

# ***BlogBooker***

Low resolution pictures

From Blog to Book.

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# Contents

<b>1</b>	<b>2006</b>	<b>97</b>
1.1	May . . . . .	97
	About (2006-05-05 18:46) . . . . .	97
	Week of Long Walks (2006-05-08 13:04) . . . . .	97
	Is the Spread of an Idea Like an Epidemic? (2006-05-16 04:49) . . . . .	98
	Scenes From the Life of a Best-Selling Author (2006-05-18 07:50) . . . . .	99
	The Ecology of New Ideas (2006-05-21 23:55) . . . . .	100
	Ford vs. Roberts (2006-05-26 14:52) . . . . .	101
1.2	June . . . . .	104
	Will It Live? (2006-06-02 11:45) . . . . .	104
	My First Reading (2006-06-16 22:52) . . . . .	106
	Meal Skipping: Good or Bad? (2006-06-22 09:15) . . . . .	106
	A Little Bit of Paris (2006-06-27 23:18) . . . . .	109
	Winery Alert (2006-06-30 14:39) . . . . .	111
1.3	July . . . . .	112
	Brain Food (2006-07-05 19:50) . . . . .	112
	Spices: A New Kind of Vitamin? (2006-07-10 16:20) . . . . .	117
	Blogger Alert (2006-07-11 22:04) . . . . .	118
	Brain Food (part 2) (2006-07-19 21:33) . . . . .	119
	Brain Food (part 3) (2006-07-20 23:48) . . . . .	120
	Brain Food (part 4: measuring balance) (2006-07-26 22:59) . . . . .	122
	The Wisdom of Strangers (2006-07-27 08:20) . . . . .	124
	Brain Food (part 5: a little progress) (2006-07-29 10:16) . . . . .	124
	Brain Food (part 6: a little more progress) (2006-07-31 22:44) . . . . .	126
1.4	August . . . . .	128
	Brain Food (part 7: looking for a steady baseline) (2006-08-03 22:30) . . . . .	128
	Brain Food (part 8: a little more baseline) (2006-08-08 23:23) . . . . .	131

	Brain Food (part 9: supporting data, and a problem) (2006-08-13 22:46) . . . . .	133
	Seymour Benzer (part 1) (2006-08-20 23:14) . . . . .	136
	Seymour Benzer (crippling the Salk Institute) (2006-08-22 08:50) . . . . .	137
	How Well Does the Shangri-La Diet Work? (part 1: breakdown by starting weight) (2006-08-27 16:59)	138
1.5	September . . . . .	140
	Four Great Modern Books (part 1: description) (2006-09-06 23:48) . . . . .	140
	Seymour Benzer (crippling medical school research) (2006-09-22 16:25) . . . . .	141
	The Annotated Woman's World article (2006-09-24 22:19) . . . . .	141
1.6	October . . . . .	142
	The Writing Cure (2006-10-11 03:54) . . . . .	142
	David Jenkins on the Shangri-La Diet (2006-10-17 10:49) . . . . .	143
	Too Few Riders, Too Many Stolen Bases (2006-10-22 21:54) . . . . .	143
	More Reason to Crazy-Spice (2006-10-24 21:48) . . . . .	144
	The Trouble With Rigor (2006-10-29 23:48) . . . . .	145
1.7	November . . . . .	146
	Amazon Rank: The Poor Man's BookScan (2006-11-01 20:39) . . . . .	146
	How Well Does the Shangri-La Diet Work? (part 2) (2006-11-05 20:38) . . . . .	147
	More Evidence That Fat Is Not Bad For You (2006-11-07 16:03) . . . . .	151
	Grass-Fed Beef, the Shangri-La Diet, and the Future of Food (2006-11-09 16:15) . . . . .	151
	Tea, Wine, and Chocolate: A Puzzle (2006-11-11 07:32) . . . . .	152
	Tea, Wine, Chocolate – and Coffee (2006-11-12 22:00) . . . . .	153
	CIA Fun Facts (2006-11-14 22:45) . . . . .	154
	Crazy-Spicing 3.0: Fava Bean Crostini (2006-11-21 02:52) . . . . .	154
	Ranjit Chandra Update (2006-11-23 12:51) . . . . .	155
	Brian Wansink on Research Design (2006-11-26 08:04) . . . . .	156
	The Wisdom of Experts: John Chambers on Research Design (2006-11-30 06:53) . . . . .	158
	Philip Weiss Appreciation (2006-11-30 15:06) . . . . .	159
1.8	December . . . . .	159
	On Scientific Method (2006-12-01 08:05) . . . . .	159
	More Weight-Loss Data from the Shangri-La Diet Forums (2006-12-04 07:28) . . . . .	160
	The Truth Is Out There (2006-12-04 16:59) . . . . .	164
	The Invisible Made Visible (2006-12-05 07:06) . . . . .	164
	American Haiku (2006-12-06 08:29) . . . . .	165
	Varieties of Shangri-La Diet Experience (2006-12-07 08:43) . . . . .	166
	Science Versus Human Nature (2006-12-08 04:48) . . . . .	167



Books Were the First Open-Source Software (2006-12-09 06:30) . . . . .	168
Stephen Marsh on the Shangri-La Diet (2006-12-12 11:20) . . . . .	169
Jimmy Berenson on the Shangri-La Diet (2006-12-13 10:19) . . . . .	171
Secrets of a Successful Blog (part 2) (2006-12-20 10:28) . . . . .	173
Web Trials (2006-12-21 08:32) . . . . .	174
Why I Like Self-Experimentation (2006-12-23 13:07) . . . . .	175
Christmas: An Evolutionary Explanation (2006-12-24 08:51) . . . . .	176
Previously On/Next On Seth's Blog (2006-12-26 08:51) . . . . .	177
Science in Action: Procrastination (2006-12-27 06:48) . . . . .	178
Science in Action: Procrastination (results) (2006-12-28 14:38) . . . . .	180
Going Flavorless (2006-12-29 11:27) . . . . .	181
Christmas in China (2006-12-31 14:38) . . . . .	181
<b>2 2007</b>	<b>183</b>
2.1 January . . . . .	183
Is Drinking Olive Oil Healthy? (2007-01-01 20:50) . . . . .	183
The Decline of Harvard (2007-01-02 15:39) . . . . .	189
Someone Has Been Reading This Blog (2007-01-02 21:46) . . . . .	190
Is There a More Original American Journalist Than Philip Weiss? (2007-01-03 08:04) . . . . .	190
Stanley Milgram's Obedience Experiment Repeated – Tonight (2007-01-03 16:06) . . . . .	191
Procrastination (cont.) (2007-01-04 07:13) . . . . .	191
Annals of Self-Experimentation: How to Fall Asleep Faster (2007-01-04 17:57) . . . . .	193
Methodological Lessons from Self-Experimentation (part 1 of 4) (2007-01-05 14:33) . . . . .	194
Methodological Lessons from Self-Experimentation (part 2 of 4) (2007-01-06 09:11) . . . . .	195
A Curious Academic Career (2007-01-07 08:10) . . . . .	195
Methodological Lessons from Self-Experimentation (part 3 of 4) (2007-01-07 21:49) . . . . .	196
Methodological Lessons from Self-Experimentation (part 4 of 4) (2007-01-08 18:29) . . . . .	198
Near-Celebrity Near-Endorsement (2007-01-09 13:45) . . . . .	199
From the SLD Forums (2007-01-10 20:15) . . . . .	201
Robin Hanson on Web Trials (2007-01-11 18:44) . . . . .	202
Robin Hanson on Web Trials (my comments) (2007-01-12 18:21) . . . . .	203
Yet More about Omega-3 (2007-01-13 23:55) . . . . .	204
Ripe for Change (movie) (2007-01-14 18:29) . . . . .	204
The Benefits of Theory: Crazy Spicing and B. F. Skinner (2007-01-16 09:18) . . . . .	207
Charles Murray vs. Charles Murray (2007-01-17 22:11) . . . . .	207
Economics and SLD (2007-01-18 15:21) . . . . .	209

How Good is Food in Berkeley? (2007-01-18 18:59) . . . . .	209
How Important is IQ? (2007-01-19 14:55) . . . . .	210
Science in Action: Omega-3 (balance results) (2007-01-20 15:41) . . . . .	213
The Half-Measure (2007-01-23 00:06) . . . . .	216
Science in Action: Omega-3 (background) (2007-01-25 11:40) . . . . .	217
Science in Action: Omega-3 (materials) (2007-01-26 18:45) . . . . .	219
Self-Experimentation = Old Buildings (2007-01-27 18:35) . . . . .	222
Bruce Springsteen on Education (2007-01-28 08:29) . . . . .	223
Secrets of a Successful Blog (part 3) (2007-01-28 17:18) . . . . .	224
Amory Lovins on Self-Experimentation (2007-01-29 22:01) . . . . .	225
Science in Action: Omega-3 (discussion of balance results) (2007-01-29 23:47) . . . . .	226
Saul Sternberg on Research Design (2007-01-30 17:27) . . . . .	227
Michael Pollan vs. Processed Food (2007-01-31 08:18) . . . . .	228
2.2 February . . . . .	230
An Unexpected Benefit of Self-Experimentation (2007-02-01 07:31) . . . . .	230
Mr. Dezenhall, Meet Mr. Orwell (2007-02-02 15:30) . . . . .	231
The Israeli Paradox (2007-02-02 21:50) . . . . .	231
Science in Action: Omega-3 (methodological improvements) (2007-02-03 12:51) . . . . .	232
Web Trials Update (2007-02-04 15:43) . . . . .	234
Jane Jacobs on Scientific Method (2007-02-05 10:19) . . . . .	235
Paperback SLD (2007-02-06 13:39) . . . . .	235
More about Pollan and Processed Food (2007-02-07 11:26) . . . . .	237
How Often Should I Weigh Myself? (2007-02-08 10:14) . . . . .	238
Eating Less (2007-02-09 12:30) . . . . .	240
Omega-3 Facts of the Day (2007-02-10 13:22) . . . . .	241
What Should "Correlation Does Not Imply Causation" Be Replaced With? (2007-02-10 23:42) . . . . .	242
Blogging and Stone Age Life (2007-02-11 20:19) . . . . .	245
Science in Action: Omega-3 (more data) (2007-02-12 13:16) . . . . .	246
The Hidden Relevance of Experimental Psychology (2007-02-13 15:12) . . . . .	251
Jane Jacobs on the Food Industry (2007-02-14 16:14) . . . . .	251
The Secret History of Innovation (2007-02-15 05:35) . . . . .	252
Omega-3 and Arithmetic (2007-02-16 06:17) . . . . .	253
Two Ways of Thinking About Self-Experimentation (2007-02-17 10:25) . . . . .	255
Human Nature vs. Self-Experimentation (2007-02-18 15:53) . . . . .	256
If You Like Paris (2007-02-19 17:21) . . . . .	257

Science in Action: Omega-3 (sleep data) (2007-02-21 11:32) . . . . .	257
Science in Action: Omega-3 (sleep data, discussed) (2007-02-22 04:45) . . . . .	260
Pregnancy and Omega-3 (2007-02-23 04:55) . . . . .	262
Omega-3 and Freakonomics (2007-02-23 11:42) . . . . .	263
Omega-3 Greatest Hits (2007-02-24 06:21) . . . . .	264
Self-Experimentation on TV (2007-02-25 22:43) . . . . .	267
Science in Action: Omega-3 (new measures) (2007-02-26 18:48) . . . . .	268
Science in Action: Omega-3 (results with new measures) (2007-02-28 10:06) . . . . .	269
2.3 March . . . . .	272
Science in Action: Omega-3 (time of day effect) (2007-03-01 21:31) . . . . .	272
A New Way to Quit Smoking? (2007-03-03 11:57) . . . . .	274
The Trouble With College (2007-03-04 21:49) . . . . .	276
Andrew Gelman on Web Trials and the Shangri-La Diet (2007-03-05 20:52) . . . . .	277
Andrew Gelman Interviews Me About TV and Mood (2007-03-06 21:13) . . . . .	282
Jane Jacobs on College (2007-03-08 10:34) . . . . .	284
How Good is the Atkins Diet? (2007-03-09 22:23) . . . . .	285
How To Do Experiments That Generate Ideas (2007-03-10 22:36) . . . . .	286
Is Sugar Fattening? (2007-03-11 14:50) . . . . .	287
Omega-3 and Bone Health (2007-03-12 22:55) . . . . .	288
The Berkeley School Lunch Program: Correction (2007-03-13 16:31) . . . . .	288
Science in Action: Omega-3 (measurement improvement) (2007-03-15 12:55) . . . . .	292
Science in Action: Omega-3 (what's the best dose?) (2007-03-16 20:59) . . . . .	294
Science in Action: Omega-3 (old data re-analysed) (2007-03-17 19:48) . . . . .	297
At the Berkeley Farmers' Market (2007-03-18 22:07) . . . . .	299
Life is Complicated (2007-03-20 04:58) . . . . .	299
An SLD Milestone! (2007-03-21 05:39) . . . . .	300
{self-experimentation, Internet, . . .} (2007-03-22 06:48) . . . . .	301
Omega-3 and Mood Disorders (2007-03-23 05:52) . . . . .	301
Agrees With Me About College (2007-03-24 20:48) . . . . .	303
For the Skeptics (2007-03-25 20:15) . . . . .	304
Language That Should Exist (punctuation) (2007-03-26 16:53) . . . . .	305
Endearingly Simple Experimentation (2007-03-27 19:33) . . . . .	306
The Most Valuable Truths (2007-03-28 07:41) . . . . .	306
Omega-3 and Dental Health (part 1 of 2) (2007-03-28 20:39) . . . . .	307
Omega-3 and Dental Health (part 2 of 2) (2007-03-29 21:14) . . . . .	310

37signals and SLD (2007-03-30 20:09) . . . . .	312
For Whom Do Colleges Exist? (2007-03-31 11:22) . . . . .	313
2.4 April . . . . .	314
How Bad is The Secret? (2007-04-02 22:20) . . . . .	314
My Holocaust (2007-04-03 07:28) . . . . .	317
For Whom Do Colleges Exist? (continued) (2007-04-03 20:54) . . . . .	318
Will It Last? (2007-04-04 22:08) . . . . .	319
Made to Stick (2007-04-06 06:06) . . . . .	320
Frontiers in Education (2007-04-06 17:40) . . . . .	321
Omega-3 and Cognitive Decline (2007-04-07 11:48) . . . . .	321
The !Golden Rule and Reed College (2007-04-07 21:25) . . . . .	322
Interview about Self-Experimentation (part 1 of 2) (2007-04-08 21:28) . . . . .	324
Durian and SLD (2007-04-09 19:50) . . . . .	325
Selenium, the Anti-Mercury (2007-04-10 19:27) . . . . .	326
Interview about Self-Experimentation (part 2 of 2) (2007-04-11 21:28) . . . . .	327
Does the Type of Fat in Your Diet Affect Your Brain? (2007-04-12 17:37) . . . . .	329
Interview about Self-Experimentation (postscript) (2007-04-13 22:12) . . . . .	330
Omega-3 and Arithmetic (continued) (2007-04-14 20:11) . . . . .	331
New Way to Lose Weight? (surgical) (2007-04-15 22:35) . . . . .	333
Birth of a Website (2007-04-16 21:05) . . . . .	334
Omega-3 and Arithmetic (evaluation) (2007-04-18 06:30) . . . . .	335
Omega-3 and Arithmetic (several analyses) (2007-04-18 21:38) . . . . .	336
You Can't Change Something Unless You Love It – Jane Jacobs (2007-04-19 15:43) . . . . .	341
Effects of SLD and Flaxseed Oil (2007-04-20 04:51) . . . . .	342
What Should I Learn About Writing From This? (2007-04-20 08:05) . . . . .	343
Too Much Emphasis on Failure (2007-04-20 22:09) . . . . .	344
Science in Action: Omega-3 (flaxseed oil vs. olive oil) (2007-04-21 20:29) . . . . .	345
A New Yorker Misstep (2007-04-23 00:01) . . . . .	349
What Loren Berlin, a Student at the University of North Carolina, Wrote Nicholas Kristof (2007-04-23 08:06) . . . . .	350
Bleak House Fact of the Day (2007-04-23 19:38) . . . . .	353
Which Signs of Aging are Inevitable? (2007-04-23 22:24) . . . . .	354
If Science Had Been Invented More Than Once (2007-04-24 19:23) . . . . .	354
Introductions to Jane Jacobs (2007-04-25 04:31) . . . . .	356
Science in Action: Omega-3 (flaxseed oil vs. olive oil, continued) (2007-04-25 19:29) . . . . .	357
Does Omega-3 Affect the Brain? (2007-04-26 23:27) . . . . .	360

A Professor Complains Loudly (2007-04-27 20:18) . . . . .	361
More about The Secret (2007-04-28 08:27) . . . . .	362
Guest-Blogger Timothy Beneke on Self-Experimentation (part 1 of 2) (2007-04-28 20:51) . . . . .	363
Injury-Causing Falls: The New Scurvy? (2007-04-29 12:22) . . . . .	364
Blogger Alert: Paperback SLD Available (2007-04-29 16:36) . . . . .	364
Where Do Useful Discoveries Come From? (2007-04-30 05:11) . . . . .	365
Dance Dance Revolution (2007-04-30 10:49) . . . . .	366
2.5 May . . . . .	366
Guest-Blogger Timothy Beneke on Self-Control (part 2 of 2) (2007-05-01 05:51) . . . . .	366
A Stanford Nutrition Professor's Explanation of SLD (2007-05-02 08:22) . . . . .	368
What If College Were Taught by Basketball Players? (2007-05-03 06:06) . . . . .	369
SLD in Paperback: What's New (2007-05-04 04:51) . . . . .	369
Encouraging Events (2007-05-04 09:06) . . . . .	370
Science in Action: Omega-3 (more memory results) (2007-05-05 16:22) . . . . .	370
Life-Size Faces (2007-05-06 13:12) . . . . .	372
Neat Freak (2007-05-06 22:20) . . . . .	376
New Way to Lose Weight? (2007-05-07 14:42) . . . . .	377
IDEO Visits a Hospital (2007-05-08 14:00) . . . . .	379
The Man Who Walks Backwards (2007-05-09 14:20) . . . . .	379
My Theory of Human Evolution (American Idol edition) (2007-05-09 20:21) . . . . .	380
Increasing Respectability (2007-05-10 05:03) . . . . .	380
Is the Goal of Education Obvious? (2007-05-10 19:03) . . . . .	380
My Theory of Human Evolution (business book edition) (2007-05-12 00:26) . . . . .	381
Where Did Blogs Come From? (2007-05-13 03:18) . . . . .	383
The New Yorker Crosses a Line (2007-05-14 04:22) . . . . .	383
Underrated Tourist Activity (2007-05-14 17:12) . . . . .	385
Life-Size Faces on YouTube (2007-05-14 18:41) . . . . .	385
The Future of SLD (2007-05-15 07:57) . . . . .	387
Memorial University Continues to Destroy Its Reputation (2007-05-15 15:45) . . . . .	388
Will It Last? (part 2) (2007-05-16 06:38) . . . . .	389
Why Blogs are Better-Written (2007-05-16 21:02) . . . . .	392
Andrew Gelman on Blogging (part 1 of 3) (2007-05-18 15:55) . . . . .	393
Science in Action: Omega-3 (flaxseed oil vs. nothing 1) (2007-05-19 06:27) . . . . .	394
Andrew Gelman on Blogging (part 2 of 3) (2007-05-19 21:25) . . . . .	396
Science in Action: Omega-3 (flaxseed oil vs. nothing 2) (2007-05-21 15:59) . . . . .	397

Five Similar Words of Wisdom (2007-05-21 23:04)	398
R Programs Used to Study Omega-3 (2007-05-22 10:17)	400
Andrew Gelman on Blogging (part 3 of 3) (2007-05-23 05:15)	402
Cool Self-Experimentation With Wine (2007-05-24 06:27)	403
Jane Jacobs on Pay Per Click (2007-05-24 08:54)	403
Science in Action: Omega-3 (flaxseed vs nothing 2 continued) (2007-05-24 21:57)	404
Memorial University, Meet Zagreb University (2007-05-26 06:39)	408
Science in Action: Sunlight and Sleep (could it be?) (2007-05-26 11:42)	409
Science in Action: Omega-3 (flaxseed oil vs. nothing 3) (2007-05-27 05:58)	410
Science in Action: Sunlight and Sleep (could it be? continued) (2007-05-28 06:36)	412
The Secret of My Success (2007-05-29 06:01)	413
Best Google Talks I've Heard So Far (2007-05-30 08:50)	414
Don't Follow the Money (2007-05-30 19:38)	415
The New Yorker Crosses Another Line (2007-05-30 22:41)	415
2.6 June	416
Science in Action: Flavor-Calorie Learning (simple example) (2007-06-01 11:52)	416
Until Nassim Taleb Starts a Blog (2007-06-01 14:27)	418
Indonesian version of The Shangri-La Diet (2007-06-02 07:41)	419
One-Sided Critiques of the Day (2007-06-02 21:22)	420
Science in Action: Omega-3 (conference submission) (2007-06-03 04:59)	420
Vows = The Hunt? (2007-06-03 15:25)	424
New Yorker Hint (2007-06-03 22:44)	425
Science in Action: Sunlight and Sleep (background) (2007-06-04 22:22)	425
Librarians vs. Soft Censorship (2007-06-05 06:35)	426
Science in Action: Sunlight and Sleep (update) (2007-06-05 21:33)	426
Say No to Genetic Determinism (2007-06-06 08:38)	428
My Theory of Human Evolution (scrapbook edition) (2007-06-07 05:23)	429
Atul Gawande on Unofficial Research (2007-06-07 21:28)	430
The Twilight of Expertise (part 1) (2007-06-09 11:47)	431
How Blogging Made Philip Weiss a Better Writer (2007-06-09 18:54)	432
Outside a Chinese Test Site (2007-06-10 06:14)	432
Academic Horror Story (Tulane University) (2007-06-10 10:32)	433
The Twilight of Expertise (part 2) (2007-06-10 23:44)	434
Fat and Anesthesia (2007-06-11 13:37)	439
The Clouded Crystal Ball (2007-06-12 03:50)	440

The OJ Group (2007-06-12 23:20) . . . . .	440
Thorstein Veblen on the Importance of Spell Check (2007-06-13 17:51) . . . . .	442
Secrets of a Successful Blog (part 4) (2007-06-13 21:23) . . . . .	443
The Twilight of Expertise (part 3) (2007-06-14 15:07) . . . . .	443
The Twilight of Expertise (part 4) (2007-06-15 22:53) . . . . .	444
Best Use of a Vocabulary Word (2007-06-16 16:26) . . . . .	445
My Jaw Dropped When I Read This (2007-06-16 21:51) . . . . .	446
Shopping Notes (2007-06-16 22:20) . . . . .	446
Science in Action: Sunlight and Sleep (progress report) (2007-06-17 22:12) . . . . .	447
SLD Musings (2007-06-18 19:59) . . . . .	447
Can Dish It Out But Can't Take It (2007-06-19 23:06) . . . . .	449
The Twilight of Expertise (part 5: psychotherapy) (2007-06-20 06:48) . . . . .	450
A New and Useful Word (2007-06-20 12:26) . . . . .	452
Strengths and Weaknesses of Epidemiology: A Semi-Insider's View (2007-06-21 23:38) . . . . .	452
The Dog-Food Diet (part 1) (2007-06-23 09:38) . . . . .	453
Learning to Write Better (2007-06-24 07:19) . . . . .	454
Good Thinking (2007-06-24 15:23) . . . . .	455
The Twilight of Expertise (part 6: psychotherapy, continued) (2007-06-25 04:02) . . . . .	455
The Twilight of Expertise (directory) (2007-06-25 09:32) . . . . .	456
The Twilight of Expertise (part 7: education experts) (2007-06-26 13:56) . . . . .	457
My Theory of Human Evolution (music video edition) (2007-06-27 10:33) . . . . .	458
My Theory of Human Evolution (directory) (2007-06-27 10:55) . . . . .	459
The Twilight of Expertise (part 8: spiritual experts) (2007-06-28 19:18) . . . . .	462
Michael Moore and Jane Jacobs (2007-06-29 06:13) . . . . .	463
The Twilight of Expertise (part 9: clinical trials again) (2007-06-29 22:08) . . . . .	466
Science in Action: Omega-3 (a surprise!) (2007-06-30 11:16) . . . . .	467
2.7 July . . . . .	471
Science in Action: Omega-3 (data from my mom) (2007-07-01 10:52) . . . . .	471
Creepy Assertions (2007-07-01 19:01) . . . . .	473
Omega-3 and Cancer (2007-07-02 17:47) . . . . .	474
Science in Action: Omega-3 (what the results mean) (2007-07-03 21:48) . . . . .	474
The Shangri-La Diet: What Went Wrong? (2007-07-05 06:11) . . . . .	476
Advances in Retailing: Penny-Free Store (2007-07-05 15:27) . . . . .	478
Omega-3 and Dental Health: Surgery Commuted (2007-07-06 04:23) . . . . .	478
Why is Sicko So Good? (2007-07-06 20:31) . . . . .	482

Science in Action: Sunlight and Sleep (more background) (2007-07-07 16:51) . . . . .	483
An SLD Marketing Puzzle (2007-07-08 04:19) . . . . .	485
More Self-Congratulation (probably erroneous) (2007-07-09 04:27) . . . . .	488
A Student Advisor's Unlovely View of UC Berkeley (2007-07-09 06:20) . . . . .	488
Blogs and Street Food (2007-07-09 19:38) . . . . .	490
My Theory of Human Evolution (diet soda edition) (2007-07-10 05:45) . . . . .	491
Irritability and Coca-Cola (2007-07-11 06:44) . . . . .	493
SLD on Los Angeles TV Tonight (2007-07-11 10:47) . . . . .	496
My Theory of Human Evolution (omiyage edition) (2007-07-12 07:12) . . . . .	497
My Theory of Human Evolution (blogs and fan clubs edition); or Why We Blog (2007-07-13 06:55) . .	497
Why Tapas and Dim Sum? (2007-07-13 11:49) . . . . .	499
Omega-3: I Can See For Myself (2007-07-14 07:08) . . . . .	499
Cure Versus Prevention (flies edition) (2007-07-15 08:17) . . . . .	501
Absurdity and Pathos in Elementary-School Education (2007-07-15 21:47) . . . . .	502
Science in Action: Sunlight and Sleep (more progress) (2007-07-17 06:51) . . . . .	504
Inside College Classrooms (2007-07-18 07:01) . . . . .	505
Why I Blog (2007-07-19 05:56) . . . . .	506
Science in Action: Omega-3 (follow-up of surprise) (2007-07-20 09:53) . . . . .	507
My Theory of Human Evolution (red stained glass edition) (2007-07-21 10:42) . . . . .	510
Science in Action: Omega-3 (a new test) (2007-07-22 09:15) . . . . .	511
A Student's Unlovely View of UC Berkeley (2007-07-23 10:02) . . . . .	515
My Theory of Human Evolution (fancy chocolate edition) (2007-07-24 09:50) . . . . .	516
Human Experimental Psychology: Science With One Hand Behind Your Back (2007-07-25 15:36) . .	517
Science in Action: Omega-3 (better measures) (2007-07-26 16:31) . . . . .	519
My Theory of Human Evolution (computer chip edition) (2007-07-27 22:16) . . . . .	519
Science in Action: Omega-3 (a delay) (2007-07-28 23:56) . . . . .	521
Misleading Info in The Joy of Cooking (2007-07-29 22:49) . . . . .	521
Annals of Self-Experimentation: Elmer Gates (2007-07-30 13:04) . . . . .	522
SLD Phenomenology (2007-07-30 17:51) . . . . .	523
More SLD Phenomenology (2007-07-31 10:02) . . . . .	524
More About Faces and Mood (2007-07-31 20:29) . . . . .	524
2.8 August . . . . .	527
Ideology of the Meritocracy (2007-08-01 10:31) . . . . .	527
Jane Jacobs and Japan (2007-08-02 03:17) . . . . .	528
SLD Phenomenology (part 3) (2007-08-02 13:41) . . . . .	528



Does the "SLD" Abbreviation Lend a Scientific Veneer to Pseudo-Science? (2007-08-02 20:59) . . . .	529
Seven Pounds Since Mid-July (2007-08-03 04:18) . . . . .	529
My Theory of Human Evolution (amazon.com edition) (2007-08-04 06:16) . . . . .	529
How to Be a Grown-up About Evolution (2007-08-04 22:56) . . . . .	532
Something is Better Than Nothing (2007-08-05 20:49) . . . . .	533
Interview with HuntGrunt (part 1) (2007-08-06 19:55) . . . . .	536
Art and Commerce (2007-08-07 10:36) . . . . .	537
Something is Better Than Nothing (part 2) (2007-08-08 06:50) . . . . .	538
Annals of Self-Experimentation: Magnetic Implants (2007-08-08 23:38) . . . . .	539
A Great Day For Free Speech (2007-08-09 08:32) . . . . .	540
Ideology of the Meritocracy (part 2) (2007-08-10 05:47) . . . . .	541
My Theory of Human Evolution (Planet Earth edition) (2007-08-10 21:53) . . . . .	543
Interview with HuntGrunt (part 2) (2007-08-11 06:13) . . . . .	544
Annals of Self-Experimentation: Highway Signs (2007-08-11 10:08) . . . . .	545
Science in Action: Omega-3 (letter-counting test) (2007-08-11 23:13) . . . . .	546
An Endangered Language (2007-08-12 21:41) . . . . .	551
The Troubles With IRBs (2007-08-13 07:26) . . . . .	551
Science in Action: Omega-3 (time course) (2007-08-13 12:13) . . . . .	552
Can Professors Say the Truth? (part 1) (2007-08-13 15:34) . . . . .	553
Instead of Reading a Book (2007-08-13 21:30) . . . . .	555
Can Professors Say the Truth? (part 2) (2007-08-14 05:22) . . . . .	555
Can Professors Say the Truth? (part 3) (2007-08-14 21:51) . . . . .	556
Hope and Surprise (2007-08-15 05:31) . . . . .	561
Crazy-Spiced Smoothies Revisited (2007-08-15 19:43) . . . . .	562
Can Professors Say the Truth? (part 4) (2007-08-16 03:08) . . . . .	563
A Curious View of Obesity (2007-08-16 12:27) . . . . .	569
Omega-3 and Dental Health (still more) (2007-08-16 17:07) . . . . .	570
Even in Sweden (2007-08-17 04:24) . . . . .	571
Why Does Gum Disease Correlate With Heart Disease? (2007-08-17 06:38) . . . . .	571
Ortho-Ergonomics (2007-08-17 20:21) . . . . .	572
What Goes Around Comes Around (2007-08-18 08:23) . . . . .	575
Nutritional Psychology: A Gaping Hole Where a Field Should Be (2007-08-18 21:53) . . . . .	575
Jane Jacobs and Traffic Tickets (2007-08-19 07:10) . . . . .	576
Freedom to Film (2007-08-19 21:10) . . . . .	577
Can Professors Say the Truth? (addendum) (2007-08-20 20:24) . . . . .	577

Science in Action: Omega-3 (time course 2, with eggs) (2007-08-20 21:21) . . . . .	577
Does Walking By McDonald's Make You Fat? (2007-08-21 21:33) . . . . .	579
Science in Action: Omega-3 (VSE) (2007-08-22 06:43) . . . . .	580
Can Professors Say the Truth? (radio show) (2007-08-22 21:07) . . . . .	584
A Novelist on the Aquatic Ape Theory of Evolution (2007-08-22 22:45) . . . . .	585
The Twilight of Expertise (part 10: book reviewers) (2007-08-23 16:16) . . . . .	585
Nassim Taleb on Research Strategy (2007-08-23 22:52) . . . . .	586
Criticize by Creating (2007-08-24 16:26) . . . . .	587
Saul Sternberg on Research Strategy (2007-08-24 21:50) . . . . .	588
Can Professors Say the Truth? (letter from Deirdre McCloskey) (2007-08-25 10:32) . . . . .	589
Something is Better than Nothing: Wedding Costs (2007-08-25 21:36) . . . . .	591
Can Professors Say the Truth? (another letter from Deirdre McCloskey) (2007-08-26 18:23) . . . . .	592
Can Professors Say the Truth? (my reply to Deirdre McCloskey's 2nd letter) (2007-08-26 19:36) . . . . .	594
The Twilight of Expertise (part 11: journalists) (2007-08-27 23:08) . . . . .	597
Vitamins, minerals, and mood (2007-08-28 05:43) . . . . .	598
Annals of Self-Experimentation: J. S. Haldane (2007-08-28 22:40) . . . . .	599
Can Professors Say the Truth? (Deirdre McCloskey's 3rd letter) (2007-08-29 06:18) . . . . .	600
Prozac Dangerous to Mussels (2007-08-29 06:41) . . . . .	602
How To Name a Book (2007-08-29 11:37) . . . . .	602
Can Professors Say the Truth? (Deirdre McCloskey's 4th letter) (2007-08-29 21:45) . . . . .	603
Science in Action: Omega-3 (more eggs) (2007-08-30 16:15) . . . . .	604
Fish and Pregnancy Danger (2007-08-30 17:32) . . . . .	607
My Theory of Human Evolution (guitar edition) (2007-08-31 05:26) . . . . .	608
Can Professors Say the Truth? (Roughgarden replies) (2007-08-31 07:27) . . . . .	609
Avoiding Overeating (2007-08-31 11:53) . . . . .	610
2.9 September . . . . .	610
Annals of Self-Experimentation: Video Games (2007-09-01 05:57) . . . . .	610
Can Professors Say the Truth? (more from Deirdre McCloskey – and the email she doesn't want you to see) (2007-09-01 23:07) . . . . .	611
Science in Action: A Puzzle (2007-09-03 03:22) . . . . .	617
My Theory of Human Evolution (quasi-reinforcement edition) (2007-09-03 21:32) . . . . .	619
Science in Action: Methodology surprise and improvement (2007-09-04 21:28) . . . . .	621
Can Professors Say the Truth? (Michael Bailey and Alice Dreger respond to Joan Roughgarden) (2007-09-05 05:46) . . . . .	623
Marion Nestle on Omega-3s (2007-09-05 23:27) . . . . .	624
Ditto Food: Microwave Popcorn (2007-09-06 05:03) . . . . .	627

Loneliness and National Security (2007-09-07 14:47) . . . . .	627
How Things Begin (Oakland Art Murmur) (2007-09-07 23:17) . . . . .	628
Tribute to Totto-Chan (2007-09-08 07:36) . . . . .	629
Science in Action: Exercise (confirmation) (2007-09-08 10:42) . . . . .	630
SLD on consumerist.com (2007-09-09 10:31) . . . . .	632
Modern Veblen: Theory Testing (2007-09-09 12:50) . . . . .	633
A Student's Unlovely View of UC Berkeley (part 2) (2007-09-09 21:50) . . . . .	634
Science in Action: Exercise (more confirmation) (2007-09-10 07:18) . . . . .	635
How Could We Be This Wrong about Medicine? (2007-09-11 07:24) . . . . .	637
Science in Action: Exercise (15-minute walk) (2007-09-11 10:37) . . . . .	638
Modern Veblen: Flight From Data (2007-09-11 21:12) . . . . .	639
Laboratory Confidential (2007-09-12 13:54) . . . . .	640
Joyce Hatto and Ranjit Chandra: Separated at Birth? (2007-09-13 06:42) . . . . .	641
Modern Veblen: The Less-Than-Obvious Value of Evolutionary Explanations (2007-09-13 19:28) . . . . .	642
The View From MIT (2007-09-14 11:50) . . . . .	644
How to Answer Your Critics (2007-09-14 21:01) . . . . .	645
How Accurate is Epidemiology? (part 1) (2007-09-14 21:56) . . . . .	645
Modern Veblen: Determinants of Conspicuous Consumption (2007-09-15 11:47) . . . . .	646
Why I Blog (2007-09-15 22:53) . . . . .	646
How to Raise HDL (2007-09-15 23:13) . . . . .	647
How Accurate is Epidemiology? (part 2) (2007-09-16 09:44) . . . . .	649
Regent Blum, Meet Provost Dumas (2007-09-16 10:29) . . . . .	650
Abstracts from The New Yorker (2007-09-16 23:01) . . . . .	651
Why Are Medical Costs So High? (2007-09-16 23:22) . . . . .	652
A Bayesian Tries SLD (2007-09-17 13:55) . . . . .	653
How Accurate is Epidemiology? (part 3) (2007-09-18 09:29) . . . . .	654
Self-Experimentation: &@%#@!! (2007-09-18 10:41) . . . . .	656
Fear-Mongering? (2007-09-18 11:48) . . . . .	656
The Academic Stockholm Syndrome (2007-09-18 16:47) . . . . .	657
Spider Science (2007-09-19 12:06) . . . . .	657
A Clinical Trial of Fish Oil (2007-09-20 04:32) . . . . .	659
Janet Malcolm on Email (2007-09-20 06:20) . . . . .	660
How Accurate is Epidemiology? (part 4) (2007-09-20 12:37) . . . . .	661
Leonard Syme on Teaching (2007-09-21 04:13) . . . . .	662
Can Professors Say the Truth? (letter from Willow Arune) (2007-09-21 08:23) . . . . .	663

My Theory of Human Evolution (the pleasure of crafts) (2007-09-22 04:06) . . . . .	666
What Is Intelligence? by James Flynn (2007-09-23 04:26) . . . . .	667
The Anti-Veblen (2007-09-23 06:32) . . . . .	668
Anastasia Goodstein on Blogging (2007-09-24 03:33) . . . . .	669
Science in Action: Exercise (15-minute walk twice more) (2007-09-25 04:21) . . . . .	670
Thank You, Abu Ayyub Ibrahim (2007-09-25 08:35) . . . . .	675
Progress in Higher Education (2007-09-25 10:56) . . . . .	676
The SLD Way (2007-09-25 22:35) . . . . .	676
What Do Meatloaf, Acupuncture, Psychotherapy, and Clinical Trials Have in Common? (2007-09-26 04:29) . . . . .	677
My Theory of Human Evolution (language) (2007-09-27 04:27) . . . . .	678
How Much Water Should You Drink? (2007-09-27 05:21) . . . . .	679
Columbia University President Lee Bollinger's Surprising View of Freedom of Speech (2007-09-27 22:14)	680
Aaron Swartz on What's Wrong with Wikipedia (2007-09-28 06:47) . . . . .	683
Support for the Theory Behind SLD (2007-09-28 22:39) . . . . .	685
Deeper Voice = More Children? (2007-09-29 05:46) . . . . .	686
The Wikipedia Wars (2007-09-29 09:32) . . . . .	687
Interesting Idea about Addiction (2007-09-29 19:52) . . . . .	688
How Lucky I Feel (2007-09-30 02:41) . . . . .	689
A Story About Data (2007-09-30 10:38) . . . . .	690
Marc Andreessen's Career Advice (2007-09-30 19:20) . . . . .	691
Walk and Write at the Same Time (2007-09-30 21:14) . . . . .	692
2.10 October . . . . .	693
Tayster Continues SLD (2007-10-01 22:22) . . . . .	693
What Causes Heart Attacks? (2007-10-02 04:54) . . . . .	694
Joyce Cohen Gets Her Teeth Cleaned (2007-10-03 03:23) . . . . .	696
In Class or In Prison? (2007-10-03 10:23) . . . . .	697
Jane Jacobs Updated (2007-10-04 06:59) . . . . .	698
Fuzzy Logic and Self-Experimentation (part 1) (2007-10-05 09:35) . . . . .	700
What Causes Heart Attacks? (continued) (2007-10-06 11:19) . . . . .	700
The Secret and Self-Experimentation (2007-10-07 11:04) . . . . .	704
Memorial University Continues to Destroy Its Reputation (continued) (2007-10-08 06:38) . . . . .	705
What Causes Heart Attacks? (the Framingham Study) (2007-10-09 05:07) . . . . .	706
Where We Went Wrong about Diet and Health (2007-10-09 15:24) . . . . .	707
The Twilight of Expertise (part 12: Super Crunchers) (2007-10-10 03:48) . . . . .	710
SLD Nation (ghee) (2007-10-10 12:43) . . . . .	712

Once Were Warriors (2007-10-11 05:32) . . . . .	713
Why We Need Enough Cholesterol (2007-10-11 05:36) . . . . .	714
What Do Bulimia and Working for the U.N. Have in Common? (2007-10-11 23:00) . . . . .	715
A Vivid Description of SLD (2007-10-12 15:49) . . . . .	715
Insanity at MIT (2007-10-13 03:49) . . . . .	716
What is Flaxseed Oil Good For? (2007-10-13 12:24) . . . . .	716
Interview with Andy Maul about Test Development (part 1) (2007-10-14 04:58) . . . . .	717
Rent-Seeking in Higher Education (2007-10-14 18:11) . . . . .	718
Interview with Andy Maul about Test Development (part 2) (2007-10-15 03:33) . . . . .	719
Omega-3 and Plagiarism (2007-10-15 05:11) . . . . .	721
The Apparent Spread of SLD (2007-10-16 06:37) . . . . .	722
Marilyn Harvey's Complaint (2007-10-16 20:34) . . . . .	724
Interview with Andy Maul about Test Development (part 3) (2007-10-17 22:23) . . . . .	725
Exit Wounds (2007-10-18 22:40) . . . . .	726
Memorial University Defends the Indefensible (2007-10-19 12:34) . . . . .	728
How Interesting is Good Calories, Bad Calories? (2007-10-19 22:48) . . . . .	729
Why Do We Like Warm Food? (2007-10-21 12:56) . . . . .	730
A Nation of Vending Machines (2007-10-21 18:00) . . . . .	733
The Silent Spring of Marching Bands (2007-10-21 19:57) . . . . .	733
Is It Time to Revise Ancient Philosophical Questions? (2007-10-22 06:04) . . . . .	735
Gary Taubes Interview (2007-10-22 07:20) . . . . .	736
SLD Side Effects (2007-10-22 15:42) . . . . .	738
A Modern Microscope (2007-10-22 22:50) . . . . .	738
Games and Self-Experimentation (2007-10-23 03:26) . . . . .	739
Culture Shock! Palo Alto (2007-10-23 21:55) . . . . .	740
Science in Action: Omega-3 (simple reaction time) (2007-10-25 05:12) . . . . .	740
News You Can Use: Hearing Protection (2007-10-25 09:15) . . . . .	743
Should Mark Twain Have Won a Nobel Prize? (2007-10-25 21:24) . . . . .	744
Why Blog? Interview with Janet Ruhl (2007-10-27 03:59) . . . . .	745
Autism Linked to Mood Disorders (2007-10-28 06:25) . . . . .	746
How Things Begin: The Flynn Effect (2007-10-28 12:19) . . . . .	747
I Learned that if I Really Wanted To, I Could Conquer My Fear (2007-10-28 23:52) . . . . .	749
My Theory of Human Evolution (early value system) (2007-10-29 06:02) . . . . .	753
Taubes versus Kolata (2007-10-29 14:35) . . . . .	754
jobbook.org: up and running (2007-10-30 08:03) . . . . .	755

Why I Don't Hire College Graduates (2007-10-31 03:33) . . . . .	756
Omega-3 and Dementia (2007-10-31 12:52) . . . . .	758
2.11 November . . . . .	758
Mark Todd, the Cheese Dude, on Gourmet Food Business (2007-11-01 17:14) . . . . .	758
The Preposterous Files (2007-11-02 04:37) . . . . .	760
Is Nutrition a Science? (2007-11-02 21:15) . . . . .	761
Better Nutrition, Better Behavior (2007-11-03 05:28) . . . . .	763
Omega-3 Without Fish (2007-11-03 18:07) . . . . .	763
New Evidence for the Aquatic Ape Theory (2007-11-04 05:31) . . . . .	764
Improving SLD (2007-11-04 11:47) . . . . .	765
Omega-3 and Snake Oil (2007-11-04 16:45) . . . . .	768
Google vs Yahoo: Scientific Implications (2007-11-05 06:09) . . . . .	769
Omega-3 and Sports Injuries (2007-11-05 14:02) . . . . .	770
Omega-3 and Dental Health (even more) (2007-11-06 07:24) . . . . .	771
Women's Health Initiative (2007-11-06 15:40) . . . . .	772
My Theory of Human Evolution (intricate art edition) (2007-11-07 04:52) . . . . .	774
Jane Jacobs Roundup (2007-11-07 17:42) . . . . .	774
Jobbook Diary (2007-11-07 18:16) . . . . .	775
A Good Day for Free Speech (2007-11-08 06:08) . . . . .	776
Self-Experimentation in Medical Discovery (2007-11-08 09:58) . . . . .	777
Curiously Small World (2007-11-08 23:55) . . . . .	778
How to Start a Food Demo Company (2007-11-09 05:46) . . . . .	778
My Theory of Human Evolution (Hallelujah edition) (2007-11-09 23:32) . . . . .	780
How Bad is Saturated Fat? (2007-11-10 05:27) . . . . .	781
Omega-3 and Veterinary Medicine (2007-11-10 20:02) . . . . .	782
The Resource Curse (2007-11-11 07:22) . . . . .	783
Omega-3 and Cognitive Function in the Elderly (2007-11-11 18:01) . . . . .	784
In Japanese (2007-11-12 05:59) . . . . .	785
Omega-3 and Cognitive Function in the Elderly: The Opposite Result (2007-11-12 22:24) . . . . .	785
My Theory of Human Evolution (the Henry Rosenthal Pennant Collection) (2007-11-13 07:59) . . . . .	786
Who Reads Blogs? (2007-11-13 16:39) . . . . .	788
My Theory of Human Evolution (Make edition) (2007-11-14 09:26) . . . . .	788
Omega-3 Research (2007-11-15 12:36) . . . . .	789
Omega-3: What Happens When You Stop? (2007-11-16 06:46) . . . . .	789
I Wonder What Seth Has Written (2007-11-18 00:18) . . . . .	791

The David Lawrence Effect (2007-11-18 17:29) . . . . .	792
Too Skeptical = ? (2007-11-19 05:52) . . . . .	794
A Better Way to Do SLD? (2007-11-19 12:25) . . . . .	795
Blood Donation, Weight Loss, and Humor (2007-11-20 05:41) . . . . .	796
More On Humor (2007-11-21 11:26) . . . . .	798
Drugs and Depression (2007-11-21 12:04) . . . . .	800
Perception vs. Reality: Nuclear Power (2007-11-22 06:14) . . . . .	801
At Thanksgiving Dinner... (2007-11-22 22:44) . . . . .	801
The Truth About Advertising (2007-11-23 08:07) . . . . .	801
Please, Mr. Kirn, I Want a Summary (2007-11-23 21:31) . . . . .	802
Fish, Omega-3 and Human Health (2007-11-24 06:58) . . . . .	803
My Favorite Comment (2007-11-24 11:05) . . . . .	804
Brian Wansink to the USDA! (2007-11-24 13:47) . . . . .	804
The Most Surprising Sentence in Good Calories, Bad Calories (2007-11-25 04:07) . . . . .	804
Omega-3 and Sports Injuries (more) (2007-11-25 12:10) . . . . .	807
A New Kind of Advertising (2007-11-26 12:19) . . . . .	808
Omega-3 and Blood Pressure (2007-11-26 15:07) . . . . .	808
Israel Ramirez on Gary Taubes (2007-11-26 20:52) . . . . .	810
Interview with a Discoverer of the Importance of Omega-3 (2007-11-27 15:31) . . . . .	812
My Theory of Human Evolution (osechi) (2007-11-28 11:09) . . . . .	813
How Dangerous is Bariatric Surgery? (2007-11-28 14:13) . . . . .	815
The Decline of Fact Checking at The New Yorker (2007-11-28 22:42) . . . . .	816
What Causes Heart Disease? Malcolm Kendrick's Views (2007-11-29 05:58) . . . . .	816
Mitch Kapor on Second Life (2007-11-29 14:12) . . . . .	818
The Wisdom of Crowds (Babylonian edition) (2007-11-30 12:17) . . . . .	820
2.12 December . . . . .	821
Eskimos, Heart Disease, and Omega-3s: The Plot Thickens (2007-12-01 09:54) . . . . .	821
The Wisdom of Google (2007-12-01 12:26) . . . . .	822
Experimental Mathematics (2007-12-02 23:11) . . . . .	823
Adventures in Eating and Sleeping (2007-12-03 06:54) . . . . .	824
Jane Jacobs and Art (2007-12-04 07:02) . . . . .	825
Everyday Humor (part 1) (2007-12-05 08:32) . . . . .	826
Everyday Hedonics (2007-12-05 20:09) . . . . .	826
The Power of Prayer (2007-12-06 08:33) . . . . .	828
Psychology Blogs (2007-12-07 05:28) . . . . .	829

Golden Handcuffs (2007-12-07 14:11) . . . . .	830
Gary Taubes's Berkeley Talk (2007-12-08 05:29) . . . . .	831
The Twilight of Expertise (part 13: ICU doctors) (2007-12-09 07:14) . . . . .	833
The Value, Not So Hidden, of Blogging (2007-12-09 23:36) . . . . .	834
Omega-3 and Depression (2007-12-10 18:28) . . . . .	836
Everyday Humor (part 2) (2007-12-11 08:50) . . . . .	838
The Softer Side of Blogs (2007-12-11 19:03) . . . . .	839
Dietary Paradoxes and a Highly Anticipated Talk (2007-12-12 05:13) . . . . .	840
Ulcerative Colitis and Flaxseed Oil (2007-12-12 17:40) . . . . .	843
The Legacy of Jane Jacobs (2007-12-13 05:35) . . . . .	848
Painfully Brilliant (2007-12-13 11:58) . . . . .	848
My Omega-3 Talk at Psychonomics (2007-12-13 21:31) . . . . .	848
Best Reference to the Shangri-La Diet (2007-12-13 22:05) . . . . .	850
Omega-3 and Parkinson's Disease (2007-12-14 18:35) . . . . .	850
Gary Taubes on the Religious Nature of Obesity Research (2007-12-14 23:13) . . . . .	851
Fighting Cancer Via Self-Experimentation – With Success (2007-12-15 15:10) . . . . .	853
Ulcerative Colitis and Flaxseed Oil (continued) (2007-12-17 00:21) . . . . .	854
Everyday Humor (part 3) (2007-12-18 19:57) . . . . .	856
Lowell's Listings (2007-12-19 20:49) . . . . .	857
A New Kind of Outreach (2007-12-19 23:17) . . . . .	857
Diet and Acne (2007-12-20 21:19) . . . . .	858
More Natto, Please (2007-12-21 10:31) . . . . .	860
Waterboarding, Self-Experimentation, and Human Evolution (2007-12-22 07:14) . . . . .	862
Science in Action: Procrastination (evidence or anti-evidence?) (2007-12-22 20:31) . . . . .	867
Hard Times and the Shangri-La Diet (2007-12-23 11:01) . . . . .	869
How Doctors Tell Family Members that the Patient has Died (2007-12-24 12:44) . . . . .	870
Speaking of Gifts (2007-12-25 10:29) . . . . .	870
Everyday Humor (part 4) (2007-12-25 23:20) . . . . .	871
The Power of Placebos Over Health Journalists (2007-12-26 10:17) . . . . .	872
Irritability and Coca-Cola (continued) (2007-12-27 16:49) . . . . .	874
Academic Horror Story (Duke University) (2007-12-29 07:12) . . . . .	877
An SLD Story for the Coming Year (2007-12-29 19:32) . . . . .	878
Can Anti-Depressants Cause Suicide? (2007-12-31 14:15) . . . . .	879
Dr. Dermatologist, Meet Governor Huckabee (2007-12-31 15:29) . . . . .	880
Academic Horror Story (Johns Hopkins University) (2007-12-31 18:14) . . . . .	881



<b>3</b>	<b>2008</b>	<b>883</b>
3.1	January . . . . .	883
	Why New Year's Resolutions? (2008-01-01 03:02) . . . . .	883
	An Excess of Caution at The New Yorker (2008-01-01 11:20) . . . . .	883
	Anti-Depressants, Suicide, and a Malfunctioning Legal System (2008-01-01 19:03) . . . . .	884
	The Best Way to Learn is to Do (Jonathan Schwarz edition) (2008-01-02 18:50) . . . . .	885
	Interview with Gary Taubes (part 1) (2008-01-03 05:47) . . . . .	886
	Advances in SLD: Easing the Burden of Sugar Water (2008-01-03 08:09) . . . . .	890
	Advances in SLD: Eating Lots of Nose-Clipped Food (2008-01-03 14:44) . . . . .	890
	Interview with Gary Taubes (part 2) (2008-01-04 05:36) . . . . .	892
	Interview with Gary Taubes (part 3) (2008-01-04 16:09) . . . . .	894
	Worried About Prostate Cancer? (2008-01-04 18:17) . . . . .	897
	Interview with Gary Taubes (directory) (2008-01-05 02:15) . . . . .	899
	A Different Sort of Scientific Progress: Toward Utility (2008-01-05 16:41) . . . . .	900
	Jonathan Schwarz, Philosopher of Science (2008-01-05 23:41) . . . . .	902
	Interview with Gary Taubes (part 4) (2008-01-06 02:42) . . . . .	902
	Interview with Gary Taubes (part 5) (2008-01-07 03:34) . . . . .	905
	"This is Not Science As We Know It" (2008-01-07 19:51) . . . . .	910
	Interview with Gary Taubes (part 6) (2008-01-08 21:53) . . . . .	911
	How Much Fish Oil Should You Take? (2008-01-09 11:50) . . . . .	912
	Interview with Gary Taubes (part 7) (2008-01-10 03:24) . . . . .	916
	Interview with Gary Taubes (part 8) (2008-01-11 16:38) . . . . .	920
	Academic Horror Story (Podesta State) (2008-01-12 16:26) . . . . .	926
	Interview with Gary Taubes (part 9) (2008-01-12 16:56) . . . . .	927
	Interview with Gary Taubes (part 10) (2008-01-13 18:07) . . . . .	930
	Interview with Gary Taubes (part 11) (2008-01-14 16:17) . . . . .	934
	Most. Frustrating. Party. Ever (2008-01-16 02:47) . . . . .	937
	A Cautionary Tale about Salt (2008-01-17 00:20) . . . . .	938
	Loss of a Child and ALS (2008-01-17 05:03) . . . . .	939
	Obesity and Refrigerator Design (2008-01-18 02:24) . . . . .	941
	Does Cholesterol Cause Heart Disease? (2008-01-18 05:24) . . . . .	942
	Eggs are Good for You (2008-01-18 21:51) . . . . .	943
	Interview with Gary Taubes (part 12) (2008-01-19 18:45) . . . . .	944
	Interview with Gary Taubes (part 13) (2008-01-20 21:43) . . . . .	945
	How Things Begin (a surprising ALS result) (2008-01-21 13:41) . . . . .	949

Why I Like HDL (2008-01-21 15:16) . . . . .	950
Interview with Gary Taubes (part 14--the end) (2008-01-21 18:32) . . . . .	950
Helping Students Find Their Way (2008-01-23 14:06) . . . . .	954
Jane Jacobs and the Drug Industry (2008-01-24 16:40) . . . . .	956
The Mystery of Bilboquet (2008-01-25 10:46) . . . . .	958
Clavell's Law (2008-01-26 10:04) . . . . .	960
Does Mercury Cause Autism? (2008-01-27 07:59) . . . . .	960
Gary Taubes on Cholesterol and Heart Disease (2008-01-27 17:25) . . . . .	965
Interview with Susan Allport (2008-01-28 11:07) . . . . .	965
Blog Power (2008-01-28 15:57) . . . . .	967
The Mystery of Bibloquet (continued) (2008-01-29 10:46) . . . . .	968
More Blog Power (2008-01-31 06:23) . . . . .	970
Academic Horror Story (UC Berkeley) (2008-01-31 10:44) . . . . .	971
3.2 February . . . . .	972
Everything Old is New Again: Pick-Up Lines (2008-02-01 18:30) . . . . .	972
Jane Jacobs and Self-Experimentation (2008-02-02 05:03) . . . . .	973
New York Times vs. Reality (2008-02-02 17:05) . . . . .	974
Interview with a Connector (2008-02-03 11:42) . . . . .	976
Does Mercury Cause Autism? (continued) (2008-02-03 23:20) . . . . .	977
Recent Reading (2008-02-04 15:37) . . . . .	980
How to Be Wrong (2008-02-06 22:07) . . . . .	981
The Lessons of Bilboquet (2008-02-07 12:37) . . . . .	985
Ranjit Chandra: A New Position (2008-02-08 11:21) . . . . .	986
Science in Action: Flavor-Calorie Learning (another simple example) (2008-02-09 09:52) . . . . .	986
How to Be Wrong (continued) (2008-02-10 07:56) . . . . .	988
Amy Winehouse and Nassim Taleb (2008-02-11 21:28) . . . . .	989
My Theory of Human Evolution (Civil Rights Movement edition) (2008-02-12 23:32) . . . . .	992
Assorted Links (2008-02-13 20:41) . . . . .	992
Introductions to Jane Jacobs (continued) (2008-02-15 11:38) . . . . .	993
In Science, What Matters? (2008-02-16 07:28) . . . . .	994
Blog Power (continued) (2008-02-17 22:26) . . . . .	996
Forensic Means ... (2008-02-17 23:40) . . . . .	997
The Greatness of Behind The Approval Matrix (2008-02-18 07:03) . . . . .	998
Want to Self-Experiment? A Special Offer (2008-02-20 00:27) . . . . .	1001
Calorie Learning: Introduction (2008-02-20 08:40) . . . . .	1001

Assorted Links (2008-02-21 20:27)	1003
Flaxseed Oil: Beware of Lignans (2008-02-21 22:03)	1004
Calorie Learning: Background (2008-02-22 01:02)	1005
Lewis Carroll on Mercury and Autism (2008-02-23 08:09)	1006
My Theory of Human Evolution (gift card edition) (2008-02-23 13:27)	1007
Calorie Learning: Materials (2008-02-24 10:18)	1008
All About Nose-Clipping (2008-02-26 00:59)	1009
Omega-3 and Sports Injuries (part 4) (2008-02-26 20:36)	1009
Calorie Learning: Procedure (2008-02-27 07:37)	1011
How Many Calories are in Your Blood? (2008-02-28 20:28)	1012
The Fate of Laura (2008-02-29 23:31)	1014
3.3 March	1014
Why Are Games Powerful? (Part 1) (2008-03-01 08:15)	1014
Why Are Games Powerful? (Part 2) (2008-03-01 20:43)	1018
Why Are Games Powerful? (Part 3) (2008-03-02 09:01)	1022
Self-Experiment on Procrastination (2008-03-02 23:18)	1023
Pretty Life-Size Face (2008-03-03 20:14)	1023
Internet Addiction (2008-03-03 21:37)	1024
Assorted Links (2008-03-03 23:11)	1025
Useless Data and Me (2008-03-04 06:50)	1025
The New Yorker 2.0 (2008-03-04 19:08)	1026
Gary Taubes' Influence on Me (2008-03-05 07:38)	1027
Calorie Learning: First Results (2008-03-05 14:23)	1029
Yay, EW Popwatch! (2008-03-05 23:36)	1030
Is LDL Bad Cholesterol? (2008-03-06 11:33)	1031
Science in Action: Omega-3 (motor-learning surprise) (2008-03-08 10:30)	1033
Science in Action: Omega-3 (motor-learning surprise, continued) (2008-03-10 06:24)	1038
Eight Ways of Looking at Self-Experimentation (2008-03-10 22:57)	1039
If Not Noseclips, Dark Sunglasses? (2008-03-11 22:10)	1040
Twisted Skepticism (2008-03-12 18:31)	1042
Twisted Skepticism (continued) (2008-03-14 06:09)	1045
Stoplights, Experimental Design, Evidence-Based Medicine, and the Downside of Correctness (2008-03-15 16:01)	1046
Science in Action: Omega-3 (more motor-learning data) (2008-03-16 07:08)	1049
Ranjit Chandra and Milk Allergies (2008-03-16 21:08)	1052
Bear Stearns and Self-Experimentation (2008-03-17 05:44)	1054

Procrastination and Self-Experimentation (2008-03-17 16:36)	1055
Alcoholism and Self-Experimentation (2008-03-17 21:17)	1056
Sweet and Ignorant (2008-03-19 09:31)	1057
What Beleg Means (2008-03-20 12:54)	1058
Robin Hanson on Doctors (2008-03-21 08:01)	1058
Bryan Caplan on Blogging (2008-03-22 09:15)	1060
Empowering Patients (2008-03-23 10:24)	1061
Tyler Cowen on Blogging (2008-03-24 07:10)	1061
What Philip Weiss Really Thinks (2008-03-24 11:44)	1062
Bryan Caplan on How to Lose Weight (2008-03-25 07:11)	1062
The Amish and Organic Farming (2008-03-26 07:03)	1063
Assorted Links (2008-03-27 03:35)	1064
Comparison of Strategies for Sustaining Weight Loss (2008-03-27 07:07)	1064
Cramps and Self-Experimentation (2008-03-28 06:12)	1067
Human Subjects Research at Drexel University (2008-03-29 02:37)	1068
Blood Sugar Measurements? (2008-03-29 03:16)	1069
I'm Speaking at Penn (2008-03-29 07:05)	1070
Praying With Lior and Labors of Love (2008-03-30 04:48)	1070
3.4 April	1071
Buried Treasure (part 1) (2008-04-01 08:38)	1071
More from Holland (2008-04-02 05:42)	1073
Bad is Good (2008-04-02 15:03)	1074
Buried Treasure (part 2) (2008-04-03 06:10)	1074
How Things Begin (I Got UGGs!) (2008-04-04 13:44)	1075
Interview with Kamran Nazeer (part 1) (2008-04-05 06:54)	1076
Interview with Kamran Nazeer (part 2) (2008-04-06 07:35)	1078
Tools Not Rules (2008-04-07 05:09)	1079
The Robot Diet (2008-04-07 06:46)	1080
My Theory of Human Evolution (frugal materials) (2008-04-08 05:23)	1080
Andrew Gelman on Blogging (part 4) (2008-04-08 23:39)	1081
In the Google Cafeteria (2008-04-09 07:20)	1082
Self-Experimentation and Murphy's Law (2008-04-09 10:45)	1082
How Bad is Dairy? (2008-04-10 11:37)	1083
Brave New SLD World (2008-04-10 15:19)	1085
Interview with Kamran Nazeer (part 3) (2008-04-11 06:31)	1086

Interview with Kamran Nazeer (directory) (2008-04-11 06:37) . . . . .	1087
My Theory of Human Evolution (the cellphone effect) (2008-04-11 23:39) . . . . .	1088
Ask Your Dentist Some Pointed Questions (2008-04-12 06:59) . . . . .	1089
Jane Jacobs and Collapse (2008-04-12 08:57) . . . . .	1090
Interview with Kamran Nazeer (part 4) (2008-04-13 06:09) . . . . .	1093
Interview with Kamran Nazeer (part 5: the end) (2008-04-14 05:21) . . . . .	1095
Abstraction Watch (2008-04-14 20:05) . . . . .	1096
The Secret Non-Shame of the Shangri-La Diet (2008-04-15 11:45) . . . . .	1097
Happy Birthday, LSD! (2008-04-16 10:28) . . . . .	1097
Interview with Mark Liberman about Blogging (2008-04-16 17:00) . . . . .	1098
Before There Was News, There Was Gossip (2008-04-17 08:24) . . . . .	1100
Assorted Links (2008-04-18 07:07) . . . . .	1101
80% Empty or 20% Full? (2008-04-18 14:07) . . . . .	1101
More about Procrastination (2008-04-19 10:04) . . . . .	1102
What Do Jobs Need to Be Good? (2008-04-19 12:44) . . . . .	1102
Never Enough by Joe McGinniss (2008-04-20 07:17) . . . . .	1104
Glimpse of the Future: Dim Sum? (2008-04-21 23:03) . . . . .	1104
How Things Begin (Reading the OED) (2008-04-22 04:57) . . . . .	1105
Self-Experimentation, Dogged and Useful (2008-04-22 21:50) . . . . .	1106
More about Acne (2008-04-23 22:40) . . . . .	1107
How Things Begin (conference-call classes about Indian philosophy) (2008-04-24 23:16) . . . . .	1110
Brain-Enhancing Drugs (2008-04-25 12:02) . . . . .	1111
More about Never Enough (2008-04-25 19:35) . . . . .	1111
More about Acne (continued) (2008-04-26 12:42) . . . . .	1112
Better in Google Books (2008-04-27 16:32) . . . . .	1113
My Theory of Human Evolution (micropygmies) (2008-04-27 18:20) . . . . .	1113
The McCarrison Society (2008-04-28 17:13) . . . . .	1115
How Much Play Will This Get? (2008-04-28 17:51) . . . . .	1115
The Scientific Method, Half-Finished but Wholly-Accepted (2008-04-29 12:23) . . . . .	1116
Happy Birthday, SLD! (2008-04-30 10:40) . . . . .	1118
Idol-Wise (2008-04-30 16:04) . . . . .	1120
Assorted Links (2008-04-30 23:11) . . . . .	1120
3.5 May . . . . .	1121
The Aquatic Ape Hypothesis (2008-05-01 22:37) . . . . .	1121
Middle School Visit (2008-05-03 02:34) . . . . .	1135

The Twilight of Expertise (fugu liver removal) (2008-05-03 20:28) . . . . .	1136
My Theory of Human Evolution (autism ) (2008-05-05 00:27) . . . . .	1137
More Acne Self-Experimentation (2008-05-05 20:29) . . . . .	1140
Jane Jacobs and Chinese Restaurants (2008-05-05 21:41) . . . . .	1141
Assorted Links (2008-05-06 19:30) . . . . .	1143
Scaled-Up Self-Experimentation Proposed (2008-05-07 14:56) . . . . .	1144
The Greatness of Mondoweiss (2008-05-08 10:32) . . . . .	1145
Magazine Article of the Year (2008-05-08 21:34) . . . . .	1145
Should Those Who Are Part of the Problem Be Part of the Solution? (2008-05-09 06:49) . . . . .	1147
Calorie Learning: Better Design (2008-05-12 19:06) . . . . .	1148
John Tukey and the Shangri-La Diet (2008-05-13 15:40) . . . . .	1150
For Whom Do Law Schools Exist? (2008-05-13 23:29) . . . . .	1150
Assorted Links (2008-05-14 23:08) . . . . .	1152
If Weston Price Had Been a Dermatologist (2008-05-15 23:02) . . . . .	1152
Read-Off (2008-05-17 11:21) . . . . .	1153
Ditto Soda: Compliment or Coincidence? (2008-05-17 23:45) . . . . .	1154
What Do Iceland and Sierra Leone Have in Common? (2008-05-18 07:58) . . . . .	1155
Self-Experimentation and the Nicotine Patch (2008-05-18 10:09) . . . . .	1156
The China/Tourist Interface (2008-05-20 21:45) . . . . .	1157
Calorie Learning: Somewhat Better Design (2008-05-23 05:49) . . . . .	1158
How Amazon Computes Book Ranks (2008-05-23 17:27) . . . . .	1159
Blogging: Megaphone and Microscope (2008-05-24 09:49) . . . . .	1160
Anchorage = State of Being Anchored (2008-05-24 23:15) . . . . .	1161
How Things Begin (The Approval Matrix, part 1) (2008-05-25 04:59) . . . . .	1162
How Things Begin (The Approval Matrix, part 2) (2008-05-25 23:30) . . . . .	1163
Emily Nussbaum Interview Directory (2008-05-25 23:34) . . . . .	1164
Andrew Solomon on Autism (2008-05-26 21:01) . . . . .	1165
How Things Begin (The Approval Matrix, part 3) (2008-05-27 18:44) . . . . .	1166
How Things Begin (The Approval Matrix, part 4) (2008-05-30 00:11) . . . . .	1167
High School Graduation Confidential: Lack of Stories Speaks Volumes (2008-05-30 11:45) . . . . .	1168
How Things Begin (The Approval Matrix, part 5) (2008-05-31 23:31) . . . . .	1170
3.6 June . . . . .	1171
BB = Before Blogs (2008-06-01 05:24) . . . . .	1171
How Things Begin (The Approval Matrix, part 6) (2008-06-02 07:41) . . . . .	1172
How Things Begin (The Approval Matrix, part 7) (2008-06-03 04:06) . . . . .	1173

How Things Begin (The Approval Matrix, part 8) (2008-06-04 07:30) . . . . .	1174
Murakami, Baseball, and Inspiration (2008-06-05 18:31) . . . . .	1175
Assorted Links (2008-06-05 22:15) . . . . .	1176
FDA Acknowledges Risk of Teeth Fillings With Mercury (2008-06-06 07:22) . . . . .	1176
While They Slept (2008-06-06 23:10) . . . . .	1177
Jane Brody Misses Many Opportunities (2008-06-08 08:37) . . . . .	1178
Evidence Snobs (2008-06-08 17:30) . . . . .	1180
Lutein (2008-06-08 18:44) . . . . .	1180
Less Carbs -> Better Sleep? (2008-06-09 20:37) . . . . .	1181
The Ketogenic Diet (2008-06-10 06:19) . . . . .	1182
"My Advantage Was Ignorance" (2008-06-11 02:42) . . . . .	1183
Compound in Red Wine Has Effects Like Calorie Restriction (2008-06-12 03:07) . . . . .	1184
Why Entertainment Weekly Rules the World (2008-06-12 16:15) . . . . .	1185
Harvard Psychiatrists Don't Disclose Millions of \$\$ From Drug Companies (2008-06-12 19:22) . . . .	1187
Japanese Cover of The Shangri-La Diet (2008-06-13 05:44) . . . . .	1188
"I Can Has Skinny Pants" (2008-06-14 12:46) . . . . .	1189
Why Do We Touch Our Mouths So Much? (2008-06-15 10:46) . . . . .	1189
The Ketogenic Diet and Evidence Snobs (2008-06-15 22:26) . . . . .	1191
Crazy Spicing Works (At Least Once) (2008-06-16 21:44) . . . . .	1193
SLD in Indonesian (2008-06-17 07:14) . . . . .	1195
Dinner in an Amsterdam Banlieue (2008-06-17 23:24) . . . . .	1195
Bloggers Can Say the Truth (2008-06-18 09:42) . . . . .	1196
Why Do We Touch Our Mouths So Much? (continued) (2008-06-19 09:46) . . . . .	1197
They Will Know Us by Our YouTube Videos (2008-06-19 11:30) . . . . .	1199
Morning Light and Better Sleep (2008-06-20 06:35) . . . . .	1199
Assorted Links (2008-06-20 12:47) . . . . .	1200
Can You Change Something If You Don't Love It? (2008-06-21 12:01) . . . . .	1201
100 Pounds Lost on the Shangri-La Diet (2008-06-22 06:06) . . . . .	1202
Trailer » Movie (2008-06-22 23:35) . . . . .	1204
Scott Adams, Magnesium, and Knee Pain (2008-06-23 06:44) . . . . .	1205
The Paradox of Advice (2008-06-23 10:44) . . . . .	1206
Lessons Learned about Book Writing (2008-06-24 14:24) . . . . .	1209
The Cost of Demonization and How to Avoid It (2008-06-24 15:22) . . . . .	1209
to other (2008-06-24 21:19) . . . . .	1210
Science versus Engineering (2008-06-25 23:09) . . . . .	1210

	Shangri-La By Another Name? (2008-06-27 15:57) . . . . .	1212
	How Art School Reveals Human Nature (2008-06-27 22:43) . . . . .	1212
	The Difference Between Being Fat and Not Fat (2008-06-28 12:28) . . . . .	1214
	The Ketogenic Diet (continued) (2008-06-30 22:22) . . . . .	1218
	SLD Mania (2008-06-30 23:17) . . . . .	1220
3.7	July . . . . .	1221
	Is Childhood Obesity Due to Not Enough Exercise? (2008-07-01 21:54) . . . . .	1221
	SLD on TV (2008-07-03 16:58) . . . . .	1223
	My Theory of Human Evolution (Fourth of July) (2008-07-04 10:21) . . . . .	1224
	SLD: "A Lazy Person's Diet" (2008-07-04 23:37) . . . . .	1225
	Short Story of the Year (2008-07-06 15:07) . . . . .	1225
	Curious Coincidence (China Department) (2008-07-07 20:27) . . . . .	1226
	Chocolate is Good For You (2008-07-09 13:21) . . . . .	1227
	GrownChildCam: New Treatment For Depression? (2008-07-11 10:50) . . . . .	1229
	Fannie Mae and The Black Swan (2008-07-12 08:14) . . . . .	1230
	David Lawrence: Down 100 Pounds! (2008-07-13 07:22) . . . . .	1233
	SLD on TV (postmortem) (2008-07-14 06:08) . . . . .	1234
	Who I'd Like to Meet (2008-07-15 05:56) . . . . .	1237
	Should Those Who Are Part of the Problem Be Part of the Solution? (continued) (2008-07-15 23:24) . . . . .	1238
	Blog Power (three parts) (2008-07-16 06:42) . . . . .	1238
	Cheap vs. Expensive Wine (2008-07-16 10:20) . . . . .	1239
	Assorted Links (2008-07-17 20:48) . . . . .	1241
	Interview with Bruce Gray, Web-Savvy Sculptor (part 1) (2008-07-19 06:07) . . . . .	1242
	Nutrition and Physical Degeneration (2008-07-20 07:31) . . . . .	1248
	Errors in The Queen of Fats (2008-07-21 23:24) . . . . .	1250
	City of Berkeley Economics: The Value of Snobbery (2008-07-23 06:38) . . . . .	1257
	Slow Weed (2008-07-24 09:54) . . . . .	1259
	Interview with Bruce Gray, Web-Savvy Sculptor (part 2) (2008-07-25 09:14) . . . . .	1259
	Benfotiamine and Self-Experimentation: Surprising Results (2008-07-26 23:03) . . . . .	1262
	Interview with Bruce Gray, Web-Savvy Sculptor (part 3) (2008-07-28 21:13) . . . . .	1264
	More about Unreported Side Effects of Powerful Drugs (2008-07-29 22:57) . . . . .	1267
3.8	August . . . . .	1269
	Research Assistant Needed in Cognitive Science Lab (2008-08-01 09:20) . . . . .	1269
	The Bechdel Test and Denise Richards (2008-08-01 22:41) . . . . .	1269
	My Humor Research (2008-08-02 21:30) . . . . .	1271



How Should We Fight Infections? (2008-08-06 18:06) . . . . .	1273
If You Read Portuguese... (2008-08-07 07:44) . . . . .	1275
Unreported Side Effects of Powerful Drugs (part 3) (2008-08-07 20:06) . . . . .	1277
The Best Food Writing I've Read (2008-08-08 12:30) . . . . .	1278
Assorted Links (2008-08-10 09:10) . . . . .	1279
Everyday Humor (2008-08-10 22:08) . . . . .	1280
What Do Organizers Do? (2008-08-11 04:21) . . . . .	1281
The Undone Work: Electric Cars (2008-08-12 06:08) . . . . .	1282
Weston Price and the Olympics (2008-08-12 09:39) . . . . .	1283
Science in Action: Why Did I Sleep So Well? (2008-08-13 20:56) . . . . .	1283
The Professor Has No Clothes (2008-08-14 11:32) . . . . .	1286
Science in Action: Why Did I Sleep So Well? (part 2) (2008-08-15 09:14) . . . . .	1287
Science in Action: Why Did I Sleep So Well? (part 3) (2008-08-16 22:44) . . . . .	1289
Science in Action: Why Did I Sleep So Well? (part 4) (2008-08-17 05:45) . . . . .	1290
Steep Learning Curve (2008-08-18 19:14) . . . . .	1292
Science in Action: Why Did I Sleep So Well? (part 5) (2008-08-19 06:42) . . . . .	1293
Musical Question (2008-08-19 08:34) . . . . .	1294
The Quantified Self Meetup Group (2008-08-19 11:55) . . . . .	1295
HDL and Vitamin D (2008-08-19 22:09) . . . . .	1296
Science in Action: Why Did I Sleep So Well? (part 6) (2008-08-20 08:58) . . . . .	1296
Why Did I Sleep So Well? directory (2008-08-20 09:19) . . . . .	1297
Chocolate is Good For You (continued) (2008-08-21 00:04) . . . . .	1299
Citizen Science: What's Your Sushi? (2008-08-22 17:28) . . . . .	1300
Science in Action: Why Did I Sleep So Well? (part 7) (2008-08-23 05:56) . . . . .	1302
The Emperor's New Clothes: Meta-Analysis (2008-08-23 09:19) . . . . .	1303
Everything I Know I Learned from Japanese Curry Instructions (2008-08-24 06:06) . . . . .	1304
Suppose Your Book Gets a Great Review in the Times (2008-08-26 00:12) . . . . .	1306
Science in Action: Why Did I Sleep So Well? (part 8) (2008-08-27 06:11) . . . . .	1307
Suppose You Write the Times to Fix an Error (part 1) (2008-08-28 07:38) . . . . .	1308
Suppose You Write the Times to Fix an Error (part 2) (2008-08-29 06:53) . . . . .	1311
Science in Action: Why Did I Sleep So Well? (part 9) (2008-08-29 19:43) . . . . .	1316
The Best Blogs Are Very Good (2008-08-30 07:34) . . . . .	1316
Assorted Links (2008-08-31 10:19) . . . . .	1317
3.9 September . . . . .	1318
Science in Action: Why Did I Sleep So Well? (part 10) (2008-09-01 07:19) . . . . .	1318

Two Books about Memory Research (2008-09-02 07:05) . . . . .	1321
Science in Action: Why Did I Sleep So Well? (part 11) (2008-09-03 17:22) . . . . .	1321
Too Much Flaxseed Oil (2008-09-04 21:24) . . . . .	1324
Rudy Guiliani, Sarah Palin and Self-Experimentation (2008-09-06 09:57) . . . . .	1328
A Hidden Benefit of Self-Experimentation (2008-09-08 22:24) . . . . .	1329
Science in Action: Why Did I Sleep So Well? (part 12) (2008-09-09 21:36) . . . . .	1330
First Meeting of The Quantified Self Meetup Group (2008-09-11 12:41) . . . . .	1332
I Love This (2008-09-12 09:35) . . . . .	1338
If Your Comment Doesn't Appear (2008-09-12 19:10) . . . . .	1338
Science in Action: Why Did I Sleep So Well? (part 13) (2008-09-12 20:47) . . . . .	1339
The Case of the Missing Evidence (2008-09-13 10:20) . . . . .	1343
New Way to Lose Weight: Don't Eat Till Your Blood Sugar is Low Enough (2008-09-15 05:48) . . . . .	1351
Red State Blue State Rich State Poor State (2008-09-16 05:41) . . . . .	1353
Treadmill Desks (2008-09-17 11:55) . . . . .	1354
Do Genes Matter for Health? (2008-09-18 10:42) . . . . .	1356
Park(ing) Day in Berkeley (2008-09-19 21:55) . . . . .	1359
Science in Action: Why Did I Sleep So Well? (part 14) (2008-09-20 10:57) . . . . .	1359
Chocolate is Good For You (part 3) (2008-09-21 10:02) . . . . .	1361
Food Fact of the Day (2008-09-21 19:06) . . . . .	1362
Food versus Nutrients (2008-09-21 20:08) . . . . .	1362
Life Imitates Art School (2008-09-22 21:45) . . . . .	1364
How Could Epidemiologists Write Better Papers? (2008-09-23 09:29) . . . . .	1365
Fake Tans, Sun Blocks, and Self-Experimentation (2008-09-25 05:07) . . . . .	1366
Science in Action: Why Did I Sleep So Well? (part 15) (2008-09-25 06:14) . . . . .	1368
The Morning Banana Diet (2008-09-26 07:57) . . . . .	1370
Games and the Business of Life (2008-09-26 08:14) . . . . .	1373
A Little-Known Problem with Vegetarianism (2008-09-26 21:39) . . . . .	1374
How to Consume Flaxseed Oil (2008-09-27 09:41) . . . . .	1375
Announcing: A Wiki for the Shangri-La Diet (2008-09-27 10:18) . . . . .	1375
Most Drug-Cancer Studies Not Published (2008-09-27 15:34) . . . . .	1376
Science in Action: Why Did I Sleep So Well? (part 16) (2008-09-28 06:36) . . . . .	1376
Barack Obama Understands Jane Jacobs (2008-09-29 05:14) . . . . .	1378
Assorted Links (2008-09-29 15:50) . . . . .	1378
3.10 October . . . . .	1379
My Pleasantly-Strange Trip to Beijing (2008-10-01 13:23) . . . . .	1379

The Neglected Importance of Diversity (2008-10-02 07:01) . . . . .	1380
Proposed Book: How to Lie with Experimental Design (2008-10-02 09:11) . . . . .	1381
Diet and Acne (continued) (2008-10-03 11:23) . . . . .	1382
Beijing Public Transit Economics (2008-10-03 18:16) . . . . .	1385
Academic Horror Story (Emory University) (2008-10-05 03:52) . . . . .	1385
What Does It Say About Psychiatry? (2008-10-06 02:15) . . . . .	1386
Professor Charles Nemeroff Predicts the Future (2008-10-06 14:02) . . . . .	1387
Cheated Again! The 2008 Nobel Prize For Medicine (2008-10-06 14:09) . . . . .	1389
Chinese Cell Phone Economics (2008-10-07 19:15) . . . . .	1390
My New Job (2008-10-09 04:21) . . . . .	1391
A New Way to Prevent Migraines (2008-10-10 04:28) . . . . .	1391
Chinese Transportation Economics (continued) (2008-10-10 20:17) . . . . .	1394
A Few Things America Can Learn From China (2008-10-12 01:42) . . . . .	1395
How to Spot Incompetence (2008-10-14 02:23) . . . . .	1397
Amory Lovins Speaking in Berkeley (2008-10-14 13:51) . . . . .	1399
Live-Blogging the Presidential Debate (2008-10-15 18:58) . . . . .	1399
Live-Blogging the Presidential Debate (part 2) (2008-10-15 19:01) . . . . .	1400
Assorted Links (2008-10-17 05:29) . . . . .	1400
What Should Double-Blind Placebo-Controlled Trials Be Replaced With? (2008-10-17 05:31) . . . . .	1400
Learning Chinese in Beijing (2008-10-18 23:46) . . . . .	1402
Is Your Milk Safe? A Statistical Fable (2008-10-20 04:44) . . . . .	1403
Jane Jacobs on Experts (2008-10-22 07:16) . . . . .	1404
Dutch Unmentionables (2008-10-22 18:10) . . . . .	1404
Tsinghua versus Berkeley (2008-10-24 05:46) . . . . .	1405
My Chinese Cell Phone (2008-10-24 19:36) . . . . .	1408
Cold Jokes (2008-10-25 23:39) . . . . .	1409
Beijing Traffic (2008-10-26 00:15) . . . . .	1410
Interview with William Rubel, Food Historian (part 1) (2008-10-27 06:53) . . . . .	1410
Tsinghua versus Reed (2008-10-28 01:02) . . . . .	1412
Advances in the Shangri-La Diet (2008-10-28 16:11) . . . . .	1414
Beijing Traffic (more) (2008-10-30 01:57) . . . . .	1416
Unread Contracts (2008-10-31 05:00) . . . . .	1417
Who Steals Bikes? (2008-10-31 05:37) . . . . .	1417
3.11 November . . . . .	1418
My Beijing Life: The Surprises (2008-11-02 20:36) . . . . .	1418

Natural versus Unnatural Learning (2008-11-04 03:03) . . . . .	1419
Beijing Shopping (2008-11-04 17:35) . . . . .	1421
Watching the Election Returns (2008-11-05 04:36) . . . . .	1422
Science in Action: Why Did I Sleep So Well? (part 17) (2008-11-07 00:55) . . . . .	1423
How to Brew Tea (2008-11-08 19:33) . . . . .	1427
Flaxseed Oil Alert: Don't Take When Pregnant (2008-11-10 02:21) . . . . .	1428
A Nice Gesture (2008-11-10 07:08) . . . . .	1429
Special Days in China (2008-11-12 02:07) . . . . .	1430
Happiness in China: Who Wants to Be a Construction Worker? (2008-11-12 20:31) . . . . .	1430
Cargo-Cult Universities (2008-11-13 19:28) . . . . .	1431
Walking is to Driving as Idea Generation is to Idea Testing (2008-11-15 04:44) . . . . .	1432
Interview with William Rubel, Food Historian (part 2) (2008-11-15 23:03) . . . . .	1433
My Theory of Human Evolution (Chinese birthday gift) (2008-11-17 00:12) . . . . .	1435
Assorted Links (2008-11-17 06:50) . . . . .	1436
Flaxseed Oil Used to Treat Cancer (2008-11-17 22:50) . . . . .	1437
The Washing Machine Principle (2008-11-19 06:04) . . . . .	1438
Lohao City (2008-11-21 06:39) . . . . .	1441
English-Speaking Contest (2008-11-23 23:12) . . . . .	1442
Learning Chinese (2008-11-24 21:21) . . . . .	1443
The Four Abundances (2008-11-25 20:29) . . . . .	1443
Reciprocity in China (2008-11-26 15:02) . . . . .	1445
Moral Stages in Different Countries (2008-11-26 15:43) . . . . .	1451
Assorted Links (China edition) (2008-11-27 14:40) . . . . .	1451
Gary Taubes Answers Questions (2008-11-28 14:38) . . . . .	1452
What Makes A Good Student? (2008-11-30 18:37) . . . . .	1455
3.12 December . . . . .	1455
How Safe is Melamine? Is This Funny or Horrifying? (2008-12-01 03:26) . . . . .	1455
Self-Experimentation on Someone Else: Alzheimer's Disease (2008-12-01 14:55) . . . . .	1457
Unfortunate Obituaries: The Case of David Freedman (2008-12-02 14:59) . . . . .	1458
Making a Living in China (2008-12-03 13:44) . . . . .	1462
Marxism Studies at Tsinghua University (2008-12-04 16:26) . . . . .	1463
Bike Culture in Beijing (2008-12-05 07:27) . . . . .	1464
The Blog of a Girl Who Killed Herself (2008-12-05 13:11) . . . . .	1465
Assorted Links (2008-12-07 06:29) . . . . .	1467
Self-Experimentation and Strength Training (2008-12-07 17:42) . . . . .	1468

What Happens When a Professor is Wrong? (2008-12-08 01:23) . . . . .	1469
Cornell President Says Ivy League Schools Teach Students "To Think" (2008-12-09 17:00) . . . . .	1472
When is Science Helpful? (2008-12-10 05:18) . . . . .	1473
Assorted Links (mental health edition) (2008-12-11 04:50) . . . . .	1475
What's Appreciative Thinking? (2008-12-12 05:21) . . . . .	1476
A Book About Scientific Failure (2008-12-12 14:49) . . . . .	1481
Self-Experimentation by Anesthesiologists (2008-12-13 15:54) . . . . .	1482
Alternate-Universe Korean Food (2008-12-14 03:52) . . . . .	1483
Museum of Tap Water (2008-12-15 04:24) . . . . .	1484
Academic Horror Story (Virginia Tech) (2008-12-15 15:50) . . . . .	1485
How Bad is LDL Cholesterol? (2008-12-15 20:28) . . . . .	1485
What's Wrong with Patients Sharing Information? (2008-12-16 22:43) . . . . .	1489
Interview with William Rubel, Food Historian (part 3) (2008-12-17 20:32) . . . . .	1491
The Last Days of Old Beijing (2008-12-18 14:35) . . . . .	1495
Max Planck Institute Promotes Brothel (2008-12-18 21:33) . . . . .	1496
My Theory of Human Evolution (fixing bike pumps) (2008-12-19 15:34) . . . . .	1496
Chocolate is Good For You (part 4) (2008-12-20 16:47) . . . . .	1497
Are You Having Trouble Getting Grants? (2008-12-21 07:02) . . . . .	1498
Careful with the Sushi (2008-12-22 01:10) . . . . .	1500
Life Imitates Art School (part 2) (2008-12-22 14:57) . . . . .	1501
Experimental Journalism (2008-12-22 16:53) . . . . .	1502
The Twilight of Expertise (part 16: opticians) (2008-12-22 22:04) . . . . .	1503
100 Paper NY Times = 1 Heavy Textbook (2008-12-23 05:58) . . . . .	1504
A Second Opinion: You've Been Poisoned by Your Doctor (2008-12-24 01:04) . . . . .	1505
Charles Nemeroff Under Scrutiny (2008-12-24 13:41) . . . . .	1505
Another Link Between Better Sleep and Better Health (2008-12-24 21:02) . . . . .	1507
The Benefits of Standing: The Clear Vial on the Right (2008-12-25 18:16) . . . . .	1507
A Chinese Dinner Party (2008-12-26 23:26) . . . . .	1508
Chinese Takeout Beijing Style (2008-12-27 06:20) . . . . .	1509
Voodoo Correlations in Social Neuroscience (2008-12-28 07:39) . . . . .	1509
The Museum of Tap Water (part 2) (2008-12-28 14:55) . . . . .	1514
Corruption of Doctors by Drug Companies (2008-12-29 06:07) . . . . .	1515
A Self-Experimental Near-Miss (2008-12-29 22:55) . . . . .	1516
The Missing Heritability of Height (2008-12-30 18:42) . . . . .	1518
Beijing Shopping (photo mall) (2008-12-31 15:59) . . . . .	1519

<b>4</b>	<b>2009</b>	<b>1521</b>
4.1	January . . . . .	1521
	The End of Newspapers As We Know Them (2009-01-01 19:29) . . . . .	1521
	Assorted Links (2009-01-02 00:54) . . . . .	1521
	Folic Acid and Birth Defects (2009-01-02 20:23) . . . . .	1523
	Does Innovation Require Markets? (2009-01-03 05:29) . . . . .	1524
	Things That Work Much Better When Broken (part 2) (2009-01-04 04:55) . . . . .	1526
	Tracking How Well My Brain is Working (2009-01-05 02:54) . . . . .	1526
	The Turning Point (2009-01-05 04:40) . . . . .	1528
	Assorted Links (2009-01-06 05:53) . . . . .	1529
	Lipid Values after 2 Years on the Shangri-La Diet (2009-01-07 14:01) . . . . .	1529
	The Shangri-La Diet Hedonic Shift (2009-01-08 05:47) . . . . .	1531
	A Statistics Package in the News (2009-01-08 16:15) . . . . .	1532
	Kafkaesque Research Regulation (2009-01-08 23:32) . . . . .	1534
	Beijing Shopping (the Beijing Zoo) (2009-01-10 14:53) . . . . .	1535
	Vaccine Safety: A Debate (2009-01-11 16:03) . . . . .	1536
	How to Learn English (2009-01-13 12:48) . . . . .	1539
	Vaccine Safety: Is This the Best They Can Do? (2009-01-13 13:21) . . . . .	1540
	The Power Law of Scientific Dismissiveness (2009-01-14 06:33) . . . . .	1541
	Better Sleep, Fewer Colds (2009-01-15 14:13) . . . . .	1543
	Chinese Medicine and Sleep (2009-01-16 22:15) . . . . .	1544
	Assorted Links (2009-01-17 15:52) . . . . .	1547
	Beijing Shopping (stuff easy to get in Beijing but not Berkeley) (2009-01-18 07:56) . . . . .	1548
	How Things Begin (sparkling tea) (2009-01-18 21:24) . . . . .	1550
	How I Will Judge the Inauguration Speech (2009-01-19 20:15) . . . . .	1550
	Powdered Ice Cream (2009-01-20 18:12) . . . . .	1553
	Unforgettable Drink at the Fancy Food Show (2009-01-20 23:20) . . . . .	1554
	Probiotics and Your Immune System (2009-01-21 08:22) . . . . .	1554
	A Group Self-Experiment (2009-01-21 16:05) . . . . .	1556
	The Wisdom of the Rest of Us (2009-01-22 14:01) . . . . .	1557
	How Bad is LDL Cholesterol? (continued) (2009-01-22 22:50) . . . . .	1557
	Webware For Self-Tracking (2009-01-23 06:41) . . . . .	1558
	Butter: Bad or Good? (2009-01-23 06:57) . . . . .	1559
	Not the Same Study Section: How the Truth Comes Out (2009-01-24 09:07) . . . . .	1560
	A Brilliant Business: Selling Soap Nuts Online (2009-01-25 12:16) . . . . .	1562

Jane Jacobs' Influence (2009-01-26 08:02) . . . . .	1564
More Great Food at the Fancy Food Show (2009-01-26 12:09) . . . . .	1565
The Inuit Paradox (2009-01-26 22:33) . . . . .	1565
Interview with Leonard Mlodinow (part 1) (2009-01-28 11:35) . . . . .	1569
Leonard Mlodinow Interview Directory (2009-01-29 00:42) . . . . .	1570
Interview with Leonard Mlodinow (part 2) (2009-01-29 07:48) . . . . .	1571
What to Do about Beijing Air (2009-01-30 09:24) . . . . .	1572
John Updike, RIP (2009-01-30 10:30) . . . . .	1574
Shangri-La Diet on Facebook (2009-01-30 23:57) . . . . .	1575
Rotten Fish are Everywhere (2009-01-31 10:06) . . . . .	1576
Interview with Leonard Mlodinow (part 3) (2009-01-31 11:32) . . . . .	1576
4.2 February . . . . .	1578
Interview with Leonard Mlodinow (part 4) (2009-02-01 09:19) . . . . .	1578
Beyond the Shangri-La Diet (2009-02-01 12:14) . . . . .	1579
The Twilight of Expertise (medical doctors) (2009-02-01 22:01) . . . . .	1580
If Commercials Told Emotional Truth (2009-02-02 11:30) . . . . .	1584
Interview with Leonard Mlodinow (part 5) (2009-02-03 10:53) . . . . .	1585
Assorted Links (black-is-white internal milieu edition) (2009-02-03 19:09) . . . . .	1587
Interview with Leonard Mlodinow (part 6) (2009-02-04 17:47) . . . . .	1588
Bill Gates Completely Wrong (2009-02-05 17:59) . . . . .	1589
Yay, The New Yorker (2009-02-06 10:16) . . . . .	1591
Why Blog? Ask American Idol (2009-02-06 11:29) . . . . .	1592
Interview with Leonard Mlodinow (part 7) (2009-02-07 06:42) . . . . .	1592
Interview with Leonard Mlodinow (part 8) (2009-02-08 07:26) . . . . .	1594
Aaron Blaisdell Recommends (2009-02-08 23:36) . . . . .	1595
Interview with Leonard Mlodinow (part 9) (2009-02-09 23:05) . . . . .	1596
Standing, Sleep, and Stereotype Threat (2009-02-10 07:04) . . . . .	1598
Interview with Leonard Mlodinow (part 10) (2009-02-11 13:51) . . . . .	1600
Kickbacks in Academia (2009-02-11 22:27) . . . . .	1601
The Comforts of the Umami Hypothesis (2009-02-12 23:30) . . . . .	1602
Sports and Money: Not So Different (2009-02-14 09:24) . . . . .	1604
Interview with Leonard Mlodinow (part 11) (2009-02-15 08:39) . . . . .	1604
Assorted Links (2009-02-15 10:39) . . . . .	1605
Pagophagia and the Umami Hypothesis (2009-02-16 12:20) . . . . .	1606
Salt, Fermented Food, and Black-and-White Speak (2009-02-17 09:20) . . . . .	1607

The Unfortunate Saveur 100 (2009-02-17 11:04) . . . . .	1609
Interview with Leonard Mlodinow (part 12) (2009-02-18 08:46) . . . . .	1609
The Staggering Greatness of Homemade Yogurt (2009-02-18 23:16) . . . . .	1611
The Power of Amateur Content (2009-02-19 22:25) . . . . .	1615
Shades of Homeopathy! Peanut Allergy Cured . . . With Peanuts (2009-02-20 07:14) . . . . .	1616
Interview with Leonard Mlodinow (part 13) (2009-02-21 09:44) . . . . .	1617
Yay for Dambisa Moyo! (2009-02-21 23:53) . . . . .	1618
Waltz With Bashir (2009-02-22 15:02) . . . . .	1620
Shangri-La Diet Quote of the Day (2009-02-22 20:29) . . . . .	1621
A Yogurt Experiment: Effect of Preheating (2009-02-23 09:05) . . . . .	1622
Good Advice From Tim Hartford (2009-02-23 23:15) . . . . .	1623
Interview with Leonard Mlodinow (part 14) (2009-02-24 23:18) . . . . .	1624
"I Started Eating More Fermented Food..." (2009-02-26 20:37) . . . . .	1627
Interview with Leonard Mlodinow (part 15) (2009-02-27 12:33) . . . . .	1628
Practical Philosophy and American Idol (2009-02-27 15:21) . . . . .	1632
What One Economist Has Learned From the Financial Crisis (2009-02-28 10:50) . . . . .	1632
Will Like vs. Might Love vs. Might Hate (2009-02-28 21:54) . . . . .	1633
4.3 March . . . . .	1635
Nose-Clipping Works (2009-03-01 09:25) . . . . .	1635
Down With Weak Yogurt! (2009-03-01 22:28) . . . . .	1636
Another Benefit of Fermentation: Better Extraction of Nutrients (2009-03-02 13:31) . . . . .	1636
Assorted Links (2009-03-02 20:50) . . . . .	1637
Why Self-Experimentation? (2009-03-04 08:04) . . . . .	1638
More Benefits of Fermented Foods? (2009-03-05 00:59) . . . . .	1639
"I Started Eating More Fermented Food..." (continued) (2009-03-05 22:13) . . . . .	1640
Polyphasic Sleep (2009-03-06 23:32) . . . . .	1642
Hey, What Happened to My Brain? (part 1) (2009-03-07 21:30) . . . . .	1643
Language and Netbooks (2009-03-08 08:36) . . . . .	1645
Lie to Me (2009-03-08 21:54) . . . . .	1645
Assorted Links (2009-03-09 13:50) . . . . .	1647
Hey, What Happened to My Brain? (part 2) (2009-03-09 21:54) . . . . .	1648
Hey, What Happened to My Brain? (part 3) (2009-03-11 07:51) . . . . .	1650
Antibiotic Foods? (2009-03-11 20:04) . . . . .	1651
Great Moments in Magazine Journalism (2009-03-12 19:02) . . . . .	1653
Oral Health, Heart Disease, and Fermented Foods (2009-03-12 22:24) . . . . .	1653



Umami Burger (2009-03-13 20:17)	1655
Bees and Fermented Foods (2009-03-14 11:18)	1656
Where Does Umami Come From? (2009-03-15 23:24)	1657
Ode to Trader Joe's: Update (2009-03-17 10:47)	1658
Uncharitable (2009-03-18 21:26)	1660
The Singapore Borders and the Power of Books (2009-03-19 15:37)	1661
Bill of Attainder (2009-03-19 16:19)	1662
The Shangri-La Diet in Japan (2009-03-21 05:49)	1664
No Way Out (2009-03-21 06:42)	1665
Bacteria and Learning? (2009-03-22 07:01)	1666
Happiness, SLD-related (2009-03-22 15:06)	1667
Autism and Digestive Problems (2009-03-22 22:36)	1667
Plagiarism in Chinese Academia (2009-03-23 15:09)	1668
Truth in Advertising (2009-03-24 09:50)	1669
JAMA Editors Go Nuts (2009-03-24 23:28)	1669
Organize by Function (2009-03-25 22:33)	1671
What Did Eskimos Eat? (2009-03-26 11:10)	1672
Assorted Links (2009-03-26 18:58)	1674
Hanging Birds (2009-03-26 19:54)	1675
A Shangri-La Diet Skeptic's Log (2009-03-27 09:38)	1677
Scam-Recognition Training (2009-03-27 10:06)	1678
Natto Shopping (2009-03-28 05:01)	1678
Do They Eat Dogs? (2009-03-28 15:08)	1680
How Things Begin (I Got Uggs! update) (2009-03-28 22:40)	1681
The Nutrition Lesson Hidden in a Bowl of Miso Soup (2009-03-29 18:26)	1683
Natto Shopping (continued) (2009-03-30 18:18)	1685
4.4 April	1687
"Baffling" Link Between Autism and Vinyl Floors (2009-04-01 09:25)	1687
Coconut Oil and Alzheimer's Disease (2009-04-01 17:49)	1689
China and Electric Cars (2009-04-01 22:28)	1692
Fermented Food and Athlete's Foot (2009-04-02 19:52)	1693
Ask Google: "Easiest Way to Lose Weight" (2009-04-02 20:01)	1695
Human Evolution: The Curious Case of To Have (2009-04-03 14:25)	1695
Nobel-Prize Cluelessness (stomach ulcers) (2009-04-03 17:44)	1699
Fermented Good = Antibiotic Bad? (2009-04-05 10:36)	1702

Scary Effect of Food Irradiation (2009-04-06 12:12) . . . . .	1705
Shangri-La Diet on Good Morning America (2009-04-06 22:58) . . . . .	1706
metrics (2009-04-07 21:44) . . . . .	1707
The Hygiene Hypothesis (2009-04-07 22:31) . . . . .	1707
History Repeating Itself: Fear of Bacteria (2009-04-08 11:37) . . . . .	1708
The Hygiene Hypothesis (continued) (2009-04-08 16:52) . . . . .	1709
SLD Made Vivid (2009-04-08 21:41) . . . . .	1709
The Wisdom of the Five-Year-Old Picky Eater (2009-04-09 10:49) . . . . .	1710
Rejuvenation Company (interview) (2009-04-10 05:47) . . . . .	1712
To (Not) Catch A Thief (2009-04-14 15:07) . . . . .	1714
Another Reason to Eat Fermented Foods (2009-04-15 03:49) . . . . .	1715
Shangri-La Diet: Before and After (2009-04-15 04:22) . . . . .	1716
Dead Food = Always the Same (2009-04-15 05:23) . . . . .	1716
Brainwashing in High Places: Genes and Disease (2009-04-16 03:15) . . . . .	1718
Principles of Experimental Design (2009-04-16 04:05) . . . . .	1719
Judith Krug, RIP (2009-04-16 04:23) . . . . .	1721
Pets and Fermented Food (2009-04-17 04:48) . . . . .	1722
Sitting is Bad, New Research Suggests (2009-04-17 05:22) . . . . .	1722
The Fate of Laura (continued) (2009-04-17 20:17) . . . . .	1723
My Theory of Human Evolution (bells) (2009-04-18 02:29) . . . . .	1724
What about Multivitamins? (2009-04-19 03:33) . . . . .	1725
Food Expiration Dates: Reversal of Fortune (2009-04-19 20:15) . . . . .	1726
Live Foods at Whole Foods (2009-04-20 20:32) . . . . .	1727
Steve Levitt and John List Teach Experimentation to MBA Students (2009-04-21 03:49) . . . . .	1728
Ancient Non-Nutritional Wisdom: Morning Dance (2009-04-21 07:32) . . . . .	1728
Trying to Buy Expired Food (2009-04-22 20:19) . . . . .	1729
Trouble in Mouse Animal-Model Land (2009-04-23 03:34) . . . . .	1731
Would You Rather Have Lice or Eat Yogurt? (2009-04-24 05:01) . . . . .	1734
The Yogurt Prize: Who Gets It Most Wrong? (2009-04-24 18:12) . . . . .	1735
Live Food at Google? Nope (2009-04-24 21:55) . . . . .	1737
Jane Jacobs and Collapse (continued) (2009-04-25 19:58) . . . . .	1738
Omega-3 and Prostate Cancer (2009-04-28 04:18) . . . . .	1740
Eczema, Nighttime Cough, Antibiotics, and Fermented Food (2009-04-29 03:45) . . . . .	1741
Sleep and the Immune System (2009-04-29 08:25) . . . . .	1744
Parasites and Allergies (2009-04-30 02:20) . . . . .	1744

4.5	May . . . . .	1746
	Too-Effective Way to Lose Weight? (2009-05-01 03:41) . . . . .	1746
	How Could They Know? The Case of Healthy Gums (2009-05-02 04:16) . . . . .	1747
	Less of a Foodie (2009-05-04 10:43) . . . . .	1750
	Department of Self-Congratulation (The New Yorker) (2009-05-05 22:03) . . . . .	1750
	Screenings of the movie FRESH (2009-05-06 07:18) . . . . .	1751
	How to Cook Hamburger: Let it Rot First (2009-05-06 07:50) . . . . .	1751
	The South Asian Paradox (2009-05-06 10:39) . . . . .	1752
	The Fantasy of Fresh (2009-05-06 17:25) . . . . .	1752
	The Experts Speak: Nutrition (2009-05-07 05:47) . . . . .	1754
	Fermentation Basics: Using Yogurt (2009-05-07 08:12) . . . . .	1756
	Assorted Links (New York City) (2009-05-07 16:46) . . . . .	1757
	Spring at Tsinghua University (2009-05-08 05:40) . . . . .	1758
	Mosquitoes Praise Fermented Food (2009-05-09 04:44) . . . . .	1758
	Academic Horror Story (Reed College) (2009-05-09 16:20) . . . . .	1759
	The Good Scots Diet (2009-05-09 19:10) . . . . .	1762
	The Wisdom of the One-Year-Old Picky Eater (2009-05-10 06:59) . . . . .	1763
	Antibiotics Associated with Later Infection (2009-05-10 20:35) . . . . .	1766
	How Things Begin (Japan Traditional Foods) (2009-05-12 07:36) . . . . .	1766
	Assorted Links (Elsevier scandal) (2009-05-12 11:51) . . . . .	1770
	If You Have Multiple Sclerosis (2009-05-12 18:00) . . . . .	1770
	The Dose-Response Revolution and Fermented Food (2009-05-12 19:01) . . . . .	1770
	The Twilight of Expertise (psoriasis treatment) (2009-05-13 16:42) . . . . .	1772
	Measuring My Brain Function: One-Finger Typing (2009-05-14 16:09) . . . . .	1773
	Probiotics and Resistance to Illness (2009-05-14 22:44) . . . . .	1774
	Fementation Festival Tomorrow Near Sonoma (2009-05-15 11:02) . . . . .	1776
	How Fast Do We Rot? (2009-05-16 05:49) . . . . .	1776
	When Did the New York Times Start Asking Abusive Questions? (2009-05-17 05:48) . . . . .	1779
	Probiotics Reduce Postpartum Obesity (2009-05-17 09:07) . . . . .	1780
	What Causes Asthma? Not What the Tovers Think (2009-05-20 07:07) . . . . .	1780
	Learning To Read Chinese (2009-05-21 09:05) . . . . .	1783
	Yogurt Popularizer Dies: Note How Old He Was (2009-05-21 09:49) . . . . .	1784
	Worm Therapy (2009-05-23 09:30) . . . . .	1785
	Kimchi Power? (2009-05-24 06:49) . . . . .	1786
	Addiction Transfer: Food to Alcohol (2009-05-24 07:24) . . . . .	1788

Delicious: Roasted Salted Flax Seeds (2009-05-24 10:51) . . . . .	1789
How the Truth Comes Out (continued) (2009-05-25 03:43) . . . . .	1790
The Naysayers (2009-05-25 20:19) . . . . .	1790
How to Become Oxford Professor of Poetry (2009-05-25 21:41) . . . . .	1792
The Opposite of Naysayers (2009-05-26 18:19) . . . . .	1793
Can Probiotics Prevent Asthma? (2009-05-26 18:56) . . . . .	1793
Assorted Links (2009-05-27 13:15) . . . . .	1794
Microwaves and Microbes (2009-05-27 20:56) . . . . .	1795
The Death of Advertising? No Way (2009-05-28 06:48) . . . . .	1796
The American Health Paradox: What Causes It? (2009-05-29 08:29) . . . . .	1798
Human Sonar and Self-Experimentation (2009-05-30 06:28) . . . . .	1802
Yogurt Power (2009-05-31 08:23) . . . . .	1803
4.6 June . . . . .	1805
Strip Clubs and Research Universities (2009-06-01 21:07) . . . . .	1805
More Benefits of Fermented Foods (2009-06-02 09:12) . . . . .	1806
A Book About the Value of Fermented Foods (2009-06-02 09:58) . . . . .	1808
The Nutritional Wisdom of Young Chicks (2009-06-02 11:26) . . . . .	1808
The Effects of Institutionalization on Children (2009-06-03 06:33) . . . . .	1809
Assorted Links (2009-06-04 06:13) . . . . .	1811
Canker Sores Prevented by Omega-3? (2009-06-04 12:09) . . . . .	1811
What Does Profound Stagnation Look Like? (2009-06-05 12:12) . . . . .	1814
Yes, Canker Sores Prevented (and Cured) by Omega-3 (2009-06-06 10:31) . . . . .	1816
Homemade Kombucha: What I've Learned (part 1) (2009-06-07 18:40) . . . . .	1821
Bay Area Fermentation (2009-06-08 12:56) . . . . .	1823
A Little Knowledge about Obesity is a Dangerous Thing (2009-06-10 09:36) . . . . .	1824
How Safe are Vaccines? (2009-06-10 23:36) . . . . .	1825
Self-Tracking: What I've Learned (2009-06-12 09:41) . . . . .	1827
Extreme Medical Tourism (2009-06-12 21:20) . . . . .	1829
The American Health Paradox: What Causes It? (continued) (2009-06-13 05:39) . . . . .	1830
The Fall of GM (2009-06-14 06:32) . . . . .	1833
Assorted Links (2009-06-14 10:20) . . . . .	1834
Relief for Ankylosing Spondylitis (2009-06-15 15:20) . . . . .	1835
Hangnails Cured by Fermented Food? (2009-06-15 20:49) . . . . .	1835
Homemade Kombucha: What I've Learned (part 2) (2009-06-16 19:53) . . . . .	1837
Homemade Yogurt: What I've Learned (2009-06-17 13:00) . . . . .	1839

Scott Adams Accidentally Does the Shangri-La Diet (2009-06-18 09:57) . . . . .	1842
Acne Gone Thanks to Self-Experimentation (2009-06-19 08:57) . . . . .	1843
Fermented Food in Africa (2009-06-19 15:40) . . . . .	1849
Ray Bradbury is Unclear on the Concept (2009-06-20 06:31) . . . . .	1850
Wise Government: San Francisco Subsidizes Solar Power (2009-06-20 19:30) . . . . .	1851
Scorpion Stings, Bee Stings, and the Umami Hypothesis (2009-06-21 22:17) . . . . .	1854
Smart Spam (2009-06-21 23:09) . . . . .	1856
One Woman's Shangri-La Diet (2009-06-22 14:59) . . . . .	1856
The Pashler-Roberts Law: Expense versus Honesty (2009-06-23 06:11) . . . . .	1858
Gmail as Ponzi Scheme (2009-06-23 11:49) . . . . .	1859
Acne Self-Experimentation: Why It's Promising (2009-06-24 23:29) . . . . .	1861
A Perfect Storm of Airport Improvements (2009-06-25 12:47) . . . . .	1863
The Story of Hyundai: A Lesson in Public Speaking (2009-06-26 07:24) . . . . .	1864
Less Popular than Jesus (2009-06-27 06:57) . . . . .	1865
Flaxseed Oil and Better Shaving (2009-06-27 22:31) . . . . .	1866
Why One Student Loves Tsinghua University (2009-06-28 21:08) . . . . .	1867
Probably Not Placebo (2009-06-30 06:34) . . . . .	1868
Shangri-La Diet for Pets (2009-06-30 15:21) . . . . .	1868
The Trip of 100 Pounds Lost: How Did it Begin? (2009-06-30 22:33) . . . . .	1869
4.7 July . . . . .	1870
Michael Bailey on Michael Jackson's Sexuality (2009-07-01 06:24) . . . . .	1870
Fermented Art, Beijing Style (2009-07-02 07:49) . . . . .	1873
How Much Should We Trust Clinical Trials? (2009-07-02 20:32) . . . . .	1874
Teaching Kids to Cook (2009-07-03 15:40) . . . . .	1877
SLD on Twitter? (2009-07-04 19:29) . . . . .	1877
Tucker Max on Law School (2009-07-04 19:37) . . . . .	1878
Progress Announced in Scurvy Research (2009-07-05 10:24) . . . . .	1879
Refrigerator Parents (2009-07-08 21:23) . . . . .	1881
Homemade Kombucha: The Hard Part Made Easy (2009-07-09 14:58) . . . . .	1882
Modern Veblen: Kathy Griffin Tells the Truth (2009-07-09 20:12) . . . . .	1883
The Wisdom of Young Picky Eaters (2009-07-10 09:50) . . . . .	1885
Yogurt Associated With Less Allergies (2009-07-11 09:14) . . . . .	1886
John Tukey and GPS (2009-07-11 20:31) . . . . .	1887
Shangri-La Diet Quote of the Day (2009-07-12 09:25) . . . . .	1888
Easy versus Hard: Hunting, Agriculture, Etc. (2009-07-12 12:15) . . . . .	1888

Antibiotics and Debt: Sources of Weakness (2009-07-13 15:40)	1891
Genes Or Environment . . . Or Environment? (2009-07-14 06:29)	1892
Assorted Links (2009-07-14 12:23)	1894
The Twilight of Expertise (mothers) (2009-07-14 16:57)	1895
Margaret Meklin Wins Russian Prize (2009-07-15 12:12)	1896
The Wonders of Turmeric (2009-07-15 20:53)	1896
One Crazy Diet (2009-07-16 07:02)	1898
Poorly Made in China (2009-07-17 09:55)	1899
The Epistemology of Academia (2009-07-18 16:06)	1900
Living Without (2009-07-18 16:18)	1901
Where Do Foodies Come From? (2009-07-19 03:23)	1902
What Else Causes Acne? (2009-07-20 19:46)	1904
Acne.com versus Acne.org (2009-07-21 10:11)	1906
JAMA Editors Continue to Display Staggeringly Poor Judgment (2009-07-22 23:03)	1908
Acid Reflux Cured by Kombucha? (2009-07-24 21:48)	1909
Tsinghua Dumplings (2009-07-25 23:07)	1912
More About Turmeric (2009-07-26 10:23)	1912
Academic Horror Story (Stanford University) (2009-07-26 15:47)	1913
Do They Eat Dogs? (Continued) (2009-07-27 11:46)	1915
What I'm Looking Forward to Reading (2009-07-28 09:43)	1916
The Mother of an Autistic Child Writes... (2009-07-29 01:08)	1917
Autism and Digestive Problems (2009-07-29 23:15)	1918
Does Bad Medicine Drive Out Good? The Case of Eczema (2009-07-31 18:46)	1920
4.8 August	1922
Andrew Gelman on Writing (2009-08-01 06:54)	1922
The Blue Sweater (2009-08-01 16:37)	1923
Gamesinwelt.com Scam (2009-08-02 12:55)	1924
Assorted Links (2009-08-02 15:56)	1935
Did Genghis Khan Read Weston Price? (2009-08-03 04:20)	1935
Edward Jay Epstein (2009-08-03 20:08)	1936
A Complaint About College (2009-08-03 23:44)	1937
Bees and Kombucha (2009-08-04 19:49)	1938
Lucky Journalist of the Year (2009-08-04 22:01)	1940
Bacteria-Free Mice (2009-08-05 15:56)	1940
Sentence of the Day (2009-08-06 07:47)	1941

Genius of Common Sense (2009-08-06 23:08) . . . . .	1942
Probiotics Prevent Colds (2009-08-07 22:07) . . . . .	1942
Jane Jacobs and the Trouble with Medicine (2009-08-08 04:48) . . . . .	1944
Not All Probiotics are Wonderful (2009-08-08 15:32) . . . . .	1946
The Umami Hypothesis and the Meaning of Co-Morbidity (2009-08-09 04:51) . . . . .	1947
Acid Reflux Cured by Kombucha? Yes (2009-08-10 11:01) . . . . .	1948
A Little-Known Bad Thing about Kombucha (2009-08-10 18:50) . . . . .	1951
Shaved Head, Good Coffee, and the Shangri-La Diet (2009-08-11 07:42) . . . . .	1952
Acne Treatment Statistics (2009-08-11 11:18) . . . . .	1952
Probiotic Pills: Minus and Plus (2009-08-12 10:50) . . . . .	1953
Assorted Links (2009-08-12 15:53) . . . . .	1954
Why Do Children Pick Their Nose? (2009-08-13 09:30) . . . . .	1955
HeartScan (2009-08-13 23:07) . . . . .	1956
This Blog Reduces Sinus Congestion (2009-08-15 05:55) . . . . .	1957
Dietary Self-Selection by Young Children (2009-08-16 08:45) . . . . .	1958
How to Avoid Infection: Something I Didn't Know (2009-08-17 12:49) . . . . .	1960
Fifteen-Thousand-Page Theorem (2009-08-17 21:51) . . . . .	1961
The Financial System and the Immune System (2009-08-19 13:10) . . . . .	1961
Noseclipping Diary (2009-08-19 22:03) . . . . .	1966
The Shangri-La Diet in Japan (2009-08-21 13:23) . . . . .	1967
Tourist Humor (2009-08-22 06:24) . . . . .	1967
PayPal, the [Empty Promise] Way to Pay (2009-08-22 13:08) . . . . .	1967
Cool New Products in Tokyo (2009-08-23 06:05) . . . . .	1969
Japanese Ice Ouca versus Bi-Rite Creamery (2009-08-23 15:29) . . . . .	1970
Gamesingate.com Scam (2009-08-24 01:55) . . . . .	1970
Signage Features of the Toyko Subway System Inexplicably Missing Elsewhere (2009-08-24 02:17) . .	1977
The Appendix and the Umami Hypothesis (2009-08-25 21:41) . . . . .	1977
If You Have Carpal Tunnel Syndrome... (2009-08-26 16:45) . . . . .	1979
"Kombucha Reconsidered" (2009-08-28 02:51) . . . . .	1980
Spectacle Practice (2009-08-28 18:47) . . . . .	1982
Hormesis Revisited (2009-08-29 18:32) . . . . .	1982
Student Power (2009-08-30 17:09) . . . . .	1984
National Fisheries Institute: Stop Misleading Us (2009-08-31 03:22) . . . . .	1986
Beijing Air: Not Dirty Enough (2009-08-31 15:39) . . . . .	1988
4.9 September . . . . .	1989

Revenge is Sweet (2009-09-01 16:02) . . . . .	1989
Infectious Disease Specialist Ignores the Immune System (2009-09-02 16:04) . . . . .	1990
Cooking in China (2009-09-02 20:19) . . . . .	1992
Why Do Cats Lick Themselves? (2009-09-03 18:10) . . . . .	1992
This Blog Reduces Sinus Congestion (continued) (2009-09-04 17:09) . . . . .	1994
The SLD Effect (2009-09-04 18:13) . . . . .	1995
How Things Begin: The Fleming Fund (2009-09-05 18:57) . . . . .	1996
Art Imitating Life (Jane Jacobs Edition) (2009-09-06 04:28) . . . . .	1997
The Dimensionality of Tsinghua Students (2009-09-06 16:51) . . . . .	1998
What One American Thinks of Beijing (2009-09-07 19:19) . . . . .	1999
New Yorker Slackers (2009-09-08 14:58) . . . . .	2000
Myshoppingsun.com Scam (2009-09-09 17:00) . . . . .	2000
Med School Profs As Drug Company Lackeys (2009-09-09 17:13) . . . . .	2001
Does H. Pylori Cause Stomach Ulcers? (2009-09-10 16:34) . . . . .	2002
More Med School Profs Behaving Badly: Professor Lila Nachtigall (2009-09-11 06:33) . . . . .	2006
More Schoolgirl Science (2009-09-11 20:43) . . . . .	2006
Perverse Incentives in Medicine (2009-09-12 16:47) . . . . .	2008
More about the Effects of Flaxseed Oil (2009-09-13 16:28) . . . . .	2009
Assorted Links (2009-09-14 05:49) . . . . .	2010
Advances in Cooking: Chocolate Chip Cookies (2009-09-14 07:31) . . . . .	2011
Are We Running Out of Omega-3? (2009-09-14 18:23) . . . . .	2012
Beijing Wal-Mart (2009-09-15 17:03) . . . . .	2014
How Dangerous Are Cell Phones? (2009-09-16 17:22) . . . . .	2018
Best Thing About Learning Chinese (2009-09-17 18:49) . . . . .	2019
The Ethical Stupidity of Med School Professors: Plagiarism Very Very Bad, Ghostwriting Okay (2009-09-18 06:20) . . . . .	2019
What Causes Hypothyroidism? (2009-09-19 06:07) . . . . .	2020
How to Talk to Strangers (2009-09-20 12:42) . . . . .	2021
Advances in Nose-Clipping: A New Use For Pantyhose (2009-09-21 01:45) . . . . .	2022
The Financial Crisis and Self-Experimentation (2009-09-21 04:51) . . . . .	2023
Tsinghua Curiosities: First Day of Class (2009-09-22 02:28) . . . . .	2024
NYU Begins to Look Very Bad (2009-09-22 14:10) . . . . .	2025
Why are the Japanese Healthier than Americans? (2009-09-23 06:47) . . . . .	2025
Anti-Depressants Associated With Birth Defects (2009-09-23 22:47) . . . . .	2028
Chinese High Schools (2009-09-25 02:03) . . . . .	2030
Smoking and SLD: "Maybe the Shangri-La Diet Curbs All Kinds of Appetites?" (2009-09-25 15:52) . . . . .	2030



Sleep and Standing on One Foot (2009-09-26 06:52) . . . . .	2031
A Problem With Soft Drinks (2009-09-27 00:41) . . . . .	2032
Exercise and Its Confounds: The London Bus Study (2009-09-28 06:31) . . . . .	2033
Effects of Probiotics on Kids (2009-09-29 02:13) . . . . .	2035
Health Care: Why Problems Have Piled Up Unsolved (2009-09-29 04:49) . . . . .	2036
Deliberate Anachronism in Mad Men? (2009-09-29 17:10) . . . . .	2037
Myshoppingsun.com Scam (continued) (2009-09-30 01:26) . . . . .	2038
In Academia, High Status = Useless (2009-09-30 06:42) . . . . .	2039
What the Government – Any Government – Isn't Telling You About Swine Flu (2009-09-30 20:09) . .	2040
Bad Review of the Shangri-La Diet (2009-09-30 23:32) . . . . .	2043
4.10 October . . . . .	2044
Sour Fish Soup (2009-10-01 21:59) . . . . .	2044
Chinese Yogurt Maker (2009-10-02 06:29) . . . . .	2044
Miso Shopping in Beijing (2009-10-03 04:12) . . . . .	2046
Gatekeeper Drugs: Drugs that Require Gatekeepers (2009-10-03 06:58) . . . . .	2047
Rent Seeking and Our Health-Care System (2009-10-03 16:58) . . . . .	2049
Beijing Subway Security in Action (2009-10-03 18:12) . . . . .	2050
Hidden Bonus of the L Prize: Better Sleep, Better Mood (2009-10-04 23:55) . . . . .	2050
Probiotic Health Claims Dismissed (2009-10-05 00:26) . . . . .	2052
Slaves of California (2009-10-05 04:06) . . . . .	2052
China and Tibet: The Other Side (2009-10-05 16:47) . . . . .	2053
"Very Happy" (2009-10-05 22:43) . . . . .	2056
Instant Willpower (2009-10-07 05:03) . . . . .	2057
Yogurt-Making Results (2009-10-07 05:40) . . . . .	2057
Modern Biology = Cargo-Cult Science? (2009-10-08 01:36) . . . . .	2061
Yogurt and Seasonal Allergies (2009-10-08 23:52) . . . . .	2065
Book Recommendations: Hedges, Yes, Dalai Lama, No (2009-10-09 18:23) . . . . .	2065
The Monster Is Asleep (2009-10-10 19:27) . . . . .	2069
How to Eliminate/Prevent a Skin Infection and What It Means (2009-10-11 11:24) . . . . .	2070
How to Eliminate/Prevent a Skin Infection and What It Means (continued) (2009-10-13 13:54) . . . .	2075
Secrets of Infomercials (2009-10-14 13:14) . . . . .	2078
More About Faces and Mood (2009-10-15 07:46) . . . . .	2080
The Price of an Unnecessary Operation (2009-10-16 04:21) . . . . .	2083
Beijing Air (2009-10-16 14:14) . . . . .	2083
Fire Your Doctor! (2009-10-17 06:07) . . . . .	2084

The Bike: X Invented It. Y Perfected It. (2009-10-19 01:36) . . . . .	2085
What Do Officer and Anchorage Have in Common? (2009-10-19 16:59) . . . . .	2086
Cosmic Radiation Makes Trees Grow Faster (2009-10-20 12:36) . . . . .	2086
Med School Interview Questions (2009-10-20 18:59) . . . . .	2088
Interview with Professor David Jentsch about Not Taking Drug Company Money (2009-10-21 13:36)	2089
eConspicuous Waste (2009-10-22 12:28) . . . . .	2091
How Effective are Flu Vaccines? (2009-10-23 15:19) . . . . .	2092
Bryan Caplan on Barbara Ehrenreich (2009-10-24 01:56) . . . . .	2093
Effect of Animal Fat on Sleep? (2009-10-24 13:33) . . . . .	2094
The Campaign Against Medical Hypotheses (2009-10-24 19:30) . . . . .	2099
Use of Probiotics in Hospitals (2009-10-25 15:54) . . . . .	2101
Winter Swimming (2009-10-26 07:31) . . . . .	2103
Evidence-Based Medicine (2009-10-26 17:16) . . . . .	2105
The Alternate Universe of Fermented Foods (2009-10-28 05:45) . . . . .	2106
Too Big to Fail (2009-10-28 15:15) . . . . .	2107
Reduced Diversity of Fecal Bacteria Correlated with Diaper Rash (2009-10-30 06:28) . . . . .	2109
Who is "Totally Healthy"? (2009-10-30 17:44) . . . . .	2109
"Some of Them Will Have the Wrong Answer" (2009-10-31 08:26) . . . . .	2111
Effect of Animal Fat on Sleep (more) (2009-10-31 18:01) . . . . .	2111
4.11 November . . . . .	2116
Emily Nussbaum Has a Blog (2009-11-02 01:49) . . . . .	2116
Black-and-White Thinking: An Example (2009-11-02 02:22) . . . . .	2117
Ben Casnocha on China (2009-11-03 05:02) . . . . .	2117
Sickness After Starting to Eat Yogurt (2009-11-04 02:33) . . . . .	2119
UCLA: Livers For Sale (2009-11-04 05:00) . . . . .	2121
Dietary Fat and the Brain (2009-11-04 20:04) . . . . .	2124
Nassim Taleb on Incompetent Experts (2009-11-05 18:42) . . . . .	2125
Jiaweishop.com Scam (2009-11-06 19:06) . . . . .	2128
Why Are Colds and Flu More Common in Winter? (2009-11-07 12:14) . . . . .	2131
Assorted Links (2009-11-07 12:21) . . . . .	2134
How to Base Medicine on Evidence (2009-11-07 12:59) . . . . .	2134
Saturated-Fat Epidemiology (2009-11-07 22:15) . . . . .	2135
Preventing Childhood Asthma (2009-11-08 11:41) . . . . .	2141
FDA Hid Research Showing that Aspartame is Dangerous (2009-11-10 06:57) . . . . .	2141
More Animal Fat, Better Sleep (2009-11-10 15:44) . . . . .	2144

Three Things Elizabeth Kolbert Doesn't Know (2009-11-11 05:41) . . . . .	2146
Mistaken Consensus in Physics? (2009-11-13 02:44) . . . . .	2152
The Parable of the Wii (2009-11-14 13:56) . . . . .	2156
More Black-and-White Thinking (2009-11-15 22:40) . . . . .	2158
A Chinese Joke (2009-11-16 07:08) . . . . .	2161
Leonard Mlodinow on Wine Experts (2009-11-16 15:06) . . . . .	2161
Dance Dance Revolution (2009-11-16 21:05) . . . . .	2162
Gatekeeper Syndrome (2009-11-17 13:48) . . . . .	2163
Pfizer, After Having Its Way with the Good Citizens of New London ... (2009-11-18 00:44) . . . . .	2166
Chatting With a Gmail Hacker (2009-11-18 05:59) . . . . .	2167
The Return of Charles "Disgraced" Nemeroff (2009-11-18 14:55) . . . . .	2173
Pork Scrap (2009-11-18 16:39) . . . . .	2173
Best TV Season Ever (2009-11-19 04:15) . . . . .	2174
Obesity and Your Commute (2009-11-19 12:17) . . . . .	2175
Depression and Insomnia Linked at CureTogether (2009-11-20 01:26) . . . . .	2177
In Your Wheelhouse (2009-11-20 02:16) . . . . .	2179
BoingBoing on Natto (2009-11-20 12:56) . . . . .	2180
Acid Reflux is Immune Problem, Says Rat Study (2009-11-21 06:55) . . . . .	2181
Interview with Tyler Cowen (2009-11-21 18:03) . . . . .	2183
Splenda Reduces Gut Bacteria in Rats (2009-11-22 14:39) . . . . .	2185
Breakthrough in Treating MS (2009-11-23 04:15) . . . . .	2188
A Fourth Thing Elizabeth Kolbert Didn't Know (2009-11-24 07:21) . . . . .	2190
A Disease of Wealth in Squirrels (2009-11-24 14:18) . . . . .	2194
Benefits of Kefir: N=1 (2009-11-25 04:13) . . . . .	2195
More About What Causes MS (2009-11-25 18:02) . . . . .	2197
Assorted Links (2009-11-26 13:50) . . . . .	2198
Senator Grassley Asks Med Schools Their Policies On Ghostwriting (2009-11-26 19:02) . . . . .	2198
F.lux (2009-11-27 05:10) . . . . .	2200
Congratulations, Andrew Rivkin (2009-11-28 07:25) . . . . .	2200
Kombucha Reduces Free Radicals (2009-11-29 15:26) . . . . .	2205
A Clue About How To Sleep Better (2009-11-30 03:10) . . . . .	2205
The Hygiene Hypothesis, Pro and Con (2009-11-30 04:56) . . . . .	2208
4.12 December . . . . .	2210
ClimateGate: An Inside Job? (2009-12-01 17:26) . . . . .	2210
Climategate: Its Educational Value (2009-12-02 05:32) . . . . .	2211

Climategate: Its Educational Value (continued) (2009-12-02 13:26) . . . . .	2216
Philip Greenspun on Universities (2009-12-03 04:38) . . . . .	2218
Nature Editorializes on Climategate (2009-12-03 06:57) . . . . .	2221
Foot Fungus Cured With Socks (2009-12-03 14:36) . . . . .	2222
The Parable of the Children's Book (2009-12-03 17:27) . . . . .	2224
What I've Learned From Climategate (So Far) (2009-12-04 21:47) . . . . .	2227
Associative Memory Studied by Self-Experimentation (2009-12-05 02:51) . . . . .	2230
Three Chinese Jokes (2009-12-05 08:08) . . . . .	2230
Aynsley Kellow on Climategate (2009-12-06 03:30) . . . . .	2231
My Theory of Japanese Aesthetics (2009-12-07 03:07) . . . . .	2234
How the National Multiple Sclerosis Society Harms MS Patients (2009-12-08 05:57) . . . . .	2235
Lightsinshop.Com Scam (2009-12-08 23:36) . . . . .	2239
Physicists Disagree about Climate Change (2009-12-09 00:02) . . . . .	2240
The Most Promising Solutions to the Allergy Epidemic (2009-12-09 07:44) . . . . .	2246
Acidophilus Pearls versus Fermented Food (2009-12-09 20:56) . . . . .	2247
Will Sea Levels Rise? (2009-12-11 07:27) . . . . .	2249
Not Being Your Own Doctor Can Be Dangerous (2009-12-12 05:21) . . . . .	2250
Two Types of Yogurt (2009-12-13 07:18) . . . . .	2252
Interview with Seth Roberts (2009-12-13 23:14) . . . . .	2253
How I Write Letters of Recommendation (2009-12-15 01:49) . . . . .	2255
The Wisdom of Tsinghua Freshmen (2009-12-17 06:01) . . . . .	2256
Review of Other Diets (2009-12-17 15:37) . . . . .	2258
The New Yorker Reading List (2009-12-17 17:51) . . . . .	2258
Assorted Links (2009-12-18 17:25) . . . . .	2260
MSG and Nightmares (2009-12-18 18:38) . . . . .	2260
Appreciative Thinking and Buddhism (2009-12-19 15:20) . . . . .	2263
Tsinghua Student Life (2009-12-20 12:16) . . . . .	2264
Michael Perelman on the Purpose of College (2009-12-21 14:36) . . . . .	2265
Modern Biology = Cargo-Cult Science (continued) (2009-12-22 13:19) . . . . .	2266
William Penn Accidentally Signs Away Pennsylvania (2009-12-23 14:47) . . . . .	2271
Sometimes Black Really Is White (2009-12-24 14:26) . . . . .	2273
Stupid Noodle Restaurant (2009-12-25 13:57) . . . . .	2274
MSG and Nightmares (continued) (2009-12-26 16:12) . . . . .	2274
James Michener Anticipates Me (2009-12-27 15:12) . . . . .	2276
Chimamanda Adichie on Academia (2009-12-28 15:54) . . . . .	2278

Science of Everyday Life: Why "Boys and Girls"? Why Not "Girls and Boys"? (2009-12-29 14:14) . . .	2280
Why I Love the Internet (2009-12-30 13:31) . . . . .	2283
The Unwisdom of John Mackey (2009-12-31 15:56) . . . . .	2285
Assorted Links (2009-12-31 19:23) . . . . .	2287
<b>5 2010</b>	<b>2289</b>
5.1 January . . . . .	2289
The Door-in-the-Face Effect (2010-01-01 05:08) . . . . .	2289
Academic Horror Story (Harvard University) (2010-01-01 15:21) . . . . .	2289
The Accidental Influential (2010-01-03 15:32) . . . . .	2294
Psychophysics of Flavor Complexity (2010-01-04 14:44) . . . . .	2295
Reflections on a Few Years of Blogging (2010-01-05 15:39) . . . . .	2299
Influential Statisticians (2010-01-06 16:28) . . . . .	2301
"Two or Three Sentences That Go Together" (2010-01-07 15:45) . . . . .	2302
The Limits of Expert Trial and Error (2010-01-08 15:04) . . . . .	2303
The Post-It Restaurant (2010-01-09 14:15) . . . . .	2307
"The 11 Best Foods You Aren't Eating" (2010-01-10 06:01) . . . . .	2307
Even More Room For Improvement at the NY Times (2010-01-10 06:21) . . . . .	2311
Value of Blood Glucose Self-Monitoring (2010-01-11 13:16) . . . . .	2311
Assorted Links (2010-01-11 13:53) . . . . .	2314
Two Chinese Idioms (2010-01-12 10:02) . . . . .	2314
False Alarm (2010-01-13 19:59) . . . . .	2315
Back to the (Recent) Past (2010-01-14 01:53) . . . . .	2316
Insurance Group VP Questions Climate Science (2010-01-15 01:33) . . . . .	2316
My Theory of Human Evolution (Beijing furniture shopping) (2010-01-16 00:16) . . . . .	2317
Berkeley Prices (2010-01-16 22:06) . . . . .	2319
Lindemans Lambic Framboise (2010-01-17 01:49) . . . . .	2319
How Bad is Animal Fat? (2010-01-17 22:14) . . . . .	2320
An Alphabet (2010-01-18 09:45) . . . . .	2323
Assorted Links (2010-01-19 01:03) . . . . .	2323
Morning Light Self-Experimentation (2010-01-19 06:27) . . . . .	2324
IvanView Contains Malware (2010-01-20 11:45) . . . . .	2326
Does Prenatal Ultrasound Cause Autism? (2010-01-23 05:41) . . . . .	2328
Animal Fat, Sleep, and the Ketogenic Diet (2010-01-24 08:00) . . . . .	2331
Impressive Versus Effective (2010-01-25 06:47) . . . . .	2332
Bacteria and Mood (2010-01-26 06:10) . . . . .	2334

Self-Experimentation and Journalism (2010-01-27 03:47)	2335
The Billion-Dollar Hoax (2010-01-27 12:36)	2338
Beijing Hot Pot (2010-01-28 08:34)	2339
Green Metropolis by David Owen (2010-01-29 00:10)	2340
Why We Travel (2010-01-29 10:20)	2341
Homemade Kombucha Tips (2010-01-30 16:19)	2343
The Checklist Manifesto by Atul Gawande (2010-01-30 20:02)	2344
5.2 February	2345
Four Quantified-Self Talks (2010-02-01 13:25)	2345
A Call From Dr. Eileen Consorti's Office (2010-02-02 06:28)	2347
Assorted Links (2010-02-02 19:09)	2350
Scholarly Research Exchange (2010-02-03 07:32)	2351
Schizophrenia Prevented By Fish Oil (2010-02-03 21:41)	2352
Camp No (2010-02-04 08:12)	2354
Medical Ghostwriting: Every Cloud Has a Funny Lining (2010-02-04 22:51)	2355
The Need for Animal Fat (2010-02-05 06:53)	2355
Assorted Links (2010-02-05 20:39)	2357
Is Your ____ Telling You the Truth? (2010-02-06 20:05)	2357
Experiments in Gift-Giving (2010-02-06 23:05)	2359
Visible Big vs. Invisible Small (2010-02-08 06:40)	2360
Alexandra Carmichael on Random Acts of Kindness (2010-02-09 06:06)	2361
A GAPS Testimonial (2010-02-10 12:45)	2363
Written With A Straight Face? Dept. (2010-02-11 00:47)	2366
Assorted Links (2010-02-11 22:29)	2369
Elizabeth Kolbert Confronts Climategate (2010-02-12 21:27)	2370
Climate Science Slowly Becomes Less Settled (2010-02-14 15:51)	2372
Confirmation of Stunning MS Claim (2010-02-14 20:15)	2374
Exploratory Versus Confirmatory Data Analysis? (2010-02-15 06:02)	2376
Assorted Links (2010-02-16 04:15)	2381
North Korea and Penn State (2010-02-18 07:26)	2381
Dealing With Referee Reports: What I've Learned (2010-02-19 07:31)	2386
Widespread Loneliness (2010-02-20 18:19)	2388
The Hollywood Economist (2010-02-21 13:12)	2392
Assorted Links (2010-02-22 10:05)	2392
The Twilight of Expertise (by-the-book professors) (2010-02-22 10:54)	2393

Boring + Boring = Pleasant!?	(2010-02-23 07:42)	2394
Assorted Links	(2010-02-24 11:58)	2399
Robert Reich Lectures at Berkeley	(2010-02-25 07:16)	2400
Assorted Links	(2010-02-26 09:17)	2402
More Movement, More Learning	(2010-02-27 06:51)	2403
Mood and Attentiveness	(2010-02-28 22:26)	2406
5.3 March		2408
China Fact of the Day	(2010-03-02 19:48)	2408
Assorted Links	(2010-03-03 07:59)	2408
One Man Vs. All Education Professors	(2010-03-04 12:10)	2409
Why Do We Dislike Short-Range Repetition?	(2010-03-05 22:14)	2412
Teaching: What I Learned Last Semester	(2010-03-06 22:10)	2414
Top and Bottom Versus Middle	(2010-03-08 05:02)	2415
Optimal Daily Experience	(2010-03-09 14:45)	2417
Science in Action: Mysterious Mental Improvement	(2010-03-10 09:15)	2421
Science in Action: Mysterious Mental Improvement (part 2)	(2010-03-11 23:02)	2424
Assorted Links	(2010-03-12 17:05)	2427
QuietComfort 15 Headphones	(2010-03-14 19:07)	2428
Scary Kombucha	(2010-03-15 06:04)	2430
Sandy Tesch on Fund-Raising	(2010-03-15 15:01)	2430
Learning Chinese (update)	(2010-03-17 03:53)	2431
Journalists and Scientists	(2010-03-17 16:48)	2432
Best Use of Smiley Face	(2010-03-17 17:21)	2434
Michael Lewis Echoes Veblen	(2010-03-17 21:16)	2434
Eczema, Nighttime Cough, Antibiotics, and Fermented Food (more)	(2010-03-18 19:24)	2435
Assorted Links	(2010-03-20 17:45)	2436
Natto is Nothing . . . Try Funazushi	(2010-03-21 10:46)	2437
Noseclipping Success	(2010-03-21 18:42)	2438
Millennium Village Evaluation	(2010-03-22 07:17)	2438
Chairman Mao's Brain Food	(2010-03-22 20:28)	2440
Science in Action: Mysterious Mental Improvement (part 3)	(2010-03-23 04:31)	2441
Kombucha Popularity	(2010-03-25 07:35)	2442
Science in Action: Mysterious Mental Improvement (part 4)	(2010-03-25 14:17)	2442
Terrible Dreamhost Support	(2010-03-25 21:27)	2446
Even More Astonishingly Bad Dreamhost Support	(2010-03-26 06:56)	2447

Assorted Links (2010-03-26 21:55)	2447
Success with the GAPS Diet (2010-03-27 05:24)	2448
Why I Use Arithmetic to Measure Brain Function (2010-03-27 20:14)	2449
A Chinese Farmer Fights Back (2010-03-28 06:58)	2451
How Long To Build a Subway? (2010-03-29 07:00)	2452
Andrew Gelman's Top Statistical Tip (2010-03-30 06:04)	2453
My Favorite Japanese Pickle: Narazuke (2010-03-31 05:24)	2454
5.4 April	2455
The Chinese Military and the Umami Hypothesis (2010-04-01 07:29)	2455
Health Benefits of Miso, According to the Marukome Company (2010-04-02 07:05)	2456
QuietComfort 15 Headphones (more) (2010-04-03 05:48)	2457
Assorted Links (2010-04-04 15:01)	2458
"My Porphyria Went Away" (2010-04-05 13:12)	2460
Arithmetic Test R Code (part 1) (2010-04-06 04:53)	2461
Arithmetic Test R Code (part 2) (2010-04-07 06:07)	2463
Arithmetic Test R Code (part 3) (2010-04-07 06:13)	2469
Your Gut Bacteria Are What You Eat (2010-04-08 04:28)	2470
Arithmetic Test R Code (part 4) (2010-04-08 04:55)	2471
Grass-Fed vs. Grain-Fed Beef (2010-04-08 05:31)	2475
Why Cory Doctorow Won't Buy an iPad (2010-04-09 08:25)	2476
The Man Who Would Be Queen (2010-04-10 09:23)	2478
Academic Horror Story (UC Berkeley - 2) (2010-04-11 10:25)	2480
City Air Makes Free (2010-04-12 07:35)	2487
Assorted Links (2010-04-13 06:17)	2488
Venous Multiple Sclerosis: A Website (2010-04-14 08:27)	2489
Memristors (2010-04-15 06:14)	2489
Animals Like Fermented Food? (2010-04-16 02:50)	2490
Why UC Berkeley is Investigating Peter Duesberg (2010-04-17 06:05)	2491
Assorted Links (2010-04-17 17:28)	2498
Tsinghua Student Clubs (2010-04-18 04:41)	2499
The Silver Lining of a Cloud of Volcanic Ash (2010-04-18 09:58)	2500
Oprah Meets Veblen (2010-04-18 18:41)	2501
Where to Find Umami (2010-04-19 05:00)	2501
Two Months on the Shangri-La Diet (2010-04-19 09:59)	2502
Assorted Links (2010-04-20 06:26)	2503



Why Are Volcano Jokes So Bad? (2010-04-20 07:18) . . . . .	2504
Is English My Native Language? (2010-04-21 05:33) . . . . .	2505
The Hockey Stick Illusion (2010-04-22 05:40) . . . . .	2508
Books I'm Looking Forward to Reading (2010-04-23 20:19) . . . . .	2516
Harry Markopolos, Meet Stephen McIntyre (2010-04-24 16:40) . . . . .	2517
Assorted Links (2010-04-25 15:13) . . . . .	2519
The Big Short (2010-04-26 15:29) . . . . .	2520
The Emperor's New Clothes Trilogy (2010-04-27 16:12) . . . . .	2521
Assorted Links (2010-04-27 17:44) . . . . .	2523
Jane Jacobs on Several Types of Bad Behavior (2010-04-28 15:55) . . . . .	2524
Jane Jacobs on Bad Behavior (continued) (2010-04-29 07:26) . . . . .	2525
The Data-Driven Life (2010-04-29 22:05) . . . . .	2527
5.5 May . . . . .	2528
New Way to Quit Smoking? (2010-05-01 06:50) . . . . .	2528
Why Do Inmates Hide Butter? (2010-05-02 01:05) . . . . .	2530
Brent Pottenger and the Benefits of an Ancestral Diet (2010-05-03 01:38) . . . . .	2531
Positive Side Effects (2010-05-04 02:44) . . . . .	2535
Better Thinking By Standing (2010-05-04 23:21) . . . . .	2537
Brent Pottenger Comments (2010-05-05 19:54) . . . . .	2538
One Million Chinese in Mexico (2010-05-07 02:36) . . . . .	2540
What We See: Advancing the Observations of Jane Jacobs (2010-05-07 03:38) . . . . .	2541
More About Treadmills and Learning (2010-05-08 06:30) . . . . .	2542
Distinguished Scienists Fail to Think for Themselves (2010-05-09 03:15) . . . . .	2543
Colony Collapse Disorder and My Self-Experimentation (2010-05-10 13:52) . . . . .	2551
Life Imitates Art: Climate-Change Edition (2010-05-10 15:33) . . . . .	2553
"Psychology is the bridge between art and science" (2010-05-11 14:15) . . . . .	2554
Is Sony Back? (2010-05-11 18:55) . . . . .	2555
Preventive Stupidity Exists (2010-05-12 14:26) . . . . .	2556
More Anti-Science (2010-05-13 19:25) . . . . .	2571
Assorted Links (2010-05-14 14:36) . . . . .	2573
Preventive Stupidity: A Nuanced View (2010-05-15 22:15) . . . . .	2573
Preventive Stupidity: An Example (2010-05-17 05:43) . . . . .	2576
Restless Legs Syndrome, Niacin, and Web Search (2010-05-17 16:50) . . . . .	2578
Gouda Cheese Did Not Stimulate Immune System (2010-05-18 10:42) . . . . .	2579
Harvard Student Almost Gets Away With It (2010-05-18 12:06) . . . . .	2580

Resveratrol Revisited: The Plural of Data is Not Data (2010-05-19 14:25)	2580
Assorted Links (2010-05-19 22:30)	2583
Losing Weight By Eating New Food (2010-05-20 10:33)	2584
College in Other Countries (2010-05-21 13:41)	2585
Butter: New Antidepressant? (2010-05-22 16:57)	2586
Foot Fungus Revisited (2010-05-23 14:01)	2589
Dangerous Fish Oil (2010-05-23 19:42)	2590
Autism and Prenatal Ultrasound (more) (2010-05-24 11:58)	2592
Restaurant With No Menu (2010-05-25 08:13)	2599
Prenatal Ultrasound and Autism: Lack of Study (2010-05-25 13:53)	2600
Columbia University Valedictorian Plagiarizes Comedian (2010-05-25 19:27)	2602
Excellent Jonathan Franzen Story (2010-05-26 16:42)	2603
Four Transitions: Population, Forests, Obesity, and Fast Food (2010-05-27 14:37)	2605
The Unreasonable Effectiveness of My Self-Experimentation (2010-05-28 07:28)	2607
The Foxconn Suicides (2010-05-29 11:39)	2608
Assorted Links (2010-05-30 16:20)	2610
Ernst Wynder on the Nurses' Health Study (2010-05-31 15:42)	2611
5.6 June	2614
Butterfat Good? (2010-06-02 20:10)	2614
"A Great Change is Coming" (part 1 of 2) (2010-06-04 01:29)	2617
Assorted Links (2010-06-04 15:28)	2618
Cigarettes are Bad, Right? (2010-06-05 12:55)	2619
The Oneness of Fermentation (2010-06-05 16:37)	2620
Can John Gottman Predict Divorce With Great Accuracy? (2010-06-06 15:29)	2622
Probiotics Help Preterm Infants (2010-06-07 07:38)	2623
Show-Off Professors (2010-06-07 15:30)	2623
Assorted Links (2010-06-08 08:40)	2627
Beijing Street Vendors: What Color Market? (2010-06-09 14:07)	2628
Ocean Science High School (2010-06-10 18:40)	2629
Naked Marriage (2010-06-11 08:37)	2630
"Goes Against Everything I was Taught in Med School" (2010-06-12 16:40)	2631
Assorted Links (2010-06-13 03:52)	2632
The Dreams of Geneticists (2010-06-13 23:53)	2633
More Fermentation, More Anti-Cancer Effect (2010-06-14 20:10)	2640
The Trouble With RCTs (2010-06-15 16:33)	2641

Bruce Charlton on the Trouble With RCTs (2010-06-16 13:36)	2644
Assorted Links (2010-06-17 15:54)	2646
Nassim Taleb Interview (2010-06-18 06:09)	2646
Omega-3 Correlations in Eskimos Support Anti-Inflammation Effect (2010-06-18 17:46)	2647
The Future of Dentistry and Experimental Psychology? (2010-06-19 13:02)	2649
Ad Hominem Attack on The Rational Optimist (2010-06-19 15:46)	2650
The Costs and Benefits of Overtreatment (2010-06-20 16:40)	2652
My Theory of Human Evolution (good-luck charms) (2010-06-21 06:59)	2655
Assorted Links (2010-06-21 13:11)	2655
Good Sleep on Long Flight (2010-06-22 19:58)	2656
My March 2010 Quantified-Self Talk (2010-06-23 07:27)	2658
Assorted Links (2010-06-24 09:36)	2659
Law Guardians and Self-Experimentation (2010-06-25 04:07)	2659
Lucky Charms Can Work (2010-06-25 23:52)	2660
Chinese Mystery Explained: Humorous Names (2010-06-26 15:36)	2661
Assorted Links (2010-06-26 17:19)	2661
Unhinged by Daniel Carlat (2010-06-27 03:41)	2662
The David Healy Affair (2010-06-27 14:17)	2664
Prenatal Ultrasound and Autism: Multiple Voices (2010-06-27 22:27)	2664
What Antidepressants Do (2010-06-29 00:16)	2666
Fermented Food in Japan (2010-06-29 22:05)	2673
Assorted Links (2010-06-30 22:22)	2676
5.7 July	2677
Homemade Yogurt Tip (2010-07-01 23:02)	2677
Crazy Spicing Ice Cream (2010-07-02 22:55)	2680
The Oncogene Theory of Cancer (2010-07-03 18:41)	2681
More Flight From Data (2010-07-04 12:11)	2682
TV Recommendations (2010-07-04 21:39)	2684
Two Faces Better Than One? (2010-07-07 13:16)	2685
Unlikely Data (2010-07-08 05:58)	2687
Assorted Links (2010-07-08 10:24)	2688
Does Lithium Slow ALS? (2010-07-09 23:57)	2689
Ancestral Health Symposium (2010-07-10 10:26)	2691
The Problem with Evidence-Based Medicine (2010-07-11 01:58)	2692
The Zamboni MS Procedure in Canada (2010-07-12 05:08)	2694

Kombucha Eliminated Heartburn (2010-07-13 11:35)	2697
The Journalistic Response to Climategate (2010-07-14 12:34)	2698
Do Fermented Foods Improve Brain Function? (2010-07-16 11:12)	2701
Learning From Mulan (2010-07-17 10:43)	2702
Assorted Links (2010-07-18 11:55)	2703
Fasting Blood Sugar Reduced by Walking (2010-07-18 17:07)	2704
Interview for a Press Release (2010-07-19 08:04)	2706
Chinese View of Chinese Restaurant (2010-07-19 12:45)	2707
Fasting Blood Sugar Reduced by Walking (cont.) (2010-07-20 18:14)	2707
What's the "Natural" Pattern of Sleep? (2010-07-21 16:34)	2711
My Theory of Human Evolution (aniline dye) (2010-07-22 07:59)	2714
Assorted Links (2010-07-22 11:50)	2716
The Shangri-La-Diet Effect (2010-07-22 21:35)	2716
Logarithmically Right (2010-07-23 12:53)	2717
The Economics of Medical Hypotheses and Its Successor (part 1 of 2) (2010-07-23 16:15)	2718
What's "Natural" Sleep? (more) (2010-07-24 09:29)	2721
Learning From "Pseudoscience" (2010-07-25 10:39)	2725
The Economics of Medical Hypotheses and Its Successor (part 2 of 2) (2010-07-26 11:48)	2727
Omega-3 and Dental Health (revisited) (2010-07-27 17:49)	2728
Assorted Links (2010-07-28 07:20)	2732
"No One's Going to Care About You Like You Do" (2010-07-28 09:12)	2733
Premier of Canadian Province Gets Involved in MS Research (2010-07-29 04:28)	2733
A Month of Omega-6 (2010-07-30 03:57)	2734
"Without Great Teachers, Nothing Else Matters" (2010-07-31 10:08)	2735
5.8 August	2736
Is It Obvious to Walk to Control Blood Sugar? (2010-08-01 08:01)	2736
Quantity Versus Quality of Research (2010-08-02 06:51)	2738
The FBI Gets It Backwards (2010-08-03 04:24)	2740
High-End Kombucha (2010-08-03 11:44)	2741
Assorted Links (2010-08-03 20:06)	2742
"Give Us Our Dammed Data" (2010-08-05 09:57)	2742
The Potti Scandal (2010-08-05 12:54)	2743
The Joan Evans Scandal (2010-08-05 18:40)	2744
Unnoticed Conflicts of Interest (2010-08-06 11:52)	2745
Too Much Murder in The New Yorker (2010-08-06 13:00)	2747

Vitamin K2 and Fermented Foods (2010-08-07 15:29) . . . . .	2748
Journal of Participatory Medicine (2010-08-08 08:06) . . . . .	2749
The Power of Hobbyists and the Impotence of Professionals (2010-08-08 23:58) . . . . .	2750
Vitamin Absorption With and Without Accompanying Meal (2010-08-09 11:56) . . . . .	2751
A Smug Professor (2010-08-09 19:35) . . . . .	2752
Animal Cognition Paper Retracted (2010-08-10 09:08) . . . . .	2755
Assorted Links (2010-08-10 13:05) . . . . .	2756
Jane Jacobs and Traffic (2010-08-11 08:42) . . . . .	2757
"A World Suppressing the Uniqueness Inside Each of Us" (2010-08-12 08:37) . . . . .	2759
How Well Do Authors of Scientific Papers Respond to Criticism? (2010-08-12 21:59) . . . . .	2761
Arithmetic and Butter (2010-08-13 20:35) . . . . .	2762
Arithmetic and Butter (continued) (2010-08-15 08:52) . . . . .	2766
Power Makes You More Dismissive (2010-08-15 09:38) . . . . .	2769
Drug Company Corruption (2010-08-16 05:43) . . . . .	2770
Pork Belly News (2010-08-16 18:04) . . . . .	2772
"That's Why You're So Easy to Hate" (2010-08-17 05:42) . . . . .	2772
The Irony of What Works (2010-08-18 05:40) . . . . .	2774
Beijing Students at Berkeley (2010-08-18 21:33) . . . . .	2775
Assorted Links (2010-08-19 21:54) . . . . .	2776
The Marc Hauser Case (2010-08-21 07:43) . . . . .	2777
Open-Access Publication Fees at the BMJ (2010-08-21 14:11) . . . . .	2780
More Saturated Fat, Less Stroke (2010-08-23 07:59) . . . . .	2781
Asthma and Probiotics (2010-08-24 05:46) . . . . .	2783
Web Alternative to Peer Review (2010-08-24 22:22) . . . . .	2786
Assorted Links (2010-08-25 19:20) . . . . .	2787
New Heart Scan Results: Good News (2010-08-28 06:04) . . . . .	2788
New Heart Scan Results: Good News (context) (2010-08-29 04:19) . . . . .	2790
New Heart Scan Results: Good News (explanation) (2010-08-30 07:21) . . . . .	2792
Funny Coincidence (2010-08-30 19:05) . . . . .	2793
New Heart Scan Results: Good News (lipid scores) (2010-08-31 07:11) . . . . .	2794
In Tokyo – Wanna Meet? (2010-08-31 08:29) . . . . .	2795
New Heart Scan Results: Good News (raw data) (2010-08-31 20:46) . . . . .	2795
5.9 September . . . . .	2797
My Theory of Human Evolution (baseball park collector) (2010-09-02 05:07) . . . . .	2797
A University President Defends Research Universities (2010-09-03 15:05) . . . . .	2798

Self-Experimentation and Infomercials (2010-09-04 16:31) . . . . .	2799
Plastic Fantastic by E. S. Reich (2010-09-05 11:44) . . . . .	2800
Assorted Links (2010-09-06 08:07) . . . . .	2801
Is Science Self-Correcting? (2010-09-06 15:53) . . . . .	2802
A Unified Theory of Japanese Food (2010-09-07 12:54) . . . . .	2804
Dry Eye and Fish Consumption (2010-09-08 12:37) . . . . .	2805
Jane Jacobs and Food Trucks (2010-09-09 15:50) . . . . .	2808
reCAPTCHA and Self-Experimentation (2010-09-10 18:39) . . . . .	2810
Assorted Links (2010-09-11 13:12) . . . . .	2811
Unschooling (2010-09-11 21:30) . . . . .	2812
The Treatment Trap by Rosemary Gibson (2010-09-12 11:27) . . . . .	2814
First Day of Class (2010-09-13 05:06) . . . . .	2815
The Thick-Fingered Surgeon (2010-09-14 05:25) . . . . .	2816
Academic Horror Story (Duke University) (2010-09-15 05:20) . . . . .	2817
Assorted Links (2010-09-16 07:25) . . . . .	2818
Yale President Defends Liberal Education (2010-09-17 07:10) . . . . .	2819
How Things Begin (Time Out) (2010-09-19 23:21) . . . . .	2822
Avocado Raises Blood Sugar (2010-09-21 07:39) . . . . .	2822
Shamelessness in Chinese Academia (2010-09-22 06:20) . . . . .	2826
Why Psychologists Don't Imitate Economists (2010-09-23 07:43) . . . . .	2827
Assorted Links (2010-09-24 16:11) . . . . .	2832
The Corruption of Drug Trials (2010-09-25 22:51) . . . . .	2833
The Stupidity of Crowds (2010-09-27 07:33) . . . . .	2834
Malcolm Gladwell on Twitter (2010-09-28 04:06) . . . . .	2836
The Nobel Prize: Not Helping (2010-09-28 22:20) . . . . .	2837
Assorted Links (2010-09-29 14:40) . . . . .	2841
New Idea About Learning Chinese (2010-09-30 19:44) . . . . .	2842
5.10 October . . . . .	2845
Punishment of Difference (2010-10-01 14:13) . . . . .	2845
Science Journalism Cliches (2010-10-01 17:49) . . . . .	2847
Gelatin and Sleep (2010-10-02 22:18) . . . . .	2847
Out-of-Control Drug Companies and Their Consorts (2010-10-03 02:47) . . . . .	2848
The Seminar Rule (2010-10-03 06:23) . . . . .	2849
Quantified Self in National Post (2010-10-04 01:11) . . . . .	2849
This Year's Nobel Prize in Medicine (2010-10-04 19:40) . . . . .	2851

How to Eat a Lot of Butter (2010-10-05 23:22) . . . . .	2852
Research Fraud in China (2010-10-06 20:38) . . . . .	2855
Dairy Consumption and Health (2010-10-08 05:54) . . . . .	2857
Chinese Text-Message Censorship (2010-10-09 04:06) . . . . .	2859
Strong Light and Cancer (2010-10-10 07:58) . . . . .	2860
Where Does Oil Come From? (2010-10-10 14:10) . . . . .	2861
How to Lie with Meta-Analysis (2010-10-11 17:35) . . . . .	2862
Chinese Reaction to Liu Xiaobo's Nobel Prize (2010-10-12 05:45) . . . . .	2864
The Contribution of John Ioannidis (2010-10-13 05:08) . . . . .	2866
How She Adjusted to Living in China (2010-10-13 23:13) . . . . .	2868
Will Eating Half a Stick of Butter a Day Make You Smarter? (2010-10-14 22:19) . . . . .	2869
Assorted Links (2010-10-14 23:51) . . . . .	2872
Fermentation Not Sexy (2010-10-16 06:31) . . . . .	2873
Breakfast Not All Bad (2010-10-17 03:53) . . . . .	2874
Health Care As Seen by a Psychiatrist (2010-10-20 21:17) . . . . .	2875
Learning Chinese Characters (2010-10-21 01:38) . . . . .	2878
Why Small Change = Big Deal (2010-10-22 11:05) . . . . .	2880
30 Rock: East versus West Live Shows (2010-10-22 21:56) . . . . .	2882
Assorted Links (2010-10-23 20:35) . . . . .	2883
A Chinese Physicist Resigns (2010-10-24 04:23) . . . . .	2884
Walnuts: Brain Food? (2010-10-25 06:56) . . . . .	2887
Assorted Links (2010-10-25 15:42) . . . . .	2891
Periodontitis and Omega-3 (2010-10-27 06:15) . . . . .	2891
The C.I.A. and Self-Experimentation (2010-10-28 06:04) . . . . .	2892
Madame Bovary and Self-Experimentation (2010-10-28 14:16) . . . . .	2893
Placebo Non-Disclosure (2010-10-30 16:14) . . . . .	2894
My Experience of Sickness (2010-10-30 18:28) . . . . .	2895
5.11 November . . . . .	2897
Dangers of Supplements (2010-11-02 00:58) . . . . .	2897
Shallows Net (2010-11-02 03:59) . . . . .	2898
In-Flight Fermented Foods? (2010-11-02 23:42) . . . . .	2900
Art Majors & UC Berkeley (2010-11-03 08:36) . . . . .	2900
Why Small Change = Big Deal (revised) (2010-11-04 02:33) . . . . .	2901
GRE = God Read English (2010-11-04 06:56) . . . . .	2902
Assorted Links (2010-11-04 21:20) . . . . .	2902

Plagiarism by British Drug Tsar (2010-11-06 15:18) . . . . .	2903
The Size of Restaurant Tips (2010-11-07 19:10) . . . . .	2906
A Theory of Human Evolution and Application to Education (2010-11-08 04:29) . . . . .	2906
How to Choose A Research Topic (2010-11-10 08:17) . . . . .	2909
Why I Am A Biological Psychologist (2010-11-11 00:37) . . . . .	2910
The Climate Change Bubble Has Burst? (2010-11-11 13:55) . . . . .	2913
Dangerous Acne Medicine (2010-11-11 21:12) . . . . .	2913
Two Gmail Features I Want (2010-11-12 01:46) . . . . .	2914
Stroke and Saturated Fat (2010-11-13 01:38) . . . . .	2916
Assorted Links (2010-11-13 02:07) . . . . .	2916
For Whom Do English Departments Exist? (2010-11-14 11:32) . . . . .	2917
My Theory of Human Evolution (letterpress printing) (2010-11-15 16:51) . . . . .	2919
Secrets of Chinese Retail (2010-11-16 06:25) . . . . .	2919
Guan Er Dai (2010-11-16 20:51) . . . . .	2919
The New Yorker on Fermentation (2010-11-17 19:37) . . . . .	2921
DHA Did Not Slow Alzheimer's (2010-11-17 23:43) . . . . .	2921
Assorted Links (2010-11-18 12:42) . . . . .	2922
Jane Jacobs on C-Span (2010-11-18 14:32) . . . . .	2923
Effect of Flaxseed Oil on Arithmetic (2010-11-19 01:01) . . . . .	2923
The New Yorker Stories by Ann Beattie (2010-11-19 16:15) . . . . .	2925
Potti: The Final Act (2010-11-19 22:53) . . . . .	2925
Flaxseed Oil vs. Fish Oil (2010-11-21 15:52) . . . . .	2926
How Wonderful is Lipitor? (2010-11-22 06:53) . . . . .	2928
How Wonderful is Lipitor? (continued) (2010-11-23 07:08) . . . . .	2930
Epilepsy's Big, Fat Miracle ... (2010-11-26 20:49) . . . . .	2931
Examples of MS Liberation Therapy (2010-11-27 02:33) . . . . .	2932
Cold Showers Raise Mood (2010-11-27 22:32) . . . . .	2934
Feeling the Future: Room For Improvement (2010-11-29 21:56) . . . . .	2936
Assorted Links (2010-11-30 23:37) . . . . .	2937
5.12 December . . . . .	2938
Food For Thought (2010-12-01 07:08) . . . . .	2938
Feeling the Future: More Likely Than You Think (2010-12-01 20:37) . . . . .	2939
Ancestral Health Symposium Tickets (2010-12-01 22:50) . . . . .	2942
Cold Shower Report (2010-12-03 16:05) . . . . .	2942
Leslie Iversen Plagiarism Update (2010-12-04 04:16) . . . . .	2944



Sanity in Education (2010-12-04 15:19) . . . . .	2945
Assorted Links (2010-12-05 07:09) . . . . .	2946
WikiLeaks (2010-12-05 22:11) . . . . .	2946
Slate Covers Self-Tracking (2010-12-06 16:43) . . . . .	2949
The Decline Effect (2010-12-09 20:01) . . . . .	2950
Chinese Censorship (2010-12-09 20:43) . . . . .	2953
Dr. Charles Nemeroff "Writes" A Textbook (2010-12-10 23:36) . . . . .	2953
The Decline Effect and Kitty Kelley (2010-12-12 14:23) . . . . .	2954
Different Effects of Omega-3 and Omega-6 on Heart Disease (2010-12-13 16:01) . . . . .	2956
Assorted Links (2010-12-14 13:55) . . . . .	2957
Walking Creates A Thirst For Dry Knowledge (2010-12-15 15:52) . . . . .	2957
Walking and Learning in Rats (2010-12-16 21:55) . . . . .	2960
Quips From A Mall (2010-12-17 15:49) . . . . .	2961
Self-Experimentation as Legal Gambling (2010-12-19 03:13) . . . . .	2961
Three Observations About Walking and Learning (2010-12-21 00:47) . . . . .	2963
Cold Shower Report (2) (2010-12-21 16:28) . . . . .	2964
Chinese Economics Joke (2010-12-22 07:16) . . . . .	2966
Rich and Poor Students: How to Distinguish (2010-12-24 07:17) . . . . .	2968
Unexpected Christmas Presents (2010-12-24 20:53) . . . . .	2969
My Theory of Human Evolution (Caganers) (2010-12-25 16:18) . . . . .	2969
Another Mysterious Mental Improvement (2010-12-28 07:35) . . . . .	2970
Do Fermented Foods Shorten Colds? (2010-12-29 15:11) . . . . .	2973
Assorted Links (2010-12-30 03:12) . . . . .	2973
Which Should You Trust: Scientific Literature or Anecdote? (2010-12-30 19:36) . . . . .	2974
Dissent Over DSM-5 (2010-12-31 14:00) . . . . .	2977

## **6 2011 2979**

6.1 January . . . . .	2979
Shangri-La Diet Uptick (2011-01-02 07:14) . . . . .	2979
Chinese Joke (2011-01-03 04:45) . . . . .	2980
"Sour" in Chinese (2011-01-03 20:59) . . . . .	2980
Does Shower Temperature Affect Brain Speed? (2011-01-05 05:56) . . . . .	2981
I Paid A Bribe (2011-01-05 23:31) . . . . .	2985
Preposterous Health Claims of 2010 (2011-01-06 21:26) . . . . .	2986
Assorted Links (2011-01-07 06:15) . . . . .	2987
Inside the Chinese Government (2011-01-07 19:31) . . . . .	2987

Design Farmer (2011-01-10 16:08)	2993
What Global Warming Science Really Says (2011-01-12 19:30)	2993
Inside the Chinese Government (2) (2011-01-13 04:31)	2995
Law Schools Deceiving Students (2011-01-13 07:46)	2996
Assorted Links (2011-01-17 04:03)	2996
Economic Police (2011-01-17 21:15)	2997
Thinking Like a Doctor (2011-01-18 14:45)	2997
Another Mysterious Mental Improvement (2) (2011-01-22 07:42)	2999
Assorted Links (2011-01-22 21:22)	3002
Episodes (2011-01-24 02:36)	3003
Monocultures of Evidence (2011-01-25 02:34)	3003
Learning How to Learn (2011-01-26 08:08)	3004
First Quantified Self Conference! (2011-01-26 13:24)	3005
Probiotic Helps Children with IBS (2011-01-27 18:02)	3005
For Example? (2011-01-27 21:30)	3007
The Buttermind Experiment (2011-01-29 05:20)	3007
Fear of Retaliation: Global Warming and Nutrition (2011-01-31 14:01)	3016
6.2 February	3018
"Reading Seth Roberts Puts Me to Sleep" (2011-02-01 02:25)	3018
Chinese New Year in Beijing (2011-02-02 04:45)	3019
Personal Science (2011-02-02 05:16)	3019
Effect of Oscar on Marriage (2011-02-02 16:23)	3021
Email From Egypt (2011-02-03 16:17)	3022
Humor as Catalyst (2011-02-04 03:14)	3022
More Email From Egypt (2011-02-04 07:21)	3023
Humor as Catalyst (another example) (2011-02-06 05:05)	3024
Growth of Quantified Self (2011-02-07 05:04)	3025
The Twilight of Scientology (2011-02-07 21:51)	3027
Assorted Links (2011-02-09 01:19)	3029
Chairs: The Carbohydrate of Furniture (2011-02-11 07:42)	3030
Walking and Learning (2011-02-11 22:50)	3032
AI at IBM (2011-02-12 07:58)	3032
Our Niche in Life (2011-02-13 05:56)	3033
Walking and Learning Update (2011-02-13 23:47)	3034
Assorted Links (2011-02-14 17:10)	3037

	"Do a Small Thing": Good Advice For Revolutionaries and Scientists (2011-02-18 00:15) . . . . .	3038
	Educational Testing Service: Stupid or Smart? (2011-02-19 09:21) . . . . .	3039
	Meat-Only Diet: Crave Carbs. Meat + Egg: No Craving (2011-02-20 21:15) . . . . .	3041
	Beijing Smog: Good or Bad? (2011-02-21 17:18) . . . . .	3043
	Memory Palaces and the Walking/Learning Connection (2011-02-23 20:14) . . . . .	3045
	The Creation of Umami Burger (2011-02-24 07:29) . . . . .	3046
	Automatic Translation of Email (2011-02-24 18:36) . . . . .	3047
	The Baltimore Shipyard Study (2011-02-25 15:34) . . . . .	3048
	The Best Argument Against Man-Made Global Warming (2011-02-27 05:52) . . . . .	3050
6.3	March . . . . .	3061
	Inside Job Wins Oscar (2011-03-01 05:17) . . . . .	3061
	How to Be Less Efficient (2011-03-01 12:25) . . . . .	3063
	Root Planing Cancelled (2011-03-03 05:45) . . . . .	3064
	German Plagiarism Scandal (2011-03-03 06:16) . . . . .	3066
	Climate Model Predictions and What Happened (2011-03-04 03:39) . . . . .	3067
	The Great Stagnation (Part 1) (2011-03-05 14:21) . . . . .	3073
	Spy Magazine Available Online (2011-03-06 16:56) . . . . .	3077
	Personal Science and Graphic Design (2011-03-07 07:21) . . . . .	3078
	"My Body, My Laboratory" (TIME article) (2011-03-07 13:30) . . . . .	3078
	Assorted Links (2011-03-08 12:12) . . . . .	3079
	Michael Bailey's Defense of Academic Freedom (2011-03-08 13:42) . . . . .	3080
	Independent German Journalism Students (2011-03-09 10:58) . . . . .	3082
	Does Blood Pressure Medicine Always Work? (2011-03-09 22:15) . . . . .	3084
	Kiviat, the Fermented Food of Greenland (2011-03-11 00:17) . . . . .	3085
	Lack of Evidence For Climate Models Intensifies (2011-03-11 16:40) . . . . .	3086
	Climatology Light Bulb Joke (2011-03-12 14:02) . . . . .	3088
	PFCs, Ultrasound, and Autism (2011-03-13 17:54) . . . . .	3091
	Chinese News (2011-03-16 03:10) . . . . .	3094
	Is Medical Research a Veblen Good? (2011-03-16 17:24) . . . . .	3095
	Terrific Essay by Cory Doctorow (2011-03-16 19:58) . . . . .	3096
	Asthma and Farm Life (2011-03-17 19:33) . . . . .	3096
	Miso Bar (2011-03-19 06:38) . . . . .	3097
	My Talk at EG (2011-03-20 16:35) . . . . .	3098
	Growth of Quantified Self (more) (2011-03-21 01:09) . . . . .	3100
	Effect of One-Legged Standing on Sleep (2011-03-22 06:05) . . . . .	3100

	Danger of Low-Carb Diet: Not Enough Vitamin C (2011-03-23 00:28) . . . . .	3106
	The Shangri-La Diet: Why No Revolution? (2011-03-24 03:07) . . . . .	3112
	Methodological Lessons From My One-Legged-Standing Experiment (2011-03-25 13:59) . . . . .	3119
	1.5 Years on the Shangri-La Diet (2011-03-27 20:24) . . . . .	3120
	Evolutionary Health Journal to Start (2011-03-29 16:49) . . . . .	3123
	The Growth of Paleo: Patrick Vlaskovits Interview (2011-03-31 08:23) . . . . .	3124
6.4	April . . . . .	3126
	Assorted Links (2011-04-01 15:39) . . . . .	3126
	Effect of Graphical Feedback on Productivity (2011-04-02 03:41) . . . . .	3127
	Dangers of Antibiotics: Case Study (2011-04-03 04:01) . . . . .	3131
	Why Did Graphical Feedback Improve My Work Habits? (2011-04-04 18:40) . . . . .	3132
	How to Self-Experiment (2011-04-06 14:53) . . . . .	3135
	My Theory of Human Evolution: New Version (2011-04-07 18:00) . . . . .	3137
	Effect of Graphical Feedback on Productivity: Another Look (2011-04-10 05:00) . . . . .	3138
	Shangri-La Diet Success Story (2011-04-11 05:00) . . . . .	3141
	Statins Reduce Cholesterol But Not Heart Disease Progression (2011-04-12 05:00) . . . . .	3141
	Another Reason the Shangri-La Diet is Not More Popular (2011-04-13 05:00) . . . . .	3146
	Downward Spiral of Whole Foods House Brand (2011-04-14 05:00) . . . . .	3148
	Assorted Links (2011-04-15 05:00) . . . . .	3151
	Beijing Talk by Me: The Value of Personal Science (2011-04-15 23:43) . . . . .	3152
	Dear Gmail: Publish Break-in Stats (2011-04-16 05:00) . . . . .	3152
	Yogurt Accident/Discovery (2011-04-17 05:00) . . . . .	3153
	My Treadmill Desk (2011-04-18 05:00) . . . . .	3155
	What I'm Watching (2011-04-19 05:00) . . . . .	3156
	The Global Warming Test (2011-04-20 05:00) . . . . .	3157
	Google Uses My Credit Card Without Telling Me (2011-04-21 05:00) . . . . .	3161
	Ten Years of Weight Measurements (2011-04-22 05:00) . . . . .	3162
	Natto Idol (2011-04-23 05:00) . . . . .	3165
	Personal Science and Lyme Disease (2011-04-24 05:00) . . . . .	3166
	Roche is Deceptive and Evasive (2011-04-25 05:00) . . . . .	3168
	Assorted Links (2011-04-26 05:00) . . . . .	3170
	Efficiency Measurement Update (2011-04-27 05:00) . . . . .	3171
	10 Years of Weight Measurements: What Was Learned (2011-04-28 05:00) . . . . .	3173
	The Kennedys (TV mini-series) (2011-04-28 17:00) . . . . .	3174
	Assorted Links (2011-04-29 05:00) . . . . .	3175

	Scientific Illiteracy at The New Yorker (2011-04-30 05:00) . . . . .	3177
6.5	May . . . . .	3178
	Percentile Feedback and Productivity (2011-05-01 05:00) . . . . .	3178
	Demand Pricing and the Shangri-La Diet (2011-05-02 05:00) . . . . .	3181
	Assorted Links (2011-05-03 05:00) . . . . .	3185
	Insider/Outsiders, Chinese History, and the Shangri-La Diet (2011-05-04 05:00) . . . . .	3186
	Assorted Links (2011-05-05 05:00) . . . . .	3188
	Tucker Max on Paleo: "I Started Feeling So Much Better" (2011-05-06 05:00) . . . . .	3189
	Nine Years of Weights, More Shangri-La Success (2011-05-07 05:00) . . . . .	3190
	Sterilities of Scale and What They Say About Economics (2011-05-08 05:00) . . . . .	3192
	Meat Consumption and Weight Gain: Health Journalism Done Right (2011-05-09 05:00) . . . . .	3196
	Liberation Therapy: Contradictory Evidence (2011-05-10 05:00) . . . . .	3198
	To Kill A Mockingbird Joke (2011-05-11 05:00) . . . . .	3200
	Seth Roberts Interview About Self-Experimentation (2011-05-12 05:00) . . . . .	3201
	Assorted Links (2011-05-13 05:00) . . . . .	3204
	The Future of China (2011-05-14 05:00) . . . . .	3204
	The Signaling of Economists (2011-05-15 05:00) . . . . .	3205
	Morning Faces Therapy for Bipolar Disorder (2011-05-16 05:00) . . . . .	3209
	Comment on "Morning Faces Therapy For Bipolar Disorder" (2011-05-17 05:00) . . . . .	3211
	Percentile Feedback Workspace Available (2011-05-18 05:00) . . . . .	3214
	Six Signs of Profound Stagnation in Health Care (2011-05-19 05:00) . . . . .	3214
	Assorted Links (2011-05-20 05:00) . . . . .	3218
	Percentile Feedback R Workspace Updated (2011-05-21 05:00) . . . . .	3219
	Morning Faces Therapy For Bipolar Disorder: A Story (Part 1: Background) (2011-05-22 05:00) . . .	3220
	Health Care Stagnation: Sleep (2011-05-23 05:00) . . . . .	3222
	Assorted Links (2011-05-24 05:00) . . . . .	3223
	"Stuff of Seth": Faces/Mood and Anticipatory Waking (2011-05-25 05:00) . . . . .	3224
	Assorted Links (2011-05-26 05:00) . . . . .	3225
	The Romance of Tracking (2011-05-28 22:05) . . . . .	3226
	Snoring and the Shangri-La Diet (2011-05-29 13:00) . . . . .	3227
	Why Does Personal Science Matter? (2011-05-30 05:00) . . . . .	3228
	Highlights of the First Quantified Self Conference (2011-05-31 14:17) . . . . .	3228
6.6	June . . . . .	3230
	Assorted Links (2011-06-01 05:00) . . . . .	3230
	Weak Iced Tea and the Shangri-La Diet (2011-06-02 05:00) . . . . .	3231

Flavor-Calorie Learning: Root Beer Floats (2011-06-03 05:00)	3235
Christine Peterson's Zeo Research (2011-06-04 05:00)	3236
Questions About One-Legged Standing and Sleep (2011-06-05 05:00)	3237
Andrew Solomon on Right to Death (2011-06-05 20:55)	3239
Assorted Links (2011-06-06 05:00)	3240
Conway's Law and Science (2011-06-07 05:00)	3241
How To Make Kefir: What I Didn't Know (2011-06-08 05:00)	3245
Paleo Diet versus Mediterranean Diet (2011-06-09 05:00)	3247
The Curious Amazon Rank of The Shangri-La Diet (2011-06-10 05:00)	3249
Two Years of Weight Measurements (2011-06-11 05:00)	3252
Assorted Links (2011-06-12 05:00)	3253
Salt is Good, Says New Study (2011-06-13 05:00)	3253
The Second Immune System: A New Way of Treating Cancer (2011-06-13 11:37)	3257
Assorted Links (2011-06-14 05:00)	3258
Chinese University Press Plagiarizes Free Course Materials (2011-06-15 05:00)	3259
Tucker Max on Omega-3 and Writing Ability (2011-06-16 05:00)	3260
Self-Tracking as a Source of Political Power (2011-06-17 05:00)	3262
Assorted Links (2011-06-18 05:00)	3264
The Torchlight List by Jim Flynn (2011-06-19 05:00)	3265
Marcia Angell on Psychiatry: A Train Wreck (2011-06-21 22:22)	3266
Albert Einstein: Out-of-Touch Theorist (2011-06-23 17:41)	3269
Assorted Links (2011-06-25 05:00)	3272
Mercury Damage Revealed by Brain Test (2011-06-26 16:28)	3272
The Medtronic Scandal (2011-06-28 20:39)	3276
Health Care Stagnation (2011-06-30 18:27)	3277
6.7 July	3285
Ancient Wisdom: Butter is Brain Food (2011-07-02 05:00)	3285
Unofficial Beer Tasting Winner: Uncommon Brewers (2011-07-03 07:59)	3286
Assorted Links (2011-07-04 11:29)	3287
Great Delusions: James Watson (2011-07-05 05:00)	3287
New Support for Prenatal Ultrasound Cause of Autism (2011-07-06 05:00)	3289
Causal Reasoning in Science: Don't Dismiss Correlations (2011-07-07 05:00)	3290
The Willat Effect: Side-by-Side Comparisons Create Connoisseurs (2011-07-08 05:00)	3295
Assorted Links (2011-07-09 05:00)	3297
Better To Do Than To Think (2011-07-10 05:00)	3297

Assorted Links (2011-07-12 05:00)	3301
Phone Hacking and Jane Jacobs (2011-07-13 07:28)	3302
Percentile Feedback Update (2011-07-17 08:43)	3304
Worse Than Placebo? Forest Laboratories's Shameful Marketing (2011-07-18 05:00)	3306
The Value of a Diagnosis of Asperger's (2011-07-19 05:00)	3307
Quantified Self Forums Now Open (2011-07-19 13:06)	3308
Morning Faces Therapy for Bipolar Disorder: Follow-Up Questions (2011-07-20 05:00)	3309
Welcome to the Sausage Factory: Multiple Fraud in a Paxil Study (2011-07-21 05:00)	3311
Harvard Psychiatrist Joseph Biederman and Parents: "Should Be Left in a Room Together" (2011-07-22 05:00)	3313
Google Yes, Wikipedia Yes, Aaron Swartz No? (2011-07-22 06:00)	3314
Assorted Links (2011-07-23 05:00)	3315
Amy Winehouse, R.I.P. (2011-07-23 11:50)	3317
Flaxseed Oil Cures Bleeding Gums in Three Days (2011-07-24 05:00)	3317
Yogurt and Nuts Correlate With Weight Loss: Why? (2011-07-25 05:00)	3321
Finding The Source of Migraines (2011-07-25 15:51)	3323
Billionaire, Genius, and This? (2011-07-25 21:04)	3325
Phone Hacking and Jane Jacobs (Roberts/Jacobs emails: Part 1 of 3) (2011-07-26 05:00)	3326
Phone Hacking and Jane Jacobs (Roberts/Jacobs emails: Part 2 of 3) (2011-07-27 05:00)	3328
Phone Hacking and Jane Jacobs (Roberts/Jacobs emails: 3 of 3) (2011-07-28 05:00)	3331
Assorted Links (2011-07-29 05:00)	3333
Morning Faces Therapy For Bipolar Disorder: A Story (Part 2: First Two Months) (2011-07-29 05:00)	3334
Science in Action: Why Energetic? (2011-07-30 05:00)	3335
"Everyone Agrees: Fresh Food Better." Uh, Not Everyone. (2011-07-31 05:00)	3337
Edward Jay Epstein Offer (2011-07-31 07:25)	3338
6.8 August	3338
Assorted Links (2011-08-01 05:00)	3338
The Comments on "Finding the Source of Migraines..." (2011-08-02 05:00)	3339
Personal Science in Japan: Radioactivity Measurements (2011-08-03 05:00)	3341
My Daily Dose of Flax Seed (2011-08-03 17:00)	3342
How Rare My Heart Scan Improvement? (2011-08-04 05:00)	3343
The Evolution of Lactose Tolerance and My Butter Discoveries (2011-08-05 05:00)	3347
At the Ancestral Health Symposium (2011-08-06 05:00)	3352
The Curious Popularity of "How To Win an Argument With a Meat-Eater" (2011-08-07 05:00)	3353
Andreas Eenfeldt on the Ancestral Health Symposium (2011-08-07 10:33)	3354
Assorted Links (2011-08-08 05:36)	3355

Top and Bottom Versus Middle: China, Schools, Health? (2011-08-09 05:00)	3356
Ancestral Health Symposium: Meat versus Fat (2011-08-10 05:00)	3357
The Beer Archaeologist (2011-08-11 05:00)	3360
What We Learn From the Better Health of Vegetarians (2011-08-11 17:00)	3361
Assorted Links (2011-08-12 05:00)	3362
More Migraine Headaches Caused by Cleaning Products: From N=1 to N=2 (2011-08-13 05:00)	3363
Assorted Links (2011-08-14 05:00)	3365
A Happy Reader Writes: Yogurt, Butter, Flaxseed Oil (2011-08-14 07:42)	3367
Deborah Estrin on Top and Bottom versus Middle (2011-08-15 05:00)	3368
Absence of Fermented Food From the Thoughts of a Foodie (2011-08-16 05:00)	3369
Many Supplements Taken Together Reduce Depression/Dysthymia (2011-08-17 05:00)	3372
My Self-Tracking Wish List (2011-08-18 05:00)	3375
Flaxseed Oil Reduces Healing Time (2011-08-19 05:00)	3376
More About the Migraine Story Comments (2011-08-20 05:00)	3378
Tucker Max on Writing and the Importance of Understanding How You Differ (2011-08-21 06:47)	3380
Assorted Links (2011-08-22 05:00)	3384
Sulfites in Wine May Cause Bad Dreams (2011-08-23 05:00)	3385
Morning Faces Therapy For Depression and Bipolar Disorder: Resources (2011-08-23 07:02)	3386
The Rules of the Tunnel by Ned Zeman (2011-08-24 15:05)	3387
Morning Faces Therapy Page (2011-08-24 18:16)	3388
Assorted Links (2011-08-28 04:45)	3388
Alexandra Carmichael Almost Eliminates Headaches (2011-08-29 20:32)	3389
The Continued Existence of Acne Reveals the Perverse Incentives of Modern Medicine (2011-08-31 05:00)	3390
6.9 September	3394
Assorted Links (2011-09-01 05:00)	3394
Van Gogh Defense Project: Rationale (2011-09-01 18:19)	3394
Workplace of the Future: The Chair (2011-09-03 05:00)	3395
Assorted Links (2011-09-04 05:00)	3399
Poor Replication Rate in Psychiatric Genetics Research (2011-09-05 13:29)	3400
Anil Potti, Ranjit Chandra, and Reducing Scientific Fraud (2011-09-07 05:00)	3402
Acupuncture Critic Misses Big Points (2011-09-09 12:11)	3404
Great TV: Downton Abbey, Switched At Birth, Suits (2011-09-10 23:41)	3406
Assorted Links (2011-09-12 03:50)	3408
Assorted Links (2011-09-15 06:48)	3412
Why is Health Care So Expensive? (2011-09-16 16:54)	3412



How to Start a Talk (2011-09-17 16:22) . . . . .	3418
First, Let Them Get Sick (2011-09-18 20:58) . . . . .	3419
Assorted Links (2011-09-19 10:01) . . . . .	3422
First Day of Class 2011 (2011-09-20 05:00) . . . . .	3423
Arthritis Relief From Flaxseed Oil (2011-09-20 23:24) . . . . .	3424
Assorted Links (2011-09-22 05:00) . . . . .	3425
Why Antidepressants Barely Work (2011-09-25 00:16) . . . . .	3426
The Beginning of the End of AGW (2011-09-26 13:46) . . . . .	3432
Spycraft, Personal Science, and Overconfidence in What We Know (2011-09-28 20:21) . . . . .	3434
Two More Shangri-La Diet Success Stories (2011-09-30 22:46) . . . . .	3437
6.10 October . . . . .	3438
Cheap Safe Remedies: Oatmeal (Cholesterol) & Deep Breathing (Blood Pressure) (2011-10-01 13:44)	3438
Flaxseed in Various Units. (2011-10-03 12:59) . . . . .	3440
More News about Liberation Therapy (2011-10-03 13:38) . . . . .	3441
The 2011 Nobel Prize in Medicine (2011-10-04 08:26) . . . . .	3442
Assorted Links (2011-10-05 05:00) . . . . .	3443
Morning Faces Therapy: Personal Account (2011-10-06 05:00) . . . . .	3444
Appetite Suppression from the Shangri-La Diet (2011-10-07 05:00) . . . . .	3446
Assorted Links (2011-10-08 05:00) . . . . .	3449
Fermented Foods In Gladiator (2011-10-09 04:38) . . . . .	3450
Let Them Get Sick (running) (2011-10-09 05:00) . . . . .	3450
New Source of Omega-3? (2011-10-09 13:28) . . . . .	3453
Edward Jay Epstein on Homeland (2011-10-10 05:00) . . . . .	3455
Grandmother Knows Best About Crohn's Disease (2011-10-10 15:06) . . . . .	3456
Public Speaking Advice From My Students (2011-10-12 05:00) . . . . .	3461
Make Yourself Healthy (Boing Boing posts) (2011-10-12 19:33) . . . . .	3463
Nobel Prize Report Card: Economics (2011-10-13 05:00) . . . . .	3464
Jane Jacobs and Amazon.com (2011-10-14 05:00) . . . . .	3467
Assorted Links (2011-10-15 05:00) . . . . .	3467
Inside Chinese Higher Education: A Hidden Strength (2011-10-16 05:00) . . . . .	3468
Willat Effect Experiments With Tea (2011-10-17 05:00) . . . . .	3469
More About The Willat Effect (2011-10-18 19:21) . . . . .	3476
Crazy-Spicing Coke Machine (2011-10-20 07:05) . . . . .	3480
Beijing Earthquake (2011-10-21 05:00) . . . . .	3481
Assorted Links (2011-10-22 05:55) . . . . .	3482

Bipolar Disorder: Good Results With Blue-Blocker Glasses (2011-10-23 05:00) . . . . .	3483
Even More About The Willat Effect (2011-10-24 05:00) . . . . .	3485
The Curious Case of Richard Muller (2011-10-25 05:00) . . . . .	3487
"We are Heroes, They are Villains": My Brilliant Students (2011-10-26 05:00) . . . . .	3491
Kombucha For Bees, Man, and Woman (2011-10-27 05:00) . . . . .	3494
Assorted Links (2011-10-28 05:00) . . . . .	3496
No Cheap Remedies: A Guiding Principle of Modern Health Care (2011-10-29 05:00) . . . . .	3496
E-Cat Passes Test (2011-10-30 05:00) . . . . .	3499
Brain Surprise! Why Did I Do So Well? (2011-10-31 05:00) . . . . .	3502
6.11 November . . . . .	3505
Assorted Links (2011-11-01 12:46) . . . . .	3505
Can Vitamin D Replace Sunlight? A Stunning Discovery (2011-11-02 05:00) . . . . .	3506
Vitamin D, Sunlight, and Sleep: More (2011-11-03 05:00) . . . . .	3513
Flaxseed Oil Heals Bleeding Gums, Again (2011-11-04 05:00) . . . . .	3516
Ten Reasons To Distrust Drug Companies (2011-11-05 05:00) . . . . .	3519
Testing Treatments: Nine Questions For the Authors (2011-11-06 05:00) . . . . .	3522
The Verb "To Google" (2011-11-06 17:38) . . . . .	3527
Assorted Links (2011-11-07 05:00) . . . . .	3528
A Great Idea From Nassim Taleb: End Banker Bonuses (2011-11-08 05:00) . . . . .	3529
The Willat Effect: More Consequences (2011-11-09 05:00) . . . . .	3530
Assorted Links (2011-11-10 05:00) . . . . .	3535
Assorted Links (2011-11-11 05:00) . . . . .	3537
Testing Treatments: The Authors Respond (2011-11-12 05:00) . . . . .	3538
"Setting Students on Fire" at Universities: An Alternative (2011-11-12 20:22) . . . . .	3539
Danny Kahneman's Decision Making (2011-11-13 05:00) . . . . .	3540
Seth Roberts Interview With Pictures (2011-11-14 05:00) . . . . .	3543
Chinese Medicine As Now Practiced (2011-11-15 05:00) . . . . .	3545
Dr. Eileen Consorti and Patient Power (2011-11-16 05:00) . . . . .	3547
Is Health Data Ever Harmful? (2011-11-17 05:00) . . . . .	3555
Assorted Links (2011-11-18 05:00) . . . . .	3558
Evidence-Based Medicine Versus Innovation (2011-11-19 05:00) . . . . .	3561
Fruit Juice Kombucha (2011-11-20 05:00) . . . . .	3562
Assorted Links (2011-11-21 05:00) . . . . .	3564
"Allergic to the Practical": Law Schools Imitating Academia (2011-11-22 05:00) . . . . .	3565
Assorted Links (2011-11-23 05:00) . . . . .	3568

Geniuses: Just Like Us! (2011-11-24 05:00) . . . . .	3569
Butter and Arithmetic: How Much Butter? (2011-11-25 05:00) . . . . .	3570
Climategate 2.0: How To Tell When an Expert Exaggerates (2011-11-26 05:00) . . . . .	3575
Assorted Links (2011-11-27 05:00) . . . . .	3578
Vitamin D: More Reason to Take at Sunrise (2011-11-28 05:00) . . . . .	3580
Duct Tape, the Eurozone, Status-Quo Bias, and Neglect of Innovation (2011-11-29 05:00) . . . . .	3583
An Unbiased View of What We Should Eat . . . From a Rat (2011-11-30 05:00) . . . . .	3586
iTunes For Windows is Horrible (2011-11-30 18:18) . . . . .	3589
6.12 December . . . . .	3592
Bryan Caplan Disses College (2011-12-01 05:00) . . . . .	3592
Flaxseed Oil Alleviates Psoriasis and Lichen Planus (2011-12-02 05:00) . . . . .	3598
Assorted Links (2011-12-03 05:00) . . . . .	3602
Butter and Eggs: What They Share (2011-12-04 05:00) . . . . .	3603
Taobao Cashes In on Singles Day (2011-12-05 05:00) . . . . .	3606
Vitamin D3 Reduces Mortality (2011-12-06 05:00) . . . . .	3607
Assorted Links (2011-12-07 21:48) . . . . .	3609
The Dominique Strauss-Kahn Victory Dance (2011-12-08 19:02) . . . . .	3611
Assorted Links (2011-12-10 04:42) . . . . .	3613
Worldwide Butter Shortage? (2011-12-11 05:00) . . . . .	3615
Vitamin D3 and Sleep Update (2011-12-13 05:54) . . . . .	3619
UC Berkeley Joke (2011-12-14 04:35) . . . . .	3625
Gelman and Fung versus Levitt and Dubner: How "Wrong" is Freakonomics? (2011-12-15 05:00) . .	3626
Justification For Self-Experimentation and My Belief that N=1 Results Will Generalize (2011-12-16 05:00) . . . . .	3628
Sleep, Mood, Restless Legs and ADHD Improved By Internet Research (2011-12-19 03:13) . . . . .	3629
Assorted Links (2011-12-20 05:00) . . . . .	3632
Two Years on the Shangri-La Diet (2011-12-21 05:00) . . . . .	3633
More Neglect of the Immune System: Bioterrorism Fear (2011-12-23 05:00) . . . . .	3634
Assorted Links (2011-12-24 05:00) . . . . .	3637
Christmas: An Evolutionary Explanation (repost) (2011-12-25 05:00) . . . . .	3638
Carl Willat on the Democratization of Magic (2011-12-26 05:00) . . . . .	3640
New Word: crapeterian (2011-12-27 05:00) . . . . .	3642
The Legacy of Steve Jobs (2011-12-28 05:00) . . . . .	3643
Acne Cured By Self-Experimentation (2011-12-29 04:24) . . . . .	3648
Assorted Links (2011-12-29 05:00) . . . . .	3651
Ask Me Anything/Contact Me (2011-12-30 16:08) . . . . .	3652
Ten Interesting Things I Learned From Adventures in Nutritional Therapy (2011-12-31 05:00) . . . .	3652

<b>7</b>	<b>2012</b>	<b>3657</b>
7.1	January . . . . .	3657
	Assorted Links (2012-01-01 05:00) . . . . .	3657
	Tokyo Visit (2012-01-02 03:29) . . . . .	3658
	Steve Jobs' Graduation Speech: My Opinion (2012-01-02 05:00) . . . . .	3659
	Assorted Links (2012-01-03 05:00) . . . . .	3664
	Assorted Links (2012-01-04 05:00) . . . . .	3665
	Is Epidemiology Worthless? The Case of Calcium (2012-01-05 05:00) . . . . .	3667
	Why Language Began: Words Say What We Want (2012-01-06 05:00) . . . . .	3669
	Tokyo Restaurant Recommendations – and Why They Might Be A Bad Idea (2012-01-07 05:00) . . . . .	3671
	Flaxseed Oil and Gum Disease: Still More Success (2012-01-08 05:00) . . . . .	3674
	Assorted Links (2012-01-09 05:00) . . . . .	3675
	Why We Touch Our Mouths So Much: Forewarned is Forearmed (2012-01-10 05:00) . . . . .	3677
	Tonsillectomy Confidential (2012-01-11 05:00) . . . . .	3680
	Assorted Links (2012-01-12 05:00) . . . . .	3684
	Peter Lawrence on the Ills of Modern Science (2012-01-13 05:00) . . . . .	3684
	Assorted Links (2012-01-14 05:00) . . . . .	3688
	More about Tonsillectomy Confidential (2012-01-15 05:00) . . . . .	3688
	Vitamin D3: More Reason to Take it First Thing in the Morning (2012-01-16 05:00) . . . . .	3701
	Tara Parker-Pope, "The Fat Trap" and the Shangri-La Diet (2012-01-17 05:00) . . . . .	3703
	SOPA Strike (2012-01-18 05:00) . . . . .	3711
	Vitamin D3 and Sleep: More Good News From Primal Girl (2012-01-19 05:00) . . . . .	3713
	The Beauty and Tragedy of Tokyo (2012-01-20 05:00) . . . . .	3715
	Google Analytics: "Make This Version Default" (2012-01-20 22:21) . . . . .	3719
	Vitamin D3 First Thing in Morning: Story 6 (2012-01-21 05:00) . . . . .	3719
	Centenary of the Theory of Continental Drift (2012-01-22 05:00) . . . . .	3722
	Assorted Links (2012-01-23 05:00) . . . . .	3723
	Vitamin D3 in Morning Improves Falling Asleep (Story 7) (2012-01-24 05:00) . . . . .	3724
	Vitamin D3: Which is Better, Gelcaps or Tablets? (2012-01-25 05:00) . . . . .	3727
	Vitamin D3 First Thing in Morning: 4000 IU Better Than 2000 IU (Story 8) (2012-01-26 05:00) . . . . .	3729
	Vitamin D3 in Morning Increases Energy Levels: Story 9 (2012-01-27 05:00) . . . . .	3731
	Vitamin D3 in Morning Helped Her Sleep Through Night (Story 10) (2012-01-28 05:00) . . . . .	3732
	One Doctor's View of Personal Science: "You Won't Learn Anything" (2012-01-29 05:00) . . . . .	3735
	The Great Climate Change Debate: Which Side is Funnier? (2012-01-30 05:00) . . . . .	3737
	Assorted Links (2012-01-31 05:00) . . . . .	3740

7.2 February . . . . .	3741
Vitamin D3 in Morning Makes Her Fall Asleep Faster and Sleep Better (Story 11) (2012-02-01 05:00)	3741
Law Schools Sued For Lying About Post-Grad Employment (2012-02-02 05:00) . . . . .	3742
Vitamin D3 in Morning Has No Clear Effect on Sleep (Story 12) (2012-02-03 05:00) . . . . .	3745
Assorted Links (2012-02-04 05:00) . . . . .	3747
Vitamin D3 and Sleep: 5000 IU Better than 3000 IU (Story 13) (2012-02-05 05:00) . . . . .	3748
50,000 IU Vitamin D3 in Morning Once/Week Improves Sleep (Story 14) (2012-02-06 05:00) . . . . .	3750
How Things Begin (honey wine vinegar) (2012-02-07 05:00) . . . . .	3751
Vitamin D3 in Morning Has Ambiguous Effects on Sleep and Energy (Story 15) (2012-02-08 05:00) . .	3753
What is a Healthy Scientific Ecosystem? (2012-02-09 05:00) . . . . .	3755
Assorted Links (2012-02-10 05:00) . . . . .	3758
What Is a Good Word For This? (2012-02-10 22:39) . . . . .	3759
Vitamin D3 in Morning Helps Him Sleep Through the Night (Story 16) (2012-02-11 05:00) . . . . .	3764
Vitamin D3 in Morning Improves Mood But Not Sleep (Story 8 Update) (2012-02-12 05:00) . . . . .	3766
High Defect Rate in Ultrasound Machines That Scan Pregnant Women (2012-02-13 05:00) . . . . .	3767
DIYization: The Word I Was Looking For (2012-02-13 17:00) . . . . .	3769
Apple Admits It Has a Workplace Problem (2012-02-13 20:39) . . . . .	3770
Assorted Links (2012-02-14 05:00) . . . . .	3777
How to Eat Natto (2012-02-15 05:00) . . . . .	3778
Vitamin D3 in Morning Improves Sleep Three Ways (Story 17) (2012-02-16 05:00) . . . . .	3779
Father Versus Surgeons and New York Presbyterian Hospital (2012-02-17 05:00) . . . . .	3781
One Doctor's View of Personal Science (more) (2012-02-18 05:00) . . . . .	3783
"We're Economists. And We Don't Care About Innovation" (2012-02-19 05:00) . . . . .	3787
Hot Miso with Cream and Sweetener: Coffee/Tea Substitute (2012-02-20 05:00) . . . . .	3792
Vitamin D3 in Morning Makes Waking Up Easier (Story 18) (2012-02-21 05:00) . . . . .	3793
Vitamin D3 in Morning (1000 IU) Improves Rosacea (Story 19) (2012-02-22 05:00) . . . . .	3796
Assorted Links (2012-02-23 05:00) . . . . .	3798
Excellent Customer Service From Fidelity Investments (2012-02-23 22:13) . . . . .	3799
Lame Response of the AMA to HealthTap (2012-02-24 05:00) . . . . .	3800
Stephen McIntyre on Gleickgate (2012-02-24 15:57) . . . . .	3801
The DIYization of Beer Brewing and Innovation (2012-02-25 03:43) . . . . .	3802
Vitamin D3 in Morning: 4000 IU Better Than 1000 IU (Story 20) (2012-02-25 05:00) . . . . .	3802
Carl Willat Suffers From the Willat Effect (2012-02-26 05:00) . . . . .	3805
Assorted Links (2012-02-27 11:52) . . . . .	3806
Toenail Fungus Home Remedies (2012-02-28 05:00) . . . . .	3807

Personal Science and Varieties of DIY (2012-02-29 19:48)	3808
7.3 March	3809
Tucker Max on How to Eat an Egg (2012-03-01 05:00)	3809
Coconut Oil Cures Foot Fungus (2012-03-02 05:00)	3813
Vitamin D3 in Morning: Mixed Evidence From PaleoHacks (2012-03-03 05:00)	3816
"Thou Shalt Not Testify Against Another Doctor" (2012-03-04 05:00)	3817
The Parable of the SAME (2012-03-05 05:00)	3819
Assorted Links (2012-03-06 05:00)	3821
More About the Lawsuits Against Law Schools (2012-03-06 05:00)	3822
An Example of Predatory Medicine (2012-03-06 20:29)	3823
How Accurate are the QuackWatchers? Mercury Amalgam Fillings (2012-03-08 05:00)	3826
Vitamin D3 in Morning: 7000 IU Improves Sleep (Story 21) (2012-03-09 05:00)	3828
The Value of Moodscope (2012-03-10 05:00)	3830
Assorted Links (2012-03-12 05:00)	3834
Ten Years of Weights, Including Two Years on the Shangri-La Diet (2012-03-13 05:00)	3834
This American Life Retracts Daisey Show (2012-03-16 15:33)	3836
Assorted Links (2012-03-17 05:00)	3837
More About the This American Life Retraction (2012-03-17 06:02)	3838
Genomics Confidential: Iceland Not So Wonderful (2012-03-18 05:00)	3841
Vitamin D3 in Morning: Moving D3 & Fish Oil from Evening to Morning Improves Sleep (Story 22) (2012-03-19 05:00)	3843
"Seth, How Do You Track and Analyze Your Data?" (2012-03-20 05:00)	3845
Assorted Links (2012-03-21 05:00)	3846
Gary Shteyngart is a Very Funny Guy (2012-03-22 05:00)	3847
Flavour, a New Scientific Journal (2012-03-22 12:01)	3848
Another Unintentionally Revealing Response From the American Medical Association (2012-03-23 05:00)	3849
The Hunger Games (2012-03-23 20:52)	3851
Sleep and Mood Strongly Linked (2012-03-24 05:00)	3853
Assorted Links (2012-03-25 05:00)	3856
Assorted Links (2012-03-26 05:00)	3857
The Future of Email: What I Want (2012-03-27 05:00)	3857
Nick Winter's Big Success with Percentile Feedback (2012-03-28 05:00)	3859
Assorted Links (2012-03-29 05:00)	3860
Fermented Foods Improve Irritable Bowel Syndrome (2012-03-30 20:38)	3861
Does Kerrygold Butter Improve HDL and LDL? (2012-03-31 14:13)	3864

7.4	April . . . . .	3866
	Moderate Alcohol Consumption Associated With Less Cirrhosis (2012-04-01 12:50) . . . . .	3866
	Assorted Links (2012-04-02 20:51) . . . . .	3868
	Lack of Repeatability of Cancer Research: The Mystery (2012-04-03 13:30) . . . . .	3869
	What is "Unnecessary" Medicine? (2012-04-04 15:28) . . . . .	3872
	Do Sonograms Cause Autism? New Evidence (2012-04-06 13:30) . . . . .	3873
	Gene Linked to Autism? (2012-04-08 05:00) . . . . .	3876
	Science in Action: Unexplained Changes in Brain Speed (2012-04-09 05:00) . . . . .	3878
	Assorted Links (2012-04-10 05:00) . . . . .	3880
	Paging Dr. Google: Magnesium, Constipation, and Subarachnoid Hemorrhages (2012-04-11 05:00) .	3881
	The American Dietetics Association Wants No Competition (2012-04-11 05:00) . . . . .	3883
	Interview with Daniel Wolfson of Choosing Wisely (2012-04-12 07:46) . . . . .	3884
	Morning Faces Therapy Improvements (2012-04-13 05:00) . . . . .	3886
	Coconut Oil/Foot Fungus Update (2012-04-15 11:09) . . . . .	3887
	The Feeding Tube Diet (2012-04-16 21:35) . . . . .	3890
	Cod Liver Oil Best Taken in Morning? (2012-04-18 05:00) . . . . .	3893
	Do Sonograms Cause Autism? A New Study (2012-04-19 05:00) . . . . .	3894
	Why We Touch Our Mouths So Much: Evidence From Ants (2012-04-20 05:00) . . . . .	3896
	Assorted Links (2012-04-22 05:00) . . . . .	3897
	Merck's Vioxx and the American Death Rate (2012-04-23 05:00) . . . . .	3897
	What Motivates Scientists? Evidence From Cancer Research (2012-04-23 05:00) . . . . .	3902
	Assorted Links (2012-04-26 05:00) . . . . .	3903
	Assorted Links (2012-04-27 13:04) . . . . .	3904
	Effect of Vitamin D3 on My Sleep (2012-04-28 05:00) . . . . .	3905
	Interview with a Shangri-La Dieter (2012-04-29 05:00) . . . . .	3911
7.5	May . . . . .	3912
	Assorted Links (2012-05-01 02:23) . . . . .	3912
	Overtreatment in US Health Care (2012-05-01 22:31) . . . . .	3913
	Morning Faces Therapy for Bipolar Disorder: What One User Has Learned (2012-05-03 05:00) . . . .	3914
	Three Days in May: Sex, Surveillance, and DSK (2012-05-03 05:00) . . . . .	3915
	Drug Companies Release More Data From Drug Trials (2012-05-05 05:00) . . . . .	3917
	How to Beat the Heat: Wet T-Shirt Edition (2012-05-05 13:52) . . . . .	3917
	The Umami Hypothesis: We Need to Eat Microbes (2012-05-05 22:38) . . . . .	3918
	Climate Science Humor: What if Your Model Predicts Wrongly (2012-05-06 05:00) . . . . .	3922
	How Common Are Medical Errors? A Horror Story (2012-05-07 05:00) . . . . .	3923

Beijing Quantified Self? (2012-05-07 13:58)	3924
What Koreans Know About China That Many Chinese Don't Know (2012-05-08 05:00)	3925
Assorted Links (2012-05-09 16:31)	3926
A Beijing Bystander Inaction Story (2012-05-10 05:00)	3927
"How Ignorant Doctors Kill Patients" (2012-05-11 05:00)	3928
Assorted Links (2012-05-12 05:00)	3929
Umami Hypothesis Page (2012-05-13 05:00)	3930
Vitamin K2 Deficiency Linked To Parkinson's Disease (2012-05-14 05:00)	3931
Assorted Links (2012-05-16 05:00)	3932
Surprising Predictions From Self-Measurement (2012-05-17 03:50)	3933
Assorted Links (2012-05-18 05:00)	3934
The Next Time a Top Economist Predicts Disaster... (2012-05-19 05:00)	3935
Usual Drug Trial Analyses Insensitive to Rare Improvement (2012-05-20 05:00)	3936
Assorted Links (2012-05-21 05:00)	3937
Assorted Links (2012-05-23 05:00)	3940
Vitamin D3 in Morning: Moving D3 to Morning Improves Sleep (Story 23) (2012-05-24 05:00)	3942
Medieval Metallurgy, the Evolution of Decoration, and the Shangri-La Diet (2012-05-25 05:00)	3944
How Difficult is Chinese? A Tsinghua Professor Complains (2012-05-28 05:00)	3946
Assorted Links (2012-05-29 05:00)	3946
Personal Science is to Professional Science as Professional Science is to Engineering (2012-05-29 05:00)	3947
How I Will Teach Next Semester: Human Evolution and College Teaching (2012-05-31 05:00)	3948
7.6 June	3951
Assorted Links (2012-06-01 05:00)	3951
Academic Politics, Alan Turing and Stanford (2012-06-02 05:00)	3951
How Much Vitamin D Should I Take? (2012-06-03 10:00)	3952
What to Do About Antibiotic Resistance? Improve Immune Function (2012-06-05 05:00)	3957
Attention The New Yorker Subscribers! (2012-06-08 16:24)	3967
Assorted Links (2012-06-10 06:43)	3968
More Examples of Mainstream Health Care Ignoring the Immune System (2012-06-11 05:00)	3969
The Glacially-Slow Conquest of Scurvy And Its Relevance to Modern Life (2012-06-12 05:00)	3973
Assorted Links (2012-06-13 05:00)	3974
Variation in Abbott Blood Sugar Test Strips: A Warning (2012-06-14 05:00)	3975
How Useful is Personal Genomics? A Case Study (2012-06-15 09:42)	3977
MIT Professor Reenacts the Movie Groundhog Day (2012-06-16 04:49)	3980
Assorted Links (2012-06-17 05:00)	3981



Double Interview on the Benefits of Probiotics (2012-06-18 05:00) . . . . .	3982
Who Watches the Watchdogs? The Myths of Journalism (2012-06-19 16:00) . . . . .	3983
The Difficulty of Finding a Good Experiment to Do (2012-06-20 05:00) . . . . .	3984
No Mention of Fermented Foods in Article about Importance of Bacteria (2012-06-21 05:00) . . . . .	3986
Effect of Niacin on Restless Legs Syndrome: The Importance of Dosage (2012-06-22 05:00) . . . . .	3987
The Art of Fermentation by Sandor Katz (2012-06-23 05:00) . . . . .	3988
Assorted Links (2012-06-25 05:00) . . . . .	3990
Make Yourself Healthy Article by Me at Boing Boing (2012-06-25 10:16) . . . . .	3991
Disappointing Visit to Apple Store (2012-06-26 05:00) . . . . .	3993
Assorted Links (2012-06-27 05:00) . . . . .	3994
The Power of Blog (Fermented Foods Division) (2012-06-28 05:00) . . . . .	3995
How Low Blood Sugar is Too Low? New Evidence (2012-06-29 05:00) . . . . .	3997
Assorted Links (2012-06-30 05:00) . . . . .	4001
7.7 July . . . . .	4002
DIY Medicine: Sinus Infections Caused by Wheat Gluten (2012-07-02 05:00) . . . . .	4002
Where to Buy Miso in Tokyo (2012-07-03 05:00) . . . . .	4004
Magic Dots: Quasi-Reinforcement Helps Get Things Done (2012-07-04 05:00) . . . . .	4004
Morning Faces Therapy: More Good Results (2012-07-06 07:37) . . . . .	4008
Notes on Navanit Arakeri's Morning Faces Experience (2012-07-07 09:57) . . . . .	4010
Assorted Links (2012-07-09 05:00) . . . . .	4012
Prize Fight: The Race and Rivalry to be First in Science by Morton Meyers (2012-07-10 05:00) . . . . .	4013
"I Hate Dreamhost!" Beware, Potential Dreamhost Customers (2012-07-11 05:00) . . . . .	4014
American Dietetics Association Tries to Outlaw Competition: More (2012-07-11 17:27) . . . . .	4016
Assorted Links (2012-07-12 05:00) . . . . .	4016
More About Pork Fat and Sleep (2012-07-14 13:56) . . . . .	4017
Assorted Links (2012-07-16 05:00) . . . . .	4022
Is Crohn's Disease Really "Incurable"? (2012-07-16 14:11) . . . . .	4022
Is Crohn's Disease Really "Incurable"? (continued) (2012-07-18 05:00) . . . . .	4025
Trust Me I'm Lying: Confessions of a Media Manipulator by Ryan Holiday (2012-07-19 05:00) . . . . .	4027
The Non-Obvious Value of Self-Tracking (2012-07-20 05:00) . . . . .	4028
Fear of Food: "The Hubris of Experts" (2012-07-21 05:00) . . . . .	4029
Assorted Links (2012-07-22 05:00) . . . . .	4030
Assorted Links (2012-07-23 05:00) . . . . .	4032
What to Do in Beijing: My Suggestions (2012-07-24 05:00) . . . . .	4032
You Don't Need a "Mother" to Make Kombucha (2012-07-25 05:00) . . . . .	4034

Assorted Links (2012-07-27 05:00)	4035
Fermented Dairy Intake Negatively Associated with Diabetes (2012-07-28 05:00)	4036
Assorted Links (2012-07-29 05:00)	4038
Assorted Links (2012-07-31 05:00)	4039
Mark Bittman Glimpses a Big Truth: Avoidance of the Obvious by Doctors (2012-07-31 06:23)	4040
7.8 August	4044
My Dental Exam: Good Gums (2012-08-01 05:00)	4044
Assorted Links (2012-08-02 05:00)	4047
Whose Side is the FDA On? (2012-08-03 05:00)	4048
Assorted Links (2012-08-04 05:00)	4049
Fibromyalgia Improved by No Longer Eating Fruits and Vegetables (2012-08-05 05:00)	4050
Vitamin D3 Timing and Sleep: More from Tara Grant (2012-08-06 18:53)	4052
The Cost of Hope by Amanda Bennett (2012-08-07 05:00)	4053
What Was Mark Bittman Thinking? (2012-08-07 08:24)	4055
How Patrick Vlaskovits Discovered His Migraines Were Due to Wheat (2012-08-08 05:00)	4058
Tyler Cowen's Unusual Final Exam (2012-08-09 05:00)	4061
How Martha Rotter Cured Her Acne By Self-Experimentation (2012-08-10 05:00)	4064
Edward Jay Epstein Reviewed Movies For Vladimir Nabokov (2012-08-11 05:00)	4066
Eliminating Nocturnal Urination (2012-08-12 05:00)	4066
Assorted Links (2012-08-13 05:00)	4068
"How We Stopped SOPA": Talk by Aaron Swartz in New York (2012-08-13 19:15)	4069
Acne: Reality is Not a Morality Tale (2012-08-14 05:00)	4070
Assorted Links (2012-08-15 05:00)	4071
B. F. Skinner: Brilliant Engineer, Brilliant Self-Promoter, Mediocre Scientist (2012-08-16 05:00)	4073
Assorted Links (2012-08-19 01:29)	4075
More Dairy Fat, Less Heart Disease (2012-08-20 05:09)	4076
Lessons of SOPA: How a Slam Dunk Bill was Stopped (2012-08-21 08:00)	4078
Why Self-Track? The Possibility of Hard-to-Explain Change (2012-08-22 05:00)	4079
Assorted Links (2012-08-23 05:00)	4081
Assorted Links (2012-08-25 15:45)	4083
Want to Track Your Brain Function? (2012-08-28 07:28)	4083
Assorted Links (2012-08-29 05:00)	4085
50 Years of Knuckle Cracking Did Not Produce Arthritis (2012-08-30 05:00)	4085
Textbook Buying Tip (2012-08-30 12:22)	4087
Benefits of Fermented Foods (2012-08-31 08:41)	4087

7.9	September . . . . .	4088
	Assorted Links (2012-09-01 05:43) . . . . .	4088
	Assorted Links (2012-09-03 05:00) . . . . .	4089
	Two Recent Health Care Experiences (2012-09-04 05:00) . . . . .	4090
	New Walking-Catalyzes-Learning Results (2012-09-05 05:00) . . . . .	4091
	Bic For Her and Personal Science (2012-09-06 05:00) . . . . .	4093
	Marginal Revolution University: A Hidden Advantage (2012-09-07 05:00) . . . . .	4094
	Assorted Links (2012-09-08 05:00) . . . . .	4095
	Independent Discovery That Walking Catalyzes Learning (2012-09-09 05:00) . . . . .	4096
	Assorted Links (2012-09-11 05:00) . . . . .	4097
	The Terry Deacon Affair (2012-09-12 05:00) . . . . .	4099
	Early Immune Warning System: A Bit of Evidence (2012-09-13 05:00) . . . . .	4101
	Unaccountable by Marty Makary (2012-09-14 05:00) . . . . .	4102
	Does Too Little Vitamin K2 Cause Prostate Cancer? (2012-09-15 05:00) . . . . .	4103
	Assorted Links (2012-09-16 05:00) . . . . .	4104
	Last Weekend's Quantified Self Conference (2012-09-21 10:09) . . . . .	4105
	Assorted Links (2012-09-23 05:00) . . . . .	4106
	Drug Companies Hide Unfavorable Evidence (2012-09-24 05:00) . . . . .	4107
	Assorted Links (2012-09-25 05:00) . . . . .	4109
	Secrets of a Long Life: Butter, Pork Belly, No Medicine (2012-09-26 05:00) . . . . .	4110
	The Complex Flavor of Fermented Foods (2012-09-27 05:00) . . . . .	4112
	Writer For Rookie Paints Too Pretty a Picture of Her Treatment For Bipolar Disorder (2012-09-28 05:00) . . . . .	4113
	Assorted Links (2012-09-29 05:00) . . . . .	4115
	The Growth of Personal Science: Implications For Statistics (2012-09-30 05:00) . . . . .	4116
7.10	October . . . . .	4117
	Two Dimensions of Economic Growth: GDP and Useful Knowledge (2012-10-01 05:00) . . . . .	4117
	Assorted Links (2012-10-02 05:00) . . . . .	4120
	Extremely Disappointing Facts About Doctors (2012-10-03 05:00) . . . . .	4122
	Assorted Links (2012-10-04 05:00) . . . . .	4126
	Five Most Important Rules of Nature Photography (2012-10-05 05:00) . . . . .	4127
	When You're a Lawyer, Everything Looks Like an Opportunity to Argue (2012-10-06 16:29) . . . . .	4127
	Assorted Links (2012-10-07 05:00) . . . . .	4129
	Kahneman Criticizes Social Psychologists For Replication Difficulties (2012-10-08 05:00) . . . . .	4130
	Hidden Side Effects of Statins and How Easily You Can Uncover Them (2012-10-09 05:00) . . . . .	4132
	Vitamin D3 Eliminated Colds and Improved Sleep When Taken in the Morning (Stories 24 and 25) (2012-10-10 05:00) . . . . .	4133

JAMA Jumps to Conclusions About Vitamin D (2012-10-11 05:00) . . . . .	4136
The 2012 Nobel Prize in Physiology or Medicine (2012-10-12 05:00) . . . . .	4139
New Product: Cascall Fermented Soda (2012-10-12 14:10) . . . . .	4141
Assorted Links (2012-10-13 05:00) . . . . .	4141
How Common is Dishonesty in Medical Research? (2012-10-14 05:00) . . . . .	4142
One Man's Interest in Fermented Foods (2012-10-15 05:00) . . . . .	4145
Assorted Links (2012-10-16 05:00) . . . . .	4145
The Reddit Protein Powder Tests (2012-10-17 05:00) . . . . .	4146
The Fallibility of Epidemiologists: Neglect of the Immune System (2012-10-18 05:00) . . . . .	4147
Doctor Logic: "Acne is Caused by Bacteria" (2012-10-19 05:00) . . . . .	4150
More Fermented Foods, Less Runny Nose? (2012-10-20 05:00) . . . . .	4153
Short-Term Effects of Fat, Protein and Carbohydrate on Cognition: Fat Best (2012-10-21 05:00) . . . . .	4155
Assorted Links (2012-10-22 05:00) . . . . .	4158
Big Diet and Exercise Study Fails to Find Benefit (2012-10-23 05:00) . . . . .	4159
The Personal Scientist Who Knew Too Much (2012-10-24 05:00) . . . . .	4165
The Dark Side of Open Source (2012-10-25 05:00) . . . . .	4167
Quantified Self Utopia: What Would It Look Like? (2012-10-26 05:00) . . . . .	4169
Bacteria are Neither Good nor Bad (2012-10-27 05:00) . . . . .	4171
Assorted Links (2012-10-28 05:00) . . . . .	4176
"The Scale of the Scandal": Tony Scott's Suicide Quite Possibly Due to Antidepressant (2012-10-29 05:00) . . . . .	4177
Acne Caused By Pasteurized Dairy: How One Person Figured It Out (2012-10-30 05:00) . . . . .	4180
"Must Prescribe Antibiotic, Must Prescribe Antibiotic ... " (2012-10-31 05:00) . . . . .	4183
7.11 November . . . . .	4184
Vitamin D3 in Morning Improves Sleep After All (Story 26) (2012-11-01 05:00) . . . . .	4184
A Theft in China (2012-11-02 05:00) . . . . .	4186
Movie Grosses and Nobel Prizes (2012-11-03 05:00) . . . . .	4188
Assorted Links (2012-11-04 05:00) . . . . .	4188
Posit Science: Does It Help? (2012-11-05 05:00) . . . . .	4189
Want to Sleep Better? Through Personal Science? (2012-11-06 05:00) . . . . .	4191
Journal of Personal Science: How Much Salt Should I Eat? (2012-11-07 05:00) . . . . .	4194
Positive Psychology Talk by Martin Seligman at Tsinghua University (2012-11-09 05:00) . . . . .	4203
Japanese Discouragement of Foreign Visitors (2012-11-09 23:28) . . . . .	4206
The Power of the Willat Effect: Rinsed versus Unrinsed Tea (2012-11-10 05:00) . . . . .	4207
Assorted Links (2012-11-11 05:00) . . . . .	4208
Measuring Yourself to Improve Your Health? Want to Guest-Blog? (2012-11-12 05:00) . . . . .	4209

Assorted Links (2012-11-14 05:00)	4212
Bayesian Shangri-La Diet (2012-11-15 06:20)	4213
Assorted Links (2012-11-16 05:00)	4215
Taobao's Double Eleven: World's Biggest eHoliday (2012-11-17 05:00)	4216
How I Read (2012-11-18 05:00)	4217
Flaxseed Lowers Blood Pressure (2012-11-18 05:00)	4218
No More Antioxidants (2012-11-20 04:11)	4221
The Physical Spacing Effect: New Way to Learn Chinese Works Shockingly Well (2012-11-22 05:00)	4223
Assorted Links (2012-11-24 05:00)	4228
Thirty Years of Breast Cancer Screening May Have Done More Harm Than Good (2012-11-25 05:00)	4228
The Emphasis on Education in China (2012-11-28 05:33)	4232
Assorted Links (2012-11-29 05:00)	4233
How Helpful Are New Drugs? Not So Clear (2012-11-30 20:13)	4235
7.12 December	4236
More Sitting, More Diabetes: New Meta-Analysis (2012-12-03 05:00)	4236
Assorted Links (2012-12-04 05:00)	4239
Who is the Richest Person in China? (2012-12-05 06:31)	4241
Bariatric Surgery Linked to Acetaminophen Poisoning (2012-12-06 05:00)	4242
Assorted Links (2012-12-08 05:00)	4243
Online Teaching Versus What? (2012-12-09 05:00)	4244
Why Do Fermented Foods Improve Health? A New Idea (2012-12-11 05:35)	4248
Few Doctors Understand Statistics? (2012-12-12 05:00)	4250
Why Quantified Self Matters (2012-12-14 05:00)	4254
Radical Thought at Johns Hopkins Medical School (2012-12-15 05:00)	4255
Assorted Links (2012-12-16 05:00)	4256
Best Books of 2012 (2012-12-17 05:00)	4258
Assorted Links (2012-12-18 05:00)	4259
Twenty Dead Schoolchildren in Newtown, Conn. (2012-12-19 05:00)	4260
One Reason for French Longevity: Molded Cheese (2012-12-20 05:00)	4263
False Confidence About What Caused the Newtown Massacre (2012-12-20 12:51)	4265
Shangri-La Diet Tip: How to Drink Flaxseed Oil (2012-12-21 05:00)	4266
Is Jimmy Moore's Ketosis Diet the Shangri-La Diet in Disguise? (2012-12-22 05:00)	4268
A Brief History of Antibiotics (2012-12-23 05:00)	4272
Assorted Links (2012-12-24 05:00)	4273
Christmas Trees at Buddhist Temple (2012-12-25 05:00)	4274

Elements of Personal Science (2012-12-26 05:00) . . . . .	4275
Assorted Links (2012-12-27 02:55) . . . . .	4277
Department of Self-Presentation: The GiveWell Mistakes Page (2012-12-28 05:00) . . . . .	4278
Assorted Links (2012-12-29 10:57) . . . . .	4278
Never Be Alone in a Hospital (2012-12-30 05:00) . . . . .	4279
How to Find a Doctor (2012-12-31 02:45) . . . . .	4281
Interview with Doron Weber, Author of Immortal Bird, About What He Learned From a Hospital Tragedy (2012-12-31 20:50) . . . . .	4283

## **8 2013 4287**

8.1 January . . . . .	4287
Success on the Shangri-La Diet (2013-01-02 05:00) . . . . .	4287
Assorted Links (2013-01-03 05:00) . . . . .	4288
Rent-Seeking Experts (2013-01-04 05:00) . . . . .	4291
How to Write: Lessons From My Writing Class (2013-01-05 05:00) . . . . .	4296
How to Write: What One Student Learned (2013-01-06 05:00) . . . . .	4298
Assorted Links (2013-01-08 05:00) . . . . .	4299
Brain Tracking: Early Experience (2013-01-09 05:00) . . . . .	4300
Undisclosed Risks of Common Medical Treatments (2013-01-10 05:00) . . . . .	4303
Sleeping Pills are Very Dangerous (2013-01-11 05:00) . . . . .	4305
Hard to Say Whether Medicine Does More Good Than Harm (2013-01-12 05:00) . . . . .	4308
The First John Maddox Prize (2013-01-13 05:00) . . . . .	4311
What Should Your Cholesterol Be? (2013-01-15 05:00) . . . . .	4312
Assorted Links (2013-01-16 05:00) . . . . .	4314
"The Most Influential Tree in the World" (2013-01-17 05:00) . . . . .	4315
No Stagnation in My Kitchen (2013-01-18 05:00) . . . . .	4316
Assorted Links (2013-01-19 05:00) . . . . .	4319
Fecal Transplant Roundup (2013-01-20 05:00) . . . . .	4321
Best Introduction to the Shangri-La Diet? (2013-01-21 21:43) . . . . .	4324
Personal Science = Insourcing Your Health (2013-01-22 05:00) . . . . .	4326
Are Low-Carb Diets Dangerous? (2013-01-23 05:00) . . . . .	4329
Creating More Diversity (2013-01-23 06:30) . . . . .	4333
Late Comment on Battle Hymn of the Tiger Mother (2013-01-24 20:11) . . . . .	4335
Assorted Links (2013-01-25 05:00) . . . . .	4336
What Happens If I Stop Grading? (2013-01-26 05:00) . . . . .	4337
Movie Directing and Teaching (2013-01-28 05:00) . . . . .	4345

	Giving Computer Science Students Freedom (2013-01-29 05:00) . . . . .	4346
	Assorted Links (2013-01-30 05:00) . . . . .	4348
	Guest Post: What Makes a Good Clinician? (2013-01-31 05:00) . . . . .	4351
8.2	February . . . . .	4353
	End-of-Life Medicine: Enormous Lack of Informed Consent (2013-02-01 05:00) . . . . .	4353
	New Terry Deacon Website (2013-02-03 05:00) . . . . .	4357
	Assorted Links (2013-02-04 05:00) . . . . .	4359
	The Clouded Crystal Ball: A Psychic and Her Employees (2013-02-04 19:41) . . . . .	4360
	Why Alicia Juarrero Got Mad at Terry Deacon (2013-02-05 05:00) . . . . .	4361
	Assorted Links (2013-02-07 05:00) . . . . .	4363
	Impossible Things That Are True: The Shangri-La Diet and the Behavior of Goldman Sachs (2013-02-08 05:00) . . . . .	4364
	Value of Self-Experimentation With Chronic Conditions (2013-02-09 05:00) . . . . .	4366
	What I Learned From My Writing Class (2013-02-10 05:00) . . . . .	4368
	If a Chinese Person Says You Are "A Good Student" What Does It Mean? (2013-02-11 05:00) . . . . .	4369
	A Little-Known Problem With Being a Doctor (2013-02-11 15:16) . . . . .	4370
	Assorted Links (2013-02-12 05:00) . . . . .	4370
	Shangri-La Success in Detail (2013-02-13 05:00) . . . . .	4372
	Who Is Listened To? Science and Science Journalism (2013-02-14 05:00) . . . . .	4373
	If You Ever Visit Seoul, You Might Want To Skip Bean Table Restaurant (2013-02-15 05:00) . . . . .	4375
	Web Browsers, Black Swans and Scientific Progress (2013-02-16 05:00) . . . . .	4376
	Assorted Links (2013-02-17 05:00) . . . . .	4384
	The Yakult Women of Seoul (2013-02-19 05:00) . . . . .	4386
	More Trouble in Mouse Animal-Model Land (2013-02-20 05:00) . . . . .	4387
	Assorted Links (2013-02-21 05:00) . . . . .	4388
	Posit Science: More Questions (2013-02-22 05:00) . . . . .	4390
	Celiac Experts Make Less Than Zero Sense (2013-02-23 05:00) . . . . .	4393
	Progress in Reducing Acne (2013-02-24 05:00) . . . . .	4396
	Bitter Pill: Why Medical Costs Are Killing Us by Steven Brill (2013-02-25 05:00) . . . . .	4398
	Consistent- versus Inconsistent-Handed Predicts Better than Right- versus Left-Handed (2013-02-26 05:00) . . . . .	4404
	Assorted Links (2013-02-27 05:00) . . . . .	4406
	Teaching With or Against Human Diversity (2013-02-28 05:00) . . . . .	4406
8.3	March . . . . .	4407
	Assorted Links (2013-03-01 05:00) . . . . .	4407
	How to Encourage Personal Science? (2013-03-02 05:00) . . . . .	4409

Assorted Links (2013-03-03 05:00)	4413
Butter = Antidepressant? (2013-03-04 05:00)	4414
A Revolution in Growing Rice (2013-03-05 05:00)	4415
Modern Food Reduced Diversity of Oral Bacteria (2013-03-06 05:00)	4417
How Meritocratic is Chinese Higher Education? (2013-03-07 05:00)	4418
Great Side Effects of the Shangri-La Diet (2013-03-08 07:32)	4420
Tea and News: Rinse First (2013-03-08 17:00)	4421
Posit Science: Does It Work? (Continued) (2013-03-09 05:00)	4422
Assorted Links (2013-03-10 05:00)	4427
The Rise of Personal Science: One Example, About Acne (2013-03-11 05:00)	4428
Assorted Links (2013-03-12 05:00)	4429
The Pizza Paradox: Home Cooking and Personal Science (2013-03-13 05:00)	4430
The Climategate Leaker Speaks (2013-03-14 05:00)	4436
Omega-6 is Bad For You (2013-03-15 05:00)	4437
Assorted Links (2013-03-16 05:00)	4440
DIY Medicine (2013-03-17 05:00)	4441
Two Cents about Renata Adler (2013-03-18 05:00)	4442
Assorted Links (2013-03-19 05:00)	4443
"Most [Scientists] are Trapped" (2013-03-20 05:00)	4445
Seoul Restaurant Story (2013-03-21 05:00)	4448
Furikake (Japanese Condiment): Attention Crazy Spicers! (2013-03-22 05:00)	4449
Assorted Links (2013-03-23 05:00)	4450
Earwax Transplant Story (2013-03-24 05:00)	4451
Does Unfamiliar Food Cause Weight Loss? (2013-03-25 05:00)	4453
Introduction to Inside Tracker (2013-03-26 05:00)	4454
Assorted Links (2013-03-27 05:00)	4455
Make Yourself Healthy: Crohn's and the SCD Experiment (2013-03-28 05:00)	4457
Does Scientific Research Cause Economic Growth? (2013-03-29 05:00)	4460
Make Yourself Healthy: Diverticulitis (2013-03-30 05:00)	4461
Better Balance and Gums From Flaxseed Oil (2013-03-31 05:00)	4463
8.4 April	4466
Maybe We SHOULD Eat More Fat? (2013-04-02 05:00)	4466
Canker Sores Quickly Cured by Walnuts: More Evidence for Importance of Omega-3 (2013-04-03 05:00)	4468
First Quantified Self Meeting (2008) (2013-04-03 18:13)	4470
Assorted Links (2013-04-04 05:00)	4471



Practical Use of Our Liking For Complex Flavors (2013-04-05 05:00) . . . . .	4472
Speech Pathology Confidential (2013-04-06 05:00) . . . . .	4473
"Brain Games are Bogus": More Trouble for Posit Science (2013-04-07 19:06) . . . . .	4475
Cod Liver Oil in Morning Improves Sleep (2013-04-08 05:00) . . . . .	4475
Why Fujoshi? Experiment by Tsinghua Freshmen (2013-04-09 05:00) . . . . .	4477
Assorted Links (2013-04-10 05:00) . . . . .	4479
First Make Yourself Healthy Meetup April 24 (Wed) (2013-04-10 20:17) . . . . .	4480
Journal of Personal Science: Xylitol Cures Lichen Planus and Geographic Tongue (2013-04-12 05:00)	4481
Xylitol Research (2013-04-13 05:00) . . . . .	4484
How Things Begin: LightSail Energy (2013-04-14 05:00) . . . . .	4486
Make Yourself Healthy Meetup: Underlying Ideas (2013-04-15 05:00) . . . . .	4489
New University of California: A Good Idea (2013-04-16 05:00) . . . . .	4489
The Jenijoy La Belle Tenure Case at Caltech (2013-04-17 05:00) . . . . .	4492
Lose Smell, Lose Weight: Evidence For the Theory Behind the Shangri-La Diet (2013-04-18 05:00) . .	4493
Is Red Meat Dangerous? (2013-04-19 05:00) . . . . .	4494
Shangri-La Diet Success, Including Better Sleep (2013-04-20 05:00) . . . . .	4496
Assorted Links (2013-04-21 05:00) . . . . .	4497
Oral Rehydration Therapy For Diarrhea (2013-04-22 05:00) . . . . .	4498
Cuban Data Refute Mainstream Health Beliefs (2013-04-23 05:00) . . . . .	4500
Cheap Good Science (2013-04-24 05:42) . . . . .	4505
Make Yourself Healthy Meetup Group: Report of First Meeting (2013-04-25 13:28) . . . . .	4507
QS Contest: What Would You Do With a Body Media Armband? (2013-04-25 17:07) . . . . .	4510
More Wrinkles = Too Little Vitamin K2? (2013-04-26 05:00) . . . . .	4510
Standing Improves IBS Symptoms (2013-04-27 05:00) . . . . .	4512
News You Can Use: Tonsillectomies Are a Bad Idea (2013-04-29 05:00) . . . . .	4514
Assorted Links (2013-04-30 05:00) . . . . .	4514
8.5 May . . . . .	4516
Acne Club: A New Way to Fight Acne (2013-05-01 05:00) . . . . .	4516
Acquired Butterphilia (2013-05-04 05:00) . . . . .	4518
Assorted Links (2013-05-05 05:00) . . . . .	4521
How Much Benefit from the Human Genome Project? (2013-05-06 05:00) . . . . .	4521
Next Meeting of Make Yourself Healthy Group (2013-05-07 05:00) . . . . .	4522
The Power of Lassi, an Underappreciated Fermented Food (2013-05-08 05:00) . . . . .	4523
Teeccino Tasting Notes (2013-05-09 05:00) . . . . .	4524
How Things Begin: Tisano Tea (2013-05-11 05:00) . . . . .	4526

	The Lessons of Tisano Tea (2013-05-12 05:00) . . . . .	4527
	Assorted Links (2013-05-13 05:00) . . . . .	4528
	Academic Job Advice: Be Able to Say Why You Study What You Study (2013-05-14 05:00) . . . . .	4529
	Sous Vide Secrets (2013-05-15 05:00) . . . . .	4530
	Journal of Personal Science: One Child's Autism Eliminated by Removal of Glutamate From Her Diet (2013-05-17 05:00) . . . . .	4532
	Assorted Links (2013-05-18 05:00) . . . . .	4535
	"You Can't Change Something Unless You Love It": The Case of Dr. Gilmer and Dr. Gilmer (2013-05-19 05:20) . . . . .	4536
	Give and Take by Adam Grant (2013-05-20 09:42) . . . . .	4538
	More about Give and Take by Adam Grant (2013-05-21 05:00) . . . . .	4540
	More on the Synergy of Walking and Learning (2013-05-22 05:00) . . . . .	4541
	Next Meeting of Make Yourself Healthy Group is Tomorrow (Thursday) (2013-05-22 09:23) . . . . .	4544
	Anti-Procrastination Software Available (2013-05-26 18:16) . . . . .	4544
	Useful Knowledge: Arithmetic and Chinese (2013-05-27 07:10) . . . . .	4547
	Assorted Links (2013-05-29 05:00) . . . . .	4547
	Hospitals and Their Employees: Stuck in the 1800s (2013-05-30 10:01) . . . . .	4549
	"Because It Costs More": An Example of Medical Reasoning (2013-05-31 05:00) . . . . .	4550
8.6	June . . . . .	4552
	Assorted Links (2013-06-01 15:00) . . . . .	4552
	"The \$2.7 Trillion Medical Bill" (2013-06-02 09:00) . . . . .	4553
	Resistance to Fecal Transplants as Treatment for C. diff. Infection (2013-06-03 05:00) . . . . .	4555
	Aquatic Ape Theory Revised (2013-06-04 05:30) . . . . .	4557
	Walking and Learning: GRE Words (2013-06-05 05:00) . . . . .	4561
	Assorted Links (2013-06-06 05:00) . . . . .	4562
	The Rise and Fall of Heart Disease (2013-06-07 05:00) . . . . .	4562
	Watch Nick Winter Work (2013-06-08 05:42) . . . . .	4565
	Nick Winter and Percentile Feedback (2013-06-09 08:42) . . . . .	4565
	Assorted Links (2013-06-10 05:00) . . . . .	4566
	The Fate of the Tiananmen Students and the Story of Edward Snowden (2013-06-11 09:16) . . . . .	4567
	Assorted Links (2013-06-13 06:00) . . . . .	4569
	Benefits of Brown Noise (2013-06-14 05:00) . . . . .	4570
	Magic Dots User Experience (Person 1) (2013-06-15 05:00) . . . . .	4572
	Occupational Specialization as Far Back as the Bronze Age (2013-06-16 05:00) . . . . .	4574
	Myopia Increases Innovation (2013-06-17 05:42) . . . . .	4575
	Sunlight and Heart Disease (2013-06-18 22:11) . . . . .	4577

Assorted Links (2013-06-20 05:00)	4579
Tisano Chocolate Tea and Combining Complex Flavors (2013-06-21 05:00)	4581
Assorted Links (2013-06-22 05:00)	4582
Magic Dots: User Experience (Person 2) (2013-06-23 05:52)	4583
Scrivener for Windows Review (2013-06-24 05:00)	4585
Magic Dots: User Experience (Person 3) (2013-06-25 05:00)	4587
Magic Dots: User Experience (Person 4) (2013-06-26 05:00)	4589
Assorted Links (2013-06-27 05:00)	4590
Heart Disease Epidemic and Latitude Effect: Reconciliation (2013-06-28 05:00)	4590
Mental Effects of Butter: "My Video-Gaming is Better" (2013-06-29 05:00)	4593
Alternate-Day Fasting Improved My Fasting Blood Sugar (2013-06-30 05:00)	4594
8.7 July	4597
Does Alternate-Day Fasting Lower HbA1c? (2013-07-02 05:00)	4597
Assorted Links (2013-07-03 05:00)	4598
David Grimes Responds to Comments (2013-07-04 05:00)	4599
Why Do Magic Dots Work? (2013-07-05 05:00)	4601
Tsinghua Graduation Memento Statement (2013-07-06 05:00)	4603
Assorted Links (2013-07-07 05:00)	4604
Journal of Personal Science: Effect of Meditation on Math Speed (2013-07-08 05:00)	4605
The History of Human Chromosome Number Reveals Constraints on Professional Scientists (2013-07-09 05:00)	4609
Congratulations, Morex! Shangri-La Diet Success (2013-07-10 05:00)	4611
Assorted Links (2013-07-11 05:00)	4613
Anesthesia Dolorosa Mirror Cure (2013-07-12 05:55)	4615
My Heart Watch: Bay Area Health Measurements (2013-07-13 05:00)	4616
Assorted Links (2013-07-14 05:00)	4618
Anesthesia Dolorosa Mirror Cure Update (2013-07-15 05:00)	4620
Assorted Links (2013-07-18 05:00)	4621
How to Detect Dementia (2013-07-19 05:00)	4623
Butter and Coffee (2013-07-20 05:00)	4625
Assorted Links (2013-07-21 05:00)	4627
More Magic Dots (2013-07-23 05:00)	4629
Are Drug Companies Becoming Less Law-Abiding? (2013-07-24 05:00)	4630
Researchers Fool Themselves: Water and Cognition (2013-07-25 05:00)	4631
Assorted Links (2013-07-26 05:00)	4634
Chinese Food: China vs America (2013-07-27 05:00)	4634

	Benefits of Alternate Day Fasting (2013-07-28 05:00) . . . . .	4638
	What I'm Reading (2013-07-29 05:00) . . . . .	4641
	Assorted Links (2013-07-30 05:00) . . . . .	4642
	Was Sisyphus in Hell . . . or Heaven? (2013-07-31 05:00) . . . . .	4643
8.8	August . . . . .	4644
	The Feet of People Who Never Wear Shoes (2013-08-01 05:00) . . . . .	4644
	Assorted Links (2013-08-02 05:00) . . . . .	4647
	Suicidal Gestures at Princeton: A Staggering Increase (2013-08-03 05:00) . . . . .	4648
	More About Benefits of Alternate Day Fasting (2013-08-04 05:00) . . . . .	4651
	More Evidence Linking Fermentation and Complexity: Wild-Fermented Wine (2013-08-05 05:00) . .	4653
	Cream Cheese Improves Brain Function (2013-08-07 05:00) . . . . .	4655
	Alternate Day Fasting: Not For Everyone? (2013-08-08 05:00) . . . . .	4657
	The Truth in Small Doses: Interview with Clifton Leaf (Part 1 of 2) (2013-08-09 05:00) . . . . .	4659
	The Truth in Small Doses: Interview with Clifton Leaf (Part 2 of 2) (2013-08-10 05:00) . . . . .	4662
	Smoking and Cancer (2013-08-11 05:00) . . . . .	4663
	Assorted Links (2013-08-12 08:56) . . . . .	4665
	"Hunger is a Necessary Nutrient" (Ancestral Health Symposium 2013) (2013-08-16 03:49) . . . . .	4666
	Correlation of Body and Soul (Ancestral Health Symposium 2013) (2013-08-17 05:00) . . . . .	4668
	Unhelpful Answers (Ancestral Health Symposium 2013) (2013-08-18 05:00) . . . . .	4669
	Economic Stagnation and Recent College Graduates (2013-08-19 05:00) . . . . .	4672
	Women and Body Fat (Ancestral Health Symposium 2013) (2013-08-20 05:00) . . . . .	4675
	First Effects of Intermittent Fasting (2013-08-21 05:00) . . . . .	4676
	Assorted Links (2013-08-22 05:00) . . . . .	4677
	Stagnation in Psychiatry (2013-08-23 05:00) . . . . .	4678
	Wild-Fermented Wine and the Ecology of Knowledge (2013-08-24 05:00) . . . . .	4680
	Showers and the Ecology of Knowledge (2013-08-25 05:00) . . . . .	4682
	Organic Pollutants Associated With Diabetes (2013-08-26 05:00) . . . . .	4683
	Dutch University Fires Unnamed Researcher (2013-08-27 05:00) . . . . .	4683
	Autoimmune Disorder Improved With Fermented Food (2013-08-28 05:00) . . . . .	4685
	Assorted Links (2013-08-29 05:00) . . . . .	4686
	Rewarding Criticism Put Nicely Produced Long-Lasting Change (2013-08-30 05:00) . . . . .	4688
	Criticism of My View of Education: My Answer (2013-08-31 05:00) . . . . .	4689
8.9	September . . . . .	4691
	The Irrelevance of Grass-Fed Beef (Ancestral Health Symposium 2013) (2013-09-01 05:00) . . . . .	4691
	What is College For? (2013-09-03 05:00) . . . . .	4693

Assorted Links (2013-09-04 05:00) . . . . .	4697
Magnesium and Rectum Healing (2013-09-05 05:00) . . . . .	4698
A Little-Noticed Male/Female Difference: Pressure to Conform (2013-09-06 05:00) . . . . .	4699
Deirdre McCloskey and Me (2013-09-07 05:00) . . . . .	4703
Dangerous Noise and "Doctors Hurt You" (2013-09-08 05:00) . . . . .	4704
More About Magic Dots (2013-09-09 05:00) . . . . .	4707
The Blindness of Scientists: The Problem isn't False Positives, It's Undetected Positives (2013-09-10 05:00) . . . . .	4708
"The Cause of Ulcers is Bacteria" Makes as Much Sense as "The Cause of Car Accidents is Cars" (2013-09-11 05:00) . . . . .	4711
Dragon vs. Dragon: Same Name, Different Genus? (2013-09-12 05:00) . . . . .	4713
Hobbyist Science vs. Professional Science vs. Personal Science (2013-09-13 05:00) . . . . .	4714
Eric Kandel Sheds Light On Who Wins Nobel Prizes (2013-09-14 05:00) . . . . .	4716
Drawing a Line Where No Line Was Needed: GQ Editor Defends Hugo Boss (2013-09-15 05:00) . . .	4719
Teaching Academic Writing: My Plan (Part 1 of 2) (2013-09-16 05:00) . . . . .	4721
Teaching Academic Writing: My Plan (Part 2 of 2) (2013-09-17 05:00) . . . . .	4722
Foreign Language Learning Tips (2013-09-18 05:00) . . . . .	4724
What Goes Unsaid: Self-Serving Health Research (2013-09-19 05:00) . . . . .	4728
Teeth Clenching Can Release Too Much Mercury (2013-09-20 05:00) . . . . .	4731
"Sitting is the New Smoking" (2013-09-21 05:00) . . . . .	4733
Assorted Links (2013-09-22 05:00) . . . . .	4734
Does Intermittent Fasting Improve Repair Processes? (2013-09-23 05:00) . . . . .	4736
Chinese versus American Math Education (2013-09-24 05:00) . . . . .	4738
"Trying to Confuse You": Pluses and Minuses of the Professorial Value System (2013-09-25 05:00) . .	4743
Queen Late (2013-09-26 05:00) . . . . .	4746
Assorted Links (2013-09-27 05:00) . . . . .	4747
Progress in Psychiatry and Psychotherapy: The Half-Full Glass (2013-09-28 05:00) . . . . .	4749
"Science is the Belief in the Ignorance of Experts" – Richard Feynman (2013-09-29 05:00) . . . . .	4750
Assorted Links (2013-09-30 05:00) . . . . .	4752
8.10 October . . . . .	4753
"A Debt-Ceiling Breach Would be Very, Very, Very Bad" (2013-10-01 05:00) . . . . .	4753
How Things Begin: Duke Check (2013-10-02 05:00) . . . . .	4755
JFK Assassination Diary by Edward Jay Epstein (2013-10-03 01:02) . . . . .	4756
The Willat Effect With Gin (2013-10-03 05:00) . . . . .	4757
The "Disgusting" Foods I Eat (2013-10-04 05:00) . . . . .	4759
TV Shows I Like (2013-10-05 05:00) . . . . .	4761

Signaling and Higher Education: Email With Bryan Caplan (2013-10-06 05:00) . . . . .	4763
Assorted Links (2013-10-07 05:00) . . . . .	4764
The Emperor's New Clothes and the New York Times Paywall (2013-10-08 05:00) . . . . .	4765
Does Chicken Extract Improve Brain Function? (2013-10-09 05:00) . . . . .	4766
Assorted Links (2013-10-10 05:00) . . . . .	4768
Association of Sleep and Chronic Illness (2013-10-11 05:00) . . . . .	4769
A High School Teacher Learns About Teaching (2013-10-12 05:00) . . . . .	4772
Why We Need Diverse Fermented Foods (2013-10-13 05:00) . . . . .	4774
Omega-3: More Evidence of Brain Benefit (2013-10-14 05:00) . . . . .	4775
Assorted Links (2013-10-15 05:00) . . . . .	4777
Coffee Experiments: Suggestions for Improvement (2013-10-16 05:00) . . . . .	4778
Assorted Links (2013-10-17 05:00) . . . . .	4781
Omega-3 and Omega-6 in Common Foods and My Consumption (2013-10-18 05:00) . . . . .	4782
My Theory of Human Evolution: Obsessive-Compulsive Disorder (2013-10-18 05:00) . . . . .	4786
Assorted Links (2013-10-19 05:00) . . . . .	4788
Harry Shearer Used My Joke (2013-10-20 19:32) . . . . .	4788
Our Need for Morning Faces: Does Isolation Cause Delusions? (2013-10-21 05:00) . . . . .	4789
Mo Ibrahim: How I Became a Teacher (2013-10-22 05:00) . . . . .	4791
Walking Meetings Much Better than Seated Meetings (2013-10-23 05:00) . . . . .	4792
Assorted Links (2013-10-24 05:00) . . . . .	4794
Saturated Fat and Heart Attacks (2013-10-25 05:00) . . . . .	4795
Walking Meeting Update (2013-10-26 05:00) . . . . .	4799
Learning English: Walking versus Sitting (2013-10-27 05:00) . . . . .	4800
Assorted Links (2013-10-28 05:00) . . . . .	4801
Doctor's Data Sues Stephen Barrett of Quackwatch (2013-10-29 05:00) . . . . .	4802
Assorted Links (2013-10-30 05:00) . . . . .	4804
8.11 November . . . . .	4805
Back Pain Cured by Sarno's Ideas (2013-11-02 05:00) . . . . .	4805
Meat as Health Food, Food Preference as Wisdom (2013-11-03 05:00) . . . . .	4807
Does Bedtime Honey Improve Sleep? Nine Reasons to Think So (2013-11-05 05:00) . . . . .	4811
Assorted Links (2013-11-07 05:00) . . . . .	4831
Why Fashion Evolved (2013-11-09 05:00) . . . . .	4832
Assorted Links (2013-11-10 05:00) . . . . .	4833
How to Write (and Teach): Tell a Story (2013-11-11 05:00) . . . . .	4834
Orange Glasses at Night Improve Sleep (2013-11-12 05:00) . . . . .	4838

More About Sleep and Honey: One Teaspoon (2013-11-13 05:00) . . . . .	4842
How to Write a Personal Statement or Statement of Purpose (2013-11-14 05:00) . . . . .	4847
LEDs: Indoor Lighting of the Future (2013-11-15 05:00) . . . . .	4849
Honey, Sleep and Reddit (2013-11-16 05:00) . . . . .	4851
Storing Food Without a Fridge (2013-11-17 05:00) . . . . .	4855
Assorted Links (2013-11-18 05:00) . . . . .	4856
Self-Experimenters Wanted: Idiopathic Thrombocytopenia Purpura (2013-11-18 23:12) . . . . .	4857
Modern Cargo Cult Science: Evidence-Based Medicine, Science Fiction in China (2013-11-19 05:00) .	4858
Bedtime Honey Improves Sleep "1000%. Crazy Good Tip" (2013-11-20 13:42) . . . . .	4860
Orange Glasses and Sleep: Correction (2013-11-22 05:00) . . . . .	4866
Assorted Links (2013-11-23 05:00) . . . . .	4867
Is Diabetes Due to Bad Sleep? (2013-11-24 05:00) . . . . .	4869
Dark Picture of Doctors (2013-11-25 05:00) . . . . .	4870
Assorted Links (2013-11-26 05:00) . . . . .	4875
Darker Bedroom Better Sleep (2013-11-27 05:00) . . . . .	4876
Assorted Links (2013-11-28 05:00) . . . . .	4878
Why Does Bedtime Honey Improve Sleep? Helpful Data (2013-11-29 05:00) . . . . .	4880
Mo Ibrahim: My First Semester (2013-11-30 05:00) . . . . .	4882
8.12 December . . . . .	4884
Assorted Links (2013-12-01 05:00) . . . . .	4884
Bedtime Honey Doubles a Measure of Strength (2013-12-03 05:00) . . . . .	4885
Magic Dots: User Satisfaction (2013-12-05 05:00) . . . . .	4888
Government as Useful Irritant and Rules of Innovation: What Libertarians and Other Economists Miss (2013-12-06 05:00) . . . . .	4890
Why Does Bedtime Honey Improve Sleep? More Helpful Data (2013-12-07 05:00) . . . . .	4895
Warning, Soybean Eaters: Tofu Made Me Stupid (2013-12-09 05:00) . . . . .	4901
Sleep: Summary of What I've Learned (2013-12-11 05:00) . . . . .	4911
Sleep Apnea, Wheat Allergy, Nasty Cough and Personal Science (2013-12-12 05:00) . . . . .	4915
Bedtime Honey: Less Honey May Be Better (2013-12-13 05:00) . . . . .	4919
Bedtime Honey: Other Benefits Besides Sleep and Strength? (2013-12-14 05:00) . . . . .	4921
Assorted Links (2013-12-15 05:00) . . . . .	4922
Soy Can Cause Migraines (2013-12-16 05:00) . . . . .	4924
Rules of Innovation: Two Examples about Snowden and Greenwald (2013-12-17 05:00) . . . . .	4926
Assorted Links (2013-12-18 05:00) . . . . .	4928
Bedtime Honey and Sleep: More Evidence It Works (2013-12-19 05:00) . . . . .	4930
Front Lines of Personal Science: Why Did I Sleep So Well? (2013-12-20 05:00) . . . . .	4932

Assorted Links (2013-12-21 05:00)	4934
Front Lines of Personal Science: Progress on Why I Slept So Well (2013-12-22 05:00)	4935
Front Lines of Personal Science: More Progress on Sleep (2013-12-23 05:00)	4937
Bedtime Honey Helps an Autistic Boy Sleep (2013-12-24 05:00)	4939
Frontlines of Personal Science: Confirmation of After Dinner Sweets Effect (2013-12-25 05:00)	4940
Lessons of This Blog (1st of 2) (2013-12-26 05:00)	4943
Lessons of This Blog (2nd of 2) (2013-12-27 05:00)	4946
Assorted Links (2013-12-28 05:00)	4949
Missing Data in Clinical Trials: FDA Officials Refuse to Set Limits (2013-12-29 05:00)	4951
Sleep and Bedtime Honey: More About Strength Improvement (2013-12-30 05:00)	4953
The Year in Personal Science: 2013 (2013-12-31 05:00)	4954
<b>9 2014</b>	<b>4961</b>
9.1 January	4961
Assorted Links (2014-01-01 05:00)	4961
Interview with Mike McInnes, Author of The Honey Diet (2014-01-02 05:00)	4963
Science Critics Are Human: Cautionary Tale (2014-01-03 05:00)	4975
ADHD Experts Have a Bad Case of Gatekeeper Syndrome (2014-01-04 05:00)	4977
Butter and Heart Attacks in Sweden (2014-01-05 05:00)	4978
Bedtime Honey and Sleep: Different Kinds and Amounts of Honey (2014-01-06 05:00)	4981
Interview with Mr. Heisenbug (2014-01-07 05:00)	4990
Mars Corp. Won't Tell Me the Flavonoid Content of Dove Dark Chocolate (2014-01-08 05:00)	4995
Reaction Time as a Measure of Health (2014-01-09 05:00)	4997
Man Beats Prostate Cancer Without Surgery (2014-01-10 05:00)	5000
Joseph Biederman is Still at Harvard (2014-01-11 05:00)	5002
Eggs and Insomnia (2014-01-12 05:00)	5004
Assorted Links (2014-01-13 05:00)	5008
Does Smoking Increase Heart Disease? If So, Why? (2014-01-14 05:00)	5009
"Bedtime Honey is a Godsend" (2014-01-14 20:19)	5012
Who Tests the Genetic Testers? And the Experts? (2014-01-15 05:00)	5015
Donald Knuth and Dessert: A Heretic (2014-01-16 05:00)	5018
More on Government as Useful Irritant: Why Are Economists Stupid About Innovation? (2014-01-17 05:00)	5019
Assorted Links (2014-01-18 05:00)	5022
Journal of Personal Science: Baby Shampoo Cured My Sinusitis (2014-01-19 05:00)	5024
Who Will Make the Future Better than the Past? Professors or the Rest of Us? (2014-01-20 05:00)	5030



Carbohydrate Near Bedtime Improves Sleep, Say Two Books (2014-01-21 05:00)	5036
Assorted Links (2014-01-22 05:00)	5039
Berkeley Undergraduates and Professors: Then and Now (2014-01-23 05:00)	5041
Beijing versus Berkeley: Which is Healthier? (2014-01-24 05:00)	5043
Assorted Links (2014-01-25 05:00)	5046
Journal of Personal Science: Nasal Congestion Due to Fabric Allergies (2014-01-27 05:00)	5048
Which Ideas of this Blog are the Most Useful? (2014-01-28 05:00)	5050
The Turning Point in My Self-Experimentation (2014-01-29 05:00)	5052
Assorted Links (2014-01-30 05:00)	5055
Depression, Pain and Addiction: The Connection (2014-01-31 05:00)	5056
9.2 February	5063
Announcing PaleoCon (2014-02-01 02:18)	5063
Charles Dickens, Demons, and Personal Science (2014-02-01 05:00)	5063
Adult Acne, Water and Milk Thistle (2014-02-02 05:00)	5064
More Muscle Strength, Less Cancer (2014-02-03 05:00)	5066
Philip Seymour Hoffman's and Cory Montith's Death From Heroin: Why? (2014-02-04 05:00)	5068
Better Sleep, Less Cancer (2014-02-05 05:00)	5073
Evidence that Antioxidants Increase Cancer (2014-02-06 05:00)	5074
Assorted Links (2014-02-07 05:00)	5076
"Night and Day": Steve Hansen on Teaching (2014-02-08 05:00)	5077
Assorted Links (2014-02-09 05:00)	5080
Adult Acne Due to Allergy (2014-02-10 05:00)	5081
Journal of Personal Science: L. Planturum-Rich Fermented Foods and Supplement Prevented/Cured My Eczema (2014-02-12 05:00)	5083
The Idealist: Jeffrey Sachs and the Quest to End Poverty by Nina Munk (2014-02-14 05:00)	5086
Assorted Links (2014-02-15 05:00)	5088
Elegant Variation, Fashion and Employee Free Time: What Do They Have in Common? (2014-02-16 05:00)	5089
Cheating at Caltech (2014-02-17 05:00)	5091
Interview with Zeynep Ton, Author of The Good Jobs Strategy (2014-02-18 05:00)	5096
DIY Medical Devices: No Science, Please (2014-02-19 05:00)	5100
Good Sleep Prevents Cancer (2014-02-20 05:00)	5102
Fermented Foods/Probiotics Clear Lungs? (2014-02-21 05:00)	5105
The Great Prostate Hoax by Richard Ablin (2014-02-22 05:00)	5106
The Conditioned-Tolerance Explanation of "Overdose" Death (2014-02-23 05:00)	5108
Fermented Food Can Cure Eczema: More Evidence (2014-02-24 05:00)	5111

	Fermented Foods, Eczema, and the Room for Improvement in Medicine (2014-02-25 05:00) . . . . .	5113
	Assorted Links (2014-02-26 05:00) . . . . .	5118
	Brain Test Phenomenology: Bad Beijing Restaurant? (2014-02-28 05:00) . . . . .	5119
9.3	March . . . . .	5123
	How to Brew Black Tea (2014-03-02 05:00) . . . . .	5123
	Assorted Links (2014-03-03 05:00) . . . . .	5125
	Who is the Smartest Person Who Believes Climate Change Fear-Mongering? (2014-03-04 05:00) . .	5131
	The Polio Vaccine Disaster: Precursor of the Obamacare Website Fiasco (2014-03-05 05:00) . . . . .	5140
	"We Need Only One Santa": My Answer to Grand Health Promises (2014-03-06 05:00) . . . . .	5142
	Sleep and Depression: More Links (2014-03-07 05:00) . . . . .	5144
	Defenders of the Indefensible: Jim Dean, University of North Carolina (2014-03-08 05:00) . . . . .	5146
	The Coming Reunification of Korea (2014-03-09 05:00) . . . . .	5148
	Human Papilloma Virus and Cervical Cancer (2014-03-10 05:00) . . . . .	5149
	Nick Szabo is Satoshi Nakamoto, the Inventor of Bitcoin (2014-03-11 05:00) . . . . .	5159
	Assorted Links (2014-03-12 05:00) . . . . .	5162
	"Dawn of Genomic Medicine" (2014-03-13 05:00) . . . . .	5162
	Assorted Links (2014-03-14 05:00) . . . . .	5165
	The Wisdom of Google: "Dessert", "Honey" and "Fruit" Closer to "Dinner" than "Breakfast" or "Lunch" (2014-03-16 05:00) . . . . .	5166
	Heart Emergencies by Appointment at Mt. Sinai Hospital (2014-03-18 05:00) . . . . .	5169
	Truth to Power: Eric Lander's Reddit AMA (2014-03-19 05:00) . . . . .	5171
	Cheap Accurate Home HbA1c Test (2014-03-20 05:00) . . . . .	5172
	Assorted Links (2014-03-21 05:00) . . . . .	5173
	Assorted Links (2014-03-22 05:00) . . . . .	5177
	Why Do Sweet Foods Taste Good? The Importance of a Simple Observation (2014-03-23 05:00) . . .	5188
	Treat Everyone As Smart, Capable and Motivated? (2014-03-25 05:00) . . . . .	5195
	"Why Fuss About Paleo Life?" (2014-03-26 05:00) . . . . .	5198
	Assorted Links (2014-03-27 05:00) . . . . .	5207
	Larger Lesson of "We Were Wrong about Saturated Fat" (2014-03-28 05:00) . . . . .	5208
	Teaching Histology: Lessons for Other Teaching? (2014-03-29 05:00) . . . . .	5213
	More Cereal Fiber, Much Less Heart Disease (2014-03-30 05:00) . . . . .	5216
	Questions for Jeffrey Sachs (2014-03-31 05:00) . . . . .	5218
9.4	April . . . . .	5220
	The Trouble with Critics of Science, Such as John Ioannidis (2014-04-01 05:00) . . . . .	5220
	Assorted Links (2014-04-02 05:00) . . . . .	5223
	Journal of Personal Science: Molybdenum and Avoiding Sulfur Helped My IBS (2014-04-03 05:00) . .	5224

	Assorted Links (2014-04-04 05:00) . . . . .	5228
	Bedtime Honey and Motivation (2014-04-05 05:00) . . . . .	5229
	What is Teaching? (2014-04-06 05:00) . . . . .	5230
	Assorted Links (2014-04-08 05:00) . . . . .	5233
	Assorted Links (2014-04-09 05:00) . . . . .	5235
	Hobby versus Job: Casa Pepe Guest House, Seoul (2014-04-10 05:00) . . . . .	5236
	Burnt Sugar Grapefruit: Give Thanks for South Korea (2014-04-13 05:00) . . . . .	5238
	Pregnancy Gingivitis: Failure to Look for the Cause (2014-04-14 05:00) . . . . .	5241
	Mo Ibrahim: My Third Year of Teaching (2014-04-15 05:00) . . . . .	5245
	Korean Bakery Opens in Berkeley (2014-04-15 05:00) . . . . .	5247
	Assorted Links (2014-04-16 05:00) . . . . .	5249
	High-Frequency Trading and Health Care (2014-04-17 05:00) . . . . .	5251
	Universities: Expectation versus Reality (2014-04-18 05:00) . . . . .	5255
	Lyme Disease and Bad Medicine (2014-04-19 05:44) . . . . .	5259
	Teaching Children: Adjustment to Individual Differences (2014-04-20 09:29) . . . . .	5260
	Assorted Links (2014-04-21 05:00) . . . . .	5262
	The Link Between Lead and Crime (2014-04-22 05:00) . . . . .	5264
	Value of Salt Reduction Supported by Four Studies (2014-04-23 05:41) . . . . .	5268
	Journal of Personal Science: Omega-3, Nursing a Baby and Postpartum Depression (Part 1 of 2) (2014-04-25 05:00) . . . . .	5274
	Journal of Personal Science: Omega-3 and ADHD (Part 2 of 2) (2014-04-26 05:00) . . . . .	5278
	Seth (2014-04-27 19:15) . . . . .	5283
9.5	May . . . . .	5307
	Cause of Death (2014-05-10 07:00) . . . . .	5307
	How Little We Know: Big Gaps in Psychology and Economics (2014-05-22 12:18) . . . . .	5312
9.6	June . . . . .	5313
	Seth Roberts Memorial Talks (2014-06-13 21:54) . . . . .	5313
9.7	July . . . . .	5314
	Assorted Links (2014-07-31 05:00) . . . . .	5314
9.8	August . . . . .	5315
	Videos of Seth Roberts Memorial Talks (2014-08-20 07:10) . . . . .	5315



# 1. 2006

## 1.1 May

### About (2006-05-05 18:46)

This is an example of a WordPress page, you could edit this to put information about yourself or your site so readers know where you are coming from. You can create as many pages like this one or sub-pages as you like and manage all of your content inside of WordPress.

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### Week of Long Walks (2006-05-08 13:04)

"How are you doing, after such an exciting week?" my sister asked. Well, I took several long walks – my idea of a big treat. To let the good news wash over me.

Have you heard of Blockbuster, a book by Patricia Marx and Douglas McGrath? Published in 1988? They wrote about the new-author experience in *Spy*: "Our book came out to whatever is the opposite of great fanfare." They decided to hire their own publicist. One candidate told them "our book could become known only if we became known. . . . Just one day after Aeschylus died, the publicist said, his play *The Suppliant Women*, which had been sparsely attended and about to close, was sold out." Another person told them, "Even if I could get you publicity for the book, which is highly, highly doubtful, what's the difference? . . . Nothing lasts." And nothing changes, either, at least in 18 years. Recently I asked Diane Reverand, an editor at St. Martin's Press, what was the worst thing about being a writer. "How difficult it is to get attention for what you have done," she replied. "So few books get any attention at all."

Which is why, when *SLD* was published (April 25), I was nervous. Two factors loom large in how well a book does: (a) how many people buy the book in the beginning; and (b) how much each buyer recommends it. The first depends more on the author's fame than anything else; the second depends on the quality of the book. These two factors roughly multiply to determine sales. Big initial audience x poor book = poor sales. Small initial audience x good book = poor sales. People in the movie industry make a similar calculation; they look at (a) size of first-weekend audience and (b) dropoff from Week 1 to Week 2.

In terms of initial exposure, *SLD* had two strikes against it: I wasn't famous; and the diet was absurd ("If you had to cook up the ultimate stereotype of a wacky fad diet for use in a comedic novel or film, the Shangri-La Diet would fill the bill," wrote [calorielab.com](http://calorielab.com)). For most media, the mental equation is publicize absurdity = lose credibility. On the other hand, *Freakonomics* authors Levitt and Dubner, my agent (Suzanne Gluck), my publisher (Putnam), my editor (Marian Lizzi), and the book's two publicists (Stephanie Sorensen and Katie McKee) did a fantastic job of turning just about every possible lever in the book's favor – so many levers I won't even start to describe them.

Their efforts – and the support of Ann Hendricks, Stephen Marsh, and, yes, [calorielab.com](http://calorielab.com) – have already begun to pay off. The book is #31 at [amazon.com](http://amazon.com) – and I'm alive. On Wednesday, Dennis Prager, of the Dennis Prager show,

interviewed me for an hour. Mr. Prager was extremely positive about the book. He almost never covered diet books, he said, but he was making an exception for this one. To discuss SLD was "a public service." A public service! He himself was doing the diet, it was working for him, he was amazed how little hunger he felt. He corrected Dubner's comment on the cover about the book helping "a few million people." "A few billion" would be more accurate, he said. After that interview, the book soared to #2 at amazon.com, where it stayed for two days. How did you do that? fellow editors asked Marian Lizzi in amazement.

Will those who buy it recommend it? Well, Kathy Sierra, co-author of Head First Java and popular blogger, didn't buy it but did recommend it – in [1]better-than-glowing terms. She summed up her opinion in an email to Marian, who had sent her a copy: "This book may be nothing less than a miracle." (Ah, shucks.) It also seems to me that almost all of the forum contributors would recommend the book. And the forums are growing rapidly.

That was the good news last week.

Berkeley Public Library Watch: The Shangri-La Diet, 3 holds on 1 copy. The Omnivore's Dilemma by Michael Pollan, 96 holds on 7 copies. Website Watch: Distinct hosts served at sethroberts.net, latest 24-hour period: 883. One week ago: 452. Distinct hosts served is close to the number of different visitors.

1. [http://headrush.typepad.com/creating\\_passionate\\_users/2006/05/the\\_strangest\\_e.html](http://headrush.typepad.com/creating_passionate_users/2006/05/the_strangest_e.html)

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## Is the Spread of an Idea Like an Epidemic? (2006-05-16 04:49)

I watched a TV movie last week about a bird-flu pandemic. Starts in China, whole neighborhoods closed off, food runs out, Penn Station giant hospital, millions of deaths, vaccine, baby on the way, ambiguous ending. Not bad, but not good, either. My mind kept drifting to the spread of The Shangri-La Diet.

It is like a contagious disease in the sense that it can be spread person-to-person: Person A reads the book, tries its weight-loss methods, loses weight or at least appetite, tells Person B about it, Person B reads the book, and so on. It is unlike a contagious disease in the sense that it can be spread by media – newspaper article, radio interview, etc. After spiking to #2 on amazon.com after an interview on the Dennis Prager show, the amazon.com rank has drifted down to about #100.

A contagious disease spreads faster and slower: faster when people are close together (subway), slower when they are apart (sleeping). But with a weight-loss idea the variations of rate of transmission are much larger. At one extreme (slow), someone tries it and then three weeks later someone else notices her weight loss and asks about its source and (if I'm lucky) decides to try it – one person "infected" in three weeks. At the other extreme (fast) is something on national TV, where hundreds of thousands of people become "infected" in minutes.

To get some idea of how the idea is spreading, I have been tracking the growth of the forums at sethroberts.net. Here are graphs of the total number of posts, topics, and members (upper graph) and the rates of their growth (lower graph).





There has been little publicity since the Prager interview about two weeks ago, so the recent growth level of about 5 % per day presumably reflects word of mouth/blog. The interesting fact is that the growth appears steady at about 5 %.

Berkeley Public Library Watch: The Shangri-La Diet, 4 holds on 1 copy. The Omnivore's Dilemma by Michael Pollan, 110 holds on 7 copies. Website Watch: Distinct hosts served at sethroberts.net, latest 24-hour period: 948. One week ago: 875. Distinct hosts served is close to the number of different visitors.

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Ethesis (2006-05-18 19:35:28)

There are a number of modeling and predictive tools available in applied economics for this sort of thing.

### **Scenes From the Life of a Best-Selling Author (2006-05-18 07:50)**

I think of it as the bestseller no one has heard of. The Shangri-La Diet is on a NY Times bestseller list. And now is #11 at amazon.com. Really. I am not making this up. Nevertheless . . .

A few days ago I was scheduled for a radio interview by phone from my apartment but at the appointed time no one called. I reached the host. "You've written a book?" he asked. Yes, it's called The Shangri-La Diet, I said. He hadn't heard of it.

Yesterday I ran into two of my former students. They asked how I was doing. "A book I wrote has just been published," I said. They were surprised. I told them the title. They hadn't heard of it. They did remember I was interested in weight control.

Yesterday I went to the bookstore closest to where I live, a very nice independent bookstore. I offered to sign any copies of my book they might have. The woman behind the counter hadn't heard of it. She looked it up on the computer, found that they didn't have any copies. You might want to carry it, it's on the New York Times best-seller list, I said. "Can you come in tomorrow?" the woman asked. "Talk to Nick, he'll be here tomorrow."

Berkeley Public Library Watch: The Shangri-La Diet, 4 holds on 5 copies. The Omnivore's Dilemma by Michael Pollan, 110 holds on 7 copies. Website Watch: Distinct hosts served at sethroberts.net, latest 24-hour period: 4667. One week ago: 874. Distinct hosts served is close to the number of different visitors.

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archer59y (2006-05-18 14:28:38)

I have asked for it at several Barnes & Nobles. They seem clueless.

Ethesis (2006-05-18 19:34:54)

I'm very impressed at how fast the internet traffic has grown. Good show.

## **The Ecology of New Ideas (2006-05-21 23:55)**

A curious feature of the Shangri-La diet is how much its spread has been helped by things that did not exist a few years ago.

First, open access. My [1]article with the data and ideas behind the diet was published in an "open-access" journal and stored in an "electronic repository." Thus anyone with Internet access could read the article. The [2]repository now has about 12,000 articles; mine was Number 117.

Second, blogs. Interest in this article was greatly amplified by blogs. My friend Andrew Gelman [3]blogged about it. His post was read by Alex Tabarrok, who wrote about it at [4]Marginal Revolution. His post was read by Stephen Dubner and led to a Freakonomics column in the New York Times – a great way to get book publishers' attention. After the column (sadly eclipsed by Hurricane Katrina), a few blogs focussed on the diet and helped me weave a fuller view of its effects into the book I soon got a contract to write. When the book was published, quite a few bloggers had already heard about its main idea, which rendered its very strange concept slightly less strange, i.e., more acceptable. Now it is being discussed and tried in several blogs (see Blogroll)

Third, forums – the Shangri-La diet forums at sethroberts.net. At a talk about user interfaces a few years ago, I heard a famous designer say that new devices went through three stages of use: (a) hobbyist; (b) expert; and (c) mass market. Departments of electrical engineering, he said, were good at providing products for the first two stages, but were poor at making mass-market products. As far as the Shangri-La diet is concerned, this is what the sethroberts.net forums have done so well: made the diet acceptable to almost anyone. They have made the oil easier to drink, answered all sorts of common questions, and provided reassurance (it may sound crazy but it works), expert advice, and support.

Recently I heard Yochai Benkler, a professor at Yale Law School, speak on [5]"The wealth of networks: How social production transforms markets and freedom" at an MIT symposium. This example supports his general point that new network-related products (such as open access) are empowering the little guy – the little guy here being me, who never got a large grant to support this research.

Why did these three new things (open access, blogs, and forums) all start at roughly the same time? Of course all of them were made possible by the growth of the Internet but so were a billion other things that haven't yet come to pass. I have been working on [6]a theory of human evolution that says language evolved because single words helped people trade. I think the growth of the Internet has been caused by the modern version of just that – better connection of buyer and seller. But open access, blogs, and forums have nothing to do with commerce. I think all three arose from another basic human tendency: a desire to share our enthusiasms. During the early days of electronic discussion groups (called bulletin boards), I was greatly disappointed that not one was devoted to Spy magazine. Why did we evolve this basic tendency? Because it led to the beginning of science – the intertwined growth of knowledge. So it makes quite a bit of sense that these three new things together acted in a kind of scientific way, bringing an effective weight-loss method out of darkness.

Berkeley Public Library Watch: The Shangri-La Diet, 4 holds on 5 copies. The Omnivore's Dilemma by Michael Pollan, 116 holds on 7 copies. Website Watch: Distinct hosts served at sethroberts.net, latest 24-hour period: 1494. One week ago: 888. Distinct hosts served is close to the number of different visitors.



1. <http://repositories.cdlib.org/postprints/117/>
2. <http://repositories.cdlib.org/escholarship/>
3. [http://www.stat.columbia.edu/~cook/movabletype/archives/2005/03/learning\\_from\\_s.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2005/03/learning_from_s.html)
4. <http://www.blog.sethroberts.net/www.marginalrevolution.com>
5. [http://webcast.berkeley.edu:8080/ramgen/events/itv/itv\\_09.rm?end=58:40](http://webcast.berkeley.edu:8080/ramgen/events/itv/itv_09.rm?end=58:40)
6. <http://www.freakonomics.com/pdf/whatdostudentswant.pdf>

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newrulespower (2006-05-23 08:08:44)

Apparently internet advertising can work effectively too. That's how I found out about the book (specifically from an ad on [www.thesuperficial.com](http://www.thesuperficial.com)) and I hardly ever respond to ads. What caught my attention was the quote from Steven Dunbar, which I surprised to see on a diet book since he known for Freakonomics.

### **Ford vs. Roberts (2006-05-26 14:52)**

Dr. John Ford, a professor at the UCLA medical school, recently posted a [1]criticism of me. Here is my reply.

An obvious problem with Dr. Ford's critique is lack of evidence. Dr. Ford seems to be saying that "The Shangri-La Diet" is dangerous but on its face this is absurd. My book suggests that people consume vegetable oils or sugar water. Billions of people already consume these substances in amounts larger than what I recommend. Compared to the drugs that Dr. Ford prescribes every day, they are extremely safe and well-studied. If Dr. Ford is implying that these foods have dangers that he knows about but the rest of us do not, he should be explicit about it: Say what the hidden dangers are, and provide evidence for his claims.

Other problems are less obvious:

First, Dr. Ford has ignored facts that do not support his conclusions. If you search the Internet for people who are trying my weight-loss ideas, you will find many for whom it is working, often very well, and only a few for whom it has failed (harmlessly). Dr. Ford says nothing about this.

Second, factual mistakes. (1) "Self Roberts were truly interested in investigating his approach, he should have subjected it to . . . peer review" "implying that I did not. In fact, my [2]Behavioral and Brain Sciences article, which contained my weight-loss theory and support for my weight-loss methods, was peer-reviewed. So was a [3]related article in Chance, which I told Dr. Ford about by email while he was writing his critique. Two is not zero. (2) He says I "present[ed] a highly speculative idea as proven science." I did not. If he reads my book, he will see that I present a theory, a weight-loss method based on that theory, and promising early results. (3) He says my Behavioral and Brain Sciences paper is "not about validating his hypothesis or conclusions [but] a speculative commentary on the use of self-experimentation." Actually, it is a long empirical article with a great deal of data "to call it "commentary" is misleading. The evidence in that article supports the theory of weight control on which my diet is based because the theory helped me discover new and surprising ways of losing weight. (4) He claims that self-experimentation is not "accepted methodology." In fact, the [4]2005 Nobel Prize in Medicine was awarded for work on ulcers in which self-experimentation played a key role. Awarding someone a Nobel Prize constitutes acceptance of their methodology. As does publication in an oft-cited peer-reviewed journal."

Finally, Dr. Ford is a medical school professor. For a long time, medical school researchers have contributed no useful ideas to our understanding of how the average person can lose weight. At best, they have tested ideas that others have come up with. Could Dr. Ford's rigid methodological beliefs have a downside? At UC San Francisco, my local medical school, the last time I looked at their online curriculum, about five years ago, medical students were being told to tell patients that weight loss is a matter of calories in versus calories out, therefore eat less, exercise more. Such advice was popular among doctors in the 1950s. It was no better advice then than it is today; it is based on a seriously-incomplete understanding of weight control. If that were my track record – failure for more than 50 years – I would be more open to new approaches.

I agree with Dr. Ford that my weight-loss ideas are not "proven science" and that "seasoned experts" (including medical school professors) may help the rest of us, including me, evaluate them. But I also believe strongly that non-experts can help the rest of us evaluate them. This is why I consider the Shangri-La Diet forums at [sethroberts.net](http://sethroberts.net) "full of non-expert views and observations – to be very important. Dr. Ford and I probably differ here. I suspect he considers these forums useless, or nearly so, for what he calls "scientific" or "clinical" purposes. Time will tell which of us is correct.

1. <http://www.tcsdaily.com/Article.aspx?id=052206D>
2. <http://repositories.cdlib.org/postprints/117/>
3. <http://repositories.cdlib.org/postprints/405>
4. <http://nobelprize.org/medicine/laureates/2005/index.html>

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rod (2006-05-26 18:15:27)

As a skeptic, but one who is doing Shangri-La nonetheless, I'd be a lot more comfortable if perhaps you could list out what scientific research is currently going on – either directly into, or inspired by, the Shangri-La diet. At the moment, I'm "tracking my own progress(Following Shangri-La)":<http://following-shangri-la.com/>, but of course, this data is purely anecdotal. If I were an outsider, I'd be claiming the Hawthorne effect was the primary explanation for any weightloss. Thanks.

KRH (2006-05-27 01:17:15)

Can you imagine this doctor talking to a cancer patient: "Well, chemotherapy works, and if it doesn't cure you, that's your fault." I am really disappointed to see that the medical educational establishment reacts this way to anyone with a new idea in the area of weight reduction. This area really is one of their most obvious, disappointing failures: it's one of the most critical issues they are facing today, but they don't have any ideas, and, apparently, they aren't looking for any, either.

Mark (2006-05-27 07:53:28)

I think you misrepresent Dr. Marshall's Nobel Prize. He drank the bacteria culture in the process of formulating a hypothesis. The Nobel Prize was awarded in light of his later proof of the hypothesis via extensive lab work that isolated the bacteria in large numbers of ulcer sufferers, and failed to find the bacteria in those without ulcers.

seth (2006-05-27 20:16:30)

If Ford had said that self-experimentation is "not completely accepted" or "controversial," that would have been accurate. To say it "not accepted" is overstating it – it is to say that nobody who matters takes it seriously. And that isn't true because a Nobel Prize winner in Medicine obviously matters. Self-experimentation was not the reason Marshall got a Nobel Prize, as you say – he got it because he was right.

Dave Pollard (2006-05-28 11:07:55)

This is really an issue of what George Lakoff calls 'frames'. To the scientific establishment, self-experimentation is unthinkable, threatening, even heretical. Seth, you've just got to let it run off you – they are never going to 'get it'. Because of the Internet, self-experimentation's time has finally come, and it will be up to the next generation of scientists to appreciate its superiority as a method of achieving useful results. About 85 % of the comments I've received on my self-experimentation articles (e.g. <http://blogs.salon.com/0002007/2006/05/23.html#a1535> ) have been positive – it's very empowering for people to overcome the learned helplessness that says they are too stupid to know how to manage their own bodies. About 15 % have been almost hysterically negative. These are from very conservative people who believe fiercely in *authority* – it gives them comfort, something to follow, something to believe in. Anything that would seem to undermine authority is seen as subversive. There is a famous saying: You can accomplish anything as long as you don't care who gets credit for it. You're too far ahead of the curve to get credit from those in authority, but what you are accomplishing is unstoppable. Thanks for being a pioneer.

TCUDD (2006-05-31 15:30:56)

Dr. Ford's criticism sounded to me a bit arrogant, I read the Shangri la diet and understood it for what it was. A new idea, there were no promises and it was not the least bit misleading. I felt insulted by Dr. Ford's attitude that average (Non-Doctors) people like me couldn't think for themselves or interpret new ideas. I don't need years of expensive studies I have tried the diets based on the careful academic studies and years of trials and guess what, none of them worked. After reading the book and carefully considering all the facts I see no risk in the diet and a possibility of a payoff. If the diet doesn't work I am out 20.00 for a book and I will go on to try other diets and exercise regimens until I find one that works (I guess that would be self experimentation. I am starting it today and am looking for a place in the blogosphere to record the results if you have any suggestions let me know.

think mojo » Seth bites back on Shangri-La (2006-06-01 01:08:49)

[...] Not surprisingly, Ford's remarks have left Seth Roberts taking umbrage at this review of his work. [...]

think mojo » Humility - Seth Roberts style (2006-07-26 05:05:24)

[...] Following the link I ended up here - Seth Roberts acknowledging that he might have had a little more grace in his initial reply to John Ford's critique of his theory and book, the Shangri-La Diet. [...]

AaronSw (2006-07-27 10:15:25)

Congrats! Anyone who's earned an attack from TCS is obviously doing something right.

Catherine Johnson (2006-07-27 11:12:57)

I'm a little taken aback by Dr. Ford's essay. First of all, the book is quite clear that the diet is based in a hypothesis or theory, not a fact or even a "finding." The evidence for the diet is also clearly stated: 1. Seth Roberts' successful weight loss experience 2. the successful weight loss experiences of 2 or 3 of Seth Roberts' friends and family members 3. converging lines of evidence in the form of peer-reviewed animal and weight-loss research consistent with the sugar-water regimen Second, many or perhaps most physicians treat individual patients, not categories or classes of patients who can be studied in large double-blind trials. Expert physicians conduct "medication trials" - that is the term of art - with individual patients, trying drugs alone or in combination and evaluating the results based on patient report. One of our family doctors tells us that prescribing medication is "an art, not a science." She doesn't say this to denigrate her profession; she's describing a core truth about treating patients whose conditions science does not yet understand. Obesity is certainly a condition science does not yet understand. Treating physicians and overweight individuals must conduct "medication trials" like Seth Roberts' sugar water regimen until such time that science does understand it and has effective treatments to offer.

Mike Lambert (2007-04-10 13:59:25)

I came across Seth Roberts paper "What Makes Food Fattening? A Pavlovian Theory of Weight Control" long before the Shangri-La book came out. I wasn't actively looking to lose weight but his theories seemed plausible. I began consuming

fructose water at work. (I sit at a computer all day.) I lost 50 pounds and like Roberts himself had to put some back on as people started asking me if I was sick! I am completely confident that I could effortlessly "dial up" any weight I care to. Regardless of what Mr. Ford thinks, it works and it doesn't get any easier than this. Dropping the extra weight lowered my cholesterol and blood pressure probably adding years to my life. Thank you Dr. Roberts!

Russell Nelson (2007-04-25 11:13:30)

Nobody caught Ford's denigration of the rat obesity studies by calling them "old". A study which has not been disproven is not made worse by age, but instead better. Nice try, Ford! Go back to making cars.

linksoflondon (2010-05-03 00:22:12)

Nobody caught Ford's denigration of the rat obesity studies by calling them "old". A study which has not been disproven is not made worse by age, but instead better. Nice try, Ford! Go back to making cars.

## 1.2 June

### Will It Live? (2006-06-02 11:45)

Mr. Tanguay, my beloved seventh-grade science teacher, did an unforgettable demonstration one day. "Class," he announced, "we're going to see if we can create life." Into a graduated cylinder he poured a lot of water. Because the human body is 95 % water. He added a few more chemicals – salt, a few others. Finally he added a mystery ingredient. The mixture began to swirl. (Maybe the mystery ingredient was vanilla extract.) "It's coming alive!" said Mr. Tanguay. Then the swirling stopped, as I knew it would. It was a brilliant demonstration not because it taught us biology (it didn't) but because it showed that Mr. Tanguay had a nice sense of humor. I actually looked forward to his class.

Watching The Shangri-La Diet progress, I thought of that demonstration. I saw swirling – would there be life? Books, or the ideas within them, live and die. Word of mouth is primitive book life. It resembles replication if listeners buy the book or repeat what they've heard. Life is more than replication, of course; books can produce descendants (sequels), mutations that fill a new ecological niche (e.g., a teaching guide for Freakonomics), and new goods and services (such as movies).

At a micro level, the SLD forum activity – more than 4000 posts – seemed to me a kind of pre-life. Not because of the success – many diets work for short time, and how representative are those posting? – but because of the emotion ("after the very first day, I finally for once in my life had real hope") and the inventiveness and fruitful observation. New and better ways to drink oil, tests of whey protein and random ("crazy") spicing, the observation that quitting smoking has become easier are examples. No other diet has had this much user improvement, as far as I know. However, the forums involve a miniscule number of people (about 500 members) compared to the size of the world in which a diet book would live (hundreds of millions of overweight people).

I wondered if there were larger signs of impending life. Right now SLD is #29 at amazon.com but does this tell the whole story? Or is it different from other books with similar sales? I started to look at this about two weeks ago. From the top 100 best-selling books at amazon.com and barnesandnoble.com, I sampled 20 (10 from amazon, 10 from barnesandnoble) whose titles were unique enough to use as search terms. On May 20 I found the number of Google results for each title. On May 28 I redid this calculation. Because a book, to live, must "grow," at least in the beginning, I looked at the change from May 20 to May 28. Below is the change in Google results as a function of days since publication (log scale).

X

SLD stands out, although not as much as The World Is Flat. After I did this analysis it occurred to me that blog mentions might be a good measure to examine because they resemble word of mouth. Was SLD blogged about more than books with similar sales? Although it would have been better to measure the change from May 20 to May 28, all I had were the values for May 28 so I computed blog mentions per day since publication.



Again, SLD appears at least somewhat special. The World Is Flat stands out in this analysis as well and so does Beautiful Lies, which I know nothing about.

We already know that The World Is Flat is an unusual book by virtue of being a best seller for more than a year. It is encouraging that SLD has World-Is-Flat tendencies. And watch out for Beautiful Lies.

Berkeley Public Library Watch: The Shangri-La Diet, 2 holds on 5 copies. The Omnivore's Dilemma by Michael Pollan, 131 holds on 7 copies. Website Watch: Distinct hosts served at sethroberts.net, latest 24-hour period: 1190. One week ago: 1611. Distinct hosts served is close to the number of different visitors.

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Ethesis (2006-06-04 18:26:45)

Seth, My congregation has at least thirty people on the diet. There have been about five books purchased (not counting misc. books I've bought for people outside of the group). Three I gave to people in the congregation and two people bought on their own. Of that group, at least twenty friends are also in the diet. So, the diet is currently propagating, at least in that group, in numbers vastly beyond the book sales or internet connections (two people have read the on-line material I put up, none have posted, both contacted me personally). In people I knew who were doing Atkins or South Beach, the ratio was 3 books for every 4 people on the diet.

losing-it (2006-12-09 19:02:37)

“Class,” he announced, “we’re going to see if we can create life.” - Mr. Tanguay, 7th Grade Science  
===== Even Life itself (and therefore, God, perhaps) seems Self-experimental. When you think about it, and most of us may not have yet come to this kind of realization, are we are not our own experiments, by virtue of being human, at least to some degree? What you are when born may be a given. We don’t have (scientifically speaking) recollection or knowledge if we had any choice in that matter, although a few claim to have pre-birth knowledge & recall. What you are becoming is largely a matter of experimental and/or experiential life choices. Once it is realized that you are creating yourself, or at least that you are a co-creator in the process, it’s possible to mentally somewhat detach from your named-self, and to view it as an experimental subject for those things which you wish to build into yourself - experience, wisdom, knowledge, understanding, character qualities, memory, languages, skills, enhanced creativity & talents, physical qualities, etc. In the process, of course, there are obstacles, questions and challenges to overcome, naturally. Glad you are self-experimental and have developed a balance of unconventional thinking skills with conventional. Or maybe you’re thinking is finely unbalanced - tilted toward the unconventional when it comes down to it...a good, healthy mix for creativity, I think. OK, For tonight, I’m done reading your thought provoking blogs and leaving haiku for you to ponder. losing-it ===== gazing into Dad’s old microscope, I wonder how small God is cocooned mothâ” underneath, the sky unravels from a raindrop DW Bender From a Haiku Editor’s Desk, World Haiku Review (Dec. 2005) [http://www.worldhaikureview.org/3-2/editorsdesk\\_dwb1.shtml](http://www.worldhaikureview.org/3-2/editorsdesk_dwb1.shtml)

## My First Reading (2006-06-16 22:52)

Yesterday I did my first bookstore "reading," at Stacey's Bookstore in San Francisco. Having seen several hundred such events on Book TV (C-Span 2), it was quite a thrill. Like one's first day as professional baseball player. It wasn't hard to fill 20 minutes; professors have been known to take longer than that to clear their throat. And I had a 20-year story to tell. I didn't read anything from The Shangri-La Diet but I did quote liberally from Ann Hendricks' repositioned [1]blog now devoted to reporting "happenings in the Shangri-La diet e-world" in order to summarize the 6000-odd posts in the forums. All the seats were full (all 20 of them), if I remember correctly, and there were plenty of questions.

On the way to the reading area I saw a book about Jane Jacobs that I hadn't known existed: [2]Jane Jacobs: Urban Visionary by Alice Alexiou. Amazon.com says it has not yet been released but there it was. After my talk, I wanted to buy it. Unfortunately the store had just one copy and although it had been on display since Jacobs's death six weeks ago (she died the day my book was published) during my talk that copy was sold. When it rains, it pours.

Berkeley Public Library Watch: The Shangri-La Diet, 1 hold on 5 copies. The Omnivore's Dilemma by Michael Pollan, 133 holds on 7 copies. Website Watch: Distinct hosts served at sethroberts.net, latest 24-hour period: 613. One week ago: 755.

1. <http://shangrilawatcher.blogspot.com/>

2. [http://www.amazon.com/gp/product/0813537924/sr=8-1/qid=1150522429/ref=sr\\_1\\_1/103-2079496-3473438?%5Fencoding=UTF8](http://www.amazon.com/gp/product/0813537924/sr=8-1/qid=1150522429/ref=sr_1_1/103-2079496-3473438?%5Fencoding=UTF8)

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## Meal Skipping: Good or Bad? (2006-06-22 09:15)

Many people find that the Shangri-La diet makes it easy to skip meals. It is natural to ask: How does meal skipping affect overall health? Having eaten one meal per day for the last six years, let's just say I care about the answer.

For more than half a century it has been clear that calorie restriction is a powerful way to increase the lifespan of rats and at least a few other species. [1]An experiment with monkeys seems to be headed for the same result: calorie restriction increases lifespan.

Calorie restriction is a complex treatment. Calorie-restricted rats eat less, they lose weight, they may eat less often, they eat less protein, they eat less carbohydrate, and so on. Which of these changes cause the health benefits? A researcher at the National Institute of Aging named Mark Mattson has been asking this question. He and his co-workers have discovered that the benefits of calorie restriction can be achieved by eating less frequently, even when there is little or no weight loss. The implication is that skipping meals, if anything, is likely to be beneficial.

One [2]study, published in 2003, compared four groups of mice. One group (ad lib) got all the food they wanted every day. Another group (calorie restriction) got 60 % of the amount of food that the first group got. A third group (intermittent fed) got all the food it wanted but only every other day. A fourth group got the same overall amount of food as the intermittent-fed group, but without a one-day "fast" between feedings. After 20 weeks, the calorie-restriction mice weighed about half what the ad-lib mice weighed; the other two groups weighed about 90 % of what the ad-lib mice weighed. The most interesting measure was what happened when kainic acid (which kills neurons) was injected

into the brains of the mice. The measure was how many neurons survive. The results were not easy to completely sum up but they did show that intermittent feeding was more protective than ad lib feeding, and at least as protective as calorie restriction. In other research from Mattson's lab, intermittent feeding has been found to be healthier than ad lib feeding in other ways – for example, [3]a rat study found protection against heart-attack damage. [4]A review article by Mattson concluded that "both caloric (energy) restriction (CR) and reduced meal frequency/intermittent fasting can suppress the development of various diseases and can increase life span in rodents."

What about humans? In January I was contacted by Dr. James Johnson, Dr. Donald Laub, and Sujit John, who had been studying the effect of intermittent feeding on humans – starting with themselves. Johnson had tried to lose weight via an on-day-off-day diet: One day you eat normally, the next you eat 20 % of what you would usually eat. I think he based this diet on Mattson's results. Eating only every other day – the usual regime in Mattson's experiments – was just too hard but Johnson found that eating a percentage on the order of 20-30 % of usual intake on the off days was just bearable and did produce weight loss. Johnson found that not only did it produce weight loss, it had many other beneficial effects, such as an improvement in asthma symptoms. He first noticed these improvements when he tried the diet himself (he wanted to lose weight); later he saw similar improvements when his friends did the diet, the same path I followed with SLD. Johnson, Laub, and John have just published [5]an article in Medical Hypotheses about their ideas. They were interested in my weight-loss ideas as a way of making the on-and-off regime more bearable – to reduce the hunger involved. "The oil and sugar water seem to work well," Dr. Laub wrote me recently.

Here is the abstract of their Medical Hypotheses paper:

Restricting caloric intake to 60-70 % of normal adult weight maintenance requirement prolongs lifespan 30-50 % and confers near perfect health across a broad range of species. Every other day feeding produces similar effects in rodents, and profound beneficial physiologic changes have been demonstrated in the absence of weight loss in ob/ob mice. Since May 2003 we have experimented with alternate day calorie restriction, one day consuming 20-50 % of estimated daily caloric requirement and the next day ad lib eating, and have observed health benefits starting in as little as 2 weeks, including insulin resistance, asthma, seasonal allergies, infectious diseases of viral, bacterial and fungal origin (viral URI, recurrent bacterial tonsillitis, chronic sinusitis, periodontal disease), autoimmune disorder (rheumatoid arthritis), osteoarthritis, symptoms due to CNS inflammatory lesions (Tourette's, Meniere's) cardiac arrhythmias (PVCs, atrial fibrillation), menopause related hot flashes. We hypothesize that other many conditions would be delayed, prevented or improved, including Alzheimer's, Parkinson's, multiple sclerosis, brain injury due to thrombotic stroke atherosclerosis, NIDDM, congestive heart failure.

Our hypothesis is supported by an article from 1957 in the Spanish medical literature which due to a translation error has been construed by several authors to be the only existing example of calorie restriction with good nutrition. We contend for reasons cited that there was no reduction in calories overall, but that the subjects were eating, on alternate days, either 900 calories or 2300 calories, averaging 1600, and that body weight was maintained. Thus they consumed either 56 % or 144 % of daily caloric requirement. The subjects were in a residence for old people, and all were in perfect health and over 65. Over three years, there were 6 deaths among 60 study subjects and 13 deaths among 60 ad lib-fed controls, non-significant difference. Study subjects were in hospital 123 days, controls 219, highly significant difference. We believe widespread use of this pattern of eating could impact influenza epidemics and other communicable diseases by improving resistance to infection. In addition to the health effects, this pattern of eating has proven to be a good method of weight control, and we are continuing to study the process in conjunction with the NIH.

Huh. My question is: Am I skipping enough meals?

1. javascript:popRefLink(8, 'B82', '12543259')
2. <http://www.pnas.org/cgi/reprint/100/10/6216>
3. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=Abstract&list\\_uids=16275865&query\\_hl=4&itool=pubmed\\_DocSum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=Abstract&list_uids=16275865&query_hl=4&itool=pubmed_DocSum)
4. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=Abstract&list\\_uids=16011467&query\\_hl=1&itool=pubmed\\_DocSum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=Abstract&list_uids=16011467&query_hl=1&itool=pubmed_DocSum)
5. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=Abstract&list\\_uids=16529878&query\\_hl=4&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=Abstract&list_uids=16529878&query_hl=4&itool=pubmed_docsum)

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heatherlyn (2006-06-23 09:37:04)

Maybe I'm just working from common-belief here, but I've always heard that skipping meals slows down your metabolism-like your body goes "uh oh, food is scarce, better conserve while I can!"... How does this belief fit in with the calorie-restriction/skipping meals idea? I've been on the SLD for 5 days now, and have been eating fewer meals (used to eat 5 small meals a day, now eating about 3 small)... and I'm GAINING weight. With less calories eaten. Wonder what that's all about? I'm wondering (perhaps stupidly, but who knows) if it's my body slowing down my metabolism to conserve the food that I AM taking in.....

raina (2006-06-26 11:49:20)

I'm very interested to see you post about this, as intermittent fasting has been another "diet" interest of mine for several years. I have never been able to stick to the regimen for very long, although it does work great when I can do it. I might give it another try with SLD. You might be interested in checking out this site. <http://everyotherdayfast.blogspot.com/> It's the blog of a guy who has been fasting every other day for 6 months and has lost over 40 lbs. Heatherlyn, what you say is indeed what they tell us. However, numerous studies have found that daily meal frequency has no effect on metabolism. I don't know if the results also extend to bi-daily meal frequency, but at the very least I wouldn't be worried about eating 3 meals a day instead of 5. My personal belief is that forcing yourself to eat when you're not hungry is the very worst thing an overweight person can be doing - you're just teaching yourself NOT to listen to your body. See this post for more info: [#msg1158](http://boards.sethroberts.net/index.php?topic=232.msg1158) Many people who have started SLD have seen the reduced appetite come in before they started losing, and have even gained weight first. Give it a couple of weeks for things to balance out.

Leo Pharmacy (2007-01-28 17:17:18)

Who really now is engaged in the control of health? To mine it neglected the large pharmaceutical companies and the medical centers. There should be a centralized management WBR LeoP

losing-it (2007-02-01 18:19:46)

Having recently read about Johnson's interesting method, and having consumed oils with SLD (consuming 1200 - 1500 average daily calories) for 2 months with -8 lb and -11 1/4 " losses to date, I'm going to give the Johnson UpDayDownDay method a try along with the SLD tasteless (oil) calories. I'm going to experiment and try not using the oil on the UpDay, rather, only consuming it in one dose on the DownDay, but I will probably return to using it on the UpDay, especially if there are measurable results (I've been in plateau according to the scale, but not according to the measuring tape). I've wanted to do some kind of fasting for a time, but have previously not had the willpower, but have had headaches trying it. I think the SLD, which has maintained my previous weight losses and continued losses through the 8 lbs and 11 1/4", while providing very good appetite



suppression, just might give me the appetite suppression to handle the DownDay of Johnson's modified intermittent fasting plan. Thanks for bringing us the Shangri-La Diet / SLD (not diet). losing-it

Seth's blog » Blog Archive » Eating Less (2007-02-09 16:11:29)

[...] Yoffe mentions the UpDayDownDay regime studied by NIH researcher Mark Mattson. There is now a website for an associated book and diet. (My earlier comments.) I asked Donald Laub, a Stanford professor of medicine who is doing this regime, to ask if he was still taking olive oil to make the low-calorie days easier to endure. He said he was. [...]

Jack Prime (2007-07-13 03:42:54)

A lot of it comes down to personal preference and lifestyle factors, but restricted calorie intake does affect quality of life in my opinion. Man has been eating for pleasure and satisfaction for generations and even though it's abused nowadays due to food abundance this aspect is often overlooked. It's important to also distinguish between "weight" loss and "fat" loss, as a loss in muscle has other detrimental affects on metabolism, well-being and lifespan.

Patri Friedman (2008-04-27 12:29:32)

I quit SLD because regular use of oil was making me nauseous, but I'm going to try it again as part of a fasting regimen, where I use oil on the "undereating" days to help reduce appetite. I'm planning to fast 1-2x/week as suggested by Eat. Stop. Eat, with the "fasting" being a few hundred calories in 24 hours.

Louis Leonard (2009-03-31 12:22:20)

Why don't you just pay the skinny people for doing the right thing in the first place...

Derek (2009-04-24 12:02:56)

I think the science is conclusive on meal skipping in the short term. There's no harm in doing it.

### **A Little Bit of Paris (2006-06-27 23:18)**

Yesterday was a little milestone. The SLD was so easy and fun that I did it too much. I couldn't eat my one meal of the day. Part of my brain said: You really should eat something, if anything you're too thin. Like a parent to a child. But I didn't. (And woke up this morning not hungry at all.) Was I testing the power of the SLD and went a little too far? No: it was an accident. Which is why it is interesting.

This has never happened before. I discovered the basic idea of the SLD and got down to my current weight six years ago. Since then I have eaten one meal per day, including any number of meals I could have easily skipped. The thing is: I didn't skip them. The part of my brain that said eat even when I wasn't hungry was powerful enough to overcome my lack of hunger. Yesterday, for the first time, it wasn't. It reminded me of being unable to eat in Paris, which led to my discovery of the SLD.

After six years, why now? Because of the SLD forums. In two months they have injected enough new ideas into the diet (e.g., take oil with water, oil improves sleep, crazy spicing is worth pursuing) to make it too much fun. (For me.) Hard to believe, I agree. Here is what I ate yesterday:

1. Early in the morning, a cup of tea (unfamiliar flavor) with one sugar cube. I've done this a thousand times. 15 calories.
2. A few sticks of gum. I've done this thousands of time. 0 calories.

3. Around 11 am I drank some walnut oil (Spectrum). I bought it a few days ago because of a forum post about its benefits. I drank 2 tablespoons of it with water – testing my friend Carl Willat's suggestion that he drew from the forums. I don't have trouble drinking oil but the oil/water mixture is even easier, a curious texture. This was slightly different than usual: I have been drinking 1-2 tablespoons oil/day for the last 3 years but (a) I have always drunk 1 T in the morning and 1 T later in the day, sometimes forgetting the second dose and (b) I have tried many different oils but not walnut oil because it has some flavor. The water seems to eliminate or greatly reduce the flavor. 240 calories. So far: 255 calories.

4. More gum. Thousands of times. 0 calories.

5. A few small pieces of excellent dark chocolate. Thousands of times. 50 calories? So far: 305 calories.

6. Small amounts of several cheeses. Thousands of times. 100 calories? So far: 405 calories.

7. Half a bottle (8 oz., whole bottle is 16 oz.) of Healing Springs Raw Watermelon Kambucha. An associated website ([www.honeysweetdrinks.com](http://www.honeysweetdrinks.com)) is non-functional. I almost never drink strange soft drinks because I'm afraid they will ruin my appetite, as they did in Paris six years ago. But in Paris I drank about two per day. This time I drank half a bottle – surely too little to matter, I thought. Such an interesting flavor, honey-sweetened. No indication of how many calories. 60 calories? So far: 465 calories.

8. Protein drink. Curious about tasteless protein drinks, I tried to follow a recipe from Sean Curley. My drink contained 1 tablespoon each of 3 different protein powders. To improve the taste I added one sugar cube, a package of Splenda, and some random spice blends. 75 calories. So far: 540 calories

9. 10 flax-oil capsules. A week or so ago I slept unusually well and somewhere around that time I had taken about 6 flax-oil capsules. Forum discussion led me to think the flax oil might be responsible. I took 10 capsules to see if I could repeat the experience. 100 calories. So far: 640 calories

10. Chai ice blend. To make swallowing the flax-oil capsules enjoyable I made a chai drink to wash them down. I blended together sugar-free chai mix, 4 oz. half-and-half, water, and ice. I'd had about 10 cups of this mix before. To make the flavor more interesting, I added a couple shakes of two random spice blends. 212 calories. So far: 852 calories.

At this point I decided I didn't want dinner and took a long walk instead.

11. Two sugar-free chocolate-chip cookies. New-product sample left at my house. 100 calories. So far: 952 calories.

12. Two Emer'gen-C (vitamin) packets mixed with 3 tablespoons half-and-half. Makes a lovely mousse-like concoction. Vaguely-familiar flavor. 90 calories. So far: 1042 calories.

Total flavorless calories: 340. Total unfamiliar-flavor calories: 347. Whereas normal values would be roughly 240 flavorless calories and <100 unfamiliar-flavor calories. So I had at least doubled my usual intake of these hunger-suppressing foods. Not because I was trying to lose weight, though, but because of forum discussions, because I found combinations of random spice blends intriguing, and because I wondered if flax oil caused better sleep. Not a long-term healthy diet but v v filling and v v easy.

I woke up the next day having slept unusually well. For me, it was an unusual form of good sleep. Many times I have slept extremely well after standing 9 or 10 hours but in these cases I woke up feeling scrubbed clean of tiredness. In this case, however, I didn't feel scrubbed clean of tiredness (and I hadn't stood 9 or 10 hours) but my brain felt very clear when I awoke. I'd been drinking oil for years – this wasn't produced by my usual oil intake. If it was cause and effect (oil caused better sleep), something found more in walnut oil and/or flax oil than in canola oil or ELOO or safflower oil or grapeseed oil (oils I had had many times in the past) was responsible.

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strophica (2006-07-06 13:25:19)

dear seth, oh this entry made me feel like a million bucks! not only was it a tiny "map" that I could follow throughout the day, but it gave me a great insight as to your own personal pursuit of this whole diet. thank you! I actually have a silly question: what type of gum do you chew? I checked mostly everywhere and I only see gum that's 5 calories a stick. thanks! Strophica

seth (2006-07-06 16:24:02)

I like Extra and Orbit gum. The number of calories is too small to matter.

Coy57 (2006-11-17 04:48:56)

Coy57... I have enjoyed reading your article, thanks....

Greg (2010-01-11 00:52:34)

Hi. I'm french. Your post can interest lot of people in France. So, if you re ok, i can copy it on a french blog. ;-)

## **Winery Alert (2006-06-30 14:39)**

I wince when I hear someone say that he or she couldn't possibly drink olive oil. "Gross!" is how it is usually put. I'm sorry to hear something culturally learned treated as a timeless truth. So I was pleased when my friend Aaron Blaisdell reminded me that wineries are beginning to have olive oil tastings. What is learned can be unlearned. The more accepted olive oil drinking becomes, the less I will have to hear "gross!" when it is suggested.

[1]Here is a NY Times article about these tastings. If anyone doing olive oil tastings reads this, I hope you will post about your event in the announcements section of the SLD forums. I suspect many forum readers are becoming oil connoisseurs.

1. <http://travel2.nytimes.com/2006/05/19/travel/escapes/19olive.html>

## 1.3 July

### Brain Food (2006-07-05 19:50)

On the Shangri-la diet [1]forums, many dieters have reported better sleep. ("Woke up feeling like I could fight tigers. Have not felt this way since 2003. . . . I would stay on this method just for the sleep benefits," [2]wrote bekel.) To learn how widespread this was, I did a [3]poll. Forty-two people answered. Two-thirds of them reported better sleep (half "much better" sleep, half "slightly better" sleep). Only one-tenth of them reported worse sleep (all "slightly worse", none "much worse"). Almost all of them were doing SLD with oil, implying that the improvement was due to a few tablespoons of oil per day.

This was exciting. A small, almost trivial dietary change seemed to be causing a big important improvement. I had switched from sugar water to ELOO about three years ago and had not noticed any sleep improvement. Perhaps this was because the improvement is due to omega-3 fatty acids, of which ELOO has much less than other oils. And because I ate a few servings of fatty fish (such as salmon) per week, I might have been less omega-3 deficient than most. Thinking about the poll results, I remembered I had slept unusually well about a week or so earlier. At roughly the same time, for reasons I can't remember, I had taken six or seven flax-oil capsules. This vague correlation was curious. It raised the possibility that a large dose of omega-3's might have a noticeable effect.

To test this idea, I made two changes: (a) I started drinking 2 tablespoons/day of walnut oil. Walnut oil (12 % omega-3) is a much better source than olive oil (1 %) or canola oil (7 %). (b) I started taking 10 flax-oil capsules/day (= 100 calories/day). Flax oil (58 % omega-3) is an especially good source. (I drank Spectrum refined walnut oil, which has little flavor, and I mixed it with water to reduce its flavor. Another walnut oil I have tried, International Collection, has a strong walnut flavor.)

It seems to make a difference. Three differences, actually: (a) Better sleep. I wake up more clear-headed, less foggy. (b) Better mood. My overall mood is slightly better, in a hard-to-describe way. (c) Better balance. For the last two years, I have often put on and taken off my shoe-laced shoes while standing; even after two years of practice there was plenty of room for improvement. Suddenly this became much easier. All three changes began the day after the dietary change (about a week ago) and since then have not only persisted but if anything have gotten stronger.

Do these bits of data – survey and self-experimentation – mean anything? I think so. Consider other facts:

1. SLD dieters using oil report many other improvements that seem unrelated to less hunger or weight loss. Most of them fall into three groups: (a) Skin. Everyone reports softer skin. In addition, spacehoppa's eczema and keratosis pilaris (permanent gooseflesh) got much better "It's like I'm correcting a major nutritional deficiency," she [4]wrote. [5]Shrinkingbean found her eczema improved after only 10 days. [6]Carol's acne has gotten much better. (2) Mood. [7]Easier to give up smoking and coffee. [8]More libido. (3) Stiffness. "I have been a person who gets stiff when sitting too long, ever since I was in high school. . . . Sitting in one place for 15 minutes would cause me to stand up from the chair like a 90 year old. . . . It just dawned on me that that is no longer true!!!!" [9]wrote Ann. Two others noticed similar effects.

2. Several studies of patients with mood disorders have found their symptoms improved when they were given fish oil (high in omega-3) compared to a placebo group. A [10]review of these and similar studies notes that "the marine-based omega-3 fatty acids primarily consist of eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) and appear to be highly biologically active. In contrast, those from plants (flaxseed, walnuts, and canola oil) are usually in the form of the parent omega-3 fatty acid, alpha-linolenic acid. Although dietary alpha-linolenic acid can be endogenously converted to EPA and DHA . . . research suggests that this occurs inefficiently to only 10 %-15 %."

3. Several [11]surveys of the elderly have found an association between (a) reduced risk of Alzheimer's disease and less cognitive decline and (b) greater fish consumption. At the other end of life, omega-3 fatty acids are necessary for proper development of our brains, a point made [12]here. The effect of an essential nutrient is likely to be clearest in those who are most vulnerable (such as babies, the elderly, and the mentally ill).

What makes the overall idea – we need more omega-3 than most of us get – even more plausible is that a pre-existing theory makes sense of these facts. That theory is [13]the aquatic-ape hypothesis, the idea that humans became big-brained primates while living near water and eating lots of fish. In 2005, Sir David Attenborough, whose nature documentaries I love, made [14]a fascinating radio show about this theory. The end of the show provides new supporting data that I find especially persuasive.

If our brains grew big while eating lots of fish, it makes perfect sense that they would work better when we eat lots of fish. More precisely, too little fish (or too little of fish's crucial nutrients) should harm the portions of our body that evolved during that period (shaped to work well on a high-fish diet) much more than older portions (shaped to work well on a low-fish diet). The improvements associated with omega-3 fatty acids – reduction of cognitive decline in the elderly, mood improvements in the mentally ill – fit that prediction well. So does the conclusion of [15]a recent meta-analysis that omega-3 does not clearly reduce heart disease or cancer.

And so do the benefits of oil (presumably from omega-3) suggested by the SLD forums and my self-experimentation. Sleep: [16]My earlier self-experimentation suggested that sleep is influenced by morning conversations and amount of standing, implying considerable differences between our sleep and the sleep of other primates. Skin: Human skin has fat attached, like marine mammals but unlike the skin of other primates. (This fact inspired Alistar Hardy to think of the aquatic ape hypothesis.) In addition, we have much less hair than other primates. Stiffness when standing up and balance on one foot: Unlike other primates, we are bipedal.

How to measure my sense of balance? . . .

1. <http://boards.sethroberts.net/index.php?action=collapse;c=1;sa=collapse;#1>
2. <http://boards.sethroberts.net/index.php?topic=591.msg3687#msg3687>
3. <http://boards.sethroberts.net/index.php?topic=1086.0>
4. <http://boards.sethroberts.net/index.php?topic=1264.msg8668#msg8668>
5. <http://boards.sethroberts.net/index.php?action=profile;u=857>
6. <http://boards.sethroberts.net/index.php?topic=1264.msg8673#msg8673>
7. <http://shangrilawatcher.blogspot.com/>
8. <http://boards.sethroberts.net/index.php?topic=320.msg1665#msg1665>
9. <http://boards.sethroberts.net/index.php?topic=1223.msg8417#msg8417>
10. <http://ajp.psychiatryonline.org/cgi/content/abstract/163/6/969>
11. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=Abstract&list\\_uids=16216930&query\\_hl=1&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=Abstract&list_uids=16216930&query_hl=1&itool=pubmed_docsum)
12. <http://arjournals.annualreviews.org/doi/abs/10.1146/annurev.nu.08.070188.002505>
13. [http://en.wikipedia.org/wiki/Aquatic\\_ape\\_hypothesis](http://en.wikipedia.org/wiki/Aquatic_ape_hypothesis)
14. <http://www.bbc.co.uk/radio4/science/scarsofevolution.shtml>
15. <http://bmj.bmjournals.com/cgi/content/abstract/bmj.38755.366331.2Fv1>
16. <http://repositories.cdlib.org/postprints/117/>

Jeremy Cherfas (2006-07-06 21:57:37)

Oh dear. I'm all for scientific iconoclasm, one reason I like the whole approach of SLD and the BBS paper, but I worry that you seem to have espoused Morgan, Hardy and Aquatic Apes so thoroughly. This is not the place for a detailed rebuttal of the ideas – which had to be considerably changed after new fossils brought the human-African ape split so much closer. I do think, however, that this is going to help mainstream, blinkered scientists to ignore some of your ideas. Maybe we do need an explanation of why omega-3 does seem to have so many cognitive benefits. Maybe we don't. and I'm all for speculation. But I do not think Aquatic Ape holds enough water to make it worth using for this purpose.

BenekeMethod (2006-07-06 23:35:18)

Seth's posting on Omega 3s and effects of the oils is fascinating. In addition to depression and Alzheimer's, there is research suggesting the EPA fatty acids in the omega 3 in fish oil helps neck and back pain: [http://blog.spinaprogram.com/2006/05/fish\\_oil\\_reduce.html](http://blog.spinaprogram.com/2006/05/fish_oil_reduce.html) ADHD in young people: <http://nutritionalconcepts.blogspot.com/2006/06/more-support-for-omega-3-calm-ing-adhd.html> Bipolar disorder: <http://www.cassmd.com/library/fish.oil.bipolar.study.html> A therapist friend treating a client who is mildly bipolar says that fish oil is on a standard list of mood stabilizers for manic depression that includes lithium and the other standard drugs. It is recommended for clients where the depressive side is pronounced. Chronic Fatigue Syndrome (Known at the time (1990) as "Post- viral fatigue syndrome") [http://www.1stvitality.co.uk/health/cfs\\_me/puri\\_cfs\\_sept6\\_2002.htm](http://www.1stvitality.co.uk/health/cfs_me/puri_cfs_sept6_2002.htm) Andrew Stoll, the Harvard psychopharmacologist who has pioneered the omega 3 research, <http://www.amazon.com/gp/product/0684871386/103-4598179-8318241?v=glance&n=283155> in an interview says he starts depressed people out on 1 gram of EPA, (an omega 3 fatty acid in fish oil) and waits a week or two to see if there is improvement. If not he goes to 2 grams a day and has almost never had to go higher than 6. [http://www.findarticles.com/p/articles/mi\\_m1189/is\\_3\\_277/ai\\_n13684165](http://www.findarticles.com/p/articles/mi_m1189/is_3_277/ai_n13684165) Stoll claims positive effects for borderline personality and Huntington's disease as well. That's a wide range of research, but there are not a lot of studies in any one area, so we need a lot more. I started taking 3 grams of EPA a day – 18 capsules of the GNC fish oil product – about a month ago and had two surprising effects. First, after 3 days, I noticed that I had a lot more energy on my morning walks. Second, after about 5 days, I started spontaneously getting up about an hour and a half earlier, from 8:45 to 7:15 in the morning. This amazed me because I have always had to work hard to reset my circadian rhythms. I saw research showing that piglets who received fish oil had more serotonin in their brain. Serotonin is tied to circadian rhythms. The fish oil does appear to help my sleep. Also, I persuaded a friend who for several years has suffered from serious Chronic Fatigue Disorder (low energy, poor concentration, "foggy brain", and forgetfulness, muscular aches and pains upon exertion, and more) to take 1.5 grams of EPA (9 capsules of GNC fish oil) a day and after 5 days, he is reporting less anxiety and better concentration... People may also be sleeping better because they are eating less and giving their digestive systems a rest, and are feeling a sense of "Shangri-La" hopefulness after realizing that they can reduce their hunger at will as long and as much as they want.

Food News 2 at Another Blasted Weblog (2006-07-10 21:23:30)

[...] Thursday 6 July: Seth Roberts, onlie begetter of the Shangri-La diet, has been marvelling about the "side effects" enjoyed by some people using different kinds of oil in their diet, particularly effects on the brain. This is my comment on Seth's blog: [...]

becks cognitive therapy (2006-07-12 09:48:19)

becks cognitive therapy... As always a good post :) ....

Seth's blog » Blog Archive » Brain Food (part 2) (2006-07-19 21:33:13)

[...] Do omega-3 fatty acids improve brain function? I blogged earlier that switching from olive oil (low omega-3) to walnut oil (high omega-3) and flaxseed-oil capsules (very high omega-3) caused my sleep, my balance, and maybe my mood to improve. If you are interested in duplicating what I did, here are details: [...]

Brice (2006-07-26 21:48:24)

In regards to flavor of walnut oil, how about pinching your nose closed while swallowing the oil? I remembered from high school that smell affects taste significantly. I've found that when swallowing olive or other oil while pinching my nose closed

and chasing that with a mouthful of water that I don't taste anything. Shouldn't this work? Heck, shouldn't I be able to eat other "tasty" foods this way and lose weight?

Seth's blog » Blog Archive » Brain Food (part 4: measuring balance) (2006-07-26 23:00:04)

[...] Speaking of standing on one foot . . . I devised a way to measure my balance. (To recap: I want to measure my balance to see if omega-3 improves it. When I increased my omega-3 consumption via walnut oil and flaxseed oil, it suddenly became much easier to put on my shoes while standing, which I'd been doing for years. The omega-3 also improved my sleep. Maybe omega-3 makes much of the human brain work better, especially the most-recently-evolved portions. Maybe this effect happens within hours.) [...]

richardinmadison (2006-07-30 08:58:44)

I too experimented with switching to all walnut oil + flaxseed oil caps and found that my sleep was affected, but not so positively: instead I experienced intense vivid dreams and awoke each morning feeling far less refreshed. After 2 weeks this effect did not modify and so I switched back to ELOO + flaxseed oil caps and immediately experienced more peaceful sleep. Has anyone else experienced something similar? I'm curious.

Seth's blog » Blog Archive » Is Drinking Olive Oil Healthy? (2007-01-02 13:42:10)

[...] 1. "All native peoples studied made great efforts to obtain seafood." This supports my comments about the importance of omega-3 fats, found much more in seafood than in other foods. [...]

Seth's blog » Blog Archive » Someone Has Been Reading This Blog (2007-01-02 21:46:47)

[...] According to this USA Today article, "omega-3 is in". That is, in many new food products to be introduced in 2007, such as a new orange juice. Omega-3, says the article, is "the hot ingredient" and "the miracle food." The article delicately calls omega-3 a "fatty acid" rather than a fat. My many posts about omega-3 include this and this. More to come. [...]

Seth's blog » Blog Archive » Yet More about Omega-3 (2007-01-13 23:57:01)

[...] I have done more self-experimentation about omega-3s and will describe the results in a week or two. Some previous posts about omega-3 are here, here, here, here, here, here, here, here, here, and here. [...]

Seth's blog » Blog Archive » Science in Action: Omega-3 (balance results) (2007-01-20 15:41:27)

[...] Because many SLD dieters reported better sleep, I wondered if omega-3 improved sleep. I increased my omega-3 intake by switching from olive oil, which has little omega-3, to walnut oil and flaxseed oil, which have much more — especially flaxseed oil. The amount of oil stayed roughly the same. The night after the change, my sleep got better. To my surprise, so did my balance. The next morning, I found I could more easily put on my shoes while standing up. I had been putting on my shoes standing up for 2-3 years and it had never been this easy. (I put on my shoes standing up because I thought it might improve my balance.) [...]

Seth's blog » Blog Archive » Omega-3 Greatest Hits (2007-02-24 06:21:19)

[...] Background why I became interested historical background [...]

Cathy W (2007-03-11 12:55:45)

I was just googling flaxseed oil and dreams, and found your website. I have started taking flaxseed oil, and have found an unexpected pleasant side effect in the vivid dreams that I have been experiencing. I recently was away on travel and didn't take my flaxseed oil with me and I didn't have any of these dreams (or that I could remember) while I was away. I didn't immediately begin taking the flaxseed oil when I got home as my new little habit had been interrupted, but when I started taking it again yesterday, I had a dreamfilled night last night! Of course this is not scientific but I do believe I have discovered a correlation between the flaxseed oil and either increased dreams or the ability to recall them.

seth (2007-03-11 13:45:21)

I think I had much more vivid dreams at first – when I started drinking flaxseed oil. But now the effect has gone away. I tried googling flaxseed oil and dreams and didn't get my website. Did you google flaxseed oil and sleep?

Cathy W (2007-03-13 05:15:23)

I just tried googling it again ... your website actually comes up on the 4th page of results. Thanks for your response to my post. I had more of my vivid dreams last night, and I guess I will just enjoy it while it lasts!

Seth's blog » Blog Archive » Omega-3 and Dental Health (2007-03-28 20:39:28)

[...] This research means better gums is very good news — for which I thank SLD-forum posters, who sparked my interest in omega-3. [...]

ShackDaddy (2008-03-05 00:47:21)

I just started taking a couple of Omega-3 capsules a day for mood last week, and the first three nights afterward I woke up completely remembering vivid dreams. That never happens to me. In the past I've known that I must have dreamed, but never remember anything. I didn't have vivid dreams again after those first three nights, even though I've continued to take the capsules, so there must be some sort of initial spike that happens to cause that.

Tom M (2008-03-20 14:16:17)

Today I Googled 'Omega 3 dreams' as, since I began taking Omega 3 fish oil tablets four days ago I have had the most astonishingly vivid dreams. I am an artist and illustrator and have always had vivid colorful dreams but very rarely anything like these. Three in a row just before dawn. Since Omega 3 is the only change in my diet I wondered if there might be a connection. Sad to read they might end soon. Oh well.

Jim Andrews (2008-10-15 15:00:39)

I too have noticed an increase in vivid dreams while taking flaxseed oil capsules. This is especially true if I take a capsule before bedtime. I began taking the supplement based on the recommendation of my pharmacist, who suggested that flaxseed oil would help my asthma. It has helped my asthma. So, long story short, I feel good and I sleep well. I will surely continue to take flaxseed oil.

song from a distant planet » Blog Archive » fish dreams (2008-10-27 09:41:47)

[...] Till this week. Three nights in a row I woke up remembering all the details, for what may be the first time in many years. The only thing I can link it to is that I started taking Omega-3 capsules the day prior to the first night. I did a search and found this site and other people are reporting the same phenomenon. [...]

Ranger (2009-01-24 09:21:58)

For four nights in a row now I've had unpleasant, violent dreams that I can recall when I wake up, which I've never been able to do. I've been taking a Fish, Flax, Borage Oil Supplement for the past 5 days. I suspected there might be a connection, but after reading all of the above posts, I'm convinced there is. I just wish the dreams were pleasant. I wish a medical professional would weigh in on this thread to assure me that the benefits of this supplement will outweigh these scary nights.

Junior Pruette (2009-12-20 01:29:03)

I had to try two times this afternoon to access your blog. Are you having problems with your hosting account? Or is it on my end?

Roy (2009-12-21 00:58:53)

Last night I took an Omega 3 pill before I slept and have had vivid dreams of my childhood. They were all happy memories of myself and my brother; interesting to note is that the memories were in chronological order, starting from when I was around 3 years old (yes i do remember a few things) to 5, 7 years of age... They were kind of memories with a little twist to them; since in the dream I (as a by-stander) was watching myself and my brother ride the bicycle together, swimming and playing in the



pool, etc... any medical thoughts on this ? Maybe I have experienced near-death !!

Eric (2011-09-14 15:15:31)

After 3 days of taking 2 T of ground whole seeds every morning my desire to smoke has also decreased. It's day 5 and my desire has not returned. This is especially impressive because my smoking is tied to when I take my prescription for Adderall. Somehow methamphetamine no longer triggers the urge to smoke. I commented on this to my wife yesterday, calling it 'weird.' And I just made the connection now, after reading this post. Very interesting.

### **Spices: A New Kind of Vitamin? (2006-07-10 16:20)**

For Shangri-La dieters who randomly spice their food, the current issue of the American Journal of Clinical Nutrition (July 2006) has very good news. Spices are a better source of antioxidants than any other food group, according to a [1]survey of popular American foods.

There are many reasons to think antioxidants are beneficial. Oxidative damage, which antioxidants reduce or prevent, seems to play a role in many major diseases, including heart disease. Yet large trials in which people were given a few antioxidants, such as alpha-tocopherol and beta-carotene, did not find health benefits. Maybe the reason for these failures is that you need a suite of antioxidants; maybe antioxidants, "which cooperate in an integrated manner in plant cells [to reduce oxidative damage], also cooperate in animal cells," the authors write. "A network of antioxidants with different chemical properties may be needed for proper protection against oxidative damage." A very plausible idea.

To test this idea, it would help to know the antioxidant content of everyday foods. This is what the researchers tried to find out. They used a chemical assay to measure the total antioxidant content of 1113 popular American foods, chosen based on a careful national survey.

Here are the top ten foods by antioxidant content (per gram): cloves, oregano, ginger, cinnamon, tumeric, walnuts, basil, mustard, curry powder, pecans. Here are the next ten: baking chocolate, parsley, molasses, pepper, artichokes, dark chocolate, blackberries, whole-grain cereal, cranberries, chocolate pudding mix. Chocolate is also high in antioxidants - more good news. Red wine was #30. (White wine was low.)

Lowest on the list were animal products. "In general, plant and plant products in the diet have a much higher antioxidant content than do animal products," the authors wrote. Oils, such as canola oil and olive oil, were higher than animal products, but less than other plant products. Cooking (heating) increased the antioxidant activity of plant foods such as carrots, tomatoes, and spinach.

The end of the paper describes evidence that higher intake of antioxidants is associated with lower risks of stomach cancer and lung cancer.

Could vitamins plus fiber plus spices provide most of the health benefits of fruits and vegetables? It is entirely possible. If so, it would be a major nutritional advance. Spices would be a new kind of vitamin. Good nutrition would include at least one heavily-spiced meal per day.

Berkeley Public Library Watch: The Shangri-La Diet, 3 holds on 5 copies. The Omnivore's Dilemma by Michael Pollan, 128 holds on 29 copies. Website Watch: Distinct hosts served at sethroberts.net, latest 24-hour period: 832. One month ago: 539. Distinct hosts served is close to the number of different visitors.

1. <http://www.ajcn.org/cgi/content/abstract/84/1/95?etoc>

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Seth's blog » Blog Archive » More Reason to Crazy-Spice (2006-10-24 21:48:23)

[...] Spices are good for you, I blogged, because they are high in anti-oxidants. A new study, done in Singapore with elderly subjects, supports this conclusion. It found that curry-eaters do better than others on a mental test. The abstract: Curcumin, from the curry spice turmeric, has been shown to possess potent antioxidant and antiinflammatory properties and to reduce Aβ-amyloid and plaque burden in experimental studies, but epidemiologic evidence is lacking. The authors investigated the association between usual curry consumption level and cognitive function in elderly Asians. In a population-based cohort (n = 1,010) of nondemented elderly Asian subjects aged 60-93 years in 2003, the authors compared Mini-Mental State Examination (MMSE) scores for three categories of regular curry consumption, taking into account known sociodemographic, health, and behavioral correlates of MMSE performance. Those who consumed curry "occasionally" and "often or very often" had significantly better MMSE scores than did subjects who "never or rarely" consumed curry. The authors reported tentative evidence of better cognitive performance from curry consumption in nondemented elderly Asians, which should be confirmed in future studies. [...]

### **Blogger Alert (2006-07-11 22:04)**

My publisher will send a review copy of The Shangri-La Diet to the first 25 bloggers who are interested in reviewing it. Please send an email with the URL of your blog and your mailing address to:

Katherine.Wasilewski@us.penguingroup.com

with the subject line "Review Copy".

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David (2006-07-12 08:39:07)

Seth, Take a look at what Hugh MacLoed ([www.gapingvoid.com](http://www.gapingvoid.com)) is doing with stormhoek wine ([www.stormhoek.com](http://www.stormhoek.com)). They have sponsored 100 "Geek Dinners" and enlist bloggers to set them up, they send the wine, and the bloggers blog about the wine, good or bad. Maybe you could set up 100 oil tasting parties...

iportion1 (2006-07-12 16:37:10)

I am the owner of and lead blogger [www.iportion.com](http://www.iportion.com) and I would love to read and review your book. I will email you in private as well. My blog is to help people get healthy and feel good inside and out.

Ethesis (2006-07-15 20:51:19)

That is neat. I'm glad your editor is still on board with you and is giving your book time to grow on its own.

## Brain Food (part 2) (2006-07-19 21:33)

Do omega-3 fatty acids improve brain function? I blogged [1]earlier that switching from olive oil (low omega-3) to walnut oil (high omega-3) and flaxseed-oil capsules (very high omega-3) caused my sleep, my balance, and maybe my mood to improve. If you are interested in duplicating what I did, here are details:

Supplies. I take (a) 2 tablespoons/day walnut oil (Spectrum Organic refined).[2] Store locator at [www.spectrumorganics.com](http://www.spectrumorganics.com) will help you locate this. Total 240 calories. (b) 10 1000-mg capsules/day of flaxseed oil (Longs cold-pressed softgels). Longs drugstore house brand, which is only available at Longs drugstores. Total 100 calories. I store both in the refrigerator but they are in stores at room temperature (reasonably enough, since walnut trees and flax plants live at room temperature). Procedure. I take both between meals. I divide the walnut oil into 2 doses of 1 T each that I take at least several hours apart. I take 80 % of this stuff after noon. I spread the flaxseed capsules out throughout the day, take about 3 at a time. But read on for more helpful info – you may not want to start with exact duplication.

With the new oils, my sleep was consistently and unusually good for about two weeks, making it was clear that the improvement was caused by the new oils (or more precisely, the difference between the new oils and the oil they replaced). Less clear was what aspect of the dietary change made the difference. I switched to walnut oil and flaxseed oil because they were high in omega-3; but they differ from olive oil in other ways as well.

It would be great to know more – both to maximize the effect on myself and to help others get the effect. The wonderful thing about finding a food component that improves sleep – if that isn't wonderful enough – is that it is likely to improve the brain in all sorts of other ways, too. (In contrast to [3]my previous sleep research on the effects of non-food-components, such as standing and breakfast, where the improvements were probably specific to sleep.) The data about omega-3 support this view: A wide range of improvements in mental function have been observed. Assuming omega-3 causes a single change in the brain, that change causes (a) a reduced rate of Alzheimer's, (b) less depression, and (c) better sleep – so it is likely to be widespread in the brain.

Since my earlier post, I've gathered some new and helpful data.

First, a Shangri-La-Diet forum [4]poll found that most people who used olive oil for the diet had better sleep (10 out of 12), even though olive oil is relatively low in omega-3. Can even a small amount of omega-3 improve sleep? (Small compared to my current dose. SLD dieters consume large amounts of olive oil compared to everyone else.) Or is some other component of olive oil causing the change?

Second, after reading my earlier post, Catherine Johnson [5]remembered that "I realize that I started sleeping miserably when I stopped taking Omega 3s."

I trust that sort of thing. I had had a similar now-I-understand experience. After [6]figuring out that lots of standing improves sleep, I remembered that several years earlier I had sleep very well the night after visiting lots of art studios during an [7]Open Studios day. At the time I had guessed that it was all the art-inspired thinking that had caused my much-better-than-average sleep. But it was also a day with much more standing than usual.

Third, I reduced my flaxseed-oil intake by half: I took 5 capsules instead of 10. To my great surprise, I woke feeling as I felt with the olive oil. I hadn't felt that way in weeks. The next day I went back to 10 capsules and again woke up feeling great. Obviously this strengthens the plausibility of omega-3 -> better sleep because the crucial ingredient is apparently in high quantities in the flaxseed oil capsules.

The stunning thing, the reason I was so surprised, is this: I didn't expect the flaxseed change to make a difference so quickly. When someone ate a zero-folate diet to learn about the effects of folate, it took months for the effects to become clear. Although I had noticed the sleep improvement caused by the new oils the very next morning,

I had assumed that was because I was quite deficient – like someone with scurvy noticing fast improvement with Vitamin C. Someone who is not Vitamin-C-deficient will have to go without Vitamin C for months before scurvy occurs. I had expected to wait weeks before seeing sleep degradation.

If you read about why omega-3 is important, you will read endlessly that our brains are made of it – the fraction of our brain that is omega-3 fatty acids is 10 % (Wikipedia?), 60 % (a Whole Foods employee), whatever. That is what I had assumed: that omega-3 is a structural element of our brains. Which is no doubt true. I have never heard that it is a metabolic element of our brains. Cars are "made of" carburetors, fan belts, computers, tires, and the like (structural elements); they "run on" gasoline and electricity (metabolic elements). Structural elements are parts. Metabolic elements are fuel. Failure to replace a perfectly good carburetor or other structural element will eventually cause trouble, but it may be several years. Failure to replace gasoline or electricity will cause trouble much sooner. Thus my little experiment suggested that omega-3 was a metabolic element.

If an effect can be turned on and off quickly it is much easier to study than if it takes weeks or months to turn on or off. Upcoming attractions: How I am studying it.

1. <http://www.blog.sethroberts.net/2006/07/05/brain-food/>
2. <http://www.spectrumorganics.com/?id=7>
3. <http://repositories.cdlib.org/postprints/117/>
4. <http://boards.sethroberts.net/index.php?topic=1262.0>
5. <http://www.kitchentablemath.net/twiki/bin/view/Kitchen/ShangriLaPart2>
6. <http://repositories.cdlib.org/postprints/117/>
7. <http://www.proartsgallery.org/ebos/index.html>

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Seth's blog » Blog Archive » Brain Food (part 3) (2006-07-21 05:42:15)

[...] Seth's blog « Brain Food (part 2) [...]

Seth's blog » Blog Archive » Brain Food (part 4: measuring balance) (2007-01-14 00:03:53)

[...] Speaking of standing on one foot . . . I devised a way to measure my balance. (To recap: I want to measure my balance to see if omega-3 improves it. When I increased my omega-3 consumption via walnut oil and flaxseed oil, it suddenly became much easier to put on my shoes while standing, which I'd been doing for years. The omega-3 also improved my sleep. Maybe omega-3 makes much of the human brain work better, especially the most-recently-evolved portions. Maybe this effect happens within hours.) [...]

Seth's blog » Blog Archive » Yet More about Omega-3 (2007-01-14 00:25:31)

[...] I have done more self-experimentation about omega-3s and will describe the results in a week or two. Some previous posts about omega-3 are here, here, here, here, here, here, here, here, and here [...]

## Brain Food (part 3) (2006-07-20 23:48)

In [1]Brain Food (part 2) I found that when I reduced my flaxseed-oil intake my sleep got worse that very night. (Presumably because I reduced the amount of omega-3 fatty acids in my diet and therefore my blood.) Several people, including me, have found that their sleep improved the night after taking more omega-3 – that is, hours later. For example, if the omega-3 was begun Monday afternoon, they slept better Monday night.

How could the effect turn on and off so quickly? An [2]article in the current issue of Journal of Nutrition supplies an answer:

Of the lipids found in the brain, polyunsaturated fatty acids (PUFAs) play an important role, serving as a major component of the phospholipids that form cell membranes, being precursors of signaling molecules such as prostaglandins and leukotrienes, modulating gene expression through the activation of transcription factors, and forming the microenvironment around membrane-bound proteins.

In other words, omega-3 has several effects in the brain, with vastly different sensitivities to changes in omega-3 blood levels. Changes in cell membranes probably happen very slowly; changes in "the microenvironment around membrane-bound proteins" could happen very quickly.

That a necessary nutrient (omega-3) could have fast-acting changes (within hours) is counter-intuitive. It doesn't agree with previous experience. Other necessary nutrients take much longer for a deficiency to become apparent. And it doesn't agree with common-sense design notions. Evolution builds our bodies out of what is in our blood. Human design is quite different – cars are not built out of what flows around them (oil and gas). Nor is anything else. There isn't a everyday analogy that shows that a deficiency of a construction element can have fast-acting effects. If all the raw metal in the world disappeared, your car would run fine for a long time. Nor does it fit with general trends in nutrition research. Nutrition researchers study the whole body, most of which changes slowly by comparison to the brain. Sure, food can change the brain – make you sleepy, make you alert (caffeine), but these are not changes that interest most nutrition researchers, who usually emphasize optimal functioning. During the Stone Age, our diets did not contain much caffeine so it is obviously not a necessary nutrient, even if it can improve memory. No dietician tells clients to consume more caffeine. There are hundreds of substances like caffeine that change mental functioning, of course, and with the right definition of improvement all of them can be considered to improve mental functioning. But none of them interest nutrition researchers, with the exception of [3]Adelle Davis (fascinated by LSD). An experimental psychologist, on the other hand, . . .

1. <http://www.blog.sethroberts.net/2006/07/19/brain-food-part-2/>
2. <http://jn.nutrition.org/cgi/content/abstract/136/8/2236>
3. [http://en.wikipedia.org/wiki/Adelle\\_Davis](http://en.wikipedia.org/wiki/Adelle_Davis)

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Seth's blog » Blog Archive » Yet More about Omega-3 (2007-01-14 00:27:45)

[...] I have done more self-experimentation about omega-3s and will describe the results in a week or two. Previous posts about omega-3 here, here, here, here, here, here, here, here, and here [...]

Memory Improvement (2007-11-13 04:55:46)

So that is why I sleep well every time I eat fish, since fish is rich of omega-3. And thus makes this a good brain food where it allows the brain to rest sufficiently. Kris

Food to improve memory | Best Memory Enhancer (2009-11-30 00:27:04)

[...] Seth's blog » Blog Archive » Brain Food (part 3) – In Brain Food (part 2) I found that when I reduced my flaxseed-oil intake my sleep got worse that very night. (Presumably because I reduced the amount of omega-3 fatty acids in my diet and therefore my blood. ... [...])

## Brain Food (part 4: measuring balance) (2006-07-26 22:59)

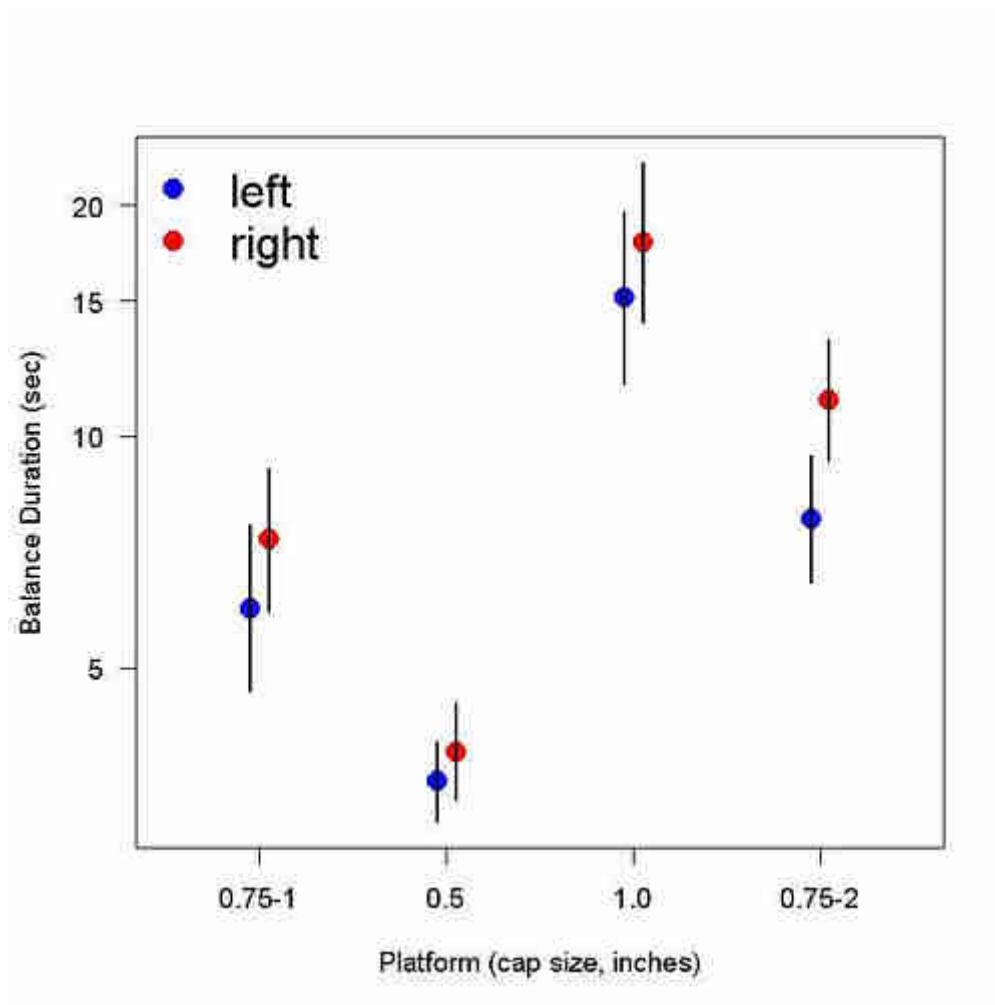
Why is now a great time to be alive? Because Philip Weiss, one of my favorite writers, has a [1]blog. [2]Today's entry mentioned a [3]story about teaching the Torah while standing on one foot.

Speaking of standing on one foot . . . I devised a way to measure my balance. (To recap: I want to measure my balance to see if omega-3 improves it. When I increased my omega-3 consumption via walnut oil and flaxseed oil, it suddenly became much easier to put on my shoes while standing, which I'd been doing for years. The omega-3 also improved my sleep. [4]Maybe omega-3 makes much of the human brain work better, especially the most-recently-evolved portions. [5]Maybe this effect happens within hours.)

Here is the method. Equipment. At a hardware store I bought a series of 6 pipe caps, caps for 0.5 inch pipe, 0.75 inch pipe, 1.0 inch pipe, 1.25 inch pipe, 1.5 inch pipe, and 2.0 inch pipe (total \$24). At a new-age pharmacy I bought a thick foot-sized cutting board (made of bamboo, \$15). Below is a picture of these items and my stopwatch, which measures times to 0.01 second. Procedure. I put the board on one of the caps and balance on the board on one foot. I measure with a stopwatch how long I can balance on it before putting the other foot down. After 30 seconds, the trial stops – 30 seconds is the maximum possible score. I stand on my left foot for several trials (e.g., 12), then switch to my right foot for several trials.



The reason for six different caps – six different platforms – is to be able to adjust the difficulty so that it is neither too easy nor too hard – if either were the case the measurements wouldn't be telling me much. With a little trial and error, the 0.75-inch cap seemed to be best. Below is data from that cap and the smaller and larger caps. With each foot I balanced 12 times; the graph shows the means and standard errors on a log scale. The sequence of conditions was: (1) 0.75-inch cap, (2) 0.5-inch cap, (3) 1.0-inch cap, (4) 0.75-inch cap. I balanced on each foot 12 times in each of the 4 conditions.



The results make sense: the smaller the platform, the less time I could balance on it. There appears to be a practice effect – better scores with more practice. I hope with more experience this effect will go away. The next step is to do these measurements several times per day for several days so that I can get some idea of how much they vary “naturally” – what the background variation is.

1. <http://mondoweiss.observer.com/>
2. <http://mondoweiss.observer.com/2006/07/sagacious-lieberman-cites-rabbi-hillel.html>
3. <http://www.sacred-texts.com/jud/tgm/tgm11.htm>
4. <http://www.blog.sethroberts.net/2006/07/05/brain-food/>
5. <http://www.blog.sethroberts.net/2006/07/19/brain-food-part-2/>

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Catherine Johnson (2006-07-27 08:25:54)

Hi - I love your book - terrific. Quick report: I've been sleeping radically better since starting to take Omegabrites at bedtime. I'd stopped taking them because they were making me nauseous, and I hadn't associated the decline in sleep with lack of Omega 3s. Am now on a quest to locate Spectrum Walnut oil.

Seth's blog » Blog Archive » Brain Food (part 5: a little progress) (2006-07-29 17:50:41)

[...] I've been doing small experiments on my balance to learn what affects it. Most research using new tools follows a progression. Step 1: you learn what people already knew. Step 2: you find new information that isn't very interesting. Step 3: you find interesting new information. Earlier I found that I balanced longer on a wider platform — Step 1. [...]

Seth's blog » Blog Archive » Yet More about Omega-3 (2007-01-14 00:45:21)

[...] I have done more self-experimentation about omega-3s and will describe the results in a week or two. Previous posts about omega-3 [here](#), [here](#), [here](#), [here](#), [here](#), [here](#), [here](#), [here](#), [here](#), and [here](#) [...]

## The Wisdom of Strangers (2006-07-27 08:20)

I posted [1]a little essay with that title at [2]the Huffington Post.

1. [http://www.huffingtonpost.com/seth-roberts/the-wisdom-of-strangers\\_b\\_25739.html](http://www.huffingtonpost.com/seth-roberts/the-wisdom-of-strangers_b_25739.html)
2. <http://www.huffingtonpost.com/>

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AaronSw (2006-07-27 10:19:50)

In the spirit of frank and unsolicited advice, it was an interesting essay but it took me 1.5 reads to figure out what it was saying. I think you need to be a little more careful about structure, so that the readers can see the connections and understand the conclusions. [1]This paper explains how scientists can do this, based on research done into how people read.

1. <http://www.amstat.org/publications/jcgs/sci.pdf>

## Brain Food (part 5: a little progress) (2006-07-29 10:16)

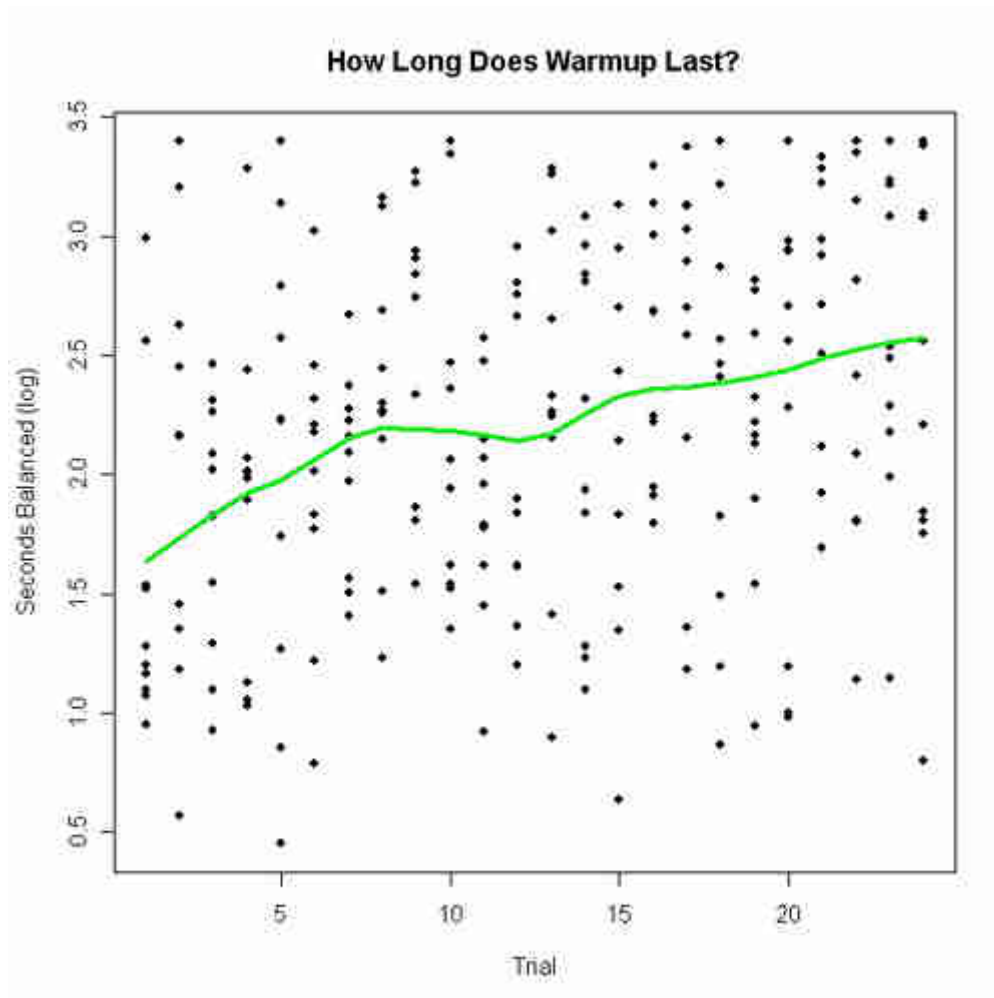
I've been doing small experiments on my balance to learn what affects it. Most research using new tools follows a progression. Step 1: you learn what people already knew. Step 2: you find new information that isn't very interesting. Step 3: you find interesting new information. [1]Earlier I found that I could balance on one foot longer on a wider platform – Step 1.

Now Step 2. I've done a few experiments comparing different footwear (sandals, shoes, barefoot). In each experiment I ran several conditions, each consisting of 12 trials standing on my left foot followed by 12 trials standing on my right foot. These trials had gaps of seconds between them. Different conditions (different footwear) were separated by at least 10 minutes and usually more.

The right-foot average was always more than the left-foot average. You can see examples of this in [2]my earlier results. I doubt that the right foot/leg is actually better than the left so this suggests there is a substantial warmup effect, as there is in most tasks.

To make measurements more precise, it would help to have a warmup period before collecting the main, more stable data. How long should it be? The graph below shows data from many of the conditions I have run arranged by trial number, with a lowess summary line.





The y axis is in log seconds, not seconds; I used a log transform to make the distribution of the data more symmetrical. The maximum time was 30 seconds. ( $\text{Log}(30) = 3.4$ .) If I kept my balance for 30 seconds, I stopped, and recorded the result as 30 seconds.

The graph shows an early warmup period that lasts 6-8 trials long, followed by a slow improvement that lasts at least 24 trials. Here is something new and not very interesting: details about the warmup effect.

1. <http://www.blog.sethroberts.net/2006/07/26/brain-food-part-4-measuring-balance/>
2. <http://www.blog.sethroberts.net/2006/07/26/brain-food-part-4-measuring-balance/>

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Seth's blog » Blog Archive » Brain Food (part 7: looking for a steady baseline) (2006-08-04 06:49:00)  
 [...] That just refines warmup measurements I posted previously. This is completely new: [...]

Seth's blog » Blog Archive » Yet More about Omega-3 (2007-01-14 07:09:23)  
 [...] I have done more self-experimentation about omega-3s and will describe the results in a week or two. Previous posts about omega-3 [here](#), [here](#), [here](#), [here](#), [here](#), [here](#), [here](#), [here](#), and [here](#) [...]

## Brain Food (part 6: a little more progress) (2006-07-31 22:44)

I did two balance experiments with a warmup of 8 trials. In one, the order of feet (which foot I stood on) was left, then right; in the other, right, then left. In both experiments I did much better (i.e., balanced longer) on my right foot than my left foot,  $p < 0.001$ . This surprised me; I had never heard of such an asymmetry. The difference was so large that the platform size (0.75 inch) good for the left foot was too easy for the right foot.

To make things as simple and easy as possible I decided to stop testing both feet and to only measure balancing on my right foot (and to use a 0.5-inch platform to make it more difficult and avoid a ceiling effect). I tested my balance (a) in silence and (b) listening to a book. The results were similar so I decided the standard condition will be listening to something. I want to make my balance test fast and pleasant.

I came across several promising related facts:

1. On the Shangri-La Diet (SLD) forums, spacehoppa [1] said she felt "solid on [her] feet" – which may mean her balance has improved. If so, the improved balance that I noticed may be widely true. She also said "my mind feels clearer," another effect I noticed from omega-3's, and more reason to think omega-3 improve brain function.
2. On the SLD forums, porkypine [2] wrote, "I have a very strong reaction to the 1500 mg of OmegaBrite that I have begun taking in the morning. . . . During the day, I am not just happier, but actually chipper, which is not a normal state for me. I have wondered if I am getting too much Omega-3." This supports one of the assumptions behind my upcoming tests of the effects of omega-3 on balance: the effects of omega-3 on the brain happen quickly. It also highlights an advantage of measuring balance rather than something else, such as mood – namely, it is reasonable to assume that the better your balance, the better your brain is working. As this quote shows, the mapping between mood and goodness of functioning is not so clear.
3. In a book about neurology (Defending the Cavewoman by Harold Klawans), including Creutzfeldt-Jacob disease, I read: "A [Fore] woman in late pregnancy who was unable to walk easily across a narrow tree trunk bridging a gorge knew from that change in her balance that she had kuru and that she would die of it. The physicians examined her and thought she was normal, but in less than one year, she was dead." This shows that balance is an especially sensitive measure of brain function, at least under demanding conditions. It's relatively easy to notice worse balance.

Balance is also much easier to quantify than many other measures of brain function, such as mental clarity.

1. <http://boards.sethroberts.net/index.php?topic=678.msg12484#msg12484>

2. <http://boards.sethroberts.net/index.php?topic=1688.msg12640#msg12640>

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bekel (2006-08-02 14:40:24)

One thing about balance is that I was told by my doctors that balance has three areas that control that function: vision, inner ear, and the brain. If at least two of those areas are functioning normally, your balance will function properly. If two or more areas are not functioning normally, your balance will be impaired. I would submit that for you folks, the impact of omega-3 on the brain may be creating the improvement. I'm envious—all three of those areas are impaired for me. I have not seen any improvement in my balance even with the omega-3 from the flaxseed. It hasn't gotten worse either, so that's something. I do plan on trying fish oil, since there are elements of omega-3 that are not available in large quantities in flaxseed oil that are available in fish oils. Perhaps that will impact my balance for the good. Thanks for all of your work.

barleyblair (2006-08-02 21:54:14)

A bit of personal history to show why I was so interested in Seth's finding about omega-3s and balance: I was born with a very slightly deformed left foot, nothing crippling, but noticeable if I was barefoot or wearing sandals and uncomfortable, right on the edge of painful, pretty much all the time. I had had three surgeries to correct the bunions that resulted from the anomaly, but they did no good; the bunions just came back and the foot became more and more trapezoidal. Then in 1997 I learned about a new surgery to correct the underlying problem; my new foot doc said I should decide whether to have it pretty soon because they won't do it on people over 60. I hemmed and hawed and finally, in January of 2003, six months before I turned 60, I had the new procedure, which was actually four surgeries, two in January and two the next September. Yadda yadda, months in bed, foot six inches above heart, blah blah blah. The upshot was I got a new foot, and it's great. It never hurts even a tiny bit, and I can walk from here to Sunday with a big smile on my face. What I couldn't do was balance on one foot. Balancing on the old left foot would have been impossible, and since I couldn't do it on the left foot I never did it on the right foot either. There's nothing wrong with my inner ear or my vision – I can ride a bike, no sweat – but my feet had never learned how to balance independent of each other. I would try to stand on my right foot; the folks in rehab always tell you, "Do the good one first; then the good one can teach the other one." But my right foot had no more idea how to stand alone than the left one did. So since September of 2003 I've had it as a goal to put my socks on standing up. Teeter-teeter, teeter-teeter ... BANG. Teeter-teeter ... SMASH. I didn't give up, but I also never seemed to make much progress. Both feet were equally bad. It was like a funny little game I'd play with myself every morning. Kind of funny, kind of sad. Last Thursday, having read the first of Seth's Brain Food posts, I chucked some flax and borage oil in my first Crazy Shake. Friday, Saturday, the same. Sunday I took some fish-oil capsules too. Monday, again, the flaxseed oil, again some fish-oil capsules. Tuesday morning I put my socks on standing up. This morning I put my socks on standing up. Then I got all cocky and put my \*/shoes/\* on standing up – something that had never been a part of my wildest ambitions for myself. I tied the knots standing up, not needing to steady myself against my dresser. I stood on one foot waiting for the bus, then on the other. Downtown I walked up an escalator no hands – wow! Then I walked \*/down/\* an escalator no hands. Wow! Wow! Oh man, this foot-balancing thing is fantastic. Now of course, it's easy for the dubious viewer to see that I am a dupe of the Seth Roberts Evil Empire. The Omega-3s are nothing but magic feathers, and I could have put my socks on standing up all along if I weren't such a wimp. So the dubious will say. But as for me, I'm switching from canola oil and ELOO to walnut oil, swishing the flax oil into my Crazy Shakes, chucking down the fish oil pills, and eating massive quantities of salmon and sardines. You'll recognize me easy, I'm the little old lady at the bus stop, standing meditatively, first on one foot and then on the other, smiling my secret smile.

bekel (2006-08-03 06:31:44)

Considering that now that I have deep restful sleep from flaxseed oil I have nominated Seth for sainthood. If I can put my socks (heck-if I can put my pants) on standing up again I will nominate Seth for Ruler of the World. The brain injury people need to be looking at this protocol to use as a part of rehab.

pauls (2006-08-03 09:29:58)

Seth: How about testing your balance with your eyes closed? Here's a standard protocol: <http://www.realage.com/WorkoutCenter/articles.aspx?aid=10318> RealAge has a cited this protocol as a way to assess your brain's age.

Seth's blog » Blog Archive » Brain Food (part 7: looking for a steady baseline) (2006-08-03 22:30:58)

[...] Seth's blog « Brain Food (part 6: a little more progress) [...]

Seth's blog » Blog Archive » Yet More about Omega-3 (2007-01-15 04:32:53)

[...] I have done more self-experimentation about omega-3s and will describe the results in a week or two. Previous posts about omega-3 here, here, here, here, here, here, here, here, here, and here [...]

joanne (2007-12-06 10:44:33)

Seth...Can borage oil be used for weight loss in place of olive oil?

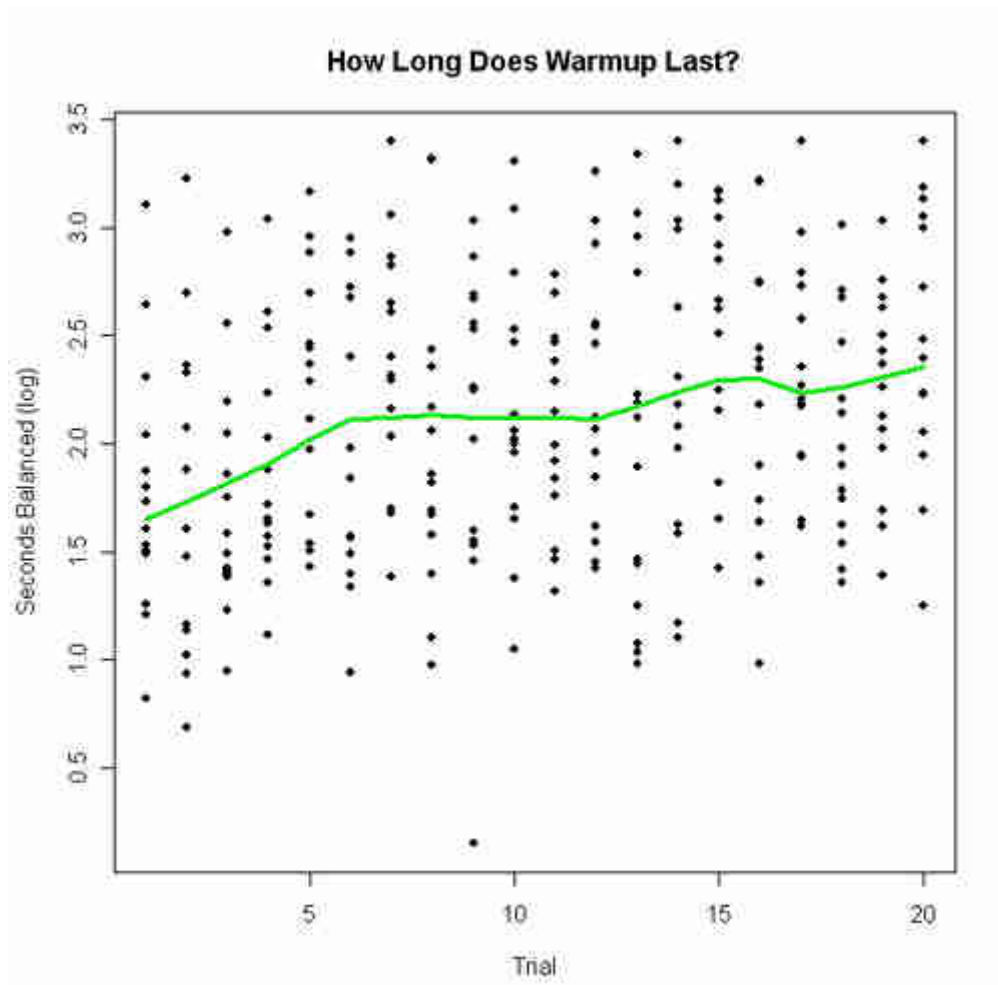
## 1.4 August

### Brain Food (part 7: looking for a steady baseline) (2006-08-03 22:30)

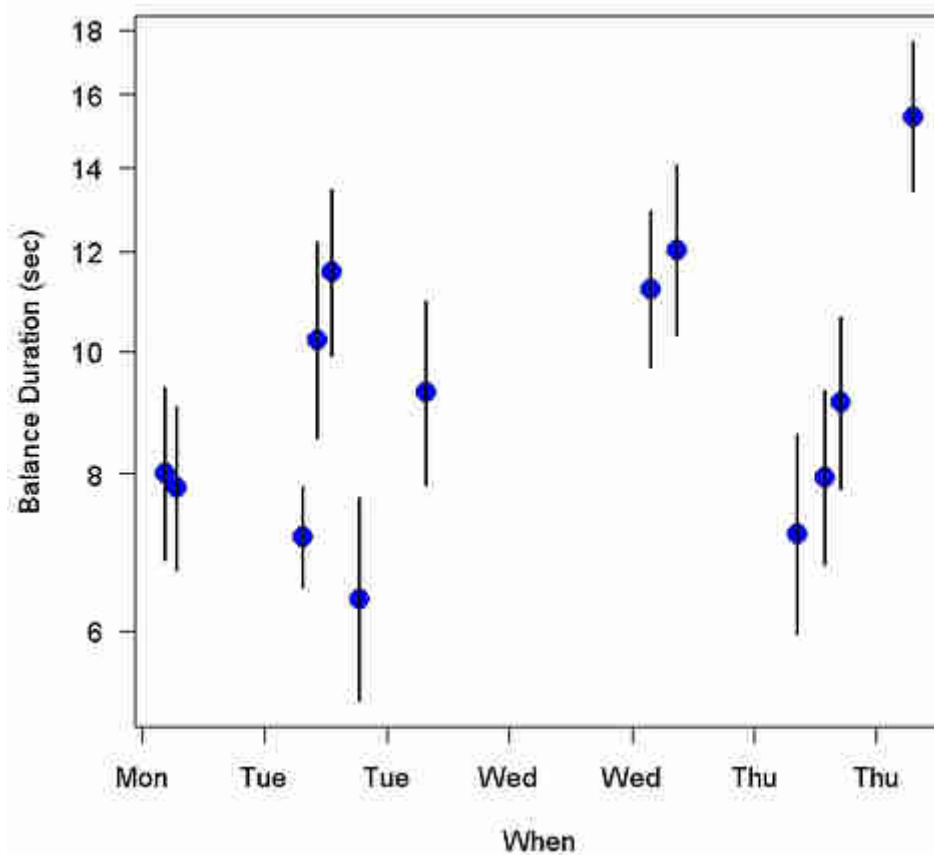
Thanks a lot to those who commented on my [1]previous post, very helpful comments. Barleyblair [2]said that after greatly increasing her omega-3 intake she too found her balance greatly improved – not only could she put her socks on while standing she could put her shoes on while standing, which she hadn't even dreamed of being able to do. Bekel [3]said her sleep is deep and restful because of flaxseed oil. Pauls referred me to [4]a Real-Age test of balance where you stand on one foot with your eyes closed. I tried it. It was way too easy: After two minute I opened my eyes and stopped the test. The table that tells you what the results means only goes up to 28 seconds. If the table is not completely bogus, then my balance is much better than average. Which is consistent with my working hypotheses that (a) the average American gets far too little omega-3 and (b) my brain function – indexed by my ability to balance – greatly improved when I increased my omega-3 intake. Keep in mind that according to conventional recommendations I ate plenty of fish (several servings per week) before increasing my omega-3 intake.

Before doing a simple test of the effects of omega-3 on my balance, I would like to establish a steady baseline and get an idea of what normal variation is. If possible, I would like to reduce normal variation – reduce background noise, in other words. With this goal I have measured my balance 13 times under roughly the same conditions: barefoot, listening to a book (a fascinating book, by the way: *Cod: A Biography of the Fish that Changed the World* by Mark Kurlansky) while doing the test, 20 trials per test. Each trial consists of standing on one foot on the cutting board on the 0.5-inch platform (see equipment [5]here) and measuring how long until my other foot touches the ground. Each test takes about 10 minutes. I like the book so I enjoy the tests.

Below are the results from all 13 tests as a function of trial number. They show that there is a warmup period lasting 5 trials.



That just refines warmup measurements I posted [6]previously. This is completely new:



The x axis shows when the test was done; points that are close together on the x axis were done close together in time – e.g., an hour apart. I hoped for a steady baseline so that I could go on to more interesting stuff. That is not what I found. I did a one-factor F test to see if there was significant heterogeneity. I used only the last 15 trials of each test, dropping the first 5 “warmup” trials. There were 13 levels (the 13 tests) of one factor. There was a highly reliable ( $p = .003$ ) effect of test, meaning the variation from one test to the next was too large to be sampling error. And this test did not take into account the obvious clustering – tests close in time had similar results. The clustering makes it even more likely there were real differences in balancing ability from one test (or rather cluster of tests) to the next.

Apparently my balancing ability can change substantially in several hours! (For example, the time between the last test and the next-to-last test, the last in a cluster of three, was 7 hours.) And my test is sensitive enough to detect this! Forgive the exclamation marks. Nothing in my knowledge of psychology makes it obvious or even likely that this would be true – that a measure of quality of brain function would vary so much in hours that it could be detected by single measurements. Or that single measurements would be precise enough to detect such a change. Of course brain function (e.g., alertness) may get worse as you get sleepy but in this case my balance was much better in the evening than in the morning. The differences in my scores had no correlate that I could notice – I didn’t feel noticeably different when I did worse than when I did better.

What might be causing the differences? Body temperature or other circadian rhythm: Unlikely, because one would expect best performance when body temperature is highest, around 4 pm, which does not fit the results very well. More plausible: blood concentration of omega-3. It will be relatively low in the morning because while I was asleep I took no flaxseed oil or walnut oil. It will rise during the day as I consume these. This is consistent with the high

measurements in the early evening.

Whatever the cause, these data suggest that something in ordinary life (which includes omega-3 consumption) can improve brain function within hours. If you, dear reader, know of other data that suggests this conclusion please let me know. Drugs and alcohol can quickly change brain function but they are not involved here. Nor am I listening to music, also believed to improve brain function (slightly). I am going to try to reduce fluctuations in omega-3 blood levels and see if I get more uniform measurements. I had a cup of tea with caffeine this afternoon; caffeine consumption is something else I will better control (by eliminating it).

1. <http://www.blog.sethroberts.net/2006/07/31/brain-food-part-6-a-little-more-progress/>
2. <http://www.blog.sethroberts.net/2006/07/31/brain-food-part-6-a-little-more-progress/#comment-55>
3. <http://www.blog.sethroberts.net/2006/07/31/brain-food-part-6-a-little-more-progress/#comment-56>
4. <http://www.realage.com/WorkoutCenter/articles.aspx?aid=10318>
5. [http://static.flickr.com/68/199360589\\_3b81669977.jpg?v=0](http://static.flickr.com/68/199360589_3b81669977.jpg?v=0)
6. <http://www.blog.sethroberts.net/2006/07/29/brain-food-part-5-a-little-progress/>

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Ethesis (2006-08-04 03:35:22)

That was interesting. I've not done a balance test with my eyes closed. But it was fun how quickly I learned it well enough to get past the end of the test. Thanks, that was fun.

Seth's blog » Blog Archive » Brain Food (part 8: a little more baseline) (2006-08-08 23:23:44)

[...] Seth's blog « Brain Food (part 7: looking for a steady baseline) [...]

Seth's blog » Blog Archive » Yet More about Omega-3 (2007-01-13 23:57:16)

[...] I have done more self-experimentation about omega-3s and will describe the results in a week or two. Some previous posts about omega-3 are [here](#), [here](#), [here](#), [here](#), [here](#), [here](#), [here](#), [here](#), and [here](#). [...]

## **Brain Food (part 8: a little more baseline) (2006-08-08 23:23)**

As I mentioned [1]earlier, while measuring my balance I've been listening to a book called *Cod: The Fish that Changed the World*. Around Hour 4 of the book I realized it was related to what I was doing: fish, brain food. Duh!

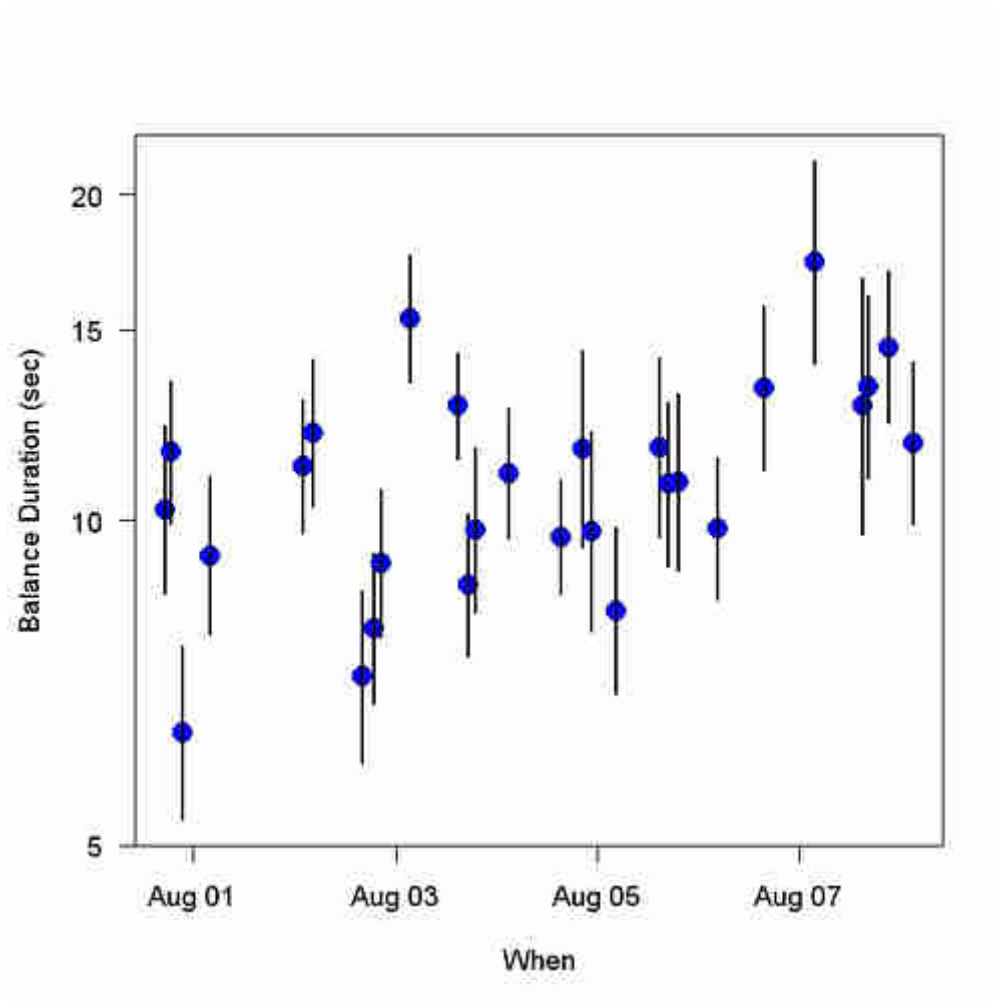
Each test of balance consists of 5 warmup trials followed by 15 regular trials. Each trial generates one number, a duration: how long I stand on one foot before the other foot touches the floor. It's a bit like surfing—balance, balance, balance, balance, balance, wipe out. (Surfers, skateboarders, skiers, snowboarders, gymnasts . . . this may interest you.) I enter the stopwatch times directly into my laptop. Each test lasts about 12 minutes. Because of the book, they're pleasant.

I made several more baseline measurements of my balance with two changes:

1. To reduce fluctuations in the concentration of omega-3 in my brain, I did my best to take the flaxseed oil capsules as evenly spaced as possible. The general rule was to take 1 every 2.4 hours (= 10 per day). I didn't take the capsules with me when I left home but I did follow that rule when I was home (not waking up to take them, however).

2. To make the distribution of (log) balance times more Gaussian (normal), I raised the maximum possible time from 30 seconds to 60 seconds. Previously I had stopped the test at 30 seconds; now the cutoff was 60 seconds. The problem was 30 seconds was too common – my balance was too good. Before the change, 3 % of baseline measurements (6 out of 210) were 30 seconds. After the change, 12 % of measurements (25 out of 210) were between 30 and 60 seconds and <1 % (1 out of 210) were 60 seconds.

The graph below shows results (mean & standard error) for 28 sessions.



The early problem (first 10 tests), discussed in [2]my previous post, was that the means were fluctuating too much. A one-way ANOVA, with each test a different level, gave  $F(9, 140) = 2.6$ ,  $p = 0.008$ . This is why I started trying to evenly distribute the flax capsules over the day. This seemed to work. For the last 18 tests,  $F(17, 252) = 1.0$ ,  $p = 0.4$ . Unfortunately there is obviously an upward trend but that is okay because the change I am going to make – much less omega-3 – should if anything impair balance.

1. <http://www.blog.sethroberts.net/2006/08/03/brain-food-part-7-looking-for-a-steady-baseline/>

2. <http://www.blog.sethroberts.net/2006/08/03/brain-food-part-7-looking-for-a-steady-baseline/>



sbean (2006-08-09 10:35:34)

Aren't you worried that your expectation of worse balance will skew the results?

Seth's blog » Blog Archive » Brain Food (part 9: supporting data, and a problem) (2006-08-13 22:46:29)

[...] But, as you can see, there was a problem: My balance rapidly improved during the low omega-3 condition. Although the results support my original idea, they don't support it as strongly as they might. A comment on a previous post was "Aren't you worried that your expectation of worse balance will skew the results?" No, I'm not I thought when I read it. I had several reasons for not worrying about the effect of expectations, and now another has come along: Surprising results, which imply that expectations have little effect. I did not expect significant improvement from practice. I had believed that because I balance everyday for hours while standing and walking, there would not be a large practice effect. I was wrong. [...]

pisces (2006-09-05 16:58:22)

Seth, what made you decide to use flax and walnut oils instead of fish oil for this experiment?

seth (2006-09-06 08:29:35)

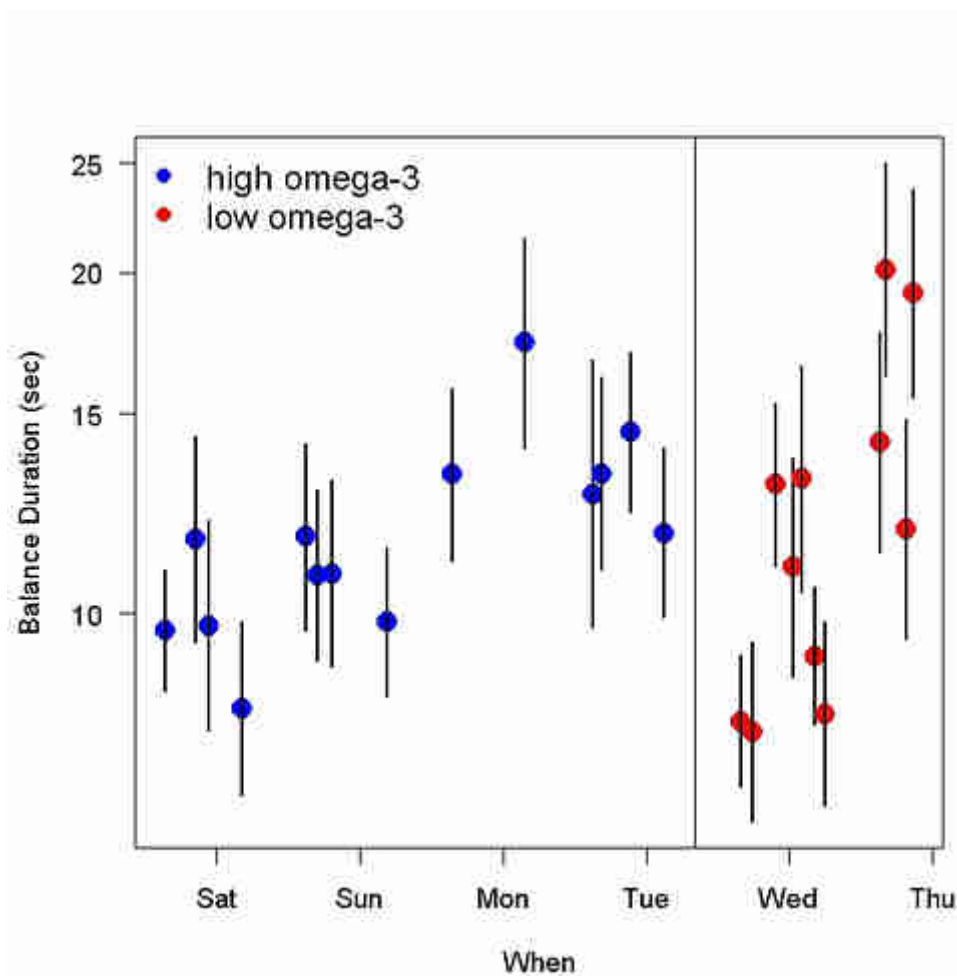
I tried fish oil one day and got a headache the next morning. Maybe I took too much. Or maybe my fish oil was bad. I'll try again.

Seth's blog » Blog Archive » Yet More about Omega-3 (2007-01-15 04:34:57)

[...] I have done more self-experimentation about omega-3s and will describe the results in a week or two. Previous posts about omega-3 [here](#), [here](#), [here](#), [here](#), [here](#), [here](#), [here](#), [here](#), [here](#), and [here](#) [...]

## **Brain Food (part 9: supporting data, and a problem) (2006-08-13 22:46)**

I reduced the amount of omega-3 in my diet. I stopped taking flax-seed oil capsules (I had been taking 10 1000-mg capsules/day) and started drinking extra light olive oil (2 tablespoons/day) instead of walnut oil. I made the change at midnight: Tuesday high, Wednesday low. The graph below shows measurements of my balance.



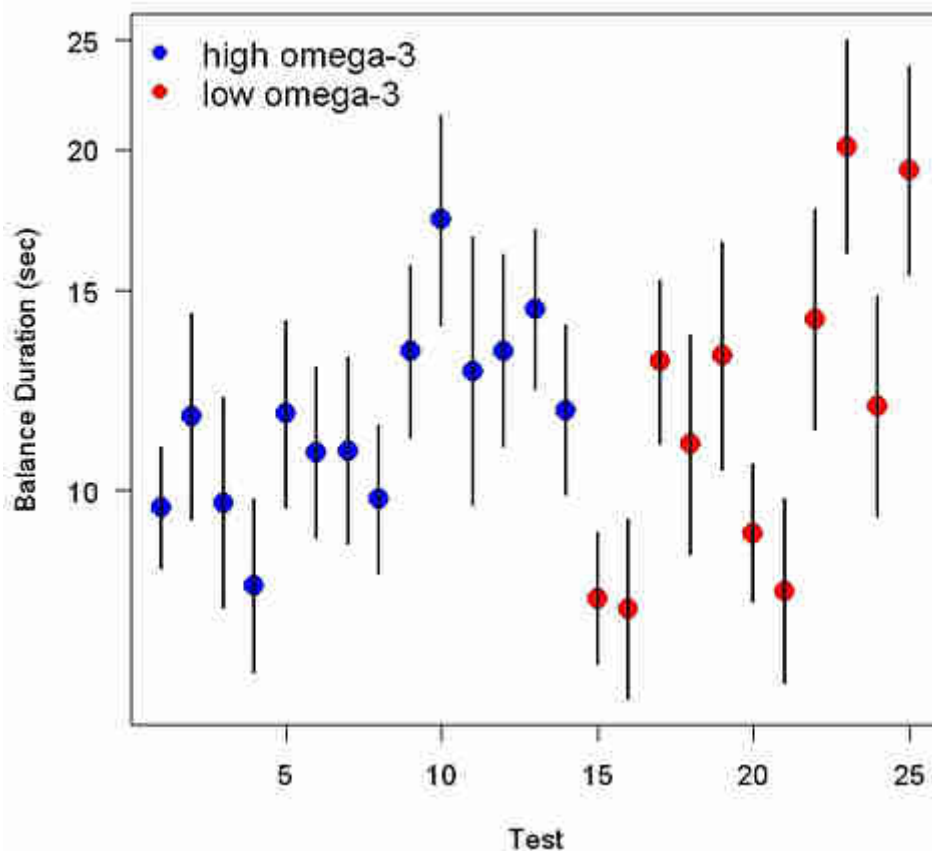
From Saturday through Tuesday, and preceding days, my intake of omega-3 was high; on Wednesday and Thursday it was low.

My balance was worse Wednesday morning than expected by extrapolation, which supports the idea I started with: omega-3 affects my balance. The time course of the change (the impairment was clear in hours) resembles the original observation: I could put on my shoes while standing much more easily the morning after the day I increased my omega-3 consumption.

But, as you can see, there was a problem: My balance rapidly improved during the low omega-3 condition. Although the results support my original idea, they don't support it as strongly as they might. A [1]comment on a previous post was "Aren't you worried that your expectation of worse balance will skew the results?" No, I'm not I thought when I read it. I had several reasons for not worrying about the effect of expectations, and now another has come along: Surprising results, which imply that expectations have little effect. I did not expect significant improvement from practice. I had believed that because I balance everyday for hours while standing and walking, there would not be a large practice effect. I was wrong.

Psychologists don't know much about motor learning. There are few well-established empirical generalizations about what makes motor learning faster or slower. Another gap in our knowledge is about the nature of the underlying change. When you get better with practice, how does your brain change?

After I shifted to low omega-3, I was surprised not only by how much I improved but also by how quickly. Was my improvement due simply to more tests? I plotted my scores versus test number:



This graph suggests that I improved more per test (greater slope) during the low-omega-3 condition than during the high-omega-3 condition. I think it is a spacing effect: During the low-omega-3 condition, I tested more often. During the high-omega-3 condition, I did 14 tests in 3.5 days – 4.0/day. During the low-omega-3 condition, I did 11 tests in 1.2 days – 9.1/day. I tested more often because I wanted to track the decrease. I think this difference in test rate is the reason for the slope difference. This effect is the opposite of the usual spacing effect in learning experiments, in which close-together (“massed”) practice is less effective than widely-spaced practice.

Relevant to the theme of [2]inspiration via self-experiment, these results and my experience gave me several new (at least to me) ideas about motor learning. One was the existence of this spacing effect. Another was that practice changes the brain by increasing how much of the brain is devoted to the task. (The areas used for other tasks shrink.) Practice increases accuracy because more neurons become involved. The output, the action, is an average from a larger sample. One reason I thought of this is that after lots of practice, and I became quite accurate, the circular area on which I was balancing seemed larger. The notion that the brain area used by the task gets larger helps explain the spacing effect. Spacing is important because the brain doesn’t care how often you have done something in the distant past; what matters is how often you are doing it now. Thus the spacing effect helps make efficient use of scarce resources (neurons). The spacing effect occurs because neural activity causes an increase in something (call it X) that slowly fades away. If later activity happens while X is above a threshold, neural rewiring occurs.

The big practice effects and the idea that practice is more powerful when more frequent should interest anyone

who wants to improve their balance (and probably other motor skills), from athletes to the elderly. In a simple cheap easy safe way I got better quickly–too quickly, actually. What happened reminds me of Little League: My batting got much better when I started swinging a bat in my backyard.

The lesson for my experimental design is that I should reduce and keep more constant how often I test.

1. <http://www.blog.sethroberts.net/2006/08/08/brain-food-part-8-a-little-more-baseline/#comment-70>
2. <http://repositories.cdlib.org/postprints/117/>

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bekel (2006-08-14 14:19:22)

When I was in physical rehab after my accident, one of the things that the folks told me was that if I chose to use a cane constantly, my balance would not get better. The expectation was not to use my cane in the home and areas where I felt safe walking. There is a device where you stand on it and it records the data in software numerically as well as pictorially (it shows how your weight shifted from one area of your foot to another during the test). I noticed an improvement from beginning to end of each test as well.

### **Seymour Benzer (part 1) (2006-08-20 23:14)**

I found [1]a long interview with Seymour Benzer, a biologist at Caltech, who is one of my favorite scientists – [2]lots of creative and important work. I was pleased to learn he is a foodie. During a 1956 trip to Japan he had sushi for the first time. "One of the greatest things about the trip," he said in 1990 (when the interview took place), presaging a future in which every upscale American supermarket sells sushi. (For dinner tonight I made salmon tartare.) When I was a student at Caltech I knew the other students liked him, but I never met him.

Benzer began the use of fruit flies to study behavior. At Woods Hole I took a course called Neural Systems and Behavior with a fruit-fly segment taught by Laurie Tompkins. She had met Benzer at a party. When she told him she studied fruit-fly mating, Benzer asked if they have orgasms. Very early in his work on behavior, he gave a talk to Roger Sperry's lab about his plans. After his talk there was a lot of debate about it. Some people thought it was very promising; others thought it was nonsense.

Interviewer: Why were people so skeptical?

Benzer: Why? A lack of imagination.

Excellent answer. I would have said: People are always skeptical.

1. [http://oralhistories.library.caltech.edu/27/00/OH\\_Benzer\\_S.pdf](http://oralhistories.library.caltech.edu/27/00/OH_Benzer_S.pdf)
2. <http://benzerserver.caltech.edu/pages/cv/BenzerFullCV%209-04.htm>

john.howes (2006-08-21 17:19:48)

Really? I would say very few people are skeptical enough.

seth (2006-08-22 07:55:00)

By "people" I meant the sort of people in Roger Sperry's lab. The typical audience for a talk by a scientist to other scientists.

losing-it (2006-12-09 18:24:43)

Interviewer: Why were people so skeptical? Benzer: Why? A lack of imagination. Excellent answer. I would have said: People are always skeptical. ===== Probably because they've never tried sushi. All things being relative, that is. ("They" being "the typical audience for a talk by scientists to other scientists.") P.S. Does Benzer need any more fruit flies? I've got a nice colony started on some bananas :^D P.P.S. To Benzer's thought processes, one might liken the following 3 haiku (excepting the pond & over-matured sushi, which could be "they," perhaps... old pond a frog jumps in sound of water Matsuo Basho (1644-1694) Translation At the over-matured sushi, The Master Is full of regret. Yosa Buson (1716-1784) Translation I eat alone & pass the salt for myself Michael McClintock (1950-Present) "Man With No Face"

### **Seymour Benzer (crippling the Salk Institute) (2006-08-22 08:50)**

One of the most fascinating stories in Benzer's [1]oral history interview is about construction of the Salk Institute in La Jolla, California:

Benzer: Louis Kahn [the architect] asked Salk, "How much money have you got to put into the building?" And Salk said, "Ten million for endowment" – this was all from the commitment from the March of Dimes – "and a million dollars a year for operating expenses in perpetuity." So Kahn went home and designed a building for \$20 million. In fact, he bragged about this at some dinner he had in La Jolla. He talked about other buildings he had designed and he said it was always his policy to make the building for twice as much as the money available, because you could always count on the fact that people scurry around to find the extra money.

Salk went for that idea on the argument that later on it would cost much more to build it. That was absolutely true. But at the time it had the effect of liquidating the endowment. And everything suffered from then on. The institute . . . was always worrying about where the next buck was coming from.

. . .

Interviewer: So they liquidated their entire endowment to construct a more expensive building?

Benzer: Yes.

Kahn knew a general principal about human nature that I do not. Why do backers reliably "scurry around to find the extra money"? Something powerful is at work here.

1. [http://oralhistories.library.caltech.edu/27/00/0H\\_Benzer\\_S.pdf](http://oralhistories.library.caltech.edu/27/00/0H_Benzer_S.pdf)

Carols (2006-08-22 14:29:20)

That's an old sales trick. Show them the super duper model and they will never be satisfied with the car they can actually afford unless they've firmly planted in their mind that they don't need all those extras. Who wants a crummy 10 million dollar building when they can have the really nice 20 million building? If there is a way, it will be found if the desire is sufficient. So in this case better is the enemy of the good enough.

iportion1 (2006-08-22 17:56:38)

I would rather have what I asked for.

Catherine Johnson (2006-08-25 06:48:54)

In for a nickel, in for a dime!

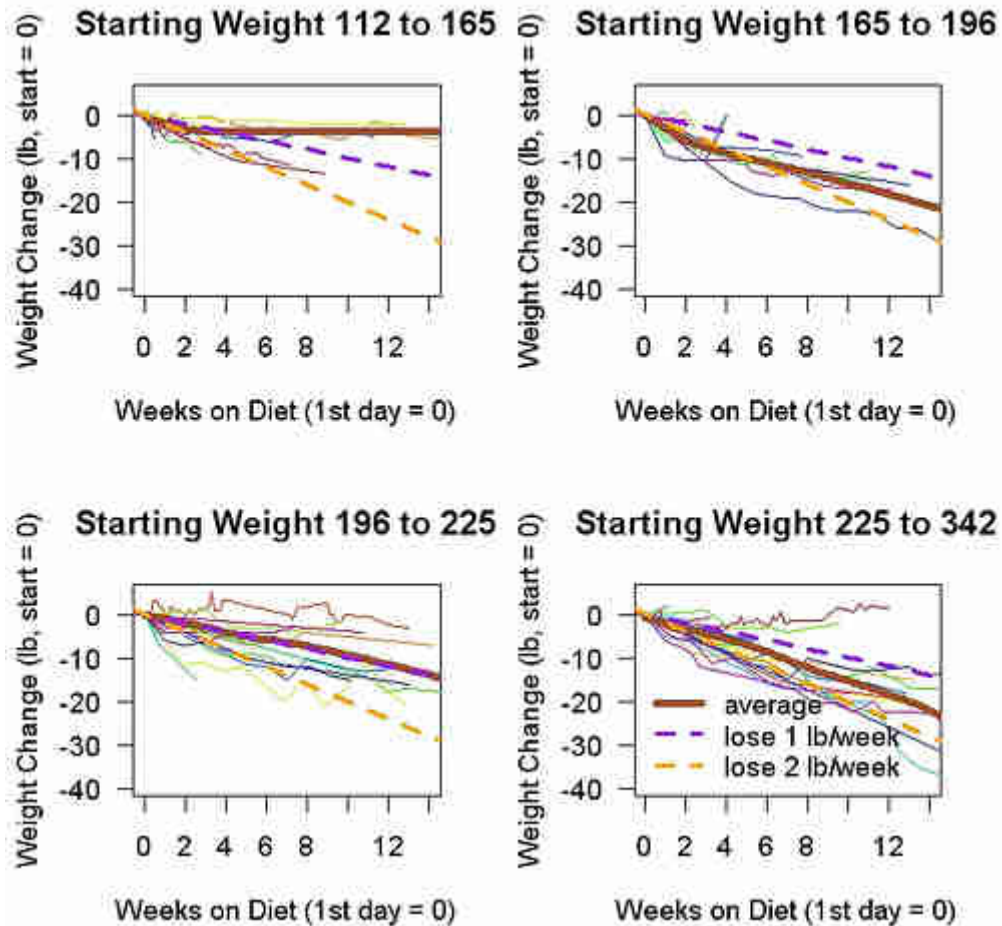
Catherine Johnson (2006-08-25 09:23:55)

Almost 20 years ago, on a Fourth of July weekend in Studio City, my husband and I saw an ad in the paper for brand-new \$10,000 dollar Camrys at our local Toyota dealership. I had my husband call to make sure they actually had \$10,000 Camrys on the lot. They did. When we got there the place was mobbed with people not buying \$10,000 Camrys. We said we'd come for the \$10,000 Camry. The salesman told us we didn't want the \$10,000 Camry because the \$10,000 Camry had a standard transmission. I said standard transmission gave you "more power." The salesman looked at me for a second, then turned and walked away without another word. Obviously the guy figured that if the *wife* was saying a standard had more power, it was hopeless. We went home with a \$10,000 Camry. The guy who finally found the car & sold it to us threw in a set of fancy wheel rims for free. Our nanny owns the car now, and is still driving it.

## **How Well Does the Shangri-La Diet Work? (part 1: breakdown by starting weight) (2006-08-27 16:59)**

The most basic question about the Shangri-La Diet is how well it works. As the host of The Amazing Race might say, there are many ways to answer this question, each with their own pros and cons. Thanks to Rey Arbolay, we can answer this question in a new way: by looking at the data in the [1]Post Your Tracking Data Here section of the [2]Shangri-La Diet forums, where more than 80 people have posted.

The goal of SLD, of course, is weight loss. The problem with just plotting pounds lost as a function of time on SLD is that a loss of 10 pounds is quite different to someone who starts at 120 pounds and someone who starts at 300 pounds. To deal with this I have divided the results by starting weight. In the graphs below, the ranges of weights were chosen so that there would be roughly the same number of people in each graph.



Starting weight makes a big difference – at least, between the two extremes. Many of the people who aren't losing very fast are in the lowest quartile. There are still a few outliers – people at the higher starting weights who are losing slowly if at all – but not many.

The next step is to do an analysis that estimates the effect of starting weight and somehow removes it. It might be better to divide people by BMI rather than starting weight, and maybe the y axis can be improved.

1. <http://boards.sethroberts.net/index.php?board=14.0>
2. <http://boards.sethroberts.net/index.php?action=collapse;c=1;sa=collapse;#1>

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Andrew (2006-08-28 18:11:54)

I'd try a model of the form,  $\log(y_{jt}) = a_j + b_j t + \text{error}_{jt}$ , where I'm using the notation  $j$  for persons and  $t$  for time. I'd then model the intercept  $a_j$  as a regression, including height and sex as predictors, and then  $b_j$  as a regression, including  $a_j$ , height, and sex as predictors. Ideally of course you'd also have a matched set of people who aren't on the diet, but perhaps that's too much to hope for... P.S. Excellent use of multiple graphs per page. My only suggestions here are: (i) make the lines a little thinner (`lwd=.5`), (ii) keep the color but get rid of the guide lines at  $-1/\text{wk}$  and  $-2/\text{wk}$ ; these overwhelm the pictures, I think. I'd also arrange in a  $4 \times 2$  grid: the 4 weight classes you have, but 2 columns, one for the men and one for the women.

sophistry (2006-09-20 14:15:46)

Before we take out the arsenal of regressions Are the people who lost a lot of weight more likely to post about it?

seth (2006-09-20 14:22:08)

Are the people who lost a lot of weight more likely to post about it? Well, no, that is not a problem because it is a prospective study – people post their weights as they go along. The better question is: are people who are going to lose a lot of weight more likely to post about it?

## 1.5 September

### Four Great Modern Books (part 1: description) (2006-09-06 23:48)

Last week I read [1]Send In The Idiots by Kamran Nazeer. It was so good – so fresh, clear, and moving – it made me wonder how it came to be. In other words, where do great books come from? Asking what several great books have in common should suggest answers to this question.

Among books published in the last 40-odd years these are the best I have read:

[2] The Economy of Cities (1969) by Jane Jacobs. Why and how cities grow or fail to grow. How new goods and services arise. They almost always begin in cities – the book starts with a discussion of how agriculture began. [3]Cities and the Wealth of Nations (1984) by Jacobs is also great but too similar to Economy to be worth separate discussion.

[4]Totto-Chan (1981) by Tetsuko Kuroyanagi. A memoir of the author's primary school days at a progressive Tokyo private school. (Mentioned in The Shangri-La Diet.)

[5]The Man Who Would Be Queen (2003) by J. Michael Bailey. What scientists, especially Bailey (a psychology professor at Northwestern University), have learned about the causes and effects of male homosexuality. One chapter is about male transsexuals, who are not always homosexual.

[6]Send In The Idiots (2006) by Kamran Nazeer. The beautiful subtitle is Stories From the Other Side of Autism. When he was a child, Nazeer attended a school for autistic children. This book is about the adult lives of several of his classmates.

In later posts I will explain why I like these books so much and try to ferret out the secrets of their greatness.

1. [http://www.amazon.com/gp/product/1582346194/ref=ase\\_sethrobertand-20/102-8713461-6299310?s=books&v=glance&n=283155&tagActionCode=sethrobertand-20](http://www.amazon.com/gp/product/1582346194/ref=ase_sethrobertand-20/102-8713461-6299310?s=books&v=glance&n=283155&tagActionCode=sethrobertand-20)
2. [http://www.amazon.com/gp/product/039470584X/ref=ase\\_sethrobertand-20/102-8713461-6299310?s=books&v=glance&n=283155&tagActionCode=sethrobertand-20](http://www.amazon.com/gp/product/039470584X/ref=ase_sethrobertand-20/102-8713461-6299310?s=books&v=glance&n=283155&tagActionCode=sethrobertand-20)
3. [http://www.amazon.com/gp/product/0394729110/ref=ase\\_sethrobertand-20/102-8713461-6299310?s=books&v=glance&n=283155&tagActionCode=sethrobertand-20](http://www.amazon.com/gp/product/0394729110/ref=ase_sethrobertand-20/102-8713461-6299310?s=books&v=glance&n=283155&tagActionCode=sethrobertand-20)
4. [http://www.amazon.com/gp/product/4770020678/ref=ase\\_sethrobertand-20/102-8713461-6299310?s=books&v=glance&n=283155&tagActionCode=sethrobertand-20](http://www.amazon.com/gp/product/4770020678/ref=ase_sethrobertand-20/102-8713461-6299310?s=books&v=glance&n=283155&tagActionCode=sethrobertand-20)
5. [http://www.amazon.com/gp/product/0309084180/ref=ase\\_sethrobertand-20/102-8713461-6299310?s=books&v=glance&n=283155&tagActionCode=sethrobertand-20](http://www.amazon.com/gp/product/0309084180/ref=ase_sethrobertand-20/102-8713461-6299310?s=books&v=glance&n=283155&tagActionCode=sethrobertand-20)



6. [http://www.amazon.com/gp/product/1582346194/ref=ase\\_sethrobertand-20/102-8713461-6299310?s=books&v=glance&n=283155&tagActionCode=sethrobertand-20](http://www.amazon.com/gp/product/1582346194/ref=ase_sethrobertand-20/102-8713461-6299310?s=books&v=glance&n=283155&tagActionCode=sethrobertand-20)

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ursula (2006-10-07 06:29:39)

Economy of Cities is great. Will have to check the rest out. Thanks!

ursula (2006-10-07 06:30:26)

Economies of Cities = GREAT! Will have to check the rest out.

Zoo Books (2008-02-27 21:36:06)

I'll have to check out Send in the Idiots.

### **Seymour Benzer (crippling medical school research) (2006-09-22 16:25)**

In [1]an interview, Seymour Benzer, the great Caltech biologist, told a story that I think explains a lot about medical-school research, including UCLA medical school professor John Ford's [2]complaint about The Shangri-La Diet:

Harold Brown [president of Caltech 1969-1977] made himself quite conspicuous by . . . trying to develop a medical school relationship. . . . His idea was for Caltech to pair up with UCLA to make a medical school. We would do the first two years of basic education of the medical students, and afterwards they would be guaranteed two more years of clinical experience at UCLA. And then they could be doctors. . . . In the Biology Division, it went over like a lead balloon: Why should we be knocking ourselves out teaching these guys, and then they go away elsewhere and don't even do research – they become doctors? What's in it for us?

Some things are hard to learn by reading. Saul Sternberg, now a professor of psychology at Penn, once spent a quarter at Berkeley and was around when Stanford grad students and faculty in cognitive psychology came up to Berkeley to present their research. One of the grad students told Sternberg about a reaction-time experiment she had done about mental something or other (mental rotation?) in which the conditions compared varied in what the subject saw. Sternberg pointed out that it would be better to keep constant what the subject sees. This is the beginning of wisdom in the design of cognitive psychology experiments, but you won't find it written down anywhere.

1. [http://oralhistories.library.caltech.edu/27/00/OH\\_Benzer\\_S.pdf](http://oralhistories.library.caltech.edu/27/00/OH_Benzer_S.pdf)

2. <http://www.tcsdaily.com/Article.aspx?id=052206D>

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### **The Annotated Woman's World article (2006-09-24 22:19)**

The next issue (Oct 3) of Woman's World, already available many places, has a lovely cover story (pp. 18-19) about the Shangri-La Diet with the funny title "Instant Willpower!" The article is very accurate and reasonable but I have a

few comments.

"Lose 7 lbs a week!" (cover and p. 19). Average weight loss is 1-2 lbs/week.

"Makes your body release stored fat!" (cover). Clever. I would have said something plodding like "lose body fat."

"Roberts says refined walnut oil and light olive oils are best" (p. 18). Refined walnut oil is hard to find. I buy Spectrum refined walnut oil at Whole Foods. The Spectrum Organics [1]store locator will find stores that carry Spectrum products but not all carry refined walnut oil. In Berkeley, most don't. You may want to call ahead.

"When reading scientific journals to prepare for a lecture, Roberts had a eureka moment. . . Turning this interesting idea into practical weight-loss advice took lots of trial and error. . . . In short order, he was 35 pounds slimmer" (pp. 18-19). I lost 35 pounds using sugar water, not oil. It took three months. The turning point in going from theory to practice was a strange experience in Paris, described in the book. Also crucial was Emily Mechner's observation that if my theory was correct, flavorless oils should work as well as sugar water. All in all, though, this is a good summary.

[to make this plan work even better] "Stick with your normal foods" (p. 19). No, I think the diet works better if you start eating foods that are new to you – foods with unfamiliar flavors.

"Avoid flax, unrefined walnut and extra virgin olive oils, which have strong flavor, says Roberts" (p. 19). You can drink these oils if you close your nose (using a noseclip for example) while drinking them. That will eliminate the flavor.

1. <http://http://www.spectrumorganics.com/?id=7>[www.spectrumorganics.com/?id=7](http://www.spectrumorganics.com/?id=7)

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ursula (2006-10-07 06:27:52)

Can't get the Spectrum link to work. I'm going to wild oats Market today to see if they carry it. Thanks!

## 1.6 October

### The Writing Cure (2006-10-11 03:54)

I wonder how many bloggers know about [1]this – research about the beneficial effects of journal writing. [2]James Pennebaker, a professor of psychology at the University of Texas Austin, has done a lot of research in this area. [3]Here is a list of studies. [4]This article sums it up nicely: "Writing about important personal experiences in an emotional way for as little as 15 minutes over the course of three days brings about improvements in mental and physical [!] health. This finding has been replicated across age, gender, culture, social class, and personality type."

I'm guessing this research started as a search for the crucial ingredients of psychotherapy. What happens during psychotherapy that helps people? Early research found that the therapist's training made no detectable difference. This suggested that just telling one's story was therapeutic. Journal writing is another step in the same direction: You tell your story without anyone listening. Next step: studying the health effects of blogging.

1. <http://books.apa.org/books.cfm?id=431791A>
2. <http://homepage.psy.utexas.edu/homepage/faculty/pennebaker/reprints/>
3. <http://homepage.psy.utexas.edu/homepage/faculty/pennebaker/reprints/writingrefs.htm>
4. <http://homepage.psy.utexas.edu/homepage/faculty/pennebaker/reprints/Seagal1999.pdf>

augustus (2006-10-12 18:14:37)

See also: <http://www.newscientist.com/article.ns?id=dn6374>

judy (2006-10-15 13:14:46)

It's nice to see this area getting some recognition. Following my example as a blogger, several of my friends in my online widow support group found that blogging has helped them as they move through their grieving journey.

The Anonymous Mama (2007-03-07 10:56:41)

Oh, this is so true! I've journaled for a long, long time, and it always seems to help iron out my "mental wrinkles." I keep one of those little Moleskine journals on me all the time. It's easy to keep up on it if you have it on you wherever you go.

### David Jenkins on the Shangri-La Diet (2006-10-17 10:49)

David Jenkins, a professor of nutrition at the University of Toronto, invented the glycemic index, probably the most important nutritional innovation of the last thirty years. The glycemic index helped me permanently lose 6 pounds (see Example 7 of [1]this paper). While preparing her [2]CBC piece about the Shangri-La Diet, Sarah Kapoor interviewed Jenkins. [3]Here is a partial transcript of what he said.

1. <http://repositories.cdlib.org/postprints/117/>
2. <http://www.youtube.com/watch?v=hR33LNwGIc>
3. [http://sethroberts.net/archives/2006-04\\_David\\_Jenkins\\_interview\\_\(CBC\).pdf](http://sethroberts.net/archives/2006-04_David_Jenkins_interview_(CBC).pdf)

losing-it (2006-12-09 17:47:15)

1:45, DJ 2 variations on a 1819 (classical Japanese) dietary haiku by haiku maser, Kobayashi Issa, translated by American professor, poet, author David R. Lanoue on his educational website, "Haiku of Kobayashi Issa": あつ-ぢゝゝ, ぢゝゝ, あつ%◎あ-  
あつ%◎あ, ぢゝゝ, ぢゝゝ, ぢゝゝ fuyugomori aku[mono]-gui ga agari keru winter seclusion- getting better at eating foul food あつ-ぢゝゝ, ぢゝゝ, あつ%◎あ-  
あつ%◎あ, ぢゝゝ%◎あ, ぢゝゝ, ぢゝゝ fuyugomori aku[mono]-gui ga jyāzu nari winter seclusion- becoming expert at eating foul food  
<http://haikuguy.com> <http://haikuguy.com/issa/queryallcodetest4.php?keywords=winter+seclusion &year=>

### Too Few Riders, Too Many Stolen Bases (2006-10-22 21:54)

I heard two excellent talks last week. [1]Bent Flyvbjerg, a professor of Planning at Aalborg University, Aalborg, Denmark, spoke on "Survival of the Unfittest: Why the Worst Megaprojects [subways, airports, bridges, tunnels] Get Built." Why? Because of false claims. Cost estimates turn out to be much too low and benefit estimates (such as

[2]ridership) much too high. Boston's Big Dig, for example, has already cost more than three times the original estimate. Cost estimates were too low in 90 % of projects, Flyvbjerg said. The tools used to make those estimates have supposedly improved a great deal over the last few decades but [3]their accuracy has not improved. Lovaglio and Kahneman have argued that the underlying problem is "[4]optimism bias"; however, Flyvbjerg believes that the problem is what he now calls strategic misrepresentation – when he used the term lying people got upset. The greater the misrepresentation, the more likely the project would be approved – or rather the greater the truth the more likely the project would not be approved. That is a different kind of bias. An everyday example is me and my microwave oven. Sometimes I use my microwave oven to dry my clothes. I've done this dozens of times but I continue to badly underestimate how long it will take. I guess that a shirt will take 8 minutes to dry; it takes 15 minutes. I know I underestimate – but I keep doing it. This is not optimism bias. Microwaving is not unexpectedly difficult or unpredictable. The problem, I think, is the asymmetry of the effects of error. If my guess is too short, I have to put the shirt back in the microwave, which is inconvenient; if my guess is too long the shirt may burn – which corresponds to the project not being approved.

Incidentally, Flyvbjerg has written [5]a paper defending case studies and by extension self-experimentation. He quotes Hans Eysenck, who originally dismissed case studies as anecdotes: "Sometimes we simply have to keep our eyes open and look carefully at individual cases – not in the hope of proving anything but rather in the hope of learning something." Exactly.

The other excellent talk ("Scagnostics" – scatterplot diagnostics) was by [6]Leland Wilkinson, author of The Grammar of Graphics and developer of SYSTAT, who now works at SPSS. He described a system that classifies scatterplots. If you have twenty or thirty measures on each of several hundred people or cities or whatever, how do you make sense of it? Wilkinson's algorithms measure such properties of a scatterplot as its texture, clumpiness, skewness, and four others I don't remember. You use these measures to find the most interesting scatterplots. He illustrated the system with a set of baseball statistics – many measurements made on each of several hundred major-league baseball players. The scatterplot with the most outliers was stolen bases versus age. Stolen bases generally decline with age but there are many outliers. Although a vast number of statistical procedures assume normal distributions, Wilkinson's tools revealed normality to be a kind of outlier. In the baseball dataset, only one scatterplot had both variables normally distributed: height versus weight. These tools may eventually be available with [7]R.

1. <http://flyvbjerg.plan.aau.dk/>
2. <http://flyvbjerg.plan.aau.dk/Publications2006/TRAFFIC111PRINTTRANSPREV.pdf>
3. <http://flyvbjerg.plan.aau.dk/Publications2006/TRAFFIC111PRINTTRANSPREV.pdf>
4. [http://en.wikipedia.org/wiki/Optimism\\_bias](http://en.wikipedia.org/wiki/Optimism_bias)
5. <http://flyvbjerg.plan.aau.dk/Publications2006/0604FIVEMISPUBL2006.pdf>
6. <http://www.spss.com/research/wilkinson/>
7. <http://www.r-project.org/>

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### More Reason to Crazy-Spice (2006-10-24 21:48)

Spices are good for you, I [1]blogged, because they are high in antioxidants. A [2]new study, done in Singapore with elderly subjects, supports this conclusion. It found that curry-eaters do better than others on a mental test. The abstract:

Curcumin, from the curry spice turmeric, has been shown to possess potent antioxidant and antiinflammatory properties and to reduce  $\beta$ -amyloid and plaque burden in experimental studies, but epidemiologic evidence is lacking. The authors investigated the association between usual curry consumption level and cognitive function in elderly Asians. In a population-based cohort (n = 1,010) of nondemented elderly Asian subjects aged 60-93 years in 2003, the authors compared Mini-Mental State Examination (MMSE) scores for three categories of regular curry consumption, taking into account known sociodemographic, health, and behavioral correlates of MMSE performance. Those who consumed curry "occasionally" and "often or very often" had significantly better MMSE scores than did subjects who "never or rarely" consumed curry. The authors reported tentative evidence of better cognitive performance from curry consumption in nondemented elderly Asians, which should be confirmed in future studies.

Tze-Pin Ng, Peak-Chiang Chiam, Theresa Lee, Hong-Choon Chua, Leslie Lim and Ee-Heok Kua. Curry Consumption and Cognitive Function in the Elderly. *American Journal of Epidemiology* 2006 164(9):898-906

1. <http://www.blog.sethroberts.net/2006/07/10/spices-lots-of-antioxidants/>
2. <http://aje.oxfordjournals.org/cgi/content/abstract/164/9/898?etoc>

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### **The Trouble With Rigor (2006-10-29 23:48)**

This is an easy question: When writing down numbers, when is it bad to be precise? Answer: When you exceed the precision to which the numbers were measured. If a number was measured with a standard error of 5 (say), don't record it as 150.323.

But this, apparently, is a hard question: When planning an experiment, when is it bad to be rigorous? Answer: When the effort involved is better used elsewhere. I recently came across the following description of a weekend conference for obesity researchers (December 2006, funded by National Institute of Diabetes & Digestive & Kidney Diseases):

Obesity is a serious condition that is associated with and believed to cause much morbidity, reduced quality of life, and decreased longevity. . . . Currently available treatments are only modestly efficacious and rigorously evaluating new (and in some cases existing) treatments for obesity are clearly in order. Conducting such evaluations to the highest standards and so that they are maximally informative requires an understanding of best methods for the conduct of randomized clinical trials in general and how they can be tailored to the specific needs of obesity research in particular. . . . We will offer a two-day meeting in which leading obesity researchers and methodologists convene to discuss best practices for randomized clinical trials in obesity.

"Rigorously evaluating new treatments"? How about evaluating them at all? Evaluation of new treatments (such as new diets) is already so difficult that it almost never occurs; here is a conference about how to make such evaluations more difficult.

This mistake happens in other areas, too, of course. Two research psychiatrists have [1]complained that misguided requirements for rigor have had a very bad effect on finding new treatments for bipolar disorder.

1. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=12482471&query\\_hl=2&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=12482471&query_hl=2&itool=pubmed_docsum)

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## 1.7 November

### Amazon Rank: The Poor Man's BookScan (2006-11-01 20:39)

Calling all authors!

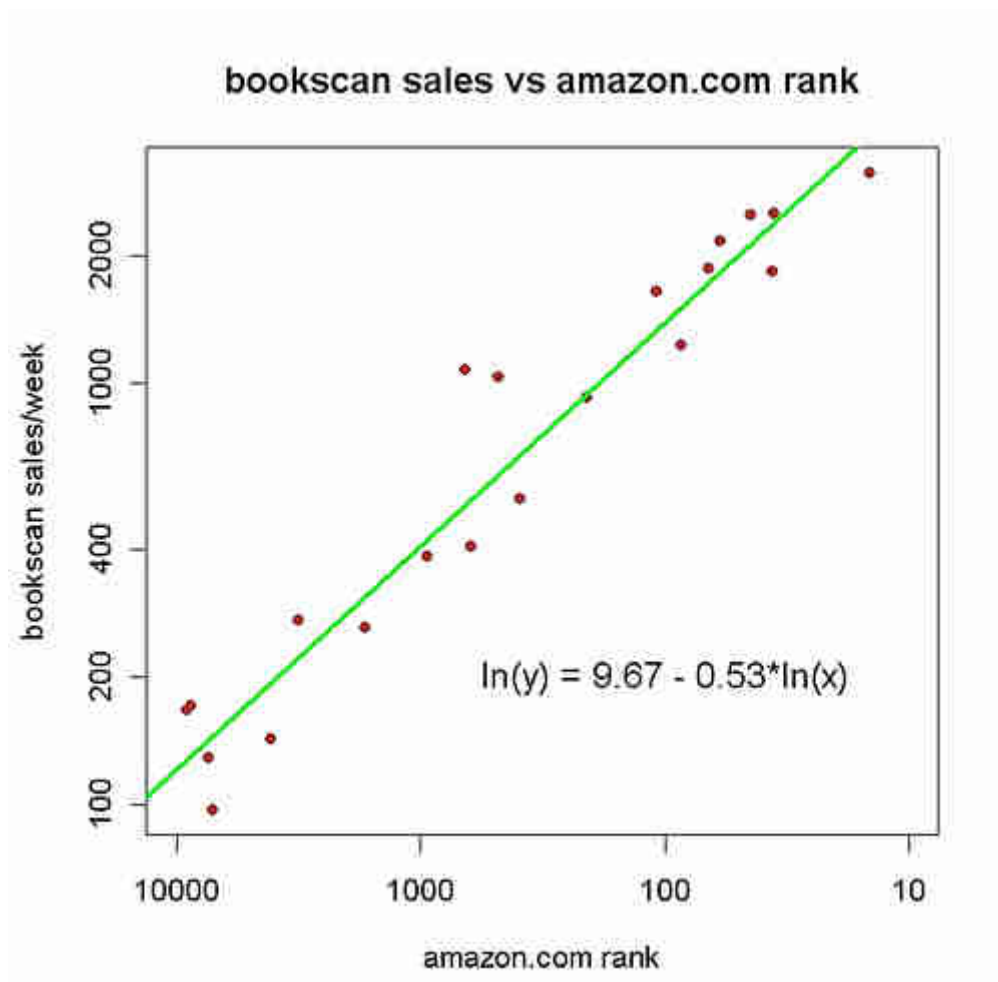
If you have written a book, you have probably wondered: What's the connection between amazon rank and number of books sold? Well, wonder no more. Below is a graph based on The Shangri-La Diet. The copies-sold information is from Nielsen BookScan. Their [1]website says:

Most of the nation's major retailers for books are included in our panel of reporting book outlets: Borders and Walden, Barnes & Noble Inc., Barnes & Noble.com, Deseret Book Company, Hastings, Books-A-Million, Tower Music and Books, Follett College stores, Buy.com and Amazon.com. Weekly sales information is also tracked from Mass merchandisers like Target, Kmart and Costco, along with smaller retail chains and hundreds of general independent bookstores.

The graph shows that the relationship between books sold and amazon rank is linear on a log-log scale (as so many things are – the physicist Per Bak wrote a whole [2]book about such relationships). Each point is a different week. To illustrate the formula of the line,

$\ln(\text{copies sold/week}) = 9.67 - 0.53 * \ln(\text{amazon rank}),$

the amazon rank of Send In The Idiots: Stories From the Other Side of Autism by Kamran Nazeer, a masterpiece about the adult lives of autistic children, is now 35,758. Predicted sales is 61 books/week.



1. <http://www.bookscan.com/>
2. [http://www.weyrich.com/book\\_reviews/how\\_nature\\_works.html](http://www.weyrich.com/book_reviews/how_nature_works.html)

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Ben Hyde (2009-10-27 07:04:26)

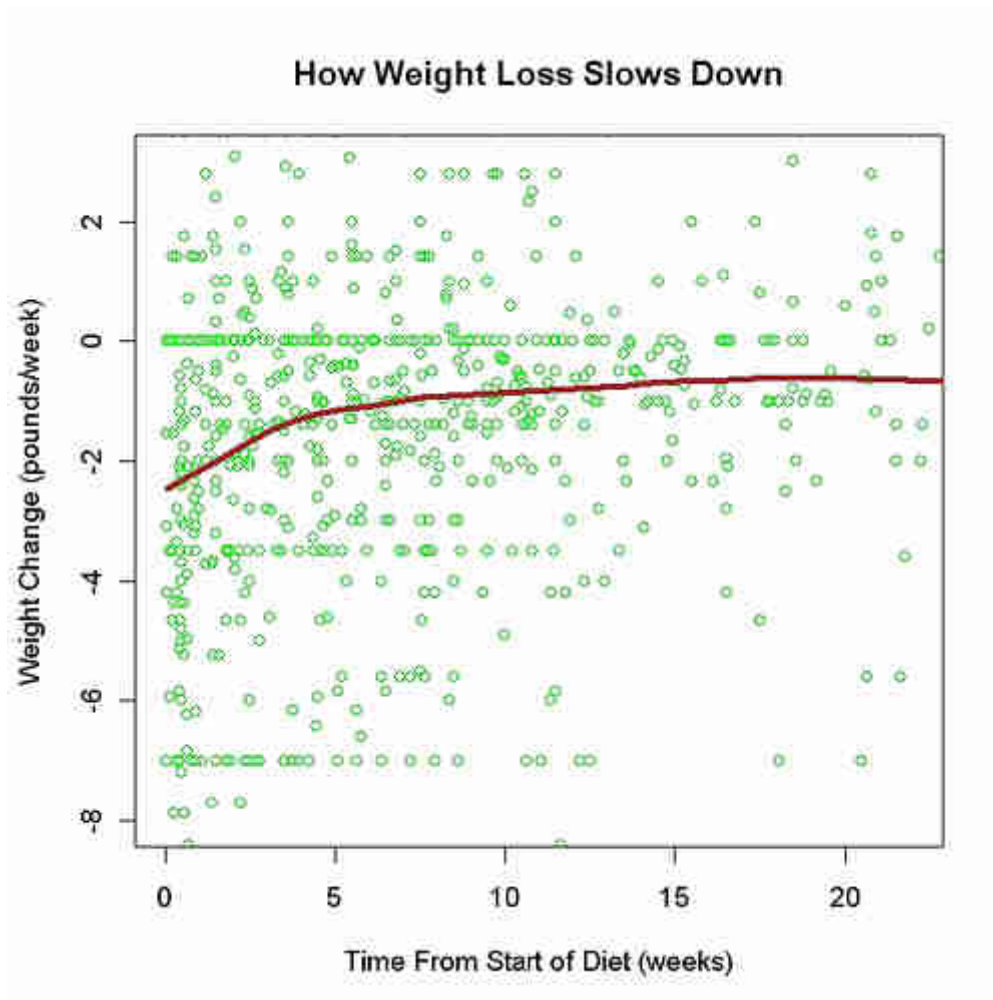
Sweet. To first order I see how this works. But. The total volume of sales must have tremendous seasonal variation. e.g. I'm flux'd that a rank of 100 in late November would sell the same number as the a rank of 100 in late January. I wonder if that might explain some portion of the variance? So I predict many of the points below the line are in quiet seasons and those above are in the holiday season. Coming at it from the other direction, I wonder if you can use your data to discover in what months diet books move. I bet people rarely give diet books as christmas presents :).

### How Well Does the Shangri-La Diet Work? (part 2) (2006-11-05 20:38)

The Post Your Tracking Data Here section of the SLD forums now contains lots of data. In addition to the weight-vs.time graphs on the [1]home page and in the [2]forums, I have now analyzed this data in other ways. The graphs below (based on data up to November 2) show how the rate of weight loss varies with (a) time on the diet and (b) weight.

For each person reporting weights, I computed a rate of weight loss for every interval in their data. For example, if someone reported her weight at three different times, then there are two intervals: from Time 1 to Time 2, and from Time 2 to Time 3. For each interval I computed a rate of weight change. The scatterplots below are based on 820 intervals. Each point is a different interval.

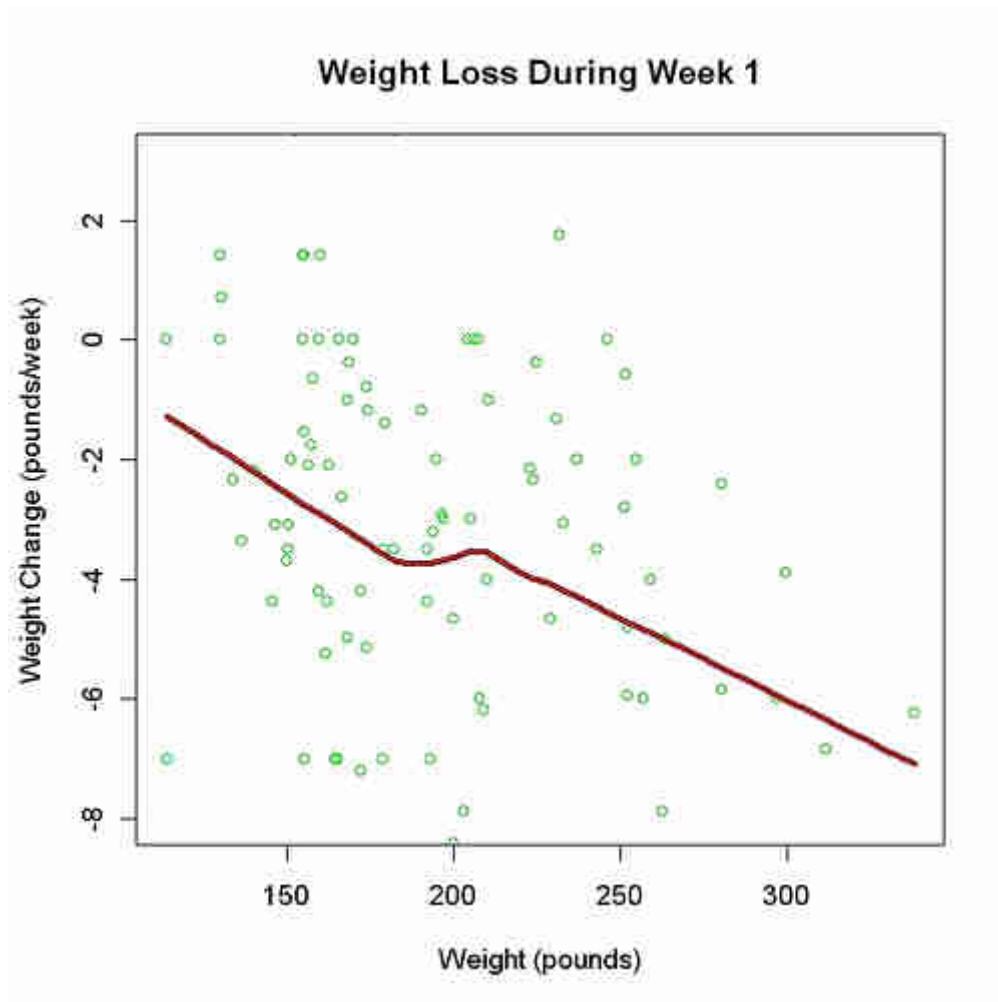
The first graph shows how the rate of weight change varied with how long you have been doing the diet.

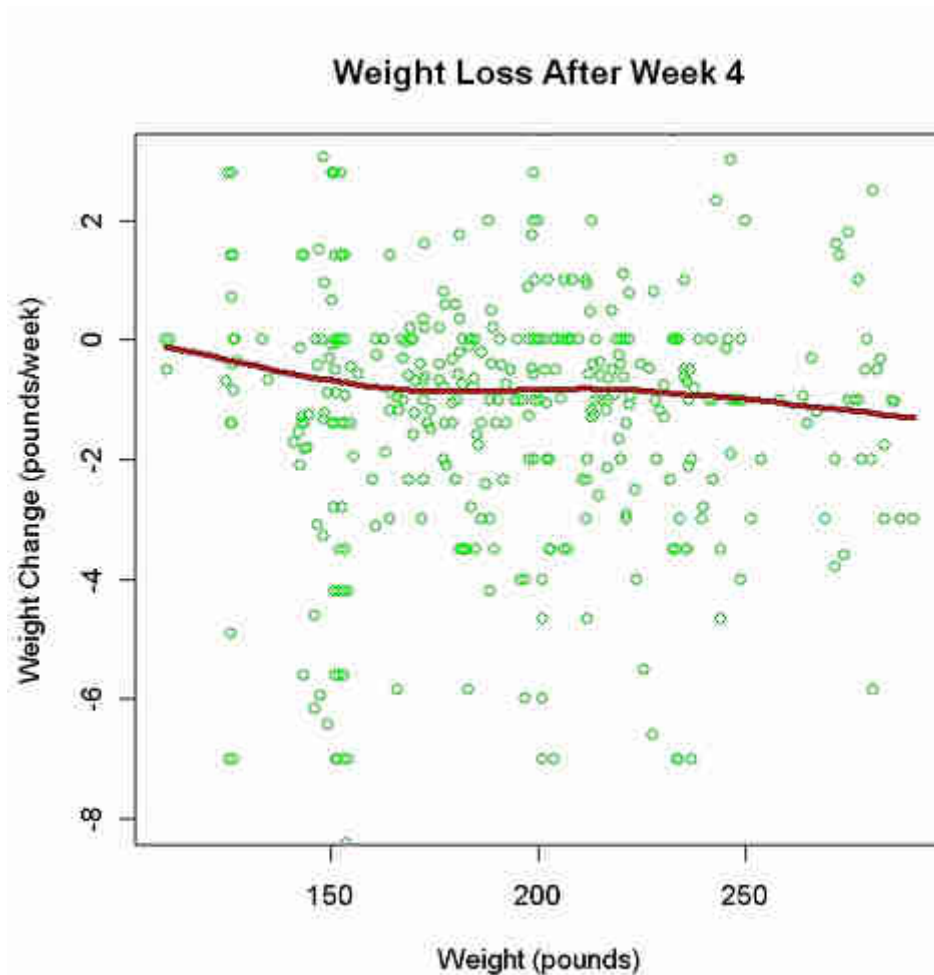


This shows that average weight loss slowed down from about 2.2 pounds/week to about 1 pound/week during the first few weeks and didn't change much after that.

Another obvious factor that might affect weight-loss rate is weight: Perhaps people who weigh more lose faster. Because rate of weight loss changes during the first few weeks, I looked at this question two ways: using only data for Week 1 on the diet (early loss); and using only data after 4 weeks on the diet (later loss).







The top graph (early loss) shows that during Week 1, your weight has a big effect on your rate of weight loss. People who weigh more lose faster. The bottom graph (later loss) shows that after 4 weeks, your weight has much less effect on how fast you lose.

My explanation: During the first week or so of SLD, most of the weight loss is not fat or water but the food in your digestive system. Because the diet has reduced your appetite, you are eating less each day. But the speed (inches/day) at which food travels through your digestive system does not change; so relatively full digestive system is slowly replaced by a relatively empty one. After this replacement – which takes about one week – is complete, further weight loss is all due to loss of fat. You comfortably lose fat at the rate at which your set point goes down. The long-term rate of weight loss is about 1 pound/week because the set point is going down about 1 pound/week.

Data analyses like these have never been published for any weight-loss method. Not that they're sophisticated or clever or surprising – they're not. Given (a) the amount of damage caused by obesity and (b) the amount of money spent on health research (2006 NIH budget: \$28 billion), it's quite a gap. Possibly related to the misguidedness I discussed [3]last week.

1. <http://www.blog.sethroberts.net/www.sethroberts.net>

2. <http://boards.sethroberts.net/index.php?topic=3068.msg26113#msg26113>

3. <http://www.blog.sethroberts.net/2006/10/29/the-trouble-with-rigor/>

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Ethesis (2006-11-07 06:01:04)

I think that most diets don't work long enough to create data sets like this.

Eliezer Yudkowsky (2009-03-28 03:21:06)

The "last week" link is currently broken.

seth (2009-03-28 04:01:17)

Thanks, Eliezer. I fixed it.

### **More Evidence That Fat Is Not Bad For You (2006-11-07 16:03)**

In the most recent issue of American Journal of Epidemiology (15 November 2006) is an article about whether there is a connection between dietary fat and breast cancer. They found no connection. Part of the [1]abstract:

Dietary fat in midlife has not been associated with breast cancer risk in most studies, but few have followed women beyond one decade. The authors examined the relation of dietary fat, assessed by repeated questionnaires, to incidence of postmenopausal breast cancer in a cohort of 80,375 US women (3,537 new cases) prospectively followed for 20 years between 1980 and 2000. The multivariable relative risk for an increment of 5 % of energy from total dietary fat intake was 0.98 (95 % confidence interval: 0.95, 1.00). Additionally, specific types of fat were not associated with an increased risk of breast cancer.

Reference: Dietary Fat and Risk of Postmenopausal Breast Cancer in a 20-year Follow-up. Esther H. J. Kim, Walter C. Willett, Graham A. Colditz, Susan E. Hankinson, Meir J. Stampfer, David J. Hunter, Bernard Rosner, and Michelle D. Holmes. Am. J. Epidemiol. 2006 164: 990-997.

1. <http://aje.oxfordjournals.org/cgi/content/abstract/164/10/990?etoc>

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### **Grass-Fed Beef, the Shangri-La Diet, and the Future of Food (2006-11-09 16:15)**

A recent Slate [1]article compared beef from different sources. "We sampled rib-eye steaks from the best suppliers I could find. The meat was judged on flavor, juiciness, and tenderness and then assigned an overall preference."

The winner: grass-fed beef, which was also the least expensive ( \$22/pound). The highly-convincing tasting notes:

Never have I witnessed a piece of meat so move grown men (and women). Every taster but one instantly proclaimed the grass-fed steak the winner, commending it for its "beautiful," "fabu," and "extra juicy" flavor (that "bursts out on every bite." The lone holdout, who preferred the Niman Ranch steak, agreed that this steak tasted the best, but found it a tad chewy.

The grass-fed beef was probably the highest in omega-3, by the way. What the writer found wrong with grass-fed beef was lack of consistency:

One grass-fed rancher I spoke to refused to send me any steak for this article because, he said, it sometimes tastes like salmon. Restaurants and supermarkets don't like grass-fed beef because like all slow food, grass-fed beef producers can't guarantee consistency-it won't look and taste exactly the same every time you buy it.

From the standpoint of the Shangri-La Diet, of course, variable flavor is a plus – a big one. I expect a similar result with other foods – the more variable foods taste better. As any engineer knows, the less you have to worry about keeping a variable (such as flavor) constant, the more you can do to maximize it.

Thanks to Clyde Adams for the link.

1. <http://slate.com/id/2152674/>

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losing-it (2006-12-09 16:58:37)

I'll bet the umami of an A5 cut of Kobe steak rives the set point way up there...unless umami is a variable taste, too...  
<http://en.wikipedia.org/wiki/Umami>

### **Tea, Wine, and Chocolate: A Puzzle (2006-11-11 07:32)**

Last night I went to the opening of the lovely [1]Teance store on Fourth Street (Berkeley). Teance specializes in Asian teas, with some Indian teas as well. They used to be elsewhere in Berkeley, but their lease ran out. At the new location, they replace a gift shop, which makes sense: Fourth Street is foodifying. Teance fits well with the other upscale food stores in the area, such as the Pasta Shop.

But enough about small business. At the opening, someone from a local tea appreciation society gave a brief talk. Two things he said made me think. One was: "We drink tea for fun. The health benefits are just a bonus." The other was a comparison of tea and wine. Tea is now where wine was thirty years ago. Since then there has been a vast increase in wine appreciation. "Thirty years ago if it was a special occasion you drank a bottle of Blue Nun. Now every kid on a skateboard knows the difference between merlot and cabernet sauvignon."

Wine has health benefits, of course. A few weeks ago I went to a little tour/talk/demonstration at [2]Charles Chocolates in Emeryville, where a few of the fine points of making chocolates (the candies, not the raw ingredient) were explained. Chocolate, too, has health benefits, as the makers of [3]Cocoavia will be happy to explain. (Charles Chocolates has partnered with Teance to produce a line of tea-flavored chocolates, which were served at the opening.)

Three foods with intense connoisseurship action, three foods with substantial health benefits:

1. Wine

2. Tea

### 3. Chocolate

A coincidence? Or meaningful? Will cheese turn out to have health benefits? As a general rule, connoisseurship and health are unrelated: That hand-painted Italian flatware is no better for you than K-Mart's finest (at least before the partnership with Martha Stewart, who called their customers "K-Martians".)

I became interested in connoisseurship because of [4]my interest in human evolution. Connoisseurship evolved, I believe, because it supported high-end craftsmanship. Skilled craftspeople were the main source of technological innovation. Connoisseurs happily pay more for high-end, carefully-made stuff. The tea spokesman was right: We drink it for fun.

1. <http://www.teance.com/>
2. <http://www.charleschocolates.com/>
3. <http://www.cocoavia.com/>
4. <http://www.freakonomics.com/pdf/whatdostudentswant.pdf>

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### Tea, Wine, Chocolate – and Coffee (2006-11-12 22:00)

[1]Jacob Grier, who works in a coffee shop, has written to say that coffee deserves to be on my list of connoisseur-type foods with health benefits (previous entries: tea, wine, and chocolate). For the health benefits of coffee, read [2]this and [3]this. Thanks, Jacob. In Berkeley, Peets (coffee) and Scharfenberger (chocolate) have created several products together. Let's see: Peets and Scharfenberger, Teance and Charles Chocolates . . . the wine/chocolate category seems underpopulated. By eerie coincidence, today I watched an episode of Weeds (Season 1, Episode 3) in which the heroine goes to a cannabis club (dispensing medical marijuana) where she learns about fancy grades of marijuana she never knew existed.

1. <http://www.jacobgrier.com/blog/>
2. <http://www.timesonline.co.uk/printFriendly/0,,1-57-409126,00.html>
3. <http://www.webmd.com/content/article/129/117277.htm>

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Jeff Winkler (2007-11-29 19:50:22)

Chowhound has done a fantastic set of interviews that they call Obsessives. See my blog post at <http://jeffwinkler.net/2007/11/02/obsessive-food-videos-from-chowhound/> . They cover coffee, tea, and other things like bread.

## CIA Fun Facts (2006-11-14 22:45)

Tonight, at a panel discussion at UC Berkeley that was part of The New Yorker College Tour, I learned two things about Central Intelligence Agency headquarters in Langley, Virginia:

1. There are scales in the bathrooms (according to Lawrence Wright).
2. There is a gift shop that sells CIA golf balls and the like. By the register is a notice: "If you are a covert operative, don't use your credit card" (according to Jeffrey Goldberg).

The big shock, however, was neither of these. It was, as Hilary Goldstine pointed out, that there were almost no undergraduates in the audience. Which speaks volumes about UC Berkeley. It was a great discussion. Jane Mayer was the third discussant and Orville Schell the moderator.

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CharlesMerriam (2006-11-27 01:45:53)

Could you clarify the line "almost no undergraduates there"? Do you mean at the talk? No B.S. degrees at the CIA?

seth (2006-11-27 05:03:17)

By "almost no undergraduates there" I meant at the talk.

## Crazy-Spicing 3.0: Fava Bean Crostini (2006-11-21 02:52)

Here is another way – in addition to ELOO, refined walnut oil, other flavorless oils, sugar water, nose-clipped smoothies, crazy-spiced smoothies, and nose-clipped food in general – to get "SLD calories" – by which I mean food that raises your set point much less than usual. I love this dish.

How to make crazy-spiced fava bean crostini:

1. Soak dried fava beans for 12-24 hours. I make about 1 pound at a time. One pound of beans makes about 6 servings.
2. Skin the beans. I make a small tear along the rim of the bean and then push the inside out. Takes a few seconds per bean. Discard the skins.
3. Cook the beans. I put them in a crockpot on high for 3 hours covered in water but any cooking method is okay.
4. Mash the beans, adding finely chopped onion and your favorite oil. I usually use flaxseed oil. The onion is for texture. At this point I have several meals worth. I store it in the refrigerator.
5. Slice a ciabatta-like bread into long thin pieces. Toast.
6. Add random spices to the beans. I use 4 or 5 Penzey's spice blends. If the beans have been refrigerated I

warm them in the microwave before this step.

7. Spread the bean mixture on the toast.

8. Add an interesting topping, which can be almost anything. I have used tomatoes, cooked mushrooms, and chopped arugula.

Background. Crazy spicing means adding randomly-chosen spices (say, 10-20) to your food so that the flavor is unrecognizable. The theory behind the Shangri-La Diet predicts that this will cause weight loss. No flavor recognition = no set point increase = lower set point = weight loss. The closest thing to a test of this prediction – making the flavor of food less recognizable will cause weight loss – was an experiment done by Alan Hirsch, a Chicago neurologist. A few hundred people sprinkled flavor crystals on all of their food for six months – one flavor for savory foods, another for sweet. The flavor crystals changed once a month. The subjects lost a substantial amount of weight.

The problem with adding random spices to ordinary food is the feeling of loss – “Alas, my beloved X.” Crazy Spicing 2.0 – crazy-spiced smoothies – solved this problem by putting the spices in a homemade smoothie, which does not have an expected taste (so no feeling of loss) and can also be made to taste good in ways that do not involve flavor recognition (sweet, salty, creamy, cooling, and thirst-quenching). Smoothies, however, do not look like ordinary food nor are they crunchy and chewy – something I’ve noticed I especially want now that I eat less. The fava bean crostini look fine – I had something similar at Chez Panisse – and have a great texture. They are wonderfully crunchy and chewy. Toppings can make the texture even better.

Notes. 1. I have tried less expensive, less glamorous beans just once; the texture was less appealing. It is not far from hummus (garbanzo bean paste), however. I have not tried garbanzo beans. 2. Add the spices once per meal. Each meal a new set of spices, in other words. If you add the spices just once and then eat the result many times, it becomes a ditto food. 3. Beans have a low glycemic index, another good feature of this dish. 4. To make it more nutritious, you can add protein powder or almost anything else you would add to a smoothie. It already has lots of fiber. 5. This is something I make far in advance. Make it on Sunday, eat for the rest of the week, for example. The only lengthy step – skinning the beans – I actually enjoy. 6. Why do I love this dish? Because of the full-bodied crunchiness and chewiness. Because it looks as good as restaurant food. Because the toppings allow room for creativity. Because once I have made a batch, it takes just a few minutes to make a meal’s worth (toasting the bread is the most time-consuming part). Because I’ve always liked fava beans.

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### **Ranjit Chandra Update (2006-11-23 12:51)**

If you have been following [1]the strange case of Dr. Ranjit Chandra, you may be interested to know:

1. He has sued the CBC (Canadian Broadcasting Corporation) because of [2]a documentary they ran last year titled “The Secret Life of Dr. Chandra”. A lawyer for the CBC told me last week the lawsuit is at a very early stage.

2. A [3]paper about Dr. Chandra’s research by Saul Sternberg and me has been accepted by Nutrition Journal, an

open-source journal. Our third and final paper on the subject.

The [4]Wikipedia entry for Chandra has a good summary of the story so far.

1. <http://www.sethroberts.net/#chandra>
2. <http://www.cbc.ca/national/news/chandra/>
3. <http://www.nutritionj.com/content/5/1/30>
4. [http://en.wikipedia.org/wiki/Ranjit\\_Chandra](http://en.wikipedia.org/wiki/Ranjit_Chandra)

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### **Brian Wansink on Research Design (2006-11-26 08:04)**

An experiment in which people eat soup from a bottomless bowl? Classic! Or mythological: American Sisyphus. It really happened. It was done by [1]Brian Wansink, a professor of marketing and nutritional science in the Department of Applied Economics and Management at Cornell University, and author of the superb new book [2]Mindless Eating: Why We Eat More Than We Think (which the CBC has called "the Freakonomics of food"). The goal of the bottomless-soup-bowl experiment was to learn about what causes people to stop eating. One group got a normal bowl of tomato soup; the other group got a bowl endlessly and invisibly refilled. The group with the bottomless bowl ate two-thirds more than the group with the normal bowl. The conclusion is that the amount of food in front of us has a big effect on how much we eat.

There are many academic departments (called statistics departments) that study the question of what to do with your data after you collect it. There is not even one department anywhere that studies the question of what data to collect – which is much more important, as every scientist knows. To do my little bit to remedy this curious and unfortunate imbalance, I have decided to ask the best scientists I know about research design. My interview with Brian Wansink (below) is the first in what I hope will be a series.

SR: Tell me something you've learned about research design.

BW: When I was a graduate student [at the Stanford Business School], I would jog on the school track. One day on the track I met a professor who had recently gotten tenure. He had only published three articles (maybe he had 700 in the pipeline), so his getting tenure surprised me. I asked him: What's the secret? What was so great about those three papers? His answer was two words: "Cool data." Ever since then I've tried to collect cool data. Not attitude surveys, which are really common in my area. Cool data is not always the easiest data to collect but it is data that gets buzz, that people talk about.

SR: What makes data cool?

BW: It's data where people do something. Like take more M & Ms on the way out of a study. All the stuff in the press about psychology – none of it deals with attitude change. Automaticity is seldom a rating, that's why it caught on. It's how long they looked at something or how fast they walked. That's why I've been biased toward field studies. You lose control sometimes in field studies compared to lab studies, but the loss is worth it.

The popcorn study is an example. We found that people ate more popcorn when we gave them bigger buckets. I'd originally done all that in a lab. So that's great, that's enough to get it published. But it's not enough to



make people go "hey, that's cool." I found a movie theatre that would let me do it. It became expensive because we needed to buy a lot of buckets of popcorn. Once you find out it happens in real theatres, people go "cool." You can't publish it in great journal because you can't get 300 covariates; we published it in slightly less prestigious journal but it had much greater impact than a little lab study would have had.

One thing we found in that study was that there was an effect of bucket size regardless of how people rated the popcorn. Even people who hated the taste ate more with the bigger bucket. We asked people what they thought of the popcorn. We took the half of the people who hated the popcorn the most – even they showed the effect. But there was range restriction – the average rating in that group was only 5.0 on a 1-9 scale – not in the "sucky" category. Then we used old popcorn. The results were really dramatic. It worked with 5-day-old popcorn. It worked with 14-day-old popcorn – that way I could say "sitting out for 2 weeks." That study caught a lot of attention. The media found it interesting. I didn't publish the 5-day-old popcorn study.

I'm a big believer in cool data. The design goal is: How far can we possibly push it so that it makes it a vivid point? Most academics push it just far enough to get it published. I try to push it beyond that to make it much more vivid. That's what [Stanley] Milgram did with his experiments. First, he showed obedience to authority in the lab. Then he stripped away a whole lot of things to show how extreme it was. He took away lab coats, the college campus. That's what made it so powerful.

SR: A good friend of mine, Saul Sternberg, went to graduate school with Milgram. They had a clinical psychology class together. The professor was constantly criticizing rat experiments. This was the 1950s. He said that rats were robot-like, not a good model for humans. One day Milgram and my friend brought a shoebox to class. In the box was a rat. They put the box on the seminar table and opened it, leaving the rat on the table. The rat sniffed around very cautiously. Cautious and curious, much more like a person than like a robot. It was a brilliant demonstration. My friend thinks of Milgram's obedience experiments as more like demonstrations than experiments. But you are right, they are experiments consciously altered to be like demonstrations. Those experiments were incredibly influential, of course – it supports your point.

BW: When we first did the soup bowl studies, we refilled the soup bowls so that we gave people larger and smaller portions than they thought had. We heated the soup up for them but gave them 25 % more to see if they would eat more than they thought. You could put that in an okay journal. The bottomless soup bowl would be more cool. Cool data is harder to get published and it's much more of a hassle to collect the data, but it creates incredible loyalty among grad students, because they think they are doing something more exciting. It's more of a military operation than if they are just collecting some little pencil-and-paper thing in the lab. It makes research more of an adventure.

Another thing: field experiments are difficult. There's a general tendency in research to be really underpowered with things [that is, to not have enough subjects]. Let's say you're doing the popcorn bucket study. Is the effect [of bucket size] going to come out? Rather than having too many cells and not get significance, it's a good idea to have fewer cells – replace a manipulated variable with one or two measured variables. For example, instead of doing a two-by-two between-subjects design we might have a design when one factor is measured rather than manipulated. If the measured factor doesn't come out you haven't lost anything; you still have all the power. With the popcorn study we knew the study would work with the big bucket [that is, we knew there would be an effect of bucket size] but we didn't know if there would be an effect of bucket size if we gave them [both good corn and] bad corn [thereby doing a two-by-two study] and only 200 people showed up [leaving only 50 people per cell]. So when we did the field study for the first time, we gave them all popcorn 5 days old. We measured their taste preference for popcorn then used it as a crossing variable. We used scores on that measure to divide the subjects into two groups.

SR: Let's stop here. This is great stuff.

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Most of the [3]VCP-310 professionals advice against [4]PMI-001 and suggest going for [5]EX0-101 instead, proceeding to [6]CCIE-LAB finally.

1. [http://aem.cornell.edu/faculty\\_content/wansink.htm](http://aem.cornell.edu/faculty_content/wansink.htm)
2. <http://mindlesseating.org/>
3. <http://www.testking-questions.com/exam/VCP-310.htm>
4. <http://www.testking-questions.com/exam/PMI-001.htm>
5. <http://www.testking-questions.com/exam/EX0-101.htm>
6. <http://www.testking-questions.com/exam/CCIE-LAB.htm>

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### The Wisdom of Experts: John Chambers on Research Design (2006-11-30 06:53)

John Chambers, a retired Bell Labs statistician and one of the persons most responsible for [1]R, the free open-source data analysis package I use, told me an interesting story yesterday. AT &T used to make microchips. The "yield" of chips – the percent of chips that were defect-free – was very important. Chambers and other Bell Labs statisticians were asked to help the chip makers improve their manufacturing process by increasing the yield. At the chip factory, the people Chambers and his colleagues spoke to were chemists and engineers. They wanted to do experiments that varied voltage, temperature, and similar variables. Chambers and his colleagues had a hunch that the operator – the person running the fabrication machines – was important, and this turned out to be true.

I like this story because it has a wisdom-of-crowds-but-not-exactly twist: the supposed experts at one thing (data analysis) turned out to have useful (and unpredictable) knowledge about something else. We don't think of statisticians as experts in human behavior but in this case they were at least more expert than the chemists and engineers. I mean: who were the experts here? And when we deal with someone, which is more likely: We overestimate how much they can help us with our problem? Or we underestimate (as in this story, where the chip makers underestimated the statisticians)? And if we have no idea which it is, how might we find out?

I told Chambers that statisticians were hurt by the name of their department: statistics. It puts them in too-small a box. John Tukey's term data analysis (in place of statistics) was an improvement, yes, but only a bit; it would be a lot better if they were called how-to-do-research departments. Yes, Chambers said, that would be an improvement.

I am fascinated by the similarity between three things:

1. Data analysis. Much of data analysis consists of putting data together in a way that allows you to extract a little bit of information from each datum. These little piece of information, added together, can be quite informative. A scatterplot, for example.
2. [2]Wisdom-of-crowds phenomena. For example, many people guess the weight of a cow. The average of their guesses is remarkably accurate, even though the variation in guesses is large.
3. Self-experimentation. The new and interesting feature of [3]my self-experimentation was that it involved my everyday life. From activities I was going to do anyway (such as eat and sleep), I managed to extract useful information.

In each case it's like extracting gold from seawater: You get something of value from what seemed useless. Are there other examples? How can we find new examples? Chamber's story suggests one direction: Making some small change so that you learn from your co-workers about stuff you wouldn't think they could teach you about.

1. <http://www.r-project.org/>
2. [http://en.wikipedia.org/wiki/The\\_Wisdom\\_of\\_Crowds](http://en.wikipedia.org/wiki/The_Wisdom_of_Crowds)
3. <http://repositories.cdlib.org/postprints/117/>

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### **Philip Weiss Appreciation (2006-11-30 15:06)**

Philip Weiss, a writer for the [1]New York Observer, has a [2]blog (as I have [3]mentioned). [4]Today's post is a good example of why I like his work so much.

1. <http://www.newyorkobserver.com/>
2. <http://mondoweiss.observer.com/>
3. <http://www.blog.sethroberts.net/2006/07/26/brain-food-part-4-measuring-balance/>
4. <http://mondoweiss.observer.com/2006/11/the-pressure-on-the-timesvery-tolstoyan.html>

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## **1.8 December**

### **On Scientific Method (2006-12-01 08:05)**

When I visited George Mason University recently, I asked Tyler Cowen, "What's the secret of a successful blog?" Cowen and Tabarrok's [1]Marginal Revolution is the most successful blog I know of.

His answer: "Three elements: 1. Expertise. 2. Regularity. 3. Recurring characters, like a TV show." By regularity he meant at least 5 times/week.

I saw I had considerable room for improvement. Since then, I've tried to post at least twice/week. With this post I am adding scientific method to the subtitle, which I hope makes me appear more expert. A Berkeley philosophy professor named Paul Feyerabend wrote a book that I thought is called On Method but that I see is actually called Against Method. He was at Berkeley when I arrived. I remember two things about him: 1. He gave all his students A's. 2. He ate at Chez Panisse every night.

1. <http://www.marginalrevolution.com/>

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tom s. (2006-12-03 09:08:14)

I never met Feyerabend, although he did lecture at Sussex before I got there. His book is wonderfully provocative. One slight correction - although he lectured at Berkeley, he also lectured at many other places. See his Wikipedia entry for some biography: [http://en.wikipedia.org/wiki/Paul\\_Feyerabend](http://en.wikipedia.org/wiki/Paul_Feyerabend)

AaronSw (2006-12-20 12:55:29)

The blog Crooked Timber has had some interesting discussions about Feyerabend.

### **More Weight-Loss Data from the Shangri-La Diet Forums (2006-12-04 07:28)**

Here are more graphs of the data in the Post Your Tracking Data Here section of the Shangri-La Diet forums. An overall summary of that data is:

Persons posting data for at least 1 week: 92

Total weeks of data: 930

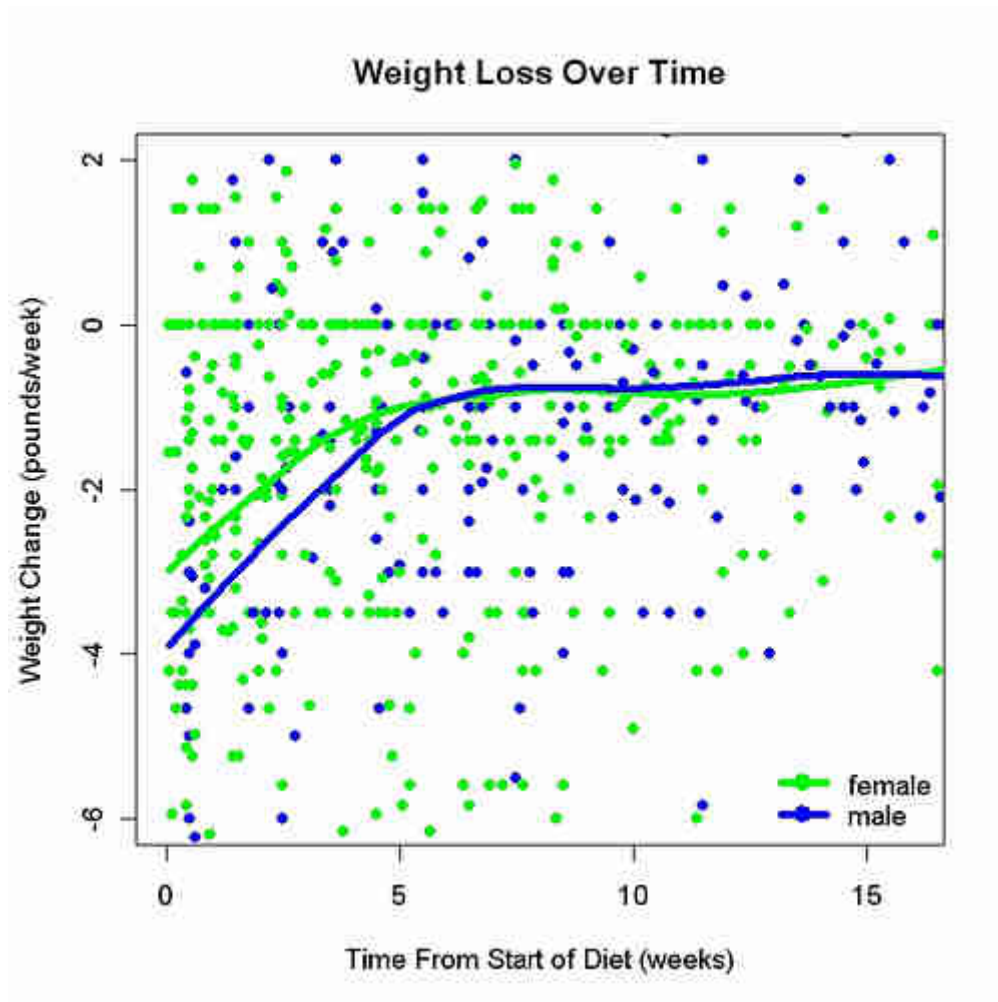
Persons posting data for at least 4 weeks: 57

Persons posting data for at least 12 weeks: 31

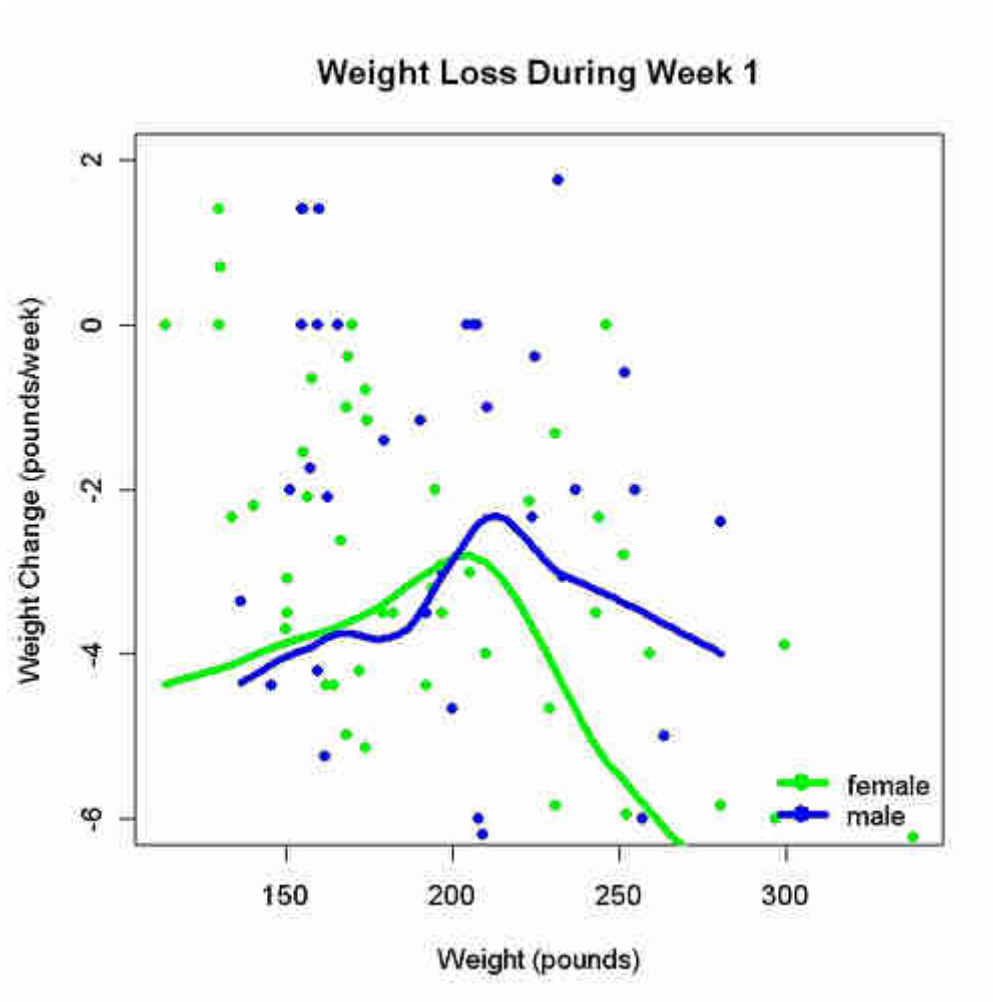
Total weight change (lb): -985

Average rate of change (lb/week): -1.1

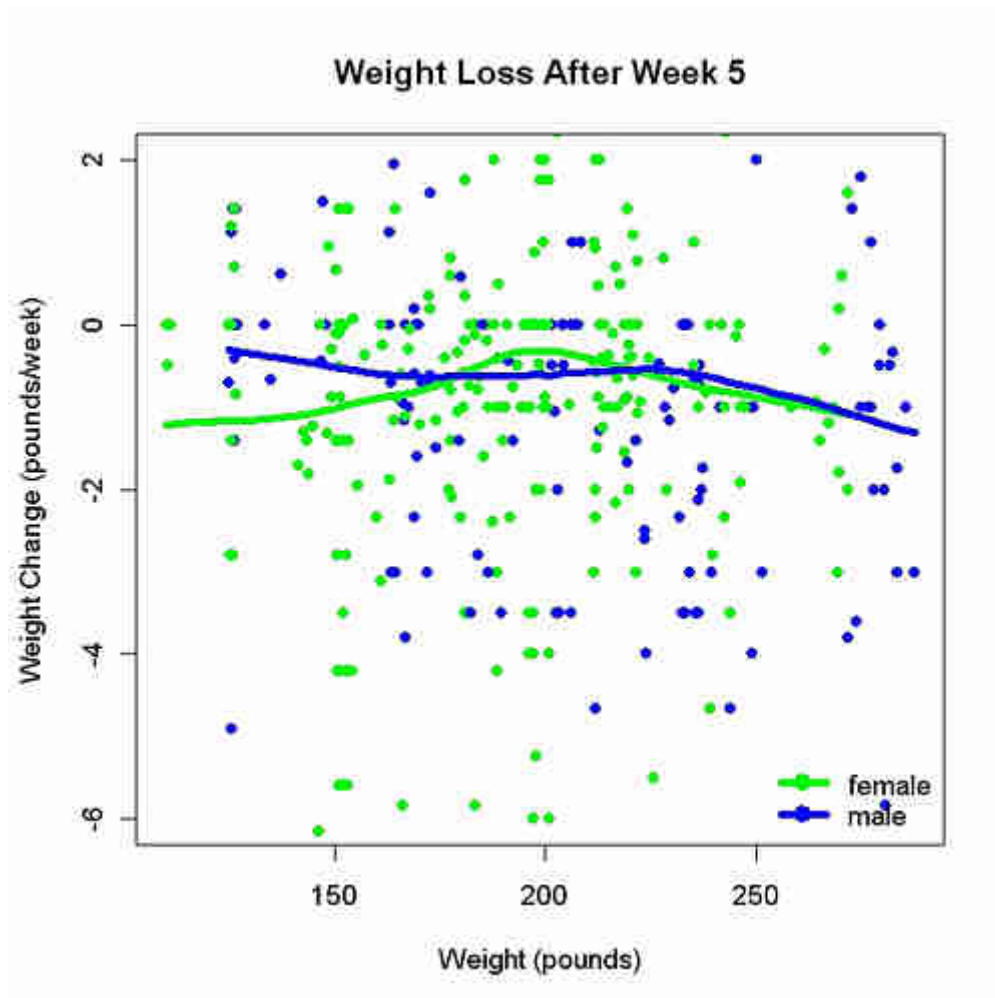
The graphs below show analyses similar to those I have done previously now divided by sex.



Weight loss slows down during the first five weeks of the diet. After that it is about one pound per week. In the beginning men lose weight more quickly than women but this difference disappears after five weeks or so.



During the first week of the diet, weight loss depends on how much you weigh: The more you weigh the more you lose, at least if you weigh more than 200 pounds. This graph compares men and women equating for weight – and when that is done there is no clear difference. The male/female difference seen in the first graph may be entirely due to weight differences: Men weigh more than women.



After Week 5 there is little difference between the sexes and little difference between people of different weights.

For easy comparison with earlier analyses see [1]my Flickr page

The results support the popular idea that men lose weight more easily than women but also argue that this may be because men weigh more than women.

1. <http://www.flickr.com/photos/86225480@N00/?saved=1>

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David (2008-04-22 07:18:12)

Seth, Do you have any data, especially average weight loss data on other weight loss programs and diet pills?

seth (2008-04-22 15:05:25)

No I don't.

## The Truth Is Out There (2006-12-04 16:59)

I was very pleased to read [1]this on the [2]Shangri-La Diet forums:

Hi everyone! My name is Cindy. I'd learned of this in quite the ironic way. Killing time on YOUTHINK.com, I came across the question, "Would you ever try the Shangri-La Diet?" Having never heard of it before, I decided to google it. 5 hours later, I was sold. The recurring thing I kept reading in blogs, reviews, etc, was amazement that this actually worked.

That is a limitation of the [3]statistics I posted today: They don't express amazement.

1. <http://boards.sethroberts.net/index.php?topic=3404.msg30625#msg30625>
  2. <http://boards.sethroberts.net/index.php?action=collapse;c=1;sa=collapse;#1>
  3. <http://www.blog.sethroberts.net/2006/12/04/more-weight-loss-data-from-the-shangri-la-diet-forums/>
- 

## The Invisible Made Visible (2006-12-05 07:06)

An artist, UC Santa Cruz professor of art history [1]Mary Holmes would say, is someone who makes the invisible visible. Does that make the Internet an artist? These examples of the invisible made visible impress me:

1. [2]Security footage of a man stealing two chairs. (Thanks to [3]HuntGrunt.)
2. [4]Tracking data at the Shangri-La Diet forums reveal what weight loss is like for other people.

I think the other extreme – the very visible made extremely visible – is also art. Here is an example: [5]David Caruso one-liners. Too funny not to be art.

1. [http://www.maryholmesbook.com/about\\_1.html](http://www.maryholmesbook.com/about_1.html)
2. <http://www.youtube.com/watch?v=Zyg4Rj1M3rU&mode=related&search=>



3. <http://huntgrunt.blogspot.com/>
4. <http://www.blog.sethroberts.net/2006/12/04/more-weight-loss-data-from-the-shangri-la-diet-forums/>
5. [http://www.youtube.com/watch?v=\\_sarYH0z948](http://www.youtube.com/watch?v=_sarYH0z948)

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losing-it (2006-12-09 15:27:07)

You might enjoy reading about an interactive art/internet experiment done by Japanese artist, Katsuhiko Hibino, where participants were invited to step beyond themselves. And the work of artist, Noriyuki Tanaka (who joined Hibino in that experiment). Also, you may enjoy the Renga interactive art project conceived of by artists Toshihiro Anzai and Rieko Nakamura. Professor of School of Letters, Arts and Sciences at Waseda University, Machiko Kusahara's paper, ON ORIGINALITY AND JAPANESE CULTURE, Historical Perspective of Art and Technology: Japanese Culture Revived in Digital Era was reprinted by permission in Volume 5, Issue 1, Spring-Summer 2005 in the World Haiku Review: [http://www.worldhaikureview.org/5-1/whcj/essay\\_kusahara.htm](http://www.worldhaikureview.org/5-1/whcj/essay_kusahara.htm)

### **American Haiku (2006-12-06 08:29)**

The American version of haiku, I submit, is a [1]Priceless ad. My contributions:

The Shangri-La Diet: \$15 (including shipping)  
bottle of grapeseed oil: \$6  
additional groceries each month: - \$200  
not worrying where your next Yodel is coming from: priceless

Note to SLD dieters: The reference to grapeseed oil dates this. I now drink refined walnut oil and flaxseed oil (nose-clipped).

smaller pants: \$60  
blush I use as excuse for better-looking skin: \$8  
blood test for improved lipids: \$80  
migraine-free TOM: priceless

Short blog posts are a little like haiku.

Update (7 Dec 06): [2]funny coincidence.

1. <http://www.priceless.com/>
2. [http://blog.juliaallison.com/2006/12/back\\_from\\_vacation.html](http://blog.juliaallison.com/2006/12/back_from_vacation.html)

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guaif1 (2006-12-06 12:33:45)

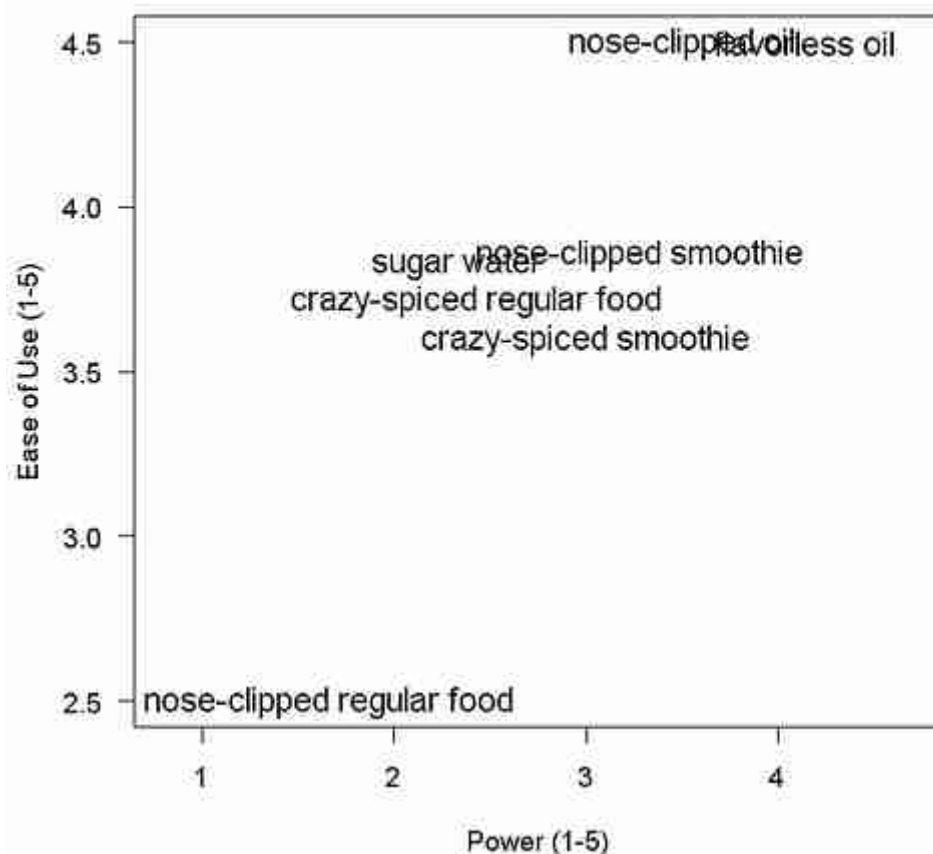
Flax Seed Oil Actually Increases Prostate Cancer While Fish Oil Decreases It [http://www.mercola.com/2004/jul/21/flax\\_seed\\_oil.htm](http://www.mercola.com/2004/jul/21/flax_seed_oil.htm)

losing-it (2006-12-08 20:01:28)

Technically, the 2 "American Ad-ku" are a tad more closely related to "zappai" :^D the dog overweight and the cat, tooâ€" I go on a diet 2 much fun... losing-it

### Varieties of Shangri-La Diet Experience (2006-12-07 08:43)

The theory behind the Shangri-La Diet suggests several new ways of losing weight. As far as I can tell, they all work at least some of the time. To get an overview of the new methods, I asked users to rate them on power and ease of use. (Thanks to [1]Brian Wansink for this suggestion.) Here are the average ratings (so far):



The two scales were defined as follows:

Power

- 5 = very powerful
- 4 = quite powerful
- 3 = somewhat powerful
- 2 = slightly powerful
- 1 = not powerful at all

Ease of Use

- 5 = very easy/convenient
- 4 = quite easy/convenient
- 3 = easy enough
- 2 = quite difficult
- 1 = too difficult to ever do

The cluster in the top corner consists of "flavorless oil" and "nose-clipped oil".

I like to think this little diagram predicts the future of SLD: lots of people drinking flavorless oil, lots of people drinking nose-clipped oil, fewer people drinking sugar water, etc. A friend of mine showed me a photo of her when she was 2 years old. Another 2-year-old was in the picture but I could tell which one was my friend.

I collected the data [2]by Web. Maybe I should have used [3][www.surveymonkey.com](http://www.surveymonkey.com) (as my students have) but it was incredibly easy compared to other data-collection methods.

1. [http://aem.cornell.edu/faculty\\_content/wansink.htm](http://aem.cornell.edu/faculty_content/wansink.htm)
2. <http://boards.sethroberts.net/index.php?topic=3338.msg30183#msg30183>
3. <http://www.surveymonkey.com/>

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### Science Versus Human Nature (2006-12-08 04:48)

Last weekend I saw the writer [1]Thomas Cahill on [2]Book TV. He mentioned his book [3]*How The Irish Saved Civilization*. The real contribution of the Irish, he said, wasn't that they saved the sacred texts, it was that they brought humor to their study. "They brought irreverence to reverence," he said. "That was entirely new."

This reminded me of [4]Brian Wansink's comments about [5]cool data. His notion that research designs should be judged on their coolness was entirely new to me. I'm not the only one; the Wikipedia entry for [6]scientific method says nothing about it. Using cool and research design in the same sentence is quite a bit like bringing irreverence to reverence. Once somebody says it, though, it makes sense. I remember being thanked after an interview; I replied that there's no point doing the research if no one ever learns about it. Coolness obviously plays into that - influences the chance that other people will learn about it.

I think most scientists will agree with Wansink, that coolness matters. I think you don't find his idea in books and articles about scientific method not only because there is so little written about research design (at least compared to the amount written about data analysis) but also because it appears undignified. "I'm important, I shouldn't have to worry about being cool" is the (very human) unspoken attitude.

1. <http://www.randomhouse.com/features/cahill/>
2. <http://www.booktv.org/>
3. <http://www.amazon.com/Irish-Saved-Civilization-Hinges-History/dp/0385418493>
4. [http://aem.cornell.edu/faculty\\_content/wansink.htm](http://aem.cornell.edu/faculty_content/wansink.htm)
5. <http://www.blog.sethroberts.net/2006/11/26/brian-wansink-on-research-design/>
6. [http://en.wikipedia.org/wiki/Scientific\\_method](http://en.wikipedia.org/wiki/Scientific_method)

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Andrew (2006-12-10 17:48:18)

Hi, Seth. This seems to contradict something you told me over 10 years ago when we were talking about psychology teaching. We were discussing in-class experiments and you were saying they weren't so great. I mentioned some classic examples (for example, the "United Nations" demonstration of anchoring (see page 88 of this article: <http://www.stat.columbia.edu/gelman/research/published/smiley11.pdf>), and you replied that, yes, these demos are "cool," but students don't really see the point of them. Your take on things was that students are more interested in things that are useful (in their sphere of interests, which include studying, grades, friendships, and relationships) but not so interested in the things we think are "cool," such as cognitive illusions. Regarding your last point above about coolness: well, yeah, one of the good things about cool is that it's available to people of low status.

## **Books Were the First Open-Source Software (2006-12-09 06:30)**

Here is [1]Aaron Swartz on Wikipedia:

When you put it all together, the story becomes clear: an outsider makes one edit to add a chunk of information [to a Wikipedia entry], then insiders make several edits tweaking and reformatting it. In addition, insiders rack up thousands of edits doing things like changing the name of a category across the entire site – the kind of thing only insiders deeply care about. As a result, insiders account for the vast majority of the edits. But it's the outsiders who provide nearly all of the content.

(Correcting Wikipedia's founder, by the way.) When I visited my editor, Marian Lizzi, at Penguin, I realized that book publishing is exactly the same: Outsiders write the books, insiders edit them.

The curious thing about book publishing is similar to what Swartz noticed in a different realm: The content, the crucial stuff, is entirely from amateurs. No other industry, with the possible exception of craft shows, is like this. If I run a deli, I buy supplies and food from people who make their living selling supplies and food. If I make clothes, I buy my cloth from professional cloth makers. If I make cheese, my milk comes from professional farmers. Only book

publishers endlessly deal with amateurs.

[2]continued

1. <http://www.aaronsw.com/weblog/whowriteswikipedia>

2. [http://www.huffingtonpost.com/seth-roberts/books-were-the-first-open\\_b\\_35844.html](http://www.huffingtonpost.com/seth-roberts/books-were-the-first-open_b_35844.html)

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Andrew (2006-12-10 17:56:25)

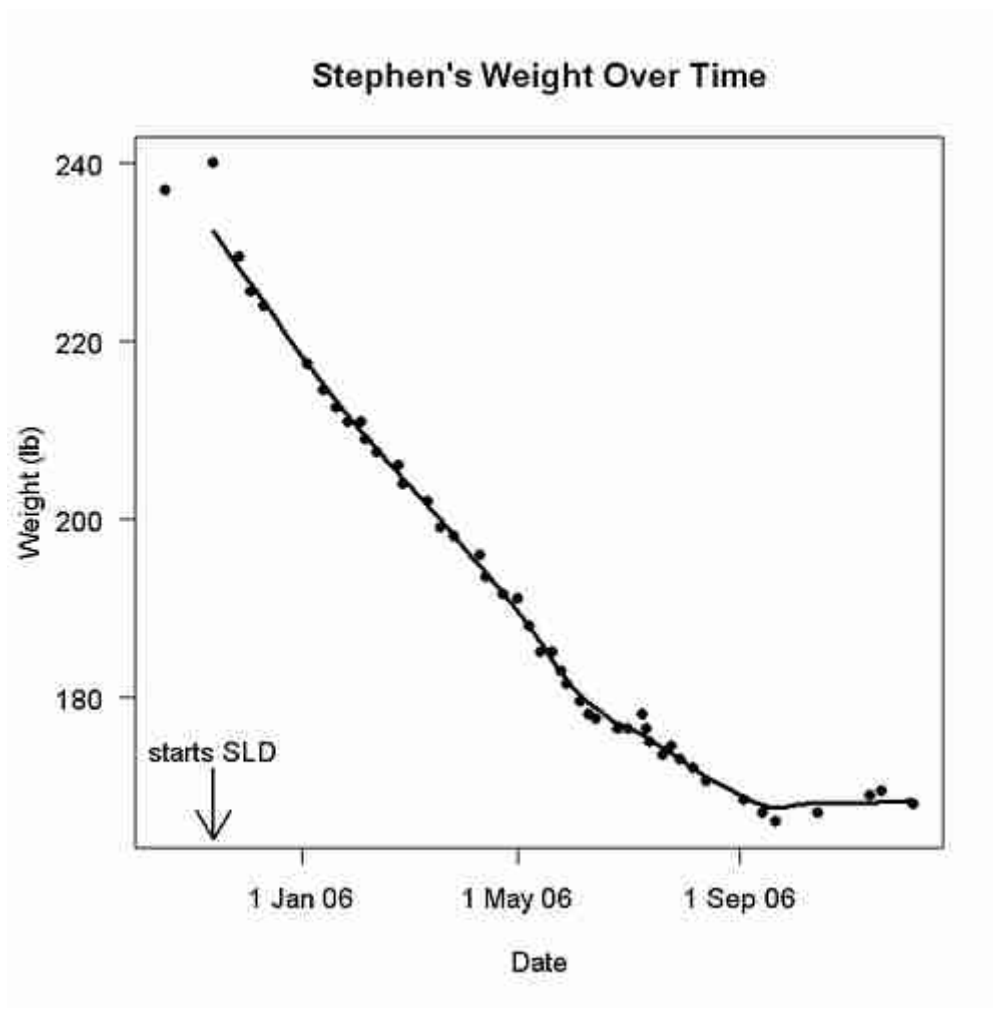
Seth, I know what you're saying, but when it comes to writing, we're the professionals and it's the book (and journal) editors who are amateurs. As an author of 3 books and a zillion articles, I actually think I have a lot more experience than these editors. I call it the pinch-hitter syndrome; see here: [http://www.stat.columbia.edu/cook/movabletype/archives/2005/01/the\\_pinchhitter.html](http://www.stat.columbia.edu/cook/movabletype/archives/2005/01/the_pinchhitter.html) P.S. I was going to leave a comment at the other site until I found out that to register I had to give them my household income. I mean, I could've just made something up, but I object to the concept of having to reply to such a question. Especially in a discussion of open-source software! Perhaps you could use your influence to do something about this...

seth (2006-12-21 16:28:15)

"When it comes to writing, we're the professionals and it's the book (and journal) editors who are amateurs." Journal articles and trade books are different. In the case of journal articles, I sort of agree with you – we are professionals (because that's basically what professors at research universities are paid to do – write journal articles). The journal editors are not amateurs – they make their living doing it – but they often have less experience than the authors. In the case of trade books, almost no one makes a living writing them. Whereas book editors do make a living doing their job. I guess it's possible for a professor to have more trade-book experience than his or her editor, but it's hard to imagine. Take Deborah Tannen. University professor, lots of trade books (five?). But surely she has a very experienced editor, commensurate with her great sales.

### **Stephen Marsh on the Shangri-La Diet (2006-12-12 11:20)**

For the paperback edition of The Shangri-La Diet, I made a graph of [1]Stephen Marsh's progress this morning. Here it is:



Stephen sent me a fax of pages from his notebook. It was thrilling to type the dates and weights into my computer. Here was someone slowly returning to health. Eventually the rest of the world would find out about it.

[2]More about his progress.

1. <http://ethesis.blogspot.com/>

2. <http://boards.sethroberts.net/index.php?topic=188.0>

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Ethesis (2006-12-12 20:22:59)

I can only say it was a return to life, not just health.

BenekeMethod (2006-12-12 23:34:39)

It's heartening to see such dramatic weight loss and return to life and health. It's now 7 years and 42 days since I started actively applying Seth's theory, and I can report that I've lost 30 pounds and kept it off for more than 6 years; 70 pounds for 2 years 8 months; and 90 pounds for a year and a half. I'm currently 95 pounds lighter than I was on November 1, 1999, going from 280 to 185. I've gotten rid of high blood pressure, high cholesterol, and incipient diabetes. I sleep an hour and a half less each night, have a huge amount more energy and enjoy having a body a lot more than I once do. I also enjoy life more. So I'm in debt to Seth's ability to grasp some deep truths about biological and psychological reality, particularly about the relationship

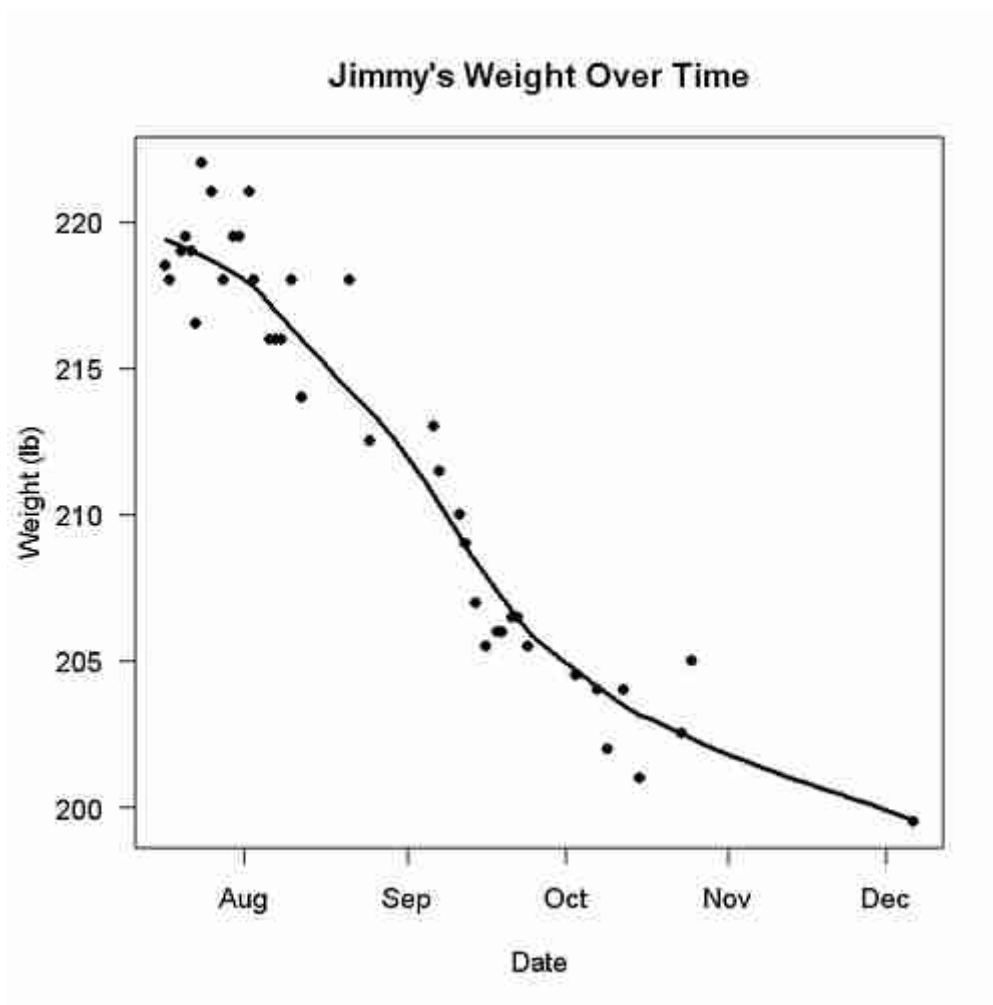
between taste and hunger, and his willingness to share what he learned. I hope and expect that within a few years, what he figured out will be widely recognized and applied... Cheers, Tim Beneke

Stephen M (Ethesis) (2008-07-04 08:48:02)

BenekeMethod – now that this might get revived with the link I have to say that your story really inspired me and gave me hope. I'm currently around 180. I'd adjusted my weight up a little, but it has slipped down some. I've got a cushion I keep because I've known to many people who slipped in to anorexia and for other reasons, but I had the same feelings: **I've gotten rid of high blood pressure, high cholesterol, and incipient diabetes. I sleep an hour and a half less each night, have a huge amount more energy and enjoy having a body a lot more than I once do. I also enjoy life more. So I'm in debt to Seth's ability to grasp some deep truths about biological and psychological reality, particularly about the relationship between taste and hunger, and his willingness to share what he learned. I hope and expect that within a few years, what he figured out will be widely recognized and applied**! Thank you Tim, for having been there when I needed an example.

### **Jimmy Berenson on the Shangri-La Diet (2006-12-13 10:19)**

When Catherine Johnson, co-author of *Animals In Translation*, saw *The Shangri-La Diet* in a bookstore, she remembered the [1]Freakonomics column about me. Her 19-year-old son Jimmy Berenson is autistic. Because of his autism, he takes a drug that causes weight gain. Over the last few years, it made him obese. In July 2006, Catherine started him on SLD (first 1, then 2 tablespoons of ELOO/day). Here is what happened:



Seeing is believing: One of Catherine's neighbors was skeptical about SLD, even when told of Jimmy's results. Only when she saw Jimmy's results, as graphed by Catherine, did she decide to try it. There is more information at Catherine's [2]blog.

Thanks to [3]Andrew Gelman for his comments on this graph.

1. <http://www.nytimes.com/2005/09/11/magazine/11FREAK.html?ei=5070&en=885eba950a1a7544&ex=1133154000&pagewanted=all>
2. <http://kitchentablemath.blogspot.com/>
3. <http://www.stat.columbia.edu/~gelman/blog/>

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Catherine Johnson (2006-12-14 14:11:51)  
wow! That's beautiful!



Catherine Johnson (2006-12-14 14:30:53)

The other terrific aspect of Shangri-La is that we're managing to stick with it through the holidays and winter months. It's as difficult to "diet" another person as it is to diet yourself, perhaps more so. At various points over the years of Jimmy's weight gain we've tried to put him on a calorie reduction diet and keep him on it. Always, we've failed. The winter months sap our energy and motivation, and we found ourselves getting sloppy with the ELOO, forgetting on weekends, seeing the return of nighttime eating .... When Jimmy's weight loss leveled off we feared the worst. But we were able to muster the energy & conviction to adapt. That would not have happened with a more complicated regimen. We fiddled with the ELOO doses, switched to sugar water, dumped the sugar water & returned to ELOO....all this while operating on reduced-battery strength. Shangri-La is a forgiving regime. Jimmy's still losing!

## Secrets of a Successful Blog (part 2) (2006-12-20 10:28)

[1]Aaron Swartz is an excellent software developer (co-founder of [2]reddit), a creative and interesting [3]writer, and a successful [4]blogger, judging by number of comments. I asked him what makes a blog successful. Three things, he said:

1. Persistence. Readership builds over time.

2. Frequency. The more often, the better. It is pure operant conditioning (although Aaron, a fan of anti-behaviorist [5]Alfie Kohn, did not use that term): When people check your blog and find new content they are rewarded, and keep checking. If they check and find nothing new, they stop checking. Although Aaron uses an [6]aggregator (which does the checking), only about 15 % of blog readers do so, he said. (I use Sage, a Firefox add-on.) Aaron posts every day or so.

3. A distinct voice. When people visit your blog they should know what to expect. When he started he blogged about all sorts of things but has become more consistent from one entry to the next.

Part 1 ([7]Marginal Revolution co-author Tyler Cowan's view) is [8]here, with comments [9]here.

1. <http://www.aaronsw.com/>

2. <http://reddit.com/>

3. <http://www.aaronsw.com/weblog/whowriteswikipedia>

4. <http://www.aaronsw.com/weblog/>

5. <http://www.alfiekohn.org/index.html>

6. [http://en.wikipedia.org/wiki/News\\_aggregator](http://en.wikipedia.org/wiki/News_aggregator)

7. <http://www.marginalrevolution.com/>

8. <http://www.blog.sethroberts.net/2006/12/01/on-scientific-method/>

9. [http://www.marginalrevolution.com/marginalrevolution/2006/12/whats\\_the\\_secre.html](http://www.marginalrevolution.com/marginalrevolution/2006/12/whats_the_secre.html)

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AaronSw (2006-12-20 12:49:23)

[1]This January 2005 Pew study says that 27 % of Internet readers say they use blogs but only 5 % of them say they use RSS

readers.

1. [http://www.pewinternet.org/pdfs/PIP\\_bloggin\\_data.pdf](http://www.pewinternet.org/pdfs/PIP_bloggin_data.pdf)

## Web Trials (2006-12-21 08:32)

Thanks to Rey Arbolay, at the [1]Shangri-La Diet forums, the eternal question "will this help?" is being answered in a new way. The specific question is "will the Shangri-La Diet help me lose weight?" The new way of answering it is that people are posting their results with the diet in the Post Your Tracking Data Here section of the forums. What they post is standardized and numerical enough that ordinary statistical methods can be used to learn from them. I'll call this sort of thing a web trial.

It's a lot better than nothing or a series of individual cases studied separately. I learned a lot from [2]my most recent analysis – for example, that people lose at a rate of about 1 pound per week after Week 5. I couldn't have done a good job of predicting where any of the fitted lines on the scatterplots would be or the size of the male/female difference. Nor could I have done a good job predicting the variability – the scatter around the lines.

It's a lot worse than perfection. It would be much better if a comparison treatment (in the case of SLD, a different way of losing weight) was being tested in the same way. Then results from the two treatments could be compared and you would be closer to answering the practical question "what should I do?" (That modern clinical trials – very difficult and expensive – still use placebo control groups although placebos are not serious treatment options is a sign of . . . something not good.)

I can imagine a future in which people with a health problem (acne, insomnia, etc.) go to a website and enroll in a web trial. They told about several plausible treatments: A, B, C, etc., all readily available. They are given a choice of (a) choosing among them or (b) being randomly assigned. They post their results in a standardized format for a few weeks or months. Then someone with data analysis skills analyzes the data and posts the results. As for the participants, if the problem hasn't been solved they could enroll again. This would be a way that anyone with a problem could help everyone with that problem, including themselves. The people who set up the trials and analyze the results would be like the [3]book industry or [4]Wikipedia insiders – people with special skills who help everyone learn from everyone.

1. <http://boards.shangriladiet.com/>

2. <http://www.blog.sethroberts.net/2006/12/04/more-weight-loss-data-from-the-shangri-la-diet-forums/>

3. [http://www.huffingtonpost.com/seth-roberts/books-were-the-first-open\\_b\\_35844.html](http://www.huffingtonpost.com/seth-roberts/books-were-the-first-open_b_35844.html)[http://www.huffingtonpost.com/seth-roberts/books-were-the-first-open\\_b\\_35844.html](http://www.huffingtonpost.com/seth-roberts/books-were-the-first-open_b_35844.html)

4. <http://www.aaronsw.com/weblog/whowriteswikipedia>

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Andrew Sidwell (2007-01-14 06:48:26)

Why does this have to be in the future? I'm interested in self-experimentation and I'm also a programmer... I'd be happy to work with people to put together a website where this could happen. This could happen soon rather than later.

Mary (2007-02-03 11:51:56)  
This is very interesting site...

## Why I Like Self-Experimentation (2006-12-23 13:07)

Self-experimentation, like blogs, Wikipedia, and open-source software (and before them, [1]books) gives outsiders far more power. This took me a long time to figure out. For years, I liked [2]self-experimentation for five reasons:

1. It worked. It [3]reduced my acne, improved my sleep, and enabled me to lose plenty of weight. This surprised me. I am a professional scientist. My professional experiments, about animal learning, generally worked, but never had practical value.
2. It had unexpected benefits. I discovered accidentally that seeing faces in the morning improved my mood the next day. Better sleep (from self-experimentation) improved my health.
3. It was easy. What I did never involved more than small changes in my life. Even standing 8 hours per day wasn't hard, after a few days.
4. My conclusions fit what others had found – usually, facts that didn't fit mainstream views. For example, the fact that depression is often worst in the morning and gets better throughout the day doesn't fit the conventional view that depression is a biochemical disorder but does fit my idea that depression is often due to a [4]malfunctioning circadian oscillator. Self-experimentation seemed to be pointing me in correct directions.
5. My conclusions were surprising. That breakfast is bad (for sleep), the effect of faces on mood, and the [5]Shangri-La Diet are examples.

Recently, though, the rise of blogging, Wikipedia, and open-source software, showed me the power of a kind of multiplicative force: (pleasure of hobbies) multiplied by (professional skills). Blogging, for example: (people enjoy writing) multiplied by (professional expertise, which gives them something interesting and unusual to say). In other words, expertise and job skills used in a hobby-like way. My self-experimentation, I realized, was another example: I used my professional (scientific) skills to solve everyday problems. My self-experimentation was like a hobby in that I did it year after year without financial reward or recognition. It was its own reward. The hobby aspect – persistence, freedom to try anything, no need for recognition or payment – made it powerful. I could go in depth where professionals couldn't go at all.

But I was still missing something – something obvious to many others. The power of blogging isn't

(hobby) x (job skills).

That's just one person. The total power of blogging is

(hobby) x (job skills) x (anyone can do it)

Which is very powerful. Finally I saw there was a sixth reason to like self-experimentation:

6. Anyone can do it.

As [6]Aaron Swartz has said, there are a lot more people than scientists. We will make a lot more progress if

everyone, not just scientists, can contribute. Mendel and Darwin were amateurs. The amateurs may rise again.

If you are interested in doing any self-experimentation, feel free to contact me for help. Also, let me know the results; I would like to publicize other people's self-experiments in this blog.

[also posted at [7]The Huffington Post]

1. [http://www.huffingtonpost.com/seth-roberts/books-were-the-first-open\\_b\\_35844.html](http://www.huffingtonpost.com/seth-roberts/books-were-the-first-open_b_35844.html)
2. <http://repositories.cdlib.org/postprints/117/>
3. <http://repositories.cdlib.org/postprints/405/>
4. <http://repositories.cdlib.org/postprints/117/>
5. <http://www.shangrladiet.com/>
6. <http://www.aaronsw.com/>
7. [http://www.huffingtonpost.com/seth-roberts/why-i-like-selfexperimen\\_b\\_37033.html](http://www.huffingtonpost.com/seth-roberts/why-i-like-selfexperimen_b_37033.html)

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## Christmas: An Evolutionary Explanation (2006-12-24 08:51)

In a kitchenware store a few years ago I came across the [1]Rotary Nutcracker, a futuristic-looking device that cracks nuts in a new way. The girl at the cash register gave me a few walnuts to test it. It didn't crack any of them. This was a curious product, I thought. Who would buy it? The salesperson told me that they'd stocked it for less than a year. I was the first person to test it. It had sold well during holiday season. Now I understood: people didn't buy it for themselves, they bought it as a gift. As a gift, it mattered much less how well it worked – "it's the thought that counts." No wonder I was the first to test it.

Here, I saw, was [2]my theory of human evolution in . . . well, a nutshell. At least part of it. Humans are the only animals with occupational specialization – we specialize, and trade. It started with hobbies. Hobbies became part-time jobs. Part-time jobs became full-time jobs. To support full-time jobs – to generate enough demand – there has to be enough expertise, which builds up slowly. To build up expertise, our brains changed so as to cause creation of special events like Christmas, Japanese New Year, Spring Festival (in China), and a thousand other examples around the world. Such events increase the demand for high-end craftsmanship, thus helping the most skilled craftsmen – the ones most likely to advance the state of their art – make a living. Christmas increases the demand for Christmas cards (fine printing) and Christmas-tree ornaments, for example. Traditional gift-giving has the same effect: It increases demand for "the better things in life." Most gifts, if you follow the usual norms, are (a) not something you would buy for yourself and (b) not something the recipient would buy. (As [3]Alex Tabarrok has noticed.) They are harder to make – and thus reward skilled craftsmen more – than the stuff we buy for ourselves, just as Christmas ornaments are harder to make than common household objects and Christmas-card printing is more difficult than most printing. Weddings, with the gifts, finery, invitations, etc., are another example. The Rotary Nutcracker didn't work in my tests but it almost worked. If enough people bought it as a gift, that would finance the research needed to improve it.

[4]Marginal Revolution and [5]James Surowiecki have recently written about the "deadweight loss of Christmas" – about how gifts tend to be worth less than their cost. I think they see this as bad thing but I see it as a good thing – at

least, in our evolutionary past it was a good thing. Likewise, the denizens of [6]The Devil Wears Prada appear slightly defensive about the social value of fashion. They seem to believe that fashion is less useful than "curing cancer" (by which they mean doing research to learn how to cure cancer). Actually, high fashion, with its hard-to-make skirts, belts, and accessories, is the same as curing cancer – they're two ways of increasing the human skill set. Art is the old Science.

1. <http://gadgets.qj.net/Nothing-Cracks-Your-Nuts-Like-The-Rotary-Nutcracker/pg/49/aid/61135>
2. [http://sethroberts.net/archives/How\\_Economics\\_Shaped\\_Human\\_Nature.ppt](http://sethroberts.net/archives/How_Economics_Shaped_Human_Nature.ppt)
3. [http://www.marginalrevolution.com/marginalrevolution/2006/12/giving\\_to\\_my\\_wi.html](http://www.marginalrevolution.com/marginalrevolution/2006/12/giving_to_my_wi.html)
4. [http://www.marginalrevolution.com/marginalrevolution/2006/12/worry\\_of\\_the\\_da.html](http://www.marginalrevolution.com/marginalrevolution/2006/12/worry_of_the_da.html)
5. [http://www.newyorker.com/talk/content/articles/061225ta\\_talk\\_surowiecki](http://www.newyorker.com/talk/content/articles/061225ta_talk_surowiecki)
6. <http://www.devilwearspradamovie.com/>

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Megan Hevron (2006-12-26 15:17:03)

I agree. A similar case is women having botox injections, which facilitates research in this area. Now it is used to help kids with cerebral palsy so they can walk. God bless those wax work dummies.

kathleen fasanella (2006-12-27 14:42:44)

Thanks for letting us off the hook Seth! My primary assertion of the value of my work in the fashion industry has always been supporting domestic manufacturing and job creation. Thanks to you, now I have another one. But just so you know, deep down, few of us will ever let ourselves believe you.

### Previously On/Next On Seth's Blog (2006-12-26 08:51)

Veronica Brown is a hot fashion designer, making a living off the virtual lingerie and formalwear she sells inside the online fantasy world Second Life.

This Washington Post [1]article about property rights in Second Life neatly combines the subjects of [2]my last post (fashion, etc., as engines of economic growth) and [3]my next post (harnessing the power of games).

1. <http://www.washingtonpost.com/wp-dyn/content/article/2006/12/25/AR2006122500635.html>
2. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>
3. <http://www.blog.sethroberts.net/2006/12/27/science-in-action-procrastination/>

A month ago I had lunch with [1]Greg Niemeyer, a professor of art at UC Berkeley whose medium is games. His games have appeared in [2]art galleries all over the world. He asked me if games had been studied by psychologists and pointed out some of their psychological properties – the power to make you concentrate for a long time, for example.

This was fascinating. He was so right – games are powerful in several ways. I wondered how that power could be (a) studied and (b) used. My first question was whether games could be a stimulant, like caffeine. I emailed Greg about this; he suggested I try Bejeweled and Sudoku. But I found them tiring – they require concentration. My next idea was that maybe I could use games as a reward. I used to enjoy Tetris and Freecell. If I do X (something I wouldn't otherwise do), then I get to play a game. This contingency causes me to do X. There are dozens of rewards you could use this way (listening to music, eating a piece of chocolate, etc.); the advantages of games include their number and variety, the care put into them, the lack of satiation (you can play the game many times and it remains pleasant), their harmlessness (if I avoided getting addicted), their low cost, the ready supply (you can play a computer game whenever you have a computer), and the short duration of some of them. The reward for a 5-minute task should not last 4 hours.

I have wondered for a long time about procrastination – what causes it, what to do about it. I like to think I've figured out [3]a few things but even so certain things I should do seem to go undone . . . well, forever.

For example, a month ago I had 40-odd emails in my inbox, some a few months old. I never got around to clearing it out. Bejeweled was no fun but [4]Sudoku (Easy level) was okay. I never played Sudoku for fun but it was slightly enjoyable. Maybe I could play a game of Sudoku as reward for answering email. If I made the requirement – the amount of email that I needed to answer – small enough, it might work.

It worked. When I made the requirement tiny – deal with 3 email (which might take 10 minutes) – that was small enough. And I was able to do it again and again: handle 3 email, play Sudoku, handle 3 email, play Sudoku, etc. Progress was slow – I spent more time playing Sudoku than dealing with email – but slow progress was far better than no progress. I was a little stunned it was actually working. After about 10 cycles (which took 3 or 4 hours), my inbox was as empty as I could make it. It hadn't been that empty in years. To gather some data about the whole process I wrote some R programs for recording what the task was, how long it took, etc.

Then I started spending all my time revising The Shangri-La Diet for the paperback edition. A few days ago I finished that. My inbox had gotten full again and again I used Sudoku to clear it out.

I want to learn more about this way of getting things done. Does it work with other chores besides email? Here is the kitchen table in my apartment:



It isn't usually this messy but it hasn't been completely clear for years. Can I use Sudoku to clear it off?

1. [http://www.berkeley.edu/news/berkeleyan/2006/02/08\\_games.shtml](http://www.berkeley.edu/news/berkeleyan/2006/02/08_games.shtml)
2. <http://art.berkeley.edu/niemeyer/bio.html>
3. [http://sethroberts.net/about/2005\\_diversityinlearning.pdf](http://sethroberts.net/about/2005_diversityinlearning.pdf)
4. <http://www.websudoku.com/>

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tlundeen (2006-12-27 12:28:54)

There are a couple of good books re procrastination, keeping current, etc. you might enjoy: Getting Things Done by David Allen, and Sink Reflections by Marla Cilley. I'm glad you're writing a blog!

tlundeen (2006-12-28 07:00:05)

I just saw this on <http://www.gradschoolstory.com/archives/95/how-to-get-started-on-anything> and had to add it - it will appeal to self-experimenters: From the blog post: I usually work on multiple projects at the same time, and whenever a new project comes along, I find it really difficult to actually get started. Once I've begun making progress, I'm able to move smoothly without any problems. It's the getting started that's really difficult, especially if it's something I'm not really interested in. At an intellectual level I know I have to get started, but I'm not able to summon up the motivation to begin. For the last few months, the most reliable technique I've found to help me get started is to take the work to a coffee shop and begin while sipping coffee. I've found that this allows me to get excited about whatever is in front of me at that time. My brain appears to misattribute the physiological response to coffee as excitement about whatever I'm working on at that time. Of course, once I've started on the project, I get into a state where I'm chugging along well after the coffee has worn off. The interesting thing is that the excitement remains.

## Science in Action: Procrastination (results) (2006-12-28 14:38)

[1]It worked. [2]This became:



The clearing took about 40 minutes of work and three games of [3]Sudoku. Now to test the [4]broken-windows theory of neatness, which says that things stay decent (say, a few items on a table) so long as the disorder stays below a certain threshold. Below that threshold, a natural tendency keeps things neat. Above that threshold, it malfunctions.

1. <http://www.blog.sethroberts.net/2006/12/27/science-in-action-procrastination/>
2. [http://farm1.static.flickr.com/153/334460889\\_62f0a6a99b.jpg?v=0](http://farm1.static.flickr.com/153/334460889_62f0a6a99b.jpg?v=0)
3. <http://www.websudoku.com/>
4. [http://en.wikipedia.org/wiki/Fixing\\_Broken\\_Windows](http://en.wikipedia.org/wiki/Fixing_Broken_Windows)

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Megan Hevron (2006-12-29 00:15:13)

You haven't eaten your persimmons. They would be an excellent reward.

Catherine Johnson (2007-01-24 06:59:24)

hmm.... I think I've tried the "Broken Windows" theory of procrastination.... I'll have to start paying attention. I'm pretty sure the Broken Windows theory of crime reduction turned out to be false, though (yes?)



## Going Flavorless (2006-12-29 11:27)

Gary Skaleski, the Wisconsin counselor who came up with [1]nose-clipping (= eating food with your nose closed, especially with a swimmer's nose clip), has tried eating all his food that way:

The last time I wrote to you I had started gaining again and not following the SLD as I should have been (off and on). However, since then I have been eating everything, all day long, without tasting anything (even coffee, diet soda)-avoiding [flavor] completely, but eating well. After a couple of days, the appetite suppression came back with a vengeance and am losing again.

What was the most interesting was the difficulty I had starting this, and the sense of loss/regret and avoidance I had to doing it, and not being able to [smell] anything. While I recommended this procedure for others, I avoided it myself. But now I am on day 3 of [flavorlessness] and am doing well. . . . Interesting new needs come up-need for something crunchy, something smooth tasting, etc. . . . does help one focus on the feeling of different foods while eating, as well as becoming more sensitive to real hunger feelings (amazed at how much taste runs one's eating).

He believes, as do I, that this may be useful in extreme cases. Let's compare gastric bypass surgery (GSB) and eating like this (NC, for nose-clipping) on several dimensions. Dangerous? GSB: very. NC: no. Reversible? GSB: no. NC: yes. Adjustable? GSB: no. NC: very. You can do it every other day, for example. You can nose-clip some foods but not others. Cost? GSB: \$20,000 or more. NC: \$5 (swimmer's nose clips).

1. <http://boards.sethroberts.net/index.php?topic=1632.0>

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## Christmas in China (2006-12-31 14:38)

A Chinese friend of mine wrote to me a few days ago:

In China, there are many people who do not believe in God, but commercial here is ....( I don't know how to express), they launch beautiful ad and some discount for people to make them spend more money and feel more happy than the Christians.

Wise observations. I think Christmas moves so easily to a country with few Christians because it derives from [1]deep-seated features of human nature. I also agree that [2]ads are often beautiful. These [3]Hershey's Kisses ads, by my friend [4]Carl Willat, for example.

[5]

1. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>
  2. <http://www.blog.sethroberts.net/2006/12/06/american-haiku/>
  3. [http://www.carlsfinefilms.com/cff\\_website/web\\_pages\\_html/new\\_hersheys.htm](http://www.carlsfinefilms.com/cff_website/web_pages_html/new_hersheys.htm)
  4. <http://www.carlsfinefilms.com/index.htm>
  5. <http://www.carlsfinefilms.com/index.htm>
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## 2. 2007

### 2.1 January

#### Is Drinking Olive Oil Healthy? (2007-01-01 20:50)

In *Cities and the Wealth of Nations*, Jane Jacobs wrote about an isolated North Carolina hamlet that her aunt visited in 1923:

One of my aunt's tasks there was to see to construction of a church. . . One of the farmers donated, as a site, a beautiful knoll beside the river and my aunt suggested the building be made of fine large stones which were already quarried, as it were, needing little dressing, there for the taking in the creek and river beds. No, said the community elders, it was a pretty idea but not possible. . . . Entire walls and buildings of stone would not be safe.

These people came of a parent culture that had not only reared stone parish churches from time immemorial, but great cathedrals.

Likewise, nutritional wisdom is forgotten. Drinking olive oil now seems absurd to some people. But it was practiced in at least one place in the not-so-distant past:

In a mountain village in Crete, [[1]Ancel] Keys saw old farmers working in the field who drank only a glass of olive oil for breakfast; he later verified that one of them was 106 years old.

From Todd Tucker, *The Great Starvation Experiment*, p. 204. There is a whole organization ([2]Oldways) devoted to preserving ancient foodways and using them for nutritional guidance. The best practitioner of this approach has been [3]Dr. Weston Price, a dentist, whose work is nicely summarized [4]here. Dr. Price traveled the world looking for economically-primitive societies ("native peoples") with ancient eating habits and excellent health. Their diets, especially the common elements, would suggest what a healthy diet must have.

Two of Dr. Price's conclusions are relevant to the Shangri-La Diet:

1. "All native peoples studied made great efforts to obtain seafood." This supports my comments about the [5]importance of omega-3 fats, found much more in seafood than in other foods.
2. "The last major feature of native diets that Price found was that they were rich in fat, especially animal fat." The animal fat in native diets would be high in omega-3 because the animals were eating grasses and other plants, not corn.

When I wrote my [6]long paper on self-experimentation I divided it into two parts: one titled "Stone-Age Life Suits Us" (the common thread of the five examples), the other about weight control (the research behind SLD). The two parts struck me as quite different. Drinking sugar water to lose weight was definitely not a return to a Stone-Age lifestyle.

But the big improvements in SLD since I wrote that paper – from sugar water to ELOO, and from ELOO to oils high in omega-3 – brought SLD much closer to the Stone-Age-Life-Suits-Us theme, I now see.

1. [http://en.wikipedia.org/wiki/Ancel\\_Keys](http://en.wikipedia.org/wiki/Ancel_Keys)
2. <http://oldwayspt.org/>
3. <http://www.westonaprice.org/index.html>
4. <http://www.soilandhealth.org/02/0203CAT/020305ppnf/price.html>
5. <http://www.blog.sethroberts.net/2006/07/05/brain-food/>
6. <http://repositories.cdlib.org/postprints/117/>

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Alfred Chew (2007-01-19 21:16:02)

To be exact, everything in moderation will be beneficial...

william hung (2007-03-06 11:09:00)

Like mercury?

Jon Cook (2008-03-14 07:09:01)

so drinking olive oil is healthy. ^.^

Genital Warts Treatment Web (2008-07-11 18:08:29)

Drinking olive oil would be exactly the same as eating it. The taste and feel of olive oil on your tongue is a little yucky though!

Eric (2008-09-26 13:05:37)

Im currently taking 100ml each day, hopefully to get my HDL cholesterol up from 80 % to over 100 % it fell from 90 %, I am sure that was because I was eating less fish. First thing I noticed I do not feel so hungry. Second, it took about 20 days before I began to like it. Third, ever since I have been taking Olive Oil my bogey drops are a lot cleaner, honest before that sometime I would think I would need a whole roll of toilet paper before I was happy, now I just need two lots of toilet paper, one to clean up and to make sure it is clean. Have you ever heard of the joke "How do you cook toilet paper?" Brown it on one side then throw it in the pan. well now I hardly ever get any "Browning" I only hope my next blood test shows up good results.

veronica (2008-09-30 00:31:14)

i am severely anemic and need to take iron supplements. also i am 40 years old and began to notice the beginning of arthritis in my hands. my aunt ruby who is 87 years old suggested drinking olive oil for the bowel movement issue (iron causes constipation). so i read up on it and learned the benefits to joints and minimizing inflammation. i have been drink about 10 to 12 oz every day now for about two weeweeks and feel great. i agree with the toilet paper entry, great side effect. so, i highly recommend it. the trick is to have a glass of water handy and drink the water immediately after you swallow the oil, sometimes even same mouth full. this is how i do it and i have not any problem. also, do not drink after too much food is in your tummy, you will get sick. it is best on an empty stomach., and you will not be hungry for hours.

Eric (2008-10-09 22:41:52)

so Google tells me 1 US fluid ounce = 29.5735296 ml. so that would be a big cup full, at 250ml per cup. One other thing, before I started to drank Olive Oil I used to rip my skin all the time, & was always catching my finger or hand at work on something, in fact I used /(still do) keep a couple of plasters in my wallet, I frequently had a plaster on my hand or finger, but now I dont in the three months or so I have been drinking Oliver Oil. In fact a google search on "drinking olive oil" tells you on one of the web site (somewhere).

Eric (2008-10-15 11:07:51)

....whoops.....sorry to be back so soon. There seems to be a terrible misconception that once you start drinking olive oil you will spend a lot of time in the "Bog House" getting rid of "bogeys", I found there is no truth in this claim at all or maybe I was not constipated to start with, so I am very sure I don't take any extra trips to the bog house since I started drinking Olive Oil, so don't drink it thinking it is a horrible tasting laxative (or you might be disappointed?) This just about completes my range of entries on the subject of "drinking Olive Oil" apart from go for "extra virgin" and buy it in tins or very dark bottles (it goes off with exposure to light)

Eric (2008-12-18 23:05:04)

OK so I tell a little fib now and again (I am back again to say more) ..... and the joke is on me, helped by google. And Doc Martin (UK TV series) is right, don't practice to be a rogue doctor from what you read on internet. I plugged into google "increase HDL cholesterol" and up popped a few articles, like Olive Oil & a lady who drinks 250 mL (a glass) of Olive oil everyday, and some other study. So I gave 100mL a go for the past six months. So a couple of weeks ago I went to see the doctor on another problem and asked him nicely if I could have an early blood test, I got the results today and I don't think Olive Oil has offered anything like a miracle cure to increase the good HDL cholesterol. However there is an interesting trend on my Triglyceride less than half (not too sure if that is due to Olive Oil or not) as in the past month or so I got the huff with lunch bars and I don't get there any more for my work lunch. Blood test results 13 December test result, name of variable, 26 April test result, (ideal). 0.9\*, HDL cholesterol (good), 0.8\*\*, (>1.0) 3.0\*, LDL cholesterol (bad), 1.9, (<3.0) 1.4, Triglyceride, 3.8\*\*, (<2.0). I wonder how my next test comes out like in a year or so from now. I hope this works

eva (2009-01-17 16:35:54)

How are you doing, Eric? I am going to start olive oil diet and I am a bit scared :) I would like to read more about others' experience.

Eric (2009-01-22 00:12:18)

Hi Eva, I gave it up (drinking Olive Oil) and lost the 2Kg I put on when I first started drinking it. My doctor told me to have "evening primrose oil" 1000mg \*4 tablets (even though the instructions say 3\*tablets).

diane (2009-02-22 16:45:28)

I just tried a tablespoon of olive oil, yuk. I still feel sick in the stomach. What's a good way to try this? diane

seth (2009-02-22 19:19:31)

Mix it with water. See [boards.shangriladiet.com](http://boards.shangriladiet.com) for lots of other suggestions.

bretto (2009-03-03 15:24:18)

I've tried it a couple of times and I find it hard to swallow. I can only take a small amount like 25ml any more and I puke.

Tom in TX (2009-03-04 12:25:24)

I have been taking extra light olive oil (ELOO) for the Shangri-La Diet lately - 4 T per day, all at once. (At other times I have taken it 2 T, 2x/day) When I take it by itself, I feel queasy for a while. I found this tip on the SLD forum and have tried it for the past couple of days. I take it with some milk. The details: Pinch nose shut. Drink 4 T ELOO. Drink small cup (about 4 oz) of milk. Drink some water to rinse everything out of mouth. Unpinch nose. The ELOO is in my tummy, my taste buds never knew about it, and I don't feel queasy. Too early to report how this affects the appetite suppression.

bretto (2009-03-10 23:50:52)

I found the best way. Pour oil into shot glass and tip a few drips of lemon juice (preferably cold). The lemon juice stays to the bottom and doesn't mix. When you drink it all you taste is the lemon juice.

ashley (2009-06-04 16:26:27)

i am thinking of trying the olive oil thing, i have a huge appetite ad i would like to control it any suggestions

seth (2009-06-04 16:38:59)

I suggest you visit [boards.shangriladiet.com](http://boards.shangriladiet.com) for lots of help and examples of how people do the olive oil thing.

Mala (2009-07-06 18:21:35)

I close my eyes and I swallow two tablespoons and then drink warm water. I don't feel any after taste.

Tom in TX (2009-07-07 06:42:25)

An update: I went back to taking my ELOO 2T, 2x/day. I pinch my nose and drink some water to rinse my mouth. No milk now. I am not feeling an queasiness. So I conclude that 4T of ELOO is too much for my tummy all at once.

Joanne (2009-08-04 21:06:41)

Would like to know if taking Extra virgin olive oil helps stomach ulcers. How much should I take and how often. Have tried everything! Thanks so much!

seth (2009-08-04 22:03:23)

Joanne, I doubt EVOO helps stomach ulcers. I suggest you try some fermented foods, such as yogurt or kombucha. See my blog for many posts about fermented foods.

Dervish (2009-08-11 08:57:49)

I have been drinking Olive Oil for a couple of years now and I have definitely felt and seen the health nefeits. My throat and nose are clean and free now, my skin is more supple, my hair is more curly, my whole digestive tract is much smoother. I used to smoke tobacco and Marihuana, which gave me a constant clogged up nose and thick unyielding mucus membranes. All the negative side effects of smoking have disappeared. I drink a few sips of Olive Oil in the morning on an empty stomach. And during the day I sometimes drink a few swigs. Olive oil dissolves non-water-soluble substances that are 'stuck' in your mucus. I havent needed to go to the doctor for twenty-some years now and a physician friend of mine has checked me up and said I have no signs of deterioration due to smoking. Even the normal physical deterioration due to my age of 41 years are less than expected, he said. I have to add that I am a vegetarian now for twenty odd years and the beneficial effects of this diet are aplenty. Stay away from sugar, tobacco, unnatural drugs and medicine, eat meat only sparsely; like we used to do in times before. Dose up on vegetables, fruits and raw foods, eat anti-oxidant rich foods. You'll live the longer for it and much healthier. And therefor happier.

Mazzie (2009-08-14 13:10:24)

Hi, My relative suffered from constant asthma. She drank about a teaspoon of olive oil everyday and has been drinking for about 12 years now and her asthma is completely better...not a single asthma attack!

Henry Mertern (2009-10-25 05:10:17)

Hi! I just tried to swallow 150ml olive oil and it went down alright - lovely flavour, hasn't it?! :-) but a few moments later I was so sick! I think my stomach has to get used to digesting over 1000cals all at once...

Jeff (2009-11-09 10:00:10)

I heard of a diet that consisted of taking a tablespoon of safflower oil after eating. This women who did it lost much weight. I wonder if it would be better to substitute olive oil?

Ricky (2009-11-11 23:12:48)

Drink it with 2/3 Cup Squeezed Grapefruit Juice and 1/2 cup Cold Processed Olive Oil.

MufaMaxer (2010-02-26 11:19:52)

I add a few tbsp's of extra virgin olive oil to my protein smoothie and this actually calms my large appetite for several hours and I feel full & satisfied. My protein smoothie consists of: 1 Scoopy of Vanilla Whey protein powder, 1/2 cup fat-free milk, and any kind of fruit you desire (bananna, peaches, blueberries). Add a few ice cubes and mix in a blender. The olive oil really enhances the flavor.

Shariq (2010-03-02 05:13:18)

Hi, i have been thinking of drinking Olive Oil for sometime as a friend is a regular at it now. I was waiting for a free day as I was worried that I would feel sick and did not want to throw up in front of my students in the iddle of the class(I am a tutor at University). But I had to dare it one day and I wake this morning and had my first taste of it, one tea spoon (slightly bigger actually). What feeling, yuck, the moment it went inside my system I felt, awww!!!. I ran to the bathroom thinking that I will vomit, but i didn't. I picked up the toothbrush and started brushing and the good smell of toothpaste helped. I just finished my class and I am feeling better. Not even the thought of throwing up came when I was in the class. Sure I am determined to take it regularly from now on. For those who are just thinking of starting, my suggestion is don't straight away for a 100ml or something. Start with a tea spoon, let your body get used to it and then slowly increase your dose. Fingers crossed, it will be beneficial. Also, I need a suggestion from someone. My 3 year old son has just been potentially diagnosed with Asthma (tests awaited). I read above that someone had a positive affect on Asthma after drinking Olive Oil. I was wondering how can I give it to such a little boy. I know he will throw up in dislike and will never take it again. Please share any ideas or experiences.

Riley (2010-03-18 10:57:47)

I am glad I found this page! I am a thin guy, and for the past few weeks I found I had no appetite, and I was losing weight and it was scary! I am too skinny to lose more weight. Someone suggested I am not getting enough fat in my system. I replied that I simply can't eat enough to gain any weight. Then they suggested drinking olive oil!! I have only been drinking it (1-2 shot glasses per day) for about a week, and I'm already noticing positive results! Is it bad for your heart though? I think I may have heart problems, and I don't want to be having a heart attack!

Kimberly (2010-03-21 08:02:26)

Hiya, I was wondering if any amount of olive oil a day matters. Most people are saying they intake 100ml-150ml... So would a tablespoon be enough? I just drank it about 20 minutes ago and it was HORRIBLE! I drank it and then quickly washed it down with water. I still felt rather sick! My head kind of hurts because I keep thinking about how strange it felt! After reading all of this and understanding how everyone else drank it, I can hopefully drink it with ease tomorrow! Shariq, try mixing it with milk or juice? He wouldn't even notice! Riley, I'm no doctor so I am not 100 % sure, but probably not. All these other people are taking it and they seem fine! (other than disgusted from the taste!)

The Golden Branch (2010-05-31 12:19:18)

From my experience coming from a mediterenian country and cooking with nothing but with extra virgin olive oil and drinking it every morning in an empty stomach its health benefits are apparent from with in and out. mentioning a few below: one looks younger then the actual age,your joints are always strong,one doesnt feel tired,no backache,no constipation,and the sexual stamina is there always even if you are making love daily:),again this is from my own experience and definitely it will benefit any1 regardless of race and place. Be a doctor to yourself with natural ways,come in south east europe and see the men who consume it glowing and full of vitality regardless of age. One doesnt need to drink it like watter, mind you that,best is moderation,our tradition is 2 to 3 tablespoons every morning,some take it 1 tbspoon morning and 1 evening,i know one old folk 117 years old doing this all her life and is walking and talking as if she is a healthy 60 years old.what more one can say abt this elixir of longevity. i hope every1 will make use of this God bleesed elixir and be healthy. Best Regards Olive man

Barbara Knutson (2010-06-03 10:27:15)

I'm trying 2 tablespoons daily as per a Mediteranean diet I read on the internet. I mix it with 8 oz of Simply Orange orange juice in my Magic Bullet. I do 1 tablespoon in the AM and 1 during the day. No weight gain yet. Labs won't happen for another 6 months or so. I can't really taste it in the o.j. (Use extra virgin. It is the best for you.) Hopeful.

sirvarht (2010-07-06 14:05:56)

I have been eating foods prepared with olive oil from childhood-I am now 55, getting older, etc. I began taking 1 teaspoon per day and still use olive oil with food as a rule. I was having trouble sleeping and a few aches (I'm sure arthritis with age) but since I have added the extra teaspoon orally on a daily basis I sleep like a baby, my aches are dissipating and my hair & skin are fabulous. Even though they say it is good to put on your hair & skin taken internally is far more nourishing to your entire body.

grace (2010-07-08 08:52:12)

Anyone ever considered tying the olive oil capsule? its a lot better than the trauma of the oily taste in the mouth.

Kathleen Fitzpatrick (2010-07-14 07:24:04)

I have a girlfriend who takes a couple of teaspoons of olive oil each morning for one reason only - her hair. And I must say the "proof is in the pudding", as she has a beautiful, shiney mane of thick hair. I pour extra virgin olive oil on just about everything, but I never thought of drinking it straight. Will try though, beginning with a teaspoon. I have oodles of bottles of flavored extra virgin olive oils, and I would bet that they are more palatable. Bottoms up!!

Redsash (2010-11-11 15:31:24)

I have tried applying olive oil on my skin especially on my face. Wow! my skin is tighter and smoother now. According to studies olive oil helps eliminate wrinkles. You can really see and feel the difference. I also take 1 tbsp. of olive oil first thing in the morning.

Janice Marie Foote (2010-11-14 17:12:13)

I'm gonna mix the olive oil in my smoothies to make it easier to swallow :) Plus as a late coming burgeoning singer-songwriter, I'm sure it'll do me extra good more ways than I can imagine :) I'm happy to find all this good o.O information here :)

Raul (2010-11-15 10:29:56)

I think you guys are really overdoing it. For Olive oil just two table-spoons daily is more than enough. And you can add it to anything you eat, so there is nothing to worry about taste. Just purchase the Extra virgin olive oil. Thanks.

Rheter (2011-03-26 19:43:22)

Try mixing a tablespoon of olive oil with tomato juice or green vegetable juice. I enjoy it this way. Hope you do too.

Terry (2011-05-04 15:22:29)

If you will get VIGO (in red) olive oil. It is not extra virgin olive oil. On the label it has VIGO then in smaller print on what looks like a blue ribbon it says IMPORTED. Then under that in red it has 100 % Pure. Under that in larger yellow letters it has OLIVE OIL. Under that in smaller white letters it has MILD TASTE. The background of the label is from top to bottom a yellow/gold with a picture of olives (green) at the bottom. On the side it says Product of Italy, Spain and Turkey. VIGO IMPORTING CO. TAMPA, FL. 33614. This olive oil is very mild and very easy to drink. There is no bitter taste at all. I get it in the 17 FL. OZ. size at the Publix grocery store here in Alabama. I hope this will be helpful to some of you that find the olive oil that you are trying to drink hard to deal with. Try this olive oil; I think that you will be pleasantly surprised.

Pam (2011-05-19 13:50:31)

I love EVOO with vinegar, apple and balsamic; always drink the residue from a salad and lemon and olive oil shaken together if I drink it. It's great tasting that way and all are good for your health.

the flower (2011-11-10 20:40:34)

can someone pls tell, whether drinking olive oil reduces acidity? Thns

the flower (2011-11-24 02:12:35)

hi guys, i started taking olive oil in the morning, empty stomach. I just take 1 tsp and immdtly i eat 2 lives with it . so its going



fine. just one week i started taking it, and really am feeling the difference. i had a severe acidity, and i used to take antacids everyday before bed. but since i started drinking olive oil , i havn't taken any atacids, its great!!!!!!:-)

steve (2011-12-10 00:16:18)

Tried drinking it yesterday - it had peppery taste and not easy to drink. No pleasure! Thought I would mix it with Balsamic vinegar and dip bread into it. So that's what I'm going to try. May come here again and tell you the result (if I ever find this page again!)

Gee (2012-02-29 03:18:48)

its now 2 months since i started using Extra Virgin Olive Oil. I usually drink 1 teaspoon after supper and also apply on my body from face to toe. Its really doing me miracles. I will start taking it on my empty stomach now after reading some of your comments. Thanks

### **The Decline of Harvard (2007-01-02 15:39)**

In high school, I learned a lot from [1]Martin Gardner's Mathematical Games column in Scientific American. I read it at the Chicago Public Library on my way home from school while transferring from one bus line to another – thank heavens transfers were good for two hours. In college, it was long fact articles in The New Yorker. Now it's [2]Marginal Revolution, where I [3]recently learned:

Harvard has also declined as a revolutionary science university from being the top Nobel-prize-winning institution for 40 years, to currently joint sixth position.

The full paper is [4]here.

What should we make of this? Clayton Christensen, the author of [5]The Innovator's Dilemma (excellent) and a professor at the Harvard Business School, has been skeptical of Harvard's ability to maintain its position as a top business school. He believes, based on his research and the facts of the matter, that it will gradually lose its position due to down-market competitors such as Motorola University and the University of Phoenix, just as Digital Equipment Corporation, once considered one of the best-run companies in the world, lost its position. A few years ago, in a [6]talk, he described asking 100 of his MBA students if they agreed with his analysis. Only three did.

How would we know if Harvard was losing its luster? Christensen asked a student who strongly disagreed with him. Harvard business students (except Christensen's) are taught to base their decisions on data. So Christensen put the question like this: If you were dean of the business school, what evidence would convince you that this was happening and it was time to take corrective action?

When the percentage of Harvard graduates among CEO's of the top 1000 international companies goes down, said the student.

But by then it will be too late, said Christensen. His students agreed: By then it would be too late to reverse the decline.

Christensen's research is related to mine, oddly enough – we both study innovation. For explicit connections, see the Discussion section of [7]this article and the Reply to Commentators section of [8]this one.

1. [http://en.wikipedia.org/wiki/Martin\\_Gardner](http://en.wikipedia.org/wiki/Martin_Gardner)
2. <http://www.marginalrevolution.com/>
3. [http://www.marginalrevolution.com/marginalrevolution/2006/12/which\\_universit.html](http://www.marginalrevolution.com/marginalrevolution/2006/12/which_universit.html)
4. <http://modernizationimperative.blogspot.com/2006/12/nobel-prizes-as-scientometric-measure.html>
5. [http://www.amazon.com/exec/obidos/tg/detail/-/0060521996/qid=1101756443/sr=8-1/ref=ase\\_sethrobertand-20/102-0228227-9568947?v=glance&s=books&n=507846](http://www.amazon.com/exec/obidos/tg/detail/-/0060521996/qid=1101756443/sr=8-1/ref=ase_sethrobertand-20/102-0228227-9568947?v=glance&s=books&n=507846)
6. <http://cdn.itconversations.com/Clayton%20Christensen%20-%20Capturing%20the%20Upside.mp3>
7. [http://sethroberts.net/about/2006\\_variation\\_of\\_bar\\_press\\_duration.pdf](http://sethroberts.net/about/2006_variation_of_bar_press_duration.pdf)
8. <http://repositories.cdlib.org/postprints/117/>

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### Someone Has Been Reading This Blog (2007-01-02 21:46)

According to [1]this USA Today article, "omega-3 is in". That is, in many new food products to be introduced in 2007, such as a new orange juice. Omega-3, says the article, is "the hot ingredient" and "the miracle food." The article delicately calls omega-3 a "fatty acid" rather than a fat. My many posts about omega-3 include [2]this and [3]this. More to come.

1. [http://www.usatoday.com/money/industries/health/2007-01-01-omega-3-usat\\_x.htm](http://www.usatoday.com/money/industries/health/2007-01-01-omega-3-usat_x.htm)
2. <http://www.blog.sethroberts.net/2006/07/05/brain-food/>
3. <http://www.blog.sethroberts.net/2007/01/01/is-drinking-olive-oil-healthy/>

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### Is There a More Original American Journalist Than Philip Weiss? (2007-01-03 08:04)

[1]Today, on Tom Brokaw. [2]An outdoor tragedy in Oregon (one of several posts). [3]College students showing the way. [4]Tolstoy and the New York Times. [5]Relationship advice.

I loved his columns for the New York Observer but I think the more flexible and personal blog format allows better use of his talents.

1. <http://mondoweiss.observer.com/2007/01/presidential-funeral-affords-three-sightings-of-wandering-sa.html>
2. <http://mondoweiss.observer.com/2006/12/some-psychologicalmarital-thoughts-on-the-last-oregon-traged.html>
3. <http://mondoweiss.observer.com/2006/12/hillel-chapters-break-new-ground-by-hosting-breaking-the-sil.html>

4. <http://mondoweiss.observer.com/2006/11/the-pressure-on-the-timesvery-tolstoyan.html>
  5. <http://mondoweiss.observer.com/2006/11/advice-column-two-weeks-of-bliss-and-confession.html>
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### **Stanley Milgram's Obedience Experiment Repeated - Tonight (2007-01-03 16:06)**

Tonight (Wednesday) on Primetime (ABC), results from a recent repetition of [1]Stanley Milgram's famous obedience experiment will be reported.

1. [http://en.wikipedia.org/wiki/Stanley\\_milgram](http://en.wikipedia.org/wiki/Stanley_milgram)
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### **Procrastination (cont.) (2007-01-04 07:13)**

A just-published [1]review article (abstract only) on procrastination, which looks good, and an interesting [2]talk by the author of the review, Piers Steel, a professor of business at the University of Calgary. No mention of an [3]evolutionary explanation.

Update of [4]my earlier post about procrastination: To keep my email In Box un-jammed and my kitchen table un-embarrassing, I now realize I must play a few games of Sudoku every day.



1. <http://content.apa.org/journals/bul/133/1>
2. <http://www.ucalgary.ca/mp2003/community/Ruby%20Tuesday%20-%20Procrastination.pdf>
3. [http://sethroberts.net/archives/How\\_Economics\\_Shaped\\_Human\\_Nature.ppt](http://sethroberts.net/archives/How_Economics_Shaped_Human_Nature.ppt)
4. <http://www.blog.sethroberts.net/2006/12/27/science-in-action-procrastination/>

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Andrew Sidwell (2007-01-04 15:42:53)

From the end of the abstract: "Continued research into procrastination should not be delayed". I hope that's meant to be ironic.

seth (2007-01-04 15:47:08)

Maybe the author will tell us.

pdf23ds (2007-01-06 13:51:56)

I think you shouldn't neglect the possibility that stimulating tasks like Sudoku, by raising your dopamine levels temporarily, simply make things done very shortly afterwards seem more interesting than they would otherwise. (Not to deny that the reward mechanism is part of it, too.)

seth (2007-01-07 07:25:22)

"research into procrastination should not be delayed": The author tells me that yes, this was meant to be humorous. pdf23ds, before I started using Sudoku as a reward I wondered if just playing it would be helpful. It wasn't: Playing it left me feeling like I had wasted my time. I think I find Sudoku mildly pleasant under some conditions. The curious thing about my findings is that making a little deal with myself (do this stuff then you can play a game of Sudoku) gets me started on an unpleasant task where otherwise I would go do something else. That can't be due to the aftereffects of Sudoku.

## Annals of Self-Experimentation: How to Fall Asleep Faster (2007-01-04 17:57)

Evan Dumas, our self-experimenter, does IT support in Portland, Oregon. He is 26 years old. As far back as he can remember, he has had trouble falling asleep. After he went to bed and turned off the light, it take an hour or more to fall asleep.

About a year ago, he tried a new solution: exercise just before bedtime. He had noticed that he fell asleep more quickly when he was tired (and of course exercise was tiring); and it was hard to exercise earlier in the day. He wondered if the standard advice don't exercise close to bedtime was true. (For example, "finish your exercise at least three hours before bedtime," [1]says the National Sleep Foundation.)

His exercise consisted of slow push-ups, crunch-style sit-ups, and some static yoga positions that use the side muscles and back muscles. He continued until he was tired. In the beginning this took about 10 minutes; now it takes about 20 minutes.

The very first night he tried this, he fell asleep within minutes. Same with later nights: After exercise, he fell asleep "instantaneously," he says – by which he means within about 5 minutes. Any doubt it was cause and effect was removed by evenings when he omitted the exercise, just to see if it was necessary. Without exercise, it again took him more than an hour to fall asleep. He also noticed that the exercise caused him to sleep less and wake up feeling more rested.

A great discovery. Surely we need far fewer sleeping pills.

To repeat what I said [2]earlier: If you are interested in doing any self-experimentation, feel free to contact me for help. Also, please let me know the results; I would like to publicize other people's self-experiments in this blog.

1. <http://www.sleepfoundation.org/hottopics/index.php?secid=9&id=31>

2. <http://www.blog.sethroberts.net/2006/12/23/why-i-like-self-experimentation/>

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Buck (2007-01-05 15:18:29)

I thought my visitors might like your blog. Posted at link here. [1]Seth Roberts

1. <http://fastamber.com/blog/2007/01/05/seth-roberts/>

pdf23ds (2007-01-06 13:54:07)

There's already one proven treatment for people with delayed or advanced sleep phase syndrome: light therapy. If you didn't have to go to sleep and wake up during the same half of the day every day-if you could sleep whenever you felt like it-would you end up having a 27 hour day, or a 21 hour day? Then light therapy can help you.

## Methodological Lessons from Self-Experimentation (part 1 of 4) (2007-01-05 14:33)

On Tuesday (January 9) I am giving a [1]talk about [2]my self-experimentation to a group of interface designers who I hope will be interested in the broad methodological conclusions to be drawn from it. An audio file of the talk and the PowerPoint will be available but I think the most interesting stuff will be clearer and more accessible if I write it down. So here it is.

Usually we learn from our mistakes. This is the rare case where I learned from success – I expected my self-experimentation – to improve my sleep, to find effective ways to lose weight – to fail and was surprised and impressed when I was wrong. The seven lessons that follows (divided into four posts) are the broad conclusions I draw from what happened.

1. Do something. I started the long-term self-experimentation that led to [3]my paper because I didn't want to wake up too early for the rest of my life. I expected my little self-experiments to fail, and they did fail, but I didn't realize that I would slowly learn from failure. I learned how to record my data, for instance, and how to analyze it. The effect of that learning was that my self-experimentation got better and better and after many years of failure I got somewhere. I think American culture teaches that success is good and failure bad, but the truth for scientists is that failure is good in the sense that you learn from your mistakes.

2. Keep doing something. I learned the value of drudgery. The research took many years. After my initial failures I continued not because I could see I was learning stuff – the learning was too slow to be perceptible – but for the same reason I started: I didn't want to wake up early for the rest of my life. One of my students had been a classical musician. She said that her job had been athletic, not aesthetic. It involved great repetition of the same movements, like manual labor. Likewise, scientists often see science as something intellectually wonderful. I came to see it differently. Perhaps a question has one answer and there are 100 plausible alternatives. To find the answer you may just need to test each of the 100 possibilities. No way around it. That was roughly the position I was in trying to improve my sleep: There were many possibilities and no alternative to simply testing them one by one. (More complex experimental designs, such as factorial designs, were impractical.) There was nothing intellectually wonderful about it. "One thing nobody tells you about being a postdoc is that stuff that used to be fun for its own sake becomes tedious when you've done it hundreds or thousands of times," [4]blogged a postdoc.

Part 2 is [5]here.

Note: You no longer need to register in order to comment.

1. <http://www.baychi.org/calendar/20070109/>

2. <http://repositories.cdlib.org/postprints/117/>

3. <http://repositories.cdlib.org/postprints/117/>

4. <http://youngfemalescientist.blogspot.com/2006/12/am-i-alone-i-think-holidays-suck.html>

5. <http://www.blog.sethroberts.net/2007/01/06/methodological-lessons-i-learned-from-self-experimentation-part-2-of-4/>

## Methodological Lessons from Self-Experimentation (part 2 of 4) (2007-01-06 09:11)

3. Be minimal. In other words, do the easiest, simplest thing that will tell you something important and new, that will provide significant progress. This I learned by failure. In the early days of my self-experimentation – and of my rat research, too – I constantly tried to do experiments that broke this rule, and again and again they failed to work. (Slow learner.) The more complex the design, the more untested assumptions it makes. And untested assumptions, at least mine, are often wrong. I've been good about following this rule in my own research in recent years so to give an example of how it is broken I will describe someone else's research. I sat in on a planning session for an experiment about asthma at a highly-ranked school of public health. The experiment was expensive – the grant to pay for it was many hundreds of thousands of dollars. There were to be about 50 families in the treatment group and 50 families in the control group. They had done some pilot work involving three families. They proposed to begin the full experiment. I suggested that they do a larger pilot experiment – maybe four families in each group. There were several professors and several more people with Ph.D.'s at the meeting. No one agreed with me. Several people explicitly disagreed: "I don't think we need to do any more pilot work." As it turned out, I was right. They began the full experiment and it failed miserably because recruitment turned out to be far more difficult than expected.

Almost all proposed research I hear about breaks this rule, which is fascinating in a train-wreck kind of way. I have never seen a book about research design that makes this point. As a result, I suspect that books about research design are often counter-productive: The student would have been better off if he or she hadn't read them. The textbook teaches this or that complication to people who can barely do basic stuff. The poor student wastes time using complex designs that fail in cases where a simpler design would have succeeded.

Part 1 is [1]here. Part 3 is [2]here. You no longer need to register to comment.

1. <http://www.blog.sethroberts.net/2007/01/05/methodological-lessons-i-learned-from-self-experimentation-part-1-of-4/>

2. <http://www.blog.sethroberts.net/2007/01/07/methodological-lessons-from-self-experimentation-part-3-of-4/>

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## A Curious Academic Career (2007-01-07 08:10)

From Wikipedia:

He had no talent for teaching. He was dismissed by [Johns Hopkins University] after one semester. . . . On leaving JHU, he took a position . . . at Brown University in Providence, Rhode Island, where it became clear that he was no better at teaching advanced students than freshmen. . . . He was let go by Brown, being hired after a trip to Europe by Yale University . . . He quickly showed at Yale the same traits he had at JHU and Brown: he . . . was incapable of giving a lecture at a level that a student (even a graduate student) could comprehend. He was also unable to direct the research of graduate students . . . At age 70, [he] was involuntarily retired.

Which makes me want to learn more about the physical chemist [1]Lars Onsager, who won a Nobel Prize in 1968.

1. <http://en.wikipedia.org/wiki/Onsager>

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### **Methodological Lessons from Self-Experimentation (part 3 of 4) (2007-01-07 21:49)**

4. There are serious defects in the way science is usually done. I found a new and powerful way of losing weight – yet I'm an outsider to that area. Although obesity is a huge problem, and hundreds of millions of dollars go into obesity research every year, I was completely outside that group of people and resources. If science is being done properly, there should be a relation between input and output – the more input, the more output. That failed here. Professional obesity researchers, given vast input, failed to discover this; whereas I, given zero input, managed to do so. You might say this was a weird fluke except the same thing happened again with mood: I discovered [1]a powerful way of changing mood, even though I was an outsider to the study of mood. Depression is a huge problem, vast resources go into trying to do something about it.

What the serious defects are has no simple answer. After the next lesson learned I'll try to explain what I think is wrong.

5. There are serious strengths in the way science is usually done. I relied heavily on conventional science and could never have gotten where I did without it. Ramirez and Cabanac did brilliant research. I say there are serious strengths in conventional science because I used conventional scientific methods and conclusions to find a new solution to a serious problem – obesity is a serious problem. I didn't just use conventional scientific tools; I also used self-experimentation, which is unconventional. But self-experimentation alone wouldn't have gotten very far, I'm sure. The turning point in my weight control research was reading a paper by Ramirez about rat experiments. Not only did I use a vast number of conclusions from conventional science, I also used conventional experimental designs and standard, common tools for data analysis, such as programs for plotting data.

To say that science is glorified common sense has a lot of truth to it. To say that science is a collection of methods to help us understand and control the world also has a lot of truth to it. But science is far more than a collection of tools; it is a whole community and culture, with beliefs as well as tools. Like any culture, many of its beliefs are based on faith.

Here is a story to illustrate what happens. It's pure human nature. Suppose someone gave you a power saw. Your first thought is: Wow, I have a power saw. There are many things I can now do that I couldn't do before. It seems like a pure benefit. No negatives. You learn how to use the power saw and you become better and better at using it. Eventually you start to make a living using the power saw – other people, who don't have a power saw, pay you to saw stuff for them. You become a power-saw professional and, along with other professionals, you establish rules about how to use power saws. To save the public from bad power saw usage, you establish a licensing test to become a power-saw professional. Your view of yourself is: I know how to use a power saw. And if there is a problem to be solved, you try to solve it with your power saw – that's what you know how to do best. All this makes perfect sense to you. Hundreds of professions have followed this path. What is hard for you to notice is that in certain ways you have become weaker – if a problem doesn't call for power-saw usage, you are less likely to find the solution. Because you are too busy making a living using your power saw.



I hope my point is obvious. Budding scientists go to graduate school where they learn a bundle of specialized research methods that varies from one research area to the next. That is their power saw. After graduate school, they make a living using the techniques that they have learned. After graduate school, they are in better shape to make a living; but they are in worse shape to solve problems for which the techniques that they have learned are not appropriate. Conventional scientific methods could go part of the way toward finding the Shangri-La Diet; but they could not go all the way. Other techniques were needed – very simple ones, pre-power-saw. So conventional science never found it.

In [2]Dark Age Ahead, Jane Jacobs gives another example of this. During a recent heat wave in Chicago, two nearby neighborhoods, similar in many ways, had very different death rates. A good explanation of the difference was provided by a graduate student in sociology, who used very simple very low-cost methods. In contrast, a task force of scientists from the Centers For Disease Control, with vast resources and great methodological sophistication, failed to explain the difference. They were blinded by their expertise. They failed to see that their methods weren't working.

Read [3]Part 1 and [4]Part 2. Part 4 is [5]here.

1. <http://repositories.cdlib.org/postprints/117/>
2. [http://en.wikipedia.org/wiki/Dark\\_Age\\_Ahead](http://en.wikipedia.org/wiki/Dark_Age_Ahead)
3. <http://www.blog.sethroberts.net/2007/01/05/methodological-lessons-i-learned-from-self-experimentation-part-1-of-4/>
4. <http://www.blog.sethroberts.net/2007/01/06/methodological-lessons-i-learned-from-self-experimentation-part-2-of-4/>
5. <http://www.blog.sethroberts.net/2007/01/08/methodological-lessons-from-self-experimentation-part-4-of-4/>

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adventurer (2007-01-08 08:36:42)

hey seth! i love how you're putting more blog entries! i enjoy all of them. i know you've done some really groundbreaking research in the area of mood: improving depression, in addition to your cutting edge research in weight loss. Will you be going back to improving your findings regarding faces and trying to publicize it, as you have with SLD? Keep the entries coming! You're doing a great job! And enjoy tomorrow night's talk! I wish I could be there.

seth (2007-01-08 10:12:20)

Yes, I will improve and publicize my findings about faces and mood. I will write about them in a book about self-experimentation that I am writing now.

willy (2007-01-08 14:04:01)

adventurer or anyone can you please post the links to the improving depression posts and mood/face?. Or are they in the forum?. I don't find them. Thanks.

willy (2007-01-08 14:12:07)

Do you mean this: <http://www.blog.sethroberts.net/2006/12/23/why-i-like-self-experimentation/> and <http://www.blog.sethroberts.net/2006/12/23/why-i-like-self-experimentation/> ? I didn't get why breakfast is bad Do you have to see real faces or can you turn on the TV?

seth (2007-01-08 14:27:12)

My mood research is described here: <http://repositories.cdlib.org/postprints/117/> see Example 2. Breakfast is bad because it interferes with sleep – causes early awakening.

pdf23ds (2007-01-09 17:31:49)

There certainly are serious strengths in the way science is usually done. One of them is that scientists have access to very expensive data collecting instruments. If I could take an fMRI of myself three times a day (or even just EEG), I could probably find a lot of neat correlations.

## **Methodological Lessons from Self-Experimentation (part 4 of 4) (2007-01-08 18:29)**

6. Curiosity helps – because it provides a wide range of knowledge. Pasteur made a similar point when he said luck favors “the prepared mind” by which he meant the well-stocked mind. To come up with my theory of weight control you needed to know both obesity research and animal learning because the theory is based on basic facts about weight control and basic facts about Pavlovian conditioning. I knew the weight control facts because I had taught introductory psychology and lectured on weight control. I knew the basic facts about Pavlovian conditioning because my graduate training was in animal learning. It was unusual to know both sets of facts. Few obesity researchers knew much about animal learning; few animal-learning researchers knew much about weight control. The same thing happened with my mood research: Facts that I had learned from teaching introductory psychology showed me that my findings made sense and were important. I had taught introductory psychology because I was curious about psychology.

These two examples (weight control, mood) surprised me. I may have heard this point made a few times but I didn’t know any examples. Since then, however, I have come across examples not involving me that make the same point. [1]Luca Turin is a biophysicist who has come up with a far better explanation of how the nose works than any previous theory. His recent book *The Secret of Scent* tells the story. “In order to solve the structure/odor problem,” he wrote, “you need to know at least three things: (a) biology, (b) structure and (c) odor. Each of these three things taken individually is not difficult” (p. 166). The problem had gone unsolved because no one before Turin knew all three.

7. Publish in open-access journals. Because [2]my long self-experimentation paper was published in an open-access journal, anybody could read it within minutes. My friend Andrew Gelman [3]blogged about it, which caused Alex Tabarrok at [4]Marginal Revolution to [5]mention it. This brought it to the attention of Stephen Dubner, who with Steven Levitt [6]wrote about it in their *Freakonomics* column in the New York Times. That led to a contract to write two books – one about weight loss, the other about self-experimentation in general. That anyone could download my paper made it spread much faster. In the old days, with photocopies and libraries and mailed reprints . . . no talk tonight.

A summing-up, if you want to figure something out via data collection: 1. Do something. Don’t give up before starting. 2. Keep doing something. Science is more drudgery than scientists usually say. 3. Be minimal. 4. Use scientific tools (e.g., graphs), but don’t listen to scientists who say don’t do X or Y. 5. Post your results.

Read [7]Part 1, [8]Part 2, and [9]Part 3. You no longer need to register to comment. [10]My talk Tuesday night (tomorrow Jan 9) 7:30 pm at PARC (Palo Alto) is open to the public.

1. [http://en.wikipedia.org/wiki/Luca\\_Turin](http://en.wikipedia.org/wiki/Luca_Turin)

2. <http://repositories.cdlib.org/postprints/117/>

3. [http://www.stat.columbia.edu/~cook/movabletype/archives/2005/03/learning\\_from\\_s.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2005/03/learning_from_s.html)

4. <http://www.marginalrevolution.com/>

5. [http://www.marginalrevolution.com/marginalrevolution/2005/04/seth\\_roberts\\_is.html](http://www.marginalrevolution.com/marginalrevolution/2005/04/seth_roberts_is.html)
6. <http://www.nytimes.com/2005/09/11/magazine/11FREAK.html?ei=5090&en=96877282e743a89e&ex=1284091200&pagewanted=print>
7. <http://www.blog.sethroberts.net/2007/01/05/methodological-lessons-i-learned-from-self-experimentation-part-1-of-4/>
8. <http://www.blog.sethroberts.net/2007/01/06/methodological-lessons-i-learned-from-self-experimentation-part-2-of-4/>
9. <http://www.blog.sethroberts.net/2007/01/07/methodological-lessons-from-self-experimentation-part-3-of-4/>
10. <http://www.baychi.org/calendar/20070109/>

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Phil Joy (2007-01-09 08:35:40)

That the experts don't take much notice of a gigantic breakthru on a problem of national importance is something I have seen before. I have several confirming instances that ionic forms of silver bound with delivery agents like citrate are in fact powerful broadband infection fighters that reduces/eliminates viral and bacterial infection both internal and external. They are also ridiculously cheap to manufacture. Thus, experts have little interest. Here is something that has potential as Hep-C, HIV, and birdflu life saving powers and where are the government and university leaders, the doctors, the AMA? Well, I think you said it Dr. Roberts, they are out playing with their power saws.

### **Near-Celebrity Near-Endorsement (2007-01-09 13:45)**

People have often told me that what the Shangri-La Diet needs is endorsement from a celebrity. I agree. From the current (2007-01-15) issue of Star magazine, here is a step in that direction. Not quite an endorsement but close; and on the same page as two celebrities.

# Winners & Losers



**WINNER!**  
DEC. 3, 2006  
123 lbs.

**ELLWEGER, 37**  
10 of diet, strength training and cardio. Sign & sound! (Source: *Source: Harley Productions*) "Eat in small meals a day. Each meal should have fat, protein, healthy carbs, fiber, minerals and water."



**MARCH 8, 2003**  
155 lbs.

**CLAY AIKEN**

Could a pair of shoes have led Clay, 28, to put on a few pounds in 2003? Who could blame him? The crooner "It's Not Me, It's You" gym routine and his on-air spat with Kelly Ripa last month made the 5'11" singer hit the scales (a since he...)



**LOSER!**  
SEPT. 26, 2006  
175 lbs.

After L.A. failed to the start Michael George says stress causes cortisol levels to rise, making the body retain fat. Is Right (and wrong). George suggests exercise. And if he's on tour, (he can't get the hotel's gym!)

## You Can Lose It, Too!

Want to get to the lean side of your life and reach your ideal weight? The biggest secret is this: You have to get your metabolism started with 30 to 60 minutes of exercise five to six days a week. Also, eat less meat. (Source: *Source: Harley Productions*)

**Your On A Diet.** Dr. Michael Rosen and Dr. Mehmet Oz (of *The Oprah Winfrey Show*) reveal the cutting-edge biological secrets that will help you shed pounds, including:

- Don't diet! If you eat more than 400 calories a day, you'll end up gaining weight. Cut 100 calories instead!
- The five ingredients to always avoid? Hydrogenated oil, sugar, high-fructose corn syrup, enriched flour and bleached flour.

Now, clinically sound weight-loss products RapidSlim SX and Cylaris are available at Walmart, GNC, and other fine retailers. Here's some important info about both:

- **RapidSlim SX** - Formulated with Hoodia...

**The Shangri-La Diet:** The No Hunger, Fat-Busting Weight-Loss Plan by Seth Kibben, Ph.D. has been derided as everything from "the olive oil diet" to "the strongest way to lose weight." Here's why:

- It requires you to drink 100 to 400 calories of sugar water and/or flavorless edible olive oil daily, at least an hour before or after your meals. This makes your stomach feel full.
- Once you've had your water and/or oil, you're free to eat anything you want!

It's been believed to act as an appetite suppressant, which makes you less hungry. The product is designed for rapid weight loss.

- Research shows that Cylaris, which contains an extract from the Asian plant *Cissampelos grandis*, can help dieters shed large amounts of weight. In one eight-week study, participants lost an average of 13 pounds!

**us people group, over \$18.95**

**YOU CAN LOSE IT**  
simonays.com, \$25

**MORE**

I am giving [1]a talk tonight (Tuesday, January 9, 7:30 pm) at PARC (Palo Alto) about self-experimentation that is open to the public. Audio and PowerPoint will be posted.

1. <http://www.baychi.org/calendar/20070109/>

larry (2007-01-10 00:57:50)

Thanks for the presentation at BayCHI. Your delivery was well-paced and engaging. The content was inspiring. One quibble: your slides were old-school, mostly a summary of the spoken message, summarized in text. Instead, consider those as your private notes, and show only the visual aids like graphs, using the former slides as your private notes. (This philosophy can motivate one to find visual aids for key points, in an attempt to eliminate the summary text.) Also, I'm confused by the Figure 2 graph in the "Surprises" paper that you also showed during the talk. After reviewing it many times, I think I understand it, but at first I thought that the intervention timing (when you saw faces) was running along the X axis. Also, the typography is hard to read because of pixelation (looks like a 4th generation photocopy). Again, thanks for the talk, which was educational and motivating. I'm off to read your book (is another on sleep forthcoming? please?). larry

pdf23ds (2007-01-11 18:02:41)

Wow. 175 lbs for a 6' 1" guy being too big? WTF? He looks tons better at 175. Reminds me why I never read celeb mags.

seth (2007-01-11 18:13:36)

speaking of WTF, on last week's Ugly Betty, Daniel and Betty are both looking at their paychecks. It's Betty's first paycheck.

Daniel: "What the . . . ?" Betty: "F.I.C.A.?"

## **From the SLD Forums (2007-01-10 20:15)**

Today paulkimelman posted [1]this:

I reached my target weight and have easily held it for >4 months now. I dropped the amount of oil to 1 Tbs from 2, but otherwise it is the same. Many people have been shocked more by the fact that I have effortlessly held the weight than that I lost it (23 pounds in 4-1/2 months). I do note that it is now effortless, as I do not worry about food at all (I eat what I want and when I want, except in the 2 hour window). Sometimes when I am snacking on almonds, I think I really should cut back, but it does not affect my weight, so I am learning to stop worrying. One interesting thing I have found in maintenance is about a 3 pound variance. What is nice, is that when it jumps up 2 pounds, I do not do anything different, as I know it will be down the next day. The other is that I know that if I have a few drinks of alcohol, my weight will be up 1 to 2 pounds the next day (1 if I drink enough water, 2 if I do not). But, again, it just drops off by the next day. I think it is simply retention of water. The calmness of not worrying about what the scale says has been a great feeling. At some point, I may shoot for losing another 6-7 pounds (I am at the top end of normal BMI, and this would take me to the low end). As you can guess, I have got a lot of people started on this diet, most have been successful (so far). So, for anyone who is not sure, I can report that I have been fully successful on this.

I now return to regular blogging...

1. <http://boards.sethroberts.net/index.php?topic=3668.msg33836#msg33836>

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Andrew Sidwell (2007-01-11 04:31:37)

It stuns me that people who criticise the diet never take into account that it's known to change your perception of food in such a way as to make you want to eat less. When I see suggestions of "someone should use the oil but keep everything else the same", the suggesters never seem to understand that with the oil, dieters don't \*want\* to keep things the same. Scientists spend too much effort on trying to prove everything objectively and exhaustively, which is very useful when you're trying to find the behaviour of gas or model "dark matter". Self-experimenters are much more interested in subjective experience, and when studying individuals (who are complex and unpredictable), it's impossible to produce infallible proof. (I think I was trying to get at a slightly more profound difference between the two than I expressed above, but I'm sure I'll figure out how to say it eventually.) The only way the mainstream science will accept SLD or self-experimentation is through sheer numbers – at least, as far as I can see. Reports like the above are always good, because every new story makes it harder and harder to say "it

might be an expectation factor", "it's because they've been posting on a message board" or "it might be because the person is becoming more aware of their eating habits" in response. Good work.

### **Robin Hanson on Web Trials (2007-01-11 18:44)**

I recently asked [1]Robin Hanson, a professor at George Mason University, what he thought of [2]web trials. Web trials are a way to learn how to solve difficult health problems (e.g., acne, obesity). By web trial I mean a web-based collection of data that compares different ways of solving a problem. People with the problem would go to a web-site, sign up for one of the treatments, follow the directions, and report the results in a standardized format. For example, a site might compare three acne treatments (treatments that anyone can try, such as dietary changes or over-the-counter medicines). The cumulated results would gradually show which treatment works best – a thousand times more efficiently (sooner, cheaper, more easily) than a clinical trial (which no one would finance because there is no profit to be made). Web trials are halfway between clinical trials and the data collection now going on at the [3]Shangri-La Diet (SLD) forums, where [4]people post their progress on SLD.

I asked Robin because he has pioneered a similar improvement: [5]Prediction markets are often far better than what they replace. And his core political affiliation is "I don't know."

Here is a summary of what he said.

1. A selection effect is a big concern. Do people wait to report back until after it works? There is always going to be the issue of sampling, selection bias for people who stay with it.
2. How could you get people to allow you (the website) to choose for them which treatment to do? That would be the hard thing. Perhaps the website could say: "would you like to see what our advice for you is?" At most you could get randomization for your advice.
3. It doesn't have to be restricted to health problems. It could be used to test all sorts of advice. You could just get data about what happens when people do or don't follow some advice – romantic advice, for example. Very rarely do we have randomization in choices. When we do, we call them natural experiments. In medicine, researchers have used practice variation (variation from one doctor to the next) to look at effectiveness.
4. Perhaps you could get people to commit to this the way they do to Wikipedia. The goal would be: Let's understand humanity – a noble cause. Let's be part of a grand project to do this.

Robin blogs at [6]Overcoming Bias. Tomorrow I will comment on Robin's comments.

1. <http://hanson.gmu.edu/home.html>
2. <http://www.blog.sethroberts.net/2006/12/21/web-trials/>
3. <http://boards.shangriladiet.com/>
4. <http://boards.sethroberts.net/index.php?board=14.0>
5. <http://hanson.gmu.edu/ideaofutures.html>
6. <http://www.overcomingbias.com/>

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### Robin Hanson on Web Trials (my comments) (2007-01-12 18:21)

Yesterday I posted [1]Robin Hanson's comments on [2]web trials. My comments on his comments:

1. I think Robin is right that it would be hard to get most people to allow themselves to be randomized. But I also think it doesn't matter much. The important thing is to improve on existing methods of evaluation. Randomization of subjects to treatments isn't an end in itself, of course. The goal is to reach the right answer: Learn which treatment works best. I think if you have what might be called a "level playing field" or a "fair comparison" (the various treatment alternatives are presented "equally" – e.g., as equally likely to work, equally attractive, equally high on a list) it will be hard to imagine how the results will be on average worse than nothing. The site can record data about each subject (age, sex, etc.) and the results can be analyzed using those factors – another way to equate subjects across treatments and to help each person decide what would be best for him or her.
2. Excellent point that web trials could be used for evaluation of any advice. Maybe it would be better to start with a non-health problem. Something where the effects are quick and easy to measure.
3. I like the Wikipedia comparison. All-to-all institutions – institutions that help connect everyone to everyone – are ancient and have been very important. Markets and money may have been the first. If I pay Sam \$5 for X, and then Sam pays Peter \$5 for Y, Peter and Sam have traded X and Y. Money has made this much easier. Democratic institutions allow everyone to govern everyone. Banks allow everyone to loan money to everyone. Books allow everyone to teach everyone. Wikipedia makes all-to-all teaching much easier. Web trials allow everyone to help everyone solve any problem where data would help. As Robin says, Wikipedia suggests that people will participate in all-to-all institutions when there is no obvious reward for doing so.

1. <http://www.blog.sethroberts.net/2007/01/11/robin-hanson-on-web-trials/>

2. <http://www.blog.sethroberts.net/2006/12/21/web-trials/>

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pdf23ds (2007-01-13 21:25:37)

I would specifically worry about people losing interest when the thing they try doesn't work, but reporting back when it does. Perhaps based on the proportion of people who sign up for a particular treatment but don't report back, you could estimate that for a greater number the treatment wasn't effective. And you'd have to deal with confounding factors. What about people who try multiple possible solutions at once? Who confuse the causality? (Maybe that would be noise? But you'd want to watch out for where there could be a bias there.) You might ask people to list other things about their life, and see if you can find correlations. Maybe remedy X doesn't work for people with more stress in their lives, or who are taking medication Y, but remedy X works for most other people. I'm not sure what a good way to do this would be.

seth (2007-01-13 22:33:58)

"I'd worry about people losing interest and not reporting back." That's what's nice about comparing two treatments at the same time – if the reporting rates differed for the two treatments, that would tell you something. I think you'd want to restrict the data to people who try one treatment at a time.

## Yet More about Omega-3 (2007-01-13 23:55)

Perhaps inspired by [1]USA Today, the New York Times [2]discusses DHA, an omega-3 fat sold as a food additive. "Magical or overrated?" is the question posed by the headline. According to Marion Nestle, overrated:

“My experience in nutrition is that single nutrients rarely produce miracles,” said Marion Nestle, a professor in the department of nutrition, food studies and public health at New York University and the author of “What to Eat,” published last year. “But it’s also been my experience that companies will put anything in their food if they think the extra marketing hype will help them sell more of it.”

Single nutrients rarely produce miracles? There is a long history in nutrition of just that: The story of the discovery of vitamins. One single-nutrient miracle after another. Given that history, the claims for omega-3 are plausible. If Nestle has an alternative explanation for the many results that point to the benefits of omega-3, that would be interesting to hear. It wasn’t provided in the article. “Companies will put anything in their food if they think the extra marketing hype will help them sell more of it”? Well, B vitamin supplementation of flour has cut the rate of neural tube birth defects roughly in half, a huge benefit, a huge amount of averted misery. Given that success, it is reasonable to think that other supplementation might also be helpful – to everyone. I discuss derogatory treatment of food companies (“will put anything in their food if . . . hype will help them sell more of it”) in the last chapter of *The Shangri-La Diet*. Curiously enough, Jane Jacobs once said, you can only change something if you love it.

I have done more self-experimentation about omega-3s and will describe the results in a week or two. Previous posts about omega-3 [3]here, [4]here, [5]here, [6]here, [7]here, [8]here, [9]here, [10]here, [11]here, and [12]here

1. [http://www.usatoday.com/money/industries/health/2007-01-01-omega-3-usat\\_x.htm](http://www.usatoday.com/money/industries/health/2007-01-01-omega-3-usat_x.htm)
2. <http://www.nytimes.com/2007/01/14/business/yourmoney/14omega.html>
3. <http://www.blog.sethroberts.net/2006/07/05/brain-food/>
4. <http://www.blog.sethroberts.net/2007/01/01/is-drinking-olive-oil-healthy/>
5. <http://www.blog.sethroberts.net/2006/07/19/brain-food-part-2/>
6. <http://www.blog.sethroberts.net/2006/07/20/brain-food-part-3/>
7. <http://www.blog.sethroberts.net/2006/07/26/brain-food-part-4-measuring-balance/>
8. <http://www.blog.sethroberts.net/2006/07/29/brain-food-part-5-a-little-progress/>
9. <http://www.blog.sethroberts.net/2006/07/31/brain-food-part-6-a-little-more-progress/>
10. <http://www.blog.sethroberts.net/2006/08/03/brain-food-part-7-looking-for-a-steady-baseline/>
11. <http://www.blog.sethroberts.net/2006/08/08/brain-food-part-8-a-little-more-baseline/>
12. <http://www.blog.sethroberts.net/2006/08/13/brain-food-part-9-supporting-data-and-a-problem/>

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## Ripe for Change (movie) (2007-01-14 18:29)

Last night I saw the excellent documentary *Ripe for Change*, about new developments in food in California. It is part of a four-part series called [1]California and the American Dream on PBS several months ago (to my horror, I missed it). The showing was hosted by [2]Slow Food San Francisco; I learned about it because I am a member of [3]Slow Food



USA, "an organization devoted to preserving [4]traditional foodways" (from their website description).

One of the producers was at the screening and spoke at length about outreach, meaning screenings. PBS misses lots of people, he said. As I say about research, no point doing it if no one learns about it. He can't post the whole thing on Google Video because PBS owns the broadcast rights for three years. Ugh. First, PBS funds it, then prevents people from seeing it.



The film covers the [5]Edible Schoolyard in Berkeley (aerial photo above) and attempts in Berkeley to improve school lunches. While writing *The Shangri-La Diet*, I looked into school gardens as a way to help kids eat better. I visited the Edible Schoolyard, where I was sorry to learn that the ten-year-old program receives \$200,000/year in grants (a crucial fact I can't find on their website) with no end in sight. When I talked with them, they seemed uninterested in reducing this dependency. Not very sustainable, much less repeatable. The Berkeley school lunch program is also [6]in poor shape, although you wouldn't know it from the film, one of its few shortcomings.



In contrast, farmer's markets are doing great. The crucial step, said the film, was legalization, which happened while Jerry Brown was governor. Farmer's markets are spreading everywhere, supporting thousands of small farms and artisanal producers, and providing healthier food. (Not to mention their social, entertainment, and educational value.) Could this be telling us something about how to improve school lunches? I think liberalization of the school kitchen laws and allowing lots of small producers to try to make a profit by providing healthy school lunches (giving kids vouchers, say) might go a long way. The current efforts are too top-down and too few brains are involved, I believe.

Before the film there was a short clip of Naked Chef Jaime Oliver trying to improve British school lunches. In what we saw, he was having trouble: the kids wouldn't eat the food. (Just like in Berkeley.) Jaime Oliver, meet [7]Antonia Demas, whom I wrote about in the last chapter of *The Shangri-La Diet*.

1. <http://www.californiadreamseries.org/about.htm>
2. <http://www.slowfoodsanfrancisco.com/>
3. <http://www.slowfoodusa.org/>
4. <http://www.blog.sethroberts.net/2007/01/01/is-drinking-olive-oil-healthy/>
5. <http://www.edibleschoolyard.org/>
6. [http://www.sanfran.com/archives/view\\_story/1050/](http://www.sanfran.com/archives/view_story/1050/)
7. <http://www.foodstudies.org/index.htm>

Ann Cooper (2007-01-16 05:14:29)

Seth Hi - I'm the Director of Nutrition Services for the Berkeley Unified School District - I am proud of the work we're doing & the progress we're making. I'd love to chat w/ you; also show you our program if you like. Check out [1]my website for more information; I look forward to speaking with you. thanks Ann

1. <http://www.lunchlessons.org/>

### **The Benefits of Theory: Crazy Spicing and B. F. Skinner (2007-01-16 09:18)**

Someone has written me that she is doing well with the Shangri-La Diet by doing only crazy-spicing – adding random spices to everything. She's not doing anything else – no oil, no sugar water, etc. My reaction is: Take that, B. F. Skinner!

In 1950, Skinner published a paper called "[1]Are Theories of Learning Necessary?" which revealed that he did not understand the value of theories. In 1977, he wrote a similar paper called "[2]Why I am not a Cognitive Psychologist," which showed he still did not understand their value. In the later paper he wrote:

I am equally concerned with practical consequences. The appeal to cognitive states and processes is a diversion which could well be responsible for much of our failure to solve our problems.

The value of crazy spicing would never have been discovered without a theory. Without a theory, you'd never try it. It would never be discovered by accident.

1. <http://psychclassics.yorku.ca/Skinner/Theories/>

2. <http://www.skeptically.org/skinner/id9.html>

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### **Charles Murray vs. Charles Murray (2007-01-17 22:11)**

[1]The Bell Curve (1994) by Richard Herrnstein and Charles Murray, which argued that IQ is destiny, was the most IQ-glorifying book since . . . well, ever. Now Mr. Murray has taken a big step away from his position in that book, yet he continues to glorify IQ. In today's Wall Street Journal, Mr. Murray wrote an op-ed piece ([2]"What's wrong with vocational school?") with which I mostly agree. His main point is that for most students, college is a waste of time. As a college teacher (at Berkeley), [3]I have seen that all too clearly. Mr. Murray has an unfortunate way of stating his position. "A four-year college education teaches advanced analytic skills and information at a level that exceeds the intellectual capacity of most people." I'd put it differently: A four-year college education teaches analytic skills and information at a level that exceeds the interest of most people. I am sure that if my students or anyone's students were more interested in the material, they would learn it better. That most college students are not interested in the same things as most college professors is a good thing, economically speaking. A healthy economy is a diverse economy; a diverse economy requires a wide range of skills and knowledge, much wider than the narrow skills and knowledge possessed and taught by college teachers. But it is a bad thing for the students and teachers, who are trapped. They have to be there. I feel worse for the students, of course – they are paying to be there. It isn't complicated: IQ tests

were designed to predict school performance. They do. People with higher IQs do better in school. To believe in the value of IQ is to believe in the school system it reflects. To glorify one is to glorify the other. Now Mr. Murray has taken a step away from one (the school system) but not the other (IQ). Well, nobody's perfect. Were I grading *The Bell Curve*, I would give it a B. The sad truth is that its basic conclusion, that a high IQ is really helpful, is entirely correct. A better book would have replaced the wacky genetic chapter with an attempt to understand why IQ matters so much. In a world where we place less weight on successful completion of college – the world that Murray now advocates – IQ will matter less. In *The Nature of Economies*, Jane Jacobs pointed to the stultifying effects of discrimination. "Macho cultures typically have pitiful, weak economies," she wrote. "Half their population, doing economically important types of work, such as cooking and food processing . . . are excluded from taking initiatives to develop all that work [e.g., open a restaurant] – and nobody else does it, either." IQ discrimination is also stultifying. If our society did a better job of helping students who are not good at college – helping them find jobs where their abilities shine, instead of wasting four precious years of their lives – the entire economy would benefit.

1. [http://en.wikipedia.org/wiki/The\\_Bell\\_Curve](http://en.wikipedia.org/wiki/The_Bell_Curve)
2. <http://opinionjournal.com/extra/?id=110009535>
3. [http://sethroberts.net/about/2005\\_diversityinlearning.pdf](http://sethroberts.net/about/2005_diversityinlearning.pdf)

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Half Sigma (2007-01-22 12:20:34)

Don't understand why a chapter explaining how intelligence is hereditary is "whacky."

Steve Sailer (2007-01-22 17:59:03)

IQ has validity for predicting plenty of non-academic outcomes in life. That's why the U.S. military began using IQ tests in 1917 and spends a fortune on IQ testing of would-be enlistees and correlating the results with their performance during their military career. Higher IQ soldiers are less likely to die in combat, to die in truck driving accidents, to drop bombs accurately on targets, etc. From 1992 through 2004, only 1 % of new enlistees were allowed into the military with IQ scores on the AFQT from the bottom 30 % of the IQ distributions. The new data in the long second part of *The Bell Curve* was delivered to Murray by the chief psychometrician of one of the services.

seth (2007-01-22 20:01:46)

Why was the IQ/heredity chapter wacky? Because it ignored the implications of the Flynn effect. That effect implies that environmental effects on IQ can be just as large as the effects that the authors wanted to explain. The army data are interesting. Many people, including Herrnstein and Murray, seem to take the predictive value of IQ as permanent, whereas I believe that in a different society – ancient Sparta, say – its predictive value would be less. In a world where we don't force everyone to go to college, its predictive value would probably be less, for example.

Steve Sailer (2007-01-23 18:51:12)

Considering that Herrnstein & Murray coined the term "Flynn Effect," I don't think they ignored its implications. The problem with the popular theory that the Flynn Effect will solve everything is that very little convergence has been observed in group average IQ scores over the last 90 years. For examples, see the graphs in: [http://www.vdare.com/sailer/060423\\_lynn.htm](http://www.vdare.com/sailer/060423_lynn.htm)

seth (2007-01-23 20:14:00)

"I don't think they ignored its implications." If I remember correctly, here is what Herrnstein & Murray ignored. The Flynn Effect implies that there are one or more powerful environmental effects on IQ. They can raise or lower IQ on the order of 20 points. For simplicity, let's say there's just one factor, Factor X. If you are high on Factor X, your IQ will be 20 points higher than if you are low on Factor X. Herrnstein and Murray speculated on the possible genetic cause of Black/White differences and other group differences without knowing (a) what Factor X is and (b) where Whites, Blacks, and other groups fall on this factor. Once those two pieces of info were known, there might be nothing left to explain. Differences in Factor X might entirely account for

the observed group differences.

Steve Sailer (2007-01-24 16:01:22)

Once again, I believe Herrnstein and Murray coined the term "Factor X." Finding Factor X was a huge obsession of American social scientists from the 1960s into the 1980s, when they started to give up out of frustration with repeated failures. For a lot of subtle reasons besides the repeated failure to find Factor X, the black-white IQ gap doesn't look much like it's caused by Factor X. It looks more like a larger version of the genetic driven differences in IQ found among biological siblings raised in the same households. Perhaps you should review what Murray has actually written before denouncing him?

seth (2007-01-25 11:47:09)

The Flynn Effect implies that Factor X exists. If American social scientists failed to find it . . . they failed to find it. That failure doesn't affect the point I'm making. "Perhaps you should review what Murray has actually written." I read The Bell Curve. As far as I can tell from your comments so far, my criticism of that book is correct. I am happy to be corrected however; if you would tell me on what page of The Bell Curve the authors refute or even show an understanding of my point about the Flynn Effect I would be happy to look at it.

TGGP (2007-12-18 12:11:42)

Karl Smith hypothesizes that the genetic component of IQ is preference [1]here. That would gel with Seth's "exceeds the interest" comment.

1. <http://modeledbehavior.blogspot.com/2007/09/smart-is-as-smart-prefers.html>

### **Economics and SLD (2007-01-18 15:21)**

I got a phone call today from a woman in Los Angeles who had some questions about the theory behind the Shangri-La Diet. It was an unusual book, she said.

"What did you like about it?" I asked.

"The cover. It's warm and inviting," she said.

I said that was the publisher's doing, not mine. She also said that it was unusual in that it paid attention to how much things cost. Most diet books don't, she said. I think my mom would be pleased to hear that.

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### **How Good is Food in Berkeley? (2007-01-18 18:59)**

From an interesting NY Times [1]article about difficult people comes this:

"She's a superior human being, and she comes from a superior area" Berkeley, Calif., Ms. Rothman said. "She has told me many times that there are only two places to get good food. One of them is Berkeley, and one of them is France. And France is only second to Berkeley."

Huh? I love Chez Panisse but otherwise that makes no sense at all. San Francisco has more great food than Berkeley. So does Los Angeles.

1. <http://www.nytimes.com/2007/01/18/fashion/18difficult.html?em&ex=1169269200&en=9c412ae51b907411&ei=5087%0A>

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losing-it (2007-01-18 20:50:50)

Mother Superior has obviously never lived and dined in Kansas City.

### **How Important is IQ? (2007-01-19 14:55)**

I teach at UC Berkeley. A few years ago I had an eye-opening experience about college teaching and evaluation. I was teaching an undergraduate seminar on depression. For the term project, I allowed/required students to do anything they wanted related to depression, so long as it was off campus and not library research. One student chose to give a talk to a high school class about depression. This would be unremarkable except that she had severe stage fright. The thought of speaking in front of any group terrified her. Every step of planning and doing the talk was very hard. But she managed to do it. In her term-project paper she wrote, "I learned that if I really wanted to, I could conquer my fear, and do what I needed to do" – among the most stirring words I have ever read.

Her work until then – class participation, writing assignments – had put her in the bottom half of the class. Yet her term project showed her to be resourceful (using the term project assignment in a useful way) and courageous (making herself do something that scared her). She chose the assignment that revealed these qualities. Ved Mehta, the writer, who is blind, spent his early years almost entirely within a small school compound. One day he was taken to the beach. He was astonished how freely he could run around. "The school compound . . . suddenly shrank in my mind, like a woollen sock . . . which became so small after [the housekeeper] washed it that I could scarcely get my hand in it," he wrote in *Vedi*. As I read my student's description of what she had done, I saw how narrow and restricted my usual assignments and my usual way of evaluating students had been.

I am sorry that Charles Murray, Bell Curve coauthor, has apparently never had a similar experience. In an op-ed ([1]"Aztecs vs Greeks") in Thursday's Wall Street Journal, alas, he made clear his belief that persons with a high IQ are more important economically and culturally than persons with a lower IQ. "We live in an age when it is unfashionable to talk about the special responsibility of being gifted," he wrote – "gifted" meaning "high IQ." He used the phrase the gifted. The gifted? If there are thirty or fifty or a thousand different useful sets of abilities, to single out one of them – the one that produces a high score on an IQ test – makes no sense. It's like referring to the sentence. That makes no sense. There are many useful sentences. We need all of them.

Persons with a high IQ do better at certain jobs, no doubt; but Murray fails to realize that such jobs are a tiny fraction of our economy and that discrimination against any group – failure to help any group develop their skills – is economically damaging because it reduces economic diversity (Jane Jacobs' point). Murray thinks we should treat high-IQ kids better. He fails to see that it is not people with high IQs who are under-served by the present system; it is everyone else – everyone with other gifts. Plenty of jobs demand resourcefulness and courage, for example, qualities that are probably uncorrelated with IQ, as my student emphasized to me. Both resourcefulness and courage are required to start a new business, which is the most economically important job of all.

Andrew Gelman's [2]reaction to similar ideas. [3]More about Charles Murray, IQ, and education. [4]A paper of mine

about encouraging diversity in learning.

1. <http://www.opinionjournal.com/forms/printThis.html?id=110009541>
2. [http://www.stat.columbia.edu/~cook/movabletype/archives/2007/01/diversity\\_in\\_le.html#trackbacks](http://www.stat.columbia.edu/~cook/movabletype/archives/2007/01/diversity_in_le.html#trackbacks)
3. <http://www.blog.sethroberts.net/2007/01/17/charles-murray-vs-charles-murray/>
4. <http://www.freakonomics.com/pdf/whatdostudentswant.pdf>

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Andrew Gelman (2007-01-19 16:02:41)

I think Bill James would agree with you. He's written a lot about the ability of good managers to get the best out of their players rather than focusing on a single skill. (He also labeled intelligence and foot speed as the two attributes that are helpful both in offense and defense.)

Sean (2007-01-19 21:06:30)

People who possess Factor X, believe that Factor X is important.

Tim Lundeen (2007-01-19 22:19:26)

Your example is an inspiration, but I think you push it too far as a contra-IQ argument. My guess is that most of the students at UC Berkeley have an IQ of 120 or more (top 10 % or better). To say that a student with a presumed IQ of 120+ conquered her fears and did something wonderful is, in Murray's words, "an underachievement story, not the story of someone at the 49th percentile of intelligence." The best (and also saddest) case I've seen for the overall importance of IQ is at La Griffe de Lion, where he supports his claim that "In market economies, per capita GDP is directly proportional to the population fraction with verbal IQ equal to or greater than 106." See <http://www.lagriffedulion.f2s.com/sft2.htm>

Laura (2007-01-19 22:48:39)

Boalt, the law school at UC Berkeley is now conducting a study in a similar vein. They are testing, checking references, etc., of law grads, to see which qualities make the best lawyers--and how they correlate (or don't) with grades and standardized testing. Public education and (more so) private education is almost entirely focused in getting high school students into college. We're in the information age, so maybe that's good. But nobody is paying attention to the kids (and the rest of us) who would be better served by students learning and practicing necessary skills and vocations that don't require a college degree. Thanks for sharing your thoughts on this. Also, what Sean said in the previous comment. It speaks volumes that you live in that Factor X world and appreciate the value of our diversity.

doug (2007-01-19 23:56:02)

Murray is one of those who sees growing entitlement liabilities leading to national bankruptcy and civil disorder later in the century. I think you've got to interpret these articles through the prism of examining an entitlement program, with every young citizen entitled to tens of thousands of dollars of extra education and removed from the tax-paying workforce for an additional 4 years (important because of demographic narrowing also expected to occur, with each worker supporting one retiree through the social system).

losing-it (2007-01-20 06:35:12)

"One of the strongest characteristics of genius is the power of lighting its own fire." -John W. Foster And, there is a difference between genius and high IQ which might not be recognized on such as a bell curve. The first cannot be measured by stick or stone, whereas the second might be graphed through (artificial) testing. The first is creative spirit, the open beach, the sight of one who is blind; the second is mere intellect, a school compound, the spatial qualities of a sock in the hand of a housekeeper (which needs the quality of the first to be alive). Your timid student lit her own fire that day and even warmed her teacher's heart

with it. She and her teacher experienced another kind of IQ that is born of the nobility of spirit, courage : "Inspiration Quota." Poor Charles Murray. To me, Ved Mehta's experience beach experience speaks more about "the encouragement of wisdom" than powering up and elitizing "the gifted" could begin to achieve. Years ago, I was employed in a public school's administrative offices for a year or two, working with, among others, the administrator for the "gifted and talented" program. Although my son qualified for that program ("gifted" classes were newer in concept at that time), I decided against his participation, not because I wished to hold him back in any way, but because of the sense of elitism that I saw in the administrator, which is an insidious and ultimately destructive kind of self-esteem. To me (and at that time) it appeared that most gifts and talents, other than those charted by IQ, were not recognized or addressed in the program. On the other hand, making fun and stimulating "imagination classes" or workshops available to any interested student can bring young creative geniuses out darkness and into light – and inspire "mediocre" thinkers to new heights. By providing integrative experiences that encourage creative thinking and doing – learning how to think and apply ideas in original ways, searching out what "wisdom" really is with practical application; exploring how various talents, skills, countries, cultures, eras, age groups, jobs, and so on, can integrate together or complement each other and bring about a wholeness. Such "classrooms" need be led, rather than taught, by those of that sort of genius, themselves. And would probably best be conducted at the beach...and at the mountains, ice cream parlours, animal shelters, art studios, labs, libraries, places of worship and shopping malls...

losing-it (2007-01-20 16:11:26)

Ah, well, to the embarrassment of losing-it. 'Twas meant to be one less "experience" and rather to say, "Inspiration Quotient." \*\*\*\*\* As far as the laws of mathematics refer to reality, they are not certain; and as far as they are certain, they do not refer to reality. -Albert Einstein while reading e-mail I phone my daughter's number on the calculator (senryu)-dwb

seth (2007-01-21 05:04:53)

"best be conducted at the beach and at the mountains, ice cream parlours, animal shelters, art studios, labs, libraries, places of worship and shopping malls." I agree completely. That was the idea behind my do-anything-off-campus assignment: That there was a lot to learn in the off-campus world, that it was educational just being there. I think what happened – how much the students learned and how enjoyably they learned it – showed that this idea was right. The other thing I learned from my assignment, which isn't reflected in what I wrote above, is that every student was different. An effective educational system I believe will allow great individualization of what is learned. I think that was the other reason my assignment worked so well. Reason 1: off campus. Reason 2: different for every student.

Half Sigma (2007-01-22 12:31:40)

I don't understand what the story of the timid student has to do with IQ. Except maybe that our primary and secondary education failed her because despite being smart enough to get into Berkely she was afraid to talk in front of a classroom. Which tends to reinforce Murray's point that we aren't doing a good job of educating the gifted.

seth (2007-01-22 19:51:21)

What does the story of the timid student have to do with IQ? Because school performance and IQ are closely correlated, and she was a relatively poor student, she probably had a relatively low IQ. But that relatively low IQ did not do her justice – she had outstanding useful abilities.

losing-it (2007-01-23 14:09:04)

Seth, you might find this an interesting read (on the brain "IQ/Genius/Learning/Appetite), as well as the other articles on the site: "Balancing Act: Controlling Your Limbic Brain's Control on What You Can Do" by Win Wenger, Ph.D. "http://www.winwenger.com/limbic1.htm http://www.winwenger.com/limbic2.htm -D W Bender

misc (2007-04-09 13:12:30)

I don't see any point in referring to IQ as a special set of skills. Being smart won't make you small, ugly or clumsy. And even the social skills normally increase with IQ.



seth (2007-04-09 13:17:14)

misc, I don't follow your argument. Could you expand on it?

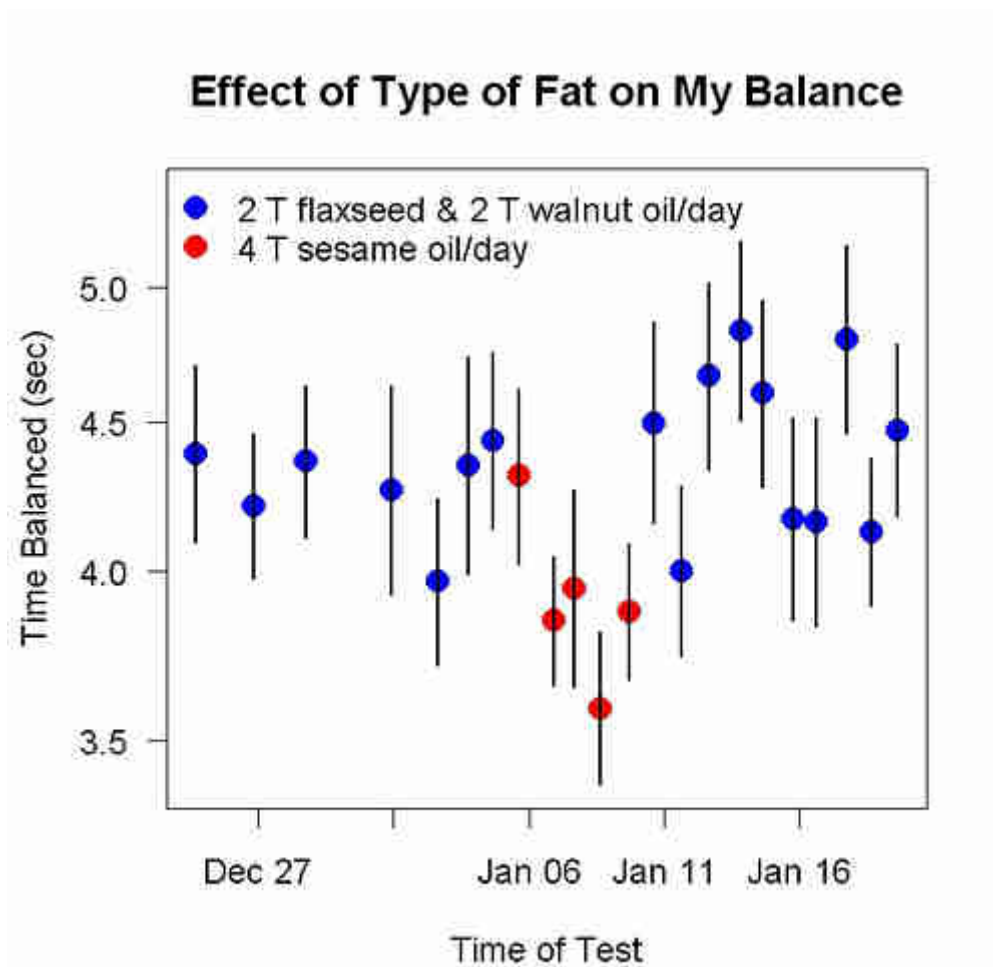
### **Science in Action: Omega-3 (balance results) (2007-01-20 15:41)**

Because many SLD dieters reported better sleep, [1]I wondered if omega-3 improved sleep. I increased my omega-3 intake by switching from olive oil, which has little omega-3, to walnut oil and flaxseed oil, which have much more – especially flaxseed oil. The amount of oil stayed roughly the same. The night after the change, my sleep got better. To my surprise, so did my balance. The next morning, I found I could more easily put on my shoes while standing up. I had been putting on my shoes standing up for 2-3 years and it had never been this easy. (I put on my shoes standing up because I thought it might improve my balance.)

I devised a simple measure of balancing ability. I stood on one foot on a platform balanced on a small metal cylinder (a pipe plug). (I will post pictures.) The parts were easy to find. I tried cylinders of different sizes until the balancing was neither too easy nor too hard. The measure was how long I could stand on one foot on the platform, which measured with a stopwatch. I made these measurements in blocks of 20 (the first 5 were warmup, leaving 15).

My early attempts had two problems: (1) The dose was too low. I had been taking the flaxseed oil as capsules (10 1000-mg capsules/day). I started taking 1 T/day in liquid form (much faster). Then I increased the amount of flaxseed oil/day from 1 T to 2 T. My sleep improved: I woke up more rested. Because the sleep effect was now perfectly clear, I thought measuring the effect on my balance would be a good idea. (2) Practice effects were too large. How well I could balance depended on how often I measured my balance. To avoid practice effects, I measured my balance no more than once/day.

I did a baseline period of several days; then I replaced the walnut oil and flaxseed oil with the same volume of sesame oil, which is low in omega-3. I continued this period until the effects seemed beyond doubt. Then I did another baseline period with the original amounts of walnut and flaxseed oil.



Here are the balance results. Each point is a geometric mean over 15 trials. The bars are standard errors. After one day, my balance got worse with sesame oil. When I returned to the high-omega-3 oils, my balance returned to its baseline level. To measure the clarity of the effect, I compared the 17 baseline days with the last 4 sesame-oil days. This gave  $t(19) = 4.1$ . A very clear effect.

I made this graph in a cafe. The person sitting next to me asked what I was working on. I showed her the graph. I explained that I measured my balance as a way of measuring how well my brain was working. The results suggested that the type of fat in my diet affected how well my brain worked. She said the results were very interesting because most people will have diets closer to sesame oil than walnut oil and flaxseed oil. Many people will be interested in these results, she said. I hope so, I said.

I will post later on the background of these results, the questions they raise, and procedural details. If you can't wait, read the posts in the omega-3 category. If you are interested in doing a similar experiment, please let me know.

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Tim Lundeen (2007-01-20 18:57:07)

It would be interesting to repeat this but substitute EPA/DHA supplements instead of the flax/walnut oil. Presumably it is the conversion of the omega-3 FA in these oils to EPA/DHA that is the active agent in your sleep/balance. 2T flax plus 2T walnut translate to about 48g of oil with about 32 % alpha-linolenic FA. At a conversion rate of about 10 % to EPA/DHA, this results in about 1.2g of EPA/DHA (varies considerably per person and as a function of omega-6 FA levels). The concern with 4T of flax/walnut oil is that this is a very high load of polyunsaturated fat on a long-term basis, I've seen recommendations for about 4 % of calories to be from polyunsaturated FAs, and 4T would put you way over this. The other issues are the uncertain conversion of alpha-linolenic FA to EPA/DHA, and finally whether it is this that is changing sleep/balance or some other component. So I would be very curious :-). I'm currently taking 400mg/day of DHA, and have noticed an improvement in sleep and mood, but I made so many concurrent changes to get here that it is hard to break of the effect from just the DHA. But I might try increasing it to 1g/day and see if that has an effect.

seth (2007-01-21 04:51:42)

EPA/DHA supplements: Yes, I will certainly try other sources of omega-3. "This is a very high load of polyunsaturated fat on a long-term basis": I'm going to try to find the type & amount of fat that makes my brain work best, measured by sleep, balance, and perhaps other things. Whether that is best for the rest of my body is of course unsure. But so is the 4 % recommendation you cite. What is the 4 % recommendation based on? 400 mg/day of DHA: When I increased the flaxseed oil from 1 T/day to 2 T/day, my sleep suddenly improved. No question that it was cause and effect. Nothing I had read had suggested that would happen. Then I realized how little we know about all this and on what weak evidence current ideas are based. It isn't a minor issue. Omega-3 is believed protective, in a big way, against heart disease, the #1 killer. If 2 T/day is twice as protective as 1 T/day, that would be good to know. Greenland Eskimos, with high omega-3 consumption, had about a tenth the rate of heart disease as Danes, with low omega-3 consumption.

peter (2007-01-21 11:14:34)

Flax Seed Oil Actually Increases Prostate Cancer While Fish Oil Decreases It; [http://www.mercola.com/2004/jul/21/flax\\_seed\\_oil.htm](http://www.mercola.com/2004/jul/21/flax_seed_oil.htm) you have to add lignan's to the mix to avoid this tendency. I've read this in other sources. when i take flax seed oil (in a capsule) i take at least one spectrum flax oil with lignans, which hopefully offsets the adverse effects of straight flax seed oil.

Tim Lundeen (2007-01-21 12:55:05)

The 4 % number comes from an article by Enig/Fallon at <http://www.westonaprice.org/knownyourfats/skinny.html> #poly, they reference Lasserre, M, et al, Lipids, 1985, 20:4:227. (Enig has a PhD in biochemistry and did some of the first research on the effects of trans fat on metabolism. The Weston A Price site is on the natural foods/historical foods end of the spectrum in terms of dietary recommendations, but whenever I've checked the original research they cite it has supported them, so they do try to be science/research based.) The concern with high levels of PUFA is that they are less stable than SFA OR MUFA, so are more prone to oxidize and cause problems. There is some basis for thinking that the PUFA in atherosclerotic buildup is the trigger for clots/heart-attacks/strokes, because it is more prone to oxidation and then triggers buildup of inflammation, which then causes the atherosclerotic plaque to break off. My understanding is that omega-3 fats are not equivalent, that the brain selectively prefers DHA and that this is the important supplement in terms of brain health (mood, memory, sleep, balance, etc). It would be interesting to see a study of the difference in the value of flax oil between people who produce the D6D (delta-6 desaturase) enzyme that converts to EPA/DHA vs those who do not, but I couldn't find any via google :-). (Because of the effects you see from flax oil, it seems pretty clear that you have this enzyme.) Flax oil/flax seed is clearly good for you in a variety of ways, and I use flax oil in salad dressings as well as the DHA supplements I take as capsules. But I try to limit total PUFA levels, and keep a good balance between omega-3/omega-6 PUFAs. Actually pretty easy to do if you avoid modern oils (corn, soybean, canola, soy) and eat enough flax, fish and/or DHA supplements.

Josh Mangum (2007-01-27 14:10:33)

From looking around on the net it looks like 1 Tbl of oil is about 12-,000-14,000 mg. Is that about right? I'm doing the calculation because i already have the capsules and thought I'd try the bigger dose. 10 capsules or 10,000mg hasn't had a dramatic affect for me on sleep. Certainly nothing like the dramatic affect on hunger. I was curious about our aquatic ape ancestors or eskimos. Assume they got 80 % of their calories from fish. Rda for calories is about 2000 per day (although they probably needed more). There are about 150 calories per 100g of fish. And .5 to 2 grams of omega-3s per 100 grams of fish.  $1750/150 = 11$  servings of 100g of fish = 5.5 to 22 grams of Omega-3 If Seth's flaxseed oil is similar to mine it's about 52 % omega-3s. So his 2 tablespoons are 14g of omega-3s. Right in the range. Even 3 or 4 tablespoons would be near how eskimos and ancient aquatic apes lived every day. Did the Danish and more recent studies use high levels of omega-3s (more than 14g) or the smaller levels (less than a gram) that Tim is talking about? omega-3 per 100 grams of fish references here <http://www.annecollins.com/dietary-fat/fish-oils-fatty-acids.htm> <http://www.americanheart.org/presenter.jhtml?identifier=3013797>

seth (2007-01-27 18:13:25)

Thanks, Josh, that's a helpful calculation. Yes, 1 Tbl of oil is about 14,000 mg. The Danish studies were surveys. I don't have the details here but I will try to find them. However, I'm sure they involved high levels of omega-3.

### **The Half-Measure (2007-01-23 00:06)**

Today I attended a two-hour class associated with the San Francisco Fancy Food Show called "Tradition + Technique + Terroir = Taste of European Traditional Foods." The class covered four hams, five cheeses, three olives, and two beers. The general idea was to explain how great these foods are so that the students – mostly food retailers – can successfully sell them. One of the cheeses was a cheddar. There is a town in England called Cheddar, I learned.

I asked a question: "When an American cheese maker makes a cheese and calls it a cheddar, what are they doing?"

"It doesn't taste the same!" said the American retailer who was in charge.

This irritated me. "When an American cheese maker makes a cheese and calls it a cheddar, it isn't a joke," I said. "There's a reason for it." Then the process called cheddaring was explained.

The people who make English cheddar cheese (the original), the people who make Greek feta cheese (the original feta), and many other food producers would like no one else to be able to use the names cheddar, feta, etc. Inside the European Union, that is often the case: Only Greek feta can be called feta, for example. A new EU program labels foods with "Protected designation of origin" or "Traditional specialty guaranteed" as a way to help consumers know that they are getting the traditional original product.

This is a half-measure. I am in favor of anything that helps preserve the diversity of what we eat, so I am in favor of this program. I am in favor of telling the stories behind English cheddar, Greek feta, and so on. But this sort of thing is a half-measure because the best way to ensure the survival of a food is to ensure it tastes better than similar foods. A labeling program does not do that. Not in the slightest. Perhaps future efforts should be focussed on how to make customers more discriminating. Here is the truth: Traditional products often taste very good. Here is the half-truth: They taste very good because they are traditional. Here is the (implicit) lie: Non-traditional products taste worse because they are non-traditional.

losing-it (2007-01-23 08:56:14)

Better Mousetraps? Advertising is all about traps isn't it, to get potential buyers to notice and buy? And traps are imaginative deceptions. "Bait and switch," "Build a better mousetrap," etc. Giving the product a sense of glamor. And apparently, that is why sex, status, beauty and youth "sells" – models are hired to (yes, deceptively) present a product and appeal to the buyer's hidden desires, those deep down, but can't s/he obtain by buying that or any other product, because a product cannot provide human or divine acceptance, admiration, respect, joy, wealth, radiant health, ultimate satisfaction. Glamor doesn't represent reality, but rather, intentionally misrepresents it. We are gullible, and sometimes willingly so. Why should we be surprised? Gazing upon the smart packaging of an expensive, authentic olive oil from Italy or tasting an imported gruyere from Switzerland, we are imaginatively transported to places we'd like to visit or be at right now – and by thinking magically, and in being happily lured by the appeal to our physical senses and psyche, we so willingly suspend our disbelief (as when we watch movies and read novels, or worse, tabloids). Nothing new or original. Kind of like when the snake sold Eve on the fruit of the knowledge of good and evil; the Satan appealed to her with an underhanded but well-crafted lie based on partial truth in order to get her to buy the deal he was selling. She suspended her disbelief and got what he wanted. And she ended up losing her assets. (Must be why we look on salesmen with suspicion, but gaze at the product with increasing fascination.) Anyway, tastes and smells, being strongly accompanied by associative mental images and emotional feelings, provide an atmospheric sense that may make flavors seem to taste better in many instances, albeit particular to the individual. Perhaps the effect of triggered associations might be compared to eating the identical food served in two different locations : one location is a fine restaurant with beautiful appointments, cozy ambience, attentive hosts, fine wines. The other is a self-serve, noisy hospital cafeteria, lacking in glamorous atmosphere. The food in question may seem to taste much better, or at least enjoyed more, at the fine dining establishment. In a sense, there may be a similar tendency with one's own mother's traditional meatloaf. Only Mother's meatloaf tastes "the best," and even if Mother-in-law makes it exactly by the same recipe, because of the mental and emotional associations, it will probably never taste the same or as good as Mom's, even if both are served up with the label "Mom's traditional American meatloaf." Unless, that is, one samples both in a blindfold test. I wonder how many people, blindfolded, would be able to tell the difference between an authentic English cheddar, and a good American cheddar, especially if the samplers haven't a clue as to what they are tasting? From some tests I've seen (long ago on t.v., not in scientific sorts of trials), many people couldn't distinguish between foods such as mashed bananas, mashed apples or avocado when blindfolded. [http://en.wikiquote.org/wiki/Talk:Ralph\\_Waldo\\_Emerson](http://en.wikiquote.org/wiki/Talk:Ralph_Waldo_Emerson) <http://www.takeourword.com/TOW125/page2.html> choices, choices a school of guppies veers right, veers left -dwb Being an inquisitive layperson, not an academic or scientist, I can only speculate from personal experiences, observations and from what I think I know or understand...which may, in reality (whatever that actually is), be a dangerous precipice to speculate from :^D

### Science in Action: Omega-3 (background) (2007-01-25 11:40)

The omega-3 story began with the circulatory system. In the 1960s, two Danish scientists wondered why Eskimos rarely die of heart disease. Could the answer explain the sharp decrease in heart disease mortality in Norway during World War II? In spite of this promising beginning, the heart and mortality benefits are still not clear. [1]A 2006 meta-analysis of heart disease studies concluded that "omega 3 fats do not have a clear effect on total mortality, combined cardiovascular events, or cancer."

You can find [2]lots of recommendations to consume omega-3 fats in various forms – fish, supplement, and so on. On the other side, Marion Nestle, the author of What To Eat, seems to believe the advantages claimed for omega-3 are "[3]hype." Most researchers are less certain. From a recent New York Times [4]article about Martek, a company that makes an omega-3 food supplement:

"A lot of the claims made for DHA [a form of omega-3] are in the realm of hypotheses," said David Schardt,

senior nutritionist at the Center for Science in the Public Interest, an advocacy organization based in Washington. "They are certainly worth pursuing, but there's not yet enough proof to warrant telling people to go out of their way to take DHA."

The exceptions, Mr. Schardt said, are people with a history of heart disease and premature infants, who need an extra boost of DHA for proper brain and eye development to compensate for their early exit from the womb.

Martek's scientists, when pressed, generally agreed with Mr. Schardt. The data showing any health benefits of DHA beyond those related to the heart or premature infants, while encouraging, is not quite conclusive, they say.

The typical experimental study of omega-3 takes two groups of people with a pre-existing problem, gives one group omega-3 and the other group a placebo, and measures outcomes several months later. [5]A 2005 study in Pediatrics, for example, compared two groups of children (n = about 60/group) with Developmental Coordination Disorder. Most of them had ADHD. One group was given an omega-3 supplement; the other group was given a placebo. The children were tested before treatment and after three months of treatment. (The reading, spelling, and behavior scores of children in the supplement group improved more than the scores of children in the placebo group.) Studies like this are hard.

In summary, there is considerable uncertainty about the effects of omega-3; and the methods used to reduce that uncertainty are slow and difficult. This is why self-experimentation might help.

[6]My recent data. [7]The Queen of Fats (2006) by Susan Allport, a science writer, is an excellent introduction to the subject.

1. <http://www.bmj.com/cgi/content/full/332/7544/752?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&fulltext=omega-3&searchid=1&FIRSTINDEX=0&resourcetype=HWCIT>
2. <http://www.newstarget.com/016353.html>
3. <http://www.blog.sethroberts.net/2007/01/20/science-in-action-omega-3-balance-results/>
4. <http://www.blog.sethroberts.net/2007/01/20/science-in-action-omega-3-balance-results/>
5. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=15867048&qquery\\_hl=1&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=15867048&qquery_hl=1&itool=pubmed_docsum)
6. <http://www.blog.sethroberts.net/2007/01/20/science-in-action-omega-3-balance-results/>
7. [http://www.amazon.com/Queen-Fats-Omega-3s-Removed-California/dp/0520242823/sr=1-1/qid=1169781113/ref=ase\\_sethrobertand-20/102-2539454-7332169?ie=UTF8&s=books](http://www.amazon.com/Queen-Fats-Omega-3s-Removed-California/dp/0520242823/sr=1-1/qid=1169781113/ref=ase_sethrobertand-20/102-2539454-7332169?ie=UTF8&s=books)

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Tim Lundeen (2007-01-25 13:09:34)

I'm surprised to hear about this NY Times article. There is a lot of evidence that the omega-3 fatty acids EPA and DHA help reduce depression, if nothing else. For example "Geographic areas where consumption of DHA is high are associated with decreased rates of depression." at <http://www.biopsychiatry.com/dhaomega.htm>. Also "The consequence of dietary omega-3 deficiencies under experimental conditions has yielded remarkable findings related to brain physiology. For example, omega-3 deficiency alters the levels and function of mood-regulating neurotransmitters, including serotonin and dopamine.", with numerous other references, at <http://physician-assistant.advanceweb.com/Common/editorial/Editorial.aspx?CC=81518> There is also good evidence that EPA/DHA lower blood serum triglycerides, which are a risk factor for heart attacks, so you would think that they are likely to reduce actual heart attacks, even if we don't have definitive studies. I'm not surprised by your experiments



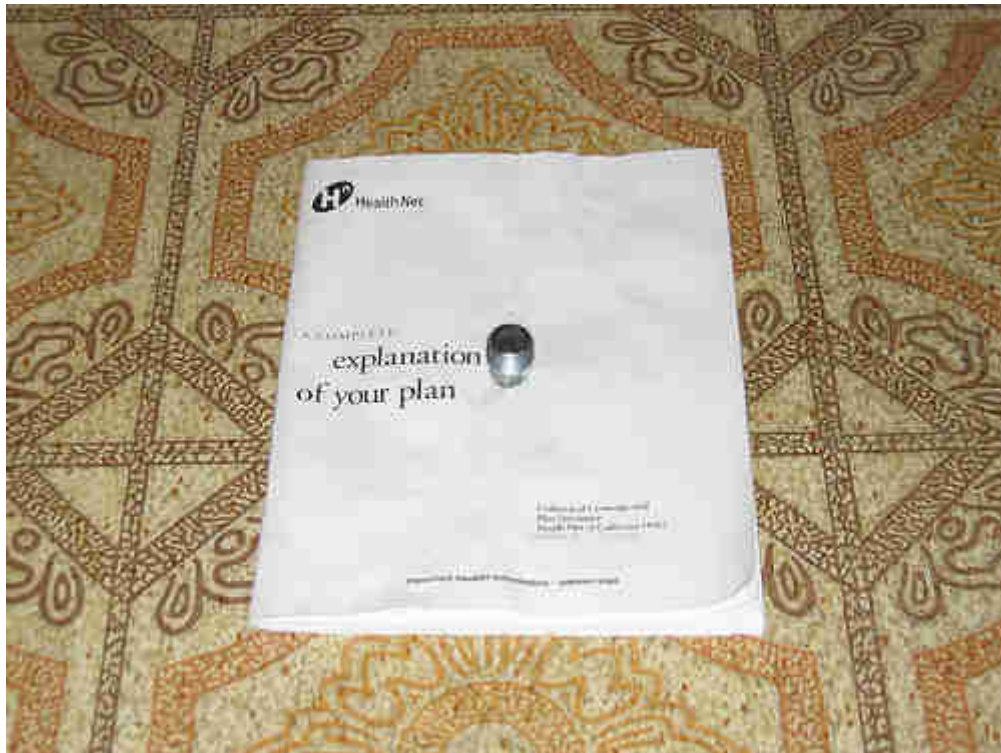


This shows the size of the pipe plug:



I put the booklet on the floor and put the pipe plug in a cut-out hole in its center. The hole goes about halfway into the booklet (e.g., 10 pages out of 20).





Then I balance the cutting board on top of the pipe plug:



I stand on my right foot on the cutting board; the measure is how long I can balance on it before my left foot touches the floor.

2. To vary the amount of omega-3 in my brain, I used these oils:



Walnut oil and flaxseed oil are high in omega-3 fats; sesame oil is low.

If you are interested in doing similar experiments, feel free to contact me.

1. <http://www.blog.sethroberts.net/2007/01/20/science-in-action-omega-3-balance-results/>

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### **Self-Experimentation = Old Buildings (2007-01-27 18:35)**

In *The Death and Life of Great American Cities*, Jane Jacobs wrote, "Old ideas can use new buildings, but new ideas need old buildings." New ideas need old buildings because old buildings are cheap. New ideas cannot be expected to be especially profitable, or profitable at all, at first. This is why self-experimentation should have a permanent place in the ecology of science: It provides a cheap way to develop new ideas.

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## Bruce Springsteen on Education (2007-01-28 08:29)

In an interview, Bruce Springsteen said:

I wasn't quite suited for the educational system. One problem with the way the educational system is set up is that it only recognizes a certain type of intelligence, and it's incredibly restrictive – very, very restrictive. There's so many types of intelligence, and people who would be at their best outside of that structure [get lost].

Yes! That's what I'm saying [1]here, [2]here, and [3]here. The [4]quote is from [5]David Shenk's great new blog about talent and how to nurture it.

1. <http://www.freakonomics.com/pdf/whatdostudentswant.pdf>
2. <http://www.blog.sethroberts.net/2007/01/17/charles-murray-vs-charles-murray/>
3. <http://www.blog.sethroberts.net/2007/01/19/how-important-is-iq/>
4. [http://geniusblog.davidshenk.com/2007/01/springsteen\\_wei.html](http://geniusblog.davidshenk.com/2007/01/springsteen_wei.html)
5. <http://geniusblog.davidshenk.com/>

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pdf23ds (2007-01-28 12:09:28)

I would \*not\* say that, just because some students are very poorly served by the educational system (and I do think it sucks badly, overall), that there are different types of intelligence. Do you believe in the 7-odd type of intelligence theory? (I forget whose.) I think there could be two or three main different areas of intelligence, with several more different minor abilities (like perfect pitch) that don't have much to do with a good, general education. The diversity in ability even among top students is more easily explained by narrow learning disabilities (like ADHD or Asperger's) and differential skill development. Which isn't to say that it's just as important to recognize these differences. But obscuring their nature isn't helpful.

seth (2007-01-28 12:47:30)

Howard Gardner and Robert Sternberg have both proposed theories of multiple intelligences – about seven of them, yes. They are certainly improvements over the single-intelligence idea but no I don't take them seriously. The IQ test was developed to predict school performance. You would need a different test to predict performance of anything else. People make their living in thousands of different ways. Each way requires different abilities. For each way you could make a separate test. Usually those specialized abilities (needed for one particular job but not other jobs) improve with practice so as a person becomes more skilled in a narrow area it becomes harder and harder to predict his or her performance based on a measure of any one or seven general intelligences.

Tim Lundeen (2007-01-28 14:12:04)

Yes, exactly right, and well said! This doesn't mean that IQ and g is irrelevant, though. The point of an IQ test is that it is highly correlated with g, which is highly correlated with all of these various abilities you cite. So an IQ test is a good "rough handle" on someone's ability level, but does not predict whether they will have a very high ability level on some particular given set of abilities. IQ tests have various subtests, and one of the main differences is between verbal and performance subtests. E.g., some people have better verbal than math scores. Sometimes people have specific minor flaws, and do much worse on some subtests than on the rest of the test, bringing down their overall score (as noted by pdf23ds above). So someone with high verbal and lower performance will have the same overall IQ as someone with lower verbal and high performance. The higher verbal person would do better in a profession where verbal skills are more important, and the higher performance person would do better in a profession where logic/math are more important, both with the same raw IQ score. This doesn't mean that IQ is meaningless – it can be useful in a variety of ways, but it certainly does not define the limits of what a given individual can do, or the fields in which they might excel. Some examples of where IQ is useful: The military uses IQ as a screening device, to limit the percentage of enlistees who have low IQs, and this has proven very successful for them. They may reject some candidates who would be successful, but they also eliminate a large number who would not work. So as a filter it is good. Programs for gifted children often use IQ tests as screening filters, and they may also reject some kids who would be well served by the program, but the kids they accept are definitely well-served and the material taught is appropriate for their ability level. I would like to see us go back to using IQ tests to normalize school results. If the kids in a school have an average IQ of 85, it is simply not reasonable to expect them to have the same achievement scores on the same tests as kids in a school with an average IQ of 115 (unless you lower the achievement level required down to the point that an IQ of 70 is all that is required to be able to learn the material, in which case almost all the kids at both schools will get perfect scores – there is a more detailed analysis of the effect of test difficulty on "performance improvements" at <http://www.lagriffedulion.f2s.com/gap.htm>)

pdf23ds (2007-01-28 16:12:00)

IQ does predict [1]plenty beyond school performance, though. (See also [2]here.) It isn't obvious that a test designed to measure such a narrow ability would turn out to be so useful and cross-correlated with other abilities, but it appears that it *is* the case.

1. <http://www.udel.edu/educ/gottfredson/reprints/1997whygmatters.pdf>

2. <http://www.udel.edu/educ/gottfredson/reprints/>

pdf23ds (2007-01-28 19:57:01)

Time, I don't know that it's clear that *early* education (as in the first few years of school) can't affect a child's ultimate IQ scores, so I'm not sure that such normalization would be desirable until middle school or beyond, if at all.

### **Secrets of a Successful Blog (part 3) (2007-01-28 17:18)**

Brad DeLong, Berkeley economics professor and [1]very popular blogger, on what makes a blog successful:

1. First-mover advantage. Brad's was one of the first economics blogs.
2. Regularity of posts. Brad said he writes several posts during one hour in the evening to be posted at intervals the next day. At least that is the ideal, he said.
3. Communicate effectively on things people want to learn about.

[2]Tyler Cowen and [3]Aaron Swartz on this topic.

I learned this last week when Aaron Swartz and I stopped by Brad's office. I had put the odds of him being there at 50 to 1. Speaking of supposedly-low-probability events, yesterday at the Berkeley Farmer's Market someone rec-

ognized me from the photo on my book. The previous day I had said that would never happen.

1. [http://econ161.berkeley.edu/movable\\_type/](http://econ161.berkeley.edu/movable_type/)
  2. <http://www.blog.sethroberts.net/2006/12/01/on-scientific-method/>
  3. <http://www.blog.sethroberts.net/2006/12/20/secrets-of-a-successful-blog-part-2/>
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### **Amory Lovins on Self-Experimentation (2007-01-29 22:01)**

[1]Amory Lovins is an engineer with many new ideas about how to save energy. In a recent [2]interview, he made these comments relevant to self-experimentation:

[Edwin Land] said that people who seem to have had a new idea often have just stopped having an old idea.

Experimental psychology began with self-experimentation – the memory research of Ebbinghaus. I stopped having the idea, dating from around 1910, that there was something wrong with self-experimentation.

Small resources like solar cells or wind turbines have less financial risk than giant power plants that take many years to build.

Self-experimentation, the smallest and cheapest research of all, has less financial risk than other research, including large experiments that take years to do.



1. [http://en.wikipedia.org/wiki/Amory\\_Lovins](http://en.wikipedia.org/wiki/Amory_Lovins)
2. <http://www.discover.com/issues/feb-06/features/energizer/?page=1>

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### Science in Action: Omega-3 (discussion of balance results) (2007-01-29 23:47)

[1]My recent omega-3 results encourage more self-experimentation to see if they can be repeated and extended. I'd be very surprised if they turn out to be due to expectations ("placebo effect"). First, the effect of going from high omega-3 to low omega-3 was different than what I expected. I did not expect the one-day lag. Second, the improvement from low omega-3 to high omega-3 repeated results that surprised me. When several months ago I increased my intake of omega-3 I was surprised to notice the next day it was easier to put on my shoes standing up.

My general plan is to find what omega-3 intake produces the best balance and then compare many other fat intakes to that. If omega-3 really improves my balance, I would like to know:

1. What is the effect of omega-6 fats? Do they reduce the effect of omega-3, as often claimed?
2. What is the relative potency of different forms of omega-3? Fish oil omega-3 is supposedly more potent than flaxseed oil omega-3 but I worry about degradation during the trip from fish to store shelf.
3. Does omega-9 have any effect?
4. What other mental functions are affected?

1. <http://www.blog.sethroberts.net/2007/01/20/science-in-action-omega-3-balance-results/>

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peter (2007-01-31 21:17:41)

those interested in increasing balance might want to try the relatively new "ubiquinol" form of coenzyme Q10 that is sold by life extension foundation. After taking this I found that my balance increased (i do tai chi, in part, with my eyes closed, which requires considerable balance, and noticed an immediate improvement). In addition, my father, who is pushing 90, has vertigo. After he started taking the ubiquinol form of co-q10 his vertigo diminished by 80-85 %. I would be interested in the experiences of others who take the ubiquinol form of coenzyme Q10.

### **Saul Sternberg on Research Design (2007-01-30 17:27)**

No one has had more effect on how human experimental psychology is done than [1]Saul Sternberg, a retired professor of psychology at the University of Pennsylvania. In the 1960s he introduced a memory-scanning task in which the subject responds as quickly as possible whether a probe item (usually a digit) is on a short memorized list. The main measure was reaction time (RT) – the time between when the subject saw the item and his response ("yes" or "no"). The linearity of the RT-vs-set-size function and the equality of the "yes" and "no" slopes suggested that search of the memorized list was serial and exhaustive (exhaustive meaning that the whole list was searched even when the target was found before the end). Before this heavily-cited work (published in [2]Science and [3]American Scientist), RT experiments were rare; after it, they were common.

SR: Where did your first ideas about research design come from?

SS: While I was a graduate student [(at Harvard in the 1950s)] I read William James' Principles of Psychology, which increased the curiosity I had developed about mental processes from my introspections. Although I wasn't working on those questions when I was a grad student, I became interested in them. I wrote down ideas for experiments – experiments on short-term memory, for example. Experiments to answer questions about things I observed about my mental processes while engaged in writing and reading and other everyday activities. At the time I was doing theoretical work on learning models that apply to both animals and people. [Stochastic Models for Learning by Bush, Sternberg's advisor, and Mosteller was published in 1955.] I didn't collect much data as a graduate student, after my interests turned to learning models. Earlier I had collected data in social psychology. I recall putting a lot of effort into an experiment on small group interactions. What was novel was that we were recording interaction events in real time by punching IBM cards.

I learned how to be an experimental psychologist during my first teaching appointment that started in 1960 at Penn, when I co-taught a laboratory course on experimental psychology. I taught it with Bob Teghtsoonian and Jack Nachmias, who became my teachers. In those days, many students took a lab course after Psych. 1. The course required us to develop experiments for undergraduates to do. Questions that arose in those experiments went beyond available knowledge. And these questions led to some actual research. In 1962 Bob Teghtsoonian and I gave a paper at EPA on all-or-none versus gradual learning of response components, in which we reported tests of two models. And in 1963 Jack Nachmias and I gave a paper at the Psychonomic Society in which we reported our application of signal detection theory to data on recognition memory that we had collected.

SR: You started your memory-scanning experiments after that course?

SS: That's true. I started them during my second year at Penn. I was still working on learning models. I was also supervising a graduate student whose research had to do with short-term memory. Not RT experiments, however. What got me interested in RT experiments was work by Ulric Neisser measuring search times. He measured visual search times as a function of number of targets for which you search. [Neisser's subjects searched a visual display – e.g., of digits or letters – for the presence of one or more digits or letters. The main measure was how long it took to search the whole display.] It's like a crude RT experiment. You're not measuring how long it takes to make one decision, you're measuring the time to make many decisions. I was skeptical about his conclusions so I thought it would be worth measuring how long it took to make a decision about one visual item. That led to the memory-scanning experiments. I did several of them, to help choose among alternative interpretations, before I reported the results. I gave a paper on those experiments at the meeting of the Psychonomic Society during the summer of 1963.

Previous post in this series: [4]Brian Wansink on research design.

1. <http://www.psych.upenn.edu/~saul/>
2. <http://www.psych.upenn.edu/~saul/hss.html>
3. <http://www.psych.upenn.edu/~saul/am.scientist69.pdf>
4. <http://www.blog.sethroberts.net/2006/11/26/brian-wansink-on-research-design/>

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### Michael Pollan vs. Processed Food (2007-01-31 08:18)

The problem with Michael Pollan's [1]latest food piece in the New York Times is that it isn't very . . . nutritious. It doesn't contain a story with new and interesting facts – like the story of Joel Salatin, a brilliant Virginia farmer, well told by Pollan in *The Omnivore's Dilemma*. Instead it contains many broad generalizations, the evidence for which is never given in any detail. Long ago we ate food (i.e., unprocessed food), says Pollan, and it was better for us than the processed food products we eat today. Long ago we listened to stories, say I, and it was better for us than the expert statements on which much of modern journalism is based. If I taught journalism (as Pollan does), I would tell my students the best thing is a story of success (e.g., Salatin) because we can always learn from it. Next best is a story of failure because we can always learn from that, too. Worst is to quote experts (e.g., Pollan quotes Marion Nestle). For two reasons: 1. Experts are often wrong. When they are, it is worse than learning nothing – we are actively misled. 2. Experts – at least in standard journalism – never say the facts on which their claims are based. Even if they are correct, what the reader learns from quoting them is shallow.

Misled by experts, apparently, Pollan repeats Marion Nestle's recommendation to "eat less" (to reduce obesity). Why it is helpful to repeat failed advice that the rest of us have heard a thousand times is not explained. Nor is it made clear what ancient foodway – Pollan is basically saying we should return to long-ago ways of eating – we would be following if we tried to "eat less." As far as I know, the answer is none of them.

Several big important stories contradict Pollan's conclusions. One is the story of B vitamin supplementation of flour and other processed food, which greatly reduced neural birth defects. I heard a dean of a public health school tell a room full of new students that this one advance, which averted so much suffering, fully justified all the money spent on schools of public health. I agree. Processing food is not always bad. Sometimes it can be very good. When you



process food based on a correct theory, that often happens. Food sterilization, refrigeration, and preservation via additives – all based on a correct theory, the germ theory of disease – have had many benefits. It's when you process food based on a wrong theory – such as the theory that fat causes obesity – that you can easily do more harm than good.

There is no turning back. We can't avoid processed food. To move forward, we need better theories to guide the processing. Anyone who reads this blog regularly knows I think ancient foodways are a good source of evidence with which to build theories (e.g., [2]Weston Price) but of course there are many other good sources of evidence.

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Usually [3]CISSP professionals prefer doing [4]N10-003 as it helps them in their [5]SY0-101 later. A small number however is content with [6]70-649 too.

1. [http://www.nytimes.com/2007/01/28/magazine/28nutritionism.t.html?\\_r=2&ref=health&oref=slogin&oref=slogin](http://www.nytimes.com/2007/01/28/magazine/28nutritionism.t.html?_r=2&ref=health&oref=slogin&oref=slogin)
2. <http://www.westonaprice.org/>
3. <http://www.testking-questions.com/certification/CISSP.htm>
4. <http://www.testking-questions.com/exam/N10-003.htm>
5. <http://www.testking-questions.com/exam/SY0-101.htm>
6. <http://www.testking-questions.com/exam/70-649.htm>

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Blair (2007-01-31 11:03:08)

I understand what you're saying, but many additives that are in processed foods can cause cancer.

Scott (2007-01-31 11:06:03)

I agree with most of Pollan's points. Yes, the science of nutrition is certainly useful in many ways, but at the same time many of us do seem to be over-obsessed with nutritional details. Adding specific nutrients back into foods that are crappy for us to begin is a step in the right direction, but why not just eat the foods that naturally come with these nutrients to begin with?

Tim Lundeen (2007-01-31 21:58:54)

The "eat less" recommendation seems consistent with what we are learning about calorie restriction and life expectancy, and that higher metabolic activity from more food are coorelated with a lot of different health risks. I agree that it was not well presented :-)

Katlen (2007-02-01 08:25:07)

I am very frustrated with the "eat less" mantra. I eat 800-1200 calories a day and in two weeks I haven't moved off my set point. My size makes doctors think I eat a lot more than I do. Since in a previous attempt to "eat less" I've already ended up in the emergency room from not eating, I am well aware of the dangers of not eating enough. So when I hear "eat less," I want to scream!

Sam Penrose (2007-02-01 17:24:26)

I think you and Pollan are talking past each other. Pollans is generalizing about the American diet as a whole: McDonalds and Coke and General Mills' breakfast products. I don't believe he has a problem with pasteurized milk or iodized salt.

Sam penrose (2007-02-01 17:25:57)

On caloric restrictions, with particular relevance to your research on smellable calories:  
<http://arstechnica.com/journals/science.ars/2007/2/1/6857>

Shawn (2007-02-07 08:04:14)

I'd like to point out that your example of fortifying flour (white flour, actually) is not really that great, since in this case they are simply adding back some (but not all) of the nutrients that were destroyed in processing. Whole wheat flour does not have to be fortified because it has those nutrients to begin with – which actually supports Pollan's arguments against food processing.

## 2.2 February

### An Unexpected Benefit of Self-Experimentation (2007-02-01 07:31)

A few days ago I ate a handful of peanuts. Uh-oh, I thought, will this make my brain work worse? Peanuts are high in omega-6. As regular readers of this blog know, when I increased my omega-3 intake several months ago, my balance got better. More recently, when I replaced high omega-3/low omega-6 oils with a low omega-3/high omega-6 oil, my balance got worse; when I returned to the high omega-3/low omega-6 oils, my balance went back up. (Details [1]here.)

To measure the effect of different fats on my brain I have been [2]measuring my balance every morning. The morning after I ate the peanuts, my balance score was within normal limits. Meaning my brain was working no worse than usual. This was reassuring – an unexpected benefit of self-experimentation.

In ten years, will there will be websites that people regularly visit to take a few mental tests? The tests would be a quick and easy measure of brain function. The sites would remember all your scores and would graphically compare your current score with your previous scores. One more way to procrastinate – but it would be good procrastination.

1. <http://www.blog.sethroberts.net/2007/01/20/science-in-action-omega-3-balance-results/>

2. <http://www.blog.sethroberts.net/2007/01/26/science-in-action-omega-3-materials/>

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Ken Dyck (2007-02-01 10:08:16)

I don't know about websites, but there's already a popular game for the Nintendo DS called [1]Brain Age that purports to measure your brain health and mental ability. It keeps two months of data that it can display on a graph (but is otherwise inaccessible).

1. <http://www.brainage.com/>

Tim Lundeen (2007-02-01 13:12:07)

Glad to hear about the non-effect of peanuts, I'm rather partial to them :-)

## Mr. Dezenhall, Meet Mr. Orwell (2007-02-02 15:30)

To deal with the threat posed by open-access journals (which I [1]praise and have [2]published in), a group of scientific publishers including Elsevier has hired Washington public relations consultant [3]Eric Dezenhall to help them. According to [4]this article, Mr. Dezenhall has

encouraged his clients to "develop simple messages," such as "public access equals government censorship"

Orwell's 1984 includes long excerpts from a fictional book with chapter titles such as "War is Peace." The book explains the term doublethink like this:

Applied to a Party member, it means a loyal willingness to say that black is white when Party discipline demands this. But it means also the ability to believe that black is white, and more, to know that black is white, and to forget that one has ever believed the contrary.

1. <http://www.blog.sethroberts.net/2007/01/08/methodological-lessons-from-self-experimentation-part-4-of-4/>
2. <http://www.nutritionj.com/content/5/1/30>
3. <http://www.dezenhall.com/eric.htm>
4. <http://www.bmj.com/cgi/content/full/334/7587/227>

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## The Israeli Paradox (2007-02-02 21:50)

You've heard of the French Paradox (140K Google hits), the fact that the French have little heart disease in spite of a diet high in saturated fats (the supposedly bad fats). You haven't heard of the [1]Israeli Paradox (<1K Google hits), which may be more important. (The French Paradox may be an [2]historical accident.) The Israeli Paradox is the fact that Jewish Israelis have very high rates of heart disease, diabetes, and cancer in spite of a diet low in total fat, high in polyunsaturated fats (the supposedly good fats), and low in saturated fats.

The best guess is that the Israeli Paradox is due to a high intake of omega-6 fats (from soybean oil). Non-Jewish Israeli citizens have rates of heart disease, diabetes, and cancer roughly half the Jewish rate. The non-Jews consume lots of olive oil (low in omega-6) rather than soybean oil. This is not an omega-3 effect; olive oil is low in both omega-3s.

"Replacing saturated fats with unsaturated fats [such as omega-6] is a safe, proven, and delicious way to cut the rates of heart disease," wrote Walter Willett, the Harvard epidemiologist, in [3]Eat, Drink, and Be Healthy (2001, p. 71). The Israeli Paradox shows that this way of reducing heart disease is anything but safe and proven.

1. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=8960090&dopt=Citation](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=8960090&dopt=Citation)
2. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1115846>
3. <http://www.westonaprice.org/bookreviews/eatdrinkbehealthy.html>

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OrenT (2007-02-03 01:07:11)

The linked article about the Israeli Paradox is more than 10 years old. In the last decade the Israeli diet has started to shift from soybean to canola oil and the consumption of olive oil in the jewish population has increased dramatically. I wonder if this is starting to show in the statistics.

Tim Lundeen (2007-02-03 12:19:56)

Fascinating links, thanks. A complex subject to be sure... Re red wine, there is more and more evidence that resveratrol (one of the components of some red wine) does very good things re metabolism. See <http://ouroboros.wordpress.com/2006/11/1-3/resveratrol-lifespan-and-an-unhealthy-diet/> and <http://en.wikipedia.org/wiki/Resveratrol>. I started taking a very low dose (20mg/day) about a month ago and noticed an immediate effect on my glucose metabolism, which went from low-grade diabetes to high-end of normal within a week (monitored via a home glucose meter). I am going to try increasing my resveratrol intake at some point, but first want to bump up my omega-3 levels from 600mg/day to 1g/day, based on what you've experienced re sleep/balance. BTW, my experience with the Shangri-La diet (based on the original paper), is that you have to be eating a relatively low glycemic-index diet for it to work. I would suggest that people who are not seeing effects try low-GI diet with is (which also lowers weight 10-15 % as you note).

JR (2007-03-13 10:25:36)

Updated article from pubmed, which I can't find a copy of. World Rev Nutr Diet. 2003;92:81-91. Links Omega-6/omega-3 fatty acid ratio: the Israeli paradox. \* Dubnov G, \* Berry EM.

Joe (2010-09-02 19:13:32)

The so-called "French Paradox" is no paradox...they have low rates of heart disease BECAUSE they eat more saturated fat! Saturated fat has long fallen under the curse of "guilty until proven innocent". Despite there being virtually no evidence that saturated fat causes heart disease, as well as lots of evidence that it PREVENTS heart disease, it's still considered the "bad fat". Wanna live longer and healthier? More saturated fat, less omega-6. Eat butter, not margarine. Eat fatty meat, not lean meat. Cut your carb intake to less than 20 % of your daily caloric intake, and try to eat a few eggs a day.

## Science in Action: Omega-3 (methodological improvements) (2007-02-03 12:51)

I realized (in both senses) several ways to improve my omega-3 self-experimentation:

1. Simpler treatment. I had been drinking both [1]walnut oil and flaxseed oil. For the sake of simplicity, I stopped the walnut oil. I continued to drink 2 tablespoons/day of flaxseed oil. I will vary the amount of flaxseed oil.
2. More controlled measurement. Instead of balancing on any part of my right foot, I started balancing on only the balls of my right foot.
3. More measurement. I measure my balance once/day. During that one session I had been measuring my balance 20 times (measuring how long I could stand on a [2]platform before falling off – 20 durations). The first 5 durations were warm-up, leaving 15 durations that counted. I increased the total number of trials to 30. It was still easy; the whole thing takes about 10 minutes.

4. A new measure. Anything that affects balance is likely to affect other mental abilities, I believe. To test this belief, I will start measuring my brain in a new way: a [3]pencil-and-paper version of [4]Saul Sternberg's [5]memory-scanning task. It will take about 5 minutes.

I started #1-3 about a week ago and will start #4 today.

1. <http://www.blog.sethroberts.net/2007/01/26/science-in-action-omega-3-materials/>
2. <http://www.blog.sethroberts.net/2007/01/26/science-in-action-omega-3-materials/>
3. <http://www.psych.upenn.edu/~saul/procedure.html>
4. <http://www.psych.upenn.edu/~saul/>
5. <http://www.psych.upenn.edu/~saul/hss.html>

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John (2007-02-04 11:37:56)

While I appreciate your overarching message of valuing bringing experimentation into more people's lives, at first glance (I just came to your blog, and this is the first entry I've read) this particular experiment you've designed seems fraught with problems. Going from least concerning to most: There's the issue of respondent/participant bias, with your own vested interest in finding change/results. Also, you didn't just come across this intervention randomly, and that same belief or hunch that led to you choosing this intervention (and the implied hypothesis being tested) also begs the worry of placebo effect. In short, there are both conscious and unconscious ways in which you're likely to distort your own results. More troubling is the obvious role that "practice effect" can play here. I'd fully expect your balancing ability to improve as you continue, as there are countless anecdotal examples of human balance skills where people improve their skills through repetition practice. And while adding another measurement may be handy for your conceptual validity, it's yet another measure that is subject to the practice effect. (Sternberg used control groupings, which you aren't.)

seth (2007-02-04 12:33:56)

Practice effects are dealt with by the experimental design: You continue the measurements until the improvement stops. Then you begin the new treatment. As for the placebo-effect explanation of improvement, that's an explanation I plan to test.

John (2007-02-04 13:32:50)

Just to be clear, are you saying that, prior to beginning any treatment with the flackseed oil and/or walnut oil, you kept this identical regiment of balance measurement up until your rate of improvement stabilized? Really? You never mentioned that in your description. Moreover, you've very clearly described that you're currently mid-treatment and have now thought of adding this new memory instrument--so certainly no designed control of the practice effect there. Moreover, while these steps would at least be a nod to the problem of practice effect, they're not a viable solution. Do you have any data that show that learned improvement around your balancing challenge and the memory instrument is continual? There are plenty of cases of learning, both cognitive and physical, where plateaus and spurts are common. How do we know that any plateau really represents an end to change attributable to practice-based learning? Short answer: we don't. I think it's wonderful to find creative ways to bring research into our individual lives. But let's also remember that, as scientists, we don't design control groups in on a lark. It's expensive, resource intensive, you name it. And this case is quickly striking me as an example of why sometimes that additional work, away from anecdotal single-case experience, is needed.

seth (2007-02-04 15:29:15)

"There are plenty of cases of learning, both cognitive and physical, where plateaus and spurts are common." I don't know of a single example where a motor task (such as balance) suddenly improves after reaching a plateau. What's an example? These

experiments also involve sudden decrements in performance, which of course cannot be explained as a practice effect.

John (2007-02-04 16:33:52)

I'd say that most attempts at improving motor tasks—be it balancing on a board, learning to juggle, etc. are typified by nonlinear progress. It's certainly the case with physical rehabilitation of motor skills (though of course there's a question if that's analogous to learning). Plateaus, and even dips, etc. are common. Moreover, as a researcher, the burden of proof is yours. You're choosing a novel instrument/test for data, it's up to you to either test how the practice effect plays out with that instrument, or—more sensibly—control for the learning.

seth (2007-02-04 17:01:57)

Could you give a specific example, not involving physical rehabilitation, of a motor task where somebody observed sudden improvement after a plateau? With a reference, hopefully, so that the rest of us can find out about it?

### **Web Trials Update (2007-02-04 15:43)**

At the [1]Shangri-La Diet forums, SLDers – more than a hundred of them – have been [2]posting their weight for many months, thanks to Rey Arbolay. No similar data is available for any other weight-loss method, as far as I know.

The main weakness of the SLD data is lack of comparison. This led me to propose [3]web trials – a hybrid of the SLD data collection and a clinical trial, where there is always a comparison (at least two treatments, or treatment and control). After I [4]interviewed Robin Hanson about them, a British student programmer named [5]Andrew Sidwell contacted me and offered to set up a website to allow web trials to be done.

How exciting! A website that does web trials will allow cheap, easy, testing of many solutions to many problems. Although clinical trials usually involve medical problems, web trials can be used to study anything, as Robin pointed out. Andrew and I plan to start with procrastination.

1. <http://boards.sethroberts.net/index.php>
2. <http://boards.sethroberts.net/index.php?board=14.0>
3. <http://www.blog.sethroberts.net/2006/12/21/web-trials/>
4. <http://www.blog.sethroberts.net/2007/01/11/robin-hanson-on-web-trials/>
5. <http://entai.co.uk/>

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Andrea (2007-02-04 16:25:30)

That's very exciting Seth! I'm glad things are rolling along well for you

Carlo (2007-02-04 23:45:54)

If you start with procrastination it will take longer.

pdf23ds (2007-02-05 21:03:30)

How are you planning on handling the case where what you're tackling turns out to be two or more different conditions (that respond to different treatments)? I'm thinking that once you have good data on a few different treatments, and one or more of the treatments seems to have a multimodal distribution of efficacy, then you'd form hypotheses about different causes and have all the participants fill out custom-designed questionnaires to tease out the different causes. So for instance, for

some people procrastination might be helped most by ADD meds, and for others it would be helped most by a change in life circumstances (because whatever they're procrastinating about isn't what they \*really\* want to do). So you see that ADD meds help a third of the people, and re-evaluating one's goals helps another third, and you find that 90 % of the first group answer "no" to a question about life goal dissatisfaction, and 90 % of the second answer yes. Then you can use that question to better direct treatment.

pdf23ds (2007-02-07 17:37:04)

How will this compare to [1]RemedyFind?

1. <http://www.remedyfind.com/>

seth (2007-02-09 11:30:23)

Compared to RemedyFind: It will involve more types of measures. RemedyFind is based on efficacy ratings alone. And the comparisons will be more equal – e.g., will be collected at the same time. RemedyFind is a fascinating site, thanks for telling me about it. How to handle the case where what you're tackling turns out to be two or more different conditions: Yes, you would expect (a) a bimodal distribution of effectiveness and/or (b) that a person's characteristics predict what will happen.

### **Jane Jacobs on Scientific Method (2007-02-05 10:19)**

You try, if you can, to get people to look at the specific thing that is happening and not try to generalize it as an ideology. Ideologies, no matter what kind, are one of the greatest afflictions, because they blind us to seeing what is going on, or to what is being done.

From [1]this interview.

1. [http://www.newcolonist.com/jane\\_jacobs.html](http://www.newcolonist.com/jane_jacobs.html)

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### **Paperback SLD (2007-02-06 13:39)**

I have just finished correcting the proofs of the paperback edition of The Shangri-La Diet, due out in May. The paperback edition has much less about drinking sugar water, and more about omega-3s, nose-clipping, and lessons learned from the SLD forums. The first three interludes (case studies) are different.

All of the changes are due to user feedback. In This Film is Not Yet Rated, Fred Von Lohmann, an attorney for the Electronic Frontier Foundation, says

Everyone always forgets . . . that Sony thought the VCR would be primarily used for time-shifting. We all know that's not what it's good for; it's good for going to Blockbuster and renting movies, right? It took some time in the hands of consumers for that device to sort of find its highest and best use.

Perhaps someday everyone will forget that SLD was originally based on drinking sugar water.

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vee (2007-02-06 18:41:59)

Just when I thought I was seeing, on the forums, a small shift back toward sugar water.

Timmmmyboy (2007-02-09 18:25:52)

This is interesting, I hadn't realized you were shifting your thoughts away from sugar water. Any reason? I'm curious if an aspect of your diet works, why would you want people to forget it? Obviously oil seems to work better for most, but I wouldn't discount the importance of sugar water to some.

seth (2007-02-09 21:32:28)

The decreased emphasis on sugar water is because (a) most people, given a choice between sugar water and oil, chose oil and (b) oil has benefits that sugar water does not. The right oils have huge benefits in addition to weight loss.

diarist (2007-02-16 17:48:32)

Is the Shangri-La Diet a higher-fat diet? **FAT IN SHANGRI-LA DIETS** The typical American diet in recent years has consisted of 33 % calories from fat, 52 % calories from carbohydrates, and 15 % calories from protein. It has been observed that this distribution reflects a recent substantial decrease in fat intake. In the middle of the twentieth century the average American diet had contained 40 % or more calories from fat. It is often further observed that the decrease from 40 % fat to 33 % fat has been accompanied by increasing rates of overweight and obesity. (Basic factual information of this kind is discussed in Walter C. Willett, *Eat Drink and Be Healthy* (Free Press, 2001), mentioned by Seth Roberts in *The Shangri-La Diet*.) The Shangri-La Diet proposed by Seth Roberts uses what seems like an unexpected mechanism: if you dose yourself with two Tablespoons of flavorless olive oil a day (not eating or experiencing any flavor for an hour on each side of the oil dose), you'll find that your appetite decreases so you can eat less, and lose weight without great hunger. (Call taking oil in this fashion "Shangri-La oil"—other oils, such as those high in Omega-3s, may be substituted for olive oil.) Now one effect of the Shangri-La Diet when practised with olive oil is to increase the proportion of calories from fat back to the dietary levels of 50 years ago (though now with what we believe are healthier fats). This is really not much of a discovery, it's just basic arithmetic. Here's the arithmetic. Assume that someone eats 1800 calories per day on the typical current American diet: No Shangri-La Oil Calories: 1800 Fat: 594 (33 %) Carbs: 936 (52 %) Protein: 270 (15 %) Such a diet provides 594 calories a day from fat (33 %), 936 calories a day from carbohydrates (52 %), and 270 calories a day from protein sources (15 %). Now add two Tablespoons per day of olive oil, which has 120 calories per Tablespoon, a total of 240 calories, with all the rest of the diet remaining the same: Two Tbsps Oil Calories: 2040 Fat: 834 (41 %) Carbs: 936 (46 %) Protein: 270 (13 %) But increasing the total calorie intake by 240 extra calories per day is not a technique for weight loss—quite the contrary. The point of adding the olive oil is to suppress appetite and thus decrease the amount of other food eaten. Note that the Shangri-La olive oil does not directly replace other fats in the diet—you don't put olive oil on vegetables in place of butter, for instance. The olive oil has to be consumed separately, not in connection with any other food or flavor. So the other food which is subtracted will not be fats only, but some combination of calorie sources. Most simply (though other possibilities could be considered) all other food will be decreased in proportion to how much of it is ordinarily eaten. For instance, take the case of a dieter who has been consuming 1800 calories per day and who adds two Tablespoons of olive oil (240 calories), and subtracts 240 calories of other foods distributed over the diet in proportion to the prior distribution, totalling the same 1800 calories: Two Tbsps Oil Calories: 1800 Fat: 755 (42 %) Carbs: 811 (45 %) Protein: 234 (13 %) To achieve this result, the dieter has added 240 calories of olive oil, and subtracted 79 ( $240 \cdot .33$ ) calories of other fats, 125 ( $240 \cdot .52$ ) calories of carbohydrates, and 36 ( $240 \cdot .15$ ) calories of protein daily. The net effect of adding two Tablespoons of olive oil is to increase the proportion of fat in the diet from 33 % to 42 %, to reduce carbohydrates from 52 % to 45 %, and to reduce protein from 15 % to 13 %. To take a further case, suppose that a dieter consuming 1800



calories per day adds two Tablespoons of olive oil, and with the resulting appetite suppression manages to reduce total calories to 1600 per day, again distributed over the total former diet. Two Tbsps Oil Calories: 1600 Fat: 689 (43 %) Carbs: 707 (44 %) Protein: 204 (13 %) To achieve this net reduction of 200 calories per day (implying a weight loss of under half a pound per week), the dieter has added 240 calories of olive oil and subtracted a total of 440 calories, divided into 145 calories of other fats, 229 calories of carbohydrates, and 66 calories of proteins. Thus, the 1600-calorie diet with two Tablespoons of Shangri-La olive oil has a distribution not very different from the 1800-calorie diet with oil, and the proportion of fat is increased from the current average American diet, from 33 % fat to 43 % fat. This is a large enough shift that some result would be expected. The reader can easily experiment with other examples, using just pencil and paper. For instance, suppose that a dieter starting from 1800 calories per day increases Shangri-La oil to three Tablespoons per day (360 calories), and with the increased oil dosage manages to suppress appetite to eat only 1400 calories per day. Three Tbsps Oil Calories: 1400 Fat: 703 (50 %) Carbs: 541 (39 %) Protein: 156 (11 %) This 1400-calorie diet, compared to the original 1800-calorie diet with no oil, adds 360 calories from olive oil and subtracts a total of 760 calories, distributed as 251 calories from other fats, 395 calories from carbohydrates, and 114 calories from protein. The dieter will be eating only 1,040 calories in all meals daily, plus the 360 calories of oil taken separately. At this rate of loss, nearly a pound a week, the fat intake has increased from 33 % to 50 % of the total diet, quite a large numeric change. The dieter, apart from the three Tablespoons of olive oil, has not increased other fats, but is just eating less of the normal distribution of food sources. (Seth Roberts suggests not exceeding 400 calories a day from Shangri-La oil, so some value around 50 % of calories from fats would be about the maximum.)

**DISCUSSION** People who follow Seth Roberts's Shangri-La Diet, and who discuss it in his forums, frequently talk about the phenomenon of "appetite suppression" as being a distinctive feature. Various reasons for the appetite suppression have been suggested, by Roberts and by others, but I suggest there may be partly an additional and simple reason: the Shangri-La use of olive oil suppresses appetite by increasing fat as a proportion of the diet. Some people have reported that a higher level of fat in the diet acts to reduce appetite and a lower level of fat acts to increase appetite (hence, it is sometimes claimed, the apparent historical correlation of lower-fat diets with more obesity). Most proponents of low-carbohydrate diets claim that substituting fat for carbohydrates will permit a dieter to eat fewer calories with less hunger than on a lower-fat diet. The fact that the Shangri-La Diet with olive oil pretty much has to increase fat in anyone's diet might contribute to its ability to suppress appetite. Obviously, a change in the proportion of dietary calories from fat need not be the only factor in growing obesity or the only way that the Shangri-La diet promotes weight loss; all the other factors discussed by Seth Roberts in his book may well play a significant role, perhaps a dominating role. But a diet which has the effect of shifting people's proportion of fats from 33 % to 42 % or 50 % of total calories should expect some result from that. It's also interesting that many of the people on the Shangri-La website find that drinking sugar water acts very differently for them from taking olive oil, and that more and more people (including Seth Roberts, to judge from this blog post) seem to find that olive oil is the more generally effective option.

## More about Pollan and Processed Food (2007-02-07 11:26)

A reader named Shawn made an interesting comment on [1]Michael Pollan vs. Processed Food:

I'd like to point out that your example of fortifying flour (white flour, actually) is not really that great, since in this case they are simply adding back some (but not all) of the nutrients that were destroyed in processing. Whole wheat flour does not have to be fortified because it has those nutrients to begin with" which actually supports Pollan's arguments against food processing.

That's true, it does support Pollan's argument against food processing. More detail will help make my underlying logic clearer. Flour is milled for several reasons, the details of which don't matter; let me just say that white flour is more profitable than whole wheat flour, thus can be sold at a lower price. In terms of price, milling is win-win: the supplier makes more profit and the customer gets cheaper flour. But when you consider nutrition – milled flour less nutritious than unmilled – it is not clear at all that milling is win-win. B vitamin supplementation, by cheaply replacing what the

milling took out, moves us back to win-win. Not milling is not win-win: It is nothing-nothing.

When you process food based on a correct theory – an accurate understanding of how our bodies work – the result is often win-win. When you process food based on a wrong theory, it is much harder to reach that result. This is what Pollan didn't understand. As usual, Jane Jacobs said it best. In response to people who said that Problem X or Problem Y was due to overpopulation – just as Pollan is anti-food-processing – Jacobs said the problem is not too many people, the problem is the undone work. In the case of food, the problem is not too much processing, the problem is the undone work – the undone work of coming up with good theories to guide the processing.

1. <http://www.blog.sethroberts.net/2007/01/31/michael-pollan-vs-processed-food/>

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pdf23ds (2007-02-07 17:39:06)

"the undone work of coming up with good theories to guide the processing" Things like including lost omega-3? Say, what do you think about magnesium? Isn't it considered to be deficient in the same way omega-3 is in American diet?

seth (2007-02-08 12:52:17)

Coming up with good theories – well, the theory behind the Shangri-La Diet, for example. If food has been processed in a way that caused weight loss, Pollan would have much less an argument. But yes also the work of figuring out better how much omega-3 we need and how to measure its benefits. Making a more convincing case for it. don't know about magnesium, thanks for mentioning it.

Raina (2007-02-09 11:04:21)

The best point I thought the article made was that there is so much we don't know about nutrition. It's ridiculous to think that we have identified all of the important nutrients that we obtain from food, and until we have, less processed food is going to be better than more processed food. As you say, the problem is the undone work. It's not as simple as that makes it seem, though, we don't really know how much remains to be done and we won't really know when we're finished until well after that point. I really doubt we're finished now though, so until we are, I'm going to try to stick with the less processed food that our bodies have evolved to use.

seth (2007-02-09 11:21:29)

I agree, "there is much we don't know about nutrition" is the best point the article made. Given that it started and ended with nutritional recommendations, it didn't make that point very clearly. When it comes to processing, I make distinctions: packaged food, no; refrigerated food, yes; cooked food, yes. I suspect you agree with me here.

## **How Often Should I Weigh Myself? (2007-02-08 10:14)**

I dislike weighing myself. But the recent [1]Fancy Food Show left me with a fabulous collection of beautiful rare chocolates and I have gained weight. [2]This essay by Bill McKibben about the value of knowing your gas mileage and [3]this great piece by Atul Gawande on the value of a birth-outcome score (the Apgar score) have made me realize:

1. Weighing yourself is an act of courage.
2. Weighing yourself is always beneficial. No matter what the scale says.

1. <http://www.specialtyfood.com/do/Home>
2. <http://www.oriononline.org/pages/om/03-1om/McKibben.html>
3. [http://www.newyorker.com/printables/fact/061009fa\\_fact](http://www.newyorker.com/printables/fact/061009fa_fact)

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longdaysjourney (2007-02-08 11:38:19)

I'm not sure I agree with you. Weighing yourself is always beneficial, if and only if you can see the measurement as just a simple data point. But there are a lot of people who can't do this. I can't tell you how many weight-loss bloggers I read who are obsessed with the scale, weighing themselves multiple times a day, getting really depressed if their weight fluctuates by just 2-3 lbs from one day to the next. The number defines their whole day. I tend to think that these people should only weigh themselves once a week, if not once a month, particularly if they're actively losing weight. They are not helping themselves with the mental trauma of daily weigh-ins

Jeff Thomas (2007-02-08 12:08:22)

True. I've often seen it recommended that you only weigh yourself once a week while on a diet. This is presumably so you don't get discouraged by daily fluctuations. However, if you weigh yourself every day a bad weigh in will naturally be followed up quickly by a good weigh in, and you will not only see the overall trend shaping up, but you may learn something from the fluctuations.

seth (2007-02-08 12:50:05)

More than once/day seems pointless, I agree with you. But as the articles I linked to show, knowing the weight does exert a downward pressure. Some people might not need that downward pressure. Or it might come at too high a price.

Matt (2007-02-08 12:55:20)

Although I don't follow any of the actual diet advice contained within (especially after SLD), [1]The Hacker's Diet contains a bevy of useful information about how the human body actually works and what weight your significance has to it. Since I read HD two years ago, I have weighed myself once a day, in the morning after I urinate, stark naked. I use a spreadsheet similar to the one John describes within to calculate a "moving average" based on the past two weeks or so of weights, that helps smooth out the day-to-day fluctuations you will often see. This helps me notice trends (good or bad) before I notice them otherwise. However, I don't think that weighing yourself more than once per day is really beneficial, and if you weigh yourself once a day like I do, it has to be under the same circumstances every day. Doing it first thing helps eliminate a lot of variables: I've tried weighing myself at various points throughout the day and have noticed HUGE fluctuations (up to six pounds) based on what I've eaten, if I've recently had a bowel movement, etc, etc, and trying to keep track of all those variables and the effect they have is just too much.

1. <http://www.fourmilab.ch/hackdiet/www/hackdiet.html>

losing-it (2007-02-09 14:16:24)

Concerning weighing-in during weight reduction; personal experience: All of the above are valid, even if differing perspectives I've done it both ways. Not judging by the scale means rather, judging by either the tape measure or by size and fit of clothes and changes in physique. For me as a woman, the tape measure presents a more accurate picture than scale of what is going on. Who knows why, but it seems inches may be shed when the scale numbers appear to be at a standstill or bouncing upward and downward a few pounds for weeks. Truthfully, even when greatly encouraged by tape-measure results, I still long to see downward scale movement. At one time of weightloss efforts, I refused to view the scale except once monthly, along with my scheduled tape measurement. I was avoiding emotional discouragement – all the while rationally understanding that a body's mass is continually affected by host of variable influences. I psychologically wanted to get an invigorating boost and increased motivation from seeing a larger drop "all at once" than is experienced with sometimes-confusing up and down daily weights. Add to that, in places like internet fora, when Venus and Mars compare their progress, it can also be a source of disheartenment

for women even though they full well know why men, on the whole, shed fat and weight more quickly and consistently, then tone more easily :^D With SLD, I am weighing in every day, even if timidly after a larger than normal meal, or when I have an overnight-5 pounds+ episode of edema. Or when the weight doesn't seem to be changing. Medically, I am supposed to weigh in every morning, although I don't really want to, and don't consistently do so, other than during this weightloss effort. It can be scary to look into the dark light of the scale. For many, daily weigh-ins CAN be an act of courage. They might more gently be done for oneself in a mildly self-disassociative state, while chanting a sweet, lullabye-rhythm'ed and new-agey mnemonic mantra to the effect that: "While I am beautifying my body, mind and soul with loving care and health, I kindly remind my heart and mind that the scale cannot be entirely accurate concerning the body's actual weight" – or better – "While I am renewing my body, mind and soul through good nutrition and health, I lovingly remind my heart and mind that, while excess fat is quietly and consistently being shed, the body's daily mass increases and decreases, due to a variety of inconsistent circumstances." :^D Hmm. Maybe I could put those affirmations into poetry and tunes and chant them on binaural soundwave CDs. Ah, although we may know and believe facts in our heads, it doesn't necessarily make them feel good or even believable in our hearts. Most of us are topsy-turvy: more creatures of heart over brain, me'feels. ...I am. But, daily weighing-in can be beneficial, nonetheless: On the positive side, for me, it does track the long, almost horizontally-angled downward trend and sheds more light for trying to realistically determine what makes my weight fluctuate or stall. It's helpful, especially comparing measures with caloric and macronutrient consumption records- both of which measuring and recording can be of value, too, particularly when beginning a nutritional plan – even SLD. The tracking of any and all of these, though somewhat a disciplinary nuisance imho, can make one diligent to examine what else might be considered and implemented – or not – or what to discontinue – in order to continue shedding unwanted fat and working toward improved health. This is, after all, the West where I've been born and living. When it comes to nutrition and eating, would that I might have been born in a culture with a long-traditional, healthy diet consumed and unquestioned by the aged elders and shamans and where there is no messing around with it by the political elite's regulatory commissions. Or, to be one of those people who are lucky with SLD and don't seem to need any of the above. I need this oil...This cup and this oil. That's all I need...and this tablespoon. I need this tablespoon... (please overlook any myopic typos)

Jay (2007-04-23 16:02:42)

Seth, Question. How does the body see the calories? Is it only by way of the mouth? I ask because I find the oil really easy to do during the week when I am at the office, but hard to keep protable on weekends. Would a capsule of oils, fish oils, any caloric laden property work just as well as long as the mouth did not taste the contents of the capsule when it was taken>? I am thinking about how they keep people in hospitals feed with intravenous feedings. If the mouth wasn;t detecting any food at all, wouldn;t it starve itself?

seth (2007-04-23 19:12:35)

yes, any form of calories should work just as well if you can't taste it. In fact, it appears to be enough to not smell it, which you can do by holding your nose while you eat whatever it is.

## **Eating Less (2007-02-09 12:30)**

Emily Yoffe has a [1]fascinating piece in Slate about going on a "CRON" (calorie-restricted optimal nutrition) plan. She eats 1500 calories/day. I was struck by three things: 1. Roy Wolford, apparently the first person to try something like this for a long time, did not live to be unusually old. He was 79 when he died. This is very helpful self-experimentation: CRON didn't work, at least for life expectancy. One data point is much better than none. 2. Hunger is a huge problem. 3. In spite of the hunger, Yoffe is continuing the plan after the allotted 2 months have finished. Her sleep is still poor, etc., but she likes being thinner.

Yoffe mentions the UpDayDownDay regime studied by NIH researcher Mark Mattson. There is now a [2]website for an associated book and diet. (My earlier [3]comments.) A few weeks ago I asked Donald Laub, a Stanford professor of medicine who is doing this regime, if he was still taking olive oil to make the low-calorie days easier to endure. He said he was.

1. <http://www.slate.com/id/2158975/nav/tap1/>
2. <http://www.johnsonupdaydowndaydiet.com/>
3. <http://www.blog.sethroberts.net/2006/06/22/meal-skipping-good-or-bad/>

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Edward O'Connor (2007-02-09 14:03:37)

Peter Voss, who's been CRONning for many years now, has notes on it here: <http://optimal.org/peter/cronindex.htm>

peter (2007-02-09 19:05:46)

according to Wikipedia, Dr. Walford died of Lou Gehrig's disease; does being thin cause or contribute to this disease? your comment suggests that CR contributed to his death and that's not clear.

seth (2007-02-09 21:34:04)

I'm not saying CR contributed to his death; I'm saying that in his particular case, the main supposed benefit of CR – longer life – failed to happen.

Peter Merel (2007-04-07 05:24:23)

If Walford had been hit by a car would you say the same? It is very regrettable that Walford's life was cut short in this way, but neither he nor anyone claims that CR will prevent death by serious disease, accident, or genetic predisposition. The main supposed benefit of CR, at least as commenced by adult humans, is not longer life - it is longer average lifespan. This is because to obtain a longer maximum lifespan, as in the experimental animals, you'd have to commence CR before puberty. And likely wind up a very long lived 4 foot tall simpleton as a result. Read the experiences of folk on your own forums, Seth. Less illness, increased energy, youthful appearance - these are common experiences of practitioners of CRON. The really nice thing about SLD is that, for the first time, it makes CRON practical for a huge population. The social effects of this may be very dramatic. When most young adults today can live to be illness free centenarians with nothing but an easily achieved and aesthetically beneficial diet change ... how will the world look then?

seth (2007-04-07 07:21:15)

What's the difference between "longer life" and "longer average lifespan"?

### **Omega-3 Facts of the Day (2007-02-10 13:22)**

1. In the 1960s, Greenland Eskimos ate a diet very high in omega-3s.
2. In the 1960s, Greenland Eskimos had very low rates of psoriasis. The Danish rate of psoriasis was 20 times the Eskimo rate.
3. High omega-3 intake reduces inflammatory intercellular signals.
4. Psoriasis [1] is beginning to be considered an autoimmune disease.

It's not the same type of fact but on the SLD forums spacehoppa [2] reported her rheumatoid arthritis was in remission, apparently from omega-3s, for the first time in the 18 years since it was diagnosed. Her balance was also better.

1. [http://www.ehealthmd.com/library/psoriasis/PSO\\_causes.html](http://www.ehealthmd.com/library/psoriasis/PSO_causes.html)
2. <http://boards.sethroberts.net/index.php?topic=678.msg12484#msg12484>

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## What Should "Correlation Does Not Imply Causation" Be Replaced With? (2007-02-10 23:42)

I shed an invisible tear whenever I hear "correlation does not imply causation" which the otherwise excellent [1]swivel (a website about correlations) emphasizes. Of course, there's truth to it. It saddens me because:

It's dismissive. It is often used to dismiss data from which something can be learned. The life-saving notion that smoking causes lung cancer was almost entirely built on correlations. For too long, these correlations were dismissed.

It's misleading. In real life, nothing unfailingly implies causation. In my experience, every data set has more than one interpretation. To "imply" causation requires diverse approaches and correlations are often among them.

It's a missed opportunity – namely, an opportunity to make a more nuanced statement about what we can learn from the data.

It's dogmatic (see [2]"Jane Jacobs on Scientific Method"). Some correlations, such as those from "natural experiments," imply causation much more than others. I suspect it does more harm than good to lump all of them together.

1. <http://www.swivel.com/>
2. <http://www.blog.sethroberts.net/2007/02/05/jane-jacobs-on-scientific-method/>

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Tim Lundeen (2007-02-11 10:13:49)

Well said. In the end, all we really have is correlation – all scientific models are based on correlation of model predictions with observations. If our observations don't match model predictions, then the model is abandoned or changed. And you are exactly right that correlation is a good starting point for looking for cause/effect models. So I suppose the phrase should really be "correlation does not imply that there is a cause-effect model that will stand up to other experiments or analysis".

seth (2007-02-11 13:03:57)

Yes, that would be an improvement. My candidate would be something like "Correlations are generally – not always, but usually – less persuasive evidence for causality than experiments." To make explicit the implied comparison.

pdf23ds (2007-02-11 23:50:09)

Well, if you're asking for a catchy replacement phrase, I think that "correlation suggests causation" isn't bad. It can be used to reply to people saying "correlation doesn't imply causation". You can say "but it \*does\* suggest it".

pdf23ds (2007-02-12 01:20:24)

The swivel people, on their blog, link to [1]this description of correlation on Good Math, Bad Math, which seems to get it about right.

The catch – and it's a big one – is that correlation does strongly suggest a causal relationship. (There's a Yale professor of statistics who's famous for saying something close to "Correlation is not the same thing as causation –

but it's a darn good hint!". ) It may not be the case that X causes Y or Y causes X - but if there's a strong correlation between them, you should suspect that there's a causal relationship

So if they agree with the post they approvingly linked to, then it sounds like they understand the issues. And given that their site seems to be mainly concerned with public data gathered from uncontrolled circumstances, in most of the use-cases of their site, much caution *\*is\** needed when inferring causality, so their approach to it might be justified by their (presumably statistically naive) audience.

1. [http://scienceblogs.com/goodmath/2007/01/basics\\_correlation\\_1.php](http://scienceblogs.com/goodmath/2007/01/basics_correlation_1.php)

seth (2007-02-12 05:09:55)

The statement "correlation does strongly suggest a causal relationship" strikes me as too strong. It's too easy to think of exceptions. The Good Math, Bad Math essay you link to goes on to say:

To show causation, you need to show a mechanism for the cause, and demonstrate that mechanism experimentally.

This does not describe how scientists in my field (experimental psychology) act. Usual behavior is to infer X causes Y if every time you (intentionally) change X, Y changes. The author is a computer scientist; that explains the lack of familiarity.

pdf23ds (2007-02-12 06:51:46)

Yeah, that point about inference based on manipulating random variables was brought up in the comments. But do you really think that statement goes too far? I mean, a case could be made that correlation virtually always implies a causal relationship, just not necessarily a direct one. If X and Y are correlated, and both caused by Z, they have a causal relationship with each other--and indirect one via Z. So saying that "correlation does strongly suggest a causal relationship" seems to me just to mean that when you see correlation, you should definitely look for the causal relationship, but it doesn't tell you to assume that it's a direct relationship. (Or if it is, which direction it's in.)

seth (2007-02-12 07:29:07)

I am not familiar with the concept of an "indirect" causal relationship. If I were, I might agree with you. To me, "causal relationship" means what you call "direct causal relationship."

Dmitry Dimov (2007-02-12 17:02:57)

Seth, great post, you are spot on. We basically whimped out after we launched Swivel after all the barrage of protests from academics and data vigilantes about our correlation meters. Even the Wikipedia article about correlations says something along the lines of, "correlation doesn't always mean causation but it sure is a hint." And when some say, well, maybe two trends are correlated because there's something else that's causing both to change, that's great: it made you think about what that third thing could be. So, I took out the link from our code just now, and it will disappear after we refresh our site. We're not some kind of anointed data gatekeepers trying to protect people from the dangers of correlation. People, look at the data and make up your own mind. That's what Swivel is about.

Bob V (2007-02-12 17:43:16)

*In the end, all we really have is correlation* Tim, this isn't entirely fair to say. In many fields (and in mine in particular) all we choose to look at are correlations. However, we also have temporal precedence. If one thing doesn't precede the other thing, it is hard to argue for a causal relationship no matter how nicely the correlational analysis works out. *a case could be made that correlation virtually always implies a causal relationship* If X and Y are correlated, it suggests at least two models, (1)  $X \rightarrow Y$  and (2)  $Y \rightarrow X$ , one of which is probably wrong. This is before considering any common causes of both.

seth (2007-02-12 19:12:18)

Thanks, Dmitry, I really appreciate that comment. You should know. That you got a "barrage of protests from academics and data vigilantes" is interesting. There's something backwards about that. Surely the point of data collection and analy-

sis is to learn something. Just like you say, it makes a lot more sense to emphasize what you do learn rather than what you don't.

pdf23ds (2007-02-13 02:06:38)

An indirect relationship is where  $X \rightarrow A \rightarrow B \rightarrow Y$ , or  $A \rightarrow B \rightarrow X$  and  $A \rightarrow C \rightarrow Y$ . Of course, there's a limit to how indirect it can be before the limited correlation between each of the steps multiplies together making the effect of A, B, and C on X and Y less negligible. If that path doesn't explain all the correlation, you look for additional mechanisms.

Tim Lundeen (2007-02-14 14:43:33)

I happened to see this quote from Jensen just now: Of course, a statistical correlation between two variables doesn't imply direct causality of the one variable by the other, nor does it imply the absence of causation. A lack of correlation, however, is more apt to imply the absence of causation. Investigation can't afford to eschew correlations as clues to causation, which of course must be established by other kinds of analysis. At an exploratory stage of investigation, reciting the "correlation is not causation" mantra is a premature criticism. <http://psycprints.ecs.soton.ac.uk/archive/00000019/> Seth, Jensen says that inspection time is highly g-loaded, looks like another possible metric for measuring mental acuity re omega-3 intake...

seth (2007-02-14 15:59:04)

Re the Jensen quote: I was once interviewing a job candidate in my office. She said something like "but of course correlation does not imply causality." I said, "wait a minute. it's not that simple. doesn't the absence of correlation suggest the absence of causality?" She thought about it, and agreed with me. Re inspection time: That wouldn't be a good measure. To determine inspection time you show stimuli very briefly (e.g., 200 msec) many times. If a whole trial takes 4 seconds, then only a small fraction of it (200 msec/4000 msec) involves brain work. That's the opposite of what I want.

Jack (2008-02-13 20:31:44)

It seems to me that the statement "correlation does not imply causation" is not meant to be dismissive (in general), but to note for a public unfamiliar with the subject that just because one factor tends to follow another, you should not immediately assume one to be the cause of the other. Imagine if every time someone noticed two factors that tend to follow each other, they began to cry 'causation!' You might have people believing that just because the numerals of a clock climb as the day becomes lighter, that the clock causes the change of the day. If observing the clock and the day outside were all the consideration they ever gave it, the clock might seem to control the day. However, you need merely to reset the clock to see that this action has no effect on the day outside, and the theory is broken. The further investigation that this quote begs would disprove the idea of causation between these two, and the correlation as well, for that matter. Further investigation would reveal that it was the passage of time itself which lead the clock to move (when properly set :) and the days to turn. Returning to the point, this phrase doesn't mean (in my opinion) that two factors are not related, but merely that correlation alone isn't enough to reach a satisfactory conclusion about the matter. Other evidence is needed before a conclusion should be made. When used in the wrong way, I can see how it could turn into undue criticism, but, I also think it serves a good point in asking people to think twice about a given example, rather than take what could merely be coincidence as fact.

seth (2008-02-14 00:18:09)

I don't mind educating the public. I mind unbalanced views of evidence. To say what's bad about evidence without also saying what's good is misleading. Which is bad education.

Phlebas (2012-01-04 12:33:42)

This is nothing more than a confusion over the word "imply". Logical implication means that something is undoubtedly entailed as a consequence of something else. However, "imply" is often used in common speech as a synonym of "suggest". The confusion is cleared up by noting that the intended meaning of "correlation does not imply causation" is that correlation does not logically entail causation; an aphorism intended to correct the simple but common error of supposing that any correlation between two or more things is \*necessarily\* evidence that a causal relationship exists between them. On the other hand, as Mr. Roberts has pointed out it is quite absurd to say that in general "correlation does not suggest causation", because it very often does.



## Blogging and Stone Age Life (2007-02-11 20:19)

"Blogging, of course, is one of the ultimate forms of self-experimentation," [1]Tyler Cowen wrote me. I wasn't quite sure what he meant. He explained: "Your blood pressure, how your brain is working, what new ideas you have, how your attention span has changed, how you now read other people's work differently, who you find yourself liking more (and less), etc. I believe those effects [of blogging] are often quite striking."

A fascinating idea. As I blogged [2]earlier, [3]James Pennebaker, a professor at UT Austin, has done many studies of the therapeutic effects of keeping a journal. A [4]book on therapeutic journaling gives "examples of how expressive writing can improve the immune system and lung function," according to its website. Do blogging and keeping a journal supply something important to human health and happiness present in Stone Age life but now usually missing? My [5]self-experimentation about faces suggests Stone Agers had a lot more face-to-face conversations in the morning than most of us. Could they have been more listened to than most of us?

Addendum: Right after I wrote this, I read a [6]post about interviewing people for a book. "They don't have to be prompted; they're utterly compelled to tell their stories," the interviewer wrote. For a term project, one of my students interviewed homeless people. He noticed something similar. Whatever the solution to homelessness, he concluded, it would involve a lot of listening.

1. <http://www.gmu.edu/jbc/Tyler/>
2. <http://www.blog.sethroberts.net/2006/10/11/the-writing-cure/>
3. <http://homepage.psy.utexas.edu/homepage/faculty/pennebaker/reprints/>
4. <http://books.apa.org/books.cfm?id=431791A>
5. <http://repositories.cdlib.org/postprints/117/>
6. <http://fromthearchives.blogspot.com/2007/02/i-would-also-consider-spain-because-it.html>

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pdf23ds (2007-02-12 00:03:15)

Other interesting things to explore about blogging: what is the effect on the blogger of fawning commenters? Contentious (but respectful) commenters? [1]Me-too commenters?

1. <http://pooflingers.blogspot.com/2007/02/censorship-at-wordpress.html>

Bob V (2007-02-12 17:28:46)

I started my blog 2.5 years ago when I left my job and started grad school, so it is hard to parse out why the following happened:

- I write higher quality first drafts.
- I have a better sense for what others will find interesting.
- My short term memory for interesting stories to tell others has improved.
- My tolerance for reading something that doesn't make its point in the first two sentences is now zero.

sags (2007-02-13 06:47:23)

It certainly makes you better person. Its gives a chance to all those intovert people to makes thier voices heard, develop senseof confidence in them. Helps them face the world in a better way. It is a established fact that public spekers, stage artists and leaders enjoy a more confidnet life style than others , blogging gives every one a option to develop this confidence.. i call this virtual reality..

seth (2007-02-13 08:50:46)

"Develop a sense of confidence." Maybe so. If you write about whatever you want and people continue to read . . . Another thing is that with a blog, all your readers are sympathetic – there are a billion other things (literally) they could be reading.

Hap (2007-03-03 12:27:07)

The MSNBC show "Lockup" goes into the nastiest, most non-rehabilitating kinds of prison environments you can imagine. But when they actually interview these hardened criminals, many seem quite human and with important things to say. So, yeah. Listen...

seth (2007-03-03 12:55:34)

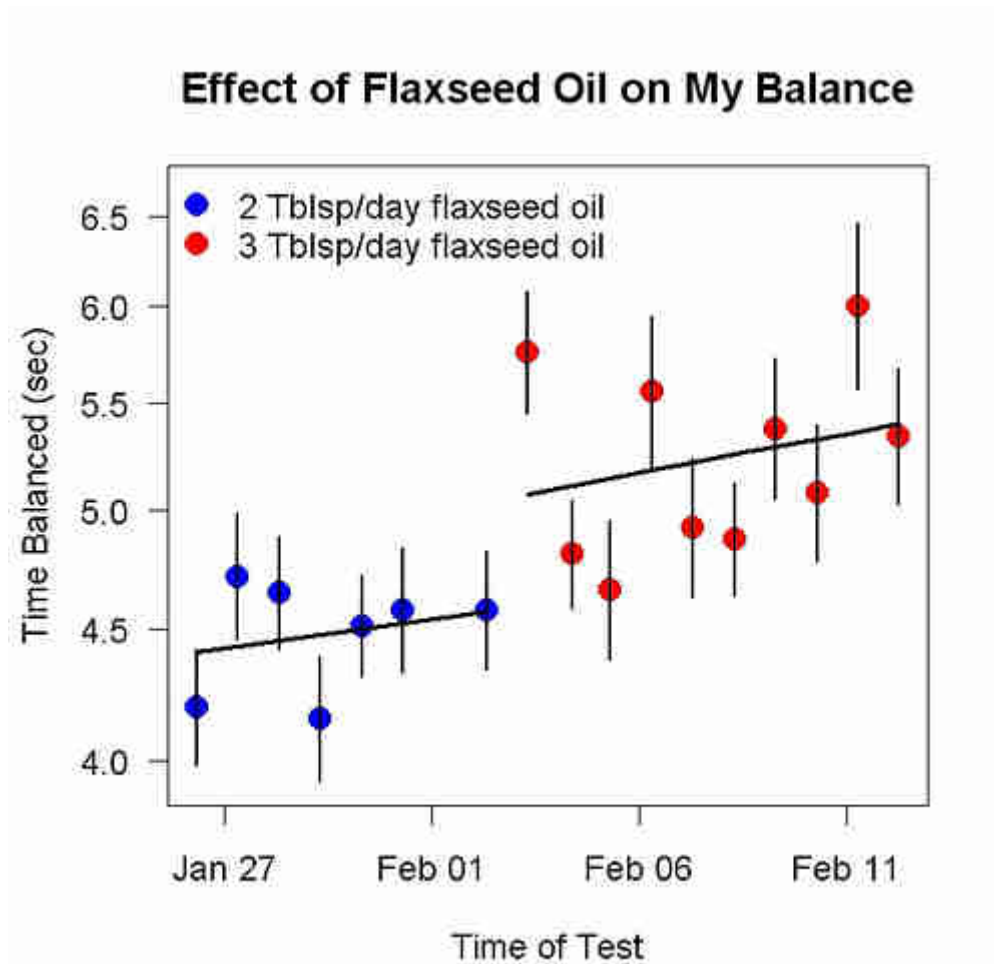
Great comment.

MIMI WIESENFELD (2007-12-26 14:40:20)

Hi Seth-I am the lady who met you on the bart shuttle a number of weeks ago. Well.I have been eating 2 tsp of flax oil a day-though not that regularly, I actually stopped for about 2 weeks. I also repurcahsed the omega 3 pills and try to do that daily too, but I have this problem that I hate taking pills. I do it when I can, which is sometimes:-) Have not noticed any difference yet in my tennis elbow problem, but also have not been doing it daily, so maybe that is why. But hey-a girl has to be careful-1 TBL is 130 calories-that is alot for a supplement. I am a little concerned as to whether it is worth the calories-but I willl go as long as to finish my 8 oz bottle from 'whole paycheck' because you were raving so! Hope you are having a nice holday season. Cheers, mlmi

### **Science in Action: Omega-3 (more data) (2007-02-12 13:16)**

This experiment isn't finished but these results are too fascinating not to share:



Each point is a mean of 25 trials. The bars are standard errors.

Every evening around 9-10 pm I drank 2 or 3 tablespoons of flaxseed oil (with my nose clipped shut). Every morning around 7-8 am I measured my balance – how long I could balance on one leg on a small platform. ([1]My balance-ometer.) I drank 2 tablespoons of flaxseed oil for 7 days then switched to 3 tablespoons.

The morning after the first 3-tablespoon dose was magical. From the very first trial I could tell my balance was better. It had always been hard to balance for much longer than 4 seconds. Now, all of a sudden, I could balance for 6 seconds, and even longer. More impressive to me than the conclusion that omega-3 (flaxseed oil is high in omega-3) had improved my brain function is (a) how easy it was to detect the difference between 2 and 3 tablespoons and (b) a fairly high dose (2 tablespoons/day of flaxseed oil contain about 14 g ALA, the shorter-chain omega-3) was less than optimal. Flaxseed oil labels recommend 1-2 Tablespoons/day.

[2]Earlier data.

1. <http://www.blog.sethroberts.net/2007/01/26/science-in-action-omega-3-materials/>
2. <http://www.blog.sethroberts.net/2007/01/20/science-in-action-omega-3-balance-results/>

Tim Lundeen (2007-02-12 15:51:05)

Wow! I just increased my daily DHA supplement to 600mg, I guess I will up it some more :-)

diarist (2007-02-12 16:21:14)

Exactly what is being compared when a dosage of "14g omega-3" daily is said to be an amount that "everyone would consider a very high dose"? Flaxseed oil contains about 7g of alpha linolenic acid (ALA) per tablespoon, fair enough. But what counts is the conversion of that ALA in the body into long-chain eicosapentaenoic acid (EPA) and docosapentaenoic acid (DHA). The standard literature suggests that such conversion is "unreliable and restricted", and usually no better than 5 % to 15 % (and in some people, especially men, close to 0 %). That rate of conversion would yield: 2 Tbsp flaxseed oil => 14g of ALA => 0.7g-2.1g EPA+DHA (or less) A daily dose of 0.7g to 2.1g of combined EPA and DHA is a very standard recommendation for distilled-fish-oil supplements, with package inserts recommending up to twice that much (and other sources still more). Not knowing your personal conversion efficiency, is it not possible that 2 or even 3 Tbsp of flaxseed oil would give you amounts of EPA and DHA less than a standard dosage of marine-source capsules? And that the dramatic change in your data for 2 Tbsp vs. 3 Tbsp is further evidence for that possibility?

John (2007-02-12 16:57:03)

I've sincerely enjoyed reading your blog, but I'm still baffled that someone with your solid training in experimental design would report this data—with the lack of controls and unexplored measurement tool—as being meaningful. If you were a doing peer review on an article with this research design, would you honestly green-light it for publication?

seth (2007-02-12 17:01:13)

that's a good point, diarist. I don't trust those conversion ratios because the more of something to digest, the more the body makes the enzyme necessary to digest it, and the conversion ratios may have come from short-term feeding studies. Thus they would underestimate the conversion rate with long-term intake. But I haven't looked at them. I read a paper about omega-3 requirements that recommended about 4 g/day – but they did not include ALA in that, I now see. I will fix the text.

seth (2007-02-12 19:02:01)

"If you were reviewing an article with this research design, would you honestly green-light it for publication?" This particular design is incomplete, as I said in the first sentence. Your comment is a bit like asking what's the use of a newborn baby. I intend to add many more conditions to aid in the interpretation. However, ABA designs or ABABA or ABCDA or similar designs (of which the data I give could be a part) are common in the field of animal learning. Peer-reviewed articles in the best journals. In my field (experimental psychology) few papers contain a single experiment. You do multiple experiments to answer the questions of interpretation that a single experiment usually raises. There's no need for any experiment to be perfect. Because very few experiments stand on their own.

Tim Lundeen (2007-02-12 20:42:38)

Lots more to be done – but this is an amazing result. Who would have thought that there would be such a short-term, dramatic benefit from increasing omega-3s? Congratulations on finding this. You mentioned that you were going to do some tests of mental acuity as well as of balance – how are these looking?

bsand (2007-02-12 20:55:24)

Perhaps your balance got better because you have been practicing every day for a week? May be you should alternate 2 tbsp /3tbsp days and see if that makes a difference for you? Or start with 3 tbsp then go to 2 tbsp and see if your balance decreases. Or better yet, have someone else administer it alternating 2 tbsp of flax oil + 1 tbsp olive oil vs. 3 tbsp flax, etc...

seth (2007-02-12 21:15:55)

The practice explanation is unlikely – my balance suddenly got quite a bit better. Practice improvements are more gradual. Yes, I plan to do many more tests with different designs. I'm still in the preliminary stages of the mental acuity measurements.

pdf23ds (2007-02-13 02:01:40)

What about using something like chess for mental acuity? Unless you play regularly, it's probably not suitable, but if you do, you might have reached a skill plateau, and that would make it suitable. You don't have to go just by win/loss ratio, either. There are lots of chess programs that will give detailed number ratings for each move you make, which could probably be used to get a continuous performance number. What's the difference between flaxseed and fish oil? I note that my fish oil bottle says each gram tablet has 340 mg of omega-3, including 180 mg EPA and 120 DHA.

OrenT (2007-02-13 02:17:44)

I don't know how long it takes to replace enough of the lipids in the brain membranes to make a difference. I have a feeling it's much more than one night, though. The placebo effect definitely cannot be ruled out here. You can improve this experiment by making it effectively "double blind": Prepare doses of the omega-3 oil and a suitable placebo in small containers labelled with random numbers, mix them up and put the "decoding key" away until you have completed a trial run. You might want to put them in pairs where you only switch randomly within each pair, using the two doses of each pair on consecutive days.

seth (2007-02-13 03:28:58)

Chess is a good idea. It requires heavy continuous computation, which is what I'm looking for and which most cognitive tests lack. I don't think it's practical because of the time-consuming opening game, unfortunately. I want something that will take no more than 20 minutes per testing session. Some other game? Flaxseed oil has lots of the shorter-chain omega-3, ALA. Which is converted in the body to the longer-chain omega-3s, such as EPA. Fish have lots of EPA. "I don't know how long it takes to replace enough of the lipids in the brain membranes to make a difference. I have a feeling it's much more than one night, though. The placebo effect definitely cannot be ruled out here." The initial improvement in my balance was a total surprise and cannot be due to a placebo effect. The other part of this comment – shouldn't it take longer than one night to replace enough of the lipids to make a difference? – is what I thought. It is what all experimenters have thought, apparently, because these day to day measurements have never before been made. This is part of what is so interesting here, that the effects are much faster than expected.

pdf23ds (2007-02-13 03:43:03)

Well, you could always use short time controls. On internet chess servers, twenty minute games (ten per player) are actually considered kind of long. If you're not used to fast play like that, it might take a bit of getting used to. Blitz games, which are very popular, are 5/5 or 5/0 (five minutes per player, plus another 5 seconds per move, or 0 seconds per move). But if you use computer analysis to rate the quality of your moves and give you a score that way, it doesn't matter whether you finish a game (or get beaten early, and start another). It doesn't even matter as much whether you win. So you could play for ten minutes at a stretch and not worry about finishing. The way you'd do that is to have your chess engine think for some standard amount of time for each move, say ten seconds, and it would tell you who it thinks has the better position after (1) your move and (2) its favorite move. You'd subtract the scores to get the difference, and add up the difference over the whole game. The closer to 0 you get, the better. I think I could pretty easily set up an engine to do this to an arbitrary game with some scripts.

Tim Lundeen (2007-02-13 14:14:13)

Another possibility for mental acuity metrics is to time the arithmetic sets in "Train Your Brain" by Kawashima. These take under 2 minutes per day and have been pretty stable for me once I got up the learning curve. (I had my best times ever the last couple of days since I increased my DHA supplements.) He also has some Stroop tests in this book, which could also be a useful metric and take less than a minute. For the arithmetic sets, I just xerox them and start over after I get to the 60th one, seems to work ok.

OrenT (2007-02-14 00:03:05)

Any comments about the idea of doing a blinded self-experiment?

seth (2007-02-14 04:57:15)

These are all excellent ideas. 1. Computer chess might be fun. That would be a big advantage. of course. Other pluses: lots of mental computation; easy to describe. Minuses: Most people don't play chess. Unclear how to deal with speed/accuracy tradeoff issue (if I take more time my moves improve). 2. Arithmetic sets. Pluses: easy to describe, easy to generate (I assume),

easy to measure performance, little worry about speed/accuracy tradeoff (because accuracy always close to perfect). Minuses: Less fun than chess. 3. Blinded self-experiment. Pluses: More convincing. Minuses: Requires swallowing a lot of capsules.

aaron\_m (2007-02-18 10:25:14)

"The practice explanation is unlikely - my balance suddenly got quite a bit better. Practice improvements are more gradual." I do not get your argument here. When it comes to balance you can dramatically improve your results during a single session. Trying to balance on a beam 5 times in a row most people with normal physical health will have a significant improvement from the 1st try to the fifth try. Going from 4 to 6 seconds should be no problem. I would expect something like, for example, 4 seconds to 30 seconds for the unathletic types and 30 seconds to 1.5 minutes for athletic types, if you get my drift. Your general claim that practice improvements are gradual if we are talking about big improvements does not tell us anything about the specific case at hand. A fifty percent improvement is big if we are talking about a change in how fast you can run 100 meters, but not if we are talking about balancing on a beam. A big improvement in the latter case might be on the order of 500 %

seth (2007-02-18 10:52:27)

The improvements I am talking about are between session, not within session. I have been measuring my balance for months. I have done it thousands of times. And then it suddenly got better. This is not how practice works. Between-session practice effects - such as the improvement from Day 1 to Day 2, or from Day 2 to Day 3 - get smaller as practice continues. For example, the improvement from Day 1 to Day 2 will be much larger than the improvement from Day 100 to Day 101. At the time this experiment began, the day-to-day improvements were quite small, as the slope of the lines shows.

aaron\_m (2007-02-18 16:50:31)

OK But why do you think that you demonstrated such poor improvement when you had practiced the task thousands of times. I am sure you almost always get the comment that your own expectations are affecting the results of the experiment (and that you are tired of hearing it), but with these kinds of physical tasks the degree to which you believe that you should be able to do it or to improve can make a huge difference. And this confidence factor can often explain a big jump in performance. I think most climbers will tell you that they have had both periods of gradual improvement and leaps in performance, the latter having to do with attitude changes. I am sure you are also aware of this potential explanation, but I just do not understand how you are controlling for this factor. Can it be done, or is attempting to demonstrate a link between Omega-3 and something as attitude dependent as balance not the kind of thing that can be shown with any confidence via self-experimenting. Again here it makes a big difference whether or not a jump from 4 seconds to 6 seconds is big for a person with your physical capabilities, i.e. not for you specifically but the average for all people with comparable physical capabilities to you since we want to rule out your expectations about what your body can do. Could one have a control where you try to think that you will be able to do 8 seconds tomorrow and visualise yourself actually doing it and honestly try to build confidence that you can do it. Such a control might also require trying to convince yourself that your Omega-3 results are not real but due to an attitude change, and it is not obvious that it would be easy to detach yourself from previous results in this way.

seth (2007-02-18 17:29:59)

"demonstrated such poor improvement when you had practiced the task thousands of times" - don't understand. Changing the dose from 2 T/day to 3 T/day did not change my attitude. And balance is remarkably unconscious. Wanting to balance better has no effect, as far as I can tell. Throughout my balance testing I have always tried to do the best I could possibly do. To minimize the possibility of effects due to changes in motivation.

Barbara P (2007-02-23 03:07:28)

I noticed your comment in a recent (Feb 13) posting - "The problem is that it is extremely hard to measure the functioning of our immune system or our circulatory system or most other parts of our body." If you are diagnosed by a traditional Oriental acupuncturist or someone well-trained in naturopathy, you will get a reading of separate body systems. Here in North Carolina, I have been getting yearly exams (and homeopathic remedies) from such a practitioner for over 30 years. I'm 65. As a result of these checkups and a generally sensible lifestyle, my health is good because my doctor can see conditions and imbalances such as inflammations and pre-cancerous areas before they become problems. In the Bay area, it should be very easy to find

such a practitioner. These kinds of exams might make your self experimentation more trackable and fun. Thank you for your good work.

### **The Hidden Relevance of Experimental Psychology (2007-02-13 15:12)**

I used to teach introductory psychology. As I skimmed introductory psych texts, I could sense the disinterest that almost all the authors of these books had for my field – experimental psychology. Pavlov, memory – that was boring. What did that stuff have to do with everyday life? the authors seemed to be saying.

The Shangri-La Diet was built on thousands of experiments about Pavlovian learning. Empirical generalizations from that data helped me make the mental jump from experiments by Israel Ramirez to a new theory of weight control. A conceptual understanding of Pavlovian learning (what makes an association weak or strong) allowed me to use the new theory to find new ways of losing weight. Suddenly that boring stuff was relevant.

My omega-3 findings (such as [1]this), if they hold up, would do the same thing for two other areas of experimental psychology. The experimental designs I use, such as ABA, are straight from [2]Skinnerian psychology. Although I am now measuring my balance – not part of experimental psychology – my guess is that most of the measurements will eventually be more "mental." I assume that omega-3s improve my whole brain, not just the balance-related part. Experimental psychologists have spent 100 years developing simple and effective measures of many mental functions; all that measurement work should help us figure out how much omega-3 and omega-6 we should consume. Too little omega-3 and too much omega-6 appear to cause [3]a vast range of health problems, including the most serious. The problem is that it is extremely hard to measure the functioning of our immune system or our circulatory system or most other parts of our body. It is even hard to measure how well our mood-regulating system is working. (Too little omega-3 appears to increase the risk of bipolar disorder.) It is much easier to measure memory.

Experimental psychology can be divided into two parts – human (Part A) and animal (Part B). Part B can be subdivided into B1 (Skinnerian) and B2 (associative learning). Part B2 can be subdivided into B21 (Pavlovian learning) and B22 (instrumental learning). If you know the field you know these are the natural divisions. All my mainstream work has been in B22. I have managed (or hope to manage) to show the relevance of every area of experimental psychology except my own. Curious.

1. <http://www.blog.sethroberts.net/2007/02/12/science-in-action-omega-3-more-data/>

2. <http://seab.envmed.rochester.edu/jeab/>

3. [http://www.amazon.com/Fish-Omega-3-Human-Health-Second/dp/1893997812/sr=1-1/qid=1171365898/ref=pd\\_bbs\\_1/102-2539454-7332169?ie=UTF8&s=books](http://www.amazon.com/Fish-Omega-3-Human-Health-Second/dp/1893997812/sr=1-1/qid=1171365898/ref=pd_bbs_1/102-2539454-7332169?ie=UTF8&s=books)

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### **Jane Jacobs on the Food Industry (2007-02-14 16:14)**

According to Paul Goldberger in the [1]NY Sun,

[Jane Jacobs] regretted the construction of more and bigger buildings, and the enormous power held by the real estate industry, Mr. Goldberger said. "But she was also a realist," he said. "She was not Utopian, and I think that was the thing that distinguished her from many other intellectual and urban thinkers. She believed that the world we had was actually pretty good, if only we would learn to understand it, appreciate it, and handle it right."

Exactly. That is what I was saying in my comments on Michael Pollan ([2]here and [3]here). Our food world – which is mainly a processed food world, very little food is unprocessed – is actually pretty good. Some food processing is done according to wrong theories – the wrong theory that fat per se is fattening, for example. The newest food processing gets the most attention because it is still noteworthy (e.g., low-fat foods) but it is new theories that are most likely to be wrong. This is why "processed food" gets a bad rap. Most food processing, which is no longer advertised and we no longer notice because it is so common, is done according to correct theories – the main examples being cooking, refrigeration, freezing, and other forms of germ reduction. The germ theory of disease is correct. The poor health of many Americans reveals plenty of room for better understanding; I think the theory behind the Shangri-La diet is an example of better understanding. That theory suggests new types of food processing, as I explain in the last chapter of the book.

1. [http://www.nysun.com/article/48375/?page\\_no=1](http://www.nysun.com/article/48375/?page_no=1)

2. <http://www.blog.sethroberts.net/2007/01/31/michael-pollan-vs-processed-food/>

3. <http://www.blog.sethroberts.net/2007/02/07/more-about-pollan-and-processed-food/>

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## **The Secret History of Innovation (2007-02-15 05:35)**

In the 1960s, [1]Eric von Hippel, now a professor of management at MIT, was a first-year graduate student in psychology at Berkeley. He had been having a hard time getting in touch with his advisor. One day, in Tolman Hall, he saw his advisor go into his office. This is my chance, he thought. He went into his advisor's office. No one was there! He realized his advisor must be hiding behind his desk. It would have been too embarrassing to confront him, so he left the office (which might now be my office).

He left graduate school, too, became an inventor, and started a company. His company needed a certain type of fan. He went to a fan company and asked them to make it. It can't be done, they told him. What you are asking for violates the laws of physics. So he went to engineers at Princeton, who designed the fan for him. He went back to the company with blueprints. They agreed to make the fan if he would pay all the new-equipment costs and buy 10,000 of them. To the company's surprise, other people wanted this fan, too, and it became a popular product. The fan company placed ads in a trade publication with the headline "They said it couldn't be done."

Von Hippel studies where innovations – specifically, new products and services – come from. He [2]argues that they come from users far more than manufacturers appreciate. Just as I believe self-experimentation is a more powerful source of biomedical progress than mainstream scientists appreciate. I learned of his work only yesterday (he gave a talk here) but I'm sure it has a lot to teach me.



1. <http://web.mit.edu/evhippel/www/>
2. <http://web.mit.edu/evhippel/www/books.htm>

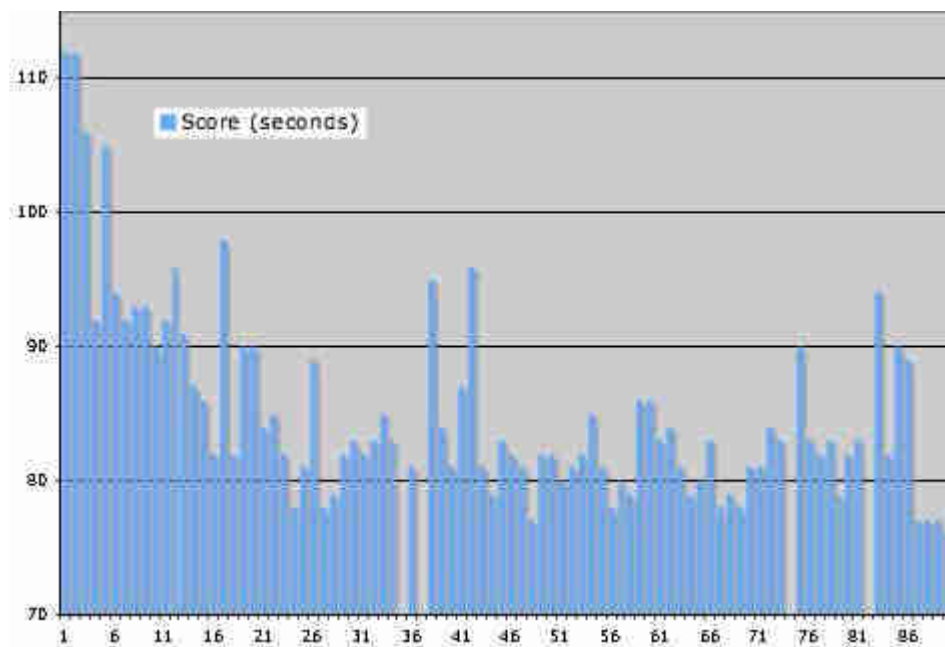
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## Omega-3 and Arithmetic (2007-02-16 06:17)

After I posted my [1]recent omega-3 results, Tim Lundeen, a Bay Area software developer, commented that his scores on an arithmetic test had improved after he had increased his omega-3 intake because of my results. I invited him to guest-blog about this:

For the last year [Tim wrote] I've been working on feeling better, trying to recover some of the energy and mental acuity that (I like to think) I used to have. As part of my program, I got Dr. Ryuta Kawashima's book, [2]Train Your Brain. His MRI studies have shown that simple arithmetic problems, done with time pressure, improve overall brain function. His book has 60 problem sets, each with 100 simple arithmetic problems such as  $7 \times 9$  or  $13 - 5$ .

Here are my results from 90 days of tests, including several breaks of 1 to 3 weeks (lower numbers are better):



I started out at about 110 seconds per problem set, improved to 80-82 seconds per set, and got stuck there. Each time I took a break due to travel or other distractions, I would start up at about 95 seconds and quickly come back down to my 80-82 second range.

Until the last 4 days. As part of my program to feel better, I started taking a DHA supplement. (DHA is found in fish oil. It is an omega-3 fatty acid that is preferred by the brain). I started taking 200 mg/day of DHA about 4 months ago, and didn't notice any effects, good or bad. So two months ago I increased the dose to 400 mg/day. Again I didn't notice any effects. After reading about the effects of Seth's omega-3 supplements, I increased my DHA by 400 mg/day to 800 mg/day. The supplements, plus omega-3 eggs, some flax oil (partially converted in the body to DHA), and some fish and oysters, put me well over the 1g/day recommended level. (When I have fish or oysters I take only 600 mg of

DHA instead of 800mg.)

I do the arithmetic test about 8 am every morning. I take the DHA supplement about 9 am. The effect of the 400 mg increase was immediate: The next morning my score dropped to 76-77 seconds, about 5 % better than I've ever seen on a regular basis. I made the change 5 days ago. The last 4 days are 4 of my 5 all-time best scores. It is fascinating to have another data point connecting brain function with omega-3 supplements.

The [3]supplements I take are from [4]iNutritionals. They are \$0.58/200 mg capsule ( \$35/bottle). They are from algae and are tasteless/odorless. No aftertaste or unpleasant effects. I tried a fish oil supplement a couple of years ago and couldn't take it because of the fishy taste and aftertaste.

About me: I'm CEO of [5]Web Crossing, Inc. My best-known product is Microsoft Works for the Macintosh, which sold millions of copies.

1. <http://www.blog.sethroberts.net/2007/02/12/science-in-action-omega-3-more-data/>
2. [http://www.amazon.com/Train-Your-Brain-Days-Better/dp/1933241152/sr=1-2/qid=1171627975/ref=ase\\_sethrobert and-20/102-2539454-7332169?ie=UTF8&s=books](http://www.amazon.com/Train-Your-Brain-Days-Better/dp/1933241152/sr=1-2/qid=1171627975/ref=ase_sethrobert and-20/102-2539454-7332169?ie=UTF8&s=books)
3. <http://inutritionals.com/smartdha.php>
4. <http://www.inutritionals.com/store.php>
5. <http://www.webcrossing.com/Home/>

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pdf23ds (2007-02-16 14:38:12)

I've been taking fish oil supplements for the past couple weeks (and seeing some subjective improvement). I actually sort of enjoy the mild fishiness. How many fish oil capsules would equal what you're taking, Seth? (With 340 mg omega-3, inc. 180 mg EPA, 120 mg DHA) I had the impression that you were totalling much more than a gram of omega-3, but maybe my math was wrong, or maybe the other omega-3 form isn't absorbed as efficiently?

seth (2007-02-16 15:52:14)

I don't know - it depends on the conversion rate of shorter-chain omega-3 to longer-chain omega-3. Little is known about the conversion rate. I will eventually test fish oil to see what amounts produce equivalent effects. I have been taking about 21 g of shorter-chain omega-3 (ALA). DHA and EPA are longer-chain omega-3. The shorter-chain ALA has the advantage not only of working but also of supplying the SLD calories I want.

Sean (2007-02-18 10:04:51)

Hate to advertise, but since I saw that Tim was paying 60 cents per 200mg capsule...I buy my fish oil capsules (300mg of Omega 3 - 180mg EPA and 120mg DHA) from the Daily Vita eBay store: [http://stores.ebay.com/DailyVita\\_Essential-Fatty-Acids\\_W0QQcolZ4QQdirZQ2d1QQfsubZ5QQftidZ2QQtZkm](http://stores.ebay.com/DailyVita_Essential-Fatty-Acids_W0QQcolZ4QQdirZQ2d1QQfsubZ5QQftidZ2QQtZkm) For 500 capsules I paid \$12.50 plus \$6 shipping. So a total of \$18.50 or 3.7 cents each - with 100mg more Omega 3 than Tim's. The delivery is also pretty fast, and the fish oil is good (one important thing to do with each new fish oil shipment: taste the liquid of a capsule for yourself to make sure the batch isn't rotten...this HAS been known to happen).

seth (2007-02-18 10:47:55)

what a big difference! thanks for telling us. one reason I find this research so promising is that it should allow testing on yourself of how effective this or that batch or brand is. No longer will you have to take someone else's word for it. No doubt the seller of the more expensive omega-3 will say it is better; but you can simply see for yourself.

Jeff Winkler (2007-04-17 19:27:23)

This looks like a good interactive math quiz to test mental agility - [http://maxi.kabutz.net/maths\\_gwt/Maths.html](http://maxi.kabutz.net/maths_gwt/Maths.html). The quiz is random..it's time and you're scored for correctness. I haven't seen the book Tim references, but this sounds like a good replacement for pre-printed worksheets.

## Two Ways of Thinking About Self-Experimentation (2007-02-17 10:25)

Self-experimentation (at least, [1]mine) is an example of what larger category?

My self-experimentation was very practical: I improved my sleep, mood, and health (went from average number of colds/winter to no colds/winter), and lost weight. My [2]omega-3 self-experimentation has improved my balance. From this point of view self-experimentation looks like engineering. > 99.99 % of engineering is making things better. The entirely new thing (e.g., the transistor) is very rare. The connection with [3]Eric von Hippel's work (who finds that product users do a lot of innovative engineering) is pretty clear. I "used" (applied) scientific research – for example, mood research.

Yesterday, however, Tyler Cowen, who [4]knows ethnic restaurants, posted [5]this:

Four chairs, one table, A+ decor, and the best Asian food in D.C. Nothing nearby comes close. Staff = 1, so you must call not only for reservations, but indeed hours in advance with an actual order so he can start making your food. I loved the salmon in red curry sauce, the pad thai, the larb, and some amazing chicken dish with the guy's last name on it; the drunken noodles are recommended as well. But I am not not not saying the other dishes are worse. 515 Florida Avenue, NW.

I'll never view the theory of the firm in the same light again. Monitoring doesn't work, and who needs division of labor anyway? The coolest place in DC right now, by far.

This is an example of what might be called the stunning single case – in this instance, drawn from everyday life. A stunning single case is an observation that casts doubt on a well-respected theory or leads to a new theory.

Another view of self-experimentation is that it is a way to learn from – take advantage of – stunning single cases in everyday life. Which is science (more precisely, theory building), not engineering. For example, one morning I woke up and felt much better than usual. This one event launched several years of self-experimentation that led to a new theory of mood.

The Shangri-La Diet was suggested by a single event (loss of appetite in Paris) but the theory behind the diet, which helped me learn from that event, was already there. (It was inspired by rat experiments.) The Paris event had a small effect on my theory but a big effect on how well I applied the theory. If all applications of theory count as engineering, the post-Paris development of SLD was engineering.

(Incidentally, I didn't notice the "not not not" in Tyler's post until the third or fourth reading, an example of repetition blindness.)

1. <http://repositories.cdlib.org/postprints/117/>
2. <http://www.blog.sethroberts.net/2007/02/12/science-in-action-omega-3-more-data/>
3. <http://web.mit.edu/evhippel/www/>
4. <http://www.tylercowensethnicdiningguide.com/>
5. [http://www.marginalrevolution.com/marginalrevolution/2007/02/thai\\_xing.html](http://www.marginalrevolution.com/marginalrevolution/2007/02/thai_xing.html)

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## Human Nature vs. Self-Experimentation (2007-02-18 15:53)

In all modesty, [1]here is Tyler Cowen's recent post about self-experimentation, especially [2]mine. I don't know enough about philosophy to comment on the philosophical stuff but I agree with the rest of it – especially the reference to [3]Robin Hanson, who [4]argues that our biases badly distort our reasoning. Sure, self-experimentation doesn't fit the usual research model. It doesn't need grants or graduate students. It doesn't generate publications quickly. But what if you are a scientist and you sleep badly, or you're depressed, or you want to lose weight? Why not self-experiment to try to find a solution? Your career won't suffer; you can do it in your spare time. Your life might benefit. Why this has not happened is the puzzle.

Tyler mentions status-quo bias. I would add two more. They are hedonic biases rather than cognitive ones: biases in what we enjoy. They are restricted to men; women are quite different:

Big things are more enjoyable than small things. This is rationalized into a belief that big things are more important, more worthy of study and support, than small things. I live on a steep street. One day a really big truck got stuck. When I came upon it, there were fifteen-odd people on the street just standing there, looking at it. Not a female among them. Treating big things better than small things I call bigism. Tyler's view that [5]a tiny restaurant had something to teach him is the opposite of bigism.

Admission of weakness is unpleasant. It is undignified. It is un-stoic. It is too personal. Taken to extremes, it is humiliating. I self-experimented on sleep and weight because I slept poorly and weighed too much. Telling others what I had done was an admission of weakness. Unavoidable, of course, but I too have this bias. Whenever anyone says I self-experimented with mood because I was depressed I quickly correct them.

1. [http://www.marginalrevolution.com/marginalrevolution/2007/02/all\\_my\\_life\\_for.html](http://www.marginalrevolution.com/marginalrevolution/2007/02/all_my_life_for.html)
2. <http://repositories.cdlib.org/postprints/117/>
3. <http://hanson.gmu.edu/home.html>
4. <http://robinhanson.typepad.com/overcomingbias/>
5. [http://www.marginalrevolution.com/marginalrevolution/2007/02/thai\\_xing.html](http://www.marginalrevolution.com/marginalrevolution/2007/02/thai_xing.html)

## If You Like Paris (2007-02-19 17:21)

A [1]thrilling ride, complete with scattering birds, through the city where the Shangri-La Diet was born.

1. <http://www.youtube.com/watch?v=ht6CBM7LTY0>

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Tom Myers (2007-02-20 09:52:44)

"This video has been removed by the user"; are you maybe talking about the fairly-famous Lelouch 1976 (1978?) race at [1]YouTube - GRIIP.NET Claude Lelouch 1976, "An 8-minutes high speed run in a Ferrari through the early morning streets of Paris to meet a girl."; but it will probably disappear; I believe there's a copyright claim.

1. <http://www.youtube.com/watch?v=ht6CBM7LTY0>

seth (2007-02-20 10:08:20)

Yes, that's it. Thanks for the new link.

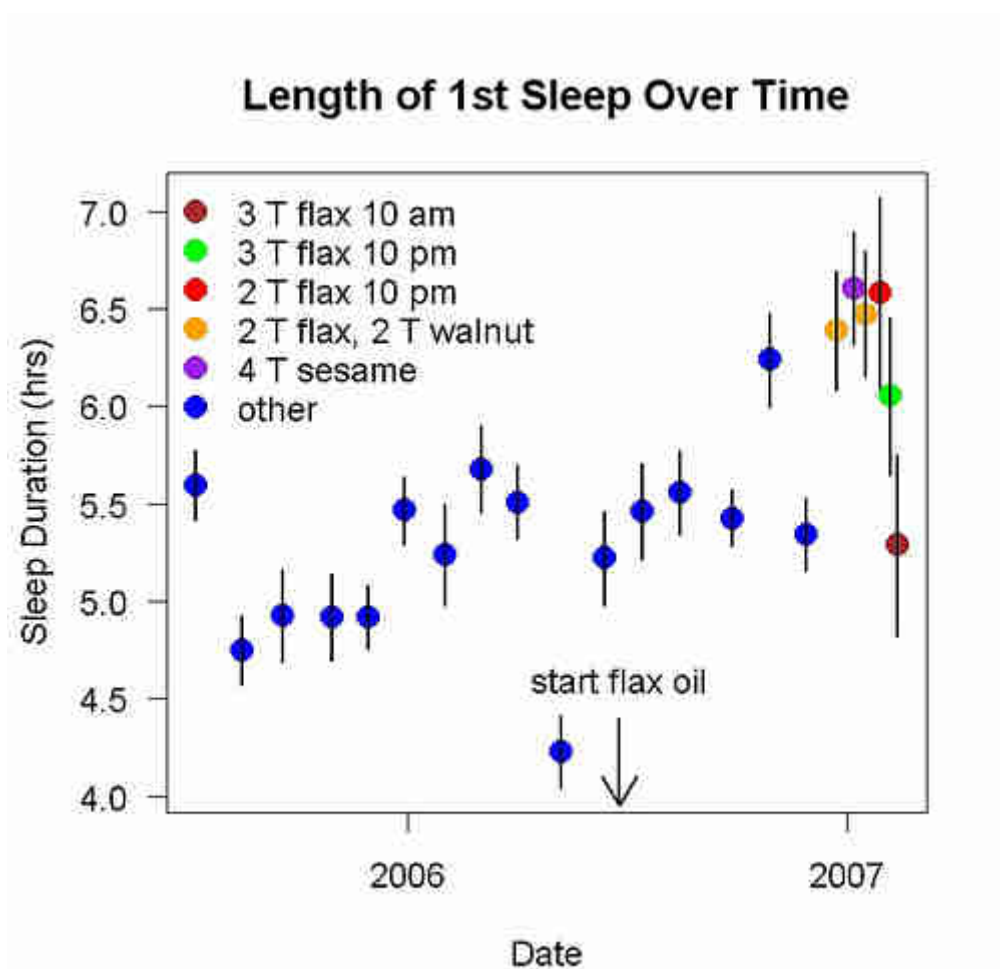
## Science in Action: Omega-3 (sleep data) (2007-02-21 11:32)

When I started taking omega-3 the rationale was not crystal clear. Many Shangri-La dieters reported better sleep; the diet involves drinking fat; omega-3, a fat, may affect the brain; sleep is controlled by the brain. I had not noticed any change in my sleep when I switched from sugar water to ELOO. Maybe this was because ELOO was low in omega-3, I thought, and this is what prompted my interest in omega-3. Later, a fly in the ointment: [1]a poll of SLDers found that ELOO was as likely to produce better sleep as other oils. Implying that it is not omega-3 that is producing better sleep. I was puzzled, but continued my omega-3 investigations, which by then were motivated by an unmistakable improvement in my balance. My sleep did seem to improve somewhat when I started taking flaxseed oil capsules (a good source of omega-3).

Now I think I understand. I recently changed the time of day that I take 3 tablespoons of flaxseed oil. I had been taking it around 10 pm every evening; I switched to 10 am every morning. I wondered if the change would affect my balance, which I test around 7 am every morning.

To my surprise the change affected my sleep: I started waking up earlier. That is, I slept fewer hours before I woke up. This was not good – in general, the longer I sleep in one continuous stretch at night, the better. I was waking earlier and less rested. My impression was that my sleep was reverting to an earlier, lower-quality state.

To confirm this, I entered a lot of my sleep data into my computer and made a graph of how the length of my sleep (my "1st" sleep, to distinguish it from sleep when I fall back asleep a few hours after waking up) varied over the last two years. Here is the graph:



T = tablespoon. The labels give the daily dose - e.g. "3 T flax" means 3 tablespoons/day of flaxseed oil. Each point is a mean. The error bars are standard errors. This graph shows that in recent months I had been sleeping longer. I had noticed this change: it was especially clear when I switched from 1 T/day flaxseed oil to 2 T/day. I thought the improvement was due to omega-3 - ignoring the fact that a switch to sesame oil (low in omega-3) didn't eliminate it.

Now, with a third fact contradicting my original idea (the first two were the poll and the sesame oil results), I have finally managed to change my mind. It is fat in the evening that causes longer sleep. Not only omega-3 fat - perhaps any fat has this effect. Now all sorts of things make sense.

When I started drinking ELOO my sleep didn't improve because I drank most of the ELOO during the day.

When I started the flaxseed oil capsules they had only a little effect on my sleep because I swallowed them throughout day as well as in the evening.

When I switched from 10 flaxseed oil capsules per day to 1 Tablespoon of flaxseed oil per day my sleep got longer because I always drank the tablespoon in one shot - around 10 pm. When I switched to 2 Tablespoons/day, I continued to drink it all at one time, around 10 pm. I attributed the improvement to the increase in omega-3; it was really due to the increased evening intake of fat.

ELOO and other fats helped many SLDers sleep better because they drank them in the evening. If you want to try this, note that the effect was bigger with 2 tablespoons at 10 pm than with 1 tablespoon at 10 pm. To be continued.

1. <http://boards.sethroberts.net/index.php?topic=1262.0>

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Sam (2010-01-11 16:50:46)

Has anyone on your forums ever found a way to make oil filled capsules? Just thinking, with some of the research showing saturated fat is better for you than polyunsaturates (like the [polyunsaturates + (alcohol or fructose)]=liver cirrhosis, but [saturated + alcohol] = no cirrhosis, butter might be a better oil for use with your diet. (I've had fatty liver before) And since you want to avoid flavour, the butter would need to be in capsules. I'm not convinced coconut oil is good for the liver either because no coconut oil gets into the chylomicrons, so it's all processed in the liver - a possibly worse situation than Fructose, IMHO

Mark (2010-07-31 23:10:47)

Wish I had time to contribute some more scientific data at this point, but for what it's worth: I've just started using ground flaxseed in my diet. I'm on a liver detox at the moment, so I'm acutely aware of what I'm eating and when I'm eating it. I'm also a lifelong insomniac, so I'm pretty finely attuned to my sleep quality and patterns. Last night at 10:30pm I took 2 tbsp of freshly ground flaxseed in 3 tbsp of water (actually, I ground them together into a totally unappetizing but not altogether unpleasant goo, like a warm alien pap). I had an incredible sleep last night. So good that after I got out of bed, I was all, "OK, WTF did I do right yesterday." I mean, in truth, I did everything right: I'm on a detox diet. But I haven't been sleeping like this. The last thing I did before bed was the flaxseed bit, so I googled flaxseed and sleep and ended up here. That's my data!

Mark (2010-08-02 07:35:59)

Sorry, when I made my above comment I hadn't looked at the rest of your blog. I now see that you don't really need any more random data from strangers (->).

Graham (2010-09-27 05:14:55)

Nobody has mentioned an issue of hrs taken before sleeping. Seth you say that you take your oils at 10pm but what time do you actually go to bed? Assuming that you went to bed at 1am (i.e. 3hrs before sleeping) then the fats might be used for another process (assuming that they are being stored as a fuel source) and therefore you mightn't notice the same affect!! Thoughts??

Graham (2010-09-27 05:33:35)

For profiles of the Oils consumed refer to the following: Walnut: <http://nutritiondata.self.com/facts/fats-and-oils/589/2> Olive: <http://nutritiondata.self.com/facts/fats-and-oils/509/2> Cod Liver Oil: <http://nutritiondata.self.com/facts/fats-and-oils/628/2> Flaxseed: <http://nutritiondata.self.com/facts/fats-and-oils/7554/2> Sunflower: <http://nutritiondata.self.com/facts/fats-and-oils/572/2> Coconut: <http://nutritiondata.self.com/facts/fats-and-oils/508/2> Sesame: <http://nutritiondata.self.com/facts/fats-and-oils/511/2> Change the SERVING SIZE to 1 TBSP. Notice the difference in the Omega-6 and Omega-3 profiles of the Oil in the fat Section. Based upon the profiles and your results it would appear that consumption of Omega-6 produces the best results. Do you suppose there is a limit to how much of any type of fat the body can store in one go?

Syed waqar (2012-01-15 12:39:56)

Dear all, I have Sleep problem. I go to bed mostly at 12:30 am and get into sleep within half an hour or less but awake after three hours. My age is 52. After awake at 4 am what should I do, because I have to go to my office at 10: am. I was very much upset. My doctor gave me relexant and told me that I have business problem. Therefore I should have sleep through medicine. This does not work situation remain the same. One day I went to market and find some traditional sweets for me that were flex seed balls join with small sugar. I took two balls by chance and ate these. Next day I noticed that went to sleep and did not get up until 9 am. Next day I repeat the same and slept till 10 am. I mean nine to ten hour sleep. Today is the third day and I took the same and will let you know tomorrow about the results. Right now I just wanted to see the effect of flexseed through Internet and found that there are few more people wha are already feel the effectiveness of flex seed for sleep. Let see today the effect. If it works I will try for many days. But before regular start I will get a complete blood reports before regular start. Then after few week I will again check the effect of these seeds on the blood picture. I will paste the results. Best regards, Syed Waqar.

## Science in Action: Omega-3 (sleep data, discussed) (2007-02-22 04:45)

This is a discussion of the facts and ideas in my [1]previous post. In summary, several observations, involving both me and others, suggest that a few tablespoons of oil (at least olive oil, sesame oil, and flaxseed oil) in the evening improve sleep.

I'm not yet sure of this conclusion, even for myself. But several things are already worth pointing out:

1. It took several facts to change my mind (I originally thought the sleep improvement was due to omega-3 fat and had nothing to do with when I ingested it) but it did happen. Strangely enough, it happened when I was studying something else: The effect of omega-3 on my balance. I switched the time I drank flaxseed oil from 10 pm to 10 am to see if this affected my balance. (I don't yet know the answer.)
2. The conclusion that a few tablespoons of fat late in the evening improves sleep is remarkably isolated. I have never read anything similar in the scientific or self-help literature. Most of my self-experimental conclusions, however odd they may strike outsiders (such as my recommendation to skip breakfast), are supported by many mainstream scientific results. (The breakfast conclusion, for example, is supported by dozens of studies of anticipatory activity in animals.)
3. It's a big effect – one more hour of sleep per night. No wonder most Shangri-La dieters [2]noticed it.
4. The long-term records of my sleep, which I had kept for no particular reason, came in handy. They made it clear that something had recently caused me to sleep longer each night. Which implied that it couldn't be fat per se that caused the improvement – I'd been drinking ELOO (extra-light olive oil) for the past two years. The term self-experimentation doesn't obviously encompass keeping such long-term records; they are better suggested by the term self-observation or even numerical self-observation. But whatever the term, they don't have an obvious correlate in more conventional science. Experiments with yourself as the subject are just conventional experiments writ small and personal, you could say. But there is no part of conventional science that tracks people closely year after year. It makes scientific sense; it would be a way of getting new ideas. You might track 100 people (say). When someone's health markers got suddenly better or worse you would investigate. This could be done; it isn't.

1. <http://www.blog.sethroberts.net/2007/02/21/science-in-action-omega-3-sleep-data/>

2. <http://boards.sethroberts.net/index.php?topic=1262.0>

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OrenT (2007-02-22 08:07:03)

At Argonne national there was a study on the effects of diet on sleep cycle and specifically on jet lag. Their recommendations were on what time of day to consume protein and carbohydrates and the size of the meal. I don't remember any mention of fats in that study.

chris (2008-12-10 19:22:02)

i have been taking omega for 4 days and 2 600mg a day and makes me sleep and I had noticed that my sleep is very deep that I don't know that omega3 is good or not for me SHOULD I keep taking or not maybe 2 pills a day might be to much for me or not or it is normal



Sandra Uemura (2009-08-31 12:06:52)

Hi, I started to take OMEGA3 3 x a day from Pharma Aldenhoven GmbH & Co. from Germany and I started to have many side effects like headache, feel very sleepy after dinner and wake up with stomachache. I just would like to know if someone who has all those side effects should stop to take omega3. The main reason I started to take omega3 is to improve my memory. Thanks a lot, Sandra Uemura

BuigueVejully (2010-04-22 21:30:56)

[1][en.wikipedia.org/wiki/Bamboo](http://en.wikipedia.org/wiki/Bamboo) [2][bamboofountains.astalog.com/](http://bamboofountains.astalog.com/) [3][www.youtube.com/watch?v=PuiH9l3cuwQ](http://www.youtube.com/watch?v=PuiH9l3cuwQ)  
[4][www.youtube.com/watch?v=24ru3Wn8aZA](http://www.youtube.com/watch?v=24ru3Wn8aZA)

1. <http://en.wikipedia.org/wiki/Bamboo>
2. <http://bamboofountains.astalog.com/>
3. <http://www.youtube.com/watch?v=PuiH9l3cuwQ>
4. <http://www.youtube.com/watch?v=24ru3Wn8aZA>

Sara (2010-07-01 09:35:35)

Omega 3 makes me fall asleep and my memory didn't improve at all.

Weedgelay (2010-09-02 10:54:48)

Where i can read all news on this forum? from 2009 year i make project in school.

x'x<sup>TM</sup>x<sup>TM</sup>x<sup>a</sup> x<sup>TM</sup>x<sup>a</sup>x<sup>TM</sup>x<sup>TM</sup> (2011-01-08 21:24:36)

there are no side effects in taking omega3.

Chris (2011-03-11 11:33:17)

I have been taking 2 tablespoons of oil about one hour before bed for about a month now and have not experienced any improvement in sleep. I have no problem falling asleep but I have vivid dreams that keep me in a half sleep half awake state somewhere from 4 am to 6 am resulting a poor quality sleep. I started with flax oil and after a couple of weeks switched to 1T flax oil and 1T cod liver oil. I have noticed that my gums have been feeling better (they weren't a real problem though) and I have had less bleeding when flossing. I will continue with the oil until my supply of flax oil runs out and then I will continue taking cod liver oil daily.

Seth Roberts (2011-03-11 16:00:07)

Chris, since I wrote this post I've discovered that animal fat produces a big easy-to-notice improvement. Now I eat 1 stick of butter per day. 2 T/day flaxseed oil should produce even better results than 1 T/day. I've never tried cod liver oil.

?????? (2011-04-08 19:57:38)

1T flax oil and 1T cod liver oil. I have noticed that my gums have been feeling better (they weren't a real problem though) and I have had less bleeding when flossing. I will continue with the oil until my supply of flax oil runs out and then I will continue taking cod liver oil daily

MumnTunkaniny (2011-06-11 15:23:59)

just examined the thread. great job.

Thedreamers (2011-10-10 15:58:36)

Recently and for about one year now, I have been experiencing hard time with my sleep, as sometimes, I can't go to sleep at all, and other times, I have enough sleep after 3 hours and a half. I don't sleep really deep sleep, and wake up many times. Most of the time and after a long day of work and studying, after I sleep, I wake up after half an hour suddenly, I don't know what causes me to wake up even though I am very sleepy and tired, and it's really hard to go back to sleep. Today, I ordered lunch at work Salamon fish, and after I had my lunch, I felt so sleepy I tried to hold my self four hours until I got home, then the story

of the deep sleepness started, I slept 7 straight hours and I noticed that my sleep was really really deep. if it wasn't my son who woke me up, I wouldn't wake up, and felt so relaxed. Really, I haven't had this nice sleep long time ago. I think Omega 3 in Salamon made me sleep for sure because it relieves stress. I decided to have that once or twice a week.

???? ???? (2011-10-17 15:23:34)

Hey huts just eat fish no need for all those omega 3 supplaments.

### **Pregnancy and Omega-3 (2007-02-23 04:55)**

A new study has found that mothers who eat more fish (high in omega-3 fats) during pregnancy have smarter, better-behaved children. Many expected the opposite: They assumed more fish = more mercury = more damage. [1]Here is a newspaper story about it.

The study, which appeared in The Lancet, has an odd title: "Maternal seafood consumption during pregnancy . . . " - as if paternal seafood consumption during pregnancy could affect the fetus. It involved about 10,000 pregnant women. The seafood/better-brain correlation was seen with several measures, including IQ scores at age 8. The authors tested the explanation that low seafood consumption was simply a marker for an unhealthy diet by taking dietary quality into account in various ways; this had little effect on the results, the authors say.

Current [2]Food and Drug Administration advice to limit seafood consumption during pregnancy may be harmful, the authors note.

Thanks to Timothy Beneke for the pointer.

1. <http://www.washingtonpost.com/wp-dyn/content/article/2007/02/15/AR2007021501515.html>

2. <http://www.cfsan.fda.gov/~dms/admehg3.html>

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michael vassar (2007-02-24 16:24:23)

I really hope they controlled for parental IQ. Just controlling for SES isn't enough. Do you know if they did?

seth (2007-02-24 16:46:48)

That's a good point, although I'm pretty sure it would have been impossible - too much work. They did control for "maternal highest educational attainment." In one analysis they controlled for paternal seafood consumption and the maternal effect was still present.

Susan (2007-03-04 16:03:55)

Is it the Omega-3 or the fish? I think the DHA. I took DHA throughout my pregnancy because of studies I had read about in the book Tomorrow's Baby - that taking DHA during pregnancy produces larger brain size and smarter children. Now this fish study comes out...wonder who sponsored it! Why not take Neuromins, an algae-form of DHA, and avoid the mercury risk? This from Wikipedia - A study[6] found that preterm infants fed baby formulas fortified with DHA derived directly from algae gained weight faster than infants fed formula fortified with DHA from fish oil. Additionally, there are no risks of harmful contaminants such as methyl mercury or dioxins, which are present in fish and fish oils.[citation needed] This is especially important for pregnant and nursing women and young children.

seth (2007-03-04 16:21:26)  
Good point.

Giving Birth World (2007-09-10 10:13:33)

I am a vegetarian and as such do not eat meat. Not because I have any morals to uphold, but simply because I don't like the taste. Anyway, this leaves me somewhat limited in terms of food to eat. Fortunately I love fish, so when I was pregnant that was pretty much all I ate. Needless to say my son is a child genius. Well not quite, but he has above average intelligence for his age; coincidence?

Aaron (2007-12-14 07:22:51)

Fish oils definately is good for mother and child. However, moderate intake should be practised as too much of DHA has been proven to actually imbalance the immune system for the infant. Once again, the intelligence of a child do depend on how well the brain is stimulated and not soplely on DHA

Sam (2008-04-04 07:26:07)

Scientists have discovered disturbing brain abnormality in young babies - [1]check it out

1. <http://www.rickrolled.co.uk/>

solar (2009-09-14 15:52:20)

I guess in every intake of food, be it fish or supplement, there ought to be an balance, in moderation with gynae's advice. There are many different kind of fishes and certain are definitely have to to be avoided like swordfish... I guess fried fish isn't healthy to eat as well, since fried stuffs are supposed to be one of the unhealthier range of food for consumption..

single mother (2011-04-05 08:26:21)

I just read a book that fish oil / omega 3 oils have a positive effect on the brain and behavior if taken in the right doses. The doctor actually cured some depression and anxiety problems in patients with just high doses of high quality omega 3's and fish oil supplements. If it works in them why wouldn't it work in children?? Tina

## **Omega-3 and Freakonomics (2007-02-23 11:42)**

Steve Levitt, co-author of Freakonomics, has done me the great favor of bringing my omega-3 self-experimentation to a wider audience in [1]this post. He thinks my results might be due to my expectations. I posted this comment:

Thanks, Steve, for writing about this. Here's why I think the balance improvements I've noticed are unlikely to be due to expectations:

1. I first noticed the effect putting on my shoes the morning after I started taking flaxseed oil. I had been putting on my shoes standing up for two years; until that morning, I had always had trouble. Every morning. (I had expected it to get much easier "practice effect" but it didn't.) The sudden improvement was a complete surprise. I had never heard of such an effect. I had hoped that flaxseed oil would improve my sleep.
2. The sudden improvement I saw when I switched from 2 tablespoons/day to 3 tablespoons/day was also a surprise, although I realize this may be harder to believe.

3. When I switched from flaxseed oil and walnut oil to sesame oil, I expected my balance to get worse. It did, but not when I expected. (It took 2 days to see a change; I expected to see it on the first day.)

Which is not to say I'm sure. If the effects I've seen are repeatable, I'll test myself not knowing what oil I've ingested.

And forgot to sign my name. Oops.

My reading of the data (such as [2]this) is that placebo effects sometimes exist but are vastly overrated – like many dangers.

Addendum: Stephen Dubner, Levitt's co-author, [3]blogged today that

nearly everything we've written about, either in the book or our journalism or the blog, has some element of people worrying too much about something

1. <http://www.freakonomics.com/blog/2007/02/23/does-omega-3-work-miracles/>

2. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=15257721&query\\_hl=6&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=15257721&query_hl=6&itool=pubmed_docsum)

3. <http://www.freakonomics.com/blog/2007/02/23/tonight-on-abcs-2020/>

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Paul Brentano (2007-02-26 08:43:13)

There were some interesting comments from on the freakonomics blog about the differences between omega-3 obtained from plants and omega-3 obtained from animals. Have you thought about testing the differences? I wonder if the delay (2 day now right?) would be less if you used the fish oil supplements.

seth (2007-02-26 17:45:44)

With the flaxseed oil it takes hours, not 2 days, for the effects to become apparent. I will eventually test different types and sources of omega-3, yes.

## **Omega-3 Greatest Hits (2007-02-24 06:21)**

My main posts about omega-3 are:

Background

[1]why I became interested

[2]historical background

[3]the Israeli Paradox

[4]fat and anesthesia

[5]the clouded crystal ball

[6]omega-3 and cancer

[7]unclear effects on heart disease

[8]prison experiment

## Procedure

- [9]equipment to measure balance
- [10]new measures
- [11]how best to measure balance
- [12]a new test
- [13]better measures
- [14]hand placement
- [15]letter-counting test
- [16]circle test

## Results

- [17]practice effects
- [18]balance experiment (high-omega-3 fats vs low-omega-3 fat)
- [19]arithmetic (guest post)
- [20]arithmetic (continued)
- [21]sleep
- [22]first results with new measures
- [23]time-of-day effect
- [24]what's the best dose?
- [25]flaxseed oil vs. olive oil (balance)
- [26]flaxseed oil vs. olive oil (memory-scanning)
- [27]flaxseed oil vs. olive oil (digit span)
- [28]flaxseed oil vs. nothing (balance)
- [29]flaxseed oil vs. nothing (arithmetic)
- [30]a surprise
- [31]time course (1st try)
- [32]time course (2nd try, plus egg surprise)
- [33]time course (very short experiment)
- [34]time course (circle test)[35]
- [36]flaxseed oil: 2 T/day vs. 1 T/day (arithmetic test)

## Discussion

- [37]sleep effect?
- [38]placebo effect?
- [39]overall discussion
- [40]source of injury-causing falls?
- [41]what the results mean
- [42]gum surgery cancelled
- [43]dental health
- [44]sports injuries (part 1)
- [45]sports injuries (part 2)
- [46]sports injuries (part 3)
- [47]sports injuries (part 4)

## Overall Summary

- [48]abstract of conference talk

1. <http://www.blog.sethroberts.net/2006/07/05/brain-food/>
2. <http://www.blog.sethroberts.net/2007/01/25/science-in-action-omega-3-background/>
3. <http://www.blog.sethroberts.net/2007/02/02/the-israeli-paradox/>

4. <http://www.blog.sethroberts.net/2007/06/11/fat-and-anesthesia/>  
5. <http://www.blog.sethroberts.net/2007/06/12/the-clouded-crystal-ball/>  
6. <http://www.blog.sethroberts.net/2007/07/02/omega-3-and-cancer/>  
7. <http://www.blog.sethroberts.net/2007/09/05/marion-nestle-on-omega-3s/>  
8. <http://www.blog.sethroberts.net/2007/11/03/better-nutrition-better-behavior/>  
9. <http://www.blog.sethroberts.net/2007/01/26/science-in-action-omega-3-materials/>  
10. <http://www.blog.sethroberts.net/2007/02/26/science-in-action-omega-3-new-measures/>  
11. <http://www.blog.sethroberts.net/2007/03/15/science-in-action-omega-3-measurement-improvement/>  
12. <http://www.blog.sethroberts.net/2007/07/22/science-in-action-omega-3-a-new-test/>  
13. <http://www.blog.sethroberts.net/2007/07/26/science-in-action-omega-3-better-measures/>  
14. <http://www.blog.sethroberts.net/2007/08/17/ortho-ergonomics/>  
15. <http://www.blog.sethroberts.net/2007/08/11/science-in-action-omega-3-letter-counting-test/>  
16. <http://www.blog.sethroberts.net/2008/03/01/why-are-games-powerful-part-1/>  
17. <http://www.blog.sethroberts.net/2006/08/13/brain-food-part-9-supporting-data-and-a-problem/>  
18. <http://www.blog.sethroberts.net/2007/01/20/science-in-action-omega-3-balance-results/>  
19. <http://www.blog.sethroberts.net/2007/02/16/omega-3-and-arithmetic/>  
20. <http://www.blog.sethroberts.net/2007/04/14/omega-3-and-arithmetic-continued/>  
21. <http://www.blog.sethroberts.net/2007/02/21/science-in-action-omega-3-sleep-data/>  
22. <http://www.blog.sethroberts.net/2007/02/28/science-in-action-omega-3-results-with-new-measures/>  
23. <http://www.blog.sethroberts.net/2007/03/01/science-in-action-omega-3-time-of-day-effect/>  
24. <http://www.blog.sethroberts.net/2007/03/16/science-in-action-omega-3-whats-the-best-dose/>  
25. <http://www.blog.sethroberts.net/2007/04/21/science-in-action-omega-3-flaxseed-oil-vs-olive-oil/>  
26. <http://www.blog.sethroberts.net/2007/04/25/science-in-action-omega-3-flaxseed-oil-vs-olive-oil-continued/>  
27. <http://www.blog.sethroberts.net/2007/05/05/science-in-action-omega-3-more-memory-results/>  
28. <http://www.blog.sethroberts.net/2007/05/19/science-in-action-omega-3-flaxseed-oil-vs-nothing-1/>  
29. <http://www.blog.sethroberts.net/2007/05/21/science-in-action-omega-3-flaxseed-oil-vs-nothing-2/>  
30. <http://www.blog.sethroberts.net/2007/06/30/science-in-action-omega-3-a-surprise/>  
31. <http://www.blog.sethroberts.net/2007/08/13/science-in-action-omega-3-time-course/>  
32. <http://www.blog.sethroberts.net/2007/08/20/science-in-action-omega-3-time-course-2-with-eggs/>  
33. <http://www.blog.sethroberts.net/2007/08/22/science-in-action-omega-3-vse/>  
34. <http://www.blog.sethroberts.net/2008/03/01/why-are-games-powerful-part-1/>  
35. <http://www.blog.sethroberts.net/2010/11/19/effect-of-flaxseed-oil-on-arithmetic/>  
36. <http://www.blog.sethroberts.net/2010/11/19/effect-of-flaxseed-oil-on-arithmetic/>  
37. <http://www.blog.sethroberts.net/2007/02/22/science-in-action-omega-3-sleep-data-discussed/>  
38. <http://www.blog.sethroberts.net/2007/02/23/omega-3-and-freakonomics/>  
39. <http://www.blog.sethroberts.net/2007/04/26/does-omega-3-affect-the-brain/>  
40. <http://www.blog.sethroberts.net/2007/04/29/does-too-little-omega-3-cause-falling/>  
41. <http://www.blog.sethroberts.net/2007/07/03/science-in-action-omega-3-what-the-results-mean/>  
42. <http://www.blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>  
43. <http://www.blog.sethroberts.net/2007/11/06/omega-3-and-dental-health-even-more/>  
44. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>  
45. <http://www.blog.sethroberts.net/2007/11/25/omega-3-and-sports-injuries-more/>  
46. <http://www.blog.sethroberts.net/2007/11/16/omega-3-what-happens-when-you-stop/>  
47. <http://www.blog.sethroberts.net/2008/02/26/omega-3-and-sports-injuries-part-3/>  
48. <http://www.blog.sethroberts.net/2007/06/03/science-in-action-omega-3-conference-submission/>

anon (2007-02-24 20:14:19)

how many g's of omega-3 would you recommend taking per day? do you think it matters what form it comes in (flaxseed oil, fish oil supplements, real fish, etc.)?

seth (2007-02-24 20:16:38)

I haven't gotten far enough to answer your excellent questions. I can only say that 3 tablespoons/day of flaxseed oil seems to produce better results than 2 tablespoons/day.

peggy (2008-07-25 07:27:31)

seth, Are you looking at the ratio between omega-3 and omega-6? Since omega -6 helps the blood clot and is part of the inflammatory process (CHD), I am interested in the ratio. Do you test both? What methodology do you use? have you heard of Mondello or Michael Pollan?

seth (2008-07-25 08:04:40)

See the post called The Israeli Paradox for information about omega-6. I haven't yet deliberately varied omega-6 but I expect to in the future. I've heard of Michael Pollan but not Mondello.

Brian (2008-09-06 17:21:47)

I have found taking omega 3 fish oil supplements more effective when taken with salty food than when taken with unsalted food. If I take fish oil with a salty meal, the improvement in my concentration, articulacy and mood is noticeably larger than when I take fish oil with a zero salt breakfast of muesli and full fat milk. I have noticed this effect many times. Anyone else?

### **Self-Experimentation on TV (2007-02-25 22:43)**

The BBC is now running a four-part series on medical self-experimentation called [1]Medical Mavericks. The examples have almost nothing in common with what I do. Here are some differences between what might be called "classic" self-experimentation (e.g., Weinberger, Marshall) and "slow" self-experimentation (what I do).

1. Classic SE: Improves medicine. Slow SE: improves my life.
2. Classic SE: few if any numerical data. Slow SE: Lots of numbers.
3. Classic SE: self-experimenter starts with strong opinion. Slow SE: self-experimenter starts without strong opinion.
4. Classic SE: lasts hours or days. Slow SE: May last years.
5. Classic SE: Demonstrative. Slow SE: Exploratory.

Long live both types.

1. <http://www.bbc.co.uk/bbcfour/documentaries/features/medical-mavericks.shtml>

## Science in Action: Omega-3 (new measures) (2007-02-26 18:48)

My balance measurements, such as [1]this, [2]this, and [3]this, have come close to convincing me that flaxseed oil improves my balance. If a nutrient improves one part of my brain, it will probably improve other parts, too. So I've added three more measures of brain function to my daily tests:

1. Memory scanning. A paper-and-pen task. After studying three digits (e.g., "3 7 9") for a few seconds, I go through a block of digits marking each one "in" (equal to 3, 7, or 9) or "out" (not equal) as fast as possible. Each test consists of 5 blocks of 100 digits. Duration: 5 minutes. Pluses: Similar to a well-studied task (Sternberg's memory-scanning task). Minuses: Requires a little bit of equipment (sheet of digits).

2. Digit span. I see a series of digits on my laptop screen then try to remember them. The number of digits goes up and down depending on my accuracy. Duration: 4-6 minutes. Pluses: A well-studied task. Quite different than balance, memory scanning, and speeded arithmetic (below). No special equipment. Minuses: Little computation involved, unlike balance.

3. Speeded arithmetic. I do 100 simple arithmetic problems (e.g.,  $4 + 8$ ,  $3 * 5$ ) as fast as possible. Duration: 2 minutes. Pluses: Tim Lundeen [4]found an effect of fish oil on this task. No special equipment. Measures long-term memory retrieval, unlike other tasks. Intense – the 2 minutes are full of mental activity. Minuses: No obvious ones.

One of these may emerge as a better way to study the issue than balance measurements. The biggest problem with balance measurements is strong practice effects. The more often I measured, the better I became. (The area of my brain devoted to the task seemed to increase. The tiny balance platform seemed to grow.) Perhaps practice effects will be less of a problem with at least one of these tasks. Perhaps one of them will show clearer effects of flaxseed oil.

In a comment on an earlier post, someone suggested using chess as a measure. A fun test would be a good addition. Chess has two big problems: 1. Openings are time-consuming and quite different from the rest of the game. 2. If you take longer to make a move you can make a better move. So the amount of time allowed per move must be fixed. Which is less fun.

1. <http://www.blog.sethroberts.net/2006/08/13/brain-food-part-9-supporting-data-and-a-problem/>

2. <http://www.blog.sethroberts.net/2007/01/20/science-in-action-omega-3-balance-results/>

3. <http://www.blog.sethroberts.net/2007/02/12/science-in-action-omega-3-more-data/>

4. <http://www.blog.sethroberts.net/2007/02/16/omega-3-and-arithmetic/>

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Mike (2007-02-27 11:19:56)

Based on this blog, I upped my daily dose of Omega-3. Previously, I was taking 1 tablet per day of Costco (Kirkland \_ brand fish oil Omega 3. These tablets contain 1000 mgs, with 180 mg being EPA, 120 being DHA, and the balance unspecified. After reading about Seth's experiment's, I started taking two pills per day. I noticed an immediate depression effect on my mood. After a few days of this, I took two days with no pills, and my depression lifted. I am now back on one pill and I seem to be fine. I do not take any anti-depressants or other medication.

seth (2007-02-27 11:56:00)

That's good to know, Mike. Thanks for commenting.



Jeffrey Miller (2007-02-28 05:12:58)

It seems likely that you will improve through practice in any activity that you choose. You can, as you have previously remarked, reduce the effect of this drift by alternating your omega-3 in time. You could also subtract out the linear term in your fit to the data, and compare only the intercepts. (Assuming of course that you fit on contiguous data during which the dosage was constant - as you did in some earlier plots). If I were doing this, I would be tempted to try somewhat harder arithmetic problems. You remember what  $5 + 8$  equals, but you probably have to calculate (in your head) what  $329 + 846$  equals. I'd imagine a different part of your brain comes into play. By the way, I've been on your oil diet for about a month and have lost about 3 % of my weight. So far so good!

seth (2007-02-28 08:53:49)

That's a good suggestion about trying harder problems. I may eventually do that. With harder problems, it is more difficult to stay at the same place on one's speed/accuracy tradeoff function. But that doesn't mean they aren't worth a try. When I analyze my data I do subtract the linear drift. I will post examples. That's good news about my diet.

pdf23ds (2007-02-28 22:52:39)

Here's something that might make chess measurable: <http://chess.emerald.net/Welcome.php> Chess tactics problems. Each one is rated based on its difficulty (according to how hard it was for other chess problem solvers). Each has one right answer, and times how fast you get the answer right. I'm not sure how easy it would be to grab the data off of their pages to put into your analysis, but worth looking into, maybe.

seth (2007-03-01 12:30:29)

That's a lot closer to what I need, thanks.

Neanderval (2007-03-03 10:12:14)

How about trying something like Escapa! <http://www.iol.ie/~dluby/escape.htm> I find it extremely addictive.

seth (2007-03-03 11:19:50)

Very good suggestion, Neanderval.

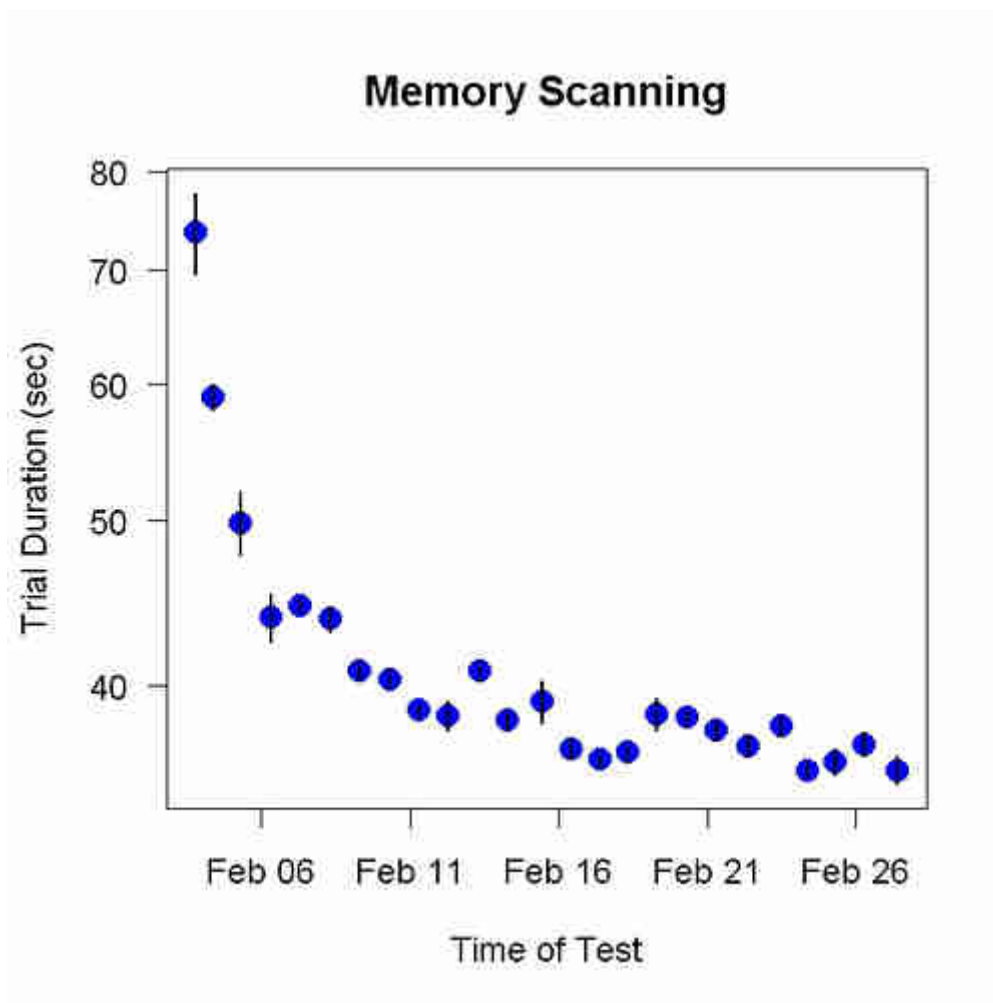
Alex (2007-04-25 09:38:10)

Thank You

## Science in Action: Omega-3 (results with new measures) (2007-02-28 10:06)

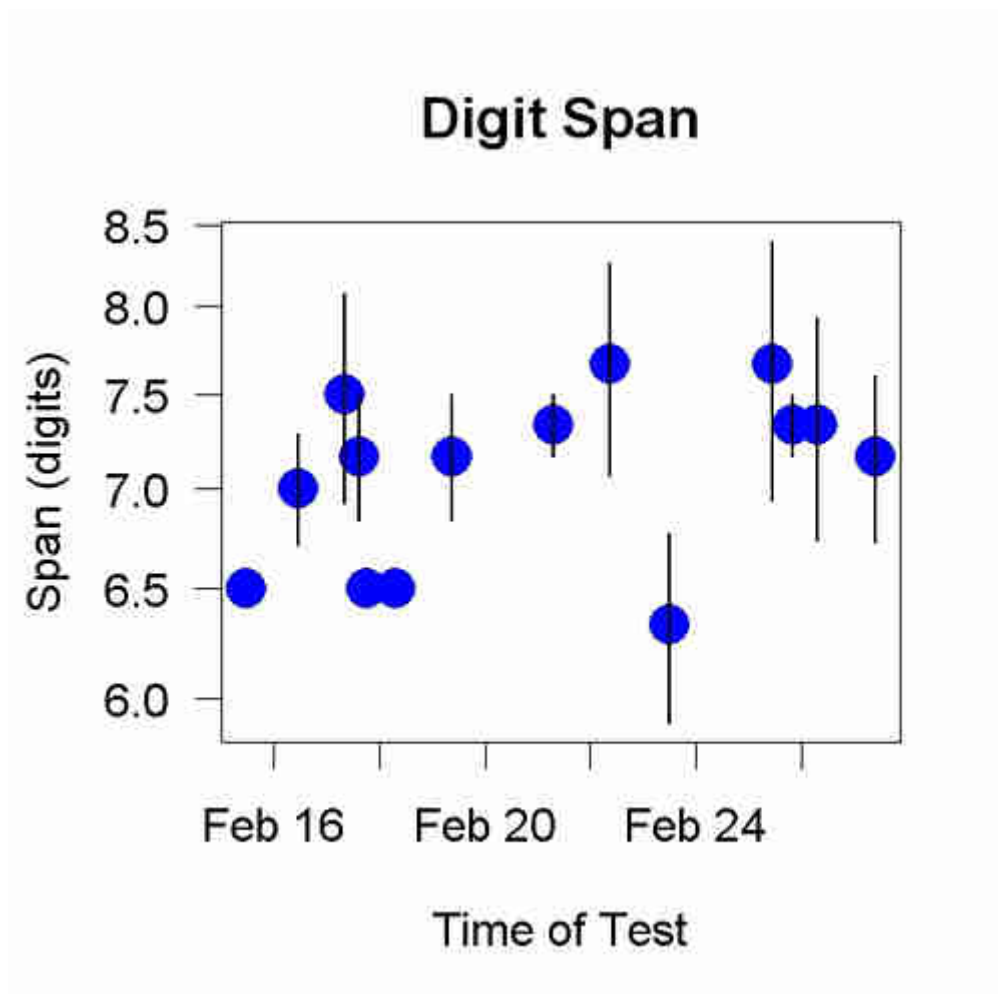
Yesterday I blogged about three new measures of mental function that I have recently started to use. Here are the first results.

### 1. Memory-scanning.



Each point is a mean; the error bars show standard errors. I expected a within-session warm-up effect (Trial 1 slower than Trials 2-5) but there isn't one so I use variation across the 5 trials (100 digits each) to get a standard error.

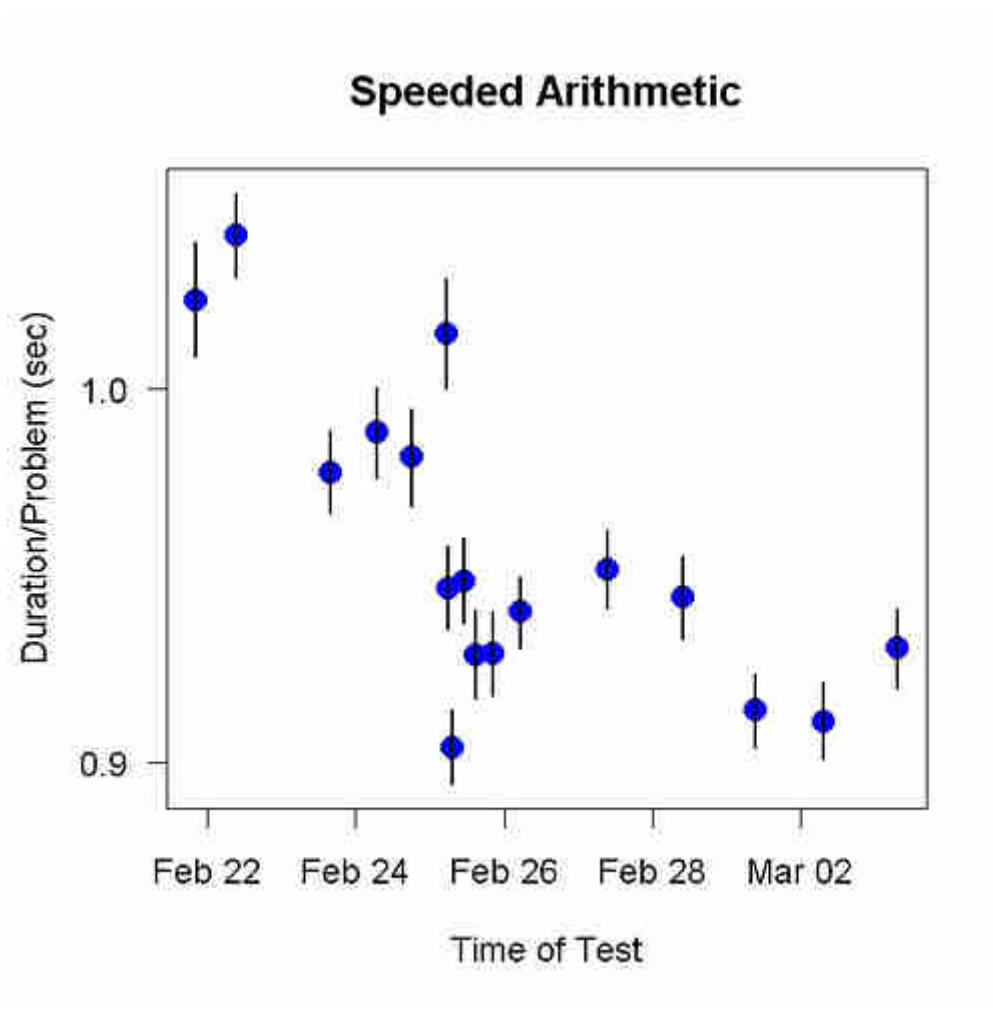
2. Digit span.



The program increases the number of digits to remember by one when I'm right and decreases that number by one when I'm wrong. The test continues until there have been six reversals in direction of the number of digits (e.g., the sequence 5, 6, 7, 8, 7, 6, 7, 8, 9, 8 contains three reversals). Each pair of reversals is averaged to get an estimate of digit span; I use between-average variation to get a standard error.

Digit span slowly improves with practice, other researchers have found. The increase is slow, however – [1]one digit for every two hours doing the task.

3. Speeded arithmetic.



The questions differ greatly in how long they take ( $7 \times 9$  much slower than  $1+0$ ) so I fit a model to remove obvious effects and use the variation of the residuals to get standard errors. I think these results are so erratic because I did the test in several different places and in some cases I corrected mistakes (which is very slow). Now I don't correct mistakes.

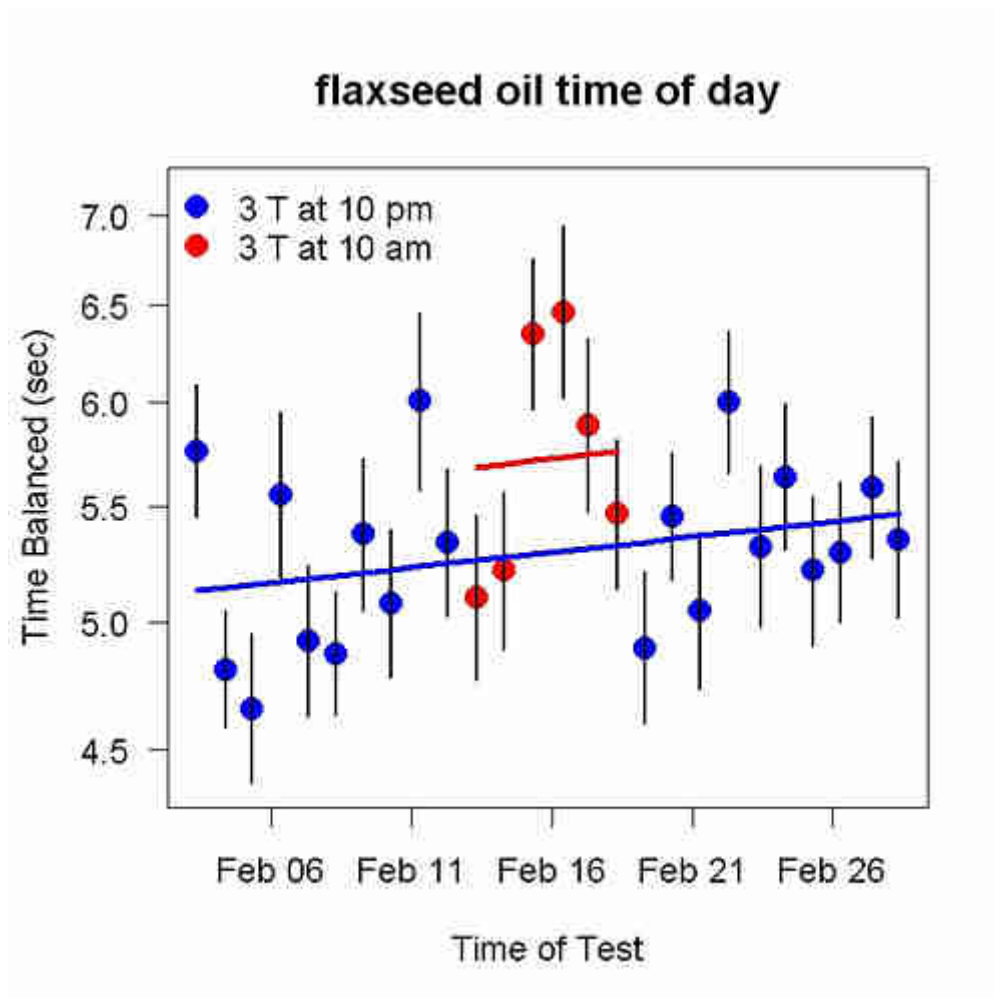
1. [http://www.indiana.edu/~jkkteach/P335/shanks\\_expertise.html](http://www.indiana.edu/~jkkteach/P335/shanks_expertise.html)

## 2.3 March

### Science in Action: Omega-3 (time of day effect) (2007-03-01 21:31)

Flaxseed oil seems to have detectable effects within hours. For example, I increased the dose in the evening and my balance was better the [1]next morning. To get some sense of the time course of the effect, I varied the time of day that I took the flaxseed. I usually took it around 10 pm; I tried 10 am instead. I continued to test my balance around 7 am.

Here are the results from an ABA experiment.



Taking 3 tablespoons at 10 am produced better results than taking the same amount at 10 pm. I fit lines with equal slope to both the A (10 pm) and B (10 am) treatments, as the graph shows. The two lines had different intercepts,  $p < .05$ .

Although 10 am produces better balance, it produces [2]worse sleep – more evidence that the sleep improvement and the balance improvement are due to different mechanisms. I want both improvements, so I am going to split my dose – half in the morning, half in the evening.

Of course, the fact that time of day of flaxseed oil matters is more reason to think that presence/absence of flaxseed oil matters. It is very hard to explain these results in terms of expectations: I had no reason to expect one time to be better than the other.

1. <http://www.blog.sethroberts.net/2007/02/12/science-in-action-omega-3-more-data/>

2. <http://www.blog.sethroberts.net/2007/02/21/science-in-action-omega-3-sleep-data/>

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Matthew (2007-03-02 01:40:25)

I notice these positive effects you have been talking about as well. I also like how I tend to sleep better when I take the oil in the evenings. However, I wonder if this does not hamper my weight-loss efforts by inhibiting the production of growth hormone. I have heard (I believe it is a prominent cycling training manual) that going to sleep on an empty stomach will trigger more production of HGH to help with weight loss. But I am not sure if fat alone will hinder this process or if it is only carbs that hinders it. Any thoughts?

seth (2007-03-02 08:11:44)

I have never seen any data that supports the idea that more production of HGH helps with weight loss. If there is zero data, I wouldn't worry about it.

Joe Cho (2007-10-13 00:43:24)

never seen any data huh? there's tons of data! <http://content.karger.com/ProdukteDB/produkte.asp?Doi=65488>

Bill Younger (2007-12-12 18:34:18)

I think fish oil is better than Flaxseed oil for the Omegas. Bill

### **A New Way to Quit Smoking? (2007-03-03 11:57)**

A few days ago on the Dean Edell radio show, I'm told, Dean Edell told his listeners that nicotine patches don't cause any addiction problems; people just don't get addicted to them. To anyone who has read The Shangri-La Diet this will sound eerily familiar: Dr. William Jacobs, a professor of psychiatry and addiction researcher at the University of Florida, told me that no one gets addicted to unflavored sugar water, although lots of people get addicted to Coke, Pepsi, and other forms of flavored sugar water.

These examples suggest that it isn't the drug (sugar, nicotine) that causes addiction, it's the signal of the drug – the conditioned stimulus (CS), to use animal-learning jargon. No signal, no addiction. In the case of sugar water, it's very clear: Digestion of calories provides little or no pleasure. Ingestion of sweet-tasting things provides just a little pleasure. Ingestion of a flavor that has been paired with calories many times, such as the flavor of Coke, provides a lot of pleasure. The pattern with nicotine may be similar: Nicotine itself provides little or no pleasure. It is learned signals of nicotine – events repeated followed by nicotine – that can be very pleasant.

The practical application is that you may not need nicotine patches to quit smoking. It may be enough to hold your nose while you smoke. (The nose-clipping that [1]SLD forum readers are familiar with.) When you smoke, the smell may become the CS. With this way of smoking you could have cigarettes whenever you wanted. You'd just come to want them less and less.

Likewise, it may be possible to get rid of an addiction to coffee by holding your nose while you drink it.

Thanks to Carl Willat.

1. <http://boards.sethroberts.net/index.php>

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Peter (2007-03-03 12:43:16)

What's the CS for injected heroin?

seth (2007-03-03 12:54:02)

The situation – the place, the injection details, maybe music and smells at the time. Shepard Siegel, a psychology professor at McMaster University, and his colleagues did a study that showed that many heroin addicts who die of "overdoses" actually die because they changed the CS. Without the right CS, they lost their tolerance and a dose that was formerly tolerable became deadly.

peter (2007-03-03 15:33:41)

taste is governed by the shape of the molecules, whereas smell is governed by the vibration (i.e., the number of electrons). See, Luca Turin (who has published a book on this, as well as Chandler Burr, who wrote "Emperor of scent etc.. (which is about Turin). I'm not sure what to make of this and am just presenting it for you to consider. As a layman, i would think that smell may be a stronger stimulus than taste. But clearly, the two are different.

seth (2007-03-03 15:54:07)

It's likely that smell can be a CS, but not taste, at least not pure taste. Because you'd only have a few possible signals (6?). Whereas there are thousands of possible smells.

david (2007-03-03 17:25:17)

Should be easy enough to test the idea with caffeine addiction. Google for "caffeinated water".

peter (2007-03-03 18:37:25)

sweet, salty, sour, and bitter; A fifth taste, umami; (from answer.com) It's not clear to me why taste cannot be a cs; because there are so few of them? Sugar has no smell; certain oils have no smell; i suppose that makes sense. i don't know if you could find anything that was either bitter or sour that did not have a smell. i'm just musing.

seth (2007-03-03 21:51:18)

right, taste makes a poor CS because there are so few of them. Lotta confusion – one bitter thing has calories, another bitter thing does not. You need delicate machinery to distinguish thousands of potential foods; and to have delicate machinery it has to be in a safe place (the nose), not in direct contact with pieces of the outside world (the mouth).

Judy (2007-03-05 17:18:38)

I have no sense of smell, yet i can taste things quite well, and can distinguish various foods with my eyes closed that other people who have on noseclips and eyes closed can't see to do. I've read that something like 10 % of people have no sense of smell. I'm just wondering how not having a sense of smell plays into this whole CS idea. The conventional thing I've always heard is that having no sense of smell means I should not be able to taste things very well, but my experience is the opposite - I am very tuned in to how things taste. I just have NO sense of smell at all (and have no idea why - have been this way since childhood - I had a head injury when I was a baby and have always wondered if that may have caused it).

seth (2007-03-05 17:28:13)

Judy, are you addicted to smoking or coffee?

Jarno Virtanen (2007-03-06 00:24:40)

I'm just musing also, but I was reminded of something when I read this idea. See, a lot of smokers, if not all, report that they don't yearn that much for smoking when they have caught a flu [1]. Most say that cigarettes "don't taste" good when they're in flu. People tend to attribute this to the condition, say, to a slight fever; that it just doesn't taste the same when you're a

bit sick. But in a usual flu, your smell is severely impaired. Your nose is typically congested with liquid (that I cannot find an English word for) and you can't pretty much smell at all. Also, the taste aspect of smoking has always seemed somehow over-emphasized. Smokers tend to "speak of a taste of a good cigarette" although everyone seems to think that the nicotine is what they're after. Furthermore, every smoker who has stopped smoking for more than a month, reports that the taste of the first cigarette after the break is awful, but that will pass usually pretty soon. (After a day or two.) Just make things clear: would it be the case that a smoker's brain associates the smell of cigarette with those rare occasions of a real nicotine high (most of the cigarettes a typical smoker has during the day don't cause any physical feeling whatsoever)? (By the way, I personally have been a smoker, but this is not just something I've noticed in myself.) [1] I'm not quite sure how the terminology is in English. By flu, I don't mean some aggressive high-fever Influenza that puts you in bed. Just a regular flu with perhaps a slight fever and snivel coming out of your nose. (I don't if "snivel" is just the right word, but I hope you understood.)

pdf23ds (2007-03-07 20:00:27)

Maybe Judy has the smell equivalent of blindsight.

pdf23ds (2007-03-07 20:01:28)

I wonder how this insight on addiction could apply to other, non-substance forms of addiction, like video games or internet or shopping or gambling.

Susana Wolfertz (2010-06-05 18:07:51)

I started cancer sticks when I was in my teens. It was the hugest wrong move I've made. Now I'm much older I have found giving them up is harder than you can imagine. I used all of the stop smoking gadgets but none did the trick. Then I found the e-cigarette. The e cig uses a nicotine liquid that has only nicotine. No toxic substances at all. They have luckily improved my life. No more inhaling cancerous substances feels great!

## **The Trouble With College (2007-03-04 21:49)**

Yesterday I heard something – a very ordinary bit of info – that neatly summed up the trouble with college. Someone told me about a friend of hers who was a graduate student in English at Berkeley. Her friend taught a small class of freshman and sophomores. He was enthusiastic about what he was teaching, but his students were not. He couldn't make them enthusiastic, even a little. They just sat there. When I started teaching at Berkeley, I had a similar experience. My first class was introductory psychology. Over the first few months, I came to see that my students, almost all of them, had different interests than me. I thought X and Y were fascinating; they didn't.

No one is at fault here, of course. It's perfectly okay that the grad student enthused about something that leaves his students cold. It is perfectly okay that I liked Research X and Y but Research X and Y bored my students. Nothing wrong with any of this – in fact, we need diversity of thought and knowledge, which grows from diversity of interests. We need diversity of thought and knowledge because we have many different problems to solve.

At fault is a system (Berkeley and similar colleges) that fails to value that diversity. (In fact, it doesn't even notice the diversity, except in a one-dimensional way: how much students resemble their professor.) Even worse, the system tries to reduce diversity of thought because it tries to make students think like their professors. Why should the 20 (or 800) students in one class be forced to learn the same material? The students vary greatly. Forcing all of them to learn the exactly same stuff is like forcing all of them to wear exactly the same clothes. It can be done, especially if rewards and punishments (i.e., grades) are used, but it's unwise. Just as feeding children a poor diet stunts physical growth, forcing college students to imitate their professors, instead of letting them (or even better, helping them) grow in all directions, stunts intellectual growth.

I wrote about these issues [1]here and gave [2]a related talk about human evolution. [3]Aaron Swartz and I have



ideas about a better way, and how to get there, which I will blog about. I will tell a 10-minute story about this as part of the [4]Porchlight story-telling series on March 26 (Monday), 8:00 pm, Cafe du Nord, 2170 Market Street, San Francisco ( \$12 admission).

1. <http://www.freakonomics.com/pdf/whatdostudentswant.pdf>
2. [http://sethroberts.net/archives/How\\_Economics\\_Shaped\\_Human\\_Nature.ppt](http://sethroberts.net/archives/How_Economics_Shaped_Human_Nature.ppt)
3. <http://www.aaronsw.com/weblog/>
4. <http://www.porchlightsf.com/thismonth.html>

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Ruth Heasman (2007-03-05 14:22:43)

Hi Seth, I couldn't agree with you more. My degree was in Philosophy and within that my favourite subject was the Philosophy of Mind. I remember studying both Daniel Dennett and John Searle. I enjoyed both immensely, but I agreed with Searle. Unfortunately, my professor was a follower of Dennett and through pride, I suppose, I wanted to get a 'first' mark in at least this one subject so in the exam I espoused Dennett's argument rather than Searle's. It hurt me to do it, but I got my 'first'. Years later, I bumped into Daniel Dennett at a book signing and somehow felt compelled to tell him all this... The poor guy, he must have thought I was an idiot! It just goes to show that I still carry that shame around with me to this day. Heck - here I am confessing all over again. Something is definitely wrong with the system though, when you know you must agree with your professor to get the desired grades. I always imagined that a Philosophy degree would be about thinking for oneself, but it turns out, it is just as hide bound as everything else.

Sean (2007-03-06 00:11:51)

Great post, Seth - as a college freshman, I must say that I wholeheartedly agree. However, the diversity of teaching styles, doctrines, and course subjects needed to create a new college experience would only be possible through extensive use of the Internet and outsourcing (e.g. off-site Indian TAs/assistants). Unfortunately, universities and the politicians/bureaucracies that control them are loathe to implement these two components - especially the second - into university education. Until then, I'll be stuck with a terrible (for me) Business Communications professor - I only had 2 choices in professors, and only one that fit my schedule. As Ruth pointed out, going against my true beliefs about good business communication habits to get an "A" instead of a "C" does me no good in the long run, and only makes me hate college and business school. BTW Seth, I ran across this article from 2003 on creatine and number memorization/IQ tests in Australia. Maybe a future self-test? As soon as I save some cash, I plan to try it out. <http://news.bbc.co.uk/2/hi/health/3145223.stm>

seth (2007-03-06 04:51:55)

Thanks, Sean. I didn't know that about creatine. Yes, maybe a future self-test.

Jez (2007-04-05 16:12:43)

I think I was lucky on my course, you were able to put your own arguments forward, as long as you demonstrated an understanding of what you were taught, and put a balanced argument forward, you could introduce your own ideas.

### **Andrew Gelman on Web Trials and the Shangri-La Diet (2007-03-05 20:52)**

[1]Andrew Gelman is a professor of statistics at Columbia University. Years ago we co-taught a seminar about left-handedness. His [2]blog. This interview took place via instant messaging in February, 2007 and has been edited slightly.

SR I want to ask your opinion of web trials. People go to a website where they choose or are randomly assigned a treatment. Then they come back and report the results.

AG Then the records of their choices and outcomes are made publicly available.

SR Yes. And there would probably be some summary of the results prepared by experts. It wouldn't be just raw data.

#### COMPARING TO CURRENT STATE OF THE ART IN MEDICAL RESEARCH

AG We could compare to the current state of the art in medical research, which I think is to have some moderately large randomized clinical trials, each of which is published in a journal, followed by a meta-analysis of these trials. A difficulty with the current state-of-the-art is that sample sizes in clinical trials seem to be simultaneously too small and too large. Too small in that results tend to be just barely statistically significant (and often not significant for subgroups), so that you can't really put your faith in one study, hence the need for meta-analysis. Too large in that each study is unwieldy, takes a huge amount of effort and doesn't allow for much learning and experimentation during the study.

SR. A famous epidemiologist [Richard Doll] once said that if the effect is strong, you don't need a big study.

AG In some way the high cost is a good barrier in that people have to think seriously and justify what they want to do. On the other hand, within any particular research plan, it would seem to limit the possibility for innovation.

Speaking generally, a challenge is to integrate clinical judgment (including ideas of experimentation and trying different things with different patients) with scientific goals such as replicability.

Also, there are well-known cognitive illusions in clinical judgment, which is what motivates the evidence-based-medicine movement (for randomized trials, public records of data, etc.) in the first place.

SR How do web trials fit into the picture you have drawn?

AG Ideally, web trials are intermediate between controlled randomized trials on one hand, and full recording of observational data on the other. If people are really volunteering to be randomized, then they follow the protocol, then this is a clean randomized expt (albeit not blinded, an issue I'd like to raise with you). In practice there will be lots of selection, dropout, measurement error, etc., which moves it toward an observational study. The dispersed nature of the data collection is similar to (in fact, more dispersed than) the idea of individual clinicians recording their experiences and outcomes into a centralized databased. That is, the data collection is dispersed, the database is centralized.

SR A web trial would have more regularity – less variation – across subjects than observations collected from individual doctors. Because everyone would get the same instructions. Whereas different doctors are obviously going to give different instructions (for the same nominal treatment).

AG Yes. That's why I said the web trial is in between.

#### DIFFICULTIES WITH BLINDING

SR In the area of blinding I think a web trial would be better than the conventional double-blind clinical trial. If the goal is to guide practice. In practice patients are not blinded. Blinding is a tool to equate expectations. Better

to equate expectations by comparing different treatments both believed to be effective.

AG One of the difficulties with your self-experimentation is that there's no blinding at all. Similarly with these trials. Some of it is the nature of your treatments, but perhaps with some effort you could come up with blinded versions.

SR In my self-experimentation the expectations are equal in the different conditions, in many cases.

AG For example, consider the recent self-experiment that you describe on your blog, where you try different oils and measure your balance. I'd believe these results a lot more if you blinded the treatments.

SR Sure, blinding would help in that case, I agree. I plan to do something like that. But blinding is not necessary to equate expectations. For example, I tried many ways of losing weight. In every case I expected it to work. Some ways worked much better than others. It is this comparison of the effects of different treatments that is interesting. In general expectations cannot be very powerful or there would be no problems left to solve. Expectations are powerful in a few areas and seem to have no effect in many areas. I don't mean we should ignore them; but to emphasize them as a big deal is not what the evidence suggests. In any case in web trials the participants would only be randomized (or choose) treatments they thought might work

AG There's some work by Rubin and other statisticians on "broken randomized trials" which can more generally be thought of as experiments that have partial randomization.

SR I think of web trials as giving "entrants" (or subjects) a choice: to be or not to be randomized. Then when it's all over you compare the two groups.

AG That makes sense. You'll still have some problems: 1. People not following protocol. 2. Non-blindness of treatments. 3. Other problems, I'm sure, which I can't think of offhand.

SR Well, these are equal for all conditions so they shouldn't distort anything

AG In a controlled trial you can deal with some of these things: 1. In a controlled trial you can have more interactions with the experimental subjects, thus maybe more likely they'll follow protocol. 2. In a controlled trial you can (sometimes) ensure blindness. In general, I don't think you can get away with assuming that biases cancel out.

#### ANALYZING DATA FROM WEB TRIALS

AG Your web trials should give us a big juicy source of data that can be thrown at a stat Ph.D. student as a thesis project, perhaps! My intuition as an amateur sociologist of applied statistics is that an exemplary applied analysis is a good way to kick-start the study of a statistical problem.

SR What's an example of such a kick-start? That's an interesting point.

AG I'm thinking of the hierarchical models that were fit by Lindley, Novick, Rubin, and others in the late 1960s thru early 1980s to educational data. These provided examples for people to follow-templates-as well as demonstrations that these methods really worked. There were various interesting discussions of these models in the stat literature, in particular I'm thinking of a paper by Rubin on law school validity studies in J. Amer. Stat. Assoc. from 1980 that had several discussants.

SR Yes, it is true that the data from web trials would be complex and interesting in new ways and accessible to everyone.

AG Yes, having available data is another plus—that's really a new feature which should help. Now back to the warnings. A very well known example is the Nurses Health Study, an observational study that found that taking post-menopausal drugs was associated with lower heart-attack risks (and lower death rates). But when a big randomized expt was done, no association was found. Actually, taking the drugs slightly increased cancer risk, I believe. See [3]here.

I talked with various people about this, and there are different potential explanations for the discrepancies. One story is that the women who took the drugs were otherwise healthier, more health conscious, etc.—even after controlling for whatever pre-treatment variables they controlled for. Another story is that the populations of the 2 studies were different (in particular, in their average ages), and perhaps the drugs are beneficial for some ages but not others. (Incidentally, the drugs were not originally intended to reduce heart-attack risk. This was an unexpected effect (or non-effect), I believe.)

Anyway, the people I trust on these matters (notably John Carlin) believe that the difference is because of "selection", i.e., the drugs don't really reduce heart attack risk. But the observational study led people to recommend the drugs. So this is a big example where the obs study was misleading.

SR: Did the randomized study conclusively rule out the effect size seen in the correlational study? or did it simply find no effect?

AG I'm not sure. My impression is that the expt actually contradicted the obs study—a stat signif negative effect for one, and a stat signif positive effect for the other—not just that there was significance for the expt and no signif for the obs study—but I never really looked into it.

SR I'd like to return to the issue of blind vs don't blind. You believe any experiment where subjects are not blind to the treatment has a problem?

AG Yes, if knowledge of the treatment could affect the outcome (for example, through motivation). I worry about it for your diet and depression studies.

SR Well, in much research the first question is whether there is a useful effect. later experiments deal with mechanism. I was under the impression that what matters is to equate expectations across conditions and that blinding is just one way to do this.

AG Maybe you're right, I'm not actually up on this literature. I know that Paul Rosenbaum has written about it.

\* MORE ON BLINDNESS: CONSIDERING THE SHANGRI-LA DIET \*\*

AG My knowledge of it is not particularly sophisticated. For your diet and depression studies, there are obvious stories based on motivation.

I wouldn't go so far as some people and simply dismiss your results. But the concerns are natural, I think. It's a little different than the problem with the Nurses study. Here I'm worried about motivation, there the issue was selection.

Although there's a possible selection problem in your study too, in that the people (including you) doing the Shangri-La Diet might be those who are ready to try something new and lose weight.

SR There are a lot of people who are always ready to try something new and lose weight.

AG Again, this could be tested with a blinded study. For example, half the people get the oil apart from a meal, half get the oil with the meal. Not that this would solve all problems of interpretation. . . .

For example, Caroline thinks that your diet works, but that the reason why it works is that it stops people for snacking for a 2-hour period (before and after the oil) and also focuses people on their snacking.

SR If anyone thinks that — and it is a perfectly reasonable thing to think if you are just starting to learn about it — then they can replace the oil with water and see if they continue to lose.

AG To answer your comment ("there are a lot of people who are always ready to try something new and lose weight"): yes, I remember you saying this before, and this is a big reason I wouldn't dismiss your results immediately. But, still, people willing to try this wacky new thing might be special (on average). To put it another way, I expect there were similar successes with people trying Scarsdale, Atkins, etc.

SR I'm sure that people who try my diet are unusual early adopter types. I think Atkins has some truth to it — some reasons it would actually work. I don't know enough about Scarsdale to comment. My theory says that merely changing what you eat (to foods with unfamiliar or at least less familiar flavors) should lower your set point.

AG Sure, but you had another point which was that these were people for whom nothing worked before. I was just using these diets as examples of other things that worked when nothing worked before. It relates to the historical perspective of new diets as things that will work for a few years before burning out. Possibly because the new diets can motivate people.

SR I tend to think they burn out because the new food becomes familiar.

AG I'm not saying that this is necessarily true of your diet—yours might be different—I'm just giving a historical control to give insight as to how there could really be motivational issues.

SR That's true, research to distinguish my explanation of the burn out and a motivational one could be done but of course hasn't been.

AG Your story, "they burn out because the new food becomes familiar", is plausible. It's also plausible that it's easier to motivate yourself with a plan that's new and different.

SR I hope there will be studies of whether the theory behind my diet is correct. These would essentially be studies that test the prediction that familiarity matters. This is a prediction that other theories do not make.

AG Yeah, based on reading the appendix to your book, there's still some research synthesis that needs to be done (presumably with the help of animal studies).

SR I agree.

## BACK TO WEB TRIALS

SR Web trials are relatively early in the research chain and they are relatively practical. In these cases you don't worry a lot about mechanism, you worry much more about efficacy — is there an effect?

AG Regarding the analysis of web trials, it would be interesting to look at other examples of partially random-

ized experiments. Rubin and Hill and others worked on a study of school choice where they looked into some of these issues. It was a study that randomized some aspects of which kids went to which schools, but parents had some choices too.

In medicine and also in economics/public-policy, there has been a lot of interest in recent years in trying to get inside this sort of study rather than just relying on the "intent to treat" or explicit randomization.

SR "get inside this sort of study"—what do you mean?

AG: I mean, look at what treatments are actually chosen by the individuals in the study, not just looking at what treatments they were assigned to.

SR Could you sum up why you like the idea of web trials?

AG 1. Lots of data. 2. Motivates people to randomize, to apply the treatment, and to record results. 3. More generally, gets people involved in the project as participants, not just "subjects"

SR Those are good points, thanks.

AG Thank you for giving me the opportunity to think about these things. I'm still struggling with the question, "Are medical experiments too small or too big (in number of subjects)?" As discussed [4]here.

1. <http://www.stat.columbia.edu/~gelman/>

2. <http://www.stat.columbia.edu/~gelman/blog/>

3. [http://www.stat.columbia.edu/~cook/movabletype/archives/2005/01/could\\_propensit.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2005/01/could_propensit.html)

4. [http://www.stat.columbia.edu/~cook/movabletype/archives/2005/05/im\\_all\\_confused.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2005/05/im_all_confused.html)

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Jeffrey Miller (2007-03-06 12:52:58)

One could eliminate any "expectations" bias by testing the predictions of the SLD on mice. The hypothesis of the SLD (as I understand it) is that if you fed mice some amount of flavorless sugar water each day, their weight set point would drop, they would eat less, and they eventually would weigh less than the control group. One could perhaps implement the experiment by providing the mice in the experimental group only some fixed amount of sugar water to eat or drink and the control group only water during a few hours of the day. During the rest of the day, both groups could eat whatever they want. Obviously you'd have to make sure that the mice were drinking the sugar water, but that should be possible.

seth (2007-03-06 13:36:22)

Yes, that's a reasonable test. You just have to make the sugar water available at a different time than food. If they are available at the same time the sugar water can make the regular food a better signal for calories.

## **Andrew Gelman Interviews Me About TV and Mood (2007-03-06 21:13)**

Andrew did this interview for [1]Stay Free!, a magazine about media and consumerism, in 2000. They didn't publish it.

AG Why don't you start by describing your method of using TV watching to cure depression?

SR To feel better, you watch faces on TV in the morning and avoid faces (televised and real) at night. TV faces are beneficial in the morning and harmful at night only if they resemble what you would see during an ordinary conversation. The TV faces must be looking at the camera (both eyes visible) and close to life-size. (My experiments usually use a 27-inch TV.) Your eyes should be about three feet from the screen. Time of day is critical--if you see the TV faces too early or late they will have no effect. The ave contact with other people has a big effect on when we are awake; and (c) there are many connections between depression and circadian rhythms. Depression is closely connected with insomnia, for instance.

AG I generally think of TV as an evil, addictive presence in American life. Do you think there's something dangerous about giving TV this "badge of approval" as a medical treatment?

SR It's not quite a "badge of approval." Seeing faces on TV at night--which of course is when most people watch--is harmful, my research suggests, if the faces are close to life-size. And they often are. Maybe TVs will be made with variable picture sizes--one size for morning, another size for night. When I watch TV at night (very rare), I stay as far away as possible.

AG I mean, if this method really worked, I could imagine the Depression Network running talk shows in the morning that are basically infomercials for Prozac or whatever. Would you worry about that?

SR No. I watch faces on TV every morning and would appreciate more choice. I suspect the morning shows would not be Prozac infomercials, however, because the people watching would not be depressed.

One thing that bothers people about your plan is the idea of TV as a substitute for human contact. I think that most of us--even people who spend a lot of time watching TV--find this idea upsetting. It's like "Brave New World" and virtual reality. Are you at all bothered by recommending to depressed people that they sit inside watching TV?

"Substitute for human contact"? True, but why is that so bad? Reading--which TV critics, many of them writers, seem invariably to like--is also a substitute for human contact, of course. Agriculture is a substitute for hunting and foraging. Vitamin pills substitute for food. Civilization is all about substitutes--about being able to fulfill needs in many ways.

Still, I think watching faces on TV in the morning is only a partial solution to the problem of depression, just as nutritional supplements (e.g., iodized salt, folate added to flour) are only partial solutions to the problems caused by a poor diet. A fuller solution would include changing when most people work. The usual pattern is work (morning and afternoon) then socialize (evening). A better pattern would be socialize (early morning) then work (late morning to early evening)--and go to bed early. I do my little bit for the revolution by inviting friends to brunch rather than dinner. The revolution would also include picture phones with life-size faces.

I heard you say once that depression is ten times as common now as it was 100 years ago. Where do you get that information from?

Many articles have made that point. One of them is: Klerman, G. L., & Weisman, M. M. (1989). Increasing rates of depression. *Journal of the American Medical Association*, 216, 2229-2235.

If depression is a consequence of modern life, do you think there's something strange about seeking a technological solution for it? It's sort of like saying, people are too atomized, so let's solve the problem with

even more solitude?

It is one of many technological solutions to problems caused by “atomization” — people being farther apart. Telephones, air travel, and email are other examples. So it isn’t strange. If my subjects are any guide, watching TV for an hour every morning would not increase the solitude of most depressed persons. They are already alone during that time.

Would listening to the radio be OK?

No. You have to see faces.

Have you ever tried to get your research sponsored by TV stations or networks or, for that matter, a publication like TV Guide?

No, but I once put a “TV is good” ad (ABC) on my bulletin board.

1. <http://www.stayfreemagazine.org/>

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Willy (2007-03-07 15:18:03)

I wonder if this effect of TV on depression explain the success of morning programs where I live (they are very new). Most programs are light and try to be fun, like the only reason to watch them is to watch people. I turn on the radio when I wake up and listen to news programs, rather depressing. I will try TV.

seth (2007-03-08 12:14:07)

Ordinary TV doesn’t have enough faces of the right size to make a difference. But I think people are hungrier for voices in the morning than at other times – they get more pleasure from hearing voices. I think just hearing voices reduces the unpleasant feeling of loneliness. A friend of mine spent several months on an island by himself. A radio made it much more bearable.

### **Jane Jacobs on College (2007-03-08 10:34)**

Jane Jacobs, the urban and economic theorist, [1]wrote:

Only in stagnant economies does work stay docilely within given categories. And wherever it is forced to stay within prearranged categories — whether by zoning, by economic planning, or by guilds, associations or unions — the process of adding new work to old can occur little if at all.



In the case of college, the "work" is post-high-school education. College students are not forced to join a union but the need for credentials forces them to attend college, where, as Jacobs correctly predicts, a narrow range of subjects is taught in a narrow range of ways. Take my department (psychology at UC Berkeley). As one of my students, a psychology major, asked, why isn't there a course about relationships? That's what's really important, he said. Yes, why not? There has never been such a course at Berkeley nor, to my knowledge, at any other elite university. What a curious omission. And why do practically all classes involve lectures, reading assignments, and tests? Aren't there a thousand ways to teach and learn? I think Jacobs has the answer: Work has been forced to stay within prearranged categories – categories that seem increasingly outdated. The pattern of chapters in almost all introductory psychology textbooks (which cost about \$100) derives from the 1950s!

[2]An earlier post by me about college. [3]Other people's comments. Jane Jacobs on [4]the food industry and [5]scientific method.

1. <http://www.kansascity.com/mld/kansascity/news/opinion/16828973.htm>
2. <http://www.blog.sethroberts.net/2007/03/04/the-trouble-with-college/>
3. [http://ben.casnocha.com/2007/03/five\\_things\\_wro.html](http://ben.casnocha.com/2007/03/five_things_wro.html)
4. <http://www.blog.sethroberts.net/2007/02/14/jane-jacobs-on-the-food-industry/>
5. <http://www.blog.sethroberts.net/2007/02/05/jane-jacobs-on-scientific-method/>

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Tim Lundeen (2007-03-08 12:03:08)

Well said :-) My son is a freshman in college, and it is not a good fit at all. Seems like a high price to pay for the credential.

pdf23ds (2007-03-08 19:41:49)

This, while it was only one of the several reasons I didn't finish college, is perhaps the primary reason why I'm not planning on returning to college.

## **How Good is the Atkins Diet? (2007-03-09 22:23)**

[1]A new study, just published in JAMA, compares several popular diets: Atkins, Zone, Ornish, and LEARN (a conventional-wisdom-type diet based on "national guidelines," according to the paper). The Atkins diet did much better than the other three. The results were quite a bit more positive for Atkins than [2]an earlier comparative study where compliance was poor, weight loss was minimal, and no diet was clearly better than the rest. The Atkins Company, not surprisingly, is pleased with the new study; they have put it in their [3]research library.

Here is what the researchers concluded from their data: "A low-carbohydrate, high-protein, high-fat diet may be considered a feasible alternative recommendation for weight loss" (from the abstract – the meaning of "alternative" is not explained).

However, a graph in the paper (Figure 2 for those of you with access) makes a very important point that the researchers don't mention: Persons on the Atkins diet weighed more after 12 months on the diet than after 6 months. After 6 months, in other words, the lost weight was coming back. The regain is not small: From Month 6 to Month 12 the Atkins dieters regained about one-quarter of the weight they had lost. At the end of the study (Month 12), they had lost about 10 pounds.

My interpretation is that the Atkins Diet works for two reasons: 1. The food is new. The flavors of the new food are not yet associated with calories. The novelty wears off, of course. This is why some of the lost weight was regained. 2. High-glycemic-index foods (such as bread and potatoes) are eliminated. This produces permanent weight loss, but not a lot. When I started to eat low-glycemic-index foods I lost 6 pounds, which I never regained. A 6-pound loss is not terribly different from the 10 pounds (average) lost by study participants.

In a [4]newspaper article, the study's lead author mentioned the regain:

As the study progressed, [Christopher Gardner, an assistant professor of medicine at the Stanford Prevention Research Center] said, some dieters put back on some of the weight they had lost early in the year.

That's misleading. It wasn't "some dieters" – it was a trend shown by the whole group. But at least he (kinda) mentioned it.

1. [http://lowcarbdiets.about.com/gi/dynamic/offsite.htm?zi=1/XJ&sdn=lowcarbdiets&cdn=health&tm=28&f=00&su=p284.7.420.ip\\_p284.5.420.ip\\_p674.0.400.ip\\_&tt=2&bt=1&bts=1&zu=http%3A//jama.ama-assn.org/cgi/content/abstract/297/9/969](http://lowcarbdiets.about.com/gi/dynamic/offsite.htm?zi=1/XJ&sdn=lowcarbdiets&cdn=health&tm=28&f=00&su=p284.7.420.ip_p284.5.420.ip_p674.0.400.ip_&tt=2&bt=1&bts=1&zu=http%3A//jama.ama-assn.org/cgi/content/abstract/297/9/969)
2. <http://jama.ama-assn.org/cgi/content/abstract/293/1/43>
3. <http://www.atkins.com/research-library/research-items/comparison-of-high-fat-and-high-protein-diets-with-a-high-carbohydrate-diet-in-insulin-resistant-obese-women>
4. [http://origin.mercurynews.com/lifestyle/ci\\_5373025](http://origin.mercurynews.com/lifestyle/ci_5373025)

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Sean (2007-03-10 09:09:58)

Do all these studies only measure weight and not percent body fat? Adding 5 lbs of muscle is healthier than adding 5 lbs of fat.

seth (2007-03-10 23:10:11)

The most recent study measured percent body fat.

## How To Do Experiments That Generate Ideas (2007-03-10 22:36)

A few days ago a graduate student in economics asked me what I thought of behavioral economics. On the positive side, I said, some of the phenomena are impressive. For example, [1]the endowment effect, which is so strong I would demonstrate it in class. On the negative side, none of the researchers use experiments to generate ideas. They don't merely not do it; they seem unaware of the possibility of doing it. The graduate student wondered how it can be done. I said there were three main ways:

1. Do something extra. Do a little more than necessary so that your experiment tells you about something that isn't the focus of interest. For example, vary a factor that you think is not important. This is [2]Saul Sternberg's idea. I did this in my peak-procedure experiments: measured how long rats held down the bar. This was irrelevant to the

purpose of the experiments, which was to understand how rats measured time. These measurements greatly surprised me. For years, I misunderstood them. Eventually they led to [3]a new line of research about the control of variability.

2. Measure a function, not a point. Ask how your treatment changes a whole function, not just this or that numerical measure. This is what I did in my peak procedure experiments: The experiments generated for every condition an entire function showing response rate as a function of time. I saw how treatments changed the entire function. [4]This talk describes some of the new ideas this led to.

3. Make your experiment easy and fast. The easier and faster it is, the more you can do it in lots of variations. Our ignorance of behavior being great, some fraction of these are likely to generate unexpected - and therefore inspiring - results. This is one reason self-experimentation is [5]good for generating ideas: It is easy and fast.

I am not aware of any other written answers to this question, strangely enough.

1. <http://ideas.repec.org/a/ucp/jpolec/v98y1990i6p1325-48.html>
2. <http://www.psych.upenn.edu/~saul/>
3. [http://sethroberts.net/about/2006\\_variation\\_of\\_bar\\_press\\_duration.pdf](http://sethroberts.net/about/2006_variation_of_bar_press_duration.pdf)
4. [http://sethroberts.net/about/1992\\_Use\\_of\\_Time-Course\\_Measurements\\_for\\_Functional\\_Analysis.PDF](http://sethroberts.net/about/1992_Use_of_Time-Course_Measurements_for_Functional_Analysis.PDF)
5. <http://repositories.cdlib.org/postprints/117/>

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David Zetland (2007-03-12 15:40:56)

I suggest spending a lot of time looking at patterns in the raw data using graphs and spreadsheet analysis. Do subjects react in the same way? in a non-linear way? Regressions are so brute force that you lose a lot of subtle details at the individual level. Also compare your results to those of others and try to understand the variation. I am working on a paper because of this: my subjects saw more data in a cooperation (PG) game - they were less "cooperative" and more "reciprocal" - relative to the other experiment. My result fits the literature better and so I'm excited to push it ahead.

seth (2007-03-12 15:58:19)

Yeah, I agree. That's advice about what to do after the experiment is over, however. My comments are about what to do before that - while planning your experiment, for example.

### **Is Sugar Fattening? (2007-03-11 14:50)**

In 1987, Dr. Israel Ramirez, a researcher at the Monell Chemical Senses Institute, whose research led to the theory behind the Shangri-La Diet, [1]questioned the prevailing assumption that sugar causes obesity in humans. Rat experiments did not support such a simple idea, he pointed out.

The [2]most recent issue of the American Journal of Clinical Nutrition has a [3]review article that agrees with Ramirez (but, alas, does not cite him). Now there is clinical evidence that Ramirez was right. From the abstract:

Numerous clinical studies have shown that sugar-containing liquids, when consumed in place of usual meals, can lead to a significant and sustained weight loss

Maybe the Shangri-La Diet isn't so crazy.

1. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list\\_uids=3310872&query\\_hl=13&itool=pubmed\\_DocSum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=pubmed&dopt=Abstract&list_uids=3310872&query_hl=13&itool=pubmed_DocSum)
2. <http://www.ajcn.org/current.shtml>
3. <http://www.ajcn.org/cgi/content/abstract/85/3/651>

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### **Omega-3 and Bone Health (2007-03-12 22:55)**

The [1]current issue of the [2]American Journal of Clinical Nutrition, which I mentioned [3]yesterday, also has [4]an interesting article about the effects of omega-3 on bone health. (Most recent issues of AJCN have something about omega-3.)

The researchers measured the bone density of about 80 teenagers and remeasured them about 5 years later. They found that bone density was positively correlated with the amount of omega-3 in the blood. A low correlation (0.3) but significant. Rat experiments support this connection. Again, it's not just that omega-3 is good; omega-6 is bad – see the [5]Israeli Paradox.

1. <http://www.ajcn.org/current.shtml>
2. <http://www.ajcn.org/>
3. <http://www.blog.sethroberts.net/2007/03/11/is-sugar-fattening/>
4. <http://www.ajcn.org/cgi/content/abstract/85/3/8>
5. <http://www.blog.sethroberts.net/2007/02/02/the-israeli-paradox/>

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### **The Berkeley School Lunch Program: Correction (2007-03-13 16:31)**

After I mentioned that the Berkeley lunch program was [1]in poor shape, [2]Ann Cooper, the chef in charge, invited me to visit – to set the record straight. It was quite an opportunity; the Berkeley lunch program, some hope, will become a model for the whole country. This is why there was [3]a long New Yorker article recently about what Cooper is doing.



Spending about \$1/day more per student, Cooper has shifted the lunch menu far away from the heavily-processed and factory-made food of most school lunches. Far more of the food is cooked in the district kitchens, albeit days in advance in some cases. I took Cooper's word for it that the students actually eat the new food. This is a great improvement, in my opinion. The big questions are whether these changes are sustainable and what effect they will have.

The single best thing you can do for your health is to eat healthy food (the exact nature of which has yet to be determined, but you get the idea). Obesity, diabetes, heart disease, cancer, stroke – all the big American health problems are made much worse by the crummy diet of most Americans. Will Cooper's improved lunches cause her lucky diners to eat better as adults? If so, \$1/day is a great bargain compared to health care costs. (She estimated these changes will cost \$2/day across the country.) Will Cooper's improvements reduce obesity and diabetes? That is obviously the hope.

I wouldn't say the Berkeley school lunch program is in trouble or in poor shape; I would say it is in limbo. Four things are big question marks:

1. Cooper seemed to be working very hard and not quite enjoying it. Even after a year on the job. This is not a good sign. Her salary is being paid by the Chez Panisse Foundation – not a good sign. She struck me as incredibly dedicated but how much failure and frustration can she and the Chez Panisse Foundation bear? This sort of thing is often much harder than anyone imagines in the beginning.
2. Obesity is a big big issue. Whether the new food will help is unknown. Cooper seems to take it on faith that her food will be less fattening. I am less sure. As anyone who has read *The Shangri-La Diet* knows, I believe that American food became really fattening not because it was processed or "unhealthy" but because of the increasing popularity of foods that tasted exactly the same each time (e.g., microwave entrees). If she cooks the same recipes again and again, the hoped-for weight loss may not happen. If it doesn't, will the program continue? Or will \$1/day be seen as better spent on something that hasn't yet failed, such as more physical ed?

3. The effects of Cooper's changes are going to be measured by UC Berkeley School of Public Health researchers. As far as I could make out, the comparison will be between Berkeley students and students in another school district. You have  $n = 1$  (1 school district) in the experimental group and  $n = 1$  (1 school district) in the control group. This is better than nothing but, given the importance of the question – can better school lunches improve health for the rest of a student's life – and our great ignorance as to its answer, it is scary bad. It will be so easy to reach the wrong answer. Researchers with this sort of design often act as if they have hundreds of subjects in each group – each student is treated as a different and randomly-assigned subject. This isn't just false, it's misleading.

4. While I am sure the researchers can measure obesity, I am less sure they will do a decent job of measuring changes in attitudes toward food. It is not a typical public health question.



I am very optimistic about the future of food – and therefore health – in America, but it's because of (a) the Food Network, (b) the growth of farmers' markets, and (c) the success of Whole Foods and similar stores. Not to mention Rachael Ray. Americans are becoming food connoisseurs, starting to catch up with a large chunk of the rest of the world, such as China. The American increase in connoisseurship is trickle-down – from rich people to everyone else. Like cell phones, like TVs, like literacy, like many things. Whereas Ann Cooper is working in a school district that has lots of poor people. Not a good place to start this sort of revolution.

Addendum: This [4]article in New York magazine reminded me that Ann Cooper's previous job was at an expensive private school. So maybe it is another case of trickle-down after all.

2. <http://www.chefann.com/>
3. <http://www.chefann.com/blog/?p=397>
4. <http://nymag.com/news/features/29724/>

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Peter (2007-03-15 19:45:55)

I don't know, Seth. This idea of trickle-down from rich people as a precursor to being a connoisseur seems a bit misleading. Cellphones started out very expensive, so only rich people could afford them. There may have been some "status" pull because they were associated with rich people, but the rest of us got cell phones because they're convenient and became affordable. I don't see how the literacy argument works at all, at least in this country. Why should poor people be less inclined to like good food if it's available in the cafeteria?

seth (2007-03-15 21:45:30)

Cell phones became affordable because rich people paid the development costs. If something about cell phones required them to start with poor people, they might not have gotten very far. To return to school lunches, Cooper is trying to do something very difficult – and on a tiny budget. If she had more money, as she would in a richer school district, it would be easier. She would have more money to spend, she could do a better job, the health effects could therefore be larger and more convincing, and she would have more time to do it – her salary wouldn't be paid by a foundation.

Peter (2007-03-16 09:03:56)

Richer school districts don't necessarily have more money for lunch. Most of the money that doesn't come from parents is from the federal government. You can't ask those on a free lunch program to eat a worse lunch than full-price students, and even in a rich district, parents won't tolerate their children's lunch money subsidizing other people's. A very rich district could subsidize the cost of everyone's lunch out of its general budget (or get Alice Waters' foundation to help out, as Berkeley does) but for the most part, districts don't seem to go much past the free lunch subsidy as the amount they will spend on the average lunch. There's no multibillion dollar infrastructure buildout required to get better lunch food, just more per-student funding, and that is something that has to be done collectively, probably at the federal level.

seth (2007-03-16 10:58:45)

Let me make a prediction: The next school districts to try to provide much better lunches – as Cooper is doing in Berkeley – will be rich districts, even though childhood obesity is a much bigger problem in poor districts. This will happen before the federal government does anything.

Dr.Susan Rubin (2007-03-16 19:09:33)

Better School Food is on its way thanks to the soon to be released documentary on school lunch called "Two Angry Moms". This is not just a movie, it's a movement. The tipping point is closer this year with the farm bill up for renewal. This film will have a huge impact in the discussion of what we are feeding our kids and why. To learn more, visit [www.angrymoms.org](http://www.angrymoms.org) Dr. Susan Rubin ( Angry Mom)

Kaylyn (2007-03-22 06:25:20)

I think schools NEED better choices for lunch, because I have seen students that can't even fit in the desks!

Adam Zauder (2007-03-25 21:55:59)

While I agree that wealthier school districts will generally be on the leading edge – generally because moms in those districts have more time to voice their concerns and spend a lot more time in Whole Foods – we've found three charter schools exclusively serving underprivileged communities (95+ % of students qualify for the Federal free & reduced lunch program) who are adamant about working with our company to get natural and organic lunches in their schools. Students in those schools

are partnering with us to find communtiy and national businesses to subsidize the Federal lunch program. Interestingly, we a higher percentage of students in those schools choose our lunches than what we generally see in richer neighborhoods. More information is available at [www.brownbagnaturals.com](http://www.brownbagnaturals.com)

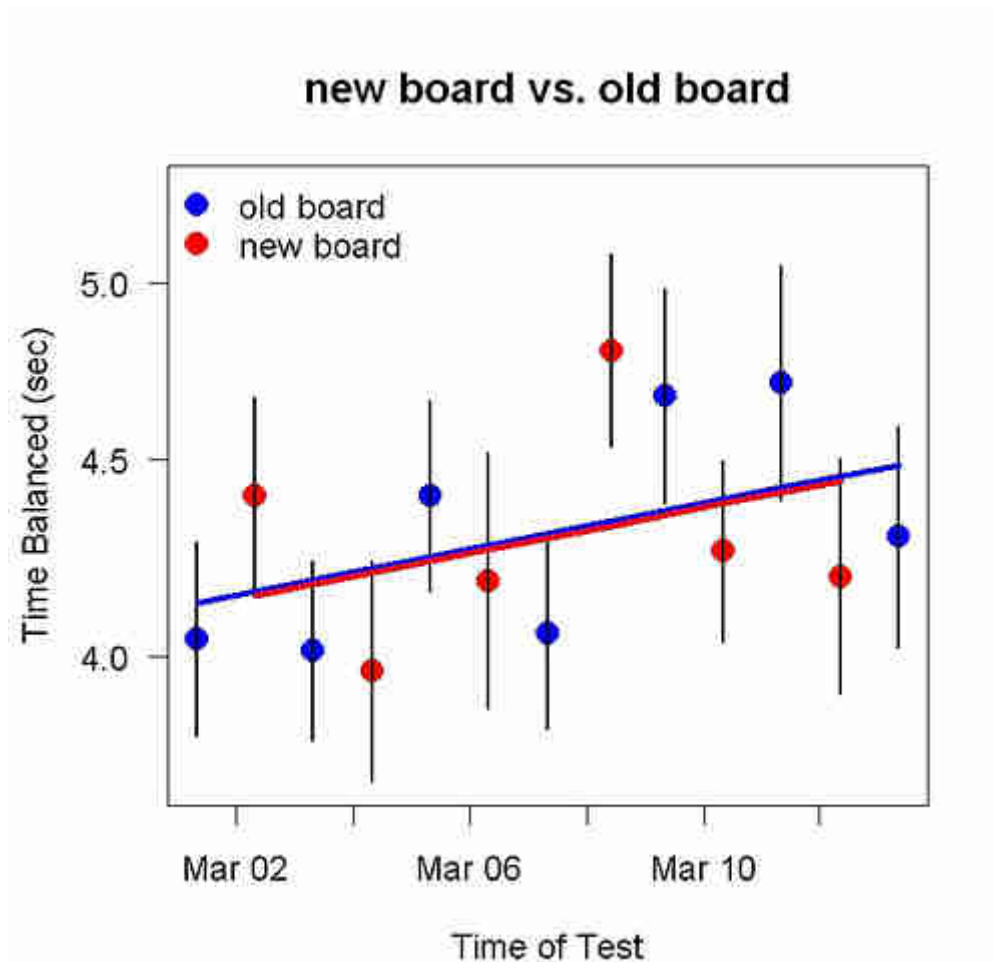
### **Science in Action: Omega-3 (measurement improvement) (2007-03-15 12:55)**

I've learned a few things. As some of you may know, I've been measuring my balance by standing on a board that is balanced on a tiny platform (a pipe plug) – pictures [1]here. Now and then the board would slip off the platform. I supposed this was a failure of balance but I wasn't sure, especially if it happened as soon as I stood on it. So I got another board into which my brother-in-law kindly drilled the perfect-size hole so that the plug will never slip:



To see if this made a difference I did an experiment with a design I have never used before but that I really like: ABABABAB... (one day per condition). In other words, Monday I tested my balance with the old board, Tuesday with the new board, Wednesday with the old board, Thursday with the new board, etc. Simple, efficient, well-balanced. Here are the results:





The red line is fit to the red points, the blue line to the blue points. The two lines are constrained to have the same slope.

Well, that's clear. I expected my balance to be better with the new board, actually.

Speaking of the unexpected, I made another measurement improvement that truly surprises me – the surprise is that I never did it before. When I looked at my early balance data (the first 10 or so days of data) I saw that my balance improved for the first 5 trials and was roughly constant after that. Each session was 20 trials so I dropped (excluded) the first 5 trials from my analyses – considering them "warm-up" trials. I took the mean of the last 15 trials. That seemed very reasonable and I thought nothing of it.

Recently I asked again how performance changes over a session. The answer was a bit different: I found that performance improved for the first 10 trials. Now there are 30 trials in a session, so dropping the first 10 of them seemed okay. And that's what I did.

But then I looked at how variability changed over a session. I expected the earliest trials to be more variable than the rest but the data didn't show that. Variability was pretty constant from the first trials to the last. Hmm. Maybe I am losing valuable information by not including those early trials in my averages. It occurred to me: why not allow for the warmup effect by modelling it, rather than by excluding it? (Modelling it meaning estimating it and then subtracting it.) I did that, and then I looked at the size of the standard errors of the means (standard errors based on the residuals from the fit) for the most recent 40 days – essentially, the error in measurement. Here is what I found. Median standard errors:

First 10 trials (out of 30) excluded: 0.073

First 5 trials excluded: 0.064

First trial excluded: 0.061

No trials excluded: 0.059

My eyes opened wide when I saw these numbers. Oh my god! I was throwing away so much! A reduction in error from 0.073 to 0.059 – that's 20 % better.

1. <http://www.blog.sethroberts.net/2007/01/26/science-in-action-omega-3-materials/>

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Tim Lundeen (2007-03-15 13:42:08)

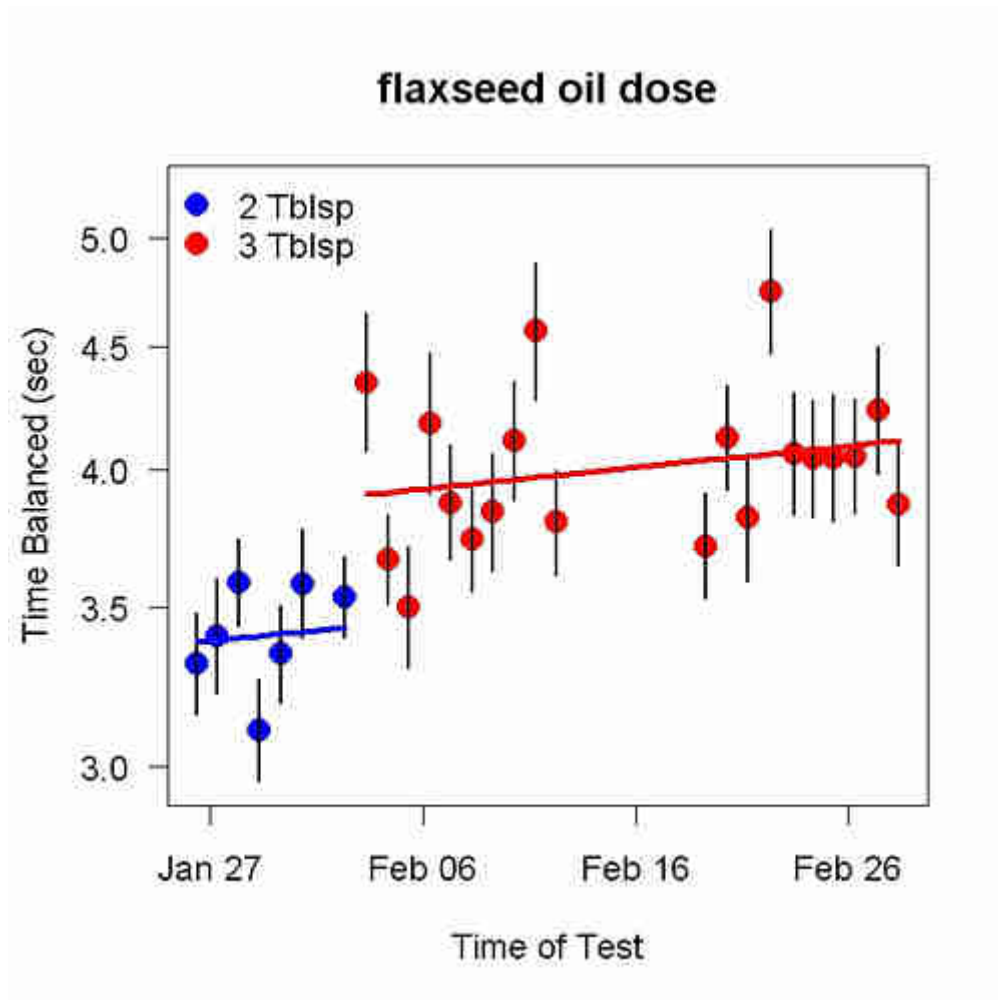
Fascinating, both the consistency of the results with/without slippage, and the standard error reduction.

seth (2007-03-15 14:29:18)

Thanks, Tim. It was your arithmetic results that led me to the standard error reduction. Your arithmetic results led me to do a very similar task, as you know. I didn't want to place constraints on the 100 simple arithmetic problems I did each session (it was just too complicated – too many things that might be important) so instead I did my best to equate different days by modelling – by estimating and removing the effects of this and that. That gave me the idea of doing it here, too.

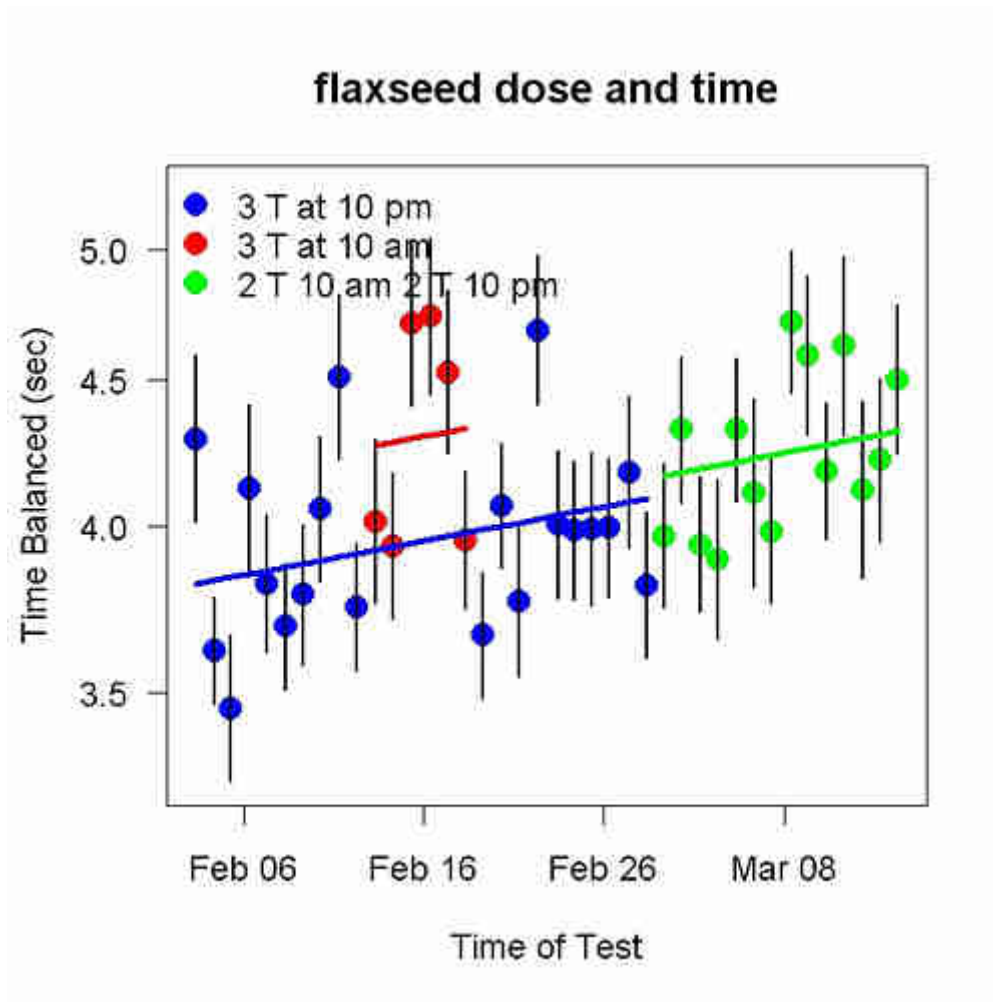
### **Science in Action: Omega-3 (what's the best dose?) (2007-03-16 20:59)**

With a [1]better understanding of how to measure balance, I looked again at my data about the effects of flaxseed oil. Here is a new, improved comparison of 2 tablespoons/day and 3 tablespoons/day:



Very clear difference: one-tailed  $p = .004$ .

Here is a messy comparison between 3 and 4 tablespoons/day:



I compared 3 tablespoons/day at 2 different times with 4 tablespoons/day divided between those 2 times. I didn't want to take 4 tablespoons at one time and I wanted to have at least 2 tablespoons in the evening because of the [2]sleep benefits. The graph shows that 4 tablespoons/day has about the same effect as 3.

The big picture: [3]Earlier data convinced me there is probably an effect. Before doing more subtle, convincing, publishable experiments, I have been trying to make the effect as large as possible. For two reasons: 1. To make the effect as clear as possible. 2. To have the most beneficial possible baseline (a baseline to which I will return many times). I foresee doing an experimental design like this: baseline (n days), something else 1 (n days), baseline (n days), something else 2 (n days), baseline (n days), something else 3, and so on. During those many baseline days I want the effect to be as strong as possible.

1. <http://www.blog.sethroberts.net/2007/03/15/science-in-action-omega-3-measurement-improvement/>

2. <http://www.blog.sethroberts.net/2007/02/21/science-in-action-omega-3-sleep-data/>

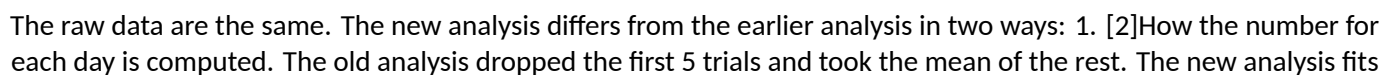
3. <http://www.blog.sethroberts.net/2007/01/20/science-in-action-omega-3-balance-results/>

Seth, may I ask what brand of flax oil do you use?

Spectrum Organic (Original Formula)

Hi seth, I am just starting reading your book. I wonder if taking omega-3 oil as capsules has any effect? You do not taste it then either. I have beend doing this for about 8 months (but skipped some days) and I lost some weight but not much. It is one clothes size even though I maintained everything else. I have never beleived in dieting. The capsules which contain flaxseed are very small. I took the oil for its beneficial effects on the brain. Thank you Claudia

A few months ago I did [1]a little experiment to test my belief that omega-3 was affecting my balance. I replaced fats high in omega-3 (flaxseed oil and walnut oil) with a fat low in omega-3 (sesame oil). Here is a new analysis of the data:



a regression line to balance as a function of trial to estimate an effect of trial and subtract it, then takes a mean of all the trials. 2. Allowance for improvement. The new analysis, as the graph shows, fits a slope to all the data. The improvement over days is subtracted from each day's score before the two conditions are compared.

The old analysis gave  $t = 4.1$  ( $p = \text{very tiny}$ ). The new one gives  $t = 6.3$  ( $p = \text{very very tiny}$ ). Big improvement!

[3]Directory of my omega-3 posts.

1. <http://www.blog.sethroberts.net/2007/01/20/science-in-action-omega-3-balance-results/>
2. <http://www.blog.sethroberts.net/2007/03/15/science-in-action-omega-3-measurement-improvement/>
3. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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peter (2007-03-19 15:04:03)

Seth, have you notice any difference in the quality of dream recall after taking more omega-3?

seth (2007-03-19 15:37:24)

In the beginning, my dream recall may have improved. But if it did I stopped noticing or it went away.

Chapman (2008-11-28 20:19:30)

After a high-cholesterol/triglycerid report, about two weeks ago I began a high Omega-3 diet (vitamin and dietary supplements, snacks, etc.). I've begun remembering vividly my dreams, and goggled "omega-3 dreams" to see if anyone else has experienced the same and found your blog. Just thought I'd share.

Hugh's house (2008-11-29 06:55:06)

Six of us staying at Hugh's house had some omega 3's before bed last night. We had 1000 mg pills (max recommended 3 / day), Hugh had 5 the rest of us have 1 or 2. We all had some hella crazy dreams. Tonight Hugh had 5, Richard and I (Alex) had 4, Ed had 2 because he is a pussy, Chris had 2 but decided to man up and have another one and Ali is going to have 3 (maybe, she is pretty sleepy but Hugh might force her). We're all about 70 kg's except Ali (weight unknown). We expect crazy dreams tonight. We'll report back tomorrow.

Hugh's house (2008-11-29 18:12:34)

So..uh...no weird dreams today. Except Chris is going to talk about his dream from last night: "I dreamed I was held up at knifepoint by one of my old school mates Jess Bingham. When he realised who I was he relented but somehow my shoe fell into a ravine. I spent the rest of my night searching for my shoe in a ravine." This dream was about a 17.56 % as crazy as the dreams from the previous night according to the published peer review journal articles. Hugh is pretty proud of his HealthyLife 200 pills / bottle double pack for \$AUS20. Their makeup: - 300 mg Omega-3 Marine Triglycerides as: - Eicosapentaenoic Acid 180 mg - Docosahexaenoic Acid 120 mg ...expect more entries.

September (2009-08-23 08:45:08)

I have begun taking Omega 3. I never eat any fish, flax, etc. so I thought it might be time to add Omega 3 to my vitamins. After taking it, I noticed I began having bizarre dreams, better sleep and better dream recall. When I forget to take my Omega 3, I do not experience these kinds of dreams. I have just started taking it and do not know how long the effects will last.

## At the Berkeley Farmers' Market (2007-03-18 22:07)

Yesterday I went to the Berkeley Farmers' Market and had a very interesting conversation with one of the vendors.

1. Whole Foods had called her and asked her if she would like to put her product in their stores. No thanks, she said. "Are you kidding?" they said. No, she said. She didn't want to put her product in their stores because she didn't want that sort of volume. She was more interested in supporting smaller stores. She told me that Whole Food's increased interest in local vendors had come about because of Michael Pollan's criticism of Whole Foods in *The Omnivore's Dilemma*. (Pollan had coined the term Big Organic and wondered which side – the more virtuous or the less virtuous – Whole Foods was on.)

2. The vendor next to her, [1]The Fatted Calf, who sell salami, beef jerky, sausage, duck confit, and other meat products, had been forced to stop selling to stores and restaurants when someone called the USDA to complain that they didn't have an office for the USDA inspector. That's right: no matter how small your business, you must have an office for the USDA inspector. It's an absurd burden to put on a small business. As I have heard others say, big businesses welcome government regulation. Because they can afford it and their potential future competitors, now tiny, cannot. Supposedly the regulation protects consumers; it may or may not but it certainly protects big businesses. (Does requiring an office for a USDA inspector protect consumers? I think not.) We need organic consumer protection. The current version is like heavy-duty insecticide. It kills small businesses.

1. <http://www.fattedcalf.com/>

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Daublin (2007-03-19 09:31:20)

On #2, absolutely. However, what is the point of the USDA if it only applies to large organizations? As you say, though, maybe the cost is more than the benefit, and so the whole thing should be cut back. As you point out, the regulatory burden is no big deal for existing large organizations, but can easily be a big deal for a newcomer. #1 sounds like someone has lost perspective from reading too many blogs. :) What percentage of Whole Foods shoppers have ever heard of Michael Pollan?

seth (2007-03-19 12:30:55)

It's not that the USDA shouldn't regulate small businesses; it is that their regulations should be "scalable" – produce the same regulatory burden on large and small businesses. As it stands, they are far more damaging to small businesses. The vendor who made that point about Pollan and Whole Foods doesn't read a lot of blogs. I think she's probably right. I'll post some evidence to that effect at a later date.

## Life is Complicated (2007-03-20 04:58)

Yesterday morning I listened to Ira Glass. Yesterday evening I listened to [1]Bill McKibben. And I reflected:

1. Bill McKibben wrote a whole book, *The Age of Missing Information* (1992), about the malign influence of TV. He spent a year watching a single day's output of the 100-odd channels of one cable company. TV makes people self-centered, he decided.

2. Ira Glass said we are living in a Golden Age of Television and listed a handful of current shows – including *The*

Wire, The Daily Show, Colbert, Friday Night Lights, Project Runway, Entourage, House, and "anything with Ricky Gervais" – in support of his claim. He has just spent a year starting a TV version of [2]This American Life.

3. Bill McKibben wrote an [3]article (in The Nation) praising This American Life to the skies.

I think of McKibben and Glass as the two Boy Geniuses of American intellectual life. (Curiously I cannot think of any Girl Geniuses.) Both of them did great work while really young. When McKibben was in his twenties, he wrote a long series of editorials in The New Yorker that were inspiring. (They were unsigned. I found out who wrote them by writing to the magazine.) His first book, The End of Nature (1989), about global warming, was prophetic. I think it was the very first general-audience book on the subject. As for Glass, This American Life was terrific right from the start, twelve years ago. He was 36 when it started.

1. <http://www.billmckibben.com/>

2. <http://www.thisamericanlife.com/>

3. <http://www.thislife.org/pages/trax/text/mckibben.html>

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Andrew Gelman (2007-03-23 09:22:27)

I wouldn't say that 36 is "really young."

### **An SLD Milestone! (2007-03-21 05:39)**

Yesterday there were more than 10,000 hits to the [1]Shangri-La Diet forums. (There were [2]11,061 hits, up from about 8000 the day before.) The last time there were more than 10,000 hits was November 22. Unlike all previous >10,000 days, this one wasn't due to an article or interview, as far as I know.

It feels like reaching a new level in [3]this strange but addictive game.

1. <http://boards.shangriladiet.com/>

2. <http://boards.sethroberts.net/index.php?action=stats;expand=200703#200703>

3. <http://www.albinoblacksheep.com/games/boomshine>

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Stephen M (Ethesis) (2007-03-22 18:16:04)

Doesn't it? Kind of neat though.

Carolyn Follmer (2007-03-23 08:26:24)

Hey.. I've been talking via lowcarbfriends about the SLD..We have people who are trying it and losing weight..already..So, I think it was "US"..:)



seth (2007-03-23 10:23:32)  
Aha!

{self-experimentation, Internet, . . .} (2007-03-22 06:48)

For the non-set-theorists, I'm using braces to express set membership:

pets = {cats, dogs, . . . }.

A week ago self-experimentation and the Internet struck me as wildly different. Self-experimentation is a tiny method of inquiry. The Internet is a gigantic physical network. Self-experimentation: one person alone. The Internet: everyone together.

But then I read this fresh [1]essay by Rishab Aiyer Ghosh, managing editor of the on-line journal [2]First Monday. Thanks to Ghosh, I now see two similarities between self-experimentation and the Internet:

1. Both are growth media. They encourage things to grow. Self-experimentation helps develop new ideas about health. The Shangri-La Diet is an example; so are [3]my ideas about mood. The most influential example is diabetes self-monitoring, which grew from self-experimentation by [4]Richard Bernstein. The Internet, of course, has helped many things grow, especially new businesses (Ebay, Google), new forms of interpersonal communication (blogs, forums, chat rooms, MySpace), and new forms of collaborative work (Wikipedia, open-source software).

2. They encourage the growth of similar things. Self-experimentation doesn't equally encourage all ideas about health; it especially encourages very low-cost ones. My self-experimentation led me to realize the benefits of skipping breakfast (improves sleep), seeing faces in the morning (improves mood), and standing a lot (improves sleep). The Shangri-La Diet costs almost nothing – less than nothing if you count the money saved on food. Ghosh points out that the Internet has especially encouraged the rise of businesses where the basic transaction does not involve money. Stuff is "given away" (that is, no money changes hands); payment is in terms of reputation. Both self-experimentation and the Internet are focusing intellectual attention on how people lived and thrived many thousands of years ago.

1. [http://www.firstmonday.org/issues/issue3\\_3/ghosh/index.html](http://www.firstmonday.org/issues/issue3_3/ghosh/index.html)
2. <http://www.firstmonday.org/>
3. <http://repositories.cdlib.org/postprints/117/>
4. <http://www.diabetes-normalsugars.com/>

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## Omega-3 and Mood Disorders (2007-03-23 05:52)

I subscribe to the [1]Arbor Clinical Nutrition Updates. It is a nice way to slowly learn more about recent nutrition research. A partial subscription is free. Last week's topic was omega-3 and mood disorders. The update summarized three articles:

1. Appleton KM. et al. Effects of n-3 long-chain polyunsaturated fatty acids on depressed mood: systematic review of published trials. *Am J Clin Nutr* 2006;84:1308-16. This meta-analysis of 12 clinical trials found that omega-3 fats significantly reduced depression.

2. Frangou S. et al. Efficacy of ethyl-eicosapentaenoic acid in bipolar depression: randomised double-blind placebo-controlled study. *Br J Psychiatry*. 2006 Jan;188:46-50. This experiment found that an omega-3 fat helped persons with bipolar disorder.

3. Hallahan B. et al. Omega-3 fatty acid supplementation in patients with recurrent self-harm: Single-centre double-blind randomised controlled trial. *Br J Psychiatry*. 2007 Feb;190:118-122. This experiment found that omega-3 fats reduced a depression score.

I recently reviewed an article for the American Journal of Clinical Nutrition that found that omega-3 fats did not reduce depression scores. Unfortunately the article was not accepted for publication. I hope it gets published somewhere else.

1. <http://www.nutritionupdates.org/cnu.html>

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peter (2007-03-23 13:00:43)

you might be interested in Amarin corp. (list stock) and it's lead product, which is a highly refined form of EPA. <http://www.amarincorp.com/page.cfm?pgname=miraxiondev> Miraxion is a semi-synthetic, highly purified ( 97 %) derivative of (all-cis)-5,8,11,14,17-eicosapentaenoic acid (ethyl-EPA). It is a long chain highly unsaturated fatty acid (often written in short as 20:5n-3 or 20:5 $\omega$ 3).

pdf23ds (2007-03-23 19:29:03)

Did they say what kind of depression was helped? Any differences in unipolar vs bipolar? Any specific symptoms that were more affected? (For instance, low motivation, anhedonia, and sadness are all different aspects of depression.)

seth (2007-03-23 19:47:29)

The studies used composite depression scores; I don't think that analysis was done.

Ted Hutchinson (2007-03-24 02:58:53)

You have previously blogged on the beneficial effect of Omega 3 on Bone strength and this <http://www.nutraingredients-usa.com/news/ng.asp?n=75128-omega-dha-blood-pressure> is reporting on the benefits of omega 3 on blood pressure. While there is lots of evidence that omega 3 may be helpful in depression there are also meta analysis like this one <http://press.psprings.co.uk/dtb/February/dtbfefb.pdf> that are skeptical. It worries me that some of the meta-analysis are including in their evidence reports that common sense tells us won't have any chance at all of having an impact. Is it likely that a body that has been starved of omega 3 since before conception respond in 6 weeks to an amount of DHA less than half the amount most experts think is the daily requirement? If you are programmed to spend \$4000 a day will paying into your bank account \$200 correct your overdraft? Clearly there are nutritional research scientists who think it possibly will.

## Agrees With Me About College (2007-03-24 20:48)

According to [1]Bryan Caplan, "our [higher] educational system is a big waste of time and money." He is writing a book about this – yay! He attended college at the place I know the most about – UC Berkeley. Here is why it is a big waste of time. Professors can only teach what they know. All they truly know how to do is how to be a professor. At a research university, that mainly involves doing research. Berkeley professors can teach how to do research, sure, but that has little to do with what most Berkeley students will do after they graduate. So a lot of time is wasted. It is most unfortunate to (a) require all students to imitate professors and (b) to rank them according to how well they do so.

In response to Caplan, [2]Catherine Johnson says her undergraduate education was useful. But she became a nonfiction writer – very close, in the big world of work, to what professors do. That's one of those exceptions that prove the rule.

I think practically everyone learns well if any of three conditions are met:

Apprenticeship. You want to be good at doing X, you will learn by watching someone skillful do X. Effortlessly.

Guru. If you think of so-and-so as a guru, you will learn from him or her. Effortlessly.

Stories. Stories teach values. Things associated with the hero become considered good and desirable; things associated with the villain become considered bad and to be avoided. Effortlessly. Most university classes, however, fulfill none of these conditions. On the face of it, university classes teach; but crucial details are missing. It's like butter and margarine. Margarine is supposed to be as good as butter but it's not. There is a superficial resemblance but margarine lacks crucial vitamins that butter contains. Because university classes lack crucial elements, they are forced to use grades, tests, and fear of failure as motivation. These motivators don't work very well, as [3]Alfie Kohn among others has pointed out. Sort of for the same reason Humpty-Dumpty couldn't be put back together again.

1. [http://econlog.econlib.org/archives/2007/03/page\\_one\\_of\\_my.html](http://econlog.econlib.org/archives/2007/03/page_one_of_my.html)

2. <http://kitchentablemath.blogspot.com/2007/03/how-i-used-my-college-education.html>

3. <http://www.alfiekohn.org/>

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Tim Lundeen (2007-03-25 08:40:17)

I agree with you about the value of stories. Have you read the recent book "Made To Stick", which makes the same point among other? Highly recommended.

seth (2007-03-25 11:06:01)

No I haven't read it. Thanks for recommending it.

pdf23ds (2007-03-25 19:10:54)

One thing about college that I'm not sure how you'd get in an alternative system is that you meet a lot of people in your major and the associated social circles that are much more like you, on average, than anyone you'll ever meet anywhere else. This is a great place to find a wife or husband, and a great place to form contacts you could use in the future. You can meet business partners to start a company with. I certainly don't like most aspects of college, but the social aspects are very important for some people.

seth (2007-03-25 19:34:15)

I agree, those are important benefits. You'd get them in an alternative system by having students live together.

Willy (2007-03-26 06:47:14)

Goog article. The problem with Apprenticeship and Gurus is to find one and get accepted by them. How to enter the social group you are interested in would be a good subject. many times it is not so easy as just asking them or showing interest.

Kathleen (2007-03-26 12:41:26)

Pdf brings up a good point, associated circles altho my take on it is a little different, not social related as he intends it. Maybe if you're already middle class and exposed to a range of experiences and knowledge, college is a wash. However, if you're from the other side of the tracks with diminished social experiences and opportunities, college is a great leveler. It gives you opportunities you'd never had known otherwise. I wasn't going to find my guru cleaning sewers. In the end, college is only what you put into it and what you take away; it's a smÅŕrgÅsbord and I couldn't eat enough.

seth (2007-03-26 16:24:02)

I agree that college acts as a leveler – that's a good point. I think all education has that effect. A better college – a college that did a better job of educating – would have more of a levelling effect, I believe.

pdf23ds (2007-03-28 16:10:23)

If the paul graham essay you link in a more recent post is right (about a major economic shift to most people being self-employed), then college-as-credentials-for-resumes would cease to be a major factor, and thus be less important for leveling. (Most information you learn in college can be learned more efficiently in other ways, so self-employed people would prefer those other ways.)

seth (2007-03-28 16:57:57)

Good point. I doubt that "most people [will be] self-employed" within the next 100 years but I do believe that businesses will become smaller on average. I think credentialism thrives in big businesses because it protects the person doing the hiring – the acronym is CYA.

Ruvell (2011-12-12 14:29:23)

An intelgient point of view, well expressed! Thanks!

### **For the Skeptics (2007-03-25 20:15)**

From the [1]Shangri-La Diet forums:

This is week 5 for me, and I have lost 7 pounds so far.

I am a 37 year old mother of two – 5'6" and started at 191 – the heaviest I have ever been in my non-pregnant life, with a BMI that fell in the "obese" category. I heard about Shangri-La from another woman, whom I dislike. I thought the whole thing sounded ridiculous, so I set out to prove her wrong. I replaced the two sodas I used to drink each day with two cups of sugar water, each 12 oz and 140 calories, exactly the same as the soda. This meant I was not changing my diet at all (other than removing the caffeine, sodium, colors and flavoring in the soda). I didn't purposely reduce my calorie intake, and I didn't change my exercise habits.

I'm amazed at the results. I'm much less hungry. I don't crave sweets or soda (the way I have my entire life) – in fact, I haven't had a soda in weeks now and I don't miss it. I'm eating a reasonable portion size at meals and it's easy.

It is an experimenter's dream, by the way, to produce a big effect with tiny change, and a theorist's dream to have a counter-intuitive prediction confirmed.

1. <http://boards.sethroberts.net/index.php?topic=4183.msg39282#msg39282>

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Carolyn Follmer (2007-03-28 14:28:51)

Congratulations!!! I'm doing the SW, too..but I'm so impressed with you swapping SW for a Coke and losing weight..) That is wonderful

### **Language That Should Exist (punctuation) (2007-03-26 16:53)**

I showed something I'd written to Marian Lizzi, my editor at Penguin. She advised me not to quote someone: "It sounds like you're sneering at them," she said. She was right – it did sound that way, although I didn't want it to. Unfortunately, there was no alternative punctuation that conveyed neutrality or respect. It was sneer or nothing.

So here's my proposal: Let the number of apostrophes indicate degree of respect for the speaker. Like this:

1. Single quotes = disrespect. Example: 'Has a good chance of working'? You can't be serious.
2. Double quotes (normal American usage) = neutral. Example: "We're running out of working waterfront," said Jim Barstow.
3. Triple quotes = respect. Example: According to a recent research report, "40 % of the subjects failed to seek help."
4. Quadruple quotes = great respect. Example: According to Jane Brody, cataract surgery ""can be life-changing.""

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losing-it (2007-03-28 06:01:42)

But then... What about the English (the British and their inverted commas)? [http://en.wikipedia.org/wiki/Quotation\\_mark](http://en.wikipedia.org/wiki/Quotation_mark)

seth (2007-03-28 16:02:34)

It would be one more confusing thing – like "boot" and "biscuit".

losing-it (2007-03-28 17:11:09)

Or "chalk and cheese." Or would that be 'chalk and cheese'? Note the punctuation inside and outside the quotation marks, also confusing differences between American and British English...and other English-speaking countries.

## Endearingly Simple Experimentation (2007-03-27 19:33)

In 2004, two 14-year-old New Zealand girls [1]found that a blackcurrant drink made by [2]GlaxoSmithKline, the giant company, contained almost no Vitamin C – contrary to advertising that boasted of its Vitamin C content. Today the company was [3]fined about \$150,000 (US).

1. <http://www.guardian.co.uk/food/Story/0,,2043626,00.html>
2. <http://en.wikipedia.org/wiki/GlaxoSmithKline>
3. <http://www.guardian.co.uk/food/Story/0,,2044221,00.html>

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## The Most Valuable Truths (2007-03-28 07:41)

[1]Paul Graham on start-ups:

For a while it annoyed me to hear myself described as some kind of irresponsible pied piper, leading impressionable young hackers down the road to ruin [via Y-Combinator, which helps young hackers start companies]. But now I realize this kind of controversy is a sign of a good idea.

The most valuable truths are the ones most people don't believe. They're like undervalued stocks. If you start with them, you'll have the whole field to yourself. So when you find an idea you know is good but most people disagree with, you should not merely ignore their objections, but push aggressively in that direction.

This applies to the Shangri-La Diet, of course: It proposes a way to lose weight that strikes most people as crazy. There's a lesson for me here. I have disliked being called a "[2]snake-oil salesman" and SLD being called "[3]absurd" and a "[4]fad diet". But now I realize Graham is right: These are good signs.

1. <http://www.paulgraham.com/notnot.html>
2. <http://www.washingtonpost.com/wp-dyn/content/article/2006/08/10/AR2006081001651.html>
3. <http://boards.sethroberts.net/index.php?topic=1477.msg10363#msg10363>
4. [http://sethroberts.net/reviews/2006-11\\_Magic\\_Elixir\\_\(Elle\).pdf](http://sethroberts.net/reviews/2006-11_Magic_Elixir_(Elle).pdf)

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losing-it (2007-03-28 17:14:24)

Very good signs, indeed. Or they can be red flags. It depends on your perspective on the issue, and what you can perceive that others are not seeing. That kind of seeing is creative genius in the act... looking closely into green shadows, something stares back at me dwb

woodenfood (2007-03-28 20:21:31)

I've always found when I introduced a new concept or idea to the management team for approval the best factor for estimating the future impact of the idea is the number of "stunned deer in the headlights" looks in the audience. The first patent I ever got was for an idea where the manager flatly stated "it'll never f\*cking work" and it went on the ship tens of millions. Keep the fascinating articles coming.

## **Omega-3 and Dental Health (part 1 of 2) (2007-03-28 20:39)**

Today I had my teeth cleaned and was told my gums were in excellent shape, better than ever before. They were less inflamed than usual. "What causes inflammation?" I asked. "Tartar," I was told. I haven't changed my cleaning habits. The only thing I have deliberately changed since my last cleaning is how much flaxseed oil I drink. At the time of my previous cleaning I was drinking about 1 tablespoon/day; now I drink 4 tablespoons/day. The person who commented about my gums doesn't know about my omega-3 intake.

Omega-3 is believed to be [1]anti-inflammatory, so it is quite plausible that the change in my omega-3 intake is what improved my gums. There have been [2]a few studies of omega-3 and gum inflammation but none found impressive results. [3]Weston Price emphasized that dental health and overall health go together. [4]Lots of research connects gum disease and heart disease. The importance of omega-3s was first realized because of their effect on heart disease.

This research means better gums is very good news – for which I thank SLD-forum posters, who [5]sparked my interest in omega-3.

1. [http://www.cbn.com/health/naturalhealth/drsears\\_silentkiller.aspx](http://www.cbn.com/health/naturalhealth/drsears_silentkiller.aspx)

2. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=12591005&query\\_hl=5&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=12591005&query_hl=5&itool=pubmed_docsum)

3. <http://www.westonaprice.org/>

4. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=15515345&query\\_hl=1&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=15515345&query_hl=1&itool=pubmed_docsum)

5. <http://www.blog.sethroberts.net/2006/07/05/brain-food/>

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losing-it (2007-03-29 03:44:53)

Congratulations. Is there room for improvement? Time for Dr. R. to start oil-pulling, maybe, for a next dental report of "no inflammation?" (Coconut Oil works great for me - talk about an amazing lack of tartar when doing it with CO!). Did you give OP a try after all the discussion on the SLD forums?

seth (2007-03-29 05:40:08)

I think there isn't much room for improvement. I haven't yet tried oil-pulling. The discussion was fascinating but I want to keep my life relatively constant when it comes to oil to improve the clarity of my omega-3 self-experiments.

CD (2007-03-29 06:35:16)

Hi Seth, I can't remember if you've mentioned it elsewhere, but do you know roughly what % of your total calories are flaxseed oil? Thanks.

seth (2007-03-29 07:07:13)

1/4 to 1/3.

losing-it (2007-03-29 07:12:16)

Hmm, funny – seems to be getting cloudy out there today, Berkeley way. LOL one freckled hand half-hiding her smile” grandmother

peter (2007-03-29 15:13:22)

my dental hygienist has been asking me about why my teeth are so clean. i thought it was the different brand of green tea that i've been drinking, but maybe it's the oil i've been taking.

seth (2007-03-29 18:31:29)

peter, what's the oil you've been taking? and how much per day?

peter (2007-03-29 21:52:17)

I can't say; the connection (if it exists) just occurred to me when i read your post. during the period, as i recall, i took light olive oil, refined walnut, pine nut oil, virgin olive oil (w/nose clips) (not very consistently). I use to take 2 tablespoons Now, after reading your experiment with balance, i've settled on flax seed oil (w/ lignans), which, given the collateral effects that you've reported, i intend to take 3 tablespoons consistently. I'm thinking that it may not make much difference which oil is taken, altho i would think that one oil probably works better than others. I've just read about oil pulling, and i'm going to start doing that. I'm religious about my teeth; in the past i scheduled cleaning every 3 months, now i'm at 4-5 months; i'd like to move it to six and hope that oil pulling will do that.

losing-it (2007-03-30 07:56:41)

Consuming oil (I take several including ELOO, macadamia nut oil, flax seed oil, coconut oil, avocado oil) has been beneficial for appetite control (normalizing) and fat loss, per SLD, for me since December 2006. I'm sure it has had unexpected added benefits in a number of other ways, perhaps not immediately measurable or noticeable, including antioxidant effects (omega 3s, etc.) brain function, skin, hair, heart and dental health conditions. Peter, oil pulling (I use coconut oil), for oral health, in my experience, makes an immediate noticeable difference: extremely reduced in amount of plaque, a continual freshness of breath, healthy, supple pink gums (they don't bleed even when using a metal dental pick), less coating on the tongue, etc. I know coconut oil has antibiotic properties, which apparently contribute to the health of the tissues and teeth. I've not had a trip to the dentist since I started oil pulling, but I can personally attest to those benefits in one person's experience. Most recently I am using flax seed oil in a personal recipe I concocted for its external use on my skin. I have rosacea, and I've read that flax seed oil is beneficial for the condition. My skin, once oily, has become very dry and scaly from facial rosacea, aging, low-thyroid, sun damage and possibly, effects of heart medications. With all that in mind, I mixed the oil with several other ingredients known to be beneficial for the skin, including idebenone powder and hyaluronic acid. It has been like a miracle for me – much different than using over the counter lotions and oils – for the first time in years, my skin once again has the moisture and oil it needs to be healthy, supple and soft. I still have rosacea, which is possibly a vascular condition, but the scaling that occurs on my skin isn't apparant. The skin texture has quickly become amazingly like baby skin. I use it full body. I'm not sure if other oils besides flax seed oil would have the same effect, since I've not experimented beyond the one oil, yet.

arazonie (2007-07-19 03:10:09)

I feel I have a pretty good ear for truth. So when I heard of oil pulling I tried it, seemed logical. The first time I gagged tried again, same response. The third time, same day did it for 10 minutes, teeth were lighter the whites of my eyes lighter, dark circles under eyes lighter. By the third time I did it , on average I now do it every 3 days, my nails stronger no breakage, cuticles have no dry skin around them, no bad breath, skin less dry not using lotion except face prior to make-up, no plaque on teeth, no build up after eating, bump on top of head seems a little I see more results the next day. I use eye whitener and crest stripes for my teeth afterwards and they do 3x the job they did before. I give it the thumbs up. I'm a nurse assistant in a hospital and looking at most the elderly they are dehydrated from lack of oil I can tell it from their toenails (dry looking and fungal, cracked)



also their bowel movements are not regular after usually 3 days of no movement they'll pile in the hospital the solution I find that is inexpensive and actually good for you is drinking coconut oil. I know it goes against what your told but coconut oil is good for cardiovascular. I use two large tablespoons in my coffee with carnation french vanilla cream to taste, take the day off it will clean you out and I do about 3 cups a day like this. I repeat whenever I don't void in under 1 minute. That's how well it works

Jolene (2007-10-21 01:46:19)

I am curious....what is oil pulling? Thank You :)

seth (2007-10-21 02:13:34)

Oil pulling is putting an edible oil, such as olive oil, in your mouth and swishing it around for a while, like 5 minutes.

mike the dental defender (2007-12-12 00:58:16)

Hi Seth It was enlightening to read about the effect of flaxseed oil on gum health. I take 500mgs of fish oil a day to get my omega 3s would this improve gum health like flax seed oil? I know the fish oil is good for eye health as we age, the main reason I take it.

anthony (2007-12-28 01:40:41)

exactly how much mg's of 3 are you getting i swear ive seen the liquids with as low as 500 to 7500 per table spoon

Mo (2008-03-23 18:01:53)

The thing I can't get around is eating oil. It's just icky. Swallowing the tablespoons of oil just makes me queasy and the taste ain't all that great either. I was messing more with hemp oil than flax, and it's like drinking oily grass. Plus there's the whole mouth coated in oil thing that's a little nasty. But, looking at the oil pulling stuff, maybe I should reconsider that. Perhaps something that would be good to do before bed? Is it good to have the oil sitting in the mouth?

Gloria (2008-05-10 06:41:59)

I looked up more information on oil pulling when I read these posts and found some good info on exactly how to do it at this site <http://www.oilpulling.com/>. Although the person who wrote the article recommend oils other than coconut oil, I certainly can't see why you wouldn't use it. It's certainly great for you otherwise.

Tom (2008-12-22 22:47:49)

Just found this blog after searching for ways to heal inflamed gums. Exactly how do you Oil Pull with Coconut Oil and what's the best CO out there. At bedtime is good or bad to coat your gums with CO and leave it on all night?

seth (2008-12-23 00:52:17)

Tom, a better way to heal inflamed gums is with flaxseed oil. On the order of 2-3 tablespoons per day.

Tom (2008-12-25 21:59:50)

Seth, are you saying to just swallow 2-3 tbsps per day, is there a particular brand, does it need to be Organic OR do you mean Oil Pull ? I Have been using the VCO for a few days and it's not doing anything.

Tom (2008-12-25 22:26:56)

One other question, do you know happen to know what's the best for oil pull because I read the article on [www.oilpulling.com](http://www.oilpulling.com) and they recommend to use Sunflower Oil or Seasm Oil ? Thank you

seth (2008-12-26 03:38:44)

Tom, it isn't easy to answer these questions by typing. Please call me at 510.453.7097 after Jan 15th.

Tom (2009-02-05 20:11:54)

Seth, I would like to talk to you about the oil pulling but I get a recording when I try calling 510 453 7097 ??

seth (2009-02-05 23:10:20)

sorry, the correct number is 510.418.7753.

Hailey (2009-09-17 06:50:54)

Hi i'm a 51 year old woman in search for my youth and i greatly appreciate you doing this. Thanks a lot.

mayka (2011-05-27 13:42:47)

i've found oil pulling with coconut useful. chia seed is also good source of omega 3, and it doesnt have the same issues of rancidity that flax seed can. personally i use green pasture fermented fish oils - but not everyone might like that. i recently read the connection between gum health and q10. so i thought i might add the q10 thing in! declines after 30 :)

mayka (2011-05-27 13:45:10)

i also noticed there was a guy called dom who made a tooth paste that would form a film to protect your teeth from the acidity of cultured food - and i now wonder if that was coconut oil. and that oil pulling would help leave a protective film on your teeth

Ilona (2011-07-25 10:15:34)

Hi, I've recently come across the overall benefits of oil pulling. I have self-diagnosed myself to having periodontal disease. I just recently came back from the dentist who used up all of my insurance money for a root canal. He told me that I have a receding gum line and suggested that I brush my teeth in a more gentle manner. (NO mention of periodontal disease at all!) Now I cannot go to a periodontist for a more professional opinion due to my lack of funds. I am convinced that I have gum disease. Does anyone know of a natural way to reverse periodontal disease and stimulate gum re-growth? Is oil-pulling an effective solution? Does the type of oil matter? I recently came across an article suggesting that Omega 3 fish oil is excellent for oral health.

Seth Roberts (2011-07-25 11:17:02)

read this: <http://blog.sethroberts.net/2011/07/24/flaxseed-oil-cures-bleeding-gums-in-three-days/>

## **Omega-3 and Dental Health (part 2 of 2) (2007-03-29 21:14)**

I looked at my gums this morning. I had never seen them so pink (that is, non-red). They looked just like the picture of healthy gums at the dentist. As I explained [1]yesterday, my gums are in good shape because I am drinking 4 table-spoons/day of flaxseed oil, which contains a lot of omega-3.

Meta-analyses of the effects of omega-3 have had trouble finding an effect. A [2]meta-analysis about mood found a barely-reliable effect and concluded "the evidence available provides little support for the use of n-3 PUFAs to improve depressed mood." (They should have said "a little support.") A [3]meta-analysis about heart disease concluded "Long chain and shorter chain omega 3 fats do not have a clear effect on total mortality, combined cardiovascular events, or cancer." The effect on total mortality was close to significant and there was evidence of heterogeneity (i.e., studies varied) so their results were not completely negative, as the authors noted in response to comments. The effect is just weak, apparently.

In other words, after combining many experiments, each experiment with dozens or hundreds of subjects, meta-analyses can barely see an effect of omega-3. Yet I found a perfectly clear effect with one subject? An effect I wasn't even looking for? That seems discrepant, and worth trying to explain.

My explanation is this: What I had in my favor and all those other studies did not were the benefits of self-experimentation. In particular,

1. The effect on balance was so clear that I used it to find the best dose. I found that 3 tablespoons/day was better than 2 tablespoons/day and even at 3 T/day there was an effect of time of day. So I went to 4 T/day. It seemed no better than 3/T day, so I stopped there. Conventional studies have not been able to do anything like this.
2. The effect on balance was so clear that I could use it for quality control. If I happened to buy a bad bottle of flaxseed oil I would have noticed – the results would not have been consistent, starting from when I started the new bottle. (I have gone through about six bottles.) Previous studies have had little or no quality control. If half their omega-3 went bad, they would have had no way of knowing.
3. I was strongly motivated to take the flaxseed oil. I know it is beneficial. This is not the case in any double-blind experiment when treatment is compared to placebo. In such experiments, every subject has reason to doubt that taking the pill will make a difference.
4. Dosage in nutrition, as in these mood and heart disease studies, has been built around avoiding failure – for example, what dose will avoid heart disease? Whereas I was looking for the optimum. My brain does not fail in any obvious way if I don't have enough omega-3; it just functions worse. The amounts needed to avoid obvious failure are probably (a) different for different parts of the body and (b) less than optimal. For example, the amount of omega-3 needed to avoid dementia may be 1 T/day whereas the amount needed to avoid heart disease may be 2 T/day. The optimal amount, the amount needed for best performance, is likely to be greater than all of these failure thresholds. It is a better target.

Something else in my favor, not related to self-experimentation is that I studied the effect of omega-3 on my balance – how long before I lost my balance, a measure that can have many values. In contrast, most omega-3 research has involved binary measures like mortality or heart attacks. Someone either dies or does not die, for example. Binary measures tell you less than many-valued measures.

Given these advantages, it makes sense that I could find a much clearer effect.

1. <http://www.blog.sethroberts.net/2007/03/28/omega-3-and-dental-health/>
2. <http://www.ajcn.org/cgi/content/abstract/84/6/1308>
3. <http://www.bmj.com/cgi/content/full/332/7544/752>

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Andrea (2007-03-31 09:10:10)

Has anyone reported success using fish oil (with a nose clip) to get the Omega 3 directly instead of through the conversion of flax? Sorry if the answer is in your book. I just bought it and have not yet read it.

seth (2007-03-31 10:59:30)

no, I don't think so.

CD (2007-04-02 06:51:15)

Hi Seth, A while ago, didn't you determine that your maintenance SLD dose was 120 cal/day? That was in the sugar water days, I believe. Did I remember that correctly? If so, now that you are consuming 480 cal/day of oil, has your set point fallen even more, or are there diminishing returns on the extra 330 SLD cal/day? Throughout these experiments, have you noticed a

change in appetite/set point as you have increased your SLD calories from 120/day to 480/day? Thanks much.

seth (2007-04-02 10:33:37)

120 calories was before I started eating lots of chocolate and drinking my share of wine. However the 480 calories (= 4 T flaxseed oil) I'm at now is because of what I have learned about the effect of flaxseed oil on my balance – 3 T is better than 2 T, I learned, so perhaps 4 T is better than 3 T. Whether 4 T is better than 3 T I don't know. whether 480 calories is really my maintenance dose now I don't know. My maintenance dose will depend on how much chocolate & wine I consume and those amounts aren't fixed.

mike the dental defender (2007-12-12 01:01:19)

Hi For andre,s benefit you don,t need nose clips, just the fish oil that comes in gel caps.

### **37signals and SLD (2007-03-30 20:09)**

[1]37signals is a Chicago software company that specializes in quick development and has been very successful. According to [2]Business Week, "the lesson [of their success]: Create a simple product as fast as you can, then get feedback from customers and make it better."

Hey, that was my philosophy with the Shangri-La Diet! One of the first managing editors of The New Yorker had a slogan: "Don't get it right, get it written". My philosophy with regard to SLD was similar: "don't get it exactly right, get it written, and get feedback."

Here are some ways the Shangri-La Diet has been improved by feedback (almost all from the SLD forums):

1. It is much clearer what rate of weight loss to expect.
2. The idea of nose-clipping. Which makes any food a weight-loss food.
3. With nose-clipping, you can use flaxseed oil to lose weight. The benefits of omega-3 have become much clearer.
4. Putting the oil in water makes it much easier to drink.

1. <http://www.37signals.com/>

2. [http://businessweek.com/magazine/content/06\\_13/b3977005.htm](http://businessweek.com/magazine/content/06_13/b3977005.htm)

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OrenT (2007-04-01 04:17:38)

Emulsifying the oil with water makes it even easier to drink. A little lecithin as emulsifier and a few minutes at high speed in the mixer will do the trick. Texture is like milk - hard to believe it's 50 % oil.

seth (2007-04-01 10:28:38)  
That's good to know, thanks.

Oslo (2007-08-05 02:59:19)

"Here are some ways the Shangri-La Diet has been improved by feedback (almost all from the SLD forums): 1. It is much clearer what rate of weight loss to expect." – It is? I've been reading the forums and find conflicting and confusing info is all over the place. I'd love to have a clearer idea of what rate of weight loss to expect, and how that will be shifted by how much or little I reduce my caloric intake.

seth (2007-08-05 06:37:50)

yes, it is. Via averaging. see the graphs at [www.shangriladiet.com](http://www.shangriladiet.com) Average weight loss is about 1 lb per week after the first few weeks.

the diet guy (2008-06-11 20:31:17)

I'm glad i reread that a few times. I was gonna ask how you came to the conclusion that nose HAIR clipping helps makes any food a weight loss food :) Flax seed is awesome for a lot of things. Along with Grape seed oil and my favorite super healthy oil comma Hemp seed oil. I dont know if youve gotten to do any research on hempseed oil but its been shown to have one of the most perfect balances of omega 3 and 6 fatty acids as well as the highest percentage of EFAs at 75-80 %. Its also awesome in that it doesnt go rancid as easily or quickly as easily as flax seed oil. I know most health food stores like whole foods now carry it. you should check it out if you havent already. This is the first time I've stumbled upon the shangri-la diet. so more flavorless fatty oils are good>? I can dig it. I have read a lot about how the diets of odler generations were a lot higher in fat content. I'll check out the book!@

## **For Whom Do Colleges Exist? (2007-03-31 11:22)**

On Book TV last weekend I saw a discussion of the terrific-sounding new book [1]You Can Hear Me Now by Nicholas Sullivan, about how an ex-banker named [2]Iqbal Quadir started GrameenPhone, which helps poor people in Bangladesh get cell phones. From the discussion:

Someone from the UN: I hear that the UN should spend \$100 in a million places rather \$100 million in one place. But what else?

Iqbal Quadir: The UN should empower the people, not empower their governments. And if they cannot empower the people they can just shut it off. My point is that helping the wrong side is harmful. So if they cannot help the right side they should at least not help the wrong side. I'm not trying to say anything radical here, frankly. The governments belong to their people. You must make sure you don't disturb that relationship. If you change the incentive for the government, you are disturbing the emergence of democracy.

I had never heard it put so clearly. We can ask if governments exist: 1. To improve the lives of the governed. 2. To employ the governors. 3. To help other governments. Similarly, we can ask if colleges exist: 1. To teach the students. 2. To employ the teachers. 3. To help businesses who will eventually employ the students (the [3]signalling function of college).

Suppose we believe that the main function of colleges is to teach the students. How, then, should we improve colleges? By giving mini-grants to teachers (as is done at UC Berkeley, where I teach)? By giving awards to the best

teachers (as is done at UC Berkeley)? Or by doing something quite different?

Addendum: The [4]growing disillusionment of a University of Michigan student.

1. <http://www.youcanhearmenow.com/>
2. [http://www.ted.com/tedtalks/tedtalksplayer.cfm?key=i\\_quadir](http://www.ted.com/tedtalks/tedtalksplayer.cfm?key=i_quadir)
3. <http://www.janegalt.net/blog/archives/005691.html>
4. <http://insixitive.com/2007/04/06/us-and-them/>

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August (2007-03-31 12:40:03)

How do they define the best teachers? I like demand driven education. I like the "Fab Lab" idea that comes from MIT: <http://fab.cba.mit.edu/> With demand driven education, the students clearly want the knowledge, and make sure they get it. With our current model, students tend to want a good grade, which is why I wondered about the definition of "best teacher." Education was a luxury good, bought by only those who had enough money, time, and interest to take advantage of it. Now we have a model in which people are forced into it, don't want to be there, and don't care very much about the subject matter.

seth (2007-03-31 13:56:34)

I don't know what criteria are used to choose the "best" teachers. Here is a press release about them: <http://www.berkeley.edu/news/media/releases/99legacy/4-21-1999c.html>

Geoff Davis (2007-04-02 15:48:31)

College rankings have documented effects on school behavior (see, for example, Monks and Ehrenberg, [http://findarticles.com/p/articles/mi\\_m1254/is\\_6\\_31/ai\\_58178197](http://findarticles.com/p/articles/mi_m1254/is_6_31/ai_58178197) ). Rankings tend to be based on reputational measures presumably in part because these are easy to get ahold of. Ideally what you'd want is a greater emphasis on outcomes, since presumably good outcomes reflect good educations provided that you control for things like entering SAT scores, student socioeconomic characteristics, etc. I think the Spellings Commission is on to something in their emphasis on school transparency and outcome measures. Check out <http://www.insidehighered.com/news/2007/03/30/rankings> and <http://graduate-school.phds.org> for some ideas on how rankings might be restructured to better reflect student interests.

## 2.4 April

### How Bad is The Secret? (2007-04-02 22:20)

Not as bad as you think. The Secret, of course, is the huge best-seller (now #2 on Amazon) that claims you can get what you want by applying "[1]The Law of Attraction" – namely, that if you think about something it will come to you. According to Wikipedia, "there have been no widely recognized studies demonstrating that the [Law of Attraction] actually works." The book has been – not to put too fine a point on it – ridiculed, for example by the author [2]Barbara Ehrenreich.

I learned about The Secret last July from my friend Sarah Kapoor, who made a [3]CBC segment about the Shangri-La Diet. She told me about nine YouTube spots (Parts 1-9), each 10 minutes long, that together made a movie. I watched only [4]Part 1 (now unavailable). It wasn't enjoyable. It seemed like a parody of a film about science, and not a funny one. Sarah said it was growing like wildfire but at the time the segments had received only a few thousand views so I wondered what she was talking about. Time has proven her correct.

Is The Secret complete nonsense? It sounds like complete nonsense, the writers of Wikipedia apparently think it's complete nonsense ("no widely-recognized studies . . ."), Barbara Ehrenreich thinks it's complete nonsense (she calls it "mass delusion"), but I don't think it actually is complete nonsense. Around 1980, Robert Cialdini, a psychology professor at Arizona State, and Kathleen Carpenter, an undergraduate, did a remarkable study. They gave Tempe residents one of two paragraphs to read about the benefits of cable TV (a new thing at the time). One was a dry statement of the benefits; the other asked the reader to imagine partaking of the benefits ("take a moment and think of how . . . you will be able to spend your time at home, with your family, alone, or with your friends"). A month later, these residents were offered the choice of whether to get cable TV or not. Of those given the dry information, about 20 % subscribed; of those given the "take a moment" statement, about 50 % subscribed. A huge difference, with nontrivial monetary consequences, from what seems like a tiny treatment. The title of the published article, which appeared in Journal of Personality and Social Psychology (1982, vol. 43, pp. 89-99) was "Self-relevant scenarios as mediators of likelihood estimates and compliance: Does imagining make it so?" Imagining did make it so, in a surprising way. The effect is much too large to be dismissed. I don't think it has been repeated, although I'm not sure.

I learned about this study from the excellent new book [5]Made to Stick by Chip Heath and Dan Heath.

1. [http://en.wikipedia.org/wiki/Law\\_of\\_Attraction](http://en.wikipedia.org/wiki/Law_of_Attraction)
2. [http://ehrenreich.blogs.com/barbaras\\_blog/2007/02/the\\_secret\\_of\\_m.html](http://ehrenreich.blogs.com/barbaras_blog/2007/02/the_secret_of_m.html)
3. <http://www.youtube.com/watch?v=hR33LNwgGic>
4. <http://www.youtube.com/watch?v=80zAdmRcdSQ>
5. <http://www.madetostick.com/>

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Dan Wood (2007-04-02 22:59:20)

I saw (not with my full attention, but close enough) the movie when it was circulating on YouTube recently. It was very slick - almost too slick - and certainly not brimming with science. However, I actually got a lot out of it. I don't believe that the universe will rearrange itself to your thoughts, but I know enough about Psychology (thanks to S.R. and some other professors @ Cal) and from my experience to know that some of it does make sense. Your thoughts and your attitude (for lack of a better word; I sound like a parent here) affect how your day is going to go, how perceptive you will be to opportunity and hazards, how people will treat you, and so forth. It doesn't sound quite as mind-blowing as the universe changing to conform to you, but I can see how one could extrapolate that out...

Phillip J. Eby (2007-04-03 09:48:48)

I myself am fascinated with the LoA from a \*psychological\* standpoint. I don't think it actually influences the outer world directly, but rather does so through self-fulfilling prophecy effects. If you believe you're going to succeed at something, you're going to invest more effort in it and be more willing to take the risks that are usually necessary to make something successful.

"The Secret" doesn't actually contain that much useful information, although it introduces the idea of the "emotional guidance system", as a way of moderating one's emotions by observing the thoughts that create them. I've found this to be an incredible tool for myself and my coaching clients, as it lets you directly identify illogical or less-than-optimal thought patterns, and improve them, with corresponding improvement in mood and personal effectiveness. The book "Ask and It Is Given" has a lot of useful information in it (including a wide assortment of techniques for altering mood and/or thoughts) as long as you can ignore all the stuff about beings on another plane of existence manifesting stuff in the physical universe and all that. If you just look at the parts that are about what's going on \*inside\* an individual person, it's surprisingly useful.

losing-it (2007-04-03 13:13:10)

Visualization, using the imagination, has been used to improve skill and technique in sports, and research is being conducted to see if it can increase muscle skill. Mind-body, in this case. Imagination and dream-mind is where creative art begins and issues forth, bringing vision into a facet of reality through canvas and paint, music, poetry, storytelling. What's equally interesting (at least in my experience) is when one is focusing daily for an answer to some question, for instance, potential answers begin to come into focus, or suddenly appear...and it feels like the same process as when I go into a focused and receptive mental state to write or draw, etc. It's a given, to me, that "it" will happen through that kind of receptiveness and expectation, especially with growing confidence as one is rewarded with inspiration. Maybe not scientific (?), but it is real in experience.

Janet (2007-04-05 14:55:20)

Do you have another example besides the cable TV? The study of cable TV dealt with an outcome that the people had control over themselves: to get cable, all you have to do is sign up. To get most other things like jobs, romantic relationships, children, you rely on other people.

seth (2007-04-05 17:14:18)

I don't think that result has been experimentally repeated. At a bookstore event I heard a little bit about Alice Waters and Chez Panisse. It was a little bit the same thing - Waters seemed to have a very strong vision of what she wanted and that helped bring it into existence. Of course the vision was far from enough by itself. But maybe it helped - I gotta read the book to be sure.

Esther (2007-04-17 20:11:16)

I just tried to view the video but Yitube already pulled it: This video has been removed due to terms of use violation

Myron Wiebe (2007-06-01 18:20:51)

I have been trying to contact Sarah Kapoor and haven't been able to find any current contact info. Is she still at cbc? I thought that she had her own production company. I saw her in the Past Life Investigation series and at the time I thought that she might be interesting in a documentary film idea that I had. Several years have past and now that I am ready to put my plans into motion I can't find out how to contact her. Can you help???? Myron

seth (2007-06-01 19:21:02)

I have forwarded your message and email address to Sarah.

Myron (2007-06-02 18:41:39)

I really appreciate it. Thanks My

Jim Cowan (2007-11-11 21:20:43)

I wonder if the Shangri La diet could be effective with the problem of alcohol consumption ? (Tell Sarah who was asking ...and wish her well) PS I hasten to add that I have no personal problem with alcohol ! Thanks.



## My Holocaust (2007-04-03 07:28)

I don't read many novels but I think I'm going to read [1]this one, which says that Holocaust denial is "the new heresy." Exactly.

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For [2]70-431, there are a number of routes. You can either clear [3]70-297 first and then go for [4]70-294 or you can directly jump to [5]70-292 as well.

1. <http://www.ew.com/ew/article/0,,20016452,00.html>
2. <http://www.testking-questions.com/exam/70-431.htm>
3. <http://www.testking-questions.com/exam/70-297.htm>
4. <http://www.testking-questions.com/exam/70-294.htm>
5. <http://www.testking-questions.com/exam/70-292.htm>

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Matt McIntosh (2007-04-03 11:57:17)

Uh, of all the various aspects of the book, why did you choose to zero in on that one? Some heresies are heresies because people in positions of influence are afraid of them being true. Others are so merely because they're almost solely espoused by the malevolent and/or stupid.

seth (2007-04-03 12:18:34)

That particular feature of the book is a neat expression of what I consider a basic but little-remarked truth about human nature: Disagreements have a funny way of being overreacted to. Calling this or that belief you disagree with a "heresy" is an example.

Matt McIntosh (2007-04-03 16:09:06)

Well, nowadays "heresy" is applied to a thesis primarily by its defenders, when they want to strike an iconoclastic pose.

Matt McIntosh (2007-04-03 16:10:34)

Which is not to say the socio-psychological phenomenon isn't still very much with us, merely that nobody calls it that anymore.

Andrew Gelman (2007-04-03 18:29:49)

Seth, There's an important distinction between disagreeing with a \_belief\_ ("heresy") and disagreeing with a \_fact\_ ("denial").

seth (2007-04-03 21:04:14)

I think the author of "My Holocaust" is saying that there are also similarities – similarities in how the people who disagree (the minority) are treated (by the majority). And I agree with her: there are similarities.

Andrew Gelman (2007-04-03 22:03:39)

Seth, Perhaps it's the tone of the blog entry that bothered me. I agree with commenter Matt that "heresy" nowadays is a complement (sort of like "delightfully irreverent" or "edgy")—it brings up images of heretics who were right, like Galileo. So calling something "the new heresy" sounds a lot like a compliment. I'd probably describe Holocaust denial not as a "heresy" but as a taboo, which is a little different—we all know that some taboos are there for a good reason. Nazi attitudes, Confederate flags, etc., have been "bad boy" accouterments for quite awhile, as a poke in the eye to the "establishment." And it's no surprise that most people react negatively to bad-boy types who are trying to rile them up. Of course, it's notoriously difficult to read

"tone" from written (as compared to spoken) words.

Mannstein (2008-10-20 02:46:33)

You can deny the existence of God, the divinity of Christ, but woe on to you if you deny the sacred mysteries of the holohoax. You will end up in jail in Israel and most European countries for such a transgression. Jefferson, Thomas (1743-1826), 3rd American President: "It is error alone which needs the support of government. Truth can stand by itself."

## **For Whom Do Colleges Exist? (continued) (2007-04-03 20:54)**

Yesterday on BART I saw someone reading The End of Poverty. It was an illegal Chinese edition of The End of Poverty by Jeffrey Sachs. I asked the person reading it what she thought of it. "Very ethnocentric," she said. "Very Jeffrey-Sachs-centric," I said. (For a good critique, see The White Man's Burden by [1]William Easterly.) America is not the only ethnocentric country, she said, so are other countries who give foreign aid, such as Japan. "What gives me hope is the growth of micro-finance," she said. "People have a great capacity for figuring out what they need." I agreed.

In the comments on my "[2]For Whom Do Colleges Exist?" post someone asked what I would suggest. In my opinion, almost all attempts to improve colleges have had the same core problem as almost all foreign aid: The helpers think they know better what to do than the people they wish to help.

My prescription for higher education is simple: Give students more control of what they learn. When I [3]did this in spades – more by accident than design – my students blossomed. I had never seen anything like it. It happened again and again. When I helped my students learn what they wanted to learn, as opposed to what I thought they should learn, they learned much more. Funny, huh?

Giving students more control of what they learn can be done in many ways, of course. At UC Berkeley, where I teach, here are two possible baby steps in that direction:

1. There exists a system of student-organized-and-run classes called [4]DeCal. Allow one DeCal class to go toward satisfying the Letters and Science college-wide [5]breadth requirement (seven classes, one from each of several areas). The DeCal class would replace any of the seven classes.
2. Allow – or, even better, encourage – admitted students to take a [6]gap year, as they do in England. A gap year is a year away from school between high school and college. (I proposed such a thing a few years ago to the previous UC Berkeley chancellor. My suggestion was given to an administrator who dismissed it. Too hard to administer, she said.)

Professors should like these suggestions. The DeCal proposal will reduce the number of students who take a class because they are forced to. The gap-year proposal will reduce the immaturity of freshmen. When I gave my students much more power to learn what they wanted to learn, my job got much easier. Funny, huh?

1. <http://www.nyu.edu/fas/institute/dri/Easterly/>

2. <http://www.blog.sethroberts.net/2007/03/31/for-whom-do-colleges-exist/>

3. <http://www.freakonomics.com/pdf/whatdostudentwant.pdf>

4. <http://www.decals.org/>

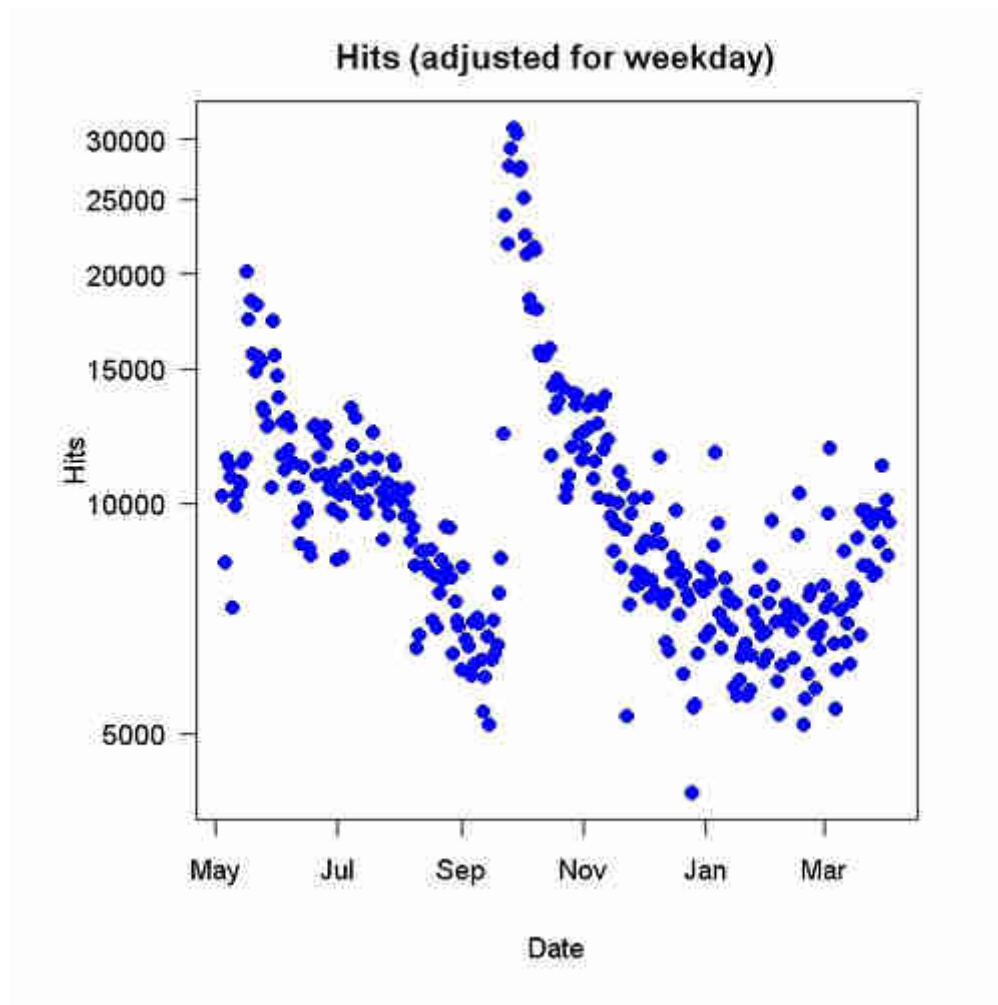
5. <http://ls-advice.berkeley.edu/requirements/lsreq.html>

6. [http://en.wikipedia.org/wiki/Gap\\_year](http://en.wikipedia.org/wiki/Gap_year)

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### Will It Last? (2007-04-04 22:08)

The graph below shows the daily number of hits to the [1]Shangri-La Diet forums since they began. "Adjusted for weekday" means I estimated the effects of day of the week (e.g., 10 % more hits on Tuesday) and then subtracted those estimates. This makes other effects easier to see.



Each point is a different day. The two sharp increases (May and October) were caused by publicity – the first (May) by an [2]interview on the Dennis Prager Show, the second (October) by a Woman's World [3]article.

The latest (current) increase looks different. It is much slower and not caused by any specific publicity. Apparently it is due to word of mouth.

Will it continue? Well, what's

infinity TIMES 1/infinity?

The number of potential users of an easy and effective method of weight loss is very large. That's the first infinity. However, the Shangri-La Diet sounds more than a little crazy. Many successful users don't want to tell anyone they're doing it. That's the 1/infinity (the probability of transmission). Theory aside, the very mild increase last July did not continue. The current increase, however, looks much stronger than the July increase.

1. <http://boards.shangriladiet.com/>
2. <http://sethroberts.net/reviews/dennispragermay3interview.mp3>
3. [http://sethroberts.net/reviews/2006-10-03\\_Womans\\_World.pdf](http://sethroberts.net/reviews/2006-10-03_Womans_World.pdf)

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### **Made to Stick (2007-04-06 06:06)**

I went to a panel discussion last night. A professor – with vast public-speaking experience – gave a long boring introduction. "If only he had read [1]Made to Stick!" I thought. The panelists were better but I wished they too had read Made to Stick.

MTS, by Chip Heath, a Stanford business professor, and Dan Heath, a corporate education consultant, tries to say what makes messages more or less memorable. They boil it down to six qualities. To be remembered, your message should be: 1. Simple. 2. Unexpected. 3. Concrete. 4. Credible. 5. Emotional. 6. Told with stories.

They complain that speakers and writers often "bury the lede" – fail to start with the most important compelling stuff. Well, their best story is buried in the middle of the book. Early in his class, Chip Heath has several students give brief talks. The class grades them. Ten minutes later everyone is asked what they remember from the talks. Hardly anything is remembered. The graded quality of the talk doesn't matter: The "better" talks are remembered just as poorly as the "worse" talks. What is remembered are stories. But hardly anyone tells a story.

In other words, Stanford business students – and by extension the rest of us – don't know how to give a good talk and don't recognize a good talk when we hear one. We don't know – and don't know we don't know. I agree. Our collective ignorance is enshrined in bad advice: Start your talk with a joke, for instance. MTS never says anything like that. It says: Start with a story.

Addendum: Seth Godin [2]demonstrates.

1. <http://www.madetostick.com/>
2. <http://video.google.com/videoplay?docid=-6909078385965257294&hl=en>

## Frontiers in Education (2007-04-06 17:40)

Speaking of giving students more power over what they learn, as I did [1]recently, [2]this article says it is working well at [3]Sudbury Valley School in Massachusetts.

1. <http://www.blog.sethroberts.net/2007/04/03/for-whom-do-colleges-exist-continued/>
  2. <http://psychologytoday.com/articles/index.php?term=pto-20060424-000004&print=1>
  3. <http://www.sudval.org/>
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## Omega-3 and Cognitive Decline (2007-04-07 11:48)

It's the golden age of omega-3 research. The February 2007 issue of the A[1]merican Journal of Clinical Nutrition, perhaps the most prestigious nutrition journal, had two articles on the topic, the March issue seven (including four letters to the editor). The April issue has three (two research articles and an editorial), all on omega-3 and cognitive decline with age.

[2]One was from Holland. Data were collected in 1990 and 1995 on 200-odd men, who were 70-89 in 1990. Those who ate fish had less cognitive decline from 1990 to 1995 than those who didn't eat fish. A virtue of this paper is that the main results are shown graphically – a [3]most basic point that AJCN papers usually get wrong.

The [4]other study was done in Minneapolis. It looked at cognitive decline in about 2000 elderly men and women over a similar time period as the first study. Rather than asking subjects what they ate, this study measured blood levels of various fats. They did not find a reliable correlation between omega-3 levels and cognitive decline when considering all subjects but did find reliable (negative) correlations in subgroup analyses.

Both studies have selection problems. The first study looked at a small fraction of all the men in the study (total n = about 900) selected because of better health. I would have liked to see the results from the rest of the men. The second study did not correct for the vast number of significance tests done.

Both studies support – the second one quite weakly – the idea that omega-3s prevent cognitive decline. The main thing I notice is how difficult the research is. Data published 12 years after collection? Two thousand people studied twice, five years apart, with results barely different from noise?

1. <http://www.ajcn.org/>
  2. <http://www.ajcn.org/cgi/content/abstract/85/4/1142>
  3. <http://www.stat.columbia.edu/~gelman/research/published/dodhia.pdf>
  4. <http://www.ajcn.org/cgi/content/abstract/85/4/1103>
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## The !Golden Rule and Reed College (2007-04-07 21:25)

In the programming language R, ! is the negation function – !FALSE is TRUE, for example. The !Golden Rule, the opposite of the Golden Rule, is to treat others as you yourself do not wish to be treated.

An example comes from Colin Diver, the President of Reed College (my alma mater), who complains in [1]an Atlantic Monthly piece about college rankings. Reed has opted out of the U.S. News and World Report rankings. President Diver explains why:

Trying to rank institutions of higher education is a little like trying to rank religions or philosophies.

That's right: If different colleges have different goals, it is unfair and misleading to rank them on the same scale.

By far the most important consequence of sitting out the rankings game . . . is the freedom to pursue our own educational philosophy, not that of some newsmagazine.

Actually, you can pursue a singular educational philosophy in any case, rankings or no rankings. It's just that the rankings punish you for doing so.

This is an example of the !Golden Rule because what President Diver complains about happens in every Reed classroom. All the students in a class are graded on the same scale with the same requirements. Perhaps different students have different goals, just as different colleges have different goals? Perhaps this system of grading punishes students with unusual goals, just as the U.S. News ranking system punishes colleges with unusual goals?

1. <http://www.theatlantic.com/doc/200511/shunning-college-rankings/1>

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c&d (2007-06-21 18:02:10)

Students choose the college and the particular class they are going to attend. Thus, they have consented to, or desire, the form of evaluation (at least on average, in the aggregate). Reed, the institution, is making its choice as to the propriety of US News's rankings, just as some students go to UC Santa Cruz and get written grades.

seth (2007-06-21 19:14:22)

They desire the form of evaluation they are going to get? I don't think they have a choice. There's a great deal of similarity from one college to the next in how students are graded.

Angelina (2007-11-03 11:53:49)

Perhaps this is why Reed hands back extensive written comments but not grades on papers and exams – to encourage students to focus on their own evaluation of their success/failure. I have friends from Reed that never saw their grades until they applied to graduate school years later. People absolutely focus on their own goals - the grades you get at Reed only matter when you choose to apply to another school (i.e. when you choose to conform to the graduate school's system of selecting you).

seth (2007-11-03 12:39:21)

Are Reed profs still doing that? I knew several people who were harmed because they didn't realize they weren't doing well. Extensive written comments are good, of course. But the importance of grades and the likelihood of graduate school – especially for Reed graduates – are facts of life. The profs are not actually living in a dream world where grades don't matter, I'm sure they realize it is a myth, a fantasy, one of those lies told to fool the public. A reasonable policy would be give extensive comments AND grades. Why don't they give grades? What's the real reason? I believe they don't give grades so that they won't have to defend them. It makes their lives substantially easier, in other words.

Steph (2008-03-02 00:51:40)

I go to Reed and wish to point out that Reed does give grades. Reed records them and the only difference is that the grades are undisclosed unless students request it (from their adviser or directly from the profs. in question).

seth (2008-03-02 08:44:11)

Thanks for the clarification.

Dida (2008-07-12 01:24:29)

Seth, when you asked, "why don't they give grades?" why didn't you do your homework instead of blurting out something you obviously hadn't enough info on. Also, careful when you say things like, "it's a fact of life" ergo grades matter... facts of life exist, yes, but it is up to colleges to think outside the box and put the focus where it needs to be - on learning and personalizing each student's experience. Slavery was a fact of life once... Women weren't allowed to vote either or earn the same amount of money as a man... all facts of life and all because someone first challenged the status quo. And why in the world would you think that it would make instructor's lives easier not to give out letter grades? Ever been to public high school? Letter grades are abundant there and very easy to dish out with little time spent elsewhere. When's the last time a student in public high school was required to sit down individually with a student to talk about the actual subject matter?

seth (2008-07-12 06:03:55)

There's a difference between ignoring a fact of life and challenging it. The Reed practice of not giving grades is the former. As far as I can tell, it has no effect on anyone outside Reed. "Why in the world do [I] think that it would make instructor's lives easier not to give letter grades?" Within a few years of teaching at Berkeley, it became abundantly clear. In other words, the answer to your question is: My experience as a college professor.

cheryl m. (2008-07-20 15:45:00)

I just would like to comment that my future was extremely adversely affected by a high school classmate who went to Reed two years 79-81. This school's philosophy is SCARY. I just read about it in an article entitled "Screwed" published in 1997. It really shows how bizarre Reed is. Now I know why this woman was so bizarre and irrational towards me! It was extremely scary reading, and the side notes at the left of the web article made my eyeballs pop out. [http://www.eweek.com/\\_/\\_/\\_ALL\\_OLD\\_HTML/cover102997.html](http://www.eweek.com/_/_/_ALL_OLD_HTML/cover102997.html) It teaches some really wicked things to its students such that they are above the law and can live a life of denial. I was just astonished at the free ticket life these people get who come out of this college that, as previously stated, doesn't really have a grading system (kind of like remaining in denial that things are too political that grades don't

matter, just that you pass). What a great school for someone that lets you choose your teacher (so obviously political), and where you don't have to see your grades unless you ask for them! Ms. Princess screwed up my future for many years with the methods she learned there. I'm sorry, I just think some of these colleges teach people how to be evil and do damage to others lives. It's scary reading.

Tyler (2009-04-30 15:00:09)

@cheryl, please get other points of view which aren't so blatantly inflammatory before trashing Reed. It operates on the honor principle, which states essentially that students shouldn't do anything to harm others. In my experiences at Reed I have found that the student body absolutely uphold the honor principle, and I don't believe I've ever been taught to be evil, unless by evil you mean not fitting into social norms.

## **Interview about Self-Experimentation (part 1 of 2) (2007-04-08 21:28)**

For a German magazine, I've been answering some questions about self-experimentation. Here are the first seven questions and my answers:

1. When and why did you came up with the idea of performing a self-experiment for the first time Mr. Roberts?

I started self-experimentation as a graduate student. My field of study was experimental psychology so it was important to learn how to do experiments. "The best way to learn is to do," I had read. So the more experiments I did the more I would learn. Self-experiments were easy and fast. So I started doing them to increase how quickly I learned about experimentation.

2. Now, self-experimentation must be considered as an inherent part of your scientific work " or is it rather a bauble?

Self-experimentation has been the most influential work of mine by far. Lots of surprises and practical applications.

3. Your self-experiments always deal with very personal concerns like sleep disorders, depressions, procrastination or weight control. Has self-experimentation changed your life?

Yes. Sleep, weight, mood, general health, brain " all better. And it is very satisfying to help people. Thousands of people have used my ideas (described in The Shangri-La Diet) to lose weight.

4. What is the role of coincidence in your self-experimentation?

Most of my self-experimentation has started with an unexpected change. I changed my breakfast; my sleep got worse. I started taking flaxseed oil capsules; my balance improved. I started to stand a lot and my sleep got better. I started walking outside in the morning; my sleep improved. I watched TV in the morning; my mood improved the next day. I drank unfamiliar soft drinks; I lost my appetite. Each of these surprises led to lots of self-experimentation.

5. By coincidence for example you found a relation between watching TV in the morning and your mood the following day. What made you looking at this?

I was hoping to improve my sleep. When we sleep is affected by when we have contact with other people. If you have contact with other people late at night, you will be awake later the following night. I knew about research that suggested that watching TV has the same effect on sleep as human contact. I wondered if my sleep was bad



because I didn't have contact with other people in the morning. Maybe TV could substitute for that, I thought. So I watched TV early one morning.

6. When experimenting on yourself, aren't you taking a big risk for your health? Have there been self-experiments you would now describe as risky?

Doctors have done risky self-experiments. I haven't. I have studied the effects of very common things " watching TV, not eating breakfast, standing a lot. Millions of people have done these things without harm. They're not dangerous.

7. Which of your experiments did you enjoy most?

Seeing faces in the morning. The effects are wonderful: I feel happy, serene, and energetic the next day. I've done several experiments about sleep. It feels great to wake up feeling very rested.

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### **Durian and SLD (2007-04-09 19:50)**

The obvious connection between durian, the big smelly spiky Asian fruit, and the Shangri-La Diet is that both rely on flavor-calorie learning. We come to like the initially unpleasant smell and flavor of durian because we learn to associate it with the calories in the fruit. Here's what happens:

"To anyone who doesn't like durian it smells like a bunch of dead cats," said Bob Halliday, a food writer in based Bangkok. "But as you get to appreciate durian, the smell is not offensive at all. It's attractive.

From [1]an article in today's NY Times. The theory that led me to the SLD centers on flavor-calorie learning.

A less obvious connection is a principle that helped me discover that drinking sugar water causes weight loss. I was in Paris and lost my appetite – a rare event. The principle is that rare events are usually due to rare events. So I wondered what else unusual had happened. Well, there was something: I had been drinking several sugar-sweetened unfamiliar soft drinks per day. When I got back to Berkeley I started to test the possibility that sugar-sweetened water can cause weight loss and SLD was born.

For a fruit, durian has three rare properties:

1. very strong, unpleasant smell
2. very big

### 3. hard to handle (because spiky)

Following the Rare-Causes-Rare principle, these should have a common explanation. Lightning does not strike thrice in one place for different reasons. According to [2]Wikipedia,

The thorny armored covering of the fruit may have evolved because it discourages smaller animals, since larger animals are more likely to transport the seeds far from the parent tree.

That's a good explanation of #3 and it explains the other two rare features ( #1 and #2) as well. The reason for the strong smell ( #1) is so that the signal will be broadcast a long distance: Large animals are less dense than small animals. We think of the smell of ripe durian as very unpleasant but perhaps almost all unfamiliar smells are unpleasant; so any random strong smell will seem very unpleasant. Big fruit ( #2) means big tree and big tree means that seeds must be carried far away so as to be placed in soil where they will not compete with the mother tree. Coconuts are big and hard to eat. Pineapples are big and spiky.

The Rare-Causes-Rare principle also helped me discover [3]the effect of morning faces on my mood and the effect of omega-3 on my balance.

1. <http://www.nytimes.com/2007/04/08/world/asia/08durian.html?em&ex=1176264000&en=b9481d6ca4c259e1&ei=5087%0A>
2. <http://en.wikipedia.org/wiki/Durian>
3. <http://repositories.cdlib.org/postprints/117/>

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### Selenium, the Anti-Mercury (2007-04-10 19:27)

I've been worried about the mercury in tuna. I didn't know that [1]selenium protects against mercury damage. See [2]this paper, for example – see Table 1. Moreover, the same fish that contain mercury contain protective amounts of selenium. "It appears that selenium levels in fish are high enough to give protection against mercury toxicity," concluded [3]a review article. These important facts were missing from all discussions of the dangers of mercury in fish that I had seen, such as [4]this one.

I already take selenium supplements because selenium protects against cancer. An especially convincing bit of evidence for this effect is a map of United States [5]county-by-county colorectal cancer rates. There is a sharp separation of high- and low-rate areas along the Ohio and Mississippi Rivers. Attempts to explain the difference eventually decided it was due to selenium in the soil of the low-rate areas.

1. <http://www.mercuryfacts.com/fselenium.cfm>
  2. <http://www.mercuryfacts.com/downloads/DietarySeleniumProtection.pdf>
  3. <http://www.mercuryfacts.com/downloads/MercuryAndSelenium.pdf>
  4. <http://query.nytimes.com/gst/fullpage.html?sec=health&res=9B07E3D6123EF936A25751C0A9609C8B63>
  5. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list\\_uids=4064058&dopt=Citation](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=4064058&dopt=Citation)
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## **Interview about Self-Experimentation (part 2 of 2) (2007-04-11 21:28)**

8. How do you verify your results?

Repetition – first by me, later by others.

9. It seems your whole life is nothing but a self-experiment – how can your friends handle this?

Well, I spend a few hours in the morning differently than anyone else. I go to sleep earlier and wake up earlier than most people around me. And I eat less than most people. I like to think I make up for it by being in a better mood.

10. How do your colleagues react to your self-experiments?

Most of them think self-experimentation is a mistake, a waste of time. A few think it is creative and important.

11. Your most recent research is dealing with the effects of omega-3 on dental health. What is this research exactly about?

It's not about dental health – that effect ([1]omega-3 improved my gums) was an accident. It's about the effects of omega-3 on my brain. I am varying the omega-3 in my diet in various ways and measuring how well my brain works in various ways. I began this research when I discovered that swallowing flaxseed oil capsules improved my balance. I was surprised but the effect makes sense: balance is controlled by the brain and the brain is more than half fat. Maybe you need the right fats in your diet if you want your brain to work as well as possible.

12. How did you get the idea of searching for the relation between omega-3 and dental health?

See answer to previous question.

13. How did you get the idea of taking oil to lose weight?

It was a three-step process. Step 1: I came up with [2]a new theory of weight control. Step 2: I accidentally lost my appetite during a trip to Paris. I guessed that the cause was the unfamiliar sugar-sweetened soft drinks I'd been drinking because of the heat. This led me to discover that drinking small amounts of sugar water cause a lot of weight loss. Step 3: A friend pointed out that my theory predicted that flavorless oil should be just as effective as sugar water.

14. Are you going to search for a medical explanation for the effects of omega-3 fats?

No. Just convincing most people that there are effects is hard enough. It will also take a long time to learn how to maximize the effects. For example, what oils are best? How much oil is best? Other people are in a better position than me to try to explain the effects. But I don't think it is terribly mysterious or surprising that dietary omega-3 should improve brain function: the brain is more than half fat. Surely the type of fat matters. My discovery is how big and fast the effect is. That's not obvious.

15. When you consider your work as a whole, what is the most important result of your scientific research via self-experimentation?

Discovery of the effect of morning faces on mood. I believe depression is a deficiency disease, caused by too little exposure to morning faces. (See [3]this paper for details.) No doubt that sounds very odd – even odder than the Shangri-La Diet – but consider this. In a wonderful book called [4]The Good Women of China, the author, a Chinese radio host named [5]Xinran Xue, wrote about her travels all over China to learn how different women lived. The last chapter is about visiting an extremely poor and backward community called Shouting Hill where an egg is a luxury and each women has multiple husbands because two or three girls are traded for a wife. She comes back to the radio station and tells her colleagues what she has seen. One of them asks, "Are they happy?" Another says, "Don't be ridiculous, how could they be happy?" Because they were so poor – very poor even by Chinese standards. Xue answered:

I said to Mengxing that, out of the hundreds of Chinese women I had spoken to over nearly ten years of broadcasting and journalism, the women of Shouting Hill were the only ones to tell me they were happy.

It is pretty clear they saw plenty of faces in the morning.

1. <http://www.blog.sethroberts.net/2007/03/28/omega-3-and-dental-health/>
2. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>
3. <http://repositories.cdlib.org/postprints/117/>
4. [http://en.wikipedia.org/wiki/The\\_Good\\_Women\\_of\\_China](http://en.wikipedia.org/wiki/The_Good_Women_of_China)
5. [http://en.wikipedia.org/wiki/Xinran\\_Xue](http://en.wikipedia.org/wiki/Xinran_Xue)

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Bryan (2007-04-12 15:48:51)

Are you still doing the morning faces during your morning treadmill, Seth? If so, what time of the morning & for how long? What does the rig look like – is the tv set on a high platform? Would the same benefit be gained from watching the faces while sitting close to a 27" tv, sans treadmill?

seth (2007-04-13 14:53:55)

I no longer use faces on TV – I use my own face in a mirror, a few feet away. I listen to a book or radio show at the same time. I stand at the same time and part of the time do exercises that allow me to keep looking in the mirror. yes, I'm sure you'd get

the benefits sitting. That's how I studied the effect for several years.

## **Does the Type of Fat in Your Diet Affect Your Brain? (2007-04-12 17:37)**

Here's how a Ph.D. student at UC San Francisco doing research on neural stem cells answered that question:

If dietary fat affected the brain in a significant way, we would know about it. It would have been discovered. Which isn't to say it doesn't affect it in a trivial way. Not just an acute action – like if you drink a small amount of alcohol or the effect of a sugar high. I mean the long-term functioning.

Why?

Because a lot of people would have tested it. Fat gets a lot of money. It's a crowded area of research. People try to exploit it. It's an area with a lot of public interest. It's very popular to study anything related to fat. Also anything related to the brain. People are worried that they will lose their mind as they age. If there was something significant found it would have been a big story all over the New York Times.

She was very sure of this, it seemed to me.

[1]My main posts about omega-3.

1. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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John (2007-04-13 03:00:06)

Where do these quotes come from?

seth (2007-04-13 05:40:24)

A conversation. "Can I quote you?" I asked. She said yes.

michael vassar (2007-04-13 09:23:45)

She believes in a rational world and an efficient Jeffersonian market in ideas. I once did too. If I still did I'd probably be a PhD student like her instead of being in business.

RandomToad (2007-04-13 13:16:27)

Whether she is right or wrong - I dunno. But her thinking seems to fall victim to a variant of Ad Populum fallacy: if a lot of people don't (or do) think X exists, then X doesn't (does) exist. Not to go off topic, but I should also add this is the argument made by many for Global Warming — everyone/many says it exists, (i.e. there is 'consensus') therefore it exists. Whether or not it exists, is independent of how many people think it is true.

seth (2007-04-13 22:04:51)

She is wrong. For a reason that is easy for long-term academics to see but would be hard for a graduate student to see: People in nutrition know almost nothing about experimental psychology and never do such measurements. (When the nutritional scientist R. K. Chandra published a paper containing psychological measurements, he didn't realize how absurd they would appear to actual experimental psychologists – see the Chandra page of my website for details.) Likewise, professors of experimental psychology know almost nothing about nutrition and never do nutritional manipulations. So it is actually very easy for such effects to go undiscovered.

losing-it (2007-04-15 12:53:03)

What if, when asked the question, she became too fixated on what she "knows" to actually perceive what is there, or what might possibly be evident? Ask someone (especially a child, or someone who isn't an artist) to draw a self-portrait, and he will usually draw images from his brain, rather from his reflection in a mirror. If that correlation makes sense or is relevant to anyone but me...(?) An interesting something else concerning perception and value goes on at this link: <http://www.washingtonpost.com/wp-dyn/content/article/2007/04/04/AR2007040401721.html>

JR (2007-04-16 13:01:11)

Her comments remind me of the economist who won't pick up the \$20 bill lying on the ground since it must be counterfeit: if it were real, it would have been picked up already.

losing-it (2007-04-19 12:09:10)

JR Said: April 16th, 2007 at 1:01 pm "Her comments remind me of the economist who won't pick up the \$20 bill lying on the ground since it must be counterfeit: if it were real, it would have been picked up already." ...or maybe the starving philosophy student grappling with the question of the Toast in the Machine: [http://www.nearingzero.net/screen\\_res/nz136.jpg](http://www.nearingzero.net/screen_res/nz136.jpg)

## **Interview about Self-Experimentation (postscript) (2007-04-13 22:12)**

One of my favorite writers is [1]Vladimir Nabokov. When he was alive, I not only read all his books but tried to read every word he wrote (in English). I have a folder full of photocopied interviews from newspapers and magazines. Late in his career, after my folder had become thick, Nabokov did something surprising: Came out with a book of interviews (Strong Opinions – [2]here and [3]here are excerpts), which put into book form most of what was in my folder. He wrote his answers to interview questions so this made some sense. Yes!, I thought, these interviews are just as interesting as I've always thought. I'd already read each of them about five times; I read them a few more times in book form.

I was such a big fan of Nabokov, and I liked his written interviews so much, that posting my answers to interview questions ([4]here and [5]here) was not an emotionally-neutral event. Partly it was a huge thrill – like being on your favorite TV show. Like being Nabokov For a Day. And partly it was humbling: My answers were way way worse than his.

1. <http://www.fulmerford.com/waxwing/nabokov.html>

2. <http://marcelproust.blogspot.com/2005/06/nabokovs-strong-opinions.html>

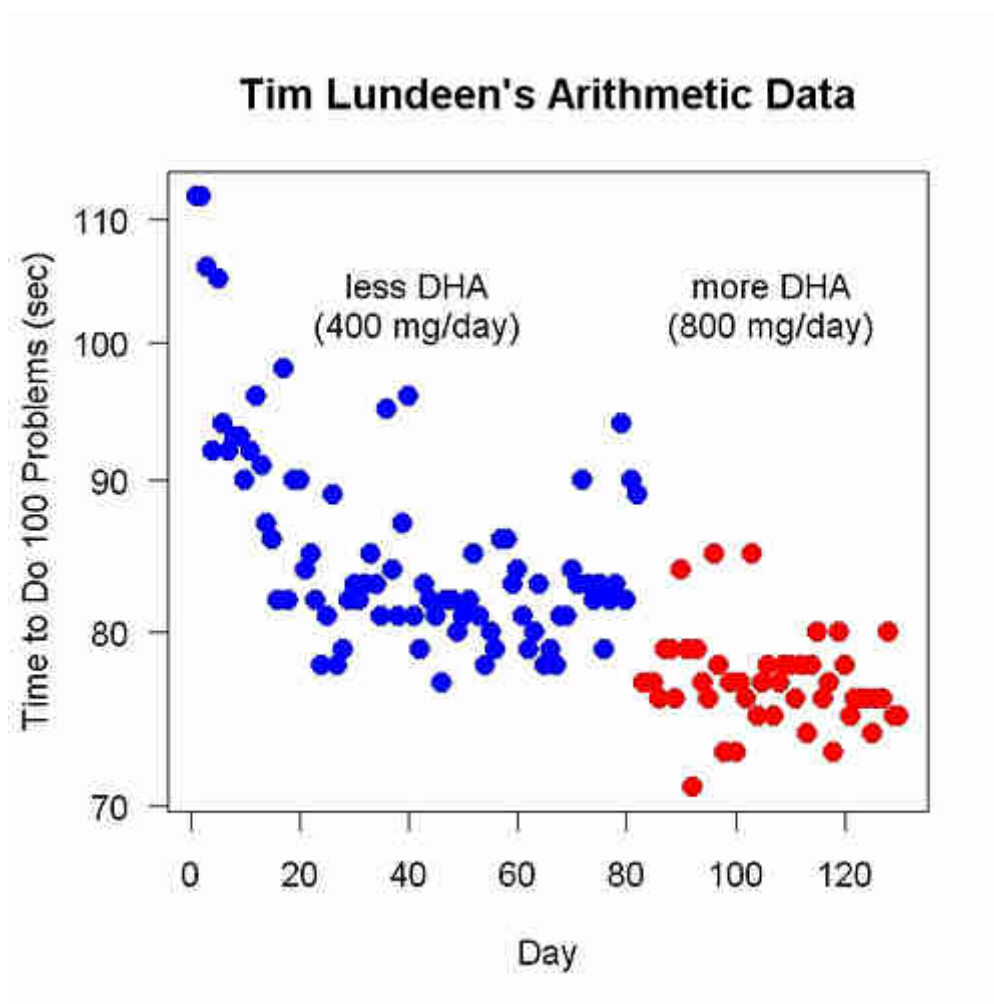
3. <http://robotwisdom.com/jorn/nabokov.html>

4. <http://www.blog.sethroberts.net/2007/04/08/interview-about-self-experimentation-part-1-of-2/>

5. <http://www.blog.sethroberts.net/2007/04/11/interview-about-self-experimentation-part-2-of-2/>

### Omega-3 and Arithmetic (continued) (2007-04-14 20:11)

Tim Lundeen, a Bay Area software developer, previously posted [1]here about what happened when he increased his daily dose of DHA (an omega-3 fat in fish oil) from 400 mg/day to 800 mg/day: The next day, the speed with which he did simple arithmetic (e.g.,  $7 + 3$ ) increased. At that point he had only four days from the high-DHA condition. Now he has two months. Here it is:



The y axis is the total time taken to do a set of 100 simple arithmetic problems.

Bottom line: The improvement continued, at roughly the same level. Very good evidence for an effect.

Tim had earlier found that doses of 200 and 400 mg/day of DHA had no apparent effect.

[2]My main posts about omega-3.

1. <http://www.blog.sethroberts.net/2007/02/16/omega-3-and-arithmetic/>
2. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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Matt McIntosh (2007-04-14 21:14:11)

How is he differentiating the effect of omega 3 from the effect of practice?

seth (2007-04-14 21:35:46)

The sudden improvement he saw when he started taking omega-3 couldn't be due to practice. The data show that by then further practice was having little or no effect.

Matt McIntosh (2007-04-14 22:34:45)

Sorry, didn't look at the previous post. My bad.

Doug (2007-04-15 14:16:52)

He might also try lowering the omega three, and seeing if the scores go back up.

Geoff (2007-04-16 09:30:31)

Why not do a hypothesis test rather than just eyeballing the data in a graph? Looks like you'd need to do a regression that included some time-based term to account for practice effects (surely there are some standard functional forms for this?) and one for dose. Doug's suggestion of modifying the dose over time is a good one - the current all-low-dose followed by all-high-dose structure would probably make any test fairly sensitive to the particular choice of practice term.

seth (2007-04-16 10:23:36)

I didn't do a hypothesis test because the effect strikes me as obvious. Very small p value. Are you saying the effect is not obvious to you?

Tom Moertel (2007-04-16 12:55:28)

Seth, Like Geoff, I see a time-based trend in the graph. I'm curious: how would controlling for time influence the DHA effect? Can you make the data set available? I'd like to drop it into R for a quick analysis. Cheers, Tom

Tom Moertel (2007-04-16 14:43:50)

Seth, As a follow-up to my previous post, I was able to extract Tim's timing data from the plot (using Engauge Digitizer). Using R, I fit the data to three models. I'll summarize my results below. Model 1: relative improvement is explained by taking more DHA. Result: taking more DHA corresponded to a 10 percent improvement in math-problem-set timings. Model 2: relative improvement is explained by practice. Result: each day of practice corresponded to a 0.15 percent improvement in timings. Model 3: relative improvement is explained by both practice and taking more DHA. Result: after controlling for practice, taking more DHA was no longer significant, and each day of practice corresponded to a 0.14 percent improvement in timings. So, at least by my cursory analysis, the data do not argue for an improvement effect when going from 400 to 800 mg/day of DHA. If you're interested in my models, results, or R code, please let me know, and I'll post them. Cheers, Tom

seth (2007-04-16 15:10:40)

How did you control for practice?



Tom Moertel (2007-04-16 16:22:06)

Seth, I used the day as a proxy for practice. That is, for day N, the model accounts for N days of practice, with the effect of each day's practice being multiplicative on the output. (In the model, all effects are multiplicative to model diminishing returns. The results were similar, however, when I used a linear model.) The model, in R syntax, is given as follows: `lm (log.timing ~ day + more.dha)` where `log.timing` is the natural logarithm of the timing data from Tim (to model multiplicative effects), `day` is the day upon which the timing was taken, and `more.dha` is a binary factor indicating whether 800 mg of DHA was taken on that day instead of 400 mg. Fitting the data to the model, the coefficient of `day` was -0.0014 (95 % CI = [-0.0019, -0.00084], p

seth (2007-04-16 18:39:46)

I would fit the same model you did but not use all the days – the effects of practice are obviously nonlinear if you use all the data. I'd 1. start at Day 40 (to get rid of the obvious nonlinearity at the beginning) 2. omit the 4 blue outliers after Day 40, which correspond to the first days back from trips. I think if you do that analysis you will see a big effect of DHA.

Tom Moertel (2007-04-16 20:30:08)

Seth, If I fit the model I mentioned earlier to the subset of the data you suggest, I do indeed get the results you expected. Practice (as modeled by elapsed days) is no longer a significant predictor of the problem-set timings. Increased DHA, however, is significant: increasing the daily DHA dosage from 400 to 800 mg corresponds to a 4.7 percent decrease in timings (95 % CI for the effect is [1.4, 7.9] percent). But is it reasonable to exclude the first 40 or so days? I think so, if we assume that the task is subject to an initial learning effect that plateaus at some point. Judging from the plot, day 40 is into the plateau stage and makes for a reasonable inclusion cutoff. Cheers, Tom

seth (2007-04-16 21:02:51)

Thanks for doing the suggested analysis. A vast amount of data shows that practice has much larger effects early in learning than later in learning, even when performance is measured on a log scale. It's not just this data set that makes me want to exclude a bunch of early days, it's all that other data, too.

Geoff (2007-04-18 09:25:47)

Seth, No, it's not obvious to me. If I ignoring the first 20 days or so, my eye sees a set of points that looks like it is clustering around a linear, downward sloping line. Maybe there is a discontinuity around the color change, maybe not. With the first 20 days thrown in, I see some kind of exponential-like decay that approaches a linear asymptote. Some kind of A-B testing would make this a lot more convincing since it does look like there is a fairly pronounced time component. Interesting stuff, though. Geoff

## **New Way to Lose Weight? (surgical) (2007-04-15 22:35)**

During the recent PBS special on obesity [1]Fat: What No One is Telling You, a segment about surgery included this voiceover:

Until recently it was believed that the tiny stomach [that the surgery produces] is what forces the patient to eat less and lose weight. The surprise came when researchers learned that what makes surgery work so well is the cutting of some nerves in the bowel, which changes signals which flow between the gut and the brain.

I'm not surprised the researchers were surprised. The obvious function of nerves from gut to brain is to tell the brain food is present in the gut; and when enough food is present, to cause satiety. If this view of what the nerves do is correct, you would think that cutting those nerves reduces satiety signals and thus increases how much people eat at

each meal – and thus causes weight gain. But the opposite is what happened.

The [2]theory behind the Shangri-La Diet, however, easily explains the weight loss: Cutting the nerves reduced the calorie signal from food, thus reduced the strength of the flavor-calorie association. (After nerves are cut, your brain thinks that a 300-calorie food only has 150 calories. So the flavor-calorie association becomes weaker.) The weaker the flavor-calorie associations of your food, the lower your set point. The observation supports the theory so well that I will try to track it down to include in a revision of my paper.

The implication is that weight-loss surgery could consist of cutting some of those calorie-signalling nerves and nothing more. It would be relatively painless: Food would still taste good, especially in the beginning. (Because cutting the nerves does not change the memory stored in the brain.) Food would gradually taste less good as the flavor-calorie association become weaker. As flavor-calorie associations become weaker, your set point goes down. Causing weight loss without effort.

1. <http://www.pbs.org/wgbh/takeonestep/fat/>

2. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>

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Doug (2007-04-16 16:45:56)

"Cutting the nerves reduced the calorie signal from food, thus reduced the strength of the flavor-calorie association. (After nerves are cut, your brain thinks that a 300-calorie food only has 150 calories. So the flavor-calorie association becomes weaker.)" I think that fits in well with my post in the forum yesterday about trying "calorie-less flavor" instead of or in addition to flavorless calories in order to induce appetite suppression.

seth (2007-04-16 18:41:42)

It would depend on what those calorie-less flavors are. If they are the same flavors that are sometimes paired with calories – yes. If they are different than the flavors paired with calories, no. I consume a fair amount of calorieless flavors in the form of gum but the gum flavors I use are not flavors that are paired with calories at other times.

### **Birth of a Website (2007-04-16 21:05)**

Several months ago I got this email from someone at the Seed Media Group:

Thank you for your interest in being hosted by ScienceBlogs. In the last couple of months, we have received well over a hundred queries from bloggers representing an impressive breadth and depth of science expertise. However, as we are trying to maintain a sense of community at ScienceBlogs, we are able to extend only a small number of invitations at a time. . . . In light of the very limited number of spaces we have to offer, we regret to inform you that we cannot extend you an invitation at this time.

This was sent to about 50 people. Their email addresses were visible. One of the recipients thought that we, the rejectees, could form our own umbrella website and wrote to us about this. I replied:

I love the idea of a form rejection letter leading to the founding of a competitive website – count me in!

Four months later I got an invitation to join the result, [1]www.scientificblogging.com. It is now a well-functioning website with lots of interesting stuff.

1. <http://www.scientificblogging.com/>

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Andrew Gelman (2007-04-17 04:45:54)

I occasionally get emails from organizations saying they want to link to my blog and asking me to link to their blog too. One of these was affiliated with Scientific American magazine, I think. I always respond saying thanks for linking to me, and I'll link to their stuff if it's appropriate to my blog. It's funny how they want to set up deals like this. I guess it makes more sense for people who are doing this as a business.

Cash (2007-04-17 14:04:59)

Seth, I think you're confusing us with this group: [1]Indy Science Blogs. We tried last year to get them to come into our site instead but they prefer keeping their own individual banners and making a newsfeed link on that common URL. It's a shame too, because they have some great stuff over there and it would be good for everyone to get them more exposure. Thanks for the publicity! We are just about to start a public beta and we'll let everyone who likes to write about science have their own column and get paid to do it.

1. <http://www.indyscienceblogs.org/>

seth (2007-04-18 19:03:58)

Oh, my. Even a renegade website didn't want me.

### **Omega-3 and Arithmetic (evaluation) (2007-04-18 06:30)**

When I read an empirical scientific paper I ask four main questions:

1. How clear is the effect or correlation? Generally measured by p values.
2. How clear is the cause of the effect?
3. How much can we generalize from this?
4. Assuming we can generalize, how much will this change what anyone does?

The overall value is something like the product of the answers. Most research gets a modest score on #1 (because a high score would be overkill and, anyway, the low-hanging fruit has been picked) and a low score on #4. Experiments get a high score on #2, surveys a low score.

[1]Tim Lundeen's little experiment that I described a few days ago, in which he found that a higher dose of DHA improved his arithmetic ability, gets a very high score:

1. The effect is very clear.
2. It's an experiment. Because the variation was between two plausible doses of a food supplement, I doubt it's a placebo effect.
3. The subject, the treatment, and the test are "ordinary" – e.g., Tim does not fall into a special group that might make him more likely to respond to the treatment.
4. Who wouldn't want to improve how well their brain works?

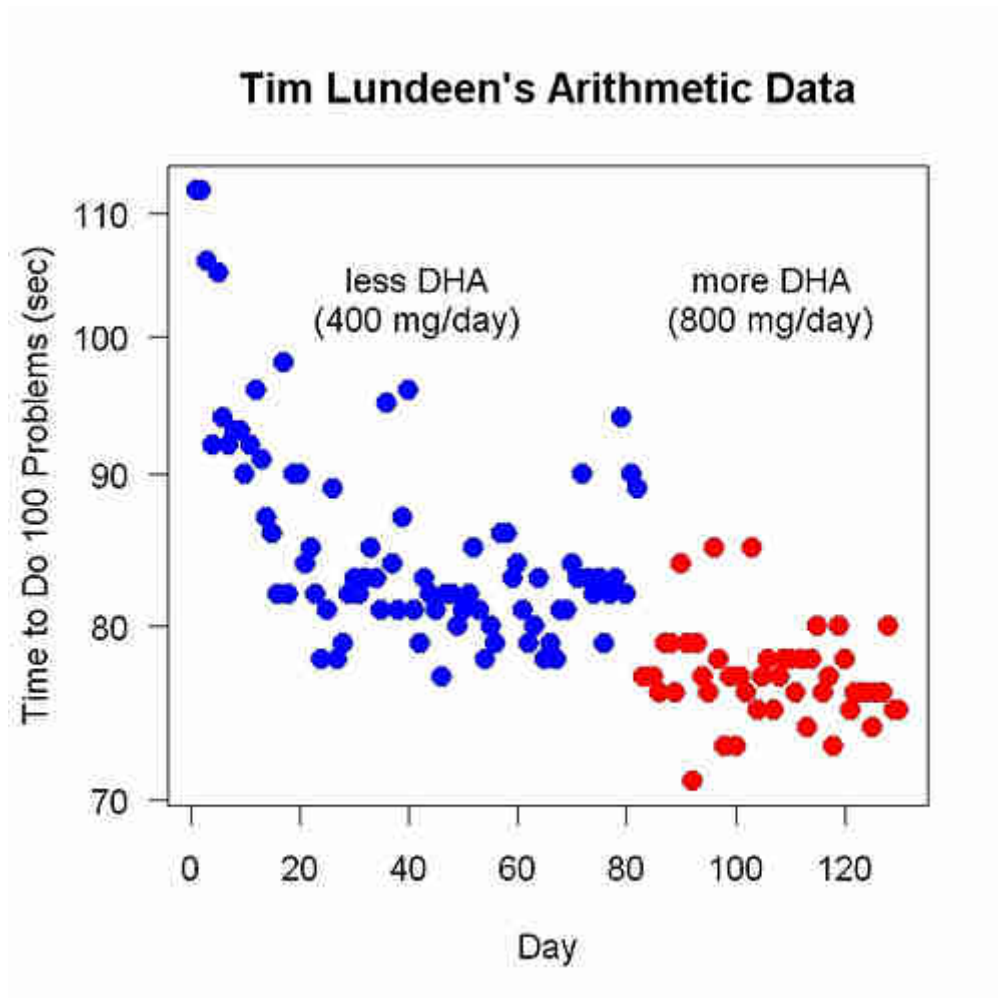
From the point of view of a nutrition scientist, I'd guess, the effect is shockingly clear and direct. Experimental nutrition with humans almost always measures correlates of disease (e.g., correlates of heart disease) rather than disease. To me, an experimental psychologist, the results are shockingly useful. Practically all experimental psychology results (including mine) have little use to most people. The clarity of the effect does not quite shock me but I'm very impressed.

1. <http://www.blog.sethroberts.net/2007/04/14/omega-3-and-arithmetic-continued/>

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### **Omega-3 and Arithmetic (several analyses) (2007-04-18 21:38)**

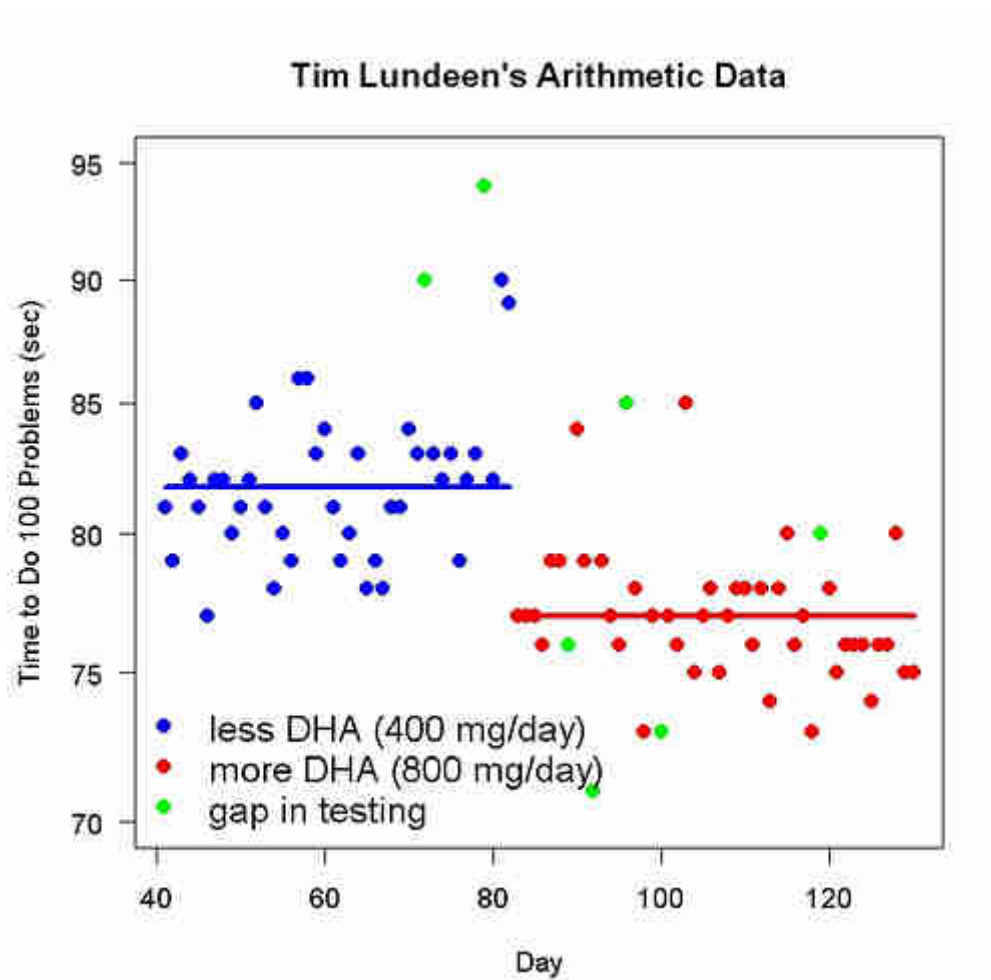
In a [1]recent post I described Tim Lundeen's arithmetic data. He found that increasing his daily dose of DHA seemed to increase the speed at which he did simple arithmetic. Here is the graph:



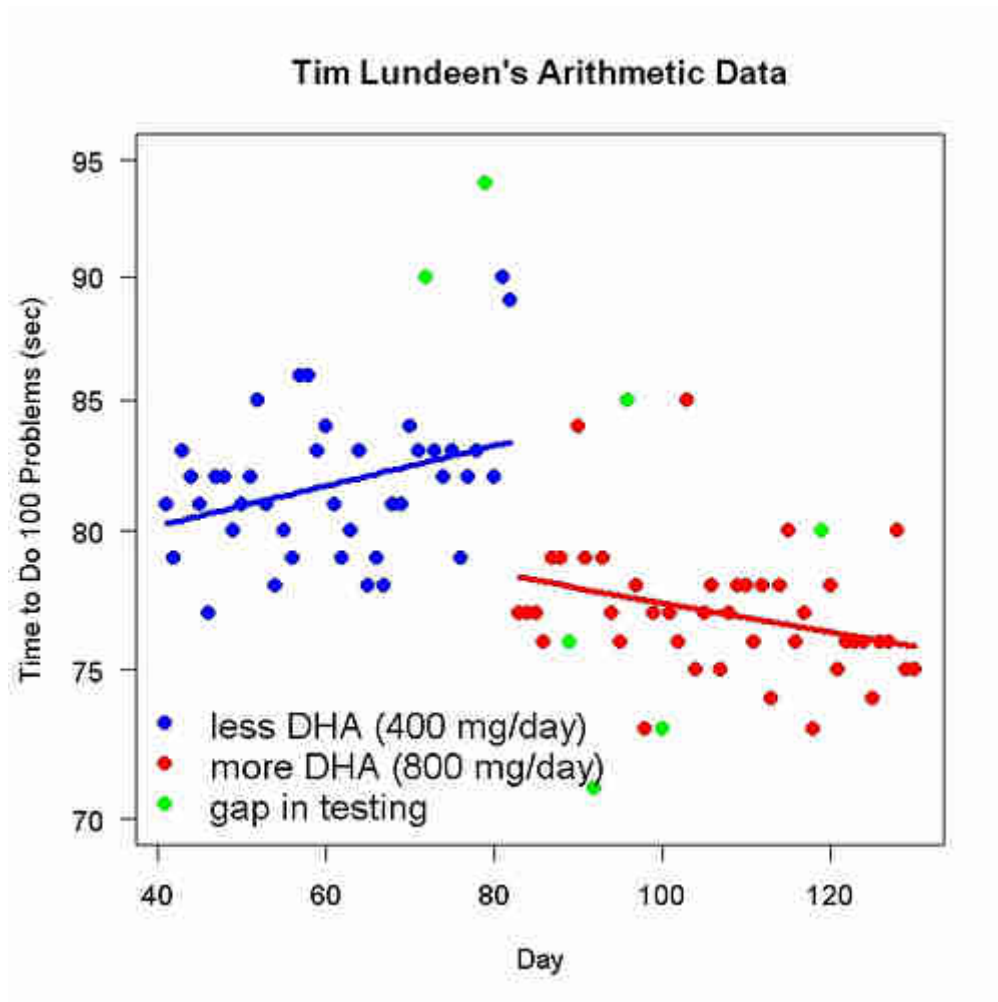
I didn't bother to do any statistical tests because I thought the DHA effect was obvious. However, someone in the comments said it wasn't obvious to them. Fair enough.

If DHA has no effect, then the scores with more DHA should be the same as the just-preceding scores with less DHA. There are practice effects, of course, so I analyzed the data after practice stopped having an effect: After about Day 40. (And I left out days preceded by a gap in testing – e.g., a day preceded by a week off.) Thousands of learning experiments have found that practice makes a difference at first and then the effect goes away – additional practice doesn't change behavior.

If I do a t-test comparing low-DHA days (after Day 40) with high-DHA days, I get a huge t value – about 9. If you're familiar with real-life t values, I'm sure you'll agree that's a staggeringly high value for a non-trivial effect. The model corresponding to this test is indicated by the lines in this figure:

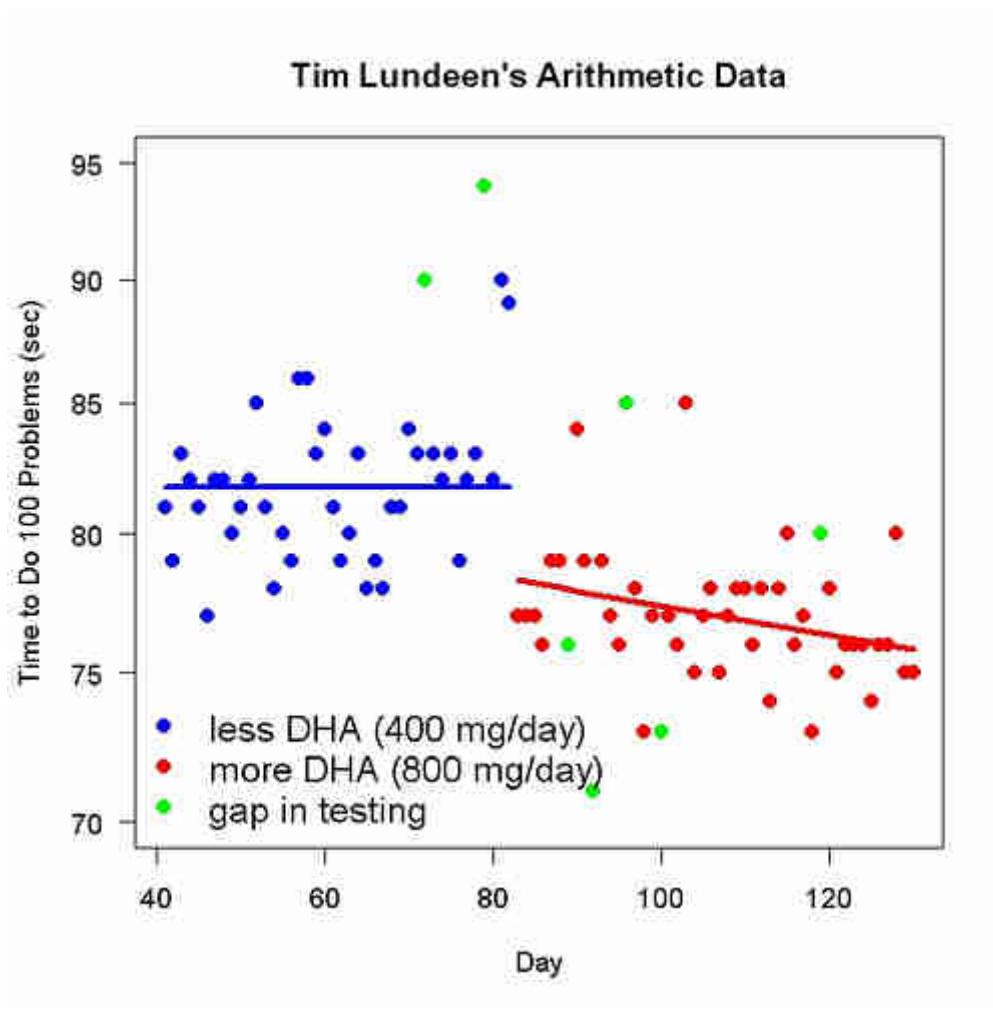


The red ("more DHA") points don't fit the line very well, which suggests doing an analysis where the slopes can vary:



There is still a huge effect of DHA, now split between two terms in the model - a difference-in-level term ( $t = 4$ ) and a difference-in-slope term ( $t = 3$ ).

But this analysis can be improved because based on thousands of experiments I don't believe that the less-DHA line could have a positive slope, as it does in the model. Or at least I believe that is very unlikely. So I will constrain the less-DHA line to have a slope of zero:



Now I get  $t = 8$  for the difference in slopes and  $t = 4$  for the difference in level. This is interesting because it implies that more DHA not only caused immediate improvement but also opened the door to more gradual improvement (indicated by the slope difference). DHA changed something that allowed practice to have more effect.

That's a new way of thinking about the effects of omega-3 – actually, I have never seen any data with the feature that a treatment caused a practice effect to resume – so I have to thank the person who claimed the difference wasn't obvious.

1. <http://www.blog.sethroberts.net/2007/04/14/omega-3-and-arithmetic-continued/>

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Geoff (2007-04-19 07:34:17)

I'm glad to see that fitting some regression lines was helpful. It looks like the positive slope you find so strange is largely due to the two outliers toward the end of the 400 mg/day period. If you toss those or switch to some form of robust regression, the slope will probably flatten out. (But that point you will have thrown out quite a bit of data)



Tim Lundeen (2007-04-19 13:38:02)

Seth, fyi the last photo in this post gets a "this photo is currently unavailable" error from flickr. I had also noticed that my scores seem to be improving over time since increasing DHA, and my sense is that this will continue; partly because I don't get "hung up" on individual problems as much, and I am able to pipeline more effectively (e.g. look ahead and start the next problem while writing down the answer to the current one). The only other change I've made in the same period is to start taking 20mg/day of resveratrol from Life Extensions, which I started about 60 days before the increase in DHA. So seems like the improvement in learning rate is due to either DHA (most likely) or resveratrol (which, because it improves blood glucose management, could improve brain function over time). Anyway, it is certainly nice, and I am subjectively more effective in my work as well.

Janet (2007-04-20 07:01:46)

Your analysis is provocative, and it's convincing enough to make me try it myself. To really be convinced, though, I would want to see the trial periods shortened to a few weeks instead of a few months, the order of the trial periods randomized, a placebo oil to substitute for lower dose of flaxseed if he didn't do that this time, and blinding as to which dose of flax seed in each time period. Since the trial periods are so long, the effect could be explained by some type of seasonal variation (e.g., daylight length, some other difference in the experimenter's life during the two 3 month periods), and since that he expected better results on higher dose, and we know that people improve their test performance if they expect they'll do better (e.g., stereotype threat), blinding would prevent that. Btw, what R command do you use to fit the two lines for different range of the x axis?

seth (2007-04-20 07:47:29)

Those are good points, except how can someone expect an effect (namely, the downward slope with more DHA) that has never been seen before? (Not by me and not by Tim, at least.) Re R. I got the fit with `fit = lm(time day)` and plotted it with `lines(day,fit$fitted.values)`

## **You Can't Change Something Unless You Love It – Jane Jacobs (2007-04-19 15:43)**

I think very highly of [1]Philip Weiss and rarely disagree with him. But I certainly disagree with [2]this:

My first feeling seeing the crapulous tape on the news last night was, Burn it. What more are we going to learn about this sick monster [the Virginia Tech shooter] from his first-person maunderings? O.K., archive it, let criminologists study it, but why give him the attention he so craved? Wipe his name from history. Did you notice he honored Dylan Klebold and Eric Harris of Columbine in his statement? Why not erase their names too.

I have not yet found the interview in which Jane Jacobs says something like "It's a funny thing. You can't change something unless you love it." But I did find an [3]interview in which she said:

You can't prescribe decently for something you hate. It will always come out wrong.

The longer you hate the Virginia Tech shooter, as Mr. Weiss and many others do, the longer it will be till you understand what to do about him – how to prevent such things in the future. It was a fundamentally decent thing that the shooter did by sending that stuff to NBC. Like everyone, he wants to be listened to. As I blogged [4]earlier, one of my students did a project that involved visiting homeless people in People's Park. He was surprised by how much they

wanted to talk to him. The solution to homelessness, he was pretty sure, would involve a lot of listening.

Addendum: A forensic psychiatrist named Michael Weiner argues the opposite (that showing the videos does no good and lots of bad) [5]here. Jacobs' view is supported by a wealth of evidence. I can't tell if any evidence supports Weiner's view.

1. <http://www.philipweiss.org/>
2. [http://www.philipweiss.org/mondoweiss/2007/04/nbc\\_seeks\\_profi.html](http://www.philipweiss.org/mondoweiss/2007/04/nbc_seeks_profi.html)
3. <http://www.gse.buffalo.edu/fas/bromley/ccs/part5.htm>
4. <http://www.blog.sethroberts.net/2007/02/11/blogging-and-stone-age-life/>
5. <http://abcnews.go.com/GMA/VATech/story?id=3056168&page=1>

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losing-it (2007-04-20 08:18:50)

Thanks for sharing your thoughts on these questions, Dr. R. It is something I often ponder...realizing that human beings are influenced by so many factors, for better or worse, and that we share a common nature. I feel that, although some people may be stronger willed or better educated or lovingly nurtured than many others, not one of us is completely exempt from the possibility and probability of making poor and even dangerous choices (having free will) or from being manipulated or inadvertently harmed by industrial product, environmental factors, psychological influences etc. It can seem difficult at times to distinguish the perpetrator from the crime s/he has committed, with one's emotional response. On the subject of media attention and publicity, I'm sure whether it is beneficial or harmful depends on the state of the watcher, which means it could be either. I for one, think the media attention goes far overboard too often in reporting, but especially in analyzing those who are accused or convicted of crimes. On a "lighter" note (being an "SLDer"), I would think that the idea of not being able to truly change something until we love it would apply to our bodies (and therefore to excess weight) as well. It might not mean having to feel a love the excess fat, but rather purposefully and intelligently loving our amazing and complex bodies as they are created, realizing their functions and purposes which may make fat storage and reduction problematic for a myriad reasons were originally developed for health and survival. And then, with that perspective, to seek out and apply the most beneficial ways of caring for the body, perhaps viewing it as if it were a little child in order to nurture it back to health and fitness, rather continually convicting oneself of guilt.

### **Effects of SLD and Flaxseed Oil (2007-04-20 04:51)**

A reader (Josh Mangum) writes:

The flavorless calorie diet lets me drop weight whenever I need to. I was usually 10-15 lbs overweight and up to 25 lbs when under stress. Both my parents are overweight so I was worried that I would put on weight under stress and not take it off. My dad especially has followed the pattern of gaining a few pounds a year his whole adult life and is now about 75 lbs overweight. Besides the obvious advantages

of losing weight now it's really nice that I don't have to worry about being very overweight in the future.

Flax oil is more subtle. I think it's improving my sleep and mental ability. For sleep I've noticed being rested and having more vivid dreams. There seems to be a dosage effect. One night I tried 6 tbs of flax oil, had very vivid dreams and felt very rested the next day. The other thing that seems consistent with it working is that I can go back to sleep for a couple hours after waking at 7 am if I'm still tired. Previously I was never able to go back to sleep whether I woke at 2 am or 7 am.

I write software and notice that it seems easier while I've been using flax oil. It seems to be easier to hold large problems in my head and work through them than previously. I don't notice much effect on how often I'm "insightful" or "clever" though. So rather than being smarter it seems like being adequately smart more often. This is subtle though and it could be the phase of the project or my outlook or just better sleep. Maybe the effects are just the result of coming out of the shorter foggy San Francisco winter days.

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### **What Should I Learn About Writing From This? (2007-04-20 08:05)**

I think could read the New York Times for a hundred years and not come across anything as well-written as [1]this gem of a blog post by Joyce Cohen, who writes The Hunt column in the Times. I love her column – but this is better. It's about something I don't even care about, New York real estate.

By incredible coincidence, [2]Nicholas Kristof's most recent blog entry (April 17, 2007) is also better, in my opinion, than essentially everything that appears in the Times (or any other paper). Kristof reprints a letter to him from a student that makes an extremely important point about Africa coverage in the Times (and, probably, all other Western newspapers): It is unceasingly focussed on failure. I wonder why.

1. <http://huntgrunt.blogspot.com/2007/04/langston-literary-culinary.html>

2. <http://kristof.blogs.nytimes.com/>

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Andrew Gelman (2007-04-20 15:33:14)

Seth, Apparently, tastes differ. I'm far more interested in New York real estate than you (for obvious reasons) but I still found that blog post completely uninteresting (and not particularly well written). In contrast, I see lots of interesting things in the Times.

seth (2007-04-20 16:31:34)

It is the quality of the writing that impressed me, not the content. The writing was warm, relaxed, evocative, and appreciative. In contrast, the student letter that Kristof quotes is not especially well-written – I'd give it an A-. I'd give the thought behind it an A+. I found it extremely interesting.

Jeremy (2007-04-23 04:47:53)

As I am not a subscriber to Times Select, nor can I afford to be, I have no way of knowing whether I agree with you or not Seth. My question; is there anything that gives access to this material like the Permalinks to ordinary NYT articles?

seth (2007-04-23 08:09:14)

Sorry. I should have paid more attention to my sister, who had the same complaint. I have posted most of it. <http://www.blog.sethroberts.net/2007/04/23/what-loren-berlin-a-student-at-the-university-of-north-carolina-wrote-nicholas-kristof/>

Jeremy (2007-04-24 04:57:41)

Thank you. You're right. It is a wonderful piece of writing. And as someone who works for an organization that is trying to improve the lives of poor people around the world – not just Africa – I can fully agree. Good news has almost no value. Never has had. Never will have. People want strife and despair and cruelty and wrong, not for themselves, but to read with their breakfast muffin.

### **Too Much Emphasis on Failure (2007-04-20 22:09)**

In [1]his blog a few days ago, as I mentioned [2]earlier, Nicholas Kristof printed a letter from a University of North Carolina graduate student about why she was not going to enter Kristof's contest to go to Africa with him. Kristof wrote too much about failure, she said:

[Quoting Kristof:]“I’m hoping that you’ll be changed when you see a boy dying of malaria because his parents couldn’t afford a \$5 mosquito net, or when you talk to a smart girl who is at the top of her class but is forced to drop out of school because she can’t afford a school uniform.” . . . The story of Africa in turmoil is the African narrative that many Americans - and certainly those who read The New York Times - already know. It is virtually the only type of reporting that Western news outlets broadcast about the continent. . . . Americans don’t need any more stories of a dying Africa. Instead, we should learn of a living one. Kristof and his winners should investigate how it is that Botswana had the highest per-capita growth of any country in the world for the last 30 years of the twenty-first century.

I believe she is correct. The Times and – I’ll take her word for it – “Western news outlets” in general have made a serious mistake in their Africa coverage: Far too much coverage of failure relative to success. An especially curious misjudgment because generally journalists like feel-good stories.

Could an entire well-respected profession do the wrong thing for a long time? Well, Jane Jacobs thinks so. In a 2000 [3]interview, she said this about economists:

One place where past economic theory has gone wrong in a subtle way is that it has always been called upon for explanations of breakdowns and trouble. Look how foreign aid, even today, is all about poverty and where things are not working. There is no focus on trying to learn how things are working when they work. And if you are going to get a good theory about how things work, you have to focus on how they work, not on how they break down. You can look forever at a broken down wagon or airplane and not learn what it did when it was working.

Maybe you say Jacobs wasn't a real economist (because she didn't write mainstream academic papers). Well, consider this. In the 1960s, [4]Saul Sternberg changed the face of experimental psychology when he showed what could

be done with reaction-time experiments, which are set up so that the subject almost always gets the right answer. Before Sternberg, memory and perception were usually studied via percent-correct experiments, set up so that subjects were often wrong.

Sternberg's reaction-time research was so much more revealing than the percent-correct research that preceded it that almost everyone switched to using reaction time. The profession of experimental psychologists had done the wrong thing for a long time.

1. <http://kristof.blogs.nytimes.com/>
2. <http://www.blog.sethroberts.net/2007/04/20/what-should-i-learn-about-writing-from-this/>
3. <http://www.govtech.net/magazine/visions/aug00vision/Interview/index.php>
4. <http://www.psych.upenn.edu/~saul/>

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Matt McIntosh (2007-04-21 08:02:57)

As far as economists and economic development go, check out anything by Hernando de Soto and Douglass North. Those two are bright lights in a field full of darkness and confusion: they actually study real economies to figure out how they work, rather than playing with toy models on paper.

Stephen M (Ethesis) (2007-04-21 20:25:57)

There is some amazing stuff in economics. Finding out why honey is related to SIDS and lots of other things. In a way, economics is a study of math and how it relates. Neat stuff. I liked your points in this post, btw, and I'm thinking on them.

Evelyn (2007-04-22 10:36:03)

I'm reading *The Ab Revolution* by Dr. Jolie Bookspan, and it's a wonderful example of how a profession can be wrong about something for a long time. The book is all about how proper posture can be more effective in preventing back pain and developing abdominal muscles than crunches, because proper posture provides a workout all the time in a way which enhances everyday functioning. Crunches don't actually strengthen abs, and can hurt your neck and back. Great stuff! Her blog is quite good as well: [http://www.healthline.com/blogs/exercise\\_fitness/index.html](http://www.healthline.com/blogs/exercise_fitness/index.html)

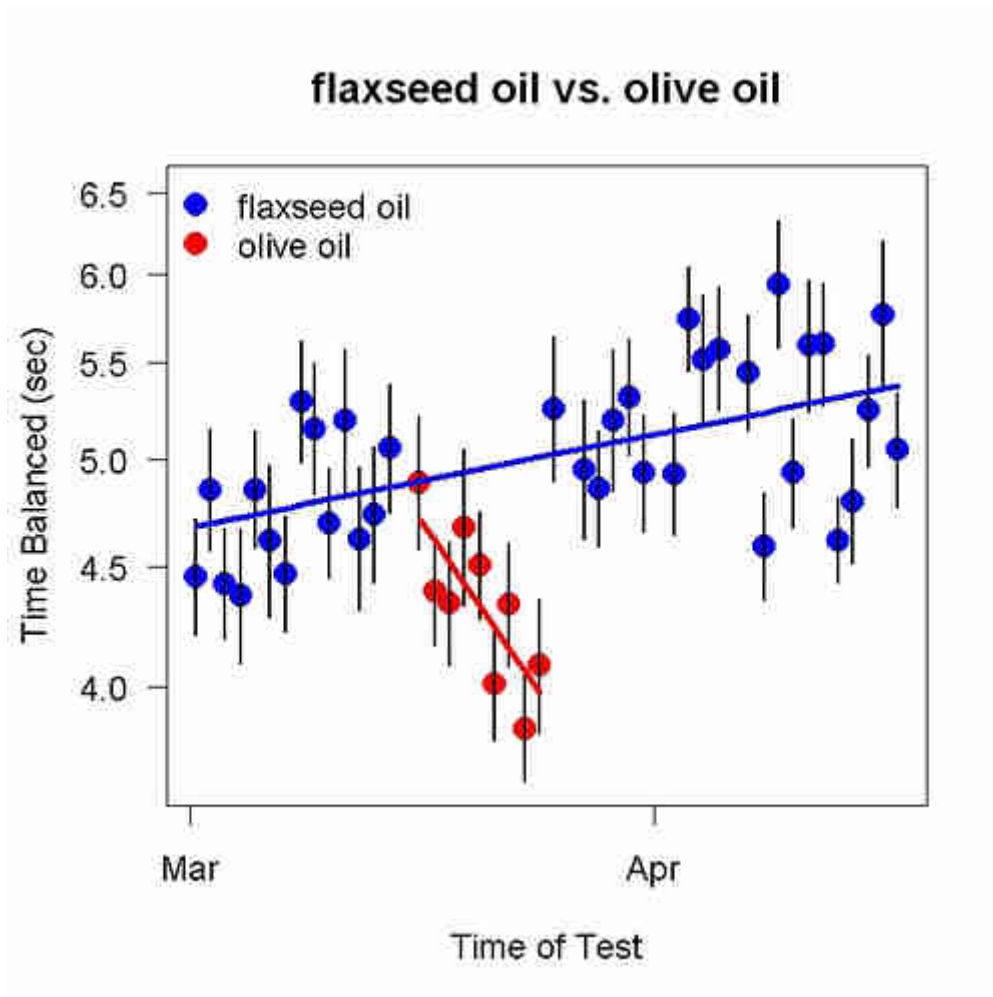
### **Science in Action: Omega-3 (flaxseed oil vs. olive oil) (2007-04-21 20:29)**

As I've described in [1]previous posts, flaxseed oil (high in omega-3) seems to improve my balance. As I increased the daily dose, I found that 4 tablespoons (T)/day had almost the same effect as 3 T/day. To measure the effects of omega-3, I plan to use 3 or 4 T/day flaxseed oil – which presumably produces near-optimal omega-3 levels – as a baseline for measuring the effect of other things.

For my first comparison I chose olive oil: widely believed healthy, but low in omega-3. (And recommended by me in *The Shangri-La Diet*.) I used an ABA design: several days flaxseed oil, several days olive oil, several days flaxseed oil. In all conditions, I took 2 tablespoons of the oil at about 10 am and 2 tablespoons at about 10 pm each day. I measured my balance at about 8 am the next day. Each daily test consisted of 30 trials. Each trial consisted of balancing on one foot on a board atop a metal cylinder ([2]pictures). The score was how long before I lost my balance and put the other

foot down.

Here are the results.



While drinking the olive oil, my balance slowly got worse. When I returned to flaxseed oil, my balance quickly returned to its previous level. Very clear difference between the oils,  $F(2,40) = 18$ , which corresponds to a tiny p value and t about 5.

A possible explanation is that when the concentration of omega-3 in the blood is low, the omega-3 in cell membranes slowly "evaporates" into the blood. When a cell's membranes lose omega-3, it doesn't work as well.

1. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

2. <http://www.blog.sethroberts.net/2007/01/26/science-in-action-omega-3-materials/>

August (2007-04-21 21:07:42)

So, how would someone already taking a flavorless oil to lose weight also manage to take flaxseed oil too? Nose clips? Is there a flavorless omega 3 out there?

seth (2007-04-21 23:02:30)

yes, with nose clips. that's what I used (with both the flaxseed oil & the olive oil).

Candy Minx (2007-04-22 00:03:31)

I take flax seed oil everyday in a shot glass, then I don't need nose clips because I swallow it quickly. I am fascinated by this experiment. I don't know if my balance is especially good because I take flax seed oil, but I feel as if my energy level is higher. Taking the flax seed oil affects my sense of hunger. I don't feel very hungry after I shoot back a half ounce. Seth, I love your blog and your great attitude towards experiments.

Sean (2007-04-22 06:23:07)

Why not an ABAB design? It gives us a better look at experimental error.

Dale (2007-04-22 07:12:34)

It would be interesting to compare fish oil to flax seed oil and olive oil.

seth (2007-04-22 08:10:57)

I agree.

Candy Minx (2007-04-22 08:51:48)

I think it would be very interesting to compare the flax oil with the fish oil. Just quickly, two contrasts i can think of is difference in cost between the two oils. Plus, fish oil...I believe, doesn't have Alpha Linolenic Acid. ALA is one of the factors that contribute to the efficiency of motor skills and absorption of all the Omega #s. But I am rather rusty on these differences. A friend of mine started a flax seed oil company...I think they were the very first flax seed oil company...and their website might have some value or interest to you Seth, or your readers. <http://www.omeganutrition.com/> I am going to e-mail my pal and let him know about your experiments here.

Matt McIntosh (2007-04-22 12:05:22)

Just want to say that I've been enjoying the omega-3 posts, and have been thinking about Tim Lundeen's results. This doesn't fit within the self-experimentation paradigm, but it'd be interesting to do a controlled study comparing the scores of omega-3 supplement users vs. non-users on the WAIS. Or perhaps better yet, since the test-retest consistency is about 0.9, just have the same people write the test without supplementation and then a few months later write it again after a week of supplementation. That way we could get a handle on whether it was just processing speed and/or working memory that was given a boost, or g. This could shed some light on the neurobiology of intelligence and ways to boost it as well. I've got plausible models dancing in my head, but more data would help . . .

Andrew Gelman (2007-04-22 16:45:27)

Seth, I suggest you try to do this experiment using a blind design, so you can do your measurements without being influenced by your knowledge about which oil you're taking. See here for more thoughts on this: [http://www.stat.columbia.edu/cook/movab-letype/archives/2007/04/testing\\_omega3.html](http://www.stat.columbia.edu/cook/movab-letype/archives/2007/04/testing_omega3.html)

seth (2007-04-22 20:32:10)

I like Andrew's comments about this at his blog. Here is what I wrote in reply over there:

That's a perfectly good suggestion except that the low-omega-3 oils take perhaps 5 days of exposure to have an easily-noticed effect, as my graph shows. Learning this time course is a very good reason to do the easier unblinded experiment first. Yes, I should do such a blinded experiment, no doubt. But what experiment should I do next?

That's a harder question. This is much like our interest in sample size: Sure, a study with a larger n is always a good idea, in some sense. But which sample size should be used *next*? That's a harder question. And a more practical one. I think it is curious how little has been written to help scientists answer such questions, which all of them who gather data have to answer many times.

gill (2007-05-25 11:51:58)

Hello , I have read your comments with interest. I take 2000 mgs of flaxseed oil -in capsule form - daily. I tend to suffer from nervousness- I can get shaky if I am the centre of attention etc- but since upping my dose from 1500 mgs to 2000 mgs I have noticed a huge lessening of my nervousness. In fact, only this week I had a very high profile event to attend where I would be photographed and introduced to lots of people and I sailed through without any nervousness at all. But the main reason I started to take flaxseed oil is because I read that it can help combat high cholesterol-mine is slightly raised- I don't know if any studies have been done on this. Also I am a vegetarian and so would not take cod liver or other fish oils.

seth (2007-05-25 15:28:33)

Your comments about raising the dose are very interesting. I suspect many people taking flaxseed oil are taking a lower-than-optimal dose.

Gill (2007-06-20 00:04:37)

Hello, I recently had another cholesterol test and my levels are now normal with my HDL being above optimum. I have made no changes whatsoever to my diet and lifestyle apart from increasing my dose of flaxseed oil so I would think that it must have contributed to my lower levels.

seth (2007-06-20 06:37:58)

Thanks for the update.

Gill (2007-07-23 14:36:32)

Hi Seth, are you still getting comments /info about your research re flaxseed oil? I have not read anything since my last comments. Regards, Gill

seth (2007-07-23 15:58:16)

yes, I am still getting comments. You can read all my posts on omega-3 - including the ones since your last comments - by clicking on "omega-3" in the category list.

Marcia (2008-07-31 20:25:36)

Hi Seth, this is a great site, so interesting. I started having ground flaxseed's after I read in a book 'The Gabriel Method' (brilliant!) that to have ground flaxseeds are so much more affective than the oil, (even tho the oil is still great!) The only thing is, you have to grind them (in a coffee grinder) just before you consume them, they go rancid very easily so even buying them pre-ground isnt good enough. I have about 3 tbs ground with a few walnuts every morning with natural, fat-free yoghurt, crushed frozen blueberries and a trickle of honey, I really look forward to it everyday now, I dont feel way different but I dont get sick and I know I am eating healthy, Im sure long term will benefit me even more!! Thanks Seth, I will keep on reading. :)

anonTMI (2008-08-01 09:44:04)

Pardon the TMI, but I have tried using flaxseed oil a couple of times for SLD. I get a negative side effect in that my prostate enlargement gets worse. Has anyone else noticed this? Details: Male (duh), 50 years old, taking 2T Flaxseed oil twice daily according to SLD rules (nose pinched shut, 1 hr before and after flavors).

Angela (2010-08-20 09:18:57)

how do you determine the appropriate dosage of flaxseed oil or other oil in capsule form? I was thinking about taking flaxseed oil in capsule form however, the directions state to take 1 to 3 capsules daily. Considering that the caloric intake from just one capsule is only 15 calories, how does one take enough to get the weight loss effect desired and appropriate for one's weight



without overdosing?

Seth Roberts (2010-08-21 07:56:20)

Angela, I determined how much flaxseed oil to take by figuring out amount made my brain work best. I ignored what bottle labels said. The best dose for me turned out to be about 30 capsules/day. So that's how much I took (in liquid form).

flaxseedguy (2011-03-08 12:38:16)

I read an article today that talked of how flaxseed oil can actually cause prostate cancer. Anybody else read anything on this?

Sam (2011-03-08 14:24:45)

I've read somewhere that you should not combine Omega-3 with alcohol, maybe a combination like this might be the problem?

Jazi yechezkel zilber (2011-06-12 05:13:16)

only extra virgin olive oil is supposed to have health benefits, and it comes from the non oil component or from being negligently handled and not processed. (According to "fats that heal fats that kill" a very deep review on the biochemistry etc. of oils) Here it was extra light olive oil, if I guess correctly. Thus it is compatible with existing evidence. (which is a positive!)

Seth Roberts (2011-06-12 17:15:39)

I think the experts are wrong about this. Flaxseed oil is high in omega-3, olive oil is not.

Ross (2011-12-21 11:35:07)

I've searched your site, and I can't find any reviews of good flaxseed oil brands. Do you have a preference? Or a pointer to a good page of flaxseed oil reviews?

Seth Roberts (2011-12-21 13:43:55)

I tested several flaxseed oil brands (Barleans, Spectrum, Whole Foods) and found no difference between them. In China, however, the flaxseed oil I bought turned out to be defective.

Lares (2012-04-02 07:33:27)

I just took my first two tablespoons of EVOO about a half hour ago (10 am). When should I take the next dose? Seth: Try 1 or more hours after dinner.

## **A New Yorker Misstep (2007-04-23 00:01)**

On the left-hand side of The New Yorker [1] website is a series of sections: Goings-On, In This Issue, Cartoon Caption Contest, and so forth. Pretty standard stuff. Then comes a section called Awards:

### **AWARDS**

Lawrence Wright has won a Pulitzer Prize for his book "The Looming Tower." Read "The Master Plan"; watch an excerpt from "My Trip to Al-Qaeda."

The New Yorker has been nominated for a Webby Award for Best Copy/Writing. Vote for us at [webbyawards.com](http://webbyawards.com).

The New Yorker received nine nominations for the National Magazine Awards. View a list of finalists and read nominated articles.

I wouldn't be so casual about such great accomplishments. Such things – at least for most of us – are more noteworthy and wonderful than what's In This Issue.

Speaking of missteps, I mentioned [2]a few days ago how New York Times columnist Nicholas Kristof put in [3]his blog a letter from a University of North Carolina student that was more interesting and insightful than anything in the NY Times in a long time. If someone wrote a letter like that to me, I would have begged her to allow me to use her full name so that she would get credit for her brilliant comment. I would have responded to it, not just printed it. I would have gotten other people's reactions to it. I would have gone on and on about it.

Maybe I should have titled this post Too Little Emphasis on Success to go with [4]Too Much Emphasis on Failure.

Addendum: Kristof has now posted the student's full name: [5]Loren Berlin.

1. <http://www.newyorker.com/>
2. <http://www.blog.sethroberts.net/2007/04/20/too-much-emphasis-on-failure/>
3. <http://kristof.blogs.nytimes.com/>
4. <http://www.blog.sethroberts.net/2007/04/20/too-much-emphasis-on-failure/>
5. <http://www.lorenberlin.com/>

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Andrew Gelman (2007-04-23 16:42:36)

For the New Yorker's biggest (recent) misstep, see here: [http://www.stat.columbia.edu/~cook/movabletype/archives/2006/12/i\\_guess\\_rich\\_li.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2006/12/i_guess_rich_li.html)

### **What Loren Berlin, a Student at the University of North Carolina, Wrote Nicholas Kristof (2007-04-23 08:06)**

I have mentioned this letter three times ([1]here, [2]here and [3]here) and [4]Jeremy Cherfas rightfully complains that he can't read it. Here is most of it:

Friday marked the deadline to enter The New York Times columnist Nick Kristof's second annual "Win a Trip with Nick Kristof" contest. Open to students currently enrolled at any American college or university, as well as middle and high school teachers, the contest offers one student and one teacher an all expenses-paid trip through Africa with the Pulitzer Prize-winning journalist to gather stories on the impoverished continent. . . The prize includes the chance - more accurately the expectation - to detail the experience on a blog on NYTimes.com.

Because I am currently a graduate student at the University of North Carolina at Chapel Hill, I qualify to enter this competition, and have many reasons to do so. . . . Yet, I refuse to apply. I think the way Kristof has cast this trip is a disservice to Africa. . . .

Kristof insists on telling the story of a failing Africa when instead he could report on its ability to overcome. On the competition's webpage Kristof has posted a letter to potential applicants that provides this explanation: "Frankly, I'm hoping that you'll be changed when you see a boy dying of malaria because his parents couldn't afford a \$5 mosquito net, or when you talk to a smart girl who is

at the top of her class but is forced to drop out of school because she can't afford a school uniform. . . .

Last year's student witnessed the death of a woman during childbirth despite the fact that both Kristof and his traveling companion donated blood in an attempt to save her. Though the doctor promised to help the young woman, he apparently ducked out the back door as she died. That was Kristof's story of Cameroon, a West African nation with tremendous ecological diversity and a per-capita GDP higher than that of most other African countries. . . .

The story of Africa in turmoil is the African narrative that many Americans - and certainly those who read The New York Times - already know. It is virtually the only type of reporting that Western news outlets broadcast about the continent. Every American student who has to listen to National Public Radio in the car when Dad picks her up from soccer practice, or has had to read The Economist for a school assignment, or has read in a church newsletter about a local youth group's spring break trip to a rural African village knows that people in Africa are hurting. Maybe we haven't smelled an understaffed health clinic that cares for HIV-positive orphans, or walked through rows of coffee trees with a farmer whose young son was beaten into serving in a youth militia in a civil war between tribal groups whose names we can't pronounce and whose agendas we can't keep straight. But we know they are poor, and that Africa will break your American heart if its contaminated water doesn't kill you first. . . .

Americans don't need any more stories of a dying Africa. Instead, we should learn of a living one. Kristof and his winners should investigate how it is that Botswana had the highest per-capita growth of any country in the world for the last 30 years of the twenty-first century. Report on the recent completion of the West Africa Gas Pipeline that delivers cheaper, cleaner energy to parts of sub-Saharan Africa. Tell us about investment opportunities in Nigeria's burgeoning capital markets.

Sadly, it's impossible to report on Africa's successes without relaying its tragedies. Virtually every African victory is somehow also a story of malnourishment and malaria, misogyny and malevolence. That's important because Africa's horrors are massive and crushing, and demand attention. I agree with Pope John Paul II, who said "a society will be judged on the basis of how it treats its weakest members." Clearly Africa will be the [basis of] judgment of our global community.

Kristof knows this, of course, and I am certain he means well when he writes that his original purpose for the contest was because he thought that "a plenty of young people [who] tune out a fuddy-duddy like myself might be more engaged by a fellow-student encountering African poverty for the first time." But they would also be excited to encounter African hope, something equally unknown to most Americans, students or otherwise.

So I'm asking Kristof to refine his summer travel itinerary to include a tour of a thriving organic farm owned and operated by a local Ethiopian cooperative. And the Ugandan health clinics that are reducing the number of AIDS cases despite a continuing guerilla war. And the wonderful "PlayPumps" scattered throughout the continent that provide safe drinking water via a pump system powered by children as they play on a playground. Brilliant idea. And something many people don't know about.

Africa needs a lot of things. It needs money and aid workers, vaccines and functioning governments. Some of those things can be provided by outside donors, and other can't. But universally, Africa needs us to believe in it. And that is something we have to be taught.

[5]Loren Berlin's website.

1. <http://www.blog.sethroberts.net/2007/04/20/what-should-i-learn-about-writing-from-this/>
2. <http://www.blog.sethroberts.net/2007/04/20/too-much-emphasis-on-failure/>
3. <http://www.blog.sethroberts.net/2007/04/23/a-new-yorker-misstep/>
4. <http://wp.jeremycherfas.net/>
5. <http://www.lorenberlin.com/>

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dilys (2007-05-14 06:31:05)

I long ago concluded that there is a psychological-emotional split among the population: one group likes challenge and achievement, the other relishes pathos. This is not the place for my theories as to why, or what else it correlates with. But Kristof demonstrates in what is quoted here, that he gets some kind of neurological kick from pathos, as well as from discomforting other people.

Frank (2008-02-26 06:16:43)

If your the Loren Berlin who published the article in today's NY times Health section drop me an e-mail and I'll pass on some information about an MD in NYC doing some alternative stuff and seemingly have some success DPYN3100@Hotmail.com

seth (2008-02-26 08:42:36)

Thanks, Frank. I have emailed Loren about your comment.

Pilar Soler (2008-02-26 10:06:10)

Loren, I've just read your article in today's NY Times. Great. I share all your feelings. I'm an Spanish diabetic girl, so I'll have to live with it. There's no cure, but I hope not to die because of it. Sorry about my English, I can understand your article, but I can't express myself very well. I've enjoyed your article because I think people usually don't know what living with a chronical disease or illness means. It's encouraging for me. I've been a diabetic for seventeen years, but sometimes I feel I'm not still used to it. Anyway, hope is a good idea. Thanks for your article, Pilar

Charles (2008-02-26 10:29:17)

Sorry, Seth, this isn't about the letter to Kristof, but like Frank, about other approaches to autoimmune disease. Please pass this on to Loren. I had an autoimmune disorder nearly three years ago. After getting nothing but an "incurable" label from several practitioners of conventional medicine I saw Richard Panico, MD, at the Mind-Body Institute at Athens (GA) Regional Medical Center. Rich is a remarkable mix: highly trained in Western medicine, an excellent diagnostician, expert in nutrition, herbal and other supplementation therapies, a yoga teacher, and the hub of a diverse group of other healers. My point is not that the Mind-Body Institute is your only hope but that a wide range of options are available which are unlikely to be mentioned (other than to be ridiculed) by most MDs today. I hope you can find some effective help, Loren. Best wishes.

sarah (2008-02-26 10:58:45)

I found this article after reading Loren's "cases" piece in the NYT. a). Is this the Loren who went to Crystallaire as a kid? If so, drop me an email, it has been a long time. b). Regardless of whether or not we actually know each other, this is an incredibly insightful criticism about modern media's portrayal of Africa. I find it frustrating to continually dispel the myths about how much success there is amidst the significant troubles. The country of Ghana, for example, is incredibly safe and stable with a rapidly growing economy and 50 years of democratic rule. I think that the young people of the world need to spend time in Africa to better differentiate between the failings and successes of the continent. Thanks for republishing this article, Seth. Best wishes to Loren.

Emily Cleath (2008-02-26 14:46:49)

Could someone please pass along my contact info to Loren in regards to her piece today in the NYTimes. I'd really like to talk to her as my experience with UC has been identical - emotionally and physically - but I've found a better way to manage the disease: with a combo of less harsh Western meds and over-the-counter products. No, I'm not trying to sell her anything. Emily

Loren Berlin (2008-02-26 18:11:48)

Hi. This is Loren. Anyone who wants to contact me can so at loren230@hotmail.com Thank you for all your kind words about my piece in the NYT, and yes, I went to Crystallaire. I will try to reply to you individually now.

Helene (2008-02-26 18:15:45)

to Loren Berlin. You are going through an awful lot and causing yourself a lot of anguish. Why don't you have a colectomy? With the J pouch technique you can have normal bowel function. See a surgeon in your area that specialized in inflammatory bowel disease. You will be surprised at your options.

GG (2008-02-26 18:36:04)

To Loren, Please consider looking outside the western medicine model and look into a good a chinese herbalist and acupuncturist. They have very effective and gentle approaches to autoimmune conditions. Best

Laura (2008-02-27 07:47:45)

I, too, have a message for Loren. I was diagnosed in 1989 (by a doctor at Duke University) with ulcerative colitis at the age of 35 and had to alternately take sulfur drugs and prednisone to control the symptoms (very similar to those described by Loren in her article). I was NOT told to alter my diet or change my lifestyle in any way. In 1992 I stopped eating meat (and fish) and at my next colonoscopy in 1994 my new doctor did not believe that I had had ulcerative colitis. She insisted on getting my records and the videotape from the Duke doctor which confirmed that I HAD had colitis in 1989, but I did NOT have it in 1994. The only difference was that I had stopped eating meat! I hope that if Loren has not made this change in her diet, that she will do so. I wish her all the best. (Please note, Loren may contact me if she wishes.)

kit (2008-02-27 10:01:45)

Loren, Just wanted to write to thank you for your article in NYTimes today.

Sally Lechich (2008-02-29 11:47:09)

Hi Loren, I just telephoned you from Stockton, Ca. and left a message, wondering if you have heard of Edgar Cayce and his remedies...I mentioned on the phone the Castor Oil Pack as a remedy for colitis...I think it would benefit you to at least try it...it is natural and seems to have worked for many. If you Google "Edgar Cayce Castor Oil Pack" you will have all the info you need. I wish you a speedy recovery. God Bless. Sally in Stockton, Ca. you may reply if you wish.

Sally (2008-02-29 11:50:17)

Hi Loren, I just telephoned you from California and told you about Edgar Cayce and his Castor Oil Pack for Colitis..Read about your HOPE in the NY times... If you google "Edgar Cayce Castor Oil Pack" you will have all the info you need. I and others have used it for many problems and it works. God Bless, Sally in Stockton, Ca.

## **Bleak House Fact of the Day (2007-04-23 19:38)**

The grandfather of Gillian Anderson, who starred in a wonderful Bleak House mini-series,

once bet someone in a bar in Kentucky that he'd marry the next girl who walked into the place; he did

and they went on to have nine children together.

From [1]this interview with Anderson.

1. <http://www.telegraph.co.uk/fashion/main.jhtml?xml=/fashion/2007/04/15/standerson115.xml&page=1>

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### **Which Signs of Aging are Inevitable? (2007-04-23 22:24)**

In a New Yorker [1]article titled "The Way We Age Now," Atul Gawande writes:

With age . . . the gums tend to become inflamed.

As I [2]posted a few weeks ago, my gums have recently become less inflamed – no doubt because of more omega-3 from flaxseed oil. For the first time in memory they are not inflamed at all. (My dentist was surprised. Hardly anybody improves, he said.) Could Gawande's "with age" effect be due to not enough omega-3?

1. [http://www.newyorker.com/reporting/2007/04/30/070430fa\\_fact\\_gawande](http://www.newyorker.com/reporting/2007/04/30/070430fa_fact_gawande)

2. <http://www.blog.sethroberts.net/2007/03/28/omega-3-and-dental-health/>

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Longevity Science (2007-04-28 12:59:19)

Thank you for your interesting comments! I thought perhaps you may also find this related post interesting to you: [1]Longevity Science: The Way We Age [2]<http://longevity-science.blogspot.com/2007/04/way-we-age.html>

1. <http://longevity-science.blogspot.com/2007/04/way-we-age.html>

2. <http://longevity-science.blogspot.com/2007/04/way-we-age.html>

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### **If Science Had Been Invented More Than Once (2007-04-24 19:23)**

Last night, at a Vietnamese restaurant, I had an avocado shake for dessert. On the way home I stopped at a Chinese bakery and got garlic pork cookies. Had science, like cooking, been invented more than once, what would other scientific traditions – other ways of doing science – look like? My guess is they would not include:

1. Treating results with  $p = 0.04$  quite differently than results with  $p = 0.06$ . Use of an arbitrary dividing line ( $p = 0.05$ ) makes little sense.

2. Departments of Statistics. Departments of Scientific Tools, yes; but to put all one's resources into figuring out how to analyze data and none into figuring out how to collect it is unwise. The misallocation is even worse because most of the effort in a statistics department goes into figuring out how to test ideas; little goes into figuring out how to generate ideas. In other words, almost all the resources go toward solving one-quarter of the problem.

3. Passive acceptance of a negative bias. The average scientist thinks it is better to be negative ("skeptical") than positive when reacting to other people's work. What is the positive equivalent of skeptical – a word that means appreciative in a "good" way? (Just as skeptical means disbelieving in a "good" way.) There isn't one. However, there's gullible, further showing the bias. Is there a word that means too skeptical, just as gullible means too accepting? Nope. The overall negative bias is (male) human nature, I believe; it's the absence of attempts to [1]overcome the bias that is cultural. I used to subscribe to the newsletter of the Center For Science in the Public Interest (CSPI). I stopped after I read an article about selenium that had been prompted by a new study showing that selenium supplements reduced the rate of some cancer (skin cancer?). In the newsletter article, someone at CSPI pointed out some flaws in the study. Other data supported the idea that selenium reduces cancer (and showed that the supposed flaws didn't matter), but that was never mentioned; the new study was discussed as if it were the only one. Apparently the CSPI expert didn't know about the other data and couldn't be bothered to find out. And the CSPI writer saw nothing wrong with that. Yet that's the essence of figuring out what's good about a study: Figuring out what it adds to previous work.

My [2]earlier post about another bit of scientific culture: the claim that "correlation does not equal causation."

1. <http://www.overcomingbias.com/>

2. <http://www.blog.sethroberts.net/2007/02/10/what-should-correlation-does-not-imply-causation-be-replaced-with/>

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Therac-25 (2007-04-24 20:31:05)

I'm just randomly coming up with ideas, but the skeptical/gullible divide is possibly due to the fact that "positive acceptance" is the default behavior for humans when encountering a proposition, and that a negative attitude towards rejecting a proposition is the default as well (consider the typical reaction to having an urban legend debunked – more often than not, it's considered rude). That is, that "positive rejection" (skepticism) and "negative acceptance" (gullibility) are attitudes that are explicitly opposite to normal human behavior, which is the reason they have names, and are valued so highly. If that makes any sense.

Er (2007-04-25 01:06:11)

'Science' has been invented more than once, but we on the western hemisphere do only accept our kind of science. Other Science like the energy knowledge of the chinese are just disregarded as not being science at all, because they do not fit in our 'scientific' thinking.

seth (2007-04-25 03:08:59)

Therac, "skepticism" and "gullibility" are themselves opposites –they can't both be "attitudes that are explicitly opposite to normal human behavior." I assume you mean the value system inherent in the words is what's opposite. I think they have

names because people often praise what they call skepticism and criticize what they call gullibility. Their opposite-valenced counterparts – over-skepticism and under-gullibility – don't have names because the underlying values (it's bad to be skeptical, good to be gullible) aren't expressed very often. You might have something there that X is not praised and Y not dispraised because they already exist – I don't know.

Tom Myers (2007-04-25 08:24:57)

I'm, ummm, skeptical about all three of these. (And I'm wondering how strong the evidence is that cooking was actually invented more than once. Sure, it could have been, but how can you be sure?) (1) Dividing lines between those-that-make-it and those-that-don't are usually somewhat arbitrary in the sense that they can be pushed around without changing the framework, yes; that's true whether you're talking about picking the ideas you're going to go on working with ("the difference between significance and insignificance is not significant") or actual evolutionary survival-via-fitness-functions (e.g., when I write a genetic algorithm). Still, we have to choose, unless we choose to keep everything, which is not usually cost-effective. I admit that I'm not sure that the issue is always cost-effectiveness; sometimes, as with the placement of an international date line, you have an actual logical necessity. (I think.) But just on cost-effectiveness grounds, I think any culture trying out ideas is going to come up with ways of measuring that look a lot like p-values, and then is gonna have to choose arbitrary conventions for picking the ones to go on with. (2) Departments of Statistics do less than a quarter of the work, with less than a quarter of the resources; that's good. Keep 'em. (3) Almost all ideas are bad, especially mine. Skepticism is appropriate. (Yes, meta-skepticism applied to claims about the virtue of skepticism is also appropriate, and so recursively to find the least fixpoint thereof, which is "I dunno." And indeed, I dunno. But I think I'll post this just the same, in appreciation of ideas of which I am skeptical.)

Jeffrey Miller (2007-04-26 08:50:12)

"Departments of Scientific Tools, yes; but to put all one's resources into figuring out how to analyze data and none into figuring out how to collect it is unwise." I'm not sure I understand what you mean. As you know, statisticans are very interested in how one should design experiments, and how to iterate between data, theory and experiment. The classic textbook by Box, Hunter, and Hunter, "Statistics for Experimenters" is concerned entirely with this topic.

seth (2007-04-26 12:53:01)

Well, "Statistics for Experimenters" might be the best statistics textbook ever written. It isn't typical. Look at an average statistics text. Statistics professors have done much more work on how to analyze data than on how to collect it.

## **Introductions to Jane Jacobs (2007-04-25 04:31)**

Nice summaries of her ideas [1]here (shorter) and [2]here (longer).

Why is an experimental psychologist (me) so interested in Jacobs' work – which on the face of it has nothing to do with experimental psychology? Four reasons. From big to little:

1. I enjoy her books and articles. They are very well-written, discuss the stuff of everyday life – what I see when I walk through any city – and have lots of ideas that I hadn't previously encountered.
2. Jacobs is essentially an economist. Psychology and economics are very close. Economics is psychology writ large, psychology is economics writ small. I came up with [3]a theory of human evolution based on economics learned from Jacobs.
3. Jacobs wrote about something that fascinates me – how things begin. [4]My longest paper is about how scientific ideas begin.



4. Self-experimentation had led me to conclusions outside experimental psychology – for example, conclusions about weight control and sleep. Jacobs, with no Ph.D. in anything, was even more an outsider.

1. [http://3quarksdaily.blogs.com/3quarksdaily/2007/04/a\\_case\\_of\\_the\\_m\\_1.html](http://3quarksdaily.blogs.com/3quarksdaily/2007/04/a_case_of_the_m_1.html)
2. <http://www.zompist.com/jacobs.html>
3. <http://www.freakonomics.com/pdf/whatdostudentswant.pdf>
4. <http://repositories.cdlib.org/postprints/117/>

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Stephen M (Ethesis) (2008-02-15 20:07:09)

That Jacobs essay made sense out of Paris for me. Paris (France, not Texas) is vibrant on the street and sidewalk level, compared to Dallas which is barren on the sidewalk level (though the underground actually has some life). The places that attempt classic city planning are vacant surprises, kind of fun to discover, but empty and alone. Thanks for this post and the links.

### **Science in Action: Omega-3 (flaxseed oil vs. olive oil, continued) (2007-04-25 19:29)**

I posted [1] a few days ago about the different effects of flaxseed oil (high in omega-3) and olive oil (low in omega-3) on my balance. There was a big difference. If omega-3 affects one measure of brain function (balance), it should affect many other measures of brain function. The whole brain is made of the same stuff (neurons, etc.).

Which brain measures are most sensitive to omega-3? The more processing/time the better, I assumed; so I looked for tasks that, like balance, involve continuous processing for most of the test period. This led me to try a paper-and-pencil version of Saul Sternberg's [2] memory-scanning task. (Sternberg's use of this procedure is described [3] here.) On each trial I memorized a list of three digits (e.g., 2, 3, 7); then as fast as possible marked each of 100 digits (20 digits/row in 5 rows) according to whether they were in the list or not. I made a line under the digit if it was in the list, through the digit if it was not. I did five trials per day.

Here is an example of the test materials and my marks:

temp

targets = 0 2 4

8	1	6	8	5	0	9	5	4	4	6	0	0	7	0	4	2	3	4	2
1	1	1	5	1	5	9	2	2	6	1	3	2	5	3	7	5	8	6	2
4	6	4	0	8	0	2	9	4	0	6	7	2	8	3	0	9	5	0	8
4	3	6	4	2	3	9	9	0	2	2	5	9	7	7	0	0	6	7	0
2	8	4	4	3	7	4	1	2	8	1	5	3	4	9	2	7	8	6	1

targets = 0 1 6

9	5	1	6	7	4	5	3	7	4	9	9	5	3	4	5	5	3	3	3
0	8	6	0	2	6	4	3	2	8	0	0	7	2	6	2	0	1	8	0
4	6	1	8	1	6	9	2	1	6	5	2	5	7	7	1	0	7	7	1
4	8	0	9	0	6	2	8	2	0	6	9	1	4	4	9	6	6	5	1
1	3	8	6	8	6	7	1	0	1	0	9	3	1	9	8	7	1	0	6

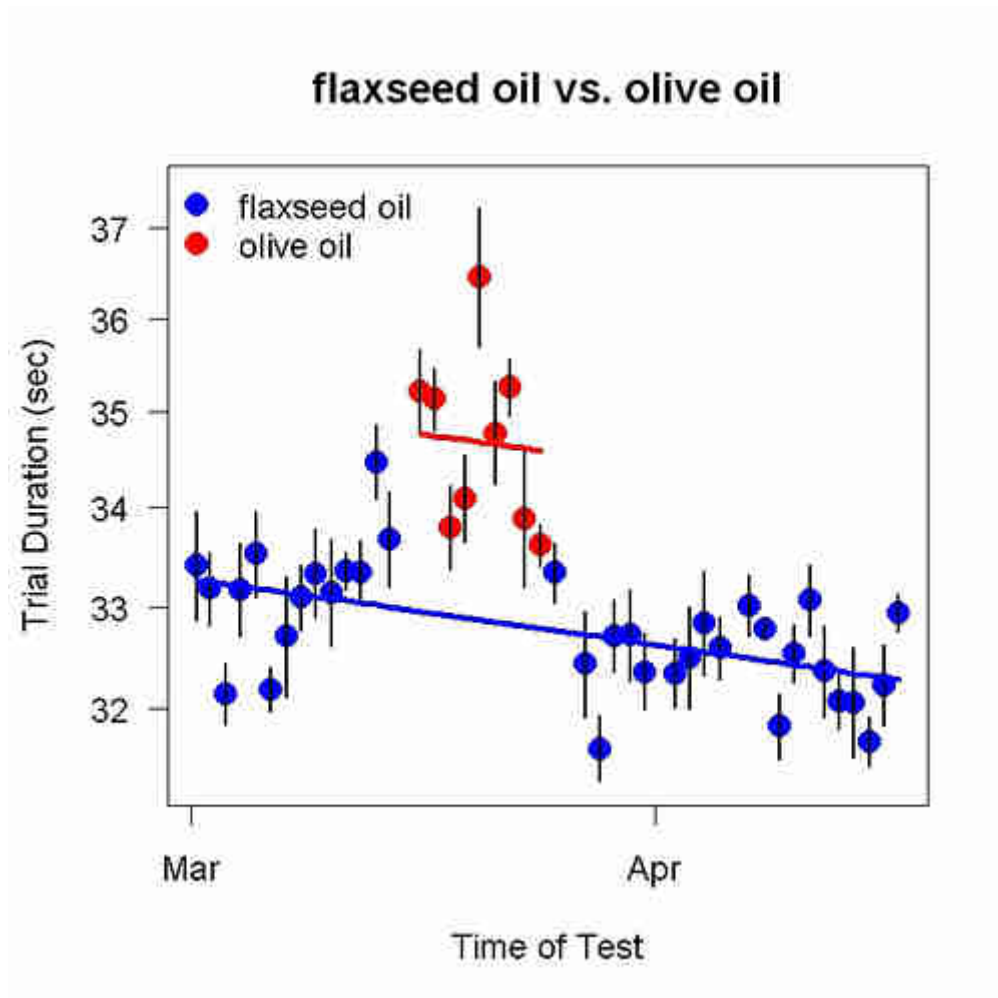
targets = 1 8 9

4	2	9	4	0	4	2	0	3	2	5	1	1	6	4	6	9	6	2	1
8	8	1	1	0	7	5	1	3	9	2	0	8	2	9	4	7	1	7	9
0	1	6	0	8	8	8	3	8	9	5	9	8	1	9	5	2	8	0	1
5	6	2	0	3	4	7	9	8	6	3	8	8	6	3	8	3	6	4	7
7	3	1	7	5	9	1	7	9	5	1	9	3	0	2	5	9	4	1	4

Page 1

The other side of the page had two more sets of digits.

Here are the results from the same flaxseed/olive oil experiment I discussed a few days ago:



There was a huge difference between the flaxseed oil and olive oil condition:  $t > 7$ .

Curiously the time course is different from the [4]balance results. In the case of balance, when I switched from flaxseed to olive oil my balance slowly got worse. Nothing like that is apparent here. This might reflect a different mechanism or it might be due to the vast difference in how much practice I had had with each task. When this experiment began, I had had far more practice with the balance task than with the memory-scanning task.

1. <http://www.blog.sethroberts.net/2007/04/21/science-in-action-omega-3-flaxseed-oil-vs-olive-oil/>
2. <http://www.psych.upenn.edu/~saul/hss.html>
3. <http://www.psych.upenn.edu/~saul/procedure.html>
4. <http://www.blog.sethroberts.net/2007/04/21/science-in-action-omega-3-flaxseed-oil-vs-olive-oil/>

TomM (2007-04-26 15:50:18)

Hi Seth, Very intriguing results! I've been looking at these and other recent plots on your blog, and was especially interested in the discussion about whether a trend (or change in trend) is "obvious" as opposed to requiring a more formal statistical test. One thing that should be mentioned is the effect of serial correlation on both observed visual patterns and statistical tests. A hallmark of time series data is that observations tend to be correlated over time: If I know your score today I can predict with better than chance accuracy your score tomorrow. The result is that observations are not independent, yet standard versions of statistical tests such as t-tests from linear models require this. The model parameter estimates are fine, but their standard errors are underestimated in the presence of autocorrelation, and thus statistical "significance" is overestimated. I digitized this graph and did a quick analysis modeling the autocorrelation along with the experimental condition, and I get a t-value about half of your reported  $t=7$ , depending on the exact model. Still big, so it may seem like I'm being pedantic here, but in other cases autocorrelation effects can be really important. Here are a couple of interesting links, the first to a general discussion of autocorrelation with some examples of visually striking patterns that are nonetheless random, and caused by high autocorrelations: [http://socrates.berkeley.edu/~epsc120/Toolkits/Toolkit\\_11.pdf](http://socrates.berkeley.edu/~epsc120/Toolkits/Toolkit_11.pdf) and this, an empirical study of people's judgements about intervention effects in single-case AB designs: <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1286245> In any case, your blog is really interesting and I'm looking forward to more data!

seth (2007-04-27 06:37:08)

That's a good point. These data do not look like what I expected nor like other self-experimental data I have collected and now that you mention it I realize that auto-correlation would explain it. I imagine it will go away with more practice.

Elaine S. (2007-12-09 17:07:47)

I just had some heart news and need to go on a strict diet when I recover from Pneumonia which I have had for two or more weeks. Any thing you can tell me about which oil and which foods would help me with heart issues, high cholest. etc. is helpful. I have never been ill or had any problems and want to be very pro active with diet and exercise. Thanks, Elaine

### **Does Omega-3 Affect the Brain? (2007-04-26 23:27)**

The last three data sets I've posted – [1]one from Tim Lundeen, two from me ([2]here and [3]here) – provide evidence that omega-3 affects the brain. The evidence has several good features:

1. Two people.
2. Three tasks.
3. Two ways of varying omega-3.
4. Strong effects (that is, large t values).
5. Easy to obtain.

Does omega-3 affect the brain? This is a good place to start a research project because there is a reasonable chance the answer to the question "does omega-3 affect the brain?" is yes.

The placebo/expectations explanation – which, based on the lack of effect of placebos in most studies, is implausible to begin with – has trouble with several facts: 1. The initial discovery was a surprise. 2. Tim's results involved comparison of two plausible doses. 3. Tim had earlier found that dose increases had no effect. 4. Tim's results had a pattern I have never seen (and thus Tim couldn't have expected). 5. My results had two different time courses.

Even more interesting than the idea that how much omega-3 we eat might affect how well our brains work are two more subtle ideas that are also becoming plausible: (a) the average diet (very low in omega-3) is very suboptimal and (b) improvement can be noticed quickly and easily.

In the latest [4]U.S. government nutrition guidelines, there is no omega-3 requirement.

[5]Directory of my omega-3 posts.

1. <http://www.blog.sethroberts.net/2007/04/18/omega-3-and-arithmetic-several-analyses/>
2. <http://www.blog.sethroberts.net/2007/04/21/science-in-action-omega-3-flaxseed-oil-vs-olive-oil/>
3. <http://www.blog.sethroberts.net/2007/04/25/science-in-action-omega-3-flaxseed-oil-vs-olive-oil-continued/>
4. <http://www.health.gov/dietaryguidelines/dga2005/document/>
5. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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Oren Tirosh (2007-04-27 09:04:39)

I agree that it's pretty unlikely to be a placebo effect - but why not go and do a double blind experiment anyway? It's not very difficult.

seth (2007-04-27 10:58:42)

The experiments I do first are those where I least know what will happen.

Ronald Pottol (2008-04-02 23:10:36)

Have you compared long chain vs short chain? I have heard that you need much higher doses of short chain (such as flax oil) vs long chain (fish oil for instance), and that was my experience. I'm very fond of Trader Joe's, as their's is higher purity than most (smells less awful), more concentrated, and larger, thus I get my 1.5g a day in just three, vs 5 for most fish oil capsules. I've been taking it for a decade for depression, it works much better than ssri anti depressants for me.

### **A Professor Complains Loudly (2007-04-27 20:18)**

Generalization #1: Everyone likes to be listened to. Being a professor is being paid to be listened to. It's like being a restaurant reviewer or a professional athlete - your job is doing what others do for fun. Generalization #2: American colleges are run more for the benefit of professors than for the benefit of students, as I have intimated [1]earlier.

That's why this [2]complaint is noteworthy:

This has been an excruciating term, because for the first time I had students who resented having to think, to work, to meet expectations, who seemed to really believe that showing up was all it took . . . As hard as I've tried, I haven't been able to salvage any time for my own research, so I feel as though - in addition

to wasting my efforts and care and concern on students who wouldn't even grasp that I was doing them some favors (yes, I'll teach extra evening sessions to help you understand the material that was a prerequisite for the course, but, um, yes, you need to do the reading) – I made absolutely no progress toward tenure. . . . This term has taken too much out of me, and right now, the thought of teaching again – ever – makes me want to sob. So here's my secret: I don't want to go back. I never want to see these people again – colleagues or students – and I think I made a terrible mistake.

A comment was "AMEN!"

I'm sure we're genetically wired to teach and learn but that doesn't mean the process can't go badly wrong. We're genetically wired to eat, too, and lots of ways people eat are very unhealthy. I have [3]compared formal education to agriculture. Sure, agriculture is more efficient than hunting and gathering but agriculture caused nutrient deficiencies that [4]reduced human health for a very long time. (My [5]weight-control research and [6]omega-3 research suggest it is still doing so.) We barely know how to eat. This complaint suggests we know even less how to teach.

1. <http://www.blog.sethroberts.net/2007/03/31/for-whom-do-colleges-exist/>
2. <http://academicsecret.blogspot.com/2007/04/at-long-last.html>
3. [http://sethroberts.net/about/2005\\_diversityinlearning.pdf](http://sethroberts.net/about/2005_diversityinlearning.pdf)
4. <http://www.primitivism.com/health-civilization.htm>
5. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>
6. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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cristina (2007-04-28 11:34:37)

I am very surprised that you see this comment as unusual. I am a PhD student and although I agree that schools are not run for the benefits of students, they are not really run for the benefits of professors either. Especially not when you consider the mass cuts of tenured professors and shifts towards adjuncts, the horrendous job markets, the heavy teaching loads and incredibly high publication requirements to get tenure, etc. Teaching is not just hearing yourself talk; it requires pedagogical skill, a great deal of patience, creativity and personality. I wish I could just talk to my students about things I was interested in and have that count as teaching. Unfortunately, I often have to teach subjects I know little about or am not interested in, to students who are not interested either, and do the best job that I can. It is a JOB, not a privilege.

seth (2007-04-28 12:55:40)

I didn't see the complaint as unusual, I saw it as noteworthy, given how good the job *should* be. To the average non-professor, I think, being a professor looks like a very nice job.

### **More about The Secret (2007-04-28 08:27)**

Wouldn't it be nice if good things just happened to you? And you hardly had to do anything – certainly not labor for years – to make them happen? Yes, that would be nice. I say this because the blog [1]I Hate The New Yorker, which I like a lot, has linked to this blog. A good thing that just happened.

[2]More on The Secret.

1. <http://ihatethenyer.blogspot.com/>

2. <http://www.blog.sethroberts.net/2007/04/02/how-bad-is-the-secret/>

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losing-it (2007-04-29 15:06:38)

Good news, Dr. R. You deserve good and excellent things happening to you, for you and from you. Like bread on water. When you teach, you learn the most. Whenever you give, you receive the most. Sometimes in unexpected and fascinating ways.

zp (2007-04-30 09:24:18)

Did you actually read my blog before I linked to you? Now that would be a nice thing for me, that just happened.

seth (2007-04-30 10:26:10)

I read your blog long before you linked to me.

### **Guest-Blogger Timothy Beneke on Self-Experimentation (part 1 of 2) (2007-04-28 20:51)**

[Timothy Beneke, an Oakland, California writer, was one of the first to try Shangri-La Diet. – Seth]

First, let me say that just as Seth can list a remarkable number of positive effects – related to sleep, mood, weight, balance, and even gum health – from surprising methods of self experimentation, I can do something similar. Here are the two biggest examples:

Following Seth's advice, by getting sunlight in the morning and going to bed earlier – around midnight instead of 3:30 a.m. – my mood has gotten better; I'd estimate a 2 point improvement on a 10 point scale – which is a lot. It led to an awakened passion for music and dancing, better functioning, and to put it mildly, a lot more joy in my life. That baseline improvement has formed the basis for other improvements of mood as well.

Using Seth's weight loss theory, I've lost about a third of my body weight – from 280 to 190. I've kept 30 pounds for 6 and a half years; 70 for 3 years, and 90 for approaching 2. I went from 280 to 250 eating weaker tasting low glycemic index foods; from 250 to 210 consuming about 350 calories of extra light tasting olive oil a day, and trying to avoid strong tasting high GI foods. Then, applying Seth's theory, I invented a way to get as many calories as I wanted taste free. I liquified lots of fruits and vegetables in a blender, added rice, bean, nut, soy, non-fat milk, flax, oat, and at times other powders to the liquified fruits and vegies, added water, cooked it in a microwave until it's moderately hard – not crusty, but not liquidy either. And then take spoonful of the mush, put it in my mouth, and gulp down water and float it down my throat. Using this method, I went from 210 to 177 going about 70-80 % tasteless for 4 months; in the last 20 months, my weight has oscillated between 177-190, perhaps a little higher – I don't weigh myself often for strategic reasons.

Geoff (2007-04-30 08:07:45)

RE morning sun, here is a possible mechanism: [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve &db=PubMed &list\\_uids=9539254 &dopt=Abstract](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve &db=PubMed &list_uids=9539254 &dopt=Abstract) (more references here: <http://www.vitamindcouncil.com/depression.shtml> ) I wonder if experimentation with Vitamin D supplements would yield results as interesting as those for omega 3s? Perhaps there is a circadian component, i.e. morning supplements would be more effective than those later in the day?

### **Injury-Causing Falls: The New Scurvy? (2007-04-29 12:22)**

In an article about aging in this week's New Yorker, Atul Gawande [1]writes:

The single most serious threat she faced was not the lung nodule or the back pain. It was falling. Each year, about three hundred and fifty thousand Americans fall and break a hip. Of those, forty per cent end up in a nursing home, and twenty per cent are never able to walk again. The three primary risk factors for falling are poor balance, taking more than four prescription medications, and muscle weakness. Elderly people without these risk factors have a twelve-per-cent chance of falling in a year. Those with all three risk factors have almost a hundred-per-cent chance.

Could the cause of so much falling be too little omega-3? [2]My omega-3 research suggests that more omega-3 quickly improves balance and that current levels in most places are far below optimal.

1. [http://www.newyorker.com/reporting/2007/04/30/070430fa\\_fact\\_gawande](http://www.newyorker.com/reporting/2007/04/30/070430fa_fact_gawande)

2. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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### **Blogger Alert: Paperback SLD Available (2007-04-29 16:36)**

If you have a blog, would like a copy of the paperback edition of The Shangri-La Diet – which is substantially better than the hardback, I like to think – and are willing to review the book on your blog, please contact Katherine Wasilewski (X.Y@ us.penguinroup.com where X = katherine and Y = wasilewski). She has 50 copies available. Please put "SLD review copy" in your subject line.

Addendum: The earlier version of this notice failed to say that these copies are for bloggers who will review it. I will soon post how the paperback is different from the hardback. The main difference is it incorporates lessons learned from forum feedback.



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Andrew Gelman (2007-04-29 17:40:28)  
I'll get one, right???

seth (2007-04-29 20:05:04)  
Yes. If there were numbered copies, you'd get #1.

losing-it (2007-05-01 15:24:51)  
Just the act of being a blogger/having a blog qualifies me to ask for a book from Ms Wasilewski?

seth (2007-05-01 17:23:33)  
Correct. Addendum: Oops, not correct. You should review it in your blog.

Ann Eshana (2007-05-03 14:27:07)  
Hi - I tried to email her but it was returned to me unrecognized. Are you sure you have the address correct? I noticed there is a space in it, so I took it out, but it was still returned. I'd love to review your book. I also started your plan recently. Off topic, it would be great if people could post pictures on this site. Pictures are really powerful. Thank you -

## **Where Do Useful Discoveries Come From? (2007-04-30 05:11)**

From Andrew Gelman's [1]blog:

On page xxi [of Nassim Taleb's new book *The Black Swan*], Taleb says how almost no great discovery came from design and planning.

I said something similar to a graduate student last week: Really useful discoveries are almost never the result of trying to do something useful; they are almost always due to accidents. Penicillin, for example. If you notice something by accident, it must be a big effect otherwise you wouldn't have noticed it. That's a great place to start: A big effect you didn't know about.

I'll have to see what else *The Black Swan* says about this. It makes self-experimentation look really good: (a) It's much easier to do a self-experiment than to do a conventional experiment so there is more chance of accidents; and (b) because we pay close attention to ourselves, it's much easier to notice the unexpected with self-experimentation than with conventional research. Every useful finding in my long [2]self-experimentation paper – breakfast, morning faces, standing, morning light, sugar water – came from an accidental discovery. In four of the five cases, the accident happened during a self-experiment; I varied something to see if X would change and noticed that Y changed. The exception was sugar water, whose appetite-suppressing effects I noticed while traveling. Hmm. Maybe travel is a type of self-experimentation. Or self-experimentation a type of [3]travel. Certainly they are [4]closely related.

1. [http://www.stat.columbia.edu/~cook/movabletype/archives/2007/04/nassim\\_talebs\\_t.html#trackbacks](http://www.stat.columbia.edu/~cook/movabletype/archives/2007/04/nassim_talebs_t.html#trackbacks)

2. <http://www.google.com/url?sa=t&ct=res&cd=1&url=http%3A%2F%2Frepositories.cdlib.org%2Fpostprints%2F117%2F&ei>

=Wtk1RrytLpT-gw0hzCWeAw&usg=AFrqEzdQa3IRUhFtM5qAQiKq778LyBY0Ew&sig2=VopuIzrMbEgMwJH3C-ccfw  
3. [http://www.marginalrevolution.com/marginalrevolution/2007/02/all\\_my\\_life\\_for.html](http://www.marginalrevolution.com/marginalrevolution/2007/02/all_my_life_for.html)  
4. <http://www.ajcn.org/cgi/content/abstract/71/1/397S>

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## **Dance Dance Revolution (2007-04-30 10:49)**

Welcome, Times! We were discussing [1]this in my weight-control seminar five years ago. And in the SLD forums a [2]year ago.

1. [http://www.nytimes.com/2007/04/30/health/30exer.html?\\_r=1&hp&oref=slogin](http://www.nytimes.com/2007/04/30/health/30exer.html?_r=1&hp&oref=slogin)
  2. <http://boards.sethroberts.net/index.php?topic=716.0>
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## **2.5 May**

### **Guest-Blogger Timothy Beneke on Self-Control (part 2 of 2) (2007-05-01 05:51)**

I continue to struggle – not terribly – but still struggle with compulsive eating. The forces in me that caused me to gain 100 pounds between 1982 and 1996 still exist in my personality. When I am stressed, I want to eat. I probably have gone about 35 % tasteless in the last 2 years. I would like to get skinnier, to push my blood pressure down as much as within reason, and get rid of the fat on my belly; my waist is around 39 inches – I am 6 feet and of moderately large athletic build. I have the tendency, when I want to go mostly tasteless for a day to impulsively give in and overeat. I was misconceiving this as an issue of will.

What I've discovered lately is that I was confusing "willpower" with technique. Low blood sugar can manifest as depressed mood, lightheadedness, vague disquiet, and more obviously food fantasies. It can be subtle. If I attend carefully to my mood when I am trying to go tasteless, attend to my hunger levels and always have the mush and water available, I can manage my blood sugar levels and not have sudden attacks and fantasies of food. If I anticipate times when I may experience such attacks I can preempt them. The conjunction of being around available food and having blood sugar drops leads me to eat compulsively. So now, I keep the mush next to my computer when I work, have it with me wherever I go and if I notice a sudden sign of blood sugar drop that may lead to compulsive eating, I consume a small bit of mush.

I would like to take this experiment as far as it will go but have not yet had the motivation to do the requisite work. I would like to see how thin I can become – within reason – using the method. It's a matter of going predominantly tasteless for 3 months as I did in the summer of 2005, when I went from 210 to 177. I'm at 188 now. Time will tell whether I can pull it off...

[1]Part 1.

1. <http://www.blog.sethroberts.net/2007/04/28/guest-blogger-tim-beneke-on-self-experimentation-part-1-of-2/>

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Dave (2007-05-01 06:44:23)

Timothy: Rather than losing more weight, being 6 feet and about 190 pounds, why not think about going from "skinny-fat" to "athletic". Do you exercise much? Is it aerobic or weight-lifting or a mix? You seem to have a strong handle on diet, but diet only helps you lose weight, not gain lean body mass.

Brad (2007-05-01 10:24:45)

I'm developing the discipline of drinking 2T flavorless coconut oil when I start fantasizing about cookies. It always kills the craving, yet, perversely, there are times when I want the craving, even though I know the cookies are bad for me.

RandomToad (2007-05-01 10:55:16)

Hi Tim, Enjoying your guest blogging — I am unsure if it is low blood sugar per se that is causing your urges to overeat. Rather, I think, consuming a bit of your concoction that you described in your previous post '*fruits and vegetables in a blender, added rice, bean, nut, soy, non-fat milk, flax, oat, and at times other powders to the liquified fruits and vegies,*' leads to an insulin spike. Your insulin sensitivity is then diminished, leading to cravings for more carbs. My guess is that one could get far in weight loss and general health combining Seth's appetite suppressant techniques with Art de Vany's theories on evolutionary health and diet. (BTW Art's theory, in a nutshell:

Evolutionary Fitness is a blending of the Stone Age with the High Tech. It's based on the following premisesâ€¦  
1) That our genes are from the Stone Age and they encode both behaviors and human physiology for a hunter-gatherer body and mind. 2) That modern research on human performance and health benefit from an evolutionary perspective.

An interview with Art here, excuse the fact that it is on meathead bodybuilding site (apologies to any bodybuilders out there): <http://www.t-nation.com/readTopic.do?id=1373291> Another interview here: <http://www.t-nation.com/readTopic.do?id=709484>

CD (2007-05-01 12:13:34)

I'm an Art fan as well. He and Seth are the only two health/diet blogs I visit on a regular basis. Here is another very good short summary of the basics, from a recent post: [http://www.arthurdevany.com/2007/04/dieters\\_gain\\_we.html](http://www.arthurdevany.com/2007/04/dieters_gain_we.html) For more comprehensive information, I recommend this paper he's written: <http://www.arthurdevany.com/webstuff/WhyWeGetFat.pdf> Good luck!

Timothy Beneke (2007-05-02 22:32:26)

Thanks for all the thoughtful comments. Hi Dave, I walk an average of about 70 minutes a day, briskly – for 3 hours at least on Sunday. I agree with you; for health reasons I want to get rid of more fat from my belly. And I want to get my blood pressure under 115/75; above that is considered pre-hypertensive and begins to be risky, we now know. Hi Brad, There may be a difference between craving for taste and craving for calories; it's not real clear to me. I agree that flavorless calories are the best way to go to get rid of unwanted eating impulses. I wonder if flavorless carbs would do better than flavorless fats – to make it simple, you could just cook quick oatmeal in a couple of minutes and then cool it a bit and float it down your throat with a big gulp of water – you could have it flavorless and that might be more powerful and effective. The more calories you get that are tasteless, the less general hunger you will have... Hi RandomToad (great name!) I don't know about the insulin spike idea; you may be right. My assumption has been that consuming the mush tastelessly by floating it down my throat, means that I only get just enough calories to assuage hunger – and hunger is very weak. There is no incentive to consume more than that because there is no "active" pleasure in the consumption because no taste. So I only eat small amounts of the mush.

Then suddenly I have weakness, or lightheadedness or something and that leads to food fantasies in the course of my day; if I have the mush available, I can intervene before that happens... There is plenty of protein and fat in the mush by the way; soy protein, garbanzo beans, almond meal etc... I must check out Art Devany's blog, thanks for the URLs and thanks CD as well. It's great to participate in Seth's blog; he is a hero of mine – his ideas have helped me enormously... Thanks again. Timothy Beneke

Stephen M (Ethesis) (2007-05-03 09:14:26)

"What I've discovered lately is that I was confusing 'willpower' with technique." That was brilliant. I think it is one of the core problems with most weight loss efforts is that they do not understand the mental breakthrough you describe.

Willy (2007-05-03 16:38:56)

>What I've discovered lately is that I was confusing 'willpower' with technique. I loved that part too, but for some reason my comment didn't show. It is an excellent point from where to start changes and not fall in thoughts like one is a weak person, etc. Does this mean one needs the help of some "expert" or one can "self experiment" with a new pattern. I think in some cases the help of other person is needed (identification, imitation, modelling). Very interesting topic to develop further :-)

### **A Stanford Nutrition Professor's Explanation of SLD (2007-05-02 08:22)**

A Palo Alto resident found SLD so effective (lost 10 pounds in 1.5 months) that he told others about it. "Everyone I speak to about the diet laughs at me or just shakes their head," he wrote. (Which is [1]good.) A tenant of his, a Stanford medical student, asked his nutrition professor how such a crazy diet could possibly work. The professor, [2]Dr. Clyde Wilson, replied:

Fats and sugars reduce hunger when consumed in moderate amounts. Fructose stimulates less of an insulin response than glucose, putting you at less risk of subsequent hunger. Flavored foods result in a greater caloric consumption. Unflavored fructose and olive oil would therefore reduce hunger during a subsequent meal. Any small healthy snack will provide the same result. A small healthy snack would be, for example, a whole grain cracker with some peanut butter and half an apple.

The interesting thing about SLD is not that the oil or sugar water reduces hunger – most food does that – but that it causes easy weight loss. This is what needs explaining. Why does X calories of sugar water cause you to reduce future consumption by more than X calories? This paragraph doesn't explain this.

Since fructose, sucrose, and unflavored oils all have the same effect, it cannot be due to a special property of fructose.

As for the prediction that a small healthy snack will have the same effect, that has not been my experience. I'm pretty sure that weight loss would not be such a big problem if one could lose substantial weight (such as 10 pounds in 1.5 months) by eating as many small healthy snacks as you want.

1. <http://www.blog.sethroberts.net/2007/03/28/the-most-valuable-truths/>

2. <http://www.DrClydeWilson.com/>

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J. Weighty (2007-05-03 14:37:32)

"eating as many small healthy snacks as you want." Hmm. Is SLD "drinking as many tablespoons of flavorless oil as you want?"

seth (2007-05-03 19:58:41)

More or less, yes – there are no tight restrictions.

### **What If College Were Taught by Basketball Players? (2007-05-03 06:06)**

1. "I don't teach passing, I teach teamwork," says a Professor of Ball Handling at an elite university.
2. The more prestigious the school, the taller its students and professors.
3. The Bell Curve is about the advantages of being tall. Taller people have better life outcomes, the authors discover via analysis of a large data set. Curiously, the authors – both tall – conclude that tall people should be favored even more.
4. The better students say that at college they learned how to learn. They mean they learned how to learn to play a sport.
5. At "research" universities the professors spend more time playing basketball than teaching.
6. A Princeton, New Jersey company develops and sells a fast standardized way to measure basketball ability.
7. Sports Illustrated publishes an essay titled "What Every Educated Person Should Know."
8. By graduation, students know very well how good at basketball they are but know almost nothing about their ability in other areas.

The excellent humorist [1]Henry Alford wrote "What If" articles for Spy magazine and, more recently, for Vanity Fair, such as [2]"What If Paris Hilton Were President of the United States?"

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1. <http://www.nytimes.com/2006/05/07/books/review/07alford.html?ex=1304654400&en=76a4a6307fb77955&ei=5088&partner=rssnyt&emc=rss>

2. <http://www.vanityfair.com/politics/features/2004/12/alford200412>

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### **SLD in Paperback: What's New (2007-05-04 04:51)**

The paperback edition of The Shangri-La Diet was published last week. The feedback I'd gotten, mainly from the forums, suggested many changes, so I was glad to be able to revise it. The main revisions are:

1. A foreword about events since hardback publication.
2. More emphasis on flavorless oil, less emphasis on unflavored sugar water.
3. New case studies (to match the emphasis on oil).
4. Data from the Tracking Data forum about how fast people lose.
5. New sidebars about omega-3, combining SLD with other diets, and how to drink oil.
6. Nose-clipping as an important new way of doing the diet.

My thanks to all SLD forum contributors and others who provided feedback.

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### **Encouraging Events (2007-05-04 09:06)**

Which should I find more encouraging?

1. [1]Now (a UK celebrity magazine) ran a 2-page article titled "Goodbye Atkins, Hello Shangri-La". It said celebrities have been sighted with rapeseed oil and normal-sized portions of food.
2. Yesterday the SLD forums got more than 13,000 hits, the most since November.

Probably the latter.

1. <http://www.nowmagazine.co.uk/>

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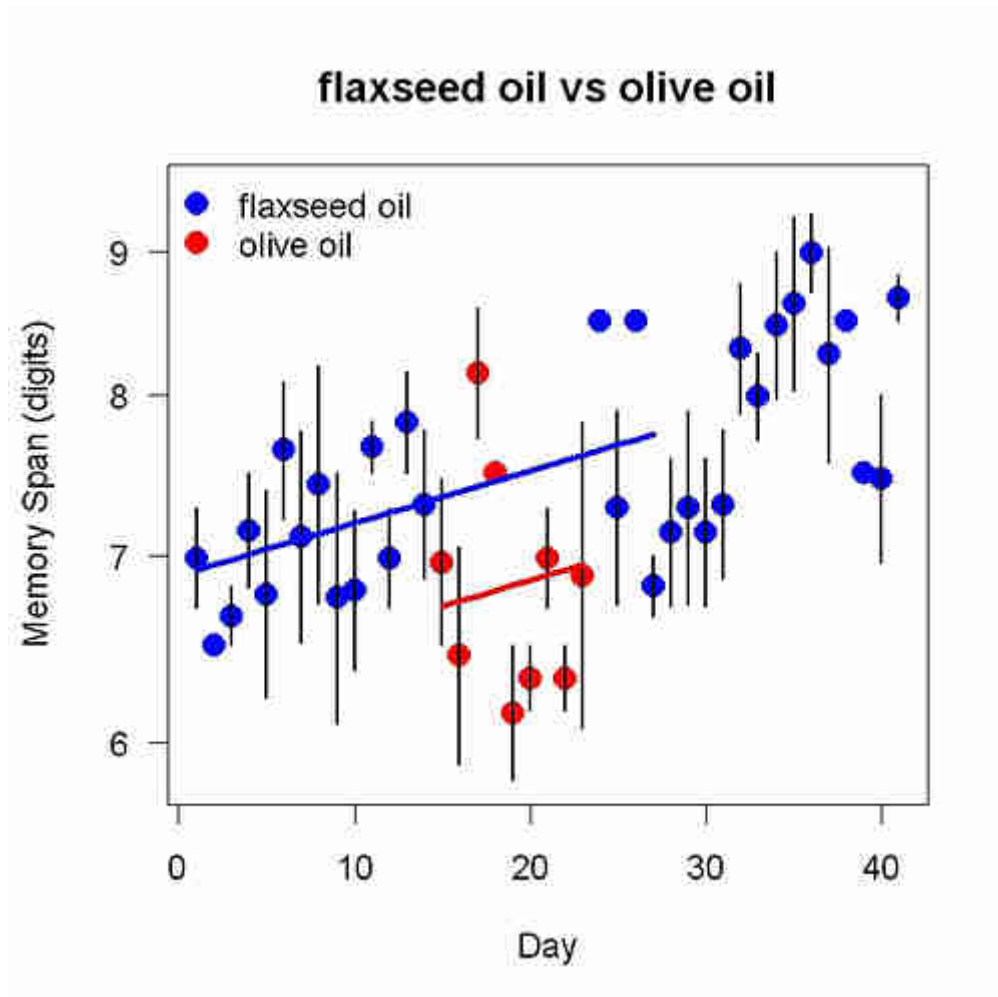
Tim Lundeen (2007-05-04 09:33:36)  
Congrats!

### **Science in Action: Omega-3 (more memory results) (2007-05-05 16:22)**

Several weeks ago I compared flaxseed oil (high in omega-3) and olive oil (low in omega-3). I've posted results from a [1]balance task and a [2]memory-scanning task. I also measured what is called digit span – the number of digits you

can remember perfectly after one presentation. It is a widely-used measure of short-term memory. In my test, the digits were shown one by one for 1 second each on my computer screen. A few seconds after the last one, I had to write them down in order. If I was 100 % correct the next trial had one more digit than the last. If any of my answers were wrong, the next trial had one fewer digits than the last. The test continued until there had been six "reversals" – right answers after one or more wrong answers, or wrong answers after one or more right answers. The measure of performance is the mean of the six reversal points. It estimates the list length at which I have a 50 % chance of being correct.

Here are the results:



Performance was better with flaxseed than olive oil ( $t = 2.5$ , one-tailed  $p = 0.01$ ). The difference – the omega-3 effect, you might say – was quite a bit weaker than what I saw with balance and memory scanning. My guess is that the relative insensitivity of this task comes from two features: 1. Binary measures. Each trial is measured right or wrong; whereas with the memory-scanning and balance task, each trial yielded a duration (many-valued). 2. Slow. Each trial takes about 30 seconds; it takes about 10 minutes to get six reversals.

[3]Guide to my omega-3 posts.

2. <http://www.blog.sethroberts.net/2007/04/25/science-in-action-omega-3-flaxseed-oil-vs-olive-oil-continued/>
3. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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peter (2007-05-06 09:09:57)

do you intend to compare flax seed with DHA (either derived from algae or fish oil or both)?

seth (2007-05-06 11:21:22)

Yes, something like that. Right now I am comparing flaxseed oil to nothing.

Andrew Gelman (2007-05-06 15:40:54)

I'm still worried that, by knowing which treatment you're taking, you can be unconsciously biasing your results. Could you have your neighbor give you the dose of oil each day so you won't know which you're taking?

seth (2007-05-06 19:34:04)

I'll eventually do that. But before I do that experiment I want to do experiments where I'm more uncertain what will happen.

### **Life-Size Faces (2007-05-06 13:12)**

My [1]long self-experimentation paper (Example 2) describes how I discovered that seeing faces in the morning improves my mood the next day. At the time I used TV faces. I tried different-sized TVs and found that the TV that produced the most life-size faces also produced the biggest effect. I also found that distance mattered: A conversational distance produced better results than a larger distance. The faces need to be looking at the camera. Clearly the TV faces were replacements for what our Stone-Age ancestors saw when they chatted with their neighbors soon after getting up. The faces/mood effect, I believe, is produced by a mechanism whose function was to synchronize the sleep and mood of people living together. It is hard to work with someone who is (a) asleep or (b) in a bad mood.

I needed 30-60 minutes of faces to get a big easy-to-notice effect. At first I used a variety of talk shows, then concentrated on two C-SPAN shows, [2]Booknotes and Washington Journal. However, Booknotes is only once/week and Washington Journal is pretty boring. Soon after I wrote to C-SPAN suggesting they re-air old Booknotes, they started doing just that. Encore Booknotes was a regular feature of Book TV. But I still had to watch a lot of Washington Journal and I wasn't as interested in politics as Brian Lamb.

Then I realized I could look at my own face in a mirror. This had the advantage that the face was exactly life-size. I listened to books or interviews or other stuff at the same time. Lately I have been listening to [3]Authors@Google talks.

Today I realized I could also use the vlogs on YouTube, the ones where people speak right at the camera. I've known about them – who doesn't, I suppose – for a long time but there have always been two problem: 1. Boring. 2. Too small. Today I came across a long series done by [4]LucyinLA (a struggling actress named [5]Laura Segura) and discovered that some of them were not boring, such as [6]this one. There was still the problem that her face is a little too small. Then I realized I can increase the size of anything on my screen by increasing the display resolution (go to the Display icon on Control Panel).

[7]Here's an example of the right stimuli:



[EMBED] I still need to find enough non-boring vlogs but that shouldn't be too hard. Whether I will switch to YouTube faces I don't know but you, Dear Reader, can now see for yourself without any special equipment. You should look at the faces soon after you wake up in the morning. Addendum: Nansen's comment about using a cheap mirror shows that I think of a \$5 mirror as "special equipment" and an internet-connected computer as not special. It's true, I do. As for the best time to see faces, all I know is it's quite early. I figured it out for myself by trial and error.

1. <http://www.google.com/url?sa=t&ct=res&cd=1&url=http%3A%2F%2Frepositories.cdlib.org%2Fpostprints%2F117%2F&ei=hZA-RsryMYjWgw0ajtjIAg&usg=AFrqEzdQa3IRUhFtM5qAQiKq778LyBY0Ew&sig2=5DDx8ntYT880EluSgrh5oA>
2. <http://www.booknotes.org/home/index.asp>
3. <http://youtube.com/atgoogletalks>
4. <http://www.youtube.com/profile?user=LUCYinLA>
5. <http://www.imdb.com/name/nm1267004/>
6. <http://www.youtube.com/watch?v=DI-8W49-VKc>
7. <http://www.youtube.com/watch?v=Cnca5kFZsR4>

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diarist (2007-05-06 15:20:55)

Changing the display resolution is far too much work. In Internet Express 7, just click on the zoom dropdown (bottom right corner, in the "status bar" along the bottom, which is set to visible on the Tools menu) and set the zoom to 400 %. The entire page (text and all images) zooms by that factor, and a YouTube playback window will nearly fill a 1600 x 1200 screen. Use whatever percentage zoom gives the result you want.

Brad (2007-05-06 17:32:12)

Is it true that you have to go to bed by 8pm to see the improvement in mood?

seth (2007-05-06 19:32:51)

diarist, thanks for the suggestion. However, when I do that the wrong part of the screen (the upper left) is magnified. I need the center of the screen (where the face is) to be magnified. Brad, no. You shouldn't have a lot of face to face conversations late at night to see the improvement in mood.

Nansen (2007-05-06 19:36:07)

When I first tried to use Seth's mirror technique, I was too depressed to get out of bed so early in the morning. Even though I was taking anti-depressants, I could not lift my ear off the pillow. So one afternoon at a drugstore I bought a small mirror that swiveled on a little stand. By standing this small mirror on the mattress top, at arm's length from my head, I could look into it at right angles. I was a horrible sight, yet somehow I got through the hour. After two days I could rotate my head, still on the pillow, upward toward the ceiling. I held the mirror above me at arm's length, and when my arms got tired I alternated back to the first position. After two more days I could sit up, and I propped the mirror on a cardboard box by my knees. Finally, after several more days of these maneuvers, I could get out of bed for the treatment within an hour after sunrise. That was a year ago. This treatment may not be for everyone, it may even indirectly harm some people, but I swear by it for myself.

Janet (2007-05-07 05:28:06)

Have you tried meeting people first thing in the morning? Even if none of your friends are interested in waking up so early or don't have time before work, I'm sure you could find people on Craigslist who would be.

seth (2007-05-07 07:00:10)

Close to trying it, yes; actually trying it, no. It's a density thing: travel time is a problem. A friend of mine told me that her mom came out of a major depression during a period when she had breakfast meetings.

Jeff Winkler (2007-05-07 07:29:17)

Too bad [1]ze frank is off the air... he did the extreme closeup thing (sans blinking!). All the old shows are up.. might be worth watching. My GF/fiancee would think I was crazy if I stared in a mirror for an hour every day...though staring at her might be ok :)

1. <http://www.zefrank.com/theshow/>

diarist (2007-05-07 17:04:29)

"diarist, thanks for the suggestion. However, when I do that the wrong part of the screen (the upper left) is magnified. I need the center of the screen (where the face is) to be magnified." I had tried it on WinXPSP2, IE7, on a 1600x1200 screen; it worked for me. When I look at your sample YouTube video and zoom to 400 %, I get scroll bars in both directions. Using these scroll bars, position the video panel to fill your screen. You can see any part of the magnified page, not just the upper left. (This is a sort of mal-feature in IE7, that when it zooms it magnifies the whole page [text, images, layout] like a telescope, and introduces scroll bars. Normally that's not ideal—you'd usually like the page reflowed without horizontal scroll bars. But for your application of large faces, it works exactly right. AFAIK, Firefox 2 doesn't work this way. Opera does. Don't know about Safari. The recommendation was tried successfully only on IE7 on WinXP.)

seth (2007-05-07 21:26:13)

Thanks, diarist, for the detailed directions. I do get the scroll bars when I magnify the standard YouTube presentation – where the TV screen takes up about 10 % of the screen. I don't get the scroll bars when I increase the magnification after first going to full-screen view. The picture becomes much bigger but I only get the upper left portion of the screen – and no scroll bars to adjust. Magnifying the ordinary YouTube view by 400 % usually isn't enough, unfortunately. For example, this video, even when magnified by 400 %, still has the face much too small: <http://www.youtube.com/watch?v=ZdqOvBflp70>

pdf23ds (2007-05-08 11:46:48)

Seth, do you know if it's required to look directly at the face? I was thinking I could put a large face on my desktop background and read webpages with my browser resized to just fill a small portion on the left of my screen, but then the face would be just outside of my focal point.

seth (2007-05-08 20:23:04)

I think you need to look directly at the face. But you have an interesting idea; maybe the face could fill the screen and the text be superimposed on it.

pdf23ds (2007-05-09 16:31:24)

Search for "alphaxp lite" to find a free program to make windows transparent. I'm going to try using that program with my web browser and a desktop background of a face to see if it helps. Do the faces need to be facing directly at you, or can they be at, say, a 45 degree angle from the camera?

seth (2007-05-09 19:00:34)

Thanks for the alphaxp lite info. The faces need to be looking directly at you.

MorningPerson (2007-05-11 16:08:58)

Iâ€™ve been using the faces method for some time now, with significant (but not perfect) success. Iâ€™ve found that the more directly the face looks at the camera the better results I get and that there is diminished efficacy when the face diverges even just 20 or 30 degrees from directly facing the camera. I also found that a more interesting and compelling speaker gets better results, most likely because it causes me to focus more closely on the speakerâ€™s face. I too have tried Booknotes, which worked, but I eventually ran out of interesting lectures in which the speaker was facing directly at the camera. I also spent some time with You-Tube blogs (I also watched LucyinLA!) but found them unwieldy and impractical. The videos are typically very short and even the bloggers that most often provide a lot of face time vary in the amount of direct face time each particular one of their videos provides. Because of this, I ended up spending a lot of time looking for good videos, bouncing around among different videos and watching videos without a lot of good face time. It was difficult to get a quality 30 or 40 minutes of face time every day. However, if anybody wants, I can post a list of the bloggers that I found most helpful. I am

currently using The Teaching Company lecture series. I've found that in some of the series the lecturers provide a more direct camera gaze for more of the time than in others and it is difficult to gauge before ordering how good a particular series will be. It's also worth mentioning, in case any of you decide to order from them, that their website provides information on how prevalent visual aides (charts, graphs, photos) are in each series. The fewer visual aides the better, as they take away from direct face time. I asked The Teaching Company to post excerpts of their videos on their website (that way I can see which videos are better before ordering). Maybe if enough people request it they will listen! Janet: I was considering posting on Craigslist a while back but I decided that the post would sound pretty weird to most people who have never heard of the faces method and I would just attract a lot of strange characters (I live in NYC) as opposed to people with whom I would actually be able to have productive morning sessions. Finally, I wish there were a group study of people who tried the faces technique, so that we could know the percentages of people that achieved positive results. Seth, any thoughts on the likelihood of a study?

seth (2007-05-12 08:16:32)

The likelihood of such a study in the next few years is low. I for one would be interested in a list of the bloggers you found helpful.

dilys (2007-05-14 06:06:06)

I entered the Eastern Orthodox church a while ago, and the "wallpaper" of large icons, often faces, sometimes whole figures – in most churches distinguishes this tradition. One practice is to gaze at icons while praying. At what point of "reality" (obviously mirrors and videos are effective) in terms of stylization and motion do you think the cut-off might be for this phenomenon to be at work (not of course that I'm making a reductive suggestion that this is *all* there is going on)? As to collective religious wisdom, I seem to remember also that there were studies that Catholic monks who engaged frequently in Gregorian chant were healthier, less depressed, and needed less sleep, than monks where there was less chant. I don't suppose you have undertaken any experiments with sonorous humming... :-)

seth (2007-05-14 08:39:59)

I'll be a little surprised if still photos work, but I haven't tested them. In one experiment I did I compared sound + video of faces with sound alone – the sound alone did nothing. I think hearing voices can reduce feelings of loneliness but that is quite different than the faces effect.

Johnny Ingles (2007-06-05 08:55:52)

What about photographic portraits, would they work? Or does the face have to be moving?

seth (2007-06-05 09:10:04)

I don't know. I've never tried them. They might fail because of what is called "rapid adaptation" in the nervous system – an example of which is the way the second sip of orange juice tastes quite different from the first. I do wonder if I would get better results looking at several faces, not just mine, over the course of an hour. But I haven't yet tested that possibility.

Tim (2008-11-13 14:47:10)

Can you be more specific about your mirror distances? I ask because mirrors have some properties that may not be obvious. You say that your face in the mirror is exactly life-sized. Actually, your own face in the mirror is exactly half life-sized. This means that if you stand three feet away, it would be like having a conversation with someone six feet away (makes sense, as the light is traveling six feet). Another question I have about your post is you theorize this effect is because people used to chat with their neighbors shortly after waking. What if this predates language? I can't imagine 30-60 minutes of non-verbal communication to start your stone age day, but in any case stone age chatting was probably different than our chatting, and perhaps there's something to that. Great blog!

seth (2008-11-13 22:00:22)

The mirror is about 1.0-1.5 feet away – making the face appear to be twice that distant. I don't consciously measure it, I just try to make the face appear the proper distance for a conversation. I don't understand the question "what if this predates language?" Could you make more explicit what the question is?

Jimmy B (2010-06-27 09:22:00)

Seth, or anyone out there .. do you still do this ?? If so, some more reports would be great!

seth (2010-06-27 22:09:41)

I still do this, yes. But when I shift time zones (e.g., go from Beijing to Berkeley) I need to wait about 3 weeks before the effect regains full strength. I will soon post about using 2 faces rather than one.

Jimmy B (2010-06-28 14:54:49)

Thanks for the quick response Seth. I look forward to the updated article . Quick question, you stated that you get a mood boost , do you also feel more calm/ less general anxiety as well?

seth (2010-06-28 15:14:29)

The faces have three obvious effects on my mood/energy: 1. I feel happier. 2. I feel more eager to do things. If I think of doing something, I am more prone to do it, it is easier to do it. The opposite of procrastination. This is not the same as restlessness. 3. I feel more serene, less irritated by this or that bad event. Less prone to react to it. I don't feel general anxiety so I don't know if the faces would lower it. One of my subjects found she had a sharp reduction in mild panic attacks when she started seeing faces.

## Neat Freak (2007-05-06 22:20)

In [1]today's Freakonomics column, Dubner and Levitt write:

we can't think of a single person who, since the invention of the washing machine, practices  
laundry for fun.

Look no further: I do. And not just laundry: For my tenth high school reunion I listed my hobbies as "doing the dishes." Yes, I enjoy doing the dishes. Long ago I hired someone to clean my apartment (including laundry) not because it was dirty but because I was spending too much time cleaning it. More recently, because of the [2]growing success of The Shangri-La Diet (which Dubner and Levitt have everything to do with), I decided I could go back to cleaning a bit more so I hired someone to clean my apartment but not do my laundry.

Before [3]watching faces in the morning I suppose I was as messy as a typical guy. The mood elevation produced by faces suddenly changed me: I discovered I enjoyed cleaning, and I started to spend lots of time (about an hour/day) doing it. It would be harsh to say that messiness is a sign of depression but I think that a very messy room or office – not to be confused with [4]extreme hoarding – is a indication of the sort of problem that when it becomes extreme we call depression.

1. [http://www.nytimes.com/2007/05/06/magazine/06wwln-freakonomics-t.html?\\_r=1&ref=magazine&oref=slogin](http://www.nytimes.com/2007/05/06/magazine/06wwln-freakonomics-t.html?_r=1&ref=magazine&oref=slogin)

2. <http://www.blog.sethroberts.net/2007/04/04/will-it-continue/>

3. <http://www.blog.sethroberts.net/2007/05/06/life-size-faces/>  
4. <http://plonkmedia.info/crazymum/>

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Sam (2007-05-07 01:16:50)

Do I read this right: you do not use a washing machine but instead wash your clothes by hand? At least that is what the quote says for me. Not only is this a lot of work, it also is quite a strain for the clothing to be scrubbed clean.

seth (2007-05-07 06:55:16)

I don't wash my clothes by hand, no. I agree the quote could be read that way. The column also refers to people who cook for fun; I'm sure they use tools such as gas stoves and blenders.

Evelyn (2007-05-08 16:09:19)

Gregory Hines, the late dancer, also mentioned in an interview one time (with the New Yorker? I don't recall), that he enjoyed doing laundry. I like having clean clothes, but prefer not to think too much about the process.

### **New Way to Lose Weight? (2007-05-07 14:42)**

At the Shangri-La Diet [1]forums, several people are trying [2]a new way to lose weight: Drinking a flavored calorie-free drink between and with meals. The first few weeks of experience suggest it works at least short-term. Here's what [3]Jenn does:

I am drinking about 1 1/2 to 2 litres of splenda sweetened kool-aid or iced tea/juice mix in water. You know those little packets that you add to a 2 cup water bottle. I have them with meals and then sip on them all day in-between. Sometimes I actually drink the whole bottle in a 1/2 hour (cause it tastes so good). I also add some olives and an occasional pickle to some of my meals and then if I want a little snack, I have a few of them between meals. This seems to really work too. . . . I never had that kind of AS [appetite suppression] or success with oils or SW.

Jenn has lost 6 pounds in a few weeks.

Why might this work (assuming [4]my theory of weight control is true)? Flavor signals must linger in the brain because it takes several minutes (15 or more?) to get a some idea of how many calories a food contains. To forget the flavor in a few seconds wouldn't work. If you eat a piece of ham and follow it with a sip of raspberry lemonade, the lemonade may reduce (erase) the memory of the ham flavor. This should have two effects: (a) reduce how much the ham flavor raises your set point and (b) reduce how much the ham flavor is associated with calories. You can think of the lemonade soaking up the associative energy that the ham calories produce. If the lemonade is also drunk (a lot) between meals, any lemonade-calorie association will disappear.

The interesting prediction: To get the effect, you must drink the calorie-free flavored drink with meals and between meals.

1. <http://boards.sethroberts.net/index.php>
2. <http://boards.sethroberts.net/index.php?topic=4361.0>
3. <http://boards.sethroberts.net/index.php?topic=4287.0>
4. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>

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peter (2007-05-07 15:19:44)

this may explain why smoking tends to reduce one's weight. the taste of smoking reduces how much the flavor of the meal raises one's set point; the taste of smoking may also reduces how much a meal's flavor is associated with calories. Smokers also indulge throughout the day. The reason people gain weight after quitting may be the reestablishment of the flavor calorie association. Those smokers that want to quit should consider substituting a low calorie or no calorie taste to replace smoking. This may prevent them from gaining weight.

seth (2007-05-07 23:44:29)

You may have something there. Michel Cabanac, however, has done some experiments that imply nicotine lowers the set point.

peter (2007-05-08 08:29:12)

then one can take nicotine patches to augment the effect of sld or as a stand alone strategy.

S Williamson (2007-05-16 10:43:35)

I can't believe this is true, because my experience disproves it. For years, while I got heavier, and with no appetite suppression, I drank diet coke with nearly every meal and in between meals also. I can't believe I would be the only one to do this either. Currently, I have a friend that follows this same pattern, drinking Diet Coke both with and between meals, and his weight has gone up at least 20 pounds just over the last year.

seth (2007-05-16 18:38:33)

The implication is not: if you do this, you will never gain weight. The implication is: if you do this, you will weigh less than if you don't do it.

Brenda (2007-06-18 21:07:18)

In my experience, all sodas MAKE YOU GAIN WEIGHT, even the diet sodas. Because the acid in it makes you more hungry. My weight drastically reduced when I stopped drinking soda. Secondly, I never drink anything acidic. Pure fruit juices, especially organic ones, (sipped with a straw to avoid cavities) once in a while is good. I do drink coffee, latte, chai, or plain tea once in a while, mstly in the morning, (Kava coffee has reduced acid, and there are other brands). But predominantly I drink plain bottled water (usually Fiji water which has silica in it that's good for your skin and hair). I learned that drinking water before I eat helps. I don't drink water during or after the meal. Of course, I'll sip water throughout the day to keep me hydrated and my energy levels up. But I feel that if I sip something while I'm eating, it's flushing the flavor out of my mouth and then I end up wanting to bite more of the food. You want your taste buds to signal to the brain that they've had enough of eating this food now, bite after bite. And if I drink water after I've finished eating, I get hungry again soon after a little while. The water just flushes all that food down, and you're hungry again. So, to feel full, I don't drink during or right after a meal. I also notice not drinking or eating anything past 8pm or not eating anything for 12 hours after dinner until breakfast the next day, helps. Exercising one hour in the morning or one hour before going to bed or even both helps. I usually workout for a half hour in the morning and one hour in the evening. If I don't have time in the morning, i'll workout anywhere between 1 to 2 hours in the evening. However I do it, I make sure i get atleast a half hour of exercise a day, preferably running. I know if you're a meat eater, eating meat helps to sustain hunger. So, I eat deli slices once in a while (preferably low sodium). If you are not a meat eater, then eat something with fiber to sustain your hunger. I noticed that going on a soup diet or eating as much soup as possible, helps to reduce the weight. Another thing, I avoid dairy at all costs. But that's

just me. if it doesn't have sugar or fat, it's got sodium. Even though I eat meat, I drink plenty of water and I make sure that I get most of my fiber in the morning. If I don't eat enough fruits and vegetables or grains/breads, then I will take a fiber supplement in the morning, which actually helps to sustain my hunger. Or I'll put tasteless, clear fiber powder in my bottled water or coffee or any drink. Inulin, which is found in some fiber, keeps blood sugar levels normal and sustains your hunger.

### **IDEO Visits a Hospital (2007-05-08 14:00)**

Science is a form of systematic innovation, right? A particular way of learning more about the world. The design firm [1]IDEO has a systematic way of coming up with new designs, illustrated in this [2]hospital visit. My guess is that IDEO and science don't have much in common in spite of the surface similarity. The product design done by IDEO is a form of engineering. Science and engineering are like two phases in the lives of ants: random search (science) and path following (engineering).

When I co-taught a course about office design, we visited IDEO (in Palo Alto). Most of their work was contract (design a new X for Client Y) but they also had a small group of toy designers who came up with new toys on spec. Their mail room was lush, with magazines, food, and a TV. Its purpose, said the CEO, was to cause people to interact. It was the big shady tree of an African village.

1. <http://www.ideo.com/>

2. <http://www.qualityoflife.org/ich/IDEO/IDEO.cfm>

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### **The Man Who Walks Backwards (2007-05-09 14:20)**

From the Journal of the Royal Society of Medicine:

In his early 40s the [1]torticollis began to worsen and was accompanied by increasing lumbar spine pain as he twisted his torso to compensate for a deviated field of vision. An occupational therapist suggested he try walking backwards, and this he did with some success. . . . Friends nicknamed him 'The Sidewinder'. . . . He now never walks forwards unless asked.

Case report [2]here.

1. <http://en.wikipedia.org/wiki/Torticollis>

2. <http://www.pubmedcentral.nih.gov/picrender.fcgi?tool=pmcentrez&blobtype=pdf&artid=1279484>

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## My Theory of Human Evolution (American Idol edition) (2007-05-09 20:21)

My theory of human evolution ([1]paper, [2]talk) is that our brains changed in several ways to build healthy economies – in particular, to increase specialization, trade, and technical know-how. For example, collectors and connoisseurs pay more for finely-made things than the rest of us; the extra payment helps skilled craftsmen advance their art. Collectors and connoisseurs come to value small improvements, I believe, through side-by-side comparisons. Obviously side-by-side comparisons help us notice small improvements; it's the predicted hedonic change that's interesting.

After listening to Jordin Sparks sing "Woman in Love" on American Idol last night, I wondered what other singers had done with it. YouTube was happy to help.

Jordin Sparks

[EMBED] Barbra Streisand [EMBED] Liz McClarnon [EMBED] Lili Ivanova [EMBED] Young Divas [EMBED] Leticia [EMBED] Shiela Rodriguez [EMBED] Regine Velasquez [EMBED] After you listen to several of these performances, I predict you will respond more strongly – more fully? – to future performances. The better ones will bring you more pleasure, the worse ones more pain. You will be willing to pay more for the better ones. [3]Saul Sternberg has also been interested in the effect of side-by-side musical comparisons. [4]Christmas edition of my theory.

1. <http://www.freakonomics.com/pdf/whatdostudentswant.pdf>
  2. [http://sethroberts.net/archives/How\\_Economics\\_Shaped\\_Human\\_Nature.ppt](http://sethroberts.net/archives/How_Economics_Shaped_Human_Nature.ppt)
  3. <http://www.psych.upenn.edu/~saul/>
  4. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>
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## Increasing Respectability (2007-05-10 05:03)

Bloor Street is a major Toronto street. The Bloor Line is a subway line. You need to know that to understand this [1]post by someone in publishing.

1. <http://seenreading.blogspot.com/2007/05/bloor-line-lunch-rush.html>
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## Is the Goal of Education Obvious? (2007-05-10 19:03)

A Harvard task force [1]has concluded that Harvard undergraduate education needs improvement. One task force member is Eric Mazur, a professor of physics. He has presumably given the matter a lot of thought. Here is what he does and says:

As a model for innovative teaching, Professor Skocpol [head of the task force] pointed to Professor Mazur, the physicist.



He threw out his lectures in his introductory physics class when he realized his students were not absorbing the underlying principles, relying instead on memory to solve problems. His classes now focus on students working in small groups.

“When I asked them to apply their knowledge in a situation they had not seen before, they failed,” Professor Mazur said. “You have to be able to tackle the new and unfamiliar, not just the familiar, in everything. We have to give the students the skills to solve such problems. That’s the goal of education.”

The other faculty in Professor Mazur’s department are surely terrific at tackling “new and unfamiliar” physics problems, which is the skill Professor Mazur wants to teach his students. Yet these other faculty are obviously not good teachers. (When he lectured, Mazur was simply imitating those around him.) I conclude that the skills needed to (a) do good physics research and (b) teach physics well are quite different. So why is Mazur emphasizing the skills needed to do the former (research) and not the latter (teaching)? And what about all the other jobs in the world – what do “you have to be able to” do in those jobs? The goal of education is not as obvious as Mazur claims.

The electrical charge of a single electron was first determined by Robert Millikan, who made a mistake in his calculations (wrong value for the viscosity of air). It was several years before this mistake was noticed. In the meantime, other physicists calculated the charge on a single electron. They did not make Millikan’s mistake – yet they got [2]nearly the same (wrong) answer! Over time, the answers gradually drifted toward the correct answer.

That is essentially what is happening here. Mazur realizes something is wrong with the current system, but he has twisted his thinking – just as post-Millikan scientists determining the charge of an electron tweaked their equipment and data analyses – until the discrepancy is small enough to live with. The notion that “the goal of education” is being able to solve new and unfamiliar physics problems (or new and unfamiliar problems in general) doesn’t survive even a little scrutiny, but that’s what a Harvard professor who cares about education has come to believe.

1. <http://www.nytimes.com/2007/05/10/education/10harvard.html?pagewanted=1>

2. <http://wwwcdf.pd.infn.it/~loreti/science.html>

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## **My Theory of Human Evolution (business book edition) (2007-05-12 00:26)**

[1]My theory of human evolution says there are mechanisms that produce diversity of skills and knowledge. These mechanisms evolved because diversity of goods and services is crucial to a healthy economy. Human diversity generates economic diversity – the person who likes to paint becomes an artist, the person who likes to make things becomes an engineer. These differences are crucial because they allow trade. If everyone made the same things, there could be no trade and no gains from specialization. The more diversity, the better. This is the opposite of the way variation is viewed in statistics. A statistician thinks of variation in measurement as “error” – something to be reduced, perhaps by averaging. Variation is everywhere, of course; you can think of it as something to be encouraged or discouraged.

Human nature encourages diversity. You can build (a) institutions that encourage, benefit from, or at least accept human diversity or (b) institutions that discourage it. The former will work vastly better than the latter because the

latter are always fighting human nature. It is the difference between swimming with the current and swimming against it. This is the heart of my criticism of higher education: It is anti-human-nature. It is anti-human-nature because every student in a class is treated the same. Every student is expected to learn the same things and is measured using the same yardstick. Such classes ignore diversity and try to reduce diversity (every student is supposed to learn the same stuff, thus making their brains more similar). They are ignoring and fighting human nature.

When I told [2]Sarah Kapoor this critique, she recommended [3]First, Break All the Rules: What the World's Greatest Managers Do Differently (1999) by Marcus Buckingham and Curt Coffman. "You'll like it," she said. She was right. At the heart of what distinguishes better managers from worse managers, say the authors, is that the better managers have this "revolutionary insight":

People don't change that much. Don't waste time trying to put in what was left out. [In other words, don't try to make your employees identical.] Try to draw out what was left in.

In other words: 1. Start by accepting diversity. 2. Try to use it to advantage.

Better managers achieve better results, defined all sorts of ways, than worse managers. The author's conclusions are based on a vast amount of research done by the Gallup Organization.

[4]Christmas edition. [5]American Idol edition.

1. <http://www.freakonomics.com/pdf/whatdostudentswant.pdf>
2. <http://www.youtube.com/watch?v=hR33LNwgGIc>
3. <http://www.amazon.com/First-Break-All-Rules-Differently/dp/0684852861>
4. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>
5. <http://www.blog.sethroberts.net/2007/05/09/my-theory-of-human-evolution-american-idol-edition/>

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Dave (2007-05-13 12:54:15)

Another book on this subject is "The Difference" by Scott Page, which recently came out. He shows how teams and groups of diverse individuals, or individuals with diverse tools, are better at solving problems and making predictions than those with lots of "ability."

Lizzie Connor (2007-06-08 16:43:05)

Dear Seth I just thought you (and perhaps some of your readers) might like to check out my new blog that traces the scientific story of human evolution from the Big Bang on, and makes the case for diversity as one of the key factors in all evolution. The accompanying book is available free to anyone signing in to my guestbook.

## Where Did Blogs Come From? (2007-05-13 03:18)

The more I blog, the more I think about blogging. (And [1]the more I enjoy blogs.) In an email to [2]Tyler Cowen I wondered if blogs were a new art form. He replied:

I've long been interested in early literary models for bloggers, including Boswell, Pepys, Julio Cortazar, and John Cage (having a co blogger and comments introduces an aleatoric element)...I'm always looking for others...

I replied:

My literary model is [3]Scheherazade. When I think of more standard precursors of blogs, I think of diaries and epistolary novels. Improvisational jazz, too, the way bloggers riff on something they've read. Also the Watts Towers – especially for [4]MR.

I think the way bloggers inject emotion into non-fiction is something new in the world of expression. Robert Caro once said that he tried to inject desperation into every page of his bio of Lyndon Johnson. "Is there desperation on the page?" read a note to himself pinned near his typewriter.

Non-fiction with emotion isn't easy, in other words. Caro's books are fantastic achievements because he manages to convey emotion page after page for thousands of pages. Not just Johnson's desperation – as a friend of mine said, Caro seems to "hate" Johnson. He certainly hated the later [5]Robert Moses.

Blogging with emotion, however, is easy. Almost unavoidable. For post after post. Nobody blogs about stuff they don't care about or feel strongly about. If you want to learn about something, find a blog about it.

Addendum: Speaking of blogs and art, [6]this NY Times Mag article is excellent.

1. <http://www.blog.sethroberts.net/2007/05/09/my-theory-of-human-evolution-american-idol-edition/>
2. <http://www.marginalrevolution.com/>
3. <http://en.wikipedia.org/wiki/Scheherazade>
4. <http://www.marginalrevolution.com/>
5. [http://en.wikipedia.org/wiki/The\\_Power\\_Broker](http://en.wikipedia.org/wiki/The_Power_Broker)
6. <http://www.nytimes.com/2007/05/13/magazine/13audience-t.html?ref=magazine>

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## The New Yorker Crosses a Line (2007-05-14 04:22)

This week's New Yorker contains an [1]article (humor by [2]Larry Doyle) that can be fully appreciated only online – it is full of hyperlinks. A [3]press release calls the online version "an interactive version" of the article. A better term

would be "the real version." It's the difference between a sculpture (the online version) and a picture of a sculpture (the print version).

Before Spy ran into financial trouble, I had had approved an article about someone in the software industry. At the time, the Internet and web pages were just starting. I envisioned my article with lots of pseudo-hyperlinks (underlined bits of text in the main article connected to text boxes). Since there was no online Spy it would have just been a form of footnote or annotation. Alas, the article was canceled. My editor at Spy, Susan Morrison, now edits the section of The New Yorker in which this line-crossing Spyish article has appeared. "We [the editors of Spy] try to find new ways to present information," Susan once told me, as some staffers played a board game that appeared in the next issue. Larry Doyle used to [4]write for Spy. Congrats to both of them.

Could this have been cleverly timed to coincide with publication of Doyle's [5]new book? Probably.

Addendum: Doyle himself [6]comments:

I have a humor piece in the New Yorker today "and it's interactive! The piece is a website devoted to wedding plans of one particularly ambitious bride, crammed with links both real and fabricated: to her blog; to a new movie starring Reese Witherspoon and Jennifer Lopez; to a site on how to treat stab wounds. Once you've bought the magazine and read the story, go to [7]gwynnanddavesharetheirjoy.com and poke around (You need to read the story first, or the website won't make sense.) You can also read the story for free online, but where's the fun in that?

Love that dare not speak its name. Use of the old-fashioned term interactive is a hint that something is amiss. It's not interactive in the print version, Larry.

1. [http://www.newyorker.com/humor/2007/05/21/070521sh\\_shouts\\_doyle](http://www.newyorker.com/humor/2007/05/21/070521sh_shouts_doyle)
2. <http://www.larrydoyle.com/>
3. [http://www.newyorker.com/services/presscenter/2007/05/21/070521pr\\_press\\_releases](http://www.newyorker.com/services/presscenter/2007/05/21/070521pr_press_releases)
4. [http://web.mac.com/larrydoyle/iWeb/Larry%20Doyle,%20Writer%20American/Ink\\_files/FF.jpg](http://web.mac.com/larrydoyle/iWeb/Larry%20Doyle,%20Writer%20American/Ink_files/FF.jpg)
5. <http://iloveyoubethcooper.com/>
6. <http://larrydoyle.com/blog1/2007/05/14/the-cyber-yorker/>
7. [gwynnanddavesaretheirjoy.com](http://gwynnanddavesaretheirjoy.com)

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Tim Lundeen (2007-05-14 12:54:18)

This was a very funny article, thanks for linking to it! And you're right, to fully appreciate it you have to follow the links.

erypelrrina (2009-01-06 14:41:46)

What is bumburbia?

## **Underrated Tourist Activity (2007-05-14 17:12)**

Riding the bus. I dislike riding the bus where I live but in strange cities it turns out to be a great way to see the sights. Getting on a random bus has worked well for me in Shanghai and Seoul. I just ride until I see something interesting. Today I took a long bus ride in New Orleans to get to the local Whole Foods to buy flaxseed oil.

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Stephen M (Ethesis) (2007-07-22 17:43:13)

Hmm, that might be why I didn't mind the bus from Sra to Venice, but don't like it usually.

## **Life-Size Faces on YouTube (2007-05-14 18:41)**

[1]My recent post about life-size faces; the comments are especially interesting. Here are some usable YouTube faces, thanks to MorningPerson:

<http://www.youtube.com/profile?user=Oneparkave>  
<http://www.youtube.com/profile?user=communitychannel>  
<http://www.youtube.com/profile?user=geriatric1927>  
<http://www.youtube.com/profile?user=LUCYinLA>  
<http://www.youtube.com/profile?user=lanCrossland>  
<http://www.youtube.com/profile?user=crossmack>  
<http://www.youtube.com/profile?user=faintstarlite>  
<http://www.youtube.com/profile?user=Paperlilies>  
<http://www.youtube.com/profile?user=xPLx>  
<http://www.youtube.com/profile?user=loneylgirl15> (the earlier entries are better)  
<http://www.youtube.com/profile?user=GregSolomon>  
<http://www.youtube.com/profile?user=renetto>  
<http://www.youtube.com/profile?user=tokenblackchic>  
<http://www.youtube.com/profile?user=thehill88>  
<http://www.youtube.com/profile?user=littleloca>  
<http://www.youtube.com/profile?user=Emmalina>  
<http://www.youtube.com/profile?user=Emmalene>  
<http://www.youtube.com/profile?user=boh3m3>  
<http://www.youtube.com/profile?user=WilliamSledd>  
<http://www.youtube.com/profile?user=courtneyblaircameron>  
<http://www.youtube.com/profile?user=HappySlip>  
<http://www.youtube.com/profile?user=DIEBUNNYHATER>  
<http://www.youtube.com/profile?user=dabestdude>  
<http://www.youtube.com/profile?user=TipToeChick>  
<http://www.youtube.com/profile?user=bowiechick>  
<http://www.youtube.com/profile?user=losetogain>

I also came across the following bloggers that looked promising but I did not get a chance to watch them before I stopped using YouTube for my morning sessions -

<http://www.youtube.com/profile?user=applemilk1988>  
<http://www.youtube.com/profile?user=corriev>  
<http://www.youtube.com/profile?user=cubefarm>  
<http://www.youtube.com/profile?user=davidnode>  
<http://www.youtube.com/profile?user=DMcLean1989>  
<http://www.youtube.com/profile?user=ExperimentsinHonesty>  
<http://www.youtube.com/profile?user=FantasticBabblings>  
<http://www.youtube.com/profile?user=jennfriedman>  
<http://www.youtube.com/profile?user=kazzart>  
<http://www.youtube.com/profile?user=kicesie>  
<http://www.youtube.com/profile?user=macgyvergg>  
<http://www.youtube.com/profile?user=omgheatherface>  
<http://www.youtube.com/profile?user=rebzugo>  
<http://www.youtube.com/profile?user=rosaku>  
<http://www.youtube.com/profile?user=SadieDammit>  
<http://www.youtube.com/profile?user=spricket24>  
<http://www.youtube.com/profile?user=sxephil>  
<http://www.youtube.com/profile?user=thaumata>  
<http://www.youtube.com/profile?user=thehurtone>  
<http://www.youtube.com/profile?user=thepoasm>  
<http://www.youtube.com/profile?user=tinydancer14>  
[http://www.youtube.com/profile\\_videos?user=TJRScudieri](http://www.youtube.com/profile_videos?user=TJRScudieri)  
<http://www.youtube.com/profile?user=trixiepixiedixie>  
<http://www.youtube.com/profile?user=Tsuneni77>  
<http://www.youtube.com/profile?user=Urgelt>  
<http://www.youtube.com/xgobobeanx>  
<http://www.youtube.com/profile?user=ysabellabravetalk>  
<http://www.youtube.com/profile?user=ZenArcher>

1. <http://www.blog.sethroberts.net/2007/05/06/life-size-faces/>

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MorningPerson (2007-05-17 14:32:56)

Another webpage with videos of talking heads is Barnes & Noble's Meet the Writers, at <http://www.barnesandnoble.com/writers/browse.asp?> If you click on the author names that are marked with a little filmstrip you will have access to a short online video interview of the author.

seth (2007-05-17 16:30:44)

That's good to know, thanks.

Heatherface (2011-05-01 19:06:58)

I'm not entirely clear on the purpose of this post, but I found it by Googling myself. If you still need to look at big heads in the morning, my new YouTube is [youtube.com/heatherface](http://youtube.com/heatherface) :)

## The Future of SLD (2007-05-15 07:57)

In a Pottery Barn yesterday, I noticed some air "fresheners" with names like Tupelo Honey, Paper White, Pomegranate, and Mandarin. Like an incense stick or scent candle, they add a pleasant smell to the air. The display included testers, similar to perfume testers, that produce a fine spray. I tried a few. They were an easy way to alter the flavor of one's food, I realized. I asked a clerk, "Can these be sprayed on food?" He tried to find the ingredients but couldn't. "Is this the strangest question you've been asked today?" I asked. "No one has ever asked me this," he said.

If you carried in your purse a few small sleek canisters of "food perfumes," you could easily make any food at any meal less recognizable and thus less fattening. Randomly using two or three perfumes per meal might provide enough diversity to last a lifetime. The SLD forum term for this is crazy-spicing. At least one person has lost a great deal of weight (80 pounds?) doing nothing else. You can still eat all your favorite foods; depending on the dose of food perfume, they will still taste good (if not out-of-this-world delicious). In [1]this post, Peter Merel describes his discovery that slightly-altered favorite foods no longer trigger binges.

a little slice of mud cake ... I know if I start I'm going to be inhaling that stuff big time. No question. Serious ditto for me.

Do you think lemon juice can cut that?

Only one way to find out. Into the microwave and then a squeeze of lemon juice on top. I'll admit the lemon juice didn't help a chocolate cake. But it wasn't bad either. I mean I'd have it again like that if this actually worked.

This Actually Worked!

I have also posted [2]many times about the benefits of flaxseed oil, which I believe derives from its high omega-3 content. The benefits are so large, fast, and repeatable I suspect almost everyone is suffering from omega-3 deficiency. The Shangri-La Diet of the future, I believe, will have three main parts:

1. Some sort of oil for weight loss and other benefits, including better sleep, better skin, and omega-3s. If it has flavor, you close your nose while you ingest it.
2. Elegant little spray cannisters of food perfumes to vary the flavor of your food.
3. (For hot weather) Ice-cold fructose water. I think it's a viable product, like ice tea.

1. <http://boards.sethroberts.net/index.php?topic=4619.msg47133#msg47133>

2. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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Bob (2007-05-15 10:27:42)

Perfumes have petrochemicals, that's crazy to spray them on food. You can use food grade essential oils though.

Brad (2007-05-15 11:03:27)

Seth, actually spraying the perfumes on the food would be unwieldy and people are unlikely to do it while people are watching. Wouldn't it make more sense to carry a set of short-life liquid aromas (food "perfumes," if you will) that you could dab in each nostril before a meal?

William Roberts (2007-05-15 14:16:44)

I think you may not need to spray the food. If you rub the perfume under your nose you will smell it throughout the meal.

seth (2007-05-15 15:26:23)

The notion of dabbing a few perfumes in each nostril before a meal is fascinating. However, you might get sensory adaptation – after a minute or two there would no more effect. While eating the smell is on and off so there is less adaptation.

Sheri M (2007-05-17 22:42:17)

I successfully lost 60 pounds some years ago. One of my techniques when eating out was to divide all the food on my plate in half, then sprinkle salt and/or sugar packets liberally on one of the halves - thereby rendering it inedible.

seth (2007-05-18 00:56:12)

Very interesting! 1. Have you kept off the 60 pounds? 2. If so what were your other techniques?

cellardoor (2007-06-05 10:55:39)

It's fairly well known that by holding one's nose, one can greatly reduce the perception of flavor in food, drink, etc. This effect is not just (total taste perception) - (intake of aroma from food). For instance, if one were to contrive an apparatus that doesn't stuff up one's nose, but instead allows one to breathe only filtered air through the nostrils, the reduction in perceived flavor would be minimal. I'm curious whether people who don't really mind holding their nose (or perhaps, using noseplugs) while consuming food or drink, might thus be able to satisfice on the shangri la diet under non-ideal circumstances (where even sugar water in a teacup is difficult to get)...

seth (2007-06-05 14:30:07)

Many people have applied the theory behind the Shangri-La Diet by holding their nose closed while eating. It's called "nose-clipping".

## **Memorial University Continues to Destroy Its Reputation (2007-05-15 15:45)**

A [1]paper by Saul Sternberg and me questioned a 2001 Nutrition [2]paper by Ranjit Chandra, a nutrition professor at Memorial University of Newfoundland. We were not the first to question Chandra's published work. Many years earlier, a nurse named Marilyn Harvey, who worked for Chandra, complained to Memorial that Chandra could not have done the research he claimed to have done. It is now obvious that Harvey was right. A panel convened by Memorial, however, found that she was wrong – more precisely,

The university said it did conduct an investigation of Chandra's research, but based on what it knew at the time, "properly determined there was insufficient evidence to sustain the complaint against Dr. Chandra."

Harvey claimed that certain data didn't exist. The Memorial panel was unable to figure out if this was right or wrong!

Harvey showed a lot of courage. She put herself at considerable risk by challenging Chandra, who was the best-known professor at Memorial. By doing a travesty of an investigation, Memorial University failed to protect her. And



now Memorial University [3]is defending what they did! Such a defense is a second travesty.

As the person responsible, the President of Memorial, Axel Meisen, continues to demonstrate his cluelessness. When the truth about Chandra became evident, he [4]said, "I don't think one can conclude that everything Dr. Chandra did is under suspicion."

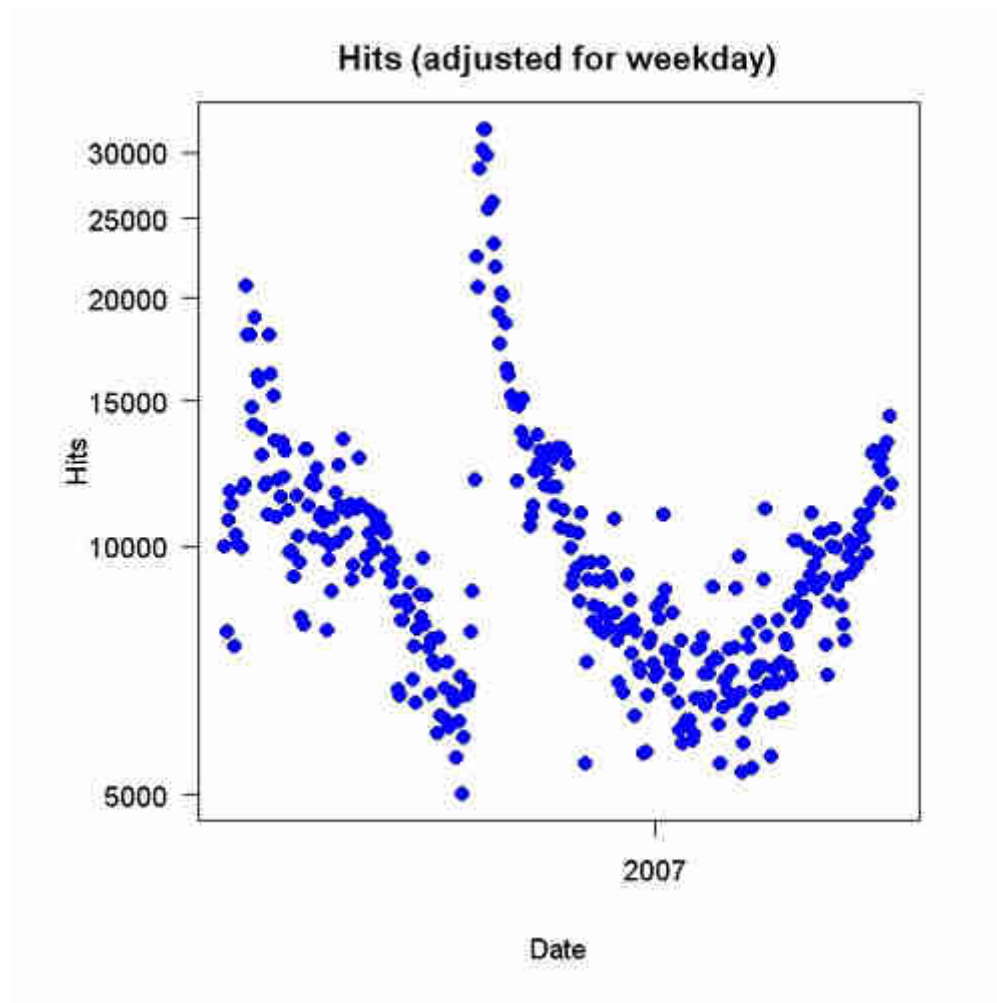
[5]More about Chandra.

1. [http://sethroberts.net/chandra/2003\\_Chandra\\_letter\\_in\\_Nutrition.pdf](http://sethroberts.net/chandra/2003_Chandra_letter_in_Nutrition.pdf)
2. [http://sethroberts.net/chandra/Effect\\_of\\_Vitamin\\_and\\_Trace\\_Element\\_Supplementation\\_on\\_Cognitive\\_Function\\_in\\_Elderly\\_Subjects.pdf](http://sethroberts.net/chandra/Effect_of_Vitamin_and_Trace_Element_Supplementation_on_Cognitive_Function_in_Elderly_Subjects.pdf)
3. <http://www.cbc.ca/canada/newfoundland-labrador/story/2007/05/15/chandra-mun.html>
4. <http://www.themuse.ca/view.php?aid=38529>
5. <http://sethroberts.net/chandra/index.html>

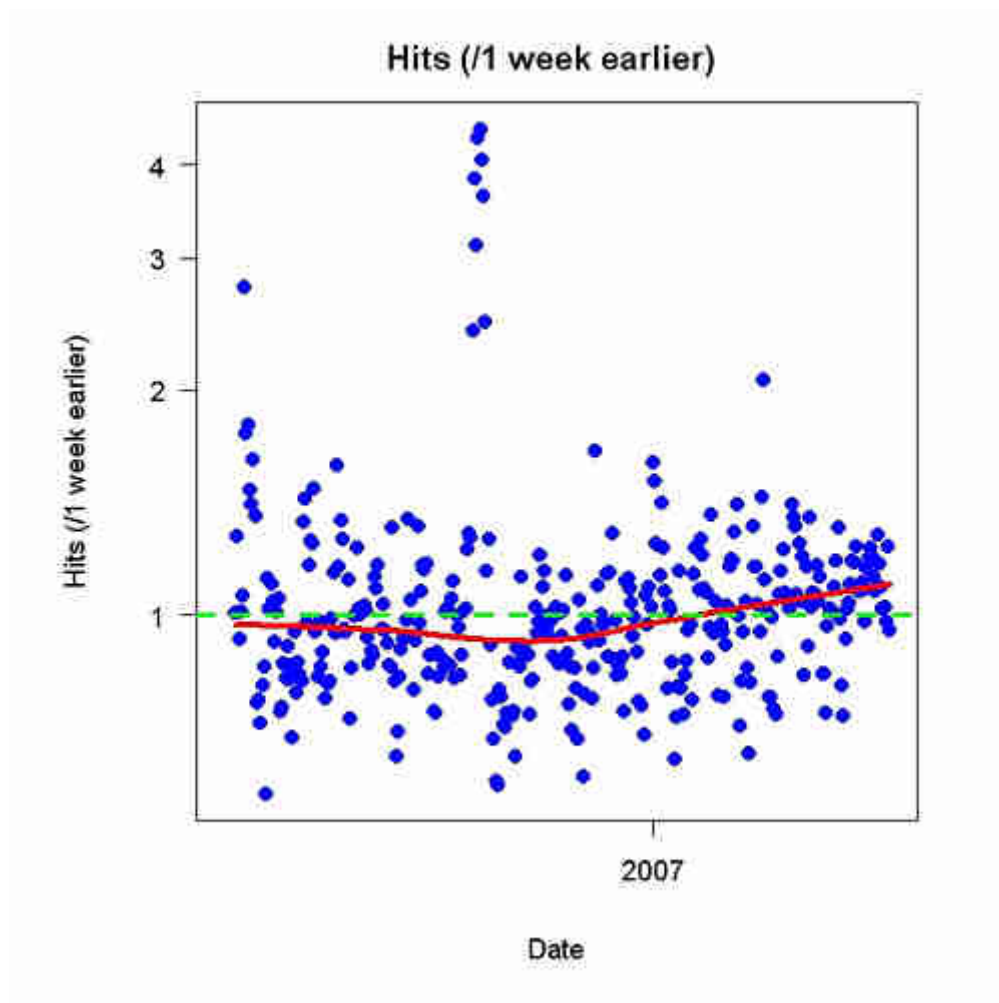
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### **Will It Last? (part 2) (2007-05-16 06:38)**

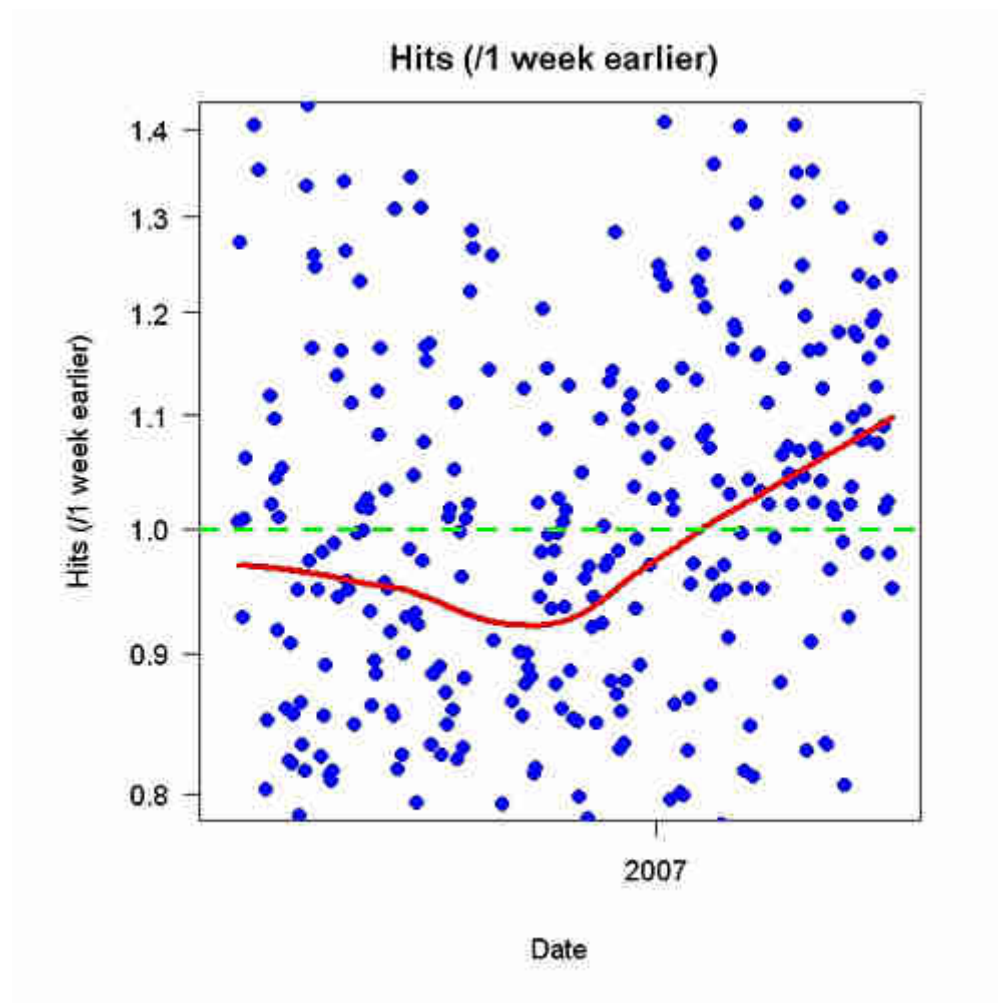
I posted [1]earlier about the recent increase in hits to the Shangri-La Diet [2]forums. Here is an updated graph.



My shallow data analysis failed to show me the most interesting thing: An increase in the rate of change. To see rates of change, I plotted ratios: hits today/hits one week before. I used one week because there are strong day-of-week effects: Sunday is different from Monday, etc. Here is a graph of these ratios.



The green line is no change. Points below the green line indicate decreases; above the green line, increases. The red line is from loess. Here is a close-up that shows the red line more clearly.



Since November, the rate of increase has been increasing. 5 %/week would be huge; the rate is now 10 %/week. This thrills me. It is a sign of what the Chinese call "word to word."

1. <http://www.blog.sethroberts.net/2007/04/04/will-it-continue/>
2. <http://boards.sethroberts.net/index.php?action=collapse;c=1;sa=expand#1>

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Stephen M (Ethesis) (2007-07-22 17:42:41)  
 Hmm, this will be interesting to see next year.

### Why Blogs are Better-Written (2007-05-16 21:02)

... than other stuff the blogger writes: 1. Shorter. 2. More emotional. 3. More personal.

Example 1: Philip Weiss. Love his [1]blog, did not love his [2]book. Alas.

Example 2: Rebecca Aronauer. Love her [3]blog, especially the [4]book reviews. This [5]magazine article was less great. I hope this isn't the best writing I will ever do. [6]More blog theory.

1. <http://www.philipweiss.org/mondoweiss/>
2. <http://www.metacritic.com/books/authors/weissphilip/americanaboo>
3. <http://raronauer.blogspot.com/>
4. <http://raronauer.blogspot.com/2006/12/raronauer-reviews-in-2006.html>
5. [http://www.salesandmarketing.com/msg/content\\_display/publications/e3i778b0e5af917c8c649a51ebf1bd4fe4b](http://www.salesandmarketing.com/msg/content_display/publications/e3i778b0e5af917c8c649a51ebf1bd4fe4b)
6. <http://www.blog.sethroberts.net/2007/05/13/where-did-blogs-come-from/>

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Candy Minx (2007-05-17 07:11:33)

I think there is an immediate gratification with blogs too. And you are writing knowing "someone" might read it... I don't know if my comment function is working but here is a review I did of your book... [http://gnosticminx.blogspot.com/2007/05/there-is-no-spoon\\_16.html](http://gnosticminx.blogspot.com/2007/05/there-is-no-spoon_16.html)

seth (2007-05-17 07:25:07)

Thanks for the great review, Candy. Maybe I should have called it the Matrix Diet, huh? My favorite part of the book is at the end, too.

Candy Minx (2007-05-18 09:33:31)

I am glad you were able to stop by and visit my review. Yes, The Matrix Diet would have been funny...I love movies so sometimes I see comparisons. I think The Shangri-La Diet is a perfect title though. I am still feeling benefits from the four basic rules. My skin feels amazing. I slept like a rock last night no wakin for 8 hours...that is unusual for me. did you read my link about Jane Jacobs when she passed away? I was impressed when you referenced her in your book. I hope you will add my review to your page with online reviews.

seth (2007-05-18 17:58:36)

I will add your review to the list of reviews, gladly! I didn't see your Jane Jacobs obituary - I'll look for it.

Tina (2007-06-01 01:18:32)

I'm less than a third-way through your book, and so far, I like it, so as far as I'm concerned, you have nothing to worry about. Also, I like Omega-3s and I like Cory Booker. I'm glad everything is going so well for your book- and I take it- you. Thanks to YOU, my diet's going pretty well for the second day into it. Thanks.

### **Andrew Gelman on Blogging (part 1 of 3) (2007-05-18 15:55)**

Long ago, scholars taught. Then they taught and wrote books. Scholarly journals began. Scholars taught and wrote books and articles. Now a few of them teach, write books and articles, and blog. For example, Andrew Gelman, a professor of statistics at Columbia University, whose blog is [1]here. To learn more about this new form of scholarship, I interviewed Andrew.

What led you to start blogging?

I started the blog in 2004 as a way for the students and postdocs in my research group to communicate with each other-the idea was that we would post items on our recent research and half-baked ideas, and it would be an open forum for us to comment on each others' ideas, also with the opportunity for outsiders to add thoughts. It also seemed

like a good way to publicize our work. I decided to post daily, and I figured that on days that I had nothing to say, I could just post one of my old papers. (As it turned out, I actually have a big backlog of blog entries now.)

Have there been any unexpected effects of blogging?

The blog itself developed differently than I expected. My students and postdocs rarely posted on it (except when I went on vacation and explicitly asked them to do an entry per day) so it became much more of my own personal forum. I've somehow developed a fairly equanimous "blog personality" in which I can comment on research by myself and others. Beyond that, I wouldn't say there have been unexpected effects. The most positive effects have been:

Commenters pointing me to software and research of which I'd been unaware;

Having to type up my vague ideas has forced the ideas into a less-vague state; it's also helpful to have to justify my thoughts to skeptical strangers;

Publicity for my work; I think that my ideas may be reaching more people now than before. But I anticipated all these effects. If those three positive effects went away or became small, would you stop blogging? If they all went away, and they weren't replaced by something else positive, then I suppose I'd stop. I do have a feeling of accomplishment from publishing every weekday for over 3 years (for my own sanity, I generally keep a no-weekend-posts rule), but if I wasn't getting anything out of it, I'd probably lose motivation and stop.

1. <http://www.stat.columbia.edu/~gelman/blog/>

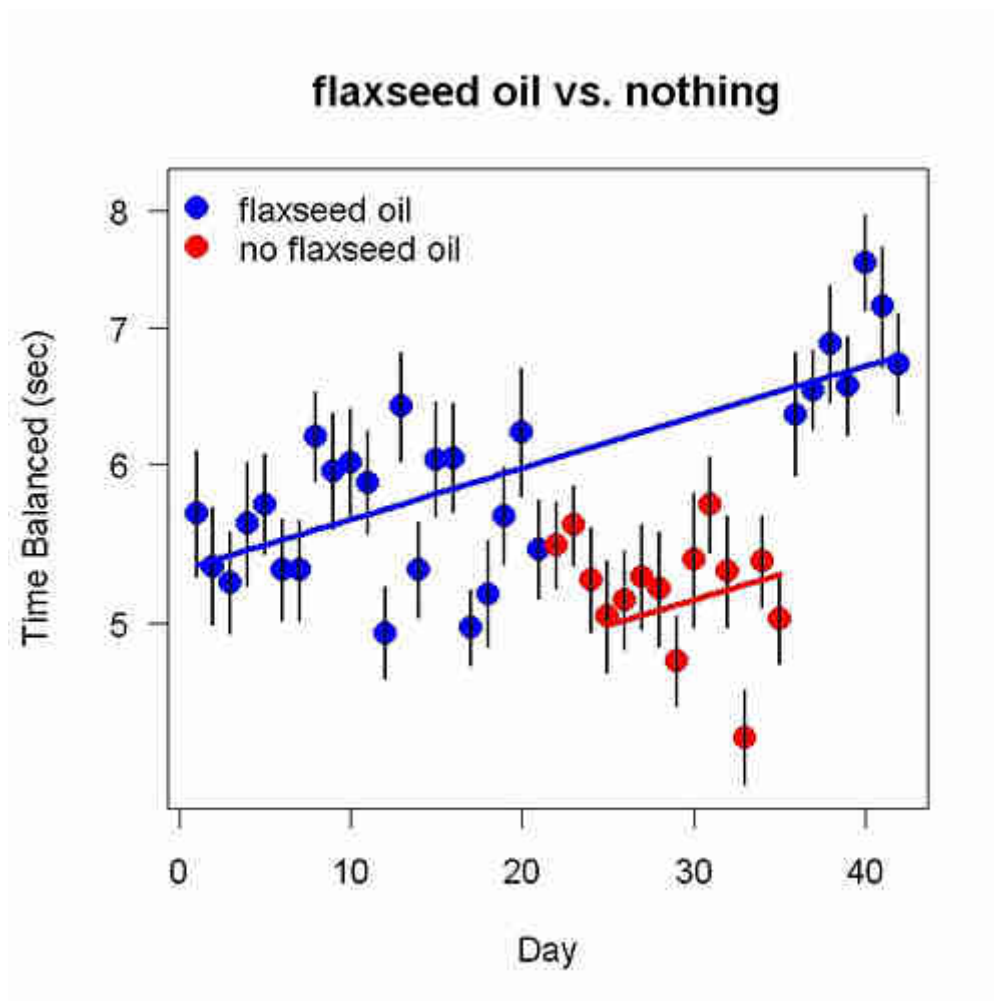
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### **Science in Action: Omega-3 (flaxseed oil vs. nothing 1) (2007-05-19 06:27)**

Do our brains need more omega-3? I have blogged about this [1] many times. My first two self-experiments to answer this question compared flaxseed oil (high in omega-3) with olive oil or sesame oil (low in omega-3). My balance was better with flaxseed oil, suggesting the answer is yes. However, another interpretation is (a) flaxseed oil had no effect and (b) sesame oil and olive oil made my balance worse. To test this possibility, I compared flaxseed oil to nothing (no supplement). If flaxseed oil has no effect, the two conditions should be the same. If flaxseed oil improves my balance, my balance should be better during the flaxseed-oil condition.

During the flaxseed-oil condition, I drank 4 tablespoons/day of flaxseed oil – 2 at 10 am, 2 at 10 pm. The balance test was at 8 am the next day. During both conditions, I did not eat fish.

Here are the results:



There was a large and very clear difference between the conditions. It took about three days of no flaxseed oil before the difference stopped increasing. On the first day of resumption of the flaxseed oil, my balance was much better than the day before. Comparing the two conditions (omitting the first three days of the nothing condition),  $t = 7$ .

These results support the idea that flaxseed oil made my brain work better.

Are injury-causing falls the [2]new scurvy? The large fast improvement in my balance when I resumed flaxseed oil does resemble the large fast improvement when a person with scurvy eats oranges.

I was surprised by the time course of the decrement during the no-flaxseed condition: It looks different than [3]what happened when I drank olive oil. In this experiment, my balance got worse for about 3 days and then stopped getting worse. In the previous experiment, my balance appeared to get worse for at least 9 days. This may be due to the high omega-6 content of olive oil – omega-6 (almost identical to omega-3) may displace omega-3. In the absence of omega-6, omega-3 takes longer to deplete.

1. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

2. <http://www.blog.sethroberts.net/2007/04/29/does-too-little-omega-3-cause-falling/>

3. <http://www.blog.sethroberts.net/2007/04/21/science-in-action-omega-3-flaxseed-oil-vs-olive-oil/>

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Rick (2007-05-19 07:05:33)

Would you get the same results with fish oil?

seth (2007-05-19 08:12:24)

Good question. Comparison of fish oil and flaxseed oil is high on my list of things to do.

peter (2007-05-20 09:02:55)

i note that your scores increased significantly after you "cycled" off flax seed oil. There is theory, mostly applied to exercise, where the results are better if one cycles on and off intense exercise, i.e., a short period of intense exercise followed by rest or low level exercise. see, A Healthy Mix of Rest and Motion <http://www.nytimes.com/2007/05/03/fashion/03Fitness.html> this theory has been applied generally to all activities, e.g., showering alternatively with hot and cold water etc.. I wonder if cycling on an off flax seed oil would improve ones score and ultimately result in a higher level of performance?

seth (2007-05-20 11:37:10)

My balance scores have always increased whenever I do the test – the general term for this is "practice effect". In other words, I don't think the "time off" had anything to do with it. Notice how the results "after" nothing fall on a line that fits the "before" nothing points – they show steady improvement, too. If you look at the other balance data I have posted, you will see there has always been steady improvement. I think it is due to more and more of the brain being devoted to the task. The exercise effect you talk about is surely due to a different mechanism.

### **Andrew Gelman on Blogging (part 2 of 3) (2007-05-19 21:25)**

To me the most interesting effect of [1]your blog is educational – when I read it I feel like I'm getting a painless lesson in advanced statistics. Any idea if it affects many other readers that way?

It's nice to hear this, but it's probably like the difference between watching baseball and playing it. A reader feels he or she is getting an education by reading the blog, but you really learn by doing. On the other hand, you (and many other readers) are active data analysts. So I suspect that you're really learning from your own data analysis. But the blog could be helpful because you go back and forth—something on the blog can inspire you to try something, which then motivates a question which is answered on the blog, etc.

In any case, I certainly help the people for whom I directly answer questions. Years ago I decided it was less effort to answer people's questions than to say No. (This was back when strangers would email me after reading [2]Bayesian Data Analysis with questions about nonconverging Gibbs samplers and the like.) Anyway, if I'm answering a question anyway, I might as well do it on the blog.

One thing I've tried to avoid is the lazy pattern of answering the easy questions and ducking the hard ones. I notice this on some computer bulletin boards (for example, R-help): There are some people who pounce on any easy question that comes up (often to tell people to Read the Manual). But when you ask a hard question, you get responses from a different sort of person. That's who I want to be. If it takes too much effort to be helpful in this way, I'd rather not try at all.

[3]Part 1 of this interview.



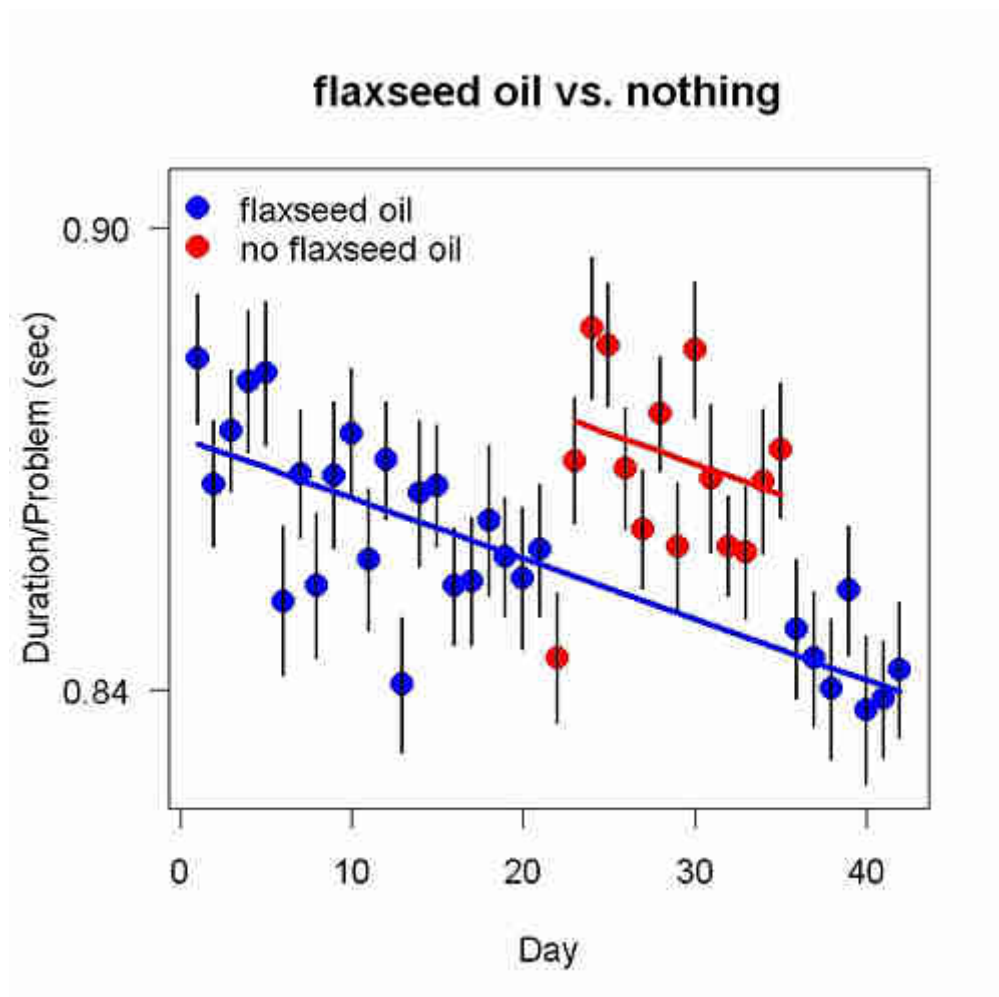
1. <http://www.stat.columbia.edu/~gelman/blog/>
2. <http://www.stat.columbia.edu/~gelman/book/>
3. <http://www.blog.sethroberts.net/2007/05/18/andrew-gelman-on-blogging-part-1-of-3/>

### Science in Action: Omega-3 (flaxseed oil vs. nothing 2) (2007-05-21 15:59)

Here are more results from my comparison of flaxseed oil with nothing. I wrote earlier about the [1]balance results.

Each day I measured how quickly I could do each of 100 simple arithmetic problems (e.g.,  $2+7$ ,  $5-2$ ,  $5*6$ ). I learned about this task from [2]Tim Lundeen. Tim did the task with paper and pencil whereas I used [3]R (a statistics-oriented language) on my laptop to do the experiment: For each problem, I typed the answer and then hit return. "FALSE" was printed if I made a mistake. The next problem appeared immediately.

Here are the average solution times:



There was a very clear difference,  $t = 6$ . It took more than one day for the effect to become clear, in contrast to the

balance results, where it took more than two days.

These results confirm what Tim found. Unlike what he did and my balance measurements, no special equipment was used (besides a computer). This may be the easiest way to study the effect.

My balance results have obvious practical value: Old people [4]often seriously hurt themselves due to loss of balance. What about these results? Well, failure to react fast enough causes many car accidents. Flaxseed oil (and probably other sources of omega-3) may make you a better driver.

[5]Directory of my omega-3 posts.

1. <http://www.blog.sethroberts.net/2007/05/19/science-in-action-omega-3-flaxseed-oil-vs-nothing-1/>
2. <http://www.blog.sethroberts.net/2007/02/16/omega-3-and-arithmetic/>
3. <http://www.r-project.org/>
4. <http://www.blog.sethroberts.net/2007/04/29/does-too-little-omega-3-cause-falling/>
5. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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Jeff Winkler (2007-05-22 10:00:28)

Fascinating. Could you post/email the R program? I assume it logs the results to a file for analysis..

seth (2007-05-22 10:03:55)

I will post the program.

Jack Christopher (2009-03-19 10:04:02)

Are you vegetarian or vegan? I'm am, but if you're not, fish and krill oil are supposed to be better utilized by the body than flax.

## Five Similar Words of Wisdom (2007-05-21 23:04)

1. I have mentioned [1]several times what [2]Loren Berlin, a student at the University of North Carolina, told Nicholas Kristof, the New York Times columnist: Stop writing about African failures, start writing about African successes.

2. At the recent New Yorker Conference, Cory Booker, the mayor of Newark, NJ, [3]told this story:

I moved into Newark around 1995. . . In my first month there I saw my first shooting ever. . . I had my life threatened . . . That same month I met this woman who changed my life. She's an ornery, tough as nails, just an amazing certifiably insane leader. She was the head of the Brick Tower Tenants Association. . . I meet this woman . . . The first thing I say to her, in my Yale Law School arrogance, I say to her, "Ma'am, I'm Cory Booker, I live across the street, I'm here to help you."

She looks at me and she says, "You want to help me, first tell me what you see around you." . . .

"I see drug dealers." Which I said in a very respectful tone, in case they overheard me. "I see a crack house." I describe the neighborhood.

"Well, you could never ever help me."

"What do you mean?"

"Boy, you need to understand something. The world you see outside of you is a reflection of what you have inside of you. If you only see problems and darkness and despair that's all there's ever going to be. But if you see hope and opportunity and even love, then you can be somebody that makes a change."

3. As I mentioned [4]earlier, in *First, Break All the Rules*, the authors summarize what they learned from thousands of interviews into one lesson for managers:

Don't waste time trying to put in [your employees] what was left out. Try to draw out what was left in.

4. At the end of my [5]long self-experimentation paper, I wrote:

[Jane] Jacobs (2000) argued that caste systems and other forms of discrimination retard economic development because they prevent certain jobs from becoming the seeds of new businesses. . . . Belief that something is bad makes it harder to learn what it is good for – including what it could become.

I was referring to the belief of many psychology professors that self-experimentation is bad.

5. In an [6]interview with someone from Buffalo, NY, Jane Jacobs said how development of Buffalo should proceed:

You need to do something – I hate to keep repeating myself – that's unique to Buffalo, that comes out of Buffalo itself. You don't want to keep acting like a company town.

In other words, don't try to make Buffalo more like other cities. Try to make it less like other cities.

Curious, huh?

Thanks to [7]Tobian, who blogs about Ethiopia, for reminding me of the [8]Loren Berlin letter.

1. <http://www.blog.sethroberts.net/2007/04/23/what-loren-berlin-a-student-at-the-university-of-north-carolina-wrote-nicholas-kristof/>
2. <http://www.lorenberlin.com/>
3. <http://www.newyorker.com/online/video/conference/2007/booker>
4. <http://www.blog.sethroberts.net/2007/05/12/my-theory-of-human-evolution-business-book-edition/>
5. <http://repositories.cdlib.org/postprints/117/>
6. <http://www.gse.buffalo.edu/fas/bromley/ccs/part5.htm>
7. <http://tobian.blogspot.com/2007/05/learn-faith.html>
8. <http://www.lorenberlin.com/>

## R Programs Used to Study Omega-3 (2007-05-22 10:17)

I [1]recently posted that flaxseed oil affected how fast I did simple arithmetic problems (a way to measure brain function). Someone asked to see the [2]R programs I used. Here they are.

```
> arithmetic.add
function (trials=100, condition = "test2", procedure = "no mistake correction",note="")
{ # collect new arithmetic data
#
invisible()
start.time=Sys.time()
condition=new.condition()
start.expt()
trls=sample(rep(c("+","-","*"),times=c(34,34,34)),size=trials) #determine trial sequence
t=arithmetic[1,]
for (tr in 1:trials) {
t2=c(current(),condition=condition,procedure=procedure,trial=tr,arithmetic.new.line(func=trls[tr]),note=note)
t=rbind(t,t2)
}
arithmetic«-rbind(arithmetic,t[-1,])
save.ws()
arithmetic.plot()
cat("total time",round(difftime(Sys.time(),start.time, unit="mins")), "minutes\n")
}
```

```
> new.condition
function (conditions.so.far = arithmetic $condition)
{ # get new condition name
#
# conditions.so.far vector of conditions so far
#
cat("most recent condition",last(conditions.so.far),"nth is condition")
condition=scan(nlines=1,what="character",quiet=TRUE, sep="!")
condition
}
```

```
> start.expt
function ()
{ #wait for Enter to start data collection
#
cat("press Enter to start "); scan(quiet=TRUE)
}
```

```
> arithmetic.new.line
function (func="+")
{ # give addition, subtraction, or multiplication problem
#
# func function
#
b=sample(0:9,2)
```

```

if(func=="+") answ=b[1]+b[2]
if(func=="-") {b[1]=b[1]+b[2];answ=b[1]-b[2] }
if(func=="*") answ=b[1]*b[2]
start.time=Sys.time()
cat(b[1],func,b[2],"= ")
a=scan(n=1, what = "integer", quiet = TRUE)
msec=as.integer(1000*difftime(Sys.time(),start.time,unit="sec"))
correct=a==answ
if(!correct) print(correct)
list(type=func,first.num=b[1],second.num=b[2], msec=msec, answer=as.integer(a),correct=correct)
}

```

```

function (vec, n = 1, drop = 0)
{ #return last n elements of vec
#
# vec vector
# n number of elements
# drop elements at end to drop before taking n elements
#
le=length(vec)
okay.le=le-drop
vec=vec[1:okay.le]
le=length(vec)
ind=(1+le-n):le
vec[ind]
}

```

If you would like help using these programs, please contact me.

1. <http://www.blog.sethroberts.net/2007/05/21/science-in-action-omega-3-flaxseed-oil-vs-nothing-2/>
2. <http://www.r-project.org/>

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Maja (2007-05-23 07:11:31)

Wow, to somebody like me who doesn't know much about statistics, this looks like a very impressive formula. My 16-year old daughter wants to study psychology, but doesn't like maths. I'm not sure whether I should show her it or not.

Matt (2007-06-05 10:38:54)

I can't get this to work. There is a function called last() that is called by new.condition() that I don't have on my build of R. Is this a function you forgot to include?

seth (2007-06-05 14:10:58)

```
oops. here it is: function (vec, n = 1, drop = 0) { #return last n elements of vec # # vec vector # n number of elements #
drop elements at end to drop before taking n elements # le=length(vec) okay.le=le-drop vec=vec[1:okay.le] le=length(vec)
ind=(1+le-n):le vec[ind] }
```

### Andrew Gelman on Blogging (part 3 of 3) (2007-05-23 05:15)

What have you learned about blogging?

I'm surprised that there are no other statistics blogs. Chris Genovese used to do one but he stopped--and his blog was more personal than [1]mine, less about statistics. I've tried to stay on topic (most of the time), since that's what I have to offer. I have political opinions, cute stories about my kids, etc., but why should anyone care about this?

I'm also surprised there are so many blogs about economics. Especially since psychology is more interesting (to me). Is this just path-dependence, or maybe actually there are a lot of other blogs out there that I don't know about. I read some econ blogs partly from clicking my link to Alex's [2]Marginal Revolution blog which links to others. There are also a lot of tech blogs and computer science blogs but this is less surprising given that it's on a computer. I suppose there are also lots of blogs about current TV shows and so forth that I don't really have interest in. As it is, I already read too many blogs. I'm trying to spend more time reading the newspaper. Regarding my own blog, first I was surprised that my students/postdocs/colleagues had so little interest in posting, second I was surprised at how few comments I get on most entries. I don't always know what will get comments, actually. I've had some success using the blog as a sort of out-box where I can park my ideas, but it's not a panacea. For one thing, it means I spend more time on the computer, which is hard on my hands and maybe degrades my general work productivity.

It's fun having 1000 readers a day (whatever that means; as a statistical consumer I'm remarkably uncurious about where the numbers come from. One day my postdoc discovered that we had set a switch wrong on the counter, and it turned out we had 1000 rather than 500 per day) although it's hard for me to think if that's a lot or a little. Many of my favorite statistical ideas have had struggles with acceptance (for example, there are still a lot of statisticians, even Bayesians, who fit models without even trying to see if they produce replications that look like observed data) so the proselytizer in me wants that large audience.

Finally, I've learned that writing can be easier than reading. As is illustrated by the above response that I've spewed out.

Parts [3]1 and [4]2 of this interview.

1. <http://www.stat.columbia.edu/~gelman/blog/>

2. <http://www.marginalrevolution.com/>

3. <http://www.blog.sethroberts.net/2007/05/18/andrew-gelman-on-blogging-part-1-of-3/>

4. <http://www.blog.sethroberts.net/2007/05/19/andrew-gelman-on-blogging-part-2-of-3/>

## Cool Self-Experimentation With Wine (2007-05-24 06:27)

We found that simply recorking an unused bottle of wine and placing it in the refrigerator is quite effective, but the use of the VacuVin pump was a noticeable improvement.

Details [1]here. Thanks to [2]Aaron Blaisdell, I use a Vacuvin-like pump.

1. <http://www.alexhealy.net/papers/experiment/index.htm>

2. <http://pigeonrat.psych.ucla.edu/>

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## Jane Jacobs on Pay Per Click (2007-05-24 08:54)

Jane Jacobs has [1]said:

You canâ€™t prescribe decently for something you hate. It will always come out wrong. . . . People [who] give prescriptions, who have ideas for improving things, ought to concentrate on the things that they love and that they want to nurture.

Emphasis added. This applies more widely than I might have thought. [2]Here is an example:

Two gourmet chocolate companies. Two pay-per-click ad campaigns. Two very different results.

Charles Chocolates – a small artisanal chocolate manufacturer in Emeryville – spent \$3,000 on pay-per-click ads over a three-month period last year and sold fewer than five boxes of chocolates. Meanwhile, Lake Champlain Chocolates – a rival chocolatier based in Vermont – sells about 30,000 pounds of chocolates each year from pay-per-click ads.

What accounts for that difference?

With 100 employees, Lake Champlain is far larger than 25-person Charles Chocolates. And with an annual pay-per-click budget of \$100,000, it also spends far more on ads than Charles Chocolates did. But that doesn't really explain the difference. When Lake Champlain started experimenting with pay per click in 2002, its budget for all forms of marketing was just \$5,000.

What Lake Champlain did have was an inquisitive employee who threw himself into learning everything about how pay per click works – mastering arcane details and strategies about keyword bidding . . . Middings was fascinated by a medium that seemed the reverse of conventional marketing. . . . Middings taught himself the tricks of the trade. He developed a list of 70,000 – seventy thousand – keywords to bid on.

Jane Jacobs on the [3]food industry and [4]scientific method.

1. <http://www.gse.buffalo.edu/fas/bromley/ccs/part5.htm>
2. <http://www.sfgate.com/cgi-bin/article.cgi?file=/chronicle/archive/2007/05/20/BUGSIPTC891.DTL&type=printable>
3. <http://www.blog.sethroberts.net/2007/02/14/jane-jacobs-on-the-food-industry/>
4. <http://www.blog.sethroberts.net/2007/02/05/jane-jacobs-on-scientific-method/>

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Jared Schroder (2007-06-12 16:53:42)

Its all about the keyword tail. Long tailed keywords are the foundation of a successful pay per click campaign. Especially when you are dealing with a relatively small budget. A company like Charles Chocolates could waste their entire monthly budget on a keyword like "chocolate" in a single day on Google alone. By implementing keywords such as "buy chocolates online", "specialty box of chocolates", "hand made chocolate candy", or "online specialty chocolates" and thousands of variations of these you can get the best bang for your PPC buck. This is where a small company can find great ROI for their pay per click efforts. You have to be careful with extensive keyword lists, not to overwhelm yourself. So breaking this list down into common components and by the need for different ad copy is very important. Another option is to locally target your campaign to the geographic areas where your customer base is located. This way you can bid more aggressively on the more competitive keywords and still limit your daily ad spend. All of these tactics can help a smaller company succeed in the pay per click game, but if you don't have the necessary ability to track which keywords are generating your sales then you may be "up a creek". My advice is to get the proper tracking and be very smart about keyword building and organization.

Jared Schroder (2007-06-12 16:55:11)

Its all about the keyword tail. Long tailed keywords are the foundation of a successful pay per click campaign. Especially when you are dealing with a relatively small budget. A company like Charles Chocolates could waste their entire monthly budget on a keyword like "chocolate" in a single day on Google alone. By implementing keywords such as "buy chocolates online", "specialty box of chocolates", "hand made chocolate candy", or "online specialty chocolates" and thousands of variations of these you can get the best bang for your PPC buck. This is where a small company can find great ROI for their pay per click efforts. You have to be careful with extensive keyword lists, not to overwhelm yourself. So breaking this list down into common components and by the need for different ad copy is very important. Another option is to locally target your campaign to the geographic areas where your customer base is located. This way you can bid more aggressively on the more competitive keywords and still limit your daily ad spend. All of these tactics can help a smaller company succeed in the pay per click game, but if you don't have the necessary ability to track which keywords are generating your sales then you may be "up a creek". My advice is to get the proper tracking and be very smart about keyword building and organization. For more advice check out InternetGatekeeper.com

## Science in Action: Omega-3 (flaxseed vs nothing 2 continued) (2007-05-24 21:57)

Flaxseed oil increased how fast I did [1]simple arithmetic problems (e.g.,  $7+5$ ,  $9-4$ ,  $3*7$ ). To better measure the effects of fats on my brain, I wanted to find out which problems were most sensitive to flaxseed oil. Then I could hope to create a more sensitive test.

Before looking at the data, I assumed that problems that required more processing – more time – would be more sensitive. But this was not what I found.



First, I compared problems with different functions – plus, minus, and times. (E.g., 5+4 is a plus problem.) Sensitivities:

function	F	n
plus	15	1400
minus	9	1400
times	16	1400

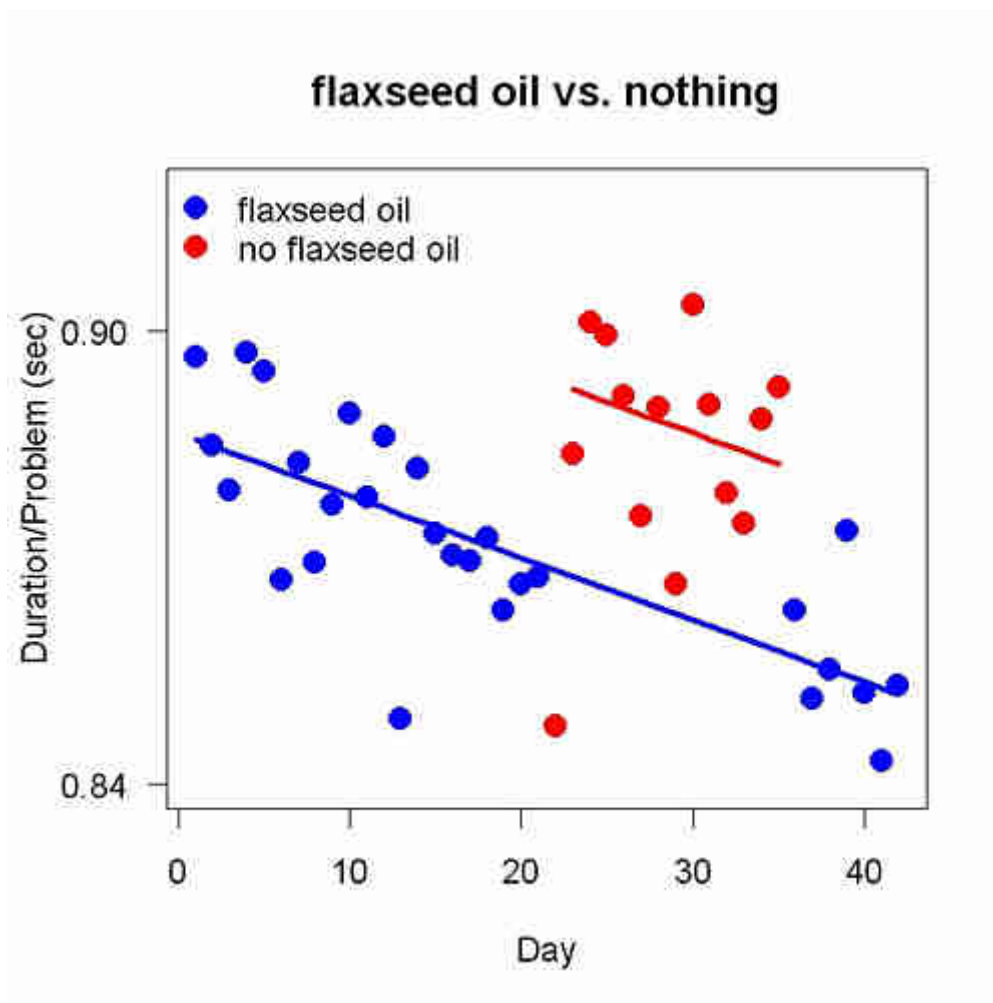
The F values are for the flaxseed/nothing comparison. Greater F = more sensitive. The n values are the number of trials. These results more or less agreed with my preconceptions: times problems were slower than the others.

Then I compared problems based on their correct answers. I divided the problems into groups with roughly equal number of trials. Sensitivities:

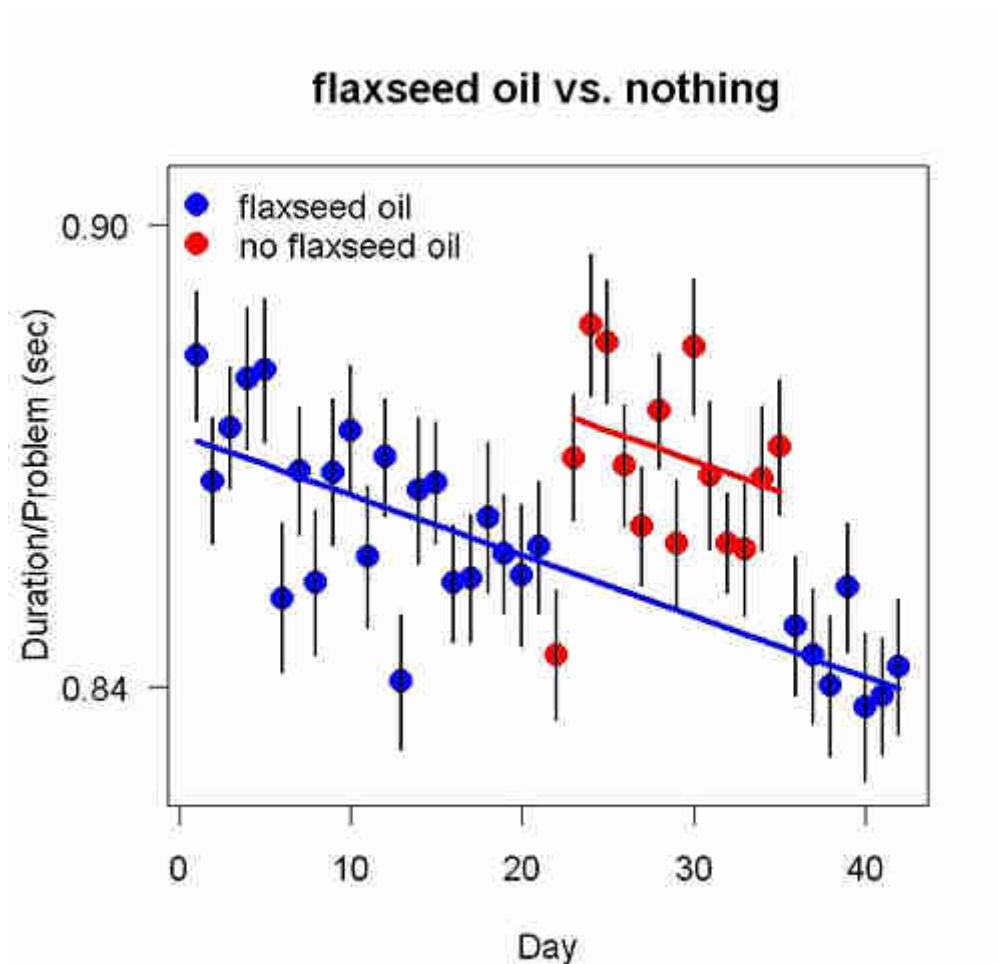
answer	F	n
0-3	12	1000
4-6	15	700
7-9	6	900
10-19	2	900
>19	13	500

This was the surprise: Problems with answers 10-19 contributed almost nothing to the overall sensitivity, while problems with answers on both sides contributed much more. Was typing "1" the problem? No, problems with the single-digit answer "1" were no worse than problems with similar one-digit answers.

I redid the analysis omitting problems with answers 10-19 and found more sensitivity to the effects of flaxseed oil – a slightly larger F (or t) value, even though the number of trials was 20 % less. Here is a graph based on the more sensitive analysis:



No important differences from the earlier, less sensitive analysis:



Based on these results I will get rid of the subtraction problems and the problems with answers from 10-19. I haven't decided whether I will keep the total number of problems the same; I might increase the number (which is now 100 - 100 arithmetic problems per session).

1. <http://www.blog.sethroberts.net/2007/05/21/science-in-action-omega-3-flaxseed-oil-vs-nothing-2/>

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Jeff Thomas (2007-05-25 08:09:04)

I just wanted to point out that for most of these simple problems you are not doing calculations in your head, but rather you are just remembering a memorized answer. This is particularly true for multiplication (where you have memorized the tables) and addition (where you do it so often that you have essentially memorized the answers as well). Subtraction is something you do a bit less often in real life, and thus for some of the subtraction problems you may actually be doing some quick manipulation in your head. So the lower sensitivity of the subtraction problems to the oil might indicate that the oil affects how fast you can call up something from your memory, rather than how fast you can manipulate numbers in your head.

seth (2007-05-25 10:18:47)

The subtraction problems are very simple, e.g.,  $9 - 6$ . Just as easy as  $5 + 3$ , on the face of it. But it's true that I probably do much more addition than subtraction in everyday life. I can test this idea by seeing if the subtraction problems showed more

improvement/session at the beginning than the addition and multiplication problems. If I do them less in real life, they should show more improvement.

peter (2007-05-25 15:08:08)

is there a way to measure your ability to solve more abstract problems, thereby providing a more meaningful measurement of intelligence and any improvement as the result of consuming omega-3 fatty acids?

seth (2007-05-25 15:35:12)

"Intelligence" – you mean the ability to do well in school (which is how the first IQ tests were constructed)? It is quite hard to measure the ability to do more abstract problems; I don't think experimental psychologists have come up with good ways of doing so. My interest is in brain function; arithmetic problems and balance are just two ways to measure that. Since the whole brain is made of the same materials (neurons and glial cells, etc.), I believe that anything that improves one sort of brain function is likely to improve all sorts of brain function. So far the evidence supports that belief.

### **Memorial University, Meet Zagreb University (2007-05-26 06:39)**

From this week's BMJ:

The saga began in the late 1980s when Dr Chalmers was preparing a systematic review of epidural anaesthesia. He noticed that much of the text and data in a 1974 paper co-authored by Professor Kurjak were identical to those in a paper from a different group of authors published three years previously.

He reported his observations to the editor concerned and to Professor Kurjak's university [Zagreb University]. Both requested that the matter be handled discreetly.

In 2006 Dr Chalmers discovered that Professor Kurjak continued plagiarising. A report in 2002 showed that he had taken material from a Norwegian doctoral thesis and published it under his own name as a chapter in a book on fetal neurology.

Likewise, Dr. [1]Ranjit Chandra continued his misdeeds long after someone complained to his employer, Memorial University of Newfoundland. Memorial University and its President, Axel Meisen, deserve some sort of award for now [2]claiming Memorial did nothing wrong when it allowed Chandra to continue.

More [3]here. An [4]editorial by me about how well universities handle this sort of thing.

1. <http://sethroberts.net/chandra/index.html>

2. <http://www.blog.sethroberts.net/2007/05/15/memorial-university-continues-to-destroy-its-reputation/>

3. <http://www.bmj.com/cgi/content/extract/334/7603/1077-a>

4. [http://sethroberts.net/chandra/2006\\_Dealing\\_with\\_scientific\\_fraud-a\\_proposal.pdf](http://sethroberts.net/chandra/2006_Dealing_with_scientific_fraud-a_proposal.pdf)

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Andrew Gelman (2007-05-26 08:16:38)

Seth, I'm curious—your article on scientific fraud seems to be labeled by the journal as a "Debate." Were there accompanying articles or discussions by others?

seth (2007-05-26 08:48:50)

Not exactly. It was the first example of a new section ("Debate") and there were no other articles in that section, no replies to what I had written. However, in that issue an editorial from the editor said this: "Public Health Nutrition will be the forum for communication and debate about the nature of what needs to be done and the best way to do it" which means the journal must have a role that is wider than simply receiving and accepting or rejecting original contributions. The journal must engage actively in discussion about the big issues that affect the nutrition-related well-being of society. The journal must be an example of best practice in terms of defining, adopting and following standards of best practice."

### **Science in Action: Sunlight and Sleep (could it be?) (2007-05-26 11:42)**

In an airport a few weeks ago, chatting with a stranger, I told her about my self-experimentation. [1]When I stand a lot, I sleep better, I said. She said that sunlight had the same effect on her: When she sunbathes, she sleeps better. Better how? I asked. More deeply, she said.

I had found that [2]morning sunlight (an hour, say) helps me sleep. Her idea was different: No one sunbathes in the morning. She was saying that the amount of sunlight matters independent of the time of day.

This was fascinating because I remembered two days, prior to studying the effects of standing and morning light, after which I had slept very well (i.e., woken up feeling very well-rested):

1. A day when I went to many artists' studios to look at their work (an event called Open Studios).
2. A camping trip.

Both days I was on my feet a lot. But both days I was also outside a lot, I realized.

Yesterday I gave her idea a test: I spent more time than usual outside – about three hours more, I'd guess. I spend a lot of time sitting in cafes writing; yesterday I sat outside instead of inside.

This morning I woke up feeling unusually well-rested. This bears more investigation.

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1. <http://repositories.cdlib.org/postprints/117/>

2. <http://repositories.cdlib.org/postprints/117/>

Timothy Beneke (2007-05-26 12:21:47)

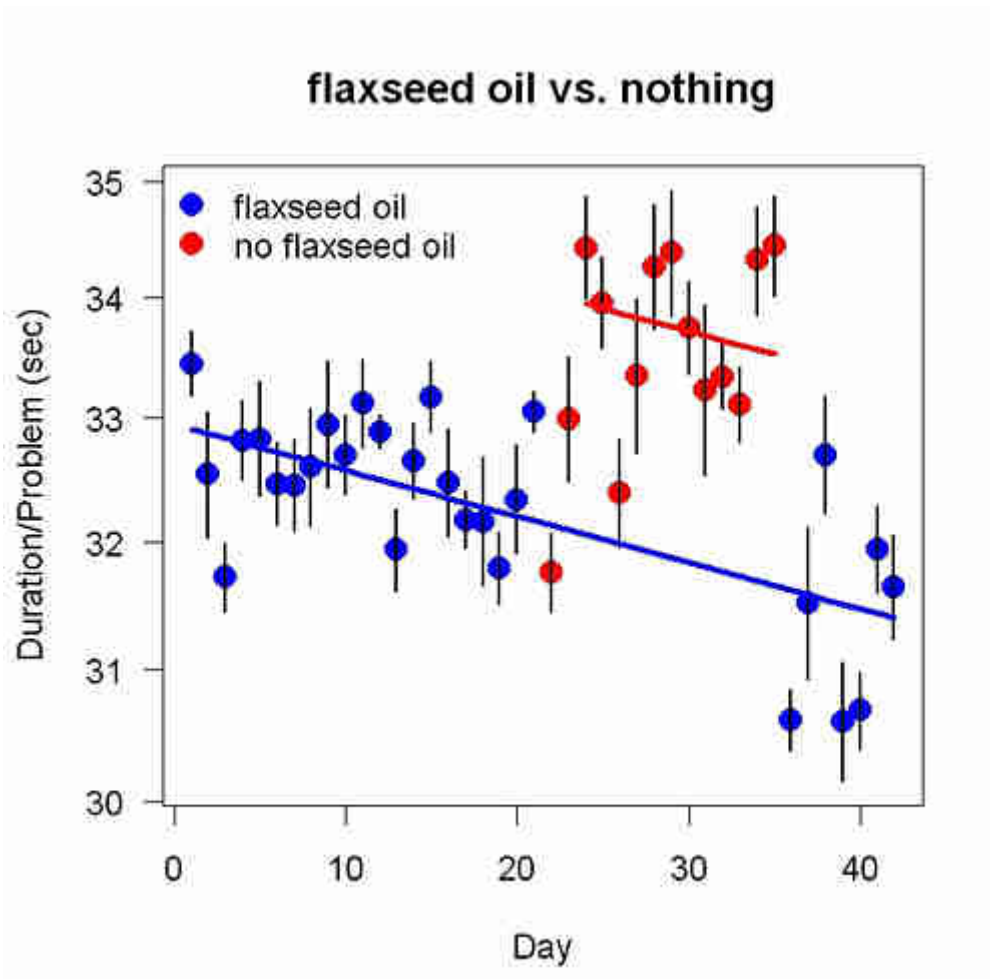
You might recall the experiment done at Wake Forest where they had subjects who liked to sunbathe spend time in two areas of artificial sunlight; one of which had the ultraviolet light screened out. They were given mood assessments afterwards and alternated exposures in the different rooms. Mood was much higher after being exposed to the UV light; and when they were given a choice at the end of the experiment to pick one of the two rooms to sunbathe in, 11 of 12 preferred the one with UV light. Here's one summary <http://isteve.blogspot.com/2006/04/tanning-and-mood.html> "Professor Steven Feldman The Wake Forest team analysed 14 people, aged between 16 and 34, who typically used tanning beds two times a week. Each volunteer spent 15 minutes lying on a sunbed which exposed them to UV rays and then on another - again for 15 minutes - which released no rays. The volunteers were not told which beds released UV. The subjects were asked if they would like to return days later and use a sunbed of their own choosing. Twelve returned and 95 % [?] opted for the bed which radiated UV light. They said it made them feel good and helped them relax. The researchers believe that tanning may release endorphins into the bloodstream." And another URL: <http://news.bbc.co.uk/2/hi/health/3917985.stm> So the better sleep could be mediated by better mood during the day. Maybe you should try being outside exposed to UV rays versus being in the shade outside... There's also the question whether sunlight is a conditioned stimulus; we react with positive emotion because we associate it with freedom as children (Rain rain go away), and warmth. I don't think in desert cultures people love sunny days... It may be that being out in "beautiful" sunny days lifts mood, which enhances sleep. So I'd be curious to see if being outside on cloudy days has the same effect. God science is complicated and hard - but the knowledge can change your life. Cheers, Tim

Linda (2007-08-30 03:58:05)

I have noticed that on days I lay out in the sun for a minimum of one hour, I sleep like a baby. Other days, I don't sleep well at all. Unfortunately, I live in an area where we get rough winters. I am going to try, however, to be out in the winter on sunny days to see if that still enhances my sleep. I wish I could bottle whatever it is that helps me sleep.

### **Science in Action: Omega-3 (flaxseed oil vs. nothing 3) (2007-05-27 05:58)**

I blogged earlier about comparing flaxseed oil and nothing: here are the [1]balance and [2]arithmetic results. I also used a paper-and-pencil memory-scanning task that I described [3]earlier. Here are the flaxseed vs. nothing results from that task:



The difference was even clearer -  $t = 8$  - than with the other measures (balance,  $t = 7$ ; arithmetic,  $t = 6$ ). It took about three days of no flaxseed oil before its effect completely wore off, but only one day of resumption to reach full strength again - the pattern seen several times earlier.

The test took 5 minutes/day, twice as long as the arithmetic problems but only half as long as the balance test. The equipment demands are mild: printer, pencil and paper (in addition to computer).

I'll discuss the implications in a later post.

1. <http://www.blog.sethroberts.net/2007/05/19/science-in-action-omega-3-flaxseed-oil-vs-nothing-1/>
2. <http://www.blog.sethroberts.net/2007/05/21/science-in-action-omega-3-flaxseed-oil-vs-nothing-2/>
3. <http://www.blog.sethroberts.net/2007/04/25/science-in-action-omega-3-flaxseed-oil-vs-olive-oil-continued/>

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Geoff (2007-05-29 15:50:43)

It will be interesting to see what kinds of results you see (if any) when you start blinding the tests. Any good ideas on how to go about doing so?

seth (2007-05-29 16:26:05)

Use capsules. I can put them in identical containers that I label on the bottom and mix up.

Geoff (2007-05-30 11:12:16)

So is there a blinded version of your experiments in the works?

seth (2007-05-30 14:34:01)

By me, no. I prefer to do experiments where I am less sure of the answer. Most placebo-controlled experiments are, in my opinion, poor experiments. They are poor from both a pure-understanding and a practical point of view. From the pure-understanding point of view, they are bad because the manipulation is so crude: the conditions being compared differ in dozens of ways. From a practical point of view, they are bad because the knowledge they provide is almost useless: The interesting practical comparison – the comparison that interests consumers – is not between Treatment A and a placebo, it is between two plausible treatments.

Tina (2007-06-01 00:53:01)

Good point! Have you seen David Burns' critique of clinical trials of psychiatric medication? See chapter 4 of his newest book entitled WHEN PANIC ATTACKS. The chapter is called "Placebo Nation: The Truth about Antidepressants and Anti-Anxiety Medications." Essentially, the two of you are agreeing.

seth (2007-06-01 06:49:42)

Thanks. And thanks for telling me about Burns' book, which I haven't seen.

### **Science in Action: Sunlight and Sleep (could it be? continued) (2007-05-28 06:36)**

Yesterday I deliberately spent almost all day indoors. I didn't change anything else. This morning I woke up feeling less refreshed than usual. Here are the last three days:

Day 1: Try to spend lots of time outdoors (in the shade). Result: Wake up feeling more refreshed than usual.

Day 2: Try to spend lots of time outdoors (in the shade). Result: Wake up feeling more refreshed than usual.

Day 3: Try to spend as little time outdoors as possible. Result: Wake up feeling less refreshed than usual.

My belief is increasing. Via Google I found [1]this:

Person 1: During the warm months of the year, I swim ...a lot! . . . The amount I sleep during swimming season can increase by 1-2 hours.

Person 2: You're probably sleeping longer due to all the extra calories and physical exertion you use by swimming.

Person 1: Nah, it's the same physical exertion year round for me. I exercise year round. But in the warm months, my exercise takes me outside where I am exposed to sunlight instead of artificial indoor light. That's how I know it's the sunlight that helps me sleep better.

I also found this:



We have found that people who are outdoors more have fewer sleep problems.

From an interesting [2]mini-book about the dangers of sleeping pills (apparently the new ones cause cancer). I haven't yet found the study it refers to.

1. <http://s3.forumforfree.com/a/index.php/nighthawk/t1309.html>
2. <http://www.darksideofsleepingpills.com/all.html>

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Matt (2007-05-28 21:29:17)

I've been informally experimenting with sunlight as a sleep aid for the past year, and I now have the suspicion that it helps me sleep better but unfortunately no hard data to share. [1]Janet Raloff's wonderful two-part article on lighting's environmental and human impacts is what started me thinking about it last year. She cites some interesting research being done in this area. I'm glad you're taking a hard look at it now! I'd be interested in participating in a group study if such a thing comes about.

1. <http://www.sciencenews.org/articles/20060527/bob9.asp>

Trina (2007-05-29 08:28:17)

I am very grateful for the information concerning sleeping pills. This is completely new to me and a frightening revelation. I have used eszopiclone sporadically for a few years, although I tried to be careful and usually took  $\frac{1}{2}$  dose when I did use them. And really, my sleep was never really improved with them. Now they are dumped! You seem to keep saving my life!

seth (2007-05-29 08:32:13)

Thanks, Trina.

Timothy Beneke (2007-05-29 11:58:43)

I sleep better, and feel better generally when I get a lot of fresh air; both when the air I'm sleeping in is fresh and when my apartment during the day has fresh air. When you are outside you are getting both more sunlight and more fresh air; this is a confound that would have to be dealt with. Can you get more sunlight without getting more fresh air and see if you still get the effect?

seth (2007-05-29 16:02:55)

I can sit in front of a big window looking out.

Janet Rosenbaum (2007-06-03 11:57:07)

Doesn't a window filter out one component of UV light?

### **The Secret of My Success (2007-05-29 06:01)**

Jane Jacobs said dozens of things that impressed me, [1]this most of all:

You can't prescribe decently for something you hate. It will always come out wrong. You can't prescribe decently for something you despair in. . . . I think people [who] give prescriptions, who have ideas for improving things, ought to concentrate on the things that they love and that they want to nurture.

She had noticed that people who hate cities or who despair of cities make bad prescriptions for them.

It was a long time before I realized this comment applied to me. I used [2]self-experimentation to improve my sleep and mood and to lose weight. Unlike most health researchers, I wasn't trying to solve other people's problems – I was trying to solve my own. No wonder I persisted in spite of many failures.

[3]Similar advice. Another [4]example.

1. <http://www.gse.buffalo.edu/fas/bromley/ccs/part5.htm>
2. <http://repositories.cdlib.org/postprints/117/>
3. <http://www.blog.sethroberts.net/2007/05/21/five-similar-words-of-wisdom/>
4. <http://www.blog.sethroberts.net/2007/05/24/jane-jacobs-on-pay-per-click/>

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## Best Google Talks I've Heard So Far (2007-05-30 08:50)

The collection of Google Talks at YouTube is the best collection of stuff I've found to listen to while I [1]look in the mirror every morning. The best (so far) of the best:

Don Tapscott, author of [2]Wikinomics:

[EMBED] Jessica Livingston, author of Founders at Work: [EMBED] Reed Hundt, author of In China's Shadow: [EMBED]

1. <http://www.blog.sethroberts.net/2007/05/06/life-size-faces/>
2. <http://wikinomics.com/>

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Brad (2007-05-30 16:43:18)

How big is the mirror you use, and how far away? How long do you look at yourself, & around what time in the morning? Sorry for the barrage of questions!

## **Don't Follow the Money (2007-05-30 19:38)**

Dr. Erika Schwartz, a New York internist, rightly [1]chastises the New York Times for a [2]long article about stroke (part of a series on major causes of death) that says nothing about prevention. Schwartz attributes the over-emphasis on treatment to relative cost: Treatment is far more expensive than prevention. Memo to Gina Kolata: Don't follow the money.

This is a genuine problem with self-experimentation: It costs almost nothing. No status-enhancing grant is required to do it. One of many ways that science is at odds with human nature.

1. <http://www.drerika.com/blog?action=viewBlog&blogID=232675754370729215>

2. [http://www.nytimes.com/2007/05/28/health/28stroke.html?\\_r=2&ref=health&oref=slogin&oref=slogin](http://www.nytimes.com/2007/05/28/health/28stroke.html?_r=2&ref=health&oref=slogin&oref=slogin)

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Tina (2007-06-01 00:44:16)

Tell me about it!

Erika Schwartz, MD (2007-06-06 12:26:07)

Thank you Seth! You are correct and your approach to helping people loose weight with natural, awareness enhancing methods works. I can attest to it and I am a conventional doctor who got fed up with a system that more often harms than helps. DrErika

seth (2007-06-06 12:33:22)

Thanks, Erica. "A system that more often harms than helps" – I think you have put your finger on the problem. The less obvious effects turn out to be more damaging than the more obvious effects are beneficial. I was watching a movie this morning that begins with an old man taking a handful of pills. "Please don't let my old age turn out like that," I thought to myself.

## **The New Yorker Crosses Another Line (2007-05-30 22:41)**

A few days ago the New Yorker [1]website added magazine-quality material to only the website. Stuff just as good as the stuff in the magazine, but not in the magazine. This is a first for The New Yorker and perhaps for any magazine. The never-before-broken rule has been that the website-only stuff is inferior or at least subsidiary to the printed stuff.

The particular item is [2]humor by James Collins, who used to write for Spy. Brilliant writer. I read his pieces over and over. I especially liked one about friendship ("The Nature of Friendship Today"). "My social life was paying off," it began.

The New Yorker website doesn't have a good place for Collins's piece on the home page. It is listed under "Shouts & Murmurs" but there is no indication that, unlike the other Shouts & Murmurs links, which precede and follow it, it is online only. Well, yes, Jackie Robinson was a first baseman, but to describe Jackie Robinson as a first baseman is incomplete.

I suspect my old editor, Susan Morrison, is behind this just like I think she was behind the New Yorker line-crossing a [3]few weeks ago. Incidentally, the printed Shouts & Murmurs (about a [4]creative astronaut) is very good.

1. <http://www.newyorker.com/>
2. [http://www.newyorker.com/online/2007/06/04/070604on\\_onlineonly\\_collins](http://www.newyorker.com/online/2007/06/04/070604on_onlineonly_collins)
3. <http://www.blog.sethroberts.net/2007/05/14/a-line-has-been-crossed/>
4. [http://www.newyorker.com/humor/2007/06/04/070604sh\\_shouts\\_kanin](http://www.newyorker.com/humor/2007/06/04/070604sh_shouts_kanin)

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Frank Quist (2007-05-31 07:20:37)

I'm not sure it's exclusive to the New Yorker. There are many magazines that publish web exclusives. What defines 'good' is subjective, of course. Just going through some magazines in my head, I can think of the Economist (its Global Agenda section) and the New Republic (they publish some great stuff online sometimes). The Atlantic Monthly, Mother Jones and The American Prospect also might be contenders.

seth (2007-05-31 07:34:33)

All the web-exclusive stuff I have seen on magazine websites has always been stuff that would not appear in the magazine for either or both of two reasons: quality too low or format not appropriate. Web exclusives are often written by interns, for example. That recent reality show about Rolling Stone interns showed many examples.

Dan Liebert (2007-06-05 06:08:58)

This is too short for a Shouts and Murmurs hard copy.

seth (2007-06-05 06:22:28)

Interesting point. Yes, why doesn't The New Yorker have a place for humor of this length? Maybe it could go in Talk of the Town – now that they're signed.

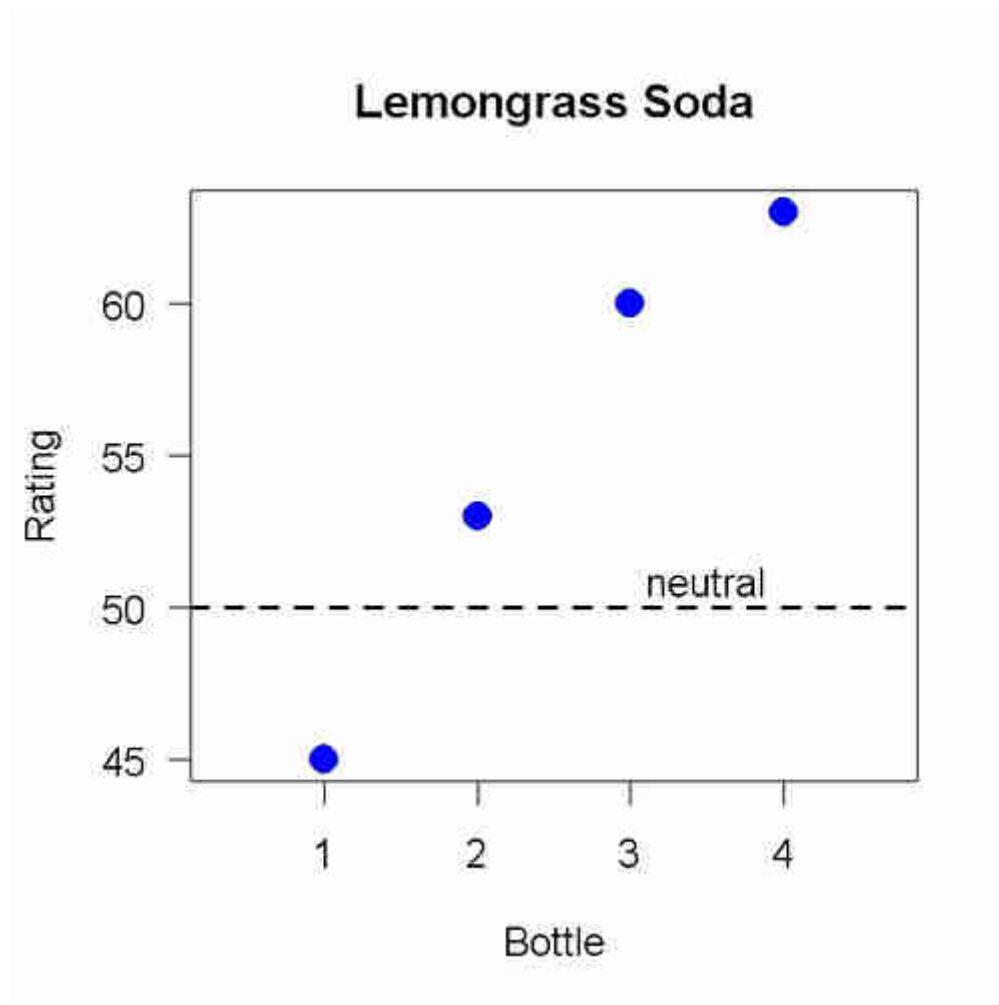
## 2.6 June

### Science in Action: Flavor-Calorie Learning (simple example) (2007-06-01 11:52)

The Shangri-La Diet is partly based on the idea that we learn to associate flavors and calories. A food's flavors become associated with the calories in the food. This association makes the flavor more pleasant.

I would like to learn more about this associative process so I have been studying it. Here is a simple example. At intervals of a day or so between bottles, I drank 4 bottles of a lemongrass-flavored soda. I chose that flavor because it was unfamiliar. Each bottle had 50 calories of cane sugar. I rated how pleasant each bottle tasted on a scale where 40 = slightly unpleasant, 50 = neutral, 60 = slightly pleasant, and 70 = somewhat pleasant. I drank the bottles between meals – far away from other food.

Here are the ratings.



The flavor gradually became more pleasant.

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Timothy Beneke (2007-06-01 14:55:55)

Next, try swishing it around in your mouth and spitting it out, and keep assessing for taste pleasure; see if it has a deconditioning effect as one would predict. My experience with "enlightened tasting" where I let myself taste but not swallow junk food that I'm attracted to suggests that by the third day, the flavor will be negative again...

peter (2007-06-01 15:39:37)

this reminds me of how drinkers "acquire" a taste for scotch.

seth (2007-06-01 16:02:31)

Thanks for the suggestion, Tim. Peter, you're quite right. Some of my first studies of this used liquor, such as orzo. I've been saving scotch for a later experiment.

Oren (2007-06-02 06:16:56)

What do you expect to happen if you switch to lemongrass soda with a low-calorie sweetener?

seth (2007-06-02 06:29:20)

I expect the rating would go back down to around 50. I've had hundreds of Diet Cokes, almost never with meals. I still don't like the flavor. I like the carbonation, the thirst-quenching, and the sweetness – whereas the flavor: uh, okay.

Thierry (2008-06-28 23:19:24)

I never could enjoy diet cola, but most people I know are saying that they cannot drink the regular stuff anymore. Would you say that this comes from the fact that they have associated the taste with calories from other foods eaten at the same time?

seth (2008-06-29 08:10:53)

yes, you are probably right, Thierry

## **Until Nassim Taleb Starts a Blog (2007-06-01 14:27)**

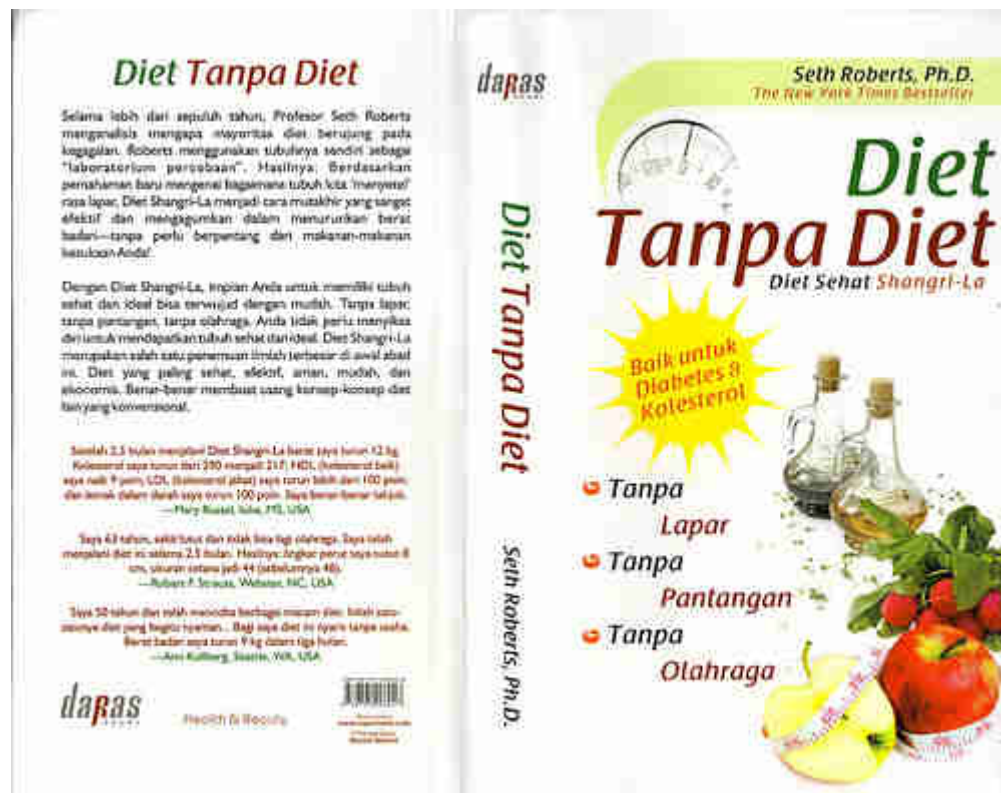
This [1]collection of his Amazon reviews will do. Memo to Taleb: You might like Exploratory Data Analysis by John Tukey.

1. [http://www.amazon.com/gp/cdp/member-reviews/A3V94HTDKTOY10/ref=cm\\_cr\\_auth/103-3675802-8345458?ie=UTF8&sort%5Fby=MostRecentReview](http://www.amazon.com/gp/cdp/member-reviews/A3V94HTDKTOY10/ref=cm_cr_auth/103-3675802-8345458?ie=UTF8&sort%5Fby=MostRecentReview)

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Tim Lundeen (2007-06-01 21:58:12)

Wonderful list, thanks!



The dust jacket of the Indonesian edition of The Shangri-La Diet. What does "diet tanpa diet" mean? What's this about diabetes and cholesterol? Uh, take my book – please.

And I mean it. Because I am stunned and happy to have written a book that anyone in Indonesia could possibly care about.

Addendum: By staring at the cover, I have figured out that tanpa means "without."

Psy student (2007-08-24 14:01:34)

The bit on the front of the book that says "Baik untuk Diabetes & Kolesterol" is roughly translated as "Good for those with diabetes and (high) cholesterol". "Tanpa" does indeed mean "without", you're spot on on that (doesn't guessing right make you feel smart? It always does for me). "Tanpa lapar, tanpa pantangan, tanpa olahraga" therefor means 'Without hunger, without restrictions, without sports'. Sadly, if I had seen this Indonesian version of the book in a store, I would've laughed my ass off and passed it off as a fad diet that'll crash and burn within a month. The Indonesian cover seriously sounds that bad... (Luckily, I heard about this diet through different channels. I haven't tried it yet as my book hasn't arrived yet at the store, but once it's there, I'm going for it. Wish me luck!)

## One-Sided Critiques of the Day (2007-06-02 21:22)

Here is an example of the negative evaluation bias I mentioned [1]earlier. Larry Sanger [2]criticizing a comparison of Wikipedia and the Encyclopedia Britannica:

Some might point to Nature's December 2005 investigative report<sup>1</sup> "often billed as a scientific study, though it was not peer-reviewed<sup>2</sup>" that purported to show, of a set of 42 articles, that whereas the Britannica articles averaged around three errors or omissions, Wikipedia averaged around four. Wikipedia did remarkably well. But the article proved very little, as Britannica staff pointed out a few months later. There were many problems: the tiny sample size, the poor way the comparison articles were chosen and constructed, and the failure to quantify the degree of errors or the quality of writing. But the most significant problem, as I see it, was that the comparison articles were all chosen from scientific topics. Wikipedia can be expected to excel in scientific and technical topics, simply because there is relatively little disagreement about the facts in these disciplines. (Also because contributors to wikis tend to be technically-minded, but this probably matters less than that it's hard to get scientific facts wrong when you're simply copying them out of a book.) Other studies have appeared, but they provide nothing remotely resembling statistical confirmation that Wikipedia has anything like Britannica-levels of quality. One has to wonder what the results would have been if Nature had chosen 1,000 Britannica articles randomly, and then matched Wikipedia articles up with those.

"Tiny sample size"? Hmm. How often have you heard "the sample size was too large"?

[3]Here is another example of a one-sided critique: her advisor's reaction to her work ("My advisor started out tearing apart the things I had done").

1. <http://www.blog.sethroberts.net/2007/04/24/if-science-had-been-invented-more-than-once/>
2. [http://edge.org/3rd\\_culture/sanger07/sanger07\\_index.html](http://edge.org/3rd_culture/sanger07/sanger07_index.html)
3. <http://thethesisblog.blogspot.com/2007/04/maybe-im-just-too-pro-science.html>

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## Science in Action: Omega-3 (conference submission) (2007-06-03 04:59)

A few days ago I submitted a title and abstract for a talk to be given at the November 2007 meeting of the Psychonomic Society, a group of experimental psychologists:



## Rapid Effects Of Omega-3 Fats On Brain Function

I measured the effect of omega-3 fats on my brain by comparing flaxseed oil (high in omega-3) with other plant fats (low in omega-3) and with nothing. Flaxseed oil improved my balance, increased my speed in a memory-scanning task and in simple arithmetic problems, and increased my digit span. The first three effects were very clear,  $t > 6$ . The effects of flaxseed oil wore off in a few days and appeared at full strength within a day of resumption. The best dose was at least 3 tablespoons/day, much more than most flaxseed-oil recommendations. Supporting results come from three other subjects. Because the brain is more than half fat, it is plausible that type of dietary fat affects how well it works. The most interesting feature of these results is the speed and clarity of the improvement. The tools of experimental psychology may be used to determine the optimal mix of fats for the brain with unusual clarity.

If I ever made a time line for my life, this submission would be one of the events.

[1]Directory of my omega-3 posts.

1. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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Tim Lundeen (2007-06-03 09:18:23)

Congratulations! It is an amazing discovery, and will have far-reaching effects as it becomes better known. It is also interesting to look at this result and try to see why it wasn't found earlier. We've known for some time that omega-3 and omega-6 are out of balance in the modern diet, and that people are healthier when they reduce omega-6 and increase omega-3. We've also seen some possible longer-term brain-health benefits from higher omega-3 intake, in terms of the effect on depression and affect. But no one found the right threshold for seeing the overnight effect on brain functioning; with the right intake levels, omega-3s (presumably DHA) increase overall brain performance (speed, balance, and it seems likely that overall IQ would also increase). So we finally have a relatively low-cost diet intervention that can make a significant, measurable difference to how well the world works. Not too shabby :-)

seth (2007-06-03 10:05:12)

That's an excellent question: why wasn't it found earlier? I will gather my thoughts and post something.

Tom (2007-06-03 10:59:13)

Why wasn't it found earlier? Reminds me of something Don Hewitt, creator of 60 Minutes, once said when he was asked why television was so awful. He said, "No one ever asked me a question about television to which the answer was not 'money.'"

Geoff (2007-06-03 11:06:12)

I think the finding is potentially interesting. However, without blinding your experiments, you open yourself up to really easy criticism. Namely, that the \*expectation\* of better performance (from the consumption of omega-3 fatty acids) leads to significantly better performance. It's pretty well-documented that expectations can significantly influence performance - see, for example <http://www.slate.com/id/2154331/> It would be a shame if your experiments were dismissed out of hand because you didn't blind your tests. I don't buy your argument that you didn't expect any effect when you first tried things, as there's plenty of suggestive material out there that omega 3 fatty acids influence brain function, e.g. that they may help relieve depression, help ADD sufferers focus, etc. And even if there weren't, your measurements are noisy, so an increase in performance that's purely random on day 1 could lead to an expectation of further performance gains on days 2 and forward - all of a sudden, a random effect ends up persisting because of a problematic experimental design.

seth (2007-06-03 14:12:20)

Tom, you may have something there. TV is bad because money plays too big a role. And scientists underperform because status-seeking plays too large a role. Self-experimentation made it easy to discover the effects of omega-3, but self-experimentation, because anyone can do it, is very low status. Geoff, I try to do the most informative experiments. There is already plenty of evidence against the expectations explanation: the dose effects that Tim Lundeen and I have found. The surprising effect I discovered was on my balance, not on depression – they are very different. (No one has ever speculated that Prozac improves balance, for example.) I don't know of the results you mention about "helping ADD sufferers focus", but I will look for them.

Timothy Beneke (2007-06-03 17:34:43)

I've been doing 2-4 tablespoons a day now of flax seed oil for a couple of weeks; i think it improves my sleep and seems to be kind of soothing. But I'm not sure exactly. I'm also engage in other experiments that are having effects... One question for Seth: If exhaustive controlled double blind studies were performed and determined that flax seed oil did not have the effects you were experiencing in balance, mental acuity etc., would you stop taking it? Would you conclude that other factors like expectation etc. were causing the effects? I ask because I take Juvenon, which may promote brain cell and metabolic efficiency – or may not, the science has not been done. But I respect Bruce Ames enough to give it a shot; if the science eventually says it does not work, I'll stop spending my money... I can't subjectively judge, though I am generally doing well intellectually...

seth (2007-06-03 18:57:09)

I've measured the effects – they don't disappear just because their explanation might change. I drive a scooter. It works. I won't stop driving just because someone else concludes either (a) scooters don't work or (b) they don't work the way I thought they did.

Geoff (2007-06-04 08:35:47)

Do a google search for "omega 3 cognition" and you'll see tons of material - over a million pages in my search - the meme is quite pervasive. Even if you somehow missed all of that, your "surprise" argument has a simple alternative explanation in the persistent random effect thing I described. I can imagine that expectation levels might have a dose-response effect, too: if thinking that you'll do well improves your performance, why shouldn't thinking that you'll do \*really\* well improve your performance even more? Maybe I'm misinterpreting you, but your suggestion that a blinded experiment would not be "informative" comes across to me as sounding like you have accepted your hypothesis as fact and are not interested in potential falsification. Given that you are already doing non-standard things with self-experimentation, why hand skeptics further reasons to doubt you? I think there's good reason to believe that some portion of your observed effect may be due to expectations. It might be 100 %, it might be 0 %, or it might be somewhere in between. A measure of the size of the expectation effect sounds like information to me, and interesting and valuable information to boot.

seth (2007-06-04 09:09:57)

"there's good reason to believe that some portion of your observed effect may be due to expectations." What is that good reason? Most studies that look for an effect of expectations come up empty. A blinded experiment would less information than other experiments (because the idea it would test is unlikely). I'm not saying it would be zero informative. My idea that varying the dose is a good way to control for all sorts of things (including expectations) is a well-accepted one within experimental psychology. I learned about it my first year of graduate school.

Geoff (2007-06-04 09:51:25)

RE expectations and performance, check out the literature on stereotype threat. There has been some fascinating recent work on expectations and test performance by Robert Rosenthal @ UCLA and Shelley Correll at Cornell - both were referenced in the Slate article I pointed you to above. (It's conceivable that the effect is a function of negative expectations)

Timothy Beneke (2007-06-04 12:08:57)

First, let me say that, given your track record, Seth, I would bet you are on to something very important. I think you have some rare capacity that I cannot describe to make objective judgments of subjective effects. On the other hand, wouldn't

virtually all scientists agree that a double blind study or series of studies with a thousand subjects, none of whom know what they are getting, or even what the study is about, being tested by experimenters who do not know who has gotten what, would tell us far more than one person engaged in self experimentation, no matter how skilled at objective self observation? Another point: the stereotype threat literature is interesting. Also the work of John Bargh and others who show that just by activating a schema in the mind, consciously or unconsciously, and without generating "expectations", behavior is altered. People exposed to words related to the elderly in word unscrambling tests walk more slowly leaving the experiment. People exposed to fast images that they associate with anger on a computer screen that they cannot consciously perceive act angrier in a situation where anger might be appropriate. The general strongly founded observation: When schemas are activated in our minds, consciously or unconsciously, we act in ways that are "consistent" with those schemas in situations where the schemas apply. The last 10 years of research are very strong on this... So could you have olive oil versus flax seed oil schemas in your mind influencing your behavior? It's only a hypothesis. I know that it's something some cognitive psych researchers would immediately ask upon encountering your findings...

seth (2007-06-04 13:25:21)

Thanks for the reference.

Geoff (2007-06-04 14:02:19)

An additional reason for blinding you might want to consider: You are trying to establish self-experimentation as a useful process for coming up with good ideas. I think there are some special considerations for experiments on one's self that are less of an issue when the experimenter and the subject are separate: Consider the rationale for double-blinding experiments: (1) if the subject knows the nature of the treatment and intended outcome, there may be placebo effects or the like, and (2) if the experimenter has a strong stake in a particular outcome, s/he may unconsciously (or consciously) bias measurements in a particular direction. With self-experimentation and no blinding, you get the worst of both worlds: Measurements are performed by and reports come from an interested party who knows the desired outcome. Now, you may be a reliable observer in spite of all these potentials for bias, or you may not be - I have no way of knowing. Conceivably, you may not even know if there is an unconscious bias. Without blinding, you're asking people to take on faith your reliability in the face of an interest in a particular outcome. Any other special considerations in evaluating self-experiments?

seth (2007-06-04 14:19:35)

Geoff, no experiment is perfect. To point out imperfections - possible imperfections - is no help at all in most cases because the alternatives are also imperfect. So long as one deals in hypotheticals. If there was evidence that effects such as the ones I describe (e.g., balance improvement) have been produced by expectations, I would be more interested in doing the experiments you describe. There isn't any evidence that dose-size effects can be produced by expectations in any domain, as far as I know. The Slate article doesn't reference any such evidence. It does mention work by Robert Rosenthal. A much better description of that work is here: <http://sciencethatmatters.com/archives/19> which describes how it has been over-used. Tim, if you look at the experimental psychology literature, you will find few if any placebo-controlled studies. I can't think of a single one. Is this because experimental psychologists are naive? All of them? No, it's because they understand there are better ways to control for expectations.

Paradigm (2007-06-05 03:19:50)

Sounds interesting but, placebo aside, doesn't four tablespoons a day make you gain weight?

seth (2007-06-05 06:07:17)

No I am not gaining weight. At [boards.shangriladiet.com](http://boards.shangriladiet.com) you will find many people who drink flavorless oil to lose weight. In my book *The Shangri-La Diet* you will find an explanation of why this works (and it certainly does, at least some of the time).

Tim V. (2007-06-05 11:05:25)

Interesting finding, but what is the mechanism that produces this change? From my limited knowledge of biology, I am surprised that resumption would have an effect within one day. Sure, the brain is full of fats, but I imagine most of them didn't

migrate there overnight. I share some of Geoff's concerns. Self-experimentation may be special with respect to placebo effects. I also share your infatuation with self-experimentation as a source of ideas and a way to convince yourself to pursue a finding. What is the major issue with recruiting even a small sample of naive participants and administering these supplements and tests to them? Is it IRB? In visual psychophysics we frequently have small sets of subjects, and usually a few of them are simply labmates who don't know precisely what we're up to, but are not entirely naive. Can you get a few of your friends/colleagues to do this sort of thing? I wouldn't bother going to elaborate lengths to "blind" the participants, but confirmation from people who don't share your motivations and expectations would go a long way towards convincing a lot of people like myself.

seth (2007-06-05 14:07:10)

There's been confirmatory data – as my abstract says – from three other people. As you suggest, I will try to find others who will also try it. About mechanism: I can't even guess, except that it involves replacement of omega-6 fats with omega-3 fats. Fats are loosely bound in cell membranes; the speed is plausible because of that fact.

Tim V. (2007-06-05 20:17:00)

Wow, somehow I completely missed the line "Supporting results come from three other subjects." even after reading through it twice. Sorry! For effects this dramatic (assuming it's reasonably strong in the other subjects you tested), the only problem you'll run into is people who don't understand how hard you'd have to work to sort of accidentally fake this data in performance tasks (which is what "placebo effect" implies to me). Unfortunately that includes almost every social scientist on the planet. You've got a friend in the visual psychophysicist, believe me. You only have to check out some of the articles at [journalofvision.com](http://journalofvision.com) to realize that. There was recently an article they published with N=1 for perhaps 1/2 of the reported experiments. The journal is peer-reviewed, respected, and has a higher impact factor than JEP: Human Perception and Performance, which is reasonably high-profile. Nice work! I look forward to your talk.

## **Vows = The Hunt? (2007-06-03 15:25)**

I told Joyce Cohen that I liked her column "[1]The Hunt" far more than the rest of the New York Times because it was about everyday life. They should have other columns like yours, I said – about finding a job or a mate, for example. She said that the [2]Vows section was sort of like that.

That's true. But how much?

Maybe I should give each Vows article a 0-100 Hunt score according to how well it approximates a Hunt column. I started reading the [3]most recent one. Then I came to this:

She is the host of "Winning Advice," on ABC Radio, and the author of "The Millionaire Zone: Seven Winning Steps to a Seven-Figure Fortune" (Hyperion). . . . But when the lopsided conversation turned to business, Ms. Openshaw perked up.

And decided I would not pursue my ranking system.

1. [http://realestate.nytimes.com/a9/search.asp?query=joyce+cohen&date\\_select=full](http://realestate.nytimes.com/a9/search.asp?query=joyce+cohen&date_select=full)

2. [http://query.nytimes.com/search/query?d=nytdsection%2b&o=e%2b&v=Style%2b&c=a%2b&query=vows&date\\_select=full](http://query.nytimes.com/search/query?d=nytdsection%2b&o=e%2b&v=Style%2b&c=a%2b&query=vows&date_select=full)

3. <http://www.nytimes.com/2007/06/03/fashion/weddings/03VOWS.html?ref=style>

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### New Yorker Hint (2007-06-03 22:44)

To decide whether to read a piece of fiction in The New Yorker, read the [1]press release.

1. [http://www.newyorker.com/services/presscenter/2007/06/11/070611pr\\_press\\_releases](http://www.newyorker.com/services/presscenter/2007/06/11/070611pr_press_releases)

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Andrew Gelman (2007-06-04 13:57:19)

But I hate spoilers! Especially for magazine fiction, there's that wonderful feeling of disorientation when you start reading and don't know anything about what's coming next. Unrelated P.S. You have google ads on your site. Is the \$ they bring in really worth the irrelevance they bring to the page?

seth (2007-06-04 14:02:37)

The press releases I've seen did not contain spoilers. I've skipped too many New Yorker stories I probably would have liked because I couldn't figure out in the first half-page or so what they were about. William Trevor's stories, for example. The Google ads are my toe-in-the-water of small business, which fascinates me. The best way to learn is to do.

peter (2007-06-04 18:50:21)

if you're counting, i don't mind the ad and it's ok with me if you make \$ \$ \$ to offset the cost of maintaining and contributing to the site. (as long as they're not pop up ads.

seth (2007-06-04 20:04:40)

Thanks, Peter. It's more \$ than \$ \$ \$.

### Science in Action: Sunlight and Sleep (background) (2007-06-04 22:22)

[1]Daniel Kripke, a professor of psychiatry at UC San Diego, has done lots of research on the effect of exposure to varying amounts of natural light. His subjects often wear meters that record the illumination level. His [2]latest paper (2004) on the connection between outside light and sleep reports several weak correlations between amount of light exposure and sleep quality:

mesor  $\log_{10}[\text{lux}]$  [a measure of light exposure] was . . . positively correlated with sleep quality ( $r_p = 0.17$ ,  $p < 0.005$ ), and negatively correlated with reported trouble falling asleep ( $r_p = -0.17$ ,  $p < 0.005$ ), waking up several times a night ( $r_p = -0.18$ ,  $p < 0.001$ ), waking up earlier than planned ( $r_p = -0.09$ ,  $p < 0.10$ ), and trouble getting back to sleep ( $r_p = -0.11$ ,  $p < 0.025$ ).

The introduction states:

Bright light has been recommended for treatment of various sleep disorders [13], but very few experimental trials have been reported.

"Very few" seems to mean none, given the absence of citations.

The paper ends:

In conclusion, low illumination has a small relationship to . . . sleep disturbances.

1. <http://psychiatry.ucsd.edu/faculty/dkripke.html>
2. <http://www.biomedcentral.com/1471-244X/4/8>

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### **Librarians vs. Soft Censorship (2007-06-05 06:35)**

The Shangri-La Diet was published because a [1]paper I wrote was amplified by blogs. [2]Here (from 2002) is something similar: one person's opinion amplified by a listserv. A librarian persuaded HarperCollins to publish a book by Michael Moore (Stupid White Men) that they had decided not to publish.

"They [HarperCollins] said it would be 'intellectually dishonest' not to admit that Bush has done a good job, and that the other things in the book wouldn't be believable if I didn't at least give Bush that much," says Moore. The author was certain that HarperCollins would cancel and destroy the book if he didn't accede to its demands.

1. <http://www.google.com/url?sa=t&ct=res&cd=1&url=http%3A%2F%2Frepositories.cdlib.org%2Fpostprints%2F117%2F&ei=CH91Rp7CFY6ahQ0039yJBw&usg=AFQjCNFPJxqS04nKippVE4qjEMBJGB53Hw&sig2=PPv617bnbQczr7NIcIEzZA>
2. <http://dir.salon.com/story/books/feature/2002/01/07/moore/index.html>

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### **Science in Action: Sunlight and Sleep (update) (2007-06-05 21:33)**

Today I had lunch with a friend and said, "I'd like to sit outside." I answered my phone indoors and went outside. I answered my email sitting outside.

I'm now convinced that more outdoor light exposure makes me sleep better – better in the sense that I wake up

feeling like I have slept more deeply. Whatever sleep does, it has done more of it. I'm convinced because I have gotten this well-slept feeling after six or seven days during which I spent several hours more than usual outdoor and did not get this feeling after two days when I spent an average or less-than-average amount of time outdoors.

I am going to start to measure my sleep quality with a rating and keep track of how long I spend outdoors.

The two questions that arise for me are: (1) As I posted before, controlling for fresh air effects. The best sleep I remember getting is when I slept in the corner of a room where there were 2 windows within 4 feet of my head on either side. I kept them open and woke up in a near euphoric state. So sleep is definitely better in fresh as compared with stuffy air. Might there be an effect that carries over from getting more fresh air during the day? (2) Is there a time of day effect? Do you get better sleep if you are outside earlier in the day? Does this increase wave amplitude, so that you are more "awake" when you are awake and more asleep when you are asleep? When I changed my circadian rhythms so that I went to sleep around midnight instead of 3:30 a.m., (following Seth's advice) I did it through getting a lot of sunlight early in the day and avoiding it later in the day. I noticed that later in the day when it was time to sleep, my body felt gripped by a very relaxed animal pleasure. I would really enjoy bedtime, something I did not experience when I went to bed at 3:30 a.m. All of this had a powerful effect on my mood generally. If your findings on increased sunlight and flax seed oil are even half true, they are mind-blowing. I'm going to experiment with both... Cheers!

Thanks, Tim. Re clean air: Someone else told me something similar: she slept better with the windows open. I tried it and indeed seemed to sleep somewhat better. But the effect wasn't large and not so clear after a while. So I stopped. Whereas the effect I see now shows no signs of going away and is so large there can be no doubt. But your comment shows a simple way to test the clean air explanation: open the windows in my bedroom. Maybe I will try again. I am inclined to discount this possibility because of the thousands of studies showing an effect of light on circadian rhythms. This gets to your "amplitude" idea. That is how I thought sunlight affected my sleep. In my recent observations, however, the additional sunlight happens late in the day (say, 4 pm) so I am surprised that it would affect amplitude of an oscillator. As you say if it is an oscillator effect time of day should make a difference – earlier in the day should be better. Whereas if it is a sleeping-pill-like effect later in the day should be better.

i think the best way to have a good sleep is that you are so busy and get tired . so when you have time and bed and of course fresh air , you can have a quite good sleep. in china, there is a traditional medicine , i remember some part of it , it says : cook the red beans and together with the special rice for a long time , and each day you insist on eating it , this will help a lot for your sleep. ä?æ~~ä.€ä°é,¶æ~ŸÜ-Džbè°ä¿†ã€,

So... MY question is: How well would you sleep if you were to STAND OUTDOORS for 9-10 hours?? ;D (Wearing SPF, of course)

yes, during camping trips I sleep very well.

dotslady (2008-06-22 13:09:33)

Hi - I know this is late in coming, but thought I'd add something not discussed. I'm new to your site having googled for 'raising HDL blog' btw - I have a malabsorption disease, celiac sprue, due to eating glutenous grains - which our society is full of and so was I. I have to work harder than most people to get where I am (thinking of Kathy Griffin on that one), and in doing so tried extra hard to get my fiber cause of \*eh hem\* constipation (per doctors instructions for low-fat, high fiber diet). Twenty years later Kashi breakfasts helped me into full blown celiac. Sooo, when you're celiac you're low on nutrients because of malabsorption. My symptoms included, but are not limited to, INSOMNIA, fibromyalgia, fatigue, depression, restless leg syndrome, worsening eyesight, eczema, dry skin, headaches, hypothyroidism (I thought so many symptoms were because of hypothyroidism, but they got better on a gluten-free diet and not on thyroid meds), hair loss (iron & other deficiencies), ADD (starving brain - no fat or nutrients). As a child my symptoms were aching muscles ("growing pain" likely iron deficiency), cavities, lowered immune system and tendency to have annual bouts of bronchitis and laryngitis. Well, I'm 47 now and the gf diet is high glycemic - I'm obese and looking to raise my HDL. So far I've lowered my LDL, but not raised much my HDL (cod liver oil and just starting low-carb, Nourishing Traditions-type diet). Okay, now my point: My first year of remission, as-it-were, was spent lolling in the pool and taking Rx for Vitamin D(2 - which I know now wasn't necessary, I could have taken D3 oil capsules, but hey, it worked, and I have insurance - referring to Dr. Davis' blogs, of which I'm an avid reader/believer). My vitamin D level prior to the pills was 21, after that it was 60. You want to be over 50 (for heart health too). And here's the kicker I didn't expect: I slept better. More story: I got tired of timing my thyroid pills with calcium/vit D/iron supplements and stopped taking them. Without realizing the connection, I was awakening earlier in the day. ALSO - I'd not been in the pool the next summer because of weather (OK - if you don't like the weather, wait a minute!) ... my vitamin D by the time I got it tested again, was down to 15-yikes! Alert Alert! And I felt it. I really like Dr. Holick and his stance on Vitamin D. Google for more info. Thanks for YOUR info - I'm sending it to my prediabetic insomniac melanoma-recovering never in the sunshine mother. She needs to be off gluten too - but she's kinda stuck feeling crappy and can't seem to muster the energy. It's sad. And I'm gonna look into your book now ...

Varangy (2008-06-23 07:31:14)

@dotslady You may want to try a hyperlipid diet and avoid fiber. <http://high-fat-nutrition.blogspot.com/> PS Yes, you read correctly, avoiding fiber probably would probably help you with your constipation problem.

dotslady (2008-06-28 17:29:16)

Thanks for the link - I'll check it out. Oh, and constipation was resolved about month 4-6 on gf diet. Everything is swimmingly fine because villous atrophy resolved, I surmise. I really believe that there is a high fiber hoax going on ... I seem to do better with less grain fiber, and more vegetables/fruit fibers ... actually less fruit nowadays as I'm working on getting rid of insulin resistance. It's always something with me! lol (high maintenance babe). Thank goodness for the internet - saved my life! Thanks again.

Ollie (2009-06-10 15:11:45)

Well written post. Over time I recovered from depression but it took medication, counseling and also a lot of personal development. Are there any good forums you would recommend?

## Say No to Genetic Determinism (2007-06-06 08:38)

James Watson, co-discoverer of the double helix, gave the Alumni Convocation address at the University of Chicago last weekend. His genome had been sequenced, he said, but he didn't want to know if he had "the Alzheimer's gene". This is misleading. It implies too much certainty, like a measurement with too many digits. It is entirely possible that this "Alzheimer's gene" determines one's vulnerability to low levels of omega-3s and that with sufficient omega-3 it makes no difference. My flaxseed-oil research suggests that almost everyone is omega-3 deficient (because the optimum amount of flaxseed oil was so high). A [1]study of persons 65 or older found that more fish consumption was associated with less cognitive decline.



Am I saying there is gene-environment interaction? Well, is there a "scurvy gene"? Surely there are genes that affect one's sensitivity to low levels of Vitamin C. But no one cares about them – because most people get enough Vitamin C to avoid scurvy.

Addendum: [2]More and [3]more about Watson and celebrity genomes.

1. [http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=16216930&ordinalpos=8&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=16216930&ordinalpos=8&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum)
2. <http://www.nature.com/nature/journal/v447/n7143/full/447358a.html>
3. <http://www.nytimes.com/2007/06/03/weekinreview/03harm.html>

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### **My Theory of Human Evolution (scrapbook edition) (2007-06-07 05:23)**

At the scrapbook store the clerk smiled as I paid. (I have a Shangri-La Diet scrapbook.)

"You're amused because I'm a professor?" I asked.

"Because you're a man. Never see men in here," she said. "My husband hasn't been here."

"I think scrapbooking is very important," I said. "Everyone's an artist."

"There's no right or wrong," she said.

Exactly. There's no right or wrong in art but there is better and worse. Unlike technology where there is "right and wrong": the tool works or it doesn't work.

Suppose you are trying to guess a number between 1 and 10000. Contrast two kinds of feedback:

yes/no

and

too low/correct/too high

The first is discouraging, the second encouraging. With the second you can find the number; with the first you will give up.

Suppose you are trying to learn how to make steel. To make useful steel requires doing several things almost exactly right. There really is right or wrong. Trying to guess what to do is hopeless because the feedback is of the yes/no variety. And, in the beginning, all of it is no.

In contrast, suppose you are using steel-like materials in art. There is better and worse in art; as a result, you will slowly learn better control of your materials. You will be slowly guided toward the knowledge you need to make steel. The evolutionary reason for art, I believe, is that paying artists paid for research in material science, which

eventually led to better tools. Just as ramps and curb cuts help people on wheels, art helped ancient man. It replaced step functions of utility vs. knowledge with ramp functions.

For fascinating recent comments on sex differences see [1]Rebecca A. and [2]Tyler Cowen. Just as scrapbooking releases the inner artist, blogging releases the inner story-teller.

Previous posts in this series: [3]Christmas; [4]American Idol; [5]business book.

1. <http://raronauer.blogspot.com/2007/06/no-boys-allowed.html>
2. [http://www.marginalrevolution.com/marginalrevolution/2007/06/feminist\\_econom.html](http://www.marginalrevolution.com/marginalrevolution/2007/06/feminist_econom.html)
3. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>
4. <http://www.blog.sethroberts.net/2007/05/09/my-theory-of-human-evolution-american-idol-edition/>
5. <http://www.blog.sethroberts.net/2007/05/12/my-theory-of-human-evolution-business-book-edition/>

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### Atul Gawande on Unofficial Research (2007-06-07 21:28)

Regardless of what one ultimately does in medicine—“or outside medicine, for that matter”—one should be a scientist in this world. In the simplest terms, this means one should count something. . . . The only requirement is that what you count should be interesting to you.

When I was a resident I began counting how often our surgical patients ended up with an instrument or sponge forgotten inside them. It didn't happen often: about one in fifteen thousand operations, I discovered. But when it did, serious injury could result. One patient had a thirteen-inch retractor left in him that tore into his bowel and bladder. Another had a small sponge left in his brain that caused an abscess and a permanent seizure disorder. . . . I found that the mishaps predominantly occurred in patients undergoing emergency operations or procedures that revealed the unexpected—such as a cancer when the surgeon had anticipated only appendicitis.

The numbers began to make sense. If nurses have to track fifty sponges and a couple of hundred instruments during an operation—“already a tricky thing to do”—it is understandably much harder under urgent circumstances or when unexpected changes require bringing in lots more equipment. Our usual approach of punishing people for failures wasn't going to eliminate the problem, I realized. Only a technological solution would—and I soon found myself working with some colleagues to come up with a device that could automate the tracking of sponges and instruments.

From [1]Better: A Surgeon's Notes on Performance. Part of Gawande's answer to the question: How to matter?

Thanks to Sean Curley.

1. <http://www.nytimes.com/2007/04/22/books/review/Chen.t.html?ei=5124&en=bc7cd755fadcc0f5&ex=1334808000&partner=permalink&exprod=permalink&pagewanted=all>

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## The Twilight of Expertise (part 1) (2007-06-09 11:47)

In a [1]TED talk, Stewart Brand pointed out that all over the world, poor villages – the same villages that Jeffrey Sachs seems to [2]want to preserve – are vanishing. The people who lived in them have moved to squatter cities, where, according to Brand, there is zero unemployment and a much better life. Because Jeffrey Sachs' interest in poor African villages seems to be recent, I am [3]not surprised that he may end up on the wrong side of the helped/didn't help ledger.

This is the general pattern with experts today: Sometimes they help, but often they make things worse. In a comment on an [4]earlier post, [5]Dr. Erika Schwartz called modern medicine "a system that more often harms than helps."

We are living in the twilight of expertise because we now have alternatives to experts – better alternatives. Squatter cities are a new thing. They solve a very difficult problem (poverty) because they combine three things: (a) People care about themselves and their children (far more than any expert will ever care). (b) The technological knowledge behind the many small businesses (e.g., hair dresser, copy center, pirated videos, cell phones) that allow squatter cities to exist. And (c) something that brings the first two things – caring and know-how – together, namely the cities themselves. Of course, squatter cities owe nothing to Sachs-type experts.

The [6]self-help self-experimentation I have done is another new thing. I solved the difficult problems of how to control my weight, my mood, my sleep, and a few other things related to omega-3, such as [7]my gums. None of which I am expert in – I am not a weight-control expert, a sleep expert, etc. I attribute my success to the combination of the same three elements that come together in squatter cities: (a) [8]I cared. I care about myself far more than experts care about most of the people they try to help. (b) Scientific knowledge – both statistical methods (e.g., exploratory data analysis tools) and basic behavioral science (e.g., the rat experiments of Israel Ramirez). (c) The ability to combine (a) and (b). Self-experimentation was a big part of this, but not the whole thing. My job as a professor and the research library system allowed me the time and opportunity to learn the scientific stuff. The flexibility of my job helped a lot. For example, I almost never had to use an alarm clock to wake up, which allowed sleep self-experimentation. The solutions I discovered are quite different from conventional solutions, but no more different than squatter cities are from what Jeffrey Sachs has prescribed.

Addendum: More info about squatter cities [9]here. A [10]blog about them. [11]More about foreign-aid experts doing more harm than good.

1. <http://www.ted.com/index.php/talks/view/id/123>
2. [http://www.wilsoncenter.org/index.cfm?fuseaction=wq.essay&essay\\_id=231264](http://www.wilsoncenter.org/index.cfm?fuseaction=wq.essay&essay_id=231264)
3. <http://www.blog.sethroberts.net/2007/05/21/five-similar-words-of-wisdom/>
4. <http://www.blog.sethroberts.net/2007/05/30/dont-follow-the-money/>
5. <http://www.drerika.com/>
6. <http://repositories.cdlib.org/postprints/117/>
7. <http://www.blog.sethroberts.net/2007/03/28/omega-3-and-dental-health/>
8. <http://www.blog.sethroberts.net/2007/05/29/the-secret-of-my-success/>
9. <http://papertygre.livejournal.com/322414.html>

10. <http://squattercity.blogspot.com/>

11. <http://blog.pmarca.com/2007/06/bono.html>

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James Aach (2007-06-12 09:52:32)

I would note that self-experimentation is a bit more difficult when trying to make infrastructure changes on a broad level - transforming the energy economy is one example I know that Stewart Brand has also been addressing. But then there's another problem when dealing with these sorts of things: what is an "expert" ? Is it a researcher who has never tried to implement solutions on a broad scale? An engineer who has - but is likely serving as an official spokesman for his/her particular business concern? A longtime activist who has done some research? Just some food for thought.

### **How Blogging Made Philip Weiss a Better Writer (2007-06-09 18:54)**

Did the invention of the piano make the first piano players - the ones who started on harpsichords - better musicians? Probably. Long before blogs, I thought Philip Weiss was the best columnist in America. His weekly or biweekly pieces in the New York Observer were usually original, well-observed, and deeply-felt. He [1]now tells how blogging made him a even better writer.

I had smart readers, whose comments were often better than my posts, and I felt more accountability to them than I had to my print readers. The flippancies and profanities I used to go in for began to vanish. The Internet is not the Wild West, it is more like a great ballroom. Yes, it permits disguise and anonymity, but it is, in the end, a social space in which one's words have consequences. I felt a sense of responsibility when I finished an item and had my finger poised over the enter key. I stopped posting pictures of my dogs.

Why blogs are better written [2]in general.

1. [http://www.amconmag.com/2007/2007\\_06\\_04/feature.html](http://www.amconmag.com/2007/2007_06_04/feature.html)

2. <http://www.blog.sethroberts.net/2007/05/16/why-blogs-are-better-written/>

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### **Outside a Chinese Test Site (2007-06-10 06:14)**

In China, a two-day annual test, which ended Friday, determines what college high school graduates will attend. Outside a test site, an AP reporter heard [1]this:

Wang said she has been cooking foods for her son that are considered particularly good for worn-out students, with plenty of vegetables and less grease.

"Oily foods, it's bad for the brain, it makes the brain slow down," she said.

Astute observation. Regular readers of this blog know that certain oily foods (those high in omega-3 fats) have the [2]opposite effect. But I suspect Ms. Wang is right, that most oily foods (high in omega-6) do slow the brain down, perhaps because they replace omega-3 with omega-6.

1. <http://financial.washingtonpost.com/custom/wpost/html-story.asp?dispnav=business&mwpage=story&symb=&guid=B120AA72-6ECE-46E0-9519-986564478F92&tid=informbox>
2. <http://www.blog.sethroberts.net/2007/05/21/science-in-action-omega-3-flaxseed-oil-vs-nothing-2/>

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### **Academic Horror Story (Tulane University) (2007-06-10 10:32)**

A few weeks ago, the manager of a New Orleans art gallery told me a story that I wish had surprised me.

When he was a senior at Tulane University, he took a Political Science class about the British Political System. For his term paper he wrote about the functions of the British Cabinet. The night before the final he got a phone call. It was from the Tulane honor board: He was charged with plagiarism. He was devastated, and did badly on the final.

The next semester a hearing took place. At the hearing, he listened to a tape of his professor's testimony. The professor recommended that he be expelled: Not only had he plagiarized, the professor said, he had flunked the final. The supposed plagiarism was that he had listed ten functions of the British Cabinet without giving a source. He had believed that this was common knowledge, such as saying the sky is blue, and thus did not need a source. He had not copied word for word – he had paraphrased his source. The honor board gave him an WF for the course – withdrawal with an F.

The charge of plagiarism is absurd. It isn't even obvious that the student did anything wrong – he is correct that you don't need to reference "the sky is blue." The telling part of this story is not that an individual professor was cruel and stupid – it is that a committee of professors backed him up.

[1]Another case – this time at Memorial University of Newfoundland – where a committee of professors did exactly the wrong thing with awful consequences for an innocent person. The current Memorial administration now [2]defends this!

A [3]website about how IRBs (institutional review boards) abuse their power. IRBs are university-wide committees that oversee research. They consist mostly of professors.

So you can see why I wasn't really surprised.

1. <http://www.blog.sethroberts.net/2007/05/15/memorial-university-continues-to-destroy-its-reputation/>
2. <http://www.cbc.ca/canada/newfoundland-labrador/story/2007/05/15/chandra-mun.html>
3. <http://www.irbwatch.org/>

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Interested Reader (2010-02-23 15:32:42)

Hey, I know someone with a similar case. He received a 2 year suspension for using material from a website on a 4 page paper in his last semester before graduation. I am interested to know if you know what happened to the person you wrote about (if he was able to finish college, get a job, etc). Thanks and have a good one!

## **The Twilight of Expertise (part 2) (2007-06-10 23:44)**

The first experts were shamans, an occupational category that eventually divided into doctors and priests. As the Catholic Church became more and more powerful, abuses of priestly power became more and more apparent and upsetting, leading to the Protestant Reformation.

Now – half a millennium later – doctors are under much greater scrutiny. The results of that scrutiny are unfavorable – perhaps highly unfavorable. A [1]RAND study suggested that the overall benefit of a substantial amount of health care was small, except in certain special cases such as eyeglass prescription. A large fraction of surgeries are unnecessary, says [2]one critic—and by large he means large:

Stanford University urologist Thomas A. Stamey, M.D., generally regarded as the father of PSA testing, says that 90 percent of all the prostatectomies performed at the Stanford hospital over the past 5 years have been unnecessary.

[3]Earlier post on this topic.

Addendum: According to [4]Biotech Blog,

Thereâ€™s been a shift in the past 50 years away from the doctor-centric model of healthcare to one in which patients expect, and demand, better information and control over their treatments.

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A [5]70-293 is a much better choice than [6]70-296 for someone who plans to do [7]70-291 later. If the future plans revolve around [8]70-526, it is alright otherwise.

1. <http://sciencethatmatters.com/archives/30>
2. [http://www.menshealth.com/cda/article.do?site=MensHealth&channel=health&category=doctors.hospitals&conitem=2641a348a8c62110VgnVCM10000013281eac\\_\\_\\_\\_&page=1](http://www.menshealth.com/cda/article.do?site=MensHealth&channel=health&category=doctors.hospitals&conitem=2641a348a8c62110VgnVCM10000013281eac____&page=1)
3. <http://www.blog.sethroberts.net/2007/06/09/the-twilight-of-expertise/>
4. <http://www.biotechblog.com/2007/06/20/googles-healthcare-ambitions-the-ultimate-second-opinion/>
5. <http://www.testking-questions.com/exam/70-293.htm>
6. <http://www.testking-questions.com/exam/70-296.htm>
7. <http://www.testking-questions.com/exam/70-291.htm>
8. <http://www.testking-questions.com/exam/70-526.htm>

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Andrew Gelman (2007-06-11 07:07:09)

Seth, Given the above sentiments, I think you'd enjoy the Shaw play, *The Doctor's Dilemma*, which considered health care 100 years ago. Seriously, though, I think you're too pessimistic. I've had some serious broken bones and was pretty impressed with the medical treatment. Also I got the chicken pox shot which was pretty cool.

seth (2007-06-11 08:16:45)

Thanks for the Shaw recommendation. If I'm too pessimistic, tell me the serious flaws of the RAND study that I link to – it found little benefit of additional medical treatment. Vaccination works, sure – it is public health, not medicine. Better nutrition works, clean water works – all that is public health. Not smoking works. Broken bones fix themselves, so your "serious broken bones" example isn't impressive. There may have been a minor advantage to what the doctors did. And fixing broken bones is a special area of medicine – one where it is easy to see the benefits. Heart disease, cancer, diabetes, stroke – I think it is easy to see that most of the time, doctors can do little about these things. As one doctor told me: "The truth is that for most problems we see, we can't do much." When it comes to everyday illnesses our immune systems do the work. So where is the great benefit?

Timothy Beneke (2007-06-11 11:22:23)

I wonder if anyone is seriously attempting to determine the morbidity and mortality benefits of "medicine" as opposed to just "public health". It would require huge meta analyses of particular areas of medicine, and then aggregating them in some way, I would guess. My own medical treatment is based on extremely crude correlational science. I've had my blood pressure and cholesterol lowered by drugs (prior to my weight loss); it's clear that high cholesterol and blood pressure correlate with greater mortality, but I'm not sure we know that lowering them with drugs helps that much. My doctor tells me that no one needs to die now from colon cancer. If everyone got colonoscopies at the right age, then all colon cancer would be detected early and when detected early can be "cured". My impression is that cancers like leukemia and others are far more treatable. Or take AIDs – surely medical treatment is extending the lives of AID's patients enormously. But I may be an innocent victim of hype; I don't think about these things rigorously. It's confusing to me. There are apparently serious scientists now claiming that in the next century or longevity will be radically expanded. I am extremely skeptical when I hear this. My question to Seth is: Do we really have the scientific knowledge to justify his claim? Is there any intuition/ideology etc., in his claim? The Rand study would have to be very fine-grained about the specific treatments that the 7000 people got and then sort out the effects – which it did not do. It would have to show which medications were given to whom at what stage of development in pathologies, differences in diagnostic testing, etc. I don't take it very seriously – but I defer to others in evaluating studies. It's probably true that a lot of medical treatment does little good, but we may not know which is useless until it's tried out for a while...

seth (2007-06-11 12:05:34)

The RAND study did look at different treatments; it found that eyeglasses were clearly effective but that most treatments were not. Surely the RAND study has its problems – but is there a better study? My own experience with doctors has been good. I had hernia surgery, which was obviously both necessary and helpful. When I had a kidney stone (very painful), a shot of morphine really worked. Sure, there are cases when medicine helps. But attempts to look at the big picture, counting costs along with benefits, have not been favorable, as far as I know. If there is evidence I am leaving out, please let me know.

Timothy Beneke (2007-06-11 12:26:49)

All the evidence that is left out would presumably not be meta-evidence, since I assume the requisite meta evidence has not been done. There is a lot of research on particular treatments showing some are not that good and some are very good. My point would be that to speak as a scientist the best thing to say is that we don't really know how much medical treatment helps, and may never know a lot. The Rand study may be interesting but way too limited in value. We can't ethically take say 10,000 people at birth, and randomly provide half with stellar medical treatment and half with zero treatment for 100 years, while each receives the same "public health" benefits (however the distinction is drawn) – which would tell us a lot. Short of that, we can look at particular treatments that have been scientifically shown to help and see how much they add up to increased

longevity, lower morbidity, etc... and weigh them against things like the Rand study...

Geoff (2007-06-11 12:32:59)

Read the May 16 comment by Toby on the article you point to. The study does \*not\* say that health care is useless. Rather, it suggests that more health care \*at the margin\* is may not be very helpful. There is an \*enormous\* difference between these two statements. If you want to measure the benefits of health care, the proper control group is people who have \*NO\* access to health care, not people who have health care but have to pay for it. The RAND study measured the benefits of \*free\* health care as compared to care that people pay for or have covered by insurance. Look at the gains in lifespan in the 20th century alone that have come from the development of antibiotics. Diabetics have health care to thank for synthetic insulin. People with heart disease have statins and angioplasties and coronary bypasses and heart transplants. People with cancer have chemotherapy and radiation and surgery - cancer mortality rates have been falling substantially over recent years. I understand that you don't agree with everything in the world of modern medicine, but arguing that health care provides no benefit is, to put it charitably, silly. Without health care, it's quite possible that you'd be dead or seriously disabled from that kidney stone.

seth (2007-06-11 14:27:22)

I don't "argue that health care provides no benefit." No benefit is much too strong. Perhaps I should have made that clearer - that is, in addition to my eyeglasses example and the 10 % of prostatectomies that the Stanford doctor believed are helpful. What I am trying to say is that the increased scrutiny given doctors has not turned out well for them. The RAND study, of course, is limited - but is there a better attempt to figure out the overall value of medicine? I don't know of one. if you can point me to a study that shows the more-than-minor value of modern medicine I'd love to look at it. Lifespan gains in the 20th century are often attributed to public health measures, such as clean drinking water and vaccinations. They do not make a strong case for the value of medicine. Why do you attribute the decline in cancer mortality to medicine rather than lifestyle changes (e.g., less smoking, better nutrition)? Perhaps the improvement is due to 90 % lifestyle change, 10 % medicine. I don't know what the correct percentage is, but you seem to. Diabetics have been helped by synthetic insulin, indeed. But they administer it themselves. It's a special case, between medicine and prevention. And in spite of this help, diabetes is a major cause of death and disability. No doubt because of obesity, which doctors have done nothing to help with. My kidney stone passed in a day or so without help from doctors. The morphine reduced the pain it caused.

Andrew Gelman (2007-06-11 17:00:52)

Seth, I don't know about the Rand study, but my first thought is that the marginal benefits from additional health care will be less than the benefits from good existing care. So, even if more is not much better, that doesn't mean that the overall benefits of existing care are "minor." Regarding various particular issues: My wrist was broken in a zillion places, and my other hand (a completely different injury) was broken internally. I'm pretty sure I'd have quite a bit less use from my hand had I let the bones heal as is. Also, I'd count the chicken pox as medicine, not public health, because (a) I got it at the doctor's office, and (b) it wasn't part of a general vaccination, it was something special that I asked for. It's also my understanding that treatments for Aids and many cancers have been effective. I expect (hope) things will improve-and you can also talk cost-benefit-but the effects of medicine here seem greater than zero.

Geoff (2007-06-11 17:40:35)

Here you go: [http://www.economics.harvard.edu/faculty/dcutler/papers/cutler\\_meara\\_boulders\\_2001\\_final.pdf](http://www.economics.harvard.edu/faculty/dcutler/papers/cutler_meara_boulders_2001_final.pdf) While public health measures and improved nutrition dominated in the early part of the 20th century, antibiotics contributed to a big decline in mortality in the middle of the 20th century. Medical treatment is playing an increasingly important role in reducing mortality, particularly in dealing with cardiovascular disease.

seth (2007-06-11 22:04:22)

Andrew, my point is that when the overall effectiveness of medicine has come under scrutiny, it has not fared well - and the RAND study is a good example. Whatever its flaws or various interpretations, I don't think it can be dismissed. I don't believe that medicine is completely ineffective - far from it. But how effective is it compared to the existing big effects on health - such as clean water? And adequate nutrition? As far as I can tell, not very - which is why I didn't bother to put qualifications



around the straightforward conclusion from the RAND study. (I might have said, "According to a RAND study. . . " or "If you believe this study . . . ") The sheer difficulty of making a convincing case for the great overall efficacy of medicine is a sign of that, I think. The mother of a friend was near death – and then she recovered when all of her medicines were stopped. Her prescribed drugs were killing her. Geoff, thanks for pointing me to the Cutler paper. I am very interested in the evidence for the other side. My take on that paper was that the argument for the importance of medicine in reducing heart disease was completely unconvincing. Sure, there may be a small effect. But the graph of heart disease mortality shows a steady decline starting around 1960. Did something happen around 1960 to make heart disease research all of a sudden effective? Not that I know of. Yet the shape of the graph – a long steady decline – suggests a single cause that became more and more effective. Around 1960, Americans became more interested in physical fitness. JFK dramatized this with his 50-Mile Hikes. This interest in fitness has slowly grown ever since.

Andrew Gelman (2007-06-12 05:02:36)

Seth, See comments here: [http://www.stat.columbia.edu/cook/movabletype/archives/2007/06/total\\_vs\\_margin.html](http://www.stat.columbia.edu/cook/movabletype/archives/2007/06/total_vs_margin.html)

Eliezer Yudkowsky (2007-06-12 10:12:06)

A small NET statistical effect does not necessarily indicate small GROSS causal effects. A large benefit of medicine may be counterbalanced by medical errors, deaths under general anesthesia or from unnecessary surgery, diseases caught in the hospital, unknown side effects of drug combinations... many are talking as if the bold hypothesis under consideration is that medicine is a null-op. This is not the bold hypothesis. The bold hypothesis is actually a spectrum of hypotheses under which the marginal benefits of medicine, and its marginal harms, range in unison from low to high - any point in this spectrum accounts for the RAND data. For every bright anecdote that pops up in your mind about how modern medicine cured your uncle's skin cancer (which I'm quite willing to accept it did) consider the anecdote someone else posted to Overcoming Bias about an uncle who went under general anesthesia for knee surgery and never woke up.

Geoff (2007-06-12 10:55:44)

I think there is probably an even simpler explanation for the RAND study: it's comparing health care that people would pay for on their own to free health care. Free or not, most people will obtain treatments that have obvious benefits: having a broken leg set, antibiotics for an acute infection, visits to an obstetrician while giving birth, and so on. It's things that are less obviously beneficial that people might choose to forgo - maybe things like brand name drugs instead of generics, frequent checkups, extra tests, etc. So perhaps the RAND study just shows that treatments that do not have benefits that are obvious to patients do not pay off in reduced mortality. That doesn't seem very surprising, nor does it discredit medical professionals to my way of thinking.

anon (2007-06-12 19:07:57)

"Heart disease, cancer, diabetes, stroke" I think it is easy to see that most of the time, doctors can do little about these things. As one doctor told me: "The truth is that for most problems we see, we can't do much." When it comes to everyday illnesses our immune systems do the work. So where is the great benefit? "There may not be a cure for diabetes, but certainly treatments such as insulin therapy are effective in regulating blood sugar levels which reduces complications due to diabetes. Hemoglobin A1c is a measure of blood sugar levels over the past 3 months. High A1c is strongly associated with many of the complications of diabetes such as retinopathy, heart disease, and limb amputations, and death just to name a few. You are either IGNORANT or an IDIOT if you can't see the great benefits of medicine for treating diabetes. In regards to cancer, in some cases, early detection is the key to successful treatment. Reductions in heart disease have been shown to be associated with various medicines. Your doctor's quote should perhaps be restated as follows: by the time that patients seek help, there is sometimes not much that the doctor can do to treat the disease, or in the case of diabetes cure it (no cure yet). However, that is not to say that some of the symptoms cannot be treated with meds. In the case of type II diabetics, many of them have spent years over-eating and not exercising and a doctor cannot fix the strain you have put on your body by not taking care of yourself. At the onset of type II diabetes, all the doc can do is attempt to regulate your blood sugar levels with meds or insulin therapy, but both are far from a cure. Your statement "Heart disease, cancer, diabetes, stroke" I think it is easy to see that most of the time, doctors can do little about these things." is very IGNORANT, especially when it comes to diabetes. Medicines have made a huge impact on the treatment of diabetes... without insulin, type I diabetics DIE.

RobbL (2007-06-12 19:38:10)

Seth, After visiting Bangladesh, I would have to disagree with you. There are plenty of people walking around with what seemed to be treatable problems. They probably would value any doctoring...even if it doesn't hold up to your standards. I would also argue with your definitions. All of vaccines and most public health stuff is most strongly driven by doctors. They should get credit for that. Lastly, everyone's prize evidence; an anecdote. (hey wait doesn't this stinking comments section have a spell checker?) My wife had a mysterious infection that destroyed her vestibular nerves. She lost much of her sense of balance. There was nothing that could be done. But after much much testing and expense, they did figure out what had happened. The neurologist had no cure, but his explanation of what had happened and his discussion about the sort of accommodations and changes she needed to make in her life style allowed her to get on with her life. Up until then she was floundering and unable to work or even to function very much. So the point is, what would a study of effectiveness make of this. In one way we spent a lot of money on doctors and in the end they could do nothing. On the other hand, the information about what had happened and how to go forward kind of saved her life.

seth (2007-06-12 20:27:11)

I'm not saying doctors have no effect. I'm not saying they're not comforting - "palliative" is the technical term. I'm saying that the effects of American medicine, in America, that when scrutinized seem overall - not in every case - to be minor compared to the big effects in health - for example, the effects of high-Vitamin-C foods on scurvy, the effects of clean water on infectious diseases, the effects of morphine on pain. As I mentioned earlier, insulin is a special case, halfway between prevention and treatment.

anon (2007-06-12 21:10:19)

You seem to have a very narrowly defined definition of medicine, which actually does not seem very clear. If a doctor diagnoses me with diabetes and tells me to take insulin, is he not in some way responsible for improving my condition? I believe doctors play a very critical role in the diagnosis of disease, to which they at least earn some credit in a less narrowly defined view of medicine. "Diabetics have been helped by synthetic insulin, indeed. But they administer it themselves. It's a special case, between medicine and prevention. And in spite of this help, diabetes is a major cause of death and disability. No doubt because of obesity, which doctors have done nothing to help with." You are right. Doctors do not yet have a magical cure for diabetes that enables patients to not have to take care of themselves. But whose fault is that really? The doctor's fault, or the patient's fault? If a doctor tells me to take an antibiotic, and then I self-administer it, does this also fall in between medicine and treatment?

seth (2007-06-12 21:25:14)

Doctors improve many conditions, absolutely. And one of them is diabetes. But compared to the treatment of scurvy with Vitamin C, is the improvement major or minor? In practice? "Whose fault is that?" I'm trying to describe the situation. Since you ask I don't blame either the doctor or the patient. I blame human nature. You're right, to say the special thing about insulin is that patients "administer it themselves" is confusing. As you say most drugs are self-administered. I should have said that insulin is special in two ways: it replaces something missing from the body; and the administration (to be effective) has to be remarkably careful and intricate. It is true that in the right hands, insulin is a major medical success story. Those "right hands" however are few. Perhaps they will become more common in the future. Self-experimentation played a very big role in showing how insulin could be used most effectively. Something else that sets insulin apart from other treatments.

seth (2007-06-13 09:00:12)

Geoff, The RAND study was surprising to many people, including me. All health care is supposed to help; the study found that a lot of it did not clearly help. I think there is something to be learned from that.

current grad student (2007-06-13 16:00:37)

Seth, see my comments at Gelman's website about interpreting the results from the Rand study and why I am not surprised to not see much of a difference. [http://www.stat.columbia.edu/cook/movabletype/archives/2007/06/total\\_vs\\_margin.html](http://www.stat.columbia.edu/cook/movabletype/archives/2007/06/total_vs_margin.html)

seth (2007-06-13 18:03:16)

Thanks for the link. I have commented over there.

current grad student (2007-06-14 14:22:38)

Seth, Why is every medicine supposed to have a big impact? Won't some have a larger effect? For the meds that are truly important, don't you think that most groups received those, and the less important, those that don't have as large of an impact, were probably what were used more in the free group. Though there may not have been noticeable overall health benefits from going to see the doctor more, as was done in the treatment group, who is to say that they didn't recover from illness faster? For most common ailments, our immune system can fight them off slowly and your health overall won't be affected much by not going to the doctor. However, how much of a benefit is there to taking a drug that speeds up the recovery process, though it may not be a benefit to your overall health. Factors such as this don't show up in the Rand study results. Also, let's say I'm in the free group, is there a benefit to going to the doctor at some of the first signs of getting sick? Even if I find out that if I have a virus that can't be treated by antibiotics, should I not have gone? Should I have used less free health services because my immune system would have most likely been able to handle the ailment? Going to the doctor more often does not necessarily mean that they received more meds... a lot of the times were probably because they were being cautious and because they could for free. When you have to pay, people aren't usually willing to seek care until they get really sick and know that they need to be seen. However, even at this point if they do have something treatable, their overall health is not going to be affected by having waited to see if their immune system could handle it.

current grad student (2007-06-14 14:24:19)

Seth, smaller studies are fine for if you want to concentrate on a population of people who are sick and you are going to randomly give half the cure as in your scurvy example. The point about the most necessary medicines is that those are where the biggest benefits are seen. Not every drug or every treatment will make a big impact in your overall health. For any treatments that do make a large impact on your health, I assure you that even people who had to pay received the necessary treatments. Big effects in healthcare can be seen for those who are sick... it is much harder to see effects of medicine when you take a sample from the general population, thus you should need an even bigger sample if you want to see a benefit. Unfortunately, as medicines become better and better, it becomes harder and harder to improve upon the standard of care. This is one of the reasons why clinical trials require so many patients to see the positive benefits of a new drug. In addition, even when the population in your study is sick, it can still be difficult to see the benefits when looking at events with low incidence rates.... and this is even when your population is sick. Can you imagine how woefully underpowered you must be when looking at a group of healthy people. By the way, for those of you who are interested, the study looked at 2750 families, the mean age was ONLY 33, the youngest person was 14, and the maximum age at time of enrollment was 61.

anon (2007-06-26 12:24:14)

"All of vaccines and most public health stuff is most strongly driven by doctors. They should get credit for that." Actually, it started in the U.S. with public health nurses and insurance companies. Doctors actually went out and got that stopped. That they are behind it now, due to the fact that they collect payment for administering it when nurses used to go door to door and provide the service for free, doesn't tell me anything that makes me want to give them credit.

## **Fat and Anesthesia (2007-06-11 13:37)**

A [1]new theory of nerve conduction takes as its empirical starting point the hundred-year-old observation of [2]a strong correlation between the solubility of a chemical in olive oil and its anesthetic potency. The more soluble, the more potent. Olive oil was used to mimic the cell membranes of nerve cells. Such observations – a certain type of fat is a useful model of the whole nervous system – make it even more plausible that dietary fat affects brain function, as [3]my omega-3 observations suggest.

The authors of the new theory believe that when anesthetics enter a nerve cell, they tend to solidify the fats in

the cell. This makes the cell less responsive.

1. [http://www.wired.com/science/discoveries/news/2007/06/nerve\\_communication](http://www.wired.com/science/discoveries/news/2007/06/nerve_communication)
2. [http://books.google.com/books?id=AA4sICmESWQC&pg=PA204&lpg=PA204&dq=hans+meyer+charles+overton+anesthetic+olive+oil&source=web&ots=AldAA4W8qa&sig=qm5uFr\\_rutSHNcQaRbQHAbqSdek#PPA204,M1](http://books.google.com/books?id=AA4sICmESWQC&pg=PA204&lpg=PA204&dq=hans+meyer+charles+overton+anesthetic+olive+oil&source=web&ots=AldAA4W8qa&sig=qm5uFr_rutSHNcQaRbQHAbqSdek#PPA204,M1)
3. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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peter (2007-06-11 13:52:29)

are you suggesting that olive oil, which is touted as a heart healthy oil, makes the cells in general and brain cells in particular, less responsive? are you saying that taking olive oil will reduce one's ability to maintain balance and compute mathematical problem (with the inference that such a reduced ability reduces one's mental ability)?

seth (2007-06-11 13:58:22)

No. Olive oil was used to model the brain. It was not a treatment – the anesthetics were the treatments in those experiments. The effect of olive oil on anything was not measured. When I compared olive oil and flaxseed oil, my balance was better with flaxseed oil.

### **The Clouded Crystal Ball (2007-06-12 03:50)**

"Does eating influence brain function?" begins a 1974 Scientific American article titled "Nutrition and the Brain" by 2 MIT professors. It is mainly about how changes in carbohydrate affect the brain – especially what happens after a carbohydrate-rich meal. A few studies of protein variation are discussed. Nothing about the effects of varying fat intake, although the brain is mostly fat.

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Andrew Sidwell (2007-06-13 17:19:32)

Out of interest, what does happen?

seth (2007-06-18 12:32:22)

A carbohydrate-rich meal increases serotonin synthesis, the authors (John Fernstrom and Richard Wurtman) found. The rats ended up with more serotonin an hour or two after a high-carbohydrate meal. No behavioral effects were measured.

### **The OJ Group (2007-06-12 23:20)**

At the CBC in Toronto, Sarah Kapoor, who did a [1]story about the Shangri-La Diet, started what she called "the OJ group" – OJ meaning Ordinary Journalism. Journalism about ordinary life, like [2]The Hunt.

Were formation of the OJ Group a chess move, I would give it two exclamation points. 1. It points out a major

problem with standard journalism: Too much of it is about famous and powerful people doing boring things. 2. It gathers support. It is a way of persuading others and learning from them. 3. It criticizes by creating – as Michelangelo [3] advised. My self-experimentation – about everyday concerns such as sleep, mood, and weight – might be called Ordinary Science. It is science about ordinary life using methods of ordinary life.

In [4] The Theory of the Leisure Class, Thorstein Veblen argued that we care enormously about status display. The upper (leisure) classes display their status by conspicuously avoiding useful work (e.g., long fingernails) and by conspicuous waste (e.g., hood ornaments). Academics display status by avoiding work on useful questions. Such work is dismissed as "applied", in contrast to "pure" research. The status of scientific work also depends on dimensions that Veblen doesn't mention: 1. It is higher status to have someone else do something than to do it yourself. 2. Expensive research is higher status than cheap research. Thus my self-experimentation had three strikes against it: low-status topics, low-status participants (I'm not ordering anyone around), and low-status cost (cheap).

In journalism, like everywhere else, there is status by association. Writing about high-status people is higher status than writing about low-status people.

1. <http://www.youtube.com/watch?v=hr33LNwgGic>
2. <http://www.blog.sethroberts.net/2007/06/03/vows-the-hunt/>
3. <http://www.fuzzysignals.com/archives/2005/02/08/000161.html>
4. [http://en.wikipedia.org/wiki/The\\_Theory\\_of\\_the\\_Leisure\\_Class](http://en.wikipedia.org/wiki/The_Theory_of_the_Leisure_Class)

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Andrew Gelman (2007-06-13 04:46:45)

Seth, I agree with you about the journalism, but maybe not about academic work. Applied work is important but, ultimately, theory has the potential to be longer lasting—a theorem is forever.

seth (2007-06-13 05:52:58)

Veblen had other academic examples. He said that academics used big words and long sentences for the same reason: To impress others with their status. This was a very amusing claim in a book full of big words and long sentences.

Timothy Beneke (2007-06-13 11:33:07)

Fascinating. I'd love to see someone write a book about status in academia, the economic motivations behind the existence of academic fields, and the requisite epistemologies and mastery of knowledge that flows out of that. – Linguist Robin Lakoff says the complexity of academic writing grows from undergrad to grad school and reaches a peak in the Ph.D. dissertation and then gets gradually simpler as people become assistant profs and get tenure – I know that much is made of "bringing money into the department" in psychology at Berkeley – it's a tenure consideration. – It's fascinating (and depressing) that distinguished psychologists would dismiss self experimentation because it "can't be trusted" when it takes most people a few hours to confirm that light-tasting olive oil (or sugar water) dramatically reduces hunger. There are many effects that cannot be so confirmed, but that one can be. It's almost comic that very smart people would be so wrapped up in their scientific ideology that they cannot see or do this. There is an implicit belief that hypotheses and intuitions are in and of themselves trivial since everyone has lots of them and they may well be wrong; and all that matters is hard scientific data and explanatory theories based on the data. But what if a hypothesis about weight loss that can improve the health of millions of people can be confirmed in the period between breakfast and lunch? – I'm exasperated by the intellectual narrowness of academics. I was in a social theory group years ago with Berkeley sociology

grad students, many of whom now teach social theory. They could discourse grandly in big historical terms about society drawing from Marx, Max Weber, Durkheim, Foucault and other thinkers, but none of them knew basic social psychology, and findings about group behavior, findings about what might influence their concrete behavior in the group. All sociological explanation comes down to psychological processes and they knew very little empirical psychology. – A famous literary scholar, Elaine Scarry, who holds an endowed chair at Harvard, delivered some prestigious Gifford lectures on beauty that she turned into a small book. They are full of psychological theorizing and speculation that she treats as sacred truth; she claims to reason her way into psychological truth. There is much in empirical psychology that is relevant to her claims, but she is utterly ignorant of it. She could sit in on an intro psych course and find a lot that applies. The book is, from my perspective, embarrassing. It's as if a Ph.D. in literature is a license to ignore whole fields that are relevant to one's claims.

seth (2007-06-13 12:05:01)

Thanks, Tim. You can read more about academic status displays in Chapter 14 of *The Theory of the Leisure Class*, which is available full-text on the web. Does Robin Lakoff agree with Veblen about why academic writing is complicated?

Timothy Beneke (2007-06-13 12:40:32)

She thinks needlessly complex academic writing is driven by status insecurity, at least in American academia; once you are secure, you don't need to put on airs as much and seek to intimidate. It's interesting though; Bob Blauner, who taught in the Berkeley sociology dept for many years and is now retired, said that when he was a grad student, everyone felt in the same boat and spoke freely to other grad students about ideas without much fear. When he became an assistant professor, he said there was a lot of fear in interacting with other assistant professors, as if they were afraid their ideas would be stolen, or afraid the other guy was smarter than they were. Once he got tenure, all that changed a bit. I'm sure there are sub-cultural variations in the departments and fields...

seth (2007-06-13 13:41:00)

Thanks for the additional details.

### **Thorstein Veblen on the Importance of Spell Check (2007-06-13 17:51)**

From [1]*The Theory of the Leisure Class*:

As felicitous an instance of futile classicism as can well be found . . . is the conventional spelling of the English language. A breach of the proprieties in spelling is extremely annoying and will discredit any writer in the eyes of all persons who are possessed of a developed sense of the true and beautiful. English orthography satisfies all the requirements of the canons of reputability under the law of conspicuous waste. It is archaic, cumbrous, and ineffective; its acquisition consumes much time and effort; failure to acquire it is easy of detection. Therefore it is the first and readiest test of reputability in learning, and conformity to its ritual is indispensable to a blameless scholastic life.

Much of my first year in college I spent reading Veblen. It seemed fresh and smart then; it seems fresh and smart now.

1. [http://xroads.virginia.edu/~hyper/VEBLEN/veb\\_toc.html](http://xroads.virginia.edu/~hyper/VEBLEN/veb_toc.html)

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## Secrets of a Successful Blog (part 4) (2007-06-13 21:23)

From [1]the penguin blog:

- 1) It should be personal - but not mundane.
- 2) The author should write about their work as well as their interests.
- 3) They should be entertaining company.
- 4) Posts should be regular and frequent.

Unsurprisingly, few author blogs manage all four.

Hmm. "Unsurprisingly"?

[2]Part 1. [3]Part 2. [4]Part 3.

1. <http://thepenguinblog.typepad.com/>
2. <http://www.blog.sethroberts.net/2006/12/01/on-scientific-method/>
3. <http://www.blog.sethroberts.net/2006/12/20/secrets-of-a-successful-blog-part-2/>
4. <http://www.blog.sethroberts.net/2007/01/28/secrets-of-a-successful-blog-part-3/>

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Nahinu (2007-06-14 14:30:33)

It's hard to manage all four facets of a successful blog. I can do the first three, where I am personal, write about my interest, and entertaining. Being regular and frequent doesn't work out for me. I have to find a good article and the passion to write about it. I need to have that spark of fire that drives me to write and I don't have that everyday. I have blogs inside me waiting to come out but I just don't have the fire to write them aggressively. I am going to try to write more frequently. That should be my goal.

seth (2007-06-14 15:09:52)

Thanks for explaining that. It once seemed daunting to write 5 posts a week, much less 7. Now I write more than 7. One of my students did a project on remembering her dreams. It got easier and easier, she found.

## The Twilight of Expertise (part 3) (2007-06-14 15:07)

Do you need to be an expert on Topic X to write a serious (i.e., non-celebrity) well-paid well-publicized book about it? Less and less. As I said [1]earlier, I am not a weight-control expert. Mickey DeLorenzo, a Philadelphia "multi-media developer" (website designer?) is even less of a weight-control expert. However, he used his Wii to lose 9 pounds in six weeks ([2]story and data) and is working with an agent from a well-respected agency to write a book about it. The publicity started with digg.

You already knew you no longer have to be an expert on Topic X to write a well-read [3]encyclopedia article about it.

[4]Part 1. [5]Part 2.

Thanks to Elaine Smith.

1. <http://www.blog.sethroberts.net/2007/06/09/the-twilight-of-expertise/>
2. <http://wiinintendo.net/2007/01/15/wii-sports-experiment-results/>
3. [http://en.wikipedia.org/wiki/Main\\_Page](http://en.wikipedia.org/wiki/Main_Page)
4. <http://www.blog.sethroberts.net/2007/06/09/the-twilight-of-expertise/>
5. <http://www.blog.sethroberts.net/2007/06/10/the-twilight-of-expertise-part-2/>

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### **The Twilight of Expertise (part 4) (2007-06-15 22:53)**

I was interviewed today by a writer for [1]Wired Online. She said the [2]Shangri-La Diet forums resembled open-source software. It's a good point; at the SLD forums, a large number of people from all over the place are slowly but surely improving the diet (which is essentially an engineering problem). Because of their improvements, the paperback is about 10 % different from the hardback. I'm not a weight-control expert; the people who contribute to the SLD forums are even less so.

The SLD forums can also be compared to a clinical trial of the diet. A large chunk of SLD forum posts are about how well the diet is working, which is what clinical trials are about. A clinical trial of the Shangri-La Diet (or almost anything) requires experts. Only weight-control experts could raise the money (hundreds of thousands of dollars) and have access to the necessary facilities. Anyone can start a forum.

Which is better? In two ways, a clinical trial is better than forums evaluation: 1. (major) You keep track of everyone who starts the trial. 2. (minor) Better measures. More accurate scales, blood tests, standardized food tracking. In six ways, forums evaluation is better than a clinical trial. 1. (major) More realistic. For example: the diet is more flexible, each dieter uses his or her own brain power to figure out what to do. 2. (major) Better reporting of side effects (both positive and negative). With forums, more brainpower goes into their detection. 3. (major). More transparent. Anyone can read the forums to find out what happened. Raw data from clinical trials is almost never available. 4. (major) Speed. Forums are much faster. 5. (major) Cost. Forums are much cheaper. 6. (major) Openness. Anyone can report his/her results on the SLD forums. Clinical trials, on the other hand, are closed to almost everyone.

I use both Firefox (open source) and Internet Explorer (not open source). But I use Firefox far more.

[3]Part 1. [4]Part 2. [5]Part 3.

1. <http://www.wired.com/>
2. <http://boards.sethroberts.net/index.php>
3. <http://www.blog.sethroberts.net/2007/06/09/the-twilight-of-expertise/>



4. <http://www.blog.sethroberts.net/2007/06/10/the-twilight-of-expertise-part-2/>
5. <http://www.blog.sethroberts.net/2007/06/14/the-twilight-of-expertise-part-3/>

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Timothy Beneke (2007-06-16 10:26:52)

"Weight loss experts"? Does it even make sense to use the phrase non-ironically or without scare quotes or the phrase "so-called" in front of it? Doesn't expertise that relates to some demonstrable end imply success and knowledge about how to gain that end? In a field that has a 96+ % failure rate is there such a thing as genuine expertise? Before the Wright brothers, were there "flight experts"? Don't we now look back upon the writings and claims of so-called experts in field prior to their achievement of success with amusement and view them as rather child-like? Someone who knows more history than I do can generate analogies...

seth (2007-06-16 10:40:28)

"Before the Wright brothers, were there 'flight experts'?" Very interesting question. I would guess not, but surely there were transportation experts who said human flight was impossible. Like the president of IBM who said there was a world market for "three, maybe four" computers.

Observer (2007-06-16 13:14:11)

"Like the president of IBM who said there was a world market for "three, maybe four" computers." Or maybe not: [http://en.wikipedia.org/wiki/Thomas\\_J.\\_Watson](http://en.wikipedia.org/wiki/Thomas_J._Watson) #Famous\_misquote *Although Watson is well known for his alleged 1943 statement: "I think there is a world market for maybe five computers," there is no evidence he ever made it. /.../*

Tim Lundeen (2007-06-16 13:19:04)

I see as a major benefit of the forums that they are adaptive/evolutionary, looking for better strategies, while a trial answers well-defined questions about fixed strategies. The forums allow individuals to try different strategies and share the results, which then allows others to try things that are working, and generates ideas about still new things to try.

seth (2007-06-16 15:30:34)

Thanks for the correction, Observer.

## Best Use of a Vocabulary Word (2007-06-16 16:26)

"The whole idea that Rumsfeld projectsâ€”Weâ€™re here to protect the nation from terrorismâ€”is an oxymoron," Taguba said. "He and his aides have abused their offices and have no idea of the values and high standards that are expected of them. And theyâ€™ve dragged a lot of officers with them."

From Seymour Hersh's latest [1] article.

1. [http://www.newyorker.com/reporting/2007/06/25/070625fa\\_fact\\_hersh](http://www.newyorker.com/reporting/2007/06/25/070625fa_fact_hersh)

## My Jaw Dropped When I Read This (2007-06-16 21:51)

From a [1]review in tomorrow's New York Times Book Review:

His ardent defense of statesâ€™ rights would have required him to uphold Virginiaâ€™s anti-miscegenation law, not to mention segregated education, yet he lives with a white wife in Virginia. He is said to dislike light-skinned blacks, yet he is the legal guardian of a biracial child, the son of one of his numerous poor relatives.

"He" is Clarence Thomas. "Yet", huh? There should be a rhetorical term for this: self-destructive.

1. <http://www.nytimes.com/2007/06/17/books/review/Patterson-t.html?ref=books>

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August (2007-06-16 23:23:19)

You do know this is a hatchet job, right? From the very first sentence, this review is loaded down with trigger words meant to paint Justice Thomas in a very bad light. No doubt the book does too, but really, the very part you quote would suggest the improbable nature of the author's point of view. It's his family! Obviously he loves his family! Plus, the right to free association, to name just one off the top of my head, would mean anti-miscegenation laws would be unconstitutional to anyone with his political views. Seriously, this is a BAD hatchet job! Can you really imagine somebody being as conflicted as the review suggests and being able to function at all, let alone sitting on the Supreme Court?

seth (2007-06-17 04:55:48)

"Hatchet job"? Well, the writer is anti-Clarence-Thomas, sure. But the reputation being damaged is the reputation of the person who wrote the review. As you say.

## Shopping Notes (2007-06-16 22:20)

1. At a Vietnamese take-out place near Berkeley I got a can of sugar-cane juice. Some flavor, but very close to sugar water. From Taiwan. Which makes sense: In a Hong Kong store I saw cans of pure sugar water.

2. At Trader Joe's I bought a package of trail mix called "Omega Trek Mix with Omega Fortified Cranberries." (A new use of omega, by the way.) It contained "500 mg Omega-3 Fatty Acids Per Serving." Sold only by Trader Joe's. Not saying which omega-3 fats is a problem; so is lack of refrigeration. I could do a bio-assay, I realized: using the tests I have blogged about, such as balance and arithmetic, I could determine how much of the mix I had to eat to have the same effect as 1 tablespoon of flaxseed oil.

3. At Trader Joe's I asked the checkout clerk what parts of her job she liked the best. "If we card a secret shopper, we get \$15 for lunch," she said. Lunch here? I asked. Lunch anywhere, she said. Whereas [1]Dell employees detest secret shoppers. A tiny glimpse of a better future.

1. <http://consumerist.com/consumer/insiders/22-confessions-of-a-former-dell-sales-manager-268831.php>

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### **Science in Action: Sunlight and Sleep (progress report) (2007-06-17 22:12)**

I've collected even more observations supporting the idea that outdoor light improves my sleep, as discussed [1]earlier. Now I'd like to get some idea of the dose-response function. To sleep really well do I need two hours of outside light? Four hours? Eight hours?

I've started to rate my sleep on a scale where 50 = average sleep (average for the months before I started spending more time outside) and 100 = best sleep imaginable (which I got after standing about 10 hours). And I've started to use a stopwatch to measure how long I spend outdoors. I've also been using a light meter to measure the strength of light in various places. When I'm outdoors it's almost always in the shade. Today I discovered that sitting indoors next to a cafe window the incident light was just as bright as when I sit outside. Great to know because indoors I can plug in my laptop.

A 1994 book chapter from [2]Daniel Kripke's lab reported a correlation (0.24) between low light exposure and "abnormal sleep." So the connection I am now studying has been plausible for many years. The measurements I am now making are easy, but no one made them. Perhaps too many people believe that anything other than a double-blind trial with control and experimental groups is, as Peter Norvig, Google's Director of Research, [3]believes, a "mistake."

1. <http://www.blog.sethroberts.net/2007/06/05/science-in-action-sunlight-and-sleep-update/>

2. <http://psychiatry.ucsd.edu/faculty/dkripke.html>

3. <http://norvig.com/experiment-design.html>

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### **SLD Musings (2007-06-18 19:59)**

On her [1]MySpace page, Janice writes:

I have been on [the Shangri-La Diet] for a month and I have lost 12 pounds! It is the easiest way to lose weight.

During this month she started riding a recumbent bike. I am struck by how often this happens: After people start SLD they start improving their lives in other ways. (Didn't happen to me, by the way.) Does cessation of struggle with food (which took "energy") leave more "energy" for other forms of self-improvement? I wasn't struggling with food when I started SLD so I would fit that theory.

This wouldn't explain why SLD causes non-caloric cravings (such as for coffee and cigarettes) to go away. Maybe they go away because they are triggered by hunger. Speaking of cigarettes, Gary Skaleski, who invented SLD nose-clipping, suggests that maybe you can quit smoking if you clip your nose while you smoke. You get the nicotine needed to remove the craving but the lack of smell removes the possibility of addiction. No one becomes addicted to plain sugar water, which has no smell. Fascinating idea.

1. <http://blog.myspace.com/64480598>

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James (2007-06-19 04:38:48)

I don't think it's a matter of energy, but rather one of control, time, and physics. Control is the big one – it's very hard to convince yourself that you can improve if you've tried and failed to control something as simple as your eating. My experience with SLD is that it turns off the part of my brain that (a) maximizes calorie consumption and (b) has veto power over the rest of the brain. Before SLD, I didn't even realize that there was this disconnect between what I consciously decided to eat and what I ended up cooking or ordering. Once I started SLD, the conscious decision-making both decreased my intake but, much more importantly in my book, greatly improved the quality of my intake. (If you told me last year that I would willingly eat only 1-2 red-meat meals a week....) With control over my eating (and more stable blood-sugar levels, I'm guessing), doing things like exercising more, getting up earlier, and quitting a massive diet-soda habit seemed both easy and worthwhile. The sleep and eating-less benefits of SLD also increased the time I had available for self-improvement – not by a lot, but every bit helps. Finally, losing weight makes most exercise easier. I actually avoided adding exercise during my first few months on SLD because I wanted to prove to myself that the plan would work without it, and I didn't want to fall into the (for me common) trap of eating more to "make up" for calories used up exercising. I'm glad I waited; when I did start ramping up the exercise, the motivational benefits of feeling light/fast were excellent.

seth (2007-06-19 05:41:42)

Thanks for the analysis.

Janet (2007-06-19 06:12:22)

A couple of months ago, the AHRQ bulletin (which summarizes medical journal articles) included a randomized experiment that showed that making multiple life changes resulted in more positive outcomes than making single life changes. It's an active area of research — I know Bonnie Spring at Northwestern has been looking into it for awhile. The converse is that if someone falls off the diet wagon (or perceives themselves as having fallen off), they may also stop exercising as well.

Pearl (2007-06-19 06:15:31)

I was thinking about this the other day too, as I also have been long trying to improve my life before SLD, not suddenly after. Maybe for a lot of people, they see weight loss like trying to push a giant boulder by themselves, but SLD is like getting a machine that pushes the boulder for you. But the machine only does so much and suddenly one feels that any energy they put into moving the boulder with the machine will actually help the boulder along. People feel like a burden has been lifted and pushing the boulder is possible, so they want to help it move as fast as possible.

Janet (2007-06-19 06:25:32)

I just ran across the article: <http://www.medpagetoday.com/Cardiology/AcuteCoronarySyndrome/tb1/5903>

seth (2007-06-19 06:44:54)

That would be an interesting study: ask people about their various goals (e.g., get more exercise) and how far they have gotten on them month after month; and then see if starting SLD actually causes them to do more on their other goals. Does it affect

1. food-related goals (e.g., drink less diet sodas).
2. weight-related goals (e.g., get more exercise).
3. health-related goals (e.g., eat less salty food).
4. wellness-related goals (e.g., get massage).
5. non-wellness related goals (e.g., blog more).

Brad (2007-06-19 07:51:49)

I would think you'd find a lot of reinforcing effects. With me the oil both tends to reduce cravings and tends to give me a feeling of control, which increases hope, which increases motivation, which increases efforts in other areas, which results in positive effects...which increases feelings of control and motivation. It's a wonderful feedback loop.

david (2007-06-19 07:56:01)

I did SLD over a year ago: was 167 lbs, did some sugar water for 3-4 weeks between breakfast and lunch; got down to 147 lbs; the weight never came back. I didn't start exercising any more though I might be slightly more active. I did however stop eating meat. I didn't so much become a vegetarian as realize I was one. I would go several days and realized I hadn't had any meat. I've since learned that vegetarianism is the new Prius, which is nice, because I can't afford a Prius: <http://www.commondreams.org/views07/0120-20.htm>

Sarah Lewis (2007-06-20 07:20:45)

David, I love that article you linked to. I'm a "[1]flexitarian" mostly due to my picky tastes (I really don't like much meat) but it's encouraging to realize that simply eating more healthfully could help with other, larger problems.

1. <http://en.wikipedia.org/wiki/Flexitarianism>

### **Can Dish It Out But Can't Take It (2007-06-19 23:06)**

The presidents of dozens of liberal arts colleges have decided to stop participating in the annual college rankings by U.S. News and World Report.

From the [1]NY Times. I commented [2]earlier on the contradiction between how college presidents think students should be judged – they believe it is fine to judge all students according to one standard that usually has little to do with their strengths and goals – and how they wish to be their colleges to be judged.

“Frankly, it had bubbled up to the point of, why should we do this work for them?” said Judith P. Shapiro, the president of Barnard College.

Yes, exactly: Why help prospective students? Lest there be any doubt [3]for whom colleges exist.

1. <http://www.nytimes.com/2007/06/20/education/20colleges.html?hp>
2. <http://www.blog.sethroberts.net/2007/04/07/golden-rule-and-reed-college/>
3. <http://www.blog.sethroberts.net/2007/03/31/for-whom-do-colleges-exist/>

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Andrew Gelman (2007-06-22 05:34:49)

Seth, I'm sure I'm biased because Barnard is an affiliate of Columbia (where I work), but I don't think you're being fair. When referring to "them," Shapiro was talking about U.S. News, not prospective students. Speaking to your larger point, I agree that just about all organizations (including universities, businesses, governments, and, for that matter, magazines such as U.S. News) work for their own interest as well as the groups that they serve. With that in mind, and following the Backseat Driver principle, I suspect that it would be useful for college presidents to listen to your advice.

seth (2007-06-22 06:24:55)

Yes, by "them" Shapiro meant the magazine. But the magazine was helping prospective students. Mayor Bloomberg give a talk at Google in which he referred to the bureaucracy of the New York City public school system as serving itself, not students. As you say, other organizations act the same way. I suspect organizations we have to deal with – such as governments and schools – are worse in this regard.

Andrew Gelman (2007-06-22 06:50:12)

Barnard is a private school so I imagine it's more responsive than governments and public schools. Regarding your first point, maybe U.S. News is helping prospective students, maybe not. Presumably the people buying the magazine think it helps them, but then again the people paying to go to Barnard presumably thinks Barnard helps them. Just as you're skeptical about Barnard providing what it claims (and what people pay for), maybe you should apply similar skepticism to U.S. News rankings, which have come under a lot of criticism in recent years.

seth (2007-06-22 07:19:34)

The problems with how college students are taught relate to my ideas about human evolution; that is one reason I discuss them. My evolutionary ideas suggest why things have gone wrong and how to fix them. The other reason is that I am familiar with colleges – at least, compared to magazines. As I once blogged, I think it is better to offer advice about stuff you are familiar with. No one is forced to buy U.S. News and World Report. But students are pretty much forced to go to college to get jobs above a certain level of prestige.

jc (2007-06-23 09:48:43)

Interesting discussion - My read of this is that schools are not saying they don't want to be graded; they are saying they don't want to be graded by US News & World Report. One, because no one thinks they have expertise in such evaluation. Two, because unlike student grades that are based on real assessment of course work related to a published syllabus, these college rankings are based on poorly executed surveys of self-interested parties and "objective" measures (like size of research budget) which have not been proven to be associated with quality of education. What is wrong-headed about the school's response is that they want to replace the US News ranking with a self-reported ranking. Instead, they should find a third party, preferably a non-profit research organization that has expertise in statistical methods, to execute an open ranking, with rules agreed upon by all schools.

seth (2007-10-25 20:29:25)

Yes, that's a good idea.

## **The Twilight of Expertise (part 5: psychotherapy) (2007-06-20 06:48)**

In [1]The Starfish and the Spider (2006), a book about decentralized organizations, one of the examples is Alcoholics Anonymous, started in 1935, in which local chapters are almost entirely autonomous from headquarters. Of course

AA led to many similar programs: Narcotics Anonymous, Overeaters Anonymous, and so on. All of these twelve-step programs offer therapy without therapists – for free. A little like the [2]Protestant Reformation, which I mentioned [3]earlier.

At a recent party I met a woman who runs an outpatient program for persons with mental disorders, including major depression. She asked me what I would suggest. Based on [4]my faces research, I suggested early morning face-to-face meetings, especially for persons with depression. Very interesting, she said, AA folk wisdom is that morning meetings have the best success rates.

If you want to attend an early morning meeting (non-twelve-step), and you live in San Francisco, you may have a communal breakfast ( \$5 plus tax, served 8:30-9:30 am) at [5]OneTaste (1074 Folsom at 7th St.), an "Urban Retreat Center". If you can do this, I'm jealous. OneTaste is a group of 50 people who live and work together. They appear to support themselves by teaching yoga and giving other classes. They have been at their SF location for two years; before that they were at many different locations. The receptionist told me it was a "sensual community." What's that? I asked. "We try to activate our sensuality" etc., she said. I didn't know what she meant. Is this on the website? I asked. Yes, she said, so I didn't bother to take careful notes. I wish I had. The website puts it more bluntly: "Our purpose at OneTaste is to return to connection by researching our relationship to orgasm." A recruitment [6]video, to prepare for breakfast.

1. <http://www.starfishandspider.com/>
2. [http://en.wikipedia.org/wiki/Protestant\\_Reformation](http://en.wikipedia.org/wiki/Protestant_Reformation)
3. <http://www.blog.sethroberts.net/2007/06/10/the-twilight-of-expertise-part-2/>
4. <http://repositories.cdlib.org/postprints/117/>
5. <http://onetastesf.com/>
6. <http://www.youtube.com/watch?v=0qNBAIU786Q&mode=related&search=>

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Willy (2007-06-20 14:19:16)

I repost, it seems I have some problems. Very nice post. Now I think I have a reason why so many people like to have breakfast at a cafe (a habit I hate). It can't be they are too lazy to make a cup of coffee.

seth (2007-06-20 14:27:07)

I think you're right. Unfortunately if you go to a cafe for breakfast you are unlikely to have long conversations with the other patrons. Which is why I like the OneTaste breakfast. The mother of a friend of mine suffered from severe depression; she couldn't get out of bed. She got better when she started a business breakfast for women. Maybe other sorts of breakfast groups are possible.

seth (2007-06-20 14:49:50)

if your comment does not appear after you post it it probably means the system treated it as spam.

seth (2007-06-20 19:49:13)

Someone had trouble posting this: Bill Wilson, the founder of AA, is an excellent example of someone who made a great discovery through self-experimentation. The AA program was adapted from an earlier program based on Wilson's observations about what worked and what didn't work for alcoholics. The entire program continued to be shaped by this type of experimentation and by group collaboration. AA is far from perfect, but evidence-based medicine has so far failed to come up with a treatment option that rivals the 12 step approach.

seth (2007-06-20 19:49:31)  
That's a good point.

### **A New and Useful Word (2007-06-20 12:26)**

The word is black-and-white-ism. For [1]instance:

Berman's chief problem as a thinker is black-and-white-ism, and this is a good example of his failure to make subtle distinctions.

Scientists are guilty of black-and-white-ism all the time: this statistic is wrong, that way of doing things is a mistake, and so on. John Tukey wrote about this tendency in a paper called "Analyzing data: Sanctification or detective work?" If you believe data analysis is sanctification, there are indeed right ways and wrong ways, as with any ritual. But if science is not a set of rituals, talking about right and wrong confuses graduate students – who begin to think science is a set of rituals – and restricts what you can do. After you say something is wrong, it is harder to do it.

1. [http://www.philipweiss.org/mondoweiss/2007/06/paul\\_berman\\_is\\_.html](http://www.philipweiss.org/mondoweiss/2007/06/paul_berman_is_.html)

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pete (2007-06-20 20:31:32)  
manicheanism?

pete (2007-06-20 20:33:22)  
well, i take it back, not exactly the same thing – less of a moral edge to "black-and-white-ism"

seth (2007-06-20 20:59:35)  
perhaps "black-and-white-ism" is the poor man's "manicheanism".

### **Strengths and Weaknesses of Epidemiology: A Semi-Insider's View (2007-06-21 23:38)**

On BART I met a graduate student in epidemiology. "What are the strengths and weaknesses of epidemiology?" I asked. Strengths:

1. It asks important questions. What causes cancer? for example.
2. The results are useful. They can guide public policy. If you learn that smoking causes cancer, you can start an anti-smoking campaign. Epidemiological results can also lead to informative experiments: Epidemiology suggests that X causes cancer, you do an experiment to test that conclusion.



Weaknesses:

1. Health is complicated, controlled by many things. Presumably this is why studies often have conflicting conclusions.
2. There is enough flexibility in data analysis that your original hypothesis may influence the way that you analyze your data.

I use epidemiology all the time – [1]here, for example. It often makes an interesting idea more plausible. My ideas about depression, derived from studying the effects of seeing faces, became more plausible to me because of the epidemiology of depression.

1. <http://www.blog.sethroberts.net/2007/06/04/science-in-action-sunlight-and-sleep-background/>

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### **The Dog-Food Diet (part 1) (2007-06-23 09:38)**

From [1]craigslist:

I have 2 dogs & I was buying a large bag of Pal at Big W and standing inline at the check out.

A woman behind me asked if I had a dog.

On impulse, I told her that no, I was starting The Pal Diet again . . . I told her that it was essentially a perfect diet and that the way that it works is to load your pants pockets with Pal nuggets and simply eat one or two every time you feel hungry & that the food is nutritionally complete.

Not absurd. [2]Sclafani and Springer (1976) compared two groups of rats: (a) rats given rat chow (which resembles Pal nuggets) and (b) rats given rat chow plus human food (e.g., salami, cheese). Both groups could eat as much as they wanted. The second group gained a lot more weight than the first. I suspect rat chow is less fattening than human food because it is more bland and digested more slowly. This is one of the experiments that led me to the [3]theory behind the Shangri-La Diet.

1. <http://seattle.craigslist.org/about/best/wdc/323692159.html>

2. [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6T0P-484NWYY-N4&\\_user=4420&\\_coverDate=09%2F30%2F1976&\\_alid=592270496&\\_rdoc=6&\\_fmt=summary&\\_orig=search&\\_cdi=4868&\\_sort=d&\\_docanchor=&view=c&\\_ct=6&\\_acct=C000059607&\\_version=1&\\_urlVersion=0&\\_userid=4420&md5=4ff975bdef39f32be7636d02c1d9092d](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6T0P-484NWYY-N4&_user=4420&_coverDate=09%2F30%2F1976&_alid=592270496&_rdoc=6&_fmt=summary&_orig=search&_cdi=4868&_sort=d&_docanchor=&view=c&_ct=6&_acct=C000059607&_version=1&_urlVersion=0&_userid=4420&md5=4ff975bdef39f32be7636d02c1d9092d)

3. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>

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J. Weighty (2007-06-23 15:25:36)

And of course, there's the Monkey Chow Diet: <http://www.angryman.ca/monkey.html>

seth (2007-06-23 15:53:27)

Thanks for the link. The big difference is that dog food is a lot more available than monkey chow.

Dale (2007-06-27 12:57:40)

Let's not forget, if you do go on a animal chow diet – don't add water!! [see Seth's Shangri-La Diet appendix page pp153-154]

seth (2007-06-27 14:10:48)

That is correct: don't add water.

## **Learning to Write Better (2007-06-24 07:19)**

[1]From the SLD forums:

I just had a great victory. My daughter is having her friends over so we are making friendship cookies. . .  
. I was feeling miserable for the first time since starting SLD [Shangri-La Diet] like I wanted to eat a whole bunch of them and totally binge out. I ate a few crumbs that fell off and couldn't get them out of my mind (I haven't had this problem in 6 wks.). I went ahead and decided to eat just one of the yummy delights.  
. . . After one I was so very full I actually didn't want anymore! DO YOU REALIZE WHAT THIS MEANS? I mean, wow! I can actually have just one cookie. I never ever ever have been able to do that before.

I like to think the Internet is improving my writing by showing me many examples of how to do it. This quote is half of a well-written few paragraphs. The other half would be the general rule that Michel Cabanac discovered: If your set point is lower than usual you will feel full sooner than usual, as this quote illustrates. (The Shangri-La Diet had lowered her set point.) Interesting idea + emotion-charged example = good writing. Blogs are another example. As I've said [2]before, they are full of good writing. You don't blog about stuff you don't care about.

Books – part of the great wide non-Internet – suffer by comparison. I recently started reading a book about [3]Alice Waters and Chez Panisse. I was favorably disposed: Chez Panisse is a great achievement, I am very interested in food and changes in food, it took place near my house, I had attended a nice reading given by the author. In spite of all this, I stopped after a few chapters. The book is very well written in a nuts-and-bolts way. However, it lacks emotion – the author didn't care passionately about his subject and it shows. The book had come about because Alice Waters's assistant had approached him and asked him if he was interested in doing such a book. He took a long time, he did a careful and thorough job, but no amount of time or care or editing could fix the problem that he didn't feel strongly enough.

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1. <http://boards.sethroberts.net/index.php?topic=5029.msg52085#msg52085>

2. <http://www.blog.sethroberts.net/2007/05/16/why-blogs-are-better-written/>

3. <http://sfgate.com/cgi-bin/article.cgi?file=/c/a/2007/04/06/DDG3FP2P621.DTL&type=printable>

## Good Thinking (2007-06-24 15:23)

I heard about [the Shangri-La] diet from someone on a discussion group I'm part of and it sounded like total bunk. . . . This person pushes my buttons, so I decided I would test the diet. If it worked, I'd lose some unhealthy weight (three pregnancies combined with the stress of recent years left me 40 pounds overweight for my height), and if it didn't work, I'd have the satisfaction of proving her wrong. It was a win/win.

I chuckle every time I read this. [1]It continues:

I eliminated my two daily Cokes . . . from my diet and replaced them with the equivalent amount of liquid and calories from sugar water. I've been less hungry and losing weight ever since. Damn her!

[2]Speaking of SLD and blogs and good writing. [3]This has nothing to do with SLD.

1. <http://mamampj.blogspot.com/2007/06/8-things-about-me.html>
2. <http://www.blog.sethroberts.net/2007/06/24/learning-to-write-better/>
3. <http://mamampj.blogspot.com/2007/06/seriously-i-am-so-pissed-off.html>

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Mary (MPJ) (2007-06-24 19:41:55)

Wow, thanks for the compliment on my writing. And thanks above all, for my new healthier and svelter self. I can't believe how easy it has been to eat reasonable portion sizes and cut down on junky snacks. I'm so happy with my new relationship with food, and as an added bonus, I find that sipping a cup of sugar water is a great way to relax. I tell any and all who will listen about the good times I'm having in Shangri-La!

Dave (2007-06-27 00:05:23)

Seth, found your site after doing some online research. Your diet info on the site obviously relates to the book which I'll go check out. It looks like its common sense based but like everyone else I lose my common sense around a bag of cookies. The wife and kids have learned to hide them from me.

## The Twilight of Expertise (part 6: psychotherapy, continued) (2007-06-25 04:02)

Among the community of psychotherapists, according to Dr. Marion Arom, a psychotherapist friend of mine, "it is common knowledge that in many traditional therapies, if the therapy fails – if the desired change doesn't occur – it's due to client resistance or lack of motivation to change or unconscious motivation. The role or skill of the therapist is not examined, ever."

[1]Dark Age Ahead by Jane Jacobs has a chapter about the failure of highly-respected professions to police themselves.

[2]

Directory of Twilight of Expertise posts.

1. <http://www.bewilderingstories.com/issue104/darkage.html>

2. <http://www.blog.sethroberts.net/2007/06/25/the-twilight-of-expertise-directory/>

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Nansen (2007-06-25 17:23:38)

And, if the desired change DOES occur, it just can't be due mainly to something unheard of, such as Seth's discovery about seeing faces early in the morning. Rather: the change must be due to the therapy, or chance, or remission, et cetera.

Psychotherapy (2008-06-03 08:22:55)

Yes, so very true. As a practicing therapist and director of an organization dedicated to promoting healthy psychotherapy and counseling, I can tell you that the inability of some therapists to self-examine is a big issue. As a general rule of thumb I believe that if the therapy is not going well, then there is a part in the way. The part may be an aspect of the client, but it is just as likely to be an aspect of the therapist. A good therapist makes an effort to know themselves and to be conscious of how parts of themselves may be interfering with the clients work or reacting to the client in subtle and significant ways. It's an excellent subject to talk about and one that we at goodtherapy.org are trying to bring more awareness to. Thanks for the blog post... I look forward to reading more and exploring your blog. Noah

### **The Twilight of Expertise (directory) (2007-06-25 09:32)**

1. [1]foreign-aid experts
2. [2]medical doctors
3. [3]book writers
4. [4]clinical trials
5. [5]psychotherapists
6. [6]psychotherapists again
7. [7]education experts
8. [8]spiritual experts
9. [9]clinical trials again
10. [10]book reviewers
11. [11]journalists
12. [12]expert vs math models
13. [13]ICU doctors

14. [14]fugu processors
15. [15]surgeons
16. [16]opticians
17. [17]medical doctors again
18. [18]psoriasis treatment
19. [19]mothers (parenting advice)

1. <http://www.blog.sethroberts.net/2007/06/09/the-twilight-of-expertise/>
2. <http://www.blog.sethroberts.net/2007/06/10/the-twilight-of-expertise-part-2/>
3. <http://www.blog.sethroberts.net/2007/06/14/the-twilight-of-expertise-part-3/>
4. <http://www.blog.sethroberts.net/2007/06/15/the-twilight-of-expertise-part-4/>
5. <http://www.blog.sethroberts.net/2007/06/20/the-twilight-of-expertise-part-5-psychotherapy/>
6. <http://www.blog.sethroberts.net/2007/06/25/the-twilight-of-expertise-part-6-psychotherapy-continued/>
7. <http://www.blog.sethroberts.net/2007/06/25/the-twilight-of-expertise-directory/>
8. <http://www.blog.sethroberts.net/2007/06/28/the-twilight-of-expertise-part-8-spiritual-experts/>
9. <http://www.blog.sethroberts.net/2007/06/29/the-twilight-of-expertise-part-9-clinical-trials-again/>
10. <http://www.blog.sethroberts.net/2007/08/23/the-twilight-of-expertise-part-10-book-reviewers/>
11. <http://www.blog.sethroberts.net/2007/08/27/the-twilight-of-expertise-part-11-journalists/>
12. <http://www.blog.sethroberts.net/2007/10/10/the-twilight-of-expertise-part-12-super-crunchers/>
13. <http://www.blog.sethroberts.net/wp-admin/post.php?action=edit&post=637>
14. <http://www.blog.sethroberts.net/2008/05/03/the-twilight-of-expertise-fugu-processors/>
15. <http://www.blog.sethroberts.net/2008/09/13/the-case-of-the-missing-evidence/>
16. <http://www.blog.sethroberts.net/2008/12/22/the-twilight-of-expertise-part-14-opticians/>
17. <http://www.blog.sethroberts.net/2009/02/01/the-twilight-of-expertise-medical-doctors/>
18. <http://www.blog.sethroberts.net/2009/05/13/the-twilight-of-expertise-psoriasis-treatment/>
19. <http://www.blog.sethroberts.net/2009/07/14/the-twilight-of-expertise-mothers/>

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## The Twilight of Expertise (part 7: education experts) (2007-06-26 13:56)

The education improvement program – merit pay for teachers as part of a larger package – promoted by the Milken Family Foundation received a big public boost last week with [1]this NY Times article about a similar program in Minnesota.

A consensus is building across the political spectrum that rewarding teachers with bonuses or raises for improving student achievement, working in lower income schools or teaching subjects that are hard to staff can energize veteran teachers and attract bright rookies to the profession. . . . Minnesota’s experience shows . . . that an incentive plan created with union input can draw teacher support.

The plan that is gaining support was devised by Lowell Milken, according to Jana Rausch, who works for the Milken Family Foundation on [2]this initiative. Before he started the foundation, Lowell Milken was a lawyer. As far as education goes, he is self-taught. Yet the program he devised seems to be working better than other programs. Of course many people have proposed merit pay for teachers; but it is the Milken Family Foundation that has managed to make it work. We need engineers to build a better plane. But we do not need education experts, apparently, to build better schools.

1. [http://www.nytimes.com/2007/06/18/education/18pay.html?\\_r=1&hp=&oref=slogin&pagewanted=print](http://www.nytimes.com/2007/06/18/education/18pay.html?_r=1&hp=&oref=slogin&pagewanted=print)
2. <http://www.talentedteachers.org/>

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### **My Theory of Human Evolution (music video edition) (2007-06-27 10:33)**

[1]This clever and attractive music video creates images out of repetition of dice numbers – pictures of dice showing 1, 2, etc. It illustrates the general point that we like to see identical or nearly-identical things side by side. A vast amount of decoration (wallpaper, rugs, packages, posters, architectural details) takes advantage of this.

It's a curious propensity because we don't see this pattern in nature: we don't see identical things side by side, neatly lined up. So the propensity did not evolve so that people will prefer Place X to Place Y. It's a propensity that causes us to place similar things side by side – if we have a doll collection, for example, to put our dolls side by side rather than far apart.

When we put things [2]side by side it is far easier to notice small differences. Noticing small differences is the first step toward caring about small differences, deriving pleasure and displeasure from them – becoming a connoisseur, in other words. Connoisseurs pay more for "fine" stuff than the rest of us – wine connoisseurs pay more for wine, for example. In human prehistory, I theorize, connoisseurs supported [3]artists and artisans, who were the first material scientists.

The pleasure we take from identical things side by side evolved because it increased connoisseurship. Supermarkets should do more side-by-side sampling of different products in the same category – different balsamic vinegars, for example.

[4]Directory for this series.

1. [http://www.factoryfilms.net/pop.php?file=FuyijaMiyagi\\_AnkleInjury.mov](http://www.factoryfilms.net/pop.php?file=FuyijaMiyagi_AnkleInjury.mov)
2. <http://www.blog.sethroberts.net/2007/05/09/my-theory-of-human-evolution-american-idol-edition/>
3. <http://www.blog.sethroberts.net/2007/06/07/my-theory-of-human-evolution-scrapbook-edition/>
4. <http://www.blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-directory/>

## My Theory of Human Evolution (directory) (2007-06-27 10:55)

- [1]Diversity in Learning (article)
- [2]How Economics Shaped Human Nature (talk)
- [3]A Theory of Human Evolution and Application to Education (short article)
- [4]How Economics Shaped Human Nature: A Theory of Evolution (book chapter)

### posts

- [5]Christmas rituals and gifts
- [6]American Idol side-by-side comparison
- [7]scrapbooking art and artists
- [8]business book specialization
- [9]music video side-by-side comparison
- [10]diet sodas side-by-side comparison
- [11]omiyage rituals and gifts
- [12]blogs and fan clubs spread of technical knowledge
- [13]red stained glass early art = material science
- [14]fancy chocolates connoisseurship and gift rituals support material science
- [15]computer chips art = material science
- [16]amazon.com gift wrapping and material science
- [17]Planet Earth relation to the Aquatic Ape theory
- [18]guitars/do animals like music? enjoyment of music supports material science
- [19]art and quasi-reinforcement art and quasi-reinforcement act as ramps
- [20]the pleasure of crafts
- [21]language
- [22]early value system artisanal values
- [23]intricate art desire for intricacy advances technology
- [24]Henry Rosenthal Pennant Collection collectors support skilled artisans
- [25]Make magazine the hobby instinct
- [26]osechi holidays support artisans
- [27]Easter tradition holidays support artisans

- [28]gift cards gifts support artisans
- [29]frugal materials love of art -> material-science research
- [30]the cellphone effect the first words facilitated trade
- [31]micropygmies hunter-gatherers with trade different from those without trade
- [32]autism autistic "obsessions" reveal a universal tendency toward expertise
- [33]Fourth of July holidays increase demand for finely-made stuff
- [34]Chinese birthday gift gifts support artisans in a different culture
- [35]fixing bike pumps single words help traders find each other
- [36]the curious case of to have to have is different from other verbs, which supports the idea that language was first used to tell who has what
- [37]bells figured heavily in the beginning of metallurgy
- [38]Beijing furniture shopping illustrates points about taste, decoration, and the attractiveness of matching stuff
- [39]good-luck charms help skilled craftsmen make a living
- [40]aniline dyes were the first industrial chemicals – an example of art as stepping stone
- [41]a baseball-park collector/connoisseur
- [42]caganers are a traditional part of Barcelona nativity scenes

1. [http://sethroberts.net/about/2005\\_diversityinlearning.pdf](http://sethroberts.net/about/2005_diversityinlearning.pdf)
2. [http://sethroberts.net/archives/How\\_Economics\\_Shaped\\_Human\\_Nature.ppt](http://sethroberts.net/archives/How_Economics_Shaped_Human_Nature.ppt)
3. <http://www.blog.sethroberts.net/2010/11/08/a-theory-of-human-evolution-and-application-to-education/>
4. <http://sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>
5. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>
6. <http://www.blog.sethroberts.net/2007/05/09/my-theory-of-human-evolution-american-idol-edition/>
7. <http://www.blog.sethroberts.net/2007/06/07/my-theory-of-human-evolution-scrapbook-edition/>
8. <http://www.blog.sethroberts.net/2007/05/12/my-theory-of-human-evolution-business-book-edition/>
9. <http://www.blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-music-video-edition/>
10. <http://www.blog.sethroberts.net/2007/07/10/my-theory-of-human-evolution-diet-soda-edition/>
11. <http://www.blog.sethroberts.net/2007/07/12/my-theory-of-human-evolution-omiyage-edition/>
12. <http://www.blog.sethroberts.net/2007/07/13/my-theory-of-human-evolution-blogs-and-fan-clubs-edition-or-why-we-blog/>
13. <http://www.blog.sethroberts.net/2007/07/21/my-theory-of-human-evolution-red-stained-glass-edition/>
14. <http://www.blog.sethroberts.net/2007/07/24/my-theory-of-human-evolution-fancy-chocolate-edition/>
15. <http://www.blog.sethroberts.net/2007/07/27/my-theory-of-human-evolution-computer-chip-edition/>
16. <http://www.blog.sethroberts.net/2007/08/04/my-theory-of-human-evolution-amazoncom-edition/>
17. <http://www.blog.sethroberts.net/2007/08/10/my-theory-of-human-evolution-planet-earth-edition/>
18. <http://www.blog.sethroberts.net/2007/08/31/my-theory-of-human-evolution-guitar-edition/>
19. <http://www.blog.sethroberts.net/2007/09/03/my-theory-of-human-evolution-art-and-quasi-reinforcement/>
20. <http://www.blog.sethroberts.net/2007/09/22/my-theory-of-human-evolution-the-pleasure-of-crafts/>
21. <http://www.blog.sethroberts.net/2007/09/27/my-theory-of-human-evolution-language/>
22. <http://www.blog.sethroberts.net/2007/10/29/my-theory-of-human-evolution-value-system/>
23. <http://www.blog.sethroberts.net/2007/11/07/my-theory-of-human-evolution-intricate-art-edition/>



24. <http://www.blog.sethroberts.net/2007/11/13/my-theory-of-human-evolution-the-henry-roenthal-pennant-collection/>
25. <http://www.blog.sethroberts.net/2007/11/14/my-theory-of-human-evolution-make-edition/>
26. <http://www.blog.sethroberts.net/2007/11/28/my-theory-of-human-evolution-osechi/>
27. <http://www.blog.sethroberts.net/2008/02/12/my-theory-of-human-evolution-civil-rights-movement-edition/>
28. <http://www.blog.sethroberts.net/2008/02/23/my-theory-of-human-evolution-gift-card-edition/>
29. <http://www.blog.sethroberts.net/2008/04/08/my-theory-of-human-evolution-frugal-materials/>
30. <http://www.blog.sethroberts.net/2008/04/11/my-theory-of-human-evolution-the-cellphone-effect/>
31. <http://www.blog.sethroberts.net/2008/04/27/my-theory-of-human-evolution-micropygmies/>
32. <http://www.blog.sethroberts.net/2008/05/05/my-theory-of-human-evolution-autism/>
33. <http://www.blog.sethroberts.net/2008/07/04/my-theory-of-human-evolution-fourth-of-july/>
34. <http://www.blog.sethroberts.net/2008/11/17/my-theory-of-human-evolution-chinese-birthday-gift/>
35. <http://www.blog.sethroberts.net/2008/12/19/my-theory-of-human-evolution-fixing-bike-pumps/>
36. <http://www.blog.sethroberts.net/2009/04/03/human-evolution-the-curious-case-of-to-have/>
37. <http://www.blog.sethroberts.net/2009/04/18/my-theory-of-human-evolution-bells/>
38. <http://www.blog.sethroberts.net/2010/01/16/my-theory-of-human-evolution-beijing-furniture-shopping/>
39. <http://www.blog.sethroberts.net/2010/06/21/my-theory-of-human-evolution-good-luck-charms/>
40. <http://www.blog.sethroberts.net/2010/07/22/my-theory-of-human-evolution-aniline-dye/>
41. <http://www.blog.sethroberts.net/2010/09/02/my-theory-of-human-evolution-baseball-park-collector/>
42. <http://www.blog.sethroberts.net/2010/12/25/my-theory-of-human-evolution-caganners/>

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Shane (2010-03-06 08:22:40)

I read the "Diversity in Learning" article and loved the practical parts of it, though phrasing it in ev-psych terms is too vague for my tastes, esp. when all of these accounts - language development, to take just one - have been treated extensively, thoroughly, and critically. (One example you may enjoy is Arbib's 2005 article in BBS on language evolution via the mirror-neuron system. Even though MNS has attracted a huge range of loonies, Arbib is about as mainstream neuroscience as it gets; so him sticking his neck out in this way was an event of some note.) Anyway, I'm putting together a curriculum for teaching various aspects of the linear model, from linear algebra to multiple regression to the derivation of the multivariate Gaussian distribution (yes, this makes sense in context.) I would love to use your idea "Do 60 hours of work on something having to do with psychology, but it has to be off-campus" but I don't think that particular phrasing would work in a mathematical class of this sort, or at least, the kinds of applications I can imagine would severely constrain the material, and the material does need to be learned - the student doesn't have the luxury of learning the stuff that she likes when she'll need these tools for the rest of her graduate career. In other words, if she doesn't leave being able to derive and hand-code a multivariate regression, connect this to geometry, and from there to fitting complex surfaces using OLS, then I lose. Any thoughts? How does one use the powerful ideas in your paper for more ... constricted domains?

seth (2010-06-21 07:04:59)

Sorry to not reply sooner. I didn't see this. I suppose my first attempt would be to say to the students: do something you want to do with these ideas. And see what happens. It could involve about 60 hours of work.

Raenell (2011-02-24 19:52:31)

As what the saying goes, "The Only Permanent Thing in this World is Change." Human evolution is happening every now and then and it's up to us humans how we will adopt and adjust into it. But the only thing I could say is that everything that is happening in our time today, it has a purpose. Only God knows that purpose.

Tian Liang (2011-09-12 10:51:04)

Greetings Seth, I read your paper on How Economics Shaped Human Nature and I am impressed by the fresh approach you took as opposed to traditional explanations of human origins and uniqueness. I'd like to offer a different approach that also involves some economics and game theory to explaining human origins. The book "Death from a Distance and the Birth of a Humane Universe" (Paul M. Bingham and Joanne Souza, 2009; [www.deathfromadistance.com](http://www.deathfromadistance.com)) in my opinion provides a fresh angle at explaining human origins much like yours and also predicts the human future. Let me call your attention to the fact that Bingham and Souza's theory accounts explicitly for why humans first evolved the capacity for "trade" and, thus, provides new insights into the relationship between human evolution and contemporary economic behavior. Let me know what you think! [I can probably arrange for the authors to send you a free copy of their book if you are interested in reviewing it. See their website at [www.deathfromadistance.com](http://www.deathfromadistance.com) .]

### **The Twilight of Expertise (part 8: spiritual experts) (2007-06-28 19:18)**

"Religion is extremely important to the Tibetans," says [1]Wikipedia, but what does that mean? The [2]Tibetan Buddhism entry is no help. Last night at dinner, however, I did learn what it means, at least in part. Tibetans spend a vast amount of time on religious observances – what the observer (Bryan Ng, a Berkeley engineer) called a "religion tax." One example was a well-observed month-long annual religious festival. Another was a sensationally slow method of travel: Take a step or two, bow down, lie down on the ground, get up, take another step, bow down, and so on. This method is used to cover long distances, such as 20 miles or more. The extremely devout do this along highways.

The Chinese government wants to reduce the influence of religion, he said. Goods imported into Tibet from China via the new railway should increase commerce, for example. The power of the Chinese government makes it likely they will succeed.

1. <http://en.wikipedia.org/wiki/Tibet>

2. [http://en.wikipedia.org/wiki/Tibetan\\_Buddhism](http://en.wikipedia.org/wiki/Tibetan_Buddhism)

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Janet (2007-06-28 20:07:52)

If this Tibetan practice is widely followed, wouldn't it qualify as a folk practice rather than expert-driven practice? An example of twilight of expertise in religion is the rise of clergy-less places of worship. I'm most familiar with Jewish case: the chavurah (a type of clergyless prayer group) movement is a few decades old, and recently the most dynamic parts of Judaism are arising from non-denominational independent traditional prayer groups which have sprung up starting with Hadar in Manhattan, and subsequently in most urban centers. Of course, many of these groups were started by skilled lay leaders who attended a couple of Ivy League colleges, so maybe it is just a different type of expertise. Someone who has a finger on the pulse of Christian movements can comment on that. My sense is that the rise of non-denominational evangelical Christianity has brought greater opportunities for substantial lay leadership. The few street ministries that I know of were started by people who don't have any particular credential except experience in witnessing, and they perpetuate it by training lay people.

seth (2007-06-28 20:32:25)

Those are good examples, thanks. The Tibetan practices I mentioned were prescribed and sustained by the spiritual experts: the leaders of Tibetan Buddhism.

## Michael Moore and Jane Jacobs (2007-06-29 06:13)

Sicko is a great movie, one of the most emotion-evoking films I have ever seen. In this interview

[EMBED] Moore says something that is at the heart of Sicko:

They [HMOs] are required by law . . . to maximize profits for their shareholders. That's what the law requires them to do. The way they can maximize profits is to deny care, is to not pay out claims. The more claims they pay, the less profit they make. You should never have the idea of profit enter into a health decision. We wouldn't allow it for the fire department or the police department. We wouldn't say, well, you know, we've got to be sure the fire department posts a profit. We wouldn't turn it over to a private company, have investors invest in it, say, well, some people are going to get fire protection and other people aren't. We wouldn't allow that, would we? It would be immoral.

This is what [1]Systems of Survival by Jane Jacobs is all about. Jacobs argued that there are two sets of "moral" rules – one appropriate for "guardians" (such as firemen, police and doctors), the other appropriate for "traders" (business people) – and that the two should not be mixed. When guardians follow commercial rules or when traders follow guardian rules, bad things happen. Sicko is about the bad things that happen when doctors follow commercial rules and how these bad things are avoided when (in other countries) doctors follow guardian rules.

1. [http://en.wikipedia.org/wiki/Systems\\_of\\_Survival](http://en.wikipedia.org/wiki/Systems_of_Survival)

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Varangy (2007-06-29 08:56:42)

Seth, While you are clearly intelligent, your take on Sicko and socialized medicine is naive at best. Explain to me how socialized medicine, in the absence of visible prices, would ration healthcare. In Canada, healthcare is often rationed via someone's ability to wait for an operation. In the UK and other places, after a certain age, people do not get operated on b/c it is considered a waste of public monies.

Scoop (2007-06-29 09:05:34)

Of course we take money into account when deciding who we'll save from crime and fire. We decide, in advance, how much we will spend on police and firefighters, even though we know we could save more people if we spent more. Moreover, the amount spent on your protection from crime and fire does vary directly with your income because rich towns chose to buy better services than poor ones. Actual policemen and firemen may not follow "trader" rules but society follows trader rules in apportioning money for those services. What's the difference where we take money into account?

seth (2007-06-29 09:09:32)

Varangy, that's a very good question, outside my area of expertise. Varangy, you don't clearly explain why my take on Sicko is naive. It is propaganda, not a think piece. There is a place for films and books that engage emotions. Sicko is a Common Sense for our times.

Sandeep Prakash (2007-06-29 09:33:36)

Seth, Paine's Common Sense was a political pamphlet that was written with the unambiguous intention of convincing people to get rid of their present government (Britain). Michael Moore's film seeks to persuade people to look for a grand, centrally-planned health-care solution. No, Sicko is no the Common Sense of our times. Sicko asks us to return to a barbaric state of affairs where the politically connected and powerful are the most likely to have access to health care, and be well-off. Hence, it is more appropriate to say that Sicko is the [1]Occasional Discourse on the Negro Question of our times.

1. <http://cepa.newschool.edu/het/texts/carlyle/carlodnq.htm>

seth (2007-06-29 09:35:54)

Scoop, we don't require that the fire department or the police department post a profit, just as Moore says. It's true that there is consideration of money but it is of a different sort.

lasser11 (2007-06-29 09:57:40)

I don't know seth. Your criticism of our for-profit health care system seems to center on our top-down model. Decisions are made according to Wall Street's standards instead of those actually administering care, like doctors. Yet, a single payer system, like Canada, is even more top down structured than the US. A centralized agency chooses everything. There's less flexibility. In the US doctors are more empowered because insurance companies are not unified.

Carter (2007-06-29 10:40:57)

Seth, A few things. First, it seems to me that you carefully examine ideas before accepting them, and so I'm surprised to see you endorse a movie or an issue without carefully examining the counterarguments. "Common Sense" tells me that the Shangri-La diet wouldn't work, and yet I wouldn't accept that as truth without giving it a fair shake. I have to say that I'm shocked that someone who promotes a "heterodox" way of doing things in his own field would favor such a top-down, one-size-fits-all system when it comes to health care. The beauty of the free market (not that medicine is a free market now) is that experimentation flourishes and the best and most cost-effective methods for treatment and care rise to the top. Such a process is impossible when the government controls health care. When health care is "free" (paid for by massive tax increases), then the quantity demanded will be unlimited. Without prices to ration care, there will have to be some other rationing mechanism. It might be waiting lists, and more than a few people die every year in Canada waiting for treatment that takes only a few days in the U.S. (since you enjoy propaganda films, you should watch one from the other side of the fence: <http://www.onthefencefilms.com/video/twowomen.html>). A doctor motivated by money is far more trustworthy than a government bureaucrat. When the government provides services, the customer is a nuisance.

seth (2007-06-29 11:16:11)

My take on Moore's movie is that above all it is meant to evoke outrage or disgust or sadness that will lead to action – that is, to change. To spell out what the new system should be is left for a different piece of communication. This is perfectly appropriate. Moore is not a thinker and he doesn't claim to be one. His movie does so well what we always ask of art – that it evoke emotion. We don't look to novels for solutions, at least we shouldn't. Perhaps I should have called it *The Jungle* for our times. I don't favor any particular new system – that is beyond my expertise, as I have said. But I do favor some new system. The emotion evoked by Moore's movie is reasonable and helpful, I believe. In a free market, you say, "the best and most cost-effective methods" rise to the top, and that such a process "is impossible when the government controls health care." That's an interesting point. I'm not so sure it's impossible. If individuals and individual doctors can be empowered relative to a Washington bureaucracy, you may be wrong. After all people care about their health and getting the best possible treatment. The internet empowers them and maybe they can be empowered further. The voucher system is not incompatible with government control of education.

CD (2007-06-29 11:18:38)

The difference between police/fire and healthcare is that there is very little incentive to consume unlimited amounts of police/fire services, just because they are free.

seth (2007-06-29 11:25:06)

Good point, CD. If doctors were as effective as firemen, we would not argue about whether or not they are effective (see my earlier post about the *Twilight of Expertise* part 2, about doctors). People consume large amounts of health care, I believe, when their basic problems are not solved. E.g., they remain obese, diabetic, depressed, etc. This is what a doctor I know meant when she said "most of the people we see we can't really help". She worked in a community hospital.

Varangy (2007-06-29 15:31:25)

*t is propaganda, not a think piece. There is a place for films and books that engage emotions. Sicko is a Common Sense for our*

times. It is clearly propaganda. Anti-american propaganda. I should point out that Anti-americanism while very chic as well as a cashbox for people of MM's ilk is nothing less than a vicious prejudice. And you're right, it does engage emotions, cruel ones that do not wish the US well. *My take on Moore's movie is that above all it is meant to evoke outrage or disgust or sadness that will lead to action - that is, to change. To spell out what the new system should be is left for a different piece of communication. This is perfectly appropriate. Moore is not a thinker and he doesn't claim to be one.* At least we almost agree here, MM IS NOT a thinker. But he does claim to be one. *His movie does so well what we always ask of art - that it evoke emotion. We don't look to novels for solutions, at least we shouldn't. Perhaps I should have called it a The Jungle for our times.* His denigration of the world's best healthcare system (yes, I say that fully knowing its myriad, serious flaws and warts etc etc) is simply not art. *I don't favor any particular new system - that is beyond my expertise, as I have said. But I do favor some new system.* That is rather weak, no? :) YOU are a thinker - you must have an idea of what an ideal system would look like? Keep in mind, utopia does not count. *The emotion evoked by Moore's movie is reasonable and helpful, I believe.* From having read your blog, I don't think that you believe that prejudice of any sort is reasonable and helpful. And that is what this movie is about.

seth (2007-06-29 17:11:50)

I hope we can also agree that it is not the world's best healthcare system for those without health insurance. I don't think Moore's movie is about prejudice. It is full of facts and examples. I don't think it is "anti-American" to make a movie criticizing American health care. Lots of Americans agree with Moore - especially the uninsured.

lasser11 (2007-06-29 18:20:09)

I agree with Seth that our health care system has serious issues (especially for the uninsured) and if Moore's film provokes serious discussion on the issue without offering the Canadian or English system as a template, then that's great. But I'm concerned that that most viewers of sickco will believe that those two flawed health care systems are the end all of exceptional health care. I believe France offers us a better model to look at. French health care offers breadth of coverage while remaining more decentralized than our health care system. Yet, Moore raves about Canadian and even Cuban health care due to their geographic proximity.

Jason (2007-07-02 16:59:39)

I agree that healthcare has a conflict of interest which is inappropriate - profit vs quality care. Not sure that socializing healthcare is not just a tradeoff of other negative aspects though. As far as police - I hate to say I think there is frequently a conflict of interest as well since they are responsible for issuing tickets for all sorts of things and almost always those dollars go into their budget as well. For example - police have a motivation to have dangerous controlled intersections with red light cameras as these generate revenues. While it is always good to stop people from running red lights, from a police perspective there is motivation to write tickets as opposed to re-engineer the intersection to reduce that behavior. Jason

seth (2007-07-02 17:23:09)

One of Jacobs's examples of commercial values being used inappropriately by guardians is about police - being given a quota of tickets to issue, I think. I don't think Jacobs says it explicitly but an underlying idea of her book is that these two sets of values represent accumulated wisdom. That is, they are based on experience and perhaps competition between different ways of doing things.

Patri Friedman (2007-07-07 00:13:31)

Seth - I am surprised to hear you speak so favorably of emotional, poorly researched propaganda. If someone inaccurately portrays the problem, or what the solution is, in an emotional manner which moves people, that does not help the debate. It adds noise. It gets people stirred up, without really understanding the subject. I think that's a bad thing, not a good thing. I mean, undirected emotional manipulation is a good way to be popular, to get lots of viewers and sell lots of tickets. But why is it good? There is a reason "demagogue" has negative connotations. As an example, would you call Bush's speeches about the War on Terror a good thing, because they get people stirred up about terrorism? I would call them a bad thing b/c they blindly evoke emotionally moving subjects while having little to do with reality. I'd describe Moore's work (that which I've seen

- I haven't seen Sicko) the same way, just from the other side of the fence.

Brad (2007-07-07 01:59:33)

A lot of these posts are fishy. I just don't believe there are that many people out there still flogging the "socialized medicine" canard. I just don't believe there are that many people out there happy with the way things are. There is some kind of orchestrated campaign to post on blogs going on.

seth (2007-07-07 03:33:38)

When Bush talked about us versus them, I was appalled and believed it was a step in the wrong direction. One big difference is that after 9/11, I thought the danger was overreaction. People were already stirred up. Bush rode the wave. I don't think Moore has inaccurately portrayed the problem, nor would I say Sicko says what the solution is, except that it is different than what we have now in the direction of more universal coverage. It is going too far to say that a vague proposal is "inaccurate" or at least I don't understand why you say that. Why is it good to get people "stirred up" in this instance? So that something will happen. In Demosclerosis by Jonathan Rausch he wrote about why so little changes in our federal government. One big reason, Rausch said, is that with any proposed change the people who have something to lose fight much harder than the people who have something to gain. In this case, to get anywhere – to improve health care – you need to energize the people who have something to gain. Namely, the public. Emotion = activation energy.

Todd (2007-07-08 08:45:58)

The above comments tend to fall into an either-or stance: favoring either the current U.S. healthcare system or some sort of universal single-payer system. Actually, I think that both are seriously flawed for the same reason: they remove true market forces by severing the connection between the individual patient and the provider of health care solutions. In the U.S. we don't have anything even closely approaching a true free market. Rather, we have a cartel of "approved" (and very expensive) solutions and we ban or place barriers on more effective, less expensive solutions. The real scandal is the high cost of health care - everywhere. If we removed subsidies (provided through both government and institutional insurance) and let folks spend their money on what really works, we'd quickly drive the market to more cost effective solutions. And in fact, many of today's health care problems could be greatly diminished, if not reversed, by focusing on nutritional and dietary approaches – yes, including the Shangri-la Diet, the using of omega-3 oils, B vitamins, etc. Removing the subsidy to "Big Medicine" would drive people to more carefully look at how nutritional deficiencies, poor health habits, sedentary lifestyles, etc. underlie a good deal of the health crisis in this country. Research should shift to epidemiology, self-experimentation, nutritional science, and better methods for understanding biochemical individuality. We also need to radically change our liability laws which remove individual responsibility and prevent or discourage cheaper "non-orthodox" solutions. We rely on a methodology of mega-funded establishment medicine driven more by legal and political considerations than by true benefit to the medical consumer. The result of pulling the plug on "subsidized health care" would be a far more affordable, individualized, and effective approach to health care than what we have in EITHER the U.S. or in "socialized" Europe and Canada.

seth (2007-07-08 10:31:48)

Those are good points. By allowing a certain kind of research – focussed on cure rather than prevention – to get most of the research money, you end up with a very expensive system that doesn't work very well. We have "doctors" who mainly try to cure people – what is the comparable prevention-focussed job? There isn't one.

## **The Twilight of Expertise (part 9: clinical trials again) (2007-06-29 22:08)**

An [1]article in this week's BMJ about problems with clinical trials makes some of the points I made in a [2]recent post. The article is based on a London conference held last week. In my post, I said the evaluation of the Shangri-La Diet going on at the [3]SLD forums was in many ways better than a clinical trial.

At the conference, a speaker complained that

key groups of participants were often excluded from clinical studies

I pointed out that anyone could post at the SLD forums.

Doug Altman, professor of statistics in medicine at Oxford University, said that the presentation of statistical results of clinical trials "lacked transparency and precluded any further analysis."

I said that the forums are more transparent.

Paul Glasziou, director of the Centre for Evidence Based Medicine at Oxford University, warned that many clinical trials described treatments that were difficult to replicate in normal clinical settings.

I said that the forums were more realistic – meaning that the treatments being tested were closer to what actually could happen.

1. <http://www.bmj.com/cgi/content/full/334/7608/1341>
2. <http://www.blog.sethroberts.net/2007/06/15/the-twilight-of-expertise-part-4/>
3. <http://boards.sethroberts.net/index.php?action=collapse;c=1;sa=expand#1>

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Dale (2007-06-30 00:00:04)

The funny thing about a double-blind clinical trial for the Shangri-La Diet: half the participants would be randomly assigned to drink sugar water, and the other half would be assigned to drink a sugar water placebo – so everyone would be on the Shangri-La Diet!!

BestHelen (2009-06-05 17:02:00)

I have found what i was looking for !!! thx )

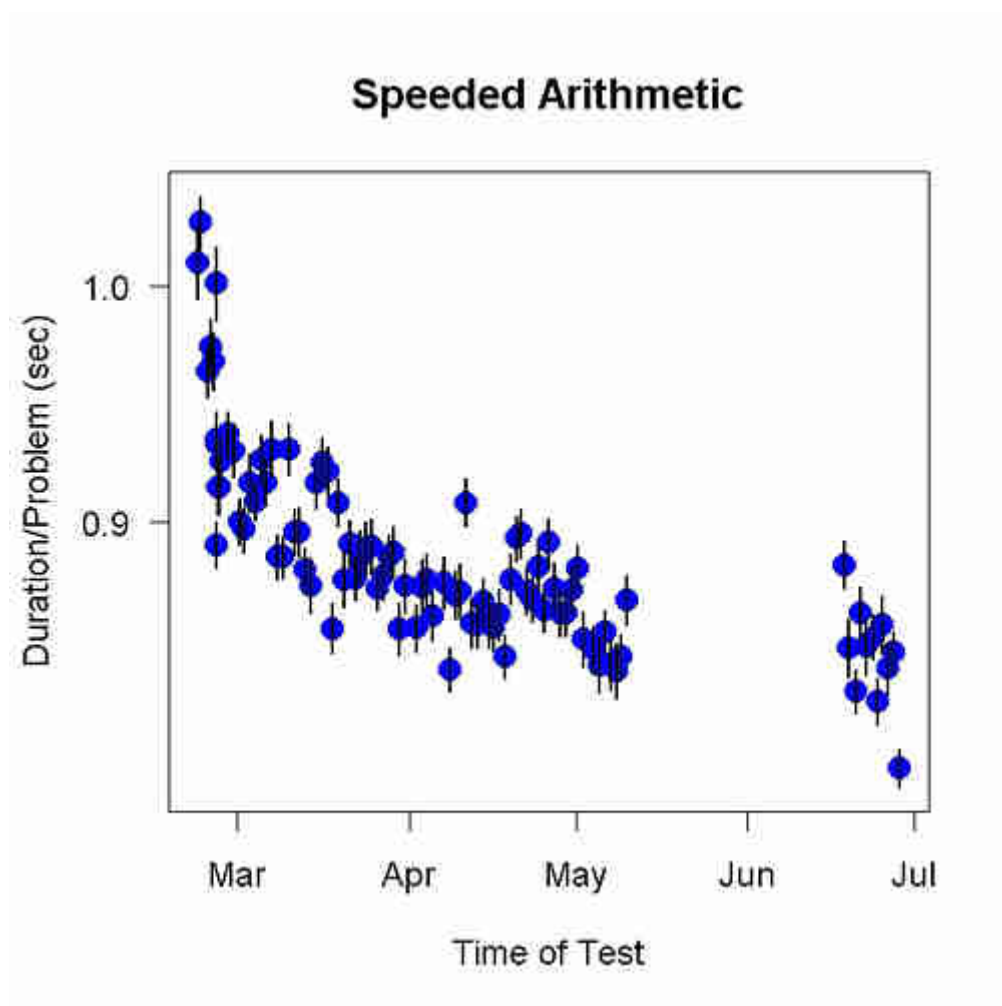
### **Science in Action: Omega-3 (a surprise!) (2007-06-30 11:16)**

I have always stopped self-experimenting when I travel because so much changes. Surely I will sleep differently, etc., far from home. However, it is not so obvious my arithmetic speed (how fast I do arithmetic problems such as  $6 + 3$ )

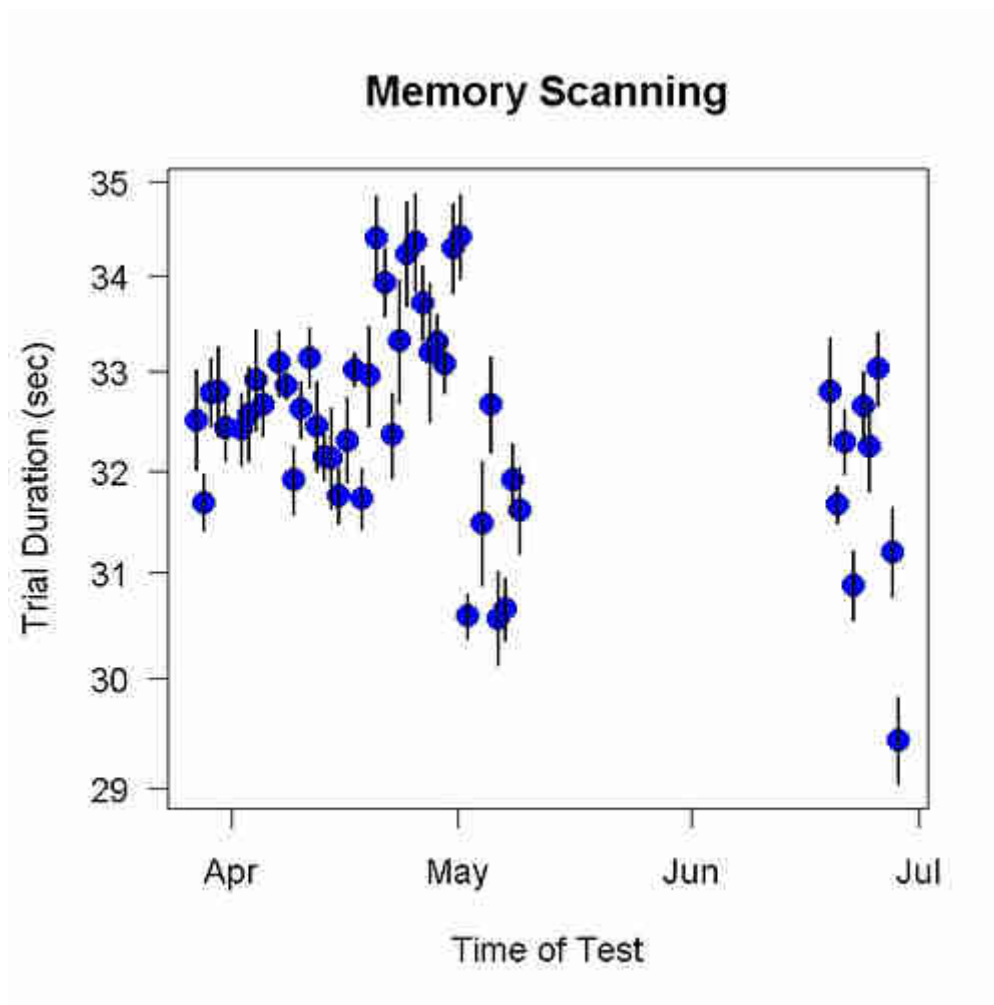
will change. I am measuring arithmetic speed as part of my study of omega-3 ([1]directory).

I recently spent a week in Los Angeles. For the first time I continued self-experimentation while traveling. When I arrived I bought a bottle of flaxseed oil. I continued to take 4 T/day and did the same mental-function tests I do at home: arithmetic, memory-scanning, and balance. I have described these tests in other posts.

My balance was much worse in Los Angeles, apparently because what I see during the test changed (because the floor and other surroundings are different). I hadn't realized how much that mattered. My arithmetic and memory-scanning results were roughly the same as the results at home – that is, until the last day. This graph shows arithmetic speeds:







The sudden improvement on the last day – also clear in the balance test – was a big surprise. It was too large to be due to practice, nor could it be due to being in LA – the previous 5 measurements were also in LA. It did, however, have a ready explanation: The previous night I had gotten back late and had forgotten to take the oil. So instead of taking 4 T at 11 pm I took it at 7 am. I did the tests at about noon. Instead of 8 or 9 hours between oil ingestion and test, in this case the difference was 5 hours.

If this explanation is correct, there is a short-lived effect of flaxseed oil on brain function – present 5 hours after ingestion but absent or weaker 8 hours later. Which, as a scientist, makes me say "Wow!" If this effect exists, it's a new tool, the most precious and powerful thing in science. I can use it to compare amounts of flaxseed oil, oils (e.g., fish oil), and foods (e.g., salmon).

My current way of measuring omega-3 effects requires one/day tests repeated for weeks. When I reduced the amount of flaxseed oil I was taking from 4 T/day to nothing, it took more than a day with the lower dose before performance even went down, and many more days before performance stabilized. This meant that experiments had to last several weeks. If the new effect exists, it will allow much faster experiments.

1. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>

Willy (2007-06-30 12:25:55)

4 tablespoons / day is a high dose. Do you take extra antioxidants?. From which dose do you start to notice balance improvement?. I need to have a reference to give flax oil to an old person with balance problems. I will post results if I can convince this person to take it. Thanks.

seth (2007-06-30 13:35:16)

I noticed balance improvement with a much lower dose. I suggest starting with 1 Tablespoon/day. I take a multi-vitamin pill that contains, among other things, vitamin A and vitamin C.

lasser11 (2007-06-30 14:57:36)

I recently read in an article that drinking flaxseed oil increases one's risk of prostate cancer. The article states that the risk can be avoided by eating actual flaxseeds. Does the risk of prostate cancer have a strong scientific basis? and are there any disadvantages of eating flaxseeds as opposed to drinking flaxseed oil?

Willy (2007-06-30 18:31:59)

Thanks. I think you could increase your intake of antioxidants like vitamin E, selenium, etc. I read (Pelton's book) that high Omega 3 intake requires adequate antioxidants. On the subject of fatty acids and creativity, have you read this article (I don't remember where I found it mentioned that caused me to download it, maybe here?): Psychoses and creativity: is the missing link a biological mechanism related to phospholipids turnover? Bradley S.Folley\*, Mikisha .Doo, Sohee Park Department of Psychology, Vanderbilt University, 301 Wilson Hall, 111 21st Ave. South, Nashville, TN 37240, USA Horrobin has suggested [3] that evolutionary brain changes occurring 2 million years ago coincided with the appearance of both psychoses and creativity, and that creativity and psychoses-proneness have made us truly human. Elements of both psychotic thoughts and creative thinking occur in all humans at some time; indeed there is a continuum attributable to both of these states suggesting that all humans are capable of psychotic thinking and creative problem-solving. If these elements can be \*\*\*related to changes in dietary fat intake\*\*\*, then it is also possible to assume that alterations in catecholamine neurotransmitter function mechanisms may have evolved as well.

seth (2007-06-30 19:11:13)

I don't know if flaxseed oil increases the risk of prostate cancer. An excellent just-published article (that I will describe in an upcoming post) implies that omega-3 fats decrease the risk of colorectal cancer – and therefore presumably all cancers. I take selenium in addition to the other antioxidants I listed.

peter (2007-06-30 19:21:00)

you can take flax seed oil with lignans, which, i understand eliminates the cancer risk.

lasser11 (2007-06-30 21:09:21)

yeah, the author of the article noted that the potential increase risk stemmed from most flaxseed oil's lack of lignans. eating actual seeds sounds like its more difficult to deal with than oil. and I bet that oil enters one's system more effectively than eating seeds.

peter (2007-07-02 01:13:38)

i'm afraid i wasn't clear. you can buy flax seed oil that contains high lignan in the oil, so you don't have to eat the flax seeds separately. You have to check the label for "high lignans" (if you do decide to eat flax seeds separately they must be ground up to release, among other things, lignans. If you eat flax seeds whole -without grinding- it will likely just pass thru your system. you can use a coffee grinder to grind the seeds. i purchase a Krup, which is effective and wasn't too much \$ \$ \$)

?????? (2011-11-23 04:34:17)

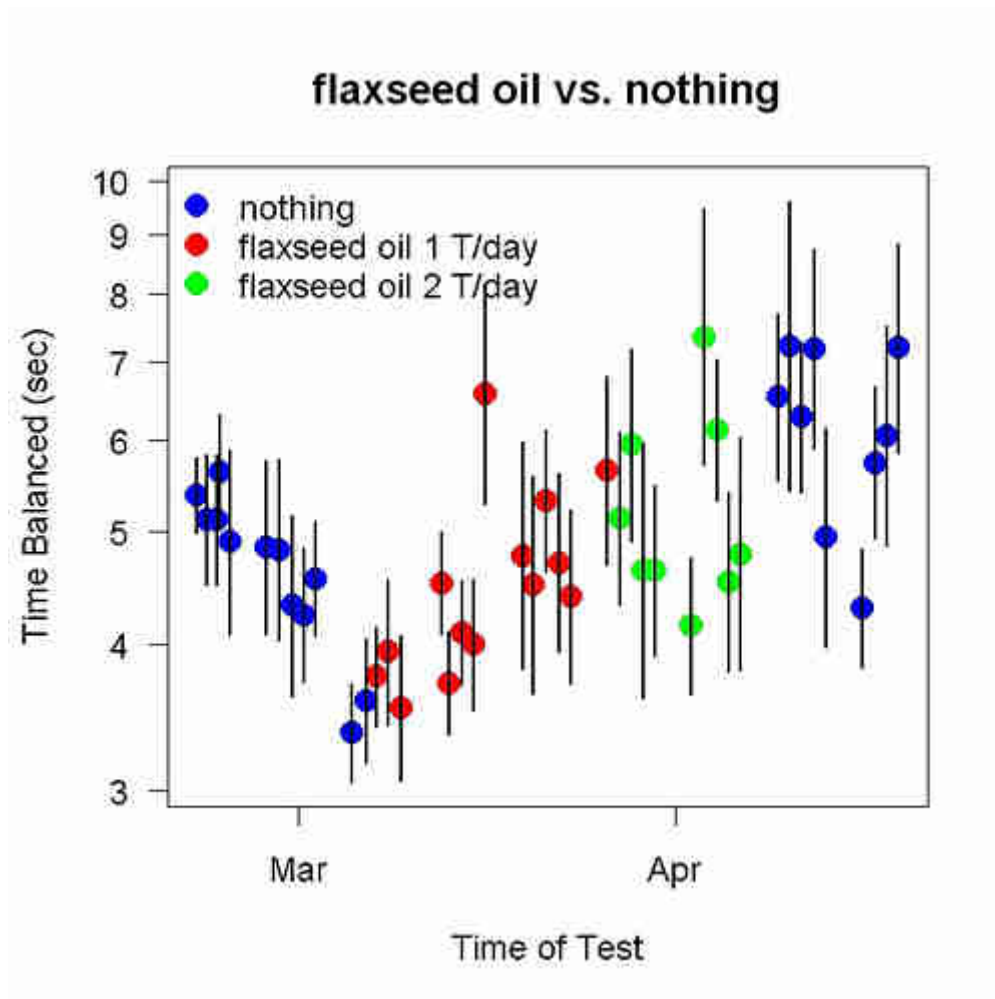
Thank you for the excellent post I did not understand what the speed of scanning?

## 2.7 July

### Science in Action: Omega-3 (data from my mom) (2007-07-01 10:52)

My mother tried drinking flaxseed oil. She measured her balance by standing on one leg; the measure was how long she could do that. She did ten of these measurements per day.

Here is what happened:



When she started taking the flaxseed oil, her balance suddenly started to improve.

Are injury-causing falls "the new scurvy," I [1] wondered – that is, caused by an easily-preventable nutrient deficiency? These results support that idea. However, I can't explain the decline in balance during the pre-flaxseed baseline period. Perhaps she had eaten food high in omega-3 and the effects were wearing off.

[2]Here are precautions about flaxseed oil. If you are 70 years old or older and would like to find out if flaxseed oil improves your balance, please contact me.

[3]Directory of my omega-3 research.

1. <http://www.blog.sethroberts.net/2007/04/29/does-too-little-omega-3-cause-falling/>
2. <http://www.umm.edu/altmed/articles/flaxseed-oil-000304.htm#Precautions>
3. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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Willy (2007-07-01 14:48:56)

Thanks for posting this, especially the precautions. Most old people take lots of drugs. I hope I can try this. There are exercises to improve balance but I think Omega3 would help.

lasser11 (2007-07-01 17:02:57)

Seth, or anybody else who has a helpful link or information, it would be great if you posted a flaxseed oil buying guide. I had a frustrating experience trying to buy flaxseed oil today. Target, Kroger, and Meijer didn't have it. then I went to walmart (probably not a good idea). the pharmacist advised me against buying flaxseed oil not stored in a refrigerator. Next I went to GNC, which also didn't refrigerate their flaxseed oil. tired, I gave in and bought it. It taste awful. i thought it would milder and nuttier. I'm concerned it's spoiled. although maybe i'm just not used to it.

seth (2007-07-01 18:09:59)

You should be able to find flaxseed oil at upscale supermarkets such as Whole Foods. They store it in a refrigerated case. I started with flaxseed oil capsules from Long's Drugs (house brand) that were not refrigerated. They produced the effect. However, I agree with your pharmacist, although I hope to study the question experimentally. I now use flaxseed oil in liquid form because I use much larger doses. I think flaxseed oil goes bad quickly but until it comes into contact with oxygen it can't go bad. So be sure to store it in the refrigerator.

lasser11 (2007-07-01 20:36:37)

thanks for the help. its probably a good idea to cut my losses and head for Whole Foods. Keeping flaxseed oil refrigerated must lessen the chance of it spoiling.

Willy (2007-07-02 05:27:48)

Flax oil tastes bad for me too. I don't think it can be used in salads as some advertisements claim. Do not think bad taste means the oil is in bad condition. If it is rancid you will notice. I see bottles are not kept in the refrigerator in shops, but I think this is important after opening. Bottles should be dark to protect from light.

Janet (2007-07-02 18:10:45)

I think it's neat to look at an older population, and wonder if it would work, but what it looks like to me is like your mom's balance improved with practice as her ankle muscles strengthened since the improvement didn't go away when she stopped the flaxseed oil.

seth (2007-07-02 18:13:22)

A practice explanation doesn't explain why the improvement started exactly when she started the flaxseed oil. It should have started after the very first trial. The persistence of improvement with zero flaxseed oil occurred with me too - it takes a week or two for the improvement to go away when the flaxseed oil is stopped.

## Creepy Assertions (2007-07-01 19:01)

The ability of patients to try experimental drugs outside of clinical trials has a lot in common with self-experimentation. The former empowers the patient; the latter empowers the amateur scientist. Another form of health-related empowerment is to allow people to buy and sell organs. Of course, some people are against this:

Nancy Scheper-Hughes, a Berkeley anthropologist – now in residence at Harvard's Radcliffe Institute – has documented how wealthy organ brokers exploit the impoverished in places like Moldova and South Africa. She cites a moral parable . . . A starving man adrift with others on a raft does not have the right to eat his fellow passengers. [Huh?] Scheper-Hughes suggests there is something of the same "predatory" aspect to organ sales – a creepy assertion "that I have the right to the body of another person, to live."

From the [1]Boston Globe. To me, the creepy assertion is "I, Professor Scheper-Hughes, know better than other people what they should do with their own bodies." Alas, this sort of professorial arrogance is common. I encountered it with the UC Berkeley Committee for the Protection of Human Subjects: I must have a certain control group in my experiment, they said. As if they knew how to do my research better than I did. I once heard [2]an NPR commentator, describing her IRB participation, boast about this: "Sometimes a control was missing, or we felt the study was misguided." A [3]website about IRB abuses has many similar stories.

1. [http://www.boston.com/news/globe/ideas/articles/2007/07/01/why\\_cant\\_you\\_buy\\_a\\_kidney\\_to\\_save\\_your\\_life/?page=full](http://www.boston.com/news/globe/ideas/articles/2007/07/01/why_cant_you_buy_a_kidney_to_save_your_life/?page=full)
2. <http://www.npr.org/templates/story/story.php?storyId=5358288>
3. <http://www.irbwatch.org/>

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Andrew Gelman (2007-07-02 14:46:51)

I wouldn't frame this as Scheper-Hughes vs. people's own bodies. It's pretty much the standard view that buying and selling organs should be illegal. Maybe the standard view is wrong, but I wouldn't label it "creepy" or "professorial arrogance" that she agrees with what is probably the vast majority opinion. The IRB thing is a separate issue—I basically agree with you here, but I think the concern is with power and implicit coercion. It does seem like it's out of bounds of your IRB to tell you to run a control group, since that doesn't seem like an ethical issue.

seth (2007-07-02 15:25:20)

Thanks for the comment. I agree, what Scheper-Hughes said is taken as reasonable and appropriate by many people, including the writer of the article. However, it's the standard view among IRBs that they are entitled to force researchers to run whatever control groups they (the IRB) thinks are appropriate. I don't think the fact that something is the standard view or well-accepted should shield it from criticism. I also agree, by itself Scheper-Hughes' belief isn't arrogant. Maybe I should have made that clearer. It isn't arrogant to think organs shouldn't be sold. It is the context and certitude that bother me. For me, the problem arises when someone goes further than a simple statement of belief – is so sure of herself – that she forces or advocates forcing others who disagree with her and know much more about their situation to go along with her beliefs. It is especially distasteful when the advocate is powerful and the people she is telling what to do are powerless. And when you defend your view by saying that buying an organ is like asserting a "right" to eat somebody (to me there is a big difference between trading

and taking and between cannibalism and organ commerce) and that a statement of disagreement with your point of view is a "creepy assertion" and when the speaker is powerful and considered a serious thinker . . . that strikes me as creepy.

### **Omega-3 and Cancer (2007-07-02 17:47)**

A just-published [1]article in the American Journal of Epidemiology reports a very clear negative correlation between colorectal cancer and omega-3 consumption. It describes the results of a case-control study done in Scotland from 1999 to 2006. The investigators hoped to recruit all cases of colorectal cancer coming for surgery in Scotland; they managed to recruit about half of them and ended up with about 1500 "cases." Each case was paired with a healthy control matched for age, sex, and residence. Then they compared the diets of the two groups. This is the approach that first linked smoking and lung cancer. Lung-cancer patients were more likely to smoke than other types of patients.

In the Scotland study, there was no correlation between cancer and overall fat consumption, but there was a very clear correlation with omega-3 fat consumption: more omega-3, less cancer. There was no correlation with omega-6 fat consumption. The conclusions remained the same after they combined their results with four previous similar studies.

1. <http://aje.oxfordjournals.org/cgi/content/full/166/2/181#BIB25>

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Yvan F (2007-12-03 16:25:23)

Hi, Congratulations for your excellent blog. He is a link for a substitute of flaxseed. It suppose too have 2,400 mg of omega-3 per 2 tablespoons. Is it a appropriate substitute for flaxseed. <http://www.sourcesalba.com/index1.php>

mike (2009-05-12 14:11:35)

the other topic everyone should know about is vitamin D, The Canadian Cancer Society have recommended for over 18 months that everyone take vitamin D to prevent cancer. Take a look at [www.vitaminD3UK.com](http://www.vitaminD3UK.com) for some good information. It may be very good for you health

### **Science in Action: Omega-3 (what the results mean) (2007-07-03 21:48)**

How do I interpret the results so far of my omega-3 self-experimentation? I'm going to skip the obvious implications (I should do more experiments, I should take omega-3, . . . ) and jump to the less obvious ones:

1. Omega-6 may make things worse. The difference between flaxseed oil and olive oil was larger than the difference between flaxseed oil and nothing, implying that olive oil is worse than nothing. Perhaps this is because olive oil is relatively high in omega-6, which displaces omega-3. The [1]Israeli Paradox points in the same anti-omega-6 direction as do lab experiments that suggest omega-6 fats are pro-inflammatory.

2. I should study other fats. My experiments don't just imply that omega-3 fats have a big effect on brain function, they imply that fats in general have big effects – and that these effects can be easily measured (which is the interesting part).

3. Health providers should pay far more attention to brain function – to "brain health." Improvements in balance led me to treatments that improved my performance on memory tests. Not surprising, since the whole brain is made of the same stuff (neurons, glial cells, etc.), but it implies that with easy to administer tests you could catch a wide range of brain problems long before they cause serious difficulties, such as dementia, Alzheimer's, and injury-causing falls. Note that no doctor ever orders tests similar to those I have used. Yet my tests eventually revealed that I was suffering from what might be called omega-3 deficiency. One well-accepted test of mental function is the Mini-Mental State Exam. It consists of such questions as "What month of the year is this?". By the standards of experimental psychology, it is incredibly crude. Experimental psychologists have a lot to teach the health community about how to measure brain function.

1. <http://www.blog.sethroberts.net/2007/02/02/the-israeli-paradox/>

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accuracy-police (2007-07-04 06:47:48)

> "olive oil is high in omega-6" Wait a minute–flaxseed oil has about 20 % Omega-6, but olive oil contains LESS, only about 12 % Omega-6. Flaxseed oil does have a much higher percentage of Omega-3, but olive oil is predominantly Omega-9. Neither is a great source of Omega-6. Changing from flaxseed to olive could change your ratio of Omega-3/Omega-6 (depending on other dietary intake), but it should LOWER the amount of Omega-6 you ingest, ceteris paribus.

jeff (2007-07-04 07:59:31)

seth - re: olive vs. flaxseed oil Is your comparison only referring to the brain benefits between the two oils? Aren't there a number of studies that demonstrate olive oil's cardiovascular benefits? I'm unsure if research shows the same for flaxseed oil. On a more personal note, I am currently taking 2 TBS of flaxseed oil before bed and 1 TBS of fish oil & 1 TBS of olive oil in the AM. Does your research suggest that even 1 TBS of olive oil would counteract the effect of the high dose of omega 3s in the fish and flaxseed oil?

seth (2007-07-04 08:00:28)

Accuracy Police, thanks for the correction. I should have said "relatively high in omega-6". And I should be more open to the possibility that it is the omega-9 in olive oil that caused it to be worse than nothing. Jeff, When I compared olive oil and flaxseed oil, I only measured my balance – a measure of brain function. I don't know of any studies that show olive oil is better for the cardiovascular system than flaxseed oil. I don't think they have been compared. The whole interest in omega-3 fats started because Eskimos had very low rates of heart disease; the eventual explanation was that they were eating lots of high omega-3 foods. If it turned out that olive oil is better for the cardiovascular system than flaxseed oil (comparing equal amounts of each), I would be very surprised. If "counteract" means "reduce the effect of", yes, my results suggest – just barely – that olive oil counteracts the effects of flaxseed and fish oils on balance and other measures of brain function. This is something I would like to test.

Tim Lundeen (2007-08-25 21:16:31)

My understanding is that the polyphenols in olive oil help reduce inflammation, so are a primary reason that olive oil improves heart health. See [http://search.lef.org/cgi-src-bin/MsmGo.exe?grab\\_id=0 &page\\_id=1451 &query=olive%20oil%20polyphenols &hiword=OLIVA%20OLIVER%20OLIVES%20OLIVI%20OLIVO%20POLYPHENOL%20POLYPHENOLE%20POLYPHENOLIC%20oil%20olive%20polyphenols%20](http://search.lef.org/cgi-src-bin/MsmGo.exe?grab_id=0 &page_id=1451 &query=olive%20oil%20polyphenols &hiword=OLIVA%20OLIVER%20OLIVES%20OLIVI%20OLIVO%20POLYPHENOL%20POLYPHENOLE%20POLYPHENOLIC%20oil%20olive%20polyphenols%20) Also, the body needs both omega-3 and omega-6 fatty acids, you don't want to get all your polyunsaturated fats from omega-3's. A 1:1 to 1:2 ratio of omega-3 to omega-6 is recommended by Enig at the Weston A

Price site. So my guess is that both this ratio and the absolute amount of omega-3 is what controls the effects of omega-3 on brain function.

### **The Shangri-La Diet: What Went Wrong? (2007-07-05 06:11)**

[1]Andrew Gelman astutely noted that the three researchers (Michel Cabanac, Anthony Sclafani, and Israel Ramirez) whose work I used the most to come up with the Shangri-La Diet were not at Harvard or Yale or Rockefeller University. Isn't that where breakthrough research is supposed to come from? This wasn't the only way that development of the Shangri-La Diet was not quite "right":

1. The research of Cabanac et al. got little recognition. The set point idea arose in the 1950s, or even earlier. In the 1970s, Cabanac saw very clearly that your set point depends on what you eat. With Rabe, he did an excellent experiment supporting this view. Not one weight-control researcher took note. No other lab built on this work.
2. I was not a weight-control researcher. In graduate school, I studied animal learning. Weight control is not just a different field of psychology; it is usually studied in a different department (nutrition or physiology).
3. The research I did was not funded. Given my lack of credentials and previous experience, it is not obvious it could ever be funded.

The hard-core defender of the system would say: SLD is rubbish. Just another fad diet. The open-minded defender would say: What do you want? You were a tenured professor at Berkeley. You published your work in Behavioral and Brain Sciences. It is well-recognized that really new ideas often take a while to be appreciated. The open-minded critic would say: All three points are correct. In addition, why isn't Israel Ramirez still a scientist? After all that brilliant research. What a loss. The hard-core critic would say: SLD reached the public as a self-help book. Why give the system any credit? Lots of non-scientists have published influential self-help books.

The hard-core views ignore reality. The [2]SLD forums make it clear SLD is not rubbish. The notion that the system should get no credit at all ignores the fact that I made a living as a scientist at a well-respected place and published my work in a well-respected journal. The open-minded views, however, are both reasonable.

1. <http://www.stat.columbia.edu/~gelman/>

2. <http://boards.sethroberts.net/index.php?action=collapse;c=1;sa=expand#1>

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Andrew Gelman (2007-07-05 08:05:21)

Seth, Your research benefited in (at least) four ways from your being a tenured professor at Berkeley. (1) You were given lots of free time to do your research (since the job of a tenured prof is approx 50 % teaching, 50 % research). (2) You were given the opportunity to teach bright students. Some of your ideas arose because you wanted to teach things that the students were interested in, rather than the usual textbook material. Also, you wrote an earlier version of some of your self-experimentation stuff in the form of a book that was inspired by one of your classes. (And your Berkeley job gave you the time to write that book.) (3) You saw me give a talk on graphical display of data. Presumably, you were more likely to see this sort of talk at a top university such as Berkeley which has an excellent statistics department. Graphing helped your research and certainly made your Behavioral and Brain Sciences article distinctive. (4) Personal connections with me led to the idea of sending your article to Chance (which maybe motivated the Behavioral and Brain Sciences article) and got you linked to a blog, which was



forwarded by another blog, which was forwarded by another blog, leading to the New York Times article which led to your book getting a contract. Once again, being at a top university such as Berkeley probably increased the probability of that original contact. All of the above could've happened at a lesser university (or even at a non-university job where you did extra work at night), you could've learned graphics by reading Ed Tufte's book, etc.-but Berkeley helped.

seth (2007-07-05 09:42:54)

Yes, I agree. That's part of what I meant when I said the open-minded defender of the system made reasonable points.

Josh M (2007-07-06 16:46:53)

As a student it was interesting that most of the professors at Stanford didn't come from top research institutions. (Math and physics seemed to be exceptions.) At first I thought maybe being at the top 10 made you soft, but eventually I decided that education quality at the top 400 schools is very similar. Research universities are more like awards or exploiting a promising line of research than where ideas originate. The guy who figured out ulcers are from bacteria could get a good position with a Nobel in his pocket, but since it isn't a whole new area of research that people could start working on he probably wasn't immediately that interesting. One part of your problem is follow up. How do others build on your work or reference it in their own papers? In a summer research job (pretend grad school) the professor I worked with said something like "these folks have some interesting results, try it out and see what happens when we do it this way." And a more independent grad student needs to think this is an interesting approach, I can add my approach to SLD and the grants will flow freely. Self experimenting might be too easy. Grad students have these tools they want to use and it seems like anyone could start record keeping and drawing inferences. Instinctively they are (I was) drawn to work that can only be done after mastering the complex information from all the classes and books and studying. It is also too hard. Key points in the process involved insight and some serendipity. "Come up with an insight" is a very hard mission for people and they would prefer less risky work. For the acceptance problem it's hard to distinguish exactly what it is that separates your findings from the enormous number of cures in the health food store (which I've been encountering as I search for flax oil). Every one of the 2000 ingredients seems to cure many things for everyone. I credit what you say because of the old Victorian science idea of a "reliable observer." You are careful, aware of placebo and confirmation bias effects and tend to find things which are "surprising" to you and discard much else. But that's a little elitist of me. (Health store guy: Oh for sleeping and mental function, try this saw palmetto too, it totally opened my mind. Me: I'll just do this for now.) These seems to be where larger studies should come in, but as you point out we've way over engineered double blind studies. Back to the system: it is great at funding big promising projects like human genome, a fab for new kinds of chips, or the effects of global warming. And for having lots of play in the system for personally interesting work. Not very good at recognizing true ideas quickly or nimbly trying out the avenues with large possible impact but small staffs. Silicon valley is very good with the last two. At various startups we've just "tried out stuff on people" all the time, I wonder if a human research committee would have approved facebook or youtube. "Hmm intense, sometimes hurtful social interaction. Privacy invasions. And what is the control?" Ebay and paypal both depended on existing where the law was just ambiguous enough to not apply to them. It would be nice if scientific standing or true finding points could be converted to money to pay off VC's and angel investors. They might then invest in the young Israel Ramirez in a way that the current system apparently didn't. Even so, modern professional research universities (the system since 1950) have produced remarkable work and such different work than what the rest of society produces that it's frightening to think about messing it up. That giant step in difficulty when you want to validate an idea. Ideally it would look as close as possible to a smooth slop. Right now it's get idea, test idea, ask friend colleagues, ask colleagues, [small leap] some publication,[big leap] get \$2 million for giant double blind study for a binary result which might be wrong, major publication, and finally acceptance. How about a giant ongoing longitudinal study where researchers could ask the participants to try things out? So instead of needing to start from scratch with each study you do the equivalent of posting to the SLD forums. Some giant study is intensively monitoring everything they can about 30,000 people. Yearly physicals, monthly phone interviews, diaries, automated sensor monitoring. Someone says they are trying SLD or the Atkins diet and that's noted and the data can be tracked. There are currently longitudinal studies but they don't try interventions and they don't investigate lives very deeply - they have interviews every 5 years or so. You don't worry about representative, you pick people that live close to the research institution and who are convenient, because you want to see what happens when they do something different. People will try the very most mainstream things and the craziest on the edge ear candle things imaginable and you track it all. Anyone

can post ideas to the forum, but researchers can support each other by commenting "I think this might work." Then ideas like Atkins, SLD, or weight watchers can be evaluated as they come up. You can say our participants who started Atkins, lost weight and raised cholesterol and 5 years later they were right back where they started. There is an opportunity for surprise and multivariate causality, maybe spinach + peanuts is a miracle food. Some people can get as intense as you Seth about recording everything, some people can get intense with automated monitoring (sensors on the cellphone, or gps, or logging heart rate monitors), and some people can just wait for the monthly interview. Participants could share the data with whoever they liked. So I could show Seth my whole record or just the part he's interested in. This is a massive very expensive step, but it might enable lots of gentler slops for lots of other research. And a place for grad students to frolic merrily in meadows of data.

seth (2007-07-06 19:18:38)

If I were reading me, I would believe my conclusions about flaxseed oil because I had experimental data that anyone could see. The effects were big and repeated, the designs were good. And there was plenty of supporting evidence. I heard a talk in which the speaker said engineers were good at going from research to device usable by tech person and from device usable by tech person to device usable by expert but poor at the final stage: going from device usable by expert to device usable by ordinary person. Science funding has the opposite problem: it is poor at the first stage, funding research that will generate ideas.

### **Advances in Retailing: Penny-Free Store (2007-07-05 15:27)**

[1]Alko Office Supply, a small Berkeley store, is penny free: If you pay cash, prices are rounded down to the nearest nickel. I have never seen this anywhere else nor had the store clerk I asked. They thought of it themselves, she said. Farmer's market prices are always rounded down to the nickel or dime, in my experience. Here and there I have made small credit card purchases (< \$20) with no signature required.

Addendum: Wikipedia [2]entry on penny elimination. A [3]penny protester.

1. <http://www.alkos.com/>

2. [http://en.wikipedia.org/wiki/Efforts\\_to\\_eliminate\\_the\\_penny\\_in\\_the\\_United\\_States](http://en.wikipedia.org/wiki/Efforts_to_eliminate_the_penny_in_the_United_States)

3. <http://www.feyaccompli.com/?p=719>

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Sam (2007-07-08 21:36:12)

I've seen this more than 10 years ago in Norway, prices would be rounded to avoid the very small change. But as far as I remember there it had been a government thing to get rid of the small coins since they had been virtually worthless and quite expensive to produce.

### **Omega-3 and Dental Health: Surgery Commuted (2007-07-06 04:23)**

I started writing a follow-up to this Marginal Revolution [1]post by Tyler Cowen before I knew of its existence:

January [2007] endodontist [= gum specialist]: "You'll need surgery either right now, or within a few months. We cut open the gum, clean out the inflammation, and sew your mouth right back up. Only sometimes do we have to eliminate the tooth."

July 5 [2007] entodontic surgeon, 10:31 a.m.: "We can cancel this morning's surgery, it seems OK for now, just keep an eye on it."

In June, Tyler [2] posted about the benefits he derived from flaxseed oil (2 Tablespoons/day): "Very good for my heart, my brain, and my gums." I asked him what was better. "Much better gums, for sure," he replied. "The rest is harder to measure." On July 4 I got around to asking for details. Tyler said that he had had bad gums for most of his life and that he noticed they were much better within a week or two of starting the flaxseed oil. He added

I have crooked wisdom teeth, never wore braces, and my mouth naturally produces lots of plaque. Put all together that means a significant problem with gum disease. I get cleanings every three months or so but still my gums have been much worse than average.

I too have crooked teeth and more plaque than average and I too found that flaxseed oil improved [3] my gums; my dentist was the first to notice.

A recent [4] experiment about omega-3 and dental health. A 1997 [5] experiment. An amazing [6] bowling video.

1. <http://www.marginalrevolution.com/marginalrevolution/2007/07/todays-happines.html>
2. [http://www.marginalrevolution.com/marginalrevolution/2007/06/flaxseed\\_oil.html](http://www.marginalrevolution.com/marginalrevolution/2007/06/flaxseed_oil.html)
3. <http://www.blog.sethroberts.net/2007/03/28/omega-3-and-dental-health/>
4. <http://www.fattyacidtrip.com/eicosapentaenoic-acid-epa-protects-against-inflammation-and-bone-loss/>
5. [http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=9442428&ordinalpos=2&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=9442428&ordinalpos=2&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum)
6. <http://www.youtube.com/v/Q5e2CgEjLpk>

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Pearl (2007-07-06 07:56:11)

Was that bowling video really necessary? Or was that done with flaxseed oil? ^ \_ ^

peter (2007-07-06 08:27:44)

my guess is that is a form of oil pulling, i.e., swishing oil in your mouth for 20 minutes or so. Taking flax seed oil, or any other oil seems to eliminate plaque. When i went to the dentist to clean my teeth the plaque was reduced at the front of my mouth, but not the back. I believe this occurred because taking several tablespoons of oil "hits" the front of the mouth and not so much in the back of the mouth. Now that i'm oil pulling, i believe the plaque will be eliminated at the back of mouth as well. i'll let you know when i go to the dentist. The point is, if my sense is correct, the reduction of plaque and improvement of gums works by applying oil to the surface of the teeth/mouth rather than consuming it. I tend to think that any oil would have the same effect.

seth (2007-07-06 09:14:05)

The bowling video shows the follow-up ball launched before the first ball. "I tend to think that any oil would have the same effect." I took olive oil (ELOO) for three years. My gums did not improve. Only when I switched to flaxseed oil did they improve. The improvement was not a reduction in plaque: it was a reduction in inflammation.

Craig (2007-07-06 10:47:18)

What is the difference between long chain and short chain omega 3?

seth (2007-07-06 10:59:26)

Long-chain have a few more carbon atoms than short-chain.

peter (2007-07-06 11:03:28)

it may be that reduction of plaque and improvement in gums are caused by discrete pathways. I always thought that they were related, i.e., the more plaque the more inflammation of the gums because of the irritation caused by plaque and the bacteria from which plaque is formed .

Timothy Beneke (2007-07-06 15:29:34)

I have a long history of gum disease, plus a long history of depression. Also, I've always hated fish and virtually never eaten it. In recent years I've taken omega 3s, and in recent months, flax seed oil. I'll see what the dentist says next time. It ought to be easy to look for correlational evidence linking fish consumption and gum health. There seems to be significant correlation between fish consumption and lack of depression. Also, depression, as I dimly understand it, is implicated with heart disease, as is gum disease. All of this warrants a lot more research...

Dave (2007-07-06 20:11:57)

I'm wondering about the above comment in regard to swishing the flaxseed oil. Seth where you swishing the oil or just taking it and you noticed the improvement in your gums.

seth (2007-07-06 20:36:03)

Just taking it. Not swishing it.

seth (2007-07-06 20:41:05)

Tim, when the experiment is that easy, it seems pointless to do surveys. The dose from fish may be too low, anyway. Tyler took 2 Tablespoons/day; I take 3-4 Tablespoons/day.

peter (2007-07-07 09:24:31)

just to clarify, i'm not swishing flax seed oil in my mouth for two reasons: (i) would result in tasting/smelling the oil which would defeat the underlying purpose of the SLD; (ii) from what i understanding swishing, first thing in the AM removes the bacteria/viruses from your teeth/mouth and you don't want to swallow that, you spit it out. I use other oils for oil pulling. there are several internet sites that discuss this and the type of oil that is used (most recommend sesame and sunflower). I suggest that anyone seeking to do this examine the web-sites. My sense is that oil pulling prevents plaque from forming on one's teeth. That's separate and apart from consuming flax seed oil as part of the SLD; and, apparently, for the anti-inflammatory effect of flax seed oil, that, among other things, improves one's gums.

Dr. Jeff Leighton (2007-07-26 11:19:59)

Inflammatory gum disease appears to respond very well to high dose OmegaMaine omega 3 oil. We formulate this high potency oil in Maine and locally our clients have reported excellent results in terms of reducing gum inflammation. Inflammation and bone resorption go hand in hand . When inflammation is reduced , progression of peridontal disease slows or stops.

Santosh Anagol (2007-09-20 12:19:18)

I've been taking two pills of flaxseed oil per day for the past few weeks and have noticed that my gums no longer bleed when I floss.

seth (2007-09-20 13:01:12)

That would be a good study to do: measuring bleeding caused by flossing or something similar.

Ann (2007-10-21 12:46:00)

I had to chime in on the Oil Pulling. I've been doing this for 2 years now. There are two theories out there about the "OP". First, there are some bacteria in the mouth that cannot be removed by conventional means. They seem however to be oil soluble. They are the nasties that build the yellow cities on your teeth, releasing harmful acids. And acidic mouth is an unhealthy mouth. There is something in the oil, perhaps their acids, that seem to vanquish these buggers. Secondly, what do you think about sublingual absorption of EFA's as opposed to ingesting? They use Oleic Acid in pharmaceuticals for sublingual medication as an enhancer. What is the difference between sublingual and ingesting medication? What role do the stomach acids play in ingestion? Would you get more benefit from one, as opposed to the other? Could it be that swishing oil around your mouth might be a more efficient way to get the EFA's? How long does it take for sublingual medication to hit the bloodstream? From what I read, Flax Seed Oil while wonderful for you, is too lopsided. Flax is very rich in Omega-3 and low in Omega-6 (n-3: n-6 ratio is usually between 3.5: 1 and 4: 1). Exclusive use of flax oil can lead to Omega-6 deficiency within 2-8 months. Using CLA (conjugated linoleic acid, a trans- fatty acid which is produced by shifting a double bond and twisting the molecule of the n-6 EFA, LA) in addition to flax oil can lead to Omega-6 deficiency symptoms even sooner than flax oil used alone. Omega-6 deficiency symptoms from too much flax oil can be reversed either by lowering Omega-3 intake or by increasing Omega-6 intake. All in all, my dental health has never been this good since swishing oil around my mouth for 20 minutes each day. I use a good balanced 3-6-9 oil. My skin, my hair, my teeth....it's not my imagination. No one has scientifically studied this except a Dr. Karach, a Russian Doctor who claimed it cured his chronic blood disease. His writings are in Russian and unavailable. Thanks for listening. Ann

joe ott (2008-05-10 18:40:38)

I HAD TO GO TO THE DENTIST IN THE PAST , 3 TIMES A YEAR BECAUSE OF GINGIVITIS. THE BLEEDING IS NOW AT A MINIMUM. FOR THE PAST YEAR I HAVE BEEN PUTTING 1 TEASPOON OF FLAXSEED OIL ON MY OATMEAL EVERY DAY. RECENTLY, I WENT FOR A 6- MONTH CLEANING AND MY HYGIENIST SAID MY GUMS LOOK REMARKABLY IMPROVED!

Lillie (2009-05-14 20:14:51)

I have a sublingual formulation of Omega 6 & 3 that is a 1:1 ratio, just perfect for humans whose blood levels are supposed to contain both Omegas but in a 1:1 ratio. You hold it in your mouth for 45 seconds and it hits the brain in 60 seconds. If you swallow liquid or take capsules you lose up to 60 % in the digestion process and it takes hours to get into your bloodstream. From the sublingual formulation you can get as much as 85 % absorption.

John (2009-12-20 23:12:24)

People! If you live in any Western industrialized country (including Israel), you are in NO danger of an Omega 6 deficiency—ever, unless you really work HARD to eliminate these fats from your diet. And you don't need any supplemental fats with Omega 6, the one exception may be Gamma Linoleic Acid and you should only take it if you are taking a lot (a lot!) of Omega 3 fatty acids. The predominant diet in the US and Europe has Omega 6 fatty acids in abundance/excess and the reason people are adding Omega 3s to their diet is because they have been removed from the diet due to processing (they go rancid amazingly quickly). For example, I was taking Coromega in the evening before bed and thought that it would just slide down my throat. I would wake up in the morning with the flavor of rancid almonds in my mouth and with dark mucus (YUCK!)-it was the Coromega having gone rancid in my throat overnight with much exposure to oxygen (I'm a mouth breather). So try to get 1:1 Omega 6:Omega 3 by reducing your Omega 6 intake while increasing your Omega 3s!

Daniela (2010-01-03 13:48:16)

I think we can all decide for ourselves what we feel we are deficient of. Not everyone eats the same food and therefore makes an educated decision. I, for one, had eliminated all fats from my diet (all I ate was fruit and veg with the odd bit of chicken breast) for a long time and whilst this eliminated some things, it compounded others. I became very thin, felt weak, had sore gums, thin hair, had equilibrium problems, etc., just to mention a few. Does anyone else have similar experiences?

Joel (2010-01-08 19:32:39)

I would LOVE to get people's opinions about this article: <http://www.sciencedaily.com/releases/2009/04/090404093331.htm> and check out this: <http://www.fasebj.org/cgi/content/full/20/2/401> When and how can human beings receding gums get our

hands on this?

Tom in TX (2010-01-09 13:59:11)

Joel - Are you sure that you need to get resolvins to solve your receding gum problem? The resolvins are derived from EPA and DHA, which are in fish oil. Why not take fish oil and see if that helps?

### **Why is Sicko So Good? (2007-07-06 20:31)**

In [1]What is Art? Tolstoy argued that the goal of art is to evoke emotion. According to a [2]Blue Cross vice president, "You would have to be dead to be unaffected by [Sicko]."

Why is Sicko so good?

I have a theory: the Internet. At his website, Moore asked for health-insurance horror stories. He got 25 thousand submissions, I have read. With that much to work with, you can select some extremely moving stories. Not only that. In an article I wrote for Spy, my editor crossed out some comment I had made. "Sometimes the material is so good it speaks for itself," she said. Moore's material was so good it spoke for itself. Because Moore said less the diversity of voices was increased, a big artistic plus.

There is a connection with self-experimentation. I was surprised how effective my self-experimentation turned out to be - effective scientifically. Far more than my other research (just as Sicko is far better than Moore's other movies). I came to believe that there was a large plodding element in effective science - to find new cause-effect relationships, you needed to be able to try lots of things. Self-experimentation worked so well because it made it easy to plod, to try lots of things. Sicko is so good because his website made it easy for Moore to gather lots of good stories.

[3]Moore and Jane Jacobs.

1. [http://en.wikipedia.org/wiki/What\\_Is\\_Art%3F](http://en.wikipedia.org/wiki/What_Is_Art%3F)
2. <http://www.michaelmoore.com/sicko/news/article.php?id=9996>
3. <http://www.blog.sethroberts.net/2007/06/29/michael-moore-and-jane-jacobs/>

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lasser11 (2007-07-07 13:03:43)

Your ideas remind me of John Dewey. Although Dewey did not specifically call for "self-experimentation", he did champion the democratization of experimentation. Which is interesting because historically, he played a major role in professionalizing the sciences which, in my opinion, hurt the idea of democratic experimentation (like a previous post you commented on). there seems to be a parallel between Michael Moore and John Dewey. Both seek a more democratic environment, which is good. But I'm concerned about the idea that such an environment can be mandated from above rather than created in a more organic manner. Moore is so obsessed about criticizing the insurance industry, he doesn't even ponder making a critique against the

AMA (havn't seen the movie, I'm just going to make a guess here he didn't). The AMA artificially creates higher salaries for doctors by restricting their supply. Additionally, the AMA is hesitant to incorporate cost reductive medical methods. its not just insurance companies which are the problem.

seth (2007-07-07 15:33:33)

That's an interesting point about "mandated from above." For some strange reason, it does not seem to be possible that the solution not be "mandated from above." Lots of things start small and grow but alternative health care systems do not seem to be among them. Richard Harris, a writer for The New Yorker, wrote an excellent book about the AMA and its lobbyists called A Sacred Trust, which you have made me want to re-read. My choice of who to blame for the health care crisis is researchers. A big reason people suffer from poor health care is that people are in poor health – obesity, diabetes, other chronic conditions. I think research on these topics could be hundreds of times more helpful than it actually is. Atul Gawande told freakonomics.com that we can now cure 70 % of cancers. This is an example of what I'm talking about: We should be trying to prevent cancer, not cure it.

lasser11 (2007-07-07 16:57:04)

I'll have to read that book "For some strange reason, it does not seem to be possible that the solution not be "mandated from above." Lots of things start small and grow but alternative health care systems do not seem to be among them." yeah, that's a good point. Health care has to be mandated from above in some form. but I guess what I would prefer is less federal regulations and more state or city regulations. Or maybe in areas with a sufficient amount of competition, less regulations all together. this idea by tyler coven sounds exciting: <http://www.marginalrevolution.com/marginalrevolution/2007/07/medical-free-tr.html> But as a hospital administrator living in the Detroit area, I'd prefer the zone to be here rather than memphis.

Varangy (2007-07-08 21:46:50)

*A big reason people suffer from poor health care is that people are in poor health " obesity, diabetes, other chronic conditions. I think research on these topics could be hundreds of times more helpful than it actually is.* Perhaps. But so what? I think we know a lot of what is needed — IMHO a lot of obesity, diabetes, other chronic conditions are brought quasi-intentionally. That is, one has to know that eating Cheesy Poofs and watching TV all day can't be good for you.

seth (2007-07-08 21:57:09)

"I think we know a lot of what is needed." You are in good company. This is what many experts said and still say about obesity: Hey, just eat more, exercise less. Marian Nestle says this, for example. But I disagree. Let's take depression: Is it obvious what it takes to not be depressed? I don't think so. Is it obvious what it takes to sleep better? Well, it wasn't obvious to me. Is it obvious how to prevent injury-causing falls? No.

### **Science in Action: Sunlight and Sleep (more background) (2007-07-07 16:51)**

An early section of [1]Wide Awake (2006), Alan Berliner's documentary about his life-long insomnia – he can't fall asleep until 3 or 4 am – lists common folk remedies:

BERLINER Over the years I've tried to cry myself to sleep, to drink myself to sleep, aroma therapy, changing mattresses, changing pillows, lavender beads, massage therapy, white noise, meditation, counting sheep, melatonin, Valerian root, acupuncture, acupressure, chamomile tea, warm milk, hypnosis even, yoga, homeopathic medicines, marijuana, lots of sex, hot baths, herbal teas, biofeedback.

SISTER Okay, nothing worked.

Conspicuously absent: sunlight. At the end of the movie, however:

DOCTOR We have to reset your [internal] clock. Since you're such a night owl, I'd like to move your sleep cycle earlier by having you get light exposure in the morning. When you wake up, throw on some clothes and go outdoors for an hour. I really want light to get into your eyes 'cause that's what going to move your rhythm so you can fall asleep earlier.

ANOTHER DOCTOR Light is one of the most powerful cues for your internal clock to know what time it is. You see light and it tells you: be active during the day, sleep at night.

But the treatment they settle on is sleep deprivation: "I'd like you to spend just 6.5 hours in bed," says a doctor. "Give you less time in bed than you want. . . . 2:30 to 9:00 am would be a reasonable way to go." "You are going to be dysfunctional," Berliner is warned. The film ends: "Now that I know what I have to do, the question is: Can I do it?"

This is a good summary of what people believe about how to cure insomnia. Sunshine is absent from the folk remedies you are likely hear. When doctors mention it, they emphasize early-morning sunlight.

Until recently, I too thought that sunlight exposure was important in the morning, but not during the rest of the day. Every morning I exercised on a treadmill with sunlight-spectrum light shining on me for an hour; I thought that was enough. Now I am adding to that sunlight later in the day – in the afternoon, for instance – and finding that it helps.

1. [http://www.alanberliner.com/flm\\_06.html](http://www.alanberliner.com/flm_06.html)

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Timothy Beneke (2007-07-08 23:39:32)

Seth told me in 1997 that my biggest problem was going to bed at 3:30 in the morning. I didn't really change that until December 2003, when I resolved to change my circadian rhythms. I followed some advice from Dement, the Stanford sleep specialist. He suggested, as did Seth, getting sunlight earlier in the day. He also suggested taking a small amount of melatonin, just when it started getting dark, and avoiding sunlight later in the day. I found that the melatonin had the biggest effect; I took about a milligram or less. It tended to make me feel yucky in the morning, but it did make it easier to get up earlier. By Christmas day I was getting up around 8:30 rather than noon. And something extraordinary occurred. I always went for years on Christmas with my girlfriend to her best friend's house 40 miles away, where her family would be present. We'd spend the day together and go to a Chinese restaurant in the evening. For years, on Christmas day, I always got depressed and felt bad by the end of the day, even though I was around people I liked and cared about. But this time, there was no bad mood; I felt fine. It was amazing, as if I had some protection against all those boring negative feelings. Changing my sleep/wake cycle began a turning point towards enjoying life more.... I began to take pleasure in sleep itself, in the way my body would be gripped by a delicious tiredness that pulled me into bed and how I began to wake up with energy and fun on my mind...

seth (2007-07-09 04:31:45)

Dement was one of the experts that Berliner consulted.

Kerry (2008-03-20 21:37:04)

I've been reading about sleep problems. I've always been a night owl. It was always hard to get to sleep and hard to wake. TM helped the falling asleep part but I still woke up not rested. I do wake up better with sunlight. My doc thinks I have restless leg syndrome. It seems to fit but Mirapex and Requip didn't work. At first I thought it was a way to sell another drug. The diagnosis does fit though. Has any of your research shed any light (no pun intended) on this syndrome?



seth (2008-03-21 06:42:10)

My research suggests that our bodies are designed to spend each day standing far more than most people do. A good amount is 8 hours/day, my research suggests. You might try doing that. It's hard the day or so but then it gets easy.

### **An SLD Marketing Puzzle (2007-07-08 04:19)**

I have done 40-odd radio interviews about The Shangri-La Diet. A few of them noticeably increased the number of visitors to the [1]SLD forums. The forums software measures number of visitors with a statistic called most online: the maximum number of simultaneous visitors to the forums, computing the maximum over one day. Until recently, the interview with the most impact was with [2]Dennis Prager (May 2006). For the five days before the interview, most online = 54 40 43 53 48. On the day of the interview, most online = 231. For the five following days, most online = 72 82 44 52 74. This was the general pattern: An increase caused by an interview lasted one day or a little more.

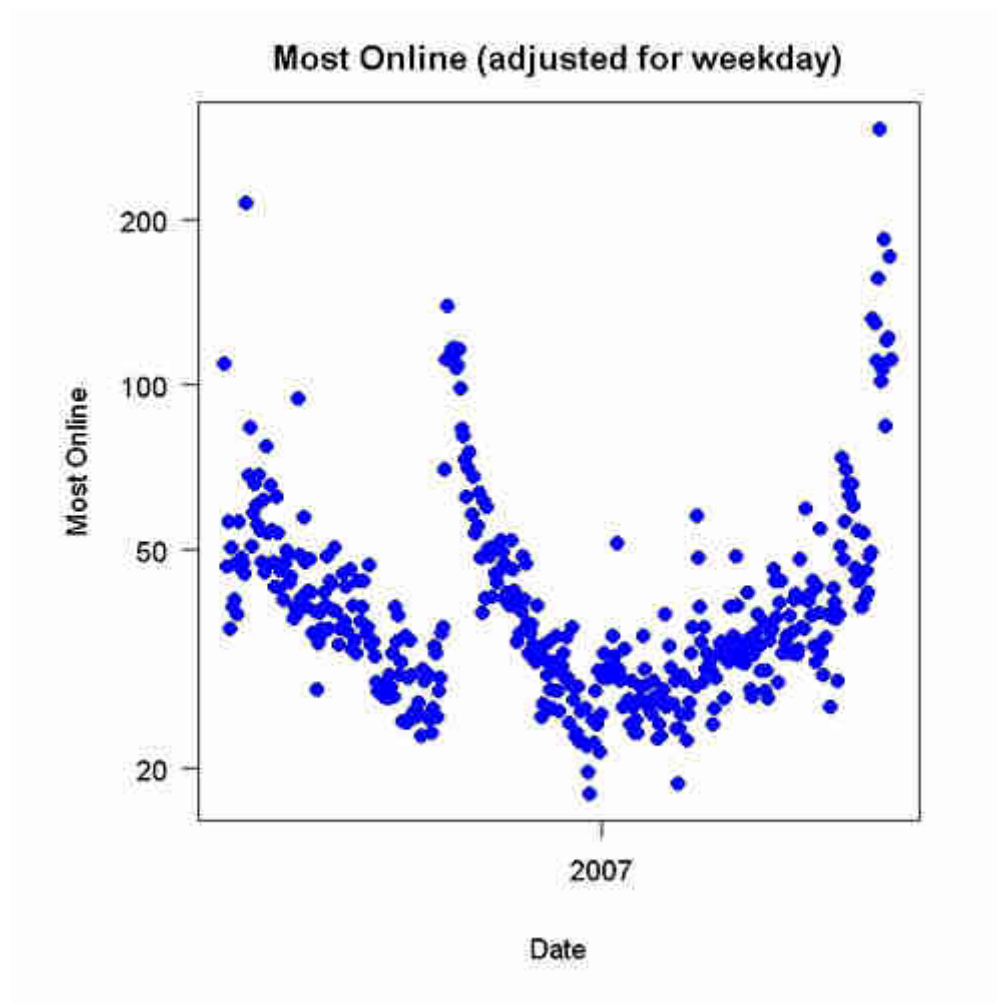
On June 28, I was a guest on [3]The David Lawrence Show. This one was different. For the 10 days before the show, most online =

52 38 35 44 47 44 48 40 42 44

On the day of the show (live), most online = 148. On the following days,

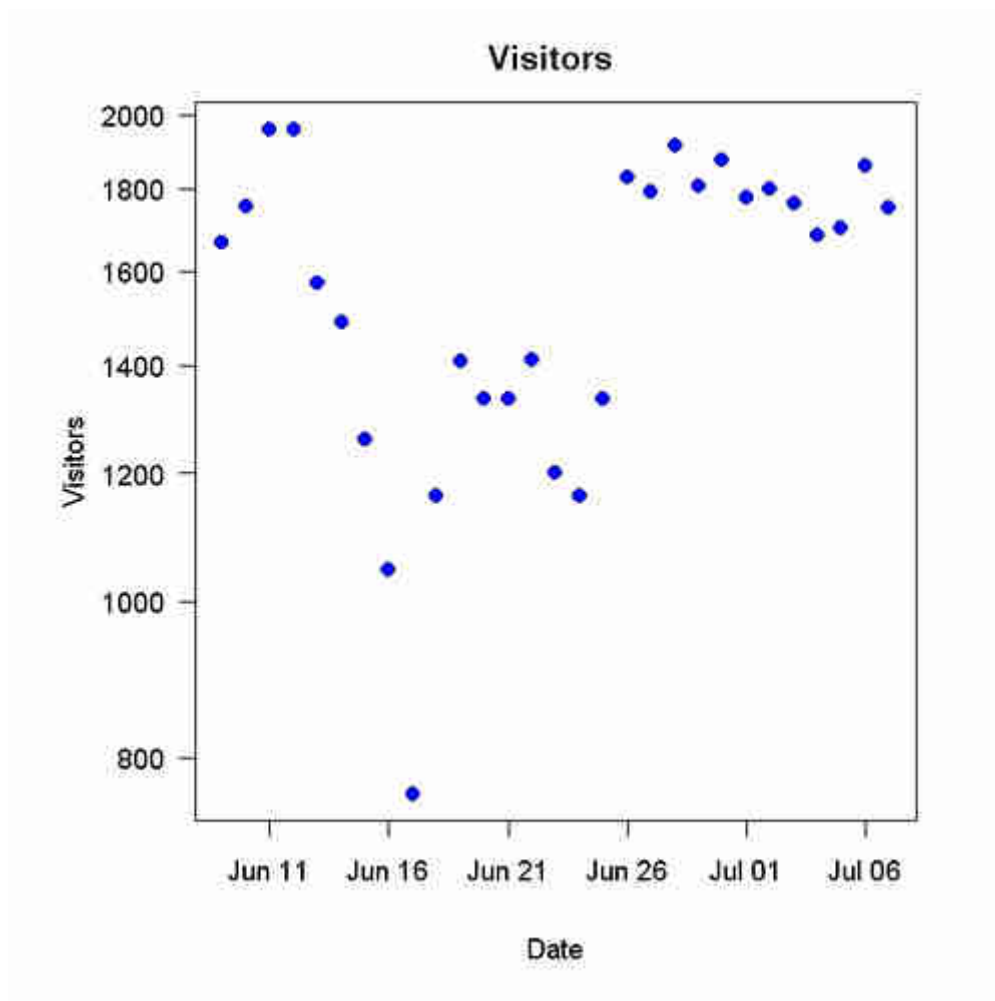
137 119 164 281 88 95 207 89 130 128 164 96

A much longer increase than usual. And the maximum value so far (281) happened days after the show. To make it clear how unusual this is, here is a graph of most online for the whole history of the forums.



Why was the David Lawrence interview so different? I can think of four possibilities: 1. The SLD forums have become more persuasive. Because they are more persuasive, new visitors come more than once. 2. David Lawrence listeners were more likely to be persuaded by the forums. 3. The David Lawrence Show gets lots of listeners via the website, where the interview can be downloaded. These downloads happened over many days, so the effect of the interview was spread out. 4. Something was different about the interview itself.

Another measure of forums activity is provided by the hosting service: unique visitors per day. This is more interesting, of course, but harder for me to record. Only recently did I start recording it. Here is a graph of visitors per day:



These data support the idea that the David Lawrence interview had a long-lasting effect, yes – but why the decrease in variability?

1. <http://boards.sethroberts.net/index.php?action=collapse;c=1;sa=expand#1>
2. <http://sethroberts.net/reviews/dennispragermay3interview.mp3>
3. [http://www.thedavidlawrenceshow.com/googlefying\\_murray\\_gold\\_and\\_the\\_shangrila\\_diet\\_007186.html](http://www.thedavidlawrenceshow.com/googlefying_murray_gold_and_the_shangrila_diet_007186.html)

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Rich (2007-07-08 10:36:44)

It looks like you have this plotted on some sort of log scale. If you take it off that scale, my guess is there isn't much decrease in variability.

seth (2007-07-08 10:49:21)

Yes, it is plotted on a log scale. When counts are plotted on square root or log scales, the variability is usually constant with changes in level – one of the big reasons for the transformation. This data violates that expectation. If it were plotted on a "raw" (untransformed) scale, the reduction in variability would still be obvious because the pre-interview values cover such a wide range.

## **More Self-Congratulation (probably erroneous) (2007-07-09 04:27)**

July 2, 2007. Online issue of The New Yorker appears. [1]Editorial by Hertzberg is based on a [2]series of articles in the Washington Post, but does not link to them.

July 2, 2007. I write to the New Yorker webmaster: If an article refers to something Web-available, why not link to it?

July 9, 2007. New [3]Financial Page appears. Number of links: 7. Number of links in previous three Financial Pages: 0.

[4]Earlier self-congratulation.

1. [http://www.newyorker.com/talk/comment/2007/07/09/070709taco\\_talk\\_hertzberg](http://www.newyorker.com/talk/comment/2007/07/09/070709taco_talk_hertzberg)
2. <http://blog.washingtonpost.com/cheney/>
3. [http://www.newyorker.com/online/2007/07/09/070709on\\_onlineonly\\_surowiecki](http://www.newyorker.com/online/2007/07/09/070709on_onlineonly_surowiecki)
4. <http://www.blog.sethroberts.net/2007/07/08/an-sld-marketing-puzzle/>

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## **A Student Advisor's Unlovely View of UC Berkeley (2007-07-09 06:20)**

I started talking with Catherine Pauling, who has worked at UC Berkeley more than 20 years, because I confused her with someone else. While she was head student advisor in the Math Department, she increased the number of majors from 170 to 600 in 5 years. "Some math professors were afraid this was too many – it could only occur because we were bringing in inadequate students, they believed," she said. "But the percentage of students having trouble and excelling remained the same."

When advising math majors, she told me, "sometimes I felt there should have been a Red Cross on my door." She learned to preach compassion – compassion for the professors. She said over and over to the students,

You have to realize it's not you. The professors will say terrible things like 'You know nothing.' But that's because in the process of becoming the best in what they do, they've neglected certain social and communication skills. So we have to appreciate and learn from their gifts and have compassion for their lack of development in these other areas.

Over the years, she was repeatedly shocked by how undergraduates were treated. "If someone has achieved so much, I would have thought it would be easy to be generous. Instead of an interest in mentoring the next generation, I often found impatience and dismissal," she said. "One student explained to me the difference between Stanford and Berkeley. At Stanford, if a student has a problem, they [faculty and administrators] assume that they're approaching it wrong and they try a new approach; at Berkeley, if a student has a problem, the assumption is that we made a mistake in admitting the student."

One recent Dean of the College of Letters and Science (also a professor) began his tenure as dean, she told me, by giving a talk in which he emphasized his belief that students were "gaming the system." He acted on this belief by rigidly

enforcing the rules, with few exceptions. (Many Berkeley students suffer serious hardships, including homelessness and major mental disorders.) When he stopped being dean several years later, it was to take a better position at another university. The next dean was less strict.

[1]For whom do colleges exist?

1. <http://www.blog.sethroberts.net/2007/03/31/for-whom-do-colleges-exist/>

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Dennis Mangan (2007-07-09 08:02:00)

A member of my family attended Berkeley about 15 years ago, and she lasted under a semester after transferring with an "A" average from elsewhere. The impression I got was that the school was totally heartless. The core classes had 300 students in them, and no one to turn to for help. Dormitory rules went completely unenforced. She hated it and left quickly.

Catherine Pauling (2007-07-09 10:59:14)

While accurately quoted above, I want to encourage anyone at or interested in attending U C Berkeley to find advisors like myself to help you achieve your academic goals. We can teach you how to join or create smaller communities within a large campus, form mentoring relationships with faculty, master the bureaucracy, and enrich your classroom opportunities with research and work internships. I am a Cal alum and have worked here for 20 years because I know what we have to offer. Learning how to learn, even in a challenging environment, can be an important life lesson.

seth (2007-07-09 16:05:15)

I think advisors at UC Berkeley are like band-aids – they can do little about a deep-seated problem. I have never understood the "learning how to learn" argument. Everyone learns all the time – babies, animals, young children, apprentices. That's what the brain is mostly about: learning. Surely we used our brains effectively before colleges came along.

lasser11 (2007-07-09 19:43:09)

this contradicts my (and probably many others) stereotypes of UC Berkeley (Professors at Stanford tend to be less elitist than Berkeley???!). there are no excuses, but I wonder if part of it is a product of undergraduate student size. As Dennis commented above, when professors can't develop personal relationships with students, its easier to be rude. also, with large class sizes, Berkeley might attract professors who don't want to develop positive relationships with students. At my small liberal arts school, with less research opportunities, I could tell that the professors loved interacting with students. Is it possible that professors who are often educated at smaller, elite private institutions showcase snobbery towards a larger, public student body? I have trouble comprehending this because UC Berkeley is such an elite institution. but maybe.

Allen Ethridge (2007-07-24 16:36:32)

There was a nearly four-fold increase in students majoring in math in a five year period? What there an equivalent increase in the math faculty? Was the real objection by the math professors that the students couldn't be adequately taught in that environment? People often become dismissive towards their subordinates and coworkers when they are overworked. I love the stereotype about math professors having poor social and communication skills. Playing on such inaccurate stereotypes doesn't make for a strong argument. It says more about that particular advisor than anyone else. The problem with lower lever math classes is that they are the classes most math professors like to teach the least and they are full of students who have little real interest in and less respect for mathematics. When I was an undergraduate engineering major, once upon a time, I had the experience of listening to an engineering professor mock the mathematics professors in an engineering class lecture. That kind of attitude doesn't lead to comfortable conversations between engineering students and math professors. (Of course, I also had the experience of listening to an engineering professor mock liberal arts students for being outside and

enjoying a warm spring afternoon. That's the point where I realized engineering wasn't the major I wanted.) In my experience math professors become a whole lot more friendly to students they see in upper level classes taking mathematics seriously. Of course, even that is going to be difficult in a math department where faculty growth hasn't kept up with student growth. I've wandered a bit, but you really don't provide enough for anyone to do more than wander and wonder what you're talking about. Over on the Huffington Post, and here on your own blog apparently, you've done a good job of presenting anecdotes about various problems in various different situations but you consistently provide insufficient details or analysis to determine what you're really getting at, if anything. You seem unsatisfied with college education but you don't seem to know why.

seth (2007-07-24 16:52:57)

Oh, I know why. The core problem is that professors have too much power, students too little. And their desires are quite different. In my post For Whom Do Colleges Exist? I was pretty explicit about this. Or so I thought. "Playing on such inaccurate stereotypes [that of the socially-inept math professor] doesn't make for a strong argument." There might be room for improvement, I agree. But let me ask you two questions: 1. Why are you sure the stereotype is inaccurate in this case (Berkeley math professors)? 2. What would be a better approach for a student advisor to take, to replace the one you don't like?

## **Blogs and Street Food (2007-07-09 19:38)**

In The New Yorker, Orhan Pamuk writes:

The best thing about Istanbul street food now is not that each purveyor is different from all the others, offering his own specialties; it is that these different street vendors sell only the things that they themselves know and love.

This is [1]what I was saying about blogs: They are so well-written, so easy to read, because bloggers only write about what they care about.

1. <http://www.blog.sethroberts.net/2007/05/16/why-blogs-are-better-written/>

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Andrew Gelman (2007-07-10 09:48:22)

Seth, Does this contradict your statement, several years ago, that you really enjoyed reading Entertainment Weekly because it was so well-written?

seth (2007-07-10 12:27:32)

Now that i read more blogs you're right, my standards for what is good writing have gone up: I am harder to please. (Sort of like a sweet tooth.) So EW would move down a notch in relative terms. But I still read it and enjoy it. Tyler Cowen – speaking of blogs – is also an EW fan.

## My Theory of Human Evolution (diet soda edition) (2007-07-10 05:45)

I have been drinking diet cherry sodas for many years. Last week, for the first time, I decided to compare two different brands. I bought a four-pack of [1]Jones sugar-free Black Cherry Soda and a six-pack of [2]Hansen's sugar-free Black Cherry Soda.



I'm never so thirsty that I want to drink two cans of soda at one time so I resisted making a direct comparison (opening both brands at once). I happily drank three bottles of the Jones soda and four bottles of the Hansen's soda at widely-spaced intervals (several hours at least). Both brands tasted fine.

X

When I had only three bottles left (one Jones, two Hansen's) I finally drank a Jones and a Hansen's side by side: sip of one, sip of the other. It was immediately clear that the Jones was much better. It had a strong clear flavor while the Hansen's had something fuzzy and metallic about it. A difference I hadn't noticed. I will never buy another Hansen's – it was that bad.

The Jones soda cost more. I had never bought it because I saw nothing wrong with the cheap stuff. Now I do. The changes were not just negative: After I noticed the difference, I got more pleasure from the Jones. Now that I am aware of this difference it will be fun to buy other cherry sodas to see how they stack up. The side-by-side comparison greatly increased my hedonic reaction to cherry sodas. Not only will I get more pleasure from the better-made, I'll get less pleasure from the worse-made.

Thus side-by-side comparisons (which we [3]enjoy) make connoisseurs of us. Connoisseurs, of course, pay more for and create a market for finely-made things, helping artists and artisans make a living. In human prehistory, artists

and artisans were material scientists. Their trial-and-error research about how to control materials eventually led to better tools.

[4]More about side-by-side comparisons. [5]The evolutionary function of art.

1. <http://www.jonessoda.com/>
2. <http://www.hansens.com/>
3. <http://www.blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-music-video-edition/>
4. <http://www.blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-music-video-edition/>
5. <http://www.blog.sethroberts.net/2007/06/07/my-theory-of-human-evolution-scrapbook-edition/>

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Aaron Brown (2007-07-10 22:43:57)

I think Diet Hansen's Kiwi Strawberry Soda is the nectar of the gods. (I drink other flavors of Hansen's, but not with the same pleasure.)

seth (2007-07-11 05:36:05)

My guess is that you didn't like it so much the first time you tasted it. When I hear "nectar of the gods" I think "strong flavor-calorie association".

Aaron Brown (2007-07-11 07:09:58)

> My guess is that you didn't like it so much the first time > you tasted it. When I hear "nectar of the gods" I think > "strong flavor-calorie association". Actually, I went crazy about it on my first can. (I've gotten a bit less enthusiastic as the newness has worn off.) I remember a similar flavor button being pushed by raspberry (or maybe strawberry) gum of a particular brand when I was a teenager, but again that happened on my first taste. I am, by the way, a successful SLD user. (Thanks for it!) An idea I've played with but never gotten around to trying is drinking ELOO with a food that I don't like so that I can develop a taste for that food.

seth (2007-07-11 08:49:38)

Hmm, well I better try Strawberry Kiwi. Your ELOO idea is definitely worth trying. And if you do try it please let me know what happens.

Ben (2007-07-11 10:17:53)

I like Aaron's suggestion of using ELOO to re-engineer the palatability of certain foods. I'm thinking about kids being picky eaters. We're familiar with the generalization that French kids have a more varied palate than, say, American kids: "French kids like to eat vegetables. American kids hate to eat vegetables." Could this be explained by flavor-calorie association? If a vegetable is characteristically cooked with a significant amount of butter (I am generalizing about French cooking that no French cook would serve a plain steamed or blanched vegetable like I do), then the particular taste of that vegetable should quickly become pleasing due to the calorie association. (Curiously, the flavor of butter itself is pleasing WITH foods, though nobody eats it by the spoonful. Maybe butter flavor just signals 'this is calorie-laden food'.) After gaining a certain amount of experience eating super-high-calorie broccoli, won't the specific flavor of plain broccoli become pleasing in a way that no amount of plain-broccoli-eating would ever produce on its own? This question affects me personally: I've been trying to take daily doses of flaxseed oil for the omega-3 benefit. From the start, I have found the taste of pure flaxseed oil to be nauseatingly vile. Theoretically, though, if I persist, the caloric punch of the oil will eventually force me to like its taste. As an intermediary step, I have taken to drinking it mixed with a very flavorful liquid like lemonade or blueberry juice, sometimes holding my nose, sometimes not. Recently I have actually noticed the thought, "This juice has a pleasant, warm, nutty taste to it." I think this is



the first stirring of liking a flavor that was initially revolting. Another question: Can flavor-calorie association explain why salt makes food more toothsome?

seth (2007-07-11 11:02:51)

Salt makes food taste better for reasons that have nothing to do with flavor-calorie associations. It is an immediate unlearned effect. I think you're right about slowly learning a flavor-calorie association with your juice – in fact that might be a good way to study that learning. yeah, we probably like the flavor of butter partly because it is paired with calories. There is also an unlearned preference for the texture of fat; and fat also intensifies other flavors because it dissolves fat-soluble flavor molecules, making them more mobile and detectable.

Ted (2007-07-11 16:47:27)

It always surprises me how artificial-tasting the "natural" Hansen's diet sodas are. But I should point out that Jones diet black cherry contains sodium benzoate, as do virtually all mainstream soda brands. Hansen's is one of the few that don't. If you believe the recent claim that this chemical could result in DNA damage, that might be an issue. It may be that you'd have to drink 80 gallons of soda a day to cause any real harm, but I figure why take the chance?

Pearl (2007-07-12 08:59:21)

In Japan there are few picky eaters and kids are taught from elementary school to eat everything without picking favorites or avoiding certain foods, big posters and motivational words and everything. I think that it's pretty normal for kids not to like certain foods, but perhaps it is because American parents are allowing the kids to be picky eaters. I think it takes everyone a certain number of times to eat a food they hate before they recognize it as palatable. My mom was almost too militant about making me eat everything, and the number of parents I've met who say "Tommy won't eat this and this" really strikes me as odd. Sometimes I get the impression US kids are being placated with food, and that it is taught to be a reward and a recreation, rather than fuel for them to grow with.

J. Weighty (2007-07-13 19:56:47)

Did the actual containers match the photos? In other words, was the Hansen's in a can, and the Jones in a bottle? That alone may account for the superior taste of the Jones. I drink very little soda, but I know bottled beer tastes better than canned.

seth (2007-07-13 20:11:37)

yes, the containers matched the photos.

glucoholic (2009-03-18 19:21:57)

I totally agree! I've done the same test myself. I think Hansen's is fine, but Jones is better. If you like it, I recommend you give the [1]Root Beer and [2]Green Apple flavors a try as well.

1. <http://www.glucoholic.com/2008/04/19/jones-sugar-free-root-beer>

2. <http://www.glucoholic.com/2009/01/15/jones-sugar-free-green-apple-soda>

## **Irritability and Coca-Cola (2007-07-11 06:44)**

The following is from a friend of mine. He is in the middle of a self-experiment to measure the effect of various forms of Coca-Cola (regular, diet, diet w/o caffeine) on his mood.

### **TODAY'S EVENT**

Today 20 oz of coca cola (w/ caffeine and w/ sugar) dramatically eliminated (in about a minute) a very real, strong feeling of irritability.

## BACKGROUND

I am on day 17/30 of the experiment and I am still blinded to the results of the first 16 days. I do know that none of my previous mood experiences in the past 16 days were like the one today.

I had a significant bout of irritability (6/10) today. This irritability has been brewing last 48 hours but was palpable all morning after I woke up this AM. This irritability was the REAL DEAL that I have been seeking the past few weeks - my family was well aware of my irritability yesterday and this AM. Since this irritability was so palpable, I decided to break my experimental protocol and drink a known real coke. Quite remarkably, within a minute or so of consuming the whole coke ( 20 oz - large) my irritability was gone (really gone). [He drank the coke in 2 or 3 minutes. The effect lasted about an hour.] Be clear, this was not some psychological maybe I feel this maybe I don't, this was real psychiatric, can't miss it, need some drugs, psychotropic bad/irritable feeling.

The past 16 days of this experiment has made me very familiar with hunger, bad moods, hunger irritability, assessing my feelings around hunger, assessing feelings around soda pop, assessing feelings around a good meal. Therefore, today I was well prepared to focus on the minute to minute dynamics around drinking this coke - the coke abruptly ended hours of feeling irritable (no better word to describe the mood than irritable).

## RESULTS

-1) Now that I am half way through the experiment, I think I can break the blind by identifying the three different types of coke. I can taste the clean sweetness of real coke immediately, I can feel caffeine in my body from the diet coke in about 5 minutes.

0) I am currently blinded to the results of the experiment I am doing. However, I do have some anecdotal impressions that presumed diet w/o caffeine causes no mood affect, diet w/ caf does affect mood, coke w/ caffeine and w/ sugar does affect mood. My anecdotal impression is that these effects are mild to modest.

1) Today was the first time I felt psychiatric grade irritability confounded by hunger irritability. Today unblinded Coke abruptly eliminated the bad feelings associated with this irritability.

2) I have been rating my mood with full meals 20-40 minutes after my soda pop drink and my impression is that real satiation does have some positive mood effects.

## DISCUSSION

The big target is understanding how 20 oz of sugar and caffeine totally eliminates the strong and persistent feeling of psychiatric grade irritability confounded by hunger irritability. Designing an experiment to go for this issue is challenged by the infrequentness of this psychiatric grade irritability.

Coke eliminating irritability appears to produce happiness by eliminating the presence of bad irritability feelings. In this setting, Coke did not produce any positive feelings, Coke simply eliminated some strong bad feelings. Coke is not producing a good mood, it removed a bad one. (There may have been some "psychological" grade good mood, but this was so tentative and hard to assess that I am happy saying Coke produced no positive affect. The removal of the psychiatric irritable mood was clear and absolute).

In contrast to the absence of irritability caused by coke (and no good mood effects), I think the satiation I have experienced these past 16 days from the big healthy meals following my soda pop does have some positive feelings associated with it. Satiation presumably feels good not just because of elimination of hunger, there seems to be some warm glow from eating a large, well-balanced, fatty, carbo, vegetable, sweet meal.

There appear to be different kinds of irritability. More than six hours without food brings on a form of irritability, but this hunger irritability appears to be different from "mood" irritability. Mood irritability lasts for days while hunger irritability lasts for hours. Hunger irritability produced in the setting of no mood irritability is not that profound. Hunger irritability on top of mood irritability appears to be the REAL DEAL of irritability. It is this REAL DEAL of irritability which today (and typically) creates the setting such that a large caffeine/sugar soft drink eliminates the persistent palpable bad feelings associated with REAL DEAL irritability.

I understand why it would be nice if the subject is blinded. However, I am not sure the subject needs to be blinded. I think one still gets meaningful results even if placebo/nocebo effects are folded into the results.

## CONCLUSION

A couple of days of irritability compounded by hunger produces a strong form of irritability which was dramatically relieved by a large glass of caffeine/sugar coke today (unblinded N = 1 in experiment). Strategies for further behavioral characterization of this phenomenon are needed. A physiological hypothesis is needed. A future design for FMRI measurements of this quick irritability response to caffeine/sugar will be fun to design.

In the final analysis, I guess it is worth finishing the current experiment - even though I think I can determine the identity of each drink. Good data from an inadequate experimental design will be helpful in creating a better experimental design.

About the author: John Keltner has a Ph.D. in Physics from UC Berkeley and an M.D. from Harvard. He is a research fellow at the University of Oxford. Given these results, I asked John if he was addicted to caffeine. He told me no, going without caffeine did not make him more irritable.

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Pearl (2007-07-11 07:16:54)

I'm confused as to why he doesn't think he is addicted to caffeine. Clearly he is irritable until he has had it. Does this mean he was just as irritable on a regular basis before he started drinking coke regularly?

seth (2007-07-11 07:28:17)

Right. About once/month he is irritable - whether or not he has been drinking coke.

Sam (2007-07-11 09:09:12)

Not easy to confirm this effect: he needs to be in a real bad mood to check this fact. And even though he might not be addicted this effect might be behavioural. Maybe he just connects such a good feeling with drinking coke / sugar with caffeine? Interesting start, needs more data ;)

Omar Wasow (2007-07-11 09:14:14)

I concur with Pearl that this low-grade "irritability" sounds a lot like the symptoms of withdrawal. I'd find this whole experiment more plausible if the subject consumed a no-caffeine, low-sugar diet for a month and then attempted to gauge his responses to various types of coke (and other caffeinated and/or sugary beverages).

Janet (2007-07-11 10:39:30)

He seems to imply that the change in irritability is from the composition of the cola. That might be true, but it could also be from a learned association between cola and a positive mental state or even a feeling of liberation due to carrying out an unplanned act. No way to really test the latter, but the former could be tested by trying an unfamiliar beverage with similar composition like Mountain Dew or a caffeinated root beer.

seth (2007-07-11 10:56:32)

I agree, a great deal of light on the mechanism will be shown by learning what else does and doesn't have this effect. If John's irritability were due to withdrawal from caffeine, there should be a strong positive correlation between two things: 1. time since last caffeine 2. irritability There isn't. If I understand John correctly, there is almost no correlation. The one-hour relief from irritability that a Coke provides is a small change relative to the whole pattern.

John Keltner (2007-07-11 12:53:08)

Hello all, Great to see interest regarding food and mood. Here is a bit of clarification of the background of my current experiment. My brother and I (and some friends we have met over the years) have noticed that periodically (once a month or so) we both get really grumpy (irritable is best description) for a few days. There may be low grade irritability the other 27 days of the year, but these three days of irritability are unmistakable. His family and mine both know when we get irritable. Both my brother and myself (and some of our friends) have noticed that being hungry is the worst exacerbant (spel?) of the really irritable 3 day state. This bad irritability (made a lot worse by hunger) is remarkably fixed by eating a good meal. To a significant degree this irritability can be significantly helped by any caffeine/sugar soda pop drink. My present experiment attempts to tease apart the affects of caffeine vs sugar upon this hyperirritable state (irritability plus hunger). To eliminate expectation bias I have blinded myself to coke, diet coke, and diet coke w/o caffeine. I did not use real coca-cola. Instead, I used a cheap co-op version of coke since I felt the caff/sugear and caff/diet and diet w/o caffeine all tasted more similar than the equivalent real coca-cola versions. Based upon a set of 30 random numbers (1, 2, or 3), my wife pours me two pint glasses of the soft drink of the day. Half way through the experiment, I have concluded that I am not totally blind to which drink is which. I think I can taste sugar and I think I can feel caffeine. Eventhough I am not completely blind, I believe some amount of being blinded has some benefit compared to not being blinded at all. Furthermore, even if I knew exactly what I was drinking, I think it would be fine to have placebo/nocebo effects as part of the measured effect. Also, my 17 days of experiment to date indicate that a healthy full meal has a lot more alleviation of hyperirritability than 2 pints of caffeinated/sugar drink. In the long run, I want to continue to pursue understanding food effects upon mood. Better understanding of these dynamics may shed light on the mechanisms of food and mood. I also believe that food affecting mood has important implications for obesity in depressed populations. I look forward to your additional insights. John Keltner

Pearl (2007-07-11 20:02:15)

It looks like there's only one way to fix this.... noseclipping :) They can help you out on that at the SLD forum.

Laura (2010-05-17 20:05:25)

I get agitated sometimes, too. After 3 years of finding out what might or might not work, I see that eating something is the only thing that gets rid of the anxiety.

## **SLD on Los Angeles TV Tonight (2007-07-11 10:47)**

[1]KABC-TV in Los Angeles will air tonight on their 11:00 pm news a 3-5 minute segment on the Shangri-La Diet. When I was in Los Angeles recently they interviewed me and yesterday interviewed someone in the area who has been doing the diet. They found that person via the SLD forums.

1. <http://abclocal.go.com/kabc/front>

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### **My Theory of Human Evolution (omiyage edition) (2007-07-12 07:12)**

The Japanese have a tradition of omiyage, little gifts that you bring back from vacation and give to your friends, family, neighbors, and co-workers. A large number of people. According to [1]Wikipedia, "Japanese are often very close-lipped about their travel plans, hoping to minimize their omiyage responsibilities." That is one solution, [2]here is another:

Choosing omiyage is so difficult and takes time out of sightseeing! It makes the luggage so heavy, when it was already heavy to begin with! You are so tired and beaten down when you return home! Just leisurely choose omiyage from this catalog, go on your trip, and weâ€™ll deliver it to your door when you return home to Japan!

And wrapping [3]matters:

When presenting omiyage remember that the wrapping is VERY IMPORTANT. Put your omiyage in the suitcase or bag that will be sent directly to Morioka from Narita Airport and you can wrap your gifts here to avoid the "well traveled" look.

Like [4]Christmas presents, omiyage (especially the wrapping) is something neither the giver nor the recipient would otherwise buy. Gift traditions increase the market for high-end finely-made things. The genes that pushed us toward these traditions evolved because they helped artists and artisans – the first material scientists – make a living.

1. <http://en.wikipedia.org/wiki/Souvenir>
2. <http://pearlalexander.wordpress.com/2007/07/04/%e3%81%8a%e5%9c%9f%e7%94%a3-omiyage/>
3. <http://www.handaweb.com/anthony/handbook/omiyage.html>
4. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>

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### **My Theory of Human Evolution (blogs and fan clubs edition); or Why We Blog (2007-07-13 06:55)**

Marc Andreessen, in a fascinating post about [1]lessons learned from blogging, started me thinking about fan clubs. After reading his post, I wondered what had I learned from blogging. Well, nothing very interesting: 1. Easier than expected. 2. More fun than expected. 3. Pleasantly surprised to see audience grow for the esoteric topics I blog

about, such as scientific method and human evolution. These are quite different than Marc's lessons.

But maybe not. I think Marc gets to the heart of the matter with this:

one of the best things about blogs is how they enable a conversation among people with shared interests.

Which is exactly what fan clubs and fan conventions do.

Every blog I read revolves around someone's specialized knowledge. [2]HuntGrunt, for example, is based on Joyce Cohen's journalism: In her blog, she writes what few others could. Bloggers enjoy writing them, I enjoy reading them. I think blogs have done grown so quickly and become so powerful because they tap into something very fundamental and important inside of all of us: We enjoy talking about our area of specialization, of expertise; and we enjoy listening to others with similar interests. Fan clubs and interest groups were old expressions of this; blogs are a new expression.

Why are people like this? My theory of human evolution says that the human brain changed in all sorts of ways to promote occupation specialization, the big way we differ from our closest ancestors. The fan-club tendency evolved because it caused specialists to share their knowledge. This pushed forward technology just as scientific journals and conferences do. People who made shoes talked to others who made shoes and shared what they had learned. The result was not only better shoes but also better use of research effort: No one had to reinvent the wheel.

Blog posts are easy and pleasant to write because they allow me to do something I enjoy doing: talk about my area of expertise. Their esoteric subject matter is crucial: I wouldn't enjoy talking about other stuff. Maybe this tendency has other uses. People with specialized interests who [3]chat every morning via webcam – now there's an idea...

1. <http://blog.pmarca.com/2007/07/eleven-lessons-.html>
2. <http://huntgrunt.blogspot.com/>
3. <http://www.blog.sethroberts.net/2007/05/06/life-size-faces/>

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Nansen (2007-07-15 17:58:12)

People with specialized interests who chat every morning via webcam: Here's something interesting from the Wikipedia article on videoconferencing: "It is known that eye contact plays a large role in conversational turn-taking. While traditional telephone conversations give no eye contact cues, videoconferencing systems are arguably worse in that they provide an incorrect impression that the remote interlocutor is avoiding eye contact. This issue is being addressed through research that generates a synthetic image with eye contact using stereo reconstruction."

losing-it (2007-07-25 20:45:22)

I love this cartoon on the devolution of blogging. Reminds me of my own current blog (mine is rather more like blah-blah-blah-ging). Thought you might enjoy the funny, too, Dr. R.: [http://sethlevine.typepad.com/vc\\_adventure/images/blog\\_1.jpg](http://sethlevine.typepad.com/vc_adventure/images/blog_1.jpg)

Brett J (2009-08-19 11:28:41)

The "everyone wins" fact you highlight when it comes to sharing knowledge is strongly resonant of Robert Wright's main points in his book *Non-Zero* - working our way toward more and more "non-zero sum" games, as history proceeds...blogs are a sort of non-zero space where ideas can be discussed/shared in a safe environment. Good book- also great post. Thanks

### **Why Tapas and Dim Sum? (2007-07-13 11:49)**

[1]Elizabeth Rode, Paul Rozin, and Paula Durlach measured the remembered pleasure for meals. It didn't matter how long the meal lasted. They called this "duration neglect."

The existence of duration neglect implies that, with respect to memories of a meal, small portions of a highly favored dish will have roughly the same memorial effect as large portions.

1. [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6WB2-4NJX40T-1&\\_user=4420&\\_coverDate=07%2F31%2F2007&\\_rdoc=1&\\_fmt=summary&\\_orig=search&\\_cdi=6698&\\_sort=d&\\_docanchor=&view=c&\\_acct=C000059607&\\_version=1&\\_urlVersion=0&\\_userid=4420&md5=f9acdd9b086bb8ff36827bb96b2846f1](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6WB2-4NJX40T-1&_user=4420&_coverDate=07%2F31%2F2007&_rdoc=1&_fmt=summary&_orig=search&_cdi=6698&_sort=d&_docanchor=&view=c&_acct=C000059607&_version=1&_urlVersion=0&_userid=4420&md5=f9acdd9b086bb8ff36827bb96b2846f1)

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### **Omega-3: I Can See For Myself (2007-07-14 07:08)**

[1]"The flax seed oil scam" by a herbalist named Henriette says bad things about flaxseed oil. One is about (lack of) conversion of ALA (the short-chain omega-3 in flaxseed oil) to EPA and DHA (the long-chain omega-3s found in fish oil and presumably active in the brain):

The scam is in flax seed oil folks trying to maintain that we can convert ALA into EPA and DHA in anything like relevant amounts.

We can't. We convert at most 10 %, but usually less than half that.

Which is "fairly common knowledge among nutritionists," says Henriette. She quotes the abstracts of two scientific papers to support this point. The other criticism is that flaxseed oil goes bad quickly:

I dislike flax seed oil for another reason as well: it oxidizes (goes rancid) pretty much the minute it's pressed, and unless it's been refrigerated ALL the way from press to consumer, it's ALWAYS rancid.

After I read this, I realized I was in an unusual position. When it comes to flaxseed oil, I don't have to take anyone's word for it. I have been able to measure the benefits [2]by myself on myself. Apparently the conversion ratio, whatever it is, is high enough; and the suppliers of my flaxseed oil (I have used Spectrum Organic, Barlean's, and the Whole Foods house brand) have solved the oxidation problem.

With almost every other nutrient, my knowledge is far less certain. Sure, I need some Vitamin C, but how much is best? Too much [3] may cause cancer. I'll probably never know the best amount for the average person, much less the best amount for myself.

1. <http://www.henriettesherbal.com/blog/?p=403>
2. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>
3. [http://www.timesonline.co.uk/tol/life\\_and\\_style/health/healthy\\_eating/article1449813.ece](http://www.timesonline.co.uk/tol/life_and_style/health/healthy_eating/article1449813.ece)

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Melissa (2007-07-14 08:06:22)

I read Susan Allport's *The Queen of Fats* and was a little disturbed that she failed to address this. More studies need to be done. I think flax seed oil might be sub-optimal, but I think there is evidence it's a lot better than nothing. I was under the impression that if plants are your main source, you need to eat more of the source than if you relied on fish, and also be careful not to drown it out with omega-6, so you not only have to up omega-3, but cut omega-6. Also, with all the pollution causing bioaccumulation of toxins in fatty fish and the depletion of fisheries, I think it's really important to research plant sources of omega-3s. If flax is not the best delivery of omega-3, then we should find ways to improve it. I buy mine fresh pressed and refrigerated from farm to fork. I have had good results, but admittedly I also eat wild salmon once a week. That blog post is rather old? Has there been more research done recently.

Melissa (2007-07-14 10:15:50)

Aha, here is where the aforementioned book backs up the claim that it's not the fish we don't eat, but the omega-6 we do eat that matters. <http://www.epress.com/w3jbio/vol2/holman/holman.html> shows high omega-3 in a population that eats little fish, but a lot of greens (most omega-6 is from grains)

leea (2007-07-14 14:21:18)

According to Stoll, "Taking more than three tablespoons a day of raw flaxseed or ground flaxseed can inhibit the uptake of iodine in the thyroid, which can produce a goiter or enlargement of the thyroid gland." I just read this here <http://www.cnn.com/2007/HEALTH/diet.fitness/07/06/hm.omega.3/index.html> What do u think about this remark?

seth (2007-07-14 14:40:06)

leea, it's news to me. I will try to find out more about it. Melissa, there has been lots of omega-3 research done recently. One good source is [www.fattyacidtrip.com](http://www.fattyacidtrip.com). That's a very important study you link to, thanks for the link. I had heard about the main results, but not the details.

peter (2007-07-14 21:47:28)

are you ever going to test flax seed oil against/ (i) DHA and (ii) EPA/DHA?

seth (2007-07-14 23:14:20)

yes, I'll test fish oil eventually. But the effects of omega-6 are more mysterious than the flaxseed oil vs fish oil question.

Nansen (2007-07-16 13:27:09)

leea, here is the more complete statement from Dr. Stoll's book, *The Omega-3 Connection*, page 219: If you are using flaxseeds or flaxmeal, it is important not to consume more than 2 to 3 tablespoons per day because the seed husks contain naturally occurring cyanogenic nitrates and linamarin, which can be toxic in higher doses. The cyanogenic nitrates interfere with the thyroid gland's ability to take up iodine and may lead to goiter or other thyroid problems. Immature seeds contain



higher amounts of cyanogenic nitrates and glucosides and are more dangerous. Flaxseeds also contain lignans, which have mild estrogenic, antiestrogenic, and steroidlike activity. These problems are not present with flaxseed oil.

seth (2007-07-16 13:48:17)

That's very helpful to know, thanks.

estomagus (2007-11-03 11:42:46)

I have tried flaxseed oil for the first day in my life. I have a strong stomach, used to all kind of strange and not so healthy food but the oil tasted so incredible unbearable I almost vomit. After reading all the stuff here, I suppose it must be rancid and probably is not healthy drinking any more. But it was out of the fridge in the shop (probably for a long time) so it is possible it was in bad state just in the moment I bought it there? I thought you have to put it on the fridge just when you open it, not before, but I was wrong, wasn't I? I think I would jump into the pills.

seth (2007-11-03 12:43:12)

Oxygen is what causes rancidity. Presumably flaxseed oil is bottled with little or no oxygen exposure until you open it. All the bottles of flaxseed oil I've seen have expiration dates; you might want to check that next time. I buy Spectrum Organic and have never had a problem. It is kept refrigerated at the store. However I first discovered the effect of flaxseed oil using capsules that had not been refrigerated at the store. You just have to take so many of them to get the full benefit.

estomagus (2007-11-04 02:23:35)

Thanks for the answer, Seth. I know the bottle I bought is not out of time. Maybe it was not rancid, just is a taste I feel specially unfamiliar. I will give it a second chance, otherwise pills should be the answer.

## **Cure Versus Prevention (flies edition) (2007-07-15 08:17)**

How to reduce flies? [1]Here's one way:

A Chinese city suburb has set a bounty on dead flies in a bid to promote public hygiene . . . Xigong, a district of Luoyang in the central province of Henan, paid out more than 1,000 yuan ( \$125) for about 2,000 dead flies on July 1, the day it launched the scheme with the aim of encouraging cleanliness in residential areas. . . An Internet user said that although the office had good intentions, the action itself had made the district a laughing stock.

"The key point is the government should encourage residents to clean up the environment so that no flies can live there, instead of spending money on dead flies," the Internet user wrote.

Yes. This [2]gets back to Erika Schwartz's [3]criticism of Gina Kolata and the NY Times for not mentioning prevention in an [4]article about strokes. Kolata's article accurately reflected the situation: far more interest in (i.e., money spent on) cure than prevention. It makes as much sense in America as it does in China.

Norman Temple and I [5]wrote about a related problem: more support for high-tech than low-tech research, even though low-tech research has been more helpful. The low-tech research is more prevention-related.

[6]More health-care absurdity.

1. [http://today.reuters.com/news/articlenews.aspx?type=oddlyEnoughNews&storyID=2007-07-10T125033Z\\_01\\_KUA046228\\_RTRUKOC\\_O\\_US-CHINA-FLIES1.xml&WTmodLoc=NewsArt-C2-NextArticle-2](http://today.reuters.com/news/articlenews.aspx?type=oddlyEnoughNews&storyID=2007-07-10T125033Z_01_KUA046228_RTRUKOC_O_US-CHINA-FLIES1.xml&WTmodLoc=NewsArt-C2-NextArticle-2)
2. <http://www.blog.sethroberts.net/2007/05/30/dont-follow-the-money/>
3. <http://www.drerika.com/blog?action=viewBlog&blogID=232675754370729215>
4. [http://www.nytimes.com/2007/05/28/health/28stroke.html?\\_r=2&ref=health&oref=slogin&oref=slogin](http://www.nytimes.com/2007/05/28/health/28stroke.html?_r=2&ref=health&oref=slogin&oref=slogin)
5. [http://sethroberts.net/about/2002\\_medical\\_research--a\\_bettor's\\_guide.pdf](http://sethroberts.net/about/2002_medical_research--a_bettor's_guide.pdf)
6. <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2007/03/30/BUG1L0TC6T75.DTL&a=1>

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michael vassar (2007-07-16 10:47:16)

I think that one reason for the emphasis on cure rather than prevention is that the beneficiaries of a cure get to see the benefit while the beneficiaries of prevention generally don't have access to high credibility information confirming the effects of not taking the preventative action. Too much low quality information or interested propaganda, for instance the sort of "health" education that takes place in public schools, goes under the guise of prevention. It isn't easy or convenient for individuals to state outright disbelief, due to authoritarian pressure, but it is easy for them to base their behavioral decisions on the imitation of others rather than on an attempt to infer the behaviors implied by official dogma. This is, sadly, terribly costly, as it prevents them from benefiting from legitimate prevention.

seth (2007-07-16 11:50:10)

I agree. Not only the beneficiaries. I spoke to a doctor who works in a hospital. We can't really help most of the people we see, she told me. So why do you do it? I asked. Why not do something that helps, such as prevention? Because I like to be thanked, she said.

### **Absurdity and Pathos in Elementary-School Education (2007-07-15 21:47)**

At the [1]San Francisco Chocolate Salon, which I attended because of my interest in [2]connoisseurship and [3]gifts, I learned some sad truths about elementary-school education. A San Francisco public school teacher told me:

1. The curriculum is mandated. Tests are mandated. And they disagree. For example, you are forced to teach what a certain word means. You spend two weeks teaching that word and then the tests use a different word for the same idea.
2. There is no allowance for differing rates of learning. Some kids learn faster than others. Teachers are not allowed to adjust.
3. There are rules about what teachers must put on classroom walls. If a federal inspector comes around and you don't have the proper material on your classroom walls, a note goes in your permanent file.
4. The Reading First program requires that reading be taught before everything else. Some kids are relatively slow to learn to read but they are able to learn in other ways. The effect of the mandate is that these other kids sit in the classroom baffled and unhappy and lose self-confidence.
5. The rigidity of the curriculum – which must be exactly the same for all students – squashes encouragement. For example, suppose a student is interested in bugs. You could encourage reading by giving the student books about bugs. This is a natural, effective, and easy way to teach reading. This way of teaching is not just discouraged but prohibited.

6. A friend of mine says that bookstores should be divided into "real books" and "other books." Children's textbooks, which are [4]worse than anything in a bookstore, deserve their own category. A fifth-grade teacher got around the awfulness of the textbooks by putting real books in the center of the classroom tables and having children sit with their textbooks open around them. This allowed the students to read the real books but if the principal came by the teacher would not get in trouble because the assigned textbooks were open in front of the students.

Excellent posts about elementary-school education by [5]Tyler Cowen and [6]Alex Tabbarok.

1. <http://www.sfchocolatesalon.com/>
2. <http://www.blog.sethroberts.net/2007/07/10/my-theory-of-human-evolution-diet-soda-edition/>
3. <http://www.blog.sethroberts.net/2007/07/12/my-theory-of-human-evolution-omiyage-edition/>
4. <http://www.textbookleague.org/103feyn.htm>
5. <http://www.marginalrevolution.com/marginalrevolution/2007/07/sentences-ofsom.html>
6. [http://www.marginalrevolution.com/marginalrevolution/2005/09/the\\_tragedy\\_of\\_.html](http://www.marginalrevolution.com/marginalrevolution/2005/09/the_tragedy_of_.html)

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Rob (2007-07-15 22:42:22)

Seth, I'm a former teacher and current ed school student. When I read this blog, I always think of how exciting it would be to incorporate kind of self-experimentation into the secondary science or health classroom--and maybe some kind of group self experimentation. At the very least, you could have kids track what they eat and their moods afterward and try to determine the relationship. You'd somehow have to avoid encouraging kids to experiment with dangerous things, though. Any thoughts on this?

Pearl (2007-07-16 05:36:53)

That's so sad. When I was in elementary school I was really good at reading so the teacher assigned me a report on rainbows to show for the class. I worked really hard on it and it gave me a lot of confidence to learn English. I was also in something called "expanded learning program" (ELP) throughout middle school that encouraged this kind of learning, but I always thought it should have been how they taught everyone. Instead it was criticized for being selective.

seth (2007-07-16 06:09:42)

Rob, it sounds too one-size-fits-all for me. I tried assigning self-experimentation to my intro psych students. I stopped after I decided too many of them were making up the data. I wasn't delusional; a University of Pennsylvania student told me that no thesis gets written at Penn without at least some fraud. I think you can talk about self-experimentation and you can allow it. I'd never force anyone to do it.

Laura (2007-07-16 13:36:52)

Depressing indeed, but I don't doubt it. When I was in elementary school, I read the whole "Reader" in one day and spent the weekend doing the homework in the associated booklet so I would never have to look at it again. I got in trouble for not following instructions and the teacher took away my booklet and gave me a new one so I would have to do it with the other students. I also have memories of frequently getting in trouble for reading "real books" during lessons- and yes, I began hiding them in the text book as well.

Reyes-Chow (2007-07-16 16:17:12)

Let me just post one positive thought about SF Public schools. I have two kids right now in the SF Public school - and one more to come - and I do think every school and every teacher is different. While I do not doubt some of the realities that you bring up, we have NOT had this experience nor have any of our many friends in public school here in the city. I also don't think this kind of rigidity is only present in the Public school. As we went through our "middle class progressive angst" when choosing a school for our kids, we looked at MANY private schools. Some were great, creative, etc while others were far more rigid and elitist than ANY public school could or should ever be. When it got right down to it, we chose public because we felt our kids' worldview would have the greatest chance at expanding in this setting. Not for every family OR teacher, but has been great for us and our kids.

Robin Hanson (2007-07-16 19:52:00)

This is terrible if true. And this is important enough to be worth checking - can others verify these claims? If true, they should be relatively easy to verify.

seth (2007-07-16 20:10:45)

Reyes-Chow, this teacher taught at a low-income school, where she said these problems were greater than at high-income schools where the students tended to have fewer problems learning to read. Robin, the teacher offered to send me some links backing up what she said. I will find out if the offer is still good.

s. (2007-07-17 00:13:13)

Well here are few links to get you started. Reading First <http://www.ed.gov/programs/readingfirst/index.html>  
Star Test <http://star.cde.ca.gov/> CA standards (notice how kindergarteners need to know how to read...)  
<http://www.cde.ca.gov/be/st/ss/index.asp> The \*only\* two approved reading curriculums in CA are... Houghton Mifflin  
[http://www.eduplace.com/index.jsp?state=ca&audience=\\_t&submit.x=49&submit.y=12&submit=About+submit+buttons](http://www.eduplace.com/index.jsp?state=ca&audience=_t&submit.x=49&submit.y=12&submit=About+submit+buttons)  
Open Court [http://en.wikipedia.org/wiki/Open\\_Court\\_Reading](http://en.wikipedia.org/wiki/Open_Court_Reading) I am a total proponent of public school, I just believe that No child left behind (which is being abandoned in Houston where all these "reforms" began) has purposely been destroying public school curriculum. <http://www.fairtest.org/nclb%20flaw%20fact%20sheet%201-7-04.html> This is a great article but the real problem is... "NCLB's obsessive focus on raising test scores will mean an increasing emphasis on test preparation, undermining the higher order thinking skills all students need to succeed in work and life? The reason your public school is probably so nice is that it is not a star or reading first school that trades funding for curriculum constriction. Schools that have the majority or more of kids receiving free or reduced lunch (don't start me on the crap they serve the kids daily) are eligible for these programs that cramp teachers, especially good teachers' style. I adore the teachings of Dr. Mel Levine <http://www.allkindsofminds.org/>

knackeredhack (2007-07-17 07:59:00)

For a UK perspective check out my post relating the achievement of West Dunbartonshire in Scotland, which is about to eradicate childhood illiteracy after a 10-year project adopting a whole community approach, according to a report in the Guardian last week. There is also a link to a very comprehensive study of research into dyslexia and reading difficulties and its implications for the teaching of reading to both adults and children.

## **Science in Action: Sunlight and Sleep (more progress) (2007-07-17 06:51)**

Surely we need sunlight to sleep properly. But how much? Rats can be synchronized to a 24-hour activity rhythm with a relatively small amount of light (such as one hour) every 24 hours. This is one reason for the emphasis on morning light by sleep doctors mentioned in a [1]previous post.

I have agreed with them. For the last 10 years I have gotten one hour of sunlight-like light every morning from a bank of fluorescent lights on the handles of my treadmill. The lights shined up at me while I exercised and

watched TV. This, I thought, allowed me to get a good dose of light with low variance in when and how much and to combine light-getting with exercise. I never questioned this routine.

Then came [2]the event that led to this Sunlight and Sleep series: In the airport during a trip to New Orleans, a student told me when she sunbathes, she sleeps better. When I got home from my trip I tested her idea. Me, too: When I was outdoors a lot (in the shade), I slept better.

I took another trip (to Los Angeles). When I got back from that trip, I decided that I would adjust the timing of the treadmill light so that it interfered less with my day. I shifted it from 9:00 am to 10:00 am (original timing) to 8:00 am to 9:00 am (new timing).

To my surprise I started waking up too early, so often it could not be a coincidence. The only change I had made was timing of the light. So the treadmill light was making things worse! I stopped it entirely. My sleep improved – no more early awakening. Huh.

Here are details:

Period 1 (treadmill light 9-10 am, little sunlight): woke up early 29 days out of 99 (29 %)

Period 2 (treadmill light 9-10 am, lots of sunlight): woke up early 1 day out of 25 (4 %)

Period 3 (treadmill light 8-9 am, lots of sunlight): woke up early 4 days out 8 (50 %)

Period 4 (no treadmill light, lots of sunlight): woke up early 0 days out of 8 (0 %).

Lots of sunlight means 6-8 hours exposure to light of roughly 1000-2000 lux. Sitting in the shade or inside next to a big window is always enough. At the low end (1000 lux) my laptop screen is easy to read; at the high end (2000 lux), which I try to avoid, it becomes slightly hard to read.

1. <http://www.blog.sethroberts.net/2007/07/07/science-in-action-sunlight-and-sleep-more-background/>

2. <http://www.blog.sethroberts.net/2007/05/26/science-in-action-sunlight-and-sleep-could-it-be/>

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### **Inside College Classrooms (2007-07-18 07:01)**

[1]Tom Perrotta, author of the novel *Little Children*, was an undergraduate at Yale, a graduate student at Syracuse, and a teacher at Harvard and Yale. I assume this passage from *Little Children* is based on that experience:

What did her in [as a graduate student] was the teaching. Some people loved it, of course, loved the sound of their own voices, the chance to display their cleverness to a captive audience. And then there were the instructors like herself, who simply couldn't communicate in a classroom setting. They made one point over and over with mind-numbing insistence, or else they circled around a dozen half-articulated ideas without landing on a single one. They read woodenly from prepared notes, or got lost in their muddled syntax while attempting to speak off the cuff. God help them if they attempted a joke.

Curious. To "love teaching" is to love hearing your own voice and showing off. This passage seems to imply that Perrotta's teachers either "loved teaching" in this unpleasant sense or were muddled and awkward failures. I would have thought that in a non-occupational-skills class (such as sociology, history, or literature), what a good teacher does is tell lots of stories. Apparently this didn't happen much in Perrotta's experience.

1. <http://www.tomperrotta.net/>

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s. (2007-07-19 08:55:39)

That's funny, I believe the best teachers are facilitators. She sounds like she was trained poorly. I think that they assume teaching assistants have been in school so long that they can pull from their own experiences as to how to teach. Also, I find when I teach, and I am secretly a learner. Also, it is a way of showing mastery of a topic. If she is getting an advanced degree in a topic, she should be able to communicate that topic at a basic level to many kinds of people. Teaching is good for ya.

seth (2007-07-19 09:45:31)

Little Children is fiction; the woman referred to in that passage doesn't exist. But I think you're right, the training about how to teach given graduate students has plenty of room for improvement.

## **Why I Blog (2007-07-19 05:56)**

[1]Robin Hanson has doubts about the long-term value of blogging – especially his own:

My main doubt is whether this will accumulate . . . We get over a thousand readers a day here, and those readers must be influenced somehow. But do those influences add up to a long term net effect?

Consider that before the farming revolution humanity's knowledge accumulated very slowly. Each person learned a great deal over the course of his lifetime, both by discovering new insights for himself and by listening to others. Nevertheless, the distribution of knowledge in the population hardly changed; each new generation had to rediscover and relearn the same insights all over again.

Before farming, I believe new insights were passed down in three ways. 1. Stories. Stories are to teaching as good food is to nourishment. Whenever I tell a story, my students pay close attention. 2. Apprenticeships. 3. Specialists talking to each other – a manifestation of the [2]Fan Club Instinct. Blogging is a new version of Method 3. When old specialists talked to young specialists, knowledge was passed down. Robin is young, but his posts are influencing even younger persons.

I think blogging is a good use of my time for several reasons. 1. Advertising. I hope blogging will draw attention to my papers and book and future work. [3]Brian Wansink nicely made this point (scientists should advertise). 2. [4]Quasi-reinforcement. Blogging divides a big task (writing a book or paper) into much smaller tasks (writing posts).

3. Data collection. Because of my omega-3 posts, two other people gathered data useful (very) to me. [5]Tim Lundeen's data led me to study new tasks. Tyler Cowen's [6]experience with flaxseed oil is enormously important to my omega-3 research.

But I have to agree with Robin that blogging sometimes seems too seductive – that I should write fewer posts like this one and more that fit into the book and papers I want to write. I keep thinking of something Philip Weiss said in [7]his blog: For men, the most enjoyable form of expression is the Op-Ed piece.

1. <http://www.overcomingbias.com/2007/07/blogging-doubts.html>
2. <http://www.blog.sethroberts.net/2007/07/13/my-theory-of-human-evolution-blogs-and-fan-clubs-edition-or-why-we-blog/>
3. <http://www.blog.sethroberts.net/2006/11/26/brian-wansink-on-research-design/>
4. <http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1338316&blobtype=pdf>
5. <http://www.blog.sethroberts.net/2007/04/14/omega-3-and-arithmetic-continued/>
6. <http://www.marginalrevolution.com/marginalrevolution/2007/07/todays-happines.html>
7. <http://www.philipweiss.org/>

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Andrew Gelman (2007-07-19 16:11:20)

Robin's not so young. The median age of humans is something like 18. Even the median age of Americans is only 36 or so.

seth (2007-07-19 20:49:25)

Well, few 18-year-olds wonder how to have a lasting intellectual effect. I think Robin is young compared to people who have such effects.

Tim Lundeen (2007-07-20 10:20:34)

I hope both you and Robin will continue to blog – I would miss both of these!

Willy (2007-07-21 13:52:23)

Seth, have you used blogging as a test for the effects of Omega 3 in writing?. It could be another reason to blog :) Have you noticed if taking Omega 3 oils affect writing? e.g. fluency, typing speed, spelling mistakes, calmness?. All these could be measured. Thanks

### **Science in Action: Omega-3 (follow-up of surprise) (2007-07-20 09:53)**

During a trip to Los Angeles a few weeks ago, I [1]noticed that my scores on several mental tests were better all of a sudden. The apparent cause was that I had taken flaxseed oil at an unusual time. Normally I took it about 10 hours before the tests; in this case I had taken it about 4 hours before.

Does flaxseed oil have a short-lived effect on brain function? When I got home I tried to find out. Rather than doing a set of four tests once per day I switched to one test many times per day (e.g., 10 times). This would allow detection of short-lived ups and downs in my mental function.

The test I used required nothing but my laptop. I usually have my laptop with me so such a test is much easier to do throughout the day than a task that requires other equipment. The test consisted of four blocks of 50 trials each.

For each block I memorized a new set of three digits (e.g., 0 1 7). On each trial I saw 1, 3, or 5 digits and pressed a keyboard key as quickly as possible to indicate if any of the memorized digits is in the displayed set. For example, if the memory set was 0 1 7 and the display set was 3 2 8 the correct answer was "no" (which I indicated by pressing "4").

The trials were packed together as closely as possible: As soon as I answered, the next set appeared. It took about 3 minutes to do 200 trials.

I did frequent measurements for four or five days. They appeared to confirm what the Los Angeles measurements suggested: Flaxseed oil did have a short-term effect. But two things muddled the water:

1. Baseline measurements were not always as steady as I would like. There were ups and downs that seemed too large to be random variation. The curious and exciting thing was that these ups and downs usually had a possible explanation – something had changed. For example, the measurements would be X1, X2, X3, Y. X1, X2, and X3 are close; Y is quite different. Between X3 and Y I had eaten a meal.

2. The task was difficult. I was about 88 % correct and it was hard to do better. With any reaction-time task there is a speed-accuracy tradeoff: If you are slower, you can be more accurate. In this particular case this is a problem because it is an added source of variation and may reduce reaction-time differences: Rather than becoming slower, I become less accurate (or rather than becoming faster I become more accurate).

Problem #1 is easy (if slightly unpleasant) to solve: Keep the situation more constant. Eat less during the measurement period, etc.

To reduce Problem #2 I am learning a new task. I will go into detail tomorrow.

1. <http://www.blog.sethroberts.net/2007/06/30/science-in-action-omega-3-a-surprise/>

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Tom (2007-07-20 13:19:26)

Seth, I'm not sure why you seem to think that the flax oil is changing the brain's composition. Such an effect would surely take months to manifest. What's clearly happening is the brain is burning flax oil (probably as ketones) for fuel. Then the meal effect is not curious; it's the expected result of the brain changing fuel sources from omega-3 derived ketones to carb-derived glucose.

seth (2007-07-20 13:42:03)

The first question I want to answer is whether it really is cause and effect. Later I'll try to answer questions about mechanism – if flax oil causes a certain change, why? I'm much less sure than you what's going on. I found that olive and flaxseed oil appeared to have effects on balance in opposite directions. These effects appeared within a day or so – much less than months. Can you explain this? About the meal effect: according to your explanation, did the meal increase or decrease reaction time?

Tom (2007-07-20 15:36:26)

Well, I apologize for the word "clearly" – it's just my hunch about a possible explanation. That the effects of flax and olive oil would show within a day would also seem to support the idea that these oils are being used by the brain for energy, rather than incorporated into the structure of brain cells. And an explanation for the different effects of these oils might be found in their fatty acid profiles. Olive oil is largely n-9 oleic acid, right? Flax contains a lot of n-3 ALA...it seems possible that the brain



might perform differently on different oils, and differently yet again on blood sugar from a (presumably) carb-heavy meal. (I think how your brain would perform after a meal might depend on what the meal was. You might have better balance after a filet of wild salmon than you do after chicken fried in trans fats with a side of french fries, for example.) It would certainly be interesting to construct a matrix of various oils and frequent tests and see which oils and carbohydrates made you smarter!

SusanJ (2007-07-20 20:01:07)

Are you familiar with the card game known as Set? You can enjoy this as solitaire as well as playing against other persons. Set is a neat and fun abstract matching test that might be useful for your experiments. <http://www.setgame.com/> I can sometimes do the online Daily Puzzle in under a minute but a minute and a half is more typical. I would expect a newbie to take several minutes.

Dale (2007-07-21 01:52:45)

Tom, I'm sure Seth will probably chime in. But he has tested other oils – with olive oil performing poorly! You should read his other posts on the subject – this one is mainly a follow up. He's explained more of his methodologies and theories in other posts. Unfortunately Seth is a one-man laboratory, I wish he had an army of subjects or at least an army of highly trainable rats! Maybe a MacArthur genius grant will come his way.

seth (2007-07-21 06:13:03)

The effects of flaxseed oil can be summed up like this: 1. going from low level to high level: fast (overnight) improvement. 2. going from high level to low level: slow (a few weeks) decline. This is the pattern seen with vitamins: 1. going from low level (e.g., scurvy) to high (sufficient) level: fast improvement 2. going from high level to low level: slow decline. With the difference that with vitamins the time course is slower: Scurvy takes a few weeks to fully recover from and takes months to develop. The fuel/structure dichotomy doesn't exhaust the possibilities. Think of oil: Adding oil to an under-oiled engine produces very fast improvement and it takes a long time without enough oil before performance gets a lot worse.

Wade (2007-07-21 07:03:41)

I can't claim to be an expert of any kind, so I'll simply point to what I've read for what it's worth. You might find at least some possible explanations in "The Ultimate Omega-3 Diet" ([http://www.amazon.com/Ultimate-Omega-3-Diet-Evelyn-Tribole/dp/0071469869/ref=pd\\_bbs\\_sr\\_1/002-3939287-9868043?ie=UTF8&s=books&qid=1185024664&sr=8-1](http://www.amazon.com/Ultimate-Omega-3-Diet-Evelyn-Tribole/dp/0071469869/ref=pd_bbs_sr_1/002-3939287-9868043?ie=UTF8&s=books&qid=1185024664&sr=8-1)). This topic is covered in Chapter 7 "Omega-3s, the Brain and Mood". According to the author, with what appears to be an awful lot of evidence to back her up, Omega-3s affect the brain in two ways. The first is in reducing inflammation, which she claims is one of the major causes of disease in all areas of the body, including the brain. More specific to the brain, Omega 3s appear to have a strong effect on the fluidity of the brain's cell membranes. Both of these seem to be more long-term benefits than what you are seeing, but it may help you piece the puzzle together a little bit. The major message of that book is that our diet includes way too much Omega-6, and not nearly enough Omega-3. All Omega-3 processes depend on certain enzymes, and Omega-3 competes with Omega-6 for these enzymes. With too much Omega-6, and not enough Omega-3, the Omega-3 can not be as effective as it should be. If this is correct, then the amount of Omega-6 in your meal could have a substantial effect on the bioavailability of the Omega-3s from your Flax Oil. She also asserts that you need an additional source of Omega-3 beyond what you get with Flax Oil. With Flax Oil you only get one of the three essential fatty acids: ALA. You also need two others, EPA and DLA every day, which can be obtained from fish sources, fish concentrates (e.g. Fish Oil), and supplements made from Algae. Your body can create EPA and DLA from ALA, but at a very low efficiency rate. The ALA seems to be more important than EPA and DLA, which would explain why you get good results with Flax Oil only. If this is all correct, you should get even better results by mixing in either some EPA/DLA supplements. I've been doing this by simply taking Fish Oil tablets with my Flax Oil or ELOO, to increase my uptake of EPA/DLA, but I haven't been doing it systematically as you are. Olive oil was entirely Omega-3 neutral, meaning that it doesn't change the Omega-3/Omega-6 ratio at all, partly because it's mostly Omega-9, and the remaining essential fatty acids are properly balanced. I also think that Tom's point about blood sugar and insulin spikes seems like something that could have a big effect on your results. It's relatively easy to prove that a carbohydrate heavy meal has an effect on brain function. Just eat one, and try to stay awake an hour later. It would be interesting if you could post a link to your mental test that you're using, so others could repeat the experiment.

imsovain (2010-07-10 15:55:49)

If I read the scientificese correctly in this abstract, it says that ALA (such as in flax) converts into ketones: <http://www.ncbi.nlm.nih.gov/pubmed/14769482> If so, Tom's hypothesis of a ketone explanation seems more plausible. Also, it suggests that coconut and MCT oil might have similar effects.

## **My Theory of Human Evolution (red stained glass edition) (2007-07-21 10:42)**

As regular readers of this blog know, I propose that art exists because in our evolutionary past payment to artists promoted material science – learning how to create new materials with useful properties. For example, [1]red stained glass.

Medieval artisans unknowingly became nanotechnologists when they made red stained glass by mixing gold chloride into molten glass. That created tiny gold spheres, which absorbed and reflected sunlight in a way that produces a rich ruby color.

The gold spheres have to be about 25 nanometers in diameter to get this effect.

Thanks to Joshua Schrier.

1. <http://www.nytimes.com/2005/02/22/science/22nano.html?ex=1184904000&en=cd11e918d259f715&ei=5070>

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Karin (2007-07-21 13:48:14)

Art exists because humans have a drive to create... relevant art exists because some humans are in touch with universal trends, or what Carl Jung termed the 'collective unconscious.' Technological, and other scientific advances, can be driven by artists (because of their heightened receptivity to the aforementioned zeitgeist and their need to create media for its expression). However, I would disagree that art exists solely because artists were inspired by material gain (i.e. payment). Certainly, notable artworks (e.g., Lascaux cave paintings) were created during the human hunter-gatherer period and predate any form of trade economics. It would make more sense to say that science exists because of art (when art is defined as the product of the human drive to create). It should be noted that non-secular art, such as stained glass dating from the 7th century and later, had motivations not strictly limited to patronage and profit. Moreover, there is a critical difference between a craftsman and an artist.

Steve (2009-06-24 18:23:05)

This is a fascinating discussion! In my humble opinion, I must agree a little with both of you. There are instances where art exists because of science....and other areas where science exists because of art. Without science, where would art be?

David Gomm (2010-01-22 12:18:51)

I knew that trace amounts of precious metal are used to form some of the hot colors, it's just nice to hear a little more about the process. I met a guy who made pink opalescent seedy glass by broadcasting arsenic into the glass, so it's pretty special,

only the owner can make it because it's not safe enough for employees to do it.

### **Science in Action: Omega-3 (a new test) (2007-07-22 09:15)**

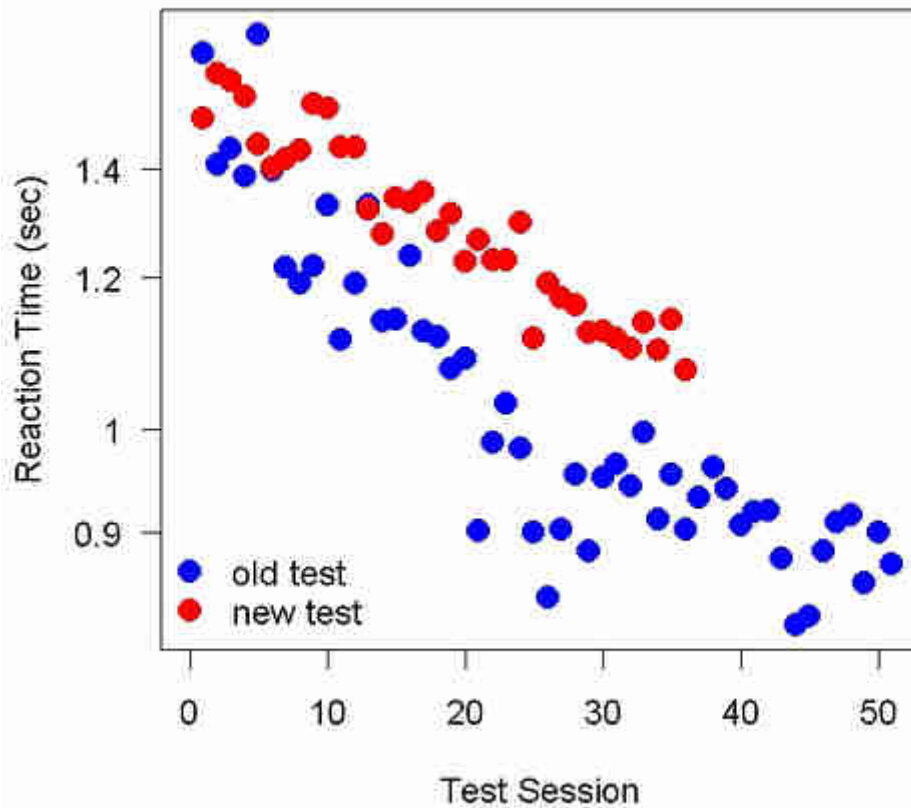
[1]Two days ago I explained why the test I was using to measure my mental function many times/day had room for improvement. I wanted a new test much like the old test but with which my accuracy was higher.

I was more accurate with the simple arithmetic test (e.g.,  $3 + 6$ ) than with the memory test I described two days ago. The crucial difference might have been the number of possible answers. The arithmetic test had 40-odd possible answers; the memory test had 2 (yes and no). Saul Sternberg did a reaction-time experiment in which the number of possible answers was varied from 2 to 8. I don't know what the accuracy data were but the [2]variance of the reaction times was lower with 8 possible answers even though reaction times were longer. A plausible explanation is that there was much more anticipation with 2 possible answers than with 8. Anticipation can cause errors.

The new test I am trying consists of typing how many letters from the set {A, B, C, D } are among a set of four letters chosen from a much larger set (most of the alphabet). The possible answers are "1", "2", "3", and "4," each equally likely. For example, I might see T B X A. The correct answer is "2". I am using R (the programming language) to run this test so I type "2" with one hand and hit Enter with the other as fast as possible.

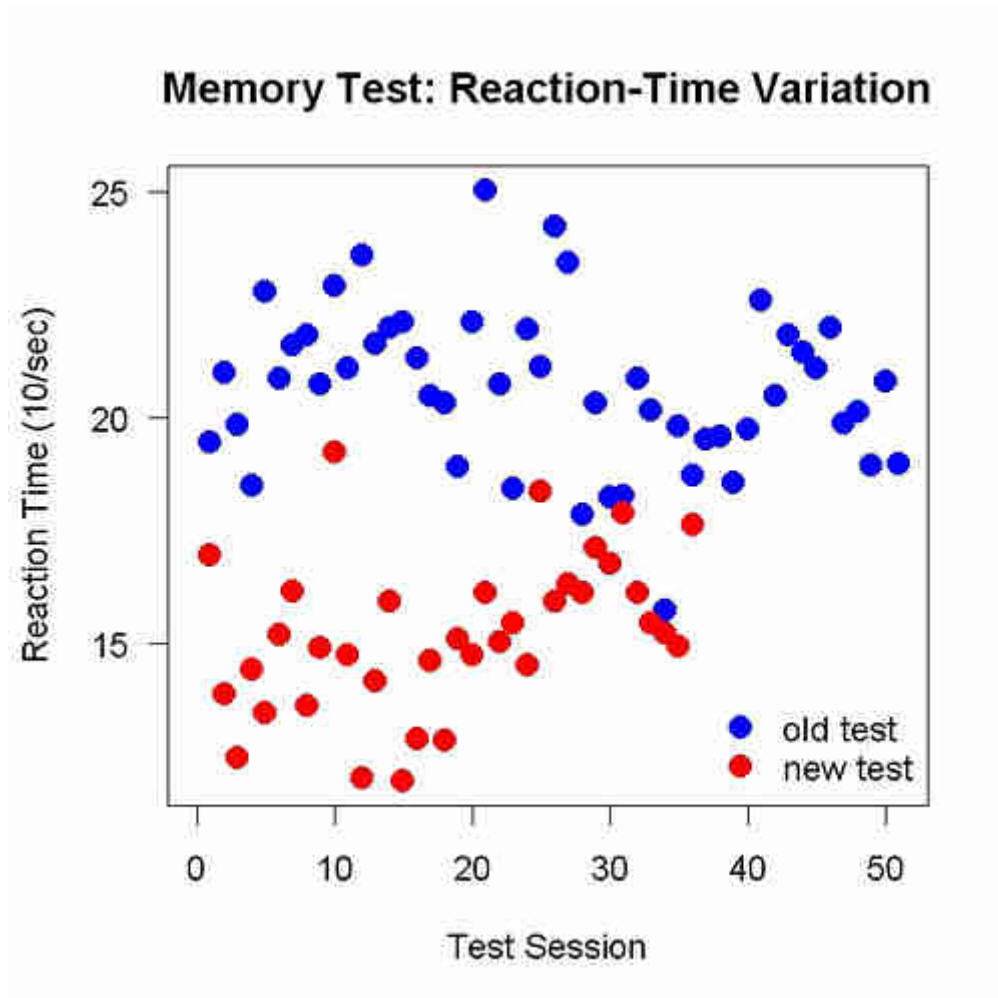
Here are the results so far from the new test – the training phase.

## Memory Test: How Fast



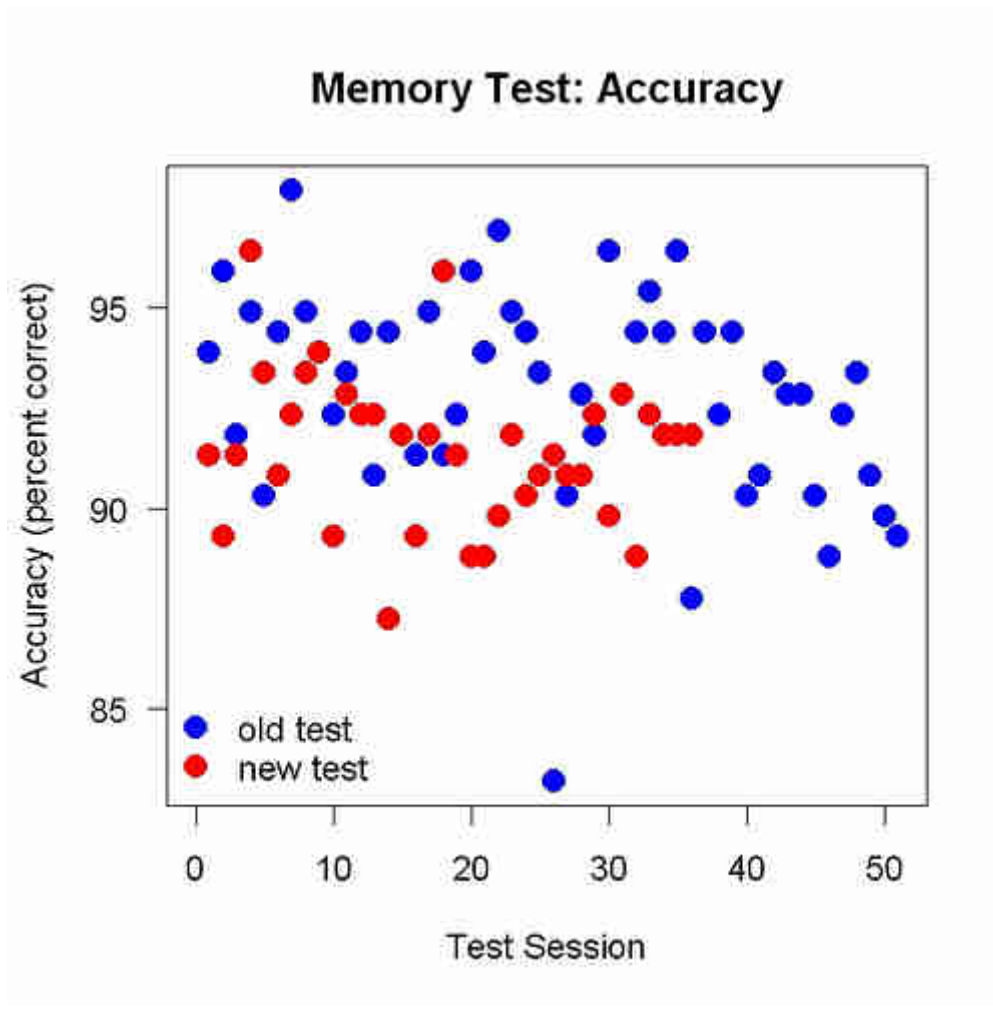
These values are taken from fit of a linear model; they are similar to means. As I gain experience with the test I am getting faster. The new test is slower than the old test (which is good – more mental processing).

Consistent with what Sternberg found, variation in reaction times is less with the new test than with the old test even though average reaction times are greater:



This graph shows the standard deviation of residuals from the fitted model. The units are reciprocal seconds (x 10) because I did a reciprocal transformation before fitting the model. The reciprocal transformation made the reaction times close to normally distributed.

Here is accuracy:



The new test feels easier than the old test, but so far there is little difference.

Overall it seems to be a step in the right direction. Reduction in variation of reaction times means more sensitive measurements.

The experiments I am planning are very simple: Test myself regularly (say, every half-hour), eat something. If the measurements are steady, it is very easy to see an effect. As far as I know, such experiments have never been done. One reason, I think, is that they require self-experimentation: It is no trouble for me to do the test (which takes 4 minutes) 100 times in a week and thereby reach a steady state. But to have someone else do the test 100 times as preparation – especially if the test were done in a lab – would be very difficult.

1. <http://www.blog.sethroberts.net/2007/07/20/science-in-action-omega-3-follow-up-of-surprise/>

2. <http://www.psych.upenn.edu/~saul/effect.var.pdf>

## A Student's Unlovely View of UC Berkeley (2007-07-23 10:02)

I recently met an undergraduate named Samantha who is majoring in Economics at UC Berkeley. She is almost done. I asked her a few questions about her education:

SR: Did UC Berkeley help you figure out what you were good at?

Samantha: No. In UC Berkeley classes you don't get to do any individual searching. You just have to do what they tell you. Because it's all theoretical, none of it is very practical. You don't do any practical projects. The classes don't give you any idea of what you want to do career-wise.

SR: Did UC Berkeley help you figure out what you enjoy doing?

Samantha: No.

SR: Why not?

Samantha: I'm here just for the name. It scares you away from trying new things. Intimidating class sizes, professors that don't seem invested in the students.

[1]A student advisor's view.

1. <http://www.blog.sethroberts.net/2007/07/09/a-student-advisors-unlovely-view-of-uc-berkeley/>

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Avinash (2007-07-23 10:34:04)

Hardly surprising. I've been at Cal for 3 years and can't say the university helped me at all. The only thing they emphasize at orientation is take requirements, buy your textbooks on time, go to office hours, study aimlessly for hours. Not that any of these things are bad, but it's all about learning to conform and it blows. No one tells you who to go to when you make mistakes, so you're pretty much left to fend for yourself when things go downhill. It's hard to feel connected to this place when you feel like you're being treated like disposables. The only great benefit is that I've been able to connect with all sorts of people I'd never get the chance to in another place. That's the real tangible benefit I'll get from graduating from here. Plus all this disgust at the system has slowly led me down another path that might make me happier in the long-run. But there is no love lost between Cal undergrads and their school. Adapt or die.

seth (2007-07-23 11:14:19)

Yeah, there are two kinds of education: education that tries to make everyone the same – assembly-line education – and education that doesn't. Practically all discussion of education improvement among Berkeley professors is about how to do a better job of making everyone the same. How to raise lecture attendance, how to raise test performance, how to reduce plagiarism and cheating, etc. I have never heard this goal questioned.

Dale (2007-07-23 21:10:09)

Economics at Berkeley?? "You knew I was a snake when you picked me up" said the snake to the frog.

## My Theory of Human Evolution (fancy chocolate edition) (2007-07-24 09:50)

The chocolates of [1]Poco Dolce (which means "not too sweet") have been named "top ten" in America by Saveur. One of Poco Dolce's products is a [2]bittersweet chocolate square with double-roasted almonds.

"Why double-roasted?" I asked Kathy Wiley, who makes the chocolates, at the [3]San Francisco Chocolate Salon. Double roasting – roast, cool, roast again – produces a better flavor, she said. "Why not just roast them longer?" I asked. Because you are more likely to over-cook them. There are special ovens for roasting nuts but she doesn't have one.

This is basic material science. Wiley wants to maximize the concentration of certain molecules (that produce a roasted almond flavor) while minimizing the concentration of other molecules (that produce a burnt flavor). By trial and error she has figured out how. She was able to do the trial and error – i.e., research – because her business is successful. Her business is successful in large part because of connoisseurship and gift rituals. People give her products as gifts.

I believe we have genetic tendencies toward connoisseurship and gift-giving [4]holidays and [5]rituals because, long ago, these tendencies supported research in material science. Pleasure from finely-made things and desire for gifts supported artists and artisans, who by trial and error learned better control of their materials. Poco Dolce is a latter-day example.

1. <http://pocodolce.com/>
2. [http://www.pocodolce.com/cgi-bin/mivavm?Merchant2/merchant.mvc+Screen=PROD&Product\\_Code=SA16&Category\\_Code=CONF](http://www.pocodolce.com/cgi-bin/mivavm?Merchant2/merchant.mvc+Screen=PROD&Product_Code=SA16&Category_Code=CONF)
3. <http://www.sfchocolatesalon.com/>
4. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>
5. <http://www.blog.sethroberts.net/2007/07/12/my-theory-of-human-evolution-omiyage-edition/>

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Dale (2007-07-24 16:17:51)

Seth, you seem to be treading on common ground with Virginia Postrel's *The Substance of Style*. Have you read it? <http://www.vpostrel.com/tsos/>

seth (2007-07-24 16:54:27)

Only a little of it. Thanks for the recommendation.

jschrier (2007-08-04 00:31:03)

Double roasting almonds is not science! It is quite literally the *opsopoiia* ("fancy cooking" such as making delicate pastries or other cookery, i.e., aimed at flattering the senses and directed by *empeiria* ("experience", or a kind of knack)), rather than *technē* ("art" or "craft", the root of technology, i.e., a rational enterprise aimed at some end enacted by a skilled practitioner), that was skewered (as "collateral damage", so to speak) by Plato's Socrates in the [1]Gorgias dialogue. At least as written (who knows? maybe Poco Dolce has a GC/MS in the back room), it appears that there is no underlying theory of mechanism, no Popperian falsifiable hypotheses, etc. characteristic of science. Instead, it is just a somewhat blind "fiddling around" until some arbitrary aesthetic criteria is reached. (Actually, the same thing originally bugged me about the post on the gold nanoparticles—stained glass, but I couldn't put my finger on it precisely). While these kinds of efforts certainly increase man's material comforts, and perhaps serve as a "raw material" for scientific discovery, the end is not to answer/raise any question. For example, one could not use these results to hypothesize the conditions for roasting hazelnuts instead of almonds, other than "try the same thing, and maybe it will still work (or be close)". At best this is the kind of low level "engineering" practised



before the development of classical mechanics, where you build bridges, cathedrals, aquaducts similar to known examples that didn't fall down (and hope that yours doesn't fall down either).

1. <http://en.wikisource.org/wiki/Gorgias>

seth (2007-08-04 11:55:25)

That's true, it's engineering at best, not science. In the phrase "material science" there is a bit of the usage of "science" that occurs in the phrase "computer science" – which is not science at all, either. Professors in Computer Science departments don't wonder how computers work; it's just that "computer science" sounds better than "computer engineering".

## **Human Experimental Psychology: Science With One Hand Behind Your Back (2007-07-25 15:36)**

Human experimental psychologists are in a most curious position. Their subject – the human brain – is obviously the most complicated thing studied by any science. Its components (neurons) are not only very numerous and densely-connected they are also very inaccessible. Moreover brains soak up their environments in a way that other objects of study do not. It isn't impossible to do experiments, but it isn't easy. You can't keep a supply of humans in your lab, for example. The difficulty of human experimental psychology is the main reason I decided to study animal experimental psychology. But the complexity of the brain is not only a difficulty but also an advantage: It means there is the most to be learned.

It is also easy to argue that human experimental psychologists study the most important subject of any science. Advances in understanding the human brain go "straight to the bottom line" – namely, human welfare and happiness – in a way that is true for few other sciences. Mood disorders and learning problems – not to mention obesity and poor sleep – cause a huge amount of suffering. Brain dysfunction is behind all of them. Norman Temple and I have [1]argued that the sort of low-tech vary-the-environment type of research done by experimental psychologists is the most likely to produce useful results.

Given such a task, human experimental psychologists are lucky to be able to use an unusual tool: self-experimentation. Self-experimentation makes it remarkably easy to study topics with practical value (as I [2]have). Because our world is already built around requirements of the human brain, self-experimentation requires no special equipment, no laboratory, and can be done at almost no cost. No other science, except human nutrition, has anything like this.

But human experimental psychologists don't do self-experimentation! (There are a few exceptions, such as psychophysics.) The standard arguments for the avoidance don't withstand scrutiny. Standard argument #1: Experimenter bias. The experimenter's expectations may influence the results. Rebuttal: The human experimental psychologists who say this don't practice what they preach: They don't run their experiments blinded. Very few psychology experiments are run blinded. Standards argument #2: Lack of generalizability. You don't know how general the results will be. Rebuttal: Yes you do. Typical psychology experiments have on the order of 8 subjects. They can be so small and still get reliable results because all the subjects change in the same direction. This means that if you know how one subject has changed you can predict how the others will change. In other words, the whole history of human experimental psychology – tens of thousands of experiments, a vast amount of data – shows that yes, you can safely generalize from one subject.

Because the stated reasons for not doing self-experimentation are so easy to rebut, the actual reasons may have more to do with human nature. My guess is that they are some combination of: (a) Fear of being different – different from other psychologists (the who-goes-first problem) and, especially, different from scientists in other areas, few of whom can self-experiment. (b) Desire for prestige. A large grant, a large lab, and activities in which others follow your orders are inherently more prestige-enhancing than doing something all by yourself.

This is why human experimental psychology, as currently practiced, really is science with one hand behind your back. Too bad it matters so much.

Thanks to Saul Sternberg for a thought-provoking discussion.

1. [http://sethroberts.net/about/2002\\_medical\\_research--a\\_bettor's\\_guide.pdf](http://sethroberts.net/about/2002_medical_research--a_bettor's_guide.pdf)
2. <http://repositories.cdlib.org/postprints/117/>

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Timothy Beneke (2007-07-26 20:42:37)

Regarding: "Very few psychology experiments are run blinded." I may well be missing something, but my impression is that in most psychology experiments, those who measure the dependent variable are usually "blinded"; i.e., they don't know whether they are observing the control group or those who have been influenced by the independent variable. I thought that was just standard practice. I am most familiar with social psychology experiments. Wouldn't most intro psych texts argue for blinding in measuring effects as basic to psychology? I'm a bit confused. Certainly in medicine in measuring the effects of agents or activities on illness, double blinding is considered the gold standard.

seth (2007-07-26 21:22:58)

I should have made clearer that I was talking about human experimental psychology. Self-experimentation is not available for most other areas of psychology – e.g., developmental, clinical, social. At least in human experimental psychology – sometimes called cognitive psychology – you will have to look long and hard to find any experiments in which the subjects or the experimenter were prevented from knowing the condition.

Timothy Beneke (2007-07-27 09:34:18)

Thanks for the clarification. What's clear to me is that if you had a team of 100 self experimenters actively generating and testing hypotheses about major human problems, like say, mood disorders or sleep, they should be able to make major progress fast. I would like to see such a program funded by the powers that be some day. It's clear in the history of psychology that major advances often start from self observation. Festinger noticed how the more his car, I think a Nash Rambler, broke down, the more attached he got to it and defended its value – that and other observations led to cognitive dissonance research that totally contradicted and refuted Skinnerian ideas about operant conditioning. The step from self observation as generating hypothesis to self experimentation – in those domains where it is viable – is not that big. I suppose getting the powers that be to see that one person's self experimentation has made huge strides in solving the obesity problem is the first step.

seth (2007-07-27 10:06:13)

I didn't know that about Festinger and cognitive dissonance. A revealing story. Self-experimentation seems to me such a powerful tool that I find it hard to imagine it will lie unused forever. And with research funding becoming harder to get, the fact that it costs nothing looks better and better.

## Science in Action: Omega-3 (better measures) (2007-07-26 16:31)

I am collecting more self-experimental data than ever before. Partly because I am excited by the prospect of doing food-brain experiments that take just a few days (measuring effects of flaxseed oil and other foods that last a few hours) and partly because I learned how to get R to respond to single keystrokes. (Via the command `getGraphicsEvent`. Thanks to Greg Snow at Intermountain Healthcare.) This allows for much better reaction-time experiments; no longer do I need to respond and then hit Enter. Because the new method uses graphic windows, I have much better stimulus control.

I converted my letter-counting test (how many ABCD's in GDKM? for example) to use the new command. Because the new command is so wonderful, I also used it to make a new test involving naming: The task is to type "1" when I see a 1, "2" when I see a 2, and so on. With eight possible stimuli (1, 2, 3, 4, 7, 8, 9, 0) and eight possible answers, there should be few anticipation errors. Accuracy should be high. The task takes advantage of the fact that I have already learned to type "1" when I see a 1, which means there should be less problem with slow learning curves – learning (getting faster) continuing for a long time. The experiments I want to do need a steady baseline.

After running into [1]Greg Niemeyer a few days ago, I realized it would help if I made these tests more game-like – then they would be more fun. I'm not sure how to do this so I hope to talk to Greg about it.

1. <http://art.berkeley.edu/niemeyer/bio.html>

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Dale (2007-07-27 17:55:39)

Seth, you are not just a self-experimenter, you are our self-experiMENTOR. When you've confidently documented Omega-3s affects, we desperately need some clarity in the Omega 3/6/9 ratio theory. You need to find out if you can indeed block Omega 3s by eating too much Omega 6s at the same time. This is one of the more pressing issues facing us SLD oil guzzlers. Did you know the 2005 Nobel Prize in Medicine was given to a self-experimenter! "Dr Marshall finally swallowed the bacterium himself to prove his point." <http://news.bbc.co.uk/2/hi/asia-pacific/4307826.stm>

seth (2007-07-27 18:23:02)

Thanks, Dale, that's a nice way of putting it. I agree, I want to measure the effects of omega-6 and omega-9, not just omega-3. Too bad Marshall doesn't have a blog.

## My Theory of Human Evolution (computer chip edition) (2007-07-27 22:16)

Computer chip designers have a tradition of putting very tiny pictures on their chips. Often pictures of animals.

A cheetah:



A hummingbird:



A [1]gallery.

The better they control their materials, the better the picture. More evidence that art = material science.

1. <http://micro.magnet.fsu.edu/creatures/index.html>

## Science in Action: Omega-3 (a delay) (2007-07-28 23:56)

All excited about my two new reaction-time tests – one involving letter counting (if I see GADZ I type "2"), the other involving naming (if I see 8 I type "8") – I did both of them in close succession this morning. Each has 4 blocks of 50 trials each. After the second test my left wrist hurt. Too much typing. Now I must reduce typing to a minimum for a few days.

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Sam (2007-07-29 11:21:38)

Ha, I already know tomorrows news hotline: Omega-3 causes wrist pain! :)

Darius Bacon (2007-07-30 10:18:01)

Do you use a keypad, or the top number row of the keyboard? I'm thinking of trying this out, and don't want to make it gratuitously different, though I guess it's no big deal.

seth (2007-07-30 12:02:08)

I use the top row of the keyboard.

## Misleading Info in The Joy of Cooking (2007-07-29 22:49)

From the nutrition chapter of latest (2006) edition of The Joy of Cooking (p. 5):

We get essential polyunsaturated fats from corn oil, soybean oil, seeds, nuts, whole grains, and fatty fish, such as salmon and tuna. The omega-3 fats are a particularly important type of polyunsaturated fat. They help with everything from normal brain and nerve development to healthy functioning of the immune system, heart, and blood vessels.

This is misleading because the first sentence lumps together foods high in omega-6 (such as corn oil and nuts) and foods high in omega-3 (fatty fish), even though omega-6 and omega-3 probably have opposite effects when consumed in the amounts we consume them. (We consume too much omega-6, too little omega-3.) [1]The Israeli Paradox is reason to think that high amounts of omega-6 are harmful. I don't know if omega-6 fats make one's brain work worse but I'm sure they don't make it work better, as omega-3 fats do.

The nutrition section of The Joy of Cooking was reviewed by Walter Willett, the Harvard epidemiologist. This blanket statement about the goodness of polyunsaturated fats is similar to what he wrote in Eat, Drink, and Be Healthy.

My [2]earlier post on the Israeli Paradox.

1. [http://www.ncbi.nlm.nih.gov/sites/entrez?db=pubmed&cmd=Retrieve&list\\_uids=8960090](http://www.ncbi.nlm.nih.gov/sites/entrez?db=pubmed&cmd=Retrieve&list_uids=8960090)

2. <http://www.blog.sethroberts.net/2007/02/02/the-israeli-paradox/>

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George Christodoulou (2007-07-30 23:54:41)

Hello, This is a mistake that I also see pretty often. People love their deep fried things so the more you can boost up poly fats, the better. Is it true that if you fry fish, it loses its nutrients? Does that also mean you don't get the benefits from the omega 3 with fried fish? Just wondering since this came up in a recent discussion about the fillet-o-fish at mcdonalds :-). Thanks, George Christodoulou

seth (2007-07-31 02:46:31)

I too wonder about the effect of cooking on omega-3. I hope to find out with my new reaction-time tests – compare raw salmon with cooked salmon, for example.

### **Annals of Self-Experimentation: Elmer Gates (2007-07-30 13:04)**

[1]Elmer Gates (1859-1923) was an inventor who did a lot of self-experimentation or self-observation. He wanted to figure out how to make his mind work better:

He kept voluminous records on his own physiology, taking urine samples several times a day and blood samples. He would take his temperature. He was doing this to find out what his physiological state was when he was most productive.

Gates was ahead of his time. Studies of body temperature and simple mental problems (e.g., arithmetic) suggest your brain works best [2]when your body temperature is highest – around 5 or 6 pm for most people. When you are most likely to be stuck in traffic.

A [3]Washington Post article about Gates.

Thanks to Robin Hanson.

1. <http://www.elmergates.com/>

2. <http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=12388468>

3. <http://www.washingtonpost.com/wp-dyn/content/article/2007/07/29/AR2007072901267.html>

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willy (2007-07-30 19:23:00)

How interesting. So math is better to take at Pm and not early in the morning as traditional pedagogy used to do.

Dale (2007-07-31 05:19:35)

OK, Seth since oils can raise basal body temperatures, you need to perform your omega-3 tests in and out of a walk-in refrigerator. ;) :)

jschrier (2007-08-03 15:21:30)

...and he was even interested in combinatorial chemistry (another of Seth's pet topics): "[Elmer Gate's] metallurgical room is for investigations in alloys. He proposes to make a complete series of 10,000 (or so) varying percentages of alloys of certain two metals, and test the properties of the alloys." letter by Herman T. Lukens, The American Journal of Psychology, Vol.10, No. 1 (Oct. 1898), pp. 163-164. (from <http://www.elmergates.com/visits/lukens.pdf> )

seth (2007-08-03 21:15:59)

way ahead of his time...although self-experimentation was common back then, combinatorial chemistry was not.

## SLD Phenomenology (2007-07-30 17:51)

From the [1]SLD forums:

I stumbled on SLD when I, after a sinus-infection, lost my ability to smell and therefor also taste the flavor of the food I was eating. I could only tell if the food was sweet, sour or salty. I was devastated especially after reading that it could very well be permanent. During those days I noticed how much the flavor of the food means to me but also how my appetite was affected. I just didn't want to eat. After 3-4 days my ability to smell started to return slowly and to my great joy so did my appetite.

Of course, you can simulate loss of smell by closing your nose with swimmer's nose clips ( \$4) when eating. By what factor is that easier, cheaper, faster, and safer than bariatric surgery? One million?

1. <http://boards.sethroberts.net/index.php?topic=5327.msg55866#msg55866>

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Dale (2007-07-31 00:16:03)

It was interesting to note the author of the post could distinguish three flavors without a sense of smell: sweet, sour and salty. You've already shown that pure sugar water doesn't count in calorie association. My challenge to you is, can you find a pure "sour" water with calories that can be tested for SLD affects.

Natron (2007-10-29 05:30:35)

It has come across my mind that smokers are generally slimmer than non-smokers, and they (generally) gain weight after quitting. Those that I know say that food tastes better after they stopped smoking, most of them have gained weight after stopping, there must be a link there. I am experimenting with adding a small amount of sea salt to my SW solution, first to use mineral replacment therapy, and second, to reduce the sweet flavor, even if it doesn't seem to matter. The flavor is less subtle than plain fructose in water, so far ( a few days) the As is the same. Natron

## More SLD Phenomenology (2007-07-31 10:02)

A [1]fascinating thread in the SLD forums about unexpected reactions to your weight loss:

As I've lost a significant amount of weight and really started looking different, I've started noticing more . . . unsupportive behavior. One of them has started offering little biting comments about my size. . . . The other has started getting very upset with me as I approach her weight. . . . When one of their husbands commented on how nice I looked I thought I might be murdered in my sleep.

I had a friend once tell me I was a "traitor" when I lost a lot of weight.

The dragon used to have an issue with my weight, now I've lost a lot, she still has an issue.

Addendum. The discussion wandered slightly:

I used to have hair down almost to my bottom & was used to getting lots & lots of attention.....i just thought men liked me...then I cut my hair quite short...whallah....where did all the men go? Very interesting & sobering experience.

1. <http://boards.sethroberts.net/index.php?topic=5305.0>

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Stephen M (Ethesis) (2007-08-01 17:27:41)

In many ways, in many situations, weight contributes to social placing. By merely changing your weight you change your social status and place, with the resulting distortions and push back from those trying to "keep you in your place."

peter (2007-08-02 18:28:14)

the idea of "keeping you in your place" is a variation of the social norm, which accounts for fat friends contributing to being fat. it strikes me as being loosely analogous to one's set point. however it is characterized, it is clear that one's weight is more complicated than calorie in and calorie out.

## More About Faces and Mood (2007-07-31 20:29)

Today I spoke to someone who has been looking at his face in a mirror every morning to raise his mood. "It's a big effect," he said. It raises his mood "about 30 points" on a 0-100 scale where 0 = misery, 50 = neutral, and 100 = ecstasy. He starts around 6 am and does it for about an hour. This is close to [1]what I observed with TV faces: one hour of faces at the best time produced about a 30-point improvement.

Thirty points, however wonderful, is not enough to change his life, he said; he would need 60 points for that. He has been in and out of mental hospitals several times and of course mental illness of that severity destroys all sorts



of things we need, such as a decent job and friendships. As he looked at the diagram (two causes of depression) on p. 237 of my [2]self-experimentation paper, his situation sunk in on him. It wasn't just lack of morning faces that was making him depressed; it was also on-going life events.

My guess is that most Americans, asked to rate their mood, would say they are around 50 – neutral. Sure, they procrastinate, and bad traffic bothers them, but on the whole life is okay. But when something awful happens – they lose a job or a spouse, for example – their mood goes way down and takes a very long time to come back up. It is like AIDS. Our mood regulatory system, which requires morning faces to work properly, functions like our immune system to fight off damage and push us back to normal. In most people, unfortunately, that system is broken, just as AIDS sufferers lack a working immune system. So many people have far too much trouble getting rid of crippling bad moods. I suspect that most addictions, including the food addictions behind serious obesity, Internet addiction and video-game addiction, are self-medication to get rid of bad mood. It is the fact that the addictive act pushes a mood of 20 or 30 up to 50 that makes it so attractive. One of my students investigated the connection between depression and drug addiction; in her small sample, the depression always came first.

[3]Earlier post about faces and mood.

Addendum: A February 2007 [4]article in the American Journal of Psychiatry about bariatric-surgery candidates (average BMI = 52) reported this:

The discrepancy between lifetime and current substance use disorders was striking (32.6 % versus 1.7 %).

In other words, they used to take drugs but they don't any more – possibly because food has replaced drugs.

1. <http://repositories.cdlib.org/postprints/117/>

2. <http://repositories.cdlib.org/postprints/117/>

3. <http://www.blog.sethroberts.net/2007/05/06/life-size-faces/>

4. <http://ajp.psychiatryonline.org/cgi/content/abstract/164/2/328?ikey=ae27144cf7d5f5608f02f76d1d32b55e15938b1e>

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Timothy Beneke (2007-08-01 11:57:17)

FYI: There is huge happiness research which suggests that Americans are somewhat happy, according to Dacher Keltner. So the figure is probably closer to 60-70 rather than 50. Amsterdam has the highest ratings for happiness. More economically egalitarian countries are happier. The research finds no gender differences in happiness. I don't know if there is any research on whether Americans suffer bigger mood dips with trauma and failure than other cultures. I suspect Americans' notorious unrealistic optimism, and intolerance of contradiction get them into trouble. A bad thing happening may turn out to be good in the long run. I'm sure that mood often drives "addictions"; though a friend I worked with on heroin addiction issues said that often he thought people were not trying to "kill the pain". And of course it's easier to get "addicted" to very strong tasting ditto foods – junk foods – which I have no doubt have grown far more strong tasting in recent years with the flavor chemists doing their work. But in my case, I got clinically severely depressed in 1982, stayed depressed in varying degrees, and overate a lot, and by 1996 had gained more than 100 pounds – from 182 to 286. Though I actually got a bit higher. It's very important to note that I lost most of the weight while remaining fairly depressed. When I began to turn the depression around in 2003, I was 50 pounds lighter. In depression people tend to eat less or eat more. I ate more (and slept more.) So it's important for depressed, overweight people to see that you can be depressed and override hunger and lose weight – which itself gives hope

and empowerment.

seth (2007-08-01 14:24:37)

Yeah, I know about those ratings that Keltner mentions. I'm inclined to think that people answer a question about happiness differently than a question about mood. I think happiness is somewhat equated with absence of wants (as in "are you happy now?"). Whereas by mood I mean something completely visceral. When I look around – at people on the street for example – it is very rare to see someone who looks or acts happy. Practically everyone seems to be neither happy nor sad. We take this as a fact of life but I don't think everywhere is like this. A friend of mine went to a poor country in Africa and came back surprised how happy the people were. Happier than Americans.

Timothy Beneke (2007-08-01 14:44:27)

If you trust Mihaly Csikszentmihalyi's work on mood, flow and happiness, where he had people respond to random beepers and write down what they were experiencing/doing/feeling at the moment, people are happiest (best mood??) in a state of flow – states of absorption where their energies/abilities are challenged but not overwhelmed, where there is feedback as to how they are doing – states of meaningful engagement. I doubt they are smiling at such times. So I wonder how much facial expressions are an index of mood. I assume Ekman/Keltner/Levenson etc. have ideas about this...

seth (2007-08-01 14:52:54)

I think when people are happy they tend to smile. Or least smile readily.

Janet (2007-08-02 09:58:04)

Europeans smile much less than Americans, and the perpetual complaint among Europeans is that Americans smile TOO much.

Chris (2007-08-02 18:13:42)

It might be interesting to look for any correlations between the use of subways/trains, employment and depression. People who need to see lots of faces on their way to their morning jobs should theoretically have better moods than those who are stuck in their cars or looking at the back of another seat. If you use employment as a way of controlling for socioeconomic gaps, it might be a good indicator. Subways would be better than commuter trains, and far better than solo car commuters, etc. And theoretically, a longer subway commute would correlate to a better mood than a shorter one (!). Another possibility would be to study the differences between bartenders and morning baristas. Both see lots of faces but bartenders late at night and baristas early in the morning. The baristas should be much happier if your theory holds. Personally, I somewhat doubt the effects of faces. I moved from the US where I was a get in the car, listen to NPR and drive to work single guy to Japan where I'm now a walk to the train station, stand in the train and walk the rest of the way to work kind of guy and despite a much higher daily dose of morning faces, I don't think my mood is better. And my mood on weekends when I don't need to commute seems even better although I'm sure a lack of work helps there.

seth (2007-08-02 19:35:54)

I have tried to get a helpful dose of faces on the subway or a crowded bus but I couldn't – you can't look at strangers that way. You need to see what you would see when you are having a conversation with someone. In my experience, that never happens on public transportation unless you are actually having a conversation. And that is very rare. I know of two people who felt much better when their job required them to have face to face contact in the early morning than when the same job required them to have the same contact at other times. One was a waitress; the other a doctor.

thehova (2007-08-02 20:53:46)

"Europeans smile much less than Americans, and the perpetual complaint among Europeans is that Americans smile TOO much." Yes, I hate to make generalizations like this, but its true: American's tend to be much more friendly with strangers and in public than Europeans. I'm not sure if this means that Americans are in better moods than Europeans. But without a doubt, the irrational friendliness of Americans puts me in a good mood. its an asset.

## 2.8 August

### Ideology of the Meritocracy (2007-08-01 10:31)

[1]Philip Weiss makes a shrewd (and I think correct) point about Jews marrying non-Jews:

A lot of meritocratic Jews like me were hoist on the petard of superiority. If you bought into the ideology of intellectual excellence—the ideology of the meritocracy, which we Jews helped to build so we could get into the good schools (and which the WASPs then helped us to festoon with prestige, to disguise the fact that none of us would have to actually serve in Iraq)—then you would inevitably look around for smart people to socialize with, and most of them turned out to be gentiles. See, it's my family's fault [that I married a non-Jew].

Weiss went to Harvard. "Ideology of the meritocracy" is a good phrase. Richard Herrnstein, the late Harvard professor of psychology and Bell Curve co-author, was indeed meritocratic – in a narrow way. (Which is the trouble with ideologies.) When I was a graduate student, he gave a talk at my school (Brown) and several graduate students, including me, had lunch with him. He was on the Harvard admissions board. During lunch, he said that some kid was the perfect candidate: "800's on his SATs, plays football, plays the flute." He was serious. Surely the best candidates should be less easily described, I thought.

1. <http://www.philipweiss.org/mondoweiss/2007/08/are-intermarrie.html>

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Andrew Gelman (2007-08-01 16:42:32)

I think Weiss may be overcomplicating things. Whether or not you go to a selective college (or, as he puts it, "good schools"), most Jews in the U.S. will encounter lots of non-Jews. Once you remove or reduce the constraints from intermarriage, it'll happen.

seth (2007-08-01 16:57:47)

I think Weiss was pointing out that anti-semitism had two effects: (a) excluded Jews; (b) kept Jews together.

Pearl (2007-08-02 09:14:35)

I've never actually met a man who played football and the flute.....interesting dynamic. I had no inkling of that which is Jewish culture until I majored in music at Michigan and suddenly BAM!, it was like the coolest club ever. I once heard a would-be conductor friend quip, "well, I'm not Jewish or gay; I've been thinking I ought to work on changing one of the two to help my career along.....no, really."

Anonymous Modern Orthodox Jew (2007-08-02 10:26:58)

The ethos at Maimon (Noah's school) is very different from the secular Jewish meritocracy that Weiss describes. Maimon was founded by the symbol and leader of American Modern Orthodoxy Rabbi Joseph Soloveitchik, who immigrated to the US before the war. Soloveitchik's ideology is that it's possible to be a Harvard PhD and a committed religious Jew learning Talmud regularly: success in the New World while maintaining Old World standards. The school pushes its students to advance the ideology: cynically, they want to prove to the Ultra-Orthodox that education isn't religiously dangerous and to other Jews that

religion isn't educationally detrimental. That the top Talmud student from the exemplar yeshiva high school could intermarry is hardly new — there are examples of similar even in the Talmud itself — but he is an example of why the Ultra-Orthodox are suspicious of secular education and becoming more so.

### **Jane Jacobs and Japan (2007-08-02 03:17)**

At the end of The Shangri-La Diet, I mention Jane Jacobs's view of complaints about overpopulation. The problem is not too many people, she said, the problem is the undone work. Much of that undone work is recycling, of course.

As The Onion recently [1]reported ("Earthquake sets Japan back to 2147"), Japan is closer to the future. How the Japanese recycle:



[2]More. [3]Jane Jacobs and the food industry.

1. [http://www.theonion.com/content/news/earthquake\\_sets\\_japan\\_back\\_to\\_2147](http://www.theonion.com/content/news/earthquake_sets_japan_back_to_2147)
2. <http://pearlalexander.wordpress.com/2007/07/30/this-is-garbage/>
3. <http://www.blog.sethroberts.net/2007/02/14/jane-jacobs-on-the-food-industry/>

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KenF (2007-08-02 09:32:09)

We stayed with some friends in Tokyo this year. They had an extraordinarily thick book of recycling regulations. If they didn't sort and prepare the trash perfectly, the trash man would refuse to take it. Milk cartons needed to be washed thoroughly, flattened correctly, and put out on the correct day. We were afraid to buy anything and bring it home, because it was such a burden on them to create extra trash that needed to be cleaned, prepared for disposal, and sorted.

Pearl (2007-08-02 20:54:26)

It is a pain, but surprisingly easy to get used to. It's like learning any other habit; eventually you stop realizing you're even doing it.

Noumenon (2007-08-09 13:17:51)

Maybe for you, Pearl, but some of us never get used to things like showering or taking out the trash and chafe every time we have to do it.

### **SLD Phenomenology (part 3) (2007-08-02 13:41)**

Kris from South Carolina writes:

I have an interesting side effect of the SLD diet: I have not peeled from sunburn. I have been using the extra light olive oil. I have light skin and usually peel even after a minor sunburn. It has not happened since I have been taking the oil. I tested it last week at the beach. Several hours on the beach with no sunscreen. I got a little red but after a week—no peeling. I've also lost 25 lbs in a couple of months.

[1]Part 1. [2]Part 2.

1. <http://www.blog.sethroberts.net/2007/07/30/sld-phenomenology/>
2. <http://www.blog.sethroberts.net/2007/07/31/more-sld-phenomenology/>

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### **Does the "SLD" Abbreviation Lend a Scientific Veneer to Pseudo-Science? (2007-08-02 20:59)**

Well, I hope not. This [1]webpage (about a psychotherapy that on its face consists of talking with the dead) gave me pause. Easy to ridicule, right? But what if it works? Like SLD.

Actually, the Shangri-La Diet is engineering, not science. The [2]theory behind it is the science.

1. <http://induced-adc.com/>
2. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>

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### **Seven Pounds Since Mid-July (2007-08-03 04:18)**

A man named Mullaney, living in Scottsdale, Arizona, made a charming video about SLD as part of a vlog. [EMBED] He has lost seven pounds since mid-July. He is a semi-serious poker player who recently moved to Arizona from New York City, apparently to take care of his father. I deduce that he learned about SLD from Freakonomics. In a generous act of reciprocity (to me) his face [1]fills the screen in his vlog introduction. [EMBED] Addendum: My deduction that he learned about SLD from Freakonomics was [2]correct.

1. <http://www.blog.sethroberts.net/2007/05/06/life-size-faces/>
2. <http://boards.sethroberts.net/index.php?topic=5340.msg56025#msg56025>

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### **My Theory of Human Evolution (amazon.com edition) (2007-08-04 06:16)**

For a birthday present, I bought [1]Planet Earth, a beautiful and eloquent 5-DVD documentary, from amazon.com. I had it gift-wrapped. It looked like this:



I was amused. This is not how gifts should look. It looked machine-wrapped; gifts should look hand-wrapped. They should look like lots of care went into the wrapping. I thought everyone knew this, but the gift-wrap designers at amazon.com appear to be unclear on the concept. At least use intricate wrapping paper, would have been my advice. Here is my gift among the other gifts:



Why do we want gifts to be intricately wrapped? It is part of a whole gift-giving ethos. Sure, gifts must be (slightly) difficult otherwise they are meaningless. But that's not the whole story. The [2]signaling explanation of gifts (gifts show we care) is not the whole explanation because there are many ways to be difficult, only some of which advance material science. Do we like gifts to be old – to be aged, to have sat in our closet for 5 years? That would be difficult, but it wouldn't advance material science. Do we like gifts to be very new ("fresh") – made that morning? That too would be difficult but wouldn't advance material science. Do we like gifts to be made by very old or very young people? That too would be difficult but wouldn't advance material science. Whereas the actual desire for intricacy does advance material science. To produce more intricate designs, you need better control of your materials. The most intricate objects are made by specialists – artists and artisans. Our desire for intricacy supports them (we can buy a nicer gift than we can make) and pushes them to improve their skills.

When Bill McKibben, an excellent writer, calls for [3]homemade Christmas presents, I believe he is missing this point. In Berkeley, at least, local artisans, such as ceramicists, must make most of their money in Christmas season. (I should ask some of them about this.)

[4]The evolutionary basis of Christmas.

1. [http://www.amazon.com/Planet-Earth-Complete-David-Attenborough/dp/B000MR9D5E/ref=pd\\_bbs\\_sr\\_1/103-3675802-8345458?ie=UTF8&s=dvd&qid=1185919915&sr=8-1](http://www.amazon.com/Planet-Earth-Complete-David-Attenborough/dp/B000MR9D5E/ref=pd_bbs_sr_1/103-3675802-8345458?ie=UTF8&s=dvd&qid=1185919915&sr=8-1)
2. <http://divisive.info/?p=414>
3. <http://www.billmckibben.com/hundred-dollar-holiday.html>
4. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>

c (2007-12-08 06:26:48)

The Japanese presented gifts wrapped in such costly wrappers of woven and embroidered cloth, sometimes with real gold thread decoration, that the recipient was expected to return the wrapper to the giver.

Kit (2011-05-03 10:55:00)

I completely disagree. I adore gorgeous, neatly wrapped packaging such as your amazon package, it doesn't say 'machine wrapped' to me, it says careful perfection, and it's how all our square presents are like. I hate the way people get so sentimental over hand-made things, I've always been big on good presentation. It's all down to taste, and it's not exactly putting a big middle finger up to the concept of love now is it. It's simple and elegant!

Anonymous (2011-07-16 20:55:49)

No, the reason gifts should look hand-wrapped is because they should be hand-wrapped- by the giver. Since you're not wrapping them anyway, which is what the recipient would care about, it doesn't matter if it's done by a machine or a human being.

### **How to Be a Grown-up About Evolution (2007-08-04 22:56)**

Spy magazine had a wonderful column by [1]Ellis Weiner called "How to Be a Grown-up". (In one column, Weiner pointed out that homeless, applied to beggars, should be houseless.) Gordy Slack, a Bay Area science writer, has written the first book that might be called How to be a Grown-up About Evolution. It is an account of the Dover, PA trial in which parents sued the school board for requiring that intelligent design be mentioned in biology class. The actual title is [2]The Battle Over the Meaning of Everything. (I've known Gordy for years and he wrote about me for [3]The Scientist.)

Not surprisingly, Gordy sympathizes with the parents (the anti-creationists). But he tries to understand the other side rather than demonize it, which is what is grown-up about his book. One reason for this attitude is that his father is on the other side. His father, at one point a professor of psychology at Harvard, became at age 51 a born-again Christian and a creationist. In 1998, his father took Gordy to meet Philip Johnson, the Berkeley law professor who is the father of intelligent design (ID), a big-tent version of creationism. "Give us five or ten years, and you'll see scientific breakthroughs biologists hadn't dreamed of before ID," Johnson told Gordy.

While writing the book, Gordy happened to interview Joan Roughgarden, a Stanford biology professor whose specialty is evolution.

I thought our interview was going well. But when I told her that I was writing a book about ID in order to understand what drove its proponents, her attitude and demeanor swung around 180 degrees. . . . "They want to define me [Roughgarden is a transsexual] as inhuman," she said.

How dare anyone try to understand the other side! (Roughgarden's [4]reaction to a psychology talk she didn't like.) The notion that the solution to intolerance is more intolerance is remarkably popular, which is why The Battle Over the Meaning of Everything really stands out.

[5]Gordy's blog.



1. <http://www.ellisweiner.com/>
2. <http://www.amazon.com/Battle-Over-Meaning-Everything-Intelligent/dp/0787987867>
3. <http://www.the-scientist.com/2007/3/1/24/1/>
4. <http://daily.stanford.edu/article/2003/4/25/psychologyLectureLacksSensitivityToSexualOrientation>
5. <http://gordyslack.blogspot.com/>

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lasser11 (2007-08-05 12:27:50)

I wish more people would read Darwin, himself. He's such a humble and respectable thinker. A lot of the emphasis Darwin placed on variation and contingency is lost in debates on evolution today. Such an emphasis by Darwin made him much more open to ideas than most of his scientific followers.

seth (2007-08-05 12:35:08)

Yeah, I think the we're-sure-we-know attitude of the pro-evolution side is not conducive to progress. Political or scientific. How much of evolution is neutral drift (driven by variation) and how much is driven by selection? I've never heard a good answer to that.

Sam Penrose (2007-08-06 11:07:43)

Practice what you preach: try to understand where Roughgarden is coming from. Her exact words (as quoted here) are: "They want to define me as inhuman" From the context I would guess that she is implying that these are fighting words. Given that the legal status of transsexuals \*has\* left them subject to malign neglect, coercion, and simple violence, she has a prima facie case that these people are a threat to her wellbeing in very concrete ways. They are attacking HER. You, by contrast, are engaged in an intellectual contest from a position of personal safety. They are attacking views you hold. It's a lot easier to consider sympathy as a tactic in the sort of struggle you're engaged in than in the one she's engaged in.

seth (2007-08-06 11:47:07)

I agree, it is easier for me to consider what you call "sympathy" and what I call "an attempt to understand". Perhaps that's why I am making such an argument. Still, I don't think it means I am wrong.

## **Something is Better Than Nothing (2007-08-05 20:49)**

I have been asked to write six columns about common scientific mistakes for the journal Nutrition. This is a draft of the first. I am very interested in feedback, especially about what you don't like.

Lesson 1. Doing something is better than doing nothing.

"You should go to the studio everyday," a University of Michigan art professor named Richard Sears told his students. "There's no guarantee that you'll make something good – but if you don't go, you're guaranteed to make nothing." The same is true of science. Every research plan has flaws, often big ones – but if you don't do anything, you won't learn anything.

I have been asked to write six columns about common scientific mistakes. The mistakes I see are mostly mistakes of omission.

A few years ago I visited a pediatrician in Stockholm. She was interested in the connection between sunlight and illness (children are much healthier in the summer) and had been considering doing a simple correlational study.

When she told her colleagues about it, they said: Your study doesn't control for X. You should a more difficult study. It was awful advice. In the end, she did nothing.

Science is all about learning from experience. It is a kind of fancy trial and error. But this modest description is not enough for some scientists, who create rules about proper behavior. Rule 1. You must do X (e.g., double-blind placebo-controlled experiments). Rule 2. You must not do Y (e.g., "uncontrolled" experiments). Such ritualistic thinking is common in scientific discussions, hurting not only the discussants – it makes them dismissive – but also those they might help. Sure, some experimental designs are better than others. It's the overstatement, the notion that experiments in a certain group are not worth doing, that is the problem. It is likely that the forbidden experiments, whatever their flaws, are better than nothing. A group that has suffered from this way of thinking is people with bipolar disorder. Over the last thirty years, few new treatments for this problem have been developed. According to Post and Luckenbaugh (2003, p. 71), "many of us in the academic community have inadvertently participated in the limitation of a generation of research on bipolar illness . . . by demands for methodological purity or study comprehensiveness that can rarely be achieved."

Rituals have right and wrong. Science is more practical. The statistician John Tukey wrote about ritualistic thinking among psychologists in an article called "Analyzing data: Sanctification or detective work?" (Tukey, 1969). One of his examples involved measurement typology. The philosopher of science N. R. Campbell had come up with the notion, popularized by Stevens (1946), that scales of measurement could be divided into four types: ratio, interval, ordinal, and nominal. Weight and age are ratio scales, for example; rating how hungry you are is an ordinal measure. The problem, said Tukey, were the accompanying prohibitions. Campbell said you can add two measurements (e.g., two heights) only if the scale is ratio or interval; if you are dealing with ordinal or nominal measures, you cannot. The effect of such prohibitions, said Tukey, is to make it less likely that you will learn something you could have learned. (See Velleman and Wilkinson, 1993, for more about what's wrong with this typology.)

I fell victim to right-and-wrong thinking as a graduate student. I had started to use a new way to study timing and had collected data from ten rats. I plotted the data from each rat separately and looked at the ten graphs. I did not plot the average of the rats because I had read an article about how, with data like mine, averages can be misleading – they can show something not in any of the data being averaged. For example, if you average bimodal distributions you may get a unimodal distribution and vice-versa. After several months, however, I averaged my data anyway; I can't remember why. Looking at the average, I immediately noticed a feature of the data (symmetry) that I hadn't noticed when looking at each rat separately. The symmetry was important (Roberts, 1981).

A corollary is this: If someone (else) did something, they probably learned something. And you can probably learn something from what they did. For a few years, I attended a meeting called Animal Behavior Lunch where we discussed new animal behavior articles. All of the meetings consisted of graduate students talking at great length about the flaws of that week's paper. The professors in attendance knew better but somehow we did not manage to teach this. The students seemed to have a very strong bias to criticize. Perhaps they had been told that "critical thinking" is good. They may have never been told that appreciation should come first. I suspect failure to teach graduate students to see clearly the virtues of flawed research is the beginning of the problem I discuss here: Mature researchers who don't do this or that because they have been told not to do it (it is "flawed") and as a result do nothing.

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Peter (2007-08-06 11:28:02)

"only if the scale is ratio or interval; if you are dealing with interval measures, you cannot." Did you mean "only if the scale is ratio or ordinal" here?

Sam Penrose (2007-08-06 11:28:05)

I'm sympathetic to your argument; I'd like it more if it addressed the most popular and/or best-in-your-opinion counter arguments. Given that you are encouraging scientists to generate results more aggressively, you might start with "how can false results do harm?"

seth (2007-08-06 11:36:31)

That's a good point, thanks. It isn't easy to argue how more evidence can be worse. It's not "results" that are false (unless fabricated); it's the conclusions drawn from them.

Timothy Beneke (2007-08-06 11:44:10)

Generally, I'd like to see clarification that distinguishes processes that lead to knowledge or hypotheses, but cannot be used to completely confirm hypotheses or establish knowledge, from processes or methods that can. Or perhaps activities that lead to greater observation or awareness of phenomena, or to further hypotheses. Part of what you're identifying is disjunctive thinking and an unwillingness in scientists to acknowledge a huge grey area. There is a huge continuum between partial confirmation of a hypotheses and totally unquestionable science. What determines what falls where on that continuum? Of course a controlled 5 year study with thousands of subjects might be ideal in confirming the Shangri-la Diet, but as more people have success with it over longer periods of time, it becomes more and more trivial. A glaring error related to people who read about your diet: there seem to be doctors and experts who dismiss it as "placebo" when they could confirm that extra light olive oil, and associated methods, reduce hunger in the time between breakfast and lunch. Can you articulate the mind-set that leads to such intellectual incompetence? An enthusiastic teenager might be more likely to confirm what's going on with the olive oil than many educated or mis-educated people. Much of the problem seems to be letting the perfect be the enemy of the good. There is a belief that because I know the hypothesis that I am trying to confirm, I cannot experiment on myself. But it would be pretty bizarre if my beliefs could alone take away hunger. Part of the problem is that you are threatening some peoples' sense of their own authority and power. To try out your method and see that it reduces hunger would be ego threatening. It's true that one person cannot completely confirm something through self experimentation, because there may be something unusual about them resulting in the effect. But even 5 or 10 people all getting the same effect in self experimentation gives me, at least, a lot of confidence that something interesting is going on, though we always have to be careful about self fulfilling prophecies.

Kayvan Sylvan (2007-08-06 14:53:37)

I like the article very much but I also agree with Sam's criticism above. Best regards, —Kayvan

Janet R. (2007-08-27 07:51:47)

I agree that there's too much emphasis on the negative, but I would say that grad students are encouraged to be negative: I actually failed one of my qualification exams and had to take the entire thing the next year for including the following in the evaluation of a study: "The lack of a real control group, subject self-selection, and other threats to internal validity mentioned above make it impossible to distinguish regression to the mean from a treatment effect... However, this study takes place in the real world in which the prospects for good multi-year studies are severely limited by funding, compliance with protocols, and cooperative participants. Policy decisions need to be made even on programs whose effectiveness have not been evaluated at all. Assessing the study from a pragmatic policy-making perspective, interventions such as these have great promise... so some generosity should be shown in interpreting the results...[The program] is relatively low cost compared with alternatives ... and unlike these programs, it has been studied. We can't prove that the intervention had any effect ... , but it may very well be the best option among the set of alternatives."

seth (2007-08-27 08:35:33)

Janet R., you failed your qualifying exam because you included praise – pointing out virtues – in one of your answers? Astonishing. Can you explain why? I've never heard of such a thing.

Ben Popken (2007-09-19 05:31:12)

On the internet we call them trolls.

## **Interview with HuntGrunt (part 1) (2007-08-06 19:55)**

Joyce Cohen, the New York Times real-estate columnist behind [1]The Hunt, blogs at [2]HuntGrunt, one of my favorite blogs. I interviewed her about blogging.

SR: Do you like blogging?

JC: No.

SR: Why not?

JC: There's easy blogging and hard blogging. Easy blogging is like a diary – you want to write about your bad dates or complain about your mother or your boss . . . the kind of thing that otherwise you would do in longhand. Hard blogging feels more obligatory. It's time-consuming and labor-intensive and the payoff isn't clear. The technology is still not up to snuff. There are space issues: You can't quite figure out the spacing to make the picture go in the right place. It's easy to make a typo and not notice it until later. You can endlessly tinker to make it look good. Sometimes, updates are necessary. In some ways, it never ends.

SR: Why do you blog if you don't like doing it?

JC: I don't know. I started. It has a momentum of its own. The more gratifying stuff is the stuff that gets linked to by someone else and commented upon. If [3]Curbed or [4]Gothamist or [5]Gawker links to the blog or one of my stories, that's interesting. Especially because of the feedback. And occasionally there is something that I want to say.

SR: Many bloggers stop.

JC: I think a lot of people try it and find that there are many reasons not to continue. Maybe it's not as great as they initially thought. Maybe they started it not really knowing. I'm not sure a lot of people start intending to stop.

SR: Yeah, that would be a small number of people.

JC: Unless you blog because of a particular project. Like if you're blogging during your kitchen renovation or during your Shangri-La diet or for some very specific purpose like that. I don't know that people start a blog and say, I'm doing this in order to stop doing it. I think people embark on it not knowing what it's like.

1. [http://topics.nytimes.com/top/reference/timestopics/people/c/joyce\\_cohen/index.html?inline=nyt-per](http://topics.nytimes.com/top/reference/timestopics/people/c/joyce_cohen/index.html?inline=nyt-per)
2. <http://huntgrunt.blogspot.com/>
3. <http://www.curbed.com/>
4. <http://gothamist.com/>
5. <http://gawker.com/>

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### **Art and Commerce (2007-08-07 10:36)**

A fascinating [1]discussion about the art and business of pottery, such as:

I used to make bowls of many colors, then one day I realized that my stock of colors of bowls on the shelves was increasing, but I had no blue bowls. It dawned on me that I was selling off everything blue, and bringing home all the other colors. So I now make only blue stuff. And mostly bowls. Why? 95 % of my customers are ladies, and every lady needs a good bowl. And it shows in my sales. Now, I confess to playing a bit now and then and making the occasional ornamental bean pot, or platter, or bread baker. But those are not my mainstay. That is bowls. Bowls and pots with a commercial attitude .... I stay away from art and craft shows - too expensive for what they do. I try and sell in a fifty mile radius of where I live and that seems to work. And I try to simply make good pots.

Veblen's [2]Instinct of Workmanship.

1. <http://www.potters.org/subject88449.htm>
2. <http://de.geocities.com/veblenite/txt/instinct.txt>

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### **David Tufte (2007-08-07 12:52:35)**

That sounds like the story they tell in statistics about how they chose to armor planes in England during WWII by looking where the bullet holes were in the planes that made it back. After a while, it dawned on them that the places where they didn't see bullet holes indicated that the plane hadn't survived.

seth (2007-08-07 13:50:49)  
yes, I agree.

Ian Bicking (2007-08-07 19:03:58)

"Blue pots" are sometimes used a shorthand among the potters I know to talk about pots that are ugly (to them) but commercially successful. Perhaps "crafty". Some feel that it's because browns and oranges are the colors good potters are most drawn too, and that a less educated eye goes for something like a blue. My personal opinion is that blue is just generally popular, and that making blue pots you can be a successful potter even if you aren't very good at it, and a lot of the business you do is based on the initial impression (where blue does well), not necessarily the richness of the lifetime of experience a person might have with their purchase. As a result of all this, I've seen potters start to associate poor craftsmanship with the color blue, perhaps unfairly hating blue as a result – the color is more of a crutch than a flaw in itself. Though there are other things too – thick, opaque glazes tend to obscure the form, for instance, so it helps the poor potter and obscures the work of the good potter. Anyway, touches on some interesting details of the craft I suppose.

seth (2007-08-07 21:19:21)

When I was about 8 years old I decided my favorite color was blue. As a high school student I wore lots of blue shirts. But as I got older, this seemed a less and less interesting choice.

Brad (2007-08-08 06:56:47)

Seems silly to hate blue. Might as well hate pots.

## **Something is Better Than Nothing (part 2) (2007-08-08 06:50)**

In a [1]recent post I said that scientists are often much too dismissive. They are "evidence snobs," Alex Tabarrok [2]might say. A [3]letter in the current issue of the American Journal of Clinical Nutrition criticizes a important example of just such dismissiveness:

In conclusion, whereas we agree that policy decisions should be evidence-based and not hasty, we do not agree that the evidence base [used to make those decisions] should be constrained to one type of study [long-term randomized controlled trials]—in particular, not to a study design that is inherently limited. Do we really want to wait perhaps decades for results of long-term RCTs, which almost certainly will not provide definitive evidence, while ignoring other relevant evidence involving shorter-term endpoints? An example is provided in the panel's own summary statement (2). In lauding RCTs as the "gold standard for evidence-based decision making," the panel proudly points to the fact that, even though folate was well known to decrease the risk of neural tube defects in animal studies, policy recommendations for folate supplementation to prevent neural tube defects were delayed while authorities waited some years for confirmation from RCTs. One can only wonder how many infants were born with neural tube defects while authorities waited.

"Proudly," huh? Inclusion of that word shows how pissed the authors of the letter are – and rightly so. One author is Bruce Ames, a neighbor of mine, for whom I have great respect; another is Walter Willett, the Harvard epidemiologist. In 1998, Willett wrote a smart [4]article challenging the popular belief that a low-fat diet is a good way to lose weight.

Here is part of the [5]reply from the authors of the report that Ames et al. criticized:

It is important to note that our panel was not charged with asking whether vitamins and minerals play a role in human disease – a topic that occupies much of the letter by Ames et al, and for which observational

evidence is indeed central – but, as a State-of-the Science Panel, was charged to reflect on the state of the available evidence for a treatment recommendation on the use of vitamins and minerals in the general population. For treatment decisions, the RCT is the established standard. No better proof of this principle can be found than in the RCTs reviewed in our report, which showed serious harm from vitamin ingestion in certain circumstances.

A less-than-reassuring answer. A commentator on my earlier post thought I should address the strongest arguments on the other side. I had trouble thinking of any. It's hard to argue that less evidence is better. You can see that those who wrote this paragraph – some of the most prominent nutrition scientists in the country – were equally baffled.

I will revise my "common mistakes" article to mention the Ames et al. letter.

1. <http://www.blog.sethroberts.net/2007/08/05/something-is-better-than-nothing/>
2. [http://www.marginalrevolution.com/marginalrevolution/2007/03/expensive\\_credi.html](http://www.marginalrevolution.com/marginalrevolution/2007/03/expensive_credi.html)
3. <http://www.ajcn.org/cgi/content/full/86/2/522?etoc>
4. <http://www.ajcn.org/cgi/content/abstract/67/3/556S>
5. <http://www.ajcn.org/cgi/content/full/86/2/522-a?etoc>

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Chris Kaiser (2007-08-09 02:05:55)

This is a hot debate regarding lung cancer screening. Researchers at Cornell led by Dr. Claudia Henschke have for years published data from their observational studies that found low-dose CT screening in high risk subjects saves lives. Henschke et al screen all subjects with CT and then randomize them to either treatment or not treatment. On the other side, are investigators for the National Lung Screening Trial, an 8-year, \$200 million NIH RCT study whose results won't be available until 2010. In this trial, subjects are randomized to either CT or chest x-ray. The observational studies have looked at thousands of cases, amassed impressive data not only regarding the efficacy of screening but also protocols for reducing false positives and downstream invasive procedures, and protocols for observing differences in lesion makeup and minute lesion growth. A model they [1]constructed claims to reduce lung cancer mortality by 80 % when caught early in stage I, which is what screening does. The folks at NLST always point out that Henschke et al have not proven that screening actually saves lives. The observational researchers claim to have an effective "cure" rate, which they extrapolate to a reduction in mortality. But the NLST investigators claim that many of the cancers found by Henschke et al are indolent and not biologically dangerous. Subjects would have died by other causes with those lesions present. NLST advocates claim that Henschke et al muddy the waters talking about cure rates rather than a [2]reduction in deaths. They claim that only the RCT study will prove whether CT screening reduces mortality or not. In the meantime, their best advice is to quit smoking. And so it goes. At medical conferences, these two opposing camps sometimes snipe and spar with each other, obfuscating any real news that might be presented. In the meantime, a [3]British panel has deemed lung cancer screening safe and effective based on the Cornell research. David Yankelevitz at Cornell wrote a good [4]article dissecting the two approaches.

1. <http://www.diagnosticimaging.com/cardiovascular/journal/showArticle.jhtml?articleID=199905821>
2. <http://www.diagnosticimaging.com/cardiovascular/feature/showArticle.jhtml?articleID=198700571>
3. <http://www.diagnosticimaging.com/showArticle.jhtml?articleID=201203019>
4. <http://www.diagnosticimaging.com/showArticle.jhtml?articleID=199701411>

### **Annals of Self-Experimentation: Magnetic Implants (2007-08-08 23:38)**

Quinn Norton, a San Francisco journalist, had a tiny magnet [1]implanted in her finger, which enabled her to detect electrical fields.

Bits of my laptop became familiar as tingles and buzzes. Every so often I would pass near something and get an unexpected vibration. Live phone pairs on the sides of houses sometimes startled me.

You might think of self-experimentation as a modern version of "know thyself" but this is "know the rest of the world".

1. <http://www.wired.com/gadgets/mods/news/2006/06/71087>

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dirty\_corner (2007-08-10 14:19:29)

That's the freakiest thing I ever heard of... not really, but pretty weird, and quite cool. Is it something that you would consider? What are the benefits, apart from being able to sense stuff.... given that some animals (pigeons, sharks) navigate using the earth's electromagnetic field, would there ever be a time when enough magnets could be inserted into the human body to enable this?

seth (2007-08-10 18:39:04)

Would I consider it? Not until the benefits are clearer. Also, my current self-experimentation makes heavy use of my fingers (reaction-time experiments). I wouldn't want to mess with them.

## **A Great Day For Free Speech (2007-08-09 08:32)**

Two days ago, Dubner and Levitt, the Freakonomics authors, moved their [1]blog to the Opinion section of the NY Times website. There was a big announcement on the Times home page. Dubner posted a short and modest [2]note about the move ("we are excited and flattered"). It got over 100 comments, mostly about the lack of full RSS feed ("I thought this move would be good news but the truncated RSS feed pisses me off") along with a few formulaic congratulations.

So I'll say it: This is a fantastic accomplishment. Two days ago was a great day for freedom of speech. For the first time ever, someone – actually two people – can say whatever they want as often as they want however they want (long, short, funny, serious, video, text) in the most coveted spot in the entire media world. Levitt took the new freedom out for a spin by posting a what might be considered [3]a big help to terrorists. Nothing like that has ever appeared in the Times or any other major newspaper in the whole history of newspapers, I'm quite sure. Nor anywhere else with a big audience.

David Brooks earned his Op-Ed column, yes, but he was also given it. His influence went way up when he started that job. Were he to lose his column, his influence would clearly diminish. He can be fired, in other words, and being fired would hurt him. Dubner and Levitt, on the other hand, can upset the people who control the Times as often and as deeply as they wish. They can be removed from the Times but it will make little difference to them – it might even help them. No matter what they say, no matter how many powerful people they offend, they will always be able to find a hosting service for their blog and will always have a big respectful audience. If anyone should be worried about offending anyone else, the people who run the Times should be worried about offending Dubner and Levitt. That's



taking freedom of speech to a whole new level.

To the right of David Brooks' column – which appears twice a week and has a fairly constant length, format, and tone – on the Times website is a blank area. David Brooks controls none of it. Whereas to the right of the Freakonomics blog is the largest set of links ever to appear on the Times website, completely under the authors' control. One section (5 links) is titled Organ Transplants. Dubner and Levitt believe that the regulations about organ transplants are too restrictive. Given its visibility and prestige placement, that little section is not just a constant reminder of their position but a powerful force for change. It is a new kind of activism. The rest of the Times's dozen-odd blogs have tiny blogrolls if any, always narrow-focus and never activist.

Quite apart from the tangible power, there is also the symbolism of it: A blog is being given the utmost respect. Blogs are inherently about diversity of voices and the notion that everyone has something to say. Editorials are not (of course). Newspaper columns are not (they are almost always by journalists). Now that the Times has shown a blog such respect, other important places will do the same. The esteem of blogs will rise in the world and, inextricably, so will the beliefs they embody.

1. <http://freakonomics.blogs.nytimes.com/>

2. <http://freakonomics.blogs.nytimes.com/2007/08/07/moving-day/>

3. <http://freakonomics.blogs.nytimes.com/2007/08/08/if-you-were-a-terrorist-how-would-you-attack/>

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lasser11 (2007-08-09 17:10:17)

I do admire Levitt's boldness in his terrorist post. but with the timing, I bet a good part of the motivation behind the post was to publicize the blog's move.

seth (2007-08-09 20:15:27)

My guess is that he had wanted to write it for a while and saved it for this occasion because he wanted the large audience.

lasser11 (2007-08-09 22:10:08)

yes, very true. my comment was probably too cynical.

## **Ideology of the Meritocracy (part 2) (2007-08-10 05:47)**

From [1]The American:

Rich Karlgaard, the technology entrepreneur who is publisher of Forbes, tells the story of a trip he took with Microsoft's Bill Gates in the early 1990s. On the flight, he asked Gates, "Who is your chief competitor?"

"Goldman Sachs" was Gates's surprising reply.

Gates went on to explain that he was in the "IQ business." Microsoft needed the best brains available to make top-shelf software. His primary rivals for the smartest kids in America were elite investment

banks such as Goldman or Morgan Stanley.

“Microsoft must win the IQ war,” Gates said, “or we won’t have a future.”

Contrast this with open-source-leader Eric Raymond’s beliefs (expressed in [2]this talk) about software development. He repeats the idea that “with enough eyeballs all bugs are shallow” – implicitly meaning enough diverse eyeballs. That I am writing this with Firefox gives some sense of who (Gates or Raymond) was more realistic.

[3]Part 1. [4]Charles Murray vs Charles Murray. [5]How important is IQ?

1. <http://www.american.com/archive/2007/july-august-magazine-contents/revenge-of-the-frosh-seeking-robots>
2. [http://www.catb.org/~esr/writings/cathedral-bazaar/linux1\\_d50\\_96kbs.mp3](http://www.catb.org/~esr/writings/cathedral-bazaar/linux1_d50_96kbs.mp3)
3. <http://www.blog.sethroberts.net/2007/08/01/ideology-of-the-meritocracy/>
4. <http://www.blog.sethroberts.net/2007/01/17/charles-murray-vs-charles-murray/>
5. [http://www.huffingtonpost.com/seth-roberts/how-important-is-iq\\_b\\_39554.html](http://www.huffingtonpost.com/seth-roberts/how-important-is-iq_b_39554.html)

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pdf23ds (2007-08-10 06:25:36)

Keep in mind that Firefox is based on the old Mozilla code, which was an open-sourced version of Netscape Navigator, which was developed by one of Microsoft’s fiercest competitors in the early browser wars. Maybe not the best example. The open source method has produced a small number of very good pieces of software, and a large number of very bad ones. There just aren’t enough eyeballs to go around.

seth (2007-08-10 06:34:42)

Interesting. I also use R all the time – also open-source.

Nansen (2007-08-10 15:26:35)

pdf23ds, if Linux and Apache are examples of very good pieces of OSS, then what are examples of very bad ones? Thanks in advance.

SusanJ (2007-08-10 20:33:08)

Just because software is Open Source doesn’t mean that lots of people have worked on it. (And just because lots of people have worked on a piece of software doesn’t mean it is any good.) There are more than 150,000 Open Source projects on SourceForge alone. If you pick one at random, you are much more likely to find a bad one than a good one.

KenF (2007-08-11 21:37:42)

Talk to anyone in the software business. They will tell you that one good programmer is better than 5, or even 10, mediocre ones. Look at Google, and how successful they are. They’ve taken the Gates approach. They’ve hired the smartest of the smartest, paid them much more than their competitors, treated them like kings. And look at the results. Open source software isn’t a product of the masses working together, it isn’t some emergent phenomenon. And fixing bugs is a very different thing from planning and constructing a piece of first-class software. In some fields of endeavor, IQ matters a lot. Writing computer software is one of these.

seth (2007-08-11 22:53:21)

Hmm. Lots of companies try to hire smart people. Those with more money hire more of them. Rich companies like Google hire lots of smart people, yes. But I imagine Google looks for other qualities, too, such as imagination and perseverance. I suspect that to produce really good software requires several or even many different talents and that only a few of them fall under the term "high IQ". In my experience, the quality of Microsoft products is remarkably low given the resources at their disposal; a narrow emphasis on IQ may one reason why – but that's just a guess since I am so far away.

KenF (2007-08-12 11:26:51)

Google doesn't hire smart people because they are rich, they are rich because they hired the smartest people. Perseverance may be a separate quality from IQ, but imagination, at least in the realm of software development, is not. You need the IQ to be imaginative in that realm. Really in any realm. Just compare the imaginative life of a high IQ child from an average child. It's worlds apart. I actually think being in Washington keeps Microsoft from attracting the smartest people. However, Microsoft's goal has never been to make the best products on earth, it has been to make the most money. And they've succeeded at that.

michael vassar (2007-08-16 09:09:52)

Programming ability is fairly easy to measure directly, so companies will generally do the obvious and correct thing and measure it directly rather than through the proxy of IQ. There doesn't seem to be much data on how well IQ predicts programming ability, but who needs to predict something trivially measured?

## **My Theory of Human Evolution (Planet Earth edition) (2007-08-10 21:53)**

The many-hour BBC documentary Planet Earth, mentioned [1]earlier, takes viewers way off the beaten track – deep into giant caves, for example. But humans – and human evolution – creep in.

Non-human primates are shown a dozen-odd times during the series. Only once do we see them walk erect: When baboons waded into a flooded area of Africa. This adds credence to the Aquatic Ape theory of human evolution, which assumes our ancestors came to walk upright because it helped them walk in water. David Attenborough, Planet Earth's narrator, made an excellent [2]radio show about the Aquatic Ape theory.

The Aquatic Ape theory explains all sorts of physical differences between man and our closest primate ancestors – why we walk upright and they don't, for example. My ideas about human evolution are about what happened next. I try to explain ways we differ mentally from other primates – we speak, for example. The core idea of my theory is that the human brain has changed in many ways to promote occupational specialization. For example, language – single words – began because it facilitated trade; it was the first advertising. (I think of a Guatemalan market where someone shouted "toothpaste" over and over. He was selling toothpaste.)

The magic of occupational specialization also comes up in Planet Earth. The "Planet Earth Diaries" (Making-of) section of "Seasonal Forests" describes filming baobab trees using a unique hot-air balloon designed for photography by Dany Cleyet-Marrel and piloted by him. Twice he flies into trees by mistake. "Many of Planet Earth's finest images would have been impossible without devoted and passionate specialists like Dany," says Attenborough.

1. <http://www.blog.sethroberts.net/2007/08/04/my-theory-of-human-evolution-amazoncom-edition/>

2. <http://www.bbc.co.uk/radio4/science/scarsofevolution.shtml>

Nancy Lebovitz (2007-08-12 05:43:20)

You might like [1]The Hand: How Its Use Shapes the Brain, Language, and Human Culture by Frank R. Wilson for a hand-oriented view of human evolution.

1. [http://www.amazon.com/Hand-Shapes-Brain-Language-Culture/dp/0679740473/ref=sr\\_1\\_1/103](http://www.amazon.com/Hand-Shapes-Brain-Language-Culture/dp/0679740473/ref=sr_1_1/103)

seth (2007-08-12 06:34:31)

Thanks. I picked it up in a bookstore but I should look at it again. Certainly the flexible hand preceded the big brain.

DDeden (2007-09-02 16:29:55)

Interesting read. I missed the show (no TV) but saw the baboon wading video and macaque swimming video at Laelaps blog. I agree with much of the AAT, but see it as part of life in a generalised coastal tropical habitat. Your mention of occupational specialization in later humans fits with my interpretation of butted hand axes as both butchering tools and woodcrafting tools used to construct the first dugout boats from hollow bent trees at waterside. These dugouts were the 'first cargo pickup trucks on the aquatic superhighway' that allowed trade and settlements upstream inland in areas formerly dominated by the big cat predators, and allowed relatively safe easy transport of people including babies, with slingstone pebbles as ballast in the bottom for stability, and push-pole thrusting spears propelling and spare throwing spears bunched aside like arrows in a quiver. Further development of boats included thinner lighter dugouts and later portageable ribbed skin kayaks, birchbark canoes and plank sailboats on the sea of galilee 20,000 years ago. The words Tectonic, Technical, Technology has the root Tek, which is Greek for carpenter or craftsman. I think it derived from the sound of stone "tick-ticking" against stone to make a hand axe and other simple tools. Other languages around the world have similar sounding words for crafting tools, which suggest great antiquity. (Chip or chop are other variations of it.) The hand in primates (and even more in anthropoids) was selected for plucking loosely hanging fruits in angiosperm trees, which had previously been the long held domain of fruit bats and frugivorous birds. Plucking allowed the changes in the jaws and dental structure, which allowed the brain to enlarge later. This combined with greater vertical climbing and posture produced a more stable bipedal locomotion, as seen in the gibbon and spider monkey. Bipedal wading doesn't cause dry land bipedalism (see wetland apes which wade on 2 legs but walk on 4, while gibbons are bipedal on the ground but never wade), but it does reinforce an already bipedal habit. Most likely the combination of fruit tree climbing, wading for molluscs in mangroves, shore cliff climbing for seabird eggs, coconut palm climbing, beachcombing for turtle eggs, vertical floating (with inflated laryngeal air sac) while plucking aquatic vegetation all combined to further the upright stance in hominoids and resulted in the complete loss of the tail. Later, the ancestors of the Great apes expanded inland along gallery forests staying arboreal and becoming more quadrupedal when on the ground, while ancient Homo erectus improved swimming and changed from vertical floating to horizontal backfloating (losing the lar. throat air sac but gaining a layer of skin fat) resulting in greater hydrodynamic linearity, thermoinsulation and oxygen breath holding abilities and becoming a more adept diver for shellfish and crustaceans. I envision them diving as male-female pairs alternating dives, while the younger males acted as area patrol guards/gangs and younger females as babysitters at the shore. Later the use of hollow logs and driftwood as floats in waters with crocs or sharks began the emergence of the most primitive vehicular industry, shells pebbles and stone tools used to make simple dugouts.

seth (2007-09-02 20:26:46)

Very interesting comment, thanks. And you have a most thought-provoking website, too.

DDeden (2007-09-02 20:51:19)

thanks, yep.

## **Interview with HuntGrunt (part 2) (2007-08-11 06:13)**

Joyce Cohen, the New York Times real-estate columnist – her column is [1]The Hunt – blogs at [2]HuntGrunt, one of my favorite blogs. [3]Part 1 of this interview.

SR: Why did you start?

JC: Because HuntGrunt was too good a name not to use. Also, I started at the time we had [4]The Walk-through. [A Times real-estate blog.] The Walk-through was on Wordpress and Wordpress sucks. It's all buggy and glitchy. I had to teach myself HTML to even do it. It was while I was doing that that I came up with HuntGrunt.

SR: Did you think of HuntGrunt?

JC: My very first entry tells you that. You can't make a diminutive from my name. You can't make a diminutive from "The Hunt" either.

SR: You'd be JCo. Like JLo.

JC: No one's ever called me that. HuntGrunt came from [5]Property Grunt. Property Grunt would write to me – to me and about me. He's a Corcoran broker. Property Grunt was his name and all of a sudden HuntGrunt came to me.

SR: You're the pure artist who has an idea and has to use it. Your blog is a way of drawing attention to the phrase HuntGrunt.

JC: Without the name HuntGrunt, I'm not sure it would exist. I'm not sure there would be much resonance.

1. [http://topics.nytimes.com/top/reference/timestopics/people/c/joyce\\_cohen/index.html?inline=nyt-per](http://topics.nytimes.com/top/reference/timestopics/people/c/joyce_cohen/index.html?inline=nyt-per)
2. <http://huntgrunt.blogspot.com/>
3. <http://www.blog.sethroberts.net/2007/08/06/interview-with-huntgrunt-part-1/>
4. <http://walkthrough.nytimes.com/>
5. <http://propertygrunt.blogspot.com/>

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## **Annals of Self-Experimentation: Highway Signs (2007-08-11 10:08)**

Meeker initially assumed that the solution to the nation's highway sign problem lay in the clean utilitarian typefaces of Europe. One afternoon in the late fall of 1992, Meeker was sitting in his Larchmont office with a small team of designers and engineers. He suggested that the group get away from the computer screens and out of the office to see what actually worked in the open air at long distances. They grabbed all the road signs Meeker had printed – nearly 40 metal panels set in a dozen different fonts of varying weights – and headed across the street to the Larchmont train station, where they rested the signs along a railing. They then hiked to the top of a nearby hill. When they stopped and turned, they were standing a couple hundred feet from the lineup below. There was the original Highway Gothic; British Transport, the road typeface used in the United Kingdom; Univers, found in the Paris Metro and on Apple computer keyboards; DIN 1451, used on road and train signage in Germany; and also Helvetica, the classic sans-serif seen in modified versions on roadways in a number of European countries. There

was something wrong with each one," Meeker remembers. "Nothing gave us the legibility we were looking for." The team immediately realized that it would have to draw something from scratch.

A little bit of self-experimentation went a long way. From a [1]wonderful story in the NY Times Sunday Magazine about highway signage. Like all good stories, there is struggle.

Over several years Meeker and Pietrucha went to meetings at the Federal Highway Administration; they would end each one by setting up a row of sample highway signs in the long hallways of the agency's headquarters. The government's own engineers were impressed with Clearview, but any immediate progress was slowed by the inevitable forces of inertia and bureaucracy in Washington. "We'd go in each time excited," Meeker says of their presentations to federal officials. "And we'd leave each time thinking, 'Why did we even bother?'"

But it ends happily.

1. <http://www.nytimes.com/2007/08/12/magazine/12fonts-t.html?hp=&pagewanted=all>

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### Science in Action: Omega-3 (letter-counting test) (2007-08-11 23:13)

At a reading, the novelist Dennis McFarland said that the hardest part of writing [1]The Music Room had been after breaks in writing it. Before he could resume, he had to reread what he'd written so far. This became so painful that he forced himself to never stop.

Because of a break due to [2]wrist problems, I'm going to backtrack a little. When my wrist started to hurt, I had been learning a new way to measure brain function. It's a reaction-time task that I can do almost anywhere. On each trial I see four letters. For example:



C A B D

The task is to respond as fast as possible how many of the letters are from the set {A, B, C, D}. In this case the answer is 4, so I would type "4".

Here is another possible display:



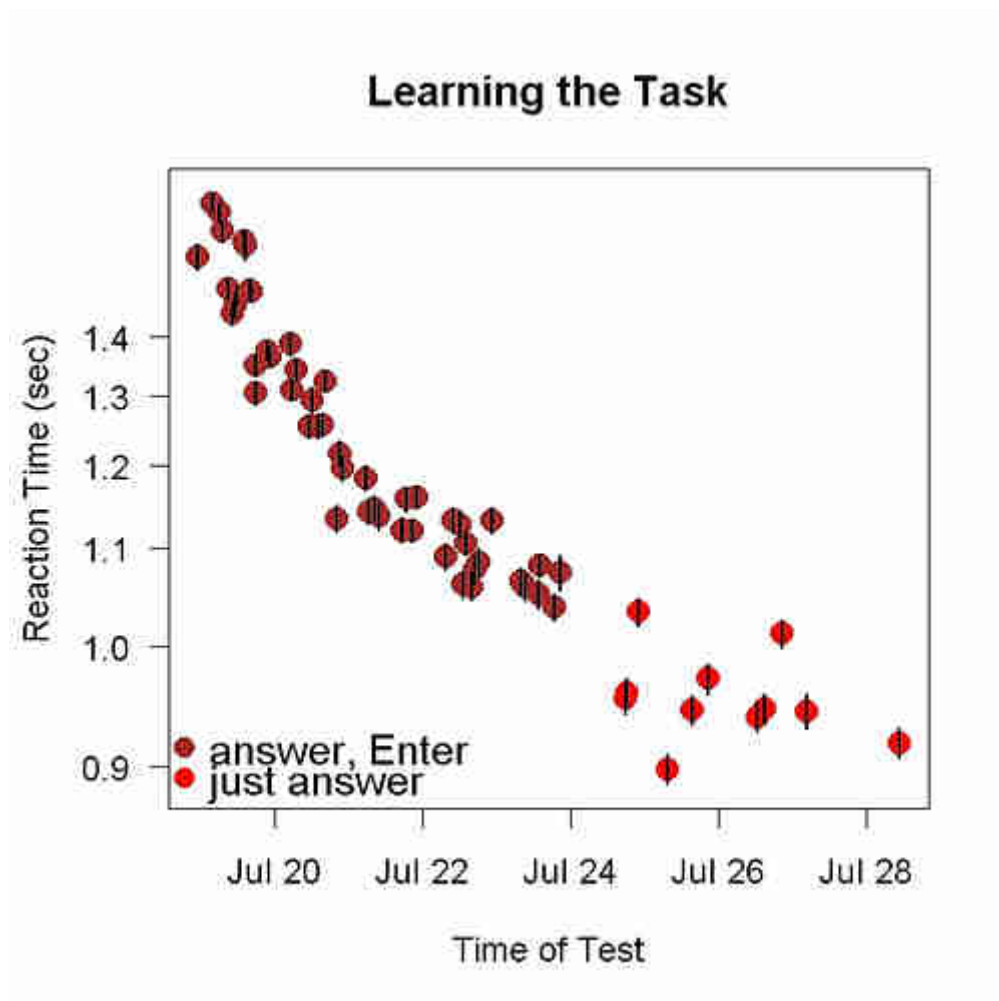
X D B C

The correct answer is 3. The possible answers are 1, 2, 3, and 4; I just leave my fingers resting on those four keyboard keys.

As soon as I respond to one display, the next appears. Each test has 4 blocks of 50 displays (= 200 trials) and takes about 4 minutes.

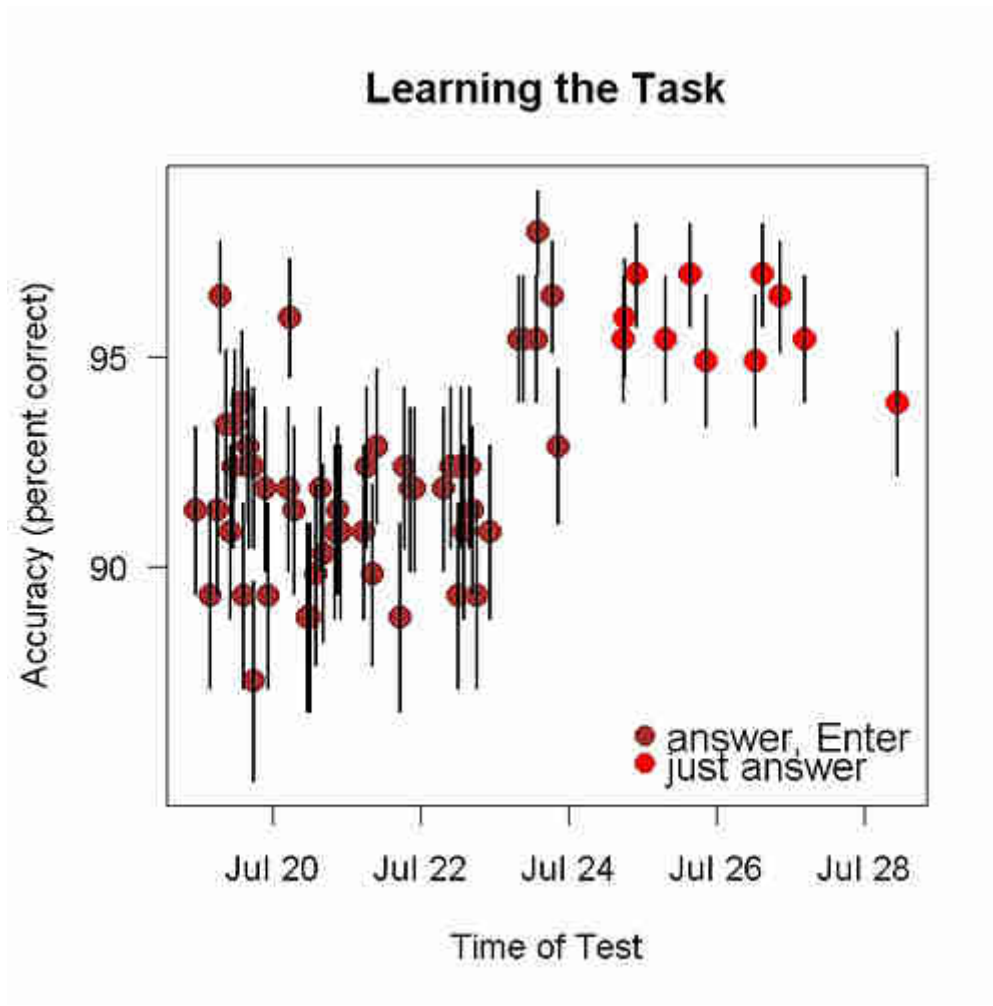
I slowly got better – faster and more accurate. This graph shows how my reaction times decreased:





When I started the task, I had to hit Enter after typing the answer (e.g., type "3" then hit "Enter"). After 50 tests, I learned about an [3]R function that got rid of the need to hit Enter after typing the answer. I could just type the answer (e.g., just type "3").

This shows how my accuracy improved:



The points become more widely spaced around July 24 because at that point I started learning another reaction-time task. After I hurt my wrist I decided I was trying to do too much.

1. <http://books.google.com/books?id=V6QNbPoazacC&dq=%22dennis+mcfarland%22&printsec=frontcover&source=web&ots=CwJDy4bpNV&sig=c4G0GnR6RsS1ccY0TIyyIGTcBD4#PPP1,M1>
2. <http://www.blog.sethroberts.net/2007/07/28/science-in-action-omega-3-a-delay/>
3. <http://www.blog.sethroberts.net/2007/07/26/science-in-action-omega-3-better-measures/>

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pdf23ds (2007-08-12 18:15:21)

Does that accuracy graph indicate that your accuracy improved after the change to just pressing the number keys? Could the improvement have been caused by that change? That would be kind of weird.

seth (2007-08-12 20:08:21)

My accuracy improved sharply before the change to just pressing the number keys. I should have used more easily distinguished colors.

How to Make Your Brain Work Better in Three Hours | We Need Health (2007-09-05 15:42:34)

[...] At about 7 am I took 4 tablespoons of flaxseed oil (Spectrum Organic). I measured my mental function with a letter-counting test. Here is what happened. [...]

### **An Endangered Language (2007-08-12 21:41)**

This is the most moving YouTube video I have ever seen.

[EMBED] Background [1]here. Several years ago I visited Alaska with a friend. We stayed in Juno. One day I visited a nearby glacier. A visitor's center had a slide show about the glacier, with taped narration from a park ranger. The glacier came out in the winter, he said, and retreated during the summer. He spoke about plants and animals nearby. It was all very factual and flat but you could tell the speaker cared a lot about the glacier. How rare, I thought. Not the emotion - people care about lots of things - but its expression.

1. <http://www.kirchersociety.org/blog/2007/08/07/the-whistling-language-of-gomero-island/>

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lasser11 (2007-08-13 01:01:23)

thanks for the reminder. Living in the midwest can mistakenly cloud the fact that the world is complicated, diverse, and beautiful.

Helen (2007-08-14 04:16:21)

super interesting, thanks. relatedly, the most moving itube video I've seen - really one of the most moving things I've ever seen - made by a woman who is autistic and activist as such - - <http://www.youtube.com/watch?v=JnylM1hl2jc>. (\* I read the pdf of 'Diversity in Learning' the other day - pleasure to read and think about. Surprised Carl Rogers' isn't mentioned - maybe that is part of what the editors edited? Is his pedagogical work interesting to you? I'd be interested in your thoughts about it - )

### **The Troubles With IRBs (2007-08-13 07:26)**

In 2006, a symposium at Northwestern University discussed problems with IRB (Institutional Review Board) oversight of research. Fascinating papers based on the proceedings are [1]available. From [2]Federic Coe's paper:

In 2006, the IRB ran into heavy issues with our use of scrap urine. They performed a review of our past submissions and found worrisome irregularities.

[3]IRB Watch.

1. <http://www.law.northwestern.edu/lawreview/issues/101.2.html>

2. <http://www.law.northwestern.edu/lawreview/v101/n2/723/LR101n2Coe.pdf>

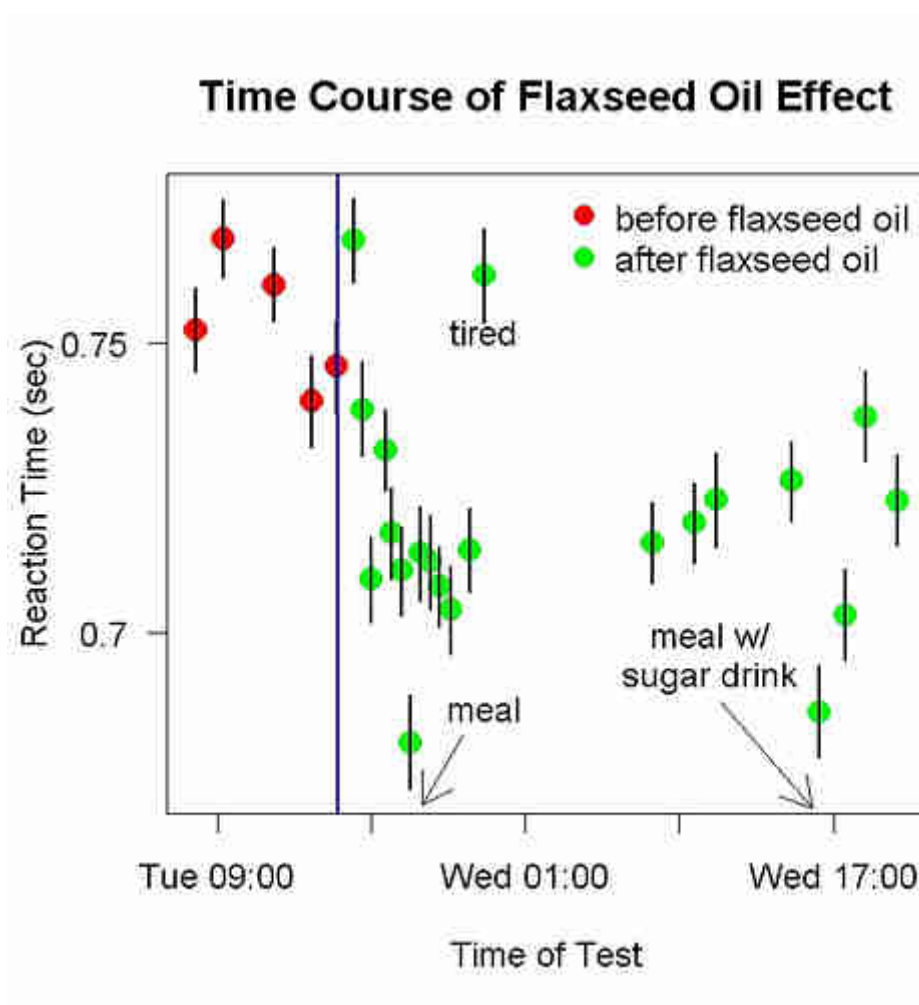
3. <http://home.earthlink.net/~irbwatch/>

### Science in Action: Omega-3 (time course) (2007-08-13 12:13)

During a recent trip to Los Angeles, I continued my self-experimental activities – three mental tests, which I did once/day. On the last day of the trip, my scores were [1]much better than usual. There was an obvious explanation: I had taken my daily flaxseed oil (4 T) closer to the time of the test – 4 hours before rather than 12 hours before. This suggested that flaxseed oil has an effect that happens fast and diminishes quickly. [2]Earlier observations had implied that the effect at least a few days to wear off completely.

Back home, I wanted to measure this effect. I started testing more often. With a two-answer (yes-no) test, I saw the short-lived effect a few times. But accuracy was relatively low (about 90 % correct) due to anticipation errors. I switched to a [3]new test that measures how fast I count letters.

After doing the new test about 70 times, my performance was fairly constant. I resumed trying to measure the short-lived effect. At 3 pm six days ago I drank 4 tablespoons of flaxseed oil. Here are the results:



The blue line shows when I took the flaxseed oil. Within a few hours, reaction time sharply decreased. The improvement slowly went away.

Two big conclusions: (1) Here is a new way to see the effect of flaxseed oil. My earlier experiments took a few weeks; this took a few days. (2) Low between-test variability. The cluster of points around the time of the first meal is an example. The one point below the cluster is a counter-example – I have no idea why it was low all of a sudden. But that is rare. Almost always erratic points suggest explanations. During the second meal I drank a sugar-sweetened drink, forgetting previous observations that these drinks lower reaction time for a few hours (no doubt because they increase blood glucose levels).

This experiment has one big flaw, which is that after I took the flaxseed oil I started making more frequent measurements. A year ago, I made the same mistake with my balance experiments. There is a kind of Heisenberg Uncertainty Principle here: The measurement itself – the test – causes learning. Learning lowers the baseline.

I'll fix this mistake and a few others and do the experiment again.

1. <http://www.blog.sethroberts.net/2007/06/30/science-in-action-omega-3-a-surprise/>
2. <http://www.blog.sethroberts.net/2007/05/19/science-in-action-omega-3-flaxseed-oil-vs-nothing-1/>
3. <http://www.blog.sethroberts.net/2007/08/11/science-in-action-omega-3-letter-counting-test>

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### **Can Professors Say the Truth? (part 1) (2007-08-13 15:34)**

Kaiping Peng, a friend of mine who is a professor at Berkeley, recently said to me that professors have an unusual place in our society: They are expected to tell the truth. Hardly anyone else is, he said. But what happens when they do?

The most impressive professorial truth-telling in my lifetime has been [1]The Man Who Would Be Queen (2003) by Michael Bailey, a professor of psychology at Northwestern. It's mainly about male homosexuals but it also discusses male-to-female transsexuals, not all of whom are homosexual. The "controversy" – actually a defamation campaign – after its publication is described in an excellent new [2]article by Alice Dreger, another Northwestern faculty member.

The serious truth-telling in the book is in the chapters about transsexuals, in which Bailey brought into public view the ideas of Ray Blanchard, a Toronto researcher. Blanchard had proposed that there are two types of transsexuals: homosexual and autogynephilic – in other words, that all or almost all transsexuals fall into one of these two categories. I'm going to call them Type 1 (homosexual) and Type 2 (autogynephilic). Both are men who become women or who want to become women; but they are otherwise quite different. There are many surface differences – so many that it is no surprise that, as Bailey says, the two types almost never mix socially. Type 1 appear far more like other women than Type 2, who sometimes resemble men wearing dresses. As children, Type 1 acted feminine; Type 2 did not. Type 1 often work in occupations full of women, such as beautician and hairstylist; Type 2 usually work in male-dominated professions, such as policeman, truck driver, scientist, engineer, and computer programmer. Type 1 usually start living as a female before age 25; Type 2 usually start much later, after age 40. Type 2 have usually been married (to a woman); Type 1 have not.

Blanchard proposed that these surface differences derive from a difference in motivation. Type 1 transsexuals are

sexually attracted to men; changing their sex will help them attract men. (They prefer straight men to homosexual men.) Type 2 transsexuals are sexually aroused by thinking of themselves as a woman; this is why they seek sex-change surgery.

Blanchard's typology, well-known to sex researchers, had not reached the public when Bailey's book was published. "When I have tried to educate journalists who have called me as an expert on transsexualism, they have reacted uncomfortably," wrote Bailey. "One said: "We can't put that in a family newspaper."

1. [http://books.nap.edu/catalog.php?record\\_id=10530](http://books.nap.edu/catalog.php?record_id=10530)

2. [http://www.bioethics.northwestern.edu/faculty/work/dreger/controversy\\_tmwwbq.pdf](http://www.bioethics.northwestern.edu/faculty/work/dreger/controversy_tmwwbq.pdf)

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Robin Hanson (2007-08-15 17:19:56)

An interesting thesis, and reasonable, but how is this an impressive example of truth-telling?

seth (2007-08-16 03:30:33)

Because of what followed the book's publication: an attack against Bailey worse than any I have seen against any other professor. This is described in Dreger's paper. I don't mean that Bailey anticipated the size of what would happen – it's hard to anticipate something that's never happened before. I mean that he knew that what he was writing would upset many people, including powerful people, and he did so without having other powerful people on his side.

Karen S (2007-08-16 07:31:52)

Academic, or for that matter, semi- or non-academic furor, is no indicator of the truth of any thesis. Nor is it a refutation. In fairness to Raymond Blanchard, his theories should be discussed as being possible. As should others. I don't see any more scientific refutation anywhere than "If you don't believe my theory, you are deluded...or unethical...or just need to be spanked!!!" To erase the voices of people who have lived through a transgender/transsexual experience simply by saying, "Well, they are just wrong, either lying or deluded" cuts off scientific inquiry then and there. That is a fair charge. I say that for both sides, and I do mean Profs. McCloskey, Conway, as well as Andrea James (who is not a professor\*), not to say Michael Bailey, Anne Lawrence, Alice Dreger, or any other of his supporters as well. I am unimpressed with any shrillness on anyone's part. Keep it calm, and academically detached. Keep it tabula rasa, too. There are many who argue transsexualism is not a mental disorder, but a state of being. Transsexuals want to choose how they deal with it, and if surgery is part of that, they should have enough control over their own lives and destinies to opt for that. That is not examined in the BBL typologies. It's already assumed to be false. It's true that no science is impartial; as long as humans conduct it, there will be biases. Part of the process of giving research out is to examine those biases (from the standpoint of our own biases, observes a skeptic) Blanchard's theories need to be examined without the escape clause. There may well be autogynephiliac transsexuals and homosexual transsexuals in the world. There may well be others typologies, however, has anyone examined what the causations of autogynephilia might be...or if it is a manifestation of something else? Does autogynephilia show up in people who are not transsexual? How about following through on the lives of transsexuals who do transition, versus those who may be convinced to live as gay men, if there are such people? Do the autogynephiles and homosexual transsexuals who transition lead happy lives..., or can they lead happy lives, especially if the public someday is conditioned to accept them as any other citizen. A huge question. I would ask a great many transsexuals some very detailed questions about that, and replicate the studies, before answering. All this said, I applaud Alice Dreger for pointing out that "attack academics" are deplorable. I would add "regardless of the theory involved." Questioning is par for the course. Ethical questioning, btw, is also, but it involves a process that does not start out with a conclusion. Alice Dreger is right in pointing that out. \*nor am I, for that matter.

Mak (2007-08-16 08:40:01)

Too bad you don't understand it from a trans perspective. You should really do a little more research before you blast those that are most affected by his "scientific" (snicker snicker) inquiry.

michael vassar (2007-08-16 09:00:17)

err... and Larry Summers?

seth (2007-08-17 05:32:39)

Larry Summers – yes, maybe worse. Those he upset weren't as upset but there were more of them.

## **Instead of Reading a Book (2007-08-13 21:30)**

I watched some of this [1]Flash art. I especially liked Scene3.

1. <http://eight8.jp/inspiration/>

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Pearl (2007-08-13 22:28:59)

Waaah! If only I lived in Tokyo, I could have seen the exhibition yesterday!! Scene 3 is so cute and reminds me so much of Tokyo; no translation necessary to appreciate it I think, but anyway Man at work: "I gotta do it! work hard!" Woman cooking: "gotta hurry!" Man eating: "ahh, happiness! the flavor of love! delicious!" Woman sitting after he leaves: "What a pain that was!"

seth (2007-08-13 22:36:21)

Thanks for the translation. The Tokyo exhibition was in an art gallery? Or a museum? I had thought that Flash art exists only on the Web so I am curious.

Pearl (2007-08-13 23:38:01)

Whoopsy, actually I was confused. The text on the right side of the page in your link indicates there was a public exhibit of the work (Night Jam 2006 8/14 in English) exactly one year ago today. It is currently 8/14 in Japan, but it is a Tuesday; I read "monday 8/14" somewhere on the page and thought it occurred yesterday. Weird. You can see photos from the event here: <http://inspiration.67.org/nj/>

## **Can Professors Say the Truth? (part 2) (2007-08-14 05:22)**

I learned about [1]Blanchard's typology of transsexuals from a draft of part of [2]Bailey's book that Bailey had posted on the Web. If correct, it is surely central to understanding male-to-female transsexuals.

I read Bailey's draft a few months after reading Crossing (1999), a memoir by Deirdre McCloskey, a professor of economics at the University of Illinois at Chicago. Crossing tells the story of McCloskey's change from man to woman. It is an emotionally powerful book, full of longing. According to Crossing and Bailey's draft, McCloskey had at least three features in common with Type 2 transsexuals (worked in male-dominated profession (economist), married, changed sex after age 40). Crossing also describes being sexually aroused by cross-dressing. This appeared consistent with Blanchard's typology – which Crossing didn't mention. Why not? I felt deceived. I wrote to McCloskey to complain:

Shouldn't you have mentioned Blanchard's ideas? Her reply: Do you believe everything you read on the internet?

No, but I believed Blanchard was a serious scientist. I did not know Bailey but he wrote extremely well. The draft I had read was brilliant science journalism. I liked Bailey's own research, too, which was about how gay and straight men differ. Blanchard could be wrong but to discuss transsexualism at book length without mentioning him seemed like writing a book about France without mentioning Paris.

[3]Part 1. Alice Dreger's [4]paper about the Bailey "controversy".

1. <http://www.blog.sethroberts.net/2007/08/13/can-professors-say-the-truth-part-1/>
2. [http://books.nap.edu/catalog.php?record\\_id=10530](http://books.nap.edu/catalog.php?record_id=10530)
3. <http://www.blog.sethroberts.net/2007/08/13/can-professors-say-the-truth-part-1/>
4. [http://www.bioethics.northwestern.edu/faculty/work/dreger/controversy\\_tmwwbq.pdf](http://www.bioethics.northwestern.edu/faculty/work/dreger/controversy_tmwwbq.pdf)

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### Can Professors Say the Truth? (part 3) (2007-08-14 21:51)

After [1]The Man Who Would Be Queen: The Science of Gender-Bending and Transsexualism by Michael Bailey was published, several transsexuals started an extraordinary defamation campaign against Bailey. The story of this campaign, including interviews, is told in the [2]new paper by Alice Dreger that I mentioned in earlier posts on this topic ([3]Part 1, [4]Part 2).

The defamation campaign was led by professors. They claimed Blanchard's typology of transsexuals was false, of course, but never clearly explained why. Bailey's crime wasn't that his book spread falsehoods; it was that it spread a truth they didn't want spread.

One of those professors was Deidre McCloskey, the author of Crossing. She wrote an [5]amazing review of Bailey's book. From her review:

Almost everyone in the scientific study of sex and gender has checked and balanced and resisted the Clarke Institute's [Blanchard worked at the Clarke Institute] theory. It has proven to be wrong and has been laid aside by the mainstream of gender researchers.

Who are these "almost everyone"? McCloskey never says. And it's a long review.

Lynn Conway, a professor of electrical engineering at the University of Michigan and a member of the National Academy of Engineering, constructed a [6]website called "An investigation into the publication of J. Michael Bailey's book on transsexualism by the National Academies". This big website has little to say about Blanchard's typology other than [7]this, written by Conway:

It is unfalsifiable (note: any trans woman who reports that she doesn't fit the classifications is explained by the "theory" as being a "liar"). Furthermore, the scheme has no predictive capabilities. Thus it is thus



untestable.

Well, which is it? "Proven wrong" by "almost everyone" (McCloskey) or "unfalsifiable" and without "predictive capabilities" and "untestable" (Conway)? McCloskey and Conway must have talked many times. This discrepancy in how they attacked Blanchard's theory shows how little they cared about its truth – or that they knew it was true.

For people engaged in what they called a noble cause (defending transsexuals), McCloskey and Conway showed a remarkable disinclination to tell Dreger what they had done. Dreger tried hard to interview both of them.

McCloskey gave Dreger some brief email answers and then

refused to tell me anything more substantial unless I first proved to her, by showing her what I was writing, that I agreed with her position.

As for Conway, Dreger was unable to reach her at the University of Michigan. Finally she called Conway at home:

We had a phone call that lasted about a minute (August 16, 2006). She surprised me by being extremely hostile at the outset. She also would not answer a question about whether she was willing to speak to me on the record. This confused me – why would she not just tell me whether or not she wanted to speak on the record. I said as much. She responded that it was very strange that I would call her at home. I told her how many other ways I had tried to reach her with no response before finally calling her home. She then said that I was stalking her and added that she would circulate this fact widely.

1. [http://books.nap.edu/catalog.php?record\\_id=10530](http://books.nap.edu/catalog.php?record_id=10530)
2. [http://www.bioethics.northwestern.edu/faculty/work/dreger/controversy\\_tmwwbq.pdf](http://www.bioethics.northwestern.edu/faculty/work/dreger/controversy_tmwwbq.pdf)
3. <http://www.blog.sethroberts.net/2007/08/13/can-professors-say-the-truth-part-1/>
4. <http://www.blog.sethroberts.net/2007/08/14/can-professors-say-the-truth-part-2/>
5. <http://www.reason.com/news/show/28928.html>
6. <http://ai.eecs.umich.edu/people/conway/TS/LynnsReviewOfBaileysBook.html>
7. <http://ai.eecs.umich.edu/people/conway/TS/LynnsReviewOfBaileysBook.html>

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A. Reader (2007-08-15 07:39:39)

Thanks for blogging on this book and the responses to it. Now I will want to read it. Having been married to a cross-gendered person (Type 2 cross-dresser, by the indications you cite) for nearly 40 years, I'm interested in what researchers may find and/or speculate about transexualality, especially concerning cross-gender and cross-dressing. My comments will stray from the main points of your blog. Discovery Health aired a fascinating televised documentary, "I Am My Own Twin," about Natural Chimerism, in which one has two genetically distinct types of cells. In such an instance, a person may also be, essentially, his or her own twin. I immediately wondered if there have been any medical studies to research if chimierism might be a possible root of transexuality, especially cross-gendered behavior, in which, a man feels like he is a woman trapped in a man's body, or visa versa for a cross-gendered woman? After knowing and intimately experiencing shared-life with a male cross-dresser for so many years, and realizing that there are an enormous variety of genetic anomalies, some rare, some more common than we may know, I would have difficulty believing transexualism is a completely learned, adopted or adaptive (i.e., mainly

psychological) behavior. From Wikipedia: "Human chimeras were first discovered with the advent of blood typing when it was found that some people had more than one blood type. Most of them proved to be "blood chimeras" – non-identical twins who shared a blood supply in the uterus. Those who were not twins are thought to have blood cells from a twin that died early in gestation. Twin embryos often share a blood supply in the placenta, allowing blood stem cells to pass from one and settle in the bone marrow of the other. About 8 % of non-identical twin pairs are chimeras." [http://en.wikipedia.org/wiki/Chimera\\_\(animal\)](http://en.wikipedia.org/wiki/Chimera_(animal)) #Natural \_chimerism An excerpt from the blog, "Inspired Moms.Com": During pregnancy, the majority of mothers and children will exchange cellular information in a process called microchimerism. This is actually beneficial to the Mother and Child at this point because it encourages the mother to not treat her child as a foreign body and spontaneous abort or miscarry her child. However, the cells and information received from the child remain. In fact, in some studies it has been shown to remain decades after childbirth in a mother's system. When a mom has other children, it is highly likely that the DNA information from the other child is passed onto the younger sibling in the womb creating Chimeras, or individuals who have been affected by Chimerism. <http://www.inspiredmoms.com/subpage/FeatureArticles/OctoberNovember2005/healthWendyStewartHamiltonChimera%20OctNov2005.htm> Also: <http://www.medterms.com/script/main/art.asp?articlekey=8905>

Rachel Owens (2007-08-16 17:31:12)

The reason we transsexuals have so much problem with the two type is there are so many of us who violate one or more rules about one of those 'types'. Those come across us as stereotypes, which is why there have been so many attacks on Bailey for his research. Sure there are many who fall under 1 or 2, but there are many that confuse or blend between the two at the same time. Saying there are two types of transsexuals is like saying there are two types of gay men. Feminine gay men, and leather daddies, it's absurd to think everyone fits into two categories. Bailey refuses to admit that bisexual men exist, he believes in the 'gay, straight or lying' idea. I myself am a transsexual. I transitioned at age 23 (type 1). I have a Master's degree in business (type 2). I was feminine as a child (Type 1). I pass fairly well, ie: not a man in a dress (Type 1). I crossdressed when young (Type 2). I date men and women (Neither Type). I didn't marry a female (Type 1). I don't obsess over being 'girly' insofar as I don't even own a single dress or pair of high heels. Bailey seems obsessed over the fetishization of female clothing when there are plenty of us who just wear jeans and t-shirts. I don't know what 'type' that qualifies me as. Bailey seems to refuse to admit people like me exist. Just like he refuses to admit that bisexual men exist. Source on his bisexual men study. <http://www.cbsnews.com/stories/2005/08/30/health/webmd/main805081.shtml>

seth (2007-08-17 06:08:37)

"So many attacks on Bailey for his research" – well, his research is mostly about male homosexuals. The typology you mention is Blanchard's research, not Bailey's. So it is clear that Bailey was not attacked because of his research. He was attacked because he wrote a book that included Blanchard's research. The types that Blanchard hypothesizes refer to motivations for sex change. The two hypothesized motivations correlate, but not perfectly, with more visible characteristics, such as married/unmarried. There aren't "rules" about the two types, just correlations.

Rachel Owens (2007-08-17 12:41:28)

I beg to differ. Bailey himself uses the same dichotomy as gay, straight or lying. You are type 1, type 2 or lying. In particular Type 2's are always lying to make themselves come across as type 1's. Quotes follow to support this. "The most important reason that most people do not realize that there are two types of transsexuals is that members of one type sometime misrepresent themselves as members of the other. ... they are often silent about their true motivation and instead tell stories about themselves that are misleading and, in important respects, false." p146 "Once you've learned about autogynephilic and homosexual transsexuals and seen several of each, distinguishing them is easy." p192 "The current popular literature about transsexualism is noteworthy for its ignorance of the distinction between autogynephilic and homosexual transsexuals." p216 He then also proceeds to defame Type 1's by calling them uneducated and stupid in various ways, as well as sex crazy. "Homosexual transsexuals tend to have a short time horizon, with certain pleasure in the present worth great risks for the future." "Prostitution is the single most common occupation that homosexual transsexuals in our study admitted to." p184 "Nearly all the homosexual transsexuals I know work as escorts after they have their surgery." p184 "As for shoplifting, homosexual transsexuals are not especially well suited as much as especially motivated. For many, their taste in clothing is much more expensive than their income allows." p185 So, in his book, he says all Type 2's are lying. All Type 1's are sex crazed

whores. Why wouldn't we be angry? Shouldn't it be obvious? Have you ever read *The Man Who Would be Queen*? All of this is right there. According to him and Blanchard I am either a sociopathic liar, or a sex crazed kleptomaniac obsessed with clothing that's suited for nothing but prostitution. Now, I won't condone what Conway and others have done. I don't see any reason to make up false accusations of Bailey's personal behavior when all that's needed is to well...actually read the book and understand how much it degrades. As for Conway being unable to cite any refuting research, I can tell you from my personal interactions that therapists and psychologists aren't buying it in the slightest. I've been to roughly ten or so since this book has been released and they all disagree with the book almost as vehemently as any transsexual. This is of course only my personal experience and no real survey of any sort, it's also confined to the state of Virginia, but I still found it interesting.

Very Anonimoose (2007-09-06 07:26:57)

Seth, your criticisms of Dr Bailey's detractors seem fine on the surface, except for one small thing - we don't fit into those neat boxes. Many of us have attributes of both types, as Rachel so eloquently pointed out, and I agree with her that your response to her post did not adequately address her concerns. To say there are two types and then say they don't correlate "perfectly" is not only an understatement but it leaves the majority of transsexuals who don't fit neatly into those types in limbo. If many of us don't fit the categories, then there are simply not enough categories. Or the wrong ones. My own background is as confusing as Rachel's: I transitioned at age 36 (type 2). I have spent most of my working life in clerical, admin and assistant roles generally held by females (type 1). I refused to see myself as feminine as a child but due to family pressures I had started "shaping myself" male at a very early age, yet schoolmates saw though my act and I was bullied (for being gay and too girly) to the point where I had to leave without any qualifications (Type ?) I pass as a woman in all walks of life and straight men often flirt with me - and I with them (Type 1). I crossdressed when young (Type 2). I am fairly intellectual (Type 2). I date men exclusively and have zero sexual interest in women (Type 1). I married a female earlier on i life (Type 2). Like Rachel, I'm not obsessive about being "girly" and wear jeans, shorts or slacks most of the time. I agree with Rachel that Dr Bailey oversexualises us. Did he wonder for a moment what could make a male sexually aroused by feminisation? I would have thought that was crucial. It doesn't take a genius to know that autog, being an unnatural impulse (ie. it is not partner-based), is caused by a form of childhood or teen trauma. What causes that particular kind of trauma? A devastating sense of emasculation as a child. Does a male child have to be feminine in fact to feel emasculated? No, it's all relative, and some may be androgynous when young but grow to be masculine, but they still retain the self-image. That's why some with an autog background are feminine (which is plain old human diversity) and others are not (slow to mature). This is hardly brain surgery, yet a supposedly serious researcher could not even come close, nor even try coming up with some hypotheses. He did, however, get to spend time in gay bars chatting with - was it 9? - transwomen. Is this the sort of research a "truth teller" does? That's just one reason why his peers rejected his book. So where does all that that leave me? I was a Type 1 who fought against my softness through family attitudes, and the resistance and subsequent insecurity and harassment gave me a Type 2 fetish (ie. damaged sexuality). If you accept it, then you're no going to be as traumatised. My confusion and denial lead to me a misguided Type 2 marriage that I thought would fix me up (and caused unfair problems for an innocent woman). I know now that, as a male, I was always bi with a strong gay preference, yet I feel I was not a "proper" gay because I never felt happy with my "equipment" at the time and pretending to be masculine made me feel disturbed. I have a fairly androgynous gay friend who knows my past and in talking we noticed how similar aspects of our youth were. One time we sat down and compared notes; we found only a few differences. I always looked more naturally feminine than he ever did. I never liked having a male organ (I used to try to wish cancer on it) and he always did. I never had that rampant male libido that he has. He has always enjoyed casual liaisons whereas they make me feel miserable and as though I've wasted my time. He knows more about tupperware, fabrics, homeware and furnishings than I do. He also knows a lot more about cars (which isn't hard). He's a bright boy. Joking aside, when I had the surgery I told myself I was doing it for practical reasons like being able to have face-to-face intimacy, not feel paranoid in change rooms, wearing tight jeans, changing my birth certificate, not worry about going to hospital if in a car accident, etc. Yet I was really surprised to find the surgery had another effect - I started being happy and I became functional. Promotions at work soon followed - for the first time in my life - because I could finally concentrate. I now earn over double what I did 13 years ago in my male life. I found that unexpected effect of the surgery weird because I never believed in the woman-in-a-male-body line; I always thought of TSism as just being a long way towards the end of the the feminine end of the male scale, to the point where living as a woman was more comfortable and allowed you to be more natural. The fact that I had that reaction suggests to me that there may well be something to the idea of gender identity, despite the naysaying of cynics. Perhaps it's an interaction of body,

mind and emotions? I had to work hard to shake off the damage to my sexuality caused by autog and I will never be 100 % fixed. It seems that, in fantasy, I can replace autog fantasies during those times when I can be bothered pleasuring myself with rape fantasies with good effect. I think that says a lot about the dynamics. In terms of my REAL orientation, I am now left with a low-intensity heterosexual preference (as in a woman who falls in love with men). One problem in removing the cancer of autog from my sexuality is that my surgery was badly done and I often experience pain during sex, even a decade post-op and despite two follow-up surgeries to remove neuromas. So I can only be with men who are modestly endowed and even then it sometimes hurts. Transwomen face a lot of problems and the last thing we need is a psychologist publishing his rough guesses and presenting them as The Truth. We have enough problems without that kind of "truth telling". A bit of real truth telling (without inverted commas) would be nice. Hopefully you will find this bit of REAL truth-telling of use in your practice.

seth (2007-09-06 15:23:45)

A theory that there are two underlying reasons for TS doesn't mean that the two clusters must be perfectly distinct. You seem to be much closer to Type 1 than Type 2. You don't mention your job; "intellectual" isn't type 2, it is computer programming, scientist, engineer, and other male-dominated jobs that are type 2. How were you "damaged" by autog? It's unclear what you mean.

Very Anonimoose (2007-09-08 23:55:20)

Thanks for your reply, Seth. I don't think there are two underlying reasons. Dr Bailey has focused on two underlying reasons but it's so much more complex. The whole idea that being a "gay boy" is the only possible manifestation of high level male femininity is terribly simplistic. It entirely disregards our ability to shape ourselves and our being, as though suppression and repression don't exist. It also disregards the varying flexibility of people. Some of us are capable of shaping ourselves to fit others' conceptions of us very convincingly and others cannot. How can a person whose specialty is studying the human mind disregard the way we shape ourselves to suit our environment? Any classification system that ignores asseveration and denial in an area where they play such a crucial role due to the intensity of stigma is can only be wrong or, at best, incomplete. Some people are more motivated than others to do alter themselves to fit the expected mold. If a budding T-woman has highly phobic parents as a child it can cut either way; sometimes we give up ever gaining their affection and camp it up to the max as a form of rebellion. If we feel parental approval is not a lost cause we might try to shape ourselves in a way that makes sure we win their approval. There is also a matter of pride, confidence and character/personality strength. Some of us think "I am who I am and I see no reason to change myself to suit anyone else" while others have more of a "Gee, I'd better be careful of I'll lose their love" attitude. The problem with Dr Bailey's approach is that it doesn't seem to be presented as "two underlying reasons" but just two types of T-woman. That's the way it's presented - is that if you are a transwoman you are either a girly gay guy who like straight men or you are a straight guy who likes wearing dresses or fantasises about having female equipment. No argument. If you say otherwise you are lying. I have worked in HR for most of my working life. Women abound, gay men are common and potential partners are thin on the ground :( Autog is highly damaging to a person's relationships as is any sexual impulse that is not relationship-based and I talked about this quite a bit in my earlier post. People are supposed to form relationships, not to fantasise about weird self-oriented things. I can be turned on by a gorgeous man or one with whom I share a special connection, but my strongest sexual impulse is towards humiliation and hurt - to myself. How horrible is that?? I am bitter about what I lost through all this and it annoys me when psychologists or psychiatrists create a very rough taxonomy on us that only serves to further damage our standing in the community. It's like kicking a kitten. As I mentioned in the previous post, the trauma/denial that creates autog can occur in both masculine and feminine kids - in the former due to slow growth, exaggerated cultural masculinity or misconceptions about self, and the latter due to denial of your pronounced feminine or androgynous features. If you accept and embrace your feminine aspects in youth then you won't be an autog, but more likely to suffer other neurotic reactions from the victimization you will inevitably suffer (that autogs change themselves to avoid). This can lead supposedly 'homosexual' transwomen to have an insatiable hunger for masculine love and acceptance to counter the lack they experienced when they were young. Then they have to put up with being tagged "sex mad" or "boy crazy". We can't win. In my opinion, TSism in its pure form is about diversity. Males vary from the hyper-masculine to the highly feminine, with most sitting somewhere in between. If you are at the feminine end of the scale then it can make for a more comfortable life to live female because you fulfill more societal/familial expectations naturally without acting or trying to muscle up or whatever. You can be yourself and actually win approval for it. I see it as a mix of the physical, mental and emotional and if you are androgynous in all areas then male life is an endless struggle. By the way, I think Dr Bailey's preferred

classifications will break down even further due to the internet because more young autogs will change over since they will be more aware of their options and feel more accepted through cyber communities.

Vera Nonimousse (2007-09-27 20:30:18)

Seth, I am disappointed. I thought you would show interest in discussing the issues but you seem uninterested. If you are unable to work past the points I make then you don't have a right to publicly spread views on the subject, unless they are modified greatly to take our views into account. If Dr Bailey wasn't so unreachable then I'd put these issues to him, so it has to be you. Those who like Dr Bailey's views have complained a lot about the lack of civility of those with contra views, yet when confronted with reasoned debate it seems they shy away. It doesn't stop them spreading a hypothesis masquerading as a theory that undermines the lives of transwomen, though.

seth (2007-09-27 23:01:38)

The "issue" for me is freedom of speech. Not whether Bailey was right, which is what you are talking about. To call what Conway and McCloskey did "lack of civility" is understating it.

Vera Nonimousse (2007-09-30 15:06:41)

Seth, you called this topic is called "Can professors speak the truth?". If Dr Bailey is right or not - speaking the truth - is exactly the "issue". The topic would more accurately be called "Can professors present half baked hypotheses seemingly shaped by their own salacious attitudes as scientific fact with impunity?". The answer is no. If Dr Bailey hurts vulnerable people by misleadingly presenting pseudo-science as science, why should he maintain a good scientific reputation and high status? Why should he not suffer sanctions and criticism? It's nothing compared with having your civil rights damaged; lawmakers are now referring to Dr Bailey's "work". It's so frustrating. I found your blog through a news article where you were interviewed. You defended Dr Bailey AND championed the whole flawed homo-auto model (further sullyng the reputation of transwomen in the process). How can you now say that the accuracy or not of the material is not the "issue" for you? You might think about admitting you were wrong and apologising. I disagree with personal attacks on Dr Bailey but the harm done by them is minuscule compared with the hurt he has caused - by NOT speaking the truth.

seth (2007-09-30 15:26:51)

"I found your blog through a news article where you were interviewed. You defended Dr Bailey AND championed the whole flawed homo-auto model (further sullyng the reputation of transwomen in the process)." What news article was that?

Vera Nonimousse (2007-10-03 01:31:25)

I can't remember now. It was about a month ago. I found it via Google news and I immediately looked you up to see where you were coming from, found this page and thought I might try to clarify a few things.

seth (2007-10-03 03:28:40)

I have never done in an interview what you say I did.

Googla (2007-10-07 03:18:14)

All I know is that you were quoted extensively in this article found on Google News. I had never heard of you until then. I am very honest and have no agenda. No, I am not part of the anti-autog ring. I just found you quoted heavily via Google news, that's all. I tried to find it again but I can't. This is odd because I can't imagine you being unaware of articles you appear in unless the journalist quoted you from a website (this website?).

## **Hope and Surprise (2007-08-15 05:31)**

From the [1]SLD forums:

I hoped it [the Shangri-La Diet] will work but still surprised it really does! . . . I had a piece of chocolate in the afternoon but not as much as normal.

Nicely put. I feel the same way – hopeful but still a little surprised. Hope and surprise go together. If you were sure something was going to happen, you wouldn't hope for it, you'd expect it.

Curiously, hoping for something is more pleasant than expecting it. Compare "I hope to get a sweater for my birthday" and "I expect to get a sweater for my birthday."

1. <http://boards.sethroberts.net/index.php?topic=5442.msg57229#msg57229>

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KimBooSan (2007-08-15 06:32:04)

And, I think, the fact is that most of us who have dieted over and over and over again for years are well trained to "hope but not expect." We hope WW will work; we hope Atkins will work; we hope the weight will stay off. As I wrote in my own SLD blog about Pavlovian responses, just waking up one day to find that you are not physically hungry at all doesn't quite change how you think about it. Suddenly finding an AS that works does not translate into that we expect it will work. Personally, I'm being very cagey about the possibility that I might lose weight because I cannot bring myself to expect it. But hope? Oh yes, I hope. I dream, I hope, and I wait... :)

Timothy Beneke (2007-08-15 09:59:51)

I think "hope is more pleasureable than expectation" is tied to a kind of reverse "ordinization", which has to do with how emotionally charged events become familiar over time lose their emotional charge. Timothy Wilson and others write about how after something good or bad happens to us, the consequences are smaller than we expect, because they become familiar to the mind and lose their charge. Life goes on. In looking to the future, the familiar – the expected – also has less emotional charge. Interesting: Do we dread the expected? Yes, but there is always in the dread an awareness that it might be terrible and not just bad. What is the opposite of dreading the expected? There are researchers claiming that negative emotions have more charge than positive for humans. The worst that can happen to us may be death or being tortured – but is there anything positive that has a charge as strong as negative as those do?

### **Crazy-Spiced Smoothies Revisited (2007-08-15 19:43)**

The [1]theory behind the Shangri-La Diet says that food with unfamiliar flavor will be just as unfattening as food with no flavor (such as flavorless oil and sugar water). The Shangri-La Diet mentions using random spice combinations to get unfamiliar flavors.

I do this with smoothies. With smoothies there is no sense of loss – you're not "ruining" something by randomly flavoring it. In my practice, "adding random spices" (also called crazy-spicing) means adding spices from three or four randomly-chosen spice mixes. It works great. Today I made a smoothie from crushed ice, plain yogurt, an egg, protein powder, powdered fiber, sugar, Splenda, Tabasco Sauce, vinegar, and, as I said, lots of four randomly-chosen spice mixes (Russian Sausage, Poultry Seasoning, etc.). Were I not in the middle of a flaxseed-oil experiment, I would have added flaxseed oil or some other oil. It tasted great.

As [2]Michel Cabanac might say, pleasure is additive. This drink provides pleasure from these properties: creamy, protein, cool, liquid (satisfying thirst), sweet, salty (from the spice mixes), hot (Tabasco Sauce), spicy, sour. Nine sources, more than most food. They add up to a lot. It doesn't matter that it tastes like nothing and that on a menu, no one would order it.

An hour later I thought: That tasted so good! But I was too full to want more.

I will be blogging more about that egg.

1. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>
2. [http://www.obesite.chaire.ulaval.ca/cv/Cabanac\\_Michel\\_E.htm](http://www.obesite.chaire.ulaval.ca/cv/Cabanac_Michel_E.htm)

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green smoothies (2010-06-29 17:08:29)

While we're talking about Seth's blog » Blog Archive » Crazy-Spiced Smoothies Revisited, Filtered water and organic fruit and greens are best - but again, do the best you can with what you have.

### **Can Professors Say the Truth? (part 4) (2007-08-16 03:08)**

Deidre McCloskey and Lynn Conway – the subjects of my [1]previous post on this topic – are both powerful persons. McCloskey is Distinguished Professor of Economics, History, English, and Communication, a title created just for her. In October 2007, she will receive an honorary degree from Goteborg University. Conway is a member of the National Academy of Engineering. McCloskey and Conway abused their power when they attacked Bailey.

As awful as their actions were, even worse is what Northwestern University administrators (led by Provost Lawrence Dumas) did: Let themselves be used as tools in the attack. McCloskey and Conway master-minded the filing of an absurd human-subjects complaint against Bailey – and Northwestern took it seriously! As Bailey [2]says, it was "obvious to Northwestern officials" what McCloskey and Conway were trying to do (ruin Bailey) and why. It was like the teacher in a playground taking the side of the bully. Except worse, because Bailey could have been fired.

Kudos to Alice Dreger for shining light on a very unsavory episode in American academic history.

[3]Dreger's paper. [4]Part 1. [5]Part 2. [6]Part 3.

1. <http://www.blog.sethroberts.net/2007/08/14/can-professors-say-the-truth-part-3/>
2. <http://www.chron.org/tools/viewart.php?artid=1248>
3. [http://www.bioethics.northwestern.edu/faculty/work/dreger/controversy\\_tmwwbq.pdf](http://www.bioethics.northwestern.edu/faculty/work/dreger/controversy_tmwwbq.pdf)
4. <http://www.blog.sethroberts.net/2007/08/13/can-professors-say-the-truth-part-1/>
5. <http://www.blog.sethroberts.net/2007/08/14/can-professors-say-the-truth-part-2/>
6. <http://www.blog.sethroberts.net/2007/08/14/can-professors-say-the-truth-part-3/>

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April (2007-08-16 08:32:42)

I've always found myself surprised by those who didn't expect the kind of vitriol that Bailey received. You take an already oppressed group of people (transsexuals) and combine that with a scientific theory that is sure to pick up press and portray transsexuals negatively. Regardless of the truth of the matter, \*of course\* there would be negative feedback. The problem with Blanchard/Bailey's theory is makes grand, overarching statements about a group of people without the incredibly strong statistical evidence needed to justify it. Take myself for instance: I'm a post-op transsexual who is married to a woman (type 2), transitioned before 25 (which would make me type 1), in a male-oriented line of work (type 2), but never got aroused by thinking of myself as a woman or by cross-dressing (type 1.) One of my oldest transsexual friends is interested in men (type 1), transitioned after 40 (type 2), in a male-oriented line of work (type 2), but never got aroused by cross-dressing (type 1.) To anybody who is personally familiar with a large number of transwomen, the thought that such a theory could pass any kind of statistical muster seems almost comical. \*That\* is why there is such a backlash to it. It's a complicated world out there, and the sciences (especially psychology) that proclaim all people are either Type A or Type B of anything has been historically been fraught with inadequacies. It is lamentable that Bailey himself was targeted and not his theories, but this sort of thing has happened before when somebody writes a popular-science book and becomes the spokesperson of a scientific theory (such as with "The Bell Curve".)

Mak (2007-08-16 10:48:58)

As I said (before my comment on your other pages was erased, you really should do more research into what OTHER trans women (besides Conway and McCloskey) think of Bailey and Drager before you take the position you do. You really don't add anything of substance to the concept of truth when you defend Bailey.

seth (2007-08-17 05:50:10)

April, I don't understand what you mean when you say Blanchard's theory needs "incredibly strong statistical evidence". For you to believe it? For me to believe it? "A scientific theory that is sure to pick up press" – Bailey found the opposite, newspaper reporters didn't want to hear it when he said it. Blanchard was familiar with a large number of transwomen, and he did not find his theory comical. Nor did Bailey, also familiar with a large number of transwomen. Re "The Bell Curve": Murray was not attacked with the vitriol that Bailey was attacked with. Mak, I've read a lot about the Bailey "controversy", including what other transwomen think. I posted about this stuff because it interests me and I hope readers of this blog will be interested as well. Some of what I have written is new – for example, pointing out the contradictory ways that McCloskey and Conway criticize Blanchard's theory.

April (2007-08-17 07:34:22)

It needs "incredibly strong statistical evidence" if it is to be The Truth - that is what you're driving at, correct? People are free to believe whatever they want, whether it's regarding to the flatness of the Earth or the origin of our species, intelligence of races, or whatever. For it to be The Truth, it should have some kind of statistical validity, and be easily falsifiable, and agree with additional research. Of the forty or so transwomen that I know, only one or two agree that they easily fit into one of his two categories. If the rest of the trans population is feeling that their existences are being invalidated by these claims, then it really shouldn't be surprising that they have defended themselves (and some, as you pointed out, have done so to excesses that have damaged their credibility.) If I were to write a pop-science book that claimed that Cal professors were actually considerably less intelligent than Stanford professors, wouldn't you agree that such an extraordinary claim required extraordinary proof? If I didn't have some sort of evidence (as Bailey doesn't), in the form of WAIS scores, SAT scores, maybe some kind of publishing history, etc., then I would I even deserve to be defended from any public outlash?

Andrew Gelman (2007-08-17 12:51:13)

I think April makes a good point that, just because a person is attacked in an unfair way, it doesn't make his theory true. The fact that Blanchard "was familiar with a large number of transwomen, and he did not find his theory comical" is not really



additional evidence, since he was the one who came up with the theory in the first place, right? It would seem fairer to describe the case as an open question, perhaps with so much politics on both sides that it will never be possible for outsiders such as myself to be convinced of the truth one way or another. (Just as, for example, no amount of Middle East archeology is going to be able to convince non-experts of the amount of truth in various passages from the bible—there are too many people on both sides of the issue who are pre-convinced of the truth of their side of the story.)

Rachel Owens (2007-08-17 13:30:07)

Okay, I was trying to think of something more scientific and actually try to cite examples of refutation of the two-type theory when I just realized the following. I don't really need to do that, because Bailey himself states he wants us to be happy. So, I'll take it from that angle. Unlike many transsexuals I have actually read the entire book. It makes me feel attacked, damaged and dirty. The book made me feel \_worse \_ about myself, it made me feel like some sort of sexual pervert, it made me feel even more isolated and discriminated against than I already am. I know Bailey claims to be focused on the happiness of transsexuals, but just reading his book has made me extremely unhappy and disgusted with myself because I am either a liar or an ideal prostitute. The book makes me, on a personal level, feel worse off than before I read the book. That's all that matters to me personally.

Boo (2007-08-17 14:46:45)

"Blanchard was familiar with a large number of transwomen, and he did not find his theory comical." Yes, but you see, among the many many flaws Blanchard overlooked was that he was in a position to get those transwomen to tell him whatever he wanted through his control over whether or not they got medical treatment. If Blanchard were to declare tomorrow that all transsexuals like to wear giant pink bunny suits, pretty soon all the transsexuals who are trying to get government subsidized medical treatment in Ontario, which is only available through his clinic and can be denied to anyone for any reason, would start showing up at his clinic in giant pink bunny suits, and he could write another "scientific" paper about bunny fetishism in transsexuals. But you're right, really. It's just so unsavory when the damn ni- oops, transsexuals don't know their place.

seth (2007-08-17 16:15:18)

"If I were to write a pop-science book that claimed that Cal professors were actually considerably less intelligent than Stanford professors, wouldn't you agree that such an extraordinary claim required extraordinary proof? If I didn't have some sort of evidence (as Bailey doesn't), in the form of WAIS scores, SAT scores, maybe some kind of publishing history, etc., then I would I even deserve to be defended from any public outlash?" Answer to Question 1: No you would not need "extraordinary proof" to say such a thing. You might need such proof to convince other people. Bailey was not proposing Blanchard's theory, he was reporting it. Blanchard's theory had stood the test of time in his and Bailey's community of researchers. Answer to Question 2: Bailey was not reporting his own ideas; he was reporting Blanchard's – who did have evidence. Bailey was appropriately not going over much of the evidence because it was a book for a general audience, not a scholarly paper. Yes, Bailey deserved to be defended. For the same reason the Bill of Rights defends freedom of speech. Boo, if you want to list the "many many flaws" in Blanchard's work I would be happy to post it and send it to Blanchard to see if he wishes to comment. Andrew, you write: "Fairer to describe the case as an open question." It's not quite clear what you mean. Bailey did not say that Blanchard's theory couldn't possibly be wrong. Bailey did say – by giving the theory so much space – that it was a reasonable theory, the best so far, and seemed credible to him based not only on Blanchard's evidence but also Bailey's own experience. To call this an "open case" – if I understand that term correctly – seems to be ignoring a lot of evidence, including the evidence in Blanchard's papers, the reactions of other sex researchers to the theory, and Bailey's reasons for believing the theory.

Andrew Gelman (2007-08-17 18:24:13)

Seth, You've clearly read more than I have in this area, so I defer to your knowledge about this case. But in an area such as sexual preference, where the data probably aren't so clean, and the phenomenon itself is changing rapidly, I'd expect scientific research to be pretty preliminary and inherently not so solid. Hence, maybe it's a bit strong to refer to Blanchard's findings as "truth." Remember how, when we taught our course on left-handedness, there were many published papers but still many open questions? And some of the published papers seemed to contradict each other? And there were always worries about data quality? I'd expect to see much more of these problems in studies of transsexuals. Not to knock Blanchard, just to say that there might be legitimate differences of opinion—even if he and Bailey found the theory to be reasonable, others might

have good grounds to differ. Of course, that's no excuse for intimidation, suppression, etc.

seth (2007-08-17 20:44:32)

The truth that Bailey wrote was that a serious scientist had come up with a reasonable theory that deserved the world's attention – a theory that Bailey himself found credible. Bailey's book is science journalism. Like journalism it tries to reach a broad audience. Bailey's book is especially journalism when he wrote about someone else's (Blanchard's) research. It's like a quote: No one criticizes a journalist if the words inside a quote make a false statement. (Peter said, "The world is flat.") The question of accuracy is whether or not the person quoted actually said them. That's what I meant when I said Bailey spoke the truth: He told the world about Blanchard's ideas. "Others might have good grounds to differ." They might, but I am still waiting to hear them. If anyone will send me a list of such grounds, I would be happy to post it and send it to Blanchard for comment.

Robert Owen (2007-08-18 01:55:55)

You continue to seem to state that Blanchard's theory is more or less 'settled theory or science' etc. However I have googled constantly for over an hour just now and the only study I can find discussing this, aside from Bailey's pop-science book, is Blanchard's 1989 study. If it is so studied, why can I only find one study, the original, on all the internet? I would assume if this was such a solid theory it would have been tested several times, but I see no evidence of that anywhere. Quotes I have found more recently from Blanchard seem to indicate he isn't even studying transsexuals anymore, he has no interest in continuing the work. How can something be refuted or supported with so few studies? I'm not a scientist and especially not a psychologist, but I thought the point of a new theory was to test it over and over again. I'm not the best internet searcher but I would have thought I would have found at least one more study in support/against, I can't find ANYTHING, pro or con his findings. What other studies have you seen that bring you to agree with his findings? Are all these studies in journals then? I can't even find citations for them though, nothing at all.

Boo (2007-08-18 04:35:13)

"Boo, if you want to list the 'many many flaws' in Blanchard's work I would be happy to post it and send it to Blanchard to see if he wishes to comment." I already put three of them into comments on your Huffingtonpost blog, so you can start there. I doubt he'd be willing to acknowledge that his clients lie to fit into his typology tho, for some reason the "conservative" clinicians never seem to want to admit that their clients are just as capable of manipulating them as they are capable of manipulating their clients. And if you brought up the fact that not one of his studies ever involved comparing transwomen to cissexual women, he'd probably look at you like you were from Mars. After all, these are "transsexual men," so what on earth could women have to do with anything? (If you pay enough attention, you may notice that when Blanchard and Bailey talk about femininity in transwomen, they are most definitely not talking about the degree to which we're like cissexual women. They're talking about the degree to which we're like effeminate gay men, which is rather a different thing.) Plus: Blanchard raised the possibility that AG might actually be a reaction to some cases of transsexualism in an early paper, then just ignored it. The idea that it's more of a side effect that can occur in some transwomen who repress their TSism is actually more consistent with the evidence of transwomen who acknowledge eroticism connected with their TSism, since they consistently say their TS feelings developed well before any eroticism occurred, and faded away once they began transition. It also doesn't make sense from a physiological point of view that AG could motivate transition, since the mtf transition process involves lowering testosterone levels, which is known to diminish paraphilic drives, which should take the desire to transition away with them if they were the cause of it. This is actually what happens when middle aged transvestites try to transition. A few months on hormones, and they're like oh, this isn't the kick I thought it would be. Blanchard also notes that male-attracted transwomen tend to transition earlier in life than other transwomen, but overlooks that this is something we should expect regardless of whether or not his typology is accurate. Transwomen who exist in the gay community before transition are in an environment where cross-gendered behavior is much more visible and tolerated than it is for transwomen who aren't in the gay community, and hence they would tend to come to see transition as a realistic option sooner. It's also worth noting that there doesn't appear to be a single transwomen alive who completely agrees with them. Willow Arune has denied having a history of crossgendered eroticism, and in her shortlived "autogynephiliasupport" group (which Yahoo shut down after she started another group devoted to cyberstalking Andrea James- a common oddity of Bailey sycophants is their weird fixation on Andrea) of the dozen or so actual "autogynephilia supporters" who made themselves known, most denied that AG was

a paraphilia. Even his number one cheerleader Anne Lawrence makes claims about herself that are inconsistent with the theory, such as claiming to have been effeminate in childhood. (Although to be fair, I suppose it is possible she's just trying to demonstrate his contention that transwomen such as herself are prone to lie about their pasts.) The transkids site disputes the notion that transwomen of the "type" they choose to identify as are well suited to prostitution. Ironically, there are actually several "hallmarks of autogynephilia" on the transkids site if you look hard enough. Hmm... more fun Blanchard questions: "Can you construct a rationalization for why Maxine Petersen went before the Canadian Legislature to testify against adding transsexuals to Canada's human rights legislation that doesn't involve the fear that it might undermine your control of your clients?" "Did it ever once occur to you that forcing people who have serious body image issues, often involving their genitalia, to let you strap machines to their genitals and make them watch a bunch of weird fetish porn is not exactly the most ethical thing to do?" "Has it ever occurred to you that forcing transwomen to act out stereotypes of femininity such as only wearing skirts or dresses will harm your ability to make unbiased assessments of their behavior?" "Are you aware that women do in fact wear pants?" "Is there any rational purpose to demanding control of what your clients can change their names to?" "Would a transwomen named Terry be the end of civilization as we know it?" "Does the strain of pretending that the multitude of gay and bisexual transmen out there don't exist ever wear on you?" "The truth that Bailey wrote was that a serious scientist had come up with a reasonable theory that deserved the world's attention" a theory that Bailey himself found credible." The truth is that Bailey lied repeatedly in the book and in his subsequent responses to his critics. When he grudgingly acknowledges that Blanchard's ideas are not accepted by the majority of his colleagues, he claims this must be because they just aren't well read enough. The truth happens to be that Blanchard's colleagues are well aware of his ideas, but find them silly and not particularly applicable to many of the clients they see. The truth is the claim that Bailey's critics all subscribe to a "feminine essence narrative" or claim to be or have been "women trapped in men's bodies" is false. The truth is that McCloskey's book makes no such claim despite Bailey's claim in his book that it does. The truth is that the only place on her website where Andrea even uses that phrase is to mock it. The truth is that Bailey lied when he claimed Lynn Conway and Andrea James did not want people to read his book, as both had prominently displayed links on their websites to where the whole book could at the time be read online for free. The truth is that Bailey exposed his complete and utter contempt for transwomen when he called his own words "dirty captions" and "obscene" when applied to nontranssexuals. The truth is that however much he might like to believe otherwise, our lives are not delineated by the degree to which we make "single, heterosexual men" like Bailey pitch a tent. And here's a question for you- applying Baileylogic where objecting to something means it must be true, and considering that denial of autogynephilia is alleged to be a symptom of autogynephilia, let me ask you something: Are you autogynephilic? And if your answer is no, why should we believe your denial any more than Blanchard and Bailey believe the denials of transwomen?

seth (2007-08-18 05:06:55)

Robert, yes, the papers are in journals. Here are some citations: Blanchard R. Early history of the concept of autogynephilia. Arch Sex Behav. 2005 Aug;34(4):439-46. Blanchard R. The concept of autogynephilia and the typology of male gender dysphoria. J Nerv Ment Dis. 1989 Oct;177(10):616-23. Blanchard R. Typology of male-to-female transsexualism. Arch Sex Behav. 1985 Jun;14(3):247-61.

April (2007-08-18 07:58:16)

I think the spirit of Robert was driving at is that, aside from Blanchard's studies and Anne Lawrence's and Bailey's commentary on Blanchard's studies, there's really aren't any studies that offer confirmatory evidence for autogynephilia. Or at least, I couldn't find any in PubMed or PsycINFO. I think when the head of HBIDGA (who sets the rules for psychologists and psychiatrists) and the Program in Human Sexuality at the University of Minnesota (one of the foremost sexuality research institutions in the world, as well as a place that sees more transgender patients than anywhere in the world), as well as Editor of the International Journal on Transgenderism, declares that Blanchard's/Bailey's research is "bad science", then perhaps that should be a sign that it might actually somewhat maaaaaybe actually \*be\* bad science, and not just some global conspiracy by thousands of autogynephiliac transsexuals to disgrace Blanchard/Bailey. <http://www.tsroadmap.com/info/eli-coleman.html>

Robert Owen (2007-08-18 08:02:20)

So...only he studied it? No one else confirmed his findings? Color me highly confused suddenly. Why hasn't another

psychologist done the same study? Whatever happened to the concept of 'peer-review?' I thought the entire point of scientific journals was to help spread the information so peer-review could take place. It's been almost 20 years and no one else has attempted to duplicate this observation?

seth (2007-08-18 20:55:18)

Robert: "Only he studied it"? I didn't say that. I don't know who else has studied it. April, when I was an undergraduate I gave a talk called "The Scientific \_ \_ \_ \_" My claim was that when you read that such-and-such is "scientific" or something else is "unscientific", that's a good sign that you should stop reading. Because the term "scientific" is nearly meaningless. I still think that. To say that someone's research is "bad science" is about as interesting and helpful and clear as saying someone's research is "bad". It says more about the person who said it than anyone else.

Boo (2007-08-19 04:42:23)

"April, when I was an undergraduate I gave a talk called "The Scientific \_ \_ \_ \_". My claim was that when you read that such-and-such is "scientific" or something else is "unscientific", that's a good sign that you should stop reading. Because the term "scientific" is nearly meaningless. I still think that. To say that someone's research is "bad science" is about as interesting and helpful and clear as saying someone's research is "bad". It says more about the person who said it than anyone else." Seth, have you considered seeking employment at The Discovery Institute? It looks like you'd fit right in. They love to pretend scientific is meaningless too. Legitimate scientists of course realize that good science would be that which strictly follows the rules of scientific investigation and analysis, and bad science would be that which does not. Like, say, purporting to investigate the sexuality of a whole population by trolling hooker bars at 3am. Or insisting that any evidence you see against a theory must automatically be reinterpreted as evidence for the theory. Which is why when anthropologists found evidence that Homo Habilis was co-existent with Homo Erectus, they immediately accused the Habilis fossils of "not being honest with themselves," instead of adjusting their views of human evolutionary ancestry to compensate.

Robert Owen (2007-08-19 16:12:59)

[http://www.genderpsychology.org/autogynephilia/ray\\_blanchard/](http://www.genderpsychology.org/autogynephilia/ray_blanchard/) I managed to find this site, it's a much more...calm discussion and study of Blanchard's work. She admits to being transsexual herself, but she doesn't throw around wild personal accusations of the man's theory. Apparently the only studies that have ever been done were by Blanchard and he only did one study, all the other papers are merely commentary and further extrapolation of his own data. Furthermore his study was done on the population he himself helped select, there was no blinding or double blinding or control grouping. At the center he did his work at he apparently rejected 90 %+ of the patients that came to him for help.

seth (2007-08-20 21:41:54)

The site you link to is relatively calm but also very biased. For example:

Blanchard's model is not supported by the empirical data. Blanchard's model assumes the very things it seeks to prove by assigning transsexuals to types and by a peculiar definition of gender dysphoria.

This makes little sense. The data Blanchard describes supports his theory. Models do not "seek to prove" anything.

Boo (2007-08-21 04:59:51)

"This makes little sense. The data Blanchard describes supports his theory. Models do not "seek to prove" anything." Actually, it doesn't support the theory. Blanchard's theory of transsexual typology is "All male-to-female transsexuals who are not attracted to men are attracted to the thought or image of themselves as women." Not some, not correlations, all are one or the other, no exceptions. Even if you take the data at face value (and as I've noted, there are several good reasons not to), it doesn't support the theory. Exclusively male-attracted transwomen should experience NO cross-gendered eroticism, yet this and Blanchard's other studies consistently find that some of them do. Bailey and pals try to weasel out of this by claiming, without evidence, that those who do must not really be male-attracted, which amounts to claiming the data as support of the theory and then turning around and goosing the very same data because it doesn't support the theory. (And that's where the unfalsifiable part comes in.) But as I've noted, since his measurement instrument doesn't

actually measure cross-gendered eroticism, there's no way to draw any meaningful conclusions from this study. Also, as you have ducked the question of your own autogynephilia, applying the logic and Bailey and cohorts means you must therefore be autogynphilic but too ashamed to admit it. Admittedly, this is ridiculous logic to apply to you, but applied to us, it's "science."

### **A Curious View of Obesity (2007-08-16 12:27)**

From a recent issue of JAMA:

Several lines of evidence from the study of patients with brain diseases converge on the prefrontal cortex (PFC), especially in the right hemisphere, as a critical area involved in the cognitive control of food intake. The PFC is the part of the brain that has undergone the biggest expansion during evolution, accounting for approximately one third of the surface of the human brain (Figure). Many complex aspects of behavior that distinguish humans from other species originate here, through the confluence of sensory, limbic, and autonomic information. Current theories on the PFC posit a crucial role for this region in the top-down control of behavior, especially under conflicting situations, when inappropriate responses need to be inhibited.

Diverse findings suggest a crucial role of the PFC in obesity. In the mid-1900s, overeating and weight gain were a common side effect in patients who underwent frontal leukotomy, a psychosurgical procedure that disconnects the frontal lobe from the rest of the brain. Damage to the right frontal lobe can cause a passion for eating and a specific preference for fine food, the so-called gourmand syndrome. In patients with degenerative dementia, the presence of hyperphagia correlates positively with right frontal atrophy and negatively with left frontal atrophy. . . . Hyperactivity of the right PFC can lead to anorexia-like symptoms, for example, in patients with right prefrontal focal epilepsy, in which the eating disorder can cease after initiation of anticonvulsant therapy.

Additional data support a link between the right PFC and spontaneous physical activity. . . . The right PFC is preferentially involved in guiding decision making according to social conduct and comprehension of bodily information at a higher level. . . . A dysfunction of the right PFC may represent a central event in the etiology of human obesity. . . . Increasing the activity of the right PFC might decrease appetite and reestablish inhibitory mechanisms controlling eating, as well as improve long-term adherence to interventions such as diet or exercise therapy, which is a major barrier that limits the success of any attempt to treat obesity.

No data to support this prediction are given. I think exercise and diet therapies usually fail because they are based on too-simple ideas about weight control. What does the gourmand syndrome reveal, I wonder.

Reference: The Right Brain Hypothesis for Obesity. Miguel Alonso-Alonso, MD, MPhil; Alvaro Pascual-Leone, MD, PhD. JAMA. 2007;297:1819-1822.

## Omega-3 and Dental Health (still more) (2007-08-16 17:07)

The gum improvements produced by omega-3 fats can be easy to see:

1. About six months ago, [1]my dentist noticed that my gums were in excellent shape (a healthy pink, not red), for the first time in memory. I had started taking 3-4 Tablespoons/day flaxseed oil a few months earlier. I hadn't made other dietary changes nor had I started brushing or flossing my teeth more. I have slacked off the usual dental care (I floss less often) but my gums have remained in excellent shape, according to my dentist.
2. When Tyler Cowen (author of [2]Discover Your Inner Economist) starting taking 2 Tablespoons/day flaxseed oil, his gums got much better within weeks. They improved so much [3]surgery was canceled.
3. Catherine Shaffer, a Michigan writer, had the [4]same experience with fish oil:

I bought a bottle of Carlson Laboratories [fish oil] and began taking the recommended dosage [1 tea-spoon/day] . . . My gums have been chronically inflamed for as long as I can remember. They were reddish in color, had a tendency to bleed when poked, and have earned me many lectures on flossing from my dental hygienist. I have had to brush three times a day and floss twice to keep the inflammation down. However, as soon as I started taking the fish oil, my gums turned a pale pink, and I even though I have been very lazy about flossing, they have not been bleeding.

Maybe I should have called gingivitis (inflamed gums) the [5]new scurvy. (Vitamin C cures scurvy in a few weeks.) Such fast big lasting improvements imply the flaxseed or fish oil supplied something important that was missing. Too much inflammation is a body-wide problem – many conditions end in -itis (e.g., arthritis) – so it is likely that the flaxseed or fish oil is having other benefits. Consistent with this idea, gum disease is correlated with several other health problems, including stroke, heart disease, and [6]low-weight babies.

According to an [7]online health-info source, echoing [8]conventional wisdom:

Gingivitis is the most common and mildest form of oral/dental disease. According to the Food and Drug Administration, approximately 15 percent of adults between 21 and 50 years old, and 30 percent of adults over 50, have gum disease . . . The main cause of gingivitis is plaque . . . The best defense against gingivitis is brushing and flossing after meals, as well as professional cleaning by a dental hygienist every three to four months.

How fragile the conventional wisdom ("The main cause of gingivitis is plaque . . . The best defense . . . is brushing and flossing") turns out to be. Eighty years ago, [9]Weston Price, a Cleveland dentist, had the same doubts I do. In travels around the world, he saw many people with excellent teeth who never brushed them. They ate ancient diets, with far more omega-3 than modern food.

1. <http://www.blog.sethroberts.net/2007/03/28/omega-3-and-dental-health/>
2. <http://www.amazon.com/exec/obidos/ASIN/0525950257/sethrobertand-20>
3. <http://www.marginalrevolution.com/marginalrevolution/2007/07/todays-happines.html>
4. <http://coconutcakesandale.blogspot.com/2007/08/fish-oil-and-me.html>
5. <http://www.blog.sethroberts.net/2007/04/29/does-too-little-omega-3-cause-falling/>
6. [http://publicaffairs.uth.tmc.edu/hleader/archive/Oral\\_Health/2004/healthygums-0503.html](http://publicaffairs.uth.tmc.edu/hleader/archive/Oral_Health/2004/healthygums-0503.html)

7. [http://www.lef.org/protocols/dental/gingivitis\\_01.htm](http://www.lef.org/protocols/dental/gingivitis_01.htm)
8. <http://en.wikipedia.org/wiki/Gingivitis#Causes>
9. [http://en.wikipedia.org/wiki/Weston\\_Price](http://en.wikipedia.org/wiki/Weston_Price)

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peter (2007-08-17 11:11:25)

did you have your teeth clean? if so, did you have plaque; if so, was it in the back teeth or was it equally distributed among the teeth, as it usually is, with a concentration in the back of lower front teeth.

Cosmetic Dentist Vancouver (2009-08-19 12:53:09)

While flax and fish oil definitely helps improve the condition of your gums, one mustn't assume that this is ALL they need to do to keep their teeth healthy! A good diet should never be a substitute for good dental habits –just think of it as an additional layer of defense against plaque, gingivitis and such. Other than that, you speak the truth :)

### **Even in Sweden (2007-08-17 04:24)**

From the [1]SLD forums, someone who recently started SLD:

On vacation at my friend's place in Dalarna Sweden. Used to live here some years ago and IÅ´m now hanging out with all my old buddies, an jeeees... everything's about food. BBQÅ´s, breakfast, snacks and lunch....? WhatÅ´s this? Has food been so important before? HavenÅ´t noticed that before, all food talk and all snacking. For fun I counted how often the word FOOD was used-25 times- during the day!!!

1. <http://boards.sethroberts.net/index.php?topic=5096.msg53612#msg53612>

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### **Why Does Gum Disease Correlate With Heart Disease? (2007-08-17 06:38)**

People who have heart disease are more likely to have gum problems. Why? According to an [1]online health magazine from the University of Texas,

Medical researchers have two main theories to explain the link between gum disease and heart disease . . . One theory is that the bacteria from periodontal disease enter the blood stream and stick to the blood vessels, creating a thickening of the walls, which may end up clogging these vessels. The second theory is that the chemical by-products from gum disease cause the same clogging effect. The chemicals may come from the by-products of the bacteria or from the chemicals produced by the body's own immune system.

A third possibility, not mentioned in the article, is that both gum disease and heart disease are caused by too much [2]inflammation.

The three cases I described [3]yesterday, in which high-omega-3 oils rapidly eliminated gum disease, convince me that the third possibility is correct. When you take 2 tablespoons/day flaxseed oil or 1 teaspoon/day fish oil, you are not killing the bacteria in your mouth. The bacteria remain as plentiful as ever. The difference is that your body is no longer overreacting to them. [4]Plenty of evidence suggests that heart disease is caused by too much inflammation. This correlation is more evidence.

Why omega-3s reduce inflammation is known. The body requires omega-3 to build an anti-inflammatory signaling molecule. Not enough omega-3, not enough of this molecule, too much inflammation.

1. [http://publicaffairs.uth.tmc.edu/hleader/archive/Oral\\_Health/2004/healthygums-0503.html](http://publicaffairs.uth.tmc.edu/hleader/archive/Oral_Health/2004/healthygums-0503.html)
2. <http://www.clevelandclinic.org/health/health-info/docs/0200/0217.asp?index=4857>
3. <http://www.blog.sethroberts.net/2007/08/16/omega-3-and-dental-health-still-more/>
4. <http://www.abc.net.au/health/minutes/stories/s1290235.htm>

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Jen (2007-08-18 18:01:18)

Gum disease and heart disease may be associated because each is associated with diabetes/metabolic syndrome. Inflammation plays a role in MetS, as well, but whether it's as cause or effect is unknown. Poor diet in general, not only the lack of omega-3 fats, is implicated. Omega-3 fats correct some but not all of the lipid abnormalities of MetS.

Ruth Heasman (2007-08-19 12:02:26)

My own take on this is somewhat different. I have rheumatoid arthritis and chronically elevated CRP (C-Reactive Protein) levels, indicating high levels of inflammation in my body. I also have healthy pink gums. This may be as a result of drinking the oil - certainly in part I'm sure. But despite the health of my mouth, I continue to have high inflammation levels elsewhere in my body. One thing I have noticed (as I do not take the oil religiously, but rather sloppily, and thankfully still have weightloss, albeit slow), is that the 'fur' on my tongue is considerably less whenever I drink the oil. I use hempseed oil, and this is known to have mild antibacterial and anti-fungal properties. There is virtually no tongue 'fur' when I use the oil, and there can be quite a lot when I don't, especially if I eat a lot of sugar. I use oral steroids, such as prednisone, to combat my arthritis and these meds and others make me prone to being a bit yeasty. I think this may be what the 'fur' on my tongue is, or else it's bacterial. Either way, I wonder whether the flaxseed oil you use Seth is antibacterial/antifungal as well? And whether keeping the mouth bacteria down is what's keeping your gums (and hopefully heart) healthy. I agree that CRP is a major marker for heart disease, much more so than cholesterol or good/bad fats, but as my CRP is always very high - always more than 20 and often more than 60 - and my gums are pink and tongue free of fur, it makes me wonder if the oil is controlling bacteria, more than inflammation?

## **Ortho-Ergonomics (2007-08-17 20:21)**

In honor of this week's BMJ [1]cover story.





My current test to study omega-3s ([2]letter counting) involves lots of typing. To avoid carpal tunnel syndrome, which I started to approach a [3]few weeks ago, I use one hand to raise the other one, as these pictures show.



Since I started doing this, I haven't had any problems. No discomfort. I usually put an hour or more between tests. (Each test involves 200 keystrokes – 50/finger – in a few minutes.)

2. <http://www.blog.sethroberts.net/2007/08/11/science-in-action-omega-3-letter-counting-test/>
3. <http://www.blog.sethroberts.net/2007/07/28/science-in-action-omega-3-a-delay/>

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### **What Goes Around Comes Around (2007-08-18 08:23)**

One of my favorite stories in [1]Discover Your Inner Economist by Tyler Cowen:

During one riot in Michigan, one woman sold stones to rioters. . . . Small stones went for \$1, larger stones brought in \$5 a piece. Most of the rocks were thrown at police. . . . The woman claimed that she collected about \$70 from her efforts, but she stopped when she was hit by a rock herself.

A perfect illustration of the title of this post.

What makes a good story? Perhaps 1. Hero. 2. Villain. 3. Struggle. 4. Details. 5. Humor. 6. Message. 7. Goodness is rewarded or sin is punished. 8. Truth (it actually happened). The rock story has six of these.

1. <http://www.amazon.com/exec/obidos/ASIN/0525950257/sethrobertand-20>

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Brad (2007-08-19 18:28:51)

Two others (which this story includes) are: 7. Surprise 8. An ending that reveals a fundamental truth, ideally one that isn't obvious from the outset. "What goes around comes around."

seth (2007-08-20 21:32:35)

Yes, I agree about your #7. Your #8 is my #6.

### **Nutritional Psychology: A Gaping Hole Where a Field Should Be (2007-08-18 21:53)**

Yesterday I attended the annual convention of the American Psychological Association (APA) in San Francisco. I was also measuring (again) the [1]time course of omega-3 effects. The exhibits hall was full of books. I picked up three introductory psychology texts to see what they said about nutrition. None of their indexes listed nutrition; apparently they said nothing about it. None of the hundreds of books I saw was about nutrition – that is, about how to nourish the brain. Yet the APA is mainly about mental health.

It's not just APA. At Berkeley, I've attended dozens of talks in the Nutrition Department. I have never seen another psych professor or grad student at any of them. Nor have I seen a nutrition professor at any Psychology Department talk. Both disciplines have [2]Annual Review series. In last seven years, there hasn't been a single article in the Nutrition series about behavior or cognition (aside from eating) nor a single article in the Psychology series about nutrition (aside from an article about weight control).

Sometimes interdisciplinary is hard. Cognitive science has tried to unite computer scientists with linguists and philosophers and psychologists. That's hard because computer scientists are engineers, not scientists, and philosophers are neither. But nutrition and psychology are both experimental sciences. Nutrition is an independent variable (food), psychology a dependent variable (behavior). They naturally go together, especially if you are concerned with mental health.

Now and then someone will study how Disorder X responds to Nutritional Treatment Y – how depression responds to omega-3, for example. [3]Better than nothing, absolutely, but not the best approach. By the time something is broken it is likely to be (a) a mess and therefore hard to measure and (b) hard to put back together. If you want to learn how a car works, should you study a car that works or a car that doesn't work? The answer isn't obvious, at least to cognitive psychologists, because for half a century they mainly studied how memory, perception, etc., failed. In the 1960s, Saul Sternberg taught the rest of the profession a better approach – namely, study a car that works. Sternberg made popular the kinds of experiments usually done today: reaction time experiments with easy problems that subjects almost always get right. [4]My omega-3 research has illustrated the truth of Sternberg's general point. I found much clearer effects of flaxseed oil on easy tasks (easy arithmetic, an easy memory task) than on a difficult task (digit span). A better way to learn how food affects our brains will be to study the effect of food on healthy brains. Such experiments will be much much easier than studying people who are depressed, children with ADD, schizophrenics, autistic children, drug addicts, and so on. I'm sure that the conclusions from healthy brains will generalize to malfunctioning brains, just as all cars – working or broken – work the same way.

1. <http://www.blog.sethroberts.net/2007/08/13/science-in-action-omega-3-time-course/>
2. <http://www.annualreviews.org/>
3. <http://www.blog.sethroberts.net/2007/08/05/something-is-better-than-nothing/>
4. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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### **Jane Jacobs and Traffic Tickets (2007-08-19 07:10)**

Rexford Township, Michigan, has started to pay police officers [1]according to the number of tickets they write. In [2]Systems of Survival, a book about moral systems, Jane Jacobs criticized something similar: ticket quotas for police. Treating guardians (such as police) as if they were in commerce doesn't work well, she wrote. There are two ways of making a living (taking and trading). Both have value, but they need to follow different rules of conduct (which we may grandly call morals) to work well.

1. <http://www.clickondetroit.com/news/13919921/detail.html>
2. [http://en.wikipedia.org/wiki/Systems\\_of\\_Survival](http://en.wikipedia.org/wiki/Systems_of_Survival)

## Freedom to Film (2007-08-19 21:10)

[EMBED] This better-than-amusing video exposes a big gap in the Bill of Rights: No right to record. A cop orders someone on the sidewalk not to film an arrest.

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## Can Professors Say the Truth? (addendum) (2007-08-20 20:24)

An [1]article in the NY Times about the harassment of Michael Bailey, which I [2]wrote about last week. My favorite passage:

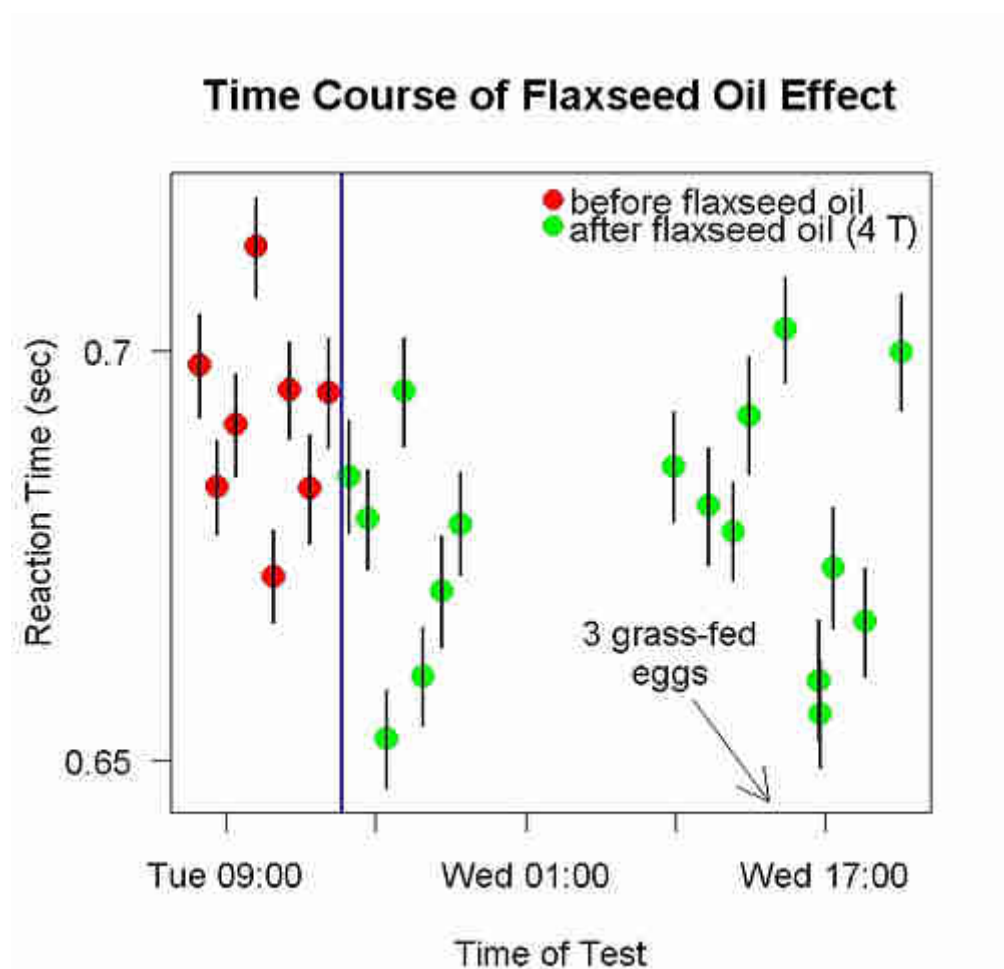
Dr. [Lynn] Conway did not respond to requests for an interview.

1. [http://www.nytimes.com/2007/08/21/health/psychology/21gender.html?pagewanted=1&8dpc&\\_r=1](http://www.nytimes.com/2007/08/21/health/psychology/21gender.html?pagewanted=1&8dpc&_r=1)
  2. [http://www.huffingtonpost.com/seth-roberts/can-professors-say-the-tr\\_b\\_60781.html](http://www.huffingtonpost.com/seth-roberts/can-professors-say-the-tr_b_60781.html)
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## Science in Action: Omega-3 (time course 2, with eggs) (2007-08-20 21:21)

Last week, I tried to measure again the [1]time course of flaxseed oil's effect on how well my brain works. As before, I used a [2]letter-counting test. The test consists of trials where I see a four-letter display such as ECQZ and type as quickly as possible how many letters from ABCD are among them (in this case, 1). 200 trials per test, about one test per hour.

On Tuesday, about 3 pm, I drank 4 tablespoons of flaxseed oil. Here's what happened:



2. <http://www.blog.sethroberts.net/2007/08/11/science-in-action-omega-3-letter-counting-test/>
3. [http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=1734678&ordinalpos=4&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=1734678&ordinalpos=4&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum)

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## **Does Walking By McDonald's Make You Fat? (2007-08-21 21:33)**

Few people have used [1]the theory behind the Shangri-La Diet more successfully than Tim Beneke, an Oakland journalist. I put before and after photos of him – before and after he lost about 100 pounds – on the front page of the proposal for The Shangri-La Diet. He writes:

It's very clear to me this summer that it's much easier for me to go tasteless and only consume the mush if I don't go to Berkeley, and just stay home in my apartment (except going for my neighborhood walk). And it's not merely a matter of behavior. When I go to Berkeley and walk near places where I am accustomed to eating (and tasting) – mostly restaurants, sandwich shops and coffee houses – I actually experience more hunger and must consume more mush to satisfy hunger than if I stay home.

I'm not surprised that auditory and visual signals for food cause hunger. There are lots of conditioned cravings like that. Tim goes on to wonder if these learned signals for food raise the body-fat setpoint, as the [2]theory behind the Shangri-La Diet says that food-associated flavors do. If you walk by your favorite bakery every day, will you weigh more than if you don't?

I always lose weight when I travel in foreign countries. I've attributed this to unfamiliar food. But could unfamiliar places also play a role?

In 1973, Edward Zamble, a professor of psychology at Queen's University, Kingston, Ontario, published an experiment very relevant to this question. He divided rats into two groups. Both group got their daily meal at random times. For one group, the meal was preceded by 30 minutes of light; the light went off before the food was available. The other group was exposed to the same amount of light but the light bore no relation to when they were fed. The rats with signaled food ate more and weighed more than the rats with unsignaled food.

I knew of this experiment – and often mentioned it – before I came up with the theory behind the Shangri-La Diet, but I never connected them. Thanks, Tim.

1. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>
2. <http://www.freakonomics.com/pdf/whatmakesfoodfattening.pdf>

KimBooSan (2007-08-23 10:53:29)

Actually this brings up a point on SLD that has me a bit concerned. As a woman, I love to lather myself with lotions and unguents and balms, and I know it doesn't seem like that has anything to do with SLD or set point levels. But have you looked at the high-end lotions and lip balms these days? "Vanilla-Fig" and "Raspberry-Peach" and "Mint Julep" and "Mango Melon" and on and on. I've started using blah unscented lotions and lip balms because I'm concerned about the smell/flavor/calorie connection, although I felt silly about it. Reading this, I think I'm not so off the mark. I often use lotions first thing after a shower, and just a few minutes before I down my flavorless calorie dose. I suppose I should be wary of VCO as well, as it has a strong coconut smell to it. I could also move my dosage to later in the morning. Hmmm. Time to experiment. :::KBS

Timothy Beneke (2007-08-23 12:08:58)

Actually there is a fair amount of research showing fragrances can lead to weight loss in people, probably be interfering with the process by which the brain learns taste/calorie associations. One study found that people wearing a vanilla scented band, I think, on their wrist lost weight compared to a control group who did not. That was a few years ago; I know a lot more has been done.

KimBooSan (2007-08-23 13:45:59)

That actually makes sense if they are wearing the scents at times when they are \*not\* eating. I'll have to look around for the studies you refer to, should be interesting reading to find out. In my case, I am referring to the combination of "flavorless" calories (a la SLD) combined with a food-associated scent, which when combined essentially makes a meal. lol! :::KBS

Timothy Beneke (2007-08-23 14:09:54)

You might try to put on lotions during times when you are not eating; that would weaken any association for the times when you are...

KimBoo's Shangrila Diet Experience (2007-08-24 10:25:10)

Day Fifteen: Lessons to be Learned... Interesting development, which I've decided to write about based on Seth's post about the flavor/smell relation. He discussed a study done with (what else?) rats about the relation of a stimulus associated with eating and feeding/weight gain, which...

Lee (2007-08-27 19:21:44)

Wouldn't this theory predict that city residents would be fatter, or at least hungrier, than suburbanites? For instance, New Yorkers walk past a great number of restaurants daily, whereas suburbanites are exposed less often, because there are fewer restaurants in the suburbs, and residents are more likely to quickly drive past them rather than walk past, thus experiencing them for less time. Maybe all of the city dwellers' walking makes up for their increased exposure to food signals.

Lee (2007-08-27 19:25:09)

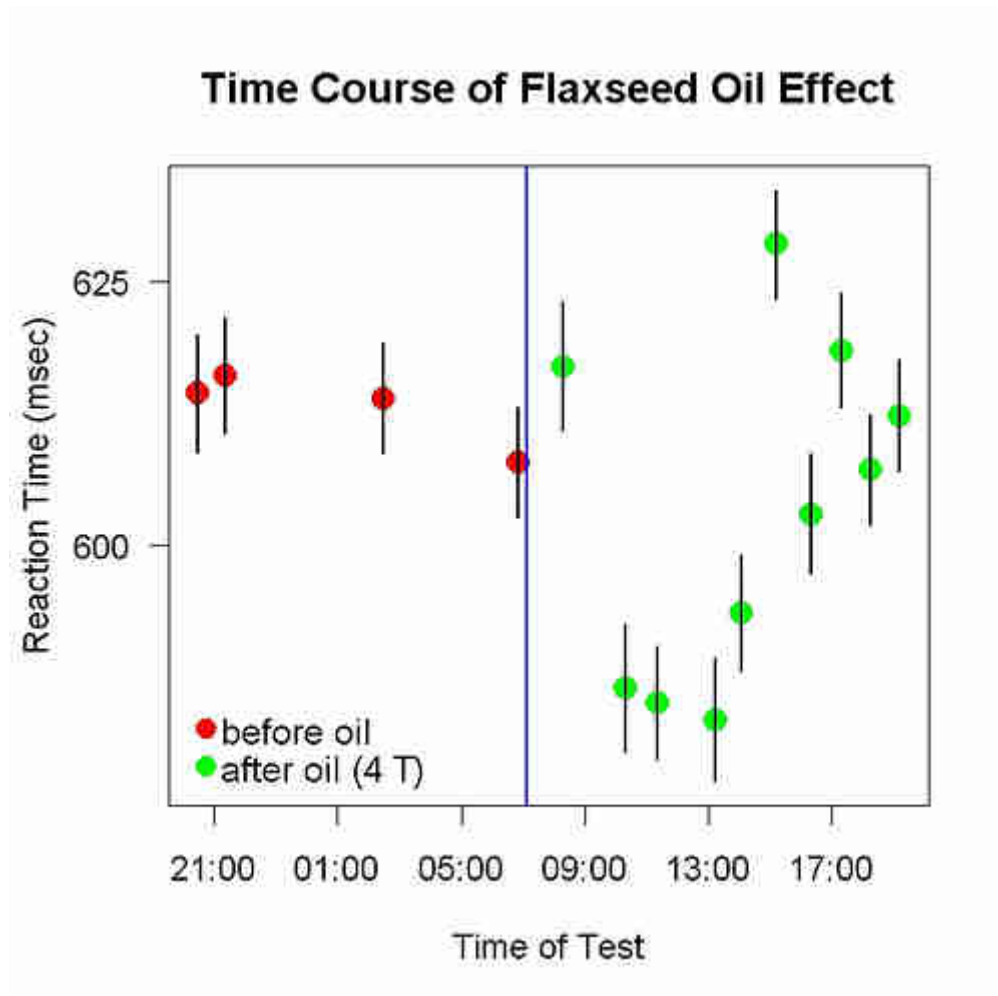
Maybe the visual stimulus of product packaging has a similar effect. Seeing the packages of favorite foods in your fridge or on the shelf may trigger hunger. I wonder what would happen if you repackaged your food in generic containers, or in the containers of non-edible products such as shampoo and soap?

## Science in Action: Omega-3 (VSE) (2007-08-22 06:43)

VSE = Very Short Experiment. After [1]VSL (Very Short List). I did this experiment yesterday. It took the whole day but the results were clear by noon.

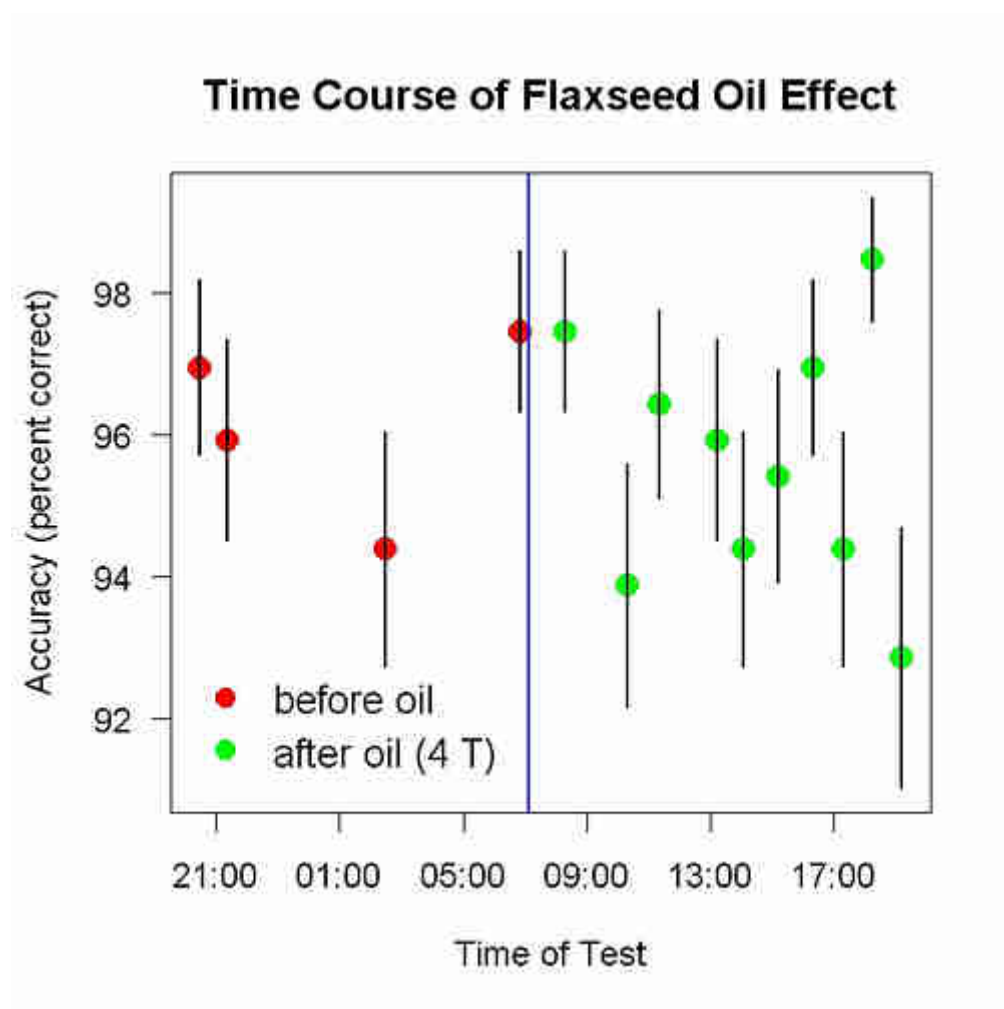
At about 7 am I took 4 tablespoons of flaxseed oil (Spectrum Organic). I measured my mental function with a [2]letter-counting test. Here is what happened.





My reaction times decreased 2-3 hours after drinking the flaxseed oil. Over the next 6-8 hours they returned to baseline.

For cognoscenti, here are the accuracy data:



Accuracy was fairly constant.

These results resemble earlier time-course measurements ([3]here and [4]here). What pleases me so much is not the confirmation – after the earlier two results I had found the dip a third time and had found that olive oil does not cause a dip – but how fast and clear the main result (the dip) was. I could have done a mere four tests (7, 8, 10, 11 am) and found interesting results – I knew that the 8 am test was too early to see a difference so it would have been two tests "before" and two "after". Six hours of testing can say something interesting about what we should eat and how to make our brains work best.

If you've been reading this blog you won't be surprised that flaxseed oil helps; what's new is how easily I can test a big wide world of foods. Salmon, trout, herring, fish oil, olive oil, canola oil, walnut oil, soybean oil, and so on. All sources of fat. Not to mention [5]eggs.

I take 4 tablespoons of flaxseed oil most days; I am not suffering from too little omega-3, as most people are. This improvement is on top of the improvement produced by getting enough omega-3 most days. If I stopped taking flaxseed oil, my mental function would slowly get worse, as an earlier experiment ([6]here and [7]here) showed.

1. <http://www.veryshortlist.com/home/index.cfm>

2. <http://www.blog.sethroberts.net/2007/08/11/science-in-action-omega-3-letter-counting-test/>

3. <http://www.blog.sethroberts.net/2007/08/13/science-in-action-omega-3-time-course/>

4. <http://www.blog.sethroberts.net/2007/08/20/science-in-action-omega-3-time-course-2-with-eggs/>
5. <http://www.blog.sethroberts.net/2007/08/20/science-in-action-omega-3-time-course-2-with-eggs/>
6. <http://www.blog.sethroberts.net/2007/05/19/science-in-action-omega-3-flaxseed-oil-vs-nothing-1/>
7. <http://www.blog.sethroberts.net/2007/05/21/science-in-action-omega-3-flaxseed-oil-vs-nothing-2/>

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Willy (2007-08-22 07:01:17)

Hello. Seth, is the software/script you use to display the letters to count and measure time available?. Thanks.

seth (2007-08-22 07:02:34)

yes that software is available. It uses R (which is free).

Willy (2007-08-22 07:14:15)

I forgot to ask if it is your creation and if it is free/paid/cost. Sorry.

seth (2007-08-22 09:16:34)

yes, it is free.

TC (2007-08-22 11:44:59)

There are 4 data non flax seed data points, and 10 flax seed data points, shouldn't you be doing some kind of re-sample with replacement [either groups of 4 from the flaxseed 10 or groups of 10 from the nonflax 4] and compare a couple of 1000 of the re-sampled groups before assuming the pictures tell the whole story

Brad (2007-08-22 11:58:53)

You're on to something amazing here, Seth. The rapid testing of various foods for short-term brain effects is going to open up whole new areas of science (and probably pharmaceuticals, eventually.)

seth (2007-08-22 13:02:50)

Thanks, Brad. As far as I know, the existence of such effects was never suspected – including by me.

Brad (2007-08-22 15:25:21)

Not to mention all the cycling coaches who will be beating your doors down. Well, maybe chess coaches. :- ) (I have a vision of hordes of law school grads chugging cod liver oil before their bar exams while muttering, "Curse you, Seth Roberts!")

Brad (2007-08-22 15:37:15)

It'd be a great way for a grad student to make a hell of a name for himself – do your protocol on every spice in the spice aisle, every oil in the oil aisle, every grain in the bread aisle. Headlines would be generated like clockwork: Dough Makes You Dokey. Fish Before Physics. Memory Gone? Tarragon!

Brad (2007-08-22 15:38:31)

I smell another best-seller, too.

Andrew Gelman (2007-08-22 15:42:44)

Seth, Not to be a wet blanket or anything, but aren't you worried that your findings might be due to expectation effects: you knew which oil you were taking when doing the tests, right?

peter (2007-08-22 17:31:27)

could you put Purslane on your list of foods to test? It is rich a source of omega-3, although i've never been able to find it anywhere. (if you could tell me where to buy it that would be great, although it may be asking a lot)

seth (2007-08-22 21:43:07)

Andrew, no, I'm not worried that the results are due to expectations. If the results always conformed to my expectations, I'd be worried, but they haven't – see my post about eggs. Moreover, this particular result confirms a result that was a surprise. In other words, I've gotten the same result when I was expecting it and when I wasn't expecting it. Peter, thanks for the suggestion. I'm going to start by testing common foods, such as salmon, and easy-to-get foods, such as my 8 remaining grass-fed eggs.

Timothy Beneke (2007-08-23 10:26:31)

My non-rigorous observation after doing 3-4 tablespoons a day of flax seed oil is that yes, it does enhance mental functioning. I've been reading and writing poetry furiously all summer, and have reached degrees of comprehension in reading and interesting associations in writing that I never got to before. One caveat: I also have done a lot of reading poetry out loud; reading aloud according to a Japanese neuroscientist oxygenates the brain more than any other activity tested. That is a confound. But I'm staying with the flax seed oil until I am given a reason not to...

Michael Parente (2007-08-23 14:19:59)

Seth, when you are clearly an advocate of the benefits of flaxseed oil, what makes you trust the results of your experiment?

seth (2007-08-24 04:37:05)

Michael, what makes me trust my results is repetition. This is my fifth observation of the dip. The first observation was a surprise. Before this series of observations, I believed that flaxseed oil had long-lasting benefits. Long-lasting, meaning weeks or months. This is a short-lasting benefit – not an effect that I thought flaxseed oil had.

Janet R (2007-08-24 09:16:36)

What do the plots look like when you don't take anything? Mental acuity may vary substantially through the day.

seth (2007-08-24 22:03:54)

During an uneventful day they are flat within the limits of measurement, except at the beginning and end of the day I am slower.

### **Can Professors Say the Truth? (radio show) (2007-08-22 21:07)**

Part of today's KQED Forum program with Michael Krasny was devoted to the attacks on Michael Bailey and his book. [1]Here is the webpage. Joan Roughgarden, a professor of biology at Stanford, was one of the guests. After Bailey gave a talk at Stanford in 2003, Roughgarden wrote an [2]op-ed in the student newspaper that contained the following sentence:

To many observers, Bailey appears to be a rather dumb, stubborn, dense and possibly deceptive regular guy with some experience in locker-room humor.

This sort of comment would go over poorly on KQED, so what would she say? It turns out that she calls Bailey's book a "fraud." It is fraudulent because it is not "science" – by which she means a scientific article – in spite of having the word science in the title. Apparently Roughgarden thinks that if you write a book about science it is fraud to use the word science in the title. She also complains that Bailey uses stories based on transsexuals he had met to illustrate

Blanchard's theory. She calls those stories Bailey's evidence for the theory, ignoring the evidence in Blanchard's papers. This is not quite the incisive criticism we might expect from a Stanford professor.

1. <http://www.kqed.org/epArchive/R708221000>
2. <http://daily.stanford.edu/article/2003/4/25/psychologyLectureLacksSensitivityToSexualOrientation>

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### **A Novelist on the Aquatic Ape Theory of Evolution (2007-08-22 22:45)**

Plausibility of the [1]Aquatic Ape Theory of Human Evolution is one reason I started studying the effects of omega-3s. Novelist Elizabeth Bear [2]doesn't like it:

[Doris] Lessing appears to have drawn her background from Elaine Morgan's notorious pseudoscientific tome, *The Descent of Woman* (1972), which argues that human evolution was shaped by a seal-like return to the sea. Crackpot theories can make for great fiction but in this case . . .

That I found beneficial effects of omega-3s many times supports the "crackpot" theory.

1. [http://en.wikipedia.org/wiki/Aquatic\\_ape\\_hypothesis](http://en.wikipedia.org/wiki/Aquatic_ape_hypothesis)
2. <http://www.washingtonpost.com/wp-dyn/content/article/2007/08/16/AR2007081602653.html>

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Falasha (2008-02-27 15:02:50)  
Please see my views on aquatic ape.

### **The Twilight of Expertise (part 10: book reviewers) (2007-08-23 16:16)**

According to [1]Publisher's Weekly, a new program at amazon.com called

Amazon Vine rewards the site's elite reviewers by giving them access to advance copies. According to a representative at Amazon, invitations have gone out to the site's "top reviewers," deemed so by their review rankings, to become Vine Voices.

I once read about a Los Angeles catering business that wasn't doing so well until they doubled their prices. This is the opposite of that.

From [2]Seth Godin:

When the Times switched from 10 books on the Hardcover [Best Sellers] list, they created a list of 15 Hardcover [Best Sellers] and a list of 5 Advice, How To and Miscellaneous [Best Sellers]. I wrote in and asked the editor why they only had 5 titles on this list and 15 on the others. She wrote back and said,

"Because we don't want people to read those books."

Pride goeth before a fall.

1. <http://www.publishersweekly.com/article/CA6467648.html?nid=2286&source=link&rid=857222478>
2. [http://sethgodin.typepad.com/the\\_dip/](http://sethgodin.typepad.com/the_dip/)

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Seth's blog » Blog Archive » The Twilight of Expertise (directory) (2009-07-14 17:00:13)  
[...] book reviewers [...]

### **Nassim Taleb on Research Strategy (2007-08-23 22:52)**

In [1]Forbes, Nassim Taleb, author of The Black Swan, made some comments I like:

Things, it turns out, are all too often discovered by accident. . . . Academics are starting to realize that a considerable component of medical discovery comes from the fringes, where people find what they are not exactly looking for. It is not just that hypertension drugs led to Viagra or that angiogenesis drugs led to the treatment of macular degeneration, but that even discoveries we claim come from research are themselves highly accidental. They are the result of undirected tinkering narrated after the fact, when it is dressed up as controlled research. The high rate of failure in scientific research should be sufficient to convince us of the lack of effectiveness in its design. If the success rate of directed research is very low, though, it is true that the more we search, the more likely we are to find things "by accident," outside the original plan.

If the success rate per test is low, a good research strategy is to start with low-cost tests. Ants do this: They search with low-cost tests (single ants), exploit with high-cost tests (many ants). I don't think the need to use different tools at different stages in the scientific process is well understood. John Tukey used the terms exploratory data analysis and confirmatory data analysis to make this point about data analysis but distinguishing exploratory and confirmatory experimental design is much less common.

I think my self-experimentation has been productive partly because it is a low-cost way of testing. All my interesting discoveries were accidents. My [2]latest omega-3 research started with an [3]accidental observation.

1. [http://www.forbes.com/2007/05/23/nicholas-taleb-innovation-tech-cz\\_07rev\\_nt\\_0524taleb.html](http://www.forbes.com/2007/05/23/nicholas-taleb-innovation-tech-cz_07rev_nt_0524taleb.html)
2. <http://www.blog.sethroberts.net/2007/08/22/science-in-action-omega-3-vse/>
3. <http://www.blog.sethroberts.net/2007/06/30/science-in-action-omega-3-a-surprise/>

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### Criticize by Creating (2007-08-24 16:26)

The Whole Foods - Wild Oats merger can finally take place, I was pleased to learn. A court [1]denied the Federal Trade Commission's request for a stay. The world needs more CEO's like Whole Foods CEO John Mackey. In a talk he gave at Berkeley last year, he quoted Michaelangelo: "Criticize by creating," a wise and memorable saying that I hadn't heard before. That's exactly what Mackey has done.

1. [http://www.wholefoods.com/investor/pr07\\_08-23.html](http://www.wholefoods.com/investor/pr07_08-23.html)

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Matt (2007-08-24 18:27:07)

I thought it was interesting that [1]for years John Mackey participated anonymously in Yahoo financial bulletin board discussions about Whole Foods and Wild Oats. When his avatar was outed, [2]he temporarily discontinued posting to his blog while the matter was investigated. I wonder if he'll resume posting now, anonymously or otherwise. What do you think about it?

1. <http://www.iht.com/articles/2007/07/12/business/pseudo.php>
2. <http://www.wholefoodsmarket.com/blogs/jm/>

seth (2007-08-24 22:01:52)

I believe too much was made of his anonymous postings. I believe they were harmless.

peter (2007-08-25 10:27:01)

i don't agree that Mackey's false and misleading posts made under the guise of being just another investor were harmless. They were probably illegal and he should be pursued (and probably will be civilly) I also don't agree that the merger is a good thing. stores will be closed and competition will be reduced. how is that good thing?

seth (2007-08-25 22:34:28)

What harm did Mackey's anonymous posts do? Given hundreds or thousands of people posting, I would think it is awfully hard to know that one of them had a big effect. And even harder to know the direction of that effect. The merger is a good thing because Whole Foods is much better run than Wild Oats. The better WF policies, etc., will replace the worse WO policies, etc. Whole Foods' main competition, Mackey has said, is Trader Joe's. Trader Joe's is not going away.

## Saul Sternberg on Research Strategy (2007-08-24 21:50)

In a [1]recent post I guessed that it would be better to begin to study the effects of omega-3 and other fats on the brain with healthy subjects than with "unhealthy" ones – that is, persons with obvious brain dysfunction. So far, almost all behavioral studies of omega-3 have used unhealthy subjects – adults with bipolar disorder or depression, children with coordination problems, autism, or ADHD. My guess was based on three things: 1. A thought experiment. Imagine trying to learn how cars work. You'd rather experiment with working cars than broken cars. 2. Healthy subjects are far more available and easier to study. 3. The work of Saul Sternberg, who pioneered the study of memory using tests on which subjects are very accurate (e.g., 95 % correct). The main measure of performance on these tasks was speed (called reaction time) rather than accuracy. After his work, reaction-time experiments became far more popular. In my study of the effects of flaxseed oil, I had directly compared high- and low-accuracy tasks. I had measured the effects of flaxseed oil using two high-accuracy tasks (arithmetic and memory-scanning) and a low-accuracy task (digit span). The effects were much clearer (smaller p values) with the high-accuracy tasks.

I asked Sternberg what he thought of my guess. He wrote, "I certainly agree that it is worth studying the effects of X on "normal" brains, where X can be many things" and later added:

I suspect my decision to measure [reaction] time under conditions of high accuracy was multiply determined, and that the determinants included some speculative notions. E. g. I may have thought that the variety of strategies is greater when the system is overloaded and errors are occurring than when it is functioning smoothly, so one was more likely to get clear answers about an underlying mechanism. Also, there was something of a tradition of measuring RT in experiments on "information processing" that weren't normally described as memory experiments, but could be. Another reason was probably that I felt that RT - a continuous measure - probably contained more "information" than errors, with a few discrete possibilities, did.

It is possible that the emphasis in memory experiments on studying accuracy when the relevant brain system is failing was influenced by the study of sensory processes, where the experimental and analytic techniques (e.g., for measuring discriminability and detectability) were well worked out, and where it is believed that the enterprise has been highly successful. Also, sensory detectability and discriminability may be more intrinsically interesting and more closely related to actual situations of practical concern than accurate performance.

1. <http://www.blog.sethroberts.net/2007/08/18/nutritional-psychology-a-gaping-hole-where-a-field-should-be/>

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Nansen (2007-08-25 19:12:12)

In the case of Andrew Stoll's research on omega-3s and bipolar disorder, he did not begin with the question "What is the effect of omega-3s on mood?" He began this way: "Several years ago, we were searching for alternatives to mood stabilizers, such as lithium and Depakote, used to treat bipolar. We began investigating what we knew about the chemical mechanisms of lithium and valproate (Depakote) on the brain and discovered that these drugs are not working on the receptors, or re-uptake sites, that Prozac and similar drugs do. They work inside the cell in a process called signal transduction. "In our search, we began looking for compounds that had a similar mechanism in the brain but had never been tested before. Omega-3s, along with other compounds, came up in our search. But omega-3s had a whole list of mechanisms that certainly appeared to have mood effects in people. This discovery was very surprising, because no one had ever looked at using omega-3s in adult psychiatric disorders. Later in our research, we discovered that we are all depleted of these essential



fattyacids. "When individuals consume a diet rich in omega3s, their brain cell membranes become more fluid, allowing for smoother flow of chemical messengers, such as serotonin, in the brain." (Source: UMI, THE SATURDAY EVENING POST, 09/2001)

seth (2007-08-27 07:17:53)

Thanks, that's good to know.

### **Can Professors Say the Truth? (letter from Deirdre McCloskey) (2007-08-25 10:32)**

Yesterday, to my surprise, I received an email from [1]Deirdre McCloskey, whom I had [2]criticized. Here it is:

Dear Professor Roberts:

I imagine you are not longer open to persuasion on the Bailey/Dreger issue, having written yourself on it in no uncertain terms after reading Dr. Dreger's article and especially Mr. Carey's piece in the Times. People are like that, I know. They swallow a line hastily acquired—in this case the Bailey = Galileo, "transsexual activists" (e.g. Barres, Roughgarden, McCloskey, Conway, and other distinguished scientists) = The Inquisition—and then won't listen any more. It's one of the main supports for the culture of yelling we seem to have developed in the United States over the past couple of decades.

But in case you are more careful and thoughtful than your blog suggests, I attach a couple of attempts to persuade you that you've got the story wrong. Dreger is wrong, and what's more important in the long run a theory based on ignoring most of the scientific evidence, and appealing instead to the sort of prejudices about queers you praise in your piece, is wrong.

Sincerely,

Deirdre McCloskey

Attached to the email were copies of her Reason [3]review of Bailey's book, a [4]commentary by her on Dreger's article, and her [5]vita.

I replied:

Dear Professor McCloskey:

Thank you for writing. I am happy to have complaints about my writing but it would help if you were more specific. What in my blog wasn't "careful and thoughtful"? When you say I wasn't careful you seem to be saying there are factual mistakes in what I wrote. If so, please tell me; I would like to correct them.

In your letter, you seem to say I have "swallow[ed] a line hastily acquired." This is puzzling, since in my blog I mention writing to you about Bailey's book draft many years ago. Surely thinking about something for many years isn't hasty. One of your attachments is the review you wrote for Reason. Another puzzle

because I quote from this review in my blog.

In your article about Dreger's paper, you "deny that [you] worked 'to ruin Bailey professional and personally" but this denial is incomplete and unconvincing. It's incomplete because you don't defend the letter you wrote to the State of Illinois complaining that Bailey had practiced medicine without a license. That is exactly trying to ruin someone.

And you don't convince me that causing to be filed an absurd human-subjects complaint against Bailey constitutes some sort of virtuous act. "Complaining through channels about mistreatment of his victims"! Please. It is another example of trying to ruin someone.

In your email to me, you write:

what's more important in the long run a theory based on ignoring most of the scientific evidence, and appealing instead to the sort of prejudices about queers you praise in your piece, is wrong.

This may be the big issue to you; it isn't the big issue to me. The big issue for me is free speech. Two professors (you and Conway) with great power tried to silence someone who said something they didn't like. I titled my blog posts on the topic "Can Professors Say the Truth?" The "truth" was not Blanchard's theory; it was that Blanchard had proposed a theory, a theory that Bailey accurately described. Blanchard said something; Bailey accurately reported what he said. The accurate reporting was the "truth". Somehow it was not enough for you and Conway that Blanchard's theory, if false, would eventually be discarded. Somehow it was not enough to attack the theory; you had to attack Bailey too, and in an awful way – by filing absurd complaints with credulous and powerful bureaucracies.

Sincerely,

Seth Roberts

Today she [6]replied to my reply.

1. <http://deirdremccloskey.org/>

2. [http://www.huffingtonpost.com/seth-roberts/can-professors-say-the-tr\\_b\\_60781.html](http://www.huffingtonpost.com/seth-roberts/can-professors-say-the-tr_b_60781.html)

3. <http://deirdremccloskey.org/pubs/gender/bailey.php#review>

4. <http://deirdremccloskey.org/docs/dreger.pdf>

5. <http://deirdremccloskey.org/vita.php>

6. <http://www.blog.sethroberts.net/2007/08/26/can-professors-say-the-truth-another-letter-from-deirdre-mccloskey/>

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## Something is Better than Nothing: Wedding Costs (2007-08-25 21:36)

The Numbers Guy Wall Street Journal columnist [1]wrote recently about reporting the average cost of weddings. He said the averages are means, not medians, they don't include certain groups, and so on. It was one of the better numerical discussions I've seen in a newspaper.

However, it was about 25 % of an ideal discussion. When I was a freshman in college, I went to a talk about life on other planets. The speaker wrote a bunch of numbers on the board, multiplied them together, and came up with something that was supposed to estimate the number of other planets with life. After the talk, I asked, "What's the error in that number?" The speaker had no idea.

If the Numbers Guy gave his column as a talk, during the question period I would say: "You've told us what's wrong with those numbers. Thanks. I'd also like to know what's good about them." His column and [2]blog contain nothing about this.

Here's my answer:

1. Sure, the median is more interesting than the mean. Because the distribution is obviously skewed positive (like the distribution of incomes), the mean provides an upper bound on the median. If the mean is \$30,000, for example, the median must be less. That's helpful to know.
2. Assuming the distribution of wedding costs resembles the distribution of incomes, I'd guess that the median is somewhere between half and two-thirds of the mean. So the mean is providing even more useful information.
3. The false precision of some estimates (e.g., "\$27,852") indicates the numerical savvy of their source. That too is helpful to know. I will take the rest of what they say less seriously. In a talk I attended, Richard Herrnstein, the Harvard psychologist, said a certain  $t$  value was so large that he had to use a special table to find the associated  $p$  value. This was an accurate foreshadowing of the quality of The Bell Curve, which Herrnstein co-authored.

That brings us to about half of a good discussion. The other half would come from eliminating the long discussion of sampling bias. Yes, the wedding industry loves sampling methods that overestimate the average cost. I knew that before I read the column. What I don't know is a method that will tend to underestimate the average cost and thus provide a lower bound. That's what I'd like to read about.

[3]Something is better than nothing. [4]Micronutrient requirements.

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1. <http://online.wsj.com/article/SB118790518546107112.html>

2. <http://blogs.wsj.com/numbersguy/calculating-the-cost-of-weddings-175/>

3. <http://www.blog.sethroberts.net/2007/08/05/something-is-better-than-nothing/>

4. <http://www.blog.sethroberts.net/2007/08/08/something-is-better-than-nothing-part-2/>

James (2007-08-26 11:04:58)

To me, the real unanswered question is the net cost of weddings after gifts are accounted for. I have heard of a few weddings in the New York area (home of the nice, efficient cash gift) that have turned a profit, so the distribution may not skew positive to the degree expected. This also means that couples have an interest in keeping the perceived cost of weddings high, to encourage more-generous gifting.

### **Can Professors Say the Truth? (another letter from Deirdre McCloskey) (2007-08-26 18:23)**

In response to [1]my reply to her letter, Deirdre McCloskey wrote again:

Dear Professor Roberts,

You are not listening, which I rather expected you would not. You are satisfied with debating points rather than trying to get to the scientific truth. Is this your *modus operandi*, or are you for some reason wedded off-stage to Bailey behaviorism, say, or transphobia? I really would like to know where your indignant certitude about things you know practically nothing about is coming from.

"The big issue" for you is free speech. In what way have I or anyone else in this debate abridged anyone's free speech? We aren't the government. It's just confused to identify published complaints by private citizens about someone—justified in this case, but let's for the moment set the issue of the merits aside—with censorship or some other governmental act in violation of "free speech." People complain about other people all the time. For example, I complain about Paris Hilton.

Your confusion fits smoothly with your strange assertion, swallowed from Dr. Dreger's self-dramatizing piece published at bizarre length in a distinguished journal run by the chief Baileyite, that we have "great power." That's how the Bailey-as-brave-victim line, adopted by Mr. Carey of the NY Times from an uncritical reading of Dr. Dreger's assault on me and others, got going.

Hmm. In what does our great power lie? Professor Bailey, like us, is a senior, tenured professor. We objected to his work and to his behavior, through our writings and through channels. What exactly is the exercise of "great power" there? Isn't this power called "the power of the pen," and isn't that exactly the "free speech" you believe you are so courageously defending? The National Academy of Science, which published Bailey's unscientific book, and which has been taken over it would appear by a clique of Gay Gene theorists (I suppose it is an indirect effect of Bush's administration, but I don't know), is powerful. That's the hand of a governmental advisory body, great power indeed, right? We are a couple of professors not in sexology who objected to the mistreatment of some of our poor and ignorant friends, and objected to Bailey's theories and especially to his lack of interest in investigating the bulk of the actual scientific evidence on the matter, namely, any serious sample of the lives of gender crossers. Where's the power?

And how about our right of free speech? We complained to the licensing board about Bailey practicing psychology without a license and you regard that action as requiring defense. (One reason the board did not act, by the way, is that the physician-created statute of limitation on malpractice had run out. It has a notably short fuse.) We complained about his abuse of scientific subjects (it's his claim, not ours, that they were scientific subjects), to the proper authorities. The proper authorities took what you call an "absurd" complaint most seriously, and Bailey resigned from the chairmanship of his department.

You regard our actions not as the "free speech" you believe you are defending but as attempts to destroy Bailey.

May I suggest that you are not making sense? Criticizing people in open forums and through channels is precisely what Dr. Dreger, and now the reporter for the Times, and now you, have done. That's fine. I do not call Dreger's hysterical letters through channels against Andrea James, or her Bailey-group subsidized piece which you have so completely swallowed, an attempt to "destroy" James or me. I call her action self-dramatizing and illiberal, and I call her writings unscientific and nonsensical, politically slanted pseudo-history. I do not call your blog retailing Carey's article an attempt to destroy me or to suppress free speech. I call it a silly remark about a subject you have no experience of.

What sort of double standard are you applying to my speech but not to your own? My criticism and complaint is "an attempt to destroy." Dreger's, the reporter Carey's secondary, and now your tertiary criticism and complaint are then. . . what? I say both are free speech, the duty of serious citizens in a democracy. Go to it. Aux barricades for a free press. But stop making these unsupported claims about censorship and destroying Professor Bailey's life.

Speaking of "destroyed lives," by the way, what about our lives and the lives of the gender crossers we sought to protect? My children have not spoken to me since I transitioned, in 1995. I have two grandchildren I have not been allowed to meet. One important reason is the sex, sex, sex theory, known in the field to be of little scientific merit, which Bailey defends with shallow evidence but which is attractive to ignorant outsiders hostile to gender crossers. More widely, the sex, sex, sex theory is one potent reason for transphobia and for the numerous violent deaths of gender crossers. You may consult GenderPak on the issue, if you can rouse some scientific curiosity about the actual facts of the matter. Or you can read the hate mail I have received since Carey's piece.

Let me ask you what you would do in a similar case. I don't know what your scientific work has been, but let's be symmetrical. Suppose an economist had written a book with a exiguous selection of evidence saying that psychologists were liars and sexual perverts, and refused to risk his theory in a serious scientific test by interviewing a wide range of psychologists. Suppose he found, by searching in places where prostitutes gather, some psychologists working as prostitutes, and concluded that psychologists tended to be prostitutes. Suppose the psychologists he interviewed were very eager to get The Letter that would, they believed in their innocence, give them, say, very valuable rights to trade on the New York Stock Exchange, and suppose the economist said he would write the letter if they would talk to him. Suppose he then in addition slept with one of the psychologists, and then used the "evidence" thus acquired to support his unscientific theories in a long book published with the government's imprimatur filled with anti-psychologist lore. First, kill all the psychologists.

What would you do about the economist's unscientific claims, let us say, on your blog? And would you also complain to the legitimate authorities about the economist's unprofessional and fraudulent behavior? When someone mugs you or a friend on the street, do you report it to the police? And would your just complaints against such a character be an attempt to ruin him? Or would it be fair comment in a free society and the exercise of the rights and duties of a citizen?

You may quote anything I write, in whole or in part. My pieces are posted on my webpage, [2]deirdremccloskey.org. I expect, however, to be answered again with silly debating points. You have closed your mind on the issue, and are not open to evidence or to reason. It is a most unscientific stance. Shame on you. (That's called fair comment in a free society, dear, not an attempt to destroy you.)

Sincerely,

Deirdre McCloskey

[3]My reply.

1. <http://www.blog.sethroberts.net/2007/08/25/can-professors-say-the-truth-letter-from-mccloskey/>
2. <http://deirdremccloskey.org/>
3. <http://www.blog.sethroberts.net/2007/08/26/can-professors-say-the-truth-my-reply-to-deirdre-mccloskeys-2nd-letter/>

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### **Can Professors Say the Truth? (my reply to Deirdre McCloskey's 2nd letter) (2007-08-26 19:36)**

In reply to Deirdre McCloskey's [1]second letter, I wrote:

Dear Professor McCloskey,

I'm glad to hear more of your side of the story. To answer your questions:

"In what way have I or anyone else in this debate abridged anyone's free speech?" By attacking someone – Bailey – who said something you didn't like. Fearful of future attacks from you or Conway or Andrea James, others will keep their mouths shut. The term is chilling effect. Here is [2]Wikipedia's definition: "A chilling effect is a situation where speech or conduct is suppressed or limited by fear of penalization at the hands of an individual or group." Wikipedia's example is fear of a lawsuit – which you have threatened ("[3]I'm going to sue Bailey for defamation if . . . "). Minutes after I posted my second blog entry about the attacks on Bailey, the first post that mentioned you, I got an email from a wise friend. "There has been a big McCloskey/Bailey feud, I believe involving also lawsuits or the threat thereof," he wrote. It was a warning. He was worried.

"In what does our great power lie?" In four things: 1. Job security. Not only tenure – you and Conway are near the top of your professions. 2. Money. 3. Respect. Your upcoming honorary degree, for example. A recent memoir by an esteemed economist praised you for your "courage." Conway's membership in the National Academy of Engineering. 4. Knowing how the system works – in particular how to get powerful bureaucracies (such as Northwestern's) to do what you want. "We are a couple of professors not in sexology." Please. You and Conway are not average professors. What fraction of professors get honorary degrees? What fraction of engineering professors are in the National Academy of Engineering?

"What about our right to free speech?" You think calling your absurd complaints to credulous and powerful authorities "free speech" somehow defends them? I don't.

"What about our lives? . . . My children have not spoken to me since I transitioned, in 1995. I have two grandchildren I have not been allowed to meet." Yes, that is horrible. No one should be treated like

that. But the fact that you have been treated badly doesn't justify doing something awful (your absurd complaints) to someone else.

How would I react if your scenario about psychologists came to pass? I would do nothing. I'm supposed to get upset that Person X asked Person Y for a letter and before Person Y wrote that letter he asked Person X to speak to him – perhaps about the contents of the letter? On what planet is that wrong? I should react because someone "had sex with a psychologist"? I should be upset that the person "used the "evidence" thus acquired to support his unscientific theories in a long book"? We are at a curious place in intellectual history when a Distinguished Professor of this and that, soon to receive an honorary degree from a major university, thinks that a sane person might be upset that someone had sex with a psychologist.

Your complaints to powerful and credulous authorities, you say, were not absurd because they were taken seriously. ("They took what you call an "absurd" complaint most seriously.") Okay, here is why your complaints were absurd. 1. You and Conway complained to the State of Illinois that Bailey was practicing psychology without a license because he wrote letters on behalf of several persons who had come to him for help. He helped them! They came to him for help! To complain about this is absurd. To say your complaint "protects" anyone is absurd. To say what Bailey did resembles "mugging" is absurd. No one seeks out a mugger and asks to be mugged. 2. You and Conway orchestrated the filing of human-subjects complaints against Bailey. These complaints assumed that persons mentioned in stories in Bailey's book were "research subjects" – simply because they were in the book. Never before in the history of science had the subject of a story told to illustrate a point been thereby considered a research subject. Bailey's book is not a scientific monograph. It is not a piece of science. It is a trade book about science. When I or anyone else gives a lecture about a scientific subject, and tell a story from everyday life to make the conclusions come alive, do we need informed consent from everyone mentioned in the story? Of course not. No one has ever been required to do this. No one has ever done this. No one has ever even conceived of such a thing. The whole idea is absurd. Northwestern administrators may be credulous; I'm not.

Twice in your letter you combine two very different activities as if they are similar. "My criticism and complaint" is one example; "criticizing people in open forums and through channels" is the other. These two activities of yours were very different. Open-forum criticism, if factually correct, is fine with me. Absurd complaints to credulous authorities with the power to destroy someone's career are much much less than fine with me. When Dreger says you tried to "ruin" Bailey, she is referring to the absurd complaints. Not to the review in Reason.

Sincerely,

Seth Roberts

1. <http://www.blog.sethroberts.net/2007/08/26/can-professors-say-the-truth-another-letter-from-deirdre-mccloskey/>
2. [http://en.wikipedia.org/wiki/Chilling\\_effect](http://en.wikipedia.org/wiki/Chilling_effect)
3. <http://www.deirdremccloskey.org/pubs/gender/bailey.php#letter>

p-ter (2007-08-26 22:22:09)

do you honestly think you're going to convince her of anything? why bother? that's not a facetious question; I'm actually kind of curious.

KimBooSan (2007-08-27 05:57:21)

I am not familiar with the whole story here – the theory in question, the actions of one researcher or the other – but I am following these exchanges with interest. To be perfectly honest, it seems you two are talking past each other. She doesn't believe you have anything to say, and you can't get her to answer the points you raise. She believes you are attacking her right to object to a theory and challenge the theorist; you are disagreeing with her methods of doing so. DÃ©tente. Personally, I certainly believe in her right to challenge the credibility of a theory, but it does seem she is taking it personally. I come from the queer community and I've known trans of all kinds; they have good reason to be defensive, to be honest. Still, I would expect more from a professional, tenured professor than condescension....hmmm, or maybe not.

seth (2007-08-27 07:15:10)

p-ter, no, I don't expect to convince her of anything. Why bother? She did two awful things – those two complaints – and I wonder how she defends them. It is also therapeutic to write about this. I was sickened by what McCloskey and Conway did to Bailey. KimBooSan, I don't mind her challenging the credibility of a theory. I mind her trying to ruin Bailey's life.

Pearl (2007-08-27 07:36:40)

I'm particularly fascinated by the fact that she continues to resort to grouping anyone who might disagree with her actions to agreeing with Bailey, as if this were the main issue at hand. The main issue is freedom of speech. And, I believe, is particularly important when in consequence to the exchanging of ideas, knowledge, and culture. If she truly believes what she is backing, there would be no need to flee from what she has done. There would be no need to make excuses or hide behind rhetorical speech to mask heinous behavior. The effort thus far exerted to silence Bailey is deplorable.

KimBooSan (2007-08-27 08:43:40)

The act of her trying to ruin Bailey's life just shows how personally she takes this whole matter. To her, defending her position is a self-evident argument and she thinks less of you for questioning it. That's why she won't debate the issue of her methods. The more she is hammered about her methods, the more she will defend her reasons. It's just silly reactionism, and Bailey is on the stick end, unfortunately. See? THIS is why I decided not to pursue a career in academia, oh so long ago!

Rachel Owens (2007-08-27 15:18:14)

I tried for days to find other studies about this particular theory by Blanchard, but apparently he's the only one that ever studied it. I think it is a wrong theory, I see evidence contrary to it every day of my life by looking in the mirror. Of course this means I am a compulsive liar. That's where the rub is, you read the book, right? The language Bailey uses to describe both type 1 and type 2 is very...offensive to say the least. I think Conway and company feel they were made fun of, mocked and insulted by Bailey's words in the book, and they think of it as returning the favor. I don't find anything in particular about the theories horribly offensive, but I do find Bailey's way of describing various women as incredibly offensive in the book. We feel insulted, degraded and spat on by this man's book, so the reactions are needless to say going to come from the gut rather than thoughtful counter-arguments from the mind.

seth (2007-08-27 18:23:09)

Would you give an example of something from Bailey's book that made you feel "spat on"?

Rachel Owens (2007-08-27 20:09:43)

Quote that seems to indicate we're stupid: "Homosexual transsexuals tend to have a short time horizon, with certain pleasure in the present worth great risks for the future." p184 Quotes that seem to indicate the only thing I'm good for is being a whore: "Prostitution is the single most common occupation that homosexual transsexuals in our study admitted to." "Nearly all the homosexual transsexuals I know work as escorts after they have their surgery." p210 Quote that indicates that I'm likely to be



a shop-lifter, and obsessed with clothing: "As for shoplifting, homosexual transsexuals are not especially well suited as much as especially motivated. For many, their taste in clothing is much more expensive than their income allows." p185 That I'm not marriage material, for the record. I\*AM\* happily married, and yes to a man, but I have a career, I did not become some stepford wife. "Do they get married? ... homosexual transsexuals are not very successful at finding desirable men willing to commit to them." p209 "They wanted to get their surgery (if they had not had it yet) and meet a nice, attractive, and financially stable heterosexual man who would marry them and take care of them ... When I was conducting my study of homosexual transsexuals, I routinely asked them if they knew anyone who had realized this dream. No one did." p186 Quotes that we're sex crazed men with vaginas that don't care about our partner of the time. "Gay transsexuals are boy crazy." p178 "ability to enjoy emotionally meaningless sex appears male-typical. In this sense, homosexual transsexuals might be especially well-suited to prostitution." p185 From an analytical point of view, I think I can see why he found what he did find. As far as I can tell, his source for 'homosexual transsexuals' was hitting up inner city gay bars. You're going to get a VERY skewed sample if your only source of people is from one sort of environment. Not all of us live in the inner city and work the streets.

seth (2007-08-27 21:35:48)

Rachel, thanks for providing those examples. These quotes describe traits that some people consider negative, yes, but not in an unfriendly or insulting way. You seem to be saying you are a homosexual transsexual. The whole book is enormously sympathetic to homosexuals, part of why it was nominated for a Lambda Award. How you have failed to see that I don't know.

Rachel Owens (2007-08-27 22:45:13)

Lambda re-examined the book more closely and revoked its status as a nominee and deemed it "Not appropriate". <http://www.planetout.com/news/article.html?2004/03/16/3> In particular this quote. "The specific issue was whether the book was transphobic," Marks told the Gay.com/PlanetOut.com Network. "The judges looked at the book more closely and decided it was." I don't find it sympathetic towards me at all, I feel dirty because of the way he talks about us. I find it degrading and insulting. I am NOT a homosexual, I dislike the terminology itself. I'm only using it when talking to you because you seem to have swallowed the theory hook line and sinker.

Geoff Davis (2007-08-28 06:35:37)

This sounds a lot like the Larry Summers fiasco: legitimate (albeit possibly misguided) discussion of sensitive issues (in both cases gender-related) leads to personal attacks with ultimately severe professional consequences. Nobody won that one.

Rachel Owens (2007-08-29 04:14:28)

[http://members.aol.com/katrinacrose/new/Dreger-Bailey\\_Bush-Libby.pdf](http://members.aol.com/katrinacrose/new/Dreger-Bailey_Bush-Libby.pdf) <http://www.intersexualite.org/Eugenics.html> Two, I guess I would say professional, commentaries on Dreger's article. One by a transwoman, another by another intersexed individual. It should be noted that Dreger herself seems to be a somewhat controversial person in her own circle of intersex organizations and individuals. Also, Exodus International and NARTH wholeheartedly support the book for study to understand how homosexuality can and should be 'cured'. I dealt with NARTH myself when I was a teenager and I was forced to undergo shock and noise aversion therapy in an attempt to make me 'more masculine' and to undo the attraction towards men that I have. These people have ENDORSED Bailey's book. They more or less tortured me as a teenager, and they support the book. How on earth can I side with people that destroyed my childhood and left me mentally scarred?

## **The Twilight of Expertise (part 11: journalists) (2007-08-27 23:08)**

Philip Weiss has written an excellent (as usual) [1]article about Matt Drudge.

“Matt Drudge is just about the most powerful journalist in America,” said Pat Buchanan.

And he's self-employed. He started way down:

This is an incredibly lonely kid, [said a friend]. He doesn't have a sister, his mother is in and out of hospitals [diagnosed with schizophrenia], the father was beside himself. In high school they treated him like shit. He was starting to lose his hair in high school; think what that does to a kid.

1. <http://nymag.com/news/media/36617/>

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Sam (2007-08-28 06:56:42)

The other way round, think what has to be done to a kid so he loses his hair!

peter (2007-08-28 08:25:56)

it's in the genes; some people lose their hair early; the teasing etc., is incidental and, to my knowledge, doesn't cause hair loss.

### **Vitamins, minerals, and mood (2007-08-28 05:43)**

... is the title of a just-published article in Psychological Bulletin. From the abstract:

Since the 1920s, there have been many studies on individual vitamins (especially B vitamins and Vitamins C, D, and E), minerals (calcium, chromium, iron, magnesium, zinc, and selenium), and vitamin-like compounds (choline). Recent investigations with multi-ingredient formulas are especially promising. However, without a reasonable conceptual framework for understanding mechanisms by which micronutrients might influence mood, the published literature is too readily dismissed. Consequently, 4 explanatory models are presented, suggesting that mood symptoms may be expressions of inborn errors of metabolism, manifestations of deficient methylation reactions, alterations of gene expression by nutrient deficiency, and/or long-latency deficiency diseases.

I am eager to see the data. The whole brain is the same stuff. If something affects mood, it should also affect reaction time, which is much easier to measure.

Reference: Psychological Bulletin. 2007 Sep Vol 133(5) 747-760

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Dennis Mangan (2007-08-28 21:01:49)

The way that influences on mood are characterized make it sound as the default mood is "good", while the various deficiencies, errors, alterations, etc. decrease "good" mood. But some things surely improve mood, e.g. sleep deprivation is known to

improve mood, even in those who aren't depressed. BTW, it seems that sleep deprivation and mood effects would be a perfect subject for self-experimentation.

Vitamin Nut (2008-06-24 17:11:17)

Well, I know that vitamins give me a lot of energy. If I didn't take my vitamins every morning, I would be out of gas by noon.

### **Annals of Self-Experimentation: J. S. Haldane (2007-08-28 22:40)**

[1]J. S. Haldane (1860-1936) was an English physiologist. (The better-known J. B. S. Haldane, a geneticist, is his son.)

He believed that there was no better experimental subject than the scientist himself. . . . Routinely, the accounts of his experiments involve vomiting, convulsions, trembling, confusion and sometimes memory loss. At one point, experimenting with extremes of low barometric pressure, and after writing "very wobbly" as a self-assessment on a piece of paper, he stared into a hand-mirror to check himself for the blue lips "cyanosis" that would indicate anoxaemia. He did this for a long time. Turned out he was looking at the back rather than the front of the mirror. . . .

When the Germans started experimenting with gas warfare "chlorine at first, and later mustard gas" Haldane led the race to provide effective protection for the troops. (As ever, this involved gassing himself half to death.) . . . Having heard about the gas attacks, Churchill declared blithely: "Oh, what you want is what we have in the navy. Smoke helmets or smoke pads, and you make them out of cotton wool or something. You'd better get the Daily Mail to organize the making of a million of them."

Haldane pointed out that while a pad of cotton wool clamped to the mouth might help a little with smoke inhalation, it wouldn't offer the slightest protection against chlorine gas. Yet not long afterwards Haldane returned from France to discover the Times reporting that the War Office had appealed for donations of home-made gas-masks from cotton wool or "double stockinette". Haldane, furious, was reassured that this was merely a propaganda exercise, and that the useless masks wouldn't be dispatched to the Front. Yet, again, not long afterwards 90,000 of them found their way to France "and proved just as much help as Haldane predicted.

Meanwhile, Haldane and his team worked like mad at designing effective respirators, tearing up stockings and shawls and even the young Aldous Huxley's scarf to make face-masks. The one they came up with went into mass production "but not before Haldane had to point out that the reason the women in the factory were getting their fingers burnt and their rubber gloves dissolved was that they were using caustic soda rather than, as prescribed, carbonate of soda.

From a [2]review of a new [3]biography of Haldane. Another [4]review by Lynn Truss. [5]Biographer's blog. A [6]third review.

Thanks to Dave Lull.

1. [http://en.wikipedia.org/wiki/John\\_Haldane](http://en.wikipedia.org/wiki/John_Haldane)

2. <http://www.spectator.co.uk/printer-friendly/books/68993/a-healthy-enthusiasm-for-danger.shtml>

3. <http://www.amazon.co.uk/Suffer-Survive-Extreme-Life-Haldane/dp/0743285972>

4. [http://entertainment.timesonline.co.uk/tol/arts\\_and\\_entertainment/books/biography/article2185353.ece](http://entertainment.timesonline.co.uk/tol/arts_and_entertainment/books/biography/article2185353.ece)
  5. <http://martingoodman.com/soyouwanttobeawriter/>
  6. <http://living.scotsman.com/index.cfm?id=1260292007>
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## **Can Professors Say the Truth? (Deirdre McCloskey's 3rd letter) (2007-08-29 06:18)**

Deirdre McCloskey wrote again.

Dear Professor Roberts:

Criticizing someone is "abridging free speech"? Good Lord, how do you think the Constitutional Convention went? Have you listened to a political campaign? Have you participated in any scientific dispute? I guess not.

If Bailey is chilled, perhaps he should get out of the cold room. If one doesn't like the heat of real scientific disagreement, get out of the kitchen. Free speech is how science advances. It ain't beanbag.

You want to think of yourself as defending the weak. It's a silly thought, which you have adopted completely uncritically from Mr. Carey's journalism. You've in fact allied yourself to the most powerful and queer-hating forces in the society. Congratulations.

The "great power" is on the other foot. Relative to the Hispanic women he abused, Bailey had the power. Relative to Lynn and me (you never mention the other distinguished scientists involved, incidentally) in sexology, Ken Zucker has the power (which he has duly exercised, and which again you do not mention: perhaps it has not registered that he allocated 52 pages of his journal on sexual behavior to what the author described as history of science. Would you be the slightest bit suspicious if an editor in your field used his journal, unrefereed, in this way to defend his own views? Relative to Sex Scientists like Bailey and Zucker, and the reactionary and queer-hating people that Bailey, and now you, have inspired (look at the blogs, dear), Lynn and I, as notable queers, do not have the power. Relative to the authority of The New York Times and its "Science" worshipping and queer-hating editors (though Carey himself, I think, is gay, which of course doesn't mean he's not queer hating!), the "power" of our articles is merely, as I said, a feeble one. The feeble power of truth against prejudice and ignorance and cowardice.

You simply won't listen to the claims of the other side. You won't read. You won't consider. Nothing you say can be mistaken. Dreger got her facts exactly right. I have to conclude that you are immovable and uncritical. Bad qualities in a scientist, though in truth not all that rare in science and scholarship as they actually are.

I recommend that you get out more. Listen to a philosopher and anthropologist, Amelie Oksenberg Rorty, who wrote a long time ago that what matters in science and scholarship is

our ability to engage in continuous conversation, testing one another, discovering our hidden presuppositions [in your case: sex, sex, sex is a true theory of queers; no Hispanic queer tells the truth; ordinary scientific disagreement abridges free speech], changing our minds because we have listened to the voices of our fellows. Lunatics also change their minds, but their minds change with the tides of the moon and no beause they have listened, really listened, to their friends' [and enemies'] questions and objections

Rorty, "Experiments in Philsophical Genre," *Critical Inquiry* 9 (March, 1983); 545-565, p. 562.

Words to live by. You've given no evidence that you have listened, really listened, to anyone except the tiny group of sex, sex, sex folk, believing uncritically their recently constructed image of Bailey as Galileo. You've not done the homework, and apparently have no shame that you haven't.

Have I got you pegged right: Get a theory, any old theory, of gender crossing or of the Bailey Controversy, and stick with it, regardless of the evidence or logic, eh? Don't open your mind. Don't read. Don't listen, really listen. I know a lot of economists like this, intellectually closed; my sister tells me they are pretty common in psychology, too.

Jean-Sartre wrote in 1944 (*Anti-Semite and Jew*: it's the only book of his I have fully understood, and one the few of his writings I agree with) about a personality type:

there are people who are attracted by the durability of a stone. They wish to be massive and impenetrable; they wish not to change. Where, indeed,would change take them? . . . What frightens them is not the content of truth, of which they have no conception, but the form itself of truth, that thing of indefinite approximation(Sartre 1944, p. 18).

Until you've read, really read, my autobiography, say, or done other serious homework, listening, really listening, you're not going to find the truth. You're going to be stuck with your first impressions and your apparently very deep prejudices. I say again (I expect it will have no more effect than it has had before): shame on you for the socially bad and scientifically indefensible thing you have done.

Sincerely,

Deirdre McCloskey

Before I replied, McCloskey wrote again. I will post that letter tomorrow.

Her [1]first letter and my reply. Her [2]second letter and [3]my reply

1. <http://www.blog.sethroberts.net/2007/08/25/can-professors-say-the-truth-letter-from-mccloskey/>

2. <http://www.blog.sethroberts.net/2007/08/26/can-professors-say-the-truth-another-letter-from-deirdre-mccloskey/>

3. <http://www.blog.sethroberts.net/2007/08/26/can-professors-say-the-truth-my-reply-to-deirdre-mccloskeys-2nd-letter/>

EC (2007-08-29 10:09:11)

This argument is going nowhere. Her argument boils down to "You are close-minded, therefore you are wrong". Anyone who has to resort to calling someone close-minded probably doesn't have the facts on his or her side.

Seth's blog » Blog Archive » Can Professors Say the Truth? (more from Deirdre McCloskey — and the email she doesn't want you to see!) (2007-09-01 23:07:33)

[...] Can Professors Say the Truth? (Deirdre McCloskey's 3rd letter) [...]

### **Prozac Dangerous to Mussels (2007-08-29 06:41)**

No joke. Prozac in the water may be [1]endangering the mussel population, now in serious decline. For more on such side effects of antidepressants, see [2]Toxipedia.

My [3]self-experimentation led me to believe that morning faces = Nature's antidepressant. Morning faces = mussel-safe.

1. <http://www.sciencedaily.com/releases/2006/09/060914153812.htm>

2. <http://toxipedia.org/conf/display/toxipedia/Antidepressants+in+our+Water>

3. <http://repositories.cdlib.org/postprints/117/>

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Rachel Owens (2007-08-29 12:14:15)

That's somewhat frightening, but I can't say as I'm surprised as heavily as SSRI's are prescribed. I think they are necessary, but they are necessary in far fewer people than actually are on the things. I've tried to live without an SSRI (I take lexapro myself). However my anxiety issues are so strong I will faint/pass out during an attack. Seeing as you have to be conscious to mentally fight a panic attack, this makes anything besides medication quite difficult.

### **How To Name a Book (2007-08-29 11:37)**

What a nice title, I thought, when I read in [1]Marginal Revolution about a collection of essays called Do Economists Make Markets?. A few glances later I realized I had misread it. The title was not Do Economists Make Mistakes?

[2]Do psychologists make mistakes?

1. <http://www.marginalrevolution.com/marginalrevolution/2007/08/what-ive-been-1.html>

2. <http://www.blog.sethroberts.net/2007/06/25/the-twilight-of-expertise-part-6-psychotherapy-continued/>

## Can Professors Say the Truth? (Deirdre McCloskey's 4th letter) (2007-08-29 21:45)

Before I could reply to her [1]third letter, Deirdre McCloskey wrote again:

Dear Professor Roberts:

Having looked into it a bit I am very intrigued by your diet, and will buy the book and try it out.

You have a lot of nerve, however, to quote Bohr— "The common aim of all science" is "the gradual removal of prejudices"—and then without self-experimentation, without consulting people like me who have self-experimented, without examining any of the literature except the sort you like, to relay to the world your prejudices about gender crossers. A lot of nerve.

Sincerely,

Deirdre McCloskey

I replied:

Dear Professor McCloskey,

I'm intrigued. What self-experimentation should I have done? [Later I realized she meant dress as a woman.]

Thank you for reading my book. Yes, Bohr's quote is relevant. Science does remove prejudices. Including the science in Bailey's book, I believe. I think Bailey's book will be a powerful force for tolerance, you think the opposite. Let history decide.

I am not anti-gender-crosser. Nor is Bailey – but I wasn't appalled by what you and Conway did to him because I liked his book. I have [2]defended Holocaust deniers and [3]praised a book with a generous view of creationism. I don't deny the Holocaust and I'm not religious. I believe everyone deserves to speak, to be heard. Everyone. Without harassment or punishment.

Sincerely,

Seth Roberts

1. <http://www.blog.sethroberts.net/2007/08/29/can-professors-say-the-truth-deirdre-mccloskeys-3rd-letter/>

2. <http://www.blog.sethroberts.net/2007/04/03/my-holocaust/>

3. <http://www.blog.sethroberts.net/2007/08/04/how-to-be-a-grown-up-about-evolution/>

Pearl (2007-08-30 01:38:27)

I think SLD is the answer to world peace.

Ben Barres (2007-08-30 10:54:57)

This is not simply a harmless academic debate. The welfare of a whole group of people is at stake. It is one thing to defend responsible free speech, but it is quite another to defend overt bigotry. Are transgendered people low socioeconomic liars and shop lifters especially suited for work in the sex trades? Such claims, published by Bailey under the guise of high quality science, engender and maintain the oppression, ostracization, and violence that transgendered people face. The real question is why the entire psychology community failed to question Bailey about the nature of his writings and behavior, leaving a disadvantaged population holding the bag. I applaud the heroic efforts of Lynn Conway, Deirdre McCloskey, Andrea James, and others to bring these issues to light. Although Andrea James has long ago sincerely apologized for her one act of poor judgement, Bailey has yet to utter a single word of apology and continues to strenuously defend even his claim that transgendered people are especially well suited to be prostitutes (this can be found on the audio recording of last weeks Kqed Forum show). It is a dirty business fighting bigots who often claim to care about the people they are targeting and to be proving their bigotted opinions using science. Throughout history, silence from the advantaged non-targeted groups is invariably the rule. Remarkably, Seth Roberts is not only silent and completely insensitive to the bigotry in Bailey's book, but is actively defending Bailey. The transgender community will no longer sit by silently while "professionals" claiming to care about us, write books filled with transphobic hate speech, practice clinical psychology without a license, sleep with their subjects, do research without informed consent, and do junk science that is then used to support public policy and opinion against us. Roberts is concerned about the chilling effects of trans activism on free speech, but he forgets that the only free speech under concern is overt bigotry. Why is he so passionate in his defense of bigotry? Why isn't he concerned about the chilling effects this bigotry has on a whole oppressed group of people? Ben Barres

KimBooSan (2007-08-30 11:15:15)

Great reply, Seth. To the heart of the matter, sincerely, and well said. Not much you can add to that, at all. And Pearl: Preach on, sister!

seth (2007-08-31 07:18:53)

Ben Barres: "Why is he [= Seth Roberts] so passionate in his defense of bigotry?" Ignoring the "when did you stop beating your wife?" aspect - Bailey's book is not, in my opinion, bigoted, quite the opposite - that's a good question. What you call bigotry I call speech. Claiming that certain people do not deserve to be heard has often been an early step down a well-trodden path toward being violent toward them - including murdering them. That's the short answer to your question. Thanks, KimBooSan! Although I felt my reply was slightly pompous I feel better about it now.

Seth's blog » Blog Archive » Can Professors Say the Truth? (more from Deirdre McCloskey — and the email she doesn't want you to see) (2007-09-02 04:43:10)

[...] Can Professors Say the Truth? (Deirdre McCloskey's 4th letter) [...]

Ben Barres (2007-09-02 20:03:04)

And while we are talking about violence and murder, why aren't you equally concerned about the violence that transgendered folks face or the nearly 50 % AIDS/HIV infection rate in gay and transgendered folks who have been forced into prostitution to survive because of employment discrimination or because they have been thrown out of their house by their parents as still frequently occurs with young teenage gay boys.

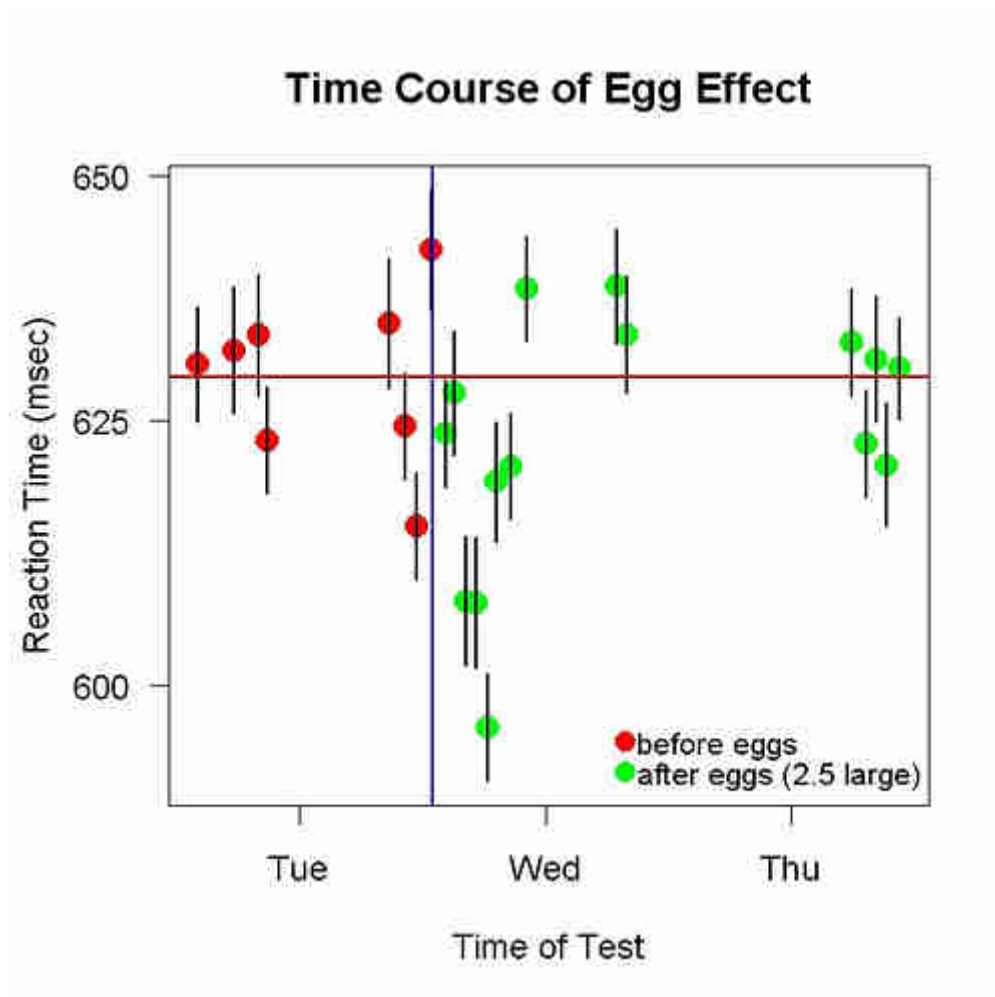
## Science in Action: Omega-3 (more eggs) (2007-08-30 16:15)

[1]Recently I described how, while testing flaxseed oil, I noticed that some eggs I had eaten seemed to have had a flaxseed-oil-like effect. The eggs came from grass-fed chickens; such eggs are believed to be high in omega-3. So the



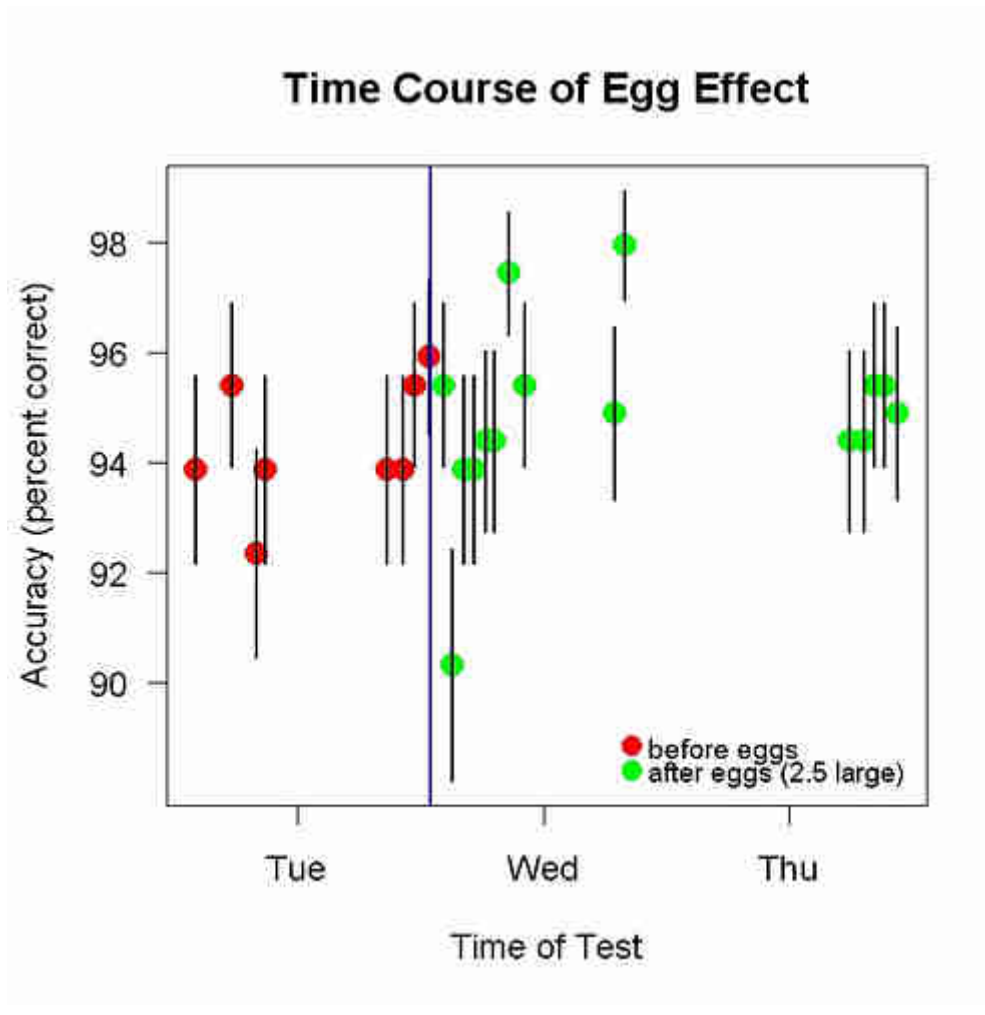
inference was plausible. But was it true?

To find out, I deliberately tested eggs. I used 2.5 large eggs (2 large, 1 small) to make scrambled eggs, which I ate. Here's what happened:



The blue line shows when I ate the eggs. The red line is the average of the pre-egg reaction times. The main result is that, as suggested by the earlier data, there was a flaxseed-oil-like effect. I'm not sure what to make of the lowest point. I had eaten half of a cheese-and-mushroom crepe before that measurement. If the crepe was digested quickly, that would have reduced reaction time. (Sugar drinks clearly do this.)

Here are the accuracy values.



Mostly there was little change in accuracy. However, one value (90 %) was very low, the lowest value in a long time. It happened before the biggest changes in reaction times. It might be due to the eggs.

My main conclusion is that yes, the eggs acted like flaxseed oil – presumably because of their omega-3. In addition, the results increase my belief that this method can measure the brain effects of ordinary food and can generate ideas worth testing.

1. <http://www.blog.sethroberts.net/2007/08/20/science-in-action-omega-3-time-course-2-with-eggs/>

CD (2007-08-31 08:01:00)

Seth, Very interesting results. This might be a good opportunity to test the effect of high and low omega-3 eggs without knowing which ones you are consuming in advance (assuming the eggs taste the same).

SusanJ (2007-08-31 10:41:38)

Eggs are the only food I'm allergic to. It actually took me years to figure out that egg consumption the cause of the problem which manifested itself as a severe lack of energy. For example, I could walk very slowly but not quickly and not run even a few steps. (And this could go on for hours.) My understanding is that this could have been an immune response provoked by egg protein getting into my circulatory system somehow. I mention this because allergy to eggs is very common and could be a confounding factor.

Floyd (2008-07-24 14:49:16)

What method did you use to test the Omega-3 levels in the eggs? Did you test your blood or did you test the egg yolks themselves? Do you know of a machine or piece of equipment on the market that can test for Omega-3 levels in egg yolks?

seth (2008-07-24 16:05:28)

I didn't test the eggs myself. The packaging indicated the omega-3 value. Omega-3 levels can only be measured with very expensive machines.

### **Fish and Pregnancy Danger (2007-08-30 17:32)**

An [1]article in the latest issue of the American Journal of Epidemiology reports a correlation between fish consumption and worse pregnancy outcomes. It was done in Denmark. Mothers who had eaten fish four or more times per month during their pregnancy had babies that were less healthy on several measures of fetal growth than mothers who had not eaten fish.

The differences were small; they required a sample of about 40,000 women to detect. However, they are convincing partly because this effect was found for only fatty-fish consumption. For lean fish, the results were quite different. Organic pollutants accumulate in fat; mercury accumulates in protein, so these results are more likely due to organic pollutants than to mercury.

A reason to get one's omega-3 from flaxseed oil rather than lots of fish or fish oil.

Earlier [2]post about a study that found beneficial effects of pregnant women eating fish.

Reference: Is High Consumption of Fatty Fish during Pregnancy a Risk Factor for Fetal Growth Retardation? A Study of 44,824 Danish Pregnant Women. Th. I. Halldorsson, HM Meltzer, I Thorsdottir, V Knudsen, and SF Olsen. Am. J. Epidemiol. 2007 166: 687-696.

1. <http://aje.oxfordjournals.org/cgi/content/abstract/166/6/687?etoc>

2. <http://www.blog.sethroberts.net/2007/02/23/pregnancy-and-omega-3/>

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Willy (2007-08-30 17:43:55)

Thanks for posting this, it is very important. I remember I read fish oil capsules are safer than fish in relation to contaminants. I don't have any link at hand, sorry.

michael vassar (2007-08-31 01:52:09)

Barely statistically significant as a measure of size, and a study of IQ showed the opposite effect recently.  
<http://www.newscientist.com/article/dn11193-breaking-fish-advice-during-pregnancy-might-benefit-babies.html>

seth (2007-08-31 06:34:18)

Thanks for the link. I should have mentioned my earlier post about that study. What does "as a measure of size" mean?

michael vassar (2007-08-31 08:19:25)

I mean that this study was simply measuring size while the other study measured IQ.

Pregnancy (2009-05-21 05:19:02)

Thank you for your information : But what can I do if I am a big fans of Shushi :p

### **My Theory of Human Evolution (guitar edition) (2007-08-31 05:26)**

In this [1]podcast, New Yorker writer Burkhard Bilger talks about the guitars of Ken Parker. A lot of research goes into them. I propose that we enjoy music because enjoyment of music creates demand for musical instruments, which leads to material-science research. My previous [2]earlier posts about human evolution have said something like this – art generates research – several times. Previous examples were visual.

Josh McDermott, a psychologist at MIT, has compared human and animal responses to music. From an in-press [3]paper:

When presented with a choice between slow tempo musical stimuli, including lullabies, and silence, tamarins and marmosets preferred silence whereas humans, when similarly tested, preferred music. . . .There appear to be motivational ties to music that are uniquely human.

1. [http://downloads.newyorker.com/mp3/070514\\_theperfectwave.mp3](http://downloads.newyorker.com/mp3/070514_theperfectwave.mp3)

2. <http://www.blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-directory/>

3. [http://web.mit.edu/jhm/www/mcdermott\\_tempo.pdf](http://web.mit.edu/jhm/www/mcdermott_tempo.pdf)

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losing-it (2007-08-31 08:42:29)

My husband and I have thought on the subject of animal non-response (for the most part, visibly) to music. We believe it may be the complex patterns of math in music which we subconsciously intuit and respond to emotionally, whereas non-human animals (such as our cats and late dog) may not be able to recognize, appreciate or respond to in the same way we do. Our cats don't seem to respond to music recordings, except to startle at unexpected volume or impactive sound; my husband is in the audio business, and we play many types of music in the house. However, interestingly, they respond to sing-song voice when I sing to them; especially a male cat who has a medical condition which can cause seizuring. Singing soft lullabye and hymn songs calms him. If I add cat sounds and his name to the songs, he seems to take notice. I think it is because the song notes sound much like the calling and comfort vocalization tones that mother cats use with their kittens.

### Can Professors Say the Truth? (Roughgarden replies) (2007-08-31 07:27)

Joan Roughgarden has [1]responded to my [2]comment about her recent KQED [3]radio appearance. Her response includes this:

Today, in 2007 only a few, like Roberts, still take Bailey's work seriously.

In 2006, Bailey's work was featured on 60 Minutes in a [4]piece titled "The Science of Sexual Orientation." After the piece aired, a blogger criticized Bailey. Shari Finkelstein, the producer, [5]responded:

His work is highly regarded by all of the researchers in the field who we spoke with.

What a difference a year makes, if Roughgarden is correct.

1. [http://www.scientificblogging.com/joanroughgarden/the\\_bailey\\_affair\\_again](http://www.scientificblogging.com/joanroughgarden/the_bailey_affair_again)
2. <http://www.blog.sethroberts.net/2007/08/22/can-professors-say-the-truth-radio-show/>
3. [http://www.alicedreger.com/kqed\\_forum\\_transcript.html](http://www.alicedreger.com/kqed_forum_transcript.html)
4. <http://www.cbsnews.com/stories/2006/03/09/60minutes/main1385230.shtml>
5. <http://www.cbsnews.com/blogs/2006/03/14/publiceye/entry1399162.shtml>

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Rachel Owens (2007-08-31 14:59:31)

I like how you just sort of glazed over everything she did when talking about how small Blanchard's study was, and the fact that no tests of significance have ever been done on the results. How can you avoid that? How as a scientist can you say that not having a test of significance isn't a lacking part of the studies? I've yet to find a psychologist who agrees with Bailey/Blanchard and I've been going to various doctors for my entire life, I've now seen several in my new area (Seattle). None so far has agreed with his work, and most actually LAUGH at his name, especially because of his gay straight or lying study, because he continues to use a penile plesmograph which is fairly disliked as a study tool Has anyone supported you Seth? You haven't posted anyone saying anything positive about your stance on Bailey, none at all. Shouldn't that tell you anything?

seth (2007-08-31 16:02:13)

My concern is not whether Blanchard is right or wrong; it was what happened to Bailey after his book was published. If Roughgarden justifies trying to ruin Bailey's life because Blanchard didn't do statistical tests, that needs no answer. She continues to act as if a trade book is a research monograph – really, no comment is needed. Yes, several people have supported me. For example, "Great reply, Seth. To the heart of the matter, sincerely, and well said" (via comments). And: "I think you're seeing this situation precisely as it truly is. It has been a horrible example of injustice and attack on scientists for simply telling

the truth, and I'm glad you're speaking out (and that people are listening to you)" (via email). Even McCloskey seems to think that not all I have written is nonsense, as I hope to show in an upcoming post.

Rachel Owens (2007-08-31 17:02:28)

Bailey ruined my life, albeit indirectly. I feel no remorse if his is ruined too, maybe I'm just cruel, but I have my reasons. My parents disowned and kicked me out of the house after they read his book, calling me a sexual deviant and a pervert. I have no family due in part because of the man's writing. I was homeless for a month as a result until I found a new family to replace them.

### **Avoiding Overeating (2007-08-31 11:53)**

On the Shangri-La Diet forums, Timothy Beneke has [1]posted about a creative method of avoiding compulsive eating.

Tim has been an excellent weight-loss engineer. His discovery, after losing 80 pounds, that he could lose even more by eating taste-free nutritionally-balanced mush is one reason I believe the [2]theory behind the Shangri-La Diet. The theory predicts this will work, yet the mush is quite different nutritionally than flavorless oil or sugar water.

1. <http://boards.sethroberts.net/index.php?topic=5547.msg58272#msg58272>

2. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>

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Bradley Cooke (2007-08-31 13:17:17)

Seth, Do you recall your podcast interview with Glenn Reynolds of Instapundit? I heard it and have since become interested in your ideas about appetite and weight. One of the things Glenn mentioned was that he'd heard commercials from the Sugar Growers of America that stated something to the effect of "a spoonful of sugar a day lowers the appetostat". You said that was consistent with your theory... I was wondering if you'd followed up on that, to determine whether they were promoting the same thing you are today. thanks, Brad. P.S. I appreciate your defense of Michael Bailey. He's a colleague and a great guy.

seth (2007-09-01 16:56:20)

Nice to hear from you, Brad. No, I haven't followed it up. Animal experiments with sugar water added to the cage generally show that the sugar water causes weight gain; this may be because the sugar water increases water intake (which causes weight gain in lab rats), or it may be because the sugar water is drunk at the same time as regular food. But you might be right; maybe I should follow it up.

## **2.9 September**

### **Annals of Self-Experimentation: Video Games (2007-09-01 05:57)**

From an [1]article about drugs and video games:

In late 2006, as rumors of performance-enhancing drug use among pro gamers crackled, FragArcade staff writer Rance Costa used himself as the guinea pig in a Netherlands experiment. He ingested four drugs

typically reputed to heighten perception, taking a different one each morning over a four-day period. It was the nutritional supplement Focus XT on the first day, Red Bull on the second, Jack Daniels on the third, and lastly marijuana. A simple computer program tested his reaction times after he consumed each substance, and each time he was sluggish

Not so different from my omega-3 research. Will gamers start taking flaxseed oil? They [2]should. Maybe some pro gamers have done extensive self-experimentation that they don't tell anyone about. Like classified military research. Good topic for TV show: Top Secret Self-Experimentation.

1. <http://www.n4g.com/News-58077.aspx>

2. <http://www.blog.sethroberts.net/2007/08/22/science-in-action-omega-3-vse/>

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### **Can Professors Say the Truth? (more from Deirdre McCloskey - and the email she doesn't want you to see) (2007-09-01 23:07)**

Continuing our voluminous correspondence ([1]here, [2]here, [3]here, [4]here, and [5]here), Deirdre McCloskey wrote again:

Dear Professor Roberts:

Yup. [In answer to my question "In your last letter, by 'self-experimentation' did you mean dress as a woman?"] That should be obvious to you. That it's not, and that you sneer at the idea, is indicative. No one who has not actually tried to pass in the other gender has any idea what it is like not to pass, how dangerous and embarrassing it is. No one who has not tried the experiment can have any idea how important it is to have nose jobs and the like. It's exactly out of such non-self-experimentation, and the lack of real empathy it implies, that the God-wants-you-to-be-thus, Clarke Institute torturing comes.

I don't remember our discussion about Crossing.

You think Bailey's book will be a powerful force for toleration? I suppose you've actually looked at the evidence, right? You've consulting the blogs, and you've read the hate mail? And your conclusion is. . . what? That a wave of transphobic filth stimulated by your blog and Carey's article will lead, somehow, to the promised land? You have here a questionable social theory, but let's hope you're right.

Disagreement, as you should well know from your own self-experimentation, is not the same as "harassment." Nor is holding people to ethical standards in their scientific behavior. We didn't "do" anything to Bailey. We exercised our rights as free citizens and as ethical scientists. That you were "appalled" shows that you got fired up by Carey's article (just as he wished) and didn't bother inquire—as you easily could have done (you keep making a point of our previous e-mail relationship) but most assuredly did not before shooting off your ill-considered blog—with the principals. You wanted the story to be Bailey = Galileo, and were not going to let such silly things as evidence stand in the way. You've stoutly defended it ever since, with no heed to the evidence.

I'm not impressed that you praise Holocaust deniers, or that you give standing to naive creationism. It just shows what is evident in your defense of Bailey, that you are willing to encourage the worst in our society in aid of a simpleton's version of "fairness." You would have been "fair" to Goebbels and the Inquisition, the Ku Klux Klan and the first Chinese emperor. Your position of "Let them have uncriticized speech to advocate idiotic and harmful proposals" depends on people like Lynn and me exercising our free speech to criticize such people. You would be the first person the Nazis you defend would come for. No, actually, on second thought, you would be the second, after me.

Sincerely,

Deirdre

I replied:

Dear Professor McCloskey:

I don't "sneer" at the self-experimentation you propose. It has a long and admirable history.

I did not get "fired up by Carey's article." My blog posts on this topic appeared before his article.

I mentioned our correspondence about Crossing in my blog posts about this.

I didn't "praise Holocaust deniers" – I just think they shouldn't be harassed or silenced.

I don't mind criticism of Bailey – of course not. I mind attempts to ruin him – which is what your and Conway's absurd complaints to authorities were.

Sincerely,

Seth Roberts

She wrote again:

Dear Professor Roberts:

Let's make this a convergent series, by undertaking to answer in half the space as the last one. Your only-only-argument against our complaints about Bailey's behavior is to assert repeatedly, unadorned by evidence, that they were "absurd." Northwestern University did not think them absurd. They fired Bailey from the chairmanship; they investigated him for a year. The lawyer we consulted did not think them absurd; nor did the state licensing bureau. Alas, the statute of limitation had run out.

We did nothing to "silence" anyone. Get this: we are not the government. We argued with Bailey. We complained about his behavior. None of that constitutes "silencing," unless indeed poor, dear Bailey is too feeble for this world.



Regards,

Deirdre

I replied:

Dear Professor McCloskey:

Please see my earlier letter for a detailed explanation, including evidence, of why your complaints were absurd. No one has ever gone to a mugger and asked to be mugged. That's my evidence for your State of Illinois complaint. And no one has ever been considered a research subject because they were in a story in a trade book. That's my evidence for your Northwestern complaint.

When you say that Bailey left the chairmanship because of your complaints, you are wrong.

"We did nothing to 'silence' anyone." If you don't understand the term chilling effect, we are again at a curious point in intellectual history.

Sincerely,

Seth Roberts

She wrote again:

Dear Professor Roberts:

Anyone who is chilled by being challenged intellectually, I suppose you agree, doesn't belong in intellectual life.

Anyone who is chilled by being investigated for wrongdoing when he's done wrong is just a moral coward, as I reckon Bailey to be. You don't understand The Letter if you don't think the women were mugged. You've not walked in those shoes, or bothered to find out. You haven't read Bailey's book if you think the women were not "research subjects." He called them that, and bragged about it. After the book came out he said, oh, it was "only a trade book. Not science."

Regards,

Deirdre

I replied:

Dear Professor McCloskey,

If you believe that Bailey should be punished for helping those who came to him for help, you have a most unusual and unfortunate view of how people should treat each other.

If you can't tell the difference between a trade book and a research monograph, we are again at a curious place in intellectual history.

Sincerely,

Seth Roberts

On her website, McCloskey includes almost all [6]our correspondence. The omissions are trivial, with one exception: She doesn't include this email from me, in spite of including her reply to it. Curious!

I wrote to her about the omission:

Dear Deirdre:

Thanks for posting our correspondence on your website. I too am glad we had it. A tiny flaw: You omit my email below ("If you believe...").

Seth

No answer. One of the few letters from me she didn't answer. She continued writing to me. I believe she omitted that email from her website because it makes things too clear.

1. <http://www.blog.sethroberts.net/2007/08/25/can-professors-say-the-truth-letter-from-mccloskey/>
2. <http://www.blog.sethroberts.net/2007/08/26/can-professors-say-the-truth-another-letter-from-deirdre-mccloskey/>
3. <http://www.blog.sethroberts.net/2007/08/26/can-professors-say-the-truth-my-reply-to-deirdre-mccloskeys-2nd-letter/>
4. <http://www.blog.sethroberts.net/2007/08/29/can-professors-say-the-truth-deirdre-mccloskeys-3rd-letter/>
5. <http://www.blog.sethroberts.net/2007/08/29/can-professors-say-the-truth-deirdre-mccloskeys-4th-letter/>
6. <http://www.deirdremccloskey.org/pubs/gender/bailey.php#seth>

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Pearl (2007-09-02 06:57:38)

"That a wave of transphobic filth stimulated by your blog and Carey's article will lead, somehow, to the promised land? " ????? How interesting that she would suggest that transphobia would be stimulated by your blog rather than by HER OWN ACTIONS. Prior to witnessing this exchange, I had within my own limited knowledge deep respect for two transgendered women within my own field. I continue to hold this respect, however now irreparably paralleled with revulsion for a handful of transgendered women who have chosen to act with immature, vile contempt towards those to refuse to "walk in their shoes." One of the transgendered women for whom I continue my utmost esteem is Wendy Carlos, a woman who burgeoned her career unfettered by her sex change, and who I deeply respect for her contribution to classical music as a PERSON. To be

honest, McCloskey's reasoning in the last paragraph starting with "I'm not impressed that you praise Holocaust deniers..." truly frightens me. Could chilling effect be any more transparent?

Rachel Owens (2007-09-02 13:45:38)

There is an inherent inability to communicate our point, and this isn't necessarily your fault, or anyone's really. We say that Bailey's book offends and degrades us. That is our opinion, you say it does not and that he is 'friendly' to us, that is similarly your opinion. We do not share that opinion. You are not transsexual, you cannot know how his book makes us feel. The book makes me feel depressed, it ruined my life, it made me homeless, it made my family turn against me. Have you ever had a book that did this to you? If not, then you can't expect to understand how it makes us feel. This book RUINED my life. I don't know how I can make that any clearer, there aren't any other words that I can use, except to say the same ones over and over again. Bailey's book forced me on the street and I had to live out of my car for three or four weeks, I don't even remember. I had to drop out of school, I had to beg for spare change until I could buy enough gas to get to a friend's house states away. I don't even really know how long I was homeless anymore, see the days blur by when you don't have a bed anymore. My mother is now in the hospital because of ovarian cancer and I cannot visit her, because they won't let me near her because I'm a filthy disgusting hedonist, all of which they got from Bailey's book. The only book that covered transsexuals they read, I was of course kicked out before I could offer something more uplifting and less degrading.

Pearl (2007-09-02 15:24:00)

Knowledge and ideas don't ruin peoples' lives. People ruin peoples' lives.

Tom (2007-09-02 19:25:47)

It is amazing the damage that people will do to avoid confronting the truth in front of their faces. Rachel's parents are blameless, Rachel is blameless, and there was never anything but love, trust and mother's milk in the Owens' home...but the book is Shiva, Destroyer of Worlds. So Bailey must be ruined, because he...wrote a book.

seth (2007-09-02 20:18:34)

Let me add two cents to this discussion: 1. One of my students, a lesbian, was kicked out of her house because she was a lesbian. No book was involved. 2. Someone in McCloskey's family - I think her sister - wanted to have McCloskey committed to a mental institution. No book was involved. This was long before Bailey's book.

Rachel Owens (2007-09-02 23:57:47)

I am certainly not blameless Tom, I could have been more tactful about my life's decisions. My father was certainly not blameless, he wanted to kick me out at 16 over the matter, the only thing holding it back was mom. My mother believed me when I told her I should have been born a girl, especially when I was diagnosed with Klinefelter's, but only until she read that book. Bailey's book completely changed my mother's opinion of me, it was black and white for her, she rapidly grew more distant. So as soon as I was 18 and some change, I was kicked out, written out of the wills and I think they even tried to get restraining orders, but I have no intent of ever going back anyway after what they said. Am I bitter? Yes, but I'm not going to weep tears when Bailey's tenured professorship is rocked a little bit when I never even got the chance to defend myself, he at least has had that luxury. I am declared scum, I was molested, abused and beaten and the cops didn't give a damn because of who I am. Nothing he said was in the slightest 'friendly' to bettering my life to the uneducated masses. Maybe to college-educated folks, they can read the book like Professor Roberts does, but the unwashed masses that read it just looked at me with scorn and only remembered the comments that "some people might consider negative" as Seth put it. As angry as I sound, it's not so much WHAT Bailey says but HOW he says it that has many of us so angry.

KimBooSan (2007-09-04 08:38:04)

I'm queer. I've known transgendered people. I've known people whose lives were ruined by the circumstances of their orientation. I worked for a GLBT newspaper, and I know from the battles our editor raged the power of words to heal or hurt. I understand what you are saying, Rachel, about Bailey: how something is said can create great gulfs in understanding what is said. I was once told by my own editor that bisexuals are not really queer; that we sit on the fence and make a bad reputation

for everyone else in the community, that we "just don't count." But those are just WORDS, Rachel. I chose to call him a bigot and call him out, but I never once tried to shut down his right to that opinion. Instead I set out to prove him wrong and a year later the newspaper was not publishing articles about the "gay community" but the "GLBT community." I could have quit, but we agreed to disagree and eventually he realized he was wrong. We changed the language and thereby changed perception, but to be honest, his perception had to change first, and I did not accomplish that by setting out to destroy him. You simply can NOT say that Bailey ruined your life. That's absurd. If your mother chose to read that book and that book ONLY and then believe that the worst of it which he presented was the truth about her own child's life, then for god's sake I have to say: You mother ruined your life. I think your efforts would be better spent showing how powerful a person you are by standing up for your rights and creating a future of hope for the other "T"s of the world as a proud role model, rather than hurling your anger at tearing down Bailey. His work will rise or fall of it's own accord, so let go of that. If he's really, really wrong, then your job is to prove that, and you will not do so by waging a campaign to silence him. ::::KBS, been there, done that.

lauraline (2007-09-06 16:18:59)

Nothing he [Bailey] said was in the slightest "friendly" to bettering my life to the uneducated masses. Maybe to college-educated folks, they can read the book like Professor Roberts does, but the unwashed masses that read it just looked at me with scorn and only remembered the comments that "some people might consider negative" as Seth put it.

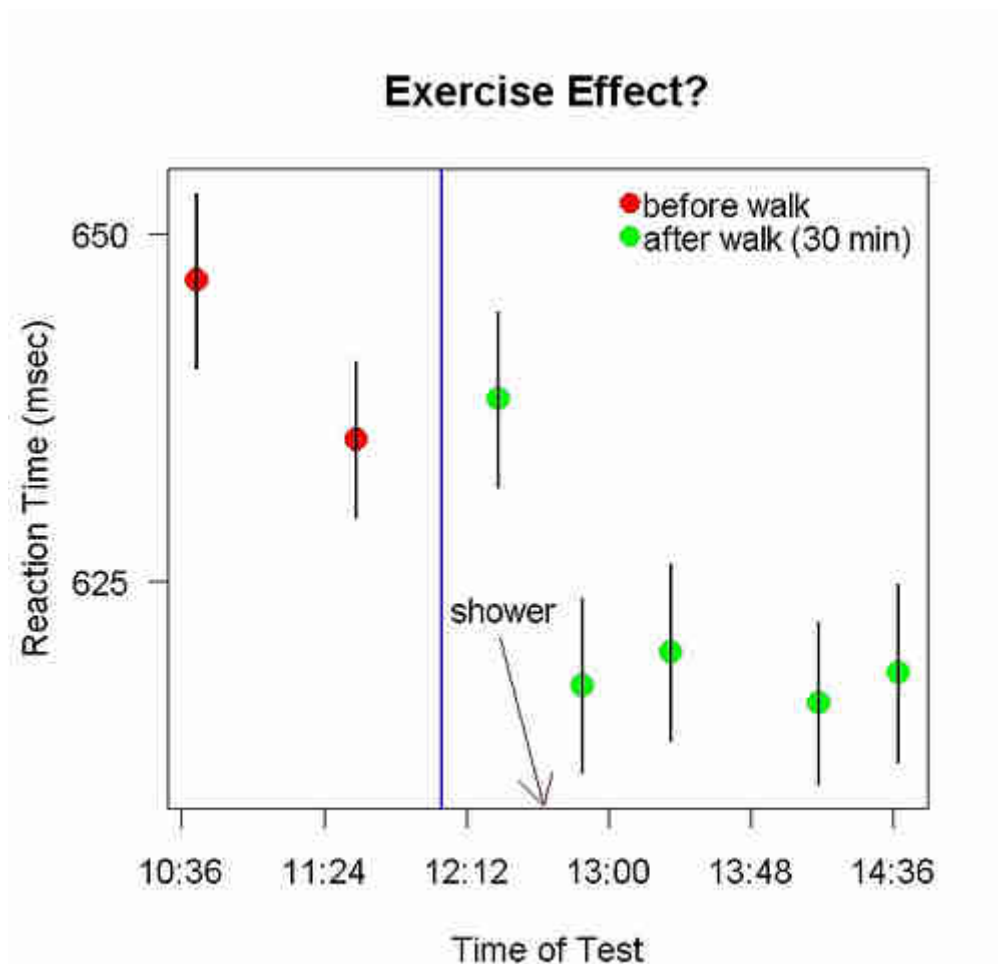
I guess that, fortunately, unwashed masses aren't much for reading books... especially books written by college professors. In any case, the unwashed masses have a tendency to dislike science and discovery in general. The unwashed masses tend to get angry when scientists write about evolution, but biologists are not about to buy into creationism and abandon the study of species evolution because it makes the unwashed masses angry. Gender science and research is no different. As for Bailey's research not making your life better, who said Bailey's job was to make your life better? Researchers are interested in investigating, generating hypotheses and attempting to test hypotheses. Ideas and discoveries that come about along the way can be put to good use or bad use and often to no use at all. Researchers don't subject the exploration process to some litmus test requiring that their investigations have some tangible benefit to some person who thinks they are entitled to such benefit. As for your mother's reaction to Queen, if in reading Bailey's book she found some reason to throw you out of the house, I'd say that your mother must be both stupid and cruel. According to your report, you would more likely fit Blanchard's transgendered homosexual type. If this is so, Bailey would speculate that it is probably due to biological (inborn) factors (this doesn't mean Klinefelter's isn't a factor) and possibly to subsequent experience of adversity including early adversity and psychopathology in the family. Why would your mother think Klinefelter's makes it okay for you to be transgendered, but somehow Bailey's (Blanchard's) typology would change everything? The only thing added to the mix is the suggestion that, perhaps, your parents might have been lousy, disturbed parents. In that case maybe your mother should have thrown your father out of the house rather than you. Better yet, both parents should have started treating you with kindness, love and respect. NOTHING Bailey has written would suggest that you should have been thrown out of your parents' house. Frankly, your parents sound awful, but science is not going to adjust exploration down to a level digestible for your awful, worthless, stupid unwashed parents. The rest of us have rights in this life and those rights are not going to be defined by your ignoramous family. It is terribly sad that you have had such a difficult life through no fault of your own. You shouldn't blame yourself for how you expressed yourself. When we are kids facing adversity, it is the job of our parents to appreciate the difficult challenges we face. This isn't something the unwashed masses seem to be very good at doing. Perhaps you would have expressed yourself better if your parents hadn't been such asses. Again, that isn't because of Bailey. It is terrible that you've suffered what you've suffered but professor Bailey is not to blame. Your low-life parents decided to sever their relationship with their child because they are bigoted, narrow-minded and probably mentally disturbed people.

## Science in Action: A Puzzle (2007-09-03 03:22)

To learn how omega-3 affects brain function, I've been doing a [1]letter-counting test several times per day. I've posted [2]some results. Several times after exercise (treadmill and street walking) my reaction times were faster than expected – meaning my brain was working better than expected.

Does exercise improve brain function? In a [3]chapter on self-experimentation that he and I wrote, Allen Neuringer described several experiments in which other measures of brain function improved after exercise. I wanted to learn more about this for two reasons: 1. Reduce "noise". If I know how much exercise is needed to get the effect, I can be careful to stay below level that while doing omega-3 experiments. 2. Practical value. You might call it nature's caffeine.

So I did a little experiment. I walked on a flat treadmill for 30 minutes and did the letter-counting test several times. Here are the results:



The line shows the middle of the exercise; the exercise ended a few minutes before the first post-exercise test. To my surprise, the first post-exercise test showed no effect. I was wrong, I thought. But to my further and greater surprise later tests showed an effect in the predicted direction.

Between the first post-exercise test and the second, I took a shower. I will need to see if showers have an effect.

If not, then apparently exercise has a delayed effect. No one has ever proposed this, I'm pretty sure.

Most of my self-experimentation has studied elements of ancient life. Omega-3, for example – I believe our ancestors ate lots of seafood (the [4]Aquatic Ape Theory). They surely walked a lot.

1. <http://www.blog.sethroberts.net/2007/08/11/science-in-action-omega-3-letter-counting-test/>
2. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>
3. <http://socrates.berkeley.edu/~roberts/self/>
4. [http://en.wikipedia.org/wiki/Aquatic\\_ape\\_hypothesis](http://en.wikipedia.org/wiki/Aquatic_ape_hypothesis)

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Willy (2007-09-03 06:32:44)

Hi. I would try running. I think it is aerobic exercise like running which improves mood and cognition (with time). Maybe walking is not strong enough.

Tom (2007-09-03 07:08:56)

A couple of anecdotal suggestions: With me, I definitely feel sharper after exercise, but also not immediately after. I may feel duller for a couple of hours, but much more alert and "on top of it" about six hours later. This happens both on days where I do my 'sprint' training (absolute max. effort for 30 seconds alternated with 3 minutes fast walking, repeated several times) or my resistance exercise (very heavy weights, slow cadence, one set to failure.) Second, I agree with Willy that walking will give you little effect...it's not really exercise. Finally, the NY Times recently ran an article on recent research that exercise increases the formation of new brain cells, even in the elderly: <http://www.nytimes.com/2007/08/19/sports/playmagazine/0819play-brain.html>

Tom (2007-09-03 07:11:54)

another interesting study: <http://www.jneurosci.org/cgi/content/full/25/38/8680>

knackeredhack (2007-09-03 07:17:23)

Seth, as I think I mentioned before, you might want at some point to try "intervals" of cold shower bursts. Athletes use contrast bathing to speed recovery, and I'm confident it has an effect on cognitive function. Three intervals of 30 seconds each of warm vs cold was the recommendation of the physios at Bath University Sports Training Village, who look after some of our leading international competitors, including the England Rugby team, some of whom reportedly go in for more extreme exposure to cold. I've been doing this consistently and almost daily since June/July and am satisfied of the benefits. I believe mood, cognition and dealing with stress have all been better as a result. There was one week when I could not cold shower and did not always feel so fresh. Some research has been done on the effects of cold on mental function and is mentioned here:- <http://news.bbc.co.uk/1/hi/england/humber/4172097.stm> Of course, Seneca got there before us all on this one.

Timothy Beneke (2007-09-03 08:04:21)

I was a runner when I was younger and am now a big brisk walker; I've never gotten the same "high" from walking that I once got from running. A comment on showers: it is clear to me that taking hot showers, probably by increasing blood flow to the brain, causes more mental activity – I will have flurry of thought, association, memory in my consciousness when I take showers. Descartes liked to think with his head near stove; he claimed it activated brain activity. Anyway, showers may be a confound worth considering. My guess is that people tend to sing in the shower because the brain is activated there.

peter (2007-09-03 08:47:12)

art de vany would probably say that your brain would work better after a short intense burst of activity, i.e., sprinting.

On Walking « Two Newtons (2007-09-03 10:28:48)

[...] On Walking September 3rd, 2007 I love to walk and I won't be surprised if someday soon walking is crowned as king of exercise. Not running. Not cycling. Not StairMaster. Walking. It's easy on the body and appears to be good for the brain. [...]

Willy (2007-09-03 21:31:48)

How interesting knackeredhack, too bad I hate cold showers. Maybe hot increase circulation and cold increases norepinephrine and stimulates you.

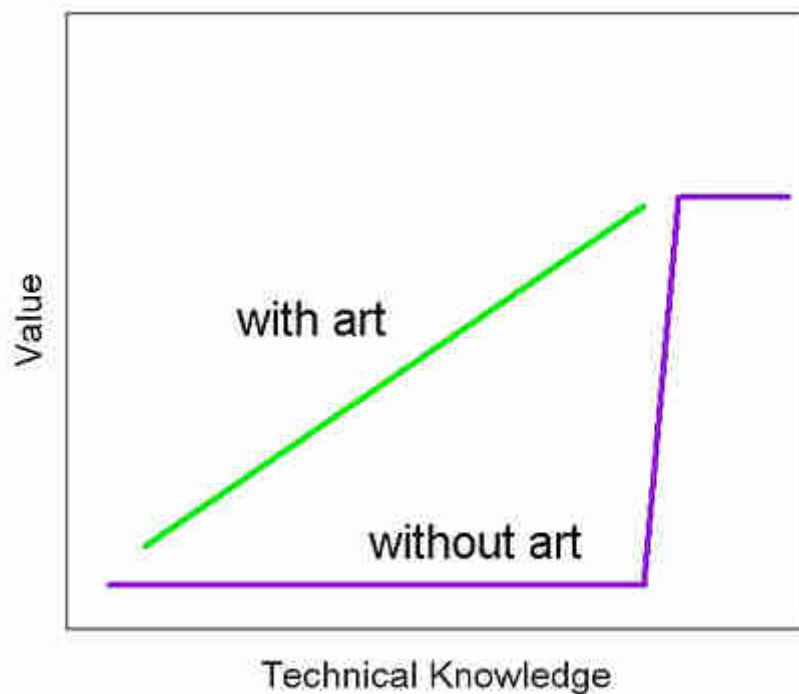
Seth's blog » Blog Archive » Science in Action: Exercise (confirmation) (2007-09-08 10:42:27)

[...] Science in Action: A Puzzle [...]

## **My Theory of Human Evolution (quasi-reinforcement edition) (2007-09-03 21:32)**

[1]My theory of human evolution assumes that art evolved because it acted like a ramp. It helped bridge the technical gap between one useful tool and the next. Tools have the property that almost all the necessary knowledge is no help. If you have 90 % of the technical knowledge you need to build a gun, you can't build a gun that works 90 % as well as an actual gun; in fact, you won't be able to build a useful gun at all. The point is even clearer with computers: Until you have a vast amount of technical knowledge, you can't build even the crudest possible computer. When you finally get enough knowledge to build a very crude but working version, then increases in technical knowledge will help you improve it. But eventually you will reach a ceiling where more technical knowledge has little payoff. This state of affairs is shown by the "without art" function of this graph:

## The Function of Art



Art is different. Because we value novelty in art, and improvements in technology have obvious effects (e.g., new colors, brighter colors, sharper lines), each little improvement in technology – in the “state of the art” – is rewarded, long before that increase in knowledge helps build something more conventionally useful. Artists were the first material scientists.

Support for my assumption that evolution can build such ramps comes from a little-known psychological effect called [2]quasi-reinforcement discovered by Allen Neuringer and Shin-Ho Chung. Suppose you require a pigeon to peck a key 300 times to get food. It will peck, but slowly. Now you change the situation so that every 20 pecks a light comes on for a few seconds. Although the pigeon will not peck a key simply to turn on a light, this change will roughly double the peck rate – a huge increase given that food per peck hasn’t changed. It’s like doubling the amount of work you get from an employee without a salary increase. I use this effect daily. Given any large task, I break it into much smaller tasks and mark the completion of each one. A friend of mine found it helped to make a mark on a piece of paper each time she read a textbook page. The quasi-reinforcement effect is essentially a ramp that helps us do long tasks that would otherwise pay off only when completed.

To me, blogging is a kind of ramp: It breaks a big task (e.g., writing about my omega-3 research) into much smaller parts with reward after each one.

1. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>

2. <http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1338316&blobtype=pdf>



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peter (2007-09-04 12:51:38)

years ago i did bio-feed back training. The object was to maintain a state of mind in a particular range of brain waves (i forget the precise type of brain wave). When i maintained the desired state i got the equivalent of brownie points which were reflected on a screen and after i reached a sufficient number of points a grand finale occurred, such as a compute depiction of a volcano erupting or fireworks. this reminds me of what you call "quasi-reinforcement." you also see it on message boards, where posters appear to compete for recognition and "recommendations" of their messages. a broader inquiry would be the evolutionary purposes of what you call quasi-reinforcement and its derivatives, since it appears to manifest itself widely.

Harry Forsdick (2007-09-07 06:42:28)

Although your argument is appealing, I think you are ignoring the same nature of incremental development that happens in all of technology. For example, the Internet has been one of the most impressive technical tools to recently happen. To think that all of the parts of the Internet had to be in place and working for it to have value is wrong. There was a constant pattern of developing useful small changes in the 25 years prior to the world "discovering" the Internet – each a small refinement of previous results. That pattern of small improvements is repeated over and over in the tool making world.

Novalis (2007-09-07 12:18:54)

Seth, you may enjoy [1]The Artful Mind, which collects some recent work on what might be called "scientific aesthetics" (e.g., Zeki).

1. [http://www.amazon.com/Artful-Mind-Cognitive-Science-Creativity/dp/0195306368/ref=pd\\_bbs\\_sr\\_1/104-5029599-0359143?ie=UTF8&s=books&qid=1189192536&sr=8-1](http://www.amazon.com/Artful-Mind-Cognitive-Science-Creativity/dp/0195306368/ref=pd_bbs_sr_1/104-5029599-0359143?ie=UTF8&s=books&qid=1189192536&sr=8-1)

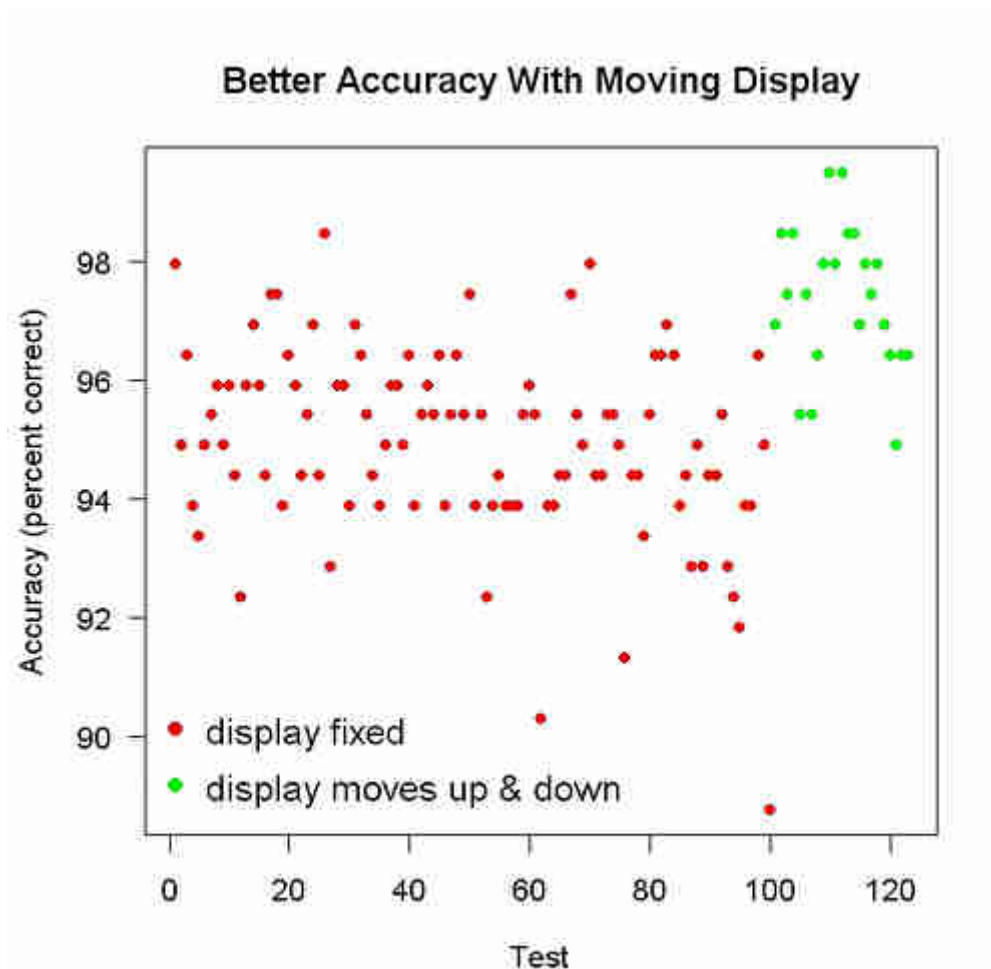
## **Science in Action: Methodology surprise and improvement (2007-09-04 21:28)**

I've been using a letter-counting test to keep hour-by-hour track of how well my brain is working. The test consists of 200 trials that ask how many of four displayed letters (e.g., YCAW) are from the set {ABCD }. for YCAW, the answer is 2. Faster answers = better brain function.

For the first several hundred tests, I kept the location of the four letters constant: the center of the window. As soon as I answered, the next display appeared in the same position as the last one. The display never repeated immediately; for example UXRA was never followed by UXRA. But UXRA could be followed by UXAR. This was too easy because it looked like the A and R had switched places. This was a big difference from the usual appearance and it signalled that the answer had not changed. Overlap between one display and the next was probably important but was hard to measure.

To make the test more uniform across trials, I had the display move up and down, which eliminated overlap between one display and the next. Successive displays appeared above center, below center, above center, below center, etc.

To my great surprise, this made the task a lot easier. Here are accuracy scores before and after the change:



Before the change, mean accuracy was 94.9 % (standard error 0.2); after the change, 97.4 (standard error 0.3). The error rate was cut in half, in other words. I had no idea this would happen.

Reaction times were slightly more after the change. A treatment that changes reaction time and accuracy in conceptually opposite directions – makes the task harder in terms of reaction times (= longer reaction times) but easier in terms of accuracy (= great accuracy) – is very unusual. I don't know of any other examples.

The displays have always been big black letters on a white background – very easy to read. But this change made them seem more visible somehow. At some high level of my visual system, it was as if the contrast had been improved. It's a funny feeling because I thought I was seeing them perfectly clearly with the old procedure.

Because accuracy is better it is now closer to constant, which is what you want in a reaction-time experiment. You want as much variation in reaction time as possible and as little variation in accuracy as possible.

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Steve (2007-09-05 05:33:54)

Is your letter-counting test software publically available?

seth (2007-09-05 09:30:37)

if you know how to use R I am willing to send it to you and help you use it.

Steve (2007-09-08 13:03:19)

I'm not familiar with R - and that's a devilishly hard thing to Google. Can you tell me the vendor or some other hind, so I can learn more about it? Thanks!

seth (2007-09-09 08:07:22)

Google "R language"

Steve (2007-09-10 08:36:27)

Thanks, that did it: <http://www.r-project.org/> But I'm still confused. It looks like R is mostly a package for analyzing and displaying statistics. Did you actually create the application that flashes letters on your screen and lets you key in an answer in R? Or do you just use R to analyze the results? If the latter, then what I'm really interested in is the actual "letter-counting test" application.

seth (2007-09-11 07:33:26)

You're right, R is not designed for data collection. But I actually created the application in R that flashes letters, etc.

## **Can Professors Say the Truth? (Michael Bailey and Alice Dreger respond to Joan Roughgarden)** (2007-09-05 05:46)

[1]Michael Bailey and [2]Alice Dreger have responded to Joan Roughgarden's [3]KQED appearance and her [4]blog post. The NY Times [5]article. Dreger's [6]paper. Bailey's [7]book.

In her KQED appearance, Roughgarden said that Bailey's book was "fraudulent" because it used the word science in its title. Here's how she said it:

The bottom headline to the cover of Bailey's book says "The Science of Gender-Bending and Transsexualism." But in point of fact, there is no science in the book, as they're apparently now agreeing. And on the whole, the book, as a work of science, is fraudulent.

Dreger notes "by this logic, the publishers of Science Times of the New York Times, the magazine Science News, and thousands of popularizations of science are also guilty of fraud."

In Pale Fire, the narrator quotes Erich Fromm's claim that in Little Red Riding Hood, the red hat is a symbol of menstruation. Does Fromm actually believe this? the narrator wonders. Dreger raises a similar question: Does Roughgarden, a professor of biology at Stanford, believe that Science News and the Science Times section are "fraudulent"?

Bailey links to a [8]page with the abstracts of twenty articles by Blanchard related to his typology of transsexuals, which I found very interesting.

1. [http://www.scientificblogging.com/jmichaelbailey/transsexual\\_smokescreen\\_ignoring\\_science\\_in\\_the\\_man\\_who\\_would\\_be\\_queen](http://www.scientificblogging.com/jmichaelbailey/transsexual_smokescreen_ignoring_science_in_the_man_who_would_be_queen)

2. [http://www.alicedreger.com/kqed\\_forum\\_corrections.html](http://www.alicedreger.com/kqed_forum_corrections.html)
3. [http://www.alicedreger.com/kqed\\_forum\\_transcript.html](http://www.alicedreger.com/kqed_forum_transcript.html)
4. [http://www.scientificblogging.com/joanroughgarden/the\\_bailey\\_affair\\_again](http://www.scientificblogging.com/joanroughgarden/the_bailey_affair_again)
5. <http://www.nytimes.com/2007/08/21/health/psychology/21gender.html?ei=5070&en=4570e1cead1cd017&ex=1188532800&adxnnl=1&adxnnlx=1188403260-YchZJhVSpNTzbkdH4ujVwQ>
6. [http://www.bioethics.northwestern.edu/faculty/work/dreger/controversy\\_tmwwbq.pdf](http://www.bioethics.northwestern.edu/faculty/work/dreger/controversy_tmwwbq.pdf)
7. [http://www.amazon.com/Man-Would-Queen-Gender-Bending-Transsexualism/dp/0309084180/ref=sr\\_1\\_1/103-3675802-8345458?ie=UTF8&s=books&qid=1188993259&sr=1-1](http://www.amazon.com/Man-Would-Queen-Gender-Bending-Transsexualism/dp/0309084180/ref=sr_1_1/103-3675802-8345458?ie=UTF8&s=books&qid=1188993259&sr=1-1)
8. <http://www.autogynephilia.org/Abstracts.htm>

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Rachel Owens (2007-09-05 13:02:55)

I still am puzzled given the fact that no one has bothered to try to duplicate Blanchard's findings. Every single study there is his own, absolutely no peer reviews and most of the studies seem to have been done at the same clinic except for a few exceptions. If I were to conduct a study at an inner city clinic versus a suburban I think just about anything would show rather different results due to underlying population variance, yet he only has ONE clinic in his studies, and there is no control group. There is also a near complete lack of study by him of FTM's. At all three colleges I attended, they outnumbered the MTF's by 4-5times the number and there was far more than 1/56 of them that preferred men sexually. So it doesn't seem to match my casual observation, hey if Bailey can do it so can I!

Jason Malloy (2007-09-06 00:41:13)

*I still am puzzled given the fact that no one has bothered to try to duplicate Blanchard's findings.* This is incorrect. From the Netherlands (University Medical Center Utrecht and Gender Clinic at the VU University Medical Center in Amsterdam): [1]Transsexual subtypes: Clinical and theoretical significance

"Within a large transsexual sample (n = 187), homosexual and nonhomosexual subjects were compared on a number of characteristics before the start of treatment... **A distinction between subtypes of transsexuals on the basis of sexual orientation seems theoretically and clinically meaningful.** The results support the notion that in the two groups different factors influence the decision to apply for sex reassignment."

[2]PDF

1. <http://dx.doi.org/10.1016/j.psychres.2005.01.008>
2. [http://akikos-planet.cocolog-nifty.com/blog/files/psychiatry\\_research\\_\\_transsexual\\_subtypes\\_clinical\\_and\\_theoretical\\_significance.pdf](http://akikos-planet.cocolog-nifty.com/blog/files/psychiatry_research__transsexual_subtypes_clinical_and_theoretical_significance.pdf)

turkey (2007-09-06 04:40:57)

I'm sure duplication studies of Blanchard will be forthcoming any day now, given how safe the research is for one's career and how congenial the environment.

seth (2007-09-06 05:23:15)

turkey, yes, that is my reaction: What a surprise that Blanchard himself no longer does research in this area.

## Marion Nestle on Omega-3s (2007-09-05 23:27)

In a January 2007 New York Times [1]article about adding omega-3s to food, Marion Nestle, the NYU nutrition professor, said this:

My experience in nutrition is that single nutrients rarely produce miracles. But it's also been my experience that companies will put anything in their food if they think the extra marketing hype will help them sell more of it.

I was [2]critical. The single nutrients called vitamins produce miraculous improvements in vitamin-deficiency diseases. In the current issue of Scientific American, Nestle is [3]more accurate:

In the early 1970s Danish investigators observed surprisingly low frequencies of heart disease among indigenous populations in Greenland that typically ate fatty fish, seals and whales. The researchers attributed the protective effect to the foods' content of omega-3 fatty acids. Some subsequent studies "but by no means all" confirm this idea.

Because large, fatty fish are likely to have accumulated methylmercury and other toxins through predation, however, eating them raises questions about the balance between benefits and risks. Understandably, the fish industry is eager to prove that the health benefits of omega-3s outweigh any risks from eating fish. [A mysterious sentence. Perhaps something was lost in the editing.]

Even independent studies on omega-3 fats can be interpreted differently. In 2004 the National Oceanic and Atmospheric Administration "for fish, the agency equivalent to the USDA" asked the Institute of Medicine (IOM) to review studies of the benefits and risks of consuming seafood. The ensuing review of the research on heart disease risk illustrates the challenge such work poses for interpretation.

The IOM's October 2006 report concluded that eating seafood reduces the risk of heart disease but judged the studies too inconsistent to decide if omega-3 fats were responsible. In contrast, investigators from the Harvard School of Public Health published a much more positive report in the Journal of the American Medical Association that same month. Even modest consumption of fish omega-3s, they stated, would cut coronary deaths by 36 percent and total mortality by 17 percent, meaning that not eating fish would constitute a health risk.

Differences in interpretation explain how distinguished scientists could arrive at such different conclusions after considering the same studies. The two groups, for example, had conflicting views of earlier work published in March 2006 in the British Medical Journal. That study found no overall effect of omega-3s on heart disease risk or mortality, although a subset of the original studies displayed a 14 percent reduction in total mortality that did not reach statistical significance. The IOM team interpreted the "nonsignificant" result as evidence for the need for caution, whereas the Harvard group saw the data as consistent with studies reporting the benefits of omega-3s.

I would have described benefits of omega-3 for which the evidence is clearer, as is done in the [4]cover story about omega-3 in the [5]current issue of Ode. Nabokov called Salvador Dali "Norman Rockwell's twin brother, kidnapped by gypsies in babyhood." I think of Ode, which put a Dali lookalike on its [6]July/August 2005 cover, and [7]Spy as linked like that.

1. <http://www.nytimes.com/2007/01/14/business/yourmoney/14omega.html?ex=1186632000&en=b311b8942efb47dd&ei=5070>
2. <http://www.blog.sethroberts.net/2007/01/13/yet-more-about-omega-3/>
3. <http://www.sciam.com/article.cfm?chanID=sa006&articleID=3CDDb14C-E7F2-99DF-39AC2C4049B2F6C0&pageNumber=1&catID=2>
4. [http://www.odemagazine.com/doc/46/feed\\_your\\_brain](http://www.odemagazine.com/doc/46/feed_your_brain)
5. <http://www.odemagazine.com/doc/46>
6. <http://www.odemagazine.com/doc/25>
7. <http://www.sethroberts.net/spy/index.html>

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Igor Carron (2007-09-05 23:58:06)

Seth, It is interesting to see that we do not understand why this is happening and that there seems to be even more potentially compelling examples i.e.: [http://scienceblogs.com/developingintelligence/2007/08/short\\_bowel\\_syndrome\\_and\\_the\\_p.php](http://scienceblogs.com/developingintelligence/2007/08/short_bowel_syndrome_and_the_p.php) Igor.

Timothy Beneke (2007-09-06 15:11:18)

"The single nutrients called vitamins produce miraculous improvements in vitamin-deficiency diseases." My very casual impression is that the research findings that have been showing up in the press in the last year or two suggest that there is little evidence that taking vitamins helps people; and may in fact be harmful. Yes, Vitamin C was a major success with scurvy, but most of the other empirical evidence appears to be very disappointing for vitamins... That's just my impression...

seth (2007-09-06 15:16:10)

Igor, that's a very interesting example, thanks for bringing it to my attention. Timothy, vitamins may not help when you are not deficient – e.g., don't have scurvy. There is no doubt that vitamins produce miraculous recoveries from certain diseases (or to be more precise, certain symptom clusters).

peter (2007-09-07 17:36:40)

i just got my blood test back and it shows that my HDL (good cholestrol) went from 48-50 to 58 since i've started taking flax seed oil on a daily basis. there were two subtypes of HDL measured, HDL-2 and HDL-3. Both were above the reference range. HDL-2 is better than HDL-3. (my hdl3 was way above ref. and my hdl2 was only slightly above the ref. ) The point of all this is that one measurement of the benefit of omega-3 is the effect on HDL. If Seth were to conduct a study, the measurements might include HDL2 and HDL3. It might be interesting to see if consuming DHA would increase the HDL3 more than flax seed oil.

seth (2007-09-08 08:28:49)

Thanks for the info, Peter.

asoff eracchi (2007-09-19 20:41:05)

Seth: Great stuff on your blog, I see that you have an interest in Omega oils, I was wondering whether you plan to cover Omega 5 oil. This is oil that is extracted from the seeds of pomegranates, usually by cold press methods. It has superb medicinal properties for men and women. Two California companies sell great Omega 5 oil products to include gel caps. I have been using the products of one of them for quite some time and simply adore the innovation. see: [www.pomega5.com](http://www.pomega5.com) Please review and I am awaiting to hear your thoughts on this item. asoff

## **Ditto Food: Microwave Popcorn (2007-09-06 05:03)**

In The Shangri-La Diet I argue that the obesity epidemic is due to what I call ditto food: Food that tastes exactly the same each time. Just as you will make a very deep hole with a gun if you hit exactly the same spot each time you fire it, you will produce a very strong flavor-calorie association if you eat a food that tastes exactly the same each time.

The [1]experience of a Colorado man supports this idea. He went to a doctor because of shortness of breath. He didn't smoke. His test results resembled those of workers in microwave popcorn factories, who often have lung damage because of exposure to a flavoring chemical. The doctor asked the man if he was around a lot of popcorn. "How could you possibly know that about me?" the man said. "I am Mr. Popcorn." He had eaten microwave popcorn twice a day or more for at least 10 years. When he stopped, he lost 50 pounds in six months. Apparently he made no other changes.

1. <http://www.nytimes.com/2007/09/05/us/05popcorn.html?em&ex=1189224000&en=e88ac8c3e56e25d9&ei=5087%0A>

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fascinated (2007-09-06 12:48:01)

I find your experiments and theories quite intriguing, albeit I remain skeptical. However, the research discussed in this article seems to provide support for a generalization of your theory involving the sense of sight! [http://www.guardian.co.uk/uk\\_news/story/0,,2157226,00.html](http://www.guardian.co.uk/uk_news/story/0,,2157226,00.html)

Kevin Mullaney.com » Blog Archive » Shangri-La Diet and Science (2008-03-23 03:59:39)

[...] It doesn't seem like much of a leap that eating the same foods over and over might contribute to weight gain, provided those foods had a strong, consistent flavor and dense calories. Junk food, fast food, sugary beverages and heavily processed foods all seem to fit into this theory nicely. Seth Roberts, the author of the Shangri-la Diet, calls these foods ditto foods. I think most people would accept the idea that foods which are dense in calories are fattening. What might be surprising is how important strong, consistent flavors are. [...]

## **Loneliness and National Security (2007-09-07 14:47)**

This [1]story – about an NSA employee named Gene Carson – by Igor Vamos is so strange and affecting I would have thought it made up (like Truman Capote's [2]snakes story) except that almost every detail rings true.

I remember when you used to tell me that fruit from the supermarket is tasteless. I agree with you. If small markets work, why do we need the super markets? I miss you.

This is one of Carson's diary entries. "You" is Imogene Campbell, whom Carson wiretapped daily but never met.

Given how little I can learn about Gene Carson and Imogene Campbell via Google, maybe it is fiction. If so, Igor Vamos is a genius.

Addendum: I guess it's fiction.

1. <http://www.e-felix.org/issue5/vamos.html>
2. [http://ronrosenbaum.pajamasmedia.com/2006/08/31/truman\\_capote\\_fake\\_snakes\\_in\\_a.php](http://ronrosenbaum.pajamasmedia.com/2006/08/31/truman_capote_fake_snakes_in_a.php)

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CP (2007-09-07 16:05:45)

Forgot the link, maybe? :o) <http://www.e-felix.org/issue5/vamos.html> By the way, I love your blog, and SLD is the best since sliced bread. Works like a charm.

Ben (2007-09-07 17:02:14)

Igor Vamos went to Reed College, like you, I think. He and I were there at the same time. One night in 1991, Igor and his crew changed all the street signs on a major street – I think it was SE Grand – to read "Malcolm X Boulevard". (The city was talking about taking the name away from some other street). The fake signs were beautifully made; the artists even manufactured fake offramp signage. That stunt alone pretty much qualifies as genius.

seth (2007-09-07 17:47:05)

Thanks, CP. Strange because I remember adding it.

## **How Things Begin (Oakland Art Murmur) (2007-09-07 23:17)**

The [1]Oakland Art Murmur is an art-galleries-open-late event that happens the first Friday of every month. It is about a year old. It started when two galleries in a cheap-rent district of Oakland got together. Soon other galleries joined them. There was a meeting at which "nothing happened" (according to a gallery manager) but they got together on paying for advertising and printing. How much did it cost each gallery? I asked. "Not much."

Each month it has grown larger. More galleries and more people. Recently the City of Oakland began a shuttle bus to take people around and a few galleries now participate that are not close to the original ones. The event has a new name, too: First Fridays Art Night. This is not as weird as it sounds; I learned that there are many First Fridays events at cities all over the country, including [2]Richmond, Virginia, and Washington, DC, but Oakland's is unusually large – around 40 galleries, whereas in Washington DC there are about 30.

In honor of Freakonomics I visited the [3]Rock Paper Scissors Collective, which turned out to be the most crowded art gallery I have ever seen. People were practically lining up on the street to get in. (Inside was a show of cartoon art and a few racks of clothes.) It felt like every artist in Oakland was there. Across the street was the opening of an exhibit of work by [4]Timothy Brown, which consisted of food or food-related things (such as spoons) in blocks of transparent plastic. I really liked some of it. Upstairs at another gallery a dozen people were finishing a meal. Each person had been given \$100 (play money?) which they used to bid for the various dishes.

I learned about the Murmur because a week earlier I had met one of the three founders of [5]The Moon, a nearby art store that opened that night. I was surprised that a senior in college (Mills) is starting a small business, much less an unusual one. At the Murmur I met a woman who had just started a [6]preschool. It was two days old. Craig's List was



involved. She had three partners. "I'm very impressed," I said. "Most people never start anything." "You're starting to walk across the street," she said.

It was way fun not only because most of the art was quite different than what I see in big-city higher-rent galleries (New Orleans, San Francisco, New York) but also because the people I met were friendly and easy to talk to. Not every conversation went well, however. I saw a guy who sells at the Farmers' Market. "Are you an artist?" I asked. Yes, he said, but that might be misleading because he was a lot of things. "What else are you?" I asked. He was too tired to answer my question, he said, "but thanks for saying hello."

1. <http://www.oaklandartmurmur.com/>
2. <http://www.firstfridaysrichmond.com/>
3. <http://www.rpscollective.com/>
4. <http://crawlspacgallery.com/members/brown/brown.htm>
5. <http://www.themoonoakland.com/>
6. <http://www.oaklandgardenschool.com/index.html>

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### **Tribute to Totto-Chan (2007-09-08 07:36)**

[1]The Shangri-La Diet mentions [2]Totto-Chan: The Little Girl at the Window by Tetsuko Kuroyanagi, a memoir of elementary school, which is one of my favorite books. At the author's school, Sports Day trophies were vegetables – a daikon radish, for example. A more typical Sports Day trophy:



Thanks to [3]Pearl Alexander.

1. <http://books.google.com/books?id=mVtRbgM4T1MC&pg=PP1&dq=The+Shangri-La+Diet&ei=LJriRo-fD4SepgKA7qAe&sig=QX7UvUdGbsLA-S0s5EanjnKFK6Y#PPR7,M1>
2. <http://books.google.com/books?id=cPZ0WyyvYwL4C&dq=&pg=PP1&ots=oBaH7AL4H3&sig=ELXJYtIDD7SKHoDAIk5DP8yn1QU>
3. <http://pearlalexander.wordpress.com/>

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Totto-Chan « Entertaining Research (2007-09-08 10:17:07)

[...] I understand Totto-Chan is a favourite book of Seth; it is one of my all time favourites too. I first read it in Tamil; I loved it but I was not too happy with the translation. Recently, I managed to get an English translation from the library and read it. In case you haven't read the book, hunt it down—it is well worth the effort. Some diligent Googling might also get you the book online (though the legality of the online versions might be questionable). [...]

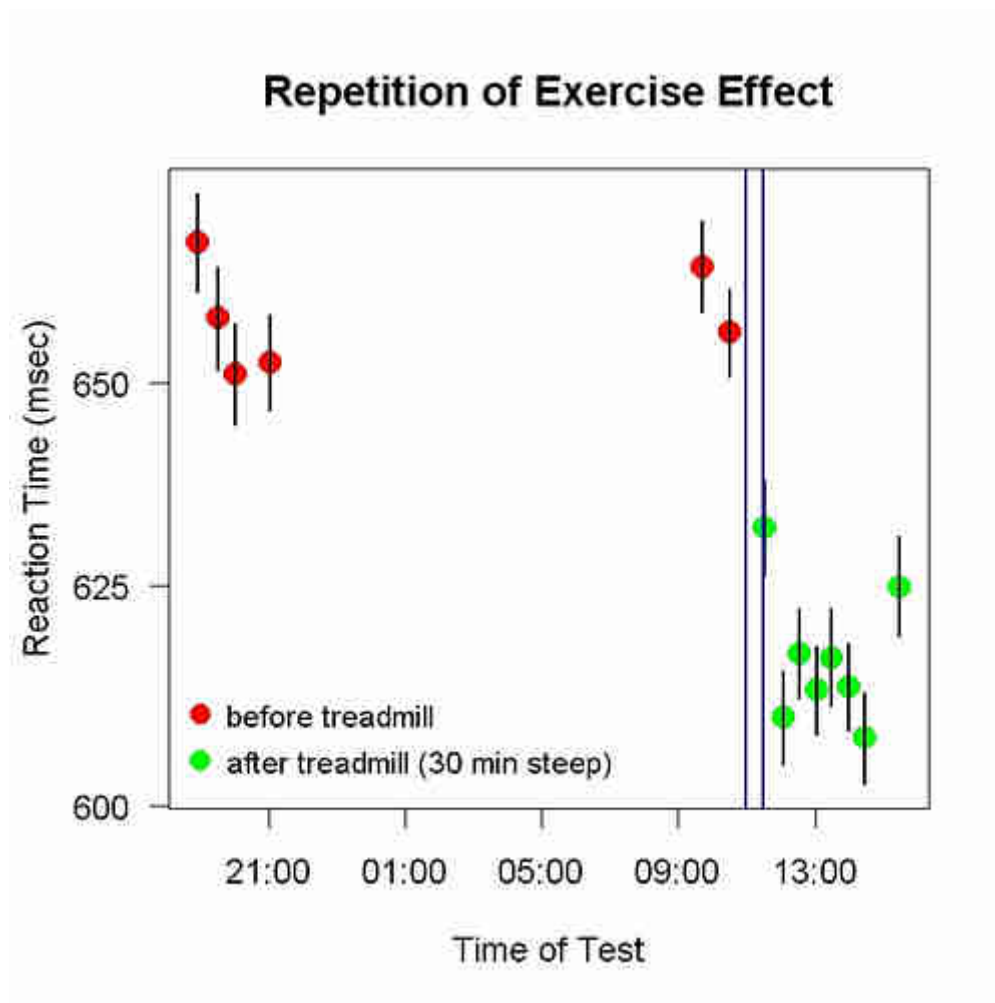
Tetsuko-san Cosplay Expo « Pearl is Culturally Confused (2007-09-09 08:04:00)

[...] September 9th, 2007 Recently Seth Roberts blogged about “Totto-chan—The Little Girl at the Window”, a famous book by Kuroyanagi Tetsuko, after I sent him a picture of one of the trophies from Sports Day which occurred at my junior high school yesterday. Sports Day was mentioned in his book “The Shangri-La Diet.” [...]

## **Science in Action: Exercise (confirmation) (2007-09-08 10:42)**

During my omega-3 tests, I noticed that exercise seemed to be reducing reaction time (= better brain function). When I tested this, the [1]results surprised me: Reaction time wasn't lower immediately after exercise but became lower later. Did exercise have a delayed effect or was the shower I took soon after exercise responsible?

To find out, I did a little experiment. The earlier exercise was 30 minutes on a flat treadmill at about 2.8 miles/hour; this time I walked 30 minutes on a steep treadmill at higher speed (about 3.7 miles per hour). Here are the results:



Vertical lines show when the exercise started and stopped. This time there was improvement immediately after the exercise (unsurprising, given that it was much more intense) but even more improvement a half-hour later. I took a shower several hours later; it had no clear effect. The improvement lasted several hours before starting to diminish.

The data are very clear. They imply the earlier results can be believed: Exercise does improve brain function in an unanticipated way. Losing weight with exercise is hard; improving brain function with exercise appears easy. I want to study this effect in detail. Not only should it teach me how to improve brain function, it should also suggest the best dose of exercise for the rest of my body.

1. <http://www.blog.sethroberts.net/2007/09/03/science-in-action-a-puzzle/>

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Willy (2007-09-08 13:56:42)

it would be interesting to compare aerobic vs anaerobic exercise e.g. running in the treadmill vs pushups.

Mark (2007-09-09 09:01:08)

See several related articles (in addition to these) that show strong correlation between aerobic exercise and increased neuronal growth factors available in the brain, specifically helping the hippocampus, and increased oxygen flow to the brain:

<http://www.nytimes.com/2007/08/19/sports/playmagazine/0819play-brain.html?ex=1345176000&en=50ec7d1aef2de5e6&ei=5090> [http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=PubMed&list\\_uids=11222653&dopt=AbstractPlus](http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=PubMed&list_uids=11222653&dopt=AbstractPlus)

Kevin C (2007-09-09 14:18:41)

I'm curious if exercise and Omega 3 have an additive effect for brain function. Also, is the test you use available to download somewhere so we can conduct our own brain function tests?

Seth's blog » Blog Archive » Science in Action: Exercise (more confirmation) (2007-09-10 07:38:08)

[...] Science in Action: Exercise (confirmation) [...]

### **SLD on consumerist.com (2007-09-09 10:31)**

[1]Here is a nice endorsement of the Shangri-La Diet by Ben Popken. A very interesting aspect of what he is doing is the use of photographs to fool himself – or not – that he is being watched.

The taking and uploading of photos helps keep me honest. I know that if I fall behind, I have to announce it. Not many people are watching it but just seeing a few views here and there helps reinforce the idea that I'm being monitored.

Photos of his weight, for example.



[2]All his photos.

Thanks to [3]CalorieLab.

1. <http://consumerist.com/consumer/health/how-i-lost-146-pounds-sitting-in-front-of-a-computer-297860.php>
2. <http://www.flickr.com/photos/popkenb/>
3. <http://calorielab.com/>

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### Modern Veblen: Theory Testing (2007-09-09 12:50)

In 2000, Hal Pashler and I published a [1]paper called "How persuasive is a good fit? A comment on theory testing." For more than 50 years, psychologists had supported mathematical theories by showing that the equations of the theory could fit data. We pointed out that this was a mistake because no account was taken of the flexibility of the theory. A too-flexible theory can fit anything. However obvious this may sound to outsiders, the practice we criticized was common (and continues).

Recently I asked Hal: Is the problem we pointed out an example of something more general? Neither Hal nor I had a good answer to this. Both of us thought the practice we had criticized was what Feynman called [2]cargo-cult science – looks like science but isn't – but that was more of a derogatory description than anything else.

Now I think I have a helpful answer: What we pointed out was an example of the general point Thorstein Veblen made in [3]The Theory of the Leisure Class: The growth of worse-than-useless practices among the well-off. Foot-binding. Hood ornaments. Long words and bad writing in scholarly articles. Conspicuous waste. The [4]last chapter of Veblen's book is about academia.

1. <http://repositories.cdlib.org/postprints/763/>
2. <http://wwwcdf.pd.infn.it/~loreti/science.html>
3. [http://xroads.virginia.edu/~HYPER/VEBLEN/veb\\_toc.html](http://xroads.virginia.edu/~HYPER/VEBLEN/veb_toc.html)
4. <http://xroads.virginia.edu/~HYPER/VEBLEN/chap14.html>

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Seth's blog » Blog Archive » How Could We Be This Wrong about Medicine? (2007-09-11 11:37:13)  
[...] Modern Veblen: Theory Testing [...]

Seth's blog » Blog Archive » Modern Veblen: Flight From Data (2007-09-11 21:12:57)  
[...] Modern Veblen: Theory Testing [...]

## A Student's Unlovely View of UC Berkeley (part 2) (2007-09-09 21:50)

At the Huffington Post, some [1]commentators on my post "A Student's Unlovely View of UC Berkeley" denounced what they called "coddling":

That's Berkeley. No coddling.

Berkeley still is a sink or swim place, with no coddling or significant support system. So what? Grow up.

Coddling? Having your nails done, sleeping on a super-soft bed, being served a fancy dessert – that's coddling. No one needs coddling, true. But what about basic nutrition? Is being served food with enough Vitamin C coddling? I don't think so.

The student who spoke to me said that UC Berkeley did nothing to help her find out (a) what she was good at and (b) what she enjoyed. That speaks volumes about UC Berkeley, of course. Students need to learn these things about themselves – everyone does. To go through life without learning these things is a tragedy. It is not asking to be coddled to want these things.

To serve up an education that fails to provide these crucial ingredients is just as unfortunate as a parent or an orphanage serving food that fails to provide essential nutrients. The effect in both cases is the same: Development is stunted. If students weren't forced to go to schools like Berkeley in order to get a good job ("I'm here for the name" the student told me) it would be less unfortunate. But they are.

Some commentators said Berkeley was somehow better for resembling "the real world" where no one holds your hand. Huh? College students are still growing. Growing things need special environments to grow properly.

One commentator said there are ways to learn on your own: "Go to a library, surf the net, watch TV." True, there are. But UC Berkeley makes it hard for students to do this because classwork is so time-consuming. Not only does the school serve its students bad food, it makes it hard for them to find good food.

[2]The original post.

1. [http://www.huffingtonpost.com/seth-roberts/a-students-unlovely-view\\_b\\_57670.html](http://www.huffingtonpost.com/seth-roberts/a-students-unlovely-view_b_57670.html)

2. <http://www.blog.sethroberts.net/2007/07/23/an-undergraduates-unlovely-view-of-uc-berkeley/>

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JZ (2007-09-10 19:31:46)

"The student who spoke to me said that UC Berkeley did nothing to help her find out (a) what she was good at and (b) what she enjoyed." I agree that these are important things for college students to find out, but does any college help students do this, and if so, how? Any advice that college students receive is complicated by the fact that they're trying to be fiercely independent, and it's hard to tell them very much that they'll listen to.

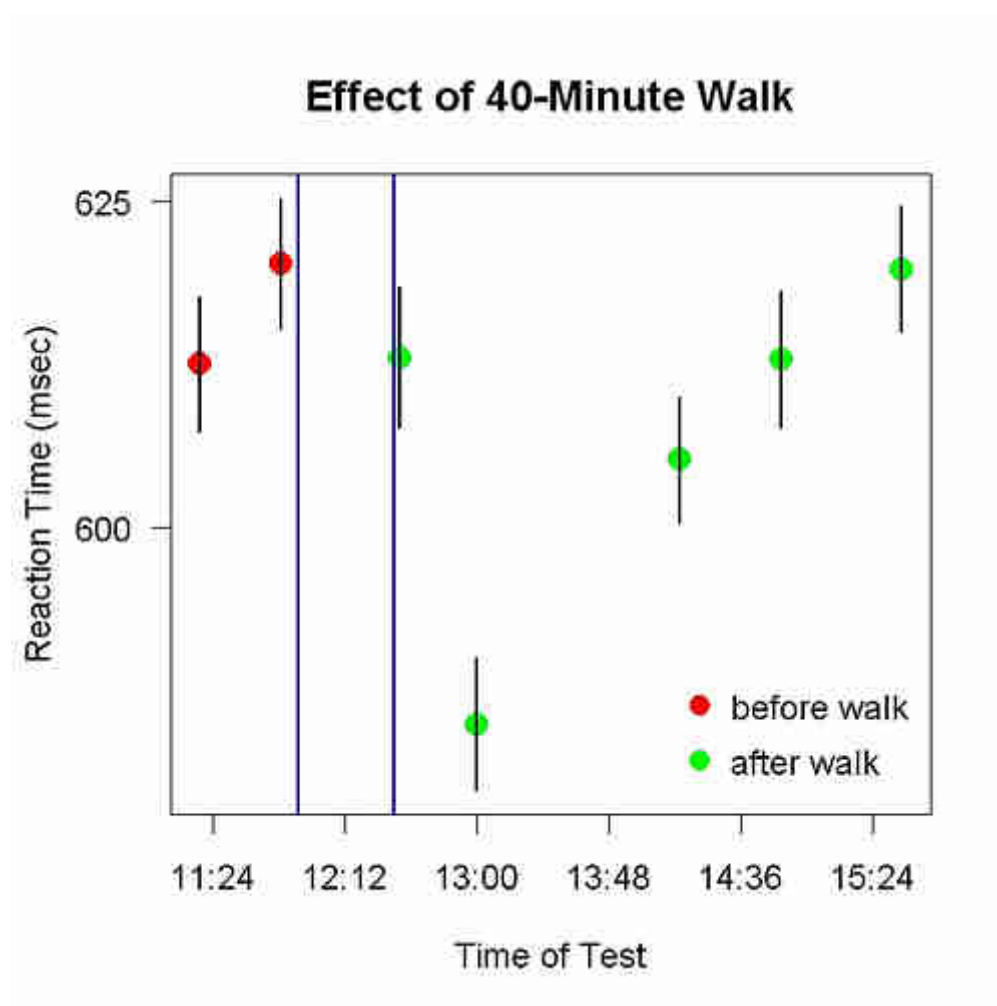
seth (2007-09-11 07:29:40)

Does any college help students do this? Yes. Columbia University schedules no classes on Friday so that students can more easily do internships. Many schools have classes that encourage students to do internships and volunteer work. They are often called "fieldwork" classes. I taught a class at Berkeley called "Psychology and the Real World" which did that. At Berkeley such courses are unusual; they are more common at less prestigious schools.

### Science in Action: Exercise (more confirmation) (2007-09-10 07:18)

How little exercise will produce the reaction-time-lowering effect I've found ([1]here and [2]here)? I decided to measure the effect of a 10-minute walk from a BART stop to a cafe. (Nicely integrating work and work.) But I got off BART at the wrong stop and my 10-minute walk took 40 minutes.

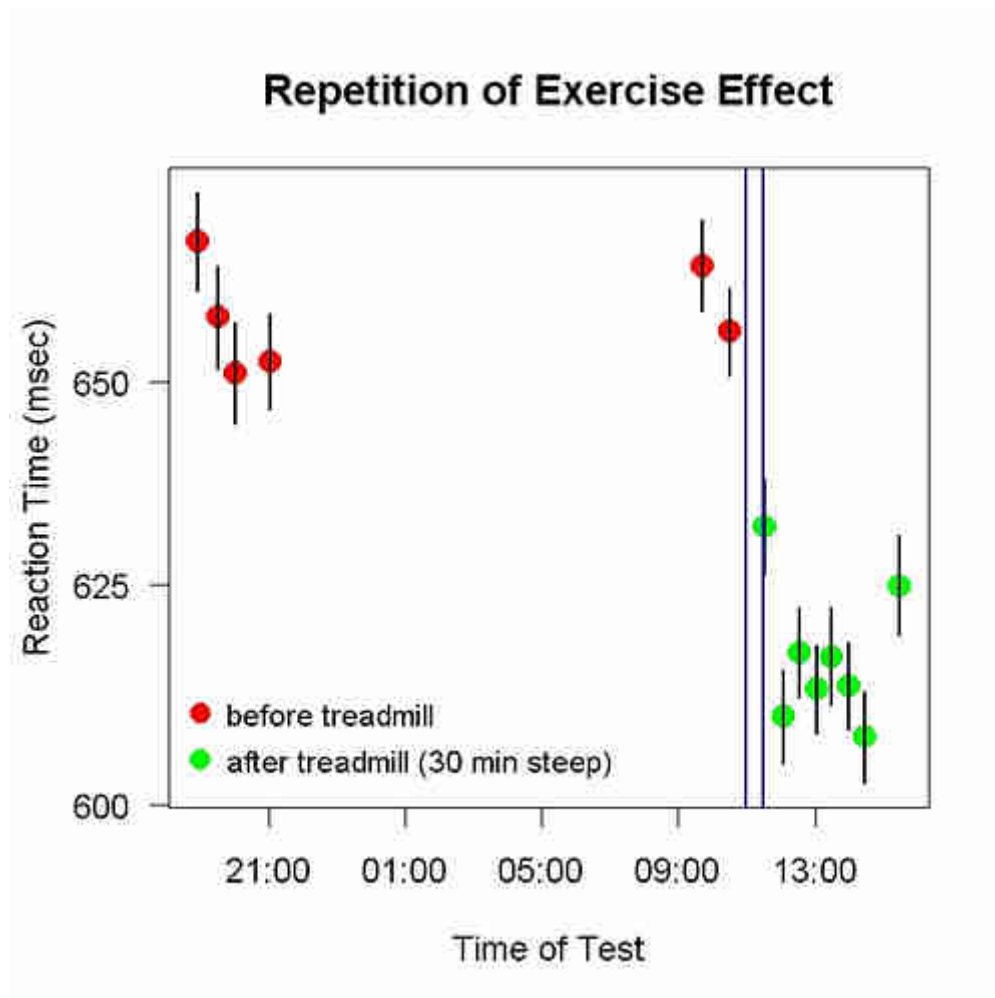
Here is what happened:



Just as with a 30-minute treadmill walk, the effect was delayed.

This is more support for the idea that exercise temporarily improves brain function. The novelty in this particular experiment is that the exercise was "real" rather than on an indoor treadmill.

For comparison, here are earlier results from much more strenuous exercise (30 minutes walking uphill on a treadmill):



The effect of more strenuous exercise was larger and lasted longer. With the easier exercise (the stroll) there was a downward spike in reaction time; with the more difficult exercise (the climb) there was a more crater-like effect. The spike shape suggests the effect was sub-maximal; the crater shape suggests that the maximum effect was reached. Which makes sense because the climb was close to maximum effort, whereas the stroll was far below it.

A kind reader pointed to a [3]NY Times article on the brain effects of exercise. "Exercise can, in fact, create a stronger, faster brain," says the article. "Create" refers to neurogenesis. The effects I've observed are more temporary – more like adding better fuel to a car.

"The human brain is extremely difficult to study, especially when a person is still alive," says the article. Not entirely true.

1. <http://www.blog.sethroberts.net/2007/09/03/science-in-action-a-puzzle/>
2. <http://www.blog.sethroberts.net/2007/09/08/science-in-action-exercise-confirmation/>
3. <http://www.nytimes.com/2007/08/19/sports/playmagazine/0819play-brain.html?ex=1345176000&en=50ec7d1aef2de5e6&ei=5090>



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Timothy Beneke (2007-09-10 08:03:00)

For what it's worth, a general finding about performance and the presence of others, which is believed to be an effect of arousal. We perform well-learned easy tasks, like simple arithmetic or tying our shoes better, faster, when in the presence of other people. The presence of others is arousing physiologically and that makes it easier. We perform more novel, difficult tasks worse in the presence of other people; it is believed because we are more aroused. It was suspected that this was because we feared being judged by others, but it holds even if the others present cannot see us. Robert Zajonc is the one who theorized all of this, that is, made sense of the disparate findings about performing better or worse around other people. I wonder if the arousal effects of exercise might differentiate in terms of easy versus difficult tasks.

Willy (2007-09-10 15:10:44)

Am I reading the results right?. The peak effect of exercise is after 1-2 hours?. I think this is important to schedule exercise the right time before you need to be sharper. Thanks.

Tom (2007-09-10 17:52:48)

It looks like anyone who isn't hitting the gym right before taking the SAT or Bar exams is making a big mistake!

seth (2007-09-11 07:31:43)

That's right – the peak effect of exercise is afterwards.

Seth's blog » Blog Archive » Science in Action: Exercise (15-minute walk) (2007-09-11 10:37:15)

[...] Science in Action: Exercise (more confirmation) [...]

## **How Could We Be This Wrong about Medicine? (2007-09-11 07:24)**

Robin Hanson's excellent [1]essay in Cato Unbound is a proposal to cut medical spending in half. The evidence suggests that this would do little harm and it would help us focus on more helpful activities. I like the way this article summarizes the RAND experiment, searches for the right metaphor, and answers objections.

One question Robin answers is "How could we be this wrong about medicine?" My answer is different than Robin's. I point to the way many scholarly and scientific disciplines start off useful and [2]become useless. In the case of medicine, the lack of benefit is easier to measure. Try measuring the value of a class in 18th Century English Literature.

1. <http://www.cato-unbound.org/2007/09/10/robin-hanson/cut-medicine-in-half/>

2. <http://www.blog.sethroberts.net/2007/09/09/modern-veblen-theory-testing/>

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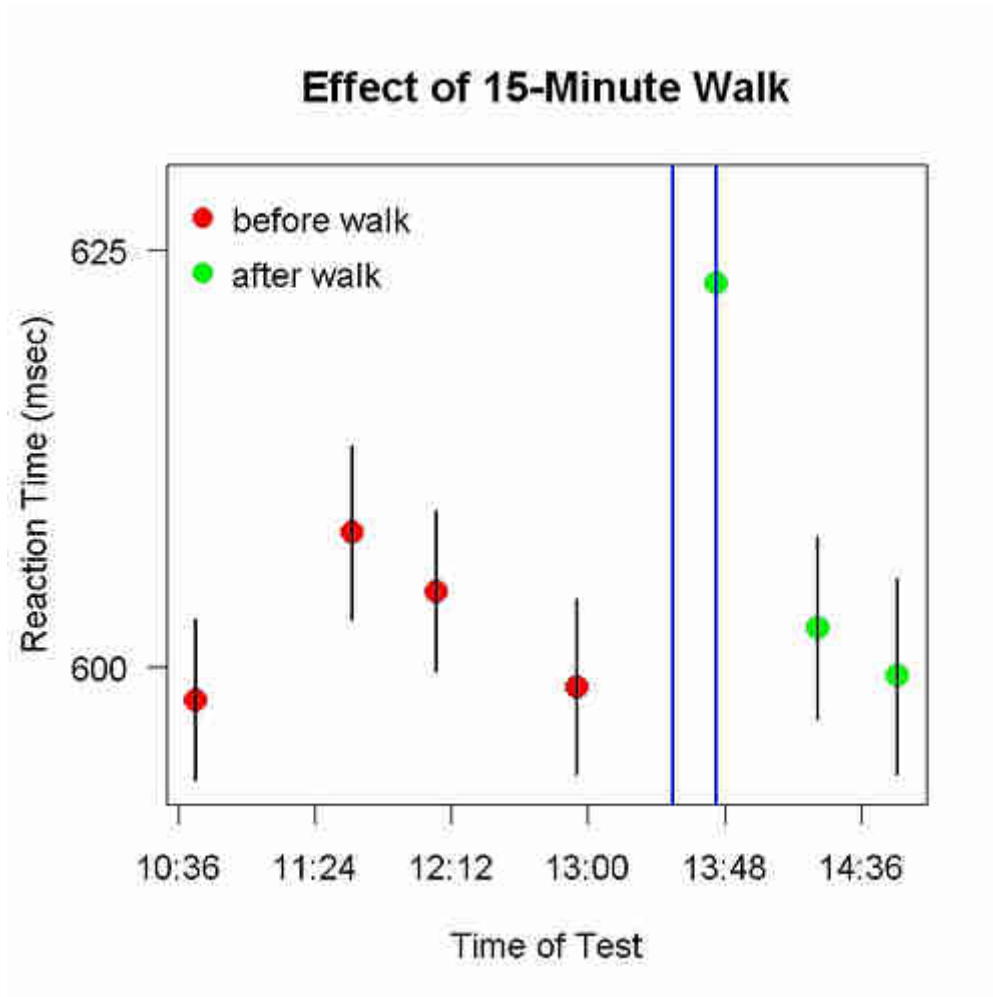
Robin Hanson (2007-09-11 11:12:26)

That is also a valid reason why we could be so wrong. I can also think of other reasons, such as the analogy to investment advisors who seem to on average provide little value.

## Science in Action: Exercise (15-minute walk) (2007-09-11 10:37)

Exercise reduces reaction time, I've [1]found. What's the threshold? I wondered – how little exercise do you need to get the effect? I wanted to know so that in my omega-3 experiments, I could be active – e.g., walk to a cafe – without distorting the results. Also, for practical reasons, I wanted to produce the effect as easily as possible.

To learn more about the threshold, I walked on my treadmill for 15 minutes at a comfortable speed (2.8 miles/hour). Here's what happened:



If anything, the short walk increased reaction time. [2]Thirty minutes of walking produced a clear (and [3]repeatable) decrease, so the the effect appears to require between 15 and 30 minutes of walking.

I did this experiment three days ago. Self-experimentation is many times easier than conventional science; blogging is many times easier than conventional publishing. A powerful combination, I hope.

1. <http://www.blog.sethroberts.net/2007/09/10/science-in-action-exercise-more-confirmation/>

2. <http://www.blog.sethroberts.net/2007/09/03/science-in-action-a-puzzle/>

3. <http://www.blog.sethroberts.net/2007/09/10/science-in-action-exercise-more-confirmation/>

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Bob (2007-09-11 10:56:06)

In this set your pre-walk reaction times are lower than in any other experiment. I'm not surprised that you don't see an effect in this set because you're already responding faster than you do in other sets (even post-exercise). Any speculation on why you did better across the board on Saturday? This is my first comment to your blog so I also want to take a moment and thank you for the consistently intriguing posts.

seth (2007-09-11 11:07:49)

Thanks, Bob. Why I did better across the board? My reaction times have been steadily going down for a long time. I'm just learning the task better and better; how long the learning has continued (hundreds of tests) surprised me when I did the analysis that showed it. This experiment was followed by another experiment in which I did see an RT decrease due to exercise.

### **Modern Veblen: Flight From Data (2007-09-11 21:12)**

I read [1]The Theory of the Leisure Class by Thorstein Veblen during college and was very impressed. One of the book's main points is that wealthy people advertise their avoidance of "dirty" work. Long fingernails on women. Obscure and elaborate phrases in academic articles. "The advantage of the accredited locutions lies in their reputability; they are reputable because they are cumbersome and out of date, and therefore argue waste of time and exemption from the use and the need of direct and forcible speech," wrote Veblen.

A friend of mine does research for an oil company. Several years ago, the oil company he worked for (Company X) was bought by another oil company (Company Y), which merged their research departments. Company X's research group moved to the research campus of Company Y. Following the move, each Company X researcher was asked to give a talk about his recent work. My friend wrote an abstract for his talk. The seminar coordinator – from Company Y – came into my friend's office with his abstract and said to him, "Could you deemphasize the parts involving real data? We don't deal with real data here."

This was true. The Company Y researchers included many theorists, heavily into abstruse mathematical models. Others were coding new algorithms and relied on model "data" for testing, but not actual data. In contrast, many of Company X's researchers, including my friend, "got their hands dirty." After my friend's talk, several people told him how nice it was to hear about real data.

You can see this tendency everywhere at UC Berkeley, from English to Statistics to Engineering to Psychology. Disciplines that began closely connected with reality and everyday concerns moved farther and farther away. A few days ago someone complained to me about a class where students graded each other's papers. That's academia, I said.

[2]Modern Veblen: Theory Testing.

1. [http://xroads.virginia.edu/~hyper/VEBLEN/veb\\_toc.html](http://xroads.virginia.edu/~hyper/VEBLEN/veb_toc.html)

2. <http://www.blog.sethroberts.net/2007/09/09/modern-veblen-theory-testing/>

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Nansen (2007-09-13 17:46:49)

John Maynard Keynes wrote: "Too large a proportion of recent 'mathematical' economics are mere concoctions, as imprecise as the initial assumptions they rest on, which allow the author to lose sight of the complexities and interdependencies of the real world in a maze of pretentious and unhelpful symbols." – The General Theory of Employment, Interest, and Money (1936)

### **Laboratory Confidential (2007-09-12 13:54)**

A friend of mine has started to wonder how to find scientists he will feel comfortable working with. For the past year, he has been working in a lab in a very prestigious institution. He wrote me about it:

The director of my lab is a very successful scientist. She is also director of the research facility. Our personalities blended well initially, but then we grew apart. She is very nice, very busy, and impressively ambitious. Despite her genuine desire to be nice, honest, and good teacher, her ambition is supreme – above honesty and integrity from my point of view.

My biggest issue has been her caring more about her own advancement than about the discovery of truth. She does not blatantly lie about her research results, but she profoundly modulates her research efforts based upon what she believes will give her the success she seeks. I realize that on the face of it there is not anything unethical about ambition directing the evolution of research. However, I am not comfortable with the degree to which the research in this group is shaped by its leader's ambition.

What has had the biggest effect on me is realizing that it isn't just her. The rest of my group has allowed her to pursue her strategies. I have realized that I don't want to pursue research in a culture where ambition is above all, particularly the pursuit of truth.

What's an example? I asked. He replied:

We had an interesting result in a study we did. Accompanying this result was an unusual artifact. It is my impression that my director did not want to publish our good result because she was hesitant to admit that we observed this unusual artifact. I believe that the unusual artifact could negatively impact the use of fMRI to investigate pharmacological drugs that affect the brain – a big research market. It is not a lie to not publish a result. However, I don't like not being able to speak frankly about the implications of a result.

This is an advantage of self-experimentation I hadn't thought of.

Addendum: "It is not a lie to not publish a result." In The Shangri-La Diet I use Vladimir Nabokov's term doughnut truth – the whole truth, nothing but the truth, with a hole in the truth.

For those who like to ponder about research ethics « Entertaining Research (2007-09-12 20:54:46)

[...] For those who like to ponder about research ethics Here is a quote from one of Seth's post: We had an interesting result in a study we did. Accompanying this result was an unusual artifact. It is my impression that my director did not want to publish our good result because she was hesitant to admit that we observed this unusual artifact. I believe that the unusual artifact could negatively impact the use of fMRI to investigate pharmacological drugs that affect the brain â€” a big research market. It is not a lie to not publish a result. However, I don't like not being able to speak frankly about the implications of a result. [...]

michael vassar (2007-09-13 07:05:01)

I think that modern tenure track is simply too competitive for anyone who isn't destructively competitive to have a chance unless they start with a huge advantage, like say having a half dozen + papers as an undergrad.

michael vassar (2007-09-13 07:05:29)

or a Nobel Laureate thesis adviser who actually cares, you know.

Tom (2007-09-14 01:33:56)

A lie of omission is a lie.

seth (2007-09-14 21:11:21)

Tom, the lab director would say you can't publish everything. To which I would say: Is it misleading to not publish the unusual artifact? Yes.

### **Joyce Hatto and Ranjit Chandra: Separated at Birth? (2007-09-13 06:42)**

In the current New Yorker, Mark Singer, one of my favorite writers, [1]describes the "incredible career" of the late Joyce Hatto, a British pianist. According to her husband, she had a stillborn twin brother. Could that brother have in fact lived, and become Ranjit Chandra, a Canadian immunologist?

Consider the similarities:

1. Accolades. Toward the end of her life, Hatto released dozens of recordings that elicited great praise. "One of the greatest pianists I have ever heard," said one critic. Chandra was awarded the Order of Canada, the country's highest honor.
2. Man of mystery. Hatto recorded several concertos with Rene Kohler and the National Philharmonic-Symphony Orchestra but "there was no mention of him or the orchestra in any reference book," according to Singer. Saul Sternberg and I could not locate Amrit L. Jain, author of a study with the same results as one of Chandra's studies. Nor could we locate his institution ("Medical Clinic and Nursing Home").
3. One strange fact after another. Many of Hatto's performances were identical or almost identical to performances by others. As Saul Sternberg, Ken Carpenter, and I examined Chandra's papers, we discovered many unlikely or impossible details. Our letters to editors about this are [2]here and [3]here.

[4]

More about Chandra, who has sued the CBC (Canadian Broadcasting Corporation) over its documentary about him. [5]Part 1 of that documentary, for which Chris O'Neill-Yates won a journalism award.

1. [http://www.newyorker.com/reporting/2007/09/17/070917fa\\_fact\\_singer](http://www.newyorker.com/reporting/2007/09/17/070917fa_fact_singer)

2. [http://www.sethroberts.net/chandra/2003\\_Chandra\\_letter\\_in\\_Nutrition.pdf](http://www.sethroberts.net/chandra/2003_Chandra_letter_in_Nutrition.pdf)

3. [http://www.sethroberts.net/chandra/Lancet\\_comment\\_091202.pdf](http://www.sethroberts.net/chandra/Lancet_comment_091202.pdf)
4. <http://www.sethroberts.net/chandra/index.html>
5. [http://www.cbc.ca/clips/ram-newsworld/chandra\\_1.ram](http://www.cbc.ca/clips/ram-newsworld/chandra_1.ram)

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j n kalhan (2007-11-24 10:07:38)

It is not true. I have personal knowledge. Dr. Chandra has no twin brother.

### **Modern Veblen: The Less-Than-Obvious Value of Evolutionary Explanations (2007-09-13 19:28)**

An interesting Economist [1]article about sex differences in a visual task calls an evolutionary explanation a "just-so story." I don't know if the late [2]Stephen Jay Gould, evolutionary theorist, Harvard professor, and "one of the most influential and widely-read writers of popular science of his generation" ([3]Wikipedia), invented this form of dismissal, but certainly he was fond of it. [4]Here, for example:

Evolutionary biology has been severely hampered by a speculative style of argument that . . . tries to construct historical or adaptive explanations for why this bone looked like that or why this creature lived here. These speculations have been charitably called "scenarios"; they are often more contemptuously, and rightly, labeled "stories" (or "just-so stories" if they rely on the fallacious assumption that everything exists for a purpose). Scientists know that these tales are stories; unfortunately, they are presented in the professional literature where they are taken too seriously and literally.

Well, this is seriously wrong. My work contains several just-so stories – evolutionary explanations of the [5]morning-faces effect and of [6]the mechanism behind the Shangri-La Diet, for example. My [7]theory of human evolution might be called a just-so saga.

These explanations made me (at least) believe more strongly in the result or theory they explained – which turned out to be a good thing. My morning-faces result was at first exceedingly implausible. The evolutionary explanation encouraged me to study it more. After repeating it hundreds of times I no longer need the evolutionary explanation to believe it but the explanation may help convince others to take it seriously. The evolutionary explanation connected with the Shangri-La Diet had the same effect. My evolutionary explanation of the [8]effect of breakfast on sleep led me to do the experiment that discovered the morning-faces effect. My theory of human evolution led me to try [9]new ways of teaching, with good results.

Why did Gould make this mistake? Thorstein Veblen wrote about our fondness for "invidious comparisons." We like to say our X is better than someone else's X. Sure, evolutionary explanations may be hard to test. That doesn't mean they're worthless. Like many scientists, Gould failed to grasp that [10]something is better than nothing.

Addendum: Perhaps the Economist writer had read a recent [11]Bad Science column that began:

I want you to know that I love evolutionary psychologists, because the ideas, like "girls prefer pink because they need to be better at hunting berries" are so much fun. Sure there are problems, like,

we don't know a lot about life in the pleistocene period through which humans evolved; their claims sound a bit like "just so" stories, relying on their own internal, circular logic; the existing evidence for genetic influence on behaviour, emotion, and cognition, is coarse; they only pick the behaviours which they think they can explain while leaving the rest; and they get themselves in massive trouble as soon as they go beyond examining broad categories of human behaviors across societies and cultures, becoming crassly ethnocentric.

"They only pick the behaviours which they think they can explain" – how dare they!

1. [http://www.economist.com/science/displaystory.cfm?story\\_id=9762790](http://www.economist.com/science/displaystory.cfm?story_id=9762790)
2. <http://www.stephenjaygould.org/>
3. [http://en.wikipedia.org/wiki/Stephen\\_Jay\\_Gould](http://en.wikipedia.org/wiki/Stephen_Jay_Gould)
4. <http://prelectur.stanford.edu/lecturers/gould/excerpts/index.html>
5. <http://repositories.cdlib.org/postprints/117/>
6. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>
7. <http://www.blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-directory/>
8. <http://repositories.cdlib.org/postprints/117/>
9. [http://sethroberts.net/about/2005\\_diversityinlearning.pdf](http://sethroberts.net/about/2005_diversityinlearning.pdf)
10. <http://www.blog.sethroberts.net/2007/08/05/something-is-better-than-nothing/>
11. <http://www.badsience.net/?p=518#more-518>

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Tom Myers (2007-09-14 07:13:43)

I'm not sure you are disagreeing with Gould's actual point: just-so stories, those which assume that "everything exists for a purpose", are taken "too seriously" in the actual literature. That doesn't mean that they shouldn't exist, or that evolutionary biologists should stop constructing them (especially in dinner conversations, or just with a glass of wine); it certainly doesn't conflict with your observation that something is better than nothing. I haven't found evolutionary biologists (my brothers and uncle) to be reluctant to come up with just-so stories; they just don't take the stories very seriously until they turn into testable ideas. My ornithologist/environmentalist brother did, long ago, have an American Bird column on [1]"Facts, Inferences and Shameless Speculations" ; it's unfortunately the case that not all scientists are good at keeping track of the differences between these categories. I'm sure your orientation really is different from Gould's; it's likely that you would view an explicit list of shameless speculations as having higher value than he, and I might agree—I sometimes thought he was looking for [2]spandrel-stories where others might look for purpose-stories. Still, as the list got longer and longer, I think you would want to put down the wine-glass and start looking down that list for something testable, i.e. something definite enough so that it might be found to be wrong. I predict that you would find that some evolutionary psychology people would be with you, indeed might be ahead of you... and that others, in particular the ones Gould is fussing about, wouldn't. (But my predictions are mostly wrong.)

1. <http://www.google.com/search?q=%22Facts%2C+Inferences+and+Shameless+Speculations%22>
2. [http://en.wikipedia.org/wiki/Spandrel\\_%28biology%29](http://en.wikipedia.org/wiki/Spandrel_%28biology%29)

Timothy Beneke (2007-09-14 07:53:10)

Interesting blog. It's a tricky business. "Just so" stories make good servants but bad masters. If the just so story gives us a hypothesis we can confirm or disconfirm then it can lead to breakthroughs, as in Seth's work on weight control or faces in the morning; if the story can't be falsified, then it's an appeal to intuitive plausibility and may or may not be true. But sometimes all we can do is generate hypotheses and hope that future evidence will emerge and confirm or disconfirm them. And sometimes we can theorize in a way that our theories will never be confirmed. The problem is treating hypotheses as truths – or treating hypotheses about reality as accurate representations of reality without being honest about it, which is I suspect what Gould is complaining about. It is a form of intellectual corruption that's common. It's often noted that Freud is full of these just so

stories that can't be confirmed; yet a charismatic therapist can foist them on patients and convince them they are true. One problem in therapy is knowing what's a valid insight; people can have what feels like insights that aren't, like insights that they were sexually abused as children and that explains their difficulties; or at the fringes, insights about past lives. It's also useful to distinguish theorizing not based on any methodically derived evidence from insight that is. Most scientific psychology tries to theorize based on scientific evidence. But in a lot of social theory and sociology, people will state that the world is like X, without showing it, and then theorize about why. I know because I've done it, and it passed peer reviewers in sociology easily...

### **The View From MIT (2007-09-14 11:50)**

I have blogged many times about the problems with UC Berkeley's undergraduate education ([1]here, [2]here, and [3]here, for example). For all the conventional talk about "the value of diversity", I never see recognition of diversity of interests and diversity of skills. Everyone in a class is taught the same material (and expected to be interested in the same stuff as the professor); and everyone is graded the same way (and expected to imitate the professor). Of course, UC Berkeley is hardly unique. Practically all higher education works this way, more or less. Berkeley is just the example I know. It is a particularly egregious example given the diversity of vocational interests among its students (much more diverse than Caltech, say), its status as a public institution (with a charter to serve the public rather than its professors), and the exceptionally high research focus of its professors (making them even less interested in [4]what students want).

At a school like Caltech or MIT, the talents of the students are closer to the talents of the professors, but I heard David Brin, the novelist, complain that after he finished Caltech with a low GPA he felt like a worthless human being. Caltech and MIT, like Berkeley, also fail to teach their students about the outside world. From an [5]MIT professor:

Most of the sweeping generalizations one hears about MIT undergraduates are too outrageous to be taken seriously. The claim that MIT students are naive, however, has struck me as being true, at least in a statistical sense. [Could the MIT faculty have anything to do with this?] Last year, for example, one of our mathematics majors, who had accepted a lucrative offer of employment from a Wall Street firm, telephoned to complain that the politics in his office was "like a soap opera." More than a few MIT graduates are shocked by their first contact with the professional world after graduation. There is a wide gap between the realities of business, medicine, law, or applied engineering, for example, and the universe of scientific objectivity and theoretical constructs that is MIT.

It's Veblen again: MIT professors would rather teach "scientific objectivity and theoretical constructs" than "the [dirty] realities" of the world in which their students will spend the rest of their lives. Law schools, especially elite ones, are notoriously like this: To teach how to practice law is beneath the dignity of their professors.

1. <http://www.blog.sethroberts.net/2007/07/09/a-student-advisors-unlovely-view-of-uc-berkeley/>
2. <http://www.blog.sethroberts.net/2007/07/23/an-undergraduates-unlovely-view-of-uc-berkeley/>
3. <http://www.blog.sethroberts.net/2007/09/09/a-students-unlovely-view-of-uc-berkeley-part-2/>
4. <http://www.blog.sethroberts.net/2007/03/31/for-whom-do-colleges-exist/>
5. <http://www.math.tamu.edu/~cyan/Rota/mitless.html>



August (2007-09-14 12:33:03)

Another view from M.I.T. [http://video.google.com/videoplay?docid=-7603731854830368188 &q=fab+labs &total=79 &start=0 &num=10 &so=0 &type=search &plindex=0](http://video.google.com/videoplay?docid=-7603731854830368188&q=fab+labs&total=79&start=0&num=10&so=0&type=search&plindex=0) Hopefully the link works. Its a Ted Talk from Neil Gershenfeld. He's started something called Fab Labs (fabrication). Anyway, it's fascinating, and it proves demand driven education works. I can't go into a full description here, but I think this is a great model for how things could work. He has a book out there by the same name too.

Bob V (2007-09-15 06:45:35)

I wouldn't be so concerned with an undergraduate commenting that his office is "like a soap opera." Such rhetoric is the stuff of small talk. When I was a consultant, I would often talk to past associates about the zoo that my current project is or relate the dramas going on in my old project. Now that I am back in academia, I talk to my old friends about the "soap opera" that is my current department. Maybe MIT can do a better job of preparing its graduates. However, I don't take such comments as an indication that they are not doing a good job of it now.

## How to Answer Your Critics (2007-09-14 21:01)

From [1]Vanity Fair:

As for the thousand or so members of the online "Rachael Ray Sucks Community" "a pack who delight in obnoxious nicknames (Retchel, Raytard), mock her smile, hate her vocabulary ("yum-o" especially), criticize her over-reliance on canned chicken stock, and think she dresses like Greg on The Brady Bunch . . . Ray answers such critics by agreeing with them. "Most of what they say is absolutely true. I don't know how to bake. I didn't make my own pierogis in episode whatever. You can't be all things to all people."

Not bad.

1. <http://www.vanityfair.com/fame/features/2007/10/rachaelray200710?printable=true&currentPage=all>

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## How Accurate is Epidemiology? (part 1) (2007-09-14 21:56)

Adding to [1]earlier discussion of that question, [2]here is an excellent article in the LA Times.

Addendum: A long [3]article in the NY Times on exactly this question appeared minutes after I posted the above.

1. <http://www.blog.sethroberts.net/2007/06/21/strengths-and-weaknesses-of-epidemiology-a-semi-insiders-view/>
2. <http://www.latimes.com/features/health/la-he-epidemiology17sep17,0,4034843.story?page=1&coll=la-home-mid-right>
3. <http://www.nytimes.com/2007/09/16/magazine/16epidemiology-t.html?pagewanted=all>

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Tom (2007-09-15 06:46:50)

Seth, the author of the NYT article is Gary Taubes, a brilliant science writer who writes a lot about how the conventional wisdom is often wrong. (He has a book coming out that lines up nicely with your Shangri-La work.)

seth (2007-09-15 12:00:48)

Yes, that's important. Taubes's previous article in the NY Times Magazine was "What if it's all been a big fat lie?" – meaning the idea that low-fat diets are a good way to lose weight. This one article, in 2002, caused a big national boom in low-carb diets, including Atkins and South Beach. I have been waiting for the book ever since.

### **Modern Veblen: Determinants of Conspicuous Consumption (2007-09-15 11:47)**

At Marginal Revolution, Alex Tabarrok has an [1]interesting post about black/white differences in what Thorstein Veblen called conspicuous consumption. It begins:

Several years ago Bill Cosby chided poor blacks for spending their limited incomes on high-priced shoes and other items of conspicuous consumption instead of investing in education.

The comments are fascinating, including this:

Merely being white is a way of signaling wealth. If you don't believe it, visit Peru.

1. <http://www.marginalrevolution.com/marginalrevolution/2007/09/politically-i-1.html>

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Willy (2007-09-15 15:35:58)

Excellent, I always noticed that if you are white you can enter a shop with not too good clothes and nobody cares.

seth (2007-09-16 09:52:37)

But if you were black and wore not-too-good clothes that was a problem? That's interesting. Where did you notice this?

Tom (2007-09-16 13:18:18)

Seriously, Seth? You've never seen this, anywhere?

seth (2007-09-16 21:11:20)

That's right – I've never seen it. The only shopping I do much of is food shopping in an upscale neighborhood. Persons, black or white, wearing not-too-good clothes are never seen. I'm curious where exactly he is talking about.

### **Why I Blog (2007-09-15 22:53)**

Could this have something to do with it?



The sign says: Will listen to your story for free. Outside a Tokyo train station.

From [1]Pearl is Culturally Confused.

[2]More about blogging and listening.

1. <http://pearlalexander.wordpress.com/2007/09/13/more-of-yesteryear/>
2. <http://www.blog.sethroberts.net/2007/02/11/blogging-and-stone-age-life/>

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### How to Raise HDL (2007-09-15 23:13)

This piece of a [1]discussion at the Google Group sci.med.cardiology fascinated me:

[My] HDL was always around 32, until I dropped the low fat nonsense about 7 years ago. Adding healthy fats and dropping carbs brings my HDL to about 70 while boosting my LDL almost none. And after the HDL shot up, the low-carbing continued to produce weight loss without difficulty. I've never felt better in my life and I am 63 now.

I would like to raise my HDL. The advice I've read (do a long list of things) hasn't helped. For example, one bit of advice was to lose weight. I did lose weight and my HDL briefly got much better. I kept the weight off but my HDL did not stay high. Whereas whatever this guy did had lasting effects. I tried to find out more about what he did but, alas, he didn't answer my email.

1. [http://groups.google.com/group/sci.med.cardiology/browse\\_thread/thread/398f4b7cfb9b325e/661ffbcblad735cf?lnk=raot&hl=en#661ffbcblad735cf](http://groups.google.com/group/sci.med.cardiology/browse_thread/thread/398f4b7cfb9b325e/661ffbcblad735cf?lnk=raot&hl=en#661ffbcblad735cf)

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James (2007-09-16 15:33:25)

It's been established that low HDL is associated with metabolic syndrome and there's some evidence that low-carb diets improve metabolic syndrome ([http://www.nlm.nih.gov/medlineplus/news/fullstory\\_52485.html](http://www.nlm.nih.gov/medlineplus/news/fullstory_52485.html)), so the author's experience does not appear to be unique. In your case, Professor Roberts, it appears that isolated low HDL (i.e., low HDL with normal-to-optimal triglycerides and LDL, which I'm wildly assuming is what you have) is associated with, among other things, active

weight loss, a low-fat diet, and starvation...all of which I've certainly experienced on the SLD. (Down 74 pounds. Thanks!) From some Googling, it's not clear whether these causes of low HDL carry the same cardiovascular risks as the more common metabolic-syndrome-type causes.

Stephen M (Ethesis) (2007-09-16 19:34:29)

Sounds like he was on an Atkins/South Beach sort of diet. That will raise fat and is the low carb weight loss program most people try.

Jen (2007-09-16 20:28:01)

The trio of low HDL, high triglycerides, and small, dense LDL particles, commonly found together as components of metabolic syndrome, all respond nicely to carbohydrate restriction. Reducing the glycemic load of the diet by substituting fat and protein for carbohydrate will almost always lower triglycerides substantially. Most people will see a significant rise in HDL. In addition, carbohydrate restriction shifts LDL to the less dense, less atherogenic form. Other ways to raise HDL include exercise, niacin, and moderate consumption of alcohol.

Dave Lull (2007-11-04 19:42:38)

A cardiologist suggests supplemental vitamin D: <http://heartscanblog.blogspot.com/2007/02/hdl-and-vitamin-d.html> <http://heartscanblog.blogspot.com/2007/04/more-vitamin-d-and-hdl.html> But, he says, be sure it's "an oil-based capsule, a gel-cap, not a tablet": <http://heartscanblog.blogspot.com/2007/03/vitamin-d-must-be-oil-based.html> And D3 not D2: <http://heartscanblog.blogspot.com/2007/08/vitamin-d2-belongs-in-garbage.html>

Dave Lull (2007-11-05 09:07:49)

Commenting on a posting about diabetes and vitamin D, at another blog, this same cardiologist said: ". . . a [vitamin D] gelcap is essential, though an internist recently flew in to see me from Kansas City to show me the phenomenal effects he's experienced on his spinal disease taking a tablet form along with a tablespoon of olive oil. (He's tougher than me!)" <http://diabetesupdate.blogspot.com/2007/10/vitamin-d-lowers-insulin-resistance.html> #c7508352879127444206

Tamara (2007-12-11 09:23:53)

I just found out yesterday that my HDL is a whopping 90 (!!!). This is a big change from 2 years ago when my TOTAL cholesterol was 87, and my MD warned that it was too low. I was on an organic vegetarian diet at the time. He encouraged me to eat more eggs and animal products. At that time I began to eat extremely natural foods, most from my local Amish farmer (grassfed meats and eggs, and raw milk products). I also added a heavy dose of cod liver oil daily, a bunch of superfoods like bee pollen, chlorella, spirulina, brewers yeast, & blue green algae. I make & eat bone broths, naturally fermented foods like freshly-made sauerkraut and kombucha and kefir. Homemade ice cream made with raw light cream (no milk or fillers! amazing!!!). I also have an intense weakness for 87 % organic dark chocolate. The veggies, fruits, and grains that I eat are mostly organic; I try to soak the grains as much as possible before eating. But most of the time I'm eating sprouted grain bread (Ezekiel) with raw butter (lots). As far as oils, I have very little vegetable oil in the house...only organic olive oil, which I never cook with; only on salads in the summer or sometimes poured on already-cooked veggies. I cook with organic ghee or coconut oil. My MIL watches what I eat and practically gags...she has totally bought into the whole low fat, low cholesterol thing. Yet her cholesterol is 350! (she eats vegetarian with no butter, eggs, or cholesterol meats...only olive oil & canola oil for cooking, and for meats mostly fish. She doesn't even eat very much bread, and usually whole wheat when she does. A lot of fruits is what ended up being a factor of her high cholesterol, but I can't help but wonder what would happen to the rest of it if she adopted my diet.) I read what's out there about how to manipulate your cholesterol, and according to them I'm doing a lot of stuff wrong. Yet I have a very healthy cholesterol profile (total cholesterol at 216...you can say that's technically high but we'll just laugh at you, since the HDL takes up 90 points, leaving only 126 for the LDL and triglycerides). Anyone interested in exploring this further with me can email me at [tamaraz@optonline.net](mailto:tamaraz@optonline.net)

Robert Neil (2007-12-19 08:24:36)

I have found that Spirulina and Chlorella really help. Regards, Robert [1]Spirulina

1. <http://www.allseasonshealth.co.uk/acatalog/SPIRULINA.html>

Jason Sole (2008-12-06 17:22:25)

I am very interested in raising my HDL, I do not want to continue on drugs.

## How Accurate is Epidemiology? (part 2) (2007-09-16 09:44)

Because Gary Taubes is probably the country's best health journalist, his [1]article in today's NY Times Magazine ("Do We Really Know What Makes Us Healthy?") about the perils of epidemiology especially interested me. It's the best article on the subject I've read. He does a good job explaining what's called the healthy-user bias – people who take Medicine X tend to make other healthy choices as well. Does wine reduce heart attacks? Well, probably – but people who drink more wine also [2]eat more fruits and vegetables.

The article falls short in two big ways. Taubes does a terrible job presenting the case for epidemiology. He mentions the discovery that smoking causes lung cancer but then disparages it by quoting someone calling it "turkey shoot" epidemiology. Actually, that discovery did more for public health than any clinical trial or laboratory experiment I can think of. Taubes fails to mention the discovery that too-little folate in a pregnant woman's diet causes neural-tube and other birth defects. As the dean of a school of public health put it in a talk, that one discovery justified all the money ever spent on schools of public health (where epidemiology is taught). Taubes also fails to mention that some sorts of epidemiology are much less error-prone than the studies he talks about. For example, a county-by-county [3]study of cancer rates in the United States showed a big change across a geological fault line. People on one side of the line were eating more selenium than people on the other side. Experiments have left no doubt that too-little selenium in your diet causes cancer.

Even worse, Taubes shows no understanding of the big picture. Above all, epidemiology is a way to generate new ideas. Clinical trials are a way to test new ideas. To complain that epidemiology has led to many ideas that turned out to be wrong – or to write a long article about it – is like complaining that you can't take a bike on the highway. That's not what bikes are for. If only 10 % of the ideas generated by epidemiology turn out to be correct, well, [4]10 % is more than zero. Taubes should have asked everyone he interviewed "Is there a better way to generate new ideas?" Judging from his article, he asked no one.

Now excuse me to take a selenium pill . . .

1. [http://www.nytimes.com/2007/09/16/magazine/16epidemiology-t.html?\\_r=1&ref=magazine&oref=slogin](http://www.nytimes.com/2007/09/16/magazine/16epidemiology-t.html?_r=1&ref=magazine&oref=slogin)

2. <http://www.ajcn.org/cgi/content/abstract/76/2/466>

3. [http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=4064058&ordinalpos=21&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=4064058&ordinalpos=21&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum)

4. <http://www.blog.sethroberts.net/2007/08/05/something-is-better-than-nothing/>

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Tom (2007-09-16 11:53:19)

If only 10 % of the ideas generated by epidemiology turn out to be correct, well, 10 % is more than zero. \_\_\_\_\_ Taubes' points, and I think they're good ones, are that the hypotheses yielded by epidemiology are confused with facts, and that these questionable hypotheses are immediately implemented as social policy due to a critical storm of: 1. researchers trying to build names and careers 2. climbing reporters, bloggers and a sensationalist press trying to make noise, money and

fill space. (USA Today will not be running any articles headlined "Slight correlation of questionable causality found in tiny subset." 3. opportunistic big Pharma & other entrepreneurs large and small who see trends to milk, and 4. politicians eager to prove their "protecting" Americans from the latest evil. 5. an uneducated population which thinks correlation is causality.

seth (2007-09-16 21:37:29)

The facts (observations) collected by epidemiologists suggest hypotheses; and sometimes those hypotheses are wrong. You may think it is awful that those hypotheses are told to the public; I don't. Let's say that an epidemiological study finds a correlation between Behavior X and better health. USA Today publishes this. As a result, many people start doing Behavior X. I don't see the problem. Sure, they could be wasting their time. But maybe not. Everything has risks, is uncertain. The epidemiological evidence does raise – or should raise – one's belief that Behavior X causes better health. A little knowledge – a little push in the direction of certainty – is better than nothing. I'm more worried about poorly-educated science journalists who are overly critical and poorly-educated scientists who are dismissive (e.g., they fail to grasp that correlation raises the plausibility of causation—I have blogged about this) than "an uneducated population." It's the journalists and scientists who have the power. I think you're right that scientists sometimes overstate their case. But I don't see a lot of that. I see much more unwise dismissiveness.

Tom (2007-09-16 23:20:30)

Well, much of Taubes' article is about the kind of problems associated with overstating those cases...the erroneous conclusion that HRT helps, when it actually kills women...the downside of folate supplementation...the panicked switch to trans fats after CSPI's alarms over palm oil in popcorn...and what Taubes explores in his new book, the real result of the bad science that is still believed to support the explosion in carb consumption of the last thirty years. I wouldn't argue for censorship, no, but I would support intelligent use of the data, which ain't happening. For me, it's hard to argue with the idea that the double-blind trials that are necessary aren't being done. The conversion of hypothesis into fact means the "trials" are done on the public at large.

Igor Carron (2007-09-17 15:09:32)

Seth, I liked what you wrote but pay attention to that pill: <http://diabetes.webmd.com/news/20070709/selenium-supplements-diabetes-risk> Igor.

seth (2007-09-17 20:31:12)

Thanks, Igor.

Seth's blog » Blog Archive » How Accurate is Epidemiology? (part 3) (2007-09-18 09:29:25)

[...] How Accurate is Epidemiology? (part 2) [...]

Zagreus Ammon (2007-09-19 14:49:51)

Epidemiology is accurate enough. The interpretation of data leaves much to be desired. From a clinician, teacher and manager's perspectives, I wish everyone would please please please realize that every piece of information has its limitations and conclusions drawn by inference cannot be logically assumed to represent complete and unalterable truth. Ya, take a pill and learn to live with uncertainty.

## **Regent Blum, Meet Provost Dumas (2007-09-16 10:29)**

Richard Blum, chairman of the UC Board of Regents, rescinded a speaking invitation to Larry Summers after some UC Davis faculty [1]complained:

After a group of UC Davis women faculty began circulating a petition, UC regents rescinded an invitation to Larry Summers, the controversial former president of Harvard University, to speak at a board dinner Wednesday night in Sacramento. The dinner comes during the regents' meeting at UCD next week. Summers gained notoriety for saying that innate differences between men and women could be a reason for under-representation of women in science, math and engineering. . . Professor Maureen Stanton, one of the petition organizers, was delighted by news of the change this morning, saying it's "a move in the right direction."

Northwestern University Provost Lawrence Dumas is responsible for allowing Lynn Conway and Deirdre McCloskey to use his university's considerable power [2]to try to silence Michael Bailey. At [3]Marginal Revolution, Alex Tabarrok calls the UC Regents' action "shameful." I agree.

Thanks to Matthew Pearson.

1. <http://www.davisenterprise.com/articles/2007/09/14/news/114new1.txt>
2. [http://www.huffingtonpost.com/seth-roberts/can-professors-say-the-tr\\_b\\_60781.html](http://www.huffingtonpost.com/seth-roberts/can-professors-say-the-tr_b_60781.html)
3. <http://www.marginalrevolution.com/marginalrevolution/2007/09/what-is-going-o.html>

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### **Abstracts from The New Yorker (2007-09-16 23:01)**

The New Yorker now has online abstracts, just like scientific journals. From the [1]abstract of an article by Patricia Marx:

The writer spies from her living-room window a multitude of colorful puffy parkas from Pucci (24 East 64th Street). The writer then calls Dr. Andrej Romanovsky to ask how the body detects cold. New York is the city of coats. Real coats, not car coats, for in this town, we walk. . . . Still worried about the coming cold? There is always one thing left to do: Miami (U.S. Airways; flights as low as \$59 one-way).

Surely this is better than the article itself. Just as brandy is better than the wine it is distilled from.

1. [http://www.newyorker.com/reporting/2007/09/24/070924fa\\_fact\\_marx](http://www.newyorker.com/reporting/2007/09/24/070924fa_fact_marx)

sysrick.com » links for 2007-09-18 (2007-09-17 18:29:00)  
[...] Abstracts from The New Yorker [...]

Emily Gordon (2007-09-18 14:28:38)

This isn't new, though! They've been writing these forever. If you look through the Complete New Yorker hard drive/DVD you can read a bunch.

seth (2007-09-18 16:18:43)

"They've been writing these forever." Like cave paintings (discovered by a 4-year-old): If only I'd raised my eyes...

TC (2007-09-28 22:13:48)

\_\_ \_Seth Wrote \_\_ \_ > Surely this is better than the article itself. > Just as brandy is better than the wine it is distilled from. If this tragic taste-bud dysfunction is a result of ingesting flax oil, I'm gonn'a have to rethink this whole Shangri-la thing

## **Why Are Medical Costs So High? (2007-09-16 23:22)**

At Cato Unbound, David Cutler, a Harvard public policy professor whose research I used in The Shangri-La Diet, [1]writes:

The most important reason why medical costs increase over time is because we develop new ways of treating patients and provide that care to ever more people.

At least in his essay, Cutler fails to consider an alternative explanation: Medical costs have increased a lot because we have become a lot more sick – more in need of help. Over the last 50 years, obesity has greatly increased. Diabetes has greatly increased. Depression has greatly increased. Depression, including subclinical depression, is now common and has so many bad effects or correlates – less activity, less socializing, less sunlight, poor sleep, less compliance with everything – that its impact on health must be great.

1. <http://www.cato-unbound.org/2007/09/12/david-m-cutler/use-a-scalpel-not-a-meat-cleaver/>

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lasser11 (2007-09-17 20:04:32)

"less activity, less socializing, less sunlight, poor sleep, less compliance with everything" that its impact on health must be great" In college I had a temp job sorting medical files. It felt like 10 percent of the doctor's patients gave him 90 % of his service. Nothing worked for them. they all were depressed with various aches and pains. We all would be better off if Doctors could work up the courage to limit care. The patients would be forced to self remedy (eat healthier, be more active, etc.). but doctors have no incentive to say no. I think Seth mentioned how Jane Jacobs argued that no one would want a privatized, profit seeking police department. Likewise, we shouldn't have a profit seekers distribute health care like the insurance companies due. But Doctors are much more powerful than insurance companies. They make the decisions. we need to de-profitize the way Doctors make decisions.



seth (2007-09-18 16:14:56)

I don't think that would work very well. Huge amounts of social pressure have not caused everyone to be thin. It's not that fat people don't want to be thin; it is that no one has told them how (correctly – there is an endless amount of bad advice available). Absent good advice, it is incredibly difficult. Same with depression. You place too much faith in "self remedy".

lasser11 (2007-09-18 19:03:28)

"It's not that fat people don't want to be thin; it is that no one has told them how (correctly – there is an endless amount of bad advice available)." I see what your saying. but do family doctors really have ground breaking advice on how to lose weight? They tell their patients to burn more calories than intake. basically eat healthier and exercise more. Nutritionist have better advice. I guess its the Hayek in me which believes that if we forced ourselves to ignore our current medical system (which is not very effective for the amount of money put into it), some sort of better medical system will spontaneously construct itself.

matt (2007-10-21 08:07:59)

Yeah there are a lot of hypochondriacs. My mother is one of them. She eats poorly and does not exercise enough if at all. Thus she is overweight, which contributes to knee problems, type 2 diabetes and depression. But at the same time it is surprising to find out that the US government spends more per person on health care than Canada or France, but most americans still have to buy insurance and pay out of pocket expenses.

## A Bayesian Tries SLD (2007-09-17 13:55)

Bayesian data analysis, which Andrew Gelman has [1]pioneered, is about taking one's beliefs into account when doing data analysis. When I wrote The Shangri-La Diet, I was being a kind of Bayesian: I realized that the facts I had gathered so far did not establish the diet as any sort of panacea. Based on the facts in the book, it was hard to say how widely helpful the diet would turn out to be. I wrote the book anyway because the facts I had gathered so far were so surprising, so inconsistent with what almost everyone said about how to lose weight. From a Bayesian point of view – taking prior beliefs into account – they were impressive. If conventional views were right, no one should lose weight following SLD. But several people had. Some of them, such as Tim Beneke, had lost a lot of weight. To complain that there was no clinical trial, no certainty, was to miss the point that the book includes data that should have been impossible.

Whoever blogs at [2]4d2.org says something similar:

My first reaction to [SLD] was, of course, that it was one of the stupidest things I'd ever seen. Then I started reading the forums on the creator's (Seth Roberts) site, and then I did some Googling. And would you believe that, in the absence of anything that I would call scientific evidence, this thing seems to work for most people that try it. . . . Five days ago I honestly believed the Shangri-La Diet to be hooey – interesting hooey, maybe, but still hooey. . . I decided I'd try it for myself and report on the results. I want to make it really clear that I approached this diet with a very healthy dose of skepticism. You should also understand that I'm a staunch advocate of the "eat right and exercise, stupid" philosophy of weight loss. I have never followed a prepackaged diet strategy. Having said all that: it works. I do not know why or how it works, but it works.

1. <http://books.google.com/books?id=TNyhnkXQSjAC&dq=&pg=PP1&ots=5F8K8HwyL7&sig=o0CT110IkfIG4zs2fDy09KFnBAk&prev=http://www.google.com/search%3Fq%3D%2522bayesian%2Bdata%2Banalysis%2522%26ie%3Dutf-8%26oe%3Dutf-8%26aq%3Dt%26rls%3Dorg.mozilla:en-US:official%26client%3Dfirefox-a&sa=X&oi=print&ct=title>
2. <http://4d2.org/archives/63>

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Blaise Pascal (2007-09-17 20:37:18)

I wonder how much of the success of SLD is reporting bias? I think people are more likely to say "I tried it, and it worked" than to say "I tried it, and it didn't work". Since the evidence for and against SLD's efficacy seems to be self-reported, a bias against saying it didn't work would artificially inflate its seeming success. (For the record, I have not previously reported that I weighted 275lb at the beginning of July when I started SLD, and 285 at the end of July when I stopped SLD. My experience is that SLD didn't work for me.)

4d2 dot org » Blog Archive » SLD Day 6: Something is Happening (2007-09-18 12:45:59)

[...] Also, Seth Roberts linked to me (and called me a Bayesian, no less)! And to think I sent Robert Atkins all that fan mail and never got a response! [...]

Tom (2007-09-18 15:09:15)

Please do report, ideally on the forums...all data helps.

links for 2007-09-19 « Matthew Henty (2007-09-18 23:31:32)

[...] Seth's blog » Blog Archive » A Bayesian Tries SLD (tags: bayesian Shangri-La-Diet selfexperimentation) [...]

Kara & Michael's Blog » SLD Day 6: Something is Happening (2008-04-17 05:56:12)

[...] Also, Seth Roberts linked to me (and called me a Bayesian, no less)! And to think I sent Robert Atkins all that fan mail and never got a response! [...]

### **How Accurate is Epidemiology? (part 3) (2007-09-18 09:29)**

To my [1]previous post about Gary Taubes's NY Times [2]article, [3]Andrew Gelman adds that it is good to see public discussion of these issues. I agree. I also like seeing them raised in a dramatic context: Who's right? Powerful people making serious mistakes. How will we know? Health at risk! That sort of thing.

Speaking of drama and epidemiology . . . For many years the introductory epidemiology class for graduate students in the UC Berkeley School of Public Health was taught by Leonard Syme. I learned about this class at party. I spoke to someone who had taken it and, as a result, had switched from public policy to epidemiology. Very impressive. I knew Syme slightly. I went to his office to learn more about how he had managed to influence someone so much. "Lots of students have said that," he told me as I entered his office. Lots of students, after taking his class, had decided to become epidemiologists. The list included Michael Marmot, one of the most important epidemiologists in the world, who studies the [4]social gradient in health – the tendency for the people at the top to be healthier than the people at the bottom, even after controlling for all sorts of things.

The class met once/week. Every week there was a new topic. For every topic Syme would assign a paper laying out the conventional wisdom – that high cholesterol causes heart disease, for example – plus three or four papers that cast doubt on that conclusion. I think he even had American Heart Association internal emails. Several students would present the material and then there would be debate – what's to be believed? The debates were intense. If ever the students seemed to be reaching agreement, he would say something to derail it. "You know, there was a study that found . . ."

Practically all classes make you think you know more at the end of them than you knew when they began. Practically all professors believe this is proper and good and cannot imagine anything else. With Syme's class, the opposite

happened: Your beliefs were undermined. You walked out knowing less than when you walked in. You had been sure that X causes Y; now you were unsure. At first, Syme said, many students found it hard to take. A three-hour debate with no resolution. They did not like the uncertainty that it produced. But eventually they got used to it.

The overall effect of Syme's class was to make students think that epidemiology was important and difficult – even exciting. It was important because we really didn't know the answers to big questions, like how to reduce heart disease; and it was difficult and exciting because the answers were not nearly as obvious as we had been told. This is why many students switched careers.

[5]Marmot on Syme: "I have never come across anyone in the academic world who had quite the powerful influence on students that Syme did." Nor have I. That meeting with Syme, about five years ago, was one of two conversations in my life that really taught me something about how to teach. I was the only person at Berkeley to ever ask him about his teaching, Syme said. What a pity.

[6]Syme on how his research began.

1. <http://www.blog.sethroberts.net/2007/09/16/how-accurate-is-epidemiology-part-2/>
2. [http://www.nytimes.com/2007/09/16/magazine/16epidemiology-t.html?\\_r=2&ref=magazine&oref=slogin&oref=slogin](http://www.nytimes.com/2007/09/16/magazine/16epidemiology-t.html?_r=2&ref=magazine&oref=slogin&oref=slogin)
3. <http://www.stat.columbia.edu/~cook/movabletype/mt-tb.cgi/1160>
4. <http://www.npr.org/templates/story/story.php?storyId=14261615>
5. <http://www.epi-perspectives.com/content/2/1/4>
6. <http://www.epi-perspectives.com/content/2/1/2>

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links for 2007-09-20 « Matthew Henty (2007-09-19 23:32:58)

[...] Seth's blog » Blog Archive » How Accurate is Epidemiology? (part 3) THIS is how to learn and teach (tags: science learning teaching) [...]

Seth's blog » Blog Archive » How Accurate is Epidemiology? (part 4) (2007-09-20 12:41:00)

[...] How Accurate is Epidemiology? (part 3) [...]

Seth's blog » Blog Archive » Leonard Syme on Teaching (2007-09-21 04:13:23)

[...] How Accurate is Epidemiology? (part 3) [...]

Seth's blog » Blog Archive » Nassim Taleb on Incompetent Experts (2009-11-06 00:10:51)

[...] I don't think conventional research in nutrition, clinical psychology, or psychiatry is worthless — far from it. I think it is very valuable. (For one thing, it helped me see that my self-experimental conclusions, as unorthodox as they were, had plenty of empirical support.) What is hard for outsiders to grasp is how what they see — what they read in magazines and newspapers and even books — is heavily filtered to conform to a party line. Plenty of research supports the Shangri-La Diet, for example (such as research about the set point theory of weight control), but you are unlikely to read about it in, say, The New Yorker because it doesn't fit conventional ideas. Plenty of conventional research supports my ideas about mood, but you are unlikely to read about that research because it doesn't support the party line of "dopamine imbalance" causing depression or whatever. This is what Leonard Syme taught his public-health students — that the party line was a lot more questionable than an outsider would ever guess. They hadn't heard that before. (And it was unpleasant: Uncertainty is unpleasant.) This is a third sort of filtering: What data reaches outsiders. [...]

Seth's blog » Blog Archive » Three Things Elizabeth Kolbert Doesn't Know (2009-11-11 05:41:36)

[...] 1. For years, as I've blogged, Leonard Syme, an epidemiology prof at Berkeley, taught his students to distrust one mainstream public-health conclusion after another. Maybe 12 examples in all. He showed them facts they didn't know. All of a sudden the picture wasn't so clear any more. That he could do this in so many cases, one case per week, is what's telling. [...]

### **Self-Experimentation: &@%\$#@!! (2007-09-18 10:41)**

There is a [1]Yahoo Group about self-experimentation. Nobody told me! Many interesting posts and links. One posting within the last week, says the site, but I can't find it. The most recent burst of activity was in May.

1. <http://tech.groups.yahoo.com/group/SelfExperimenters/>

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Pearl (2007-09-18 17:15:09)

Wow, it was even dedicated to you and you didn't know about it....

### **Fear-Mongering? (2007-09-18 11:48)**

[1]This post by Dr. Erika Schwartz, complaining about a [2]breast cancer story in the NY Times, makes important points. When politicians – such as Joe McCarthy or Jean-Marie Le Pen – try to scare us, most of us appreciate the psychology involved: The more fearful we become, the more we will look to them to protect us, thus increasing their power. Our fear = their power. Schwartz is saying that respected doctors and journalists do the same thing. How prophetic was [3]The Coming Plague (1994) by Laurie Garrett?

Schwartz's post has too little detail to convince me that this particular story is guilty. Nor do I agree with her that statistics are "totally meaningless when applied to the individual." Her contribution is to ask: how can we discuss these issues without fear-mongering?

1. <http://www.drerika.com/blog?action=viewBlog&blogID=-429513830556401411>

2. [http://www.nytimes.com/2007/09/16/health/16gene.html?\\_r=2&oref=slogin&oref=slogin](http://www.nytimes.com/2007/09/16/health/16gene.html?_r=2&oref=slogin&oref=slogin)

3. <http://books.google.com/books?id=GwzdAAACAAJ&dq=&prev=http://www.google.com/search%3Fq%3D%2522Laurie%2BGarrett%2522%26ie%3Dutf-8%26oe%3Dutf-8%26aq%3Dt%26rls%3Dorg.mozilla:en-US:official%26client%3Dfirefox-a&sa=X&oi=print&ct=result&cd=1>

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Andrew Gelman (2007-09-19 04:19:24)

Seth, I agree with your general point but I think your analysis is oversimplified. My guess is that journalists want to sell books more than they want power. Joe McCarthy wanted power; he also wanted to get reelected (not exactly the same as wanting power; he wanted to keep his job), also it is said that he enjoyed seeing his name in the paper. In other settings, organizations are set up to have a particular bias. For example, if the EPA raises a ruckus about some environmental hazard, it might be that people in the organization want power, but it might just be that it's essentially their job to do this.

Doctors and Statistics « Two Newtons (2007-09-19 09:32:16)

[...] Doctors and Statistics Seth comments on Dr. Schwartz's contention that statistics are "totally meaningless when applied to the individual." [1]

## The Academic Stockholm Syndrome (2007-09-18 16:47)

Today I went to a talk about terrorism. After the talk, I asked a question: What's the evidence for the recommendations you made at the end? The speaker, a professor at Harvard, began her answer by apologizing: I can only tell you case-by-case anecdotes, she said. She repeated this apology a little later. Well, of course no one has done a controlled experiment (or any experiment) on how to deal with terrorism. Of course all we have is a story here, a story there. The speaker, whose talk was good, had heard the pervasive dismissiveness I criticize [1] here so many times that not only did she expect it, she accepted it. The academic Stockholm Syndrome.

1. <http://www.blog.sethroberts.net/2007/08/05/something-is-better-than-nothing/>

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Andrew Gelman (2007-09-18 17:59:27)

"Of course all we have is a story here, a story there." You're setting the bar a bit low there, Seth. Political scientists can indeed do quantitative studies, even if not experimental, by gathering what data are at hand. There's a lot of room between pure anecdote at one extreme, and a randomized controlled study at the other.

seth (2007-09-18 18:31:34)

No doubt the evidence can be improved, yes. But that is usually true.

## Spider Science (2007-09-19 12:06)

The success of my self-experimentation has puzzled me. The individual discoveries (a new way to lose weight, a new way to improve mood, sleep-related stuff, the fast effects of omega-3) seem normal; someone would have found them. It's their combination that's strange. Scientists who study weight control do not discover anything about mood, for example. But I did.

An [1] ancient (2001) essay by Paul Graham is about how the future lies with web-based applications. No more Microsoft Word. One of Graham's stories sheds light on my puzzle:

I studied click trails of people taking the test drive [of Graham's web-based application] and found that at a certain step they would get confused and click on the browser's Back button. . . . So I added a message at that point, telling users that they were nearly finished, and reminding them not to click on the Back button. . . . The number of people completing the test drive rose immediately from 60 % to 90 %. . . . Our revenue growth increased by 50 %, just from that change.

I studied click trails. He examined a rich data set, looking for hypotheses to test. I practiced what I'll call spider science: I waited for something to happen. When it did, I started to study it, just as a spider moves to the part of the web with

the fly. Here are examples:

1. A change in what I ate for breakfast caused me to wake up early much more often. I did many little experiments to find out why.
2. Watching TV early one morning seemed to have improved my mood the next day. This led to a lot of research to figure out why and how to control the effect.
3. After I started to stand more, my sleep improved. I made many measurements to see if this was cause and effect and if so what the function looked like (the function relating hours of standing to sleep improvement).
4. In Paris I lost my appetite. This started the research that led to the Shangri-La Diet.
5. The morning after I took some omega-3 capsules, my balance improved. This led to experiments to see if it was cause and effect and if so what the function (balance vs. amount of omega-3) looked like.
6. One day I took flaxseed oil at an unusual time. My mental scores [2] suddenly improved. I started to study these short-term effects.
7. While studying these short-term effects, I noticed improvements shortly after exercise. I started to study the effect of exercise.

Graham studied click trails partly because he could so easily act on anything he learned, partly because it was his company and he was so committed to its success. The seven examples I have given all came about partly because I could easily act on what I noticed and partly because I would directly benefit from learning more.

Conventional scientists do not practice spider science. They do not continuously monitor or search out large rich data sets hoping to find something they can act on. They can't afford to, it's unconventional, it's too risky, it won't pay off soon enough, they probably couldn't act on what they found, etc. Later in Graham's essay he marvels that big companies develop any software at all. Microsoft is like "a mountain that can walk." Likewise, I'm impressed that scientists operating under the usual constraints manage to discover anything. You might think tenure allows them to relax, wait, take chances, and do things they weren't trained to do, but it doesn't work out that way.

1. <http://www.paulgraham.com/road.html>
2. <http://www.blog.sethroberts.net/2007/06/30/science-in-action-omega-3-a-surprise/>

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Igor Carron (2007-09-19 13:13:44)

Seth, You mentioned a drink in Paris that got your taste twisted, do you recall if it was Orangina ? ( <http://en.wikipedia.org/wiki/Orangina> ). The Coke tastes different as well. I need to write something longer on this, but there is some type of wisdom that says the french are thinner or at the very least they seem to be less weighty on average. While one can definitely see lifestyle differences in particular with regards to the use of cars as opposed to a more pedestrian approach to moving (hence letting french people to be standing longer over a whole day), I was wondering if another aspect of the french lifestyle could also be part of that equation: food. The large choice in the number of sauces and other cooking techniques could be one of the ways to diversify the taste of different mixtures to the point where the taste association, which you refer to, is altered. Igor.

Andrew Gelman (2007-09-19 15:06:46)

Seth, I might argue that, although individual scientists do not usually follow what you call "spider science," this is in fact the path followed by scientific \_fields\_. For example, for the past few years lots of political scientists have been looking at polarization. Any given political scientist (including myself) usually is studying some specific hypotheses, but the field as a whole could be said to "continuously monitor or search out large rich data." Consider also the large communally-funded studies such as the National Election Study and General Social Survey. On an unrelated point, relating to your final sentence: the vast majority of scientists don't have tenure.

seth (2007-09-19 15:18:58)

I sort of agree that whole "fields" practice something like waiting. But what happens when something is found? Does that shift the research of the person who found it? I don't know enough about political science to know the answer. True, most scientists don't have tenure, making it even harder for them to wait. The Paris drink wasn't Orangina. Orangina is available in Berkeley. The Paris drinks I tried I had never seen before. I agree that the diversity of French cooking helps them be thin.

NE1 (2007-09-19 17:03:27)

You're wrong. Scientists are willing to admit strange data. It's unlikely they will do so without at least an attempted explanation, but you can't afford to pass up new ideas when a completely independent experiment takes years and hundreds of thousands of dollars to set up. You build it, you make a bunch of measurements along the way to make sure you're really studying what you think you are, and you finally get the ones you wanted to publish. Or you have to work another 6 months refining your device. Maybe the real difference is that you're dealing with systems which are innately complex, and hard to isolate. You can't recreate a Mr. Seth every morning in exactly the same state to repeat the experiment. I use perfect crystals. This is also what makes me so skeptical about any significance in your results. If you find the tiniest thing prompts a new approach, how can you be sure it isn't something else confounding your results? I guess you can only hope Omega-3 is a helluva powerful effect.

## **A Clinical Trial of Fish Oil (2007-09-20 04:32)**

A big study of the effects of fish oil is taking place at Ohio State University. From [1]its website:

The beneficial effects of fish oil (or eating fish more frequently) include reductions in triglycerides, blood pressure, and heart rate, as well as increases in HDL cholesterol, the "good" type of cholesterol. In

addition, certain aspects of immune function also appear to show favorable responses to fish oil supplementation, and some studies suggest that fish oil helps to improve mood and decrease depression. This study is designed to examine how supplementation with omega-3 polyunsaturated fatty acids (key fish oil components) affects aspects of your immune response, and your mood; because some research suggests that people who eat more fish may do better during stressful times, the study will also examine how fish oil affects your immune response to stress, certain stress hormone responses, and your psychological response to stress.

I was especially curious how they are measuring brain function. Here's how:

At Visit 1 and Visit 5 [16 weeks after Visit 1] only, you will be asked to perform various tasks for about 20 minutes; these will include making a short speech and computing arithmetic problems without pencil or paper in the presence of other research team members. You will be audiotaped while you complete these tasks. . . At Visit 1 and Visit 5 only, the researchers will administer short tests that measure aspects of memory and concentration to see if the fish oil supplements have positive effects on learning and memory. For example, you might be asked to memorize several words, and then you would be asked which of the words you remember several minutes later.

Each subject participates for 24 weeks. The study, which started in 2006, is supposed to [2]end in 2010, with 138 subjects in two groups (69 per group).

Tyler Cowen's [3]experience with flaxseed oil implies that omega-3 supplementation can dramatically reduce inflammation within a few weeks. [4]My research shows that omega-3 supplementation can improve brain function within a few hours. This study appears to be much larger than necessary.

1. <http://www.stressandhealth.org/>
2. <http://clinicaltrials.gov/ct2/show/NCT00385723?term=omega+3&rank=43>
3. <http://www.blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>
4. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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fascinated (2007-09-21 22:50:39)

Given your interest in fish oil and omega-3, you will probably find this article in the NYT interesting (as I did): <http://www.nytimes.com/2007/09/19/business/smallbusiness/19hunt.html>

### **Janet Malcolm on Email (2007-09-20 06:20)**

Janet Malcolm is the most divisive (within me) writer I have encountered. I loved *The Journalist* and *the Murderer*. A journalistic masterpiece (except for the opening sentence about all journalists being con artists). I wrote her a fan letter about it. I hated *In the Freud Archives*, her hit piece about Jeffrey Masson. [1]This review of a book about how to write email is not very good, alas. Too obvious. How far the gifted have fallen.



Jeffrey Masson used to live in Berkeley. I visited him while writing an article for Spy about his lawsuit against Malcolm (it never ran). While I was there, he got a phone call from Joe McGinness, the "journalist" of The Journalist and the Murderer.

1. <http://www.nybooks.com/articles/20571>

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## How Accurate is Epidemiology? (part 4) (2007-09-20 12:37)

In Sunday's NY Times Magazine, [1]Gary Taubes argued that epidemiology does not provide a good basis for health decisions – it is often wrong, he claimed. By "wrong" he meant experiments were more pessimistic. Things that seemed to help based on surveys turned out not to help, or help much less, when experiments were done. A 2001 [2]BMJ editorial disagrees:

Randomized controlled trials and observational studies are often seen as mutually exclusive, if not opposing, methods of clinical research. Two recent reports, however, identified clinical questions (19 in one report, five in the other) where both randomized trials and observational methods had been used to evaluate the same question, and performed a head to head comparison of them. In contrast to the belief that randomized controlled trials are more reliable estimators of how much a treatment works, both reports found that observational studies did not overestimate the size of the treatment effect compared with their randomized counterparts. . . . The combined results from the two reports indeed show a striking concordance between the estimates obtained with the two research designs. . . . The correlation coefficient between the odds ratio of randomized trials and the odds ratio of observational designs is 0.84 ( $P < 0.001$ ). This represents excellent concordance.

Here is the data:

The correlation coefficient is the wrong statistic. They should have reported the slope of a line through the points constrained to have intercept = 0. The graph above shows that the slope of such a line would be close to 1. Unlike the correlation, that is relevant to their main question – whether surveys tend to find larger risk ratios than experiments.

[3]Part 1. [4]Part 2. [5]Part 3.

Addendum: A [6]later (2005) paper by John Ioannidis, one of the authors of the 2001 paper, claims to explain, in the words of its title, "why most published research findings are false." The above data suggest that most published research findings in Ioannidis's area are accurate. [7]Alex Tabarrok on the 2005 paper.

1. [http://www.nytimes.com/2007/09/16/magazine/16epidemiology-t.html?\\_r=2&ref=magazine&oref=slogin&oref=slogin](http://www.nytimes.com/2007/09/16/magazine/16epidemiology-t.html?_r=2&ref=magazine&oref=slogin&oref=slogin)  
2. <http://www.bmj.com/cgi/content/full/322/7291/879?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&fulltext=ioannidi>

s&searchid=1&FIRSTINDEX=0&resourcetype=HWCIT

3. <http://www.blog.sethroberts.net/2007/09/14/how-accurate-is-epidemiology/>

4. <http://www.blog.sethroberts.net/2007/09/16/how-accurate-is-epidemiology-part-2/>

5. <http://www.blog.sethroberts.net/2007/09/18/how-accurate-is-epidemiology-part-3/>

6. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?tool=pubmed&pubmedid=16060722>

7. <http://www.marginalrevolution.com/marginalrevolution/2007/09/why-most-publis.html>

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## Leonard Syme on Teaching (2007-09-21 04:13)

In a [1]recent post I described an amazingly influential class on epidemiology taught by Leonard Syme, a professor in the UC Berkeley School of Public Health. [2]Andrew Gelman ("inspiring") and [3]Matthew Henty ("THIS is how to learn") were impressed. To find out more about the class, I asked Syme a few questions:

1. What gave you the idea of teaching the course this way?

I was struck by the fact that we can't do classic experiments in epidemiology. We can't assign one randomly selected group of babies to be smokers for the rest of their lives and another random group to refrain. Instead, we have to study people as we find them (in religious groups, in jobs, in various locations, marital statuses, etc) and then try to statistically adjust for the things we think might be confounders. In general, we end with evidence that is not very good and the burden on us is to assess the data very, very carefully. I have defined epidemiology as the the activity of evaluating lousy data as best we can. The class merely illustrated this issue. The theme of the class was how can so many bright and caring people come to such different conclusions looking at basically the same data. The lesson was that we really needed to be clear about our biases and expectations and that we needed to think about the data as carefully as possible. I thought the class should have been called "The Sociology of Knowledge".

2. What were a few of the accepted ideas that you covered?

a. Everyone knew that high fat diets were related to serum lipids and coronary heart disease. The data then (and now) do not support that belief.

b. Everyone knew that the surgical treatment of breast cancer required radical surgery. There was a rumor that lumpectomy would do as good a job but few people believed that. The evidence showed that a more limited procedure was just as good.

c. Some people had been calling for research on the relationship between race and IQ. Majority scholars argued that no good could come from such research and they were refusing to fund such work. How do we decide what is worth studying? Because there might be harm?

d. A major national clinical trial on the treatment of diabetes showed no results but it turned out the randomization procedures were seriously flawed. People in the treated group consistently had higher risk factors to begin with and this doomed the trial. How do we take account of the fact that randomization is a method and not a result? Unbalanced randomization results will occur with a predictable regularity. This study led to the idea of stratification in sampling.

e. Everyone knew that multiphasic screening was good to do. It detected disease early. The evidence did not

support this. The evidence showed that early detection means you live longer with the disease but you still die on Thursday morning at 10 AM. You just knew about it longer.

There were 10 sessions like this. Three hours each! Students ( $n = 15-20$ ) had to read hundreds of pages each week and had to present their case with great frequency - probably 3 or 4 times during the semester. The only rule for presentations was that people could not summarize the papers. Everyone had already read everything and they had to get on with the argument.

3. How long did you teach the course? Did the course change over the years? If so, how?

I taught the course for 12 years. It changed each year only because I updated the literature on particular issues and because I found a new issue that I thought might be more interesting than one of the older topics. But the way in which the course was organized did not change.

4. Apart from lots of epidemiology, what did you learn from teaching the course? For example, did you learn anything about teaching?

I'm not sure. As a teacher, my emphasis has always been on challenging people to think hard about issues. My favorite definition of a good book is one that forces you to do your own thinking. When I lecture, I get very nervous when I see people taking notes. What are they writing? What I'm saying? Not good. Unless they are writing things down so that they can refute my points later on.

1. <http://www.blog.sethroberts.net/2007/09/18/how-accurate-is-epidemiology-part-3/>

2. [http://feeds.feedburner.com/~r/StatisticalModelingCausalInferenceAndSocialScience/~3/158547101/an\\_inspiring\\_st.html](http://feeds.feedburner.com/~r/StatisticalModelingCausalInferenceAndSocialScience/~3/158547101/an_inspiring_st.html)

3. <http://matthewhenty.wordpress.com/2007/09/20/links-for-2007-09-20/>

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Tim Lundeen (2007-09-21 12:43:52)

Wow, wonderful! Wish I could have taken this :-)

### **Can Professors Say the Truth? (letter from Willow Arune) (2007-09-21 08:23)**

Willow Arune, a retired lawyer who has been one of Michael Bailey's supporters, sent me this email:

Hi Seth,

I have found your exchanges with Deirdre McCloskey rather amusing.

I am one of those transsexual women who supported Bailey. I did so publicly and as a result was subjected to the lies, half-truths and innuendo of Andrea James and Lynn Conway. Even now, the slander is still on both of their web pages. Along the way, I noted that Dr. McCloskey had announced that she

would sue Bailey if he dared to suggest that she was "one of those" so I did it for him. Frankly, her autobiography does that to her as well, although she does not use the term

I invited Dr. McCloskey to sue me. I even wrote her lawyer providing an address for service. For one week, I wrote her daily asking her to please, please sue me. Years later, she has still not done so. A shame really as I had lined up a wonderful cast of potential witnesses to provide expert testimony. Truth is always a defence to such silly actions.

Dr. McCloskey has hidden behind the more overt actions of Andrea James and Lynn Conway. Yet she was one with them, an equal participant in the vile and ugly attacks made not only on Bailey but also on other transsexual women who dared to support him. As Dr. Dreger points out, many would not allow their names to be used for fear of attracting attacks from McCloskey's crew. I also received many letters of support from transsexual women who agreed with Bailey or, at the least, thought the actions of Conway, James and McCloskey were repugnant. None would dare have their comments public for fear of being subjected to the same attacks that had been made against other transsexual women and myself.

Let me give you one example of those actions that McCloskey supported, those actions she says do not cause her shame.

Firstly, I am a rape survivor. Andrea James was well aware of this as we had continued a "back channel" correspondence well after Bailey's book was published. During 2003, on a public newsgroup, an anonymous writer posted a vile accusation that I was a "registered sex offender". Not true then or now. Then, on December 24th of that year, I received a post from Andrea James asking me to "confirm or deny" that I was a registered sex offender. In the same post, she threatened to send out "investigators" to look into my past. She justified this action by the broad premise that her end justified any means and that those of us who supported Bailey must have ugly reasons to do so in our past. She would discover those and expose us.

Her web page on me followed, as did another screed from Lynn Conway. Lies, half-truths and innuendo.

This tactic "the no-name post to an e-group or newsgroup" was repeated in the case of the Transkids. It started with a further anonymous post, this one to an e-group on Calpernia Addams' web site. I first heard of it on an e-group for UK transsexuals and complained to the moderator. In time, thanks to confirmation from other transgendered people, Christine Burns issued a formal apology for spreading the lies, the day after she was awarded an MBE. She had, she stated, relied upon a "usually reliable source" (Andrea James).

The tactic is straight from the McCarthy days. Spread an unfounded accusation and repeat it often so that some will believe it is true. As the writer Patricia Cornwell has recently shown, even one with many financial resources cannot control a slander on the Web.

Ms. James attacked several transsexual women who dared to either support Bailey or Blanchard, or even those who simply wanted to turn down the heat. Each was (and remains) subjected to a web page on Andrea's site. No wonder few were willing to step out of the trenches. Most transsexual women simply wish to get on with life. They do not wish to be vilified "and outed" on a web page available to anyone with a computer.

If Dr. McCloskey is not ashamed of this type of tactic, as she states, she should be. Instead, she

continues to attack you and anyone who dares to express even the slightest question about Blanchard's theory or the means used by Conway and James to attack Bailey and anyone else who crosses their sights.

It is part of this nasty group to ignore the theory and go personal. In the years since Bailey's book has been published, I have had few conversations or exchanges about "the theory". The hate mail that arrives in my mailbox always quotes some of the accusations made by James or Conway about me as a person. James's screed is copied and posted to some newsgroups on a regular basis by her supporters. Nor, after all this time, have I met any transsexual who has directly suffered as a result of Bailey's book "and I have asked repeatedly for one to come forward.

The book was published several years ago; I have certainly moved on. I stood up for Dr. Bailey's right to publish and against the vile and arrogant tactics of Conway, James and McCloskey. I am glad that Dr. Dreger had the courage to expose the facts concerning this matter. As both James and Conway see fit to retain their personal attacks on me on their respective web pages, I can now point to Dr. Dreger's article as some vindication, certainly as an explanation. In these days when potential employers even check e-groups and such regarding potential employees, slander of the type employed by Conway, James and McCloskey against other transsexual women can have dramatic effect. A dispute over a theory is not a reason to slander a person in the manner employed by these zealots.

Willow Arune

[1]Her blog.

1. <http://pangarune.blogspot.com/>

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Richard Whitaker (2007-09-21 16:52:00)

Hi, sorry to be off topic, but the blog format change has put the text to the far left (hard too read) and made the charts too large for the screen. I've looked running various versions of IE under a couple of OS's. Haven't had a chance yet to look with Firefox or anything else. Thought you'd want to know. Now back to lurking --richard--

seth (2007-09-21 19:39:57)

what blog format change? I haven't changed anything.

Pearl (2007-09-21 20:51:40)

I experienced that as well, sometimes the chart in the recent epidemiology post appears really huge and runs off the screen. It has always been viewed in the same browser and appears to change randomly from normal-sized to huge.

Richard Whitaker (2007-09-22 04:29:37)

It looks fine this morning, but Pearl describes my experience exactly. I'll drop you a line if it recurs. --richard--

seth (2007-09-22 09:06:49)

Pearl's comment clarified the problem. I used a too-large jpg file for the data. I changed it to a smaller file.

Boo (2007-09-22 19:25:57)

Wow. You got one of Bailey's supporters to freely admit that she acts like a two year old. That's pretty kewl.

Jennifer Usher (2007-09-25 11:25:12)

Before anyone jumps to any conclusions about Arune's remarks concerning Andrea James, I would strongly urge that they actually check out what Ms. James has to say. The web sites in question are actually quite well documented, including details of Arune's harassment of Andrea James. and others. As to the repeated requests that Deidre McCloskey sue Arune, well it would be foolhardy for Ms. McCloskey to bother pursuing such an endeavor. It is well known that Arune is supported by disability payments in Canada and is, in effect, judgment proof. Jennifer Usher

seth (2007-09-30 15:25:32)

Willow Arune has asked me to post this: "As mentioned in my post, those who oppose Bailey rarely talk about the theory of transsexuality set out in his book. Instead, they use personal attacks. As confirmation of this statement, we have the comments of BOO and Jennifer Usher above, both of which attack me and leave the theory untouched. Need I say more?"

Stephen M (Ethesis) (2007-10-06 08:19:33)

This is fascinating to read as a study in a conflict where I have no emotional attachments – for me it is like pure research. (You can note my general interest in such things at <http://adrr.com/> and <http://srmarsh.com/> ). I've no other conclusions to draw at the moment, I almost feel that it is unfair to use this as a case study because I'm not a stakeholder in the conflict and it is so raw.

## **My Theory of Human Evolution (the pleasure of crafts) (2007-09-22 04:06)**

On the [1]Meet the Pros episode of This American Life, [2]David Rakoff said

I make stuff: boxes, lamps, mirrors, small folding screens, painted jackets for kids, that sort of thing. It's what I do in my spare time. Some people exercise; my salvation lies in time spent alone with an Xacto knife and commercial-grade adhesive. During the act of making something, I experience a kind of blissful absence of self and a loss of time. I almost cannot get this feeling any other way. . . . I once spent 16 hours making 150 wedding invitations by hand and was not for one instant of that day tempted to check the time.

He gives the stuff he makes as gifts to his friends. A Martha Stewart Living staffer tells Rakoff it is harder to do this sort of thing for a living than as a hobby.

[3]

My theory of human evolution, which explains how we became the only species whose members make their living in many diverse ways, says the sequence was: 1. Hobbies. 2. Part-time jobs. 3. Full-time jobs. The first hobbies obviously involved making things and were the beginnings of craftsmanship. That many of us, such as Rakoff, enjoy crafts indicates that those early genes are still there.

Before trading evolved, you gave the products of your specialized skill to your friends, which generated a vague obligation. This was the precursor of trading. In contrast to trading, of course, in this case the recipients may have only a little use for what they receive.

1. [http://www.thisamericanlife.com/Radio\\_Episode.aspx?episode=192](http://www.thisamericanlife.com/Radio_Episode.aspx?episode=192)
2. [http://en.wikipedia.org/wiki/David\\_Rakoff](http://en.wikipedia.org/wiki/David_Rakoff)
3. <http://www.blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-directory/>

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Seth's blog » Blog Archive » My Theory of Human Evolution (directory) (2007-09-27 04:29:13)  
[...] My Theory of Human Evolution (the pleasure of crafts) [...]

### **What Is Intelligence? by James Flynn (2007-09-23 04:26)**

James Flynn's conclusion that IQ scores all over the world had gone up by one standard deviation over 50 years or so (the Flynn effect) was one of the great psychological discoveries of the 20th century. It showed more clearly than anything else that everyday life can have a big effect on IQ, contrary to what many claimed.

In a new book called *What Is Intelligence? Beyond the Flynn Effect* Flynn takes this discovery as a starting point. After reading it, I could see there are three broad classes of explanation:

1. Events fed on themselves to promote certain abilities. To illustrate the dynamics, Flynn gives the example of basketball. As basketball became more popular, more people watched basketball, more people played basketball, and the rewards possible from basketball went up. All this increased the average level of play.
2. The trend of the last 50 years is a continuation of very long-term trends affecting those of high and low IQ roughly equally.
3. During the last 50 years, some environmental features were "fixed" – not everyone was reaching full potential. Better nutrition is the obvious example – nutritional deficiencies were corrected. This explanation is discussed briefly.

These three classes of explanation correspond to different expectations about how the distribution of IQ scores has changed. The first suggests that the high end (e.g., 75th %ile) increased more than the low end (e.g., 25th %ile). This is surely the case with basketball ability. The second means that that whole distribution has shifted. The third suggests that there will have been more improvement at the low end of the distribution than at the high end. Flynn does not make clear what the data show.

To the question, "were our (lower-IQ) ancestors sort of stupid?" Flynn answers yes. He quotes interviews with Russian peasants. Asked what dogs and chickens have in common, the answer was nothing. Asked what fish and crows have in common, again the answer was nothing. "Sort of stupid" is a harsh way to put it – and obviously they had many skills we have lost – but with the New York Times archives online, you can judge for yourself. Here is the opening of a 1937 [1]review of Eleanor Roosevelt's autobiography:

You pick up this book in the acute–and of course inevitable–consciousness that it is the autobiography of the wife of the President of the United States.

That sounds to me like a Spy parody.

I am less interested than Flynn in the question of the title. Intelligence is an everyday word with a meaning most of us know well; and it has also been used by psychologists to label what IQ tests measure (which is reasonable; it's just an abbreviation). I find it hard to get interested in questions about definitions. Asking how to define this or that word is like asking how much cumin or cinnamon or whatever to put into a dish. It matters, but not very much. Definitions, like recipes, are man-made tools. Questions about cause and effect – such as what caused the Flynn effect – interest me more.

The dust jacket calls Flynn "a psychologist" but he's a philosopher by training. "I am too much in love with philosophy to collect data or do field studies," he writes. As a non-nutritionist who has written about nutrition ([2]Chandra, the Shangri-La Diet, omega-3), his out-of-field success pleases me.

1. <http://select.nytimes.com/gst/abstract.html?res=F00C1FFD3B59177A93C3AB178AD95F438385F9>

2. <http://sethroberts.net/chandra/index.html>

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p-ter (2007-09-23 08:03:55)

partially genetic explanations would also probably shift the low end more than the high  
<http://www.gnpx.com/blog/2007/09/heterosis-and-flynn-effect.php>

michael vassar (2007-09-23 08:23:38)

3 seems to be correct. I have seen other and more thorough research to this effect, but here are the links I can find with a few minutes of googling [http://en.wikipedia.org/wiki/Flynn\\_effect#\\_note-Colom2005](http://en.wikipedia.org/wiki/Flynn_effect#_note-Colom2005) [http://www.gifteddevelopment.com/Whats\\_New/flynn.htm](http://www.gifteddevelopment.com/Whats_New/flynn.htm)

seth (2007-09-23 11:24:18)

Flynn favored Explanation 1, but it wasn't clear to me what data supported this.

Seth's blog » Blog Archive » How Things Begin: The Flynn Effect (2007-10-28 16:44:15)

[...] Flynn said that only now (in his new book What is Intelligence?) can he give a coherent explanation of the gains. [...]

sigh (2007-10-29 12:44:42)

I am always amazed that "intelligent" people believe that human intelligence can be measured. It's like saying the queen bee is smarter than a worker. They do completely different things. You have to look at whole system to get a picture of intelligence.

NE1 (2007-11-02 09:44:55)

What is Science Fiction? You have a point. What is Intelligence? from the point of view with which you write about the book is more of a "What contributes to Intelligence, and what influences it?" I would be surprised if you found this uninteresting. That "lack of lead in paint" is intelligence seems very important, to me.

## **The Anti-Veblen (2007-09-23 06:32)**

It is curious that both Thorstein Veblen and Tyler Cowen were/are economists. Judged by their interests, they might have been psychologists, sociologists, or anthropologists, especially the last. The Theory of the Leisure Class was pure



anthropology. Tyler's new book [1]Discover Your Inner Economist is a blend of psychology and anthropology. Veblen wrote a whole book arguing what Tyler (rightly) takes as needing little support. "Cookbooks by famous chefs . . . seek to impress rather than respect our limits," writes Tyler. Straight out of Theory of the Leisure Class except better written.

In book after book, Veblen criticized mainstream economics. The mainstream economists of his time liked to assume that everyone "maximized utility"; the point of Theory of the Leisure Class was how wrong this was – all that conspicuous waste and consumption and impracticality done to signal one's wealth. Whereas Tyler's theme is essentially the opposite: mainstream economic ideas, which now include Veblen's, explain a lot about everyday life, such as which countries have the best restaurants. U. N. troops were "very good for the people who sell lobster," a Haitian taxi driver told him.

Whereas Veblen expressed his dissatisfaction in the usual academic way – he wrote a book saying this is bad, that is bad (very creatively and thematically) – Tyler did something far less predictable and probably far more powerful: With Alex Tabarrok, he started a blog. The main theme of [2]Marginal Revolution, as far as I can tell, is to praise stuff (usually academic economic stuff) that Tyler believes is or is likely to be under-appreciated. Greg Clark's [3]new book is an example. Stories teach values, and MR is a long-running serial with "recurring characters" (to quote Tyler). To criticize by creating is as old as Michaelangelo but requires a willingness to start small and deal with small things (such as a [4]tiny restaurant) that doesn't come easily to academics in prestigious positions.

1. <http://www.amazon.com/exec/obidos/ASIN/0525950257/sethrobertand-20>

2. <http://www.marginalrevolution.com/>

3. <http://www.marginalrevolution.com/marginalrevolution/2007/08/a-farewell-to-a.html>

4. [http://www.marginalrevolution.com/marginalrevolution/2007/02/thai\\_xing.html](http://www.marginalrevolution.com/marginalrevolution/2007/02/thai_xing.html)

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veblengood (2007-10-13 12:13:13)

And I say Veblen is a genius :) It's more sexy to be negative. It's the new black, didn't you know?

### **Anastasia Goodstein on Blogging (2007-09-24 03:33)**

[1]Anastasia Goodstein, a San Francisco writer, blogs at [2]Ypulse – Y as in youth, meaning teenagers. She came to blogging from the "other side" – from journalism rather than subject-matter expertise – and blogging is one way she makes a living. She has written a book called [3]Totally Wired: What Teens and Tweens are Really Doing Online.

What did you slowly learn about blogging from doing it?

I learned when you are running a professional blog that has to be updated every day (or five days a week), you just can't be brilliant every day. You have days where you have no clue what to blog about or when you're just not inspired, but still you have to post. I also learned that posts I think might be amazing may get no response while other posts that I didn't think were that great generate lots of comments. I have found ways to produce content that don't rely on me having to write full blown posts all the time. I do a lot of Q &As (like this), repost some of the more interesting comments and have easy features like Ypulse Quote (where I find a relevant and interesting quote) or From The Ypulse WTF files (a short post about something that just makes you scratch your head).

I think blogging is a great way to work your writing muscles and develop/strengthen your writing voice – it takes focus and discipline and it's public so you get feedback on what you do. I love blogs where you find great info and get to know the blogger – For example, USA Today's [4]Pop Candy, written by Whitney Matheson is one of my favorites.

What do non-bloggers fail to realize about blogging?

I think non-bloggers don't realize how much work it is (see number one) – to build a decent readership, you have to update your blog pretty regularly. They may not realize that blogging can be financially lucrative – there are many writers now being hired as professional bloggers, individual bloggers like myself who have build media brands from their blogs and consultants and agencies who have used their blogs to generate lots of business.

You write: "Since May 2004 Ypulse has been updated five days a week . . . [in] September 2006 . . . I decided to try to make Ypulse my full-time gig." Was it a hard decision? What was behind it, besides the obvious advantages of working for oneself?

The decision to leave Current TV was agonizing – I love the mission of the network and very much enjoyed the people I worked with. I left partly to be able to promote my book, *Totally Wired*, which came out in March of 2007, and because Ypulse was becoming more than just a side project. The scariest part of leaving a job is leaving the security of a regular paycheck and benefits. I also wasn't sure where I wanted to focus. I was going to try consulting, maybe launch a paid subscription product – I wasn't sure. It has been a year since I left my job, and it was the best decision I've made. I now have a business partner helping me grow, a successful conference business and am still promoting my book on the road, which I never could have done working full time.

1. <http://www.word-geek.com/>
2. <http://www.ypulse.com/>
3. <http://www.totallywiredbook.com/>
4. <http://blogs.usatoday.com/popcandy/>

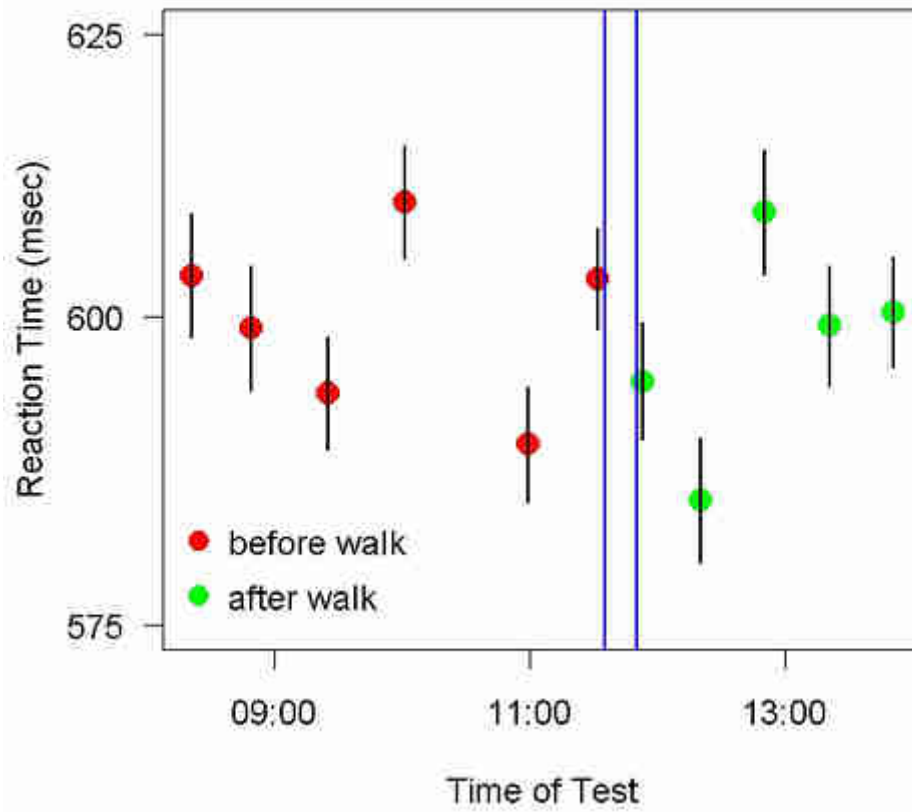
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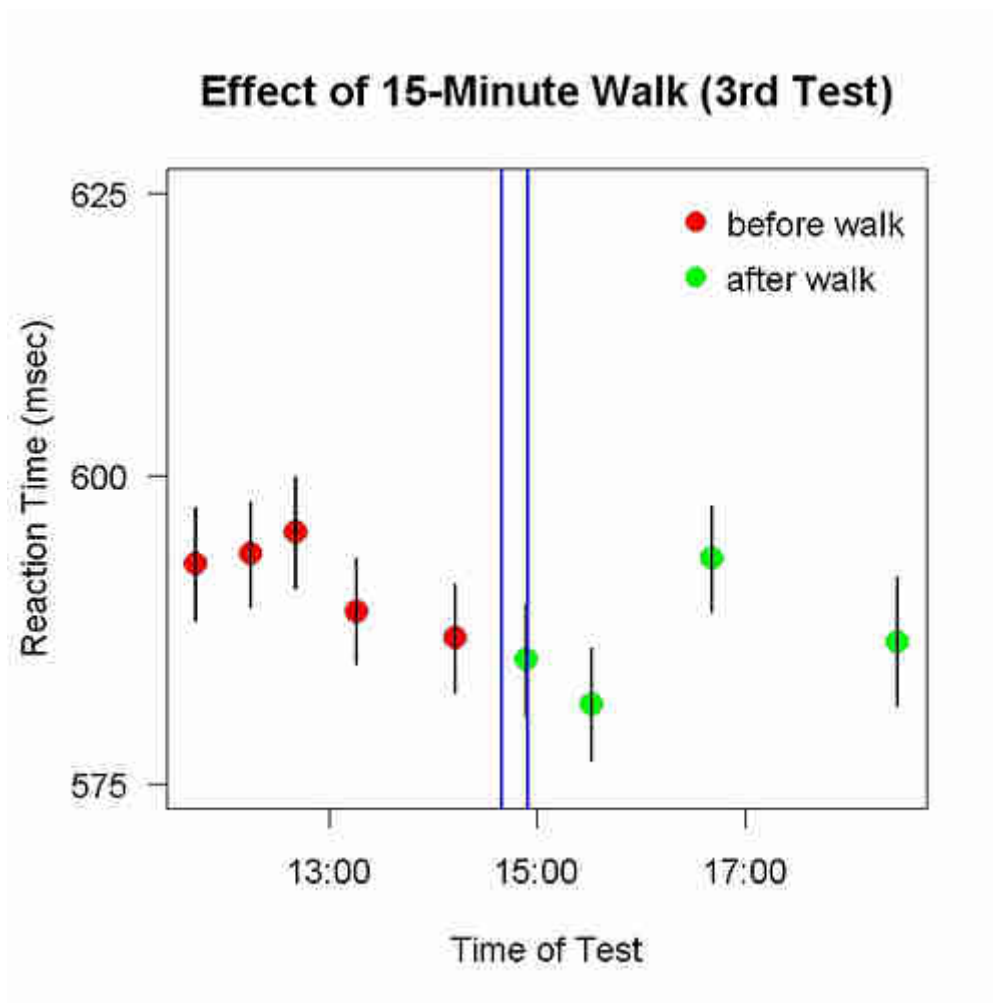
Blogging as flexing the writing muscles! « Entertaining Research (2007-09-24 05:07:22)  
[...] From Seth's blog. [...]

### **Science in Action: Exercise (15-minute walk twice more) (2007-09-25 04:21)**

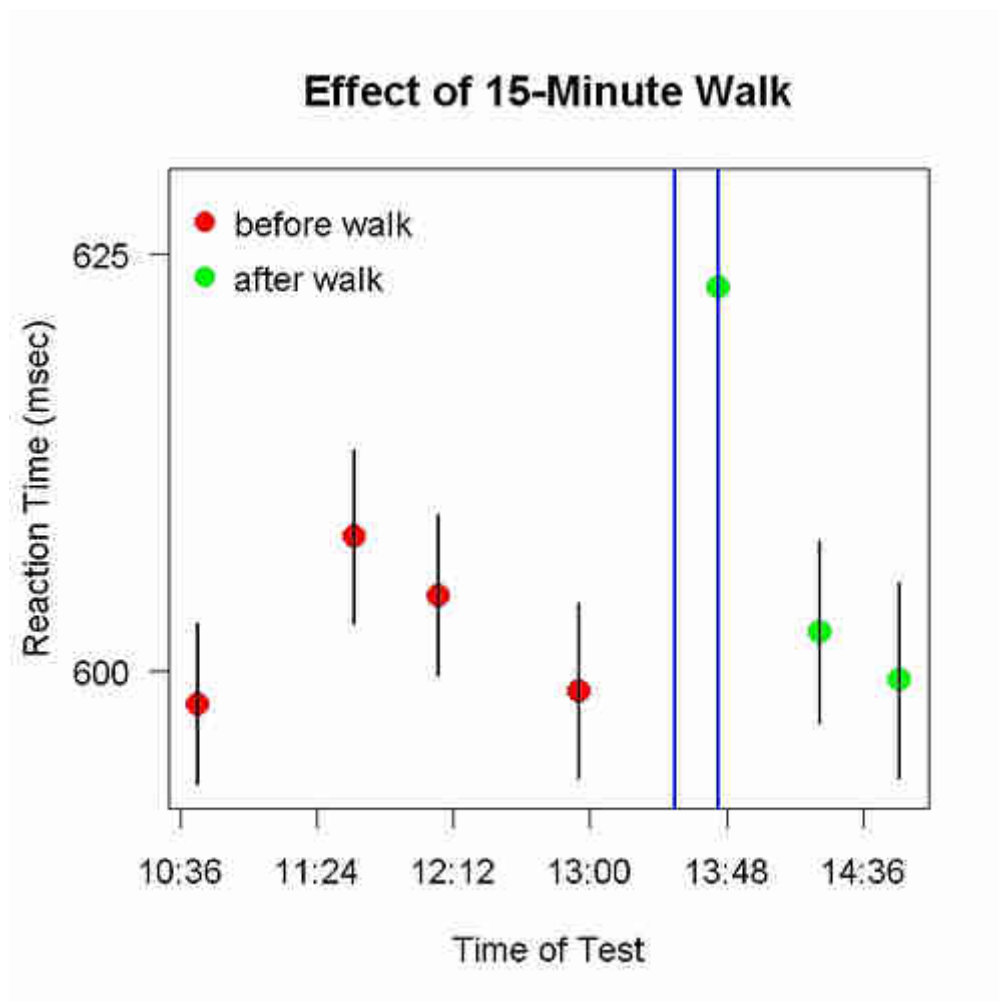
As part of my digression into the effects of exercise, I tested the effect of a 15-minute walk (= on a treadmill at about 2.8 miles/hour) twice more. Here are the results:

### Effect of 15-Minute Walk (2nd Test)

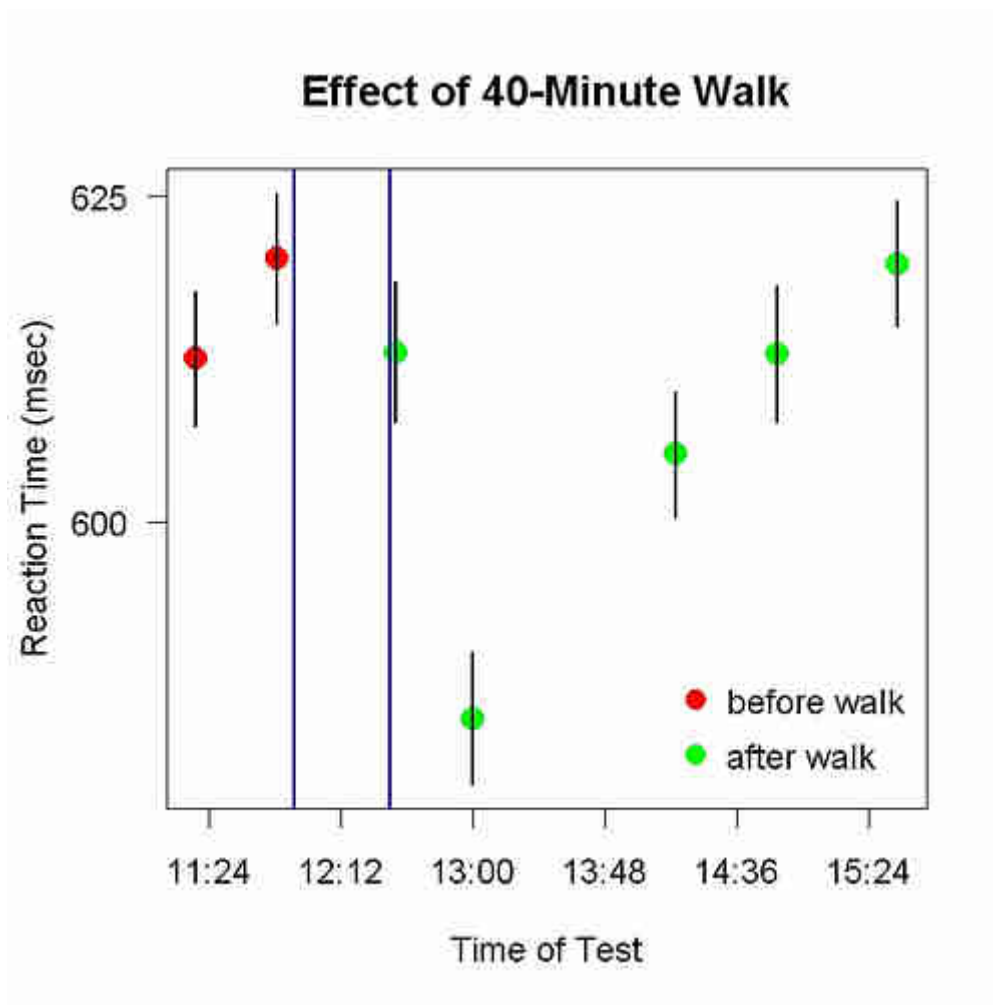




Here is the result (posted earlier) of the first test:



Here is a test of a 40-minute walk:



What do I learn from all this? For my omega-3 experiments, which might cover 6 hours, I should keep the walking involved under 15 minutes. If I want to get some sort of mental benefit from walking, I should spend 40 minutes or more. Less obvious is this: I take these results to indicate the existence of a mechanism that "turns up" our brain when we are doing stuff and turns it "down" when we are inactive. This suggests what Stone-Age activity consisted of: more than 15 minutes of walking. This also suggests that whatever the benefits of exercise, they require more than 15 minutes of walking to obtain.

The practical question these results raise is how to use this effect to help me with what I do all day – most of which, such as writing, seems to be incompatible with walking. Walking breaks every few hours? What about running 10 minutes every few hours?

Gary Taubes' [1] new book on food and weight comes out today. Taubes [2] agrees with what I say in The Shangri-La Diet: Exercise is a poor way to lose weight. The results above provide a different reason to exercise, of course. But the details should change. My impression is that most people focus on burning calories; whereas these results suggest choosing exercise that best produces this reaction-time-lowering effect.

1. <http://www.amazon.com/Good-Calories-Bad-Gary-Taubes/dp/1400040787>

2. <http://nymag.com/news/sports/38001/>

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Nootropos (2007-09-25 06:50:33)

Hello, this is a very interesting and important finding. I think I would choose running 10 minutes on the spot (better on a rubber mat). The problem is sweat. Not good for when you are at the office. Instead of coffee machines there should be places to walk and exercise at work. No wonder a school of philosophy is called "peripatetic". The greek walked to think. Maybe for a different reason, it seems that when you put your body to work or in movement your mind is more free of tensions. But it could also be due to what you describe here.

seth (2007-09-25 10:59:56)

That's a good point about the peripatetic philosophers. I have found that interviews go much better if we walk rather than sit.

lasser11 (2007-09-25 16:22:29)

Gary Taubes' diet recommendations sound similar to SLD and especially Dr. Atkins diet. Did anyone really disprove Dr. Atkins? I know there was a giant backlash against him with people distastefully making fun of how fat he was when he died. Didn't Atkins start all of this? or at least popularized the idea that Seth and Gary Taubes seem to agree with: the type of food one eats, NOT THE AMOUNT OF CALORIES, matters.

Shopping for Builders (2007-09-26 05:36:41)

Wow! really interesting and amazing research, i just got surprised by looking at this. Instead of coffee machines there should be places to walk and exercise at work.

Matthew (2007-12-30 19:21:13)

Matthew... ..Basically put, how long does the support for your new treadmill last?.....

seth (2007-12-31 17:41:36)

Matthew, I don't understand your question.

jim boggs (2008-08-01 11:19:16)

what great research...great information

## **Thank You, Abu Ayyub Ibrahim (2007-09-25 08:35)**

Abu Ayyub Ibrahim is behind [1]Behind the Approval Matrix – that is, New York magazine's [2]Approval Matrix, which is the first thing I read – if that's the right word – in every issue. For example:



Ibrahim's blog or whatever you call it explains the items in the Approval Matrix.

I wonder why Ibrahim and I like it so much. Perhaps 1. We enjoy praise and dispraise. 2. Cute little pictures. 3. Use of pictures as dots. 4. Draws our attention to stuff we may enjoy but otherwise wouldn't know about (e.g., YouTube clips). 5. Unpompous. 6. Artistic in the Nabokovian sense (i.e., implies a better world – see Afterword to Lolita). 7. Mixes high and low. (My students laughed when I wrote "pimple" on the board.) 8. Sometimes witty.

1. <http://www.behindtheapprovalmatrix.com/>

2. <http://nymag.com/arts/all/approvalmatrix/37962/>

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Ibrahim (2007-09-25 19:53:00)

Thanks for the post! I see that you're an educator too. Maybe that's the reason we love the Approval Matrix, but I bet it's really the "cute little pictures." Thanks again, Ibrahim [www.BehindtheApprovalMatrix.com](http://www.BehindtheApprovalMatrix.com)

### Progress in Higher Education (2007-09-25 10:56)

The present system of working for examinations by students is one which is doing a great deal of harm in every way.

From a 1883 letter by J. S. Haldane to his mother.

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Ben A (2007-09-26 04:08:42)

Did you see the article on HE in Britain in yesterday's Guardian? Quoting from it: *Students, he says, work hardest when there is a high volume of formative-only assessment and oral feedback - typically writing essays that don't count towards their degree result, but for which they have to cover a range of material. This is the Oxford and Cambridge model, and used to be the case at most universities 30 years ago. They do less work when there is a high volume of summative assessment, that is, coursework or exams that count towards the degree mark, the pattern in new universities. They do least of all when there is relatively little assessment of either kind, which is what tends to happen in Russell group universities other than Oxbridge, and which may explain the low hours of study in some of them, he says.*

losing-it (2007-09-27 00:22:55)

Sorry Dr. R. - I pasted in a wrong URL for the Sir Ken Robinson video, from another open window. The correct URL to "The Conflict between Education and Creativity by Sir Ken Robinson" follows: <http://pathwaytohappiness.com/happiness/2007/05/20/the-conflict-between-education-and-creativity-by-sir-ken-robinson/>

### The SLD Way (2007-09-25 22:35)

From [1]Tayster, below a poll that asks "do you sing in the car?":

It's been a week since I started the Shangri La Diet and I have lost eight pounds. More importantly, I have lost the cravings that I used to have. I don't feel like eating as much food as I did before. And when I do eat food, I feel like I need to make it something besides a bag of chips and a chocolate cherry Coke. Since I eat less meals, I prefer to make the meals count.

I still can't explain it, but it works.



One comment: "CHOCOLATE CHERRY COKE?!!! How did I not know about this assuredly sublime creation?!"

1. <http://tayster.blogspot.com/>

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david (2007-09-26 07:37:35)

I did the SLD for 3 weeks two years ago using sugar water. Lost 20 lbs that never came back. I also made it a point to eat better food since I was eating fewer calories. I ended up becoming a vegetarian (one year ago). The "eat less, but eat better" part is interesting to me. I wonder how common the reaction is among SLDers. If it happens often, is it instinct or just people following their common sense? Perhaps it's related to the effect you've mentioned elsewhere that after being successful with the SLD people report that they make other lifestyle improvements (exercise, stopping smoking, whatever). In addition to dropping meat, I also quit caffeine.

### **What Do Meatloaf, Acupuncture, Psychotherapy, and Clinical Trials Have in Common? (2007-09-26 04:29)**

Jane Jacobs tells a story about a handed-down meatloaf recipe: After the loaf is made, the end is cut off. "Why?" she asked. "We've always done it that way," she was told. The original recipe was for a smaller oven, it turned out; the end was cut off to make the loaf fit in the oven.

I thought of this story when I read a [1]recent study in the Annals of Internal Medicine that compared three treatments for back pain: acupuncture, "sham acupuncture," and "conventional therapy." Sham acupuncture was like acupuncture except that the needles were put in "wrong" places, inserted less deeply, and not rotated after insertion. Conventional therapy was drugs, physical therapy, and exercise. The study found that acupuncture and sham acupuncture were equally effective. Both were much better than conventional therapy. The results imply that acupuncture works, but the surrounding theory (meridians, etc.) is wrong. Which I find reassuring.

Psychotherapy is essentially the same. Lots of studies show that psychotherapy helps – but many studies also imply that the surrounding theory is wrong. Untrained therapists are as effective as trained therapists. [2]Keeping a journal has similar effects. The active ingredient may be telling your problems, just as the active ingredient of acupuncture is apparently needle insertion.

Ritual – doing something just because – can be found in meatloaf recipes, acupuncture, psychotherapy, and clinical trials. In the discussion section of the acupuncture paper, the authors wrote:

Potential limitations of this study [include] inability to blind acupuncturists to the form of acupuncture.

Just as the meatloaf cooks did not understand their recipe, the acupuncture researchers did not understand their research design. The original reason for blinding was to equate expectations. That the two forms of acupuncture came out equal in spite of unequal expectations among the therapists is better evidence that expectations were not important. The authors failed to grasp that lack of blinding worked in their favor.

Thanks to Hal Pashler.

1. <http://archinte.ama-assn.org/cgi/content/abstract/167/17/1892>
  2. <http://www.blog.sethroberts.net/2006/10/11/the-writing-cure/>
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## **My Theory of Human Evolution (language) (2007-09-27 04:27)**

After reading [1]Christine Kenneally's [2]The First Word: The Search for the Origins of Language (2007) I could see that most theorists agree with me that language must have started small: With single words. None of the theorists seem to use my other guiding principle: Lightning doesn't strike twice in one place for different reasons. If two rare events – such as (a) a sound in the night that sounds like a burglar and (b) in the morning your wallet is gone – might be due to the same thing, they probably are. Use of this principle means that how language evolved should fit into a larger explanation.

Humans differ from our closest primate relatives – not to mention all other species – in many ways, of course. One big difference is language; but there are many others. Application of the lightning-strikes-twice principle means that language probably began for the same reason as the other differences.

The overwhelming difference between humans and other species is that humans specialize in terms of jobs. Two randomly-selected people almost surely make their living doing quite different things all day. No other species does this. Two randomly-selected members of any other species almost surely make their living doing the same thing all day. The story I am trying to tell in my human evolution posts is how humans came to specialize like this. (I believe the aquatic ape theory is right, but it's about an earlier stage of human evolution, before job specialization.)

For me, the question of how language evolved becomes the question: How did single-word language promote job specialization? This has an obvious answer: It promoted trade, which job specialization obviously requires. The first words were nouns – in particular, the names of objects (chair, knife, bag, etc.). These words promoted trade because:

1. They served as advertising. It became much easier to tell others that you or someone else had something to trade. It's weird that there is no word for the other side of the picture: Wanting something. Single words also made it much easier to broadcast that there was something you wanted.
2. They emphasized function. The words chair, knife, and bag describe the function of the objects they name. Objects have many other qualities, of course: color, location, ownership, age, materials, etc. Common words tend to hide those qualities and emphasize function. Trades based on function became easier to arrange than trades based on desires for other qualities. The first words helped people trade for stuff they could use, in other words.

Single words work perfectly as advertising. They are still used this way. In a Guatemalan market, I heard a man shout the Spanish word for "toothpaste" over and over. Lots of businesses use single words on their signs to indicate what they sell. Early names, moreover, reflected what a person would have to give in trade: Smith, for example.

People who criticize evolutionary explanations sometimes say it is impossible to have evidence. Not so. In the case of language, you can examine how single words are used today. Sure, new ways of using language have grown up; but they are unlikely to have made old uses impossible. There are dozens of things you can't do with single words. But you certainly can advertise and request ("fork?").

1. <http://www.christinekenneally.com/>
2. <http://www.nytimes.com/2007/08/01/books/01grim.html>

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Pearl (2007-09-27 06:11:46)

I agree, however I wanted to add that in Japanese, and maybe other languages, you can actually have a regular conversation in single words. They don't use pronouns or modifications of the "to be" verb (ex. 'are you going?' is simply 'go?'), and often verbs are not conjugated into a particular tense. A lot of the language is made cogent by context and voice inflection. You can have a pretty lengthy, albeit shallow, conversation in single word statements. It's sort of amazing how much you can do with one word actually, sometimes I find it unfortunate English is so unwieldy :)

### **How Much Water Should You Drink? (2007-09-27 05:21)**

According to this persuasive non-embeddable [1]video – from a BBC series called The Truth About Food – the answer is don't worry about it.

They compare two twins. One drinks 2 liters water/day, the other doesn't drink any water. Not self-experimentation, but close.

I did [2]an experiment in which I drank 5 liters of water/day. I lost a few pounds, not nearly worth the trouble. There was one surprise: Flavors intensified. Every strawberry was the best-tasting strawberry I'd ever had.

1. <http://www.youtube.com/watch?v=fK2b6UtVW70>
2. <http://repositories.cdlib.org/postprints/117/>

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James (2007-09-27 06:56:53)

...plus the few pounds you lost were water, which removed some of the buffer between your normal hydration level and being dehydrated. As someone who recently stopped taking a diuretic, I must say that having a few extra pounds on the scale is far superior to being on the edge of dehydration when exercising. That being said, I drink a lot of water – I'm up to liter 6 today and it's before 10AM – after experimenting with more normal consumption levels. Two advantages I've found for losing weight: 1) The well-known "you may be thirsty when you think you're hungry" angle. I'm not sure that this is true, since hunger is often a passing thing anyway, but, even so, this is a nice simple habit to get into to let it pass. 2) Being well hydrated seems to make higher ambient temperatures much more tolerable, perhaps because sweating is more effective. Between the additional calories needed for thermoregulation and the reduced energy use/cost from air conditioning, this aspect has been a total win/win for me. Of course, I work alone (so my slightly increased sweatiness doesn't affect anyone else) at home (so I can keep the temperature high); not sure how broadly applicable this aspect is.

whahuunhuuuh? (2007-09-27 12:14:32)

6 liters before 10 a.m.? Forget dehydration, I'd call that drowning.

lasser11 (2007-09-27 14:41:43)

"There was one surprise: Flavors intensified. Every strawberry was the best-tasting strawberry Iâ€™d ever had." That's not a good thing for the SLD diet. But that's interesting.

James (2007-09-28 06:26:11)

Before "whahuunhuuuh?" has me committed for water-poisoning myself, I'll point out that I weigh 290 pounds and had walked 5 miles in 100 % humidity when I posted yesterday. Because of the conditions, I weighed myself after the walk, so I knew I had lost 2 pounds of water since waking up; this was after drinking 4 liters before and during the walk, so I knew I needed at least one more. Considering that waking up is my low point for hydration, the extra liter over replacement seemed prudent. Side rant: Really big people sweat a \*lot\*, even on a gentle stroll, and the resultant discomfort and dehydration keeps big people from continuing to exercise. If I were an insurance company (or the US government, for that matter, to avoid future Medicare/Medicaid costs), I would send free sweat-wicking clothes and a Camelbak to every obese customer who asked for it.

seth (2007-09-28 08:46:42)

"Not a good thing for the SLD diet." I think that drinking all that water only affected my taste buds, whereas SLD is about smell.

### **Columbia University President Lee Bollinger's Surprising View of Freedom of Speech (2007-09-27 22:14)**

On issues I care about, college presidents have a terrible record. After [1]Margot O'Toole accused Imanishi-Kari of scientific misconduct, David Baltimore – later president of Rockefeller University and Caltech – stood by as O'Toole's career was ruined. Both O'Toole and Imanishi-Kari were in Baltimore's lab. I'm sure O'Toole was right; ink and digit analyses made it clear that Imanishi-Kari's data was fake. The current Chancellor of UC Berkeley, Robert Birgeneau, when he was head of the University of Toronto, stood by as [2]a job offer to the psychiatrist David Healy was withdrawn because Healy had criticized drug companies. President of Reed College Colin Diver [3]failed to grasp that what he strongly objected being done to him was what Reed professors did to their students every day. Axel Meisen, President of Memorial University, has allowed his university's lawyers to defend the indefensible: Memorial failed to protect the nurse who tried to stop [4]Ranjit Chandra. Henry Bienen, President of Northwestern University, allowed Lynn Conway and Deidre McCloskey to use the power of his university [5]to punish Michael Bailey for saying something that Conway and McCloskey didn't like.

I might have given Columbia University President Lee Bollinger credit for supporting free speech when the President of Iran spoke there a few days ago. But I won't, because [6]here is how Bollinger introduced him:

[long self-congratulation] . . . Let me now turn to Mr. Ahmadinejad. . . [long no-stone-unturned condemnation] . . . Mr. President, you exhibit all the signs of a petty and cruel dictator. . . . Why are you so afraid of Iranian citizens expressing their opinions for change? . . . You held a two-day conference of Holocaust deniers. For the illiterate and ignorant, this is dangerous propaganda. . . . When you have come to a place like this, this makes you, quite simply, ridiculous. You are either brazenly provocative or astonishingly uneducated. . . . Because of this, and for many other reasons, your absurd comments . . . I close with this comment frankly and in all candor, Mr. President. I doubt that you will have the intellectual courage to answer these questions. . . . your preposterous and belligerent statements . . . so embarrassed sensible Iranian citizens . . . I am only a professor, who is also a university president.

Ugh. Ahmadinejad objected:

In Iran, tradition requires that when we demand a person . . . to be a speaker, we actually respect [the audience] by allowing them to make their own judgment, and we don't think it's necessary before the speech is even given . . . to provide vaccination.

Bollinger did not understand that freedom of speech means nothing unless you listen to those allowed to speak.

Addendum: Bollinger, a former Law School professor, teaches a class on freedom of speech. At the next meeting of this class, shortly after the remarks I quote above, "the students erupted in cheers."

1. [http://en.wikipedia.org/wiki/David\\_Baltimore](http://en.wikipedia.org/wiki/David_Baltimore)
2. <http://www.pharmapolitics.com/>
3. <http://www.blog.sethroberts.net/2007/04/07/golden-rule-and-reed-college/>
4. <http://sethroberts.net/chandra/index.html>
5. [http://www.huffingtonpost.com/seth-roberts/can-professors-say-the-tr\\_b\\_60781.html](http://www.huffingtonpost.com/seth-roberts/can-professors-say-the-tr_b_60781.html)
6. <http://www.azstarnet.com/sn/hourlyupdate/202820.php>

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Rich (2007-09-28 08:58:18)

i suspect you might be interested in this, [http://www.canada.com/nationalpost/news/story.html?id=6054a78b-6dac-4e1f-9caf-b4b9fe275217 &p=1](http://www.canada.com/nationalpost/news/story.html?id=6054a78b-6dac-4e1f-9caf-b4b9fe275217&p=1)

Clyde (2007-09-28 11:02:37)

Contrast Bollinger's welcome to dictator General Musharraf: <http://distantocean.com/2007/09/lee-bollinger-f.html>

qarni (2007-09-28 22:41:49)

An Open Letter to Lee Bollinger, President of Columbia University A Barbarous and Ignorant Speech By CLIFTON ROSS To Mr. Lee Bollinger, I'm writing you to express my outrage over your vulgar treatment of President Ahmadinejad yesterday when you invited him to speak at your university. Simple human etiquette of the most primitive and elemental sort, was required in the situation, but you failed to deliver even that. You were obnoxious, insulting and displayed an appalling ignorance of President Ahmadinejad, Iran and politics, not to mention the rules that govern "civilized" human conduct (arguably "primitive" conduct is even more governed by politeness and elevated rules of conduct). Moreover, in a context that calls for objectivity, investigation, open mindedness and a willingness to learn and exchange ideas, you displayed a remarkable absence of any of those qualities. Instead, you showed yourself to be one with the bullying, abusive, ignorant and arrogant people who unfortunately govern our country at the moment and who are attempting to induce a phobic and neurotic xenophobia comparable only to what Hitler and Mussolini and Stalin inculcated in their countries during those moments of greatest darkness in human history. The irony of the situation is that you displayed all those qualities of which you accused President Ahmadinejad. Where was that display of that "great tradition of openness" in your callous, close minded speech? Your speech shows you to "exhibit all the signs of a petty and cruel dictator" and worse: a bully, a man who invites a guest into his house, then abuses him before a cheering crowd. You accuse President Ahmadinejad of "a brutal crackdown on scholars, journalists and human rights advocates" but you fail to mention the scores of scholars, journalists and human rights advocates, imprisoned, tortured and murdered by U.S. forces in Iraq. Is that cowardice or a double standard or merely "oversight" on your part? And when you accuse President Ahmadinejad of denying the Holocaust and calling for the destruction of the state of Israel, that is, when you pander to your Zionist supporters, you merely display an ignorance of the actual words of Ahmadinejad (words that were twisted in the translation to English, predictably; see this piece by Virginia Tilley,), which he corrected yesterday in his comments and clarifications. However, when you say "your [Iran's] government is now undermining American troops in Iraq by funding, arming, and providing safe transit to insurgent leaders like Muqtada al-Sadr and his forces" you show yourself to be as biased,

and blinded by nationalism and an imperial arrogance as the architects of the genocide we're currently seeing in Iraq. You don't ask what "American troops in Iraq" are doing there as invaders, occupiers, who are, de facto, now made war criminals by being the willing instruments of the "war of aggression," considered the supreme international crime, one committed by Mr. George Bush through fabrications of evidence, lies, and manipulation; you don't ask what role those resistance fighters like Muqtada Al Sadr are playing, but those less blinded by nationalism than you would compare him to our own patriotic forefathers who fought the British for our own nationhood; and now you don't bother to ask what your ignorant, uninformed criticisms of President Ahmadinejad will do to help the same war criminals who destroyed Iraq to now go on and destroy Iran. If you knew anything of history, the history of your own lifetime, you might understand the situation that currently confronts Iran. You probably know that the U.S. overthrew Iran's democracy in 1953 and set up a brutal, decadent Shah who was our man in the Middle East for the following two and a half decades. You may even know that the CIA helped organize the imprisonment, torture and killings of dissidents under that Shah, which is why the students took over the U.S. embassy when they finally got rid of the filth the U.S. had imposed upon them for all those dark years. We don't need to agree with the elected President of Iran, Ahmadinejad, to show him the simple respect due an elected head of state. But you seem incapable of that simple act required of someone in your position. To call an elected president a "dictator," however, is not only insulting but inaccurate. Such epithets are reserved for those who impose themselves by force and by fraud, such as Mr. Bush, who has stolen two elections. But I'm sure you wouldn't use terms to describe your own head of state so, now would you? The Chinese have a saying, roughly translated, that goes, "the one pointing his finger at another, has three fingers pointing at himself." But you are so blind to who you are, up there in your position of power as President of the prestigious Columbia University of New York in the great empire of the United States of America, that you don't see the man being accused by his three fingers. So, to close, I invite you to take a look at yourself, and our people, as another sees us. Her name is Layla Anwar and she writes a blog called Arab Woman Blues which you can find [here](#). I warn you. A man of your highly sensitive sensibilities may find some of her language harsh, painful, distasteful. But I assure you, she has far more justification for saying what she does than you did in your pronouncements against the President of Iran yesterday. And it is long, but I plead for you to have patience because you are a man in need of an education, and sometimes education is a very painful process. She writes: Is there anything in Iraq that the Americans have not destroyed? Anything at all? ... The past - you have looted and destroyed. Trying to erase our collective historical memory ... Our roots, where we came from, what our ancestors did, their achievements, their trials, their statues, their writings ... You do not know history, you are rejects of history. You have no history. You have no past, you have nothing ... you are nothing. You are nothing but ogres of consumerism. Not just material stuff, but anything you can swallow whole you will. You even swallow other people's history whole. You are a greedy, covetous, gluttonous, voracious, jealous, envious people ... Since you are nothing, your nihilism contaminates everything else ... You destroy and self destruct ... No Future - You have no future, because inside of yourselves, your future is limited to your own little egos. Little egos have no future. Little egos are amoebas, parasites, feeding off others ... You think you have a vision but your vision is only about your stomach, your pockets and what you have in between your legs ... That is it. This is where it stops. Surely this does not make you seers ... What have you contributed to the world? Anything of real substance? Nothing. Apart from brutal might and power ... and your sickening culture that is as hollow and as empty as you are. And just as you have no real future, you robbed us of our own. You are collectively a bunch of criminals, thieves, thugs and perverts of the worst kind. Since your f—ing 9/11, you have totally destroyed two countries. Afghanistan and Iraq. And you have not stopped. Not one day, not one hour ... You wanted regime change in Iraq - you got it. You also changed us, me, beyond anything I can recognize ... I never hated you before. Today I do. I really hate you. You collectively disgust me. Even our ancient Mesopotamian deities and spirits are disgusted with you. Every single letter of the Alphabet is disgusted with you. The earth, the rivers, the sky, the mountains, the trees, the birds of Iraq are disgusted with you ... The cosmos is disgusted with you ... Everytime I spot one of you anywhere in close proximity and hear that ugly accent of yours I run away ... I avoid you like the plague. I can't bear to hear you or see you. You represent nothing but Death and Destruction to me. Your ugliness is all pervading ... Everytime I switch on the TV or the Radio and see or hear one of you, I zap. I wish I can zap you out of my life once and for all ... I know, I keep repeating myself, but then you keep repeating the same acts. Iraq is going down, with its past and its future ... I can only promise you one thing, however long it may take, we are going to take you down with us." As a North American I can add nothing more except to apologize to Iraq for what my government has done and continues to do to them and to Iran for what you, and your government have done, and are preparing to do, to them. And to President Ahmadinejad, I apologize for Mr. Bollinger's barbarous and inexcusable words. Not all U.S. citizens are as ignorant and lacking in basic manners as the presidents of our universities. Clifton Ross Clifton Ross is the co-editor of *Voice of Fire: Communiques and Interviews of the Zapatista National Liberation Army* (1994,

New Earth Publications). His book, *Fables for an Open Field* (1994, Trombone Press, New Earth Publications), has just been released in Spanish by La Casa Tomada of Venezuela. His forthcoming book of poems in translation, *Traducir el Silencio*, will be published later this year by Venezuela's Ministry of Culture editorial, Perro y Rana. Ross teaches English at Berkeley City College, Berkeley, California. He can be reached at: [cliffross@gmail.com](mailto:cliffross@gmail.com)

Justin (2008-04-16 12:37:36)

Well, I will first say that I don't agree with the way Lee addressed the President of Iran. I found it to be more of a mud slinging contest than an actual debate. None the less, he was honest when he said he "felt all the weight of the modern civilized world yearning to express the revoltion at which you stand for". So, who did he really please? The mass of stupid, that's who. Which seem to highly out number the intelligent ones. However, I do not agree with Layla Anwar and her equally belligerent comments. I realize she is not broadcasting as mainstream as Lee is and therefore, she must play catch-up and speak bolder, louder and more aggressive to win her opinion over on her readers. She did quite well and I almost agreed with her. Unfortunately, someone who possesses so much hate and animosity for a country they willingly live in sure isn't going to be someone who I would put much stock in. As we can already see, using hateful and unprofessional comments in your opinions only makes you just as bad as the person you're accusing. So, I guess you were right, Qarni. There are three fingers pointing back at you. That's the way it works, didn't you know? Same goes for you, Layla. "I can only promise you one thing, however long it may take, we are going to take you down with us." This is a clear indication that you have some anger issues that you need to address, Layla. You're protesting against the violence in one country and then you turn around and promote the violence of another. Revenge is a stinky cologne. However, I can't say I haven't felt revenge at some point in my life. I don't blame you for feeling that way. I'm a secular humanist so understanding is in my nature. I just strongly disagree with your out look on the whole thing. You're spreading hate and doing exactly the opposite of what is best for you and your readers. Therefore, you're no different then Lee when he makes an ass out of himself in front of the "modern civilized world". You're no better than Mahmoud Ahmadinejad when he makes his outrageous comments and preposterous claims to the denial of the holocaust and his ever so convenient miscommunication of his intentions on dealing with Israel. Just so we're clear, humans don't get a long because of many barriers between us. Like no other species we desire to control the world around us. Temptation for murder and genocide is higher than you may think. Our primitive side isn't that far gone, let's be honest here. Living in America, I'm sure you have to force yourself not to throw someone who cuts you off in traffic the middle finger. That anger gets the best of us and it's just a hop, skip and a jump away from our true primitive feelings. Understanding is our only way to unite the world. You're just being a hypocrite, Layla. Shame on you for not seeing that in her, Qarni. My conclusion: All four of you [Lee, Ahmadinejad, Qarni, Layla] are wrong because your version of the truth is distorted by your emotions - which have no place in a professional debate. Sorry for the bad grammar, spelling, etc. I never claimed to be perfect. -Justin

Sam (2008-09-05 14:52:04)

After reading all this I must say that I agree with Justin. Layla is just full of hate and animosity and she's also wrong about the Americans having no history. She's just an angry little hermit who probably lives in her mothers basement and writes hate columns in her blog trying to justify her reaction to the world in hopes that she can suck other innocent people into her web of hate. Ahmadinejad is a liar, a terrorist and an instigator and is obviously refusing to comply with The United Nations which is why sanctions were placed down in the first place. Let's not forget who's provoking who.

### **Aaron Swartz on What's Wrong with Wikipedia (2007-09-28 06:47)**

I recently asked [1]Aaron Swartz, who has [2]written about Wikipedia and [3]run for its board of directors, what he thought was wrong with it. Three big things, he said:

1. Failure to value new contributors. A small number of insiders are dismissive of and treat poorly newcomers who contribute. For example, their contributions are deleted without explanation. The insiders see the newcomers as a source of trouble rather than strength.

2. Disorganized and underfunded. It took someone Aaron knows two years to make a deal with Wikipedia. The finances are in bad shape.

3. Lack of vision. Wikipedia could be improved in many ways but actual improvements are rare.

He used to see Wikipedia as just a wonderful thing, he said; now he sees it as a wonderful thing that is falling way short of what it could be.

You seem to be saying someone could come along and start a better open-source encyclopedia, I said. That's unlikely, he said, Wikipedia is so big.

Who does it better? A similar but vastly [4]better-run website is craigslist, he said. A chart of [5]page view rank and number of employees shows Yahoo at #1 with 10,000 employees, TimeWarner at #2 with 90,000, Google at #3 with 10,000, and so on. Craigslist is #7 with 23 employees.

Addendum: Wikipedia, with very few employees, would of course also rank very high on such a chart; this is the magic of both Wikipedia and craigslist and why it makes sense to compare them. The craigslist link I gave, to a Wall Street Journal article, suggests that craigslist values contributors much more than Wikipedia. [6]Here is what happened at a Wikipedia board of directors meeting that Aaron attended a few years ago:

One presentation was by a usability expert who told us about a study done on how hard people found it to add a photo to a Wikipedia page. The discussion after the presentation turned into a debate over whether Wikipedia should be easy to use. Some suggested that confused users should just add their contributions in the wrong way and a more experienced users would come along to clean their contributions up. Others questioned whether confused users should be allowed to edit the site at all – were their contributions even valuable?

1. <http://www.aaronsw.com/>
2. <http://www.aaronsw.com/weblog/whowriteswikipedia>
3. <http://en.wikipedia.org/wiki/User:AaronSw/Election>
4. <http://www.opinionjournal.com/editorial/feature.html?id=110008531>
5. <http://www.craigslist.org/about/pages.and.peeps.html>
6. <http://www.aaronsw.com/weblog/wikicodeislaw>

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Sage (User:Ragesoss) (2007-09-28 19:00:05)

I think that chart is misleading when you're trying to compare Wikipedia to Craigslist. That chart is limited to English language rankings, and is probably out of date. The overall rankings (not page view rankings) from Alexa currently have Wikipedia at #9 and Craigslist at #10 for the U.S. Globally, Craigslist is something around #40, while Wikipedia is #8 and serves almost 3 times the page views of Craigslist. Wikipedia also has a much broader constituency; Craigslist has a much higher number of page views per user, but much lower "reach". Incidentally, the Wikimedia Foundation has a paid staff of 12. I love Craigslist, but I think this is apples and oranges. Aaron is certainly right that Wikipedia and the Wikimedia Foundation has some problems (and I respect Aaron's viewpoint; I voted for him for the board), but I think he's out of touch with the way things have been going since he disconnected with the community when it comes to points 2 and 3. Organization has been improving rapidly, and funding has more or less kept pace with the organization's ability to spend it in an organized and effective manner. Yes, many people (myself included) have thrown out big ideas for what we could do if we had the money for it, but the priority has



been to create stability first, including a stable funding base. This is much more of a challenge for Wikimedia (a non-profit) than Craigslist (which makes its money from job and housing ads). As for lack of vision, I think Aaron is deeply mistaken here, but I guess it comes down to a judgment call.

seth (2007-09-28 23:24:26)

Yes, obviously Wikipedia gets a staggering number of page views with a small staff and lots of user-contributed content, just like craigslist. That's why they're worth comparing. But if you don't like that comparison – which is fine – tell me a better one. If you think Aaron is wrong about lack of vision, it would be helpful to know why.

Seth's blog » Blog Archive » The Wikipedia Wars (2007-09-29 09:32:22)

[...] Aaron Swartz on What's Wrong with Wikipedia [...]

links for 2007-10-01 « Matthew Henty (2007-09-30 23:22:40)

[...] Seth's blog » Blog Archive » Aaron Swartz on What's Wrong with Wikipedia (tags: Wikipedia socialsoftware) [...]

## **Support for the Theory Behind SLD (2007-09-28 22:39)**

On the SLD forums, a member named Del [1] posted this:

Roughly a month ago, I got tired of the oil. I was fighting to take it and something about one of them was causing an allergic reaction (dermatitis), so I switched to noseclipped oatmeal with brown rice protein. I haven't noticed any change in my appetite suppression (read, still ridiculously good) and my weight loss has maintained at the usual rate of 3lbs or so per week. I'm really enjoying it and I have that nice full feeling as well.

So in the interest of sharing, that's:

1/2 c. quick cook oatmeal

2T. brown rice or egg white protein

1 c of water

Cook in microwave for 2 minutes, let sit for one minute. Consume noseclipped morning and night.

In conventional nutritional terms, oil and the oatmeal mixture are very different. One is all fat, the other has almost no fat. Yet they have had the same effect on her weight. The theory behind the Shangri-La Diet predicts this but few if any other theories do. For example, if you believe in low-carb diets, you would predict that the oil (no carbs) would cause weight loss more easily than the oatmeal mixture (which has plenty of carbs).

1. <http://boards.sethroberts.net/index.php?topic=5684.msg59502#msg59502>

Lori (2007-09-29 06:44:55)

But why would oatmeal or any other (nose-clipped) flavourless carb be any different than sugar water, the original flavourless carb in the SLD saga? SLD'rs are nose-clipping all kinds of foods.

seth (2007-09-29 08:33:00)

Lori, are you saying this result was obvious? I'm afraid I don't understand your question or point.

### **Deeper Voice = More Children? (2007-09-29 05:46)**

At Language Log, [1]Mark Liberman has an excellent discussion of a new paper that reports a correlation between voice pitch and number of children for men in a hunter-gatherer population. Men with deeper voices had more children. This portion of Liberman's post surprised me:

This particular form of sexual dimorphism is apparently not shared with our relatives the chimps and gorillas, so it must have evolved during the same period that human speech and language did. Therefore, starting at some point during the last five million years or so, there must have been a selective advantage for male hominins with lower voices. And according to the featured study (C.L. Apicella, D.R. Feinberg, F.W. Marlowe, "Voice pitch predicts reproductive success in male hunter-gatherers", *Biology Letters*, published online 9/25/2007), evidence of this selective advantage can still be found today.

I agree with all of this. The puzzle is that the effect remains. Five million years is a long time; shouldn't the dimorphism have gotten larger and larger until an equilibrium was reached, and then stayed at that equilibrium? Once equilibrium is reached it will be the average voice pitch that is most successful.

I can think of several possible answers.

1. The correlation is due to random variation. Because lots of surveys have shown that women prefer men with deeper voices, this is less plausible.
2. Evolution is still happening on this dimension. That is, equilibrium hasn't yet been reached.
3. This particular tribe was pushed away from equilibrium for an extended time – that is, for a long time higher-pitched men's voices were more advantageous than usual. Whatever caused that has disappeared so this group is moving back toward equilibrium.
4. It's about signalling. The voice-pitch variation observed in populations is mostly due not to genetic variation but to early environment (say, testosterone in the womb) and is correlated with something less visible that makes a difference in the reproductive success of one's children.

I imagine the authors of the paper favor #4. When the full text is available for free, I'll find out and post again.

1. <http://itre.cis.upenn.edu/~myl/language-log/archives/004974.html>

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Tom Myers (2007-09-29 10:11:18)

I have two thoughts about this selective advantage...first, it could still be that the relationship is non-causal, in the sense that gene G being selected for causes phenotypical effects P1 and P2, where P1 is being selected for and P2 is lower masculine voice. I don't see that this possibility has been eliminated by the discussion I see so far. Second, I would point to a [1]zoologist's [2]book about communication with dogs:

Dogs and humans share an interpretation of high and low sounds (as do many other mammals)...Simply saying a signal in a lower voice than before can make the difference between your dog's ignoring you or obeying...I know I'm not the only woman whose voice tends to rise just when I most need it to carry authority: Some men, on the other hand, need to practice using a higher voice to praise or encourage their dogs. Almost every training class has at least one guy's guy who shouts out "Good dog" in a voice that stops all the dogs and usually half the humans...high sounds are associated with excitement, immaturity, or fear, while lower sounds are associated with authority, threat, or aggression...practice saying "No!" or "Stay" in a low voice rather than a loud one and letting your voice rise when you call "Come"...[pp 62-3]

It seems likely to me that the selective advantage was already present among our shared ancestors with chimps and gorillas, but became more important simply because human signaling became more verbal. (But it's still a Just-So story; I don't have further testing in mind at the moment.)

1. [http://www.patriciamccconnell.com/patricia\\_mccconnell.php](http://www.patriciamccconnell.com/patricia_mccconnell.php)

2. <http://www.amazon.com/Other-End-Leash-Patricia-McConnell/dp/034544678X>

Tom (2007-09-29 15:17:14)

How about #5) Chicks dig deep voices. Or was that included in #2>

Mark Liberman (2007-09-29 15:19:24)

Apicella et al. don't discuss the question, but I expect that they would favor the view that this sexual dimorphism is roughly in equilibrium, and has been for a long time. Why don't male voices go on getting deeper and deeper? Perhaps females somewhat prefer baritones to basses; perhaps larger larynx size carries increasing selective disadvantages of other kinds, having to do with the mechanics of breathing and swallowing. Both ideas are plausible. Meanwhile, I'll send you a .pdf of the article.

Mark Liberman (2007-09-29 15:27:55)

I should have said, \_some \_ females somewhat prefer baritones. The shape of individual preference functions and the distribution of such preferences in the female population are both largely unknown. There might also be other maladaptive effects of whatever combination of higher testosterone levels and greater sensitivity to testosterone during adolescent growth is responsible for larger larynx size and lower pitch.

seth (2007-09-29 17:35:58)

"Chicks dig deep voices" is a different category of explanation. Such explanations are called "proximate" while evolutionary explanations are called "ultimate". Weird terminology, but you get the point.

## The Wikipedia Wars (2007-09-29 09:32)

[1]Speaking of Wikipedia, the LA Times has an [2]interesting article today about what happened when Jimmy Wales – the founder – posted a one-sentence article about a butcher shop on the outskirts of Cape Town. It was deleted quickly – not important enough – but then a big debate ensued. The Times piece turned to the bigger issue:

Perhaps the granddaddy of all the Wikipedia debates is the question of which information deserves to be

included, and which doesn't. So-called Inclusionists believe that because Wikipedia is not bound by the same physical limits as a paper encyclopedia, it shouldn't have the same conceptual limits either. If there's room for an article on unreleased Kylie Minogue singles – and a group of people who might find it useful – why not include it? Deletionists, meanwhile, believe that because not all articles are created equal, judicious pruning increases the overall quality of Wikipedia's information and strengthens its reputation. An encyclopedia, they say, is not just a dumping ground for facts.

While the people who run craigslist try hard to figure out what users want and how to give it to them – starting with the assumption that they themselves do not know – the people who run Wikipedia play God, at least by comparison. In this debate, both sides are playing God. As [3]Aaron Swartz said, it isn't wise. Jane Jacobs tells a story about a Pennsylvania Girl Scout troop. They were snobs; they made it hard for new members to join (the Wikipedian attitude that Aaron criticized). The girls who couldn't get in formed their own troop. Several years later the new troop was thriving; the old troop was dying.

1. <http://www.blog.sethroberts.net/2007/09/28/aaron-swartz-on-whats-wrong-with-wikipedia/>
2. <http://www.latimes.com/entertainment/news/la-ca-webscout30sep30,0,344107.story?coll=la-home-center>
3. <http://www.blog.sethroberts.net/2007/09/28/aaron-swartz-on-whats-wrong-with-wikipedia/>

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david (2007-09-29 12:02:25)

Reminds me of this post of yours <http://www.blog.sethroberts.net/2007/04/16/birth-of-a-website/> about the genesis of <http://www.scientificblogging.com/> I still have scientificblogging in my feed reader and regularly find interesting things there. Any news on how the other site that rejected everybody is doing?

seth (2007-09-29 18:43:47)

I think the site that rejected everyone is doing fine but I'm not sure. Maybe the founder of scientificblogging could answer that one.

### **Interesting Idea about Addiction (2007-09-29 19:52)**

From [1]addiction and self-experimentation:

I am coming to believe that [my] addiction may be caused by a specific kind of autism-related syndrome. I don't crave order in everything that I do but I do crave order and structure in order for me to relate to others. I need to figure out some ways to get that structured social interaction that my brain requires. . . A 12-step meeting could be [seen] as just a highly structured social event.

A friend of mine became an Orthodox Jew in college; his parents were not very religious. Now and then I went to his house for Shabbat. As I got to know him better – outside the religious rituals – I was astonished at the difficulty he had carrying on a conversation. The many structures (rituals) of Orthodox Judaism made it much easier for him to spend time with other people.

1. <http://addictexperiment.blogspot.com/>

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Mary (MPJ) (2007-09-29 21:09:29)

This is absolutely fascinating. Thanks so much for posting! I will have to check the blog you referenced. I have a husband who is an addict and a son with autism, and I have noticed that there are many, many other families in which both addiction and autism are found together. Both addiction and autism have obsessive/compulsive components, and as the writer pointed out, a need for order and structure and difficulty relating to others.

Stephen M (Ethesis) (2007-09-30 21:22:55)

This post has me thinking as well. Thank you.

Arnoud (2007-10-05 10:58:41)

how to handle addiction if one has Asperger or PDD?

### **How Lucky I Feel (2007-09-30 02:41)**

From an [1]email to science-fiction author [2]Bruce Sterling:

The main thing [most book] authors experience is THE VOID. We never get any feedback or at least never enough. I have a friend called Ruth who is 80 years old and reads voraciously: novels, biographies, poetry. She writes to the authors she likes and gets back extraordinary responses: four pages hand written, invitations to dinner. She says, 'I would have thought they were too important to read my letters' and I say 'Ruth, you are the only one who writes'.

It's the same with teaching. We get to know so little of what effects we have on our students. But the internet offers a small measure of salvation. Sometimes a former student writes, 'You don't know me but I sat in your class in 1991 and...' It makes all the difference to get just one of those every few years, but it doesn't add up to an objectification of the audience for our work.

I've had thousands of students and written one book. (In Chinese you are a "writer" if you've written one book and an "author" if you've written more than one – so I am a writer.) I don't hear from my students very often but every day I get feedback from the SLD forums. To say I get "enough" feedback would be to understate the effect of comments like [3]this:

I started a new job this past August . . . It's so strange to be in a new place with people who've never known me as Fat Del. . . . That insidious "I wonder if there's something wrong with her" has never

crossed their minds. I'm just the normal girl in the next office. Men flirt with me and seem to think it's cute when I'm not sure how to flirt back. . . . No one ever thinks I used to be fat and no one ever judges me in that light. Hell, my boss calls me by my full name and says it's because Del is too short and casual for a pretty girl.

It's so odd to be normal. I never thought I'd know what that was like.

Thanks for letting me know, Del.

1. <http://blog.wired.com/sterling/2007/09/author-20-feeli.html>
2. [http://en.wikipedia.org/wiki/Bruce\\_Sterling](http://en.wikipedia.org/wiki/Bruce_Sterling)
3. <http://boards.sethroberts.net/index.php?topic=5665.msg59332#msg59332>

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michael vassar (2007-09-30 02:56:56)

Funny to hear that from Sterling while his peer Neal Stephenson vociferously objects to criticism he receives for never responding to mail or to journalists except when a new book must be promoted.

Tom (2007-09-30 10:27:36)

Wow. Seth, what a great post, and how wonderful to have created something that gives that gift to people.

### **A Story About Data (2007-09-30 10:38)**

While [1]introducing Justin Wolfers as guest blogger at Marginal Revolution – which I am greatly looking forward to, since Wolfers is an excellent data analyst – Alex Tabbarok wrote:

An open secret and an open sin in economics is that many empirical studies are difficult to replicate, even when journals supposedly require authors to make their data publicly available.

Which reminds me. Several months ago, I read an article in a psychology journal about a topic I care a lot about. The conclusions of the article were the opposite of what I think is the case. Was I wrong? Possibly – but the data analysis done in the article was unquestionably "wrong" in the sense that (a) it assumed something that was unlikely to be true and (b) it was possible to do a data analysis that didn't make that unlikely assumption. I don't think my opinion here is controversial; I think a blunt but fair summing up of the situation is that the authors made a big mistake.

I was in New Orleans a few weeks after the article appeared. Someone in an art gallery told me the conclusion of the paper! Which is only to say it is a really interesting conclusion. Anyway, I wrote to the first author of the paper (a graduate student) to explain my concern about their conclusions and to ask for the data, so I could do a better analysis. Two weeks went by, no answer. I sent a reminder email, and got this answer:

We typically do not give out our original data, but when I get a chance, I will run the analyses in HLM and get the results back to you. Thanks for your interest in the study,

Wow! It is the policy of the journal in which the paper was published that the data be made available. A month passed. When do you expect to run these analyses? I wrote. A month passed with no answer. I wrote to the faculty member who was a co-author on the paper. Finally I got an answer from the student:

I have been meaning to respond to your email & I apologize for not getting back to you sooner. I am a graduate student and am traveling for the summer. I understand the difficulty with the [blank] situation and am assuming that HLM would be a good way to work through that. However, I am not familiar with the procedure, so it will not be until late August/ early September when I can get a statistician here at [blank] to teach me the procedure. If you have specific suggestions about the analyses, please let me know and I will keep that in mind when I get a chance to work with it. We should have some follow-up data coming in as well so it will be good to learn the procedures for future research. Thanks for your interest in the study.

The story so far is uncomfortably close to what happened when Saul Sternberg and I questioned [2]Ranjit Chandra's data. Similarity 1: He never provided the data. Similarity 2: It took a remarkably long time and several emails to get any response. Similarity 3: The response, when it finally came, was only vaguely reassuring. However, in this case, I predict the better analysis will actually be done. Which is good – I would rather someone else do them.

1. <http://www.marginalrevolution.com/marginalrevolution/2007/09/justin-wolfers-.html>

2. <http://www.sethroberts.net/chandra/index.html>

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Stephen M (Ethesis) (2007-10-06 08:17:05)

That was well worth reading.

### **Marc Andreessen's Career Advice (2007-09-30 19:20)**

[1]Marc Andreessen is starting a series of posts of what I am sure will be excellent career advice. This is from the [2]first:

I believe a huge part of what people would like to refer to as "career planning" is being continuously alert to opportunities that present themselves to you spontaneously, when you happen to be in the right place at the right time. . . . [for example:]

Your former manager has jumped ship to a hot growth company and calls you three months later and says, come join me.

I am continually amazed at the number of people who are presented with an opportunity like one of the above, and pass. There's your basic dividing line between the people who shoot up in their careers like a rocket ship, and those who don't – right there.

A friend of mine worked at UC Berkeley with Bill Joy, one of the founders of Sun Microsystems. One day he got a call from Joy: Want to join me at Sun? My friend would have been employee #5 – something like that. He said no. It was a huge mistake, just as Andreessen says.

1. <http://blog.pmarca.com/>

2. <http://blog.pmarca.com/2007/09/the-pmarca-gu-1.html>

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Blaise Pascal (2007-09-30 21:55:04)

Conversely, I've a friend who, in a similar situation, jumped from a well-paying university tech-support position to move half-way across the country to join a dot-com. Over the past few years he's seen several of the businesses he's worked for sell out and close down. He's happy where he is, but his income isn't much higher than it was when he started working for the start ups. If he'd passed on the opportunity, he'd have tons of seniority at the university, fewer periods of unemployment, and more security than he's experienced. Would he do it again? Probably. But it's reasonable to make the same risk-assessment and to decide not to leap.

KenF (2007-10-01 09:45:27)

So many people devote their heart and souls to start-ups that go nowhere. They work nights, weekends, etc. for mediocre salaries and end up with little or nothing to show for it. Some people get rich that way, of course, but most end up chasing failed dreams. I've known several people who stayed at their "boring" jobs, while others went and chased riches, and actually they ended up making the most as their "boring" companies ended up being sold or they rose high up in the company.

OneStepAheadCV (2008-07-10 03:49:09)

For every start-up that succeeds, more fail - however like gambling, the big risks pay the most! I worked for an SME startup, it had the best working environment, a great training scheme...but it only lasted six months! I guess you can't win them all, but at least you can try!

## **Walk and Write at the Same Time (2007-09-30 21:14)**

My [1]exercise research suggests our brains work better when we walk. Here's one way to combine walking and writing:

While working on a paper, which was most of the time, [Niels] Bohr would select an assistant from among the young physicists in Copenhagen. The assistant, affectionately dubbed the victim, was supposed to sit in place while Bohr paced around the room, constantly puffing away at his pip, working and reworking his ideas, talking aloud as the idea took shape, trying and retrying to dictate his sentences to the victim.

From [2]Faust in Copenhagen: A Struggle for the Soul of Physics by Gino Segre.

The modern version may be use of word recognition software with the computer screen on a wall or large TV. You walk back and forth in front of it. I have spent a lot of time writing while walking on a treadmill but it was noisy and



tiring. Moreover, it was hard to start and stop and it was monotonous.

1. <http://www.blog.sethroberts.net/2007/09/25/science-in-action-exercise-15-minute-walk-twice-more/>

2. [http://www.edge.org/3rd\\_culture/segre07/segre07\\_index.html](http://www.edge.org/3rd_culture/segre07/segre07_index.html)

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Igor Carron (2007-10-01 12:00:02)

I find a lot of truth in the walking while having ideas. I think most people do. I have gone through several PDAs and always come back to the little paper notebook. There is another place where my brain works real fast and efficiently: Planes. Being stuck in a plane for 10 hours has consistently provided me a pretty good brainstorming session. I don't know if it is the surrounding, the air/atmospheric pressure, no internet, constant cooling or something else (like having to watch the seat in front of me something akin to your face studies). I have also noticed that ideas generated during those "sessions" generally are of different quality (more far reaching) than the ones I would have had on the ground. I wonder if I am the only one. Igor.

Ben Popken (2007-10-01 18:48:11)

Interesting. I got a LG eNv, which has a full QWERTY keyboard, so I could type up ideas on the go and send myself cut and pastable notes. I've done some composing on the run and come up with good ideas, but I need to work on my peripheral vision so I don't end up as a brilliant pancake.

pdf23ds (2007-10-01 19:18:13)

To do the voice recognition thing, you'd have to wear a wireless headset. Any room microphone would have to be quite expensive to have a low enough self-noise, and even then the background noise would be very confusing to modern speech-to-text algorithms.

## 2.10 October

### Tayster Continues SLD (2007-10-01 22:22)

It's been almost two weeks since I started The Shangri-La Diet. I am down about ten pounds total. . . I'm all of a sudden some sort of health guru to the ladies at my office. As of this morning, there are six co-workers that are participating in the SLD in one way or another.

All they heard me say was, "I lost weight by drinking oil" and they all ran out and bought a bottle of oil to start losing weight.

I should've told them that I was drinking my own urine.

From [1]Tayster's World. [2]After one week.

1. <http://tayster.blogspot.com/2007/10/diet-continues.html>
2. <http://www.blog.sethroberts.net/2007/09/25/the-sld-way/>

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Blaise Pascal (2007-10-02 05:16:41)

Hmmm, without experimentation, I can only speculate. I would assume that urine has too much flavor and too few calories to be effective for the SLD.

Tayster (2007-10-02 11:04:51)

First of all, Seth, thanks for the link...again. And Blaise, you owe me a new keyboard. I opened the comments just to see what was being said about me and I wasn't expecting a continuation of my urine remark. I laughed (and shot water out my nose onto my keyboard) after reading your urine speculation.

### **What Causes Heart Attacks? (2007-10-02 04:54)**

On the latest episode of the excellent TV show *Mad Men*, which takes place in 1960, a man who has just had a heart attack says, "Did everything they told me. Drank the cream. Ate the butter." A humorous comment on how ideas change. Now, of course, many people – possibly including the screenwriter – think eating cream and butter causes heart attacks. After a year studying omega-3s, I'm sure it wasn't the amount of fat that caused the high-fat diet/heart attack correlation, it was the type of fat (low in omega-3). Cream and butter would have been fine if the cows' food contained plenty of omega-3.

For decades we've been told that cream and butter and other animal fats "clog your arteries". It's like a well-known experiment with split-brain patients. The patient chooses a card based on what he sees on a screen. The two hemispheres see different things. In one particular trial, the right hemisphere saw a picture of snow on the screen and picked out a card with a picture of a shovel. The left hemisphere saw a chicken claw. The left hemisphere controls speech. When the patient was asked to explain the choice, he said, "You need a shovel to clean out the chicken coop." This happened again and again: The left hemisphere did not know why a card had been chosen but rather than saying "I don't know" it confidently made up an explanation. Keep this in mind the next time you hear an explanation.

Studies to see if omega-3 supplementation reduces heart attacks have had ambiguous results, as Marion Nestle [1]said. Why am I so sure that lack of omega-3 is the problem? (So sure that I no longer worry about my cholesterol.) 1. There is lots of evidence that heart attacks are due to inflammation. 2. There is lots of evidence that omega-3 fats are anti-inflammatory. 3. Eskimos had very low rates of heart disease and ate a diet high in omega-3 fats. 4. Many studies have correlated heart attack risk with gum disease. 5. My [2]self-experimentation showed beyond any doubt that omega-3 supplementation makes the brain work better. It also showed what effective dosages are. 6. When Tyler Cowen took an effective dose, his gum disease [3]quickly disappeared. Everyone – everyone who thinks about this stuff – knows #1- #4. It is #5 and #6 that are new and complete the chain of reasoning. I believe #6 is as meaningful as the observation that scurvy is quickly cured by lime juice.

In the 1930s, a dentist named [4]Weston Price went all over the world looking at people's gums. He wanted to compare modern diets with traditional diets. When his subjects ate a modern diet, he found gum disease. When they ate a traditional diet, their gums were fine even when they never brushed their teeth. In a few cases, such as an isolated group of Swiss mountain people, the traditional diets contained lots of butter and cream – from grass-fed cows. My gums vastly improved after I started taking good amounts of omega-3 (via flaxseed oil). After I reread Weston Price recently, I stopped being so careful about flossing and brushing. It hasn't made a difference. In the past,

my gums would bleed when I flossed unless I flossed daily. Now I floss rarely but they don't bleed. I'm sure my whole circulatory system is in better shape.

1. <http://www.blog.sethroberts.net/2007/09/05/marion-nestle-on-omega-3s/>
2. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>
3. <http://www.blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>
4. <http://www.westonaprice.org/>

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peter (2007-10-02 14:47:43)  
do you know the cholesterol level and hdl/ldl ratios of the Eskimos?

seth (2007-10-02 19:26:11)  
very good question. but I don't know the answer.

andy (2007-10-02 19:34:46)  
In that episode, he thought it was the ulcer that was going to kill him. I believe that was why he was eating the cream and butter.

asoff eracchi (2007-10-02 20:57:37)  
Seth - how can the antioxidants rich Omega- 5 oil help in this situation? would you recommend that we consume pomegranate seed oil to boost the system and protect the body against heart attacks. There is some research out there that shows that Omega - oil has interesting cardio elements, I'd suggest you check it out. The Omega- 5 oil is sold in gel caps as well as in bottles. From my experience, people prefer the soft gel caps. Asoff

seth (2007-10-02 21:07:11)  
I don't know the effects of omega-5. I hope to eventually study its effects on the brain.

Dwight Lundell (2007-10-03 06:57:17)  
You are on the right track. Omega 3 is critical in preventing heart attack. The low fat diet is a failed experiment which has caused us to be overloaded with Omega 6 from vegetable oils (mostly soy). Omega 6 promotes inflammation, Omega 3 reduces inflammation. Inflammation causes heart attack! Having been a heart surgeon for 30 years I have seen it and touched it. My new book The Cure for Heart Disease gives all the details.

Tom (2007-10-03 12:03:00)  
Omega 3s reduce inflammation, but carbs increase inflammation. Seth, you've got to read Gary Taubes' new book, an analysis of diet propaganda over the last fifty years. You will love it, and it would be fantastic to hear your take on it.

seth (2007-10-03 14:10:53)  
Yes, I am going to read Taubes' new book.

lasser11 (2007-10-03 21:53:49)  
So I guess it might be beneficial for those on the SLD to switch to flaxseed oil and plug their nose. I currently take both canola oil (for the SLD) and flaxseed oil (for general health purposes). Because Canola oil has a poor ratio between omega 3 and 6, could it be diminishing the results from my flaxseed intake? Flaxseed oil appears to hit 2 birds with one stone.

Tom (2007-10-04 12:22:59)

I've been doing 2T decaffeinated coconut oil during the day, and 2T flax (non-lignans, holding my nose) at night. Seth, do you now prefer the version with lignans? Seems to me there was some issue with the lignans...something estrogenic about them, perhaps? I might be confusing that with soy...

seth (2007-10-04 21:23:38)

I don't know if lignans are better or worse than nothing.

peter (2007-10-04 21:29:10)

lignans are good for you; <http://en.wikipedia.org/wiki/Lignan>. i've read that flax seed lignans bind to testosterone, which results in a lower risk of prostate cancer.

Tom (2007-10-05 00:36:06)

That was it; thanks. But I'll keep my testosterone, and pass on the breast tissue. BTW, prostate cancer is one of the slowest-developing cancers there is; many elderly men have it (undiagnosed) for years before dying of other causes. The ones who have it treated (prostates removed) will often have worse outcomes (impotence, incontinence.)

asoff eracchi (2007-10-12 18:54:06)

Yes, and the omega 5 oil [ pomegranate seed oil ] has been researched in the context of prostate cancer. You ought to review the research in the areas of antioxidants, anti-inflammation, prostate cancer, and breast cancer to name a few. The other day, I was told that Omega 5 could be helpful in minor cases of skin cancer. Have you had any experience with pomegranate seed oil? The ladies are excited because it is a natural SPF and helps as an anti-aging / cellulite agent, I do not think that fish oil can do that, but again, I am not a scientist or physician. You may want to look into Omega -5 oil. I am taking a daily dose of Omega 5, it is boosting my system and my skin looks younger. Asoff

DAvid Marcus (2007-12-01 01:41:50)

It's a myth that eskimos have low-rates of heart disease. Actually, recent studies have shown they have high rates of cardiovascular disease (50 % higher than western populations) despite diets that are very high in fatty fish.

Droque effects (2011-03-29 19:27:23)

I didn't know it was a myth, anyway just posting to say i take omega pill too and except the awful taste of fish i indeed look younger too! But the main benefit is that i have cardiovascular problems from weed and i m pretty sure (all the doctors i've seen told so) that it benefits the heart of healthy people, and those at high risk of cardiovascular disease.

### **Joyce Cohen Gets Her Teeth Cleaned (2007-10-03 03:23)**

A few months ago, Joyce Cohen, who writes The Hunt column for the NY Times Real Estate section, started drinking 2 tablespoons of flaxseed oil every day. She began after talking with me and because of stuff posted here. Yesterday she went to the dentist for the first time since she started drinking it.

"Jane the hygienist said my gums were in great shape - better than ever," she wrote me. Meaning the best they'd ever been.

"What's funny is you can't FEEL good gums from inside your mouth, but I take her word for it." The hygienist said that although she was scraping and scraping, there was no bleeding.

Joyce started with Spectrum Organic flaxseed oil without lignans but later switched to the oil with lignans. She despises the taste but finds it is most palatable mixed with yogurt.

[1]My dental story. [2]Tyler Cowen's story.

1. <http://www.blog.sethroberts.net/2007/03/28/omega-3-and-dental-health/>

2. <http://www.blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>

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Timothy Beneke (2007-10-03 08:17:28)

I've been doing 3-4 tablespoons a day and my gums are better as well according to my dentist. Barlean's has the most palatable taste of the ones I've tried. Also, if you put the oil in a small clean glass with some water, then bring the glass to your mouth, and open your mouth wide, and then stick your tongue way out, OUTSIDE of the bottom of the glass, and against the bottom, and then gulp it down, you get very little taste, because it bypasses your tongue and enters the back of your mouth. Then I gulp down some water and then take a big swig of green tea and hold it in my mouth to mask any taste. I don't want any taste, in part because I don't much care for the taste, but also because I always go tasteless in the morning anyway, and lately have been going tasteless all day, but that's another story...

### **In Class or In Prison? (2007-10-03 10:23)**

College students are often bored by lectures. With their laptops open in front of them, and WiFi, they can express this boredom in a new way. Professors are unhappy. I got an email about this problem from someone who tries to improve teaching at UC Berkeley. It included what he called "excellent suggestions":

Tell students to keep their laptops closed unless they are doing an online task that you assigned.

Set specific objectives for them to accomplish in their in-class laptop assignments, and hold them accountable-e.g., randomly ask students or teams to report their progress to the entire class.

Set tight time limits for these assignments.

Design these assignments for pairs, triads, or quads. Aside from the likely learning benefits, group work will help keep the students on task, as students will not be able to agree on a renegade web site.

Walk around the room and stand in the back to monitor their screens during these assignments.

Have students bring their laptops to class only on certain days, and tell them explicitly not to bring them the other days.

Mark students absent for the day if you catch them at a renegade site. "Will not be able to agree on a renegade web site" – from an ancient Chinese book of maxims, I suppose. An [1]article in the Chronicle of Higher Education shows that the problem is widespread. Addendum: In response to this email, a professor replied:

Today one of my GSIs informed me that several students were looking at internet porn during lecture. This not only proved a distraction but made several people uncomfortable. The GSI warned the student to close the site immediately and tried to get the names of the students. Of course, the students declined to give their names and one even just simply left class rather than be reprimanded further. Now I am left with the unpleasant, but necessary, task of trying to track down these students.

1. <http://chronicle.com/free/v52/i39/39a02701.htm>

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Bob (2007-10-03 11:16:49)

As a student I have a couple suggestions for lecturers who wish to increase attentiveness in science classes. 1) Do not hand out copies of the notes. When I already know what a professor is going to cover it's easy to take a superficial glance at the material and convince myself that I already know what they're going to say. Also, a student who needs to record the material themselves won't have time to devote to other distractions. 2) Do not present from PowerPoint. Slides allow too much information to be thrown at a student at once and they won't know what to pay attention to. Figures are almost always too complex to reproduce in notes, and slides are too verbose. If it's not possible for the instructor to draw or write out a concept in the time allotted to it, the student won't be able to either. 3) Show partial derivations, including algebra. It's often obvious to an expert in the field what simplifying assumptions can be made for a problem, but when it's first introduced to a student these can be huge road blocks in their understanding. A lecture I can follow is much more interesting than one where I become lost. 4) Finally, take a hard line from the beginning. Confront students who have open laptops or other distractions as soon as they're noticed. Lectures should be attended voluntarily, if students don't want to pay attention they shouldn't be present.

michael vassar (2007-10-03 22:10:22)

Public school basically sets a precedent for our whole society defining universal prison as what we should all aspire to.

### **Jane Jacobs Updated (2007-10-04 06:59)**

Chris Matthews' latest book is *Life's A Campaign*. "A recipe for sadness," Jon Stewart called it in an interview that Matthews called the worst of his life:

[EMBED] In [1]*Systems of Survival* (1992), Jane Jacobs described two ethical systems: guardian (= government) and commercial. Each system consists of rules of conduct (e.g., "be honest" is a commercial value but not a guardian one). Matthews's book says you should use guardian principles in everyday life; Stewart said that's a mistake – commercial principles work better. Jacobs said there is a tendency to think that the principles that work well in your system work everywhere. Maybe this is why Matthews seemed stunned by Stewart's objections. To Jacobs' two systems, [2]Chris Phoenix, a nanotechnology expert, has added a third: the "[3]information system". It is about appropriate behavior – what is seen as appropriate behavior – in the world of open source software and similar goods. Phoenix argues persuasively that a different set of values applies. This is why I asked Aaron Swartz [4]what's wrong with Wikipedia: It's not so obvious what the appropriate values are. Long before open source software [5]there were books: books share expertise. Long before books – at the [6]dawn of humanity, I believe – there were hobbies: hobbyists share their expertise. The ethical system that Phoenix describes is much older and more important than he says. Phoenix acted within that system when he posted his essay on the Web; Jacobs did, too, when she wrote a book. Just as I do by blogging.

1. [http://en.wikipedia.org/wiki/Systems\\_of\\_Survival](http://en.wikipedia.org/wiki/Systems_of_Survival)

2. [http://www.crnano.org/about\\_us.htm#Principals](http://www.crnano.org/about_us.htm#Principals)

3. <http://www.nanotech-now.com/Chris-Phoenix/diverse-ethics.htm>

4. <http://www.blog.sethroberts.net/2007/09/28/aaron-swartz-on-whats-wrong-with-wikipedia/>

5. [http://www.huffingtonpost.com/seth-roberts/books-were-the-first-open\\_b\\_35844.html](http://www.huffingtonpost.com/seth-roberts/books-were-the-first-open_b_35844.html)

6. <http://www.blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-directory/>

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michael vassar (2007-10-04 07:36:18)

Personally, I think that guardian encompasses Chris Phoenix's "information" system under the category "make rich use of leisure" and "treasure honor". I have been arguing with him about this, off and on, for years though. It seems to me that only the "richest", in some sense that I don't fully understand, of history's guardian groups demand that one "make rich use of leisure", and in the 20th century all high status Guardian classes abandoned it, which is why "information" looks like something new. Really though, who could be more "information", or more "guardian" than Eric Raymond, for instance?

michael vassar (2007-10-04 07:48:29)

I don't think that the Matthews/Steward debate is one of guardian vs. commercial principles. Matthews is certainly not saying to 'rely on force', the core guardian precept. He's also not saying to be fatalistic, shun trading, be obedient and disciplined, revere tradition, etc. For a true devotee of guardian virtues, look to Robert Green. I think that ultimately his difference with Stewart is that Matthews admires and wants to be like Bill Clinton and thinks his readers should want to be like Clinton, while Stewart wants to be himself and thinks his readers should want to be themselves. Personally, as TV hosts, both are solidly within the information system, which, as I have said, makes them a part of the guardian system just like the priests of ancient times.

seth (2007-10-04 10:28:57)

The surprising feature of the interview I think is that Stewart was honest (commercial virtue) rather than loyal (guardian virtue). He told Matthews his actual reaction to the book. Which I suspect is rare in such interviews. I think that what hobbyists and open-source participants consider good behavior is quite different than what policeman consider good behavior – so I don't think that what Phoenix calls the "information system" (terrible name – I'd call it the hobbyist system) falls under the guardian system. Policeman don't make a big deal of giving stuff away.

lasser11 (2007-10-04 14:11:14)

Even though Stewart was on the attack, he was also on the defense. He appeared almost shaken. Out of his element. Instead of allowing Chris Matthew to respond, he continually made some outrageous comment (your book is fascist) to get the crowd laughing. Shouldn't the guardian and commercial virtue engage in a more fruitful debate? I would love to read Jane Jacobs on the matter. Did she just advocate a separation and protection of the various ethical systems? or did she also encourage some sort of debate between the ethical systems?

seth (2007-10-04 21:27:31)

Jacobs specifically criticized books that treated business as if it were war. She felt each system had its place; using the values of a system in a different place, as Matthews is advocating, led to trouble.

michael vassar (2007-10-05 04:43:05)

Guns for toys? Anyway, churches make a big deal of giving stuff away. The government makes a big deal of giving stuff away. Nobles give stuff to both the poor and to each other. You have to focus on the whole list. Jacobs includes "give largess" on the guardian list for a good reason.

seth (2007-10-05 05:48:12)

I don't think any government program resembles open-source software. Nor any church program. Nor any police program. Nor anything that Henry III gave any of his subjects. The larger point is that the people who participate in open-source software programs act quite differently than government officials.

michael vassar (2007-10-06 09:56:49)

I would suggest law and academia as examples of "government programs" at least as much like one another and like open source as any one government program is like another.

## **Fuzzy Logic and Self-Experimentation (part 1) (2007-10-05 09:35)**

Fuzzy logic, which started with a 1965 paper by Lotfi Zadeh, a professor of computer science, is an advanced form of engineering; self-experimentation is a kind of primitive science. They seem to be at opposite ends of a continuum. As science advances – as knowledge becomes wider and more accurate – it becomes more and more useful, gradually becoming engineering. Fuzzy logic is an especially useful form of engineering.

A few years ago I attended a talk by Zadeh in the Berkeley Physics Department colloquium series. He showed a little movie of a platform moving back and forth to balance three linked poles. It was staggering that this was possible. It is a classic problem in control theory. Here is an example with two linked poles:

[EMBED] Fuzzy logic has proved especially useful in building control systems. An early example was furnace control; one of the first real-life examples was a Japanese subway system. Many consumer electronic products, especially those from Japan, use fuzzy logic. One of my Omron blood pressure meters uses fuzzy logic, says the box. (Omron now uses the term [1]IntelliSense instead.) When an engineer builds a control system, he doesn't start from scratch, choosing from among all possibilities. Rather, he tries to embody in a computer program what a person would do. The program embodies a series of rules. Fuzzy logic provided a new and better language for describing those rules. It "bring[s] the reasoning used by computers closer to that used by people," Zadeh has said. People use "vague" rules: If you are near a corner, slow down. Now it was easy to add such rules to control systems.

1. <http://www.omronhealthcare.com/enTouchCMS/app/viewPromotion?promotionId=878>

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## **What Causes Heart Attacks? (continued) (2007-10-06 11:19)**

Uffe Ravnskov, a Swedish doctor, wrote a paper titled "Is atherosclerosis caused by high cholesterol?" (An admirably clear title.) His answer was no. He submitted it to a medical journal. One of his empirical points was that there was no relationship between cholesterol level and atherosclerosis growth. One reviewer commented:

Lack of relationship can be explained by more factors than only absence of it: small numbers, incorrect or indirect measurements of variables of interest, imprecision in measurement, confounding factors, etc.

To which Ravnskov replied:

If it is impossible to find exposure-response between changes of blood cholesterol and atherosclerosis growth in 22 studies including almost 2500 individuals a relationship between the two, if any, must be trivial.

Which sounds reasonable. But an even larger number of clinical trials failed to find clear evidence that omega-3 supplementation reduces heart disease. Yet I am sure that, with a large enough dose, it does.

Most people believe clinical trials, which are usually double-blind when possible and placebo-controlled. "The gold standard," they are called. Science writer Gary Taubes, for example, believes them: When the results of a clinical trial



contradicted a survey result, he believed the clinical trial. His recent NY Times magazine article was based on the assumption that clinical trials are trustworthy. This is such an article of faith that he gave no evidence for it.

That the heart disease clinical trials failed to clearly show benefits of omega-3 supplementation had large and unfortunate consequences. Not only because heart disease is the leading cause of death in many places, including America, but also because I am sure proper omega-3 supplementation would reduce many other problems, including falls, memory loss, gum disease, and other diseases of too much inflammation.

I don't know why the big clinical trials failed to point clearly in the right direction. I can think of several possibilities:

1. Too large. Hard to control quality – verify data, for example. People near the bottom doing the work have little stake in accuracy of the outcome.
2. Poor compliance. If you are taking the placebo, why bother? And the odds are fifty-fifty you are. Lots of people have trouble following SLD, which obviously works.
3. Degradation. My belief that omega-3 is powerful comes from experiments (mine) and examples involving flaxseed oil. Flax grows at room temperature. The heart disease studies used fish oil; fish live in cold water. The omega-3 fats in fish oil may degrade at room temperature. The omega-3 fat in flaxseed oil may be far more stable at room temperature.
4. Wrong dose. Self-experimentation made it easy for me to figure out the correct dosage. People studying heart disease had no similar data to guide them. They could not realistically expect people to consume as much fish oil as the Eskimos whose rate of heart disease was so low.
5. Too sure. Self-experimentation encourages skepticism about one's results because new experiments are easy to do. If I can think of reasons to doubt my results so far, that's a good excuse for a new experiment. The more experiments the better. Each one is easy; I just need a good story line, a good reason for each one. Whereas if you are doing an experiment that cannot be repeated, any skepticism about it – e.g., about accuracy of measurements – is discouraged: It would cast doubt on the whole enterprise.

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Dennis Mangan (2007-10-06 12:47:10)

There's lots of evidence for the link between cholesterol and heart attacks. For example, heart attacks are virtually unknown in those people with a cholesterol level of 150 or below. Epidemiological evidence is strong: Third World nations that eat a traditional diet have low cholesterol levels and no heart attacks. And I wouldn't think that all of them necessarily have lots of omega-3 in their diets; the common factor is that they eat little fat, especially saturated fat.

Dave Lull (2007-10-07 07:53:36)

Malcolm Kendrick reviews briefly some data from the WHO MONICA (Multinational MONItoring of trends and determinants in Cardiovascular disease) Project\* here: <http://www.youtube.com/watch?v=i8SSCNaaDcE> These figures don't seem to support the conclusion that high cholesterol is linked to cardiovascular disease. === \* <http://www.ktl.fi/monica/index.html>

Dennis Mangan (2007-10-07 16:51:46)

Interesting video. However, "The Framingham Heart Study established that high blood cholesterol is a risk factor for coronary heart disease (CHD). Results of the Framingham study showed that the higher the cholesterol level, the greater the CHD risk. On the other end of the spectrum, CHD is uncommon at total cholesterol levels below 150 milligrams per deciliter (mg/dL). A direct link between high blood cholesterol and CHD has been confirmed by the Lipid Research Clinics-Coronary Primary Prevention Trial (1984) which showed that lowering total and LDL ("bad") cholesterol levels significantly reduces CHD. A series of more recent trials of cholesterol lowering using statin drugs have demonstrated conclusively that lowering total cholesterol and LDL-cholesterol reduces the chance of having a heart attack, needing bypass surgery or angioplasty, and dying of CHD-related causes." <http://www.nhlbisupport.com/chd1/why.htm>

seth (2007-10-07 18:07:09)

Dennis, thanks for the additional info. I don't have an opinion on this. However, the cross-country epidemiology certainly doesn't support the idea that high cholesterol causes heart attacks. In the MONICA study, two countries - China and Japan - had very low values of both heart disease and cholesterol. The other countries had higher values of both measures; but within this group there appears to be no correlation. So essentially you have a two-point scatter plot. Such plots of course tell you nothing about strength of correlation.

Tom (2007-10-07 18:47:35)

Dennis, the Framingham study proves nothing of the kind. Here is an ACTUAL QUOTE from the study: \_\_\_\_\_  
\_\_\_\_\_ There is no indication of a relationship between dietary cholesterol and serum cholesterol level. If the intake on animal fat is held constant there is still no relation of cholesterol intake to serum cholesterol level. If (further) a multiple regression is calculated [using animal fat and dietary cholesterol] there is also little suggestion of an association between this pair of variables and serum cholesterol level. \_\_\_\_\_

Tom (2007-10-07 18:50:15)

In the period between the taking of the diet interviews and the end of the 16-year follow-up, 47 cases of de novo CHD developed in the Diet Study group. The means for all the diet variables measured were practically the same for these cases as for the original cohort at risk. There is, in short, no suggestion of any relation between diet and the subsequent development of CHD in the study group.

seth (2007-10-07 19:43:30)

Very interesting, Tom.

Dennis Mangan (2007-10-07 19:46:47)

Tom: You could at least provide a link. Anyway, your first post says that dietary cholesterol doesn't correlate with serum cholesterol, and that animal fat doesn't either, which I have a hard time believing. In any case, it's serum cholesterol (and other things too) that causes heart disease. Your second post says that diet wasn't a factor in the development of heart disease. However, all the study participants were very likely eating very similar diets, with none of them eating an actual low-fat (10 % of calories), high-fiber diet. People who eat these latter type of diet, whether here or in Third World countries, don't get heart disease.

Dennis Mangan (2007-10-07 19:55:43)

Here are a few items from the Framingham Heart Study homepage. <http://www.nhlbi.nih.gov/about/framingham/timeline.htm>  
"1961 Cholesterol level, blood pressure, and electrocardiogram abnormalities found to increase the risk of heart disease  
1987 High blood cholesterol levels found to correlate directly with risk of death in young men  
1988 High levels of HDL cholesterol found to reduce risk of death  
1990 Homocysteine (an amino acid) found as possible risk factor for heart disease [The significance of this is that homocysteine levels are diet-related; specifically, eating meat raises serum homocysteine.]  
1997 Report on the cumulative effects of smoking and high cholesterol on the risk for atherosclerosis" Obviously, research is ongoing. But to dismiss diet and cholesterol as causes of heart disease goes against everything we know.

seth (2007-10-07 23:07:50)

Well, the MONICA data I described show that cholesterol levels – at the population level – predict nothing. China and Japan are obviously different from European countries in dozens of ways; that they have lower heart disease AND lower cholesterol means almost nothing. Then there are all the other countries where there is no correlation. As I said I haven't studied the matter enough to have an opinion. But the data I do know about imply that the answer is not obvious and that the effect, if any, must be small relative to other causes. One view is that high cholesterol is caused by inflammation, which also causes heart disease.

www.topcholesteroladvice.info » What Causes Heart Attacks? (continued) (2007-10-08 16:37:55)

[...] seth wrote a fantastic post today on “What Causes Heart Attacks? (continued)” Here's ONLY a quick extract One of his empirical points was that there was no relationship between cholesterol level and atherosclerosis growth. One reviewer commented:. Lack of relationship can be explained by more factors than only absence of it: small numbers, ... [...]

Jill (2007-10-08 17:30:57)

The Framingham Heart Study originally showed a strong but non-significant trend. I can't speak to any results after the early 1960's, but I remember being struck by the graphs showing lowest overall mortality for women with cholesterol between 220 and 260.

Varangy (2007-10-08 19:41:45)

*But to dismiss diet and cholesterol as causes of heart disease goes against everything we know.* Exactly. [1] Paul Ewald, for one, has been challenging the medical status quo as to the root causes of various diseases and ailments. I strongly recommend his book **Plague Time: The New Germ Theory of Disease**.

1. [http://en.wikipedia.org/wiki/Paul\\_W.\\_Ewald](http://en.wikipedia.org/wiki/Paul_W._Ewald)

Varangy (2007-10-08 19:51:53)

Something to think about - infection as a [1] root cause of heart disease, not cholesterol:

Some researchers have also found tentative links between *H. pylori* and heart disease, the No. 1 killer in the United States. Others think the villain might be either cytomegalovirus, a herpes virus, or even the bacteria in dental plaque. But the strongest evidence implicates another bug, called *Chlamydia pneumoniae*, in heart disease. Discovered in the 1980s, *C. pneumoniae* is now known to be widespread in the environment, causing, for example, at least 10 % of all cases of pneumonia. It is also a close relative of *Chlamydia trachomatis*, the most common cause of sexually transmitted disease in this country. The idea that bacteria and viruses can damage the heart is not farfetched. The streptococcal bacteria that cause rheumatic fever also attack the heart, causing lingering damage. Several viruses attack the heart directly, causing myocarditis, which is often fatal.

1. <http://www.anapsid.org/cnd/diffdx/bacterialink.html>

Tom (2007-10-09 19:34:33)

Infection is a key source of inflammation, hence the association between heart and periodontal disease. Another important reason to keep drinking your flax oil! :-)

Melissa (2007-10-09 22:33:56)

Also the omega-3 studies didn't lower omega-6 consumption, which is important since omega-6 competes with omega-3 in the body. Too much 6 will drown the three out. The letters following the omega-3 studies have a lot of interesting info about this problem.

www.topbloodpressureadvice.info » What Causes Heart Attacks? (continued) (2007-10-10 10:35:08)

[...] seth wrote a fantastic post today on “What Causes Heart Attacks? (continued)” Here's ONLY a quick extract That the heart disease clinical trials failed to clearly show benefits of omega-3 supplementation had large and unfortunate consequences. Not only because heart disease is the leading cause of death in many places, including America, ... [...]

Bill (2007-12-14 15:53:40)

here is a Framingham link: Castelli; Archives of Internal Medicine; July 1992: 152;1371-1372 no correlation of CHD and cholesterol

### **The Secret and Self-Experimentation (2007-10-07 11:04)**

The Secret, of course, is the huge best seller that makes a claim that on its face sounds delusional: You can get what you want by thinking about it. Years ago I stayed in a bed-and-breakfast room rented by a woman whose refrigerator had a collage with pictures and words showing money and prosperity. Clearly she believed that imagining these things would help achieve them.

Previously I described [1]a cable-TV experiment that shows there is something to this. Here, in addition, is some self-experimentation:

Back in the 80's when I first started work as a nurse, I decided to spend one week using only superlatives & compliments when dealing with my co-workers and patients. I 1st wanted to see if they would 'call' me on it & just tell me to stop the silliness. Then I wanted to see if it made a difference in my life, &/or theirs. . . . I freely complimented the docs, nurses, ancillary help, etc. At the end of the week, I had people telling me, 'I don't know what it is about you, but I just love spending time around you.'

My mom tells a similar story. In seventh grade she went to a new school where she didn't know anyone. It was very bad year in terms of making friends. The night before the first day of eighth grade she had a dream. In the dream she was at school and it was just as terrible as seventh grade. She woke up and thought, "No, I can't go through that again, it was too awful." She wondered what she could possibly do to change things. Well, she thought, I could smile at everyone "like a damn fool" – whether she felt like smiling or not. In fact, this worked. Not much later a girl she admired said to her, "People say you're a lot more friendly this year." Eighth grade turned out a lot better than seventh grade.

1. <http://www.blog.sethroberts.net/2007/04/02/how-bad-is-the-secret/>

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evelyn (2007-10-07 14:52:06)

The Buddhist meditation practice of metta, is a lot like this. In it, you wish to be free of suffering and the causes of suffering, and you wish to be happy and healthy. Then you wish the same for your family, friends, close neighbors, strangers, enemies, and finally all sentient beings. I suspect, if you're going around wishing all the best to everyone, then people would notice your positive affect, and return it, thus creating a good result for yourself. I haven't read The Secret. I have tried smiling a lot at people. There's a huge positive difference between living in a world where people don't make eye contact and smile at you, and one where they do. And all you have to do to live in the second world is to make eye contact and smile.

dgm (2007-10-07 18:10:22)

Maybe this is my secret. (I haven't read the book.) I've always been one of those people that everyone says "hi" to and attempts to engage in conversation. When I was younger it used to really baffle me because I was mostly not initiating these

conversations. I've concluded that there must be something in my "default face" that triggers this in others. I don't think I smile all the time, but I do make eye contact with people when I pass them.

Pearl (2007-10-07 18:58:59)

The only way I can make friends with some women, or even get them to talk to me after being introduced to them in some cases, is to compliment their clothing or accessories. Works like a charm. I don't think a man could use that trick however. Men should compliment their intellect or reasoning, perhaps; works on me.

Timothy Beneke (2007-10-08 08:10:01)

Dacher Keltner (<http://psychology.berkeley.edu/faculty/profiles/dkeltner.html>) did a study where he looked at yearbook photos of Mills college graduates from 1959 and 1960; they were a group that has been studied repeatedly over the years with personality inventories and such periodically. Keltner controlled for attractiveness and a couple of other things and found that women who showed Duchenne smiles – big broad smiles where your eyes crinkle that are hard to fake – had in the next 40 years lived far happier lives than women who showed polite smiles or no smile at all. This is the thinnest slice of behavior imaginable, the split second of a photo, and it was strongly predictive of psychological well being in life. Also, there are people who because of some muscular defect in their faces cannot smile, so when someone smiles at them, they cannot smile back; this is painful for others – it feels bad to smile and not have you smile returned. But it is devastating for their relationships. A way was found for them to clench hard on their back molars to produce a little smile. Bob Levenson of the Berkeley psych dept worked with them, so they could do this. It changed their lives – they could share positive emotions with others in a facial way. I find that smiling at people socially creates a friendlier environment. I've learned not to be offended if people don't smile back; women smile back more than men. In fact women smile socially more than men. I think that as I get older – I'm 57 – people seem a little more willing to smile at me...

knackeredhack (2007-10-08 11:09:48)

Seth, I think this is really one of your best posts. The use of italics and hyperlinks was highly effective. And I especially like the way the individual commenters added something special of their own. I'm going to try this too :) :) Tim

### **Memorial University Continues to Destroy Its Reputation (continued) (2007-10-08 06:38)**

In 2003, Saul Sternberg and I published an [1]article that claimed that some work by Ranjit Chandra, an Order-of-Canada-winning scientist, was unbelievable. You can learn more about the Chandra story [2]here. In February, someone named Peter S. Morris made [3]a long list of additions to the [4]Ranjit Chandra entry in Wikipedia. The additions make Memorial University of Newfoundland, Chandra's employer, look better. They include:

The vice-presidents [investigating a charge that Chandra had fabricated data] were unable to secure the data, and, as a consequence, were unable to verify research fraud conclusively.

What a statement. Not being able to "secure the data" is what you would expect if data were fabricated. Either the vice presidents were mentally retarded or this is false. The whistle blower who reported Chandra to Memorial, a nurse named Marilyn Harvey who had worked for Chandra, did so at considerable risk. That Memorial did a travesty of an investigation and failed to protect her is horrible – and now someone is lying about it.

A [5]Peter Morris is Director of Public Affairs in the Division of Marketing and Communications at Memorial University.

[6]My earlier post with this heading.

1. [http://www.sethroberts.net/chandra/2003\\_Chandra\\_letter\\_in\\_Nutrition.pdf](http://www.sethroberts.net/chandra/2003_Chandra_letter_in_Nutrition.pdf)
2. <http://www.sethroberts.net/chandra/index.html>
3. [http://en.wikipedia.org/w/index.php?title=Ranjit\\_Chandra&diff=107811665&oldid=93310208](http://en.wikipedia.org/w/index.php?title=Ranjit_Chandra&diff=107811665&oldid=93310208)
4. [http://en.wikipedia.org/wiki/Ranjit\\_Chandra](http://en.wikipedia.org/wiki/Ranjit_Chandra)
5. [http://www.mun.ca/marcomm/public\\_affairs/](http://www.mun.ca/marcomm/public_affairs/)
6. <http://www.blog.sethroberts.net/2007/05/15/memorial-university-continues-to-destroy-its-reputation/>

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### **What Causes Heart Attacks? (the Framingham Study) (2007-10-09 05:07)**

The Framingham Study is a famous long-term health survey. According to an NIH [1]webpage, its goal was "to identify the common factors or characteristics that contribute to CVD by following its development over a long period of time in a large group of participants who had not yet developed overt symptoms of CVD or suffered a heart attack or stroke."

That is not quite right. It was originally called the Framingham Diet Study. Now it is called the Framingham Heart Study. Why the change? Well, Michael Eades, the author of Protein Power, found an early report on the findings of this study and wrote a [2]fascinating post about it. One of his excerpts from the report:

In undertaking the diet study at Framingham the primary interest was, of course, in the relation of diet to the development of coronary heart disease (CHD). It was felt, however, that any such relationship would be an indirect one, diet influencing serum cholesterol level and serum cholesterol level influencing the risk of CHD. However, no relationship could be discerned within the study cohort between food intake and serum cholesterol level.

In the period between the taking of the diet interviews and the end of the 16-year follow-up, 47 cases of de novo CHD developed in the Diet Study group. The means for all the diet variables measured were practically the same for these cases as for the original cohort at risk. There is, in short, no suggestion of any relation between diet and the subsequent development of CHD in the study group.

That is, the findings of the study completely contradicted what the researchers believed (as indicated in the name Framingham Diet Study). This is what [3]Leonard Syme taught his introductory epidemiology students on topic after topic: Well-known conclusions are far less certain than you think.

Thanks to Tom.

1. <http://www.nhlbi.nih.gov/about/framingham/design.htm>
2. <http://www.proteinpower.com/drmike/?p=285>
3. <http://www.blog.sethroberts.net/2007/09/18/how-accurate-is-epidemiology-part-3/>

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Dennis Mangan (2007-10-09 09:42:18)

"Burr & Butland (1988) found vegetarians to suffer significantly lower mortality from heart disease than health conscious non-vegetarians. Mortality from ischaemic heart disease was 57 % lower in vegetarians than the general population, and 18 % lower than in non-vegetarians following a healthy lifestyle. Deaths due to cerebrovascular disease was 43 % lower in the vegetarians compared with the general population. A study of nearly 28,000 Seventh Day Adventists in California noted a clear trend of increasing incidence of heart disease with rising frequency of meat consumption (Snowdon, 1988). [...] The protective effect of a vegetarian diet is believed to be related to the lower blood cholesterol levels seen in vegetarians. Repeated studies have demonstrated the low blood cholesterol levels of vegetarians (Resnicow, 1991)." <http://www.vegsoc.org/info/health2.html> Obviously, diet has nothing to do with either cholesterol levels or heart disease.

Lancaster (2007-10-09 11:50:00)

As John Tierney points out in his review of "Good Calories, Bad Calories: Challenging the Conventional Wisdom on Diet, Weight Control, and Disease," by Gary Taubes, "To bolster his [low fat] theory, Dr. Keys in 1953 compared diets and heart disease rates in the United States, Japan and four other countries. Sure enough, more fat correlated with more disease. But critics at the time noted that if Dr. Keys had analyzed all 22 countries for which data were available, he would not have found a correlation." <http://www.nytimes.com/2007/10/09/science/09tier.html> When it comes to longevity, the one variable that empirically makes the biggest difference in all animal studies is caloric intake: the lower (to a point), the better. So when people talk about low-fat, high-fiber "Third World" and vegetarian diets, the critical intervening variable may well be low caloric intake. Epidemiological studies involving countries like Japan and Korea should factor in the twenty-year span during the middle of the 20th century when caloric consumption fell drastically. At any rate, the incidence of heart disease or cancer in any population is meaningless unless paired with actual life expectancy. In Japan, death from stroke over the past 50 years has fallen dramatically. Death from heart disease has climbed. Each generation of children has been bigger than their parents. Longevity has steadily increased, despite the fact that Japanese men still smoke like crazy. Studies have pointed to a strong inverse relationship between consumption of animal fat and stroke. <http://www.bmj.com/cgi/content/full/333/7559/148-b> Everybody dies of something. What matters is when, and the quality of life up to that point.

[www.topcholesteroladvice.info](http://www.topcholesteroladvice.info) » What Causes Heart Attacks? (the Framingham Study) (2007-10-09 19:11:26)

[...] seth wrote a fantastic post today on "What Causes Heart Attacks? (the Framingham Study)" Here's ONLY a quick extract! It was felt, however, that any such relationship would be an indirect one, diet influencing serum cholesterol level and serum cholesterol level influencing the risk of CHD. However, no relationship could be discerned within the study ... [...]

capri anderson videos (2011-05-18 02:10:34)

Cool stuff, digged ;)

## **Where We Went Wrong about Diet and Health (2007-10-09 15:24)**

John Tierney has an interesting [1]column in the NY Times today about how many Americans – including the Surgeon General and the McGovern Commission – came to mistakenly believe that low-fat diets were better than diets with more fat.

Thanks to Dave Lull.

1. <http://www.nytimes.com/2007/10/09/science/09tier.html?ei=5070&en=c8e3a7abe072462c&ex=1192593600&emc=eta1&pagewanted=all>

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Dennis Mangan (2007-10-10 06:54:00)

Seth, the ideas you're propagating in this post and the others are not only mistaken, but dangerous. Tierney's article cites one source, Taubes' new book. As I've indicated in my previous responses, abundant evidence, both epidemiological and experimental, exists that shows that a high fat diet is bad for health and promotes not only heart disease, but cancer, diabetes, kidney disease, and a host of other degenerative diseases which are the plague of the Western world. But people want to believe good news about their bad habits (which is why the news in recent years that alcohol may be good for health has had such an enthusiastic reception). When Taubes and others claim that low fat diets show no benefit, they are talking about diets that are 30 % fat, as recommended by the American Heart Association, and this diet is indeed not beneficial, because it isn't really low fat. This new meme about high fat diets is going to cause a world of suffering.

Tom (2007-10-10 07:43:29)

Dennis, Taubes (and Tierney, in the NY Times) discuss at length why that "abundant evidence" cannot be trusted...at all. Further, it would be appropriate if you revealed in your posts that you don't think humans have the moral right to eat animal flesh. It would enable readers to put your opinions in context.

Dennis Mangan (2007-10-10 08:54:04)

It would be nice if you'd address the issue rather than citing "authority" and making ad hominem arguments. You certainly haven't "revealed" anything about yourself. I stated the evidence clearly. The fact, and it is indeed a fact, that the populations of many other countries have far lower rates of heart disease (cancer, etc.) than the U.S., along with other lines of evidence, such as that high fat diets cause atherosclerosis, points to diet as the explanation. The biggest and best epidemiological study of diet, The China Study, concluded that diet profoundly affects disease rates, especially cardiovascular disease and cancer.

seth (2007-10-10 09:08:59)

I hope to interview Taubes. Dennis, do you have some questions you would like me to ask him?

Tom (2007-10-10 09:46:08)

Dennis, it's not an "ad hominem" argument; I'm simply referring your Animal Rights agenda which you clearly set out on your blog but never here. And the "China Study" has been amply debunked elsewhere, but Seth might ask Gary Taubes to address it. Another possible question to ask Taubes to elaborate on how he's adjusted his own diet in the light of his research, and has he made further adjustments since publication?

Dennis Mangan (2007-10-10 09:49:11)

Seth: Sure. What is his explanation of cross-country mortality in heart disease and cancer? Why does he think experimental animals, such as rabbits and monkeys, develop atherosclerosis when fed a high fat diet? Why have we seen regressions in atherosclerosis when people go on a low fat diet such as Ornish or McDougall? Why is there an epidemic of heart disease in the Western world, and why is heart disease on the rise in places like China? Why do statins decrease the risk of heart attack? Why do high fiber diets lower serum cholesterol? That's more than enough, and thanks Seth for allowing me to comment here.

Dennis Mangan (2007-10-10 09:54:43)

By the way, Seth, I read your book and think your discovery of the ability to change one's set point to be brilliant. Your research into omega-3 is also compelling, and convinced me to start taking flax seed oil. And your blog is always interesting. So



all the more reason for me to dispute with you and your readers on this topic which has so much consequence for life and health.

Lancaster (2007-10-10 11:08:53)

Dennis, I fear you are missing the bigger point. Dying of some things is preferable to dying of other things. Morality is the issue, not the specific disease, since in the long term we shall all be dead. As medical science stands now, for example, CHD is much preferable to stroke. Replumbing and rewiring the heart is fairly straightforward; replumbing the brain is not. This is why longevity in Japan has increased even while the diet has become more "westernized" and CHD has climbed accordingly. But longevity for Japanese living in the U.S. has increased more: "Asian women in the United States—many of whom are second-generation and have spent their whole lives here—have a life expectancy that is three years longer than Japanese women . . . . Previous research suggested that Asians lose their 'survival advantage' after they are in the United States for a long time and have adopted an American diet and habits, but the new study suggests that is not happening with Asian women." [http://seattletimes.nwsources.com/html/nationworld/2003254679\\_longevity12.html](http://seattletimes.nwsources.com/html/nationworld/2003254679_longevity12.html) My own educated belief is that mortality (rather than the incidence of specific diseases) will in the final analysis correlate strongest to public health and hygiene, general nutrition, and caloric intake. The biggest problem with high-fat diets is that it's so easy to consume a lot of calories at once. I suspect that the interaction of genes, along with the intake of fish and soy (much higher in Asia), will prove significant as well.

seth (2007-10-10 12:34:38)

Thanks for the praise, Dennis, thanks for your questions for Taubes, and thanks for your comments here. And if you think the flaxseed oil is affecting you, please let us know!

Bix (2007-10-10 13:43:24)

Hello! I've been enjoying reading the comments here :) What Taubes has succeeded in doing for me is to carve out my niche on the fence even deeper. I'm really torn at the moment. For instance, he has been defending the impotence of exercise in weight loss: "Expending more energy than we consume does not lead to long-term weight loss; it leads to hunger." and ... "Obesity is a disorder of excess fat accumulation, not overeating, and not sedentary behavior." Any light you can shed on this would be welcome :)

seth (2007-10-10 17:57:08)

Taubes is much closer to the truth than what you usually hear. If you are sedentary, exercise indeed causes weight loss. If you sit all day every day, you may lose 10 pounds by walking to work every day, for example. But after you have lost those 10 pounds it becomes very difficult to lose much more. You have to practically train for a marathon to lose a lot of weight by exercise. That is of course impractical so exercise is not a good way to lose a lot of weight.

[sysrick.com](http://sysrick.com) » links for 2007-10-11 (2007-10-10 18:23:37)  
[...] Where We Went Wrong about Diet and Health [...]

Bix (2007-10-11 09:51:07)

Thank you for your reply, Seth. As I understood Taubes, he says that exercise does not lead to weight loss, even if you are sedentary. That our body compensates for increased activity such that there is a negligible effect on weight. It's quite a proposal, in the current climate.

Lancaster (2007-10-11 12:06:00)

One emerging theory I find compelling is that aerobic exercise is what our predatory ancestors did before killing something and eating it. And the more of it the better. Look at a pride of lions. They'll sit around all day, get hungry, run down an antelope and eat it, and then go back to sitting around doing nothing. We really are carrot and stick creatures, and when we run around a lot without getting the carrot, we'll stop at McDonald's and buy one (with fries and a shake). This theory argues that when it comes to weight control, it's muscle mass that matters—that which keeps on burning calories when you're sitting around doing nothing. In other words, don't exercise to burn calories, exercise to build muscle.

Dave Lull (2007-10-11 13:24:47)

Gina Kolata, author of *Ultimate Fitness: The Quest for Truth About Exercise and Fitness*, said in an interview\*: "The too-good-to-be-true myth is one that I had believed. I had thought, and so did many people, that if you build muscle that muscle will burn more calories and fat and therefore throughout the day, even if you do nothing, even if you just sit still, you will automatically be burning more calories, your metabolism will be higher. Unfortunately, that's not true. I asked an exercise physiologist to do a calculation for me. If a man goes to a gym and lifts weights seriously for four months he might build about four pounds of muscle, which is a lot; a woman would build much less. That four pounds of muscle would burn an extra 24 calories a day. That's like a bite of a cookie." ==== \* <http://www.medicinenet.com/script/main/art.asp?articlekey=54516>

Lancaster (2007-10-11 14:50:04)

On the other hand, these things are cumulative. The man who wakes up on his 40th birthday and steps on the bathroom scale and realizes he's carrying an extra 50 pounds around the middle since graduating from high school did not put it all on since his 39th birthday. More likely that he's been adding 24 extra calories or so a day for the past 22 years.

Bix (2007-10-12 04:00:09)

Dave Lull, Just wanted to say I just read that Gina Kolata interview. Loved it!

## **The Twilight of Expertise (part 12: Super Crunchers) (2007-10-10 03:48)**

Ian Ayres' interesting new book, [1]*Super Crunchers*, has a chapter about expert prediction versus predictions from math models. Almost always, the math models do better than the experts. I learned about this in graduate school when I read stuff by Paul Meehl, a psychology professor who compared the predictions of clinicians and regression equations in the 1950s. The idea has gathered strength since then and now the persons in some jobs – such as loan officers – are required to follow an algorithm for making decisions. Their expertise is ignored. Obviously they no longer derive as much self-worth from their job, Ayres points out.

It's like the beginning of agriculture. Lots has been written about [2]the physical problems caused by the change to agriculture. Stature decreased, tooth decay increased, and so on. I've never read about the mental problems it must have caused. I can only speculate, of course, but here's an possible example: Hunters derived self-worth from bringing meat to their families. Taking that away caused problems. (*Watching Once Were Warriors*, a terrific movie, should make this more plausible.)

I have never read anything about how to reintroduce into everyday jobs crucial mental elements that hunting had and farming lacked. Nutrition education, vitamin supplements, dietary fortification, and other nutrition programs push us toward a pre-agricultural diet, which was far more diverse and better balanced. There is no similar set of things that move us closer to pre-agricultural ways of making a living. My self-experimental research is all about the value stuff that ancient life had but modern life lacks – such as seeing lots of faces in the morning – but I have never figured out how to simulate elements of hunting, beyond being on one's feet a lot.

1. <http://www.amazon.com/Super-Crunchers-Thinking-Numbers-Smart/dp/0553805401>

2. <http://books.google.com/books?id=SXpGhERTtOEC&dq=health+and+the+rise+of+civilization&pg=PP1&ots=e5MwU32kvq&sig=U30M0wj0Aj1scZjNtC-RlYdb1Gg&prev=http://www.google.com/search%3Fhl%3Den%26safe%3Doff%26client%3Dfirefox-a%26rls%3Dorg.mozilla%253Aen-US%253Aofficial%26hs%3D2Lt%26q%3Dhealth%2Band%2Bthe%2Brise%2Bof%2Bcivilization%26btnG%3DSearch&sa=X&oi=print&ct=title>

Andrew Gelman (2007-10-10 03:58:17)

Sure, but what you call "the math models" (I would call them "statistical models" since I think when you fit a mathematical model to data, it's a statistical model) need experts to run them well. A good algorithm doesn't come from nowhere.

michael vassar (2007-10-10 05:23:48)

You get some of the elements of hunting-gathering, at least of the gathering part, by shopping, hence, presumably, its popularity. Other elements can come from frantically running around to do small one-shot freelance jobs and tasks, such as being a taxi driver searching for fares. Video games presumably satisfy other elements of the faux-hunter lifestyle, or certain physical recreations such as hide-and-seek.

Timothy Beneke (2007-10-10 08:19:12)

Philip Tetlock's book on expert political prediction "Expert Political Judgment: How Good Is It? How Can We Know?" found ([http://www.newyorker.com/archive/2005/12/05/051205crbo\\_books1](http://www.newyorker.com/archive/2005/12/05/051205crbo_books1)) it to be largely bogus, as I understand it. The New Yorker summarized his findings. Even rats made better predictions than Yale students at a particular task. From Louis Menand's New Yorker article: "It is the somewhat gratifying lesson of Philip Tetlock's new book, "Expert Political Judgment: How Good Is It? How Can We Know?" (Princeton; \$35), that people who make prediction their business—people who appear as experts on television, get quoted in newspaper articles, advise governments and businesses, and participate in punditry roundtables—are no better than the rest of us. When they're wrong, they're rarely held accountable, and they rarely admit it, either. They insist that they were just off on timing, or blindsided by an improbable event, or almost right, or wrong for the right reasons. They have the same repertoire of self-justifications that everyone has, and are no more inclined than anyone else to revise their beliefs about the way the world works, or ought to work, just because they made a mistake. No one is paying you for your gratuitous opinions about other people, but the experts are being paid, and Tetlock claims that the better known and more frequently quoted they are, the less reliable their guesses about the future are likely to be. The accuracy of an expert's predictions actually has an inverse relationship to his or her self-confidence, renown, and, beyond a certain point, depth of knowledge. People who follow current events by reading the papers and newsmagazines regularly can guess what is likely to happen about as accurately as the specialists whom the papers quote. Our system of expertise is completely inside out: it rewards bad judgments over good ones." Why am I not surprised?

Tom Myers (2007-10-10 08:23:08)

You're linking two transitions: (A) from hunter-gatherer to agricultural economics, and (B) from expert to math-model decision-making. Okay, each involves a replacement of creativity/expertise by a routine. We might throw in (C) the industrial revolution, where Adam Smith's pin factory replaces craftsmanship by assembly-line production. However, the "Super-Cruncher" transition (B) seems to me to be fundamentally different in that the routine is to be carried out by a computer. The expert is upset at losing status, but the resulting society is not one of increased drudgery; it's simply a society in which people (patients, sports teams, investors, customers, governments) depend less on human experts and more on their "own" (computer) resources, as fed by their own intuitions and web-collected data from all over the world. See page 124: "The most important thing that is left to humans is to use our minds and our intuitions to guess at what variables should and should not be included in statistical analysis." This may be intrinsically closer to a hunter-gatherer structure after all; there's no hierarchy of experts, perhaps no hierarchy of authority at all. Of course we will need Gelmans for a while, but in the end perhaps we can breed good modeling algorithms via genetic algorithms; if experts are replaced by algorithms, meta-experts may be replaced by meta-algorithms. And then the Singularity? Well, maybe. It is a step in that direction, whether the journey continues or not.

Seth's blog » Blog Archive » The Twilight of Expertise (directory) (2007-10-10 12:45:26)

[...] The Twilight of Expertise (part 12: Super Crunchers) [...]

Seth's blog » Blog Archive » Once Were Warriors (2007-10-11 05:32:38)

[...] The Twilight of Expertise (part 12: Super Crunchers) [...]

Heather (2009-01-18 23:56:17)

I don't know what's keeping Dr. Consorti so busy. She obviously doesn't spend her time making sure her patients are receiving the quality care they deserve. If she would've taken the other 30 minutes required for my surgery, maybe the skin from both sides of my incision would match up. Thanks to her, I'll probably be having another surgery down the road to remove scar tissue from her horrific attempt at stitching. Maybe she should've taken HomeEc before going to med school.

### SLD Nation (ghee) (2007-10-10 12:43)

I drink 4 tablespoons of flaxseed oil per day. But perhaps I could go higher:

Anjum always cooks with safflower oil (similar to sunflower oil), but admits that "butter goes really well with lentils" and even, unfashionably, puts in a good word for ghee (clarified butter). "I think modern science has it wrong and soon they're going to say ghee is healthy." At an Ayurvedic spa in Malta last summer she was put on a ghee detox. "I was like: Are you crazy? I wanted to lose the baby weight." Given increasing doses for breakfast, by the last day she could happily swallow nine tablespoons of pure fat. "I looked, like, six years younger."

From [1]here.

Thanks to Evelyn Mitchell.

1. [http://www.timesonline.co.uk/tol/life\\_and\\_style/food\\_and\\_drink/article2005749.ece](http://www.timesonline.co.uk/tol/life_and_style/food_and_drink/article2005749.ece)

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peter (2007-10-10 21:25:35)

there are a number of articles on quackwatch.org that deal with ghee, as well as studies. here's one. <http://www.quackwatch.org/01QuackeryRelatedTopics/PhonyAds/ghee.html> Can Fit in a Bottle of Ghee? Stephen Barrett, M.D. Ghee is a semiliquid form of butter from which the water and milk solids have been removed by heating and straining. Since ghee is 100 % fat (approximately 14 grams per tablespoon), and since high-fat diets are known to increase the risk of coronary heart disease, I was surprised to see an ad promoting ghee as a health food. The ad pictured below was distributed in 1998 by Maharishi Ayur-Ved Products International, a prominent marketer of ayurvedic products. The ad states that, "For thousands of years, Ghee has been used for its many healthful values." That statement is literally true because ghee is an Indian folk remedy. But whether eating it promotes health is another story. The product retails for \$7.95 for 13 ounces or \$12.95 for 28 ounces, which is much more than the cost of ordinary butter. To investigate, I used PaperChase to perform a Medline search for the word "ghee." This yielded 45 citations, 30 of which were accompanied by abstracts that could be read online. Four studies noted an association between the use of ghee and increased prevalence of coronary artery disease [1-4]. Another report – from 1978 – stated that when food is well chewed and the diet contains plenty of vegetable fibres and fermented milk products such as ghee and yogurt, the amount of salivary mucus that is swallowed will increase, which can help protect against peptic ulcers. However, with modern ulcer treatment available, there is no reason to believe this potential benefit outweighs the increased risk of cardiovascular disease. The rest of the studies did not appear relevant to the claims in the ad.

Tom (2007-10-11 00:15:59)

The hypothesis that high-fat diets increase the risk of CHD is anything but proven.

Josh M (2007-10-11 11:00:20)

Wonder what the omega-3 content of milk and then ghee is, especially from a Maltese cow. I couldn't get the original study but this mentions that organic milk has more of it. <http://www.vetscite.org/publish/items/001719/index.html>

Anonymous (2007-10-15 12:16:41)

Seth, I am curious, since you state you drink four tablespoons of flaxseed oil per day now, how do you get over the taste? I've been taking two tablespoons a day for a month now, and the aftertaste is just awful. Thanks.

seth (2007-10-15 15:07:42)

Anonymous, my solution has 2 parts: 1. add the oil to water. 2. hold my nose closed while I drink it.

Redondo Beach Day Spa (2008-11-05 14:06:49)

I understand that flaxseed oil is the next best thing to having a multi-vitamin a day. The reasoning for actually ingesting this oil in it's purest form per day: Is this a viable way to consume this because it absorbs into the system faster than if it were in pill form? Assuming the answer is yes, would it be a good idea that instead of holding my nose before taking it in, would I be able to mix it with something like Kool-Aid or Gatorade mix? If the answer to that is yes, would it be even a better idea to mix it with something creamy like chocolate or strawberry milk mix and milk? Thank you in advance.

## **Once Were Warriors (2007-10-11 05:32)**

In a [1]recent post I mentioned [2]Once Were Warriors, a movie about Maoris in New Zealand. Yesterday I met someone from Australia who said that the Maoris had/have an exceptionally war-like culture. They are not the same as other "native" groups, such as the American Indians or the Australian aborigines. They came to New Zealand relatively recently – from Samoa, maybe – and flourished by killing everyone who was already there. The Wikipedia entry for [3]Maori doesn't make this clear but doesn't contradict it, either.

1. <http://www.blog.sethroberts.net/2007/10/10/the-twilight-of-expertise-part-12-super-crunchers/>

2. [http://en.wikipedia.org/wiki/Once\\_Were\\_Warriors](http://en.wikipedia.org/wiki/Once_Were_Warriors)

3. <http://en.wikipedia.org/wiki/M%C4%81ori>

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Andrew S. (2007-10-11 10:07:10)

Yeah, that's been my understanding too (though I'm no closer to New Zealand than you are—well, actually, I live in Sunnyvale, so I guess I'm a *little* closer...) I think that's a big part of the subtext of OWW—that the abusive husband comes from native group which had been conquered and enslaved by the Maori, and he feels inferior to his Maori wife and overcompensates violently.

jeremy (2007-10-11 20:50:27)

jeez. In oww both are Maori. Maori arrived around 1200 and they are the native people of New Zealand, there wasn't anyone there before them. They had war rituals that are pretty similar to most small tribal groups anywhere in the world, old european tribes included. The difference between the european blooded New Zealander and the european blooded Australian is the unique influence of the Maori race on the NZ culture ; and the slow realisation of its citizens, that white nzers are just late

arriving "islanders", the proud reject great great grandsons and daughters of a wave of 'low class' european immigrants . NZ has the potential to be a great state

### Why We Need Enough Cholesterol (2007-10-11 05:36)

Another [1]excellent post from Michael Eades discusses a new study that found elderly people with lower cholesterol had faster cognitive decline than those with higher cholesterol. Suggesting that cholesterol protects your brain.

There are several reasons to think this association reflects cause and effect. First, earlier studies found the same thing. Second, an earlier study found that people whose cholesterol was lowered had higher rates of violent death – an unexpected side effect that implies brain dysfunction. Third, as Eades points out, the brain contains lots of cholesterol.

Thanks to Tom.

1. <http://www.proteinpower.com/drmike/?p=968>

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www.topcholesteroladvice.info » Why We Need Enough Cholesterol (2007-10-11 19:44:13)

[...] seth wrote a fantastic post today on "Why We Need Enough Cholesterol" Here's ONLY a quick extract Another excellent post from Michael Eades discusses a new study that found elderly people with lower cholesterol had faster cognitive decline than those with higher cholesterol. Suggesting that cholesterol protects your brain. ... [...]

A. Way (2007-10-11 23:06:27)

The suicide rate study was flawed. And I hope so. My cholesterol is measured in double digits. The same as many Chinese studied back in the 70's and 80's and in whom you could not find heart disease. See the book, "The China Study".

Tom (2007-10-11 23:33:35)

That blog is fascinating...it's some site in India that is aggregating by machine. There is clearly no human involved.

seth (2007-10-12 04:23:59)

A. Way, there was a mistake in my post. It was violent deaths in general, not just suicides, that went up. Here is a description:

With the combined data the researchers could study the experience of nearly 25,000 male subjects followed for an average of 4.8 years. Half of the 25,000 had been given treatment to lower their cholesterol. Although members of this group had 28 fewer heart-attack deaths than the controls, they had 29 more violent deaths (from accidents, suicide, or homicide).

What was the flaw in the study?

Dennis Mangan (2007-10-12 06:48:47)

I see one flaw: though low cholesterol, if it did indeed have the brain effects that are claimed, might influence accidents and homicide - in the sense of "he was asking for it" - it's not clear that that is the case, and it's highly doubtful that it could account for many of them. The theory that low cholesterol turns one into a murder victim seems a classic case of confusing correlation with causation. I would imagine that the sort of people who take statins don't often get involved in violent street

confrontations. Also note that the group had fewer heart attacks.

seth (2007-10-12 08:57:00)

"The theory that low cholesterol turns one into a murder victim seems a classic case of confusing correlation with causation." The data are from experiments. They imply causation.

### **What Do Bulimia and Working for the U.N. Have in Common? (2007-10-11 23:00)**

Twice in my life – in Denmark and Hong Kong – I have started chatting with women who ended up telling me about their bulimia, which they kept secret from almost everyone, including their friends. A few days ago, in San Francisco, I met a woman who works on water engineering projects for the U.N. "What I do in my job is connect people," she told me. For example, she went to Haiti and brought the people who needed help together with the people (in Haiti) who could help them. She never tells her bosses what she does. To her bosses, the focus is on some sort of technology. Were she to tell her bosses what she does, she said, the focus would shift away from the technology. There would be attempts to institutionalize what she does – and institutions would be terrible at it.

What other jobs are like this (where your boss doesn't know what you do)?

Shirley Hazzard's *Defeat of an Ideal: A Study of the Self-destruction of the United Nations* (1973) is excellent. It's *Devil Wears Prada* about a whole institution.

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[www.learnhypnosiseasily.info](http://www.learnhypnosiseasily.info) » What Do Bulimia and Working for the UN Have in Common? (2007-10-12 05:06:16)

[...] seth wrote a fantastic post today on "What Do Bulimia and Working for the UN Have in Common?" Here's ONLY a quick extract A few days ago, in San Francisco, I met a woman who works on water engineering projects for the UN – "What I do in my job is connect people," she told me. For example, she went to Haiti and brought the people who needed help together with ... [...]

### **A Vivid Description of SLD (2007-10-12 15:49)**

[1] Michael Blowhard has an especially vivid description of Life With SLD:

It took about a week for the appetite-suppression part of the Shangri-La experience to kick in. . . . It was a funny and bewildering moment when it did. I reached out for the usual additional forkful – and my hand stopped in midair. Nope, didn't feel like it – and back my fork came, empty. My brain was thinking "What the hell?" but my body was saying "Had enough." My instincts were speaking – only they were saying something different ("Enough") than they usually do ("More! More!").

1. [http://www.2blowhards.com/archives/2007/10/shangrila\\_updat.html#004536](http://www.2blowhards.com/archives/2007/10/shangrila_updat.html#004536)

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### **Insanity at MIT (2007-10-13 03:49)**

[1]Predictably Irrational, a forthcoming book by Dan Ariely, a behavioral economist at MIT, tells about an experiment done to learn how sexual arousal influences decision making. The experiment involved showing pornography to male undergraduates while they masturbated.

Before allowing the research to begin, Dean Richard Schmalensee assigned a committee, consisting mostly of women [professors], to examine the project. This committee had several concerns. What if a participant uncovered repressed memories of sexual abuse? Suppose a participant found that he or she was a sex addict?

Pale Fire by Vladimir Nabokov quotes a psychoanalytic textbook by Erich Fromm "used in American colleges, repeat, used in American colleges":

The little cap of red velvet in the German edition of Little Red Riding Hood is a symbol of menstruation.

The narrator comments: "Do these clowns really believe what they teach?" Did the MIT professors really believe those outcomes were serious dangers?

For similar stories, see [2]IRB Watch.

1. <http://www.predictablyirrational.com/>
2. <http://home.earthlink.net/~irbwatch/>

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Dan Ariely (2008-01-10 08:22:56)

I personally think that they just wanted to prevent us from doing this research – so they were trying every excuse they could come up with. In grad school no one tells you about these research "challenges" Dan

### **What is Flaxseed Oil Good For? (2007-10-13 12:24)**

According to the latest Newsweek (October 15), "flaxseed oil is . . . an over-the-counter nutritional supplement that helps with heart disease and menopausal symptoms. It's also a common wood finish."



losing-it (2007-10-13 14:07:32)

Funny. You can eat it on your salads and use it to polish the floors or protect your tools from rusting. But let's not overlook its use in the arts (as linseed oil for painting). "It is one of the oldest commercial oils and solvent-processed flax seed oil has been used for centuries as a drying oil in painting and varnishing." I use it topically for softening my dry, rosacea problem skin :^D  
<http://en.wikipedia.org/wiki/Flax>

## **Interview with Andy Maul about Test Development (part 1) (2007-10-14 04:58)**

Andy Maul, who took introductory psychology with me, is a graduate student in Educational Psychology at UC Berkeley.

### **1. What is your research about?**

I'm taking a closer look at tests recently developed to measure the construct of emotional intelligence (EI). In particular, I'm looking at the Multifactor Emotional Intelligence Scale (MEIS) and the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT), which were both developed in the past decade and evaluated using traditional methods (confirmatory factor analysis [CFA] and classical test statistics such as alpha coefficients, along with correlations with other tests and hypothesized outcomes). I'm looking at these tests again, both through the traditional lens of CFA and through the newer lens of Item Response Theory (IRT). In the end, I hope to make points both for the development of EI tests, and for psychological measurement in general, by highlighting how newer methods can improve the construct- and test-building process.

### **2. How did you get interested in this line of research?**

I became interested in emotions by working with Professor Dacher Keltner. At some point in graduate school my interests shifted to the more quantitative side of research, and I've since been working with Professor Mark Wilson on test theory and statistical measurement. I thought combining the two interests, by evaluating tests of emotional intelligence through a quantitative lens, would be a good idea.

### **3. What's an example of research that shows the value of measuring emotional intelligence?**

The MSCEIT appears to predict some life outcomes (such as grades, prosocial behavior, and self-reported life satisfaction), even controlling for IQ and personality. Other researchers have challenged these claims as being premature and based on insufficient evidence. There are multiple problems with the validity of existing EI tests that make them difficult to interpret, and make claims based on them highly suspect.

Some researchers feel that defining and measuring emotional intelligence could clarify and expand our definitions of intelligence and cognitive abilities in general, and provide information about an area of human functioning that could predict important personal and interpersonal outcomes (such as life satisfaction and the quality of one's relationships) above and beyond traditionally-measured intelligence and personality. In today's era of high-stakes testing, with so much riding on what many feel to be tests with limited utility, a new, well-validated test of emotional intelligence could provide insight into what makes students successful in schools and in life.

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Seth's blog » Blog Archive » Interview with Andy Maul about Test Development (part 2) (2007-10-15 03:33:41)  
[...] Interview with Andy Maul about Test Development (part 1) [...]

Chuck Wolfe (2007-10-16 07:18:32)

Hello, I found the comments about emotional intelligence to be very interesting but not entirely accurate. For a period of time I published the MEIS for Mayer-Salovey-Caruso and actually co-authored the certification training for others to use the test. At a later time my certification program was used to introduce the newer version of their test, the MSCEIT. I now certify people to use the MSCEIT and distribute both the MSCEIT and the BarOn EQi. My reason for commenting is that the MSCEIT actually is based on a sample of 5000 people from a variety of countries and ethnicities. It is scored in two ways, one as Andy suggests, general consensus and the second is based on emotions experts. For a detailed explanation I refer people to the MSCEIT User's Manual. This is not to say that the MSCEIT is a perfect test, I just want your readers to have accurate information. I actually have found that the MSCEIT is incredibly useful, powerful and compelling. The actual report you get leaves much to be desired but when people are trained in how to interpret it the results are very meaningful.

Seth's blog » Blog Archive » Interview with Andy Maul about Test Development (part 3) (2007-10-17 22:23:42)  
[...] Interview with Andy Maul about Test Development (part 1) [...]

### **Rent-Seeking in Higher Education (2007-10-14 18:11)**

A [1]nice essay by Paul Graham about the effects of making start-ups easier says that one effect will be changes in our education system:

Performance is always the ultimate test, but there are so many kinks in the plumbing now that most people are insulated from it most of the time. So you end up with a world in which high school students think they need to get good grades to get into elite colleges, and college students think [correctly] they need to get good grades to impress employers.

A world in which lawyers are forever judged by the law school they attended, which greatly surprised a lawyer friend of mine. If you can leave college to start a company, your professors have less power over you. One more way the Web is like the printing press, which led to a vast reduction in the power of the Catholic Church. The printing press made it much easier to start new religions.

[2]For whom do colleges exist?

1. <http://www.paulgraham.com/webstartups.html>

2. <http://www.blog.sethroberts.net/2007/03/31/for-whom-do-colleges-exist/>

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## Interview with Andy Maul about Test Development (part 2) (2007-10-15 03:33)

4. You write "There are multiple problems with the validity of existing EI tests that make them difficult to interpret, and make claims based on them highly suspect." What are the main problems?

Many early tests designed to measure emotional intelligence, and some still in use today (including one developed in part by the journalist Daniel Goleman, who popularized the term emotional intelligence in his 1995 book), used self-report methods and treated the construct as a conglomerate of various desirable personality and motivational factors, such as optimism, contentiousness, happiness, and friendliness. Tests of this nature may be interesting and may predict important outcomes, but emotional intelligence, defined in this way, is really just a repackaging of old ideas. These tests are so highly correlated with traditional measures of personality as to be operationally indistinct from them. Additionally, calling this construct emotional \*intelligence\* is suspect: personality and intelligence are generally regarded as very different things, and assessing intelligence through self-report is generally considered inadequate.

The MEIS and the MSCEIT, to which I referred earlier, are, to my knowledge, the only two currently published tests that assess emotional intelligence as an intelligence. These tests ask respondents to engage in a variety of tasks, such as looking at pictures of people's faces and reading stories about human interactions, and then make judgments about the emotional content of those stimuli. These tests are a step in the right direction, but have their own problems.

The test developers have a rather odd way to score the responses people give to the stimuli on the tests. The tests were administered to a large (N=2000+) standardization sample, and the scores people are now given on the items are the percentage of people from that standardization sample who chose that alternative. In other words, if you select choice "A" on an item, and 67 % of people from the standardization sample also chose "A", then you get a .67 for that item. If you chose "B", and only 11 % of people chose "B", then you only get .11 for that item. Your total score is simply the sum of the weighted scores from each item.

As odd as this method of scoring may sound, it has been used in other situations where the underlying theory

is not well understood (see Legree, below, for an exposition of this). However, it presents difficulties here: it defines correctness as, essentially, conformity of opinion with the standardization sample. In other words, what is actually being measured may not be "intelligence", but rather, simply, normality or popularity of opinion: the highest-scoring respondents will simply be those who most consistently choose the responses most other people also select. Additionally, this prohibits the existence of items so difficult that most people get them wrong, such as a very subtle facial expression that only the most emotionally astute could correctly parse: if there were any such items, the astute minority would be penalized for choosing the less-popular but more-correct alternative. This is a serious challenge to the construct validity of the test.

Additionally, the internal structure of the test itself is suspect. The test developers posit a four-factor model of emotional intelligence (the four factors being the ability to perceive emotions, the ability to allow emotions to facilitate thought, understanding emotions, and managing emotions) and have branches of the tests designed to measure all four of those factors. They have published confirmatory factor analyses that they claim support their theory; however, re-analyses of their tests, and new analyses (including one that I am conducting now) have not been able to replicate their results, calling into question the internal validity and reliability of the tests.

In my dissertation, which I can make available early next spring, I discuss all these points in greater detail.

[1]Part 1.

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1. <http://www.blog.sethroberts.net/2007/10/14/interview-with-andy-maul-about-test-development-part-1/>

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michael vassar (2007-10-15 04:51:55)

"Additionally, this prohibits the existence of items so difficult that most people get them wrong, such as a very subtle facial expression that only the most emotionally astute could correctly" The solution to this is with recursive scoring. After the first round of allocating points to answers, take people's total scores and then apply these as multipliers to the answers they select, then sum up the scores again. Repeat a few times if desired.

### **Omega-3 and Plagiarism (2007-10-15 05:11)**

The [1]news page of Linköping University, in Sweden, has two articles that greatly interest me. One is about a surprising effect of omega-3 supplements:

One-year-olds whose mothers had ingested fish oil during pregnancy and breastfeeding had considerably fewer allergic reactions than children whose mothers did not take this supplement.

The other is about a case of extreme plagiarism: An entire material-science paper was copied, almost word for word, from PNAS. [2]Into Madness has a nice comment:

Regarding the main authors, there seems to be a Nepali element involved! Sounds like a case for Father Brown. . . . Some Engineering students at Anna University [where two of the four authors of the paper that is a copy came from] who I talked to were not aware of this until they read the blogs. There have been no newspaper reports in India (as far as I know). How and when Anna University will react to this incident will be interesting to watch.

I agree. In the 1990s, when (a) Ranjit Chandra's research assistant came forward and said "this research couldn't have been done" and (b) Chandra could not produce the data, it was obvious that something was seriously wrong. Yet Memorial University, Chandra's employer, gave Chandra a tap on the wrist.

A curious feature of this case is that two co-authors [3]claim they are innocent:

Tom Mathews, doctor at the Indira Gandhi center for nuclear research in India and one of the four researchers named as authors, distances himself from the article in an email to DN [= Swedish newspaper]. So does Roshan Bokalawela, graduate student at the University of Oklahoma in the USA.

1. <http://www.liu.se/en/news-and-events/News?newsitem=11268>
2. <http://mekhala.blogspot.com/2007/10/spotted-dopant-in-research.html>
3. <http://horadecubitus.blogspot.com/2007/10/translation-of-swedish-article-on.html>

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fascinated (2007-10-19 17:07:22)

The study connecting fish oil and allergies is indeed fascinating. It also makes me wonder if omega-3 consumption during pregnancy might also help prevent autism. There is a well-documented strong association between autism and allergies. Also, both phenomena have grown during a time when fish consumption during pregnancy has declined due to concerns about mercury in fish.

seth (2007-10-19 20:00:06)

Very interesting idea – that omega-3 consumption during pregnancy might be related to autism.

Dennis (2007-10-21 21:01:53)

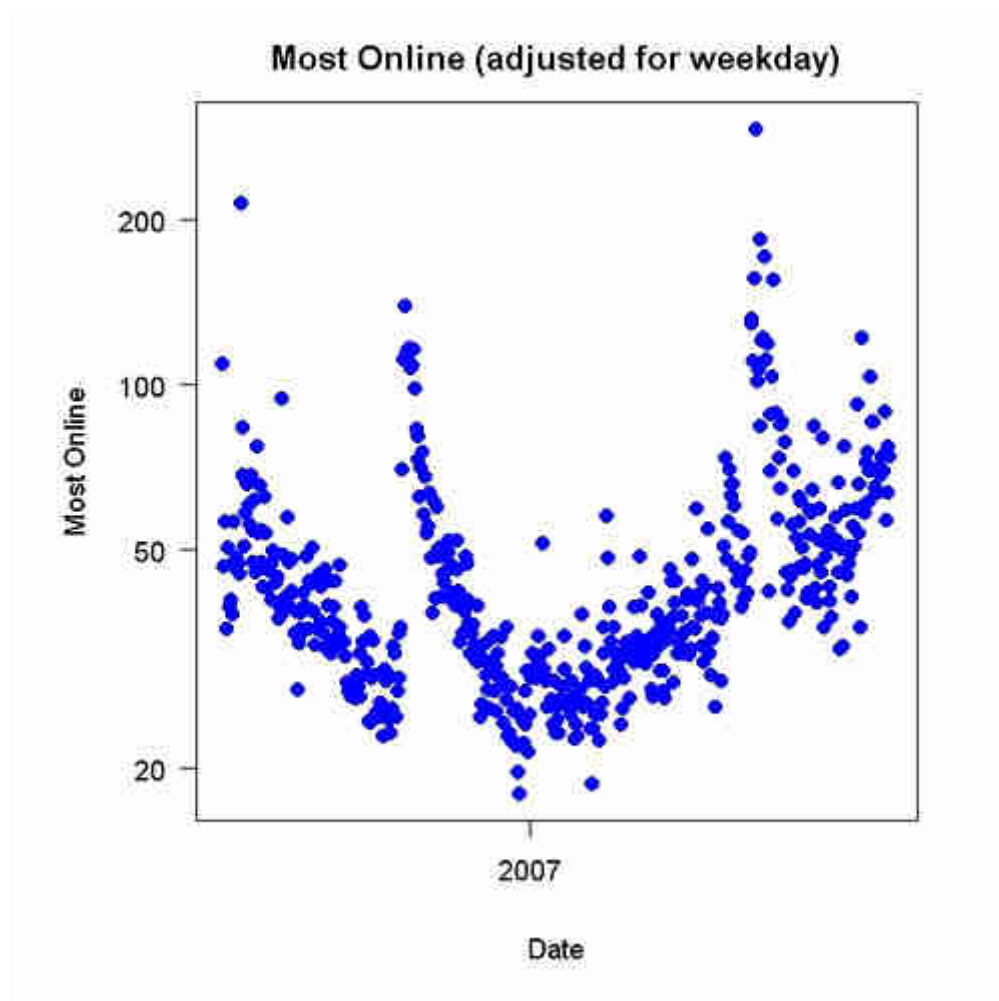
Have you considered testing your balance or cognition with fish or cod liver oil against flax seed oil? According to Wikipedia [http://en.wikipedia.org/wiki/Omega-3\\_fatty\\_acid](http://en.wikipedia.org/wiki/Omega-3_fatty_acid) flax seed oil has higher levels of ALA, but conversion of ALA to EPA and DHA is limited in humans. It would be interesting to know if fish oils were better or worse than flax seed oil.

seth (2007-10-21 23:23:48)

Yes, I will try fish oil and other sources of omega-3. I have some fish oil capsules in my refrigerator.

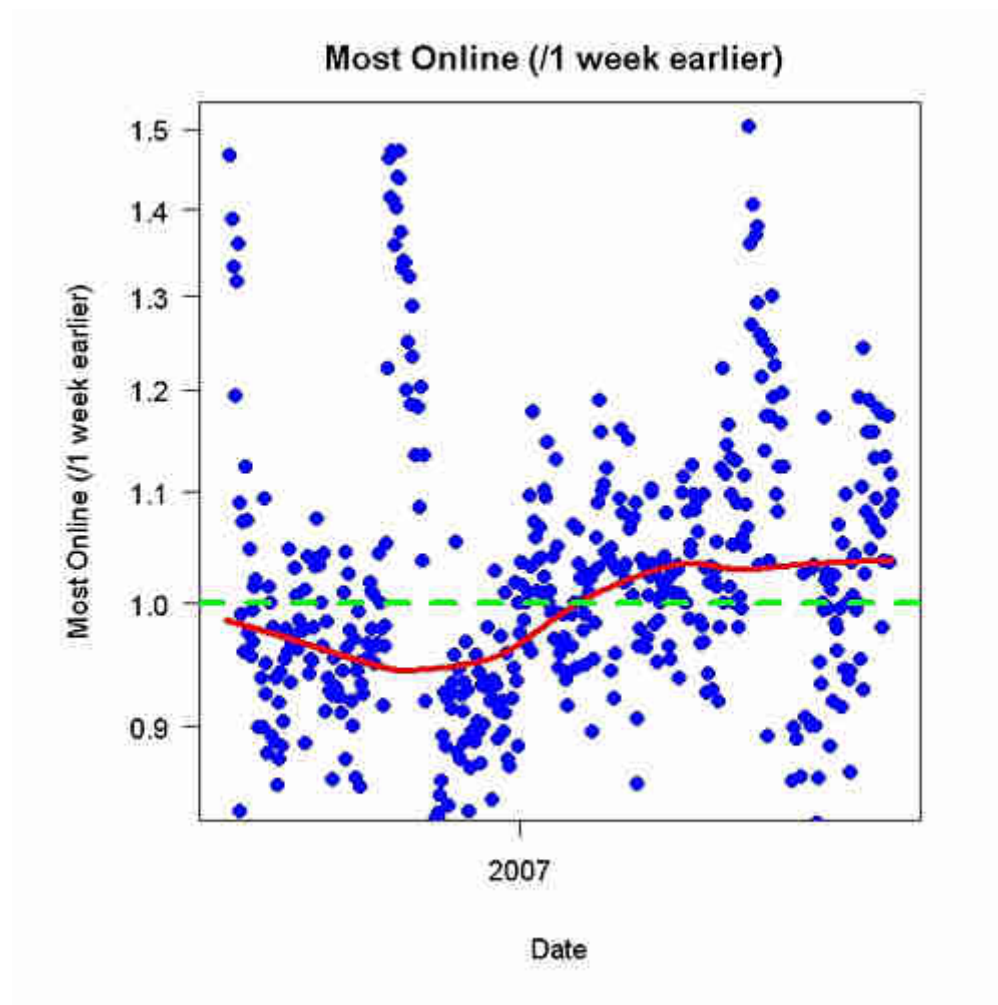
## **The Apparent Spread of SLD (2007-10-16 06:37)**

The number of visitors to the Shangri-La Diet forums has been growing. This graph shows, for each day, the maximum number of people accessing the forums at one time. (When you load a page, I guess you are considered "at" the forums for some length of time.)



"Most online" has steadily increased since January. These values are closely correlated with the number of visitors in a day, for which I have less data.

Here is another way to look at the most-online data. Each most-online value is divided by the value from one week earlier.



Perhaps the rate of increase is increasing but it isn't clear.

[1]Will it live?

1. <http://www.blog.sethroberts.net/2006/06/02/will-it-live/>

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Pearl (2007-10-16 08:17:08)  
Yay! :)

### **Marilyn Harvey's Complaint (2007-10-16 20:34)**

In 1993, Marilyn Harvey, a nurse, complained to Memorial University that her boss, world-famous Order-of-Canada scientist [1]Dr. Ranjit Chandra, could not have done the research he claimed. A very courageous thing to do. After an



investigation, Memorial did not agree. Harvey recently sued Memorial. From [2]her complaint:

The Plaintiff [Harvey] says that the Defendant [Memorial] defamed her by taking actions which . . . caused her to be isolated, shunned, and humiliated through the following:

- (a) representing to the community that her complaint was unjustified;
- (b) misconducting the investigation of the complaint;
- (c) misleading the research community as to the reasons for discontinuing the investigation;
- (d) choosing not to conduct another investigation;
- (e) misleading the Plaintiff as to the reasons for discontinuing the investigation;
- (f) acquiescing in and adopting [?] the actions of Dr. Chandra when he sued her for theft of research data; and by its conduct giving the Plaintiff and the public the impression that it believed the allegations of theft to be true;
- (g) treating the Plaintiff in a manner as to imply to her and the university and the healthcare communities, and the public, that her complaint was unjustified;
- (h) acquiescing in and adopting statements of Dr. Chandra which impugned the Plaintiff's motives and integrity.

The overall effect of the conduct of the Defendant was to constitute a communication to the community, and to the research and hospital community in particular, that was profoundly defamatory. . . It expose[d] her to contempt, ridicule and marginalization and [caused her] to be viewed by co-workers as a troublemaker and a pariah who could have a detrimental effect on one's career if she were not avoided.

[3]Memorial's defense.

1. <http://www.sethroberts.net/chandra/index.html>
2. [http://www.mun.ca/marcomm/public\\_affairs/HARV0125\\_2\\_-\\_statement\\_of\\_claim.pdf](http://www.mun.ca/marcomm/public_affairs/HARV0125_2_-_statement_of_claim.pdf)
3. [http://www.mun.ca/marcomm/public\\_affairs/Statement\\_of\\_Defence\\_SIGNED.pdf](http://www.mun.ca/marcomm/public_affairs/Statement_of_Defence_SIGNED.pdf)

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Seth's blog » Blog Archive » Memorial University Defends the Indefensible (2007-10-19 12:35:08)  
[...] Marilyn Harvey's Complaint [...]

### **Interview with Andy Maul about Test Development (part 3) (2007-10-17 22:23)**

5. What are you doing to develop a better test?

Not being a content expert in either emotions or intelligence myself, I have no plans at the moment to create a test of emotional intelligence. Instead, my goal is to explore and discuss, firstly, better ways of engaging in the iterative process of construct exploration and test development, and secondly, better methods of test analysis. These are, of course, interrelated.

The "classical" method of test construction in psychology goes like this: a) decide what you want to measure (formally or informally); b) write items to measure it; c) pilot those items; d) run basic statistical analyses, such as

Cronbach's alpha e) remove the items from the test that are the least reliable with the other items, thus improving the reliability of the test, and f) publish.

This process usually yields a reasonably reliable test. A problem with this approach is that nowhere did we allow the process of test construction to inform our theory development. Test construction can be as much a process of construct exploration as anything else, if we allow it. For instance, think-alouds and exit interviews can help us understand what subjects are actually thinking as they take the test, and whether the variation in the ways people approach the items truly reflects variation in the construct we think we're measuring. The exercise of construct mapping can turn a murky idea of what we're measuring into a much clearer one, by laying out a priori theories about what kinds of items measure what levels of the construct, and those ideas can then be empirically tested later, which makes the analysis phase much more informative than it traditionally is. And, of course, I would be remiss if I didn't mention the analysis itself: item response modeling often affords valuable information missed by classical analysis, such as information on person and item  $\alpha$  (which, to be interpretable, requires going back to the theory of the link between the items and the construct itself, which once again benefits from thoughtful construct mapping) and information about dimensionality at the item level (as opposed to the branch level, which is where confirmatory factor models—such as the ones used to investigate the structure of the emotional intelligence tests I'm working with—traditionally concentrate).

Doing things in this manner usually takes more than one iteration, which is one reason people might not like it. So far, the MSCEIT has been developed and evaluated, and the test developers have spent a good deal of time debating other authors in the literature concerning the value of the test, but the analyses have not yet led to test revision (except in the manner I described above: that items with poor reliability were dropped, without any particular theory about *why* they were unreliable).

So, in other words: I won't claim to be a substance expert enough to be able to write a new test of emotional intelligence on my own, but I would like to use the measurement efforts in this field as a way to discuss construct exploration and instrument development in psychological research.

[1]Part 1. [2]Part 2.

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1. <http://www.blog.sethroberts.net/2007/10/14/interview-with-andy-maul-about-test-development-part-1/>

2. <http://www.blog.sethroberts.net/2007/10/15/interview-with-andy-maul-about-test-development-part-2/>

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## Exit Wounds (2007-10-18 22:40)

Tonight, by accident, I attended a talk by the Israeli artist [1]Rutu Modan about her graphic novel [2]Exit Wounds. I learned:

1. One day in 1914, Franz Kafka wrote in his diary, "Germany invaded Russia. Swimming lessons in the afternoon."
2. Browsing at a flea market, she found an album of pictures of her dead father. Her family had given it away by mistake. When she told the seller about this, he raised the price from \$4 to \$150.
3. She wrote Exit Wounds in Hebrew but drew it in English. No kidding. She wrote the text in Hebrew and had it translated into English. The balloons where the words go were arranged to read from left to right. For a forthcoming Hebrew edition, she made mirror images of everything. There was just one problem: Cars were on the wrong side of the road. 150 panels (the hero is a taxi driver) have this problem. She has been forced to do some redrawing.

1. <http://modan.blogs.nytimes.com/>

2. [http://www.veryshortlist.com/samples/exitwounds.cfm?email\\_key=cc3fb78c-c8d8-432b-ac6c-ae59a0c3e93](http://www.veryshortlist.com/samples/exitwounds.cfm?email_key=cc3fb78c-c8d8-432b-ac6c-ae59a0c3e93)

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Varangy (2007-10-19 09:23:18)

2. Browsing at a flea market, she found an album of pictures of her dead father. Her family had given it away by mistake. When she told the seller about this, he raised the price from \$4 to \$150. That is some creepy, albeit fortuitous, coincidence.

Ruth (2007-10-19 14:22:47)

How did you attend a talk by accident?

seth (2007-10-19 14:52:13)

This talk was in the Cartoon Art Museum in San Francisco. I went there to attend another talk.

losing-it (2007-10-21 07:07:04)

"1. One day in 1914, Franz Kafka wrote in his diary, Germany invaded Russia. Swimming lessons in the afternoon." Franz Kafka's diary entry is all haiku to me (text divided into a modern two-line-haiku format). A wonderful juxtaposition...

losing-it (2007-10-21 07:28:46)

"2. Browsing at a flea market, she found an album of pictures of her dead father. Her family had given it away by mistake. When she told the seller about this, he raised the price from \$4 to \$150." And Rutu Modan's experience with the flea market vendor could be fodder for senryu: the lost heirloom found at a flea fair..."mine," I claim and the price goes up :^D

losing-it (2007-10-21 08:20:29)

And then there is the primary "accidental tourist" haply experiencing synchronistic life as [cartoon] art:^D... How fun. A little senryu... cartoon museum" I've arrived for the event on next week's schedule

seth (2007-10-21 08:51:09)

Very nice, losing-it. The last one should be like this: cartoon museum - I've arrived for the event in the other room.

## Memorial University Defends the Indefensible (2007-10-19 12:34)

In 1993, Marilyn Harvey, who at the time was Ranjit Chandra's research assistant, came forward to say that a paper by Chandra reported research that didn't happen. Memorial University conducted an investigation that failed to confirm her (very courageous) allegation. About that investigation, Ranjit Chandra's [1]Wikipedia entry says the following:

The vice-presidents were unable to secure the data, and, as a consequence, were unable to verify re-search fraud conclusively.

Huh? Harvey's claim was that the data didn't exist!

This sentence was written by Peter S. Morris, Director of Public Affairs at Memorial. I emailed Morris to try to find out how it could make sense. Presumably it made sense to Morris. Alas, Morris would not explain it. He did say that to prove research fraud – in Chandra's case, the fraud of making up data – you need the data. You read that correctly: To prove that someone has made up data you need to have the data, Morris asserted. He wouldn't explain that, either.

Memorial's behavior did great harm to Marilyn Harvey, as you can read in [2]the complaint filed with her lawsuit.

1. [http://en.wikipedia.org/wiki/Ranjit\\_Chandra](http://en.wikipedia.org/wiki/Ranjit_Chandra)

2. <http://www.blog.sethroberts.net/2007/10/16/marilyn-harveys-complaint/>

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Andrew Gelman (2007-10-19 16:47:22)

Seth, I defer to you entirely on the merits of the case, but surely you can't be surprised that the public information officer, when encountering a hostile question from someone he doesn't even know, will respond guardedly. Consider the alternative: do you really think he's gonna say: "D'oh! You're right—Chandra is a fraud and my bosses are incompetent." Making judgments like this isn't really part of his job description. I might also say that it's hardly worth your time to be pursuing this, but I won't say that, because then I'd have to conclude it's hardly worth my time to write this comment, etc etc. I guess I will suggest that we talk on the phone more often since that's probably more efficient than blog commenting as a way of communicating!

Tom (2007-10-19 18:52:25)

Respectfully, it's worth it. An innocent person got reamed. The media will call the university's PIO (Morris) to "find out what happened." Morris will talk up Chandra's resume, limn Harvey as a crackpot out for money, and that will be what the reporter runs with. Unless the reporter actually decides to spend another 30 seconds on the story and run it through Google...then he'll get the real story from Seth. What's right is right.

seth (2007-10-19 19:48:17)

Harvey was not only innocent, she was trying to make the world a better place in a very difficult way – it was obviously dangerous going up against someone as powerful as Chandra. Who was also her boss. Because of the Memorial administration's horrible behavior, she paid a huge price. The Memorial administration could have decided that they made a mistake; they have chosen not to. I was curious to see if there was anything reasonable to be said in their defense. I gave Morris the opportunity to defend Memorial; he failed to say anything reasonable.

## How Interesting is Good Calories, Bad Calories? (2007-10-19 22:48)

Very.

The single most striking result in the history of the cholesterol controversy . . . passed without comment by the authorities: those Framingham residents whose cholesterol declined over the first fourteen years of observation were more likely to die prematurely than those whose cholesterol remained the same or increased. They died of cardiovascular disease more frequently as well.

Around 1990, nineteen studies found that both women and men had higher total mortality at the lowest cholesterol levels (< 160). The increase came from more "cancer, respiratory and digestive diseases, and trauma." From Gary Taubes' fascinating new book *Good Calories, Bad Calories*.

I expect these results are corrected for income but I'm not sure. A friend of mine is very poor. "You have the cholesterol level of a Chinese peasant [i.e., very low]," his doctor once told him.

[1]Interview with Taubes (October 9).

1. <http://wor710.com/pages/48794.php>

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Timothy Beneke (2007-10-20 09:14:38)

I find this all very confusing. The big question, or several questions: How seriously should we take the plethora of correlational studies about all kinds of stuff? Most nutritional claims are basically grounded in such studies. Since you can't ethically do double blind controlled studies that may well hurt people; and it's so hard to do such studies over a 10 or 20 or 30 year etc. period that might tell us something, we're left with these correlational observations, plus scientific causal research and theory. After watching my girlfriend and other women feel seriously betrayed by science and the HRT debacle, where they were assured by their doctors that the good effects of HRT mostly outweighed the bad, and then told, "Sorry, oops, we got it all wrong," it's all very confusing. Or take vitamins; my impression is that the attempts to give specific vitamins to people to help them with specific risks are largely a failure. I want to see good intellectual work that tells me when to trust correlational research and when not to. Is there an algorithm or a heuristic that helps? How do we ever really know that we have controlled for all of the relevant confounds? My guess is that it will take more centuries of experience with this kind of science before we can answer this. When we can make effective prescriptions based on correlational research that clearly have the intended effect then we know the conclusions we draw from such research were more or less correct, or at least useful. I don't really know how to think critically about this. But I welcome enlightenment of any kind...

Trina (2007-10-20 09:16:05)

A fascinating though frustrating interchange last night on Larry King Live between Taubes, Mehmet Oz and Dr. Weil (the frustrating part being the "moderator's" maddening irrelevant interruptions). Dr. Weil was barely restraining his annoyance with Mehmet Oz's closed-minded, convention-wisdom, know-it-all, inside-the-box thinking. I had recently purchased the book and am still reading it. This is important, leading-edge stuff, and we all need to pay attention. That's all Gary Taubes wants.

Paradigm (2007-10-20 09:26:25)

I hope you invite your friend for dinner once in a while ; )

Chi (2007-10-20 12:31:16)

He's a science \*journalist\*. He corrects for nothing, except for intrigue. I mean, come on, he left in "trauma". Like anyone cares if a fatty diet makes a compound fracture more deadly. Timothy, for every correlational study there will be someone waving their hands and screaming that some huge bias is selected for or uncorrected. The only way to know for sure is to A) test it yourself, a la Seth [not so great an idea as far as heart attacks go] or B) make sure a ton of money has been thrown at the study by people concerned enough about their scholarship and reputation to care about the results.

Dennis Mangan (2007-10-20 14:26:54)

People with "cancer, respiratory and digestive diseases" are more likely to have low cholesterol as a consequence of their illnesses, because they cause wasting. Likewise, the people in the Framingham Study whose cholesterol declined could have experienced the decline as part of their illnesses, which are often hidden until they become major problems.

Tom (2007-10-20 16:02:49)

Citations, Dennis?

Dennis Mangan (2007-10-20 16:41:32)

"Cancer patients often die with a serum cholesterol between 100 and 150. The same holds true for many other chronic illnesses, especially those associated with bodily wasting (cachexia). It is as though, in the wasting process, as all the fat is "burned," so too is the cholesterol." From one of your favorite sites: <http://www.westonaprice.org/askdoctor/lowcholesterol.html>

seth (2007-10-20 18:05:35)

That makes a lot of sense, Dennis.

Chris (2007-10-20 21:36:29)

Doesn't taking flax oil/fish oil lower your cholesterol as well? Mine's gone down to 170 from 190 since doing the SLD for 3 months.

## **Why Do We Like Warm Food? (2007-10-21 12:56)**

Yesterday I cooked some chicken. Today I reheated the leftovers. While eating them, I had a gruesome thought: Warm food is more pleasant than food at room temperature. Could the evolutionary reason be that it is better to eat freshly-killed meat (warm) than meat killed yesterday (room temperature)? Or did a preference for warm food evolve because it caused us to prefer cooked food (sterilized) to uncooked food (unsterilized)?

Sure, thermoregulation is involved. We like warm food more when we're cold; we like cold food more when we're hot. Michel Cabanac has done [1]brilliant experiments about our changing preference for hot and cold environments. But there is an overall preference for warm food. We like warm food even when we're not cold.

In spite of thousands of books and articles promoting this or that "natural" diet, it has been incredibly hard to determine what our ancient ancestors ate, the diet that presumably fits us best. One way has been to ask what modern-day hunter-gatherers eat. Not only do their diets vary widely but also they are clearly not typical: They live in meager environments. So that is hopeless, although [2]Weston Price showed that there was a lot to be learned by studying earlier foodways. Price was surprised to find how much those ancient foodways differed from each other yet all produced good health.

The most basic questions about our ancient diet remain unanswered. Did our ancestors eat lots of meat (savannah evolution) or lots of fish (aquatic ape theory) or neither (vegetarian proponents)? In spite of looking, Price never found a group that ate little meat that was in the best health, so I doubt the vegetarians. I suspect ancient peoples ate lots of fish at first and then started eating lots of meat as they spread away from the coasts. My main evidence for the fish is my [3]omega-3 results that imply our brains work best with lots of omega-3. My main evidence for the meat is the huge popularity among boys of video games that contain elements of hunting. It's hardly great evidence, of course, since the popularity of those games, and of actual hunting, has other plausible explanations.

This is why my omega-3 self-experimentation interests me so much. It is a way to figure out the best diet for our brain. It relies on fast simple cheap easy-to-control experiments that anyone can do, rather than on epidemiology (correlations) or expensive slow hard-to-control clinical trials that often involve unusual people.

1. [http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=379894&ordinalpos=122&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=379894&ordinalpos=122&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum)
2. [http://www.google.com/url?sa=t&ct=res&cd=1&url=http%3A%2F%2Fwww.westonaprice.org%2F&ei=dqobR\\_6DHYi-gQPOnqHuBw&usg=AFQjCNF-DvgMmUYOrppEwXXw52sLG75YmQ&sig2=oUEE5YOAshlgo1EpKcEjyA](http://www.google.com/url?sa=t&ct=res&cd=1&url=http%3A%2F%2Fwww.westonaprice.org%2F&ei=dqobR_6DHYi-gQPOnqHuBw&usg=AFQjCNF-DvgMmUYOrppEwXXw52sLG75YmQ&sig2=oUEE5YOAshlgo1EpKcEjyA)
3. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>

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david (2007-10-21 14:30:04)

Perhaps warming food releases more flavor.

Jen (2007-10-21 16:12:26)

Fish aren't the only rich source of long-chain omega-3 fats; our less squeamish paleolithic forebears could have obtained plentiful amounts from the brains of hunted or scavenged animals.

Robert Blandford (2007-10-21 16:29:19)

I believe that there are a number of foods that are easier to digest, and a number that release nutrients when they are cooked. I can't come up with good examples right now, how about consulting a nutritionist?

KenF (2007-10-22 10:54:14)

This sounds like a Quiznos ad. ;-)

Bob (2007-10-22 15:44:53)

This is an article copied from the September 13th edition of Nature (vol 449 pp. 155). I think you'd find it interesting. EVOLUTIONARY GENETICS: You are what you ate by Sadaf Shadan It is hard to think of anyone who doesn't like starchy foods such as pasta, chips, rice or bread. But certain populations, for example hunter-gatherers living in the rainforests or near the Arctic circle, have historically existed on a diet rich in protein and low in starch. George Perry and colleagues conclude that such differences in the amount of dietary starch have moulded the human genome over time (G. H. Perry et al. Nature Genet. doi:10.1038/ng2123; 2007). Dietary shifts "whether driven by the development of stone tools, by controlling fire or by domesticating plants and animals" have had a major role in human evolution. Perry and colleagues specifically looked at the effect of dietary starch on the number of copies of AMY1, the gene that encodes the salivary amylase enzyme, which breaks down starch. AMY1 is one of the few genes in the human genome that show extensive copy-number variation between individuals. So the authors first looked at whether additional AMY1 copies are functional. They found that extra AMY1 copies do indeed endow the individuals carrying them with the capacity to produce more salivary amylase. The question then was whether the starch content of past diets dictates the present levels of amylase and, thus, AMY1 copy number. Perry et al. studied two groups: one consisted of four populations with a low-starch diet and the other of three populations from

agricultural societies and hunter-gatherers in arid environments, who traditionally eat high-starch food. Strikingly, twice as many members of the high-starch-diet group had at least six copies of AMY1. This difference could not be explained by geographical factors because both groups contained people of Asian and African origin. Instead, the authors propose that variations in AMY1 copy number are more likely to have been influenced by positive natural selection. So what is the advantage of having more salivary amylase? Significant digestion of starch occurs during chewing. This is crucial, and probably vital, in people likely to suffer from diarrhoeal diseases. Moreover, after being swallowed, salivary amylase is carried to the stomach and intestines, where it aids other digestive enzymes. Of the three copies of the AMY1 gene registered in the reference sequence of the human genome, variations in nucleotide sequences are small. This suggests that the duplication of these genes may have occurred relatively recently, possibly even since the evolution of modern humans about 200,000 years ago. So Perry and colleagues' results, and elucidation of copy-number variations in other human genes, could provide insight into our ecological and evolutionary history.

Larry (2009-04-02 22:58:09)

I was wondering the same thing today. It just popped into my mind while microwaving some meat. Your idea of our ancestors eating freshly killed meat is interesting. It might be because we like food that matches our body temperature?

Kat (2010-05-08 21:53:04)

Or maybe it was a type of trial and error/natural selection thing - more people might have died from diseased meat (especially if it was scavenged) than cooked meat. So they learned, and kept cooking...

Emilie (2010-06-25 11:19:25)

I was wondering about this over chicken pot pie. I think Larry's hypothesis is interesting and makes sense. Our bodies want to get the most energy out of the food we eat, so the closer to our body temperature food is, the less energy is wasted by being lost to colder food.

del rashid (2010-10-19 09:47:28)

We eat warm food for fetal comfort. Our mothers amniotic fluid temperature is about 37 degrees celcius. The human fetus can taste and breathe the mothers amniotic fluid. This is the primary reason we have to heat a newborn baby's bottle, a newborn will always refuse a cold bottle. We never lose our fetal knowledge

Dan (2010-10-23 18:03:10)

We discussed a similar topic in my Ancient Engineering course recently, and I came up with an answer to this question based on what we talked about (see below): It takes less energy to consume warm food. You chew less if the meat is tender, and it digests easier. From a thermodynamic standpoint, the molecules are moving around faster and therefore bonds are broken more easily. In class we compared our gut size to an ape's gut size (relative to the body). They have a much larger gut because they eat leaves. This requires a lot of chewing (hence larger teeth) and they get less energy per quantity. Therefore, they have to eat more, meaning a larger gut. Since a lot of the consumed energy goes towards digestion, their brains were not able to evolve like ours. We are able to allocate more energy to brain functions since we have a much better diet. More about the relationship between diet, brain size, and gut size can be found at <http://www.beyondveg.com/billings-t/comp-anat/comp-anat-4b.shtml> What I said is based on what I remember in class, but hopefully it is consistent with the article. I don't think it mentions warm food, but I believe warm food falls under "better diet."

del rashid (2010-10-26 07:52:43)

I am researching natural health and wellbeing, hence my interest in why we eat warm food. Dans views of mechanical thermodynamics, are also important in biological thermodynamics. Basically all life is exothermic ("cold blooded") but mammals, birds and some PLANTS have the ability to produce heat energy and are called endothermic life, (ie "warm blooded"). Biologically we have got to remember that digestion is on an evolutionary point a chemical process that involves enzymes and various reactions. Exothermic animals such as snakes, crocodiles, only have to eat once a month, or once every 2 years in the case of crocodiles, for nutrition rather than for energy. Carnivorous plants also have enzymes, digesting captured animals and insects



to provide valuable nutrition rather than energy. Which brings me to the point that teeth evolved as a form of defense against predators, canine teeth in humans are quite small but in chimps and gorillas they are extremely large for animals that are mainly plant eaters. So my point is why do we like to eat warm food, or drink warm coffee or tea, or even take a warm bath, (water dries your skin so moisturise before you have a bath and shower), and the answer is that oxytocin is released in our brain. Oxytocin is the feel good chemical that gives us that comforting, and relaxing feeling

del rashid (2010-10-26 08:28:18)

Sorry, I ended abruptly earlier, Oxytocin is found in the mother's amniotic fluid, it also encourages the mother's breasts to produce and release milk, i.e. lactation. So our brains are conditioned to experience warmth and comfort by the release of Oxytocin. I have discovered that Mother Nature does not create LIFE so it can be eaten as food source, and that plants and animals don't exist so that they can taste good. I believe we have to learn to eat for nutrition and health, and not for good taste, it is unjustifiable to Mother Nature that we kill and cause suffering to animals so that we can satisfy our taste buds.

Jordan C. (2011-06-27 19:16:21)

You mentioned in the Original Post that you believe the fish diet to be the most compelling because of the high amount of Omega-3 present in fish. You are being partially misled by the way our present society works. Omega-3 and Omega-6 are two major fatty acids that promote brain function. In many plants Omega-6 is found in the seed portion of the plant primarily, whereas Omega-3 is largely found in the plant body. We tend to lack Omega-3 because of the fact that we have moved to feeding our livestock (meat which previously would have had a better balance of Omega-3 and Omega-6) with corn (a seed, higher in omega-6). On top of that we are adding high fructose corn syrup, xanthan Gum, maltodextrin, citric acid, and many other products derived from corn into our processed foods. Some scientists (I'm not sure of the proportion) believe that it's not just the lack of omega-3 in our diet that is the problem, but more so that the imbalance is a problem. With this in mind, I believe that ancient fish and ancient land-based wildlife were at least closer with each other with regards to omega-3 content, and that the mostly fish diet and the mostly meat diet are equally as valid.

doc (2011-09-07 07:57:34)

Still want to know if eating warm food is better for you than lukewarm food

## **A Nation of Vending Machines (2007-10-21 18:00)**

[1]But not obese.

1. [http://www.nytimes.com/slideshow/2007/10/20/world/20071020\\_JAPAN\\_SLIDESHOW\\_index.html](http://www.nytimes.com/slideshow/2007/10/20/world/20071020_JAPAN_SLIDESHOW_index.html)

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Pearl (2007-10-21 19:59:04)

Oooooooooohhhhhh!! I was SO going to blog about this! How dare you!! ;)

## **The Silent Spring of Marching Bands (2007-10-21 19:57)**

Rachel Carson's Silent Spring, about the damage done by pollution, "is widely credited with launching the environmental movement in the West" ([1]Wikipedia). Along similar but narrower lines, last week's USA Today had an [2]article by [3]Joyce Cohen about hearing damage caused by being in a marching band. It begins:

There's no bigger booster of his marching band than Mark Claffey. "I am a total band nerd!" declares Claffey, a drummer for the Golden Falcons at Franklin Heights High School in Columbus, Ohio.

There's just one downside. At age 17, he has painful ear damage.

He says that, after indoor rehearsals, his ears started hurting, then ringing.

Now, he's abnormally sensitive to sound. If someone cranks the car radio, "I get a sharp shooting pain in my right ear," says Claffey. . . .

It's the dirty little secret of the halftime show: Marching band . . . can cause irreparable hearing damage, according to Brian Fligor, director of diagnostic audiology at Children's Hospital in Boston.

The director of a professional group of music teachers claimed that knowledge of this problem is fairly new. That's absurd, Joyce said. Stories about hearing problems among musicians have been published in medical and professional journals for at least two decades. Music teachers don't acknowledge their own hearing problems, several experts told her, because doing so could endanger their livelihoods. Band parents, known for their fanaticism, were sometimes dismissive. They claimed that pain and ringing in the ears are normal.

The Indianapolis Star, published by Gannett, which also owns USA Today, reprinted the article. On the newspaper's forums, readers started [4]a debate about whether there should be laws to protect students' hearing.

1. [http://en.wikipedia.org/wiki/Silent\\_Spring](http://en.wikipedia.org/wiki/Silent_Spring)
2. [http://www.usatoday.com/news/health/2007-10-16-band-hearing\\_N.htm](http://www.usatoday.com/news/health/2007-10-16-band-hearing_N.htm)
3. <http://www.blog.sethroberts.net/2007/10/03/joyce-cohen-gets-her-teeth-cleaned/>
4. <http://www2.indystar.com/forums/showthread.php?p=3249602>

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david (2007-10-21 20:11:51)

When I was in middle school (late 70's/early 80's), my band (not marching) teacher commented that drummers were always deaf. Her husband was a drummer.

Pearl (2007-10-21 20:16:41)

I totally agree with this; there ought to be more awareness of what it does to kids hearing. When I played in band in high school a few times as a bassist, I always tried to wear earplugs during rehearsal or performance because it actually felt physically painful, it was so loud. My years of orchestral playing hadn't conditioned my ears to be used to it. I had no idea how they could tolerate it; some of the kids have the bells of the brass instruments pointed directly at their ears.

Joyce (2007-10-21 21:10:06)

Pearl, years of playing don't toughen up your ears. It's not possible to condition yourself to withstand noise. If anything, that orchestral playing made your ears more susceptible, not less. Noise exposure causes damage that is cumulative, irreversible

and untreatable.

Pearl (2007-10-22 00:35:05)

I had gained the impression that it was possible, sustaining years of exposure to noise, to develop a tolerance for noise levels. After repeatedly being exposed to a certain level of sound at a certain frequency, the part of your ear that receives that sound gets damaged and needs a stronger volume. It's why we lose our hearing and need people to shout at us as we get older, if I'm not mistaken. Using a personal example, I once determined I was building a tolerance to noise when I noticed that I kept turning my Walkman up higher and higher as an adolescent. I needed to turn it up to maximum level 10 to get the same satisfaction I once got from level 5. I've known several musicians who could tolerate higher noise levels than I could; orchestral playing for a string section member has a far lower decibel level because we aren't in close contact with the noisemakers, namely brass and percussion.

Pearl (2007-10-22 00:36:59)

I suppose hearing loss due to aging would not be quite the same as losing it to noise exposure, but perhaps could be a factor, I should have said.

Nansen (2007-10-22 12:54:58)

Good luck trying to sell safe sax.

Seth's blog » Blog Archive » News You Can Use: Hearing Protection (2007-10-25 09:15:37)

[...] The Silent Spring of Marching Bands [...]

Mark Claffey (2007-10-31 16:14:23)

Well, I am the Mark Claffey interviewed in this article. My hearing isn't really damaged, I just have an abnormal sensitivity to loud and high pitched sounds. Drumming over 2 or 3 years without earplugs has caused a ringing in my right ear. I now wear ear plugs to prevent any further damage in my ears. Thankfully marching band is coming to an end, which means putting away the loud marching drums, and bringing out some of the quieter, (not really), drums. I plan to go into college for music, and plan to wear earplugs when I am practicing. Anyone interested in talking to me about hearing loss from marching band please e-mail me at mclaffey12489@yahoo.com.

## **Is It Time to Revise Ancient Philosophical Questions? (2007-10-22 06:04)**

If I didn't blog it, I didn't think it. Nonsense, right? Well, let's rephrase the ancient question "if a tree falls in a forest and no one hears it, did it make a sound?" Of course this is true:

tree makes sound → someone hears

where → indicates causality. X → Y means X causes Y.

But what about

someone hears → tree makes sound?

This had always struck me as boring. Who cares? But I am noticing that while this is obvious

I think of something → I blog about it

this is not so obvious, but true:

I blog about it -> I think of something

Because I blog about my thoughts, I have more of them. I blog, therefore I think.

This post and others about blogging, for example. Posts about the twilight of expertise in areas other than science. I'd be doing omega-3 self-experimentation blog or no blog but blogging about it divides the research into small and more doable parts (making the graphs, for example). It is encouraging to get feedback and have others, such as [1]Tim Lundeen, contribute their observations. Blogging is a kind of tinder. It doesn't create the initial spark but it amplifies it.

In terms of book and scientific-paper writing, blogging plays the [2]role I give art in the growth of technology: It provides a slope in place of a step. It divides a big task into tiny tasks.

1. <http://www.blog.sethroberts.net/2007/02/16/omega-3-and-arithmetic/>

2. <http://www.blog.sethroberts.net/2007/06/07/my-theory-of-human-evolution-scrapbook-edition/>

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Sam (2007-10-22 07:51:57)

The more logical rephrase of "if a tree falls in a forest and no one hears it, did it make a sound?" is "if a tree falls in a forest and no one hears it, does the tree even exist?" or maybe, the web version: Does it exist if google does not find it?

seth (2007-11-11 21:35:18)

Shortly after you wrote that, Sam, I discovered that Google was no longer indexing all of my blog posts. Terrible!

## **Gary Taubes Interview (2007-10-22 07:20)**

From the [1]Los Angeles Times:

What is the evidence that the low-carb Atkins diet is healthy?

First, all you're doing is not eating foods that none of us ate up until a few hundred or thousand years ago.

That's a good way to put it. However, I wonder about processing: What about a food eaten thousands of years ago processed in a new way that increases speed of digestion? E.g., applesauce, orange juice. I believe fruit juice that tastes the same each time is very fattening, for example. Taubes says he lost about 12 pounds doing Atkins that he has kept it off. I lost and kept off the same amount of weight by reducing how much my food was processed. Oranges instead of orange juice. The whole interview is a summary of Taubes' new book Good Calories, Bad Calories.

More [2]Taubes links. Taubes on [3]Larry King Live. [4]Radio interview with Taubes about epidemiology. In this interview, around the 22:00 mark, Taubes makes some very interesting comments about the evidence against trans fats. He says all the evidence against trans fats comes from a data set (the Nurses Health Study) in which trans fat

intake is completely confounded with processed-food intake.

Thanks to Dave Lull.

1. <http://www.latimes.com/features/la-he-fat22oct22,0,6079725.story?coll=la-tot-features&track=ntothtml>
2. <http://livinlavidalocarb.blogspot.com/2007/10/theres-been-explosion-of-attention-on.html>
3. <http://transcripts.cnn.com/TRANSCRIPTS/0710/19/lkl.01.html>
4. <http://audio.wnyc.org/b1/b1091707dpod.mp3>

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James (2007-10-22 08:21:34)

Taubes said he lost 12 pounds avoiding refined carbs and potatoes, \*not\* by following Atkins. On the processing issue, I think it's really a matter of quantity and availability over processing. Our pre-agricultural ancestors would have had access to relatively small quantities of climate-appropriate seasonal fruit. It's doubtful that they would have access to anything as sweet and fructose-filled as an orange, or even modern apples. I agree that processing does make it easier to overeat such foods, and Taubes does lay out how fructose leads to bad lipid mojo, but I don't think overeating unsweetened applesauce or drinking too much orange juice are major contributors to obesity on the whole.

Chi (2007-10-22 08:39:51)

I don't see this as a very clean justification, seeing as how for those same thousands of years (except for Methuselah), we didn't live so long either. Now, you can say that's because of predators, illnesses, or violence, sure. But I don't think anyone can say for sure. In addition, now we have modern research data into the longevity of different cultures, and you'd think we'd have gained a glimmering of wisdom from examining huge variations between diets. And to me, that wisdom says: vegetables, fruit, more fish, and whole grains. Anyone who trades that wisdom for the Atkins diet is either foolish or lazy in my book.

seth (2007-10-22 10:10:51)

It's clear enough that eating ancient diets is much healthier. That is the evidence in Taubes's book, in fact, that I found most persuasive: that when groups suddenly shift their foodways from ancient to modern their health suddenly goes downward. I think this evidence is why Taubes describes the Atkins diet like that.

Timothy Beneke (2007-10-22 13:26:50)

Shouldn't Taubes' ideas about weight loss be reformulated in terms of Seth's theory? Carbs tend to be strong tasting. I've only read the interview, but is he saying that other things being equal, a less "nutritious" calorie will be more fattening than a more nutritious one? Does a nutritious calorie assuage hunger more than a less nutritious one?

seth (2007-10-22 15:45:16)

I think the carbs that Taubes dislikes – bread, mashed potatoes, pasta – are digested quickly. They tend to be eaten with strong flavors so they are bad both ways: strong flavor, digested quickly. Taubes is saying that certain carbohydrates are more fattening than fat & protein, calorie for calorie.

lasser11 (2007-10-22 19:47:29)

Our farming subsidies can't help the situation. This country produces massive amounts of cheap corn syrup and enriched flour due to subsidies. No domestic government policy frustrates me more than farming subsidies.

Tom (2007-10-23 07:45:24)

A calorie is only a calorie when burned in a calorimeter. The idea that a bomb calorimeter is a good proxy for human metabolism is bizarre – but not as bizarre as the fact that no "dietary expert" ever seems to question it! Unlike in a calorimeter, in the body, CHO calories behave very differently from protein and fat calories. Dietary carbohydrate spikes insulin, causing a metabolic cascade that not only makes us store fat, it eventually makes us sick. But with paleo diets, carb levels (and insulin) remain low, and there is little fat stored, and fat is actually burned. Taubes: "When insulin levels fall, we release fat from our fat tissue and burn it as fuel." But if we're eating carbs, insulin levels never fall.

### **SLD Side Effects (2007-10-22 15:42)**

On the SLD forums, you can read about many positive side effects of drinking oil. (One of them – better sleep – caused me to start studying the effects of omega-3.) Today three people [1]posted some more:

I used to get those little cracks in the sides of my mouth. After just a few days on the diet, those are gone! I can open my mouth as far as it will go and no cracks!

My feet/heels don't seem to be getting hard/cracked like they were

My skin feels softer

I haven't had an asthma attack since starting in March.

Mental calmness. Situations that used to bother me now just slide away. It is hard to describe, but the peacefulness is wonderful. I conclude that a big nutritional deficiency has been corrected. What fraction of people with (a) dry or cracked skin, (b) asthma, and (c) irritability have been told to consume more fat, I wonder? Zero? In the case of the asthma and irritability, I expect the improvement comes from a fat high in omega-3.

1. <http://boards.sethroberts.net/index.php?topic=5778.0>

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### **A Modern Microscope (2007-10-22 22:50)**

Reading this [1]legal complaint – suing a florist who gave the plaintiffs far less than agreed-upon at a very expensive wedding – I feel I am peering into a kind of microscope. Something far away and very small in the big scheme of things – the plaintiffs' frustration – is made very clear. It reminds me of *The Devil Wears Prada* (no art but lots of emotion) but the legal complaint is even more evocative.

1. [http://online.wsj.com/public/resources/documents/LB\\_chip-fax.pdf](http://online.wsj.com/public/resources/documents/LB_chip-fax.pdf)

## Games and Self-Experimentation (2007-10-23 03:26)

On Friday I had tea with [1]Greg Niemeyer, a Berkeley art professor whose medium is games. I wanted to "gamify" the task I have been using to measure brain function. It is a letter-counting task: I see 4 letters and respond as fast as possible how many are A, B, C, or D. This takes about 600 msec – I've gotten a lot faster. Each session has 4 blocks of 50 trials and lasts a few minutes. From each session I get an average reaction time. I have been doing experiments to measure the effect of flaxseed oil (high in omega-3) on this task.

The task is quick, portable (requires only a laptop) and provides 200 fine-grained measurements (reaction times) per session. Flaxseed oil, I have found, not only produces long-lasting improvement in brain function (lasting weeks) but also a short-lived improvement that starts an hour or two after ingestion and lasts several hours. I developed the letter-counting task to measure the time course of the short-lived improvement. To measure the time course, I do the task every half-hour or so. The task has also turned out to be good for discovering other everyday events, such as exercise, that affect brain function. So far I have data from about 450 sessions.

It hasn't been hard. It could be more fun. The more fun, the easier the research and the more likely other people will do it. Games are fun. Can I make the task more fun by making it more like a game? I asked Greg what makes games enjoyable. In rough order of importance (most important first), he mentioned four things:

1. The right amount of difficulty. Too easy we get bored; too difficult we get frustrated. [2]Mihaly Csikszentmihalyi has made this point.
2. Lots of feedback.
3. Varying problems to solve.
4. Color and sound.

I will try adding these to the letter-counting task. I made a simple RT task with elements of #2 (feedback) and #4 (color & sound). It was much too easy but I am sure that #2 and #4 made it more pleasant.

A London Times article about [3]medical self-experimentation.

1. <http://studio.berkeley.edu/niemeyer/bio.html>
2. [http://en.wikipedia.org/wiki/Mihaly\\_Csikszentmihalyi](http://en.wikipedia.org/wiki/Mihaly_Csikszentmihalyi)
3. [http://www.timesonline.co.uk/tol/life\\_and\\_style/health/features/article672977.ece](http://www.timesonline.co.uk/tol/life_and_style/health/features/article672977.ece)

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Timothy Beneke (2007-10-23 09:56:56)

Question: I started at 4 tablespoons of flax seed oil a day, a few months ago, and while I haven't done any scientific self measurements, I'd say my brain is doing very well lately. I've gone down to about 2 and a half tablespoons in the last couple of months – do you think doing 4 has substantially greater effect than doing 2?

seth (2007-10-23 10:33:37)

Tim, I think 3 is better than 2. So the answer is yes, probably.

Pearl (2007-10-23 18:13:36)

God, that article practically sounds like a preface to an article about SLD. And one of the guys' names was even Seth! (albeit last name...)

peter (2007-10-23 21:02:35)

do you still plan to study the effects of DHA? (a gentle reminder) I'm especially interested since the oil doesn't seem to work for me, but i'd still like the benefit of taking DHA and omega-3, but without all the calories, assume there is a benefit.

seth (2007-10-23 21:24:31)

Yes, I will certainly study fish oil, including DHA. I have some in the refrigerator. But I'm giving a talk on flaxseed oil in the middle of November so it won't be before then.

Seth's blog » Blog Archive » Science in Action: Omega-3 (simple reaction time) (2007-10-25 05:12:42)  
[...] Games and Self-Experimentation [...]

### **Culture Shock! Palo Alto (2007-10-23 21:55)**

Please, I want to read Culture Shock! Palo Alto. Michelle Nguyen, who does healthcare software consulting, recently moved to Palo Alto from the East Coast.

On the East Coast, she said, one of the first questions she was asked was about her education. If you have a Ph.D., they take you seriously.

In Palo Alto, among the first questions are (a) where did you go to school? and (b) do you have a blog? It doesn't help to have a Ph.D. It does help to have gone to Stanford or an Ivy League school. And – most encouragingly – it helps to have a blog. Having a blog, said Michelle, shows that you think and have ideas. Yes, it does.

[1]Michelle's new blog is "a place for thinking about all things tech, web, and gadget." Her first entry reviews Microsoft's HealthVault, which allows you to store your health info online.

The [2]Culture Shock! series.

1. <http://geeknalytics.wordpress.com/>

2. <http://www.expatriates.com/directory/books/cshockbooks/>

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### **Science in Action: Omega-3 (simple reaction time) (2007-10-25 05:12)**

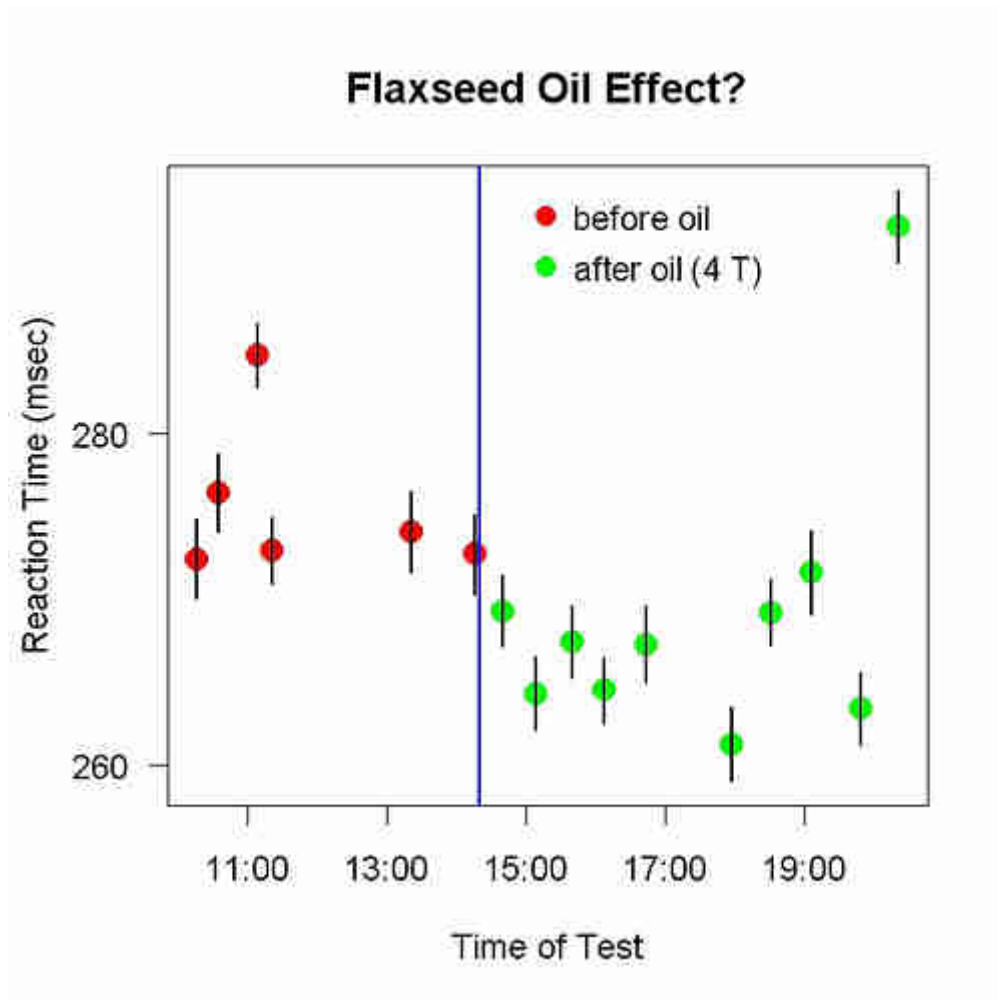
A friend who has known me for years said I became more talkative recently – around the time I started taking flaxseed oil. In the letter-counting task I have been using, there is an increase in error rate at the same time that flaxseed oil is reducing reaction time – I become more "jumpy". It is as if flaxseed oil lowers a threshold for action.

Maybe I could measure this. Following some of [1]Greg's principles, I devised what experimental psychologists call



a simple reaction time task: I see colored circles on my laptop screen and press a key on the keyboard as quickly as possible when a circle appears. The computer beeps 0-4 times depending on how fast I respond.

With the letter-counting task, I kept improving for at least 100 sessions. With this task, I stopped improving (getting faster) after about 2 sessions. I took 4 T flaxseed oil around 2 pm and measured my reaction time before and after. Here are the results.



My reaction time decreased with roughly the time course I'd seen in [2] other tests. The percentage decrease was unsurprisingly small but it was quite clear. It was hard to tell how long it lasted.

I was impressed how easy the whole thing was. It only took about an hour to write the experiment-running program (because I could modify something I already had) and the necessary pretraining (learning the task) was trivial (a few minutes, in contrast to weeks with the letter-counting task). I'm unsure how much follow-up of this I will do but it was reassuring to find similar results (flaxseed oil improves performance) in another task.

1. <http://www.blog.sethroberts.net/2007/10/23/games-and-self-experimentation/>
2. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>

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Joanna (2007-10-25 07:39:36)

Dr. Roberts, Are you really taking 4T of Flax seed oil? It seems a lot. I take about 1 T-2T (12 -24 oil capsules) a day. I wonder what the most optimal dose would be?

Timothy Beneke (2007-10-25 09:55:49)

For what it's worth: I always take about 2-2 and a half tablespoons of flax seed oil in the morning, around 8-8:30. The one very striking thing I've noticed has to do with notetaking work. I take notes for 2 classes on Monday and Wednesday. I take notes from 10-11, come home and write up the notes from about 11:45-1:05 and return to take notes from 2-3; then come home again to write those up and finish the first batch, if I haven't already. What is striking is that I seem faster, more efficient, in taking and writing up the notes at 11:45 than I have ever been. There is a rapid flow from the notes onto the page as I write them that is faster than I have ever experienced – and I have been doing this for 15 years. I suppose I could try not doing the flax seed oil in the morning and see if I am still so fast, but I really don't want to... In the afternoon, I always experience a drop in energy, but I may do some flax seed oil then to see if that affects my mental functioning. Subjectively, it seems to be an issue of mental energy. I hope somebody does standard double blind studies of this soon – the broader community won't buy it until we have that...

seth (2007-10-25 10:21:22)

Johanna, yes, I am. I found that 3 T worked better than 2 T. I haven't yet compared 3 T and 4 T.

lasser11 (2007-10-25 21:54:01)

"It is as if flaxseed oil lowers a threshold for action." I noticed this phenomenon. I think its a good thing. Flaxseed oil appears to decrease my overall laziness. Is there any negative aspect of using Flaxseed oil instead of Canola oil for the SLD (using the plug your nose method)? I don't think so. Maybe cost.

seth (2007-10-25 22:04:54)

I don't think so either.

Kragen Sitaker (2007-10-29 11:48:42)

Well, I don't know much about statistics, but maybe you should take a bigger sample. Did I apply the T test here correctly? (I'm eyeballing the sample numbers off your graph.) kragen@thrifty: \$ R R version 2.4.0 Patched (2006-11-25 r39997) Copyright (C) 2006 The R Foundation for Statistical Computing ... > before <- c(271, 278, 283, 272, 273, 272) > after <- c(269, 265, 267, 266, 267, 261, 270, 271, 263, 295) > t.test(before, after) Welch Two Sample t-test data: before and after t = 1.5234, df = 13.734, p-value = 0.1504 alternative hypothesis: true difference in means is not equal to 0 95 percent confidence interval: -2.230346 13.097013 sample estimates: mean of x mean of y 274.8333 269.4000

seth (2007-10-29 11:57:54)

1. do a one-tailed test. you did a two-tailed test. I predicted the direction of the effect. 2. omit the first and last "after" values (269 & 295). I believed that the effect would take about an hour or more to develop and would wear off after 4 hours or so. then you get t = 3.8, highly significant

Kragen Sitaker (2007-10-30 11:36:52)

I think both of your suggested modifications are plausible but questionable. I have creepy feelings about one-tailed tests (lots of actual statisticians have them too but they usually dress them up in fancier language) and you say in the post that it "was hard to tell how long it lasted," so perhaps your choice of which points to reject may have been influenced by having seen the data values, especially the rather extreme outlier. I'm guessing that the data values on the chart represent averages over N reaction times in a session? Maybe you could get more information about the distribution of your reaction times if you used

the raw reaction times instead of per-session averages. For example, it would be hard to plot the ones you have here on a Q-Q plot. It might also give you more information that could be valuable for significance analysis.

seth (2007-10-30 12:06:23)

"Creepy feelings about one-tailed tests" – in this particular case, why?

Kragen Sitaker (2007-10-30 17:26:46)

Well, what would you have done if your post-flaxseed-oil reaction times had clustered around 320ms? Would you have concluded that this was logically impossible and clearly you'd screwed up the experimental technique somehow? Would you have thought it was logically impossible for this to actually represent the real effect of the oil? Would you have thought it was uninteresting? If I were in your place in that case, I would have thought that the result at least suggested that there was an effect in the opposite direction than I'd originally thought, and perhaps warranted some more trials — maybe at different times of day, for example — rather than that the result was uninteresting. If there's a possibility you might have reacted the same way and been induced to apply a two-tailed test *in extremis*, rather than merely dismissing the apparent difference out-of-hand, then perhaps a two-tailed test is the right thing to apply in the first place? That's where my creepy feeling comes from. But I'm pretty ignorant about statistics, so there could easily be a hole in my reasoning.

seth (2007-10-30 21:37:51)

Hmm. Thanks for the explanation. When lots of previous results lead one to expect an effect in a certain direction, I'm afraid I still don't see the problem with using a one-tailed test. But it hardly matters, since the effect was so strong. That's the nice thing about self-experimentation; you can usually do the experiment again.

## News You Can Use: Hearing Protection (2007-10-25 09:15)

[1]Joyce Cohen on hearing protection beyond earplugs. I often wear noise-cancelling headphones on BART; now I will wear them more often. Does the New York subway damage hearing?

[2]The trouble with marching bands. [3]New York noise.

1. <http://huntgrunt.blogspot.com/2007/10/on-beyond-earplugs.html>

2. <http://www.blog.sethroberts.net/2007/10/21/the-silent-spring-of-marching-bands/>

3. <http://nymag.com/nymetro/urban/features/noise/9456/>

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Peter (2007-10-25 11:18:16)

I prefer my Etymotic isolation earbuds to the noise-cancelling headphones. Smaller, cheaper, and I think they sound better. Some people don't like things in their ears, however. I wonder how much hearing gets damaged on airplanes. The small jets are really loud if you're sitting in the back. Fortunately at least some airlines are now letting people keep earbuds in (unplugged) during takeoff and landing, when it's loudest.

Chris (2007-10-25 19:54:55)

While noise cancelling headphones would help you feel more at peace by reducing the variation in noise, wouldn't they still hurt your physical hearing since the overall decible level is actually higher? I thought noise cancellation works by adding more noise so a 60 decible noise becomes unnoticable but you get that effect by adding 20db's of cancelling noise. I guess if the goal

is to make the world quieter in the long term even when you're not wearing noise cancelling headsets, it's working :)

### Should Mark Twain Have Won a Nobel Prize? (2007-10-25 21:24)

Of course. He didn't. And dozens of writers you have never heard of, much less read, much less quoted in everyday conversation, have. These wrongs are corrected in an alternative universe described [1]here. The Biology/Medicine Prize has also been fairly ridiculous, although at least [2]Robert Gallo hasn't gotten one:

Mistakes of commission: 1. Frontal lobotomies. 2. Eric Kandel. If you think he deserved it, read [3]Explorers of the Black Box.

Mistakes of omission: 1. The scientists who discovered that smoking causes lung cancer. 2. The scientists who discovered that folate deficiency causes birth defects.

Several years ago, at a big Thanksgiving dinner in an Oakland loft, I told the woman sitting next to me, a genetic counselor, what a travesty the Biology prizes were. The discovery that smoking causes lung cancer had improved the lives of millions of people, I said; the discovery of so-called oncogenes hadn't improved the life of even one person. She replied that she was the sister of one of the oncogene discoverers. The next day I learned she complained I had been rude!

1. <http://www.greatbooksguide.com/nobel2.html>

2. <http://www.virusmyth.net/aids/data/srlabrat.htm>

3. [http://www.amazon.com/Explorers-Black-Box-Search-Cellular/dp/0595189628/ref=sr\\_1\\_1/103-3675802-8345458?ie=UTF8&s=books&qid=1193372979&sr=1-1](http://www.amazon.com/Explorers-Black-Box-Search-Cellular/dp/0595189628/ref=sr_1_1/103-3675802-8345458?ie=UTF8&s=books&qid=1193372979&sr=1-1)

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Tom (2007-10-26 00:05:20)  
The truth is unfailingly rude.

Willy (2007-10-26 03:39:26)  
The book "Explorers of the Black Box" gives reasons against Kandel?. I thought his work was very important and he seems very intelligent to me. I went to Amazon but there are no reviews yet.

seth (2007-10-26 04:13:34)  
Explorers of the Black Box describes Kandel's attempts to get more credit than he deserved.

michael vassar (2007-10-26 08:59:59)  
Every famous scientist gets more credit that he deserves, but I don't see why Kandel's work is of significantly less than typical Nobel (medicine) caliber. As for the Nobel in Literature, think maybe the issue is that we are native English speakers, not native speakers of some other language, so English Language authors loom large?

seth (2007-10-26 10:29:41)

The situation described in Explorers of the Black Box is extraordinary. I don't know if English writers get the Literature prize more or less than they deserve. Twain deserved it more than all other English writers who have won it.

Alex Chernavsky (2010-07-30 04:59:59)

I had dinner with Eric Kandel at a conference once, when I was a graduate student in the late 1980s (this was before Kandel won the Prize). He got into an argument (a civil one) with a fellow graduate student about some fine point of neurotransmitter receptor structure. Later, we looked it up – and Kandel was wrong. That still amuses me.

## **Why Blog? Interview with Janet Ruhl (2007-10-27 03:59)**

Janet Ruhl [1]blogs about diabetes and maintains a website called "[2]How to get your blood sugar under control." Thanks to Dave Lull, I came across her [3]critique of Good Calories, Bad Calories ("some of the densest writing I've encountered in a long life of reading popular science . . . its core message is VERY important" – I agree with both) and noticed a comment by her that blogging turned out to be a good idea. Ah, blogging. She kindly agreed to answer a few questions.

Why did blogging turn out to be a good thing to do?

Blogging introduced me to a new group of younger people who have been a pleasure to interact with. I was accustomed to the more traditional web information exchange venues, having been active in online forums since I joined Compuserve in 1987. But many of the bloggers are younger and don't appear to be familiar with the newsgroups or even the larger discussion forums dedicated to my topic. Once I started blogging and syndicating my blog [via RSS], these bloggers introduced themselves [by commenting on her blog]. I really like the positive supportive atmosphere that they bring to interaction.

What have you learned from blogging?

In the health community, at least, the younger people whose online communication is confined to blogging seem to be more positive and supportive and less likely to use internet communication to indulge the kinds of flaming and obsessional nuttiness that seems to have destroyed the newsgroups as a viable place for intelligent discourse. They also make very good use of multimedia when making their points.

You seem to be saying blogging brings out a better side of human nature.

Not really. It is just that the structure of blogging allows each person to be heard, and leaves it to the audience to vote with their attention for content. Stridency and conflict are minimized because comments are moderated. A person can, of course, contradict another person, in their own blog, but they have to attract readers and conflict alone is not a strong attraction.

[4]Joyce Cohen on blogging. [5]Anastasia Goodstein. [6]Why I blog.

1. <http://diabetesupdate.blogspot.com/>

2. <http://www.phlaunt.com/diabetes/14045524.php>

3. <http://diabetesupdate.blogspot.com/2007/10/taubes-good-calories-bad-calories-lost.html>

4. <http://www.blog.sethroberts.net/2007/08/06/interview-with-huntgrunt-part-1/>
  5. <http://www.blog.sethroberts.net/2007/09/24/anastasia-goodstein-on-blogging/>
  6. <http://www.blog.sethroberts.net/2007/09/15/why-i-blog-2/>
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### **Autism Linked to Mood Disorders (2007-10-28 06:25)**

Mood disorders appear to be much more common among the relatives of autistic children than among the relatives of other children. A [1]survey article about this appeared in 2004. Here is a bit of the data:

In North Carolina, between 1988 and 1990, we studied 40 autistic individuals (20 attributable to known neurological disease and 20 idiopathic). Family histories, using the family history method, without knowledge of the neurological status, showed a low incidence of major mood disorder in the neurological patients (only two had family members with major depression, none with bipolar disorder). In the idiopathic autistic patients, by contrast, major depression was found in 14 and bipolar disorder in 8 of twenty families.

Between 1995 and 2002, we acquired another series of patients included in our study of fluoxetine treatment for young autistic spectrum children. We determined family history data as before and sought information about family members with special intellectual abilities or attainments, inspired by observing such individuals in many of the families. The abilities most often were scientific, mathematical, or computational but included others (e.g., professor of philosophy, professional musician). Analysis revealed a strong correlation among three groups: autistic probands responding to fluoxetine, family members with major mood disorder (especially bipolar disorder), and family members with special intellectual abilities. In this study, history of major mood disorder (in first- and second-degree parental relatives) was assessed in 151 families. One hundred and eleven families (74 %) had a history of major depression (in 102) and/or bipolar disorder (in 52).

In other words, mood disorders were more common among the relatives of autistic children who responded to fluoxetine (Prozac) than among the relatives of autistic children who did not respond to fluoxetine. I have wondered why autism seems to be increasing. This linkage suggests it may have something to do with the long-term increase in depression.

Thanks to [2]A Room of One's Own.

1. <http://neuro.psychiatryonline.org/cgi/content/full/16/2/199>
2. <http://mamampj.blogspot.com/2007/10/autism-and-vaccines-little-scientific.html>

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Mary (MPJ) (2007-10-28 09:06:32)

Always happy to be of assistance. I find the research fascinating because, of course, there is a history of mood disorders and autism in our own family.

KenF (2007-10-28 09:27:50)

I can't help but think that associative mating is part of what is going on with the rise in autism. In the old days "nerdy" girls and boys didn't find each other to mate, but as this becomes more prevalent, we see a rise in autism.

seth (2007-10-28 11:40:04)

The assortative mating explanation of the rise in autism has been proposed by Simon Baron-Cohen, an autism expert. It predicts that something else – whatever you get when you put two non-autism genes together – should also be increasing.

KenF (2007-10-28 12:18:49)

There's a very famous ethnic Chinese math prodigy, out of three children in his family, he is a math genius, one brother is extremely bright, the third is autistic, apparently. Autism may be price that has to be paid to produce certain types of genius. I'd put most of the smartest people I've known somewhere on the "autistic spectrum".

Dennis Mangan (2007-10-28 16:57:13)

God evidence exists for the theory that vitamin D deficiency is responsible for autism. Since vitamin D deficiency is also linked to depression, the correlation described above makes sense. <http://mangans.blogspot.com/2007/10/asthma-diabetes-autism-and-vitamin-d.html>

Donna (2007-10-29 13:03:42)

What about the idea that autism and mood disorders might be increasing because they are related to problems in the birth process, and deaths from these problems have dropped dramatically. Over the twentieth century there was a drop in infant mortality from about 100 per 1000 live births in the beginning of the century to about 7 per 1000 in 2000. Some research has shown autism being linked to using antibiotics and not breastfeeding. People with autism may have benefited more from improvements in antibiotics and formula. I think this makes a lot of logical sense, but has the problem of being counter-intuitive. Greater health leading to more people with disorders!

Carol (2007-12-04 23:13:08)

One of my 2 year old students has recently been diagnosed as having the Autism Syndrome Disorder. The parents of the child mentioned that Bipolar Disorder has been diagnosed in the case of several of this child's relatives. It is also very interesting that these relatives have very high IQs and the child is quite bright, inspite of his autistic tendencies.

Carol (2007-12-04 23:25:35)

My previous comment contained an error: Autism Syndrome Disorder. The correct term is Autism Spectrum Disorder.

## **How Things Begin: The Flynn Effect (2007-10-28 12:19)**

The [1]Flynn Effect is the steady improvement in IQ scores over the last 50 years or so in many places. It was documented by James Flynn, a professor of moral and political philosophy at the University of Otago. Flynn gave a talk at Berkeley recently. I asked him how the Flynn Effect came to be.

Flynn finished college at the University of Chicago in one year (lots of advanced placement) and went on to get a Ph.D. at the same school. His first job was at Eastern Kentucky University. It was during the Korean War; better schools were afraid he'd be drafted. He lost that job because of his CORE (Congress for Racial Equality) membership.

He got another assistant-professor job at Lake Forest. He lost that job because of his socialist views, although "sins" such as assigning readings beyond the set test were also given. He and his wife decided to go to New Zealand, where his politics would be more acceptable. He got a job at the University of Otago, where he has been ever since.

In the 1980s, he started to write a book defending humane ideals. One > question he wanted to answer was how to combat racism. He came across Arthur Jensen's work. Jensen's work was not easily dismissed. It was based on data. To properly answer Jensen, he believed, you needed data – a radical view for a philosophy professor. This was outside his area of training. He asked a professor of psychology for advice. The psychology professor was dismissive; his attitude was "what could you possibly contribute?" But Flynn did not see that psychology professors were substantially smarter than everyone else; the necessary skills should be within his reach, he thought.

He studied the math behind IQ tests for two years. He started looking at data. He looked at IQ test manuals and discovered that the raw scores kept increasing over time. He found six examples. He wrote a paper based on these examples and sent it to the Harvard Educational Review. The editors (who, unknown to Flynn, were [2]graduate students) rejected it. Everyone knows intelligence is going down, one reviewer wrote. This made him mad. He went out and found 14 more examples. With 20 examples, he wrote a paper that was accepted by Psychological Bulletin. The reviewers were stunned, he said, but couldn't find any holes in his case. It appeared in 1984.

Arthur Jensen pointed out that the tests concerned were heavily influenced by education and predicted that a test like Raven's would show no gains. Flynn collected data from around the world (14 nations) and found that the largest gains were on Raven's. The resulting article appeared in Psychological Bulletin in 1987.

Flynn said that only now (in his new book [3]What is Intelligence?) can he give a coherent explanation of the gains.

1. [http://en.wikipedia.org/wiki/Flynn\\_effect](http://en.wikipedia.org/wiki/Flynn_effect)

2. <http://www.hepg.org/page/21>

3. <http://www.blog.sethroberts.net/2007/09/23/what-is-intelligence-by-james-flynn/>

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marmolillo (2007-10-28 13:49:15)

It is a interesting history but the truth is that probably the Flynn Effect is wrong. This article from [1]The Guardian shows a perfect example: same test, same number of children, incredible big and good test group, 15 years of difference.

1. <http://education.guardian.co.uk/schools/story/0,,1693061,00.html>

seth (2007-10-28 16:46:16)

Interesting article, marmolillo, thanks for the link. The study it describes implies that the Flynn Effect is not true everywhere always – but no one expected that. The interesting lesson to be drawn from the facts Flynn found is that IQ depends heavily on environment in mysterious ways. The study the Guardian article describes supports the same conclusion.

What is Flynn effect, and how it came to be? « Entertaining Research (2007-10-28 17:37:02)

[...] What is Flynn effect, and how it came to be? Seth at his blog recounts the story (that he heard from James Flynn himself): In the 1980s, he started to write a book defending humane ideals. One question he wanted to answer was how to combat racism. He came across Arthur Jensen's work. Jensen's work was not easily dismissed. It was based on data. To properly answer Jensen, he believed, you needed data – a radical view for a philosophy professor. This was outside his area of training. He asked a professor of psychology for advice. The psychology professor was dismissive; his attitude was "what could you possibly contribute?" But Flynn did not see that psychology professors were substantially smarter than everyone else; the



necessary skills should be within his reach, he thought. [...]

An intelligent view of intelligence « The Ministry of Science (2007-10-31 17:49:31)

[...] What's more, these small initial differences are not necessarily even genetic. The children of a good basketball player could end up reaping the same amplifying effect of a small initial difference. It's what William Dickens and James Flynn, after whom the Flynn effect is named, call social multipliers. [...]

## **I Learned that if I Really Wanted To, I Could Conquer My Fear (2007-10-28 23:52)**

In an upper-division depression seminar I taught in 2002 the term project assignment was to do whatever you want related to depression so long as it does not involve library research and is off campus. Several students decided to give a talk about depression to a high school class, including Cindy Voong. She wrote this about her experience:

Five years ago, I graduated from Oakland High School, a public high school with a dominant African American and Asian population. A little over a week ago, I revisited my old high school as a guest speaker for Mr. Tinloy's 3rd period psychology class. It was not as bad as I thought it would be. I was quite nervous and terrified of speaking in front of a classroom full of juniors and seniors, but I made it out alive, and it was a good learning experience.

My friend, a former student of Mr. Tinloy, brought me to his classroom during the break between 2nd and 3rd period, and introduced me. I was pretty nervous. Speaking to teachers and professors always makes my heart beat a little bit faster than normal. I spoke to Mr. Tinloy very briefly. I introduced myself, explained why I was there, and asked him if he would be interested in having me speak to his class about depression. He was very nice. He wanted to know what I planned on talking about, so that he could critique it if necessary. I made arrangements to contact one of the students (I actually knew five of his students, much to my surprise) and get his notes on what they have covered in class so far before I decide what I wanted to talk about. We made a date for when I would come in (April 26), and before then, I was to email him an outline of my talk. That was the first step. Whew!

Shortly after my first meeting with Mr. Tinloy, I contacted Simon, one of his students, and got his notes for the class. After reviewing his notes, which covered articles and brief overviews of what depression is, I emailed Mr. Tinloy a tentative outline of what I might talk about. Now that I look back on it, the list was actually quite long. I don't know what I could have been thinking about. The outline is as follows: different types of depression, symptoms and signs of depression, treatment (both pharmaceutical and therapeutic), theories on why someone might become depressive (maybe including evolutionary viewpoints), depression in childhood and adolescence, suicide, social stigma (political perspective), and what one can do to help a depressed individual.

Before I emailed Mr. Tinloy, I took out all my psychology books and skimmed over the depression sections of the text. They all pretty much went over the same things, so I thought I would give them a review of what I thought they already know. Mr. Tinloy emailed me back that I should plan on about 20 minutes and that I should talk about whatever I felt most comfortable talking about. I was kind of surprised that he did not give me more feedback on what he thought I should cover, because when I spoke to him the first time, it seemed like he would be more critical about what I would talk about, but he was pretty relaxed and carefree about the whole situation.

When I received his email and read 20 minutes, my first thought was, "Yes! Twenty minutes only! I can talk for 20 minutes!" One of my biggest fears is talking in front of a big group. I was afraid that if I were given more time I wouldn't know what to say. Then I looked at my outline and thought, "Uh oh! Revision!" I knew that I could not possibly fit in everything in 20 minutes. So I looked over my list, and decided to focus on the evolution of depression. That was a topic I did not see in neither my psychology textbooks nor in Simon's notes, so I thought something different might be more interesting.

I had originally planned on having overheads, so that all the attention would not be on me, but it was just my luck that Mr. Tinloy did not have an overhead projector. This made my talk even more of a challenge. I was terrified of the idea of standing in front of that classroom and talk for 20 whole minutes. I have given five-minute presentations in class before, and even five minutes was too long for me. I thought I was going to go into that classroom and freeze up. My nerves were definitely working against me.

Mr. Tinloy teaches two psychology classes, 2nd and 3rd period. I was supposed to come in at 9:20 am, the last twenty minutes of 2nd period, and stay for the first 20 minutes of 3rd period. I arrived to the class at 9:25 am, five minutes late. The class was watching a video on autism, schizophrenia, and other psychological disorders. When I entered the classroom, my heart was pumping like crazy. I was so nervous I literally forgot my whole talk. I think Mr. Tinloy sensed how nervous I was, because he asked me if I wanted to start with this class, or if I wanted to wait for the next class. It was up to me. I tried really hard to gather my thoughts and settle my nerves, but I could not. I started to worry that 15 minutes would not be enough time for me to get through everything. Then I worried about what I should and should not talk about with my time limit. The thought of turning off the television, which only half the class was paying attention to, and having their attention turned to me frightened me even more. I was not yet comfortable in the classroom. It was extremely intimidating. I was definitely not ready to speak. I would have only succeeded in making a fool of myself if I decided to speak. So I did what I had to do. I told Mr. Tinloy I will wait for the next class. (Yes, I chickened out!) But I am very glad I decided to wait for the next class. For those 15 minutes, I calmed myself down, and made myself more at home in the classroom. I sat on a high chair in front of the class, getting myself accustomed to being in front of a class. I showed Mr. Tinloy my notes, and he thought that the four evolutionary ideas were interesting. He saw that I had questions I wanted to ask the class, and pointed out that it was really important to engage the students in discussion with questions to keep their interest. So I sat there and reviewed my notes.

When the class ended, and students from 2nd period started to file out as 3rd period started to trickle in, I found it less intimidating to be in the classroom as the students one-by-one came into the classroom than to come into a room filled with students already. My friend, who had introduced me to Mr. Tinloy, was also there to give me some moral support. As the students started to come in, I counted five kids whom I actually knew. At first I thought that it was kind of cool to have them there, and that it would make it less scary. But then it made me a little more nervous, because they were people I knew. What if I gave a totally lame lecture? I would never hear the end of it! So I started to have all these mixed anxieties again.

When class began, Mr. Tinloy introduced me to the class, and the stage was all mine. Thirty or so pairs of eyes looked my way. I smiled, and pretended I was extremely confident, and that I gave talks all the time. I gave them a general definition of depression. The first question I asked them was, "Are you guys familiar with the DSM-IV? Do you guys know what it is?" Gosh, those two seconds of silence was deadly. No response at all. The crowd was dead before I even started! Very, very discouraging! Then someone said, "Yeah." Mr. Tinloy then told me that they kind of went over that. That was my cue to keep going. I read them the DSM-IV criteria for depression to kind of jog their memory a little. I then introduced the topic of my talk: Why depression?

To get them to start thinking about what I meant by "the evolution of depression" and why there is depression in modern society, I posed them with a few questions from Solomon's evolution chapter. Why would such an obviously unpleasant and essentially unproductive condition occur in so large a part of the population? What advantages could it ever have served? Could it simply be a defect in humanity? Why was it not selected out a long time ago? Why do particular symptoms tend to cluster? What is the relation between social and biological evolution of the disorder? Why do we have moods at all? Why do we have emotions? What exactly caused nature to select for despair and frustration and irritability, and to select for, relatively speaking, so little joy?

I pretty much read off these questions, and did not realize that I was reading them off too fast to actually al-

low them time to think about one before I rambled on to the next question. Mr. Tinloy helped me out a bit, and asked that I repeat the first question. So I reread the questions, one at a time, slowly, to allow for discussion if any one questions struck the students at all. Unfortunately, the students were pretty reluctant in participating in discussion. Mr. Tinloy seemed to be the only person interested in what I had to say, and he tried to answer some of the questions I posed, which in itself led me into the next portion of my talk—the four proposed answers to all those questions.

Even though the students were not very responsive, I found myself getting more comfortable talking. Mr. Tinloy was asking questions, and I actually knew the answers! I was so proud of myself for being able to answer his questions with confidence, which made me more confident. I knew more than I thought I knew!

So I went into each of the "proposed answers to the 'why'". I would read off one proposal (e.g. Depression served a purpose in evolution's prehuman times that it no longer serves.), and explain to them what it basically meant, and where such a proposal came from. One thing I feared going into the lecture was that I would be reading off my notes the whole time, and not look at the class, so I decided to go into the classroom with just my outline. I was also afraid that I would freeze up and have nothing to go on if I just had my notes. But I am extremely glad I didn't have everything all typed up, because it allowed me to talk more freely. It also made me seem like I know my stuff. =)

So after each explanation, I would allow for any questions anybody might have. Mr. Tinloy kept asking me question after question, and I kept answering all his questions. I was really enjoying the talk. It was as if we were having a private intellectual conversation. We touched on a lot of interesting things that I had not intended to talk about, so I was extremely glad I had read all those chapters closely! We talked about things from why more females are depressed than males to medication to positive illusion. It was also during this portion of the talk that a couple of the students were starting to participate, so I was really excited. One of the students asked about medication, and getting off medication, so I was really excited to inform them that the myth that getting better meant getting off medication is not true, and that for most people, staying better meant staying on the medication.

For the last portion of my talk, I had four passages from [Andrew] Solomon's hope chapter [in *The Noonday Demon*] that I wanted to read to them, that I thought were very powerful. I wanted to end the lecture on a good note, something they could go home and think about. When I looked at the time, I realized that I had talked too long, and resorted to only reading two of the passages. This portion of the talk seemed to get the most response from the class. I started off asking them what comes to mind when they think about a depressed person. They pretty much gave a similar answer to how Solomon had described it. So I went on to read the first passage:

Psychiatric illness often reveals the dreadful side of someone. It doesn't really make a whole new person. Sometimes the dreadful side is pathetic and needy and hungry, qualities that are sad but touching; sometimes the dreadful side is brutal and cruel. Illness brings to light the painful realities most people shroud in perfect darkness. Depression exaggerates character. In the long run, I think, it makes good people better; it makes bad people worse. It can destroy one's sense of proportion and give one paranoid fantasies and a sense of helplessness; but it is also a window into truth.

I was pleased to find that half the class is no longer falling asleep. They were giving what I said some thought. Some actually responded!

The first passage I skipped was about the interaction between illness and personality, and that a sense of humor and love gives hope. The second passage I skipped was the part about how you are your choices.

I ended the lecture with one last passage from Solomon's hope chapter:

Depression in its worst is the most horrifying loneliness, and from it I learnedâ€¦ So many people have asked what to do for depressed friends and relatives, and my answer is actually simple: blunt their isolation. Do it with cups of tea or with long talks or by sitting in a room nearby and staying silent or in whatever way suits the circumstances, but do that. And do it willingly.

After that, the class clapped, and Mr. Tinloy asked the class if there were any more questions for me. There were a few questions like "What year are you?" and "Are you going to be a psychologist?" but that was it. I was pretty surprised that nobody had any questions about Cal, but I guess those who planned to go to college already know where they are going, and have pretty much become familiar with all the info. When all was done, Mr. Tinloy thanked me for coming, and told me that I did a very good job and that I should come back to visit anytime I wanted.

I walked out of the class with a huge sigh of relief. I was so glad that it was over with. The one thing that surprised me the most was that I kept talking, quite freely, without relying on my notes too much, and for FORTY-FIVE MINUTES! I was also very thankful that Mr. Tinloy was there to guide me through the whole process, and was there to keep the lecture going. I was even more thankful that I was able to answer all the questions he fired at me, because I was afraid I would be unable to answer a question, and the students would look at me and think that I was a flake.

Overall, this was a very difficult, but rewarding experience. I was able to overcome my many fears, and talk! It feels very different being in front of a class, and not in the class, hiding in the crowd, like I tend to do. It did not surprise me much that I got the response I got from the class. Five years ago, I was in their shoes. Guest speakers meant a break from the regular class work, nothing more. Most of them have senioritis, and do not want to do anything anyways. Nevertheless, I went in there hoping for the best. It was very nerve-racking and intimidating at first, but it was not too bad. I was disappointed that I bored most of them to death, but very glad that I held the interest of Mr. Tinloy and at least two students the whole time. I was also very surprised that the students' interest rose toward the end of the talk. It actually turned out much better than I thought it would, at least on my part.

I later on asked my friend for her honest opinion about my talk. She said that my presentation was good, and that I didn't look nervous at all, and that I knew my stuff, but she was fighting to stay awake, because the topic did not interest her one bit. She is a business major, and had no idea what I was talking about. She thought I did a better job that she expected.

I also asked one of the students I knew from the class what she thought. She said pretty much the same thing, that I did a good job, but that it was boring because she wasn't all that interested in what I was talking about, but it got more interesting toward the end when other students started to talk. "Nobody likes guest speakers, so it's okay." I don't know what to make of that. Is that a good thing or a bad thing?

I have always found high school students a very intimidating group to work with, because they are on the verge of adulthood, yet not quite mature enough. I don't know if it is because of the high school that I went to, but I find that high school students think they are on top of the world, and that they know everything, so they tend not to listen to adults as much as kids or even other adults would. Students in high school are there because they have to be, so not everyone is there because they want to learn. That is why I have to agree with Solomon when he said that it is easier to talk to a room full of psychologists than it is to talk to a room full of high school kids. With a room full of psychologists, you at least know that they will be interested in hearing what you have to say. This whole experience reconfirms my decision to stick to teaching grade school kids after graduation. Third and fourth graders are more likely to listen to what I have to say, and they are shorter than me. However, seeing Mr. Tinloy interact with his students make it a little less scary to teach in a high school setting. Mr. Tinloy seems to have a very comfortable and

close relationship with all his students. It is that bond that he developed with his students that made them respect and listen to him. If ever I was to teach at a high school, I think I would definitely have to adapt Mr. Tinloy's style of teaching.

Have I changed as a result of this class project? In a way, I have. I learned that if I really wanted to, I could conquer my fear, and do what I have to do. Speaking in front of any kind of crowd has always made my heart pump like there is no tomorrow. Forcing myself to speak in front of a high school class made me realize it's not as bad as I thought it would be. As long as I can put my fear aside, and carry some confidence, I can talk forever! (Well, you know what I mean.) And the most important part of having that confidence is knowing your stuff! Being able to answer questions is the biggest confidence booster there is. I think I will use this as an example for future reference. I know that this will not be the last time I have to give some sort of presentation in front of a group, and it won't be the last time that my heart starts racing when I get in front of a crowd, but I will be able to remember this experience, and tell myself, "It's not that bad."

I was enormously impressed by this paper. Not only by the pragmatism and courage she had shown, but also by the realization that conventional college assignments, including mine, would never have revealed she had these strengths.

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Seth's blog » Blog Archive » Why I Don't Hire College Graduates (2007-10-31 03:33:57)  
[...] I Learned that if I Really Wanted To, I Could Conquer My Fear [...]

### **My Theory of Human Evolution (early value system) (2007-10-29 06:02)**

From a [1]review of [2]The Surgeons: Life and Death in a Top Heart Center by Charles Morris:

For better or for worse, the quality of health care is driven by what Morris calls an "artisanal" value system, one that has little to do with institutional allegiances or administrative management objectives, but rather with "internalized systems of ethics and the expectations of other professionals."

My theory of human evolution says it started with hobbies. Hobbyists became artisans. It hadn't occurred to me that an "artisanal" value system exists but what Morris says makes sense. Such a value system should be powerful, easy to spread, and hard to eliminate.

1. <http://www.nytimes.com/2007/10/28/books/review/Chen-t.html?ref=review>
2. <http://www.wwnorton.com/catalog/fall07/006562.htm>

## Taubes versus Kolata (2007-10-29 14:35)

Gary Taubes [1] responds to Gina Kolata's [2] review of Good Calories, Bad Calories. The [3] scientific article by Leibel et al. that Taubes and Kolata refer to.

Thanks to Dave Lull.

1. <http://www.nytimes.com/2007/10/28/books/review/Letters-t.html>

2. <http://query.nytimes.com/gst/fullpage.html?res=9C00E3D71139F934A35753C1A9619C8B63>

3. <http://www.ajcn.org/cgi/content/abstract/55/2/350>

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James (2007-10-29 16:41:52)

To me, Taubes missed another major flaw with citing Hirsch and Leibel – the study's minimum calorie proportion of carbs was 15 %, and all carbs were from celerose, which appears to be a form of glucose. So, if my math is right ( 9500kJ/d total \* .15 carbs / 16.7kJ/g = 85g carbs/d), even the "low carb" group was getting 3 ounces of straight glucose a day. I don't know the biology, but that seems like a lot of glucose; perhaps enough that higher doses would have no effect on the subjects.

David (2007-10-30 05:18:43)

I also find the Leibel et al. study of limited relevance because patients appear to have not been allowed to regulate their own food intake. Part of the reason low carb diets might work is that people who are sensitive to insulin are less hungry on them. There are several ways in which "a calorie is a calorie" as it is popularly understood might not hold.

James (2007-10-30 05:30:46)

I also think Taubes understands and believes in the set point concept – he cites the work of Sims and other related to set points – but he avoids "set point" because it's become a loaded term. Cabanac is right that there's widespread confusion between a set point and a reference, and, when it comes to obesity, Kolata and others have popularized the idea that set points are fixed and/or uncontrollable. Since Taubes' whole thesis is that permanent weight loss is possible, he implicitly agrees that set points are adjustable. What struck me when reading the book, particularly the description of how insulin drives hunger, is that SLD, at least in its oil form, is something of a stealth low-carb diet. The two-hour window around the oil essentially makes it a meal with a minimal insulin response, so one is guaranteed to be in a low-insulin state (no hunger, no carb cravings, etc.) once or twice a day. I also suspect that nearly all SLDers eat fewer carbs than they did before starting the oil. I have no idea how much of an effect this has, but I think it's worth considering that carb restriction might play a role in SLD.

seth (2007-10-30 05:51:26)

James, it turns out that Taubes does discuss the set point concept (pp. 427-428). He doesn't believe it ("the concept of a set point or a lipostat has little precedent in physiology"). When you do SLD by drinking sugar water, it is obviously not stealth low-carb. That the sugar water and flavorless oils produce roughly the same effect per calorie implies that carbohydrate reduction has nothing to do with the effect.

James (2007-10-30 07:36:17)

Professor Roberts, you're absolutely right, I'm confusing set-point-like local equilibria (which Taubes buys into) and a centrally controlled set point for adiposity (which I had forgotten was part of the SLD book). FWIW, my own self-experimentation has shown that sugar water is not as effective for me as oil when it comes to appetite suppression. (I really wanted sugar water to work, too – it would be much easier when travelling.) In fact, my first attempt with SLD was with sugar, and I had little AS in two weeks; a few months later, I tried the same number of oil calories, and started feeling the effects within days. To put this

in context, I started out quite heavy (365 lbs.) and I stopped eating refined carbs after starting oil-based SLD (it became very easy to do so), so I may be atypical.

Josh (2007-11-11 17:41:11)

I read Taubes' book awhile back and remember wondering about its relation to SLD. If I remember correctly, he dismisses the set-point theory, but goes on in the next few pages to discuss research linking an initial surge in insulin to the taste of food. I thought this actually dovetailed nicely with SLD, with low-flavor food diminishing the response/association. So maybe SLD isn't stealth low-carb, but is stealth low-insulin response. Admittedly, the sugar water is somewhat problematic for this hypothesis, but perhaps Dr. Roberts is right in thinking that sugar water that doesn't have other flavor is treated differently than sugar water with added flavor. In this case, the difference would be insulin response.

### **jobbook.org: up and running (2007-10-30 08:03)**

[1]jobbook.org, a website to help students choose careers, is up. [2]Aaron Swartz and I have been working on it for several months. We hope that it will eventually contain lots of first-hand information about jobs so that students (and anyone else) can learn what the jobs they are interested in are really like. Aaron has called it an "encyclopedia of jobs."

To decide what to do, Aaron and I visited several schools around the Bay Area. At San Francisco State, a nursing student said, "I'm a nursing major, but I barely know what nurses do." When I was in school, I could have said the same thing: By deciding to go to graduate school in experimental psychology I was choosing to become a "professor major" but I knew little about what professors did. Even as a graduate student I barely knew what they did. This reflects a truth about modern life: It is hard to learn what jobs are like. You can do an internship, but schools like UC Berkeley don't make that easy. And internships take a lot of time. The goal of jobbook.org is to provide the same information much more easily.

jobbook.org is a wiki – a Wikipedia-like website than anyone can edit. We hope that people on both sides – people with job knowledge and people who want job knowledge – will contribute.

If you have a job (any job!), we hope that you will offer to be interviewed about it. (To make that offer, just add your job, location, and contact info to the [3]home page.) You don't need to wait to be interviewed: You can simply describe an actual day of your job and add that description to the site.

If you are interested in learning about any job, we hope that you will request an interview. (To make that request, just add the job and your contact info to the [4]home page.)

We hope that these offers and requests will produce interview transcripts that will be added to the site. If you know of a helpful link (such as a book or magazine article), we hope you will add it.

Last night, there was a meeting for interested students in the Channing-Bowditch (a Cal dorm) lounge. I expected no one to show up. Four people did. Next meeting: next Monday (Nov 5), same place, see home page for details.

Sabine Alam, Khoi Lam, and Michelle Nguyen are the Advisory Board who have been giving Aaron and me sage advice. Thanks to them.

1. <http://jobbook.org/>

2. <http://www.aaronsw.com/>

3. <http://jobbook.org/>

4. <http://jobbook.org/>

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Charlie (2007-10-30 12:03:59)

Hi Seth! This is why there was no point to us doing things stealth... because if you we have a good idea, chances are, there are some smart people who are thinking about it at the exact same time... .and... here you are! Someone just left a comment about what you're up to on our blog... <http://blog.path101.com>. We're building a company around exactly what you've come to... that students, and really many other people, simply don't know what's out there to be done. Would love to chat sometime and see if there's a way to work together.

lasser11 (2007-10-30 20:53:00)

great idea. college students need to be more proactive in finding their career. But it is understandable why young people feel less urgent in finding a career now in comparison to 30 years ago. it has to do with the job market being more fluid and less receptive to college grads in their 20's. All of this ties into the growing inequality debate. Businesses are finding it much easier to reward their more productive employees, which is likely to be baby boomers with mba's and years of experience. businesses simply find it less financially rewarding to invest money into 25 year olds. so college students have less incentive to quickly find a career more now then 30 years ago. And this encourages college grads in their 20's to experiment more in different job fields.

lasser11 (2007-10-30 21:09:32)

I don't know if I was clear. personally, I chose a career path right out of college. And to be honest, I don't think I'm making too much more money than my friends who experimented in different job fields. bottom line: I can't wait for the baby boomers to retire to open up some upper level positions.

News » 2007 Review of Projects (2008-02-22 23:28:07)

[...] JobBook: Intermediate. An initial site is launched but I have not spent a lot of time on it nor is it progressing rapidly. Other people are pursuing it, though, so I feel less pressure. [...]

## **Why I Don't Hire College Graduates (2007-10-31 03:33)**

A 1924 magazine article called "[1]Why I Never Hire Brilliant Men" contains this:

Every year I picked up a half-dozen live young fellows who seemed to have a capacity for hard work, and shoved them in at the bottom of the pile, letting them make their way up to the better air and sunlight at the top - if they had it in them to do it. For a time I tried picking these youngsters out of the colleges. But my experience with college men was not fortunate. If I selected good students, I found too often that their leadership had been won by doing very well what their teachers had laid out for them. They had developed a fine capacity for taking orders, but not much initiative.

The notion of not hiring college grads now seems absurd, perhaps because the fraction of people who go to college has gone way up. But it's hard to believe that the selection pressures operating within colleges have changed. College professors are still a tiny fraction of the population.



I came across this magazine article randomly browsing but this quote is another way of saying what two of my recent posts – my student's [2]term project about overcoming stage fright, and [3]about [4]jobbook.org – were about. If most people must spend four years in a place (college) where those in charge (professors) value only a small fraction of their abilities, a lot is lost.

1. <http://taoyue.com/stacks/articles/brilliant-men.html>
2. <http://www.blog.sethroberts.net/2007/10/28/i-learned-that-if-i-really-wanted-to-i-could-conquer-my-fear/>
3. <http://www.blog.sethroberts.net/2007/10/30/jobbookorg-up-and-running/>
4. <http://jobbook.org/>

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Pearl (2007-10-31 04:29:07)

This is really quite interesting; actually I think it was this type of mindset that caused a number of my family members to be quite opposed to me spending money on a college education, particularly one in music. Whereas most of my peers in the music school couldn't fathom their parents not having supported them the entire way through their musical upbringing. My family is mostly comprised of self-made men who never got college educations; a local politician, a self-taught plumber, and a military senior-master sergeant. It sounded absurd to them for me to invest in a college career, which would have caused me to go against everything I had learned in high school about having a career. It is curious to me why a college degree is so important now as opposed to then. I couldn't have gotten this cushy English teaching job if I hadn't had one because what are you if you haven't got a paper to prove you're something? Of course the tragic thing is that classical music has gone so downhill in America, that most of my generation are chasing a hell of a lot of pipe dreams. The only way to get a job now is to be willing to move anywhere in the world, preferably Europe where musicians are government-paid and receive great benefits.

Bob (2007-10-31 07:40:54)

I wish I hadn't gone to college & grad school.

Chris (2007-10-31 12:45:17)

A B.A. in the 1920s would be equivalent to an advanced degree today - at least in terms of status. I'm sure you can imagine someone preferring to hire B.A.s/B.Sc.s rather than grad students. They may or may not be brighter than the grad student, but they've opted to join the workforce earlier rather than later, which may suggest something about their character. A fair number of very bright, original thinkers don't have university degrees: think Robert Fulford and, oh yes, Jane Jacobs. That's going back a bit, mind you. I wonder if, nowadays, Jacobs could make a career with just a highschool diploma. Maybe: she worked her way up as a freelance journalist, and in journalism, as in sales, you're judged on what you produce, not on what your credentials say you ought to be able to produce. (J-schools have corrupted high-end journalism to some degree, especially in your country, I'm afraid.) "Fortunately my high school marks had been so bad that Barnard [College] decided I could not belong to it and I was therefore allowed to continue getting an education."

Chris (2007-10-31 12:46:40)

That last paragraph was an irresistible quote from Jacobs.

Mia (2007-10-31 15:06:38)

In response to the final line of this blog entry: "If most people must spend four years in a place (college) where those in charge (professors) value only a small fraction of their abilities, a lot is lost." It just strikes me odd that the writer thinks that professors are in charge. If I had believed that, college would have been hideous. As it was, I thought the whole thing was fun. Especially amusing: assignments. You can learn without being obedient. Silly rabbit.

Pearl (2007-10-31 20:26:57)

If professors are not in charge, who are you proposing is in charge?

### **Omega-3 and Dementia (2007-10-31 12:52)**

A [1]new study has found that older people with less omega-3 in their blood are more likely to suffer from dementia. The study involved about 1000 persons 65 or older randomly sampled from two Italian towns. They were given mental tests and divided into three groups: no cognitive impairment; cognitive impairment but not demented; and demented. In addition, their blood was measured. Worse mental function was more strongly associated with total omega-3 fatty acids ( $p = .01$ ) than any of the other fatty acid measures.

One more reason to think that consuming more omega-3 might improve your brain function.

1. <http://biomed.gerontologyjournals.org/cgi/content/abstract/62/10/1120>

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Joanna (2007-11-01 08:26:11)

This is another good reason to take Fish Oil or Flaxseed oil daily.

Dennis (2007-11-01 09:55:26)

Do we know that taking supplements results in higher levels of omega-3 in the blood?

Dennis (2007-11-01 09:56:07)

And is there some threshold effect, where if your blood levels are above X then adding more Omega 3 does not help?

peter (2007-11-01 19:34:49)

the study emphasizes the deficiency of alpha-linolenic acid levels in people with dementia. Flax seed oil is especially high in alpha-linolenic acid. the benefit of fish oil is that it is higher in DHA. as i recall it ALA can be converted into DHA, but it takes a lot to produce a relatively small amount of DHA.

Lancaster (2007-11-02 11:38:24)

Positive omega-3 story from NPR. Also an explanation (at the end of the audio version) why there's no mercury in fish oil supplements (it's refined and distilled). <http://www.npr.org/templates/story/story.php?storyId=15823852>

## **2.11 November**

### **Mark Todd, the Cheese Dude, on Gourmet Food Business (2007-11-01 17:14)**

[1]Mark Todd (thecheesedude at aol dot com) is a cheese expert who lives near the Russian River. Today he was in a local store demoing a cheese ([2]Chiantino) that [3]he and his business partner import from Germany. We had a long and utterly fascinating conversation. He has met most of the chefs who appear on the Food Network. His favs:

The best cook: Jacques Pepin "hands down".

The most knowledgeable food expert: [4]Alton Brown. "He knows ten times more than all the rest of them put together."

How did he become a cheese expert, I asked. "Persistence," he said.

The details of that persistence were not what I expected. When he was 30, his dad, who was 58, died of a massive heart attack. At the time, he was a lawyer. He hated it. What do I really want to do? he wondered. Something with food. He and his wife moved from crowded Palo Alto to near the Russian River. At a food event in the months that followed, he met someone who was paid to carve cheese. Wow, you can get paid for that, he thought. He asked the guy if he needed help. No, he didn't. He and his wife hung out with the guy and his girlfriend. Several months later, the guy told him he needed help at an upcoming event in Monterey. He went down and helped and was paid \$500/day in addition to free hotel for him and his wife and conference admission (usually \$750). After the conference, he contacted the guy's boss. "I want to do this," he said. "What do you know about cheese?" he was asked. "Nothing," he said. "Well, then you're no use to us," he was told. Two weeks later he called the boss again. "I've read four books about cheese," he said. "Do you have any work for me?" No, he was told. "I really want to do this," he said. He called the next day. And the next day. And the next day. And the next day. And the next day. Finally the boss said, "I get it. You really want to do this." And he was hired for six figures a year to go here and there and talk about cheese. Now he works for many cheese organizations. Next week he's going to China to teach them about California cheeses.

I told him I was interested in how people come to appreciate "fine" food. Exposure, he said. "Are some exposures more powerful than others?" I asked. "Peer exposure," he said. When he was a sophomore in college (at Cal Poly, San Luis Obispo), he didn't like beer. He decided he wanted to learn about wine. One of his roommates had been to Napa and come back with notes. Teach me about wine, he said to his roommate. It takes time, his roommate said. They decided that Wednesday would be Wine Night. Every Wednesday for the next two years, he, his roommate, and another guy went to Safeway and bought three versions of the same varietal - e.g., three Chardonnays. Then they did blind tastings. His palate became better than most of the guys in the wine business, he said. Side-by-side tastings are crucial, he said. If you taste 500 cheeses on 500 different days, you won't know much. But if you taste those cheeses side by side, you'll learn a lot.

As wallpaper patterns, store displays, and millions of graphic designs reveal, we like to see similar things side by side. I have blogged [5]here, [6]here, and [7]here about side-by-side comparisons and human evolution.

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1. [http://www.beyondwonderful.com/experts/cheese/content\\_cheese.htm](http://www.beyondwonderful.com/experts/cheese/content_cheese.htm)

2. [http://www.fondofoods.com/download/SF\\_Chronicle\\_9\\_21\\_070001.pdf](http://www.fondofoods.com/download/SF_Chronicle_9_21_070001.pdf)

3. <http://www.fondofoods.com/>

4. <http://www.altonbrown.com/>

5. <http://www.blog.sethroberts.net/2007/05/09/my-theory-of-human-evolution-american-idol-edition/>

6. <http://www.blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-music-video-edition/>

7. <http://www.blog.sethroberts.net/2007/07/10/my-theory-of-human-evolution-diet-soda-edition/>

Cheese Articles » Blog Archive » Mark Todd, the Cheese Dude, on Gourmet Food Business (2007-11-02 09:18:26)  
[...] Original post by seth [...]

frontblink » Mark Todd, the Cheese Dude, on Gourmet Food Business (2007-11-10 03:48:16)  
[...] You can read the full story here [...]

Valley Ford Cheese Co. (2009-07-05 17:06:13)

Looking for Mark Todds email. Would like him to sample a new cheese made locally in Valley Ford, California.

seth (2009-07-05 18:35:47)  
His email address is given above.

## **The Preposterous Files (2007-11-02 04:37)**

The BBC has a most intriguing radio show (on Radio 4) that they are curiously hiding from potential listeners. It is called "[1]The Preposterous Files" and is about "cases that show up Civil Service bureaucracy." It was on their [2]Listen Again page yesterday but was taken off yesterday. Its Listen Again button (pre-disappearance) replayed a segment about fiddling, alas.

So far there have been 5 shows. Perhaps that's all there will ever be. (How unfortunate!) Here are their topics (taken from the show's [3]archives):

1. Deciding on the design, location and function of the police telephone box proved a dauntingly complex process. One difficulty was that most of the public had never used a telephone.
2. In 1900, the North of England press began to report a mysterious epidemic that was affecting thousands of beer drinkers. The medical profession declared that it was an outbreak of peripheral neuritis provoked by excessive alcohol consumption, but a sceptical chemist, working alone from a makeshift laboratory, thought otherwise.
3. In 1912, cost-conscious HM Customs replaced Falmouth's steam launch with a former sailing boat fitted with an auxiliary motor. Unfortunately, the motor proved unable to cope with the strong currents off the Cornish coast.
4. In 1954, stevedores reported finding an unconscious young man on board a Polish ship berthed at Bermondsey Docks. Was he an asylum seeker or a stowaway?
5. The transcript of the court martial of Flying Officer DR Kenyon, who retracted his plane's undercarriage whilst still standing on the runway prior to taking off for a bombing mission during the 1956 Suez crisis, makes extraordinary reading.

1. <http://www.bbc.co.uk/radio4/thepreposterousfiles/>
2. <http://www.bbc.co.uk/radio4/progs/listenagain.shtml>
3. <http://www.bbc.co.uk/radio4/thepreposterousfiles/pip/archive/>

Ben (2007-11-02 05:32:06)

Use this link for the latest show: [http://www.bbc.co.uk/radio/aod/radio4\\_aod.shtml?radio4/preposterousfiles](http://www.bbc.co.uk/radio/aod/radio4_aod.shtml?radio4/preposterousfiles)

seth (2007-11-02 05:51:17)

Thanks, Ben. When I go to that link I get the same wrong program I got yesterday – Highland Hip, a segment about "young musicians with new takes on traditional music." Pretty interesting, I admit.

Matthew Henty (2007-11-03 17:30:55)

Seth, It could be because the BBC listen again facility is often limited to seven days only, or just the most recent show. Quite annoying! Q & A here: <http://www.bbc.co.uk/radio4/help/index.shtml#question2>

## **Is Nutrition a Science? (2007-11-02 21:15)**

In [1] John Tierney's blog, Gary Taubes is very critical of nutrition researchers:

The last place you want a science to find itself is where obesity research is today, with hypotheses of causation that can explain none of the pertinent observations, but yet are believed so fervently that no one can challenge them without being ostracized or declared a quack.

Fair enough. But Taubes (and Tierney) make the usual mistake of being too critical and not enough appreciative. I figured the real wisdom would be in the comments, and I was not disappointed. Taubes thought physics functioned better than nutrition. One comment:

It's not that the scientists [in physics and nutrition] are any more or less skeptical, or that it takes any longer for the truth to emerge, it's that the public is more likely to be paying attention [to nutrition] in the meantime. And human beings as a group are extremely bad at reasoning under uncertainty.

Quite right. If Taubes and Tierney have trouble seeing the big picture (although Good Calories Bad Calories is a big-picture book) surely most people, and other journalists, do much worse. Another comment:

People like the old "correlation does not equal causation" slogan, but it's not correct to translate that as "correlations are completely uninformative,"

Well put. (I [2]blogged about this.) My favorite comment, however, was not wise:

Tierney stresses the errors and biases of nutrition science - but what of its successes? [Good start.] . . . As Tierney surely knows, there is a solid body of research that cumulatively demonstrates the positive effects of a balanced diet, lots of fresh fruit and veggies, avoidance of saturated fats, moderate consumption of calories and regular exercise. This is common sense, and science backs it up.

The history of nutrition teaches the opposite. The most helpful findings have not been "common sense". Folate supplementation greatly reduced birth defects. Not common sense. Eat oranges to cure scurvy: Not common sense. Pellagra due to nutrition rather than infection: Not common sense. The whole notion of vitamins: Not common sense (deficiency diseases were attributed to poisons). "Common sense" approaches to losing weight, such as "moderate calorie intake": Failed miserably.

It's true that [3]traditional foodways often turn out to be very healthy, but they can't be called "common sense" because they vary so much from one place to another.

Thanks to Dave Lull and Tim Beneke.

1. <http://tierneylab.blogs.nytimes.com/2007/11/01/is-nutrition-science-not-really-science/>
2. <http://www.blog.sethroberts.net/2007/02/10/what-should-correlation-does-not-imply-causation-be-replaced-with/>
3. <http://www.westonaprice.org/>

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James (2007-11-03 05:59:45)

Well said. I see two problems with nutrition research: \* No hope of doing truly controlled experiments in humans. Yes, correlation tells us something, but it would be really nice to be able to say effect X happened because people ate more or less Y (for various values of Y – saturated fat, carbohydrates, etc.). In physics, an experiment can show which of two conflicting theories is correct, but similar experiments in nutrition are infeasible because you aren't allowed to totally control a person's food intake and see the long-term results. \* Terribly muddled communication with the general population. I've had "informed" people tell me that cane sugar is a "good for you" whole grain and that frozen vegetables are "bad for you". The relentless focus on marginal optimization and fringe beliefs has caused people to miss the fairly uncontroversial big picture. Many different diet plans (including SLD and even the later phases of Atkins) can be made to fit with the "conventional wisdom" of [1]Willett's food pyramid.

1. <http://www.hsph.harvard.edu/nutritionsource/pyramids.html>

seth (2007-11-04 12:30:49)

I agree. Except you can do well-controlled experiments when a nutrient affects the brain because you can maintain control for a short period of time and the brain reacts rapidly. My omega-3 research is all about that.

## **Better Nutrition, Better Behavior (2007-11-03 05:28)**

[1]Here is an abstract of an enormously interesting and already famous 2002 study of the effect of better nutrition on the behavior of prison inmates. The supplements included omega-3 fats.

The study was very innovative and no doubt extremely difficult. About as far from studying lab rats or college students as you can get. Here are the key results:

Those who received the active capsules committed on average 11.8 infringements per 1000 person-days, a reduction of 26.3 % (95 % CI 8.3-44.3 %) compared to those who received placebos. This difference between groups was statistically significant at  $P < 0.03$  (two-tailed).

In spite of a huge effect – huge at least in practical terms – the statistical significance was marginal. There isn't anything wrong with that, it indicates that we need a way of studying these very important issues that isn't incredibly hard. Of course the "easy" method will be "deficient" (according to overly critical critics) in a dozen ways; that's the price you pay. The authors of this article don't entirely understand this point. "Further investigations should include assessments of nutritional status from blood before and during supplementation," they write. Uh, no, you don't always follow a very difficult thing by trying to do an even more difficult thing.

Nothing is said about the difficulty of the study, which is extremely important, in this report. The difficulty of a scientific study is always important but almost always goes unmentioned in scientific articles. If you (the reader) have done similar studies you can guess okay but with an innovative study like this few readers could have any clear idea.

1. <http://bjp.rcpsych.org/cgi/content/abstract/181/1/22>

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Seth's blog » Blog Archive » Omega-3 Greatest Hits (2007-11-06 15:38:25)  
[...] Better Nutrition, Better Behavior [...]

## **Omega-3 Without Fish (2007-11-03 18:07)**

[1]Here is a very important omega-3 paper, titled "High Omega-3 Essential Fatty Acid Status in Nigerians and Low Status in Minnesotans," that a reader named Melissa linked to in the [2]comments. It shows you can have much more omega-3 in your blood than Americans even if you don't eat fish.

Rural and urban Nigerians had similar omega-3 levels. Here's what they eat:

The major carbohydrate-rich staples are the starchy tubers such as yams, cocoa-yams and cassava, the cereals rice and maize, and minor foods such as plantains and bananas. The major protein staples include legumes such as beans and pulses, seeds, nuts, cereal proteins and leaf proteins, some of which are rich in 18:3w3. Animal protein sources such as milk and eggs are virtually nil for rural communities, and are very limited for the urban population. Meats and fish . . . are in limited supply. Crayfish and dried fish are important but cost constraints limit intake.

The effect:

Nigerians have more than twice as much essential w3 EFA in their plasma lipids as do Minnesotans.

There was a negative correlation between blood levels of omega-3 and blood levels of omega-6. Perhaps raising omega-6 levels lowers omega-3 levels, even when the amount of omega-3 in the diet is constant. The theoretical mechanism is competition for the same enzyme. I haven't yet studied this via self-experimentation; I will.

Thanks, Melissa.

1. <http://www.epress.com/w3jbio/vol2/holman/holman.html>
2. <http://www.blog.sethroberts.net/2007/07/14/omega-3-i-can-see-for-myself/>

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Dennis Mangan (2007-11-03 21:38:57)

Interesting: the Nigerians are eating a very low-fat, high-fiber diet, just what Taubes thinks is all wrong.

seth (2007-11-03 21:51:47)

Taubes dislikes refined carbohydrates, such as bread and sugar. I don't think he dislikes high fiber foods.

James (2007-11-04 05:54:21)

I don't think the article mentions relative macronutrient intake, so it's hard to know what to make of most dietary fat being in the form of palm oil, which is high in saturated fat and has a [1]45:1 omega 6:omega 3 ratio.

1. <http://www.nutritiondata.com/facts-C00001-01c208E.html>

## **New Evidence for the Aquatic Ape Theory (2007-11-04 05:31)**

When I watched [1]Planet Earth, I was impressed that the most successful aquatic animals were mammals (whales and dolphins). Fish had had a huge head start. Mammals such as whales and dolphins had moved back into the water after long evolution on land. Something promoted by terrestrial evolution allowed them to dominate their new world. That "something" is probably learning ability, although research on whale learning has yet to be done.

This is one reason the aquatic ape theory of human evolution makes sense. Judging from whales and dolphins, a little brain power can go a long way. Early humans had not only brains but hands. The combination made sea creatures extremely vulnerable. The threat was so flexible and different than previous threats they couldn't tweak a few genes and escape. To take advantage of this new food source, humans had to wade into the water – the presumed initial reason (by those who believe in the aquatic ape theory) for bipedality.

Anthropologists at Arizona State [2]recently reported evidence that early humans did indeed live on coastlines, with



ready access to fish and shellfish. Other researchers had found evidence of this as early as 120,000 years ago; the new evidence pushes the date of earliest coastline habitation even earlier, to about 160,000 years ago.

“We also found what archaeologists call bladelets “ little blades less than 10 millimeters in width, about the size of your little finger,” [one of the anthropologists] says. “These could be attached to the end of a stick to form a point for a spear, or lined up like barbs on a dart “ which shows they were already using complex compound tools.”

If you have watched Survivor, you will remember tools much like that being used to catch fish.

Thanks to Michael Vassar.

1. <http://www.blog.sethroberts.net/2007/08/10/my-theory-of-human-evolution-planet-earth-edition/>
2. [http://www.eurekalert.org/pub\\_releases/2007-10/asu-rfe101207.php](http://www.eurekalert.org/pub_releases/2007-10/asu-rfe101207.php)

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new evidence in favor of the (exceedingly awesome) aquatic ape theory « Onwards and Forwards (2007-11-04 06:39:24)  
[...] new evidence in favor of the (exceedingly awesome) aquatic ape theory Filed under: evolution, science — eenauk @ 14:39  
Ok this has nothing to do with ethics or religion, but i'm a big fan of the aquatic ape theory. Seth points us to new evidence from the University of Arizona that our ancestors were coaxed by watery ways into the beginnings of human evolution. [...]

Varangy (2007-11-06 13:52:18)

*When I watched Planet Earth, I was impressed that the most **successful** aquatic animals were mammals (whales and dolphins). Fish had had a huge head start. Mammals such as whales and dolphins had moved back into the water after long evolution on land. Something promoted by terrestrial evolution allowed them to **dominate** their new world. That “something” is probably learning ability, although research on whale learning has yet to be done. I think you are subjectively anthropomorphizing. Define what you mean by *successful* and *dominate*. It is not clear to me.*

Marc Verhaegen (2007-12-30 17:35:30)

For recent discussions & links on AAT, please go to <http://groups.yahoo.com/group/AAT> or google “aquarborneal”.

seth (2007-12-31 17:43:43)

Whales dominate in the sense that they are huge and eat others but are not themselves eaten. Top of the food chain, in other words. Similar for dolphins. They eat a vast number of fish that cannot eat them.

## Improving SLD (2007-11-04 11:47)

John Tukey once said that a good way to have new ideas is to tell others the ones you have already. This was part of why I wrote The Shangri-La Diet: It would be much easier to get better ideas about weight loss if I told people the ones I already had. Call it open source weight control.

I think it's working. In the SLD forums, Sean Curley, who tried SLD before the book (thanks, Levitt & Dubner!), made this [1]brilliant post:

Two years ago (before the book came out), I lost about 27 lbs on SLD, using fructose water. In hindsight, I probably lost too much weight going from 183 lbs to 155 lbs (I'm male, 6' 1"). I stopped doing what had worked, and got sloppy about SLD in general, and put most – but not all – of it back on over the course of a year or so. So, now I'm doing it again, but having read about how hepatotoxic and lipogenic fructose is, started doing oil instead – ELOO, Walnut Oil and Canola, usually mixed in equal parts, and usually not breathing through my nose when I drink it to avoid any flavor at all.

My MO, historically, and what worked well for me, was doing – don't gasp – 750 calories/day of SW (previously) and then oil (more recently). Both worked well, although truth be told, I think SW worked even better. Because of my concerns about fructose, and sugar in general, that's not really an option for me anymore. My one concern about SLD has always been, am I replacing too many regular, "nutritious" calories with calories that aren't? (Although I am aware of the healthy benefits of the oils.) I have tried various protein powders – whey, rice, and some soy – with noseclips followed by a mouth rinse, but haven't had good AS with that (maybe negative AS, actually). Not sure if it's too much residual flavor, too "simple" in its form, but for whatever reason, they just didn't work well for me. Also tried Tim Beneke's flavorless mush balls, but too much of a hassle, and just a little awkward for me.

I've always wondered if "real" protein in some flavorless, non-processed form wouldn't be even more effective, but for some reason, I never got around to trying it until three weeks ago. I thought that eating full-fatted cottage cheese, which is very high in protein, and pretty bland, with noseclips on, might be worth a try. And, wow, did it work! My approach to SLD has always been to have the first 750 cals of my day as flavorless, going to dinner time on nothing but flavorless calories – as needed, in 50 calorie "doses" (oil or SW), and then allowing myself to eat whatever I wanted after that. But, it usually took 750 calories to get me there, sometimes a little less, but not usually. So, 750 flavorless calories was my "benchmark."

The first day I tried the nose-clipped cottage cheese, It took only 420 calories to get to dinner time, with a MUCH greater feeling of fullness and AS than I had ever experienced on SLD. That effect has held consistent for the last two or three weeks, sometimes needing as few as 360 cals to dinner, but never more the 560, although usually 425 is the number. That's a substantial reduction (43 %) in the number of flavorless calories required to get the same (probably better, actually) AS effect. Then, two days ago, I thought: I wonder how bland, plain chicken breast meat would work? (again with noseclips). The answer, after two days, appears to be even more effective –more on the order of 360 calories required to get the same effect.

In both cases, I use nose clips, and typically eat about 60 cals at a time, as needed for hunger, AND I rinse my mouth out two or three times before I take the noseclips off to wash out any residual flavor.

For me the effect of going from oil to flavorless "real" protein has been as remarkable as the effect I got from going from pre-SLD to SLD originally.

As I posted there, the theory behind SLD is all about regulation of energy storage. You want to store neither too little nor too much – and you want to store more when food is cheap. But food is more than energy. It is also building blocks. Which means protein, mostly. So it is quite plausible that there is a whole regulatory system designed to get the right amount of protein. Sean's observations suggest exactly that.

Besides the conceptual plausibility the details of the new method are excellent:

1. The raw materials (cottage cheese and chicken meat) are readily available and easy to eat.
2. The notion of eating the first calories of the day flavorless and then anything for dinner matches what's clear about self-control: We have a lot more earlier in the day. This method uses self-control when it is plentiful and not when it is scarce.

I'm not going to stop drinking flaxseed oil (nose-clipped). But I am going to try adding chicken meat (nose-clipped).

1. <http://boards.sethroberts.net/index.php?topic=5800.0>

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Claire Bickell (2007-11-04 15:24:10)

Catalyst reported on research suggesting that protein is a key factor in how much we eat. I found it interesting and it made me wonder how such research might integrate with set point theory. [http://www.abc.net.au/catalyst/stories/s\\_2069308.htm](http://www.abc.net.au/catalyst/stories/s_2069308.htm)

John (2007-11-04 15:44:27)

Very cool post. Instead of salting my morning eggs, I'm going to try eating them unseasoned with my nose clipped.

SusanJ (2007-11-05 11:22:11)

Is this guy eating a mouthful of cottage cheese seven times a day? I thought with SLD you should only have to take the flavorless calories once. It sounds more like he's getting AS by keeping his blood sugar under control rather than how SLD supposedly works.

SFC (2007-11-05 14:37:36)

Yes, that is what I am doing. That has been my MO all along with SLD, even when doing oil or sugar water . . . using it throughout the day as opposed to just one or two times a day. What's interesting to me, though, is how much more effective the cottage cheese and chicken are than just the oil or sugar water.

LemmusLemmus (2007-11-06 09:14:39)

"The notion of eating the first calories of the day flavorless and then anything for dinner matches what's clear about self-control: We have a lot more earlier in the day." Quite a claim. Do you have a cite for the assertion that self-control is easier in the morning (preferably controlling for alcohol consumption).

seth (2007-11-06 12:36:49)

No, no citation. I've noticed it in myself and others – unprompted – have said the same thing. One documented assertion, although I can't give you a reference, is that people eat a large fraction of their calories in the evening. That seems to be when dietary control breaks down.

Patri Friedman (2007-11-12 17:54:49)

Hi. My experience w/ SLD was that the effectiveness of any source of calories decreased over time, presumably because I got enough flavor to develop some association. This theory seems to fit Sean's case, and is an alternative to the hypothesis that cottage cheese or chicken are any more efficient than oil for SLD. That said, nose clips + washing mouth out with water is more than I have ever tried, so I will try that and see if I get a slower efficiency decay. On a totally different note - Hey Seth, have you tested / written much about using fish oil for SLD to get maximum omega-3s? I've been using Carlson's fish oil on and off, figuring that whether or not it works for SLD (due to having noticeable flavor) I'm getting tons of omega-3s. I'm also curious whether there is such a thing as "too much" omega 3. For the outcomes you self-study, at what dose does the response taper

off? How much becomes dangerous due to too little clotting?

seth (2007-11-12 19:37:37)

I don't think sugar water has any flavor at all. And its effectiveness did not noticeably decline over the three years I used it. I've haven't tried using fish oil for SLD. I tried different amounts of flaxseed oil and found that while 3 tablespoons/day was clearly better than 2 T/day, 4 T/day was not clearly better than 3 T/day. Now I do 4 T/day to be on the safe side. I'm assuming what's close to optimal for the brain will be close to optimal for the rest of the body – because the whole structure was shaped with the same amount of omega-3 in the blood.

Igor Carron (2007-11-14 15:59:45)

Seth: How would this product fit into your SL theories ? <http://www.graphicology.com/blog/2007/11/12/131-ad-of-the-week-buckleys.html> Igor.

### **Omega-3 and Snake Oil (2007-11-04 16:45)**

Julia Powell, the inspired [1]Julia/Julia blogger (the first blog to be made into a movie), wrote in the [2]Washington Post she was "almost 95 percent sure that Seth Roberts, author of THE SHANGRI-LA DIET: The No Hunger, Eat Anything Weight-Loss Plan (Putnam, \$19.95), is a snake-oil salesman." Almost 95 %?

How about [3]100 %? Snake oil, it turns out, is [4]high in omega-3.

Recently in Japan, a group of scientists at the Japanese National Food Research Institute led by Nobuya Shirai turned their attention to snake oil . . . Shirai and his team evaluated the effects of Erabu sea-snake oil on a number of outcomes in mice, including maze-learning ability and swimming endurance. In both cases, snake oil significantly improved the ability of the mice in comparison with those fed lard. . . .The original Chinese purveyors of snake oil offered something that probably did exactly what they claimed it would do: help fellow workers relieve the pain of their labors.

Thanks to [5]Tucker Max.

1. <http://blogs.salon.com/0001399/>

2. <http://www.washingtonpost.com/wp-dyn/content/article/2006/08/10/AR2006081001651.html>

3. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

4. <http://www.sciam.com/article.cfm?chanID=sa029&articleID=F7B4BAF7-E7F2-99DF-3870FFECA70C38C9&pageNumber=2&catID=9>

5. <http://www.tuckermax.com/>

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Tom (2007-11-06 06:25:31)

A discussion of the various memes is the closest nutrition writing gets to experimentation, but tipping your hat to meta doesn't mean you know anything about what's true. A sneer isn't science. God forbid she should try it, even once, before mocking it!

## Google vs Yahoo: Scientific Implications (2007-11-05 06:09)

[1]Google vs Yahoo over several years. A fable for scientists. Yahoo is worth countless billions of dollars less than Google, in spite of a big head start. The moral: methodological complications, always seen as "improvements", have a price. The benefit of a more complex experiment is easy to see, while the increase in cost (difficulty) usually goes unremarked.

My usual comment on proposed research is that an easier experiment – often smaller, often less "well-controlled" – would be better. I seem to be the only person who says this, yet I say it all the time.

1. <http://www.codinghorror.com/blog/images/yahoo-vs-google-1996-to-2005.png>

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Mike Kenny (2007-11-05 08:42:34)

Is there a means one could come up with to help get a sense of the likelihood of any given self experiment working, or having good results? Maybe self experimenters on average deviate from later more reliable, but presumably more costly, studies by x percentage points, so when you're doing your particular self experiment, you say, "Well, self experimenters tend to have exaggerated figures on average, by x percent compared to later more reliable findings, so I can account for that," and you account for that by trying to get even greater findings. You perhaps say, "Well, x percent of generalizations from a sample of one are off by x percent compared to later more reliable studies, so I'll account for that too," and you expand your sample to a few friends to decrease the variation. You then say, "Well, small, non-random sample tends to deviate from large random samples by x percent on average, so I'll try to focus on findings that are large enough to be larger than the average deviation." Would this approach be useful (does such information exist about large randomized sample studies compared to self experimentation)? I'm not terribly knowledgeable about probability and statistics. This approach does seem to be in keeping with your idea of making your findings as pronounced as possible. I'd love to hear your thoughts and perhaps you can clear up misconceptions I have if you're so inclined.

seth (2007-11-05 10:11:40)

"good results" would be learning something you wouldn't know otherwise. It is hard to imagine that not happening. Usually the alternative to self-experimentation is doing nothing. as for getting "wrong" results, you have to look long and hard through the history of science to find cases where the results of self-experimentation were misleading; it doesn't take long at all to find cases where they pointed in the correct direction.

Mike Kenny (2007-11-05 10:59:59)

I guess what I'm wondering is what kind of generalizations can we feel comfortable making about self experimentation, and what biases should perhaps be controlled for when looking at our data? I think it makes sense to self experiment, and in an informal way I think we all do it, and it seems your formal approach is way better than the informal self experimentation. I'd just like to have a sense of what reasonable inferences we can draw from the facts we've uncovered via self experimentation. For example, if I were to observe that my pulse is 70 beats per minute, and I generalized, saying "I would guess the average person's heart rate is that," I'd probably be close (I think). But if I observed that I could read 100 pages in a half an hour, and assumed this was average, I'd be wrong (I wish I could!). I'm just wondering if there are some useful approaches or information out there to help in interpreting data from self experimentation that helps one make good inferences. For example, would it be useful to have a sample of self experimentation results compared to more conventional studies and see the differences in conclusions. "Oh, the average self experimentation results varied from the conventional study results by x percent. Oh, x percent of self experimentation findings approximated the findings of more conventional studies. I can use that info in judging

the results of my own self experimentation.”

### **Omega-3 and Sports Injuries (2007-11-05 14:02)**

Tucker Max wrote:

I compete in MMA (mixed martial arts/ultimate fighting)–amateur of course, but I train with professionals. As you can imagine, full contact fighting leads to all kinds of sprains, strains, dislocations, etc. Ever since I started taking flaxseed oil–in caplet form, equivalent of 2 tablespoons a day–I have noticed a serious reduction in the number of small, inflammation-type injuries, and a reduction in recovery time for those injuries.

I asked what he meant by “inflammation-type injuries”.

That would be any injury where inflammation is the key component of the damage, for example:

- sprain
- strain
- bruise

This is opposed to injuries where the key component of damage is something more significant, for example:

- break
- dislocation
- tear

Another way to put it would be that I don’t seem to get as many small injuries, and when I get them, they seem to heal quicker. I used to have to take like four Advil every day before I went to class, simply because I was so sore from the things we had done the previous days . Now, I don’t take any–and I haven’t changed anything else other than the flaxseed caplets.

Tissue inflammation is a huge part of most sports injuries. You ever watch Sportscenter, and see the post game interviews in the locker rooms? Notice how the athletes–especially pitchers–always have ice wrapped on their arms or knees or whatever? That is to reduce the tissue inflammation that occurs with high stress use. The general acronym for treating a minor sports injury is RICE (Rest, Ice, Compression, Elevation). Each of those are primarily designed to reduce tissue inflammation in the damaged areas, because once that is reduced, the body can heal itself much faster (I am simplifying this, but you get the point).

If high levels of omega-3’s really do reduce this sort of sports injury inflammation, it would be a HUGE discovery in sports medicine.

It makes sense. Injuries heal faster when the body’s “natural response” is reduced? Apparently the “natural response” is excessive.

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NE1 (2007-11-05 16:12:39)

When I was little, I used to think that Popeye vitamins gave me extra strength.

Seth's blog » Blog Archive » Omega-3 and Dental Health (even more) (2007-11-06 07:24:14)

[...] Omega-3 and Sports Injuries [...]

estomagus (2007-11-06 14:37:48)

I was searching for Omega3 and flaxeed oil on the Internet and thought you would be an all the first places but truth was all this places were for pages of sportmen speaking about the benefits of this kind of products.

Seth's blog » Blog Archive » Omega-3 Greatest Hits (2007-11-06 15:39:04)

[...] Omega-3 and Sports Injuries [...]

Seth's blog » Blog Archive » My Omega-3 Talk at Psychonomics (2007-12-13 21:32:04)

[...] This is a new idea in nutrition (at least, new to me). It is supported by and explains some of the most interesting data I've posted. It explains why Tyler Cowen's gums got so much better so quickly — because he was taking almost exactly the best amount of flaxseed oil for his gums. Tyler chose his intake of flaxseed oil based on my behavioral data, which suggested the best amount was between 2 and 3 tablespoons/day. The gums and the brain could hardly be more different, but the best level for the brain turned out to do a wonderful job of healing his gums. Same thing with Anonymous and sports injuries. [...]

blog.sethroberts.net | Blog Review (2009-07-08 03:38:29)

[...] [...]

Jack Rusher (2009-09-12 09:45:21)

Like Anonymous, I'm an MMA enthusiast. My experience with 3T/day of flax seed oil have been more or less identical to his – before: high doses of NSAIDs just to survive training, constant soreness and fatigue, &c.; after: no joint pain at all, complete discontinuation of NSAIDs, lower frequency and severity of injury. I'd really like to see a large-N peer-reviewed study on this effect, which I speculate is caused by the influence of omega-3/omega-6 fatty acid balance on eicosanoid production. Dental results: my hygienist made strong comments regarding the improvement of my gums on my first post-flax visit, attributing it to changes in my oral care behavior... of which there were none.

Seth's blog » Blog Archive » More about the Effects of Flaxseed Oil (2009-09-13 16:33:16)

[...] Commenting on an earlier post, Jack Rusher reports: Like Anonymous, I'm an MMA [Mixed Martial Arts] enthusiast. My experience with 3 T/day of flaxseed oil have been more or less identical to his. Before: high doses of NSAIDs [non-steroidal anti-inflammatory drugs] just to survive training, constant soreness and fatigue, etc. After: no joint pain at all, complete discontinuation of NSAIDs, lower frequency and severity of injury. Dental results: my hygienist made strong comments regarding the improvement of my gums on my first post-flax visit, attributing it to changes in my oral care behavior . . . of which there were none. [...]

## Omega-3 and Dental Health (even more) (2007-11-06 07:24)

[1]Tucker Max wrote again:

I started taking the flaxseed oil when I saw your post about Tyler Cowen not having to get gum surgery because he was taking it. I have had bleeding gums etc for most of my adult life, and nothing has ever made them better so I tried flaxseed oil. Worked great.

[2]Tyler's experience. [3]My experience. [4]Joyce Cohen's. [5]Tim Beneke's.

1. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>
2. <http://www.blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>
3. <http://www.blog.sethroberts.net/2007/03/28/omega-3-and-dental-health/>
4. <http://www.blog.sethroberts.net/2007/10/03/joyce-cohen-gets-her-teeth-cleaned/>
5. <http://www.blog.sethroberts.net/2007/10/03/joyce-cohen-gets-her-teeth-cleaned/#comment-48774>

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### Women's Health Initiative (2007-11-06 15:40)

[1]Here's a nice essay about the Women's Health Initiative, a nine-year mega-million-dollar experiment to measure the effect of "healthy eating" especially a low-fat diet.

48,835 postmenopausal women . . . were randomly assigned . . . to either their regular unrestricted diet or to a "healthy" diet that was low-fat (20 % fat) and high fiber, with at least 5 servings of fruits and vegetables, and 6 servings of grains a day. The "healthy" eaters endured an "intense behavioral modification program by specially trained and certified professionals" to keep them on their diets. While they backslide a little, they did surprisingly well in sticking to the diet "as good as dietary prescriptions will ever get and money can buy" at a cost of \$8,498 spent per person!

Oops, no effect. "The results of this huge study, despite the hundreds of millions of dollars of taxpayer money spent on it, were quietly buried."

I conclude two things: 1. People in charge of spending vast sums on nutrition research don't know very much about what constitutes a healthy diet. 2. The same people know very little about how to do experiments. The most basic lesson is to do the smallest experiment possible.

Sandy Szwarc, the author of this essay, concludes:

When we enjoy a variety of foods from all of the food groups "as most everyone naturally does when they're not trying to control their eating" and trust our bodies, we'll get the nutrients we need to prevent deficiencies. And that is the only thing that nutritional science can credibly support.

There is some truth to this, both (a) we instinctively eat to avoid certain deficiencies and (b) nutrition science has found conclusive evidence that we need certain chemicals. But she is quite wrong in the sense that most Americans appear to suffer from huge omega-3 deficiencies ([2]my posts about this). Many of them, probably most of them



"enjoy a variety of foods from all of the food groups."

Thanks to Dave Lull.

1. <http://junkfoodscience.blogspot.com/2007/10/junkfood-science-exclusive-big-one.html>

2. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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David (2007-11-06 17:22:20)

Another advantage of small studies is that the political power of the investigators and other vested interests in any given study is likely to be lower. That would make the spinning of results more difficult.

seth (2007-11-06 17:27:38)

Interesting comment, David. Along similar lines, smaller studies would allow more even-handed interpretation of the results, since results opposite to expectations would be less embarrassing.

Rich (2007-11-06 17:39:34)

“The results of this huge study, despite the hundreds of millions of dollars of taxpayer money spent on it, were quietly buried.” please, the paper was published in JAMA and covered in the new york times, for pete’s sake! its hard for a scientific article to get less buried than that.

seth (2007-11-06 18:06:00)

Rich, coverage in the NY Times (once?) doesn’t make your point. Was it covered on the Today show? Good Morning America? Oprah? A hundred other places? How much coverage did it deserve? Well, the notion that Americans have been given poor nutrition advice for a long time is very important – had the advice been better, lots of lives would be better. I think the results deserved lots of discussion about “where we went wrong” or “where the experts went wrong” or “where the funding system went wrong” – whatever you want to call it. There was none of that.

lasser80 (2007-11-06 18:45:51)

“When we enjoy a variety of foods from all of the food groups – as most everyone naturally does when they’re not trying to control their eating – and trust our bodies, we’ll get the nutrients we need to prevent deficiencies.” There is something pleasantly Jane Jacobs like or Hayekian in that statement (very anti-central planning/anti-expertise). But sadly, in my personal experience, if I let myself spontaneously choose what I want to eat, I’ll eat very unhealthy.

Pearl (2007-11-06 20:11:24)

Unhealthy foods exist as a result of engineering and mass production. If they didn’t exist, we would be able to trust our bodies and eat well. That’s why they shouldn’t exist.

Rich (2007-11-06 20:41:53)

Seth, The original quote was that the results were “quietly buried.” you may believe the results deserved wider coverage, but that’s quite different than suggesting they were “quietly buried.” I do think publication in one of the pre-eminent medical journals and coverage in a pre-eminent newspapers is ample evidence against quiet burial.

seth (2007-11-06 21:10:13)

Reasonable point. I quoted too selectively and misled you about what the author meant. You are right, by one meaning of “quietly buried” they were not. The author meant they received far less coverage than they would have had they come out

differently. She meant "by comparison, they were quietly buried." That isn't clear from the single sentence I quoted.

David (2007-11-07 07:16:22)

Does anyone know why they chose 49,000 participants, which is an astoundingly large number? It seems that kind of number would pop out of a power calculation if you expected the effect to be very small and/or the background variation to be very large. If its the former, it makes the interesting point that the study cost will be decreasing in the magnitude of the effect you expect to find. This isn't to say that some very small effects might have a big social benefit and that you would want to know about them, but it is still a perverse property of research!

michael vassar (2007-11-07 09:29:47)

Great point David.

### **My Theory of Human Evolution (intricate art edition) (2007-11-07 04:52)**

[1]Kris Kuksi is an artist who graduated in 2002 from Fort Hays (Kansas) State University. Here is an example of his work:

[2] 

Very intricate. What the world calls good art is almost always intricate. Artists, driven by their own preferences and the preferences of customers, move in that direction. Intricacy is technically difficult. The desire for intricacy causes technological innovation.

[3]More intricate art, with great soundtrack.

1. <http://www.kuksi.com/>

2. <http://pizdaus.com/>

3. <http://www.haltadefinizione.com/en/cenacolo/look.asp>

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Stephen M (Ethesis) (2007-11-07 20:34:09)

I've always found your comments on intricate art interesting. Nice example.

Seth's blog » Blog Archive » My Theory of Human Evolution (directory) (2007-11-11 09:40:19)

[...] My Theory of Human Evolution (intricate art edition) [...]

### **Jane Jacobs Roundup (2007-11-07 17:42)**

1. [1]About her work, on YouTube (3 minutes).

2. [2]Podcast of her first Massey lecture, about Quebec separatism (34 minutes).

3. To the extent I could figure out her intellectual likes and dislikes, I always agreed, with one glaring exception:

She liked Stephen Jay Gould's work, whereas I thought it was awful. [3]This informative post reminded me of this disagreement; I learned that people in Gould's field (evolutionary biology) agree with me. One reason I didn't like Gould's work was his dismissal of evolutionary explanations as "[4]just-so stories".

1. <http://www.youtube.com/watch?v=Jg4t9NLhrGs>
2. <http://www.cbc.ca/podcasting/pastpodcasts.html?24#ref24>
3. <http://www.overcomingbias.com/2007/11/beware-of-gould.html>
4. <http://www.blog.sethroberts.net/2007/09/13/modern-veblen-the-less-than-obvious-value-of-evolutionary-explanations/>

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lasser80 (2007-11-07 18:39:05)

Hmmm, I understand what your saying about Gould's and Jacobs apparent dismissal of evolutionary explanations. But doesn't experimentation take priority over the inward theoretical debates of evolutionary scientist. It's true you can go to scientist and back up your SLD experiment with an evolutionary explanation. But the breakthrough appeared to come when you confronted a daily life problem (overeating) with an experiment. The evolutionary explanation is a secondary effect. I think Jacobs also had much stronger faith in daily problems solving rather than the abstract theoretical debates which evolutionary scientist often engage in. Jacobs argues that solutions usually arise on the ground level where people are more intimately connected with their environment. To borrow a term Hayek used, there is a "spontaneous order" to our lives, outside the boundaries of human knowledge.

seth (2007-11-08 05:22:43)

I think Jacobs just liked Gould's Natural History columns. Evolutionary ideas helped me decide what experiments to do; that's how they were useful. Much as correlational evidence helps decide what experiments to do.

### **Jobbook Diary (2007-11-07 18:16)**

I asked my mom, a retired librarian, if she could find some good librarian blogs to add to [1]jobbook.org. She found four, but she wanted me to add them to the home page. She didn't know how to edit wikis and she didn't want to learn.

If you have trouble, I said, something is wrong. (My mom is more computer-literate than I am. She was using email before 99.9 % of the rest of us – before me, for example. Her mom told her in the 1950s that computers were going to be a big thing.)

She reluctantly agreed to try. She clicked on edit on the home page, which brought up an edit box. To add her line, she erased everything in the box. You don't want to do that, I said. Hit the delete key, I said. To demonstrate – this was over the phone – I hit the delete key on my screen. Oops, the whole page was gone!

I couldn't figure out how to restore it. Which shows how much I know about wikis. I emailed Aaron and he fixed it. You restore a page, it turns out, by going to the history page, clicking the edit link for the version you want, and Save-ing it.

Page restored, my mom tried again. She successfully added a line for librarian with a blog link. However, she had found four blogs she liked, so it seemed like a good idea to add more links, if only to make the point that there could

be more than one link per line. Since there were no pre-existing examples of multiple links per line, it wasn't obvious how to do this. I think you do it like this, I said:

librarian: [blog] (address) [blog] (address)

Correct, it turned out. Now the issue is how to separate links. They now appear on the page separated by one space, which isn't enough, my mom thinks. I don't know how to increase the spacing but maybe Aaron does.

1. <http://jobbook.org/>

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david (2007-11-07 19:19:31)

In that context you'd probably use commas to separate the items. Another suggestion would be to make the link text more descriptive (i.e. instead of just "blog", "Name of the blog").

seth (2007-11-08 05:19:21)

Thanks for the suggestions.

marmolillo (2007-11-08 22:33:52)

I have always said Wikipedia is not that simple to edit and that is a reason why it is not even bigger. There are thousands of people unable to edit such a mess of Wikitext. Nowadays it is crazy that Wikipedia can not admit simpler editions.

seth (2007-11-08 23:21:46)

Good point.

### **A Good Day for Free Speech (2007-11-08 06:08)**

Negotiations between NBC and Rosie O'Donnell about a talk show were broken off by NBC after Rosie said something about them to the media. Rosie blogged about it [1]here in her endearing style.

Remember that A. J. Liebling saying: "Freedom of the press is guaranteed only to those who own one"? For the low price of blogging, Rosie owns one.

A [2]great day for free speech.

1. <http://www.rosie.com/blog/2007/11/07/the-show-that-never-was/>

2. [http://www.huffingtonpost.com/seth-roberts/a-great-day-for-free-speech\\_b\\_59872.html](http://www.huffingtonpost.com/seth-roberts/a-great-day-for-free-speech_b_59872.html)

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Dennis Mangan (2007-11-08 09:33:37)

Given that James Watson was recently publicly browbeaten, humiliated, and ultimately fired for giving a scientific opinion, free speech isn't in very good shape in this country, in my opinion. Rosie O'Donnell is a popular media personality who is arguing against a corporation, which are widely hated by the media and opinion makers. That Chapman guy recently had his TV show canceled for a private utterance. Say something truly against current received wisdom and you'll find out just how free your speech really is.

seth (2007-11-08 09:54:27)

True. We're a long way from anyone can say anything. But we're closer. Rosie can say she's gay, for example.

### **Self-Experimentation in Medical Discovery (2007-11-08 09:58)**

An [1]editorial by William Bains, a biotechnologist and entrepreneur, questions the usual drug development process:

Translational Medicine [about going from research to practice] conferences are full of discussions of PET fMRI, gene arrays and proteomics, far beyond the means of the GPs that see 95 % of patients, and divorced from the simple clinical observations that resulted in the discovery of drugs as diverse as aspirin and viagra.

Because this is the way that biomedical research (especially drug research) is done, it is assumed that the features of this process are features that have to be part of the biomedical research process. These include:

- (i) that only professionals operating in established organizations can have the knowledge to identify new areas of medicines research;
- (ii) that biomedical research can only be done using cutting edge technology, which is enormously expensive;
- (iii) that only tests on huge numbers of people can validate a new approach.

None of these is true.

There is precedent for other ways of doing things:

The majority of clinical advances in the last 20 years of dermatology have been made by individuals working outside the mainstream of academic research, but possessing a keen observational eye, strong, skeptical analytical skills and constant contact with patients

1. [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6WN2-4R11KF5-5&\\_user=4420&\\_coverDate=10%2F29%2F2007&\\_rdoc=1&\\_fmt=&\\_orig=search&\\_sort=d&view=c&\\_acct=C000059607&\\_version=1&\\_urlVersion=0&\\_userid=4420&md5=0b17c508d399c137816df7cbc2cffb6b](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6WN2-4R11KF5-5&_user=4420&_coverDate=10%2F29%2F2007&_rdoc=1&_fmt=&_orig=search&_sort=d&view=c&_acct=C000059607&_version=1&_urlVersion=0&_userid=4420&md5=0b17c508d399c137816df7cbc2cffb6b)

## Curiously Small World (2007-11-08 23:55)

1. I meet one of Leonard Syme's students at a party.
2. I learn about Syme's unusual [1]teaching methods (and later [2]interview him about them).
3. One of Syme's students, Michael Marmot, writes a book called [3]The Status Syndrome (2004).
4. Nassim Taleb, author of The Black Swan, writes an excellent [4]review of The Status Syndrome:

You are a hot shot in a company, though not the boss. You are paid extremely well, but, again you have plenty of bosses above you (say the partners of an investment firm). Is it better than deriving a modest income being your own boss? The counterintuitive answer is NO. You will live longer in the second situation, even controlling for diet, lifestyle, and genetic predispositions.

5. I [5]quote Taleb's research ideas approvingly.

1. <http://www.blog.sethroberts.net/2007/09/18/how-accurate-is-epidemiology-part-3/>
2. <http://www.blog.sethroberts.net/2007/09/21/leonard-syme-on-teaching/>
3. [http://books.google.com/books?id=EGlQt8p9\\_5cC&dq=%22the+status+syndrome%22&pg=PP1&ots=SE9cSdN1Dg&sig=jeo\\_iuTKanasAnwv9MJ3JCv7YZ8&prev=http://www.google.com/search%3Fq%3D%2522the%2Bstatus%2Bsyndrome%2522%26ie%3Dutf-8%26oe%3Dutf-8%26aq%3Dt%26rls%3Dorg.mozilla:en-US:official%26client%3Dfirefox-a&sa=X&oi=print&ct=title&cad=one-book-with-thumbnail](http://books.google.com/books?id=EGlQt8p9_5cC&dq=%22the+status+syndrome%22&pg=PP1&ots=SE9cSdN1Dg&sig=jeo_iuTKanasAnwv9MJ3JCv7YZ8&prev=http://www.google.com/search%3Fq%3D%2522the%2Bstatus%2Bsyndrome%2522%26ie%3Dutf-8%26oe%3Dutf-8%26aq%3Dt%26rls%3Dorg.mozilla:en-US:official%26client%3Dfirefox-a&sa=X&oi=print&ct=title&cad=one-book-with-thumbnail)
4. [http://www.amazon.com/review/product/0805073701/ref=dp\\_top\\_cm\\_cr\\_acr\\_txt/103-3675802-8345458?%5Fencoding=UTF8&showViewpoints=1](http://www.amazon.com/review/product/0805073701/ref=dp_top_cm_cr_acr_txt/103-3675802-8345458?%5Fencoding=UTF8&showViewpoints=1)
5. <http://www.blog.sethroberts.net/2007/08/23/nassim-taleb-on-research-strategy/>

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## How to Start a Food Demo Company (2007-11-09 05:46)

At the Berkeley Whole Foods a few days ago, a friendly man named Hunter Austin was demoing [1]Alvarado Street Bakery Sprouted Wheat bread. "Baked locally, sold [frozen] nationally," he said. He was giving out little grilled cheese sandwiches. It turned out he had his own demo company - food companies hire him to demo their products. He had started the company four years ago. Before that he had owned and run a restaurant. He made lots of money but he was working seven days a week. The pay worked out to \$15/hour.

Why did you choose this as your escape route? I asked. "You want to know the truth?" he said. "Because it looked really easy." He did demos for someone else for a few months then decided to strike out on his own. He made a brochure advertising his services. Then he went up and down the aisles at a supermarket writing down the names and addresses of companies whose products he liked. He sent them his brochure. What happened? I asked. "I got business," he said.

That's how his business began. It turned out to be harder than it looked. "The first ten demos are fun," he said,

"the next twenty are sobering, and after that it's a job." Now he mostly hires people to do the actual work. This was the rare demo he did himself. His company is called Demo Demon.

1. <http://www.alvaradostreetbakery.com/>

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MARCY (2007-12-18 21:42:54)

WHAT DO YOU CHARGE THE FOOD COMPANIES TO DO DEMOS? I AM CURRENTLY DOING DEMOS FOR A COMPANY AND GET PAID \$25.00 AN HOUR I WOULD LIKE TO BRANCH OUT AND OPEN MY OWN BUSINESS AND HIRE OTHER PEOPLE. WHAT DO YOU PAY YOUR EMPLOYEES?

seth (2007-12-19 07:46:50)

I'd guess he charges the food companies about twice what he pays his employees.

MARCY (2007-12-22 20:56:00)

SO IF I PAY MY EMPLOYEES \$20.00 AN HOUR FOR 4 HOURS THEN I SHOULD CHARGE THE FOOD COMPANY \$40 OR \$50.00?

seth (2007-12-23 00:01:16)

Something like that would be my ignorant guess, yes.

marcy (2008-04-13 12:49:32)

May I ask what you pay your employees? If you pay them \$15 or 20, do you charge the company \$45 an hour or 50" Can you email me a copy of your brochure just to give me an idea??

seth (2008-04-13 14:49:10)

I don't have any employees. I don't run a food demo company.

Hunter (2010-01-20 20:29:54)

Better late than never...thedemodemon@yahoo.com-I can field your questions if you ever happen back to this site.

Mary Broady (2010-04-20 14:40:50)

I am very much interested in starting my old demo product business. send info on how to quickly get started.

TammieWalker (2010-10-21 18:24:38)

Hello Seth you have inspired me, I'm interested in learning as much as possible from you if you would please contact by email at moodoggy2@yahoo.com that would be great!

Donna Ezrow (2010-11-18 11:59:26)

Seth, I as well have done this after being in the food biz for Disney as well as myself. Your right when you talk about the hours you have to work. having displayed many products for other companies I find they come of short. I am on a crusade for selling a \* Brand \* no matter who it is. Promoting a new brand for a small biz or one of the well known brands we are all familiar with.OK Having said all that I enjoy doing a real showy demo.I like to gather a crowd and break down the cost as I cook with the ingredient or product.I would love you to send me good info as to how to do this myself.

Gayle (2011-07-31 16:48:24)

I do demos for \$9 an hour. Every time I suggest starting my (our) own demo company my demo friends say it is impossible. Can someone really get started on a shoe string budget?

Ruth (2011-09-18 09:52:45)

Very interested in starting a demo company, would love to learn from you... How can I learn....

Kathy (2012-01-29 04:46:50)

I was wondering what all needs to be in the contract that you set up with the food company? Do you have a sample contract?

### **My Theory of Human Evolution (Hallelujah edition) (2007-11-09 23:32)**

The latest episode of Ugly Betty ended with Jeff Buckley's version of Leonard Cohen's Hallelujah. I was entranced. I ran to YouTube to hear the whole thing:

What a great performance! Could anyone else come close? I usually like Rufus Wainwright:

Not close.

K. D. Lang?

No.

Leonard Cohen himself?

Well, the best of the rest.

I am a lot more interested in [1]Jeff Buckley than I was an hour ago. From Wikipedia: "The night before his death [by drowning], Buckley excitedly told his girlfriend Joan Wasser that he believed he had found the cause of his dramatic moods, namely bipolar disorder."

1. [http://en.wikipedia.org/wiki/Jeff\\_Buckley](http://en.wikipedia.org/wiki/Jeff_Buckley)



Lori (2007-11-10 10:44:10)

Thanks for this great selection of "Hallelujah" versions. As a fan of Leonard Cohen, I prefer his own performance of it, and there is a huge fan base for him where I come from.

David (2007-11-10 10:56:56)

What about John Cale's version? Btw., often the live versions of songs you find on youtube often don't represent what people are used to hearing on the radio/their cd players. For the Cale cover, this one sounds like it has the standard CD-version (so just ignore the animated video part). I assume it's being on youtube is a violation of some copyright tho. I'd rank them Cale (favorite), Wainwright, Buckley, Cohen, Lang. Interesting that there are so many covers of the song and so many are so good. What other songs have been covered as often and as well? Something by Dylan maybe?

David (2007-11-10 10:57:43)

Oops...the url in my previous post was omitted: <http://www.youtube.com/watch?v=ekHeeJWsNJA>

seth (2007-11-10 11:24:39)

I didn't listen to Cale – there were so many I had to stop somewhere. Now I will, thanks for pointing it out.

Ian Bicking (2007-11-10 17:06:29)

I can't get myself to like any Leonard Cohen performances after 1972 or so. Still a great songwriter (as this song shows), but it's always bizarrely overproduced and just not as good as the song itself. If you are looking up songs in YouTube you might like this new site: <http://www.songza.com/> – though you'd miss out on the awesome background to L.C.'s version ;)

ResultsNotTypical (2007-11-10 20:55:07)

If you liked that, listen to Jeff Buckley's 'Last Goodbye'.

## **How Bad is Saturated Fat? (2007-11-10 05:27)**

[1]This Men's Health article is a nice summing-up of the lack of evidence that saturated fat is bad.

In 2000, a respected international group of scientists called the Cochrane Collaboration conducted a "meta-analysis" of the scientific literature on cholesterol-lowering diets. After applying rigorous selection criteria (219 trials were excluded), the group examined 27 studies involving more than 18,000 participants. Although the authors concluded that cutting back on dietary fat may help reduce heart disease, their published data actually shows that diets low in saturated fats have no significant effect on mortality, or even on deaths due to heart attacks. "I was disappointed that we didn't find something more definitive," says Lee Hooper, Ph.D., who led the Cochrane review. If this exhaustive analysis didn't provide evidence of the dangers of saturated fat, says Hooper, it was probably because the studies reviewed didn't last long enough, or perhaps because the participants didn't lower their saturated-fat intake enough. Of course, there is a third possibility, which Hooper doesn't mention: The diet-heart hypothesis is incorrect.

Thanks to Dave Lull.

1. [http://www.menshealth.com/cda/article.do?site=MensHealth&channel=health&category=heart.disease&conitem=a03dd2eaab85110VgnVCM10000013281eac\\_\\_\\_\\_&page=0&print=true&url=http%3A%2F%2Fwww.menshealth.com%2Fcda%2Farticle.do%3Fsite%3DMensHealth%26channel%3Dhealth%26category%3Dheart.disease%26conitem%3Da03ddd2eaab85110VgnVCM10000013281eac\\_\\_\\_\\_%26page%3D0](http://www.menshealth.com/cda/article.do?site=MensHealth&channel=health&category=heart.disease&conitem=a03dd2eaab85110VgnVCM10000013281eac____&page=0&print=true&url=http%3A%2F%2Fwww.menshealth.com%2Fcda%2Farticle.do%3Fsite%3DMensHealth%26channel%3Dhealth%26category%3Dheart.disease%26conitem%3Da03ddd2eaab85110VgnVCM10000013281eac____%26page%3D0)

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## Omega-3 and Veterinary Medicine (2007-11-10 20:02)

The November 2007 issue of [1]Acres USA, a magazine about organic/sustainable farming, has an article (not online) about using omega-3s to cure farm-animal problems. Here are the best parts:

One family reported that their dog had failed obedience training three times. Our therapy of cod liver oil (Nordic Naturals), Fasttrack probiotic, and a homeopathic prescription enabled him to pass on the next attempt. . . . Dogs experience panic attacks for a variety of reasons. One frantic German shepherd dog jumped through a plate glass window to escape the house and get near his owner. The solution to his panic and anxiety attacks proved to be cod liver oil, the correct homeopathic medicine, and a whole-food diet rich in omega-3 oils and quality live probiotics.

The obedience-training story resembles my story of taking flaxseed oil capsules and the next morning being able to easily put on my shoes standing up. With the difference that I'd had trouble several hundred times in a row, not just three.

Thanks to Joshua Schrier.

1. <http://www.acresusa.com/magazines/magazine.htm>

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NE1 (2007-11-21 22:57:43)

Ah, a perfect study! Except for the confounding effect of the homeopathic remedy. Your attitude with stories like this is just astounding. It's almost enough to make me think you don't really want Omega-3's to become legit, commonplace supplements.

seth (2007-11-22 06:23:23)

Where do new ideas come from?

NE1 (2007-11-23 13:13:16)

Ideas are worthless. There are billions of them. Most people can think of 6000 ideas before breakfast. This is no longer a question of where they come from. You are now trying to pass this idea off as a truth. You do not confirm, validate, or bound an idea by lumping it in with homeopathy, feckless whole-foodism, and hearsay anecdotes. My grandmother takes honey for her arthritis, and rubs yogurt on her age spots. What shall I say when she hears about flax seed oil? The only reason why I am paying attention at all to your blog (or ideas) is because of the data you record and present, yet you refuse to take the standard next steps to limit or reinforce your conclusions. It's like you live in a dream where the first thing you think of is reality. This

fetish for ideas has you satisfied in believing things which may not be true, and you broadcast this further to the world. That's what I don't understand.

seth (2007-11-23 17:49:38)

By "new ideas" I meant plausible new ideas – ideas worth taking the effort to test further. They are remarkably hard to come by, in my experience. There are not "billions" of them—in some fields, there appear to be none. "Things that may not be true"? I think the new data – including stories from others, such as Tyler Cowen – that I've presented here make a strong case for the benefits of flaxseed oil. And the virtues of self-experimentation, which uncovered new and useful facts on a heavily researched topic.

### **The Resource Curse (2007-11-11 07:22)**

In an excellent [1]Authors@Google talk based on his book [2]The Birth of Plenty – about the increase in GDP growth that started around the Industrial Revolution – William Bernstein mentions what he calls "The Resource Curse":

If all your wealth comes out of a couple of holes in the ground, the quickest way to become wealthy . . . is control of those holes and access to those holes. It breeds corruption, and it breeds poor government, and it drains the entrepreneurial spirit. The best way to get rich is to have no natural resources at all. Think Singapore, think Japan.

Could the same be true of science? Could access to resources – say, a lot of grant money or expensive equipment – breed corruption and poor government, and drain the entrepreneurial spirit? It isn't obvious why not. Surely human nature is essentially the same in both places. This may have something to do with Gary Taubes' complaints about poor nutritional science in Good Calories, Bad Calories.

I rarely mention in this blog my animal learning research, which [3]in recent years has been about exactly this – with animals (rats and pigeons). The results of our experiments are easy to sum up: When animals have access to rich sources of food, it drains the entrepreneurial spirit. In psychology-speak, when the probability of reward for actions is high, there is less variation in what animals do than when the probability of reward is low. I got into this line of research [4]by accident.

1. <http://youtube.com/watch?v=fTUZXwQwUJM>

2. [http://books.google.com/books?id=VfR06vLd2esC&dq=bernstein+%22birth+of+plenty%22&pg=PP1&ots=aFSKsQucRe&sig=VSjo8AG\\_sayyy8HifJ2oVbHSxss&prev=http://www.google.com/search%3Fq%3Dbernstein%2B%2522birth%2Bof%2Bplenty%2522%26ie%3Dutf-8%26oe%3Dutf-8%26aq%3Dt%26rls%3Dorg.mozilla:en-US:official%26client%3Dfirefox-a&sa=X&oi=print&ct=title&cad=one-book-with-thumbnail](http://books.google.com/books?id=VfR06vLd2esC&dq=bernstein+%22birth+of+plenty%22&pg=PP1&ots=aFSKsQucRe&sig=VSjo8AG_sayyy8HifJ2oVbHSxss&prev=http://www.google.com/search%3Fq%3Dbernstein%2B%2522birth%2Bof%2Bplenty%2522%26ie%3Dutf-8%26oe%3Dutf-8%26aq%3Dt%26rls%3Dorg.mozilla:en-US:official%26client%3Dfirefox-a&sa=X&oi=print&ct=title&cad=one-book-with-thumbnail)

3. [http://sethroberts.net/about/2006\\_variation\\_of\\_bar\\_press\\_duration.pdf](http://sethroberts.net/about/2006_variation_of_bar_press_duration.pdf)

4. <http://sethroberts.net/articles/2001-04%20Timing%20and%20the%20Control%20of%20Variation.pdf>

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David (2007-11-12 14:16:53)

An essential part of the resource curse story is that it induces an economy to specialize in exploiting the resource and not to engage in other activities that have better long-run growth prospects, such as knowledge industries. After exploiting the

resource until it runs out, the economy finds it difficult to return to the other activity unless it has wisely invested in the abilities needed to do so. ([http://en.wikipedia.org/wiki/Dutch\\_disease](http://en.wikipedia.org/wiki/Dutch_disease)) I think there is an analogy here to "normal science" and "paradigm-shifting" science. It is easy for funding agencies to justify large investments in the former, since they produce reliable returns in the form of publications and so forth, but without investments in the latter the long run looks bleak. In some ways it seems that nutritional science is suffering from too little investment in path breaking work....

### Omega-3 and Cognitive Function in the Elderly (2007-11-11 18:01)

Two papers in the [1]latest issue of the [2]American Journal of Clinical Nutrition provide more support for the idea that omega-3s improve brain function.

The first was a cross-sectional study involving about 2000 persons 70-74 years old in Norway. Their fish consumption was measured and they took a battery of cognitive tests. The more fish you ate, the better your score on every test, even after adjustment for several things.

The second used data collected as part of a 3-year experiment about something else (the effect of folic acid) with 800 persons aged 50-70. They measured the omega-3 concentrations in the blood of their subjects. Would these predict anything? Their results were more ambiguous:

Higher plasma n-3 PUFA proportions predicted less decline in sensorimotor speed . . . and complex speed . . . over 3 y. Plasma n-3 PUFA proportions did not predict 3-y changes in memory, information-processing speed, or word fluency. The cross-sectional analyses showed no association between plasma n-3 PUFA proportions and performance in any of the 5 cognitive domains.

Cross-sectional correlations between a measure of omega-3 (fish consumption) and cognitive performance are exactly what the first study did find.

1. <http://www.ajcn.org/current.shtml>

2. <http://www.ajcn.org/>

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Timothy Beneke (2007-11-12 09:59:27)

So maybe it's something else in the fish that's enhancing cognitive functions?

Leo (2007-11-12 10:14:05)

Seth, FYI: Curves, women and Omega-3 <http://www.telegraph.co.uk/news/main.jhtml?xml=/news/2007/11/12/ncurves112.xml>

seth (2007-11-12 10:18:09)

I think it's just a comment on the generalizability of research. Lots of things are important that the experimenters don't realize.

And these vary from one lab to another.

Seth's blog » Blog Archive » Omega-3 and Cognitive Function in the Elderly: The Opposite Result (2007-11-12 22:27:01)  
[...] Omega-3 and Cognitive Function in the Elderly [...]

### **In Japanese (2007-11-12 05:59)**

If you read Japanese you can read about the Shangri-La Diet here:

- [1][http://www.suda.tv/archives/2007/03/post\\_580.php](http://www.suda.tv/archives/2007/03/post_580.php)
- [2]<http://ameblo.jp/pb-038434/entry-10044923240.html>
- [3]<http://groundhogday.seesaa.net/article/7497773.html>

And even if you don't read Japanese you can appreciate the excellent illustration here:

- [4]<http://dietxdiet.ojaru.jp/Shangri-la/>

and the great blog name (my nonsequitur) and banner here:

- [5]<http://www.owl-tottori.jp/diet/jijou-bn/shangriradiet.html>

Thanks to Pearl Alexander.

1. [http://www.suda.tv/archives/2007/03/post\\_580.php](http://www.suda.tv/archives/2007/03/post_580.php)
2. <http://ameblo.jp/pb-038434/entry-10044923240.html>
3. <http://ameblo.jp/pb-038434/entry-10044923240.html>
4. <http://dietxdiet.ojaru.jp/Shangri-la/>
5. <http://www.owl-tottori.jp/diet/jijou-bn/shangriradiet.html>

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### **Omega-3 and Cognitive Function in the Elderly: The Opposite Result (2007-11-12 22:24)**

Peter Spero has sent me the following abstract from a [1]paper published in 2003 in the Journal of Alzheimer's Disease:

It has been suggested that the dietary intake of omega-3 polyunsaturated fatty acids could be inversely related to the risk of dementia and cognitive decline. This analysis examined the association between plasma concentration of omega-3 polyunsaturated fatty acids and prevalence and incidence of cognitive

impairment and dementia. Data are reported on subjects 65 years or older who had a complete clinical evaluation at the first two waves (1991-1992 and 1996-1997) of the Canadian Study of Health and Aging. Main outcome measures were cognitive impairment and dementia by mean relative plasma concentrations of fatty acids in the phospholipid fraction at baseline. Results were adjusted for age, sex, education, smoking, alcohol intake, body mass index, history of cardiovascular disease, and apolipoprotein E e4 genotype. In the cross-sectional analysis, no significant difference in omega-3 polyunsaturated fatty acid concentrations was observed between controls and both prevalent cases of cognitive impairment and dementia. In the prospective analysis, a higher eicosapentaenoic acid ( $p < 0.01$ ) concentration was found in cognitively impaired cases compared to controls while higher docosahexaenoic acid ( $p < 0.07$ ), omega-3 ( $p < 0.04$ ) and total polyunsaturated fatty acid ( $p < 0.03$ ) concentrations were found in dementia cases. These findings do not support the hypothesis that omega-3 polyunsaturated fatty acids play a protective role in cognitive function and dementia.

The people with worse-functioning brains had more omega-3 in their blood than everyone else. Which is opposite to one of the two studies I [2]described yesterday.

I'd love to have seen what reviewers made of this.

1. <http://iospress.metapress.com/app/home/contribution.asp?referrer=parent&backto=issue,7,12;journal,32,55;linkingpublicationresults,1:105656,1>
2. <http://www.blog.sethroberts.net/2007/11/11/omega-3-and-cognitive-function-in-the-elderly/>

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john (2007-11-19 14:15:36)

Could they be not using the omega-3 due to inability to process it in their metabolism, kind of like a diabetes for omega-3? It would be interesting to co-relate their high concentration of omega-3 vs diet differences.

### **My Theory of Human Evolution (the Henry Rosenthal Pennant Collection) (2007-11-13 07:59)**

Henry Rosenthal, the San-Francisco-based producer of the documentary [1]The Devil and Daniel Johnston (the best movie ever made about mental illness), has a large collection of pennants. No sports teams, no schools, only North America – those are the rules. Hundreds of pennants. Most are for places (Mexico, the Grand Canyon, San Francisco). A few are for events (a Chicago trade show). "I've been collecting since early childhood," Henry told me. "I made two pennants myself years ago, one for Joseph Albers and the other for Robert Rauschenberg."

For years I wondered why people collect. By collect, I mean collect gift-like objects, such as frog figurines or erasers with pictures or stamps or refrigerator magnets or pennants. I understood it was enjoyable – you derive pleasure from your collection. It was the evolutionary reason I couldn't figure out. When I eventually thought of my theory of human evolution – it is all about the growth and encouragement of occupational specialization – I realized this was one of the puzzles it solved.

Will Henry pay more than the average person for new and well-made pennants? Very likely. Will he appreciate an especially well-made pennant more than the rest of us? Undoubtedly. Like most collectors, Henry has placed the items of his collection side by side, making it easy to compare them and, I believe, [2]promoting connoisseurship. Studying his collection – covering the walls and hanging from the ceiling of a large room – made me a connoisseur of

pennants.

Collections increase the demand for finely-made things, helping their makers make a living and advance the state of their art, whatever it might be. that people collect all sorts of finely-made things encourages the growth of a wide range of technologies.

Incidentally, Henry is currently working on a movie about [3]Tiny Tim. If you can't wait for the movie, you can read [4]a book it will be based on.

1. <http://www.sonyclassics.com/devilanddaniel/>
2. <http://www.blog.sethroberts.net/2007/05/09/my-theory-of-human-evolution-american-idol-edition/>
3. [http://en.wikipedia.org/wiki/Tiny\\_Tim\\_%28musician%29](http://en.wikipedia.org/wiki/Tiny_Tim_%28musician%29)
4. <http://www.amazon.com/Tiny-Tim-Harry-Stein/dp/087223455X>

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Seth's blog » Blog Archive » My Theory of Human Evolution (directory) (2007-11-14 16:27:30)  
[...] My Theory of Human Evolution (the Henry Rosenthal Pennant Collection) [...]

KenF (2007-11-14 16:39:01)

I heard that often men collect as children, don't collect in their 20s/30s, then get back into collecting in middle age. I don't know if this applies to women as well.

Richard Hollerith (2007-11-16 10:18:56)

Seth, you are using group selection to explain the behavior. Mistake. You have to show how the behavior benefits the gene that causes the behavior. That it advances the state of the technical arts, helps artisans make a living or encourages occupational specialization do not explain how the gene's frequency would increase.

seth (2007-11-17 23:55:33)

Richard, genes spread through populations that live together. The genes I am talking about helped perpetuate themselves because they provided advantages to the group of people who had them.

Richard Hollerith (2007-11-18 17:34:11)

A mutation will "fixate" (spread) only if the male (female) who bears it has greater reproductive fitness than the other males (females) in the population that lives together. By helping the artisans in the population, the collector is aiding his competitors in the competition for sexual partners, so that cannot be why the mutation fixated. You are making a very common mistake. Ask 100 evolutionary biologists and they will all tell you that. Don't worry, you are in good company: Darwin persisted in the same error.

seth (2007-11-18 23:42:53)

I believe a mutation can spread a considerable distance – for many generations and thru many people – even if it confers no advantage or even if it slightly reduces fitness. There is random spread, in other words. So people living close together tend to share mutations. A gene that produces a slight disadvantage to a single person among others who don't share it can spread widely enough so that it reaches a group of people who collectively benefit from it. Call it a critical mass.

Richard Hollerith (2007-11-19 11:09:42)

Let us say that it did happen that through genetic drift a collector mutation ("allele" would be a better word) spread to an entire group of humans living together, with the result that the group benefits. You have failed to explain why that mutation would persist to the present day. Since the allele confers no advantage to the individual, why would the descendents of the group not eventually drift the other way? Note that the fact that a group composed wholly or mainly of collectors has a reproductive advantage over other groups does not take away from the fact that within the advantaged group, collectors have no reproductive advantage over non-collecting group members. Now let me stress that I tentatively agree with you that the tendency to collect things conferred a fitness advantage to humans in the environment of evolutionary adaptation. It is just your argument I disagree with, not your conclusion. It might help for you to read <http://www.overcomingbias.com/2007/11/evolving-to-ext.html> and other posts by the same author.

### **Who Reads Blogs? (2007-11-13 16:39)**

An article in the current issue of the American Journal of Epidemiology is about participants in a large health survey. It compares people who turned in the questionnaire via the Web with those who answered via mail.

Over 50 % of 77,047 participants chose to enroll in the study via the Web . . . The authors compared the demographic and health characteristics of Web responders with those of paper responders. Web responders were slightly more likely to be male, to be younger, to have a high school diploma or college degree, and to work in information technology or another technical occupation. Web responders were more likely to be obese and to smoke more cigarettes and were less likely to be problem alcohol drinkers and to report occupational exposures.

The study began in 2001.

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### **My Theory of Human Evolution (Make edition) (2007-11-14 09:26)**

The path to human nature, I propose, began with capable hands. No surprise there. In our brains formed a desire for hobbies, to take advantage of what our hands allowed. Hobbies were the first step toward occupational specialization, which led to the full flowering of human nature (trading, language, procrastination, art, holidays, rituals, fine wine, fashion, Veblen's Instinct of Workmanship, etc.).

The Hobbyist Within Us is especially clear in the pages of [1]Make, a young magazine devoted to higher-tech DIY. [2]Turn your old scanner into a camera. [3]Make a Joule thief. It started as a website, which was so successful that a print version was launched. More recently, [4]Maker Faires have started.

Thanks to [5]Niall Kennedy, who has written for Make.



1. <http://www.makezine.com/>
2. [http://www.makezine.com/blog/archive/2007/11/turn\\_your\\_old\\_scanner\\_int.html](http://www.makezine.com/blog/archive/2007/11/turn_your_old_scanner_int.html)
3. [http://www.makezine.com/blog/archive/2007/11/make\\_a\\_joule\\_thief\\_weeken.html](http://www.makezine.com/blog/archive/2007/11/make_a_joule_thief_weeken.html)
4. <https://store.makezine.com/SearchResults.asp?Cat=39>
5. <http://niallkennedy.com/>

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Nansen (2007-11-15 13:53:01)

If you were to write a book titled "Discover Your Inner Hobbyist", what sort of practical advice and insight would it contain?

seth (2007-11-15 20:58:52)

I don't know. I guess I would do journalistic research on hobbyists and try to figure out what the range of hobbies is and what the benefits of different hobbies are.

### **Omega-3 Research (2007-11-15 12:36)**

Summaries of a vast number of omega-3 related research articles can be found [1]here. Nothing about gum disease or balance or the sort of cognitive tests I've been doing, however.

1. <http://www.omega-research.com/index.php>

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Igor Carron (2007-11-16 03:06:22)

Seth: Unrelated to this but still in your area of investigation: <http://www.physorg.com/news114358249.html> and <http://www.graphicology.com/blog/2007/11/12/131-ad-of-the-week-buckleys.html> Igor.

Catherine (2007-11-16 18:24:59)

One study mentions periodontitis. <http://www.omega-research.com/researchview.php?ID=418&catid=8>

### **Omega-3: What Happens When You Stop? (2007-11-16 06:46)**

[1]Tucker Max wrote again, with new data:

I started taking two tablespoons of flax seed oil about a month after reading [2]this post by you [about Tyler Cowen's dental experience] (sometime around the beginning of August, I think). I decided to try it because I have had bleeding gums for about as long as I can remember. This has always confused me,

because I don't have any cavities and have otherwise good dental health. I would always ask my dentists about this, and they would always tell me I didn't floss enough, but even when I would floss regularly, the bleeding wouldn't totally stop. After about a week or so of two tablespoons of flax seed oil a day, I had virtually no gum bleeding. I didn't change anything else.

Then, about two weeks ago, my girlfriend pointed something out to me: I was not taking pain relievers anymore. I train in amateur mixed martial arts (MMA), which is a very intense, full contact combat sport that combines boxing, muay thai, brazilian jiu-jitsu, and wrestling. For as long as I've been training in it, I have had to deal with muscle soreness and pain in my joints, and to deal with it, I would take 4-6 ibuprofen before training. But, for about the past three months, I wasn't in enough pain to need it. I didn't really think about it at first, just chalking it up to getting tougher. But that doesn't make sense-I've been training in MMA for well over a year, and the only thing I have done differently in the past three months is start taking flax seed oil. I wasn't 100 % sure that the flax seed oil was making the difference, but considering the effect it has on inflammation-which is what ibuprofen is for-it made sense.

That was when I sent you the emails you [3]posted. One of your commenters [4]accused me of falling victim to the placebo effect, so I decided to test it. I stopped taking flaxseed oil on November 5th. At the time, my gums were not bleeding, I had no joint pain or soreness of any significance, and I felt great overall.

As I write this it's November 15th. My gums have bled heavily when I brushed this week, especially the past few days, and I have intense pain in both shoulders, soreness in my left elbow, and my knees are throbbing. I had intended to go two weeks without taking any flaxseed oil, but I am stopping the experiment now because this is all the proof I need.

One more interesting fact: I took four tablespoons a few hours ago, instead of the regular two, thinking that maybe I could load up and it might help me get back to normal quickly. The pain is pretty much the same, and I just brushed and my gums bled, so obviously the flaxseed oil takes more than a few hours to affect those problems. But-and I haven't measured this with reaction tests like you do-I feel considerably more mentally alert right now. I don't know if I felt like this before, and maybe I didn't notice it because it came on slowly, or maybe I need four tablespoons at once to see a difference, but I really do feel the difference.

1. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>
2. <http://www.blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>
3. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>
4. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/#comment-60468>

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August (2007-11-16 08:01:18)

When I take flax seed oil, I get something similar to a sinus headache- like something in the oil is causing a histimine reaction. The longest I've been able to take it was two weeks. I noticed an improvement in my gums, but that strange headache feeling masked any other improvements. I'm hoping I can avoid the adverse reaction by finding a different source of Omega-3s.

Timothy Beneke (2007-11-16 08:29:20)

I've been taking the flax seed oil for several months, now; I was at 2 tablespoons and have gone to 4 in the last 3 weeks. I've had bad gums for years. 2 months ago I had gum surgery. My orthodontist warned me that it would take a long time to heal and there might be problems with one area. When I returned after 2 weeks she said, "I'm surprised! It's healing very well!"

Then when I returned after 2 months, she said, "You're doing very well! You must be working very hard to keep your gums in shape!" The truth is I have not been working that hard, not been doing everything she recommended, at best doing what's adequate. It seems to be the flax seed oil.

David (2007-11-16 09:42:25)

August, I have been using Nordic Naturals Cod Liver Oil for about three weeks with good success. It has virtually no fish flavor, only the faintest hint sometimes. My understanding is that the Omega 3s in flax and fish oils are different, though.

NE1 (2007-11-16 11:26:00)

I have been taking fish oil 3x a day for the past month and a half. A week ago, I just sprained my ankle worse than ever before. It's still purple and swollen, tender to the touch. Clearly omega-3 delays the healing of more internal wounds and soft-tissue growth. ...

anonymous (2007-11-17 08:52:01)

Every time I drink flax seed oil, I have some shortness of breath. It goes away pretty fast but it happens.

sj (2007-11-19 20:06:28)

NE1, you sprained your ankle worse than ever before. Your words. CLEARLY, nothing is clear about Omega-3. Take some of your popeye vitamins, you'll feel better soon.

john (2008-05-10 09:45:48)

you people are funny. suspecting flax seed oil is causing or fixing all your problems. crackpots are too many. I would strongly look into the daily amounts that you consume. everybody is different. I read several sources claiming 2-3 grams is best, exceeding does not add any more benefits, possibly triggering reactions or side effects at higher doses. for me I take a small teaspoon of flax seed oil daily, or around 2 grams.. reason being.. duh! eat fish soy, tofu tempeh and you get more omega three on top.. getting different omega three from fish is a nice way to add more. oh oh..i have an elbow pain...could be I am not drinking enough flax seed oil?

Renea Johnson (2009-09-30 10:39:35)

I have been looking for information on what has happened to me since I began to take omega 3,6,9, I have had surgery for a Chiari malformation in my brain, and have ruptured all of the disc in my neck. Needless to say I have lived in pain for the last 7 years. my normal routine for taking pain meds is Lyrica (antiinflammatory), Ultram (pain) and a muscle relaxant 2x daily and inbetween I would lay on Icedoc and take ibuprofen. The pain was bearable but never gone. I had been taking omega 3 and seen some relief but I still hurt. I went to Sam's and found the omega 3,6,9, on sale so I decided to get some the first night I took it and when I got up I was pain free, so I took it again in the morning making me take 2x the suggested dose daily. I have seen my pain get better and this last weekend when I held my sick grandson for the whole weekend I hurt but after a day of rest I was back to having relief and it usually would have taken a week for me to get back to my normal pain level. I have quit taking my morning meds and am planning on weening off of my night pain meds. Praise be to God for creating a body that would respond to foods so well. I look forward to being my drugfree self again soon for the first time in over 7 years.

Blog-watch: Omega 3 (2011-11-24 14:02:11)

[...] improves mental ability (it certainly appeared to). This summer Seth Roberts noticed that, just as Tucker Max had observed with flaxseed oil (a source of omega 3) back in 2007, a larger than usual dose of flaxseed oil [...]

## **I Wonder What Seth Has Written (2007-11-18 00:18)**

I've been too busy at the Psychonomics Convention to blog – I will resume tomorrow. Tonight I looked at the Firefox button for my blog and thought: It would be nice to read something new. Then I realized, alas, that my blog does not

write itself.

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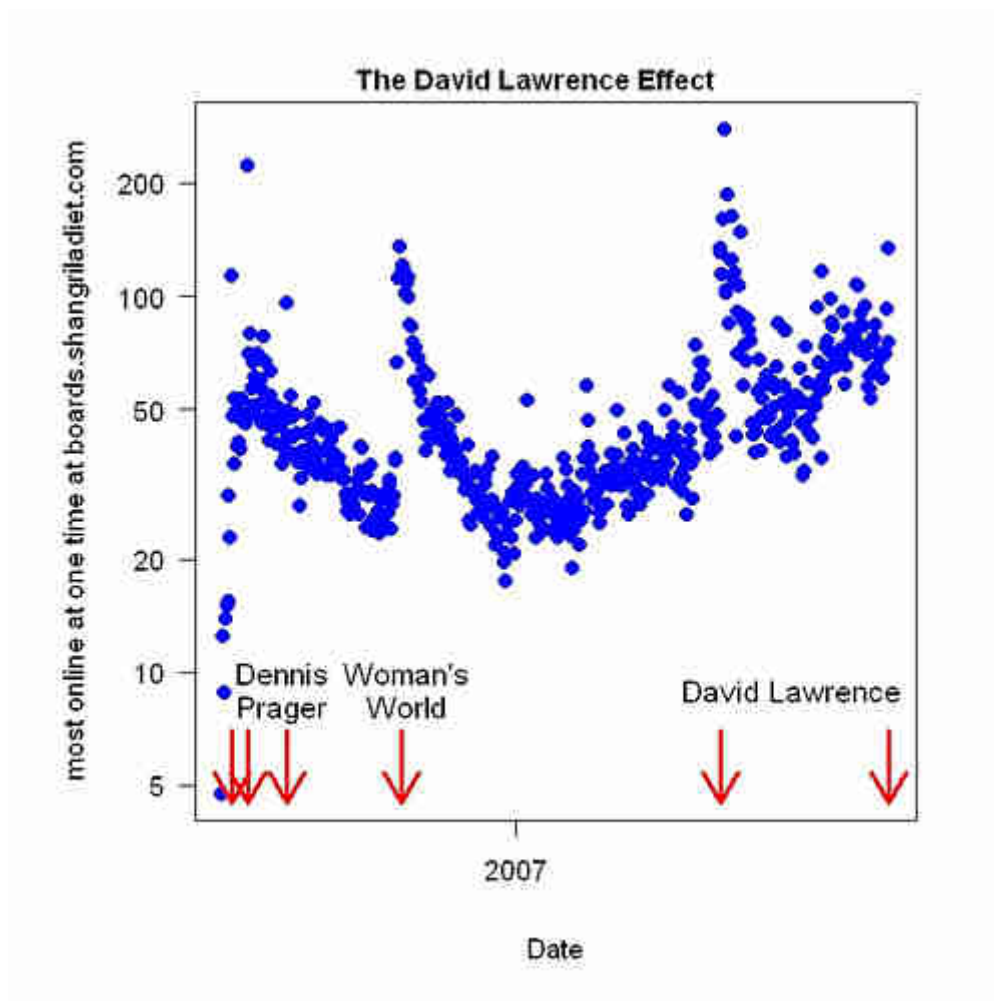
Ben Webster (2007-11-18 14:31:52)  
It would if you had cobloggers!

### **The David Lawrence Effect (2007-11-18 17:29)**

Two days ago I was on the [1]David Lawrence Show, which Mr. Lawrence produces in his home in Los Angeles. This was the second time; the first was in June. The show lasts three hours and consists of three interviews. Between my first and second appearances on his show, Mr. Lawrence stopped doing regular shows to concentrate on acting. He now does new shows now and then.

During my second appearance, he told me that radio was going downhill even faster than network television. That may be, I said, but your show had a much bigger impact on interest in my diet than almost any other interview I'd done, TV or radio – and I'd done about 50. He was surprised. Really, I said, I'll make a graph and send you a copy. Later he asked me to compare his show to the other radio shows I'd been on – what was the percentage difference between the impact of my show and the other shows, he wondered. "2000 %" I said. "20 times?" he said. Yeah, I said, maybe even 50 times. He looked surprised.

Here is the data.



This shows the maximum number of people reading the Shangri-La Diet forums at any one time for each day. (This is an easy-to-compute proxy for the number of distinct visitors.) The first media to have a big effect was a [2]35-minute interview on the Dennis Prager Show, which was replayed twice. The next was a [3]Woman's World article. The third was the first David Lawrence Show interview.

It is stunning that the David Lawrence Effect was of the same order of magnitude the effect of the Woman's World article. Woman's World, of course, is a huge operation, with millions of copies sold each week.

After the David Lawrence effect wore off, the function continued its steady climb at roughly the level you would extrapolate from before the DL effect started. My interpretation is this: As persuasive as that show turned out to be, and as large its audience – its effect was small compared to the total effect of word of mouth, which is what is pushing interest up.

1. <http://www.thedavidlawrenceshow.com/>
2. <http://www.sethroberts.net/reviews/dennispragermay3interview.mp3>
3. [http://www.sethroberts.net/reviews/2006-10-03\\_Womans\\_World.pdf](http://www.sethroberts.net/reviews/2006-10-03_Womans_World.pdf)

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Noumenon (2007-12-25 10:58:28)

The point you want to make is good, but if David Lawrence is like me he won't be very impressed by the chart. His spike is not 20 times as high as Prager's spike. You would need to post a chart of visitors with the baseline at zero for his spike to look impressive.

### **Too Skeptical = ? (2007-11-19 05:52)**

Paul Meehl, a famous clinical-psychology researcher, once said that when he was a student he was taught "the general scientific commitment not to be fooled and not to fool anyone else." Yes, the. I've heard a dozen variations of this: "In graduate school I learned to think critically," for example. How weirdly unbalanced. Isn't it just as important – or more important – to figure out what can be learned from evidence? Not just what can't?

The bias shows up in language. Skeptical is good, credulous is bad. There is no word that means too skeptical, no word that means under-credulous, no word that means the right amount of credulous.

When I hear comments like Meehl's – when someone says "correlation does not equal causation," for example, and does not stop to wonder what can be learned from the particular correlation being discussed – I think: You're only using half your brain.

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katya (2007-11-20 14:43:56)

I think the word you're looking for (in terms of "just credulous enough") is "charitable": e.g. I'm willing to give the results of self-experimentation a charitable interpretation. Meehl's statement (out of context) isn't precisely skeptical = good, credulous = bad; self-experimentation isn't "fooling other people" as long as you make it clear that your N = 1 and includes the experimenter. Self-experimentation is just a more rigorous way of talking about your intuitions, and since most experiments proceed from intuitions, it shouldn't be abandoned. Also, skeptics are roundly believed not to be very much fun at parties. :)

Nansen (2007-11-20 16:57:04)

George Polya discusses the "heuristic syllogism" and the nature of plausible reasoning in *How to Solve It* (1957), sections 6 and 7 of the article "Signs of Progress", p. 186-190. These sections are online here: <http://reposeinthee.blogspot.com/2007/02/heuristic-syllogism-and-nature-of.html> In section 2 of the same article ("Signs of Progress", page 181) he notes: "If you take a heuristic conclusion as certain, you may be fooled and disappointed; but if you neglect heuristic conclusions altogether you will make no progress at all."

seth (2007-11-20 17:08:39)

Thanks, beta, that's a good quote. I suppose it supports my point that it comes from a mathematician rather than a scientist. yes, "charitable" may be the closest word. It isn't quite right though – charitable is not the opposite of skeptical or credulous.

Chris (2007-11-20 18:06:31)

Let's coin a word: "creditive", meaning 'tending to give credit', 'tending to believe'. While we're at it, let's start using "under-credulous", "over-credulous", and "appropriately credulous", to help spread the idea that skepticism is not an unconditional virtue.

seth (2007-11-20 21:37:00)

That sounds about right. I would add "over-skeptical".

### **A Better Way to Do SLD? (2007-11-19 12:25)**

The most interesting recent posts on the Shangri-La Diet forums have been from Roger Garrett (id [1]Fastneasy), who has come up with what seems to be an especially potent version of the diet: He has a three-hour food window every day that starts when he eats his first meal; the rest of the day, he drinks sugar water and doesn't eat anything else. He takes weekends off.

He's 36 years old. Starting weight: 269 pounds. After about a month, he writes, "I've lost 24 pounds so far. This has been incredibly easy! No hunger, no struggle, and tons of energy." He did almost the same thing eight years ago with one difference: no sugar water.

The difference between then and now is [now] I'm shedding the fat at three times the speed and with no anguish and fatigue that's associated with the fasting. I'm not hungry, my stomach doesn't growl. I have tons of energy and feel great in the morning. Also the funny thing, after waking in the morning after fasting for 21 hours, I'm not starving. I remember with the fast before I would wake in the night stomach growling and ready to eat. When I would wake up, I could kill to eat.

1. <http://boards.sethroberts.net/index.php?topic=5804.0>

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Stephen M (Ethesis) (2007-11-19 17:51:18)

That is interesting. I found the best thing about the diet was that my metabolism didn't shut off after losing the first twenty pounds. That was a miracle, and it looks like it is happening for him.

seth (2007-11-19 18:42:40)

Yes, I agree. Your metabolism isn't fighting against the weight loss.

medi (2007-11-19 20:35:07)

Seth, i was wondering if you could give me quick snapshot as to what you are taking (exactly) at the moment for SLD and appetite supression. I believe it is an oil of some type - specifics please. Thanks!

seth (2007-11-19 21:34:39)

I'm taking 4 T/day flaxseed oil (nose-clipped) and 100-200 calories/day bland chicken (nose-clipped).

Chris (2007-11-20 17:59:56)

That's your maintenance dosage, is it?

seth (2007-11-20 21:38:05)

I haven't done it long enough to see where it will put me.

Coldnose (2007-11-20 22:24:31)

I've been experimenting with my own weight loss, like starvation dieting and eating huge amounts of various foods for AS's-sake. (Sushi and unsweetened applesauce give good AS, I've found). My experience is exactly the opposite of Roger Garrett's. The best solution for me is to take a large (400-600cal) dose of flax oil in the morning, then restrain myself from eating for as long as possible, because as soon as I taste food, my AS goes out the window. I flirted with starvation dieting before that, and I found that, from the moment I wake up, I can go without eating for a long time. Even if I went to sleep extremely hungry, I wake up with no craving for food whatsoever (though my stomach may grumble uncomfortably). As soon as I eat food, however, my self-control fails for the rest of the day. (just another data-point for you, Seth)

### **Blood Donation, Weight Loss, and Humor (2007-11-20 05:41)**

At the Shangri-La Diet forums, karky, who has lost 75 pounds on SLD, [1]wrote:

In July I experienced a plateau, and wrestled with the same 5 lbs all month. At the end of July, I donated a pint of blood. WooHoo! Weight loss is back! I think to myself, hmmm... coincidence. In November, another plateau, wrestling with 3 lbs. I donated a pint of blood Monday. Today is Wednesday, I have lost 5 lbs since Monday, 3 lbs Tuesday morning, 2 lbs this morning.

Chrianna [2]replied:

you certainly make a good argument for donating blood!

Which made me chuckle.

I cannot come anywhere near explaining karky's observation. But maybe I can explain – someday, not right now – why Chrianna's reply amused me. I once wrote down about 50 laugh-inducing sentences I heard on the the sitcom Cheers, looking for patterns. Several were obvious. For example, many of the laugh-inducing sentences were insults. Maybe I should resume this quest.

It is a good way to pass the time. A few days ago, I heard the following on a Chevrolet radio ad:

Male voice: With Pilates, three kids, and a house full of laundry, Diana is too busy to think about fuel economy.

Female voice: I'm sorry. Did somebody say something?

Funny! I was driving. I turned off the radio and thought about it for the rest of the trip. What's the rule? What general pattern is it an instance of? I couldn't figure it out. I'm not the only one interested in this question. In an interview I can no longer find, Robert Mankoff, cartoon editor of The New Yorker, said he wanted to write a scientific paper about the patterns he saw in New Yorker cartoon caption contest submissions. Which reminds me: I have written about [3]patterns in New Yorker cartoon captions and [4]talk-show monologue jokes.



1. <http://boards.sethroberts.net/index.php?topic=5831.msg61246#msg61246>
2. <http://boards.sethroberts.net/index.php?topic=5831.msg61247#msg61247>
3. <http://sethroberts.net/spy/iftthereisonething.pdf>
4. <http://sethroberts.net/spy/whatareyouacomedian.pdf>

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Dennis Mangan (2007-11-20 08:46:45)

Blood donation could put one's metabolism into a "fight or flight" mode, i.e. blood loss makes one's body think an emergency is occurring. So maybe appetite decreases, metabolism increases.

Mike Kenny (2007-11-20 09:58:03)

My theory (and perhaps others have expressed it too, can't recall) is that humor is a means of venting anxiety caused by surprise that turned out to be harmless or not seriously harmful. Someone breaks wind—initially your ancestral-environment-oriented brain thinks "Is that sound dangerous?!" Then, "Oh, it was just Jim." You laugh, venting the anxiety. The surprise could be more complex. Giving blood could be thought of as a signal of altruism. "I wish to demonstrate I am a valuable person to the tribe." Giving blood for obviously selfish reasons damages the signal and could be potentially dangerous, until you realize it's not. You feel anxiety and then relax, seeing that expressing selfish motives for giving blood isn't likely to be worth worrying about.

James (2007-11-20 10:43:07)

You might want to read 'Made to Stick' by Chip and Dan Heath. The book discusses what makes ideas memorable to humans but includes a great deal on what makes things funny (since this also makes things memorable). Largely boils down to this: 'violate my expectations'.

seth (2007-11-20 11:20:06)

I blogged about Made To Stick: <http://www.blog.sethroberts.net/2007/04/06/made-to-stick/> Violation of expectations is part of humor – nothing we expect is funny. But humor requires more. In neither of my two examples (blood donation and Chevy ad) is there a clear expectation that is violated. I think anxiety makes us more likely to laugh. Nervous laughter. The "oh it was Jim" sounds more like the insult category than a "relieved to be safe" category.

Timothy Beneke (2007-11-20 12:11:58)

I've spent a lot of time on humor over the years. Historically, there are 4 major insights. 1. Hobbes has the "instant glory" notion; we laugh because we feel superior. You fall on a banana peel; I'm up, you're down ha ha. 2. Freud of course writes about conspiracies of aggression, using humor to express what's covert; this is in line with releases hidden anxieties we don't want to talk about etc... 3. Bergson, talked about the seeing the mechanical as animate, like a slinky toy going down the stairs... 4. The best writing on humor, which "contains" all of the above, is Arthur Koestler's "The Act of Creation". He gets to the heart of the matter. It's bisociation. We start from one matrix of thought, i.e., we are functioning with one set up background assumptions or modes of intelligibility, one frame of understanding. Why did the chicken cross the road? (Assumption: I'm telling you a joke) To get to the other side. (Assumption: I'm giving you obvious factual information about the chicken.) The two frames collide. Think of puns. We laugh to dispel a kind of cognitive disorientation, an eruption of confusion and then return to normalcy. Laughter is 85-90 % exhalation – try laughing while inhaling. All exhalation slows down heart beat and calms the ANS. Laughing at humor is pleasureable reconstitution of cognition; notice that groaning at puns or bad jokes is less pleasureable, but also involves exhalation. (Of course we laugh in many contexts; a psychologist at Vanderbilt is studying laughter rigorously and trying to break it all down.) In the radio commercial, the announcer is making a statement about how busy Diana is so that she can't think of certain thing; and Diana says she thinks she may have heard someone say something. My girlfriend has told me she thinks my hearing is getting worse. I respond by saying, "What did you say." She repeats it, and I say, "What?" Then

she gets that I'm making a joke. It's 2 frames colliding. In the commercial, there is the frame of an announcer in a commercial, and some implicit expectation that Diana is part of the commercial; there is a dramatic reality implicit in this. Then it's as if she doesn't know she's in a commercial or that he is present and speaking even. She's that busy. We are not quite used to this collision of frames; 50 years from now we might be and it might seem trite. Sometimes "matrices of thought" are hard to pin down exactly – those are often the best cases of humor. But When Robin Wright says, "I keep an enormous collection of seashells scattered across the beaches of the world. Perhaps you've seen them." It's very simple, but brilliant. I believe a computer could generate humor randomly by generating collisions of frames; most of it would not be funny, but there would be enough of it generated so we could find the funny examples. I've tried writing humor from Koestler's theory with some success...

dilys (2007-11-20 22:11:05)

Another take on humor strategy (from a course with Neil Simon's brother Danny) especially serially like sitcoms, is setting up, then satisfying an expectation from a character. Jack Benny being mugged – "Your money or your life" – "I'm thinking, I'm thinking." The greatest funny line in Cheers IMO ends the episode with John Cleese (of Monty Python) as a famous marriage counselor, who obviously considers Sam and Diane a disastrous couple. Diane, of course, won't accept this answer, and badgers Cleese mercilessly, at dinner, in the bath, etc. to his very funny outrage. Finally, to get rid of her and get some peace, he sarcastically screams that they are the greatest, most successful, most sublime match since Adam and Eve. Diane's one-word triumphant fade-out line: "See?!" Do you remember how you categorized this one?

Seth's blog » Blog Archive » More On Humor (2007-11-21 11:27:08)

[...] Blood Donation, Weight Loss, and Humor [...]

Weightloss » Blog Archive » Blood Donation, Weight Loss, and Humor (2007-11-30 01:02:03)

[...] seth put an intriguing blog post on Blood Donation, Weight Loss, and HumorHere's a quick excerptWeight loss is back! I think to myself, hmmmâ€ coincidence. In November, another plateau, wrestling with 3 lbs. I donated a pint of blood Monday. Today is Wednesday, I have lost 5 lbs since Monday, 3 lbs Tuesday morning, ... [...]

Jayaramu (2011-07-15 11:31:03)

Guys .. [www.thefirstblood.tk](http://www.thefirstblood.tk) is the website that collects blood donors' details and helps the blood seekers with the donors' info when there arises a need for blood. If you are interested to donate blood and help the needy in dire situations, please register in this website. Registration takes just 2 minutes of your life time but by this you can save lives of many people. Look website also for Voluntary Blood Donors Info when there is a need for blood .. Jai Hind ..

## More On Humor (2007-11-21 11:26)

When I was an undergraduate, I came up with an idea about why people laugh: Laughter is triggered by sudden pleasure. Not pleasure alone, it must increase quickly. Sudden pleasure is the necessary and sufficient condition for laughter. The threshold goes up and down – easier to make someone laugh if they're nervous or cold, for example – but the basic rule never changes. (Tickling is an exception, of course.) Two old friends unexpectedly encounter each other, they embrace, laughing.

Humor is a subset of what causes laughter. Obviously we enjoy humor and jokes have punchlines – the necessary conditions are met. Maybe humor can tell us something about evolution: What is funny reveals what we enjoy, which may have a genetic basis.

I figured out that many jokes derive their pleasure from more than one source. These sources include:

1. Something forbidden. We have something we want to say or would enjoy saying; humor lets us say it. Insults, sexual stuff, scatological stuff (for children), swear words. Political jokes, a much bigger deal in the former Soviet

Union than in America, tell forbidden truth about the government.

2. Something clever. Connecting two things that are quite different.

3. Something incongruous. Many New Yorker cartoons involve [1]animals talking or children talking like adults.

Many jokes are clever insults, for example. Maybe the "did somebody say something" joke that I was [2]puzzled about is an example. The speaker is saying "I don't care about what you care about" (an insult of sorts) in a clever way.

I suspect this list is incomplete – but now that I've made it I can test it.

1. <http://sethroberts.net/spy/ifthereisonothing.pdf>

2. <http://www.blog.sethroberts.net/2007/11/20/blood-donation-weight-loss-and-humor/>

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Geremiah (2007-11-21 13:11:22)

Interesting. This has always seemed to me like an incredibly tricky nut to crack (necessary/sufficient conditions for humor), but here are some thoughts. I think "pleasure" is wrong, because most cases of physical pleasure I can think of are counterexamples. When you're starving to death and you tear into a sandwich, that's a pretty sudden increase in pleasure. Or when you're freezing and someone lets you into a heated room (or vv). Those don't tend to cause laughter. My leading theory has to do more with relief, but a particular kind of relief - simultaneously empathizing with a belief about the world and seeing that it's completely wrong. Nearly every case I can think of where I have a "bird's-eye view" of someone's situation, and can see why their interpretation of it and reactions to it are totally misguided, is funny. (This describes a surprisingly large # of jokes and funny scenes, so if you can't think of examples I haven't put it well enough.) Another thing that is pretty reliably funny is watching two people come from completely different perspectives, and seeing just how out of whack each's perception of the other is (while understanding the perspective that leads them to this crazy perception). Even slapstick seems to work this way: a guy walking merrily along before falling into a pothole or bumping into a pole is funny (again, the viewer sees what he "should have known"). But a piano falling on a guy who's been walking cautiously along, actively looking for something dangerous, is not funny. This also would explain why a joke's power fades with familiarity. You stop feeling the relief at having escaped the wrong belief about the world, because you get so used to how wrong the belief is that you lose any empathy for it. Similarly, it would explain why there is no easy or systematic way to come up with funny jokes, except when targeting a very stupid audience. You need to create relief in your audience - that means finding a belief that is wrong but still draws them in in some way.

Geremiah (2007-11-21 13:17:01)

A couple more thoughts: 1. The counterexamples to your theory aren't just physical. Watch someone as they watch their sports team turn a win into a loss in under a second (this happens with buzzer-beaters in basketball, walkoff HR in baseball, etc.) You'll see shouting and displays of aggression, no laughter. 2. My theory is also consistent with the fact that humor nearly always feels "profound" - it seems like there is something higher about laughter and comedy than strict pleasure (or stories with happy endings). Under my definition, humor is always built on recognizing a fallacy, so it always represents "learning" something in some small sense.

seth (2007-11-21 13:25:01)

"When you're starving to death and you tear into a sandwich." The sandwich isn't unexpected. The increase in pleasure is therefore gradual - it started long before you actually started eating the sandwich. Likewise someone letting you into a heated

room. Relief would not explain why old friends laugh upon unexpected encountering each other. Lots of everyday examples of laughter don't involve relief.

Varangy (2007-11-26 18:37:45)

Evolutionarily speaking I think laughter has little to do with the reasons, while interesting, you list above. I think that laughter is a hard-to-fake social signal of group cohesion, liking and affection. Some food for thought: 1) Why do we tend to like funny people? That is actually the wrong way to think about it. Think about it this way, the more we like someone, the more funny we tend to find them. 2) Why does laughter hurt? For example when a group of people are laughing at the expense of one in the group. The laughter signals who is part of the in-group and who is part of the out-group. 3) Why is fake/forced laughter so annoying? Sometimes people want to be liked and force themselves to smile/laugh – when done poorly, they repel those they want to attract.

seth (2007-11-26 22:04:02)

Your team suddenly loses and nobody laughs – why is that a counterexample? It isn't pleasant to see your team lose. Sure, laughter is a signal. But a signal of what? Humor and laughter obviously go together – humor if good enough provokes laughter. Humor exists in non-group settings. New Yorker cartoons are still funny when I look at them by myself. Laughter may indeed promote group cohesion because we like it when someone makes us laugh and it is much easier to make someone laugh if you know them well—if the two of you are in the same group.

Mike Kenny (2007-12-02 21:03:49)

One puzzle I contemplate—why do babies cry at surprises sometimes, and other times laugh? Babies seem more likely to laugh at visuals and more likely to cry at loud noises.

## Drugs and Depression (2007-11-21 12:04)

The most gripping portions of [1]Let Them Eat Prozac [by David Healy] narrate courtroom battles in which Big Pharma's lawyers, parrying negligence suits by the bereaved, took this line of doubletalk to its limit by explaining SSRI-induced stabbings, shootings, and self-hangings by formerly peaceable individuals as manifestations of not-yet-subdued depression.

Yeah. From an excellent [2]book review. The author of the review, an English professor, doesn't understand methodology, but the facts are nicely presented. I assigned some of Healy's book to my students. Healy did experiments that showed that Prozac caused suicidal thinking in a non-trivial fraction of ordinary people.

1. [http://books.google.com/books?id=5w64WC\\_-jbMC&dq=%22let+them+eat+prozac%22&pg=PP1&ots=nm382Qt69G&sig=RNXGUZK9DnZq\\_eBoWNqWJRWDGio&prev=http://www.google.com/search%3Fq%3D%2522let%2Bthem%2Beat%2Bprozac%2522%26ie%3Dutf-8%26oe%3Dutf-8%26aq%3Dt%26rls%3Dorg.mozilla:en-US:official%26client%3Dfirefox-a&sa=X&oi=print&ct=title&cad=one-book-with-thumbnail](http://books.google.com/books?id=5w64WC_-jbMC&dq=%22let+them+eat+prozac%22&pg=PP1&ots=nm382Qt69G&sig=RNXGUZK9DnZq_eBoWNqWJRWDGio&prev=http://www.google.com/search%3Fq%3D%2522let%2Bthem%2Beat%2Bprozac%2522%26ie%3Dutf-8%26oe%3Dutf-8%26aq%3Dt%26rls%3Dorg.mozilla:en-US:official%26client%3Dfirefox-a&sa=X&oi=print&ct=title&cad=one-book-with-thumbnail)
2. <http://www.nybooks.com/articles/20851>

lasser11 (2007-11-21 19:09:11)

Seth, you don't the history of Psychology. I know the history of Psychology. ha, just joking. Tom Cruise had a point.

### **Perception vs. Reality: Nuclear Power (2007-11-22 06:14)**

[1]A fascinating post by Stephen Dubner – with help from Gwentyth Cravens – says that our perceptions of the danger of nuclear power have been warped, and not in a good way. Years ago I saw a scatterplot that showed perception of risk versus actual risk for many possible dangers: auto accident, being hit by lightning, and so on. Nuclear energy was a whopping outlier. Its perceived risk was much greater than you'd expect from its actual risk. From that outlier, a book with a great title: [2]Power to Save the World.

1. <http://freakonomics.blogs.nytimes.com/2007/11/21/do-not-read-this-if-you-are-anti-nuclear-energy/>

2. <http://online.wsj.com/public/article/SB119551341776798449.html>

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Ben (2007-11-22 10:01:28)

Hi Seth, Do you remember where you saw that scatterplot?

seth (2007-11-22 12:36:54)

I think it was during a talk by Ken Craik, a professor in my department. I can't remember why he was showing it.

Ben (2007-11-22 14:49:19)

Thanks!

### **At Thanksgiving Dinner... (2007-11-22 22:44)**

...My sister said that – curious from reading this blog – she increased her daily dose of flaxseed oil from one capsule (10 calories) to 1 Tablespoon (110 calories) per day. She noticed three positive effects. One is that the skin around her fingernails improved. It cracked less often. (I'd say the same – hadn't realized it until she mentioned it.) Another, first noticed by her dentist ("I didn't say anything"), is that her gums were in better shape. The third, more subtle than the first two, is more energy. She has noticed no negative effects.

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### **The Truth About Advertising (2007-11-23 08:07)**

At a recent party, I met a brand manager for a very large company. He explained how advertisements are designed. You do a focus group to find out the real reason people buy your product – what they really want from it – then you make your advertisements reflect that reason. For example, people do not buy [Product X] because it does [the

stated function of Product X]. They buy it because they want to feel confident. So the ads for [Product X] show people appearing confident.

I had heard this before, but never so clearly. A NY Times [1]article about Western Union provides another example:

Having once stressed efficiency (â€œthe fastest way to send moneyâ€?) [in its ads], Western Union now emphasizes the devotion the money represents. One poster pairs a Filipino nurse in London with her daughter back home in cap and gown, making Western Union an implicit partner in the familyâ€™s achievements. â€œSending so much more than moneyâ€? is a common tag line.

1. <http://www.nytimes.com/2007/11/22/world/22western.html?pagewanted=1&ei=5090&en=5df21be09f41e1d4&ex=1353387600&partner=rssuserland&emc=rss>

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### **Please, Mr. Kirn, I Want a Summary (2007-11-23 21:31)**

Years ago, Bill McKibben gave a reading at Black Oak Books, a Berkeley bookstore. After the reading he chatted with a friend. The grade of B his book had received from Entertainment Weekly came up. "It settled arguments around the house about who's the better writer," McKibben said. His wife's most recent book had gotten a B+. McKibben and his friend then decried the EW practice of giving grades to books as if they were term papers. Perhaps they called it "simplistic".

Whereas I think EW has exactly the right idea. I liked Ha Jin's Waiting. I respect Walter Kirn. I was pleased to see that Kirn [1]reviews Ha Jin's latest book, A Free Life, in the current New York Times Book Review but I became a little dismayed as I read Kirn's review: What exactly was he trying to say?

Volatility, after all, is a measure of health in a free market, and the elementary algebra of Jin's narrative pace â€” as slow, implacable and steady as interest accumulating in a savings account â€” implicitly promises that his dimes and quarters of mundane description and petty conflict will result in a full piggy bank for all. Neither does Jin give his people flaws or problems grave enough to threaten their well-being. Pingping's chronic fretting is not disabling, and Nan's nascent ambitions as a poet aren't the kind that lead to leaps off bridges if they go unattained.

Huh? Kirn seems to be saying the novel is too predictable but I'm not quite sure. I would really have liked a grade at the end so that I could have figured out what Kirn thought overall.

Kirn wrote for Spy; I met him there once and told him I loved his article about "The First 100 Lies" (of the Bush pere presidency). Where is Review of Reviewers, one of Spy's best features, when we need it?

1. <http://www.nytimes.com/2007/11/25/books/review/Kirn-t.html?8bu&emc=bu>

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### **Fish, Omega-3 and Human Health (2007-11-24 06:58)**

I ordered [1]Fish, Omega-3 and Human Health (2005, 2nd ed.) by William Lands from Amazon in March. It came a few days ago. It is published by the [2]AOCS Press. AOCS = American Oil Chemists' Society.

A jewel of a book. Like a research monograph, it has lots of data, graphs, and references; unlike a research monograph, it tries to reach any scientifically literate reader, not just specialists. It has much more about mechanism than other books on the subject. "Health" in the title mainly means circulatory system health (heart disease, strokes); there is also a chapter on the immune system and a chapter on cancer. Almost nothing about mental illness or the brain. Nothing about gum disease.

I read the first edition a year ago. It is a sign of changes in my thinking that I didn't notice a comparison of epilepsy rates in Eskimos (high omega-3 diet) and Danes (low omega-3 diet) living in Greenland. The Eskimos have twice as much epilepsy. It is the only big negative effect of the Eskimo diet. The epilepsy difference fits something I think now but didn't think a year ago: omega-3 makes neurons more easily excited. Three observations led me to this: (a) In my choice reaction-time experiments, flaxseed oil caused an increase in anticipation errors. To reduce them, I changed from a two-choice task to a four-choice task. (b) A friend said I have become more talkative, apparently due to consuming much more flaxseed oil/day. (c) I found that [3]flaxseed oil reduces simple RT - latency to press a button when something happens.

The two-to-one epilepsy ratio is the only case where the Eskimos are clearly worse off. The ratios in the other direction are much larger. The Danes had 20 times more psoriasis than the Eskimos (as I [4]noted earlier), and 25 times more bronchial asthma.

1. <https://www.aocs.org/catalog/product.asp?ID=w204&dept=10>

2. <https://www.aocs.org/press/>

3. <http://www.blog.sethroberts.net/2007/10/25/science-in-action-omega-3-simple-reaction-time/>

4. <http://www.blog.sethroberts.net/2007/02/10/omega-3-facts-of-the-day/>

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Ben A (2007-11-25 13:52:26)

I recall from undergraduate lectures that Eskimos also suffer from increased risk of haemorrhage, and this was linked to increased omega-3 intake. Take [1]this paper for example (although it doesn't investigate diet).

1. [http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=6837347&ordinalpos=7&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=6837347&ordinalpos=7&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum)

seth (2007-11-25 19:21:51)

Yes, good point.

### **My Favorite Comment (2007-11-24 11:05)**

Thank you, j n kalhan, for [1]your comment on a [2]post of mine that speculated that Joyce Hatto and Ranjit Chandra might be twins separated at birth:

It is not true. I have personal knowledge. Dr. Chandra has no twin brother.

1. <http://www.blog.sethroberts.net/2007/09/13/joyce-hatto-and-ranjit-chandra-separated-at-birth/#comment-756>
2. <http://www.blog.sethroberts.net/2007/09/13/joyce-hatto-and-ranjit-chandra-separated-at-birth/>

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### **Brian Wansink to the USDA! (2007-11-24 13:47)**

Brian Wansink, author of [1]Mindless Eating and an [2]innovative methodologist, has been [3]appointed executive director of the U.S. Department of Agriculture's Center for Nutrition Policy and Promotion for 14 months. A surprising and most encouraging choice. Brian's research is amazingly free of dogma. He does what you should do, rather than what people tell you to do.

About [4]cool data.

1. <http://www.mindlesseating.org/>
2. <http://www.blog.sethroberts.net/2006/11/26/brian-wansink-on-research-design/>
3. <http://www.news.cornell.edu/stories/Nov07/Wansink.toDC.sl.html>
4. <http://www.blog.sethroberts.net/2006/12/08/science-versus-human-nature/>

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### **The Most Surprising Sentence in Good Calories, Bad Calories (2007-11-25 04:07)**

Gary Taubes' Good Calories, Bad Calories is overall a very good book, especially in its description of evidence. But there is also this:

Life is dependent on homeostatic systems that exhibit the same relative constancy as body weight, and none of them require a set point.

How does he think body temperature is regulated? Taubes continues:



It is always possible to create a system that exhibits set-point-like behavior or a settling point without actually having a set-point mechanism involved. The classic example is the water level in a lake, which might, to the naive, appear to be regulated from day to day or year to year, but is just the end result of a balance between the flow of water into the lake and the flow out.

No, lakes do not "appear to be regulated" because they do not exhibit anything like hunger or feeling cold. When the water level in a lake is lower than usual, nothing happens to push the level back up. Taubes continues:

When Claude Bernard discussed the stability of the milieu interne and Walter Cannon the notion of homeostasis, it is was this kind of dynamic regulation they had in mind, not a central thermostatlike regulator in the brain that would do the job rather than the body itself.

[1]Michel Cabanac would not enjoy reading this. Whatever Bernard and Cannon had in mind, there is a "central thermostatlike regulator in the brain" that controls body temperature. It makes us seek warmth – take a warm shower, drink hot drinks, put on a jacket – when our body temperature is too low and do the opposite – such as drink cold drinks and eat ice cream – when our body temperature is too high. When our body temperature is too high, we find a warm shower more pleasant than when our body temperature is too low. These changes are obvious – at least, once you look for them – and imply a thermostat in the brain.

1. <http://jap.physiology.org/cgi/content/abstract/100/4/1338>

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Dennis (2007-11-25 13:37:23)

I don't know if you've seen this: <http://www.arthurdevany.com/webstuff/WhyWeGetFat.pdf> Thought you might be interested in it, given your writings about set points and evolutionary explanations.

Tim Lundeen (2007-11-25 16:25:59)

Another example is re blood sugar levels. Dr Bernstein writes about sampling thousands of normal blood sugar levels, and finding them all at 83, +/-3. Some of this may be a matter of semantics, though, rather than disagreement about mechanisms. The set point for blood sugar appears to primarily due to pancreatic machinery that is "set" for 83, rather than something in the brain per se. Still, the brain is intimately connected to glucose homeostasis, and controls diet and cephalic-phase insulin when you eat familiar foods.

seth (2007-11-25 18:31:59)

I don't know much about blood sugar regulation. But it is clear that with body weight and body temperature, counter-acting behavior (e.g., seeking warmth when you are cold) helps keep the level constant. This implies brain involvement and a regulatory system more complicated than the forces controlling the level of a lake.

Timothy Beneke (2007-11-26 00:56:38)

I find it hard to know how much of this is semantic. Science often proceeds by understanding biological functioning in terms of technology. We didn't know the heart was a pump until someone invented a pump; that is not metaphoric – the heart actually is a pump of sorts. I'm told that radar technology helped get the mind back into psychology in the 1940s... Understanding weight control in terms of a thermostat may just be a metaphorical mapping where some parts hold but others do not. There is a regulatory system with causal interactions that can be identified – exposure to poorly learned tastes reduces hunger, to

strongly learned ones increases it; enduring hunger and losing weight (in my view) increases "sensitivity" or readiness for the system to learn or respond to taste-calorie associations – but how much does it really matter if we add the notion of an entity, a noun, "a thermostat in the brain". If we find some controlling mechanism in the brain that does that, fine. And is there really a "point" that the "brain" sets in some way? Is this a metaphor? Or is there just a set of causally interactive processes at work that are easier to understand if we talk this way? When do we need to say that there is a central regulator regulating a biological system and when do we say there is just a system that regulates itself? Does positing a "thermostat in the brain" explain the system or merely re-describe it? Perhaps that will only be known if one is identified. Or is it obvious that there \*must\* be one given the functioning of other neurobiological systems? How do we empirically determine the difference between a system that merely behaves as if there were a thermostat in the brain and a system where there actually is one? Ad nauseum...

seth (2007-11-26 02:38:11)

Why does it matter whether there is a "thermostat in the brain"? That Taubes is wrong about something pretty obvious makes it more plausible to me that he is wrong about something less obvious – whether there is a set point for weight. If you think there is a set point for weight you can entertain the possibility that the set point is adjustable. If you think it is adjustable you can entertain the possibility that it is adjusted based on environmental conditions (as Cabanac concluded the temperature set point is). If you believe in an adjustable set point based on environmental conditions you can begin to wonder what the exact rule is. The more detailed your theory, the easier it is to derive predictions that you can test.

Timothy Beneke (2007-11-26 09:47:22)

Still not convinced there is a disagreement of substance. Taubes is not denying that you can intervene in homeostatic systems; you can reduce body temperature with aspirin or cold. Or even change the depth of a lake. He is just saying the regulatory system may be the whole body itself rather than a thermostatic system in the brain, a little homunculus in charge of things. The existence of the system for hunger control is to me, undeniable; and god knows we can intervene in it, but whether there is the equivalent of a thermostat in the brain may be an open question. The causal system may resemble a thermostatic system without their being some special mechanism "in the brain" that "sets" hunger levels. Yes, thinking of it in the way you do may lead heuristically to better interventions. It actually seems kind of conceptually tricky because we have a biochemical neurological system interacting with consciousness – awareness of flavors and memory of previous flavors – so straight biochemical concepts are not quite enough. The thermostat has no consciousness; it's straight chemistry. The brain/body does... John Searle claims there is a lot of intellectual confusion because people confuse behaving according to a rule, and following a rule... Assuming all of this makes it easier to intervene. You are making a conceptualist argument; there is a system that can be intervened upon sure, I guess the question is whether it "sets" a hunger level the way a thermostat does, or whether what is set, is constantly changing, which is where the metaphor breaks down... Of course thinking about it this way enables you to intervene; it clearly is a system of causal forces, analogous to a thermostat... Part of the system can be destroyed and it no longer regulates; a person can have a stroke and their temperature regulation system can fail... Whether there is a homunculus in the brain, or just a more diffuse systemic bodily system. Taubes would not deny that you can intervene in the other systems; you can lower body temperature with aspirin or cold packs; you can lower hunger by getting calories without taste, or sugar water (the latter would blow Taubes' mind).

David Brown (2007-11-30 20:18:35)

The appetite regulating mechanism is probably far more complex and variable than any of us currently imagine. There's ghrelin and leptin and insulin, all interacting to regulate hunger and satiety and fuel availability. Probably, then, the biggest hindrance to developing a good working model of the appetite regulating mechanism is the biochemical variability of the metabolic machinery in cells and the physiological variability of the various organs of digestion, absorption, and hormonal regulation. Taking data on all of this variability with all of its attendant uncertainties and making statistical sense of it is a major challenge for modern science. Perhaps we shouldn't argue passionately about particulars at this point.

Sara R (2008-03-06 17:24:44)

I think the point of the book was that we tend to get dogmatic about all of this instead of looking at the facts. We don't have all the facts yet. In the context of set points, even though there is evidence that they exist in the human body, we still cannot

prove that they do. It is very hard to prove until we understand how all of the related factors correspond on the entire system. This is not religion we are talking about, though and we cannot go on faith. It has to be based on science. I think that was the point of the book.

### **Omega-3 and Sports Injuries (more) (2007-11-25 12:10)**

Anonymous found, to his surprise, that [1]his martial-arts injuries healed faster after he started taking flaxseed oil (2 T/day). A [2]comment about Popeye vitamins led him to [3]stop taking flaxseed oil. Within ten days, his gums got worse, and his sports injuries became more painful. He has written again:

After going off flaxseed oil for about ten days and seeing all sorts of negative side effects, I have now been back on it for about ten days (this time with four tablespoons a day instead of two), and I am totally back to where I was before I stopped. Gums aren't bleeding at all, joints and tendons don't ache, and I feel great. Anecdotal evidence yes, but very persuasive to me. I have kept taking four tablespoons instead of the previously normal two because I think it increases my mental acuity

Very persuasive to me, too, regardless of what it is called.

1. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>
2. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/#comment-60468>
3. <http://www.blog.sethroberts.net/2007/11/16/omega-3-what-happens-when-you-stop/>

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Matthew (2007-11-25 12:43:38)

I had a very similar experience. I'm a recreational cyclist, 30 years old, and I ride a decent amount—maybe 100m/week. I actually started cycling when I developed severe Planar Fasciitis as a runner and required surgery about 2 1/2 years ago. For a long time I battled knee pain when I rode, but I was able to control it with exercise to balance my leg strength to make the kneecap track properly and a professional bike fitting. During this time (about a year ago) I started doing SLD with flaxseed oil (after having lost 25lbs. on sugar water the year before in an effort to take some of the weight off of my feet but being unable to run), and I noticed that the pain went away, along with most of the foot pain. I also had a much easier time during allergy season and experienced less symptoms of exercise asthma that I usually get during the winter. Anyway, about 2 months ago I did sort of an accidental experiment on myself by running out of fish oil capsules (I switched to these because I don't tolerate swallowing the oil well) and being too busy/lazy to go buy some more. Within a week, the knee pain was right back to where it was. I could hardly make my 5 mile commute by bike without moderate to severe knee pain. I finally got around to replacing my fish oil supply, and then within 5 days of resuming my regimen, the knee pain was gone completely.

seth (2007-11-25 13:28:58)  
Excellent story, Matthew.

willy (2007-11-26 10:51:07)

How long does it take to notice the effects from flax oil when you start it (mood and energy)? A week in general?. I also notice a difference between flax and fish oil. Thanks.

seth (2007-11-26 11:51:42)

I noticed an improvement in balance from flaxseed oil within about 12 hours. In my recent experiments it takes about 2-3 hours to see improvement in brain function. Keep in mind that I have lots of the necessary enzyme because I have been taking flaxseed oil for months. A beginner may not. So if you have enough of the enzyme, the effects of a large-enough dose should occur in hours. Effects on gums take longer – perhaps a week or two to reach full strength. What difference did you notice between flax & fish oil?

Willy (2007-11-26 14:17:25)

Flax oil seems to give me more energy than fish oil, but I did not compare equal doses. Do you mean the anzyme that converts EFA to EPA?. I did not know the enzyme upregulates when more omega 3 is available. I started taking one tablespoon of flax oil about two weeks ago, so maybe I still have to wait.

seth (2007-11-26 16:12:03)

yes, the enzyme that converts short-chain to long-chain. Many enzymes work that way: when there is more stuff to be converted, more of the enzyme is made. You might try 2 T/day flaxseed oil to see effects more clearly than with 1 T/day.

Mike (2008-02-15 10:31:18)

Great information about flaxseed oil! I've been taking it for a little over a week, and noticed my lower body joints no longer hurt. Before the flax, it would hurt to walk downstairs, the day after running. My question is, when do you take flax? I try to take it before lunch so my stomach is pretty empty and nothing will hinder the digestion process. But I don't know when the optimal time is.

seth (2008-02-15 10:50:23)

I don't think it matters when you take it. I take it at all different times – before lunch, after lunch, before bedtime. I don't take it at meals so that it acts to reduce my weight. As this post shows, the effects take about a week to build up. That kind of slow build up means that the exact timing is unlikely to be important.

ebrageem (2009-03-13 23:02:34)

what i the effect of omega 3 on heart during sport ?please send it for me

blog.sethroberts.net | Blog Review (2009-07-08 07:21:51)

[...] [...]

## **A New Kind of Advertising (2007-11-26 12:19)**

This doesn't look like an ad, but it is:

[EMBED] It points to a website where the product – a Samsung mobile phone – is more obvious. Watching the video a second time I can see something is fake about it – it's too generic – but that wasn't obvious the first time I watched.

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## **Omega-3 and Blood Pressure (2007-11-26 15:07)**

I was surprised to see a chapter in Fish, Omega-3 and Human Health devoted to hypertension. Isn't high blood pressure caused by too much salt and too much weight? Well, yes, but a special strain of rats used as an animal model

of hypertension turned out to have a defect in their immune system. Perhaps high blood pressure is also caused by immune-system over-reaction.

A [1]1993 meta-analysis of studies of the effect of fish oil on blood pressure concluded:

Diet supplementation with a relatively high dose of omega-3 PUFA, generally more than 3 g/d, can lead to clinically relevant BP reductions in individuals with untreated hypertension.

The sizes of the blood pressure changes:

Weighted, pooled estimates of SBP [systolic blood pressure] and DBP [diastolic blood pressure] change (mm Hg) with 95 % confidence intervals were -1.0 (-2.0 to 0.0) and -0.5 (-1.2 to +0.2) in the trials of normotensives, and -5.5 (-8.1 to -2.9) and -3.5 (-5.0 to -2.1) in the trials of untreated hypertensives.

A [2]different meta-analysis reached essentially the same conclusion.

Note the use of fish oil. Fish oil has long-chain omega-3 fats, while flaxseed oil – which I have used in my self-experimentation – has only the short-chain omega-3 fat, which is converted to long-chain omega-3 after you eat it. Fish oil is often considered better because the omega-3s don't need to be converted. But this way of thinking misses something. Because the omega-3s in flaxseed oil are converted to long-chain omega-3s by enzymes, the amount of long-chain omega-3 in the body rises more slowly (and thus lasts longer) than if you take fish oil supplying the same amount of long-chain omega-3. Flaxseed oil supplies a kind of time-release long-chain omega-3. A long low dose [3]could easily be more potent than a short high dose.

Thanks to Dave Lull.

1. [http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=8141868&ordinalpos=1&itol=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVAbstractPlus](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=8141868&ordinalpos=1&itol=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus)
2. [http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=8339414&ordinalpos=1&itol=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVAbstractPlus](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=8339414&ordinalpos=1&itol=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVAbstractPlus)
3. <http://heartscanblog.blogspot.com/2007/10/omega-3-fatty-acids-frequency-vs.html>

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NE1 (2007-11-26 19:43:56)

I'm sure something in Dr. Davis' past education prompted his speculation about dose frequency, but he does not sound very convincing. The liver holds vitamins until needed, surely the body has some way of dealing with the oh-so-important omega-3 fats. His theory sounds more like pandering to our voodoo instinct: be sure to shake the bottle 7 times before it's opened, too. It activates the molecules at their resonant frequency.

seth (2007-11-26 21:56:49)

I agree that Dr. Davis is remarkably vague: "more frequent dosing may provide a larger effect. The least effective dosing is once per day; twice per day is far more effective. Three times per day, although cumbersome, provides even greater effect." He never says what "effect" is being measured. Why not?

Dave Lull (2007-11-26 22:57:41)

I think the "effect" that Dr Davis is looking for is a decrease of triglycerides to 60 mg/dl or less, and the elimination of "intermediate-density lipoprotein, or IDL, also called 'remnant lipoproteins' on a VAP panel." \* \* See "How much omega-3s are enough" here: <http://heartscanblog.blogspot.com/2007/05/how-much-omega-3s-are-enough.html>

Igor Carron (2007-11-27 10:48:56)

on an unrelated note, it seems to have an effect on Parkinson's <http://www.sciencedaily.com/releases/2007/11/071126110453.htm> Igor.

[Video] Diet and foods that naturally lower blood pressure | Mediterraneanbook.com (2007-12-08 10:35:14)

[...] Omega-3 and Blood Pressure [...]

### Israel Ramirez on Gary Taubes (2007-11-26 20:52)

The [1]theory behind the Shangri-La Diet was inspired by [2]research of Israel Ramirez, which I describe in an appendix ("The Science Behind the Theory Behind the Diet") to the book. I recently asked Ramirez what he thought of Gary Taubes' idea in Good Calories, Bad Calories that we are fat because carbohydrate consumption pushes our insulin levels too high. He is especially well-qualified to judge because he has done [3]experiments in which insulin injections induced obesity in rats. His reply:

As I understand Gary Taubes, he has resurrected Atkins's™ idea that carbohydrates stimulate insulin which lowers blood glucose and thereby induces more eating. The evidence for this is not very compelling. You can induce overeating with insulin in lab rats but you have to give so much insulin that the animal is in danger of dying. I am not aware of any experiments of this sort in people but diabetics don't™ often report being hungry after accidentally giving themselves too much insulin. There are exceptions to this pattern; for people and lab rats, glucose levels tend to fall shortly before eating.

There are clinical trials in people and lab rats showing that high protein, low carbohydrate, diets suppress intake. For people, the effects are modest in the long term, amounting to a few pounds greater loss than for people given a low fat diet at the end of a one year trial. There is some evidence that this weight loss might not be maintained after the first year. Trials showing weight loss on low carbohydrate diets required eating less carbohydrate than that consumed by 99 % of lean people.

Cross national and historic data don't strongly support Taubes. People in countries where traditional high carbohydrate diets are still consumed are often lean, i.e. Japan and China. In recent times, as people in these countries have shifted away from traditional starch diets, frequency of obesity has increased. Intake of soft drinks, on the other hand, does roughly parallel incidence of obesity. I interpret the beverage correlation as a psychological phenomenon but it is also consistent with Taubes.

Even if Taubes were entirely correct about carbohydrates, it would not contradict the idea that learning influences the amount of food you eat. Nor would it mean that extremely low carbohydrate diets are best or easiest way to lose weight; Seth Roberts's™ method may still be easier for many people.

1. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>

2. <http://sethroberts.net/science/index.html>

3. <http://ajpendo.physiology.org/cgi/reprint/245/3/E211.pdf>

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Dave Lull (2007-11-26 21:37:48)

Gary Taubes comments on the Chinese diet here: [scroll down to the bottom:] <http://livinlavidalocarb.blogspot.com/2007/10/gary-taubes-continues-his-dietary-truth.html#1207525350668233528> And he comments on the Japanese diet here: [http://www.nytimes.com/2007/09/23/magazine/23Taubes.html?\\_r=1&fta=y&oref=slogin](http://www.nytimes.com/2007/09/23/magazine/23Taubes.html?_r=1&fta=y&oref=slogin)

Laura Ramirez (2007-11-26 23:43:47)

The effect of insulin on hunger is only part of Taubes' premise. Another part, is how insulin contributes to obesity by impairing the body's ability to utilize stored fat for energy. Taubes' survey is a critique of the culture of science and research, and the weakness of evidence for the current recommendations to the public about how to lose weight, avoid cancer, heart disease and stay healthy.

Pearl (2007-11-27 03:36:25)

Unfortunately I don't agree with Taubes' response to the Japanese diet. He's right; they don't eat a lot of sugar. But if what's he's saying is true, then most of us English teachers, who usually eat a bowl of rice with school lunch, would all be getting obese because we're not used to digesting the sugars. This is quite the contrary. All of the teachers in my city had their weight fluctuate, but it went up or down depending on the person. The most often cited case for weight loss was not being used to the food and feeling lack of hunger and pleasure from eating. For weight gain, it was increased snack and fast food or increased alcohol consumption that seemed to cause it. It was actually considering the Japanese diet that caused me to really have faith in the flavor-calorie association theory; Japanese food is traditionally very low in flavor and with the exception of rice, slowly digestible. When I sit down to bowl of rice, some pickles, and a bowl of miso soup, I feel full far faster than on western food, with far fewer calories. Processed foods usually vary in flavor as well, even sodas come in flavors like wasabi, banana, or cucumber, that change every season. And there are very few "secret sauces" to get addicted to. Seth's explanation makes sense in the context of the Asian diet. The low carbohydrate diet leaves a huge loophole when you consider the diets of the some of the healthiest nations on the planet.

Lancaster (2007-11-27 12:07:22)

Pearl has a good point. Compare mashed potatoes (as served in the U.S.) and rice as served in Japan. Rice served with a meal in Japan is white and unflavored. The idea of "seasoning" white rice in Japan is as unthinkable as eating mashed potatoes plain in the U.S. But when looking at a country like Japan, another obvious variable has to be taken into consideration: price. The retail cost of rice in Japan is 2-3 times that in the U.S. Interestingly, though, a Big Mac is not. And neither are tremendous variety of "traditional fast food" meals served at the ubiquitous mom & pop shops that compete directly with McDonalds (and deliver!). Taubes is quite right that sugar (HFCS)-based junk food in Japan is considerably more expensive and is served in smaller portions.

Pearl (2007-11-27 16:29:45)

Actually, they do sometimes season white rice with "furikake"; toppings made with seaweed, sesame, salt, pickled plum, beefsteak leaf, dried fish, or dried vegetables, so it's not exactly "unthinkable" to season rice, but it is far more common to see it served plain. You wouldn't get furikake on rice in a restaurant, for example. It also depends on what your definition of seasoning is. Spices are generally not found in foods other than curry, which itself is considered a food borrowed from foreign countries. A lot of traditional food is mostly a balance between salty and sweet, or salty, sweet, and sour.

Lancaster (2007-11-28 11:34:59)

By "seasoning," I was thinking in terms of mashed potatoes, where the whole bowl of carbohydrates is heavily buttered and seasoned, so that every bite tastes the same. Like a big bag of potato chips. The only comparison I can think of is the common faux pas foreigners commit by dumping soy sauce directly on white rice (treating it like mashed potatoes). One exception might be onigiri, where the rice can be very lightly seasoned. Emphasis on "very lightly." Onigiri is actually a good case in point, where a lot of rice (practically unflavored) is interrupted by small, concentrated bits of unique flavor.

SciLibby (2007-12-12 07:35:44)

I wonder if genes that make certain people or populations sensitive to large intakes of carbs would make Taubes' theory true \*in those people\*. It seems that moderation is a good rule of thumb for most people, but for some, much less carbs might be the ticket, and this could be a result of their genes that control how their bodies respond to carbs.

### **Interview with a Discoverer of the Importance of Omega-3 (2007-11-27 15:31)**

Dr. Jorn Dyerberg was one of two Danish doctors who discovered that Eskimos in Greenland, with low rates of heart disease, have much more omega-3 in their blood than Danes in Greenland, with normal rates of heart disease. This was the beginning of the great interest in omega-3s. [1]Here is an interview with Dr. Dyerberg. Among his comments:

As for ALA, an omega-3 from plants that is converted in the body to EPA and subsequently DHA, he was unconvinced. In terms of biological effects of DHA and EPA, Dr. Dyerberg said there are many. "We don't know of any specific biological effects of ALA," he said.

"Tissue experiments give you an ALA concentration of zero. This omega-3 is either burnt or converted," he said. "And the conversion is low."

"If we want the benefits of omega-3, we have to eat them as long chain," he said, referring to EPA and DHA.

[2]My research – revealing very clear benefits of flaxseed oil, no doubt because of its ALA – shows this is quite wrong.

Thanks to Dave Lull.

1. <http://www.nutraingredients.com/news/ng.asp?n=81606>

2. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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anonymous coward (2007-11-27 17:31:33)

Isn't it a wee bit misleading to end the quote where you do? With your edit, you can say "My research – revealing very clear benefits of flaxseed oil, no doubt because of its ALA – shows this is quite wrong." But Dr. Dyerberg continues directly "But it wasn't all doom and gloom for ALA, as Dr. Dyerberg said it could be effective: "If you change your diet dramatically, you can achieve the same EPA and DHA levels in cells on an ALA diet, but you have to change your diet totally," he said. "Diet compliance will be poor," he added." Most observers would have to agree that changing the diet to ingest 500 calories per day of flaxseed oil, which is something like 25 %-30 % of a person's total daily calories (with little other nutritional value), is a very major ("dramatic") diet change, and one that most people would tire of rapidly. You have changed your diet "dramatically", and "achieve[d] the same EPA and DHA levels in cells on an ALA diet", which pretty much agrees with Dr. Dyerberg's remarks.



seth (2007-11-27 22:20:38)

I did want to put Dr. Dyerberg in the best possible light – even though it might seem exactly the opposite. I thought quoting someone saying 2 wrong things was not a clear improvement over saying 1 wrong thing. As Tyler Cowen and Anonymous and several others can attest, you can get fabulous benefits from just 2 T/day of flaxseed oil. Taking 2 T/day of flaxseed oil isn't "chang[ing] your diet totally" – quite the opposite – nor is it hard to do forever.

### My Theory of Human Evolution (osechi) (2007-11-28 11:09)

Sure, you know that in Japan, New Year's is the big winter holiday. But did you know that [1]osechi, a kind of fancy bento box, is a holiday tradition? Here are some examples:





ordering osechi as a set. . . . Price is determined by contents and the reputation of the wholesaler or restaurant which put it together. For example, a relatively unknown shop may whip up three 20 square centimeter boxes for ¥22,000 [= \$200], whereas Kicho, a famous restaurant in Kyoto offers three circles of the same size for a hefty ¥196,000 [= \$1800]. The rest of the sets, ranging anywhere from one to four tiers cost between ¥30,000 to ¥50,000 on average and most Isetan customers buy their ready-made osechi in this price range.

Osechi is another example of how holidays [2]create a market for expensive difficult-to-make things. The Stone-Age predecessors of holidays helped support skilled artists, artisans, and craftsmen, the technological pioneers of the time.

Addendum: Bento boxes [3]inspired the design of the IBM Thinkpad.

1. <http://snakelyone.com/osechi.htm>
2. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>
3. <http://www.lenovoblogs.com/designmatters/?p=72>

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### **How Dangerous is Bariatric Surgery? (2007-11-28 14:13)**

From the abstract of a [1]new paper on the question:

The 1-year case fatality rate was approximately 1 % and nearly 6 % at 5 years. . . .There was a substantial excess of deaths owing to suicide and coronary heart disease.

Six percent chance of dying within 5 years . . . Your chance of survival is probably better if you are posted to Iraq. On the other hand, another study found a 6 % death rate within 5 years for matched obese persons who didn't have the operation.

1. <http://archsurg.ama-assn.org/cgi/content/abstract/142/10/923>

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Chris (2007-11-28 16:15:12)

Ah, so not the miracle cure for diabetes it's been held up as.

seth (2007-11-28 20:39:07)

I agree. If it were effective in a big way surely the long-term death rate would be lower than that of a similar unoperated group.

Chris (2007-11-29 13:23:15)

It's an interesting experiment, but not one I like to see carried out on humans. Bariatric surgery was developed as a weight-loss measure for the extremely obese, and of course weight loss typically improves outcomes for diabetics, even leading to remission in some cases. Weirdly, the surgery seems also to have an anti-diabetic effect independent of weight loss, and there have been some experiments performing operations on non-obese diabetics. In other words, they're on bridge of the UFO starcruiser, they have only a vague notion of what any of the buttons mean, but they find that pressing a certain pattern of buttons has certain desirable effects. As well as certain effects they don't know about or don't understand.

## **The Decline of Fact Checking at The New Yorker (2007-11-28 22:42)**

In the latest New Yorker, [1]an article by Bill Buford begins:

Meat-eaters . . . have more recently had to accept that their diet is probably the source of much of the world's . . . obesity.

Gary Taubes' new book Good Calories, Bad Calories argues the opposite. Even if the fact checkers hadn't read Taubes, surely they knew of the Atkins diet?

Addendum: Buford also blames heart disease on meat. In [2]this talk Malcolm Kendrick notes an inverse correlation between saturated fat consumption and heart disease. Thanks to Dave Lull.

1. [http://www.newyorker.com/arts/critics/atlarge/2007/12/03/071203crat\\_atlarge\\_buford](http://www.newyorker.com/arts/critics/atlarge/2007/12/03/071203crat_atlarge_buford)

2. <http://uk.youtube.com/watch?v=XPPYavcXo1I&feature=related>

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Peter (2007-11-28 23:19:42)

maybe the author meant 'global warming' instead of 'obesity'?

## **What Causes Heart Disease? Malcolm Kendrick's Views (2007-11-29 05:58)**

In this video Malcolm Kendrick, a Scottish doctor, points out the lack of cross-country correlation between cholesterol levels and heart disease rates.

[EMBED]

In this video Kendrick explains why he believes that extreme stress – often caused by emigration – is a big reason for high rates of heart disease.

[EMBED]

This view is supported by research by Michael Marmot and others on the [1]social gradient: People higher in occupational level have better health than those below them. This seems to be because lower jobs are more stressful. The lower your job, the less control you have. Lack of control is the problem.

Kendrick's view calls into question the usual interpretation of migrant studies. When persons emigrate across countries – from Japan to America, from India to England – they usually have higher heart disease rates in the new country. This is often attributed to differences in diet – the old-country diet is presumed healthier than the new-country diet. Kendrick lays the blame elsewhere. He also makes an interesting point about Finland. Finland used to have a very high rate of heart disease. Kendrick points out that in the early 1950s, about 700,000 persons of Finnish descent were pushed by the Soviet government out of the Soviet Union and into Finland. Kendrick also mentions Roseto, Pennsylvania, a town created by emigration en masse from Roseto Italy. The old customs and social networks survived the move intact and the people of Roseto Pennsylvania were for many years [2]remarkably healthy.

Previous posts on heart disease: [3]Omega-3 and heart attacks (also [4]here). [5]The Framingham Study.

Thanks to Dave Lull.

Addendum: Kendrick on "[6]The Great Cholesterol Myth."

1. <http://globetrotter.berkeley.edu/people2/Marmot/marmot-con3.html>
2. [http://www.huffingtonpost.com/dr-rock-positano/the-mystery-of-the-roseta\\_b\\_73260.html](http://www.huffingtonpost.com/dr-rock-positano/the-mystery-of-the-roseta_b_73260.html)
3. <http://www.blog.sethroberts.net/2007/10/02/what-causes-heart-attacks/>
4. <http://www.blog.sethroberts.net/2007/10/06/what-causes-heart-attacks-continued/>
5. <http://www.blog.sethroberts.net/2007/10/09/what-causes-heart-attacks-the-framingham-study/>
6. <http://spiked-online.co.uk/Articles/0000000CAE78.htm>

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Dennis Mangan (2007-11-29 08:28:55)

Seth: Finland still has high rates of CHD. Causes, according to this: <http://www.springerlink.com/content/b011711g64k05142/>, include high serum cholesterol levels, smoking, and hypertension. As per the first video, Australian aboriginals also have high rates of obesity, alcoholism, and diabetes, leading to high CHD rates. As for the "social gradient" theory of CHD, I think that has been definitively put to rest by Deary and Gottfredson: Childhood IQ is moderately strongly correlated with adult socioeconomic position. Lower IQ is also associated with increased rates of all-cause mortality (1, 2), cardiovascular disease (2&€"4), hypertension (5), contact with psychiatric services (6), and other negative health outcomes (7). These associations remain after controlling for socioeconomic position in early life. <http://www.udel.edu/educ/gottfredson/reprints/2005scienceletter.pdf> See also Gottfredson's "Intelligence: Is it the epidemiologists' elusive 'fundamental cause' of social class inequalities in health?" <http://www.udel.edu/educ/gottfredson/reprints/2004fundamentalcause.pdf> Further, as to "stress", heart disease rates in German-occupied Europe during WW2, in The Netherlands and Norway for example, went down, exactly the opposite of what one would expect if stress were a cause.

Timothy Beneke (2007-11-29 11:11:45)

One has to wonder after all the failed nutrition research to what degree nutrition is a factor in heart disease. How does one go about making estimates in the first place if you don't know what other factors are in play? It's all guess in the dark. Robert Levenson' and other emotion researchers find that if you have subjects watch a disturbing video of an arm amputation and are told to keep a poker face and show zero emotion in response to it, they have 2x the cardiovascular stress in heart rate and blood pressure as subjects who watch it and respond naturally. And generally, suppressing any emotion, positive or negative, causes much added cardio stress. Perhaps immigrants, especially from radically different cultures, must suppress a lot of emotion, or feel cognitively overwhelmed, and that causes heart disease. The depression research is showing great increases in heart disease among depressives, based on correlational studies – again more guessing, but interesting. Stress hormones like cortisol are tied to depression and heart disease. When you don't know what you don't know, you have to be very careful about making causal claims – it should be written on wind and running water!

seth (2007-11-29 19:42:54)

Dennis, the drop in heart disease during WW2 has been attributed to a dietary shift from meat to fish, which makes sense. Although Kendrick doesn't believe in the value of omega-3, I do. "The social gradient" is an observation, not a theory – it can't be "put to rest" unless the data turns out to be false. As for its explanation, sure, IQ could be important, especially in controlling what job you end up getting. Whether IQ remains important after degree of control over one's job has been accounted for remains to be seen. A study that equates IQ across the groups being compared is the famous study of London transit workers in the 1950s that found that drivers of double-decker buses had a higher rate of heart attacks than the ticket takers on those buses. The first explanation was that the ticket takers got more exercise (presumably up & down the stairs); I have suggested they got more sunlight and stood much more so they slept better; others have suggested that driving in London traffic is stressful. No one has proposed that the crucial difference is IQ.

Dennis Mangan (2007-11-29 22:20:19)

Seth: Good points except, I think, for the last one: the London bus drivers vs. ticket takers doesn't involve a social gradient. Or if there is one, it ought to be the drivers who are higher on the scale. The studies I've seen involving social gradients were workers with bureaucratic functions who had precisely defined positions and pay, but all doing sedentary work. As for the possibility of decreased CHD resulting from a switch to fish from meat, I really wonder whether those in the occupied countries had much access to fish. However, I haven't seen any data on this. I haven't heard that those in unoccupied countries like Britain had lower CHD rates.

LemmusLemmus (2007-11-30 12:30:52)

I would argue that the social gradient speaks against a stress-heart disease connection, not for it: Who works longer hours - the CEO or the blokes at the assembly line and in accounting? Who has a higher responsibility and thus more to worry about? I will admit that this is somewhat compensated by lower-level workers having to worry more about making ends meet, but I don't think this comes close to making up for work-related stress - at least not in first-world countries where low-level workers are relatively well-off.

seth (2007-11-30 13:16:40)

Perhaps "stress" is the wrong word. People lower in the hierarchy have less control of their work and their working conditions. Working on an assembly line is the ultimate in terms of lack of control. Being the CEO is the opposite of that.

## **Mitch Kapor on Second Life (2007-11-29 14:12)**

Yesterday I heard Mitch "Lotus 1-2-3" Kapor give the third of three talks at the UC Berkeley I-School on "[1]Disruptive Innovations I have Known and Loved" ([2]podcast). This talk was about Second Life; the first two were about the PC and the Internet. It was a very nice talk I would have enjoyed more if I hadn't had a cold. Even with a cold I was

pleased by two things:

1. A graph of on-line Second Life activity. It was increasing at roughly the same rate as [3]SLD-forums activity.
2. A comment that the short-term effect of similar technologies is less than expected; the long-term effect is far greater than expected. One long-term effect Kapor predicted is virtual meetings. I knew someone who was head of design for a very large powerful company – supposedly a dream job. But he had to travel all over the world to meet with his subordinates. Incredibly exhausting. So it wasn't a dream job, and he gave it up.

I knew about the "disruptive technologies" idea from my work on [4]variation in rat bar-pressing, which led me to read Clayton Christensen's excellent [5]The Innovator's Dilemma. Disruptive technologies can be as simple as hydraulic power, which caused several steam-shovel companies to fold.

I had not thought of SLD as a technology; but I realized that's what it is: A weight-loss technology. Disruptive, who knows, although Aaron Swartz was [6]optimistic quite early. And today in the SLD forums I read [7]this:

I've lost 85 lbs. and I have 25 lbs. to go and I just. Can't. Quite. Process that idea. . . I'm at a new job where no one knows that I used to be incredibly heavy and there's even a really cute fellow faculty member who seems to like me. He smiles at me. A lot. It's nice. Everything is so . . . fantastic. I'm so happy I'm practically beside myself. . . . Almost every morning . . . I catch sight of myself in the full-length mirror out of the corner of my eye and the first thought is still "Is that me?". And I have to stop. And look. And wrap my arms around my tummy - my much, much smaller tummy - and think "Oh that's right. That IS me." It always makes me laugh.

Podcasts of his earlier talks [8]here (PC) and [9]here (Internet).

1. <http://www.ischool.berkeley.edu/about/events/dls20071128>
2. [http://www.ischool.berkeley.edu/files/DLS\\_Mitch\\_Kapor\\_28nov2007.mp3](http://www.ischool.berkeley.edu/files/DLS_Mitch_Kapor_28nov2007.mp3)
3. <http://www.blog.sethroberts.net/2007/11/18/the-david-lawrence-effect/>
4. [http://sethroberts.net/about/2006\\_variation\\_of\\_bar\\_press\\_duration.pdf](http://sethroberts.net/about/2006_variation_of_bar_press_duration.pdf)
5. <http://www.businessweek.com/chapter/christensen.htm>
6. <http://www.aaronsw.com/weblog/fatfuture>
7. <http://boards.sethroberts.net/index.php?topic=5861.msg61700#msg61700>
8. [http://www.ischool.berkeley.edu/files/DLS\\_Mitch\\_Kapor\\_03oct2007.mp3](http://www.ischool.berkeley.edu/files/DLS_Mitch_Kapor_03oct2007.mp3)
9. [http://www.ischool.berkeley.edu/files/DLS\\_Mitch\\_Kapor\\_14nov2007.mp3](http://www.ischool.berkeley.edu/files/DLS_Mitch_Kapor_14nov2007.mp3)

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Del (2007-11-30 06:49:05)

NIFTY! I'm going to have to read this more regularly. I was fascinated by the Aaron Swartz article. Y'all's, Del

Timothy Beneke (2007-11-30 11:18:17)

The quote from the forums is wonderful and something I can relate to. I'm around 100 pounds lighter than I used to be now, and have ranged from 80-100 pounds lighter for more than 2 years. I still get a thrill when I see people I haven't seen for a long time, usually acquaintances or people who I'm friendly with but not exactly friends. I start talking with them, they wonder who the hell I am and then go through a shock of recognition – "Tim?!" And at a dinner party a few months ago with a number of people who had weight problems present, a woman I was meeting for the first time asked, "Have you \*always\* been thin? How do you do it?" I delight in being asked that. I have not had the experience of a new job with people who only know me as thin. That must be interesting, like taking on a social identity... Cheers!

seth (2007-11-30 12:01:31)

I love hearing stories like that, of course. Having a new job with people who only know you as thin must be like a Twilight Zone episode. The opposite of wearing a fat suit. Except it's true.

Mikes (2007-11-30 15:16:08)

Hey Seth – interesting post, but also noticing that you report having a cold, and recall you had gone I think several years without one having virtually perfected your sleep. Has the record been broken for a while? Any new thoughts/comments/developments in this sleep/immunity situation? Would be interested to hear. I have tried the standing technique and not achieved similar improvements in my sleep.

seth (2007-11-30 16:40:39)

I haven't had a cold like this – obvious symptoms, lasting a week – in about 10 years, ever since I started standing a lot, etc. But it isn't completely surprising because recently my sleep has been the worse it's been in a very long time. I don't know why. So in a way this new cold supports my idea that better sleep = more resistance to colds. To get reliably better sleep by standing I found I had to stand about 8 hours. Below that the effects were unclear. No new developments on the sleep/immunity connection.

## **The Wisdom of Crowds (Babylonian edition) (2007-11-30 12:17)**

[1]Herodotus on Babylon:

They have no physicians, but when a man is ill, they lay him in the public square, and the passers-by come up to him, and if they have ever had his disease themselves or have known any one who has suffered from it, they give him advice, recommending him to do whatever they found good in their own case, or in the case known to them; and no one is allowed to pass the sick man in silence without asking him what his ailment is.

Surowiecki's book, like this example, was actually about the wisdom of passers-by (unconnected individuals) rather than crowds.

Thanks to David Cramer.



1. <http://www.fordham.edu/Halsall/ancient/greek-babylon.html>

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Wisdom of passers-by « Entertaining Research (2007-12-02 22:16:32)

[...] Wisdom of passers-by Seth has a nice, historical piece of information. [...]

## 2.12 December

### Eskimos, Heart Disease, and Omega-3s: The Plot Thickens (2007-12-01 09:54)

David Marcus made the following [1]comment on an [2]earlier post:

It's a myth that Eskimos have low rates of heart disease. Actually, recent studies have shown they have high rates of cardiovascular disease (50 % higher than western populations) despite diets that are very high in fatty fish.

Mr. Marcus makes a very good point (and it is wonderful to get such informative feedback). Myth is wrong. A Greenland doctor's casual observation – Eskimos almost never died of heart attacks – was confirmed by a detailed study, published in *Acta Medica Scandinavica* in 1980. A recent study, however, found this:

**OBJECTIVES:** The thirty-year-old hypothesis that omega-3 fatty acid (FA) may "reduce the development of thrombosis and atherosclerosis in the Western World" still needs to be tested. Dyerberg-Bang based their supposition on casual observations that coronary atherosclerosis in Greenlandic Inuit was 'almost unknown' and that they consumed large amounts of omega-3 FAs. However, no association was demonstrated with data. **STUDY DESIGN:** Cross-sectional study. **METHODS:** 454 Alaskan Eskimos were screened for coronary heart disease (CHD), using a protocol that included ECG, medical history, Rose questionnaire, blood chemistries, including plasma FA concentrations, and a 24-hour recall and a food frequency questionnaire assessment of omega-3 FA consumption. **RESULTS:** CHD was found in 6 % of the cohort under 55 years of age and in 26 % of those > or = 55 years of age. Eskimos with CHD consume as much omega-3 FAs as those without CHD, and the plasma concentrations confirm that dietary assessment. **CONCLUSIONS:** Average daily consumption of omega-3 FAs among Eskimos was high, with about 3-4 g/d reported, compared with 1-2 g/d used in intervention studies and the average consumption of 0.2 g/d by the American population. There was no association between current omega-3 FA consumption/blood concentrations and the presence of CHD.

A well-written abstract, by the way.

Science is like a game of telephone. It would be truly weird if the initial observation was wrong, given that it was later confirmed in detail and productively followed up – and no one doubts that omega-3 increases clotting time. But "replications" are never exact. This study, for example, measured "in vivo" CHD, whereas the initial observation was about causes of death. The group of Eskimos studied is probably different; and their lifestyle, especially their diet, may have changed substantially in the last 30 years. On the other hand, these new observations are consistent with the great difficulty there has been in confirming the idea that omega-3 fats reduce heart disease.

1. <http://www.blog.sethroberts.net/2007/10/02/what-causes-heart-attacks/>
2. <http://www.blog.sethroberts.net/2007/10/02/what-causes-heart-attacks/>
3. [http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=16277122&ordinalpos=8&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=16277122&ordinalpos=8&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum)

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Dennis Mangan (2007-12-01 12:05:07)

Eskimos' fish consumption with consequent high protein intake is also responsible for their high rates of osteoporosis.

DAvid Marcus (2007-12-02 04:41:21)

I also noticed that in another post you mentioned the Israeli Paradox, where Jewish Israelis who consume polyunsaturated fats are supposed to have higher coronary disease rates than Non-Jewish Israelis who consume monounsaturated fats. A few recent studies have actually found that Arab Israelis have much higher heart disease risk than Jewish Israelis - among the highest rates in the world in fact - despite the fact that they drown their food in olive oil. See, for instance, <http://ije.oxfordjournals.org/cgi/content/full/35/2/448>

peter (2007-12-02 21:33:23)

marcus's authority re high rates of heart disease in Palestinians is consistent with Kendrick explanation, i.e., that extreme stress is the cause of heart disease (altho i tend to think that no single factor is absolutely controlling).

Aaron Ashmann (2007-12-08 21:40:31)

Seth, I think there is more to be done in testing polyunsaturates vs monounsaturates and saturates. Do you think you can perform some more tests on flax vs butter and flax vs coconut oil (for cognitive tasks). This might give us more light on if the weston a price crew was on to something. Also, are you familiar was ray peats work on the subject. If the weston price crew is correct that saturates allow for better functioning of omega 3 and 6 - and this is said on both weston a prices website and ray peats- then your test of flax vs butter and flax vs coconut oil- should show the saturates coming on top- or at least being better over time. There main argument is that saturates promote better brain functioning- lets look at this! Your tests vs olive oil didn't say much because both the above camps say that monounsaturate consumption doesn't nessasarily lead to better brain function.

## The Wisdom of Google (2007-12-01 12:26)

Can I use emoticons [with Google Chat]?

Yes. Emoticons make your chats funnier.

[1]Source. Should I laugh or cry?

1. <http://mail.google.com/support/bin/answer.py?answer=34056>

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Willy (2007-12-01 22:14:46)

Cry. Many applications and web services are bloated just to use emoticons.

David (2007-12-02 06:51:12)

I think you should laugh. Emoticons provide inflections to chat conversations that would be conveyed in speech by tone of voice. They are a way of enhancing the meanings that can be conveyed in chat, making it more like a speech conversation. I find the emoticons :-) and ;-) to be particularly useful.

### **Experimental Mathematics (2007-12-02 23:11)**

The journal [1]Experimental Mathematics, started in 1992, publishes "formal results inspired by experimentation, conjectures suggested by experiments, descriptions of algorithms and software for mathematical exploration, [and] surveys of areas of mathematics from the experimental point of view." The founder wanted to make clearer and give more credit to an important way that mathematicians come up with new ideas. As the journal's [2]statement of philosophy puts it, "Experiment has always been, and increasingly is, an important method of mathematical discovery. (Gauss declared that his way of arriving at mathematical truths was "through systematic experimentation.") Yet this tends to be concealed by the tradition of presenting only elegant, well-rounded, and rigorous results."

When John Tukey wrote Exploratory Data Analysis (1977), he was doing something similar: shedding light on how to come up with new scientific ideas plausible enough to be worth testing. Tukey obviously believed this was a neglected area of statistics research. I was told that the publisher of EDA was uninterested in it; they only published it because it was part of a two-book deal. The other book, with Frederick Mosteller, was more conventional.

My paper titled "[3]Self-experimentation as a source of new ideas" made the same point as Tukey about an earlier step in the scientific process: data collection. How to collect data to generate new ideas worth testing was a neglected area of scientific method. Self-experimentation, derided as a way of testing ideas, might be an excellent way of generating ideas worth testing.

I think of it as crawling back into the water. In the beginning, all math was conjecture and experimentation. In the beginning, all data analysis was exploratory. In the beginning, all science was tiny and devoted to coming up with new ideas. From these came methods of proof, confirmatory data analysis, and methods of carefully testing ideas. Human nature being what it is, users and teachers of the new methods came to greatly disparage the earlier methods. Gary Taubes told me that he spoke to several obesity researchers who thought that the field essentially began with the discovery of leptin. Nothing before that mattered, they believed.

1. <http://www.expmath.org/>

2. <http://www.expmath.org/expmath/philosophy.html>

3. <http://repositories.cdlib.org/postprints/117/>

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## Adventures in Eating and Sleeping (2007-12-03 06:54)

Since the beginning of time everyone has been eating and sleeping – a lot. If you thought this meant there couldn't be any new and cool twists on these activities, you'd be wrong.

1. Eating. "Last night I tried to "race myself" because I knew I would get full fairly quickly but I really enjoyed what I was eating so I ate fast." [1]This is from the [2]SLD forums. Outcome of race: Lost. "I still couldn't get through the whole salad, just too full to eat another bite. That's amazing to me."

2. Sleeping. Someone I know used to wake himself up in the middle of the night because he enjoyed falling asleep.

1. <http://boards.sethroberts.net/index.php?topic=5806.msg61241#msg61241>

2. <http://boards.sethroberts.net/index.php#1>

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alexis gallagher (2007-12-03 09:13:54)

Being woken up just to enjoy falling asleep again is not a completely new twist: "Others feel the pleasure of content and prosperity; I feel it too, as well as they, but not as it slides and passes by; one should study, taste, and ruminate upon it, to render condign thanks to Him who grants it to us. They enjoy the other pleasures as they do that of sleep, without knowing it. To the end that even sleep itself should not so stupidly escape from me, I have formerly caused myself to be disturbed in my sleep, so that I might the better and more sensibly relish and taste it." – Of Experience, Michel de Montaigne, 1580. (full text at <http://oregonstate.edu/instruct/phl302/texts/montaigne/montaigne-essays-8.htm> I)

Mike Kenny (2007-12-03 09:33:04)

Michel de Montaigne used to wake himself up so he could fall asleep again at night, for the same reason, enjoyment of falling asleep. His writings, what I've heard of them, seem not so much self-experimentation as recollecting of data from experience and theorizing, which is very similar. It seems more appreciated, perhaps, than self experimentation, though I'm not sure why.

Timothy Beneke (2007-12-03 13:17:17)

When in December 2003, I changed from going to bed around 3 a.m to around 11:30-12 (following Seth's counsel), and also began religiously getting sunlight early in the day, not only did I undergo a powerful positive shift in baseline mood, with behavioral consequences, but I also experienced sleep, especially going to sleep, much differently. It became more pleasureable. I began to look forward to the relaxation that came as it got dark and my body began to shut down. And getting into bed to read and then sleep, my body would have this warm, relaxed quality that I basked in. I said to friends that I no longer fell asleep but went to sleep. Previously for many years, I just stayed up into the night, and when sleep overtook me, I fell asleep. After going to bed early, I would know when my body was ready to sleep and take pleasure in it and prepare for it. It felt like something my body and I were doing together. I assume that changing my circadian rhythms increased wave amplitude, so I was more awake when I was awake, and more asleep when I was asleep, and it felt – and still feels good... There is a sweetness and honesty to Montaigne's writings that make them very charming....

KenF (2007-12-03 22:27:05)

in college I knew a guy who didn't drink or do drugs. But he stayed up far past his bedtime once and was overwhelmed with excitement at feeling a little punchy because of it.

## Jane Jacobs and Art (2007-12-04 07:02)

⌘

The Cleveland painter [1]Michelle Muldrow was a musician for ten years before becoming a painter – although she got a BFA (Bachelor of Fine Arts) before that. From an unusual background, an [2]unusual creative process:

Interviewer: Describe your working process when creating a new work.

MM: Usually I begin reading about environmental issues, urban development, really anything touching on the subjects of land use, as well American history and fiction. I guess I sort of consider myself a sponge at the beginning stages of work, then usually some travel helps and I take tons of source photos. From there I organize my photos into different obsessions, be it the artificial horticulture and landscaping in the modern developments, or the death of inner ring suburbs, subdivisions, etc, at that point I look for what I am most interested in painting. It's sort of like all my intellectual obsessions still must go through a filter of how I feel, and that is an important element to my work- nostalgia. I suppose I attribute that to the rootlessness of my childhood, I am always trying to make sense of my landscape and home. Then I begin the body of my work. I tend to approach my work as a series or body rather than as individual images. I always prep, underpaint and paint at least 4-5 paintings all at once, never one at a time. I freehand draw, then do a monochromatic underpainting, and from there, I paint.

Painting, in other words, resembles blogging: You can blog about anything, you can paint anything – so long as you care about it.

One of her favorite writers is Jane Jacobs. She used to live in San Francisco, where there seemed to be no upper limit on the value of property. In Cleveland, with boarded-up homes everywhere, there seems to be no lower limit.

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1. <http://www.mmuldrow.com/index.php>

2. <http://thevisualmovement.com/the-visual-movement-interview-with-michelle-muldrow/>

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Andrew Gelman (2007-12-05 17:10:28)

You write, "Painting, in other words, resembles blogging." I would substitute "writing" for "blogging" (or else substitute "posting paintings on the web" for "painting.")

seth (2007-12-05 18:12:23)

Interesting. Maybe you are thinking that painting and writing are "large" while blogging is "small". What I was thinking is that painting and blogging are activities that inherently involve a lot of emotion. Writing may or may not. Do newspaper writers care a lot about their assigned topics? Often not. Do technical writers care a lot about the stuff they write? Probably not. Is there emotion behind every letter? No, a lot of letters are purely functional. Behind every blog post? I think so, unless it's a job.

Andrew (2007-12-05 20:29:45)

No, I'm just saying that blogging is a way of publishing. Writing is the creative activity, blogging is the medium. But your last comment reminds me of something I recently noticed about applied research and teaching, which I'll blog about sometime soon when I have a moment.

### **Everyday Humor (part 1) (2007-12-05 08:32)**

I returned vol. 3 of Not Only the Best of the Larry Sanders Show to my public library but forgot to include the DVD. I got a phone call about it. I returned with the DVD, which I had put in a paper envelope.

Here it is, I said. As I was leaving, the librarian asked if I wanted my envelope back. "In case this happens again," she said. Everyone laughed.

Type of joke: veiled not-serious deprecation.

[1]Blood donation, weight loss, and humor. [2]More on humor.

1. <http://www.blog.sethroberts.net/2007/11/20/blood-donation-weight-loss-and-humor/>

2. <http://www.blog.sethroberts.net/2007/11/21/more-on-humor/>

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Weightloss » Blog Archive » Everyday Humor (part 1) (2007-12-06 06:47:26)

[...] seth put an intriguing blog post on Everyday Humor (part 1)Here's a quick excerptAs I was leaving, the librarian asked if I wanted my paper envelope back. "In case this happens again," she said. Everyone laughed. Type of joke: veiled not-serious deprecation. Blood donation, weight loss, and humor. More on humor. [...]

Timothy Beneke (2007-12-06 10:33:08)

Another phrase for "veiled not-serious deprecation" through humor is affectionate teasing. Teasing, when it is friendly, serves to remind the teased of their characterological deficiencies without overtly putting them down. In Seth's example it was a nicer way of reminding him to try to return his DVDs with the DVD enclosed. I am a life-long unregenerate slob and have gotten a lot of teasing for it. I'd much rather be teased in a playful way than have someone overtly moralize at me or seriously put me down for it. Friendly teasing is nice. Of course there is cruel, hostile teasing which is another matter...

### **Everyday Hedonics (2007-12-05 20:09)**

Conversation on a Berkeley lawn:

[1]Andrew Gelman: You'd think we prefer an upward spike in pleasure – we're happier for a while, then return to normal – to a downward one, but the evidence isn't clear.

Seth: I know someone who woke himself up so he could enjoy falling asleep.

Andrew: Really?

Seth: Yes, really.

Andrew: Was that you?

Seth: No, it wasn't me.

Andrew: If I heard about someone doing that, I'd think it was you.

[2]Phil Price: That's brilliant, actually.

Leonard Mlodinow, author of [3]Euclid's Window (about geometry), [4]Feynman's Rainbow, and a forthcoming book on probability and chance, and co-author with Stephen Hawking of [5]A Briefer History of Time, was the brilliant sleeper. (Not [6]Montaigne.) He might have woken himself up while he was a grad student at Berkeley (in physics). After Berkeley, he became an assistant professor of physics at Caltech. He left Caltech to become a writer. As unorthodox in a big way as waking yourself up so that you can fall asleep is in a small way.

1. <http://www.stat.columbia.edu/~gelman/>

2. <http://www.creekcats.com/pnprice/newhome.html>

3. <http://books.google.com/books?id=ZlsPAAACAAJ&dq=Leonard+Mlodinow&prev=http://www.google.com/search%3Fq%3D%2522leonard%2Bmlodinow%2522%26ie%3Dutf-8%26oe%3Dutf-8%26aq%3Dt%26rls%3Dorg.mozilla:en-US:official%26client%3Dfirefox-a&sa=X&oi=print&ct=result&cd=3&cad=author-navigational>

4. <http://books.google.com/books?id=T10xBHjyuXIC&dq=%22feynman%27s+rainbow%22&pg=PP1&ots=s-Gf92iH1i&sig=4Tp09miiSmIidMocYFYtMVTGy7E&prev=http://www.google.com/search%3Fq%3D%2522feynman%27s%2Bbrainbow%2522%26ie%3Dutf-8%26oe%3Dutf-8%26aq%3Dt%26rls%3Dorg.mozilla:en-US:official%26client%3Dfirefox-a&sa=X&oi=print&ct=title&cad=one-book-with-thumbnail>

5. <http://books.google.com/books?id=LvUoAAAACAAJ&dq=Leonard+Mlodinow&prev=http://www.google.com/search%3Fq%3D%2522leonard%2Bmlodinow%2522%26ie%3Dutf-8%26oe%3Dutf-8%26aq%3Dt%26rls%3Dorg.mozilla:en-US:official%26client%3Dfirefox-a&sa=X&oi=print&ct=result&cd=2&cad=author-navigational>

6. <http://www.blog.sethroberts.net/2007/12/03/adventures-in-eating-and-sleeping/#comment-82705>

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Michelle (2007-12-06 01:35:48)

You know the most interesting people

Lori (2007-12-06 06:46:13)

Stop it! You're deepening this hopeless devotion.

michael vassar (2007-12-06 07:32:52)

My wife does that too.

## The Power of Prayer (2007-12-06 08:33)

From [1]Nassim Taleb:

I truly believe that it was rational to resort to prayers in place of doctors: consider the track record. The risk of death effectively increased after a visit to the doctor. Sadly, this continued well into our era: the break-even did not come until early in the 20th Century. Which effectively means that going to the priest, to Lourdes, Fatima, or (in Syria), Saydnaya, aside from the mental benefits, provided a protection against the risks of exposure to the expert problem. Religion was at least neutral –and it could only be beneficial if it got you away from the doctor.

This gives placebo effect a whole new meaning. And it defends religion in a new and reasonable way.

A belief similar to Taleb's is why I began the long-lasting self-experimentation that led to my paper "[2]Self-experimentation as a source of new ideas": I didn't want to see a doctor about my sleep problem (I awoke too early in the morning and couldn't fall back asleep). I was sure that what the doctor would prescribe (sleeping pills) would do more harm than good.

1. <http://www.fooledbyrandomness.com/notebook.htm>

2. <http://repositories.cdlib.org/postprints/117/>

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Chris (2007-12-06 12:07:01)

Here I am working against a deadline, and I've just spent an hour on Nassim Taleb's blog, without regret. That fellow is erudite.

Michael Blowhard (2007-12-06 22:33:59)

FWIW, I remember hearing or reading someone saying that Christian Science – loony as it may seem to many now – made good sense back in the days when it was invented. Sleep a lot, pray, be nice, work hard, eat wholesome ... You'd almost certainly have done a lot better following those tips than you'd have done seeing doctors back in 1880. Someone else (Roy Porter, maybe, the historian of medicine) wrote somewhere that until the 20th century doctors did on balance far more harm than they did benefit. Lucky us to be living in the 21st century, when doctors can be of some use.

michael vassar (2007-12-07 06:20:14)

I have said this in the past, and possibly to you Michael. Not many people know it, but while doctors \*can\* be of net use through the use of medical science, if they care to use it [http://www.newyorker.com/reporting/2007/12/10/071210fa\\_fact\\_gawande](http://www.newyorker.com/reporting/2007/12/10/071210fa_fact_gawande) in practice it still seems, at least anywhere near the margins, not to be <http://sciencethatmatters.com/archives/category/medicine>

Chris (2007-12-07 14:52:02)

In Medical Nemesis, Ivan Illich estimated the crossover year (when doctors began to save more people than they killed) at 1910. Thinking about Michael's recent postings about the (growing?) incompetence of our institutions is starting me thinking about Illich; I must dig out some of his books.



seth (2007-12-07 20:21:52)  
Chris, which Michael?

Chris (2007-12-08 16:31:31)  
"Michael Blowhard", your second commenter. I'm a regular reader of his blog - where I found out about the SL diet, by the way.

seth (2007-12-08 18:10:05)  
thanks, Chris

Stephen M (Ethesis) (2007-12-28 23:14:12)  
When I talked with critical path specialists, they estimated that if you took trauma care and vaccinations out of the picture, the break even point was in the 1980s. Given that the doctors of New York City put a stop to public health nurses in the early 1900s (who were keeping too many people from getting sick), I think that it is important to factor changes like that into any final statistics, not to mention doctors banning pain killers for new borns and very young children and the wave of deaths that caused.

## Psychology Blogs (2007-12-07 05:28)

[1]This is a nice blog about psychology research, including a section on [2]"weird" research. [3]This is a blog about the origins of language that I look forward to exploring. [4]Here is a long list of neuroscience blogs.

Thanks to Michelle Nguyen.

1. <http://www.spring.org.uk/>
2. <http://www.spring.org.uk/labels/Weird%20Psychology.php>
3. [http://ebbolles.typepad.com/babels\\_dawn/](http://ebbolles.typepad.com/babels_dawn/)
4. <http://neurophilosophy.wordpress.com/2007/02/24/neuroscience-blogs/>

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Willy (2007-12-12 17:11:40)  
I am trying to post this for the third time. Very interesting links. I like this psych blog: [www.mindhacks.com](http://www.mindhacks.com)

seth (2007-12-12 19:03:44)  
If you (meaning anyone reading this) have trouble posting a comment email me and I'll look into it. It probably happens because your comment is treated as spam. I can "de-spam" it.

Diana King (2008-06-19 22:11:01)  
Frankly, im quite happy that the psychology blog has been created.Perhaps it will further the research that will unfold the mystery behind drug addiction. .... Diana King Drug Alcohol Rehab [1] [drugalcoholrehab.net/](http://drugalcoholrehab.net/)

1. <http://DrugAlcoholRehab/>

## Golden Handcuffs (2007-12-07 14:11)

In *The Innovator's Dilemma*, Clayton Christensen gives many examples of how industry-leading companies lost their lead, often so badly they went out of business. As I've said before, this is something I've studied [1] in rats writ large. In a [2] great talk about the beginnings of the PC industry, Mitch Kapor describes meeting Ken Olsen, the CEO of Digital Equipment Corporation (DEC), a \$15-billion-sales-per-year company destroyed by the PC.

"Meeting the needs of people who had never previously used computers was the foundation of this entire [PC] industry," says Kapor. "Even after we [Lotus] had started to become successful, this was still not clear to some people." This is what Christensen says, too: Disruptive innovations begin downmarket, among users not previously thought worthy of notice. For example, hydraulic-powered shovels started in sizes appropriate for digging ditches. The pattern Christensen saw was that the industry-leading companies ignored this market until it was too late. DEC was no exception. Olsen wanted to meet Kapor, who was flown by DEC helicopter to DEC headquarters. When they met, Olsen complained for 15 minutes about the flimsiness of the PC case.

"The stuff that made him smart was the stuff that was now making him incredibly dumb," says Kapor. "They didn't understand that they needed to stop doing all the things that had made them successful in order to have a chance to succeed." I would put it differently. Our experiments with rats made one thing clear: The more successful you are – and DEC was very successful – the harder it is to try new ways of doing things.

[3] Comment on another Kapor talk.

1. [http://sethroberts.net/about/2006\\_variation\\_of\\_bar\\_press\\_duration.pdf](http://sethroberts.net/about/2006_variation_of_bar_press_duration.pdf)
2. [http://www.ischool.berkeley.edu/files/DLS\\_Mitch\\_Kapor\\_03oct2007.mp3](http://www.ischool.berkeley.edu/files/DLS_Mitch_Kapor_03oct2007.mp3)
3. <http://www.blog.sethroberts.net/2007/11/29/mitch-kapor-on-second-life/>

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Chris (2007-12-07 14:41:25)

The bit about the helicopter made me laugh. I worked in marketing for DEC for a few months in the late 80s. The pièce de résistance of all our sales strategies was always just that: fly 'em to DEC headquarters in the company helicopter, they'll be putty in our hands!

knackeredhack (2007-12-11 03:35:32)

Seth, I've seen this throughout my career. What is strange is that everyone knows these stories in business, and yet they still seem to think they are not the stupid ones. The problem is getting worse, as Paul Graham's essay showed and which you pointed to in an earlier post. The cost of startups, at least software startups, is now almost zero, so they are proliferating. The majority will lack any social proof, so it takes a different skill plus luck to differentiate the wheat from the chaff. Graham argues that those, like Google, who have sat the other side of the table and been ignored by large corporates and investors, will be better equipped to function in this more uncertain ecology, where the acquisition of the right collections of talent and technology will determine success. But the tendency in business will be to cluster around what is known, like Hollywood does with stars, who then grab a disproportionate share of the cashflows, while not necessarily delivering success.

## Gary Taubes's Berkeley Talk (2007-12-08 05:29)

Gary Taubes spoke at Berkeley a few weeks ago; the title of his talk was "The Quality of Calories: What Makes Us Fat and Why No One Seems to Care" ([1]webcast). Did you know that the last edition of Dr. Spock's baby book advocated a vegan diet? One of many fascinating details. Also this:

There's a group at the University of Cincinnati that did an Atkins vs. low-fat study and they found that the Atkins people lost twice as much weight and they liked the diet much better. I was interviewing the dietitian who did the study. She had agreed to talk to me but she was very hesitant – she didn't offer up any information. Finally, at the end of the interview, the one thing she offered freely: I asked her who funded it and she said the American Heart Association.

I said, "Well, I have to give them credit for funding it."

She said, "Don't. They funded it because we proposed it as a study that would refute the benefit. And when we found that the Atkins diet really worked and worked better than the low-calorie diet, now we're trying to get money to look further into it and they won't give it to us."

Thanks to Dave Lull.

1. [http://webcast.berkeley.edu/event\\_details.php?webcastid=21216](http://webcast.berkeley.edu/event_details.php?webcastid=21216)

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Dennis Mangan (2007-12-08 08:47:16)

The Atkins diet helps people lose weight, but so do chemotherapy, depression, and amphetamines. Just because something helps you lose weight doesn't mean it's healthy. In this particular case, Atkins causes ketosis, a state akin to starvation.

Tom (2007-12-08 09:33:41)

You're confusing two completely different things: ketosis and ketoacidosis. Ketoacidosis is a dangerous condition, ketosis is simply how our cells derive energy from fat (as opposed to sugar.)

David (2007-12-08 10:51:20)

It would guess that the body is probably pretty well adapted for ketosis. Our hunter-gatherer ancestors must have experienced periods of low food intake and starvation quite frequently in which they would live off of accumulated fat and muscle stores. People with poor tolerance for this state were probably weeded out of the genetic pool a long time ago.

seth (2007-12-08 16:05:10)

"Chemotherapy, depression, and amphetamines"? Not to mention famine. These strike me as fundamentally less healthy than avoiding bread, desserts, and pasta.

Dennis Mangan (2007-12-08 21:15:49)

Like I said, Atkins is about as healthy as chemotherapy. And ketosis is *\*not\** the default metabolic state; it happens in the absence of carbohydrates, such as occurs in a famine.

Tom (2007-12-08 22:20:24)

Reliable evidence (ie, not the discredited slanting of the China study) would be delightful - if hard to find for such a claim. And ketosis is the default metabolic state if you lay off the potatoes, pizza, muffins & cookies.

Dennis Mangan (2007-12-08 22:32:27)

Hey, Tom, you got a last name, so we can see who you're affiliated with? The fact that your man Atkins was obese and likely died of a heart attack ought to give you a little pause.

Tom (2007-12-08 23:23:04)

For a Vegan/PETA member who takes great care to hide that fact, you're very interested in my affiliations. I'm just a guy who knows that carbs are sugars, and I'm doing my best to avoid them. Your arguments are all of the hoary Vegan propaganda pieces (though you don't reveal your agenda.) And Atkins was not obese and died when he hit his head. A google search immediately reveals that (and the orchestrated PETA campaign to smear him.)

Stephen M (Ethesis) (2007-12-09 19:15:05)

Interesting how this side track shows up all over. Really too bad how people feel a need to smear Atkins. Wish I understood the visceral drive some have on the topic.

Dennis Mangan (2007-12-09 21:32:03)

Tom: Carbs are not sugars, but the reverse is true, sugars are carbs. Take a physiology class, for God's sake. All this bullshit about my "agenda" is just that, bullshit. I don't belong to any animal rights group, and I'm not "taking great care" to hide anything. I am a vegetarian, if that floats your boat. The fact is, it's irrelevant, we're talking about diet and nutrition, not me. As far as being interested in your affiliations, you're the one that brought it up. Seth: I think you know very well that the Atkins diet is about a lot more than avoiding white flour and sugar, as you imply. <http://www.cbsnews.com/stories/2004/09/0-2/health/main640566.shtml> "The most frequent complaints with low-carb diets are constipation and headache, which are readily explained by the lack of fruit, vegetables and whole grains, Astrup said. Also, bad breath, muscle cramps, diarrhea, general weakness and rashes are more often reported on low-carb diets than on low-fat diets, Astrup found. "The majority had some of these side effects in the Atkins group. In the control group, almost nothing," he said. These side effects are consistent with carbohydrate deficiency, because the brain and muscle do not get enough sugar from carbohydrates to maintain their normal function, Astrup said. "We have known for many years that there is a minimum intake of carbohydrate necessary to maintain the normal function of your body and that is approximately 150 grams a day," he said. "But, if on the Atkins diet you go down to 20 to 30 grams in the induction phase, then maybe go up to 100 grams, still you are far below what your body needs." The body can coast along for a while with the carbohydrate stores in the liver and the muscles, but eventually problems start to occur, Astrup said. "I think these symptoms are signs that something is wrong," Astrup said. "Great: constipation, bad breath, diarrhea, weakness, just what Dr. Atkins ordered. There is no way that this diet is healthy.

Tom (2007-12-09 22:03:54)

It has nothing to do with Atkins; he's simply a symbol for the consumption of animal flesh. The PETA/Vegan endgame is outlawing meat consumption, and they'll never get there if they can't bury the fact that chronic carbohydrate consumption makes people sick.

Tom (2007-12-10 02:15:37)

Dennis, carbs are sugars. Some are simple sugars like glucose, others are complex sugars, a/k/a starches. Thanks for the ad hominem, though. You brought up the question of my name and affiliations, and you're more than a vegetarian: "for many years now I've refrained from reading books, and even most articles, in support of animal rights, for the simple reason that I know in advance that I am going to agree with nearly everything said. I gave up eating meat fifteen years ago, and for a number of those years, including now, I've been almost entirely vegan, that is, I eat no animal products whatever and avoid things like the use of leather and anything else in which animals are cruelly used." (And if you can't even be bothered to read something that supports your position, I suppose it'll be a cold day in hell before you read Taubes!) Anyway, re: the

study you quote, you certainly had to Google past a ton of pro-low-carb results before you found that thing. It's no surprise you had to settle for some guy doing a meta-analysis. Meta-analyses are notoriously unreliable because they're so easy to slant to fill an agenda. One simply cherry-picks the studies that prove one's point, mixes them all together without noting that they have all been done to different standards, or have tiny populations, or aren't blinded at all. All these deficits are conveniently hidden when they're dumped into the meta-blender. They are so misleading that scientists have organized to create protocols under which meta-analyses can be trusted. Look into "Cochrane Collaboration" if you care to learn more, or start here: <http://snipurl.com/1v130>

David (2007-12-10 06:51:24)

Also from the article cited by Dennis: "More people stayed in the low-carb group than in the low-fat group, so you've got to wonder how severe those side effects were if more people kept to the low-carb diet," said William Yancy, a Duke University researcher who conducted one of the major studies that Astrup reviewed. Certainly I have found a low carb diet easier to adhere to than a low fat one. And I've experienced essentially no side effects. In any case, healthy is a relative judgment, not an absolute one. Perhaps there are unhealthy side effects from a low carb diet, but they have to be weighed against the effects of obesity, both physiological and psychological, and the relative efficacy of different diets at promoting weight loss.

sj (2007-12-13 20:35:48)

I tried the Atkins diet few years ago out of sheer curiosity - I was not overweight. I found it easy to stick with, did not experience any untoward side effects (headache, constipation, etc.) and had one unexpected yet gratifying benefit - an absence of flatulence. Once I began to eat carbs again - gas. Sigh.

### **The Twilight of Expertise (part 13: ICU doctors) (2007-12-09 07:14)**

The other shoe drops. A year ago Atul Gawande [1]wrote in The New Yorker about the [2]Apgar score, a low-tech measurement of newborn viability that led to vast improvements in obstetrics. That's the "how to improve?" side of things. Now Gawande has written about something equally simple and powerful on the "here's how to improve" side of medicine: the use of checklists to improve ICU treatment. The first article was called "The Score"; [3]this one is called "The Checklist".

Checklists are the idea of Peter Pronovost, an ICU doctor at Johns Hopkins Hospital. His first checklist, in 2001, was designed to prevent infections on tubes inserted into patients. Nurses made sure that doctors followed the checklist. It's like the Ten Commandments: the top and bottom getting together to improve the behavior of people in the middle. Checklists involved the empowerment of nurses (bottom) by hospital administrators (top) to improve the performance of doctors (middle). No coincidence, I'm sure, that the Apgar score also involved female empowerment: Virginia Apgar was one of the first powerful women in medicine.

Pronovost told Gawande:

The tasks of medical science fall into three buckets. One is understanding disease biology. One is finding effective therapies. And one is insuring those therapies are delivered effectively. That third bucket has been almost totally ignored by research funders, government, and academia. It's viewed as the art of medicine. That's a mistake, a huge mistake. And from a taxpayer's perspective it's outrageous.

Not to mention a sick person's perspective. I completely agree. Several years ago I heard an industrial designer give a talk to an interface design group. He said that new high-tech products go through three stages: (a) used only by gadgeteers and professional engineers (e.g., the first home computers); (b) used by experts (e.g., billing software for

lawyers); and (c) mass market (e.g., cell phones). The discipline of engineering, he said, was good at designing for the first two stages but not the third.

The similarities suggest a common explanation. I think one reason goes back to Veblen: It is low status to do useful work. It may also have to do with male dominance of medical research and engineering. When balancing status versus usefulness, men may weigh status more highly.

More innovation in the delivery of medicine: [4]house calls. No kidding. [5]More about Peter Pronovost.

1. [http://www.newyorker.com/archive/2006/10/09/061009fa\\_fact?printable=true](http://www.newyorker.com/archive/2006/10/09/061009fa_fact?printable=true)
2. [http://www.google.com/url?sa=t&ct=res&cd=1&url=http%3A%2F%2Fen.wikipedia.org%2Fwiki%2FApgar\\_score&ei=oetbR-yRM6DUpgTElLm6CQ&usg=AFQjCNHNsj7H9vczzXJtzJDDnh8r0zJx3Q&sig2=VhQdGsMzaT3jP1sCcDgxEg](http://www.google.com/url?sa=t&ct=res&cd=1&url=http%3A%2F%2Fen.wikipedia.org%2Fwiki%2FApgar_score&ei=oetbR-yRM6DUpgTElLm6CQ&usg=AFQjCNHNsj7H9vczzXJtzJDDnh8r0zJx3Q&sig2=VhQdGsMzaT3jP1sCcDgxEg)
3. [http://www.newyorker.com/reporting/2007/12/10/071210fa\\_fact\\_gawande](http://www.newyorker.com/reporting/2007/12/10/071210fa_fact_gawande)
4. <http://hippocratech.org/2007/12/08/high-tech-gadgetry-with-old-school-service/>
5. <http://www.hopkinsmedicine.org/hmn/F02/oncampus.html#blame>

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Tom (2007-12-09 08:43:38)

Interesting insight about the three stages of industrial design. Apple seems to be proof of this idea. They dominate personal audio players (and have a good shot at dominating cellphones) despite being late entrants into both sectors. Before I had an iPod, I had an iRiver audio player – great technology with an interface that made you want to slam it into the wall every time you used it. And I still have a cellphone that Verizon insists be loaded with its confusing, ugly interface, one that only allows it to store 50 txt messages (despite 90 % of the phone's memory being empty.)

Mary (MPJ) (2007-12-09 10:56:24)

Interesting perspective. I used to work in user interface and don't see the problem being so much that design for an end user is female or low status, but that may be because I worked for companies that highly valued the usability of their products. The engineers and scientists who create the products have highly specialized knowledge in a very narrow field; they create the products in a way that makes sense to them and the way they view and interact with the world. Part of the problem is that there are very few people who understand both the way the end users are going to interact with the product and the way the engineers see the product. The process requires usability testing directly with the kind of people who will use the product; it requires people who carefully watch those interactions and can improve the design; and it requires people who can translate the design vision to the engineers in a way that they can understand it.

## **The Value, Not So Hidden, of Blogging (2007-12-09 23:36)**

The evolutionary sequence is:

1. Facial expressions and vocalizations.
2. Language (speech and writing).

### 3. Blogging.

Each makes clearer to everyone else what is inside us. Human nature being what it is – [1]closely tied to occupational specialization – it should be no surprise that blogging is very useful in getting a job, as Penelope Trunk [2]says. To get a job you need a skill. Your skill is inside you; blogging makes it much more apparent. Blogging shows not only that you have a skill but that you have an emotional attachment, too: Bloggers write about what they care about. Not only does blogging help you get a job, it helps you get a job you want.

There should be software that creates networks of blogs based on similarity. I wish I knew which blogs were most like mine, for example.

1. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>

2. <http://blog.penelopetrunk.com/2006/05/23/blogging-essential-for-a-good-career/>

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david (2007-12-10 09:10:57)

That should be possible. For music, there are sites like <http://www.last.fm> where you have your mp3 player log the music you listen to. Since it collects listening habit data from lots of people, it can tell you what people who like the music you like also like (or you can just type in an artist and it will show you what other people who like that artist like). For bookmarking, there are social bookmarking sites that also collect the bookmarks and folksonomy tags for lots of people, but the focus there is more on the tag-to-bookmark relationship rather than on figuring out what sites are similar. Still, you might be able to figure something out. On [del.icio.us](http://del.icio.us), 19 people have tagged your blog using tags like "blog diet food health psychology science statistics weightloss": <http://del.icio.us/url/fbf301d0377f949dc10848f957fa3cba> If I search delicious for exactly those terms, I don't get much: [http://del.icio.us/search/?fr=del\\_icio\\_us&p=blog++diet++food++health++psychology++science++statistics++weightloss&type=all](http://del.icio.us/search/?fr=del_icio_us&p=blog++diet++food++health++psychology++science++statistics++weightloss&type=all) But if I search for fewer terms, I get: [http://del.icio.us/search/?fr=del\\_icio\\_us&p=blog+science+health+diet+psychology&type=all](http://del.icio.us/search/?fr=del_icio_us&p=blog+science+health+diet+psychology&type=all) Explore that 2nd link and you should find sites that are similar to yours. David

Evolutionary sequence « Entertaining Research (2007-12-10 10:16:05)

[...] Evolutionary sequence According to Seth, is: 1. Facial expressions and vocalizations. [...]

seth (2007-12-10 15:20:18)

Thanks, David

katya (2007-12-10 17:30:55)

One could set up a blog similarity rating machine using Latent Semantic Analysis. LSA does similarity ratings based on co-occurrence of words between (and within) multiple texts. The only hard part (programatically, from my perspective as a linguist rather than a web coder) would be crawling the blogosphere for the appropriate texts. Then you'd have a list of keywords that you could use in a way similar to how the [del.icio.us](http://del.icio.us) tags were used above. You could also get a rating of how internally consistent a blog was, e.g. whether the next post was more likely to be on the same topic as the last 10 posts, on a different but related topic, or on a completely irrelevant topic.

knackeredhack (2007-12-11 04:19:47)

Seth, connecting this to your post about Golden Handcuffs, the more people blog and blog well, the less we look at the press. But when you hear people in the press talk about blogs, they'll often focus on the bad ones or the outright eccentric, rather than understand the sheer volume of content now available, and so much of it good fun, from people

in whom we learn we can actually put our trust. For instance, this blog and Andrew Gelman's represent that for me in spades in the areas of the blogosphere where I hang out. With blogging, my own experience suggests that it takes time to feel comfortable and enjoy it, and that it might not suit everyone. But that might have more to do with my being a journalist, steeped in the caution of the news agency ethos. I came across the expression "curating a blog" the other day, and it seems to me it fits rather well, particularly as it was applied for students in the context of preparing them for employment.

Seth's blog » Blog Archive » The Softer Side of Blogs (2007-12-12 09:57:16)  
[...] The Value, Not So Hidden, of Blogging [...]

### **Omega-3 and Depression (2007-12-10 18:28)**

From the [1]abstract of a 2003 article titled "A Double-Blind, Placebo-Controlled Study of the Omega-3 Fatty Acid Docosahexaenoic Acid in the Treatment of Major Depression":

Thirty-six depressed patients were randomly assigned to receive DHA, 2 g/day, or placebo for 6 weeks. Response was defined a priori as a  $\geq 50\%$  reduction in the score on the Montgomery-Åsberg Depression Rating Scale. Thirty-five participants were evaluable; 18 received DHA, and 17 received placebo. RESULTS: Response rates were 27.8 % in the DHA group and 23.5 % in the placebo group. The difference in response rates between groups did not reach statistical significance. CONCLUSIONS: This trial failed to show a significant effect of DHA monotherapy in subjects with major depression.

This study is unusual in that it used DHA rather than EPA. EPA studies have been more successful. Excerpt from an [2]overview:

One meta-analysis combined all the studies involving adults with unipolar or bipolar depression reported above, in which omega-3 fatty acids were used to augment existing treatments or as monotherapy. Best-case and worst-case analyses were carried out, and omega-3 fatty acids were found to produce a statistical improvement compared to placebo under both scenarios (best-case  $p = 0.02$ , worst-case  $p = 0.03$ ). A second review including the same data has also suggested a benefit of omega-3 fatty acids in major depression. However, as the authors of both reviews point out, there is significant heterogeneity among the included trials, and this undermines the reliability of the combined results.

Here is the conclusion from another [3]review article:

Trial evidence that examines the effects of  $n-3$  PUFAs on depressed mood is limited and is difficult to summarize and evaluate because of considerable heterogeneity. The evidence available provides little support for the use of  $n-3$  PUFAs to improve depressed mood.

A weak effect, in other words. I would be surprised if omega-3s helped a lot with depression. My [4]self-experimentation pointed to a different cause of depression – seeing faces too little in the morning and/or too much at night.



1. <http://ajp.psychiatryonline.org/cgi/content/abstract/160/5/996>
2. <http://dtb.bmj.com/cgi/content/full/45/2/9>
3. <http://www.ajcn.org/cgi/content/abstract/84/6/1308>
4. <http://repositories.cdlib.org/postprints/117/>

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Nansen (2007-12-12 14:00:32)

You point out that the Pennsylvania Amish have a one-year rate of unipolar depression of about 0.1 percent (page 238 of your paper). I guess it's a pretty safe bet the Amish don't consume large amounts of either fish or flaxseed oil.

seth (2007-12-13 04:47:31)

Or eat a lot of fish. Yeah, good point. Someone should measure their omega-3 levels. The Amish don't have unusually low rates of bipolar disorder. Bipolar disorder might be more sensitive to omega-3 than unipolar depression. There is a large cross-national negative correlation between rate of bipolar disorder and fish consumption, if I remember correctly.

Sans (2011-06-21 22:37:02)

Hey Seth, if you don't mind I could use some of your advice here. For the past few months I've been steadily going into a mild depression, and the pattern fits your findings on seeing faces in the morning almost perfectly - I'm generally in a very bad mood during the day, which causes me to sleep in until afternoon when my mood begins to go up. Finally night time comes and I'm either at a party, which causes me to sleep in late, or at home going through insomnia and unable to sleep. Either way I go to bed late and the next day the cycle continues. Fortunately I'm about to start my internship, which will allow me plenty of interaction with my co-workers in the morning and which will force me to go to bed at a decent hour, thus fixing most of the factors that cause the depression. However, my problem is thus - I appear to be addicted to clubbing. Again, your theory would support this fact for if clubbing is my main way of getting social interaction then I would grow to be quite dependent on it. But at least at the moment I am slightly hesitant to cut off all of my clubbing entirely, as being a student this is quite a big part of my social life. (doubly so for being an extremely social person that I am). My first thought was to compromise and only go clubbing until say 11-12 at night, but your article says that the amish go to bed even earlier than that (9pm), which is a bit impractical for me. What would you recommend here? Would it be better to have a small amount of clubbing nights that end quite late, or a more frequent amount of clubbing that ends early? Or should I cut out clubbing entirely?

Seth Roberts (2011-06-21 22:47:19)

You should cut out clubbing entirely. You can watch TV during the day to reduce your need for human contact late at night. Once you start your internship, you should feel much better.

Sans (2011-06-21 23:31:55)

Thanks for the advice, Seth, I can see the logic behind it. How long before going to sleep do you think I should start limiting my social interaction with others?

## **Everyday Humor (part 2) (2007-12-11 08:50)**

At a wine tasting, I was chatting with two women who are friends.

Me (to one of them): How did your friend entice you to come to this event?

Woman: She told me I was coming.

Laughter.

Type of joke: ?. Actually, it was the truth. Even armed with my idea that laughter is caused by sudden pleasure I still find it very hard to say why we laughed. How odd this is! Laughter is a big and important part of life. Visible, common, highly desirable – yet mysterious.

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David (2007-12-11 09:22:20)

I think this is funny because using the word "entice" sets up the expectation that the first woman used persuasion to convince the second one to come. This is the kind of interaction we view as normal between friends. That expectation is violated when the second woman implied she was ordered to come, not persuaded. A lot of comedy seems to depend on setting expectations and then violating them. Now, why THAT is the case is mysterious.

seth (2007-12-11 18:09:22)

Good answer, David. I also think we find it funny when an adult is ordered around – treated like a child. It is another sort of incongruity.

Seth's blog » Blog Archive » The Softer Side of Blogs (2007-12-11 19:03:43)

[...] Everyday Humor (part 2) [...]

Montclus (2007-12-11 22:02:55)

In this case, it may not have been the quality of the joke, but the intended social interaction. See this article: [http://discovermagazine.com/2007/brain/I\\_aughter/article\\_view?b\\_start:int=0&-C=](http://discovermagazine.com/2007/brain/I_aughter/article_view?b_start:int=0&-C=)

Kai Carver (2007-12-18 07:53:04)

To me it's funny and clever because of the paradox: 1. I'll be enticed to go to a party where cool people are coming. 2. I'm a cool person. 3. She tells me I'm coming, so I definitely want to go. Sorry if my explanation isn't funny, but this is:

<http://www.youtube.com/watch?v=5P6UU6m3cck>

Mike Kenny (2007-12-18 11:09:20)

In keeping with my view that humor is a way of venting tension after being surprised with something that isn't harmful, I'd say that the laugh comes from a sense that what she says has a certain shock because you don't expect someone to say something like that. There's confusion in you, and then you realize there's nothing wrong with this situation. I translate the interaction this way: "She ordered me to come even though I didn't want to, and I'm coming, even though I wouldn't if not compelled, and am, surprisingly, not showing the normal desire to maintain a certain level of easygoingness during a social event, or deference to the wishes of the authority, the person ordering me here, by calling attention to how I was ordered, and don't want to be here.' Your mind initially thinks this, but then 'says' "Of course she's not saying that. Why would she?" and laugh at how the surprise, which could have been unpleasant (uncomfortable social interaction, possibly an argument) turned out to be a friendly exchange. Laughing releases the anxiety that popped up at the initial remark. Imagine if she had been serious about being ordered there! You might have laughed, then saw she wasn't laughing, and felt uncomfortable. The initial judgment of taking her serious would be correct. Laughing could be partially releasing tension, but also a means of signalling to others "I'm uncomfortable and really wish that whatever just happened that makes me uncomfortable be taken in the harmless way rather than in the unpleasant way."

Noumenon (2007-12-24 21:43:38)

Here's another theory of humor that might explain it - [1]Link

1. <http://www.tomveatch.com/else/humor/paper/node2.html>

Inappropriate laughter? « N=1 (2010-03-31 09:03:17)

[...] I remember a post by Seth Roberts where he said "Laughter is a big and important part of life. Visible, common, highly desirable" yet mysterious." [...]

mike kenny (2011-11-14 16:00:30)

i'm now guessing i got that theory about laughter—that it signals to others that a surprise is not dangerous—from alex backer. here he puts forth his theory: <http://alexbacker.pbworks.com/w/page/1721182/The-Evolutionary-Advantage-of-Humor>

## **The Softer Side of Blogs (2007-12-11 19:03)**

[1]Michelle Nguyen told me that in [2]Palo Alto, professional contacts expect you to have a blog. If you don't have a blog, you're not a serious person.

At a recent [3]wine tasting, I encountered the other, nicer side of the coin. I met Colleen and Vanessa, two of the three women behind [4]Wishbone Clover, a blog without a theme. "We just blog about what we care about," Vanessa said (as I [5]have guessed). It's a way of talking to each other and, oh yeah, other people can read it.

I said I had a blog, too.

"Have you ever been stalked on your blog?" Colleen asked. This might be the friendliest question I've ever been asked at a party.

"Stalked?" I said.

She meant that someone had repeatedly left very nasty comments on her blog, such as "you draw like a 4-year-old" (she is a graphic designer and often posts drawings).

I said no, most comments are favorable. No one has ever left nasty comments.

She explained that she had been at a museum party in Boston and a woman at the party thought that she (Colleen) had been hitting on her (the stalker's) girlfriend. that's what caused the stalking. It really upset her.

The women behind Wishbone Clover met when they worked at Wells Fargo. All three were told working at Wells was an "awesome opportunity"; all three left. Colleen now works at another bank. Vanessa is a writer; she has a writing job at UCSF and writes fiction. I forget what the third one does.

Wishbone Clover has a great list of categories, including aggrieved, I am so mad right now, glimpses, special guest star, exchanged (conversations), and the mysterious hlp. I especially liked an entry called "[6]My Mother's Royal We." It begins:

One recent morning I chatted, via IM, with my BFF, EB. I noticed a quirk in our conversation: when I describe some difficulty, especially related to poorly behaved gentlemen, she tends to respond in the third person, for example:

We don't have time for that bullshit. Let's drug his drink, leave him in Nebraska, and see how he fares.

However, she doesn't like it when her mom uses the royal we. "We don't like raw fish," her mom once said.

1. <http://hippocratech.org/>
2. <http://www.blog.sethroberts.net/2007/10/23/blogging-and-meritocracy/>
3. <http://www.blog.sethroberts.net/2007/12/11/everyday-humor-part-2/>
4. <http://wishboneclover.typepad.com/>
5. <http://www.blog.sethroberts.net/2007/12/09/the-value-not-so-hidden-of-blogging/>
6. [http://wishboneclover.typepad.com/wishbone\\_clover/2007/12/my-mothers-roya.html](http://wishboneclover.typepad.com/wishbone_clover/2007/12/my-mothers-roya.html)

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colleen (2007-12-12 09:45:52)

Seth! The ladies of WC thoroughly enjoyed your company at the sparkling wine tasting event. That bottle top is living in my apartment right now: [http://wishboneclover.typepad.com/wishbone\\_clover/2007/12/swords-champagn.html](http://wishboneclover.typepad.com/wishbone_clover/2007/12/swords-champagn.html)

seth (2007-12-13 04:55:28)

Thanks, Colleen. Maybe you will have a show in that gallery. And maybe the bottle top will be part of it.

### **Dietary Paradoxes and a Highly Anticipated Talk (2007-12-12 05:13)**

[1]Here's a nice post about dietary puzzles in which a group of people who should have a high or low rate of heart disease don't. For example,

[2]Spanish paradox. Those naughty Spaniards are eating more fat and less carbs and getting LESS heart disease, now there's a surprise. Good thing their medical system is so marvelous.

[3]Sri Lanka paradox. In Sri Lanka they eat <25 % calories from fat and still get lots of heart disease. Tut tut.

I have blogged about the [4]Israeli Paradox. These paradoxes go away, the author notes, "when you realize saturated fat is not the cause of heart disease."

[5]Elsewhere on his blog he discusses studies that found that eating less fruits and vegetables improved health. Thanks to Dave Lull.

Not unrelated to all this, Ken Carpenter, a [6]co-author of mine and an excellent speaker, is giving a talk next week in the Nutrition Department at UC Berkeley titled "When Nutritionists Go Wrong". It is on Wednesday, December 19, 2007, at 4:10 pm Room 114 Morgan Hall. Ken has written wonderful books and [7]articles about the history of nutrition and I am eagerly awaiting this talk.

1. <http://high-fat-nutrition.blogspot.com/search/label/Paradoxes>
2. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=7754987&query\\_hl=8&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=7754987&query_hl=8&itool=pubmed_docsum)
3. [http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list\\_uids=14644383&query\\_hl=2&itool=pubmed\\_docsum](http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pubmed&cmd=Retrieve&dopt=AbstractPlus&list_uids=14644383&query_hl=2&itool=pubmed_docsum)
4. <http://www.blog.sethroberts.net/2007/02/02/the-israeli-paradox/>
5. <http://high-fat-nutrition.blogspot.com/2007/09/asterisk.html>
6. [http://sethroberts.net/chandra/Lancet\\_comment\\_091202.pdf](http://sethroberts.net/chandra/Lancet_comment_091202.pdf)
7. [http://nobelprize.org/nobel\\_prizes/medicine/articles/carpenter/](http://nobelprize.org/nobel_prizes/medicine/articles/carpenter/)

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Timothy Beneke (2007-12-12 10:08:04)

Do we really know the degree to which nutrition is important in health, that is, assuming we get basic amounts of protein, carbs and fat? Maybe the fundamental assumptions about the relation between nutrition and health outcomes are just plain wrong. And no matter how many times correlations are repeatedly found in epidemiological studies, it can never show causality. There are so many correlational studies controlling for confounds that are themselves based on correlations. It's all a big guessing game and it's obvious now that nutritionists have been guessing wrong. The lesson is: when it's nearly impossible to do controlled, randomized studies, be humble and admit that you are just guessing...

David (2007-12-12 11:29:38)

I think Tim understates the utility of correlations. They are relatively cheap and can be guides about whether theories are reasonable and then what to do a randomized study on. Correlation suggests causation. Then we have to go further. We also have to be careful not to base policy on correlations, especially when we have good reason to believe confounding factors will be important.

seth (2007-12-12 11:59:19)

The first evidence that folate prevents birth defects came from correlational studies. See for example <http://www.kofinasperinatal.org/download.cfm?DownloadFile=244A9AD1-BB1E-A39E-81BE645F04C090B2> Later this idea was tested with experiments. It turned out to be correct.

Dennis Mangan (2007-12-12 13:12:52)

Seth: So, what \*does\* cause heart disease? Seriously, I'd like your opinion. The current state of knowledge would have it that it's multifactorial, for instance related to diet, exercise, smoking, hypertension, etc. Obviously lots of people get heart disease in this country, but they don't all have the same risk factors. How does one explain, e.g., the runner Jim Fixx, who died of a heart attack and who seemingly had only one risk factor, high cholesterol? Then there's data like that in which vegetarian Adventists outlive non-vegetarian ones. If the ideas that you've been writing about here turn out to be even half-correct, well, I just don't get it.

Tom (2007-12-12 14:08:47)

They're only paradoxes if you believe Ancel Keys and Senator McGovern were right. It's getting pretty clear they were disastrously wrong. Distance running IS a risk factor. It's a bizarre behavior with no evolutionary *raison d'être*, and it's incredibly inflammatory. We didn't evolve to do anything of the kind. We evolved to be largely stationary, with short bursts of extreme exertion – sprinting. And in fact, sprinting exercise is anti-inflammatory and anabolic. (The idea that the Marathon is the pinnacle of human physical health is kind of insane, even before you acknowledge that it's the commemoration of a runner's death.) We also evolved to eat – also in short bursts – large amounts of (can't help myself, dude) protein and fat. Carbs just weren't around in non-trivial quantities. And even then, we evolved to go quite a while between feeds. And indeed, intermittent fasting is anti-inflammatory, compared to constant noshing. And, also, anabolic. In other words, you get big and strong if you eat one meal a day of protein and fat. Six small meals, less so. Add carbs, even less. Why? We're probably tuned for our ancient environment.

Timothy Beneke (2007-12-12 16:19:35)

David: Most correlations only suggest hypotheses to be tested; if they are enormously strong they may begin to suggest causation. I agree that when something jumps out at us in a correlation, it should be tested to see if there is causality. The problem is that it's enormously difficult, expensive, and ethically limited to do controlled nutritional experiments. It's not clear to me that replication of correlational studies should be taken very seriously, because you may just be replicating correlations that have nothing to do with cause. The controlled nutritional studies like the Women's Health Initiative seem to suggest that diet matters less to health than was previously believed. I don't know how we go about sorting out all of the correlational data and controlled studies to try to determine if nutrition, within a basic range of getting reasonable protein, carbs and fats is really that important.

Lancaster (2007-12-12 16:38:43)

The Japanese remain the world's longevity champions. CHD mortality rates have declined even as meat consumption has doubled. When I first lived in Japan 25 years ago, the beef bowl and katsudon had already become staples of the Japanese fast food diet. (As Homer Simpson would say, "Mmmm . . . katsudon.") Most paradoxical is the persistently high smoking rate. And it would seem that the stressful Japanese lifestyle would only make things worse. But this is where I think alcohol enters the equation in an interesting way. It's still *de rigueur* for Japanese businessmen to hit the bars after work on a daily basis. Getting soused and blowing off steam is culturally acceptable, even smiled upon. Add to this a cohesive, community/religion-centered culture (though most Japanese claim not to be "religious"). This is a "cradle-to-grave" society that manages to avoid being actually socialistic. Free-market capitalist that I am, there's a lot to the argument that the stress alleviation provided by a paternalistic society and "good enough" socialized medicine may well offset the deficiencies. Another beneficial aspect of the Japanese lifestyle is the huge amount of walking and biking they do. Not for "exercise," but merely to get around. Seriously, the only people I ever saw jogging in Japan on a regular basis were other Americans. (Plus, this is a culture that puts a high premium on hygiene.)

David (2007-12-12 16:52:20)

Tim: I agree with you. I think the main problem with studying nutrition is that it is so multidimensional. How do you begin to do a reasonable mapping of the eating behaviors of a population onto a set of outcomes that you care about? If the goal is to set some recommended nutrition policy this is very hard. Even if you could do studies that plausibly estimate causality for some outcome over some range of the nutrition variable, you would still need to worry about its interactions with everything else, and with the multiplicity of outcomes that people are concerned about. Its even worse that the outcomes we are really interested in are long run mortality and morbidity.

seth (2007-12-12 17:01:08)

Dennis, I don't know what causes heart disease. However, if I had to guess, I think the evidence is strongest for: 1. Stress. The social gradient is large and everywhere and seems to be due to less control of one's job at lower positions. Kendrick's examples of displaced peoples provides a different kind of evidence for this factor. Perhaps stress acts by disturbing sleep, which causes one's immune system to malfunction. 2. Inflammation. The strong correlation between gum disease and heart disease. I think gum disease is due to too much inflammation.

Willy (2007-12-12 17:08:47)

Tom, this is very interesting: > sprinting exercise is anti-inflammatory and anabolic. > you get big and strong if you eat one meal a day of protein and fat. Can you please point me to some further reading?. Thanks

David (2007-12-12 18:26:28)

I've heard a theory of the evolution of human beings in the ecological niche of East Africa that suggests our species spent a lot of time following herds of large migrating animals and scavenging those that died or were killed. This is said to explain bipedalism since that configuration of the body is the most efficient at shedding heat. In this setting it made sense to eat the most energy dense portions of the animal first-brains and so forth-that are mainly fat. I haven't read the science, just a lay account, but I found it very suggestive.

## **Ulcerative Colitis and Flaxseed Oil (2007-12-12 17:40)**

Ulcerative colitis is a disease of too much inflammation. The Mayo Clinic [1] recommends several dangerous and expensive anti-inflammatory drugs. Based on [2] its effect on inflamed gums (gingivitis), I suspect flaxseed oil would be very effective, much safer, more convenient, and much cheaper, assuming you get the right dose (about 2 table-spoons/day).

Flaxseed oil is not on the Mayo Clinic list. Nor is any other source of omega-3. In a store today I ran into a woman seeking herbal treatments for ulcerative colitis. She hadn't heard of using flaxseed oil.

Does anyone reading this have direct experience about what happens when you take flaxseed oil for ulcerative colitis?

The Mayo Clinic website [3] doesn't say anything about using flaxseed oil (or other omega-3 sources) to treat gingivitis. (And the Mayo Clinic [4] claims expertise on alternative medicine.) Nor does it say gingivitis is caused by too much inflammation. [5] In two weeks, you can see for yourself they are wrong.

1. <http://www.mayoclinic.com/health/ulcerative-colitis/DS00598/DSECTION=8>

2. <http://www.blog.sethroberts.net/2007/11/06/omega-3-and-dental-health-even-more/>

3. <http://www.mayoclinic.com/health/gingivitis/DS00363/DSECTION=3>

4. <http://bookstore.mayoclinic.com/products/bookDetails.cfm?mpid=35&trkid=20477S13939270>

5. <http://www.blog.sethroberts.net/2007/11/16/omega-3-what-happens-when-you-stop/>

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Pearl (2007-12-12 18:28:22)

My mother had colitis, I'm not sure if it was ulcerative. They had her on a lot of drugs and it was quite bad for a couple years until she heard from someone about drinking juiced carrots, green tops are the best for some reason. You have to drink the real stuff, not processed. She drank it a couple times a day and it cleared up in about half a year. Now she only gets a rare bout if she eats too much spicy food or drinks red wine. She hasn't tried flax seed oil that I am aware of although I think she takes fish oil capsules for the omega 3. I will recommend flax oil to her.

peter (2007-12-12 20:02:08)

why don't you share your research w/ the Mayo; perhaps they'll conduct a mini study.

Paul Brentano (2007-12-12 23:06:26)

I have ulcerative colitis but fortunately it has quieted down on its own for the last couple of years. My doctor prescribed an anti-inflammatory and told me I'd have to take it the rest of my life but the pills made me sick so I quit taking them after just a couple of weeks. I do take flaxseed oil now after reading your blog so perhaps it will help prevent a relapse.

seth (2007-12-13 07:35:23)

Peter, thanks for the suggestion. I don't think the Mayo Clinic does dental research. I do hope that an interested academic dentist will try to repeat the dental observations I've reported here, how flaxseed oil cures gingivitis. I think about 1 in 1000 dentists would be interested and it's not obvious to me how to find him or her.

Tom (2007-12-13 09:41:35)

How about making the request here? UC forum: <http://www.healingwell.com/community/?f=38> It appears to be quite active. (In fact, if you jump up a level in the hierarchy, there are many forums where you could make a similar request. Perhaps flax doesn't work for UC, but cures Crohn's...who knows?) health forums: <http://www.healingwell.com/community/default.aspx?c=4> (This is just one site, too...I suspect there are many such forums on the net.)

Timothy Beneke (2007-12-13 09:49:06)

As I've posted before, I had gum surgery, now about 12 weeks ago. For the final assessment yesterday, my gum surgeon said, "Wow, I'm amazed! If I keep doing such great work, I'll have to call myself God!" She laughed and was joking, but both her and her assistant were surprised at how well my gums were doing. And praised me highly for how hard I must be working to keep my gums in such great shape. I actually haven't been working very hard, I must confess. It's only after I started doing the flax seed oil - an average of about 3 tablespoons a day - that I have been getting these kinds of responses. I would love to see some research on this.

Tim (2007-12-13 10:03:18)

I imagine that the lady you met must have been newly diagnosed. I have had ulcerative colitis since 1996. Most of the people that I know with u.c. take omega-3, though perhaps more commonly as fish oil. All of my gastroenterologists have agreed that it can be a useful adjunct to other therapies. In fact, one of the drug companies is developing a supplement drink that combines omega-3's with the soft fiber found in bananas, vitamin D and some other foods that are very beneficial to u.c., but hard to get in the right proportions. In general though, doctors seem reluctant to recommend diet-only solutions. I have a relatively mild case, but have had two bad flare ups. Consequently I take two of the drugs listed in addition to fish oil. I am hopeful that one day I will get off the other meds, but for now I just take a very low dose of the drugs thanks largely, based on my self-experimentation, to the omega-3s. The other therapy that doctors downplay for u.c. is nicotine. Even though I have never been a smoker, nicotine gum can stop an oncoming flareup with fewer side effects than steroids and without the knee-jerk doctor's response of increasing the dosage of my other meds.



peter (2007-12-13 11:10:26)

i doubt that any practicing dentist would be interested; you'd have to contact a university. I'd also mention oil pulling, which i sense will also be effective (it has been for me). The much more serious disease is ulcerative colitis, especially since the drugs have a hi rate of AE's. that's where i think Mayo could be interested in seeing if omega-3 oil are useful, although probably w/use of a lower dose of an anti-inflammatory.

seth (2007-12-13 11:38:06)

"AE" = adverse effect?

peter (2007-12-15 10:32:42)

yes, AE = adverse effects

Seth's blog » Blog Archive » Ulcerative Colitis and Flaxseed Oil (continued) (2007-12-17 00:21:19)

[...] Ulcerative Colitis and Flaxseed Oil [...]

Swift Loris (2007-12-23 16:33:16)

For whatever it's worth: I've had Crohn's since 1996. Before I sought treatment I had several very bad bouts of it, but it's been under excellent control symptom-wise with Asacol for almost 10 years. I started with a low dose, but last year my gastroenterologist wasn't happy with my test results and colonoscopy findings and doubled the dose, despite my symptoms being minimal. I'll be getting new tests and another colonoscopy shortly, so I'll know more then about how things are progressing. I've been taking fish oil in the Dr. Sears Zone Omega Rx formulation, which is supposedly "ultra-refined" to remove impurities, for several years, 5 capsules a day (5000 mg fish oil containing 2000 mg EPA and 1000 DHA). As noted, it hasn't seemed to have brought about any improvement in my Crohn's. Dr. Sears himself recommends a significantly higher dosage for Crohn's, but my gastroenterologist isn't comfortable with my taking that much, so I've stayed with 5 capsules/day. On the other hand, as it happens, I have a terrible dentist-phobia and have avoided for years getting my teeth professionally cleaned (I do brush regularly with an electric toothbrush but don't floss). By all rights I should have serious gum disease by now, but my gums never bleed and I have no swelling or other gum symptoms, so I'm hopefully assuming I'm OK on that front.

slackersdelight (2008-02-01 14:05:20)

From my 7 year sever bout with UC, I've learned a couple of things (about myself, everyone might be different): 1. Stay away from steroids, they only cause other problems. 2. 3 pills 3x per day of Asacol is way too much, try one after every meal; better results. 3. Cut back on dairy. 4. No sugar or bread. Sorry, the complex sugars, wheat, and yeast will cause you gut to overreact. 5. And this is the biggest one! Buy a coffee grinder and whole seed flax seed to mix into your morning cereal (I use almond milk). Every morning grind about 2 table-spoons and pour the meal right into the cereal (low sugar granola works best). Give it a try, but be patient it could take 3-6 months to clear up.

Allan Coffey (2008-02-17 11:48:43)

I have also had UC since 1996. first few years were hellish with two very bad flare ups which required hospitalisation & heavy steroid / Imuran & salazopyren doses. not good. had fluctuating health for a few years with another severe flare up a few years back which had me on the brink of major surgery. Western meds are not the answer to Chrons or Colitis. I have put together a programme which now sees me in consistently good health with occasional digestive problems but overall a very normal life. came accross a book, "Self healing Colitis & Crohns" by David klein. It basically promotes a whole food /vegan diet which cuts out foods that puts stress on your gut & causes fermentation. the book also deals with the problems caused on an emotional level. I do not follow the plan strictly but even following it generally leads to vastly increased condition of the gut. I grow my own wheatgrass which is a very powerful healer. I have a veg juice every morning, using a masticating juicer with no blades, always with some flax seed oil. To keep stress levels at bay I meditate, cycle, swim. all in all my life is back on track. I still have maintenance daily dosages of salazopyrn & Imuran but I hope to some day be able to stop taking them. Western medicine has no interest in prescribing a diet to fix these debilitating conditions but it does work & how! all it takes is discipline & motivation to be healthy again. Allan in Ireland

Brandi (2008-05-14 17:37:46)

Doing some research here. I was diagnosed with U.C. in 2006 and have had three bouts with it thus far. I am currently trying Turmeric and Fish Oil for the anti-inflammatory effects associated with these. I am not willing to start prescription drugs but I am becoming desperate to find a better treatment. I do believe that dairy and complex sugars do play a huge role in this disease. I will try the flax seed and report back. It is probably best to grind the seed yourself but can you just take the flax seed oil pills? Any suggestions or advice would be greatly appreciated. Brandi in Illinois

seth (2008-05-14 17:58:54)

Brandi, I believe drinking the oil is best. At least 2 tablespoons/day. I take 4 per day. If you take the pills you won't get enough. You'd have to take about 25 pills to get the oil in 2 tablespoons.

Thomas (2008-08-26 21:22:12)

I just bought a Flax Seed Oil Bottle from Whole Foods this evening. A little history, I've had U.C. since 1988 (20 years) Took the gambit of meds early on. Woke up to the fact that Western Meds don't do much of anything. I started doing things naturally in the med to late nineties. I fell off the Horse a month ago, and am having a flare-up. Trying to rid the diarrhea, it's been bad the last few weeks. I'm on Probiotics, going back to what I used to eat, good healthy stuff and now I bought the Flax Seed Oil. I usually put it in my Oatmeal.

Chris (2008-11-05 20:45:46)

Could you tell me how use use Flaxseed oil for gum disease and in what amounts. Thank you.

Phil (2009-04-25 15:28:01)

I've had U.C. for about 11 years now. Does anyone know if rhubarb is a bad thing to eat. I've been eating some every morning. My U.C. hasn't let up for about 8 months now. Also I had my gall bladder removed almost 2 years ago. About a year later I seem to have gotten worse. You never know if one thing is related to the other. I ate lots of live foods through most of it. I can't even to that anymore.

overpopulation is here (2009-05-11 10:17:42)

It seems obvious that everyone's similar IBD \*symptoms\* are caused by various intestinal imbalances that are different for every person. Each person simply needs to experiment to find what works for their case. I have had UC for 8 months now; first flare that led to diagnosis, and now a second flare I'm getting over(lasted 3months!). On my first flare after diagnosis, I got REALLY sick after starting taking ASACOL (allergic), so I started Prednisone @30mg day instead and also started the SCD diet- and my flare cleared up to NORMAL stool in about 2 weeks (no use of Flax Oil, Probiotics, or anything else). I started to read up on supplements/etc for UC and then started taking ALOT of Garden of Life Probiotics/HSO's according to that Makers Diet. I think these products really messed me up on my next flare by introducing too many & new bacteria strains to my system... Had a 2nd flare 3 months later immediately (next day) after going off strict diet and eating potato & cake bites-only. This time I also had Candida/Eczema which I had to clear up with Candex and Coconut oil. Then I finally went to the Dr. who put me on 50mg Prednisone and that helped start clearing things up. This flare was bad and I found that I could not eat foods with any sugars in them, even fruit- all I was eating was nuts,seeds, and cheese since it minimized my D to 3-6/day. Until I finally stumbled on the fact that I may be intolerant to Lactose(Prednisone filler!) or Fructose like most IBD'ers, or have SIBO. I found another Dr. who could do tests, and I was tested positive for severe SIBO- which is why my flare was so bad and not easily clearing up with strict diet & Prednisone. Took antibiotics for 2 weeks to quell the SIBO and then I could eat normal SCD foods again. So now I say "Get tested for everything you can." I had to research and request these extra tests that Dr.'s never seemed to mention. Try different probiotics. Another of my Dr's patients found that taking Florastor (S. Boulardii-yeast just like Ganeden Crohns/Colitis pills) keeps him normal with no meds. I tried it and found this made \*me\* worse- maybe because it's a yeast and I probably have some lingering SIBO(too soon yet). I've found that Acidophilus (small Intestine bacteria) makes me worse. Tried Bifidum (large intestine bacteria) instead, and seem to be improving... 1-3 formed BM's/day. This is in the form of Natren Healthy Trinity right now...but it is expensive... Note that for a portion of this 3 month flare when I had D, I tried a Flax remedy that a friend from the Ukraine recommended: Boil then simmer 2TBSP flaxseed/half liter water to extract oils. Pour everything into a

thermos. Drink this thick solution 3x day before meals to coat your insides. It helped. Now that my stools are more normal I only continue to take 2TBSP day bottled flaxoil & 2tsp/day of Cod Liver Oil. +5 fish oil caps of EPA/DHA 300/200. Taking DGL & Glutamine powder also helped get MY stool back in form. Scrutinize your supplements: I definitely got better after finding that my Multivitamin, Calcium, & Amino Acid contained Calcium Carbonate filler (basically an antacid). I stopped taking these and things improved. If you take Prednisone, take it with a Lactase pill to help neutralize the main ingredient in those pills- lactose filler!

Renay (2010-04-06 09:16:01)

Fieldwork Denver is a market research firm, conducting a private informal group discussion with individuals diagnosed with Ulcerative Colitis. This discussion pays \$125 CASH and takes place on either the 12th or 15th of April in Denver. If you want to be invited to participate please click on this link and provide some basic information... you will be contacted with more information. OR CALL 303-825-7788 ASK FOR RENAY [https://fieldwork.formbin.com/forms/dnv\\_medical\\_conditions](https://fieldwork.formbin.com/forms/dnv_medical_conditions)

Teri (2011-03-13 16:27:27)

I have a 10 year old daughter that was diagnosed with UC in July 2010!! I am desperate to look for an alternative "natural" treatment as the prescribed medications I do not feel are working. I was recently advised to give her the Flax Seed 3 x's a day in a tea form and to add a bit of sugar and cinnamon(i guess for flavor) but, I just read in another article that the flax seed should not be exposed to heat as it can cause toxins. Does anyone know if this is a true fact? desperate Mom in Florida!!

correct facts and research helps a lot (2011-04-21 21:23:57)

I notice that "overpopulation in here" seems to be listing a lot of things that are very contradictory to one another. Yes, everyone is different when it comes to disorders of the gastrointestinal system, but it seems that he/she is stating a lot of things that are not correct. \*you cannot really have too many "new" strains of bacteria introduced to your system. The most probable cause to your problems is that you were taking very strong medications (Asacol and Prednisone) which were causing the problem, NOT the probiotics. And having bacterial overgrowth is not tied to taking probiotics. Just have to know what probiotics to take. \*the vast amounts of anti-biotics and steroids which doctors tend to administer to control these disorders is simply acting as a band aid, not a true treatment (Asacol is a perfect example). \*Of course foods high in sugar will tend to aggravate your stomach, as well as the acid from fruit. If all you were eating was nuts, seeds and cheese, you are going to make your digestion work on overtime to digest those things. You were eating things that are polar opposites in their digestive properties. What made you think that eating nuts, seeds and cheese was a good idea? Those are very hard things to digest. \*go to a knowledgeable health food store/pharmacy, where the pharmacist is familiar with autoimmune disease. Many people do not know that colitis is an autoimmune disease. \*make sure you are not taking pills that are going to counteract one another. Vitamins can be very harsh on your system, but having bowel disorders usually makes it difficult to absorb our nutrients properly. Make sure to have something to help prep your stomach for whatever pills you are taking, unless the pill specifically needs to be taken on an empty stomach.

flaxseed info for Teri (2011-04-21 21:29:17)

Teri- There is no reason to heat the flax seed oil at all. You can get the seeds and grind them down finely in a coffee grinder, but you can also purchase the oil itself and put it in oatmeal, in a shake or other. You do not want to get whole flax seeds for her to take, as the key factor of the seed is its oil. That oil will not properly be digested in seed form. Keep in mind, flax seed oil can cause more bowel movements per day, which means that it can have her stomach working overtime. What other things have you been administering to her? I highly recommend researching probiotics which have a high "count" and multiple strain. Whole Foods has a good variety, but make sure to look into which strains are geared towards different parts of the digestive tract.

Clair Pickering (2011-11-12 21:34:46)

My 17 year old daughter was diagnosed with U.C about 3 years ago. She had a very rough time. We went to a specialist who recommended adding wheatgrass to her diet. We were reluctant to try it, but to our surprise, it seemed to be helping. The wheatgrass is run through a juicer. It has diminished her symptoms greatly. She had to get used to drinking it, however it beats the alternative.

Joe (2012-01-06 19:38:15)

My wife was diagnosed with colitis about 4 years ago. After being prescribed a medication that clearly didn't work, and 2 years of suffering, I decided to put her on supplements of potassium and magnesium. This calmed things down a little. But when her knee swelled up a year ago, she was diagnosed with rheumatoid arthritis. This seemed strange. She's only 36. This led me to search for things that would help with inflammatory diseases. That's when we found GROUND FLAXSEED! After taking two tablespoons per day,(in only two weeks), her knee swelling went down. And, within a month, all of her colitis symptoms were gone. It has been over a year, and still no symptoms. She eats anything she wants(even her favorite buffalo wing pizza), with no consequences. GROUND FLAXSEED has truly changed her life!

### **The Legacy of Jane Jacobs (2007-12-13 05:35)**

Because of reading Jane Jacobs, I could begin to understand [1]this fascinating post by E. M. Risse about trade vs import replacement. I hadn't before heard his point that between-region trade tends to favor people at the top of the economic food chain. I'm not sure I completely understand Risse's post but I am intrigued enough to want to look at his (four-volume!) book, [2]The Shape of the Future, shape meaning settlement pattern.

1. <http://baconsrebellion.blogspot.com/2007/12/hey-larry.html>

2. <http://www.amazon.com/Shape-Future-Overarching-Settlement-Environmental/dp/0967810809>

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### **Painfully Brilliant (2007-12-13 11:58)**

Last year this commercial was everywhere in Japan:

[EMBED] Tarako means cod roe, a popular flavor in Japan. [1]Here is a long version. Thanks to [2]Pearl Alexander.

1. <http://youtube.com/watch?v=vAtBNOKT8jM>

2. <http://pearlalexander.wordpress.com/>

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### **My Omega-3 Talk at Psychonomics (2007-12-13 21:31)**

At the November meeting of the Psychonomic Society, a group of experimental psychologists, I gave a 15-minute talk ([1]PowerPoint) about my omega-3 research. (Anyone know how to add audio to a PowerPoint file?) Almost all the data in the talk I've posted here, but it had one not-blogged idea, which I summarize like this:

optimize brain -> optimize body

The intake level of a nutrient that optimizes brain function should be close to the level that optimizes the function of

everything else. In particular, the omega-3 intake that makes the brain work best should be close to the level that makes the rest of the body work best. This is because the brain and the rest of the body are bathed in the same blood.

It is easy to see why this is so. I have many electrical appliances: clock, telephone, TV, microwave, refrigerator, laser printer. In spite of vastly different innards and functions, all of them run best when their electrical supply is very close to house current. The electric current that makes my laser printer work best is very close to the electric current that makes my refrigerator work best. Of course, this is by design. Likewise, the different parts of our body, although doing vastly different things, have all been adjusted by evolution to work best with the nutritional equivalent of house current. Just as we might study laser printers to learn what current to use with our refrigerator, we can study the brain to learn what nutrients optimize immune function.

This is a new idea in nutrition (at least, new to me). It is supported by and explains some of the most interesting data I've posted. It explains why Tyler Cowen's gums got [2]so much better so quickly – because he was taking almost exactly the best amount of flaxseed oil for his gums. Tyler chose his intake of flaxseed oil based on my behavioral data, which suggested the best amount was between 2 and 3 tablespoons/day. The gums and the brain could hardly be more different, but the best level for the brain turned out to do a wonderful job of healing his gums. Same thing with [3]Anonymous and sports injuries.

By the way, this shows the scientific value of blogging. My gums got better, too, but not as impressively as Tyler's. I didn't have a lot of injuries to heal. The big improvements noticed by Tyler and Anonymous were "accidents" (unintended consequences). Science thrives on accidents; blogging, it turns out, is a new way to generate them.

1. <http://sethroberts.net/about/2007-11-16%20Rapid%20Effects%20of%20omega-3%20Fats%20on%20Brain%20Function.ppt>
2. <http://www.blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>
3. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>

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NE1 (2007-12-14 16:59:57)

This is really sketchy reasoning. Your appliances were designed for 2 things: to be useful, and fit your 120V line. Evolution happens at the edge of life or death, and my first inclination would be to say that only one of the advantages: anti-inflammation or better reaction time etc, is necessary at any one cusp. The probability of needing optimums of both is (to first order) unlikely. In any case, without more specific examples (specific proteins and vitamins from the past, and studies showing the optimal coupling of the involved systems) I wouldn't have made the strong statement about "should". Could, might? Maybe.

seth (2007-12-14 19:13:29)

NE1, I don't follow your reasoning. If you have a different explanation of why a dose of flaxseed oil chosen based on brain measurements did such a good job of improving gum health, I'd like to hear it.

NE1 (2007-12-14 19:54:11)

For one thing, I dispute your ability to notice a decline in gum health with excessive amounts of fat intake (or a plateau, or lowest effective dose—these things require more subjects. shocker.) Without this, you're stuck saying "brains need this much, but any amount is good for gums." 2-3 tablespoons of oil seems like a large amount even for early coastal humans, let alone those on the savanna. It seems a stretch to claim an optimum. In fact, browsing your presentation, I notice you didn't even find the optimum for the brain, only a plateau in effect. An easy (and easily confirmed) explanation for this is that storage has maxed, but there are others just as relevant as your conclusion.

seth (2007-12-15 03:58:34)

Thanks, NE1. I'm unable to find an alternative explanation in what you wrote.

### **Best Reference to the Shangri-La Diet (2007-12-13 22:05)**

The year isn't over, but we have [1]a winner:

I am going to learn Russian.

I feel so enchanted when I gaze into his handsome face. His eyes are so commanding. I cannot look away.

Should I try the Shangri-la diet?

"He" is a co-worker. She has tried many other diets without success.

1. <http://pepperandhoney.blogspot.com/2007/12/privyet.html>

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My Diet and Weight Loss » Blog Archive » Best Reference to the Shangri-La Diet (2007-12-27 04:17:49)

[...] Meredith Kesner Lewis article is brought to you using rss feeds. Here you will find the latest information on diet and weight loss. I am going to learn Russian. I feel so enchanted when I gaze into his handsome face. His eyes are so commanding. I cannot look away. Should I try the Shangri-la diet? "He" is a co-worker. She has tried many other diets without success. [...]

### **Omega-3 and Parkinson's Disease (2007-12-14 18:35)**

The [1]press release had a curious title: "Omega-3 fatty acids protect against Parkinson's." The certainty suggested an experiment, but Parkinson's is too rare to study prevention experimentally. The press release turned out to be about a rat study that used a drug called MDPT to cause brain damage that resembles Parkinson's. Rats given a high-omega-3 diet suffered much less damage – apparently none – from the drug.

Rats given the high omega-3 diet had much less omega-6 in their brains than control rats – one more reason, in addition to the [2]Israeli Paradox, to think that omega-6 may be just as bad as omega-3 is good. Omega-3 may act by displacing omega-6 (they are almost identical physically).

The results could have been taken to suggest both (a) eat more omega-3-rich foods, such as fish and (b) eat less omega-6-rich foods, such as most nuts and vegetable oils, but only the first recommendation [3]reached the public.

1. <http://www.sciencedaily.com/releases/2007/11/071126110453.htm>

2. <http://www.blog.sethroberts.net/2007/02/02/the-israeli-paradox/>

3. <http://www.canada.com/montrealgazette/news/story.html?id=5185659f-cde5-48b0-85e4-95d6fa641f32&k=19940>

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David Marcus (2007-12-15 03:57:34)

Suggesting that people avoid nuts seems counterproductive. Nuts are among the only foods for which consumption is consistently and dramatically linked to lower heart disease (and all-cause) mortality in epidemiologic studies, and lab and animal studies are also suggestive of protection from vascular diseases.

seth (2007-12-15 04:53:44)

Thanks, David, that's a good point. I was aware of experiments suggesting that walnuts – which are high in omega-3, one of the few nuts that is – have heart-protective effects. But I'd forgotten about the studies you mention. I found this in a 1999 paper: "Perhaps one of the most unexpected and novel findings in nutritional epidemiology in the past 5 y has been that nut consumption seems to protect against ischemic heart disease (IHD)." It's also true that while vegetable oils are high in omega-6, nuts contain far more than fat. Vegetable oils are close to the sum of the fats they contain; nuts aren't.

peter (2007-12-15 11:54:21)

<http://ifitandhealthy.com/healthy-diets-the-mediterranean-diet/> When it comes to a fatty acid composition of oils, the best omega-6 to omega-3 ratio is found in flaxseed, canola, walnut, olive, and avocado oils. Omega-6:Omega-3 Ratio in oils: Flaxseed " 0:24 Canola " 2:00 Walnut " 5:08 Olive " 13:1 Avocado " 13:0 In nuts, the best omega-6 to omega-3 ratio is in walnuts, macadamia, pecans, cashews, and pine nuts. Omega-6:Omega-3 Ratio in nuts: Walnuts " 4:2 Macadamia " 6:3 Pecans " 20:9 Pine " 31:6 Cashews " 47:6 If you have a choice, it is a good idea to use nuts and oils with a good omega-6 to omega-3 ratio.

L. Atkins (2009-03-20 13:48:45)

Thanks to Peter! I've been looking for that nut info all over the Internet.

## **Gary Taubes on the Religious Nature of Obesity Research (2007-12-14 23:13)**

From an excellent [1]interview with Gary Taubes:

Martin: You write that the "enterprise" of diet, obesity and disease research "purports to be a science and yet functions like a religion." In what ways?

Taubes: Simple. The researchers and authority figures in this business seem utterly uninterested in finding out whether what they believe is true or not. It's as though their God, whichever one that might be, told them that obesity is caused by eating too much – by gluttony and/or sloth – and so they believe that unconditionally, and no amount of contradictory evidence, no failure to explain the actual observations can convince them to question it. They have unconditional faith that they know what the truth is, and there's no place for this kind of faith in the pursuit of science. Science requires skepticism to function. Religion requires faith.

I agree with Taubes about the facts: Obesity "authority figures" do "seem uninterested in finding out" etc. Yes, it resembles religion, not science. Taubes's summing-up, however, is one-sided. To say "science requires skepticism" is to miss the point that science also requires paying attention – finding, noticing, thinking about facts you can't explain. Religion doesn't. The Atkins Diet caused millions of people to lose plenty of weight in a way that mainstream weight-control theories could not explain. No one powerful in obesity research managed to notice this was a puzzle worth trying to explain.

Science isn't just about testing ideas (Taubes's "skepticism"); it also requires generating them. I'm hoping if I blog about this often enough I will find a humorous way to say it.

Thanks to Dave Lull.

1. <http://www.alternet.org/healthwellness/70314/?page=entire>

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Tom (2007-12-15 08:22:32)

I think scientists were noticing, and they had better ideas than Ancel Keys and Senator McGovern [who was trying to do Pritikin (an Ornish predecessor) but couldn't stick with it.] My opinion: Science, at least in some fields of inquiry, also requires an appetite for self-immolation. Would you publish your research if you were quite sure that doing so would mean your income, reputation and career were destroyed? Physiologists watched it happen to their peers. These days, depending on field, scientists may have their labs wrecked, their test animals "liberated" and come home to find protesters taunting their kids. Even during the McGovern hearing, it was already clear that the costs of speaking truth to power would be astronomical. And the cascade only gathered power from there, especially when it became clear that it was a license to print money [from huge-markup, low-labor, cheaply-shipped carb products.]

Timothy Beneke (2007-12-15 09:13:42)

I am eternally grateful to Gary Taubes for opening my eyes on nutritional matters; if I were religious, I'd pray that he read Seth's work. But he doesn't seem to know much psychology and would do well to read research on belief perseverance, which is roughly the tendency to keep on believing something even in the face of disconfirming evidence. Good science has safeguards against this, but nutrition appears not to be a scientific field, because it's so expensive and difficult to do the science that actually tells you something, in this case you need controlled randomized studies with large samples that you observe over many years. To understand nutritional belief perseverance, we also need to understand people's blindness to their social roles. To be an expert supposedly protecting people's health, guiding them towards longer lives with reduced suffering and misery, does have an almost priestly component – I am protecting you against death and misery. The role encourages belief perseverance because of the shame and sense of public humiliation that you risk if you have to admit you were wrong. It's also tied to intolerance of contradiction and cognitive dissonance. If I have lots of correlational studies showing that people who eat whole grains, fruits and veggies have better health and longevity, and have concluded that eating those cause better health outcomes, how do I cope with the contradiction that when actually put to the test in the randomized, controlled Women's Health Initiative,



my beliefs turn out to be wrong? Changing my beliefs is humiliating and shaming, so I just dismiss the study or ignore it. Below are quotes and a couple of URLs on belief perseverance if anyone is interested: [http://changingminds.org/explanations/theories/belief\\_perseverance.htm](http://changingminds.org/explanations/theories/belief_perseverance.htm) "Once we have decided that we believe something, we will tend to keep on believing it, even in the face of disconfirming evidence. Particularly if other people know of our belief, it can be embarrassing to climb down from our previous assertions. It is also difficult to remove a belief which has been woven into a wider web of belief, without disturbing those other beliefs." And here: [http://209.85.173.104/search?q=cache:GjBritgPZUMJ:www.psychology.iastate.edu/faculty/caa/abstracts/2005-2009/06A.pdf+%22Belief+perseverance%22&hl=en&ct=clnk&cd=4&gl=us&lr=lang\\_en](http://209.85.173.104/search?q=cache:GjBritgPZUMJ:www.psychology.iastate.edu/faculty/caa/abstracts/2005-2009/06A.pdf+%22Belief+perseverance%22&hl=en&ct=clnk&cd=4&gl=us&lr=lang_en) "Three different types of belief perseverance have been extensively studied. One involves self-impressions, beliefs about oneself. Examples include beliefs about your athletic skills, musical talents, ability to get along with others, or even body image. Perhaps you know someone who is extremely thin but who persists in believing that she is too fat. Such a mistaken and perseverant belief can lead to a serious consequences. Another involves social impressions, beliefs about specific other people. Examples include beliefs about your best friend, mother, or least favorite teacher. The third type involves naive theories, beliefs about how the world works. Most perseverance research on naive theories has focused on social theories, beliefs about people and how they think, feel, behave, and interact. Examples include stereotypes about teenagers, Asian-Americans, Muslims; beliefs about lawyers, artists, firefighters; even beliefs about the causes of war, poverty, or violence."

seth (2007-12-15 11:28:01)

That's very interesting, Tom. I'm curious what specifically you are referring to. "Physiologists watched it happen to their peers. . . Even during the McGovern hearing, it was already clear that the costs of speaking truth to power would be astronomical." Could you give examples or links?

Tom (2007-12-15 20:25:45)

Hi, Seth, here's one place to start re: Ancel Keys and what happened if you challenged him: <http://www.proteinpower.com/drmike/lipid-hypothesis/the-low-fat-diet-cascade/> Keys' fame brought him power and money, and he was quite ruthless about destroying opposition. - Tom

seth (2007-12-16 05:13:57)

Thanks, Tom, I see what you mean. Tim, yes, I agree. The importance and difficulty of the subject caused opinions to be more rigid. Charisma and scientific effectiveness don't mix.

Nick DiGiacomo (2007-12-20 13:04:28)

Taubes insights into the role belief has on the business of science is relevant to another emerging nutrition topic - food safety ratings. More here: <http://blog.identitycommerce.com/index.php/2007/12/20/beware-food-rating-systems/>

## **Fighting Cancer Via Self-Experimentation – With Success (2007-12-15 15:10)**

About 10 years ago, a UCSD psychology professor named Ben Williams, who is in my area of psychology (animal learning), managed to successfully cure his own terminal cancer by self-experimentation. He wrote a book about it called [1]Surviving Terminal Cancer. As [2]this WSJ story shows, his approach – which can be summed up think for yourself – is spreading.

Just as my dermatologist was irritated by my acne self-experimentation ("Why did you do that?" he asked), Ben's oncologist, a University of Washington med school prof named Marc Chamberlain, was against what Ben did. Chamberlain now tells the WSJ that Ben's self-treatment "probably contributed" to saving Ben's life. Which is like a math professor saying  $2 + 2$  "probably equals" 4.

A [3]long essay by Williams about his experience.

Addendum: Williams's book, which had an amazon rank of about 1,000,000 when the WSJ article appeared (Dec 15), is now (Dec 18) ranked about 29,000. Dec 24, ranked about 30,000.

1. <http://www.amazon.com/exec/obidos/ASIN/1577491165/sethrobertand-20>
2. [http://online.wsj.com/article/SB119759308934528357.html?mod=hpp\\_us\\_pageone](http://online.wsj.com/article/SB119759308934528357.html?mod=hpp_us_pageone)
3. <http://virtualtrials.com/pdf/williams2007.pdf>

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NE1 (2007-12-15 16:14:07)

Incurable diseases are heartbreaking, especially in children. That said, who knows if anything he was doing was helping? You saw him vacillate in agony over one vitamin addition when the diagnosis was reversed in only a couple days. The doctors surely had 2 things in mind, after delivering the original prognosis: the remaining quality of life for the child, and the possibility for malpractice type suits. I'm heartened that in most cases the afflicted were eventually able to find doctors willing to oversee treatment. But it seems like someone with a little more training could have overseen the addition of copper-absorbing chemicals and omega-3 doses (or monitor Accutane et al), for the peace of mind of the parents, if not the child.

Andrew Gelman (2007-12-16 10:36:03)

Seth, They always teach us in statistics that you don't know what would've happened if something else had been tried. Sometimes diseases go away on their own. I don't know anything at all about this example, but just in general you can never be sure about causation from before-after data in the context of individual variation. I understand that you (and your colleague) feel strongly about this situation, but saying that a before-after pattern proves causation as strongly as "2+2=4" is going overboard. You can legitimately be angry at the doctor without needing to claim an impossible certainty.

Yvan F (2007-12-16 12:19:20)

Hi, Interestinn blog. Here is a new updated ( august 2007 ) link to his long essay by Williams about his experience. <http://virtualtrials.com/pdf/williams2007.pdf>

seth (2007-12-16 13:09:45)

Thanks, Yvan, I've updated the link.

Tim Lundeen (2007-12-19 12:55:13)

Superb book, thanks for the reference! Re the concerns about whether his cocktail approach saved his life or he would have had a remission regardless, there is of course no way to know for a single case. We do know that the additional supplements/drugs he took all show significant benefits in other cases, and he survived an illness with an a-priori 1-2 % remission rate. So there is a very high probability that his cocktail approach saved his life. For me, the key points in the book are the necessity of taking charge of your own case, the major problems with the FDA approval process, and the blindness of oncologists to the cocktail approach. (Also well written and a pleasure to read, I couldn't put it down.)

## **Ulcerative Colitis and Flaxseed Oil (continued) (2007-12-17 00:21)**

Tom [1]commented on my [2]earlier post on this topic:

I imagine that the lady you met must have been newly diagnosed. I have had ulcerative colitis since 1996. Most of the people that I know with u.c. take omega-3, though perhaps more commonly as fish oil. All

of my gastroenterologists have agreed that it can be a useful adjunct to other therapies. In fact, one of the drug companies is developing a supplement drink that combines omega-3s with the soft fiber found in bananas, vitamin D and some other foods that are very beneficial to u.c., but hard to get in the right proportions. In general though, doctors seem reluctant to recommend diet-only solutions. I have a relatively mild case, but have had two bad flare ups. Consequently I take two of the drugs listed in addition to fish oil. I am hopeful that one day I will get off the other meds, but for now I just take a very low dose of the drugs thanks largely, based on my self-experimentation, to the omega-3s.

The lady I met (who had ulcerative colitis) had had the problem for 14 years. She had not previously heard of using flaxseed oil. "This is your lucky day," I told her, not because I told her to try flaxseed oil but because I could tell her a good dose (at least 2 T/day). How much is crucial information.

It is very difficult to do experiments, even self-experiments, that measure the effect of different doses of flaxseed oil on ulcerative colitis. I'm sure they haven't been done. It was her lucky day because I'm pretty sure I was the only person in the world who could have told her with confidence what dose to take. (Which I could do because of the [3]optimize brain -> optimize body principle.) The gastroenterologists who recommend omega-3 as useful additions - they couldn't say what the best dose is. The drug company making a supplement drink can't say what the best dose is.

Until you know the best dose of a drug or nutrient - the one that delivers the largest possible effect - you are very likely to underestimate its effectiveness. If Tom starts using a large-enough dose of flaxseed oil he may no longer need other medications.

1. <http://www.blog.sethroberts.net/2007/12//12/ulcerative-colitis-and-flaxseed-oil/#comment-88736>
2. <http://www.blog.sethroberts.net/2007/12/12/ulcerative-colitis-and-flaxseed-oil/>
3. <http://www.blog.sethroberts.net/2007/12/13/my-omega-3-talk-at-psychonomics/>

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Dennis Mangan (2007-12-17 10:36:46)

" To begin to understand the cause of this disease, you must know that ulcerative colitis is found only in parts of the world where people follow the Western diet, high in meat and dairy foods. This is an autoimmune disease, where the immune system attacks the body (in this case, the bowel primarily). The course of ulcerative colitis is characterized by frequent exacerbations (relapses). Previous studies have found a high intake of dairy products, and a low intake of dietary fiber, are associated with relapses. Patients with ulcerative colitis also have higher concentrations of sulfur in their intestines and the course of the disease correlates with that amount.<sup>2</sup> Sulfur appears to be toxic to the intestine. So, where does all this sulfur come from? The amount of sulfur in the intestine is increased by consuming animal products, which are inherently high in sulfur-containing amino acids, like methionine and cysteine." <http://www.nealhendrickson.com/mcdougall/2004nl/041100pufavorite5.htm>

seth (2007-12-17 12:51:03)

Thanks, Dennis. In authoritative discussions of what causes gingivitis, you won't find any mention of over-reactive immune system, just as it isn't mentioned in what you quote. Here's an example from the National Library of Medicine: "Gingivitis is due to the long-term effects of plaque deposits. Plaque is a sticky material made of bacteria, mucus, and food debris that develops on the exposed parts of the teeth. It is a major cause of tooth decay. If you do not remove plaque, it turns into a hard deposit called tartar that becomes trapped at the base of the tooth. Plaque and tartar irritate and inflame the gums. Bacteria and the toxins they produce cause the gums to become infected, swollen, and tender." <http://www.nlm.nih.gov/medlineplus/ency/article/001056.htm#Causes,%20incidence,%20and%20risk%20factors> Nothing in that description would lead one to suspect

that enough flaxseed oil would eliminate gingivitis. But it does.

Paul Brentano (2007-12-17 13:14:34)

How many milligrams to you estimate equates to 2 tablespoons?

Chris (2007-12-17 20:18:29)

Two tablespoons equals 30 millilitres, so if flax oil were the same density as water, that'd be 30 grams, or 30,000 milligrams. Since oil's lighter than water, say 20,000 - 25,000. That means about 11,000 to 14,000 mg of omega-3.

Caleb Cooper (2007-12-18 11:35:13)

is ground flaxseed a workable substitute for Flaxseed oil (I like to mix it in smoothies and other dishes)? How many T ground flaxseed would give the equivalent of 2 T flaxseed oil? thanks.

Tracy (2007-12-18 13:33:28)

Caleb, I don't have UC (although a friend does), but I'm vegan and eat ground flaxseed every day for its fiber and omega 3s. My bag says that a serving size is 3 Tablespoons, so I generally grind 2-3 Tablespoons of flaxseeds every morning and mix them with my cereal. For those of you who have never used ground flaxseeds, just buy a bag of whole flaxseeds and grind them as you need them in a coffeegrinder. Whole flaxseeds do not need to be refrigerated, but ground flaxseed does. (Which is why I only grind what I'm going to eat that morning.) Tracy

seth (2007-12-18 19:54:19)

Caleb, 1 cup of ground flax has about 600 calories; about 75 % of those calories are from fat. That gives about 450 calories of oil. Flaxseed oil has about 120 calories/tablespoon. To get about 240 calories of oil, then you need about half a cup (8 tablespoons) of ground flax.

Swift Loris (2007-12-23 16:41:28)

Seth, I have Crohn's, which is similar to ulcerative colitis. Based on the amount of EPA/DHA in the fish oil capsules I'm taking (1000 mg fish oil containing 400 mg EPA and 200 mg DHA per capsule), could you give a recommendation for an appropriate dosage of these capsules for Crohn's? I'm currently taking 5 a day. (I left a comment on your previous post about ulcerative colitis and flaxseed oil with more details.)

Alice (2009-02-04 15:50:33)

I am worried that having the flax oil when on a low calorie diet will compromise the diet. Am I being a neurotic fool or is Flax oil a very high calorie addition to diet? I heard that it stimulated the metabolism and could help weight loss. Is that true?

Marek (2010-02-06 16:27:16)

Alice, you needn't worry about the effect flaxseed oil will have on the diet. Because it is a super-unsaturated omega 3 oil, the fatty acids are oxidised at such a rate that intake of omega 3 oils actually increase the metabolic rate. It is for this, and their anti-inflammatory effect amongst others, that I recommend omega 3 oils to all my clients. Should this be in the form of flaxseed oil, I would suggest around 20-30ml per day.

### **Everyday Humor (part 3) (2007-12-18 19:57)**

Not quite everyday humor . . . but very funny.

"Dammit George, you picked up while I was doing the Internet!"

Type of joke: Feeling superior? (That is, it's funny for the reason we laugh when someone slips on a banana peel.)

From [1]product investment, which has other great links.

1. <http://product-investment.blogspot.com/>

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### **Lowell's Listings (2007-12-19 20:49)**

At the reception before [1]Ken Carpenter's talk ("When Nutritionists Go Wrong" – meaning make mistakes) at the UC Berkeley Nutrition Department, I met Lowell Moorcraft, who maintains a calendar of events called [2]Lowell's Listings. It is a listing of events at or near the UC Berkeley campus that are free or almost free. He compiles it from about 300 sources, he told me. Scanning recent weeks, I was very sorry to see I missed [3]a talk by Reed Hundt. There should be an emoticon for kicks oneself in the head. He spoke [4]at Google last year. To make up for missing the Berkeley talk, I'll watch it again.

More localese: The Berkeley Public Library posts a shockingly good video.

[EMBED]

1. <http://www.blog.sethroberts.net/2007/12/12/dietary-paradoxes-and-a-highly-anticipated-talk/>

2. <http://calendar.yahoo.com/lowellmoorcroft>

3. <http://calendar.yahoo.com/YYYY,57ee6d/srt,0/lowellmoorcroft?v=4&t=1196960400&i=28002&pv=1&wt=1196553600>

4. <http://www.youtube.com/watch?v=vwvgxLdeLgk>

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### **A New Kind of Outreach (2007-12-19 23:17)**

My phone rang at 6 am. Who would call so early? "Hello?" I said. No answer. "Hello?" No answer. I heard people talking. A Christmas song was playing.

I kept listening. Now and then someone speed-dials me by mistake – while their cell phone is in their pocket, for example. By listening it becomes clear who it is. I heard people talking but they didn't sound like anyone I knew. It was too early. They must be in a different time zone.

I made out bits of conversation. Something about religion. Then a voice became clearer. A woman was teaching religion. "The Constitution is based on the Law of Moses," she said. My phone said Conference Call, I saw.

It was no accident. My phone number had been chosen at random. It was religious outreach, like Mormons knocking on doors.

[1]A new kind of advertising.

1. <http://www.blog.sethroberts.net/2007/11/26/a-new-kind-of-advertising/>

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pd3 (2007-12-20 09:21:28)

An unfortunately ignorant statement which only undermines their thesis: that the constitution was based on the law of Moses. The motive of that statement was probably to support a conservative political viewpoint; it had nothing to do with actual theology, I speculate. More here about why the Constitution was not based on the law of Moses, although it certainly may have been informed by it, among many other sources: <http://www.commondreams.org/views05/0303-30.htm>

### **Diet and Acne (2007-12-20 21:19)**

Two years ago I guest-blogged at the Freakonomics blog about [1]diet and acne. I wrote that the claim of dermatologists that there is no link between diet and acne was absurd, not only because I had seen for myself such a link but also because it was an impossibly broad generalization.

In an [2]article in the Boston Globe, Cynthia Graber, a science journalist, describes quite a bit of evidence that yes, diet affects acne. The research on which the no-link claim was based tested only two foods (chocolate and sugar)! From which committees of dermatologists generalized to all foods.

SO WHY HAVE DOCTORS been taught for so long that there's no link? The anti-diet hypothesis . . . arose solely from two studies from the late 1960s and early 1970s. . . . One compares real chocolate bars with fake ones and was conducted at the University of Pennsylvania School of Medicine with funding from the Chocolate Manufacturers Association. . . . The other study examines sugar in the diet of a small group.

It's like that scene in the Wizard of Oz where the Great Oz is revealed to be an ordinary man behind a curtain. All those knowledgeable-sounding claims by dermatologists, based on nothing more than this.

Conventional research on the subject is difficult, both because of funding problems – drug companies won't fund such research; and dairy farmers won't fund experiments to find out if dairy causes acne – and because it's clear that many different foods are involved. On the other hand, determining the effect of Food X or Y on your own acne is easy. I wonder why someone doesn't build a website to gather information from such self-experiments. If I had [3]super-powers, I would.

[4]More about diet and acne.

1. <http://freakonomics.blogs.nytimes.com/2005/09/15/seth-roberts-on-acne-guest-blog-pt-iv/>

2. [http://www.boston.com/news/health/articles/2007/12/16/a\\_clear\\_connection/](http://www.boston.com/news/health/articles/2007/12/16/a_clear_connection/)

3. <http://www.aaronsw.com/weblog/nosuperpowers>

4. <http://www.sciam.com/article.cfm?id=E2AA1B5E-E7F2-99DF-3341E329F83EE6CF&page=1>

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david (2007-12-20 22:11:09)

Maybe you do have superpowers and just don't know it. I think the first thing you would need is a general collaborative framework for hosting self-experimentation studies. This would be a webapp with various features. Ability to create users, control access to various parts of the site based on roles that users have, forums for sure, and some wiki-like areas, but also some facility for allowing participants to submit their data. Maybe some generic spreadsheet like area where the study coordinator could create a spreadsheet template that participants use to submit their own data for a particular experiment. You'd probably need some kind of plugin architecture so custom modules could be added for specific studies. Anyway, thing out loud (i.e. blog) about what you'd want. What you're actually doing is creating a spec ("specification" or document describing what a piece of software should do; typically when software is written, it is written to implement a spec. So when it's tested, the tester checks to see if the software actually does what the spec says it should do). Perhaps someone out there will know of some combination of existing free software that already does what you want. Perhaps there's a developer out there with acne and some free time who will start implementing it as an open source project for you.

seth (2007-12-21 06:15:17)

Thanks, David. Were I to try to create such a website, I think I'd start with a forum. Each food or food group or other possible cause (e.g., washing your face too much, too little sunlight) would be a branch of the forum. Perhaps each branch would have two subbranches: yes (this does cause acne) and no (this doesn't cause acne). People with relevant experience would post their experience in the appropriate place. For example if you tried avoiding dairy for 3 weeks, you'd post about what you did and what you found under either the dairy-yes branch or the dairy-no branch.

michael vassar (2007-12-21 08:12:40)

It reminds me of the patently false generic claim that myopia has nothing to do with reading.

August (2007-12-21 08:29:43)

Someone, somewhere tested bread and came up with the idea that it, and probably other foods based on processed carbs increases the likelihood of acne. I suspect this particular blurb came from some weightlifting magazine, so I'm not sure of the source. I have, however, been on a bread making kick for the last few months, and I've also noticed more acne. Probably not nearly scientific enough, but it seems to match.

david (2007-12-21 09:43:11)

You definitely could do the whole thing with just forums. I'm assuming though that in many cases the coordinator will need some empirical results to process (e.g. number of small, medium, and large pimples each day during the period; estimated amount of sunlight exposure that day, and so on). The coordinator would then have to do all the work of compiling results reported back through forum posts, which might involve a lot of manual data entry. But I assume test results would typically be numeric values, so a better solution is for the participants to enter their data directly into the site in a form that the coordinator could then analyze the aggregate data easily and without much time consuming, error prone manual reentry. Tangent: One thing I noticed about the SLD was that when I started eating less food, food allergies were less of a problem. In my case, I've always had problems with dairy. I can tolerate small amounts of dairy and when I started eating less overall, I was less likely to hit that limit.

seth (2007-12-21 14:59:05)

David, I think the forums might have a person who would be in charge of each possible cause who would keep track - who would write summaries of what the evidence so far meant.

losing-it (2007-12-22 14:55:11)

I have had rosacea (adult acne), a neurovascular disease for about 10 years. Eating certain foods is known to aggravate it and trigger outbreaks in those who have this condition, which has been most recently thought to be an auto-immune disorder. In my case, consuming cayenne and other hot peppers, alcohol, and also coconut oil are definite triggers. Hot weather/hot

flashes/hot water...i.e., heat is also a trigger, at least producing ruddiness of skin (per Chinese medicine, I wonder if those consumed substances would be classified as heat-producing in the body). Using coconut oil steadily for the SLD on several occasions made me aware that it caused severe breakouts for me. I had begun to wonder if it was an auto-immune condition because of that. I had pimples as a teenager and well into my late twenties, although those substances did not trigger rosacea. I'm not certain what food and substances, if any, caused or affected it. I wonder, though, since health is often a matter of chemical balance and imbalance, if it might be possible that ordinary acne and adult acne could have similar causes related to certain proteins/peptides. Here is an excerpt from ThaiMed: "The team found that small proteins called anti-microbial peptides caused the same skin symptoms that are seen in rosacea. The peptides are part of the body's immune system (and there are many other articles on the medical report to be found on the Internet).: 'When we then looked at patients with the disease, every one of them had far more peptides than normal,' Dr. Richard L. Gallo, chief of the division of dermatology at the University of California, San Diego School of Medicine, said in a statement. Gallo, who led the research team, also is part of the dermatology section of the Veterans Affairs' San Diego Healthcare System. A precursor form of these peptides known as cathelicidin normally helps protect the skin from infection. Indeed, some skin problems occur when there is too little cathelicidin. But it turned out that people with rosacea had too much cathelicidin, and it was different from the form in people without the illness. Rosacea patients also had high levels of stratum corneum tryptic enzymes (SCTE), the precursor of the disease-causing peptide. 'Too much SCTE and too much cathelicidin leads to the abnormal peptides that cause the symptoms of this disease,' said Gallo." <http://www.thaimed.us/rosacea-red-skin-disorder-treatment/2007/08/02/>

Comment on Diet and Acne by losing-it (2008-01-20 01:45:35)

[...] admin wrote an interesting post today onHere's a quick excerptI have had rosacea (adult acne), a neurovascular disease for about 10 years. Eating certain foods is known to aggravate it and trigger outbreaks in those who have this condition, which has been most recently thought to be an auto-immune ... [...]

John Anderson (2009-11-05 22:11:03)

I started working out 45min a day 5 times a week, and at first I would just starve myself, I would eat like an apple and some juice, for the day. I lost weight, but once the weekend hit I totally caved, and I was like oh well I can just diet again once the week starts, but I would really like to know what food and how much of it I should eat.

## More Natto, Please (2007-12-21 10:31)

Natto. This is on the list because, for one, it's one of the few foods I've eaten that I truly don't like. But mainly, it's here because we've really messed up the way we eat soy. Natto is fermented soybeans and very popular in Japan, which is where I had it. It's becoming more popular here and this is most likely due to its health benefits. Nearly all the soy options we're offered in the U.S. are non-fermented. The list of health benefits of fermented soy is a mile long. It's associated with reducing the risk of cancer, minimizing the likelihood of blood clotting, aiding digestion, increasing blood circulation, an improved immune system, improving bone density, lessening the likelihood of heart attacks, more vibrant skin, and reducing the chance of balding. And it also has strong antibiotic properties, among other things. So you might want to ditch the soy crisps, soy ice cream, and your iced soy mochas and add some natto to your diet.

From [1]10 Foods You Should Eat. It's a very reasonable list.

1. <http://fitnessvillage.wordpress.com/2007/12/20/10-foods-you-should-eat/>



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Varangy (2007-12-21 12:43:32)

*reducing the chance of balding*. C'mon. Already. This is snake-oil. I fear that the soy bandwagon is just another false information cascade. It is not often mentioned that the soy phyto-estrogens **may** encourage cancer cells to grow in women have had breast cancer. Somewhere I saw a reference to a linkage between soy and reduced sexual drive in rats as well as endometrial hyperplasia (abnormal vaginal bleeding). The more I read Gary Taubes' stuff, the more and more skeptical I am of the nutrition/diet industry.

Tom (2007-12-21 13:54:47)

That soy is healthful is anything but established: <http://www.soyonlineservice.co.nz/>

More Natto, Please · Skin Cancer Information (2007-12-21 15:40:36)

[...] Original post by Sethâ [...]

Comment on More Natto, Please by More Natto, Please Â· Skin Cancer ... · Skin Cancer Information (2007-12-21 21:39:43)

[...] Original post by unknown [...]

Booker Roach (2007-12-22 05:47:35)

Skin cancers and melanomas are the curse of God against white people for their skin sins and continued evil of today. In Daniel, Isaiah and Revelations God warns He will curse the evil with the Sores That Do Not Heal. Skin cancer and melanomas are these sores. Based on their skin color, whites exalted themselves above everyone else on the planet and called everyone else: ugly, evil and inferior. Now, that giving everyone else life burns whites'™ skin. That giving everyone else life is God. The sun is God. The sun hates white people. God Hates White people. God has fixed His holy light to discriminate between black and whites so that it burns the whites. Ultraviolet light is the fire of the 2nd Rapture burning evil from the earth.

seth (2007-12-22 07:37:20)

Tom, I completely agree, which is why (a) I eat much less soy now than I used to and (b) this post is particularly interesting. If fermentation makes soy healthier, that is curious. It isn't easy to explain.

Comment on More Natto, Please by Booker Roach · Skin Cancer Information (2007-12-22 10:22:32)

[...] Original post by unknown [...]

Aaron (2007-12-23 09:51:50)

I found an important paper providing and exhaustive review of the medical literature on soy-based infant formula, many in comparison to cow-based infant formula. Here's a link: <http://www3.interscience.wiley.com/cgi-bin/fulltext/113339995/PDFSTART>.

Chris (2008-01-02 10:23:30)

Natto is supposed to be an acquired taste, to put it mildly. What about tempe and miso? They are also fermented soy products (less fermented, I supposed).

Robyn (2008-10-31 15:33:18)

The difference between fermented and unfermented Soy beans can be found on Dr Mercolas website. he is a Doctor but well into the healthy side of life. The falsehood about the orientals living healthy and long lives was thought by the western world to be because of the consumption of normal soy beans. Apparently that is wrong, and is actually due to fermented Soy, as in sauces and Natto. The fermenting makes certain chemical changes which makes it a very different food source. Having soy sauce every day can help balance the hormones and helps ladies with hormone flushes. I cannot say whether the risk of hormonal cancer would still be there..Dr Mercola may have something to say about that. It is a long time since I looked at the subject. I thought, since the fermented soy balances, rather than escalates, then that particular danger would be gone. Certainly I feel very unwell on the Western world's soy powders and drinks, but I don't on Soy sauces. I haven't tried Natto as I can't find a source in my country so far. Apparently ALL fermented Soy products are safe, unless of course someone has decided to add something horrific to it !!

Robyn (2008-10-31 15:40:35)

Correction The ( fact ) about the orientals living healthy and long lives was thought by the western world to be because of the consumption of normal soy beans. Apparently that is wrong, and is actually due to fermented Soy, as in sauces and Natto. The fermenting makes certain chemical changes which makes it a very different food source. I put falsehood instead of fact....sorry...

seth (2010-02-04 18:38:14)

Now that I have lived in China and spent more time in Japan, I think it is the fermented food, not the soy. Lots of fermented food in both China and Japan.

Matthew Anderson (2010-06-17 18:49:50)

Bob Marley died of Melanoma right ?-.'

### **Waterboarding, Self-Experimentation, and Human Evolution (2007-12-22 07:14)**

Someone named Scylla [1]waterboarded himself and provided a detailed account of what happened. "Old" self-experimentation, you could say, was doctors doing dangerous things to themselves for a short time to prove some idea that they already believed (e.g., a dentist using laughing gas as an anesthetic); "new" self-experimentation is me doing something perfectly safe for a long time to solve a problem that I have no clue how to solve. What Scylla did is between the two. Short duration, not completely safe, done to find out if waterboarding is torture or not. Scylla had no strong opinion about this when he started.

Before he got to using saran wrap it wasn't particularly bad. Here's what happened with saran wrap:

The idea is that you wrap saran wrap around the mouth in several layers, and poke a hole in the mouth area, and then waterboard away. . . . So far I would categorize waterboarding as simply unpleasant rather than torture, but I've come this far so I might as well go on. . . It took me ten minutes to recover my senses once I tried this. I was shuddering in a corner, convinced I narrowly escaped killing myself.

Here's what happened:

The water fills the hole in the saran wrap so that there is either water or vacuum in your mouth. The water pours into your sinuses and throat. You struggle to expel water periodically by building enough pressure in your lungs. With the saran wrap though each time I expelled water, I was able to draw in less air. Finally the lungs can no longer expel water and you begin to draw it up into your respiratory tract.

It seems that there is a point that is hardwired in us. When we draw water into our respiratory tract to this point we are no longer in control. All hell breaks loose. Instinct tells us we are dying.

I have never been more panicked in my whole life. Once your lungs are empty and collapsed and they start to draw fluid it is simply all over. You [b]know[/b] you are dead and it's too late. Involuntary and total panic.

There is absolutely nothing you can do about it. It would be like telling you not to blink while I stuck a hot needle in your eye. . .

I never felt anything like it, and this was self-inflicted with a watering can, where I was in total control and never in any danger. And I understood.

Waterboarding gets you to the point where you draw water up your respiratory tract triggering the drowning reflex.

This shows something non-obvious: We are hard-wired to avoid drowning and like all good safety systems, the system kicks in well before damage occurs.

For such a system to evolve, humans must have spent a lot of time in water deep enough to drown in. We don't now, of course. The sheer fact of Scylla's post – the fact that waterboarding is torture isn't obvious – shows this.

All this – Scylla's initial ignorance, what he experienced and concluded – is consistent with the [2]aquatic ape theory of human evolution and inconsistent with alternatives to that theory (e.g., the savannah theory), which assume no long aquatic phase. Belief that the aquatic ape theory was probably true was one reason I started [3]omega-3 self-experimentation, which led to the discovery of very clear experimental effects.

This interests me not only because of what it says about human evolution – to me, it's substantial new evidence for the aquatic ape theory – but also for what it says about science. Scylla has no scientific credentials (I assume). His report wasn't peer-reviewed. It wasn't quantitative. It wasn't long. It was closer to an anecdote than a conventional experiment (where you compare two conditions). He wasn't trying to test any theory. Yet it provided helpful new info on a major scientific question (human evolution), which is very hard to do.

1. <http://boards.straightdope.com/sdmb/showthread.php?t=448717>

2. [http://en.wikipedia.org/wiki/Aquatic\\_ape\\_hypothesis](http://en.wikipedia.org/wiki/Aquatic_ape_hypothesis)

3. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>

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Bosco (2007-12-22 11:17:39)

hi seth, been lurking on your site for a while. just wanted to chip in and say that it truly puzzles me why there's such a severe reaction against the aquatic ape theory in mainstream biology. i'm a professional computational biologist so i feel like i have some qualifications in judging a theory. while not completely fool-proof, aquatic ape theory seems to be, at least, the equal of any other theory of human speciation from apes. yet otherwise even-handed writers like phyrngalia and others scienceblog dismiss it out of hand, without pointing out how ridiculous the other theories are. just saying.

seth (2007-12-22 15:26:41)

That's a very good question. My guess is that the aquatic ape theory is dismissed out of hand because it came from outside anthropology (from a marine biologist) and is so different from what anthropologists have proposed.

Mike Kenny (2007-12-22 16:35:37)

reading this made me think waterboarding with saran wrap is a bit like holding an unloaded gun in someone's mouth, telling them there's one bullet in it (a lie) and then pulling the trigger, and then demanding answers. if you told me we did this, i would have a greater sense of what is going on than with waterboarding, which even when i've seen explanations, is hard to grasp. sylla gets me a more concrete sense of what is going, assuming his take is true (more people expressing similar experiences would be helpful!) the concreteness i think is most important in explaining the experience, in keeping with the 'made to stick' idea of getting ideas across. perhaps concreteness of experiences also helps us think about things in a useful way, and self-experimentation helps us along these lines.

seth (2007-12-22 16:43:09)

Good point. I think one appealing feature of waterboarding – appealing to the people who use it – is just what you say: It is hard to understand. Because of this, it seems more innocuous, i.e., more humane, than it is.

JoeCitizen (2007-12-23 18:40:02)

"For such a system to evolve, humans must have spent a lot of time in water deep enough to drown in" And with that, I kindly suggest you take that reference to the scientific method off of your masthead. Shall we begin with the form of the argument? That any piece of evidence can ever necessitate one and only one explanation? If the life of the rational mind tells us anything, it is that any number of explanatory hypotheses can be generated to explain any observed phenomenon. And of course, coming up with a hypothesis does absolutely nothing to give reason for accepting it as valid. What about the idea of testing? Then we get to the substance of your contention. That an aversion to drowning means we must have spent time during our evolution in or about water deep enough to drown in. Why is that? Let's say, for arguments sake, that some species never encountered water at any greater depth than a puddle. For that species too, taking water into the lungs would lead to death. Why do you think that the species would not have an aversion response to that? Start thinking about that, and maybe you will find yourself on the right path. Here is a hint how to proceed (it's a nice general first-step whenever you think about evolutionary adaptations). First, what is the generality, phylogenetically speaking, of the phenomenon? Are humans the only primates, the only mammals, the only terrestrial vertebrates with an aversion to drowning? Go stick your dog's head in the bathtub and see what happens (no DONT DO THAT - just a rhetorical point). If you discover that an aversion to drowning just might have a greater generality than only amongst humans, then you can't support an argument that it is a human adaptation. Now, I will admit, I have not done these experiments. But my suspicion would be that an aversion to taking water into the lungs, and an escape reaction to such a situation, is probably found in ALL air-breathing vertebrates. And so the evolutionary novelty is best explained as arising at that level. Given that the first air-breathing terrestrial vertebrates had a close proximity to deep water in their recent evolutionary past, maybe your logic can work, at least at that level, rather than at the ape level. The aquatic ape theory is seen as nutty because it consists essentially, of a set of speculations of just this kind. No evidence, just speculative hypotheses about cherry-picked phenomena that seem, on the surface, to be consistent with the theory. One could almost say it's a Republican theory. :)

Whispers (2007-12-23 19:50:17)

Isn't this just a "just so" story? "All this...is consistent with the aquatic ape theory of human evolution and inconsistent with alternatives to that theory (e.g., the savannah theory), which assume no long aquatic phase." There are much better arguments for (and against) the aquatic ape hypothesis listed at Wikipedia. I can see why this theory would be discounted: the divergence time from chimpanzees is only 5 MYA, and the AAH would require a long period of time near water, separated from simian ancestors, a claim that is not supported by any fossil evidence. Right? I think the criticisms at Wikipedia are much stronger than the theory, which seems to lack any evidence and consists mostly of wandering hypotheses.

seth (2007-12-23 20:37:27)

JoeCitizen, sure, if you found such a reflex in other primates, it would no longer support the aquatic ape theory. I fail to see the force of this point; I don't know of any evidence for anything whose interpretation couldn't be changed by new data. I said this observation favored one hypothesis over another because one hypothesis explains it much more easily than the other. I fail to see how that's a mistake. Whispers, for a comment on "just-so stories" see <http://www.blog.sethroberts.net/2007/09/13/modern-veblen-the-less-than-obvious-value-of-evolutionary-explanations/> You say the theory "lacks any evidence." The theory was suggested by subcutaneous fat in humans. Not found in other primates, but found in marine mammals. That was the first piece of evidence. Much more has come along since then. I think there is fossil evidence – evidence of pre-human habitation along the African coast. It was discovered within the last year.

QrazyQat (2007-12-23 20:42:20)

*That's a very good question. My guess is that the aquatic ape theory is dismissed out of hand because it came from outside anthropology (from a marine biologist) and is so different from what anthropologists have proposed. The claim that it was dismissed out of hand is one that has been carefully cultivated by the idea's chief proponent for over 3 decades. It's untrue, but becomes part of her heroic outsider against the closed-minded establishment stance (which you may notice is a mainstay*

of fringe and pseudoscience ideas). There are excellent reasons that the idea was dismissed: start with claims that are counter to long known evidence, claims that researchers said the opposite of what they actually said, altered quotes, and extreme misunderstanding of basic concepts of evolutionary theory. I've documented a lot of this at my site on the theory, which is the primary source for critical, accurate info on the idea. It has been used as a source for The Straight Dope, the Fortean Times (which did what was for me a surprisingly good writeup on the idea), and lately a fair number of college courses; I've also written the entry on the AAT for the Sage Encyclopedia of Anthropology. If you have any questions, my site is [1]Aquatic Ape Theory: Sink or Swim? and there's a feedback mailto link at the bottom of each page. Feel free to ask me anything I haven't made clear.

1. <http://www.aquaticape.org/>

QrazyQat (2007-12-23 20:49:33)

BTW, I should have mentioned a couple of specifics. One is that the omega-3 info does not support the AAT; check my page specifically on "the Omega-3 gang" for that, as well as a short bit on my "objections" page. Omega-3 fatty acids are good to get, and I support the excellent work of the folks I refer to as the "Omega-3 gang" when it comes to nutrition and getting awareness of those fatty acids out to the public, but they do themselves no favors by tying the accurate info to a leaky theory like the AAT. The other is that one problem with drowning is powerful evidence against the AAT. When animals which are adapted to diving run out of oxygen, they have internal mechanisms which keep them from gasping for air, which would obviously be a bad thing to do underwater. We, like other terrestrially-evolved animals, do not, to disastrous effect. If we had evolved as we have due a swimming and diving lifestyle, as the AAT insists, one wonders why we drown so easily. Gasping for a breath when you're underwater is one major reason we drown, and evidence against a semi-aquatic past for our species.

Skeptic (2007-12-23 22:24:07)

Hi Seth, It's true that the anthropological community at large is outrightly dismissive of the aquatic-ape hypothesis, but at least one critique of the idea has been published in a peer-reviewed journal within the last 10 years. Here's a quote: "Humans have an unusual amount of subcutaneous fat that functions for bouyancy and to a lesser degree for insulation in place of fur. This is a parallel adaptation with many aquatic mammals. However, the fat-and-sweat strategy of thermoregulation may be adaptive for a species that is more concerned about shedding internally generated heat. Insulative fat, rather than hair, permits the bloodstream to bypass it as needed, taking hot blood from the core of the body to the surface to be radiated or lost through evaporation." (Langdon, 1997, p. 483-484, Journal of Human Evolution). Nearly all of the features invoked in support of the AAH can be explained in another context, and most damningly, the fossil record is not on the side of the hypothesis. I can send you a copy of the article if you want to read it. I looked for an email contact on your site but couldn't find one. (BTW - the savanna theory is no longer an accepted explanation for the origin of the human lineage. Recent fossil evidence indicates that the first human ancestors probably evolved in a forested setting. So the savanna theory is really a straw man.)

seth (2007-12-23 23:01:05)

Skeptic, yes, I would like a copy of the article. my email address is twoutopias (at) gmail.com. "Most damningly the fossil record is no on the side of the hypothesis." If I remember correctly the fossil record was in the beginning not on the side of conclusions drawn from mitochondrial DNA analysis about when humans diverged from other primates. But eventually it was conceded that the DNA was right and the fossils wrong.

JoeClitzen (2007-12-23 23:30:12)

Seth, "I said this observation favored one hypothesis over another because one hypothesis explains it much more easily than the other. " Gee, I must of missed that. I see an assertion on your part, but thats all. WHY do you think the AA hypothesis better explains the drowning response? You offer no reason for your assertion. Why would a close proximity to water make an air-breathing vertebrate more averse to drowning than an arid-habitat-living species? Both of them share the same physiological fact - taking water into the lungs will kill them. And as to the phylogenetic argument. Do you think that all air-breathing vertebrates that havent had a semi-aquatic phase in the history of their individual species would simply drown peacefully if you put water into their lungs? I don't think the AA hypothesis offers any insight whatsoever into the drowning response. If you catch a fish and toss it into your boat, it will have a similar response to someone who is being waterboarded - does this support the terrestrial fish evolutionary hypothesis? I checked out your link in your response to Whispers. Wow.

A defense of just-so stories! Have you just given up on doing the hard work of science - i.e. actually committing to testing hypotheses before you grant them credibility? Coming up with hypotheses is fun, and easy. Sure its better than doing nothing, but once you do it, all you have is an unsupported hypothesis. Its only value is that it lays out for you the next phase, the hard work - i.e. it gives you something to test. It deserves no credibility whatsoever until that is done. Thats why they are mocked and derided when they show up in scientific literature - its not that they shouldn't exist on the face of the earth, its just that no rational person should grant them credibility until they are tested.

Skeptic (2007-12-24 05:54:57)

SETH SAID: "If I remember correctly the fossil record was in the beginning not on the side of conclusions drawn from mitochondrial DNA analysis about when humans diverged from other primates. But eventually it was conceded that the DNA was right and the fossils wrong." Actually, the argument you are referring to was not about mtDNA. Check out this link for a quick summary of Sarich and Wilson's classic study: [http://en.wikipedia.org/wiki/Vincent\\_Sarich](http://en.wikipedia.org/wiki/Vincent_Sarich) In any event, the reluctance of paleoanthropologists to accept the molecular evidence was due in part to the fact that many assumed a priori that the divergence between humans and apes must have been very, very deep, given the marked differences between these two groups. It wasn't based on any fossil evidence in particular. The assumption of a deep split led paleoanthropologists to "search" for human ancestors in the earliest fossil record of apes (e.g., Proconsul, Kenyapithecus), way back in the early and middle Miocene. The molecular evidence was only accepted after paleoanthropologists demonstrated that fossil species believed to be human ancestors were in fact fossil apes (google "Ramapithecus"), and that the human lineage could not be traced back into the middle and early Miocene. Long story short – your comparison between this issue and the aquatic-ape hypothesis is a non sequitur; as soon as paleoanthropologists realized that the fossil evidence could not sustain the deep-split hypothesis, it was abandoned. If there was an aquatic phase in human evolution, there is absolutely zero evidence for it in the current fossil record, which is of course incomplete, but it is also the most studied fossil record of any organism that ever walked, crawled, swam, flew, floated, or just sat on earth. If someone could point to a single disputable piece of fossil evidence that supports the AAH, then they would have by now. The article is in the email. Please let me know if you don't receive it.

Skeptic (2007-12-24 05:59:05)

Erratum: In my previous post, "disputable" should be "indisputable."

seth (2007-12-24 06:06:03)

Why do I think the AA hypothesis better explains an anti-drowning response than other hypotheses? Because it implies there was more danger of drowning – thus more selection pressure for an anti-drowning response – than other hypotheses.

QrazyQat (2007-12-25 20:37:36)

As I mentioned already, what you see (and expect to see due to evolution) in an aquatic or semi-aquatic animal (or one with such a past) is a response that helps keep one from drowning. We have the opposite, just like other terrestrially-evolved animals and unlike semi-aquatic-evolved animals; especially because we have an automatic urge to inhale when we run out of oxygen even if we're underwater.

seth (2007-12-25 23:03:05)

I wouldn't say the description of waterboarding given above implies a response that is "the opposite" of an anti-drowning response. At the risk of stating the obvious, it shows that we get terrified when we get anywhere close to drowning. Perhaps it is this response – which kicks in long before there is any possibility of drowning – that lets us have a different response when we run out of air. The terror response has replaced the response you refer to.

Skeptic (2007-12-26 01:40:54)

JoeCitizen already mentioned this, but the fear brought on by waterboarding can simply be explained as a reaction to not being able to breathe. The fear can't be specifically connected to drowning because drowning falls under the umbrella of "things that inhibit proper respiration." Given that respiration is essential to all terrestrial vertebrates (to mention only one group), it should come as no surprise that natural selection has produced mechanisms that ensure its proper function. Plug your nose and put duct tape over your mouth and a similar reaction will most likely ensue. Supporters of the AAH must demonstrate that

ONLY drowning prompts the response in question. Otherwise, the explanation is ad hoc. Ad hoc explanations make for poor science. Only those who already believe will be convinced.

seth (2007-12-26 10:29:19)

"The fear brought on by waterboarding can be simply explained as a reaction to not being able to breathe." No it can't. Waterboarding is considerably more complicated than preventing breathing. As Scylla demonstrates, the details are necessary to produce the effect.

Skeptic (2007-12-26 17:39:36)

I have read Scylla's description, and there is nothing in it that convinces me that the effect of waterboarding is not simply a general reaction to the impairment of proper respiratory function. In a system as essential to life as breathing, natural selection will "build" powerful fail-safe mechanisms. No paleoanthropologist would argue that early human ancestors were not exposed to water – they probably had to make the same dangerous trip to the water hole that many African mammals do today. But the reaction Scylla describes is probably even more ancient – likely dating to the first terrestrial vertebrates, as implied in JoeCitizen's post.

Marc Verhaegen (2008-01-10 07:44:27)

Hi all. Nice to see AAT discussed. For recent views please see <http://groups.yahoo.com/group/AAT> <http://users.ugent.be/~mva-neeche/outthere.htm> or google "aquarboreal"

FireWire Card (2011-11-30 09:08:42)

What a really good post...

### **Science in Action: Procrastination (evidence or anti-evidence?) (2007-12-22 20:31)**

Evidence is the raw fuel of science: We collect data, it pushes forward our understanding. But there is also anti-evidence: observations that have the effect of holding back our understanding. The clearest example I know comes from experiments that supposedly "tested" mathematical learning theories in the 1950s and later. The observation was that the theory could fit the data. Theorists wrote papers to report this observation. In fact, the theory was so flexible it could fit any plausible results. The papers, which were taken seriously, retarded the study of learning because they wasted everyone's time. They gave the illusion of progress. Hal Pashler and I [1]wrote about this.

Another example of anti-evidence, I think, is the sort of data that linguistic theorists have been fond of: Observations that this or that sentence or sentence fragment strikes the theorist as grammatical, i.e., possible. Not studies of how people actually talk; the observation that a speaker of English or whatever could say this or that. The theorist's judgment based on introspection. I'm not saying that this isn't actual data of some sort; I just suspect that the value of these sorts of observations has been overrated and the net effect has been to keep linguists from collecting data that would push theorizing forward.

Months ago I blogged about how I found that when I made playing a game contingent upon clearing off my kitchen table, I was [2]able to clear off the table. Which had been messy for quite a while. My question: is this evidence or anti-evidence? If I think about this, and try to understand it, will I be deluding myself, as the mathematical learning theorists and the linguistic theorists deluded themselves? On its face, it seems like a very ordinary, very narrow observation, much like the observation that "George played with the game Dave brought over" is a possible English sentence. On the other hand, it is something unusual and helpful that actually happened, unlike an observation that this or that is a possible English sentence.

When someone says "the plural of anecdote is not data," you can be sure their grasp of scientific method is weak;

lots of important discoveries have begun with accidental single observations. But those productive single observations are always surprising. My table-clearing observation was slightly surprising...

1. <http://repositories.cdlib.org/postprints/763/>

2. <http://www.blog.sethroberts.net/2006/12/28/science-in-action-procrastination-results/>

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Phillip J. Eby (2007-12-25 22:13:11)

Procrastination is a tricky subject to study, precisely because the word itself is misleading. It describes a symptom rather than defining a disease – like trying to improve medicine by figuring out a treatment for "death". There are many causes of procrastination, just as there are many causes for death. It is also difficult to investigate treatments for procrastination in self-experimentation, because it can be hard to be sure whether testing one's idea is adding just enough novelty and interest to make the target activity motivating! To be sure, I have to find out if a method will work when I'm not interested in testing it. :) When I first worked with clients who were procrastinating, I had a few simple theories of what caused it. Now I know there's little point in theorizing; I just help them figure out what's causing it in the specific case and address that.

seth (2007-12-25 23:03:57)

Philip, what are some of the many causes of procrastination?

Phillip J. Eby (2007-12-26 09:11:12)

Broad-based, chronic procrastination (long term, across many subjects) in my experience is usually linked to one or more pervasive negative emotions such as despair (e.g. "what's the use of trying?"), fear (e.g. of being found inadequate), anger (e.g. "I shouldn't have to do this"), or rebellion (e.g. "I don't want to and you can't make me!"). These are the easiest to get rid of, since they involve a strong feeling and there are plenty of simple techniques that only need to be applied once to get rid of them. Sometimes, though, chronic procrastination is just the result of a poor motivation strategy. For example, some people motivate themselves by thinking about what disaster will result if they don't do something, and others motivate themselves by thinking about what it will feel like to \*do\* the activity (which means they'll be motivated to do fun and enjoyable things, but nothing else). There's an audio sample about some of this at <http://theownerscircle.com/sample-the-cure.html> if you're interested. Subject-specific and situation-specific procrastination are a lot more varied, though. I've worked with a person who put off their own projects simply because they didn't put them on their calendar, which was reserved for what \*other\* people wanted. I've had a person who put off learning new things because he would always think about what \*else\* he had to do. These sorts of things are also pretty straightforward to solve with one-time thought replacements. Then we get to self-image and identity conflicts: a person who can't consistently exercise because they got picked on in the past by people who were fit and liked to exercise. Thus, actually \*liking\* exercise would make them like the hated group. A person who has trouble being organized because of jealousy of organized people – and another who has trouble being organized because they can't bear to be near the chaos they've created. There are a whole bunch of procrastination causes that could be called "fear of success", but just like procrastination might be compared to "death" as an explanation, "fear of success" might be compared to "cancer" in how broad it is. The identity fears of success I just mentioned are one kind, but anything that creates a conditioned link between pursuing pleasure and receiving pain can produce avoidance behaviors that you could call "fear of success" without being in any danger of actually learning something about the problem. :) The approach that I use with my clients could be compared to guided self-experimentation: I have them think about a recent, specific situation where they experienced a block or problem, and to note their spontaneous responses: thoughts, images, feelings, etc. Then I begin having them work backward through their thought process so I can figure out what their brain is actually \*doing\* to produce those images or feelings or whatever. Then I try various techniques, and have them think about the original situation again, to observe what change(s), if any, have occurred in the spontaneous response. The idea of testing against the spontaneous response is that anybody can use willpower to override their conscious response to something, at least \*once\*. So it's not very useful to test whether they can \*make\* themselves act differently, especially since in the long term that just creates feelings of alienation



and restriction, not freedom. Oh, anyway, I'm digressing a bit, as there are still \*more\* forms of procrastination that are situation-specific. For example, not having a clear enough idea of what it is you intend to do, or having a clear idea about some problem with what you want to do, but no clear idea of how to solve it and no \*commitment\* to try solving it anyway. In short, "procrastination" is a pretty useless word: it simply describes the action of not doing something that's intended, without giving any useful information as to \*why\* or \*how\*. So, despite the fact that I sell a course called "The Procrastination Cure", there is really no \*single\* cure for procrastination, because procrastination is not one single thing. (The course deals almost solely with chronic feeling-based procrastination and chronic motivation strategy failures, as these forms are usually the most debilitating, and also the easiest to give straightforward procedures for fixing, that most people can use. In contrast, subject-specific and situation-specific procrastination varies so widely from person to person that it's easier for them just to have me spend 20 minutes asking questions to find out what's going on, than to try to learn about all the different possibilities.) By the way, I find it interesting that psychology works tend to have by far the \*least\* useful information about procrastination, when compared to say, economics papers. That is, economists seem to understand procrastination better than psychologists... and good direct marketers understand it even \*more\*. See, e.g.: <http://dirtsimple.org/2006/09/seven-self-help-secrets-you-can-learn.html>

seth (2007-12-26 10:50:34)  
Thanks, Philip

### **Hard Times and the Shangri-La Diet (2007-12-23 11:01)**

Life in Cuba:

In 1991, Mr. Castro declared a "special period" of drastic reductions in food and other rations. Average daily caloric intake fell by 40 %. . . . When friends got together during those times, Ms. S  nchez recalls, a single topic dominated conversation: food. To stave off hunger pangs, Ms. S  nchez gobbled spoonfuls of sugar.

If there were several cheap foods to chose from this suggests that sugar reduced hunger more than other foods. From an excellent [1]WSJ article about a Cuban blogger.

Thanks to [2]Santosh Anagol.

1. [http://online.wsj.com/article/SB119829464027946687.html?mod=hpp\\_us\\_inside\\_today](http://online.wsj.com/article/SB119829464027946687.html?mod=hpp_us_inside_today)
2. <http://santoshecon.blogspot.com/>

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Tom (2007-12-23 11:30:29)

Seth, Not on-topic for this post, but this fits in nicely with your interest in the aquatic ape hypothesis: <http://www.drmmcleary.com/2007/12/21/BecomingABrain.aspx>

Peter (2007-12-23 13:53:54)

the first time i heard of 'the special period' was in this video, which is very good: <http://video.google.com/videoplay?docid=-5350731284170267256>

David (2007-12-24 09:37:17)

I don't think this implies that sugar is more hunger reducing. Sugar may just have been a very cheap or easily available source of calories.

seth (2007-12-24 11:12:18)

David, good point. I have added that qualification.

Euonymous (2007-12-26 17:47:49)

Perhaps off topic, but I recall reading years ago that said traditionally Chinese use honey to help with dieting and weight loss. Now I have always loved honey and have never found that it diminished my appetite in the least. But then I put it on top of toast. I find the SLD matches my observations and anecdotal experiences over the years. Our Western diet patterns clearly increase our appetites. The oil approach decreases my appetite and that is all I ask for. I'm reluctant to try the sugar water approach just yet. Honey may also work just fine if it's used in an SLD pattern, but I'm going to stay with what's working for the moment.

My Diet and Weight Loss » Blog Archive » Comment on Hard Times and the Shangri-La Diet by Euonymous (2007-12-27 03:08:08)

[...] Phentermine diet pills. article is brought to you using rss feeds. Here you will find the latest information on diet and weight loss. Our Western diet patterns clearly increase our appetites. The oil approach decreases my appetite and that is all I ask for. I'm reluctant to try the sugar water approach just yet. Honey may also work just fine if it's used in an SLD ... [...]

## How Doctors Tell Family Members that the Patient has Died (2007-12-24 12:44)

The last issue of the BMJ each year is a "Christmas issue" with humorous and seasonally-themed articles. [1] This year's Christmas issue has an [2] article about how doctors tell family members that the patient has died. The execution is very flawed; for example, it's hard to tell how fictional it is. I mention it because a study of how doctors actually do this and how it changes with experience – comparing young and old doctors, for example – would be fascinating.

1. <http://www.bmj.com/>

2. <http://www.bmj.com/cgi/content/full/335/7633/1296?etoc>

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## Speaking of Gifts (2007-12-25 10:29)

Yesterday I knocked something off a table and caught it before it fell very far. "Nice catch," said an observer. I too was surprised. Today the same thing happened. Something fell and I surprised myself by catching it. I think it's the omega-3. Tests showed that flaxseed oil reduces my "simple reaction time" – the time to push a button as quickly as possible in response to a signal.

Peter (2007-12-25 11:18:23)  
and it must throw off your spatial thinking, too.

Stephen M (Ethesis) (2007-12-25 23:01:37)  
BTW, how much fish oil and flaxseed oil does it take you to get the effects you get?

Willy (2007-12-26 17:19:27)  
Stephen M, 2 tbsp flax oil, from what I read in other posts.

Nansen (2007-12-26 17:28:20)  
Catching things that I used to dropâ€”for example, keysâ€”was the first effect that I noticed. (I take 2.5 grams of OmegaBrite fish oil capsules a day.)

seth (2007-12-26 20:28:23)  
Stephen, 2-3 Tbsp flax oil per day. Don't know how much fish oil.

Stephen M (Ethesis) (2007-12-26 23:43:29)  
Glad to know it is the same amount.

Aaron (2007-12-29 15:58:55)  
Seth, I know this may be covered elsewhere- but what type of balance between omega 3s and 6s do you strive for? Seems that with 2-3 tbsp of flax oil- you would need a lot of omega 6 oils to make up for the 3 or 4 to 1 ratio of omega3s to 6s in flax oil.

seth (2007-12-29 16:15:42)  
Aaron, I don't worry about getting enough omega-6. It's everywhere in our food system. Nuts, olive oil, other vegetable oils, etc. I don't know what the optimal omega-3/omega-6 ratio is.

Laura (2007-12-31 09:45:53)  
I think it is very easy to get enough omega-6, if you know that the average American consumes ratios of 1:25!!!

seth (2007-12-31 17:39:53)  
Thanks for supplying that missing piece of info, Laura.

Nathan (2008-01-22 19:28:15)  
Seth, What evidence do you have that the placebo effect is not the cause of your improved performance?

seth (2008-01-22 23:31:41)  
Nathan, three kinds of evidence: 1. The initial effects were surprising. They cannot be due to placebos. 2. The effect is dose dependent – different doses produce different effects. Placebo effects are not dose dependent. 3. When others tried the amounts of flaxseed oil I used, it produced surprising results. Again, placebos cannot produce surprises.

## **Everyday Humor (part 4) (2007-12-25 23:20)**

A collection of [1]mathematical jokes at Wikipedia includes some nice ones – such as

Why do mathematicians think Halloween and Christmas are the same?  
Because 31 Oct = 25 Dec.

- but inexplicably omits my favorite:

Why is six afraid of seven?  
Because seven ate nine.

Why is this funny (at least to a 5-year-old)? Because we enjoy seeing unexpected connections.

1. [http://en.wikipedia.org/w/index.php?title=Mathematical\\_joke&oldid=179995500](http://en.wikipedia.org/w/index.php?title=Mathematical_joke&oldid=179995500)

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### **The Power of Placebos Over Health Journalists (2007-12-26 10:17)**

In the New York Times, Abigail Zuger, an M.D., recently [1]reviewed a book called Snake Oil Science: The Truth About Complementary and Alternative Medicine by R. Barker Bausell – the "truth" being, if I read Zuger correctly, that it's all baloney. Zuger calls the book "immensely educational". Not educational enough:

Dr. Bausell starts out with the story of his late mother-in-law, Sarah, a concert pianist who developed painful arthritis in her old age and found her doctors to be generally useless when it came to satisfactory pain control. "So, being an independent, take-charge sort of individual, she subscribed to Prevention magazine, in order to learn more about the multiple remedies suggested in each month's issue" for symptoms like hers.

What ensued, according to Dr. Bausell, was a predictable pattern. Every couple of months Sarah would make a triumphant phone call and announce "with great enthusiasm and conviction" that a new food or supplement or capsule had practically cured her arthritis. Unfortunately, each miracle cure was regularly replaced by a different one, in a cycle her son-in-law ruefully breaks down for detailed analysis.

Neither Bausell nor Zuger notice two problems here: (a) The alternative treatments worked better than the conventional ones. They didn't provide permanent relief, true, but apparently conventional medicine ("useless") didn't provide any relief. [2]Something is better than nothing – and something is wrong with Bausell's interpretation of this story. (b) Why didn't the conventional treatments benefit from the placebo effect?

That Zuger thinks this story supports her claim that the book is good suggests the power of pre-conceived notions, not the power of placebos.

The book is published by Oxford University Press. [3]Bausell has a Ph.d. in Educational Research and works as a methodologist.

Not only do Bausell and Zuger fail to see what the mother-in-law story means, they fail to grasp a larger point: Skeptics are a dime a dozen. The attitude in short supply is sophisticated appreciation.

Thanks to Dave Lull and Hal Pashler.

1. <http://www.nytimes.com/2007/12/25/health/25book.html?ex=1199336400&en=123d5d7d33451582&ei=5070&emc=eta1>
2. <http://sethroberts.net/articles/2007%20Something%20is%20Better%20than%20Nothing.pdf>
3. <http://nursing.umaryland.edu/faculty/osah/bausell.htm>

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Willy (2007-12-26 17:16:21)

>Why didn't the conventional treatments benefit from the placebo effect? Maybe because the alternative treatments offer something conventionals don't: a sense of power, not a passive acceptance. People like to read about "natural" treatments in popular magazines that are written for the lay person (they get an explanation of the suffering) and they let one take charge of their problem and do something active apart from obeying a doctor.

LemmusLemmus (2007-12-26 21:53:01)

Are you saying homeopathy works?

LemmusLemmus (2007-12-26 21:53:22)

Beyond the placebo effect, that is?

seth (2007-12-26 22:58:34)

No, I'm not saying homeopathy works. Prevention magazine doesn't cover homeopathy, I'm pretty sure.

Stephen M (Ethesis) (2007-12-26 23:47:51)

Nicely said.

michael vassar (2007-12-27 08:59:09)

Of course, we all know that "Education Research" is just a placebo PhD.

Timothy Beneke (2007-12-27 14:18:14)

I think Seth's general point that we should be alert to new hypotheses is well taken; and in many domains new hypotheses can be readily tested through self experimentation – if we could have 1000 skilled self experimenters working together around the world, to judge from Seth's achievements, we could do a lot of good. Regarding "placebo": It's a concept that hides more than it reveals. It could reflect a dissonance effect resulting from intolerance of psychological contradiction. It's well known that if you can get people to choose to participate in a second experiment, after going through one already, that causes them to suffer more electric shocks or eat more salty foods that require enduring thirst, their act of choosing causes them not only to say that they are less stressed by the shocks or thirst the second time around, but physiological measures confirm this. And people in nursing homes live longer if they are given more choice over their environments. It may be that Sarah's own initiative and choice resulted in symptom reduction, which is real, but caused not by the agent she consumed but by her own positive attitude and belief. And we have to allow for reporting effects where someone says their pain is reduced and wants it to be when it isn't; I've done this. When I pay good money for something, it's hard to admit it's not working. Second, when is "placebo" just return to the mean? If people seek help when their suffering is bad and will get better on its own, a placebo effect may just be an effect of time and not an effect of "belief" or "expectation". As I recall, a meta-analysis of placebo effects done a few years ago found zero effects for blood pressure and cholesterol; and very small ones for pain. "Placebo" is a concept

that reflects a lack of precision and rigor in those who use it....

### **Irritability and Coca-Cola (continued) (2007-12-27 16:49)**

John Keltner, an M.D./Ph.D. at Oxford, guest-blogged [1]earlier about a self-experiment to measure the effect of Coke on his mood. Below he describes his results in more detail.

I did a self-experiment to measure the mood and hunger effects of consuming 30 oz of Coke, Diet Coke With Caffeine, and Diet Coke Without Caffeine. I used two numerical rating scales. For the mood scale 0 represented profound dysphoria, 5 neutral mood, and 10 profound euphoria. For the hunger scale 0 represented profound hunger, 5 no hunger or fullness, 10 profound fullness.

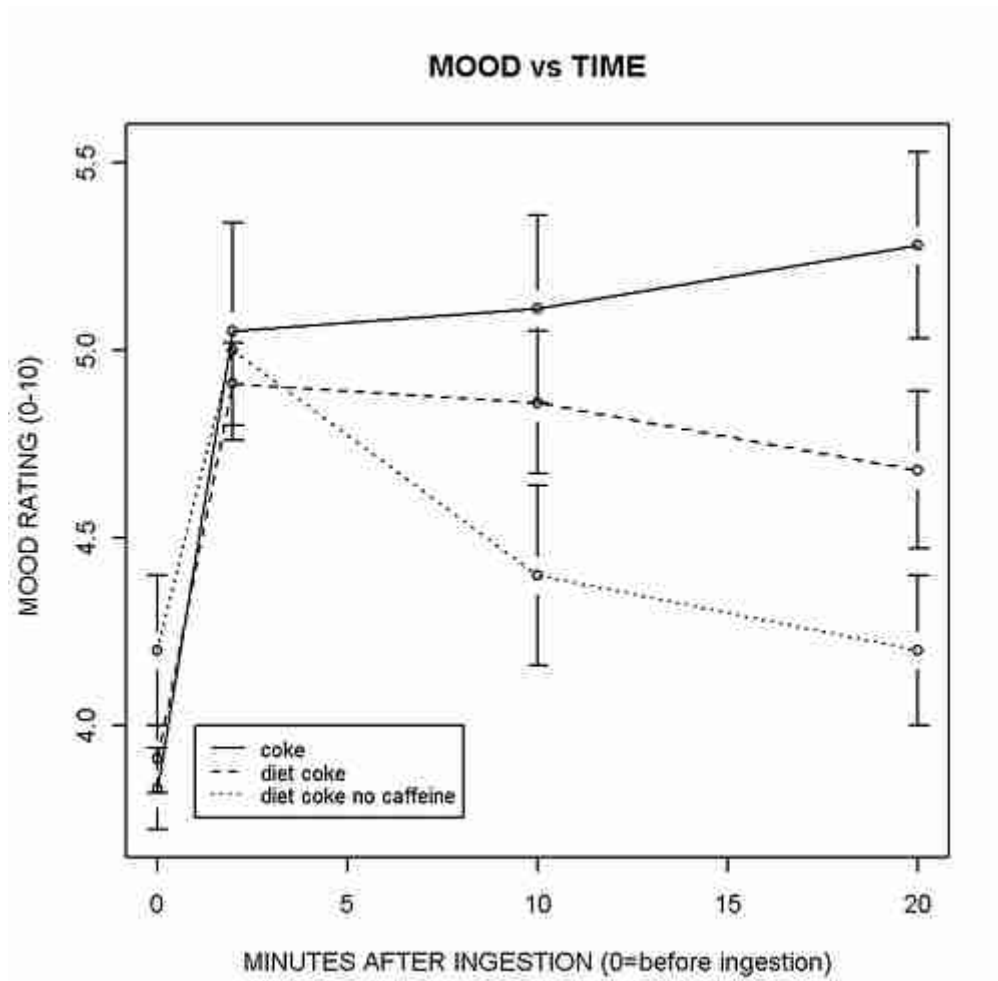
Each day before dinner (after 7 hours of not eating anything but water), I measured my mood and hunger/fullness at four times: right before drinking 30 oz of soda, right after drinking the soda, 10 min after, and 20 min after.

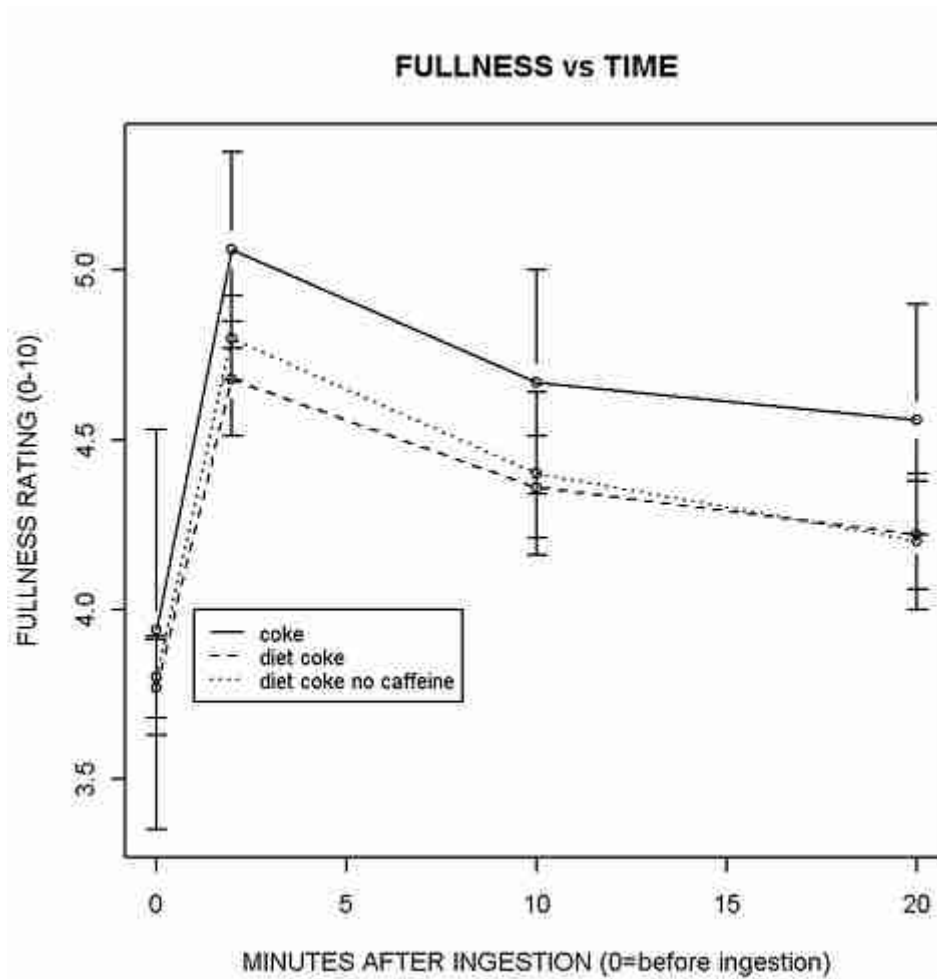
I collected the data in two ways: blinded and not blinded. The 3 drinks were consumed in a random order.

The experiment lasted 25 days - one drink per day.

At the end of the 25 days there were a couple of measurement categories with only 2 or 3 data points, so I have combined the blinded and not blinded data for the purposes of presenting the data here.

The figures below show means and standard errors.





Within 10 minutes (and stronger at 20 minutes) there appears to be a significant change in mood ratings for the sugar and caffeine coke drink compared to the non-sugar and non-caffeine coke drink. Furthermore, it appears that caffeine alone was able to cause an increase in mood at the 10 minute and 20 minute time points between diet+caf coke vs diet w/ no caf coke. Finally, it appears that effects of sugar and mood are additive.

There was not a large difference in the fullness ratings between the three different drinks.

It is also notable that mood and fullness were markedly increased for all drinks immediately after consuming the drinks. Presumably this immediate increase in fullness and mood has more to do with the immediate taste or volume affects of the drinks and less to do with the calories or caffeine in the drinks.

In my next experiment investigating mood effects of sugar and caffeine I will reduce the number of parameters in my experiment. I spent a month collecting this data and a fair amount of effort (blinded data are hard to collect). Because I chose three types of coke drinks (sugar+caf, no sugar but caf, no sugar and no caf), two parameters to examine (hunger and mood), and two conditions (blind and non-blinded) my data points were spread too thin over the categories. Next experiment I will choose just two drinks (caf vs no caf), one condition (blinded), and I would focus on mood instead of hunger.

This experiment leads me to believe that a number of smaller experiments are more effective than one large experiment - at least in the beginning.

I would like to thank Seth Roberts (a lot!) for his generous helpful suggestions as I pursued this self experiment. I



initiated the experiment on my own, but I would not have finished it without Seth's help.

1. <http://www.blog.sethroberts.net/2007/07/11/irritability-and-coca-cola/>

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Tom (2007-12-27 22:48:29)

There's a variable I wish he would have measured (though I can understand why he wouldn't have thought to)... consuming colas, even diet ones, causes very strong carb cravings on the evenings of any day a cola has been consumed...even many hours after the soda consumption. ie, drink water all day long - minimal munchies at night. Drink diet coke with lunch - ravenous munchies at night. Bizarre, but true.

### **Academic Horror Story (Duke University) (2007-12-29 07:12)**

From [1]Until Proven Innocent by Stuart Taylor and [2]K. C. Johnson, about the Duke lacrosse case:

The Duke president addressed the [lacrosse] team for the first time since May a few weeks into its fall practice. . . . When Brodhead opened the floor for questions, Read Seligmann's former roommate, Jay Jennison, spoke up. He said that all of the team had learned much from the case . . . "What have you and the administration learned?" Jennison asked Brodhead. . . . Brodhead responded, "What do you think I should have learned?"

Head of a prestigious institution of higher learning resistant to learning or at least admission of learning. Curious.

[3]Tulane University.

1. <http://untilproveninnocent.com/>

2. <http://durhamwonderland.blogspot.com/>

3. <http://www.blog.sethroberts.net/2007/06/10/academic-horror-story-tulane-university/>

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bobvis (2007-12-29 08:25:38)

I am curious as to how the conversation proceeded from that point. I hope the student said something like "I wouldn't be so presumptuous as to tell you what I think you should learn. I was hoping that you could let us know more about what the experience was from your position."

Dennis Mangan (2007-12-29 08:46:36)

What Brodhead should have learned, and hopefully will, is that he and his university can be sued to within an inch of their lives because of their actions in this case. Duke has apparently settled for an undisclosed sum, but to my knowledge Brodhead has yet to suffer any consequences. Nor have the 88 professors who signed a public letter condemning the students. I'd fire every one of them.

Stephen M (Ethesis) (2007-12-29 10:20:47)

Kind of what people should learn about diets. BTW, for an interesting perspective: <http://www.t-nation.com/readArticle.do?id=1392804> Mostly about more things wrong with normal diet efforts.

seth (2007-12-29 11:43:13)

bobvis, the book doesn't say in any detail what happened next, only that the team was stunned by Brodhead's response. Dennis, I agree, that Brodhead hasn't suffered any consequences speaks volumes. I take him as a good example of what's wrong with Duke because his view of the case wasn't politically slanted; the problem is not that faculty have political views and biases, it's their heedless certainty that's the problem. I wouldn't fire anyone for exercising freedom of speech, including the Duke 88. After the Duke 88 signed that public letter, the rest of the faculty (a few thousand professors) could have signed an anti-88 letter. They didn't. A handful complained, much less visibly. That says something not very pleasant about practically all Duke professors.

Tom (2007-12-29 11:53:31)

I dunno...I think all involved just did a meta-analysis of their personal experiences and private biases and reached a reasonable conclusion. People have turned Vegan for less. :-) More seriously, I agree with all of the above, and yet, while there are corrupt DAs, stupid DAs, and desperate DAs...a DA as corrupt, stupid and desperate as Nifong is a bit of a "black swan" event.

Peter (2007-12-29 12:51:54)

if the student insulted me like that i'd tell him to go eff himself. so, as far as i can see, the prez handled it a lot better than i would have.

### **An SLD Story for the Coming Year (2007-12-29 19:32)**

My dad has diabetes, and I casually got Amazon.com to send him the Shangri-La Diet book. I left him a message saying (still very casually) "I came across something that you might find interesting. The book is in the mail. Talk to you soon".

A few weeks later he (casually) mentioned that he had started the oil, and was now physically incapable of overeating.

A few more weeks later, and he reports that he is unable to finish his breakfast in one sitting - he has to eat half, go work for a few hours, then finish his breakfast.

I'm elated.

My father has been compared to Homer Simpson. Both in the "get thrown out of Pizza Hut on all-you-can-eat night" and in the "awwww, my stomach hurts... I shouldn't have eaten that packet of gravy that I found in the parking lot" departments.

From the [1]SLD forums.

1. <http://boards.sethroberts.net/index.php?topic=5893.msg62211#msg62211>

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Paul (seeking weight loss solutions) King (2007-12-30 16:43:59)

Great story, I'll be sure to check out this diet plan. If it can work for Homer there's hope for me yet! : )

### Can Anti-Depressants Cause Suicide? (2007-12-31 14:15)

Many parents have said yes. David Healy, a Scottish psychiatrist, prompted by those stories, did a small experiment in which undepressed persons took anti-depressants. About 10 % of them started having suicidal thoughts. Drug companies and the University of Toronto (where Healy had been offered a job) reacted very badly to this information, as Healy describes in [1]Let Them Eat Prozac. An [2]article in the latest issue of the American Journal of Psychiatry by David Leon, a biostatistician on the FDA oversight panel, describes why he voted to extend a warning about this from children (< 18 years old) to young adults (18-24 years old). This was the main data:

X

What's shown is the odds ratio for a report of suicide ideation or behavior, comparing those who got anti-depressants with those who got placebos. An odds ratio of more than 1 means greater risk in those who got anti-depressants. The red bar is from a different study. When different ages are lumped together there is no increase in risk but that hides opposing tendencies at high and low ages.

The article contains this curious sentence: "The results did not provide definitive evidence of risk, yet they failed to demonstrate an absolute absence of risk." No possible results could "demonstrate an absolute absence of risk" so it is unclear what Dr. Leon meant. Later he writes: "My vote to extend the black box warning to young adults was based on concern that risk of suicidality could not be ruled out and, given the widespread antidepressant use, even a small risk must not be ignored." Yes, he has it backwards: The data do not "fail to rule out" suicide risk (no possible data could "rule out" such risk, i.e., show the risk is zero); they manage to overcome a barrier to show it's there. And yes, he's congratulating himself ("even a small risk must not be ignored") for doing his job.

Uh-oh. That someone – a biostatistician, no less – in such a powerful regulatory position fails to understand basic concepts is bad enough; to make things worse, Dr. Leon has received money from three of the companies (Eli Lilly, Organon, and Pfizer) he oversees.

[3]Related post by Andrew Gelman.

1. [http://books.google.com/books?id=5w64WC\\_-jbMC&dq=%22let+them+eat+prozac%22&pg=PP1&ots=nm382Qt69G&sig=RNXGUZK9DnZq\\_eBoWNqWJRWDGio&prev=http://www.google.com/search%3Fq%3D%2522let%2Bthem%2Beat%2Bprozac%2522%26ie%3Dutf-8%26oe%3Dutf-8%26aq%3Dt%26rls%3Dorg.mozilla:en-US:official%26client%3Dfirefox-a&sa=X&oi=print&ct=title&cad=one-book-with-thumbnail](http://books.google.com/books?id=5w64WC_-jbMC&dq=%22let+them+eat+prozac%22&pg=PP1&ots=nm382Qt69G&sig=RNXGUZK9DnZq_eBoWNqWJRWDGio&prev=http://www.google.com/search%3Fq%3D%2522let%2Bthem%2Beat%2Bprozac%2522%26ie%3Dutf-8%26oe%3Dutf-8%26aq%3Dt%26rls%3Dorg.mozilla:en-US:official%26client%3Dfirefox-a&sa=X&oi=print&ct=title&cad=one-book-with-thumbnail)
2. <http://ajp.psychiatryonline.org/cgi/content/full/164/12/1786?etoc>
3. [http://www.stat.columbia.edu/~cook/movabletype/archives/2007/12/zoloft\\_stories.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2007/12/zoloft_stories.html)

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NE1 (2008-01-01 00:00:40)

Finding ratios 5 sigma below 1 (for a well-reasoned study) would easily satisfy my definition for "absolute absence of risk". It means in a large sample of people, the risk just doesn't occur. The results do not provide definitive evidence of risk because...

the value isn't 3 sigma above 1. What's hard about this?

lasser80 (2008-01-01 02:10:00)

I don't doubt that anti-depressants help many people. But the question on if anti-depressants are necessary and if they are, in fact, better than other less abrasive treatment methods is still questionable to me. Messing around with one's brain chemistry does strike me as potentially dangerous. It might subdue the depression, but the side effects are unknown. If more organic means can provide the same benefits as the abrasive means, then it's an easy decision. Yet psychiatrist don't seem to be open to the organic means.

seth (2008-01-01 02:48:17)

NE1, what is the numerical value of a risk ratio "5 sigma below 1"? And why 5? why not 20? or 3?

Seth's blog » Blog Archive » Anti-Depressants, Suicide, and a Malfunctioning Legal System (2008-01-01 19:03:49)  
[...] Can Anti-Depressants Cause Suicide? [...]

NE1 (2008-01-01 21:05:53)

Seth, you must be joking. A value 5 sigma below 1.0 means that if we were able to commission 4000 independent studies like this, we would expect to find an increase in ideation over placebo in just about one. So that, unless this is \*that\* one horribly biased study, we can be pretty certain that the risk does not exist (and is most likely reversed!). Now, if you want to turn that around and say that's still not enough, that 2 excess children having suicidal ideas is too many, then sure, price in some reasonable precautions. The odds against a 20 sigma study would be so great as to require the inadequacy of the study on other grounds (systematic error). But no, at some point you have to say: These 3999 positively (!) reacting teens are good evidence for me, and the 1 other could very well be the product of some other unfortunate circumstance. This isn't even in the realm of this Commentary, though. The value is within 1sigma of 1 here, so there isn't sufficient evidence to draw any hard conclusion. He also explicitly says that the black box warning is not about discouraging use, but warning about the danger of not monitoring; the reality is unknown, doctors are encouraged to be perceptive. You say: "The data do not fail to rule out suicide risk (no possible data could rule out such risk, i.e., show the risk is zero); they manage to overcome a barrier to show it's there. This is certainly not true. I have been willing to give you the benefit of the doubt on many things, as this is not my field, but one thing I have learned is an appreciation for the depth of people such as Leon. I may not understand the analyses he walks us through, but I do know that such processes are created for a reason. I am amazed that you feel capable of dismissing them without any reasoning yourself. You must think he has not gone far enough in restricting these drugs, but the evidence you seek does not seem to be in this report. Lasser: it's not hard to imagine that some people have inappropriate levels of the basic neurotransmitters in the brain, a natural "chemical imbalance". In that case it seems perfectly reasonable to me to plan on replacing those chemicals with a pill, as opposed to suggesting they exercise or eat more ice cream. To insist otherwise, as say the Scientologists might, is to turn one's back on centuries of confidence building in science. I know you're not taking this stance, but I think much of the public is still attached to the stigma against anti-depressants.

Corrinne Levanovich (2009-01-25 21:29:05)

For the last person to respond- when I was 19 I was put on Paxil, and while it did not cause suicidal feelings I had a severe reaction to it. It actually made me manic and angry. I am not saying this is a common experience, but I have never had a manic episode in my life and I haven't had one since I stopped taking it. (I am 23 now) I don't doubt that there's some people that antidepressants react badly with.

## Dr. Dermatologist, Meet Governor Huckabee (2007-12-31 15:29)

Since the 1960s, this has been the [1]standard conversation in dermatology offices:

PATIENT I think Food X causes acne. After I eat Food X, I break out.

DOCTOR There's no link between food and acne, but if something bothers you, don't eat it.

Here is Governor Huckabee [2]campaigning for President:

"If you want to believe that you and your family came from apes, that's fine," Huckabee said after an early debate. "I'll accept that. I just don't happen to think that I did."

The dermatologists made a mountain out of a molehill (the diet/acne question hadn't been carefully studied). Huckabee made a molehill out of a mountain.

1. [http://www.boston.com/bostonglobe/magazine/articles/2007/12/16/a\\_clear\\_connection/](http://www.boston.com/bostonglobe/magazine/articles/2007/12/16/a_clear_connection/)
2. [http://www.newyorker.com/reporting/2008/01/07/080107fa\\_fact\\_kolbert](http://www.newyorker.com/reporting/2008/01/07/080107fa_fact_kolbert)

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### **Academic Horror Story (Johns Hopkins University) (2007-12-31 18:14)**

I previously blogged about [1]ICU checklists. Atul Gawande has written another excellent article about them, this time an editorial in the New York Times:

A year ago, researchers at Johns Hopkins University published the results of a program that instituted in nearly every intensive care unit in Michigan a simple five-step checklist designed to prevent certain hospital infections. It reminds doctors to make sure, for example, that before putting large intravenous lines into patients, they actually wash their hands and don a sterile gown and gloves.

The results were stunning. Within three months, the rate of bloodstream infections from these I.V. lines fell by two-thirds. The average I.C.U. cut its infection rate from 4 percent to zero. Over 18 months, the program saved more than 1,500 lives and nearly \$200 million.

Yet this past month, the Office for Human Research Protections shut the program down. The agency issued notice to the researchers and the Michigan Health and Hospital Association that, by introducing a checklist and tracking the results without written, informed consent from each patient and health-care provider, they had violated scientific ethics regulations. Johns Hopkins had to halt not only the program in Michigan but also its plans to extend it to hospitals in New Jersey and Rhode Island.

The government's decision was bizarre and dangerous. But there was a certain blinkered logic to it, which went like this: A checklist is an alteration in medical care no less than an experimental drug is. . . . A checklist may require even more stringent oversight [than drug tests], the [OHRP] ruled, because the data gathered in testing it could put not only the patients but also the doctors at risk "by exposing how poorly some of them follow basic infection-prevention procedures. . . .

A large body of evidence gathered in recent years has revealed a profound failure by health-care professionals to follow basic steps proven to stop infection and other major complications. We now know that hundreds of thousands of Americans suffer serious complications or die as a result. It's not for lack of effort. People in health care work long, hard hours. They are struggling, however, to provide increasingly complex care in the absence of effective systematization.

Excellent clinical care is no longer possible without doctors and nurses routinely using checklists and other organizational strategies and studying their results. There need to be as few barriers to such efforts as possible. Instead, the endeavor itself is treated as the danger. . . . Scientific research regulations had previously exempted efforts to improve medical quality and public health "because they hadn't been scientific. Now that the work is becoming more systematic (and effective), the authorities have stepped in. And they're in danger of putting ethics bureaucracy in the way of actual ethical medical care.

Not "in danger of" – they have put "ethics bureaucracy" ahead of patient safety. In a big way.

1. <http://www.blog.sethroberts.net/2007/12/09/the-twilight-of-expertise-part-11-icu-doctors/>

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sysrick.com » links for 2008-01-01 (2008-01-01 16:29:12)  
[...] Academic Horror Story (Johns Hopkins University) [...]

Seth's blog » Blog Archive » Anti-Depressants, Suicide, and a Malfunctioning Legal System (2008-01-01 19:13:33)  
[...] Academic Horror Story (Johns Hopkins University) [...]

links for 2008-01-04 « Matthew Henty (2008-01-03 23:19:43)  
[...] Seth's blog » Blog Archive » Academic Horror Story (Johns Hopkins University) (tags: bureaucracy healthcare ethics)  
[...]

David Hunter (2008-01-11 01:37:03)

Seth I don't see the problem here. Why did John Hopkins not simply apply for approval before they began what was clearly research? You seem to be siding with Hopkins because it worked, but what if it hadn't? What if their experiments had negative effects, would you then be condemning them? The job of research ethics committees is to ensure research is carried out ethically, and I don't see how bypassing them is laudable.

Royce Fessenden (2008-08-05 07:49:01)

I'm stunned at David Hunter's comment that elevates an administrative procedure to the same level as "medical research". This is the same type of medieval madness that objected to doctors washing their hands and cleaning up the bloody surgeons gowns. Who will protect us from the "ethics" protectors!

PJ Eby (2009-01-29 13:16:29)

FYI, a response from the OHRP is here: <http://www.hhs.gov/ohrp/news/recentnews.html#20080115> They seem to be saying that as long as you're not \*researching\* whether checklists actually WORK, it's okay to just go ahead and USE them. Which seems a bit weird, but oh well.

## 3. 2008

### 3.1 January

#### Why New Year's Resolutions? (2008-01-01 03:02)

[1]Justin Wolfers gives seven possible explanations for New Year's resolutions. Here's another: They improve self-image. A Catholic who has gone to confession and been granted some sort of absolution has a better self-image after confession than before. Likewise, a person who wants to do X but hasn't (a "sin of omission") feels better about him- or herself after making a New Year's resolution to do X.

[2]Mark Liberman's resolution – surely for a different reason. I can't imagine making a New Year's resolution – see busman's holiday – but if I did it would be . . . to blog less. I enjoy blogging too much.

Happy New Year!

1. <http://freakonomics.blogs.nytimes.com/2007/12/28/economics-and-new-years-resolutions/>

2. <http://itre.cis.upenn.edu/~myl/languageblog/archives/005280.html>

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#### An Excess of Caution at The New Yorker (2008-01-01 11:20)

From an otherwise excellent [1]article about Rudy Giuliani:

Many, perhaps most, politicians probably value competence and probity somewhat less than devotion.

Uh, how about

Perhaps most politicians value competence and probity less than devotion.

Too much hyper-editing or too little? During a visit to The New Yorker, I used the bathroom. In the next stall, there were page proofs on the floor. The occupant was studying them.

1. [http://www.newyorker.com/reporting/2008/01/07/080107fa\\_fact\\_kolbert](http://www.newyorker.com/reporting/2008/01/07/080107fa_fact_kolbert)

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Peter (2008-01-01 14:25:35)

the two version read very differently. is the second version a response to a query? is the second version a rhetorical question? and the concept of competence vs. loyalty in politics is not very clear, i would argue - thus making the first version preferable on another count. the first version just reads easier - and that has value. the seeming watery-ness of the first version would be a problem in many/most other cases (probably), but not here, methinks. :)

seth (2008-01-01 14:58:15)

The second version is my edit of the 1st version.

Chris (2008-01-02 09:56:49)

I think it's underediting. Sad, cos line-editing is something the New Yorker used to do superbly. The writer obviously wants to add a tentative note to the blank statement "Politicians value competence and probity less than devotion", so he throws in a quibble, in fact he throws in three, then qualifies one by writing "Many, perhaps most" instead of just "Many". It makes him sound like a nervous Nellie. I'd rewrite as follows, with one quibble only only: "Many, perhaps most, politicians value competence and probity less than devotion." It's still not very good. "Probity" is a stuffed-shirt word - does he mean honesty? "Devotion" is also unclear - is it religiosity or loyalty? Anyway, if the 1965-era New Yorker somehow reappears and is looking for a line-editor, let'em know I'm available.

## **Anti-Depressants, Suicide, and a Malfunctioning Legal System (2008-01-01 19:03)**

[1]This sort of combines two recent posts of mine ([2]here and [3]here):

Unlike the possibility that anti-depressants may cause suicidal ideas, [addition of] the black box warning has been followed by the deterrence of non-psychiatric doctors from treating depressed people. The rate of hard outcome suicide, not just thoughts, shot up. It had been dropping prior to that.

[4]Supporting data. Related [5]FDA overreaction.

1. <http://suicidemalpractice.blogspot.com/2008/01/can-litigation-cause-suicidal-ideas.html>
2. <http://www.blog.sethroberts.net/2007/12/31/can-anti-depressants-cause-suicide/>
3. <http://www.blog.sethroberts.net/2007/12/31/academic-horror-story-johns-hopkins-edition/>
4. <http://ajp.psychiatryonline.org/cgi/content/abstract/164/9/1356>
5. <http://suicidemalpractice.blogspot.com/2007/12/clueless-fda-at-it-again.html>



## The Best Way to Learn is to Do (Jonathan Schwarz edition) (2008-01-02 18:50)

"The best way to learn is to do," wrote the late [1]Paul Halmos at the beginning of [2]an article about how to teach college math that inspired me to start self-experimenting. [3]Jonathan Schwarz says [4]something similar:

America is so completely depoliticized that I support people doing pretty much anything (except forming neighborhood fascist gangs, and even that doesn't worry me too much). Perhaps I'm foolishly optimistic, but I believe people will learn from the horrendous mistakes they'll surely make. And even if they don't, giving it a shot is the only way they have even a possibility of doing so.

Well put.

A subtle defense of the Iraq War? If Halmos were alive I like to think he'd agree with this:

Lesson 1: The best way to learn is to do.

Lesson 2: And the best thing to do is something small.

[5]Halmos excerpts.

1. [http://en.wikipedia.org/wiki/Paul\\_Halmos](http://en.wikipedia.org/wiki/Paul_Halmos)
2. [http://links.jstor.org/sici?sici=0002-9890\(197505\)82%3A5%3C466%3ATPOLTT%3E2.O.CO%3B2-B](http://links.jstor.org/sici?sici=0002-9890(197505)82%3A5%3C466%3ATPOLTT%3E2.O.CO%3B2-B)
3. <http://www.tinyrevolution.com/mt/>
4. <http://www.tinyrevolution.com/mt/archives/001979.html>
5. <http://www.ams.org/notices/200709/tx070901136p.pdf>

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david (2008-01-02 20:28:39)

William Blake edition: "If the fool would persist in his folly he would become wise." from the \_The Marriage of Heaven and Hell \_

seth (2008-01-02 21:53:40)

Nice, David.

Peter (2008-01-02 22:47:25)

A subtle defense of the Iraq War? people will try anything to defend war crimes.

Aaron Brown (2008-01-03 12:02:15)

I'm reading the [1]collection of Halmos excerpts right now and it's great. This part hit home:

Despite my great emotional involvement in work, I just hate to start doing it; it's a battle and a wrench every time. Isn't there something I can (must?) do first? Shouldn't I sharpen my pencils, perhaps? In fact I never use pencils, but pencil sharpening has become the code phrase for anything that helps to postpone the pain of concentrated creative attention. It stands for reference searching in the library, systematizing old notes, or even preparing tomorrow's class lecture, with the excuse that once those things are out of the way I'll really be able to concentrate without interruption.

1. <http://www.ams.org/notices/200709/tx070901136p.pdf>

seth (2008-01-03 15:24:28)

Everyone procrastinates. Or almost everyone.

## **Interview with Gary Taubes (part 1) (2008-01-03 05:47)**

I interviewed Gary Taubes shortly after he gave a [1]talk about the main ideas of his new book – Good Calories, Bad Calories – at UC Berkeley. The interview lasted 2 hours.

INTERVIEWER I just spoke to someone who reduced the carbohydrate in his diet, for various reasons, including your book. He found that his performance on mental problems started improving again. It had stopped improving; it had been constant for a long time, and then it started getting better. So it may be that when you reduce the carbohydrate in your diet, your brain starts working better.

TAUBES Well, there is evidence that your brain works more efficiently on ketones, as does your heart. So if he reduced his carbohydrate consumption sufficiently, he probably increased the level of ketones in his blood. But I'm just speculating here.

INTERVIEWER: The book seems to have had an unusual beginning. You'd been writing about salt, and you learned that a scientist you didn't trust about salt was also talking about obesity?

TAUBES Well, I've spent over 20 years now writing about controversial science. In the mid-1980s, I lived at CERN for ten months, the big physics lab outside Geneva, watching physicists discover non-existent elementary particles. Then I wrote a somewhat infamous story about prions, the supposed causative agents of Mad Cow Disease. I wrote a book about cold fusion: I got obsessed with this question of how it happened, because it was so obviously wrong. After all that, I developed what I believe is a very good feel for who's a good scientist, and who's a bad scientist, just by talking to them. There are certain ways that good scientists describe their data, describe the caveats, and describe the conditions by which they may or may not be right. I had also, obviously, with cold fusion, interviewed some of the worst scientists in the world. I used to joke with my friends in the physics community that if you want to cleanse your discipline of the worst scientists in it, every three or four years, you should have someone publish a bogus paper claiming to make some remarkable new discovery – infinite free energy or ESP, or something suitably cosmic like that. Then you have it published in a legitimate journal ; it shows up on the front page of the New York Times, and within two months, every bad scientist in the field will be working on it. Then you just take the ones who publish papers claiming to replicate the effect, and you throw them out of the field. A way of cleaning out the bottom of the barrel.

INTERVIEWER I thought your NY Times article, "What if It's All Been a Big Fat Lie," sort of did that. The people who came out against it, they were the bad journalists. Just throw them out!

TAUBES Well, how I got onto that: I was doing this story for Science on salt and blood pressure, looking into the controversy about whether salt consumption plays any role at all in raising blood pressure and causing hypertension. One of the prime players in this salt/blood pressure controversy was obviously one of the worst scientists I'd ever met – one of the five worst" | you can't say, in that five, who is the very worst, but they're all pretty bad. This is a group that includes guys like Stan Pons and Martin Fleischman who claimed to have discovered cold fusion. While I'm on the phone with this guy, interviewing him, he takes credit for getting Americans to eat less fat and fewer eggs. I literally finished the interview, called my editor at Science, and I said "You know, one of the worst scientists I've ever interviewed just took credit for getting Americans to eat less fat and fewer eggs, and I don't know what the story is, but when I'm done with this salt story, I'm going to look into fat, cholesterol, and saturated fat." I had a great relationship with Science. My editors had faith in me. If I said there was a story there, they'd give me the support

I needed to pursue it. A year later, I ended up with that first story in Science, saying that there's no evidence that reducing the total fat in the diet makes a damned bit of difference in our health. The evidence that saturated fat and monounsaturated fats are players is, at best, marginal. And that led to the N.Y. Times article.

INTERVIEWER What did that scientist say that made you rank him so low?

TAUBES There are all kinds of signs. He told me there was no controversy, when there was obviously a controversy. His side might have been right, but to deny there as a controversy was ludicrous. He talked about the legitimacy of throwing out negative data. You measure salt consumption one way; you don't see any effect on blood pressure, and so you decide that's obviously the wrong way to measure it. The implication of everything he told me was that he knew what the answer was before he did his experiments, and then he adjusted his experimental techniques and methodology until he got the answer that he wanted. And he believed this was legitimate science. There are other signs. I'm a stickler about the use of words like "evidence"<sup>[2]</sup> and "proof"<sup>[2]</sup>. So if someone tells you there's no evidence for some controversial belief, you can be fairly confident that they're a bad scientist. There's always evidence, or there wouldn't be a controversy. If somebody says that "we proved that this was true"<sup>[2]</sup> or "we set out to prove that this was true"<sup>[2]</sup> that's another bad sign. The point here, as Popper noted, among others, is that you can never prove anything is true; you can only refute it. So researchers who talk about proving a hypothesis is true rather than testing it make me worried.

INTERVIEWER Yeah, I see what you're saying. They overstate; they twist things around to make it come out the way they want. They are way too sure of what they"<sup>[1]</sup>

TAUBES Yes, and the really good scientists are the ones, almost by definition, who are most skeptical of evidence that seems to support their beliefs. They're most aware of how they could have been fooled, how they could have screwed up, or how they might have missed artifacts in their experiment that could have explained what they observed. They're very careful about what they say. If you ask them to do play devil's advocate, and tell you how they could have screwed up, then at the very least, they'll say "Well, if I knew how I could have done it, I would have checked it before I made the claim"<sup>[2]</sup>. So when I'm talking about discerning the difference between a good scientist and a bad scientist, I'm talking about how they speak about their research, the evidence itself, it's presence or absence. My friends in journalism would often ask me this question: by what right do I think make decisions about who's a good scientist and who's not. I'd say "Well, when you're an English major, you can be confident that Norman Mailer was a better writer than John Grisham, even though John Grisham makes 10 to 100 times more money"<sup>[2]</sup>. It's just a feel for what you do; I don't know how else to describe it. I know a good scientist when I talk with one. I might be fooled, on occasion, but....

INTERVIEWER It's not particularly well-correlated with how famous they are, or how many Nobel Prizes they've won.

TAUBES My first book was about a Nobel Prize winner who discovered non-existent elementary particles.

INTERVIEWER Who was that?

TAUBES An Italian physicist named Carlo Rubbia.

[2]Interview directory.

1. [http://webcast.berkeley.edu/event\\_details.php?webcastid=21216](http://webcast.berkeley.edu/event_details.php?webcastid=21216)

2. <http://blog.sethroberts.net/2008/01/05/interview-with-gary-taubes-directory/>

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sidereal (2008-01-03 13:12:50)

Funny juxtaposition:

There are all kinds of signs. He told me there was no controversy, when there was obviously a controversy. His side might have been right, but to deny there as a controversy was ludicrous... I'm a stickler about the use of words like "evidence" and "proof". So if someone tells you there's no evidence for some controversial belief, you can be fairly confident that they're a bad scientist. There's always evidence, or there wouldn't be a controversy.

My first book was about a Nobel Prize winner who discovered non-existent elementary particles

Rubbia won the Nobel Prize for discovering the W and Z bosons. Their existence is fairly well established in the Standard Model, to the degree that we can observe particles that minute. To call them 'non-existent' would be a profoundly hubristic scientific claim. Taubes might be referring to the Higgs boson, which is predicted within a fairly narrow range of parameters, but unobserved. This is again substantially different from 'non-existent'. I haven't read Taubes' book of course, so it's entirely possible he's referring to some other particles, but it certainly seems as if Taubes is failing to hold himself to the standard he requires of the scientists he interacts with.

taubes (2008-01-03 15:53:20)

With apologies for coming off like an egomaniac and writing in the third person, Taubes was indeed referring to some other particles. He was there when Rubbia won the Nobel Prize. He even accompanied him to Stockholm (something Rubbia probably regrets to this day) and had a great time. The first half of his book, *Nobel Dreams*, chronicles the work leading up to the observation of the W and Z bosons at Rubbia's experiment. The second half of *Nobel Dreams* chronicles the "discovery" of the non-existent elementary particles and the subsequent realization that it was, indeed, a royal screw-up. The book is a good read. I recommend it. (My advice to sidereal, which I try to follow as an investigative journalist, is always to begin from the assumption that someone is no more nor less idiotic than you might be, until proven otherwise.)

sidereal (2008-01-03 17:29:13)

Indeed. sidereal simply read the exchange about Rubbia, in the context of the impeachability of Nobel Prize winners, as being about the work *for which* he won the Prize. sidereal apologizes for the assumption and will, as a fan of scientific controversies, read the book if he gets a chance. Regarding idiocy, he's surprised Taubes though it was implied. Lack of scientific rigor in approaching claims is unfortunately the human condition, and hardly qualifies as idiocy.

Seth's blog » Blog Archive » Interview with Gary Taubes (part 2) (2008-01-04 05:36:23)

[...] Interview with Gary Taubes (part 1) [...]

Bix (2008-01-04 11:25:09)

Taubes' response to the question, "What did that scientist say that made you rank him so low?", was, in my humble opinion, excellent. (I thought the asking of that question was also on target.) I especially liked, and agree with, his discussion about "proof." I was curious to see if Taubes would respond with an emotional argument. He didn't. In my eyes, this elevates his credibility. Just for a moment I'd like to come to the defense of scientists. I've worked with some, and I see that when someone becomes very excited about a finding, they, as if it was human nature, start to erect blinders to the alternative hypothesis. I think that's ok, as long as they can be reigned back in. Excitement is ok. But there are others who become progressively cemented to their idea. It's difficult to work with someone who has stopped listening, who can't see beyond their selected path. That's all! Nice job on the interview!

Seth's blog » Blog Archive » Interview with Gary Taubes (part 3) (2008-01-04 16:09:14)  
[...] Interview with Gary Taubes (part 1) [...]

Quantum Theory Man (2008-01-04 17:38:43)

I would have to agree, having been involved in various "hard" science projects over the years. When a new idea or discovery is thought up by the scientists, they often do put on blinders to any conflicting data or confounding hypotheses. This is what peer review is supposed to solve, but sadly since most of the peer reviewers also have their own set of blinders, things don't work out as they should. Paradigms change offly slow...

Seth's blog » Blog Archive » Interview with Gary Taubes (directory) (2008-01-05 02:15:54)  
[...] Interview with Gary Taubes (part 1) [...]

Allen Oelschlaeger (2008-01-06 11:47:49)

I recently read Gary Taube's new book and believe he got a lot of things right (e.g., overstated role of salt and fat to health). However, I'm less convinced that the obesity epidemic has been caused by a decrease in fat consumption and that a low-carbohydrate diet is the best way to lose weight for everyone. Instead, I think there is equally strong evidence (if not stronger) that the increased incidence of obesity is due to an increase in dieting (one indicator – \$11 billion was spent on dieting in the early 1980s and over \$60 billion is spent today). In fact, there is a strong argument that the global obesity epidemic is due to the broader issue of an increase in food insecurity (for which dieting is just one example). To read a paper on this topic, you can download a PDF at this URL: [http://www.truthspublishing.com/Obesity\\_Epidemic\\_Public\\_Policy.pdf](http://www.truthspublishing.com/Obesity_Epidemic_Public_Policy.pdf) Allen Oelschlaeger Author of Finally, the Straight Scoop About Weight, Nutrition, and Fitness (learn more at <http://www.truthspublishing.com>).

tiara.org » links for 2008-01-11 (2008-02-25 12:43:36)

[...] Seth's blog » Blog Archive » Interview with Gary Taubes (part 1) First part of a lengthy interview with Gary Taubes, author of Good Calories, Bad Calories which indicts many nutritional studies from the last 60 years and concludes again: it's carbs, not fat, to watch out for. (tags: foodscience diet health) [...]

Ron Burk (2008-02-26 21:01:20)

"may be that when you reduce the carbohydrate in your diet, your brain starts working better." I gotta dollar that says that all mental effects of low-carb diets are the result of increased serotonin getting into the brain. I have (ahem) self-experimented on this extensively because I was experiencing circadian dizziness (falling-down dizzy if I got up at 4am to go to the bathroom) and mental foggiess that seemed to correlate with sugar intake. After the doctor ruled out the good stuff (tumor, diabetes, etc.) I realized that a) when you get circadian symptoms, you look at circadian hormones and b) dizziness and mental foggiess are well-known symptoms for people using drugs that try to tinker with serotonin levels in the brain. They are often circadian symptoms, but for some reason doctors are real likely to ignore the fact that symptoms occur only at a certain time of day. A good scan of the literature helped me form the hypothesis: eat too much sugar, get sugar malabsorption, excess sugar binds with tryptophan, increased carbs in blood competes with tryptophan at brain-blood barrier, and you get seriously lowered ability to make serotonin in the brain. If you have any interest, ya gotta read this grotesque experiment they did on athletes where they put a catheter in the jugular so they can directly measure how much tryptophan is getting sucked in to the brain when athletes do endurance exercise with or without drinking carbs. I swear, you can do experiments on athletes that prisoners would never sign up for. The experiment to test the hypothesis on myself was easy: pop a tryptophan pill and do extended aerobic exercise on an empty stomach at peak serum tryptophan time (say, 6-8pm). The result was stunning. Boom – the mental foggiess I had had for unknown months or years disappeared. It was like the feeling you get when you get new prescription glasses and you suddenly realize that you had been unable to see clearly for who-knows-how-long. I can reproduce the symptoms at will and make them disappear at will. When you cut those carbs drastically or eliminate them, yer gonna get more tryptophan in the brain, so more serotonin can be produced from it. More serotonin in the brain may also help decrease cravings and increase satiety. I believe it's impossible really understand the Atkins diet without understanding how carbs can compete with tryptophan, and without understanding the Harvard work on using protein to help raise brain serotonin levels. The Atkins diet tinkers with brain serotonin, but since it does so unconsciously, it doesn't always produce the desired result (and certainly isn't the only way to elevate brain serotonin).

Lauren Schiller (2008-02-27 12:29:54)

So Ron, Very interesting, where can I find this information? I've been reducing my carb intake but it still seems like I fluctuate between good days and foggy days. I'd love to have a better understanding of what to do to reduce the brain fog.

### **Advances in SLD: Easing the Burden of Sugar Water (2008-01-03 08:09)**

One way to do the Shangri-la Diet is to drink sugar water. This can cause your blood sugar to go too high if you don't drink it slowly. Dr. Edward Pooley, a UK doctor, has noted that in the UK you can buy [1]FibreSure, which is powdered [2]inulin, a flavorless soluble fiber. Adding it to the sugar drink should slow digestion of the sugar. It is also sold in the United States.

1. <http://us.fibersure.com/ca/en/about.shtml>

2. <http://en.wikipedia.org/wiki/Inulin>

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Matthew (2008-01-03 09:42:40)

FYI, in the US it's called Fibersure. Thanks for the tip-I'll be trying this as soon as I can get my hands on it. Never could tolerate the oil.

Mike (2008-02-12 11:56:33)

Why is this sugar/insulin/diabetes issue dealt with so little detail. I wonder about the general warning being sufficient. If you're not diabetic and you use the sugar water religiously can you BECOME diabetic? What specifically happens when your blood sugar gets too high? How would one measure that? Drinking in 5 minutes, 10 minutes, 15 minutes? Now you suggest that one should use powdered insulin? Is it safe to be "eyeballing" or guestimating your sugar and insulin intake?

seth (2008-02-12 12:40:10)

There's no doubt that high blood sugar levels are damaging. This is why I used fructose instead of sucrose; fructose is digested more slowly. My A1C levels - which detect too-high levels - were fine. If you are worried about this, one thing to do is get your A1C level measured. Another (more time consuming) is to measure your blood sugar directly with a home meter for that purpose. There's too much variation from person to person and from one situation to another for me to make very concrete statements about what is best. You can post at [boards.shangriladiet.com](http://boards.shangriladiet.com) if you'd like more information.

### **Advances in SLD: Eating Lots of Nose-Clipped Food (2008-01-03 14:44)**

At the Shangri-La Diet forums, Heidi 555 [1]wrote (excerpts):

I highly recommend nose-clipping a high percentage of food. My weight has been steadily dropping down and my body is shrinking. But best of all I feel really good in my body. For the past five years I've been dedicated to getting in shape. I gradually built some muscles but found it impossible to lose those last 10 pounds of fat. Working out made me look stockier. Now I am in the enviable position of trying to figure

out what I want to weigh. Imagine that – pick what I want to weigh! I can't believe that I'm trying to figure that out.

For the most part, I don't mind nose clipping lots of food. I enjoy eating even with nose clips on. Yesterday, I made some delicious cream of mushroom vegetable soup. I raved about how delicious it tasted. My husband looked at me as if I was slightly nuts. I was wearing nose clips and couldn't taste a damn thing. Yet, I enjoyed every mouthful and raved about how great it "tasted". The healthy, creamy, warm, texture, umami elements were deliciously satisfying.

I have found the same thing – that there is a lot of pleasure to be gotten from the non-smell elements of food (creamy, sweet, salty, sour, etc.) and that the overall effect, when these elements are present in good amounts, is that the food tastes delicious, even without smell. When I have nose-clipped chicken, for example, I sprinkle it with salt, sugar, vinegar, and hot sauce.

I don't worry about a two hour window. I'm also flexible each day with what percentage of food I nose clip. I think in general I nose clip somewhere between 40 and 90 percent of what I eat. But it's not as bad as it sounds. With strong appetite suppression, I often don't care if I taste what I eat. I try to nose clip extremely healthy food. But sometimes I have a fridge to mouth nose clipped binge. The weirdest thing is that I always feel like I'm eating a lot. Maybe eating as much as you want, of whatever you want, always feels like a lot.

It's especially interesting she doesn't worry about a two-hour window.

With flavorless oil and unflavored sugar water, there is a dosage limit, of course: you'll probably want to stay under 400 calories/day so that the rest of your diet provides good nutrition. With nose-clipping there is no obvious calorie limit. Everything we know about nutrition suggests you could eat all your food this way. Given the right choice of foods – foods that are adequately creamy, salty, sweet, etc. – you'll still enjoy everything.

1. <http://boards.sethroberts.net/index.php?topic=5903.msg62328#msg62328>

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david (2008-01-03 15:55:29)

Ever since I read about the SLD, I've wondered if the real reason smokers lose weight (or gain it when they quit smoking) is because they can't taste/smell food as well when they smoke. IIRC, you mention in the original paper that smokers don't lose all that much weight because of smoking, but still they lose some. What if there were a pill that temporarily interfered with your ability to smell/taste food? Would that be the ultimate diet pill? Perhaps there is a drug already out that has that as a side effect.

lasser80 (2008-01-03 21:56:16)

I had difficulty swallowing food with my nose clipped.

Heidi 555 (2008-01-04 06:04:26)

I have difficulty swallowing liquids with my nose clipped. I have to drink slowly in small sips. Perhaps I also eat more slowly with nose clips. I'll have to pay attention and see.

How To Stop Smoking » Blog Archive » Comment on Advances in SLD: Eating Lots of Nose-Clipped Food by david (2008-01-04 21:04:22)

[...] unknown wrote something noteworthy recently. Here's a little excerpt: Ever since I read about the SLD, I've wondered if the real reason smokers lose weight (or gain it when they quit smoking) is because they can't taste/smell food as well when they smoke. IIRC, you mention in the original paper that ... [...]

How To Stop Smoking » Blog Archive » Comment on Advances in SLD: Eating Lots of Nose-Clipped Food by ... (2008-01-05 02:10:22)

[...] Ali wrote something noteworthy recently. Here's a little excerpt: Here's a little excerpt: Ever since I read about the SLD, I've wondered if the real reason smokers lose weight (or gain it when they quit smoking) is because they can't taste/smell food as well when they smoke. ... [...]

IRENE (2011-09-14 13:48:45)  
Drink through a straw. ?

## Interview with Gary Taubes (part 2) (2008-01-04 05:36)

INTERVIEWER What do you think about prions?

TAUBES Here's the problem with prions: the claim is that here's a radical discovery – an infectious agent that doesn't have nucleic acid – and it's based fundamentally on a negative result, which is that when researchers have gone looking for the nucleic acids they failed to find them. Therefore, so the logic goes, they must not be there. The original claim, by Stan Prusiner, another Nobel Prize winner, was premature. He made some claims in his early papers that were definitively wrong. Yet everything he's done since then supports his initial claim, which suggests he's was either remarkably lucky to begin with, or he's only capable of interpreting his results so that they agree with his preconceptions. One of the themes in all of my work is that if you go public on premature data, what happens is that the motivation to do really good science ceases. By "really good science", what you're supposed to do, as brutally as you can, is to try to come up with tests that would refute your own hypothesis. The idea is that if your hypothesis survives every rigorous test you can imagine, and all those that everyone else can imagine, then you can start believing it's true. But once you've staked a claim based on premature data – once you've gone out on a limb without doing any of those rigorous tests – now your motivation becomes to prove that you were right., which you can never do in any case. But the point is that you stop trying to refute your hypothesis, and you start trying to accumulate evidence that supports it and the latter isn't science. It's more like what happens in religions.

INTERVIEWER That's what happened with Peter Duesberg. He was a good scientist until he started making claims about HIV.

TAUBES When I wrote this prion article in 1987, the science was so bad that it was a joke. Still, I never said that the prion concept wasn't correct; I just said there was excruciatingly little evidence to support it, and there were plenty of reasons to believe it was wrong. How do you get strains of an infectious agent without nucleic acids (RNA or DNA) to encode the information in the strains? If you actually look today, even though Prusiner has won the Nobel Prize, if you go to the WHO website or the NIH website and you read up on prions, you'll see that it's still considered a hypothesis. There's still no way to explain how you can get strains without a virus. Prusiner has these ideas, but they're along the lines of now "a miracle happens". It's another long story, but one of the problems (and this is a theme in my book), when you let an untested hypothesis grow and infect the science to the point where people start to believe it's true, even though it's never been rigorously tested, the obstacles against ever overturning it get bigger and bigger. It's like the dietary fat hypothesis: you let it sit around for 40 years, and it evolves to the point that people consider it dogma; it's virtually impossible to overturn it. The situation with prions isn't so bad because the public



doesn't care about prions the way that they care about diet, but once the Nobel Prize is awarded, even though it's still considered a hypothesis, people tend to ignore the studies that suggest it's wrong. There's one researcher from Yale who is constantly publishing evidence in major journals that she's found the nucleic acids, and people just ignore her. They believe the question has already been answered.

INTERVIEWER What's her name?

TAUBES [1] Laura Manuelidis.

[2]

Interview directory.

1. [http://blog.wired.com/wiredscience/2007/01/what\\_really\\_cau.html](http://blog.wired.com/wiredscience/2007/01/what_really_cau.html)

2. <http://blog.sethroberts.net/2008/01/05/interview-with-gary-taubes-directory/>

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BarryBrolley (2008-01-04 14:10:29)

this sounds reminiscent of Smolin's critique of string theory in his book, "The Trouble with Physics" Smolin writes that string theory makes no testable predictions..

Joshv (2008-01-05 11:45:42)

"INTERVIEW That's what happened with Peter Duesberg. He was a good scientist until he started making claims about HIV." Unless I misunderstand your position, you are missing the parallels between the Dietary Fat/Obesity hypothesis and the HIV/AIDS hypothesis entirely. The "probable cause" of AIDS was announced in 1984 by press conference, not in a published, peer-reviewed paper. Since then there has always been ample evidence that either HIV does not cause AIDS, or that there are other causal "co-factors" involved. This evidence still exists, and has yet to be adequately explained. Instead most of this evidence is ignored, and the HIV-AIDS causal link is taken as a forgone conclusion - there is simply an opinion that "consensus" that HIV causes AIDS. Which is exactly the flawed misapplication of the scientific method that lead us to the current badly flawed dietary advice to avoid fat and replace it with carbs. Based on my reading of Taube's work, and my own extensive research on HIV/AIDS, I suspect that Taube's is most likely extremely skeptical of the causal link between HIV and AIDS. Duesberg is in fact an extremely careful and skeptical scientist, exactly the sort of researcher Taubes tends to respect based on my reading of his latest book, and other interviews/presentations. The parallels between the terrible science/scientists Taubes discovered in the field of dietary research, and what can be found in HIV/AIDS research are legion. I have not been able to find a public statement of his opinion on these matters, but I realize that for him to "come out" as an HIV/AIDS skeptic would most likely be an act of career interruptus. Note how he didn't answer the question you asked? He avoided it entirely (I am assuming his answer is unedited).

seth (2008-01-05 15:13:40)

I didn't ask Taubes what he thought about HIV and AIDS. My comment about Duesberg was an interruption.

Seth's blog » Blog Archive » Interview with Gary Taubes (directory) (2008-01-06 02:42:41)

[...] Interview with Gary Taubes (part 2) [...]

MacDonald (2008-01-06 07:08:25)

The comment on Duesberg and HIV certainly was an interruption. It would have been more interesting to compare Taube's and Duesberg's almost identical criticisms of prion theory.

joshv (2008-01-06 09:18:44)

"I didn't ask Taubes what he thought about HIV and AIDS. My comment about Duesberg was an interruption." I realize that, but your quip got it 180 degrees backwards. What Taubes is doing in dietary research is entirely analogous to what AIDS dissidents such as Duesberg, and more recently Culshaw are doing in realm of AIDS research. The parallels are clear, and if anything Taubes is most likely extremely skeptical of the conclusions reached by the last 25 years of HIV/AIDS research. I'd love to hear him comment on the subject.

Bob (2008-01-06 21:50:46)

"...now your motivation becomes to prove that you were right., which you can never do in any case. But the point is that you stop trying to refute your hypothesis, and you start trying to accumulate evidence that supports it and the latter isn't science. It's more like what happens in religions." Oh my goodness, the 2,000 pound elephant sitting in the living room, that nobody is remarking on, is named Al Gore. He's even got his own Nobel Prize, how apt. At the same time, Earth Day is replacing Easter, so the comment about religion is true in spades. Yet he and the hordes who insist that global warming is "proven" to be caused by man go unremarked upon in all of this discussion. Why? Does it depend on whose ox is being gored?

ryanwc (2011-04-04 21:05:18)

I'm awfully late getting here, via a search for Taubes critics to see what might turn up. But Bob, two things. One, Gore doesn't claim to be a scientist. If you even knew the names of actual scientists involved, rather than a guy who funded a movie, your own "skepticism" might seem better justified, rather than merely self-serving. Two, Taubes uses a large number of scientists whose views correspond in different ways to the things he is saying, and also cites many scientific papers whose results suggest different conclusions than those drawn by the high-carb folks. The climate science "skeptics" (as opposed to the genuinely skeptical scientists within the mainstream of climate science) have never been able to do either of those things. The very small number of people disputing that anthropogenic human warming exists (as opposed to the many who dispute exactly how much) are barely able to interact with the scientific papers that are published. They don't even attempt to explain or to integrate, instead, they've spent inordinate amounts of money trying to wish away the data. But the data itself has proven quite robust.

### **Interview with Gary Taubes (part 3) (2008-01-04 16:09)**

INTERVIEWER You wrote that New York Times piece, and from my take on it, you had a bunch of evidence, and then you got a book contract. Is it fair to say that you found out that what you wrote in the piece was mostly right?

TAUBES It's a difficult question. I had actually pitched the New York Times piece on fat as an attempt to determine the cause of the obesity epidemic. The proposal was very open ended. I had several ideas. I actually believed, going in to the story, that the answer was going to be that high-fructose corn syrup was responsible for Americans getting fatter over the last 30 years.

INTERVIEWER I'm glad to hear that.

TAUBES The thing about the obesity epidemic is that we can say when it starts, give or take five years: some-time between the mid-1970s and late 1980s. So we have a starting point, and that happens to coincide with the introduction of a type of high-fructose corn syrup known as HFCS-55, which was developed to taste exactly like sugar when it's put in sodas and juices. In fact, it is effectively identical to sugar, as far as the body is concerned – sugar (sucrose) is 50-50 glucose and fructose and HFCS-55 is 45 percent glucose and 55 percent fructose – although I didn't know that when I pitched the article. But I thought that high-fructose corn syrup is so cheap. Basically this is an idea that Greg Critser in a book called *Fatland* picked up on, and subsequently Michael Pollan, too, that high fructose corn syrup allows you to saturate the market with sugar, without any fear that price fluctuations will cause you to go out of business, or lose you a lot of money. If the international price of sugar suddenly spikes, as it did in the 70s, and

you're committed to fulfilling this enormous demand for sugar you've created, then you're in trouble. But if you have a cheap reliable source of sugar, at a price that won't change from year to year, then you can create an enormous market without fear. This was, more or less, my naive idea of how the economics of HFCS might have caused an entire nation to get fat. Once they had this dependable low-cost sugar substitute, the sugar industry and the soda industry could then expand their production and sell Big Gulps, etc. Then I did the reporting. I talked with industry analysts, and they said that was nonsense; that the primary cost of selling sodas and fruit juices is the bottling and the shipping, and that the cost of the sweeteners is such a tiny portion of the cost of the end product that it wouldn't have made any difference whether it was sugar or high-fructose corn syrup. So I moved to my next idea, which was based on the fact that the beginning of the obesity epidemic coincided with the institutionalization of the low-fat dogma. As I'm doing that reporting, I stumbled upon what was, at that time, five trials of the Atkins diet, all of which had been finished, but not yet published. At one point, when I was doing the reporting, I actually got worried that some other journalist would beat me to the punch.

INTERVIEWER What was it about the Atkins diet that made these trials so important to your article?

TAUBES: Well, remember, my background, as a journalist and in school, was more or less in physics. In the kind of physics I used to write about, you've got some complicated detector that's looking at particles and atoms smashing together inside it and you're looking for some byproduct of a collision that you've never seen before. A new particle. But the first thing you have to do is make sure you understand your detector. Can you believe what it's telling you. So you have to calibrate it. If you want to know how much you weigh, for instance, one thing you might do before you step on the scale is you calibrate that. You make sure that when you're not on it, the little arrow on the scale is pointing to zero. If it's registering one or two pounds when you're not standing on it, then it might be off by five or ten pounds or more when you are. So you want to calibrate your equipment. You want to know that when you set it to zero, it says zero. That's an idea that's always resonated with me. Measure what happens at an extreme, make sure you understand that, and then see what happens from there. So here's the Atkins diet: in theory, you're removing virtually all of the carbohydrates, but you don't tell people to eat less. You tell them to eat as much as they want. It's like you're setting the diet to zero carbohydrates, and as much fat as possible. According to conventional wisdom, you should certainly not lose weight and you might even gain it. But here were five studies saying that, lo and behold, people really do lose weight when you remove the carbohydrates from the diet, and they lose more weight than they do when you tell them to keep the carbohydrates but eat less calories. What's more, their cholesterol profiles actually improve, so how can fat or saturated fat be bad for your cholesterol, if these high fat, high saturated fat diets make your cholesterol levels better. To me that had to tell you something about the validity of the low-fat dogma and about the underlying physiology. What do carbohydrates do, and what does their removal do. So once I learned about those five studies, I was confident that I had a story that was now worth writing. As for your original question, about whether I found out most of what I originally wrote was right, obviously the book supports the message of the article, but I no longer believe a fair number of things I believed when I wrote that story. For instance, when I wrote the Times article I inherently believed that the key was still calories consumed.

INTERVIEWER You mean things that you believed then, that you don't believe now?

TAUBES Yes, that I don't believe now. In that original article, I discussed what David Ludwig has argued – that easily digestible carbohydrates cause these blood sugar and insulin spikes, and that in turn causes blood sugar to plummet, and the result is blood sugar so low a few hours later that this in turn makes you hungry. So you eat more and that's why you get fat with carb-rich diets. Ludwig works with obese children at Harvard and I believed that his hypothesis was probably true. Then I also talked about Michael Schwartz's research at the University of Washington. Schwartz believes that insulin's primary role is to suppress hunger in the brain, but that somehow we become resistant to that effect and so, once again, we eat too much and that's why we get fat. Both these theories are predicated on the notion that we get fat because we eat too much and that's what I believed. We consume more calories than we expend and we get fat; something about carbohydrates facilitates that excess consumption. Now I believe the causality is reversed, and that's what I discuss in the book and in the lecture. Carbohydrates make us

accumulate calories in our fat tissue, and that in turn makes us eat too much. It's all about the regulation of fat metabolism. All those things that Ludwig and Schwartz were talking about might have been true (I mean, they are true, on some level), but they're not the driving force of why we get fat, or why removing the carbohydrates makes us lean.

INTERVIEWER I see. So that's a good summing up of what was in your article that you believe, and what you don't believe anymore.

TAUBES There are other related facts, as well. I never imagined when I wrote that original article that I would come to believe that exercise won't make you lose weight, even though I've been an athlete my entire life and it's never helped me. So it's fair to say that when I wrote that New York Times article five years ago, I had an entirely different conception about the causes and cures of obesity and overweight. Carbohydrates were key, but my understanding of the mechanisms was completely different. That's the kicker with research and reporting: you don't know what you'll find until you do it.

[1]Interview directory.

1. <http://blog.sethroberts.net/2008/01/05/interview-with-gary-taubes-directory/>

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Timothy Beneke (2008-01-04 20:07:56)

First, a huge thank you to Gary Taubes! He's opened my eyes more than once. But, regarding high-fructose corn syrup; the obvious issue for anyone who as lost weight using Seth's ideas - through bypassing taste, or eating weaker tasting foods: Was it the biochemical effects of the added sugar or the enhanced flavor effects that led to the obesity epidemic? I was shocked 2 years ago when I sampled junk food - chips especially - after years of not tasting them and saw how rich-tasting they were. We need a history of taste strengths in the US and rest of the world in the last 30 years. And don't forget all those swell Flavor Chemists(<http://www.flavorchemist.org/>) who are working studiously to enhance the taste of foods. Did their influence grow in the 70s? (I hope to test whether the low-carbs effect on weight loss is really a weak-taste effect by seeing if I can lose more weight consuming a low carb diet free of taste than I have on a high carb taste-free diet. My first attempt failed because I could not go tasteless on the low-carb mush - but I may have had too much protein and not enough fat.)

Di the Colon Cleanse Buff (2008-01-05 13:14:14)

Great post enjoyed reading the decade of info. Still think the most important change we can make is to decrease our simple carbohydrates completely. If we only choose whole grains products and complex carboydrates we wouldn't see those insulin spikes. Thanks for your info.

Cynthia1770 (2008-01-06 00:08:03)

re: "It (HFCS) is effectively identical to sugar, as far as the body is concerned" The chief difference between sucrose and HFCS is that sucrose is a disaccharide and requires the enzyme sucrase to cleave the molecule into its component sugars. Anytime you have enzymatic catalysis you have regulation at the site of the chemical reaction. In contrast, HFCS is just a mixture of fructose and glucose, and therefore the sugars are delivered directly to the bloodstream. Secondly, HFCS 55, the sweetener used for every national brand of non-diet soda is 55 % furtcose:45 % glucose. Although the Corn Refiners Assoc., claim that it is "very similar" to sucrose (50:50), this is patently misleading.  $55/45\% = 12.2\%$  excess fructose in every can of caloric soda. It is the fructose moiety that causes long term health hazard leading to lipidemia and heart disease; hyperinsulinemia and Type II diabetes. Considering that the average teen chugs one or two cans of soda a day that is a lot of excess fructose that the liver is forced to metabolize. No, as far as the body is concerned the industrial sweetener HFCS and sucrose are quite different. Why

is it that in France Coke, made with real sugar is still served in 6 oz glass bottles (quite refreshing) and in the US Coke is only sweetened with HFCS and we guzzle liters. Is it because HFCS is so inexpensive that we are awash in the sweetener or are the inherent differences, unbound sugar molecules and sugar ratios yielding >10 % excess fructose causing our obesity epidemic. I'll put my chips on the latter.

Seth's blog » Blog Archive » Interview with Gary Taubes (directory) (2008-01-07 03:35:34)  
[...] Interview with Gary Taubes (part 3) [...]

Bob (2008-01-07 09:49:59)

I was very tempted to read the book because I like the way that the author thinks. However, I've just read a few reviews on Amazon. People who've read the book are repeating the very misleading saw that refined carbs are high GI and whole grains are not. Does the author really think that? The truth is far from such a simple analysis, just as was the earlier misconception that simple carbs are high GI and complex carbs are low GI (which even some doctors still believe). Well, table sugar actually is medium GI (requiring a multistep enzymatic reaction to convert the fructose to glucose, as mentioned above). Table sugar is bad in a lot of ways, but it's not high GI. Glucose = 100 and fructose = 20, and so it's no surprise that sucrose is in the middle, roughly at 60. Brown rice is not much different than white rice as a general rule - it's the type of starch (amylose vs amylopectin) that matters. So Uncle Ben's converted rice is better than a high GI brown rice. Most whole wheat breads are not much better on GI than white bread. But \*coarse\* grain bread is lower GI. Most whole wheat breads are fine milled. White spaghetti will beat the pants off most any whole wheat bread or brown rice, because it's durum semolina wheat. Prunes are good (because of the soluble fiber), but raisins are not. Most of this is counter-intuitive. [Note that all of this has to do solely with the narrow field of GI, and not with any other health consideration such as benefits of fiber or phytochemicals, or other valid considerations such as dangers of high blood fructose levels or glycation or whatnot.] So, to bring it all back to the topic, those misconceptions about GI represent yet another area where the established "knowledge" is wrong. Anybody with a glucose meter can observe that.

greigt (2008-01-12 03:56:09)

Bob read the damn book and stop relying on others to inform you. That's what's wrong with us all in the first place we place trust in the info. we are given to be true and it's not in most cases! This book hasn't got much on the GI at all, I've read it 3 times over now and still dip into it for information. It is a fantastic read and the first part of the book about the history of nutrition is worth it by itself. I never use the GI, eating is simpler than that, and Gary Taubes emphasises this with the statements near the end of his book.

## Worried About Prostate Cancer? (2008-01-04 18:17)

Many studies have linked dairy consumption with an increased risk of prostate cancer. Two studies in a recent issue of the American Journal of Epidemiology looked at this connection in detail and reached the same surprising conclusion: it's low-fat dairy that is problematic. Here are their abstracts:

High intakes of calcium and dairy products have been suggested to be related to prostate cancer risk. Such associations were examined in the Multiethnic Cohort Study (1993–2002) among 82,483 men who completed a detailed quantitative food frequency questionnaire. During a mean follow-up of 8 years, 4,404 total cases of prostate cancer were identified. In Cox proportional hazards models, no association was found between calcium and vitamin D intake and total, advanced, or high-grade prostate cancer risk, whether for total intake, intake from foods, or intake from supplements, among all male participants or among nonusers of supplemental calcium. No association of calcium or vitamin D intake was seen across racial/ethnic groups. In analyses of food groups, dairy product and total milk consumption were

not associated with prostate cancer risk. However, low-/nonfat milk was related to an increased risk and whole milk to a decreased risk of total prostate cancer; after stratification, these effects were limited to localized or low-grade tumors. Although the findings from this study do not support an association between the intakes of calcium and vitamin D and prostate cancer risk, they do suggest that an association with milk consumption may vary by fat content, particularly for early forms of this cancer.

Calcium and dairy foods in relation to prostate cancer were examined in the National Institutes of Health (NIH)-AARP (formerly known as the American Association of Retired Persons) Diet and Health Study (1995/1996–2001). Diet was assessed with a food frequency questionnaire at baseline. Multivariate relative risks and 95 % confidence intervals were estimated by Cox regression. During up to 6 years of follow-up (n = 293,888), the authors identified 10,180 total prostate cancer cases (8,754 nonadvanced, 1,426 advanced, and 178 fatal cases). Total and supplemental calcium were unrelated to total and non-advanced prostate cancer. However, a statistically nonsignificant positive association with total calcium was observed for advanced ( $\approx 2,000$  vs.  $500 < 750$  mg/day: relative risk (RR) = 1.25, 95 % confidence interval (CI): 0.91, 1.71; ptrend = 0.06) and fatal ( $\approx 1,000$  vs.  $500 < 750$  mg/day: RR = 1.39, 95 % CI: 0.92, 2.09; ptrend = 0.10) prostate cancer. Skim milk, but not other dairy foods, was associated with increased risk of advanced prostate cancer ( $\approx 2$  vs. zero servings/day: RR = 1.23, 95 % CI: 0.99, 1.54; ptrend = 0.01). In contrast, calcium from nondairy foods was associated with lower risk of nonadvanced prostate cancer ( $\approx 600$  vs.  $< 250$  mg/day: RR = 0.82, 95 % CI: 0.68, 0.99; ptrend = 0.04). Although the authors cannot definitively rule out a weak association for aggressive prostate cancer, their findings do not provide strong support for the hypothesis that calcium and dairy foods increase prostate cancer risk.

Emphasis added. The differences between these two abstracts should interest people trying to learn how to write abstracts.

[1]First article. [2]Second article.

1. <http://aje.oxfordjournals.org/cgi/content/abstract/166/11/1259>

2. <http://aje.oxfordjournals.org/cgi/content/abstract/166/11/1270>

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Richard Tamesis, M.D. (2008-01-06 03:39:29)

All that sugar in low fat or skim milk is feeding prostate cancer cells.

seth (2008-01-06 05:35:07)

You seem to be saying that people tend to consume the same number of calories of skim milk and whole milk and that the skim milk has a larger fraction of those calories as sugar. Very interesting idea.

Adam Becker Sr (2008-01-10 22:34:39)

Interesting, but. Observational data are like captured soldiers. If they're not confessing \what you want to hear, you can always torture them some more. Remember, it's an \*observational\* study (or a meta analysis of many observational studies.) Observations like this are excellent starting points for intervention studies (either animal or human.) Till then, apply grains of salt liberally.

## Interview with Gary Taubes (directory) (2008-01-05 02:15)

- [1]Part 1
- [2]Part 2
- [3]Part 3
- [4]Part 4
- [5]Part 5
- [6]Part 6
- [7]Part 7
- [8]Part 8
- [9]Part 9
- [10]Part 10
- [11]Part 11
- [12]Part 12
- [13]Part 13
- [14]Part 14

[15]The whole interview.

1. <http://blog.sethroberts.net/2008/01/03/interview-with-gary-taubes-part-1/>
2. <http://blog.sethroberts.net/2008/01/04/interview-with-gary-taubes-part-2/>
3. <http://blog.sethroberts.net/2008/01/04/interview-with-gary-taubes-part-3/>
4. <http://blog.sethroberts.net/2008/01/06/interview-with-gary-taubes-part-4/>
5. <http://blog.sethroberts.net/2008/01/07/interview-with-gary-taubes-part-5/>
6. <http://blog.sethroberts.net/2008/01/08/interview-with-gary-taubes-part-6/>
7. <http://blog.sethroberts.net/2008/01/10/interview-with-gary-taubes-part-7/>
8. <http://blog.sethroberts.net/2008/01/11/interview-with-gary-taubes-part-8/>
9. <http://blog.sethroberts.net/2008/01/12/interview-with-gary-taubes-part-9/>
10. <http://blog.sethroberts.net/2008/01/13/interview-with-gary-taubes-part-10/>
11. <http://blog.sethroberts.net/2008/01/14/interview-with-gary-taubes-part-11/>
12. <http://blog.sethroberts.net/2008/01/19/interview-with-gary-taubes-part-12/>
13. <http://blog.sethroberts.net/2008/01/20/interview-with-gary-taubes-part-13/>
14. <http://blog.sethroberts.net/2008/01/21/interview-with-gary-taubes-part-14-the-end/>
15. [http://docs.google.com/Doc?id=dhm4f3rg\\_36gg4956dm](http://docs.google.com/Doc?id=dhm4f3rg_36gg4956dm)

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Seth's blog » Blog Archive » Interview with Gary Taubes (part 4) (2008-01-06 02:42:07)  
[...] Interview with Gary Taubes (directory) [...]

Seth's blog » Blog Archive » Interview with Gary Taubes (part 5) (2008-01-07 03:34:54)  
[...] Interview with Gary Taubes (directory) [...]

Seth's blog » Blog Archive » Interview with Gary Taubes (part 7) (2008-01-10 03:24:18)  
[...] Interview with Gary Taubes (directory) [...]

Seth's blog » Blog Archive » Interview with Gary Taubes (part 8) (2008-01-11 16:38:55)  
[...] Interview with Gary Taubes (directory) [...]

Gary Taubes Interview with Seth Roberts | Modern Forager (2008-03-19 05:00:41)

[...] Here's something to keep you entertained and well-read for the day: Gary Taubes Interview. It's 14 parts and is some of the same stuff from Good Calories, Bad Calories. It's largely a very conversational skimming of what's in the book. [...]

Gary Taubes Interview with Seth Roberts | Modern Forager Test Site (2008-03-19 05:07:41)

[...] Here's something to keep you entertained and well-read for the day: Gary Taubes Interview. It's 14 parts and is some of the same stuff from Good Calories, Bad Calories. It's largely a very conversational skimming of what's in the book. [...]

Anna (2008-03-25 12:41:50)

I think there is a transcription error in this section of the interview. I think there are two separate incidences far down in the interview where insulin-resistant should really be insulin-sensitive. I noted them below in these: "TAUBES What I ask when I talk with these people. What I say is: Look at the regulation of fat tissue. The question is, how can you lose weight, or gain it — how can you gain weight without either increasing insulin secretion, or increasing the relative insulin sensitivity of the fat tissue to the muscle tissue. Basically, the way we work, at least if you believe the biology that I describe, is that as we secrete insulin in response to the carbohydrates we consume and the insulin works, among other things, to facilitate the movement of glucose into the cells of your muscles and other lean tissues. But blood sugar is kind of toxic, so your muscle tissue doesn't want the insulin pushing all this blood sugar in, and it becomes insulin resistant. Your fat tissue now remains , because your body doesn't like to waste fuel. So if you eat a high-carb diet, your lean tissue takes up some of the glucose for fuel, and the rest gets dumped in your fat tissue, and your fat tissue remains for a long time — far longer. Because once your fat tissue becomes insulin resistant, then you just become diabetic; you have no place to put the glucose. You just pee it out. That's the last resort, because your body doesn't want to waste fuel."

seth (2008-03-26 05:26:57)

Thanks, Anna

This blog is overrated. :: Eat Food. As Much as You Want. Interspersed with Flavorless Oil or Fructose Water. (2009-01-01 19:11:05)

[...] Two of our greatest dietary contrarians, Seth "Shangri-la Diet" Roberts and Gary "What If It's All Been a Big Fat Lie" Taubes, have an in-depth conversation of the type you don't see much of in the mainstream media. Funniest moment: Roberts, a psychology professor whose idiosyncratic self-experimentation led him to believe that swallowing flavorless (or oddly flavored) but caloric food, like vegetable oil, can cause weight loss, trying to explain his theory: TAUBES: When you talk about flavorless protein, what do you mean? The oils, I understand; the fructose fits with everything I know. The sucrose starts getting tricky. What do you mean by flavorless protein? Give me an example. [...]

Personal Archaeology » Update from the Land of Me (2009-12-14 12:47:49)

[...] Gary Taubes, interviewed by Seth Roberts November 30, 2007 from Seth's blog [...]

## A Different Sort of Scientific Progress: Toward Utility (2008-01-05 16:41)

From a [1]excellent column by Tim Hartford:

Esther Duflo, a French economics professor at MIT, wondered whether there was anything that could be done about absentee teachers in rural India, which is a large problem for remote schoolhouses with a single teacher. Duflo and her colleague Rema Hanna took a sample of 120 schools in Rajasthan, chose



60 at random, and sent cameras to teachers in the chosen schools. The cameras had tamper-proof date and time stamps, and the teachers were asked to get a pupil to photograph the teacher with the class at the beginning and the end of each school day.

It was a simple idea, and it worked. Teacher absenteeism plummeted, as measured by random audits, and the class test scores improved markedly.

Another young economist, Ben Olken of Harvard, used a similar randomisation technique to work out whether corruption in Indonesian road-building projects was best fought top-down, using audits, or bottom-up, soliciting comments from local villagers about whether money was being embezzled. One challenge was to work out how much embezzlement was taking place. Olken enlisted engineers to take samples of the road's structure and to estimate how much it should have cost to build; he compared that estimate with how much spending was claimed in the project's accounts. The missing funds were a rough guide to the amount embezzled.

In contrast to Duflo's results, Olken found that the bottom-up monitoring was not effective – it shifted the embezzlement from something the villagers cared about (wages) to something they did not (building materials). The threat of a guaranteed audit – a threat that was later carried out – was much more effective, reducing the estimates of missing funds by a third.

[2]A chapter in *The Theory of the Leisure Class* by Thorstein Veblen is about academia and the tendency toward uselessness, which Veblen explained as a way of signalling that one doesn't need to work. As a general rule at research universities, useful = low status. A few years ago, I had lunch with an engineering professor. By far the most useful thing to come out of the UC Berkeley Electrical Engineering Department in the last 20 years, he told me, was a circuit analysis program ([3]SPICE). Used everywhere. A big contribution to the field. Who did it? I asked. He didn't know. That's how low-status it was – no professor wanted to be closely associated with it.

The curious thing about the two examples that Hartford describes is that they are happening at the same time. Is this a coincidence? Or is there an explanation?

[4]Peter Pronovost's research on ICU checklists is far more useful than one would expect from a medical school professor; likewise my [5]self-experimentation about everyday problems (e.g., poor sleep) was far more useful than one would expect from a psychology professor. So perhaps there is some sort of larger discipline-spanning force at work.

1. <http://www.ft.com/cms/s/0/db729908-b8fb-11dc-bb66-0000779fd2ac.html>

2. <http://xroads.virginia.edu/~HYPER/VEBLEN/chap14.html>

3. <http://bwrc.eecs.berkeley.edu/Classes/IcBook/SPICE/>

4. [http://chccnet.org/files/TheChecklist\\_TheNewYorker.pdf](http://chccnet.org/files/TheChecklist_TheNewYorker.pdf)

5. <http://repositories.cdlib.org/postprints/117/>

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David (2008-01-06 09:44:54)

The two examples cited are part of a trend in economics to use field experiments to evaluate policy alternatives in developing countries. These techniques are also used to study more abstract, fundamental questions about economic behavior. The individuals mentioned are both part of the Cambridge, Mass. development economics communities and are stars in the field.

## Jonathan Schwarz, Philosopher of Science (2008-01-05 23:41)

In his [1]New Year's Resolutions, Jonathan Schwarz vowed to "accentuate the positive":

At all times in history, there have been zillions of people doing wonderful things with little recognition. 99 % of the attention goes to various monsters. Even when the attention is extremely negative (i.e., people like us yowling about Dick Cheney or Thomas Friedman) it suggests the monsters are the only ones doing anything important, and the rest of us have nothing better to do than talk about them.

This is empirically wrong. And it saps our capability for independent thought, because it orients us toward reacting to the powerful, rather than acting ourselves.

This is especially pernicious in a period when technology is opening up ways to build new and better institutions. While I understand the visceral appeal of dumping a bucket of pig excrement on Fred Hiatt, this takes time away from what will have a longer-term impact: nurturing our own fledgling efforts.

This is similar to [2]what I wrote – in the context of a NY Times review of a book about "pseudoscience" – about skeptics being a dime a dozen and what's really lacking is sophisticated appreciation.

1. <http://www.tinyrevolution.com/mt/archives/001981.html>

2. <http://www.blog.sethroberts.net/2007/12/26/the-power-of-placebos-over-health-journalists/>

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## Interview with Gary Taubes (part 4) (2008-01-06 02:42)

INTERVIEWER I was impressed with the discussion in your book and lecture about obesity coexisting with poverty in all these different cultures and the implications of that. I'd never seen that before.

TAUBES I have this feeling, and I guess that all writers (or all neurotic writers) have to some extent, that my work is being ignored. It's my Rodney Dangerfield complex. Now that I've written the book, I occasionally get emails from friends saying that they had some discussion with some obesity researcher, and they said, "Are you going to read Taubes's book?" and their response was "Well, we know what Taubes thinks, so why should I bother reading the book?" What's more, the Atkins craze has come and gone, so these people believe it's old news. Why should they pay attention to the book or what I might have learned in reporting it? In fact, I got more reviews for my cold fusion book than I have for Good Calories, Bad Calories. And The cold fusion book came out three years after the fact. There was also this sense that my article started an Atkins craze, and then Atkins Nutritionals declared bankruptcy, and somehow it all went away, and it's just the same old diet crap that nobody wants to hear about.

Nobody is going to stay on the Atkins diet so who cares? Let's move on. The lecture you heard is an attempt to combat that attitude: I argue that the existence of these obese, impoverished populations living on high carbohydrate diets are counter-examples to the conventional wisdom. As I said in my talk, if you have an obese mother and a malnourished child living in the same family, and this is a common phenomenon, that should be perceived as a refutation of the calories in/calories out hypothesis. In any sort of healthy scientific endeavor, that's the kind of paradox you look for. Physicists have recently spent a few billion dollars building an accelerator that will, they hope, produce some kind of phenomenon that they can't explain by their current theory. If they get that, it's front page news and they now have some observation that they can use to improve their theory. These obesity researchers, they have malnutrition and obesity coexisting in the same impoverished population, and they don't see it as a challenge to their hypothesis. How do I get the word out that there are important issues here that have to be discussed? That's what that lecture is intended to do. When [the New York Times reporter] Gina Kolata reviewed my book in the New York Times Book Review, she swept right over these issues. She went right to the thing that bugged her – why don't people stay on these low-carb diets? – and ignored all the evidence that refutes the conventional wisdom about why we get fat. All she cared about in the end was why don't people stay on these diets if they work.

INTERVIEWER As if that's your fault! I thought that was a very unusual way to review a book.

TAUBES Well, she had written her own obesity book that came out five months earlier, and she blamed obesity, in effect, on genes, without bothering to acknowledge that the genes interact with the environment; we have an obesity epidemic; we have obesity associating with poverty, for instance, so there's obviously some lifestyle factor.

INTERVIEWER And obesity's gone way up in the recent past; it can't be genes.

TAUBES I felt her review was her way of saying "Look, this is why none of the stuff he discusses was in my book." One point I make over and over again is that obesity is a disorder of excess fat accumulation, so you have to look at the hormonal regulation of fat tissue. If you're discussing growth disorders – gigantism or dwarfism – you look at the hormonal regulation of growth. So why not do the same in obesity. Gina didn't, because nobody she interviewed brought it up. Then she turned her review of my book into an excuse for why she didn't mention any of these things. Anyway, that's life in the publishing industry. If you think about it too much, you just get angry.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2008/01/05/interview-with-gary-taubes-directory/>

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Richard Tamesis, M.D. (2008-01-06 03:35:08)

Excellent interview! I just hope someone at the NIH will at least consider the alternative hypothesis presented in his book and fund a modest study to actually test the two hypotheses and settle the question of what makes us fat once and for all.

SusanJ (2008-01-06 14:36:33)

Thanks for the link to Taubes lecture (which was great) and also for the excellent interview. I've got his book on order. Meanwhile, is there a short answer to the question as to why Taubes' theory doesn't violate conservation of energy?

David Brown (2008-01-06 16:52:24)

Susan J, The short answer as to why Taubes' explanation of the disconnect between caloric intake and weight gain or loss involves two observable but difficult to measure phenomena. One is caloric excretion and the other is metabolic adjustment.

The body is not anywhere near 100 % efficient at absorbing calories from the gut. Also, the body will build or tear down organ tissue, muscle tissue, and brown fat tissue depending upon how completely and consistently its nutrient needs are being met. For further discussion I suggest you Google "calorie excretion" and "brown fat tissue."

David Brown (2008-01-06 16:57:47)

Correction: I meant to say The short answer as to why Taubes's explanation of the disconnect between caloric intake and weight gain or loss doesn't violate any physical laws of nature involves two observable but difficult to measure phenomena.

Stephen M (Ethesis) (2008-01-06 17:26:13)

Susan, the short answer is that his bottom line doesn't. It is like the SLD. Sure, I take in about 300 additional calories a day in extra light olive oil - but, I went from eating 5000 calories a day to eating less than 2000. So, a lot more went on that the part where I added calories (or, perhaps better said, the part where I changed some of my calories). Taubes comments merely point to retention and metabolism. Many people, with certain diets, will have their metabolisms alter. Kind of like saying, eat fat, your thermostat will be set to 80 degrees, eat carbs and your thermostat will be set to 60 degrees. (Speaking by analogy, but I would notice dramatic crashing of my metabolism on some diets. If I'm eating 1600 calories and using 1200 a day, I'll gain weight. If I eat 1800, but use 2000, I'll lose weight).

Wade (2008-01-06 20:10:52)

> Meanwhile, is there a short answer to the question as to > why Taubes's theory doesn't violate conservation of energy? Mainly because the "calorie is a calorie" argument is based on some naive assumptions about the conservation of energy, and a misplaced ideas of causality. Your total weight is a function of the total number of calories you've ever ingested, minus all the energy that your body has ever used. The second part of that equation is highly variable, and in fact is part of the body's self-regulation mechanism (with or without a setpoint). The body has ways to use energy more or less efficiently. For example, it can reduce energy and movement to conserve energy, or fill you with nervous energy to consume excess energy. Both of these will change the number of calories required substantially without changing your weight, the same as if you moved to a warmer or colder climate. There are also simply differences in metabolic efficiency so that some calories can be used more efficiently than others. What that means is that the idea that your weight is directly related to total caloric input minus total output, but it's not helpful because there are a bunch of other factors that have to be ignored to make the case that all weight loss must be from calorie restriction, or that reducing one kind of calories is the same as any other kind of calories. That's the Cliff's Notes version anyway.

SusanJ (2008-01-06 20:35:42)

Thanks. As a scientist, I was persuaded by the data Taube showed but didn't know the explanation. For an amusing recent paper that uses "energy balance" to [mistakenly, I believe] conclude that the reason low calorie diets don't work can only be that people don't really stick to them see Heymsfield, et. al, <http://www.ajcn.org/cgi/content/full/85/2/346>

Bob (2008-01-06 23:01:48)

As I remember things (as a casual observer), the Atkins diet turned out to be a calorie reduction diet - since people got so sick of all the tasty fat after a few days that they ate less of it while pining for simple things like bread. (Besides which, the body seems to know that it needs carbs in order to completely metabolize fat anyway.) ...and despite the talk at the time in the popular press that serum cholesterol improved, it was really triglyceride levels that fell - which is no surprise since it is the carbs that are rapidly assembled into triglycerides/chylomicrons. ...and that much of the weight loss under strict Atkins in the first week occurs from water loss - since intra-muscular and hepatic glycogen storage is accompanied by several times its own weight in associated water. Has any of that been disproved? Also, just for the heck of it, I'd speculate that the main danger of sugars to waistlines comes because it is so eminently easy to increase calorie consumption with sugar. Even after everybody is absolutely stuffed at a big feast and can eat no more of the actual meal, out comes the desert and most people manage to pack in more calories. There really is always room for Jello... or ice cream or chocolate or whatever. Besides, between meals nobody chews on a stick of butter, but those extra calories in soda or candy go down almost without thinking. Sugars, or sugars and fat, are the easiest & most effective ways to increase calorie consumption.

Seth's blog » Blog Archive » Interview with Gary Taubes (directory) (2008-01-08 21:54:36)  
[...] Interview with Gary Taubes (part 4) [...]

Charles (2008-01-20 00:00:57)

Bob: Read the book. Your arguments are answered there. These were quite common, and mistaken, perceptions.

None Given (2008-02-03 21:47:27)

Yeah, I lost 70+ pounds of water, sure. The first few pounds lost from all diets is water because even the low-fatters cut back on sugar. You don't get sick of all the fat, after the first 2-3 weeks, more of your body's processes convert to burning ketones instead of glucose. Then you need less protein to fuel gluconeogenesis so you feel less hunger. Also, fast carb is addictive and after the worst of the withdrawal is over you just don't crave it like you may have before. Now I know what it feels like to not be hungry all the time. Triglyceride levels do fall and so does the amount of VLDL which in turn leads to larger LDL particle size. Also, HDL levels increase. My HDL went from 45 to 54 in a few weeks.

Migraineur (2008-03-20 09:58:19)

I wrote a couple of blog posts that address some of Bob's and Susan's questions about calorie restriction and water loss:  
<http://migraineur.wordpress.com/2007/11/11/calories-in-calories-out/> <http://migraineur.wordpress.com/2007/10/12/its-all-just-water/>

Sam S.R (2008-05-18 03:23:37)

We have hundreds of case studies to prove that carbohydrate consumption and ensuring high insulin levels are primary driver in obesity. I found Gary Taubes book to corroborate the observations we made during four years. We did gain one crucial insight also from his book. Gary says that carb consumption encourages the kidneys to reabsorb and retain sodium. We found that interesting because many obese femals have low blood pressure in the presence of poly cystic ovarian syndrome. The paradox was solved when we looked at homestatic mechanisms in PCOS.

seth (2008-05-18 06:11:29)

If "carbohydrate consumption and ensuing high insulin levels are the primary driver in obesity" then how come I lost weight by drinking sugar water?

## **Interview with Gary Taubes (part 5) (2008-01-07 03:34)**

INTERVIEWER Well, I think your book is a great book, and I don't think its effect is limited to how many reviews it gets. What books do you think your book resembles? I think of it as a book showing that authorities can be seriously wrong, but what do you think?

TAUBES You know, I don't know, actually. I can't answer that question without sounding like a crazed egomaniac, so I won't. What the book does is try to explain why the paradigm of obesity and chronic disease has to change and then to offer the alternative paradigm. Although I don't use the word "paradigm" in the second half of the book, that's what it's trying to do. I want people to stop thinking about obesity as a disorder of overeating, calories in over calories out, and think about it as a disorder of excess fat accumulation. That's a classic paradigm shift, or at least so I think. I don't believe that you can understand obesity and its associated chronic diseases, without thinking of obesity fundamentally as a disorder of excess fat accumulation and asking this question: what regulates fat accumulation? That's going to be the thing that tells you what the cause of obesity is. If it's a paradigm shift, then you have to ask yourself how many paradigm shifts are there like this, and what kind of books have been written to directly shift those paradigms, and then I sound like I have some serious ego problems.

INTERVIEWER Then let me put the question differently. I think your book piles up an enormous amount of evidence that is hard to refute. The cumulative effect of all that evidence is not that weâ€™ve been lied to, of course, but that weâ€™ve been misled, badly misled, about something thatâ€™s really important, namely our health. So, are there other books like this?

TAUBES I really canâ€™t answer that question either. Iâ€™m not erudite enough and then I spent the last five years doing nothing but reading about fats and carbohydrates, so my memory of other subjects fades away. Hereâ€™s how I think of it, though: when I was talking with my editor about this book when we in the editing process – and heâ€™s a tremendous editor, who has edited maybe eight or nine non-fiction Pulitzers – I brought up a book called *Ashes to Ashes* as an example. *Ashes to Ashes* is by Richard Kluger and it won the Pulitzer and my editor edited it. Itâ€™s about the cigarette industry and not just the industry itself, but the science and the struggle to understand that cigarettes cause lung cancer. I said to my editor, â€œImagine if we lived in a world where the public health authorities were telling us that lung cancer is caused by saturated fatâ€. Kluger has got to write a different book, and thatâ€™s the situation that we are in.

INTERVIEWER Kluger has got to write a longer book? Was that your argument?

TAUBES Heâ€™s got to write a different book. His book was actually longer than mine, but it was a narrative, which mine isnâ€™t. If youâ€™re going to convince the entire public health community that theyâ€™ve made a horrible mistake – or many of them, in this case, whether about cigarettes or obesity and disease – then you have to build an argument as carefully and as rigorously as you can. Itâ€™s like arguing a legal case, more so than telling a story. And thatâ€™s one of the reasons why my book can be difficult to read, or challenging.

INTERVIEWER I found it easy to read.

TAUBES Well, good. See, I read the Amazon reviews. I shouldnâ€™t but I do. And for every three people who say itâ€™s tremendous, thereâ€™s somebody who says â€œItâ€™s boringâ€ and they couldnâ€™t get through 20 pages of it. One problem is that we gave it this diet-like spin, with the title *“Good Calories, Bad Calories”* and people buy it expecting a diet book. And itâ€™s not a diet book. I also have a lot of friends who tell me they bought the book and theyâ€™re jumping into it, and I never hear from them about it. It tells me, being a cynic, that they got to the section on VLDL and LDL or some such, and that was the end of that.

INTERVIEWER I think it has a lot of evidence. I think the book is harder to read than it might be, because you feel compelled to have a lot more evidence than usual, because youâ€™re saying something that everyone says is false. If what youâ€™re saying was more conventional or acceptable or went down more easily, you wouldnâ€™t need as much evidence.

TAUBES Well, thatâ€™s the thing. This is one of the ironies, again, of reviews like Gina Kolataâ€™s or some other that Iâ€™ve got. Theyâ€™ll say the bookâ€™s too long, it goes on and on, and then theyâ€™ll say â€œhe doesnâ€™t even mention X,” or â€œhe leaves out this evidenceâ€. Iâ€™m all too aware of the arguments I left out, the counter-arguments, the counter-counter-arguments, the counter-counter-counter-arguments. At one point I had a draft of the book that was 400,000 words, unfinished. For every section, like the section on salt and blood pressure, I would say â€œhereâ€™s why we believe what weâ€™ve come to believe. Hereâ€™s the counter-evidence implicating carbohydrates. Hereâ€™s how the authority figures treat that counter-evidence. Hereâ€™s why they can look at that evidence and think itâ€™s not a challenge to their beliefsâ€. And my editor, bless his heart, said â€œLook, you donâ€™t need this. If you get a chance to lecture on this material, then you can tell the people in the audience why their counter-counter-arguments arenâ€™t actually refutations of the carbohydrate hypothesis. You donâ€™t need fifteen different levels in the book.” But, youâ€™re right, Iâ€™m trying to convince people of something they donâ€™t believe. I was walking this tightrope between making it readable for the lay public, so that they could make their own decisions, and hoping that doctors, researchers, and authorities would read it, and they might say,

“Well, you know, Taubes has a point. Maybe we should take this seriously.” What I fear is that on one level, I lose some of the lay public, because it’s too difficult and advanced, and on the other level, the physicians and researchers aren’t going to read it anyway, because they don’t see that a journalist can tell them anything they don’t already know. And then there’s this effect where, after I challenge half a dozen of their most fundamental beliefs, and they’re only 150 pages into it, do they just burn out? The example that I use there is that if somebody came out with a really-well-reviewed book saying that extrasensory perception should be taken seriously as a scientific phenomenon, I wouldn’t be able to read it. No matter how good it was, or other people thought it was, I wouldn’t be able to read it. I might try, because I tell myself I have to be intellectually honest and rigorous, but I could imagine, after 50 pages, I’d just say “I can’t do it. Maybe he’s right, but I can’t process it. My brain won’t allow me to process what he’s saying.” I wonder if that’s going on here, too: “Saturated fat, OK, but salt, fiber? Give us a break.”

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2008/01/05/interview-with-gary-taubes-directory/>

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Dennis Mangan (2008-01-07 10:52:26)

Gary Taubes may be speaking in shorthand when he implicates “carbohydrates” in the genesis of obesity and disease, but it’s ludicrous to think that all carbs cause problems. The obesity epidemic is not, I submit, caused by a huge spike in broccoli consumption. Furthermore, as to looking at “calories in, calories out”, the plain fact is that calorie consumption in this country has increased non-trivially over the past 30 years, and calorie expenditure decreased.

Tom (2008-01-07 11:59:50)

It wouldn’t kill you to actually READ Taubes’ book, Dennis.

Varangy (2008-01-07 12:41:03)

@Dennis Check out the [1]Hyperlipid blog. Most notably this [2]post: *It is remarkably widely accepted that fruit and vegetables are good for you. Three a day, five a day, nothing but fruit and vegetables all day..... The problem is that all of the evidence of benefit is epidemiological, and **this never proves causation, merely association.***

1. <http://high-fat-nutrition.blogspot.com/>

2. <http://high-fat-nutrition.blogspot.com/2007/12/fruit-and-vegetables-re-post.html>

David Johnson (2008-01-07 19:33:54)

Who is to say that Dennis didn’t read the book? Everyone who has problems with this book is accused of not reading it—but the fact is, despite the mountain of tedious research he quotes, he has not laid out the truth. He’s chosen the studies that support his thesis—which he’s held for years, and for which he is paid handsomely—and ignored the studies that do not support his thesis. That is why not a single scientist in the field endorses this book. As we all know, Americans did not get fat eating whole grain bread and bananas—among the evil foods that Taubes sites. We got fat eating sweet, fat, calorie dense convenience foods—and not moving. If low carb diets work, they work because people can only eat a limited amount of fat and protein, and therefore decrease their total calorie consumption. That’s the truth, and that’s also the reason why low carb diets generally fail over the long term. (They do work for some people, as all diets work for some people—but not for most people.) The French, the Japanese, and the Dutch have very low rates of obesity, and each has a very high carbohydrate diet I know Taubes denies this, but this is absurd—anyone who has lived in France know they begin and end their day with bread. The Japanese eat large amounts of rice. The Dutch love their potatoes. These are starch lovers all, yet have very low obesity rates. Still, so many Americans believe what they want to believe—they WANT to believe that there is a conspiracy

of bad doctors and scientists making them fat—they want to believe that the French are thin because they don't eat carbs, when the real reason is because they walk everywhere, don't snack, and eat small portions. Taubes is brilliant in that he has caused so many people to let go of their common sense. He has actually convinced readers that exercise does not help maintain weight loss, that eating large quantities of fat is healthy, that calories do not count. But then again, Taubes went to Harvard and studied physics, of all things. He's a smart guy who knows how to spin a tale and make a buck. Good for him!

Tom (2008-01-08 00:11:41)

David, diatribes like yours are the reason Taubes took so many years writing his book, and why it's so damn long. You have spewed so much misinformation in that post, yet Taubes has deconstructed every hoary assertion in it. Read the book, and respond to the EVIDENCE. And the personal attack about "making a buck" is just asinine. No one writes an encyclopedic examination of the perversion of science to get rich!

Varangy (2008-01-08 01:06:40)

Wow. David, it sounds like you haven't read the book b/c Taubes very credibly backs up the fact **we don't know that:** *Americans did not get fat eating whole grain bread and bananas* "among the evil foods that Taubes sites. We got fat eating sweet, fat, calorie dense convenience foods" and not moving.'. He addresses most, if not all, your points either in the book itself or in subsequent interviews and presentations. You really should check it out. He might not be right (I personally think he is on to something), but he definitely employs reason and evidence in his arguments.

Dennis Mangan (2008-01-08 07:42:53)

Look at China: a diet based on rice; Peru, potatoes, West Africa, rice and sweet potatoes; India, bread and lentils; why aren't all those people fat, diabetic, and suffering from heart attacks? Oh, but it's "only" epidemiological evidence, of the sort that linked cigarettes to lung cancer. Correlation should make one suspect causation. That's the point of it.

Tom (2008-01-08 08:13:56)

Dennis, watch the video of Taubes that Seth linked to in an earlier post – Taubes discusses why this isn't so. He shows how a healthy, slender Native American tribe became horribly obese after the whites moved in and killed off the game the tribe had lived on for centuries. The tribe was forced to subsist on handouts of – surprise! – carbohydrates, and got massively obese. Once again, Dennis, Taubes exhaustively deconstructs all of these Vegan bullet points in *Good Calories, Bad Calories*.

michael vassar (2008-01-08 08:20:56)

It seems to me that the best format for this book would have been a hypertext. Then everything could have been left in without it becoming slow and pedantic.

Lancaster (2008-01-08 16:41:52)

White short-grain rice is not consumed bulk like potatoes or pasta. It is typically eaten as a side-dish to a high-fat, high-protein meal. A katsudon comes to around 1000 calories, of which less than a quarter is the rice. The rest comes from the deep-fried pork cutlet and egg. At least in Japan, this myth of "low fat" cuisine seems to be the product of cookbook authors writing for western audiences, not observations of what normal people actually eat. (Or how they eat—I seriously think chopsticks make a big difference.) White short-grain rice has no taste to speak of and is generally not consumed flavored. It does have a very definite "mouth feel." Eating it alone you quickly achieve a sense of "fullness." In fact, it would seem to meet Dr. Roberts' "tasteless calorie" criteria for appetite suppression. Moreover, the short-grain rice that predominates in Japan and China is an expensive source of calories. Before the 20th century, few farmers could afford to eat the rice they grew. Rice grown in Japan still costs twice what it does in the U.S., yet is being exported to China at extraordinary premiums.

Seth's blog » Blog Archive » Interview with Gary Taubes (directory) (2008-01-08 21:55:23)

[...] Interview with Gary Taubes (part 5) [...]



Lana Nelson (2008-01-09 20:48:09)

Dennis, Dennis, the highest rate of diabetes in the world is in India. The second highest rate of diabetes in the world is in China. People in India have been encouraged to replace their traditional cooking fat, ghee (clarified butter) with rape seed oil and to reduce the amount of oil used. They have no doubt been pressured to make other changes to their traditional diet as well. It would be interesting to know if they had such a high rate of diabetes in 1950 as they do now. For a country where half the country is vegetarian, reducing fat no doubt greatly increases carbs.

Gary (2008-01-13 09:35:05)

Dennis writes: "Look at China: a diet based on rice" I have a woman friend who grew up in Chunking, and was training for the Chinese gymnastic team in her adolescence. We spoke about my change to the paleo diet a while ago. I don't eat rice any more. I had this exchange in e-mail: "I see in my readings that many people ask why are Asians not obese and they eat all that rice, very high carbohydrate. I'm guessing that rice is eaten for sure, but what percentage of the diet is it, your best guess for the average person in Chun King? And is it white or brown rice?" "Yup, rice was considered fattening and it is known among athletes. The coaches often exclude white rice, or limit the quantity of it in players' diet. I think Asians are not fat partially due to the genetic reasons and also the food in Asian countries is still a lot more organic and balanced compare to the western diet where a lot of processed food is being used everywhere including home-cooked food. Carb is not all that bad if your meals are combined with vegetables and meat instead of white bread plus processed beef and processed cheese. Some crap is better than all crap I guess. As of percentage of the white rice, rice is the equivalent of bread in Western diet. I would say 1/3 of a meal on average?" There goes your "diet based on rice" canard. It's really a low-refined food diet. I disagree about the genetics, for as Taubes points out, Asians who adopt Western eating habits get fat too.

None Given (2008-02-03 21:58:28)

The French eat smaller portions because they eat more fat than Americans.

Migraineur (2008-03-20 10:14:28)

"The obesity epidemic is not, I submit, caused by a huge spike in broccoli consumption." Broccoli is very low in carbohydrates. "As we all know, Americans did not get fat eating whole grain bread and bananas" among the evil foods that Taubes sites." I did. Steel cut oats, one of the wholest of the whole grains, spike my blood sugar to near diabetic levels, even though I've never had a diabetes diagnosis. "Look at China: a diet based on rice; Peru, potatoes, West Africa, rice and sweet potatoes; India, bread and lentils; why aren't all those people fat, diabetic, and suffering from heart attacks?" There's at least one study - a correlation study, which means it is not the highest standard of evidence, but correlation studies are great for raising questions - that shows that the Chinese women who eat the most rice are most likely to be diabetic. (<http://weightoftheevidence.blogspot.com/2007/11/higher-carb-higher-gi-and-high-gl.html>) "Oh, but it's only epidemiological evidence, of the sort that linked cigarettes to lung cancer." I'm not quite certain about this, but I believe the epidemiological evidence that links smoking to lung cancer shows that smokers are something like 3,000 times more likely to have lung cancer than non-smokers. That means for every non-smoker who gets lung cancer, there are 3,000 smokers who get it. In dietary studies, you're hard pressed to find an effect that shows a 2:1 ratio. If you are studying 2 groups of 1,000 people, one on a high-fat diet and one on a low-fat diet, and 2 high-fat eaters kick the bucket and only one low-fat eater kicks it, that's not a very impressive correlation, is it? "Correlation should make one suspect causation." Yes, emphasis on *suspect*. But people in countries with more telephone poles have more heart disease than people in countries with fewer telephone poles. Do telephone poles cause heart disease? Weak correlations like the one I described above are good, at best, for generating hypotheses, but they don't prove anything.

Michael Cohen (2011-09-25 08:35:44)

I DID get fat eating whole wheat bread and bananas, as well as brown rice legumes and other fruits. I was a life long avoid-er of sugar, processed and refined foods. I avoided all dairy and fats as best i could especially saturated fats. Most of my calories came from whole grains and legumes. My job involved walking 3-5 miles a day and I was a competitive fencer and coach. In middle age I found myself 40lbs overweight with high triglycerides and cholesterol. I also developed severe GERD and arthritis in my neck and shoulders. My doctor a gastroenterologist was puzzled because my "low fat, whole grain" diet was supposed

to be an ideal one for health. All he could offer me was a lifetime of drugs like nexium, celebrex and statins. This was not acceptable to me and I started my own research. After reading Taubes GCBC and other books and articles I eliminated ALL grains, concentrated carbs and vegetable seed oils from my diet and increased the animal fats. The GERD disappeared in two days, the arthritis in ten days. So far i have lost over 25lbs without hunger or increasing my exercise.

### **"This is Not Science As We Know It" (2008-01-07 19:51)**

Therefore it must be wrong. This was the reaction of several prominent anthropologists when Chuck Millikan, a California policeman, wrote to them to ask what they thought of the aquatic ape hypothesis, according to [1]Elaine Morgan. Millikan was "a compulsive letter-writer," said Morgan. He had been impressed by her ideas and wrote her to ask when her next book was coming out. There won't be a next one, Morgan had replied, I've said all I have to say. Millikan's response to this was to write prominent anthropologists asking them what they thought of her theory. When he sent Morgan their replies, she saw they had no good reasons for ignoring her. Emboldening and irritated, she wrote another book.

Let me invent a verb: to elaine morgan something is to have a big effect on something you shouldn't have been able to influence. Elaine Morgan elaine morganed the study of evolution. She was far outside anthropology; she shouldn't have been able to successfully promote a radical new view of evolution, but she did. Chuck Millikan elaine morganed Elaine Morgan; he shouldn't have been able to persuade her to start writing again, but he did.

A excellent BBC documentary about the aquatic ape theory ([2]part 1 of 6).

1. [http://www.ociotube.com/video.php?op=youtube&video=81GnT9tt\\_IU](http://www.ociotube.com/video.php?op=youtube&video=81GnT9tt_IU)
2. [http://www.ociotube.com/video.php?op=youtube&video=81GnT9tt\\_IU](http://www.ociotube.com/video.php?op=youtube&video=81GnT9tt_IU)

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Chris (2008-01-08 06:54:57)

I read on of Morgan's books years ago, and she struck me as a truly original thinker, another Jane Jacobs. I expect that the aquatic-ape hypothesis will eventually accepted in some form. Looking around the web, it seems that Morgan is a pariah in academic circles, and has suffered for this emotionally. Some academics seem to feel almost a revulsion for her. I'm not sure why. The cheerful, commonsense tone her books radiate may drive some batty; perhaps they prefer things mysterious and deep. Sometimes she gives the impression of throwing every conceivable scrap of evidence into her argument, which is a hallmark of crank arguments. She sometimes has gotten emotional in her online responses - that's hardly unusual for academics, but is especially damaging for people who already carry the stigma of crankdom. But in the end I think it comes down to her lack of academic credentials and the fact that she is challenging a hegemonic theory. Other examples occur to you no doubt.

anthrosciguy (2008-01-11 06:59:36)

The reason academics didn't take to Elaine Morgan's ideas, and to her to some extent, is that they don't tend to like ideas, and people, which depend on distorting what people say, claiming they said the opposite of what they did, people who alter quotes to suit their purposes, people who use bogus claims as data. All this describes her methods in her books and articles, and much of it describes all the work done by AAT proponents. My site, [1]Aquatic Ape Theory: Sink or Swim?, has many examples of these and other problems with the AAT in its various forms. Chris, it's ironic that you compare Morgan to Jane Jacobs because Morgan also wrote a book following Jacobs' thesis, and it really shows the difference between the two. Jacobs was a brilliant thinker who had original and thought-provoking ideas, Morgan's book was merely a weak imitation of Jacobs' work. Sad, really, because Morgan is a talented TV writer, but falls down badly when she stretches outside it.

1. <http://www.aquaticape.org/>

DDeden (2008-01-14 23:18:06)

Seth, she certainly did. So did Chuck.

### Interview with Gary Taubes (part 6) (2008-01-08 21:53)

INTERVIEWER When I started your book, I already kind of believed all of your main points. Not all of them, but I was sympathetic. I knew where it was going. I thought "œOh, good. More evidence. This is interesting, and that's an interesting way to tell that story".

TAUBES The way I see it is that the establishment has an immune system to protect itself from challenges. Every science needs that kind of immune system to protect itself from quacks and easy-to-swallow but erroneous ideas that might infect the good science in the field. My question is whether I can infect enough people, enough serious scientists, that I can pose a threat to this immune system, that I could compromise the immune system of the establishment and make them take this idea seriously. Because some times these immune systems work against challenges that are legitimate. I honestly don't know if I can. It's going to be an interesting year. I hope I don't become one of those bitter old men who, when I fail to do so, who can't let it go.

INTERVIEWER How did you end up giving your recent [1]talk at Berkeley? Obviously someone in the establishment was willing to invite you?

TAUBES Yes. It was actually epidemiologists at the School of Public Health who invited me initially to talk about epidemiology after I had a cover story called "Unhealthy Science" in the New York Times. I told them that the subtext of that story was my book. If what I say in the book is correct, then an observational epidemiology has done an enormous amount of damage. One line that was taken out of the New York Times article said that this was a story about the risks and benefits of observational epidemiology. There are certainly some successes in that endeavor, but if we're living through an obesity and diabetes epidemic because of its failures, then it's conceivable that more people have died because of observational epidemiology than have been saved. You always have to look at the negatives, the false negatives and the false positives. You can't just look at the true positives and say that this is a valuable field of science. We're digressing again, but the game of poker is relevant here. Are you a poker player?

INTERVIEWER I've played a lot of poker, yeah.

TAUBES Bad poker players base their methodology, their strategy, only on what happens when they win. They don't notice that that strategy is making them lose more money when they're losing than they win when they're winning. The best strategy, of course, minimizes the losses and maximizes the gains. But they don't think like that; the wins are so seductive that that's all they pay attention to. Anyway, getting back to the question, these Berkeley epidemiologists invited me to lecture on epidemiology; I said "œlet me talk about the book"; it gives me a chance to sit down and try to convince some unbiased observers, I hope, that their beliefs about calories-in/calories-out has to be questioned.

INTERVIEWER What effect do you think your lecture had?

TAUBES I don't know actually. I don't know how many of the people I was preaching to are already converted. I thought it went over well. I mean, I couldn't believe that I had spoken for almost two hours and had 90 % of the audience awake. There were a few people I lost (you know, you focus on the girl in the seventh row on the right, who's asleep). But most people seemed pretty attentive. But when I say I'm trying to infect others with these beliefs, if I convinced even a few of the faculty Berkeley that these ideas have to be taken seriously I've made progress. OK, now I've got a little infection growing at Berkeley. Indeed, I asked one of the epidemiologists who

invited me to e-mail, say, ten of his colleagues and say, "You should get Taubes to come lecture, because it's fascinating, and you might think his book is a little dubious, but when you hear his lecture, you'll see if it has any effect or if they've found it compelling enough that they went through with it. I hope so.

INTERVIEWER I'm just surprised that they found your book dubious. I think they might disagree with your interpretation of the evidence, but I don't think they would find the reporting dubious.

TAUBES I've got to get to the people who take this knee-jerk response that they know what I think, and they don't have to read the book. For instance, I had lunch with a Berkeley obesity researcher that I'd interviewed five years ago. We spent a couple of hours together five years ago and I sent him a copy of the book when it came out.

INTERVIEWER Who is this?

TAUBES A guy named Marc Hellerstein. He's a runner and, of course, he believes that sloth is the cause of overweight. He joined us for lunch on Wednesday, but he didn't eat, and I had about 35 minutes to try and convince him to read the obesity section of the book. The way he sees it, he's got a lot to do; he's a busy man, doing all of these experiments, trying to get funding, what could he possibly learn from reading the book and it's a big book? So I was basically sparring with him for 35 minutes trying to inflict enough damage that he might conclude that he might actually learn something about his own subject of expertise if he reads it. And he actually said "OK, OK, OK, I'm going to read it, I'm going to read it." (If he does, I'd be surprised, because after the lecture I e-mailed him a few follow-up notes, and he never bothered to respond.) I believe his initial response is probably common among obesity researchers, and even if they're tempted, they first have to wade through 200 pages on chronic disease that try to convince them that everything else they believed is wrong. The exceptions are those people like you, who already had reason to agree with me.

1. [http://webcast.berkeley.edu/event\\_details.php?webcastid=21216](http://webcast.berkeley.edu/event_details.php?webcastid=21216)

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Seth's blog » Blog Archive » Interview with Gary Taubes (directory) (2008-01-10 03:25:13)  
[...] Interview with Gary Taubes (part 6) [...]

## How Much Fish Oil Should You Take? (2008-01-09 11:50)

A [1]WSJ article doesn't reach much of an answer:

Hardly a month goes by without a study suggesting that the omega-3 fatty acids in fish oil can fend off disease – including heart attacks, strokes, Alzheimer's disease, depression, rheumatoid arthritis, asthma, psoriasis and even attention-deficit hyperactivity disorder.

The problem is, to get the health benefits seen in clinical trials, you probably need to take fistfuls of capsules.

"The kind of benefits seen in most of the clinical trials with omega-3 generally have involved much higher

doses than you see recommended on supplement labels,” says Charles Serhan, a Harvard Medical School expert on omega-3’s activity.

Which raises a little-discussed point. For practical purposes, it’s not enough to show that a drug works; you also need to find out the minimum dose that produces near-optimal results. In layman-speak, you need to find “the right dose.” Studies that compare drug and placebo are no help; much better would be studies that compare dosages (e.g., Group A gets one dose, Group B gets a different dose).

Here are three more useful comments:

1. [2]I found that about 3 Tablespoons/day of flaxseed oil was enough to produce the best brain performance. As I’ve said, the amount that optimizes brain performance is likely to be a good amount for everything else. For the same reason that the best voltage pattern for your TV is likely to be a good voltage pattern for your other electrical appliances.
2. You can choose the minimum dose of fish oil that makes your gums perfectly pink. The transition from reddish gums (a sign of inflammation) to pink gums (no inflammation) takes about a week.
3. You can do mental tests to choose your dose, as I have done. The big problem here is practice effects – you will get better at the test just from doing it. So you will need several weeks of doing the test before the practice effects become small. You have to be a little bit sophisticated at data analysis – at least, able to plot your data – to take this approach.

In the future I can imagine people repeatedly measuring their mental ability with short (2-3 minute) tests, just as diabetics measure their blood sugar today.

Thanks to Santosh Anagol.

1. [http://online.wsj.com/article/SB119975627038373627.html?mod=hps\\_us\\_at\\_glance\\_pj](http://online.wsj.com/article/SB119975627038373627.html?mod=hps_us_at_glance_pj)
2. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>

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Loweeel (2008-01-09 13:06:00)

*For the same reason that the best electrical current for your TV is likely to be a good amount for your other electrical appliances.* Seth, let me preface by saying that I have an enormous amount of respect for you, love your writing, and think that you’re right over 99 % of the time. However, at least part of this statement isn’t one of them (as you don’t have a Physics/EE background). In fact, appliances DO NOT draw the same amount of current (i.e., electrons/second). What is standardized, at least from the outlet, is voltage, or at least the voltage pattern (120V, 60 Hz), which is roughly equivalent to the amount of momentum each electron has, or, to analogize to water flow, the vertical drop of the pipe in a section. Various appliances all have different wattages (e.g., Computer power supply at 300-500 W, Gen1 Foreman Grill at 1500, lightbulbs at their rating), but they achieve this by drawing different amounts of current at the given voltage, not by varying the current. So no, the amount of current that a TV requires will be vastly different than the amount of current that everything else draws – largely because power systems are designed to have a standard voltage and have the current be variable. It’s much easier to get more electrons when you

need them than it is to alter their potential energy. A TV will operate at the same voltage input as other appliances because they are all designed to operate from that 120V 60 Hz source voltage.

Loweel (2008-01-09 13:06:36)

"... not by varying the current" should be "not by varying the VOLTAGE and keeping the current constant."

seth (2008-01-09 13:16:29)

Thanks, Loweel. By "current" I meant "voltage pattern". I should have at least said "type of current" rather than "current". I will correct my post.

Varangy (2008-01-09 15:14:20)

*In the future I can imagine people repeatedly measuring their mental ability with short (2-3 minute) tests, just as diabetics measure their blood sugar today.* This is very thought-provoking. By what sort of mechanism do you posit this sort of testing?  
1) An automated test, similar to the ones you have experimented with? 2) A blood test to check for levels of XYZ?

seth (2008-01-09 18:41:39)

The test of mental ability would be automated. A series of problems, measuring how fast and accurately you response.

sj (2008-01-09 20:43:59)

i tried the flax seed oil Seth, I really did. It was awful - I felt as though I had just gargled furniture polish for 10 minutes after taking 1 tablespoon. I am using one that requires refrigeration - heard that is really the only way to get the "real benefit". Is your flax seed oil refrigerated? Is there a particular brand that has a more mild and tolerable taste? Otherwise I am going to have to bypass these benefits due to my gag reflex.

Doshia Wall (2008-01-09 22:14:41)

Texas Rep-Carlson Labs Is flaxseed oil a risk for men? Dr. Andrew Weil Calgary Herald Monday, June 18, 2007 CREDIT: Richard Arless Jr./Montreal Gazette Dr. Andrew Weil says men should avoid flaxseed oil, unless it has added lignans. Q: Several years ago you indicated that you do not recommend flaxseed oil for men due to potential for prostate tumour growth. Does this research still hold? A: Freshly ground flaxseeds are an excellent source of alpha-linolenic acid (ALA), a type of omega-3 fatty acid. The human body needs long-chain omega-3s (EPA and DHA), which are found in salmon and other oily, cold water fish. It can make them from ALA, but the conversion is not efficient and is inhibited further if the diet is rich in the omega-6 fatty acids, which are found in most vegetable oils and processed foods. As you know, omega-3s are associated with reduced risks of heart attacks and stroke and also may decrease the risk of macular degeneration (a leading cause of age-related blindness) as well as breast, prostate and colon cancers. If you don't like fish (and don't eat the recommended three servings of cold water fish per week), ground flaxseeds can help fill the gap. I recommend buying whole flaxseeds, storing them in the refrigerator and grinding a half-cup (125 mL) at a time in a coffee grinder. You can then sprinkle a tablespoon or two (15 to 25 mL) over salads, cereals or potatoes or add them to baked goods such as breads and muffins. In addition to providing some omega-3 fatty acids, flaxseeds are an excellent source of fibre, which helps prevent constipation, and of lignans, compounds with beneficial estrogen-like effects that offer protection against breast and prostate cancer. I often recommend supplementing the diet with fish oil as an omega-3 source, but I'm less enthusiastic about flaxseed oil. One tablespoon (15 mL) flaxseed oil daily will give you seven to eight grams of ALA, but little of that will be converted to EPA and DHA. Flaxseed oil spoils easily, so be sure to keep it refrigerated (it should be refrigerated when you buy it). If you notice that it tastes like oil paint, throw it away. Rancidity is oxidation, and oxidized fats are toxic. Although flaxseed oil seems to be safe for women, I still haven't seen any data showing that it is safe for men. In October 2004, Nutrition Journal published an analysis of nutrition and cancer. One meta-analysis included in that publication reviewed nine studies that revealed an association between flaxseed oil intake or high blood levels of alpha-linolenic acid and increased risk of prostate cancer. The author speculated that the lignans in flaxseed are a major component of its anti-cancer effects and that the lack of lignans in most brands of flaxseed oil may explain why flaxseed oil is not beneficial. Until we know more about the risk flaxseed oil appears to present, I recommend that men avoid it, or at least stick to brands that put the lignans back in. Flaxseeds, however, present no danger to men.

Timothy Beneke (2008-01-09 23:53:52)

SJ: I find Barleans quite tolerable, the high lignan kind. I just mix two tablespoons with about 3 ounces of water and put my tongue outside of the glass at the bottom and swallow it; then drink more water or have some tea to get rid of any lingering taste. The taste is not so bad anyway, but I want to do it tasteless, so I can get the benefit of calories without taste, and lower hunger levels. I have not done any precise self experimentation but I can say that I am quite happy with my mental abilities since I've been on it... And there seems to be powerful effects on my gums — this based on comments from my dentist and periodontist.

Stephen M (Ethesis) (2008-01-10 20:58:13)

"The test of mental ability would be automated. A series of problems, measuring how fast and accurately you response." There are game collections for portable game players (like the PSP) that are quite popular in Japan that are intended to improve mental acuity, but that would work well to test it. I'll note that the WSJ article noted that a fairly small amount of fish oil in elderly men protected brain function – about two capsules worth. Triglyceride suppression varies, some people are more sensitive than others. I dropped mine from 300 to 100 pre-SLD on a capsule a day for six months. Surprisingly, my mother on more, over a longer time, got much milder results (though measurable ones). For a humor article on Applied Nutrigenomics (the science of calculating how different people react differently to the same input) see: <http://www.t-nation.com/readArticle.do;jsessionid=F32229025A924E1A2D4F0469D93754FE.hydra?id=1885110> Ok, parts of the interview are serious, e.g.: "I first became interested in this field about 10 years ago, which is before the term "nutrigenomics" was actually coined. At the time, I was working on my PhD in nutritional sciences and was researching the effects of cholesterol on cancer using rodent models. One of my experiments gave totally unexpected results. In fact, they were completely the opposite of those published by other researchers. It turned out, however, that the strain of rat that I used metabolizes cholesterol quite differently than other strains that were used in previous experiments. The study design was virtually identical to previous ones, but the only real difference was the genetic background of the animals. I realized the importance of considering genetics when studying nutrition and it occurred to me that genetic differences between humans could also explain why some people respond differently than others." I'll have to look at the flax seed oil I bought, it hasn't resonated for me, so I've been just using the ELOO and taking a few grams of fish oil and flax oil with my vitamins, though I really enjoy the flaxseed bread I've taken to eating. I might try to find the seeds some place and eat them (or mix them into a morning smoothie).

Chris (2008-01-10 21:14:56)

I would try looking for Japanese Shiso (a.k.a. Perilla or Beefsteak) oil if you can't stomach flaxseed oil. The omega-3 levels are equivalent and the flavor isn't as strong. I've found it to be easier on the stomach as well.

Anthony (2008-01-11 00:59:24)

You can mix flaxseed oil with all sorts of stuff (two examples: yogurt and guacamole) if the taste bothers you. If you are trying to have it alone because of the SL diet, then I feel for you.

DdK (2008-01-11 01:05:17)

I take 'Udos choice' and mix it in a smoothie or some sort of vegi or fruit juice; and can't taste it at all.

Ruth Heasman (2008-01-12 04:48:45)

I use hempseed oil personally. And I try to take it tastelessly as per the SLD, but if you don't then I think it probably has a better flavour than flaxseed oil. As for the mental benefits of reduced inflammation, I can agree with that wholeheartedly. I have rheumatoid arthritis and so have high levels of inflammation on an ongoing basis. I've been playing the Nintendo DS brain training game daily recently and it graphs your progress. I've been altering my daily dose of prednisolone (a powerful anti-inflammatory) lately as I've been trying to taper my dose, and it's absolutely obvious that on my high dose days my brain training scores are higher and on my low dose days, my brain is functioning considerably less well, with lower scores. I received this gadget as a Christmas present, so this is a fairly recent discovery for me, but ties in with my subjective experience that my brain fog is significantly lessened when my arthritis is controlled. It sounds like common sense I know, but doctors don't tell you this. Also, I read an article this week that claims that etanercept (aka enbrel), an anti-tnf rheumatoid

arthritis drug, made miraculous improvements to an alzheimer's sufferer when injected into his spinal column. He went from not knowing the day or date, to knowing these things in under 10 minutes! Here's the link to the story on the BBC: <http://news.bbc.co.uk/1/hi/health/7179060.stm> So perhaps reducing inflammation in the brain is the key to improved mental ability, in healthy people as well as in alzheimer's and rheumatoid arthritis sufferers. And maybe in healthy people, a daily dose of omega 3 via flaxseed oil or similar is enough to do that.

susan allport (2008-01-22 08:34:14)

Thought you'd be interested in this: <http://www.youtube.com/watch?v=eIgNpsbvc VM>

### **Interview with Gary Taubes (part 7) (2008-01-10 03:24)**

INTERVIEWER I was a member of the Center for Weight and Health. But the other members didn't know what I was up to, and had no idea it could have anything to do with actual weight loss.

TAUBES That's one of the things I've found most amusing about obesity research, that you have this disconnect from pre-World War Two, when the people doing it were clinicians who were treating obese patients, to post-World War Two, where first, it's nutritionists, who do rat experiments. Then, by the 1960s, obesity is considered an eating disorder and it's being treated by psychologists and psychiatrists. So today, if you looking at some of the major obesity centers in the country — at Yale, at University of Cincinnati, they're all run by psychologists or psychiatrists. Here's a physiological disorder of the body, and it's being studied by psychologists and psychiatrists. They're not interested in anecdotal evidence, unless it agrees with their preconceptions.

INTERVIEWER In my department, we don't have any of that. Obesity is not handled much on the Berkeley campus.

TAUBES But think about it: it's a physiological disorder.

INTERVIEWER Well, hunger is controlled by the brain.

TAUBES I know, I know, but you know, diabetics get hungry. Type I diabetics are starving. Literally starving, without insulin. But it's not psychologists who treat diabetics.

INTERVIEWER I think that with Type I diabetes, you can say, "look at this problem; it's not in the brain". But I think with most obesity, it's not so obvious that the problem isn't in the brain. Sure, they're fat, but maybe they're fat because they're hungry too much. That could easily be a brain disorder. It could easily have something to do with the brain.

TAUBES It could have something to do with the brain, but the problem is in the body. This is the paradigm problem. If you just think of it as hunger, then

INTERVIEWER I'm not saying you just think of it as hunger, but you wouldn't want to rule it out.

TAUBES Yeah, I know. That's why the book is so long, because I'm trying to do it — I'm trying to say "Look, your fat tissue is trying to get fat. Hunger and gluttony and sloth are side-effects of what's happening at a hormonal level in your fat tissue."

INTERVIEWER Right. What effect did Weston Price have on you?



TAUBES Price was interesting. It's funny. He got cut from the book for reasons of length and narrative, but reading Price was a revelation to me, as I say in the acknowledgments. I think that Price should be required reading for every nutritionist in the world. And then, "Nutrition and Physical Degeneration" is a great read, as well.

INTERVIEWER How did you come to read his book?

TAUBES How did I come to Price? I don't remember, actually. Somebody in the field must have recommended him.

INTERVIEWER It was after your New York Times article?

TAUBES Oh, yes, definitely. I did not read Weston Price prior to that. I have to say, by the way, that I was trying to decide how much to believe of Price's stories. I decided that if his story about migrating, tree-climbing crabs in the South Pacific was true, I would believe everything Price said. This was my calibration. Because some of his stories are wild: about how pygmies, for instance, kill elephants by slowly hamstringing them over the course of a few days. Even with his photos as evidence, they're still hard to believe. So, anyway, this being the 21st century, I googled the tree-climbing crabs, and indeed, there are migrating, tree-climbing crabs in the South Pacific. The article I found didn't say whether the local natives hunted them by putting nets under the trees and making the sounds of coconuts falling, so that the crabs would climb back down into their nets, which is what Price wrote, but the crabs definitely exist. I decided that's it. As far as I'm concerned, Weston Price is an unimpeachable source.

INTERVIEWER That's good to know. I really like his work, too.

TAUBES And those photos of the teeth of populations that do and do not eat sugar and white flour. Compelling stuff. I have a 2 year old and I try to keep him away from sugar and white flour just because of Price's photos. And you know, in this day and age, it's not easy to keep a child away from sugar and white flour. But it's the photos in Price's book that keeps me motivated: we've got to survive in Manhattan on a science writer's salary. It would be nice to save the \$6,000 for braces, if I could keep him off sugar and white flour. I still don't understand how the sugar and flour can effect how the teeth actually grow in, but Price makes a compelling argument that they do.

INTERVIEWER There's disagreement about that. Weston Price thinks it's one thing. A professor in Illinois thinks it's that that people who eat the urban diets have soft food, and the people who eat the rural diets have chewy food. The chewy food makes the kids' jaws grow to be the right size.

TAUBES My problem with that is that he's making the assumption that the addition of sugar and flour removes some significant portion of the baseline diet. It could be true, but again, it's an extra assumption. Take the Inuits, for example: one of the things I did in the course of my research was try to refute this notion that cancer didn't exist in the Inuits until the 1930s. So I tracked down whatever memoirs I could find from physicians working with the Inuits to see if any of them mentioned cancer prior to the 1930s. And one of the things I found fascinating was that at the turn of the early years of the 20th century, the Inuit were eating mostly their native diet. By the 1950s, they were eating tons of sugar and flour and drinking beer and other alcohol, and tuberculosis had decimated them, but they were still eating their baseline diet; it's just that all these other things had been added on top. So they're still eating seal and whale and caribou, but they're also eating these Western foods. In general, it's never a good idea to add that extra assumption until you absolutely have to – that something else critical changes with the addition of sugar and flour. Maybe it's just the addition that's the cause. That's the one thing you know for sure that happened. This is Occam's Razor. The key thing is that cavities are caused by the sugar and flour. The simplest hypothesis is that the orthodontal problems are too. It is possible that the sugar and flour affect growth hormones – insulin-like growth hormone, for instance – which could have local effects on how the teeth grow in. The sugar and flour could affect bacterial growth locally and that could have some effect. Either way, I find the evidence sufficiently compelling

to wonder whether my son will grow up with nice teeth if he doesn't eat a lot of sugar and candy and white flour.

INTERVIEWER Changing the subject slightly, you mentioned that the obesity center at Yale is run by psychologists. Did you ever ask Kelly Brownell how he reconciles his toxic environment view with the fact that many people in poor countries are fat?

TAUBES Not yet. I would like to lecture at Yale some day, and I'm hoping that I don't have to invite myself. You know, I'm fairly confident that if I were to ask many of these people if they'd get me a lecture – call them and say I'd like to come and talk – they'd arrange it. They're intellectually honest enough on that level. But again, it's people like Kelly Brownell that I was thinking of when I was compiling that list of populations. And what boggles my mind is that people have been peddling this nonsense for 30 years, and they never bothered to look. They never bothered to do their research, to see if there was evidence that refuted their hypotheses. Again, this is what you do in science; you get a hypothesis, and you try to test it. So how would you test the hypothesis that prosperity causes obesity, or that our modern toxic environment, as defined by Brownell, is the cause. Let's see if we can find examples of non-toxic populations, you know, poor populations without McDonald's, without televisions, without remote controls, who are obviously physically active, at least by our standards. It's funny, I was talking with Hellerstein at Berkeley. When I told him about the Pima and the Sioux Indians, and he said "Well, do they live on reservations?" Like, if they live on reservations, then that means they're sedentary, at least relatively, compared to their previous lives, and so you can evoke sedentary behavior as the cause of their obesity. So now you have this idea that it's not how sedentary you are, it's how sedentary you are in comparison to how active you used to be. So like, Sioux Indians, who rode along the Great Plains and chased after Custer — they were so active that if they only have to move onto reservations and stop riding their horses all the time, they get obese. So it can actually be a detriment to be extremely active, because then being only mildly active causes obesity.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2008/01/05/interview-with-gary-taubes-directory/>

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michael vassar (2008-01-10 07:47:54)

Does Gary read this blog? It's interesting to know that he's in NYC and I was wondering if he would be interested in getting together with some of us readers in the city some time to discuss his conclusions.

seth (2008-01-10 08:22:46)

Michael, I'll refer him to your comment.

Varangy (2008-01-10 13:22:14)

Seth, While you are it, would you mind seeing if he will be in Southern California anytime soon? The entire paradigm shift and how he applies his findings to his own life is absolutely fascinating.

Tom (2008-01-10 15:31:41)

Great interview, Seth.

Michael Blowhard (2008-01-10 17:02:25)

Great interview. Many thanks to both of you.

Stephen M (Ethesis) (2008-01-10 20:45:31)

I really enjoyed the interview segments, and I'll note his book is doing well enough that the used copies on Amazon have a price very close to the Amazon price – always a good sign as to actual demand.

Dennis Mangan (2008-01-10 22:27:25)

Pima Indians in Mexico have far less obesity and diabetes than their American cousins. "This preliminary investigation shows that obesity, and perhaps NIDDM, is less prevalent among people of Pima heritage living a "traditional" lifestyle than among Pimas living in an "affluent" environment. These findings suggest that, despite a similar potential genetic predisposition to these conditions, a traditional lifestyle, characterized by a diet including less animal fat and more complex carbohydrates and by greater energy expenditure in physical labor, may protect against the development of cardiovascular disease risk factors, obesity, and NIDDM." The Mexican Pimas' traditional diet largely consists of beans and corn, i.e. carbohydrates. If Taubes wants to say that white flour and sugar makes people fat, he ought to be more specific, because clearly not all carbohydrates have that effect, even when they make up 3/4 or more of calories. Sorry to rain on the parade.

Dave Lull (2008-01-11 06:19:02)

"You're not talking about a diet with no carbs, just a reduced amount?" [Gary Taubes]: The underlying philosophy is this kind of Paleolithic diet theory. It's what we ate during the 2 million years that we were hunter-gatherers on this planet. The fact that we were hunter-gatherers for 2 million years suggests it was an extraordinarily successful evolutionary adaptation. The question is: What did we eat during these 2 million [years] when we left the jungle, the trees, went down into savanna and started surviving on whatever we could hunt or gather? That's the philosophy. The answer is, probably considerable meat, very low glycemic index, hard-to-digest roots and starches, and fruits and berries that look nothing at all like the beautiful Fuji apples you can buy at your local market now. Some carbohydrates, but whatever it was, it wasn't refined. It wasn't sugar. It wasn't flour. It wasn't easy to digest. That's my going theory. If this theory's right, the diet we evolved to eat is probably the correct diet." Frontline interview of Gary Taubes: <http://www.pbs.org/wgbh/pages/frontline/shows/diet/interviews/taubes.html>

taubes (2008-01-11 10:40:39)

Dennis, To echo several other comments, Taubes (again speaking pretentiously in the third person to identify the author) thinks you'd benefit by reading the book. Taubes is always specific about the type of carbohydrate he's discussing – often to the point of slowing the narrative to a crawl – because such specificity, as Dennis notes, is critical to understanding what might be happening in these populations. That said, the argument is that the quality and the quantity of the carbohydrates have to be taken into account (which you would know if you read the book.) as well as the time that a population has had to adjust to carbohydrates in new forms. It could be true that the difference between the two Pima population is that the Mexican Pima eat less animal fat, more complex carbohydrates and expend more energy, as the NIH report suggests. It could be true that the relevant factors are that they consume far less sugar, and less refined easily-digestible carbs, in which case any differences in animal fat consumption and physical activity would be canards. This is why observational studies are so difficult to interpret. They don't tell you what factors cause the difference in disease rates, only what factors differ between the populations. And if the researchers have blinders on, as the NIH researchers in this case did, they don't even tell you all of those. Only those that the researchers chose to look at the time. My advice: read book first, rain on parade second.

Lancaster (2008-01-11 11:55:36)

No one argues that low-fat, high-carbohydrate diets don't "work." Only that they require great discipline to be effective. In large parts of the world, this discipline continues to be supplied by scarcity and work. In economic terms, the steep marginal costs in time, money and labor of each additional calorie. That marginal cost in the U.S. is the lowest in history—close to zero—which is why it is so profitable to "supersize." However, the modern high-carb, high-calorie diet is a quirk created only in the last century or so. Prior to the mechanization of agriculture, processing grains into food took enormous amounts of time and labor. Grains stores had to be rationed or people starved. One hard drought and you were all dead. Even avid gardeners don't plant rice or wheat as a hobby. People plant corn as a hobby, but not to eat as corn meal. (Modern sweet corn is organic candy.) People bake bread, but few in the first world grind flour from wheat and bake a half-dozen (big) loaves a week (like my parents did, though they did use an electric grinder). Because it's hard, time-consuming work. Especially without the electric

grinder. I believe the hundred-thousand years of human evolution prior to the agricultural revolution programmed a simple instruction into the metabolism: "If you encounter a carbohydrate surplus, rather than letting it go to waste, chow down and convert into fat, because it comes dear and won't last."

Tim Lundeen (2008-01-11 12:09:26)

Great interview series, thanks! The Weston A Price Foundation web site is at <http://www.westonaprice.org/> and is a good resource. And I just ordered a copy of Nutrition and Physical Degradation :-)

Varangy (2008-01-11 16:11:45)

Kudos to Seth for giving space to Taubes' ideas.

Seth's blog » Blog Archive » Interview with Gary Taubes (directory) (2008-01-11 16:39:45)

[...] Interview with Gary Taubes (part 7) [...]

Andrew Gelman (2008-01-11 18:27:20)

Seth, I'm confused. There's all this talk about the paleolithic diet or whatever, but people didn't eat burgers in paleolithic times either.

seth (2008-01-12 15:54:52)

Andrew, during Paleolithic times people ate zero refined carbs. No bread, no soft drinks, no pasta, etc. The Atkins diet consists of eliminating these foods (while, yes, leaving cheese and eggs, which were also absent in those days). So you can think of the Atkins Diet as a semi-Paleolithic diet.

Andrew Gelman (2008-01-13 12:49:20)

Seth, Yeah, but that's a much weaker statement. Taubes appears to have lots of data supporting his claims, which is great, but then he makes statements implying that his ideas make sense because of the paleolithic diet. But unless he's talking about climbing trees and chasing down weak gazelles or whatever, his lifestyle does not seem particularly paleolithic. If he wants to cut out white flour and keep burgers, rather than the other way around, that's fine, but I don't see the "paleolithic" argument to be very relevant to that choice.

LCforevah (2008-01-16 11:32:55)

A bit of bad news for Taubes as a Dad. I believe the future shape of the jaw and the tooth buds are pretty much laid down in utero. Just he found evidence that shows that overweight mothers with diabetic/insulin resistance problems give birth to children who then develop the same problems more easily, it's his wife who had to give up the sugar and white flour so her infant would have strong jaws and straight teeth. Of course keeping his son away from refined junk will help his overall development on many other levels anyway.

Mamas, Don't Let Your Babies Grow Up To Need Braces « Sacred Appetite (2009-10-23 21:08:44)

[...] <http://www.blog.sethroberts.net/2008/01/10/interview-with-gary-taubes-part-7/> [...]

## **Interview with Gary Taubes (part 8) (2008-01-11 16:38)**

INTERVIEWER Marc Hellerstein thought that the obesity epidemic was caused by people being sedentary?

TAUBES He believed that the key is whether you're sedentary compared to how you used to be. When I told him about the Pima and the Sioux Indians and this 1981 study of obesity in oil field workers, he had an excuse for everything. So the Pima and the Sioux Indians, they lived on reservations, so they could be obese because they were relatively sedentary, at least more sedentary than they used to be. And the oil field workers, well, they're

Mexican-American, so they have some kind of “thrifty” gene going. You know, this is what pathological science is: a field in which you can find a reason to explain away all negative evidence. In pathological science, it’s no longer possible to refute the hypothesis. Remember, science is about trying to test your hypothesis and refute it, but in a field like this, if you test it and come up with a counter-example, the counter-example is just explained away with whatever comes to mind. Negative evidence never means anything. So you have an obese person who’s sedentary, that’s proof of my hypothesis. If you have an obese person who’s very active – at least, compared to most people today – the Sioux Indians, for instance, who were so poor they had to walk down to the river to get their drinking water; who had no televisions, no cars; they had to walk outside to evacuate their bowels – those people are obese because they used to be more active than they are now.

INTERVIEWER I’ve never heard that before: “They used to be more active.”

TAUBES But that’s the implication of Hellerstein’s knee-jerk reservation hypothesis. They may be poor, and they may be out working in the fields, so compared to us, they’re active, but compared to their former life, they’re sedentary. See what I’m saying?

INTERVIEWER Yeah, I understand the logic. I’ve just never heard it before.

TAUBES Well, the reason you’ve never heard it before is because you’ve never heard anyone have to explain why obesity was common in an impoverished Native American tribe in 1902 or in 1928. When confronted with that observation, they have to come up with an explanation so that they don’t have to question their hypothesis. I happen to challenge someone who believes the conventional wisdom unconditionally, and that’s the response I get: “Well, they’re living on reservations”.

INTERVIEWER Does he do research on weight, on obesity?

TAUBES Absolutely, he does.

INTERVIEWER That’s unfortunate.

TAUBES This is why the field is in the position it’s in. These people believe so strongly in the calories in/calories out/gluttony/sloth combination that they no longer function as scientists. They can’t imagine the existence of an alternative hypothesis. So everything they see, they have to find a way to interpret it so that it supports what they already believe to be true.

INTERVIEWER They don’t see that they’re operating differently

TAUBES than other scientists.

INTERVIEWER Do they see that they’re not making progress?

TAUBES No, because that gets blamed on the obese. If you believe that obesity is caused by sloth, then the reason fat people are fat is because they don’t have the moral fortitude to go run ten miles every day the way you do.

INTERVIEWER Well, people have been saying that for 50 or 60 years. So the fact that they’re saying the same thing now as they were saying 60 years is a sign, to me, that they’re not making progress.

TAUBES Yes, that’s a very good sign, but these people don’t realize they’re saying the same things and doing the same experiments and making the same mistakes that their predecessors made a century ago because they don’t bother reading that literature. For reasons I still don’t really understand, these people see no reason to pay

attention to the history of their field. Imagine if physicists saw no reason to pay attention to Einstein and Plank and Maxwell and Heisenberg? I mean, these guys all lived a century ago, why would anyone want to know about them or the experiments they did? But in physics, mathematics and even biology, the history is carried along with it. As the science progresses, it takes with it the successful ideas and the students learn about the history along with the science. In obesity research, World War II just cut all of that off. For whatever reason, several generations of researchers grew up with this belief that the history of the field doesn't matter. And so they don't even know or care that they're saying the same thing and doing the same experiments that their predecessors did 100 years ago. And then this latest generation is full of young molecular biologists, and they start the clock in 1994, when leptin was discovered. They're not aware that they're not making progress, because they believe that nothing of value was done until 1994.

INTERVIEWER The birth of a new world. In your book, you seem to place weight on the fact that Atkins was disliked by people he went to school with. Did I read that wrong?

TAUBES I think that was part of it. I think the fundamental problem with Atkins is that his book emerged in 1972, when the low-fat dogma was really beginning to be taken seriously, not just by the heart disease researchers, but by physicians and public health authorities. It was viewed as a great triumph of modern medicine. We finally understand what causes heart disease. Then Atkins goes out of his way to throw the high-fat nature of his diet out there: "You can eat Lobster Newberg, double cheeseburgers, and porterhouse steaks" (like my New York Times Magazine cover). The AMA always had this philosophy that even if people wanted to lose weight, they should go to their doctor and discuss it with them. You shouldn't go on a diet without your physician's guidance. So here Atkins was end-running all of that. Then he was saying "eat a high-fat diet. It's harmless". He actually said "it's good for you." If you read Atkins, he read a lot of the papers I read. His understanding wasn't tremendously sophisticated, but he didn't have the advantage I had, of coming along 40 years later. For the time, he was doing pretty damned good. He believed that triglycerides were the problem, not cholesterol. He believed that insulin was a problem. He was a working physician; he didn't have the time that I did to read all of the research, and to have the internet available to allow him to track down all of the references. But the establishment thought his diet was dangerous. And then Atkins made these claims that he had patients who consumed 5000 calories a day and still lost weight, so they also believed Atkins was a quack, a shyster trying to sell impossible dreams. And they thought this because they believed that calories in/calories out was all that mattered. They had this inherent belief that in order to lose weight, you have to restrict calories; Atkins said you didn't. So, to these establishment nutrition types, Atkins was saying that the laws of thermodynamics can be ignored. So they had reason to think that Atkins's diet couldn't possibly work, on the one hand, and that it would kill you, on the other. So these "responsible physicians," as they perceived themselves to be, felt an obligation to suppress this threat to the public health. The fact that they knew Atkins personally, that some of them had worked with him and gone to medical school with him and didn't particularly like him, made it all that much more . . .

INTERVIEWER Irresistible.

TAUBES Yes, irresistible. One of the things I mentioned in my lecture was something I didn't realize this when I wrote the book. Atkins proposed that one reason carbohydrates-restriction worked is that it stimulated the secretion of something that British researchers in the 1950s had called Fat Mobilizing Hormone. The joke is that you didn't need a Fat Mobilizing Hormone; the thing you have to do to mobilize fat is lower insulin levels and the way to do that is to remove the carbohydrates from the diet. That's what mobilizes fat from the fat tissue. But Atkins was doing what a lot of diet book authors do, which was combing the literature for everything and maybe anything that might support his argument. He talked about insulin, but he also talked a lot about Fat Mobilizing Hormone, which was controversial at the time but not an outrageous idea. At the time Atkins wrote the book, this Fat Mobilizing Hormone had yet to be nailed down, and it never would be. The fundamental requirement to mobilize fat, as I said, is to lower insulin. So, the American Medical Association publishes this famous article dedicated, effectively, to establishing that Atkins has no credibility and one of the ways they do it is to discuss how Atkins was wrong about

this idea of Fat Mobilizing Hormone. Then in the same paragraph they also say “in order to mobilize fat, you have to lower insulin”<sup>[2]</sup>. Then they go back to talking about how Atkins jumped the gun on Fat Mobilizing Hormone . So they know that insulin controls fat accumulation, and they say actually acknowledge it in the article, but only in the context of it supporting the argument that Atkins has no credibility. They never mention that the way to lower insulin – and so, apparently, to mobilize fat from the fat tissue – is to eat less carbohydrates, which is exactly what Atkins was recommending. I was writing my response to Gina Kolata’s review when I first really noticed that sentence, and it jumped out at me. “Holy shit!” These people knew what regulates fat tissue, and they know what regulates insulin. They just don’t care. That’s how dedicated they were to trying to squash Atkins.

INTERVIEWER It didn’t matter whether evidence supported them or that there was something there that they couldn’t explain. It just mattered that he was wrong about something.

TAUBES All they wanted to do was establish that Atkins was not a credible source, and people shouldn’t follow these bizarre practices of nutrition, or whatever they called it. One of the things I’m curious about is whether, from here on, the American Heart Association and other health authorities will continue to refer to low-carb diets, the Atkins diet, as these fad diets. Even though, if nothing else, as I point out in the book, these diets constituted the preferred medical treatment of obesity for 150 years, or 100 years, until the low-fat diet came along. It’s the low-fat diet that’s the fad.

INTERVIEWER That’s an interesting point. What is the fad diet? Is it the absence of the Atkins Diet, or its presence? Which is temporary?

TAUBES The idea that you could somehow lose weight by removing fat and increasing carbohydrates is as ludicrous as the idea that you could do it by eating ice cream for any extended period of time. I’m sure there’s something about the ice cream diet that works in the short term. I’m not sure, but I wouldn’t be surprised.

INTERVIEWER Was your response to Kolata’s review published?

TAUBES Yes. If you search me in the Times, you can read [1]my response.

[2]

Interview directory.

1. <http://query.nytimes.com/gst/fullpage.html?res=9D07E5D71130F93BA15753C1A9619C8B63&sec=&spon=&pagewanted=all>

2. <http://www.blog.sethroberts.net/2008/01/05/interview-with-gary-taubes-directory/>

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Dennis Mangan (2008-01-11 18:31:15)

“The idea that you could somehow lose weight by removing fat and increasing carbohydrates is as ludicrous as the idea that you could do it by eating ice cream for any extended period of time.” Overreaching, to put it mildly. People lose weight that way all the time. For example, at places like Dr. McDougall’s clinic, which practices low fat/high carb in the extreme, with no limitations on intake, massive weight losses are common, not to mention reducing or eliminating insulin and blood pressure medications.

Tom (2008-01-12 00:43:44)

Any studies to back that up? Taubes has references for every statement he makes. Which you would know. If you READ THE BOOK !

Dennis Mangan (2008-01-12 09:01:31)

"Our patients' average weight loss is 4 pounds (2 Kg) in 7 days; that's half a pound a day while eating unlimited amounts of delicious foods, served buffet-style. Significant improvements in blood pressure, cholesterol, triglycerides, and blood sugar are seen. [...] Most (over 90 %) people are able to stop their medications for hypertension, type-2 diabetes, arthritis, indigestion, and constipation. Those who must stay on medications are often able to switch to simpler, safer, more effective, and less expensive ones." [http://www.drmcDougall.com/health\\_10\\_day\\_program.html](http://www.drmcDougall.com/health_10_day_program.html)

Dennis Mangan (2008-01-12 09:05:39)

By the way, Tom, have you read any book or paper on nutrition other than Taubes or garden-variety diet books? Just wondering.

Tom (2008-01-12 09:37:03)

That would be a personal attack, Dennis. I believe it's been made clear that those are inappropriate.

Lauren Schiller (2008-01-12 10:04:09)

Gary Taubes (If you read these posts), Since the medical and scientific communities seem hopeless regarding nutrition, why not try to sell your book to Oprah. I say this not only because she can make a book a bestseller, but especially because she has had an epic struggle with her weight all of her life. I would guess that it's those of us who've struggled with food and have the most to gain from your insights, who are your biggest fans. Since reading your book and everything else I can find related to it, I've come across information linking insulin/blood sugar with eating disorders, mood disorders, alcoholism and addiction, night eating syndrome and more. I'm not overweight but have struggled with food and various disorders all of my life and reading your book gave me the motivation to try something different. I'd been fat-phobic and ate little protein or fat for years and I can only wonder what havoc that wreaked on me. Anyway, I'm a huge fan of the book and hope that it breaks through the mental fog of the mainstream nutrition field. I understand that you don't want to spend time on a website but something simple just to alert people about new events/interviews would be great.

Dennis Mangan (2008-01-12 10:39:57)

In no way is it a personal attack; I'm merely turning the tables regarding your repeated query about my reading Taubes' book. You seem to be questioning my qualifications (when of course, the only thing that matters is whether one's statements are true or plausible and whether they can be backed up). So, for the record, my background is in microbiology, biochemistry, and pharmacology, the last at the grad level. What's yours? I'll also take your response to my question about reading in nutrition to be "no".

Tom (2008-01-12 11:39:41)

Of course it's a personal attack; the subject is Taubes' writings. I could remark that it's amusing that you're trying to engage **me** in debate while ducking one with Taubes himself (in the part 7 comments), but that too would be a personal attack. So I'll refrain. :-) So I'll just advise everyone (that includes you, Dennis) that Good Calories, Bad Calories is a groundbreaking work. Read it – even if you never read another book. :-)

Dennis Mangan (2008-01-12 13:01:40)

Tom, you seem to be blind to the fact that every time I write something critical of Gary Taubes, you bring up me. Look at your first comment: "Which you would know. If you READ THE BOOK ! " Anyone who reads my blog or my comments here can see that I'm a complete ignoramus who never reads anything. In any case, I'm responding to words on this page, not somewhere else, and I've backed up my claims wherever I've made them. So, Tom, do us all a favor, and unless you've got something substantive to say, that is something that isn't about me or my reading habits or my qualifications to comment on Gary Taubes' bad science and misleading statements (like the one above)... I notice that Taubes himself makes a number of insinuations about other peoples' motivations, e.g. "They just don't care. That's how dedicated they were to trying to squash Atkins. [...] All they wanted to do was establish that Atkins was not a credible source, and people shouldn't follow these bizarre practices of nutrition, or whatever they called it."



Tom (2008-01-12 13:22:37)

Again, Dennis, why not take it up with Taubes himself? I will repeat that anyone who wishes to comment intelligently on Taubes would be well served to read him first.

David Brown (2008-01-12 14:37:55)

Tom and Dennis, I imagine differences of opinion regarding what constitutes the "proper" approach to weight control could be resolved if more experts understood the importance of "Biochemical Individuality." That's the title of a book by Roger J. Williams that was published more than 30 years ago. Mainstream science is only now beginning to appreciate the range of variation in human metabolic makeup as manifested in individualized responses to food intake. Some people are really not all that sensitive to carbs. Others must strictly limit their intake to keep from gaining weight. There's some excellent discussion of this on pages 85-86 of "Nutrition Against Disease," also authored by Dr. Williams. For example: "Kuo and his coworkers found that the liver tissue of individuals with high blood fat levels took up fructose five times as rapidly as individuals whose blood-fat levels were lower. Fat tissue from individuals with high blood fat levels also took up fructose seven to eight times more rapidly than the fat tissues of individuals with low blood fat levels. This shows how biochemical individuality comes into the problem and gives us a lead as to how some individuals may be adversely affected by the fructose content of sucrose." The notes at the back of the book contain further comment: "In their study of eight 'hyperlipidemic' patients, Kuo and colleagues found that dietary sugar (sucrose) administered to patients causes blood fats to increase, while starch tends to lower them. They found that individuals who had low blood fat levels were relatively resistant to the effects of sugar, and that 85 to 90 percent of the total calorie intake in sugar was required to produce hyperglyceridemia." Notice the difference between metabolic response to starches and sugar. For some, just reducing sugar intake while consuming all the unrefined carbs they want will result in weight loss. So Dr. McDougall's approach does work for some but not for others. I suggest you guys read a December 10, 2007 article by Carmen Drahl published in CE & N subtitled "The maturing field of metabolomics is taking steps toward guiding personalized nutrition." David brown Nutrition Education Project

David Brown (2008-01-12 14:40:57)

Oops: Forgot to include the address for the article. Here 'tis: <http://pubs.acs.org/cen/coverstory/85/8550cover.html>

Seth's blog » Blog Archive » Interview with Gary Taubes (directory) (2008-01-12 16:57:18)

[...] Interview with Gary Taubes (part 8) [...]

Varangy (2008-01-13 11:03:35)

Does anyone else think that Dr. McDougall's clinic's claim of weight loss seems totally, well, ridiculous? \*\*\*\*\*Our patients' average weight loss is 4 pounds (2 Kg) in 7 days; that's half a pound a day while eating unlimited amounts of delicious foods, served buffet-style. \*\*\*\*\* 1/2 pound a day? No f--- way! (Apologies for the unintentional rhyme).

Kevin C (2008-01-13 22:01:51)

Actually, Varangy, I don't think it's outrageous at all. I experienced a similar rapid weight loss years ago, and it was on a very low fat diet. At the time I was following a plan very similar to the low-fat diet outlined in "Eat More, Weigh Less" by Dr. Dean Ornish. 4 pounds a week for an extended period of time seems unlikely, but 4 or 5 pounds during the first week of a program is not unusual. Of course, much of that weight might be from water loss and from your bowels and not really body fat loss.

Neil Wilkinson (2008-01-18 14:30:23)

Whatever the diet, a loss of 4lbs of fat equates to a 'loss' of approx 14000 calories. Much of initial large scale loss has to be more than just fat loss(which is the only thing that people actually want to lose) Losing even a pound of fat (3500 cal) over the long term would seem a pretty demanding target.

Eric (2008-06-23 19:57:10)

Varangy, It's not far-fetched at all. I lost 50 lbs over 5 months following McDougall/Esselstyn's plans, with much of the loss coming in the first 3 months. I've kept it off for over a year and a half and have never counted a calorie. If you take out

extremely calorie dense foods (oils, meats, dairy) and substitute them with bulky less calorie dense foods, you will feel full on far fewer calories than ever before. If you doubt it so much, why don't you just try it for a month and see? Don't worry, eating lots of veggies and whole foods won't hurt you.

Varangy (2008-06-24 11:32:48)

@Eric I find .33 to .5 lbs of fat/day extremely hard to believe. I suspect a not insignificant portion was initial water weight. Regarding my diet, I do eat so-called 'whole foods' as I have recently started eating hyperlipid\* (majority of calories from fat, moderate amount from protein, little from carbs) and have had fantastic results. My average weight loss per day was about .12 lbs per day. My sleep has dramatically improved as well. \*And no, I don't believe the lipid hypothesis ( [http://en.wikipedia.org/wiki/Lipid\\_hypothesis](http://en.wikipedia.org/wiki/Lipid_hypothesis) ). :)

Sue (2008-07-03 03:45:18)

Must have been a lot of lean body mass loss with the McDougall diet as low-carb is muscle sparing.

Eric (2008-09-10 07:42:43)

Well, after 2 years on the Esselstyn diet, not counting calories at all, and eating as much as I want, I'm still 50 pounds lighter than I was when I started, my exercise endurance is better than it was 20 years ago, and I'm off all medicines. Lipid panel for those who believe in these numbers are well below Esselstyn's target of sub 159 TC. I have no idea if Taube's and the low carb crowd are on to anything, but I see no reason to question whether Esselstyn's diet works or not when it's been so easy to maintain results. Really, if you doubt that this kind of weight loss is possible, just try it for a month and see what happens.

## **Academic Horror Story (Podesta State) (2008-01-12 16:26)**

From [1]Inside Higher Ed:

T. Hayden Barnes opposed his university's plan to build two large parking garages with \$30 million from students' mandatory fees. So last spring, he did what any student activist would do: He posted fliers criticizing the plan, wrote mass e-mails to students, sent letters to administrators and wrote a letter to the editor of the campus newspaper. While that kind of campaign might be enough to annoy university officials, Barnes never thought it would get him expelled.

Rather than ignore him or set up a meeting with concerned students, Valdosta State University, in Georgia, informed Barnes, then a sophomore, that he had been "administratively withdrawn" effective May 7, 2007. In a letter apparently slipped under his dorm room door, Ronald Zaccari, the university's president, wrote that he "represent[ed] a clear and present danger to this campus" and referred to the "attached threatening document," a printout of an image from an album on Barnes's Facebook profile. The collage featured a picture of a parking garage, a photo of Zaccari, a bulldozer, the words "No Blood for Oil" and the title "S.A.V.E.-Zaccari Memorial Parking Garage," a reference to a campus environmental group and Barnes's contention that the president sought to make the structures part of his legacy at the university.

1. <http://www.insidehighered.com/news/2008/01/11/valdosta>

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Peter (2008-01-13 00:03:38)

i don't understand why it's being published just now. the article seems to let us know that Barnes did actually have a personal/private psychologist - was that knowledge the university was allowed to divulge? it's obviously a trashing operation run by the President, Ronald Zaccari. I'll drop a call in there on Monday, for sure. and it reminds me that I should do something to get myself and all alumni of my schools organized for when something like this happens. uh-oh - a new website - here it comes....

Peter (2008-01-13 00:10:40)

well, i left a voice mail and sent an email. that should start things nicely.

Peter (2008-01-13 00:56:09)

I did a little more research on that FIRE institute - I was alerted when I saw that Cato was involved (Cato being a libertarian right-wing think tank). It appears that FIRE is, indeed, a right-wing hack group: [http://en.wikipedia.org/wiki/Foundation\\_for\\_Individual\\_Rights\\_in\\_Education](http://en.wikipedia.org/wiki/Foundation_for_Individual_Rights_in_Education) #FIRE.27s \_political \_orientation They're using this case to try and up their street cred. It's why you won't find any mention of their funding sources on their website. It's a good cause - defending this kid - but it's shameful that FIRE is using the case in a cynical fashion. But would you expect anything else from a right-wing hack group? They're part of that whole David "I used to be a left-wing Marxist" Horowitz's campaign to intimidate professors into teaching 'state capitalism for the rich'.

Stephen M (Ethesis) (2008-01-13 22:18:13)

FIRE is more than that (and less). They aren't hacks, but they are ideologically driven, much like the ACLU, and sometimes the drive takes them strange places.

## **Interview with Gary Taubes (part 9) (2008-01-12 16:56)**

TAUBES Kolata's response to me reminds me a little of Mike Fumento's response to me. Did you read that back-and-forth?

INTERVIEWER Yes. This is an example of the litmus test for who the good journalists are and who the bad journalists are. In your Berkeley talk, you quoted Jane Brody: "eating pasta is a good way to lose weight." There seems to have been some sort of journalistic failure. What was the journalistic failure; what is it?

TAUBES Beginning in the 1960s, when newspapers institutionalized this idea of having diet and health/nutrition writers on newspapers, and it's still the case, for the most part, today, the people who got those jobs weren't the shining intellects on the newspaper, and the shining intellects didn't want to be diet and health writers. If you're a whip-smart young guy or girl who wants to go into journalism, you want to be an investigative reporter, a political reporter, or a war correspondent; you don't want to write about diet and health. Or at least you didn't. So I think that was one of the problems. You got not very smart people; truly mediocre reporters, doing jobs that turned out to have remarkable significance and influence. I do think that Jane Brody is as responsible as anyone alive for the obesity epidemic. She just bought into this idea of the low-fat diet as a healthy diet, and her sources in New York told her that Atkins was a quack, and that fat was bad, and she never questioned any of it. I don't know if she had the intellectual wherewithal to do it. In any other field of reporting, as far as I know, reporters are supposed to be as skeptical of their sources as scientists are supposed to be skeptical of their data. Certainly, if George Bush tells a political reporter something, that political reporter doesn't treat it like it's true. He might faithfully report what George Bush said, but you're supposed to be skeptical of what government institutions tell you. So now it's 1977, the McGovern Committee and the USDA make these proclamations about what constitutes a healthy diet, and there's simply no skepticism. (With the possible exception of Bill Broad writing in Science magazine, which no one outside the field of science was reading.) So the government tells us that we should eat low-fat diets - and

not even learned authorities in the government, but Congressman and USDA bureaucrats channeling 30-year-old congressional staffers – and lo and behold, all these health reporters decide it must be true. That’s the failure. In my fantasy life, I get a call from the managing editors of the New York Times and the Washington Post and the Wall Street Journal and they say they’ve read my book and they want to know how they can improve their health and diet reporting. Because they can see, whether or not I’m 100 % right, or 80 %, or only 50 %, surely their reporters did something wrong. Now there’s a fantasy for you.

INTERVIEWER Yeah, I agree. That makes sense. So, what would you say?

TAUBES I haven’t figured that one out yet. Get some of your political reporters to do the health writing. Get the smarter people on the paper to do it.

INTERVIEWER Well, I always thought of you as one of the very few science writers who was sufficiently skeptical. Practically none of them are.

TAUBES That’s basically the problem. This lack of skepticism. But I had an advantage. . . . You’ll remember, in my first book, I got to live at a physics laboratory and I was lied to regularly by a Nobel Prize-winning physicist. His conception of truth was what he needed to be true at the moment, and what he could get people to believe. So if you called him on the lie, and he was kind of a charming fellow, he would acknowledge that he might have misled you, and then he would step back and try another lie, because it wasn’t in his best interest to tell the truth. Then I did this book on cold fusion where I spent three years, basically, getting lied to constantly by anyone who thought it was in their best interest. There was a period in my life where it was hard for me to trust anyone, because I’d just been around too many people who believed that the truth was what was convenient. I also knew, by the time I got into public health reporting, I knew what it took to do good science. So, if somebody wasn’t doing it, I knew there was no reason to put them on a pedestal. The first article I ever wrote for Science magazine was an investigative piece of an alleged fraud that had happened in the cold fusion episode – a fundamental result that kept the field alive for another few months couldn’t be explained by nuclear physics. That alone was so remarkable – as one of the smartest men in the world suggested to me, a physicist named Dick Garwin at IBM – that it should have made everyone suspect fraud. If something can’t be explained by a very well-tested theory, you would question the ethics of the researcher who did the work before you’d question the theory. This is Hume’s idea that eyewitness testimony is never good enough to make you believe in the existence of a miracle, because a miracle is, by definition, something that’s impossible, by all our accepted theories. It’s easier to believe that 10, 100, or 1000 people were deluded or dishonest than it is to believe that the Virgin Mary really did appear in Times Square or whatever your miracle of choice is. Anyway, I’m writing this story for Science about an alleged incidence of fraud that took place at Texas A & M, and the editor had a Master’s degree in mathematics from Texas A & M. He took it upon himself to call some of the professors I interviewed, and he would ask them if they really believed what I said they believed, which was not completely unreasonable, considering I’d never written for the magazine before. But then he would say to me, “Well, I talked to professor so-and-so, and he says he doesn’t believe what you said he believed.” And I would say, “Well, this is six months after the fact. Let’s go look at the lecture he gave six months ago, and here’s the paper he wrote on the lecture, and here’s the sentence where he says what he believed then, which is what we’re writing about.” And this editor’s response was “how could you question him? He’s a PhD, and you’re not.”

INTERVIEWER That’s rather unfortunate.

TAUBES This was around 15 years ago; it’s still one of those memorable moments in my life.

INTERVIEWER This guy was an editor at Science magazine?

TAUBES An editor for the journal Science.

INTERVIEWER Oh yeah — that's really bad. Really, really bad.

TAUBES It's a common response you see -- what right does Taubes have to say this stuff? He's not a scientist. It's like "The Wizard of Oz," where in order to be a scientist or be taken seriously in science, somebody has to first give you the piece of paper?

INTERVIEWER On a scale of sharpness of criticism, from one to a hundred, that ranks about a zero.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2008/01/05/interview-with-gary-taubes-directory/>

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Varangy (2008-01-13 11:07:38)

\*\*\*\*\*And this editor's response was "how could you question him? He's a PhD, and you're not."\*\*\*\*\* Ah yes, the classic logical fallacy of argumentum ad verecundiam rears its hideous head.

Seth's blog » Blog Archive » Interview with Gary Taubes (directory) (2008-01-13 18:08:14)

[...] Interview with Gary Taubes (part 9) [...]

charles (2008-01-13 20:09:12)

My wife recently lost 40 lbs. She is 40, and she has a bad hip, so she has extreme difficulty exercising, esp. cardio. She is lactose intolerant, and she is a vegetarian. So, that leaves vegetables, and to top it off, she does not like sweets. Whew! So she eats a hi carb diet. She lost 40 lbs in a year, has kept it off. I am very proud of her, and her doctor's visits have shown her health and tests to be very good. So I guess she's a case where she is the opposite of an Atkins type diet. I, for one, expected her to fail, but of course did not say this! Her case is very atypical, I would imagine. She is very disciplined.

marge (2008-01-13 20:20:24)

I just watched Taubes on Charlie Rose. Dr. Ornish raised a good point - that Taubes is very good at poking holes in others' research, but there hasn't been many studies to show that Atkins own diet is actually healthy. On a side note, Taubes didn't really come off too well; he interrupted too much and Ornish's point (my point above about poking holes) rang true. Taubes wasn't rude, but Ornish seemed too mild mannered and nerdy, and Taubes too impatient and testy, unwilling to let either of these actual researchers even finish a sentence. Unflattering. Taubes is a bright man, no doubt - Harvard, etc. I also don't doubt his honesty or his zeal (certainly not the latter! I just read his response to Fumento at Reason!). I would just offer unsolicited advice that his ideas are exciting and he is an articulate, forceful advocate - he can rest a little bit; the average reader/viewer will, however, constantly be thinking "But he's not a doctor, let alone a researcher himself", unfortunately. No journalist can match an actual researcher, no matter his or her zeal. A good narrative is still different than good science. I am all for paradigm shifters and new Copernicuses. If Taubes helps Americans be healthier and provides an epistemological slap in the face of the AMA, hot dog, as long as the evidence is there. But it's so much fun to be sexy and an outsider, and no fun at all to be a scholarly drudge affirming the platitudes of dietary common sense.

marge (2008-01-13 20:25:57)

Sorry, I hit return too early! As far as the interview here, I found the entries on Rubbia fascinating! I realized while reading the interview I had bought that book years ago and read it! I had forgotten the author's name. The cold fusion portion is also fascinating - what a great opportunity to develop one's scientific intuition. I would love to hear more about that BS detector,

whether that was generalizable to other people, circumstances, and if it helped him in his daily life. In the spirit of Seth Roberts, the intriguing idea to me is that everyone has intuitions, but to be able to TEST the intuitions, and to verify or disconfirm them, is very exciting. The idea of calibrating one's intuition is great. I work with patients and they often fib or lie, and I often wish I could find out if my hunches are accurate, and to what extent. Taubes' experience in this dept is an interesting lead...

Mickey (2008-01-15 23:56:37)

> I just watched Taubes on Charlie Rose. Dr. Ornish raised a good point - that Taubes is very good at poking holes in others' research, > but there hasn't been many studies to show that Atkins own diet > is actually healthy. Marge, I'll have to point out now that the Charlie Rose show with Barbara Howard, Gary Taubes, Dean Ornish was in 7/2002 - that is almost six years ago. At that time Gary Taubes hadn't even started the 5 years of full-time research for his book. I also found the discussion and was a little disappointed because Gary didn't give the arguments that he so very clearly presented in his book until I realized that the video was from 2002 when Taube's 'Big Fat Lie' article was published. After 2002 there have been a lot of studies showing that the Atkins type of diet is in fact very healthy! Unfortunately there are no major long-term studies - the longest I heard of being 44 months (a Swedish study on diabetics on low carb). But there are dozens of studies that are 6 or 12 months long already. I'm staggered by the amount of studies that come out nowadays - nearly every week there is a new low carb study published in some of the big nutritional / medical journals all of the results have been very good. Luckily a lot of things have changed in the last 6 years.

Stephen M (Ethesis) (2008-02-25 19:43:24)

**I do think that Jane Brody is as responsible as anyone alive for the obesity epidemic. She just bought into this idea of the low-fat diet as a healthy diet, and her sources in New York told her that Atkins was a quack, and that fat was bad, and she never questioned any of it. I don't know if she had the intellectual wherewithal to do it. Kismet.**

## **Interview with Gary Taubes (part 10) (2008-01-13 18:07)**

TAUBES I'm definitely more skeptical; even the science journalists I really respect, some of my friends, sometimes I read their stuff and I say, "They just weren't skeptical enough".

INTERVIEWER Yeah, that's my reaction to at least half of the science journalism I read. One of my next questions is, did writing your book radicalize you? But it sounds like you were already radicalized!

TAUBES What do you mean by "radicalize me"?

INTERVIEWER Did it make you even more skeptical of the establishment? Obviously, you were skeptical to begin with.

TAUBES Again, the obesity stuff, in retrospect, is mind-blowing to me. Until I did the research for the book, I never questioned the idea that obesity wasn't about calories in/calories out. That it wasn't about overeating. Then you realize that there's no arrow of causality in the law of energy conservation. That the correct interpretation is that we overeat because we get fat, we don't get fat because we overeat. Now that's a remarkable shift in causality, and yet nobody picked up on that for fifty years. And nobody seems to care even now. There's one guy I know of - Robert Lustig at UCSF - who has written papers discussing this causality issue and getting it right. And nobody else seems to care. It blows my mind that an entire field of research could get it so wrong.

INTERVIEWER But you'd seen Nobel-Prize-winning physicists get it very wrong.

TAUBES But what they were getting wrong were subtle; yes, they'd believe incorrectly that they'd discovered elementary particles, but what they were doing was a real subtle game. What they were misinterpreting

were extraordinarily subtle aspects of the data. This obesity screw-up is fundamental; it's like a grade school error in the interpretation of the laws of thermodynamics. And I made it as well, up until five years ago. I never thought differently. But what radicalized me is that they don't care. If they successfully ward off my threat to their beliefs, then I'm in a very dangerous place. Then it's, like I said, where I end up a bitter demented old man, one of those guys who's muttering to himself all the time that they, the establishment, didn't listen to him...

INTERVIEWER I wondered, too, what other books your book resembles. To me, that's an interesting question. But there's many possible answers, and one is "Well, there's been a long list of books that talk about this scam or that scam, and some of them are awful and some of them are pretty good. One of the ones that's good is that great cholesterol scam, *The Great Cholesterol Con*. That's a good book. But your book is different, because unlike the author of that book, you really had something to lose. You were a respected science writer who could expect to receive many more assignments in the course of a lifetime and write many, many more times for the *New York Times* in science, and so forth, and might write other books. For a writer in that position — this is an incredible book, because

TAUBES I actually didn't think — and this may be my own ignorance — I didn't ever think of it as endangering my career.

INTERVIEWER But you clearly have more at stake

TAUBES I always knew I could write about other subjects. I could go back to writing about high-energy physics; I like it. There's a new accelerator turning on; there'll be something to write about. I would have to compete with the whole new younger generation of whiz kids who may be better prose stylists than I am, but I could do it. What stuns me is that people may not take me seriously enough to refute me, to ruin my credibility. That's what bothers me, not that they could ruin it. Here's a book that might be similar, OK? Not in terms of prose style, or beauty of presentation, but like *The Best and the Brightest*. A book that came out during the Vietnam War and exposed the sort of irrationality of it. When I was writing my cold fusion book, I read *A Bright and Shining Lie* and I read Randy Shilts's *And the Band Played On*. I thought we're all writing about human idiocy. Shilts's book was particularly important, because it came out at a time when it could still make a difference, when people still had to change their beliefs. So Shilts actually accomplished something. And *A Bright and Shining Lie* was an extraordinary book. In my fondest dreams, I couldn't imagine writing such a book. But maybe my book may be akin to book *And The Band Played On* and *The Best and the Brightest*. Those are books that revealed the establishment's erroneous beliefs and how they were misleading us, and they did so at a time and in a way that could actually help set us on the right path. You use the term "We were misled"; we were literally misled. Not deceived; we were just led down the wrong path. Often, when I think about this, I imagine this situation in the 50s and 60s, when there were these dual paths that could be followed; two paths through the woods, and the establishment took us on this low-fat path. What I had to do when I did this research is I had to back up, back up, back up until I got back to the woods, to the point where the two paths diverged, and see the existence of the other path, and see where that one led us. Did that get to a place where we could actually understand what was going on, and maybe prevent and cure these diseases.

INTERVIEWER Well, when I think about precedents for your book, sometimes I think of *The Jungle* [by Upton Sinclair]. In the sense that there's this awful thing going on, and it's in the interests of many people to keep it going on, but it's really outrageous. It's very different, in a way, because the meat-packing industry was very obviously horrible, whereas what you're saying went on isn't obviously horrible; it's more complicated than that. But on the other hand, your thing is kind of a bigger issue; it's everyone's health. It's not just everyone's health, it's everyone's mental health; it's horrible, being fat; it's awful every day, not just when you die.

TAUBES I have friends and acquaintances who will often say to me at dinner parties, "Well, who really cares about this stuff, because you want to live well, not just eat the healthiest possible meals." But they're

not overweight, they don't have cancer running in their family. Their life, rightfully, is a balance between living healthy and living well. But the problem always is that even though those people want to live well, they eventually get to the point where now they're sick. Inevitably, when you get to that point, you wish maybe you hadn't lived quite so well. Unless you're lucky and you have that massive coronary on the golf course, or on your lover, so you don't have time to think about it. But both my mother and my father died from long, extended, horrible illnesses. There's a point at which you think, "Maybe if, 30 years ago, I had lived less well and more healthy, I wouldn't have to go through this," but I guess we all have to die of something.

INTERVIEWER Well, I think understanding what causes obesity is a big, big issue. For the medical establishment to be misled, or deluded, to get the wrong answer and insist on it, is a tragedy. It's a gigantic tragedy, because of all of the people who are overweight. Not the people who are 5, 10, or even 20 pounds overweight. The people who are 50 or 100 pounds overweight.

TAUBES We're drowning in diabetics; we're drowning in obese patients. Obviously, physicians and obesity researchers and public health authorities haven't got a clue. By what right does anyone flippantly discard an alternative hypothesis that can explain the evidence? You would think they'd be desperate for such a thing. You know, this guy presents a compelling argument that we got it wrong. Well, Jesus, we obviously got it wrong. We haven't cured a person in 100 years! Let's take him seriously!

INTERVIEWER Let's praise him for raising an idea that hasn't yet been proved wrong.

TAUBES We'll see how it goes. Again, I'm obviously impatient. I expected people to read the book immediately and to send me emails; somebody at NIH saying "Come on down here! Talk to us about what experiments we should do." If the book has any effect over five years, ten years, that probably would be a great accomplishment. In a sense, I wrote the book for graduate students and post-docs, so that when their professors utter nonsensical statements, like the only that matter is calories in/calories out, these kids will challenge them. It could take awhile; it's only been a few months.

INTERVIEWER When their ideas failed to produce better ways of losing weight, and fifty years had passed, it was understandable, but not for scientific reasons.

TAUBES As I say in the book, they're not scientists. The funny thing is, they're not trained as scientists; a lot of the people involved in this field are nutritionists, medical doctors, public health people, and that's a different way of thinking. I had an apprenticeship in science; I got to spend my ten months at this physics laboratory; I got to delve into cold fusion for three years. In a way, you have to get an apprenticeship in how to think like a scientist. You have to be mentored. It's not how we naturally think. These people, it's not part of their training in any way. Not that there aren't scientists who started as MDs. There are these yellow berets, the guys who went to NIH instead of Vietnam in the late 60s and early 70s, so suddenly, they're MDs who were working around biologists and PhDs, and they were taught how to do good science. But it's not how we naturally think; these people just didn't do it. Then there's this whole world of nutritionists and epidemiologists who, for whatever reason, far too many of the senior figures in those fields don't have a clue how to do science. So they passed on this sloppy way of thinking to their students, and the whole field is permeated with less-than-rigorous thinking.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2008/01/05/interview-with-gary-taubes-directory/>



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Aaron Brown (2008-01-13 20:34:46)

This is a fascinating interview. A couple typos in this installment: "we get overeat" "getting it write" Did you conduct the interview with voices or email?

Aaron Brown (2008-01-13 20:39:53)

Sorry for the bogus formatting in my last comment. (But hey, if there's no preview button...)

Tim Lundeen (2008-01-13 21:15:48)

I do think science gets it right in the end, and that good science displaces non-science in the end. And I think Taubes' book will accelerate this process re carbohydrate metabolism. The book has been incredibly useful for me, and has started me down a number of good/interesting paths. Since lowering my blood sugar down another level, to try to keep it close to 83, I've lost 10 more pounds and my arithmetic performance tests look better.

Tom (2008-01-13 21:30:12)

This interview continues to amaze me, Seth. Fantastic. And there is deafening silence on Taubes from the top obesity authorities - a far cry from the howls of outrage that greeted his NY Times piece. The book is just too authoritative. I think they know he knows their field better than they do...so they're hiding in their foxholes, waiting for it to blow over. The blogs know about the book, though, and Google ain't forgetting it any time soon. It may be my imagination, but I have seen a skepticism re: the Ancel Keys/low-fat dogma beginning to percolate through the memes out there. A work of this quality and range simply cannot be denied.

Stephen M (Ethesis) (2008-01-13 22:16:24)

"but I have seen a skepticism re: the Ancel Keys/low-fat dogma beginning to percolate through the memes out there. A work of this quality and range simply cannot be denied." I hope so. I'm a hoper in the percolate theories ... BTW, went to Washington over Christmas (State, not D.C.) started four people on SLD. Now that I've kept the weight off, they are interested. Was an interesting visit. I'm really curious to hear how it goes for them.

Tom (2008-01-14 08:57:53)

Another result that is 'impossible' according to low-fat, low-cholesterol dogma - Cholesterol drug lowers cholesterol, clogs arteries faster: [http://www.nytimes.com/2008/01/14/business/14cnd-drug.html?\\_r=1&hp&oref=slogin](http://www.nytimes.com/2008/01/14/business/14cnd-drug.html?_r=1&hp&oref=slogin)

Heidi 555 (2008-01-14 09:37:03)

Seth, great interview. I've been enjoying it, and am looking forward to reading Taubes' book. (These are the typos that I noticed: "is that we get overeat because we get fat," "who has written papers discusssing this causality issue and getting it write" "But what they were getting wrong were subtle" "like the only that matter is" Please delete this portion of my comment, after you read it.)

seth (2008-01-14 15:13:15)

Aaron, this interview was by phone.

Seth's blog » Blog Archive » Interview with Gary Taubes (directory) (2008-01-14 16:18:49)

[...] Interview with Gary Taubes (part 10) [...]

losing-it (2008-01-15 09:15:36)

"...the correct interpretation is that we overeat because we get fat, we don't get fat because we overeat." Whoa. Brilliant. This perception clicks; echoes clear and true somewhere in the unplumbed Depths of Recognoscere.

Mickey (2008-01-16 00:10:13)

â€œthe correct interpretation is that we overeat because we get fat, we don't get fat because we overeat.â€ Yes. The slightly longer version: When our insuling levels are high (either from eating a lot of carbs or from having metabolic syndrome and hyperinsulinemia) all energy is directed to the fat tissue. All the energy (fatty acids and lipoproteins) get's sucked up in our fat tissue and our muscles and other organs are deprived of evergy which will make us hungry and causes us to eat again. So the above sentence is literally true even if it doesn't seem to make sense at first.

## Interview with Gary Taubes (part 11) (2008-01-14 16:17)

INTERVIEWER What happened when you met with the [UC Berkeley School of Public Health] epidemiology students?

TAUBES Again, it was a little discouraging, only because these kids really want to do good, they want to make a difference in the world. That's why they go into the field. They want to have an effect. But as I say at the end of the book, to do science right, your primary motivation has to be to learn the truth, and if you're infected with this desire to change the world, to save lives, it takes you away from the fundamental motivation, which is to get it right. If you want to save lives, then you want to get the word out as quickly as possible. You don't want to wait ten or twenty years or more for definitive evidence, for the rigorous tests to be done; you want to give advice and tell people what you've learned, even if you only think that you've learned it. Doing science right takes a long time. So does good journalism. You can say the difference between my book and Gina Kolata's book is – not counting whatever difference in intellect we begin with– my book took five years, more than full time, because I wasn't going to say anything until I was certain that what I was saying was sound. She wrote her book in two years, part-time, while still working full-time as a New York Times reporter.

INTERVIEWER Yeah, they're very different.

TAUBES Even when I was writing magazine articles, if I was in danger of missing a deadline, which was often the case, I would ask my editors, â€œDo you want it on time, or do you want it right?â€.

INTERVIEWER There was a managing editor at The New Yorker, one of the first, whose motto was â€œDon't get it right, get it written.”

TAUBES When I was a young journalist working for Discover, which was owned by Time, Inc., the philosophy was that one of the worst things anybody could do was over-report a story. Just get the facts and get it out. Except science doesn't work like that. Science, you've got to get it right, and that takes time, and you can't do it on deadline. Along those lines, I did read one of your blog entries about settling points versus set points, and I thought it might be. You know, I Google myself, as all writers do fairly regularly, so first you read all news stories that day, hoping that the Google Alert might have missed something, and then you go to the blogs.

INTERVIEWER So you read my post about the most surprising thing in your book?

TAUBES What was the most surprising thing?

INTERVIEWER That you didn't agree that set points play a role in homeostasis.

TAUBES It's funny â€“ the more I think about it, the more Claude Bernard was brilliant. (I'd like to do a book on Claude Bernard, but probably can't because my French is terrible.) In particular, this idea of the milieu interieur? The fundamental idea of homeostasis is that the body works to maintain the stability of what he called the milieu interieur, which gets translated to â€œinternal environmentâ€. What he meant by that is the conditions

right outside the membrane of the cell, every cell in the body. So the body wants to maintain stable this internal environment – the pH, the blood pressure, the ionic potential, everything – of the cell itself. So it wants to make sure that the environment the cell lives in – every cell – remains relatively stable. In that sense, we're this huge symbiotic organism made up of billions of individual cells, and homeostasis functions to keep the conditions that these cells live in stable. So each cell lives in this little isolated world, and it's got to see stable conditions, or it's going to die. The idea of the set point is that there's some central controller in the brain that maintains homeostasis, but that's naive. Rather, there's an unbelievably complicated mechanism composed of individual settling points. Like the fatty acid concentration on the interior, and exterior of the fat cell. If there's more fatty acids on the outside of the cell membrane than the inside, then fatty acids flow into the cell, and you get slightly fatter. There's no brain in charge. The brain may respond, and the hypothalamus sends signals back and forth, and effects changes in hormones in response to changes in the environment, but there's so many different interrelated, interconnected feedback loops involved that to refer to a set point is to grossly oversimplify this beautiful homeostatic system, and it directs attention away from the body, where all these feedback loops interact, to the brain. Did you ever read any books on chaos theory?

INTERVIEWER No, I haven't.

TAUBES Well, to understand homeostasis you have to understand this concept of dynamic equilibrium, where there can be hundreds of forces acting simultaneously. And the point is, you've got these negative feedback loops all over the body, and they involve the brain, but on some level, the dynamic equilibrium you're looking at is right at the cellular level. That's where the forces converge to make us leaner or fatter. And the brain is part of these loops, but to concentrate on the brain misses the big picture.

INTERVIEWER The brain is sensitive to the environment — sure, the set point doesn't really exist anywhere, and sure it's a function of about a zillion things, not all of them in the brain, sure. But the reason I like that idea of a setpoint is that it's easy to imagine something going up and down, rather than a million things going up and down.

TAUBES But the problem is once you oversimplify, there's a tendency to believe the oversimplification. You should go back and read the papers on settling points. There were a couple, if I remember correctly, written by psychologists from the University of Chicago. You should go back and read those original papers. They're fascinating, and the point they make, is that you don't need the brain involved. Like we don't think of the brain regulating blood pressure. You don't really think of your brain regulating blood glucose. Those cycles I described in my lecture, you know, the triglyceride fatty acid cycle and the Randall cycle, serve to regulate blood sugar. Then hormones are layered on top of those cycles, and the hormones are determined, in part, by the hypothalamus, so you get the brain involved, and the sensing of the environment, but there are other ways to sense the environment, like temperature sensing of the skin, evaporation. There are other ways that we adjust to the environment without the involvement of the brain. One of the things I left out of the book, for instance, is this theory that hunger is perceived by the liver.

INTERVIEWER Perceived, or controlled?

TAUBES Perceived. Or sensed by the liver. You know, your eyes collect photons, and then they send the signal back through the optic nerve. The perception of the universe is done in the inside of the brain, but the eyes are the sense organ that collect the photons. Your ears detect sound waves, but your perception of what you're hearing is inside of the brain. This theory says that your liver senses fuel availability and then your brain integrates the signals from the liver and registers them as hunger or the absence of hunger.

INTERVIEWER Hunger is internal. It's like the recognition. Hunger is not something external to the body.

TAUBES Let me re-phrase it. It senses fuel ability. Then your brain perceives it as hunger and initiates — that would be a better way of putting it. But the sense organ of fuel availability is your liver. I had some discussions with Mark Friedman, a fascinating guy, really smart. He's at the Monell Institute.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2008/01/05/interview-with-gary-taubes-directory/>

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Timothy Beneke (2008-01-14 17:07:37)

This interview gets more fascinating with each installment. You guys should talk forever!

NE1 (2008-01-14 18:16:54)

I haven't been reading these interviews (I read blogs for the value-added), but I'll once again take the contrarian position. Science done right is science that *\*works\**. I see nothing wrong with straining at the bit to counteract disease before it is fully formed and overblown. Surely this is what the study of epidemiology is—else it's medicine or biology. Leave it to the Historians of Science to be cautious and right.

Tom (2008-01-14 18:41:28)

Well, do you see anything wrong with creating epidemics of obesity, diabetes, and heart disease because a nation's diet was completely changed on the basis of a few misunderstood findings?

NE1 (2008-01-14 20:19:58)

Well, I still don't know much about the world of epidemiology, and had assumed there were tests for significance as in most of science, but perhaps things get carried away when they are handed off to policymakers. Anyways, I actually ran into an epidemiologist today, and she echoed general frustrations with the half-assedness of many in the field, and not just in the issue of competency.

Wade (2008-01-14 20:47:51)

Seth, Did you get a chance to ask Taubes to comment on the "China Study". It seems like a well reasoned, well researched tome that comes to the exact opposite conclusions he does. It agrees that refined carbs are bad (is there anyone who doesn't), but advocates an all whole foods plant based diet.

Chris (2008-01-15 12:15:13)

I'm sympathetic to NE1: we have finite lifetimes, so it makes sense to act on partial or preliminary evidence rather than wait a couple of decades for the science to firm up. Sure, I may have wasted a few bucks on beta-carotene supplements back when they were being hyped - and maybe the Vitamin D I'm taking now will fail to live up to the claims being made for it. Still, I think the risks and benefits, based on the information available at the time, made it rational to take these supplements. As for the low-fat fiasco, the problem there was not in initially promoting the hypothesis, but in continuing to promote it - hegemonically - despite negative results. For someone fighting a weight problem, it made perfect sense to try the low-fat approach in 1978, but not in 1988 or 2008.

Jen B. (2008-01-16 12:05:59)

What is puzzling to me is that the low fat theory took hold so fast and so hard. Even after reading GCBC it is hard for me to see why this happened. However, Gary, be of good cheer. I have convinced both of my parents to go low carb, and I gave each of them your book. I know you'd rather *\*scientists\** were rethinking this stuff, but perhaps it will percolate in from the outside

instead of the other way around.

Stephen M (Ethesis) (2008-01-16 17:44:30)

I like the concept of dynamic balance, would explain some things about why I can make sugar or oil work for weight loss, but if I take them together (not split am/pm, but a combined dose) or use protein powder SLD doesn't seem to work over the long run as well.

Neil Wilkinson (2008-01-18 14:48:34)

Wade, for a counter argument to T Colin Campbell who wrote about the China Study, try this review by of the book by Chris Masterjohn at <http://www.cholesterol-and-health.com/China-Study.html> Cheers

Seth's blog » Blog Archive » Interview with Gary Taubes (directory) (2008-01-19 18:46:18)

[...] Interview with Gary Taubes (part 11) [...]

Wade (2008-01-27 20:07:47)

Neil: Thanks for that link... very interesting reading, particularly the stuff about Price who seems well worth reading. After going through the rebuttal, the counter rebuttal, and the counter-counter rebuttal my head's spinning, but it certainly takes quite a bit of shine off of the China Study. Doesn't mean it's all wrong, but in the end it seems to me that you can quite reasonably shoot down the China Study's conclusions, or at least that there isn't enough information in the book itself to really justify its conclusions. Wade

### **Most. Frustrating. Party. Ever (2008-01-16 02:47)**

I attended the [1]Electronic Freedom Foundation's [2]17th birthday party.

It was a highly frustrating party because (a) there were many fascinating guests and (b) the music was so loud it was hard to talk to them. Every conversation was at least a little difficult. Still, I learned a few interesting things:

1. Around 5 p.m. that day, as a BART train pulled into the 16th Street stop, the driver announced, "16th Street, EFF."

2. Every EFF employee was required to wear a name tag that said "Hello, my name is" along with their name. Underneath the name box it said "Don't ask me about XXX" where XXX was about 30 or 40 possibilities, including "drugs", "P2P", and "Open Government". This was so amusing it would have been nice if the room had been a little bit brighter so I could have read more of them. The "Open Government" one was worn by a woman named Marcia, who was responsible for the FOIA request that caused Attorney General Alberto Gonzales to resign. "The straw that broke the camel's back," said Marcia. In a little speech by one of EFF's leaders, this was mentioned as one of the year's two biggest accomplishments. The other was the success so far of their lawsuit against AT & T for allowing the government to tap everyone's phone without a warrant.

3. Marcia was impressed that I knew Aaron Swartz. She didn't know him personally but she admired the breadth of his activities. "Like what?" I asked. "The [3]12-part novel he's writing," she said. This was a surprising answer. "You read his blog?" I asked. "No, I just heard about it," she said.

4. [4]Graffiti Research Lab exists.

5. I met a guy named Jason who had recently graduated from the University of Rochester and is now working at a small (12-person) start-up in San Francisco. He had wandered over to the EFF party from another get-together. We

talked about working conditions. Most people don't like their jobs, I said. That was a strange concept to him, he said, since he had enjoyed the two jobs he had. "It's a job, you're not supposed to like it, my friends tell me," he said.

6. When I was a grad student, I studied how rats measure time on the order of minutes and seconds. (They have a clock that resembles a stopwatch, I found.) Surely humans have a similar clock, but why? One use of such a clock, I realized, is to measure how long it's been since the last good conversation. When that time gets large enough, you leave the party.

Addendum. Me comparing chocolates: [5]Photo 1. [6]Photo 2. [7]Photo gallery.

1. <http://www.eff.org/>
2. <http://www.eff.org/deeplinks/2008/01/effs-17th-birthday-party-san-francisco>
3. <http://www.aaronsw.com/weblog/bubblecity11>
4. <http://graffitiresearchlab.com/>
5. <http://valleywag.com/photogallery/effpartymacworld2008/1000505553>
6. <http://valleywag.com/photogallery/effpartymacworld2008/1000505577>
7. <http://valleywag.com/345818/eff-party-celebrates-san-francisco-cliches>

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Mike Kenny (2008-01-16 09:19:24)

Regarding item six—that reminds me of when one speaks with others, a silence of too long a duration feels like a prompt to 'say something'. Or when someone is talking for too long (I wonder why we have this intuitive standard), one feels like 'Okay, okay, you've gone over your time limit' as if you were at a debate. Do we have mechanisms that induce us to share information in conversation, but not to monopolize or allow others to monopolize so multiple sources can be considered? This might be useful to people in a stone age environment.

Akhdar (2008-01-22 00:43:58)

Why, in arenas promoting talk with fascinating people, do they play the music so loud? I do not get this. I find it frustrating as well! I went to a party recently with a lot of older (my age) people of varied interests and affiliations. We began to have a chat and became tremendously involved in our conversation. The host then put on some ear-splitting electric guitar filled screaming music. Mid-life crisis, I wondered. How conducive to good conversation is music when one has to shout? Call me a fuddy-duddy, but I feel constantly assaulted by loud music in many places. I don't get it at all. A discotheque ambiance in a store is not going to encourage me to peruse, but to get the heck out of there as fast as I can make it. Number 6: very funny.

Piracy EFF » Blog Archive » Most. Frustrating. Party. Ever (2008-03-22 08:28:39)

[...] Laura McGann wrote an interesting post today on Here's a quick excerpt Every EFF employee was required to wear a name tag that said "Hello, my name is" along with their name. Underneath the name box it said "Don't ask me about XXX" where XXX was about 30 or 40 possibilities, including "drugs", "P2P", ... [...]

## A Cautionary Tale about Salt (2008-01-17 00:20)

From the [1]SLD forums:

Thinking that I was doing a good thing, about twenty-two years ago, I stopped buying salt to keep at home – believing the hype about Americans eating too much salt, etc. I suppose that, in my younger years, it was not too dangerous as I was eating out a lot, and, at times, eating from packaged foods. Also, Pre-SLD, I would get cravings for popcorn (with a little salt added) and give in – so I did get salt at times.

But, for years, I have mainly cooked at home and have eaten foods high in potassium (garlic, onions, et al). Potassium depletes sodium further – and I was even taking potassium pills in order to ease a separate condition. I rarely go out and do not eat packaged foods. I had no idea that sodium was essential (stupid me). I thought that it was like sugar – best to cut it out completely.

On SLD (not that this is SLD's fault, of course!), I could rein in my cravings for popcorn. And so I was getting no salt. At the end with SLD (and for many, many months, afterwards), I began to have an issue that if I ate anything sweet, I would begin to stutter, feel like I could not breathe, feel faint, dizzy, etc. It was like the sugar bypassed the blood-brain barrier and went directly to my head. Honestly, it was terrifying and I was fairly sure that I was becoming diabetic.

The doctors, noting atypical symptoms and a frightened, teary woman, naturally diagnosed panic attacks. Then low iron. And a million other things which had no effect. Of course they really thought that I was a hysteric (an hysteric?). The irony is that they thought that maybe I was dehydrated so I increased my water intake. The worst possible thing.

And then I began to faint, to black out. And then had two seizures.

A friend of mine who is a chef (my ex, actually) figured it out. I bought some sea salt and the minute I ate it, my body lunged! Like this was exactly what I needed. After three heavily salted meals, everything normalised – even things which I had not noticed as abnormal. My eyesight sharpened, my balance improved, and I felt sane – like I wasn't drowning anymore. Overnight I felt better than I had in years.

Later neurological consultations confirmed that I probably injured my brain as badly as I did in the car accident I was in as it may have been chronically swollen from the lack of salt. Who knew? I had no idea how important – vital – salt was to the diet.

1. <http://boards.sethroberts.net/index.php?topic=738.msg62799#msg62799>

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Ed (2008-01-17 11:37:24)

Interesting, how is one to know what the "right" amount is for salt and or sugar? –Ed

### **Loss of a Child and ALS (2008-01-17 05:03)**

This is one of the most unusual research findings I have ever encountered. From the [1]American Journal of Epidemiology:

Between 1987 and 2005, the authors conducted a case-control study nested within the entire Swedish population to investigate whether loss of a child due to death is associated with the risk of amyotrophic

lateral sclerosis (ALS). The study comprised 2,694 incident ALS cases and five controls per case individually matched by year of birth, gender, and parity. Odds ratios and their corresponding 95 % confidence intervals for ALS were estimated by using conditional logistic regression models. Compared with that for parents who never lost a child, the overall odds ratio of ALS for bereaved parents was 0.7 (95 % confidence interval (CI): 0.6, 0.8) and decreased to 0.4 (95 % CI: 0.2, 0.8) 11–15 years after the loss. The risk reduction was also modified by parental age at the time of loss, with the lowest odds ratio of 0.4 (95 % CI: 0.2, 0.9) for parents older than age 75 years. Loss of a child due to malignancy appeared to confer a lower risk of ALS (odds ratio = 0.5, 95 % CI: 0.3, 0.8) than loss due to other causes. These data indicate that the risk of developing ALS decreases following the severe stress of parental bereavement. Further studies are needed to explore potential underlying mechanisms.

I would love to learn how the authors decided to look into this. There are a variety of "stress is good for you" results (e.g., low calorie intake increases rat longevity) but this is the most puzzling.

1. <http://aje.oxfordjournals.org/cgi/content/abstract/167/2/203?etoc>

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Joe (2008-01-17 09:19:24)

It would just seem that there are different kinds of stress, which may even release different hormones. The stress of hunger can actually be beneficial to the body, while the stress of grief for a loved one can be harmful. It would seem to make sense.

Timothy Beneke (2008-01-17 09:59:19)

Fascinating. If there's research on this, one would expect there to be research determining the overall mortality and morbidity effects of losing a child. Everything I've ever seen, from literature to clinical observations says losing a child is the most painful grief one can experience. Surely it correlates with depression, which is known to correlate with heart disease... But all this correlation stuff is one big guessing game...

Tom (2008-01-17 10:29:11)

Perhaps the death of a child causes an increased focus on the body's fragility, leading to better care of one's health, diet, exercise?

Stephen M (Ethesis) (2008-01-17 18:20:02)

"Perhaps the death of a child causes an increased focus on the body's fragility, leading to better care of one's health, diet, exercise?" All I can say is "not hardly." I've known a lot of parents who went through the death of a child. None of them took better care of themselves for years, if ever. Took me, I'd say almost ten years from the last death before I really started to take care of myself at all, I'm still not to pre-death levels of care.

Tom (2008-01-17 18:25:00)

I should have been able to figure that out...apologies for the witless remark.

donnyrosart (2008-01-18 20:14:14)

Calorie restriction makes just about every degenerative disease less common—except for ALS. So maybe something that increases the genetic risk of cancer decreases the risk of ALS?



Stephen M (Ethesis) (2008-01-19 12:25:28)  
No apologies necessary.

Sheila Buff (2008-01-19 17:05:51)

Hi Seth– I think this ALS/stress study is related to a long series of similar studies that have been conducted in Scandinavia. For example, Cancer incidence in parents who lost a child: a nationwide study in Denmark (Cancer 2002;95:2237-42). The conclusion was that the death of a child is associated with a slightly increased overall cancer risk in mothers, mostly due to smoking-related malignancies. Since people often smoke as a way to reduce stress, that's not surprising. A follow-on study showed that cancer survival in the child-loss cohort isn't impaired. Separate studies have looked at heart disease, rheumatoid arthritis, inflammatory bowel disease, multiple sclerosis and some others. The bereaved cohort had a greater risk of myocardial infarction, again mostly due to stress-related behaviors such as drinking alcohol and smoking. They also had a greater risk of MS, but for RA and IBD there was no difference. The ALS finding is especially interesting compared to the increased MS risk. The expectation would be that if stress increases the risk of one neurodegenerative disease it would increase the risk of others, but maybe not.

Seth's blog » Blog Archive » How Things Begin (a surprising ALS result) (2008-01-21 13:41:09)  
[...] Loss of a Child and ALS [...]

## **Obesity and Refrigerator Design (2008-01-18 02:24)**

In the last chapter of The Shangri-La Diet, I discussed what environmental changes my theory of weight control suggested. An [1]article in the LA Times about how to reduce obesity by changing the environment contains some ideas that strike me as unwise:

laws regulating portion size

but also a good one, from Brian Wansink.

A 2006 study in the International Journal of Obesity [by Wansink and colleagues] found that when candy was placed in a clear dish, people ate 71 % more than when it was in an opaque dish. The same study found that the closer the food, the more likely it would be eaten. . . . "We need to make small changes in our environment. That can be as small as moving fruits and vegetables to the middle shelf in the refrigerator" [said Wansink].

In Japan – where portion sizes are smaller without the need for legislation – most new refrigerators have three compartments separately accessible from the outside. Two are above freezing, one is below. Wansink's comment suggests not only that such refrigerators are a good idea but also that one of the above-freezing doors should be transparent. Behind the transparent door you'd put fruits and vegetables.

Thanks to Dave Lull.

1. <http://www.latimes.com/features/la-he-weightloss14jan14,0,2473215.story?coll=la-tot-features&track=ntothtml>

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### Does Cholesterol Cause Heart Disease? (2008-01-18 05:24)

The first links between cholesterol and heart disease were correlational, of course. Then statins, which improved cholesterol levels, turned out to reduce heart disease – experimental evidence of a connection. This strengthened the case for causality, but [1]Malcolm Kendrick argued, based on lots of other evidence, that the heart-disease lowering effect of statins was due to other effects of the drugs, not their cholesterol-lowering properties. Now we have [2]this:

Pfizer stopped development of its experimental cholesterol drug torcetrapib in December 2006, when a trial involving 15,000 patients showed that the medicine caused heart attacks and strokes. That trial “somewhat unusual in that it was conducted before Pfizer sought F.D.A. approval” also showed that torcetrapib lowered LDL cholesterol while raising HDL, or good cholesterol.

This supports Kendrick’s argument. It shows that drugs can have two effects: (a) on heart disease and (b) on cholesterol.

Thanks to Dave Lull.

Addendum. [3]Do cholesterol drugs do any good?

1. <http://www.blog.sethroberts.net/2007/11/29/what-causes-heart-disease-malcolm-kendricks-views/>

2. <http://www.nytimes.com/2008/01/17/business/17drug.html?ex=1201237200&en=ee99863ce98ff82b&ei=5070&emc=eta1>

3. [http://www.businessweek.com/print/magazine/content/08\\_04/b4068052092994.htm](http://www.businessweek.com/print/magazine/content/08_04/b4068052092994.htm)

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Timothy Beneke (2008-01-18 09:42:45)

I am on statins, blood pressure meds and baby aspirin. When I asked my doctor if we really had good scientific evidence that the statins were reducing heart disease, he said that something was but that we really didn’t know what. People were definitely living longer; he said it could be statins, blood pressure meds – it could be that people are exercising more. No one could be sure. I appreciated his frankness. I’d place my bet on exercise, but I’m continuing with the other stuff to be safe...

## Eggs are Good for You (2008-01-18 21:51)

A generation of Americans reduced their egg intake because eggs contain cholesterol and cholesterol = bad. Now comes [1]this study from the Journal of Nutrition of the effect of 3 eggs/day:

In this study, 28 overweight/obese male subjects (BMI =  $25 \pm 37 \text{ kg/m}^2$ ) aged  $40 \pm 70 \text{ y}$  were recruited to evaluate the contribution of dietary cholesterol from eggs in a CRD [calorie-reduced diet]. Subjects were counseled to consume a CRD ( $10 \pm 15 \%$  energy from carbohydrate) and they were randomly allocated to the EGG group [intake of 3 eggs per day ( $640 \text{ mg/d}$  additional dietary cholesterol)] or SUB group [equivalent amount of egg substitute ( $0$  dietary cholesterol) per day]. Energy intake decreased in both groups from  $10,243 \pm 4040$  to  $7968 \pm 2401 \text{ kJ}$  ( $P < 0.05$ ) compared with baseline. All subjects irrespective of their assigned group had reduced body weight and waist circumference ( $P < 0.0001$ ). Similarly, the plasma TG [triglycerides] concentration was reduced from  $1.34 \pm 0.66$  to  $0.83 \pm 0.30 \text{ mmol/L}$  after 12 wk ( $P < 0.001$ ) in all subjects. The plasma LDL-C concentration, as well as the LDL-C:HDL-C ratio, did not change during the intervention. In contrast, plasma HDL-C concentration increased in the EGG group from  $1.23 \pm 0.39$  to  $1.47 \pm 0.38 \text{ mmol/L}$  ( $P < 0.01$ ), whereas HDL-C did not change in the SUB group. Plasma glucose concentrations in fasting subjects did not change.

I want to raise my HDL. I am going to eat more eggs. Perhaps nose-clipped.

1. <http://jn.nutrition.org/cgi/content/abstract/138/2/272?etoc>

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Chris (2008-01-19 09:15:31)

Cripes, you mean no-one undertook studies like this before they started demonising eggs? How unsurprising.

Stephen M (Ethesis) (2008-01-19 12:31:21)

Darn, I knew there was a reason my Cholesterol numbers have always been low. ;)

craig (2008-01-19 13:30:53)

Now I can eat that "The Incredible Edible Egg" again.

losing-it (2008-01-20 10:40:35)

Don't know if you've cited this on your blog, but here is an older study concerning eggs & cholesterol: <http://jn.nutrition.org/cgi/content/abstract/131/9/2358> Excerpt from related web article on Unisci.com <http://www.unisci.com/stories/20014/1029013.htm> Why Eggs Don't Contribute Much Cholesterol To Diet "Nutrition researchers at Kansas State University have published the first evidence that the absorption of cholesterol is reduced by another compound in the egg, a lecithin. "The research by Sung I. Koo, Yonghzi Jiang and Sang K. Noh has resulted in the issue of U.S. Patent No. 6,248,728, "Compositions and methods for lowering intestinal absorption and plasma levels of cholesterol." The patent was issued June 19 to the KSU Foundation. "A peer-reviewed research paper by the three researchers, "Egg

phosphatidylcholine decreases the lymphatic absorption of cholesterol in rats," appears in the September issue of Journal of Nutrition. ..."

Dennis Mangan (2008-01-20 20:15:07)

"I want to raise my HDL. " Why? I thought you were of the opinion that cholesterol doesn't matter. Also, feeding eggs to someone on a 10 to 15 % carbohydrate diet couldn't make a lot of difference, good or bad, because they're bound to be consuming huge amounts of fat and protein already. Adding a few eggs to a horrible diet doesn't make it much more horrible, and hey, it even raises HDL, so party on!

Dave Lull (2008-01-21 07:43:53)

Peter, posting at his blog, Hyperlipid: "Well, elevated HDL cholesterol appears to be a marker of a high fat, low carbohydrate diet and its associated beta hydroxybutyrate. So it is a marker of good things happening in the metabolism. As such I welcome it, but not if it is an effect of some drug." <http://high-fat-nutrition.blogspot.com/2007/10/niacin-and-beta-hydroxybutyrate.html>

### **Interview with Gary Taubes (part 12) (2008-01-19 18:45)**

INTERVIEWER Did you ever hear of Israel Ramirez? He was one of Mark Friedman's colleagues.

TAUBES That's the Ramirez you quoted. I forgot that. I didn't put it together, because I always knew him as I. Ramirez. I saw that, too — here's my other carp, and then I'll stop. It doesn't do any good to have somebody discuss my arguments who hasn't read the book.

INTERVIEWER I asked him to, so it's my fault.

TAUBES Then other people see someone refuting me, and they don't care whether they read the book or not. You know what I mean?

INTERVIEWER Well, I appreciate that it would be irritating.

TAUBES The problem is, you can't ask Mark, because I know what Mark thinks of the book. He's read it — he read it in draft and critiqued it for me. He's in the book, so you can't ask him, either, even though he would probably say tremendous things about it. You have to find people whose research I don't discuss. I'll tell you one guy who would be worth knowing what he thinks: George Wade. He's at U. Mass Amherst. He did these rat experiments. He's an expert on animal reproduction and I sent him a draft of the book, and I didn't ask him to critique it, but I was asking him a fact-checking question and I sent him a copy of the book and he never got back to me. I don't know if he read it or not. I'd be curious what he thinks, because he was my revelation, Wade. He shifted my paradigm.

INTERVIEWER You said something about that in your Berkeley talk.

TAUBES He was the one who got me to realize that we overeat because we get fat; we don't get fat because we overeat. That's the paradigm shift, the literal paradigm shift. He's describing his ovariectomized rat experiments to me. That's how he did it.

INTERVIEWER Do you know about someone named Michel Cabanac?

TAUBES Yeah, I read a lot of Cabanac's stuff. I forget what the details were. I only remember that I was disap-

pointed and decided that he was missing the point.

INTERVIEWER Well, he had a big effect on me, at least. His idea is that I'm sure there's a set point, but that's an old idea. The new idea is that the set point depends on what you eat. He had some ideas about that.

TAUBES Well, that's the thing. There is a settling point, whatever you call it. The weird thing is that insulin regulates the settling point. It obviously goes up and down. It obviously goes up, anyway.

INTERVIEWER He might not disagree with your book. I asked him "Can insulin regulate the settling point?" I thought that was unlikely, but he didn't; he thought, "Why not?"

TAUBES Insulin levels correlate with weight, with fat. The question is whether insulin goes up because we get fat, or we get fat because insulin levels go up. There's always two ways of interpreting the observations in this business. So the establishment viewpoint is that insulin goes up because we get fat. I tracked that belief down to see if there was evidence for it, and indeed, there's not; there's a sort of misinterpretation of these experiments done by Ethan Sims 40-odd years ago. On the other hand, it's easy to show that you can manipulate insulin levels by manipulating the carb content of the diet. If you manipulate the carb content of the diet, then the question becomes, does insulin and the weight still track? So the hypothesis is insulin regulates the settling point and the question is how do we test that rigorously to find out if that's indeed what's happening.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2008/01/05/interview-with-gary-taubes-directory/>

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Seth's blog » Blog Archive » Interview with Gary Taubes (directory) (2008-01-20 21:44:56)  
[...] Interview with Gary Taubes (part 12) [...]

### **Interview with Gary Taubes (part 13) (2008-01-20 21:43)**

INTERVIEWER My book came out of an accidental observation, which is that I lost weight when I drank sugar soft drinks. Lost weight, not gained weight. That happened in Paris, and I came back to Berkeley, and I found out it was the sugar. In other words, if I drink unflavored sugar water, I lost weight. Not so obvious, right? But Israel Ramirez, who I mentioned a few minutes ago — his experiments with rats are what led me to this discovery. Because I don't think most people would have thought it was possible to lose weight by drinking Coke, or whatever. But it has to be unflavored. Anyway, the effect never wore off. I drank sugar water for three years, and my weight went down and stayed down. There was no sign that it was ever going to wear off. So this seems to me to be a big problem with your theory, which is that I drank something which obviously raised my insulin level, sugar water. I didn't measure it. I lost weight and not only did I lose weight, but I kept the weight off, and I lost it without being hungry; I was less hungry than usual. I mean, you're right, you know, set points, settling points, who cares. . .

TAUBES It's important to think of it as a settling point. Because it's important to have this concept of dynamic equilibrium. As long as you're thinking about what's happening in the brain, which is what set point implies. My question is, what did the sugar water do to your fat tissue? It should have caused you to accumulate fat, or at least hold on to the fat you had, according to what I know of the underlying regulation of fat tissue. The

question is, why did it do what it did?

INTERVIEWER I was less surprised than you are, or than most people are, let's put it that way, because I was led to this observation by a theory. I had a theory which pre-dated all of this. I was kind of surprised my theory was so helpful, because it hadn't been that helpful before. But, lo and behold, it really turned out to be helpful and it led me to other ways to keep my weight off, and I'm still way down from where I was.

TAUBES What I ask when I talk with these people. What I say is: Look at the regulation of fat tissue. The question is, how can you lose weight, or gain it — how can you gain weight without either increasing insulin secretion, or increasing the relative insulin sensitivity of the fat tissue to the muscle tissue. Basically, the way we work, at least if you believe the biology that I describe, is that as we secrete insulin in response to the carbohydrates we consume and the insulin works, among other things, to facilitate the movement of glucose into the cells of your muscles and other lean tissues. But blood sugar is kind of toxic, so your muscle tissue doesn't want the insulin pushing all this blood sugar in, and it becomes insulin resistant. Your fat tissue now remains insulin-sensitive, because your body doesn't like to waste fuel. So if you eat a high-carb diet, your lean tissue takes up some of the glucose for fuel, and the rest gets dumped in your fat tissue, and your fat tissue remains insulin-sensitive for a long time — far longer. Because once your fat tissue becomes insulin resistant, then you just become diabetic; you have no place to put the glucose. You just pee it out. That's the last resort, because your body doesn't want to waste fuel.

The thing that Rosalyn Yalow and Solomon Berson reported forty years ago is that organs respond differently to high levels of insulin, and they get insulin resistant at different periods. One of the things I put into a paragraph in the book is that I can imagine a scenario where fat tissue becomes insulin resistant prior to muscle tissue, and the result would be anorexia or bulimia. The person would eat a meal and would have no place to store the calories temporarily. So they would either lose their appetite and not be interested in eating at all (anorexia), or they might just throw it up afterwards. Because they have no place to temporarily store the calories that aren't being used immediately. Bulimia would be another option. A third option would just be to get on an exercise bicycle and ride for three hours and burn the calories off — be Lance Armstrong, in effect. So what I'm trying to figure out is what did the sugar water do, unflavored? And it's interesting — the idea that it's unflavored might disconnect some of the sort of Pavlovian responses that you've developed.

INTERVIEWER Yeah, I think that's what was key. The reason I lost my appetite in Paris was that I was drinking unfamiliar sugar water. I think this is the reason that so many diets work in the beginning: because people eat unfamiliar food. Once the food becomes familiar, the diets don't work so well.

TAUBES This is the problem with anecdotal evidence. The idea that oil could suppress your appetite I could understand, because, as I said in my lecture, you need alpha glycerol phosphate to fix fatty acids as triglycerides. You get the alpha glycerol phosphate from eating carbohydrates, so if you only ate oil it would be shipped off to the fat tissue as triglycerides, then broken down by lipoprotein lipase into fatty acids, but those fatty acids couldn't be stored in the fat. So it would raise the fatty acid level in your blood, and your body would switch over to burning fatty acids, and this would effectively suppress hunger. That makes sense. But I can't see why unflavored sugar water would be any different than say, Coca Cola itself, which is just flavored sugar water, for all intents and purposes.

INTERVIEWER Well, when I talked about it in the beginning, I was using fructose.

TAUBES Well, pure fructose, I can also understand. Friedman and Ramirez did an experiment showing that fructose suppresses hunger apparently because it is metabolized in the liver and they believe that the liver monitors fuel status in the body.

INTERVIEWER This is very interesting: someone who is not dedicated to my being wrong.

TAUBES I'm open-minded.

INTERVIEWER Your book proved that.

TAUBES The experiments that Freedman and I think Ramirez did to demonstrate that the liver must sense hunger, must sense fuel availability, is they did intravenous infusions of fructose, Fructose is metabolized only in the liver. It's not metabolized in the brain. So they infused fructose into the blood stream of rats and it suppressed eating behavior. That's one of many experiments they did that suggested that somehow what we sense as hunger is being communicated by the liver. It's always made sense to me. So if you only use fructose, and you don't get an insulin response to fructose, it would make sense that it suppresses hunger. In my book, I discuss the hypothesis that whatever prompts an insulin response is what causes us to get hungry. So, the fructose, I can understand. Actually, if you're now eating real sucrose, that's where it gets complicated, because with sucrose, you're going to get an insulin response. Unless the fructose component outweighs the glucose, but then, what is it about the absence of taste? Why would Coke make you fat, and sugar water not?

INTERVIEWER Well, first it was it was that flavorless fructose worked. Then it was flavorless sucrose worked. Then it was flavorless oils work. Then it was flavorless any food worked, in particular flavorless protein.

TAUBES When you talk about flavorless protein, what do you mean? The oils, I understand; the fructose fits with everything I know. The sucrose starts getting tricky. What do you mean by flavorless protein? Give me an example.

INTERVIEWER Oh, for example, eating chicken holding your nose clipped. It's flavorless in the sense that you don't smell it.

TAUBES That's interesting. Remember I told you that Jaques Le Magnen started his career studying olfaction (because he was blind). He was curious why the smell of a particular food can go from being very pleasurable when you're hungry to being nauseating when you're full. The example I used in the book was the smell of a cinnamon bun cooking. You can imagine that being unbelievably enticing when you're hungry, and then nauseating if you've already eaten three cinnamon buns. Le Magnen moved from that to asking similar questions about the taste of a food, which he thought was determined by our level of hunger. It's conceivable that if you don't taste a food it somehow works to suppress hunger, but I have no idea why.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2008/01/05/interview-with-gary-taubes-directory/>

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SusanJ (2008-01-21 11:39:01)

I've thought a lot about how consuming tasteless food could suppress hunger. My favorite theory is that it is similar to what happens when an animal is hibernating. The "magical" appearance of calories fools your body into thinking it is living off its fat and then it actually does so.

Seth's blog » Blog Archive » Interview with Gary Taubes (directory) (2008-01-21 22:45:12)  
[...] Interview with Gary Taubes (part 13) [...]

Charles (2008-01-22 09:43:07)

While eating without taste may be effective, it seems to me to be a very unnatural approach, that cuts out a whole heck of a lot of built-in safety and feedback mechanisms that taste is involved in. Don't get me wrong. I have been fat, and "effective" beats "powerlessness." So if one has tried everything else, like low-carb, then I understand the appeal. But for the long term, it seems to me you're losing a lot of important information, information that is important for health and even survival. You are eating entirely based on your rational beliefs about what your body needs, and not training yourself to listen to important messages, and not rebuilding or improving the body's messaging systems. And I have found that to be a really valuable part of the process of normalizing weight.

SusanJ (2008-01-22 16:11:41)

If you are talking about food safety such as identifying rotten food by its smell or taste I don't think SLD advocates eating something you aren't sure about. For example, you'd smell and taste the first bit from a new bottle of oil and then store it properly. If Taubes is correct, fat people's bodies send them messages that they are hungry because they actually are hungry. The body is starving internally because of its inability to utilize its fat stores. Taubes provides lots of data to explain how a low-carb corrects this inability. If SLD makes your body send the message that you aren't hungry and you know you are overweight, this seems good, not bad. You wouldn't want to stay on SLD if you got too thin.

Charles (2008-01-22 17:47:03)

I guess I was talking about more subtle stuff than just whether the food was going to kill you or not. My experience is that there are a lot of messages that come from our bodies about the food we eat, or more interestingly, are hungry for. When we are tuned into our bodies, and our bodies are tuned up by a generally good diet, I think we tend to crave what we need. One thing I see with people struggling with overweightness is that both the messaging system and their interpretation of the messages has gotten out of whack. Now one explanation for that is that we just don't have a physiology that has historical experience with the kind of dense, high-carbohydrate foods we find ourselves surrounded with. So our messaging system just doesn't have the built-in experiential intelligence to deal with these kinds of foods. Yes, the SLD short-circuits the problem entirely. I'm not saying it's awful because of that. I am very pragmatic when it comes to fat control. All I'm saying is that there is value to improving the messaging system and the messaging receptors in our thought processes, so that someone stops the SLD-eating, the body/mind has a clue about what to do next to maintain where it's gotten.

Tom in TX (2009-01-02 18:15:22)

Gary Taubes: "Actually, if you're now eating real sucrose, that's where it gets complicated, because with sucrose, you're going to get an insulin response. " Forgive me for asking what may be a very dumb question, but do we know this for sure? Has anyone measured insulin response when people eat unflavored fructose/ sucrose/glucose to see if it is any different from flavored fructose/sucrose/glucose?

Darrin Thompson (2010-01-11 17:00:36)

Yes someone did measure blood glucose response to sucrose! The work of Dr. Jennie Miller-Brand on constructing a glycemic index might be useful. Their testing method for foods seems reasonable. They measure blood glucose response to eating specific things using 10 volunteers in the morning who apparently don't mind a lot of finger sticking. Their website still promotes the usual wisdom concerning fat, but they do acknowledge that fat does lower food GI. So they appear to at least be honest about their measurements. They measured sweeteners. Here are some useful numbers from their shopping guide: Fructose: 19 low Sugar, white: 68 med Glucose syrup tablets or powder: 100 high So the surprising fact is that sucrose (presumably Sugar, white above) in isolation isn't terribly harmful to insulin. Other things normally consumed with sucrose probably are worse. That said, it would be worth testing SLD vs. glucose. I'd be willing to propose that corn syrup will \_never\_ work.

Tom in TX (2010-01-12 08:19:56)

My question was: Has anyone measured insulin response when people eat \_unflavored\_ fructose/ sucrose/glucose to see if it is any different from \_flavored\_ fructose/sucrose/glucose? I want to know if the flavor has anything to do with the response.



It would seem obvious that it doesn't, but sometimes obvious things aren't true, and vice versa. 8-) I am told that the standard glucose tolerance test is given with some kind of flavored glucose solution. But I have never taken the test myself.

Darrin Thompson (2010-01-12 09:01:47)

Oh, my bad. That would be a good test. I'm a little suspicious of the favor hypothesis, but that's probably because I'm not a psychologist and I don't understand those mechanisms. And I'm partial to Taubes view that it's safe, for us laymen, to simplify the obesity model to "it's the insulin, stupid" since given all the factors acting on fat balance, that seems to be the biggest. And it's really simple to understand. And as a matter of saving the world, converting people's opinion from "it's the calories, stupid" to "it's the insulin, stupid" would be an easier sell than "it's the flavor, stupid." Seth, great work. Thanks for publishing this interview.

Seth Roberts and the Shangri-La Diet | the Justin Owings page (2011-07-25 09:40:08)

[...] to trying to understand how SLD fits into the grand scheme of human physiology. An interesting comment was made at the bottom of Part 13 of Roberts' Interview of Gary Taubes: I've thought a lot about how [...]

### **How Things Begin (a surprising ALS result) (2008-01-21 13:41)**

I [1]recently blogged about a surprising association between ALS and loss of a child: Losing a child reduces your chance of getting ALS. I wrote to the lead author of the study, Dr. Fang Fang, to ask how this study come to be. Here is his reply:

Severe emotional stress, as in the case of loss of a child, has previously been associated with health consequences such as psychiatric hospitalizations, cardiovascular morbidity, etc. Our initial hypothesis was that severe emotional stress might also contribute to the development of ALS. We thus used the unique settings in Sweden including the population based registration of in-patient hospitalizations and familial link registration to explore the relationship between loss of a child and the risk of developing ALS. It was surprising for us to see an inverse association between loss of a child and the risk of ALS. After a series of careful checks on data quality, we came to believe this association was not due to systemic errors.

In other words, they did the study because they expected the opposite result.

1. <http://www.blog.sethroberts.net/2008/01/17/loss-of-a-child-and-als/>

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Stephen M (Ethesis) (2008-01-21 18:48:06)

And, they did the study because they had an easy to use database. That answered my real question, and was what I supposed. Interesting.

## Why I Like HDL (2008-01-21 15:16)

In the comments, Dennis Mangan asked why I wanted to raise my HDL cholesterol levels. The answer is simple: Because Eddie Vos told me a few years ago that "it's unanimous that having a good amount of HDL is a good thing." Eddie Vos is a Canadian engineer who runs a [1]diet-and-health website as a hobby.

1. <http://www.health-heart.org/acceuil.htm>

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Tom (2008-01-21 16:11:43)

If you really want to boost HDL (a great idea, btw) consider 4,000 - 5,000 IU Vitamin D3/day. (And the linked blog is highly recommended for a very in-depth discussion of cholesterol, which even most doctors do not understand.) <http://heartscanblog.blogspot.com/2007/02/hdl-and-vitamin-d.html>

Tom (2008-01-21 16:25:54)

btw, Seth, I notice your blog has a Page rank of 5...you can make a lot more money if you offer the space you're giving to Google ads directly to advertisers...usually 5x more. (Yes, Google's standard cut is they take an 80 % commission....there's a reason they're taking over the world.) Suggestion...create an "advertise here" link under the google ad tower, offer the same size tower ad for 5x what you made last month from Google, and field the offers. Someone will meet your price and your standards.

## Interview with Gary Taubes (part 14-the end) (2008-01-21 18:32)

TAUBES Now here's one question for you, you know the Freakonomics guys, right? Did you read their last column on obesity?

INTERVIEWER About bariatric surgery?

TAUBES Yes. In particular, the last two paragraphs, about their recommendation that fat people, in effect, carry around something nauseating. I felt like I was reading something from 150 years ago, where they were using anal suppositories to try to cure obesity. Do you remember those paragraphs?

INTERVIEWER Yes, I do.

TAUBES They're saying, "let's get fat people to have willpower, like we do." Here's a way they could do it, they could carry some nauseating-smelling thing in a pouch around their neck, and whenever they find themselves going to the refrigerator, they could open it up and smell it.

INTERVIEWER I think they were trying to illustrate the concept of commitment device.

TAUBES I got what they were trying to do, but

INTERVIEWER You're saying that trivializes the problem.

TAUBES More than that. I'm saying it misses the point entirely. It's not about how much they eat. Remember, you can starve fat animals, for instance, and they'll die with their fat tissue intact. It's not about how

much theyâ€™re eating; itâ€™s about the regulation of their fat tissue. And if you don't understand that, you're not doing anyone a favor by discussing it publicly. If these guys are going to write about this subject, and they're so now so influential and noticeable, they should have some understanding of what's actually going on physiologically. We talked earlier about how I can become flabbergasted – your words was "radicalized" – by the idea that people can write about obesity without stopping to think â€œwhatâ€™s the mechanism? Should I know anything about the underlying biology?â€ And again, I never did until the last five years. It was only when I did the research for the book that I realized that you have to actually pay attention to the underlying biology – the hormonal and enzymatic regulation of fat tissue – or you can't understand what's going on. Imagine writing about growth defects, about gigantism or dwarfism, without caring about the hormonal regulation of growth. If the Freakonomics guys are going to write about obesity in the New York Times, then maybe they should read my book (he said, ego-maniacally), so they know what they're talking about. And since I don't know them personally, maybe you could...

INTERVIEWER Iâ€™ll recommend your book to them. Itâ€™s great that you were invited to Berkeley; that shows people trust you. The fact that they invited you means youâ€™re not a heretic, youâ€™re not off the reservation, youâ€™re a respectable person. The fact that you continue to write for the New York Times, thatâ€™s very good. Every article you publish from now on will push your book forward, will push your case forward, will say that you are a serious person who is respected by serious people. Just maybe, just maybe, this is one of the cases where the authorities were wrong. Weâ€™re all familiar with this happening in the past, and maybe this is just another case. For everybody but the tiny faction of people at the top of the health establishment, I think theyâ€™re perfectly fine with the idea that the authorities are wrong. I think that the lack of progress on the obesity epidemic is making more and more people dissatisfied. Thatâ€™s just a guess. More and more people, outside of the people who are responsible for the current policies.

TAUBES I think that's true, but thereâ€™s this contrary effect that happens. I said this in my lecture. The science I'm trying to get across can be accepted up until the point at which I say the the word carbohydrate, and then people shut down, and they think â€œOh, itâ€™s that Atkins stuff again." Their minds close and they turn around and go back to their lives. Anyway, I look forward to seeing the interview and getting your book and reading it. I enjoyed this. Again, I like nothing better than talking about this stuff.

INTERVIEWER I learned a lot from our conversation. Iâ€™m sure my blog readers will enjoy this.

[1]Interview directory. [2]The whole interview.

1. <http://www.blog.sethroberts.net/2008/01/05/interview-with-gary-taubes-directory/>
2. [http://docs.google.com/Doc?id=dhm4f3rg\\_36gg4956dm](http://docs.google.com/Doc?id=dhm4f3rg_36gg4956dm)

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Andrew Gelman (2008-01-22 00:35:51)

Seth, Thanks for doing this. But I love bread, so I hate hearing this stuff about carbs being bad for you!

Niko (2008-01-22 06:34:55)

Thanks for conducting the interview! It was a feast to read an honest exchange not being spoiled by vanities and preconceptions.

Stephen M (Ethesis) (2008-01-22 06:52:10)

"Remember, you can starve fat animals, for instance, and theyâ€™ll die with their fat tissue intact. Itâ€™s not about how much theyâ€™re eating; itâ€™s about the regulation of their fat tissue." That is something that belongs on the front of a book, as the

money quote.

Stephen M (Ethesis) (2008-01-22 06:54:38)

One other comment. I noticed that my metabolism was dramatically different at somewhere between fifteen and twenty hours a week of exercise. When I hit the break point, what caused me to lose weight and the kind of food that worked well for me changed. I've always thought that a significant problem with weight loss advice is that too much of it comes from people who exercise a lot and from competitive athletes. I think what we are finally getting is an approach to weight and weight loss that involves science and a data set of normal people.

Trina (2008-01-22 09:54:57)

Thank you for this. I have copied the whole interview-35 pages. I love you guys!

Timothy Beneke (2008-01-22 10:05:57)

Fantastic interview. If Gary Taubes ever reads (or has now read) "The Shangri-La Diet" I'd love to hear more about his reactions.

Stephen M (Ethesis) (2008-01-22 12:04:07)

One last comment, I knew Clyde Filmore, a Bataan Death March survivor, and he remarked that they all thought the fat guys would do best, having the extra reserves, but that they died the soonest. Fat humans died with a good deal of fat tissue intact. Not just animals.

Always INquisitive (2008-01-22 15:47:35)

A fantastic interview. Thank you, Seth, for publishing and thank you, Gary, for participating.

Tom (2008-01-22 19:16:29)

Next step: *Surgery* so people don't have to give up their carbs. Aren't you looking forward to having your premiums raised so they can keep hitting the Mallomars? :- ) <http://www.nytimes.com/2008/01/22/health/research/23cnd-diabetes.html>

Tom (2008-01-23 13:47:35)

More interesting science: Does taking calcium cause heart attacks? [http://heartscanblog.blogspot.com/2008/01/calcium-chaos\\_22.html](http://heartscanblog.blogspot.com/2008/01/calcium-chaos_22.html)

Sandy (2008-01-23 20:05:59)

Thank God Gary's book was sitting in my public library on the day 3 weeks ago when I learned that I was officially diabetic. I am not obese at 140 pounds but could lose a dress size or maybe even two, which would bring me back to my lifetime approximate weight of 125 pounds. So - 15 or so pounds would be good, diabetic or not. I am a 65 year old woman. My doctor's few words of advice began with 'Limit your carbs drastically - no sugar - talk to our nutritionist (appt. scheduled) - and go to the American Diabetes Association website and educate yourself as to their recommendations' and I'll see you in a month after you've seen the nutritionist'. So first off I went to the ADA website - and I was SHOCKED! The ADA food pyramid is completely contrary to a low carb diet. (Look it up!) They in fact recommend that a diabetic 'choose 6-11 servings a day' of carbohydrates. They furthermore do not distinguish between highly refined carbs and complex carbs. In their pyramid rice is merely 'rice' and pasta is 'pasta' and bread is 'bread' (not even whole grain or whole wheat bread.) They encourage 2-4 servings of ANY kind of fruit a day (even canned fruit, no mention of low or no sugar). They advise very limited meats, very small portions, all fat removed, they do not bother to even mention eggs, give cheese no particular importance, and no mention of butter at all. It's a 'fat' which is not advised and is included with 'fats, oils, and sweets'. They even suggest that sweets such as cookies, ice cream or cupcakes should be used 'in small servings, to be eaten as a 'special treat'. Are they TRYING to get me on insulin? Are they TRYING to kill me? So then I went to the NIH diabetes advice. They say 'Grains, beans and starchy vegetables - 6 or more servings a day. Mayo Clinic: (Diabetics should... aim for:) 45 % to 65 % of daily calories from carbohydrates. They are ALL trying to kill me! So..... I read Gary's book twice all the way through. I am reading selected chapters again. The book will be overdue soon so I am going to buy it. And every time someone, maybe this nutritionist even, says to me 'You really need to eat

a lot of carbohydrates for a balanced diet' I am going to say 'uh huh, thanks, I will' and go home for dinner, which might be a steak with 2 eggs fried in butter, a small salad with bleu cheese dressing, water, and for dessert some dry roasted almonds. In the morning there will be cream in my coffee and then I will think about something fatty like bacon for breakfast. If my labs come down, and I am positive they will, I will send Gary a Christmas card next year because unless I get run over by a truck, I will possibly still be alive. Thx for a voice of reason in the babble of the medical community.

Tom (2008-01-24 00:22:14)

Sandy, Taubes is great and you're well on your way, but with a diabetic Dx you owe it to yourself to get a copy of "Dr. Bernstein's Diabetes Solution" in the newest edition.

Comment on Interview with Gary Taubes (part 14 "the end) by Sandy by diet.MEDtrials.info (2008-01-24 08:19:00)  
[...] article continues at unknown brought to you by diet.medtrials.info and conSALSITA [...]

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[...] Posted by as Uncategorized Mayo Clinic: (Diabetics should aim for:) 45 % to 65 % of daily calories from carbohydrates. They are ALL trying to kill me! So I read Gary's book twice all the way through. I am reading selected chapters again. ...article continues at unknown brought to you by diet.medtrials.info and conSALSITA [...]

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Comment on Interview with Gary Taubes (part 14 "the end) by Comment ... by diet.MEDtrials.info (2008-01-24 20:48:08)  
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Pete (2008-01-25 13:03:28)

I was excited to hear about the book, and am completely open to new possibilities, but I was pretty disappointed with the interview. It seemed to me Taubes exhibited the same human biases that he was railing against during the interview - he seems to have lost his own skepticism in the process. And to simply suggest that he is right because he is smarter than his colleagues isn't really going to get him anywhere. It is too bad, because I sure hope people take his book seriously. I will be a bit more suspicious due to this interview. Perhaps his next book should be on human influence and persuasion (Cialdini is a good starting point).

Stephen M (Ethesis) (2008-01-26 09:36:53)

I ordered the book a while back, must be selling well because it hasn't arrived yet.

None Given (2008-02-05 11:51:34)

*Surgery so people don't have to give up their carbs.* I've heard that the post op diet is low carb and low fat.

Migraineur (2008-03-20 10:45:58)

"If my labs come down, and I am positive they will, I will send Gary a Christmas card next year because unless I get run over by a truck, I will possibly still be alive. Thx for a voice of reason in the babble of the medical community." That's exactly how I feel. "What If It's All Been a Big, Fat Lie?" saved my life. I owe the fact that I am not yet diabetic (and hope never to be) to that article. So, Mr. Taubes, if you're reading, I owe you a Christmas card, too.

Paul Johal (2008-12-17 10:38:51)

I Read Gary's NYT Magazine article on July 7 2002 on a plane from Chicago to Calgary Canada. Then I bought the Atkins Book. From July 8 2002 to August 11 2002 (1 Day before my Birthday) I went on the program. I lost between 30-35 Lbs of body fat. I worked out 3-4 times a week. My allergies disappeared. I woke up without an alarm every morning by 7 AM. Having been a chubby kid, adolescent and adult - what I had gone through was truly a metamorphosis. I am still amazed at the mainstream media, health authorities and groups like the AMA, Diabetes association still maintaining their adherence to the low-fat dogma. I think with the Internet - the truth will finally start to spread. Thank you so much guys!

## Helping Students Find Their Way (2008-01-23 14:06)

At the [1]EFF party, the friend of a friend made a vivid statement about the value of helping high school and college students figure out what job fits them best. When I asked if I could quote him in my blog, he said he preferred this way of putting it:

I believe a large fraction of people around ages 16-22 are ignorant of what kinds of work environments and activities will make them happy and productive later in life. Current classroom-based training structures do not provide exposure to work environments. The cultural and social pressures from media, family and friends can be overwhelming and can often lead to people being very confused, and hence, making poor choices. I've seen that people tend to get very limited and highly biased information that leads to making training choices and work choices early in their life that are often not well matched for the person's individual genius. By mid 20's and 30's, getting out of these poor choices is extremely difficult, as financial requirements as one ages grow and available time to retrain diminishes. Expectations of experience grow as one gets older, and the neural ability to quickly learn and master new skills diminishes, especially much later, after 40 or 50 years. All of these factors point toward a critical need to have experienced, outside input into making early choices about career paths, and what types of experiences individuals would benefit from most. Such advice is available, and can be found - but it is not commonly accepted that expert outside opinion is the best source for career and training choices for young people. Kids get it mostly from their parents and friends - neither of which are consistently accurate, trained in normal psychology, or unbiased in their assessments. While many schools have "guidance counselors", I have seen most of the service offered as severely lacking (like much of public education) when compared with the needs of students, both in quality and quantity. I think there is are enormous unmet needs in many cultures, the US in particular, to provide more assistance to people in their late teens and college years to deeply explore what career options best fit their personality, and provide assessment and testing with definitive recommendations for majors, mentors, internships, and work choices.

Furthermore, when viewed on the societal level, there is an obvious argument that a society will function better when higher percentage of the population finds work/life situations that leave them happier and more productive. This I feel is even more important than providing education looking out on the 10-20 year technology horizon. In a world where most educational materials and social connections will be portable, open source, and available online - the problem will not be as much about getting information, skills, or training, but in individuals being tracked toward education options, career paths, and work environments that work best for them: a problem not easily solved with mass distribution of content or any technology solution.

This view arises partly from his own experience. He majored in Chemistry and Physics, then got a Ph.D. from Stanford in Biomedical Informatics. After working in that area for several years, he discovered that what he really enjoyed

was building communities, and moved in that professional direction. Currently he is building an online community to share digital media content.

1. <http://www.blog.sethroberts.net/2008/01/16/most-frustrating-party-ever/>

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Peter (2008-01-23 15:13:42)

i don't think there's much rocket science to it, really. Like they say, you can paint a turd gold...put lipstick on a pig...etc. I have always hated the word 'career' and still do - I'm 34, now. A career means you've sold out - you've stopped caring about the world and have bought into the 9-to-5 and a mid-level management position and an occasional lunch at the Cheesecake Factory. Forget that. People don't hate their jobs because they are 'not a good personality fit' for them. People hate their jobs because people are not automatons. Adam Smith said division of labor led to productivity gains, but he also said it made people "as stupid and ignorant as it is possible for a human creature to become". He goes on to say that governments needed to prevent this from happening - well, if we would want to consider ourselves an 'improved and civilized' society, that is. Other economists went much further - decrying wage labor because it deprives us of our humanity. I think i'd agree with these other economists. I'm sure most Americans do, too. The solution, then, is not to help children to decide which position they would best be able to withstand this mental, physical, moral, and emotional dumbing down with - the solution is to help children escape this awful world we've created for them by restructuring society so that they don't have to perform mind-numbing work just to have access to health care - just to have a roof over their heads - just to be considered 'respectable'. At a minimum, we need to be honest with them about the world they are going to enter - they will rent themselves to some corporation for 40+ hours a week, push paper, take orders, attend meetings, and other assorted meaningless tasks. And when they're sufficiently brain-dead and have learned to not challenge authority, they'll be promoted. Then they'll buy more stuff and repeat the process. They'll be miserable, so they'll have kids, and those 20 years will slide by with some sense of purpose, and then they're back in the crapper - visiting websites on anti-depressants, wondering if they can just end it all without hurting too many people they care about. We need radical democratic reforms at the lowest levels of society - in the home, in the workplace, etc. Don't try to tell kids that they're supposed to fit into some godforsaken 'career' - it's not fair. Tell them the truth - "We messed up really bad. It's unforgivable, but that's the truth. You will probably never be happy renting yourself to some corporation - an immortal person - a god, if you will - so you need to think about ways you can stay alive without submitting yourself completely to this way of life. Here are some ideas. Oh yeah - now you have a responsibility to help us change things for kids behind you."

Stephen M (Ethesis) (2008-01-23 18:21:19)

Interesting, I was blogging about parts of that at: <http://ethesis.blogspot.com/2008/01/now-she-has-life-chosen-for-her-by-high.html> obviously heavily influenced by the links I included.

donnyrosart (2008-01-24 11:14:26)

<http://pharmaco-nutrition.net/2007/02/02/is-smelling-a-matter-of-life-and-death/> Nothing to do with helping students, but I was just wondering if you'd seen this?

Andrew Gelman (2008-01-24 19:17:59)

Seth, I chose my career (scientific research) by looking around, when I was 20 years old or so, at what various guys in their 50s whom I knew were doing. My impression was that the guys doing scientific research were happy with their jobs, even into their 50s and 60s, but people in other jobs weren't so happy. Just about all the researchers—including those who weren't doing interesting work—seemed to like their jobs. To me, at the age of 20, a business-type job seemed more glamorous, but I thought it would make more sense to do work that, statistically speaking, would be likely to leave me happy in 30 or 40 years.

Stephen M (Ethesis) (2008-01-26 09:35:54)

Andrew, looks like you made an excellent choice. My wife did something similar and is happy with her work.

Greg S (2008-02-07 09:36:14)

Help!!! I have three kids, ages 24, 22 and 19, and I know they need this type of career counseling. The colleges are pretty useless at this too, especially liberal arts. But I don't know who to go to (Mpls area). Any suggestions? And how do you tell the "good" counselors from the bad?

## **Jane Jacobs and the Drug Industry (2008-01-24 16:40)**

At the Freakonomics blog there is a [1]fascinating "quorum" (four people answer the same question) about the drug industry. "What can you tell us – good or bad – that we don't know about drug companies?" was the question. Three of the answers were bad things, one was a good thing – pretty predictable given who was asked. What interested me was how bad were the bad things (very bad) and how good was the good thing (barely good). The answers make the drug industry look very bad, in other words.

You are reading this because of my fear and dislike of pharmaceutical drugs. Long ago, I had trouble sleeping through the night. If I went to a doctor, I knew I would be given a prescription for a drug that would be ineffective (long-term) and dangerous (due to biases in the way drugs are tested). So I struck out on my own and via self-experimentation eventually [2]found several solutions that did not involve drugs. (The first was to stop eating breakfast.) This is how I realized the power of self-experimentation to find unusual solutions to everyday problems.

Why does an industry entrusted with something so precious – our health – come across so badly? In [3]Systems of Survival, Jane Jacobs pointed out two moral "syndromes" (sets of values): the commercial syndrome and the guardian syndrome. The commercial syndrome (e.g., be honest) was appropriate for businesses; the guardian syndrome (e.g., be loyal) was appropriate for governments. Why just two? Because there were two fundamental ways of making a living, Jacobs said: trading (business) or taking (government). She pointed out the trouble that arises when governments act like businesses or businesses act like governments. It is bad news, for example, when policemen are given ticket quotas. Quotas are a business tool.

I recently experienced the problem Jacobs pointed out when my scooter was towed by Avenue Tow Service (Berkeley, CA) – using power given them by the city government. They broke the windshield. No surprise they lied about it. Why should they bother telling the truth? Unlimited power is a government tool.

The drug industry is a much larger example of the same thing. What is trading? You trade voluntarily. The two parties are roughly equal in strength. What is taking? The powerful take from the weak. Although drug companies are businesses, they deal with people who are weak (sick) and have no other choice. So in essence, they take rather than trade. One of the Freakonomics examples of bad behavior was price gouging.

The federal government has given drug companies this power, just as the Berkeley city government gave Avenue Tow Service the power to tow my scooter. The federal government has done so because it has failed to effectively support research into non-drug solutions. ([4]Norman Temple and I wrote about how almost all research money goes in the wrong direction.) This leaves the drug industry, like the company that towed my scooter, with a monopoly. Unlike a conventional monopoly (a single company) it is industry-wide. But the effects are the same – a business starts to take rather than trade. And they do things that, when exposed, make them look very bad.



1. <http://freakonomics.blogs.nytimes.com/2008/01/24/what-dont-we-know-about-the-pharmaceutical-industry-a-freakonomics-quorum/>
2. <http://repositories.cdlib.org/postprints/117/>
3. [http://en.wikipedia.org/wiki/Systems\\_of\\_Survival](http://en.wikipedia.org/wiki/Systems_of_Survival)
4. [http://sethroberts.net/about/2002\\_medical\\_research--a\\_bettor's\\_guide.pdf](http://sethroberts.net/about/2002_medical_research--a_bettor's_guide.pdf)

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Dennis Mangan (2008-01-24 19:42:51)

Seth, it would be hard for me to disagree more with you. You say that drug companies deal with a weaker party (the sick), who "have no other choice". But if decent profits - and drug companies in general are hurting these days - are not available, the drugs they develop wouldn't be there in the first place. Then the sick would have no choice whatsoever. "Price gouging" is a euphemism for "I think you charge too much, and I want it at a lower price... my price". I do agree with regard to your ideas on sleep, but if you think that the average person is going to laboriously try different methods for getting decent sleep, rather than quickly and easily take a pill, you're dreaming. If people operated like that, there wouldn't be any obesity problem, to take one example. The pharmaceutical industry has done more good for more people than any equivalent government source, and without stealing money in the form of taxes like the government does.

seth (2008-01-24 21:52:06)

Two questions, Dennis: 1. What other choice do most people have than take the pill their doctor prescribes? 2. The Freakonomics example isn't price-gouging? (If you don't like the term price-gouging, call it something else.) You don't think that sort of pricing is widely seen as offensive?

lasser (2008-01-24 22:34:26)

What about doctors? for some reason, no one wants to criticize them. It's taboo. It's easier to criticize drug companies. But Doctors are directly responsible for our health care mess. The AMA has lost its soul.

Tom (2008-01-24 23:41:39)

Doctors? Have you seen a doctor in the last fifteen years? They have miserable lives. I would say the insurers have made whores out of them, but whores make good money and don't need to see forty clients a day to make ends meet. See "Sicko" and get back to us. (I wish Moore would do a film on Big Pharma - imagine the sequence he could create on the procession of Homecoming Queens the drug co's keep pumping through every medical office building in the country.)

Dennis Mangan (2008-01-25 07:33:21)

Seth: You ask about the choices of the sick, but thanks to "Big Pharma" they've got more choices than ever. And at any rate, poor health does not give anyone a claim on others' resources, at least not in my moral universe. "Price gouging" is indeed seen as offensive, but Americans have never shied away from having the government force others to give them free goodies. Personal responsibility is so last century.

Tom (2008-01-25 10:05:44)

The issue is a company's conspiring for years to hide evidence that their drug was useless - if not dangerous - while billions rolled in from people who believed their promises of better health and longer life. Is there a right not to be defrauded? The law says so.

Stephen M (Ethesis) (2008-01-25 11:31:32)

Tom, I deal with some doctors who have lunch catered four times a week, week after week, by the pharmaceuticals reps and who are making more than \$600k a year. Most prostitutes net a great deal less, and get far fewer free lunches.

Tom (2008-01-25 11:53:11)  
lol Point taken.

Timothy Beneke (2008-01-25 12:21:52)

The disparity between neuroscientific knowledge and drug efficacy is striking. The causes of Alzheimer's are well known, but no drug can treat it. The neurological causes of depression are not well known, but lots of drugs and even ECT can treat it well, much of the time, though probably not as well as the drug companies would have us believe. It's worth being reminded that a lot of the drugs Big Pharma creates do help people a lot.

Tom (2008-01-25 15:35:52)

Well...if a drug is under patent, we'll hear about its benefits – a lot. I was startled by the study a few days ago that appears to show that pregnant women who drink a lot of caffeine have a 25 % chance of mis-carrying (up from 12.5 % of women who don't drink much caffeine) - a **doubling** of risk. After all the ferocious battles in this country over abortion, I really don't understand the silence on caffeine, which is clearly aborting far larger numbers of children every day. (The story got some play, but it's already faded and will be forgotten in a month.) But can you imagine if Merck owned the patent for *Vivasurin* **ad**rug that could reduce miscarriages by 50 %? They could charge \$10/day minimum, and every pregnant woman in the country would be on it. Merck would make a couple of grand off every baby born, and the ads would be everywhere.

Tony (2008-01-25 16:07:49)

"The neurological causes of depression are not well known" Has anyone here read work by Griffin and Tyrrell on the causes of depression (incidentally, some of it stemming from Griffin's self-experimentation)? If so, what do you think about it?

Stephen M (Ethesis) (2008-01-25 17:13:15)

**s there a right not to be defrauded? The law says so.** The entire research thing and the buried studies is a real crime. There are real problems with drugs that work but that can't be patented, such as the Chinese herbal remedy for malaria that turns out to actually work, is cheap and not worth the trials. The UN has been working out a protocol for approving financing for it (but not opening the floodgates to tapping funds for worthless folk remedies at the same time). Tom, you and Tim make excellent points.

Dennis Mangan (2008-01-25 19:21:45)

"Merck would make a couple of grand off every baby born, and the ads would be everywhere." Yeah, and we'd see the Merck executives holding guns to people's heads to force them to fork over the money, just like they're doing now. What a bunch of whining socialists everyone in this country has become.

lasser (2008-01-25 23:30:06)

"Tom, I deal with some doctors who have lunch catered four times a week, week after week, by the pharmaceuticals reps and who are making more than \$600k a year." I worked at a doctor's office in a rural town hundreds of miles from a large city. Every lunch was catered at the most expensive restaurants in town. The doctor did not have an objection. The drug companies' sales representatives were likable people. The doctor, making much more money than everyone else in the office, was an outsider socially. As a result, the doctor loved to talk with the drug company rep. I can't honestly blame the doctor. The lunches were a great opportunity to get the bitter office employees together to share a meal. And like I said, the sales reps. were extremely likable. The bottom line: The American Medical Association needs to look into this. But I don't have a lot of faith they will.

## The Mystery of Bilboquet (2008-01-25 10:46)

A [1]bilboquet is a toy: a ball and stick. The ball has a hole and is attached by a cord to the stick. You toss the ball and impale it with the stick. A friend gave me a Japanese version:



It seemed impossible to reliably catch the ball on the stick but here is someone who can do it:

[EMBED] Even better: [EMBED] How do people get so good at this? I have part of the answer: it is a lot of fun to practice. I have been tracking my progress and I have to restrain myself from doing it more often. Why is it so much fun to practice? To be continued.

1. <http://www.gamesmuseum.uwaterloo.ca/VirtualExhibits/bilboquet/pages/index.html>

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Timothy Beneke (2008-01-25 12:31:06)

I'd explain the toy's attraction in terms of the induction of "flow" ([http://en.wikipedia.org/wiki/Flow\\_\(psychology\)](http://en.wikipedia.org/wiki/Flow_(psychology))) as Cs kszentmih lyi (sheek-sent-me-high) calls it. In his research people are happiest in such states; states where they are absorbed in activity that is hard enough that they are not bored, not so hard that they are totally overwhelmed and frustrated and helpless, where they get feedback as to how they are doing, and that preferably have some meaning for them, though the latter may not even be necessary. We are happiest when we are engaged and lose awareness of ourselves; of course if we are getting paid for it, that's even better... We evolved to find the use of our abilities pleasurable... The Japanese are very good at creating entertainment..

Seth's blog » Blog Archive » The Mystery of Bilboquet (continued) (2008-01-29 10:46:17)  
 [...] The Mystery of Bilboquet [...]

OdileS (2012-03-25 16:26:44)

Yeah, I use to play this as a teen while living in France...I constantly practiced and got very good at it..I would challenge myself as to how many times I could get the ball in the peg... I am looking around the web to buy one...Got any suggestions?

## Clavell's Law (2008-01-26 10:04)

Andrew Clavell writes a blog called [1]Financial Crookery. A [2]recent post about bonuses included this:

Due to the apparent ease of this management game ["managing upward" = convincing your superiors you are doing a good job without actually doing so] compared to the grisly business of finding actual customers and making them want to do profitable business with you, it is no wonder foot soldiers vie to join management ranks.

What is the scientific equivalent, I wonder?

1. <http://crookery.blogspot.com/>
2. <http://crookery.blogspot.com/2008/01/at-bonus-time-no-one-can-hear-you.html>

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David (2008-01-26 11:35:54)

Focusing your work on what will bring top publications and grants, on low-risk small steps rather than high-risk big steps?

seth (2008-01-26 11:46:18)

It's about creating the illusion of progress rather than actual progress. It's a variant of Gresham's Law (bad money drives out good).

Stephen M (Ethesis) (2008-01-26 21:20:59)

OB guys study things like this. For example, effective managers (ones who get things done) actually network less than the average. Successful managers (those who get promoted and make money) spend almost half their time networking. Interesting.

## Does Mercury Cause Autism? (2008-01-27 07:59)

A [1]2003 paper in the International Journal of Toxicology suggests the answer is yes. A Baton Rouge doctor named Amy Holmes, who herself had an autistic child, wondered if mercury was involved. She tested the hair of a series of autistic children from her practice and found, to her surprise, that they had less mercury in their hair than other children. Then she and two other scientists did a well-controlled comparison of normal and autistic children that confirmed her original observation. These are the data in the 2003 paper. Here is its abstract:

Reported rates of autism have increased sharply in the United States and the United Kingdom. One possible factor underlying these increases is increased exposure to mercury through thimerosal-containing vaccines, but vaccine exposures need to be evaluated in the context of cumulative exposures during gestation and early infancy. Differential rates of postnatal mercury elimination may explain why similar gestational and infant exposures produce variable neurological effects. First baby haircut samples were

obtained from 94 children diagnosed with autism using Diagnostic and Statistical Manual of Mental Disorders, 4th edition (DSM IV) criteria and 45 age- and gender-matched controls. Information on diet, dental amalgam fillings, vaccine history, Rho D immunoglobulin administration, and autism symptom severity was collected through a maternal survey questionnaire and clinical observation. Hair mercury levels in the autistic group were 0.47 ppm versus 3.63 ppm in controls, a significant difference. The mothers in the autistic group had significantly higher levels of mercury exposure through Rho D immunoglobulin injections and amalgam fillings than control mothers. Within the autistic group, hair mercury levels varied significantly across mildly, moderately, and severely autistic children, with mean group levels of 0.79, 0.46, and 0.21 ppm, respectively. Hair mercury levels among controls were significantly correlated with the number of the mothers' amalgam fillings and their fish consumption as well as exposure to mercury through childhood vaccines, correlations that were absent in the autistic group. Hair excretion patterns among autistic infants were significantly reduced relative to control. These data cast doubt on the efficacy of traditional hair analysis as a measure of total mercury exposure in a subset of the population. In light of the biological plausibility of mercury's role in neurodevelopmental disorders, the present study provides further insight into one possible mechanism by which early mercury exposures could increase the risk of autism.

The abstract omits the most important piece of information: There was little or no overlap between the hair mercury of the control and autistic groups. (It is hard to tell exactly, the data are badly plotted.) Given the size of the two groups, this is highly persuasive. The abstract also omits the basic conclusion: In autistic children, a mechanism that gets rid of mercury is broken. As a result, they get poisoned by levels of environmental mercury that would otherwise be safe.

Holmes started treating autistic children by (a) giving them a compound that tends to bind to mercury and form a compound that is excreted and (b) reducing their mercury exposure. The results of this treatment have been very impressive. As children get older, it becomes less effective. Here are details:

We currently have over 500 autistic patients under treatment with DMSA ranging in age from 1 to 24 years old. In general, we do not expect to see any behavioral, language, or social improvements until at least some of the CNS mercury has been removed. As of 1/15/01, we had 85 patients who had finished DMSA alone and had completed at least 4 months of DMSA + lipoic acid. The results of treatment in these patients are presented below:

n = 85 Improvement ( % )  
 Age Number Marked Moderate Slight None  
 1-5 40 35 39 15 11  
 6-12 25 4 28 52 16  
 13-17 16 0 6 68 26  
 18+ 4 0 0 25 75

Once lipoic acid is added, we usually track mercury excretion via tests of fecal mercury. We have noticed a large dependence of excretion on age of patient with the younger patients excreting much more mercury than the older patients. We think this difference in rapidity of excretion may explain the differences in response between the various age groups.

We have 6 patients, all 1 to 2 years of age who are finished with treatment by measurements of urinary and fecal mercury excretion. These 6 patients are "normal" by parent reports and repeat psychological testing. We have no children over the age of 2 who are finished with treatment. The rapidity of excretion seems to decrease markedly with each additional year of age. There are several children, mostly in the

younger age groups, who have made remarkable progress to the point of being able to be mainstreamed in school, but who are still have some "oddities" of behavior – none of these children have completed treatment yet.

Unfortunately I cannot find later results. An [2]undated announcement says "due to health reasons, Dr. Amy Holmes is no longer able to continue in her practice." [3]Miscellaneous comments by Holmes. [4]SafeMinds, a Cambridge, MA nonprofit devoted to this issue.

Addendum. A [5]new TV series (Eli Stone, rated B+ by Entertainment Weekly) will consider this issue. According to the NY Times TV reporter, "Reams of scientific studies by the leading American health authorities have failed to establish a causal link between the [mercury-containing] preservative and autism."

1. [http://www.ncbi.nlm.nih.gov/pubmed/12933322?ordinalpos=8&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/pubmed/12933322?ordinalpos=8&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum)
2. <http://www.healing-arts.org/children/amyholmes.htm>
3. <http://www.generationrescue.org/pdf/holmes3.pdf>
4. <http://safeminds.org/index.html>
5. <http://www.nytimes.com/2008/01/23/arts/television/23ston.html?ref=television>

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beagle (2008-01-27 17:49:57)

A quick google search brought these up: <http://autismdiva.blogspot.com/2005/12/dr-amy-holmes-was-just-trying-to-help.html> <http://autismdiva.blogspot.com/2007/08/dr-amy-holmes-and-mikes-story.html> Haven't had time to read either the original docs too deeply myself, nor these links.

B Campaigne (2008-01-27 18:45:16)

Hair analysis is inconclusive. Thy a live blood cell anaysis. I guarantee a different result. Please stop this propaganda. Why is the focus always only on thimerosal? Included on this list of chemical concerns should also be formaldehyde, M.S.G., aluminum, Butylated hydroxytoluene or B.H.T. and many others. Don't let the mainstream media and pharma spin doctors lull you into only focusing on the thimerosal. Remember these corporations would no doubt lose everything if a connection is made between the preservatives and the world wide vaccine programs. I saw my 5yr old son's live blood analysis taking place. I saw live candida yeast in his blood. I saw the heavy metals as well. Where do you think it came from? Leaky gut syndrome comes from the M.M.R jab.

Kathleen (2008-01-29 16:46:27)

Frankly Seth, I'm stunned. Shocked. That you'd even find the topic worthy of consideration much less come to these conclusions. This tired old argument is what I expect from wild-eyed curebies -not you- and it causes me to question the caliber of the content you've been publishing. I am sad and disappointed. Or maybe that's just my mercury poisoning talking...Odd how mercury poisoning seems to run in families. Perhaps you'll tackle that next.

seth (2008-01-29 18:25:41)

Kathleen, do you have an alternative explanation of the data of Holmes et al.? As for "tired old argument" I haven't seen anyone else say how persuasive the Holmes et al. data are. Even their abstract fails to make this clear.

Seth's blog » Blog Archive » New York Times vs. Reality (2008-02-02 17:05:50)  
[...] Does Mercury Cause Autism? [...]

Charles (2008-02-03 01:22:20)

Seth, I lean towards the mercury-autism link, but only lean, because the data seems contradictory. When I mentioned this article/study to a statistician friend of mine (he had just blogged about this) his response was that since the mercury was removed, we haven't seen any changes in the rate of autism, therefore it couldn't have been the mercury. I still haven't been able to find a way around that argument. I would suggest that some children are more susceptible than others, and the vaccinations might send them over the edge. I would also suggest that the rise has a lot to do with the essential fatty acid imbalances (Omega-6 vs. Omega 3) that have been increasing significantly over the past couple of decades. A book I read 10 years ago predicted a rise in autism, ADD, MS, Alzheimer's and other nervous system issues as a result. And as to your commenters who just can't bare the thought of someone bringing this issue up again, get a life. You speak as if all of these questions have always been dealt with purely dispassionately and scientifically. Your willful ignorance of the politicization of science and public health does not speak well of your intellectual capacity. The idea that mercury could have been a cause of the rise of autism was not unreasonable, and while the question seems to have been answered at this point, it was not always so clear. It would be wonderful if you could save your passion for helping to figure out what's happening, rather than getting your rocks off by reacting so indignantly.

Kev (2008-02-03 02:06:48)

Speaking as the parent of an autistic child, Seth and Charles will just have to get over their continued outrage that people should be outraged that this study is still being discussed as viable. You would both do well to read the following: 1) [1]Prometheus Part II 2) [2]Autism Street 3) [3]Not Mercury 4) [4]Autism Diva The above authors and scientists are also parents of autistic kids. We share an opinion that it might be good for our kids if people would move on, actually LEARN about the science involved instead of regurgitating abstracts like they think they know what they're talking about and hey - maybe some of that good old research money might start going to ways that will improve the lives of our kids. Y'know - education, housing for autistic adults, silly little things like that.

1. <http://photoninthedarkness.blogspot.com/2005/07/perfect-example-of-how-not-to-do-study.html>
2. <http://www.autismstreet.org/weblog/?p=61>
3. <http://notmercury.blogspot.com/2006/03/glutathione-what-is-it-and-why-should.html>
4. <http://autismdiva.blogspot.com/2005/08/ pernicious-is-word.html>

seth (2008-02-03 06:31:57)

Charles, "I haven't been able to find a way around that argument." I suggest you look at <http://www.jpands.org/vol11no1/geier.pdf> which shows that the autism rate HAS started to fall, exactly when you would expect from the mercury/autism hypothesis. Kev, Thanks for the links. I read the comments of Autism Diva before my post. I've now read the rest. They don't make any good points. For example, Prometheus gives three possible explanations - explanations he or she thinks are plausible - for the Holmes et al findings. Here is one of them:

The low hair mercury level is the result of a laboratory or specimen collection error that was systematically applied to only the autistic subjects. There is not enough information in the paper to address how this might have happened, but it is my personal favorite.

With no supporting data. This is like saying "then a miracle happens" or "I just don't believe it". It isn't persuasive.

Charles (2008-02-03 09:09:34)

Seth: Thanks for the .pdf. Interesting stuff. And I think your excerpt above, "...but it is my personal favorite," perfectly illustrates why people might be generally skeptical. I'm no longer shocked when I read various scientific studies in which the conclusions aren't at all supported by the data because it happens so often.

Kev (2008-02-03 10:19:18)

If you're relying on JPANDS papers for good science then I understand why you are having a problem. Good luck, but don't expect people not to take issue with you when you express your dissatisfaction with their criticism of your credulousness.

Autism News Beat (2008-02-03 10:50:20)

Kev's right - JPANDS gives a bad name to junk science. A recent paper (Gundacker et al , 2007) shows that genuine poor Hg excretors have elevated hair mercury levels. Hair reflects blood mercury level, so if you can't excrete it, the mercury builds up in the blood and the hair. Hair has high levels of cysteine (a sulfur-containing amino acid), that draws out and retains blood mercury. That's why we use hair mercury levels to track long term exposure. But hair also attracts and hold on to environmental mercury, which makes hair mercury levels in urban environments unreliable.

seth (2008-02-03 16:50:14)

Kev & Autism News Beat, Do you have an alternative explanation for the very clear declines in autism rates shown in the JPANDS paper?

Autism News Beat (2008-02-03 19:44:48)

There were a few quarters in late 2004 and early 2005 when the Calif. numbers seemed to trend downwards, but it didn't last. Over the longer term, case loads are not going down. Figure 3 in the Geier's non-peer reviewed article tracks CDDS numbers. Look at the data point for the third quarter of 2002. It's a huge out-lier, due to a programming error that was discovered in July 2002, in addition to changes to the reporting system effected in the same month, that added a large number of clients that had previously gone unrecorded. The hugely inflated number and subsequent "decline" is an anomaly that the Geiers passed off as real. A legitimate journal would have caught the deception. The Geiers presented the data point like any other. It is inconceivable that any honest, skeptical researcher could look at that data and not wonder about the outlier. The answer is readily available on the CDDS website. It is obvious that the Geiers deliberately used skewed data to further their agenda. That's not science.

B Campaigne (2008-02-16 03:58:57)

Blood Levels of Mercury Are Related to Diagnosis of Autism: A Reanalysis of an Important Data Set M. Catherine DeSoto, PhD Department of Psychology, University of Northern Iowa, Cedar Falls, Iowa, cathy.desoto@uni.edu Robert T. Hitlan, PhD Department of Psychology, University of Northern Iowa, Cedar Falls, Iowa The question of what is leading to the apparent increase in autism is of great importance. Like the link between aspirin and heart attack, even a small effect can have major health implications. If there is any link between autism and mercury, it is absolutely crucial that the first reports of the question are not falsely stating that no link occurs. We have reanalyzed the data set originally reported by Ip et al. in 2004 and have found that the original p value was in error and that a significant relation does exist between the blood levels of mercury and diagnosis of an autism spectrum disorder. Moreover, the hair sample analysis results offer some support for the idea that persons with autism may be less efficient and more variable at eliminating mercury from the blood.

seth (2008-02-16 06:30:44)

The article by DeSoto and Hitlan is here: Journal of Child Neurology, Vol. 22, No. 11, 1308-1311 (2007)

Ashley (2008-03-24 19:54:48)

Hi, I'm a student at a college in New England majoring in Psychology. For my Research Methods class I need to do a study and I chose to do Mercury causing Autism. I have a few questions that I would be very grateful if anyone would answer them and maybe give me an idea of how you feel about the subject. Thank you for taking the time. 1. Do you personally know anyone that has Autism? 2. Do you know a lot of information about Autism? Would you consider yourself an expert? 3. Do you believe mercury causes Autism? 4. Do you believe that thimerosal has made Autism increase? 5. Why do you think that the rate of Autism is at 1 out of 150 children? 6. Why do you believe that that number varies from state to state? Is it the environment? The mercury in the environment? 7. Do you believe that testing childrens' hair is an accurate test of mercury causing Autism?



Agerserve (2008-10-23 09:32:23)

There was this guy see. He wasn't very bright and he reached his adult life without ever having learned "the facts". Somehow, it gets to be his wedding day. While he is walking down the aisle, his father tugs his sleeve and says, "Son, when you get to the hotel room...Call me" Hours later he gets to the hotel room with his beautiful blushing bride and he calls his father, "Dad, we are the hotel, what do I do?" "O.K. Son, listen up, take off your clothes and get in the bed, then she should take off her clothes and get in the bed, if not help her. Then either way, ah, call me" A few moments later... "Dad we took off our clothes and we are in the bed, what do I do?" O.K. Son, listen up. Move real close to her and she should move real close to you, and then... Ah, call me." A few moments later... "DAD! WE TOOK OFF OUR CLOTHES, GOT IN THE BED AND MOVED REAL CLOSE, WHAT DO I DO???" "O.K. Son, Listen up, this is the most important part. Stick the long part of your body into the place where she goes to the bathroom." A few moments later... "Dad, I've got my foot in the toilet, what do I do?"

Plavuse (2011-03-06 13:53:12)

Ues, but not everthing black and white, something is gray :) Miranda

### **Gary Taubes on Cholesterol and Heart Disease (2008-01-27 17:25)**

[1]He interprets recent results with a cholesterol-lowering drug called Vytorin much like [2]I interpreted similar news about a different cholesterol-lowering drug (torcetrapib).

Thanks to Dave Lull.

1. <http://www.nytimes.com/2008/01/27/opinion/27taubes.html?ex=1202101200&en=c30d3c5dc326225c&ei=5070&emc=eta1>

2. <http://www.blog.sethroberts.net/2008/01/18/does-cholesterol-cause-heart-disease/>

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### **Interview with Susan Allport (2008-01-28 11:07)**

[1]Susan Allport is the author of [2]The Queen of Fats: Why Omega-3s Were Removed from the Western Diet and What We Can Do to Replace Them, which for me was the best source of introductory information on the subject. Chapter 1 is [3]here. A [4]video.

What have been the main reactions to your book?

The best reaction has been from scientists and the American Oil Chemists Society (AOCS), whose members were happy to have the history of this important research laid out for the public and for themselves. The book hasn't yet caught on with general readers – in part because the material is somewhat difficult and in part because most people think that the problems with fats are with trans fats or saturated fats or cholesterol: three long detours on the road to dietary understanding, in my opinion.

Learned anything since you wrote it that you would include in a revised/expanded edition?

I would certainly include a key piece of evidence that has been available for some time but not brought to light. It has to do with the argument that we don't elongate and desaturate the parent essential fatty acids very

well (the omega-3 fat: alpha linolenic acid and omega-6 fat: linoleic acid). Therefore, the argument goes, it doesn't matter about the quantities of these parent fats in the diet. What matters is the amount of long chain fats (in fish, etc.)

But here's the rub and the lie to this argument.

According to the Nationwide Food Consumption Survey and other data, Americans consume more long chain omega-3 fatty acids than they do long chain omega-6 fatty acids (See "Polyunsaturated fatty acids in the food chain in the US", Am J Clin Nutr 2000;71 S 179s-88s.) Yet their tissues are full of these highly inflammatory omega-6 fats.

How did this happen? There is only one way. The large amount of linoleic acid in the diet (about 7 % of energy) overwhelms and outcompetes the much smaller amount of alpha linolenic acid (about .7 % of energy). So it does matter how much linoleic acid we consume. Linoleic acid is the elephant in the living room and the reason we are experiencing the many chronic illnesses that are associated with an insufficiency of omega-3s.

I like to think that anyone who has read [5]my flaxseed oil results (flaxseed is high in alpha linolenic acid, the short-chain omega-3 fat) would agree. Next question: My impression is that the optimal amount of omega-3 is highly unclear. Do you agree?

The optimal amount of omega-3s in one's tissues does seem to vary, somewhat, according to where one lives. In the cold Arctic, humans benefited from a very high proportion of omega-3s in their tissues, and there they weren't penalized for having a lower proportion of omega-6s b/c there are few infectious microorganisms in the Arctic. (Omega-6s, remember, are important in mounting a good immune response.) In more temperate and tropical regions, we need a more balanced amount of 3s and 6s in our tissues. We'll be learning a lot more about these optimal amounts in the future.

What's most critical to understand, though, is that omega-3s and omega-6s compete for enzymes and for positions in our cell membranes. So the amount of omega-3s you need to eat in order to achieve a given (optimal) amount in your tissues depends entirely on the amount of omega-6s you're eating. If you're eating small amounts of omega-6s, you need to eat only small amounts of fish and greens. If you're eating, as most Americans are, large amount of omega-6s, you'll need to eat large amounts of fish and greens – more fish than there are in the ocean!

Which widely-listened-to nutrition expert or group of experts has best appreciated the importance of omega-3s? Which has worst appreciated them?

I've had very good conversations with Dr. Mehmet Oz, and I know that Andrew Weil has a very good understanding of the issues. Epidemiologists seem to have the least appreciation because they have little knowledge and appreciation of biochemistry, in general.

In that last question I was thinking of Walter Willett, whose book Eat Drink and Be Healthy fails to clearly distinguish omega-3 and omega-6 fats. Since he's an epidemiologist, that agrees with what you say. Can you say more about the reaction of epidemiologists?

For Willett to observe the difference between the two families of fats in his type of research, he would need subjects with very different proportions of these fats in their tissues. He doesn't have that since all of his subjects eat a similar American diet. He also doesn't see it because he doesn't control for the two families and their competitive interactions. What we need to do to achieve a good understanding of the role of the two families of essential fats in health and disease is to take experimental work (which clearly shows important differences b/n the two families) and use it to frame our prospective studies. (And because of the competitive interactions, we can't use fish intake as

an indication of omega-3 status; we must use tissue levels of the two families!)

1. <http://www.susanallport.com/>
2. <http://www.amazon.com/exec/obidos/ASIN/0520253809/sethrobertand-20>
3. <http://www.ucpress.edu/books/pages/10264/10264.ch01.pdf>
4. <http://www.youtube.com/watch?v=eIgNpsbvcVM>
5. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>

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Stephen M (Ethesis) (2008-01-29 18:41:49)  
Thanks, that was interesting.

Tom (2008-01-30 00:49:49)  
Seth, think you'll find this interesting: <http://heartscanblog.blogspot.com/2008/01/high-dose-fish-oil-for-lpa.html>

Susan Allport (2010-07-28 04:25:51)  
Hi Seth, Did you see this piece of self experimentation? It clearly shows how hard it is to have good omega-3s on a high omega-6 diet. <http://omega-6-omega-3-balance.omegaoptimize.com/2010/07/25/case-study-30days-of-high-omega6-dietstiffens-arteries-and-increases-belly-fat.aspx>

## **Blog Power (2008-01-28 15:57)**

[1]Philip Weiss:

It's not just that the Times is spot-on about Giuliani's character. It's great to see a big newspaper take the gloves off and really let someone have it and not worry about sinking the guy's campaign. The editorial wasn't fair or balanced, but it for-damn-sure knew what it was talking about. I feel that the Times was influenced by the blogosphere in those rhetorical liberties, and I hope the trend continues. Can you imagine someone saying what they really think about the Israel lobby on the Op-Ed page, instead of saying what they're supposed to be saying? Now that would be progress.

[2]  
New Yorker abstract:

On September 8th, two million people in two hundred and twenty cities across Italy celebrated V-Day, an unofficial new national holiday, the "V" signifying victory, vendetta, and, especially, "Vaffanculo" ("Fuck off"). The event had been organized by Beppe Grillo, Italy's most popular comedian, to protest endemic corruption in the national government. . . . Grillo has galvanized Italians by talking about corruption with irreverence and humor"indeed, by talking about it at all. The country's mainstream press is controlled,

or owned outright, by political parties and corporations. Since 2005, Grillo has addressed the public primarily through his blog. . . V-Day grew out of Clean Parliament, which Grillo launched in 2005, when he posted on his blog the names of the convicted criminals serving in parliament.

1. <http://www.philipweiss.org/mondoweiss/2008/01/the-times-takes.html>

2. [http://www.newyorker.com/reporting/2008/02/04/080204fa\\_fact\\_mueller](http://www.newyorker.com/reporting/2008/02/04/080204fa_fact_mueller)

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Andrew S. (2008-01-28 17:34:30)

The irony in the first quotation, though, is that a New York Times endorsement in the GOP primaries does more harm than good. Rudy rushed out a web add touting the NYT's attack on him. <http://blip.tv/file/629683>

### **The Mystery of Bibloquet (continued) (2008-01-29 10:46)**

Bibloquet appears impossibly difficult, I [1]posted recently. Yet people become very good at it, no doubt through huge amounts of practice. Why?

Now and then I hear about somebody getting very good at a physical skill: A basketball player is very good at free-throw shooting, for example. No doubt the reason is lots of practice. I'm not surprised because explanation is easy: He played a lot of basketball (social, fun to move around), he wanted to be a pro (aspiration). Professional musicians have practiced a lot – sure, music sounds good, it's their job. Most cases of extreme practice that I know of have plausible common-sense explanations.

Bibloquet skill does not. It leads nowhere, is completely useless (I suspect), isn't social, and isn't promoted by the environment (there are no bilboquet rooms, for example). Some people spend a huge amount of time playing video games (also useless, etc.), but video games are complicated. Bibloquet is simple. You can see this in the price. A video game might cost \$40, not counting the price of the computer it runs on. My bibloquet probably cost about \$1. No computer needed. For that \$1 I am going to get a huge amount of enjoyment. Hard to think of something else for \$1 that would provide so much pleasure.

As Michel Cabanac has argued many times, our brains use pleasure to guide our actions: What we should do is more pleasant than what we shouldn't do. Sometimes this system misfires because something man-made resembles what we should be seeking. If your iron level is very low you may suffer from pagophagia – too much ice chewing. Ice chewing brings persons with pagophagia great pleasure. I'm sure that the evolutionary reason is that ice chewing is producing the same sensations as bone crunching. Bone crunching would be a good source of iron because bone marrow is iron-rich. The mechanism that causes pagophagia evolved because it promoted bone crunching. Chewing ice resembles bone crunching. What biologically-useful activity does playing bibloquet resemble?

My guess is that bilboquet is addictive because:

1. Success is sharply defined. You catch the ball (success) or not (failure). Other addictive games have this feature. Tetris: you fit the falling shape into the pile at the bottom. Sudoku: You fill in all the squares correctly.

2. Success is not easy. We like a challenge. Most video games, such as Tetris, get harder and harder.

### 3. Hand-eye coordination is involved.

At the core of human evolution is occupational specialization and diversification. It started with hobbies. To get diversity of hobbies you need diversity of reward; a wide range of skilled activities must be rewarding. Rather than evolve a separate mechanism for each hobby, this was accomplished with a mechanism that is quite flexible and can operate with lots of different activities. Thus the reward system can be transferred to something completely useless, such as bilboquet. The not-too-easy feature caused hobbyists to become more and more skilled because only by continually challenging themselves could they keep enjoying it. Hand-eye coordination was required because the goal was to get people to make things. Why success had to be sharply defined I'm not so sure. (In art, a similar human activity, success is not sharply defined.) Maybe it serves to focus effort.

The lesson for me is that if I want to produce a task that will measure how well my brain is working and be so much fun it's addictive, it should involve hand-eye coordination. (It will be easier to make the many measurements [2]my omega-3 research requires if I have such a task.) This is consistent with what I've observed so far: None of the tasks I've used have been addictively fun. The balance task had a fairly sharp and difficult measure of success (staying balanced for more than a few seconds) and was physical but didn't involve hand-eye coordination. The digit-span task had a sharp measure of success (perfect recall) and could be made more and more difficult but didn't involve hand-eye coordination. Three other tasks I've used had less sharply-defined success and didn't involve hand-eye coordination.

Addendum. A [3]Japanese website. In Japan bilboquet is kendama. Thanks to Pearl Alexander.

1. <http://www.blog.sethroberts.net/2008/01/25/the-mystery-of-bilboquet/>
2. <http://www.blog.sethroberts.net/2007/02/24/omega-3-greatest-hits/>
3. [http://www.kendamakyokai.com/index\\_english.html](http://www.kendamakyokai.com/index_english.html)

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Kjrsten (2008-01-29 16:38:28)

"success is sharply defined" ... that's why I moved from being a graphic/web designer (limited to visual presentation) to being a developer/programmer. I get a much bigger kick out of making a piece of code work – difficult to do sometimes, but when you get it right, you KNOW it. Design involves subjective value judgments, and "success" is in the eye of the beholder.

Kjrsten (2008-01-29 16:40:18)

I had to look up bilboquet. I had thought it might be "ball in cup" but it's "spike in ball". Female vs. male? ; )

Stephen M (Ethesis) (2008-01-29 18:39:07)

<http://www.independent.co.uk/news/science/scientists-discover-way-to-reverse-loss-of-memory-775586.html> You might find that interesting, an intersection of brain function and obesity research.

NE1 (2008-01-29 18:45:17)

Video games are very social, if mostly only between males. You might imagine it's a way to establish a hierarchy like hunting is for the Ache, even though it's not necessary anymore. Sounds like bilboquet would be useful if anything as party trick, like solving the Rubik's cube, playing the harmonica (these days), or other things kids routinely and amazingly master in their spare time. I don't see why you should want a particularly fun game, that would encourage you to want to improve personally. You want something where it's very clear what your limitation is, and not personal technique. Something that takes the data for you, so that you aren't able to bias the value, sure. The few you list sound fine, if they reflect something. Really, it seems like

with most games/tests you're screwed, because of learning. Maybe it's best to have a game you've reached a near permanent plateau with, so that transitory omega-3 status shows clearly against the residual learning background.

KenF (2008-01-29 18:51:45)

"Stacks" is very popular in my house, where you stack up these cups and then unstack them.

seth (2008-01-29 19:59:32)

NE1, I want a particularly fun test to make it easier to collect the data.

Jeff Winkler (2008-01-31 12:26:20)

My morning routine includes: 1 - 20 minutes of a driving game, Burnout Revenge, an Xbox video game, using a Kilowatt game controller ([http://kotaku.com/gaming/live-blogging/kilowatt-kills-my-girly-muscles-110\\_058.php](http://kotaku.com/gaming/live-blogging/kilowatt-kills-my-girly-muscles-110_058.php)) This meets your criteria in spades - hard, fast paced, visual. Wakes me up physically, gets blood flowing to the brain. 2 - Mindhabits, <http://mindhabits.com/> . The goal is to click on smiling faces. Hand-eye coordination...and a tie-in with your faces in the morning idea. It's shown to reduce cortisol (paper - [http://selfesteemgames.mcgill.ca/research/dandeneau\\_etal\\_07.pdf](http://selfesteemgames.mcgill.ca/research/dandeneau_etal_07.pdf)) Mindhabits meets your 3 criteria.. though I don't obsess over score. I do it because it's fun and improves my outlook. 3 - Typing practice: recently switched to the Dvorak keyboard layout so I practice 15 minutes a day. The software tracks speed and error rate. All 3 are electronic games which record results. They're fun and get me "warmed up" for the day.

The Doctor What (2008-02-01 12:30:45)

You keep saying it's hard to do, but it isn't once you know the trick. Both the cup-and-ball and the spike-and-ball have a trick that let anyone with a little eye-hand skills do it successfully. cup-and-ball: When you throw the ball in the air (by tugging on the cup) it forms an arc. You want to catch the ball as it approaches the apex (top) of the arc. If you catch it too far below the apex it bounces and won't stay in the cup. Ideally, you get the cup right under it as it hits the apex. spike-and-ball: Take the ball and set it spinning at the end of the string. Then do the same thing as with the cup-and-ball. The spinning keeps the hole pointed downwards. It's actually easier because you have more "bounce" room because the spike is so tall. Ciao!

Seth's blog » Blog Archive » The Lessons of Bilboquet (2008-02-07 12:37:20)

[...] The Mystery of Bibloquet (continued) [...]

Mark (2008-12-28 10:01:00)

If you're still doing the kendama, let me know. I'll send you an official one, licensed by a nonprofit that certifies them. They have patents and design patents on the particular design used in competitions, and three companies currently make them. Spinning the ball isn't necessary. You just need to jerk the ball straight up from a dead hang when it is still and not jiggling so that the hole stays on the bottom. Spinning accomplishes that by making the ball a little gyroscope, but you can just stop the wobbling with your hand also. When catching the ball in the cup, you put the cup under the ball at its apex, but you should pull it straight up, not in an arc, although the arc version is also one of the tricks you can do. There are over 100 tricks. There are kyu and dan levels, just like in karate. This page has the tricks for all the kyu levels of [1]kendama. Check out the "lighthouse" if you really want to see something that seems impossible (but is not so hard if you blow several hours practicing it).

1. <http://kendama.org/>

## More Blog Power (2008-01-31 06:23)

From the London Telegraph a few days ago:

Peter Hain has made history: his is the first British ministerial scalp to have been claimed by a blogger. Kudos, as the Americans say, to [1]Guido Fawkes [a blogger], who first sighted his tomahawk at the Hain

campaign 12 months ago when he posted Hain's campaign strategy.

[2]Hain's crime was failure to declare campaign donations. A [3]downfall timeline. "Guido sees himself as a journalist, a campaigning journalist who publishes via a blog. He campaigns against political sleaze and hypocrisy," [4]says Guido. His [5]comparison of food allowances.

1. <http://www.order-order.com/>
2. <http://www.telegraph.co.uk/news/main.jhtml;jsessionid=45VLIEA3HF30RQFIQMGSFF4AVCBQWIV0?xml=/news/2008/01/25/nhain225.xml>
3. <http://www.order-order.com/2008/01/how-guido-destroyed-hains-ambitions-in.html>
4. <http://www.order-order.com/2004/01/about-guidos-blog.html>
5. <http://www.order-order.com/2007/12/food-allallowances-school-children-armed.html>

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### **Academic Horror Story (UC Berkeley) (2008-01-31 10:44)**

Two years ago, a University of California Berkeley undergraduate was a subject in an MRI experiment at the Henry H. Wheeler, Jr. Brain Imaging Center on the UC Berkeley campus. She did it for the money: It paid \$200 for two two-hour sessions, during which you lie motionless inside a large loud machine. During the first session, the persons monitoring the experiment could see that something was seriously wrong: The subject had a large mass in her brain. Clearly her life was at risk. But they didn't tell her immediately what they had seen. (Later they claimed they "couldn't" have told her, for legal reasons. A friend of hers who was present at the experiment was threatened with serious legal action if he told her.) Instead, they sought outside opinion about what the mass was and what to do about it. A few weeks later, they told her about it. "Sometimes unusual things show up on these scans" she was told. This was incorrect: Nothing like this had happened before at UC Berkeley.

In a way, the story has a happy ending. The large mass turned out to be benign (but at the time of the experiment they had no way of knowing that). It was removed. A year and a half after the operation, there are no signs of recurrence.

The experimenters not only (a) withheld what might have been life-saving information, (b) they persisted in this behavior after having time to think about it; and (c) they threatened someone who wanted to do the right thing. This is no momentary lapse in judgment. The experimenters – including the professor in charge and who knows what other powerful people at UC Berkeley – actively did the wrong thing. They carefully decided not to tell her info that might have saved her life.

More. After I wrote this post, I learned that the person in charge of the Wheeler Brain Imaging Center at the time was Professor Mark D'Esposito. By email I asked him if he disputed any of the facts in this post and if the Center had done anything to keep such a thing from happening again. He didn't reply.

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NE1 (2008-01-31 11:27:21)

When I have done those experiments in the past, the grad students running it have offered to give them the MRI's for free. They'd do anything to get people to just show up.

Chris (2008-01-31 12:07:42)

Privacy rules have proliferated so much in recent years that I expect many institutions have developed a culture of not releasing any information to anyone, ever, common sense or humanity be damned. In this case, there may be some mindless spillover from experiment protocols that obsess over double-blindness. Not that that there's a logical case for it - compare it to the reporter's reflex to scatter "alleged" throughout any crime story, even where the risk of libel is laughably absent: e.g., "The alleged assassin felled the long-time dictator with one shot to head." Needless to say, the experimenters' behaviour was inexcusable.

CD (2008-01-31 12:27:25)

Why not tell us the experimenters' names?

Stephen M (Ethesis) (2008-02-01 11:43:52)

btw, for a funny post on salt (and the sodium lack most people have): [http://www.t-nation.com/article/most\\_recent/sodium\\_your\\_secret\\_weapon](http://www.t-nation.com/article/most_recent/sodium_your_secret_weapon)

Emily M (2008-02-08 21:36:47)

A friend of mine participated in an MRI experiment at Minnesota about a dozen years ago. When the researchers saw his scan, which showed a large tumor, they IMMEDIATELY referred him to a neurologist. His tumor also proved benign although it was large enough to be quite threatening (despite having up till then produced no symptoms he'd noticed).. There has been no recurrence. Happy ending. I find it really shocking that researchers would withhold information like that from a volunteer about their scan.

seth (2008-02-09 12:51:49)

Thanks, Emily, that's good to know.

## 3.2 February

### Everything Old is New Again: Pick-Up Lines (2008-02-01 18:30)

Long before Atkins, there was Banting. The first low-carb diet was the creation of William Banting's doctor. A pamphlet about it titled [1]Letter on Corpulence, published in 1864, was a huge best-seller. The verb to banting meant to diet.

And long before The Game – albeit less well-known for teaching pick-up lines – there was Jane Austen. The lessons of The Game were [2]a subplot of a recent episode of Ugly Betty in which Betty interviews an author of a similar book that says the best way to get a woman's interest to follow praise with criticism. Later in the episode, we see this advice in action: Henry tells a woman that she has a lovely face – "your doctor did an excellent job."

Here's Austen, from [3]Northanger Abbey:

"I have sometimes thought," said Catherine, doubtingly, "whether ladies do write so much better letters



than gentlemen! That is – I should not think the superiority was always on our side.”

”As far as I have had opportunity of judging, it appears to me that the usual style of letter-writing among women is faultless, except in three particulars.”

”And what are they?”

”A general deficiency of subject, a total inattention to stops, and a very frequent ignorance of grammar.”

A little later:

”And pray, sir, what do you think of Miss Morland’s gown?”

”It is very pretty, madam,” said he, gravely examining it; ”but I do not think it will wash well; I am afraid it will fray.”

1. <http://www.proteinpower.com/drmike/low-carb-library/bantings-letter-on-corpulence/>
2. <http://www.televisionwithoutpity.com/Shows/Ugly-Betty/Stories/A-Thousand-Words-By-Friday?currentPage=3>
3. <http://etext.virginia.edu/etcbin/toccer-new2?id=AusNort.sgm&images=images/modeng&data=/texts/english/modeng/parsed&tag=public&part=all>

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Ugly Betty Writers Inspired By Jane Austen? (2008-02-02 08:47:01)

[...] Well, Seth Roberts has found an interesting parallel in Jane Austen’s writing.Â Roberts, professor emeritus of psychology at the University of California at Berkeley, gives these two excerpts from Austen’s Northanger Abbey: “I have sometimes thought,” said Catherine, doubtingly, “whether ladies do write so much better letters than gentlemen! That is – I should not think the superiority was always on our side.” [...]

## **Jane Jacobs and Self-Experimentation (2008-02-02 05:03)**

In answer to a question about what Pittsburgh should do to revive itself, Richard Florida [1]answered:

I asked Jane Jacobs once, ”What would you do – as a person who lived in New York in the Village – to rebuild the World Trade Center site? She said, ”Well, Richard, you asked the wrong question. What would the people who used that site do? What would the people who used to work there do? What would the people who owned shops there do?”

The people who used the site know the most about the site. And they care the most about it.

This is one big reason self-experimentation is a good idea: The people with a problem know the most about the problem and care the most about it. People with acne know more and care more about acne than people without it.

People with insomnia know more and care more about it. And so on. It's a huge resource that conventional research almost completely ignores.

1. [http://www.pittsburghlive.com/x/pittsburghtrib/opinion/columnists/steigerwald/s\\_550387.html](http://www.pittsburghlive.com/x/pittsburghtrib/opinion/columnists/steigerwald/s_550387.html)

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### New York Times vs. Reality (2008-02-02 17:05)

In a recent NY Times [1]health blog by Tara Parker-Pope was the following:

Dr. Parikh says it is a lesson pediatricians have already learned. He notes that doctors weren't paying attention in the late '90s, when patients were just beginning to go online en masse and theories about vaccines and autism were first circulating.

"We weren't paying much attention until parents started to refuse vaccines. When we looked, we realized that many parents were exposed to story after story on autism Web sites and in chat rooms about the dangers of vaccines. That echo chamber of opinion became a reality despite our best efforts to prove otherwise. Would things have been different if we had engaged our patients from the get-go by providing them with alternative Web sites, scrutinizing and rebutting anti-vaccine 'science,' or posting studies demonstrating vaccine safety in the public domain? I would answer, emphatically, yes."

To Parker-Pope, in other words, everybody knows – or at least every sensible person knows – that "anti-vaccine 'science'" wasn't really science and that vaccines were safe. [2]Not quite. Further examples: [3]NYT vs. business reality. [4]NYT vs. political reality.

1. <http://well.blogs.nytimes.com/2008/01/11/medical-googlers-part-two/>
2. <http://www.blog.sethroberts.net/2008/01/27/does-mercury-cause-autism/>
3. <http://feeds.feedburner.com/~r/pmarca/~3/227737846/inaugurating-th.html>
4. <http://www.tinyrevolution.com/mt/archives/002038.html>

Dennis (2008-02-02 21:57:11)

Nothing is completely safe. Vaccines have risk. Having a significant portion of the population unvaccinated has risk. The optimal situation for parents is not to vaccinate their child, so they bear no risk from the vaccination, and for every one else to vaccinate their child, so there is no one to catch the disease from. Of course, if many parents try to choose the optimal situation, the disease can infect many unvaccinated children.

seth (2008-02-03 05:54:55)

The choice isn't between vaccine and no vaccine; the choice is between different methods of preserving vaccines: with or without mercury.

Andrew Gelman (2008-02-03 08:47:52)

Seth, I respect your concerns on this issue, but I think you're presenting it a bit strongly: rather than "NYT vs. Reality," it seems the situation is really "NYT and the Expert Consensus vs. A Minority of Scientists (that happens to include Seth)." Disagreement is not the same thing as denying "reality."

seth (2008-02-03 09:17:47)

If you ignore the data, that's a fair statement. Yes, a majority vs. a minority. I don't think the data should be ignored. They paint a very different picture. Not only the paper I mentioned earlier but also this: <http://www.jpands.org/vol11no1/geier.pdf> Lo and behold, when mercury is removed from vaccines autism rates decline, at the predicted time. Nothing prevented Parker-Pope from reading this paper. I believe NYT journalists should do more than simply repeat what experts tell them; they should actually look at the research. Had Parker-Pope done so, she might not have been able to figure out that "the expert consensus" was wrong; but she could have surely realized it might be wrong.

Stephen M (Ethesis) (2008-02-03 12:47:17)

*I don't think the data should be ignored. ;)*

Tom (2008-02-03 13:06:10)

Good point, Seth, and yet Tara Parker-Pope is so much better than Kolata and Brody that it's not even funny. In TPP's recent blog on Cholesterol, you can actually see her POV shifts as the comments spur her to do more reading on what she's writing about. <http://well.blogs.nytimes.com/2008/01/28/will-cholesterol-pills-save-your-life/> #comments And TPP clearly respects Dr. (Malcolm) Kendrick, who will not be appearing in Brody's blog, I guarantee you. In a recent post in her Times "science" (!) blog, Brody covers a similar subject with absolute Ancel Keys-rigidity. <http://science.blogs.nytimes.com/2008/01/28/a-new-you-jane-e-brody-on-nutrition/> One thing that's fascinating about Brody's blog entry is that she concludes her final comment by defensively discussing what has clearly been a blizzard of comments about Gary Taubes...yet, if you look at comment's she's approved for posting, only ONE of them mentions Taubes. In other words, she's gotten an onslaught from readers demanding she respond to Taubes' research, and has censored it all! And then she forgets that she has done so!

Stephen M (Ethesis) (2008-02-03 20:38:26)

Quote: And since so many queries and comments concerned Gary Taubes, I think a final word is needed. While it is true that the saturated fat/cholesterol hypothesis about heart disease has never been put to an incontrovertible clinical trial, there is at least decades-long experience with it that has found absolutely no hazardous effect and strong indications of benefit. The idea that carbs (and I don't mean the refined and sweet ones, at least) are the real cause of obesity and heart disease is thus far just an idea. Although in short-term tests about a year the high-fat, low-carb diet has improved measurements of cholesterol and diabetes control, it has never been followed for decades in any population group except the Eskimos and some Greenlanders, whose main source of fat is not from red meat and dairy but from creatures from the sea. So, to my mind, the jury is very much still out on the long-term safety of a diet that gorges on red meat, high-fat cheeses and other sources of saturated fat and dietary cholesterol. End Quote Sure enough, she hardly let any of those through moderation (though she did let lots of "pat on the back, requires no response" err "questions"). I'd have posted a link back to this thread, or a copy of the above post, but comments were closed.

SusanJ (2008-02-03 22:01:27)

Seth, It is extraordinarily difficult to disentangle what is going on in the autism field. You could easily spend several months full-time just trying to sort out the players and agendas. It makes Taubes' book look simple by comparison. You might want to read this article: <http://quackfiles.blogspot.com/2005/03/mark-geier-untrustworthy-autism.html> Bear in mind that at least some autism is hereditary and any theory would need to explain that. FAAASS (Families of Adults Affected by Asperger's Syndrome) has a number of stories of parents (typically fathers) who were only diagnosed as a result of their child's diagnosis since AS wasn't well-recognized a generation ago. <http://www.faaas.org/>

Tom (2008-02-04 15:11:26)

Another note in Tara Parker Pope's favor – in the comments for the blog entry I linked to above, I urged her to look into the Cochrane Collaboration, and just days later it figures prominently in today's article. <http://well.blogs.nytimes.com/2008/02/04-/antidepressants-dont-ease-back-pain/> IMHO, a policy of engagement is probably in order with most journalists, who are very harried and doing their best in most cases. There will certainly be exceptions like Brody who are actively censoring science out of their papers (even the paper of record!), but most will want to hear the truth. Unfortunately, they are not hearing the truth, and if they need a quote on a deadline, they have a long list of rent-a-docs on big pharma's retainer who are ready to return their "I need a quick quote" calls immediately. But if we want better science reporting, rather than deploring first, why not at least try to educate first?

pam tigre (2008-03-24 08:33:56)

I am a producer with WCBS TV working on a story about vaccination controversy...would love to speak to some parents who are not vaccinating their children... Call 212 975-7953 or e-mail...[ptigre@cbs.com](mailto:ptigre@cbs.com) Thank you! Pam Tighe

### **Interview with a Connector (2008-02-03 11:42)**

One of Malcolm Gladwell's best articles is "[1]Six Degrees of Lois Weisberg", about a Chicago woman who seemed to know everyone and enjoyed introducing them. In *The Tipping Point*, Gladwell called such people Connectors. When I met a Connector, a Berkeley psychologist named Karine S., at a Los Angeles party, I wanted to know more.

You like to connect people? How do you do that?

I think the root of my desire to connect people stems from being from a collectivistic culture (Israeli). Also, friendship means a lot to me and I take it very seriously. So I like to bring friends together when I know that they will get along. I do have to say that I'm very selective about which friends I combine though. And often times people connect because they meet over and over at events/outings that I plan/initiate. But ultimately I have to say that I think that people in my life connect because of a common experience. For example, when I moved up north [the Bay Area] I spent a lot of time with friends in the time before at "going away" outings. So I think there was a common emotion experienced which led to them bonding. So now some of my friends back home and are now friends because they met through me. Of course when I come down we all get together again. I think it just comes down to making a plan and inviting a bunch of people that are my friends which leads them to connect and get along.

You say you're selective about "which friends [you] combine". Can you say more about this? Such as how you decide?

I guess it stems from being so sensitive and attuned to people's feelings and experiences that I know who will hit it off and who won't. It's also somewhat selfish because I will end up "babysitting" people if they do not blend with others and engage. I'd like to say that most of my friends get along with each other, but there are some who have not hit it off. I think I combine those who are open to diversity and are not judgmental much more easily. Come to

think of it, in big settings I combine mostly everyone. But let's say it's a Sunday on Melrose...window shopping, eating lunch...I invite those that I know like each other. It's basically a personality assessment. Some people are very open to being around others and there are some people that are so uncomfortable in their own skin that they cannot be around others comfortably and it shows. And when you have known people for a long time, it doesn't require much thought. I know I'm pretty good at doing this because there are people who share me as a friend, and now hang out because they met through me.

Can you think of a mistake you've made bringing people together?

One time I brought two people together who I thought would hit it off and didn't! It was like a bad accident! I thought they would bond about things and enjoy each other and it turned out that the "philosophical" conversation turned into a battle of egos. They verbally attacked each other and it was so bad. This all happened at a restaurant and carried over to my house. One of them reassessed whether she wanted to be friends with me if I was to have this other friend in my life. I think now when someone has as strong a personality as this friend did, I make sure to talk to that person about how expressive they will be about their viewpoints. I think this issue only comes up with certain people in my life...meaning there are certain friends that I cannot bring around just anyone because they are fragile and/or not as mentally sophisticated/intelligent as the other people in my life.

A [2]nice article critical of Gladwell's thesis.

1. [http://www.gladwell.com/1999/1999\\_01\\_11\\_a\\_weisberg.htm](http://www.gladwell.com/1999/1999_01_11_a_weisberg.htm)

2. <http://www.fastcompany.com/magazine/122/is-the-tipping-point-toast.html>

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Varangy (2008-02-04 13:45:39)

Your interview is interesting b/c Karen S. seems to be self-aware that she is a Connector and appears to work at it. All the Connectors I have met do their connecting/networking effortlessly, fluidly and without conscious thought, or at least exude the appearance of effortlessness.

### **Does Mercury Cause Autism? (continued) (2008-02-03 23:20)**

A [1]2006 paper reported that autism rates have started to decline, according to a California reporting system and a nationwide one. The declines, you will see if you look, are very clear. They started soon after mercury began to be removed from childhood vaccines. Richard Herrnstein, the psychologist, coined a useful phrase: to praise with faint damn. I thought of it when I read comments ([2]here and [3]here) criticizing this study because of the journal it is in.

According to the [4]Sacramento Bee,

Experts said, however, that they don't know what's causing the numbers to fall off.

“Perhaps whatever caused (the number of cases) to go up ... is no longer present,” said Dr. Robert Hendren, executive director of the University of California, Davis MIND Institute, which researches neurodevelopmental disorders.

No kidding.

[5]Previous post.

1. <http://www.jpands.org/vol11no1/geier.pdf>
2. <http://www.blog.sethroberts.net/2008/01/27/does-mercury-cause-autism/#comment-115586>
3. <http://www.blog.sethroberts.net/2008/01/27/does-mercury-cause-autism/#comment-115601>
4. <http://www.sacunion.com/pages/california/articles/5424>
5. <http://www.blog.sethroberts.net/2008/01/27/does-mercury-cause-autism/>

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NE1 (2008-02-04 08:34:12)

They do more than criticize it for the journal it's in (which seems low-rent even by inspection). They criticize it because of the lack of peer review, cite shoddy methods, and provided more recent data. How can you read this and still be indignant at the vaccine makers? The reality is, this is a 2006 paper, from even earlier data. If there was anything to it, the trend would have continued and it would be all of the news, and vaccine makers would be hauled off to court in droves. So tell us, what is Big Pharma doing to hide the True drop in autism cases that has occurred because of the removal of that nefarious chemical thimerasol?

seth (2008-02-04 09:08:09)

NE1, To answer your question: I don't know. Perhaps you have read "The Emperor's New Clothes"? Do you have an alternative explanation of the declines?

Charles (2008-02-04 09:59:14)

I really can't imagine why anyone would question the integrity or reliability of the pharmaceutical industry. Their record of honesty and transparency is unassailable. I am certain that if they had any information regarding the safety or danger of any of their products, they would move heaven and earth to reveal that information immediately. And skepticism about their motives is clearly unwarranted and unfair.

SusanJ (2008-02-04 10:10:29)

"Do you have an alternative explanation of the declines?" Why do you trust these authors? You are stepping into the middle of a very politicized situation without knowing the history or the players.

Rich (2008-02-04 10:21:35)

I think an alternative explanation of the adverse events data (figs 1 and 2) is pretty easy. they're using an exceptionally poor sample that is subject to a bias that, i would predict, would mimic their results. the data set is one maintained by the cdc and contains adverse events reported to the cdc following vaccinations. some adverse events are legally required to be reported (as the authors note), but most are not. Autism is not required to be reported, and i didn't see that the authors mention this (but i only skimmed the paper). medical professionals are rather busy and reluctant to report things that are actually legally mandated, let alone optional. Further, the other adverse events that are required to be reported are things like anaphalaxis (see <http://vaers.hhs.gov/pdf/ReportableEventsTable.pdf>) which happen almost instantly after immunization. So this raises the questions of what physician in his/her right mind submits non-mandatory adverse events information about a vaccine many years after that vaccine was given. physicians who are already convinced that vaccines cause autism. why did the number increase over the late 90's? likely because 1 or 2 physicians became increasingly convinced of the link and began reporting it. why did it decline after use of thimerisol stopped? because they were convinced of the link and therefore stopped reported

their cases after thimerisol use stopped. i actually don't know anything about the CDDS data, but it also seems to be self-report and is probably non-mandatory and could be subject to any manner of reporting bias. i also recall seeing data presented at a meeting a few years ago from an autism study in california that did not show this trend at all. further, if my memory is correct, japan switched off thimerosal before the US did and didn't see any decline. you seemed to indicate the NYT acted inappropriately in not reporting the results of this article. but a cursory glance at the first half of the data indicates an analysis so flawed that they would have been (rightly) ridiculed had they reported it.

SusanJ (2008-02-04 10:38:54)

Perhaps you have access to this article and can review it for us. "Thimerosal Disappears but Autism Remains" Arch Gen Psychiatry. 2008;65(1):15-16.

seth (2008-02-04 12:25:47)

Rich, thanks for the alternative explanation. I don't find it plausible that the reduction in cases occurred because 1 or 2 physicians stopped reporting their cases after thimerosal stopped. Of course the measurements are flawed; all measurements are. SusanJ, thanks for the citation. I'm going to wait to see what people who know more about this than me say. I do have one comment, however: The author has apparently received a lot of money from pharmaceutical companies for defending them in court. He tried to downplay this by including a lot of irrelevant detail in his financial disclosure, including the statement "None of his research has ever been funded by the pharmaceutical industry." He is far from unbiased – yet he tried to appear so. Not a good sign.

Steve Grathwohl (2008-02-04 13:56:57)

If you are worried about the credibility of the author of the Arch Gen Psychiatry article, then you should do a bit more research about the Geiers before betting on their horse. There is a wealth of research showing no association between thimerosal and autism. It would be difficult to dismiss all that research as being big pharma funded and useless. In a recent court case (Blackwell v. Sigma Aldrich, Inc. et al. (Circuit Court for Baltimore City, Case No. 24-C-04-004829)), the Court held that "The 2004 IOM Committee found that '[e]pidemiological studies examining TCVs and autism, including three controlled observation studies (Hviid et al., 2003; Miller, 2004; Verstraeten, et al. 2003) and two uncontrolled observational studies (Madsen, et al., 2003; Stehr-Green, et al., 2003), consistently provided evidence of no association between TCVs and autism, despite the fact that these studies utilized different methods and examined different populations (in Sweden, Denmark, the United States and the United Kingdom).' " The Court also had harsh words for Mark Geier: "Dr. Geier is not qualified by his knowledge, skill, experience, training or education to render the opinions he proffers in this case... [T]his Court does not find that there exists a sufficient factual basis to support [Dr. Geier's] proffered testimony..." and "Dr. Geier's epidemiological studies purporting to show an association between thimerosal-containing vaccines and autism were not conducted in accordance with generally accepted epidemiological methods." "...Dr. Geier's methodology of differential diagnosis is fundamentally flawed, because he improperly "rules in" thimerosal as a potential cause of autism, and he cannot rule out the high likelihood that autism in any given individual was caused purely by genetic factors that do not require an environmental trigger." You should browse the archives of <http://scienceblogs.com/insolence/>. If you want to see bias, the Geiers are your men.

Igor Carron (2008-02-05 02:38:11)

Seth, As SusanJ points out, you really need to do your homework as the various actors of this tragedy have various angles to this. It is easy to say that big pharma is trying to hide something. However, I am overly skeptical of this type of conspiracy. To get a better perspective, I went to a presentation of Eric Fombonne (McGill) and he has shown (with peer-reviewed publications) in Canadian studies that the removal of mercury in vaccines has not changed the numbers of cases in autism. His point is simple, tax-payers money in every country is somehow diverted in these type of statistical exercises even though other stats in other countries have shown it was negative. He has also shown that the change in the definition of autism from DSM-II to DSM-IV has changed the number of kids diagnosed with the disease but going back to 1970's and recategorizing some of the diagnostics, one eventually gets about the same number : 1/166 kids is affecting with the disease. So it is easy to see a jump into some epidemics bandwagon if most of the people you used to put in different categories now fall into this new autism spectrum disorder (ASD). Now, the worst thing that I think is really happening is that this diagnosis of ASD

comes generally very late and that there is no simple way to find out that there is something wrong. As somebody asked me once, "so what, you learn your kid has ASD, there is no cure, it doesn't matter if you learn about it sooner rather than later". It so happens that ASD is actually a very broad term and it includes, it seems, about three different subgroups (still not very well defined). One group has major problems and our current health care system will have to take care of them for a long time. For the rest two other groups, it looks as though by aiming at the capabilities that are missing that some type of re-education program does OK. Please note that there is not even a substantial work on the evolution of the disease/condition as witnessed by the inability to interpret well the graphs we studied here: [http://www.stat.columbia.edu/cook/movabletype/archives/2007/09/redoing\\_venn\\_di.html](http://www.stat.columbia.edu/cook/movabletype/archives/2007/09/redoing_venn_di.html) [http://www.stat.columbia.edu/cook/movabletype/archives/2007/10/venn\\_diagram\\_ch.html](http://www.stat.columbia.edu/cook/movabletype/archives/2007/10/venn_diagram_ch.html) [http://www.stat.columbia.edu/cook/movabletype/archives/2007/10/venn\\_diagram\\_ch\\_1.html](http://www.stat.columbia.edu/cook/movabletype/archives/2007/10/venn_diagram_ch_1.html) Your interest in rigorous self-experimentation is exactly what families should go through in order to see the things that work and the ones that do not. For instance, in the detection of autism, we already know that the cranial perimeter of the infant goes above the 95 percentile for the first two years of his life (with a specific jump in the first six month). How come there is no universal way of measuring the head perimeter of infants ? Also, some groups have dedicated psychologists going through hours of family movies to see if, at the age of 6 months, one could already see something amiss (generally it's the eye tracking business). Hence how come more money is not spent on having an automated system that evaluates this condition right on the spot instead of doing it 3 years later when people are seeking a diagnosis. Not only could it be used for diagnosis but more importantly it could be used to assess the day-to-day effects of the therapy. One more thing, I think it is unfair to say that if you are funded by big pharma your studies are suspicious. If you make your data available and do the peer-reviewed thing, I don't see how the funding affects the findings and subsequent re-analysis of it by others. Igor.

seth (2008-02-05 09:04:34)

Igor, thanks for your comment. There is one thing I don't understand. You write: "tax-payers money in every country is somehow diverted in these type of statistical exercises even though other stats in other countries have shown it was negative." I think I understand the first part of the sentence about taxpayer's money but certainly don't understand what you mean by "even though other stats in other countries have shown it was negative." What's "it"?

Igor Carron (2008-02-05 11:40:25)

Seth, In all developed countries, the same rumors about the vaccine causing autism have abounded and in every country, local governments had to fund the same studies using their own data to eventually come to the same conclusion. The "it" was referring to the statement "vaccine cause autism". One more note in case I was not clear, the head perimeter study from Couchesnes and the less "peer-reviewed" studies on family movies are pointing to an autistic syndrome that was already there from birth. It so happens that the disease is so badly detected/diagnosed that the first time people worry about it, is when their kids don't start speaking at about 2-3 years old. It so happens that this is also the time when some vaccines are being inoculated thereby producing this never ending wave of "mercury causes autism". Let me also state that I am clearly not saying that vaccines are not exacerbating a condition that was already there. If there is, the studies have shown it is not a mercury issue. Igor.

SusanJ (2008-02-05 15:35:06)

This looks to be a good starting point explaining why the study by Dr. Amy Holmes has been discredited. <http://photoninthedarkness.com/?p=142>

## Recent Reading (2008-02-04 15:37)

Random paragraphs from two books I've recently read.

By 1853 Riemann was twenty-seven and on the last stretch of the long road to a lectureship at Gottingen.



In Germany at that time, such an academic position did not pay the modest salary it does today. It did not pay any salary. To many of us, that would be a bit of a drawback. To Riemann, it was a coveted position, a stepping stone to a professorship. And students gave tips.

From Euclid's Window: The Story of Geometry from Parallel Lines to Hyperspace (2001) by [1]Leonard Mlodinow.

“Tastes great, less filling!” could be the motto for most processed foods, which are far more energy dense than most whole foods: They contain much less water, fiber, and micronutrients, and generally much more sugar and fat, making them at the same time, to coin a marketing slogan, “More fattening, less nutritious!”

From In Defense of Food: An Eater's Manifesto (2008) by [2]Michael Pollan.

1. [http://en.wikipedia.org/wiki/Leonard\\_Mlodinow](http://en.wikipedia.org/wiki/Leonard_Mlodinow)

2. <http://www.michaelpollan.com/>

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Diety (2008-02-05 04:02:43)

It's my 1st comment here so I say Hi! :) I was looking for some different and strange diet and I found this. Starting to read right now. I'd like you to improve navigation a bit, I had real trouble to find the Shangri-La diet.

Stephen M (Ethesis) (2008-02-06 12:10:37)

"And students gave tips." That would really make the life of an adjunct hard.

### How to Be Wrong (2008-02-06 22:07)

There are two mistakes you can make when you read a scientific paper: You can believe it (a) too much or (b) too little. The possibility of believing something too little does not occur to most professional scientists, at least if you judge them by their public statements, which are full of cautions against too much belief and literally never against too little belief. Never. If I'm wrong – if you have ever seen a scientist warn against too little belief – please let me know. Yet too little belief is just as costly as too much.

It's a stunning imbalance which I have never seen pointed out. And it's not just quantity, it's quality. One of the foolish statements that intelligent people constantly make is "correlation does not imply causation." There's such a huge bias toward saying "don't do that" and "that's a bad thing to do" – I think because the people who say such things enjoy saying them – that the people who say this never realize the not-very-difficult concepts that (a) nothing unerringly implies causation, so don't pick on correlations and (b) correlations increase the plausibility of causation. If your theory predicts Y and you observe Y, your theory gains credence. Causation predicts correlation.

This tendency is so common it seems unfair to give examples.

If you owned a car that could turn right but not left, you would drive off the road almost always. When I watch

professional scientists react to this or that new bit of info, they constantly drive off the road: They are absurdly dismissive. The result is that, like the broken car, they fail to get anywhere: They fail to learn something they could have learned.

Addendum. By "too little belief" I meant too little belief in facts – that this or that new observation has something useful to tell us. Thanks to Varangy, who pointed out that there is plenty of criticism of too little belief in this or that favored theory. You could say it is a kind of conservatism.

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Matthew (2008-02-06 22:28:51)

This post makes you sound a lot more like Aunt Dierdre than your recent spat would suggest. You two should kiss and make up; you'd make good intellectual allies.

seth (2008-02-07 00:46:29)

Matthew, You mean McCloskey made similar points somewhere? Where?

Two mistakes you can make when reading a scientific paper « Entertaining Research (2008-02-07 08:56:09)

[...] Two mistakes you can make when reading a scientific paper Seth in his blog tells what they are: There are two mistakes you can make when you read a scientific paper: You can believe it (a) too much or (b) too little. [...]

Chris (2008-02-07 11:40:53)

What do you think of Rupert Sheldrake? This episode of CBC Radio "Ideas" program put a lot of emphasis on the way the scientific establishment (notably, the editor of Nature) ostracised him after he published *A New Science of Life* in 1981 – admittedly, a book with some fairly far-out ideas. Here's a podcast: <http://www.cbc.ca/podcasting/pastpodcasts.html?45#ref45> The whole How To Think About Science series that Ideas has been broadcasting is well worth a listen.

Tom (2008-02-07 12:45:00)

In other words, correlation is strongly correlated with causation.

NE1 (2008-02-07 17:33:20)

Too little belief is always preferable to too much. If someone else comes along and does it again, there's your second chance. If you start acting on every Tom, Dick and Harry's theory, you'd be taking 5 types of Tibetan berry juice by now. Failing to learn something you could have learned is not a mode of failure for modern scientists. There will always be more than you could ever learn. You're never alone. On the other hand, building a bridge on a foundation that will eventually have to be removed is pretty much a complete waste. Your car example doesn't make sense, but professional scientists react by considering results false first because important new results are rare. Any graduate student can tell you this, because while to them every new feature is a mystery the post doc remembers you get crazy results with only one crossed wire.

Varangy (2008-02-07 17:41:40)

*The possibility of believing something too little does not occur to most professional scientists, at least if you judge them by their public statements, which are full of cautions against too much belief and literally never against too little belief.* I couldn't disagree more. Look at the theory of anthropogenic global warming. The second anyone professes too little belief, they are ostracized and branded a heretic – whoops – I meant to write skeptic. Which, ironically, has become a pejorative in the scientific community.

Matthew (2008-02-08 00:08:58)

Seth, It's not the same, but it reminded me of some of the methodological issues she has written about over the years. Check out her paper "The Secret Sins of Economics." You can find it here: <http://www.prickly-paradigm.com/paradigm4.pdf> Read the discussion of statistical significance and the mammogram example starting at the bottom of page 48 and following.

Pedro J. (2008-02-08 08:20:43)

In his book *The First Three Minutes*, Steven Weinberg explains his earlier rejection of the Big Bang Theory: "Our mistake is not that we take our theories too seriously, but that we do not take them seriously enough. It is always hard to realize that these numbers and equations we play with at our desks have something to do with the real world. Even worse, there often seems to be a general agreement that certain phenomena are just not fit subjects for respectable theoretical and experimental effort." So it is not quite true scientist do not think about what happens when we do not trust quite enough on scientific results. Another recent example is Max Tegmark complain about not taking MWI interpretation of quantum mechanics seriously enough or Robin Hanson complain about not taking seriously enough what most studies show: there is not a clear relationship more medicine-more health.

seth (2008-02-08 10:24:13)

Rather than "too little belief" in general, I should have said "too little belief in new facts." I should have said that no scientist warns against under-inference – not inferring enough from new facts. Although since I wrote that I thought of an exception: In 2007, Bruce Ames et al. wrote a letter complaining that the committee behind a report of nutrition recommendations failed to take seriously enough the evidence before them. The committee wanted better evidence before doing anything. In the case of theories, as Varangy says, it is different. Matthew, thanks for the reference. Pedro, yes, in individual cases scientists complain that this or that evidence isn't taken seriously enough. "Too little belief is always preferable to too much." It took doctors a long time to realize that smoking causes lung cancer. Their objections to the evidence in front of them were often absurd. That is a case in which too little belief was harmful and too much belief would not have been harmful.

Pedro J. (2008-02-08 10:58:38)

By the way, excellent recommendation, Mathew. The joke about double positive sentences enjoyed my afternoon.

seth (2008-02-08 15:53:21)

"Too little belief is always preferable to too much." What if the new idea is correct?

Eliezer Yudkowsky (2008-02-09 11:07:43)

Well, I've been going around for a while now saying that Bayesian probability theory tells us that there is an exactly correct update which you should make upon new evidence, neither more nor less; and even in cases where we can't calculate the math exactly, the mere fact that math exists tells us that there is a correct update which has no room in it for our whims, or for "conservatism" if you feel like being conservative. Judea Pearl has written extensively on the correlation/causation business. You can actually extract some damned impressive evidence off of even noninterventionist experiments, though it takes a sophisticated theory of causation to do it. The heuristics and biases community has investigated "motivated skepticism". So, no, you are not quite a lone voice in the wilderness here - though I agree that it is one of the most important ways that old-style pre-Bayesian Traditional Rationality goes astray. But the Bayesians have noticed the mistake, analyzed it mathematically, investigated it experimentally, etc.

James Annan (2008-02-10 02:17:43)

IMO this conservatism is a natural and reasonable correction for the undeniable fact that the majority of new and striking "results" are simply wrong. I've noticed a significant number of these in my own field (climate research) in the last couple of years (examples available if you want), they got a lot of publicity but basically every knowledgeable scientist realised (correctly) they were probably wrong at the outset. In fact it seems to me that the professional scientists are being (approximately) Bayesian in requiring strong evidence to overcome (well-justified) prior beliefs that the "new" results seek to overturn.

seth (2008-02-10 05:32:17)

James, I am surprised to hear that "the majority of new and striking 'results' are simply wrong." I'm not sure what you mean by "results". Theories, methods, data, conclusions drawn from data? I was referring to data – that is, observations. Upon encountering new data, the reaction of the average scientist is much more about what you can't learn from it (e.g., "correlation does not imply causation") than what you can. You believe that most new data is "simply wrong"? Wrong in what sense? And why do you believe this?

Seth's blog » Blog Archive » How to Be Wrong (continued) (2008-02-10 07:57:01)  
[...] How to Be Wrong [...]

James Annan (2008-02-10 16:16:23)

"Wrong" in that it does not represent the theory that is attributed to it. In climate change, we have: Plants emitting methane (AIUI no-one knows yet where this result really came from, but no-one thought it was reasonable and several replications have contradicted it). Oceans cooled over the last few years (now clearly understood as an artefact of measuring error due to a large number of buoys with a bias). Ocean circulation slow-down (combination of a rather simplistic analysis and perhaps intrinsic high-frequency natural variability being larger than we thought). These all had a \*lot\* of press coverage, and it was IMO entirely correct of scientists to warn against believing them too strongly. I don't think most new data is wrong - much data is confirmatory in nature, uncontroversial and right. I think much or most new and striking data are wrong. It's basically publication bias. But these are the cases where you hear scientists commenting, precisely because they are highly talked-about.

seth (2008-02-11 01:16:25)

Thanks for the explanation, James. As I say in a later post, <http://www.blog.sethroberts.net/2008/02/10/how-to-be-wrong-continued/> I see the same bias in areas much different than science. Therefore I don't think it is caused by science-specific things such as publication bias or press coverage.

Charlie (Colorado) (2008-02-12 07:53:41)

My grandfather used to tell me "If the bird book and the bird disagree, believe the bird." This is a lesson I have to teach new baby engineers pretty well every year.

Gustavo Lacerda (2008-04-07 12:34:50)

Eliezer, " though I agree that it is one of the most important ways that old-style pre-Bayesian Traditional Rationality goes astray. But the Bayesians have noticed the mistake, analyzed it mathematically, investigated it experimentally, etc. " This has nothing to do with Bayesianism. Spirtes, Glymour and Scheines are not Bayesians. I have no idea about Pearl. Gustavo

Nathan Myers (2008-04-17 13:52:26)

I like this term "twisted skepticism". It's more palatable than "dishonest skepticism". Justifications for the habit of twisted skepticism, and for specific examples of it, always sound plausible, but are often revealed as rationalization when the same individuals fail to be similarly skeptical of ill-supported notions favored within their community. E.g., no astronomer can remain in good standing while expressing any skepticism that 98 % of the universe's mass/energy is composed of stuff of which no hint has ever been detected in a laboratory. Likewise, none may be skeptical of the faith that gravitation must be the entire explanation for any large-scale phenomenon, or that the Doppler effect must explain all observed red shift, without exception. Different fields of science have different levels of dogmatism; astronomy's may be higher than most, paleontology perhaps lower. I have identified two systematically irrational behaviors common to scientists. First, there is commonly an established theory which is inconsistent with new data. (Perhaps no diagnostic data ever supported it; it may have originated as an honest speculation by a respected elder.) An alternative theory is simpler, accounts equally well for old data, but also predicts the new data. A rational scientist would accept that there are now two theories on possibly equal footing, but this never happens. Instead, the new theory must pass overwhelmingly more stringent tests than the old theory ever did before it may even be considered as a reasonable alternative. Until this occurs, the contradictory data is ignored or discounted. A related systematically irrational behavior occurs when new data conclusively falsifies a commonly-held theory (or received

speculation), but no one has advanced a palatable alternative. The typical response is to ignore, discount, or even actively suppress the new data. Systematically irrational behavior by scientists has seemed odd enough that I have puzzled over it for years. The best explanation I have identified is that scientists are self-selected from among the population as those who feel a need to know, and to feel that they do know. To go from relying on one theory to considering two feels like going from knowing to only half-knowing. To discard a theory one has lived with feels like going from knowing something to knowing nothing. Both are, evidently, intolerable to most people who choose to become scientists. The above does not suffice to explain the condition of astronomy.

## The Lessons of Bilboquet (2008-02-07 12:37)

There are lots of omega-3-related self-experiments I'd like to do: 1. What about fish oil? 2. Is omega-6 bad for the brain? As my olive-oil results suggested. 3. "Blind" experiments where I don't know what I've ingested. I wanted to use a design that involved many tests/day. This would be easy if the tests were fun, hard if they weren't. Games are fun—could I figure out why and make a mental test that was like playing a game?

After talking with [1]Greg Niemeyer, I decided that color, variety, feedback, and appropriate difficulty (not too little, not too much) were possible reasons games are fun. I constructed a letter-counting task with all of these attributes – and it wasn't fun. I had to push myself to do it. These attributes may help, but not a lot.

Then, [2]as I've posted, a friend gave me a bilboquet. For such a simple object, it was surprisingly fun and slightly addictive. Thinking about other addictive games, such as Tetris (I once played a lot of Tetris), I [3]guessed that the crucial features of a game that make it addictive are: 1. Success is sharply defined. 2. Not too easy. 3. Hand-eye coordination. (Not any eye-body coordination: I did thousands of balancing tests but had no trouble stopping.)

I constructed a new task with these attributes: Click the Circle. A circle appears on the screen, you move the pointer to the circle and click on it; a new circle appears somewhere else, you move the pointer to click on it, etc. At the end there's a little feedback: how long it took. Very simple.

This task, at least so far, is addictive. I think something else may be going on in addition to the three factors: we enjoy completion, especially visual completion. (Which Tetris had a lot of.) In this case the visual completion is the blank space that appears when I click on a circle. If I have a few dishes to do, it's easy to do them—the promise of an empty sink (= visual completion) draws me to the task. In contrast, if there are a lot of dishes to do, it's much harder to do a few of them. I'll probably do none of them or all of them. If you have 20 dishes to do, doing them will generate a lot more pleasure (and thus will be easier to do in the future) if you can manage to create 20 completion moments than if they get piled up and there is only one completion moment.

1. <http://studio.berkeley.edu/niemeyer/bio.html>

2. <http://www.blog.sethroberts.net/2008/01/25/the-mystery-of-bilboquet/>

3. <http://www.blog.sethroberts.net/2008/01/29/the-mystery-of-bilboquet-continued/>

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links for 2008-02-09 at Matthew Henty (2008-02-08 23:24:00)

[...] Seth's blog » Blog Archive » The Lessons of Bilboquet Is it surprisingly easy to generate psychic wins, through visual organisation of work? (tags: psychology) [...]

## **Ranjit Chandra: A New Position (2008-02-08 11:21)**

The Indian health tourism company [1]Indicure has appointed Dr. Ranjit Chandra, whose story is told [2]here, to be one of its panel of experts. Few scientists have a more impressive [3]resume:

Dr. Chandra has received 16 honorary degrees including DSc honoris causa recently from Panjab University. He has received over 100 awards worldwide. In 2003, he was given the Jubilee Gold Medal by the Queen and the title of Honorable Baron of Blackburn. Prof. Chandra is an Officer of the Order of Canada, the highest award given to Canadian citizens.

[4]More about Chandra. His work [5]remains influential.

1. [http://www.indicure.com/about\\_indicure.html](http://www.indicure.com/about_indicure.html)
2. <http://ibfan-africa.org/blog4/2007/10/03/the-story-of-ranjit-chandra/>
3. [http://www.indicure.com/dr\\_rk\\_chandra.html](http://www.indicure.com/dr_rk_chandra.html)
4. <http://www.sethroberts.net/chandra/index.html>
5. <http://www.thebalitimes.com/2008/02/08/longevity-news-review-2/>

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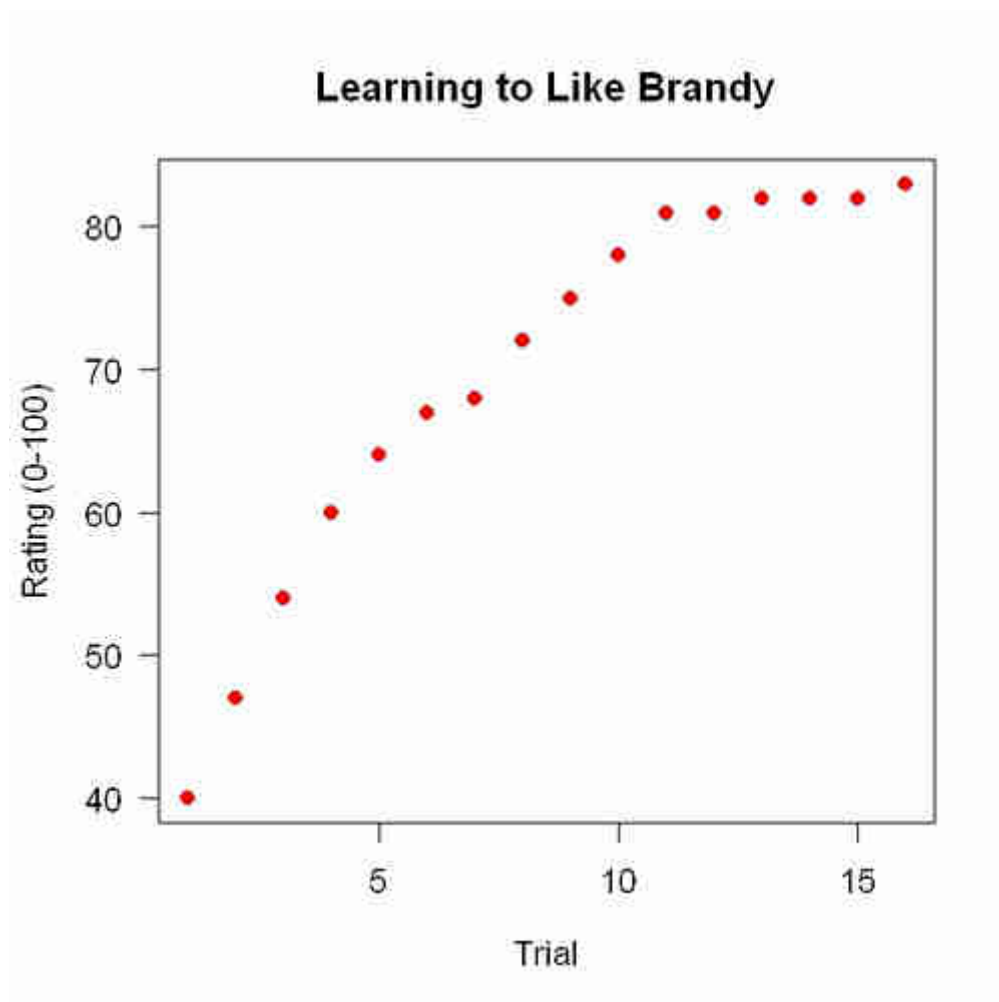
## **Science in Action: Flavor-Calorie Learning (another simple example) (2008-02-09 09:52)**

At the heart of the Shangri-La Diet is the idea that we learn to associate flavors (smells) with calories. This learning was first shown in rat experiments. There's some human evidence, but not much. If I could discover more about what controls this learning, I might be able to improve the diet. For example, maybe I could say more about what the flavor-free window should be.

My earlier self-experimentation on this subject - I used tea for flavor and sugar for calories - was helpful. To my surprise, I found that really small changes in flavor made a noticeable difference. If I switched from one canister of Peet's Gunpowder Tea to a new canister, the ratings went down, although everything else stayed the same. From this came the notion of ditto food: Foods with exactly the same flavor each time are especially fattening. I hadn't realized what a difference it would make if you kept the flavor exactly the same each time.

It's been hard to learn more. After Christmas dinner, my mom gave me the leftover brandy (A. R. Murrow). I used it for a very simple experiment in which I learned to like it. I've never drunk brandy in any quantity and I started off not liking it. Every day for a few weeks, I drank one tablespoon. I drank it in a few sips over a few minutes. I didn't eat anything else for at least 30 minutes. I rated how good it tasted on a 0-100 scale where 10 = very bad, 20 = quite bad, 25 = bad, 30 = somewhat bad, 40 = slightly bad, 50 = neutral, 60 = slightly good, 70 = somewhat good, 75 = good, 80 = quite good, 90 = very good. The overall rating was the maximum of the ratings of the several sips. (The first sip usually tasted the best.)

Here are the results.



I've observed similar results five or six times. They are more support for the most basic conclusions: 1. The effect is very clear. One tablespoon of brandy has only 30 calories. 2. A really simple experiment is easy.

That's a promising start but then it gets hard, or at least non-obvious. As a way to study flavor-calorie learning, this little example has several flaws: 1. Slow learning. 2. Expensive materials. 3. Little control of flavor. The best I can do is choose which liquor to buy. Soon I will run out of ones I haven't used. 4. No way to separate flavor and calories in time. 5. No way to change the calorie source.

An [1]earlier demonstration used a soft drink. It's really Science in Inaction: I've made zero progress in a year.

1. <http://www.blog.sethroberts.net/2007/06/01/science-in-action-flavor-calorie-learning-simple-example/>

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Socketopi (2008-02-09 13:56:28)

Could part of the French paradox be that they drink a lot of wine, and each bottle is a unique mix of flavors, resulting in a suppressed appetite?

August (2008-02-10 12:22:41)

What about an attempt to de-associate a flavor with it's calories? It seems to me you could use nose-clipping to add calories to any flavor, thus causing the flavor/calorie association to be adjusted. If the body kept getting random levels of calories for a particular flavor, wouldn't the flavor/calorie association be weakened?

Killer Bees (2008-02-11 19:04:11)

Does that apply to coffee? I really like a latte with a little sugar or a vanilla late. Can you really gain weight from drinking a white coffee with one sugar every day?

seth (2008-02-11 21:39:04)

Socketopi, yeah, something like that. In The Shangri-La Diet (the book) I mention a "culture of connoisseurship" as a likely reason the French weigh less than you'd expect. August, you can weaken a flavor-calorie association if you experience the flavor without the calories. Randomly varying the calories won't do it. I think Tim Beneke has tried the flavor-no-calorie approach. He tastes the food and then spits it out. If I remember correctly, it works: the flavor becomes less pleasant. Killer Bees, one sugar doesn't have a lot of calories.

## **How to Be Wrong (continued) (2008-02-10 07:56)**

I asked a friend of mine why she was a good boss. "I was nurturing," she said. [1]A big study of managers reached essentially the same conclusion: Good managers don't try to make employees fit a pre-established box, the manager's preconception about how to do the job. A good manager tries to encourage, to bring out, whatever strengths the employee already has. This wasn't a philosophy or value judgment, it was what the data showed. The "good" managers were defined as the more productive ones – something like that. ([2]My post about this.)

The reason for the study, as Veblen might say, was the need for it. Most managers failed to act this way. I [3]posted a few days ago about a similar tendency among scientists: When faced with new data, a tendency to focus on what's wrong with it and ignore what's right about it. To pay far more attention to limitations than strengths. Here are two examples:

1. Everyone's heard "correlation does not imply causation". I've never heard a parallel saying about what correlation does imply. It would be along the lines of "something is better than nothing."
2. Recently I attended a research group meeting in which a postdoc talked about new data she had gathered. The entire discussion was about the problems with it – what she couldn't infer from it. There could have been a long discussion about how it added to what we already know, but there wasn't a word about this.

Some of the comments considered this behavior a kind of Bayesian resistance to change in beliefs. But it occurs regardless of whether the new data support or contradict prior beliefs. There's nothing about prior beliefs in "correlation does not imply causation." The post-doc wasn't presenting data that contradicted what anyone knew. Also, similar behavior occurs in other areas besides science (e.g., how managers manage) in which the Bayesian explanation doesn't fit so well.

I think it's really strong. I was guilty of it myself when discussing it! I made very clear how this tendency is a problem, giving the analogy of a car that could turn left but not right. Obviously bad. I said nothing about the opportunities this tendency gives everyone. My self-experimentation is an example. The more that others reject useful data, the more likely it is that useful data is lying around and doesn't require much effort to find. I have called this behavior dismissive; I could have called it generous. It's like leaving money lying on the ground.



A [4]related discussion at Overcoming Bias. [5]What should "correlation does not imply causation" be replaced with?

Addendum. Barry Goldwater [6]weighs in: "I'm frankly sick and tired of the political preachers across this country telling me as a citizen that if I want to be a moral person, I must believe in 'A,' 'B,' 'C,' and 'D.'" Indeed, preachers spend far more time on what we are doing wrong (and should do less of) than on what we are doing right (and should do more of). The preacher Joel Osteen has taken great advantage of this tendency. "I think most people already know what they are doing wrong," he [7]told 60 Minutes.

1. <http://www.amazon.com/First-Break-All-Rules-Differently/dp/0684852861>
2. <http://www.blog.sethroberts.net/2007/05/12/my-theory-of-human-evolution-business-book-edition/>
3. <http://www.blog.sethroberts.net/2008/02/06/how-to-be-wrong/>
4. <http://www.overcomingbias.com/2008/02/believing-too-l.html>
5. <http://www.blog.sethroberts.net/2007/02/10/what-should-correlation-does-not-imply-causation-be-replaced-with/>
6. [http://blogs.chron.com/bluebayou/2006/11/goldwater\\_conservatism\\_vs\\_rick.html](http://blogs.chron.com/bluebayou/2006/11/goldwater_conservatism_vs_rick.html)
7. <http://www.cbsnews.com/stories/2007/10/11/60minutes/main3358652.shtml>

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Andrew Gelman (2008-02-10 12:52:17)

Bill James wrote about baseball managers that the important skill was to make use of what your players can do, rather than focusing on what they can't. He used Earl Weaver as an example of someone who made good use of his players. Weaver discussed this in his books, too, I think. Something about not having players on your bench unless you're willing to send them up to bat (or to pitch). But Weaver didn't do much "nurturing," at least not how that term is generally construed.

Notional Slurry » links for 2008-02-18 (2008-02-17 23:26:58)

[...] Seth's blog » Blog Archive » How to Be Wrong (continued) (tags: bias research explanation data exploration exploitation models science worldview) [...]

son2 (2008-02-18 08:18:09)

I made very clear how this tendency is a problem, giving the analogy of a car that could turn left but not right. Obviously bad.

There were a lotta cars in Daytona Beach this past week that could only turn left. Ryan Newman won \$1.6 million with one of those cars. Which is a lot more than my car ever made *me*.

## Amy Winehouse and Nassim Taleb (2008-02-11 21:28)

Will Amy Winehouse – who won five Grammys last night – help or hurt the music industry? A few years ago, I went to a tasting event called The Joy of Sake. There were about 100 of the best sakes from Japan. A pre-event talk for retailers discussed the decline of sake in Japan. (Soju is cool; sake is old-fashioned.) That was the reason for the show. I loved tasting 30-odd high-quality sakes but the overall effect on me was the opposite of what the promoters wanted. I [1]quickly became a connoisseur. I no longer liked the cheap stuff – ugh! But the stuff I did like was too expensive. I stopped buying sake.

Before last night I had heard of Amy Winehouse and I had heard Rehab, but hadn't put the two together. Her Grammy performance blew me away. I watched a bunch of YouTubes of her. Back at the Grammys, I listened to an orchestra play Rhapsody in Blue. I used to like it; now it sounded awful. I listened to a few more group performances; they too sounded bad. Just as The Joy of Sake had made me no longer enjoy cheap sake, listening to a lot of Amy Winehouse had made me no longer enjoy "average" music – music where several individual performances are combined.

I thought of The Black Swan by Nassim Taleb. Taleb defined Mediocristan as situations where no one datum can have a big effect on the result. The average height of 100 people, for example. In Extremistan, by contrast, a single datum can make a big difference. The average wealth of 100 people, for example – one person can have much more money than the other 99 put together. Orchestras are Mediocristan, I realized; individual singers are Extremistan. In art, emotional impact is everything. Extremistan allows really big impact; Mediocristan does not. Maybe this is why classical music is dying.

I felt like throwing away half my CDs. I could use the space. Thanks, Amy!

1. <http://www.blog.sethroberts.net/2007/05/09/my-theory-of-human-evolution-american-idol-edition/>

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Loweel (2008-02-11 23:19:26)

Seth – <http://www.sakeone.com/sakeone/index.jsp> Try the G, the Momokawa, and the Murai family series. Great sake at a reasonable price. And check the reviews at [cellartracker.com](http://cellartracker.com)

Varangy (2008-02-12 01:39:50)

Seth, Same exact thing happened to me with fish. After I started free-diving in Southern California, shooting fish (White Sea Bass, Halibut Yellowtail, and the occasional Calico Bass) as well as gathering Scallops and Lobster and then eating them literally within hours — eating fish at a restaurant, even a 5-star restaurant on a corporate expense account...seemed to be nothing but a brutal exercise in futility. I quickly realized even the best restaurants in the world cannot get fish of the same quality as my friends and I could on a good day in the water. (BTW my friends don't like to believe me, but it is true. None of my spearfishing buddies ever order fish at a restaurant unless it really doesn't matter e.g. Baja fish taco) And my sushi intake also slackened dramatically. Great fish ruined me forever for anything less than the absolute freshest and best. To this day, I never eat fish in a restaurant b/c I know it will be un-fresh and most often overdone. I usually opt for the steak cuz I haven't figured out how to slaughter a cow at home. :) And a steak can benefit from aging.

seth (2008-02-12 06:07:14)

Excellent story, Varangy. Curious that it involves sushi. Maybe Japanese cuisine, with its relative absence of strong flavors and sauces and spice-heavy recipes, is Extremistan, and other cuisines are not.

Tom (2008-02-12 12:39:34)

Yes, I think Japanese cuisine really needs to be good. American cuisine, not so much. A mediocre cheeseburger with mediocre fries is a filling lunch and we won't even notice there's anything wrong. But sushi, for example, is different. Very few people have ever had good sushi. Living in a city with a large Japanese community, I've had the opportunity to do so. Result: I rarely eat sushi now. And even though there are at least a dozen sushi places in my immediate neighborhood, I will get on the highway and drive for half an hour to the place I know is good.

Varangy (2008-02-12 15:53:15)

Yep, I agree. An average burger is totally edible and okay. Sure, it is not a Father's Office burger. (If you haven't had one, demolish one ASAP) But 'average' sushi is just horrible. (My friends think I am an intentional-snob-elitist-bastard, but I swear I am not.) Like you say Seth, sushi could be Extremistan where the mean and median are entirely meaningless, and the distribution is characterized by the extremes at either tail.

mike kenny (2008-02-12 16:11:48)

this post makes me think of the auteur theory of film. it seems like auteur films are better than the average film. one guy has a strong vision that is followed, versus a film made by a lot of collaboration by many-writers, director, actors. maybe this is the difference between extremistan and mediocristan. of course, there are good non-auteur films!

Tim Lundeen (2008-02-12 17:51:06)

Great post! I normally listen to popular music and like Amy Winehouse a lot, but recently found a classical piece that I love, Dvorak's Stabat Mater by Shaw ([http://www.amazon.com/Dvorak-Stabat-Goerke-Simpson-Atlanta/dp/B00001QGKI/r\\_ef=pd\\_bbs\\_sr\\_1?ie=UTF8&s=music&qid=1202863660&sr=8-1](http://www.amazon.com/Dvorak-Stabat-Goerke-Simpson-Atlanta/dp/B00001QGKI/r_ef=pd_bbs_sr_1?ie=UTF8&s=music&qid=1202863660&sr=8-1)). Extremistan for the orchestra and chorus. (Not really fair, because there are a lot of solos, but see what you think.)

Danny (2008-02-13 05:18:22)

You're absolutely right. It's always bothered me that that egotistical composer only had the same impact as the 5th chair, first seat second violin. And when it's a piece for solo piano? Each of the 88 notes can't stand above any of the others. Those damn classical musicians may as well be communists, but that's why they're all dying, so it'll be all good soon enough anyway.

Tony (2008-02-13 05:33:39)

"Orchestras are Mediocristan, I realized; individual singers are Extremistan. In art, emotional impact is everything. Extremistan allows really big impact; Mediocristan does not. Maybe this is why classical music is dying." This is the opposite for me. After developing my ear to better understand classical music, most of the pop I grew up on seemed like a distance echo of really emotional music. Second, to equate "classical" music with orchestral music seems puzzling. There is probably more classical music being produced now than at any time before, and classical music has spread to large parts of Asia. I'd be interested in data which suggest that classical music is dying, though.

seth (2008-02-13 07:55:04)

Tony, after reading this article <http://www.artsjournal.com/artswatch/aw-deathofclassical.htm> I agree with you, it's not obvious that classical music is dying. I was thinking of the current situation vs 100 years ago when classical music was a much larger fraction of all music. I forget which composer was the first rock star.

Norcross (2008-02-13 08:49:07)

Agreed. I've basically stopped listening to commercial "over the air" radio, since 99 % of what they play just isn't good music. It's crap. While it pens me as a music snob, it also means I don't have to subject myself to inferior music.

Pearl (2008-02-13 09:16:10)

I'm with Tony. Listening to Amy Winehouse for the first time makes everything ELSE sound better. Especially centuries of classical music. Listen to Jaqueline Du Pre playing Elgar here: <http://youtube.com/watch?v=L5C99JyP2ns> She was a rock star and a classical musician. Incredible.

Tony (2008-02-13 15:46:49)

Seth, thanks for the link. Interesting.

Nansen (2008-02-15 18:16:53)

Here's an experiment: You can compare an orchestral version of Beethoven's symphonies with Liszt's arrangements of them for solo piano. See, for example: [http://www.musicweb-international.com/classrev/2004/Jan04/Beethoven\\_Katsaris.htm](http://www.musicweb-international.com/classrev/2004/Jan04/Beethoven_Katsaris.htm)

Consuming good art decreases your overall art consumption « N=1 (2009-07-10 14:20:14)

[...] July 10, 2009 by jason After reading a lot of Charles Bukowski's writing, I've lost interest in reading a lot of other authors. Â They just don't seem good enough anymore. Â This reminds me of something that Seth Roberts wrote about: Before last night I had heard of Amy Winehouse and I had heard Rehab, but hadnâ€™t put the two together. Her Grammy performance blew me away. I watched a bunch of YouTubes of her. Back at the Grammys, I listened to an orchestra play Rhapsody in Blue. I used to like it; now it sounded awful. I listened to a few more group performances; they too sounded bad. Just as The Joy of Sake had made me no longer enjoy cheap sake, listening to a lot of Amy Winehouse had made me no longer enjoy â€œaverageâ€ music â€” music where several individual performances are combined. [...]

### **My Theory of Human Evolution (Civil Rights Movement edition) (2008-02-12 23:32)**

From [1]Eyes on the Prize, about an Easter boycott of Nashville stores:

Easter was a most important time to buy. All blacks had to have a full, brand new outfit at Easter, no matter how poor you were, right? You may start three months ahead of time paying for that Easter outfit, and you may be paying for it for three months later.

There is a similar tradition in China: At the start of the new year you buy new clothes. I've [2]blogged before about how rituals, ceremonies, and holidays promoted technological development: They increased the demand for high-end items. This helped skilled craftspeople make a living.

1. [http://www.pbs.org/wgbh/amex/eyesontheprize/about/pt\\_103.html](http://www.pbs.org/wgbh/amex/eyesontheprize/about/pt_103.html)

2. <http://www.blog.sethroberts.net/2007/11/28/my-theory-of-human-evolution-osechi>

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### **Assorted Links (2008-02-13 20:41)**

1. [1]Suppression of dissent in science and elsewhere.
2. [2]Center for Science Writing at Stevens Institute of Technology. Includes stuff about Gary Taubes.
3. [3]Daughters more psychologically sophisticated than their moms.

Thanks to Dave Lull and [4]Marginal Revolution.

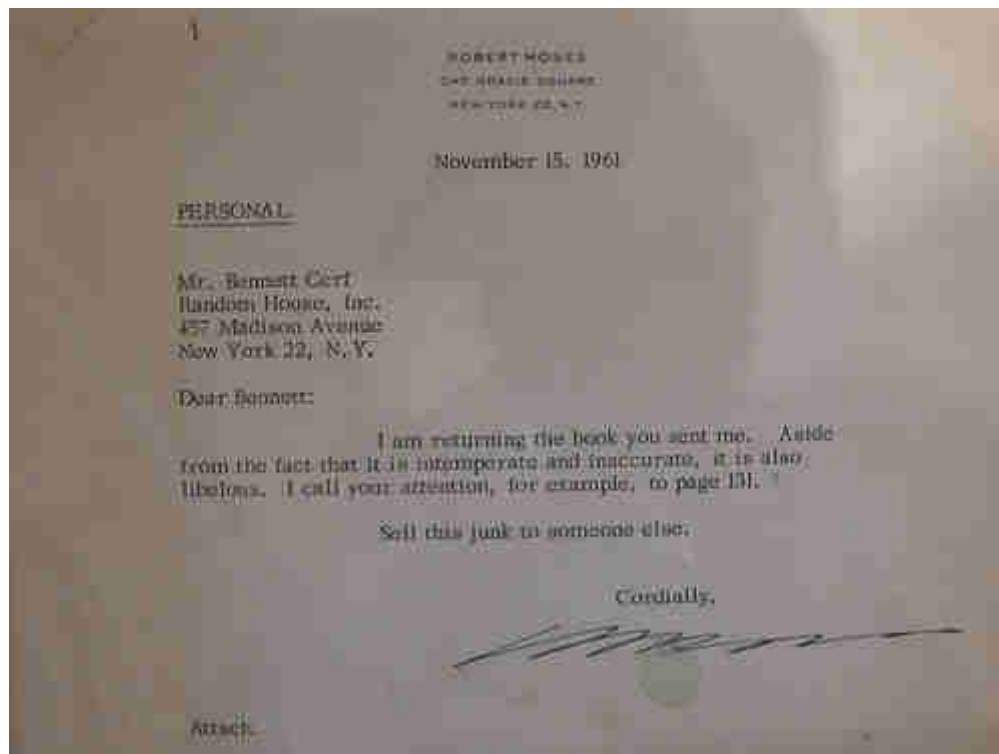
1. <http://www.uow.edu.au/arts/sts/bmartin/dissent/>
2. <http://www.stevens.edu/csw/cgi-bin/index.php>
3. <http://nymag.com/news/features/43893/>
4. <http://www.marginalrevolution.com/marginalrevolution/>

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Stephen M (Ethesis) (2008-02-15 20:01:31)

I've been very impressed by how much of science seems to be the history of the triumph of belief over evidence. Yes, still reading Traube's latest book ;)

### Introductions to Jane Jacobs (continued) (2008-02-15 11:38)



Moses is referring to Jacobs' first book, *The Death and Life of Great American Cities*. A nice talk-like [1]introduction to her city-planning ideas by [2]Julia Lupton, a professor of English at UC Irvine. [3]Many pictures from the recent exhibition "Jane Jacobs and the Future of New York".

[4]More introductions.

1. <http://www.soundandsignifier.com/jrlupton/Jacobs-MICA.pdf>
2. <http://www.thinkingwithshakespeare.org/>

3. <http://www.flickr.com/photos/thinkinggirl/sets/72157603294158149/>
4. <http://www.blog.sethroberts.net/2007/04/25/introductions-to-jane-jacobs/>

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Ryan Holiday (2008-02-15 13:43:20)  
Did you like The Power Broker?

seth (2008-02-15 16:58:59)  
yes, very much.

Julia Lupton (2008-02-15 21:31:56)  
I have heard about Robert Moses' response to Jane Jacobs' book, but I've never seen the document. That's great – and I will incorporate it into the set of lectures that you so kindly reference.

Stephen M (Ethesis) (2008-02-16 14:14:16)  
Thank you for this link, it suddenly helped me understand why Paris works as a city compared to Dallas which is just a place.

Anthony Flint (2008-02-16 15:55:00)  
The letter is vintage – "sell this junk to someone else" – and is from the Jane Jacobs papers at the Burns Library at Boston College, where MAS got most of its material. Far as I can tell, Moses made no public comment about Death and Life; he only wrote this private letter, and let others bash her in the weeks and months following publication October 1961 ... a staggering 47 years ago.

### **In Science, What Matters? (2008-02-16 07:28)**

And how do you learn what matters?

When I was a grad student, I read Stanislaw Ulam's memoir [1]Adventures of a Mathematician. I was impressed by something Ulam said about John von Neumann: that he grasped the difference between the trunk of the tree of mathematics and the branches. Between core issues and lesser ones. Between what matters more and what matters less. I wanted to make similar distinctions within psychology. Nobody talked about this, however. Not even other books.

Some research will be influential, will be built upon. Some won't. To put it bluntly, some research will matter, some won't. I once thought of teaching a graduate course where students learn to predict how many citations an article will receive. You take a 10-year-old journal issue, for example, and try to predict how many citations each article will receive. I like to think it would have been a helpful class: The key to a successful scientific career is writing articles that are often cited. I even had a title: "What Will You Do After You Stop Imitating Your Advisor?"

When I was a grad student the short answer to "what matters?" in experimental psychology was clear enough:

1. New methods. The Skinner box, for example, was a new way to study instrumental learning. Skinner didn't discover or create the first laboratory demonstration of instrumental learning; he simply made it easier to study.
2. New effects. New cause-and-effect linkages. For example, John Garcia discovered that if you make a rat sick after it experiences a new flavor it will avoid foods with that flavor.

My doctoral dissertation was about a new way to study animal timing.

A few months ago I had coffee with [2]Glen Weyl, a graduate student in economics at Princeton. We discussed his [3]doctoral research, which is about how to test theories. One of Glen's advisors had told him about a [4]paper by Hal Pashler and me on the subject. Hal and I argued that fitting a model to data is a poor way to test the model because there is no allowance for the model's flexibility. The first reviewers of our paper didn't like it. "You don't realize how hard it is to find a model that fits," one of them wrote.

Glen's interest in this question began during a seminar in Italy, when he realized the speaker was more or less ignoring the problem. The speaker was comparing how well two different theories could explain the same data without taking into account their different amounts of flexibility. Glen's thesis proposes a Bayesian framework that allows you to do this. His main example uses data of Charness and Rabin from choice experiments. ([5]Matt Rabin is a MacArthur Fellow.) Taking flexibility into account, he reaches a different conclusion than they did.

I wondered how Glen decided this was important. (It's a method, yes, but a highly abstract one.) I asked him. He replied:

Sadly, despite my interest in the history of economic thought, I don't have a lot of insight about why I came upon these thoughts. But one thing: my interests are very interdisciplinary . . . My work is based on drawing connections between economics, philosophy of science, and computer science (and meta-analysis from psychology and bio-statistics). Most of my work takes this form: as you'll see on my website, I've used theoretical insights from economics and computer science as well as evidence from neuroscience, psychology and biology to critique the individualist foundations of liberal rights theory; I've used ideas from decision theory to lay firmer foundations for goals set out by computer scientists designing algorithms; I've used tools from information theory to instantiate insights from psychology to help understand the design of auctions; and I've used computational neuroscience to model biases in economic information processing. Broad interests are hard to have, because they limit the time for learning a particular area in depth, but I prefer to read broadly and draw connections rather than to read deeply and chip away at open questions.

That was interesting. I read broadly, and so does Hal, who knows more about the philosophy of science than I do. I wrote to Glen:

The usual comment about interdisciplinary knowledge is that it's good because you can bring ideas from one area, including solutions and methods, to solve problems in another area. . . . But maybe it's also good because by learning about different areas you absorb a range of different value systems and this makes you less sensitive to fads (which vary from field to field), more sensitive to longer-lasting and more broadly-held values.

The more trees you know, the easier it is to see the forest.

[6]Evaluating new product ideas.

1. [http://books.google.com/books?id=U2\\_zEZ0HdU4C&printsec=frontcover&dq=%22adventures+of+a+mathematician%22&sig=QZi1JgZBh-N3T18oNysxfNUtoWM#PPA3,M1](http://books.google.com/books?id=U2_zEZ0HdU4C&printsec=frontcover&dq=%22adventures+of+a+mathematician%22&sig=QZi1JgZBh-N3T18oNysxfNUtoWM#PPA3,M1)

2. <http://www.princeton.edu/~eweyl/>
3. [http://www.princeton.edu/~eweyl/Third\\_Draft\\_Simple\\_Theory.pdf](http://www.princeton.edu/~eweyl/Third_Draft_Simple_Theory.pdf)
4. <http://repositories.cdlib.org/postprints/763/>
5. <http://elsa.berkeley.edu/~rabin/>
6. <http://evhead.com/2007/12/how-to-evaluate-new-product-idea.asp>

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Stephen M (Ethesis) (2008-02-17 13:08:16)

Seth, I've really been enjoying your blog recently. Just wanted to encourage you to keep posting.

Stephen M (Ethesis) (2008-02-17 18:49:00)

BTW, on finding something that matters: [http://www.newyorker.com/reporting/2007/12/10/071210fa\\_fact\\_gawande?currentPage=4](http://www.newyorker.com/reporting/2007/12/10/071210fa_fact_gawande?currentPage=4)

model fits and surprising predictions « the pulchrifex papers (2010-04-01 15:42:07)

[...] 1, 2010 · Leave a Comment I just attended a talk by a very famous quantitative psychologist. It was a good talk, all about modeling some fairly fine aspects of the interactions between information and reward in a decision-making paradigm, and there was a lot of mathematics in it that will forever elude me. Since I don't do this kind of work and am not well-equipped to understand it, I am probably undersensitive to how hard it is. Owing in part to these deficiencies, I've always appreciated Seth Roberts and Hal Pashler's points about model-fitting (here's a relevant post from Seth's blog, referencing a classmate of mine from a neural networks course), and in particular the point that fitting a lot of data with a few free parameters isn't always the coup it seems to be. I think there's an issue of denying the antecedent at work. Everyone knows that, if your observations aren't much more numerous than your parameters, a model fit is unimpressive; the easy inference is that, if your observations are much more numerous than your parameters, a model fit is impressive. But that's invalid and, more to the point, not always true. Roberts and Pashler bring up the point that "psychological data is often not surprising"; in many situations, including the ones addressed in this talk, it's predictable that the data will take the form of, say, a logistic function. (In fact, I'd guess that psychologists tend to prefer experiments that can be easily modeled by simple functions.) If there's a strong prior for a logistic function, the fact that you can fit a lot of data with a couple of parameters is not impressive; all it shows is that you know how to fit a logistic function. [...]

## **Blog Power (continued) (2008-02-17 22:26)**

What Jonathan Schwarz calls "the Lost Kristol Tapes" is a [1]taped debate between William Kristol (the new NY Times columnist) and Daniel Ellsberg about the invasion of Iraq. The debate was on C-Span's Washington Journal, of which I have fond memories; I watched it for years to get morning faces for my self-experimentation. [2]Schwarz called Kristol's comments "a double album of smarm, horrifying ignorance, and bald-faced deceit."

The debate has been watched about 5000 times. Three days ago, just before Schwarz's piece, it had been watched four times, three by Schwarz himself. [3]My long self-experimentation article would have been read by almost no one had not [4]Andrew Gelman blogged about it. Now it's been downloaded thousands of times.

More blog power: [5]here and [6]here.

Addendum. Funny coincidence: The day after I posted this, the formerly-obscure [7]Wikileaks hit the news for a super-charged version of the same thing. Wikileaks exposed Cayman Island tax shelters.



1. [http://www.c-spanarchives.org/library/index.php?main\\_page=product\\_video\\_info&products\\_id=175746-2&highlight=ellsberg](http://www.c-spanarchives.org/library/index.php?main_page=product_video_info&products_id=175746-2&highlight=ellsberg)
  2. <http://www.tinyrevolution.com/mt/archives/002087.html>
  3. <http://repositories.cdlib.org/postprints/117/>
  4. [http://www.stat.columbia.edu/~cook/movabletype/archives/2005/03/learning\\_from\\_s.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2005/03/learning_from_s.html)
  5. <http://www.blog.sethroberts.net/2008/01/28/blog-power/>
  6. <http://www.blog.sethroberts.net/2008/01/31/more-blog-power/>
  7. <http://en.wikipedia.org/wiki/Wikileaks>
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### **Forensic Means ... (2008-02-17 23:40)**

1. Forensic science = science relevant to the judicial system. Like CSI.
2. Forensic psychology = legal-system-related psychology. Like the personalities of serial killers.
3. Computer forensics is about using computers in the legal system.
4. Yet forensics by itself = public speaking.

Huh?

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Varangy (2008-02-18 00:41:35)

*The first teachers of oratory were the ancient Greeks and Romans, namely Aristotle and Cicero. When they were classifying "kinds" of oratory, they termed the kind of argument used in a court of law to prove or disprove past events "forensic" argumentation. Centuries later while universities were still teaching all the forms of argument, students decided to take it to the competitive level and began debating for sport in an activity they named "forensics." Today forensics includes competitive dramatics and public speaking.* <http://www.morainevalley.edu/forensics/etymology.htm>

Benquo (2008-02-18 05:43:38)

The root is *forum*, which I think is used in the sense of a public place for discourse, where decisions might be made based on speeches. #4 is clearest – public speeches are proper to the forum. Similarly, anything to do with legal pleading is a public and thus *forensic* matter.

seth (2008-02-18 08:01:56)

Thanks for the explanations, Varangy and Benquo.

## The Greatness of Behind The Approval Matrix (2008-02-18 07:03)

What I like most about magazines is their ability to open new worlds to me. Books – unless by Jane Jacobs – rarely do this. Music, TV, and movies almost never do this. Paintings and other visual arts never do this (to me). Magazines do this regularly. Entertainment Weekly – the best magazine with a dull name – tries to do this (and succeeds). I am now reading The Golden Compass because of EW. An issue of Colors made me visit Iceland. Spy made New York fascinating. (E.g., an NYC map of smells.) It's the best kind of teaching: you open a door and make what's inside seem so interesting and wonderful that the student voluntarily decides to enter and explore.

Which is why it isn't completely surprising that Abu Ayyub Ibrahim, who writes [1]Behind the Approval Matrix, is a teacher. New York magazine's Approval Matrix has a wonderful way of introducing new things: with humor, poetry (if well-written short captions = poetry), a dash of outrage (calling stuff "despicable"), and an attractive layout. When it calls something Brilliant, I'm instantly curious – thus fulfilling the best function of magazines with remarkable ease. The problem for me, and I assume many others, is that the captions are often obscure. Behind the Approval Matrix – which might have been called The Annotated Approval Matrix – explains each item.

The creators of The Approval Matrix had a great idea and didn't quite pull it off. It's often too hard to figure out what they're talking about. Ibrahim has supplied what is missing.

It's a bit like my self-experimentation. Previous (conventional) research, for various reasons, couldn't quite reach practical applications (e.g., omega-3 research couldn't figure out the best dose); my self-experimentation, building on that research, was able to cover the final mile.

1. <http://behindtheapprovalmatrix.blogspot.com/>

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barjac (2008-02-18 13:53:53)

I enjoy reading your blog. But I find infuriating the frequent non sequitur congratulatory insertions about your research on omega-3s in posts otherwise about other topics. It does not serve you well as a scientist and as a blogger. As to the correct dosage, I looked at my file in which I keep references for future use. The portion devoted to omega-3 goes on for 42 pages. A percentage of these studies are clinical trails (at least 900 have been done) or animal research and do talk about dosage. Dosage for what? A relatively low dose of EPA/DHA has been used in coronary heart disease studies. But one gram per day shows significant reductions in a variety of bad outcomes. Want to reduce triglycerides, 2 to 4 grams a day. Elevated blood pressure, at least 3 grams per day, but higher doses for higher blood pressure. Rheumatoid arthritis, 2 to 6 grams daily, but with greater percentages of EPA which is a major precursor to anti-inflammatory eicosanoids (DHA is not). And so on. What else is one consuming? Overconsumption of Omega-6 EFAs in the American diet is part of the problem. For example, there is some suggestion that maximum conversion of the 18 carbon Omega-3 (ALA, the Omega-3 in flax oil) to EPA occurs when the consumption of Omega-6 to Omega-3 is 2.3 to 1. But are Omega-6 EFAs bad? We have known that complete elimination of Omega-6s from the diet results in serious disease since the 1930s. There are only a handful of recognized such cases for Omega-3s. Can one take too much? Omega-3 EFAs reduce the ability of the blood to clot. For someone on the modern American diet, that first step of reduction is probably good for almost everyone. Somewhere around 13 grams of daily consumption of EPA/DHA probably gets dangerous. I like the idea of self-experimentation. But it is suggestive. As science, it tells us where it might be fruitful to look further, but it does not establish the "truth" of anything. I find your results of the effect on cognition from the consumption of ALA intriguing. I cannot account for it. I have some ideas why it might work, but I do not know. And almost certainly, if true, it is different from the ways EPA/DHA work in multiple different ways throughout the body.

seth (2008-02-18 14:24:40)

barjac, if you think I didn't figure out the optimal dosage for myself, I'd be curious to know why. I gave a reason for generalizing from my measurements of cognitive function to other measures. If you think the optimal dosage has been figured out in other studies, can you give a citation for this claim so I can look at the evidence for it? You seem to be giving the ranges of dosages used in published studies; they may all be too low or too high.

Ibrahim (2008-02-18 16:57:25)

Seth, Thanks so much for the kind compliments! I've been meaning to email you since I switched to the new format. Please send me an email, and let me know what you think. I'm going to start checking out "Entertainment Weekly", and "Spy." Wait, is "Spy" still in circulation? Thanks again! Ibrahim P.S. I can't believe the magazine didn't come out today.

barjac (2008-02-18 18:51:55)

Indulge me with a part of a story from New Scientist, 9 February 2008. "Dingemanse and his colleagues have established that there is genetic variation underlying exploration behaviour in small birds called great tits" some individuals inherit a highly exploratory personality and others a more cautious one. The researchers measured this trait in wild great tits and related it to their survival over three years. For females, the higher the exploration score, the more likely they were to survive in 1999 and 2001. However, in 2000, when resources were abundant, low-scoring females were more likely to survive. For males this pattern was reversed, reflecting the different survival pressures that they face. This study and others like it make a powerful point: the optimum level of a personality trait depends on the details of the local ecology. As humans we want a simple story. As scientists, one wants to say all other things being equal. (I chose the above story for how important all other things being equal is. I am a parable kind of guy, I realize some may read it and think how bizarre, but for me it is salient to the issue.) But things are complicated. Small changes in one dial can make the optimum setting of another dial different. Take acetaminophen toxicity. Assuming one does not have liver disease or has not drunk some alcohol recently, one can probably take 4 or 5 grams of acetaminophen safely. Not a good idea, but it will probably not kill or damage most people. The liver uses glutamate in metabolizing the toxic ingredient. Somewhere north of 7 or 8 grams, there is a cliff effect. Glutamate runs out and now things go south for the liver quickly. So no one should take, say, 20 grams of acetaminophen at once and almost all normal people can take 700 mg and a fair percentage will get pain relief. But what about 700 mg every four hours, is that okay? That is only 4.2 grams a day. What about day after day? What is the optimum dose for pain relief? What is the maximum safe dose? Both vary from person to person and importantly, both vary for the same person from time to time. (Most non-prescription drugs have a much higher ratio of toxic to therapeutic effect.) These examples are chosen for dramatic effect. The bullet point is that there is no such thing as an optimal dosage. Just a pretty good therapeutic dosage for a particular desired effect. One hopes the side effects are minimal. One hopes it remains a pretty good therapeutic dose, but a lot of the time it does not. Things change over time. Dosage for what? From the University of Maryland Medical Center web site: <http://www.umm.edu/altmed/articles/omega-3-000316.htm> "Macular Degeneration" Another larger clinical study confirms that EPA and DHA from fish, 4 or more times per week, may reduce the risk of developing macular degeneration. Notably, however, this same study suggests that ALA may actually increase the risk of this eye condition. (So ALA is bad?) "Inflammatory bowel disease (IBD)" In animals, it appears that ALA works better at decreasing bowel inflammation than EPA and DHA. (So ALA is good, better even?) Stroke: "Strong evidence from population-based clinical studies suggests that omega-3 fatty acid intake (primarily from fish) helps protect against stroke caused by plaque buildup and blood clots in the arteries that lead to the brain. In fact, eating at least 2 servings of fish per week can reduce the risk of stroke by as much as 50 %. However, people who eat more than 3 grams of omega-3 fatty acids per day (equivalent to 3 servings of fish per day) may be at an increased risk for hemorrhagic stroke, a potentially fatal type of stroke in which an artery in the brain leaks or ruptures." (Less one thinks that this example provides brackets for an optimal dose, note that for Americans a lot of therapeutic effects for other diseases start around 3 grams per day.) "Depression" In a clinical study of individuals with depression, those who ate a healthy diet consisting of fatty fish 2 - 3 times per week for 5 years experienced a significant reduction in feelings of depression and hostility. (Probably mostly the DHA. Note the effect is over years. I got to retrofit all those cell membranes. Also note that even at a healthy level there is more arachidonic acid (omega-6) in brain cell membranes than DHA. It would probably be impossible to get this effect with just ALA and certainly not with just ALA in a diet high in Omega-6 alpha-linoleic acid. So the time effects range from the short-term in the self-experimentation that you did to days to weeks to a few months

for anti-inflammatory effects – the gum disease example, but also other things such as sudden death from heart disease to years in the case of DHA in brain and eye cell membranes.) Could a dose of 3 grams or more of EPA/DHA just be too high, but the only one that will work to counteract the effects of a lifetime diet low in omega-3s and high in omega-6s? You have shown that ALA has an effect on a particular type of cognitive function in the short term in one person. Speculation is that it worked as a fat metabolized for energy. But it really tells us nothing about a good quantity for omega-3 in your diet over the long-term and even less about what might be good for other people. I am not trying to belittle the self-experiment that you ran, but it just doesn't.

barjac (2008-02-18 18:59:23)

Consider that it might be an fat metabolism providing a source of energy effect. Does it matter if you are somewhat ketotic after fasting or if you have recently ingested glucose. It has been a while since I read your stuff, maybe you considered this.

seth (2008-02-18 20:49:01)

I doubt that omega-3 brain effects are due to its being a source of energy. The brain is more than half fat – structural fat – and a lot of that is omega-3. Other fatty acids, as far as I can tell, do not produce the same effect. The studies you mention do not indicate optimal dosage. Such a study requires testing several doses and mapping out a dose-response function. Because self-experimentation is so easy and fast and the effects so clear, I was able to do a fair approximation of such a study. Of course my data is imperfect, of course it's unclear how far to generalize, but to say "it really tells us nothing about a good quantity of omega-3 in your diet over the long-term" is an overstatement.

barjac (2008-02-19 01:33:49)

By the way, I was typing fast and there is more DHA than arachidonic acid in brain membranes. About a quarter of the fat by weight in the brain is DHA, 10 percent AA. 50 % of the weight of the neuron's plasma membrane is composed of DHA. There is only a small amount of EPA in the brain. Only a small amount of ALA is converted to DHA, so even if your daily flaxseed consumption resulted in the consumption of, say, 7 or 8 grams of ALA, the amount of DHA resulting would be no more than a few hundred mg of DHA, probably a lot less. So overnight the consumption of a lot of ALA probably cannot effect the main ways that DHA effects cognition. Not enough DHA and not enough time to incorporate significant amounts into membranes. But I can quickly run out of fingers (a couple of times) just off the top of my head listing ways DHA is used in the body in addition to phospholipids. One or more of them may have an overnight effect. Yeah, the energy metabolism comment was the result of an impish impulse. Not absolutely, completely to be ruled out however. My impulse to comment here has run its course, so I will stop. But remember, we know a LOT about the biochemical processes these chemicals are involved in. And there is even more we don't yet understand. Especially in the complexity, the interactions, the emergent properties. It would be quite amazing if one guy experimenting on himself standing on one foot learned something astounding. That he learned something quite admirable, we learn a little something every time we do science even if it is that we don't yet understand.

Stephen M (Ethesis) (2008-02-19 17:08:56)

I have to say I always read Seth on Omega 3 as more happy about it than anything else. If you've ever talked to him, you can just hear his voice. More of a "gee, this reminds me of" than "non sequitur congratulatory insertions." Omega 3 dosages, and I've read a number of studies, are something that have a pretty wide range – more than 100 % (2-5 grams, as in the one study, is 150 % range – that's like saying maybe this, maybe twice this, maybe more), depending on what you are seeking to accomplish. I like the perspective of "covering the final mile" in the post. Honestly, the blog has gotten more interesting over time.

DW Bender (2008-02-21 11:19:38)

...It's the best kind of teaching: you open a door and make what's inside seem so interesting and wonderful that the student voluntarily decides to enter and explore. Which is why it isn't completely surprising that Abu Ayyub Ibrahim, who writes Behind the Approval Matrix, is a teacher. New York magazine's Approval Matrix has a wonderful way of introducing new things: with humor, poetry (if well-written short captions = poetry), a dash of outrage (calling stuff "despicable"), and an attractive layout. When it calls something Brilliant, I'm instantly curious – thus fulfilling the best function of magazines with remarkable ease." Those are interesting and sharp observations from you, a professional teacher and especially a learner through experiment, yourself. I had just finished blogging a bit on a science project my second grandson is engaged in,

touching on a long-standing concern about the interconnectedness of giftedness (primarily in the arts, including humor) with academic learning and enjoyment. [1]Leeches, Amoebas & Algae (Oh My!) . I believe that children and adults who exhibit such gifts (and those who may not exhibit them) develop them primarily as learning-tools, while the enjoyment and entertainment we derive from them may be secondary benefits.

1. <http://thecommonhours.blogspot.com/2008/02/leeches-amoebas-algae-oh-my.html>

### **Want to Self-Experiment? A Special Offer (2008-02-20 00:27)**

I'd like to increase the ability of self-experimenters to tell others what they've done and get feedback. Blog software can be used to do this.

Instead of posting again and again, as in the usual blog, you just post a few times then edit those posts as you collect new information. Instead of post = diary entry, the concept is post = section of scientific paper. You might have posts corresponding to Introduction, Equipment, Procedure, Raw Data, Data Summary, Interpretation, Strengths, Weaknesses, and Comparison to Other Work. You start by writing the Introduction. As the raw data comes in, you add it to the Raw Data post. After you finish collecting the raw data, you write the Data Summary post. And so on.

[1]Here is the start of an example.

The special offer is that if you want to do a self-experiment and are willing to communicate your results in this form, I will – time permitting – help you do it and write it up and will link to the blog you create. To take advantage of this offer, write me at twoutopias at gmail dot com. Tell me what you want to do and your relevant background. Deadline: Sunday, February 24.

1. <http://www.blog.sethroberts.net/2008/02/20/calorie-learning-introduction/>

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josh (2008-02-21 08:07:54)

The sounds a bit more like something you would put in a wiki to me. Have you seen scholarpedia.org? I suppose scholarpedia is a little more formal since it is peer-reviewed.

How to Stop Procrastinating So that I Am Not a Bum - A Self-experiment | FlowingData (2008-03-02 22:55:32)

[...] In an attempt to work more efficiently, I am going to take up Seth's self-experimentation offer that I found via Andrew's post. I am going to self-experiment; I am going to collect data about myself; and I am going to find out if my two-pronged method to stop procrastination works. Here's my plan: [...]

### **Calorie Learning: Introduction (2008-02-20 08:40)**

In a series of posts, each titled Calorie Learning: [something], I'm going to use a blog to communicate self-experimentation. To see the whole series, look in the category Calorie Learning (under Self-Experimentation).

This research will be about how we (or at least I) learn to associate flavors with calories – more precisely, smells

with calories. This learning is at the heart of the Shangri-La Diet, which derives from [1]a theory that says the flavors of your food increase your set point if they are associated with calories. The stronger the association, the bigger the increase.

Why study this? 1. Maybe I can improve the diet. 2. It matters. It happens with every bit of food you eat. It controls what you eat and your appearance (assuming my theory is right). 3. Little is known about it. As I wrote in the appendix to The Shangri-La Diet, Anthony Sclafani has studied this learning extensively in rats. No one has studied it extensively in people. 4. The experiments can be simple and easy – or at least that's what I think now.

A few weeks ago, a friend told me how much she liked those cellophane-wrapped white-bread sandwiches sold in delis and bodegas. Egg salad sandwiches, for example. They were addictive, she said. That sounded about right: White bread (and bread in general) is digested very fast, witness its very high glycemic index. Fast digestion means the calorie signal it generates in the brain overlaps a great deal with the flavor signal it generates in the brain. The more overlap of the two signals, the stronger the association created. The stronger a flavor's association with calories, the more you like it.

Her comment gave me an idea: I can create a random new flavor by randomly combining many spices, mixing them into butter, and spreading the butter on white bread. The spices supply the flavor, which I can reproduce as often as I want by making a big enough batch of spicy butter when I start. Spice mixtures are cheap. I can easily and cheaply make a huge number of flavors that should taste entirely new. This means I can start fresh – which is where you want to start when doing a learning experiment – as often as I want. White bread is cheap, easily available, has little flavor, and provides a strong signal per calorie. If I want to increase the time between the flavor and the calories, maybe I can spread the butter on crackers, which have few calories, and eat the bread later.

Will it work? Stay tuned.

1. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>

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Jeff Winkler (2008-02-20 10:19:13)

Hi Seth- I meant to reply to your original brandy post, but see you're expanding on this (th/m)eme. Would the association be accelerated if you took flavorless calories along with the flavor? (Flax capsules, totally flavorless). Anything wrong with exaggerating the association in this way? Jeff

seth (2008-02-20 12:15:08)

Jeff, yes additional calories should strengthen the association. as for your "anything wrong?" question I don't think I understand what might be "wrong". in these experiments I will probably try flavorless calories – e.g., eating plain bread with my nose closed.

Trina (2008-02-20 14:41:16)

This is as interesting as being an undergraduate again, at the start of a new semester, in an exciting class with a dynamic professor, sitting at the edge of my chair with sharpened pencils in both hands–without the angst. Thanks, Seth.

seth (2008-02-20 15:10:46)

Thanks, Trina. That's a vivid and satisfying picture.

spacenookie (2008-02-20 19:43:07)

somewhere in the Taubes tome, Taubes talks about insulin release in \*anticipation\* of eating. He says that if you think about eating, there is an initial release of insulin that precedes consumption and then a later release after consumption. I wonder if the initial release could be a learned effect based on what types of food you expect to eat. Taubes argues strongly that if you don't have insulin in your system, you can't gain or maintain fat.

Jeff Winkler (2008-02-21 10:38:02)

Exaggerating the caloric content seems like a [1]Useful Lie, if the goal is to learn to like a food. Now how can I get my wife to like veggies? :) (This is a social engineering problem, she has an aversion to things that taste "green") [http://www.keepkidshealthy.com/nutrition/kids\\_vegetables.html](http://www.keepkidshealthy.com/nutrition/kids_vegetables.html) says - "What if you didn't teach your toddler to eat a lot of fruits and vegetables? Is it too late? Probably." The old trick of mixing veggies in with calorie-rich companions seems like it should not work if taste sensitivities are ultraspecific- "Creative ways to get your kids to eat more vegetables can include camouflaging them in with other foods, like chopping up and mixing vegetables in with pasta sauces, lasagna, casseroles, soup, chili, omelets, etc. or adding veggie toppings to pizza. You can even find recipes for things like banana raisin pancakes, carrot beef meatballs or zucchini cookies, that your kids might enjoy."

1. <http://c2.com/cgi/wiki?UsefulLie>

Aaron Blaisdell (2008-02-21 13:05:45)

Hi Spacenookie, Taubes discusses the anticipatory release of insulin resulting from thoughts about food, or exposure to the smell of food, in the last or second-to-last chapter of his book. I just finished reading the tome last night, so this section is still quite vivid in my mind. Now that I've finished the book (one of the best books I've read in my lifetime - ever!), I am going to re-read Seth's interview with Taubes. Btw, I've haven't done the SLD diet in quite a while (I'm 5'11" and 142 lbs., an ideal weight for my height), but I've been cutting way back on carbs and increasing my intake of protein and fats, especially red meat, eggs, whole milk, and cheese. I also take 2400 mg of fish oil in capsule form daily. I can honestly say I've never felt better both physically AND mentally in my whole life. I just had a dentist visit two days ago and the dentist was impressed at how good my oral health was. I used to suffer have one or two cavities filled almost every year, and my gums always had swelling. My gums are doing much better and I haven't had a cavity in almost two years.

### **Assorted Links (2008-02-21 20:27)**

1. [1]Gary Taubes speaks at Stevens Institute of Technology. This page curiously links to itself.
2. [2]Ticket cameras increase crashes. The opposite of what was promised. They have just been installed in downtown Berkeley.
3. [3]Humor and the boss-employee relationship. Not exactly self-experimentation, but close.
4. Sherwin Nuland on [4]being treated for severe depression. His doctors recommended that Nuland receive a pre-frontal lobotomy. A resident said: Let's try ECT.

Thanks to Dave Lull.

1. <http://www.stevens.edu/csw/cgi-bin/index.php>

2. <http://www.motorists.org/photoenforce/home/studies/>

3. <http://blogs.wnyc.org/radiolab/2008/02/19/the-boss-is-funnier/>

4. <http://www.ted.com/index.php/talks/view/id/189>

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Varangy (2008-02-21 23:56:14)

*Ticket cameras increase crashes.* Of course they do — why? Contrary to popular opinion, sometimes, not often, it is better/safer to run a red light than to stop for it. When you are driving in that uncertain netherzone, you don't know long it has been the yellow, and but you know that you cannot safely stop for the red w/u surprising the people behind you. Better to punch it. I am not advocating running reds by any means, but we all know that there are situations where it is very literally safer. But here is the irony and second reason that traffic cameras increase crashes: if a cop sees you run a red, your chance that you get a ticket is almost indistinguishable from 100 % (unless you are a highly attractive female). If you stop for every red, even in the unsafe situation described above, you will not get a ticket, almost no matter what happens, provided you weren't speeding. After all, you obeyed the law and stopped for the red. Sort of like the unseen hero that NNT describes in the Black Swan, you don't get credit for preventing an accident, b/c no one saw the accident.

seth (2008-02-22 00:57:28)

Very interesting. I thought the reason those cameras cause crashes is that they are distracting. I don't understand your second reason.

Stephen M (Ethesis) (2008-02-22 18:36:50)

Locally the cameras seem to have reduced accidents. Interesting. BTW, I've been really enjoying the various posts and material at <http://www.ted.com/talks/view/id/142> Fascinating.

Varangy (2008-02-25 12:08:25)

Hi Seth, I guess my second reason isn't really separate from my first. The point is that, while it may be safer in some instances to run a red light, the law doesn't recognize such an instance i.e. you will always get a ticket for running a red. Therefore, you are incented to stop for every red, even if you know it might cause an accident. You are not rewarded for preventing an accident — because no one will reward you for avoiding an accident that didn't occur b/c you prevented it. It is invisible (and probably) incomprehensible to 99.99 % of people.

## **Flaxseed Oil: Beware of Lignans (2008-02-21 22:03)**

When I buy flaxseed oil, I have a choice: with or without lignans. I almost always choose without. Apparently that's the right choice, witness [1]this from the SLD forums:

I've been trying to figure out what besides overeating might cause these flare ups with my gallbladder. It seems clear from the last few days that one of the things that can set it off is Flax Seed Oil with lignans. When I consume 2-3 tablespoons a day of FSO without lignans, I don't notice any problems. The FSO goes down easy and I don't feel nausea or pain. But with the lignans I often do. To be sure, I decided to switch from FSO to ground up flax seeds mixed into my oatmeal. And today, the first time I tried that, an hour later the familiar nausea is back.

1. <http://boards.sethroberts.net/index.php?topic=5995.msg63455#msg63455>



lasser83 (2008-02-21 23:33:46)

I purchase and intake flaxseed with lignans. But only because that is all that's offered at the health food stores in the midwest.

Caleb Cooper (2008-02-22 07:24:47)

huh. i've heard that men should take flaxseed w/ lignans, because without lignans there's increased risk of prostate cancer, which my family has a history of. For the record, at doses > 2tbsp I've experienced headaches with lignans flaxseed. Cutting back my dosage to

Caleb Cooper (2008-02-22 07:27:18)

oops, got cut off. [continued]...cutting back my dosage to

lasser83 (2008-02-22 16:16:11)

Yeah, the cancer thing freaks me out. I read a couple articles by doctors who would not recommend taking flaxseed oil without lignans due to the cancer risk. But both doctors also concluded that more research needed to be done on the matter.

Kristen's Raw (2008-02-22 18:57:02)

Anyone ever use hemp seed oil for getting the appropriate ratio of omega-6 to omega-3 essential fatty acids?

KevinK (2008-02-23 12:54:21)

The connection between prostate cancer and non-lignan FSO seems pretty weak to me. But I do want to do more. The [1]Mayo Clinic has a page on FSO and it's potential benefits and problems. The biggest takeaway from that page seems to be that there is a lot of room for more research. The prostate cancer/FSO connection seems the weakest.

1. [http://www.mayoclinic.com/health/flaxseed/NS\\_patient-flaxseed](http://www.mayoclinic.com/health/flaxseed/NS_patient-flaxseed)

Kevin Mullaney.com » Blog Archive » When Gallbladders Attack (2008-04-10 07:34:18)

[...] Now these attacks are infrequent. I had several last fall, but I think I've only had two this year. The hypothesis that I'm currently working under is that starches in my diet aggravate it. The first few attacks I had were after large meals with lots of rice. I also noticed that the lignans that accompany flax seed oil also irritate it, as do ground flax seeds themselves (the oil without lignans seems to be fine). [...]

## **Calorie Learning: Background (2008-02-22 01:02)**

The discovery of flavor-calorie learning (in rats) was no surprise. It was another example of flavor-consequence learning, which was well established. In the 1950s, John Garcia had found that if you make a rat sick after exposing it to a new flavor, it will avoid that flavor. Flavor-consequence learning belongs to the larger category of Pavlovian learning (also called classical conditioning), the sort of learning where an animal learns that an unimportant event (such as a bell) predicts an important event (such as food). Pavlovian learning belongs to the larger category of associative learning, which also includes action-event learning, such as a rat learning that bar presses produce food pellets. The action is pressing the bar; the event is getting a food pellet.

My Ph.D. was in the field of animal learning. Almost all animal learning research is about associative learning. When I taught introductory psychology, however, I found it hard to take advantage of my expertise because most of the research had little real-world relevance. The big exception was [1]Shepard Siegel's work on drug tolerance and craving. Tolerance and craving are due to Pavlovian learning, Siegel argued. Flavor-calorie learning, happening at every meal, might have been another exception had anything interesting been known about it – but nothing was.

The usual terminology is to say that in a Pavlovian-learning experiment, the animal learns to associate the CS (conditioned stimulus, such as a bell) with the US (unconditioned stimulus, such as food). In flavor-calorie learning experi-

ments, the flavor source is the CS, the calorie source the US.

1. <http://www.science.mcmaster.ca/psychology/ss.html>

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Tim Lundeen (2008-03-16 22:40:10)

This Siegel & Ramos paper is just superb (finally made it to the top of my reading list). Thanks for linking to it, fascinating and useful information. It certainly looks like one factor in food binging is the insulin spike (the conditioned compensatory response) that your brain learns to generate when you smell or eat familiar food, which happens before the carbohydrates are absorbed into your bloodstream. This causes a need for carbohydrate to balance the insulin, making it very hard to stop eating.

### **Lewis Carroll on Mercury and Autism (2008-02-23 08:09)**

From [1]an article in Rolling Stone about mercury and autism:

The CDC "wants us to declare, well, that these things are pretty safe," Dr. Marie McCormick, who chaired the [Institute of Medicine's] Immunization Safety Review Committee, told her fellow researchers when they first met in January 2001. "We are not ever going to come down that [autism] is a true side effect" of thimerosal exposure. According to transcripts of the meeting, the committee's chief staffer, Kathleen Stratton, predicted that the IOM would conclude that the evidence was "inadequate to accept or reject a causal relation" between thimerosal and autism. That, she added, was the result "Walt wants" – a reference to Dr. Walter Orenstein, director of the National Immunization Program for the CDC.

From Chapter 12 of [2]Alice's Adventures in Wonderland:

'No, no!' said the Queen. 'Sentence first—verdict afterwards.'

'Stuff and nonsense!' said Alice loudly. 'The idea of having the sentence first!'

'Hold your tongue!' said the Queen, turning purple.

Eerily prophetic, no?

1. [http://www.rollingstone.com/politics/story/7395411/deadly\\_immunity/](http://www.rollingstone.com/politics/story/7395411/deadly_immunity/)

2. <http://www.cs.cmu.edu/~rgs/alice-XII.html>

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B Campaigne (2008-02-23 20:18:42)

You are a human being. You are not a person, you *have* a person. A person is your agent in commerce,. A fictitious entity to which rights and duties are ascribed. To the government and industrialists you are an indentured slave or as the media refers to us, *consumers*. Before you enter into the world arena let alone the Autism arena you must see where, as an individual, you stand. Here in Ontario Canada there are over 1000 citizen children on a shameful waitlist to receive funding for ABA/IBI therapies. Time is their enemy. After four years and the Senate / Eggleton paper *Pay Now or Pay Later* and the Canadian National Autism Strategy lies dormant. (Although it is a good document , worth reading) Canada is founded upon the principles that recognize the Supremacy of God and the Rule of Law. Both of which are being broken by the Canadian governments both Federal and Provincial. The Magna Carta, the British North American Act, The Canadian Charter of Rights and Freedoms and the U.S. Constitution were all written to protect us from the Sovereign. To all of us parents in the front lines all over the world *Hallelujah to Ya !* At the end of the day it's just us, our little team and the clinic we run from our homes. Why is the focus always only on thimerosal? Included on this list of chemical concerns should also be formaldehyde, M.S.G., aluminum, Butylated hydroxytoluene or B.H.T. and many others. *Don't* let the mainstream media and pharma spin doctors lull you into only focusing on the thimerosal. Remember these corporations would no doubt lose everything if a connection is made between the preservatives and the world wide vaccine programs. Our great grandparents our grandparents and our parents were all infected with toxic preservatives through the inoculation programs. I saw my 5yr old son's live blood analysis taking place. I saw live candida yeast in his blood. I saw the heavy metals as well. *Where do you think it came from?* *Leaky gut syndrome comes from the M.M.R jab.* We saw the change in our child right after the second round of vaccinations. Freedom of the person requires not only, or not even especially, the absence of legal constraints but the presence of alternative thoughts. The most successful tyranny is not the one that uses force to assure uniformity, but the one that removes awareness of other possibilities. I have come to the conclusion that those who benefit from any societal mechanism rarely wish to understand that mechanism, especially if it appears to grant them power or authority and understanding it or any alternatives would restrict, diminish or destroy that power apparently granted. They live in a vapid world of learned assumptions. Lets face it if you have acronyms after your name your whole goal is to get published and funded no matter how ridiculous your position is. Most if not all of the researchers and their research are in the pocket of Big Pharma. They have lobbied their way into the core of our societies. I feel sorry for the caregivers who actually administer the jab and wonder how they are going to live with themselves after the truth comes out. If we put up with this our children will be next. It's not the vaccines it's the toxins therein. A child on the spectrum is born every 20 minutes. What do they all have in common? Wake up people.

### **My Theory of Human Evolution (gift card edition) (2008-02-23 13:27)**

The Sharper Image has gone bankrupt and will [1]no longer honor gift cards. In the comments section of the Consumerist post about this, several people apparently fail to understand why gift cards exist:

Another reason why cash is a better gift than gift cards.

This is just a good example why you should never buy a gift card.

Did anyone ever NOT know that gift cards are stupid?

The real lesson here, as Consumerists know, is don't buy gift cards. They are a bad deal even if the issuer doesn't go bankrupt.

This is the low-rent version of the [2]deadweight cost of Christmas idea, which I [3]discussed earlier. At the risk of stating the obvious, the perfect gift shows you know a lot about the recipient; cash shows you know nothing. A gift card shows you know a little – where the person likes to shop. They are less wasteful but less gift-like than ordinary gifts, more wasteful and more gift-like than cash. Gifts are supposed to be wasteful. This is why they are nicely wrapped. (Curiously no commenter called gifts stupid, a scam, etc.) In evolutionary terms, gift-giving traditions evolved because they increased demand for seemingly "useless" stuff. Gifts that went unused and expensive wrappings weren't actually useless; they helped artists and artisans make a living. They were research grants for material science.

1. <http://consumerist.com/359574/the-sharper-image-suspends-acceptance-of--gift-cards-due-to-bankruptcy?>
2. <http://www.timesonline.co.uk/tol/news/uk/article804558.ece>
3. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>

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jaz (2008-02-24 06:23:55)

Giving a gift card ensures they do get a gift and dont use the money to buy groceries.

sysrick.com » links for 2008-02-24 (2008-02-24 16:31:31)  
[...] My Theory of Human Evolution (gift card edition) [...]

Giftcardblogger (2008-03-19 19:38:01)

I hope the sharper image situation will remind consumers to pay attention to what is going on with the company before buying a gift card, especially since many people hold on to gift cards for an extended period of time.

Jamie Lentzner (2008-03-30 21:05:20)

Low rent - I just learned that "expression" this past year - I love it! Anyhoo, good post - shame on Shaper Image.

## **Calorie Learning: Materials (2008-02-24 10:18)**

These are the supplies I used in my calorie-learning experiments:

1. Wonder bread. I wanted bread with as little flavor as possible
2. Unsalted butter. Unsalted because the spice blends have salt.
3. Eleven [1]Penzey's Spices spice blends. In particular, Baking Spice, Cake Spice, Chicken Taco Seasoning, Jerk Pork Seasoning, Poultry Seasoning, Mural of Flavor, Sate Seasoning, Southwest Seasoning, Sweet Curry (regular), Tuscan Sunset, Venison Sausage Seasoning. Each has 5-15 different spices. For example, Jerk Pork Seasoning contains paprika, allspice, ginger, cayenne pepper, sugar, nutmeg, black pepper, garlic, thyme, lemon grass, cinnamon, star anise, cloves, and mace. Baking Spice is a mixture of two kinds of cinnamon, anise seed, allspice, mace, and cardamom. Combining a few of them should produce a flavor unlikely to resemble any familiar flavor.

1. <http://www.penzeys.com/>

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Tom (2008-02-25 15:30:41)

Seth, you'll find this fascinating: **Artificial Sweeteners Cause Energy Disregulation** <http://www.arthurdevany.com/?p=940>

Varangy (2008-02-25 16:37:03)

Seth, Don't know if you have seen this study, but it seems to be germane to your research.  
<http://www.arthurdevany.com/?p=940>

### **All About Nose-Clipping (2008-02-26 00:59)**

Over at the SLD forums, Heidi555 posted these useful links:

1. [1]Nose clipping ditto foods to extinguish cravings
2. [2]Conditioning Appetite Suppression
3. [3]Nose clipping lots of food really works â€“ it's easier!

This is about as far from the "losing weight is just a matter of calories in versus calories out" dogma as you can get. Last week at a dinner I sat next to a young doctor who said exactly that. I said nothing.

Thanks, Heidi.

1. <http://boards.sethroberts.net/index.php?topic=5835.0>
2. <http://boards.sethroberts.net/index.php?topic=5849.0>
3. <http://boards.sethroberts.net/index.php?topic=5903.0>

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Stephen M (Ethesis) (2008-02-26 11:45:41)

Self control is a fun thing, isn't it ;)

### **Omega-3 and Sports Injuries (part 4) (2008-02-26 20:36)**

Anonymous writes again:

I got caught in a nasty achilles lock the other day—it's an MMA [mixed martial art] submission move—and while trying to escape, I accidentally dislocated my fibula at the knee. It made a LOUD popping noise, to the point where everyone in the gym stopped. It popped it back in immediately, and other than some instability, it felt OK. Thankfully there was a doctor there (by chance—he does MMA and was in my class). He spent like 15 minutes examining my knee and said that other than some stretched ligaments, it was fine. His quote (I'm paraphrasing):

"That's amazing. You should need reconstructive surgery right now. I don't know how that happened, you must have rubber ligaments."

I told him about taking 4 tablespoons of flax seed oil every day, and he was shocked, and said he was going to research it to see if that could be why I got so lucky. Told him to Google you, it's all there.

The injury happened Friday. Today (Tuesday) the doctor looked at my knee again in class, and he was amazed not only at the lack of swelling, but that I was able to roll today (not full speed, just lightly).

I have played sports my whole life and have had at least half a dozen various knee injuries. Things like minor cartilage tears, hyperextensions, strains, etc.—none that were this major (a dislocation of a bone at the joint). Of those injuries, I was out longer and recovered much slower than I have with this one. I know this isn't proof of anything, and I don't know how much the flaxseed oil has had to do with what happened, but even the doctor is shocked.

More about omega-3 and sports injuries [1]here and [2]here and [3]here.

Addendum. He uses Whole Foods flaxseed oil without lignans.

1. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>

2. <http://www.blog.sethroberts.net/2007/11/25/omega-3-and-sports-injuries-more/>

3. <http://www.blog.sethroberts.net/2007/11/16/omega-3-what-happens-when-you-stop/>

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Stephen M (Ethesis) (2008-02-26 20:58:00)

Wow, that is very, very impressive. Interesting what you discover when you pay attention.

Varangy (2008-02-26 22:58:58)

As a skeptic of largely everything, I think this might be an example of post hoc ergo propter hoc fallacy as the anonymous alludes to at the end of his comment. That noted, it clearly warrants further research.

MT (2008-02-27 02:24:02)

Any way to find out what type of flax oil Anonymous is taking? I'm curious about the lignan content comments from other posts which suggested lignans might be a source of nausea, and wondering whether they may have other effects on the benefits, or lack thereof, of flax. I've always taken flax with lignans and haven't experienced such benefits.

Charles Richardson (2008-02-27 16:15:19)

As per Roger Williams's "Biochemical Individuality," there is an incredibly wide range of responses to everything, including nutrients. Having owned a health food store for a lot of years, it was obvious to me that some things were miraculous for

some people, neutral for others, and harmful to another group. That's why Seth's approach is so important. It's all about experimentation and learning what things do to your body, and learning how to be objective about that (as far as that's possible). I was taking flax seed oil at one point for weight loss, and then I realized that it was improving my mood. Unfortunately I didn't trust that observation (about fatty acids) until years later, when it was validated by reading some studies about fatty acids and the brain. So again, Seth's approach to all these things, and the rigor with which he approaches them, is something to emulate.

seth (2008-02-27 21:44:10)

Charles, I agree, biochemical individuality is one big reason self-experimentation is important. So you can figure out what works for you. Self-experimentation is a bit like the two sides of a bridge, the on ramp and the off ramp. Self-experimentation (on ramp) will often be the only way to come up with a new idea worth testing conventionally. And even after this or that treatment is shown to work via conventional research (bridge), individuals will still need to use self-experimentation (off ramp) to make sure it is working for them.

JohnN (2008-02-28 14:37:19)

I suspect the idea of biochemical individuality will never be proven. I'm reminded of the popularity of "Eat Right for Your Type" several years ago. Both seem plausible but a long way from truth and of course, not testable as a hypothesis. What should be recognized, however, is that the body is a complex system, its output expressed by the myriad rules that govern it and the initial conditions. Different initial conditions yield different results. When it comes to the efficacy of omega 3 we can not isolate the daily dose of fish oil/flax seed from our current and past diets (omega 6: omega 3 intake; types of omega 3 - ALA, DHA or EPA; low-fat Vs low-carb; saturated fat: MUFA/PUFA; other supplements that may work for or against omega 3, etc.) and your physical & psychological environments (high intensity Vs endurance exercise; how you manage stress). The permutation is endless with endless possibilities without ever resorting to biochemical individuality as an explanation. Self experimentation may be the only way to settle some hard cases.

Seth's blog » Blog Archive » Omega-3 Greatest Hits (2008-03-01 08:21:53)  
[...] Omega-3 and Sports Injuries (part 4) [...]

jackson12 (2008-06-28 05:48:58)

Seth .. this may be a strange question, but I'm wondering how your hair is doing? I've experimented with flaxseed oil myself, but I noticed my hair got thinner as a result of using flax-oil. On the net I also found a lot of reactions from people who also experienced hairloss because of flaxseed oil. Thanks for your reaction

seth (2008-06-28 18:27:28)

I haven't noticed any effect on my hair other than it is much softer.

## **Calorie Learning: Procedure (2008-02-27 07:37)**

In the first experiment, I created a butter mixture with a random flavor and spread it on two pieces of bread, which I ate and rated.

To create the butter mixture with a random flavor, I took 1/2 stick of butter and heated it in a microwave until it was soft. Then I randomly selected four of the 11 Penzeys spice blends and mixed 1/2 tsp of each into the butter.

For each trial, I spread a thin layer of the butter on two pieces of the bread, which was at room temperature. I ate them in a minute or so. I rated how good they tasted on a scale where

90 = very good

80 = quite good

75 = good  
70 = somewhat good  
60 = slightly good  
50 = neutral  
40 = slightly bad

I've used this scale to rate food dozens of times. Sometimes the rating changes with successive tastes; if so, the assigned rating is the maximum.

After eating the bread I waited at least an hour before eating anything else or brushing my teeth in order to to eliminate interference from other smells.

I did no more than one trial per day. On most days I did a trial.

To find other posts in this series, use the Calorie Learning category.

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SusanJ (2008-02-27 15:15:13)

Have you considered extracts for another set of flavors? You would be amazed at the number of different extract flavors they sell at cake-decorating stores.

seth (2008-02-27 21:45:54)

I do have about 20 flavor extracts. Good point, maybe I should consider using them in some experiments like this.

### **How Many Calories are in Your Blood? (2008-02-28 20:28)**

Any idea? Here is a [1]helpful comment by SixtiesLibber on the SLD forums:

When you get your fasting blood sugar tested, it's supposed to be below 100. And it should almost never go above 200. Well, I finally checked and found what those numbers mean, that's 100 milligrams per deciliter. That's kind of a weird measurement but it's actually the same as 1000 milligrams per liter or 1 gram per liter. In other words, normally your blood has only 1 gram of glucose (sugar) per liter. (A liter is almost the same as a quart.) Adults have something like 5 quarts of blood in their bodies. So at any one time you only have about 5 grams of glucose circulating in your blood. That's the equivalent of about 1 teaspoon of sugar or one-third of a piece of "squishy white bread."

Answer: Not many.



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Charles Richardson (2008-02-28 22:37:28)

So a 24-ounce Starbucks Caramel Frappuccino Blended Coffee with whipped cream (530 calories, 17 grams of fat, 71 grams of sugar) shouldn't really affect that too dramatically, right? Right?

Andrew S. (2008-02-29 01:44:40)

Though there's also some fat in the blood, being shuttled to and from adipose tissue, right? (I seem to remember once when I gave platelets, they showed me the fat that had been skimmed out of my blood along with the platelets.) And, of course, there's lots of protein in the red blood cells themselves—but I assume we aren't counting that, because we're just considering how much fuel is being carried by the bloodstream, not the energy locked up in the blood itself (which isn't really available, unless you're starving).

seth (2008-02-29 09:14:30)

Good point. I wonder how many calories of fat.

Dennis Mangan (2008-02-29 10:24:10)

At a triglyceride level of 150 mg/dl, that comes to 1.5 g/l, times 5 l, equals 7.5 g. At 9 Kcal/g, a grand total of 67.5 Kcal of fat in your blood. Cholesterol at 200 mg/dl would more than double that.

Stephen M (Ethesis) (2008-02-29 11:59:15)

Gee, only five grams of sugar, compared to 71 grams of sugar in a standard extra large drink. No wonder low carb diets, as long as they are ultra low carb, don't seem to have effects. I'm trying one now. I realized that when I couldn't tolerate Atkins I was cutting carbs to a gram or so a day and cutting calories to those in 60 grams of protein. On a more Taubes like limitation, it isn't so bad at all. It is kind of fun to experiment. SLD makes that possible. BTW, kind of interesting: <http://www.nytimes.com/2008/02/26/science/26tier.html?em&ex=1204434000&en=2ed3c327ef3d4df4&ei=5087%0A>

anon (2009-11-17 17:22:31)

That's the amount of sugar (glucose) in the **serum** not the whole blood. If you counted the intracellular glucose, we'd be talking totally different numbers (but not exponentially more). I promise your W/RBCs have to have glucose IN the cell to do all the work they need to do, but w/o looking it up I don't know how what that quantity would be. More food, er, sugar, for thought. ;)

LW (2010-03-17 19:31:23)

I was told by the Inland Northwest Blood Center than one pint of blood is equal to 3000 calories being taken from you.

AnotherAnon (2010-04-07 14:59:03)

That's most likley how many calories it takes for your body to replace that pint, i.e. manufacturing new blood cells, producing plasma, etc. Probably not the healthiest way to burn calories though...

David\_notMD (2010-09-09 18:47:56)

Seth - I've written up a show-the-math answer for eHow that has been accepted but not yet posted. Once it is up a search on "calories human blood" will find it. You contributors are on the right track by adding up components. Calculating for a unit of donated blood (500 ml), it would contain between 400 and 500 calories (men average higher than women). It's mostly protein in the red blood cells and plasma, smaller amounts for contributions from white blood cells and platelets.

Boot Camp Calgary (2011-03-23 13:14:24)

I definitely have to give you a lot of credit for this post. I am writing an article on what to eat before a workout and trying to figure out how long it takes to deplete your blood sugar. I was surprised to learn that blood lipid levels are also important to consider in this equation. I know with cardiovascular training the primary source burned is fat and for muscular endurance it is carbohydrates. I suppose if you are going to do a boot camp style of workout with cardio and resistance training it is best to eat something with complex carbs and perhaps a small amount of fat. I have talked to triathletes who actually concern themselves with eating enough fat the day of the event. Beyond that I have never heard of anyone concern themselves with eating enough fat.

### **The Fate of Laura (2008-02-29 23:31)**

[1]This sounds promising. I have read more words written by Vladimir Nabokov than by anyone else, by a large margin. A few days ago I was watching American Idol and thinking about how I have come to enjoy singing more because of the judges' evaluations. It reminded me of reading Nabokov's commentary to Eugene Onegin when I was in college. In his commentary, Nabokov passed judgment on many lines of poetry – "this is beautiful," "that is awful." Studying those remarks – what did he see? – made me read in a new way forever.

1. <http://www.abc.net.au/rn/bookshow/stories/2008/2157977.htm>

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## **3.3 March**

### **Why Are Games Powerful? (Part 1) (2008-03-01 08:15)**

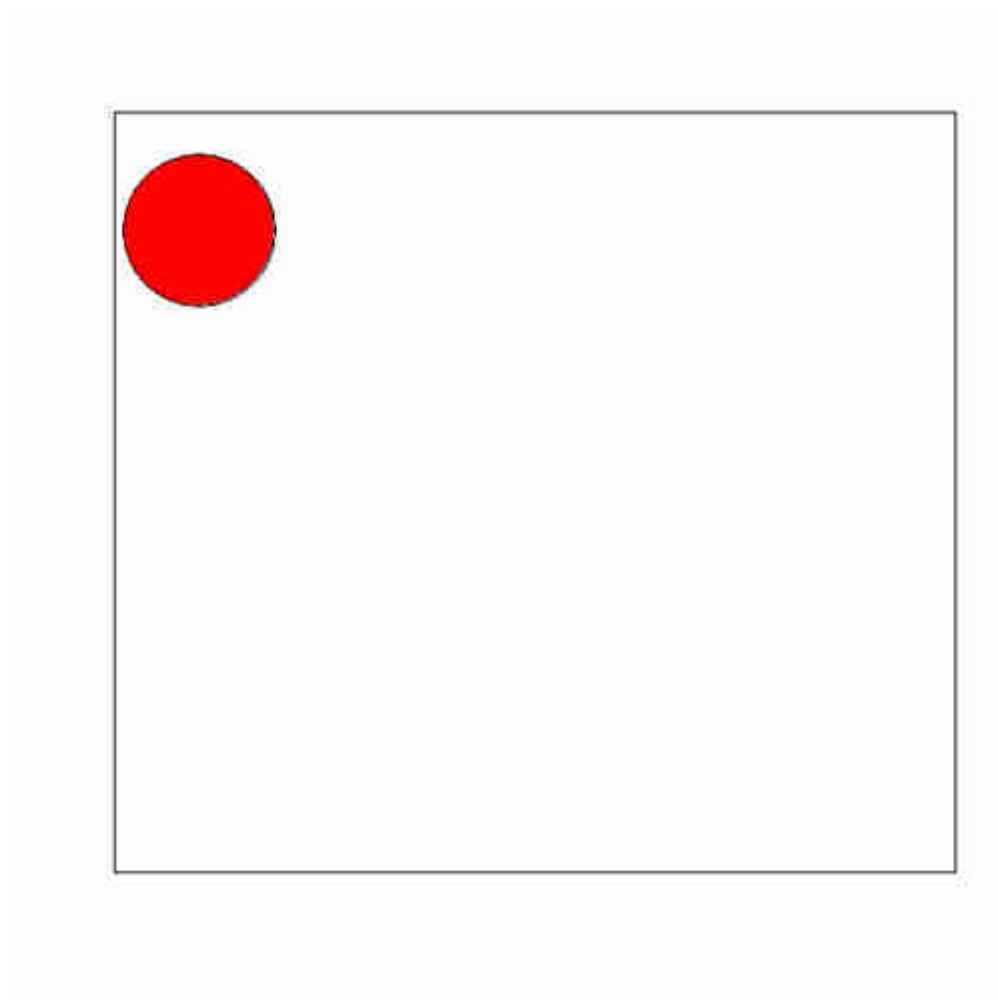
Drug addiction, sure. The first pleasurable drugs were probably discovered hundreds of thousands of years ago, if not much earlier. All cultures use drugs. Drugs physically reach the brain. But video game addiction? Video games are a millisecond old, compared to drugs. How did they get so potent so fast?

Self-experimentation made me ask. Using an ordinary psychological test and a speeded arithmetic task, I [1]discovered a fast-acting effect of flaxseed oil. About two hours after ingestion of 4 tablespoons, my brain worked detectably better. The effect wore off over several hours. To properly study this effect, and exploit it to learn more about what fats we should eat (which has been very hard to figure out), I would have to test myself many times per day for many days. Thousands of tests. It would be a lot easier if the tests were fast, portable, and fun – especially fun. Many computer games have these traits. But they don't provide the data I need, which is a measure of how well my brain is working, and they take too long.

After talking with [2]Greg Niemeyer, I came up with four properties, shared by many games, that might be why they are fun: 1. Right difficulty level. Neither too easy nor too hard. This is a variable emphasized by Mihaly Csikszentmihalyi in [3]Flow. 2. Feedback. You learn how well you are doing. 3. Variety. Not the same thing over and over. 4. Color. I constructed a task with all four features. To my dismay, it wasn't fun! (So much for the placebo effect.) I had to force myself to do it.

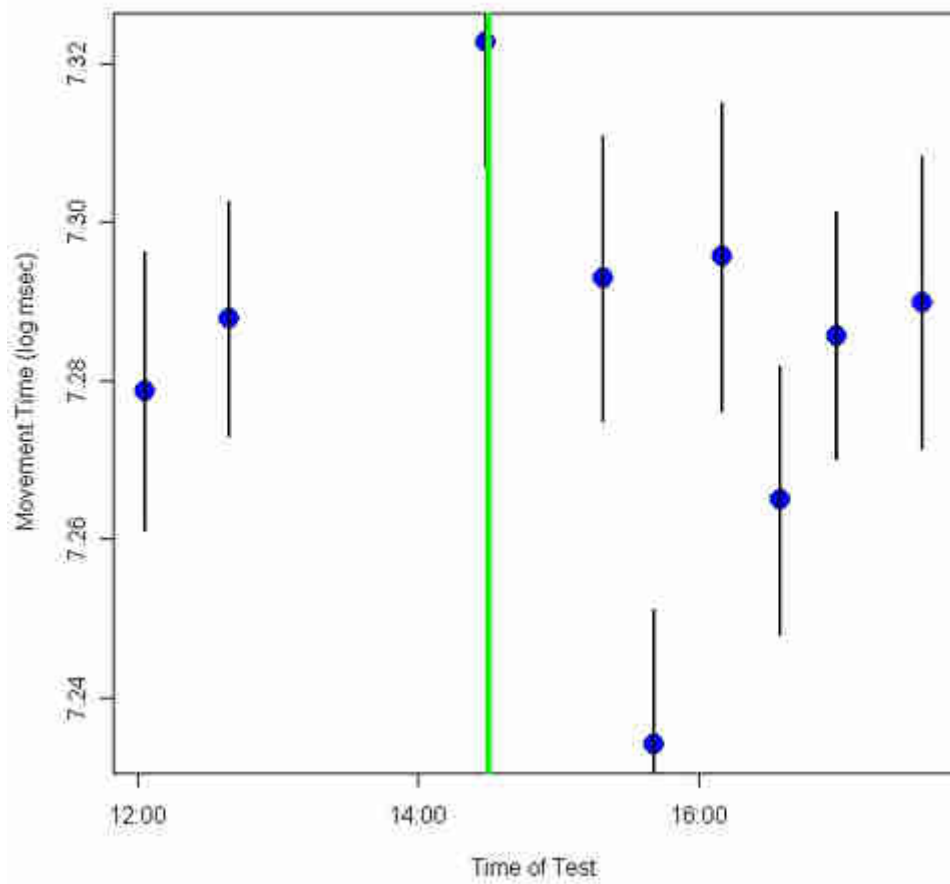
I had no idea what was wrong. Then, [4]as I've written, a friend gave me a bilboquet, which led me to think that there were two principles of fun-making I'd left out: 1. Hand-eye coordination. We enjoy tasks that involve this. 2. Completion. We enjoy tasks where something is cleared up or put neatly together.

I used these ideas to construct a new test. It consisted of moving the cursor around the screen from one colored circle to the next. I move the cursor to a circle and click on it. That circle disappears and a new circle appears somewhere else. It's a bit like shooting one circle after another. Aim, click, aim, click. Each circle is effectively a new trial. The speed at which I moved the cursor to the new circle and click on it is the main measure. There is trial-by-trial feedback: the color of the next circle depends on how quickly I got to the last circle. Here's a screen shot (cursor not shown):

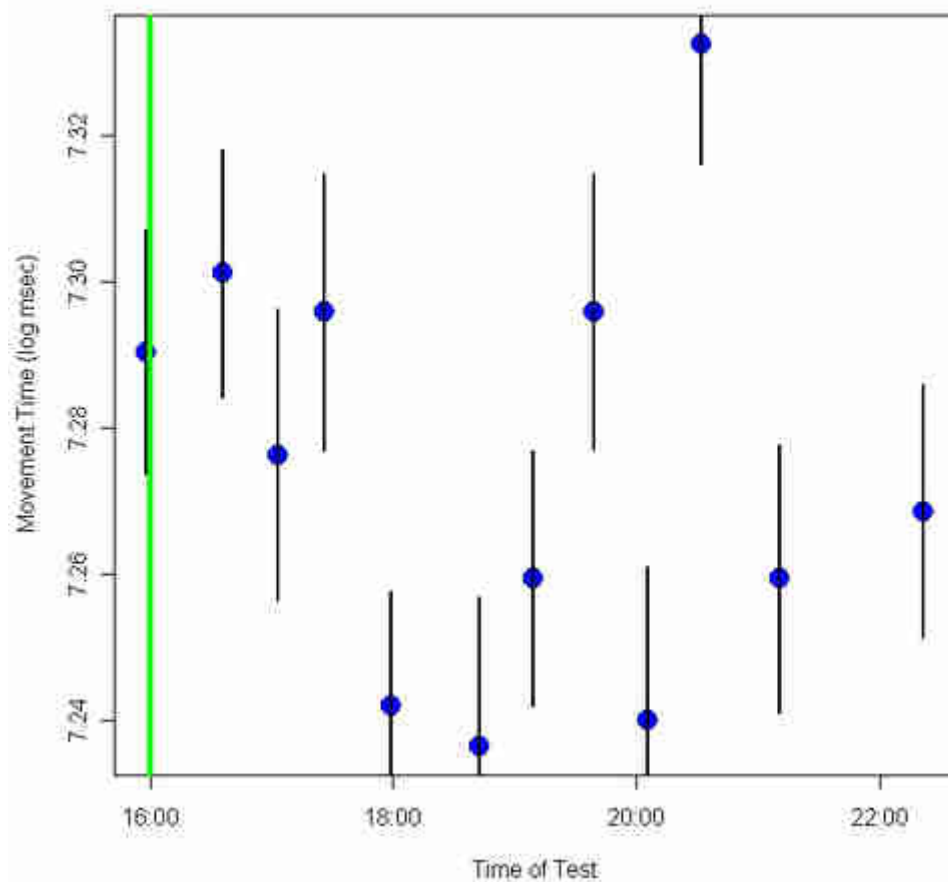


I did this on a Thinkpad. I used the trackpoint to move the cursor. This had the pleasant feature that there was no obvious learning curve – I didn't improve with practice. Presumably because I have years of practice with the trackpoint

Eventually I got around to the big question: Was this test sensitive to the effects of flaxseed oil? I've done two series of measurements to answer this. Here are the results from the first series:



The green line shows when I drank 4 tablespoons of flaxseed oil (without lignans). Here are the results from the second series:



Again, the green line shows when I drank 4 tablespoons of flaxseed oil.

Both times the results resembled my previous results. The flaxseed oil appeared to cause a decrease (= improvement), which reached a maximum around 2 hours after ingestion and declined. The results were far from beautiful but because of the similarity to earlier results ([5]here, [6]here, and [7]here) I found them fairly persuasive. They certainly suggest doing more with this test.

Then I made a different game...

[8]My visit to Greg's class.

1. <http://www.blog.sethroberts.net/2007/06/30/science-in-action-omega-3-a-surprise/>
2. <http://studio.berkeley.edu/niemeyer/bio.html>
3. <http://www.amazon.com/Flow-Psychology-Experience-Mihaly-Csikszentmihalyi/dp/0060920432>
4. <http://www.blog.sethroberts.net/2008/02/07/the-lessons-of-bilboquet/>
5. <http://www.blog.sethroberts.net/2007/08/13/science-in-action-omega-3-time-course/>
6. <http://www.blog.sethroberts.net/2007/08/20/science-in-action-omega-3-time-course-2-with-eggs/>
7. <http://www.blog.sethroberts.net/2007/08/22/science-in-action-omega-3-vse/>
8. <http://orcaomar.blogspot.com/2008/02/self-experimentation.html>

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Stephen M (Ethesis) (2008-03-01 08:57:46)

Have you thought of selling the game? As either a direct release or shareware?

peter (2008-03-01 14:53:58)

are you ever going to conduct tests with fish oil or DHA?

seth (2008-03-01 19:59:38)

No I'm not going to sell the game. It's easy to program. Yes, I will eventually test fish oil and other omega-3 sources. Before I do so, I want to make the flaxseed oil effects as clear as possible.

Seth's blog » Blog Archive » Why Are Games Powerful? (Part 2) (2008-03-01 20:43:29)

[...] Why Are Games Powerful? (Part 1) [...]

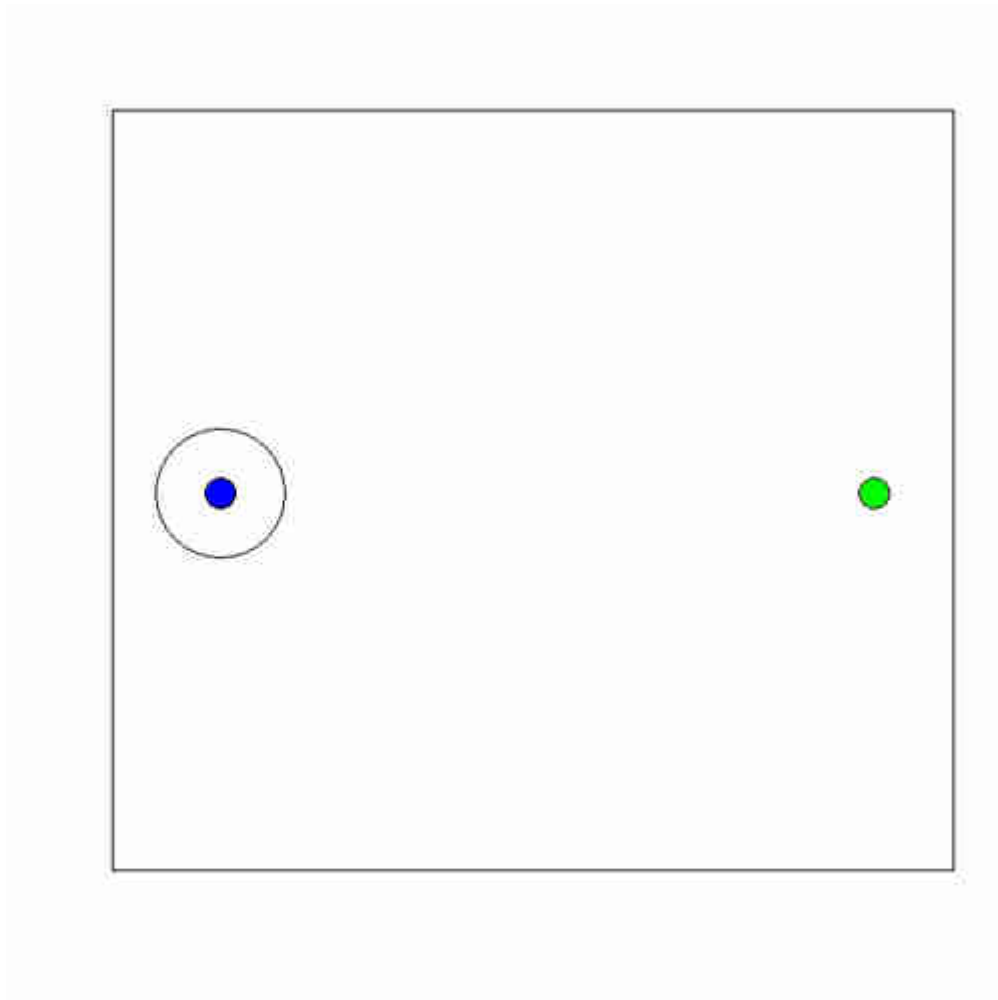
Seth's blog » Blog Archive » Why Are Games Powerful? (Part 3) (2008-03-02 09:01:46)

[...] Why Are Games Powerful? (Part 1) [...]

## **Why Are Games Powerful? (Part 2) (2008-03-01 20:43)**

After I saw that flaxseed oil probably affected my circle-game performance, I wondered how to make its effect clearer. One possibility was to change the input device. I was using the trackpoint on my Thinkpad to move the cursor; what about the touchpad? Might be a more natural task. So I played the game several times using the touchpad. I was a lot slower, presumably because in ordinary usage I've used the trackpoint.

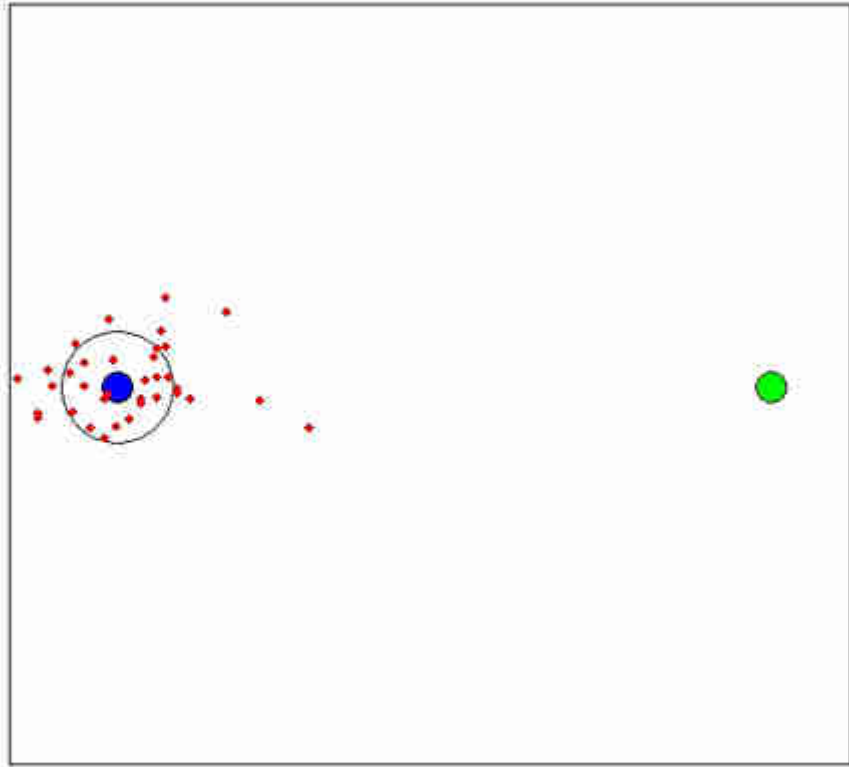
I wondered: Could I get better on the touchpad? I made a little game to practice. Here is the initial screen.



You begin by moving the cursor to the green circle. Then with one movement – one fingerstroke – you move the cursor as close as possible to the blue circle. You "toss" it at the blue circle. You click where it ends up. It's a lot like free-throw shooting and darts. You do that again and again; at the moment each test session consists of 35 "tosses".

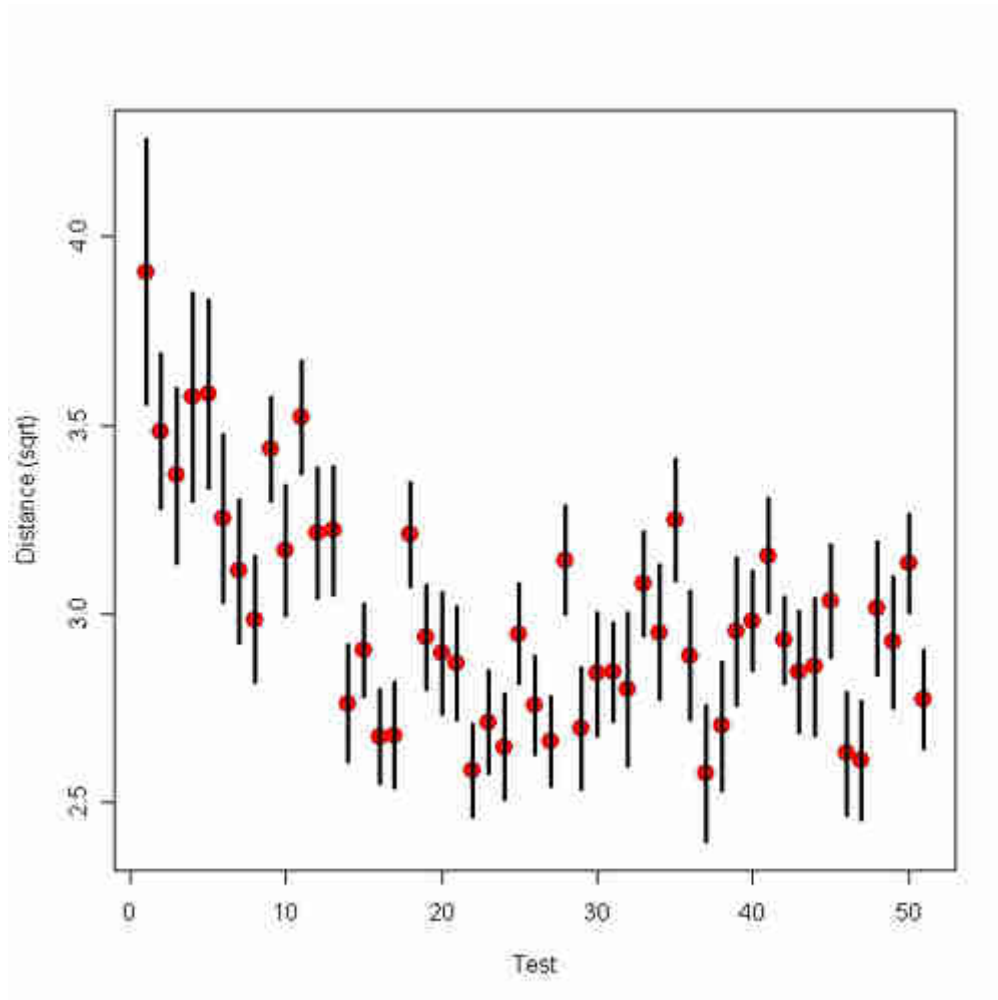
The outer circle around the blue circle is based on the previous 200 trials; the radius of that circle is the median distance. If I'm improving, I'll be within the outer circle more than half the time.

Here are sample results (from the most recent session).



Here is my learning curve. The y axis is the average distance from where the cursor landed to the middle of the blue circle. The bars show standard errors.





I have collected a lot of data in my life. This particular dataset (data from about 1700 trials) was the easiest. To my great surprise, this exceedingly simple game is great fun! I have to push myself to not do it.

What makes games addictive? This game has 1. Hand-eye coordination. 2. Feedback. 3. Difficulty. It doesn't have 1. Variety. 2. Action.

[1]Part 1. Part 3: Interpreting the results.

Addendum. A poem called "[2]Needle's Eye" in this week's New Yorker ends like this:

what does it matter how big  
a target you are? Someone somewhere  
will invent a game to make you hard to hit.

1. <http://www.blog.sethroberts.net/2008/03/01/why-are-games-powerful-part-1/>
2. [http://www.newyorker.com/fiction/poetry/2008/03/10/080310po\\_poem\\_chiasson](http://www.newyorker.com/fiction/poetry/2008/03/10/080310po_poem_chiasson)

## Why Are Games Powerful? (Part 3) (2008-03-02 09:01)

My observations:

1. The first task I used to measure my mental function at frequent intervals (e.g., every 30 minutes) resembled an typical cognitive psych task. It wasn't fun and I had to push myself to do it.
2. I [1]made another test to do the same thing based on the [2]lessons I drew from bilboquet. It consisted of tracking circles around the screen. It was mildly fun.
3. Trying to improve the second test, I made a [3]third test, which consisted of "tossing" the cursor from one point to another – like throwing darts. In spite of its simplicity, it was/is a lot of fun. Slightly addictive.

[4]My theory of human evolution places great emphasis on hobbies (which at first were varieties of tool making) and job specialization. Hobbies must be fun. So that we will do them – or at least so our Stone Age ancestors would do them – they must provide pleasure. Where does this pleasure come from? The third task suggests a source: We enjoy simple hand-eye tasks with feedback where there is plenty of room for improvement. The Stone-Age hobbyist is trying to get this or that stone or piece of wood to do what he wants. The importance of job specialization – people must be able to enjoy a wide range of jobs, and the first jobs derived from hobbies – implies that the pleasure derived from hobbies must be "free-floating." It cannot be closely tied to any particular hobby; to encourage a wide range of hobbies (= a wide range of tools) it must be generated by a wide range of hobbies. Because it is free-floating, we should be able to generate it from something quite different from a Stone-Age hobby, such as my third test. The Stone-Age hobbies we're talking about, ur-technology, involved making things – which involves hand-eye coordination. The third test was more fun than the first two because it was closer to a Stone-Age hobby.

I don't yet know if the third test is sensitive to flaxseed oil. I have doubts because it seems to involved only a small amount of mental computation per minute of testing. I believe flaxseed oil improves all brain function, but this test may require too much time (e.g., 20 minutes per session) to see the effect clearly. The other tests show the effect and take about 3 minutes per test. One reason balance clearly showed an effect of flaxseed oil is, I think, that it is computationally very intensive. A huge amount of computation goes on at once. A kind of averaging goes on, making systematic differences larger relative to noise.

[5]Part 1. [6]Part 2.

1. <http://www.blog.sethroberts.net/2008/03/01/why-are-games-powerful-part-1/>
2. <http://www.blog.sethroberts.net/2008/02/07/the-lessons-of-bilboquet/>
3. <http://www.blog.sethroberts.net/2008/03/01/why-are-games-powerful-part-2/>
4. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>
5. <http://www.blog.sethroberts.net/2008/03/01/why-are-games-powerful-part-1/>
6. <http://www.blog.sethroberts.net/2008/03/01/why-are-games-powerful-part-2/>

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Stephen M (Ethesis) (2008-03-03 20:05:25)

Seth, Askimet decided I was a spammer for a bit, something on a group blog where I'm one of the admins set it off. Got that fixed, but it ate my comment on your game. I used to program in machine code, a long time ago. Now I'm far away from doing that (since it was back in the early 70s and my last coding was in the late 70s). I'd like to try the game you invented, was

wondering if I could have a copy to try, even if you've decided it isn't difficult enough to be worth releasing. Let me know. Thanks.

### **Self-Experiment on Procrastination (2008-03-02 23:18)**

[1]Nathan Yau, a graduate student in statistics at UCLA, has started a self-experiment about procrastination. He is measuring his procrastination by how much he surfs the web. To reduce it, he is doing two things: 1. Make to-do lists. 2. Block favorite sites. More info [2]here. He's starting today or tomorrow.

1. <http://flowingdata.com/about-nathan/>

2. <http://flowingdata.com/2008/03/03/how-to-stop-procrastinating-so-that-i-am-not-a-bum-a-self-experiment/>

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FruitfulTime - Free Procrastination Ebook (2008-03-03 16:31:07)

I would like to suggest you our free ebook about procrastination. If you like it you can go ahead and suggest it to your readers!! :)

Willy (2008-03-04 07:53:08)

Where is the link to download the ebook? I got lost in your website, please don't make us read about your products. Thanks.

Willy (2008-03-04 09:12:30)

I found it, the image did not load, sorry. Anyway, a direct link is better.

### **Pretty Life-Size Face (2008-03-03 20:14)**

[1]This site takes a few seconds to load and provides - once you zoom in - a pretty face close to life-size, which is what you need to get the mood effect I describe in Example 2 of [2]my long self-experimentation paper. I usually use a mirror to get a life-size face but I will try this one instead.

1. <http://cubo.cc/>

2. <http://repositories.cdlib.org/postprints/117/>

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nathan (2008-03-03 20:55:23)

she's kind of creepy-looking with those bloodshot eyes...

Timothy Beneke (2008-03-03 21:04:42)

Pretty powerful image; you might warn people to avoid staring at it at night... Maybe I'll try to spend some morning time with it...

seth (2008-03-03 21:23:53)

yes, the bloodshot eyes are puzzling.

gabe (2008-03-04 04:29:13)

Any reason to believe that it's being on screen has any additional effect? Could a large portrait on the wall be just as effective?

seth (2008-03-04 06:19:47)

When I studied this effect, I found that distance mattered. The best distance was roughly the distance you'd be from someone when having a conversation with them. A large portrait on the wall would not be as effective if the face was larger than usual and you stood further away.

Seth's blog » Blog Archive » The American Time Use Survey: Valuable Info? (2008-03-04 06:58:34)

[...] Pretty Life-Size Face [...]

Nansen (2008-03-04 14:48:24)

Simulation might be another route to get more faces. This work at Stanford looks interesting:  
<http://graphics.stanford.edu/~sifakis/>

Jeff Winkler (2008-03-08 19:15:48)

She definitely falls into the uncanny valley..especially on the smile.

## Internet Addiction (2008-03-03 21:37)

... is likely to become a recognized psychiatric disorder via inclusion in the next edition of the DSM (Diagnostic and Statistical Manual) of the American Psychiatric Association. From [1]an editorial about it:

[There are] at least three subtypes: excessive gaming, sexual preoccupations, and e-mail/text messaging. All of the variants share the following four components: 1) excessive use, often associated with a loss of sense of time or a neglect of basic drives, 2) withdrawal, including feelings of anger, tension, and/or depression when the computer is inaccessible, 3) tolerance, including the need for better computer equipment, more software, or more hours of use, and 4) negative repercussions, including arguments, lying, poor achievement, social isolation, and fatigue. . . Some of the most interesting research on Internet addiction has been published in South Korea. After a series of 10 cardiopulmonary-related deaths in Internet caf  s and a game-related murder, South Korea considers Internet addiction one of its most serious public health issues . . . . The average South Korean high school student spends about 23 hours each week gaming.

Stop reading this!

1. <http://ajp.psychiatryonline.org/cgi/content/full/165/3/306?etoc>

thegayrecluse (2008-03-04 09:01:01)

They should totally add "blogging" to the list, but I haven't yet decided if it's a good addiction or a bad one (?)

dgm (2008-03-04 21:55:10)

This might explain behavior we have noticed in our kid when she is pulled away from either her computer or her nintendo DS after more than an hour-she becomes very agitated, rude, and frighteningly moody. After talking to other parents who have experienced the same thing with their children, we have limited our daughter's time to a maximum 45-60 minute increments only a few times/week. This has helped immensely.

### **Assorted Links (2008-03-03 23:11)**

1. [1]Curious customers.
2. [2]This rewritten Modern Love column is hilarious. To appreciate it you probably want to read the [3]original first. Related [4]data analysis.
3. Why don't we see [5]wine self-experimentation?
4. [6]The Mum Effect.

Thanks to Joyce Cohen.

1. <http://notalwaysright.com/>
2. <http://thegayrecluse.com/2008/03/01/on-gay-modern-love-me-my-daughter-and-them/>
3. <http://www.nytimes.com/2008/03/02/fashion/02love.html?scp=2&sq=modern+love&st=nyt>
4. <http://thegayrecluse.com/2008/01/20/on-modern-love-an-informal-but-rather-telling-quantitative-analysis/>
5. [http://groups.google.com/group/How-We-Heal/browse\\_thread/thread/e53e96a85f30c643?hl=en](http://groups.google.com/group/How-We-Heal/browse_thread/thread/e53e96a85f30c643?hl=en)
6. <http://query.nytimes.com/gst/fullpage.html?res=9E03EFD81639F936A15757C0A9679C8B63>

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Stephen M (Ethesis) (2008-03-04 12:05:15)

"and who had pretended to love her back." – pretty much captures the writer. That was interesting. The real issue with the Mum Effect is the way it poisons future relationships.

Jeff Winkler (2008-03-08 18:47:01)

On expectations and wine... the same thing happens with expensive wine glasses, Riedel's. They are very expensive and sold in home gatherings. The leader tastes first and comments on the flavor..everyone follows and convinces themselves. <http://www.podbean.com/podcast-detail-episode/77540/kitchen-window-episode-2- june-6-2007>

### **Useless Data and Me (2008-03-04 06:50)**

[1]Odd Numbers, an excellent blog by Jubin Zelveh at Portfolio.com, recently listed a few [2]findings from the American Time Use Survey, which is in danger of being ended. They included:

- First-born children receive 20 to 30 minutes more quality time each day from parents than second-born children.
- Married couples have very little influence over each other when it comes to how much time each spends on leisure, child care, and chores.

A comment was:

Valuable information?

You can't be serious. What can possibly be done by anybody about these "observations"?

This seems like a welfare program for economists.

Time use data – from 13 countries, including America – had a huge effect on my research and I suppose my life, since I applied my research to my life. The time use data I'm referring to showed that Americans were awake an hour later than people in the 12 other countries. They also watched TV an hour later. In other words, America was an outlier in two distributions: time of going to sleep, and time of stopping TV watching. I knew about research that showed that exposure to other people controls when we sleep. The time use data suggested that watching TV can substitute for ordinary human contact in the control of when we sleep. I wondered if seeing faces in the morning would improve my sleep; so I tried watching late-night TV early in the morning (via tape). I did that on a Monday morning. On Tuesday morning, I felt exceptionally good. Thus began [3]the self-experimentation behind [4]my pretty-face post. My best work. (The self-experimentation, not the post.)

Thanks to [5]Marginal Revolution.

1. <http://www.portfolio.com/views/blogs/odd-numbers>
2. <http://www.portfolio.com/views/blogs/odd-numbers/2008/02/27/things-weve-learned-from-the-american-time-use-survey>
3. <http://repositories.cdlib.org/postprints/117/>
4. <http://www.blog.sethroberts.net/2008/03/03/pretty-life-size-face/>
5. <http://www.marginalrevolution.com/marginalrevolution/2008/03/odd-numbers-blo.html>

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## The New Yorker 2.0 (2008-03-04 19:08)

I read [1]this excellent article by Michael Lewis in the print version of Portfolio. Then I looked at it online. The online version was much better: It had [2]reader comments.

When will [3]The New Yorker online follow Portfolio's lead and allow comments? Comments on fiction should be especially interesting.

I suppose I'm especially sensitive to this issue. Spy had a regular feature called Letters to the Editor of The New Yorker.

Yorker. (At the time, The New Yorker did not publish reader letters.) I wrote two of them, [4]here and [5]here.

1. <http://www.portfolio.com/news-markets/national-news/portfolio/2008/02/19/Black-Scholes-Pricing-Model>
2. <http://www.portfolio.com/news-markets/national-news/portfolio/2008/02/19/Black-Scholes-Pricing-Model/comments>
3. <http://www.newyorker.com/>
4. <http://sethroberts.net/spy/lettertotheditor89.pdf>
5. <http://sethroberts.net/spy/lettertotheditordec88.pdf>

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### **Gary Taubes' Influence on Me (2008-03-05 07:38)**

Yesterday I had my cholesterol levels measured. My HDL was better than usual – I have ten years of records – and the Total Cholesterol/HDL ratio was good, which is unusual for me. Thinking about what might have caused this, I realized that over the past few months, mainly because of Good Calories Bad Calories, I've shifted toward what I think of as a pre-agricultural diet: plenty of meat and greens, no grains, a little fruit. Long ago I stopped eating packaged food. That was the pre-factory diet – a hundred years ago. Now I've moved back in time two more log units (log unit = factor of 10).

[1]My interview with Taubes.

1. [http://docs.google.com/Doc?id=dhm4f3rg\\_36gg4956dm](http://docs.google.com/Doc?id=dhm4f3rg_36gg4956dm)

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Pearl (2008-03-05 07:59:01)

That's what I did recently too; belly has been coming off slowly but steadily.

Mel (2008-03-05 20:20:09)

It has been amazing. I started eating the same way since reading Taubes' book in October. I've lost 5 pounds a month, my waist is smaller by at least 2 inches and my blood pressure is averaging 115/68 from 140's/90's. I feel so much better. I started with tasteless EVOO but couldn't tolerate it, so I went with crazy spicing, which I still do. But not much changed about my appetite until I dropped nearly all carbs. I'm especially successful the more fat of any kind that I'm able to work into each meal. Mel

Dennis Mangan (2008-03-05 21:07:10)

The recent news of a study which showed that evolution is proceeding at a rate up to 100 times faster than previously thought, and in any case much faster than several thousand years ago, makes theories about a "paleo diet" into so many "just-so" stories. We might be able to speculate on what the diet was like in paleo times, but that doesn't equate to healthy. We've evolved a lot in 10 thousand years.

Dennis Mangan (2008-03-05 21:08:52)

Also Seth, since you're on record as asserting that cholesterol levels don't correlate with heart disease, why do you have them measured?

seth (2008-03-05 22:28:06)

I have them measured because I might learn something. My position is not what you say; a more correct statement of what I think is that Malcolm Kendrick makes good points. My total cholesterol was 215, above the supposed cutoff of 200. You are correct that I think the cutoff is wrong; I think it should be higher and that 215 is perfectly okay. If my cholesterol were 300 or 400, however, I'd be concerned. As for the speed of evolution, there's a world of difference between (a) assuming a paleo diet (or whatever) is best and (b) taking that as a possibility to be tested. I'm doing (b).

Aaron Blaisdell (2008-03-06 08:44:13)

Gary Taubes explains how it is not total cholesterol that should be measured, or even just HDL and LDL, but importantly also VLDL. He gives compelling reasons why VLDL likely plays a key role in coronary heart disease. Gary also writes that the triglyceride profile is more important than overall cholesterol, since the lipoproteins are just cargo holders for triglycerides.

seth (2008-03-06 11:42:07)

Thanks, Aaron. Good point.

Sara R (2008-03-06 17:50:57)

There is also a difference between a paleo diet and just not eating the processed junk-food, processed carbohydrate diet. I stopped eating refined carbs and limited my grain and fruit intake overall in September 2007 (before reading Taubes' book) and I've lost over 17 % body fat during that time. I also stopped being anemic and my LDL:HDL ratio improved, my triglycerides went down to normal ranges and my CRP (cardiac disease risk factor) also went down.

Willy (2008-03-07 06:48:22)

Seth, the problem with fruits is sugar?. Too bad, I like fruits too much.

seth (2008-03-07 07:58:16)

the problem with fruit is too much quickly digested sugar.

Willy (2008-03-07 12:14:00)

Thanks, yes, i should have mentioned GI. unfortunately fruits with low GI are expensive, like berries. If anyone can give tips on how to incorporate more vegetables I'd appreciate it. e.g. vegetables that do not need cooking or are easy to prepare. Recently I tried spinach salad and liked it, before I eat it cooked.

Stephen M (Ethesis) (2008-03-08 15:48:37)

Spinach salad, spring mix, broccoli are all foods you can eat raw. Carrots too.

Thomas M Seay (2008-03-19 13:07:25)

Cruciferous vegetables like broccoli, cabbage, cauliflower, etc. should always be cooked. It's the one vegetable that I know of that is actually healthier when cooked: <http://www.westonaprice.org/basicnutrition/crucifers.html>

cartes (2008-07-02 09:41:09)

According to non-mainstream but plausible French researchers (Zermati/Apfeldorfer), you can only lose weight if you are above your set point. Your set point is the weight you are genetically programmed for. It's the weight at which, if you eat exactly in accordance with your hunger sensations (i.e. your energy output equals your caloric input), you remain stable. From there, it doesn't matter what type of calories you eat: fat, carbs... it's all the same. A weight loss treatment according to this principle means you must rediscover your hunger sensations, and stop eating when no longer hungry. Then your body will automatically go back to its set point. The problems: (1) if you are below your genetically determined set point, you will put on

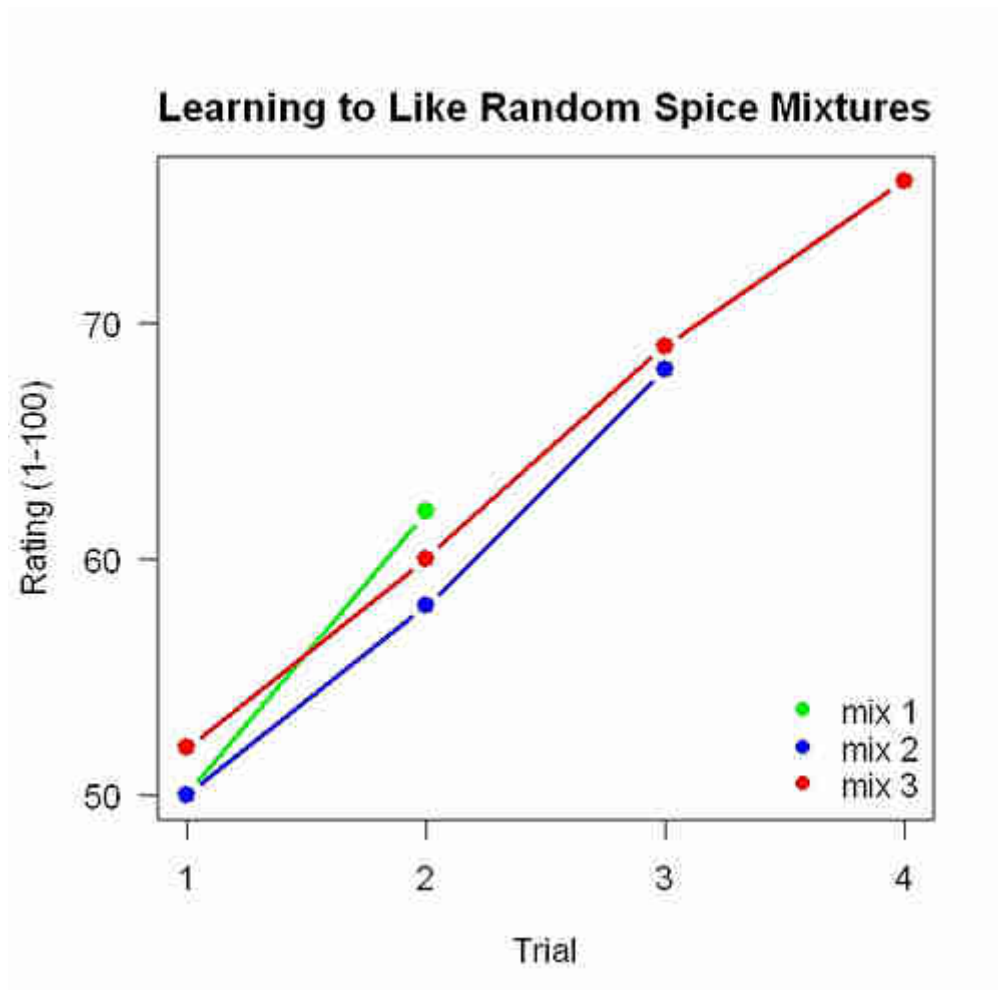


weight, not lose it. (2) your set point is not necessarily stable during your lifetime and can go up, due in particular to overeating for a certain length of time. (3) you can never maintain your weight below your set point, except at the cost of life-long (and increasing) restrictions. Finally: why does the set point go higher if you overeat for a long time? Because your fat cells, instead of just getting "fatter" with all the lipids they are absorbing, start to multiply. This is symptomised by feeling hungry when you shouldn't be. If you mostly eat without feeling hungry, you are probably above your set point: and therefore can hope to lose weight until you reach your SP by reacquainting with your body sensations. To me, this makes sense.

### Calorie Learning: First Results (2008-03-05 14:23)

I made random flavors by mixing 4 randomly-chosen spice mixtures into butter. I spread the butter on 2 pieces of Wonder Bread. I used each mixture more than once – twice in a row (1st mixture), three times in a row (2nd mixture), four times in a row (3rd mixture). Each trial consisted of a flavor-calorie pairing – flavor from the spices, calories from the bread. Each trial also provided a rating, which measured the learning.

Here are the ratings of how good the bread tasted.



This was good. 1. The ratings started near 50 (neutral) each time. I'd like to have a large supply of flavors so that I can start fresh each time. These results suggest that randomly mixing 4 spice mixes provides this. The 4 spice mixes were randomly chosen from 10 spice mixes – so there are a lot of possible combinations. 2. The learning per trial was

substantial.

More in the category Calorie Learning.

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LemmusLemmus (2008-03-05 17:53:17)

Just in case nobody's pointed it out yet, I think that in this experiment there is a very, very big danger of results being marred by the placebo effect. Yes, I know you're a bit of a skeptic in this respect. But you wouldn't dispute it exists, would you? That's not to say the experiment isn't interesting; it certainly is and I'm going to follow it.

seth (2008-03-05 18:49:18)

"very very big danger" – on what do you base this belief?

LemmusLemmus (2008-03-06 13:44:35)

a) on the general knowledge of the placebo effect b) on the knowledge that you know which results you want to find Granted, "danger" may be too strong a word. Nobody's going to get hurt.

LemmusLemmus (2008-03-06 14:10:30)

I forgot: c) on the knowledge that liking a food is subjective - there is no objective measure, so you'll have to rate, and in this respect b) comes into play.

Matt Goff (2008-03-08 13:11:44)

I've noticed what I suspect is the same effect with the flavored Wheat Thins. When I eat Parmesan Basil or the Tomato Basil crackers for the first time after a long break, I don't care for the taste (though I don't find it horrible). Usually I eat a few more anyway because they're convenient, and I find they seem to taste much better. Before long, I have a hard time not eating them because they taste so good. This experience has been consistent every time I've eaten them (which isn't very often), and before reading about Calorie Learning, I didn't have a good theory for why it worked that way. One thing I wonder about is whether it would be possible to use this idea to develop tastes for foods that I feel like it would be worth liking. I'm thinking in particular of locally produced foods that would be good to eat for a variety of reasons, but I'm not so thrilled with the taste. Also, given that the Wheat Thin flavor seems to reset after some period of time, I wonder if it's even possible to make the Calorie Learning-based perception of good flavor permanent (by which I mean the perception that they taste good remains even if there is a significant gap between times of consumption or the fast calories disappear, but the flavored (s)low calorie food remains).

## **Yay, EW Popwatch! (2008-03-05 23:36)**

A recent [1]EW Popwatch post compared several YouTube versions of Leonard Cohen's Hallelujah, much like I did [2]here. It's like Leno and Letterman [3]telling the same joke. We have an Instinct of Connoisseurship, Veblen would say.

1. <http://popwatch.ew.com/popwatch/2008/03/jeff-buckley-ha.html>

2. <http://www.blog.sethroberts.net/2007/11/09/my-theory-of-human-evolution-hallelujah-edition/>

3. <http://sethroberts.net/spy/whatareyouacomedian.pdf>

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### Is LDL Bad Cholesterol? (2008-03-06 11:33)

You've heard a million times that there is "good" cholesterol (HDL) and "bad" cholesterol (LDL). Recently I got my cholesterol measured. My LDL was 151 mg/dl. The test results were written on a form that said your LDL should be "Below 100 mg/dl. Below 70 mg/dl if High Risk." The person who handed the results to me said, "These are not the best results . . . "

How concerned should I be? [1]A 2005 study in the Journal of the American Geriatric Society surveyed several thousand "elderly people [who] were recruited from a general Italian population, and mortality was monitored from 1983 to 1995." The emphasis of the study was on whether LDL was good or bad.

People with more LDL lived longer. You read that correctly. For women, mortality was lowest at the highest level of LDL. For men, mortality was higher at the highest level of LDL (60 deaths/1000 patient years) than at the next highest (50), but still lower than at the lowest level of HDL (90). Going from the lowest to the highest levels of LDL is associated with a one-third decrease in mortality, in other words.

What should I make of my 151 mg/dl? To convert to the units of the paper (mmol/L), I needed [2]to divide by 39.  $151/39 = 3.9$ . Looking at the graph relating mortality to LDL, an LDL concentration of 3.9 mmol/L is where the mortality vs LDL function reaches a minimum – the lowest mortality. According to this study, my LDL is optimal.

Thanks to Joel Kauffman.

1. [http://www.medscape.com/viewarticle/518416\\_print](http://www.medscape.com/viewarticle/518416_print)

2. <http://www.faqs.org/faqs/diabetes/faq/part1/section-9.html>

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Tom (2008-03-06 13:24:13)

Seth, there are many kinds of LDL, and the LDL level handed to you was almost certainly *not* measured (as that's expensive), but rather inferred from other results and then calculated (which is very inaccurate.) So you really have no idea what your LDL is, and you certainly don't know your LDL particle size (which is crucial.) Here are some posts that explain things: [http://heartscanblog.blogspot.com/search/label/LDL %20cholesterol](http://heartscanblog.blogspot.com/search/label/LDL%20cholesterol)

David Marcus (2008-03-06 14:52:34)

It's optimal if you are "elderly." It's well known that "bad" cholesterol is a significant predictor of cardiovascular disease and mortality in middle aged men.

peter (2008-03-06 14:57:30)

also, there's different kinds of LDL, i.e., very lower density, which, as i recall, are the most dangerous. my guess is that if an elderly person survives with hi ldl, it's probably not vldl and probably there is some genetic reason the elderly person can deal with hi ldl, whereas many in middle age cannot. Your seeming conclusion is (with all due respect) unscientific and dangerous.

Aaron Blaisdell (2008-03-06 15:54:47)

These discrepancies and caveats underscore the need to look at LOTS of studies – epidemiological, human experimental, lab animal experimental – and in multiple categories – old, middle, and young aged; various ethnicities and both genders; and with various risk and environmental factors – in order to build a strong framework from which to derive testable hypotheses. This, I thought was one of the strengths of Gary Taubes book "Good calories, bad calories".

Varangy (2008-03-06 17:07:54)

*It's well known that bad cholesterol is a significant predictor of cardiovascular disease and mortality in middle aged men.* @David Marcus It may be 'well known', rather, many believe it as such — but that certainly doesn't prove that 'bad' cholesterol is any sort of predictor. Taubes and many others such as Eades and Kendrick have done some serious damage to the validity of the lipid hypothesis and its attendant correlaries and ostensible implications. LDL levels may be a marker, but we really don't know for what. We don't don't know if there is any optimal level of any sort of cholesterol. Kendrick thinks it may be for stress. See *The Cholesterol Con* and his take on the lipid hypothesis. The low-fat and low-cholesterol myths-sum-informational cascades we have been drenched by prove absolutely nothing. The more and more research I do, the more and more I think those who have promoted the aforementioned have gotten it wrong. What is 'The Unifying Answer' to cholesterol and diet and health? I dunno, but I think we are all better off admitting our ignorance than being swept away by these misinformational cascades.... BTW that is exactly why Taubes' book is such a great one.

Sara R (2008-03-06 17:34:27)

Triglycerides are a more telling marker of heart disease risk. LDL levels on their own don't mean as much as the LDL:HDL ratio. I work in a medical lab. Also the size of the LDL molecule is telling as well. VLDL or very dense molecules are stickier and are more likely to clog artery walls. They are associated with greater consumption of carbohydrates.

Varangy (2008-03-06 23:57:48)

@Seth Here is a pretty good summation of some of the myths of LDL, HDL etc etc <http://www.marksdailyapple.com/cholesterol/> For your next self-experiment, you might want to look at the relationship between inflammation and flax seed oil.

seth (2008-03-07 05:41:30)

Varangy, that's a good idea – about studying inflammation as a function of flaxseed oil. Any suggestions how to measure inflammation? I was thinking of measuring the redness of my gums, but that isn't easy. Hard to quantify.

SusanJ (2008-03-07 12:13:14)

I believe you can get tests that will give a breakdown of your LDL particle size. As others have already written, this is much more useful information than is the total.

Varangy (2008-03-07 12:32:59)

Yep. I was just thinking that. Dunno if you saw this post over at Art de Vany's blog on evolutionary fitness — <http://www.arthurdevany.com/?p=961> but the guy in the pictures, himself, references the inflammation in his face in the 'before' photo. Quite dramatic difference a year makes. Two questions: 1) Is it really 'inflammation' not just excess body, in this case, facial fat? 2) If it is inflammation, what is an objective definition, and moreover, what is an objective measurement? Here Mark Sisson talks about inflammation and reducing it, without really defining it. In the cholesterol post two comments above he had referred to biomarkers for inflammation without naming them. <http://www.marksdailyapple.com/naturally-reduce-inflammation/>

Chris (2008-03-07 16:37:59)

I've been tracking the severity of my psoriasis using a cellphone camera. I take snapshots of left hand, open them in ImageReady (but any reasonable graphics program will do), take a colour sample of an affected area and copy the red-blue-green values into a spreadsheet. The most obvious variation is in the level of redness, which I expect has to do with underlying inflammation. I've posted some October/November results [1]here. The results are false-colour: the red really is reddish; the brown is my

slightly swarthy caucasian skin tone. Displays best in Firefox.

1. [http://www.islandnet.com/~catchword/family/medical/psoriasis\\_2.html](http://www.islandnet.com/~catchword/family/medical/psoriasis_2.html)

Tom (2008-03-07 17:03:41)

Seth, you might see if there is a medical researcher at Berkeley or UCSF who is willing to run regular tests on your C-Reactive Protein...might be a good proxy for systemic inflammation. (Or they might be able to identify a better proxy.) Would make an interesting research paper.

Tom (2008-03-07 17:04:35)

Possibly a rheumatologist?

seth (2008-03-08 06:35:26)

Chris, that's an intriguing idea, using the red-green-blue values of a photo as a way of measuring redness. Your psoriasis data is very impressive. Have you reached any conclusions from it? Tom, there is no medical school at Berkeley; UCSF is an hour away. I want to make daily measurements for months. That would be too much travel.

Chris (2008-03-10 10:56:16)

Yes, my aim is to see how different factors affect my psoriasis. I've come to some provisional conclusions: (1) less redness in the morning, more in the evening; (2) less redness immediately after an acupuncture treatment; (3) strong redness after certain foods - red wine, aged cheeses, shellfish, for example. I'm continuing to experiment.

### **Science in Action: Omega-3 (motor-learning surprise) (2008-03-08 10:30)**

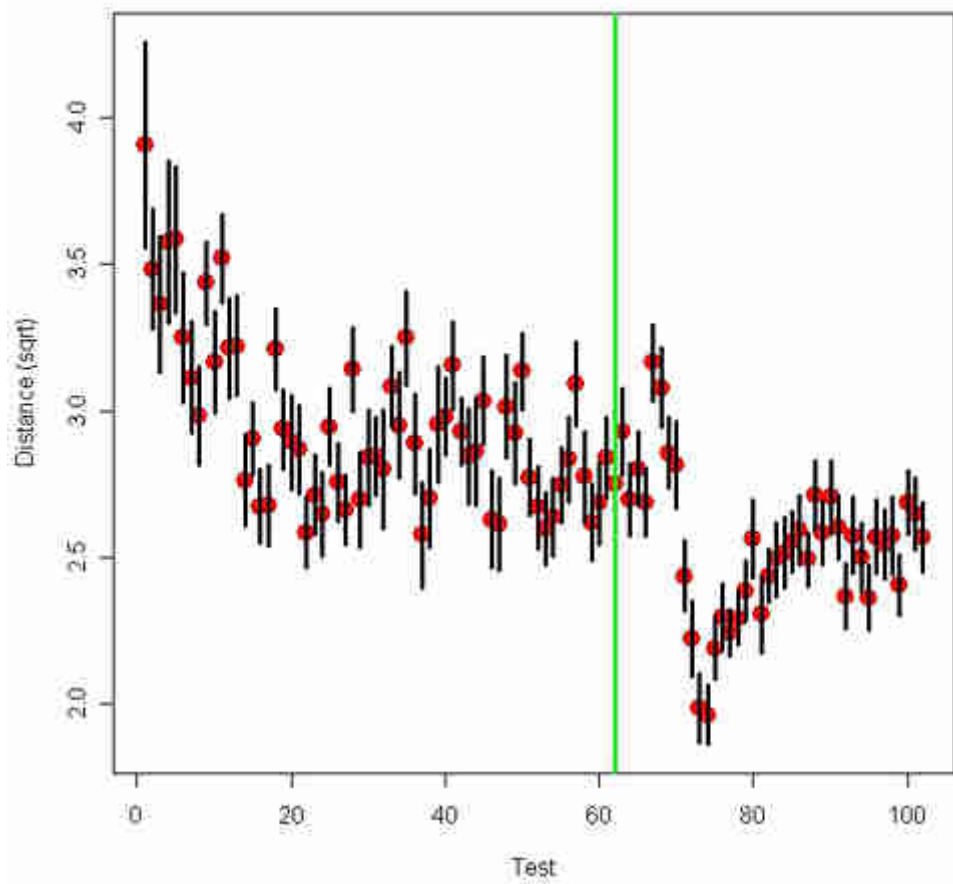
The more I played racquetball, the more accurate my shots became – the more control I had. It was a kind of learning: learning to place the ball. I was fascinated by how little we knew about how that learning took place. I studied associative learning in my own research. The motor learning during racquetball resembled associative learning in the sense that my actions (hitting the ball with the racket) were shaped by what happened next (accuracy of placement). Yet I knew nothing non-obvious about motor learning.

This background of ignorance is why I find my latest flaxseed oil results so interesting. [1]As I've posted, I've started using a new test in which I use the touchpad to "toss" the cursor from one spot to another (that is, move the cursor with a single finger movement), and measure how close it "lands" to the target. The function relating cursor position to finger position on the touchpad isn't simple.

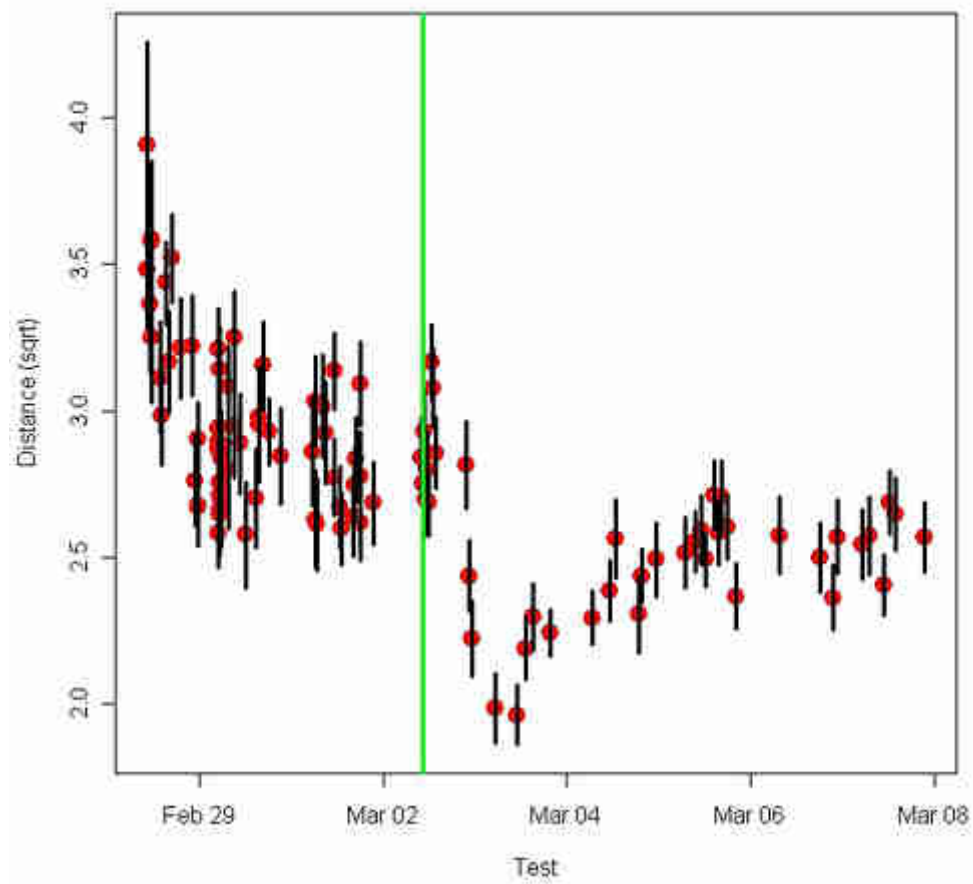
Of course I wanted to see how flaxseed oil affected performance on this task. I doubted that it would. This task is untimed. No time pressure. It is like shooting free throws. Most of the previous tasks I've used that have shown a flaxseed-oil effect have been tasks where you respond as fast as possible. My balance test was go at your own pace, but it involved a huge amount of computation. Balancing my body on one foot for several seconds seemed to involve a lot more computation than moving a finger about an inch.

Usually I take 4 tablespoons of flaxseed oil just before bedtime. One recent day I took it much earlier and did the toss test at 30-minute intervals before and for several hours afterward.

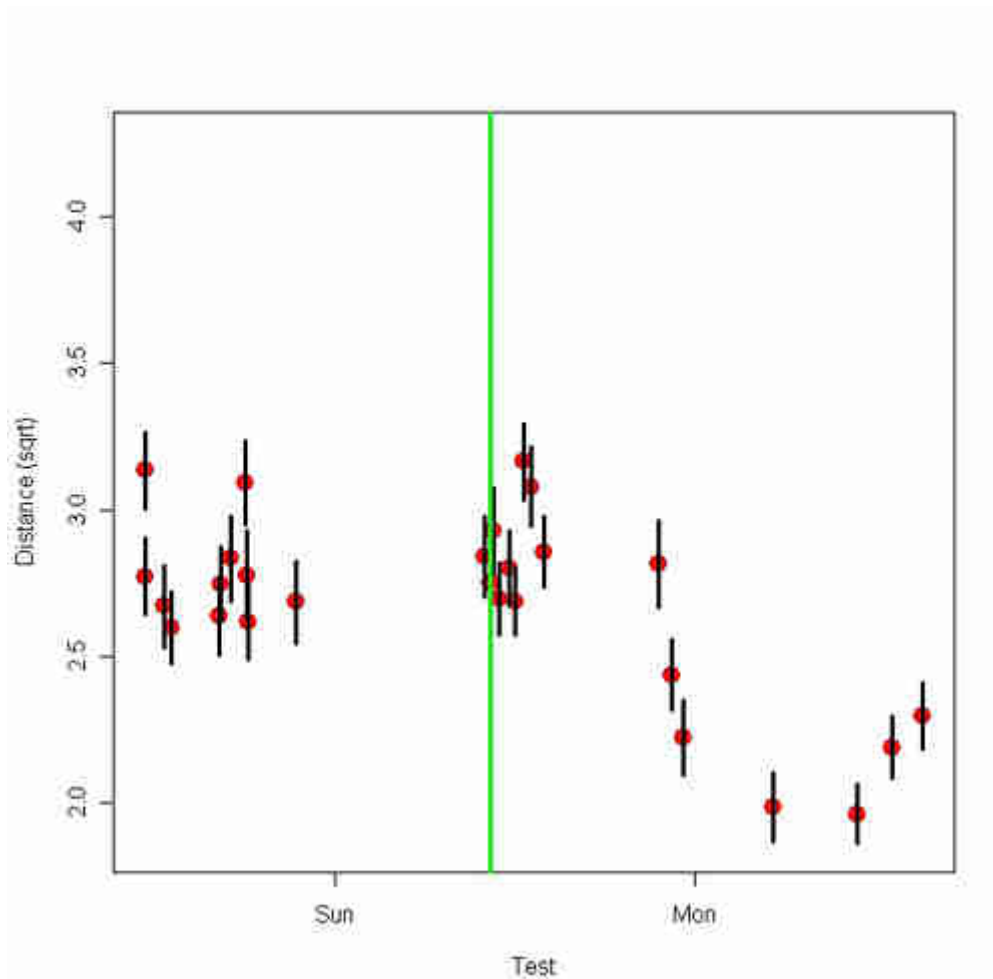
Here are the results plotted as a function of test session number.



Here are the same results plotted versus the time of the test:



Here is a close-up of the crucial data:



About two hours after I drank the flaxseed oil, my accuracy got worse. Then it slowly got much better. The amazing thing about the improvement is that it reached a maximum long after you would think that the effects of the flaxseed oil had worn off. My overall level of omega-3 is high because I take 4 T flaxseed oil per day. The effect of shifting when I drink the 4 T is just to change the timing of a short-lived peak. Usually that peak happens when I'm asleep and my omega-3 levels are reasonably constant while I'm doing the test. In this case the peak happened while I was doing the test.

I'll discuss what this might mean in a later post.

1. <http://www.blog.sethroberts.net/2008/03/01/why-are-games-powerful-part-2/>

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Phillip J. Eby (2008-03-09 15:04:16)

Have you ever compared what type of omega-3's work best? I mean, the whole ALA vs. DHA vs. EPA thing. I've heard that what people really need is DHA and EPA, and that not everybody can convert ALA to those other forms in their bodies. Personally, my gums have been staying pretty healthy after I switched from taking an ounce of flaxseed oil to taking a few "Fisol" capsules that had about the same amount of DHA and EPA as the ounce of flaxseed oil. And it's a lot easier to take the capsules. I'm curious, though, what findings you might have.



seth (2008-03-09 21:27:04)

I once took some fish oil and got a headache. Flaxseed oil has never given me a headache. In any case, I'm still working out the phenomenology of flaxseed oil. Later I'll try different oils, including fish oil.

Ben Hyde (2008-03-10 06:13:28)

No doubt you've seen this, but if not is hip-slapping-amusing. "... supply of long-chain polyunsaturated fatty acids that are essential for neurodevelopment. Thus, waist-hip ratio (WHR), a useful proxy for the ratio of upper-body fat to lower-body fat, should predict cognitive ability in women and their offspring. Moreover, because teenage mothers and their children compete for these resources, their cognitive development should be compromised, but less so for mothers with lower WHRs. ..." - [http://www.ehbonline.org/article/S1090-5138\(07\)00073-6/abstract](http://www.ehbonline.org/article/S1090-5138(07)00073-6/abstract) soukous

Seth's blog » Blog Archive » Science in Action: Omega-3 (motor-learning surprise, continued) (2008-03-10 06:28:03)

[...] Science in Action: Omega-3 (motor-learning surprise) [...]

Igor Carron (2008-03-11 06:31:53)

Seth: I am not sure I am reading your x-axis right, but isn't there a "correlation" between taking omega-3 + sleep and improvement? It reminds me of this entry in my blog: <http://nuit-blanche.blogspot.com/2005/01/we-sleep-because-we-want-to-assimilate.html> which talks about experiments performed by Daniel Wolpert on sensorimotor learning that seem to parallel bayesian statistics (the last Paragraph). The sleep issue appears in small print in the nature paper (study done over two days) <http://www.hera.ucl.ac.uk/sml/publications/papers/KorWol04.pdf> But I think I read the more complete report which showed that learning after the first day was not optimal but was better when people had slept on it. Btw, It is interesting that some of his experiments (<http://learning.eng.cam.ac.uk/wolpert/projects/index.html>) look like what you are talking about in your blog (about boredom and games...) The Nature paper is: <http://www.hera.ucl.ac.uk/sml/publications/papers/KorWol04.pdf> Igor.

Jim (2008-03-12 04:18:35)

I read somewhere that the carbon chains in the fatty acids from flaxseed oil are too short and while the body does synthesize the longer chains the process is very inefficient, meaning that flaxseed oil must be taken in huge quantities. On the other hand, fish oil provides long chain fatty acids. I'm veggie, so I'm taking algal omega-3 oil from v-pure.

Seth's blog » Blog Archive » Science in Action: Omega-3 (more motor-learning data) (2008-03-16 08:59:59)

[...] Science in Action: Omega-3 (motor-learning surprise) [...]

Howard Wainer (2008-03-31 17:55:33)

Hi Seth, Vastly enjoyed your presentation today and had a million questions. Three of them are: (i) do you know anything about side effects of flaxseed oil? (ii) interactions of flaxseed oil with other supplements? Other drugs? (iii) which other oils offer the same amount of Omega-3? Grapeseed oil? fish oils? (iv) you said that it was cheaper to buy in liquid form. Where (if there is no Whole Foods nearby)? Best, H

seth (2008-04-01 08:51:25)

1. The only important possibly negative side effect of flaxseed oil seems to be a lengthening of clotting times. Fish oil has the same effect. 2. An average doctor would say that flaxseed oil "interacts" with medication designed to reduce clotting times. 3. No other readily-available oils offer the same amount of short-chain omega-3. Fish oil has lots of long-chain omega-3. 4. The Spectrum Organic website has a way to locate stores that sell their stuff. Barlean's is another widely available brand. Trader Joe's has an inferior version (with lignans, which are a useless complication).

Nathansmommy1973 (2008-10-14 20:24:05)

It seems flaxseed oil is becoming more and more popular. I myself have not tried it however I have taken Omega 3 supplements, specifically the one from Neurovi.com, for a while because of the effects I've read about it improving brain function. I also took it when I was pregnant and had no problems at all. One thing I do see in article after article is the importance of the DHA to EPA

ratio when taking these supplements. The one I'm taking now seems to meet those standards ideally so I am happy. Thanks for your very interesting article!!

### Science in Action: Omega-3 (motor-learning surprise, continued) (2008-03-10 06:24)

The results I described in [1]the previous post surprised me because (a) my performance suddenly got better after being stable for many tests and (b) after the improvement, further practice appeared to make my performance worse. I'd never before seen either result in a motor learning situation. If you can think of an explanation of the result that practice makes performance worse, and animal learning isn't your research area, please let me know.

Learning researchers used to think of associative learning as a kind of stamping-in process. The more you experience A and B together, the stronger the association between them. Simple as that. In the 1960s, however, several results called this idea into question. Situations that should have caused learning did not. The feature that united the various results was that in each case, learning didn't happen when the animal already expected the second event. If A and B occur together, and you already expect B, there is no learning. Theories that explained these findings – [2]the Rescorla-Wagner model is the best known, but [3]the Pearce-Hall model is the one that appears to be correct – took the discrepancy between expected and observed – an event's "surprise factor" – rather than simply the event itself, to be what causes learning. We are constantly trying to predict the future; only when we fail do we learn.

In my motor-learning task, imagine that the brain "expects" a certain accuracy. When actual accuracy is less, performance improves. Performance stops improving when actual accuracy equals expected accuracy. The effect of more omega-3 in the blood, and therefore the brain, was to increase expected accuracy. (One of the main things the brain does is learn. If we do something that improves brain performance in other ways, it is plausible that it will also improve learning ability.) Thus the sudden improvement. The decrement in accuracy with further practice came about because, when the omega-3 concentration went down, actual accuracy was better than expected accuracy. Accuracy was "over-predicted," a learning theorist might say. So the observed change in performance was in the opposite-from-usual direction. Accuracy got worse, not better.

[4]Related happiness research. "Christensen's study was called "Why Danes Are Smug," and essentially his answer was it's because they're so glum and get happy when things turn out not quite as badly as they expected."

1. <http://www.blog.sethroberts.net/2008/03/08/science-in-action-omega-3-motor-learning-surprise/>

2. [http://www.scholarpedia.org/article/Rescorla-Wagner\\_model](http://www.scholarpedia.org/article/Rescorla-Wagner_model)

3. [http://www.scholarpedia.org/article/Pearce-Hall\\_theory](http://www.scholarpedia.org/article/Pearce-Hall_theory)

4. <http://www.cbsnews.com/stories/2008/02/14/60minutes/main3833797.shtml>

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LemmusLemmus (2008-03-10 10:18:37)

"If you can think of an explanation of the result that practice makes performance worse, and animal learning isn't your research area, please let me know." Wild guess: Repetition makes the task more boring, which reduces concentration.

seth (2008-03-10 12:53:55)

Thanks, LemmusLemmus. The repetition rate wasn't unusual when accuracy started getting worse.

LemmusLemmus (2008-03-10 15:55:18)

Seth, yes, but even with a constant repetition rate, couldn't the task get more boring? If I see film XYZ once a week, it's going to get more boring (on average) every time I see it.

LemmusLemmus (2008-03-10 16:09:14)

To add to my first post, it may reduce not only concentration, but also motivation. To add to my second post, I think there may be threshold effects. Both is nothing more than personal experience, but to illustrate, a few years ago, I got into playing a popular computer game (basically, a move-cursor-and-shoot game). Once I was pretty good at it, I lost interest. The same happened with a pinball machine earlier. I broke the record on one and then couldn't be bothered anymore both about that particular machine and others of the same type.

seth (2008-03-11 08:24:04)

I'm sure the accuracy reduction over time wasn't due to boredom. It started just after I'd observed one of the most fascinating-to-me results in all my self-experimentation.

ronburk (2008-03-11 19:56:04)

Performance gets better after period of stability. Isn't that a standard feature of learning, as the learnt stuff gets shuffled into neurons in a more permanent part of the brain (e.g., research on stroke victims who thought they reached limits of improvement possible with therapy, but found more improvements when therapy was kept up for longer periods). Further practice makes performance worse. Well, Tim Gallwey (Inner Tennis) kinda built a career on that, didn't he? Once you've learned the basic task, focus from the wrong part of the brain can interfere with performance, eh? Also, if you haven't already, you probably really need to control for aspirin use with these tests, due to aspirin's ability to combine with docosanoids to form potent, inflammation-terminating resolvins and protectins. But I just learn this stuff from Oprah, so it might be wrong. :-)

## **Eight Ways of Looking at Self-Experimentation (2008-03-10 22:57)**

[1]Scientific American Online has started a eight-part series about self-experimentation. Part 2 is about Morgan Spurlock of Supersize Me.

1. <http://www.sciam.com/article.cfm?id=self-experimenters&sc=rss>

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Tom (2008-03-11 09:42:41)

I'm surprised that Scientific American is not reporting on the fact that no one has been able to replicate Spurlock's results, and the fact that he refuses to release his food logs or comment on the controversy.

Tom (2008-03-11 10:40:05)

Maybe that was part of Spurlock's experiment. 8-)

Varangy (2008-03-11 12:31:38)

I agree with Tom. There was a comedian, Tom Naughton, who undertook a similar 'Spurlockian' experiment in 'Fat Head', and his health markers, I believe, improved. He repeatedly called Spurlock's representatives for his food diary and was studiously ignored. While very trendy and seductive to the anti-McDonaldists, Spurlock is a really bad example and I don't think it behooves someone like Seth to be compared to him. Forgive my language, but Spurlock is an attention-whore and

tireless self-promoter, not a real or even amateur scientist. See this video for Tom Naughton's analysis of Spurlock's numbers that don't add up. <http://www.youtube.com/watch?v=Ccdfzq2M1Ec> &url=<http://www.fathead-movie.com/> More here: <http://www.fathead-movie.com/>

Varangy (2008-03-11 15:51:39)

@Seth BTW if you or your publisher would implement comment subscriptions for each of your posts – that would be a great way to further encourage the, generally, very stimulating commentary on this great blog. Having to check back every day is a bit tiresome.

LemmusLemmus (2008-03-12 01:19:39)

It's a bit weird the post on Spurlock makes much of his weight gain. In the film (which is very entertaining), two facts are clearly stated: 1) To maintain his weight, he should have consumed about 2500 calories a day. 2) He consumed about 5000 calories a day. Big surprise: He gained weight. I would think the same would have happened if he would have consumed 5000 calories/day in apples.

seth (2008-03-12 06:23:48)

I think the main point of the film was not the weight gain – which as you say seemed very likely – but the other bad health effects. What Spurlock did was a little like feeding rats large amounts of saccharine – larger than anyone would ever ingest – as a way of finding out quickly what the effects of smaller and more realistic amounts would be. He ate a large amount of fast food to find out what the effects of small amounts of fast food are.

LemmusLemmus (2008-03-12 09:39:06)

"He ate a large amount of fast food to find out what the effects of small amounts of fast food are." I'm not sure. In an interview one finds on the German DVD edition of the film, he is asked whether his experiment has any value given that nobody eats like that. He makes a big point of arguing that, no, he doesn't know anyone who eats at McDonald's every day, but he does know people who eat at McDonald's in the morning, KFC at noon and Pizza Hut in the evening.

Observer (2008-03-14 13:09:14)

"the fact that no one has been able to replicate Spurlock's results" That's probably because Fredrik Nystrom has replicated Spurlock's results. His test group, consisting of 12 male and 6 female students, showed a large individual variation, including one male test person that suffered as badly as Spurlock, and had to be removed from the experiment: <http://www.liu.se/en/news-and-events/startpage?newsitem=16242> "Blood tests of the fast food eaters showed sharp increases in the liver enzyme alanine aminotransferase (ALT). ALT levels more than quadrupled during the 4-week study period and 13 of the 18 subjects developed morbidly high status of ALT in their blood serum. One male had such extreme values after three weeks that he was withdrawn from the experiment and put on a normal diet."

### **If Not Noseclips, Dark Sunglasses? (2008-03-11 22:10)**

In [1]this interesting video about losing weight, Paul McKenna, a British hypnotist, recreates a study in which people ate food blindfolded. In the study, they ate one-quarter less when blindfolded than when not blindfolded. This doesn't impress me; nothing is stopping the blindfolded subjects from eating more at later meals. But it makes me wonder how not seeing your food affects flavor-calorie learning. It might make it stronger (you're less distracted) or it might make weaker (the sight of food acts like glue to strengthen flavor-calorie associations – there is actually evidence for something like this).

While wearing noseclips while eating with others is too weird, wearing dark sunglasses might not be. And what about listening to music (for distraction) while you eat? My calorie learning experiments are continuing; eventually I should be able to test these possibilities.

Thanks to Gary Skaleski.

1. <http://www.youtube.com/watch?v=UQv1JBZ197Q>

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Ali Choudhury (2008-03-12 04:26:07)

I would think distraction would cause you to consume more, since you're not paying attention to how much you eat.

seth (2008-03-12 06:21:52)

I meant: what would be the effect of distraction on the flavor-calorie learning that takes place at every meal?

SusanJ (2008-03-13 10:00:53)

It's funny this shows up with an ad for the book on "Mindless Eating." My recent experiences with SLD and lo-carb coupled with long experience with eating and various shortterm attempts at dieting have completely convinced me that Taubes is right when he says that hunger is physiological, not psychological. Once you've decided the exact amount you are going to eat or drink - a nose-clipped protein shake, say - and treat it as fuel, you aren't going to consume more or less. I can now break a single potato chip into a dozen or more pieces and savor each little piece if I want to. I think I can do this enjoyably because lo-carbing means my body is no longer associating that taste sensation with a forthcoming sugar rush which it can hardly wait for. And I'm sure that SLD has also helped to break a flavor-calorie association although I think perhaps the important thing is breaking the flavor-sugar rush association. I'm not sure how to test this.

Ali Choudhury (2008-03-14 10:01:41)

D'oh. Looks like I better up my flaxseed dosage.

Jeff (2008-03-14 21:22:40)

It sounds like more distraction = more [1]mindless eating: "Where you are, what you're doing, and who you're with all affect how many calories you're likely to consume. When you're in a restaurant with low lighting, you tend to eat more. You also eat incrementally more as the number of people at the dining table increases, and **you'll eat more if you're watching television or reading the newspaper. According to Wansink, eating in front of the TV can increase your consumption as much as 60 percent, depending on how long you sit there watching.**"

1. <http://www.runnersworld.com/article/printer/1,7124,s6-242-304--11628-0,00.html>

danielle (2009-05-22 13:38:21)

The answer is simple. It takes certain amount of time for the body to feel satisfied and full. When you have blindfolds on, then it takes longer for you to eat. Then when the time comes when you actually feel full, you didn't have as much food as usually. - this isn't news to me. It's re-doing work that has been done already! When you eat with other people, many more things are going on. You look at how others eat and you excuse your own behavior "I guess everyone is eating a lot, then it means I can too". If everyone eats just a little, maybe you'll be a little ashamed to eat twice as much as everyone else. Nose-clips - sure if you wear nose-clips all day long, maybe you won't be teased by the smell of food and maybe you won't think of eating as much. In my personal opinion, that's not the way to do this, because we need to breathe through our nose, we need to filter the air with nose hair, etc. Knowing how to breathe properly through the nose may actually lower people's depression, may improve posture, and may cause them to eat a little less. Noises - I don't think there's much of a relationship, because people eat in clubs where there's a lot of music, and in restaurants where there's a lot of noise. The amount of food you eat depends on how fast you eat, which depends on how hungry you are. Or simply, you eat and eat, even when you are full and even when you sweat. If you do the second one, then you have too many problems to handle alone. Don't get me wrong I wouldn't be surprised if there was a relationship between noise and overeating, but I predict there would be a small effect size. I would

call that doing science for the sake of doing science, not for the sake of helping humanity. There wouldn't be much value in this study. If someone really wants to loose weight, they need to change their relationship with food, they need to make a commitment, and they have to do the work. Shortcuts don't work in the long run, just like 99 % of diets! Determination, eating moderately, diet full of nutrients, exercise and therapy are the only things that really help.

Tom in TX (2009-05-23 20:23:18)

I wonder if the kind of noise would matter, e.g., soothing classical music vs. traffic noise.

### **Twisted Skepticism (2008-03-12 18:31)**

Scientists are fond of placing great value on what they call skepticism: Not taking things on faith. Science versus religion, is the point. In practice this means wondering about the evidence behind this or that statement, rather than believing it because an authority figure said it. A better term for this attitude would be: Value data.

A vast number of scientists have managed to convince themselves that skepticism means, or at least includes, the opposite of value data. They tell themselves that they are being "skeptical" – properly, of course – [1]when they ignore data. They ignore it in all sorts of familiar ways. They claim "correlation does not equal causation" – and act as if the correlation is meaningless. They claim that "the plural of anecdote is not data" – apparently believing that observations not collected as part of a study are worthless. Those are the low-rent expressions of this attitude. The high-rent version is when a high-level commission delegated to decide some question ignores data that does not come from a placebo-controlled double-blind study, or something similar.

These methodological beliefs – that data above a certain threshold of rigor are valuable but data below that threshold are worthless – are based on no evidence; and the complexities and diversity of research imply it is highly unlikely that such a binary weighting is optimal. Human nature is hard to avoid, huh? Organized religions exist because they express certain aspects of human nature, including certain things we want (such as certainty); and scientists, being human, have a hard time not expressing the same desires in other ways. The scientists who condemn and ignore this or that bit of data desire a methodological certainty, a black-and-whiteness, a right-and-wrongness, that doesn't exist.

[2]How to be wrong.

1. <http://www.blog.sethroberts.net/2007/11/19/too-skeptical/>

2. <http://www.blog.sethroberts.net/2008/02/06/how-to-be-wrong/>

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LemmusLemmus (2008-03-12 19:48:09)

"The scientists (...) desire (...) a black-and-whiteness, a right-and-wrongness, that doesn't exist." Relatedly, it is remarkable that statistical associations are either "significant at conventional levels" or not, when the actual statistic is continuous.

Andrew Gelman (2008-03-12 19:54:35)

Seth, Yes, but think about [1]statistical power. Some studies just don't have enough data to be relevant; they're just noise machines.

1. <http://www.stat.columbia.edu/~gelman/research/unpublished/power.pdf>

NE1 (2008-03-12 21:12:08)

Saying there is no evidence for the beliefs that some studies provide more trustworthy directional implications than others, and that anecdotes can be misleading, is just silly. Scientists seek out the most perfect studies so that they can update their Bayesian predictions most efficiently. All of these "methodological beliefs" come from a simple analysis of random sampling and the logic of science, of data. If you want to get down to brass tacks, start wagering. The people whose income depends on predicting the future know exactly how much to weight evidence towards a correlation or cause. And it's not going to be as much as well-structured studies. We may be quick to seize upon a study's failings because it's often so easy to do it right. A simple calculation. A sentence of instruction to the subject. Once you know how much better it is to randomize faces in a lineup, would you ever congratulate a police department for neglecting this? Lemmus: the  $p = .05$  is there as a courtesy to the reader, no? Not because there is a step-function of a conclusion's relevancy.

seth (2008-03-12 22:37:04)

"Some studies just don't have enough data to be relevant." What's an example? I find it hard to believe there is a threshold for relevance: above the threshold, relevant, below the threshold, not relevant. NE1, I'm not saying there is no point being discriminating. Of course some studies are more meaningful than others. It is the black-and-whiteness of the judgments that is the problem. The way studies that don't meet some arbitrary criterion are ignored. They really are ignored, completely discounted; I'm not making this up. Whether the  $p$ -must-be-.05-or-less convention is helpful or harmful is a hard question, at least for me. It gives scientists who know very little something to shoot for; but it ignores the reality that there is no important difference between  $p = .04$  and  $p = .06$ . It distinguishes things that are the same, in other words. Should bikes be built with permanent training wheels?

michael vassar (2008-03-13 21:19:46)

Seth, the problem is that "the scientific method" is not an epistemology but rather an evolved set of hacks optimized for, among other things, improving the quality of naive human epistemology. All of the forms of pseudo-skepticism you complain about involve rules that deviate from optimal epistemology, but by default humans also deviate from optimal epistemology. These are the best known rules that we have, not for reaching truth, but for indoctrinating into a crowd of people so that those people can do a better job of reaching truth than they would by default.

LemmusLemmus (2008-03-14 02:53:18)

"Lemmus: the  $p = .05$  is there as a courtesy to the reader, no? Not because there is a step-function of a conclusion's relevancy." Oh, in the stuff that I read (I'm a sociologist), it's pretty much treated like a "step-function".  $p = .06$  equals "no association".

Seth's blog » Blog Archive » Twisted Skepticism (continued) (2008-03-14 06:09:54)

[...] Twisted Skepticism [...]

seth (2008-03-14 06:14:52)

Michael, yeah, I agree, a binary function is better than a flat function. That's what I meant by "gives scientists who know very little something to shoot for." A little scientific education is a dangerous thing.

michael vassar (2008-03-14 07:39:36)

It's definitely worse to build bikes with permanent training wheels than to teach people to ride bikes without training wheels, but better than to have a population of bikers who are always falling down. The question is, do we (collectively) know any fairly reliable way to teach people to use the "no training wheels" version of rationality instead of just "faking it" with the "scientific method". If so, do we (personally) know how to get there from here, e.g. how to influence the culture in the relevant manner. Honestly, I think 'no' and 'no', but I think I'm closer to the second bit than to the first.

seth (2008-03-14 11:28:49)

Were I to teach the basics of science, I would tell a bunch of stories chosen to show the value of a wide range of evidence,

experimental, non-experimental, case reports, etc. I would say: we need all types, and explain why. A story-driven approach is a lot different than the current approach (e.g., evidence-based medicine) with its emphasis on rules (do this, do that) and value judgments (this is good, that is bad).

Andrew Gelman (2008-03-14 12:28:27)

Seth, You question my claim, "Some studies just don't have enough data to be relevant" and write, "What's an example?" Follow the link that I put in my comment. It gives an example, in excruciating detail.

seth (2008-03-14 13:24:45)

Andrew, thanks for clarifying that. Your paper argues that the Kanazawa study was too small to have a good chance of finding results with  $p < .05$  given the likely size of the effect. Sure. I don't agree that this means its info is useless. You write: "A study of this size is not fruitful for estimating variation on this scale." That is too strong, I believe. I don't think it's true that nothing can be learned from the Kanazawa data. The Kanazawa data make some ideas more plausible, other ideas less plausible.

Tony (2008-03-14 15:02:39)

Susan Haack was once taking questions after a talk, and was asked "What, essentially, do you think the scientific method is?" Her (prescriptive) response was: "Trying really hard to figure out the truth." The problem I have with this is that many scientific advances are made when scientists almost dogmatically hold onto beliefs in the teeth of contrary evidence. Their perseverance leads to the uncovering of evidence that does support their position ...

Andrew Gelman (2008-03-14 17:05:17)

Seth, There are no "Kanazawa data." Kanazawa analyzed existing public data sources. You could give these data to your psych undergrads too, and if they know SPSS, they might come up with some interesting things too. What made Kanazawa's work break the attention barrier (so that people like you and me have heard of him) was that his findings were surprising. He got surprising findings by making statistical errors. If he'd gathered his own data, I'd respect his work more. The point of my paper is not about p

Andrew Gelman (2008-03-15 15:09:44)

Hi, Seth. The rest of my comment got cut off because I used the "less than" sign, which got interpreted as html. But I think I made the basic point above. It's fine to respect unorthodox research, but, at some point, the work is so crappy that it's the equivalent of reading tea leaves, or throwing darts at a newspaper and using the words to write poetry. It might provoke interesting thoughts, but I don't consider it science. It's more like literature, or philosophical speculation, leavened with statistical errors and irrelevant data.

Darius Bacon (2008-04-06 23:33:47)

I just came across a ref to an article by V.S. Ramachandran titled "Creativity versus skepticism within science: more harm has been done in science by those who make a fetish out of skepticism, aborting ideas before they are born, than by those who gullibly accept untested theories." That reminded me of this discussion - perhaps you'll find it of interest. <http://www.amazon.com/Creativity-versus-skepticism-within-science/dp/B000KIXE RI/>

Gustavo Lacerda (2008-04-07 12:28:14)

Darius, This link seems to have the full article: "Creativity versus skepticism within science: more harm has been done in science by those who make a fetish out of skepticism, aborting ideas before they are born, than by those who gullibly accept untested theories." [http://www.encyclopedia.com/doc/1G1-1542\\_38670.html](http://www.encyclopedia.com/doc/1G1-1542_38670.html)

Mike Brown (2008-04-12 08:05:58)

This may be tangential to your discussion, but have you run across <http://www.institutionalreviewblog.com/> The blogger there is a history teacher at Geo. Mason who has been thwarted by IRB rules intended, of course, to protect human subjects, but misapplied (he feels) to the social sciences. I'm currently going through the online IRB training through CITI and, while I totally



agree that psychological and medical experiments need oversight, is it really necessary if I'm testing a user interface for data entry? For whatever reason, I'm seeing parallels between this series of posts and my recent reading of horror stories related to getting IRB approvals. Another article about the blog is at <http://insidehighered.com/news/2007/01/19/irb>

### Twisted Skepticism (continued) (2008-03-14 06:09)

Writing about [1]advances in obstetrics, Atul Gawande, [2]like me, suggests there is a serious downside to being methodologically "correct":

Ask most research physicians how a profession can advance, and they will talk about the model of "evidence-based medicine" the idea that nothing ought to be introduced into practice unless it has been properly tested and proved effective by research centers, preferably through a double-blind, randomized controlled trial. But, in a 1978 ranking of medical specialties according to their use of hard evidence from randomized clinical trials, obstetrics came in last. Obstetricians did few randomized trials, and when they did they ignored the results. . . . Doctors in other fields have always looked down their masked noses on their obstetrical colleagues. Obstetricians used to have trouble attracting the top medical students to their specialty, and there seemed little science or sophistication to what they did. Yet almost nothing else in medicine has saved lives on the scale that obstetrics has. In obstetrics . . . if a strategy seemed worth trying doctors did not wait for research trials to tell them if it was all right. They just went ahead and tried it, then looked to see if results improved. Obstetrics went about improving the same way Toyota and General Electric did: on the fly, but always paying attention to the results and trying to better them. And it worked.

Is there a biological metaphor for this? A perfectly good method (say, randomized trials) is introduced into the population of medical research methods. Unfortunately for those in poor health, the new method becomes the tool of a dogmatic tendency, which uses it to reduce medical progress.

1. [http://www.newyorker.com/archive/2006/10/09/061009fa\\_fact?currentPage=all](http://www.newyorker.com/archive/2006/10/09/061009fa_fact?currentPage=all)
2. <http://www.blog.sethroberts.net/2008/03/12/twisted-skepticism/>

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Aaron Blaisdell (2008-03-14 07:17:57)

But wasn't Gary's book, Good calories, bad calories, a critique of the problem with NOT using rigorous scientific methods and practices to promote nutritional policy?

seth (2008-03-14 08:03:25)

Interesting question. When I interviewed Taubes, he spoke of the importance of skepticism. But since his book was full of data I think by skepticism he meant "value data" (e.g., look at data) rather than "ignore data". I'm not sure, though.

Is there an Engineering approach to medicine? « Entertaining Research (2008-03-15 10:48:04)

[...] Atul Gawande, in a must-read piece in New Yorker, titled The score: how childbirth went industrial; via Seth. [...]

Charles (2008-03-15 12:39:11)

There's a fundamental difference between the way individual people learn and the way public policies are determined. People learn only through self-experimentation, in which a healthy skepticism is necessary. But if there is too much rigidity in that skepticism, novelty is discarded as anecdote, rather than clue. I think we can learn much from a scientific approach, but not necessarily by accepting the conclusions of scientific investigations as gospel, but rather seeing those conclusions as more data points. And the conventions of the scientific method do yield data points that have a unique, though not exclusive value. I think nutritional data are particularly affected by the fact that we are much more biochemically unique than Nutritional Science posits and assumes. So generalizing investigations of nutrition to larger critiques of science in general is dicey. I've been involved in this kind of nutritional self-experimentation for decades, so I've thought a lot about this. Coherence still escapes me, however.

Seth's blog » Blog Archive » Stoplights, Experimental Design, Evidence-Based Medicine, and the Downside of Correctness (2008-03-15 16:01:27)

[...] Twisted Skepticism (continued) [...]

Stephen M (Ethesis) (2008-03-16 14:47:33)

I'd add that trials in Europe determined that there were much better positions for childbirth than the standard one in America – more than thirty years ago. OBs, for the most part, stick with what is most convenient for them. /Sigh

## **Stoplights, Experimental Design, Evidence-Based Medicine, and the Downside of Correctness (2008-03-15 16:01)**

[1]The Freakonomics blog posted a letter from reader Jeffrey Mindich about an interesting traffic experiment in Taiwan. Timers were installed alongside red and green traffic lights:

At 187 intersections which had the timers installed, those that counted down the remaining time on green lights saw a doubling in the number of reported accidents . . . while those that counted down until a red light turned green saw a halving in . . . the number of reported accidents.

Great research! Unexpected results. Simple, easy-to-understand design. Large effects – to change something we care about (such as traffic accidents) by a factor of two in a new way is a great accomplishment. This reveals something important – I don't know what – about what causes accidents. I expect it can be used to reduce accidents in other situations.

It's another example (in addition to [2]obstetrics) of what I was talking about in[3] my twisted skepticism post – the downside of "correctness". There's no control group, no randomization (apparently), yet the results are very convincing (that adding the timers caused the changes in accidents). The [4]evidence-based medicine movement says treatment decisions should be guided by results from controlled randomized trials, nothing less. This evidence would fail their test. Following their rules, you would say: "This is low-quality evidence. Controlled experiment needed." The Taiwan evidence is obviously very useful – it could lead a vast worldwide decrease in traffic accidents – so there must be something wrong with their rules, which would delay or prevent taking this evidence as seriously as it deserves.

1. <http://freakonomics.blogs.nytimes.com/2008/03/14/taiwans-solution-to-traffic-jams/>

2. <http://www.blog.sethroberts.net/2008/03/14/twisted-skepticism-continued/>

3. <http://www.blog.sethroberts.net/2008/03/12/twisted-skepticism/>

4. [http://en.wikipedia.org/wiki/Evidence-based\\_medicine](http://en.wikipedia.org/wiki/Evidence-based_medicine)

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ronburk (2008-03-15 17:58:02)

I had not heard that someone (anyone?) was claiming that "nothing" should be put into practice without RCTs. The traffic light example seems like a straw man. We routinely \*stop\* RCTs when a large effect is seen. We routinely make bad medical decisions when small effects that are unvetted by RCTs are the goal. Use of EPO to treat chemo-induced anemia was approved, in part, because no large enough negative effect on cancer outcome was noticed. Only RCTs could show that there is indeed good reason to suspect that EPO worsens the outcome for some cancer patients that receive it. Likewise, the effect of HRT on heart disease and cancer risk seemed small but compelling (due to the N of the uncontrolled studies done). Only an RCT was able to show that the heart benefit was overestimated and the cancer risk underestimated. That RCT, of course, did not answer all questions about HRT, but it did answer the "first, do no harm" question. It's hard to forget that one of the first applications of statistics to medical treatments was to inspect the efficacy of "bleeding" patients (i.e., cutting, or leaches). When the results showed that "bleeding" was not at all correlated with outcome, what did the study author do? He concluded that the study must be wrong, and that we must bleed patients earlier and more aggressively. Such is the power of subjective experience and expectation over objective, statistical correctness. Like Feynman said, the first order of business is not to fool ourselves. When medical effects or benefits are small or subjective, it's hard to point to any tool more successful at preventing self-fooling than the RCT. Large, non-subjective effects are obviously less likely to be proved false by an RCT. However, it appears that at this point in history, a large percentage of new medical practice is focussed more in the area of the smaller, more subjective effect – hence there is no shortage of places where RCTs continue to be required to avoid fooling ourselves and hurting patients. If you want to see what medical practice looks like without RCTs, look no further than the snake pit that is back surgery to relieve pain today.

scott (2008-03-15 18:27:51)

I'd also argue that the study in Taiwan very well could have elements of a control group and randomization. There are many more than 187 intersections in Taiwan and one could easily consider deciding which intersections to place the countdown timers on randomly and comparing them to a control group of similar intersections. Great research in that it was a roll-out to test something (timers) that were believed to be helpful and the analysis was done to determine that there were unexpected results, but I think the RCT argument in this case is a bit of a stretch.

NE1 (2008-03-15 18:45:16)

No control group? Where did the baseline from the "doubling in the number" come from? Presumably the control is the long period of time for which data exists and there was no countdown. This assumes that the base rate hasn't changed because drivers are confused as to which type of countdown might be at any particular traffic light. I think this is a neat result, and it would be nice to see the total cost of the study. Especially given the unconvincing data cited for red light cameras, it would be a breath of fresh air to hear motions for wider tests, if the accident rate changes are pretty uniform. I really don't know where you're coming from here. To the extent you and I find the study "convincing", I'm sure it can be traced to intuition leached from proper statistical theory (fairly large N, control data, and no stated bias in randomization). To the extent that it is not iron-clad, I'm sure there are traditional objections.

Aaron Blaisdell (2008-03-15 20:56:57)

NE1 writes "No control group? Where did the baseline from the "doubling in the number" come from? Presumably the control is the long period of time for which data exists and there was no countdown." I agree, and furthermore, though I've never been to Taiwan, I bet they have a hell of a lot more than 187 intersections with traffic lights, so the remaining intersections that didn't receive timers also serve as controls (assuming there is a record of the accident rate at those intersections as well).

seth (2008-03-15 21:49:06)

NE1 & Aaron, yes, the baseline came from earlier measurements of the same intersections. "Like Feynman said, the first order of business is not to fool ourselves." I think this gets to the heart of the matter. I would prefer that medical research concentrate on maximizing the benefits of treatment rather than on minimizing the extent to which doctors fool

themselves. I agree that RCTs are often helpful. It's when non-RCT evidence is ignored or dismissed or not taken seriously that the trouble begins. "I had not heard that someone (anyone?) was claiming that "nothing" should be put into practice without RCTs." A high-level panel making nutrition recommendations ignored non-RCT evidence. For details, see <http://www.blog.sethroberts.net/2007/08/08/something-is-better-than-nothing-part-2/>

LemmusLemmus (2008-03-15 23:28:37)

A broader political point is the question whether the NHS/medicare/whatever it's called in one's country should be expected to pay only for those treatments which have been shown to work by the most rigorous scientific standards. I think it's not hard to make the argument that the answer is "yes". Of course, this is distinct from the question whether scientists should disregard evidence that doesn't live up to those standards.

Stephen M (Ethesis) (2008-03-16 14:39:06)

**He concluded that the study must be wrong, and that we must bleed patients earlier and more aggressively.** Hmm, seems like the studies and the low fat/high carb debate ...

Jeff Winkler (2008-03-17 10:04:43)

[1]Taking back science - "Ideas are tested by experiment. That is the core of science. By teaching people to hold their beliefs up to experiment, Mythbusters is doing mere to drag humanity out of the unscientific darkness than a thousand lessons in rigor."  
- Zombie Fenyman

1. <http://imgs.xkcd.com/comics/unscientific.png>

seth (2008-03-17 11:37:43)

I'm not saying don't test ideas. I'm talking about the nature of the test. Different purposes suggest different types of test. If your goal is maximizing patient benefit, you do Test X; if it is "not fooling yourself" you do Test Y.

Markus (2008-03-19 10:23:48)

If traffic in Taiwan is anything like that of mainland China, then these results don't surprise me at all. People drive a lot differently over there with a great deal less observance of "traffic laws" and consideration of safety. I would guess that it's common to treat a red light more like a stop sign when you don't know how long it'll last. With the timer, knowing that it'll turn green in X seconds, you may be more likely to wait. Similarly, I can imagine that drivers would speed up to get through the intersection on seeing that only 2 seconds of green are left - higher speed -> more accidents.

current grad student (2008-04-02 11:19:57)

Ummm.... is there something wrong with not wanting to fool yourself? I mean, the whole point of experimental design is to guard against fooling yourself into believing that your treatment is responsible for the supposed patient benefit observed.

seth (2008-04-02 14:48:21)

If you have "not fooling myself" as your only goal, you will be too conservative.

current grad student (2008-04-03 23:48:12)

I am actually ok with being labelled conservative if that means I am hesitant to update my beliefs based on a poorly designed experiment or an observational study. I do not deny that such studies have the potential to find interesting, and real, results, but the quality of the data, study design, and analysis, should all affect how and to what extent I update my beliefs. In regards to the traffic study, I am particularly concerned with your statement, "There's no control group, no randomization (apparently), yet the results are very convincing (that adding the timers caused the changes in accidents)." Aside from the fact that you made a causal inference about the result seen, I don't know how you can seemingly care so little about the design of the experiment.... you seem to not know anything about the design, and the scary part is that you don't seem to care! I know of a great way to "reduce" the number of traffic accidents. Place the timers at intersections which had the highest accident rates the previous year. You are almost guaranteed to observe lower accident rates the following year. This is a simple example

of regression to the mean.

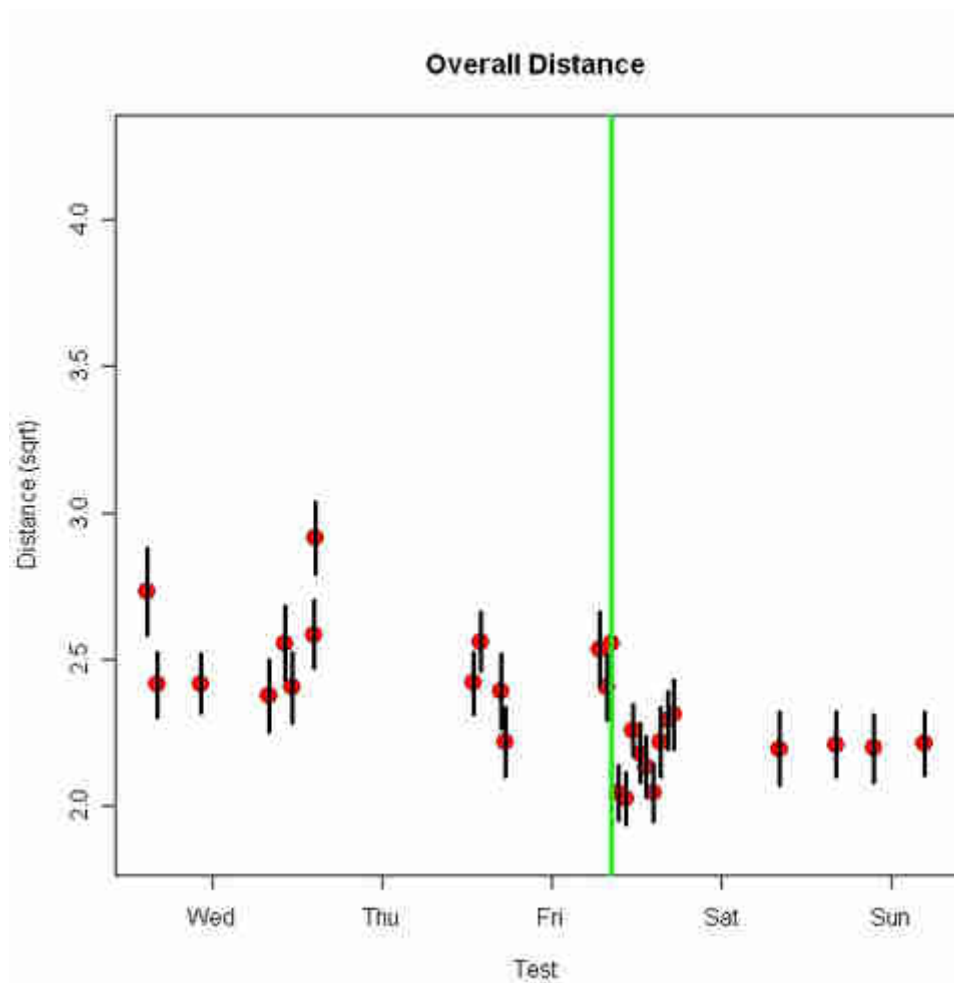
seth (2008-04-05 07:19:50)

"You don't seem to care". Please see my posts on experimental design and scientific method – e.g., interviews with Brian Wansink and Saul Sternberg. The broad point I am making is following or advocating rules without understanding them, including their weaknesses, causes trouble. Randomization is good but other schemes may be good enough.

### Science in Action: Omega-3 (more motor-learning data) (2008-03-16 07:08)

Background. I took 4 T of flaxseed oil during the day (instead of just before bedtime) and [1]measured its effect with a cursor test. The test was [2]how accurately I move the cursor from one point to another with a single movement. The result was a sharp improvement – some of which lasted, some of which didn't. (Just to be perfectly clear: what's varied is not my daily amount of flaxseed oil. It's the time of day I take it. I'm varying the time between a short-lived peak in omega-3 concentration, which happens shortly after ingestion, and doing the cursor test. Usually they are far apart. The interesting data are what happens when I move them close together.)

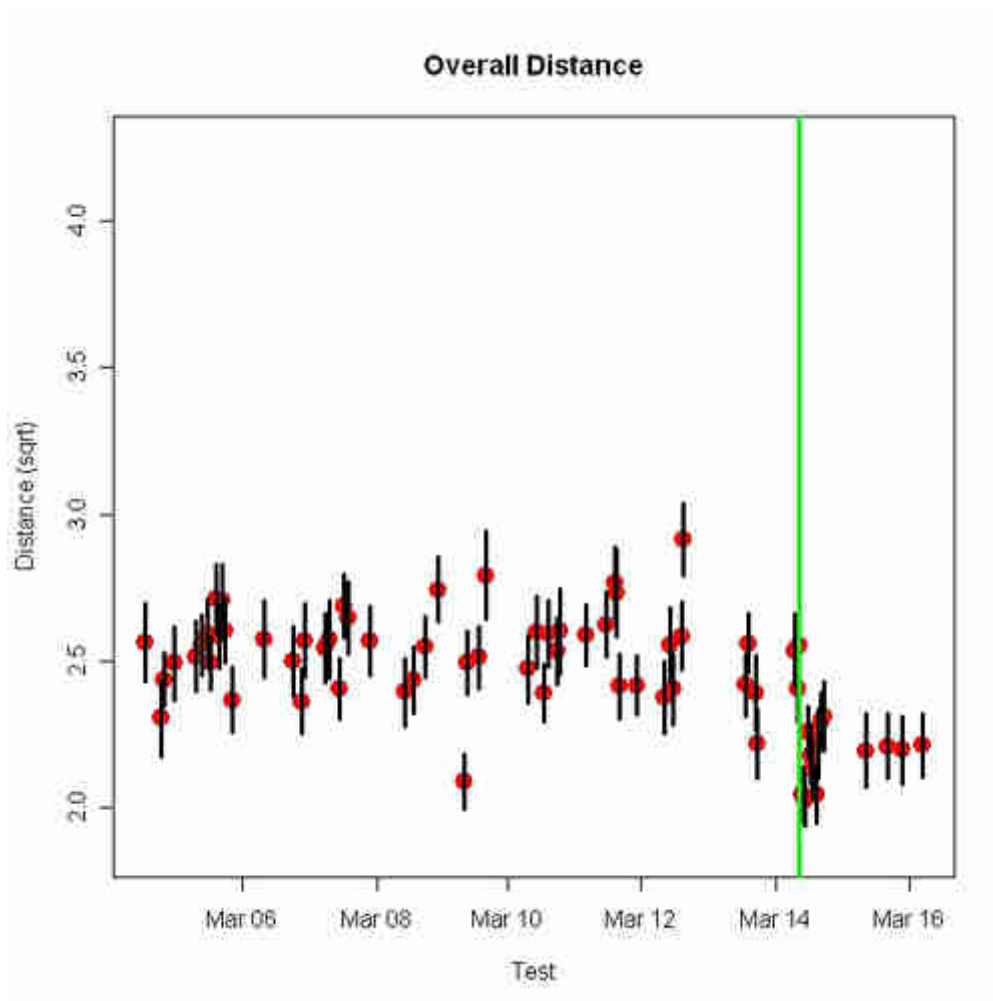
New data. I tried the same thing again. Here are the results.



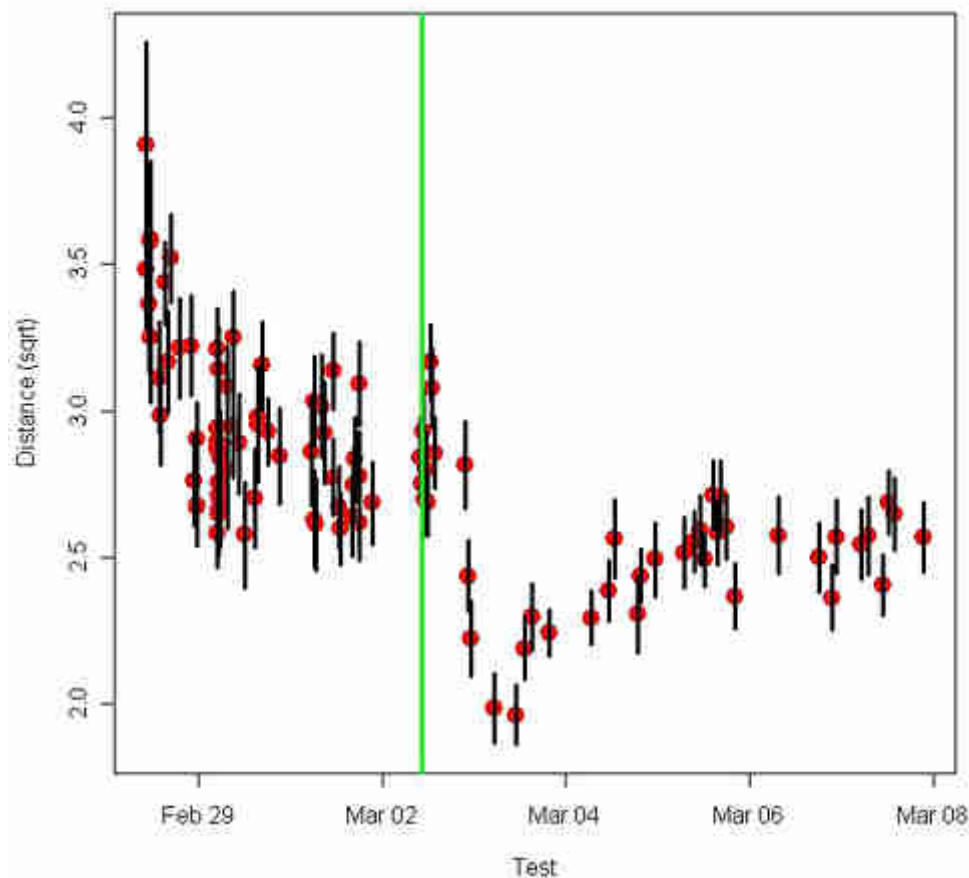
The green line shows when I took 4 tablespoons of flaxseed oil. I took the oil at 8:30 am. The first test after that, at 9:30 am, showed the improvement. (In previous measurements of the short-term effects, it has taken closer to 2

hours to see the maximum effect.)

Here is a longer view, which emphasizes the constancy of the pre-test baseline.



For comparison, here are the earlier results.



Conclusions. When I take 4 T of flaxseed oil, it creates for a few hours a higher-than-usual concentration of flaxseed oil in my blood. I'm pretty sure the active ingredient is omega-3. This has two effects:

Better performance due to temporary effects. It's hard to give these effects a good name. Better coordination, perhaps.

Better performance due to long-lasting effects. This is why performance was constant at a lower (better) level after the test than before. The higher-than-usual concentration caused a change (more "learning" than usual) that outlasted it. The concentration of flaxseed oil dropped back to average levels but the learning persisted.

1. <http://www.blog.sethroberts.net/2008/03/08/science-in-action-omega-3-motor-learning-surprise/>
2. <http://www.blog.sethroberts.net/2008/03/01/why-are-games-powerful-part-2/>

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MT (2008-03-16 10:27:37)

I'm curious how your general consumption of flax influences these results – I was under the impression you took flax more regularly. I'm also wondering whether the persistence of a good-performance effect reflects learning as opposed to enhanced cognitive functions that are directly related to some more persistent aspect of the flax. Perhaps it is less a learning effect and more an efficient neurological function effect. A graph that showed longer timelines and multiple dosages would be illustrative. Interesting though – thanks.

seth (2008-03-16 11:20:28)

I take 4 T flax daily. Usually late in the evening – 11 pm, for example. (This is not shown on the graphs.) These graphs show what happens when I take it earlier. This is why the persisting effect reflects learning – aftereffects of the combination of Event A (very high flaxseed blood level) and Event B (doing the cursor test) at the same time. Usually the very high flaxseed level happens while I am asleep. In other words, usually Events A and B happen far apart. The treatment is to bring them close together just once. A reasonably high level of omega-3 is nothing new because I take flaxseed oil every evening.

MT (2008-03-16 15:35:28)

Gotcha. It would be interesting to see that tested with a more common athletic skill, such as free throws – you any good at basketball?? Maybe it could help my squash game too. If you want to test other cognitive functions the Nintendo "How Old Is Your Brain" game might be interesting – it tests math and other skills and you might be able to see a performance effect there, though it isn't as quick as your current test. Another simple one (though missing your game criteria of being fun, depending on your idea of fun) might just be speed and accuracy in solving a few tough randomly generated math questions in your head. A performance effect there would be very interesting as well.

Kristen's Raw (2008-03-16 20:32:33)

Interesting :)

### **Ranjit Chandra and Milk Allergies (2008-03-16 21:08)**

The following letter is from a Swedish professor who was president of the European Society of Pediatric Allergy and Clinical Immunology. [1]Background about Ranjit Chandra.

Lerum, March 16<sup>th</sup> 2008 Dear Prof Roberts, The correspondence/letters I have found or remembered are as follows.

1. In 1993, The European Society of Pediatric Allergy and Immunology, ESPACI) intended to publish a position paper on Cow's milk allergy(1). In my position as secretary of ESPACI, I wrote that paper in collaboration with the authors listed. We had intense discussions on whether or not we should cite Prof Chandra, whom we all knew, but did not trust, mainly since we found his inclusion criteria and symptoms curious and not according to scientific knowledge at that time. We also opposed, since he had not performed any blinded oral provocation tests and several authors, e.g. Arne Host(2) have found that less than 50 % of those reporting symptoms at exposure had cow's milk allergy at scheduled blinded oral provocation testing. I wrote a letter to the dean of the university of St John asking whether or not the rumors about Prof Chandra, that his nurse/secretary(?) had produced the results without the involvement of patients, were true. The reply was: "Since the allegations against Prof. Chandra have not been proven or disproven, he is still in office". I do not find that letter in my files.
2. In 1997 Ranjit Chandra published a 5 yrs follow up study on his cow's milk allergic children(3). This paper included DBPCFC. Then some of my colleagues drew the conclusion that everything was in order.
3. In 1998 we published a second position paper together with the European Society on Pediatric Gastroenterology and Nutrition, ESPGAN, on cow's milk allergy(4). At that time we accepted the Chandra paper, according to point 2.
4. In 2003 we were writing up three papers later published in PAI(5-7). These publications were based on papers read during the ESPACI/Section on Pediatrics meeting in Padua, Italy on Dietary prevention of Allergy. Since at that time I was President of ESPACI and Chairman of the Section on Pediatrics within EAACI and organizer of the meeting, I wrote (in collaboration with the speakers) paper I and II and Arne Host and Susanne Halken paper III.



Since I was still skeptical of the data by Chandra, I wrote [2] a letter on Feb 15 2003 to the dean of St John's (enclosed), without any response. The three papers were published in 2004.

5. January 19 2006 [3] I wrote once again to St John since I never got any response from the dean, correspondence enclosed.
6. On February 16 2006 [4] I got a response from St John from Prof Strawbridge and responded. On February 20 2006 I got another response and [5] again responded to Prof Strawbridge, Dean of St John, enclosed.
7. On Feb 24 I got a copy from German Friends and on March 3<sup>rd</sup> another one from Arne Host on the (enclosed) TV series in CBC on January 29<sup>th</sup> 2006 and later

The rest you know much better than I do. Actually, I don't know whether my correspondence has any value on a website. But maybe you can use it for your documentation.

1. Businco L, Dreborg S, Einarsson R, Giampietro PG, Host A, Keller KM, et al. Hydrolysed cow's milk formulae. Allergenicity and use in treatment and prevention. An ESPACI position paper. European Society of Pediatric Allergy and Clinical Immunology. *Pediatr Allergy Immunol* 1993 Aug;4(3):101-11.
2. Host A. Cow's milk protein allergy and intolerance in infancy. Some clinical, epidemiological and immunological aspects. *Pediatr Allergy Immunol* 1994;5(5 Suppl):1-36.
3. Chandra RK. Five-year follow-up of high-risk infants with family history of allergy who were exclusively breast-fed or fed partial whey hydrolysate, soy, and conventional cow's milk formulas. *J Pediatr Gastroenterol Nutr* 1997 Apr;24(4):380-8.
4. Host A, Koletzko B, Dreborg S, Muraro A, Wahn U, Aggett P, et al. Dietary products used in infants for treatment and prevention of food allergy. Joint Statement of the European Society for Paediatric Allergology and Clinical Immunology (ESPACI) Committee on Hypoallergenic Formulas and the European Society for Paediatric Gastroenterology, Hepatology and Nutrition (ESPGHAN) Committee on Nutrition. *Arch Dis Child* 1999 Jul;81(1):80-4.
5. Muraro A, Dreborg S, Halken S, Host A, Niggemann B, Aalberse R, et al. Dietary prevention of allergic diseases in infants and small children. Part III: Critical review of published peer-reviewed observational and interventional studies and final recommendations. *Pediatr Allergy Immunol* 2004 Aug;15(4):291-307.
6. Muraro A, Dreborg S, Haken S, Host A, Niggemann B, Aalberse R, et al. Dietary prevention of allergic diseases in infants and small children. Part II. Evaluation of methods in allergy prevention studies and sensitization markers. Definitions and diagnostic criteria of allergic diseases. *Pediatr Allergy Immunol* 2004 Jun;15(3):196-205.
7. Muraro A, Dreborg S, Halken S, Host A, Niggemann B, Aalberse R, et al. Dietary prevention of allergic diseases in infants and small children. Part I: immunologic background and criteria for hypoallergenicity. *Pediatr Allergy Immunol* 2004 Apr;15(2):103-11.

1. <http://sethroberts.net/chandra/index.html>
2. <http://sethroberts.net/chandra/Dreborg1.doc>
3. <http://sethroberts.net/chandra/Dreborg2.doc>
4. <http://sethroberts.net/chandra/Dreborg4.eml>
5. <http://sethroberts.net/chandra/Dreborg3.doc>

## Bear Stearns and Self-Experimentation (2008-03-17 05:44)

Understanding and investment go together: The more you understand something, the more you should invest in it. On Friday, Bear Stearns owners thought their stock was worth \$30/share; they were [1]utterly wrong, it turned out.

In this sense, self-experimentation – research so cheap it can be done as a hobby – is a statement of complete ignorance. Because it is so cheap, you can test a hundred absurd ideas. If you use more expensive research methods, you cannot afford to test ideas you think are absurd. You must search a smaller solution space. If you are not correct about where the answer to your question will be, the region of possibilities that contains it, your research will fail to find it.

[2]My self-experimentation about why I was waking up too early revealed that I was almost completely ignorant about what I was studying. Two of the causes I found – eating breakfast and not standing enough – were not on my list of possibilities when I started. The Shangri-La Diet is outside the range of weight-loss methods that obesity researchers consider reasonable; without self-experimentation, it would never be tested.

1. <http://www.nytimes.com/2008/03/17/business/17bear.html?hp>

2. <http://repositories.cdlib.org/postprints/117/>

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Aaron Blaisdell (2008-03-17 07:29:21)

The Bear Stearns deal just proves what I've noticed since I was a teenager. Something is only worth what someone else is willing to pay for it. I was never one to "Ooh" and "aah" over expensive cars, purses, coats, boats, etc., but since that realization I have had a reason why. The question I have never been able to answer is why do most people buy into the "luxury item = status" equation? I guess if something is difficult to buy (i.e., takes a lot of money) then this prevents most people from buying it. Thus, those who CAN buy it are by definition in a special minority. An elite minority. It is a symbol of power. But the success of that symbol requires the masses to buy into this equation even if they can't afford to (puns intended). I unplugged myself from those masses a long time ago and I feel like I'm looking down into an ant jar and watching the ants duke it out whenever I see people caught up in this struggle for symbols of success. I also think they guy who built the ferrari get the credit for building a beautiful machine, and not the guy who buys it. This is especially true of art.

Tony (2008-03-17 11:36:11)

I wish it were so easy to escape the status game. You might disdain the process, but it's real and it affects you, whether you want to close your eyes and wish it away or not. Looking like a bum on the subway? People will instantly judge you, and usually they will be correct. Dress extremely well and you'll get a very different judgment. Status symbols are used because they are usually reliable. When they stop being reliable indicators of status, they will stop being used, I'm guessing. The idea that the masses only should buy into them if they accord status to the masses is illogical, because high status by definition require differentiation from the mass of people.

Aaron Blaisdell (2008-03-17 12:14:56)

Tony, you make some good points. Even when academics (such as myself) dress more casually than our counterparts in the corporate world, its likely because our status as allows us to do so (the standards are different). I guess the status symbols I feel unaffected by are the real luxury items, such as very expensive cars, designer clothing (not just nice clothes, but name brands like Versaci and the like), and a house in Beverly Hills. Sure, some of these things are nice, but others are no different than the

Scion XB that I drive (and LOVE) or my beautiful 1,500 square foot home in Culver City where the sun is bright, the birds are singing, and life slows down to a day dream. I don't have city or ocean views or a truly expensive zip code (though that has changed dramatically these past few years), etc. Once I have achieved a nice standard of living (a wife and kids, a nice home to house us, a great job that I love going to every day, good food to put on the table), then the rest is just fluff. Do I wear a Rolex or a Timex? Doesn't matter to me (actually it's a cheap Indiglo). I've had a couple of suits custom tailored in Hong Kong (from where my wife hails) which aren't name brand, but they fit me like a glove! I'm comfortable, happy, and content. Maybe these are status symbols, but for the most part they aren't out there for most people to see and I don't have a drive to compare my stuff to that of others.

Tony (2008-03-17 14:59:23)

Oh, you absolutely have a good point that being impressed by fancy cars and so on is something to avoid, and that status games in general tend to be superficial. (Although I think that status in some way is a basic need for almost all humans.) Status in the academic world is a little different from most parts of the world, as you pointed out, which I think is why so many academics get so heated when others question or attack their ideas. Distinguished originator of ideas = status in the academic world (often). Attack the pedigree of the ideas, and you attack the basis of that person's distinction. The seemingly irrational counter-attacks and refusal to give credence to different ideas or data has its basis in a very rational desire - to keep or increase one's own status.

Seth's blog » Blog Archive » Sweet and Ignorant (2008-03-19 09:31:49)

[...] Bear Stearns and Self-Experimentation [...]

## **Procrastination and Self-Experimentation (2008-03-17 16:36)**

Nathan Yau has [1]posted results from the first two weeks of a self-experiment about procrastination. He tried

1. making a to-do list every evening for the next day
2. blocking the sites he wastes the most time at.

The results were not what he expected.

1. <http://flowingdata.com/2008/03/17/a-self-experiment-my-mid-month-report/>

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gwadzilla (2008-03-18 07:05:56)

wow! alcoholism procrastination and weight management looks like I could gain a great deal by reading these pages right now I am about to try the Shangri La Diet it all seems to make such simple sense! my brother tried it and it worked and he is a Phd that did not poo poo your theories he read about it he tried it it just made sense but that chocolate just tastes so good!

Phillip J. Eby (2008-03-18 10:40:06)

If, per David Allen, one's to-do list only contains "amorphous blobs of undoability", it won't have any effect on the kind of procrastination that's caused by unclear goals. Resistance procrastination, on the other hand, will find ways around browser tricks. In other words, his results are about what I would have expected, i.e. Hawthorne-effect "willpower" improvements only. When his concentration lapsed, so did the improvements. My hypothesis: only if he reduces his anxiety response to either the goals or the tasks will he significantly reduce his procrastination over any period longer than can be accounted for by the active use of willpower/concentration. Otherwise, when energy drops, he will abandon his approach or find new

ways to procrastinate. (In other words, I posit that the real problem here is his conditioned feeling-response to the intention to work, not environmental distraction or lack of focus per se.) The anxiety reduction might be through changes in ideation about the goals or tasks, breaking them into smaller increments, or other methods. (Of these, I think the most effective ones can be classified under "other methods", as it's faster and easier to directly remove the response or association in the mind, rather than applying external workarounds.) Of course, it's also possible that he hasn't adequately defined his tasks, and isn't doing anything because he doesn't know what to do! But I don't consider that the same thing as procrastination. Hm. I just noticed something interesting about his first post... He says he wants to stop procrastination so that "I am not a bum". What's funny about that, is that in my experience chronic procrastination is often strongly associated with identity fears, i.e. fears that "I am/will be (undesirable label) if/because I don't do (project)". Such fears are usually a significant \*cause\* of the procrastination, rather than its effect! If he's genuinely afraid of being "a bum" (i.e., it was not just self-deprecating humor), then it's highly likely that this is THE major cause of his procrastination (as the source of the goal/task anxiety), and eliminating it might slash his perception of procrastination and resistance by 50 % or more. Some more on how anxiety leads to procrastination: <http://dirtsimple.org/2008/02/backpedalling-your-brain.html> In simple terms, we have two broad modes of behavior that might be called "acquisition" and "preservation", and preservation-mode tends to bias behavior strongly towards low-risk, short-term rewards (like web browsing), rather than investing in long-term gains (like a degree). One reason why sufficiently fine-grained to-do lists and techniques like working in short bursts can sometimes help procrastination is because they decrease the time to rewards. Unfortunately, they can also just replace one set of large tasks with another, especially if the person begins to think, "I'd better make that to-do list, \*or else\*," – a clear sign that they're still operating in preservation mode. In my work with myself and my clients, I've found the most reliable way to eliminate procrastination on large, highly-desired projects (writing a book, recording an album, getting a degree, etc.) is to remove the threat focus so that the "acquisition" mode is reinstated. In this mode, people do things because they want the result, rather than because they fear the consequences of \*not\* doing them. And long-term goals are much more easily able to override short-term distractions, when not under the stress of a threat. I'll leave the full evolutionary explanation of why we have different reward biases under perceived threat and non-threat conditions as an exercise for the reader. ;-)

Tony (2008-03-21 13:42:34)

Phillip, That was a very interesting comment. Would this fit under your model? I realized that when thinking about doing various tasks, I thought about it being completed. I typically would then think about how hard it would be to complete (perfectly). I changed to thinking about some task and thinking "I'll just get started" (with no or little concern about it being completed), which is kind of fun, often with a sense of exploration or excitement. Doing this, I've gone from doing what I really want to do 1-2 hours a day to 10-12 hours a day. Basically, it came about by examining the phenomenology of the key moments before starting a task. What was stopping me? It seemed there was some (half-)conscious kind of thought that tended to appear.

## Alcoholism and Self-Experimentation (2008-03-17 21:17)

I'm impressed:

[1]This is the story of Olivier Ameisen, a brilliant physician and cardiologist who developed a profound addiction to alcohol. He broke bones with no memory of falling. He nearly lost his kidneys; he fractured ribs and suffered a hemopneumothorax that left blood and air in the sac around his lungs. He gave up his flourishing practice and, fearing for his life, invested himself in Alcoholics Anonymous and, later, rehab. Nothing worked.

So he did the only thing he could: he took his treatment into his own hands. Searching for a cure for his deadly disease, he discovered baclofen, a muscle relaxant that had proven effective in curing rats addicted to every substance from nicotine and alcohol to cocaine and heroin. Ameisen prescribed himself the drug and, over a two-year period, experimented with the dosage until he reached a level high enough to leave him free of any craving for alcohol. That was four years ago.

[2]More.

1. <http://www.amazon.com/End-My-Addiction-Olivier-Ameisen/dp/0374140979>

2. <http://www.sciam.com/article.cfm?id=alcoholic-cardiologist-prescribed-experimental-drug>

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Pearl (2008-03-18 08:06:13)

This is so interesting; great article and inspiring. I've been reading a lot about GABA recently in relation to anti-anxiety treatments; it has a decent reputation in Japan where it is primarily known as being a byproduct of sprouted brown rice, is infused into a chocolate candy called Gaba, and readily available in supplement form. I'm taking about 840 mg a day to see what happens. Interesting there would be a drug made that might do the same thing. I suppose that's because it's easy to regulate i.e. reap profits from.

Causalien (2008-03-18 18:17:30)

Seth, I found your site through scientific america's article. I didn't know that there are others like me who are conducting experiments on ourselves. Thanks for making this known to the world and thanks for letting me know that there are other like minded people.

### **Sweet and Ignorant (2008-03-19 09:31)**

[1]Speaking of ignorance, after all this time, [2]we don't understand the effects of artificial sweeteners. Excellent health journalism by Jill Adams. The Shangri-La Diet shows we didn't understand the effects of sugar. (Universally believed to be fattening, even by Gary Taubes, it turns out to be extremely slimming under some conditions.) Which we have been eating even longer.

Thanks to Dave Lull and Andy Pattantyus.

1. <http://www.blog.sethroberts.net/2008/03/17/bear-stearns-and-self-experimentation/>

2. <http://www.latimes.com/features/la-he-sweetener17mar17,0,392117.story?track=ntothtml>

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david (2008-03-19 15:25:29)

Based on SLD, I would expect a 0 cal drink to suppress appetite if taken within a two hour window, but to increase appetite if taken with food (though it should be better than a regular soft drink). Or is there a reason that flavor with no calories, wouldn't break the flavor-calorie connection as well as calories with no flavor? But then by the same logic, I would have expected the rats on the glucose sweetened yogurt to gain a little more weight than the other rats because they had the same flavor with a few more calories. Or perhaps the artificial sweet ends up not being "invisible" in the way sugar water sweet is?

Ronald Pottol (2008-04-02 23:22:15)

From what I have heard, the data is all over the map, and why should each sweetener have the same effects? They don't even taste the same, and how the body handles them is not considered.

## What Beleg Means (2008-03-20 12:54)

A friend living in Holland writes:

I found this word [beleg] in my Dutch/English dictionary today.

Definition 1: to declare martial law. Definition 2: sandwich filling.

huh?

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jan (2008-03-20 15:31:33)

It's really not that difficult at all.... Leggen in Dutch means to put/lay (something). Beleggen means (to put something upon something else beneath it). So "beleg" is all about the something that is put upon/over something else: in Def. 1-Force, in Def. 2 Cheese, ham, marmelade, etc. Helps?

seth (2008-03-20 16:40:54)

thanks, jan

Wouter Lievens (2008-03-31 01:13:56)

"Beleg" is actually a siege when used as a noun. I think the use for martial law is archaic and obscure, at least in Belgium.

Blegging « Shifting Gears (2008-03-31 09:12:42)

[...] A bleg = blog + beg "i.e., using a blog to beg for information. (This is not to be confused with the Dutch beleg "which is either a sandwich filling or the declaration of martial law.)" [...]

## Robin Hanson on Doctors (2008-03-21 08:01)

I am visiting George Mason University. Yesterday, as I was answering email, I heard a class in progress on the other side of the partition by my desk. It was Robin Hanson lecturing about the economics of health care to 20 undergraduates. It was so interesting I ended up listening to about 90 minutes of it. "Do your students know what a great class they're getting?" I asked Robin during a break. "I don't know myself," Robin replied.

I have heard hundreds of professors lecture. I had never heard anything like this. It wasn't the usual stuff. It wasn't the usual stuff made entertaining with cartoons or demonstrations or jokes or war stories. Instead, it was a straight-forward look at how the medical profession operates, and a lot of it was about how it operates to empower doctors, reduce the power of patients, and reduce health care innovation. Robin traced the history of the profession from the 1800s until today. "What separates a trade from a profession?" he asked his class. Professionals have ethics, he said. Doctors devised a code of ethics. At the top was "first, do no harm." What does this mean in practice, he asked his class. If a patient dies, does the doctor feel shame? No. If a patient wants a medical procedure that isn't recommended, does this mean the doctor doesn't do it? Apparently not. In contrast to the remarkable vagueness of "first do no harm" the rest of the doctors' ethics code was quite clear: no practice without a license, no advertising, and so on – each item with clear economic implications.

Robin also discussed how little doctors are supervised. A British doctor managed to kill over 200 people before anyone noticed; he was finally caught only because he forged a will. A nurse at a local hospital was assigned to measure how often doctors wash their hands. They're supposed to always wash their hands but many do not. The nurse did the survey, and, as requested, correlated hand-washing compliance with death rates. It turned out that the doctor who washed his hands the least had the highest death rate. The nurse reported this. The exceptional doctor had her fired.

On and on like this. Several books cover bits of this territory. A Sacred Trust by Richard Harris, very well written, is about how the AMA fought public health legislation. [1]Overtreated by Shannon Brownlee, which Robin assigned, is a recent overview. The nice thing about Robin's critique is that it was very accessible and at the right level of detail – I didn't have to spend 10 hours reading a book to learn what Robin said in 20 minutes – and it was very wide-ranging. During my last visit to GMU, Robin had told me about [2]the RAND study that found groups with different access to health care had the same health. Uh-oh. This was a much broader, more narrative look at same thing – how well is our health care system working? – and was a kind of explanation of the results of the RAND study.

1. [http://www.thehealthcareblog.com/the\\_health\\_care\\_blog/2007/10/qualitypolicy-o.html](http://www.thehealthcareblog.com/the_health_care_blog/2007/10/qualitypolicy-o.html)

2. <http://sciencethatmatters.com/archives/30>

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Robin Hanson (2008-03-21 10:26:21)

Wow - I'm very flattered! :)

Brandon W (2008-03-21 10:52:02)

When I first started in the California Workers' Compensation industry in 1993, I thought the shady people were the attorneys. I now know it is the doctors. In my opinion, somewhere over the last 30 years or so making a really good living as a doctor no longer was enough. Now, many doctors attempt to maximize their earning potential. As soon as that bridge was crossed, healthcare costs exploded and patient care suffered.

lasser83 (2008-03-21 11:11:07)

It is interesting how the AMA is winning the public relations battle. The public is quick to blame everyone in the health care industry, with the exception of the doctors.

Heidi 555 (2008-03-21 16:13:44)

I am in the middle of reading Shannon Brownlee's book "Overtreated" and I highly recommend it. More people need to be made aware of how the medical profession operates. And thus be allowed more conscious choice and freedom in their healthcare decision making process. Perhaps Robin could be persuaded to put a lecture or transcript online.

lasser83 (2008-03-21 17:32:26)

I know Seth Roberts disagrees with this, but I strongly believe the health care industry needs to be run more like a business. There needs to be more transparency with costs and doctor performance. And there desperately needs to be more competition. Screw the AMA and their lawyers, Walmart should be able to open clinics.

seth (2008-03-22 07:46:47)

"I know Seth Roberts disagrees with this." ??? I agree with your suggestions. More transparency with costs and doctor performance and more competition are excellent ideas, well worth testing. I'm for more empowerment of everyone else involved, including nurses, hospital administrators, and especially the rest of us, before and after we get sick. My self-experimentation

was a way of taking my health care into my own hands.

Stephen M (Ethesis) (2008-03-22 13:07:15)

I ended up at a Wal-Mart clinic this last vacation, due to an emergency and it was a seamless experience. I was impressed. BTW, Taubes ought to just write a fiction novel. **White Death** and interleave factoids about medicine with a codebreaker on the run from unknown enemies who turn out to be cardiologists in league with flour and sugar manufacturers ... treat the misfeasance in diet as intentional malfeasance. Makes a much easier way to get across the real problem.

Tom (2008-03-22 13:17:14)

I think Taubes is moving the culture – not as dramatically as with "Big Fat Lie", but perhaps more lastingly. "Good Calories, Bad Calories" is beginning to get into the groundwater.

Stephen M (Ethesis) (2008-03-22 15:39:12)

You are right, consider Curtis' recent diet: *To fix it, she dropped 20 pounds by giving up "fattening" foods that most Americans would consider relatively healthy – like crackers, bread and granola, which have white flour and sugar and are surprisingly high in fat. She hopes American women will learn from her example.* <http://www.people.com/people/article/0,,20185529,00.html>

lasser83 (2008-03-22 19:54:53)

I apologize for misrepresenting Seth Roberts. Looking back it, I think Roberts argued in a previous post that the profit motive should be more limited in health care (wall street shouldn't make all of the decisions on health care). That is much different than what I claimed above.

### **Bryan Caplan on Blogging (2008-03-22 09:15)**

I asked [1]Bryan Caplan what effect his blogging had had. It made [2]his first book a success, he said. Or helped make it a success. He had started blogging about two years before it appeared. Other bloggers wrote about his book as if they knew him. They knew him from [3]his blog.

1. <http://economics.gmu.edu/bcaplan/>

2. [http://www.cato.org/pub\\_display.php?pub\\_id=8262](http://www.cato.org/pub_display.php?pub_id=8262)

3. <http://econlog.econlib.org/>

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bobvis (2008-03-22 11:03:17)

I would not have known who you are except for Tyler Cowen linking to your paper on Marginal Revolution. That led to my reading your paper on self-experimentation, then your blog, and finally your book. None of that would have happened though if the initial paper hadn't been really good. It may be an obvious point, but I think it is worth saying explicitly: blogging (or any kind of marketing) will help an excellent product sell well; it will always be hard to sell trash.

Tim Lundeen (2008-03-22 11:10:01)

Seems very true – I bought his book because of his blog :-)

LemmusLemmus (2008-03-23 07:42:21)

(completely offtopic, feel free to delete) This might interest you: <http://www.clapclap.org/2007/04/hallelujah.html>



## Empowering Patients (2008-03-23 10:24)

Speaking of empowering patients, [1]this is incredibly important.

He clicked on baclofen, and the Web site informed him that nearly 200 patients registered at [2]Patients-LikeMe were taking the drug. He clicked again, and up popped a bold bar graph, sectoring those 200 across a spectrum of dosages. And there it was. Contrary to what his neurologist told him years ago, 10 milligrams wasn't the maximum dose. In fact, it was at the low end of the scale. "They're taking 30, 60, sometimes 80 milligrams" and they're just fine," Small recalls. "So it hits me: I'm not taking nearly enough of this drug." A few days later, Small asked his neurologist to up his dosage. Now Small takes 40 milligrams of baclofen a day. His foot drop isn't cured "there are no miracles in M.S." but he has found that after 14 years, he can walk to his car without sinking into quicksand.

Long ago diabetics did not have access to blood-glucose meters. Doctors resisted this innovation, now considered the greatest advance in the treatment of diabetes since the discovery of insulin.

Thanks to Tyler Cowen.

1. [http://www.nytimes.com/2008/03/23/magazine/23patients-t.html?\\_r=1&sq=thomas%20goetz&st=nyt&scp=1&pagewanted=all](http://www.nytimes.com/2008/03/23/magazine/23patients-t.html?_r=1&sq=thomas%20goetz&st=nyt&scp=1&pagewanted=all)

2. <http://www.patientslikeme.com/>

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beagle (2008-03-23 15:39:18)

On the subject of MS, there are no miracles but apparently great advances - see <http://www.lowdosenaltrexone.org/> Both this and DCA ( <http://www.thedcasite.com/> ) are treatments based on drugs that have been long in use, thus with a well known safety profile, except that they are used in smaller doses and for different uses. And they are both cases in which self-experiment is the norm, because people with either MS or cancer are very willing to experiment and not willing to wait 10 years for the standard process.

## Tyler Cowen on Blogging (2008-03-24 07:10)

"I can say what I really think," said Tyler about blogging a few days ago. Not only that, (a) this truth-speaking is on a topic he cares about, (b) what he says is based on considerable knowledge (what an ignorant person "really thinks" about something isn't helpful), and (c) a lot of people listen. This is a potent mix.

The magic of blogging is that when you start you can tell the truth because no one is listening. With zero audience, it makes sense - it feels good - to tell the truth. If you are an expert like Tyler, this sort of thing is irresistible to readers (economics confidential) so your audience grows. Now it is too late to start censoring yourself; people are reading your blog because you tell the truth.

[1]Tyler's blog.

1. <http://www.marginalrevolution.com/>

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### **What Philip Weiss Really Thinks (2008-03-24 11:44)**

[1]In this case, Weiss says what he really thinks by repeating what someone told him:

She can never bring these ideas up with her Jewish relations, they go haywire. She never talks about these ideas in company.

But Weiss can express them without breaking a sweat. This is amazing.

[2]Tyler Cowen on blogs as truth.

1. <http://www.philipweiss.org/mondoweiss/2008/03/my-dinner-partn.html>

2. <http://www.blog.sethroberts.net/2008/03/24/tyler-cowen-on-blogging/>

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Stephen M (Ethesis) (2008-05-25 19:48:33)

I wonder if he really does bring them up without breaking a sweat? The issues seem too complex and emotional to be so easily discussed.

### **Bryan Caplan on How to Lose Weight (2008-03-25 07:11)**

[1]My self-experimentation inspired [2]Bryan Caplan to do his own self-experiment: Could he lose weight by eating less without discomfort? He did two things:

1. Stopped eating when he wasn't hungry. During a meal he began to pay close attention to how hungry he was. When he stopped being hungry, he stopped eating, even if it meant leaving food on his plate. Before this he rarely left food on his plate. Now it was common.

2. Cut down on his soda consumption. Previously he was drinking at least two cans/day of Coke or IBC Root Beer (both non-diet). He reduced this to one can/day, which he found was enough to keep his energy up.

Bryan is 5' 10". When this started he weighed about 178 pounds. Over 9 months, his weight went down to 155, where it has remained for 9 months. "Is this something I'm willing to do for the rest of my life?" he asks. "Yes."

I'm sure that non-diet soft drinks – primo ditto food – are very fattening but it isn't easy for me to believe that cutting

back on them could cause so much weight loss. Did the don't-eat-when-not-hungry rule also help Bryan lose weight? I don't know of research that answers this question.

1. <http://repositories.cdlib.org/postprints/117/>

2. <http://economics.gmu.edu/bcaplan/>

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david (2008-03-25 08:32:17)

I can believe that he went from 178 to 155 over 9 months doing what he described, but I suspect few people have the discipline to pull it off.

Timothy Beneke (2008-03-25 10:34:58)

I'd be curious what else he was eating; eliminating the ditto food probably helped a lot. One thing is clear to me: it is impossible to lose weight if you eat when you are not hungry; so it is necessary to be aware of your hunger levels when you eat and not go beyond them...

jon (2008-03-25 11:15:22)

Well, from an overly simplistic mathematical standpoint, he lost 80,500 Calories worth of weight in say 270 days, or just under 298 a day. Dropping one can of coke (160 Calories) a day (maybe even more, since he says he was drinking "at least" 2 per day) puts us at 138. Assuming that the meals he stopped eating when he wasn't hungry previously were about 1500 Calories (not sure if this is reasonable, I really don't have a good idea of how many Calories cooked food has), he could drop the remainder of the weight by just eating 10 % less, which seems very reasonable.

jayesh (2008-05-27 12:20:54)

to add a wrinkle to jon's calculation: That 80K is what he cut down from his REQUIREMENT, not consumption. If he was stable at 178 Lbs, they are the same. However, if he was gaining weight when he met Seth, he had to cut down on the excess he was consuming, PLUS the 298 calories he had to cut down. Now assuming most people are gaining weight when they seek help, he needed to cut down on much more than the 10 % you calculated.

## **The Amish and Organic Farming (2008-03-26 07:03)**

One modern invention accepted by Pennsylvania Amish farmers is pesticides: They use horses to pull pesticide dispensers. This may play a part in [1]an increase in birth defects in their community, which are usually explained by inbreeding. (However, large increases over short periods of time are almost always due to environmental changes.) A few years ago, Sally Fallon, head of the [2]Weston A. Price Foundation, was part of a group visiting an Amish farm that had recently become organic (i.e., stop using pesticides). Someone asked the farmer why he had decided to change. Show them, he told his son, who had been standing with his arms behind his back. One of his arms had no forearm. We took that as a sign from God, said the farmer.

1. <http://googolplexus.blogspot.com/2005/06/birth-defects-haunt-amish-people.html>

2. <http://www.westonaprice.org/>

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Matthew (2008-03-27 18:16:33)

Check out photo number 6 here: [http://www.gerdludwig.com/html/stories\\_soviet.html](http://www.gerdludwig.com/html/stories_soviet.html) Caption: These children, all from two city neighborhoods, were born with missing forearms. Many scientists suspect their congenital deformities to be caused by Moscow's bewildering mix of pollutants. Moscow, Russia

### **Assorted Links (2008-03-27 03:35)**

1. [1]Gary Taubes on sleep deprivation and the obesity epidemic.
2. [2]Jane Jacobs on nature and economics (quotes).
3. Long excellent post on [3]entrepreneurial mismanagement.
4. Coronary calcification [4]predicts heart attacks.

Thanks to Dave Lull.

1. <http://www.stevens.edu/csw/cgi-bin/blogs/csw/?p=126>
2. <http://www.salmonpop.com/node/202>
3. <http://blog.pmarca.com/2008/03/the-psychology.html>
4. <http://www.knowledgeofhealth.com/blog/2008/03/cholesterol-does-not-predict-future.html>

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### **Comparison of Strategies for Sustaining Weight Loss (2008-03-27 07:07)**

A recent issue of JAMA has [1]an article titled "Comparison of Strategies for Sustaining Weight Loss: The Weight Loss Maintenance Randomized Controlled Trial". It reports an experiment that compared three ways to keep from regaining weight you've lost.

If you want to lose weight it paints a discouraging picture. It was an very expensive study, 27 authors, five grants. About 1000 subjects. Four years just to collect the data. The whole thing might have taken seven years. Must have cost millions of dollars. Might have cost tens of millions of dollars.

Given the huge expense, surely the subjects got the best possible establishment-approved weight loss advice. They did lose 19 pounds in six months. Here's how the advice was described in the article:

Intervention goals were for participants to reach 180 minutes per week of moderate physical activity (typically walking); reduce caloric intake; adopt the Dietary Approaches to Stop Hypertension dietary pattern . . . and lose approximately 1 to 2 lb per week. Participants were taught to keep food and physical activity self-monitoring records and to calculate caloric intake.

Shades of Marion Nestle's "move more, eat less"! Aside from the DASH "dietary pattern," which was meant to reduce blood pressure, not weight, this advice could have been given fifty years ago. Apparently, those who did the study and those who funded it – who are representative of the larger research establishment, I assume – believe there has been no theoretical or empirical progress since then.

Many fields haven't progressed in 50 years. Fifty years ago,  $2 + 2$  equaled 4. The basic principles of thermodynamics and inorganic chemistry were the same then as they are now. Lack of progress in weight loss advice would be fine if the advice actually worked but the whole study derived from the fact that the advice is poor – the weight loss it produces cannot be sustained.

To help people sustain their weight loss, the study compared three methods: 1. Monthly contact. Usually a 10-minute phone call ("with an interventionist"), every 4th month a hour face-to-face visit. Although the article claims this treatment was "practical," I suspect it is too expensive for widespread use. 2. Encouragement to visit an interactive website. The website helped you set goals, allowed you to graph your results, and had a bulletin board, plus several other features. This was the focus of the whole huge research project: the effect of this website. It could be offered to everyone practically free, except that if the subject didn't log on after email reminders she got a phone call. 3. "A self-directed comparison condition in which participants got minimal intervention [that is, nothing]."

The personal contact condition was slightly better than nothing. By the end of the study, the website was no better than nothing. And nothing was bad. The subjects regained about two-thirds of the lost weight during the maintenance year and, looking at the weight-versus-time graph, were apparently going to regain the rest of the lost weight during the coming year. Subjects in all three conditions continued to regain the lost weight throughout the year of maintenance.

In other words, this exceedingly expensive study could be summed up like this: We tried something new, it didn't work. The abstract didn't face this truth squarely. It concluded: "The majority of individuals who successfully completed an initial behavioral weight loss program maintained a weight below their initial level."

It's a Catch-22: Without a good theory, it's hard to find experimental effects. You're just guessing. Most of what you will try will fail. Without strong experimental effects, it's hard to build a good theory. I was in this situation with regard to early awakening. I had no idea what the cause was. It took me ten years of trying everything I could think of, dozens of possibilities, before I managed to find something that made a difference. From that I managed to build a little bit of a theory, which helped enormously in finding more experimental effects.

The people who did this study had no good theory about weight control. Nothing wrong with that, we all start off ignorant. The website they tested was just the usual common-sense stuff. What's discouraging for anyone who wants to lose weight is how little progress was made for such a huge amount of time and money. If it takes seven years and ten million dollars and a small army of researchers to test one little point in a vast space of possibilities . . . you are unlikely to find anything useful during the lifetime of anyone now alive (or any of their children). The people behind the study also had a poor grasp of experimental design. With 300 people in the website group, it would have been easy to test many website design variations: weight-loss graph (yes or no), bulletin board (yes or no), etc., using factorial or fractional factorial designs. Their study merely showed that one particular website didn't work. They learned nothing about all other possible websites. They might have been able to say: no likely website will work. They can't because the study was badly designed. The study cost something like \$10 million and that was the statistical advice they got!

The huge expense and the lack of progress in the last 50 years go together. The methodological dogmatism [2]I discussed recently has bad consequences. It leads to studies that are more expensive and take longer. The proponents of the methodological rigidity say they are "better" not taking account of the cost: continued ignorance about health. A better research strategy would be to fund and encourage much cheaper ways of testing new ideas.

1. <http://jama.ama-assn.org/cgi/content/abstract/299/10/1139?ct>
2. <http://www.blog.sethroberts.net/2008/03/12/twisted-skepticism/>

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Tom (2008-03-27 07:32:42)

The writing of abstracts that diverge from the findings of the paper itself, while common, is criminal. Rather than a worthless study that cost \$10mm, we are left with one that actively spreads disinformation.

michael vassar (2008-03-27 08:20:08)

Agreed with Tom. Seth, maybe you should write a book on experimental methodology and design. I hope you are somewhat familiar with Bayesian Statistics. It would be pretty essential for such a task but you might be able to do it in collaboration with someone else who is familiar.

larry (2008-03-27 10:09:30)

Speaking of dogmatism, the recent flap over tobacco companies funding lung cancer research seems odd to me. In the New York Times, the editor of JAMA says flatly that she would never publish ANY lung cancer study if the author had accepted funding from a tobacco company. This prohibition is obviously irrational and seems more related to politics than to good science. Tobacco companies share with the public an interest in finding more effective treatments for lung cancer, if only to make their products less harmful to customers. No mention was made of any similar bar on authors accepting funding from pharmaceutical companies, despite their potential interest in study outcomes. [http://www.nytimes.com/2008/03/26/health/research/26lung.html?\\_r=1&st=cse&sq=tobacco&scp=1&oref=slogin](http://www.nytimes.com/2008/03/26/health/research/26lung.html?_r=1&st=cse&sq=tobacco&scp=1&oref=slogin)

LemmusLemmus (2008-03-27 10:21:53)

Michael, the stuff Seth complains about is pretty basic; I should think that there are lots of books that could have told the researchers and the funding agencies what the problem with their design was - if those people would have read them. In case I'm wrong, Andrew Gelman would seem to be a natural choice for a co-author who knows lots about Bayesian ideas as well as Seth.

Lancaster (2008-04-02 15:41:37)

The other "Seth" comes up with a good illustration of this from a completely different field of endeavor: [http://sethgodin.typepad.com/seths\\_blog/2008/04/which-comes-fir.html](http://sethgodin.typepad.com/seths_blog/2008/04/which-comes-fir.html)

Vic (2008-07-07 14:53:56)

Considering the magnitude of the problem, only miniscule resources have been devoted to research on weight loss techniques. Fast food companies spend billions every year promoting their products compared to a few million a year from NIH to study obesity. Do you think that long-term weight loss is important? This was the first randomized trial to systematically compare behavioral weight loss maintenance strategies with more than one year of follow-up. The blog writer asserts that only minimal weight loss occurred, but that is not the case. 2/3 of the participants in the first six months of the trial lost 4kg or more. That is enough weight loss to show improvements in blood pressure and glycemic control. Similar amounts of weight loss in the Diabetes Prevention Program (DPP) resulted in significant reduction in the risk of becoming diabetic.

seth (2008-07-07 17:28:22)

"The blog writer asserts that only minimal weight loss occurred." No, I wrote "They did lose 19 pounds in six months." I would like to hear someone defend this study. I think \$10 million should have bought a more sophisticated experimental design. Vic, do you disagree?

Sherylle Grace Francia (2009-12-07 17:08:32)

Have you seen what your site looks like with safari? It looks a bit funky on mine. Is it just me or?

seth (2009-12-07 18:00:05)

no I haven't seen what it looks like with Safari. So I can't answer your question. Thanks for pointing it out.

## **Cramps and Self-Experimentation (2008-03-28 06:12)**

Does too little potassium cause cramps? [1]Quite possibly:

Dr. Stephen Liggett, a professor of medicine and physiology at the University of Maryland, . . . got terrible cramps in his calf during yoga. The culprit, he decided, was the drugs he takes for asthma, which can diminish the body's supply of potassium. He knew that potassium is sold over the counter. But because high levels of potassium can be dangerous, store-bought potassium supplements are not very strong. . . . Before he does yoga, he measures the potassium levels in his blood before and after taking what he describes as a hefty dose of over-the-counter supplement. Then he calculates how much additional potassium he thinks he needs, securing it from concentrated potassium tablets from his research lab – how much he declined to say."I didn't want to drink two gallons of Gatorade," Dr. Liggett explained. He hasn't had cramps since he began "preloading," as he calls it, with potassium. But, he said, "I haven't done a controlled trial."

Thanks to Evelyn Mitchell.

Addendum. Someone commented that the potassium/cramps connection is widely known. And he or she is right. No wonder Dr. Liggett didn't do a "controlled trial".

1. <http://query.nytimes.com/gst/fullpage.html?res=9F00E2D7173BF937A25751C0A96E9C8B63&sec=&spon=&pagewanted=all>

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Stacey (2008-03-28 12:18:46)

Any pregnant woman will confirm this is true. With both of my pregnancies, I experienced horrible leg cramps/charlie horses once I hit the 3rd trimester. By that point in the pregnancy, the body is pretty much at its limit and potassium is depleted quickly. To remedy this, I ate a banana before bed every night. On the nights I did that, no cramps. The nights I skipped my banana(s), I woke up with horrible charlie horses and cramps. Proof enough for me!

August (2008-03-28 13:26:50)

I thought this was established science. I take potassium supplements whenever I do something I suspect will diminish my blood levels, and I regularly include bananas in my diet for this very reason. Recently, I've added B-12 supplements too after some searching on the internet.

## Human Subjects Research at Drexel University (2008-03-29 02:37)

I am visiting Philadelphia. Yesterday I learned that if you want to do human subjects research at Drexel University you must:

1. Include indemnification language in the consent form. The subject must promise to not sue Drexel no matter what happens. This is a bluff: You cannot sign away your ability to sue. Of course this requirement leaves subjects more vulnerable, not less, the usual purpose of consent forms. Shades of [1]twisted skepticism.
2. Never contact subjects via email.
3. Never advertise your research on the web.
4. Never contact subjects who have been in a previous experiment.

The Drexel IRB (Institutional Review Board) will never approve any study that involves giving any drug to a non-patient. This means the very important [2]studies by David Healy that involved giving Prozac to ordinary (non-depressed) people – some of whom became suicidal – wouldn't be possible.

I suppose it's no surprise that Drexel IRB members, such as literature professors, criticize research designs. In an NPR piece, [3]a former IRB member boasted about the accomplishments of her membership, which included correcting faulty designs. At UC Berkeley a few years ago, I submitted to the animal research IRB a proposal to test with rats a key observation behind the Shangri-La Diet: Drinking sugar water caused me to lose weight. The proposal was turned down: It couldn't possibly be true that sugar water can cause weight loss, said the IRB. Testing this idea was a waste of time.

[4]IRB Watch. [5]Earlier post about IRBs.

1. <http://www.blog.sethroberts.net/2008/03/12/twisted-skepticism/>
2. <http://search.barnesandnoble.com/Let-Them-Eat-Prozac/David-Healy/e/9780814736692>
3. <http://www.npr.org/templates/story/story.php?storyId=5358288>
4. <http://home.earthlink.net/~irbwatch/>
5. <http://www.blog.sethroberts.net/2007/08/13/the-troubles-with-irbs/>

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LemmusLemmus (2008-03-29 09:35:50)

This is a very extreme example, and I can't even guess the reasoning behind points 2-4. But one hears these kinds of things about American IRBs all of the time. I wonder: Why is it in a University's interest to sabotage its own researchers? It just doesn't make any sense at all. Anyone?

seth (2008-03-29 09:47:02)

Why does this happen? Because lawyers for Drexel want to prevent Drexel from being sued. They exert far more power than the researchers.

LemmusLemmus (2008-03-29 10:18:18)

Seth, that *does* make sense. Reminds me of other stories I hear from the US - doctors performing useless medical tests just



to be on the safe side, companies having their products come with hilarious warning labels ("Remove child before folding stroller!") and the like. It seems that American tort law needs some serious overhaul.

Andrew Gelman (2008-03-29 13:54:19)

I probably shouldn't admit this, but I've forgotten to remove child before folding stroller. Many times, in fact.

LemmusLemmus (2008-03-30 00:17:51)

Andrew, we'll take you to the cleaners!

Stephen M (Ethesis) (2008-03-31 06:19:30)

"indemnification language" In many states you can give up your right to sue. Indemnification language, however, is a contract by you to pay for their cost to defend against your lawsuit and to pay them for any damages they have to pay out as the result of your suit (or someone suing through you – e.g. your health insurance company who would have a right of indemnification). That is much stronger than a mere waiver. Just FYI. Too bad about the rat study being nixed. Wonder what it would cost to have it funded by private donors?

## **Blood Sugar Measurements? (2008-03-29 03:16)**

Speaking of [1]blegs, Howard Wainer, [2]a renowned statistician at the National Board of Medical Examiners, is looking for sets of blood sugar measurements in Excel format. The ideal set would be measurements six or more times per day for several months. He is writing a paper about better ways to analyze such measurements, which are commonly made by diabetics and persons at risk for diabetes. He has collected such measurements himself; he wants to see how well the methods he developed using data from himself work with data from someone else. You can reach him at hwainer at nmbe dot org.

I told Howard: You will be the first statistician (a) to use your professional skills to improve your own life and (b) publish the results. (Which is what I did with [3]my self-experimentation.) Lots of statisticians must have done something similar, said Howard. For example? I asked. He mentioned John Tukey making traffic measurements to help his wife push a change in traffic rules. However, Tukey didn't publish the results and the relevance to Tukey's own life was tiny. If anyone reading this knows of an example, please let me know. Statistics is hundreds of years old; there are thousands of professional statisticians. It seems strange that it has taken this long for such a thing to happen but that seems to be the case.

1. <http://feeds.feedburner.com/~r/FreakonomicsBlog/~3/259750706/>

2. <http://press.princeton.edu/titles/7820.html>

3. <http://repositories.cdlib.org/postprints/117/>

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Seth's blog » Blog Archive » Buried Treasure (part 1) (2008-04-01 08:41:42)

[...] Blood Sugar Measurements? [...]

## **I'm Speaking at Penn (2008-03-29 07:05)**

This coming Monday (March 31), at noon, I'm giving a talk at the University of Pennsylvania titled "The Value of Self-Experimentation, with Examples from the Study of Omega-3 and Brain Function." The talk will be in the Large Conference Room of the Institute for Research in Cognitive Science, Suite 400A, 3401 Walnut Street.

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Kevin C (2008-04-01 18:24:57)

'Walnut' street? Coincidence? I don't think so.

## **Praying With Lior and Labors of Love (2008-03-30 04:48)**

Last night I saw [1]Praying with Lior, a documentary about the bar mitzvah of a boy with Down's Syndrome. Easily the best movie I've seen this year, better than There Will Be Blood, Mary Poppins (leaving aside the great song [2]Feed the Birds), Blade Runner, and several documentaries, for example. I asked a friend why she liked the TV show ER. "It makes you feel happy and sad," she said. Praying for Lior made me sad again and again, which is part of why I liked it so much. I also liked seeing someone with a handicap struggle and succeed; Praying with Lior has a lot in common with My Left Foot, one of my favorite movies.

The person responsible for the film is Ilana Tractman, [3]who met Lior at a religious retreat. Her day job is making television documentaries. She got the money to make the film – from a large number of foundations and people – while she was making it. As far as I can tell, she had almost total freedom, in contrast to her TV documentaries. I use the term superhobby to describe activities that combine the skills and resources of a professional with the freedom of a hobbyist. All of the blogs I read regularly are superhobbies. My self-experimentation was (and is) a superhobby. Writing open-source software is a superhobby. Most books are superhobbies. When a superhobby produces art, we call the product a labor of love. As we get richer and richer – thus can afford more freedom – and skills and knowledge improve, these labors of love become better, more possible, and more common.

The Praying with Lior [4]website revealed to me that the film had/has a "mission": "to change the way people with disabilities are perceived and received by faith communities." Perhaps that is another reason why such a good film was made: This purpose helped it get funding and other help (a lot of people worked on it). And maybe it was part of why Ms. Tractman began and continued a difficult and uncertain project.

1. <http://www.prayingwithlior.com/>

2. [http://www.youtube.com/watch?v=\\_VwU\\_oS2ErQ](http://www.youtube.com/watch?v=_VwU_oS2ErQ)

3. [http://dcist.com/2008/03/28/dcist\\_interview\\_24.php](http://dcist.com/2008/03/28/dcist_interview_24.php)

4. <http://www.prayingwithlior.com/>

## 3.4 April

### Buried Treasure (part 1) (2008-04-01 08:38)

Not long ago, Howard Wainer, the statistician I [1]mentioned recently, learned that his blood sugar was too high. His doctor told him to lose weight or risk losing his sight. He quickly lost about 50 pounds, which put him below 200 pounds. He also started making frequent measurements of his blood sugar, on the order of 6 times per day, with the goal of keeping it low.

It was obvious to him that the conventional (meter-supplied) analysis of these measurements could be improved. The conventional analysis emphasized means. You could get the mean of your last  $n$  (20?) readings, for example. That told you how well you were doing, but didn't help you do better.

Howard, who had written [2]a book about graphical discovery, made a graph: blood sugar versus time. It showed that his measurements could be divided into three parts:

measurement = average + usual variation + outlier (= unusual variation)

Of greatest interest to Howard were the outliers. Most were high. They always happened shortly after he ate unusual food. Before a reading of 170, for example, he had eaten a pretzel. He had not realized a pretzel could do this. He stopped eating pretzels.

When Howard told me this, it was like a door had opened a tiny crack. Recently a deep-sea treasure-hunting company found a shipwreck off the coast of Spain. [3]They named it Black Swan, apparently a reference to Nassim Taleb's book. Shipwrecks are black swans on the ocean floor; black-swan weather had sunk the ship. For Howard, outliers were another kind of buried treasure: the key to saving his sight.

It isn't just Howard. Outliers are buried treasure in all science. They are a source of new ideas, especially the new ideas that lead to whole new theories. The Shangri-La Diet derived from an outlier: Unusually low hunger in Paris. My self-experimentation about faces and mood started with an outlier: One morning I felt remarkably good. My discovery that standing improved my sleep started with a series of days when I slept unusually well.

Modern statistics began a hundred years ago with the  $t$  test and the analysis of variance and  $p$  values – very useful tools. Almost all scientists use them or their descendants. Almost all statistics professors devote themselves to improvements along these lines. However, conventional statistical methods, the  $t$  test and so on, deal only with usual variance. (Exploratory data analysis is still unconventional.) As Taleb has emphasized, outliers remain not studied, not understood, and, especially, not exploited.

1. <http://www.blog.sethroberts.net/2008/03/29/blood-sugar-measurements/>

2. <http://books.google.com/books?id=ux1Yf0FFVx4C&dq=%22howard+wainer%22+graphical+discovery&pg=PP1&ots=oEYpVLtI7&sig=KHlmytmkwbq8Rcr2LqUYluFec&hl=en&prev=http://www.google.com/search?q=%22howard+wainer%22+graphical+discovery&ie=utf-8&oe=utf-8&rls=org.mozilla:en-US:official&client=firefox-a&sa=X&oi=print&ct=title&cad=one-book-with-thumbnail>

3. [http://www.newyorker.com/reporting/2008/04/07/080407fa\\_fact\\_colapinto](http://www.newyorker.com/reporting/2008/04/07/080407fa_fact_colapinto)

Howard Wainer (2008-04-01 10:51:09)

I didn't lose the weight first and spot blood sugar outliers afterwards. They happened at the same time and were related. Losing weight is hard. It is hard because if you weigh yourself in the morning and then eat a double bacon cheesburger, extra fries and a thick shake and weigh yourself again, nothing has changed. Similarly, if you eat very carefully all day and then weigh yourself again at night, nothing has changed. So there is no immediate feedback to reward good behavior or discourage bad. Blood sugar is fast – if you eat something you shouldn't you find out immediately. And the long-term consequences of poor eating habits are dire (you go blind and your legs get amputated before dying prematurely (see Jackie Robinson as one very sad example). By controlling blood sugar I was forced into healthy eating (a Hobbitt diet – eating 5-6 small meals a day) and the weight fell away at a bit over 1/2 lb/day. I went from 240 to 191 in a few months. Unfortunately, despite maintaining a very vigorous exercise regime, I lost muscle as well as fat. Now, a year later I am still between 190 and 195 and blood sugar is well controlled. And although I can do as many push-ups now as I could before, I can't bench press what I used to.

Tony (2008-04-01 11:40:54)

Seth: I love the metaphor of outliers as buried treasure. The problem is to distinguish between junk that you dig up and really valuable stuff. Howard: Immediate feedback is very important in game design (players get frustrated and give up if they can't figure out what the effects of their actions are). I think Seth has actually blogged a bit about the concept before ... Putting these sort of situations in place in everyday "games" is one element that increases motivation. Runners often use a similar sort of approach by measuring their heartbeat rate.

Tim Lundeen (2008-04-01 14:33:09)

Lower blood sugar after eating familiar food is the result of a conditioned compensatory response, the "cephalic-phase insulin release". Your body learns to pre-compensate for familiar food to reduce both insulin and blood glucose exposure. Interesting that the unlearned state would have such significantly higher glucose levels. Maybe this is why my major indulgence, a very small hot-fudge sundae after dinner, doesn't have more of an effect on my blood sugar in the morning :-). Howard, you might want to try eating less-frequent meals with lower carbohydrates. What I've found is that eating less often moves my body's adjustment down into the normal range, because it takes my metabolism a long time to bring my blood sugar down. So now, instead of being adjusted to blood sugar of 90-100, I'm adjusted to 75-85. In this range, you should lose more weight, have more energy, and can skip meals without feeling bad.

Varangy (2008-04-01 16:14:34)

@Howard Wainer You may want to check out two fascinating blogs. They might be able to assist you with your weight loss, retaining your sight (None of my business, but I assume this is diabetes related) and general health. Both are well-written, somewhat out of the mainstream thought, for an educated audience and employ statistics and logical reasoning in their arguments. 1) Art de Vany's Blog on Evolutionary Fitness and Diet - <http://www.arthurdevany.com/> Excerpt from an interview on [1]T-Nation **Charles:** *I don't know if I read in the first chapter of your book on in the blog, you said that when you were in your 40's you started making changes in your lifestyle. I wanted to ask you what was the catalyst for those changes and what did you start doing differently?* **Art:** *That's very interesting, because it was probably when my wife developed type-1 diabetes and we moved to California in '84. She had developed it 2 years prior to that. My son had been an infant onset juvenile diabetic at the age of 2, so I began studying metabolism quite intensively, just trying to keep track of his health and keep him healthy. And then having my wife have the same problem develop, obviously it's in her genetic stock on that side of the family, the autoimmune illness.* **Charles:** *Sure.* **Art:** *I, by that time, accumulated a lot of evidence as to what foods elevated what glucose, and began systematically eliminating those, even with my son. But we became more ruthless at it when my wife also developed type-1 diabetes. So, if you just look at the evidence, somebody who can't control their blood sugar adequately, because they don't respond with an insulin response, as do normal people, then what you find is the kinds of foods that I eliminated from the diet were all of the things apparently so heavily criticized for having high glycemic index or high glycemic load. So, that was the beginning of it. And then, I migrated towards a hunter/gatherer model, simply by looking at the evolutionary history and what kinds of foods our ancestors ate.* 2) The Hyperlipid Blog - <http://high-fat-nutrition.blogspot.com/> Written by a man named Peter who is a physiologist and biochemist training. He follows an 80 % fat diet and is constantly trying to prove himself wrong ala Karl Popper. Two posts on diabetes: <http://high-fat-nutrition.blogspot.com/2008/03/diabetes-and-hunger.html> <http://high-fat-nutrition.blogspot.com/2008/03/diabetes-and-cardiac-apoptosis.html> Best of luck.

1. <http://www.t-nation.com/tmagnum/readTopic.do?id=1373291>

Seth's blog » Blog Archive » Buried Treasure (part 2) (2008-04-03 06:10:30)  
[...] Buried Treasure (part 1) [...]

Howard Wainer (2008-09-26 12:16:33)

Seth - two thoughts on outliers. 1. An outlier in statistical jargon is often called a contaminant – as in a contaminated normal distribution. One goal of statistical analysis is to reduce the influence of outliers on the overall estimate. This is typically done by separating outliers from the main body of the data for different treatment. Contaminant is not meant as pejorative. In south Africa good building stone is sometimes contaminated by diamonds. 2. I am reminded of Isaac Asimov's observation that scientific discovery is almost never accompanied by "Eureka." Much more often it is signaled by "that's funny." Hope you are well, H

### **More from Holland (2008-04-02 05:42)**

[1]My friend in Holland wrote again:

Last year, the Dutch Supreme Court ruled that it was OK to have sex with animals, as long as the animals enjoyed it.

She attached a newspaper article in the Hague/Amsterdam Times dated 20 March 2008 that began:

Under a new law being debated by the government, sex with animals will be allowed as long as people don't enjoy it.

It ended:

The Animal Party was mainly disappointed about the fact that the new bill does not refer to the animals' dignity.

1. <http://www.blog.sethroberts.net/2008/03/20/what-beleg-means/>

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Varangy (2008-04-02 16:55:03)

Call me old-fashioned, Victorian, and ridiculously judgmental, but even as a libertarian, isn't condoning sex with animals, er, wrong, for lack of a better word.

## **Bad is Good (2008-04-02 15:03)**

A health study by Japanese researchers has found that people with low levels of LDL cholesterol – often referred to as "bad cholesterol" – are more likely to die than those with higher levels.

[1]More. Thanks to Pearl Alexander.

1. <http://mdn.mainichi.jp/national/news/20080329p2a00m0na021000c.html>

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Varangy (2008-04-02 16:46:26)

Great post. While I am suspicious of all studies, even ones that confirm my POV/biases, I think this study ultimately leads to what I got from Taubes' book and others. We simply do not know if the Lipid Hypothesis is valid, nor if cholesterol levels, or accompanying levels of lipoproteins signal/indicate anything. And if they do, how to interpret them as markers. I suggest this to people at cocktail parties and am always roundly laughed at. No one ever takes me up on my (perhaps Aspergian) offer to provide them with reading materials that may enlighten them. My guess is that we have suffered a lot from the mis-information cascades of the low-fat diet and the lipid hypothesis — and as humans, as long as we remain intellectually arrogant, will continue to in nutrition and other fields.

Aaron Blaisdell (2008-04-03 06:39:15)

I thought ALL people were 100 % likely to die. If you strictly interpret the text above ("A health study by... ... with higher levels"), it suggests there are a bunch of immortals walking around Japan.

## **Buried Treasure (part 2) (2008-04-03 06:10)**

Before the invention of statistical tests, such as the t test, science moved forward. People gathered data, computed averages, drew reasonable conclusions. As far as I can tell, modern ways of analyzing data improved the linkage between data and conclusion because they reduced a big source of noise: How the data were analyzed. Procedures became standardized. Hypothesis testing improved. Hypothesis formation, however, did not improve. Knowing how to do a t test and the philosophy behind it will not help you come up with new ideas. Yet data can be used to generate new ideas, not just test the ones you already have.

Our understanding of outliers is in a kind of pre-t-test era. People use them in an unstructured way. As [1]Howard Wainer's analysis of his blood sugar data indicates, better use of them will improve hypothesis formation. A kind of standardized treatment should help generate ideas, just as the t test and related ideas helped test ideas. Here are some questions I think can be answered:

1. Cause. What causes outliers? It's a step forward to realize that outliers are often caused by other outliers. Howard has found that unusually high blood sugar readings are caused by eating unusual (for him) foods.

2. Inference. I'm fond of saying lightning doesn't strike twice in one place for different reasons. The longer version is if two outliers could have the same explanation, they probably do. I think this principle can be improved.

3. Methodology. To test ideas, you want variation to be low. To generate ideas, you want outlier rate to be high. Howard could make progress in understanding what controls his blood sugar by deliberately testing foods that might produce outliers. In genetics, x-rays and chemical mutagens have been used to increase mutation rates; mutations are outliers. ([2]Discovery of a white-eyed mutant fruit fly led to a wealth of new genetic ideas.) In physics, particle accelerators increase the outlier rate in order to discover new subatomic particles. There are no comparable procedures for psychology. Self-experimentation increased my rate of new ideas because it increased my outlier detection rate. It increased that rate for three reasons: 1. I kept numerical records. 2. I analyzed my data using the same methods as Howard. 3. I did experiments. Travel is like experimentation; there too it helps [3]to keep numerical records and analyze them. The question: What are the basic principles for increasing outlier rate?

[4]Part 1.

1. <http://www.blog.sethroberts.net/2008/04/01/buried-treasure-part-1/>

2. [http://www.genomenewsnetwork.org/resources/timeline/1910\\_Morgan.php](http://www.genomenewsnetwork.org/resources/timeline/1910_Morgan.php)

3. <http://www.blog.sethroberts.net/2007/06/30/science-in-action-omega-3-a-surprise/>

4. <http://www.blog.sethroberts.net/2008/04/01/buried-treasure-part-1/>

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Aaron Blaisdell (2008-04-03 06:43:06)

"There are no comparable procedures for psychology." What about the rorschach test? Granted, I had to stretch all the way to psychoanalytic theory to find an example.

seth (2008-04-03 07:24:55)

Well, Rorschach tests haven't generated any new psychological ideas, as far as I know. But they may be the best possible answer for psychology, as you say.

Varangy (2008-04-03 16:43:15)

*Hypothesis testing improved. Hypothesis formation, however, did not improve. Knowing how to do a t test and the philosophy behind it will not help you come up with new ideas.* Exactly! I have had the misfortune of taking a graduate degree and one of the most irritating aspects of it was the fetishism on hypothesis testing and rather intentional devaluation of hypothesis formation. This resulted in quite a few, extremely intelligent and creative (and subsequently frustrated) people being sidelined and passed over for their (relative) weaknesses in statistical methodology, while their unfairly devalued talents and insights clearly lay in what you call hypothesis formation. I always thought this was a tremendous waste of human capital.

Stephen M (Ethesis) (2008-04-03 18:32:31)

Economists found botulism spores in honey by studying SIDS and diet and data mining. They find a number of things.

## How Things Begin (I Got UGGs!) (2008-04-04 13:44)

Mohamed Ibrahim, the New York schoolteacher who does [1]Behind The Approval Matrix (which I have [2]blogged about) also has a blog called [3]I Got UGGs!. I asked him how the Ugg blog began. Here's what he said:

I have a fetish about Uggs. Whenever I see a girl wearing Uggs, it's the sexiest thing in the world to me. It drives me crazy. You know how they say "do what you love and the money will come later"? I read an article in Time about bloggers and blogging. One of the blogs they profiled was by two ladies who post pictures of kittens and cats and write little blurbs about them. This gave me an idea: I'll do the same thing about girls in Ugg boots. They got \$5-6000/month from ads and all they do is post pics and write blurbs about them. I'll take pics of girls wearing Uggs. Not only will I enjoy it but maybe I can also make some money. I went to Best Buy, got the cheapest digital camera, and hit the streets. The first place I went was Times Square. Initially I would approach people and ask them if I could take their pic for the blog. I discovered later it's better to just take the pic and put it up. That's what I do now. Now I get people sending me pics - they take a picture of their friends or they send me pics of celebrities. We're getting over 500 page views/day. It's only been about 4 months.

The [4]Gawker link Mohamed got by telling them some crazy guy was taking Ugg pics and blogging about it.

1. <http://www.behindtheapprovalmatrix.com/>
2. <http://www.blog.sethroberts.net/2008/02/18/the-greatness-of-behind-the-approval-matrix/>
3. <http://www.igotuggs.com/>
4. <http://gawker.com/361318/blogs-keeping-uggs-alive-sadly>

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priapism (2008-04-04 20:55:07)  
Hysterical. People WILL pay for anything.

sds (2009-10-14 22:23:52)  
The Gawker link Mohamed got by telling them some crazy guy was taking Ugg pics and blogging about it.

Rc Auto (2011-11-10 14:53:34)  
People are like lemmings.

## **Interview with Kamran Nazeer (part 1) (2008-04-05 06:54)**

[1]Send in the Idiots: Stories from the Other Side of Autism (2006) by Kamran Nazeer is [2]one of my favorite books. Nazeer works as a policy advisor to the British government. When I found a reason to interview him, I took it.

ROBERTS At a conference of experimental psychologists, I heard about some test results that found that autistic kids did better than non-autistic kids. The researchers were expecting the opposite. They expected the autistic kids to have deficits in processing of faces, how well they can perceive faces. But they found the opposite. That's what prompts this. I spoke to the researcher afterwards, and he said it wasn't the only example. Another researcher has several findings along these lines and parents are fond of the idea that autistic kids have a different set of skills.

NAZEER I'm not convinced that we need to think of these things as polar opposites. I think what's going on is that autistic kids have equal or even higher attention to particular details, or particular kinds of details. There can be two issues; one issue is sometimes that their sense of hierarchy about sense data is different from what we regard as normal. So it may be that autistic kids will regard particular sense data as being more interesting to them



than sense data that might be more socially useful. So they might well pick up just as much, or more, information about people's faces, but it's just not the thing that they focus on. They might focus on something completely different instead. So then, it's a question of how do you change the kid's focus so that the data that all the time they've been taking in is the data that they actually use to form judgments about the world. So I think that that's one thing that happens. I think the other thing that often happens is that, because of language difficulties, even though autistic kids might be picking up equal or higher levels of sense data, they're just not able to articulate to other people, and hence probably not even that well to themselves, what it is that they're perceiving.

ROBERTS You're saying that autistic kids favor some kinds of sense data over other kinds of sense data?

NAZEER Right. To give you an example that I use in the book, which is about Elizabeth, who you might remember is the only girl that I write about. There is this scene in which her parents took her along to a bus stop. It's not that she wouldn't notice that there was a bus coming, and it's not that she wouldn't notice what the number on the bus was; it's that she would also notice who in the queue for the bus had their nails cut, or what color people's sneakers were, or if there was a missing apostrophe in the advertisement on the side of the bus. So, you know, it's not that she was missing out on the crucial piece of sense data, which is "where is this bus going?", but she was not realizing that this was the most important piece of sense data for her at that time, to be paying attention to. So in that sense, she had a different hierarchy.

ROBERTS So you're saying that for other people, where the bus is going would be higher on their hierarchy?

NAZEER Exactly. That's because the non-autistic have a better social sense of what the relevant piece of sense data is at any particular time, whereas an autistic person might have a different hierarchy, or might have no hierarchy at all of sense data. That's what often happens with autistic people when they feel overwhelmed by their surroundings. It's because they're not forming a hierarchy of sense data, it's because they're taking on all the sense data, it's random, and as you can imagine, we're always overwhelmed by sense data. But the reason why we don't feel overwhelmed is because we have a hierarchy for sorting them out. So, when we're sitting and reading the newspaper, we realize that it's the words on the page that are at the top of the hierarchy. When we're standing at a bus stop, we realize that it's whether or not the bus is coming in, what the destination at the front of the bus is that's at the top of the hierarchy. I think that what often happens with autistic people is that they don't hierarchize. Either they don't hierarchize in the same way, or they don't hierarchize at all?

ROBERTS What does it mean, to not hierarchize at all?

NAZEER It means that you just feel overwhelmed by what you see around you, and so you don't know, what if it is useful to you? And so you don't know, what if it is useful to you, so you experience it all as being sort of alien and unsettling. That, I think, is why a lot of autistic people display what I and many other people have called desire for local coherence. So because they're not forming a hierarchy of sense data, which ultimately is the only way in which we can stop ourselves from feeling overwhelmed in the world, what they do instead, instead of forming the hierarchy, they ache for some simple way of bringing order to the chaos around them. So rather than sorting out the sense data, they just pick one thing to focus on, so they pick a pen, or the edge of the table, or they start rocking, or they walk on the soles of their feet. So they take one random thing and put it on the top of the hierarchy, so that

everything else thatâ€™s under it doesnâ€™t overwhelm them any more.

1. <http://www.amazon.com/Send-Idiots-Stories-Other-Autism/dp/1582346208/ref=sethrobertand-20>

2. <http://www.blog.sethroberts.net/2006/09/06/four-great-modern-books-part-1-description/>

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a. nonymous (2008-04-05 15:58:16)

I find your habit of identifying yourself only as "Interviewer" in the interviews you post here totally contradictory to the rest of your work. Isn't part of what you're saying/showing that you can't isolate the scientist from the experiment? Shouldn't you be more up front about the fact that it's \*you\* and not some random person doing the interviewing?

seth (2008-04-06 06:43:08)

You might be right. Let me think about it. The interviews are transcribed by someone else – she chose "interviewer". I found it amusing so I left it that way. I like to think that no one could misunderstand who "interviewer" is.

Seth's blog » Blog Archive » Interview with Kamran Nazeer (part 2) (2008-04-06 07:35:26)

[...] Interview with Kamran Nazeer (part 1) [...]

## **Interview with Kamran Nazeer (part 2) (2008-04-06 07:35)**

ROBERTS I got the sense reading your book that the autistic persons got more pleasure from focusing on small details of things. Those details were comforting. Like a favorite piece of music, or whatever; anything you enjoy is comforting. So when they were uncomfortable, they would go to an unusual place. If somebody likes small details, theyâ€™ll pay more attention to them, simple as that. Because if you donâ€™t youâ€™ll do something else with your attention.

NAZEER We get taught that itâ€™s more socially useful not to focus on the small details. Sometimes we get taught that in explicit ways, or sometimes thatâ€™s just the way things are. So people forget about small details, because theyâ€™re focusing on something thatâ€™s more socially useful.

ROBERTS When you say focus on the small details, you gave an example. The opposite of a small detail is where the bus is going; thatâ€™s sort of a big thing. So whatâ€™s another example thatâ€™s opposite of the small detail?

NAZEER Iâ€™ll give you an example of Craig, whoâ€™s the speechwriter, also in the book. Craig will often find that heâ€™s sitting in a meeting and heâ€™s supposed to be focusing on the political issue or the speech that is the topic of discussion at that meeting. That is the thing that heâ€™s supposed to be focusing on professionally. But heâ€™ll often find difficult is that heâ€™s noticing lots and lots of other small details, as well. He tries very hard to keep his focus where it ought to be, but because he keeps noticing these other small details, they can drag him away from where heâ€™s supposed to be focusing.

ROBERTS Details of the meeting, or details of the argument, or what?

NAZEER It could be that. So he could be seeing a level of nuance that actually isnâ€™t all that useful. Because sometimes when youâ€™re in a meeting, you have to ignore certain nuances to get the bigger points. Or it could just be

sometimes that heâ€™s focusing on the fact that somebodyâ€™s missed a button when they buttoned up their shirt, or that their cufflinks are unusual, or that theyâ€™re flicking their pen. He might notice and focus on things that are completely irrelevant to the conversation heâ€™s supposed to be having.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2008/04/11/interview-with-kamran-nazeer-directory/>

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Seth's blog » Blog Archive » Interview with Kamran Nazeer (directory) (2008-04-11 06:38:06)  
[...] Interview with Kamran Nazeer (part 2) [...]

### **Tools Not Rules (2008-04-07 05:09)**

I am fascinated by how human nature interferes with science. This [1]article in the Wall Street Journal helped me understand one way this happens.

A civility campaign in Howard County, Maryland, centered on a book called *Choosing Civility: The Twenty-five Rules of Considerate Conduct* (2002) by [2]P. M. Forni, a John Hopkins professor of romance languages. Rule 7, for example, is "don't speak ill." The book bothered Heather Kirk-Davidoff, a pastor. She visited Professor Forni. "Jesus didn't say, 'I am the rule,' right?" she told him. Professor Forni agreed. "Yes, Jesus said, 'I am the way.' If I had met you before, probably I would have used way. The 25 Ways of Being Considerate and Kind," he said.

Hmm. The way versus the rule: similar. The way versus a way: big difference. Neither the professor nor the pastor noted that a better title would omit the: 25 Ways of Being...

The writer of a book about civility – in that very book – fails to grasp a big point about civility. The pastor who points out the problem makes a similar omission. Our tendency to turn tools into rules must be strong.

If you invent a useful tool, you have made the world a better place. If you denigrate non-users, the improvement is less obvious. Randomization, for example, is a tool. Many scientists treat it like a rule. Were I to write a book on scientific method, it would contain a paragraph beginning: "A few years ago, the head librarian of the Howard County, Maryland, county library bought 2300 copies of a book called . . ."

[3]Twisted skepticism.

1. <http://online.wsj.com/article/SB120735250203191297.html>

2. <http://web.jhu.edu/civility>

3. <http://www.blog.sethroberts.net/2008/03/12/twisted-skepticism/>

Andrew Gelman (2008-04-07 08:45:25)

A pluralist is a dogmatist who's been mugged by conformity.

### **The Robot Diet (2008-04-07 06:46)**

The robot works by talking to you about how much you're eating and exercising. It helps people stick to their diets by verbally asking dieters to input data about what they ate on a touch screen. The robot then provides encouragement and advice.

[1]More. [2]Social facilitation effects are powerful. For example, if you are riding a bike with someone else you will be able to go faster and farther than if you ride alone. Next, perhaps: A robot that judges your appearance (praise only!).

Thanks to Dave Lull.

1. [http://www.wptv.com/content/health/mb/story.aspx?content\\_id=9d5f01aa-aeff-4549-9e9d-79912a0b794f](http://www.wptv.com/content/health/mb/story.aspx?content_id=9d5f01aa-aeff-4549-9e9d-79912a0b794f)

2. [http://en.wikipedia.org/wiki/Social\\_facilitation](http://en.wikipedia.org/wiki/Social_facilitation)

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### **My Theory of Human Evolution (frugal materials) (2008-04-08 05:23)**

What's art? The [1]2008 Whitney Biennial at the Whitney Museum of American Art provides an answer – whatever the work of the eighty-odd artists has in common.

The exhibit included some videos, documentaries (Spike Lee), photographs, drawings, and paintings. Most of the work, however, was everyday stuff – what artist [2]Adam Putnam called "frugal materials" – used in unusual ways. Here are some examples:

- [3]bird excrement (Charles Long)
- [4]automotive paint (Daniel Martinez)
- [5]styrofoam and resin (Jedediah Caesar)
- [6]CDs and styrofoam balls (Jason Rhoades)
- [7]drywall (Lisa Sigal)
- [8]rebar and chain-link fence (Ruben Ochoa)
- printed matter (many)

Collages (e.g., [9]Rita Ackermann) are the school-art-project example of this sort of thing. The goals of the artists seemed to be about 20 % beauty, 30 % emotional impact, 50 % novelty. The Biennial also included old technologies used in new ways: [10]Matt Mullican made drawings while hypnotized and then did similar drawings while not hypnotized. An outpost of [11]Neighborhood Public Radio allowed anyone to be on the air for an hour.

[12]As I've said, I believe the tendencies behind art evolved because they generated material-science research. The tendency to make art caused some people to make new things that required control of materials but weren't obviously useful; enjoyment of art meant that others would trade for what they'd made, allowing artists to spend more time making art. A premium for novelty kept artists on their toes; it pushed them to find new ways of making things. Wandering around the Whitney Biennial, these ideas seemed easy to believe.

1. <http://whitney.org/www/2008biennial/www/?section=home>
2. [http://whitney.org/www/2008biennial/www/?section=artists&page=artist\\_putnam](http://whitney.org/www/2008biennial/www/?section=artists&page=artist_putnam)
3. [http://whitney.org/www/2008biennial/www/?section=artists&page=artist\\_long](http://whitney.org/www/2008biennial/www/?section=artists&page=artist_long)
4. [http://whitney.org/www/2008biennial/www/?section=artists&page=artist\\_martinez](http://whitney.org/www/2008biennial/www/?section=artists&page=artist_martinez)
5. [http://whitney.org/www/2008biennial/www/?section=artists&page=artist\\_caesar](http://whitney.org/www/2008biennial/www/?section=artists&page=artist_caesar)
6. [http://whitney.org/www/2008biennial/www/?section=artists&page=artist\\_rhoades](http://whitney.org/www/2008biennial/www/?section=artists&page=artist_rhoades)
7. [http://whitney.org/www/2008biennial/www/?section=artists&page=artist\\_sigal](http://whitney.org/www/2008biennial/www/?section=artists&page=artist_sigal)
8. [http://whitney.org/www/2008biennial/www/?section=artists&page=artist\\_ochoa](http://whitney.org/www/2008biennial/www/?section=artists&page=artist_ochoa)
9. [http://whitney.org/www/2008biennial/www/?section=artists&page=artist\\_ackermann](http://whitney.org/www/2008biennial/www/?section=artists&page=artist_ackermann)
10. [http://whitney.org/www/2008biennial/www/?section=artists&page=artist\\_mullican](http://whitney.org/www/2008biennial/www/?section=artists&page=artist_mullican)
11. [http://whitney.org/www/2008biennial/www/?section=artists&page=artist\\_npr](http://whitney.org/www/2008biennial/www/?section=artists&page=artist_npr)
12. <http://www.blog.sethroberts.net/2007/07/21/my-theory-of-human-evolution-red-stained-glass-edition/>

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Mike Kenny (2008-04-08 15:34:02)

I can see beauty as being obviously valuable, and novelty as useful research. What's your take on why emotional impact is a goal of the art? Are the artists trying to show empathy and therefore their value, or learn about the psyche by creating something that stimulates reactions? Part of me wants to say artists might be precursors to psychologists. Maybe market researchers too? :)

Seth's blog » Blog Archive » My Theory of Human Evolution (directory) (2008-04-11 23:47:49)  
[...] My Theory of Human Evolution (frugal materials) [...]

## Andrew Gelman on Blogging (part 4) (2008-04-08 23:39)

My friend [1]Andrew is busy with many projects. Doing all that stuff must make it hard to do [2]your blog, I said. He said the opposite was true: Blogging is a form of procrastination.

[3]Part 1. [4]Part 2. [5]Part 3.

1. <http://www.stat.columbia.edu/~gelman/>
2. <http://www.stat.columbia.edu/~gelman/blog/>
3. <http://www.blog.sethroberts.net/2007/05/18/andrew-gelman-on-blogging-part-1-of-3/>

4. <http://www.blog.sethroberts.net/2007/05/19/andrew-gelman-on-blogging-part-2-of-3/>
5. <http://www.blog.sethroberts.net/2007/05/23/andrew-gelman-on-blogging-part-3-of-3/>

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nathan (2008-04-09 06:53:44)

i agree, and i happen to procrastinate a lot.

### **In the Google Cafeteria (2008-04-09 07:20)**

I recently had lunch at the Google New York cafeteria with [1]Tom Ritchford, whom I met at a Toronto hostel while helping Sarah Kapoor make [2]a CBC segment about the Shangri-La Diet. No company personifies the Internet more than Google. Eating the wonderful free food at their cafeteria was like reading The New Yorker online. A this-can't-be-happening experience.

Most successful dish: Orange Marmalade Whipped Cream.

Least successful: Thyme Nectarine Water.

Tom works at home three days a week partly to avoid the cafeteria, which caused him to steadily gain weight.

1. <http://groups.google.com/group/tomr/topics>

2. <http://www.youtube.com/watch?v=hR33LNwgGIc>

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### **Self-Experimentation and Murphy's Law (2008-04-09 10:45)**

While studying Air Force records [in the 1940s], Dr John Stapp realized that simple, everyday car accidents â€” not plane crashes â€” were responsible for a huge proportion of pilots' deaths. Dr Stapp decided to test the limits of humans' ability to withstand an impact to demonstrate the need for proper restraints in airplanes and in cars. One of the tests, in 1954, in which Dr Stapp, "the fastest man on earth," rode a rocket-powered sled from zero to 1,019 km/h in five seconds and then came to complete stop in 1.4 seconds, temporarily blinded him due to retinal hemorrhages, broke both of his wrists and caused other injuries. In an earlier test, an engineer named Edward Murphy managed to install both of the two sensors incorrectly, rendering the data useless. "If there are two or more ways to do something and one of those results in a catastrophe, then someone will do it that way," Captain Murphy declared after seeing Dr Stapp emerge from the sled bloodied and hurt, spawning his famous law.

From [1]a very good article about self-experimentation.

1. [http://www.nationalreviewofmedicine.com/issue/2008/04/5\\_advances\\_medicine01\\_4.html](http://www.nationalreviewofmedicine.com/issue/2008/04/5_advances_medicine01_4.html)

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Edward (2008-04-09 16:31:30)  
zero to 633.177245 mph in 5 seconds...yikes

### **How Bad is Dairy? (2008-04-10 11:37)**

A most intriguing comment on Tim Ferriss's excellent post about [1]how to sleep better:

To require less sleep and yet still feel awake, energetic and not sleep deprived in general:

The single biggest factor for me has been the elimination of all dairy products from my diet. I have experimented with this over 4 years now and it is clear the most benefit is achieved with the most radical approach to this. In other words, removing dairy products completely from my diet has the biggest benefit. Yes this means no chocolate, no products with whey in them, no milk, yoghurt etc etc. it's also interesting to see how difficult this is to do, but the benefits are so astounding from an energetic lifestyle point of view that I do it for long periods of time at a stretch.

Huh. Cheese makes me sleepy, so much so that I use it to fall asleep on planes. I didn't always understand this. Several years ago, I was in New York and bought expensive tickets to a Broadway show. Before the show I ate some cheese - samples at a store, maybe. During the show I fell asleep.

1. <http://www.fourhourworkweek.com/blog/2008/01/27/relax-like-a-pro-5-steps-to-hacking-your-sleep/>

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david (2008-04-10 14:15:10)

I never fall asleep after eating dairy...the sharp intestinal pains keep me awake! Oh, another reason to reconsider dairy is all they feed the cows now to keep them alive on the diet of corn that they were never meant to eat. Hmm...might be interesting for someone who can tolerate dairy to do some experiments with dairy from corn fed cows, "organic" non-drugged, but still corn fed cows, and grass-fed, non-drugged cows.

Peter (2008-04-10 14:57:43)

Seems to me that some people are allergic/sensitive to dairy, and some aren't. I can eat cheese without any noticeable effects. Of course the last time I ate cheese (the other night) it was made from milk produced by goats that I've met, and they eat mostly grass or whatever is growing in the pasture supplemented with organically-grown alfalfa.

Mike Kenny (2008-04-10 16:20:16)

Huh, is milk meant to relax and put babies to sleep? Makes some intuitive sense.

seth (2008-04-10 18:27:44)

yeah, great point, Mike.

Caleb (2008-04-10 20:55:10)

casein (milk protein) has opiate-like qualities.

david (2008-04-11 07:51:15)

Got Opium?

Pearl (2008-04-11 10:39:12)

Cheese is and always will be the greatest creation on Earth, for me. It has never made me sleepy, rather it regularly makes me the happiest being imaginable, and I eat it whenever possible. I would only be willing to believe that it affects some negatively and other not, or perhaps that strengths of fermentation could play a role in negative effects; I recently read that strong fermentations can aggravate candida. Perhaps it is opiate-like for me, although elimination from my diet upon moving to Japan did not make me energetic, it only made me incredibly grumpy. Reclaiming cheese made me happy once again. Cheese!

Timothy Beneke (2008-04-11 12:30:52)

Fascinating - raises the whole question of the relationship between diet and sleep quality and need; and then is that a confound that influences all the correlational findings on which nutritional claims are based? We know that quality sleep is tied to good health...

Aaron Blaisdell (2008-04-11 16:44:22)

My experiences mirror those of Pearl. Cheese keeps me awake and happy. Since reading Good Calories, Bad Calories about two months ago, I have dramatically increased my consumption of hard cheese, whole milk (organic, presumably corn-fed), cottage cheese, and yogurt. Likewise, I have dramatically reduced my consumption of most sugars, refined grains (still eat whole wheat bread and pasta), white rice, etc. I used to require a nap in the afternoon (after a meal containing a fair amount of carbs). No more! I feel FULL of energy, more so than ever in my life. I've always been a day dreamer in class, with a poor ability to control my mind wandering or feeling "hazy" or sluggish. I now RARELY experience these feelings of lethargy. Instead, I feel much more alert, awake, high-energy, up-beat, etc. I'm sure many people have adverse reactions to dairy, but not me. There seems to be overwhelming evidence for individual differences in how people react to dietary content. I actually used to think milk was an issue for me (for other reasons) and tried to eliminate it from my diet. At the same time I continued to consume carbs, including from refined sources in large quantity. I didn't feel any better, though. The only change to significantly improve my health and well being has been to drastically reduce carbs, in particular refined carbs. Increasing my consumption of animal protein and fat, including lots of dairy has if anything helped (but it is difficult to say for sure since I made both changes at the same time).

NICOLE (2008-05-02 15:48:13)

dairy products inhibit digestion-this is the major health concern. if you don't want to give up meat or dairy, try organic or kosher products. the animals are killed as humanely as possible. additionally, on a spiritual level, if an animal is tortured prior to death, this can be be very traumatic. if you are consuming the remains of an abused animal, chances are you are also ingesting the trauma and suffering that the animal experienced.

NICOLE (2008-05-02 15:50:19)

check out the book: skinny bitch. just google it. tons of nutrition info and pro-vegan resources

k (2009-09-21 23:10:50)

cheese undoubtedly makes me sleepy, there's a direct connection. i'm trying to figure it out that's how i found this blog entry

Vivek (2010-06-18 11:04:38)

Slept at around 11 pm last night. Woke up at 8 all fresh and chirpy. Ate 2 slices of cheese and a bowl of cereals and there I go!! Slept for 7 hours straight. And I realised something must be wrong- I googled it and I found this blog



Eri Gentry (2011-01-26 22:19:33)

I have used yogurt (plain, fat-free) as a sleep-aid in the past, though its effects were not 1:1. Cheese tends to make me feel strange: not exactly sleepy but similar in that it makes me less able to think clearly (fuzzy mind, sometimes dizzy body - reminds me mostly of the effect from L-Tyrosine when I wasn't used to it). Some cheeses (ones with bolder flavors, perhaps fat or mold) cause this effect more than others. For example, a benign cheese for me is low-fat mozzarella. A friend suggested a Tyramine sensitivity. No idea. Overall, I'm happy to avoid cheese :)

## **Brave New SLD World (2008-04-10 15:19)**

The blogger behind [1]voluntaryXchange ([2]nice name) has been on the Shangri-La Diet for two years.

I gave a positive report after one year. After a second year I'm supposed to give you a second report that I've gained all the weight back. Sorry about that - I've had only the smallest rebound. Maybe I'm wrong, but I attribute that to not having played a racquet sport on Saturdays in the last 9 months. I still have no confirmable side-effects. I had a couple of cavities - that might be something. I think I'm more inclined to doze off when I'm tired, but that could be middle age too.

Compare that to weight loss from conventional methods in the wildly-expensive study I [3]mentioned recently. Two years after starting, subjects in the no-intervention group had regained about half of the weight they'd lost.

1. <http://voluntaryxchange.typepad.com/voluntaryxchange/2008/04/shangri-la-diet.html>
2. <http://www.blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-directory/>
3. <http://jama.ama-assn.org/cgi/content/abstract/299/10/1139?ct>

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Stephen M (Ethesis) (2008-04-11 06:12:42)

I was 245 when I started, got down to 167, hurt my shoulders and had to quit Judo, stabilized at 189. When I exercise more, my weight begins to drop, if not, it slowly glides back to 189. I'll be at three years in November, 2008. I find that when I'm low carb (not excessive no carb, just doing without sugar) I don't doze off in the afternoons. Not sure what that is about. I sleep a lot better. But I'm glad to see other people enduring with their weight loss. With significant exercise I lose weight on two tablespoons of oil a day, without exercise in any meaningful amount, I'm stable with three tablespoons. I find it interesting how exercise makes such a difference when I'm on SLD, not as much when I wasn't.

Stephen M (Ethesis) (2008-04-11 06:50:48)

I should note that my "after" picture was taken at 189 - I look the same today as when that was taken.

david (2008-04-11 07:36:38)

I originally did SLD in October 2005 using [whatmakesfoodfattening.pdf](#) posted on the Freakonomics blog. I started at 170, used sugar water SLD for about three (not every day though) weeks and got down 145. Decided that was too much and let myself gradually go up to 150. Stayed there until recently. I noticed I was creeping slowly back up to 155, so I did sugar water a couple of times and am back down. No cavities in the past 2.5 years. I also do nose clipped Flaxseed oil a few times a week for the omega 3s. So after 2.5 years, it still works for me. I too doze off sometimes in the afternoons, but then I also quit all forms

of caffeine about a year ago to self-treat nighttime teeth grinding.

### Interview with Kamran Nazeer (part 3) (2008-04-11 06:31)

ROBERTS This is a big theme of your book, right, sort of a difference in attention. To my way of taking it, you didn't have any lesson you were trying to teach the readers of your book. You were just trying to tell four stories, or five stories. But reading the stories, someone like me says "Oh my God, how can this be?" Not exactly that, but I felt like this wasn't something that was supposed to be. There was a recent piece in the news about how kids who are disruptive in kindergarten grown up fine; they grow up without problems. One of the founding assumptions of our society is that things that we say are bad are harmful. They go together so well, right: harmful and bad? If your child has a problem, then presumably they're going to grow up in some kind of bad way, and something bad is going to happen to them as an adult. But your book didn't support that assumption, because these kids grow up to be unusual adults, but not terribly impaired, or anything. Is that a fair reading of your book?

NAZEER I think that's a fair reading. The gloss that I think I would add to it is what happened to them in childhood was incredibly important. What was important about it was all the people in the book, what they have in common was that they all received the diagnosis very early on and received very early and very good intervention. That was fundamentally important to their success in later life. So autistic kids who don't get the diagnosis early on, and don't get the help that they need — and I'll resist the word deficits, because I don't think they are deficits — to understand the world better and to overcome the kind of differences that they have, then those kids actually do struggle. Whereas I think the kids in the book struggle less because they were lucky enough to get a diagnosis early on and get very good help early on.

ROBERTS I see. So this was unusual, the timing of the diagnosis.

NAZEER It's usual now. It's now thankfully becoming much more common for kids to be diagnosed at the age of three or four. It's now becoming much more common for kids to actually get a decent level of education. It's still not common enough, but it's much more common than it was in the early 80s, when we were all at school.

ROBERTS What would have happened if the level of schooling had been worse, or less appropriate?

NAZEER I think it would have taken them a lot longer to overcome — and I don't use this word in a perjorative way — overcome their disabilities. It would have taken them a lot longer to develop their language abilities, to develop useful hierarchies of sense data, and develop a sense of confidence about themselves, which I think is really fundamentally important as well. I think one of the big benefits of early intervention for autistic children is they begin to get a sense of things that they can do. And getting a sense of things that you can do then in turn builds a sense of confidence in yourself. So it means that even when you're 13 and you've had a really really bad day, you can still remind yourself that you have had moments of progress, and there are things you can do at 13 that you weren't able to do when you were 11.

ROBERTS What is an example of these things that you can do?

NAZEER Sometimes it can be very, very simple things. For Elizabeth, it was things as simple as teaching herself how to ride a bike. For somebody who perhaps was at the higher-functioning end of autism, somebody like Craig, that sense of confidence came from being able to write a good essay. So even though he might have still very profound

social difficulties, because he knew that there was this thing that he was good at doing, that gave him a certain sense of confidence, even when it came to activities that he found much more challenging.

ROBERTS So you're saying the way he was taught helped him to be confident, because somehow, his ability to write an essay was stressed, or something? Is that what you're saying?

NAZEER Right. I think that's what I'm saying. I think, in that sense, autistic young people aren't any different from anybody else. I think, ultimately, nobody ever becomes brilliant at everything; we all become decent at some things, but being decent at some things gives us the confidence to try out things that we're not so good at.

ROBERTS I think you're right. I think that's the incredibly important thing about education: to help people figure out that there are some things that they're good at.

NAZEER People end up being good at different things. That is what I think — your deficit and difference opposition comes into play, which is that autistic people may well be different — may well be good at other things to other people. But as long as they get to the position where they feel comfortable, capable, and confident in doing some things, then that gives them confidence in functioning socially.

ROBERTS So they need schooling in which their abilities are recognized and developed and encouraged.

NAZEER That's right.

ROBERTS That's what you seem to be saying: that if autistic kids have different skills, then they have to have teachers who know how to develop and recognize those skills.

NAZEER That's exactly it.

[1] Interview directory.

1. <http://www.blog.sethroberts.net/2008/04/11/interview-with-kamran-nazeer-directory/>

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Seth's blog » Blog Archive » Interview with Kamran Nazeer (directory) (2008-04-13 06:10:48)  
[...] Interview with Kamran Nazeer (part 3) [...]

## **Interview with Kamran Nazeer (directory) (2008-04-11 06:37)**

1. [1] Part 1
2. [2] Part 2
3. [3] Part 3

4. [4]Part 4

5. [5]Part 5

1. <http://www.blog.sethroberts.net/2008/04/05/interview-with-kamran-nazeer-part-1/>
2. <http://www.blog.sethroberts.net/2008/04/06/interview-with-kamran-nazeer-part-2/>
3. <http://www.blog.sethroberts.net/2008/04/11/interview-with-kamran-nazeer-part-3/>
4. <http://www.blog.sethroberts.net/2008/04/13/interview-with-kamran-nazeer-part-4/>
5. <http://www.blog.sethroberts.net/2008/04/14/interview-with-kamran-nazeer-part-5-the-end/>

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Seth's blog » Blog Archive » Interview with Kamran Nazeer (part 4) (2008-04-13 06:13:00)  
[...] Interview with Kamran Nazeer (directory) [...]

Seth's blog » Blog Archive » Interview with Kamran Nazeer (part 5: the end) (2008-04-14 05:27:41)  
[...] Interview with Kamran Nazeer (directory) [...]

## **My Theory of Human Evolution (the cellphone effect) (2008-04-11 23:39)**

In poor countries, cellphones have [1]a big anti-poverty effect:

Jan Chipchase and his user-research colleagues at Nokia can rattle off example upon example of the cellphone's ability to increase people's productivity and well-being, mostly because of the simple fact that they can be reached. There's the live-in housekeeper in China who was more or less an indentured servant until she got a cellphone so that new customers could call and book her services. Or the porter who spent his days hanging around outside of department stores and construction sites hoping to be hired to carry other people's loads but now, with a cellphone, can go only where the jobs are. . . . Over several years, his research team has spoken to rickshaw drivers, prostitutes, shopkeepers, day laborers and farmers, and all of them say more or less the same thing: their income gets a big boost when they have access to a cellphone.

This is exactly the effect I propose that the very first words had: They helped two traders find each other. Having a word for knife made it much easier for the person who had a knife to trade to find someone who wanted a knife. I was in Guatemala when I ran out of contact-lens solution. Not knowing the Spanish term for it, it was extremely hard to find. Once I knew the Spanish term, it was very easy to find. In a Guatemalan market, I heard a man shout "toothpaste" (in Spanish) over and over. He was selling toothpaste.

I think the first words were also the first names; You became identified by the name of what you were good at making (and therefore had to trade, since you made many of them). This information spread, like a cellphone signal, from tower to tower: From one person to another. If you were Mr. X, and someone wanted X, and they said so ("X?"), someone would point them to you. All it took were single words.

Later in the article, Chipchase responds to the author, who wonders if more technology is always better. "People once believed that people in other cultures might not benefit from having books either," he says. I would go further: Not having cellphones is like not having language.

1. <http://www.nytimes.com/2008/04/13/magazine/13anthropology-t.html?ei=5087&em=&en=e46d649779a0b9be&ex=1208145600&pagewanted=all>

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Chris B. (2008-04-14 06:50:54)

"This is exactly the effect I propose that the very first words had: They helped two traders find each other. Having a word for knife made it much easier for the person who had a knife to trade to find someone who wanted a knife. [...] In a Guatemalan market, I heard a man shout "¡toothpaste!" (in Spanish) over and over. He was selling toothpaste." Yet there's evidence that some higher primates have vocalisations associated with particular objects - types of food for example. Yet they don't trade. What they have may not be language, but it would be as much language as your toothpaste man is using.

seth (2008-04-14 11:31:15)

Thanks, Chris, interesting point. The toothpaste man is using a system that has thousands of nouns. (And can easily make room for even more.) The higher primates have just a few object-specific vocalizations. I'm saying that the many-noun system evolved because of trade. If you have a lotta stuff to trade you obviously need a more flexible system - I think the word is "scalable".

Seth's blog » Blog Archive » My Theory of Human Evolution (directory) (2008-04-28 05:27:59)

[...] I Recommend material-science research) the cellphone effect (the first words facilitated trade) micropygms (hunter-gatherers w/ trade different from those w/o trade) [...]

## Ask Your Dentist Some Pointed Questions (2008-04-12 06:59)

[1]This video, about mercury exposure from amalgam fillings, is all too convincing. Ugh.

1. <http://www.youtube.com/v/9ylnQ-T7oiA&hl=en>

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Chip Morris (2008-04-14 02:58:31)

There are serious doubts about the validity of this video. See "this post":<http://quackfiles.blogspot.com/2005/04/smoking-teeth-truth-gets-smoked-out.html> for a good analysis of the video. Also, "QuackWatch":<http://www.quackwatch.com/0-1QuackeryRelatedTopics/mercury.html> has a general article on mercury amalgam fears/hoaxes.

seth (2008-04-14 05:56:06)

Thanks, Chip, that's helpful. As for the Quackwatch article, it's by Stephen Barrett. My mom told me he criticized a website named Planetree that helps average people get medical research information. I suppose he felt they couldn't be trusted with it; the details of his criticism are no longer on Quackwatch. Given that attitude, I don't take him seriously. I'd guess the criticism of the video is right. But I also think the video probably makes a correct point: mercury probably does leak from your mercury

amalgam fillings into your body.

Alex C. (2008-04-14 08:29:05)

I e-mailed IAOMT to ask them about this question of mercury vapors rising vs. falling. I have quite a few amalgam fillings in my mouth, so I want to get to the bottom of this. I'll post another comment if and when I get a response from them. As for Stephen Barrett, he tends to go after the easy targets. I'd have more respect for him if he exposed the pseudoscience behind more-conventional treatments that have no basis in science.

seth (2008-04-14 17:23:03)

Thanks, Alex. Among Barrett's many dislikes is the Weston Price Foundation.

Tom (2011-06-29 09:33:14)

The **only** reason anyone listens to Stephen Barrett is because he bought a great URL. More really ought to be required.

### **Jane Jacobs and Collapse (2008-04-12 08:57)**

Soon after it was published, I listened to an audiobook (abridged) version of [1]Collapse (2005) by Jared Diamond. It is about how several societies destroyed their ecosystem and died. One example was Easter Island; the islanders cut down all the trees, and disappeared. The whole book was meant as a warning, of course: This can happen to us. At first I liked it – interesting stories. Then I heard that Jane Jacobs didn't like it. I was unable to find out why. I began to wonder what I'd missed.

Now I can guess what she'd say: "Collapse doesn't make clear that overexploitation has been avoided countless times. That is the usual outcome. Even before cities, humans were constantly creating new ways to make a living, which decreased reliance on the old ways."

I could make a video that shows Michael Jordan missing 20 free throws in a row. Every moment would be true but the whole thing would be false. That's not far from what Collapse does – at least the audiobook version.

1. [http://en.wikipedia.org/wiki/Collapse:\\_How\\_Societies\\_Choose\\_to\\_Fail\\_or\\_Succeed](http://en.wikipedia.org/wiki/Collapse:_How_Societies_Choose_to_Fail_or_Succeed)

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Peter (2008-04-12 14:12:10)

this is a really lame 'criticism'. it's like the "you're not reporting on the \_good \_ news" criticism of media coverage of Iraq. The analogy is too close for comfort, and i'm very surprised - possibly even disappointed - to read it here. I believe that most of the people who criticize Diamond and his work are jealous that he's achieved remarkable success and popularity, and his work stands up, which makes a lot of people who think they are really smart - look bad. Lots of other people, however, \_love \_ Diamond, and for good reason. He's not petty - he just does what he does, and reading what he's written and watching the shows he's been on - it's very clear that he does his work, at least in part, in the service of humanity. Of course, the book is titled 'Collapse: How Societies Choose to Fail Or Succeed". Now, I'm not a very educated person - I don't have a PhD - and I don't know much about anthropology and literary criticism, but the title leads me to think that this particular book might be about the \_collapse \_ of civilizations, as opposed to maybe the \_triumph \_ of civilizations. But that's just me. I wouldn't expect a book on bicycles, or on the nature of clowns, and I wouldn't be so pretentious as to tell someone they wrote their book 'incorrectly' - they should have talked to \_me \_, first. Instead, I would write it myself. And if i couldn't write it myself, I would not lob hand grenades in a ham-handed attempt to try to bolster my own public image. If I just didn't like the book for some

inconsequential reason - like it didn't use the proper font or something - I would just tell the truth. I would say: "You know, this is a good book, but I did not like it because I prefer books that avoid attempting to drive home the seriousness of the situation so as to act as a warning, but instead try to alleviate our fears about our collapsing environment so that we can be lulled back to sleep, if we weren't already. But that's just me." Or... "You know, this is probably a great book for some people, but I hated it. It spent far too much time talking about how the occupation of Iraq was being lost, and not nearly enough time talking about how the occupation of Iraq was being \_won\_. But, you know, that's just my opinion." There are lots of books about the Romans. This book, however, seeks to provide a comprehensive analysis of those factors which lead to the collapse of any civilization. It is \_not\_, obviously, intended to act as a cheerleader for civilizations that have managed to continue to exist either by design or by chance. This book is a warning and reference and analysis that can be used by regular people, citizens, public policy planners, central planners, and politicians to stave off the collapse of one particular country/society - the good old US of A. Now, if Diamond is wrong - say so. If his logic is flawed or his theories nonsensical or his writing just utter crap, then say so, but don't waste my time with some overly-qualitative, essentially-meaningless, personal preference that has nothing to do with the central theme of the book. It's petty, bad style, and it does not help 'the cause'. You'd be better off criticizing the color of the book jacket. Would we take seriously criticism of the Shangri La Diet that suggested that it did not spend enough time talking about how thin people stay thin without the need for dieting? It's absurd. If we want to read everything about everything without diving too deeply, we go to Wikipedia, not the local book store. >8-(

seth (2008-04-12 15:02:01)

Peter, okay, why do you think Jane Jacobs didn't like Collapse? It's quite possible I'm wrong, that she had a different reason. I'm sure it wasn't jealousy, however.

Ben Webster (2008-04-12 21:47:43)

Not only is it lame criticism, it's actually wrong. Maybe Diamond didn't emphasize the point enough for your liking, but he does discuss why Greenland failed and Iceland and the Faeroes didn't, and which differing factors amongst Polynesian Islands led to success or failure which sounds like....exactly what you were saying he should have written about.

seth (2008-04-13 05:45:48)

Ben, thanks for those examples. Yes, I knew Diamond described successes as well as failures. If successes outnumber failures 1000-to-1, and a book describes 5 failures and 5 successes it's not so obvious that book has done a good job. In any case, I was trying to figure out what Jacobs didn't like about it. Do you have a better idea than mine?

Aaron Blaisdell (2008-04-13 09:27:02)

I guess someone could always ask her why she didn't like the book. Many comedies are based on one person wondering why another person did what they did, and drawing the wrong conclusion - which leads to an embarrassing culmination (A man suspects his wife of cheating on him based on a few snippets of odd behavior he exhibits. She hatches a plan to catch him in the act, and her plan unfolds only to discover he was planning a surprise birthday party for her which she ruins due to acting on her suspicions). Many tragedies are based on the same thing but with tragic results (Romeo & Juliet is a great example). Sometimes a direct confrontation can stave off useless or even misleading speculation. But the process of speculation (basically hypothesis generation) can be so much fun I guess we are all often tempted to engage in it! Why did the chicken cross the road. (speculation: there must be a rooster on the other side!)

seth (2008-04-13 14:50:32)

I wish I could ask her! But I don't trust Ouiji boards.

Peter (2008-04-14 00:23:40)

Peter, okay, why do you think Jane Jacobs didn't like Collapse? As a commenter suggested, we should first try to figure out what she actually thought and or said about Collapse - if anything at all. We know something about what she thought about GG & S: From p. 19 of 'Dark Age Ahead', Jane Jacobs writes: "Diamond's analysis of winners and losers, elegantly precise and predictable wherever the forces at work were geography, climate, plants, animals, microorganisms, and demography, turned

mushy and unreliable as soon as human decisions entered the equation. Yet, as he himself was the first to admit, a science of human history that omits the behavior of human beings is an absurdity. His brilliant analysis, as is, explains most outcomes of unequal contests between cultural winners and losers. But I think he limited its explanatory power unnecessarily by the way he posed his initial question: 'What are the advantages that enable cultural conquerors to win conflicts with losers?' The first part of her book basically paints JD as the Second Coming, so I wouldn't expect jealousy would get the better of her. I only know about JJ what I read here, what I read in wiki, and what i've been unable to find via Google - any criticism of Collapse. I only know of critics of JD what I read all over the web a few months ago - dozens/hundreds of his colleagues crucifying him with anonymous comments at annual conferences. The wiki review page talks about the anonymous review in the Economist that is 'generally favorable', but that criticizes the book on a couple of counts, one suggesting that Collapse is not 'optimistic enough'. Does that actually mean anything at all? [http://en.wikipedia.org/wiki/Collapse\\_\(book\)#The\\_Economist](http://en.wikipedia.org/wiki/Collapse_(book)#The_Economist) [http://www.economist.com/books/displaystory.cfm?story\\_id=E1\\_PVVVRJQ](http://www.economist.com/books/displaystory.cfm?story_id=E1_PVVVRJQ) So, given Jacobs' heavy praise of Diamond in her book, Dark Age Ahead, the tone of this review does not seem like it would be her. But who knows? More reviews, here: <http://www.metacritic.com/books/authors/diamondjared/collapse> So, let's forget about whether Jane Jacobs said anything about Collapse or not, and concentrate on Seth's review. Does it make sense to criticize, say, a zombie movie because it has too much killing? A hot fudge sundae because it has too many calories? A book about the collapse of societies because it has too many stories of...collapsing societies? I'm gonna argue 'no'. So, take this particular line: "doesn't make clear that overexploitation has been avoided countless times" Should Diamond have gathered a count of Failed vs. Survived societies throughout the history of mankind, and then finding that more societies survived than failed (true? false?), provided a more reassuring message to the masses - "but don't worry - this \_probably\_ won't happen here"? Should he have added to his book a analysis that would have provided a Pentagon-like statistical likelihood of the collapse of American society? It just doesn't strike me as valid criticism - or particularly meaningful criticism. It's like criticizing your soon-to-be-daughter-in-law because she decided to attend Michigan instead of a true Ivy League school. I could be wrong, no doubt - I often am - but a book is just a book - it can't be all things to all people - and you wouldn't want it to be - else you end up with an intractable tomb of pseudo-scientific babble - something not completely dissimilar from The World is Flat. :-D Had to get that dig in. But seriously - is the book being unfair? Did Katrina not just happen? Did I not just see bodies floating in the streets? Are the polar ice caps not melting, and water levels rising, and islands disappearing, and societies already collapsing? Are we not locked into our horrendous suburban nightmare of asphalt and pollution and oil dependency? Are India and China not industrializing like crazy? Are people not starving? Are large swaths of the lower-48 not drying up? Is ocean pH not acidifying? Did Arnold not just declare a state of emergency because the salmon disappeared? Are many and serious scientists around the world not calling for drastic national policy changes across the board, across the world, to avoid complete ecological collapse? Is not ecological disaster already occurring - the only thing left to decide is whether or not it actually does wipe us out completely? I don't know Diamond's intentions in writing the book, but I kinda doubt it was to suggest we should all tuck our heads between our legs and kiss it all goodbye. I prefer to think he wrote it in the spirit of humanity, which his previous book/articles/shows demonstrated. I have a feeling that Diamond believes that we can, in fact, survive. The "has been avoided countless times" phrase, to me, is really just a repackaged "don't worry about it, nothing to see here, keep consuming, move along". Anybody can write whatever book they want - and anyone can offer any criticism they want - but they should do it with an appreciation for the context of the times. If Collapse doesn't go out of its way to give us all a warm fuzzy about how everything will \_probably\_ be alright, then I'm not gonna be all that upset about it, because I know this is exactly what the people who own this country would want - they want us to go back to sleep, to mind our own business, and stay out of the affairs of learned men.

Nansen (2008-04-14 18:56:45)

Jacobs writes in Dark Age Ahead (p. 24-25): "It may seem surprising that I do not single out such failings as racism, profligate environmental destruction, crime, voters' distrust of politicians and thus low turnouts for elections, and the enlarging gulf between rich and poor along with attrition of the middle class. Why not those five, rather than the five [community and family; higher education; science and technology; taxes and governmental powers; self-policing by the learned professions] that I have selected to concentrate upon? Surely the second five indicate serious cultural dysfunction. Perhaps my judgment is wrong, but I think these second five are symptoms of breakdown in the five I have chosen to discuss." This suggests that Jacobs would not fault "Collapse" so much for its cherry-picking, but rather for misdiagnosing the nature of the problem.



seth (2008-04-14 19:51:35)  
Good point, Nansen.

Peter (2008-04-14 22:37:57)

Here's a review that criticizes 'Collapse' for being too optimistic: <http://www.richardheinberg.com/museletter/154> A second disappointment that readers already familiar with the subject matter may encounter with Collapse is the perception that, while the author is warning us that modern industrial civilization may be headed the way of the Classic Maya or the Easter Islanders, he seems satisfied with this warning. He offers, in essence, a message of the type we have come to expect: Humanity is undermining its ecological viability, but there are things we can do to turn the tide. Indeed, Diamond predictably devotes the last section of his last chapter to "reasons for hope," leaving the reader with evidence for thinking that collapse will not occur in our own instance after all. ... Suggest that it's possible to avert complete disaster, and you're basically making the case that you're OK with things as they are. But talk too much about collapse, and well, you're not being optimistic enough. I guess winning the Pulitzer is a bit like winning the Heisman - something to be avoided. One point to recognize, I think, is that Collapse focuses on collapses that have had at least an environmental component to their failure. It looks like Jacobs' book 'Dark Age Ahead' considers all societal failures. Seems like it might be a chicken/egg problem to a certain extent, too. Is our environment being wrecked because most Americans want it? No, of course not - but it helps that we have a dysfunctional government. Is our government more dysfunctional than any other has ever been? I'll have to read Jacobs' books. Not crazy about those '5 pillars'. To me, for instance, 'family' and 'community' are easily separable and are mostly mutually exclusive in America today. The 'higher education' and 'intellectual subservience' make me think we're attempting to put too much stock in intellectuals to save us or any other society. Haven't intellectuals always been servants of power? Here's Diamond at UCSB: <http://video.google.com/videoplay?docid=3641551737596451012>

thekingofcheap (2009-04-27 08:03:04)

Isn't Jacobs referring to "Guns Germs & Steel" in Dark Age Ahead? Guns Germs & Steel might rightly be criticized for taking the social elements out of an examination of societies. However, Diamond bases his arguments on the assumption that cultures adapt to and become rooted in their specific environments. Collapse is the extension of Guns, Germs & Steel, an attempt to add human culture to the equation. (In Guns, Germs & Steel, he does briefly address this topic, though, when he illustrates Australian aboriginals, who were given the technology for bows and arrows and rejected it.)

## **Interview with Kamran Nazeer (part 4) (2008-04-13 06:09)**

ROBERTS What about your case? Did that happen in your case? Your special skill seems to be language, but — what do I know?

NAZEER Yes, maybe that's it. It's a certain kind of precision of expression. Or not even a precision of expression, but an agility of expression, which for me, in the first place, came about because of learning how to write well. Then, from learning how to write well, it turned into being able to speak well about particular topics. Whereas I'm not so good at being in a meeting with 12 people and trying to get what I want out of that meeting, I'm better at writing a very persuasive email to 12 people.

ROBERTS A less-useful skill. So your teachers recognized your language ability, your early teachers?

NAZEER No, because at that stage I didn't have it.

ROBERTS You didn't have it?

NAZEER What my early teachers helped me to do was to develop it, was to put me on the first steps of the ladder towards having it.

ROBERTS What did they do?

NAZEER Well, to begin with, it was very simple things, like giving, kind of forcing me to say particular words, showing me flash cards again and again until I would use particular words, beginning by kind of letting me be able to point to things when I wanted them and then actually withholding them until I would actually say the name of the thing. So there were techniques of that sort. There were also techniques of encouraging me to talk to other kids in the school who were at a similar position in their language development to me, so that we weren't being over-awed in talking to much more linguistically agile kids, or fully linguistically developed adults, but in fact we were talking to people who were in a similar linguistic position to ourselves. That helps linguistic development.

ROBERTS So you're saying that, by certain measures, you were linguistically behind. Your language development was retarded relative to other kids.

NAZEER It certainly was. I didn't start speaking until I was about 6 years old.

ROBERTS It wasn't because you thought it was boring, or anything.

NAZEER No, not at all, no, no.

ROBERTS So somehow, at some point, you caught up. Is that true?

NAZEER Yes.

ROBERTS So at some point, you caught up. You started off more slowly, and then you caught up, and then you surpassed.

NAZEER I'm not sure I surpassed, but yeah, I'll agree with the 'caught up' bit.

ROBERTS Well, you wrote a book. Very few people write a book, and not only that, your book is very well written, which is much rarer.

NAZEER But I chose to focus on writing as a skill that I wanted to develop and I worked hard at it in the same way that somebody else might focus on becoming an electrician, and work very hard at it, and they'd become much better at wiring than I'd ever be, possibly. But for me, writing is very much that thing; it's a craft. It's something I decided I wanted to be good at, and then I spent a lot of time learning to be good at it.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2008/04/11/interview-with-kamran-nazeer-directory/>

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Seth's blog » Blog Archive » Interview with Kamran Nazeer (directory) (2008-04-14 05:23:00)  
[...] Interview with Kamran Nazeer (part 4) [...]

### **Interview with Kamran Nazeer (part 5: the end) (2008-04-14 05:21)**

ROBERTS You enjoyed reading, I assume.

NAZEER Yes. That's true.

ROBERTS So your language development was retarded, even though you enjoyed reading. That's unusual, I would think.

NAZEER I certainly didn't enjoy reading at that age. I didn't read much at all when I was a kid. I started reading a lot more when I was older.

ROBERTS Reading was something that you discovered you enjoyed relatively late in life.

NAZEER Yes.

ROBERTS So, while the other second graders are reading their books, you were not.

NAZEER No, I wasn't.

ROBERTS Huh. So, did you have any other abilities? I think it's common enough for people to develop late. There's a word for it: late bloomers. We don't normally hear this word in reference to autism. But you know more about it than I do. Is this a common developmental trajectory in autism? The person starts out slow, but slowly and surely passes everyone else?

NAZEER I'm not sure about the passing everyone else, and I'm not sure that's the case with me, either.

ROBERTS Well, you are an extremely good writer.

NAZEER I chose to focus on a particular skill. What you're seeing is the result of me having chosen to focus on that. So I'm more uncomfortable with the surpassing idea, but on your idea of developing late, I think that probably is true. I think that autistic young people find it very, very difficult to develop certain skills, but with the right support, they can develop them; they just often develop them much later and much more slowly than other kids.

ROBERTS Well, it helps to have many different kinds of people in the world, with many different kinds of brains, because we need many different skills to have a well-functioning economy. So from that point of view, the fact that autistic kids have different skills, or different abilities, letâ€™s put it that way, makes a lot of sense, because then theyâ€™ll grow up to be adults who can do things the result of us canâ€™t. But thatâ€™s really different from the idea that theyâ€™ve got a handicap that theyâ€™ve got to spend the rest of their life trying to overcome. Your story, in your book, suggests there are certain things that autistic kids can do as adults that other people canâ€™t.

NAZEER I donâ€™t think I am suggesting that.

ROBERTS You probably didnâ€™t write the book with that in mind, obviously, but do you think thatâ€™s fair?

NAZEER No, I think, on the whole, itâ€™s not fair because most autistic adults, even as adults, even though they might have developed the confidence to do certain things well, experience often quite profound difficulties. Everybody whoâ€™s in the book still has quite profound difficulties of one sort or another. So I donâ€™t think itâ€™s at all the case that all autistic adults, or even most, completely overcome the difficulties that they have. But that said, I think there is particular aspects of the condition of autism which might mean you have a particularly good focus on detail, which might suit you very well for certain types of jobs. It may mean that you think in a very structured way, which again, may suit you for particular jobs. I think another thing that comes about for autistic people is because they know that they have to work harder at things than other people, that kind of leads to a certain determination and resourcefulness and kind of reliance on being logical, which again, suits you for certain kinds of jobs.

ROBERTS Thanks very much for your time.

NAZEER Thanks, it was an interesting discussion.

Kamran Nazeer is the pen name of [1]Emran Mian. He is the author of *Send In the Idiots: Stories From the Other Side of Autism*. [2]Interview directory.Â

1. [http://en.wikipedia.org/wiki/Emran\\_Mian](http://en.wikipedia.org/wiki/Emran_Mian)

2. <http://www.blog.sethroberts.net/2008/04/11/interview-with-kamran-nazeer-directory/>

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### **Abstraction Watch (2008-04-14 20:05)**

Today I made a new cup of matcha (powdered Japanese green tea) before finishing one I'd made earlier.

After [1]Raronauer'ed.

1. <http://rebeccaaronauer.com/2008/04/13/gentrification-watch/>

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## The Secret Non-Shame of the Shangri-La Diet (2008-04-15 11:45)

Before I wrote The Shangri-La Diet I anticipated the diet would reduce hunger and weight and increase peace of mind but [1]this surprised me:

So far, I have told NO ONE what I am doing, not even [my husband]. A couple of my teens (I'm the mother of 3 teenage boys, ages 19,16 and 15) have walked into the kitchen as I was taking my oil and wondered what I was doing. I just told them it was to take care of some pooping problems I've been having.

SLD = more off-limits than poop.

1. <http://boards.sethroberts.net/index.php?topic=6203.msg67056#msg67056>

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Peter (2008-04-15 13:56:17)  
hilarious!

Ed (2008-04-15 15:56:21)

I have to agree, I casually mentioned SLD to a couple of friends and they all reacted horribly. I decided it was best not to discuss it.

Tom (2008-04-15 16:15:52)

Yep, people freak if you tell them you're drinking oil. But tell them you ate a half gallon of Rocky Road last night before bed, they'd only wonder why you prefer it to the Cookies and Cream they'd had.

LemmusLemmus (2008-04-16 08:47:43)

I think the problem - if it is a problem - is that the method sounds absolutely wacky if you don't know the theory behind the diet. (The book's subtitle, anyone?) I once explained it to a friend and made sure to start out with, "Ever heard of the concept of a weight set-point?" rather than, "It's all about drinking oil!"

seth (2008-04-16 11:41:18)

Perhaps a better subtitle would have been - "now you may be surprised by this..."

## Happy Birthday, LSD! (2008-04-16 10:28)

On this day 65 years ago LSD was discovered via self-experimentation. [1]Here is an in-depth account; the title of this post is [2]here. When I was a grad student, a faculty member had recently retired and his reprints were available. I took one from the 1950s about the effect of LSD on snails.

1. [http://scienceblogs.com/neurophilosophy/2008/04/lsd\\_discovered\\_on\\_this\\_day\\_65.php](http://scienceblogs.com/neurophilosophy/2008/04/lsd_discovered_on_this_day_65.php)
2. <http://www.roberdo.de/?p=222>

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Nansen (2008-04-16 17:37:35)

We look forward to your paper, "The Effect of Snails in the SLD".

David Weman (2008-04-17 04:15:09)

Well, what were the effects?

seth (2008-04-17 05:24:06)

Immobilization, if I remember correctly.

## **Interview with Mark Liberman about Blogging (2008-04-16 17:00)**

Mark Liberman, a professor of linguistics at the University of Pennsylvania, blogs at [1]Language Log. Recently I asked him a few questions about blogging.

ROBERTS Why did you start Language Log?

LIBERMAN Several reasons. First, I had started reading blogs and enjoyed them. Second, I was spending quite a bit of time exchanging email with friends. They were like long-distance dinner-table conversations. Each email was a couple of paragraphs. I was spending quite a bit of time on that. It was interesting and fun, a way of keeping up with friends and former colleagues. I realized that many of these emails were close to blog entries that might be interesting to a wider audience. Some of them could have been blog entries. I thought to myself: If there was a weblog, instead of sending this to 1 or 2 people I could put it on the weblog and send a link to those people. Third, I had felt for a long time that linguistics, in our current culture, was in an historically atypical and irrational place. Almost nobody learned about linguistics, got any intellectual information about language. It was undertaught to the general public. It has been valued much more in the past. Now we're in a situation where many English professors have never taken a course that teaches anything about the analysis of language. They don't know how to do it. One small way to improve that situation would be to put stuff out there that people could read.

ROBERTS How has blogging affected you?

LIBERMAN Three things. First and most important, I've met – mostly digitally – a large number of people that I would never otherwise have met. They send me email. If I look over my email logs, there are probably 5 or 10 people that I correspond with frequently whom I've met that way. Most of them are not linguists; I wouldn't have met them otherwise. Some of them are not even academics. Second, it has allowed me to influence the conversation inside linguistics and related fields in a way that I hadn't really expected. It wasn't my motivation. I've always thought of writing for people outside the field. Issues that I've raised within the field, including how the field ought to view itself, people respond to. I was invited to give a plenary talk at the Linguistics Society of America meeting about the status of the field in academia. I had blogged about such things. Third, I get a lot of calls from journalists asking me to comment about this or that. A lot of things they ask me to comment on I don't know about. It made me someone that journalists call.

ROBERTS How have your views about blogging changed since you started Language Log?

LIBERMAN There is a spectrum of blogs; some are just sets of links – minimal comment and a link. When I started I thought that was what I was going to do, along with email-to-friends kind of pieces. Along the way I learned that a blog entry is a good way for me to learn things. If there's something that I'm interested in, I may write a blog-like essay about it. I compose quite a few blog entries that I never publish. When I'm working through some ideas, I often organize my thoughts an awful lot like an blog entry. Like an annotated bibliography but with more structure. I don't publish some of those things because I don't think the general audience of Language Log would be interested in them. They're too difficult. They take the form of an extended blog entry – links plus evaluation and discussion but more informal than a paper. Very helpful in organizing my thoughts. I read some things, put in some links, quotes, weave it all together into some structure. I produce an html document. It's a way of taking notes. Something I do at the very beginning of an intellectual enterprise. A journal article is what you do at the end. For example, I've become interested in auditory texture. I've been composing a few things that are like weblog entries.

Once a month or so I try to do what I call a breakfast experiment. Some issue has come up in the world that I want to comment on. There's an experiment that I wouldn't want to submit to a journal. Better than an anecdote. For example, a few months ago somebody wrote that a journalist who had been living in Japan had been learning girl Japanese. Is it true that there is more gender difference in pitch in Japanese than in other languages? At the Linguistic Data Consortium we had conversations in many languages, including Japanese and English. I could select appropriate conversations, throw values into R, look at quantiles. (There were a few issues you'd want to clean up for a journal article.) I got up early, set up scripts, made coffee, had cereal, plotted quantiles. By 7:30 am I had some pictures. It was true that there was more gender polarization in pitch in Japanese than in English. The analysis involved 18 Japanese conversations and a similar number of English conversations.

I had been abstractly aware for a long time that there's a lot of value in doing experiments on published data. One of the problems in doing empirical linguistics has been that gathering data takes a lot longer than anything else. For English we've now got about 10,000 extemporaneous telephone conversations, with demographic info about the speakers. I thought of experiments on that sort of data where someone had to spend a lot of time gathering the data, but once it's gathered and published, there are a lot of ideas that you can try out very quickly.

1. <http://languagelog.ldc.upenn.edu/n11/>

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Seth's blog » Blog Archive » Before There Was News, There Was Gossip (2008-04-17 08:24:14)  
[...] Interview with Mark Liberman about Blogging [...]

syz (2008-04-19 04:38:26)

Hi Seth, thanks for the insightful co-mingling of themes on amateurism and gossip with these responses from Liberman. His Language Log style of using data to advance a conversation beyond simple opinion is an inspiration to us amateurs in the "gossip" business. It's a style that differentiates good gossip from mere gossip. When you try to emulate it, you find yourself working harder at blog entries, learning more in the process, and also getting more fruitful, thoughtful comments from readers that in turn inspire better blog entries – a virtuous cycle. And it is hopefully a cycle that leads this kind of amateur blogging to "fill a gap" (as you mentioned in the other article) between the true professional and the truly unreflective gossipier.

## Before There Was News, There Was Gossip (2008-04-17 08:24)

Did the professionalization of science – people could make a living doing science – cause harm because although more science was done scientists – the professional ones – were no longer free to pursue the truth in any direction? Because their jobs and status were at stake? It's plausible. Recall that Mendel and Darwin were amateurs. A more recent example is Alister Hardy, the Oxford professor who conceived the aquatic ape theory of evolution. He didn't pursue it because he feared loss of reputation. The more sophisticated conclusion, I suppose, isn't that professionalization was bad but that loss of diversity was bad. We need both amateur and professional scientists because each can do stuff the other can't. Right now we only have professional ones. No one encourages amateur science; there is no way they can publish their work. (Unless, like Elaine Morgan, who wrote several books about the aquatic ape theory, you're a professional writer.)

These thoughts were prompted by [1]this remarkable blog post, which has nothing to do with science. What an amazing piece of writing, I thought. I don't even agree with it, and here I am staring at it. A work of genius? No, lots of blog posts are really good. This one was merely better than most. Would something this brazen and effective appear in any major magazine, newspaper, TV show, radio ad, etc.? No, not even. Do we realize that, all these years, stuff like this has been missing from our media consumption? No, we don't. Before there was news, there was gossip, I realized; news (such as newspapers) was a kind of professionalization of gossip. The blog post I admired was a bit of riveting creative gossip. Blogs are just new-fangled gossip. Bloggers are endlessly scandalized, indignant, judgmental, just as gossips are. Just as gossip is usually "passed on," most blog posts have links and many posts consist almost entirely of "passing on" something. Just as gossip can be anything, bloggers can say what they really think, as [2]Tyler Cowen pointed out. That's why they're so successful, so easy to write and read. Gossip is good for our mental ecology, just as science is. Mark Liberman's [3]Language Log blog is a blend of (good) gossip and science; as you can see from [4]my interview with him, it filled a gap. I hope blogs will provide a kind of support structure on which amateur science can grow.

1. <http://lawrenceofcyberia.blogs.com/news/2008/04/the-cystic-fibr.html>
2. <http://www.blog.sethroberts.net/2008/03/24/tyler-cowen-on-blogging/>
3. <http://languagelog.ldc.upenn.edu/n11/>
4. <http://www.blog.sethroberts.net/2008/04/16/interview-with-mark-liberman-about-blogging/>

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LemmusLemmus (2008-04-17 09:46:22)

"bloggers can say what they really think" Depends. I could easily create a few blogposts that might end your career if you posted them under your name. That's why I use a pseudonym. As it happens, I've never posted anything that most people would find strongly objectionable (I think), but I like having the freedom to not even have to think about whether a post might be bad for my career. Still, blog authors have a high degree of freedom to write what they want, but I don't think that is the main reason that I read more blogs than professional sites on a typical day; I think the main factor is sheer mass. The main reason you can find blogs you like is the same reason you can find a forum for people that get sexually aroused by bird feathers or whatever: There's just *lots* out there.

Tom (2008-04-17 16:42:42)

Gossip is more primal than news. It is fundamental to our species' ability to grow beyond small bands in which everyone knew each other. Gossip and the prefrontal cortex are inextricably linked – it is where we store our stories about who we are, who we're ideally supposed to be, and who others are. That lobe is where society and politics live, and gossip is the data that fills that lobe. "Does he do his share? Can he be trusted? Who are his allies and his enemies?" If we know these answers about strangers, there is no limit to our society's size. And we know how to behave in a way that keeps us from being destroyed. It's



been said, and subsequently disproven, that tools are what make us human. I would argue that gossip makes us human. Even crows use tools. Humans use gossip.

Blogs as gossip, and gossip as support structure for amateur science « Entertaining Research (2008-04-18 19:08:05)

[...] Blogs as gossip, and gossip as support structure for amateur science Seth on blogs as gossip and what role they can play in increasing the diversity among the practitioners of science: Blogs are just new-fangled gossip. Bloggers are endlessly scandalized, indignant, judgmental, just as gossips are. Just as gossip is usually "passed on," most blog posts have links and many posts consist almost entirely of "passing on" something. Just as gossip can be anything, bloggers can say what they really think, as Tyler Cowen pointed out. That's why they're so successful, so easy to write and read. Gossip is good for our mental ecology, just as science is. Mark Liberman's Language Log blog is a blend of (good) gossip and science; as you can see from my interview with him, it filled a gap. I hope blogs will provide a kind of support structure on which amateur science can grow. [...]

### Assorted Links (2008-04-18 07:07)

1. [1]Nassim Taleb's [2]current research.
2. [3]Against the Socratic Method of teaching. Thanks to Dave Lull.
3. [4]Interesting experiment in cookie making.
4. [5]The New Yorker wants to profile Michelle Malkin. Malkin refuses to cooperate.

1. [http://bloomberg.com/apps/news?pid=20601109&sid=aHfkhe8.C.\\_8&refer=home](http://bloomberg.com/apps/news?pid=20601109&sid=aHfkhe8.C._8&refer=home)
2. <http://www.decisionresearchlab.com/mission.html>
3. <http://divisive.info/?p=1303>
4. <http://chadzilla.typepad.com/chadzilla/2008/04/cookie-tech-102.html>
5. <http://bloggasm.com/why-the-hell-would-the-new-yorker-want-to-write-a-profile-of-michelle-malkin>

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### 80% Empty or 20% Full? (2008-04-18 14:07)

A study in the latest issue of Journal of Nutrition wondered if following dietary guidelines ("eating healthy") is helpful. From [1]the abstract:

Few studies have found that adherence to dietary guidelines reduces the incidence of chronic disease. In 2001, a National Nutrition and Health Program (Program National Nutrition Santé®) was implemented in France and included 9 quantified priority nutritional goals involving fruit, vegetable, and nutrient intakes, nutritional status, and physical activity. We developed an index score that includes indicators of these public health objectives and examined the association between this score and the incidence of major chronic diseases in the Supplémentation en Vitamines et Minéraux Antioxydants cohort. . . . Men in the top tertile [ = most adherence] compared with those in the lowest one had a 36 % lower risk of major chronic diseases . . . No association was found in women.

No association in women. Suppose the guidelines were half correct – half of the advice was useless, half was helpful. You'd still expect an association because the helpful advice would help and the useless advice would neither hurt nor help.

Did the authors of this highly-informative study [2] face their results squarely? No. The abstract concludes: "Healthy diet and lifestyle were associated with a lower risk of chronic diseases, particularly in men, thereby underlying relevance of the French nutritional recommendations." Particularly in men, huh? The study started with about 2000 men and 3000 women. It lasted eight years.

1. <http://jn.nutrition.org/cgi/content/abstract/138/5/946?etoc>

2. <http://www.blog.sethroberts.net/2008/03/27/comparison-of-strategies-for-sustaining-weight-loss/>

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Jasmine (2008-04-20 05:50:22)

Perhaps because women has more complex physiology

### **More about Procrastination (2008-04-19 10:04)**

Nathan Yau, who is trying to reduce how much he surfs the Web, has posted [1] a report of what he learned during his first month of self-experimentation. It reads exactly like my experience of research: In the beginning, few things turn out as planned.

1. <http://flowingdata.com/2008/04/14/how-to-stop-procrastinating-one-month-report/>

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### **What Do Jobs Need to Be Good? (2008-04-19 12:44)**

I've always wondered what makes a job satisfying. Yeah, it varies from person to person. What about features that are true for everyone? What about [1] this, for example?

For a while at Amazon, I was the Manager of Website Performance and Availability. . . . Whenever something went wrong, and some chunk of the site got slow, I tracked down why and got people to fix it. Each week I wrote a report summarizing everything that went wrong in excruciating detail, and presented it to a room of directors and VPs in a weekly metrics meeting. It was as Sisyphean a task as any you can possibly imagine. In a software system as large, complex and constantly changing as amazon.com, something is always going wrong. . . . My job was to make a list of irritating things each week, and I was widely regarded as having done it as well as anyone ever had. . . . I found this job to be the most soul-crushing work I've ever done. I totally burned out in a year, as did the person who held the job before me.

I tell you this story as a cautionary tale. Try to find work that allows you to focus on positive things. Avoid like the plague any work that focuses on negative things.

[2]Related research. [3]The writing cure.

1. <http://telepatch.blogspot.com/2008/04/why-being-latency-monkey-makes-you-want.html>
2. <http://psychology.ucdavis.edu/labs/emmons/>
3. <http://www.blog.sethroberts.net/2006/10/11/the-writing-cure/>

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Peter (2008-04-19 14:57:31)

that job sounds exciting. very similar in what i used to do as a tech support engineer. big challenges - technical and otherwise - helping people - working with people, a sense of urgency, you get to be proactive, eventually working to reduce complexity and up reliability. good stuff. but it sounds like it was stressful and probably required a lot of overnights. i never had that. we were usually able to fix our probs, and if not, it was never mission critical or something we could fix by completely swapping out software/hardware - we didn't have 50,000 computers. a good manager is clutch to having a 'good job'. someone who believes in human dignity. having a say in decision-making is important - a little democracy in the work place instead of the totalitarian top-down approach that most of us are used to right now. so, co-ops are a good model. look for the fascists and corporatists and Republicans to vilify co-ops as they continue to grow in popularity. here's a good example of one: <http://www.blackstar.coop/> and, increasingly, people are starting to realize that having some time to play with their kids, visit and take care of their parents, go to church, volunteer, make love to their spouses, plant some veggies in the community garden, etc. are important - so 'full time' jobs with 30-hr work weeks will increase, as will people's happiness and satisfaction with their jobs. :)

Varangy (2008-04-20 12:34:50)

*having a say in decision-making is important - a little democracy in the work place instead of the totalitarian top-down approach that most of us are used to right now. so, co-ops are a good model. look for the fascists and corporatists and Republicans to vilify co-ops as they continue to grow in popularity.* I guess I am a fascist-'corporatist'-Republican because I have always observed that too many cooks in the kitchen spoil the broth.

TomG (2008-04-23 02:11:55)

Well about that broth, it really all boils down to who calls the shots (doesn't it always) - and I see the traditional top-down management structures as inherently dysfunctional, where authority is fear-based and coercive rather than one fostering an atmosphere of mutual respect - that actually capitalizes on human dignity, and actually benefits a company with greater individual output and much less turnover. Peter only mentioned "a little democracy" - so not sure why that's too much to mention. The reality is that we're supposed to justify our pay to the stockholders/owners or a company - and the quality of management and culture they engender truly do matter. When I hear the usual crappola such as "don't bring problems, only solutions" - then you know the company has slothful types running the show (a disservice to the true owners). You can have the most skilled kitchen staff, and provide the best stove and appliances - but if the head chef ignores the remarks and stressors in making the broth, it'll come out spoiled excepting sheer luck. The typical replacing of one inept chief for another will procude no better results - since a good leader listens to his staff and allows them the freedom to do what they're supposed to for the sake of all, and especially the owners.

## Never Enough by Joe McGinniss (2008-04-20 07:17)

I am reading [1]Never Enough, [2]Joe McGinniss's latest book. I was browsing at the Berkeley Public Library and there it was! It was a little [3]like discovering a painting by Jackson Pollack in a thrift store. The typical book I want to read at BPL has 15 holds on it.

I am trying to read it as slowly as possible so that it will last as long as possible. It is surely the best book I have read this year. It is one of the best books I have read since I read [4]The Miracle of Castel di Sangro (1999) by McGinniss, which was also incredibly good. That was another book hard to stop reading. In both books, the characters are bathed in a golden authorial light. Events are described with a beautiful simplicity, as if in a story for children, except what happens is intricate, meandering, morally complex, and true. In Miracle, McGinniss falls in love with the soccer team of a little town only to have his heart broken when they throw their last game. In Never Enough, a man is murdered – and then his brother, half a world away, is also murdered. (Which happened while McGinniss was writing about the first murder.) Surely the murders are unconnected yet how could they not be connected?

1. <http://www.cbsnews.com/stories/2007/11/09/earlyshow/saturday/main3480292.shtml>
2. [http://en.wikipedia.org/wiki/Joe\\_McGinniss](http://en.wikipedia.org/wiki/Joe_McGinniss)
3. [http://www.thereeler.com/features/the\\_50\\_million\\_question.php](http://www.thereeler.com/features/the_50_million_question.php)
4. <http://www.dooyoo.co.uk/printed-books/miracle-of-castel-di-sangro-joe-mcginniss/1028916/>

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Nansen (2008-04-21 18:02:09)

Your spoiler kind of ... spoils Miracle.

seth (2008-04-21 21:00:30)

as I told someone yesterday who'd seen the movie Atonement...Nabokov said, "Curiously enough you can never read a book you can only reread it." He meant the first time you read a book learning the details of what happens, the plot, etc., gets in the way of appreciating the rest of it.

Seth's blog » Blog Archive » More about Never Enough (2008-04-25 19:35:37)

[...] Never Enough by Joe McGinniss [...]

Joe McGinniss (2008-04-27 15:27:22)

Thank you, Seth, for the generous comments about not one, but two of my books. I hope the SF Chronicle (if it's still in business) hires you as its book editor (if it still has one) before my next book.

## Glimpse of the Future: Dim Sum? (2008-04-21 23:03)

The most surprising finding of [1]my self-experimentation was that we need to see faces in the morning – every morning for most of us – to be in a good mood during the day. Morning faces push an oscillator that controls our mood. During the Stone Age, this need was fulfilled by talking to your neighbors. The function of this oscillator was to synchronize the moods of people who live together. It greased the wheels of cooperation. It's much easier to work with someone in a good mood than someone in a bad mood.

Since I discovered this, I've wondered: What will this mean for everyday life? Will people chat via videophones?

Watch YouTube videos ("This is my response to . . .")? Look in a mirror? Gather in cafes? Or what? You need a community to make this work, since you need to see one or more faces for a half hour or more.

Last night at [2]Teance, at a Slow Food event, I learned of two modern communities where people manage to get the needed face time. One is in [3]Chaozhou, a city in Guangdong Province, China. Every morning retired people get together and drink tea. Where do they meet? I asked. "Anywhere," I was told. They may meet in a park, for example. In Guangdong they drink more tea than anywhere else in China and, I was told, have better health than the rest of China.

The other community are those Cantonese, both in Hong Kong and in Guangdong Province, who eat dim sum every day for breakfast. They gather in restaurants that serve dim sum. You can come whenever you like but the restaurants open around 5 am and the whole thing may last four hours. (My results imply that the face-to-face conversation should happen during the first hours or so after you get up. Wait till 10 am and there won't be any effect.) You might have three business meetings during that time. You can stretch out eating dim sum in a way you can't easily stretch out eating breakfast that appears all on one plate at once. So it lends itself to longer meals. The longer everyone spends at the dim sum restaurant, the easier it becomes to meet there.

1. <http://repositories.cdlib.org/postprints/117/>

2. <http://teance.com/>

3. <http://en.wikipedia.org/wiki/Chaozhou>

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Nansen (2008-04-23 19:35:55)

Sometimes I wonder which is the more remarkable: your discovery itself, or the fact that a widespread appreciation of the discovery could take another fifty years.

seth (2008-04-24 03:42:54)

That's an interesting way to put it because countless times I have thought something with a similar logical structure but more positive: The remarkable thing about this discovery is that whatever recognition I get for it won't bring me as much happiness as the discovery itself.

Andrew Gelman (2008-04-25 19:15:50)

Seth, Why is this remarkable? Isn't that the nature of all, or almost all, scientific discoveries? Recognition is a motivation, but my impression is that psychological studies have found that recognition doesn't bring much happiness at all. (I have to say, it's brought me some happiness, but I've just always assumed that I'm more recognition-loving than most. I imagine you're closer to the norm.) P.S. I guess I should correct this slightly, since some scientific discoveries bring negative happiness. For example, I once met the guy who invented napalm.

## **How Things Begin (Reading the OED) (2008-04-22 04:57)**

Maybe this post should be titled How Books Get Written. A curious feature of the book industry is that it gets almost all of its key ingredient – book manuscripts – from amateurs. No other big industry is like this. If our economy is a giant experiment, [1]this point is an outlier. A huge outlier. What does it mean?

To find out, it would help to look at specific cases. I asked [2]Ammon Shea, author of [3]Reading the OED (forthcoming), how he managed to write it. He replied:

The advance was plenty for me to live on for a year, which is approximately how long the book took. However, I live cheap. I moved in with my girlfriend, who owns her own apartment, and so the rent, or maintenance costs, are low. We cook at home, tend to not buy things that we don't need, and our idea of excitement is to go to a new library.

I had wanted to read the OED for quite some time, but knew that I didn't have the leisure to spend ten hours a day doing so. I wrote the book proposal to see if I could convince some publisher to, in effect, subsidize my hobby.

I've worked as either a musician or a furniture mover for most of the past twenty years - both are occupations which allow a certain freedom; freedom from both responsibility and security. Taking off time was not so much of a problem. In terms of circulating the proposal I had my agent send it out. He's the same one that I had when I wrote several other books, some eight or ten years ago.

Ammon's editor is the same as mine (Marian Lizzi), which is why I knew about his book. Reading the OED: One Man, One Year, 21730 Pages (= 60 pages/day) will be published in August.

1. <http://www.blog.sethroberts.net/2008/04/01/buried-treasure-part-1/>

2. <http://www.ammonshea.com/index.html>

3. <http://www.ammonshea.com/oed.html>

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knackeredhack (2008-04-22 07:07:26)

Seth, it looks like an increasing number of web apps are coming from amateurs, the self-funded or students. Perhaps journalism is in effect heading that way too. Tim

LemmusLemmus (2008-04-22 08:52:46)

Given that he got an advance, he wasn't really, really an amateur. Even so, I think you're basically right. I think there are two simple reasons why so many books are superhobbies, as some might call it: 1. Having produced a book is fun. Having produced 100.000 screws probably isn't (for most people). 2. Producing a book costs next to nothing (as opposed to producing a film, an epidemiological study, etc.).

## **Self-Experimentation, Dogged and Useful (2008-04-22 21:50)**

Studying himself, Piotr Wozniak, a Polish computer programmer, [1]learned some useful things:

In 1985, he divided his database into three equal sets and created schedules for studying each of them. One of the sets he studied every five days, another every 18 days, and the third at expanding intervals, increasing the period between study sessions each time he got the answers right. This experiment proved

that Wozniak's first hunch was too simple. On none of the tests did his recall show significant improvement over the naive methods of study he normally used. But he was not discouraged and continued making ever more elaborate investigations of study intervals, changing the second interval to two days, then four days, then six days, and so on. Then he changed the third interval, then the fourth, and continued to test and measure, measure and test, for nearly a decade.

Based on his results he created a popular program called [2]SuperMemo.

Wozniak has ridden SuperMemo into uncharted regions of self-experimentation. In 1999, he started making a detailed record of his hours of sleep, and now he's working to correlate that data with his daily performance on study repetitions. . . . Wozniak has also invented a way to apply his learning system to his intake of unstructured information from books and articles, winnowing written material down to the type of discrete chunks that can be memorized, and then scheduling them for efficient learning.

Thanks to John Kounios, Robert Simmons, and Navanit Arakeri.

1. [http://www.wired.com/medtech/health/magazine/16-05/ff\\_wozniak?currentPage=all](http://www.wired.com/medtech/health/magazine/16-05/ff_wozniak?currentPage=all)

2. <http://www.supermemo.com/>

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Paul Brentano (2008-04-23 09:07:05)

That is an extremely cool and provocative article. So, I can't help but to think about what kind of an effect omega-3 + the "spacing effect" would have together. I'm guessing that maybe omega-3 would "flatten" the forgetting curve a little bit. Maybe I'll experiment on my kids a little.

Phillip J. Eby (2008-04-23 12:53:11)

There's also an open-source version of a similar concept, at <http://www.mnemosyne-proj.org/>. It supports pictures and sounds as well as text, and uses a somewhat older version of the SuperMemo algorithm. Personally, when I saw this, I was really excited at first, and then I realized I don't have much use for jamming my declarative memory full of facts. It would be much more useful to have a way of quickly adding things to your procedural memory: then you could install new eating or exercise habits, or other daily routines. (Let alone the whole, "let's download Tae Kwon Do and how to fly a helicopter" scenario in the Matrix movies.) Know of anybody who's got software for that? ;-)

NE1 (2008-04-23 18:25:29)

That site is one of the biggest black hole of consciousness I've visited on the net since like the 90's. The guy is probably mentally ill. I used Supermemo for a couple months. The program is analogous to the website. So much crazy crap added in, and it still doesn't have basic usability features. Content creation is pretty tough, so I think you need dedicated peers to make it work. If I were to start doing it again, I'd lower my projected retention rate. It was definitely not working for learning new material—the sets just blew up.

### **More about Acne (2008-04-23 22:40)**

The highlight of my recent trip to New York was a talk I gave at Landmark High School, a public high school near Columbus Circle. The students paid close attention. Afterwards, a student named John Cortez told me what he'd figured

out about what causes his acne. His skin was clear so I had to believe he knew what he was talking about.

He has three rules: 1. Eat less greasy food. 2. Work out hard. 3. Wash face extremely well, especially after working out. The last rule is surprising because one of Allen Neuringer's students found that acne got better when she stopped washing her face. John explained his reasoning like this:

When I was little I got something because of the lack of hand washing. Nothing serious – it went away – but it caused me to become sort of a neat freak. When i started to get pimples I thought it was because i didn't wash my face well. When i started to wash my face better, my acne stopped getting worse. One day i got lazy and from there on I stopped washing. Then I noticed that I was almost covered with pimples. When I got in a gym I realized that when i sweat and as soon as possible, washed my face got less pimples and prevented those nasty huge acne.

Amount JC figured out about acne while in high school: A lot. Amount SR figured about acne while in high school: Zero.

Addendum. Another unexpected aftereffect of my talk was that [1]Shangri-La Diet forum traffic went way up. That evening, at one point there were 307 people simultaneously reading the forums, a new record. The average daily maximum during the days just before was about 150. There were about 50 people at my talk. Go figure.

1. <http://boards.sethroberts.net/index.php>

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a\_guy (2008-04-24 01:18:41)

There are two medical things that I know of that are simple and cures quite serious conditions amazingly well but are not well known. One is the shangri-la diet. The other is eating large quantities of vitamin B5 to cure acne. I have had acne for many many years, and I have tried many things. Until I found B5 the only thing that worked was an antibiotic, but after I had been on it for over a year my doctor didn't want to prescribe it to me any more. I searched for solutions online and tried a bunch of things that people were talking about. Nothing helped. I finally tried B5, and it worked amazingly well. I'm not 100 % cured, but almost. If I skip the B5 for just a couple of days it comes back though. And sometimes it seems like some batches of the stuff I buy are bad and don't work as well. We're talking about large quantities, around 10 grams per day. That's somewhere around a thousand times RDA. From what I've read on different forums it doesn't seem to work for everyone, but it works for many. It worked for the only one I recommended it to, but that was a relative. This knowledge could help a lot of people. Many years of my life were much much worse than they could have been because I had not found B5 yet. Unfortunately, there is no Seth Roberts to promote it. Even worse, the only one who is seriously trying to promote it have done a study that wasn't very well made, and he has a theory about how it works that is most likely completely wrong. Instead of pointing to the fact that people seem to be cured by it, he mostly focuses on his theory, and since it's obviously wrong nobody takes him or B5 seriously. Whenever someone looks into B5, all they see is a flawed study and a bogus theory. The fact that there is tons of anecdotal evidence is not enough to compensate. It doesn't help that the only ones who sell B5 cheaply enough are pretty shady companies, and most of them refer to the flawed study and theory. So, even if I know that it works, I can't really prove it to someone else. I hope the day will come when it becomes more mainstream, it helps more people, and I can start buying it from some more serious and trustworthy sources. It shouldn't have to take more than a well made double-blind study.



seth (2008-04-24 03:36:27)

I did a little self-experiment that found that B vitamins – a B-vitamin pill – reduced my acne by about 50 %. I can't remember what caused me to try it. By then my acne was pretty low, which is perhaps why it wasn't a dramatic effect. What persuaded you to try it initially?

Andrew Sidwell (2008-04-24 06:41:43)

I found that two things significantly helped my skin health (not acne, but they did together reduce the number of spots/pimples to single figures from some amount much larger than that). One was flax-seed oil, the other was dropping dairy from my diet.

Ian (2008-04-24 09:10:52)

I can imagine that after sweating, the bacteria on your face would be kind of turned up, and allowed to spread. It might be the most vulnerable time. By cleaning at that point, maybe it reduces that risk (and presumably a person's immune system is capable of handling at least some of the burden of the bacteria).

a\_guy (2008-04-24 11:02:20)

Seth, People were talking about it in different Internet forums, and many reported success. Much like the way I found SLD. The normal dosage of B5 (or Pantothenic Acid, same thing) is 10 grams per day. That's one kg in three months (and 8 pounds per year). The biggest pills they sell are 1 gram, because it's too hard to swallow anything bigger. You need ten of these every day. Or you can buy powder to keep the cost down. It's not something you happen to eat by mistake. :-). When people are discussing this you often see people who claim they didn't have any effect, and when queried they say that they used B5 found in some multivitamin or whatever, and it says on the bottle it contains 10 mg. mg and g are not the same of course, so they were just eating one thousand of the required dose by mistake. So, your B-vitamin results are not the same as this. It might be related though. I wish I knew what makes it work. Maybe there is a simpler way to trigger the same effect without eating these huge amounts of a vitamin.

Mike (2008-04-24 12:29:11)

I have to throw in my 2 cents about B5. Yes, it definitely worked for me, but I stopped using it after some very painful self-experimentation results. I'm in my 50's and have had moderate acne (1 or 2 spots at any given time) my whole adult life. I've more or less accepted it now, if people have a problem with my skin, it's their problem. But I still would rather not have it. I agree with what's been posted above. Washing makes it worse. Dairy makes it worse (maybe just dairy fat, need more self-experimentation on that). Chocolate has no effect. Trans fat makes it much, much worse - I'm thinking of renting out my face as a trans fat detector. When I inadvertently eat trans (eating "home-cooked" baked stuff, usually), I find out a couple days later, big time. As to supplements, B5 megadosing worked great for me. I got to the point where I couldn't even remember my last pimple. But I came down with kidney stones for the first time in my life. Read somewhere online that might be related to B5 megadosing, something about leaching calcium. So I stopped taking B5. Pimples came back, kidney stones went away. 6 months later I tried the B5 megadose again after some bad breakouts. 2 weeks later, kidney stones again! Not a controlled study, but proof enough for me.

Kirsten (2008-04-24 14:47:44)

For me, the key was coffee. I never had a problem with acne growing up, but after a stressful summer when I was 27, I spent six or seven years really suffering from it. Nothing helped except Retin-A, and the side effects were too harsh for long term use. I finally removed caffeine from my diet, then one year later removed even decaf coffee (which I drank every morning.) This was the single most important factor in clearing up my skin. I also found a couple other contributing factors, which I'll mention below. Stopping coffee was a hunch based on an Adele Davis book and also some mass media news article on Yahoo!, both of which said that coffee washes vitamin A out of the body. I finally solved 99 % of my skin problems last October when I made a list of everything I knew contributed to acne and everything I knew cleared it, and did as little of the first and as much of the second as possible. Still, more than anything, the clearness of my skin remains directly proportional to the amount of coffee-decaf or otherwise-I drink. Other contributing factors: Causes acne: Eating chocolate, falling asleep without washing my face (even if it's for a half hour on the couch), not washing my hair every day. Also, I suspect a link to sugar, but I'm not sure

about that one. Helps clear acne: Sulfur pills ("Acne Relief"), washing my face twice every night, using only non-comedogenic makeup, swimming in salt water, spending time in the sun, fish oil pills, a multivitamin, mud face masks (Queen Helene's and also bentonite powder mixed with apple cider vinegar). Also, coconut oil applied topically may help, but that's too new to say.

Ali Choudhury (2008-04-25 04:07:34)

My acne decreased a lot by cutting out sugary junk and baked confectionary.

## **How Things Begin (conference-call classes about Indian philosophy) (2008-04-24 23:16)**

Waiting for a BART train I met Krishna Kashyap, a [1]San Diego businessman, who teaches classes on Indian philosophy by conference call. He was born in India and studied philosophy there before he came to America.

There are many such classes. About 15 years ago, a Berkeley student named Mani Varadarajan started a listserv called bhaktilist, which allowed people who were interested in Vaishnava Vedanta to contact each other and exchange ideas. This is how the conference-call classes began. Bhaktilist no longer exists, but many lists came from it, including srirangasri@yahoogroups.com and oppiliappan@yahoogroups.com. There are several thousand people on these lists.

Kashyap himself recently stopped teaching classes so that he would have more time to learn. He is now taking classes with a teacher named K. S. Varadachar. He dials his number in India at a particular time. Other people can dial in as well. They listen and ask questions. "I got isolated from my community when I came to this country 20 years ago," Kashya said. "Reading books is not enough. There wasn't any other way to communicate [besides the conference calls]. When I wanted to learn I had to get teachers from India."

Now there are 4 or 5 classes simultaneously; they meet by phone once/week, using freeconferencecall.com. The Indian lecturers don't get paid or at least such is the convention. They are given an end-of-term "gift," called sambhavana, that is \$200- \$1000.

A vast amount about Indian philosophies is [2]here.

How different from American higher education! People learn easily, without coercion, without threats, without punishments, without external rewards, if they see their teacher as a guru. The American term for guru, of course, is motivational speaker.

1. <http://www.sentacbiz.com/?page=aboutus>

2. <http://www.ibiblio.org/sripedia/>

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Motivational speaker as the American equivalent of Indian guru! « Entertaining Research (2008-04-25 09:22:25)

[...] Motivational speaker as the American equivalent of Indian guru! Seth on conference calls on Indian philosophy: Kashyap himself recently stopped teaching classes so that he would have more time to learn. He is now taking classes with a teacher named K. S. Varadachar. He dials his number in India at a particular time. Other people can dial in as well. They listen and ask questions. "I got isolated from my community when I came to this country 20 years ago," Kashya said. "Reading books is not enough. There wasn't any other way to communicate [besides the conference calls]. When I wanted to learn I had to get teachers from India." [...]

## Brain-Enhancing Drugs (2008-04-25 12:02)

A [1]helpful collection of stories about the use of drugs that help you get things done. This amused me:

Individuals who experiment with these substances are on their own, testing drugs on themselves in a wild, crowdsourced, ad hoc brain-enhancement experiment. They join a [2]scientific tradition of self-experimentation that stretches back to [3]Santorio Santorio, a 16th-century physiologist.

If you experiment with mood-altering drugs, you join an older tradition.

1. [http://www.wired.com/medtech/drugs/news/2008/04/smart\\_drugs?currentPage=all](http://www.wired.com/medtech/drugs/news/2008/04/smart_drugs?currentPage=all)
2. <http://www.sciam.com/article.cfm?id=self-experimenters>
3. <http://galileo.rice.edu/sci/santorio.html>

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## More about Never Enough (2008-04-25 19:35)

From Never Enough by Joe McGinniss, which I [1]blogged about:

One day she noticed that Michael wasn't wearing the [ \$7000] watch [she'd given him]. He was embarrassed to tell her why. Finally, he said he'd told his brother Lance about the affair but Lance had been born again and told Michael he was immoral. More to the point, he told Michael he was fired. They argued. Finally, Lance said that Michael could keep his job in return for the watch.

Shades of the indulgences that upset Martin Luther! You don't find this sort of detail in other books.

1. <http://www.blog.sethroberts.net/2008/04/20/never-enough-by-joe-mcginniss/>

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Andrew Gelman (2008-04-26 08:51:42)

Seth, Did you read Absurdistan or Then We Came to the End? These had this sort of detail. I respect that you like this particular book—I'm a McGinniss fan too—but no need to praise it by putting down all other books!

seth (2008-04-26 09:05:37)

It's not quite the same. Absurdistan and Then We Came to the End are novels. Never Enough is not. But you're right that I might like Then We Came to the End, I've heard good things about it.

## More about Acne (continued) (2008-04-26 12:42)

When I was a teenager, my dermatologist gave me a long list of foods that might cause acne. It wasn't any help at the time but later, when my acne was better, it helped me realize that drinking Diet Pepsi caused me to get acne 2 or 3 days later because "cola drinks" was on the list.

Now I learn from [1]Tucker Max that it was probably the caffeine that did it:

I had bad acne in high school. I cut all caffeine out of my diet—cola, chocolate, etc—and about 90 % of the acne went away. I got the rest with Accutane.

Very useful information. The list my dermatologist gave me was too long and too homogenous. "The acne caffeine link is well-known to dermatologists," Tucker added. Except those [2]who claim acne has nothing to do with diet.

1. <http://tuckermx.com/>

2. <http://www.blog.sethroberts.net/2007/12/20/diet-and-acne/>

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Aaron (2008-04-28 21:33:27)

I've found this to be the case too - but with a twist. It isn't caffeine per se that makes me break out, it's coffee. Weird though it seems, I can drink two or three cups of caffeinated tea a day and have no flareups at all. But a day or two spent drinking even decaf coffee, and I've got three or four pimples on me. Someone explained to me once that coffee has extra compounds in it that promote a kind of sweaty aggressiveness, while tea has compounds that promote ease and relaxation. I certainly find this to be the case. When I drink coffee, I'm much more dynamic, determined, and combative. I'm also prone to set out on all kinds of ambitious new initiatives, and for my energies to scatter. On tea, I'm calmer, don't sweat so much, am wary of new initiatives, and can behave in a more organized fashion. Anyway, for me: coffee equals acne, tea doesn't.

Raffaella Ducoli (2008-05-11 09:54:53)

Although some research claim that food is not a cause of acne, some other researches show that certain food increases the inflammation in the body. I used to have a cup of coffee a day and my skin had breakout and it was drier. Now I replace coffee with tea and I have no more breakout.

Serge (2008-10-15 21:54:26)

The issue in my experience is not diet. The causes of acne are specific and relate to the release of sebum (oil) that clog the sebaceous glands and cause acne. The release of these oils actually have more to do with hormones and gender than they do with diet. There's actually emerging discussion about how gender effects acne. These discussions often contain facts about the differences in the genders and how that creates a need for a gender-specific acne treatment. I researched the topic myself and came across this site which provided some useful info that helped me understand: [http://campusacnetruth.org/html/acne\\_gender.html](http://campusacnetruth.org/html/acne_gender.html)

browneye (2008-10-26 18:40:51)

The skin is your body's largest detox organ, after the liver and kidneys. As a general rule, caffeinated coffee, red meat, cheese and all manner of drugs and environmental toxins that we absorb each day can overwhelm these organs and then it shows up in the skin. All makeup clogs the pores and the chemicals in skincare products can also make things worse. After years of trying to practically peel off and dry up the skin on my face with marginal improvement, I found that pure olive oil soap, lots of

distilled water, and rarely wearing makeup (and with the olive oil to moisturize, no other products are needed) has cleared the adult acne that has grossed me out for years.

### **Better in Google Books (2008-04-27 16:32)**

I've heard that Samuel Beckett's plays, written in French, are better in English. I have no idea if that's true but I am sure that *Television Without Pity: 752 Things We Hate to Love (and Love to Hate) About TV* by Tara Ariano and Sarah Bunting is better in its more accessible, abridged [1]Google Books version. I remember Sarah from when she was an especially visible fan of *My So-Called Life*. I got a much-enjoyed soundtrack cassette from her. Then she and Ariano started [2]*Television Without Pity*, a brilliant entrepreneurial idea, which has helped me understand so many erudite HBO dramas.

1. <http://books.google.com/books?hl=en&id=cm28udLiQlkC&dq=%22sarah+bunting%22+&printsec=frontcover&source=web&ots=16SxVHaW7S&sig=9p7KDY6DkcrAmLMoB4k7yj4r5E#PPA3,M1>

2. <http://www.televisionwithoutpity.com/index.php>

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Howard (2008-04-27 18:30:47)

Visit my SLD blog if you get a chance.

### **My Theory of Human Evolution (micropygmies) (2008-04-27 18:20)**

In 2004, anthropologists discovered fossils of tiny human ancestors on an Indonesian island. Called micropygmies, they were about three feet tall. Their brains were smaller than chimpanzee brains. They appeared to be descended from *Homo erectus* rather than *Homo sapiens*.

They survived until about 20,000 years ago – which was impressive, since *Homo sapiens* reached nearby islands about 50,000 years ago. Why didn't the *Homo sapiens* kill off the micropygmies? [1]Jared Diamond was puzzled by this:

The discoverers of the Flores micropygmies conclude that they survived on Flores until at least 18,000 years ago ([2]1, [3]2). To me, that is the most astonishing finding, even more astonishing than the micropygmies' existence. We know that full-sized *H. sapiens* reached Australia and New Guinea through Indonesia by 46,000 years ago, that most of the large mammals of Australia then promptly went extinct (probably in part exterminated by *H. sapiens*), and that the first arrival of behaviorally modern *H. sapiens* on all other islands and continents in the world was accompanied by similar waves of extinction/extermination. We also know that humans have exterminated competing humans even more assiduously than they have exterminated large nonhuman mammals. How could the micropygmies have survived the onslaught of *H. sapiens*?

One could perhaps seek a parallel in the peaceful modern coexistence of full-sized sapiens and pygmy sapiens in the Congo and Philippines, based on complementary economies, with pygmy hunter-gatherers trading forest products to full-sized sapiens farmers. But full-sized sapiens hunter-gatherers 18,000 years

ago would have been much too similar economically to micropygmy hunter-gatherers to permit coexistence based on complementary economies and trade. One could also invoke the continued coexistence of chimpanzees and humans in Africa, based on chimps being economically too different from us to compete (very doubtful for micropygmy), and on chimps being too dangerous to be worth hunting (probably true for micropygmy). Then, one could point to the reported survival of the pygmy stegodont elephants on Flores until 12,000 years ago ([4]1, [5]2): If stegodonts survived so long in the presence of *H. sapiens*, why not micropygmy as well? Finally, one might suggest that all of the recent dates for stegodonts and micropygmy on Flores are in error [despite the evidence presented in ([6]1) and ([7]2)], and that both stegodonts and micropygmy became extinct 46,000 years ago within a century of *H. sapiens*' arrival on Flores. All of these analogies and suggestions strike me as implausible: I just can't conceive of a long temporal overlap of *sapiens* and *erectus*, and I am reluctant to believe that all of the dates in ([8]1) and ([9]2) are wrong. Hence I don't know what to make of the reported coexistence.

Yes, I know, when you have a hammer everything looks like a nail. But I think Diamond is quite wrong about the nature of *Homo sapiens* economies 50,000 years ago. To Diamond, the big change was the invention of agriculture. Before that, hunter-gatherer; after that, farmer and occupational specialization. I believe there were vast economic changes long before agriculture – it took a long time to evolve language, and that didn't start until there was already plenty of trading. By 50,000 years ago, I'm sure there was lots of specialization (Person A makes/knows X, Person B makes/knows Y), giving the *Homo sapiens* all sorts of tools and other useful expertise that the micropygmy didn't have. They both hunted and gathered but much larger brains and a vast amount of expertise would have been for naught if they didn't hunt and gather different foods. [10]*Homo erectus* did not have anything like human language, as far as I can tell; therefore they didn't have lots of trading or expertise. The two groups could co-exist because their foods were different. I suspect the *H. sapiens*, able to hunt really large animals, thought small animals, which supported the micropygmy, a waste of time.

1. <http://www.sciencemag.org/cgi/content/full/306/5704/2047>
2. <http://www.sciencemag.org/cgi/content/full/306/5704/2047#ref1>
3. <http://www.sciencemag.org/cgi/content/full/306/5704/2047#ref2>
4. <http://www.sciencemag.org/cgi/content/full/306/5704/2047#ref1>
5. <http://www.sciencemag.org/cgi/content/full/306/5704/2047#ref2>
6. <http://www.sciencemag.org/cgi/content/full/306/5704/2047#ref1>
7. <http://www.sciencemag.org/cgi/content/full/306/5704/2047#ref2>
8. <http://www.sciencemag.org/cgi/content/full/306/5704/2047#ref1>
9. <http://www.sciencemag.org/cgi/content/full/306/5704/2047#ref2>
10. [http://en.wikipedia.org/wiki/Homo\\_erectus](http://en.wikipedia.org/wiki/Homo_erectus)

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Kevin C (2008-04-27 21:26:33)

A small point, but the micropygmy would not be human ancestors. They would have belonged to another branch of hominids as you point out. They would be our evolutionary cousins, but not our ancestors.

seth (2008-04-27 22:22:51)

Yeah, I was simple and somewhat wrong rather than complicated and correct. I wondered how to describe them and followed Diamond, who called them "a primitive human micropygmy population".

Kevin C (2008-04-28 06:53:43)

I can sound like such a nitpicker. I think that is part of my evolutionary niche: to find tiny problems with things I otherwise like or agree with.

seth (2008-04-28 07:16:06)

Thanks, Kevin. It was helpful to be corrected.

Seth's blog » Blog Archive » My Theory of Human Evolution (directory) (2008-05-05 06:13:00)

[...] I Recommend material-science research) the cellphone effect (the first words facilitated trade) micropygmyies (hunter-gatherers w/ trade different from those w/o trade) autism (autistic "obsessions" reveal a universal tendency toward expertise) [...]

### **The McCarrison Society (2008-04-28 17:13)**

The [1]McCarrison Society is named for Robert McCarrison, a British doctor who studied nutrition in India. Its website is full of important nutritional info, including [2]this:

When I worked in East Africa from 1960 - 1965, there was not a single case of breast, colon or prostate cancer, no cardiovascular heart disease and any diabetes seemed relatively mild. Nor was this absence of such diseases due to poor diagnostic facilities.

It's like a British version of the [3]Weston Price Foundation.

[4]Interesting lecture by Michael Crawford, its president.

More. It was founded in 1966 and has about 300 members.

1. [http://www.mccarrisonsociety.org.uk/component/option,com\\_frontpage/Itemid,64/](http://www.mccarrisonsociety.org.uk/component/option,com_frontpage/Itemid,64/)

2. <http://www.mccarrisonsociety.org.uk/content/view/19/52/>

3. <http://www.westonaprice.org/>

4. [http://ncs-video.wmin.ac.uk/sih/m\\_crawford/m\\_crawford.html](http://ncs-video.wmin.ac.uk/sih/m_crawford/m_crawford.html)

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Howard (2008-04-29 04:29:20)

Makes me glad I've found SLD and non-sugar/non-flour eating.

### **How Much Play Will This Get? (2008-04-28 17:51)**

How will Al Gore respond to [1]this, I wonder?

Disconcerting as it may be to true believers in global warming, the average temperature on Earth has remained steady or slowly declined during the past decade . . . All four agencies that track Earth's

temperature (the Hadley Climate Research Unit in Britain, the NASA Goddard Institute for Space Studies in New York, the Christy group at the University of Alabama, and Remote Sensing Systems Inc in California) report that it cooled by about 0.7C in 2007. This is the fastest temperature change in the instrumental record and it puts us back where we were in 1930.

Thanks to [2]Geoffrey Kidd.

More. A [3]response to this article. Thanks to Kathy Wollard.

1. <http://www.theaustralian.news.com.au/story/0,25197,23583376-7583,00.html>
2. [http://www.amazon.com/gp/cdp/member-reviews/A3FUAGZZ6AF8XM?ie=UTF8&sort\\_by=MostRecentReview](http://www.amazon.com/gp/cdp/member-reviews/A3FUAGZZ6AF8XM?ie=UTF8&sort_by=MostRecentReview)
3. <http://www.theaustralian.news.com.au/story/0,25197,23612876-11949,00.html>

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Peter (2008-04-28 22:31:37)

"[...]It is excellent to have well-informed opinion pieces published in our newspapers. It is a pity when opinion pieces contain significant errors or misleading information. This opinion piece written by Phil Chapman appears to have a number of factual errors, incorrect conclusions, and misleading statements.[...] " <http://www.aussmc.org/ScienceBlog.php>

Howard (2008-04-29 04:28:48)

This entire theme has gotten a lot of play, just not in the normal press.

Andrew Gelman (2008-04-30 21:09:47)

I don't know that Al Gore is in the business of responding to opinion pieces in Australian newspapers, but I'm sure there's someone who's taken a look at this.

Tom (2008-05-02 10:46:56)

Here is a response, though not from Al Gore.... Global Cooling Consistent With Global Warming  
<http://www.globalwarming.org/node/2137> <http://www.globalwarming.org/node/2143>

## **The Scientific Method, Half-Finished but Wholly-Accepted (2008-04-29 12:23)**

In a science classroom at a middle school I saw a poster about "the scientific method." There were seven steps; one was "analyze your data." According to the poster, you use the data you've collected to say if your hypothesis was right or wrong. Nothing was said about using data to generate new hypotheses. Yet coming up with ideas worth testing is just as important as testing them.

It's like teaching the alphabet and omitting half of the letters. Or teaching French and omitting half the common words. While no one actually teaches only half the alphabet or only half of common French words, this is how science is actually taught. Not just in middle school, everywhere. The poster correctly reflects the usual understanding. I have seen dozens of books about scientific method. They usually say almost nothing about how to come up with a new idea worth testing. An example is *Statistics For Experimenters*, a well-respected book by Box, Hunter, and Hunter. One of the authors (George Box) is a famous statistician.

The curious part of this omission is how unnecessary it is. Every scientific idea we now take for granted started somewhere. It would be no great effort to find where a bunch of them came from.



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LemmusLemmus (2008-04-30 06:23:17)

I think the problem is that you can't teach how to come up with new ideas. You can tell a pretty standardized story about how to test ideas, but not about how to develop them. I remember reading in a book about the methods of empirical social research something along the lines of: "Hypotheses can come from reading the previous literature, the researcher's intuition... pretty much anything goes." Which sounds about right to me.

Marc (2008-04-30 07:10:00)

For me one of the valuable ideas which I've taken away from G. Box and his writing is his stress that experimentation is a dialog between theory and practice. One generates theories and then one tests them using sound methods. The results from the tests generate new perspectives which get fed back to the original theory and the cycle repeats. Another idea which I remember getting stressed quite a bit in the DOE literature was not to put all ones resources into the first experiment. The first experiment is most likely to reveal that ones thinking about the problem is way off track. The ideas are there, in the background, that the experiments themselves generate the ideas/theories which step by step bring one closer to understanding.

Aaron Blaisdell (2008-04-30 07:41:40)

Allen Neuringer and other experimental psychologists would disagree with the statement that "you can't teach how to come up with new ideas." Allen's research paradigm directly addresses this question and finds that variation—the foundation of creativity—can be selected for through operant reinforcement. I remember reading similar studies in human children being selected for creative (i.e., novel) output in art media (painting if my memory is correct). That said, it is very neglected in the science classroom and literature, but I think it is alive and kicking in the mentor-apprentice model that takes place in most ph.d. labs. Also, see Platt's famous 1964 Science paper "Strong Inference" for a well-stated explanation of the scientific method.

seth (2008-04-30 09:11:34)

"You can't teach how to come up with new ideas." I think you can. One way to come up with new ideas – that is, increase the chances of this happening – is to do a better job of analyzing your data. To examine it more thoroughly. This will sometimes reveal hard-to-explain anomalies. These anomalies will often inspire new ideas. Note that this particular method was not one of the ones listed in that methodological book LemmusLemmus read.

LemmusLemmus (2008-04-30 09:35:40)

Seth, the "you can't teach..." wording was much too strong, even wrong. It would be more accurate to say that it is harder: My main point was that there is a fairly standardized method to test ideas - formulate the hypothesis, collect data, etc. - and there is no such standardized method for coming up with ideas. I'm definitely not against telling students to come up with ideas by looking closely at the data, introspection, self-experimentation, and so forth. In fact, it would be useful to have an as-exhaustive-as-possible-list in a textbook. The list is going to vary depending on the subject. (It's been a long time since I read that book; that was not a verbatim quote.) As an aside, I once read an article in a German sociology journal that included a long and winding paragraph in which the authors justified not deriving their hypothesis from the previous literature, but simply from everyday observations. I have a funny feeling that one was included in response to a reviewer's comment.

seth (2008-04-30 13:43:23)

"The list is going to vary depending on the subject." Interesting idea – why do you think this?

LemmusLemmus (2008-04-30 15:35:07)

Seth, for example, if you're an astrophysicist, self-experimentation will not help much.

Nathan Myers (2008-05-02 22:37:37)

Astrophysicists have much bigger problems these days than not being able to apply self-experimentation. Most of what they theorize about (black holes, neutron stars, dark matter, dark energy) very likely doesn't exist at all. Everything they see (planets excepted) and everything in between is made out of stuff whose behavior is governed by completely intractable mathematics they prefer not to think about at all. The scientific method was invented in its entirety by one ibn al-Haytham, a bit more than a thousand years ago. (He is known in mathematics as Alhazen and Alhacen, in different contexts.) He was under house arrest in Egypt, and spent his time in confinement founding the study of optics. He invented science in order to obviate the need to appeal to authority. His book on optics was the standard reference for centuries after, and well known to Francis Bacon. Hypotheses fall from the sky like rain. Science provides a way to cull the wrong ones. It fails completely if you don't want to cull the wrong ones.

seth (2008-05-03 02:50:54)

thanks for the explanation, LemmusLemmus. I think self-experimentation isn't a basic principle of science, it just is one way to follow a basic principle, which I would state as: "to find new ideas worth testing, gather data quickly and cheaply." Nathan, what does "hypotheses fall from the sky like rain" mean? It sounds too passive. It is hard to increase the rate of rainfall; it is much easier, I'm sure, for a scientist to increase the rate at which they generate new ideas worth testing.

Nathan Myers (2008-05-03 11:01:33)

My point was that any competent scientist can come up with more hypotheses than he can afford to test carefully, and way more than his or her colleagues can afford to pay attention to, in aggregate. With science, we can offer reasons why somebody else should pay attention to our ravings. This was the problem that al-Haytham first addressed. Ravings were perhaps more prevalent then.

seth (2008-05-03 19:24:13)

"Any competent scientist can come up with more hypotheses that he can afford to test carefully." More *plausible* hypotheses? That is the opposite of my experience. In my field, experimental psychology, it is extraordinarily hard to come up with new treatments that will plausibly have a big effect on the main things we study. What are you basing this statement on?

Nathan Myers (2008-05-05 08:28:11)

I'm not an experimental psychologist. Doesn't it take a long time to test a hypothesis thoroughly? Aren't there many, many phenomena still lacking definitive explanation? For many years the only plausible hypotheses were behaviorist. Inventing plausible behaviorist hypotheses is really hard. More generally, the hardest part about inventing hypotheses is to stop pretending to know what you don't really. Limiting yourself to what grant committee members and journal referees would welcome makes hypothesizing artificially difficult.

John Hunter (2008-05-31 13:35:09)

One of the other authors of [1]Statistics for Experimenters was my father :- ) [2]William Hunter. It is great to keep hearing from people that like the book.

1. <http://statisticsforexperimenters.net/>

2. <http://williamghunter.net/>

## Happy Birthday, SLD! (2008-04-30 10:40)

The Shangri-La Diet (the book) is two years old. What's happened during the last year?

The nerd in me is enormously concerned with numerical measures of popularity. Is the diet spreading? If so, how fast? This can be measured dozens of ways; the number I trust most is number of visitors to the [1]SLD forums. This

number has been steadily increasing. Plotted on a log scale, the visitors-vs-time function is roughly linear (= same percentage increase each month). The number has doubled in a year. It was about 7,000 a year ago; it is about 14,000 now. The increase has happened/is happening without much effort from me. During the first year, I posted on the forums several times per day; now I post less than once/day.

Which brings up Topic 2: Improvements by users – which the populist in me cares about. I like to think that allowing anyone to contribute ideas and experience, which they can do via the SLD forums, will be a good thing. (Not only here: the Weston Price Foundation website should have forums.) I also like to think the ideas behind SLD have a life of their own. More than other weight-loss methods, the Shangri-La Diet is based on a theory. Most weight-loss methods are based on good/bad classifications: Food A is good, Food B is bad. Not much room for improvement. A theory, on the other hand, can be used in many ways. Mixing a new theory with lots of user experimentation should be really powerful – especially when the user-experimenters can trade ideas and experience. It should produce a different kind of growth: growth of efficacy. Over the last year I was especially impressed with comments on the SLD forums about nose-clipping. [2]This thread in particular. Heidi555 wrote:

I think it's much easier to nose clip a higher percentage of food. The AS is noticeable and you don't have to exert any will power. I don't worry about a two hour window. . . . The weirdest thing is that I always feel like I'm eating a lot. Maybe eating as much as you want, of whatever you want, always feels like a lot.

By "much easier" she meant much easier than other ways of applying the theory ("taking oil, sugar water, or a smaller amount of nose clipped food). Wearing nose-clips in public isn't easy, but that could change. Isn't wearing nose-clips a lot like wearing glasses?

Another part of me likes a good story – e.g., American Idol. If I wanted to tell a story about SLD during the last year, I would stress the omega-3 storyline, especially 1. [3]Tyler Cowen no longer needs gum surgery after he starts taking flaxseed oil (FSO). 2. Anonymous finds himself [4]healing more quickly after martial arts practice when he starts taking FSO.[5] Stops taking FSO, returns to baseline, restarts FSO, improves again. I like the unexpectedness of it: Why would a new diet lead to this? Speaking of fights, in New York, I met a woman who works on reality TV shows. "That's what my job is about," she said. "Getting people to fight." Yes, fight = good TV. Over the last year, the SLD forums [6]remained bad TV: exceptionally well-behaved and conflict-free. I'm not sure what this means, but I really like it.

[7]Stephen Marsh's 2.5 yrs on SLD.

1. <http://boards.sethroberts.net/index.php?action=collapse;c=1;sa=expand#1>
2. <http://boards.sethroberts.net/index.php?topic=5903.0>
3. <http://www.marginalrevolution.com/marginalrevolution/2007/07/todays-happines.html>
4. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>
5. <http://www.blog.sethroberts.net/2007/11/25/omega-3-and-sports-injuries-more/>
6. <http://boards.sethroberts.net/index.php?topic=2170.0>
7. <http://ethesis.blogspot.com/2008/04/updates-two-and-half-years-on-shangri.html>

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Craig (2008-04-30 15:37:14)

Purslane high in omega 3, in India traditionally used as a remedy for dry coughs, swollen gums.

Andrew Gelman (2008-04-30 20:42:52)

I don't think being interested in "numerical measures of popularity" has anything to do with being a nerd. Lots of non-nerds are interested in numerical measures such as how much money they have, how fast their car can go, etc. And I'm sure that just about every book author, nerd or not, wants to know sales figures.

seth (2008-04-30 22:43:08)

True. Perhaps nerds are more interested in such measures?

Sam (2008-05-03 03:45:01)

About Omega-3, I just read that Omega-6 and Omega-3 are taking up each others spaces in our body, so taking in much more Omega-3 than Omega-6 would deplete our body of Omega-6. I wonder what this will do to your body, on long term (if anyone would know, it should be you I'd think). I'm just starting a mercury/amalgam detox using Chlorella, wild garlic, protein, sunflower oil and flaxseed oil, and they recommend 1 part flaxseed oil (omega-3) for 4 parts sunflower oil (Omega-6) to rebuild cell damage from mercury/amalgam - so far I only used flaxseed oil, but I'll get started with sunflower oil, too (btw. reading about amalgam and conventional wisdom being wrong is very interesting - amalgam was accepted for teeth for all the wrong reasons against knowing mercury for being toxic).

### **Idol-Wise (2008-04-30 16:04)**

The most popular TV show is American Idol. On Survivor, one of the most popular TV shows, an "immunity idol" has a big role. Next: a restaurant chain called [1]Potlatch.

1. <http://en.wikipedia.org/wiki/Potlatch>

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### **Assorted Links (2008-04-30 23:11)**

1. [1]Why Word has an animated paperclip. For more on this, see the excellent [2]Who Really Matters: The Core Group Theory of Power, Prestige, and Success by Art Kleiner.
2. [3]Does sugar make it harder to fight off microbes?
3. [4]Practical memory training.
4. [5]Interview with Leonard Mlodinow, author of Feynman's Rainbow and the soon-to-be-published [6]The Drunkard's Walk: How Randomness Rules Our Lives.

Thanks to Dave Lull and Peter Spero.

1. [http://jamesfallows.theatlantic.com/archives/2008/04/clippy\\_update\\_now\\_with\\_organiz.php](http://jamesfallows.theatlantic.com/archives/2008/04/clippy_update_now_with_organiz.php)

2. <http://www.amazon.com/Who-Really-Matters-Privilege-Success/dp/0385484488/sethrobertand-20>

3. <http://stuartbuck.blogspot.com/2008/04/starve-fever.html>

4. [http://www.nytimes.com/2008/04/29/health/research/29brai.html?\\_r=1&oref=slogin](http://www.nytimes.com/2008/04/29/health/research/29brai.html?_r=1&oref=slogin)

5. <http://blogs.wsj.com/numbersguy/numbers-guy-interview-leonard-mlodinow-329/>
  6. <http://www.amazon.com/Drunkards-Walk-Randomness-Rules-Lives/dp/0375424040/sethrobertand-20>
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### 3.5 May

#### The Aquatic Ape Hypothesis (2008-05-01 22:37)

Recently I visited some friends whom I hadn't seen for a while. You're more talkative, they said. I attribute this to flaxseed oil.

I became interested in the effects of flaxseed oil partly because of the aquatic ape hypothesis, the idea that living near water had a big effect on human evolution. During a long period of human prehistory, the theory says, we swam a lot, presumably to catch fish. If we ate lots of fish (high in omega-3) at the same time our brains grew large, it was quite possible that our brains need large amounts of omega-3 to function properly. Flaxseed oil is high in omega-3.

Elaine Morgan, the theory's main proponent, has written several books about it, "each more po-faced [= academically correct] than the last," she has said. I have finally read two of them and was pleased to find more scrutiny made the theory more plausible.

Background to the idea that humans were once aquatic is that several mammals have obviously become aquatic – starting on land they shifted to water. Sea lions, whales, and so on. Birds have become aquatic – for example, ducks. Insects have become aquatic. Elephants appear to have become aquatic and then terrestrial again – note how well they can swim. There is ample precedent, in other words.

Humans differ in all sorts of anatomical and physiological ways from other primates and the aquatic ape theory has straightforward explanations for many of them:

1. Humans have subcutaneous fat, other primates don't. Other aquatic mammals do. Explanation: The fat serves as insulation.
2. Humans have almost no fur, other primates do. Other aquatic mammals don't. Explanation: Fur creates drag in the water. In the air, fur insulates.
3. Humans are bipedal. Explanation: Walking upright keeps the head out of the water, allowing breathing.

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Hamish (2008-05-02 01:15:49)  
Regarding point 2. What about fur seals?

Varangy (2008-05-04 15:37:27)

Don't get me wrong, I am open to the idea of the aquatic ape theory, but I don't find theory compelling. *During a long period of human prehistory, the theory says, we swam a lot, presumably to catch fish.* This holds no water, no pun intended. Ever try spearfishing? Even with a high-powered modern speargun, powerboat and modern wetsuit, it is on a calorie expended basis, by far, the least efficient way to obtain calories. Probably negative, if you count all the times one goes spearfishing and comes back with nothing. Also, humans have to be taught how to swim and most of us, are instinctually, afraid of the water. *Humans have subcutaneous fat, other primates don't. Other aquatic mammals do. Explanation: The fat serves as insulation.* Again, I am very skeptical about how much insulation subcutaneous actually provides. After all, we where clothes and air is much less of a conductor of heat than water is. 2. *Humans have almost no fur, other primates do. Other aquatic mammals don't. Explanation: Fur creates drag in the water. In the air, fur insulates.* Again, other marine mammals DO have fur. Seals and sea lions certainly do, river otters do. Beavers. Not to mention the animal with the most dense fur of all animals, the sea otter. Also, marine birds certainly have feathers. Penguins, ducks, cormorants etc etc. 3. *Humans are bipedal. Explanation: Walking upright keeps the head out of the water, allowing breathing.* Back to marine mammals, no marine mammals is bipedal. And the other animals that are bipedal, namely birds, such as herons, use their bipedalism essentially as terrestrial animals to stalk small game in very shallow waters. By the AA theory, based on bipedalism and tallness, a crane would be ideal for getting INTO the water and stalking game that way. I think the theory is fun, but ultimately sort of romantic and not serious.

Varangy (2008-05-04 15:39:04)

One more thing, I just don't see aquatic apes spearing fish with crude spears, no flippers and no goggle like device.

seth (2008-05-04 16:06:17)

Efficacy of fishing. To use your own experience as a guide here is to underestimate the effects of learning, tradition, and practice. Not to mention over-fishing. "Humans have to be taught how to swim." You haven't seen pictures of swimming babies. They swim very easily. What's your explanation of why humans have subcutaneous fat and other primates don't? Human subcutaneous fat increases when humans are exposed to cold. And what's your explanation for why humans became bipedal? Thanks for the correction about aquatic mammals and fur. I should look at that more carefully.

Kevin C (2008-05-04 17:06:56)

Isn't bipedalism conventionally explained by our shift from forests to open plains? The open plains of Africa gave an advantage to apes that could stand up and see above the grasses and across the plains.

seth (2008-05-04 19:05:08)

Re the open-plains explanation of bipedalism. It would be nice to have one coherent explanation of the dozens of ways early humans differed from chimps rather than separate explanations for each difference. The forest-to-plains explanation doesn't offer a good explanation for subcutaneous fat – surely the plains were hotter than the forests. And the "see over the grass" explanation is pretty arbitrary. What about looking up into the leaves? Why didn't other primates develop bipedalism so that they can more easily look up into the trees?

anthrosciguy (2008-05-05 10:40:23)

As has been pointed out, not just fur seals but *all* seals have hair, and for that matter all aquatic and semi-aquatic mammals except whales, serenia, and hippos. All these can be explained by two factors which are well-supported: large size and thermodynamics, and in the case of the smaller whales, swimming speed. Although it's also likely that the hairlessness of whales only evolved once and then spread to all descendants, all species we have now, rather than for each individual species. The "swimming babies" business is an old zombie. There is an "infant swimming reflex" (just as there is an infant crawling reflex and a host of other interesting reflexes in infants). The infant swimming reflex is not unique to humans but is found in all mammals tested, including opossum, rat, kitten, rabbit, guinea pig, and rhesus monkey. They all lose this reflex within a few months after birth, and it's likely present because the infant has just spent its life immersed in fluid up until birth. The subcutaneous fat in humans is just like primates which are allowed to get fat. In the wild primates, like most other animals, don't get very fat because even though fat is great for lean times, it limits mobility and makes one more vulnerable to predators.

In animals which have relatively little danger from predators, they get fatter than their close relatives. Humans have had, due to fire and "advanced" weapons like spears, had relatively little predator problems for hundreds of thousands of years compared to our close relatives. It's also clear that fat has not evolved for insulation, as we can see, for instance, by the fat deposits of whales and seals. The fat there is for shaping, to make the animal more hydrodynamic; the fat across the belly is very thinly deposited which wouldn't make sense if it was for insulation, also in winter and cold water and poorer food supply the fat nearest the skin gets used up first which also wouldn't make sense if it was for insulation. This according to Caroline Pond, who is certainly the foremost expert on the evolutionary significance of fat. On the subject of hydrodynamics, fur is not a drag in the water, it aids in hydrodynamics due to breaking up the boundary layer (this has been confirmed through testing). And dolphins, for instance, have no fur but instead have evolved dermal ridges which do the same thing that a layer of fur would do. In fact, the one thing we find that's bad for swimming speed is exactly what we have: some hair (sometimes a lot of body hair) which is often curly and decidedly non-hydrodynamic. On bipedalism, the normal paleoanthropological explanations involve looking at how and when non-human primates use bipedalism (they all do sometimes). A very tiny fraction of that is walking in deep water (usually when they do wade, they're quadrupedal), most is during food getting and carrying, also for observation, for displays, etc. And of course some apes (orangs and gibbons) use bipedalism virtually exclusively on the ground, because they use it a lot in trees (as do other apes and monkeys of course). In short, there are no real good reasons to think the AAT/H holds water, and plenty of really good reasons to think it doesn't. As you can see just from these few bits of data, the only way an argument can be made for it is to ignore the real evidence and twist data into an unrecognisable pretzel. And the idea of one cause for everything, one stop shopping (or an "umbrella hypothesis" as it's called) is appealing to people who don't know much about the subject but falls apart when you look at it and start learning. Even Seth's interest in flax seed oil shows one way the theory doesn't make sense; one of the common claims for it is that the oil he prizes (quite rightly) in flax seed and other plant and terrestrial sources is only found at the seashore – obviously that's nonsense, yet the proponents still make the claim. If you want to know more about the problems with the idea, you can check out my web site (the link is above). I've been doing this for quite a few years now and my site is used by college courses as well as by magazines and online sources, and I recently wrote the entry on the theory for the *Sage Encyclopedia of Anthropology*. Apologies for the long comment.

Varangy (2008-05-05 10:59:59)

I think antrosciguy has it about covered. But to respond to Seth's comments: *Efficacy of fishing. To use your own experience as a guide here is to underestimate the effects of learning, tradition, and practice. Not to mention over-fishing.* I couldn't, respectfully, disagree more. My experience is based on fish behavior when being hunted. In modern spearfishing we observe all the effects of learning, tradition and practice that you mention — and yet, with all of its the very, very modern accouterments such as specialized freediving goggles, specialized freediving wetsuits, specialized freediving flippers, specialized freediving gloves, specialized freediving knives, and unbelievably powerful spearguns, spearfishing is hard. Very hard. It takes a considerable amount of courage practice, time, and skill to kill large fish regularly. And yet, there is no way one could harvest enough fish over an extended period of time to actually subsist on or even support a family. Unless aquatic apes looked like dolphins with arms, in-water/swimming around with a crude spear is impossible. *Humans have to be taught how to swim.* You haven't seen pictures of swimming babies. They swim very easily. I have. And that is quasi-myth. They don't actually 'swim'. They can naturally hold their breath, but unless you bring the child to the surface, rest assured it will drown. *What's your explanation of why humans have subcutaneous fat and other primates don't?* Human subcutaneous fat increases when humans are exposed to cold. I suspect that other primates do — these certainly do. *And what's your explanation for why humans became bipedal?* There are various theories on this, I don't want to go into the pros and cons of each – however, logically, I do not have provide a competing explanation to reasonably cast doubt on AA theory. *Thanks for the correction about aquatic mammals and fur. I should look at that more carefully.* More to antrosciguy's point — take a look at the Fastskin by Speedo: <http://www.sciam.com/article.cfm?id=the-olympians-new-clothes> *One fabric, the Fastskin, works like spandex to compress the body and limit muscle oscillation. Fastskin is designed to reduce friction drag by creating ridges and valleys similar to those on a shark's skin—the water skims over the ridges and skips the drag-inducing valleys in between them. At points where bodies curve, another spandexlike material called Flexskin—joined to the other fabric by low-profile seams—enables greater mobility. Speedo suits also feature titanium-silicon scales on the inner forearm that grip the water better on down strokes. Lastly, rubber bumps across the chest help reduce another type of resistance called pressure drag. The overall effect, Speedo asserts, is a 4 percent reduction in passive drag for men and a 3 percent reduction for women.*

Varangy (2008-05-05 11:04:30)

We cannot forget the prevalence of large marine predators as well, both in freshwater as well as salt i.e. crocodiles, alligators, hippos (while they do not technically prey on humans, they often kill them, both in the water and out), of course, various sharks, — there also no reason that a marine mammal like a killer whale wouldn't snack on a human, even though that, for some unknown reason, is thought to be impossible.

seth (2008-05-05 20:58:30)

Anthrosciguy, do you have a reference for your apparent claim that humans and other primates do not differ in amount of subcutaneous fat? I couldn't find one at your website. Since people gain subcutaneous fat when exposed to cold, I cannot believe that fat has nothing to do with insulation, no matter what Caroline Pond says. You are plainly wrong when it comes to omega-3, the part of your comment that I know the most about. Some seafood, such as salmon, has a lot of omega-3. The aquatic ape theory doesn't suppose it is "only" found in seafood. Of course not. Omega-3 is in every plant. It supposes that seafood is an unusually good source.

anthrosciguy (2008-05-10 10:54:36)

It's not amount of fat. What the situation is is that humans can and do get fat, just as all animals do when they can get away with it. The controlling factor for most animals, including primates, is predation. Extra fat is very useful because it's stored food, and when your food supply is off and on having that extra food is very handy; it can be the difference between life and death, or between healthy pregnancies and nursing or weak, sick young. But it limits mobility, so it makes the animal more vulnerable to predators. In situations where predation is limited, an animal will become fatter than its relatives in situations where predation is not so limited. For humans, this relatively limited predation has been the case for hundreds of thousands of years, since we were able to use fire and "advanced" weapons like spears. Now all these fat deposits are anchored to internal depots, and those of humans are just like those of other primates. When the fat of either humans or other primates gets more plentiful it spreads out and eventually is found under the skin in larger amounts, just as it is elsewhere in larger amounts. But humans can get fatter, although it's not clear that "wild" humans actually are fatter than wild non-human primates. For instance, most primates in the wild are similar to most other terrestrial mammals at around 5 % fat (it goes up at certain times of the year and down at others, particularly for animals which don't live in the tropics, although even there rainy and dry seasons cause quite a change). For modern humans, who don't live in anything like a "wild" situation anywhere – not even gatherer-hunters – the average fat is higher, and of course it's getting crazy in North America. But we also find, for instance, that Eskimos have lower body fat than adults in Canadian cities (people *do not* gain subcutaneous fat when exposed to cold, AFAIK, would you please send me a reference for that if you have one), and some gatherer-hunter tribes were measured at around 5 % body fat, so it's not unlikely that normal, everyday humans tens of thousands of years ago were not much fatter, if at all, than non-human primates even though they *could be*, and sometimes were. In short, when any primate gets fat, the fat which is anchored in internal depots spreads out and under the skin. Due to predation, non-human primates tend not to get that fat, and in zoos they are fed a diet which tries (not always successfully) to keep them trim. BTW, a common thing you'll see in AAT/H proponents' claims is the "ten times fatter" claim; this is a serious misreading (originally by Morgan and endlessly repeated by others) of Caroline Pond's work in which she found that humans, *just like other primates*, have numerous and small fat cells compared to rodents, that *compared to rodents* we have "ten times the expected number of fat cells". She was describing why rodents aren't a very good model for fat in humans, since they can expand and decrease the size of their fat cells as they get fatter while we, *just like other primates*, add fat cells instead, and this makes it harder to lose fat since losing fat cells is much harder than reducing their size, yet the small size of our fat cells makes it very hard for them to be reduced in size. As far as insulation goes, any benefit of fat is secondary rather than a reason it was selected for. And I've given an outline of the basic reasons why, and Caroline Pond is one heck of a source, having devoted her career to studying this; your dismissing her work in favor of your wishes is not very good science, to say the least. :) Many AAT/H proponents claim that seashore sources are far better than inland sources for DHA (an example is from the BBC Radio 4 program, where it was incorrectly claimed "And the only place to find that accessible and abundant supply of brain selected nutrients was at the shoreline, in the marine food chain."). This is one of those "true but false" things: One the one hand, DHA itself is found more in some marine sources, but especially in cold water marine fish, which is fairly easy for us to get but let's face it, impossible for our early ancestors to obtain. But DHA and LNA are found in many inland terrestrial sources, and these are not that hard to find. Wild game, especially brains,



various plant fats from various plants (just as you're promoting flax, and it's far from the only one) are some sources. And other needed nutrients are, according to studies, far more abundant in terrestrial sources than at the shore.

Ilana (2008-05-12 16:54:02)

I was under the impression that the main purpose of fat in the Aquatic Ape theory was not for insulation but in order to help with bouyancy. That in turn would help the ape/human to swim. And it would help with insulation in the water - that's why women can compete with men in swimming - they have more fat than men do which makes them more bouyant, and they can stay in cold water for longer periods of time than men can for the same reason. Of course, this would not help if they were to stay in water for long periods of time, but the AAT never said that the apes/ humans would live in the water, just that they would live by water sources and spend a frequent amount of time in the water. Also, clearly other primates can get fat, but can they get as fat as humans can? And about the fishing - you're all ignoring another method of gaining marine food that would have been very possible for the apes/humans - diving. There's not just fish in the sea, there's also seaweed and crustaceans. It's very possible that the apes/humans started picking seaweed and crustaceans up in shallow water, and gradually moved deeper, learning to dive for their food. They would have then had a ready supply of food much easier to attain than fishing. You can see examples of this in modern times in the Amo and Haenyo diving communities. The women dive in the ocean for food and occasionally pearls. While it takes great skill and training to do this, it wouldn't be improbable for apes/humans to learn how to do this if they gradually moved out into deeper and deeper water. There would also be a far greater food supply if they lived off seaweed and crustaceans than if they lived off game and brains, competing with the big cats and other hunters of the area. And if they got bigger brains from eating the same food that terrestrial hunters ate, then why are modern humans brains so much bigger than any brain of a terrestrial animal of the same size? Wouldn't the terrestrial animals' brains be the same size in proportion to their bodies as humans? Also, I'm sure those nutrients are found in plants, but would those plants have been found in abundance in that particular part of africa? I don't know the specific nutrients in plants, but I know that many vegetarians have to be careful about their diet to be sure they get the right amount of vitamins to keep their bodies healthy. That would seem to point that the apes/humans did not get much of the nutrients needed entirely from plants, because then our bodies would be designed for vegetarianism, which they are not. However, I do not know the specifics on that one, so I could be completely off on the plant point. If someone knows more detail about it, please let me know. Also, the predator argument against the theory doesn't hold water, because there would be a similar amount of predators on land. They wouldn't not go in the water once they had found it to be a good food source because of marine predators, and stayed on land, where there were other predators. It doesn't make sense. Also, the various aquatic predators would differ from area to area, so they wouldn't have hippos, crocodiles, alligators sharks and killer whales diving at them all at once. At most they would have one or two, and they would have learned to cope with them, the same way that they would have learned to cope with the predators on land if they lived in a land based environment. And they probably would not have had to deal with sharks and killer whales unless they lived in the sea, which is unlikely. According to the AAT, they would have lived along the coast, where shark attacks, though they do occur, are minimal. and, yes, clearly hairlessness would not be as effective in reducing speed as ridges on dolphin skin, but as simply shaving off body hair increased swimmers speed according to a 1989 study, losing thick, curly hair from all over the body would have had quite an effect on increasing both speed and efficiency in the water. If you think about it, it is more likely for an ape to have lost hair in order to be more efficient in the water than it is to have changed its existing hair into the water efficient hair of a seal or an otter. Remember, the ape/human would only be semi aquatic, rather than fully aquatic, so it would have had no reason to grow ridges on the skin like dolphins or other fully aquatic animals. And to assume that in order for it to be aquatic it would have had to change its pelt into one similar to an otter or a seal is just silly. And yes, humans are instinctively afraid of the water. However, we spend quite a lot of time in the water for creatures who are afraid of it. Yes, we have to learn to swim, but we also have to learn to walk, and to speak. What of it? Is language not a part of our brains or our evolution simply because we have to learn it? OK, I'm done now. I think. Sorry that took so long. You were all giving such intelligent arguments that I had to jump in.

seth (2008-05-12 20:03:43)

thanks Ilana. If fat provides buoyancy the more fat the harder to dive - which makes it harder to get food that you have to dive for. Insulation is an unequivocal blessing since the water will be cold. you remind me that collegiate swimmers shave themselves before big meets - to go faster, of course. So even the hair we have left slows us down in the water. This makes

the idea that more primate-type hair would be better in the water (fur "aids in hydrodynamics" according to anthro guy) very hard to believe.

Varangy (2008-05-13 11:43:09)

That in turn would help the ape/human to swim. And it would help with insulation in the water - that's why women can compete with men in swimming - they have more fat than men do which makes them more buoyant,

Women don't compete with men in swimming. And as they generally have more fat as percentage of body fat to muscle, I would say that is a hindrance rather than advantage. Lastly buoyancy is almost irrelevant to swimming speed. Check out the backstroke next time, why is so much of the race **underwater** off the wall using dolphin-kick? (This is legal BTW)

And about the fishing - you're all ignoring another method of gaining marine food that would have been very possible for the apes/humans - diving. There's not just fish in the sea, there's also seaweed and crustaceans. It's very possible that the apes/humans started picking seaweed and crustaceans up in shallow water, and gradually moved deeper, learning to dive for their food. They would have then had a ready supply of food much easier to attain than fishing.

That is incorrect. Crustaceans and shellfish are extremely hard to find and dislodge from their crevices. On a per calorie expended basis, diving, even with modern spearfishing equipment is a negative proposition. Sustaining oneself or a family is impossible.

You can see examples of this in modern times in the Amo and Haenyo diving communities. The women dive in the ocean for food and occasionally pearls. While it takes great skill and training to do this, it wouldn't be improbable for apes/humans to learn how to do this if they gradually moved out into deeper and deeper water.

These women use all the modern free-diving accouterments (mask, fins, wetsuit, boats, nets, abalone bars to pry abalone off rocks etc etc) (My guess scuba is too expensive and limits mobility) Some pics here: <http://quebecjeju.blogspot.com/2007/09/d-ominatrix-women.html> They do NO subsist nutritionally from diving.

There would also be a far greater food supply if they lived off seaweed and crustaceans than if they lived off game and brains, competing with the big cats and other hunters of the area. And if they got bigger brains from eating the same food that terrestrial hunters ate, then why are modern humans brains so much bigger than any brain of a terrestrial animal of the same size? Wouldn't the terrestrial animals' brains be the same size in proportion to their bodies as humans? Also, I'm sure those nutrients are found in plants, but would those plants have been found in abundance in that particular part of Africa? I don't know the specific nutrients in plants, but I know that many vegetarians have to be careful about their diet to be sure they get the right amount of vitamins to keep their bodies healthy. That would seem to point that the apes/humans did not get much of the nutrients needed entirely from plants, because then our bodies would be designed for vegetarianism, which they are not. However, I do not know the specifics on that one, so I could be completely off on the plant point. If someone knows more detail about it, please let me know.

This is a complete non-sequitur.

Also, the predator argument against the theory doesn't hold water, because there would be a similar amount of predators on land. They wouldn't go in the water once they had found it to be a good food source because of marine predators, and stayed on land, where there were other predators. It doesn't make sense. Also, the various aquatic predators would differ from area to area, so they wouldn't have hippos, crocodiles, alligators, sharks and killer whales diving at them all at once. At most they would have one or two, and they would have learned to cope with them, the same way that they would have learned to cope with the predators on land if they lived in a land based environment. And they probably would not have had to deal with sharks and killer whales unless they lived in the sea, which is unlikely. According to the AAT, they would have lived along the coast, where shark attacks, though they do occur, are minimal.

Being in the water and having to face predators negates many of the advantages that humans have. Relatively keen color eyesight in air/land, being able to aim and throw a spear/rock/club (we know chimps defend themselves with clubs), height to see

over obstructions, being able to climb a tree/cliff for evasion and reconnaissance. BTW there are also fresh-water sharks like the Zambezi and Bull Shark that do attack Africans in rivers. I and maybe a few experienced men with spears have a far better chance against several lions (aren't lions afraid of the Masai?) than we do against one shark/killer whale/croc/snake/hippo whathaveyou in the water. In short, they couldn't have coped.

If you think about it, it is more likely for an ape to have lost hair in order to be more efficient in the water than it is to have changed its existing hair into the water efficient hair of a seal or an otter. Remember, the ape/human would only be semi aquatic, rather than fully aquatic, so it would have had no reason to grow ridges on the skin like dolphins or other fully aquatic animals. And to assume that in order for it to be aquatic it would have had to change its pelt into one similar to an otter or a seal is just silly.

So it went from a chimp pelt, to hairless, to current status? How and why exactly?

Yes, we have to learn to swim, but we also have to learn to walk, and to speak. What of it? Is language not a part of our brains or our evolution simply because we have to learn it?

Completely different and irrelevant. All healthy humans learn to, innately/built-in, speak and walk. As birds learn to fly. It is part of the definition of being a human, genetically wired and part of growing. Swimming is a skill learned, much like driving a car or baking a cake. The baby swimming myth is just that, a myth.

you remind me that collegiate swimmers shave themselves before big meets "to go faster, of course. So even the hair we have left slows us down in the water. This makes the idea that more primate-type hair would be better in the water (fur "aids in hydrodynamics" according to anthro guy) very hard to believe.

@Seth So how do you explain the marine mammals I have brought up? Not to mention, the platypus! Also, feathers on penguins? You have to stop thinking linearly on this. The function probably dips and rises like this: -No hair "okay/good. -Some curly hair (especially in very un-hydrodynamic places, head, genitals, armpits) "very bad -Hydrodynamic thick coat (that may insulate as well "ala sea otters) "very good. -Ridges ala dolphins/sharks "best.

Ilana (2008-05-13 15:19:57)

actually, what you said about the divers is untrue. The ama have been diving for 1,500, before modern technology was created. And traditionally, they do not use modern diving equipment - that has only been introduced recently, in the past hundred years. Traditionally, they would dive mostly nude. In diving communities untouched by tourism, they still dive nude. As for the tools they use to prise the abalone shells from the rocks, those would not be too difficult for a human/ape to come by. They could have used thick sticks. And saying that they would have not been able to live off it is illogical. Humans have been eating shellfish for thousands of years, long before modern technology came along and made it easier for us to collect. Shellfish mounds have also been found in many ancient cultures. They probably obtained their shellfish through diving, and then switched to more efficient methods as they became more experienced. But the fact that humans have been eating shellfish for thousands and thousands of years points to the fact that not only could it have sustained a family, but that it couldn't have been as difficult to obtain as you portray. Also, the fact that humans learn to talk and walk as well as swim is not irrelevant. In our modern culture, children still have to learn to talk and walk. Therefore, in a culture that lived at the edges of lakes and rivers and on the sea shore, they would have had to learn to swim as well as walk, talk etc... In those cultures, swimming would be "part of the definition of being a human, genetically wired and part of growing," just like walking and talking is for modern humans. Bouyancy may be irrelevant to swimming speed, but it is not irrelevant to swimming. And the whole AAT argument centers around the hominids being efficient in the water. Being able to float would make it easier for them to swim. It also would help them to swim faster, because they could focus more of their energies on moving forward rather than staying afloat. Seth - you make a good point. However, one of the whole reasons that the Ama and Haenyo cultures use women is because they can withstand the cold for far longer than men because of their fat. This would mean that fat is good for insulation, like you said. But as fat is also bouyant, this bouyancy would not prevent them from diving deep. Again, it is the women, with the most fat, who dive in these cultures. So humans are able to use their brains to cope with land predators, but the moment that they step in the water, those brains are gone? If early humans can learn to cope with lions, there's no reason that they couldn't have learned to cope with water predators as well. At that very least they could

have gotten out of the water and climbed a tree (after all, they're more aquatic than other apes, rather than fully aquatic) Perhaps learning to deal with water predators helped humans/apes gain intelligence? Also, there are many sea based cultures in modern times such as the sea gypsies of southeast asia that must have found methods of coping with sharks and other predators simply because they live so close to the sea. Besides, sharks would not be the biggest threat, crocodiles would. And not all crocodiles are deadly. In fact, in the area where Lucy was found, the crocodiles are considerably smaller than Nile crocodiles and are not a threat to humans. Either the humans/apes would have found a way to deal with man eating crocodiles, and in doing so gained in intelligence and experience, or the water predators where the humans/apes lived were not as threatening as we might assume. When talking about hairlessness I was referring to our current status. That was what stimulated so much speculation on human evolution, the fact that compared to other mammals, humans are remarkably hairless. (and we stand on two feet). As to why we have armpit, head, and pubic hair, I really don't know. We probably have armpit hair and pubic hair because they grow in sheltered spots of the body and would not majorly detract from speed and efficiency in the water, or were simply one of the last areas of hair left as the body hair grew thinner and thinner. Also, when looking at the aquaticness of humans, you have to remember to compare them with apes, rather than fully aquatic animal, or even semi aquatic animals such as otters. After all, Hardy's original thesis proposed that the aquatic ape would be more aquatic than an ape, and less aquatic than an otter. So is a human's skin and hair as efficient in the water as a dolphin's, or a seal's? Obviously not. But is it more aquatic than an ape's? Clearly it is. If, according to you, Varangy, a human's skin and hair is not efficient in the water, than an ape's would be even less so. Apes do not have hydrodynamic thick coats, so their fur would be even less efficient in the water than our state of relative hairlessness. This only proves the point of AAT - humans are clearly more aquatic than apes, and the only theory providing an explanation for that is AAT. Sorry, that was long again.

Ilana (2008-05-13 17:49:14)

I forgot to mention edible seaweed again in my last post. Sorry about that. Edible seaweed as well as shellfish and fish as well as sponges would provide a lot of food to an ape/human, and edible seaweed certainly would not be difficult to obtain. Oh, and the Haenyo cultures used to live off what they gathered through diving, and it was only when Japan and Korea's relations improved that the Haenyo divers began exporting their gatherings for cash. So clearly it is possible to live off, and support families, from what could be gathered by diving into the sea. And if it's possible for Haenyo divers, it was certainly possible for apes/humans as well.

anthrosciguy (2008-05-14 11:44:00)

Several points: The proponents of the AAT/H have tended to go for moving the goalposts when it comes to what features are supposedly for, initially fat was said to be for insulation, then when (valid) objections were made to that claim, they shifted it to buoyancy. They always assume a modern western human degree of fatness, which is problematic, but more importantly they dismiss the sensible idea that features often have side benefits. As far as predators go, I have a section on my site that deals with predators and there are several big problems with the AAT/H view of aquatic vs. terrestrial predators. One is that we can see how even our most primitive ancestors could deal with terrestrial predators, by looking at how chimps do. Contrary to common AAT/H thought, this isn't simply by running away and climbing (although those options were available to our ancestors too); mostly they do it by harassing them, and in fact we see that leopards, for instance, will actually actively avoid chimp groups. Some predation occurs, of course, but we also see that there's not enough to cause the species to have a significant problem, because they have continued to exist for millions of years in the face of these predators. This shows that a species with similar reproduction to us - medium sized mammals with relatively slow reproduction rates - can survive in a terrestrial environment in the face of terrestrial predators. OTOH, we see no such species in a semi-aquatic or aquatic environment anywhere in the world. This is likely because the situation with aquatic predators is quite different from terrestrial. For one thing, the primary predators - crocs and sharks - are unresponsive to intimidation and counter-attack, very unlike terrestrial predators. And they are numerous. Rather than go over all this here, let me suggest reading that section of my site for the info. As for hair, it's quite true that shaving off body hair improves swimming times, and it's partly due to hydrodynamics (part seems to be due to changes in lactic acid build-up caused by removing the hair), but that only shows the extent of the problem. For swimming speed, we can either shave off our hair or don suits that mimic having lots of hair - the one thing competitive swimmers *don't want* is exactly *what we have*, and what we have is, according to the AAT/H claim, due to swimming speeds and efficiency. If it were, we wouldn't expect it to be *exactly what we don't want* for that purpose. There are a few other problems

I've seen pointed out that I haven't gotten into on my site, such as the littlest, and most deadly, predators: microorganisms, which we find we suffer from in water. We also have a number of ailments due to swimming and diving – the field of sports medicine goes into detail about them – that we would expect to have been weeded out of a species that spent a great deal of time swimming and diving, as those ailments have been weeded out of actual aquatic and semi-aquatic animals. For one example out of many, actual diving species have lost the instinct to breath in when they run out of air underwater; we have the opposite instinct, which is of course rather bad news for us when we're underwater and know full well we shouldn't gasp for air but can't help but do so.

anthrosciguy (2008-05-14 12:16:30)

There are a couple other points I realised I should've put in my last comment. First is on the subject of aquatic vs terrestrial predators: one of the bigger problems with the AAT/H claim that predators aren't a problem for the idea is that unless you're suggesting an exclusively aquatic species (which no one even halfway sensible is suggesting) they would have to face both types. All their arguments, bogus though they are, about terrestrial predators would apply to their scenario as well, plus the aquatic predators added in. The usual claim there is that the little beasties just run in and out of the water depending on what predator they are avoiding, but this founders for two reasons. One is that terrestrial predators will, and often do, chase their prey into water where their bounding abilities give them an even greater advantage compared to their prey; the other is that aquatic predators are generally not even seen or detected before the attack, while terrestrial predators often are. The other point is on fat. We see that fat is generally adapted for two things, extra food and – often – body shaping. This body shaping can be sexually selected, as our life history shows it is in humans, or for a functional purpose like streamlining, as it is in whales and seals (the animals the AAT/H says we resemble in this feature, although they don't like to name them because then it's obviously ridiculous and the feature is not at all similar in life history). For whales and seals, their fat is adult-like at an early age (at birth for whales), as soon as they hit the water. For humans, we start off fat as babies, go through an extremely lean period as children (except for modern overfed kids), then get remarkably fatter right at puberty. If this was due to water use, whether for insulation or bouyancy, this would mean that babies were aquatic, children weren't, then we become aquatic again exactly at puberty... and females would be more aquatic than males at puberty. The alternative explanations – unique-among-mammals fatness for our babies as part of our unique-among-mammals extended post-partum development, fat at puberty and variation between the sexes due to sexual selection – don't have this tortured path to follow.

Ilana (2008-05-14 16:03:56)

That's not true. The big cats stalk their prey - therefore, they, like aquatic predators, rely on not being seen. That is the method by which most predators work, on land or in water. Also, the predator argument against AAH often relies on finding each and every vicious aquatic predator and having them all prey on the apes at once, while they founder in the water. But most aquatic predators that people list would not even apply to the AAH, and it is highly unlikely that even if they did, all the most vicious of these species would happen to exist in the same place that early humans were developing. SHarks, for instance, would not be a serious threat. The amount of shark attacks in shallow waters is very low, even in modern times when we have far more people than existed then. It is still highly unlikely to be attacked by sharks in the water. Even in diving communities, the chances of being attacked by sharks is very slim. When it does occur, however, the sharks can usually be deterred by punching or kicking them, which would imply that sharks do indeed respond to threats. There also are documentations of dolphin groups intimidating sharks, which would render your claim, that marine predators do not respond to threats or intimidation or counter attacks, entirely false. The primary predator would be the crocodile. However, there is evidence that it would not be as terrible as it is played up to be. There are many species of crocodiles throughout the world, and in only a few areas are they serious man eaters, mainly in the Nile and the marine crocodiles of Australia. However, evidence shows that early humans lived by the Afar sea. The crocodiles in that region are not the man eaters of the Nile or Australia. They probably could be dealt with by humans/apes. Also, crocodiles and alligators jaws can easily be held closed. It is ludicrous to assume that these early humans/apes would not have known about this, yet would have known how to deal with lions. AND yes, terrestrial predators will often chase their prey into the water. However, an animal that can swim and dive will have the advantage in that situation, and would probably be able to get away, because they would be more efficient in the water than the terrestrial predator. I don't understand your point about shifting goal posts. All theories revise when new evidence is presented. Therefore, what's wrong about shifting the purpose of fat within the theory to suit new evidence? That's what's done in every other theory

of evolution, yet when the AAH/T does it, people imply that they are twisting facts, etc... You can't have it both ways. Such double standards should not exist in science. The same goes for the theory itself. The AAT/H has been subject to extreme scrutiny, and not one all encompassing flaw has been found, and it still hasn't been accepted by mainstream science. Yet other evolutionary theories have far more holes in them and are not subject to the same scrutiny. The theory that apes stood up to better reach fruit is ludicrous, because apes climb trees. Yet apparently that theory is more scientific than AAH/T. The theory that apes stood up to see over grass is also implausible, because they would simply return to all fours when they were done looking, if that were the case. I don't feel like listing all of them right now, but in all of them the disadvantages about becoming bipedal outweigh the advantages, and they are still more accepted by mainstream scientists than AAH/T. Why does this double standard exist? And it's not because AAH/T is not scientific, because it has far more evidence behind it than many of the other theories. It even has fossil evidence - many of the early fossils have been found by lakes or in wooded areas that would imply the existence of a close water source, which directly ties in with the AAT/H.

Ilana (2008-05-14 16:09:34)

Oh, and about the hair and skin. What we have may be inefficient when compared to true aquatics, such as dolphins or seals, but compared to apes? Our relative hairlessness would be far more efficient in the water than their pelts. Besides, you're missing the point. If even a little hair shaved off makes us more efficient in the water, then how much difference must hair loss have made to an ape?

Varangy (2008-05-14 17:20:16)

@Ilana I will respond to your comments later, but with all due respect (this is not a slur), you are not really engaging in logic-based debate and argumentation, rather you appear to be overtly exploring unbound conjecture and trying to fit the data to the hypothesis, when clearly, it should be the other way around.

Ilana (2008-05-15 15:45:01)

no, that's not true, it seems to be that your arguments are in fact illogical. You exploit every scrap of data that would refute the theory, without looking at the theory as a whole. Much of what you have been saying - that all possible extreme water predators would be there to prey upon the apes, that because human skin and hair does not match that of true aquatics - which the theory never claimed - then they couldn't have possibly spent more time near water than other apes and the theory must be false, seems much more like trying to fit data to refute the hypothesis, rather than looking at all the information out there objectively. However, this is not a slur, and should not be taken as such. no, I'm not trying to be petty, but the moment you start criticizing me as a person (and yes, you were doing so) goes far beyond having a fun and interesting debate. If you think I am wrong, then say why I am wrong, with facts and reasons, do not start attacking me and calling me illogical. By the way, I was not 'exploring unbound conjecture'. Much of what I was saying has facts and reasons behind it. However, since this was merely an interesting debate on the internet, I didn't bother to site any sources. And of course neither did you. However, if you want me to trace everything I was saying back to a source, then I will. I am going to make myself very clear. Debates, whether online or in person, are only fun when both sides respect one another. Now, I do disagree with the points you make, and have said why I do so, but I also respect your opinion and can understand why you think the way that you do. Clearly that same respect is not afforded to me, if you have to belittle me and write at me in a condescending manner. (although I did the same to you in this post, thought it was a reaction) Please, if you feel that I am being illogical, list every point and say in black and white why you think it is illogical. I do the same when I find something to be illogical. But saying in general that my arguments are illogical, that AAT/H proponents arguments are bogus is not really respectful, nor does it make you come across in a positive light, if that's what you have to resort to merely because you dislike a theory.

anthrosciguy (2008-05-21 19:11:59)

*That's not true. The big cats stalk their prey - therefore, they, like aquatic predators, rely on not being seen. That is the method by which most predators work, on land or in water.* We find that chimps just don't have the huge problem with predators that we might think they would, and they don't handle predators simply by running away or climbing. Predators mostly avoid them, and the predation they suffer is too little to have kept them from prospering for millions of years. There is no reason to assume that our ancestors couldn't do what chimps do vis a vis predators. However, your assumption that

terrestrial predators are not seen by chimps doesn't seem to be how the real world operates. Sometimes sure, but mostly no. The claim that Afar crocodiles are special friendly non-hominid eating crocs is something started by Morgan, and it founders on several points. First, there is no reason to try to posit that there was an aquatic period centered on Afar; even Morgan has dropped that apparently, and for good reason: we find earlier and earlier fossils in other places. Also, we're not talking about which crocs now live there, but which crocs lived there in the past. We are also not talking about preying on modern humans (with modern weapons, even "modern" weapons like spears), but preying on our ancestors which is not the same thing (even so, crocodile attacks are numerous and dangerous for reasons I go over in detail on my site). Shark attacks would not, IMO, be as bad a problem, but would be in some areas. The biggest problem for both sharks and crocs, though, is that the attacking animal is generally not seen *at all* until it has bitten the victim, and then it's too late. I'm afraid I don't find the notion of crocodile-wrestling hominids to be anything other than ludicrous. Ditto for your argument that humans are pretty much like dolphins – really, come on... Also note that today (besides shark fences on many swimming beaches) only a small part of our population is in the water, whereas the AAT/H insists that the entire population used water every day for massive amounts of time – otherwise there's no selection pressure for these massive changes. *Oh, and about the hair and skin. What we have may be inefficient when compared to true aquatics, such as dolphins or seals, but compared to apes? Our relative hairlessness would be far more efficient in the water than their pelts. Besides, you're missing the point. If even a little hair shaved off makes us more efficient in the water, then how much difference must hair loss have made to an ape?* The point is that we have *just exactly what swimmers don't want*. We could have no hair and that's better; we could have lots of hair (like most aquatic mammals) and that would be better. Both those possibilities fit the evidence from sports science. But instead the AAT/H proponent is forced to argue that millions of years of evolution devoted to swimming and diving has left its mark on our hair patterns, and done so by leaving us with *exactly what we don't want*. That doesn't make sense. And our hair patterns are rather obviously the result of sexual selection, which is of course another mark against the notion that it's due to environmental determinism. I'm afraid the notion that the AAT/H doesn't have any major flaws is just silly. It has many major, and very bad, flaws. *Therefore, what's wrong about shifting the purpose of fat within the theory to suit new evidence?* Well, to start with, the fact that the "new" purpose doesn't fit the facts either. *The theory that apes stood up to better reach fruit is ludicrous, because apes climb trees. Yet apparently that theory is more scientific than AAH/T. The theory that apes stood up to see over grass is also implausible, because they would simply return to all fours when they were done looking, if that were the case. I don't feel like listing all of them right now, but in all of them the disadvantages about becoming bipedal outweigh the advantages, and they are still more accepted by mainstream scientists than AAH/T.* These ideas do make sense, although you've worded them inaccurately. They not only make sense because that's when we see other primates using bipedality, but they've been tested. Actually, the most common, and long-lasting, use of bipedality is food-getting and carrying. But displays and observation are also very common uses of bipedality. The idea that wading is a major time when bipedality was used is interesting but doesn't hold up; other than unusual times when wading in very deep water without swimming, what we see mostly is wading while doing food-getting and carrying... so is the wading really the reason, since it's what they do on land so often too? And the majority of wading time for non-human primates is quadrupedal.

Ilana (2008-05-22 18:36:10)

anthrosciguy - thank you very much for pointing out the arguments that you found illogical, rather than just insistently accusing them of being bogus. However, you do still seem to have some problems with respect, as in almost every piece of writing you have, you consistently drop in slurs against AAT/H proponents. A word of advice - this lessens the credibility of your arguments, and your standing as an authority on the subject. Now, in response to what you've written: First off, you completely misunderstood the point I was trying to make about the crocodiles. I most certainly did not imply humans wrestling crocodiles. However, if a culture lives by crocodile-infested waters, and have to use those waters as a food source, they are going to have to find ways to deal with those crocodiles. When I wrote about holding crocodiles' jaws shut I was trying to illustrate a known way in which humans could deal with crocodiles, not to suggest that they valiantly went about daily wrestling crocodiles. Also, I was not trying to say that they definitively developed in Afar and that the Afar crocodiles were "special friendly non-hominid eating crocs", but to suggest that not all crocodiles need be huge man eaters, and that there are crocodiles who are currently not extremely dangerous in the North east of Africa where it is likely that early humans developed. I thought I made myself very clear on that point, but obviously I did not. I apologize if you misunderstood me. I also never suggested that humans were like dolphins. I actually have absolutely no idea where that came from. What I actually

said what that since dolphins can intimidate sharks, it would imply that sharks actually could be intimidated. Humans are like dolphins never even entered in to that. I did say that the Amo and Haenyo diving cultures dealt with shark attacks by punching them and by intimidation. However, that has nothing to do with humans being like dolphins. Also, the Amo and Haenyo cultures often will see the shark coming - which is why they can deal with them. AAH does not demand that "the entire population used water every day for massive amounts of time", and it does not have to be so in order to work. Even for a population that only used water as a food source, and did not enter it for massive amounts of time, selection would still be made to prevent drowning and to increase food getting efficiency - by swimming, etc...After all, completely terrestrial mammals also have methods to prevent drowning, such as the diving reflex. Why would these selections not have increased in a population that was mostly terrestrial, but which used the water frequently as a food source? AAH does not depend on them practically living in the water, not by the slightest stretch of the imagination. Hair loss - you're stressing the point that what we have is exactly what we don't want entirely too much, especially since it's not strictly true. That would imply that out of the thousands of different types of hair and fur variations in the animal kingdom, humans have absolutely, categorically the least efficient form ever. Of course this is not true. That is not to say that our skin is as efficient in the water as a dolphins, because it isn't, not by any stretch of the imagination. You also make the rather simplistic point that hair is good, no hair is good, and what we have is terrible. This fails to distinguish between the different types of hair. Of course an otter's hair or a seal's will be extremely efficient in the water. But a housecat's will not be nearly as efficient. What you should be doing is comparing the efficiency of chimpanzee and bonobo hair - and maybe gorillas and other monkeys for good measure- to humans in the water to see what is more efficient. The question is not whether humans rank as aquatic in relation to aquatic mammals in the rest of the animal kingdom, but whether they rank as relatively aquatic in relation to apes. That question would easily apply to an ape's fur. If a reliable experiment is done that says that what humans have is less efficient in the water than even a chimpanzee's hair, then I will rest my case. However, your answer on hair is sidestepping the issue, and is not fully answering it in the context of the theory (or theories.) I also have a problem with the notion that our hairloss - practically unique among the animal kingdom - was done by sexual selection. Why would hairloss be sexually selected for humans and not for any other ape? There would have to be a pretty strong reason. I have heard another somewhat similar theory that hairloss would be sexually selected because it would decrease parasites. But why would that be so for humans and not any other ape? All apes suffer from parasites. It would only make sense if humans lived in an environment where parasites were much worse - such as by rivers - for that to work. There has to be a reason for something to be sexually selected. Even in modern human history, there are reasons for what is considered beautiful. Pale skin used to be extremely desired in many cultures up until recently because it showed off a woman's status, and the fact that she had the luxury of not getting tan through working in the fields. There are reasons for things to be sexually selected. It seems to me that many scientist - amateur and professional - rely on the blanket term 'it must be a sexually selected feature' for something they really can't see the purpose of. Of course, things like peacock's tails really are sexually selected. But I don't think hairlessness would fall into this category, unless there were other strong reasons accompanying it, because then why don't apes also have a tendency to sexually select less fur? I don't think AAT/H has any gaping holes - minor ones, yes, such as the idea that there was a distinct aquatic phase, etc..., but gaping ones, no. I also find that many of the arguments against it are extremely flimsy, or they take the idea to the extreme, or they 'disprove' a point by falling back on the same analogies that they hate so much or by providing analogies that don't really apply yet make them seem as if they do apply. I also think that all the other theories are at least as flawed, or even more so, than the AAH. However, as you clearly disagree with me, and have stated by you do so, let's let this one drop and not get into a spitting match over it. No, I did not necessarily word the theories inaccurately, although I didn't describe them the same way that textbooks etc.. that favor them do. Regardless of whether apes reliably stand up for food getting, it still does not explain why that would provide enough pressure for human ancestors to become bipedal. And the majority of wading time for non human primates is not quadrupedal, it's bipedal. Where on earth did you get that idea from? That was long again. Sorry about that.

CJ Alexander (2008-06-01 17:38:47)

I thought the Aquatic Ape hypothesis was delightful and intriguing when I first read about it here on Seth's blog, several months ago. The subsequent comment thread (after that post) thoroughly convinced me otherwise, and left me confused about Seth's obstinacy in the face of obvious and overwhelming arguments against it. THIS thread has so thoroughly curbstomped the idea, largely due to anthrosciguy's contributions, that Seth's stubborn adherence to it is frankly making me question his judgment about everything, to the point where I'm considering an unsubscribe from his RSS feed. This just isn't good scientific thinking



on display...

Varangy (2008-06-02 13:29:03)

@CJ Alexander *THIS thread has so thoroughly curbstomped the idea, largely due to anthrosciguy's contributions, that Seth's stubborn adherence to it is frankly making me question his judgment about everything, to the point where I'm considering an unsubscribe from his RSS feed. This just isn't good scientific thinking on display!* I think this blog is great and I like Seth's POV on quite a lot. But I know exactly how you feel. I too, as someone who knows a bit about anthropology and has spent more than little time in the water, am surprised, perhaps even a bit appalled as to Seth's clinging to the very romantic, but highly improbably, theory of AA. But hey, we're all human.

anthrosciguy (2008-06-09 17:05:41)

Sorry to leave a comment so long after the rest, but I just had a couple of points to make for Ilana: *AAH does not demand that the entire population used water every day for massive amounts of time, and it does not have to be so in order to work.* That's what most AAT/H proponents will now say, but then you look at what features they claim are due to this "hardly in the water" lifestyle and you see that those features, like hair, fat, and several others, are found only in a very few fully aquatic mammals which have been fully aquatic for several times longer than hominids have existed. This means they are either actually claiming we spent an enormous amount of time in the water, or that somehow just being near water gave us characteristics found only in whales and serenia. At least Hardy was honest about the amount of time he thought our ancestors would have to have spent in water, but then he was a scientist, even though he did make many elementary errors of fact in his "aquatic ape" idea, just as he did in his telepathy and psychic phenomena ideas. The fact is that they also describe those characteristics inaccurately, and they really aren't like those of aquatic or semi-aquatic mammals, and that's just an additional nail. *Hair loss - you're stressing the point that what we have is exactly what we don't want entirely too much, especially since it's not strictly true.* Look at aquatic and semi-aquatic mammals; they have either lots (most of the them, the vast majority of them in fact) or none (a very few fully aquatic mammals which have been fully aquatic for several times longer than hominids have existed). *I also have a problem with the notion that our hairloss - practically unique among the animal kingdom - was done by sexual selection. Why would hairloss be sexually selected for humans and not for any other ape?* That's typically what you see in cases of sexual selection; for instance, why do lions have manes but other big cats don't? (There is also a tendency toward less body hair in apes, compared to other primates.) But the most critical part is that when you see characteristics like fat or hair being due to environment, an aquatic environment specifically in this case, those characteristics are set by the time the creature hits the water. Naturally. And they don't vary between the sexes. Naturally. In humans, however, you find those characteristics change right at puberty and vary between the sexes, which are hallmarks of sexual selection. This also leads to the odd internal inconsistency in the AAT/H: babies need to be aquatic to explain their fat, and non-aquatic to explain their larynxes; later, as children, they need to be non-aquatic again to explain their lack of fat and sebaceous glands, and aquatic to explain their larynxes. Women need to be far more aquatic than men to explain their fat and hair differences, but men need to be far more aquatic than women to explain their sebaceous glands. This contradictory jumble just doesn't make sense, while all those things can be explained simply with non-AAT/H ideas: fat, hair, and sebaceous glands are sexually selected (they near all the hallmarks), the baby fat is unique to humans and no doubt due to our also unique to humans post birth development, especially brain development. And the larynx is now pretty conclusively shown to be due to selection for a deeper voice and is now known to not be unique to humans among primates, not to mention other mammals (others known, so far, include chimps, red deer and elk, koalas, "lions, tigers, and other members of the genus Panthera", dogs, pigs, goats and monkeys, and even at least some birds, like roosters and cardinals. (It was thought otherwise until recently - 15-20 years ago - because most research on this was done by dissection, but newer research with imaging on living animals shows that the descended larynx is a common feature. And of course until relatively recently we concentrated most research on ourselves, or things of medical benefit to ourselves, which limited our knowledge about a range of non-human animals.) *And the majority of wading time for non human primates is not quadrupedal, it's bipedal. Where on earth did you get that idea from?* From actual primate researchers' actual reports on actual primate behavior. That's what they find. A couple of AAT/H proponents have claimed otherwise, but Morgan did so on the basis of no research whatsoever and counter to the actual research (guess which position I accept?) and another fellow does so on the basis of 5 hours of observation at a zoo where bonobos reached very quickly into water (no more than a few seconds at a time for a total of 37 seconds) where he got radically different results

from all other researchers who did hundreds of hours of observations in the wild. He doesn't wonder at all (as any researcher should) why his results were so far different from everyone else's – other observation of bonobo populations show ranges of 0-24 % of wading time done bipedally; and other apes, as well as monkeys, do so even less often. Again, guess which research I find most compelling, the many studies done by many dispassionate observers or the guy who thinks his numbers from 37 seconds of wading should be used in place of all other studies?

William Bond (2008-11-04 12:28:25)

Hi Everyone If people want to find out more about the Aquatic Ape theory there is a 7 part Documentary (Discovery Channel/BBC 1998) of it on Youtube at - <http://uk.youtube.com/watch?v=VFsgtLxALac> Or you can look at Elaine Morgan's web-site. <http://www.elainemorgan.me.uk/> William Bond

Uill (2008-11-04 13:21:10)

AAT is not about having aquatic ancestors as such, but ancestors who lived on the shore, as opposed to the savanna. It is about the role water, waterside living played in human evolution. See: AAT - Shore Adaptations in the Genus Homo <http://tech.groups.yahoo.com/group/AAT/> AAT is based on human behavior/anatomy/physiology/DNA compared to chimps & living animals: Waterside food collection (fruits/(coco)nuts, turtle/bird eggs, shell/crayfish, water(side)plants, drowned bovids, stranded whales...) explains unique Homo traits (not in apes/australopithecids) better than forest or plains dwelling: brain size, slow-diving skills, breath control, small mouth & biting muscles, tongue bone descent, projecting nose, poor sense of smell, handiness/tools, late puberty aligned-spine-legs, flat feet, fur loss, fatness, sweating, reduced climbing, high needs of water/sodium/iodine/poly-unsatur.FAs(DHA)... features present in different combinations in (semi)aquatic animals but absent in savanna mammals.

Marc Verhaegen (2008-11-04 13:58:09)

Somebody wants to defend AAT on the basis of: 1. Humans have subcutaneous fat, other primates don't. Other aquatic mammals do. The fat serves as insulation. 2. Humans have almost no fur, other primates do. Other aquatic mammals don't. Fur creates drag in the water. 3. Humans are bipedal. Walking upright keeps the head out of the water, allowing breathing. These 3 arguments can easily be dismissed: 1. Sea otters have no SC fat. 2. They have an extremely dense fur. 3. They're not bipedal. And these arguments can be repeated for a lot of other (semi)aquatic mammals. The point is: most features that discern humans from chimps are \*in different combinations\* typically seen in waterside mammals that spend a lot of their time in the water: large brain, high sodium, iodine, DHA & water needs, head & spine & legs on 1 line, dexterity & stone use, external nose etc. Another point is: all H.erectus fossils apparently lay next to shellfish. It's obvious that H.erectus did not disperse on "Savannahstan" to other continents as some PA postulate, but along the coasts & from there inland along rivers & lakes. The Mojokerto skull 1.8 Ma lay in marine sediments in a river delta, the Dmanisi population 1.8 Ma lived next to abundant lacustrine resources etc. Why would a dextrous intelligent tool-using thick-enameled omnivorous ape not have collected part of his foods from the water, esp.cray- & shellfish?? Many people discussing AAT still think AAT is about australopithecines or human ancestors millions or years ago, but this only shows how uninformed they are. I suggest that people trying to discuss AAT should first inform properly, eg, P.Tobias <http://allserv.rug.ac.be/~mvaneech/outthere.htm> <http://allserv.rug.ac.be/~mvaneech/Symposium.html> [http://users.ugent.be/~%7Emvaneech/Verhaegen et al. 2007. Econiche of Homo.pdf](http://users.ugent.be/~%7Emvaneech/Verhaegen%20et%20al.%202007.%20Econiche%20of%20Homo.pdf) [http://users.ugent.be/~%7Emvaneech/Verhaegen & Munro. New directions in palaeoanthropology.pdf](http://users.ugent.be/~%7Emvaneech/Verhaegen%20&%20Munro.%20New%20directions%20in%20palaeoanthropology.pdf) or google "aquariboreal"

Marc Verhaegen (2008-11-05 12:54:28)

Sorry, there seems to be something wrong with the spaces in the links. It's not but and In any case, it's likely IMO that our semi-aquatic phase was once rather profound (otherwise we wouldn't be able to dive 50 metres deep & more than 5 minutes), but also that it didn't last very long (otherwise we hadn't returned so completely to the land) & that it didn't happen millions of years ago (otherwise we hadn't preserved so many (semi)aquatic features). I guess it happened at some time during the Pleistocene when our ancestral Homo population spread along the coasts (so-called "Out of Africa 1"?), possibly somewhere around the Indian Ocean & not unlikely on offshore islands (SE.Asia? Flores? Danakil? Andamans? ...). During the Ice Ages, sea levels were lower, there must have been large areas on the continental shelves where cray- & shellfish were abundant. These

foods have lots of poly-unsaturated fatty acids (DHA etc.) that are essential to brain growth, and that were easily procurable by tool-using & thick-enamel omnivore. No wonder this phase (100 m below sea level now?) didn't leave many traces in the fossil & archaeol.record. And no wonder their descendant trekked into the continents along the rivers where their diet included cattails (traces on neandertal tools) & where they caught small & large prey in shallow waters & butchered stranded whales & other sea mammals, eg, - M.Gutierrez cs 2001 "Exploitation d'un grand cétacé au Paléolithique ancien: le site de Dungo V À Baia Farta (Benguela, Angola)" Comptes Rendues CRAS 332:357-362, - CB Stringer cs 2008 "Neanderthal exploitation of marine mammals in Gibraltar" PNAS 22.9.08. :-) -Marc

Marc Verhaegen (2008-11-06 08:11:02)

Sorry. Apparently something went wrong again. I hope the correct links are <http://users.ugent.be/~7Emvaneech/Verhaegen%20et%20al.%202007.%20Econiche%20of%20Homo.pdf> <http://users.ugent.be/~mvaneech/Verhaegen%20&%20Munro.%20New%20directions%20in%20palaeoanthropology.pdf> -Marc

Beard (2009-03-13 18:26:51)

I think too many posters are looking at this the wrong way. If I was to create a simulation on a computer and place two apes on the savanna and two apes on the shores. Which one do you think would survive in each climate. What features would evolution select out as an advantage in the different environments. The ape who could hold it's breath, whose nose pointed downward, who had little hair enabling it to dry quickly and not become chilled would have an advantage. Extra fat deposits help as well. On a savanna, the hairless ape would easily get sunburned, would excrete too much salt (no one has mentioned this tremendous sweating of salt humans do) and water to survive. To make this post short, I won't go on, but readers should stop trying to defend theories and start thinking intelligently about what would offer a survival advantage or disadvantage of one ape over another in different environments. Then you will find the right answers.

marc Verhaegen (2009-10-09 03:31:09)

Well-said, Beard. 'Aquatic ape' is an unfortunate misnomer IMO: it's not about 'aquatic', but about 'littoral', finding foods at the beach & in shallow water, and it's not about apes or australopithecines, but about Pleistocene Homo dispersing to other continents along sea coasts & inland along rivers, collecting shell/crayfish, bird & turtle eggs, (coco)nuts, whatever at the waterside. IMO (speculation) this happened (partly?mostly) when during the glacials sea levels were 100 m or so below today's sea level, when vast continental shelves were available to dextrous tool-using omnivorous human ancestors for beachcombing, wading & diving for sea & other foods. From there different offshoots of these littoral populations ventured inland along rivers & lakes, in savannas & elsewhere.

marc verhaegen (2012-05-01 11:44:44)

Still no answer after more than 2 years? Most people agree? :-) Recent work on the littoral theory can be found in M Vaneechoutte, A Kuliukas & M Verhaegen eds 2011 ebook Bentham Sci Publ "Was Man More Aquatic in the Past? Fifty Years after Alister Hardy: Waterside Hypotheses of Human Evolution" with contributions of professor Phillip Tobias, Elaine Morgan & all important proponents of this theory. Or you can contact me for our recent paper (with Stephen Munro) in HOMO - J compar hum Biol 62:237-247, 2011 "Pachyosteosclerosis suggests archaic Homo frequently collected sessile littoral foods"

## **Middle School Visit (2008-05-03 02:34)**

On Monday I visited a cooking/gardening class at Willard Middle School in Berkeley. One student told me it was his favorite class. "Why?" I asked. "Because you can talk," he said. He and two friends were standing by a stove. They were making grits and waiting for the water to boil. Out in the vegetable garden - the students are divided into three groups, and one group spends the class period in the garden - another student told me it was his favorite class, too. "Why?" I asked. "Because you can move around," he said. I was very impressed. Two different students say the class is their favorite - for two different simple non-obvious reasons. The cooking and gardening program at Willard is run by Matt Tsang, who has been at Willard ten years.

Later that day I saw a slide show of architecture theses. One slide showed a page of a thesis that said: "Work with nature, not against it."

Maybe middle school students have strong desires to talk and move around. Maybe "work with nature" means, in that context, teaching in such a way that students can talk and move around. Maybe classes can be set up so that the existence of those desires makes learning easier rather than more difficult. Like swimming with the current rather than against it. In the typical Willard class students can't talk and move around. And teaching at Willard is hard; the average teacher lasts only five years.

The existence of the slide in the slide show showed that work with nature, not against it needs to be learned; it wasn't obvious. Nothing like that is taught in schools of education, I'm pretty sure.

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beowulf (2008-05-03 21:13:25)

Seth, I noticed that that both students quoted were "he". One of the arguments for single-sex schools is that boys and girls have different learning styles. Boys do best in classes where they can move around and don't have to be quiet. Girls do better in the traditional format- sit at your desk and listen quietly to the teacher. *"In its all-boysâ€™ classes, students are not required to sit still and be quiet. They are welcome to stand or sit or curl up under their desks, or jump up and down if they like. Just about anything is allowed, short of punching a classmate. When I first entered the classroom, it didn't look like any classroom I had seen before. It looked more like a can of worms or a beehive, with boys gyrating, bouncing, and buzzing like bees. But the boys' dynamic teacher, Jeff Ferguson, assured me that his students were paying attention and, in fact, they were thriving with the more relaxed format."* <http://www.schoollibraryjournal.com/article/CA6472910.html>

seth (2008-05-05 21:44:44)

Thanks, beowulf, that's a great comment.

Zenzoa · Feminist Woman versus Aqua Apes (2008-05-07 05:02:28)

[...] On the other hand, one of his commenters suggests that boys do better than girls in interactive classrooms: "Boys do best in classes where they can move around and don't have to be quiet. Girls do better in the traditional formatâ€ sit at your desk and listen quietly to the teacher." I feel like I need to find a phone booth and a Feminist Superhero costume... all I need is research to back up my visceral objections. There's just no way boys are genetically predisposed to have more fun! [...]

## **The Twilight of Expertise (fugu liver removal) (2008-05-03 20:28)**

Fugu is a puffer fish prized by Japanese fish connoisseurs. Its liver is poisonous, thus only specially-trained chefs can serve it. A episode of The Simpsons featured Homer poisoned by fugu.

Recently, however, [1]researchers determined that fugu liver is poisonous because fugu eat poisonous food. When fugu is farmed, and given non-poisonous food, its liver is harmless, and the fish tastes almost as good. No more need for special processing. Unsurprisingly, the National Fugu Association wants to preserve the status quo. But you can now buy fugu liver in the town of Useki.

Masataka Kinashi, the head of the tourism association in Usuki and a fugu dealer himself, suddenly stared down at his desk when asked about the widespread sale of fugu liver.

“Officially, you can never eat it here,” Mr. Kinashi said. “Well, it’s not that you can’t eat it, but, no, you can’t eat it. That’s the only answer I can give you.”

1. <http://www.nytimes.com/2008/05/04/world/asia/04fugu.html?hp>

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Aaron Blaisdell (2008-05-04 20:25:38)

I had Fugu in Tokyo in February. My tongue didn’t tingle even a little bit—contrary to what I’d been led to expect. I wonder if they used a farm-raised fugu with a non-poisonous liver. They didn’t serve the liver, but even other parts of the fish are supposed to impart a little bit of a tingling due to trace amounts of the toxin.

## **My Theory of Human Evolution (autism ) (2008-05-05 00:27)**

In the journal [1]In Character, Simon Baron-Cohen, the autism expert, [2]writes:

Clinicians describe the deep, narrow interests in autism as “obsessions,” but a more positive description might be “areas of expertise.” Sometimes the area of expertise a person with autism focuses on appears not to be very useful (e.g., geometric shapes, or the texture of different woods). Sometimes the area of expertise is slightly more useful, though of limited interest to others (e.g., train timetables, or flags of the world). But sometimes the area of expertise can make a real social contribution (such as fixing machines, or solving mathematical problems, or debugging computer software).

My guess is that in autism, something is turned off that should be turned on. This allows the rest – in particular, the rest of what motivates us – to be seen more clearly. Everyone has a tendency toward expertise, says my theory of human evolution. Why everyone? Because everyone suffers from procrastination and the tendency toward expertise is the tendency that causes procrastination: It’s harder to do something new than to do what you did yesterday. Back in the Stone Age, this tendency toward expertise caused different people to do different hobbies, and become good at them. This was the beginning of occupational specialization.

1. <http://www.incharacter.org/index.php>

2. <http://www.incharacter.org/article.php?article=101>

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Phillip J. Eby (2008-05-05 08:33:21)

Er, it’s not THE tendency that causes procrastination. A lot of things cause procrastination, so much so that it’s probably useless to have only one name for it. There should probably be some specialized words, the way we have terms for different types of cancer. Meanwhile, I don’t think I’ve seen any literature in either psychology or economics about procrastination treats it as being related to being harder to do new things. It seems to me much more likely that specialization is the simple result of it

being \*easier\* and \*more attractive\* to do more of something you already know a little about. Occam's razor suggests that dragging procrastination into the equation is unnecessary, since procrastination is a deferment of something you \*want\* to do, or believe you \*should\* do. And how is that even relevant to wanting more of something you've previously found rewarding?

LemmusLemmus (2008-05-05 09:56:37)

I'll second Phillip on this one: The reason I'm not doing the dishes is not that it's a new task; it isn't, it's just unpleasant, full stop. Doing it another 100 times will not make me like it more. Although being new can make a task more unpleasant by making it harder, it can also make it more pleasurable (e.g., reading an unknown book vs. one you already know).

Ryan Holiday (2008-05-05 14:26:08)

The Essential Difference is a GREAT book.

seth (2008-05-05 16:38:41)

Philip, what's the evidence that "a lot of things cause procrastination"? If you look at the other posts in this series, you'll see evidence for my explanation – which is new.

Tyler Cowen (2008-05-05 17:14:07)

Great post...

Phillip J. Eby (2008-05-06 07:41:02)

Procrastination is just doing something other than what you believe you \*should\* be doing. And there are almost as many reasons people have for doing something else, as there are people. Not to mention quite a few specific processes by which people arrive at a decision to do something else. I've worked with people who put things off because: \* They thought of all the \*other\* things they should be doing, too, then felt bad about doing the desired task \* They made mental predictions about how things would turn out, then felt bad about the prediction \* They had generalized feelings of despair or ineffectiveness \* They felt bad because of how the task or their skill at it would reflect on their self-image And I can show that these factors were, if not "the" cause, were at least a requirement for the procrastination to exist, since correcting the above issues resulted in an end to the procrastination. Now, I should note that in most of the cases I'm describing above, the task did not involve \*doing anything new\*. These were people putting off things they knew how to do, and were in fact IN the people's area of expertise. (E.g. a musician putting off work on his next album, and a writer putting off work on her next book.) And that part alone seems to falsify a hypothesis that links procrastination to expertise-development. If it's merely that these people hadn't worked on the right thing for a while, then why did changing the specific thoughts or feelings make a difference? Shall we hypothesize that these were created by not working on their projects for a few days? Then the issue should return if the artist takes a vacation... but I know at least the musician and writer I'm referring to are still working despite having taken breaks. Meanwhile, skimming back through your previous articles on procrastination, I get the distinct impression that you're using a significantly different definition of procrastination... like comparing acne to skin cancer. Mere difficulty getting started isn't even remotely close to being real procrastination. Let's call your brand of procrastination, "difficulty getting started", or perhaps "task inertia". Task inertia is easily explained by the lack of a clear representation of the task to be performed, and/or a clear representation of the goal state. Why? Because in my experience it's immediately correctable by doing one or both of these things: 1. forming a clear representation of the task in the client's mind 2. forming a clear representation of the end-state in the client's mind I usually try the second one first, though. For example, if you want to get started cleaning your desk, the best way to do it is to visualize the clean desk, overlaying it on the real desk with your eyes open. Simply holding that visualization and thinking about how nice the clean desk would look – without trying to take any deliberate action – will generally produce a noticeable feeling of motivation to pick something up within oh, 15-30 seconds. And, if you simply continue to consciously focus on the image of the clean desk, you'll find yourself doing the whole thing, without needing to direct any of the action intentionally. (This is all assuming, of course, that you don't have other linked thoughts or feelings that intrude – i.e., \*real\* procrastination, by my definition – and that the feeling associated with the visualized end-state is at least mildly pleasant.) However, if the task is something more complex, you may also need to work out a plan, even if that plan is, "do something and see what happens", or to choose a subgoal state to focus on in the same way as above. Anyway... it's reasonable to assume that task inertia will be greater for something you haven't done in a while, because the normal mechanism of memory would mean that

less-frequently-used representations would take longer to retrieve and be less consciously accessible. And it's certainly much easier to treat task inertia – and even procrastination in general – as spandrels or side-effects of other evolved systems, rather than as selected-for characteristics. Adding a brain mechanism to specifically induce procrastination is a big stretch, since all the pieces you'd need to create task inertia and procrastination already need to exist for other things. Also, there's a deeper reason why I believe the idea of a procrastination-specific brain mechanism is a misleading idea. When we don't do what our conscious mind wants, we call that procrastination. But, from an evolutionary standpoint, why should our body do what our conscious mind wants, *\*ever\**, unless it happens to correspond to an already-defined goal, evolutionarily speaking? It's only consciousness-centrism that leads us to think that we ought to do what we "decide" to do, ignoring the fact that most of our "decisions" aren't conscious anyway. We really only notice it when our "conscious" intent conflicts with our actual actions – and then call it procrastination or lack of willpower. But the error here lies in assuming that we should have been able to control our behavior in the first place! Procrastination doesn't require a special mechanism – it's merely a label we attach to noticing that we're not really in control, and never were to begin with. If consciousness is a recent addition to our brains, it stands to reason that our brains were already capable of making decisions before consciousness arrived... and without consciousness, there's *\*nobody there\** to be in *\*conflict\** with the decision, and call it "procrastination". This seems a vastly simpler – and far more likely – explanation. Procrastination has many causes simply because *\*it's not a real thing\**, just a label we attach. And the actual behaviors we attach it to, are just *\*normal decision-making\** – there is nothing special about a decision, just because it happens to conflict with a conscious intent! After all, having intentions and free will is probably not what consciousness is "for". Why evolve something that might freely choose to do something not in your genes' interest? Thus, I consider it to be simply a happy accident that we sometimes seem to be able to influence the mechanism enough to get it to do what we want at all! :)

seth (2008-05-06 19:06:00)

Phillip, can you point me to evidence that supports your views about procrastination?

Phillip J. Eby (2008-05-07 08:54:45)

Er, you mean like all my client session tapes? Or did you mean evidence that people put off doing things that are *\*in\** their areas of expertise? I mean, are you asking me for evidence that *\*writer's block\** exists? I'll tell you what, though, if you'll line up somebody who is *\*chronically\** procrastinating on some project – to the point of being emotionally distraught about it – I'll do a conference call with you and them and fix it for them. Better yet, get more than one person so you'll have a better chance of seeing that there are multiple mechanisms that can cause the effect. (e.g. belief interference vs. personal judgment vs. conditioned association vs. erroneous thought patterns, etc.) If you're looking for more "official" research, though, it seems to me that there's plenty of books, papers, etc. on procrastination out there with evidence that one thing or another can cause procrastination. My take is that (nearly) all of them are correct, because I've seen (nearly) all of them in action in myself or in clients. (The reason I say "nearly" is that there are a few quasi-correct theories that introduce ideas like "fear of success" or "self-handicapping", which are in fact just sweeping labels for a handful of more specific phenomena – much like the idea of "procrastination" itself!) Anyway, I'd be happy to participate in an experiment designed to falsify either my theory or yours. Every so often I learn some new distinction that refines my view, so this would be no different. For example, when I first started, I focused on removing blocks to action, but now I work on removing the person's so-called "motivation" to do the task in the first place. Paradoxically, this is a *\*lot\** faster than removing a person's blocks to action! I tried it because my pain vs. gain theory predicted that the key to getting a person positively motivated is to remove whatever "unacceptable risks" are in play. And, in most cases of chronic procrastination I've encountered, the "unacceptable risk" lies not in difficulties with the task itself, or fears related to its performance, but rather the fear of what it will *\*mean\** about the person if they do not complete the task, or do not complete it to some standard of excellence. Thus, targeting this issue first gets them back into "gain" mode (positive motivation) much more quickly than the way I was doing things before. Now, if I were sloppy in my thinking, or if I'd stumbled on this method first, I could perhaps be forgiven for jumping to the conclusion that all procrastination – or at least all *\*chronic\** procrastination – is a matter of ego fears about successful completion of the task. However, I'm a bit more cautious than that, which is why I would certainly welcome a well-designed experiment.

Andrew Lehman (2008-07-27 15:42:54)

Please consider visiting <http://www.neoteny.org/?cat=7> to review a unique and unorthodox theory for the cause of autism based on an evolutionary interpretation of the condition. Thank you, Andrew Lehman

### More Acne Self-Experimentation (2008-05-05 20:29)

[1]This post from the [2]self-experimentation forums deserves to be reprinted in full:

After being plagued with acne for years, I took a job which caused me to work in remote bush camps for short periods in the far north. My acne would invariably disappear within a few days of exposure to this. When I returned to the city, the acne would return with a vengeance. Did not know why.

My theory: Soap residue left after washing my face with hardwater was the true acne culprit. Washing my face with ultrasoft lake water in bush camps leaves little or no soap residue, so no acne. Soap residue stimulates excessive skin oil secretions which leads to increased acne. A rich diet aggravates the problem by feeding the oil secretions.

My self-experiment: I experimented with different types of soap and different concentrations of soap in hard and soft water.

Conclusion: Soft and slightly soapy water only (a very mild soap) produced the least amount of acne. Never apply soap lather directly to your face! If you have only hard water to work with, then no soap at all is the best choice by far. Compensate for the lack of soap with hotter water.

Added benefit: Washing your face with no soap causes acne lesions to heal much faster - a couple of days compared to a week or more with soap.

Great work!

The same technique [3]applied to cold sores.

1. <http://boards.sethroberts.net/index.php?topic=39.msg66064#msg66064>
2. <http://boards.sethroberts.net/index.php#2>
3. <http://boards.sethroberts.net/index.php?topic=6244.msg67427#msg67427>

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spacenookie (2008-05-05 22:09:53)

Soap seems to be a holdover from the days when people used to bathe in cold or lukewarm water and share bathtub water (several people might bathe in the same tub of dirty water). In addition to once a week or once a month baths - Nasty. My experience is that you do not need to use soap or shampoo at all in a modern hot water shower unless you are unusually dirty.

Stephen M (Ethesis) (2008-05-06 05:49:48)

If you have soft water, soap can be marvelous. It also helps reduce the amount of bacteria that remains on the skin. But the heat of the water makes a huge difference.



LemmusLemmus (2008-05-06 06:23:58)

I'm surprised about this post because I learned from my parents never to use soap on my face when I was about three years old. (I still never do; water only.) I had always assumed this was something that all children learned, like putting your trash in the trashcan. This may be a cultural difference. (I live in Germany)

Raffaella Ducoli (2008-05-08 10:43:47)

I think soap is both the cause and the cure of skin problems. Chemical soaps cause problems and natural soaps cure. Soap should be simple and free of chemicals or any complicated words in the ingredient list. The base of soap should be Lard as this is the most similar to human skin. Simplicity is generally the best solution and with something placed on your skin daily, you need to trust that your soap is naturally pure and clean and will therefore make your skin clean and natural as well. If your soap cleans up your skin and doesn't leave any chemicals on it, then it can finally get clean and be clear of acne.

Fernando Almaguer (2008-11-13 14:41:39)

I have sensitive skin and wash my face with a clearasil for sensitive skin formula. I believe it also contains Aloe. To wash it off i always use bottled spring, or bottled purified water. Try it!

The Acne Relief (2008-12-05 23:43:28)

I learned something today. This is very interesting. I'm done with soap.

Sarah (2009-01-24 12:50:00)

Hmmm. I will have to try some different soaps. Maybe it can help. It can't hurt to try.

### **Jane Jacobs and Chinese Restaurants (2008-05-05 21:41)**

Why did Chinese immigrants to America start so many restaurants? Because Chinese cuisine is glorious, right? Well, no. Chinese immigrants started a lot of laundries, too, and there is nothing wonderful about Chinese ways of washing clothes. As Jennifer Lee explains in [1]this excellent talk, the first Chinese immigrants were laborers. They were taking jobs away from American men, and this caused problems. Restaurants and laundries were much safer immigrant jobs because cooking and cleaning were women's work.

A character in Jane Jacobs's [2]The Nature of Economies says this:

This is why societies that are oppressive to women and contemptuous of their work are so backward economically. Half of their population, doing economically important kinds of work, such cooking and food processing, cleaning and laundering, making garments, and concocting home remedies, are excluded from taking initiatives to develop all that work [that is, start businesses] – and nobody else does it, either.

My grandparents, Jewish immigrants, were in the garment industry. Now I can guess why.

1. <http://youtube.com/watch?v=WGZ6IwSDyyo>

2. <http://query.nytimes.com/gst/fullpage.html?res=990CE1D81039F931A35750C0A9669C8B63&n=Top%2FFeatures%2FBooks%2FBook%20Reviews>

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Ben Hyde (2008-05-06 08:06:17)

Tilly's marvelous book *Durable Inequality* has more subtle things to say about this. For example why in Boston we know that Brazilians make good housekeepers, while in Chicago they know that's the Polish. Why Italians are good at lawncare, or stone. Why most the motels in the country are run by one Indian caste. Why the Koreans dominate the small grocery stores in NYC. While I'd not take issue with the model you outline above, Tilly lays the majority of the blame at what these days one might label preferential attachment. I.e. that one a community puts down roots in a given trade it's common for that community to specialize. Jacobs talks about that as well, why certain cities end up specialized. The just so stories aren't, to my mind, as important as the preferential attachment - or if you like the positive feed back loops. Sociologists are particularly good at teasing out which of these feedback loops is or isn't responsible, but it is certainly tough in the face of peoples desire for simple stories.

Bloix (2008-05-07 10:53:48)

This sounds like one of those, "I think it therefore it's true" moments. What's the evidence? And what about other ethnic groups? Irishmen became cops. Was that women's work? Bohunks became coal miners. Women's work? Italians became haulers. Women's work? If you look at the history of the laundries, you find that they were owned by Chinese owners, who hired and exploited the hell out of Chinese workers. You could open a laundry with a small amount of capital, gained not from a bank (which wouldn't lend to you) but from an informal community association. You could hire workers of your own ethnicity, who couldn't work elsewhere because of discrimination and the language barrier. This pattern is repeated over and over again in American history: Jews: the needle trades. Greeks: diners. Koreans: greengrocers and dry cleaners. Indians: motels. Irish: bars and pubs. Germans: butchers and bakers. Italians: fruit and vegetable wholesalers. It's the fact that these small businesses can be started by members of the ethnic community without the support of the majority business community that leads to their existence. Whether the work is women's work or men's work is irrelevant. The Chinese found themselves the target of discrimination even in the supposed "women's work" of laundry - see, e.g., *Yick Wo v. Hopkins* 118 U.S. 356 (1886), in which the US Supreme Court struck down a San Francisco ordinance designed to drive the Chinese out of the laundry business. In New York, they organized to oppose municipal efforts to destroy the Chinese laundries by forming the Chinese Hand Laundry Association. See the book, *To Save China, to Save Ourselves: The Chinese Hand Laundry Alliance of New York*. [http://www.textbookx.com/product\\_detail.php?upc=9780877229964&type=book&affiliate=froogle](http://www.textbookx.com/product_detail.php?upc=9780877229964&type=book&affiliate=froogle) PS -about your grandparents- At the time your grandparents were garment workers in New York, Italian immigrants were working down at the docks and Irish immigrants were filling the ranks of the police force. Now, unless you think that there was some two-tiered prejudice going on so that non-immigrant men didn't mind losing their jobs to Italians and Irishmen but didn't like losing them to Jews, I don't see the explanatory power of this analysis. PPS- I love Jane Jacobs. The quote doesn't support Lee's argument.

seth (2008-05-07 13:30:26)

For the basis of Lee's analysis, see her book *The Fortune Cookie Chronicles*.

Sheila Buff (2008-05-07 18:03:20)

Hi Seth- I think one reason many immigrant groups open inexpensive restaurants is that the barriers to entry are low-and were even lower a century or more ago when there was far less regulation. The initial capital investment is relatively low, family members can be employed, there's a built-in market among fellow ethnics looking for familiar and inexpensive food, good command of English and high educational attainment aren't necessary, etc. The Chinese restaurant story has parallels among every ethnic group throughout American history: Italian pizzerias and restaurants, Jewish delis and dairy restaurants, Polish pierogi restaurants, German beer gardens, barbeque joints in the South, Greek diners. And I wouldn't suggest to a French chef that he was doing a feminine job-cooking for the public is men's work in many societies-as in fact it tends to be in America today, where most of the chefs and most of the kitchen staff are men. And in China, being a chef was not only a man's job but also one that was fairly prestigious, attained only after a long and arduous apprenticeship.

Varangy (2008-05-08 08:14:33)

While I like JJ, I too am skeptic. I think she overreaches and projects herself on many topics she does not know much about. My guess is that so many Chinese restaurants sprouted up was: a) low barriers to entry b) cheap, novel and unique cuisine (which is part of their staying power) Looking at European immigrants that came to the States such as the Poles, Hungarians etc etc — you see that many started restaurants but, I think, weren't sufficiently unique to the States and ended up serving mostly the very same immigrant community. Nowadays, one is hard-pressed to find a Hungarian restaurant outside of NY/NJ, Cleveland or Toronto. Chinese food, by definition, is not of European extraction – and therefore sufficiently novel. I remember the very first time I tasted it — it blew me away. Also, most importantly perhaps, cooking, especially fine cuisine, has long been a !man's! occupation in Europe, and yet Chinese restaurants have sprouted up all over Europe such as in (very recently) Hungary, where I am from.

ã,çãf;ãf<sup>a</sup>ã,«ç™ã! (2008-05-26 03:30:29)

Hi! I am a Japanese. Though I looked for English study in various ways, I commented because contents were interesting. I was able to enjoy it very much. In addition, I come to look. Please keep it for us. Thank you!

Best Chinese Restaurant? (2008-10-13 07:33:33)

Every other guy I know wants to open a cafe...

Karl Merdises (2009-08-19 21:26:36)

You cannot take the iss<sup>Ä</sup>¼ much better.

## Assorted Links (2008-05-06 19:30)

1. [1]LSD, My Problem Child by Albert Hoffman (full book).
2. [2]High-powered editing (scroll down to the Karp letter).
3. Plow the Deep: terrific but rejected title for [3]William Bernstein's new [4]history of trade. [5]Excellent Econ-Talk podcast.
4. Speaking of editing, [6]proofreading fiasco.

1. <http://www.psychedelic-library.org/child.htm>
2. <http://www.fortunecookiechronicles.com/blog/reviews/>
3. <http://www.efficientfrontier.com/>
4. <http://www.nytimes.com/2008/04/30/books/30gord.html>
5. [http://www.econtalk.org/archives/2008/04/bernstein\\_on\\_th.html](http://www.econtalk.org/archives/2008/04/bernstein_on_th.html)
6. <http://www.baltimoresun.com/news/local/bal-md.vozzella02may02,0,3456293.column>

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LemmusLemmus (2008-05-07 03:15:38)

The "proofreading fiasco" link doesn't work for me.

Jaap (2008-05-07 06:02:07)

You linked to Chapter 8 of "LSD, My Problem Child," rather than the table of contents. The link you probably intended to have is <http://www.psychedelibrary.org/child.htm>

seth (2008-05-07 06:30:22)

Jaap, thanks for the correction. LemmusLemmus, the link repeatedly works for me. I don't know what could be wrong.

LemmusLemmus (2008-05-07 07:38:13)

Now works. Hm.

## **Scaled-Up Self-Experimentation Proposed (2008-05-07 14:56)**

From an [1]article in Nature Medicine:

A British biotech entrepreneur named William Bains is proposing that self-experimenters should form collectives, pooling resources to make their findings more acceptable to the mainstream scientific community. Bains, who also lectures on the business of biotechnology at the University of Cambridge, UK, believes that the high costs and red tape associated with clinical trials have forced pharmaceutical companies to become increasingly conservative in the treatments they will test—leaving radical but potentially effective therapies out in the cold. . . . A radical alternative to conventional clinical trials, which he proposed in a paper published in April, is to have people who are willing to experiment on themselves band together and form what he calls 'biomedical mutual organizations' (BMOs) ( Med. Hypotheses

70 , 719–723; 2008). These collectives would pool resources to provide their members with more test subjects (each other), greater analytic capacity and access to more novel therapies, Bains claims.

1. <http://www.nature.com/nm/journal/v14/n5/full/nm0508-471b.html>

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Nansen (2008-05-08 13:12:10)

What has become of your [1]web trials idea?

1. <http://www.blog.sethroberts.net/2007/02/04/web-trials-update/>

seth (2008-05-08 21:08:52)

Nothing has become of it. The first thing I'd like to do is get a few more people to do self-experimentation they tell other people about.

Aaron Blaisdell (2008-05-09 14:25:56)

Reminds me of something I learned from a friend of mine when I was an undergraduate at SUNY Stony Brook. He was taking a course on parasitology and apparently, most of the significant early work (pre 1900) in the field of parasitology came from a small but dedicated group of parasitologists who studied their parasite of choice by infecting themselves with it and logging the results. They then wrote their self-experimental results up in scientific publications that the other members of this group read. So there is a precedence (probably many if we looked harder at the history of science and medicine) for Bains' proposal.

## The Greatness of Mondoweiss (2008-05-08 10:32)

Day after day I read [1]Mondoweiss, Philip Weiss's blog, even though his main subject – Israeli treatment of Palestinians, how this is enabled by Jewish Americans, what a mistake that is – is not something I read about elsewhere or think about when I'm not reading Mondoweiss. It would be too self-congratulatory to say now I care more about it but it is undeniable that now I know a lot more about it. Without any effort at all.

It's like a really great column in a newspaper or magazine except it's much better than that: Weiss can write anything he wants at any length at any time, unlike any columnist. The whole thing has a raw and impassioned and narrow and personal aspect unlike any column I've ever read. And it's so easy to read, even though it's unfamiliar and complicated. Here's [2]an example why:

I heard a crushing story about Aaron David Miller. He's from Cleveland and a big Jewish family. He went to a synagogue there recently and spoke from the pulpit and said, The problem's simple, two peoples fighting for a disputed piece of land, there will have to be a compromise. There was dead silence in the synagogue and the rabbi came up and said, "[3]In Numbers 34, God promised the land of Israel to Moses, from the Dead Sea to the Mediterranean...."

What a chilling story.

1. <http://www.philipweiss.org/mondoweiss/>
2. <http://www.philipweiss.org/mondoweiss/2008/05/from-the-financ.html>
3. <http://www.biblegateway.com/passage/?search=Numbers%2034:1-15;&version=31;>

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Stephen M (Ethesis) (2008-05-09 18:06:17)

I'm amazed this hasn't drawn comments, one way or the other.

Stephen M (Ethesis) (2008-05-11 20:21:42)

I'm going to make a comment about the situation Modoweiss blogs about. Most Americans would be well served if every time a map of Israel was displayed it was superimposed over a major metropolitan area in the U.S. People would understand a lot of things a good deal better if Californians realized that Israel and the West Bank are, together, smaller than Los Angeles County. Texans would be surprised that Israel is not as large as the complete Dallas-Fort Worth metroplex. Etc. The entire scope and perspective of the conflict need to be better understood, I think, and a good start would be helping people to get just how small of an area we are talking about.

## Magazine Article of the Year (2008-05-08 21:34)

The year isn't half over, but [1]this brilliant profile – by Lauren Collins in The New Yorker, about a photo-retoucher you've never heard of – gets my vote.

I mentioned the Dove ad campaign that proudly featured lumpier-than-usual "real women" in their undergarments. It turned out that it was a Dangin job. "Do you know how much retouching was on

that?â€ he [Dangin] asked. â€œBut it was great to do, a challenge, to keep everyoneâ€™s skin and faces showing the mileage but not looking unattractive.â€

1. [http://www.newyorker.com/reporting/2008/05/12/080512fa\\_fact\\_collins](http://www.newyorker.com/reporting/2008/05/12/080512fa_fact_collins)

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Profiles in Self-Education: Pascal Dangin (2008-05-09 07:31:49)

[...] (Hat tip to Seth Roberts for bringing my attention to the profile.) [...]

Observer (2008-05-13 15:23:12)

I assume you've noticed by now that the quotation you included in your post turned out to be inaccurate – Dangin didn't work on Dove's "Real Women" campaign featuring "lumpier-than-usual women in their undergarments" that the journalist appears to mention, and wasn't talking about that one either. Instead, he worked on the "Pro-Age" photos by Anne Leibovitz, which featured older (50+), mostly thin, and \*naked\* women. And according to both Dangin and Leibovitz, he did dust removal and color correction, not heavy retouching. (Not sure if they ever used those photos in the US; too much skin, I guess...) (And yes, the New Yorker has confirmed this, even if their arrogance forbids them to actually admit that they didn't bother to fact-check their own article, and instead claims that one inaccurate word ("undergarments") in a 6,308 word article isn't that bad.)

seth (2008-05-13 17:22:43)

Observer, no I hadn't noticed this. Thanks for pointing it out. My take is that Collins accurately reported what Dangin unwisely (but accurately) said. I'll believe Dove, Dangin, and Leibowitz when they release the originals . . . which they haven't. Rather than say the quotation "turned out to be inaccurate" I'd say it turned out to be embarrassing.

Observer (2008-07-17 12:47:37)

But now you're doing the same thing as the journalist: mixing up two campaigns, and using Dangin's comments about one of them to attack the people behind the other. Again, Leibowitz/Dangin didn't do the "Real Women" campaign with lumpy women in underwear that you're both referring to; that was a different photographer (Ian Rankin). Leibowitz/Dangin worked on a \*different\* campaign (and a campaign that probably wasn't used much in the US, since it featured \*nude\* women. Have you seen that one? You would remember it if you had...) I mean, if a journalist were to ask McCain what he meant by something that Obama said, and then accuse McCain of hiding something when he denied saying that, surely everyone would think that the journalist was a complete tool (especially if the defense was "yeah, whatever, I say so many words, surely you cannot expect me to get them all right?"). So why does the journalist get a free pass in this case? Because it's a well-written article and everyone knows that companies lie all the time, so who cares about the details? I'm not sure I get this.

seth (2008-07-17 22:32:34)

The New Yorker shouldn't have said "undergarments" because that was a different campaign, yes. I fail to see how that makes the quotation less interesting – it is merely about a slightly different campaign – although I do see that the mistake makes it easier for Leibovitz and others to be indignant. Here is Leibovitz: "He is primarily a printer – and only does retouching when asked to." Right. "When asked to." Please. Here is Dangin correcting the record: "I only worked on the Dove ProAge campaign taken by Annie Leibovitz and was directed only to remove dust and do colour correction – both the integrity of the photographs and the women's natural beauty were maintained." Of course. Whatever "integrity" and "natural beauty" mean. Not exactly a statement that he was misquoted. Quotes from <http://www.brandrepublic.com/News/808249/Dove-Dangin-dispute-real-beauty-ad-r-etouching-claim/>

Profiles in Self-Education: Pascal Dangin - The Personal MBA â„¢ (2009-07-30 15:31:10)

[...] (Hat tip to Seth Roberts for bringing my attention to the profile.) [...]

## Should Those Who Are Part of the Problem Be Part of the Solution? (2008-05-09 06:49)

At a press conference about endangered salmon, I met Heather Hardcastle, who works at [1]Taku River Reds, a fishing company in Juneau, Alaska. She went to graduate school at Duke in 2002 where she studied marine conservation biology. "Everyone thought fishermen were bad," she told me. "I'd grown up in a fishing family, so to them I was a bad person. Most of the students thought of themselves as environmentalists – as if I wasn't."

What a failure of education. Surely people who make their living fishing would suffer the most if fish runs out; and surely people who have spent a lifetime fishing might know something useful to fish preservationists. Somehow this escaped the majority of the Duke students and, apparently, their professors. At the end of *The Shangri-La Diet*, I mention this problem: the idea that business is the enemy. In the case of obesity, of course, lots of people think that big food companies are the enemy. Well, yes, it's pretty clear that big food companies are responsible for the obesity epidemic – but maybe that means they should be more involved in the solution, not less?

Stephen Dubner interviewed me in my office to write about me in the [2]Freakonomics column. I mentioned a discussion I'd had with a friend about the Enola Gay controversy at the Smithsonian; my friend and I thought it was unfortunate, I told Dubner, that neither of us knew someone on the other side of the argument. Dubner said that a lot of reporters at the New York Times wrote about military stuff, but hardly anyone at the Times that he knew had even visited West Point, which was less than 60 miles away.

1. <http://www.takuriverreds.com/>

2. <http://topics.nytimes.com/top/features/magazine/columns/freakonomics/index.html>

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Varangy (2008-05-09 09:04:04)

Great, great post. On many different levels. Almost heresy in academia. *At the end of The Shangri-La Diet, I mention this problem: the idea that business is the enemy. In the case of obesity, of course, lots of people think that big food companies are the enemy. Well, yes, it's pretty clear that big food companies are responsible for the obesity epidemic – but maybe that means they should be more involved in the solution, not less?* I like your openness, but I take a different view. If anyone is responsible for the obesity 'epidemic' (other than us being responsible for our own health, first and foremost) it is government! Not business. Government should not be in the business of telling us what government scientists think is good/healthy/natural etc etc and then spending taxpayer's monies on promoting their nonsense, and even worse, setting public policy to their tune — when they have no idea what they are talking about. Be it on nutrition or 'global warming'. I think Taubes made that point, at least implicitly, and more eloquently, with review of the low-fat diet recommendations promoted by government funded scientists in the 80s. The most recent government mandated nutrition debacle that comes to mind is the trans-fat ban in NYC under the current Health-Nazis. Because *\_we \_know \_that \_trans-fats \_are \_bad \_for \_us.* Hhhhhhhhhmmm, why did restaurants start using trans-fats in the 80s? This may have already slipped down the memory hole forever, but if I remember correctly, (and I may be mistaken), ironically, NYC's government banned the use of animal fats sometime previously. This forced restaurateurs to switch to trans-fat type products. I leave you with this:

After gaining national media attention for spearheading an almost total ban on trans fats in city restaurants starting last July, **Bloomberg was photographed in this month's issue of *Wired* magazine munching on those very same dangerous fats.** The photo, which accompanies a short Q & A about technology and politics, features Bloomberg at his City Hall desk, looking thoughtful and serious. Meanwhile, his right hand is seen almost absent-mindedly pulling a Cheez-It out of a single-serving bag of the crackers. The mayor's food choice directly counters the guidance of his own Department of Health, which specifies on its Web site that **"there is no safe level of artificial trans fat consumption."**

<http://texasholdemblogger.wordpress.com/2008/01/11/trans-fat-bans-for-thee-but-not-for-me/> Do as I say, not as I do.

Andrew Gelman (2008-05-12 07:42:49)

Seth, You write, "Surely people who make their living fishing would suffer the most if fish runs out...." This makes sense, but remember that fishing is a classic example of the tragedy of the commons: it makes sense for each person to grab as much as he or she can while the resources run out. The issue isn't whether Heather Hardcastle is "a bad person," it's more a question of the economic and social incentives in play here.

seth (2008-05-12 13:19:24)

Andrew, the relevance of the grad students thinking that Heather was "a bad person" is that when you demonize someone it becomes harder to learn from them. Not to mention work with them. This is why it matters that the grad students saw her that way. It is truly weird that the Duke professors, not to mention a thousand other teachers, didn't teach that.

Seth's blog » Blog Archive » For Whom Do Law Schools Exist? (2008-05-13 23:30:01)

[...] As If I Wasn't [...]

Seth's blog » Blog Archive » Tucker Max on Law School (2009-07-04 19:37:33)

[...] More trouble with the basics at Duke. For whom do law schools exist? [...]

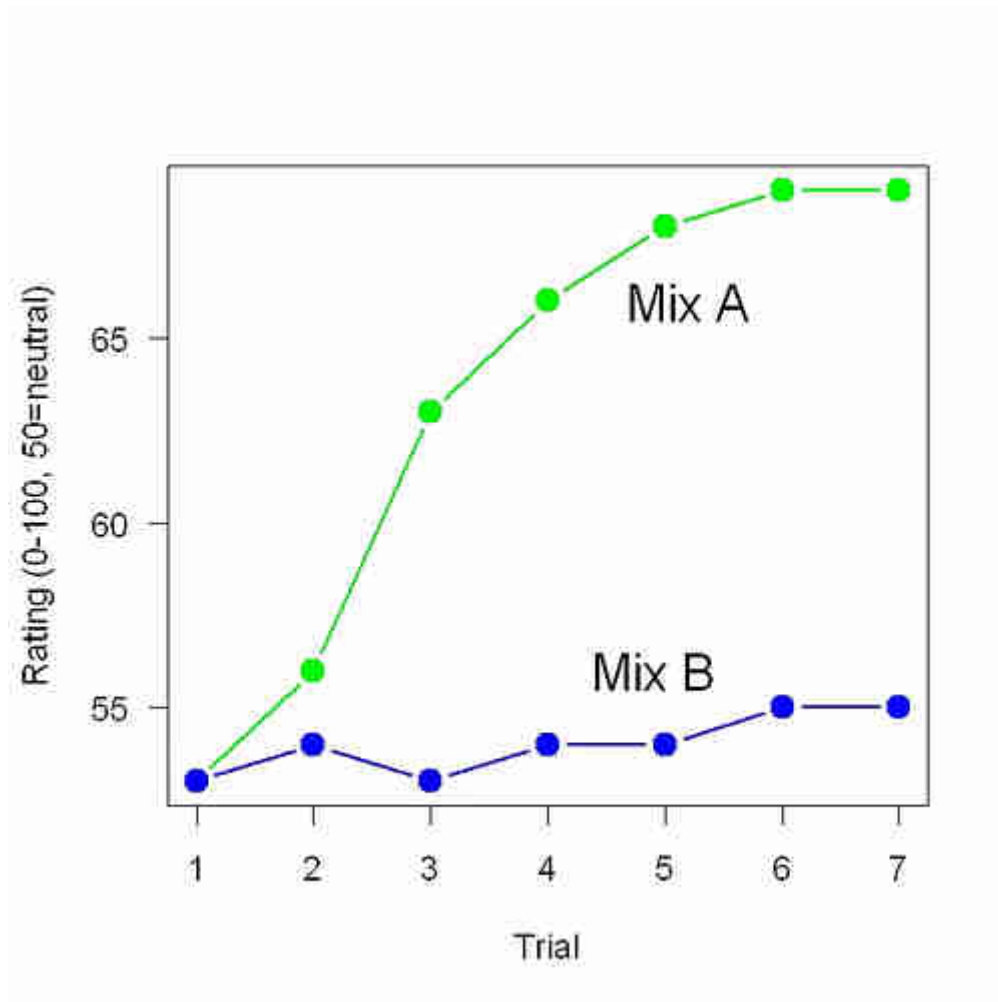
## **Calorie Learning: Better Design (2008-05-12 19:06)**

I finished a better-designed calorie-learning experiment. I mixed 5 randomly-chosen spice mixes into one chunk of butter (Mix A) and another 5 spice mixes into another chunk of butter (Mix B). Then I alternated two types of trials:

1. 2 saltines spread with Mix A followed by a piece of bread eaten nose-clipped.
2. 2 saltines spread with Mix B followed by nothing.

On each trial I rated how good the saltines tasted on scale where 50 = neutral, 60 = slightly good, and 70 = somewhat good. Here are the results:





When a new flavor was followed by a piece of bread, it tasted better than a similar flavor not followed by a piece of bread. After several flavor-bread pairings, the difference became large.

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SusanJ (2008-05-13 08:42:10)

Interesting and plausible. I'm wondering if it's not just the calories from the bread but the "sugar spike" from the carbs in the bread? Could you try a similar experiment using an isocaloric NC follow-up item for both A and B but one follow-up being carbs and the other being protein or some other item that doesn't quickly raise your blood sugar?

seth (2008-05-13 10:37:28)

SusanJ, as far as anyone can tell, other calorie sources, such as protein and fat, also produce this learning, which surely predates foods that are quickly digestible, such as bread. Because rats and other mammals show this learning, it must have evolved long ago.

Varangy (2008-05-13 13:46:25)

I suspect the sugar spike has something to do with how you interpret how good something tasted. /"I'd like to buy the world a Coke and keep it company."/ :)

## John Tukey and the Shangri-La Diet (2008-05-13 15:40)

About ten years ago, John Tukey, the great statistician, gave a talk at Berkeley. After his talk, I went up to him.

"The tools you've invented have been really helpful to me," I said.

"If they work just some of the time, we should be pleased," he replied.

A curious answer, I thought. But I found myself thinking the same thing when [1]a woman named Darkhorse on the SLD forums said something similar to what I said to Tukey:

As of today, I am one pound below my original arbitrarily chosen "goal weight", and some 40 lbs. lighter than I was one year ago. No one is more surprised than I am . . . SLD is exquisite in its very simplicity, and I saw no need to complicate it. Best of all, it works!

If SLD works just some of the time . . . Thanks, Darkhorse.

1. <http://boards.sethroberts.net/index.php?topic=6314.msg68604#msg68604>

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## For Whom Do Law Schools Exist? (2008-05-13 23:29)

In the [1]Freakonomics blog, Ian Ayres, a Yale law professor, described a Law Revue skit at his school:

A group of students [were] sitting at desks, facing the audience, listening to a professor drone on. All of the students were looking at laptops except for one, who had a deck of cards and was playing solitaire. The professor was outraged and demanded that the student explain why she was playing cards. . . . She answered, "My laptop is broken."

Not bad. The professors in the audience were stunned.

The skit was "several years ago." I wondered how Ayres would manage to connect revelation of a timeless truth about higher education (see [2]For Whom Do Colleges Exist?) with something new. Here's how:

Saul Levmore, the dean at the University of Chicago Law School, has recently announced an end to classroom surfing.

The big truth behind the little joke was . . . hard to see. Or at least hard for professors to see. The big truth is that law schools, like most institutions of higher education, are run in dozens of ways that benefit professors at the expense of students. Boring lectures are one example. In response to a small revelation of this big truth, Dean Levmore – presumably after consultation with many other law school professors – created another example of how law schools are run for professors rather than students.

Difficulty with basic concepts at [3]Duke and [4]UC Berkeley.

More. I suppose solitaire is still okay at the University of Chicago since it doesn't involve surfing.

1. <http://freakonomics.blogs.nytimes.com/2008/05/13/surfing-the-class/>
2. <http://www.blog.sethroberts.net/2007/03/31/for-whom-do-colleges-exist/>
3. <http://www.blog.sethroberts.net/2008/05/09/as-if-i-wasnt/>
4. <http://www.blog.sethroberts.net/2008/01/31/academic-horror-story-uc-berkeley/>

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Stephen M (Ethesis) (2008-05-14 19:35:42)

Seth, you hit one what used to be an interest of mine. <http://adrr.com/law0/> is material I wrote in the early to mid 90s (around the time period of the events in <http://adrr.com/living/>) in response to a request from a friend who was doing a project. I've not done much to edit or update it since I started being able to think again, but you've hit a very sharp point indeed.

Andrew Gelman (2008-05-16 19:26:31)

Seth, I think this is a more general issue, not specific to universities. People in a system who have some control over their working environment will seek to make themselves more comfortable. Getting to the specifics-yeah, I don't want my students emailing or surfing the web during my classes. It distracts them from thinking about the course materials, distracts other students too, also I think it sets a mood in which students don't take the course seriously. That's one reason I do classroom activities in pairs, to keep the students involved.

seth (2008-05-16 19:40:52)

Universities are a peculiar "working environment". In certain ways they resemble jails - that professors have trouble seeing this is interesting, especially because they were once students. Given that law is about equity, it is especially interesting that law professors have trouble seeing this.

Andrew Gelman (2008-05-17 12:19:58)

Seth, I've never been to jail but this comparison seems like a stretch to me! I'm not saying that I enjoyed college, but . . . jail?? Ya gotta be kidding.

seth (2008-05-17 13:03:59)

Yes, jail. Many students would not be in college if they had any choice in the matter. They feel forced to be there. Before Dean Levmore decided to ban surfing in classrooms, I'm pretty sure he didn't consult any students, which is an indication of how little power they have - like prisoners. John Taylor Gatto has often compared school to prison.

Andrew Gelman (2008-05-17 17:48:08)

Hmmm . . . I don't know that anyone is being forced to go to law school! Elementary school, sure, but law school?? Nobody's stopping these kids from cutting classes and flunking out. Heck, if they really want, they could commit some crimes and go to jail, saving themselves all that tuition in the process!

seth (2008-05-18 06:08:21)

If there is a way to become a lawyer without going to law school, I'm unaware of it. Of course, law school is unlike jail in dozens of ways; I thought that was obvious. The similarities - and the way professors have trouble seeing them - are what's interesting. It will cost you dearly if you flunk out of Yale Law School. A friend of mine got into Yale but for irrelevant reasons

went to a much less prestigious law school. Huge mistake, she now says. She didn't realize that where she went to law school would affect how she was treated for her entire professional life.

Seth's blog » Blog Archive » Tucker Max on Law School (2009-07-05 08:02:45)  
[...] More trouble with the basics at Duke. For whom do law schools exist? [...]

### Assorted Links (2008-05-14 23:08)

1. [1]Amory Lovins lecture series. 5 lectures, each about 1.5 hr. [2]New Yorker profile of Lovins.
2. [3]Unexpected effects of a low-carb diet by Gary Taubes.
3. [4]Beware diet sodas?

Thanks to Dave Lull and Brett Johnson.

1. <http://rmi.org/sitepages/pid231.php>
2. <http://globalwarmingshop.wordpress.com/2007/01/22/mr-green-environmentalism%E2%80%99s-most-optimistic-guru/>
3. [http://www.prevention.com/cda/article/diary-of-a-carb-phobe/d69f12b73d8e8110VgnVCM10000013281eac\\_\\_\\_\\_/news.voices/in.the.magazine/may.2008.issue/0/](http://www.prevention.com/cda/article/diary-of-a-carb-phobe/d69f12b73d8e8110VgnVCM10000013281eac____/news.voices/in.the.magazine/may.2008.issue/0/)
4. [http://www.alumni.umn.edu/Weighing\\_In\\_on\\_Diet\\_Soda.html](http://www.alumni.umn.edu/Weighing_In_on_Diet_Soda.html)

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### If Weston Price Had Been a Dermatologist (2008-05-15 23:02)

[1]This review article – comparing several commonly-prescribed treatments for acne – ends up close to what I figured out [2]as a graduate student via self-experimentation: that benzoyl peroxide works much better than antibiotics.

I like to think that in 100 years people will look back on current treatments for acne (and a hundred other things) as medieval, like leeches. If [3]Weston Price had been a dermatologist, we would now have evidence, I'm sure, that certain traditional lifestyles produce very low rates of acne. Examination of those lifestyles would provide good clues about what aspects of our way of life cause acne. That would be a good starting point for experiments to zero in on what matters. Once we knew the environmental causes of acne, such as [4]caffeine or [5]soap, they could simply be avoided; no need for powerful dangerous expensive medicines. At the moment, however, determination of what aspects of modern life cause acne isn't even close to being studied. You might think it is better to study safe cheap cures than dangerous expensive ones but you'd be wrong. At least now.

1. <http://www.ncchta.org/execsumm/summ901.htm>
2. <http://repositories.cdlib.org/postprints/405/>
3. <http://www.westonaprice.org/>
4. <http://www.blog.sethroberts.net/2008/04/26/more-about-acne-continued/>
5. <http://www.blog.sethroberts.net/2008/05/05/more-acne-self-experimentation/>

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david (2008-05-16 05:17:13)

I've often wondered about that. I used to study classics (Latin and Greek). To my knowledge, in the ancient authors there was never a mention of acne being a common phenomenon. I would think that if it had been a problem, it would be mentioned somewhere (whether to joke about it or whatever). Ask your colleagues from other departments who study traditional cultures (living or dead) if there is any mention of acne in the texts or representations of it in visual arts. If it was problem associated with adolescence in those cultures, it would surely show up in the texts. The only character from literature I can think of is Bardolph in Shakespeare's Henry IV part I. Not sure if that was acne, but he had some kind of boils on his face.

Andrew Gelman (2008-05-16 18:44:29)

Perhaps they had more important things to worry about!

Nathan Myers (2008-05-17 01:42:48)

Safe cheap cures are generally not patentable. Ginger, incidentally, has worked twice as well as dramamine against motion sickness, in double-blind trials. Such trials are conceivable (but not inevitable, or immediate) only since the patent on dramamine expired.

Gittit Shwartz (2008-05-17 14:55:50)

Actually, Loren Cordain (author of The Paleo Diet) showed that a paleolithic diet/lifestyle eliminate acne.

bjk (2008-05-18 03:48:28)

I read a book by a dermatologist about 15 years ago who experimented on his patients. He found that partially hydrogenated sat fats were the worst, although all sat fats were bad. His theory was that any fat that was a liquid at room temperature (like butter) is bad for you and would clog up the pores, and that liquid fats like olive oil are good for skin. Many Asians believe this, and attribute acne to things like chocolate. The dermatologist found that a diet that totally eliminated saturated fats and caffeine would eliminate acne. Very high doses of niacin were also effective, the theory being that niacin affected skin temperature. I don't remember the title of the book. I bounced his ideas off a dermatologist. He was dismissive and offended that I would question his authority.

David (2008-07-11 23:17:36)

sigh\* I absolutely hate prescription acne treatments. In my opinion its all just a psychological issue, with prescription placebos to advance your thinking.. try a natural acne cure for once. at least the detox diets actually work. check out this link to see what im talking about: <http://noacnenow.com/top-five-acne-treatments/>

Zeke (2009-05-26 02:44:54)

I got acne at a very early age (fourth grade) and had it bad until high school, when it started going away. I was on everything from oral and topical antibiotics to Retin-A to Accutane. The Accutane was horrible. It gave me chapped lips so bad the middle of my bottom lip would occasionally split open and bleed. The only thing I found that worked was products with salicylic acid. I still occasionally crush up an aspirin and put it on the rare zit.

## **Read-Off (2008-05-17 11:21)**

Or should that be Write-Off? Last night I compared, as in a cook-off, the first few pages of four books I want to read. (I also want to read Cookoff by Amy Sutherland.) Here are my notes:

1. [1]The Geography of Bliss: One Grump's Search for the Happiest Places in the World by Eric Weiner. Slow start. Weiner goes to Rotterdam to visit happiness researcher Ruut Veerhoven. I am unamused that a Dutch waiter asks "Maybe now you would like some intercourse?"

2. [2]Natural Capitalism: Creating the Next Industrial Revolution by Paul Hawken, Amory Lovins, L. Hunter Lovins. Disappointing, although possibly a great book. The beginning is abstract and preachy – although the central idea – we are beginning an industrial transformation that will transform our lives as much as the Industrial Revolution did – is incredibly important.

3. The Man Who Loved China: The Fantastic Story of the Eccentric Scientist who Unlocked the Mysteries of the Middle Kingdom by Simon Winchester. About Joseph Needham. Another slow start. Begins with his arrival in China. No amount of well-written detail will make someone getting off a boat or plane interesting, although I expect the rest of the book will be excellent. Here's how the [3]USA Today review of the book begins:

Simon Winchester's The Man Who Loved China proves the adage that if you really want to learn a foreign language, fall in love with a native speaker.

Winchester's new non-fiction book is the tale of what happened after brilliant British scientist Joseph Needham lost his heart to Lu Gwei-djen, a 33-year-old Chinese biochemist. She had come to Cambridge University from China in 1937 to meet with Needham, 37, and his wife Dorothy, also a prominent biochemist.

Much better.

4. [4]The Fortune Cookie Chronicles: Adventures in the World of Chinese Food by Jennifer 8. Lee. (I have no idea why Lee spells her name with a period after the 8.) This was the book I kept reading. After a poor prologue (a cluster of Powerball winners due to a fortune-cookie fortune – unsurprising), the book moves to a well-written mix of stuff I didn't know about an interesting topic (Chinese take-out) and personal story.

Winner: The Fortune Cookie Chronicles.

1. <http://www.ericweinerbooks.com/content/index.asp>

2. <http://www.natcap.org/>

3. [http://www.usatoday.com/life/books/reviews/2008-05-07-china\\_N.htm](http://www.usatoday.com/life/books/reviews/2008-05-07-china_N.htm)

4. <http://www.fortunecookiechronicles.com/>

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thehova (2008-05-17 12:42:44)

"The Geography of Bliss: One Grump's Search for the Happiest Places in the World" is a wonderful book. I highly recommend reading the entire book.

**Ditto Soda: Compliment or Coincidence?** (2008-05-17 23:45)

Which of the following doesn't belong?

- Fanta
- Dr. Pepper
- Coke
- Pepsi
- Skipper
- Parker
- 7Up
- Sprite
- Mountain Dew
- Mr. Pibb
- Ditto

All are names of soft drinks. Ditto is the name of a new lemon-lime drink that is the Safeway house brand. It strikes me as so different than the other names on the list that I flatter myself to think that there is some connection with my invention of the term ditto food in The Shangri-La Diet. Soft drinks are prototypical ditto foods.

A few years before Nabokov's novel *Lolita* was published, [1] a short story by Dorothy Parker titled "Lolita" appeared in *The New Yorker*. Nabokov had published often in *The New Yorker*, and he wrote an angry letter to Katherine White, the fiction editor, complaining that the manuscript of *Lolita* that he had shown them in confidence had somehow leaked. White wrote back that it was a coincidence.

1. <http://www.villagevoice.com/books/0537,essay,67720,10.html>

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## What Do Iceland and Sierra Leone Have in Common? (2008-05-18 07:58)

[1] Something important. After reading this, my question is: What else has John Carlin written?

1. <http://www.guardian.co.uk/world/2008/may/18/iceland>

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Mel (2008-05-18 18:53:15)

Well, I took the hook and read the article. Ah, it sounds like a feminist fantasy land. The part about being pagan as the foundation of all this happiness forced me to read the Wikipedia entry about Greenland and it has had a history of Christianity, but I think that's all behind them now. I'm glad all 316,00 of them have created government heaven on earth and I wish them success. Don't think I'd care for the weather.

pd3 (2008-05-19 10:39:32)

that's fine as far as it goes, but the next time I find someone who went through a break up and found it emotionally easy, will be the first. He quotes Oddny who relates the positive experience of another woman for the proposition that there was no crisis as far as the children. That is highly unreliable evidence, at least as far as how that woman took it. And, there really is no way to measure that sort of thing anyway. Oddny said the divorce rate is not something to be proud of, which can be read as a tacit admission that the success of the country may be in spite of the divorce rate. The next witness to mention marriage credits the economic boon of World War II and seems to have stayed married and keeps care of his invalid wife. The remainder of the article credits the picking and choosing of the best policy structures that other countries have to offer and the power of the extended family. Seems pretty traditional to me. So, Iceland seems like a pretty nice place to live—at least since 1939—but the article has not necessarily proven that the success is because of they got over any "hang ups" which I am not sure what that even means.

LemmusLemmus (2008-05-19 12:21:38)

pd3, I don't think the article proves anything either - it's just a journalist's article, after all, not a scientific paper. I agree that we have no hard social scientific evidence of the effects of divorce on children. Neither does it follow that divorce is good for children nor that it is bad. In which case you have to use anecdotal evidence, which is better than nothing. My anecdotal evidence says that I was relieved when my parents got a divorce. A friend of mine said the same. It's just not much fun living in a household where you have to be constantly afraid that a fight is going to break out between your parents for no reason whatsoever any minute - even if it's just a verbal fight.

Varangy (2008-05-19 14:05:21)

This article is a cute puff piece but really makes some completely irrelevant and obfuscatory points. *it's the only country in Nato with no armed forces (they were banned 700 years ago)*; This is because, like the rest of Europe (with weak armies), their defense is completely subsidized by the USA.

Andrew Gelman (2008-05-20 19:03:51)

John Carlin is the second author of Bayesian Data Analysis, so I'd say he's made some major contributions already!

Chris B. (2008-05-23 09:31:41)

LemmusLemmus wrote: "I agree that we have no hard social scientific evidence of the effects of divorce on children. Neither does it follow that divorce is good for children nor that it is bad. In which case you have to use anecdotal evidence, which is better than nothing. My anecdotal evidence says that I was relieved when my parents got a divorce." I think you're understating the amount of research done in this area. It's difficult, of course, to get "hard scientific evidence" in the sense of controlled experiments, but the effects of family structure on life outcomes for children has been studied extensively. One of the stronger conclusions seems to be that children's experience tends to vary depending on the kind of marriage the parents had before their divorce. If their marriage was highly conflictual, the children tend to do better after divorce than their peers whose parents stay together. If the marriage was low-conflict, the children tend to do significantly worse than their peers. However, most divorces (something like 70 percent) occur in what sociologists rate as low-conflict marriages, so the net impact of divorce on children appears to be distinctly negative. There are the usual caveats about correlation and causality, but, as I've said, this topic has been studied extensively, so I doubt the researchers aren't falling into any of usual traps for the naive or inexperienced. Here's a paper on the general issue - not the best I've seen, but the best I could Google up in a couple of minutes: [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=984487](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=984487) #PaperDownload

## Self-Experimentation and the Nicotine Patch (2008-05-18 10:09)

Murray Jarvik, inventor of the nicotine patch, died recently. I [1]learned:

When the researchers could not get approval to run experiments on any subjects, they tested their idea



on themselves. "We put the tobacco on our skin and waited to see what would happen," Jarvik recalls. "Our heart rates increased, adrenaline began pumping, all the things that happen to smokers."

Why, I wonder, didn't they start with self-experimentation?

1. <http://www.magazine.ucla.edu/features/25-brilliant-ideas/index16.html>

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### **The China/Tourist Interface (2008-05-20 21:45)**

When I gave a draft of my [1]Robert Gallo article to my editor at Spy, Susan Morrison, she called it "well-reported." I hadn't heard the term before, but I understood what it meant. (And, yes, I do remember every compliment I have ever been given.)

I thought of well-reported when I read this in [2]The Fortune-Cookie Chronicles by Jennifer Lee:

This eighty-one-year old Chinese woman was a professional Jew.

She lives in Kaifung, China, where long ago there had been a community of Jews large enough to build a synagogue. She is one of the few Jews left; pilgrims visit her. She makes a living selling them paper cutouts that combine Jewish and Chinese themes. You could read a hundred books about China and not come across anything like this, but it reminds me of my experience. When I was in China – I taught psychology at Beijing University – some friends and I visited the Great Wall. To avoid tourists, we went to a remote and less popular section. As predicted, it was nearly deserted. But along the path to the wall, just before it got steep, sat an old man in a chair. "2 yuan" said a sign. He wanted 2 yuan (about 25 cents) to allow us to pass. We paid.

[3]

1. <http://www.virusmyth.com/aids/hiv/srlabrat.htm>

2. <http://www.fortunecookiechronicles.com/>

3. [http://www.rollingstone.com/politics/story/20797485/chinas\\_allseeing\\_eye/print](http://www.rollingstone.com/politics/story/20797485/chinas_allseeing_eye/print)

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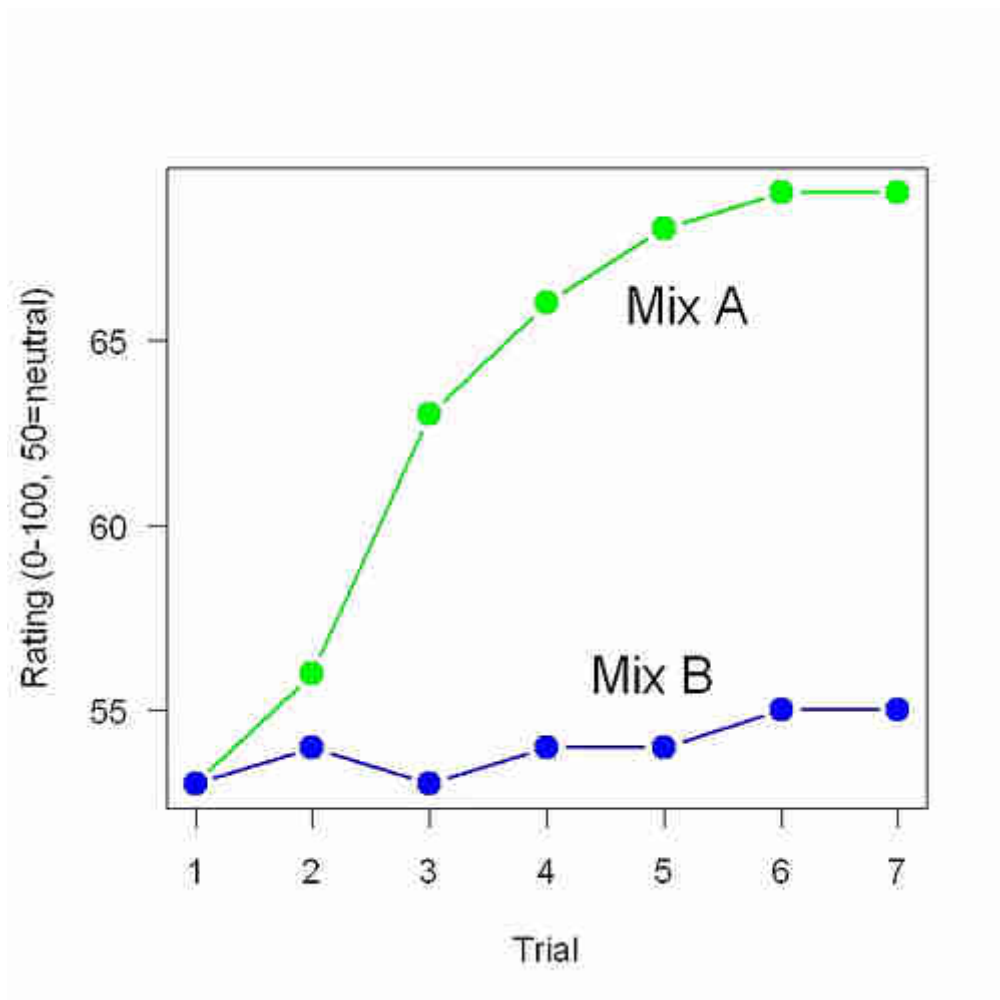
Nathan Myers (2008-05-21 16:22:52)

Curiously, there's no such physical object as a Great Wall in China. There are lots of walls, to be sure, some of them very photogenic, but "The Great Wall" as such is purely a marketing construct. One might as well speak of Europe's "Great Castle Chain"; there are lots of castles, but each was an independent project. Some walls attach end-on to previous projects, some run parallel, some are just out there by themselves. People who are convinced nobody ever walked on the moon are nonetheless happy to believe that you can see "it" from there.

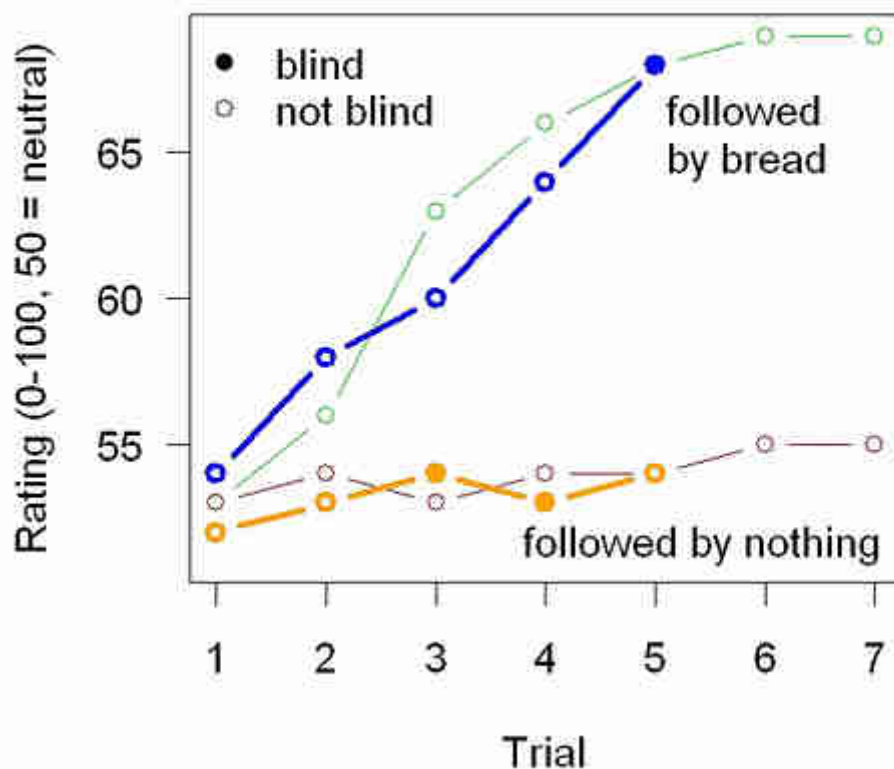
## Calorie Learning: Somewhat Better Design (2008-05-23 05:49)

I've done several experiments where I add a bunch of randomly-chosen spices to butter, spread the butter on saltines, eat the saltines, and then follow (or not follow) them with a piece of Wonder Bread eaten with my nose clipped shut.

In the previous experiment in this series, I made two spice mixes, A and B. After eating saltines spread with A, I ate a piece of bread. After eating saltines spread with B, I ate nothing. I did one trial per day, going back and forth between a trial with A and a trial with B. For example, Monday (A Trial), Tuesday (B Trial), Wednesday (A Trial), etc. Here are the results:



In an experiment just finished, I improved this design a bit: 1. I had trials with both A and B on the same day. (I made two new random spice mixes for this experiment.) 2. The first saltines of the day I rated "blind" – that is, without knowing what mix it was. Here are the new results superimposed on the previous results.



So far so good. The new results agree with the earlier results.

### How Amazon Computes Book Ranks (2008-05-23 17:27)

Given how interested authors are in the Amazon rank of their books, it's curious how little I can find about how those ranks are computed. [1]Amazon won't say. Let me try to figure it out.

Is it based on the number of copies sold in some unit of time – say, one day? Surely not. If the unit is too small, then most books will have zero copies sold. That's too many ties. If the unit is too large – say, one week – it won't change very quickly. That's boring.

That leaves average time between orders – what an animal psychologist would call interorder interval (IOI). If one copy is sold at 10:00 am on Monday and the next copy is sold at 12 noon on Tuesday, the IOI is 26 hours. This is easy to track for each book and can discriminate between books that don't sell many copies.

How many IOIs does Amazon use to compute the rank? One, five, twenty? Surely more than one. Using just one would be too noisy and would do a terrible job of discriminating best-sellers. This morning my editor asked me if [2]Stephen Dubner's Freakonomics blog post about SLD yesterday helped its Amazon rank. I checked: the rank was about 5600 (better than usual). This afternoon, I checked again: the rank was about 1700. I am sure there is no delayed effect of a mention on the NY Times website; Dubner's post must have had its biggest effect on sales yesterday. So why is the rank improving today? Because Amazon uses a fixed number of IOIs (or at least a maximum number) to compute the rank and today the longer ones are still being replaced by shorter ones. In other words, the rate of sales, although lower today than yesterday, is still higher than usual.

According to [3]this article, a book ranked about 2000 sells about 10 copies per day (on Amazon, I assume). SLD's current rank (about 2000) reflects an average of long IOIs (before yesterday) and short ones (yesterday and today). Yesterday, therefore, it must have sold more than 10 copies – but this wasn't enough to get rid of all the long IOIs. So the rank is based on more than 10 IOIs.

Further than that I cannot go.

[4]Using Amazon rank to compute sales. The Bookscan/Amazon-rank correlation I show in that post indicates that a book with an Amazon rank of about 2000 sells about 40 Bookscan copies per day, which is why I assume that the 10 copies per day mentioned above refers just to Amazon sales.

1. <http://www.nytimes.com/2007/08/06/business/media/06rank.html?ref=books>
2. <http://freakonomics.blogs.nytimes.com/2008/05/22/a-not-so-cheap-way-to-get-skinny/>
3. <http://www.nytimes.com/2007/08/06/business/media/06rank.html?ref=books>
4. <http://www.blog.sethroberts.net/2006/11/01/amazon-rank-the-poor-mans-bookscan/>

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Andrew Gelman (2008-05-23 18:35:26)

Hi, Seth. I don't know if this helps, but our recent book sold about 4000 copies in 9 months—that would be about 15/day in total, not just Amazon, and it's typically ranked around 5000 on Amazon. My point is that technical books such as mine sell proportionally more on Amazon, while Stephen King etc sell more in stores. I'm not sure where your book falls in this spectrum.

John Hunter (2008-05-31 13:42:42)

I also wonder about several things: is the rank based on book count volume, or \$ volume? I am guessing \$ volume. I also wonder if it is some kind of decaying rank (sales today count more than yesterday which counts more than 2 weeks ago).

### **Blogging: Megaphone and Microscope (2008-05-24 09:49)**

If I had said to someone twenty years ago, "In twenty years there will be a way for you to say what you really think about everything related to your job, with a big audience" they would have looked at me as if I were crazy. Now, as [1]Tyler Cowen pointed out, that's actually the case, thanks to blogs. It's a kind of psychological miracle. It's due to technology, sure, but the achievement is essentially psychological.

It's not the only psychological miracle that blogging provides. Consider [2]this account of being in a mental hospital:

K, so since the night I got there, I would get a whiff of this nasty smell. It 's hard to describe, it was just nasty and I couldn't figure out where it was coming from.

One day, I'm in my room with two roommates and I smell it.

"There it is again!" I yelled.

"It always smells like this." The older lady said.

"OmG, you've been here so long, you're used to it," I said, repulsed. However, I still couldn't figure out where it came from. Some times I would smell it, then go back to that same place and it would be gone.

It was making me (excuse the pun) feel like I was going crazy.

After using the bathroom, I went to wash my hands. Maybe it was the soap? No.

Later, I took a shower and sniffed the shampoo that came out of the pump on the wall.

It was the friggin shampoo! No wonder I got a whiff here and a whiff there. Everyone in the building (32 people) had that crap in their hair!

Vivid, easy to read, even enjoyable to read. Now you know a little - very little, but more than zero - about what it's like to be in such a place. I read *Girl, Interrupted*. Lots of movies include scenes in mental hospitals - as stylized as a Dove ad. I didn't see [3] *Titicut Follies*. Maybe Sylvia Plath wrote about it, I don't know. It's been nearly impossible - or actually impossible - to get an accurate idea of what it's like to be in a mental hospital without actually visiting one. But now it is.

1. <http://www.blog.sethroberts.net/2008/03/24/tyler-cowen-on-blogging/>

2. <http://stephanie-howiseeit.blogspot.com/2008/02/that-smell.html>

3. [http://en.wikipedia.org/wiki/Titicut\\_Follies](http://en.wikipedia.org/wiki/Titicut_Follies)

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Stephanie (2008-05-24 17:23:06)

Thanks for reading my blog and stuff.

### **Anchorage = State of Being Anchored (2008-05-24 23:15)**

[EMBED]

Anchorage by Michelle Shocked is one of my favorite songs. This twenty-year-old video was put on YouTube two weeks ago. It's as fresh and alive as the deer in my backyard.

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Fedoemami (2009-01-06 21:25:41)

There are 5 houses in five different colors In each house lives a different nationality. These 5 owners drink a certain beverage, smoke a certain brand of cigar and keep a certain pet. No owners have the same pet, smoke the same brand of cigar, or drink the same beverage. The CLUES: The Brit lives in the Red house. The Swede keeps dogs as pets. The Dane Drinks tea. The Green House is on the left of the White House. The Green House's owner drinks coffee. The person who smokes Pall Mall rears birds. The owner of the yellow house smokes Dunhill. The man in the center house drinks milk. The Norwegian lives in the first house. The man who smokes Blends lives next to the one who keeps cats The man who keeps horses lives next to the man who smokes Dunhill. The man who smokes Blue Master drinks beer. The German smokes Prince. The Norwegian lives next to the Blue House. The man who smokes Blends has a neighbor who drinks water. The QUESTION: Who owns the fish?

Fuzu (2009-10-28 21:21:05)

Ooh gosh i just typed a long comment and as soon as i hit post it came up blank! Please please tell me it worked right? I dont want to sumit it again if i do not have to! Either the blog bugged out or i am just stuipd, the latter doesnt surprise me lol.

jeffery adamczyk (2009-10-30 18:41:02)

Hi just thought i would let you know i also had a problem with this blog appearing frozen also. Might be gremlins in the system.

## **How Things Begin (The Approval Matrix, part 1) (2008-05-25 04:59)**

New York magazine's [1]Approval Matrix is my favorite magazine feature. I asked Emily Nussbaum, an editor at New York, how it came to be.

ROBERTS When did you come up with this? What happened in the beginning?

NUSSBAUM I'd been hired soon after Adam Moss came on board as Editor-in-Chief and my job was essentially to oversee the redesign of the culture section. It was a collaborative process with editors like Chris Bonanos and writers including Boris Kachka and Logan Hill. I wanted to open with something more substantive – an essay on a cultural matter or a profile – follow with reviews and fun devices. and then close with something really visual, ideally that combined different genres. We rejected a variety of things before we managed to come up with something. Actually, the idea [for The Approval Matrix] came off a piece I saw in Wired magazine. Which was a kind of Matrix-y sort of chart, a one-off thing. The two directions, one of them went geek to cool, the other went nerd to wonk. It didn't have any visuals and it didn't have any jokes. It was all of these different people. It had Joss Whedon and Joss Whedon was nerd/cool. Names of different technology people, a little bit of pop culture. It was funny, it was hard to understand in its own way, which I think is true of The Approval Matrix as well – but that was part of the appeal. So I brought it in and showed it to Adam. We were talking about it and I suggested we use it as a back-page round-up, a visual catch-all for stuff from theatre to television to books . . . Commentary on little news items in culture, events, people, a whole range of things. That was the basic concept. Then I had suggested that it go highbrow/lowbrow and something like good/bad or great/terrible. Adam said we should make the extent of the continuum longer than that. So I said "brilliant" and he said "despicable" – which in the long run was one of the more controversial aspects of The Matrix! Every once in a while, I'll come across someone who says, "How can you call something despicable?" The larger philosophy of the section was to combine access – talking to creators – with judgment and authority. So the Matrix was about making judgments but also being playful and random, by comparing totally different things to each other. The extremeness of brilliant/despicable was supposed to be part of that. And then there's the highbrow/lowbrow thing, which can also be controversial. It's both something that we're literally doing and something we're being satirical about. For me personally, one of things that I thought was appealing about it – not to be, as I'm already being, incredibly overanalytical – but one of the things that I wanted for the section as a whole, was to say the obvious but true thing that you can have something that's lowbrow that's absolutely fantastic or something that people think of as mass-y, like comics books or whatever, that's incredible, and some opera that's actually incredibly dull; it's just that they operate on different parts of the spectrum. So the idea was that putting those things together was essentially saying what really matters is the quality of them, not whether people consider them an elite taste or whether people consider them a mass taste. But obviously it's also supposed to be something fun, geeky and mathematical. There was an initial concern that it might be hard to understand. Just because it's a graph, and people found it a little confusing. So, anyway, we drew up a prototype of the Matrix. The designers did a great job. Then there was a gradual move toward launching the Culture section. And we launched The Matrix. It didn't change that much from the time that we put it out. What changed was the developmental process of figuring out which jokes work and what works best in terms of combining visuals and text.

[2]Interview directory. [3]Behind The Approval Matrix. [4]The Greatness of Behind the Approval Matrix.

1. <http://nymag.com/arts/all/approvalmatrix/46796/>
2. <http://www.blog.sethroberts.net/2008/05/25/emily-nussbaum-interview-directory/>
3. <http://www.behindtheapprovalmatrix.com/>
4. <http://www.blog.sethroberts.net/2008/02/18/the-greatness-of-behind-the-approval-matrix/>

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Seth's blog » Blog Archive » Emily Nussbaum Interview Directory (2008-05-25 23:35:10)  
[...] How Things Begin (The Approval Matrix, part 1) [...]

### **How Things Begin (The Approval Matrix, part 2) (2008-05-25 23:30)**

NUSSBAUM I remember during the first Matrix, there was this Uggs fever in New York. I put them on the slightly highbrow and slightly despicable side. [1]A picture of an Ugg. It just said Ugg. A one-word thing.

ROBERTS Ugg spelled U-G-H?

NUSSBAUM It just said U-G-G-S. On the other side was some "brilliant" fashion thing. So we started pairing things. Initially, the illustrations were way too literal. They would just illustrate the thing we were talking about it. But I think The Matrix works better when there are some big and some small things, some visuals that are jokes themselves.

ROBERTS You said there were big things and small things. What do you mean by big and small?

NUSSBAUM Just visually. Sometimes there would be one big blown-up thing to add visual interest to it. We were constantly sending notes to the photo department saying, "if there's a thing about something being slow, just show a snail." Silly dopey things like that. Finding a visual that made its own joke, as opposed to simply being straightforward: We think this book is good, we think this TV show is bad. We wanted something that would kinda make it work together. And then of course there were debates about what constituted highbrow and lowbrow. The way we actually created the Matrix was, it was mostly the people who worked in culture – it was myself, Chris Bonanos, and, once we hired Adam Sternbergh, he was very involved, and he really helped sharpen the voice. Because he used to be a comedian and he was incredibly funny at coming up with these compressed one-liner ways of saying things. At the time, I was top-editing it, and then later, he took that on, and now there are other people doing it: Emma and Ben. I would send out a big mass email, trying to get stuff from all of the different people who did different areas, classical music, art, etc. But the truth is, it was just a few people contributing initially. People would send in their jokes or their elements. They would send us something that was highbrow/despicable. And sometimes, more specifically, it would say "highbrow/despicable but very close to the brilliant/despicable line", describing where it should go on the Matrix. Then I would top-edit the jokes. And often at the end of the day, when we were closing the thing, the three of us would gather in Bonanos' office and we all just would hash it out and try to sharpen or improve some of the jokes in the way that you do. We would do it collaboratively and try to get it to work. Then I would send it by Adam Moss and he would add or sharpen things further. It was often an incredible crunch because it was such a visually-complicated thing to lay out. And very last-minute. Because they would be trying to get a photo of something odd or difficult.

[2]Interview directory. [3]Behind The Approval Matrix. [4]The Greatness of Behind the Approval Matrix.

1. <http://www.igotuggs.com/>
2. <http://www.blog.sethroberts.net/2008/05/25/emily-nussbaum-interview-directory/>
3. <http://www.behindtheapprovalmatrix.com/>
4. <http://www.blog.sethroberts.net/2008/02/18/the-greatness-of-behind-the-approval-matrix/>

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Seth's blog » Blog Archive » Emily Nussbaum Interview Directory (2008-05-27 19:54:33)  
[...] How Things Begin (The Approval Matrix, part 2) [...]

## Emily Nussbaum Interview Directory (2008-05-25 23:34)

I interviewed Ms. Nussbaum, an editor at New York, about the origins of New York magazine's Approval Matrix.

1. [1]Part 1
2. [2]Part 2
3. [3]Part 3
4. [4]Part 4
5. [5]Part 5
6. [6]Part 6
7. [7]Part 7
8. [8]Part 8

[9]The whole interview.

1. <http://www.blog.sethroberts.net/2008/05/25/how-things-begin-the-approval-matrix-part-1/>
2. <http://www.blog.sethroberts.net/2008/05/25/how-things-begin-the-approval-matrix-part-2/>
3. <http://www.blog.sethroberts.net/2008/05/27/how-things-begin-the-approval-matrix-part-3/>
4. <http://www.blog.sethroberts.net/2008/05/30/how-things-begin-the-approval-matrix-part-4/>
5. <http://www.blog.sethroberts.net/2008/05/31/how-things-begin-the-approval-matrix-part-5/>
6. <http://www.blog.sethroberts.net/2008/06/02/how-things-begin-the-approval-matrix-part-6/>
7. <http://www.blog.sethroberts.net/2008/06/03/how-things-begin-the-approval-matrix-part-7/>
8. <http://www.blog.sethroberts.net/2008/06/04/how-things-begin-the-approval-matrix-part-8/>
9. [http://docs.google.com/Doc?id=dhm4f3rg\\_42gjg57pcp](http://docs.google.com/Doc?id=dhm4f3rg_42gjg57pcp)



Seth's blog » Blog Archive » How Things Begin (The Approval Matrix, part 5) (2008-05-31 23:33:41)  
[...] Emily Nussbaum Interview Directory [...]

Seth's blog » Blog Archive » How Things Begin (The Approval Matrix, part 6) (2008-06-02 07:47:16)  
[...] Emily Nussbaum Interview Directory [...]

Seth's blog » Blog Archive » How Things Begin (The Approval Matrix, part 7) (2008-06-03 04:06:20)  
[...] Emily Nussbaum Interview Directory [...]

Seth's blog » Blog Archive » How Things Begin (The Approval Matrix, part 8) (2008-06-04 07:30:05)  
[...] Emily Nussbaum Interview Directory [...]

Seth's blog » Blog Archive » Emily Nussbaum Has a Blog (2009-11-02 01:49:37)  
[...] Interview with Nussbaum. [...]

### **Andrew Solomon on Autism (2008-05-26 21:01)**

After reading an [1]excellent article about Craig Newmark by Philip Weiss in New York magazine, I turned to a New York article about [2]controversy over how to deal with autism. (New York, you see, is more humble and thus more interesting than The New Yorker.) Its author, Andrew Solomon, who wrote *The Noonday Demon*, once [3]wrote about the deaf rights movement. The neurodiversity movement is similar. What I found most revealing about Solomon's article is the level of animosity he uncovered.

Researching this article, I spent a lot of time being talked at by people on both sides, one more doctrinaire than the next. Not since my early days reporting from the Soviet Union had I found myself so bullied about what I should and shouldn't be mentioning.

It's a kind of debate that didn't happen until recently: on one side are parents who want to help their kids; on the other side are people who want more acceptance for autistic behavior. On the face of it they should be allies but in reality they are enemies. It reminds me of my complaint about how graduate students are trained (or rather not trained): they never learn to praise, to see what's good about this or that study, so their natural inclination to be negative does a lot of damage.

1. <http://nymag.com/nymetro/news/media/internet/15500/>

2. <http://nymag.com/news/features/47225/index3.html>

3. <http://query.nytimes.com/gst/fullpage.html?res=9A00E2D91639F93BA1575BC0A962958260&scp=2&sq=deaf+&st=nyt>

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Mary (MPJ) (2008-05-27 00:50:20)

I read the article too and thought it was a good overview. I'm the mother of an autistic son and fall in with the neurodiversity movement. Not all parents believe that vaccines cause autism (I don't) or believe that the same things will help their children. I agree most with Phil Schwarz, who commented on the article, that we're looking at a false dichotomy when we talk about cure/no cure. Of course, as with autism itself, there is a spectrum of opinion, even if in what appears to be two clear warring factions.

Kristen's Raw (2008-05-27 02:08:42)

Interesting about autism and the "sides." On a separate note, I love Brian Wansink's book.

Aaron Blaisdell (2008-05-27 16:20:59)

Seth, you wrote "It reminds me of my complaint about how graduate students are trained (or rather not trained): they never learn to praise, to see what's good about this or that study, so their natural inclination to be negative does a lot of damage." We all have our own experiences as graduate students (those of us who are or were) and some of this set later on become mentors. I must say that my experiences differ markedly from yours. My own graduate and postdoctoral mentors (Ralph Miller and Bob Cook, respectively) both taught me how to praise as well as criticize. I have attempted to emulate both sides of critical analysis when mentoring my own postdocs, graduate, and undergraduate students.

seth (2008-05-27 17:44:42)

Aaron, it's good to hear about that. About a dozen people have told me they were trained "to think critically" – that is, to find flaws. You're the first person to say they were trained to find strengths.

Jay Verkuilen (2008-06-05 15:29:06)

I'm now a psychometrics prof at but spent a long, long time as a grad student—in two fields—at University of Illinois. I had different mentors over time. My first (who shall remain nameless) was incredibly critical, far more than is good for anyone. I had to unlearn that because it literally poisoned my thinking as I got way too good at turning the guns on myself. My later mentors were much better about being even handed and modest. Look for what's good, what you yourself can learn from, and what can be improved. Don't automatically reach for the 12 gauge and start blasting away. In fact, in the unlikely event that they're reading I'll thank, in alphabetical order, Carolyn Anderson, David Budescu, Larry Hubert, Jack Knott, Jim Kuklinski, Gerry Munck and Michael Smithson, various senior faculty members with whom I worked, was supervised by or just got a lot of advice from when a grad student, all of whom taught me how to do it right. The remaining faults are, of course my own. :)

### **How Things Begin (The Approval Matrix, part 3) (2008-05-27 18:44)**

ROBERTS To me one of the fascinating things about The Approval Matrix is not only that it works so well but also that it has this despicable/brilliant dimension. This is fascinating because they're not opposites, obviously. But also because despicable is an unusual word to see in highbrow American journalism.

NUSSBAUM All credit to Adam Moss for people who like and dislike the word despicable. Who find it both brilliant and despicable.

ROBERTS I'm saying that people usually don't pass moral judgment. Are you saying that despicable is just a synonym for idiotic or awful?

NUSSBAUM To me, what despicable does is it says there is something outrageous about this and not entirely serious about the judgment. Because, the truth is, to me the voice of The Matrix, much more than the rest of the Culture section, sounds like people mouthing off in a bar. When you get in one of those crazy High-Fidelity-like debates about something. Where you say, "Don't you think that this is a tiny bit better than the other thing?" These two characters on a TV show, one of them is two notches better than the other one.Â Somebody says: I just can't abide anything from that genre, it's completely despicable. It has the voice to me of people being, hopefully, witty blowhards. To me, despicable kind of refers to them.

ROBERTS An underreported category.

NUSSBAUM Yes, the witty blowhard! The thing signalsâ€"because you can't judge things so literally, on a mathe-

matical chartâ€”it both displays our judgment about things and to me slightly undercuts it. Because part of the point of The Matrix is for people to argue about the placement of things. Or object to them. Because that's what happens. If you hand it to somebody, nobody's going to agree with everything. Often what they disagree with is not the literal placement of things but the placement of things in relationship to one another. For instance, wait a second, a Sondheim musical is more highbrow than this particular HBO drama. And then there's this weird discussion: Why is that? What constitutes more highbrow? Or, often, my favorite thing: Early in The Matrix, one of the fun things to do was to create a something like a constellation. . . .

ROBERTS You mean, if you connect the dots, it makes a shape? Is that what you mean by constellation?

NUSSBAUM No, not a literal constellation like that. I mean a bunch of things that all cluster together and are all being judged in relation to one another. This was several years ago and we had a tiny cluster that was essentially Paris Hilton, Nicole Richie, Lindsey Lohan, these starlet types who had been caught in various scandals. They were all in lowbrow/despicable but they were in slightly different sections next to each other. Lindsay Lohan was slightly more highbrow than Nicole Richie and a little bit more brilliant. They were funny in relationship to one another. This was at the point when Sternbergh, a couple months into it, he started being the top editor. And his sensibility has been really important to it. He was overseeing it when there was an end-of-the-year matrix thing. There were a lot of Jude Law movies out that year. So it was Jude Law's face right in the middle of The Matrix and then four of his movies were right around him, each of them in one of the quadrants. The bizarre thing is – they were weirdly accurate. I'm trying to remember what they were. The Closer was highbrow/despicable. God, what did he make that year? He had literally done four movies that you could kind of justify as being very close to one another but each crossing into a different category. I always enjoyed when we did things like that.

Interview directory. [1]Behind The Approval Matrix. [2]The Greatness of Behind the Approval Matrix.

1. <http://www.behindtheapprovalmatrix.com/>

2. <http://www.blog.sethroberts.net/2008/02/18/the-greatness-of-behind-the-approval-matrix/>

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Jim N (2008-05-28 07:27:22)

Seth, on the previous post, I was going to respond to your tangential comparison of the New Yorker and New York Magazine, and then I realized that what I was about to do was almost exactly the topic of this post - debating "a bunch of things that all cluster together and are all being judged in relation to one another". This blog is causing me to observe my own behavior objectively, even as I read this blog.

Seth's blog » Blog Archive » Emily Nussbaum Interview Directory (2008-05-30 00:11:56)  
[...] How Things Begin (The Approval Matrix, part 3) [...]

### **How Things Begin (The Approval Matrix, part 4) (2008-05-30 00:11)**

NUSSBAUM Occasionally we'd throw something in that had nothing to do with culture. At one point this year the weather was really miserable. I just suggested putting overflowing sewers on one side and then hot soup on the other – or something like that. The main thing we got flack for was the highbrow/lowbrow aspect of it.

ROBERTS Why? What was the flack?

NUSSBAUM We got this objection from people who have a strong feeling about these cultural categories. About the

art of the charticle. The strongest objection was essentially, to be super-academic about it, that we were reifying the categories of highbrow and lowbrow.

ROBERTS What does reify mean?

NUSSBAUM Instead of critiquing, or being playful with, or using but in a knowledgeable way, those categories, that we were solidifying them, and acting as if they were real and making them into solid objects.

ROBERTS I'm not grasping the criticism. Oh, ok, you're doing that, so what?

NUSSBAUM Basically, that we were taking them at face value, or, even more cynically, that we were presenting them at face value even though we knew better. By setting up a chart like this, we were basically saying opera is highbrow and comics are lowbrow. When to me, part of the point of it was making visual those illusory categories. Effectively setting up a kind of stimulus for people to react to the way that we place things. You do end up saying to yourself, at least if you're in-house and you're debating these things – you do end having this weird conversation about: are the Oscars more highbrow or lowbrow than the Grammys and the Tonys? This kind of crazy way of determining things. Sternbergh once wrote something to the guy [Mohamed Ibrahim] who was doing [1]Behind the Approval Matrix – we were so excited that someone was doing a blog about it – he wrote a note to him at one point describing our thinking on several of the items in it. Also, occasionally people would just come up to us and say, I don't understand why is this in this category, it should be here! And then we would have an absurdly overanalytical conversation about our thinking. For good or bad there was actually a lot of conversation and real analysis about where to place things.

[2]Interview directory.

1. <http://www.behindtheapprovalmatrix.com/>

2. <http://www.blog.sethroberts.net/wp-admin/post.php?action=edit&post=874>

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Seth's blog » Blog Archive » Emily Nussbaum Interview Directory (2008-05-31 23:32:13)  
[...] How Things Begin (The Approval Matrix, part 4) [...]

## **High School Graduation Confidential: Lack of Stories Speaks Volumes (2008-05-30 11:45)**

In the 1920s a young woman moved to an isolated North Carolina town in part to oversee construction of a church. When she suggested that it be built out of stones from a nearby river, the locals laughed. It wasn't possible to build buildings out of stone, they said. Their ancestors had done so (in Europe); they had forgotten. Jane Jacobs tells this story in *Cities and the Wealth of Nations*.

Unsophisticated villagers, huh? Yesterday I went to a high school graduation. A private high school in Los Angeles. There were six speakers: two adults, the school's headmaster and a history teacher, and four students. Here's what was so strange: No one told any stories. (One of the students told the beginning of a story.) The headmaster speaks at every graduation. The history teacher has given hundreds of lectures. Neither of them, apparently, knew to tell a few stories in that situation. No wonder the students didn't know. Long ago, before cheap books, I'm sure everyone knew this basic point about public speaking. Now it's as if no one knows it. What a vast forgetting!

I was surprised, but maybe I shouldn't have been. [1]Made to Stick sort of says the same thing. One of the authors, a Stanford professor, asked his students to rate a bunch of short talks. Their ratings had no correlation with how memorable the talks were. In other words, the students had no idea what made a talk memorable. They thought a good talk meant you told a joke. What actually made talks memorable were stories, the research showed.

Even Edward Tufte, a presentation expert, seems to not understand this. In his [2]complaints about PowerPoint, he doesn't tell any stories, doesn't say anything about PowerPoint's lack of encouragement of stories, and doesn't say that students should be taught to tell stories (preferably by example).

I'm giving a talk next week. It's going to be one story after another, which is not what I would have said before that graduation.

1. <http://www.blog.sethroberts.net/2007/04/06/made-to-stick/>

2. <http://www.wired.com/wired/archive/11.09/ppt2.html>

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Tim Lundeen (2008-05-30 16:17:45)

Made to Stick is a great book, yes. Thanks for the reminder!

Tom (2008-05-30 17:53:56)

The school wasn't Buckley, was it?

seth (2008-05-31 03:13:46)

It wasn't Buckley.

Jake (2008-05-31 16:44:24)

Not everyone has forgotten: Joel Spolsky of Joel on Software addresses exactly this point in his [1]Introduction to the Best Software Writing. It's not in the context of graduations, obviously, but in it he makes a similar point. Incidentally, I bought the book and keep meaning to write about it on [2]The Story's Story, as the essays are a) interesting, b) tell stories and c) offer a rich load of metaphors for other fields of endeavor. And if he manages to produce another volume, I'll be sure to read that too – not because I'm particularly interested in software, but because the pieces are so compelling. And why are they compelling? Most tell stories, as you say.

1. <http://joelonsoftware.com/articles/BestSoftwareWriting.html>

2. <http://jseliger.wordpress.com/>

Why public speakers are usually so bad? « BC in OC (2008-06-01 13:43:26)

[...] Why public speakers are usually so bad? Posted on June 1, 2008 by bryan They don't know how how to tell stories. [...]

Varangy (2008-06-02 13:34:50)

I have come to the conclusion that we are evolutionarily hard-wired for understanding the world through stories. I think NNT wrote about this in The Black Swan as well.

Nansen (2008-06-03 14:46:43)

Steve Jobs gave a highly non-traditional commencement speech at Stanford—the entire speech consists of just three stories ([1]YouTube , [2]text ) . Edward Tufte's background is in statistics, which is not usually associated with effective storytelling. You might be interested in John Allen Paulos's thoughts on this in Chapter 1, "Between Stories and Statistics" of his book Once Upon a Number (1998). @ Varangy: But in The Black Swan, Taleb says we may have to [3]denarrate in order to rise above the "animal form of life".

1. <http://www.youtube.com/watch?v=UF8uR6Z6KLc>

2. <http://news-service.stanford.edu/news/2005/june15/jobs-061505.html>

3. <http://www.humblemoney.com/?p=251>

Brice (2008-06-03 23:15:01)

Regarding PowerPoint, Cliff Atkinson has written a book about using PowerPoint. [http://www.amazon.com/Beyond-Bullet-Points-PowerPoint®-Presentations/dp/0735\\_623872/ref=pd\\_bbs\\_sr\\_1?ie=UTF8&s=books&qid=1212559939&sr=8-1](http://www.amazon.com/Beyond-Bullet-Points-PowerPoint-Presentations/dp/0735_623872/ref=pd_bbs_sr_1?ie=UTF8&s=books&qid=1212559939&sr=8-1) "He guides you, step by step, as you discover how to combine the tenets of classic storytelling with the power of projected media to create a rich, engaging experience."

Varangy (2008-06-04 09:21:51)

@Nansen Exactly. The point that Taleb is making is that we are hard-wired for storytelling or rather, interpreting the world through stories. And to employ as unbiased reason in order to make truly rational decisions, one has to separate our innate desire for the narrative explanation i.e. don't get fooled by randomness.

Seth's blog » Blog Archive » The Story of Hyundai: A Lesson in Public Speaking (2009-06-26 07:24:21)

[...] Krafcik repeated an old Jay Leno joke: "How do you double the value of a Hyundai? Half-fill the gas tank." So he had a great story to tell, the return from ignominy, but curiously he barely told it. Probably this was because he was working at Ford at the time. I have no great interest in cars, I'm not particularly interested in why one company does better than another, yet I was entranced. I came away thinking that most of what I'd heard about public speaking was wrong — most of the stuff in *Made to Stick*, for example. Sure, the advice to tell a story — and most speakers don't even understand that — is right. Krafcik did tell a story. But that's the easy part. I think everyone understands what a story is. The harder part is convey emotion. Carl Willat has said to me that in movies, that's all that matters. Absolutely, and I think what's he saying applies to talks as well. Of course an academic talk must have content. But the practical lesson for me is that when planning a talk I should pick something I care a lot about and in the talk do my best to convey how I feel. That's all. Don't worry about telling a joke, don't worry about slick visuals, don't try to impress them. I plan to show Krafcik's talk to graduate students (in psychology) because it makes a point I doubt they've heard: It's fine if it's other people's work that you feel strongly about. Krafcik isn't the head of Hyundai. He had nothing to do with their long comeback. But he's proud of his company — and he conveyed that in spades, and that was enough. Suppose you do research on X. You're giving a talk about it — perhaps a job talk. Maybe your research is mediocre. But you think research on X is incredibly important. Fine — just make that clear. Everyone in the audience will like you for being able to appreciate the work of others, that's so rare. When you point them to other work that is great, you're helping them. Suppose you're teaching a class. Find the parts of the subject that you feel strongly about. Do your best to convey how strongly you feel. Better positive than negative but negative works. (Ask Nassim Taleb.) Avoid the parts you don't feel strongly about. [...]

## How Things Begin (The Approval Matrix, part 5) (2008-05-31 23:31)

NUSSBAUM For good or bad there was actually a lot of conversation and real analysis about where to place things. In the very beginning one thing I did try was to make it a policy, if we could avoid it, to not snark on things that we hadn't actually experienced or really knew nothing about, just make jokes at the expense of the names of books that we hadn't read. I wanted to make the jokes about things that were very specific. Instead of saying we don't like the movie *Godzilla*, saying "the ridiculous scene in . . ." — a specific scene, a specific performance, or a specific song in a musical, or something like that. Because to me it makes it more useful and more authoritative, and less just striking out at the general world of culture and saying good, bad, good, bad, good, bad, which is always a danger with something like that. Because we were under a time crunch.

ROBERTS Yeah, a little less *Entertainment Weekly* with its A+, B+. . . . I happen to like that.

NUSSBAUM I don't actually have a problem with that. What *Entertainment Weekly* does with that is very basic, and a lot of places do that, is using a school metaphor thing to judge things. They've read the book. They're actually writing a review of it. The Matrix isn't writing reviews. but because it's putting things on this chart, I do think we have to have some sense of responsibility about not just throwing something on just because that doesn't sound good.

ROBERTS You're real critics. You actually know about what you're talking about.

NUSSBAUM The whole thing works better if we know what we're talking about, if it actually seems like...it operates

as though it has its own consciousness and it's this weird hive mind of a lot of different opinionated people who've experienced a lot of different culture.

ROBERTS If a book is on The Approval Matrix, someone at New York has read the book.

NUSSBAUM Ideally, yes. I'm talking to you because I began the thing. But I've switched jobs now, I'm not the head of Culture now. Sternbergh isn't editing it, either, it's been passed on. But even if it was a very silly book, you should at least take a look through it. That was essentially the premise. Some things are about news items. Those don't have the same necessity in terms of . . . I feel like I'm being so crazily over-analytical! Of course it is a charticle.

ROBERTS A charticle? There've been many charticles in the history of journalism.

NUSSBAUM Of course it is a visual device. It's supposed to be entertaining.

ROBERTS I think it's wonderful. Not because it's entertaining, although it is, but because it's enlightening. It's opening up a world. It does it so well. Let's take Entertainment Weekly. If they give something an A, I'm going to look into it. If they give a book an A I'm going to check out that book. But they take two pages to give one book an A. The Approval Matrix can give something an A or A+ five times in one page.

NUSSBAUM This is the transcendent beauty of the reductive. We can chart something in this pseudo-scientific way. It does have some kind of ...

ROBERTS Pseudo-scientific? I don't know about that. I think it's scientific.

NUSSBAUM Just in the sense that it's so absurdly hyper-specific that it's unreal.

[1]Interview directory. [2]Behind The Approval Matrix.

1. <http://www.blog.sethroberts.net/2008/05/25/emily-nussbaum-interview-directory/>

2. <http://www.behindtheapprovalmatrix.com/>

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Seth's blog » Blog Archive » Emily Nussbaum Interview Directory (2008-06-02 07:49:42)

[...] How Things Begin (The Approval Matrix, part 5) [...]

## 3.6 June

### BB = Before Blogs (2008-06-01 05:24)

BC, AD, and BB. Before blogs, exactly how often could you read something like [1]this – Philip Weiss (a Jewish journalist) criticizing pro-Israel bias among powerful (Jewish) journalists? Exactly never. Illustrating [2]Tyler Cowen's point that blogging allows him to say what he really thinks.

[3]The Greatness of MondoWeiss.

1. <http://www.philipweiss.org/mondoweiss/2008/05/this-piece-in-the-forward.html>

2. <http://www.blog.sethroberts.net/2008/03/24/tyler-cowen-on-blogging/>

3. <http://www.blog.sethroberts.net/2008/05/08/the-greatness-of-mondoweiss/>

Andrew Gelman (2008-06-02 14:12:22)

You gotta be kidding. Before blogs, Jewish journalists never criticized each other on the topic of Israel???? C'mon.

seth (2008-06-02 17:59:30)

What's an example, Andrew?

Andrew Gelman (2008-06-03 04:05:25)

Just so many it's hard to know where to begin . . . Jews are notorious for disagreeing with each other and journalists are no exception . . . look at some back issues of the Village Voice, or to go further back, all the writings of the so-called New York Intellectuals . . . Norman Podhoretz . . . Hannah Arendt . . . I'm sure you can find lots of lesser names too. Journalists criticize other journalists all the time.

seth (2008-06-03 04:45:42)

What Philip Weiss wrote was not merely an example of "[Jewish] journalists criticizing other [Jewish] journalists". It was very specific criticism: criticism of pro-Israel bias. It is this specific criticism that I claim is very rare or non-existent. If I'm wrong I'm happy to learn that – but you haven't provided an example. It is too vague to say "back issues of the Village Voice" or "Norman Podhoretz" or "Hannah Arendt" (who wasn't a journalist).

Andrew Gelman (2008-06-04 15:28:04)

Hey, you're the one who made the "exactly never" claim. I think if you go to back issues of the Village Voice you'd find about 3 zillion examples of Jewish journalists criticizing other Jewish journalists of pro-Israel bias. Since neither of us is being paid to do this, I doubt either of our assertions will ever be checked, but that's my impression.

seth (2008-06-04 18:19:08)

"3 zillion examples" exist and you can't give one?

## **How Things Begin (The Approval Matrix, part 6) (2008-06-02 07:41)**

NUSSBAUM We do want it [The Approval Matrix] to be useful. Somebody told me that they were sitting on a subway and they saw somebody circling things on it. That was really cool, I suppose it was things they wanted to see.

ROBERTS Exactly!

NUSSBAUM I thought that was really great. There are the two reactions that I like the most: people finding it really useful and also people arguing with it. It was always interesting to trigger an argument where people just have a conversation about how good or bad something was in relation to something else. We actually made a little bit of a specialty in the Culture section in general of doing quasi-mathematical charts. We did a crazy guilt/pleasure index for reality television as a way of covering reality television. The other big one was when Sternbergh and I collaborated on this thing called The Undulating Curve of Shifting Expectations. I don't know that you've seen that. That's the flowing time chart that shows how things move from buzz to saturation point, how good people think things are going to be, to backlash to backlash to the backlash. We've done a few mathematical things. But they're kind of tricky. We tried to come up with others but sometimes they just didn't work. Or were too complicated. It's hard to come up with anything original just because magazines, this is their stock in trade. The thing I do really love about The Matrix and I did feel really proud about, was the fact that... I felt like it managed to combine a bunch of things in a good way.

ROBERTS Like what? What did it combine?

NUSSBAUM It's fun to respond to, so it's an entertaining thing. It allows us to have a final say on the culture for the week. In a magazine sense, it closes the section nicely. And it's kind of a destination place, people open the magazine and go to it.

ROBERTS That's very true.

NUSSBAUM Give a quick shot of wit and humor.



ROBERTS It's easy, pretty easy.

NUSSBAUM On the one hand it's easy and reductive. On the other hand, I'm telling you, I guess people who are just not mathematically-minded at looking at charts: I don't get it. I don't get it.

NUSSBAUM They don't understand how charts work. I had somebody say: I don't like it, it makes me feel dumb, it makes me angry. I mean, I think it's clever but it's not THAT smart.

ROBERTS They didn't understand what the placement of the points meant? Is that what you're saying?

NUSSBAUM Exactly. This wasn't an uncommon reaction. There was a moment when it first came out where people felt like they had to work to understand it. I don't think that was a bad thing. There was also a question of the tone of it. We had a meeting early on, when we first put out the section, where there was a discussion about whether it was too kind of snarky, bloggy, online, maybe juvenile in its sensibility, whether that was in some way problematic, or didn't match what the rest of the section was supposed to be. I never agreed with that. But it's always a discussion because when you have something that's funny and punchy in that way, there's the question of: Is it going to be sour and kind of rim-shot-ish, like it'll just be a roast? To me it doesn't feel like that at all. And obviously we celebrate things. A whole half of it is about things we think are brilliant! So those were the main points of debate. One of them was tonal, one of them was the idea of acting as if there really was a distinction between highbrow and lowbrow. And then, that's it.

[1]Interview directory.Â [2]Behind The Approval Matrix.

1. <http://www.blog.sethroberts.net/2008/05/25/emily-nussbaum-interview-directory/>

2. <http://www.behindtheapprovalmatrix.com/>

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Seth's blog » Blog Archive » Emily Nussbaum Interview Directory (2008-06-04 07:31:49)

[...] How Things Begin (The Approval Matrix, part 6) [...]

## **How Things Begin (The Approval Matrix, part 7) (2008-06-03 04:06)**

NUSSBAUM The other thing is it [The Approval Matrix]Â got picked up all over the place. Which was exciting for me. We would start noticing people started refering to things as highbrow/despicable.

ROBERTS By "picked up" you mean by other magazines? People on the street?

NUSSBAUM A lot of people did imitations of it. Some of them mentioning it, other ones ripping it off. I've seen 10 or 12 other magazines doing things that were like The Politics Matrix or whatever. A bunch of European magazines did things. At one point Stuff magazine did something and we put their matrix on our matrix. I wasn't involved in the placement at that point. We put their matrix on our matrix, and then they put our matrix on their matrix. It was this strange little down-the-rabbit-hole issue. I would occasionally read different articles or online things where people would start refering to something as lowbrow/brilliant. And at one point we talked about making stickers to put around town so that people could tag things as lowbrow/brilliant or highbrow/despicable like that. It never happened. There was a New York magazine event where they made t-shirts. I think the t-shirts are going to be a problem because I don't think people are going to get a t-shirt that says highbrow/brilliant.Â Everybody will want a t-shirt that says lowbrow/brilliant or maybe lowbrow/despicable. It was an interesting question: What labels are people willing to put on themselves? Which t-shirts would be more popular than others?

Later they created a online interactive Matrix on the website, but I don't think it was that successful even though it

was incredibly beautifully done. To me that was because people don't want to place things on the matrix, they want to argue about the matrix.

ROBERTS I did it once and everything landed in the middle. It was no fun.

NUSSBAUM It was an interesting idea in theory because it was a Wiki-matrix. But to me it missed the point of what people liked about it. First, people like the authority of it being set and then responding to it. They don't necessarily want to create their own. The other thing was that the jokes out of context of their actual placement are not that interesting. If you just see a factoid about a particular fashion show that week – it's not that meaningful unless you see where it's placed on The Matrix. To me, it wasn't supersuccessful. Did you find it that, technologically, it was lovely? I wasn't surprised that it didn't take off.

ROBERTS I did it once and the average answers were so boring I stopped. I don't care what I think, I'm more interested in what other people think.

NUSSBAUM Exactly. I think that that's the case. I launched it, and oversaw the editing for – I don't even remember how long, I was working so hard at the time, the whole thing is such a blur to me. After a couple of months, like I said, we hired Sternbergh and he came on and he was the overseeing editor of it for quite a long time. If you want to talk to him, he's another good person to talk to.

ROBERTS Well, I'm just writing a blog entry about this, not a book. This is wonderful. This is so interesting to me, you can't understand how interesting this is to me.

NUSSBAUM So why are you interested in it? How did this become a thing for you? I'm just so excited when someone likes it. It's nice. What interests you about it?

ROBERTS Partly it's that I worked at Spy . . . No, the first thing that happened was that I read Spy. I loved Spy. The interesting thing is not that I was so into dissing powerful people, it was that Spy made me interested in New York City in a way that I'd never been before. Spy did all sorts of things that made New York come to life and made it seem like a wonderful place. This was the city that has The New Yorker, remember? Spy did better, way better. Then I worked at Spy and I talked to the editors, I know they were very interested in coming up with new ways of telling things. I could see that it was very successful at this. And then Spy goes away, and a long time later The Approval Matrix comes up which has the same quality as Spy of making me interested in stuff. In a big way. It really succeeds in ways that other magazines don't do so well.

NUSSBAUM I was very into Spy as well.

[1]Interview directory. [2]Behind The Approval Matrix.

1. <http://www.blog.sethroberts.net/2008/05/25/emily-nussbaum-interview-directory/>

2. <http://www.behindtheapprovalmatrix.com/>

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Seth's blog » Blog Archive » Emily Nussbaum Interview Directory (2008-06-04 19:01:30)

[...] How Things Begin (The Approval Matrix, part 7) [...]

## How Things Begin (The Approval Matrix, part 8) (2008-06-04 07:30)

ROBERTS Were there really some people that didn't think that opera is highbrow and comics are lowbrow? Was that a hard thing?

NUSSBAUM The complicated thing is: why is opera considered highbrow and why is comics considered lowbrow?

ROBERTS That's a different question.

NUSSBAUM We were trying to articulate this. Part of it is a mass versus elite thing. Part of it is a notion of the complexity of ambition of the thing. But that doesn't really work.

ROBERTS That's not quite fair.

NUSSBAUM You can have an opera that's incredibly dumb and not very well thought through. And you can have a comic book that is the most ambitious thing ever in terms of its narrative or in terms of its artistry. The tricky thing is: what pulls something up or down? Also, I just couldn't over the fact that people didn't understand that lowbrow is not a bad thing. It's not a bad thing for something to be mass and enjoyable. That's why there are two different things. The visual is meant to literally suggest that highbrow and lowbrow are not same thing as brilliant and despicable.

ROBERTS I liked The Approval Matrix for that. I took it for granted.

NUSSBAUM I'm kinda chatterboxy today for lack of sleep.

ROBERTS That's fine. You've helped a lot. The wonderful thing about The Approval Matrix is that in a small space it makes me aware of many new things I would like to find out about. It improves my world. It opens me up to lots of stuff. It opens me up to lots of art. It helps me find lots of great art.

NUSSBAUM That's great!

ROBERTS Other magazines don't do that as well. I think every magazine does that a little bit.

NUSSBAUM Not only is that very exciting to hear, it was one of the things when I was redesigning the section that was really difficult. When you read a section on culture it is generally divided into genres. So if you're interested in visual arts, that's what you end up reading about. If you're interested in visual arts, you flip to the visual arts section. You're likely to perhaps never read the book section or the TV section or something you're not interested in. The thing about The Matrix is, because it's a destination that sort of forces everyone to go to this place where it's like a big bus station where everyone interested in everything is forced to hang out, I hope it has that service quality you're talking about. Which is it opens your eyes to things you'd normally not have heard of, you're forced to mingle with all art forms, to be very high-faluting about it.

ROBERTS That's a good way to put it.

NUSSBAUM Are there other questions?

ROBERTS There's aren't any other pressing questions, no. You've done a wonderful job answering my questions. Thanks a lot, Emily.

[1]Interview directory. [2]Behind The Approval Matrix.

1. <http://www.blog.sethroberts.net/2008/05/25/emily-nussbaum-interview-directory/>

2. <http://www.behindtheapprovalmatrix.com/>

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## **Murakami, Baseball, and Inspiration (2008-06-05 18:31)**

About ten years ago Haruki Murakami, the author, gave a talk at UC Berkeley. in which he said he had decided to try to become a writer during a baseball game – specifically, when someone hit a single to left field. I told this story as often as possible. My listeners were always puzzled. It made no sense. Was he kidding?

Now Murakami has told the story [1]in print. Turns out it was a double, not a single. And I missed another crucial detail. Murakami was a "fairly devoted Yakult Swallows fan." It was the Swallows lead-off batter who hit the double. Now the story makes sense. Something wonderful had just happened on the field. Surprising, too. Wonderful unpredictable things happen, Murakami realized. They could happen to him. "Something flew down from the sky at that instant," he wrote, "and, whatever it was, I accepted it."

1. [http://www.newyorker.com/reporting/2008/06/09/080609fa\\_fact\\_murakami](http://www.newyorker.com/reporting/2008/06/09/080609fa_fact_murakami)

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### **Assorted Links (2008-06-05 22:15)**

1. Bruce Bawer [1]on the Up Series.
2. Gary Taubes interview: [2]Part 1
3. [3]Problems with public libraries.
4. Armand Hammer, one of the greatest con men of the 20th Century, almost won a Nobel Prize. Came in 2nd to the Dalai Lama. Watch [4]the Charlie Rose interview with Edward Jay Epstein in 1996.
5. Nassim Taleb's [5]contingency fund.

Thanks to Dave Lull.

1. <http://www.hudsonreview.com/BawerAu07.pdf>
  2. <http://www.thelivinlowcarbshow.com/gary-taubes-part-1-episode-139/>
  3. <http://stephanie-howiseeit.blogspot.com/search/label/Reasons%20Why%20I%20don%27t%20Like%20Hanging%20out%20at%20the%20public%20Library>
  4. <http://www.charlierose.com/search/>
  5. <http://business.timesonline.co.uk/tol/business/economics/article4022091.ece>
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### **FDA Acknowledges Risk of Teeth Fillings With Mercury (2008-06-06 07:22)**

The Food and Drug Administration has [1]settled a lawsuit related toÂ mercury in dental fillings. As part of the settlement, it will acknowledge that these fillings may harmÂ some people. This is from an email by someone behind the lawsuit:

To change FDA policy, we tried petitions, Congressional hearings, state fact sheet laws, Scientific Advisory Committee hearings, and letters galore – to no avail. So in the great American tradition, we sued. The case came to a head this spring. On April 22, working with Johann Wehrle and Gwen Smith, I filed a motion for an injunction before Judge Ellen Huvelle. Three sets of briefs later, the government and I presented our oral arguments on May 16. In a crucial ruling, Judge Huvelle ruled that our 11 plaintiffs – the diverse group listed below – have standing. She said FDA should classify, and invited the two sides to mediate. On May 30, before Magistrate Judge John Facciola, Bob Reeves (who flew in from Lexington KY) and I hammered

out an agreement with FDA's officials and lawyers.

The impact of the re-writing of its position on amalgam can hardly be understated. [A curious mistake: the writer means overstated.] FDA's website will no longer be cited by the American Dental Association in public hearings. FDA shows awareness of the key issues involved. As it prepares to classify amalgam, FDA has moved to a position of neutrality. Indeed, having repeatedly raised the question of amalgams risk to children, young women, and the immuno-sensitive persons in its website, I find it inconceivable that FDA will not in some way protect them in its upcoming rule.

Mercury fillings were once very common and are still common. Unfortunately that it took a lawsuit to get the FDA to change. Judges have little or no relevant experience understanding scientific papers. Scientific advisory panels have much more relevant experience. However, they suffer from [2] a "purity" bias – they are evidence snobs.

1. [http://news.yahoo.com/s/nm/20080604/hl\\_nm/fda\\_dentalfillings\\_dc](http://news.yahoo.com/s/nm/20080604/hl_nm/fda_dentalfillings_dc)

2. <http://www.blog.sethroberts.net/2007/08/08/something-is-better-than-nothing-part-2/>

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### **While They Slept (2008-06-06 23:10)**

From a [1] review of Kathryn Harrison's new book *While They Slept*, about a boy who murders his parents:

When Billy Gilley is 13, stealing cigarettes leads him to the Children's Services Division, where the boy trustingly told a social worker about his family: the drinking, fighting, extreme verbal abuse in a family where customarily, after sentencing by his mother, his father would tie him to a tractor tire in order to immobilize him for beating with a rubber hose. He described for the social worker how his parents were, in Billy's terms, "crazy and unfit."

The child told his story, and the social worker's response was to repeat it to those abusive parents. Furious, they demanded to speak with him in private, so that he recanted and said he had been lying. The parents threatened to sue the agency, which fired the social worker and destroyed the record of her conversation with Billy, leaving only the annotation that the child was a liar. . . . Having acquired literacy skills in prison, he writes and illustrates children's books. In these books, large-eyed animals play an important role: children are in trouble or distress, and human adults cannot understand or help. The animals understand the children, and bring them to safety.

This reminds me of two things. Many years ago, such as in the 1920s, cancer was a terrible thing and a total mystery. People didn't like to talk about it. Likewise the social worker's actions are a terrible thing and a total mystery. What should be done about such behavior? Nobody wants to talk about it. The other thing this reminds me of is the Ten Commandments. Here is something else no one talks about: There is no commandment against child abuse. No stealing: yes. No murder: yes. No adultery: yes. No child abuse: no. Stealing is worse than child abuse? Huh?

Well, at least the review is titled "Speaking the Unspeakable."

1. <http://www.nytimes.com/2008/06/08/books/review/Pinsky-t.html?ref=books>

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LemmusLemmus (2008-06-07 07:32:53)

"No child abuse: no." What's more, there's even a commandment on honouring your parents. Unconditionally, that is. That was a popular favourite in religious education: "Why should I honour my parents if they hit me?" "What if my dad's a murderer?" I've never heard a decent answer.

Mike Kenny (2008-06-07 11:23:27)

Sad story. In defense of the social worker, maybe he or she had heard made-up stories by kids a lot in his or her line of work. When I was in pre-k (so very young) I told my mom that my teacher hand-cuffed me to a chair. I'm pretty sure I believed this to be true at the time, though it seems highly doubtful now! My mom asked the teacher about it, probably to get a sense of what really happened.

seth (2008-06-07 12:37:48)

I asked someone who works in the child protective system about this. She said the whole system is broken, in many ways. Caseworker overload, caseworker burnout, corruption, etc. She thought *The Wire* was accurate. I said, "Why do we bother to have a system that fails so completely? To make politicians look good?" She said, "Yes, there is that. Politicians are in office for 2 or 4 years. They won't fund something that would produce results when they're out of office."

Janet R (2008-06-12 11:02:04)

1. The commandment is against kidnapping, not stealing. It's a mistranslation. 2. The ten commandments are not more important than the other commandments. A better translation is "the 10 utterances" — the ones "spoken" by G-d at Sinai.

### **Jane Brody Misses Many Opportunities (2008-06-08 08:37)**

Jane Brody has written about health for the New York Times for a long time. Recently, a blood test indicated that [1]her total cholesterol was 222 and her LDL was 134, which she believed was too high.

Missed Opportunity #1: She had no idea of the error in these numbers. It would have been better to get a second measurement to get some idea of the error. What if the second measurement of total cholesterol was 180?

She made various non-drug changes. She stopped eating cheese and lost a few pounds. She believed this would lower her cholesterol. It didn't. A new test found total cholesterol was 236 and LDL was 159.

Missed Opportunity #2: She still had no idea of the error in these numbers.

Missed Opportunity #3: If the change from 134 to 159 was not random error, it was possible that cheese was lowering her cholesterol – the opposite of what she believed. She failed to consider this possibility – at least, she doesn't mention it.

She made more extreme changes:

Now it was time to further limit red meat (though I never ate it often and always lean), stick to low-fat ice cream, eat even more fish, increase my fiber intake and add fish oils to my growing list of supplements.

Her cholesterol numbers got even worse – total cholesterol was 248 and LDL 171.

Missed Opportunity #4: She still had no idea of the error in these numbers.

Missed Opportunity #5: She again failed to consider the possibility that what she was told was wrong – that things she did to lower her cholesterol actually raised it.

Her doctor tells her: "Your body is spewing out cholesterol and nothing you do to your diet is likely to stop it."

Missed Opportunity #6: She failed to consider what this says about her doctor. If her doctor believes this, why didn't he or she say so earlier?

Missed Opportunity #7: She failed to ask her doctor the basis for such an extraordinarily broad claim ("nothing you do").

Missed Opportunity #8: She failed to realize her own data called this statement into question. Her own data suggests that diet made a difference (if the random error is small enough). She changed her diet, her cholesterol changed.

My own self-experimentation started with the discovery that some of what my dermatologist told me was wrong. A certain antibiotic was supposed to reduce my acne; if anything it increased my acne.

The classic case of a self-experimenter failing to learn something he could have learned is Barry Marshall, the Australian doctor who won a Nobel Prize for showing that bacteria cause ulcers. He drank a flask full of the bacteria – this was the self-experiment. Results: 1. He didn't get an ulcer. 2. He became infected and the infection went away after treatment with a drug later found to have no effect against the bacteria. Warren might have concluded that some people can successfully fight off infection from the bacteria and that the people who get ulcers are not those who are exposed to the bacteria (which is probably almost everyone) but those who can't fight it off. Warren's self-experimental results, like Brody's, supported a conclusion quite different from the conclusion he started with, and he failed to notice – or at least mention – this.

1. [http://health.nytimes.com/ref/health/healthguide/choolesterol\\_ess.html](http://health.nytimes.com/ref/health/healthguide/choolesterol_ess.html)

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Aaron Blaisdell (2008-06-09 10:32:00)

Hi Seth, This anecdote reminds me of something Ralph Miller said in one of our lab meetings. "Data never overthrew a theory, only another theory overthrows a theory." So long as the medical community and its customers (i.e., us) continue to spout the AMA party line, there not only will be a refusal to accept the new theories like that discussed in Taubes' GCBC (I say this with a laugh since the new theories are really the old ones!), but a blindness to one's own self-based data. Aaron

Tom (2008-06-11 11:19:01)

I think it's because most people, like Brody, are incapable of understanding data. We (I have to include myself) only understand *stories*. Mere data simply cannot gain purchase in 99 % of human minds. It's why Seth's paper is such astounding reading.

Varangy (2008-06-12 12:25:48)

@Seth I read a different story about Marshall – do you have an online source that takes the POV you describe? I would love to check it out.

seth (2008-08-08 10:45:24)

Varangy, the POV I described I figured out for myself. I have never read it anywhere else.

### **Evidence Snobs (2008-06-08 17:30)**

At a reunion of Reed College graduates who majored in psychology, I gave a talk about self-experimentation. One question was what I thought of [1]Evidence-Based Medicine. I said the idea you could improve on anecdotes had merit, but that proponents of Evidence-Based Medicine have been [2]evidence snobs (which derives from Alex Tabarrok's [3]credit snobs). I meant they've dismissed useful evidence because it didn't reach some level of purity. Because health is important, I said, ignoring useful information, such as when [4]coming up with nutritional recommendations, is really unfortunate.

Afterwards, four people mentioned "evidence snobs" to me. (Making it the most-mentioned thing I said.) They all liked it. Thanks, Alex.

1. [http://en.wikipedia.org/wiki/Evidence-based\\_medicine](http://en.wikipedia.org/wiki/Evidence-based_medicine)

2. <http://www.blog.sethroberts.net/2007/08/08/something-is-better-than-nothing-part-2/>

3. [http://www.marginalrevolution.com/marginalrevolution/2007/03/expensive\\_credi.html](http://www.marginalrevolution.com/marginalrevolution/2007/03/expensive_credi.html)

4. <http://www.blog.sethroberts.net/2007/08/08/something-is-better-than-nothing-part-2/>

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Seth's blog » Blog Archive » The Ketogenic Diet (2008-06-10 06:19:46)

[...] Speaking of evidence snobs, this is from the TV movie ... First Do No Harm (1997) about a family's discovery of the ketogenic diet (a high-fat low-carb diet) for their severely-epileptic son: [...]

### **Lutein (2008-06-08 18:44)**

Â

Ever heard of [1]lutein? If you have consider yourself well-informed.Â There is no Recommended Daily Allowance. But a study of monkeys fed a laboratory diet, presumably containing all necessary nutrients, found that they got macular degeneration eight years earlier than monkeys fed ordinary foods. The missing nutrient appears to be lutein, which is found in green leafy vegetables such as spinach. More info [2]here.

One more indication that our knowledge of nutrition is incomplete even at the simplest (single nutrient) level.

Thanks to Martha Neuringer, who was one of the first researchers to study the brain effects of omega-3s.

1. <http://en.wikipedia.org/wiki/Lutein>

2. <http://www.luteininfol.com/home>



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Aaron Blaisdell (2008-06-09 12:09:58)

I checked the Wikipedia link to Lutein (which I had heard of) in your post. I was struck by the statement in the first paragraph describing the sources of lutein: green leafy vegetables, flowers, egg yolk, and animal fat. This struck me as so glaringly obvious when I connected this with a prior sentence in the same paragraph explaining that lutein binds to fatty acids. Well, then of course lutein should be found in animal fat-grazing animals (cows, sheep, goats, etc.) eat grass and leafy greens, they consume the lutein which after entering their system binds to fatty acids, which then get deposited in animal fat! This logical sequence was something I probably would never have made if I just read the paragraph without thinking about it. But my training in science, and more recently, my reading of Taubes' GCBC which discussed how animal fat is loaded with vitamins and minerals AND with a lot of mono-unsaturated fat (fatty acids) prepared my mind for this logical inference. I had salad and steak for dinner last night. I feel great this morning. I can't wait to get my next physical and see what my blood lipid profile looks like.

Aaron

### **Less Carbs -> Better Sleep? (2008-06-09 20:37)**

I haven't heard [1]this before:

My insomnia seems to have gone. This may be something to do with my bold adherence to [2]Nassim Nicholas Taleb's low carb diet. I have not drunk and barely eaten a single gram of carbs for the last two and a half weeks. I am ten pounds lighter and I sleep like a baby. . . . I am attaining a steady seven and a half hours of unconsciousness nightly. This hasn't happened in at least ten years, possibly more. I have also become optimistic, amiable and energetic.

Perhaps drinking less alcohol improved his sleep. This has nostalgic interest for me. A turning point in [3]my self-experimentation came when I analyzed my data and saw that I started sleeping less exactly when I lost weight (by eating less processed food).Â In a complicated way this helped me discover that eating breakfast caused me to wake up too early.

Thanks to Dave Lull.

1. <http://www.bryanappleyard.com/blog/2008/06/insomnia-lack-of.php>
2. <http://www.bryanappleyard.com/blog/2008/05/psychotropic-peach.php>
3. <http://repositories.cdlib.org/postprints/117/>

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thehova (2008-06-10 20:32:56)

I do seem to wake up too early often. So it's tempting to try not to eat breakfast. But couldn't that be a bad trade off. Nutritionally, isn't breakfast crucial to focus and energy throughout the day? I found this article interesting: <http://nymag.com/restaurants/features/breakfast/47396/>

seth (2008-06-11 02:27:23)

Thanks for the link. When I stopped eating breakfast, I didn't notice any problems with energy throughout the day.

Varangy (2008-06-11 08:31:55)

I think the "You need breakfast for energy" meme is ultimately a canard. Also, ever since starting a hyperlipid diet, I too, have experienced better sleep.

thehova (2008-06-11 19:43:53)

I recently started eating breakfast regularly and I've noticed positive results (strikingly less hunger throughout the day and evening, plus an overall more positive mood). The nice thing about breakfast is that it's an easy meal to eat right. Because I eat alone for this meal, I can eat disgustingly healthy, organic food. Lunch and Dinner are different. I often eat out or invite people over for the two meals. Eating healthy food in a social setting is much more difficult. So I know that at least one meal I eat daily will be healthy.

MT (2008-06-16 15:20:36)

Hey Seth, the link you post in this post leads to an article by Brian Appleyard's mood being effected by breaking his low-carb diet – very interesting, but it doesn't seem related to the link title (Nassim Nicolas Taleb's Low-Carb Diet) or to the relationship between sleep and carbs. What's the connection? Also, the article's description of his sudden mood change when he took in carbs is interesting, but wondering if it is suggesting something – that low-carb diets are bad for mood for instance. I have heard that it takes a couple weeks to adjust to low-carb, during which time you can feel tired and even sick, but that afterward you end up with more energy, a better metabolism that reduces body fat etc. So could Appleyard have been experiencing a temporary adjustment? I would definitely be interested in more discussion on this one as I'm reading more about, and increasingly convinced by, low-carb diets including so-called paleo-diets. Again, it may be a matter of personal physiology though, whose success is exposed through self-experimentation. Cheers.

MT (2008-06-16 15:22:10)

D'oh!! Missed that first link :) Would still be interested in hearing more thoughts though!!

## **The Ketogenic Diet (2008-06-10 06:19)**

Speaking of [1]evidence snobs, this is from the TV movie [2]... First Do No Harm (1997) about a family's discovery of [3]the ketogenic diet (a high-fat low-carb diet) for their severely-epileptic son:

DOCTOR The diet is not an approved treatment.

MOTHER But there have been a lot of studies.

DOCTOR Those studies are anecdotal, not the kind of studies we base sound medical judgment on. Not double-blind studies.

Later:

DOCTOR I assume you know all the evidence in favor of the ketogenic diet is anecdotal. There's absolutely no scientific evidence this diet works.

The doctor prefers brain surgery. When the diet is tried, it works beautifully (as it often does in real life). "What could have gone so horribly wrong with this whole medical system?" the mother writes the father.

1. <http://www.blog.sethroberts.net/2008/06/08/evidence-snobs/>
2. [http://en.wikipedia.org/wiki/...First\\_Do\\_No\\_Harm](http://en.wikipedia.org/wiki/...First_Do_No_Harm)
3. [http://en.wikipedia.org/wiki/Ketogenic\\_diet](http://en.wikipedia.org/wiki/Ketogenic_diet)

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Patri Friedman (2008-06-12 23:20:45)

But...but...there is tons of evidence for the ketogenic diet, including plenty of controlled studies. It's hard to blind the diet, but it's not like this hasn't been studied. When I started eating low-carb 6 or 7 years ago, and I looked into research on the safety of being in ketosis, most of what I found was studies of ketogenic diets to reduce epilepsy in children. So I'd say the problem here is that this doctor is ignorant, not that the whole system is wrong.

seth (2008-06-13 03:21:10)

Patri, thanks for your comment. I don't think the film was saying that the doctor was ignorant. The doctor knew about the studies, she just didn't like them. She didn't find them convincing. In the film, the doctor showed the mother a comprehensive book about the treatment of epilepsy, the "bible", and told her that the ketogenic diet wasn't in the book or according to the book wasn't an approved treatment. It wasn't just one doctor who thought the diet was not worth trying. It was also the authors of that book. If the film didn't present an accurate picture of how the ketogenic diet was viewed by the vast majority of doctors, please let me know.

Seth's blog » Blog Archive » The Ketogenic Diet and Evidence Snobs (2008-06-15 22:26:17)  
[...] The Ketogenic Diet [...]

konja (2011-05-03 05:58:10)

I found your blog in google. I want to print this but i could not find any print button :(

### **"My Advantage Was Ignorance" (2008-06-11 02:42)**

While both of us were waiting for a bus at the Oakland Airport, Andrew Sutherland asked me where I was going. He was from New Zealand, on a two-week visit to America. I asked him what he did. "I'm working on retirement," he said. He's in his mid-forties.

When he was 18 years old, he bought his first house for \$1000. It was in terrible shape but he was good at making things so he was able to fix it up. Later he owned a bunch of houses in Denedin, where the University of Otago is located, and rented them to students.

"What advantage did you have over your competitors?" I asked.

"The main advantage I had was ignorance," he said. He didn't know all the things that could go wrong. "I wasn't afraid." Someone who knew more would have been. Geoffrey Bateson said something similar: If I'd known how hard everything was going to be, I would never have done anything. This is the upside of the ignorance that Nassim Taleb talks about.

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Ben Hyde (2008-06-11 06:24:36)

Sometimes it bothers me that we give so much respect to the opportunistic fools that survive. The exuberance and confidence of creatures in r-selected contexts belies the hundred of their kind that tried and died. But then, if you hang for a while in a K-selected community it's stoggy residents come to drive you bonkers too. Not to hot, not to cold I guess. But is it a strategy?

### **Compound in Red Wine Has Effects Like Calorie Restriction (2008-06-12 03:07)**

Here's part of the abstract from [1] a recent paper titled "A Low Dose of Dietary Resveratrol Partially Mimics Caloric Restriction and Retards Aging Parameters in Mice":

We fed mice from middle age (14-months) to old age (30-months) either a control diet, a low dose of resveratrol . . . or a calorie restricted (CR) diet and examined genome-wide transcriptional profiles. We report a striking transcriptional overlap of [the effects of] CR and resveratrol in heart, skeletal muscle and brain. Both dietary interventions inhibit gene expression profiles associated with cardiac and skeletal muscle aging, and prevent age-related cardiac dysfunction. Dietary resveratrol also mimics the effects of CR in insulin mediated glucose uptake in muscle.

This is from the introduction:

Resveratrol, a natural compound found in grapes and red wine has previously been shown to extend lifespan in *S. cerevisiae*, *C. elegans* and *Drosophila* through a SIRT1 dependent mechanism. However, recent studies have failed to reproduce these life extension results and other studies have demonstrated that the ability of resveratrol to activate yeast Sir2 or human SIRT1 is substrate-specific in vitro and resveratrol has no effect on Sir2 activity in vivo . . . . Recently, mice fed a high fat diet supplemented with high levels of resveratrol . . . were shown to have extended lifespan as compared to controls, and several metabolic alterations similar to what is observed with CR.

I first heard of the wonders of resveratrol from James Johnston and Donald Laub, authors of The Alternate Day Diet. [2] Here is a review article about it. The interest of the new study is that a low (i.e., practical) dose is effective.

Thanks to Bob Levinson.

1. <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0002264;jsessionid=E8FC7E1B86A2DF2DDB0A59F96B72E003>

2. <http://www.nature.com/nrd/journal/v5/n6/abs/nrd2060.html>

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talisman (2008-06-15 20:05:15)

Do you take resveratrol? Is there a reliable provider? Etc.

seth (2008-06-15 20:16:08)  
No I don't.

### **Why Entertainment Weekly Rules the World (2008-06-12 16:15)**

Recently Tyler Cowen and I wrote the following dialogue about Entertainment Weekly, of which we are both big fans. We failed to get it published – perhaps because we broke an important freelancing rule: Never submit a finished piece, as [1] Jack Hitt told Berkeley journalism students. Our loss is your gain.

SETH When my friends look puzzled that I subscribe to EW I say "entertainment" means art. It's about art. They could have called it Art Weekly but they didn't want to scare people.

TYLER The age of the review has been replaced by the age of the cue. There's too much wonderful stuff out there to read pages of reviews. I want a letter grade and a few sentences on what it is and whether I might like it. If I love the product I can go read lengthier reviews on the web afterwards, when I understand the context and don't have to worry about spoilers. Most critics don't realize just how much they are dead in the water, and replaced by trusted intermediaries – like EW or favorite bloggers – who offer just a few guiding sentences. I often disagree with EW but I always know where they are coming from. I can usually gauge my own best guess, relative to the evaluation in their review.

SETH After a reading I overheard a famous author and his friend discuss the B that EW had given his book. "It helped settle debates around the house about who's the better writer," he said – his wife's book had gotten a B+. They agreed that assigning grades to books was shallow. Listening to them, Tyler, I thought what you say: Hey, the rest of us need the time. Sure, there's something superficial about treating complex artistic productions, such as books and movies and albums, like homework assignments – but why exactly is that bad? I call it the Chez Panisse model. The distinctive style and concerns of Chez Panisse came from mixing haute cuisine with French bistro food – bistro food treated as seriously as haute cuisine. Your blog, Marginal Revolution, is another example. Blogging is just a variation of diary entries, the lowest form of literature – but people such as you are lavishing great care on it and creating new effects. Likewise, EW lavishes great care on the assignment of lowly, shallow grades – the accompanying review, for example. The rest of the magazine also treats "low" culture with great respect. All that praise of Buffy the Vampire Slayer. All that space devoted to American Idol. What I want from magazines is to take me where I wouldn't have gone. To expand my world. Long ago, The New Yorker managed to often do that. Now, not so often. Now it is EW more than any other magazine that manages to get me to read or watch or listen to stuff I otherwise wouldn't have encountered. It's not just reviews; it's reviews of beach books ("which no poet would deign to touch" as one of Nabokov's characters put it).

TYLER I find the grades for books are the least reliable section of EW. Which for me means they are the most reliable section. If they like a book, I know to stay away. How could a critic be better or more trustworthy than that? Too many readers are too concerned about affiliating themselves with prestigious magazines, rather than learning something. EW takes us to new places because the magazine covers only what is new, or newly reissued. Other cultural contributions (dare I call them "products"?) simply don't exist for the magazine. That's what is truly startling about the pages, not what is there but what's not there. We need to take that seriously, as our culture already operates on that basis.

SETH I once wrote EW to say they should cover radio. I want to know what's as good as [2] This American Life. What do you think they should cover but don't?

TYLER I'd like to see more coverage of satellite radio in particular, plus Internet radio, both of which are na-

tional. Most of all, I'd like their take on new technologies for consuming culture.Â What's the best way to connect a computer and a television?Â Is there anyone you would trust to give a better answer about a simple and cheap method?

SETH I can rent a DVD for \$1/day at a local store. At my public library, they're free for a week. With so much "entertainment" so available, the value of filters goes up. Whether the founders of EW foresaw this or were lucky, I don't know. I do know that the grades ( e.g., B-) attached to every review are filters of filters. Smart. At EW they are clear on the concept. Entertainment in the EW sense might be America's biggest export in terms of dollars. It could easily be America's most influential export, since it enters the brain. So economists should pay more attention to EW, the only magazine that gives a sense of what all this stuff is about and might answer the question of why American entertainment has achieved such world dominance. Does sheer wealth mean a country can make more easily exportable movies and TV shows? Or is it the universality of English that is the secret? I don't think there is a magazine like EW in any other country. Nor earlier in history. While TV Guide seems to be fading away even as TV is booming, EW, with its much greater emphasis on reviews and broader coverage, is thriving. I think stories teach values – we imitate the hero, don't do what the bad guy does – and EW is the first magazine to devote itself to this market: What stories are we telling? The values of EW staffers, therefore, get huge leverage. Maybe the magazine is written by about 50 people. Each of them may have more power over what stories people are exposed to– keeping exports in mind – than the President of the U.S. Than anyone else in the entire world! Than the editor of The New Yorker. All 50 of them. Where is EW, with its vast power over our values, taking us – meaning the world? They are probably more pro-gay than the average person. They certainly like The L Word, for example, and think that Ugly Betty is a great show. They have never published a "courageous" (muck-raking) article, such as Silent Spring, but neither do they publish fawning profiles. I think the Must List demonstrates tolerance and acceptance of differences; relatively small and quirky projects make the list. They have embraced reality shows and cable TV, both of which thrive on quirkiness.

TYLER This is getting complicated. Let me try some familiar territory. Here's what I think of Entertainment Weekly:

TV coverage: A

Movie and DVD coverage: A-

Music coverage: B-

Radio coverage: D

Book coverage: A+

Advertisements: B

The Must List: A

Columnists: A-

1. [http://en.wikipedia.org/wiki/Jack\\_Hitt](http://en.wikipedia.org/wiki/Jack_Hitt)

2. <http://www.thisamericanlife.org/>

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Why Entertainment Weekly is the best art magazine in America « BC in OC (2008-06-12 19:36:13)

[...] Why Entertainment Weekly is the best art magazine in America Posted on June 13, 2008 by bryan Two economists, Seth Roberts and Tyler Cowen, explain why. [...]

michael stack (2008-06-13 05:11:20)

Awesome! A+!

## **Harvard Psychiatrists Don't Disclose Millions of \$\$ From Drug Companies (2008-06-12 19:22)**

From [1]the latest BMJ:

Findings that a leading Harvard professor of psychiatry failed to report substantial payments that he received from drug companies has caused Harvard Medical School, one of its affiliated hospitals, and the US National Institutes of Health (NIH) to come under fire.

An investigation by the US senator Charles Grassley showed that the psychiatrist, Joseph Biederman, and two of his colleagues, Thomas Spencer and Timothy Wilens, had altogether received more than \$4.2m (£2.1m; €2.7m) from drug companies since 2000.

The financial disclosure forms filed by the three doctors, according to Mr Grassley, "were a mess" and made it seem that they had received only "a couple of hundred thousand dollars" in the past seven years. . Professor Biederman, at the centre of the scandal, has been widely recognised as one of the most influential psychiatrists in the world. He is a leading proponent of the diagnosis of paediatric bipolar disorder and he is currently conducting a study of the antipsychotic, quetiapine (Seroquel) in children aged 4 to 6 years with bipolar disorder.

[2]Details.

1. <http://www.bmj.com/cgi/content/full/336/7657/1327-a>

2. [http://www.nytimes.com/2008/06/08/us/08conflict.html?\\_r=1](http://www.nytimes.com/2008/06/08/us/08conflict.html?_r=1)

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Nansen (2008-06-13 14:14:04)

Absolutely sickening.

seth (2008-06-13 15:56:43)

I agree. Especially since these professors are promoting giving powerful dangerous poorly-tested drugs to young children.

Monet (2009-05-09 12:38:53)

I am absolutely astounded, not surprised, but it just makes me sick since I am a BP patient who weaned myself from drugs over 4 years ago! The fact that they are doing a "study" and promoting these drugs for children is extremely dangerous and UNETHICAL. As an adult who took them, I can tell you that they can KILL YOU. Once I weaned myself I did not have the suicidal thoughts that were prevalent while on them! I can also tell you that fish oil and flax oil have helped stabilize my moods!!! Monet



I'm glad to have written something so exciting. You can buy it [1]here.

Thanks to Pearl Alexander.

More: A Japanese government program that should help sales: [2]Mandatory waist measurements, with sanctions for being overweight.

1. [http://www.amazon.co.jp/%C3%A3%E2%80%9A%C2%B7%C3%A3%C6%92%C2%A3%C3%A3%C6%92%C2%B3%C3%A3%E2%80%9A%C2%B0%C3%A3%C6%92%C2%AA%C3%A3%C6%92%C2%A9%C3%A3%C6%92%C2%BB%C3%A3%C6%92%E2%82%AC%C3%A3%E2%80%9A%C2%A4%C3%A3%E2%80%9A%C2%A8%C3%A3%C6%92%C6%92%C3%A3%C6%92%CB%86-%C3%A3%E2%80%9A%C2%BB%C3%A3%E2%80%9A%C2%B9%C3%A3%C6%92%C2%BB%C3%A3%C6%92%C2%AD%C3%A3%C6%92%C2%90%C3%A3%C6%92%C2%BC%C3%A3%C6%92%E2%80%9E/dp/4894513056/ref=pd\\_bbs\\_sr\\_2?ie=UTF8&s=books&qid=1212623338&sr=8-2](http://www.amazon.co.jp/%C3%A3%E2%80%9A%C2%B7%C3%A3%C6%92%C2%A3%C3%A3%C6%92%C2%B3%C3%A3%E2%80%9A%C2%B0%C3%A3%C6%92%C2%AA%C3%A3%C6%92%C2%A9%C3%A3%C6%92%C2%BB%C3%A3%C6%92%E2%82%AC%C3%A3%E2%80%9A%C2%A4%C3%A3%E2%80%9A%C2%A8%C3%A3%C6%92%C6%92%C3%A3%C6%92%CB%86-%C3%A3%E2%80%9A%C2%BB%C3%A3%E2%80%9A%C2%B9%C3%A3%C6%92%C2%BB%C3%A3%C6%92%C2%AD%C3%A3%C6%92%C2%90%C3%A3%C6%92%C2%BC%C3%A3%C6%92%E2%80%9E/dp/4894513056/ref=pd_bbs_sr_2?ie=UTF8&s=books&qid=1212623338&sr=8-2)

2. <http://www.nytimes.com/2008/06/13/world/asia/13fat.html?pagewanted=1&ei=5087&em&en=c6f2623fbee96495&ex=1213502400>



## **"I Can Has Skinny Pants" (2008-06-14 12:46)**

I like [1]this set of posts about the Shangri-La Diet, especially this:

I had to borrow a black vest for the prom I worked last night. Twenty pounds ago, that vest would have NEVER fit this monkey.

I give credit to my kettleball, and the Shangri-La Diet. When I mentioned the vest situation to the crew during set-up the new guy chimed in, Oh yeah, I lost 40 pounds on Shangri-La. Got a few more to go. I don't even bring it up to people any more. I'm tired of being told I'm crazy and that it sounds like it wouldn't work.

Why do I laugh?

1. <http://spiritualmonkey.livejournal.com/tag/shangri-la-diet>

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Darkhorse (2008-06-14 17:16:17)

Seth, yours will be the last laugh. I secretly laugh too when I see so many of the people who sneered at Shangri-La who are still overweight, still dieting, still hungry, while I have gone from 160 lbs. to 116 lbs. in one year and loved every minute of it. After I read a NYT article on his research and findings. It just dang ol' made sense...in a twisted way. You add flavorless calories to your diet twice a day. Don't have anything with flavor (not even brushing your teeth or chewing gum) for an hour on either side. And that's it. Also, two words: shot glass. That's exactly all I did, with some nose-clipping, and without trying to improve something that was already excellent. I also now have skinny pants. Who wouldn't laugh? It's so simple, it's hilarious.

seth (2008-06-14 23:00:14)

Thanks, Darkhorse. That's nice to hear. At a party today I learned that vaccination was once controversial. Which supports your point.

## **Why Do We Touch Our Mouths So Much? (2008-06-15 10:46)**

This photo documents something anyone can notice: While we're sitting, we touch our mouths a lot.



The photo shows the full faces of 22 men; 7 of them are touching their mouths. I have noticed something similar at many faculty meetings. I started to notice this after I read about its observation in a study designed to measure something else.

I've known about this for many years but have never read an explanation. Do we enjoy touching our mouths – or is the absence of touch for a long time unpleasant? If so, why?

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Mike Kenny (2008-06-16 15:04:50)

Maybe to hide emotions? I notice sometimes people hide their smiles, or hide a yawn. Perhaps hiding our emotions in some cases helped us pass on our genes and so the behavior has been encouraged via evolutionary pressures.

Ryan Holiday (2008-06-17 10:55:18)

THAT is the odd thing you noticed about this photograph? Who is that woman and what could she possibly be doing in that room?

MarkH (2008-06-18 22:08:59)

Men in that photo? Oh, over on the right.

James (2008-06-19 04:04:49)

What about a means to sample the local microbial environment? A safer route to building immunity to bugs common in your environment by constant, low-dose intake (whether swallowed or inhaled)?

Dave (2008-06-19 08:50:54)

"Who is that woman and what could she possibly be doing in that room? " I count 6 guys who are eying her up. Maybe the reason they're all covering their mouths is because they're all saying ":cough: dude, check out the hottie :cough:"

Seth's blog » Blog Archive » Why Do We Touch Our Mouths So Much? (continued) (2008-06-19 09:46:25)  
[...] Why Do We Touch Our Mouths So Much? [...]

Ranjith's Castle » Eyes Closed Vs Lips !!! (2008-07-02 00:08:27)  
[...] Most people close their Mouth [...]

## **The Ketogenic Diet and Evidence Snobs (2008-06-15 22:26)**

If we can believe a movie based on a true story, the doctors consulted by the family with an epileptic son in ...First Do No Harm knew about the ketogenic diet but (a) didn't tell the parents about it, (b) didn't take it seriously, and (c) thought that irreversible brain surgery should be done before trying the diet, which was of course much safer. Moreover, these doctors had an authoritative book to back up these remarkably harmful and unfortunate attitudes. The doctors in ...First, as far as I can tell, reflected (and still reflect) mainstream medical practice.

Certainly the doctors were evidence snobs – treating evidence not from a double-blind study as worthless. Why were they evidence snobs? I suppose the universal tendency toward snobbery (we love feeling superior) is one reason but that may be only part of the explanation.Â In the 1990s, Phillip Price, a researcher at Lawrence Berkeley Labs, and one of his colleagues were awarded a grant from the Environmental Protection Agency (EPA) to study home radon levels nationwide. They planned to look at the distribution of radon levels and make recommendations for better guidelines. After their proposal was approved, some higher-ups at EPA took a look at it and realized that the proposed research would almost surely imply that the current EPA radon guidelines could be improved. To prevent such criticism, the grant was canceled. Price wasÂ told by an EPA administrator that this was the reason for the cancellation.

This has nothing to do with evidence snobbery. But I'm afraid it may have a lot to do with how the doctors in ...First Do No Harm viewed the ketogenic diet. If the ketogenic diet worked, it called into question their past, present, and future practices – namely, (a) prescribing powerful drugs with terrible side effects and (b) performing damaging and irreversible brain surgery of uncertain benefit. If something as benign as the ketogenic diet worked some of the time, you'd want to try it before doing anything else. This hadn't happened: The diet hadn't been tried first, it had been ignored. Rather than allow evidence of the diet's value to be gathered, which would open them up to considerable criticism, the doctors did their best to keep the parents from trying it. Much like canceling the radon grant.

[1]The ketogenic diet.

1. <http://www.blog.sethroberts.net/2008/06/10/the-ketogenic-diet/>

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Stephen M (Ethesis) (2008-06-17 11:05:07)

The entire history of how the ketogenic diet was discovered and then swept away is an amazing one, as is its return. BTW, just for amusement, <http://drdeborahserani.blogspot.com/2008/05/10-illusions-in-2-minutes.html>

Julia Schopick (2008-06-30 20:39:20)

Seth: As one who has long been wary of a medical establishment that only respects the results of studies – and, even sadder, the results of studies that they believe have been conducted in the “right way,” by the “right researchers,” at the “right institutions” (or by the “right pharmaceutical companies”), and written about in the “right journals” – I find your ideas wonderfully refreshing. (Of course, many of us know that a majority of these so-called “studies” that doctors trust so much are carried out by pharmaceutical companies with pre-ordained agendas, and that these studies therefore come to conclusions that will benefit the companies themselves. Scary.) Concerning “First Do No Harm”: Although it was made in the 1990s, the action of this wonderful movie takes place in the 1970s. And you are very right that, at that time, most doctors believed that drug therapy and surgery were the only “proven” treatments for childhood epilepsy. Many still do. But, their belief, even then, was misguided, and – I can only conclude – shaped by financial interests. For one thing, as the movie pointed out, the diet has been used very successfully for decades at Johns Hopkins, under the direction of John Freeman, MD, and registered dietician Millicent Kelly. But, even more puzzling, since 1925, there has been a huge amount of published literature extolling the efficacy of the diet. For instance, on April 4, 1925, one of the “rightest” of journals, the AMA’s own JAMA, published an article, “The Ketogenic Diet in Epilepsy,” in which M. G. Peterman, MD, reported on the results of a study at the Mayo Clinic, in which 37 children with “essential epilepsy,” between 2-1/4 and 14-1/2 years of age, were treated with the ketogenic diet. The results were stunning, with a majority of the children experiencing improvement. In fact, quoting from the article, nineteen, or just over 50 % “have been free from attacks since the institution of this treatment.” JAMA published the results of another study in 1927, the conclusion of which was that “twenty-nine of ninety-one patients suffering from idiopathic epilepsy have been freed from attacks by means of the ketogenic diet. Twenty others are definitely improved, so that 54 per cent have been definitely benefited by the dietary treatment.” Similar studies were published in every decade thereafter. And to my knowledge, the results reported in all these studies are much better than those achieved by any anti-epileptic drug. So, why did the doctors in “First Do No Harm” react the way they did? Frank Lefevre, MD and Naomi Aronson, PhD, in an article (“Ketogenic Diet for the Treatment of Refractory Epilepsy in Children: A Systematic Review of Efficacy”), published in 2000 in “Pediatrics,” the official journal of the American Academy of Pediatrics, offer a possible rationale: (See <http://pediatrics.aappublications.org/cgi/content/full/105/4/e46>) Quoting from their article: “This diet was used as a treatment for epilepsy fairly commonly in the 1920s and 1930s. In the late 1930s and 1940s, as effective antiepileptic drugs, such as phenytoin and phenobarbital, were introduced into clinical practice, the ketogenic diet was largely replaced by drug therapy.” I received my education about the ketogenic diet from Hollywood producer/director/writer, Jim Abrahams, the man who deserves a huge amount of credit for spreading the word about the diet. Jim is the man responsible for “First Do No Harm.” His own experience with the diet, which worked so well for his son Charlie (when nothing else, including surgery, would), has led him to labor tirelessly since the 1990s to promote the use of the diet. Through his Charlie Foundation, Jim has produced and disseminated informational videos, and regularly sponsors training seminars for professionals so they can become qualified to implement their own ketogenic diet programs. Thanks to Jim’s efforts, the ketogenic diet is now available in many hospitals in both the US and abroad. (Estimates range from 65 to 200 programs worldwide!) You may read Jim’s and Charlie’s inspiring story at <http://charliefoundation.org/>, where you’ll find lots of other resources, as well. In addition, I have written an article, “Four Lifesaving Medical Treatments: Not So ‘Anecdotal,’ After All.” My article features the ketogenic diet – as well as three other equally impressive “anecdotal” treatments. It is posted on my website, at <http://www.honestmedicine.com/2008/05/four-lifesaving.html> Thanks much for the work you are doing. Hopefully, together we can (finally!) get the word out there. Julia Schopick [www.HonestMedicine.com](http://www.HonestMedicine.com)

Damon (2008-08-05 10:57:01)

I can’t believe how silly this post is. “Evidence snobs?” So basically what you’re saying is: If you want evidence that something works, you’re a snob. Seriously? Double blind studies are important because they remove human bias. Yes, you can argue that if something works without a double blind there is “evidence” for it, yes, you can say that in this particular case there was some very bad personal interference. But To say this somehow makes double blind studies a snobbery is pretty irresponsible, and frankly, stupid. A good double blind study -will- tell you if a drug is “sometimes” effective. You should know that. What it will also tell you is how statistically relevant that outcome is. I find all of this boogey-manning of the “medical establishment” to be a little weak. It’s basically a thinly veiled conspiracy theory. Maybe you already know these things, Seth, but look at the people

commenting in your threads. Many are basically clueless about the scientific method and a lot of them are conspiracy theory types who's intellectual laziness should warn you that they are not the kinds of supporters you want. If you spend a minute thinking about it, you can either attribute their comments to zaniness, or perhaps conclude that your posts on occasion aren't diligent enough to clearly explain to these people what you are getting at. "Evidence Snobbery." Come on.

seth (2008-08-05 17:54:47)

An evidence snob is not someone who "want[s] evidence that something works." An evidence snob is someone who disregards evidence – evidence that doesn't reach a sufficient level of quality. As far as "bogey-manning" the medical establishment, the stuff in ...First Do No Harm actually happened. It's not speculation, as conspiracy theories are.

Tom in TX (2008-08-10 20:24:29)

The diet is worthless because it has not been proven by a double-blind placebo-controlled study. So why not do the study? That would be a waste of time, since the diet is worthless. 8-b The logic is irrefutable.

### **Crazy Spicing Works (At Least Once) (2008-06-16 21:44)**

The [1]theory behind the Shangri-La Diet says that the more variable the flavors of your food, the less fattening it will be. The problem with junk food is not just the quickly-digested calories (from bread and sugar), it is also the remarkably constant flavor. Coke tastes exactly the same each time.

A [2]new study has just come out that supports these ideas. Sprinkling essentially random flavors on food (which an SLD forum member called crazy spicing) caused a lot of weight loss:

Alan Hirsch, MD, founder and neurologic director of the Smell & Taste Treatment and Research Foundation in Chicago, studied "tastants," substances that can stimulate the sense of taste. He asked 2,436 overweight or obese individuals to sprinkle a variety of savory or sweet crystals on their food before eating their meals during the 6-month study period. Subjects put liberal applications of the salt-free savory flavors on salty foods and applied the sugar-free sweet crystals on sweet or neutral-tasting foods. They did not know what the flavors were other than salty or sweet. The hidden flavors of the savory tastants were cheddar cheese, onion, horseradish, ranch dressing, taco, or parmesan. Sweet flavors were cocoa, spearmint, banana, strawberry, raspberry, and malt.

A control group of 100 volunteers did not use tastants. Both groups were allowed to diet and exercise if they were already doing so. For both subjects and controls, Hirsch measured weight and body mass index (BMI) – a measure of height and weight – before and after the study.

At the start of the study, the treatment group had an average weight of 208 pounds and average BMI of 34, which is considered obese. After 6 months of using the crystals, the 1,436 subjects who completed the study lost an average of 30.5 pounds, compared with just 2 pounds for the untreated controls. Their BMI dropped by an average of 5, moving them from obesity to the overweight range. Controls had an average BMI decrease of 0.3.

Hirsch theorized that subjects lost more weight than controls did because the tastants made them feel full faster and therefore eat less. However, he did not track the amount of food the subjects ate. Another possibility, he said, is that the crystals improved the taste of bland but healthy foods, such as tofu and some vegetables, causing a change toward healthier eating habits. He said he believes this approach works because, unlike most diets, it is not based on food restriction.

Subjects lost an average of nearly 15 percent of their body weight, results showed. It is not clear whether the apparent weight loss benefits of the tastants would extend past 6 months or to people who weigh less than the obese subjects in this study.

"It could be that the percent of weight reduction would be lower in people who are less obese," Hirsch said. "In theory, tastants won't work for people who eat even when they're full and for people who have lost their sense of smell."

Hirsch said the tastants worked so well that they contributed to the dropout rate. Some of the subjects stopped the study before 6 months because they already had reached their ideal body weight—an unexpected result, he said.

Hirsch has done similar experiments, with similar results, in the past.

Thanks to Sheila Buff.

1. <http://www.sethroberts.net/about/whatmakesfoodfattening.pdf>
2. [http://www.eurekalert.org/pub\\_releases/2008-06/tes-hso061408.php](http://www.eurekalert.org/pub_releases/2008-06/tes-hso061408.php)

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Fortinbras :: Seth's blog » Blog Archive » Crazy Spicing Works (At Least Once) :: June :: 2008 (2008-06-17 03:31:50)  
[...] Seth's blog » Blog Archive » Crazy Spicing Works (At Least Once) The theory behind the Shangri-La Diet says that the more variable the flavors of your food, the less fattening it will be. The problem with junk food is not just the quickly-digested calories (from bread and sugar), it is also the remarkably constant flavor. Coke tastes exactly the same each time. [...]

Phillip J. Eby (2008-06-17 11:24:12)

Awesome. You gonna point him to your alternative explanation? And don't forget... you can now put out an updated edition of your book, "NEW: Now with Crazy Spicing and Scientific Proof!" ;-)

Kevin C (2008-06-17 22:20:32)

Wow, Seth! This is really great. I think this has re-inspired me to try crazy spicing again to help me lose those last 10 pounds. I'm a little confused though about the study, were they given randomized flavors, or was each participant given a specific flavor?

seth (2008-06-18 09:06:28)

I think each participant was given all the flavors. Each person was given – if I'm right – two sets of about six flavors each – one set for sweet foods, one for non-sweet foods.

SusanJ (2008-06-18 10:43:24)

This is way too good to be true. I've NEVER seen a weight loss study where the participants have ever come close to an average loss of more than a pound a week for six months.

seth (2008-06-18 17:08:39)

Hmm. Isn't there a first time for everything?

VeganKitten (2008-06-18 21:32:10)

1,436 subjects lost an AVERAGE of 15 % of their body weight. That's colossal.

Kristin (2008-06-20 21:44:46)

Hi Seth - I read on your blog that you would love to experiment with the product. Give me a shout and I'll send some off to you! I would also be happy to send you a copy of the clinical study that was published in Prague. The one just presented at the Endocrinology Conference is awaiting publication.

### **SLD in Indonesian (2008-06-17 07:14)**

There is a long discussion of the Shangri-La Diet [1]here on an Indonesian forum. I like the locations some posters give: "the hottest city in Java," "space," "a quiet little house," "above the earth," "nowhere to be found."

Thanks to Mark Schrimsher of [2]CalorieLab. The 2005 [3]CalorieLab post on SLD – now an historical artifact. [4]Why Japanese People in Japan Don't Get that Fat.

1. <http://www.kaskus.us/showthread.php?t=896152>

2. <http://calorielab.com/index.html>

3. <http://calorielab.com/news/2005/09/21/seth-roberts-shangri-la-diet-in-detail/>

4. <http://calorielab.com/news/2008/01/17/why-japanese-people-in-japan-dont-get-that-fat/>

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Igor Carron (2008-06-17 10:00:48)

Forbidden You don't have permission to access /news/2005/09/21/seth-roberts-shangri-la-diet-in-detail/ on this server. when clicking on the last two links here is what I get. Igor.

Andrew Gelman (2008-06-17 18:58:44)

Isn't every record from the past a "historical artifact"?

Mark (2008-06-18 00:12:19)

Igor, if you send us your IP address ( <http://checkip.dyndns.org/> ) via e-mail to [inquiry@calorielab.com](mailto:inquiry@calorielab.com) we can look into your problem. We've blocked a few IP ranges due to abusive access by automated robots.

seth (2008-06-18 23:49:29)

Andrew, good point, I will tag this post as "self-congratulation".

### **Dinner in an Amsterdam Banlieue (2008-06-17 23:24)**

A friend in Amsterdam writes:Â

I went to my [Moroccan] friend's family's apartment in Slotervaart and we watched Turkish soap operas dubbed in Arabic.Â At one point, the characters showed a map of Europe and the Middle East, with

various arrows pointing back and forth. I asked her what they were, and she said they were maps of drug trafficking routes from Holland to Istanbul. Then my friend and her sister laid out a plate of sheep's stomach while I was in the bathroom and waited to see whether I would eat it. I explained that although it had smelled good before I knew what it was, the thought of eating it made me feel sick, but I felt obligated to eat a tiny bite of it anyway.

Slotervaart is not technically a banlieue (outskirt) of Amsterdam but it is functionally the same as the Paris banlieues. It is where Muslim immigrants live.

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### **Bloggers Can Say the Truth (2008-06-18 09:42)**

As I blogged [1]earlier, Tyler Cowen said that on [2]his blog he can say what he really thinks, unlike other economists, who are often unable to say what they really think. Here is [3]another example of the same thing from a blogger who writes about stuttering:

At least four [researchers] have told me that they try not to provoke or openly criticize work by a big name [researcher], because they are scared of having a paper rejected or getting no funding. Actually, they like me because I say what they do not [dare] to say [for] political reasons ! So view my blog also as the voices of some in the research community!

This blogger isn't a researcher so his situation isn't the same as Tyler's. But my point is the same: Blogs allow uncomfortable truths to be said that otherwise would not be said.

In the past this was much harder. To say some uncomfortable truth about this or that field of expertise (such as stuttering research or economics), the truth-speaker had to be (a) close enough to the field to understand it (which usually omitted journalists, with a few exceptions, such as Gary Taubes and John Crewdson) and yet (b) outside the field, so as to not suffer professional damage. There was also the problem of publicizing the uncomfortable truth. These requirements were hard to meet. [4]Richard Feynman's O-ring demonstration was a rare example where they were. Feynman knew what he was talking about yet was outside the industry, so he could say what insiders could not. (His criticism came from insiders.) [5]Saul Sternberg's and my criticism of Ranjit Chandra is another example. We knew enough about the sort of data Chandra had collected to criticize the work but were outside nutrition so we could say what we wanted to without risking professional harm.

[6]A Philip Weiss example.

1. <http://www.blog.sethroberts.net/2008/03/24/tyler-cowen-on-blogging/>
2. <http://www.marginalrevolution.com/>
3. <http://thestutteringbrain.blogspot.com/2008/05/different-types-of-researchers.html>
4. <http://www.kakool.com/content/richard-feynman-o-ring-debate>
5. <http://www.sethroberts.net/chandra/index.html>
6. <http://www.blog.sethroberts.net/2008/06/01/bb-before-blogs/>



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## Why Do We Touch Our Mouths So Much? (continued) (2008-06-19 09:46)

I asked this question in a [1]recent post. If you look at people sitting in an audience, about one-third of them will be touching their mouth.

I had wondered about this for years. Somehow blogging about it helped. A few days ago I was on the subway. Of the persons sitting, the usual fraction were touching their mouth. Nobody standing was touching their mouth with their hands but now and then I noticed them purse or lick their lips.

Which suggested an answer to my question: We get a small amount of pleasure from touching our mouths. The pleasure declines after it is "harvested" and takes several minutes to become available again. This mechanism evolved because it kept our lips moist. At the time it evolved, people spent little time sitting. The pleasure was obtained by pursing or licking your lips, which moistened them. Predictions: 1. if you watch people whose hands are busy, they will purse or lick their lips roughly as often as people in an audience touch their mouths. 2. The more you lick or purse your lips, the less you will touch them with your hands. 3. The more you touch your lips with your hands, the less you will purse or lick them.

Pagophagia (compulsive ice eating) is similar. It is [2]caused by anemia (too little iron). In the Stone Age, there was no ice. An intense desire to crunch something in your mouth would have led you to crunch bones. Bone marrow is high in iron. It's another mechanism that worked well in the Stone Age but now malfunctions (not that there's anything wrong with touching your mouth with your hand). [3]My self-experimentation is all about this sort of thing. It's easy to sit, so we don't sleep well. It's easy to be inside in the morning, so we don't sleep well. It's easy to eat breakfast, so we don't sleep well. it's easy to avoid faces in the morning, so we get depressed. And so on.

More. [4]Andrew Sullivan's readers have other ideas: [5]here and [6]here. Thanks to Tyler Cowen.

1. <http://www.blog.sethroberts.net/2008/06/15/why-do-we-touch-our-mouths-so-much/>
2. <http://www.ncbi.nlm.nih.gov/pubmed/5244572?dopt=Abstract>
3. <http://repositories.cdlib.org/postprints/117/>
4. [http://andrewsullivan.theatlantic.com/the\\_daily\\_dish/](http://andrewsullivan.theatlantic.com/the_daily_dish/)
5. [http://andrewsullivan.theatlantic.com/the\\_daily\\_dish/2008/06/touching-our-li.html](http://andrewsullivan.theatlantic.com/the_daily_dish/2008/06/touching-our-li.html)
6. [http://andrewsullivan.theatlantic.com/the\\_daily\\_dish/2008/06/email-of-the--3.html](http://andrewsullivan.theatlantic.com/the_daily_dish/2008/06/email-of-the--3.html)

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James (2008-06-20 06:46:47)

"This mechanism evolved because it kept our lips moist." How does touching our lips w/ our hands keep them moist? More importantly, why is keeping them moist important? I agree with your suggestion of periodicity and with licking taking over when we're mobile. Both of these attributes, however, to me suggest a larger purpose - and I'd posit that moist lips are a great surface for capture of local microflora whether by contact with air (while mobile) or by direct sampling (with hands, while seated). Swallowing would then allow for a measured immune response and a constant re-adjustment of immune capability to the local microflora environment. Same goes for swallowing mucus from the nasal passages.

seth (2008-06-20 12:01:33)

"How does touching our lips w/ our hands keep [our lips] moist?" It doesn't – just as chewing ice doesn't cure an iron deficiency. Back in the Stone Age, with a different environment, the mechanism kept our lips moist because it caused us to touch our lips with our moist tongue.

James (2008-06-20 16:12:39)

"the mechanism kept our lips moist because it caused us to touch our lips with our moist tongue" I'm still not sure I understand the connection between touching one's mouth and maintenance of moist lips; wouldn't touching a dry hand to your lips dry them further? Accepting your reasoning, this still doesn't explain \*why\* it's so important for us to maintain moist lips.

kevin (2008-06-20 16:33:09)

I have found that licking my chapped lips dries them out further, causing more harm than if I left them alone, just as washing dry skin doesn't restore moisture, it makes it worse. What the lips need is probably not water, its skin oil, right?

Cliff (2008-06-20 21:23:19)

Kevin is exactly right- licking your lips will not keep them moist, it will dry them out. I am skeptical that touching your lips gets skin-oils on them and keeps them moist, but that is more probable than your opposite-world conclusion.

seth (2008-06-20 22:50:42)

I have no idea what chapped lips need. Perhaps more oil. Perhaps something else. I'm talking about normal lips.

Cliff (2008-06-21 13:53:53)

Yes. you are talking about normal lips and you are wrong about normal lips. There are no lips that licking makes moist, that is the bottom line. If you don't believe me, do a little research, then revise your theory because it does not fit reality. Think about it. Would washing your hands really often keep your hands moist? No. It dries them out. Try washing your hands 100 times a day and see what happens to your hands, they will be destroyed. If you bothered to google, you would find stuff like this: <http://www.wikihow.com/Make-Your-Lips-Smooth> [http://www.ehow.com/how\\_2115815\\_cure-chapped-lips.html](http://www.ehow.com/how_2115815_cure-chapped-lips.html) [http://www.carefair.com/Skincare/Tips\\_to\\_Stop\\_Biting\\_Your\\_Lip\\_1427.html](http://www.carefair.com/Skincare/Tips_to_Stop_Biting_Your_Lip_1427.html) Looks like unanimous agreement- don't lick your lips. Btw, I have been watching people who are busy, and have not seen any lick their lips.

seth (2008-06-21 16:37:09)

If you can find data – not just assertions – that support your idea, please post again.

moruno28 (2008-06-21 21:34:30)

i think that when i touch my own lips i often rub the ends, moving the moist buildup towards the middle of my lips. thus, my lips become more moist, even though moistening my lips in this fashion is not my intention, maybe it's instinctive.

Rob (2008-06-22 04:53:25)

Hey Seth, Cliff is right. I have a nervous habit of licking my lips sometimes and all it does it dry them out during the day by removing the natural oils on the surface. After hours of licking my lips I have to start using lip balm! Maybe there's a benefit to licking lips - but it ain't keeping them lubricated!

seth (2008-06-22 06:01:06)

Rob, maybe doing something 20 times is helpful but doing it 100 times is harmful. Maybe you're licking your lips too much.

Bob (2008-06-23 11:13:49)

Touching one's mouth may have a social meaning as well; in acting they say that touching your mouth or your head with your hands lowers your social status relative to other people in the room. I've never seen any data or experiments to test this though.

Greg (2008-06-24 04:37:14)

Seth, I think you're now taking your conclusion and searching for somewhat tortured justifications for it - e.g., maybe 20 times is helpful but 100 times is harmful. As far as I know, it's commonly held that licking your lips dries them out, and it's consistent with my experience. If you disagree, why not try licking your lips various numbers of times per day and see if it keeps them moist?

Jas (2008-11-22 09:40:22)

It's a nice theory you have, but I have to disagree a little. I think the lip licking and lip touching has more to do with nervousness or interest in a person. We lick our lips and when we do so, they are for a little while moist and glistening, which is the same effect you get from lip gloss. It's a way to draw attention to your mouth. I won't go in to detail, but it is also a sort of reference to something else. Also, by licking our lips, we show our tongue, or part of it, for a split second, which could be seen as another way of showing interest and wanting that someone to notice you. The lip touching has the same use, to draw attention to our lips. It's a simple way of intentionally, but mostly unintentionally, show that you are interested in someone. It doesn't have to be someone you're in love with, just someone you just saw and found attractive/cute/sexy whatever.

drbganimalpharm.blogspot.com (2009-01-02 01:44:32)

Silent celiacs have an incurable addiction to iceberg lettuce when they exhibit when iron deficient. They may also chew on things - like clothes, anything close to their mouth. Autistic children are reported to exhibit the same thing. In celiac (wheat-intolerance), the gut becomes fenestrated ('leaky') and blood leaks out into the stools. Perhaps our bodies respond to ancient signals that defy our current understanding?? In the nutrition world this is known as 'pica'. Thanks for this post! This explains a lot that we observe. :)

## **They Will Know Us by Our YouTube Videos (2008-06-19 11:30)**

Or by our blogs. [1]Here are old photographs of New York, some from a hundred years ago.

1. <http://wirednewyork.com/forum/showthread.php?t=5010>

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## **Morning Light and Better Sleep (2008-06-20 06:35)**

Song Cato, a friend of mine in Taiwan, writes:

I was very surprised that the quality of my sleep greatly improved after I switched to waking up at 5:30 am and walking in the park soon after that. I started it about a month ago. The park is packed with people doing everything from tai chi to ballroom dancing. I used to go to bed at 1 or 2 am. and wake up between 7 and 8:30 am with a foggy head. Now sometimes I feel tired and go to sleep at 10 pm which has never happened in my life since I went to middle school.

She got the idea from me. I go outside around 7 am every morning and fall asleep between 11 pm and midnight.

More. She gets up at about 5:15 am and gets outside about 5:30. She stays outside for at least 2.5 hours, mostly in the park, where she walks, talks to vendors, shops a little, and does simple stretching exercises. Talking to vendors

= very good!

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hp (2010-03-25 04:52:00)

Hi seth, question on morning sunlight. I have to be to work before sunrise, but i can, if i choose work with the sun shining directly on me through a glass window in the morning. Do you think this would this give me the same benefit as direct sunlight outside, (it's a standard house window, no special properties to it) Thanks

Shawn (2011-08-24 05:19:15)

They key is to get up around sunrise while maintaining an adequate amount of sleep (I checked the charts and sunrise in Taipei in June is around 5 am). It has helped me immeasurably. I get a sense of overall well-being, and lack the foggy-headed tiredness that has dogged me like a black cloud over my head.

#### **Assorted Links (2008-06-20 12:47)**

1. One of Entertainment Weekly's most Spy-like articles: [1]So You Want To Write A Memoir
2. [2]Genesis in lolspeak, part of the [3]Lolcat Bible Translation Project.
3. A riveting EconTalk interview about [4]buying a new car.
4. Speaking of cars, [5]the hidden meaning of bumper stickers.

Thanks to Joyce Cohen and [6]Robin Hanson.

1. <http://www.ew.com/ew/article/0,,20203167,00.html>
2. [http://www.lolcatbible.com/index.php?title=Genesis\\_1](http://www.lolcatbible.com/index.php?title=Genesis_1)
3. [http://www.lolcatbible.com/index.php?title=Main\\_Page](http://www.lolcatbible.com/index.php?title=Main_Page)
4. [http://www.econtalk.org/archives/2008/06/cole\\_on\\_the\\_mar.html](http://www.econtalk.org/archives/2008/06/cole_on_the_mar.html)
5. <http://www.washingtonpost.com/wp-dyn/content/article/2008/06/15/AR2008061501963.html?sid=ST2008061600110>
6. <http://www.overcomingbias.com/2008/06/loud-bumpers.html>

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david (2008-06-21 14:43:04)

Regarding #4, I want a bumper sticker that says: "Don't cut me off! Studies have shown that drivers with bumper stickers are aggressive."

cp (2008-06-23 04:00:53)

You might like this one: [http://dilbert.com/blog/entry/magnesium\\_and\\_vacatios/](http://dilbert.com/blog/entry/magnesium_and_vacatios/)

## Can You Change Something If You Don't Love It? (2008-06-21 12:01)

At a bookstore reading, I learned that Elizabeth Pisani wrote [1]The Wisdom of Whores – about doing HIV epidemiology among sex workers – because she wanted to have more of an effect on HIV prevention programs. Scientific papers didn't have much effect unless a journalist wrote about them. Journalists, she found, tended to focus on the exceptions rather than the rules. The exceptions – e.g., sex trafficking – were a poor basis for policy, of course. So she did what drug dealers call "jump the connection": She wrote a book about the rules, illustrating them with good stories. Speaking directly to the public. It seems to be working, she said.

Jane Jacobs (whom Pisani hadn't heard of) said something enormously relevant to her enterprise. I think it was in an interview. "It's a funny thing," Jacobs told the interviewer. "You can't change something unless you love it." What a broad statement, huh? Could it be true? HIV prevention programs, in Pisani's experience, have mostly failed. She was hopeful that private foundations could do what governments could not. The Gates Foundation, for example – could they crush HIV the way Microsoft crushed Netscape? Jacobs would have been skeptical: Is the usual attitude at the Gates Foundation to love, or at least respect, sex workers? Well, probably not. Indeed, the closer Pisani got to private foundations, the more skeptical she became. They were getting advice from former CDC bureaucrats and the like, full of the same ideas that had already failed.

Pisani held up one country as an example of how to do it right: Brazil. Why Brazil? I asked. Funny thing: In Brazil, they respect sex workers. Unlike everywhere else. In this case, at least, Jacobs was right.

More: [2]Here's one version of Jacobs saying this: "I think people [who] give prescriptions, who have ideas for improving things, ought to concentrate on the things that they love and that they want to nurture."

1. <http://www.wisdomofwhores.com/>

2. <http://www.gse.buffalo.edu/fas/bromley/ccs/part5.htm>

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MT (2008-06-22 00:48:27)

I think it is likely that there are people at the Gates Foundation who are motivated by a love of and compassion for women – who are mothers, daughters, and sisters – and who happen to also be in the sex trade. Although there are a variety of motivations for working in philanthropy, and the Gates Foundation pays better than other non-profits, those who work there are still on average driven by different motivations than most people. There is more money for people of comparable talent in other sectors, so those working in non-profits are likely doing so out of empathy and compassion for others and would be aware of the economic and social conditions that conspire to put women into the sex trade.

seth (2008-06-22 06:18:19)

MT, I edited the post make it clear I was talking about the usual attitude of people who work at the Gates Foundation. The average attitude. You're right, there may be exceptions.

Tom (2008-06-23 22:01:21)

"The Gates Foundation, for example – could they crush HIV the way Microsoft crushed Netscape?" Yes, they could crush HIV exactly the same way they crushed Netscape – by flooding the market with thousands of HIV-free prostitutes who would give their services away at no charge. 8-)

Seth's blog » Blog Archive » The Paradox of Advice (2008-06-24 10:38:01)  
[...] Can You Change Something If You Don't Love It? [...]

Patri Friedman (2008-06-24 14:51:34)

This seems like a good argument for social freedom and harm reduction rather than criminalization, for things like prostitution, gambling, and drugs. If they are illegal, we tend to demonize them, and the people who do them are people willing to do illegal things, who tend to be sleazier. You get a feedback cycle of sleaziness. And then when there are problems (drugs that are bad for you, STDS among sex workers), they are hard to fix. If instead you acknowledge that these things are going to happen anyway, make them legal and regulated, when problems come up it will be much easier to find smart, competent people who respect drug users, prostitutes, and Johns, and can provide good suggestions for fixing the problems.

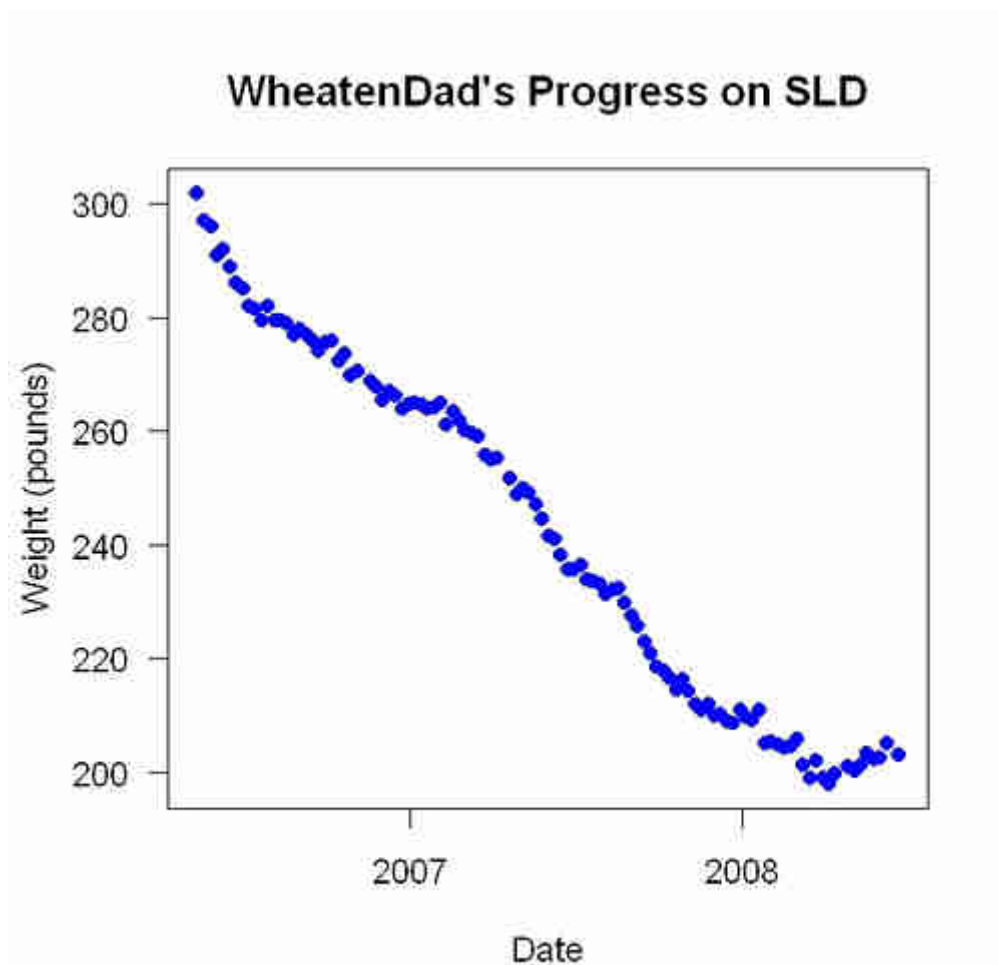
seth (2008-06-24 15:00:23)

that's a great point, Patri. I'm going to write a post based on it.

Seth's blog » Blog Archive » The Cost of Demonization and How to Avoid It (2008-06-24 15:22:12)  
[...] Can You Change Something If You Don't Love It? [...]

## **100 Pounds Lost on the Shangri-La Diet (2008-06-22 06:06)**

WheatenDad, a 70-year-old man who lives in San Carlos, California, started the Shangri-La Diet two years ago and began [1]posting his weight on the [2]Shangri-La Diet forums. At the time, he weighed 300 pounds (BMI = 38). Now he weighs about 200 pounds (BMI = 26). He lost about 1 pound/week for 2 years:



He did SLD by taking 3 tablespoons/day of extra-light olive oil. In February 2008 he increased it to 4 tablespoons/day. In May 2007 he started walking 1-2 miles/day, eventually increasing this to 3-4 miles/day.

1. <http://boards.sethroberts.net/index.php?topic=1258.0>
2. <http://boards.sethroberts.net/index.php?action=collapse;c=1;sa=expand#1>

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Douglas Clegg (2008-06-23 11:27:51)

This is great. A little over a year ago, I read the book, and started the diet using sugar water. For whatever reason – maybe my body chemistry – it was the wrong thing for me. Truthfully, sugar itself – despite my love for the stuff – has never tasted good to me, neither has sugar substitutes. So it may be that when something doesn't actually taste good to you, it means your particular body says, "I really don't want this in me, you idiot." I went off it within a few days (and suddenly had an attack of vertigo, which really made me nuts until a doctor diagnosed it. I doubt it had anything to do with sugar water, but it happened at the same time, so I went off any kind of diet or program at that point – and even gave up martinis, because I'd had one the night before the vertigo jumped me and threw me on the floor.) So, I decided sometime after that to go low-sodium with food to mainly lower my blood pressure, and voila, lost about 30 pounds this way over about 7 months – without doing anything other than keeping my sodium intake to 2,000 mg per day (or thereabouts). This meant I had to cut out all fast food, fried food, and most frozen and overly processed foods. I also made sure I walked or got on a bicycle about 4 days a week for 40

minutes or so. But I had been doing that long before, and I hadn't lost any weight from it. So the 30 pounds definitely moved by watching sodium and keeping it well-within the reasonable 2,000 mg level (which is still a lot of sodium every day.) I ended up cutting out all kinds of food I had been eating prior to this – just by watching sodium on the labels. Still I ate everything I wanted, whenever I wanted it, within my sodium range. Then, I hit a plateau, and even though I've exercised about five hours a week over the past year, I couldn't make the scale move lower...given my work, which is very sedentary, those five hours a week really aren't that much... So, in semi-desperation, I decided to re-try The Shangri-La Diet with flavorless oil. For reasons of health, I went with walnut oil, as well as some fish oil. The fish oil comes in a bottle, so I use a tablespoon with that. I don't believe that Extra-Light Olive Oil has much health benefit, and I needed some Omega-3s and also to reduce my triglyceride level (there is some evidence that fish oil can help with this.) I cover my nose when I take the fish oil, but the cold pressed walnut oil has zero flavor. 1 tbsp fish oil and 3 walnut oil each day (I do mornings when I rise and night just before I get into bed.) Then, still keeping my nose shut, basically, I drink a glass of water and swoosh some of it around in my mouth to remove any linger fish oil taste. Now, this is only my first week but...four pounds down. Four pounds down in one week – without my even watching what I'm eating – after no movement on that scale for several months. I'll keep it up and see how it goes from there, but I am impressed. As I said, I hit a plateau for about five months after losing the initial 30 pounds via going to a sane sodium-intake level (and realistically, I don't always – sometimes when I eat out, who knows how much sodium is in that food? And I eat out in restaurants about 4 times a week.) I don't count calories at all – I've never believed that works for people, or the idea of deprivation. When I'm hungry, I really want a good meal. I didn't feel as if any eating habit of mine changed while taking this oil, so it makes me wonder if there aren't several mechanisms at work here besides set point and satiety. Could it be that oil has another action in the body that helps this? Still, it could be satiety – it could be that I'm actually eating less than I usually do, but am not noticing what "less" is because the set point is lowering. Who knows? So, just wanted to post this, particularly after having read of this amazing success story here. Thank you, Seth.

Ascription is an Anathema to any Enthusiasm » Blog Archive » Shangri-La Diet (2008-06-24 06:59:28)

[...] This data is tainted by the how it is self reported, but none the less it is amazing.Â The other day Seth reported some fun data for one dieter, who lost about a pound a week for two years!Â He wrote a nice posting a while back about the fun he is having with his little community of users.Â And this is a nice research result that makes complete sense given the diet's punitive explanation, i.e. that standardization make food more fattening. [...]

Nick (2011-05-04 00:32:34)

That's kind of incredible - but more down to determination than the diet he chose. If he could have stuck with calorie counting, for a whole year, i'm sure his results would have been pretty good. Congrats to him!

Seth Roberts (2011-05-04 02:35:40)

Nick, I don't know anyone who has lost 100 pounds by calorie counting. Perhaps calorie counting is too hard and SLD is much easier?

## **Trailer » Movie (2008-06-22 23:35)**

The trailer for Robin Hood: Prince of Thieves contained a shot in which the camera was mounted on an arrow. The shot, done especially for the trailer, was far more memorable than anything else in the movie. I'm afraid this line from [1]an abstract of a New Yorker article by Andrea Lee about growing up in Pennsylvania–

Writer briefly describes a lunch with an Italian movie director who tells her about an affair he once had with a woman from Bucks County, Pennsylvania.

–is going to be more memorable than anything in the article.



You can see the arrow shot [2]here.

1. [http://www.newyorker.com/reporting/2008/06/30/080630fa\\_fact\\_lee](http://www.newyorker.com/reporting/2008/06/30/080630fa_fact_lee)
2. <http://www.youtube.com/watch?v=8XvA967YSPs>

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Robin Hood And Shangri-La | Trailers Undone (2008-06-23 17:56:37)

[...] Seth Roberts has a short post about the relationship between the trailer for Costner's Robin Hood and the movie, and it was mirrored on his Amazon employee blog. [...]

Movie Trailers: Robin Hood And Shangri-La | miconian (2009-04-24 15:28:55)

[...] Seth Roberts has a short post about the relationship between the trailer for Costner's Robin Hood and the movie, and it was mirrored on his Amazon employee blog. [...]

### **Scott Adams, Magnesium, and Knee Pain (2008-06-23 06:44)**

The creator of Dilbert [1]blogs:

About two years ago I started taking magnesium supplements because I saw something on the Internet that indicated it might help my knees problems. (My knees always hurt after exercise.) The magnesium either worked, or it was a remarkable coincidence, that after 15 years of knee pain it suddenly went away and has stayed away.

Recently I realized I haven't had any allergy or asthma symptoms for well over a year. For the first time in my life I went through the entire allergy season without so much as a sniffle or a wheeze. And I didn't even use my allergy or asthma meds. On a hunch, I googled "magnesium allergy" and discovered that doctors sometimes use magnesium to treat asthma attacks. And a magnesium deficiency apparently does promote allergies.

One of the comments is curious: "There's nothing wrong sharing what happens to you, Scott."

Thanks to cp.

1. [http://dilbert.com/blog/entry/magnesium\\_and\\_vacatios/](http://dilbert.com/blog/entry/magnesium_and_vacatios/)

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Varangy (2008-06-23 08:53:28)

On a random, yet related note: I suffered a sports career ending knee injury as a younger man. A few years ago, against my doctor's and others' advice, I began doing barbell squats, in a matter of months my knee felt an order of magnitude better and I no longer experienced pain upon strong twisting/lateral type movements. I later learned from some olympic lifters, that squats (done properly) are excellent for rehabbing knees suffering from damage to the ligaments/tendons.

Ben T. (2008-06-23 10:46:38)

That's fascinating. My knees also hurt after exercise and I have mild allergies. I also often have "restless legs" when trying to sleep, which a commenter at Scott's blog reports are ameliorated by taking magnesium supplements. (All these conditions are mild and I haven't been actively looking to fix them.) I'll try magnesium supplements starting tomorrow and report back in a few weeks. It may be just confirmation bias etc. But here's the really fascinating thing. I just checked which foods are high in magnesium and this list has a surprisingly large overlap with my list of favourite foods. Did my tastes adjust in order for my body to get more magnesium? This suggests the following conjecture: To identify which nutrients you might be chronically deficient in, look at which nutrients are present in higher-than-normal amounts in your favourite foods. Does anyone have evidence to support/reject this?

SusanJ (2008-06-25 09:02:15)

Thanks so much for this! Most of my (very longstanding) knee pain has gone away and my knees are much more flexible since I started supplementing with magnesium 5 or 6 months ago. It never occurred to me that it was due to the magnesium since I had started taking it when I made a lot of changes switching from SLD to SLD plus low-carb. Mineral supplements are advised when on low-carb because of the diuretic effect of low-carb. I had assumed the reduction in my knee pain was the result of weight loss together with some positive effect of not consuming grains. It's funny if it's just the magnesium. Maybe someday I'll know for sure.

Aaron Blaisdell (2008-06-25 10:27:31)

When my wife experienced pre-term contractions during her 29th week of pregnancy, the doctor put her on a magnesium sulfate IV drip to stop them.

Stephen M (Ethesis) (2008-06-25 19:02:05)

That is interesting. I'll note that doing squats has helped my knees too.

Mark (2009-01-18 21:54:31)

I have had pain in my medial part of my knee for seven years. Knew exercise would help so I decided to use the elliptical machine since it hurt the least doing that exercise. Every day for four and a half weeks I was on that machine for 30 minutes to an hour everyday. Somewhere along the line the pain went away. I now do swats again with no pain. I can also play basketball without the pain I had before. I did not do any special pills or vitamins just the elliptical machine everyday. No longer do I get out of bed and feel that pain in the knee that I did for so many years especially after exercise. I also did leg stretches before and after which you should be doing anyway.

p. canter (2009-07-04 21:53:54)

Thank you for all the information on how magnesium has helped each of you. I also have alot of pain in my knees one I've had surgery on recently. So my question is how much magnesium does one need? All your information has been so helpful. Looking forward to trying it myself. Especially something natural.

Brenda Nicholson (2009-12-29 13:40:00)

I have torn miniscus, torn tissue behind my right and left knees. The right is the worst. Surgery is scheduled for late January 2010. I want to know how much magnesium do I need to take. What is an elliptical exercise machine? I certainly can not do any squats at this time; I am a person that walked, rides a bike, exercise and roller skates. I can do barely nothing now. Can someone steer me in the right direction? Thank you.

## **The Paradox of Advice (2008-06-23 10:44)**

[1]A long post by Ben Casnocha tells how to give advice. The subject fascinates me because I've noticed what a strong tendency I have to give advice when told of this or that problem – yet I also realize that advice giving is usually obnox-

ious. I think this is why Ben's post is long: It's a difficult problem, like an addiction: The bad consequences are hard to avoid. Why do I have this tendency? No obvious reason. It certainly isn't learned or copied or sustained by reward. Why is it obnoxious? Again, there's no obvious reason. Giving advice has good and bad aspects: trying to be helpful (good) and acting superior and ignorant (bad). Why the bad seems to predominate I have no idea.

This is one reason I think Jane Jacobs's [2]you can only change what you love is usually true: because in your communication with someone you love (or at least respect) there will be enough positive in the whole message to overcome the negative of the advice itself – so that the advice doesn't push the person away. (Another reason I think she's right is that to give good advice you usually need to know a lot about the person you are advising.)

1. <http://feeds.feedburner.com/~r/ItsLikeBensBlog/~3/315907281/if-i-were-youth.html>

2. <http://www.blog.sethroberts.net/2008/06/21/can-you-change-something-if-you-dont-love-it/>

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Tim Lundeen (2008-06-23 12:40:48)

Giving advice confers higher status on the advice giver, and reduces status for the advice taker. This is what makes it so hard to take :- (And pleasant to give.) This is a large part of the job satisfaction of being a doctor/minister – you are acknowledged to be an advice-giver, and earn much status in that role. I think one thing that helps both sides is a strong foundation of mutual respect, so that the acceptance of advice doesn't materially change the status balance; another way to do this is to trade advice, accept advice that you don't (think you) need in order to give advice that (you think) will materially help someone. A knotty problem :-)

seth (2008-06-23 13:01:49)

Yes, giving advice has a lot in common with putting a bumper sticker on your car, as Robin Hanson pointed out: <http://www.overcomingbias.com/2008/06/lo ud-bumpers.html>

Mike Kenny (2008-06-23 19:19:36)

i've heard from a psychologist that you can't really change people, which is interesting, though i'm not sure exactly how to take it. i've also heard it said you can't really change people's minds with an argument which is similar to advice-giving. that seems true to me, since i can't think of a time i really changed anyone's mind with an argument. on the other hand, maybe i am not noticing, since i can think of arguments that have changed my mind, and perhaps it's not obvious my mind was changed by the people who persuaded me, since i don't like to linger on my own errors :)

Tim Lundeen (2008-06-23 22:00:58)

I liked the "strut" update to Robin's post. My dog struts after she has an encounter with a submissive dog, it is really funny to see. All of her 15 pounds of white fluff, strutting down the street.

Darkhorse (2008-06-24 04:21:11)

A lot of people are giving advice. Peter Kollock (Univ. of California, L.A.) has researched motivations for contributing to online communities. <http://narrowmindboat.blogspot.com/2007/07/peter-kollock-economies-of-online.html> He lists as egoistic motivators: "anticipated reciprocity" reputation (bragging rights) sense of efficacy And as altruistic motivators: help someone who has a need attachment to a community Seth, I see your own motivators for the advice you give in the SLD forums as purely altruistic, and I don't sense any "strutting", either. This wikipedia piece on motivators is also interesting [http://en.wikipedia.org/wiki/Virtual\\_community](http://en.wikipedia.org/wiki/Virtual_community)

Ben Hyde (2008-06-24 06:33:52)

"Give a stone before advice." My dad was a fan of this poem on advise "A GARLAND OF PRECEPTS" by Phyllis McGinley But, I'd advise fixing the Jane Jacobs link. There is an ironic tension in the Jacobs quote. In particular, she had little love for urban planners. They didn't love cities, but she yearned to change them.

Varangy (2008-06-24 07:36:18)

Not to intentionally go off-topic, but this article - [http://www.wired.com/science/discoveries/magazine/16-07/pb\\_theory](http://www.wired.com/science/discoveries/magazine/16-07/pb_theory) - touches a lot of the themes that this blog regularly comments on. Would love Seth's take on it.

Aaron Blaisdell (2008-06-24 11:57:09)

In response to Mike Kenny's response, when I do take someone else's advice, it is usually after their argument is over and they are long gone. This way I save face (i.e., status) by appearing not to take their advice, but get the benefits of their potential wisdom. I guess this happens a lot, otherwise advice would never do any good.

Ben Casnocha (2008-06-24 14:39:59)

Thanks for the link, Seth! And I agree that bad advice predominates.

peter (2008-06-25 07:49:39)

my take on giving advice is that our bodies probably reward us in some hormonal/chemical way. For example, chimps in the wild who dominate have higher levels of testosterone. giving advice is, in a manner of speaking, dominating or being in a superior position and probably leads to enhanced and perhaps pleasurable hormonal/chemical releases. dominating results in greater likelihood of survival and it makes sense that we are reward in a many ways, including hormonally/chemically. I recall that a neighbor knocked on my door to give me my key, which i left hanging from my mail box. rather than simply hand them to me and say something like "here you left these in the mail box" he looked excited and exhilarated and recounted the experience in detail (i.e., "i walked up to the mail box a notice" etc...) as if it were a thrilling adventure. relative to his life this was domination and he obviously got a thrill out of pointing out a mistake.

Aaron Blaisdell (2008-06-25 08:21:45)

Here's another piece of evidence that fits with the idea that giving-taking advice raises-lowers the status of the giver-taker, respectively. When my wife and I were first dating, and she knew I was a college professor trained in the behavioral and neural sciences, she would listen to my advice about certain topics. But we are married and with a 2 year old girl. I'm still an expert in the behavioral sciences, but she won't take my advice about how to help train our daughter (as all little kids need lots of constant training!). I that since my wife obviously doesn't want to feel inferior to me, she often won't listen to my advice, no matter how helpful and kindly it is given. I could tell my wife something that I know from the medical community that will help her (e.g., take omega 3 supplements every day, especially while pregnant) but she won't listen to me. But if her prenatal doctor tells her that that is a great idea, she WILL listen to her. No worries about loosing status to the doctor, the doctor is supposed to have more status than the patient. But the wife is not supposed to have more status than the husband (at least not in our relationship). Maybe I should switch tactics and tell her stories instead of giving advice or offering helpful tips (the latter sounds more benign, doesn't it). Something like "I saw a prenatal doctor give a talk on campus and she had a whole discussion about how most pregnant women don't get enough omega 3 fatty acids. This can lead to all kinds of problems for the developing fetus, such as ..." Sure, it's a fictional tale, but maybe she will listen to the ideas in the story to heart. After all, I wasn't offering advice, I was telling a story!

The Paradox of Advice: as good a place as any to begin « Enjoymentland (2008-09-17 23:16:52)

[...] Turns out Seth Roberts has thought about this paradox as well.Â A good quote from Jane Jacobs, writer of "The Death and Life of Great American Cities" that he quotes is: "You can't change something unless you love it." [...]

## Lessons Learned about Book Writing (2008-06-24 14:24)

1. At [1]Writers With Drinks I met a woman who is writing a memoir. Since I had actually published a book, she wondered if I had any advice about finding a publisher. I said don't get your hopes up. Practically no one makes anything resembling a living from writing books. (I meant books like memoirs – what a friend calls real books.) It's a hobby. I asked her if she'd heard this before. No, she said. She said she's around people who are "positive" whereas I was "realistic."

2. My friend Phil Price is a researcher at Lawrence Berkeley Laboratory. A few years ago he wrote a chapter ("Assessing uncertainties in the relationship between inhaled particle concentrations, internal deposition, and health effects") for a handbook-like compendium. It was a big mistake, he said. There were three problems: 1. It was much harder to write than he expected. 2. The quality of the final product was lower than he expected. 3. The audience was tiny. Maybe 11 people would end up reading what he'd written.

1. <http://www.writerswithdrinks.com/>

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Andrew Gelman (2008-06-24 15:57:08)

I don't make a living from writing my books, but I wouldn't call it a hobby. I don't think that, just because something isn't one's main source of income, that it necessarily falls into the "hobby" category.

seth (2008-06-24 21:24:01)

What would you call it? Writing your books I would call a superhobby because they are based on what you do for a living yet writing them is optional and different from what you do for a living. But *superhobby* is a term I invented.

Nathan Myers (2008-06-30 17:00:42)

Many people writing books would bill the time to their marketing budget.

Alex C. (2008-07-05 09:45:19)

This is a very good (and funny) essay about publishing books: <http://philip.greenspun.com/wtr/dead-trees/story> It's a bit long, but I think it's worth reading.

## The Cost of Demonization and How to Avoid It (2008-06-24 15:22)

In response to my post [1]Can You Change Something if You Don't Love It? Patri Friedman wrote:

This seems like a good argument for social freedom and harm reduction rather than criminalization, for things like prostitution, gambling, and drugs. If they are illegal, we tend to demonize them, and the people who do them are people willing to do illegal things, who tend to be sleazier. You get a feedback cycle of sleaziness. And then when there are problems (drugs that are bad for you, STDS among sex workers), they are hard to fix.

If instead you acknowledge that these things are going to happen anyway, make them legal and regulated, when problems come up it will be much easier to find smart, competent people who respect drug users, prostitutes, and Johns, and can provide good suggestions for fixing the problems.

Besides being a great point all by itself, it is eerily similar to something [2]Eduoard Servan-Schrieber told me at lunch when he was a grad student at Berkeley. He'd been a sailor in the French navy when he was about 21. Every day, everyone on the ship had lunch together, the officers at the same table as the privates. This was great, said Eduaord, because when a problem came up it was easy to speak with the officers about it. You weren't scared of them, they weren't mistrustful of you.

I've repeated this story many times. I think there is something basic and biological that makes us trust and work well with people we see regularly and makes us mistrust and work poorly with those we don't see regularly. When you are in the same company or organization with people you don't see regularly, great problems can arise, especially if you have power over them or they have power over you.

More. Elisabeth Pisani – the source of the post to which Friedman responded – wrote me, "I agree 100 % with Patri, not just on principle but with the weight of the evidence of 15 years experience."

1. <http://www.blog.sethroberts.net/2008/06/21/can-you-change-something-if-you-dont-love-it/>
2. [http://fr.wikipedia.org/wiki/%C3%89douard\\_Servan-Schreiber](http://fr.wikipedia.org/wiki/%C3%89douard_Servan-Schreiber)

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### **to other (2008-06-24 21:19)**

I learned a new verb today: to other, meaning to treat someone else as "other," as different. The person I learned it from had used it once before. She had learned it from a graduate student. Sample usage: "They were othering him and I didn't like it." I like to other because there's room for a milder term than demonize.

[1]Definition of othering, which isn't in Merriam-Webster's Online.

1. <http://www.cwrl.utexas.edu/~ulrich/rww03/othering.htm>

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### **Science versus Engineering (2008-06-25 23:09)**

Varangy wonders what I think about [1]this editorial by Chris Anderson, the editor of Wired. Anderson says "faced with massive data, this approach to science – hypothesize, model, test – is becoming obsolete." Anderson confuses statistical models (which are summaries of the data) with scientific ones (which are descriptions of the mechanism that produced the data). As far as the content goes, I'm completely unconvinced. Anderson gives no examples of this approach to science being replaced by something else.

For me, the larger lesson of the editorial is how different science is from engineering. Wired is mainly about engineering. I'm pretty sure Anderson has some grasp of the subject. Yet this editorial, which reads like something a humanities professor would write, shows that his understanding doesn't extend to science. It reminds me why I

didn't want to be a doctor. (Which is like being an engineer.) It seemed to me that a doctor's world is too constrained: You deal with similar problems over and over. I wanted more uncertainty, a bigger canvas. That larger canvas came along when I tried to figure out why I was waking up too early. Rather than being like engineering (applying what we already know), this was true science: I had no idea what the answer was. There was a very wide range of possibilities. Science and engineering are two ends of a dimension of problem-solving. The more you have an idea what the answer will be, the more it is like engineering. The wider the range of possible answers, the more it is like science. Making a living requires a steady income: much more compatible with engineering than science. I like to think my self-experimentation has a kind of wild flavor which is the flavor of "raw" science, whereas the science most people are familiar with is "pasteurized" science – science tamed, made more certain, more ritualistic, so as to make it more compatible with making a living. Sequencing genes, for example, is pasteurized science. Taking an MRI of the brain while subjects do this or that task is pasteurized science. Pasteurized science is full of rituals and overstatements (e.g., "correlation does not equal causation", "the plural of anecdote is not data") that reduce unpleasant uncertainty, just as pasteurization does. Pasteurized science is more confusable with engineering.

There's one way in which Anderson is right about the effects of more data. It has nothing to do with the difference between petabytes and gigabytes (which is what Anderson emphasizes), but it is something that having a lot more data enables: Making pictures. When you can make a picture with your data, it becomes a lot easier to see interesting patterns in it.

[2]Andrew Gelman's take.

More. [3]Derek James, a graduate student at the University of Louisiana at Lafayette, agrees with me.

1. [http://www.wired.com/science/discoveries/magazine/16-07/pb\\_theory](http://www.wired.com/science/discoveries/magazine/16-07/pb_theory)

2. [http://feeds.feedburner.com/~r/StatisticalModelingCausalInferenceAndSocialScience/~3/320200404/the\\_end\\_of\\_theo.html](http://feeds.feedburner.com/~r/StatisticalModelingCausalInferenceAndSocialScience/~3/320200404/the_end_of_theo.html)

3. <http://journalscape.com/derekjames/2008-06-26-09:32/>

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Araglin (2008-06-26 07:55:40)

Seth, You said: "That larger canvas came along when I tried to figure out why I was waking up too early." I know this a bit off topic, but, in dealing with this question, did you discover any possible means by which a person who chronically sleeps late could be made to spontaneously wake *earlier*? Thanks, Araglin

seth (2008-06-26 12:03:14)

to spontaneously wake up earlier get a lot of sunlight early in the morning. Go outside soon after you get up. The shade is fine. Try 2 hours outside.

Araglin (2008-06-26 12:54:42)

I'll definitely try that, although, the fact that I have to work (office job) Monday through Friday would require that I start out only getting the morning light on weekends... Oh: Could it be that staring at a computer monitor at night makes me want to go to sleep later and wake later? Thanks, Araglin

Scot (2008-06-26 14:02:10)

Hmm...I'm thinking that there's uncertainty in engineering or other applied sciences too. Not sure that the uncertainty disappears just because it's an applied science. Just a thought. When I think of engineering I think of a skunk works.

Science and engineering approaches « Entertaining Research (2008-06-27 00:42:23)

[...] Science and engineering approaches Here is another take on the Wired piece of Chris Anderson — this time around, by Seth Roberts: Varangy wonders what I think about this editorial by Chris Anderson, the editor of Wired. Anderson says “faced with massive data, this approach to science — hypothesize, model, test — is becoming obsolete.” Anderson confuses statistical models with scientific ones. As far as the content goes, I’m completely unconvinced. Anderson gives no examples of this approach to science being replaced by something else. [...]

## Shangri-La By Another Name? (2008-06-27 15:57)

There’s a new diet called something like Fat Loss For Idiots or The Idiot-Proof Diet in which you lose weight by constantly changing what you eat. [1]Here’s how the creators put it:

To lose weight your diet menu needs to be SHIFTED every few days –and this is something you’ve never tried before, and that’s why you’ve never been able to change your body when dieting.

Never tried before? When I go to a foreign country that’s close to what happens. And I do lose weight. According to the theory behind the Shangri-La Diet, this should work – because you are constantly eating flavors you haven’t yet associated with calories. Thanks to Tim Lundeen.

1. <http://fatloss4idiots.com/1280index3.html>

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VeganKitten (2008-06-27 16:48:51)

\$55.95 to get the info, from what I can see. Someone’s going to make a lot of money, but they won’t get mine. ”9 pounds every 11 days” indeed!

Andrew Gelman (2008-06-27 17:45:47)

Seth, If you’re going to mock these people, you should also consider mocking the ”2008 Diet of the Year” that you have a Google ad for on your page. I clicked on it just for laffs and it started popping up windows all over my computer! It looks much worse than ”Fat Loss For Idiots.”

## How Art School Reveals Human Nature (2008-06-27 22:43)

Sure, we can learn about human nature by looking at art. [1]I’ve done that. What’s less obvious, at least to me, is how muchÂ can be learned about human nature by observing art students. I got a glimpse of this from talking to a student at [2]California College of the Arts. Three things I learned:

1. Every department looks down on every other department. Or, at least, there is a vast amount of ”looking down on”. One example is that students in the illustration department look down on students in the fashion department. This is puzzling because the two subjects are unrelated (unlike, say, graphic design and illustration, which are closely related). Why does it happen? My informant thought it was because so many people looked down on illustrators that



they were desperate to find a group they themselves could look down on; they chose fashion even though it made no sense.

2. Students in each major have distinct personalities. Photography majors tend to be self-centered and outspoken. In class, they talk more than they need to. Illustration majors are relatively childlike; they are wacky and playful and fun and less serious. In the illustration department, unlike other departments, critiques are always sugar-coated: "This is great, what a nice job you did, you might think about ..." Graphic design majors are "urban" – more sophisticated, more interested in being cutting edge, more concerned about the job market. Fashion majors tend to be flighty.

3. Almost all students at CCA enter with their major already decided. They are intensely focused on their subject – think about it all the time. They have little interest in what can be learned from other disciplines. Somehow focus seems to get in the way of curiosity. You might think that art is about being creative and creativity is helped by curiosity. Somehow this doesn't occur to them and isn't taught.

Shown the above, my informant, wanting to give a more complete picture, added:

I also think that a lot of those students who help to create these perceptions are probably also the ones that feel the need to be labeled. The photography students who create the image of self-assuredness, the ones who talk about themselves and their work all the time, probably feel they need to do it because it's the image of themselves and of photographers that they need to create. Same goes for fashion and illustration and all others. There are probably other students who feel the way that I do and just choose not to get into it and would rather leave those "personas" for someone else to convey.

I think it's specific to art students, and [part of a] desire to be seen as artistic, since most artists i know outside of school don't seem to perpetuate this. i don't want to make it seem as if art students are superficial and uninspired. i've met my share of really great people.

More. Russ Roberts, [3]interviewing Diane Coyle: "The culture among the graduate students [in economics at the University of Chicago in the late 1970s], and probably among the faculty, was to really look down on the other social sciences and to see them as a total waste of time."

1. <http://www.blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-directory/>

2. <http://www.cca.edu/>

3. [http://www.econtalk.org/archives/2008/04/coyle\\_on\\_the\\_so.html](http://www.econtalk.org/archives/2008/04/coyle_on_the_so.html)

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Chris (2008-06-28 00:09:43)

Funny, the description of the different majors reminded me of your post of differentiating scientists from engineers. I bet all the artists look at that rift as similarly comical. We all want our cognitive shortcuts. From the time of being a baby, people become successful by copying the successful. If a photo major has idols to emulate with all the profiles/interviews of famous photographers happening these days they may think that being articulate and opinionated is a big part of being a successful photog. Similarly, illustrators in industry can be recluses, more child-like, etc. But above all, everyone in western society wants to be an individual but doesn't want to fall so far from the tree that they're alone. It's better to be a \_\_ \_ major than to be that weird guy.

Mike Kenny (2008-06-28 09:42:07)

hm, do you have thoughts on personality tendencies among students of various degrees at a university along the lines of this post? i'd be very interested in your observations.

seth (2008-06-28 12:47:22)

good question, Mike, but I'm not close enough to a wide range of students to answer it. Most of my contact has been with students from just one major (psychology).

Aaron Blaisdell (2008-06-30 05:52:24)

...and the physical anthropology students look down on the cultural anthropology students (poor archeology students are caught in the middle of that cold war), and the experimental psychologists look down on the clinical psychologists (who think this is ironic), and the UCLA middle campus (biological and social sciences) looks down on the UCLA north campus (humanities and arts), and the south campus (medical school) look down on both middle and north campus. It all reminds me of a funny scene in *Stranger in a Strange Land* where the Martian protagonist (forgot his name) is trying to figure out why humans laugh (an alien concept and emotion to the Martian—pun intended) until he visits the zoo. He is at the monkey (or was it ape?) enclosure and observes the biggest male walk up do and hit the second biggest male, who then proceeds to go on and hit the third biggest male, and so on down the line. All of a sudden the Martian laughs with a sudden insight into human nature and a major source of all of its comedy. I guess this is why the ancient Greeks linked comedy to tragedy so well. By the way, REAL artists – those that ply their craft for a living – tend not to be like the art students described (at least not in my limited interaction with them). I used to hang out on a regular basis with New York fashion designer Byron Lars and many of his friends and colleagues who designed, illustrated, photographed, etc. Each artist I met, no matter what their niche, not only respected the practitioners of the other niches, but actually utilized them in plying their own craft. Whoever things illustration and fashion are different spheres of art has never met a real fashion designer. Illustration is probably what they do most, more than cutting fabric, I can assure you of that! I've observed that many successful artists and scientists do not wear blinders to their own field, but have much broader interests and had more unconventional and highly varied educations and past experiences.

Brian Sherwin (2008-07-17 13:11:55)

Interesting post.

## **The Difference Between Being Fat and Not Fat (2008-06-28 12:28)**

I have never read a better description of the difference between being fat and not fat:

I had a gastric bypass and ate 750-1000 calories of liquid meal replacement a day. I had complications and couldn't swallow food. I lost over a hundred pounds. I regained it over a number of years. Once I lost weight and was normal, my life did change for the better. It's the only reason I had my child. For the first and only time in my life it was easy to have people in my life. People wanted to be around me. I had boyfriends who treated me well for the first and only time in my life. I got married. All this happened very quickly and easily with no effort on my part. Being fat is completely different. I think the way people treat a fat person is similar to being disfigured or in a wheelchair with your legs cut off. In many instances it is better to be dead than to be this fat.

[1]From an anonymous blogger who weighs about 280 pounds. She isn't trying to sell anything, make a journalistic or academic point, appear to be this or that. The post goes on:

My daughter had a fat friend over for a sleep over the other day. It's the second fat friend she's ever had over. The difference between these girls and the thinner girls is striking. The fat girls are obsessed with

food. They are more driven to eat, more interested in food, more hungry than the thinner girls. The thin girls are interested in food far less. It's not that they are better than the fat girls, they are simply less hungry. My daughter first fat friend got up all through the night to raid our refrigerator. This child acted as if she were starving. She ate until she was literally ill and threw up on the sleeping bags. Then later she peed on my daughter. My daughter is fastidious and she was completely revolted. That was the end of the friendship.

I came across this because she is trying the Shangri-La Diet.

1. <http://www.realized-dreams.com/?p=39>

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Dennis Mangan (2008-06-28 18:07:06)

Sad story. The fact remains, however, that the incidence of obesity has risen dramatically over the past generation, which means that in the past people must have had more self-control. Or at least, that's what it means based on this blogger's statements about being "obsessed" with food; she's put on all that weight despite the fact that it makes her feel "disfigured". Why wasn't the previous generation "obsessed"? Put this way it makes it seem that obesity is a moral failing - which it might be.

seth (2008-06-28 18:34:16)

"People must have had more self-control." Must is too strong. That is one possibility. Others are plausible. I believe their set points were lower. It doesn't take any self-control to lose weight if your set point goes down.

spacenookie (2008-06-28 21:35:54)

studies have shown that fat people eat no more and expend no less energy on average than lean people. Taubes' Good Calories, Bad Calories suggests that fat people are effectively starving because nutritional energy is disproportionately consumed by the fat cells (because excess insulin signals fat to store more energy, not release it). Starving people are obviously prone to become obsessed with food. Note that the poster doesn't say the lean girls "had more self control", they just were not interested in more food. Taubes effectively blames the obesity "epidemic" on the low fat, insulinogenic diet recommended by the govt and most doctors since about 1980.

Tom (2008-06-28 23:20:56)

Hard to see how one could get 'poor self-control' from that story; it's exactly what the writer is taking pains to refute. And yes, Taubes takes apart the "poor self control" theory quite convincingly.

Kevin C (2008-06-29 15:19:28)

I agree Seth. This idea that people are fat because they have no will power is very unhelpful. None of us have much will power when our body is telling us to do something. It doesn't matter if your body is screaming out for coffee or alcohol or potato chips or pad thai. If your body wants it, you are going to eat it. What's nice about SLD is that it circumvents this. I got a friend of mine to try SLD and the change amazed her. Even on the first day, her desire to eat her normal sweet treats was almost completely gone. It was easy for her to resist, because her body had little interest in it.

Dennis Mangan (2008-06-29 17:27:34)

You guys are pretty funny, you know? The two girls can't stay away from the frig, and you see no lack of self-control? But wait, the bible of Taubes, 3:23 explains all: it's low-fat diets that are to blame! "Studies" have shown that the fat eat no more and exercise no less than the slender? Who am I to believe, "studies" or my lying eyes? All around me, I see people eating

constantly, between meals, between snacks even, raiding vending machines, turning themselves into blubber. And guess what, they're not eating low-fat diets either, which is heresy against that Taubes bible. They're cramming themselves full of every french fry, Oreo, and cheese curl in sight. As for the self-control issue, everyone has a hunger drive, just as they do a sex drive. I suppose y'all want to excuse rapists and adulterers; "I just couldn't help myself! My drive is too strong!" Reminds me of the criminals described by Theodore Dalrymple, who say things like "The knife just went in", absolving themselves of all responsibility. That's how it is everywhere these days.

Mel (2008-06-29 18:35:18)

Dennis, I'm guessing that you have no problem with your own body weight but that you have family or friends that do. There is something bad that happens to some people when they eat foods full of carbohydrates (as recommended by "everybody") for too long. That feeding style causes lots of insulin to be excreted into the blood stream and as the Taubes' bible says, it makes the stored fat invisible to the body's food supply system. In fact it makes every cell in your body scream to be fed. It is impossible to resist eating constantly when all your cells are starving. I think the Shangri-La diet works wonders in two ways. It supplies lots of quality fat to feed the starving cells and it 'tricks' the weight regulation center to let go of excess fat. I've been there, I've wondered for years how I could be hungry not long after eating. When I quit eating carbs (mostly), and upped my fat intake, and crazy spiced my meals, the feeling of satiety after and between meals has been heaven. Even if I didn't lose weight, I'd never go back to being fat+starving. I'm glad you're metabolism is not broke. Please give others a break, it's not will power! It's the wrong information!

Tom (2008-06-29 20:16:24)

These comments might as well be in response to Seth's post "Can You Change Something If You Don't Love It?" Love the victim and anything's possible. (And in my mind, the anonymous blog writer seems to love the overweight girl who can't stop eating, even if it forces her into exile after she can't help but urinate on the writer's own daughter.) But conflate the obese with rapists and adulterers and the conversation's over. One is just shouting in one's private echo chamber.

Dennis Mangan (2008-06-29 20:20:15)

Yes, clearly the hunger and sex drives have absolutely nothing in common. Thanks for straightening me out.

spacenookie (2008-06-29 21:57:34)

Dennis, oreos, cheese curls, and french fries are 60-70 % calories from carbs. These are not low-carb items. Sodas, gatorade etc are usually 100 % calories from carbs. If lack of self-control causes people to become fat, and lack of self-control causes people to become rapists (because they don't control their hunger/sex drives), then lack of self control would cause people to become fat rapists. I don't think so.

Anonymous (2008-06-30 08:54:46)

I wonder how many people who aren't overweight or obese refrain from eating when they're hungry? How many mind their diets carefully, such as severely limiting carbohydrates or sugar, when they've never been heavy? Or do people who have never been overweight or obese eat when they're hungry, eat to satisfaction, then stop? Do they eat basically what they like and want? I have never been not overweight or not obese without severely restricting my food with constant discomfort, vigilance and considerable effort. I don't think I lack self control more than average size people. I exercise considerable willpower in other areas of my life. For example, I stopped smoking over twenty years ago. I remember the effort was negligible in comparison to what it took to diet or even to maintain a low weight. I complete (write) entire books and I've noticed average size acquaintances have been unable to exercise the discipline to complete a book even when they strongly desire to do so. Do normal weight people really exercise constant self-control? I wonder.

Stephen M (Ethesis) (2008-06-30 10:55:28)

Seth, this was a great post. The link wouldn't work for me, I wanted to read more, and I hope SLD works for her. But you couldn't have asked for more, down to the comments by people who exhibit classic blindness to reality. Thanks again for your efforts to share SLD.

seth (2008-06-30 12:25:27)

Thanks, Stephen. The whole blog has become unavailable, I don't know why. There are plenty of other good posts. It turns out the blogger is a well-known novelist. (I have no idea who.) Her books are so popular that she hears other people talking about them while she's at the beauty parlor. Anonymous, I agree completely.

seth (2008-06-30 17:08:58)

The link is now working again.

Aldarris (2008-06-30 17:46:38)

It is indeed true that low weight people rarely exercise more self control than fat people, but this is beside the point. We all have passions of varying degrees, and if a passion controls a person, if it makes one eat until one is bloated or go violent on a regular basis, one shouldn't look for excuses "hey, they do not have will power, they are just lucky", but exercise self-control to do something that comes natural to other people – to control the passion. Life is not fair, is it?

Tom (2008-06-30 22:48:33)

Aldarris, I'm sure you think you're making a point, but you have not succeeded. I can't for the life of me figure out what you're trying to say.

Kevin C (2008-07-01 05:47:21)

No one is making excuses. We want explanations, and methods of weight loss that actually work. Telling people to simply control their impulses when their impulses are that out of control doesn't work. The key is to find ways to turn off the impulses to overeat, not to scold people because they are obsessed with food. When one changes the types of foods one eats (i.e. a low carb, ketogenic diet), or one uses a method like SLD which lowers your set point, the impulses to overeat subside. It makes it much easier to lose weight. When someone is so obsessed with food that they are waking up in the middle of the night to gorge themselves and eating until they are ill, it's only rational to look for other explanations besides "will power". There is something else going on here.

Dennis Mangan (2008-07-01 07:27:27)

Aldarris's point is perfectly clear: psychological impulses and drives vary tremendously between persons, and we don't excuse those who let their impulses get away from them by saying that they couldn't help themselves. Or rather, we do excuse them now, which was partly my original point. In the old days, the obese were much rarer and more stigmatized socially, and I submit that there's a connection, just like there's a connection between the increase in illegitimate births and lack of stigma. As for people "gorging themselves until they are ill", it's not hard to imagine that that little girl's parents are exercising any discipline at all over what she eats. So aside from a bad diet or even a psychological disorder, lack of standards and discipline is part of the problem. At my workplace, lots of people eat all day at their desks, and then wonder why they're overweight. That's a lack of discipline. You're not supposed to eat all day long.

seth (2008-07-01 09:53:38)

Dennis, I guess you mean "are **not** exercising any discipline." I read it the opposite: The little girl's parents are exercising so much discipline that when freed from that discipline she goes too far. In terms of her setpoint, she really is starving.

Kristin (2008-07-05 23:00:52)

Dennis and Seth- This has been an enlightening experience, reading these opinions. I am obese, but not ashamed, as if I have some horrible disfigurement, simply because I will not allow it. To some degree, I was that little girl in the blog. I grew up thin, and I believe my natural set point is lower. I am losing weight now by not eating meat and limiting my portion sizes. My mother kept a close eye on my food intake, and commented on anything I ate that she thought was inappropriate. We weren't allowed sugared anything. When I went to other children's homes, I tended to over-eat, because it was available. I didn't do it to a large degree, like the little girl did, because I was afraid my mom would find out. Seth, I agree with your assessment. The little girl probably ate like that because it was some of the only freedom she ever got. Dennis, I know you feel attacked. What you see in

your environment is the truth to you...people over eat and then wonder why they are fat. Well duh!! I would feel the same way you do! What you are not looking at however, is WHY they do it...it is too easy to say that it is because they don't have will power. (Kind of a B.F. Skinner approach- the behaviorist approach to psychology) The reasons why people over eat, and are overweight are as complicated and varied as the people themselves. Trying to find a simple answer is understandable, and to some degree, true. But it's not ALL of the truth. Lack of willpower is not all of why someone eats too much, just the outer behavior that you see. For example, after having such a restricted eating environment at home, when I left for college, I didn't binge drink or binge sleep around (I was thin and very pretty, I could have) I ate. It was like all at once there wasn't a nag at my shoulder all the time, so I could eat what I wanted. My decision making had been returned to me! It was my own form of rebellion. Since then, I have realized that my reactions to my emotional state, or stimuli for outside myself are things that can provoke the need to eat. YES, I fight it. YES I am aware of what I eat and am constantly trying to control it and make the right decisions. But until you have been in an obese person's shoes, regardless of what you see everyday, please don't judge us. Obviously, you are not struggling with your weight, and never have. Otherwise, you would have more understanding and compassion. Thank you though, for being brave and saying what you think. It helps others to be able to voice their opinions and sort out how they feel. You helped me!

accorn (2009-01-16 06:51:33)

I think there is partial truth to what Dennis was saying, but it's not the whole picture. I went to China for two weeks, and eat a vegetarian diet. As such I didn't touch the "westernized" meat foods offered over there and eat much like the average Chinese person does. (plain rice with cabbage and other fairly plain vegetables and light sauces.) What was really interesting to me only a few days into this diet, was that my body was not hungry at all for large amounts of time until right up to the moment I was about to eat (going to restaurant etc). Once I arrived at the place we would have lunch, I would be famished and eat - and then be good again for hours. Whereas in the USA I always feel hungry, and always driven to snack. It made me aware of how powerful our culture is on our health in general. I think it is largely that in our need to keep a fast lifestyle going, we've given power to corporations to make our foods, and they have produced foods that are chemically designed to make cravings. In our culture everyone is eating this food - and everyone is wondering "why am I so fat" when everyone else is eating this - but it's only when you go to a completely different culture will you see that in fact everyone doesn't eat like we eat. Anyways I'm not saying that we are not responsible for choosing what we eat like Dennis asserts - but at the same time you can't deny the forces that have encouraged our problems.

## **The Ketogenic Diet (continued) (2008-06-30 22:22)**

Thanks to [1]Honest Medicine, I found some interesting videos about the ketogenic diet. The first two are from Date-line NBC: [2]Part 1 and [3]Part 2. In Part 1, Dr. Donald Shields, head of pediatric neurology at the UCLA Medical Center, says, in answer to a question about why he didn't recommend the ketogenic diet to the Abramsons, who discovered it for themselves:

Because I don't think we had exhausted all the medical approaches [to treating their son's epilepsy] yet. There were actually still other medications that we hadn't tried yet.

The last is [4]a great talk (9 minutes) by Dr. Deborah Snyder. "To say the ketogenic diet has touched my heart would be a great understatement," said Dr. Snyder.

[5]More videos from [6]The Charlie Foundation. [7]The Ketogenic Diet and Evidence Snobs.

1. <http://www.honestmedicine.com/>

2. <http://www.youtube.com/watch?v=STPOEFfQdjw>

3. <http://www.youtube.com/watch?v=VdP9JyYgasA>

4. <http://www.youtube.com/watch?v=XS52D9YopBc&feature=related>
5. <http://www.youtube.com/user/charliefoundation>
6. <http://www.charliefoundation.org/>
7. <http://www.blog.sethroberts.net/2008/06/15/the-ketogenic-diet-and-evidence-snobs/>

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Tom (2008-06-30 23:08:12)

Carbs are disastrous. Unfortunately for us, they are also incredibly addictive: <http://drbganimalpharm.blogspot.com/2008-05/wheat-would-you-give-your-kids-crack.html>

Dennis Mangan (2008-07-01 18:38:01)

"Carbs are disastrous." Yeah, broccoli and apples and brown rice are just killing us. Watch out for figs and beans too.

Varangy (2008-07-01 21:23:20)

@Dennis Mangan They may well be. <http://www.plantpoisonsandrottenstuff.info/content/toxins.aspx>

... Though there are many toxins and pharmacological chemicals in nature, the following chemicals are found in foods we eat and can cause adverse effects in the wrong individual: Lectins (beans, pulses, grains, nuts, nightshades) Cyanogens, cyanogenic glycosides, and amygdalin (seeds of many fruits and nuts, rose family, particularly amygdaloideae - cherry, almond, peach) Coumarins (tonka bean, woodruff, bison grass, clover) Goiterogens (soya, cabbage family) Alkaloids and glycoalkaloids (diverse sources, caffeine, theobromine, solanine, chaconine, nicotine) Oxalates and oxalic acids (vegetables particularly leafy green, sorrel, spinach, rhubarb) Protease inhibitors (beans)

Aaron Blaisdell (2008-07-02 07:50:15)

So how did our hunter-gatherer ancestors survive? Humans are one of many generalist forager species on the planet (pigs and rats are also generalist foragers). Generalist foragers must learn what to eat from the availability in their environment. Such species typically live in much broader ranges, both in terms of geography and in terms of habitat type. I doubt our HG ancestors sat around the camp fire at night discussing which categories of food were associated with thyroid problems later in life. The statistical associations presented in studies that keep appearing in this and related blogs are weak at best and contentious at worst. Maybe the answer is that, while certain natural foods (plant parts in particular) may have chemicals associated with epidemiologically detectable adverse effects, these effects are too weak to select for a natural mechanism to avoid such foods (e.g., taste detectors). While I take much of what I read in Taube's GCBC to heart, I am not going to give up soy milk (I don't drink that much anyway), dairy (great source of protein, fat, calcium, and Vitamin D), fruits, nuts, or vegetables. I WILL avoid overly processed foods and refined carbohydrates because these things have been so altered that they don't even resemble the thing plucked off of the tree or sheared off the stock. And the scientific and epidemiological evidence for their dietary malfeasance is much stronger. I'm not saying certain people shouldn't avoid certain foods that they know they have allergies to. That makes obvious sense. But to worry about each fruit, vegetable, whole grain, and nut or seed that goes into my mouth just goes too far.

Varangy (2008-07-02 10:53:28)

*Maybe the answer is that, while certain natural foods (plant parts in particular) may have chemicals associated with epidemiologically detectable adverse effects, these effects are too weak to select for a natural mechanism to avoid such foods (e.g., taste detectors).* You are missing one piece of the puzzle. What we know today as fruit and vegetables did not exist in our ancestors' world. Today's fruits and vegetables are distant domesticated cousins — that is, we ate fewer plants than today — of wild plants for which we most certainly developed natural mechanisms such as morning sickness (see Margie Profet) which might be an evolutionary response acting to protect the growing fetus from 'natural' teratogens (toxins that cause birth defects) and abortifacients (toxins that induce miscarriage) found in edible plants. Also, ever try to eat a very unripe apple — you will get sick to your stomach as the apple tree doesn't want its apples to be eaten before its seeds are ready for dispersal — and your body is

clearly reacting to the plant toxins found therein. I don't think we can reject the hypothesis that plant foods may not be harmful.

seth (2008-07-02 10:59:28)

You mean, "plant foods may be harmful"?

Aaron Blaisdell (2008-07-03 06:19:15)

Thanks for your comment Varangy. What you say suggests the hypothesis that there should be a strong correlation between the degree to which modern fruits and vegetables (and tubers, legumes, grains, etc.) have been altered through domestication and with how toxic to the human body they may be. Primates (including Chimps) living in natural conditions eat a lot of plant materials that we also still eat, such as figs. It would be a very interesting analysis (hint, hint, somebody reading this blog).

Dennis Mangan (2008-07-03 07:46:46)

Some plant foods are obviously toxic enough to be considered inedible. As for the ones we do eat, they are indeed loaded with toxins, most of which are identical to the "phytochemicals" and antioxidants that make fruits and vegetables health-promoting, and which is why five or more daily servings are recommended. If anything, I would suspect that domesticated plants would have fewer of these toxins than their wild cousins, precisely because we can care for the former, but the latter are on their own.

Dennis Mangan (2008-07-03 10:15:14)

"New study shows how broccoli helps reduce cancer risk" The study shows that those who ate cruciferous vegetables regularly had changes in gene expression that lower cancer risk. If one wants to consider them toxic, go ahead. Also, I believe that broccoli has been greatly modified by man. <http://www.physorg.com/news134232276.html>

Howard (2008-07-04 08:36:25)

Take eggplant. It used to be white and about the size and shape of an egg. Now it is large, black and squash shaped. Or lima beans. They have 1 % of the cyanide they used to have and produce four times as many beans. Lots of modification going on. Much of it causing health problems. Corn drove out the prior food which had a lot more protein in it (and also did not taste as good).

Tom (2008-07-04 23:26:24)

"New study shows how broccoli helps reduce cancer risk" Rather bizarre study, and certainly a headline that isn't supported by the data. The correct headline would be something closer to, "Certain genetic markers were more likely to change when subjects ate a pound of broccoli a week, relative to eating a pound of peas a week."

Miley-Cyrus-Fan (2008-08-01 10:22:01)

hmm.. thank you very much. usefull information

Marians (2008-08-03 10:37:43)

Yay! Interesting...

Jesse dziedzic (2011-10-20 07:26:30)

Some instructional piece of writing!!!

**SLD Mania (2008-06-30 23:17)**

... [1]continues:

The only person I've told about SLD is my wife, and she specifically told me not to tell her family about



SLD.

1. <http://boards.sethroberts.net/index.php?topic=6434.msg70575#msg70575>

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## 3.7 July

### Is Childhood Obesity Due to Not Enough Exercise? (2008-07-01 21:54)

As any reader of The Shangri-La Diet knows, I attribute the obesity epidemic to ditto foods – foods that taste exactly the same each time, such as factory food and fast food. We eat a lot more of these foods today than 50 years ago or even 20 years ago.

An alternative explanation of the obesity epidemic that many people believe is too little exercise. People who deal with childhood obesity, in particular, often say the problem is too much TV, too little playground.

If kids are fat due to lack of exercise, more exercise should be a good solution. [1]A new study shows it isn't. It turns out that giving kids more P.E. doesn't cause weight loss:

In studies involving nearly 10,000 children, primarily in elementary schools, none demonstrated a reduction in BMI with those who were assigned to the most phys-ed time, compared to those who didn't have as much.

Via [2]Calorie Lab.

1. <http://www.canada.com/montrealgazette/news/story.html?id=8c57f212-0450-4ba5-bc6a-0505800603fa>

2. <http://calorielab.com/news/2008/06/26/nibbles-more-gym-classes-dont-help-kids-acomplia-okd-in-uk-and-unlocking-the-chocolate-genome/>

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Nathan Myers (2008-07-01 23:57:03)

I find this result entirely unpersuasive. My recollection of P.E. classes is that they mostly amounted to standing around waiting, with a total of less than ten minutes of movement in any given class period. Such a signal is completely swamped by how far a kid has to walk to the bus stop, never mind whether they ride their bike after school.

Kevin C (2008-07-02 08:50:59)

Well, it seems obvious that the students did get more activity since the ones who had more physical activity had "improvements to bone mineral density, aerobic capacity, reduced blood pressure and increased flexibility." It would probably be best to look at the details of the actual study to see just how much more activity the students got before dismissing it based on your memory of phys ed classes.

Dr. Patrick Havey (2008-07-02 14:18:45)

The obesity pandemic is certainly out of hand and children today are being brought into a world of processed foods with little nutrition. With the digital age in full force, and less 'labor' being performed, the calorie expenditure has declined tremendously. It's easy to get more calories into the diet, and easier to expend few calories, and that adds up to trouble for the health of our country now and for the next generation. We may start seeing heart disease and heart attacks in teenagers very soon. It's not unthinkable that we may be making ourselves extinct considering the course the world is on. It takes moving back to nature - fruits, vegetables, hard work. Science may never be able to duplicate what nature perfected long ago.

Tom (2008-07-03 06:15:33)

The Medifast bars you're pushing - what trees do they grow on?

Mark (2008-07-03 11:27:24)

I think that there are many factors that contribute to it, and changing just one or two at a time is not enough to reach a tipping point to reverse it.

SusanJ (2008-07-04 14:39:05)

I believe there is good epidemiological evidence to show that the rather sudden rise of childhood obesity in the US coincided with the recommendations to lower fat consumption and eat more carbs. IIRC this is documented in Taubes' "Good Calories; Bad Calories." The reason, as Taubes explains in much more detail, is that the body can only store fat in the presence of insulin and carbs cause a rise in insulin. This evidence doesn't negate the possibility that the "ditto foods" setpoint theory could also account for at least part of the rise. High-calorie, high carb foods are especially addictive as well as fattening since the "sugar rush" from the carbs coupled with the high calories increases their addictive power.

Cure of Ars (2008-07-07 09:46:44)

BMI is a very poor measure. It does not take into account muscle gained through exercise. It lists bodybuilders with 6 % body fat as obese and fat people with little muscle as normal. Heavy kids running around in P.E. are going to gain muscle just due to the weight that they are not used to moving around. I know for me that when I exercise that it makes me eat more. This study does not show that exercise does not work; it just shows that it is not sufficient, at least at the intensity level of a P.E. class. Diet is probably the more important factor.

beowulf (2008-07-13 10:17:50)

A daily PE requirement (as Florida recently adopted) is a good idea if only for the benefits to mental health (see John Ratey's new book "Spark"). This study reminds me of two from the 90's that Gina Kolata mentioned in Rethinking Thin- and in a 2006 NY Times article she wrote (quoted below). Kolata makes the point that since the current worldview (fad, frame, paradigm, whatever you want to call it) is that modifying children's diet and exercise schedule is the best way to reduce childhood obesity, no one wants to hear about evidence that it doesn't make a difference in terms of weight loss. A fine example of cognitive dissonance for your Psych students, Seth. :o) "In the 1990's, the National Institutes of Health sponsored two large, rigorous studies asking whether weight gain in children could be prevented by doing everything that obesity fighters say should be done in schools - greatly expand physical education, make cafeteria meals more nutritious and less fattening, teach students about proper nutrition and the need to exercise, and involve the parents. One study, an eight-year, \$20 million project sponsored by the National Heart, Lung and Blood Institute, followed 1,704 third graders in 41 elementary schools in the Southwest, where students were mostly Native Americans, a group that is at high risk for obesity. The schools were randomly divided into two groups, one subject to intensive intervention, the other left alone. Researchers determined, beginning at grade five, if the children in the intervention schools were thinner than those in the schools that served as a control group. They were not. The students could, however, recite chapter and verse on the importance of activity and proper nutrition. They also ate less fat, going from 34 percent to 27 percent fat in their total diet. Alas, said the study's principal investigator, Benjamin Caballero, director of the Center for Human Nutrition at the Johns Hopkins Bloomberg School of Public Health, "it was not enough to change body weight"... The paper appeared in The American Journal of Clinical Nutrition in 2003 to no acclaim, Dr. Caballero said. No press release, no media coverage, no invitations to speak about the results at scientific meetings. On the journal's

Web page, a search of articles that refer to the study comes up empty. It has not been cited anywhere. The second study, of 5,106 children in 96 schools in California, Louisiana, Minnesota and Texas, had a similar design and the same results: all that help made no difference in the children's weights." [http://www.nytimes.com/2006/02/12/weekinreview/12kolata.html?\\_r=1&oref=slogin](http://www.nytimes.com/2006/02/12/weekinreview/12kolata.html?_r=1&oref=slogin)

seth (2008-07-13 11:05:50)  
great comment, thanks!

VesnaVK (2008-08-03 08:53:26)

That's the sort of valuable information in Rethinking Thin that makes me so very disappointed in Kolata's shallow, misguided take on Taubes in her NY Times book review, and her response to Taubes's response to it.

### **SLD on TV (2008-07-03 16:58)**

This coming Wednesday (July 9), [1]Stephen Marsh and I will be on [2]The Morning Show with Mike and Juliet to talk about the Shangri-La Diet. (In the Bay Area, this show starts at 9 am on the FOX affiliate. It lasts one hour.) When Stephen asked his boss for time off,Â she said, "But you've always been thin." Music to my ears.

1. <http://www.blog.sethroberts.net/2006/12/12/stephen-marsh-on-the-shangri-la-diet/>
2. <http://www.mandjshow.com/>

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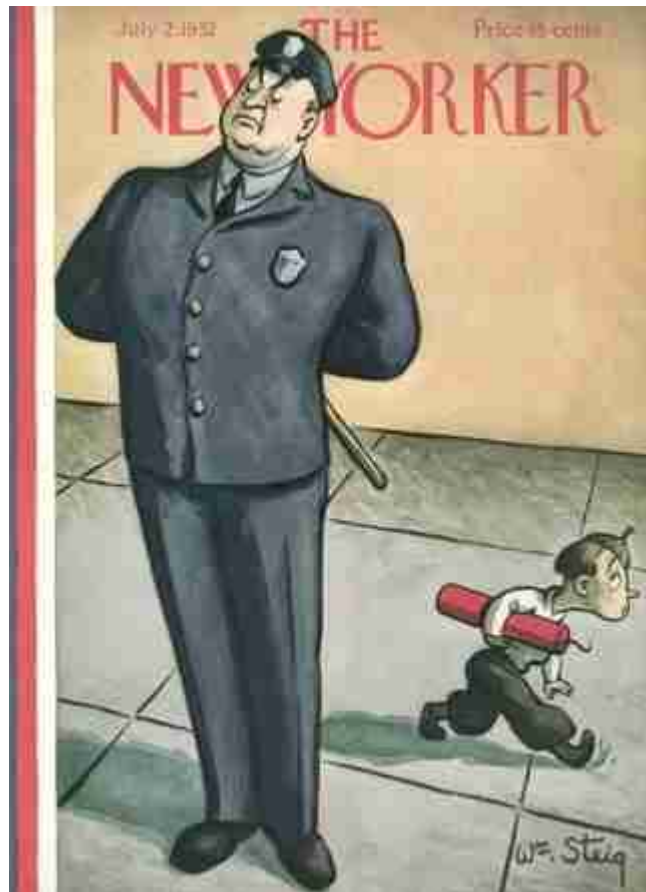
buxi (2008-07-04 11:46:42)

Hi! I would like to see that, but i live in Ireland.Is there any chance to put the video on the internet so i could possible watch it latter.

seth (2008-07-04 15:00:43)  
Depends how embarrassed I am!

buxi (2008-07-05 13:03:27)  
lol, you are going to be ok!

## My Theory of Human Evolution (Fourth of July) (2008-07-04 10:21)



Why do holidays exist? For the same reason as festivals, ceremonies, and souvenirs: To increase demand for hard-to-make stuff. This helps artisans at the cutting edge make a living. They are the innovators. Helping them advances technology. Our celebration of Independence Day, for example, creates demand for fireworks, firecrackers, and American flags.

[1]The case of Christmas.

1. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>

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Seth's blog » Blog Archive » My Theory of Human Evolution (directory) (2008-07-04 10:23:40)

[...] Fourth of July (holidays increase demand for finely-made stuff) [...]

mike kenny (2008-07-04 12:27:24)

hm, costume manufacturers would certainly be up a creek if they didn't have halloween, and people talk about hallmark holidays created to sell cards, so that makes intuitive sense. i guess another idea that leaps to mind is that holidays are a time when people are more likely to be focusing on a certain seemingly culturally valuable narratives or sets of ideas. i'm reminded of how muslims have to pray five times a day and have ramadan once a lunar year presumably effectively reminding them of their muslim values. with the fourth of july there's a nice overlap of the commercial ends of holiday's and the end of reminding

people of american values, given american free-market friendliness. :)

Andrew Gelman (2008-07-05 18:12:28)

I love the American flag but I wouldn't call it "hard-to-make stuff" or a product of "artisans at the cutting edge"! I mean, maybe in the Betsy Ross's time, but now???

seth (2008-07-05 18:47:06)

True, not hard to make any more.

### **SLD: "A Lazy Person's Diet" (2008-07-04 23:37)**

I wish I could embed YouTube videos here but it messes up the layout. Especially I would like to embed [1]this charming video from Kevin Mullaney, whom you may remember from [2]an earlier video about the Shangri-La Diet. In the newer video, he calls SLD "a lazy person's diet". I like that!

[3]Kevin's ticker indicates he has lost about 60 pounds. The last 10 were from SLD plus a low-carb diet.

Thanks to [4]Buxi.

1. <http://www.youtube.com/watch?v=BpUL9Io97u8>

2. <http://www.youtube.com/watch?v=CjLU97F0DfE>

3. <http://boards.sethroberts.net/index.php?topic=6427.msg70574#msg70574>

4. <http://sldbuxi.blogspot.com/>

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Graham English (2008-07-05 07:21:29)

You can change the height and width of youtube videos so they fit your layout. It's pretty easy to find in the embed code. If it's 425x344, change it to 375x303 and it's sure to fit. SLD rules! :)

seth (2008-07-05 07:47:00)

Thanks, Graham. I tried your suggestion but unfortunately it didn't work. Curiously it used to be possible to embed YouTube videos.

buxi (2008-07-05 13:20:33)

yes i remember that sentence too,i identify completely with that,lol. I left a tutorial on my blog to shrink youtube videos if you like.

buxi (2008-07-05 13:24:20)

And thanks for mentioning me :)

### **Short Story of the Year (2008-07-06 15:07)**

"[1]The Headstrong Historian" by [2]Chimamanda Adiche is the best short story I have read in The New Yorker in years, and in the book I am writing now – on self-experimentation – I will quote from it:

How she had puzzled over words like “wallpaper” and “dandelions” in her textbooks, unable to picture them.

No wonder the author won the Orange Prize last year for her novel [3]Half of a Yellow Sun.

[4]An essay by Adichie about being called “sister” contains the following:

The word “racist” should be banned. It is like a sweater wrung completely out of shape; it has lost its usefulness. It makes honest debate impossible, whether about small realities such as little boys who won’t say hello to black babysitters or large realities such as who is more likely to get the death penalty.

In college I wrote an essay saying essentially the same thing about the word scientific – that it was too vague and pompous to be helpful.

[5]A Chimamanda Adiche website.

1. [http://www.newyorker.com/fiction/features/2008/06/23/080623fi\\_fiction\\_adichie?currentPage=all](http://www.newyorker.com/fiction/features/2008/06/23/080623fi_fiction_adichie?currentPage=all)
2. [http://en.wikipedia.org/wiki/Chimamanda\\_Ngozi\\_Adichie](http://en.wikipedia.org/wiki/Chimamanda_Ngozi_Adichie)
3. <http://www.halfofayellowsun.com/>
4. <http://www.washingtonpost.com/wp-dyn/content/article/2008/06/06/AR2008060603141.html>
5. <http://www.l3.ulg.ac.be/adichie/>

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Tim Lundeen (2008-07-07 08:28:57)

Wonderful and moving, thanks for linking to it.

Seth’s blog » Blog Archive » Who I’d Like to Meet (2008-07-15 05:56:32)

[...] Short Story of the Year [...]

### **Curious Coincidence (China Department) (2008-07-07 20:27)**

Here is the new 10 yuan note (from [1]Alex Tabarrok):



Here is the man standing in front of a tank during the Tiananmen Square protests:



1. <http://www.marginalrevolution.com/marginalrevolution/2008/07/evidence-of-abs.html>

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Andrew S. (2008-07-08 00:02:28)

I don't know why they switched away from this logo: <http://www.flickr.com/photos/maoman/34279163/>

**Chocolate is Good For You** (2008-07-09 13:21)

I put cocoa powder in my black tea. I like the complexity it adds and believe it's good for you. More evidence of its health benefits has [1]just been published:

Design: Randomized, placebo-controlled, single-blind crossover trial of 45 healthy adults [mean age: 53 y; mean body mass index (in kg/m<sup>2</sup>): 30]. In phase 1, subjects were randomly assigned to consume a solid dark chocolate bar (containing 22 g cocoa powder) or a cocoa-free placebo bar (containing 0 g cocoa powder). In phase 2, subjects were randomly assigned to consume sugar-free cocoa (containing 22 g cocoa powder), sugared cocoa (containing 22 g cocoa powder), or a placebo (containing 0 g cocoa powder).

Results: Solid dark chocolate and liquid cocoa ingestion improved endothelial function (measured as flow-mediated dilatation) compared with placebo (dark chocolate:  $4.3 \pm 3.4\%$  compared with  $-1.8 \pm 3.3\%$ ;  $p < 0.001$ ; sugar-free and sugared cocoa:  $5.7 \pm 2.6\%$  and  $2.0 \pm 1.8\%$  compared with  $-1.5 \pm 2.8\%$ ;  $p < 0.001$ ). Blood pressure decreased after the ingestion of dark chocolate and sugar-free cocoa compared with placebo (dark chocolate: systolic,  $-3.2 \pm 5.8$  mm Hg compared with  $2.7 \pm 6.6$  mm Hg;  $p < 0.001$ ; and diastolic,  $-1.4 \pm 3.9$  mm Hg compared with  $2.7 \pm 6.4$  mm Hg;  $p = 0.01$ ; sugar-free cocoa: systolic,  $-2.1 \pm 7.0$  mm Hg compared with  $3.2 \pm 5.6$  mm Hg;  $p < 0.001$ ; and diastolic:  $-1.2 \pm 8.7$  mm Hg compared with  $2.8 \pm 5.6$  mm Hg;  $p = 0.014$ ). Endothelial function improved significantly more with sugar-free than with regular cocoa ( $5.7 \pm 2.6\%$  compared with  $2.0 \pm 1.8\%$ ;  $p < 0.001$ ).

Conclusions: The acute ingestion of both solid dark chocolate and liquid cocoa improved endothelial function and lowered blood pressure in overweight adults.

22 g cocoa powder = 2.5 tablespoons. If you live near Berkeley, you might want to attend the [2]Charles Chocolates annual open house, which is this Saturday (July 12) at 2 pm. They are located in Emeryville at 6259 Hollis.

1. <http://www.ajcn.org/cgi/content/abstract/88/1/58?etoc>

2. <http://www.charleschocolates.com/>

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David Marcus (2008-07-10 00:47:06)

studies suggest that cocoa increases insulin response to a meal and that it is bad for the kidneys

Nansen (2008-07-10 12:55:59)

@David Marcus that's interesting. do you have any references to these studies?

Varangy (2008-07-10 15:54:39)

@David Marcus Presumably sweetened cocoa prompts a sig. insulin response – I would assume that unalderated cocoa does not. <http://www.nutritiondata.com/facts/sweets/5471/2> Thoughts?

G. Coker (2008-07-10 18:31:42)

Cocoa powder is healthy. It lowers the blood pressure. Black tea is also health. I am going to try this combination.

Stephen M (Ethesis) (2008-07-10 19:06:13)

Too bad I've an allergy to chocolate.

Stephen M (Ethesis) (2008-08-21 17:28:15)

BTW, you might find this interesting: [http://www.diet-blog.com/archives/2008/08/19/diet\\_and\\_exercise\\_what\\_the\\_research\\_says.php](http://www.diet-blog.com/archives/2008/08/19/diet_and_exercise_what_the_research_says.php)



## GrownChildCam: New Treatment For Depression? (2008-07-11 10:50)

Jacob Nelik, the friend of a friend, is a businessman/engineer in Los Angeles whose business, [1]ISS Corporation, makes high-tech solutions from off-the-shelf components. Their projects include video camera systems for luxury yachts and retail stores, and technical and marketing support to Israel Aerospace Industries for their wiring design software. His mom, who is 85, lives in Israel in an old-age home. She has short-term memory problems. Jacob wrote me:

I try to visit her 3-4 times a year but at this age the feeling of loneliness and emptiness, compounded with the feeling (and fact) that because of distance, I can't come and visit her whenever she (or I) would like to, brought her to a stage where she felt she didn't have a reason to live ("living for what?" as she said). I felt that with my knowledge, experience and the internet, I can make it easier for her. So I utilized a TV set she already owned to create a live picture of me in my office. Whenever I am in the office, she can see me (live). It is on 24 hours a day just like a picture but with live image. I felt that this would bring her closer to me and she would feel (on a daily basis) that I am there with her.

I utilized video parts that my company uses. I took an old home camcorder and connected it to one of the parts we use for our video projects, called a video server or video encoder. It takes the Analog video/picture that the camcorder provides, digitizes it, compresses it, and converts it to IP (Internet Protocol). There are many like this in the market; the one I used allows me to control many parameters including picture compression algorithm, so I can maintain a large physical picture (to fill up the TV screen on my mom's end without being grainy or fuzzy) with high quality, high frame rate, very short delay (under 2 seconds) and very low bandwidth so I can use the cheapest internet service available. On my mom's end, I used the same type of circuit to perform the reverse function (Taking the IP video stream, decompress it and convert it back to an Analog video to be fed into the TV set to the same connector where a VCR is connected). I am skipping some technical details but the net result is high quality video from end to end (when each end can be located at different place in the world).

What happened?

From the moment the system started operating (about a year ago) I could see tremendous positive effects on my mom. She no longer says "why do I need to live, what for?" I can detect a smile in her face just by listening to her. Just yesterday she told me that she saw me eating ice cream at my desk. She mentioned a new shirt I was wearing. It gives her many new conversational topics. She tells me that she enters the room and starts talking to me as if I am there with her. She became much more relaxed and as a result, even her blood pressure is better controlled. It fills a void in her life. It affected me positively as well, because I see how much better she is.

1. <http://www.issc.net/index.htm>

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Ed (2008-07-11 13:37:07)

Thank you for this great story! This sounds like exactly what I need to deal with the same problem. Where can a mere mortal turn to do the same thing?

s (2008-07-11 16:39:00)  
seeing is believing..

VeganKitten (2008-07-11 18:58:03)  
what a fantastic idea! I wonder if that would help pets too. Highly social, intelligent birds like parrots (left home alone all day) would probably really dig it, and maybe dogs with separation anxiety, too. Cats wouldn't care – as a cat owner I'm pretty sure of this ;) Although I have thought of setting up a cam so I can see what THEY do all day.

seth (2008-07-12 08:55:31)  
"Where can a mere mortal turn to do the same thing?" I suggest you contact Nelik via his business.

peter a blacksberg (2008-07-13 11:10:46)  
I was introduced to picture phones at RIT in 1972. The idea was for deaf students and teachers to use the system. However, it became apparent that seeing each other talk opened a channel of human relationship. I hope this becomes packaged so I can use it with my aging parents. Peter

MT (2008-07-14 10:27:29)  
Great story – this will be a commercial product within the next ten years, to the chagrin of many kids and delight of many parents.

Scott (2008-11-05 21:26:42)  
It's nice that it makes the author's mother and author happy, but is anyone else immediately reminded of Fahrenheit 451?

Laura (2009-07-28 09:45:08)  
Would Jacob be willing to do a step-by-step on this so that some of us with limited resources could consider a DIY project?

seth (2009-07-28 15:00:22)  
Laura, I suggest you ask Jacob that question.

## **Fannie Mae and The Black Swan (2008-07-12 08:14)**

In response to the trouble at Fannie Mae – its stock plunged – we have [1]this:

“There is a sort of a panic going on and that’s not what ought to be,” said Senator Christopher J. Dodd, the Connecticut Democrat who heads the Senate banking committee. “The facts don’t warrant that reaction, in my view.”

Mr. Dodd said that he was persuaded by conversations with Mr. Paulson and Mr. Bernanke that the two companies “are fundamentally sound and strong.”

Nassim Taleb begs to differ – a year ago:

The government-sponsored institution Fanny Mae, when I look at their risks, seems to be sitting on a barrel of dynamite, vulnerable to the slightest hiccup. But not to worry: their large staff of scientists deemed these events “unlikely.”

A footnote on p. 226 of The Black Swan, published April 2007. Asked to comment on the Fannie Mae situation, Taleb replied, “I discuss events before, not after. I despise postdicters.”

1. [http://www.nytimes.com/2008/07/12/business/12fannie.html?\\_r=1&hp&oref=slogin](http://www.nytimes.com/2008/07/12/business/12fannie.html?_r=1&hp&oref=slogin)

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Dennis Mangan (2008-07-12 11:10:34)

Taleb "despises" most everyone and in his opinion most everyone is stupid, except for himself of course. That's one thing that makes him so insufferable and his books so unreadable. In his first book, "Fooled by Randomness", he bragged that he resisted his editor's efforts at correcting his English, which is his third language. It showed on every page.

seth (2008-07-12 11:54:12)

Dennis, if The Black Swan is "so unreadable" why has it been so popular?

Varangy (2008-07-12 13:48:18)

@Dennis Mangan NNT is certainly arrogant — but why take personal offense? (Personally, I enjoy opinionated arrogant persons as what else is there to talk about politics and religion?) As far as his dismissal of the prediction pundits, he certainly includes himself in that lot – that is what The Black Swan is all about. That WE fool ourselves all the time by fitting a narrative to a certain set of data and ultimately being fooled by randomness. I though his book quite readable and enjoyable. In fact, I have re-read multiple times for sheer enjoyment. IMHO he demonstrated a command of the English language better than 95 % of native speakers. BTW how many languages do you speak, and moreover, can you write in? :) @seth Unfortunately, your argumentum ad populum has to be rejected — why is unbearably unreadable PoMo so popular among the college crowd? :)

Dennis Mangan (2008-07-12 14:09:38)

I haven't read "Swan", simply because, even absent the self-congratulation, "Randomness" was low in substantive content. Taleb constantly boasts about his investment prowess, but to my knowledge has never released any performance data, nor has he given any details of his trades, other than that they are deep OTM puts and calls. I could stand the arrogance if he was actually saying something beyond what would fit into a short article. My own fluency or lack thereof in a 2nd language is irrelevant to criticism of Taleb's writing. That's the fallacy in criticism Johnson addressed 250 years ago. ("Sir, I may not know how to make a table. It is not my business to make a table.") That being said, if I ever wrote for publication in Spanish I'd be more than happy to have an editor go over it.

Ali (2008-07-13 13:24:14)

Dennis - Taleb is arrogant and insufferable at times. And you can argue that this is off-putting. Or that if he had used an editor or made an attempt to be more approachable (in language and tone), then he would have had a larger reading audience. But that's hardly an argument against the content of his books, especially with regard to the specific that Seth pointed out. I admit I suffer from this when the content is politics. I find I have to issue a mental override when an insufferable politician or partisan/ideological think-tanker says something smart or reasonable. It's difficult though and I don't always succeed. Seth - It's not clear to me that everyone who bought his books actually read them. Not unlike the Stephen Hawking fare back whenever. Popularity has a way of snowballing especially when the book is declared smart, innovative or some such. It makes for a good coffee table or bookshelf item. It works for fiction too. One of these days I'll finish my copy of Pynchon's Rainbow.

John S. (2008-07-14 03:42:00)

I agree wholeheartedly with Dennis. The substantive content in "Fooled by Randomness" would fit on a matchbook cover, with room left over. Having been fooled once, I decided to skip "The Black Swan". Is it anything more than a rehash of his first book?

seth (2008-07-14 06:00:15)

"Matchbook cover"? Here's something that fits on half a matchbook cover: Faces in the morning push an oscillator that controls mood. Little things can have big implications.

Nansen (2008-07-14 11:09:16)

William James, in Lecture I of Pragmatism (1907) wrote: Whatever universe a professor believes in must at any rate be a universe that lends itself to lengthy discourse. A universe definable in two sentences is something for which the professorial intellect has no use. No faith in anything of that cheap kind!

c. (2008-07-14 14:07:56)

Generally agree with Dennis, here. Don't know that I would call Fooled or Black Swan "unreadable" – they read relatively easily and the writing style (if not the tone) is compelling. They're "unreadable" in the same way that cheez whiz in "inedible." It's technically edible, but lacks nutritional value, tastes bad, and hurts your stomach later. While I agree w/ Seth's point that little things have big implications, I see a real difference between Seth's example, which suggests a concrete relationship or effect, and suggests actions to test or exploit it. Taleb's thesis in Fooled and Black Swan, are, as near as I can tell: "Shit happens. If you can manage to bet on it (or insure against it), you might make money." And while Taleb had two books to spell out the concrete implications of his thesis and test them, he didn't. Instead he spent a lot of words railing against perceived lesser intelligences and making up loopy new buzzwords.

seth (2008-07-15 05:31:02)

Very nice quote, Nansen.

Ian Marion (2008-07-16 23:11:54)

I read both books and enjoyed them. NNT's message is I think, simple. Do not take the "experts" at face value; the best laid plans often fail due to unpredictable outside circumstances. As you pointed out Seth NNT is right when it comes to Fannie Mae, full stop!

Jeff (2008-07-23 18:03:42)

I was just witnessing congressional spending at its finest when it bailed out Fannie Mae and Freddie Mac as well as all those folks who were dumb enough to get in over their heads on mortgages when I realized what was happening. We are now losing our ability to hold ourselves individually accountable for our actions. Collateral damage is the ability to hold others accountable as well. Individual bankruptcy, stomach staples, misbehaved children at restaurants, public profanity, credit card debt and other excesses that are largely caused by the lack of individual self control are entry points for collective controls over everyone's lives. Those of use who are responsible are left exposed to unnecessary controls, laws, and limits on our freedom. Now on to the collateral damage – we can no longer hold companies (unless you are an oil company), government, or groups accountable for their terrible lack of control either. When are we going to hold the US Congress and members of either party responsible for ANYTHING? Last I checked they made the laws that allowed the current banking and real estate crisis possible (besides the dumb individuals). They are also the same group who thinks that those of us who have behaved responsibly should be taxed on some of our hard earned 401K savings – no kidding. How about the companies who thought sourcing everything to China was a great idea for costs, now we have lost numerous jobs – where is the outcry about China's human rights violations. Lastly, where is the press? Where is the in depth analysis of the cost of oil and the real reason for the supply side issues, or the pollution caused by third world countries. I see so much written negative about the United States it amazes me how we gloss over far more significant violators on this planet and give them a free pass. Did you know that China is shutting down factories up wind of Beijing prior to the Olympics so it does not appear too polluted? When are we as Americans going to say enough and hold individuals and the groups to which they belong accountable?

J. Joseph (2009-09-11 04:55:26)

With regard to Fannie Mae, I would say NNT turned out to be a prophet. Whether he is a polite prophet, I am not sure. I found the first hundred pages of Black Swan rather uninspiring, but liked it as I gained momentum. The digressions in his book are heavier than the main story. And he deliberately used polemics, which I don't believe is his true nature, but more of a

marketing ploy. That he was rather concerned about sales is evident from the many references to book sales in *Black Swan*. But in the end we must appreciate him for the counter-intuitive insights presented in his book.

J. Joseph (2009-09-15 03:25:45)

Gaussian distribution talks only about the probability of occurrence of events. Nicholas Nassim Taleb talks about the impact of the occurrence of improbable events. Probability of occurrence and impact of occurrence are different. It seems Taleb inadvertently or deliberately wrote his book as if they are the same.

Fannie Mae (2009-12-31 17:53:08)

Seth's blog » Blog Archive » Fannie Mae and The Black Swan was very interesting while I was researching fannie mae for our next generation game. We wanted to created an up to the minute version of Bailout! The Game.

### **David Lawrence: Down 100 Pounds! (2008-07-13 07:22)**

I met David Lawrence when I appeared on [1]his radio show [2]a year ago. Since then, he has lost more than 100 pounds. He started at 355 (BMI 50); now he's at 246 (BMI 34). Very impressive. How did he do it?

I'm not really doing anything special other than portion control (very easy, just eat a little not everything), and being more active. Occasionally I'll remember to drink a Mexican Coke [he lives in Los Angeles] an hour or so before a big meal, and that cuts it down to size, but I can't really claim that I'm following the SLD regimen. More like, I park in the first spot I come to in the parking lot, and walk to the buildings. Feels great.

There seem to be three changes here: 1. Eating less. 2. More walking. 3. Mexican Coke before some meals. I am skeptical that trying to eat less can have massive long-term effects, so I discount that factor completely. More walking can certainly be potent if pre-walking you are very sedentary, as perhaps David was. I've never heard of anyone losing 100 pounds by walking more, however. And the additional walking doesn't sound like much.

So perhaps the Mexican Coke before big meals is actually doing something. This is fascinating because in general soft drinks are fattening. (They are the perfect ditto food: strong constant flavor, quickly-digested calories.) Yet it is possible that with this particular timing the calories in the Coke don't get associated with the flavor of either the Coke or the following meal. If so they would function as SLD calories and that could indeed cause substantial weight loss (or at least make it much easier to do portion control).

There isn't any precedent in the study of learning for "associative strength" (generated by the calories) to get lost, as it were, but then no one would ever look for such a thing. Normally the flavor of the Coke would hang around in the brain waiting for the calorie signal generated by the sugar but when the meal comes along the flavor signal gets muddled. Perhaps combining the Coke flavor memory with a wide range of other flavor memories creates a jumbled mess that is so inconsistent that the Coke goes from ditto food to the opposite, completely-new-flavor food.

David will appear in two episodes of [3]Heroes in October.

1. <http://www.thedavidlawrenceshow.com/index.html>

2. <http://www.blog.sethroberts.net/2007/07/08/an-sld-marketing-puzzle/>

3. <http://www.nbc.com/Heroes/nexton/>

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buxi (2008-07-13 14:31:53)

Thats really intriguing. I noticed that here in Ireland that the coke tastes really diferent from the coke in Portugal, i really dont like it. Maybe there is a remote possibility that the coke as some kind of unusual flavor? Before i used oil in SLD i used candies with some "flat" flavor, exactly before lunch and it really toke my appetite away. Maybe there are some particular flavors that are "null" besides salt and sugar.

Stephen M (Ethesis) (2008-07-13 20:24:23)

Interesting. My mother got started, lost a fair amount of weight, but didn't need to keep taking the SLD calories once she had lost 20-30 lbs. I think the way he talks about the Mexican coke cutting meals down to size is interesting. You've hit an interesting facet, many people do experience spoilers for meals. Some people can spoil their appetite (I never could, it just ramped it up so I could eat more).

seth (2008-07-13 22:09:23)

Salt and sugar are null because when dissolved in water they have no smell. They are detected only by the tongue, not the nose.

ame (2008-07-13 22:55:10)

Dear Seth, I'm now following this diet since 1 week ago and I've lost 3 kgs, thanks for the inspiration, first I've trie ELOO but it turns unuseful for me, then I tried sugar,...then here I am losing 3 kgs, well, still got 12 kgs to lose, wish me best luck on my program

Douglas Clegg (2008-07-14 15:50:42)

Doesn't Mexican Coke use real cane sugar as opposed to corn syrup that's in U.S. Coke? Are we all going to be terrified if that's the secret to a lot of weight problems: the overabundance of corn syrup in our diets since the 1980s or thereabouts?

Stephen M (Ethesis) (2008-07-14 16:42:45)

About fructose, here is an essay by a group of self- and small-group experimenters. [http://www.figureathlete.com/article/diet\\_and\\_nutrition/the\\_low\\_fructose\\_diet](http://www.figureathlete.com/article/diet_and_nutrition/the_low_fructose_diet)

Douglas Clegg (2008-07-16 14:55:03)

Stephen - Thanks for that link. I will herewith go fairly low fructose (particularly of the corn variety.)

Janet (2008-08-01 22:54:10)

Yes, Mexican Coke does use real cane sugar. There is another brand of soda called Jarritos. It also uses sugar and has interesting flavors, such as tamarind.

## **SLD on TV (postmortem) (2008-07-14 06:08)**

On Wednesday Stephen Marsh and I appeared on The Morning Show with Mike and Juliet to talk about the Shangri-La Diet. The clip, alas, is no longer available. There were two critics: a doctor and a dietician. A friend of mine was amused by the doctor's belief that because someone from Berkeley had criticized the diet it couldn't be any good. [1]Discussion in the SLD forums. Before the segment, the producer said to me, "What happens determines the length. If it's interesting, it will be longer. If it's boring, it will be short. That's just the reality." It was really short. If she hadn't told me that . . . I felt bad for a while but other people convinced me it was okay. I'm pleased by the publicity, of course. Overall, I like the show; I like its focus on everyday issues and problems.

Two other diets were covered in [2]the previous segment: [3]The Flat Tummy Diet and [4]The Warrior Diet. The author of the latter [5]wasn't pleased.

[6]Stephen Marsh answers the critics.

1. <http://boards.sethroberts.net/index.php?topic=6476.0>
2. <http://www.mandjshow.com/videos/%e2%80%9cmj-investigates%e2%80%9d-new-dieting-trends/>
3. <http://www.flatbellydiet.prevention.com/default.asp?keycode=0A1230/>
4. <http://www.warriordiet.com/>
5. <http://www.warriordiet.com/blog/archives/49-The-FOX-Fiasco-How-The-Warrior-Diet-was-Ambushed-on-National-TV,-and-Why-Never-to-Trust-a-Fat-Health-Expert.html>
6. <http://ethesis.blogspot.com/2008/07/responses-to-criticisms-of-shangri-la.html>

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david (2008-07-14 08:37:14)

> "What happens determines the length. If it's interesting, it will be longer. If it's boring, it will be short. That's just the reality." That was your cue to hit someone with a chair during the segment. You see, these shows aren't scripted at all, but if you want your segment to be long, you do need to find some spontaneous, honest, authentic way to make it interesting. Hitting someone with a chair for example. That's just "reality."

buxi (2008-07-14 08:38:38)

I think you have to have some brain to understand this diet.

Aaron Blaisdell (2008-07-14 08:40:02)

Seth, This is the second time I've seen you criticized by a nutritionist for the fact that you are a psychologist. Both times, they suggested that psychologists have no business giving nutritional advice. You really should remind these people that nutrition is a sub-discipline of physiology (or should be!), and that the scientist that discovered the type of learning that underlies the SLD was Ivan Pavlov, a famous Russian physiologist. Physiologists (including learning psychologists) are probably more qualified to discuss diet and nutrition than are most nutritionists which don't have a strong background in physiology.

Aaron Blaisdell (2008-07-14 08:47:27)

Oh.. and you should beat them in the head with a chair while telling them this.

Varangy (2008-07-14 09:52:53)

I think Taubes compellingly demonstrated that historical nutrition science is anything but...

Stephen M (Ethesis) (2008-07-14 10:00:55)

Liked the chair suggestion. They already had the next clip up, so I suspect that it didn't matter how interesting anyone was. Still, it was great to meet Seth face to face.

david (2008-07-14 11:32:36)

I just watched the clip. Pretty amazing when they say "He didn't lose weight because he drank oil. He lost it because he ate less food." They did deserve to be hit with a chair, but I can see where that wouldn't have advanced your cause any. Anyway, things like this remind me why I don't own a TV.

Darkhorse (2008-07-14 14:44:28)

"Still, it was great to meet Seth face to face." I'm so jealous of you, Stephen.

Nile (2008-07-14 17:15:01)

The link seems to have been taken down or broken. I get a 404 error when I click on the link. Is it just me or do others have that problem.

Stephen M (Ethesis) (2008-07-14 19:11:59)

Darkhorse, well, maybe on his next book's tour. BTW, just checked Amazon. Amazon.com Sales Rank: #9,378 in Books (See Bestsellers in Books) Popular in this category: (What's this?) #47 in Books > Bargain Books > Health, Mind & Body Good move from over 100,000

Tom (2008-07-14 19:56:42)

I was able to find the first segment at <http://www.mandjshow.com/videos/âœm j-investigatesâœ-new-dieting-trends/> but the 2nd segment (with SLD) is missing. Can anybody find it?

Valerie (2008-07-14 19:57:49)

Losing weight is all about controlling the 2 hormones - insulin and glucagon. Insulin stores energy (fat), glucagon releases energy. This is easily manipulated by the foods you eat. Get this right, and the weight will just fall off. I went from over 150 pounds to 119 in a very short time.

Tom (2008-07-14 20:43:02)

"Valerie," or should I say Jason LeGris, you have built the phoniest affiliate squeeze page I have ever seen. (And it takes a bit of gall to promote a diet that rips Seth's work off on his blog!)

Tom (2008-07-14 21:09:41)

And it's even more impressive that "Valerie" managed to write ten weeks of blog entries...considering the blog was created yesterday. [http://who.godaddy.com/Whols.aspx?domain=myfatloss4idiotsjournal.info &prog\\_id=godaddy](http://who.godaddy.com/Whols.aspx?domain=myfatloss4idiotsjournal.info &prog_id=godaddy)

Laura (2008-07-15 07:47:16)

David wrote: I just watched the clip. Pretty amazing when they say "He didn't lose weight because he drank oil. He lost it because he ate less food." Was that not the stupidest thing you've ever heard? Did that woman think Seth was claiming some sort of magical fat-burning properties for the oil? Ugh. I agree...chair throwing was in order. And re: "Valerie"...hilarious!

seth (2008-07-15 09:05:49)

Yeah, saying he lost weight "because he ate less food" is some sort of low point. Aaron, that's a good point about Pavlov. Yeah, I should do that.

Aaron Blaisdell (2008-07-16 09:34:18)

Wait a minute. I thought the whole point of the SLD was that it allows the body's set point to move to a lower value, which then leaves you less hungry, so that you eat less. Wasn't this the logic presented in the book? So in a sense the critic was right, Steve lost weight because he ate less. But what allowed him to eat less was that drinking the flavorless oil caused his set point to lower which thereby reduced his hunger and cravings, thus leading to a reduction in caloric intake (smaller, less frequent meals, loss of appetite for ditto foods, etc.). So the critic was right, but failed to see the significance of the oil in kick-starting and maintaining the weight loss.

Chaim Rubin (2008-07-20 13:45:27)

I found the second (SLD) segment Googling this site:<http://www.mandjshow.com investigates trends> The page is gone or broken but click 'Cached' below the link with -continued in the URL and you will find enlightenment (actual



link:<http://209.85.141.104/search?q=cache:0bnSNMkYoZYJ:www.mandjshow.com/video/%E2%80%9Cmj-investigates%E2%80%9D-new-dieting-trends-%E2%80%93continued/+site:http://www.mandjshow.com+investigates+trends&hl=en&ct=clnk&cd=2&gl=us> Get it while it's hot. I may try this. I have not watched TV for years, and found the panel including the accredited ones to be buffoons, but maybe they were instructed to be confrontational. There is a big trade off trying to discuss anything intelligently in that kind of forum. All three diets look fine, I guess the quest for Shangri-La is to work smarter and not harder

VesnaVK (2008-08-03 08:39:11)

"S/he just ate less food, that's all" is also a common criticism of low-carb approaches to weight loss. I've never understood how it's supposed to translate to a negative comment, but somehow people mean it that way, and take it that way. If eating less leads to weight loss (I don't agree with the positive/negative energy balance theory of fat accumulation and loss, so I say "if"), then wouldn't anything that helps you eat less without suffering be a good thing?

Stephen M (Ethesis) (2008-09-09 10:50:16)

**But what allowed him to eat less was that drinking the flavorless oil caused his set point to lower which thereby reduced his hunger and cravings, thus leading to a reduction in caloric intake (smaller, less frequent meals, loss of appetite for ditto foods, etc.). So the critic was right, but failed to see the significance of the oil in kick-starting and maintaining the weight loss. Exactly.**

## Who I'd Like to Meet (2008-07-15 05:56)

At dinner I asked my friend who he'd like to meet. "Good question," he said. Let me try to answer it:

1. [1]John Horton Conway. A Princeton math professor who's combined math and human interest better than anyone since John Von Neumann. I especially like his work on numbers and games and [2]The Book of Numbers, which he wrote with Richard Guy.
2. Lauren Collins. She and Mark Singer are the best writers at The New Yorker. As I [3]recently blogged, I loved [4]her profile of Pascal Dangin.
3. [5]Chimamanda Adichie. I [6]blogged about [7]a recent short story of hers. Reading her reminds me how I used to read lots of fiction and how much I liked it.

The person I don't know who I most wish would write another book is Renata Adler. If a book can be stillborn, [8]Private Capacity, supposed to be published in 2002, was that. From [9]Wikipedia: "Renata Adler's investigation of the Bilderberg group reveals the true history of the organization, its membership and its nebulous function. With an astonishing cache of Bilderberg archives and secret files, Adler charts the history of the organization and the extent of its power." Sounds like it exists, doesn't it? It ranks 5 million on Amazon, maybe because I ordered a copy. Second most: Ben Cheever. I loved [10]Selling Ben Cheever.

1. [http://en.wikipedia.org/wiki/John\\_Horton\\_Conway](http://en.wikipedia.org/wiki/John_Horton_Conway)
2. <http://www.amazon.com/Book-Numbers-John-H-Conway/dp/038797993X/sethrobertand-20>
3. <http://www.blog.sethroberts.net/2008/05/08/magazine-article-of-the-year/>
4. [http://www.newyorker.com/reporting/2008/05/12/080512fa\\_fact\\_collins](http://www.newyorker.com/reporting/2008/05/12/080512fa_fact_collins)
5. <http://www.l3.ulg.ac.be/adichie/>
6. <http://www.blog.sethroberts.net/2008/07/06/short-story-of-the-year/>
7. [http://www.newyorker.com/fiction/features/2008/06/23/080623fi\\_fiction\\_adichie?currentPage=all](http://www.newyorker.com/fiction/features/2008/06/23/080623fi_fiction_adichie?currentPage=all)
8. <http://www.amazon.com/Private-Capacity-Renata-Adler/dp/1891620908>

9. <http://www.sourcewatch.org/index.php?title=Talk:Bilderberg>

10. <http://www.amazon.com/Selling-Ben-Cheever-Service-Economy/dp/1582343268/sethrobertand-20>

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## Should Those Who Are Part of the Problem Be Part of the Solution? (continued) (2008-07-15 23:24)

In the last chapter of The Shangri-La Diet and [1]this post, I said it was foolish for those who want to improve the world to denigrate those in industry. ("[Food] companies will put anything in their food if they think the extra marketing hype will help them sell more of it," said [2]Marian Nestle.) [3]A recent article in the NY Times described in detail how a wash-your-hands campaign became more effective by studying industry tactics. The head of the campaign said pretty much what I've been saying:

"For a long time, the public health community was distrustful [not to mention scornful] of industry, because many felt these companies were trying to sell products that made people's lives less healthy, by encouraging them to smoke, or to eat unhealthy foods, or by selling expensive products people didn't really need," Dr. Curtis said. "But those tactics also allow us to save lives. If we want to really help the world, we need every tool we can get."

And every person.

Thanks to Marian Lizzi.

1. <http://www.blog.sethroberts.net/2008/05/09/as-if-i-wasnt/>

2. <http://www.nytimes.com/2007/01/14/business/yourmoney/14omega.html?ex=1186632000&en=b311b8942efb47dd&ei=5070>

3. <http://www.nytimes.com/2008/07/13/business/13habit.html?ei=5087&em=&en=32fb055cb7b06b25&ex=1216267200&pagewanted=all>

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Dr. Patrick Havey (2008-07-16 10:44:22)

There's no doubt that those who sell fast foods that are unhealthy try to position themselves as having a solution to the obesity epidemic by marketing 'healthy salads' or other healthy items, when in fact 90 % of what they're serving is unhealthy. We purchased hamburgers from a fast food restaurant and have kept them, with no preserving techniques, and have seen NO deterioration or breakdown of them. They look the same. (You can view them here - <http://www.GuessTheAge.com>) Companies can't have it both ways - they're either a part of the problem or part of the solution!

## Blog Power (three parts) (2008-07-16 06:42)

Part 1

[1]Irena Briganti is a widely-feared Fox VP of media relations:

Though one of Briganti's favorite pastimes is [2]leaking to blogs, she'll come to find that her detractors can do the same thing just as easily. Blogs are far less likely to cower in the face of a threat of "denied access."

## Â Part 2

Before I became a blogger, I spent my entire 20's trying to become an academic (English and critical theory was my focus). While I struggled to produce a handful of conference papers or publishable articles during that decade, in my four years as a blogger I have published about 4,400 articles that have received about 50,000,000 direct page views, 46,000 incoming links, and over 100 Lexis Nexus mentions. Had I stayed in academic, none of this would have been possible, and I would have continued to receive an endless series of rejections from the gatekeepers. The "experts" that Appell describes did not see the same value in my writing huge numbers of other people clearly have.

From [3]Chris Bowers.

## Part 3

Yoely made some compromises. He miscalculated, however, when he wired his home with Internet access. "He thought, If I give her this, then she'll shut up and be satisfied," Gitty says.

"Once I read blogs from people who had gotten out of places like KJ, there was no turning back. Yoely begged me to stay. It is humiliating for a Satmar man to have his wife leave him. But it was too late," says Gitty, who would start her own blog, 1 Beautiful Stranger, where she wrote about her misplaced life in Kiryas Joel.

From [4]New York.

1. <http://gawker.com/tag/irena-briganti/?i=5022476&t=irena-briganti-the-most-vindictive-flack-in-the-media-world>
2. <http://www.jossip.com/category/fox-business-channel/>
3. <http://www.openleft.com/showDiary.do?diaryId=6896>
4. <http://nymag.com/news/features/48532/>

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## Cheap vs. Expensive Wine (2008-07-16 10:20)

The Harvard Society of Fellows, I learned from this [1]great post by Steve Levitt, drink expensive wine – like \$60/bottle. Steve, who was a Fellow for 3 years, did a simple experiment that showed the other members couldn't tell expensive wine from cheap wine. Although the other members had liked the idea of doing the experiment, they didn't like the results:

There was a lot of anger when I revealed the results, especially the fact that I had included the same wine twice. One eminent scholar stormed out of the room stating that he had a cold "otherwise he would have detected my sleight of hand with certainty.

Stormed out of the room! Why were they so angry? I think they were embarrassed. And not just that. Steve doesn't say it, but I think there had been lots of dinner table conversation about how great the wine was. Now all that conversation was revealed to be delusional. Noting the greatness of the wine was – to be crude about it – a way of noting the greatness of those assembled at the table. "We appreciate the finer things in life," they were saying. "We deserve to be here." Snobbery is reassuring. In a tiny voice, the results said, yes, you are here, congratulations, but the reason you are here is more complicated than "you deserved it".

1. <http://freakonomics.blogs.nytimes.com/2008/07/16/cheap-wine/>

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Stephen M (Ethesis) (2008-07-16 10:25:46)  
That is an interesting observation.

Brent Pottenger (2008-07-16 10:44:20)

At the world-renowned Viticulture and Enology program at UC Davis, the message is two-fold: Primo, "Average \$10 per bottle of wine in your consumption schedule," and Segundo, "If you buy a bottle of wine that costs more than \$25, especially if it is over \$50, make sure that everyone drinking the wine knows exactly how much you paid for that bottle."

Darkhorse (2008-07-16 11:11:34)

At a Christmas party last year, we conducted a similar experiment, with a similar result, on our (now former) wine-snob friends. We thought it would be a hoot. Interesting how snobs are totally without humor. Also, thanks for quoting from my other favorite blog.

Chris B. (2008-07-16 12:27:07)

Next time you have a dinner party, blindfold your guests and see if they can tell the difference between white wine and red wine. I failed! Still, there is an obvious difference between home-made wine and \$15-a-bottle stuff, and between \$15 wine and \$30 wine (I'm less sure of this, because I don't drink much \$30 wine). Above \$30? I doubt it matters.

Aaron Blaisdell (2008-07-16 15:12:28)

The quality of a wine is only weakly positively correlated with its price. It is also true that there are more poor quality wines at lower prices (e.g., less than \$10 a bottle) than at higher prices. This is simply because consumers will not pay high prices for low quality wine, and the critics will out them pretty quickly anyway. But at lower prices, there are many gems to be found! I've been really enjoying delicious wines at great values (less than \$12 a bottle) currently being exported from Spain, Italy, Chile, and Argentina.

cyates (2008-07-16 17:34:12)

Seth, in one of your previous posts I remember you noting that developing your palette and allowing you to distinguish between low and high quality actually increased the pleasure you got out of consuming the high quality goods. This would suggest you disagree with Levitt's idea that 'ignorance is bliss' when it comes to wine.

seth (2008-07-16 17:49:40)

that's true, cyates, I do disagree with Levitt that ignorance is bliss in this case. Lately I've been buying two bottles of wine from the same grape – e.g., two bottles of sauvignon blanc – and doing blind comparisons. Eventually I can tell them apart. And it does make me enjoy that type of wine more.

Matthew (2008-07-17 00:08:58)

The comments from cyates are just what I was thinking when I read this post. Actually, when I read Levitt's original piece, my first thought was that you would be rolling your eyes at this. Part of that was my knee-jerk reaction to what I perceive as other economists getting a little too enamored with their own cleverness and "discovering" something that experts in the fields they're colonizing have known all along. Wow, so experts know good wine and non-experts do not-this is surprising? The implication is that non-experts have nothing to gain by developing a palette for good wine? It wasn't long ago that I would have picked a soda over a beer. It's cheaper too! The authors of this paper would have suggested that I had nothing to gain by developing a taste for the more complex but more expensive beverage (actually, it seems like their assumption is that taste doesn't develop at all). But now, even though I'm poorer for it, I enjoy the drinking experience more. Also, trotting out the "finding" that price does not equal quality, which is nothing more than a misconception by people who don't know anything about wine, hardly makes this experiment a worthwhile enterprise. Their interpretation of their finding is that non-experts shouldn't rely on the opinion of experts or price in making wine choices. But among non-experts, casual white zinfandel drinkers won't be reading those opinions anyway, and eager learners may be developing an appreciation for those wines that they wouldn't have picked in a taste test. According to these authors though, they should have stuck with soda! Investing in enjoyment that may come in the future as well as enjoying the hobby of learning more about wine doesn't figure in to their interpretation (in the conclusion or abstract, anyway).

Stephen M (Ethesis) (2008-07-17 05:19:19)

A great related post is: <http://ozarque.livejournal.com/536010.html> The real story about wine and beer is the same as random flavors mixed in with butter and served on toast – you can learn from the calorie and alcohol associations a good amount that makes you appreciate rotted fruit and grain better. Note that without alcohol, the market in premium near beers just hasn't done well, in spite of numerous efforts.

seth (2008-07-17 07:59:36)

I seem to have mistitled this post. To me the fascinating thing about Steve's story is how angry the Fellows got. Do you think I'm right that they were embarrassed? If so, why? They're not wine experts.

Lose 10 Pounds In 7 Days (2008-07-17 12:41:07)

I think that it was embarrassment. Since they talk about something so much and act like they know what their talking about, only to be exposed as "phonies" can be quite humiliating. Very interesting experiment but I'd like to know the psychology of their angry reaction more in depth.

### **Assorted Links (2008-07-17 20:48)**

1. [1]The most trendy restaurant in America – which might be a good thing.
2. Precognition from Kurt Andersen: "[2]Expect . . . years to pass with no posts."
3. Leonard Mlodinow [3]talks at Google.
4. [4]Intermittent Fasting, the blog.
5. [5]Escaping the Amish, a fascinating interview by Tim Ferriss.
6. [6]What your stuff says about you: Google talk by Sam Gosling.

Thanks to Michael Bowerman.

1. <http://www.seriousseats.com/newyork/2008/06/blue-hill-at-stone-barns-pocantico-hills-new-york-dan-barber-working-farm.html?ref=se-bb2>
2. <http://www.kurtandersen.com/blog/index.html>
3. <http://www.youtube.com/watch?v=F0sLuRsu1Do>
4. <http://projectfit.org/ifelifeblog/>
5. <http://www.fourhourworkweek.com/blog/2008/07/15/escaping-the-amish-part-1/>
6. <http://youtube.com/watch?v=dllhXD6iTRE>

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Tim Lundeen (2008-07-19 14:01:21)

Great links, thanks! I particularly liked the talk by Sam Gosling, and ordered his book. Some interesting insights. He says that you can't get much information about someone from one observation, that you need to put together a number of data points. This reminds me of gene analysis, where knowing one allele for an individual doesn't give you much information, but from 100 alleles you can make a number of predictions with high probability of being right. I don't agree with Gosling's conclusion that some people are inherently messy, even though they want to be neat and organized. My experience is that a lot of being organized comes from training and learning good techniques: I know my life was changed by two books, Marla Cilley's Sink Reflections and David Allen's Getting Things Done. Allen's rule is to do things that take less than 2 minutes right now, instead of putting them off. Just following this one rule makes a dramatic difference, and it isn't hard to do.

seth (2008-07-19 14:06:50)

Thanks for the comments, Tim. I've known Gosling a long time; he was a grad student at Berkeley.

### **Interview with Bruce Gray, Web-Savvy Sculptor (part 1) (2008-07-19 06:07)**

Wandering around the [1]Brewery Art Colony in Los Angeles with [2]Len Mlodinow, we met [3]Bruce Gray, a sculptor who works there. I was amazed how much the Web helps him sell his work. Later I interviewed him about it.

ROBERTS What were you doing before you were a sculptor?

GRAY I was living in Boston and I was working in advertising as a graphic designer and I also worked as a photographer.

ROBERTS When did you make the transition?

GRAY January 1989. I moved out to Los Angeles and I pretty much jumped right in with both feet. I got a studio and just started making stuff. It just took off from there.

ROBERTS What gave you the confidence to do that?

GRAY Probably lack of planning and thinking things out. I don't know if it was actually the smartest move to try to do something like that. It's certainly been a bit of a struggle. But it's the kind of thing that when you have a dream of something that you want to do bad enough, you just have to make it happen. I think that's kind of half

the battle and there was nothing that I wanted more than to try to be able to make my own art creations and make a living off that.

ROBERTS Had you gone to art school?

GRAY I went to school for design and photography and of course I took all kinds of art classes as well—design and illustration and sculpture, photography.

ROBERTS Where did you go to art school?

GRAY University of Massachusetts.

ROBERTS When you were doing the photography and graphic design, you took other people's ideas and executed them.

GRAY Right. And that's what I kind of got tired of, actually. I really do like doing graphic design—things like logos and stuff. The interesting jobs were few and far between and I wanted to do something that I had more control over, and also something a bit more permanent. I just wanted to make my own legacy, I guess.

ROBERTS How did you manage to sell your first sculptures?

GRAY Well, it wasn't easy. I really didn't even know L.A. hardly at all, so I went around to galleries; I went around to a lot of the high end furniture stores were really my first big clients, near the Pacific Design Center. There's a lot of high end furniture stores down there and a lot of those guys became clients pretty quickly and it got to the point within, oh, just a year or so, they were ordering quite a few of my early pieces at a time and that's been keeping me quite busy.

ROBERTS So they would place your pieces next to their high end furniture and their customers would buy some of them. Is that how it worked?

GRAY Right. Also, a lot of what I was making at that time was more furniture—a line of unique art furniture, like my red, angry dog table and my s-shaped aluminum form table. Things like that were very popular. I think I sold probably fifty of those form tables, mostly all back in that time. But people have a very different view about furniture than they do about sculpture. It's way easier to get money for sculpture, comparatively to furniture, and a good example of that is: I had one furniture store, and I had a very interesting table that I had made, all these intersecting shapes and aluminum and it was kind of expensive and they were having a hard time selling it. They decided that it just looked so cool that they would put it up on the wall and see how people reacted and it sold within just a few days of doing that.

ROBERTS You mean they took it off the floor and they put it on the wall and it sold quickly?

GRAY Exactly. And that's just the difference in perception. People think, "oh well, for that many thousands of dollars, how much can I get at IKEA," or whatever. I don't know how they think about it, but they certainly

have a much harder time spending the comparable money for furniture over sculpture.

ROBERTS Wow! I would have thought that it was the opposite. You can use the furniture.

GRAY Right.

ROBERTS When did you learn that lesson?

GRAY It was quite a long time ago.

ROBERTS Within the first year of selling the stuff?

GRAY Within the first three years, probably. But then I've gotten more into doing the sculpture stuff instead. I still like to do the furniture pieces, but I'm also not going to kill myself to make pieces that I have to sell for less than I think they're worth just because that's the way the market works.

ROBERTS So you're saying that with sculpture it's easier to get the price you think it's worth.

GRAY Exactly.

ROBERTS So you shifted from the furniture-like stuff to the sculpture-like stuff. Is that a fair description of what you've been doing since then?

GRAY Yes, but I still do some of the furniture stuff, just not that much and mostly by commission. If someone sees something that I've done that they like or they like my work and they want something custom done, then I'll do that, but they're going to be paying my sculpture prices for that stuff.

ROBERTS When did you get interested in the internet?

GRAY Pretty early on. For someone like me that can end up needing to do some research on a fairly regular basis . . . there's a lot of times I may just need an image of a certain kind of insect or something like that, and the internet is just a ridiculous amount of searchable information. You can spend the rest of your life just looking up insect pictures.

ROBERTS So true.

GRAY As many images as I want, the videos; it's like the encyclopedia on steroids. Anything is there that I need for research. Initially I had wimpy websites, through AOL or Earthlink, those things are really kind of half-assed; they don't really do much of anything. But I quickly realized that the internet is worldwide and it's open 24 hours a day, seven days a week. No one else is pushing my work like that. And I get contacts with people from other states and other countries—there's just no way I would have had these kind of distant contacts without the internet.

ROBERTS Before the internet, how did you usually sell your stuff?



GRAY Mostly through the local high-end furniture stores, the art galleries, direct mail—I do a lot of postcards that I mail out. That’s actually worked out to be a pretty good thing too.

ROBERTS You mailed out postcards?

GRAY Yes. The first postcards I ever mailed out, I ended up getting one of my long-term collectors off of that mailing—they ended up buying three or four pieces for their company, and then they bought another eight pieces or more over the years for their home, and that’s all from one postcard.

ROBERTS Where did you get the mailing list for that mailing?

GRAY I just looked around and came up with it myself, basically looking through interesting businesses that can relate to modern art, the film industry people, things of that nature, the Academy of Motion Pictures was actually the one that ended up buying a bunch of stuff.

ROBERTS Oh my god, you didn’t buy someone else’s mailing list? You made the mailing list yourself?

GRAY Right.

ROBERTS Wow! When did you do that?

GRAY When I first started, pretty much.

ROBERTS 1990?

GRAY Right.

ROBERTS Okay, so you were selling stuff that way, and then the internet comes along, and you have a wimpy home page, and then what happened next?

GRAY Then I decided that having a web page is the only way to fly. I just knew that this was the thing to do and I’ve always felt that I was pretty savvy with computer programs, at least things like Photoshop, but putting the web stuff together, I really didn’t know how to do it, so initially I had a friend of a friend doing some of the stuff for me. He never had time, it was expensive, it would take me weeks to get any update done and I’m thinking to myself, well this is ridiculous. I’m going to be using this website for the rest of my life, so I might as well just bite the bullet here and buy the program and take a class or whatever I have to do. So I bought Dreamweaver and ended up paying a guy to give me private lessons for about eight to ten hours or so, and a few weeks later that guy’s calling me up to ask questions.

I picked it up pretty quickly and it’s been the greatest thing I ever did. Like today alone, I just took a picture of my latest wall sculpture and boom, it’s already up there. I photographed it digitally and put it right up. There’s no middleman, there’s no problems, no delays. It’s a very workable system not only for the artist but basically for any entrepreneur or sole proprietor who’s running their own business.

ROBERTS When did you figure out that this was the way to go? Why did you think, in the very early stages, that this was going to be so great?

GRAY Because it just seemed that was nothing else really like it in the world, where you could connect with people, distant people. One of my best friends has always told me that if you really want to succeed in the art world, the biggest mistake you can make is trying to rely on your home market alone. Even a city like L.A. If you try to just sell your work here, youâ€™ll probably never have your bills caught up, so you have to get your work in front of people from other cities and other countries and the web is the way to do it for free, you know?

ROBERTS Yes. Well, youâ€™re in a building with 30 or 40 other artists, right?

GRAY Well, Iâ€™m in a complex with somewhere over 300-something studios and well over four hundred artists. Itâ€™s supposed to be the biggest art complex in the world, they say.

ROBERTS Do they all agree with you? Do they all have their own web site?

GRAY I would say that just about everybody does at this point. A lot of them have taken my word for it and I had to talk them into it.

ROBERTS You were the first person.

GRAY I was definitely one of the first. To be honest, though, a lot of my artist friends who have done websites have told me that theyâ€™ve never sold anything from it. Even a very well-known successful artist whoâ€™s a good friend of mine—heâ€™s told me that heâ€™s never sold a single piece. A lot of it is what you put into it—you canâ€™t just throw some images up on a website and expect that to be changing your world for you. I spend several hours every week, minimum, adding new stuff and trying to get additional links and things into the site. Right now, the parameters for what ranks you highly keep changing on quite a regular basis, but the thing that is very important right now is good qualified links into your site, especially from things like publications, universities, museums, things like that. A link in from your sisterâ€™s cat website is not going to rank that highly, but valid press links weigh very heavily.

ROBERTS How do you go about getting those links?

GRAY Most of them come naturally from people whoâ€™ve done articles on me and stuff like that, and other times I go around to all the websites that are art-related and see whatâ€™s going on with those. I tend to try to stick with the ones that are free to list with.

ROBERTS You list yourself where you can.

GRAY Right, and then people who have done articles, if they donâ€™t have a link, I ask them for one, and that sort of thing.

ROBERTS Do you think that thereâ€™s something about your work that is especially web-friendly?

GRAY I think, partially, my success is due to the fact that I am quite diverse. I have a lot of different types of work that I do, so I have a little bit of an advantage as far as that goes.

ROBERTS When we visited you, you said you made about 90 % of your money from the web?

GRAY Yes, definitely. It's probably going to get even higher than that. It's been slow. We have an open house here twice a year and several thousand people come through that, and I've been doing that for sixteen years, but the past five years, I don't think I've sold a piece during that art walk. I think that people have a hard time spending several thousand dollars on the fly like that. It's something that they need to consider a bit more. The one thing I'm amazed at with the web is that people will see an image of one of my sculptures and then just, without even calling me up, or any letter, they'll send me an email, ask if it's available, and next thing I know I get a check in the mail. No phone call or no discussion about it or no question about how is this going to look in person, or that kind of thing. It's always kind of surprising to me that people will make these large purchases- \$10,000 or so-over the net with just seeing one small image.

ROBERTS What fraction of the people who buy from you live in the United States?

GRAY Most of them do.

ROBERTS What fraction of them speak English?

GRAY Just about everybody. I get emails sometimes that take a bit of translation; I get some overseas calls once in a while. It gets a little tricky to deal with that kind of situation sometimes if there's a bit of a communication problem. I do recall one time that I kind of thought I was being scammed because it really didn't sound like it was a legitimate thing and it turned out to be very legitimate.

ROBERTS Where was it from?

GRAY Korea. It was actually a museum there. They ended up commissioning two large sculptures for their permanent collection.

ROBERTS Wow! How had they heard of you? What led them to you?

GRAY Through the web. They just Googled "rolling ball machine," or something and my work popped up and they sent me a few emails and just made it happen.

ROBERTS When was that?

GRAY It was last year.

ROBERTS After you started having a nice website, or a conscientious website, how long did it take before you realized that it was going to be a big success?

GRAY I knew fairly close to the beginning that it was working. I don't get sales from it every week, or even every month. You just never know in my world. I can get five major sales in a week, and then literally nothing at all for five months; it's very, very hard to predict and plan, but I will say that the sales that are coming in are definitely from the web. The last four pieces I'm working on or that I have just finished up right now-those are all through the

web. I'm trying to remember the last time I got something that wasn't.

ROBERTS These are commissions, you mean?

GRAY Yes, all through the web. This one I'm just finishing right now is going to New Jersey. Even if I had a ton of stuff in galleries over in Santa Monica, I wouldn't be doing these sales to the East Coast or to Korea.

ROBERTS I hear there's a lot of tourism involved in art galleries.

GRAY There is. But it's still hard to make that sale if they just see it temporarily, especially if it's over a couple of thousand dollars.

ROBERTS Do you still have shows? Do you still have your stuff in galleries now?

GRAY I do shows from time to time, when I get asked to, but I don't really push it as much as I used to, partially because it's just so much of a better deal to not split the money with anybody. That's another huge benefit of the internet. There's no one taking a cut.

1. <http://www.thebrewery.net/>
2. <http://www.its.caltech.edu/~len/>
3. <http://www.brucegray.com/>

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Tom (2008-07-20 15:14:10)

He probably said "red, angry dog table" (not God.) [http://www.brucegray.com/htmlfolder/html\\_subpages/angdogshrk.html](http://www.brucegray.com/htmlfolder/html_subpages/angdogshrk.html)

seth (2008-07-22 06:41:30)

Thanks for the correction, Tom.

Seth's blog » Blog Archive » Interview with Bruce Gray, Web-Savvy Sculptor (part 2) (2008-07-25 09:14:47)

[...] Interview with Bruce Gray, Web-Savvy Sculptor (part 1) [...]

## **Nutrition and Physical Degeneration (2008-07-20 07:31)**

Weston Price's masterpiece, *Nutrition and Physical Degeneration: A Comparison of Primitive and Modern Diets and Their Effects* (1939), is online [1]here. The chapters I like are the ones where he visits eleven groups of people around the world and compares those eating traditional diets with those eating modern ones. Those eating traditional diets had very few cavities, even though they didn't brush their teeth. They also had very little "dental malocclusion" – crooked teeth caused by a too-small jaw. This was presumably because they got enough of certain growth factors in childhood. (The [2]NIH health encyclopedia says dental malocclusion "is most often hereditary" – a mistake that speaks volumes.) The main thing I learned from this book was the importance of fat (to supply fat-soluble micronutrients) including animal fat. (There's an evolutionary reason we like the taste of fat.) Swiss in isolated areas had to grow

almost all of their food in spite of living in the mountains. They ate lots of dairy products, especially butter; apparently they were in good health because their dairy animals ate lots of fresh green grass, high in all sorts of necessary micronutrients including ones that may not yet have been identified. The isolated Swiss also ate lots of whole grain bread. To walk around any supermarket and see all these labels saying "low-fat" as if it were a good thing makes me think of the Middle Ages when people had all sorts of strange ideas about what caused disease – such as too much excitement.

This book seems to be emerging from obscurity due to mentions by Michael Pollan in *In Defense of Food* (2008) and Gary Taubes in *Good Calories, Bad Calories* (2007).

1. [http://journeytoforever.org/farm\\_library/price/pricetoc.html](http://journeytoforever.org/farm_library/price/pricetoc.html)

2. <http://www.nlm.nih.gov/medlineplus/ency/article/001058.htm#Causes,%20incidence,%20and%20risk%20factors>

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John (2008-07-20 08:33:28)

Where in *Good Calories, Bad Calories* does Taubes mention Weston A. Price? I couldn't find it and don't remember it being in there. It certainly fits the theme of the book. I'm glad to see you mentioning it regardless.

Charles (2008-07-20 11:58:05)

Based on Taubes's recommendation, I picked up the book from Amazon, and read it cover-to-cover. It's worth doing so to get the full message, and Price's support for his arguments. While there seems to be some disagreement as to the influence of nutrition on facial structure, it's awfully hard to argue with the pictures of generations and see the changes over time as their nutrition changes from a traditional diet to a westernized (Processed carbohydrates-based) diet. In particular the repeated pattern of no tooth decay on traditional diets vs. increasing tooth decay on western diets was a revelation. We have accepted tooth decay as normal and natural, but it appears it isn't at all. Disgusting as it may sound, I almost never brushed my teeth growing up. Maybe 2-3 times a year. But I never had bad breath, and I never had a cavity until I was in my 20s. Not one. And I ate lots of sugar and was overweight. The rest of the family had plenty of cavities. The only difference is that in my early 20s, I stopped drinking milk. Up until that time I was drinking upwards of a half gallon a day. When I stopped, I started to get cavities. Not many, but it went from zero to a few within a few years. Price would have understood this immediately. This kind of study is probably impossible at this point in history. When Price and his wife were traveling in the early 30s, transportation and the degree of modernization was such that there were still genetically-identical populations that could be separated by only a short distance, and where one of the group might be eating a traditional diet and the other a westernized diet, so you could reasonably and easily compare the two. That isn't the case anymore I don't think.

David Brown (2008-07-20 13:59:10)

Charles, The Kitava Study is an interesting example of recent research similar to Dr. Price's. You can Google "Kitava Study" or paste <http://paleodiet.com/lindeberg/> into your browser. David Brown Nutrition Education Project

Charles (2008-07-20 20:39:25)

I think Price was mentioned in Seth's interview with him. At least that's where I remember seeing it.

Stephen M (Ethesis) (2008-07-20 20:45:29)

Thanks for that link, a good reminder.

Varangy (2008-07-21 09:12:32)

*To walk around any supermarket and see all these labels saying "low-fat" as if it were a good thing makes me think of the*

*Middle Ages when people had all sorts of strange ideas about what caused disease – such as too much excitement. One day, low-fat diets will be seen for what they are – the contemporary version of bloodletting.*

seth (2008-07-21 10:03:44)

John, Taubes mentions Price in the acknowledgements section of *Good Calories, Bad Calories*. Page 575. He says *Nutrition and Physical Degeneration* is the book that most affected his thinking but wasn't mentioned.

Seth's blog » Blog Archive » Errors in The Queen of Fats (2008-07-21 23:24:55)

[...] *Nutrition and Physical Degeneration* [...]

John (2008-07-22 06:28:40)

Aha! Thanks!

Stephan (2008-08-11 21:23:43)

Just wanted to mention, in case some of you haven't heard, Price's "X-factor" has been identified as the menaquinone-4 form of vitamin K2. Chris Masterjohn wrote an article about it for the WAP foundation; I highly recommend it. Get this... K2 levels during development affect facial structure. Price truly was a genius.

Lauren (2009-04-01 07:42:22)

re dental malocclusion: straight teeth in less industrial society probably results from lengthy breastfeeding as a child. I had an orthodontist who insisted that prolonged sucking on the roof of the mouth pulls the structure down a bit (with the nose as well) and that the lowering of this arched structure would push the sides of the arch outwards. So the jaws would become wider. He also contended that over time the arch narrows, the roof of the mouth moves up, the nose protrudes more, nasal cavity space is decreased and tmj problems may result. Certainly I have noticed that protruding noses and narrow faces go together. Perhaps sucking hard on marrow bones (or other difficult to extract foods ) would counter this effect of aging and/or the industrial world diet. I would love to know what you think! best, Lauren

## Errors in The Queen of Fats (2008-07-21 23:24)

Susan Allport's [1]The Queen of Fats is the best introduction to omega-3 fatty acids and their importance that I know of. I learned a lot from it (and [2]interviewed the author). This is why its errors are interesting; they shed light on the big nutritional misconceptions of our time (as Weston Price, the subject of [3]yesterday's post, did in a different way). Joel Kauffman, a chemist, made a list:

1. On p1 low-carb bread and beer are ridiculed despite evidence (see Nielsen JV, Joensson EA, Low-carbohydrate diet in type 2 diabetes. Stable improvement of body weight and glycaemic control during 22 months follow-up, *Nutrition & Metabolism* 2006;3(22) doi:10.1186/1743-7075-3-22) to the contrary. There are at least 10 studies supporting Nielsen. Low-carb means low insulin demand. Insulin converts carb to fat. Allport's claim that the world's leanest peoples mostly eat carbs neglects to mention that they are malnourished.
3. On p2 and later Allport calls saturated fatty acid chains "straight", then still later by the correct term "zigzag", but never by the chemist's term "unbranched". She is not aware that a saturated fatty acid chain of 22 carbons has many more conformations than the 22-carbon DHA with 6 carbon-carbon double bonds, or that double bonds keep 4-carbon groups rigid. If DHA is constantly on the move there must be some other reason.

5. On p10 canola oil, which is not rapeseed oil, is not usually promoted for its linolenic acid content, but for its low saturated content, lower than olive oil. This is not a real advantage, according to all the books (except Sears's™) I have listed above.
6. The conundrum of eating fish for its omega-3s despite the mercury content was not resolved on p11 or elsewhere. There are two long-term studies showing that there is not a big problem: The Chicago Western Electric Study followed the effects of fish consumption in 2,107 men aged 40-55, and followed for 30 years. Those who ate an average of \*35 g daily (about 1 big fish dinner every 5 days) had only 9/10 of the all-cause mortality rate of men who ate no fish. The Nurses's™ Health Study on 84,688 women aged 34-59 years and followed for 16 years for outcomes vs. fish and omega-3 fatty acid intake, had the following findings: women consuming fish five times weekly had only 7/10 the all-cause mortality rate of those eating fish once a month. Pregnant women have been cautioned to restrict their intake of fish ([4][http://www.cbc.ca/storyview/CBC/2002/10/21/Consumers/mercuryfish\\_021021](http://www.cbc.ca/storyview/CBC/2002/10/21/Consumers/mercuryfish_021021)) despite evidence that children receive most of their mercury from vaccines. Hepatitis b vaccine carries 12.5 micrograms per dose; influenza and other common vaccines carry 25 micrograms per shot, over 830 times the amount in a can of tuna. It has been reported that vaccines said not to contain the mercury compound, thimerosal, still might have it. The long duration of the diet studies makes it very clear that the mercury content of fish, in general, is not shortening life.
7. On p14 eating fat in general was used as a straw man and implied to be the major cause of heart disease. Not so; see below (section titled More at bottom of post).
8. On p15 the Framingham Study was claimed to have shown a positive link between serum cholesterol and risk of heart disease. This was disproven by 1937 by experiments on cadavers. See The Cholesterol Myths and either Great Cholesterol Con [there are two books with this title]. See above for evidence that the Seven Countries Study was a fraud. A more recent study on free-living elderly in Manhattan showed the opposite – those with the highest cholesterol and LDL-C levels lived the longest. See Schupf N, Costa R, Luchsinger J, et al. (2005). Relationship Between Plasma Lipids and All-Cause Mortality in Nondemented Elderly. *Journal of the American Geriatrics Society* 53:219-226.
10. On p20 the excessive bleeding in Eskimos is said to be unimportant vs. lower heart attack rates than those of Danes, but external bleeding, as with aspirin, probably indicates internal bleeding.
11. On p21 it was written that polyunsaturated fats held down cholesterol levels. Actually HDL levels were held down and there was no drop in mortality: Rose GA, Thomson WB, Williams RT (1965). Corn Oil in Treatment of Ischaemic Heart Disease. *British Medical Journal* 12 Jun:1531-1533.
12. On p22 gas-liquid chromatography was said to have been developed in the 1950s by oil companies. A Google search showed its invention in the 1940s to separate fatty acids: see James A T & Martin A J P. Gas-liquid partition chromatography: the separation and microestimation of volatile fatty acids from formic acid to dodecanoic acid. *Biochem. J.* 50:679-90, 1952. [National Institute for Medical Research, Mill Hill, London, England]
13. On p22-3, 25 it is implied that the increase in heart disease in Eskimos who adopted aspects of a Western diet is solely due to differences in omega-x fat intake. No attention was paid to the effect of carbs on a very carb-sensitive population.
14. On p25 Allport insults Spam for being "highly saturated". This is nonsense, since lard is only 40 % saturated. See *Know Your Fats* by Mary G. Enig, 2000.

17. On p49 the “pure cholesterol” fed to rabbits has been shown to be oxysterol, which is not healthful.

18. On p51 Ancel Keys, MD, was said to link serum cholesterol to heart disease, but this link had already been shown to be false in 1937 by work on cadavers.

19. On p54 Allport wrote that EPA was responsible for low cholesterol in Eskimo blood on traditional diets, but linoleic acid based fats do this also, and human fat is 10 % linoleic (lard 6 %).

20. On p57 was written that pork and dairy fats are very saturated. Actually, the former is about 40 % saturated and the latter 62 %. See Know Your Fats.

31. On p66 a crack was made about an unbalanced diet. Since some populations have survived for centuries on all animal diets, a balanced diet turns out to be a fantasy designed to raise carb consumption despite a lack of evidence that there is any requirement for carb at all in the human diet. See the Ottoboni’s book. Also, there is vitamin C in fresh meat, so worrying about scurvy was not justified.

32. On p68 the claim that fats and carbs make up over 80 % of the calories in every diet consumed by humankind is absurd, based on traditional Eskimo and Masai diets, among others.

33. On p 69: “so fat gives foods their distinctive aromas and tastes.” What about the odor of fresh bread, hot marshmallow, citral and neral in fruit, licorice, mint, wine, beer, etc.? These are not fats.

34. On p71 the statement that the increased energy in fats compared with carbs or proteins comes from their dense packing. The no-nonsense explanation is that carbs and proteins are partially oxidized because they contain oxygen and nitrogen, so oxidizing them the rest of the way to CO<sub>2</sub> and water gives less energy than the all-hydrocarbon parts of fats.

35. Also on p71 is the fantasy that unsaturated fats contain less energy than saturated because a double bond contains 10 % less energy than a single bond. My old physical organic chemistry text has 80 kcal/mole for the C—C single bond, and 142 kcal for the C=C double bond, a far cry from Allport’s fantasy. And the energy available on digestion is given above “much less from mostly saturated fatty acids.

36. On p74 the slow melting of butter is not due to the melting points of the fatty acids in its triglycerides (fats), but the different melting points of the fats themselves.

37. On p78 and elsewhere Allport wrote of the high concentration of arachidonic acid and DHA in brain and nerve tissue. Her conflicted position on cholesterol is shown by her refusal to mention that the highest concentration of cholesterol in the body is in the brain. But on p148 she writes that cholesterol is a necessary component of brain function

39. On p88 the fantasy begun by Ancel Keys that overconsumption of fats was the major health problem in the West was reiterated without any of the evidence from the books cited above that this was false.

40. On p89 domestic cow fat is said to be only 2 % unsaturated. Know Your Fats says it is 42 % unsaturated, and the CRC Handbook of 1983-4 says 52 % unsaturated.

43. On p100: “In men, it [aspirin] cuts mortality from heart disease by more than half.” This is one of the most flagrant misquotations of the aspirin findings I have yet seen. Actually Bufferin cuts the



number of non-fatal heart attacks by half with no change in mortality, and plain aspirin maybe by 1/3, also with no change in mortality.

44. On p104 a common omission characteristic of drug ads is found: “...mortality from heart disease goes up linearly with the increase in omega-6s...” does not include the crucial all-cause mortality, without which no amount of lowered mortality from some single cause has any meaning for action.

46. On p107 Allport implies that the incidence of heart disease in the US has not changed from 1909-1985. In Heart Frauds by Charles T. McGee (2001), p59, heart disease death rate was shown to have changed from 15/100,000 in 1910 to a peak of 331/100,000 in 1968, then falling to 194/100,000 by 1990. McGee shows that this drop corresponded well with an increase in vitamin C intake.

47. On p109 there is a disconnect between Allport’s generalization that seeds contain mostly omega-6s and leaves mostly omega-3s. Both canola and linseed oils are high in omega-3s which are in their seeds.

49. On p114 it was written that certain Nigerians with high omega-3 levels, presumably in blood, ate “a lot of greens” and most fat was palm oil, high in saturated fats, meaning that sat fats (and the other half of palm oil, the monounsaturated oleic acid 18:1\*9) do not interfere with the transformation of linolenic acid from those greens into DHA and EPA. OK, then, why did she not relent on her anti-sat fat position?

50. On p118, Allport actually said that “...small amounts of saturated fats are better than large amounts of omega-6s.” This shows her conflict: such small amounts would require much less total fat consumption, and the value of this move has no positive evidence.

51. Also on p118 and 142, Allport minimized the dangers of trans fats, being totally unaware that controlled tests in human subjects showed serious adverse effects. Risérus U, Abner P, Brismar K, Vessby B (2002a). “Treatment with Dietary trans-10cis-12 Conjugated Linoleic Acid Causes Isomer-Specific Insulin Resistance in Obese Men with the Metabolic Syndrome.” Diabetes Care 25(9):1516-1521; Risérus U, Basu S, Jovinge S, Fredrikson GN, Arnlov J, Vessby B (2002b). “Supplementation with Conjugated Linoleic Acid Causes Isomer-Dependent Oxidative Stress and Elevated C-Reactive Protein. A Potential Link to Fatty Acid-Induced Insulin Resistance.” Circulation 106:1825-1929.

52. On p126 in an otherwise good discussion of bad aspects of leaky membranes, a bad simile was used: “...we all know what happens to engines when they run constantly...” Do we? It was found by the 1960s that most car engine wear occurred immediately after startup from cold, while there was no measurable wear during constant running at moderate rpms.

54. On p129 Allport notes that there was not a single known case of diabetes (no type given) in Eskimos of the Umanak district in 1971 on their traditional diet. The implication is that omega-3s did the job, but no airtime was ever given to the zero-carb diets.

55. On p134, again, diabetes (type not given) and obesity were equated to caloric intake, not, as so often demonstrated, carb intake.

56. On p135 one of the classic objections to the Atkins low-carb diet is given “that it causes kidney and liver failure due to higher protein consumption. This was twice false, since no such damage was seen by Atkins in his patients who did raise protein intake; but more important, the missing carbs

are ideally to be replaced by fat, which has no glycemic index, unlike protein with a GI of 20 or so.

58. On p139 the blanket recommendations to eat “lots (and lots) of fruits...” is very destructive to diabetics (both types) and pre-diabetics. Many kinds of fruit are high in sugars. Barry Groves, PhD, Nutrition, Richard K. Bernstein, MD, and William Cambell Douglass, Jr., MD, have avoided fruit for decades and are all in their seventies in good health.

59. Also on p139 the advice to avoid any high omega-6 oil is OK, but the advice to minimize butter is not. Not only is there no danger in butter, but its medium-chain fatty acids have antimicrobial properties. See Know Your Fats, above.

60. On p140 and 142 the advice to eat a wide variety of fish does not account for differences in EPA and DHA content, or differences in mercury content. Benefits of supplements of EPA and DHA have been shown in controlled trials.

61. On p143 saturated fats come in for another absurd hit, this time with the epithet “solid”. Phew! Of course lard and tallow are not solid at body temperature! And they do not cause heart disease: Ravnskov U (1998). The Questionable Role of Saturated and Polyunsaturated Fatty Acids in Cardiovascular Disease. Journal of Clinical Epidemiology 51:443-60.

62. On p144 Allport reverses herself from her position on p138 and gives amounts of EPA and DHA supplements to take daily. She wisely cautions against supplements containing omega-6s since we get too much of them anyway. But she says that strict vegetarians need more linolenic acid as though they are not getting it from eating massive amounts of leafy vegetables.

65. On p149 a study within the Physicians’ Health Study (the one with the misquoted and misinterpreted info on aspirin) there was a finding that 94 of 15,000 of them who experienced sudden cardiac death were 90 % less likely to do so if they had the highest omega-3 levels in their blood. First, in the absence of all-cause mortality, you cannot tell whether high omega-3 levels did any overall good. Next only 0.6 % of the total or 1 in 170 had this cause of death, so the benefit is pretty small. Dietary intake of omega-3s was not even given.

66. On p151 it is not clear whether all omega-3s in blood are measured by the commercially available tests, or whether the individual ones are assayed and reported. If EPA and DHA levels are not reported, there will be little if any value in the tests.

67. On p192 Allport wrote that rapeseed oil “has a high alpha linolenic acid content.” My CRC Handbook of 1983-4 lists 1 %! Such is the result of confusing rapeseed and canola.

You can see from the numbering I’ve omitted some of them; for the full list, contact Dr. Kauffman at kauffman at bee dot net . For more on health misconceptions, read his book [5]Malignant Medical Myths, Infinity Publ., West Conshohocken, PA, 2006. ISBN 0-7414-2909-8 326 pp. \$24.95.

Science, especially health science, is so important yet it is remarkably hard to learn about. Part of the problem seems to be that those who can write well (such as journalists) don’t understand the science and those who understand the science (such as scientists) can’t write well. (Another part of the problem, as Veblen pointed out, is that among academics to write clearly is low status, to write “mumbo-jumbo” is high status.) This is why I like [6]Leonard Mlodinow’s work so much; he writes well and understands the science.

But don’t misunderstand this post. The Queen of Fats is an excellent book. The most impressive and hopeful thing

about it is that it was written by a non-scientist – in other words, that a non-scientist was able to figure out that the common neglect of omega-3 fats was seriously wrong. (Omega-3 fats receive almost no attention in *Eat Drink and Be Healthy* by Walter Willett et al. for example. There is no RDA for them.) I like to think it's some sort of turning point that non-scientists have become able to grasp how wrong the health establishment can be; another example is Taubes's *Good Calories, Bad Calories*.

More. The list of errors unfortunately omitted some general comments:

The Seven-Country Study by Ancel Keys that was so influential (cholesterol and saturated fat being "bad") was not presented as the fraud it was. For a great description, see *The Great Cholesterol Con* (GCC), by Anthony Colpo (2007). For an honest Fourteen Country Study see another GCC of 2007, this one by Malcolm Kendrick, in which Kendrick showed that the 7 countries with the lowest saturated fat consumption had the highest mortality from heart disease (450/100,000 per year), while the 7 countries with the highest saturated fat intake had the lowest mortality from heart disease (170/100,000). See also *The Cholesterol Myths* by Uffe Ravnskov, 2000. Low-carb high-fat diets were ridiculed from start to finish as destructive and a fad, despite overwhelming evidence that they are not. See Nielsen JV, Joensson EA, Low-carbohydrate diet in type 2 diabetes. Stable improvement of bodyweight and glycaemic control during 22 months follow-up, *Nutrition & Metabolism* 2006;3(22) doi:10.1186/1743-7075-3-22. While Allport may be correct in claiming that omega-3s will prevent or reverse diabetes (and she is not always clear on which type), the evidence is clear that type-1 is much more easily controlled with a low-carb high-fat diet, and type-2 may be controlled so well on a low-carb diet that no medication is needed. See *Dr. Bernstein's Diabetes Solution*, rev. ed. by Richard K. Bernstein, MD, Boston, MA: Little, Brown, 2003. So Allport's recommendation to eat large amounts of fruit (p139) could be a disaster for diabetics. Eskimos are often obese albeit healthy, so omega-3s for weight loss seems too much to claim. And she seems unaware of the prevalence of grain allergies. See *Natural Health & Weight Loss*, Barry Groves, 2007; *Know Your Fats* by Mary G. Enig, 2000. Also Allport seems to equate eating linolenic acid as the equivalent of eating EPA and DHA in fish, and does not recommend supplements of the latter two. Neither idea had any supporting evidence presented. Nor was the ideal range of omega-3 intake given. A study of the conversion of radioisotopically-labeled linolenic acid to EPA in humans showed poor conversion, and even poorer conversion to DHA. Adequate intakes of pre-formed DHA are needed for good health. See Burdge G, alpha-Linolenic acid metabolism in men and women: nutritional and biological implications, *Curr Opin Clin Nutr Metab Care* 2004;7:137-144.

1. <http://www.amazon.com/Queen-Fats-Omega-3s-Removed-California/dp/0520253809/ref=sethrobertand-20>
2. <http://www.blog.sethroberts.net/2008/01/28/interview-with-susan-allport/>
3. <http://www.blog.sethroberts.net/2008/07/20/nutrition-and-physical-degeneration/>
4. [http://www.cbc.ca/storyview/CBC/2002/10/21/Consumers/mercuryfish\\_021021](http://www.cbc.ca/storyview/CBC/2002/10/21/Consumers/mercuryfish_021021)
5. <http://www.amazon.com/gp/product/0741429098/ref=sethrobertand-20>
6. <http://www.its.caltech.edu/~len/>

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Varangy (2008-07-22 09:05:44)

*(Omega-3 fats receive almost no attention in Eat Drink and Be Healthy by Walter Willett et al. for example. There is no RDA for them.)* Seth, I think we can agree that RDAs are complete and meaningless fiction produced of political machinations. The more the government stays out of nutrition 'science'/public policy, the better off we are. Witness the low-fat mis-information cascade (RDAs being directly tied to) promoted relentlessly by the government. Just like cholesterol markers are largely meaningless (again, subject to political and biased processes i.e. statin suppliers), RDAs are insidious because of their strong

fooling effect — they are printed onto every product and determined by government 'science' ergo they MUST be right. Yeah right...

seth (2008-07-22 09:18:15)

"Complete and meaningless fiction"? That goes much too far. The reports issued to support each set of RDAs have convinced me that they are valuable. But there certainly is lots of lobbying as well.

Mike Kenny (2008-07-22 09:56:27)

It seems the more scientific progress affects our everyday lives, we'll need good writers to explain to us what is going on in terms we can understand. At some point will that be possible I wonder? I think of the health debate, but also the global warming debates and public policy generally.

Tom (2008-07-22 10:03:53)

Seth, you'll be interested in the following review of Taubes, and in Taubes' rebuttal. <http://www.proteinpower.com/drmike/weight-loss/gary-taubes-responds-to-george-bray/> Rebuttal (pdf file): <http://www.proteinpower.com/drmike/wp-content/uploads/2008/07/taubes-response-to-bray.pdf>

Varangy (2008-07-22 10:09:17)

@seth I don't think so – RDAs have completely and entirely vilified fats for one small example — we may not be getting enough saturated fats in our diets — whatever value they may have is undermined by the false confidence they promote.

Varangy (2008-07-22 10:18:50)

*Part of the problem seems to be that those who can write well (such as journalists) don't understand the science and those who understand the science (such as scientists) can't write well* I think you overlook scientists who don't understand scientific methodology or are not scientific, either intentionally or unintentionally — and that is what makes NNT's book valuable BTW. Ostensible unbiased scientists have become High Priests in our society today — the masses and the media have all fallen for the argumentum ad populum and argumentum ad verecundiam. Believe me b/c other scientists ("experts") agree with me! You hear over and over and over again. As Crichton has pointed out many a time — consensus is not an argument for AGW. Semmelweis is the exemplar. Back to AGW — skeptics are reviled! Skepticism is the basis of the scientific method. Irony, irony and more irony.

Cyan (2008-07-22 11:14:05)

Point 35 is wrong – unsaturation does reduce the available energy in a hydrocarbon. Kauffman's mistake is that unsaturation replaces H-C-C-H with C=C; he's neglected the energy of the C-H bonds. But Allport is wrong too about the "10 % less energy" statement – I can generate neither a true nor an erroneous calculation that would give that result.

chris (2008-07-23 13:42:45)

Elevated mercury levels are of great concern, however safe seafood is available. For the first time there is a company that doesn't rely on only the age or location of the fish caught to claim that it is lower in mercury than FDA action levels. Safe Harbor guarantees that the fish it certifies is lower than FDA action levels because it tests every large fin fish released under the Safe Harbor brand. For the first time I am 100 % confident about the safety of the seafood I eat and buy for my family. All their mercury certification levels are available online, along with details about their testing process and where their product is available at <http://www.safeharborfoods.com> Check them out and enjoy the health benefits of seafood without worry!

maximumgravity1 (2008-10-22 19:00:46)

I appreciate Chris' comments about high levels of Mercury and other heavy metals in seafood. Having seen countless fishing places disappear on the Eastern Shore of Maryland over a span of about 20 years due to "contamination", it is disheartening to know that some of our best sources of Omega-3's are being corrupted by environmental factors. It gets even more depressing knowing that if we at least catch our own, we know something about the streams, oceans or rivers we pull the fish from.

Although it is a bit naive to think that one location on the shore is contaminated, and that 5 miles up the road it is "clean" enough to eat the same fish that swim through the same waters. Without trying to sound like a sponsored plug or shameless self promoting, I am glad to finally find a supplement that is highest in concentration of any omega-3's on the market, and due to their process of extracting the oils almost eliminates all traces of mercury (almost - not quite). The extract comes from the Green-Lip Mussel in New Zealand, which is just recently finding its way on the scene as a very powerful source of concentrated Omega-3 (<http://www.mymoxor.com/ProductScience.aspx?ID=maximumgravity1>). This company combines the Green-Lip Mussel with grape seed extract for high levels of antioxidants as well. Here is a purity test of the Hoki Stick oil (the carrier in the gel)<http://www.naturalnews.com/moxor/HokiOilCertificate.jpg> Anyway, the point without seeming like I am stepping on your thread with plugs for products is to mention that it is encouraging to see science finally starting to advance in areas that give us the ability to eat healthy foods without fear of becoming victims of our environment. Some great articles on GreenLip Mussel oil <http://www.mymoxor.com/ProductArticlesandResearch.aspx?ID=maximumgravity1> Good info on your blog - keep it coming.

DonH (2008-12-15 08:51:08)

Joel's list of "errors" indicates that he didn't actually read the book for what it is, a history of the investigation into fats as well as how we came to be at the point we are at now. It is not meant to be a scientifically critical review of the research. The errors of early assumptions become obvious as the book progresses. The book would be unapproachable by her intended audience had she relentlessly cited all of the studies that Joel offered as proof of errors. Further, I don't understand his assessment that Alcott is "conflicted". She doesn't set out to prove anything. If she is conflicted, it is a reflection that much of the nutritional advice has been conflicted over the years. The thing that I liked most about her book was that it didn't relentlessly try to push a point of view. She told the story of how we arrived at our current knowledge of dietary fat. The history has been, and continues to be, full of conflicting views and advice.

Ronald Pottol (2009-02-02 22:27:51)

Infant formula does have requirements for omega 3s, so that is a start.

So, what about writing cases that promote inquiry and collaboration? · MyPlant IT Blog (2010-07-15 07:04:57)

[...] Book review to the book "The Queen of Fats": <http://blog.sethroberts.net/2008/07/21/errors-in-the-queen-of-fats/>  
[...]

### **City of Berkeley Economics: The Value of Snobbery (2008-07-23 06:38)**

The City of Berkeley, which Jane Jacobs called a "pretentious suburb," isn't doing well economically. There was a Barnes & Noble downtown, a kind of anchor store. It closed. There was a Ross downtown. It closed. Chain stores don't do well in Berkeley. One downtown corner has gone through several renters, including Gateway Computers, Cody's Books, and L.L. Bean, in just a few years. The main reason I go to downtown Berkeley is to take BART to San Francisco.

My neighborhood, North Berkeley, is doing much better, although there are two empty storefronts and the Starbucks will close. Elephant Pharmacy, a New-Agey kind of pharmacy ("the drugstore that prescribes yoga"), has been successful and has started opening branches in nearby cities. (It's a good place to shop, too. Yesterday I bought some whole nutmeg there.) The Cheese Board, a worker's cooperative, with a great selection of cheese, has done a good job adding pizza sales to cheese sales.

The overall economic record of the neighborhood is staggering, since it includes the original Peet's, the inspiration for Starbucks, and Chez Panisse, the most influential restaurant in the world. It also includes the first Papyrus store. I don't drink coffee, and didn't start drinking tea until the Shangri-La Diet, so I never shopped at Peet's until recently. A friend, however, has been going there almost its entire history. He says that when Mr. Peet died, the workers became

a lot friendlier. Before that they had a snobbish attitude. Some workers from Peet's started a similar business in Seattle, which they called Starbucks. It was very successful and they sold out to Howard Schulz, who greatly expanded it.

Was Mr. Peet's snobbery "bad"? Well, it – plus the corresponding attitudes of Berkeley residents – allowed him to develop a unique business. After that business was developed, that attitude could be shed and the whole thing could be moved to a place (Seattle) where its business potential could be revealed. The shift of ownership allowed the idea to become separated from the "big business is bad" notion (which was helpful at first) and launch a thousand Starbucks. (An excellent company, by the way, that not only provides me a place to work but also produced *How Starbucks Saved My Life*, a very good and persuasive book.) This is yet another tiny illustration of my theory of human evolution, how it all started with hobbies which eventually became businesses. Peet's wasn't a hobby, but it was hobby-like in its expression of the owner's attitudes. It was far more a labor of love than most businesses. There are other examples. Survivor is to The Real World as Starbucks is to Peet's. The Omnivore's Dilemma is to Slow Food as Starbucks is to Peet's.

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david (2008-07-23 07:30:09)

"The Omnivore's Dilemma is to Slow Food as Starbucks is to Peet's" I must be dense. I don't get it.

seth (2008-07-23 07:43:00)

The Omnivore's Dilemma was a big commercial success built on what you might call the intellectual capital of Slow Food. Just as Starbucks was a big commercial success built on what you might call the intellectual capital of Peet's.

Brandon W (2008-07-23 10:14:57)

I may have written of this in a prior comment. One reason Berkeley business may be struggling is the fact the City gives out tickets for not having a front license plate ( \$25 fine). I received one in front of the Newman Center a few months ago while attending a funeral. I understand if the meter person is already writing a me a parking ticket but my meter still had time on it when I got back to the car. Basically, the meter person was looking for cars with no license plates as a revenue stream for the city. When I sent my payment in for the fine, I sent a letter and copied Peet's coincidentally enough as we were planning on getting coffee after the funeral. The letter stated instead of shopping in Berkeley waiting for the reception, we got out of there. I love Berkeley but I will never go into the city again if I do not have to (or to attend a football game). Brandon

Aaron Brown (2008-07-23 10:42:52)

"How Starbucks Changed My Life" -> "How Starbucks Saved My Life"

Tom (2008-07-23 13:18:31)

How Starbucks Saved My Life was really good. Tom Hanks bought the rights and may star.

seth (2008-07-23 13:51:53)

thanks for the correction, Aaron

Bonnie (2008-07-23 15:20:17)

I work at Elephant Pharm, and stumbled across your blog b/c I get a daily Google Alert for all things "elephant pharm". Thanks for the shout out! I love Elephant Pharm, and not just because I work there... I work there because I love it! :)

mike kenny (2008-07-23 17:28:13)

this post reminds me of a post at overcoming bias regarding how people enjoy unpopular or unrewarding (i guess in a monetary sense) hobbies: <http://www.overcomingbias.com/2008/04/sincerity-i-lik.html> i guess the point of the overcoming bias post is money can complicate a certain authentic communitarian experience which is valuable to people.

### **Slow Weed (2008-07-24 09:54)**

Guthrie said that the quasi-legal status of smaller growing arrangements, combined with consumers'™ preference for potent, high-maintenance weed, has shifted the balance of the pot business away from large-scale farms. "There's a lot more people doing little scenes," he said. The welter of laws pertaining to medical marijuana in California has offered careful operators like Guthrie the best of both worlds: prosecution for growing and selling has become much less likely, while federal busts and seizures keep prices high.

Too bad David Samuels, the author of [1]this well-reported article, doesn't use the term artisanal marijuana. Artisanal cheesemakers, etc., might learn something helpful from this. For example, maybe it helps that raw milk is slightly illegal. After he wrote Fast Food Nation, Eric Schlosser wrote about underground economies. Maybe he'll eventually write Slow Food Nation.

A friend of mine spent a year growing pot in her California basement in response to the economic trends described in Samuel's article. She stopped when her business partner became too unreliable.

1. [http://www.newyorker.com/reporting/2008/07/28/080728fa\\_fact\\_samuels?currentPage=all](http://www.newyorker.com/reporting/2008/07/28/080728fa_fact_samuels?currentPage=all)

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mike kenny (2008-07-24 18:03:28)

Hm, it seems like there's a trend of expansion and contraction. People start off developing marketable ideas as autotelic hobbies, then they or someone else popularizes their product, and then the market evolves such that new hobbies can be supported, refining what exists. Someone who's interested in plants discovered the drug-element of marijuana (or coffee to reference your previous post), a subculture develops of enthusiastic hobbyists, then the drug gets popularized and mass-produced, and then a demand for a more refined form of the product develops and new hobbyists breed newer forms of the drug. Are we, through this process, becoming more and more refined aesthetes?

### **Interview with Bruce Gray, Web-Savvy Sculptor (part 2) (2008-07-25 09:14)**

Bruce Gray is a Los Angeles sculptor with [1]an impressive website.

ROBERTS Do you know how art galleries have been affected by the web?

GRAY They definitely don't like it.

ROBERTS How can you tell?

GRAY I've heard them complain about it. They have complained about it a lot. Some galleries won't even represent you if you have a website. They also don't like you to list your prices, because they will usually be asking for twice the money.

ROBERTS Yeah.

GRAY But that's up to the individual gallery, and it depends how bad they want you. The ones that have the very tight rules on that are usually the galleries that are really hard to get into anyway. But let's face it, if it's Gagosian or someone who could triple my prices and turn me into an overnight sensation, then hey, I'll take the freaking website down, but until that happens, I need something to keep the bills paid and the web is definitely doing it. Like I've told all my artist friends, every single artist in the world should have a website.

ROBERTS Yeah, and what will the world be like?

GRAY Another great thing is that it's a portfolio that you have with you wherever you go. It's very easy to show people my work at their homes, or even through my iPhone. I keep 300 dpi images up there too on a hidden page. So say I'm out of town, and I get a call that someone needs a large image for a magazine article, I can just give them that link and I don't even have to send them anything.

ROBERTS Does this mean that people will be able to buy art at lower prices because the middle man is cut out?

GRAY It does, absolutely.

ROBERTS Are there any signs of this actually happening? You're bringing people in to the art market because the prices are lower.

GRAY Of the artists I know, that's basically what people have been telling me. Obviously when you're going directly to an artist's studio, it's kind of the same thing as buying through the internet. You're cutting out any gallery or dealers in most cases, unless people have signed on for one of those deals where you're supposed to give your dealer a percentage even if you make your own direct sales, which I just don't understand why anybody would sign on for that, but I do know people who have that, and they generally get some kind of stipend or something, but I don't know. It doesn't look like a good deal to me.

ROBERTS It sounds like there should be new customers in the art world, and I wonder if there are any signs of that.

GRAY The thing about galleries that you can't escape is they are going to promote you, at least locally, better than you can yourself. And they give you a certain credibility factor. Obviously someone who's been around as long as I have, I have enough credits on my biography where people know that I'm legitimate, so I don't really need to go out there and beg to get in a bunch of shows just to beef up on the lines on my biography. To get in a cool or interesting show, that's still a good thing to do for anybody and I still do that when I get asked, but I just don't have to do it as much.



ROBERTS How is the traffic to your website changed over the years?

GRAY It's pretty damned good. It varies a bit, but it gets a lot of traffic—thousands and thousands of people looking at it every day.

ROBERTS Thousands of distinct visitors per day?

GRAY Yeah. It has been for a long time. Not everybody buys stuff, but a lot of times people, when they purchase art, it's a decision that can take years to make. They may see something and like it, but it actually takes them several years to commit to buying it. I've had that happen a whole bunch of times. People say, "I really want that, and I'm getting that some day," and you're like, "Oh yeah, yeah, I've heard that," and five years later they come back and say, "Hey, I'm getting that!" It does happen.

ROBERTS Have you measured a visitors per dollar or hits per dollar—have you ever computed that index? If you make \$10,000 and it requires a million hits?

GRAY I've never really figured that out.

ROBERTS I wonder how that ratio would change over the years.

GRAY Well, I take all the web statistics with a grain of salt because I don't think any of them are super accurate. If you go to the several different groups that watch that kind of stuff, they're all going to give you a different statistic—whether it's how many sites link into your site, or anything else. If I look online for that kind of information, how many people link to my site, every different page that will give you any of that kind of reference will have a completely different number. You have to just use it like a scale, you just kind of go, "Okay well it's going up at least."

ROBERTS And it might be going up because of robots.

GRAY Robots just basically spider your information and go and update new stuff; that doesn't really represent hits the way that an individual coming in will.

ROBERTS How does the number of visitors to your site compare now to a year ago?

GRAY I figured it's just gradually getting better and better. Every year I have a lot more information on there, which attracts new people in, say, maybe a TV show that I had something on—that might attract in a little bit, or like I had some stuff on this Gene Simmons show a couple of years ago and I just noticed recently that they're using one of my photos from the stills from that on this Gene Simmons site, so all of a sudden I'm getting a bunch of hits in now from that. Each little thing that you add, each little accomplishment, or book appearance or gallery show—all that stuff adds in another layer of keywords and things that people may be searching for. That's all kind of a weird world how that works, too, because for example—Gene Simmons again—he's obviously a very famous rock star guy and if you look up his name, I'm not going to get a gazillion hits because I have Gene Simmons's name on my website, because when you're talking about someone who is super-famous, if their name is on your site—as a collector for whatever reason—there's so much other material about them already, that you are so way down in the bottom of the relevancy that if you get one or two hits a week because of their name, that would be about average. Trying to

kind of beef up your website by putting in a lot of names like that wouldn't really do anything.

[2]Part 1.

1. <http://www.brucegray.com/>

2. <http://www.blog.sethroberts.net/2008/07/19/interview-with-bruce-gray-sculptor-part-1/>

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VNM (2008-07-26 08:41:45)

GOgosian should be GAgosian.

seth (2008-07-26 11:05:37)

Thanks for the correction. I thought I had made sure that was correct.

### **Benfotiamine and Self-Experimentation: Surprising Results (2008-07-26 23:03)**

Tim Lundeen, whose [1]fish oil/arithmetic results impressed me, recently tried [2]taking benfotiamine (a fat-soluble version of thiamine) to reduce damage caused by high blood sugar. Things did not go as he expected:

I bought 100mg capsules from Life Extension Foundation, and starting taking 1 per day in the morning with breakfast. Over the course of 3-4 weeks, the two small dead spots on the bottoms of my big toes started to feel normal, and I didn't notice them anymore when I went walking. My energy and general mood were good, and my fasting blood sugar readings were basically unchanged, staying in the 85-95 range. Scores on my daily math speed test were good, possibly slightly better than before.

Unfortunately, I started to gain weight, gaining about 10 pounds over the 10 weeks I took benfotiamine, without any other major changes to my regimen.

Weight gain was not a known side effect. For example, [3]a 2005 study in which 20 patients received the drug for three weeks reported: "No side effects attributable to benfotiamine were observed." This is on a web page that is trying to sell benfotiamine but there's nothing unusual about the situation. Studies of drug efficacy are almost always done by drug companies that want to sell the tested drug. What is the term for such a side-effects reporting system? The fox guarding the hen house, perhaps?

It isn't easy to measure side effects in conventional studies of treatment vs placebo. If you measure the rates of 100 possible side effects, and use a 5 % level of significance, one or two true positives will go unnoticed against a background of five or so false positives. So a drug company can paradoxically assure that they will find nothing by casting a very wide net. And there is a larger and more subtle problem that statistics such as the mean do not work well for detecting a large change among a small fraction of the sample. If soft drinks cause 2 % of children to become hyperactive and leave the other 98 % unchanged, looking at mean hyperactivity scores is a poor way to detect this. A good way to detect such changes is to make many measurements per child. Many did-a-drug-harm-my-child? cases come down to parents versus experts. The experts are armed with a study showing no damage. But this study will inevitably have the weaknesses I've just mentioned – especially, use of means and few measurements per subject. The parents, on the other hand, will have used, informally, the more sensitive measurement method.

For these reasons, I suspect drug side effects are woefully underreported. [4]Here is the story of a child with a neurodegenerative disease that might have been caused by "the Gardasil vaccine (or perhaps some other vaccine with key similarities, such as an aluminum adjuvant)." Her parents are trying to find other children with similar symptoms.

1. <http://www.blog.sethroberts.net/2007/02/16/omega-3-and-arithmetic/>

2. <http://noozit.com/article/.ee82fca>

3. <http://www.raysahelian.com/benfotiamine.html>

4. <http://www.jenjensfamily.blogspot.com/>

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peter (2008-07-27 10:04:14)

Mr. Lundeen appears to have a mild case of diabetic neuropathy. This would seem to call into question the validity of his prior findings relative to consuming DHA. (What would work in a diabetic might not work or work as well in an individual w/o that condition). He also might consider checking out Sangamo BioSciences, Inc. treatment for this condition, currently in phase II; perhaps he could enroll in the phase III, which is scheduled to commence next year (although his condition may not be severe enough).

seth (2008-07-27 10:45:54)

Peter, I don't follow your reasoning here. "What would work in a diabetic might not work or work as well in an individual w/o that condition." Why do you think diabetics might metabolize DHA in the brain differently than non-diabetics? DHA plays a large structural role in the brain, glucose does not.

peter (2008-07-27 11:38:46)

i don't know how a diabetic metabolizes DHA, but i know that it's a serious condition that could skew the results. my sense is that this feature of a study would be criticized by reviewers. (altho i recognize that your experience tends to be consistent with his).

seth (2008-07-27 19:28:05)

Thanks for explaining that. My flaxseed oil results, and Tim's, have a very simple explanation: We don't eat nearly enough omega-3. There's no reason to think diabetics need less omega-3 than non-diabetics.

MT (2008-07-28 02:58:12)

What is the normal variance in his weight? Would it be worth another trial to see if the weight gain was related to another variable changing? Would the weight go away after a month off, and return after a month back on?

seth (2008-07-28 04:37:48)

I'd guess that if you looked at Tim's weight at 10-week intervals you'd see it vary by a pound or so on average and that a 10 pound change would be very rare.

elsa961 (2008-07-28 09:14:33)

don't use drugs only natural products and food!

Stephen M (Ethesis) (2008-07-29 18:59:20)

That was very interesting. I had no idea they were manipulating data like that. How did his weight go when he went off the drug? What about the dead spots?

Seth's blog » Blog Archive » More about Unreported Side Effects of Powerful Drugs (2008-07-29 22:57:42)  
[...] Benfotiamine and Self-Experimentation: Surprising Results [...]

Seth's blog » Blog Archive » Unreported Side Effects of Powerful Drugs (part 3) (2008-08-07 21:58:09)  
[...] Benfotiamine and Self-Experimentation: Surprising Results [...]

cynthia (2011-10-06 00:09:57)

The b vitamins supposedly work together. It would probably be a good idea to also take a b complex with the benfotiamine. I probably have a deficiency, but I am taking benfotiamine a b complex several times a day, and my energy is up and my pants size is down. Also go by your belt size, not the scales. It could be that the benfotiamine is making you more muscular.

### **Interview with Bruce Gray, Web-Savvy Sculptor (part 3) (2008-07-28 21:13)**

ROBERTS What mistakes have you made with regard to the web?

GRAY I remember years ago I went to a company that was one of those web search enhancement companies and you were supposed to pay them a monthly fee and they would beef up your meta tags and stuff like this, and give you some advice on how to do the stuff, just tweaking out your website to make it more optimized. I was looking at some of the stuff they do, and one of the things was putting in these pages, your background pages, all kinds of meta tags, like keywords in white on a white background—that was kind of technique—a lot of people still use that, but it's very highly frowned upon in the search engine world and if they catch people doing that kind of thing, they can definitely drop you down on your rankings status there and when I read that, I was like, "Wow, this is the company I'm paying to do this for me and they're doing something that the search engines don't like you to do," so I dropped them. I want to be legitimate. I don't want anybody to have any reason to take away any of my rankings status there.

ROBERTS Are there other artists who have gone into the web more than you? You're by far the farthest in of anyone I've met.

GRAY I don't know anybody else who has remotely the kind of website detail and depth that I do. I just try to put up, literally, almost every piece I've made that I can at least get a photo of. My website is way more in-depth and detailed than any other artist I know, by far.

ROBERTS Yes, that was my impression.

GRAY That helps, obviously.

ROBERTS Yes. Has anyone from the art world come and interviewed you about your web strategy?

GRAY I've definitely been asked about it quite a few times, actually. There was a book that came out years ago about selling art without galleries—I got interviewed about that kind of thing. Actually, almost anytime that I get asked about my sales, I start talking about the web and everybody gets very interested in how I'm doing it.

ROBERTS Has there been articles focused on that particular topic—you and the web?

GRAY No.

ROBERTS What else have you learned besides donâ€™t go with that optimization company?

GRAY That you basically just have to keep up with it, keep it fresh, donâ€™t make it too complex. I canâ€™t tell you how many times, you know, Iâ€™m pretty web savvy, and I go to websites all the time that you get on to them and theyâ€™re so slow loading and when they do finally load, itâ€™s like playing that game Myst to even try to find the buttons to go to anything. Itâ€™s almost more of a showcase for the web designer more than it is for the company that theyâ€™re trying to represent and I think thatâ€™s a huge mistake, because people just get too lost in that, and I think thatâ€™s a mistake thatâ€™s extremely commonplace.

ROBERTS You mean to have some kind of Flash animation, or something?

GRAY Yes, they have just too much crap. Itâ€™s too complex—you canâ€™t even find the buttons, the navigationâ€™s almost impossible. To even find how to make contact, or even get to the next page, you have to mouse all over the images and try to find what is the button, and these are gigantic companies and stuff. Iâ€™m just always amazed that they do things like that. And the other reality is that youâ€™ve got to think who is looking at your website and whoâ€™s your market. In my world—in the art market world—my clientele tend to be older and very wealthy, 50s to 80s, mostly retired or with very hefty bank accounts, and the one thing that they donâ€™t know is computers. Most of these people are not that computer savvy and if they get to your webpage and they canâ€™t navigate around, or if they get to your webpage and it says, â€œYouâ€™re going to have to download the latest version of Flash,â€ and this, that, and the other thing, theyâ€™re going to be like, â€œOh, well the hell with that. What the hell is a download? Whatâ€™s Flash?â€ Seriously, I mean I have very smart people that just donâ€™t have any reason to be that web or even computer savvy. They completed most of their career before everybody really got into computers that heavily, so they just donâ€™t know them that well. So you have to make it—at least make the navigation—pretty simple, and no major drama to at least get to the home page. The fancy Flash opening thing in my opinion is just only a showcase for the Flash or the web designer.

ROBERTS I would imagine artists like yourself donâ€™t have a lot of Flash on their pages.

GRAY Well, a lot of them do.

ROBERTS Really?

GRAY Iâ€™m all for doing that kind of thing, too, but if I wanted to do that, I would have it as the secondary page. Have the home page where you can have the two buttons, because thatâ€™s what a lot of people do. Go to the HTML version or go to the Flash version. At least if you separate it off on your home page, then people at least have the option before they get stuck in this window of a ten minute download.

ROBERTS What are your hopes—do you have other things youâ€™re hoping for out of your webpage, your web presence, that you havenâ€™t gotten yet? Or is it working pretty well?

GRAY Well, itâ€™s been working pretty well. I just basically want it to continue to grow and get better. And it gradually is. Every year I do some new things and it adds a little bit more—new museums and things linking in—the more of that kind of stuff, the better.

ROBERTS When you say you do new things, you mean you add links or you add whole concepts or categories?

GRAY I mean I add the links any time that I'm on television or any books, magazines, weblogs or anything—all of that stuff. I link to them and they link to me, and it's just another notch in the credibility factor.

ROBERTS I see, so it's an ongoing process of trying to increase linkage and so forth.

GRAY Right. But that is the most important credibility factor in the web search engine world these days—good qualified links coming in to your site. Links that go out don't mean anything; you can have six million of them and they don't care.

ROBERTS Yes, I see what you mean. Is there anything about you and the web we haven't asked about?

GRAY The one other thing that I think I should mention is that there is other ways of enhancing your web experience aside from just your own webpage and that's things that are free, like My Space or LinkedIn for instance, are classic examples. They are very searchable in Google and they rank the information on these sites quite highly, so it's good to have supplemental ways of people seeing your work other than just your own website. One of the reasons for that, and one of the reasons I kind of got into trying to go around and hook up with these other art websites is because of things like: Years ago, Yahoo! decided that they weren't going to even list my home page anymore unless I paid them, so when they start doing things like that, you know, my website wouldn't even be listed but all the other websites that mention me or link to me, those are all listed. I still get the listing on Yahoo! but not directly. I think that my website is listed now, but it's down on the third page or so of listings for "Bruce Gray sculptor."

ROBERTS So if I search Yahoo! for "Bruce Gray sculptor," I get your home page on the third page of listings—is that what you're saying?

GRAY Something like that, yes. You'll see a whole bunch of other stuff first, let's put it that way. And that's not that way on Google. That's why everybody uses Google now. If the other search engine's going to make a lot of the cool stuff have to pay to be on there, then obviously they're not going to have anywhere near the level of listings that Google does, so what's the point of even bothering with it?

ROBERTS Yes, I see what you mean.

GRAY That's why they're not doing so well.

ROBERTS Yes, the act of desperation. I think that covers it well. Thank you very much for your time.

[1]The whole interview.

1. [http://docs.google.com/Doc?id=dgb53zjg\\_1dpwpkdfx](http://docs.google.com/Doc?id=dgb53zjg_1dpwpkdfx)

Nadav (2008-07-29 05:06:03)

Awesome interview. Can anyone confirm what Bruce said re "That's why everybody uses Google now." Is it really mostly because Yahoo! makes the most logical top search results pay for the privilege of occupying the top spot? I'm an investment analyst, and in my experience it's almost unheard of for a company that does no advertising and enjoys no obvious barriers to entry to have such a dominant market share.

## More about Unreported Side Effects of Powerful Drugs (2008-07-29 22:57)

[1]A few days ago I blogged about how Tim Lundeen, via careful and repeated measurement – let's call it self-experimentation – uncovered a serious and previously-unreported side effect of a drug he was taking. Tim's example illustrates an important use of self-experimentation: discovering unreported side effects, which I believe are common.

By coincidence today I came across a talk about the very subject of unmentioned side effects: Alison Bass speaking about her new book, [2]Side Effects: A Prosecutor, a Whistleblower, and a Bestselling Antidepressant on Trial. Near the end, Bass said,

It's not the just the antidepressants, it's not just the antipsychotics. This is happening with a lot of other drugs. With Vioxx, with Vytorin, an anti-cholesterol drug, with Propriety [?] and Marimex [?], anti-anemia drugs. Where again and again the drug companies know that there are more severe side effects and they're not letting the public know about that. It just keeps happening, unfortunately.

Just as it would be foolish to think the problem is limited to mental-health drugs, it would be foolish to think the problem is limited to side effects, that drug company researchers do everything right except fail to report side effects. Tim's example shows how hard it is to learn about unreported side effects – so it is only realistic to think that there are other big problems with drug company research we don't know about. Bass mentioned one I didn't know about. A company did a clinical trial of Paxil. The goal was to see if the drug helped with Measures of Depression A and B. Turns out it didn't: no effect. So the company changed the measures! They shifted to reporting different measures that the drug did seem to improve. Creating the hypothesis to be tested after the data supposedly supporting that hypothesis had already been collected. Without making this clear. (Which I presciently mentioned [3]here, in response to an interesting comment by Andrew Gelman.) And if you think that drug companies do research like this – in ways that seriously damage people's lives – but everyone else, such as academia, is really good, that is as realistic as thinking the problem with drug company research is restricted to side effects. Self-experimentation has all sorts of limitations, yes, but (a) you know what they are and (b) it is cheap enough so that you can gather more data to deal with the problems. Drug company research and lots of other research is too expensive to fail – or even be honest about shortcomings.

This is an aspect of scientific method that scientists rarely discuss: the effect of cost on honesty. Is there an economic term (a Veblen good, perhaps?) for things whose quality goes down as their cost goes up?

1. <http://www.blog.sethroberts.net/2008/07/26/benfotiamine-and-self-experimentation-surprising-results/>

2. <http://www.alison-bass.com/books.html>

3. [http://www.stat.columbia.edu/~cook/movabletype/archives/2008/07/an\\_ounce\\_of\\_rep.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2008/07/an_ounce_of_rep.html)

mike kenny (2008-07-30 15:09:31)

hm, are there database of self experimentation available to and created by the public regarding drugs (and i suppose anything self experimentation could help on)? would such a thing be useful if it existed, as a supplement or check on more expensive studies with problematic biases? i guess this database might be a kind of wikipedia of self experimentation.

Nathan Myers (2008-07-30 17:18:26)

Is this the place to repeat my mother's report that 1000 IU Vitamin D supplements caused all-over itching in herself and (later) in my father, mitigated by reducing dosage? Or the place to complain that the huge study skewering vitamin E as increasing cancer risk used a synthetic alpha- acetate formulation, despite that nowhere in nature do you find only alpha-, and that the acetate compound interferes with some people's (e.g., my) digestion? Where is the study using mixed alpha, beta, gamma free-form natural extracts as they appear in, you know, *food*? OK, never mind.

seth (2008-07-30 22:38:11)

Mike, that's an excellent idea. Nathan, I didn't know that about the Vitamin E study. Thanks.

Andrew Gelman (2008-07-31 21:02:49)

Seth, Why do you say "let's call it self-experimentation"? If he's doing an experiment on himself, that's self-experimentation, right? What do you mean by "let's call it"?

BBrolely (2008-08-01 05:47:45)

I can't speak for all pharma's, but several have a transparency policy. [http://www.lillytrials.com/results/results\\_by\\_ta.html](http://www.lillytrials.com/results/results_by_ta.html) Ms. Bass can search to her hearts content through the adverse events reports: rule of thumb- the bigger the number the more there are, help her look for those "severe" adverse events that are "woefully underreported". In regards to vaccines, you're not part of the "Green Vaccine Team" are you now? <http://thestatsblog.wordpress.com/2008/07/17/hurrah-for-amanda-peat-and-salon/> Finally, not that long ago, big pharma was looked upon as a good business model, now they are vilified, why the sudden change? Perhaps it's the same phenomena that Tierney speak about with information cascades: <http://tierneylab.blogs.nytimes.com/2007/10/09/how-the-low-fat-low-fact-cascade-just-keeps-rolling-along/>

seth (2008-08-01 21:05:49)

BBrolely, if you think I'm wrong that serious side effects are "woefully underreported", could you explain why? Ms. Bass said that it was the way drug companies would shift the endpoints after the trial was over that led to the current requirement that clinical trials be registered. Andrew, he didn't take the drug to see how it would affect his weight. He took it because he thought it might help something else. Which it did. He didn't measure his weight because he thought the drug might affect it. He measured his weight for other reasons. So he was doing two ordinary things. To say anytime anyone takes a drug it's self-experimentation is going a bit far. To say anytime anyone keeps track of their weight it's self-experimentation is probably going too far. That's why it's a borderline case.

VesnaVK (2008-08-03 11:52:33)

Speaking of side effects of powerful drugs, here's an excellent post about statins on the blog of Dr. Michael Eades, co-author of Protein Power: <http://www.proteinpower.com/drmike/statins/statin-disaster/> It tells the story of a man with no health problems other than a set of numbers – triglycerides and cholesterol – that his doctor didn't like. His subsequent slide into medicalization and suffering is chilling, and revealing. Lots of great comments, also.

Seth's blog » Blog Archive » Unreported Side Effects of Powerful Drugs (part 3) (2008-08-07 20:06:18)

[...] More about Unreported Side Effects of Powerful Drugs [...]



## 3.8 August

### Research Assistant Needed in Cognitive Science Lab (2008-08-01 09:20)

[1]Saul Sternberg, whom I interviewed about [2]research design and [3]research strategy, is looking for a research assistant:

A full-time research assistantship is available in Saul Sternberg's laboratory at the University of Pennsylvania in Philadelphia. Applicants should be college graduates with computer programming skills and an interest in the study of human behavior. Current research topics include (1) interaction of brain and biomechanics in the control of timed actions (as in music performance), and (2) how visual information is encoded, transformed, and retrieved within the first two or three seconds after it is displayed. [4]Details.

Saul is a member of the National Academy of Sciences and has won the American Psychological Association's award for Distinguished Scientific Contribution.

He and I have written four papers together, three about [5]Ranjit Chandra's research and one about [6]reaction time and mental models. In the Acknowledgments section of *The Shangri-La Diet*, I wrote, "I have learned more experimental psychology from Saul Sternberg, a research scientist at Bell Labs and a professor at the University of Pennsylvania, than from anyone else."

1. <http://www.psych.upenn.edu/~saul/>
2. <http://www.blog.sethroberts.net/2007/01/30/saul-sternberg-on-research-design/>
3. <http://www.blog.sethroberts.net/2007/08/24/saul-sternberg-on-research-strategy/>
4. <http://www.psych.upenn.edu/~saul/ad0808.pdf>
5. <http://www.sethroberts.net/chandra/index.html>
6. <http://www.psych.upenn.edu/~saul/apxiv.pdf>

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### The Bechdel Test and Denise Richards (2008-08-01 22:41)

I loved Alison Bechdel's [1]*Fun Home*. It was one of the best books I read in 2007. So I was pleased to learn of [2]the Bechdel Test, which can be applied to TV and movies:

To pass it your movie [or TV show] must have the following:

- 1) there are at least two named female characters, who
- 2) talk to each other about
- 3) something other than a man.

Few movies or TV shows pass it, said Jennifer Kesler.

I came across this test after spending a pleasant morning analyzing data while listening to the first six episodes of Denise Richards: It's Complicated which I found on YouTube. (Such as [3]part 1 of Episode 1.) The show consisted mainly of two named female characters – Denise and sister, Denise and friend, Denise and daughter – talking to each other about something other than a man.

I was surprised how much I liked it. When Denise and her dad (who lives with her) interview people to be her assistant, it was amusing (Denise has about 20 pets; one applicant said she didn't like pets); when she gets mad at an entertainment journalist, it was forgivable; when she enters her nephew's room to find him and his friends looking at a Playboy with her on the cover, it was unforgettable. The entertainment journalist wants to know why she is doing the reality show. "My [recently dead] mom wanted me to do it," Denise says. The journalist can barely keep from laughing. "A deathbed wish?" she says. Denise got upset, so let me answer: The better you know almost anyone, the more you like them.

[4]How to avoid demonization.

More. Gillian Flynn, one of Entertainment Weekly's TV reviewers, [5]hated the show – gave it a D. Could reviewers be overly negative because they are forced to watch?

1. <http://www.amazon.com/gp/product/0618477942/sethrobertand-20>

2. <http://thehathorlegacy.com/why-film-schools-teach-screenwriters-not-to-pass-the-bechdel-test/>

3. <http://www.youtube.com/watch?v=T31WcWtHYVo>

4. <http://www.blog.sethroberts.net/2008/06/24/the-cost-of-demonization-and-how-to-avoid-it/>

5. <http://www.ew.com/ew/article/0,,20201972,00.html>

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mike kenny (2008-08-02 08:32:46)

oh that's interesting. i do the same thing when i'm editing (which i don't like doing)-i listen to shows or podcasts. i was doing some editing while basically listening to episodes of dexter yesterday and it makes the editing so much easier. i've wondered if politicians could benefit from having their own reality shows. john mccain seems to get a lot of his likability from making himself very available to journalists. what if he had a reality show while on campaign that ran regularly on his website. would that increase public liking of him? i suspect so, but i'd imagine it would have to be kind of a 'warts and all' kind of show, rather than some idealizing-the-person show. this i suspect would apply to lots of politicians, though perhaps some people are so unlikable that getting to know them makes you like them less-i imagine they are a minority though.

Response to the Bechdel post | the Hathor Legacy (2008-08-16 12:29:17)

[...] Seth Roberts, a professor emeritus of psychology at the University of California at Berkeley, suggested a new show you might want to check out in response: I came across this test after spending a pleasant morning analyzing data while listening to the first six episodes of Denise Richards: It's Complicated which I found on YouTube. (Such as part 1 of Episode 1.) The show consisted mainly of two named female characters – Denise and sister, Denise and friend, Denise and daughter – talking to each other about something other than a man. [...]

## My Humor Research (2008-08-02 21:30)

[Rosie Shuster] did have one quality she could privately lord over her classmates: her father was a comedian. . . A life in comedy meant that Frank Shuster nodded, rather than laughed, at jokes that worked.

From [1]American Nerd: The Story of My People by Benjamin Nugent, pp. 62-3. When I was in college I came up with a theory: Laughter is caused by sudden pleasure. Obviously we enjoy jokes, and jokes have punchlines. People laugh in lots of situations not involving humor and as far as I can tell they always involve sudden pleasure – unexpectedly seeing an old friend, for example.

Which is only to say, as this passage implies, there should be a limited number of joke categories and they should be far from mysterious. I once wrote a bunch of jokes from the TV show Cheers on cards and sorted them into categories. Later I classified [2]six months of New Yorker cartoons and Spy accepted it. It was my first submission and I was thrilled.

More. Mike Kenny put it better than me. That I was able to get my research published in a magazine I adored was "[3]a fusing of the intellectual with the practical." I was going to say it was a practical application of pure research.

1. <http://www.americannerdbook.com/>

2. <http://sethroberts.net/spy/ifthereisonething.pdf>

3. <http://michaelkenny.blogspot.com/2008/07/organic-whole-and-pragmatic-souls.html>

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Toni (2008-08-03 02:56:45)

Yeah, laughter is a way for the autonomic nervous system to quickly move control from the sympathetic to the parasympathetic system. I.e. you get suddenly really excited (kind of fight or flight) and your body realizes it's not dangerous so it tries to relax you back to normal as soon as possible.

non (2008-08-03 13:09:04)

Hi, this question isn't related to this post. I saw this recently: <http://www.trysensa.com/how-sensa-works.htm> this diet is supposed to work by sprinkling flavors (different sets of flavors each month) on food. Average weight loss is claimed to be 30 pounds per six months, or 5 pounds a month. Is this related to your work/diet? Do you think it should work? Do you know anything about it? Thanks.

mike kenny (2008-08-03 19:08:56)

oh, i'm glad you felt that was a good way of putting what you do! i really like your blog for fusing the intellectual with the practical! do you find that some people have difficulty fusing the intellectual and the practical, seth? or that some people are hostile to fusing the two? to me you seem unusually (in a good way) focused on fusing the two.

seth (2008-08-04 05:58:47)

non, yes it is related to my research. I discuss the connection here: <http://www.blog.sethroberts.net/2008/06/16/crazy-spicing-works/> Mike, I think it is rare to find college professors highly interested in practical stuff because they see practical stuff as lower status. Applied research is lower status than pure research. Veblen wrote about this in The Theory of the Leisure Class.

mike kenny (2008-08-04 15:19:54)

i'll have to check out veblen. i wonder if there are any obvious evolutionary psychological explanations for this phenomenon, too. i'm sort of at a loss on that count! i can imagine alpha males not doing drudge work, and having others do it for them, and i can imagine nobles taking on this alpha-male-like role. i tend to not think of academics as a sort of power-elite, like nobles or alpha males, but perhaps this is a mistake. there is some reverence towards the well-educated. i wouldn't be surprised if alpha males tended to have high iqs, given cleverness seems an asset in gaining and maintaining power.

Phillip J. Eby (2008-08-04 17:24:01)

Speaking of status, don't forget to account for social status in laughter: people are much more likely to laugh at jokes made by their superiors than their inferiors, and in the presence of a person of high status, members of the same group will check whether the superior is laughing before laughing themselves. People are also more likely to laugh aloud if other people are present, and less likely to do so when no-one can hear. All of these things seem to point to laughter having a social signaling function that goes beyond the simple expression of pleasure.

seth (2008-08-04 19:26:53)

Yes, laughter is a curious signal – signalling both submission and dominance depending on the situation.

Igor Carron (2008-08-06 13:11:30)

Seth, I am sure you have seen this: <http://www.sciam.com/article.cfm?id=magnifying-taste&sc=rss> Igor.

non (2008-08-07 09:07:44)

thanks for your answer and sorry to be so slow to respond. He claims to have tested which flavors work best. Unfortunately in response to my query, they informed me their product is not kosher. Do you know anything more about his research or which flavors are supposed to work? IIUC according to your theory, any unfamiliar flavor would work.

non (2008-08-07 09:10:17)

also the subjects used these flavors for a whole month, and only switched sets of flavors at the end of each month. Isn't a month a long time dont you theorize a flavor connection is made more quickly than that?

seth (2008-08-07 09:38:09)

I don't know how Hirsch selected the flavors he used in his research. Good question, I will try to remember to ask him. Yes, according to my theory any unfamiliar flavor will work. Nor do I know why they switch after a month. That might have been the most often they could switch. The effectiveness of many diets seems to wear off after 6 months or so. I think they stop being effective – the lost weight starts being regained – because the diet caused the dieter to eat food less strongly associated with calories and new associations were learned over months. if I'm right, apparently it takes months to learn them enough so they make a difference. That sort of data supports Hirsch's choice.

non (2008-08-07 15:47:25)

that's interesting. Do you have results with unfamiliar spices alone? or have you seen an additional weight loss effect with unfamiliar spices. What would constitute an unfamiliar spice? Must it be totally unfamiliar or just not associated with that food? (I guess the latter, since you suggest sprinkling cinammon on pizza?) I did try cinammon on pizza once and didn't notice anything except a weird taste! Dr hirsch claims that "The Tastants slightly enhance the flavor of your food without changing the flavor. In fact, you probably won't even notice they are there!" How do you reconcile that with your flavor - if one doesn't notice it, how can new flavor connections be made?

seth (2008-08-07 18:16:54)

non, this isn't the place for an extended back and forth. Feel free to give me a call and I would be happy to answer your questions. Or you can post them on the SLD forums.

Pattern Recognition (2008-08-08 03:09:06)

The humorous response (including the release of neurotransmitters and endorphins, instant responses in the autonomic nervous system and a reduction in stress hormones) is also, of course, broadcast as laughter, signalling that one has recognized the pattern in question. This humorous response has both voluntary and involuntary neural networks and, consequently, the response can be attenuated or extenuated in certain circumstances. However, laughter is only a minor part of the major cognitive process known as humour, which is fundamental to perceptual proficiency and has played a vital role in the evolution of humankind's unique intellectual capacities.

Basil Hall (2011-03-05 18:28:42)

Everything mention in the above messages is true to some extent but all these ideas must be place into a coherent hypothesis. I believe my essay (see below) does this. It may not be correct but it answers most of the questions that still puzzel researchers. Basil Hall <http://sites.google.com/site/basilhughhall/anewtheoryoflaughterandhumor>

## How Should We Fight Infections? (2008-08-06 18:06)

In the latest New Yorker, [1]an article by Jerome Groopman is about the emergence of even-more-antibiotic-resistant bacteria.

I asked him what we should do to combat these new superbugs. "Nobody has the answer right now," he said. "The fact of the matter is that we have found all the easy targets" for drug development. He went on, "So the only other thing we can do is continue to work on antibiotic stewardship."

All the easy targets, huh? Here's an easy target that hasn't been exploited: Why are colds more common in the winter? Many diseases are more common in the winter. I believe it's because sleep is worse in the winter. While you are asleep is when your body does its best job of fighting off infection. When [2]I vastly improved my sleep – by standing much more, and by getting more morning light – I vastly reduced the number of easy-to-notice colds that I got. I still got cold infections, I think, but they merely caused me to sleep more than usual for a few days.

Several years ago I noticed an introductory epidemiology course in the UC Berkeley School of Public Health was taught by someone I knew. I called him. "Is your course going to cover what makes our ability to fight off infection go up or down?" I asked. No, he said. That is the usual answer. The question of why colds are more common in the winter is not part of the traditional study of epidemiology.

The connections between sleep and fighting off infection are so strong I'm pretty sure I'm right about this (that colds are more common in the winter because sleep is worse). Why, then, haven't sleep researchers looked into this? Strangely enough, they may not have thought of it; I haven't come across this idea in any book about sleep I've read. (If you've seen it somewhere, please let me know!) Justifications of sleep research tend to revolve around car accidents, which are often caused by too little sleep.

More. My point is not that poorer sleep causes more colds in the winter; it's that it's an easy target. Suppose you think the colds/winter connection is caused by less Vitamin D in the winter. An experiment in which one group gets Vitamin D supplements in the winter and another group doesn't is easy to do, given the great health implications.

1. [http://www.newyorker.com/reporting/2008/08/11/080811fa\\_fact\\_groopman?currentPage=all](http://www.newyorker.com/reporting/2008/08/11/080811fa_fact_groopman?currentPage=all)

2. <http://repositories.cdlib.org/postprints/117/>

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Dennis Mangan (2008-08-06 18:21:15)

I can't think of any reason why sleep should be worse in winter; as far as I can tell, it ought to be better due to longer hours of darkness. As for the relative increase in colds during winter, several other factors come to mind: less sunlight means less vitamin D production and thus weaker immune systems; less sunlight also means lower microbicidal ultraviolet radiation; cold weather means people are indoors more and can more easily communicate pathogenic microbes to each other.

mike kenny (2008-08-06 19:36:08)

dennis, i thought it was odd too that sleep could be worse in the winter. i had an odd thought: if you sleep poorly in winter, you might be groggy and therefore not able to do much during the day, limiting your energy expenditure when you might need to conserve it. in the summer, if you sleep well, you have energy to make use of the long days. winter tends to be associated with depression, which manifests sometimes as low energy and poor sleep.

Ben Hyde (2008-08-06 20:06:53)

Demmet's big book on sleep is full of interesting stuff.

Aaron Blaisdell (2008-08-06 20:13:32)

For a long time now, I've noticed that I sleep much better in the winter when the ambient indoor temperature is cool (and I can snuggle up warm and toasty under the covers) than in the summer, especially when it's hot. In warm weather especially it takes me longer to fall asleep, I feel less comfortable in bed, I wake up more frequently, have more bouts of insomnia, and wake up earlier than when the weather is cooler. I love summer but I always dread the uncomfortably warm sleepless nights.

John (2008-08-06 21:05:30)

I don't buy the bad sleep in winter thing. Not true for me. Besides, I thought it was the lack of vitamin D which caused colds and influenza in winter (unless you lived someplace sunny that is).

seth (2008-08-06 22:06:06)

Dennis & John, I have seen at least one study showing that sleep is worse in the winter. There is a reference to it in that self-experimentation article. I believe sleep is worse in the winter because there is less morning light – that light increases the amplitude of a circadian oscillator that controls sleep is not exactly a revolutionary idea. But even if I'm wrong, something that has a big effect on rate of infection changes a lot from summer to winter. If it turns out to be Vitamin D, for example, that would be very helpful to know.

Mark (2008-08-07 01:24:47)

People cluster closer together, indoors, in the winter, so transmission is increased. Just a small difference in the number of people in proximate location to each other translates into huge exponential growth in infection.

david (2008-08-07 06:05:51)

I agree that inadequate sleep can be a contributing factor to getting a cold. That's definitely been true in my case. Given time to catch up on sleep and some Zicam zinc lozenges I can fight off any cold. As for why colds are more common in the winter, I read "somewhere on the internet" that this is due the fact that the in colder, less humid weather the mucus in your nasal passages dries up making it easier for the germs to get in. My guess would be some combination of factors. I'd be interested to see data about when cold season starts in the northern areas versus southern areas.

Dennis Mangan (2008-08-07 06:54:41)

This may be of interest: "Epidemic influenza and vitamin D" <http://journals.cambridge.org/action/displayAbstract?fromPage=online &aid=469543>

Aaron Blaisdell (2008-08-07 06:55:56)

Just to raise more potential contributing factors, there is the stress from the holiday season to consider, plus all of the extra travel from Thanksgiving to Christmass/Hanuka (sp?), then New Years. This raises the question as to whether infectious illnesses like the common cold are more common in winter in ALL cultures or largely in western society?

Nathan Myers (2008-08-07 13:40:22)

Aaron: they are. Furthermore, they're more common then in completely isolated communities (i.e. not brought in by outsiders). They're more common where it's always hot. They're more common where it's always cold. The only important variable is that in the southern hemisphere, the phase is reversed.

Nathan Myers (2008-08-07 16:43:45)

Evidently I wasn't clear: colds are more common in winter everywhere, even in places that are always cold, and places that never really get cold, and places that get no visitors. You're left trying to explain it by reference to light and to temperature changes vs. the summer baseline.

Nathan Myers (2008-08-07 18:28:58)

Evidently I wasn't clear: colds are more common in winter everywhere, even in the Yukon, and in the tropics, and in places that get no visitors. You're left trying to explain it by reference to light and to temperature changes vs. the summer baseline.

Chris B. (2008-08-13 11:34:38)

I suppose another possibility is that the body's cold-fighting ability has an annual rhythm. Perhaps the systems that fight off infection need a respite after a period of intense activity. If the organism's most important activities (reproduction, food-gathering) take place in summer, it may sense to schedule the down time for winter. The obvious alternative - maintaining a lower but constant level of robustness year round - might be suboptimal.

Chris B. (2008-08-13 11:42:16)

To complete my thought: In that case, looking for environmental cause of wintertime liability to infections would be a dead end. On the other hand, it could be Vitamin D! (BTW, in light of the new studies on Vitamin D, doesn't it strike you as scandalous that this reasearch wasn't done decades ago? You'd think that correlations between all well-known nutrients and population health would be considered basic statistics, the public-health equivalent of the national census.)

### **If You Read Portuguese... (2008-08-07 07:44)**

...you might want to read [1]this webpage by a Brazilian woman about the Shangri-La Diet. And feel free to tell me what it says.

More. The Portuguese edition of The Shangri-La Diet is titled A Dieta Shangri-la. Its ISBN number is 978-85-7684-168-5.

1. <http://www.dietashangrila.blogspot.com/>

Dennis Mangan (2008-08-07 09:59:10)  
Keeping it short, what she says is good.

seth (2008-08-07 13:01:04)  
thanks, Dennis

Tom (2008-08-07 13:34:25)

Here's Google's machine translation: \_\_\_\_\_ Interview with author of the diet - Seth Roberts The author of the diet Seth Roberts agreed to answer questions that all we have on the diet, or any other questions, in an interview. I will organize the questions to which he responds, then publicarei here on the blog! The deadline is until 14/08 to send their questions and doubts! I hope the collaboration of you! Send your questions! It may be by mail, in the commentary here in my blog or orkut profile: <http://www.orkut.com/Profile.aspx?uid=17-96069216891997996> Sobre Dietas... About Diet ... Today I found a very interesting article on diets and weight loss based on searches and would like to post a summary here since the article is longã€| For those who take an interest in original article in English: <http://www.amptoons.com/blog/archives/2006/04/03/the-case-against-weight-loss-dieting> The case against the Diet "Probably no medical advice is given as often and with so little rational basis on the pressure for obese people lose weight" 1) Para a maioria das pessoas obesas, as Dietas nãŁo funcionam 1) For most obese people, the Diet will not work This means two things: that the amount of weight that is lost is not the person ceases to be obese and that this loss is generally not maintained. There is no clinical study demonstrating a long-term success in losing weight (5 years). Large companies earn billions of dollars with promises of weight loss every year, but if a company could certainly make obese people in thin would make more money than any other company on the planet. One possibility that would impede the loss of weight permanently would be for our bodies fit for the reduction of calories ingested by decreasing the metabolic rate and increasing the proportion of food stored as fat. This means that the more you make diets, vai be more difficult to lose weight in the long term. 2) Weight loss does increase the probability of dying before you Often people gain back the weight they lost, but that does not mean that they returned to where they were at the point of view of health. This means that there are studies indicating that the weight loss reduces mortality and others that indicate that even increases. Sometimes people who have diets are more likely to die of cardiovascular problems that obese people who keep their weight stable. Especially people who lose weight and come back to win it (the effect sanfona) further increase the risks to the health effects such as high blood pressure, high cholesterol, cancer ... Moderate physical exercises is the only thing proven that it increases its longevity and quality of life ... 3) The idea of "normalizing" the dietary habits is a myth Normally if you believe that people are obese because they eat more and thus are less exercise and that people are thin. Which is as thin eat fatty would also be obese, and that if the obese eat normally as they lean iram slimmer. Many studies have tried to show that obese people eat more calories, but have had no success. It is true that many people above the weight have diets rich in calories, fats, fast food, etc., but there are many thin people who eat well. Our body is much more complicated than a simple matter of eating more or less and spend as of calories. 4) Para Resumir: 4) To summarise: - "Nunca foi comprovado cientificamente que uma dieta produza substancial perda de peso em longo prazo, a nãŁo ser em uma minãŁscula quantidade de indivãŁduosã€?. - "It has never been scientifically proven that a diet produce substantial weight loss, in the long term, unless in a tiny quantity of individuals." - "If the diet work or not, people who make them is most likely to die sooner than those who keep their weight stable or who gain weight slowly." - "For obese people (or anyone) concerned about their health, the best option is probably moderate exercise and eating fruit, vegetables without worrying about standards of beauty and weight." - "The model that anyone looking for losing weight is based on that obese people eat more and must learn to eat as thin, is probably a myth." Responding to the criticismã€| I found a blog by Stephen M (<http://www.ethesis.blogspot.com/>) very interesting diet on the Shangri-la. He began the diet on November 13, 2005 with almost 110 kilos and in April 15, 2006 already weighed 87 kg or less 23 pounds in 5 months ... It continues with the diet until today to maintain and says be very happy and keep its 81kg today. A great example of perseverance and strength in the mirror and we must follow. The blog it is very interesting and I advise those who want to read a story of success (in English). Well, but let's answers to some of Stephen's criticisms of the diet and some other found on the Internet: Todo esse ãŁleo nãŁo pode ser saudãŁvel!! All this oil can not be healthy! - The amount of oil that is taken in the diet is less than if one eats a large portion of fries. - Some proven benefits of olive oil: It is a versatile food and essential to health as it benefits the gallbladder and liver, stimulates the secretion of bile and tonicity of tissues, also serving as nerve tonic, stimulates muscle contraction. The intake of olive oil is good for people suffering from cholesterol because it helps to dissolve the deposits of cholesterol. You were just



lucky – The calorie intake in the diet shangri-there are differences. With 3 tablespoons of soup Stephen maintained its 85 kg for almost 2 years. If it reduces the quantity, weight gain and when increases start to lose weight. – With 50 years is hard to change the metabolism to lose weight as other diets speak ... Only restriction of calories / starvation diets and exercises to work – For 2 / 3 of 2.8 % of people who can make a diet with much conviction is successful. – With the diet shangri it if you have to lose 18kg or more, 75 % of people seem to have success and maintain the weight reached. Mas vocÃª deveria apreciar a comida! But you should enjoy the food! – You'll still enjoying the food. Just eat less and eat more if their metabolism fits. – Many people try doing this diet try new flavors – Much better not be slave to food. I could never follow this diet – Why not? – It is cheap and uses ingredients you have in your home ... – You can even take the oil in the middle of the night when most convenient to you ... ! It makes no sense! .. – There is the theory of Seth behind the diet ... Why do not you try too?

### Unreported Side Effects of Powerful Drugs (part 3) (2008-08-07 20:06)

A [1]comment on the [2]previous post in this series – thanks, Vesna! – led me to [3]a horrifying story about what happened to someone whose doctor prescribed statins (an expensive and nearly worthless class of drugs) because his cholesterol numbers were bad. (My friend and collaborator [4]Norman Temple has [5]written about the true value of statins.) The doctor did not warn him of the dangers, which were great. When his troubles began, he should have simply stopped the drug. What actually happened was that his doctor prescribed another dangerous drug. And his troubles got worse. Shades of [6]Jane Brody!

I know a similar story. The elderly mother of a friend of mine was taken to the emergency room of a hospital because she had some sort of attack. It was the third such attack in a year. Her children were concerned. She was not of sound mind. Heroic measures to help her? Or a peaceful death? They chose a peaceful death. She was moved to a hospice. By mistake, her six prescriptions failed to be transferred. A clerical error. So she wasn't able to take her usual drugs. She soon got better! Within a week or two she returned home. The drugs her doctor had prescribed had been killing her. Nobody had noticed.

First do no harm is a scary motto because it shows that those who take it seriously – supposedly the entire medical profession – aren't thinking clearly, as I've heard [7]Robin Hanson point out. It's like English teachers having a motto with a word spelled wrong. And the consequences of doctors not thinking clearly – not doing something as obvious as stopping dangerous drugs when the patient gets worse – can be terrible. My suggested replacement motto: Learn something from everyone who comes to you for help.

This is closely related to self-experimentation, of course, which is all about figuring out for oneself what effect something has. I got a lot more interested in self-experimentation when it showed me that an acne drug I'd been prescribed was worthless.

[8]Part 1.

1. <http://www.blog.sethroberts.net/2008/07/29/more-about-unreported-side-effects-of-powerful-drugs/#comment-201573>
2. <http://www.blog.sethroberts.net/2008/07/29/more-about-unreported-side-effects-of-powerful-drugs/>
3. <http://www.proteinpower.com/drmike/statins/statin-disaster/>
4. <http://science.athabascau.ca/staff-pages/norman/norman.php>
5. <http://auspace.athabascau.ca:8080/dspace/handle/2149/1462>
6. <http://www.blog.sethroberts.net/2008/06/08/jane-brody-misses-an-opportunity/>
7. <http://www.blog.sethroberts.net/2008/03/21/robin-hanson-on-doctors/>
8. <http://www.blog.sethroberts.net/2008/07/26/benfotiamine-and-self-experimentation-surprising-results/>

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Nathan Myers (2008-08-07 22:17:49)

My wife's grandmother was driven to the brink of suicide by what felt like powerful electric shocks at her left cheekbone, and by the high doses of tegretol her doctor prescribed for it that left her too dizzy to walk. After many months I finally persuaded her to visit a specialist in another city, who in a simple outpatient procedure inserted a spacer between two crossed nerves, completely eliminating the problem. Her husband went from a vigorous, active life to a passive little old man in only a few months from radiation treatments to his prostate. It made him dizzy and he fell from a loading dock, and his broken hip was not detected for six months. When my own father had his pelvis crushed, recently, under a backhoe, the hospital staff decided on their own say-so to stop giving him his bipolar meds, cold turkey, and great risk to him. My sister-in-law presented, some years back, with extreme abdominal pain, and was sent home without being tested for ectopic pregnancy, and nearly died. I could go on. We learned only recently that in treatment of myriad drowning victims in recent decades, their brains deprived of oxygen were undamaged until attending physicians applied oxygen, provoking massive cell death. Medical malpractice has been blamed for 75,000 deaths/year in the U.S., but I suspect that number is a lower bound.

david (2008-08-08 12:46:40)

Good thing we have "tort reform" to protect the medical profession from lawsuits!

Tom (2008-08-08 22:21:18)

Giving pure oxygen is also what blinded tons of premature infants until recently. It was simply assumed, without testing, that more oxygen was better, and it was many years before it occurred to someone that the oxygen might be CAUSING the blindness. Similarly, people assume that eating fat makes you fat. It just makes SENSE, doesn't it? Incredibly, the testing HAS been done and most people still don't believe it.

question (2008-08-11 08:34:48)

Where's part 2?

seth (2008-08-11 09:37:33)

Part 2 = previous post in this series

Methuselah (2008-08-12 22:32:54)

I think that between 'Self Experimentation' and 'self-reported experience' lies a continuum of rigour but that both are valuable. As well as exposing side-effects the pharmas would rather gloss over, I believe these case studies, driven by the aggregation medium of the internet, are starting to reveal the extent to which diet can obviate the need for some drugs, but that the evidence is being undervalued by the research community - I argue this in more detail here: [1]Are we Underrating the Anecdotal - would love to get your views. Methuselah [2]Pay Now Live Later

1. <http://paynowlivelater.blogspot.com/2008/07/are-we-underrating-anecdotal.html>

2. <http://paynowlivelater.blogspot.com/>

## **The Best Food Writing I've Read (2008-08-08 12:30)**

I subscribed to Saveur for several years but never finished any of the long articles - which weren't that long. This should have puzzled me, but it didn't. A month ago, however, I got the audiobook of Secret Ingredients, the New Yorker anthology about food. I was surprised how many of the articles I didn't want to listen to. 90 %? Usually I like New Yorker anthologies and read most of the articles. I'm a more tolerant listener than reader which made the comparison even worse.

Here's my explanation. Food writing is like downtown Edinburgh. Its main street has shops on one side, on the other side a park. What should have been the economically most lively street in the city is rendered half as effective as it might be by the fact that half of it isn't businesses. As something to write about, food is similar. Just as a park is economically inert, food is psychologically inert. Like a park, food can be pleasant (to read about) but it doesn't act. It isn't alive. This is why those Saveur feature articles were hard to read, I realized. They resembled flat lists: We cooked and ate X, Y, and Z. It's incredibly hard to make that sort of thing fun to read. The best article in Secret Ingredients was John McPhee's profile of Euell Gibbons. It's a mini-adventure story, with an interesting guy at the center. The food is . . . a condiment.

This is why I'm so impressed by the chapter "Waizhou, USA" in *The Fortune Cookie Chronicles* by Jennifer 8. Lee. Waizhou means "out of state" – in this case, away from New York City. It's the story of a family who left New York to run a Chinese restaurant in a small Georgia town. It took a shocking turn that Lee didn't expect. Police took the children away. The father was arrested. "The offices pointed to the burn scars from cooking oil on the parents' arms and said that was evidence that the couple had a history of fighting." This had horrible and ramifying effects. "Oh, I can't eat there anymore," said a lawyer, "that's the DV [domestic violence] case." The teenage daughter starts using the court system to punish her mother. The parents are arrested again. "They had violated court rules by driving near their children's foster home. Because they had sold their restaurant they were considered a flight risk." Eventually they get their children back, and go back to New York. It's a whole slice of life I'd never read about before. Enormously emotional and unpredictable. The father enjoyed jail. "When I was in jail for two days, it was really relaxing," he told Lee.

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mike kenny (2008-08-08 17:52:32)

that's a good point about food being psychologically inert. it seems like shifting from list-making to a sort of problem-solving process aimed at obtaining some strongly desired aesthetic experience might be more engaging, along with the dramatic tale you recounted. chef as struggling artist, or mad scientist. 'how can i make this good? how can i make this good and affordable? how can i make this not boring anymore?' i have a good friend who likes to talk about food. i'm inclined to think he and his foodie acquaintances, when they are talking about food, are in part, demonstrating they care, sort of like the stereotypical jewish or italian mothers. 'i hope you like this salad. it had x, y and z in it. i care about what you ingest, and here is what it is. it's only the best for you!' maybe that form of communication is being carried over to food writing?

John S. (2008-08-10 05:20:55)

I found a website for her book. There are some excerpts, including a link to her original Times article about the family who moved to Georgia: <http://www.fortunecookiechronicles.com/excerpts/> Remember the Seinfeld episode where George gets mad when he finds out Susan's cousin named her baby "Seven"? I always wondered if they were poking fun at Ms. Lee, the only person I've seen with a number in her name (besides The Prisoner).

### Assorted Links (2008-08-10 09:10)

1. [1]A one-month test of The Secret.
2. If you can't see the Frida Kahlo exhibit, read [2]this.
3. Google Talk with a lot of laughs: [3]J. A. Janis, author of *Damage Control*, a murder mystery. A masterpiece of public speaking.

1. <http://oneminutebookreviews.wordpress.com/2007/06/12/does-%E2%80%98the-secret%E2%80%99-work-final-results-my-30-day-test-of-%E2%80%98the-secret%E2%80%99/>
2. <http://sfciviccenter.blogspot.com/2008/06/cult-of-frida-kahlo.html>
3. <http://www.youtube.com/watch?v=vKbY4X6fbTo>

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mike kenny (2008-08-10 12:37:34)

that was sort of an interesting read, the secret test. i like the idea of testing what seems like obvious nonsense—astrology for example, as a simple means of disproving the idea, or, because it's possible that there's some value to astrology or the secret. for example, the secret sounds like it could help some people become clear about what they want, which could be half the battle in getting what you want. isn't there some kind of psychological concept of essentially 'faking it till you make it'? you imagine you have a million dollars and so you emulate millionaires and some of that emulation actually has practical value in getting a million bucks. no need for a metaphysical explanation. of course...acting like a millionaire by incurring debts like one...well, that could be a problem! and the magical thinking would maybe obfuscate that possibility. anyway, either way, cheap, low risk testing of claims seems a valuable tool, which i think is in line with your thinking!

david (2008-08-10 15:28:51)

Ok, first let me admit that I haven't read or seen the movie The Secret...but it sounds like the sort of thing that's ripe for exhibiting the Forer effect. You visualize yourself a new car and at some point you receive a toy car or a picture of a car or end up being loaned someone's new car...your mind finds some way to say it worked. It's like a horoscope in reverse. Anyway, it sounds like bullshit to me (or would that be smells?). On the other hand, it would be really ironic if the writer of that blog post about testing the secret ends up with some book deal resulting from someone in the publishing industry reading her blog post.

### **Everyday Humor (2008-08-10 22:08)**

In the checkout line at Monterey Market:

ME Are those mangosteens?

MAN They're baby artichokes.

You eat them raw, he said. Peel off the outer leaves and slice them thin.

MAN With some Pecorino sliced thin, pinenuts, a little olive oil . . .

ME Sounds Italian.

MAN Yes, it is.

Everyone laughed.

Nathan Myers (2008-08-11 10:26:22)

I don't get it. Were they really mangosteens?

seth (2008-08-11 12:15:52)

No, they were baby artichokes. You're right: it isn't a conventional joke. But it was funny enough so that even a bystander laughed.

## **What Do Organizers Do? (2008-08-11 04:21)**

At a cooking class, I met Ami DeAvilla, a professional organizer. It's a profession so new – 15 years old? – that I was curious what sort of problems she works with. She told me some examples:

Example 1. A woman who was 4 years behind filing her taxes. She was collecting the letters from Franchise Tax Board and the IRS. There wasn't that much money involved – she might even have had some money owed to her. Became overwhelming and daunting. As the years went on, doing her taxes became overwhelming. She had a "fear basket": those letters went in it. I was able to come in & open the most recent of the letters. She did have all of the info. There was a lot of fear involved. Also she had gotten divorced. Emotion of having to handle financial stuff on her own. She contacted me because she knew she needed to file but couldn't do it on her own. Her sister found me through the website of the National Association of Professional Organizers. We met twice/week for a few hours. We did 3 years together; she did the last one on her own. Total 15 hours [Ami's current rate is \$100/hour]. One 3-hour session was about her current relationship to money, which was as important as the taxes. Just as having a heart attack can lead you to improve your health habits because it indicates a greater problem.

Example 2. A woman who for 37 years had been in the same home. She needed to decide whether to stay there because her husband's health was getting worse. It was a two-story house. Two sets of steps to climb because it was on a hill. Not possible for him to be mobile in and out of the house. He had severe back pain and had trouble getting up the stairs. It was her home. She didn't want to leave. She was feeling overwhelmed with the decisions to be made. After she decided to move, there were decisions about their stuff. They were moving to a much smaller place. Moving from four-bedroom house to three-room apartment. Sorting through their entire life. Dividing belongings among all their children and grandchildren.

Example 3. A small business owner who had been in practice for over 20 years. His home-based office was a mess. People not billed. Papers all over the office. He works on site. He came to me because it was daunting to take care of tasks that needed to happen. He would hire someone to help in the office but they wouldn't work there until it was cleaned up. They didn't want to feel overwhelmed by the clutter. He wasn't able to clean up his office. He was working a lot of hours, trying to balance personal life with business life. Now that he was taking some personal time, and not working all night, business things weren't being taken care of.

Example 4. Published author, several books out. She was juggling four pressing projects and trying to start a website. Continuing on a book she was halfway into. Couldn't make the writing work. I worked with her for 2 hrs to help her prioritize her time. Previously she was able to manage some of this better. When the website came along it became another project that kept the writing from happening. She'd been working on the book for a year or less; she was more than halfway through, and now falling behind the publisher's deadline. She wanted a plan, plus physical organization of her workspace. We shifted the space a little bit to help her focus on writing. She was getting distracted too much.

Example 5. A woman called me because her house was not the way she wanted it. Three people had died and she had inherited their belongings. She felt overwhelmed in her own home. She'd lived there over 20 years. It was

overwhelming to go through things and make decisions about what she wanted to keep. Stuff had gotten packed in quite a bit. We went through her house room by room and cleared stuff out. Started in the kitchen. Less emotional. Not much room left on the counters. We did 4 or 5 rooms, including office space. She had been a graphic designer.

You can reach Ami at amisolutions at mac dot com.

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mike kenny (2008-08-11 20:24:27)

that's a neat idea. your own personal 'fixer' so to speak. to me this person seems to help people who have overdrawn on their finite willpower and don't have anymore to deal with stress, so they pay someone else for his or her willpower, so to speak. your willpower is like your car, and when you run out of gas, the car stops, and you hail a taxi. this idea comes from, i think, a paper tyler cowen linked to at marginal revolution, on willpower as a finite resource, and the paper suggested that when we ran out of willpower, we engaged in behaviors normally restrained by willpower (drinking, binging on food i suppose), or i suppose we failed to do things that willpower would have forced us to do (like taxes, or cleaning up room). this made so much sense to me. does this idea of finite willpower connect with your theory of procrastination at all, i wonder?

seth (2008-08-12 06:12:01)

yeah, I agree with the idea of willpower as finite. Research suggests it is like a muscle: gets stronger with use. To answer your question: No, the notion of finite willpower has little to do with my thinking about procrastination. Although maybe it's why procrastination is a problem worth thinking about.

## **The Undone Work: Electric Cars (2008-08-12 06:08)**

During Bill McKibben's book tour for *Maybe One* (1998), an argument for having no more than one child, he gave a reading in Berkeley. I attended, and asked a question: Jane Jacobs says the problem isn't too many people, the problem is the undone work. (Which I also said at the end of *The Shangri-La Diet*.) For example, air pollution. The solution won't be fewer people, it will be cars that pollute less. I asked McKibben what he thought of this. He said he thought highly of Jacobs, but the EV1 was a failure. Terrible answer, I thought.

Yesterday I spoke to the owner of an electric car. It is entirely powered by electricity from solar panels on the roof of her house. It can't go on the highway but is perfectly good for taking her and her two children around town. She's had it about a year; she bought it after seeing someone else drive one. Leaving aside the cost of the solar panels, driving costs her almost nothing, is very quiet, and produces no pollution. The car was made in Vancouver. In America, it's small; it wouldn't be small in Japan. Looks like the future, I thought.

[1]Green Motors, a Berkeley store specializing in electric cars, started by the man she bought it from. Lovely website, his enthusiasm shines through. [2]Car-maker difficulties.

1. <http://www.gogreenmotors.com/>

2. <http://www.greenparty.ca/en/node/3045>

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Stephen M (Ethesis) (2008-08-14 15:29:26)

What is really fun is seeing compressed air used as the storage device for energy rather than batteries or gas tanks. Works very well with the minicars, and has little disposal problems ;)

### **Weston Price and the Olympics (2008-08-12 09:39)**

I was surprised how much I liked the Olympics opening ceremonies on Friday. I hadn't been so transfixed by an Olympic event since Joan Benoit won the first woman's marathon, leading the whole way. At one point during the opening ceremonies a young girl in a red dress sang a Chinese song. Or [1]so it seemed:

The girl in the red dress with the pigtails, called Lin Miaoke, 9, and from a Beijing primary school, has become a national sensation since Friday night, giving interviews to all the most popular newspapers.

But the show's musical designer felt forced to set the record straight. He gave an interview to Beijing radio saying the real singer was a seven-year-old girl who had won a gruelling competition to perform the anthem, a patriotic song called "Hymn to the Motherland".

At the last moment a member of the Chinese politburo who was watching a rehearsal pronounced that the winner, a girl called Yang Peiyi, might have a perfect voice but was unsuited to the lead role because of her buck teeth.

Weston Price's research, described in Nutrition and Physical Degeneration, implies that buck teeth are caused by too little of a dietary growth factor, which a commenter described as "the menaquinone-4 form of vitamin K2."

1. <http://www.telegraph.co.uk/sport/othersports/olympics/2545387/Beijing-Olympics-Faking-scandal-over-girl-who-sang-in-opening-ceremony.html>

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mike kenny (2008-08-12 17:34:50)

the ceremony was pretty amazing, what i saw of it. it's interesting that what visually might have been uninteresting if it were CGI or machinery doing the work (the many people moving up and down in those boxes comes to mind) suddenly becomes amazing because it's a bunch of actual people doing the work. at the same time, i found something creepy about the mass-coordination of individuals during the ceremony. i don't feel that way about dance troupe performances or orchestration, or marching bands. so i'm a little perplexed by my reaction.

### **Science in Action: Why Did I Sleep So Well? (2008-08-13 20:56)**

Last night I slept extremely well. I slept about eight hours and woke up feeling really good. In the past I've slept this well only after being on my feet nine or ten hours. Yesterday I was on my feet maybe four hours. I usually sleep well but this was a distinct improvement.

What caused it? Yesterday had many unusual features (like most days), but I did deliberately vary one thing:

1. I looked at faces (actually, my face in a mirror) earlier than usual. Usually I start around 7:40 am; yesterday I started about 7:10 am. (Background: I discovered that seeing faces in the morning improves my mood the next day. For example, seeing faces Monday morning improves my mood on Tuesday. And makes my mood worse Monday night. Details [1]here.) I've done this before – watched the faces earlier than usual – and hadn't noticed anything unusual. Yesterday may have been different, however, because three days ago I changed something. I always listen to something (audiobook, a Google Talk, This American Life episode, etc.) while I look at my face in the mirror. Three days ago I moved the sound source directly behind the mirror.

This is my best guess why my sleep was better than usual. But yesterday was unusual in several other ways as well:

2. I went outside (in the shade) 30 minutes earlier than usual.
3. Usually wear contact lenses while sleeping but didn't.
4. Usually wear a tooth guard while sleeping but didn't.
5. Salmon for dinner, which isn't unusual, but I had more than usual.
6. No aerobic exercise.
7. Did a lot of chores I'd put off. (Peace of mind?)
8. On the preceding days, the sound source was behind the mirror. In other words, it was the cumulative effect that produced better sleep.
9. The end of a cold.

Now I'll do all sorts of things to test these possibilities.

There's a saying No one believes a theory but the theorist; everyone believes an experiment but the experimenter. This illustrates why. The experimenter can see all sorts of confoundings and special circumstances that others cannot.

[2]Directory.

1. <http://repositories.cdlib.org/postprints/117/>

2. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

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Igor Carron (2008-08-14 05:23:53)

You also leave out of the equation the actual eight hours of sleep! Do you know for a fact that no specific sound/noise (however small) occurred during your sleep? If one were to follow the "prehistoric" man story you like to come back to, shouldn't an uneventful sleeping state be correlated with a sign of no surrounding predators and therefore be correlated to a good sleep? Just wondering... Igor.



Mike Kenny (2008-08-14 05:25:08)

interesting. maybe hearing voices behind you tends to cause you to feel secure, as if you're with friends who you can trust ("they have my back") and provides a sense of security?

Igor Carron (2008-08-14 06:05:04)

Mike, I was not thinking in that direction (more in the direction that that night, Seth has not heard any noise/sound) but this is interesting. However, how would one explain that snoring is a major impediment for others to sleep in groups ? I am also of the opinion that snoring is also detrimental to the snorer as their noise is bound to make their sleep light. Igor.

Mike Kenny (2008-08-14 06:23:03)

hi igor, i was referring to having the radio behind oneself while looking at oneself in the mirror. i hadn't thought of effects of noise on sleep. i can't recall being bothered by snoring myself (though maybe i don't remember). having people talking around you seems an anti-depressant to me. i used to work in a closed office by myself and being a retiring person, i got a bit isolated, but then i had office mates and the door to my office remained open to the hustle and bustle of people outside it, and i believe my mood got better overall. obviously there could be other causes to my better mood, but it does seem true there's some apparent correlation between hearing people talk and feeling good. placement of the voices seems to speak to trust-if you don't trust people you seem likely to keep them in front of you, and if you trust them, behind you, so if you have voices behind you, it might trigger a feeling of security and friendship, which seems a plausible cause in elevating mood, as seth's experiment might suggests.

peter (2008-08-14 07:04:46)

OT, but related to sleep. there was segment on sleep apnea on pbs' news-hour that talked about an elaborate diagnostic procedure (sleeping in lab hooked up with wires etc.) and treatment that consisted of sleeping with equipment attached to one's face; both of which would be fairly expensive. it turns out that i have had sleep apnea for several years and that merely using a breath right strip across my nose resolved the problem. (i didn't have a scientific diagnosis, but the before and after difference in my sleep was clear). the point is that i did self-experimentation rather than be drag into the medical establishment to spend thousands of \$ \$ \$. (one of the great things about reading your blog is that it leads one to consider and try self-experimentation). It may be that this simple inexpensive "treatment" may not work for everyone, but it ought to be tried before sufferers/society incur the expense of a cumbersome and often ineffective "medical" treatment. There are other simple treatments as well, such as a applying wrap to one's head (from the chin to to the top of the head) to force one to breath thru the nose. I don't see these simple treatments discussed on-line and they weren't discussed in the pbs piece.

seth (2008-08-14 10:21:54)

Igor, I don't think there were any unusual sounds while I was sleeping. It wasn't unusually quiet, as far as I know. Mike, the voices were behind the mirror, not behind me. The effect was that looking at my face while listening to voices was a lot more realistic since the voices appeared to come from the face, rather than somewhere else. Peter, I completely agree. I hadn't heard that before about the breath right strip resolving apnea, that's really helpful to know. Those sleep labs tend to conclude you have disordered breathing whether you do or don't, according to Insomnia by Gayle Greene.

Mike Kenny (2008-08-14 11:59:14)

oh, i see. my mistake! i misread.

MT (2008-08-15 05:39:22)

Love it!! Go Seth!! Look forward to your results....

Seth's blog » Blog Archive » Science in Action: Why Did I Sleep So Well? (part 2) (2008-08-15 09:14:32)

[...] Science in Action: Why Did I Sleep So Well? [...]

Seth's blog » Blog Archive » Science in Action: Why Did I Sleep So Well? (part 3) (2008-08-16 22:44:48)  
[...] Science in Action: Why Did I Sleep So Well? [...]

Seth's blog » Blog Archive » Science in Action: Why Did I Sleep So Well? (part 5) (2008-08-19 06:42:16)  
[...] Science in Action: Why Did I Sleep So Well? [...]

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## The Professor Has No Clothes (2008-08-14 11:32)

In 1953 Harvard appointed an architect named Josep Sert to a powerful position. Sert had some amazing ideas. From a [1]review of a new book about him:

With the help of Walter Gropius, [Sert] was appointed dean [of the architecture school] at Harvard in 1953, where he set up the world's first course on urban design, a perfect platform from which to propagate the modernist Ciam agenda for shaping cities using new science, principles and forms. . . .

As propagandist for a type of urban thinking which would have disastrous consequences, Sert had a programmatic mind-set which could see the beauty of historic cities, but his totalitarian attitude insisted on extrapolating abstract systems out of their features. In 1953, for instance, he proposed that if repeated endlessly, the traditional patio house could make a whole city. . . . Sert continued to insist that since the unplanned energy of cities is "chaotic" and "disorderly", the planner must normalise and "overcome" it. He expressed these convictions in abstract terminologies about neighborhoods, scalar zones, urban functions, categories and so on, and in complacent assertions "every city is composed of cells, and the role of planning is to put these cells into some kind of system or relationship."

His 1952 plan for Havana is one shocking example. Commissioned by a group of speculators intent on carving up the city, Sert's Pilot Plan "addressed the entire metropolitan area of Havana, applying Le Corbusier's rules on classification of roads", a totally abstract theory. Having destroyed the city's historic streets and obliterated all memory of Old Havana, he proposed "clusters" of what he supposed would be "charming streets recalling the city's origins", but with dimensions that would use the completely abstract principles of Le Corbusier's Modulor. This awful scenario was to be dominated by "tall towers for a new financial district" which would have wrecked Havana once and for all.

Thankfully, the 1959 Cuban revolution thwarted this insane plan.

I wonder what real-world events led Hans Christian Andersen to write "[2]The Emperor's New Clothes."

1. <http://www.bdonline.co.uk/story.asp?sectioncode=429&storycode=3119895&c=2>

2. [http://en.wikipedia.org/wiki/The\\_Emperor%27s\\_New\\_Clothes](http://en.wikipedia.org/wiki/The_Emperor%27s_New_Clothes)

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### Science in Action: Why Did I Sleep So Well? (part 2) (2008-08-15 09:14)

A few days ago (Tuesday night) I slept unusually well, presumably because Tuesday day had been unusual in some way. I [1]made a list of nine possible reasons.

Today I realized I'd forgotten something: 10. Stood on one foot more than usual. To pass the time while looking at my face in the mirror I had stood on one foot while stretching the other leg, pulling my foot up behind me. I was curious how long I could do this so I did a few trials with each leg where I did it until it became too painful. I lasted about 2 minutes on one leg and 2.5 minutes on the other.

This might seem trivial – and I forgot about it. But standing on one foot continuously for a relatively long time surely stressed my leg muscles much more than usual. [2]Previous research convinced me that standing many hours improves sleep. Maybe this "extreme standing" produces the same hormonal effects in a few minutes as normal standing does in ten hours. That would be wonderful!

[3]Directory.

1. <http://www.blog.sethroberts.net/2008/08/13/science-in-action-why-did-i-sleep-so-well/>
2. <http://repositories.cdlib.org/postprints/117>
3. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

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andrew smith (2008-08-15 09:56:29)

I was always very interested by your theory that standing more than 10 hours improves sleep. After you performed all that self-experimentation, did you ever take the next step and check to see if others who routinely stand more than 10 hours a day (waiters, retail workers, etc.) sleep unusually well? Of all your hypotheses, it seems the stand/sleep one would be the easiest to prove because plenty of people naturally engage in the behavior.

david (2008-08-15 10:20:42)

Better us retail workers. Waiters and bartenders tend to abuse other substances that might interfere with their sleep.

Kirk (2008-08-15 14:44:23)

At least one branch of Tai Chi (Cheng Man-Ch'ing as taught by Ben Lo) emphasizes holding postures. Several postures require all weight to be on one leg, such as White Crane Spreads Wings, and Play the Lute. You could wander over to Lenzie Williams classes in Berkeley and ask him and his senior students if anybody has noticed a difference for the days they hold postures.

seth (2008-08-15 15:03:24)

Andrew, I have done such a study. Two students and I compared the sleep of retail workers with people with desk jobs. There was an interaction of job and age. Older workers showed the predicted effect (those who stood a lot had better sleep than those who stood little); with younger workers, their sleep was usually good in both cases (so the lack of difference was probably a ceiling effect).

mike kenny (2008-08-15 17:03:17)

i'll have to try standing on one foot for a couple minutes and then the other to see if my sleep gets better. i sleep pretty well anyway, but why not?

Thomas See (2008-08-15 20:23:09)

I find your site is very interesting and infomative. I personally practise some "Chi Kong" before my bed time, it does help me to sleep better at night. Good Job!

Heidi 555 (2008-08-16 04:45:15)

Seth, I see why you are so successful with self-experimentation. You are willing to entertain some unusual hypotheses in terms of cause and effect. And then you have the patience to test them out. I think that your ability to remain open to unusual correlation is key. It appears that one must initially learn to suspend the mind's (left brain) critical judgement. My brain immediately discredits certain hypotheses as implausible. Also, I tend to assume that there are multiple causes for an effect that work together synergistically, so combinations of variables that play a part can seem overwhelming. (I've been reading the book: My Stroke of Insight by Jill Bolte Taylor so I've been thinking about brain pathways involved with things. She is a neuroscientist who had a severe stroke and was able to articulate what occurred from that perspective. It's a fascinating and inspiring read.) I feel inspired to test your standing on one leg hypothesis. I enjoy yoga one-legged postures even though I rarely do them. Also, I've wanted to improve my balance by standing on one leg on a balance disc. When I did T-Tapp I most enjoyed the exercises that entailed standing on one leg. I did those one legged exercises for quite an extended period of time. I don't recall if my sleep was better, but it might have been. I am curious about other health benefits of one-legged standing.

seth (2008-08-16 10:48:38)

Thanks, Heidi. The hypothesis in this post – that standing on one leg will improve sleep – isn't implausible given my earlier observations that standing for many hours improved sleep. In the earlier work I found that until the standing became stressful (= many hours) it had no effect. I should have realized back then that it might be the stress, not the hours, and that other ways of producing stress might have the same effect. But you're right, I did entertain a strange hypothesis. It happened when I considered the possibility that mere standing (not exercise) would cause weight loss. That's why I started standing a lot many years ago. That hypothesis turned out to be completely wrong – I didn't lose any weight – but I did start to sleep much better.

Heidi 555 (2008-08-16 16:23:12)

That's great how a wrong weight loss hypothesis led to improved sleep. Actually, I was thinking that the standing on one leg was less unusual than many of the other things on your list (in the previous post of why you slept so well). It was helpful for me to read your list and have a glimpse of how you generate self-experimentation ideas. I hope that you'll continue to write about the things that you'll do to test these possibilities. I admire your ability to come up with obscure and unusual ideas. I wrote a list of things that help me to sleep better, but they are more obvious commonly accepted kinds of things. I'm pondering how to look for more unusual correlation. Today I stood on one leg on a balance board while washing dishes. I like the challenge of it – it was fun. I actually was sorry that I didn't have more dishes to wash!

Nadav (2008-08-16 19:30:05)

Consider that humans evolved to stand–actually to walk–for long periods in search of food, and also to undergo short periods of extreme exertion when killing prey or fleeing from danger. Maybe some combination of both produces optimal sleep.

Seth's blog » Blog Archive » Science in Action: Why Did I Sleep So Well? (part 3) (2008-08-16 23:05:40)

[...] Science in Action: Why Did I Sleep So Well? (part 2) [...]

evconvert (2008-08-18 13:58:58)

Could you elaborate on what "too painful" means exactly? I think I can stand on one leg for a long long time in various states of discomfort to pain.

seth (2008-08-18 16:06:24)

Evconvert, my threshold for stopping is low. "Too painful" means "more than slightly uncomfortable". Or even "slightly uncomfortable." You could say I stop when it becomes difficult to continue.

Seth's blog » Blog Archive » Why Did I Sleep So Well? directory (2008-08-20 09:19:50)

[...] Science in Action: Why Did I Sleep So Well? (part 2) [...]

Seth's blog » Blog Archive » Science in Action: Why Did I Sleep So Well? (part 5) (2008-08-20 09:22:11)

[...] Science in Action: Why Did I Sleep So Well? (part 2) [...]

Kroatien (2008-12-03 00:16:46)

Hello webmaster I like your post "Science in Action: Why Did I Sleep So Well? (part 2)" so well that I like to ask you whether I should translate into German and linking back. Answer welcome. Greetings Kroatien

### **Science in Action: Why Did I Sleep So Well? (part 3) (2008-08-16 22:44)**

Yesterday I did two of the 10 or so possible things that might have caused me to [1]sleep really well recently: (a) looked at my face in a mirror earlier than usual with voices behind the mirror (Factor A) and (b) [2]stood on one foot until exhaustion (twice) (Factor B). And last night I slept better than usual – not quite as great as the first time but still really well. This seems to narrow down the possibilities to:

- Factor A only
- Factor B only
- Factor A and Factor B

I have doubts about Factor A. After I figured out that seeing faces in the morning improved my mood, I tried for months to find the right "dose" (right time, right length) to improve my sleep. I didn't find it. Whereas Factor B is merely a new version of something that has improved my sleep countless times, so much that I've noticed its effects when not looking for them. The effect might have been less clear last night than the first time because I only stood on one foot to exhaustion twice. The first time – I wasn't paying attention, of course – I think I did it three or four times.

So today I did it six times. It was curiously exhausting. After I felt recovered (about an hour later), the rest of the day I felt really good, cheerful and energetic – better than after yoga. That doesn't make a lot of sense. If I do something that makes me sleep better, shouldn't it make me more tired?

[3]Directory.

1. <http://www.blog.sethroberts.net/2008/08/13/science-in-action-why-did-i-sleep-so-well/>
2. <http://www.blog.sethroberts.net/2008/08/15/science-in-action-why-did-i-sleep-so-well-part-2/>
3. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

Seth's blog » Blog Archive » Science in Action: Why Did I Sleep So Well? (part 4) (2008-08-17 05:46:04)

[...] Science in Action: Why Did I Sleep So Well? (part 3) [...]

Methuselah (2008-08-17 05:46:05)

I guess the problem with experimenting like this on consecutive days is that there's no way to know whether the first day's activity has impacted the second...do you think it's necessary to decide, for each experiment, how much time must elapse between tests to be sure this effect does not apply? Methuselah [1]Pay Now Live Later

1. <http://paynowlivelater.blogspot.com/>

mike kenny (2008-08-17 09:56:47)

maybe being on your feet triggers energy during the day. being on your feet a lot could mean there's some benefit to being on ones feet, and so more energy is provided by your body to keep up the beneficial behavior (might explain why runners get addicted to running and feel nervous when not running). but since one is expending more energy on one's feet, one sleeps better. there is a greater need for recuperation. it's a bit like your dieting theory. the body economizes on behaviors, doing them when they are most beneficial and cutting back on them when they aren't terribly worthwhile. maybe in the stone age we benefited from days of long exploration on our feet sometimes, but at other times it was best to relax and not wander around too much.

Seth's blog » Blog Archive » Why Did I Sleep So Well? directory (2008-08-20 21:28:10)

[...] Science in Action: Why Did I Sleep So Well? (part 3) [...]

more on running, sleep, and energy « Mike Kenny (2011-11-24 05:02:08)

[...] robert's writes: That doesn't make a lot of sense. If I do something [standing on one foot a few times till [...]

## Science in Action: Why Did I Sleep So Well? (part 4) (2008-08-17 05:45)

I repeated the two things that [1]remained on my list as possibilities for why [2]I slept so well a few nights ago: 1. Looked at my face in a mirror a half-hour earlier than usual with a better sound source. 2. Stood on one foot until exhaustion (6 times). Lo and behold, I slept great. Now I'm pretty sure one of these two, or their combination, is responsible.

An unexpected twist is that I only slept 5 hours. Usually I'd still feel tired after that little sleep. But I feel like I slept 7 or 8.

I suspect the standing, not the faces, is the cause. Which would be ironic. Of the treatments I've studied by self-experimentation and found helpful, standing 9 or 10 hours, which [3]greatly improved my sleep, was the most difficult. I loved what it did to my sleep. I still remember how wonderful it felt to be so well-rested the next morning. Even so I stopped doing it. As an experimental treatment, it was hard to measure how long I stood. As a lifestyle change, it was really hard to arrange so much standing. Whereas standing on one foot to exhaustion six times might be the easiest effective treatment I've studied (if it's effective). Easy to measure, nothing to buy, no logistical problems.

I may try to repeat the earlier observation a few more times – as a kind of gift to myself – but now the main thing I want to do is separate the effects of the two factors, i.e., test one without the other.

[4]Directory.

1. <http://www.blog.sethroberts.net/2008/08/16/science-in-action-why-did-i-sleep-so-well-part-3/>
2. <http://www.blog.sethroberts.net/2008/08/13/science-in-action-why-did-i-sleep-so-well/>
3. <http://repositories.cdlib.org/postprints/117/>
4. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

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peter (2008-08-17 06:52:16)

there's more to standing on one leg than meets the eye. this article notes that bird do it all the time (and not just flamingos) <http://richarddawkins.net/forum/viewtopic.php?f=5 &t=52446 &start=0 &st=0 &sk=t &sd=a> There doesn't seem to be much literature on it, altho i did not do an exhaustive search. Also, one of the postures of Nei Kung involves more or less standing on one leg (Playing P'i P'a) Kei Kung is a precursor to Tia chi. These practices are generally designed to open up one's meridians; and to generate and disperse chi throughout the body. My understanding of "Chi" is that it is the undifferentiated energy of the universe. A person that practices Nei Kung for several years forms a thick fascia throughout the body (Fascia is strong connective tissue which performs a number of functions, including enveloping and isolating the muscles of the body, providing structural support and protection.<http://www.wisageek.com/what-is-fascia.htm>) my instructor told me that Playing P'i P'a results in fascia being formed along the side of the leg. These Chinese forms evolved over many centuries and are often the result of observing animals (including birds, i would think). If Playing P'i P'a "make the cut" then it's has to do with more than just sleep. I don't know what that is, but it would be interesting to find out.

mike kenny (2008-08-17 09:37:30)

does the time of day you stand on one foot matter, do you think?

seth (2008-08-17 09:55:44)

Mike, I don't know. If standing on one foot does matter, presumably it puts one or more stress hormones in the blood that later (at night) control depth of sleep and during sleep are gotten rid of. If that's correct, then the time of day shouldn't matter because the stress hormones are likely to be stable. It's a question that I will try to answer if standing on one foot turns out to matter.

mike kenny (2008-08-17 11:28:22)

excellent. i tried standing on one foot (right, then left) for about 2.5 minutes a piece on friday fairly close to bed and didn't notice effects (though there are numerous confounding elements in the mix—it's been a high stress time for me). it sounds like you spent more time standing on one foot though, and did it in the morning. i'll play around with the idea.

seth (2008-08-17 12:11:36)

If you want to see if you get the same effects, I'd try six times – three on each foot.

Stephen M (Ethesis) (2008-08-17 12:56:57)

Now you've got me wanting to change my computer desk so I stand while I read my e-mail.

mike kenny (2008-08-17 14:09:17)

will do

seth (2008-08-17 22:15:44)

From Nancy Lebovitz: It'll be interesting to see whether it's the stress or the one-footed standing. If it's the former, you'll get less improvement in your sleep as you get better at one-footedness from practice. Answer: I don't do the one-footed standing for a fixed time. I do it as long as possible. So it is more or less equally stressful each time.

Heidi 555 (2008-08-18 05:36:46)

There's also the element of balance, which is related to the stress and would improve over time. I've been doing a one-legged standing on a balance board or disc about 3 times daily. I've noticed that I feel good after doing it. My balance is improving. Last 2 nights my sleep has been excellent but I sleep well maybe 60-70 % of the time.

Caleb (2008-08-18 08:26:27)

fascinating results, but man this isn't working so easily for me. I decided i'd try it out while doing my 30 minutes with the mirror. The problem is I'm probably on the tail end when it comes to balance and leg endurance. I use a bike as my primary transportation, and I don't use my hands when I ride, so my leg strength and balance are pretty ridiculous. I made it through the whole 30 minutes and I was still standing on the first foot. It was definitely feeling quite tired and sore in places, but I could have gone longer. Still, I might be able to make this work, as I suspect the benefits come from the hormones you produce when your legs endurance gets pushed past it's limits. Maybe if I pre-exhaust my legs with some weight lifting before hand it won't take nearly as long for them to give out. I'll have to look up what are the most important leg muscles for balance.

Nadav (2008-08-18 10:30:54)

Caleb, the important factor may be the stress itself, not the fact that it's induced via the legs. Maybe you could try something you're not already good at, like maintaining yourself in the half-pushup position as long as you can. This will stress your arms, chest, and abdominal core (make sure you're ramrod straight).

Kirk (2008-08-18 16:12:30)

Caleb, sink into the supporting leg. Soften the muscles in the hip. Always keep the knee over the foot, don't let it move inside or outside. I just tested multiple positions and it seems that the easiest to illustrate is: turn the foot of what will be the supporting leg out 45 degrees (if the left foot, then it points to 10:30) extend the other leg in front, sliding on the floor sink, sink, sink into the hip the stopping point is when you can't lift the other foot without lurching Then lift your non-weight-bearing foot from the floor a quarter inch or so. Hold.

mike kenny (2008-08-18 18:58:42)

i tried standing on each foot for about 2 minutes, 3 times last night-i was more or less exhausted by this. i woke up about 2 hours earlier than usual this morning, and couldn't get back to sleep, which was kind of weird. i tried standing on each foot till i was pretty much exhausted three times today, too, and i'll see how i sleep and how i feel tomorrow.

Seth's blog » Blog Archive » Why Did I Sleep So Well? directory (2008-08-23 05:57:19)  
[...] Science in Action: Why Did I Sleep So Well? (part 4) [...]

### **Steep Learning Curve (2008-08-18 19:14)**

The phrase everyone gets wrong. Outside experimental psychology, where the term originated, I have never seen a correct usage. Learning curves show performance (e.g., percent correct) as a function of amount of training (e.g., number of trials). A steep learning curve means the organization, person, or animal quickly went from low to high performance – in other words, learning was fast.

The phrase is always used to mean the opposite (slow learning). An example from [1]Economic Principals:

But experience has shown that high fixed costs, steep learning curves, access to delivery systems and expensively-maintained reputations are powerful deterrents to ambitious start-ups.

1. <http://www.economicprincipals.com/issues/2008.08.17/331.html>



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Nathan Myers (2008-08-18 20:39:17)

It's routinely used correctly in industrial manufacturing, where it refers to cost reductions that result from manufacturing experience and competition. There, cost starts at a normalized 1 and declines exponentially toward an asymptotic horizontal somewhere (presumably) above zero.

David (2008-08-19 00:13:16)

The normal usage of the phrase is very closely related to the actual meaning, though. When someone says "product X has a steep learning curve", they mean "product X requires that you go from low to high performance very quickly to use it" – it's a product that isn't worth using if you're not going to learn quickly.

whisht (2008-08-19 03:45:33)

ah, thanks for this. I always used it wrongly for a different reason. I use it to mean "difficult" (which would be an axis of Effort and Time). Good to learn where I'm wrong (again) :Â~)

Family Nutritionist (2008-08-20 05:40:25)

Achieving a steep learning curve can feel difficult, because there can be much to learn in a short time. I think you are correct to note that the term is hardly ever used to describe situations where it was easy to go from low to high performance. Intuitively, a steep hill is one that is hard to climb, so the phrase is naturally associated with situations where learning feels like quickly climbing a steep hill.

### **Science in Action: Why Did I Sleep So Well? (part 5) (2008-08-19 06:42)**

I have been sleeping much better than usual. Sharp easy-to-notice improvement. After the first time this happened I made [1]a list of 9 possible reasons (lifestyle changes that might have been responsible). I [2]later added one I'd overlooked: standing on one foot to exhaustion a few times.

Yesterday I stood on one foot to exhaustion four times, twice in the morning and twice in the evening. It took about three minutes each time (12 minutes total). Didn't make any of the nine other candidate changes. And I slept much better than usual. So it is beginning to look like just that one factor is responsible. The one I almost forgot but also the one that seemed most plausible after i remembered it.

[3]Directory.

1. <http://www.blog.sethroberts.net/2008/08/13/science-in-action-why-did-i-sleep-so-well/>

2. <http://www.blog.sethroberts.net/2008/08/15/science-in-action-why-did-i-sleep-so-well-part-2/>

3. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

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Igor Carron (2008-08-19 07:02:13)

Seth, Are you talking about just standing on one foot or tiptoeing on one foot ? 3 minutes seems to be a small number to get

exhausted, or am I missing something ? Cheers, Igor.

Nathan (2008-08-19 07:35:35)

I usually spend most of my day sitting in front of a computer and don't sleep as well as I'd like (though not terribly). Yesterday, inspired by this series of posts, I raised my computer 18 inches and worked for several hours standing in front of my desk. I slept very well last night and plan to stand for several hours today as well. I also found that standing helps fight drowsiness, so I plan to stand while doing some of my more boring research work.

Phillip J. Eby (2008-08-19 08:12:55)

Yeah, and what do you mean by "exhausted"? Just that your leg feels tired, that you can't stay standing on it, you lose your balance, or...?

Curious one-footer (2008-08-19 08:24:24)

And what are you doing with the other foot? Holding it slightly off the ground? Bent up behind you? Pressed against the other leg (as in yoga's tree pose)? Extended in front of you?

seth (2008-08-19 08:46:11)

Igor, I just stand on one foot. No moving around. Maybe 3 minutes isn't long, I don't know. I do know that in any yoga class I am the worst student. Philip, by "exhausted" I mean my leg starts to hurt and to continue would be more than slightly uncomfortable. Nothing to do with balance. Curious, while I'm doing this I'm holding my other foot bent up behind me. Because I found that many hours of standing produced similar effects, I discount the stretching aspect of my pose. My previous research (standing many hours) involved no stretching.

Chris (2008-08-19 20:59:50)

I think this works! I've got a Wii fit that I hadn't been using much lately and decided to do 30 minutes of the 'stand on one leg' exercises they had ( 3 yoga poses, 3 'strength' exercises) and I ended up waking up about 1.5 hours earlier and feeling pretty good (although the day's not over yet). Obviously it'll need more trials/comparisons with other exercises, etc. but it's a promising find. Seth, you mentioned during your omega-3 posts that you used balancing on one leg as a test--were there any sleep differences while you were running those tests? Anyway, be curious to here if others get the same result. The wii fit does seem like a decent platform for self experimentation since you get a score and logs of how long you did each exercise for.

seth (2008-08-20 06:38:39)

When I did my balancing tests (standing on one leg) my sleep did not noticeably improve. I don't make anything of this because I would typically balance for 5 seconds or so perhaps 30 times with substantial rest between bouts. Whereas now I am standing 3 minutes or so at one time, that is, with no rest (and doing this 4 times/day = 12 minutes total/day). Old way: not stressful at all. New way: very stressful. I'm sure you need stress to get the effect (if there is one) because I got no sleep benefit from standing until I got up to 8 hours or more per day.

Collective Wisdom for a Good Night's Sleep (2010-07-28 10:01:26)

[...] Still, sleep deprivation is not fun. I'm always looking for new ideas to help me get a better night's sleep. I drink chamomile tea and avoid caffeine. I try to get lots of fresh air and daily walks. I read fiction before bed. I study the science of sleep. I've even tried Seth Roberts' theory that standing on one leg to exhaustion can help you sleep better (I think it works). [...]

## Musical Question (2008-08-19 08:34)

Browsing through the many cell-phone-music videos on YouTube I came across [1]this demonstration of an iPhone piano program. The demonstrator first shows the range of the instrument, then plays Chopsticks, then plays . . .

what? A piece I've heard many times but can't place.

What impresses me so much about the mystery piece is how urgent it sounds. Somehow the composer has figured out what makes something sound urgent. It reminds me of a note Robert Caro, the biographer, has posted above the desk where he writes: "Is there desperation on the page?"

More. It's [2]Clocks by Coldplay. Thanks so much, Sam and Jeff! Only now do I manage to see that the song is identified in the comment section of the video.

1. [http://www.youtube.com/watch?v=j-CFD\\_1tP9w](http://www.youtube.com/watch?v=j-CFD_1tP9w)

2. [http://www.youtube.com/watch?v=c9j\\_RZDqYc4](http://www.youtube.com/watch?v=c9j_RZDqYc4)

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Sam (2008-08-19 09:00:32)

The song is Clocks, by Coldplay. [www.youtube.com/watch?v=c9j\\_RZDqYc4](http://www.youtube.com/watch?v=c9j_RZDqYc4)

jeff (2008-08-19 09:03:58)

it's "clocks" by coldplay.

Stephen M (Ethesis) (2008-08-19 16:41:38)

That is neat, thanks for the reference.

### **The Quantified Self Meetup Group (2008-08-19 11:55)**

Gary Wolf, a writer for Wired, and Kevin Kelly, one of the founders of Wired, have formed a San Francisco Bay Area [1]Meetup group called The Quantified Self.

This is a monthly show and tell for people taking advantage of various kinds of personal tracking - geo-tracking, life-logging, DNA sequencing, etc. - to gain more knowledge about themselves. Come where what you are doing, and learn from others. Topics include, but are not limited to:

- Chemical Body
- Load Counts
- Personal Genome Sequencing
- Lifelogging
- Self Experimentation
- Risks/Legal Rights/DutiesBehavior monitoring
- Location tracking
- Non-invasive Probes
- Digitizing Body Info
- Sharing Health Records

- Psychological Self-Assesments
- Medical Self-Diagnostics

The first meeting, which I will eagerly attend, will be on September 10 (Wed) evening in Pacifica. Sign up for details.

1. <http://www.meetup.com/>

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### **HDL and Vitamin D (2008-08-19 22:09)**

Vitamin D supplementation raises HDL enormously, says [1]William Davis:

Add vitamin D to achieve our target serum level . . . HDL jumps to 50, 60, 70, even 90 mg/dl.

The first few times this occurred, I thought it was an error or fluke. But now that I've witnessed this effect many dozens of time, I am convinced that it is real. Just today, I saw a 40-year old man whose starting HDL was 25 mg/dl increase to 87 mg/dl.

Responses like this are supposed to be impossible. Before vitamin D, I had never witnessed increases of this magnitude.

Thanks to Dave Lull.

1. <http://heartscanblog.blogspot.com/2008/08/vitamin-d-and-hdl.html>

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Nathan Myers (2008-08-19 22:44:12)

Of course cholesterol levels below 100 are associated with higher mortality. The association is still unexplained, so doctors still exhort patients to get their cholesterol levels as low as possible... by using statins, of course.

Aaron Blaisdell (2008-08-20 08:20:55)

Another reason to drink milk as an adult...if you are lactose tolerant.

### **Science in Action: Why Did I Sleep So Well? (part 6) (2008-08-20 08:58)**

On the SLD forums Heidi 555 [1]posted this:

I've been standing on one foot on an inexpensive balance board or inflatable balance disc. . . . I've been using the balance board while doing dishes and brushing my teeth. . . .

I feel good immediately afterwards. I feel slightly better physically and emotionally. . . . I'm use to feeling better after I exercise, but typically it takes more intensive sustained exercise to get this effect.

I sleep well 60-70 % of the time. . . . For the past 3 days that I've done the one-footed standing I've had excellent sleep. Last night it was especially surprising because I went to bed emotionally distraught and stayed up slightly later than I intended.

[2]Directory.

1. <http://boards.sethroberts.net/index.php?topic=6595.msg73100#msg73100>

2. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

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Timothy Beneke (2008-08-20 17:31:14)

I'd be very curious to know how many minutes per day you did it during the 3 days. I've now done it for about 6 minutes twice today, and find it relaxing. I wonder if it releases endorphins?

seth (2008-08-20 17:59:06)

About 12-16 minutes total per day. 4 bouts of 3-4 minutes each.

Seth's blog » Blog Archive » Why Did I Sleep So Well? directory (2008-08-27 06:16:31)

[...] Science in Action: Why Did I Sleep So Well? (part 6) [...]

### **Why Did I Sleep So Well? directory (2008-08-20 09:19)**

1. [1]Initial observation, 9 possible causes
2. [2]Another possible cause: standing on one foot
3. [3]Sleep almost great, narrowing possible causes to two.
4. [4]Sleep great again, narrowing possible causes to two
5. [5]Sleep great again after only standing on one foot
6. [6]Someone else gets similar results
7. [7]Technical details
8. [8]How long I stand
9. [9]Eerie coincidence
10. [10]Patterns of discovery
11. [11]Comparison to other sorts of exercise

12. [12]What's a good dose?
13. [13]How much I've been standing Comparison with conventional exercise.
14. [14]Two more people get similar results
15. [15]How long I stand (continued)
16. [16]Replication details
17. [17]The amount of time needed stops increasing

1. <http://blog.sethroberts.net/2008/08/13/science-in-action-why-did-i-sleep-so-well/>
2. <http://blog.sethroberts.net/2008/08/15/science-in-action-why-did-i-sleep-so-well-part-2/>
3. <http://blog.sethroberts.net/2008/08/16/science-in-action-why-did-i-sleep-so-well-part-3/>
4. <http://blog.sethroberts.net/2008/08/17/science-in-action-why-did-i-sleep-so-well-part-4/>
5. <http://blog.sethroberts.net/2008/08/19/science-in-action-why-did-i-sleep-so-well-part-5/>
6. <http://blog.sethroberts.net/2008/08/20/science-in-action-why-did-i-sleep-so-well-part-6/>
7. <http://blog.sethroberts.net/2008/08/23/science-in-action-why-did-i-sleep-so-well-part-7/>
8. <http://blog.sethroberts.net/2008/08/27/science-in-action-why-did-i-sleep-so-well-part-8/>
9. <http://blog.sethroberts.net/2008/08/29/science-in-action-why-did-i-sleep-so-well-part-9/>
10. <http://blog.sethroberts.net/2008/09/01/science-in-action-why-did-i-sleep-so-well-part-10/>
11. <http://blog.sethroberts.net/2008/09/03/science-in-action-why-did-i-sleep-so-well-part-10-2/>
12. <http://blog.sethroberts.net/2008/09/09/science-in-action-why-did-i-sleep-so-well-part-12/>
13. <http://blog.sethroberts.net/2008/09/12/science-in-action-why-did-i-sleep-so-well-part-13/>
14. <http://blog.sethroberts.net/2008/09/20/science-in-action-why-did-i-sleep-so-well-part-14/>
15. <http://blog.sethroberts.net/2008/09/25/science-in-action-why-did-i-sleep-so-well-part-15/>
16. <http://blog.sethroberts.net/2008/09/28/science-in-action-why-did-i-sleep-so-well-part-16/>
17. <http://blog.sethroberts.net/2008/11/07/science-in-action-why-did-i-sleep-so-well-part-17/>

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Timothy Beneke (2008-08-20 14:26:15)

Fascinating. I've found in the past that helping friends move always led to the best, most relaxing sleep in which I felt my body "letting go" of tension in a deep way. It seemed to be caused by picking up and carrying moderately heavy boxes significant distances and put them down. I was using muscles I don't use, at least not that much. I just did about 6 minutes of standing on each foot, alternating until it became very difficult; I used it as a chance to meditate which I do a lot of anyway lately. I had my head slightly down hands in together on my chest as is done in walking meditation, and I kept my eyes fixed and followed my breath as I do when I normally meditate; as I get lost in my thoughts I gently pull myself back to attending to my breath... I did notice some soreness in my hips and knees, so I changed feet when it got unpleasant... I'll do it again tonight and see what happened.

Timothy Beneke (2008-08-20 20:25:24)

One more comment; I just tried standing on one foot with both arms out - more bang, or muscle usage, for your buck. My arms had to come down before my leg did. Then I switched legs and put my arms out again. I feel stronger relaxation then when just doing it on one leg. This is interesting!

seth (2008-08-20 21:28:45)

That's a good idea, Tim. When I stand on one leg I'm pulling up the other leg behind me so I am using the muscles of one arm.

Darkhorse (2008-08-21 06:24:10)

Seth, this is so great! I have been doing this most days for about a week. I can do it longer when wearing shoes than when barefoot. It also forces people like me, who usually hit the floor running, to find a few minutes for much needed centering and contemplation. I'm assuming that it is best done in the morning to affect sleep that night? Can't you just see all of us in other time zones standing on one leg while you are sleeping deeply? Now, if I could just tuck my head under my armpit!

seth (2008-08-21 06:59:22)

Thanks, Darkhorse. I don't think the time of day matters much (but I'm just guessing, I haven't studied this). I've been doing two bouts in the morning and 2 later in the day. As you say it's something to actually look forward to, there's something pleasant about it.

Mike Kenny (2008-08-21 07:58:29)

I've tried standing on one foot, for about two days, and it seems I was markedly more anxious the next day. I'll try this more to see if the effects seem connected or if it's accidental. I didn't stand on one foot yesterday and I think also the day before IIRC, and didn't feel as anxious the following days as on the days following standing on one foot. So maybe I'm experiencing energy that causes some anxious feeling.

Seth's blog » Blog Archive » Science in Action: Why Did I Sleep So Well? (part 7) (2008-08-23 05:56:30)

[...] Why Did I Sleep So Well? directory [...]

Seth's blog » Blog Archive » Science in Action: Why Did I Sleep So Well? (part 8) (2008-08-27 06:11:43)

[...] Why Did I Sleep So Well? directory [...]

Seth's blog » Blog Archive » Science in Action: Why Did I Sleep So Well? (part 9) (2008-08-29 19:43:19)

[...] Why Did I Sleep So Well? directory [...]

Nibbles: Pollution can make babies fat, plus shrinking supermarkets and standing for more sleep | MProtein.com (2008-09-15 11:36:51)

[...] Finally, there have been all sorts of studies through the years linking lack of sleep and obesity. If you're trying to catch more Zs, try what- Shangri-La Diet mastermind Seth Roberts (who will soon be sharing his wisdom- at Tsinghua University in Beijing) has been experimenting with: standing more on one foot. He's been chronicling things that might be playing a role in sleeping better or worse and says standing up for long periods of the day, particularly when some of that time is spent on just one foot, seems to help him sleep better. We don't know if it works, but would love to hear about it if you try. [...]

Western gal (2009-05-22 14:09:18)

Standing on one foot, and on both feet are well known practices in oriental exercise. For your reference: Stalking Yang Lu-Chan By Robin Johnson <http://books.google.com/books?id=36FkmdsrV8AC> have fun in China!

## Chocolate is Good For You (continued) (2008-08-21 00:04)

[1]A just-published study compared the effects of dark chocolate (flavonol-rich) and white chocolate (no flavonols) on 19 persons with high blood pressure and impaired glucose tolerance. The dark chocolate reduced blood pressure by 4 points (both systolic and diastolic) and improved insulin sensitivity.

I really should test this myself. There is plenty of similar evidence.

[2]Earlier post.

1. <http://jn.nutrition.org/cgi/content/abstract/138/9/1671?etoc>
2. <http://www.blog.sethroberts.net/2008/07/09/chocolate-is-good-for-you/>

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Sam (2008-08-21 01:03:28)

On the other hand, chocolate is said to put stress on your liver, just like alcohol does - I wonder how one would measure the liver function? Maybe by observing how tired one is?

### **Citizen Science: What's Your Sushi? (2008-08-22 17:28)**

Self-experimentation is an example of the more general idea that non-experts can do valuable research. Another example is that two New York teenagers have shown that fish sold in New York City is often mislabeled. They gathered samples from 4 sushi restaurants and 10 grocery stores and sent them to a lab to be identified using a methodology and database called [1]Barcode of Life. They found that "one-fourth of the fish samples with identifiable DNA were mislabeled" . . . [and concluded] that 2 of the 4 restaurants and 6 of the 10 grocery stores had sold mislabeled fish."

[2]The article, by John Schwartz, appeared in the Science section, which makes the following sentence highly unfortunate:

The sample size is too small to serve as an indictment of all New York fishmongers and restaurateurs, but the results are unlikely to be a mere statistical fluke.

This is a [3]Samantha-Powers-sized blunder. It could hardly be more wrong. How much you can generalize from a sample to a population depends on how the samples were chosen. Sample size has very little to do with it. (John Tukey had the same complaint about the Kinsey Report: Stop boasting about your sample size, he said to Kinsey. Your sampling methods were terrible.) To know to what population we can reasonably generalize these results we'd need to know how the two teenagers decided what grocery stores and restaurants to sample from. (Which the article does not say.) If the 14 fish sellers were randomly sampled from the entire New York City population of grocery stores and restaurants, it would be perfectly reasonable to draw broad conclusions.

I have no idea what it could mean that the results are "a mere statistical fluke".

The effect of these errors is that Mr. Schwartz places too low a value on this research. It's impressive not only for its basic conclusion that there's lots of mislabeling but also for showing what non-experts can do.

The end of the article did see the big picture:

In a way, Dr. Ausubel said, their experiment is a return to an earlier era of scientific inquiry. "Three hundred years ago, science was less professionalized," he said, and contributions were made by interested amateurs. "Perhaps the wheel is turning again where more people can participate."



1. <http://www.barcodinglife.org/views/login.php>
2. <http://www.nytimes.com/2008/08/22/science/22fish.html?em>
3. [http://www.stat.columbia.edu/~cook/movabletype/archives/2008/08/the\\_difference\\_5.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2008/08/the_difference_5.html)

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Stephen M (Ethesis) (2008-08-22 19:50:20)

Good point. BTW, on the warrior diet, I learned some more: [http://www.t-nation.com/free\\_online\\_article/sex\\_news\\_sports\\_funny/the\\_warrior\\_diet\\_an\\_interview\\_with\\_penthouse\\_editor\\_ori\\_hofmekler](http://www.t-nation.com/free_online_article/sex_news_sports_funny/the_warrior_diet_an_interview_with_penthouse_editor_ori_hofmekler)

Methuselah (2008-08-24 02:34:16)

Hi Seth, As someone who works in the market research industry I like the Samantha Powers story and think the article makes a good point. I am more torn on the questions you raise in your post. As you know from [1]my post about the under-use of anecdotal evidence I am a big believer in not letting valuable evidence leak away. I was slightly confused by your statement *I have no idea what it could mean that the results are "mere statistical fluke"* since it seemed from the article that the author was saying it was **unlikely** to be a fluke. So in that respect he seems to be on the same page as us. It is just the sample size issue where there is divergence, and in this respect what I am wondering is this: he has obviously applied some formula to determine whether the sample size can be taken as significant, whereas we perhaps prefer to apply a commonsense interpretation of the results and sampling methodology - but there must be a point at which sample size does matter even for that approach - for example, could we have viewed a sample of 3 as having the potential to be regarded as a statistical fluke? Methuselah [2]Pay Now Live Later

1. <http://paynowlivelater.blogspot.com/2008/07/are-we-underrating-anecdotal.html>

2. <http://paynowlivelater.blogspot.com/>

seth (2008-08-24 04:47:36)

The term "statistical fluke" is usually applied to differences between groups. Group A and Group B differ by some amount - does this mean the populations from which they were sampled actually differ on that dimension or could the results be due to sampling variability? If they are due to sampling variability, that means the observed difference is a "statistical fluke." In the fish case, there are not two groups. So I have no idea what he's talking about. You can't have sample sizes be "[statistically] significant" or not; it is differences between groups or differences from zero that are statistically significant or not.

Methuselah (2008-08-24 14:28:16)

Got it - thanks for the explanation.

Seth's blog » Blog Archive » Suppose You Write the Times to Fix an Error (part 1) (2008-08-28 07:42:20)

[...] Citizen Science: What's Your Sushi? [...]

Seth's blog » Blog Archive » More Schoolgirl Science (2009-09-11 20:43:39)

[...] The students used iodine titration to determine Vitamin C levels. Why had the students managed to see something important that the food giant overlooked? My guess is that an unusual processing step (e.g., high storage temperature) destroyed the Vitamin C and those who knew about the anomaly didn't want to consider the possibility that it had done damage. The possibility that someone outside the company might notice didn't occur to them. Just as those who mislabel fish in New York restaurants and markets never realized that two students could uncover their deception. I found that the omega-3 in a Chinese brand of flaxseed oil was probably destroyed before it got to me. [...]

Sui Fai John Mak (2009-09-11 23:24:31)

Thanks for the post. This revealed the importance of checking the source and accuracy of information before making an judgment. The risk of stereotyping is often overlooked, just as in this case. We could perform lots of scientific experiments and conclude results based on "facts". However, it is imperative to reveal the procedures and ensure that all "facts" presented have been critically examined. When I was at school doing chemistry experiments, I often found the results differing from the

theory quite a lot. Why? There are a lot of factors which could affect the accuracy of the experiments.... Again, it is too unfair to all parties by just looking at the results, without understanding what's behind. This applies not only to scientific "experiments", but also to social observations. If you were the teacher of the students, what would you have advised the students? John

### Science in Action: Why Did I Sleep So Well? (part 7) (2008-08-23 05:56)

I've continued to sleep extremely well. I'm sure there's something to this. I'm almost sure it's because of the one-legged standing.

Here are some technical details. I usually do four bouts of one-legged standing, two in the morning and two later. During each bout I stand on one leg, pulling my other leg up behind me. Sometimes I touch something to balance myself. Usually I watch or read something at the same time. Each bout lasts until it's hard to continue – until it becomes slightly painful. At first the bouts lasted about two minutes, now they last about four minutes. I enjoy it more when I time it with a stopwatch.

I haven't yet systematically varied the number of bouts but I suspect one is too few to get the full effect and four is plenty. I'm still trying different ways of arranging them throughout the day. Doing all four at once is too tiring – it takes too long to recover. Maybe it's best to do two whenever's convenient during the day and then do two more in the evening when it's okay to be tired.

[1]Directory.

1. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

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MT (2008-08-25 01:07:41)

Super interesting. I look forward to hearing more! How many days do you think you would take to compare various protocols (when is best to stand, how long is best to stand, etc). It is also interesting because it helps develop balance, which is a neglected aspect of many people's fitness. A great article about balance in the NYTimes notes that 1/3 Americans over 65 are injured every year from a fall: <http://www.nytimes.com/2008/01/08/health/08brod.html?ex=1357448400&en=d2e8cfe20029acbe&ei=5124&partner=permalink&expprod=permalink> (I'm also curious about whether that statistic is meaningful! I know lots of over-65s who aren't injured from falls, and can only think of one one I have even known who was injured from a fall. Nonetheless!)

Nansen (2008-08-25 13:23:23)

It's not clear that you have in fact separate the effects of the two factors, i.e., test one without the other (see [1]part 4 of the directory).

1. <http://www.blog.sethroberts.net/2008/08/17/science-in-action-why-did-i-sleep-so-well-part-4/>

seth (2008-08-26 20:23:06)

Nansen, yes, that's correct. I have found that the standing alone – without the other factor – produces the effect. But I've only observed this a few times. I'll go from "almost sure" to "sure" when I observe it a few more times.

## The Emperor's New Clothes: Meta-Analysis (2008-08-23 09:19)

In [1]an editorial about the effect of vitamin-mineral supplements in the prestigious American Journal of Clinical Nutrition, the author, Donald McCormick, a professor of nutrition at Emory University, writes:

This study is a meta-analysis of randomized controlled trials that were previously reported. Of 2311 trials identified, only 16 met the inclusion criteria.

That's throwing away a lot of data! Maybe, just maybe, something could be learned from other 2295 randomized controlled trials?

[2]Evidence snobs.

1. <http://www.ajcn.org/cgi/content/full/84/4/680?etoc>
2. <http://www.blog.sethroberts.net/2007/08/08/something-is-better-than-nothing-part-2/>

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MT (2008-08-25 02:28:36)

It would be interesting to do a second meta-analysis that is more or totally inclusive, and compare results.

Nathan Myers (2008-08-26 12:08:56)

I take the meta-analysis to mean that if you want to discount the benefits of antioxidants, you must discard 2295 out of 2311 controlled trials, or 99.3 % of them. What other proposed therapy is robust enough to stand up to such treatment? Probably not even aspirin.

seth (2008-08-26 20:21:05)

Nathan, the discarding of the "bad" studies was done, I'm sure, according to widely-accepted rules. It wasn't tailored to this particular situation. But it is truly bizarre that this sort of thing is considered reasonable.

NE1 (2008-08-28 16:40:05)

"The a priori defined exclusion criteria were as follows: 1) no data in humans, 2) no original data, 3) observational epidemiologic study, 4) no random allocation, 5) no vitamin-mineral supplement as intervention, and 6) no subclinical marker of atherosclerosis as outcome" Seeing as how supplementation is a subject so prone to bias, I'm not sure it's such a bad thing. Do we need 100 new minerals claiming to be the cure to heart disease? A thousand new snake-oil salesman to hock them, because they're unregulated and so easily obtained? What makes you think a simple dose of vitamins deserves to cure one of the biggest killers out there? Maybe it wouldn't have hurt to list the major culling criterion, but they started out with one huge filter: looking for effects on heart-disease.

seth (2008-08-28 18:26:59)

"I'm not sure it's such a bad thing." Is there any other branch of science in which 99 % of expensive hard-to-collect data is thrown out?

## Everything I Know I Learned from Japanese Curry Instructions (2008-08-24 06:06)

I got this in a Japanese supermarket:



Translation:

How to make soup curry:

Ingredients-

- 1 packet of soup mix
- 1 packet of flavorful oil
- 1 packet of spicy flavoring
- 80g (3 oz.) of chicken thigh meat cut into bite sized pieces
- 1/4 medium sized carrot

1/2 medium sized potato (cut in half)  
400ml water

1. Boil water in a small pan. Add chicken, potato, and carrot, cook until vegetables become soft, about 20 minutes on med-low heat.
2. Turn off the heat, add the soup mix and mix thoroughly, turn the heat back on and cook a little longer until the flavor penetrates the meat and vegetables.
3. Pour the flavorful oil onto a plate and pour the finished curry on top.
4. Add a desired amount of the spice flavoring.

-the spice flavoring is fairly spicy, so please use caution when adding  
-please cook the chicken thoroughly before adding the soup mix  
-to make a double portion, double the meat and vegetables, and increase water to 700ml.  
-the black things in the soup are basil

To make a dish like the picture on the box: Add sauteed japanese eggplant, shimeji mushrooms, green peppers, and hard boiled egg to the dish. Use boned chicken meat.

How to eat: Using a spoon, scoop rice and add a small amount of curry to the spoon. Please keep the curry and rice in separate dishes to prevent the rice from getting soggy.

Caution: Please use the entire contents of the packets after opening. Cannot be preserved for later use.

I have bolded the interesting parts: 1. The use of please. 2. The explanation ("the spice flavoring is fairly spicy"). You won't find them in the instructions on most American products. I became aware of this aspect of Japanese life when I read T. R. Reid's wonderful book [1]Confucius Lives Next Door: What Living in the East Teaches Us about Living in the West, which was based on six years Reid spent in Japan as a correspondent for the Washington Post. At one point Reid quoted from a sign in a park. The sign had a list of prohibitions: No littering, no music, and so on. But instead of saying, as an American sign would, "no littering", the sign said something like: "So that others can enjoy the beauty of the park, please put your litter in the proper receptacle."

A few years ago I taught a class called Psychology and the Real World in which students did some sort of off-campus work of their choosing. (An example of [2]my teaching philosophy.) One student volunteered in a hospital. One day he told a story about being treated rudely by a nurse. I said, yeah, we live in a pretty rude culture. Japan is different, I said, and told the class about Reid's Japanese park signs.

My student was impressed. He had a part-time job monitoring parking in front of a San Francisco hotel. People would often try to park in an area that needed to be kept clear and it was his job to get them to move. His method - pre-Reid - had been to go over to the offending car and say "sorry, you can't park here." Post-Reid, he was elaborately polite: "Please forgive me for disturbing you, but we need to keep this area clear so that taxis can pick up and drop off passengers. I'm sorry for inconveniencing you, but would you be kind enough to move your car?" Something like that. Pre-Reid, about half the time the driver would argue or cause some sort of difficulty. Post-Reid, there were no problems.

Thanks to [3]Pearl Alexander.

1. <http://www.booknotes.org/Transcript/?ProgramID=1515>

2. <http://graphics8.nytimes.com/images/blogs/freakonomics/pdf/whatdostudentswant.pdf>

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Aaron Blaisdell (2008-08-24 08:49:51)

Interesting. I noticed the polite nature of public signs in use in Hong Kong. Since the signs are all written in both Chinese and English, I wasn't sure whether it was Chinese politeness or British politeness (or both). The British also seem to be more polite in these matters, too. Perhaps its the tea (as opposed to coffee drinking Americans who are more direct and gruff).

david (2008-08-24 10:25:52)

Some of those things might be so formulaic as to have lost their politeness in the original language. I stayed with a French family as an exchange student. Their daughter had missed a few days of elementary school to go to the doctor. They received a letter from the school that started "I have the honor to inform you that your daughter, Sophie, has missed three days of school..." They said "I have the honor to inform you..." is just how the school starts all letters. I'm a technical writer now. We routinely edit out any words like "please"...the goal is to make the prose as squeaky clean as possible. People read documentation as a last resort anyway. We figure extra words waste their time.

The importance of politeness « BC in OC (2008-08-24 16:01:48)

[...] The importance of politeness Posted on August 24, 2008 by bryan A lesson in the art of persuasion. [...]

mike kenny (2008-08-24 17:50:08)

Maybe we should slap emoticons on street signs. No Parking :) On a related note, some phrases in English strike me as formally polite, but are often aggressively used. "Excuse me?" "Do you mind?" "Thanks a lot."

Chris (2008-08-24 22:00:22)

Japanese grammar has a lot of do with it...There are basically 4 different levels of formality (1-you absolutely better not park here, 2-don't park here, 3-please don't park here, 4-you are higher on the social scale than me, and I beg you, please don't park here and you can even go higher than 4 in some cases). Level 3 the default. Level 1 is reserved for when you intend to scold someone. It's often heard when you have cranky mother punishing a kid. Otherwise, it's usually the stuff of movies and comic books. The rest are pretty polite and going from 2-3 is really simple (1 word tacked on the end) so most people do it out of instinct. In English we usually stick please on the front end as if we're explicitly trying to be nice about it. For Japanese, everyone just tacks it on the end. Anyway, I'd be curious to see how this compares with the stuff in Robert Cialdini's books on influence. He cites research that if you can give a reason (even an illogical one) for anything it's much more effective than having no reason. So "No parking" fares much worse than "No parking because it's not allowed."

### **Suppose Your Book Gets a Great Review in the Times (2008-08-26 00:12)**

Few books, including [1]Lolita ("highbrow pornography"), get great reviews in the New York Times. One that did is Ammon Shea's [2]Reading the OED: One Man, One Year, 21,730 Pages. According to Nicholson Baker, the reviewer, "Shea has walked the wildwood of our gnarled, ancient speech and returned singing incomprehensible sounds in a language that turns out to be our own." Someday – 20 years from now? – every review in the Times archives will be retrospectively assigned an Entertainment-Weekly-style grade by computer analysis and [3]Baker's review will be determined to have given an A to Shea's book. I interviewed Shea about the experience.

Few of us will ever get such a positive review in the NY Times, so we must live vicariously. What were the effects on you of Baker's review?

I have a sneaking suspicion that he liked the book more than I did, which is fine by me.Â I'm an enormous fan of both his writing and his perspective on things, and there is no one who I would rather have had read it.Â It did not change my feeling on who I am or what might lie in store for me in the future, but it did make me feel deeply and improbably happy.

What were the effects on your editor and publisher?

My editor [Marion Lizzi, who also edited *The Shangri-La Diet*] says she is quite happy with it as well, and I see no reason to disbelieve her.

What was the effect on sales?

I don't know what the exact figures were, although I understand that they were significantly higher after the review came out.Â I understand that the publisher is preparing another printing, which I suppose is to be credited at least somewhat to the effects of the review.

Did any friends/family contact you about the review?

Some of them did call or write - butÂ both my family and my circle of friends are fairly small, so there was not so much hullabaloo.

How long did it take for the effect of the review to wear off?

It hasn't worn off in some ways - I'm still delighted that Baker enjoyed reading the book.Â However, in some other ways I'd say as soon as I began to seriously think about writing the next book that the incipient terror of that process nudged the residual celebratory feelings of the review somewhat to the side.

[4]Earlier interview with Shea.

1. <http://www.nytimes.com/books/97/03/02/lifetimes/nab-r-booksoftimes.html?scp=1&sq=Lolita%20review&st=cse>
2. <http://www.ammonshea.com/oed.html>
3. <http://www.nytimes.com/2008/08/03/books/review/Baker-t.html?scp=1&sq=ammon%20shea&st=cse>
4. <http://www.blog.sethroberts.net/2008/04/22/how-things-begin-reading-the-oed/>

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## Science in Action: Why Did I Sleep So Well? (part 8) (2008-08-27 06:11)

[1]My recent experience suggests that if I stand on one foot until it becomes slightly difficult about four times/day I will sleep much better. Two days ago I measured how long those four bouts of one-foot standing actually were: 6.2 (left foot), 4.3 (right), 4.8 (left), and 5.2 (right) minutes. The median is 5.0 minutes. When I started doing this, about two weeks ago, each bout was about 2 minutes.

It doesn't seem to matter when I do them. Now I do two in the morning and two in the evening. Fits perfectly with a subway commute. You'll want to be forced to stand.

In the evening I have a pleasant sense of anticipation: I will fall asleep and wake up feeling really good. I have never before felt this way. I have slept this well before, when I stood 9 or 10 hours/day. The sheer difficulty and all-consumingness of doing that, I now realize, got in the way of anticipating the benefits.

Something else curious is that one-foot standing leaves no mark – I can't tell at 3 pm how many bouts I've done so far just by noticing how I feel. Unlike water or calorie consumption: If I don't drink anything I'll get thirsty. If I don't eat anything I'll get hungry. But if I don't get enough of this particular byproduct of exercise I'll never notice.

1. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

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MT (2008-08-27 15:03:12)

Great post! It would be really interesting if you were able to do an optimization curve by alternating shorter and longer periods of standing and seeing where your returns-for-effort peaked. That curve might shift as it is possible that the trigger for the sleep mechanism is from the musculature and requires a certain level of challenge to be set off. The time necessary to induce the deeper-sleep response may increase as you become better at it or develop stronger legs from the process. Very interesting experiment and results.

seth (2008-08-27 16:07:34)

Thanks, MT. yes, that is what I plan to do soon, vary the "dose" (number of bouts, length of bouts) and see how my sleep changes.

Mike Kenny (2008-08-28 06:33:30)

this ultramarathon runner cut his sleep down to four hours to make time for running. i wonder if he can do this because of all the time he spends on his feet: [http://www.wired.com/wired/archive/15.01/ultraman.html?pg=1 &topic=ultraman &topic\\_set=](http://www.wired.com/wired/archive/15.01/ultraman.html?pg=1&topic=ultraman&topic_set=)

Kjitten (2008-08-28 19:21:31)

That's it, I'm trying it. I so rarely wake up feeling Good and Well-Rested.

Toni H (2008-09-01 06:46:10)

It would be really helpful if in a future blog post you could explain what you mean by standing on one foot? ie. are you holding support with your hand from a bar in the subway, are you holding the other foot with your hand behind you, are you balancing on just one foot, etc. I guess this is what's usually called isotonic exercise?

seth (2008-09-01 07:57:03)

Toni H, I've done it two ways: 1. A quadriceps yoga-like stretch. Pulling my other leg back behind me. 2. No stretch at all. The two feet remain close together except one is bearing all the weight.

Seth's blog » Blog Archive » Why Did I Sleep So Well? directory (2008-09-03 19:53:48)

[...] Science in Action: Why Did I Sleep So Well? (part 8) [...]

## **Suppose You Write the Times to Fix an Error (part 1) (2008-08-28 07:38)**

Recently the New York Times published [1] a fascinating article by John Schwartz in the science section about how two teenagers discovered that a lot of raw fish sold in New York is mislabeled. Unfortunately, the article contained two



big mistakes: 1. The teenagers' results were dismissed as unconvincing because the sample size (10 stores and 4 sushi restaurants) was, according to Schwartz, too small. For many purposes the sample was large enough, if their sampling method was good. 2. The sampling method wasn't described. Without knowing how the stores and restaurants were chosen, it's impossible to know to what population the results apply. This was like reviewing a car and not saying the price.

In an email to the Times I pointed out the first mistake:

Your article titled "Fish Tale Has DNA Hook" by John Schwartz, which appeared in your August 22, 2008 issue, has two serious errors:

1. The article states: "The sample size is too small to serve as an indictment of all New York fishmongers and restaurateurs." To whom the results apply – whom they "indict" – depends on the sampling method used – how the teenagers decided what businesses to check. Sample size has almost nothing to do with it. This was the statistician John Tukey's complaint about the Kinsey Report. The samples were large but the sampling method was terrible – so it didn't matter that the samples were large.
2. The article states: "the results are unlikely to be a mere statistical fluke." It's unclear what this means. In particular, I have no idea what it would mean that the results are "a mere statistical fluke." The error rate of the lab where the teenagers sent the fish to be identified is probably very low.

In retrospect the second error is "serious" only if incomprehensibility is serious. Maybe not. I should have pointed out the failure to describe the sampling protocol) but didn't.

I got the following reply from Schwartz:

Thank you for your note about my article, "Fish Tale Has DNA Hook," which appeared in the newspaper on Friday. You state that the story misstated the importance of sampling size as "an indictment of all New York fishmongers and restaurateurs." Although you are certainly correct in stating that poor methodology can undercut work performed using even the largest samples, it is also ill advised to try to establish broad conclusions from a very small sample. The fact that mislabeling occurred one in four pieces of seafood from 14 restaurants and shops in no way allows us to conclude that 25 percent of fish sold in New York or in the United States is mislabeled. And that is all I was trying to say with the reference to sample size was that while the girls' experiment shows that some mislabeling has occurred, their work cannot say how much of it goes on or whether any given restaurant or shop is mislabeling its products. Similarly, when I wrote that it is unlikely the findings are a "statistical fluke," I merely meant that while it is possible that Kate and Louisa found the only 8 restaurants and shops in New York City that mislabel their products, that is not likely, and so the possibility that the practice is widespread should not be discounted. And, of course, I hope you can forgive the pun.

Thanks again for taking the time read the article and respond to it, and I hope that you will find more to like in other stories that I write.

Uh-oh. The email was as mistaken as the article, although it did clear up what "statistical fluke" meant. I wrote again:

Thanks for your reply. I'm sorry to say that you still have things more or less completely wrong.

"Their work cannot say how much of it goes on or whether any given restaurant or shop is mislabeling its products." Wrong. [Except for the obvious point that the survey does not supply info about particular places.] I don't know what sampling protocol they used – how they chose the restaurants and fish sellers. (This is another big problem with your article, that you didn't state how they sampled.) Maybe they used a really good sampling protocol, one that gave each restaurant and fish seller an equal chance of being in the sample. If so, then their work can indeed "say how much [mislabeling] goes on." They can give an estimate and put confidence intervals around that estimate. Just like the Gallup poll does.

Somewhere you got the idea that big samples are a lot better than small ones. Sometimes you do need a big sample – if you want to predict the outcome of a close election, for example. But for many things you don't need a big sample to answer the big questions. And this is one of those cases. There is no need to know with any precision how much mislabeling goes on. If it's above 50 %, it's a major scandal, if it's 10-50 % it's a minor scandal, if it's less than 10 %, it's not a scandal at all. And the study you described in your article probably puts the estimate firmly in the minor scandal category. In contrast to your "it's cute but doesn't really tell us anything" conclusion quite the opposite is probably true (if their sampling procedure was good): It probably tells us most of what we want to know. You're making the same mistake Alfred Kinsey made: He thought a big sample was wonderful. As John Tukey told him, he was completely wrong. Tukey said he'd rather have a sample of 3, well-chosen.

Thanks for explaining what you meant by "statistical fluke." You may not realize you are breaking new ground here. Scientists wonder all the time if their results are "a statistical fluke." What they mean by this is that they've done an experiment and have two groups, A (treated) and B (untreated) and wonder if the measured difference between them – there is always some difference – could be due to chance, that is, is a statistical fluke. In your example of the mislabeled fish there are not two groups – this is why your usage is mysterious. I have never seen the phrase used the way you used it. And I think that the readers of the Times already realized, without your saying so, that it is exceptionally unlikely that these were the only fish sellers in New York that mislabeled fish.

Schwartz replied:

I understand your points, and certainly see the difference between a small-but-helpful sample and a large-but-useless sample. but four restaurants simply cannot represent the variety of dining establishments in New York City. Four restaurants, ten markets.

I also realize that you must think I am thickheaded to keep at this, but I will certainly keep in mind your points in the future and will try not make facile references to small and large samples when the principles are, as you state, more complicated than that.

To be continued. [2]My original post about this article.

1. <http://www.nytimes.com/2008/08/22/science/22fish.html?em>

2. <http://www.blog.sethroberts.net/2008/08/22/citizen-science-whats-your-sushi/>

Vince (2008-08-28 18:45:35)

If the 14 establishments were randomly selected from the population of all NYC fish sellers, then we could use the fact that 8 of 14 had mislabeled fish to estimate what percent of fish sellers have mislabeled fish using standard statistics, the same way that polls calculate the margin of error. Using the exact binomial distribution, I'm getting that we could be 95 % confident that between 29 % and 81 % of fish sellers have mislabeled fish (again, assuming a representative sample).

seth (2008-08-28 20:42:19)

Thanks for doing the calculation, Vince.

Andrew Gelman (2008-08-28 21:11:29)

I'm impressed that he responded to your email at all. But you have to remember that this reporter talks to lots of people. My guess is that he's an expert in hearing people out and in presenting different points of view, not an expert in evaluating expert judgments. The reporter is showing good judgment in taking your comments seriously, even if he's not going so far as to fully address them.

Seth's blog » Blog Archive » Suppose You Write the Times to Fix an Error (part 2) (2008-08-29 10:47:15)

[...] Suppose You Write the Times to Fix an Error (part 1) [...]

### **Suppose You Write the Times to Fix an Error (part 2) (2008-08-29 06:53)**

The [1]Roberts-Schwartz correspondence continued. I replied to Schwartz:

"Dining establishments"? [His previous email stated: "Four restaurants simply cannot represent the variety of dining establishments in New York City"] I thought the survey was about sushi restaurants. Places where raw fish is available.

Quite apart from that, I am sorry to see such a fundamental error perpetuated in a science section. If you don't believe me that the teenagers' survey was far better than you said, you might consult a friend of mine, Andrew Gelman, a professor of statistics at Columbia.

John Tukey – the most influential statistician of the last half of the 20th century – really did say that a well-chosen sample of 3 was worthwhile when it came to learning about sexual behavior. Which varies even more widely than sushi restaurants. A sample of 4 is better than a sample of 3.

Schwartz replied:

The survey included 4 restaurants and 10 stores.

The girls would not disclose the names of any of the restaurants, and only gave me the name of one store whose samples were not mislabeled. Their restaurants and stores might have been chosen with exquisite care and scientific validity, but without proof of that I could not say it in the article.

I wrote:

I realize the NY Times has an "answer every letter" policy and I am a little sorry to subject you to it. Except that this was a huge goof and you caused your subjects damage by vastly undervaluing their work. Yes, I knew the survey included 4 restaurants and 10 stores. That was clear.

As a reader I had no need to know the names of the places; I realized the girls were trying to reach broad conclusions. They were right not to give you the names because to do so might have obscured the larger point. It was on your side that the big failing occurred, as far as I can tell. Did you ask the girls about their sampling method? That was crucial info. Apparently The Times doesn't correct errors of omission but that was a major error in your article: That info (how they sampled) wasn't included.

He replied:

I could have been more clear on the subject of sample size, but I did not commit an error. Neither do my editors. That is why they asked me to write a letter to you instead of writing up a correction.

I don't feel I have been "subjected to" anything, or that this is some kind of punishment. This is an interesting collision between the precise standards of someone with deep grounding in social science and statistical proof and someone who tries to write intelligible stories about science for a daily newspaper and a general interest audience. But I am not sorry that you wrote to me, even a little sorry.

i wrote:

"I did not commit an error." Huh? What am I missing? Your article had two big errors:

1. An error of commission. You stated the study should be not taken seriously because the sample size was too small. For most purposes, especially those of NY Times readers, the sample size was large enough.
2. An error of omission. You failed to describe the sampling protocol – how those 10 stores and 4 restaurants were chosen. This was crucial info for knowing to what population the results should be generalized.

If you could explain why these aren't errors, that would be a learning experience.

Did you ask the girls how they sampled?

His full reply:

We're not getting anywhere here.

Not so. After complaining he didn't have "proof" that the teenagers used a good sampling method, he won't say if he asked them about their sampling method. That's revealing.

Something similar happened with a surgeon I was referred to, Dr. Eileen Consorti, in Berkeley. I have a tiny hernia that I cannot detect but one day my primary-care doctor did. He referred me to Dr. Consorti, a general surgeon. She said I should have surgery for it. Why? I asked. Because it could get worse, she said. Eventually I asked: Why do you think it's better to have surgery than not? Surgery is dangerous. (Not to mention expensive and time-consuming.) She said there were clinical trials that showed this. Just use google, you'll find them, she said. I tried to find them. I looked and looked but failed to find any relevant evidence. My mom, who does medical searching for a living, was

unable to find any completed clinical trials. One was in progress (which implied the answer to my question wasn't known). I spoke to Dr. Consorti again. I can't find any studies, I said, nor can my mom. Okay, we'll find some and copy them for you, she said, you can come by the office and pick them up. She sounded completely sure the studies existed. I waited. Nothing from Dr. Consorti's office. After a few weeks, I phoned her office and left a message. No reply. I waited a month, phoned again, and left another message. No reply.

More. In spite of Dr. Consorti's statement in the comments (see below) that "I will call you once I clear my desk and do my own literature search," one year later (August 2009) I haven't heard from her.

1. <http://www.blog.sethroberts.net/2008/08/28/suppose-you-write-the-times-to-fix-an-error-part-1/>

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Hap (2008-08-29 07:33:12)

I also recently consulted a Berkeley surgeon about an inguinal hernia. He confessed to me that he has TWO of them, both untreated for the last two years! I said, "Wow, with what you know I'd think you'd leap on the table." He replied, "Well, I'm not sure I trust anyone else with my body." Interesting. Back East for a physical with a friend who is a Western MD running an integrative (wholistic) medicine practice, I learned that he has an untreated hernia, as well. He told me there's no need to treat it. Both doctors agreed that if it gets in the way of things you want to do, or especially if it becomes painful (a very dangerous situation), then surgery would be an option. (Even then, it can be done endoscopically with a small incision and the insertion of a piece of mesh over the weak area of the abdominal wall.) As it is, I'm sticking with Chinese medicine which does not immediately force one to pick up a knife.

Aaron Blaisdell (2008-08-29 07:55:30)

Thanks for this telling story. I really think that a doctor should be obliged to provide the patient with the actual literature reporting relevant research if asked by the patient. Of course, the medical establishment would be against this because it removes their power as the priests of the information and, perhaps more importantly from their point of view, it removes their protection from being vetted by patients who question their authority and expertise.

seth (2008-08-29 08:32:24)

Aaron, yes, I completely agree. I think that's the moral of this story. Of course a surgeon will recommend surgery - I don't think that's a big surprise. But claiming there is nonexistent evidence for that recommendation - that's going too far. I could check her claim very thoroughly but most people to whom she makes such claims would have to take it on faith.

Magicmike (2008-08-29 12:11:16)

Seth, you are completely right. But... But I'm surprised he took the time to answer - your communications seemed confrontational to me. We should embrace guys like Roberts-Schwartz - yeah, he ain't got it all right, and yeah, it would be cool if he did, since it's a science section. But he seems to value research and have a genuine scientific bent. Thanks for publishing the correspondence.

Kirk (2008-08-29 15:15:14)

As for the hernia issue, when I asked my surgeon about how to avoid hernias, he said there is no way to avoid them. 'They show up, we repair them.' Why should they be repaired? Because they may become strangulated. What is the probability of your hernia becoming strangulated? That's the tough question. It's the risk management decision that those of us with hernias are being forced to make, with no information. As for the columnist, he may be a bit out of his depth having to do with appropriate sampling sizes. (Sort of like I am in this particular area.) You might want to rephrase the issue as a set of Action Items for him. Give him specific tasks. For example, if it's important to know the geographical spread of

the sushi restaurants, then write the exact questions that should be posed to the original authors. If it's important to know the number of sushi restaurants in a particular area, ask if a Gayot search for 'sushi' (which shows 62 listings) is sufficient. If it's important to know that the restaurants have different owners and not all part of the same chain, state that as a question. What would be best is if he can use this follow-up investigation to construct another article. Then he has motivation.

Methuselah - Pay Now Live Later (2008-08-30 05:53:36)

Seth - great to see people with responsibility for public health or the perception of it being held to account via the public medium of a blog. I am trying the same approach on my blog with a campaign to bring health food stores to account for the volumes of sugar in some of their products: [1]The Worst Sugar Pushers of all - Health Food Stores So far one of them has responded and made an equally poor job as Schwartz of defending their position (also published.) Suddenly the power shifts to the letter writer and it is no longer good enough for the recipients to fob them off with inadequate and ill-judged responses....

1. <http://paynowlivelater.blogspot.com/2008/08/worst-sugar-pushers-of-all-health-food.html>

Kirk (2008-08-30 07:26:04)

I looked around and found what looks like a relevant hernia study: <http://www.ncbi.nlm.nih.gov/pubmed/16418-463?dopt=Abstract>

sean (2008-08-30 08:13:51)

The dirty little secret is that some doctors are not as driven by evidence as we might hope. That is why the evidence-driven medicine movement is gaining momentum. Remember how medical journals initially refused to published evidence that *helicobacter pylori* was a cause of ulcers and not stress? A number of doctors pretend to be driven by evidence, but they are much more driven by a god complex that says, I'm the expert listen to me. The sampling question is another example of enumerative versus analytic thinking in the world of statistics. Most people think that all statistics is enumerative. Refer the journalist to any of the key articles by Deming.

Gordon (2008-09-03 16:18:24)

Sean, I'd like a reference to the key articles by Deming if you have them. Regarding the question of whether or not one can trust a doctor's recommendation, what about dentists? In the early 20th there were some in the profession who made claims that dentistry had reached the point in history where it was about to start doing more good than harm. Were they right? Have we ever reached that point? How can we know?

eileen consorti (2008-09-12 15:33:59)

Seth, While I am in the process of finding papers in the literature to satisfy your scientific curiosity on why this hernia should or should not be fixed I am additionally trying to care for around 30 new patients referred to me for their new cancer diagnosis in the last 3 months. This may or may not explain why I have not been motivated to answer your call regarding your ambivalence about fixing your hernia. Yes, it is small and runs the risk of incarceration at some time. I will call you once I clear my desk and do my own literature search. Thanks for the update. Eileen Consorti

seth (2008-09-12 18:48:51)

Dr. Consorti, to call my question "scientific" curiosity is highly unfair. I'm sure everyone, not just scientists, cares whether a proposed surgery will do more good than harm. My question is not "why" my hernia should be fixed - it's whether it should be fixed. My calls that have gone unanswered were not about my "ambivalence" - they were trying to determine what happened to the studies you said, several months ago, you would find and copy for me. But thank you for finally responding.

Heather (2009-01-18 23:51:10)

While I did not have a hernia, I just wanted to say I had a horrible experience w/ Dr. Eileen Consorti. I had extra breast tissue removed from my armpit, and she did a horrible job. First off, I would like to say how insulted I was that she did not have a paper gown in her office to adequately fit my breasts. She showed up late for my surgery, did it in half the time she said it would take, and stitched me up like a one-armed blind person who'd never been to med school. I used to be self-conscious about my

underarm breast, but it's nothing compared to the hideous clown smile under my arm now. Oh yeah, and the puckers at both ends of the incision look like the nipples of a girl just entering puberty. DR. CONSORTI SUCKS!

Seth's blog » Blog Archive » The Price of an Unnecessary Operation (2009-10-16 04:21:12)

[...] A few years ago, a Berkeley surgeon named Eileen Consorti, to whom I was referred by my primary-care doctor, recommended that I have an operation to repair a hernia so small I couldn't detect it. I have already written about how she kept saying there was evidence such operations were beneficial but as far as I can tell no such evidence exists. (Dr. Consorti has yet to provide the evidence she still seems to think exists.) Okay, she overstated benefits. What about costs? [...]

Dennis (2009-10-18 15:34:04)

Seth: Here is a good PhD thesis topic: "I. What proportion of medical treatment or procedures have a basis in evidence? II. Looking at the universe of ailments, what proportion of treatments in [1950] are recognized to be (a) harmful; or (b) useless today? III. Given II., what should we infer about accepted treatments today that are not evidence-based?"

seth (2009-10-18 23:15:57)

IV. Is the current emphasis on "evidence-based medicine" helpful or harmful? I don't mind that a doctor recommends a treatment for which there is no study showing it works. That is okay. It was that my doctor claimed the existence of non-existent studies that bothered me.

Seth's blog » Blog Archive » Gatekeeper Syndrome (2009-11-17 13:49:50)

[...] Shades of my surgeon claiming the existence of studies that didn't exist. But that's not the point. The point is this: After reading Atul Gawande's article about mirror therapy for phantom limb pain, she and her husband tried it. "Within 2-3 days, his pain was down to zero." It stayed there so long as they continued the mirror therapy. Soon after this they were able to eliminate his pain medication. [...]

Johann (2010-02-07 16:20:14)

About the hernia problem, you are in good company. Clinical Evidence, the database of evidence-based medicine run by (I think) the British Medical Journal, has a monograph on "expectant management" (doing nothing) compared to repairing an inguinal hernia: "We found no systematic review, RCTs, or cohort studies of sufficient quality" to say which strategy is better for improving symptoms. Also from Clinical Evidence: "Compared with expectant management (in people with minimally symptomatic hernia) Open mesh repair may be no more effective at reducing mortality (very low-quality evidence)." But the bigger problem is that most people have no idea how much of our clinical practice is not guided by solid evidence, and never will be because there are just too many questions and good studies are so hard to do. As a physician I often tell people "nobody really knows what the right thing to do is," but I think it tends to make many patients uncomfortable so I find myself trying to gauge whether someone just wants my advice or is really interested in hearing my evaluation of the evidence as it may apply to them. I certainly try to be as complete as possible if people ask, and I have often been prompted by patients' questions to do literature searches, but I don't print out studies for people even if they ask because I don't have the time. If they are that motivated they can do it themselves.

jessedziedzic (2011-10-20 11:41:20)

I do not disagree with this writing...

Seth Roberts (2011-11-14 14:17:03)

Johann, you write, "I don't print out studies for people even if they ask because I don't have the time. If they are that motivated they can do it themselves." That makes sense. But consider this: Dr. Consorti was going to make a lot of money if I followed her recommendation. That may be why she didn't tell me she was busy.

## Science in Action: Why Did I Sleep So Well? (part 9) (2008-08-29 19:43)

From [1]Nassim Taleb's web notebook:

I was going to have dinner with Seth Roberts in San Francisco. So, out of curiosity, I tried his diet [ clipping my nose and consuming two large tablespoons of flaxseed oil ] . . . When someone who observed me with a noseclip asked: "what are you doing?" , I gave my answer "trying to be healthier". It elicited a smile: "Why don't you dance outside on one leg for ten minutes? That too may work very well".

Strange strange coincidence.

[2]Why Did I Sleep So Well? directory.

1. <http://www.fooledbyrandomness.com/notebook.htm>

2. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

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Dan (2008-08-30 07:31:43)

Just given the sheer weirdness of your theories, I've repeatedly thought that you're actually doing large-scale research on the placebo effect, and that we're all going to end up as examples in a paper or book down the road. But the flaxseed oil did have a positive effect on my sleep – very vivid dreams. Any weight loss has been minimal, but I did think that I have been less hungry, so I'll keep it up for another couple weeks and see if there is an effect.

seth (2008-08-30 10:01:49)

"The sheer weirdness of your theories." Yeah, I find them weird too. Not the flaxseed oil, which many others before me have praised. (Although the idea that an everyday foodstuff could substantially improve brain performance is weird.) But the standing, the faces, the sugar water, the oil, the nose-clipping, the anti-breakfast – those are weird. I'm not sure what to make of it.

Seth's blog » Blog Archive » Why Did I Sleep So Well? directory (2008-09-03 19:57:57)

[...] Science in Action: Why Did I Sleep So Well? (part 9) [...]

## The Best Blogs Are Very Good (2008-08-30 07:34)

From [1]It's Raining Noodles:

Before the next batch of snapshots and corresponding captions [on a screen at a fast food restaurant in Singapore] were revealed, a simple message against a plain background read, "To all the great and wonderful mothers out there..." as a sort of enigmatic prelude to the marvels to come, and because I am a cynical bitch with a very gloomy worldview, I asked out loud, "What about the other mothers?" To which Maria put on an affected frown as if she'd been hurt that her loved one was being left out by the onscreen message, and gleefully responded, "What about MY mom?"



More. Not to mention [2]this:

The past three hours can only be adequately described by the word SIGH. Thinking that I was taking a step towards improving my relationship with God, no this is not a long preachy thing so please stay with me, I agreed to sit through a session thingy with a very Christian Mrs. In-Law and a very reluctant Neptune. . . . The sharing session was led by a heterosexual couple (why I am highlighting the heterosexual part will become evident later), and it was interesting because they had a different take on the religion from most that I've heard. In many ways it felt like a lecture in literature class, and for the most part I enjoyed it because of the different perspectives on the same ol' concepts. . . . The only revelation for me, though, arrived when the female half of the heterosexual couple went on to preach that God gives up on people who insist on pursuing sin, such as idolatry and YES YOU GUESSED IT, homosexuality. She was all, "YES, HOMOSEXUALITY IS WRONG! God has given up on people like that."

And I realised in that moment that God had probably just punished me by making me sit through three hours of this thingy thinking that MAYBE I had a shot at heaven when actually? ACTUALLY? NO CHANCE AT ALL. God has abandoned me to begin with right from the start. I'm damned forever. So I looked at Neptune and said, "God has given up on us!" and I was very sad. I find it very difficult to wrap my head around exactly why I deserve to go straight to hell when all I've done is fall in love with another person.

1. <http://raining-noodles.blogspot.com/2007/05/i-hope-her-mom-doesnt-read-this-website.html>
2. <http://raining-noodles.blogspot.com/2008/08/blog-post.html>

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Jenny (2008-08-30 09:57:57)

"The Best Blogs Are Very Good" nice circular arguement

### **Assorted Links (2008-08-31 10:19)**

1. [1]High cholesterol and heart disease – myth or truth?
2. [2]Self-experimentation on mood
3. [3]Email interview with me about the Shangri-La Diet in Portuguese and English
4. [4]Do what you love getting good at
5. [5]Things to hate about Singapore

Thanks to Dave Lull and Patri Friedman.

1. <http://www.cholesterol-and-health.com/Does-Cholesterol-Cause-Heart-Disease-Myth.html>
2. [http://www.behavior.org/life/index.cfm?page=http%3A//www.behavior.org/life/everyday\\_life\\_calkin.cfm](http://www.behavior.org/life/index.cfm?page=http%3A//www.behavior.org/life/everyday_life_calkin.cfm)
3. [http://dietashangrila.blogspot.com/2008/08/entrevista-com-o-autor-da-dieta-seth\\_26.html](http://dietashangrila.blogspot.com/2008/08/entrevista-com-o-autor-da-dieta-seth_26.html)

4. <http://unreachablecode.com/happiness-terrains>
5. <http://raining-noodles.blogspot.com/2008/08/things-i-hate-about-singapore.html>

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MT (2008-09-02 15:57:19)

Really enjoyed the mood experiment article. Amazing to see people discovering such little interventions, and even better that the internet and blogging is helping them propagate. I think I will give this one a try – a minute a day is a pretty small commitment! Great find, thanks.

## 3.9 September

### Science in Action: Why Did I Sleep So Well? (part 10) (2008-09-01 07:19)

Long ago, talking about scientific discovery, Pasteur said "chance favors the prepared mind." In my case, I now realize, this generalization can be improved on. The underlying pattern can be described more precisely.

I've made several discoveries because two things came together, as Pasteur said, with one element a kind of chance and the other a kind of knowledge. The two elements were:

1. I did something unusual.
2. I knew something unusual.

Here are the discoveries and how they fit this pattern:

1. Breakfast. Discovery: Eating breakfast caused me to wake up too early more often. Did something unusual: I copied one of my students, who told me about his experiences during office hour. This eventually led me to vary my breakfast. Knew something unusual: I had detailed records of my sleep. The combination made it clear that breakfast was affecting my sleep.
2. Morning faces. Discovery: Seeing faces in the morning improves my mood the next day. Did something unusual: I watched a tape of Jay Leno soon after getting up. Knew something unusual: From teaching intro psych, I knew there was a strong connection between depression and bad sleep.
3. Standing and sleep. Discovery: Standing a lot reduces early awakening. Did something unusual: I arranged my life so that I stood a lot more than usual. Knew something unusual: I had detailed sleep records. They made the reduction in early awakening easy to see.
4. Sleep and health. Discovery: At the same time my sleep greatly improved, I stopped getting colds. Did something unusual: To improve my sleep I was standing a lot and getting a lot of morning light from a bank of lights on my treadmill. Knew something unusual: I had records of my colds going back ten years.
5. The Shangri-La Diet. Discovery: Drinking sugar water causes weight loss. Did something unusual: I went to Paris. Knew something unusual: I had developed a new theory of weight control.

6. Flaxseed oil and the brain. Discovery: Flaxseed oil improves my mental function. Did something unusual: One evening I took 6-8 flaxseed oil capsules. Knew something unusual: I had been putting on my shoes standing up for more than a year and knew how difficult it usually was. The morning after I took the flaxseed oil capsules it was a lot easier.

7. Standing on one foot and sleep. Discovery: Standing on one foot improves my sleep. Did something unusual: In order to stretch my quadriceps, I stood on one foot several times one day. Knew something unusual: I knew that if I stood a lot my sleep improved (Discovery 3).

The unusual actions ranged from things as common as foreign travel (Paris) and stretching to the extremely rare (watch a tape of Jay Leno soon after waking up). The unusual knowledge ranged from quirky and casual (knowing how hard it is to put on shoes standing up) to sets of numbers (sleep records) to generalizations based on numbers (what scientific papers are about) to the sort of stuff taught in science classes (a theory of weight control) to the sort of knowledge derived from teaching science classes (connecting depression and bad sleep). To call this stuff unusual knowledge is actually too broad because in every case it's knowledge related to causality.

Only after Discovery 7 (more precisely, this morning) did I notice this pattern. Read the discussion section of [1]this paper (which is about Discoveries 1-5) to see how badly I missed it earlier.

More on [2]Discovery 6. [3]Discovery 7.

1. <http://repositories.cdlib.org/postprints/117/>

2. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>

3. <http://www.blog.sethroberts.net/category/self-experimentation/why-did-i-sleep-so-well-directory/>

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Heidi 555 (2008-09-01 13:31:58)

Seth, I think that keeping detailed records of your sleep and colds (and perhaps other things) is extremely helpful to the self experimentation process. Could you say a bit more about what kinds of records you keep, which details you track, and how you notate them? I am thinking about starting to keep sleep records and am looking for ideas on how to set up a journal, log, or computer data sheet. For years I have kept careful records of 3 different things. I keep a journal in which I record every mushroom and wild food that I've found. (This journal also has photos I've taken and looks beautiful as well as being a tremendous resource.) I keep careful track of my hormonal/menstrual cycle and many things related to it. I record a certain kind of dream that I regularly have. My records are a source of tremendous knowledge/self-knowledge and I consider them my most valuable possessions.

seth (2008-09-01 19:56:53)

Outcome measures: At the moment I record details of my sleep, weight, fasting blood glucose level, and blood pressure. My sleep records consist of when I went to bed, when I got up, how rested I felt when I got up, and if I took a nap, how long. Treatment measures, all related to sleep: when I was outside in the morning, when I looked my face (in a mirror), how often & how long I stood on one foot. What's crucial, I believe, is to make it easy to do and look at. I write the sleep & weight info in a standard college-note-taking-type lined-paper notebook, one line per day. The blood pressure and blood glucose data I enter into my computer using R.

Heidi 555 (2008-09-02 09:18:51)

Thanks Seth. That was helpful. I'm going to start keeping sleep records.

david (2008-09-02 10:30:22)

Seth, Regarding standing on one foot improving sleep: I think you've just independently discovered yoga :-). In fact, a friend of mine who does yoga informs me that standing on one foot is a form of "The Tree Pose". I'd be interested to see if replacing the one-footed balancing with a more traditional yoga improves your sleep and if it does so any more than your few minutes of tree-posing a day. The connection between better sleep and better overall health and well being seems obvious and I'm sure has been empirically demonstrated (I'm too lazy to google for that right now). So it looks like you're demonstrating the connection between yoga and sleep, which in turn validates the connection between yoga and overall health and well-being that's often claimed for it. My guess is that yogic traditions that have been developed over thousands of years are more finely tuned to produce various benefits than the one-footed-balancing you've stumbled upon (no pun intended). For example, if you combined your tree-pose with the mind-clearing, meditative aspects of yoga, your sleep may improve even more. Likewise, there may be other benefits apart from better sleep that result from practices like yoga and meditation. David

seth (2008-09-02 18:37:06)

David, you may have something there. Maybe some of the benefits of yoga derive from better sleep. On the other hand, I recently did a month of yoga classes, and never noticed that my sleep was better. The poses, including the one-legged poses, lasted about a minute, whereas I stood on one foot for a few minutes each time. And it is a million times easier to stand on one foot for several minutes a few times than take a yoga class.

david (2008-09-03 08:42:53)

Ok, perhaps it's the other way around then. You've discovered that yoga, as it's sometimes practiced, is suboptimal because the poses aren't held long enough. I've done very little yoga and know nothing about what's considered the right way to do it and what specific goals it has. My guess is that there are many types of yoga, some more rigorous than others and some with more specific goals. I know that people who do meditation are often studied by psychologists and they usually pick people who've done a lot of meditation (in these examples, one is people who've just done a three-month silent retreat and the other is people who've meditated daily for three years): [http://www.scientificblogging.com/news/meditation\\_may\\_fine\\_tune\\_attention\\_span](http://www.scientificblogging.com/news/meditation_may_fine_tune_attention_span) [http://www.scientificblogging.com/news\\_releases/this\\_is\\_your\\_brain\\_on\\_zen\\_experienced\\_meditators\\_recover\\_more\\_quickly](http://www.scientificblogging.com/news_releases/this_is_your_brain_on_zen_experienced_meditators_recover_more_quickly) So you might want to look for a more rigorous form of yoga. It may also be worth looking to see if yoga and sleep have been studied already by sleep researchers. I also wonder if there's not a 'lowest common denominator' effect in yoga classes, so that the poses are only held as long as the weakest members of the class can hold them. You mentioned that you hold your pose until you can't anymore. I wonder if in the yoga class, the poses are only held until the bottom third of the group starts to fade. Finally, I don't know what the stated purpose of yoga classes is. Is it just to teach you the poses so you can do them on your own? Do instructors tell you to hold the poses as long as you can when you do yoga on your own? Or is the expectation that you only do the poses in class and not on your own at home? David

Adam (2008-09-03 10:51:54)

Hi Seth, I've had problems with sleeping for a few years now, so I've been trying out your possible solution for the last week. I'm curious about something. You mentioned you stand on one foot until you become exhausted, usually 2-6 minutes. Unfortunately for me, I seem to be able to stand on one foot indefinitely, or at least I haven't reached a point where I feel exhausted enough to stop. This is really surprising, since I have an office job and standing isn't exactly something my body is accustomed to. I usually have to stop after 10-20 minutes simply because I have other things to do. I do get a slight pain in the arches of my feet. I wear sandals while doing this, on a hard wood floor. Do you feel "exhausted" in general, or is there some specific kind of physiological sign you use to tell yourself to stop? Initial observation is that if I do this standing routine right before bed, my sleep is extremely shallow, causing sleep interruptions and early waking, but there could be other factors to that. Today I'm trying it throughout the day instead. Thanks for your thoughts.

seth (2008-09-03 16:22:57)

Adam, I found that if I stand on one foot with the other foot just barely off the ground I can stand that way much longer (10-15 minutes) than if I stand on one foot with the other foot pulled back such that its muscles are stretched (5-8 minutes). I've been doing it the second way. This probably explains the difference between your times and mine. Doing it doesn't make me feel

exhausted. What happens is my legs and foot start to hurt after a while, then I stop. I suggest you try the second (stretching) way of doing it. David, the yoga I took (Bikram) was done in a heated room that would be hard to duplicate at home. And there is a kind of motivation supplied by doing it in a room with an instructor and many other students. The poses incorporate all sorts of difficult elements that make them harder to do – I usually stopped not because my muscles were tired but because I wasn't flexible enough. I don't know why poses were held for a minute rather than a shorter or longer time. Thanks for the links about meditation. The yoga I did was a constant struggle, not meditative at all. I liked it, I should add, but it was very time-consuming, not to mention tiring and expensive.

Seth's blog » Blog Archive » Why Did I Sleep So Well? directory (2008-09-03 19:56:47)  
[...] Science in Action: Why Did I Sleep So Well? (part 10) [...]

## **Two Books about Memory Research (2008-09-02 07:05)**

My mom said this:

Finished reading [1]Can't Remember What I Forgot: The Good News From the Front Lines of Memory Research [by Sue Halpern]. As far as I'm concerned, [2]Carved in Sand [by Cathryn Ramin] is much the better book. Less science but better, more careful and detailed, description of remedies tried.Â Halpern personalizes each scientist she talked to in an irritating way, and then describes their theories in great detail, only to report their failures later. As a matter of fact, most of the news she reports, especially about Alzheimer's, is bad news. The good news is that daily exercise appears to be beneficial to memory, as are a host of other things supposedly good for it. Earthshaking.

1. <http://www.suehalpern.net/>
2. <http://www.carvedinsand.com/>

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Dave Lull (2008-09-03 17:35:05)

"Exercise 'tackles flawed memory'": <http://news.bbc.co.uk/2/hi/health/7593324.stm> 'Dr Susanne Sorensen, head of research at the Alzheimer's Society, said: "Regular exercise is one of the best ways to reduce your risk of dementia and can help slow progression of the condition. "'This study demonstrates that exercise improves cognition in people with mild cognitive impairment, and that there is a lasting effect even after the exercise intervention stops. "'We need more research to investigate whether exercise not only improves cognition, but also stops people with mild cognitive impairment developing dementia.'"

## **Science in Action: Why Did I Sleep So Well? (part 11) (2008-09-03 17:22)**

I'm now sure it's the one-legged standing that's improving my sleep. The new way of seeing faces in the morning doesn't seem to matter. In case you want to try this, I've found that if I just raise one foot slightly I can stand one-legged much longer (about twice as long) than if I stand one-legged and pull the other foot behind me (stretching my leg muscles). I think this means the stretching pose is twice as effective per minute as the non-stretching pose; it produces the same effect in half the time.

It's only been a few weeks, but my legs are already much stronger. Walking long distances (such as 4 miles) is easier

and so is standing for long periods of time. My notions about exercise are changing, too. Before this, I thought of exercise having three types:

1. Strength. Exercise a muscle, it gets stronger. Benefits: stronger muscles can do more, look better.
2. Flexibility. Improved by stretching, e.g., yoga. Benefit: less chance of injury.
3. Aerobic. The Cooper idea. Improved by running, swimming, etc. Benefit: apparently reduces risk of heart attacks, perhaps reduces risk of other diseases. (Some people do it to lose weight, of course.) To measure aerobic fitness, The Cooper Institute stress-tested executives and found that [1]those with better stress-test scores had lower mortality in the following years. Stress-test fitness was a better predictor of mortality than obesity – some people were "fit but fat".

The one-legged standing seems to be a whole new category:

4. Soporific. When you stress a leg muscle a lot, presumably one or more chemicals are released that both (a) cause the muscle to grow (the well-known effect of exercise) and (b) cause you to sleep more deeply at night (the effect that interests me). In contrast to Types 1-3, there's no need for the concept of fitness here because you don't slowly go up and down in a measure of effectiveness (i.e., become more or less fit). Rather each day you are high or low on this measure, and the next day you start fresh. In contrast to Types 1-3, where the benefits accrue slowly (over weeks and months), the benefits are obvious the next morning (you feel better-rested) and the next day (you're less tired). In contrast to Types 1-3, there is no connection with athletics (such as Olympic events). Conventional exercise is integral-like: It's the sum over days that matters. Whereas this exercise is derivative-like: The benefits derive from doing a little more today than you did on previous days. The psychology is different, too. The benefits are so large relative to the cost that there's no motivation problem. Deciding to do it is about as hard as deciding to pick up a \$!0 bill. Deciding to do conventional exercise is a lot harder.

[2]Directory.

1. <http://www.ncbi.nlm.nih.gov/pubmed/2795824?dopt=Abstract>

2. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

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Tom (2008-09-03 17:30:31)

"Soporific" – interesting. I was about to suggest that it's really an offshoot of isometric exercise (as it seems to me that you're really tensing opposing muscles against each other.) And this caused me to wonder if there isn't something in the nature of isometric exercise, rather than standing, that helps sleep. ie, does it have to be standing? Could it just be isometrically exercising, say, your chest muscles by pressing your palms together hard and holding it for a while? Or holding a mid-pushup position (keeping your core solid) as long as you could?

Ryan (2008-09-03 17:48:20)

I've started doing the leg lift thing like you described. For the past few days I've awoken very well-rested and energized, for what it's worth. I wonder what may cause this effect, but in the meantime I'm going to keep doing it. I really like the "Science in Action" series and hope you apply it to other topics.

Charles (2008-09-03 18:01:43)

I wonder if there is a connection with the similar and proven benefits of Tai Chi Chuan? When you are doing Tai Chi correctly, you are slowly transferring your weight from one leg to the other, as if you were standing on each leg alternately.

seth (2008-09-03 20:07:11)

Tom, yeah, I don't think the leg muscles are constructed differently than other muscles; they're just larger. So that you get a larger dose of the crucial chemical per minute of exercise. I like your alternative suggestions because pretty soon my legs are going to be stronger than they need to be for any conceivable task and it might help to strengthen other parts of my body. It might take too long using other parts of the body but it's worth a try.

Sam (2008-09-03 23:11:41)

I wonder if you have to stand on one leg until you are tired - since I couldn't make it. Being a dancer I could stand on one leg for hours, so maybe the effect does not work as well on me? On the other hand, I usually sleep very well and wake up early. I started a dancers workout every morning, which contains a lot of standing on one leg, but so far I noticed not much difference in my sleep.

MT (2008-09-04 04:49:40)

Great posts about your sleep and one-legged standing - I will definitely give this a try in a while. In the interim, here is a post I got today from another blog I like about fitness: <http://conditioningresearch.blogspot.com/2008/09/one-arm-pushup.html> It talks about one-armed push-ups, and one legged squats, which I mention because I have been looking into trying to improve my vertical leap to try and slam dunk a basketball - some research demonstrated that doing one-legged squats helps improve power more than two-legged squats, and they theorise that it is because of incorporating balance. Maybe a series of one-legged squats while balancing would trigger your better-sleep-oscillator still more quickly? Perhaps it is load-dependent? As with your wondering if you'll get strong too quickly, you can ALWAYS challenge yourself with squats! Technique is important, you can often find good form on YouTube. if you are interested in more fitness ideas, there is an interesting group called CrossFit, who believe in functional fitness, and they have an interesting paper on their website about their definition of fitness which incorporates balance and other elements. It is well thought out. I found these leads through my research into so-called evolutionary health, intermittent fasting, etc. Great posting!

seth (2008-09-04 05:11:44)

MT, yes, one-legged squats, or just bending the standing leg, might be an improvement, in the sense of producing the same effect more quickly. I'll try it sometime.

Igor Carron (2008-09-04 12:13:07)

Seth, In a similar vein, I don't know if you remember this study <http://www.msnbc.msn.com/id/6795822/> [http://www.medscape.com/viewarticle/4933\\_23](http://www.medscape.com/viewarticle/4933_23) <http://nuit-blanche.blogspot.com/2005/01/its-all-downhill-from-here.html> that seemed to show that walking downhill did not yield the same results as walking uphill. Is there a mechanism that is specific to the soporific mode as opposed to the others ? Igor.

James (2008-09-04 17:45:18)

I had stuff I needed to do yesterday when I thought about standing on one leg, so I hopped around. In total I only stood on each leg for a few minutes, but the hopping shortened the time it took to become hard to continue.

seth (2008-09-04 21:05:40)

thanks, James, that's a good idea: hopping on one leg.

JohnN (2008-09-05 11:56:40)

On why one-leg standing works, here's one hypothesis to consider: Standing on one leg creates asymmetrical loading forcing our body to engage more of the fine-control muscles and more neurons (firing) to maintain balance. Of course, these fine

muscles tire out very easily - you can tell by the lactic acid burn which incidentally also signals the body to produce growth hormone. This acute but brief stress will force your brain to enter deep sleep to absorb the lesson. I think Tai Chi works for me (like Charles suggest) - probably because of the very slow and deliberate movements with absolute body control ( & concentration). Can we test this hypothesis by standing on one leg with our eyes closed to intensify the experience? My limit on a good day is 20-40 seconds after some refinements to fine-tune the body posture.

Willy (2008-09-05 12:49:09)

> I've found that if I just raise one foot slightly I can stand one-legged much longer (about twice as long) than if I stand one-legged and pull the other foot behind me (stretching my leg muscles). Do you mean keeping both foot on the floor but raising one a bit so the load is put on the other one?. Thanks.

Kirk (2008-09-05 16:01:48)

A brief comment for Sam . . . the teachers in my Tai Chi group say that if the stances are getting easy, you need to sink lower. They tell a story about one of the best students working on Descending Single Whip (also known as Snake Creeps Down) with our master teacher. They were both at the lowest position and the teacher said, 'OK, like all one-legged stances, you should be able to pick your other foot off the floor.' Which he proceeded to demonstrate, while the student struggled. Perhaps one of your fellow dancers has studied Tai Chi and can show you this stance. It can also be found at 4:45 at <http://www.youtube.com/watch?v=USJPmCZ6Efc>. And, by the way, while you're in stance, stay relaxed. (One of our teachers taught a professional dance company; he said they were able to learn the stances and flow immediately, but could never relax.)

Dave Lull (2008-09-06 12:06:46)

Kirk's URL has a period at the end that "corrupts" the link. Here it is without the period: <http://www.youtube.com/watch?v=USJPmCZ6Efc>

seth (2008-09-09 21:25:46)

Willy, no. One foot is an inch or two off the floor.

Seth's blog » Blog Archive » Why Did I Sleep So Well? directory (2008-09-09 21:37:49)

[...] Science in Action: Why Did I Sleep So Well? (part 11) [...]

## Too Much Flaxseed Oil (2008-09-04 21:24)

I recently got the following email:

I'd like to advise caution about the use of excessive omega-3s, such as flax and fish oil. I discovered that too much of these oils can induce an omega-6 deficiency, since both n3 and n6 oils compete for the same enzymes in the biosynthesis pathways of prostaglandin precursors. In susceptible people, of which I am one, this leads to insomnia, psoriatic lesions, and when combined with food avoidance (e.g. Atkins-like diets, etc.), can lead to loss of immunological tolerance to food antigens. It turns out that n6 arachidonic acid is critical for the development and maintenance of oral tolerance (Newberry, 1999).

I asked her for details. She replied:

I started taking 2 tablespoons of flax oil daily with meals, and this was my exclusive added fat source for several months; I also got fat from meat and dairy. This was back in 2001. The insomnia happened



almost immediately, and the psoriasis and “cellophane-like” skin developed over several weeks. I quit the flax oil after 3 months, but this was around the same time that I learned of Atkins and the Weston Price foundation- so, I cut back on carbohydrates and added fish oil and “whole foods” to my diet. It’s not clear what exactly happened around that time, but I started to descend into chronic illness: chronic flu-like symptoms, blood-sugar fluctuations, disordered sleep schedule, arthritis in my wrists and toes, rapid weight gain, etc. (And I should mention that before that I was an invincible young woman grad student, an outdoorsy athlete, was proud to never get a cold, and only mildly overweight.) I dealt with it as best as I could, since I was also trying to do my PhD thesis in engineering. I also quit taking any dietary supplements, because nothing seemed to help and I would often get weird side-effects from simple things like calcium supplements. On the advice of a physician in 2004, I added more carbohydrate back to the diet (re-introduced wheat carbs) and got hit with some frightening digestive complaints (cramps, vomiting, IBS symptoms.) It looked a lot like celiac disease, but all of the tests were negative. I didn’t have the proper genetic markers for celiac disease, either, but a strict gluten-free and dairy free diet helped nonetheless.

The GI symptoms were much better by 2005 after going gluten and dairy free, but I was still not well. What gave me the “aha moment” was taking a random dose of fish oil during that time, and having an immediate relapse in symptoms. Then I started researching arachidonic acid (the “bad”  $\omega 6$ ), with the question of “well, what is it good for, then?” That’s when I found the Newberry paper, and it dawned on me that I had inadvertently created an  $\omega 6$  deficiency by overdoing it on flax/fish oil. I also became quite an expert on essential fatty acid metabolism. What I had likely done was impair my ability to tolerate the introduction of new foods. I knew that my problem wasn’t gluten per se, because I would develop symptoms soon after adding exotic foods (coconut milk, pork, tapioca flour, etc.) to replace the eliminated things like milk and wheat flour.

Here are the three things I did to get well:

- 1) After discovering the Newberry paper, I decided to focus on acquiring pre-made sources of arachidonic acid in the diet. I found that the best source of pre-formed arachidonic acid is egg yolks and poultry, and I looked to worldwide intakes of AA to gauge my dose. It turns out that the French get a good daily dose of AA (190mg for women), and I settled on 2 egg yolks per day (65mg each) plus incidental sources. This is where I really turned the corner on feeling well.
- 2) I avoided known problem foods temporarily. I consulted with Jonathan Brostoff on food intolerances, and he said that the immune system requires about 6 months to “forget” its hypersensitivity to a food antigen before it can be re-introduced. I did the gluten and dairy free diet for 3 years in total, and added back foods on an experimental basis once I had been on the egg-yolk regime for a year.
- 3.) Finally, a gastroenterologist called my problem IBS, which is a catch-all trash diagnosis. However, I had been thinking in terms of celiac disease for a long time, and after doing searches on IBS I came across some new information about a probiotic that was supposed to help with IBS. I tried Bifidobacterium infantis (Align) for 2 months last winter, and it put me over the top. This was around the same time that I tried gluten and dairy for the first time in 3 years, and I was able to introduce it with no problems.

Today, I feel that I’m back to 100 % and cured, except for the weight that I acquired during the illness. (I stopped gaining after going gluten free, but could never lose anything.) My propensity to experiment on myself led to some serious consequences, but I discovered something that relatively few people know about the importance of omega-6s.

Keep in mind that deficiency of omega-6 is very rare and overconsumption very common (e.g., the [1]Israeli Paradox). In 2002, the Japan Society for Lipid Nutrition recommended reducing linoleic acid (LA) intake; LA is the short-chain omega-6 fatty acid, found in high concentrations in many vegetable oils, such as soybean oil. LA is converted to AA in the body.

1. <http://www.blog.sethroberts.net/2007/02/02/the-israeli-paradox/>

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MT (2008-09-05 02:25:05)

Great research by the emailer. I have not seemed to realise benefits from flax either, and on my most recent round of experimentation with it felt quite nauseous from it and actually feel an aversion toward it. I am thinking about trying fish oil instead, as there may be a subtlety in how I process the ALA into DHA/EPA or something else (lignans?) causing the nausea – alternatively it may be my body telling me not to consume it. Maybe there is an O6 relationship? I have found that intermittent fasting (limiting eating to a short window during the day, typically 4-6 hours for me, meaning 'fasting' for 18-20 hours a day) has allowed me to become much more aware of the effects of different foods on me. For instance, I get really sleepy within an hour of eating bread – something I've never noticed previously, and it became obvious because the fasting period makes creates more contrast between periods with a food, and periods without. So observations are easier. Incidentally, my energy levels are normal for me, or slightly better – I can exercise vigorously with nothing in my stomach and recover as quickly as I ever have. It does help many people with weight loss and/or muscle gain, if the O6-emailer wishes to keep experimenting :)

SusanJ (2008-09-05 11:23:52)

This is very interesting. About a dozen years ago I luckily discovered by doing something random and unusual (consuming a large egg-salad sandwich for lunch) that an intolerance for eating eggs was the source of a long-standing, mysterious, seeming randomly occurring, disabling lethargy. When this lethargy hit me, simply walking to the end of the driveway was almost too much. I now can eat items, such as baked goods, which include a small amount of egg without a problem. I haven't (yet) tried eating a plain cooked egg since the possibility of the lethargy's recurring seems just too unpleasant. I don't have any other food intolerances, don't have asthma or other chronic problems, and don't have any allergies (with the exception of mild allergies to juniper).

Kirk (2008-09-05 14:49:27)

Agreed, great information by the emailer. I hadn't heard that '6 months' hypersensitivity issue. Maybe this means I can eat chocolate again? (There's nothing like having your throat close down to put you off chocolate.) My readings about Omega-6s and Omega-3s indicate that it is best to aim for a balance, because the two fats compete. The International Society for the Study of Fatty Acids and Lipids recommends a Omega-6:Omega-3 ratio of 1:1 to 2:1. And it is important to keep the overall Omega-6s down to the 4400 - 6670 milligram range; it's not just a matter of increasing Omega-3s. Another thing to consider is that the Omega-3s that improve the body are EPA and DHA: flaxseed oil contains ALA. One author says that 'only a miniscule amount of ALA is converted into EPA and DHA in the body–(the conversion rate is less than half of one-percent, 0.03 %)' As for fish oil capsules, physicians in one book that I'm currently reading say, 'Researchers had pulled bottles of fish-oil capsules off the shelves of health food stores and checked them for rancidity. They found that in almost 50 percent of the cases some of the capsules in a given bottle were rancid. When fish oil becomes rancid it doesn't go from being a good fat to being a neutral fat, it becomes a harmful fat . . . substances called lipid peroxides that cause all kinds of problems once they get inside us.' Thank goodness for canned sardines and grilled salmon.

Stephen M (Ethesis) (2008-09-07 06:39:29)

Kirk, That is interesting (about the chocolate). I'd love to be able to eat chocolate again. I continue in my quest for the perfect oil – easy to swallow, high in O-3, easy to find. ;)

Mary Marvin (2008-09-10 04:49:19)

Thank you for your article on flaxseed oil, fish oil and soybean oil. I have to search for my own answers because doctors do not know how to help with severe RA except methotrexate and Orencia which only suppress some symptoms. You still have your RA and when you stop the meds your RA is worse than it was before starting the medications. The avoidance of soybean oil in America will be extremely hard because it is in just about every product in the grocery from bread and baked items to salad dressings.

reeko (2008-09-17 19:59:34)

I've quit taking fish oil. Been off it now for two weeks - and feel fantastic. The background (and breakthrough) is this: I was diagnosed with hypertriglyceremia 20 months ago. At the same time, I mysteriously began having "panic attacks" that mimicked the exact symptoms of a heart attack: cold sweating, sharp pains in chest, hard to breathe, pains running down left arm and shoulder, tightness in throat etc. I've been admitted through emergency rooms three times in the past year and half. All tests were done and all usual suspects ruled out: no heart enzyme problems etc. NO heart attacks at all. These episodes have been ruled "panic" or "anxiety" attacks and they do seem to come whenever I was stressed... Yet not one of the many doctors suggested a link between my "off the chart" triglycerides (above 400) and these "panic" attacks. Since my cholesterol levels are that of a teenager (I am in my 50s) and I don't smoke or drink excessively, weight lift and workout regularly, I am still about 20 or 25 lbs overweight. Being overweight is a factor in high triglycerides, but no association with the panic or mock heart attacks. The only drug I've been given is Xanax, and that is what I've been taking when I feel those symptoms. Until now. I have religiously taken a daily dose of 1000 mg of fish oil for almost 30 years. For about one year several years ago, I alternated between flax oil and fish oil every other day. That is probably a good reason my cholesterol is that of a teenagers. BUT nobody has made the connection between high triglycerides and fish oil. I've looked all over the internet - nothing. I also can't find anything connecting high triglycerides and panic attacks... On my own (and against my doctor's opinion) I decided to stop taking the fish oil. Since high triglycerides are basically a high amount of soluble fats in the bloodstream, I figured it couldn't hurt. I am glad I did. If anybody knows of any info about "too much" fish oil or toxicity from it, and I don't mean allergic reactions, please let me know ok?

reeko (2008-10-06 22:53:21)

UPDATE: had my quarterly labs done at the VA, and my triglycerides have gone down to 309 from 330 last time. Even though that's still WAY too high and dangerous (100-150 is normal) it is a lot better than the 400 it was. Here's yet another happy side effect of NOT taking fish oil: I no longer have dispepsia/acid reflux. For about a decade, I've been taking Pepcid AC, then Zantac, then Prilosec. All good, but I still took them whenever I needed them - which was every day. Only a few days after stopping the fish oil, I no longer had heartburn/reflux! I'm feeling better all the time... FYI: read somewhere that up to 50 percent of all fish oil sold is rancid or contaminated. Can't google that story right now, but maybe that has something to do with it. I'm sticking with just eating a lot of seafood and to hell with those supplements! - reeko

Jr (2008-12-31 10:40:42)

One of the things that I didn't notice in browsing over this page was whether you or anyone is consuming the flax oil in combination with Whey Protein. It is extremely important for one to mix flax with Whey Protein as Whey has sufficient sulfur proteins that allow the flax to combine with it to make it water soluble and gives the body the ability to easily assimilate it. This is all based on the work of the 6 time Nobel prize nominee Joanna Budwig. She actually doesn't recommend taking flax oil on its own without this combination.... do a search on Joanna Budwig, and you can buy her books translated to English online....

Gary (2009-01-10 23:04:46)

interesting discussion. Some fairly good insight is also provided by Dr. Donald O Rudin so you can look it up. It seems we all have some pretty varied responses to mega doses of omega 3. the only reason to use high doses is to "do an oil change". but we have to listen to our bodies carefully and after a while titrate back to something sane with a good ratio of 6/3. It seems since this is genetic food adaptaion we are talking about here and we are a very diverse genetic world population with out genes all mixed up we are all going to be having different reactions to levels of these fats in our diet in both the long and short run. I have to admit as well that when i try to read the work of Joanna Budwig her reasoning seems to be kind of faulty. The general idea is that we have a regulatory system based on lipids. you could call it a prostaglandin system that needs to be in ballance. remember you cant use fish oil alone for 3 because of no ALA. also might want to include evening primrose oil for GLA. remember that the conversion of molecules in the body is very complex almost like a chemical based computer with many redundant systems and pathways all built up as a response to our environment. we do our best based on current research but actually understand very little about how it all works so diet variety is the key.

reeko (2009-03-04 21:11:24)

SUCCESS! The no-fish-oil regimen worked. I had my lipids checked again today, and after only six months of going off fish oil, my triglycerides are now normal: 145. Just two years ago, they were "off the charts" - over 400. And back in October after only a month of going off fish oil it had dropped to 309. I also began taking a low dose niacin in the mornings as well. I feel fantastic, no more dyspepsia/heartburn, much more energy, no more panic attacks (that mimic heart attacks) and my lipids are all within normal ranges. No matter what anybody says, I took fish oil (or flax) for almost 30 yrs, and here is proof, as far as I'm concerned that it is NOT the greatest thing to do for everybody. To each his own and good luck, but the best "prevention" may sometimes just be living naturally - and save your money on the supplements. ;) reeko

Johan (2009-11-21 07:05:28)

Just entered here via Google. @ Reeko I agree with you on the opinion that the best thing is living naturally and have varying diet. I have been using supplements for quit some time. I stopped because I think fish oil is also a supplement that is very stimulating. I think it can help you being active, but I don't always like that.

Emma (2010-02-14 05:07:59)

SEth, What are psoriatic lesions

## **Rudy Guiliani, Sarah Palin and Self-Experimentation (2008-09-06 09:57)**

Sometimes I'm surprised how much there is to blog about. At the Republican National Convention, [1]Rudy Guiliani bashed community organizers:

[Obama] worked as a community organizer. [Said with a disparaging emphasis on "community organizer"]  
. . . Barack Obama has never led anything, nothing, nada.

So did Palin:

In this world of threats and dangers, it's not just a community and it doesn't just need an organizer.

The interesting thing about community organizing is that (a) anybody can do it (no need to be elected) and (b) you can organize about anything. This wide net, this all-inclusiveness, makes it a way that new ideas can become powerful. Self-experimentation is very similar: (a) anyone can do it and (b) you can study anything. You don't need anyone's approval, the research can be very cheap, the ideas you test can be conventional or wacky. Only if you believe that

the already-powerful know everything should you disparage activities that help new knowledge come to light.

1. <http://robin-loves.blogspot.com/2008/09/dont-knock-community-organizers.html>

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Ryan Holiday (2008-09-06 12:50:10)

Seth, Have you read any of Saul Alinsky's books on community organizing? Reveille for Radicals is one of my favorite books of all time - and strangely, very relevant to the internet. If I remember correctly, Obama styles himself as being from the Alinsky school of community organizing and Hillary actually wrote her college thesis on him. Ryan

seth (2008-09-06 13:12:00)

No I haven't read anything by Saul Alinsky. Thanks for the suggestion.

Methuselah - Pay Now Live Later (2008-09-06 15:25:38)

Seth - I think blogging could be looked at in the same way. Anyone can do it and the power derives from the empowerment to place correspondence (such as your exchanges with the Times journalist) into public view and thus organisations or those representing them to give more considered responses. I am currently pursuing a few retailers in this way, posting my questions about the foods they sell as 'open' emails to them and publishing their responses. It will be interesting to see how this pans out.

seth (2008-09-06 21:04:33)

I agree, blogging is similar. Anyone can blog and you can blog about anything.

Dennis Mangan (2008-09-07 13:16:51)

"Only if you believe that the already-powerful know everything should you disparage activities that help new knowledge come to light." The type of "communtiy organizing" that Obama and his like do has nothing to do with discovery; it has to do with milking the government and corporations for more money. So I'd say it bears little similarity to self-experimentation.

thehova (2008-09-07 23:18:22)

Come on now. The whole Obama narrative, about walking away from Wall Street to do real work that's helpful, isn't fair either. Of course, Seth criticizes only the Palin attack on Community Organizers. But lets be fair. Wall street workers play a fundamental role in up keeping our society.

mike kenny (2008-09-08 17:42:11)

Entrepreneurs as well seem a like self-experimenters. You have an idea, don't need permission from authorities, can go out and give it a try, and see where it goes.

## **A Hidden Benefit of Self-Experimentation (2008-09-08 22:24)**

Today I met a Unix consultant named Jerry Lugert who has done a lot of self-experimentation. He made a point I hadn't heard before: When you start to measure something carefully, you become a lot more motivated to improve it. In practice, this means when you start to measure something at home every day or often in contrast to having it measured every six months when you see a doctor. One of his examples was blood pressure. He became a lot more

motivated to lower his blood pressure when he measured it himself. Another example involved using chemstrips to measure his urine. He used them to measure both his hydration and the amount of protein in his blood.

The usual idea is that knowledge is power. Sure, if you measure your blood pressure every day you can better control it than if you measure it once per six months. That's obvious. This is different: knowledge is motivation. If you measure your blood pressure every day you'll want to control it more than if you measure it every six months. That's not obvious at all and way more important.

This idea is so close to my idea about connoisseurship (which Jerry of course hadn't heard of) I wonder if the mechanism is the same. I believe connoisseurship arises from side-by-side comparisons of very similar items: close-in-time comparisons of two orange marmalades, for example. Or two vanilla ice creams. Or two cheddar cheeses. Or two merlots. Etc. It's obvious that if you make these close comparisons you'll become better at discrimination – e.g., better at discriminating varieties of vanilla ice cream. What interests me is the hedonic change: making these comparisons causes you to care more about the dimension. You get more pleasure from the good stuff and less pleasure from the bad stuff. Connoisseurs are basically people who will pay more for this or that than the rest of us. (When income or wealth is equated.) Not because they're snobs or showing off – because they derive more pleasure from it. This is part of [1]a theory of human evolution.

1. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>

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david (2008-09-09 06:37:09)

I think there's also a similarity between hacking (in the computer subculture sense of that word) and self-experimentation...that occurred to me when you mentioned your friend is a Unix geek. Unix admins are also used to monitoring complex systems that log lots of data which then needs to be analyzed to see if anything is about to go wrong.

Jeff Winkler (2008-09-09 13:08:54)

An example of a much tighter feedback loop is the Prius MPG meter: <http://www.washingtonpost.com/wp-dyn/content/article/2008/05/25/AR2008052502764.html?hpid=sec-business>

Maestro (2008-09-09 20:04:16)

"It's obvious that if you make these close comparisons you'll become better at discrimination" Or maybe you'll just start to believe this about yourself. E.g., wine connoisseurs.

## **Science in Action: Why Did I Sleep So Well? (part 12) (2008-09-09 21:36)**

Over the last week I've found that standing on one foot till it becomes difficult just twice during the day is enough to produce much better sleep that night. Maybe the effect is larger with three times but not enough to make much difference.

It now takes 8-10 minutes of one-leg standing (with the other leg stretched back behind me) before it gets difficult. When I started, it took 2-3 minutes.

[1]Directory.

1. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

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Mike Yeomans (2008-09-09 22:05:52)

Hey Seth, so do you think this effect is chemically driven? It seems to me there's gotta be some molecules bouncing around between your legs and your sleep neurons that is important. Might this relate to other, pharmaceutical sleep aids? I know that's not a focus of your own experimentation, but while I will still hit google scholar tomorrow, maybe you've already done some research?

Mark (2008-09-10 00:03:18)

I think this hypothesis alone is proof that you are seriously sleep deprived.

Stephen M (Ethesis) (2008-09-10 06:03:19)

Mark, that made me laugh. We need more humor here and there, thanks.

MT (2008-09-10 07:32:17)

On the humourless/pedantic side - are you referring to your legs "singly," as in if you stand on your right leg until tired in the morning, and later in the day again stand on your right leg until tired, you get the effect? When you stand on your leg, is your knee locked, or slightly bent? The former takes less energy - I'm trying to imagine how to tell when I'm 'tired'....

Darkhorse (2008-09-10 07:53:52)

Also, do you always balance on the one leg, or just stand on it while touching something for balance? For me, the former is more difficult, so I suppose more effective? As in yoga, focusing on some point while balancing is the only way: close my eyes, and I fall.

Caleb (2008-09-10 08:16:48)

I just made a connection with something I often see as a massage therapist. When releasing a 'knot' the client often gets very relaxed, goes into a trance, and then starts snoring as they fall asleep. One of the important things the body does during sleep is to try and relax and unwind restrictions in the muscles and fascia. It makes sense that the more residual myofascial tension, the deeper the body will relax overnight as it works to release that tension, which is what may be happening by standing on one foot. This suggests to me that the primary cause may be in the nervous system instead of chemical; in the interaction between the nerves that monitor how much tension is stored in a muscle (proprioceptors?) and the sympathetic nervous system that controls autonomic relaxation. The onset of patients deep relaxation and falling asleep seems like it's too quick to be initiated by chemicals.

seth (2008-09-10 08:58:02)

Mike, yes, I think it's chemical: the stressed muscle puts something into the blood that tells the brain to sleep more. Darkhorse, I usually touch something for balance at the same time. I don't know if it makes a difference whether you touch something or not. Caleb, the time between cause (standing on one leg) and effect (better sleep) can be 16 hours or more. If I stand on one leg at 8 am and sleep better starting at midnight, for example. That's easy for chemicals (hormones) to bridge. Not so easy for change in neural activity to bridge. MT, I always do both legs. One-legged on the left leg (in the morning, say); one-legged on the right leg (in the evening, say). During this the leg is both straight and a little bent - I go back and forth. I do it until it's hard to continue.

Caleb (2008-09-10 10:44:14)

Yeah, the effect only can occur during deep relaxation/sleep. What I'm saying is that during sleep the body runs a program for loosening the muscles. The greater the stimulus (myofascial tension) on the proprioceptors, the greater the activation of the

sympathetic nervous system, and thus the deeper the sleep. It doesn't matter when the muscle tension occurs because the body has to wait until sleep for the brain waves to drop to delta where it can run the program to clear the muscle tension out. I guess that's the key; the program doesn't run until the CNS drop into the theta/delta range.

Jeff (2008-09-10 13:31:51)

Seth - Last year you were studying the link between sunlight exposure and sleep. A large number of hours of sunlight exposure seemed to lead to better sleep. I didn't see this item in your recent list of self-experimentation discoveries. Where did your research on this link ultimately lead?

seth (2008-09-11 08:09:54)

Jeff, I ultimately found it worked, as far as I could tell. But I haven't yet done especially conclusive experiments. It isn't much of a discovery - lots of people already say light is important for the control of circadian rhythms, such as sleep. The value of self-experimentation in this case is the ability to get better evidence and measure the dose-response function.

Nansen (2008-09-11 17:31:33)

Some people might benefit from reading your earlier post on [1]Cramps and Self-Experimentation before trying out your new standing idea. It might also help to stretch the [2]outer calf muscle and the [3]inner calf muscle.

1. <http://www.blog.sethroberts.net/2008/03/28/cramps-and-self-experimentation/>

2. <http://www.racewalk.com/Stretching/CalfStretches01.asp>

3. <http://www.racewalk.com/Stretching/CalfStretches04.asp>

Seth's blog » Blog Archive » Why Did I Sleep So Well? directory (2008-09-12 20:49:22)

[...] Science in Action: Why Did I Sleep So Well? (part 12) [...]

## **First Meeting of The Quantified Self Meetup Group (2008-09-11 12:41)**

Last night the first meeting of The Quantified Self Meetup Group took place at Kevin Kelly's house in Pacifica. Here are my notes:

### Five-Word Introductions

Kevin Kelly (KK) Magazine junkie science groupie host

Melanie Swan

Lisa Betts-LaCroix home schooling

Joe Betts-LaCroix now future earth people children

Nathan Myers software wind minerals

Lee Corbin software hobbies math chess history

David Kirby machine learning applications

Tim Ferriss athletic performance language acquisition cognition

Hor machine learning life extension

Graham Bullock product health effects

Dan Brown sleep monitoring for better rest

Paul Lindow film binaural language

Jerry Legert ontology unix physics

Peter Mortensen design irrationality

David Duncan writer radio experimental man

Alex Bangs personal health

Alexandra Carmichael open-source health research

Daniel Reda open-source health research



Gary Wolf (GW) reporter utopian  
Vivian Dissler new conceptions of health  
Moor unwilling rebel leader  
Rajiv Mehta tools for living  
Seth Roberts sleep mood self-experimentation flaxseed  
Ka-Ping Yee visualization democracy lambda graphics usability  
Stephanie life-streaming ubiquitous ambient  
Chris social constitution of self online  
Steve complex systems accumulating evidence reflexively  
Neal futurism python family jazz piano  
Emil Gilliam

Kevin Kelly introduction

Like to keep broadening it, before we get to the idea of saying we're not interested in this. Using data & measurement for self-knowledge. Revolving around numbers and measurement. And measuring ourselves. Here we're interested in science upon yourself.

Stuff people are interested in

Actionable measurements

Mood

Self-measurements of health

Gadgets

Service providers

Using geocoding for self-analysis

How have you incorporated measurements into your life?

Where do you do your research? Where do you get your ideas?

When you have a lot of data, how do you extract something you can see from it?

What data people would be willing to share with others? What private?

Measuring the effects of measuring

Resources, other groups

Spheres beyond health - such as time use, learning, how quickly you acquire new items

How to measure learning

Aesthetics of self-documentation

What do to with the data that we gather

Can you learn too much about yourself?

Environmental data, brain scans

How quantified health can be used to collaborate w/ traditional medicine

The greater good of all this - what potential for doing good?

Stuff people are willing to talk about

I've tracked my time for 3 years - how to analyze

Things I've measured

What professional athletes do in this domain

Learning, how quickly you learn

Design principles for measuring oneself

Genes, brains, & body - the Experimental Man

Geocoding

Ka-Ping Yee: Time Tracking

Tracked use of his time. Felt like problem not making good use of time. By collecting data, would help. How much

sleep. Where is my time disappearing? Wrote script that keeps little window open in screen. Types in whatever he's doing. E.g., "at QS meeting". Logged with time. [Question from audience: what have you learned?] not a lot. Hope to learn. Can measure how much sleep I've been getting. Turns out to be getting more sleep than I thought.

Roberts: this data useful if you change something. You can notice unexpected changes.

Ferriss: MeTimer: tracks web browser use

RescueTime: indicates active focus, & local applications. Fascinating. Making me more effective. Doing the right things.

Xobni: identifying email hotspots. Top 10 contacts.

???: made pie graph of where we're spending our time & is it compatible with what we say we're about? Do we spend our time on our kids, business, health?

Clickable menu to help track time.

Yahoo widget stopwatch. Tracking work hours.

Surprises: so much unstructured time, more time spent with kid bigger than expected. Agast to realize one project was taking so much time. I'm really doing a lot of things. Decided to focus my life more. Ultimately the most satisfying thing to me. Now I'm working on that company. Me figuring out where I'm putting my creative energy.

The challenge of assigning tags to things. Too much or too little detail. Just write in your own words.

David Kirby: time tracking mood, sent message at random times to cell phone, got a lot more honesty about activity. Extremely difficult to do in social environment. What are you doing, do you feel productive? What is the sampling period? And what is the associated honesty of the data? I became very afraid of wasting time when each message would come it.

Tracking leads to optimization. As soon as she gets people to track their diet, it massively improves. Helps with eating disorders. Nigerian lawmakers tracked by journalist. Just the fact of publishing it greatly improved voting records.

Tim Ferriss: Athletes

Recorded every resistance training workout since age 15. Now 31. Diet & so forth. Go back to notebooks to see how I looked in this or that photo. Related to performance enhancement. Athletes are v. interested in relative vs absolute measurements.Â Body fat percentage - many different methods. All have problems. Real benefit is in measuring progress - difference up or down. I measure VO2 max. BMI is waste of time. VO2max tends not to change much. Only tested twice. Very similar in spite of different regimens. Cyclists measure to see performance maximum - can I become professional? Lots of blood testing. Every 2 or 3 tests, plus saliva-basted testing. \$500-\$1000 per time. Complete metabolic panel. Cortisol, estradial. Done 1st thing in morning. [Someone else: 120 things I track.] Most athletes use a laundry list of drugs. They cycle off to compete. They look at ratios. E.g., free testosterone to epitestosterone. Steriods are like antibiotics. Many of them. Betablockers: used by Chinese archer, concert pianists, entire orchestras. Subject in expts related to body heat. When does your body shut down? How to best dissipate heat? Wanted the data, would have cost \$100K. Found that my ability to dissipate heat is severey reduced. Surface areas of lungs compared to surface area of skin. Brain shut down at unusually low temperature. Heat stroke susceptible. Recovery time measure of fitness. Sets, Reps, rest periods. Within rest periods you can track several things. Return to basal body temperature, heart rate, muscle tonus (galvanic skin response). Don't believe in general intelligence or general fitness. I measure sex hormones, metabolic panels, IGF-1, indirect measures of growth hormone, free testosterone, T3 T4 TSH insulin (wide diurnal variance). How much insulin is produced, how much remains after meal. Athletes only measure something if they can act on the data they gather.Â I don't want 24/7 measurement - too much data. I take a lot of experimental supplements. I like watch the response of my autonomous nervous system. Ephedrine hydrochloride. Widely studied.Â Yohimbine HCL: proposed as safer alternative to ephedrine. Not a selective agonist. I wanted to measure my blood pressure very closely.

You can order blood tests online & go to local places that will draw your blood & send you the results. Don't need doctor's prescription. Look up symptoms for whatever would require that type of testing.

Any statistical tools that will help you calibrate measurements against each other?

Templates for analyzing small data sets: couldn't find.

Statistics packages, such as R. Google Website Optimizer. Set up experiments for website visitors. Test different pictures on your page. Ramsey 2-color theory. The known Ramsey numbers. If you know there has to be a mutual group of 5 people that all know each other, you have to have at least 43 people in the room.

Suggests data tutorial for the self-experimenter. At future meeting.

If there were a easy to use tool set, if you wanted to run experiments, finding things that were harder to find or predictions. Good tool honeypot for data. Norbert Weiner talks about that.

RescueTime can take aggregate data of 30000 people, reducing data entry from 100 items to 2 items. Hope there will be communities that will follow protocol.

Gary Wolf: Learning/Knowing

Did long story for Wired about managing 5000-item dataset. Keeps track of what you've learned & haven't learned. Makes prediction about what you need to practice something to remember forever. How deeply rooted it is. Street you've lived on when little kid. I'm measuring 2700 index cards. Spanish vocabulary. Modal sentences for grammar learning. Maintaining at 90 % remembering. What 1000 words do you need to know? Super Memo. Pieter Wozniak, Polish computer scientist. When you do your tests every day, you get 85 %-90 % on every test. It shows you a set of cards. If you want to learn the most, maximum efficiency is 40 % efficiency. Unpleasant. A 5-point rating system. Implemented physically in the 1950s. A Liter System. Pimsler implements spaced repetition in background way. Index cards a metaphor - all online. You want to learn constantly for short periods of time over long time spans. What's the lifetime limit on what you can learn? Cabbies in London: larger hippocampus. There are some glitches: learning some things can interfere with knowing other things. Cards in Super Memo that often come up. You can figure out why you're not learning them. A Everyone knows that poor sleep impairs learning. How much will your performance decrease? You need a lot of sleep data & lot of learning data. We're on edge of being able to do that.

David Duncan: One of brain scan tests for my book has to do with memory. As we age, we don't forget things, we have inability to filter out. Series of faces & landscapes. Then forget faces or landscapes. Can you filter out what you're not supposed to remember? Compare young and old. Older people can remember as well as young people but can't filter as well. I came out right in the middle.

I've been doing tai-chi for a number of years. Doing for 5 min/day better than 1 weekend/month.

How do you measure learning? Not just via standardized tests. Cognitive & batteries of tests that people take. Tell you what your brain age is. Column for Portfolio. Cognitive drug research. Did better than I expected, didn't want to take again. On website. On wine, my timing was way off. Check comment stream, people who got younger thought it was a great test. Issues with speed of server.

Rajiv Mehta: Ways This Helps

Helping people take care of their health. Individual perspective. You have some regimen in mind: chicken soup or whatever. What gets in the way of people taking care of their health? We forget a lot, life gets busy. Keeping detailed records impossible for vast majority. Made prototype device. Gives reminders for things that are scheduled. Makes easy to record symptoms moods, etc. anything you think is important health. User tracking exercise. ZumeLife.com.

Tracking her carbs, glucose, medications, symptoms, shortness of breath. Speak into it. Transcription service. Things that don't lend themselves to charts get put into notebooks. USB connected to your PC. Every day or so. NY Time article about 42-year-old person w/ diabetes. Complicated case. Lots of drugs. [can you use any category?] Right now. 5 categories: meds, biometrics, exercise (name, duration), food (carbs, points), health-status questions (how much coughing, how did you feel). Most been using: 7 months. One person had sclera derma. Intense pain, cold hands. She started measuring her pain levels, realized she was having 3 or 4 intense episodes per week. With her printout, she & her doctor said: you have a problem. Over 6 week period she went from 3 or 4 intense to 1 mild episode/week. About \$40-50/month. Can't ask people to buy a special phone. I'm not waiting for United Health Care to say it's interesting. Institutions don't want to deal with smart phones, they want a special device. We've found everyone experiments. If anybody is going to figure out what works for her, it's her. Doctors benefit from charts. The experimenter is her. Our doctors are at best good advisors. We cannot abdicate responsibility.

#### Peter Mortensen: Motivating Running

If you want to help people who are not enthusiasts. Need proud & constant presence. Nike Plus Sports Band. Wear all the time I'm awake. Not just a string around my finger. I can see how much running I've done in last 3 months. Also have my last run. More successful than Nike iPod. You should hide the change you want to make. Also USB key, syncs/ with NikePlus website. Graphs, etc. Even cooler it charges battery when plugged in. I only hear I'm interested I'm wearing a nice watch, never that I'm self-tracking. Chip on shoe, Bluetooth. Impact accelerometer. It's an attractive watch, I'm proud to wear it. Aesthetic thing. An ugly watch would not have the same effect.

Raj: If you're sick it means something bad. If there's going to be a device they have to be proud of it. Before Ms. L got our device she was trying to use her Treo. It got in the way. It's rude to answer your phone if you're having a conversation. People would get upset. This device: It's Ms. L taking care of herself.

Nice scales for tracking weight. Cable going off somewhere. Body composition Bluetooth scale. Tonita.

#### Seth Roberts: Sleep

Early self-experimentation about acne. Found out stuff doctor didn't know: really useful. Maybe would help with sleep problem: Waking up too early in the morning. Tried many things for 10 years, everything failed. All ideas were wrong. Finally got a new idea due to analyzing data, noticing less sleep when lost weight, told class, student told him about another way to eat less, required changing breakfast. Change in breakfast caused early awakening to get worse. This was the first thing that had made a difference. Led to discovery that any breakfast hurts; supported by rat research. Later found that standing a lot improved sleep. Had to stand at least 8 hr to get effect; no effect of 6 hr of standing. Great sleep when stood 10 hr but really hard to do. More recently discovered that standing on one leg to exhaustion helps. Do twice in one day. Same effect, roughly, as many hours of standing but only takes a few minutes. Now working out the dose/response function.

KK: looking for people who want to blog on the blog itself. If you'd rather just share a comment or idea just mail it to us (GW & KK).

GW: lot of dry timber waiting for a spark here. Value of this meeting, can something bigger grow out of it?

Bodymedia.com making their gadget available to retail. Measures body temperature, galvanic skin response. \$399 plus \$20/month. 2. Body computing conference at UCSF Oct 25. internal 3. 23 & me has dropped their price. Version 2. 1/3rd price.

Send stuff to KK & GW to post on blog.

More [1] Gary Wolf's account.

1. <http://www.kk.org/quantifiedself/2008/09/but-why.php>

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Trey (2008-09-11 13:22:28)  
Thanks for posting this.

Jeff Winkler (2008-09-11 16:20:28)  
I'm jealous - on the wrong coast (Boston)!

mike kenny (2008-09-11 18:26:54)  
cool! maybe your group could set up a wikipedia of self-experimentation, or the like. apparently there are free services on the web.

Alexandra Carmichael (2008-09-12 04:27:52)  
Thanks Seth, for recording such a fabulous evening! Sorry we had to duck out before your talk - your discoveries sound fascinating and I'd love to hear more. A couple of minor name corrections: Melanie Swan Lisa Betts-LaCroix Daniel Reda Looking forward to next time! Alexandra Carmichael Co-Founder, <http://www.CureTogether.com>

Stephen M (Ethesis) (2008-09-12 05:14:59)  
Athletes and body builders are compulsive self-experimenters. Unfortunately, as Sports Illustrated noted a while back, at the elite level, that also includes protocols and close to universal use of illegal drugs. It used to be a few sports (weight class based sports) were immune. I still remember my brother talking about how everyone at Nike was amazed by the wrestler who was on their endorsement list, was going to the Olympics and wasn't using steroids - while it made sense to my brother, steroids would increase his weight. Now, well, they have better steroids. Not to mention, they've discovered regimens that improve recovery time without increasing weight/muscle mass. But it looks like you've got a great group. Next post on them, please do post the blog link in the post (for the lazy ones among us who don't want to work through looking in the side bar or on google ;)).

Justin (2008-09-12 08:29:59)  
Seth, Your standing for better sleep comments are intriguing to me. Could you comment on what exactly it means to stand on one leg to exhaustion? Is this the point at which you can't maintain balance while standing on one foot? Is the whole regiment to do two sets in a day whereby each set is stand-to-exhaustion on each leg? Thanks for the intell- Justin

seth (2008-09-12 09:40:58)  
Justin, what I mean by "standing on one leg to exhaustion" has nothing to do with balance - I usually touch something to make it easy to balance. I mean I stand on one leg until it becomes difficult due to muscles getting tired. I never actually endure pain or even discomfort but I go right up to the point where I would start to if I continued. In the beginning I could only do this for 2-3 minutes; now it's up to about 11 minutes. At the moment the "whole regimen" is what you call one set: standing on each leg to exhaustion once. In other words, left leg once, right leg once.

seth (2008-09-12 18:57:34)  
Thanks for the corrections, Alexandra.

Standing can improve sleep? | the Justin Owings page (2011-07-25 09:40:56)  
[...] sleep. I found it thanks to a shared Google reader item from Patri Friedman. It was part of some notes taken from a meetup meeting: Change in breakfast caused early awakening to get worse. This was the first thing that had made a [...]

## **I Love This (2008-09-12 09:35)**

In late July, JemSparkles posted [1]this to the SLD forums:

Ok so I have tried many diets. Here's the list Jenny Craig (10 lbs lost but gained back), Atkins (3 months of phase 1 and nothing lost), Curves (1 year and 10 lbs lost), Herbal Magic, a multitude of diet pills, the Zone, and then simply working out non stop. The weight doesn't want to come off. So here I am with the last attempt that sounds crazy enough to work! I bought the book and this is day two. I am going to start tracking my data and see if I get any results.

Here's to hoping!!!

Ok so I weighed myself for the first time this morning and my starting weight will be 260lbs.

Two weeks later she posted [2]this:

Ok so I haven't seen the fast results that some have seen but I am seeing results which is what matters. And compared to any diet this has been super easy to keep up with.

Today she posted [3]this:

254!!! Yes I am finally down a total of 6 pounds and starting to feel much better. I have been working really hard on this and am not giving up. This diet has been the most effective I have been on to date.

We now return to our regularly-scheduled blogging.

1. <http://boards.sethroberts.net/index.php?topic=6516.msg71795#msg71795>
2. <http://boards.sethroberts.net/index.php?topic=6516.msg72766#msg72766>
3. <http://boards.sethroberts.net/index.php?topic=6516.msg74255#msg74255>

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## **If Your Comment Doesn't Appear (2008-09-12 19:10)**

I just found two perfectly good comments in the spam pile, which contains thousands of items. If you post a comment on this blog and it doesn't appear right away it means either

-it's being held for approval by me;

or

-it's been classified as spam, in which case I don't see it. Comments classified as spam usually have one or more links. If your comment has two or more links, it has a good chance of being considered spam.

If you have commented successfully before your comment should appear right away. If it doesn't, please let me know. You can send your comment to me and I will post it or de-spam it.

If you haven't commented before and your comment doesn't appear within a day, please let me know and I will post it or de-spam it.

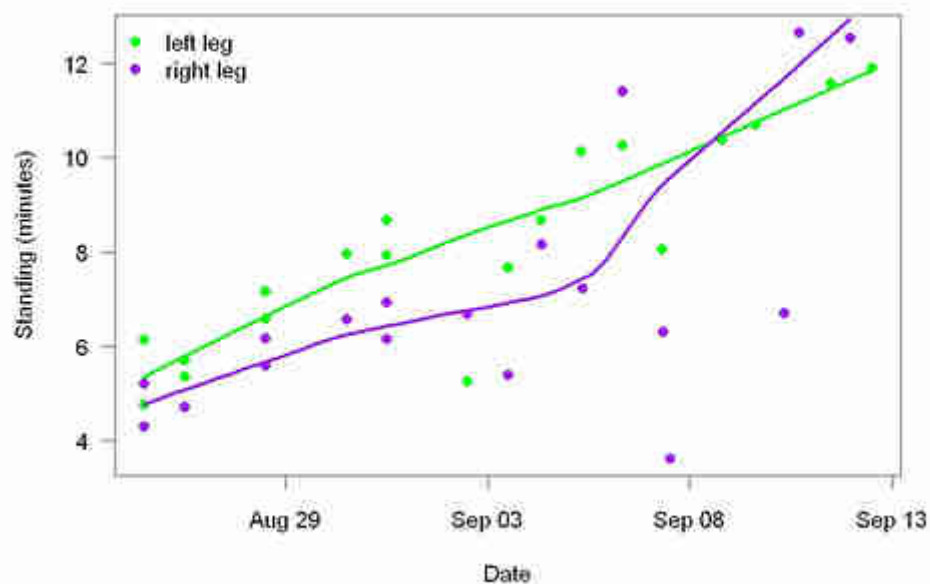
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kclane3 (2008-12-08 15:43:11)

Thanks for the post, I have been having the same problems.

### Science in Action: Why Did I Sleep So Well? (part 13) (2008-09-12 20:47)

When I talk about how standing on one leg has helped me sleep better, the inevitable question is how much standing? After I became sure the standing was making a difference, I started to record the durations. I always stood on one leg until it became a little hard to continue. As my legs have become stronger, this has taken more time, as this graph shows:



During the early days on this graph, I didn't include time-of-day information. I usually stood on one leg three or four times per day. More recently, I have included time-of-day info and now stand on one leg only twice most days. In all of the cases shown on the graph, I was pulling my other leg back behind me at the same time, stretching the muscles. (If I don't stretch the other leg, I can stand one-legged much longer.) In the very beginning, I only stood one-legged 2-3 minutes.

I'm sleeping better than any other period in my adult life. My sleep was pretty good before this period but the difference is still huge. Not only am I sleeping better, I suspect I'm also sleeping less (as happened [1]when I improved my sleep by standing a lot).

I suppose one-legged standing counts as "exercise" – that source of so many claimed benefits (longevity, weight loss, less heart disease, etc.). I read today that exercise is supposed to improve your brain. But the differences between what I am doing and what is usually recommended are as large as the difference between the Shangri-La Diet and other diets:

1. Conventional exercise: Requires expanse (for walking) or, usually, special equipment (e.g., gym). Takes one hour or more, when you count changing clothes and showering, not to mention the drive to and from the gym. One-legged standing: Can do almost anywhere. Takes less than 30 minutes, so far.

2. Conventional exercise: Requires discipline if you want a decent workout in a reasonable amount of time. One-legged standing: Almost no pain involved. I can watch TV or read something at the same time.

3. Conventional exercise: Supposed to be aerobic if you want the main benefits. One-legged standing: The opposite of aerobic.

3. Conventional exercise: Some benefits accrue slowly, such as weight loss. Others are hard or impossible to detect, such as longer life. Runners' high goes away, in my experience. One-legged standing: Benefit clear the next morning. Because I am strengthening muscles I use all the time (when I walk or stand) I notice my vastly increased leg strength all the time.

4. Conventional exercise: You want to get stronger. One-legged standing: You don't want to get too strong or else it may take too long to get the effect.

5. Conventional exercise: Often difficult to measure increased strength. Hard to measure improvement in swimming, racquetball, or aerobics classes, for example. One-legged standing: Easy to measure increased strength.

6. Conventional exercise: Helped me fall asleep faster, but didn't solve the problem of too-light sleep. One-legged standing: Utterly solves the problem of too-light sleep.

Could the benefits of conventional exercise have anything to do with the fact that it vaguely resembles one-legged standing?

[2]Directory.

1. <http://repositories.cdlib.org/postprints/117/>

2. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>



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Maestro (2008-09-13 07:15:35)

Have you tried doing it for shorter periods now that you've built up your leg strength, to see if that matters?

seth (2008-09-13 08:50:20)

Maestro, that's a good idea but I haven't done it yet, no.

Andy McKenzie (2008-09-13 08:51:04)

Could the benefits of one-legged standing have anything to do with the fact that it vaguely resembles conventional exercise? It is hard to posit why either effect would occur evolutionarily since the necessity of sleep in that context is so vague itself. But exercise at least seems to be a biologically relevant activity—running around was probably a common activity during the Paleolithic era, while it is less probable that people were standing on one leg for no apparent reason for thirty minutes at a time. In all likelihood there is a third variable at play that is triggered by both standing on one leg and exercise. Not attempting to be critical, as I find the general effect fascinating, but that last sentence was iffy.

Aaron Blaisdell (2008-09-13 09:00:29)

With a set of two 15 or 20 pound dumbbells, I find that I can get an excellent workout in 30-45 minutes. Three times a week I do the following routine: pushups, situps, two shoulder exercises (shrugs and another involving holding the weight with both hands in front of my hips and bending my elbows to bring the weight straight up almost to my chin - can't remember what these are called), triceps "curls", and bicep curls. After these I do a few stretches to hit most major muscle groups in upper and lower body. After doing this three times a week for two weeks I noticed distinct improvements in sleep, and resting wakefulness (feeling calm and alert during waking hours). I also notice distinct improvements in my muscle tone and how good my upper body looks in a mirror (my wife always laughs at how I will pose in front of a mirror to admire the results). I have to admit that the leg exercises seem even simpler and perhaps I'll give them a try. But the idea that exercise is expensive (e.g., gym membership, special equipment), difficult (requiring high motivation or difficult movements), and time consuming (I do a total of 90-115 minutes per week) are certainly necessarily true. I think a lot of people make things more difficult than need be, and perhaps the media has had a hand in portraying these myths about exercise.

seth (2008-09-13 12:13:22)

Andy, you write: "It is hard to posit why either effect would occur evolutionarily." I think the evolutionary reason that one-legged standing improves sleep is pretty obvious: We sleep more when we need more time to grow muscles. Muscles are better grown when at rest than when being used, thus they are grown during sleep. This is why my one-legged standing causes both muscle growth (as the graph shows) and better sleep. And why I don't think the sleep improvement is likely to occur when the muscle use isn't extreme – isn't extreme enough to cause growth. Aaron, thanks for the exercise details. I'm glad to hear about an exercise routine that's easy to do at home.

MT (2008-09-14 15:13:09)

I don't think the good-sleep effect from standing on one leg is a byproduct of exercise per se, because: 1. Dose effect from standing for nine hours or more suggests biological trigger 2. Many people exercise legs more but don't report similar benefits 3. Seth has exercised more and not reported these benefits (walking and standing over ten hours a day for instance, would be more energy intensive) I suspect that this effect is a fluke of evolution – the good-sleep trigger is hardwired to be set off by something which standing on one leg triggers relatively easily (or it does in Seth – has anyone else had a similar experience yet?). I think it has to do with nerve signals and/or pressure. Alternate hypotheses: 1. the sensory input to the brain from one-legged standing is heavy as the balance requires so much processing, so it simulates normal standing for really long periods, 2. there is a nerve signal produced by one-legged standing that is pressure sensitive. Other people exercise their legs strenuously without profound changes in sleep – myself for instance. I think the theory should account for that difference. I wonder whether anyone has noticed sleep benefits from gymnastics, or other activities where people might train to fatigue while balancing.

seth (2008-09-14 17:52:57)

"Other people exercise their legs strenuously without profound changes in sleep." I think the details matter. I did one particular type of "exercise". I think what I did is a particular efficient way of generating the necessary signal. You can "strenuously exercise" your legs in a hundred different ways and I'd guess that almost all of them less efficiently produce the necessary signal. I think the evolutionary story (better to grow muscles while they are still so they are grown during sleep; thus more growth -> more sleep) is so plausible that the effect could hardly be a "fluke" and is very likely to happen to everyone.

MT (2008-09-15 03:17:46)

Seth, you wrote: "I think the evolutionary reason that one-legged standing improves sleep is pretty obvious," but provided an explanation why exercise would improve sleep - those are different, which my comment was addressing. You quoted my use of "fluke" out of context - I was not referring to sleep and muscle recovery, where the benefits are obvious, I was referring to one-legged standing triggering the better sleep mechanism more efficiently than alternative activities which would confer more evolutionary advantages - like hunting and gathering. So I agree that the details matter - what I'm wondering is whether there is some aspect of the details which can explain why THIS behaviour seems to create the BEST sleep response. A unique connection between balance and savanna behaviour, for instance. I agree that it is likely many or most people would have a similar response, and that it is likely that it is the combination of balance and strain that creates the response.

seth (2008-09-15 06:39:17)

MT, thanks for explaining that. Why does this form of exercise produce the effect more clearly than other forms? My guess is that the answer is: It produces the most muscle growth per unit time (spent exercising). In other forms of exercise, the stress is spread out over several systems (e.g., we become out of breath before our muscles get tired) and is more intermittent, so that there is more recovery. One-legged standing is especially efficient because the muscle-growing system is "isolated" and stressed without any recovery period.

siegfried (2008-09-15 11:26:05)

Hi- balancing on one leg is a common posture in Yoga as well as Tai Chi. Practitioners have long held that it helps with better sleeping. there are other potential connections: Standing on one leg (with a stick to lean on) is a common rest position among aborigines, Massai, etc. Any alternate stimulation on the brain (cf: EMDR) has shown anti-stress potential. S.

MT (2008-09-15 13:13:52)

Sounds reasonable - so the balance element is not relevant with that explanation, it is simply the continuity of the load to exhaustion which matters. That should be testable fairly easily, as bending your legs into a crouch with your upper body as upright as possible (known as a chair sit - had to do them for ice hockey) is quite exhausting (the lower you sit, the harder - you can just crouch a bit for a good effect), and produces a continual load on your legs, like one-legged standing. To shorten the time to exhaustion of one-legged standing you could bend the leg a bit more as well. When doing CROUCHES or SQUATS - you want to KEEP YOUR KNEE BEHIND YOUR TOES, and in a straight line above them - can put too much pressure on the knee otherwise. Such variations could test whether balance is relevant, though I imagine you are interested in training your balance as well. There are inexpensive wobble boards that can add challenge to your balance exercises. There is some evidence that improving balance and coordination can help with aspects of cognition. Perhaps your results from the reaction-time test you devised would improve if you challenge balance and coordination simultaneously for a few weeks.

Chris B. (2008-09-16 09:45:47)

I've tried the one-legged standing twice with disappointing results. It took me about 20 minutes to tire out leg, probably because I cycle for exercise, and I didn't notice any improvement in my sleep. In fact, last night I slept unusually poorly, waking briefly at 12:30, and waking up for good at 5 am. I will give it another try, but it may be one of those things that doesn't work for everyone. Assuming that the effect, for you, has to do with stimulating muscle growth, perhaps I'd be better off exercising some less-developed muscle group. I've been planning to start some upper-body weight training. If/when I do, I'll try to keep records on the connection with sleep patterns.

Tod L. (2008-09-16 19:39:17)

have you tried introducing the variable of crossing your meridian during the stretch? Right hand stretching left leg while standing on right leg while crossing left hand to right shoulder? then visa versa.

cato (2008-09-18 19:48:04)

you might also want to try one legged squats. you stand on a sturdy chair or bench and do a squat on one leg. you don't need the extra weight of a normal squat. maybe the extra intensity will have interesting effects...

MJS (2008-09-20 07:26:53)

I've never posted here before, but I wanted to mention that I've been doing these exercises - standing on one leg - and it's helped my sleep immensely. About a year ago, I went through a pretty traumatic experience that disrupted my sleep patterns. The end result was that I couldn't sleep for longer than 3 or 4 hours at night without waking up. For several months, the lack of sleep was like living in a nightmare, and prescription drugs just made the problem worse. I finally decided to go off medication all together and change my attitude, which worked wonders - I could get back to sleep after I woke up - but I'd still only sleep in 4 hour chunks. About a month ago, I began doing these exercises, and now I'm sleeping 6 to 7 hours at a time. It's amazing; and on the days I don't do them, I don't sleep well at all. It's amazing how easy they are to do - if I find myself standing in line, meeting friends for a happy hour, or even watching tv, I'll do them. Last night I told a friend to do them while he was at a happy hour, and this morning, he said he slept "like a log." So, thanks so much for the suggestion and helping me regain my life/sleep back.

Seth's blog » Blog Archive » Why Did I Sleep So Well? directory (2008-09-20 10:59:00)

[...] Science in Action: Why Did I Sleep So Well? (part 13) [...]

## **The Case of the Missing Evidence (2008-09-13 10:20)**

The most telling detail in [1]Robin Hanson's lecture about doctors was about a nurse assigned to measure hand-washing rates among surgeons at her hospital. After she measured the hand-washing rates, she - as ordered - correlated them with death rates. It turned out that the surgeon who washed his hands the least had the highest death rate. For reporting this - as she was ordered to - the nurse was fired. Robin learned this story from his wife, who was a friend of the ex-nurse.

I was very impressed by Robin's lecture, which was both accessible and profound, and it was one reason that during my next encounter with a doctor I was more skeptical than most patients. As I [2]blogged earlier:

I have a tiny hernia that I cannot detect but one day my primary-care doctor did. He referred me to Dr. [Eileen] Consorti, a general surgeon [in Berkeley]. She said I should have surgery for it. Why? I asked. Because it could get worse, she said. Eventually I asked: Why do you think it's better to have surgery than not? Surgery is dangerous. (Not to mention expensive and time-consuming.) She said there were clinical trials that showed this. Just use google, you'll find them, she said. I tried to find them. I looked and looked but failed to find any relevant evidence. My mom, who does medical searching for a living, was unable to find any completed clinical trials. One was in progress (which implied the answer to my question wasn't known). I spoke to Dr. Consorti again. I can't find any studies, I said, nor can my mom. Okay, we'll find some and copy them for you, she said, you can come by the office and pick them up. She sounded completely sure the studies existed. I waited. Nothing from Dr. Consorti's office. After a few weeks, I phoned her office and left a message. No reply. I waited a month, phoned again, and left another message. No reply.

Yesterday Dr. Consorti finally got back to me, by posting a comment:

Seth, While I am in the process of finding papers in the literature to satisfy your scientific curiosity on why this hernia should or should not be fixed I am additionally trying to care for around 30 new patients referred to me for their new cancer diagnosis in the last 3 months. This may or may not explain why I have not been motivated to answer your call regarding your ambivalence about fixing your hernia. Yes, it is small and runs the risk of incarceration at some time. I will call you once I clear my desk and do my own literature search. Thanks for the update. Eileen Consorti

Fair enough. She's busy. And I am glad to have her reply and her view of the situation. On the other hand, I am pretty sure the studies she was so sure existed – that justified the surgery – don't exist. To call my curiosity about whether the proposed surgery would do more good than harm "scientific" has a bit of truth: No doubt scientists understand better than others that you can test claims such as "you need this surgery". But it isn't "scientific" in the least to worry that a medical procedure will do more harm than good. Everyone, not just scientists, worries about that. Surgery is scary. Let's set aside the death rate, which is low but non-zero. How many brain cells are killed by general anesthesia? Dr. Consorti doesn't know, nor do I. The number is plausibly more than zero. I suspect a power-law distribution: Most instances of general anesthesia kill a small number, a small fraction kill a large number.

I pointed Robin to Dr. Consorti's response. He replied:

I wonder if she even realizes that she in fact doesn't know why you should get surgery.

What I know and Dr. Consorti, very reasonably, doesn't know, is that my mom was a librarian at the UCSF medical library and has done a vast amount of medical-literature searching. If she can't find any relevant studies, it is very likely they don't exist. And my mom did find a study in progress, which, to repeat myself, shows that my question about cost versus benefit is a good one. Others had the same question and launched a study to answer it. Robin's lecture helped me ask it. Thanks, Robin.

More. Robin's version of the fired-nurse story is [3]here. Thanks to Charles Williams.

1. <http://www.blog.sethroberts.net/2008/03/21/robin-hanson-on-doctors/>
2. <http://www.blog.sethroberts.net/2008/08/29/suppose-you-write-the-times-to-fix-an-error-part-2/>
3. <http://www.overcomingbias.com/2007/10/doctors-kill.html>

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Baker (2008-09-13 12:00:55)

it's an agent principal problem, doctors can enrich themselves at the cost of wasting their patients' money, and additionally if they don't conduct every imaginable procedure they run the risk of being sued for malpractice by a trial lawyer, another individual who earns money by wasting their clients' instead of their own, it's no surprise medical care grows more and more expensive when all the incentives are aligned against the patient.

seth (2008-09-13 12:19:46)

Not so much against the patient – I have insurance – as against the insurance company. The proposed surgery would cost me a trivial amount of money.

peter (2008-09-13 12:31:12)

"it's against the patient" in the sense that the patient could take an unnecessary risk of surgery; this risk is present regardless of the financial implications.

sun, too (2008-09-13 13:44:50)

We can all grant that this surgeon stands to make a nice buck in a short amount of time (provided your insurance company pays her) if she does this routine hernia surgery. So she has that incentive. But I don't understand why, in all this Consorti business, no one has acknowledged the elephant in the room, which is the *legal* incentive this surgeon has to advise you to undergo surgery. She knows a little about abdominal anatomy, so it doesn't take a wild flight of fancy to imagine a more substantial hernia developing. And she knows a little bit about malpractice lawsuits (hopefully not from experience), so it's not hard for her to imagine that if she advised you *not* to get surgery, and then you had a major problem with this thing, you might sue her. That seems like it would also be a strong incentive to operate. Where does that play into all this?

Patrik (2008-09-13 14:54:31)

Uhm — odd, that neither you nor Robin mentioned Semmelweis. In broadstrokes, the nurse re-created his seminal findings in Vienna in 1847. For his insight and standing firm against the 'scientific consensus' of the day – he was driven back to Budapest and his reputation thoroughly besmirched. [http://en.wikipedia.org/wiki/Ignaz\\_Semmelweis](http://en.wikipedia.org/wiki/Ignaz_Semmelweis) BTW Crichton and others (myself included) think that are poignant parallels to be drawn from this episode of scientific history and current mainstream scientific consensus's stance on global warming skeptics.

david (2008-09-13 15:55:29)

What peter said and even if you don't pay for it, you still lose time from work for the surgery and recovery.

Tim (2008-09-13 16:08:08)

Hi Seth, here's an interesting article that is related: [http://www.newyorker.com/reporting/2007/12/10/071210fa\\_fact\\_gawande?printable=true](http://www.newyorker.com/reporting/2007/12/10/071210fa_fact_gawande?printable=true)

James (2008-09-14 00:41:57)

Hah, I was going to post the exact link Tim did.

Mark (2008-09-14 02:38:28)

"Robin learned this story from his wife, who was a friend of the ex-nurse." This sentence stuck out for me. There's a subbranch of the field of folklore called "Emergency Room Lore" by anthropologists. These are apocryphal stories passed on by nurses and doctors in hospitals. It's a very rich and developed body of folklore. Jan Harold Brunvand has a section about it in one of his books. The reason why it's so vivid in my memory is that a few days after reading Brunvand's book, a coworker told me about an incident that happened to his mother, an emergency room nurse, which exactly matched one of the examples in the book. I did what I have learned you never should do when you hear an urban legend (and I probably shouldn't be writing this comment!): I challenged the story and related what I had just read in Brunvand's book. The coworker was incensed and asked if I was calling his mother a liar. Before I wised up and shut up, I tried to explain that folklore works because people unconsciously move up the source of information one person when they pass it on. It's always "a friend of a friend." I think if you tried to track this story down, Robin's wife's friend will say, "Yes, it's absolutely true, but it wasn't my friend, but a friend of my friend." And this would repeat as far back as you have patience to follow it.

Dennis Mangan (2008-09-14 06:41:33)

While not impossible that the doctor could get the nurse fired, doctors are not hospital employees or supervisors. The doctor would have to convince an administrator that the woman deserved firing for cause, pretty difficult in this day of employee lawsuits.

seth (2008-09-14 06:59:34)

Mark, Robin's wife did not hear a story about someone else being fired – she heard from the person who was fired.

retired urologist (2008-09-14 07:26:59)

I do not know Robin Hanson personally; I know only the persona he presents on his blog, Overcoming Bias. That persona dislikes doctors on several levels. The justifiable level is that they waste healthcare resources and participate in services that are not helpful, while being paid to do so. It galls him that such a profession enjoys high respect among the general public, because, as he frequently implies, and sometimes states overtly, he believes doctors harm their patients intentionally for money. The persona on his blog is a little out of control on this issue, as the "nurse story" illustrates (he used it in a major blog post). Dr. Hanson is so precise when it comes to the economic evidence he presents (he has persuaded me completely about the lack of value of my profession overall), yet he allows his brilliant (I mean that term literally) mind to fall into the same trap as a lesser human when he passes along such gibberish (as Mark and Dennis Mangan point out correctly). This story is so untrue on so many levels, and obviously so to any informed person, that both Hanson and his wife should be embarrassed for having passed it along. By the way, vigorous scrubbing has been on its way out for several years. Current topical solutions work better without it. Dr. Consorti should have been more honest with you about her lack of evidence regarding hernia surgery. This "doctor arrogance" is what causes Hanson to lose his professional perspective about the doctors. What Dr. Consorti \*did\* know is that tiny hernias are more likely to become acutely incarcerated causing a life-threatening emergency, frequently requiring partial bowel resection. She cannot say what your individual chances of that are, for as you have noted, the studies are not available. I'm not sure how they could be, especially in this litigious age. She recommended the surgery, because she feels the outcome is better when done electively as opposed to the emergency situation I described. Now, she's off the legal hook, and you are free to decide as you see fit.

seth (2008-09-14 10:10:51)

"Dr. Consorti should have been more honest with you about her lack of evidence regarding hernia surgery." This is unfair to Dr. Consorti. She honestly believed the evidence existed, I'm sure. However, the fact that she was wrong about the state of the evidence is a serious problem whether she is honest or not.

retired urologist (2008-09-14 13:31:16)

Here's a link to another of Robin Hanson's econ colleagues on Overcoming Bias, writing on a topic almost exactly like yours. <http://www.overcomingbias.com/2008/08/doctor-there-ar.html>

Kirk (2008-09-14 15:37:39)

I wonder if it would be possible to develop one's own risk-assessment? This would be possible if there were the following numbers (all per year) a) the number of emergency operations for incarcerated or strangulated hernias b) the number of people who die due to incarcerated or strangulated hernias c) the number of people who have hernias each year As for me, fifteen years ago I had an emergency hernia surgery and it scared me seriously. That's why I am having another hernia surgery soon, even though my last one had its problems. But then, my current hernia is large and hurts when I sneeze. It would be a much more difficult decision for a small hernia. I wish you the best of luck.

Stephen M (Ethesis) (2008-09-15 10:40:21)

Dennis Mangan – it really depends on the hospital. In some hospitals, nurses are subjected to constant and incredible levels of hostility and harassment and can be readily fired if they displease any doctor who draws in revenue. In other hospitals, swearing once at a nurse will get your credentials revoked. Abuse from doctors is a huge issue in the nursing profession and the subject of a great deal of literature. You would think that they could file hostile work environment claims, but it doesn't seem to be the case.

retired urologist (2008-09-15 13:00:32)

*You would think that they could file hostile work environment claims, but it doesn't seem to be the case.* Disclaimer: Anecdote Twenty years ago, the technically-best and highest revenue-producing cardiovascular surgeon in town was brought before the executive committee at my community hospital. A nurse had brought a summons indicating a lawsuit against the

hospital and the doctor for habitual "sexual harassment" (sexual only in the sense that his verbal abuse was aimed at someone of another gender). She agreed from the outset to drop the suit if the doctor were removed from the staff. He was, and from the other local hospital staffs as well. As you say, perhaps it varies. I think there's more to the "nurse story" than she revealed to Mrs. Hanson.

Vesna (2008-09-15 16:45:31)

1. Seth, your post refers to a link to the full fired-nurse story, but I can't find it. Could you have left it out? 2. About urban legends: yes, Robin reports that his wife spoke to the actual nurse. However, Mark is saying that this is exactly the classic form of the transmission of urban legends. Whenever you hear that someone heard something from only a single link away (a friend of a friend, or FOAF), it's a red flag. When that single link is followed, too often it leads to another link, and another, and another. Did Robin talk to the nurse himself? Does he know (even if he's keeping it private for whatever reason) the name of the hospital, what year this happened, and so forth? 3. Patrik, I think the reason Semmelweis wasn't mentioned was simply that the connection was so plain and obvious, not because no one knows about Semmelweis and the birth of the germ theory of disease. Besides, the moral I got from the reported correlation between death and less hand washing was this: less careful doctors provide worse care overall. I didn't think the story was supposed to point to hygiene, specifically.

seth (2008-09-15 17:38:13)

Vesna, thanks for pointing out the missing link. I fixed it. As for your Point #2, I'm sure "my wife knows the person involved" is not the classic form of urban legends.

Vesna (2008-09-16 18:52:16)

Thanks for fixing the link! I notice that Robin doesn't say "my wife knows the person involved," but "a colleague of my wife." Which could mean someone that she doesn't actually know. I posted a comment on Robin's blog asking if he could clarify. Now I'm curious!

retired urologist (2008-09-17 06:52:29)

@Seth: my question about cost versus benefit is a good one. It seems that when all the evidence was weighed, it was the anecdotal, experiential bias of the surgery profession versus a study in progress. With nothing else to go on, what did you decide to do, and what does your decision tell us about dealing with matters for which there is not perfect rational evidence?

seth (2008-09-17 07:49:56)

I decided to wait for the surgeon to tell me about the studies she told me she would find. If she never find those studies (or at least never calls me back), I'll wait for the study in progress to finish. A few days ago my mom found a study of a different (larger) type of asymptomatic hernia which found that doing nothing ("watchful waiting") was a good option. If no more evidence surfaces, I'll do nothing.

Medicine as a guild « It's Not Hard... but it could be (2008-09-18 09:32:57)

[...] Recently, I was involved in the comments on a couple of blog posts that are quite revealing about the "art" aspect of a medical practice: here, by Dr. David J. Balan, a prominent economist, and here, by Dr. Seth Roberts, a prominent psychologist. In both cases, intelligent members of guilds not associated with the guild of medicine were given medical advice. In each case, they asked for rational evidence to support the recommendation. In each case, they were told that such evidence existed and that it confirmed the sagacity of the advice. In both cases, the doctors were wrong (about the existence of evidence). They knew that a keystone facilitated an arch, but they weren't sure why. That's not science. This sort of encounter is becoming more common among doctors and their patients of equal or superior intelligence. The medical guild has published all their information on the Internet. Good for the patients, bad for the guild. The next thing you know, the patients will want limited guild-privileges to treat themselves. Actually, they've already voiced this opinion. And since the margin of elective US medical care is zero maybe they have a point. [...]

J Thomas (2008-09-20 06:10:17)

*This sort of encounter is becoming more common among doctors and their patients of equal or superior intelligence. The medical guild has published all their information on the Internet.* Well, no. They haven't published all their information. They've published the information they bother to publish. Some years ago my girlfriend had a deep venous thrombosis. It started out extremely serious and then it stabilized. She'd need to use a pressure bandage for the rest of her life and maybe have some circulation problems etc. I did a lit search and the results were pretty horrendous. I was upset. She got a referral to a prestigious surgeon who reassured us. "Why do you think there's any problem here?" "I did a lit search and the published literature was pretty scary." "Why do you think you could understand about that?" "I'm a biomathematician. I can follow the literature but I don't actually have any experience." "Well I do. I see DVTs \*all the time\*. There's nothing to worry about." My girlfriend started a regular exercise program. Pretty soon she was feeling mostly recovered. The trouble was, they didn't publish about it unless it was something serious. There's a great big publication bias. If you go to a plumber he won't have engineering studies that show the way he does his work is the best way. There are probably engineering studies that show everything he does is sub-optimal, that there are newer methods that work better. But he has a big body of experience, most of it handed down to him, that says what he does works. Doctors are a lot more like plumbers than they are like doctors or engineers. When you consult a doctor you are depending on his experience and his training. Hardly any of that is published or publishable. It is deeply unscientific. But on average the doctor has some idea how well it works, although you can't depend on him to truthfully tell you how well it is likely to work.

retired urologist (2008-09-21 10:17:43)

Google "deep vein thrombosis" and 560,000 hits appear. Each of those have multiple references to other (or cross) references. Contrary to what you say, almost every thought that goes through doctors' minds has been published somewhere. Much of it is locked behind subscription-only journals, but even these are available in medical and hospital libraries.

J Thomas (2008-09-21 14:40:09)

RU, I googled 'deep venous thrombosis' and got 1.5 million hits. I googled "post phlebitic syndrome" and got only 28,000 hits. Years ago when I did that search it was only 9000. The ones I looked at emphasized the worst cases. Maybe my search was biased but I tried to include lots of randomness to pick up things I didn't know I was looking for. I believe the bias was in the literature and not much in my search of the literature. The prestigious surgeon we talked to had not published anything about DVT that I could find. But he had sufficient experience to say that her PPS would probably subside with no problems. And he turned out to be right. DVT was not a research interest for him, it was just a complication he saw a lot.

retired urologist (2008-09-21 16:18:54)

J Thomas: "only 28,000 hits" on post-phlebitic syndrome". Yep, sounds like a conspiracy to hide info to me. The "medical guild", for a surgical specialist, requires a minimum of 13 years training, at little or no pay. Chances are your knowledge and experience (and that of your biomathematician girlfriend) may still fall short of that of a surgical specialist, even after hours of "lit search". I would also suggest that the two of you not do any complicated plumbing based on a lit search. Nor any complicated engineering. God knows what they may be hiding from you.

J Thomas (2008-09-21 17:24:26)

*Chances are your knowledge and experience (and that of your biomathematician girlfriend) may still fall short of that of a surgical specialist, even after hours of lit search.* RU, that was my point. My understanding of statistics etc from my biomath training might give me a much better ability to understand randomized trials than most physicians – a large portion of them wind up not at all showing what the authors think they do. But that's no substitute for experience. I couldn't look at her leg and tell whether her PPS was really serious. All I had to go on were a few pictures and a lot of wordy descriptions. The surgeon could tell at a glance that it wasn't that bad because he had experience. He had DVT and PPS as complications for his surgery patients **all the time**. I wouldn't be surprised if I knew much more of the literature about those topics than he did. But that was no substitute for experience, and I knew it. *The medical guild has published all their information on the Internet. Good for the patients, bad for the guild.* It isn't that simple.



retired urologist (2008-09-22 05:11:25)

J thomas, we are in complete agreement about the unscientific conclusions drawn from randomized studies by the medical profession. It is the central idea behind the original post to which you are responding , as well as a facet of several of my other posts at "It's Not Hard". I'm having a little trouble understanding the source of your displeasure. it sounds as if you were upset that your lit search led you to believe your girlfriend's situation was dire, while you are relieved that the doctor visit changed your impression. It sounds as if you would have eliminated the anxiety by seeing the surgeon to begin with, rather than researching it on your own. That's the way the way the system has always worked, pre-Internet.

J Thomas (2008-09-22 06:37:54)

RU, I suspect we're pretty much in agreement all round. I did my own lit search because that was what I knew how to do. I had access to a medical library, so I could get any paper that wasn't too obscure. I knew how to do lit searches quickly and efficiently and I was quick to pick up the material. But that was no substitute for direct experience. I had no idea that my girlfriend's symptoms would subside in 6 months. It wasn't true for the people in the studies. But those people were chosen because their symptoms were serious enough to deserve careful attention. I could tell after the fact that she was a plausible candidate for DVT. She was on estrogen, and was somewhat overweight. She got a bad bruise on a mountaineering trip and then drove long hours with no rest break. But I'd never seen it before. The surgeon, however, gave DVT to over a hundred people a year. He'd seen a lot of cases and he knew what to expect. I'm not complaining about that. I'm just pointing out that doctors are more like plumbers than they're like scientists. When you call a plumber you don't expect the latest scientific results in plumbing. You expect he has the judgement and experience to do the job, and if he doesn't you hope he'll refer you to somebody who does. Same with MDs. We currently have no way to transfer that judgement and experience over the internet or through medical libraries, either one. I can imagine a way to begin to do that. We'd put all patient records into a database, with some attempt to allow anonymity. So then say you have flu symptoms. You put your symptoms into the database and it tells you about what happened to other people with symptoms like that. 97 % of them had flue and got over it. A few had histoplasmosis, a few went on to have coronary disease, a few had this or that other problem. So then you can reduce the search to people who're around your age, and/or gender, and/or your geographical area, and/or whatever else is available, and maybe you get a different result - fuzzier but different. Every few days the database could email you to remind you to tell it how you're doing, and if you don't respond it checks the death records etc to see if you can't respond.... It wouldn't substitute for the personal touch but it would provide a whole lot of data that anybody could mine. We have something like that now for insurers, but the data is mostly private and it's organized around diagnoses more than symptoms and test results.

retired urologist (2008-09-22 07:05:56)

J Thomas: As you can see from all these replies, "retired" means I have a lot of spare time. You sound a lot different now than in your original post. Plumbers=doctors is not only right, it is exactly what I said ("guild"). Your attitude seems a bit naive in that you wish for doctors to promote a system that would somehow transfer the benefit of their experience to the patients without a paid encounter. That's where the guild concept comes in. Doctoring is a *job*, which requires an incredibly long apprenticeship. The doctors plan for you to pay for the service, as much as the traffic will allow, for as long as you are willing to do so. Just like plumbers.

J Thomas (2008-09-22 09:24:19)

RU, the cost for medical care plus insurance overhead etc is something like 16 % of GDP and rising. It's already more than we can afford. I can't expect MDs to do anything that might reduce their guild; privileges, but it's plausible that insurance companies and government might want things to reduce expense. That could include public health measures and improved self-screening approaches. My father is a retired dentist. Back when fluoridation was new he campaigned heavily for it. Some other dentists said that he shouldn't because he'd be cutting back on business. "Cutting his own throat." But he argued that there would be plenty of dental business even after fluoridation, and he was right. Currently, more things to make people ill won't increase medical payments much. The money just isn't there.

retired urologist (2008-09-22 11:01:18)  
agreed

Bias on the hoof: Hanson and RU continued « It's Not Hard... but it could be (2008-10-05 16:44:45)

[...] A reader (not me) saw coverage of the post on the blog of Seth Roberts, and asked Hanson "whether you actually ever met and talked to the fired nurse, how strong her evidence was that she was fired for the reason in the story, etc.? Did your wife actually know her, or know someone who knows her (who might turn out to be someone who knows someone who knows someone), that sort of thing?" Hanson replied: "The nurse was a close co-worker of my wife, who I've met." (Nothing more.) [...]

Mark (2009-01-19 20:49:46)

"Mark, Robin's wife did not hear a story about someone else being fired" she heard from the person who was fired." Yes, FOAF would seem to imply that these stories are two levels away, but many people will move the level up one. It's just an unconscious need to make the story more immediate and vivid and place oneself at the center of the action. In the case of my workmate, his mother knew the person supposedly involved. Now I didn't contact her and ask her about it, but the story (involving a person who fainted from cut-off circulation due to some sort of device in his pants to make it appear that he had larger genitals than he really did) was a classic piece of emergency room lore described by Brunvand. Mind you, I'm not saying that anyone at all is lying. It's just that people's minds play tricks. This is the entire basis of the study of folklore, and not only anthropologists, but many journalists have run across this phenomenon. And I'm not saying that such a study, if actually done, would not turn up the results claimed. It's just that the particular details and person involved are unconsciously fabricated. Why don't you try to actually contact the nurse involved. If it's really just one person away, it shouldn't take much time. And if she was fired, she has nothing to lose and shouldn't mind speaking to you. Make sure to get back to us with your results. ;-) The way I see this is that at some point some medical professional hypothesized to another that if such a study were done such a result would ensue. Then a couple of people down the line, the story became that the study actually was done. Then at some point in passing this fable along, someone made the crack that, yeah, and the nurse would probably get fired for her trouble. And a few levels away from that it wasn't a crack but a fact. And the urban legend went on from there, each time with a little more certainty added to it. (By the way, an excess of details that anticipate objections are one characteristic of urban legends.) The comments to this post show how much interest there is in the medical community about the issues raised by the story. Urban legends flourish the most when they "confirm" the opinions of large numbers of people in the community in which they are passed on.

retired urologist (2009-01-20 09:05:15)

Mark, Thanks for re-opening this discussion. If it did not involve a world-class thinker who states in his widely-read [1]blog that his significant interest is "the rationality of paternalism and other kinds of disagreement", and who makes a living teaching medical economics, perhaps it would have no importance, and bear no further attention. However, a clear thinker like Seth Roberts has said that the incident was "the most telling detail in Robin's lecture about doctors", the result being that he "was very impressed by Robin's lecture". Consequently, I continue to feel that it should be fleshed out for what it is. I tried [2]here and [3]here to get Hanson to reconsider the matter or give evidence, but he would not (see his comments, and judge for yourself).

1. <http://www.overcomingbias.com/welcome.html>

2. <http://drchip.wordpress.com/2008/10/04/disagreements/>

3. <http://drchip.wordpress.com/2008/10/05/bias-on-the-hoof-hanson-and-ru-continued/>

seth (2009-02-01 23:19:08)

"give evidence"? I guess you mean give more evidence. Doctors' widespread disinterest in evidence is the subject of my latest post. I would be interested in your thoughts on the subject.

retired urologist (2009-02-03 19:42:49)

See comment on your post Feb 1, 2009.

Stephen M (Ethesis) (2009-02-06 21:13:33)

"There's a subbranch of the field of folklore" ... reminds me of the stories of mice in soft drink bottles ... and reading about how that was all folklore, except, of course, I had seen the citations and the actual case law involving those cases on appeal. Or,

in a case closer to home, the actual maggots in the package of crackers I went out and bought my wife when she was pregnant. On a different example, which I will skip the details, you can imagine my surprise at having worked on a case and then having read about it being urban folklore. Since the law suit involved someone suing over the facts being disclosed ... I rather believed the facts were acknowledged, not folklore. Pleadings at the county courthouse. Just a comment.

Seth's blog » Blog Archive » Jane Jacobs and the Trouble with Medicine (2009-08-08 04:48:14)

[...] Are doctors takers or traders? The flaw in trying to improve doctor performance by changing incentives is the balance of power: Doctors have almost all of it. Patients trust doctors. (When I asked my surgeon the basis for her judgment that I needed surgery — treating her as an equal, in other words — she must have been stunned. She certainly didn't respond appropriately.) That's why it's so easy for doctors to do too much or too little. It's the same problem with quota systems for policemen: The policemen have too much power. The current balance of power makes doctors takers rather than traders. [...]

Noumenon (2009-08-22 01:37:02)

FWIW when I had my visible hernia that didn't hurt my doctor here in rural Wisconsin said he'd never seen one he couldn't push back in so I might as well wait for it to incarcerate before I got the surgery. But I eventually got the surgery anyway, and now a nerve in my hip burns when I get tired.

### **New Way to Lose Weight: Don't Eat Till Your Blood Sugar is Low Enough (2008-09-15 05:48)**

[1]Tim Lundeen's sister Miriam wrote this:

Tim and I have been having conversations about health, diet and blood sugars for several years and I figured I was insulin-resistant with mild blood sugar dysregulation, but never was more than interested. About two months ago after a move cross-country with the accompanying stresses, I became more acutely concerned about my metabolic damage and was in a place where I could pay attention and do something about it. At Tim's recommendation, I read Dr. Bernstein's Diabetes Solution and Jenny Ruhl's Blood Sugar 101 and started monitoring my blood sugar with a glucometer. Initially, my morning readings were usually 91-94. Not too bad but not the 83-85 that is "normal" [i.e., optimal]. I started waiting till I was hungry or when I would normally eat and then take my blood sugar again. If it was 85 or below I would eat a normal meal with an awareness of the carb content and eat smaller portions of these foods. Then I would monitor my postprandial (post-meal) blood sugars about every hour and see when and how high my spike was. If it was too high (over 140 for sure, and in the 130's probably) I would adjust the amount of carbs downward. If my blood sugar was over 86 and I wasn't famished I would distract myself with some engaging activity and check my sugar again when I noticed I was hungry. If I became really famished but my sugar was still not under 86, I would have a no-to-low carb snack like almonds, walnuts, left-over meat or a salad. Then I'd wait till I was hungry again. After a few weeks of doing this my morning sugar was consistently 81-85. If I ate off-plan and had an occasional 94, that was fine by me. I was happy about my blood sugars, but the pleasant surprise came when I had a physical exam at my doctor's. I had lost 20 pounds without even noticing! [She is 5 feet 5 inches tall. After losing 20 pounds her weight was 155.] I was amazed since I had tried to diet a number of times over the last 10 years and my weight just kept creeping up. This has been the most fun and healthy weight loss program I could imagine. I am hoping my carbohydrate metabolism will eventually recover and I will again be able to eat more carbs without weight gain and metabolic damage.

I am doing something similar for a few days, too soon to tell the results. About six months ago, to help write a chapter in my self-experimentation book about diabetes, I got a glucometer and started testing myself regularly. I was displeased to find that my morning readings were about 91, like Muriel's, and further displeased to find that eating less

carbs didn't help.

Blood sugar testing isn't cheap, but it's easy and painless. The glucometer I use is Abbott's Freestyle Lite (which is free). It's painless if you get the blood from your arm. The test strips cost about 60 cents each.

1. <http://www.blog.sethroberts.net/2007/02/16/omega-3-and-arithmetic/>

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John (2008-09-15 06:20:48)

I think this boils down to: Tim went on a low carb diet and lost weight. You don't need to measure your blood sugar to do this, but it does sound like it might be fun.

MT (2008-09-15 06:23:50)

Very interesting results. Seem similar to the benefits of intermittent fasting (eating same daily calories, but in a smaller window of time each day), which seems to lower blood sugar on average.

Andrea (2008-09-15 11:59:54)

Seth, I am really glad that you are looking at diabetes and blood glucose regulation. Let me remind you that current glucose monitors are at best, highly inaccurate and unreliable. I believe that this is because the strips are not individually sealed. When I was first diagnosed, I used the Glucometer Elite (Bayer) recommended by Richard Bernstein. The strips were individually sealed. I now use the Bayer Contour (25 strips in a bottle). I have several monitors all over the house and ordered a free one (I liked the color:-) Here are the readings I got from the same finger on three different monitors during the same ten second period: 104, 122, and 98. Here are the results of the control solution provided by the company to test the meter. Same solution in four different Contour meters: 125, 117, 110, 134. There are NO government standards for accuracy and reliability. If you test at 100, you could be anywhere between 80 and 120. The Freestyle is just as bad if not worse. Dr. Bernstein now recommends the Accucheck Aviva. I doubt that it is any better. The best way to test is using the same meter and at the same site on your body. At least you can see trends because you are certainly not seeing actual glucose levels.

MT (2008-09-15 12:59:45)

Andrea - did you try testing the same meter at the same site? Wondering if there is variability within the same product as well.

seth (2008-09-15 16:12:39)

Andrea, early on I did 10 duplicate tests: measured my blood sugar twice (keeping everything the same). The average difference between the two readings was about 6, if I remember correctly. That gave me a good indication of the accuracy (variability). Now that you bring it up, I have two Freestyle Lite meters and should probably use both of them to see if they are calibrated accurately. Whether they are calibrated identically is a test of that. What your assessment leaves out is that Miriam (a) actually got her morning blood sugar to go down and (b) she lost weight. So whatever the measurement problems, they didn't get in the way of her glucometer being really useful.

Mike (2008-09-15 20:52:20)

I think the real lesson is, measure! I can easily picture someone who tried the same diet but because things were bouncing around and they didn't "notice" their weight drop, to cheat every once in a while, and then to forget it altogether. Putting numbers to the test really makes a diet mean more than just self-regulation practice. Weight takes a while to move, but blood sugar measurements make the effects of the diet almost instantaneous. Even if "wait until your blood sugar is low" wouldn't help some people, if they were rigorous about what's actually going on in their body, maybe that in and of itself would help diet commitment and further the original goal, weight loss.

Mary Lee (2008-09-16 07:54:31)

When my blood sugar gets well within normal range, if I don't eat it begins to rise anyway. What's going on. This happens over night also, so my "fasting" reading is usually hi, sometimes as high as 130's. Doctors don't give me an explanation, but they want to medicate me on the basis of the hi morning readings. Anybody got any clues?

Magicmike (2008-09-16 10:49:34)

In my view this is a bad idea, or more precisely, a case of the cure being worse than the disease. It seems that effects that come with low blood sugar - delayed onset grumpiness, slower reaction times, etc., (to say nothing of less visible effects) are so overwhelming that it is simply nuts to do this. mmmmm.....nuts.....mmmmm

Tom (2008-09-16 22:18:25)

Mary Lee said: *According to Bernstein, it's called the "dawn phenomenon." He experiences it himself: Ordinarily, the liver is constantly removing some insulin from the bloodstream, but during the first few hours after waking, it clears insulin at an accelerated rate. [...] Because of it, my blood glucose can rise even though I haven't eaten.*

catabolic foods (2008-11-26 10:53:38)

Does this have anything to do with catabolic foods at all? I read on that and it seems to be very interesting when you can eat more and lose weight. Any opinions on that?

### **Red State Blue State Rich State Poor State (2008-09-16 05:41)**

To explain why Andrew Gelman et al.'s [1]Red State Blue State Rich State Poor State is such an important book I have to tell two stories.

A few years ago a student did a senior thesis with me that consisted of measuring PMS symptoms day by day in several women. After she collected her data she went to the Psychology Department's statistics consultant (a psychology grad student) to get help with the analysis. The most important thing to do with your data is graph it, I told the student. The statistics consultant didn't know how to do this! There was little demand for it. Almost all the data analyses done in the Psychology Department were standard ANOVAs and t tests. If you look at statistics textbooks aimed at psychologists, you'll see why: They say little or nothing about the importance of graphing your data. Gelman et al.'s book is full of informative graphs and will encourage any reader to plot their data. There are few examples of this sort of thing. That's the obvious contribution. Because graphing data is so important and neglected, that's a big contribution right there.

The other contribution is even more important, but more subtle. Recently I was chatting with a statistics professor whose applied area is finance. What do you think of behavioral economics? she asked. I said I didn't like it. "It's too obvious." (More precisely, it's too confirmatory.) For example, the conclusion that people are loss-averse - fine, I'm sure they are, but it's too clear to be a great discovery. She mentioned prospect theory. Tversky and Kahneman's work has had a big effect on economists - which certainly indicates it wasn't obvious. Yes, it has been very influential, I said. I'm not saying their conclusions were completely obvious - just too obvious. Tversky and Kahneman were/are very smart men who had certain ideas about how the world worked. They did experiments that showed they were right. There's value in such stuff, of course, but I prefer research that shows what I or the researcher never thought of.

Red State Blue State is an example. Andrew and his colleagues didn't begin the research behind the book intending to show what turned out to be the main point (that the red state/blue state difference is due to an interaction - the effect of wealth on tendency to vote Republican varies from state to state). I suspect they got the idea simply by

making good graphs, which is an important way to get new ideas. (Neglect of graphics and neglect of idea generation go together.) Red State Blue State could be used in any class on scientific method to illustrate the incredibly important point that you can get new ideas from your data. There aren't many possible examples.

If I were teaching scientific method, I'd assign a few chapters of Red State Blue State and then have a class discussion about how to explain the results. Not just the state-by-wealth interaction but also the fact (revealed by a scatterplot) that the United States is far more religious than other rich countries – an outlier. Then I'd say: The graphs in the book made you think new thoughts. Your own graphs can do that.

1. <http://press.princeton.edu/titles/8729.html>

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LemmusLemmus (2008-09-16 14:08:02)

Humans evolved to see pictures. (The real world is like pictures, only three-dimensional), they didn't evolve to work with numbers, let alone advanced statistics. That's why I think graphs are generally preferable. The problem, of course, is that you can't produce a seven-dimensional scatterplot, whereas you can regress a variable on seven other variables.

seth (2008-09-16 14:30:14)

LemmusLemmus, check out the splom command in R. It produces scatterplot matrices: every variable plotted against every other variable.

LemmusLemmus (2008-09-16 16:15:49)

I've never used R. (Maybe I should?) Frankly, I can't imagine what plotting every variable against other variable would look like in a scatterplot. Anyway, thanks for the tip!

Seth's blog » Blog Archive » Do Genes Matter for Health? (2008-09-18 10:45:11)

[...] Red State Blue State Rich State Poor State [...]

## **Treadmill Desks (2008-09-17 11:55)**

As far as I know, I was the first person to [1]have a treadmill desk. I wanted to be able to stand more easily. I had found that if I stand a lot I sleep better. I reasoned it might be easier to stand a long time if you are walking than if you are standing still.

Treadmill desks are now becoming mildly popular, the New York Times [2]reports. I had nothing to do with this. They were popularized by James Levine, a Mayo Clinic endocrinologist, who believes that calorie burning is a good way to lose weight. I used my treadmill desk for a few years. There were two big problems: 1. The noise bothered my neighbors. The Times article says these desks tend to be placed in common areas, where that would be less of a problem. 2. It was tiring. After one or two years I mainly stood on it and rarely walked on it. Finally I replaced it with a standing-height desk.

The article describes non-weight-loss benefits: Walking makes it easier to concentrate.

“I thought it was ridiculous until I tried it,” said Ms. Krivosha, 49, a partner in the law firm of Maslon Edelman Borman & Brand.

Ms. Krivosha said it is tempting to become distracted during conference calls, but when she is exercising, she listens more intently.

“Walking just takes care of the A.D.D. part,” she said.

Allen Neuringer, a professor of mine at Reed College, found that [3]movement helped him learn. I think an urge to be active builds up during inactivity just as thirst builds up when we don’t drink. Being able to be active while you work gets rid of that distraction – and no doubt is healthier in other ways than sitting all day. I would like to be able to use a computer while I am free to move around the room (or larger spaces) and move my arms, not just walk forward with my hands on the keyboard. I’d like to be able to write this blog post while strolling through my neighborhood, for example.

Thanks to Marian Lizzi.

1. [http://209.85.173.104/search?q=cache:lu37KUp-12gJ:berkeley.edu/news/media/releases/2000/08/29\\_work.html+](http://209.85.173.104/search?q=cache:lu37KUp-12gJ:berkeley.edu/news/media/releases/2000/08/29_work.html+)
2. <http://www.nytimes.com/2008/09/18/health/nutrition/18fitness.html?ei=5070&emc=eta1>
3. <http://socrates.berkeley.edu/~roberts/self/>

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SusanJ (2008-09-17 12:45:12)

You could “write” while strolling by using a voice recorder and either have someone else transcribe it or use software such as Express Scribe to ease the process of transcribing it yourself.

seth (2008-09-17 13:22:43)

When I write I do a lot of revising. And I like to see what I’ve written.

Patrik (2008-09-17 14:49:14)

*They were popularized by James Levine, a Mayo Clinic endocrinologist, who believes that calorie burning is a good way to lose weight.* Levine should read Taubes. While exercise is certainly fun/healthy and may reduce insulin resistance, it does induce greater hunger – demolishing the cal in, cal out fallacy.

Aaron Blaisdell (2008-09-17 16:23:38)

This post reminded me of the David Premack’s research that led to the idea of behavioral bliss points.

Beth (2008-09-18 11:00:40)

Patrik should refer to Levine’s extensive research on NEAT.

Kevin Maloney (2008-09-18 18:54:29)

If this interests you, then you should also check out the [deltabalance.com](http://deltabalance.com) website, where you can see a very interesting take on the stand-up desk that keeps you moving without the mechanics of a treadmill. When you think about many of the ills of our present culture, chairs are probably one of our downfalls.

Adam (2008-09-21 08:41:45)

Treadmill desk may be fun at the start but as time progress you just simply want to do the treadmill first then do your work after or vice versa. Honestly can you enjoy doing treadmills while your fingers are tapping away those keyboard keys, not to mention how about using your mouse? In some form of exercise maybe you can combine work with exercise but honestly using a treadmill and doing your work, not to mention having those low cost treadmills that don't give proper stability while walking or jogging.

Jeff Winkler (2008-10-03 13:45:54)

The books Brain Rules (Medina,2008) and Spark(Ratey,2008) get into this. Basically, more exercise=more oxygen to the brain, increased neuroplasticity, memory consolidation and BDNF. A quick summary from Dr. John Medina - <http://www.youtube.com/watch?v=ck-tQt0S0Os>

Sarah Toms (2008-10-23 13:04:46)

Seth, A treadmill desk? That reminds me of an exercise vest! <http://www.hyperwear.com> My girlfriend has been telling me about this for months now. I might check out your treadmill desk. I'm young and want to stay really nice and fit! hehe Sarah

Exercise Ball (2009-09-24 13:53:49)

I've heard of using exercise balls at your desk as a chair, but this treadmill desk idea has never crossed my mind! I think I'd try it though, but not with my pumps! I can't believe its said to help you concentrate! CRAZY!

jeff (2010-09-17 02:55:49)

While working you can have a fitness workout using a treadmill desk, this is quite unusual but is worth a try. There are people who can think better if they are moving, and there are also people who simply can not concentrate while walking. A treadmill desk is designed to have a minimal workout even while working. It is very beneficial for people who are very busy and can not find time to go out for an exercise. It is true that sitting all day long will give you better fat deposits, you will be happy with it.

## **Do Genes Matter for Health? (2008-09-18 10:42)**

How much disease do genes cause? Sure, they cause some rare diseases that affect very few people but what about major health problems, such as depression, that affect everyone? The notion that genes make a big difference to human health – that some people are healthy and others sick because of genetic differences – was much of the rationale for funding the human genome sequencing project, which cost billions. The founders of the company [1]23andme (23 = 23 human chromosomes) often say genes matter, most recently in [2]The New Yorker:

“It’s very useful if you know that you’re at increased risk for deep-vein thrombosis and you’re on a plane,” she continued. “You might want to stay vigilant about moving around.” Instead of finding out the hard way that their children are allergic to peanuts, parents may someday be able to test their DNA. Even small inherited traits, Avey added, can serve as health clues: “There is some correlation between your ability to metabolize caffeine and your risk for a heart attack.”

There is something breathtaking in the fact that someone who believes you can learn about allergies by studying DNA is taken seriously in The New Yorker.

Some rare non-hype on this issue has recently come [3]from Dr. David Goldstein:



But David B. Goldstein of Duke University, a leading young population geneticist known partly for his research into the genetic roots of Jewish ancestry, says the effort to nail down the genetics of most common diseases is not working. “There is absolutely no question,” he said, “that for the whole hope of personalized medicine [where people with different genes are treated differently], the news has been just about as bleak as it could be.”

The researchers have been unable to find genes that make much difference.

If they had found such genes, I would have been stunned. My self-experimentation has led me to believe that our environments are far from ideal – in non-obvious ways. I believe that people don’t get sick because of their genes, or gene-by-environment interactions, they get sick because of their environments, which lack something essential or include something bad. Animal experiments have given us a decent understanding of nutrition; maybe we know half or more than half of the basic requirements. When it comes to subjects that don’t lend themselves to animal experiments, little is known – about what causes depression, for example. My self-experimentation took over where animal experiments left off; it provided a way to do experiments that generate ideas. (Which is [4]crucial for knowledge advancement, as opposed to career advancement.) I have been able to find one big self-experimental effect after another (most recently, about [5]omega-3s and [6]sleep) related to common health problems only because (a) so little was known and (b) I accidentally picked up an effective tool (self-experimentation) that no one else had used this way (to find new experimental effects).

More from the other side of the debate: 1. [7]Elderly genetics. 2. [8]Google co-founder has Parkinson’s gene. It is hard to find support for my side of the debate in print. It isn’t easy to notice when you don’t get sick (because of advances in the study of nutrition, for example) so it isn’t easy to notice how study of the environment has paid off in concrete ways. I’m in an unusual position: I can easily notice how my life has improved via self-experimentation.

Even more [9]Dean Ornish agrees with me. Thanks to [10]Carl Willat.

1. <http://www.blog.sethroberts.net/www.23andme.com>
2. [http://www.newyorker.com/talk/2008/09/22/080922ta\\_talk\\_schulman](http://www.newyorker.com/talk/2008/09/22/080922ta_talk_schulman)
3. <http://www.nytimes.com/2008/09/16/science/16prof.html>
4. <http://www.blog.sethroberts.net/2008/09/16/red-state-blue-state-rich-state-poor-state/>
5. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>
6. <http://www.blog.sethroberts.net/category/why-did-i-sleep-so-well-directory/>
7. <http://online.wsj.com/article/SB122176857706253591.html?mod=article-outset-box>
8. <http://www.nytimes.com/2008/09/19/technology/19google.html>
9. [http://www.ted.com/index.php/talks/dean\\_ornish\\_says\\_your\\_genes\\_are\\_not\\_your\\_fate.html](http://www.ted.com/index.php/talks/dean_ornish_says_your_genes_are_not_your_fate.html)
10. <http://www.carlsfinefilms.com/>

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stephen (2008-09-18 13:27:29)

seth, have you ever tried to control for placebo effects in your self-experiments? based on something you wrote recently i suspect you think its too difficult. Here’s one method i’ve thought of: you could make identical (gelatin?) capsules containing a dose of flaxseed oil, a placebo (e.g. water) and olive oil. Store them on identical plates (one plate for each) so that they are

indistinguishable from each other by touch alone and then blindfold yourself as you reach down to take one randomly - use a webcam to record which one you're taking. The only problem here is that you know there's a chance of placebo, and as I remember from my health psychology lectures this has been shown to have an effect (infact, some studies indicate that even the doctor knowing they are prescribing a placebo has an effect on the patient - I can probably dig up the reference for this if you want..)

seth (2008-09-18 17:10:10)

"Have you ever tried to control for placebo effects"? Yes, by varying the dose. I like to think that's the sophisticated way to control for expectancy effects. Of course, most experiments use a placebo pill, which generally varies in 20 ways from the treatment. All these differences allow subjects to figure out what group they are in. If subjects figure out what group they are in, the "placebo control" stops controlling for expectancy effects because expectancies are no longer equal.

Gyan (2008-09-18 22:22:55)

I have read that dietary intake of LA downregulates the conversion of ALA to DHA+EPA. If this be true, then consuming large amounts of ALA might be necessary since the body is going to convert only a small amount to DHA+EPA and burn the rest of ALA?.

seth (2008-09-19 09:20:50)

Gyan, yeah, maybe. Because I was able to measure the effects of ALA (in flaxseed oil) I could adjust the amount of ALA I consumed until I got the biggest possible effect.

MT (2008-09-21 09:22:58)

Your questioning of the merit of genetic testing is less commonly heard and useful to highlight, but there are good ways to use information about genetic predispositions as well. If genetic sequencing of test subjects in experiments were mandatory in the FDA approval process it might be possible to link the efficacy of drugs to certain genotypes, and in the process use drugs that are clinically effective and safe for those populations, and/or not use drugs that seem statistically unsafe for others. There are effective drugs which aren't used because they are lethal or unhealthy to small numbers of people, so they are banned, but the source of that lethality may be related to a genetic factor. Similarly some approved drugs could be used more appropriately. A friend of mine had her life destroyed taking Accutane for a mild case of acne, as prescribed by a dermatologist, became severely ill, and has not recovered after five years. This drug is allowed despite such known problems because they are rare. It would be nice to protect people for whom such events are more likely. This is all based on probability, and doesn't account for all other relevant factors, but is still worthwhile.

Jeff Winkler (2008-10-03 13:29:20)

Exercise overriding the FTO "obesity gene": Physical Activity and the Association of Common FTO Gene Variants With Body Mass Index and Obesity Evadnie Rampersaud, MSPH, PhD; Braxton D. Mitchell, PhD; Toni I. Pollin, PhD; Mao Fu, PhD; Haiqing Shen, PhD; Jeffery R. O'Connell, PhD; Julie L. Ducharme, MD; Scott Hines, MD; Paul Sack, MD; Rosalie Naglieri, MD; Alan R. Shuldiner, MD; Soren Snitker, MD, PhD Arch Intern Med. 2008;168(16):1791-1797. Background Common FTO (fat mass and obesity associated) gene variants have recently been associated with body mass index (BMI) and obesity in several large studies. The role of lifestyle factors (such as physical activity) in those with an underlying FTO genetic predisposition is unknown. Methods To determine if FTO variants are associated with BMI in Old Order Amish (OOA) individuals, and to further determine whether the detrimental associations of FTO gene variants can be lessened by increased physical activity, a total of 704 healthy OOA adults were selected from the Heredity and Phenotype Intervention (HAPI) Heart Study, an investigation of gene x environment interactions in cardiovascular disease, for whom objective quantified physical activity measurements were available and for whom 92 single-nucleotide polymorphisms (SNPs) in FTO were genotyped. Results Twenty-six FTO SNPs were associated with BMI (P = .04 to Conclusions Our results strongly suggest that the increased risk of obesity owing to genetic susceptibility by FTO variants can be blunted through physical activity. These findings emphasize the important role of physical activity in public health efforts to combat obesity, particularly in genetically susceptible individuals.

[1]Obesity Genes and Physical Activity, An Interview with Dr. Evadnie Rampersaud - Fitness Rocks Podcast 114

[2]drmonte

In this episode of Fitness Rocks I have a conversation with Dr. Evadnie Rampersaud about the effect of physical activity on the expression of a gene that is associated with obesity. Dr. Rampersaud is an Assistant Professor at the Miami Institute for Human

Genomics at the University of Miami Miller School of Medicine.

[3]Listen to Fitness Rocks Podcast 114

1. <http://fitnessrocks.org/2008/09/27/obesity-genes-and-physical-activity-an-interview-with-dr-evadnie-rampe-rsaud-fitness-rocks-podcast-114/>

2. <http://fitnessrocks.org/author/admin/>

3. [http://media.libsyn.com/media/drmonite/Fitness\\_Rocks\\_Podcast\\_114.mp3](http://media.libsyn.com/media/drmonite/Fitness_Rocks_Podcast_114.mp3)

### **Park(ing) Day in Berkeley (2008-09-19 21:55)**

[1]Park(ing) Day was today. The first Park(ing) Day was in 2005. You celebrate it by turning a parking place into a park – as in the verb to park. In North Berkeley, around lunchtime, I came across a dozen Landscape Architecture grad students sitting around a long table full of food that filled up two parking places on Shattuck Avenue (a busy street). My big question was where the tables came from – that seemed like the hard part. From Wurster Hall (where the Landscape Architecture Department is). They invited me to join them and the whole thing was so interesting I couldn't resist.

The food was very good. One person brought tomatoes, broccoli, cucumbers, and purslane picked that morning from his garden. Someone else brought homemade salsa.

You might think you could lay claim to a parking spot by putting money in the meter. Not in Berkeley. A parking cop came by and wondered what was going on. Someone had reported "a picnic," the cop said. The cop left. Twenty minutes later he returned. Apparently there had been discussion about how to handle this. The ruling was you need a permit. Parking places are for cars, said the cop. Feeding the meters wasn't enough. The cop gave the students 15 minutes to leave. At that point I left.

1. <http://www.parkingday.org/>

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### **Science in Action: Why Did I Sleep So Well? (part 14) (2008-09-20 10:57)**

Two more people have gotten results similar to mine. From a [1]comment on an earlier post:

I've been doing these exercises - standing on one leg - and it's helped my sleep immensely. About a year ago, I went through a pretty traumatic experience that disrupted my sleep patterns. The end result was that I couldn't sleep for longer than 3 or 4 hours at night without waking up. For several months, the lack of sleep was like living in a nightmare, and prescription drugs just made the problem worse. I finally decided to go off medication all together and change my attitude, which worked wonders - I could get back to sleep after I woke up - but I'd still only sleep in 4 hour chunks.

About a month ago, I began doing these exercises, and now I'm sleeping 6 to 7 hours at a time. It's amazing; and on the days I don't do them, I don't sleep well at all.

It's amazing how easy they are to do - if I find myself standing in line, meeting friends for a happy hour, or even watching tv, I'll do them.

Last night I told a friend to do them while he was at a happy hour, and this morning, he said he slept like a log."

As [2]Pale Fire says:

If on some nameless island Captain Schmidt  
Sees a new animal and captures it,  
And if, a little later, Captain Smith  
Brings back a skin, that island is no myth.

I have started to measure my sleep with a [3]SleepTracker so I will have another way to measure the effects, in addition to (a) how rested I feel when I awake and (b) how long I sleep.

More The SleepTracker - my second, the first didn't work - worked correctly for the first three nights but failed on the fourth.

1. <http://www.blog.sethroberts.net/2008/09/12/science-in-action-why-did-i-sleep-so-well-part-13/#comment-221418>
2. <http://www.tundrasquid.com/canto3.htm>
3. <http://www.sleeptracker.com/>

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david (2008-09-20 12:04:07)

The SleepTracker is a neat idea, but I think wearing a watch to bed would make it harder for me to get to sleep. I'm also surprised you have to set the "to bed" time to when you anticipate falling asleep. Should it be able to tell? The way I would want it to work is to push a button when I go to bed, then have it tell me how long it takes me to fall asleep as part of the data it collects.

baker (2008-09-20 19:08:24)

I want to add my name to the list of those getting the same amazing results, since I started the standing on each leg exercise I have been able to go back to sleep if I wake up in the night and feel like I have gotten good rest for the first time in 8 years. Also to check I have intermittently (every couple of weeks or so) not done the exercises for a day or two and without an exception the nights I fail to do the exercise I sleep in only 2 or 3 hour spells, I am so happy to have been made aware of this and thanks for your efforts

mike kenny (2008-09-20 19:55:53)

hm, i've been having trouble getting this to work for me. maybe more time on each foot.

seth (2008-09-20 22:24:32)

David, the SleepTracker has a feature where you press a button when you go to bed and it automatically sets your "to-bed" time to be 30 minutes later. I don't know why it doesn't record for the 1st 30 minutes but it makes sense that it should not start recording until you're very likely to be asleep. Baker, glad to hear it!

Darkhorse (2008-09-21 09:13:41)

I was finding it impossible to do this correctly during the day due to the often frantic nature of my work. I did manage it watching the early morning news and again in the evening. Time to fatigue has increased considerably from less than 1 minute to about 8 minutes, with the effort to actually balance requiring more effort and causing earlier collapse. I worried that just these two instances would not be effective. Then, I gradually realized that the Zopiclone tablet I would reluctantly leave on the table in case I woke again after two hours sleep, and stay awake as I frequently do, was still there after 6 hours. I haven't had 6 hours straight sleep for as long as I can remember. Thank you for this and for all that you have done.

MT (2008-09-21 09:26:07)

Very interested in this – tried it one day on my subway ride, but didn't really get tired over

MT (2008-09-21 09:50:28)

course of days journeys (total about 30 minutes). Will try variations and report back.

Adam (2008-09-21 10:13:49)

Seth (and others), I'm wondering if you have tried closing your eyes while standing. Eyesight is important for balance, so in theory this would make it harder to balance, causing more rapid fatigue, and thus create an exercise more easily fit into hectic schedules. 1-3 minutes instead of 5-15 minutes. I had posted before about having trouble getting fatigued after even 20 minutes. I tried your advice, Seth, and made sure my other foot was positioned far enough up on my leg. This did make a significant difference, simply by shifting the center of gravity and making it harder to balance. But, it still can take upwards of 10-20 minutes to feel any kind of fatigue, and I just haven't had enough time to get any kind of consistent data. Balancing with the eyes closed increases the challenge, but I wonder if the effect remains undiminished.

seth (2008-09-21 18:58:19)

Adam, I don't bother to balance. I hold on to something. I believe what matters is stressing muscles so much that they send out a growth signal. This has little to do with balance, which mostly exercises the brain. While standing on one leg, to get tired more quickly, you might try keeping your standing leg bent all the time.

seth (2008-09-21 22:30:54)

Darkhorse, you're welcome. Thanks for reporting your experience. Yeah, the surprise here is how little it takes to make a big difference.

Seth's blog » Blog Archive » Why Did I Sleep So Well? directory (2008-09-25 06:21:13)

[...] Science in Action: Why Did I Sleep So Well? (part 14) [...]

### **Chocolate is Good For You (part 3) (2008-09-21 10:02)**

A [1]new study in the Journal of Nutrition:

Dark chocolate contains high concentrations of flavonoids and may have antiinflammatory properties. We evaluated the association of dark chocolate intake with serum C-reactive protein (CRP). The Moli-sani Project is an ongoing cohort study of men and women aged 35 y randomly recruited from the general population. By July 2007, 10,994 subjects had been enrolled. Of 4849 subjects apparently free of any chronic disease, 1317 subjects who declared having eaten any chocolate during the past year (mean age  $53 \pm 12$  y; 51 % men) and 824 subjects who ate chocolate regularly in the form of dark chocolate only ( $50 \pm 10$  y; 55 % men) were selected. . . . The European Prospective Investigation into Cancer and Nutrition FFQ was used to evaluate nutritional intake. After adjustment for age, sex, social status, physical

activity, systolic blood pressure, BMI, waist:hip ratio, food groups, and total energy intake, dark chocolate consumption was inversely associated with CRP ( $P = 0.038$ ). When adjusted for nutrient intake, analyses showed similar results ( $P = 0.016$ ). Serum CRP concentrations [geometric mean (95 % CI)] univariate concentrations were 1.32 (1.26–1.39 mg/L) in nonconsumers and 1.10 (1.03–1.17 mg/L) in consumers ( $P < 0.0001$ ). A J-shaped relationship between dark chocolate consumption and serum CRP was observed; consumers of up to 1 serving (20 g) of dark chocolate every 3 d had serum CRP concentrations that were significantly lower than nonconsumers or higher consumers. Our findings suggest that regular consumption of small doses of dark chocolate may reduce inflammation.

These findings, like previous epidemiology of chocolate, suggest that ordinary dark chocolate produces these benefits. You don't have to process the chocolate in special ways or preserve it in special ways. Mars, the company behind Cocoavia, a line of chocolate products that emphasizes health benefits, [2]makes the opposite claim:

Like green tea and red wine, cocoa beans contain naturally occurring compounds called flavanols that scientists believe help promote blood flow, circulation and a healthy heart. But traditional cocoa processing often [emphasis added] destroys these natural compounds. After years of research, the makers of Dove® Brand Chocolates have perfected a breakthrough Cocoapro® process, the only patented process that retains high levels of the flavanols found naturally in cocoa.

Well, how often is "often"? And what fraction of the flavanols are destroyed by ordinary processing? More on the benefits of chocolate: [3]Part 1. [4]Part 2.

1. <http://jn.nutrition.org/cgi/content/abstract/138/10/1939?etoc>
2. <http://www.cocoavia.com/products/>
3. <http://www.blog.sethroberts.net/2008/07/09/chocolate-is-good-for-you/>
4. <http://www.blog.sethroberts.net/2008/08/21/chocolate-is-good-for-you-continued/>

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### Food Fact of the Day (2008-09-21 19:06)

Norway leads the world in frozen pizza consumption. "Why?" I asked the Norwegian who told me this. "We're lazy," she said.

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### Food versus Nutrients (2008-09-21 20:08)

A few years ago, I learned that persons who apply to the [1]Chez Panisse Foundation for funding are warned by staffers not to use the word nutrition in their applications – Alice Waters hates that word. A more nuanced version of this attitude was expressed in Michael Pollan's *In Defense of Food*. Supposedly we should eat food (= choose our food using food names and categories) rather than nutrients (= choose our food according to nutrient content). [2]Here is Marian Nestle, the prolific and influential NYU professor, on the subject:

Q: How do nutritionists feel about Michael Pollan's idea in "In Defense of Food" that we should be eating food, not nutrients?

A: I can't speak for all nutritionists, but my guess is that we are all jealous of how well he writes. But look around you. Except for people in hospitals who are fed intravenously, I don't know anyone who eats nutrients. Everybody I know eats food.

When I give lectures in Australia or India, as I did last year, I see people eating food - all kinds of food. In Australia, I went to a Chinese restaurant one night and sampled kung pao kangaroo. In India, I ate dosas every chance I got. I never gave the nutrient content of those foods a single thought.

"Everybody I know" indeed. Our understanding of vitamins comes from nutrition research that, contra Waters, Pollan and Nestle, focused on nutrients rather than food. This research has been enormously beneficial, mainly among the poor and institutionalized. From [3] a review article about Vitamin A:

By 1992, most large-scale mortality prevention trials and at least 3 measles treatment trials [in poor countries] were completed. A meeting convened at the Rockefeller retreat in Bellagio reached consensus that vitamin A deficiency increased overall mortality, particularly from measles; improving vitamin A status would reduce overall mortality; and treating children already ill with measles with high-dose vitamin A was an effective means of reducing their risk of complications and death. This "Bellagio Brief," published widely, helped draw attention to the importance of vitamin A. . . . National programs of varying effectiveness have been launched in over 70 countries and vitamin A "coverage" is now one of the core health indicators published annually in the State of the World's Children. By UNICEF's estimate, over one-half a billion vitamin A capsules are distributed every year, preventing 350,000 childhood deaths annually. . . . The World Bank lists vitamin A supplementation as one of the most cost-effective of all medical interventions.

This isn't esoteric knowledge.

1. <http://www.chezpanissefoundation.org/>

2. <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2008/09/10/FDE412D79R.DTL&hw=nestle&sn=006&sc=143>

3. <http://jn.nutrition.org/cgi/content/full/138/10/1835>

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Igor Carron (2008-09-22 08:43:33)

Seth, Talking about nutrients, this reminded me another fact you might want to use to reinforce or refute some aspects of the Shangri-la diet (I realize that refuting is not your goal but it might bring a narrow aspect of it to light). In Space, one of the main issue for astronauts is the issue of taste. Most astronauts that have spent some time in orbit will tell you that the food is extremely dull. One of the goal of some of the chefs doing work for the space agencies (US, French or Russian) is to find a way of implementing spicy foods so that they raise the tasting experience. They have to do that and weigh this against the stringent requirements that the food must have a very low bacteriological activity. At the same time, zero-g also brings a whole slew of annoying side effects such as space sickness (which is not the same as sea sickness and will bring down the best people for days -if they ever recover, some people have been known to be sick during their whole trip- ) and bone loss. Many astronauts will also probably tell you that their sleep pattern is not good and most of them do put that on the excitement of the trip. Eventually, it looks like I am noticing that most of what you are mentioning eventually has a strong relation to gravity (standing up for ten hours or one lieg) and taste (the shangri-la diet). Both of which disappear in Orbit. Igor.

peter (2008-09-22 11:39:40)

so gravity affects taste/smell? What strikes me is that space travel (the accompanying lack of gravity) could result in accelerated decrepitude, i.e., loss of taste, loss of bone are both hallmarks of getting older. it makes one wonder what effect space travel would have on mental activities, i.e., could enough space travel result in cognitive impairment.

ram (2008-10-14 05:59:01)

hey seth do you know a lab where i can go with a sample of food and get it checked for nutrient content

seth (2008-10-14 06:21:27)

no I don't.

### Life Imitates Art School (2008-09-22 21:45)

I had lunch with Lisa Goldberg, an adjunct professor in the Statistics Department at Berkeley. Her application area is finance. She said that people in finance have at least as much contempt for academics as academics do for people in finance. Thorstein Veblen, of course, wrote about the latter – people looking down on useful work – but not the former. Perhaps his views were skewed by being an academic himself. I [1]blogged earlier about how students in each major at a San Francisco art school look down on the students in some other major.

Lisa also said she sleeps well. I was surprised – hardly anyone says that. It turns out she exercises heavily. She swims or runs seven days a week and when she swims, she swims 2000 meters. As a former swimmer, I know that's a lot. When I exercised, there was no clear effect on my sleep, apart from falling asleep faster. I still woke up too early in the morning. Maybe I wasn't exercising enough. Anyway, it's one little data point supporting [2]my conclusions from standing on one leg.

1. <http://www.blog.sethroberts.net/2008/06/27/how-art-school-reveals-human-nature/>

2. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

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mike kenny (2008-09-23 17:55:25)

I wonder if we form a tribe or band with our fellow members of a profession. Professors have offices around each other. They get used to seeing each other regularly and this triggers tribal feelings. "He's one of my group." Ditto students of the same major, and finance people. We see others bands or tribes as competitors for resources whom we signal our dislike of to our friends.

Stephen M (Ethesis) (2008-09-23 20:26:44)

**at least as much contempt for academics as academics do for people in finance** With more numbers ... Somewhat like the way Economists used to look down on "softer" sciences in the 70s when NASA had to go to Econ PhDs to handle linear programming. But yes, there is a solid feel in Finance, especially given the objective measures (e.g. how much money they are paid) that there is a merit system that puts them at the top, easily measured.

MT (2008-09-24 16:07:26)

I've observed that on average every profession and every subculture idealise their profession or subculture and look down on every other profession or subculture. People at each station or position within different sectors tend to do so as well. It is subtle but seems real, and probably relates to some aspect of our need to affiliate – so we do it on the available lines since we don't have true tribes anymore. (note: the following are gross simplifications, and averages with lots of exceptions,



but I think the trends are accurate): Punk rockers look down on hip-hop, and vice-versa, grunge rockers didn't like glam rockers, and vice versa, bankers think academics are not practical enough, academics think bankers are shallow, non-profit workers think corporate people are greedy, corporate people think non-profit people couldn't cut it in the corporate world, etc. It creates a tendency to stay within our tribe that perhaps helps us extract the economic benefits of specialization. If people don't derive status from one thing (say money) they will derive their status from something else. Within the environmental movement (which I've been deeply involved in) it was eco-purity, and money was a bit disdained. People with materialistic predilections (I know lots of millionaires) tend to scorn those with less as ascetics. People who truly cut across areas are few and far between. I've had many dozens of jobs (36 in one ten year period) so a chance to observe this pretty closely.

Stephen M (Ethesis) (2008-09-25 16:11:59)

Let me quote from another blog, just a bit ;)

In 1990, the French sociologist Pierre Bourdieu wrote his wildly entertaining (though obnoxiously esoteric) book, *Homo Academicus* – a sociological study of academics as a social class. He calls his study a “comic scenario, that of Don Juan deceived or the miser robbed.” Lest I sound unkind in my reference, I point to the reality that scholars have made similar characterizations of their subjects for centuries – making labels, classing peoples. Yet I suggest that the analyzers of man might also profitably become the analyzed.

## How Could Epidemiologists Write Better Papers? (2008-09-23 09:29)

Inspired by Andrew Gelman's posting of [1] his discussion of a paper, here is a review I recently wrote of a omega-3 epidemiology paper. The shortcomings – or opportunities for improvement – I point out are so common that I hope this will be of interest to others besides the authors and the editor.

This is an important paper that should be published when the analysis is improved. The data set analyzed was gathered at great cost. The question of the relationship between omega-3 and \*\*\* [\*\*\* = a health measure] is very important and everyone would like to know what this data set has to say about it.

That said, the data analysis has many problems [= opportunities for improvement]. Most of them, perhaps all of them, are very common in epidemiology papers, I realize. Here are the big problems:

1. No figures. The authors should illustrate their main points with figures. They should use lowess – not straight lines – to summarize scatterplots. The relationships are unlikely to be linear.
2. Failure to transform their measures. Every one of their continuous variables should be transformed to be roughly normal or at least symmetrical before further analysis is done. It's very likely that this will get rid of the outliers that led them to treat a continuous variable (omega-3 consumption) as a categorical one.
3. What was the distribution of \*\*\* scores? How did this distribution vary across subgroups? If the distribution isn't normal – and it probably is far from normal – then a transformation might greatly improve the sensitivity of the analysis. Since the distribution is not shown the reader has no idea how much sensitivity was lost by failure to transform.
4. Pointless analyses. It is never explained why they separately analyse EPA and DHA; that is, no data are given to suggest that these two forms of omega-3 have different effects. Rather than analyse separately EPA and DHA they should simply analyze the sum. Nor is there any reason to think that fish consumption per se – apart from its omega-3 content – does anything. (At least I don't know of any reason and this paper doesn't give any reason.) Doing weak tests (fish, EPA alone, DHA alone) dilutes the power of the strongest test (EPA + DHA).

5. Failure to test the claim of interaction. I don't mind separate analyses of large subgroups but if you say an

effect is present in women but not men – which naïve readers will take to mean that men and women respond differently – you should at least do an interaction test and tell readers the result. (You should also provide a graph showing the difference.) Likewise if you are going to claim Caucasians and African-Americans are different, you should do an interaction test. Perhaps the results are different for men and women because \*\*\* – and if so there may not be an interaction. Finding the relationship in women but not men has several possible explanations, only one of which is a difference in the function relating omega-3 intake to \*\*\*. For example, men might have more noise in their omega-3 measurement, or a smaller range of omega-3 intake, or a smaller range of \*\*\*, and so on. The abstract states "the associations were more pronounced in Caucasian women." The same point: When the authors state that something is "more" than something else, they should provide statistical evidence for that – i.e., that it is reliably more.

6. It is unclear if the p values are one-tailed or two-tailed. They should be one-tailed.

7. It is unclear why the data are broken down by race. Why do the authors think that race is likely to affect the results? Nowhere is this explained. Why not stratify the results by age or education or a dozen other variables?

8. The authors have collected a rich data set – measuring many variables, not just sex and race – but they inexplicably do a very simple analysis. If I were analyzing these data I would ask 2 questions: 1. Is there a relation between EPA+DHA and \*\*\*? This is the question of most interest, of course, and should be answered in a simple way. This is a confirmatory analysis. 2. Getting some measure of that relationship, such as a slope, I would ask how that slope or whatever is affected by the many other variables they measured, such as age and so on. This is an exploratory analysis. There are no indications in this paper that the authors understand the value of exploratory analyses (which is to generate new ideas). Yet this is a good data set for such analyses. To fail to do such analyses and report the results, positive or negative, is to throw away a lot of the value in this data set.

9. The single biggest flaw (or to be more positive, opportunity for improvement) is losing most of the info in the \*\*\* measurements by dichotomizing them . . . .

It would also be nice if epidemiologists would stop including those "limitations" comments at the end of most papers. They rarely say something that isn't obvious.

1. [http://www.stat.columbia.edu/~cook/movabletype/archives/2008/09/approximate\\_bay.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2008/09/approximate_bay.html)

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Why You Should Write Better | English Writing Software (2008-11-10 07:43:25)  
[...] How Could Epidemiologists Write Better Papers? [...]

## **Fake Tans, Sun Blocks, and Self-Experimentation (2008-09-25 05:07)**

I guess [1]this is from a press release:

John M. Pawelek, Ph.D., a senior research scientist in the department of dermatology at the Yale School of Medicine, recently was awarded a U.S. patent entitled Cosmetic Melanins for producing and composing synthetic melanins that may be used in cosmetic products.

Through its Office of Cooperative Research, Yale licensed the Melasyn technology originating in a medical school laboratory to Vion Pharmaceuticals, Inc. of New Haven. This month, Vion announced an exclusive world-wide licensing agreement with San-Mar Laboratories of Elmsford, NY., to manufacture and market products containing Melasyn.

Throughout nature, melanin is used in such diverse areas as protection from ultraviolet radiation, camouflage and species recognition. It is insoluble and difficult to work with, making it impractical for inclusion in creams and lotions. "But we have invented simple methods for creating melanin substitutes that dissolve readily in water and, when incorporated into cosmetic creams, can be spread evenly on the skin to instantly produce a tan," Dr. Pawelek states.

In inventing this unique product, Dr. Pawelek employed one of scientists' historical approaches to research: self-experimentation. "For nearly four years, I have been applying the material daily to my own face, and it produces such a natural-looking tan that it even surprises my dermatologist colleagues at Yale," he quips. "Scarcely a day goes by when someone on an elevator or in a hallway doesn't ask me where I was on vacation." . . .

The Yale laboratory work behind the patenting and licensing offers interesting insight into the process of research and development of potential new products. "It started several years ago with our basic research on skin enzymes that produce melanin," Dr. Pawelek explains. "Melanin usually is insoluble in water and forms a gummy solid in test tubes. One day, however, we noticed that the melanin in one enzyme assay remained dissolved in water," he recalls.

Dr. Pawelek credits his colleague, Jean Bolognia, M.D., who conducts her research in his laboratory, with the idea for cosmetic use of melanin. If the melanin were really soluble, she surmised, it should be useful as a cosmetic. "From that point on," he says, "we began a search for the right combination of ingredients and methods to produce cosmetic melanin.

"We were motivated by the thought that melanin naturally protects our skin from cancer induced by ultraviolet light. Perhaps, we reasoned, synthetic melanin would do the same," he says. "If we could design a melanin that produced a natural-appearing tan, we believed that people might be attracted to the product through its cosmetic qualities and simultaneously apply a sun-protectant, affording them added sun protection and potentially reducing the incidence of sun-induced skin cancer," hopes Dr. Pawelek, a cancer biologist who studies melanoma.

I often do something similar: Use an activity I want to do to motivate something I don't want to do. Drink wine to take vitamin pills, for example.

1. <http://food.blogvis.com/2008/09/24/yale-scientist-invents-cosmetic-melanin-liquid-melanin-moves-closer-to-marketplace/>

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Nathan Myers (2008-09-25 19:05:12)

I'm just marveling that they didn't say anything about their product enabling people who think they need tans (as some people do, for work) to avoid sun- or tanning bed exposure.

Gyan (2008-09-25 21:35:57)

Dont the skin products need to go through safety trials?.

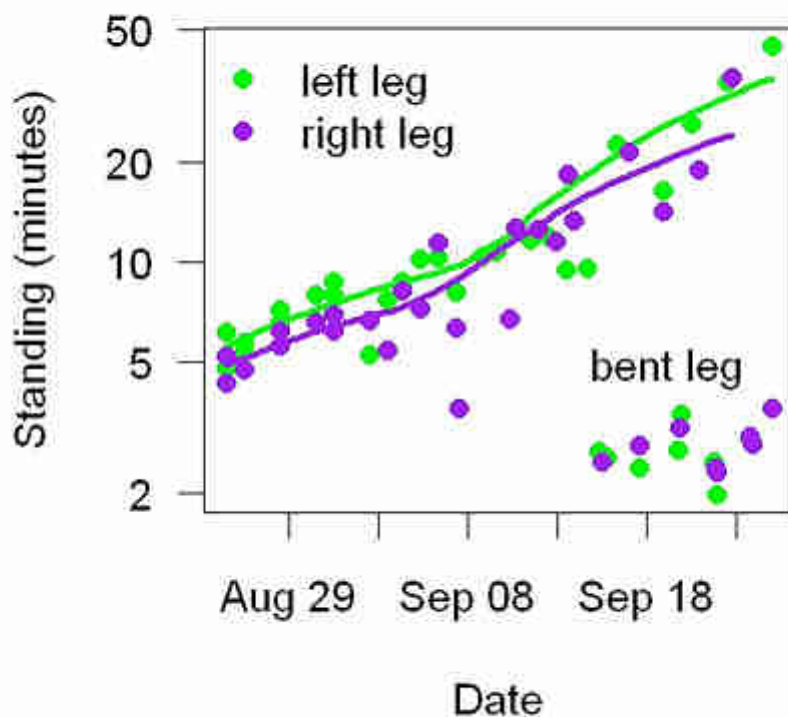
Nathan Myers (2008-09-26 23:51:33)

Amazingly enough, they don't. They're "cosmetics", and the rules date from when everybody insisted nothing could penetrate skin.

### Science in Action: Why Did I Sleep So Well? (part 15) (2008-09-25 06:14)

Yesterday I went to San Francisco early in the morning.Â Because of my discovery about standing and sleep, I had slept very well. In Berkeley, it looked like morning: empty streets, angle of light. I felt jet-lagged: I should have been tired but I wasn't. On BART, the same mismatch: Everyone looked tired but I was wide awake.

It is taking longer and longer to get enough one-legged standing to generateÂ great sleep. Here's a graph of how long I've been standing:



Each point is a different bout of one-legged standing. Most of the points are from bouts where the standing leg was straight or bent (usually straight) but a few of them ("bent leg") are from bouts where the standing leg was bent the whole time. Most days have two bouts: 1. On the left leg until I get tired. 2. On the right leg until i get tired. I'm pretty sure there's no effect until it becomes difficult - until the muscles are so stressed that they send out a grow signal. The whole thing is pleasant because I watch TV or a movie at the same time but, as the graph shows, it has

become seriously time-consuming.

So I have tested keeping the standing leg always bent. I get tired much sooner (2 minutes versus 20 minutes) but the effect is not quite as strong. Probably because fewer muscles are involved – you use more muscles when you stand on one leg in any possible way than if you stand on one leg in only one way.

I assume there's a steady-state solution. The more muscle you have the more you lose each day. (Just as the theory behind the Shangri-La Diet assumes that the higher your set point, the faster it falls.) Eventually I should have enough muscle and will lose enough in one day so the exercise needed to merely replenish it will be enough to produce great sleep.

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Methuselah - Pay Now Live Later (2008-09-25 07:29:08)

Seth - have you considered adding weight? Apologies if you have discussed this earlier in the series. Seems like a good way to keep it simple but also keep the time down. A good quality weighted vest might do the job...

Stephen M (Ethesis) (2008-09-25 16:16:19)

You can also do one legged squats once your legs get strong enough. A full range squat is going to work a lot of the muscles in your leg (vs. a partial). You can start with just bodyweight squats, all the way down and up, you don't need to use weight, but eventually switch to single leg squats when you are strong enough. That should get the time down to a much shorter time. Even a hundred body weight squats can be done in a couple-three minutes, and that is a large number.

seth (2008-09-25 18:49:10)

Methuselah & Stephen, thanks for the suggestions. Funny, I just threw away an old backpack...which I have now retrieved from the trash.

Nathan Myers (2008-09-25 19:07:27)

Once you're in good enough shape, two-minute one-armed handstands ought to suffice for quite a while. When you get to the point of tongue-stands, I think you'll need to think of something else.

MT (2008-09-27 08:03:21)

Maybe adding a balance challenge to the one-bent-leg technique would make it more effective. Balance engages a whole host of additional supportive muscles, which may partially account for the original value of this technique (and why it hasn't been reported from more common leg exercises). So perhaps try doing the bent-leg on some kind of wobble-board, being careful to ensure you're safe. Fitness centers sell variations of these devices, they are inexpensive, and balance is a great fitness element to work on anyway. Or a higher level challenge might be to try juggling. The cerebellum controls this type of coordination, and there is evidence of abnormalities in the cerebellum in dyslexia. Some researchers have claimed that very demanding physical challenges (hand-eye coordination at the same time as balancing, for instance) can ameliorate some symptoms of dyslexia, presumably by enhancing the function of this part of the brain. Then add the one-armed handstand.

Seth's blog » Blog Archive » Why Did I Sleep So Well? directory (2008-09-28 06:39:28)

[...] Science in Action: Why Did I Sleep So Well? (part 15) [...]

char (2009-08-11 08:11:04)

that's an interesting graph you have there.

## The Morning Banana Diet (2008-09-26 07:57)

I just googled "[1]morning banana diet" and got only a thousand hits. Surely that will change. It is the most popular diet in Japan right now, so popular, Mark Schrimsher of [2]CalorieLab told me, that "You can't buy bananas in Japan now. It's crazy. We found some little green ones and some really expensive ones, but the rest are sold out." [3]Fytte, a woman's health magazine, has covered it three months in a row. Three books have been written about it.

Like the Shangri-La Diet, it derives from (a) self-experimentation by (b) someone who was not a weight-control expert and (c) was spread by the Internet.

A [4]cartoon.

1. <http://morningbanana.com/>
2. <http://calorielab.com/index.html>
3. <http://fytte.kurasse.jp/>
4. <http://www.asabanana.net/e/>

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August (2008-09-26 08:57:54)

An entire country doesn't notice that they are ravenously hungry two hours after breakfast? Or am I just that different?

Willy (2008-09-26 13:13:50)

Maybe a banana is enough because they have dinner late.

Joshua McMichael (2008-09-27 06:42:40)

This appears to be a intermittent fasting type diet. Basically, with the exception of the banana, the Morning Banana Dieter is restricting food intake to between midday and early evening (lunch and an early 6pm dinner). Eating according to this schedule provides a nice 18 hour fast, and will result in weight loss, provided the dieter doesn't gorge during lunch and dinner. I bet one could substitute any 100 calorie low glycemic index food for the banana and observe identical results. I tried this (minus the banana) once over a fairly sedentary 2 month period, and lost about 10 lbs. I'm working right now on getting back into the habit.

Mark (2008-09-27 09:57:13)

You can eat more than one banana. The inventor of the diet eats four bananas at 6 a.m. and a rice ball "o-nigiri" (maybe 200 calories) during his commute at 8 a.m. I think you're allowed to eat something else in the morning if you wait 15 minutes after the bananas and are still hungry (which is defined as under the 80 percent full level, not just not being stuffed). Dinner is supposed to be by 8 p.m., and by 6 p.m. if possible. You need to go to bed by midnight or earlier and leave four hours before dinner and your bedtime, although here too there is an out clause allowing some fruit in the evening if you're hungry. As you can see, the diet is not as simple as it first appears, and I suspect it works partly by just being so complicated that you end up not eating so you can avoid dealing with the complications ... like many diets. :-)

thehova (2008-09-27 11:56:01)

Isn't there a lot of evidence that a lack of sleep leads to obesity? And I know there is a lot of research which suggests that a high level of water intake leads to weight loss. As for eating the banana, itself, I wonder if any type of fruit would work. I know that vegetables and especially fruit help aid the digestion process. Yeah, I don't think there's anything magical about this diet. It works because it's simple and it's the right way to loose weight.

thehova (2008-09-27 12:00:50)

I just noticed that I called the morning banana diet simple and a commenter above specifically said it isn't simple. The morning banana diet has 4 or 5 principals to follow. But if you go to a Barnes & Noble and look in the diet section, you'd be shocked to see how difficult and challenging the diets are.

Kris (2008-10-02 13:59:42)

Like Joshua said: "This appears to be a intermittent fasting type diet." That is the first thing I thought of. The banana would not be a lot of calories, and would not be enough to really "break the fast". On a similar note, I started eating no breakfast and low (or slow) carb for dinner to include a fasting period in my day. Or, as I view it, turn off the insulin machine for long periods of time. It is working great. I had a job in college that was 2nd shift and I felt great and lost weight, but I thought it was because I was so busy I did not have time to eat. After college I got a job on 2nd shift again, same thing lose weight- feel great. The thing in common: little or no breakfast. This fits in with the SLD because banana=not much taste.

Philip (2008-10-17 09:08:35)

This doesn't look like fasting at all to me. It doesn't at all look complicated either. Whether it works is another story. They say you can eat anything you want for the other two meals, just banana and water in the morning. I'll give it a try. Sounds like the least complicated diet I'll have tried and it's certainly not fasting.

Bob (2008-10-17 14:54:50)

The Warrior Diet by Ori Hofmekler is similar, and essentially is a fasting diet, based on the theory that Roman Warriors, and the like, ate little or nothing during the day, and gorged themselves at night.

lori (2008-10-18 19:55:45)

Potassium Pump. Apparently there is a connection between metabolic rate and potassium in the body. If one 'breaks the fast' with bananas they also turn on the "potassium pump" in the body and food metabolizes more completely. With honest sensible eating I think this diet can work very well.

Jerry (2008-10-20 14:48:28)

Bananas help people lose weight because they contain resistant starch, which ferments in your large intestine, creating by-products that block conversion of some carbohydrates into fuel, so replacing ordinary carbs with the resistant starch in bananas can boost fat burning. And banana fiber bulks up in your stomach, so you feel full for longer. There's a healthy way to do the banana diet which makes sense and includes exercise <http://www.dolennutrition.com/bananadiet/bananadiet.htm>

Phyllis (2008-10-21 04:58:24)

Not sure if this has been covered, but a doctor once told my grandmother she was eating too many bananas (she had dementia and was not realizing how many she was eating during the day). She was getting too much potassium in her body. I forget what he said it does, but it wasn't good for her. Just like anything else: too much of anything is not good. For another example: Too much Vit C leads to diarrhea. Never do (or over-do!), without checking with your personal physician. Some foods even counteract medications, so please be careful.

Alison (2008-10-22 14:32:44)

For breakfast, you should eat one or more bananas and drink a glass of lukewarm water. You can have as many bananas as you like until you are full. The reason for the water to be lukewarm is not known and has come under much speculation on the Internet. Most diets suggest that you can burn more calories by drinking cold water. Lunch can be just about anything you like. This diet places no restrictions on what you can or cannot eat. you can eat one snack around 3:00 pm if you are hungry Dinner can be anything you like as long as you eat before 8:00 pm. Avoid ice cream and other dairy products, as well as dessert after dinner One other rule of the diet is that you must go to bed before midnight each and every night. This makes sense because studies have shown that a lack of sleep leads to obesity. And finally, Yes I'm definitely going to give it a try.

CRYSTAL (2008-10-23 08:46:01)

THE REASON FOR LUKE WARM WATER IS THAT IS BURNS FAT NOT CALORIES. AND THAT;S THE GOAL.

Jan711 (2008-10-27 05:06:24)

Is there any real evidence that anyone has truly lost weight on this diet?

wanda chafin (2008-10-28 10:51:24)

I tried the banana diet after hearing about it on the news. Thats all I did was have a banana and warm water ( I warmed mine and had in coffee cup, I didn't know it was supposed to be room temp ?) but the first day I started it I didn't weigh myself and I ate bananas and had a fast food hamburger and fries and regular coke. ( Large hamburger). Then the next morn I weighed myself and I counted calories all that day , did the same for one more day-got on the scales and lost almost 5 lbs..I want to wait until saturday to find out the real loss since saturday will be a week for me ! I love this diet it really works..

Megilla knows (2008-11-02 06:59:39)

Monkeys are laughing at you right now. This was a diet they discovered thousands of years ago and they have lean bodies to show for it.

Chris (2008-11-15 19:09:48)

I'm looking forward to starting this diet.... just one question... do you have to have water? or could you substitute coffee and splenda instead?

elide (2008-11-17 02:21:37)

Yes.me too. I would like to know if you can have coffee instead of worm water.

seth (2008-11-17 06:46:07)

I'm no expert on this diet, so I'm the wrong person to ask.

mararules (2008-11-18 09:14:57)

I started it this morning..I did not weigh myself...but I will tomorrow morning..I will let you know if it works : )

John (2008-11-28 09:15:31)

I agree the morning banana diet is not really suitable for westerners. Having tried it myself I found I was too hungry allot of the time and so I made some modifications to it which works better for the bigger western chap like me! I have still gone from someone that is clinically obese to normal weight within 18 months. I didn't think it would work either. Who'd think it, eating a few bananas would do that lol :-)

Mark (2008-11-29 05:30:59)

Here's a site with details on the diet, slightly Westernized: <http://morningbanana.com>

Cheryl (2008-12-18 19:03:14)

I've been on the banana diet since November 1 and have lost 8 pounds (in 50 days). I have not done the diet perfectly but I have eaten a banana and water at least 45 of the days. I didn't do the diet around Thanksgiving (and gained 2 lbs or so that I had to re-lose). I've also probably eaten more sweets than I should have (due to the holidays). The rules and how I do on them: 1. Eat a banana and lukewarm water (pretty faithful). 2. Eat whatever at lunch. I've had something sweet after lunch probably 1/3 of the 50 days so far (so...I would say partly faithful). 3. Eat a snack at 3 PM (pretty faithful). 4. Eat whatever for dinner (sometimes have sweets; probably 10 days out of the 50-so, more faithful than not). 5. Eat before 8 PM (pretty faithful). 6. Go to bed by midnight (pretty faithful). I guess if I didn't eat the sweets after lunch or dinner, I'd be doing better. I also exercise on average of 4 days per week. I try to walk with some jogging 4-5 miles on some days; lift weights (1 set of about 12 exercises) some days. Losing 8 lbs for me in less than 2 months is amazing as I've gone on every diet imaginable with not great results.



My pants are getting looser and my stomach is flatter. Most of my "muffin top" is gone (just a slight amount of spillover). I'm not sure how/if this will work the same for you as it seems to be working for me. I wish everyone luck with their fight against the bulge!

pride (2009-01-09 23:48:08)

CAN I DRINK MILK WITH THIS DIET??? I need milk lol growing boy =]

allie (2009-01-16 17:08:52)

is there a book you can buy on the banana diet?

Angie (2009-01-26 13:33:49)

All i can say is that as crazy as this diet seems it really works, its all just common sense i guess, things you should be doing already, but most of us don't. Like going to bed at a decent hour, drinking, lunch and snack. Anyways, my quality of life has improved even if it is just a fad diet. Also, after 16 days i had lost 5lbs :) I blog about it if your interested at all.

Shelley (2010-07-30 18:05:40)

This is my 3rd week on the banana diet and I've lost 4 lbs. I took the "eat whatever you want at lunch and dinner" very literally and still lost weight. However, one of the rules is no chips, sweets, ice cream, etc., so I did not eat those for snack or meals. But I did eat chile dogs, hamburgers, etc....things I kind of laid off just having finished 4 months on WW and only losing 10 of the 70 lbs I need to lose. I also have a slight underactive thyroid and get edema (water swelling) in my ankles that is very painful. But, since eating the bananas (potassium, I suppose), that has gone away and I feel much better. I eat 3 bananas. Sometimes I get hungry between breakfast and dinner, but I saw a site that said to also eat a handful of nuts. That would help and I think I will start trying that, but now that I have gotten the junkfood thing out of my system, it's back to whole grains, lean meats, and more veggies for me just because I feel better when eating that way. If you want to know if it works, it has for me. I suggest giving it two weeks.

Shelley (2010-07-30 18:10:06)

Correction to my prior post: "Sometimes I get hungry between breakfast and lunch" not dinner. I did not mean to imply that I am skipping lunch because I am not. I eat until I feel satisfied whatever I feel like that day (sans sweets).

james (2010-10-17 20:43:19)

I think this diet was invented by the folks who import bananas into Japan <http://www.japansugoi.com/wordpress/banana-king-japanese-tvcm/>

## **Games and the Business of Life (2008-09-26 08:14)**

You probably know that plastics were first used for toys. You probably don't know that the first metals were used by artists, as far as archeologists can determine. That's material science, what about non-material science? Here's [1]Tyler Cowen:

I've been thinking of all those old puzzles where a bunch of guys enter the room and only so many of them have smudges on their foreheads and you have to find the algorithm to reveal that information.

The problem is to separate good banks from bad banks, so that good banks can continue business. A big reason I started self-experimentation was Martin Gardner's Mathematical Games column in Scientific American. I could sometimes solve Gardner's made-up puzzles, which gave me confidence when a non-made-up puzzle – waking up too early – came along.

More When I pointed this post out to Tyler, he replied, "Exactly what I was thinking in fact, when I wrote that...I even almost mentioned Martin Gardner."

1. <http://www.marginalrevolution.com/marginalrevolution/2008/09/another-modest.html>

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### **A Little-Known Problem with Vegetarianism (2008-09-26 21:39)**

If you look up [1]vegetarianism in Wikipedia, you'll find references to several health "concerns". You won't find anything about trouble at high altitudes. However, a friend of mine went on a high-altitude camping trip and found himself feeling terrible, with symptoms of altitude sickness. He later learned, when everyone reconvened, that two others in the group of 30 had had similar troubles. All three were vegetarians. They'd done fine on hikes at lower altitudes. None of the other 27 were vegetarians. The correlation makes sense because vegetarians are often much lower in iron – a component of hemoglobin, which transports oxygen – than non-vegetarians.

The interesting question for me is: What can we do with such data? It's obviously useful, but where does it go? Not in a scientific paper, obviously. In a letter to the editor? Of what journal?

1. <http://en.wikipedia.org/wiki/Vegetarianism>

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Igor Carron (2008-09-27 03:21:46)

What makes you think this blog entry is not enough ? Igor.

Alex Holcombe (2008-09-27 03:39:10)

could write a paper and submit it to J. of Medical Hypotheses. It's even indexed by PubMed

seth (2008-09-27 05:23:33)

Igor, that's a good question and my answer is ignorance. I am unaware of facts reported in blog entries making their way into general knowledge. But you're right, it's not like I have a large sample.

Aaron Blaisdell (2008-09-27 08:53:36)

Treat vegetarianism as an experimental variable and take a group of people consisting of vegetarians and non-vegetarians on a high-altitude hiking trip (without revealing the real purpose of the trip). Record what happens (how people feel). Sounds publishable in a reputable journal to me.

Tom in TX (2008-09-27 09:50:52)

You could add it to the Wikipedia article.

Igor Carron (2008-09-27 11:12:37)

Seth, In saying this, I was specifically remembering this story: <http://nuit-blanche.blogspot.com/2006/11/google-can-save-your-life.html> Igor.

Igor Carron (2008-09-27 11:22:07)

Seth, This other analysis of my logs is also indicative of something along the lines of my first remark: <http://nuit-blanche.blogspot.com/2007/11/outliers-in-long-tail-case-of-autism.html> Igor.

Gyan (2008-09-28 22:21:53)

Just saying vegetarianism is not sufficient. There are many kinds of vegetarians. Not all are low in iron. Some are traditional vegetarians like Jains They know how to combine proteins and optimize iron. Some are new-fangled Americans whose idea of being a vegetarian is to gorge on soya.

Chris B. (2008-09-30 12:58:21)

"You could add it to the Wikipedia article. " No, I think it would count as Original Research, a no-no in WP.

### **How to Consume Flaxseed Oil (2008-09-27 09:41)**

My friend [1]Carl Willat has the following suggestion:

To make it easier to consume flaxseed oil, put it on toast. About one tablespoon of flaxseed oil per slice of bread. Eat nose-clipped.

I tried it. Flaxseed on toast, noseclipped, is delicious. It tastes just like toast with butter.

1. <http://www.carlsfinefilms.com/>

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Rasmus (2008-09-27 11:49:01)

Sounds good, but after trying to drink flaxoil, even noseclipped, I've developed a strong enough aversion to the stuff that I can hardly look at a bottle of it without retching a little.

thehova (2008-09-27 19:05:19)

Yeah, I concur with Rasmus. Flaxseed oil is awful stuff. Walmart is selling fish oil and flaxseed oil capsules at a price that I believe is cheaper than purchasing the oils, themselves. Is there any disadvantage to taking capsules rather than oil?

Fred Gibson (2008-12-16 21:03:25)

I put two tablespoons in my morning cereal, and I've really grown to like the taste a lot.

### **Announcing: A Wiki for the Shangri-La Diet (2008-09-27 10:18)**

It's [1]here. Not much content yet.

Anyone can contribute, you just need to register first.

1. <http://shangriladiet.wik.is/>

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Matt (2008-09-27 17:14:41)

The link's currently got a typo. It should be: <http://shangriladiet.wik.is/>

Eric Vlemmix (2008-09-28 05:04:24)

Good idea! (website is at <http://shangriladiet.wik.is/> , the link in the blogpost has a problem) I've made some initial pages and an index go get things started.

seth (2008-09-28 05:43:20)

Thanks, Matt and Eric. Typo fixed.

### **Most Drug-Cancer Studies Not Published (2008-09-27 15:34)**

According to a [1]new study,

Fewer than 20 % of cancer trial results are published in peer-review journals. . . Industry-sponsored trials only achieve publication one time in 20.

[2]A new website hopes to increase visibility of clinical trials. Publication bias is one reason a method that allows you to see for yourself – self-experimentation – has value.

[3]The study.

1. <http://www.newser.com/story/38574/many-cancer-studies-go-unpublished-study.html>

2. [http://latimesblogs.latimes.com/booster\\_shots/2008/09/did-the-study-w.html](http://latimesblogs.latimes.com/booster_shots/2008/09/did-the-study-w.html)

3. <http://www.theoncologist.com/cgi/reprint/theoncologist.2008-0133v1>

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### **Science in Action: Why Did I Sleep So Well? (part 16) (2008-09-28 06:36)**

A few days ago I spoke on the phone to someone who'd written me that one-legged standing improved his sleep. I mentioned this replication [1]earlier but the new details are interesting.

He is a 35-year-old man with an office job. He now works in the Washington, D.C. area. Until about a year ago, his sleep was fine. He would sleep 7-7.5 hours no matter when he went to bed.

About a year ago he went through a tough time with a lot of stress and anxiety. After that he started waking up after only 6 hours of sleep. He'd wake up early in the morning, 3 or 4 am, still tired but unable to fall back asleep. This is exactly the problem I had when I started to self-experiment to try to sleep better.

He went to a doctor for help. (I considered seeing a doctor.)<sup>1</sup> The doctor prescribed:

1. Ambien. It worked for 1 or 2 nights.
2. Lunesta. Like Ambien, it worked for only the first few nights.

After using these two drugs, the problem got worse. Now he awoke after only 4 hours of sleep. He tried non-prescription drugs:

3. Melatonin. It made him foggy during the day.
4. Tylenol PM. It worked okay, but he would still wake up after 6 hours.

Then he decided he didn't want to take pills of any sort – even if they worked, he'd have to take them for the rest of his life. (This is why I didn't go to a doctor and never tried pills.) He tried conventional alternative treatments:

5. Changed his attitude about the problem. Although he was waking up very early, he wasn't tired during the day. He had four extra hours. After this change in attitude, he began to fall back asleep a few hours after waking up. Gradually the amount of time he was awake in the middle of the night got shorter.
6. He has cold feet. He can't fall asleep when his feet are cold. He read somewhere that if you imagine your feet are warm, they will warm up. This gave him an idea. What if he imagined going into an MRI-like machine that induces sleep? He started doing this. When he'd wake up at 2 a.m., he'd imagine himself going into this machine. This enabled him to fall back asleep with a short latency.

In August he read my posts about this and started one-legged standing, often while watching TV. He does it without stretching the other foot: puts one foot on top of the other or behind the other. He might or might not balance. Usually stands on a pillow. He does it until it hurts, twice for each leg. In the beginning it took only 5-10 minutes but now it has gotten much longer and he has started doing other things, such as wearing a backpack with books, to shorten the time.

From my point of view the main points are these: 1. He had tried several other treatments. Some were awful, some were okay, but none sustainably solved the problem. Not only did one-legged standing help, it apparently helped more than six other plausible treatments, including two powerful and expensive drugs. 2. What he did differed from what I did – verbal descriptions are always inexact and omit a lot – but still worked well right away.

[2]Directory.

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1. <http://www.blog.sethroberts.net/2008/09/20/science-in-action-why-did-i-sleep-so-well-part-14/>  
2. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

## Barack Obama Understands Jane Jacobs (2008-09-29 05:14)

From [1]this video:

Keith Wilkowski I'm holding the most important book ever written about cities.

Obama Is it Jane Jacobs?

Obama goes on to correctly state the main point of two of her later books, *The Economy of Cities* and *Cities and the Wealth of Nations*.

1. <http://www.youtube.com/v/--v1T1iGF0g&color1=0xb1b1b1&color2=0xcfcfcf&fs=1>

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Nansen (2008-09-29 17:56:10)

I recall you once said that you wished Jane Jacobs could be president (while she was alive, of course).

seth (2008-09-29 20:59:34)

I don't remember saying that. But it sounds like something I would say.

Seth's blog » Blog Archive » Barack Obama Understands Jane Jacobs | Barack Obama (2011-03-31 05:21:24)

[...] Taken from: Seth's blog » Blog Archive » Barack Obama Understands Jane Jacobs [...]

## Assorted Links (2008-09-29 15:50)

1. [1]Talk about self-experimentation by Lawrence Altman
2. [2]A new book celebrates fat.
3. [3]The Kitava Study. [4]Cardiovascular risk factors on Kitava.
4. A [5]scary Google Talk by Nena Baker, author of *The Body Toxic*, about food and plastic.

Thanks to Pietr Hitzig and Dave Lull.

1. <http://videocast.nih.gov/summary.asp?file=14625>

2. [http://www.salon.com/mwt/food/eat\\_drink/2008/09/25/jennifer\\_mclagan/index.html](http://www.salon.com/mwt/food/eat_drink/2008/09/25/jennifer_mclagan/index.html)

3. <http://wholehealthsource.blogspot.com/2008/08/kitava-wrapping-it-up.html>

4. <http://wholehealthsource.blogspot.com/2008/08/cardiovascular-risk-factors-on-kitava.html>

5. [http://www.youtube.com/watch?v=kAUC\\_rTJ-SU](http://www.youtube.com/watch?v=kAUC_rTJ-SU)

Igor Carron (2008-09-30 09:47:20)

you might find this interesting: <http://www.sciam.com/article.cfm?id=why-calories-are-delicious> Igor.

### 3.10 October

#### My Pleasantly-Strange Trip to Beijing (2008-10-01 13:23)

I am now in Beijing. On the way (12 hours nonstop from San Francisco):

1. Without asking, my seat was switched to one of the best seats in economy: aisle of the bulkhead row.
2. Boarding was last rows first. So rational, so easy, no special equipment or software required. I have never before encountered this. Good work, Air China.
3. A riveting movie, which I'd never heard of, was shown: [1]The Children of Huang Shi, which is a [2]Chinese Schindler's List. In both Chinese and English, with Chinese subtitles when the characters were speaking Chinese. The best movie I've seen on a plane.
4. The plane was old. Well-maintained, yes, but the film was VHS, the headphone jacks were double-pronged, and my supplied headset was broken. Maybe this is why the price was surprisingly low (about 40 % less than the competition).
5. Midflight, a fly alighted on my book ([3]Traffic by Tom Vanderbilt).
6. Three times I did my [4]one-legged standing. Seeing me, two others started stretching. For the first time on one of these long flights, I had no trouble sleeping in my seat. (In the past, I've been able to sleep well only on the floor.)
7. The flight was 78 minutes early. I didn't know such a thing was possible – like the fly.
8. The Beijing terminal (Terminal 3 at [5]the airport), which opened six months ago, must be the biggest in the world. Nicely decorated with bamboo plants. At debarkation, a sign said we were 10 minutes from Customs. No line at Customs. After Customs, we took a shuttle train to luggage pickup. The ride – within one terminal – seemed about a mile long. I look forward to spending more time there, to study the 72 restaurants, for example.
9. The trunk of my taxi was perfectly clean.
10. During the taxi ride, I saw a bike rider. He was about to go from the on-ramp onto the freeway, apparently to ride on the line between lanes. It was a normal unclogged highway, with cars going 60 or 70 mph. I didn't know such a thing was possible.

1. [http://en.wikipedia.org/wiki/The\\_Children\\_of\\_Huang\\_Shi](http://en.wikipedia.org/wiki/The_Children_of_Huang_Shi)

2. <http://www.timesonline.co.uk/tol/news/world/asia/china/article1362720.ece>

3. <http://www.bikecommuters.com/2008/09/22/book-review-traffic-by-tom-vanderbilt/>

4. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

5. [http://en.wikipedia.org/wiki/Beijing\\_Capital\\_International\\_Airport](http://en.wikipedia.org/wiki/Beijing_Capital_International_Airport)

Igor Carron (2008-10-01 14:46:16)

thanks for 6. For 7, the winds do make a difference. I am eagerly waiting to see how you are going to deal with the jet-lag when you come back stateside. It always takes me three days to recover. Igor.

## **The Neglected Importance of Diversity (2008-10-02 07:01)**

In *The Black Swan* (2006), Nassim Taleb wrote:

Globalization creates interlocking fragility, while reducing volatility and giving the appearance of stability. In other words it creates devastating Black Swans. We have never lived before under the threat of a global collapse. Financial institutions have been merging into a smaller number of very large banks. Almost all banks are interrelated. So the financial ecology is swelling into gigantic, incestuous, bureaucratic banks “when one fails, they all fall.” The increased concentration among banks seems to have the effect of making financial crisis less likely, but when they happen they are more global in scale and hit us very hard. We have moved from a diversified ecology of small banks, with varied lending policies, to a more homogeneous framework of firms that all resemble one another. True, we now have fewer failures, but when they occur “I shiver at the thought.

To me, this sounds Jacobian. Jane Jacobs disliked calls for reduced family size (e.g., Bill McKibben) not merely because she was a third child but because she disliked reducing the diversity of family ecology. In public health, it’s called the dangers of monoculture. The Irish potato famine (which “dwells in my memory as one long night of sorrow” – William Butler) is a dietary example of Taleb’s point. When one (potato) crop failed, they all failed.

Self-experimentation is a more positive example of the broad point. Self-experimentation derives its power from two things: 1. Motivation. You are more motivated to solve your own problems than other people’s problems. 2. Diversity. The self-experimenter can do anything – change anything, measure anything. Other scientists cannot. For people with serious problems, such as depression, reduced diversity of the associated science (e.g., the science of what causes depression) is a long slow catastrophe when the associated science, because of its restricted nature, cannot find the best solutions (as I believe is the case with depression).

My animal-learning research also centers on this point. It is about what controls variation in behavior. Dave Stahlman (UCLA), [1]Aaron Blaisdell (UCLA), and I will soon finish a paper about this. With too little variation, catastrophe is too likely, as Taleb says. So mechanisms to produce diversity have evolved. Just as the importance of diversity has been neglected by financiers, it has been neglected by research psychologists.

1. <http://pigeonrat.psych.ucla.edu/>

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MT (2008-10-02 12:57:29)

Great point – I think a new framework in finance and economics could be an optimization problem between the very legitimate benefits of economies of scale and the costs of homogenization and interdependence. Somewhere between the two is an ideal and determining that point should inform federal and multilateral policy. How much consolidation to allow in an industry could be based on research in that area, and considered at national and international levels. Free market benefits collapse as you approach oligopolistic and monopolistic states in most cases. Also reminded of the benefits of collaboration and



interdisciplinary research as, in this case, ecology, psychology, finance, and urban design are drawing on one another – which is a heterogeneous approach, making the post rather metaheterogeneous. A diverse post about the value of diversity.

seth (2008-10-02 13:16:47)

Thanks, MT. As you suggest, my animal learning research is about how animals optimize (not just produce) diversity of action. The diversity of what they do depends on external events.

Nansen (2008-10-04 17:11:44)

Your point about depression being a "long slow catastrophe" reminds me of a related point by [1]Ellen Frank about the treatment of bipolar disorder: This approach [of putting the emphasis on the prophylaxis of mania], however, left many bipolar patients to suffer protracted and debilitating (but not dramatic) depressions. We now recognize that these low-grade depressions are actually associated with more impairment than the more dramatic, impressive manias [citation], but this was not appreciated for much of the psychopharmacological drugs era. (From [2]Treating Bipolar Disorder, page 29)

1. [http://en.wikipedia.org/wiki/Social\\_rhythm\\_therapy](http://en.wikipedia.org/wiki/Social_rhythm_therapy)

2. <http://books.google.com/books?id=cRMzWcXgFeAC&pg=PA27&dq=treating+bipolar&sig=ACfU3U37naE4-1ufi-RM2ku1siRFIHqCRg>

### **Proposed Book: How to Lie with Experimental Design (2008-10-02 09:11)**

From [1]ABC News:

Angelo Tremblay [a professor at Laval University] noticed something odd every time he worked up a grant application for his research program in a Quebec university. He had a craving for chocolate chip cookies.

Professor Tremblay wondered if this meant that thinking makes you fat – which is curious, because it implies that the rest of his job didn't involve thinking, or at least less of it. More likely is that anxiety makes you crave pleasure-producing food (such as chocolate-chip cookies) to dull the pain; there is a term for it, emotional eating. Grant writing is anxiety-producing, of course: You worry about not getting the grant. Yet – to his credit – Tremblay did experiments to test his idea. And these experiments, he believes, supported his idea that thinking alone can cause obesity, which I'm pretty sure is wrong. It makes me want to write a book: How to Lie With Experimental Design (although I'm sure Tremblay wasn't trying to deceive anyone). Its predecessor, How to Lie with Statistics, was a big success.

Thanks to Dave Lull.

More From a [2]documentary about Ranjit Chandra:

In the Nestle and Mead Johnson studies, Chandra concluded that those company's products helped reduce the risk of allergies, while the Ross formula which was virtually the same did nothing.

Masor says he asked, "'Dr. Chandra, how can you explain that we didn't see anything with our study and you did with the Nestle study?' And he said, 'Well, the study really wasn't designed right.'

"I said: 'Dr. Chandra we designed the study with you. You designed it. That's why we went to you, so you would be able to do it correctly.' And he said, 'Well, you didn't really pay me enough money to do it correctly.'"

An extreme case.

1. <http://abcnews.go.com/print?id=5763150>
2. <http://www.cbc.ca/national/news/chandra/>

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Timothy Beneke (2008-10-02 13:49:44)

I've often noticed that anxiety either feels like, or stimulates hunger. It's that unsettled, frightened, butterflies feeling in the stomach that does it. Last night I downloaded a Norton Securities update; this morning I could not get online with Internet Explorer. I felt a lot of anxiety until after it was fixed. The anxiety makes me want to eat, in fact seems almost inseparable from hunger, except it's located only in the belly, and is not so globally disorganizing to my functioning the way hunger itself can be...

### **Diet and Acne (continued) (2008-10-03 11:23)**

I've blogged [1]several times about environmental causes of acne, especially diet. Cynthia Graber, a science journalist, wrote a [2]whole article about diet and acne, a link that dermatologists deny much more strongly than the evidence warranted. Why do they act so sure? I asked Graber. Because, low on the medical totem pole, they want to appear more scientific, she said. Genetics and drugs – that's science. Diet – that isn't science.

Here is more data on the subject, from two widely-different sources. The first is a [3]comment on [4]Dennis Mangan's blog:

I had some acne when I was a teen. I was considered a very "pretty" teenager, but was painfully shy whenever my face "broke out". I remember going to a dermatologist who put me on a sulfur cream and antibiotics for it. He emphasized over and over that diet "had absolutely nothing" to do with it, and that I should eat whatever I wanted and that "only by eating huge amounts of fish" could I actually aggravate it.

I still had some breakouts even until my twenties every so often. Because I was basically bodybuilding as a "hobby", I switched to diet colas and started eating a great deal of tuna and canned chicken around this time. Guess what? The acne completely went away at about 21 and didn't come back until about 26. At 26 I had some hard bumps under my chin like boils. The dermatologist said they were folliculitis and told me to make sure my razors were dry and my sink was super clean. But I noted that I had drifted back to a fast food diet and was drinking regular colas again—and kind of power-lifting a couple of days a week but not hitting it hard.

I got back into it at the gym, and wanted a six-pack again. I went back to diet cola and started dieting again. The result? The acne completely went away. This time I made a connection.

I have sworn up and down to some of my friends that I think our diets might lead to acne when we're teens. One of my pals, Myron, took his kids (both teens) off cokes and instant soups and started cooking for them and making them drink orange juice and apple juice and tea. Their faces completely cleared up (they were 14 and 16) in about two months. No trips to the doctor, no anti-bacterial soaps, nothing. Just diet. They have had lovely clear skin ever since.

I have another friend at work whose teenage daughter "got off" colas and he started cooking for her (single parent). Her face cleared up. He mentioned it. She was a pretty girl but used to break out fairly badly. According to him, she's on top of the world now that her skin is cleared up and is confident (and she should be because she really is a cutie).

I read a little bit about the study doctors cite about acne and diet. They fed a big chocolate bar to one group and fed another a CANDY bar that didn't contain chocolate to another group. Since both groups had acne at the same levels, they declared that diet had nothing to do with acne. WHAT HOGWASH!!!! If they were both drinking sodas, both eating tons of refined white flour, white pasta, and both eating a big candy bar (so what if one was toffee and one was chocolate) every day, they still were eating a "western diet".

Anyway, I've read about the severe uptick in acne in newly "Westernized" populations. I've read about the rate of prostate difficulties of Asian-Americans versus rural Asians. Diets do INDEED affect much more about ourselves than we'd like to admit. I can guarantee you, because I've seen it on my own face and have friends who I trust who have seen it on the faces of their children, that diet does indeed influence acne and that high glycemic index foods and colas and sugars certainly worsen it at the least.

The thing that REALLY got me thinking this was a few years ago, I saw a couple of very Indian-looking Mexican teenagers. They didn't look like they had a drop of European blood in them. They had BAD acne on their cheeks. Hell, I thought those people never broke out, yet there they were at a convenience store buying two colas and potato chips-looking like Oxy poster-children.

The second source is [5]Arbor Clinical Nutrition Updates, an excellent Australian publication aimed at nutrition professionals. The latest update, which I cannot link to, is about acne and diet. From its conclusions:

For many years the conventional wisdom dispensed by physicians on the relationship between diet and acne vulgaris has been that there is none. In a recent study, the fact that nearly a half of a group of final year medical students believed that diet was an important factor in acne was held to be an unfortunate misconception – likely to perpetuate misinformation in the community.â€?

The "expert view" from doctors is in stark contrast to what their patients think. Many studies have shown that the average person is under the distinct impression that diet can indeed affect acne, particularly fatty foods and chocolate.

A careful look into this question reveals something rather fascinating – that although medical textbooks used to strongly support the idea of "acne diets", in the last 50 years this has completely reversed. Yet experts'™ current confidence that there is nothing to the diet-acne story is itself based on almost no evidence.

The update describes two studies. [6]One found that a low-glycemic-index diet reduced acne. The [7]other found that, in teenage boys, greater milk consumption was associated with slightly more acne.

More Maybe Graber was too kind. Confidence that diet had nothing to do with acne allowed dermatologists to prescribe dangerous and expensive drugs. I wish I could be sure no payola was involved, but – given [8]a horrifying story in today's NY Times about several psychiatrists' total and dishonest disregard of conflict-of-interest rules – I can't. From the article:

From 2000 through 2006, Dr. [Charles] Nemeroff [of Emory University] earned more than \$960,000 from GlaxoSmithKline but listed earnings of less than \$35,000 for the period on his university disclosure forms, according to Congressional documents. Sarah Alspach, a GlaxoSmithKline spokeswoman, stated in an e-mail message that "Dr. Nemeroff is a recognized world leader in the field of psychiatry."

What does that say about psychiatry?

[9]Shannon Brownlee on the subject. [10]A blog on the subject. [11]A letter from Senator Charles Grassley to James Wagner, the president of Emory, describing Nemeroff's behavior and asking for more information.

1. <http://www.blog.sethroberts.net/category/acne/>
2. [http://www.boston.com/news/health/articles/2007/12/16/a\\_clear\\_connection/](http://www.boston.com/news/health/articles/2007/12/16/a_clear_connection/)
3. <http://mangans.blogspot.com/2008/09/bogus-research-and-true-cause-of-heart.html#c6609396086799556614>
4. <http://mangans.blogspot.com/2008/09/bogus-research-and-true-cause-of-heart.html>
5. <http://www.nutritionupdates.org/>
6. <http://www.library.nhs.uk/skin/Page.aspx?pagename=ACNEDELLAV>
7. <http://www.medicine.org.hk/hksdv/journal/2008v16n03-10.pdf>
8. [http://www.nytimes.com/2008/10/04/health/policy/04drug.html?\\_r=1&hp=&pagewanted=all](http://www.nytimes.com/2008/10/04/health/policy/04drug.html?_r=1&hp=&pagewanted=all)
9. <http://www.washingtonmonthly.com/features/2004/0404.brownlee.html>
10. <http://carlatpsychiatry.blogspot.com/>
11. <http://s.wsj.net/public/resources/documents/SenateLetter081003.pdf>

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Methuselah - Pay Now Live Later (2008-10-04 01:03:13)

Seth - there's been more discussion and testimony (including my own!) over on Whole Health Source: [1]Acne: Disease of Civilization and [2]Acne Anecdotes This idea that the medical establishment sees drugs as science and diet as not science pretty much says it all.

1. <http://wholehealthsource.blogspot.com/2008/09/acne-disease-of-civilization.html>
2. <http://wholehealthsource.blogspot.com/2008/10/acne-anecdotes.html>

Seth's blog » Blog Archive » Academic Horror Story (Emory University) (2008-10-05 03:53:00)  
[...] Diet and Acne (continued) [...]

Ahmed Darwish (2008-10-05 22:21:09)

Completely agree. I've posted a very positive experience about no-sugar-or-starch diet and my acnes below:  
<http://www.board.crossfit.com/showthread.php?t=37519>

Jay (2008-10-09 10:23:09)

Seth, Just wanted to say first and foremost that I really enjoy you blog. I have always found that creating a diet full of natural supplements and organic goodies has always helped me stay clear of acne. I recently started a blog about green tea and its effects on my weight loss and as well its anti oxidizing powers that have helped my acne. My latest post describes all the scientific properties behind green tea which help with anti-oxidizing, you can view it at Green Tea Blog

AS (2008-10-09 14:48:04)

My story: In college, I started getting cysts on my face. They would often start off as whiteheads or closed pimples and then just grow and grow. They was extremely ugly. They would take weeks to finally go away, upon which there would usually be a scar to mark the spot. I tried reforming my diet, that is cutting out all junk food. I also tried the standard antibiotics and retin-A regimen. It didn't really seem to make a difference. (For what it's worth, I have never had a soda habit). What finally worked was drastically reducing my intake of dairy products. My small pimples would just stay their normal size and clear up quickly. I also had a habit of nervously touching my face and of resting my face on my left hand. I noticed that I had far more pimples and cysts on my left cheek than on my right. So not touching my face helped. Finally, I felt exercise also helped.

The Acne Relief (2008-12-06 18:25:16)

I've always felt like certain foods broke me out. For a doctor to say there is no correlation between acne and food is crazy. That doctor is book smart only and honestly making his money selling prescriptions.

BjÄ¶rn (2009-05-28 15:58:46)

This post is dumb. The whole argument is stupid. What dermatologists say is that no link between acne and diet HAS BEEN PROVEN. For every study that detects a correlation between foodstuff X and acne, there are ten that do not. Then stating that diet is the cause of acne is irresponsible because it is not backed up by the evidence. Also, if you suffer from severe acne, take a good long look at your parents and their grand parents skin. Odds are very high that they have acne scars and did or do have acne problems. How can that be? Two generations ago people ate healthier yet still had acne. How can people who are allergic to dairy products have acne if it is the dairy products that are causing it? People had acne back then too, and that means that the dietary argument is false.

### **Beijing Public Transit Economics (2008-10-03 18:16)**

Bus fare is 1 yuan – 15 cents. If you buy a card the fare goes down to 0.6 yuan.

ME How long does the reduction last?

FRIEND Forever.

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### **Academic Horror Story (Emory University) (2008-10-05 03:52)**

From Claudia Adkison, Emory University dean, to Charles Nemeroff, Emory University professor of psychiatry, in [1]a 2006 memo:

I have been grateful that the reporter was not sophisticated enough to ask all the right questions.

Grateful. She was grateful. Ugh. Double ugh. Professor Nemeroff, [2]you'll recall, took vast sums of money to advocate the prescription of dangerous drugs to millions of people and hid this fact, even after several warnings. Dean Adkison was grateful, let me repeat, that a reporter didn't ask "all the right questions" to expose this.

This is why New York Times reporter John Schwartz's [3]lack of understanding matters.

1. <http://graphics8.nytimes.com/packages/pdf/health/04DRUG/2006-07-20Adkison.pdf>
2. <http://www.blog.sethroberts.net/2008/10/03/diet-and-acne-continued/>
3. <http://www.blog.sethroberts.net/2008/08/28/suppose-you-write-the-times-to-fix-an-error-part-1/>

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University Diaries » More Commentary on Emory University's Professor Charles Nemeroff (2008-10-05 06:49:42)

[...] \*\*\*\*\* From Claudia Adkinson, Emory University dean, to Charles Nemeroff, Emory University professor of psychiatry, in a 2006 memo: [...]

Stephen M (Ethesis) (2008-10-05 18:04:41)

That memo must be a story in itself. Guess it just was in this post.

Seth's blog » Blog Archive » What Does It Say About Psychiatry? (2008-10-06 02:20:50)

[...] Academic Horror Story (Emory University) [...]

### **What Does It Say About Psychiatry? (2008-10-06 02:15)**

It isn't just GlaxoSmithKline (who called Emory professor [1]Charles "Disgraced" Nemeroff "a recognized world leader in the field of psychiatry"). It's also the Emory University administration. According to a presumably well-thought-out [2]statement:

Dr. Nemeroff is recognized internationally as a leader in psychiatric research, education and practice. He has made fundamental contributions to the field over many years.

What this says about the moral compass of the Emory administration is clear – that they are unable to grasp the awfulness of what Nemeroff did. (As Emory dean Claudia Adkinson [3]revealed in spades.) If they did, they wouldn't spend a millisecond defending him. The harder question is: What does this say about psychiatry?

1. [http://www.nytimes.com/2008/10/04/health/policy/04drug.html?\\_r=1&hp=&pagewanted=all](http://www.nytimes.com/2008/10/04/health/policy/04drug.html?_r=1&hp=&pagewanted=all)
2. <http://www.whsc.emory.edu/nemeroff.cfm>
3. <http://www.blog.sethroberts.net/2008/10/05/academic-horror-story-emory-university/>

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Pietr Hitzig (2008-10-06 17:18:08)

Fifteen years ago, I attended a conference about a new antidepressant. The Harvard equivalents of Nemeroff were stroking their beards while they pontificated about "Type I" and "Type II" depression. The former needed hospitalization and the latter

treated as outpatients. Puckishly, I suggested that actually Type I had insurance and Type II did not.

MT (2008-10-10 04:17:03)

It is disheartening that the treatments research shows to be the most effective and longest lasting for depression and anxiety – cognitive and other talk therapies – are underprescribed and not considered primary treatments by many doctors. It is further disheartening that research into the role of nutrition in mental health is underfunded – which seems to be because there is no way to patent nutritional interventions, so no motive for private research funding. Some of Seth's self-experiments on Omega 3 here, as well as other research support the merit of more research into nutrition for health, as does the intervention proposed by Truehope, which has not been properly researched, but should be given startling evidence of a relationship between nutrition and bipolar, ADHD, and possibly other mental health issues. Things are indeed seriously awry in psychiatric research.

Seth's blog » Blog Archive » Med School Profs As Drug Company Lackeys (2009-09-09 17:13:36)

[...] 1. I blogged earlier about Duke professor Charles "Disgraced" Nemeroff taking huge amounts of money — which he then failed to disclose — to encourage doctors to give dangerous poorly-tested drugs to children. Nemeroff is (or at least was) considered a top psychiatry professor! [...]

### **Professor Charles Nemeroff Predicts the Future (2008-10-06 14:02)**

The case of [1]Charles "Disgraced" Nemeroff, the Emory University professor of psychiatry, is a touchstone in the sense that it reveals something about the morals (or lack thereof) of those who brush against it. That GlaxoSmithKline (which called Nemeroff "a recognized world leader in the field of psychiatry") is amoral we already knew – a kind of positive control. The responses of Emory dean Claudia Adkison ("[2]grateful" that a reporter didn't know enough to fully expose Nemeroff) and the Emory administration (which [3]called him "a leader in psychiatric research, education, and practice") are more interesting.

But Nemeroff is also a touchstone in reverse. Not only can we learn about X and Y by seeing how they react to Nemeroff, we can also learn about X and Y by seeing how Nemeroff reacts to them. In a 2006 New Scientist series called Brilliant Minds Forecast the Next 50 Years, Nemeroff wrote [4]this:

In the next 50 years, we can expect several breakthroughs. Identifying gene variants that confer vulnerability [to major psychiatric disorders] will result in the emergence of a new field, preventative psychiatry. Elucidating the causes of mental illness will lead to novel treatments. We will also see breakthroughs in understanding the biology of resilience, now poorly understood. And in contrast with our largely trial-and-error-based system, treatments will be individualised, based on genomics and brain imaging.

That Nemeroff likes these ideas suggests they are wrong. Supporting what I've [5]said earlier.

1. [http://online.wsj.com/article/SB122304669813202429.html?mod=googlenews\\_wsj](http://online.wsj.com/article/SB122304669813202429.html?mod=googlenews_wsj)

2. <http://graphics8.nytimes.com/packages/pdf/health/04DRUG/2006-07-20Adkison.pdf>

3. <http://www.whsc.emory.edu/nemeroff.cfm>

4. <http://www.newscientist.com/channel/opinion/science-forecasts/dn10559-charles-nemeroff-forecasts-the-future.html>

5. <http://www.blog.sethroberts.net/2008/09/18/do-genes-matter-for-health/>

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Pietr Hitzig (2008-10-06 17:12:11)

Ernst Mach advocated a version of Occam's razor which he called the Principle of Economy, stating that "Scientists must use the simplest means of arriving at their results and exclude everything not perceived by the senses." (1) Brain imaging, genome analysis and proprietary pharmacotherapy are the way to go according to Nemeroff and those owning the current paradigm of medicine. He and his colleagues foresee a future in which the tools become more and more complex and the treatments more expensive and toxic. I suggest that correcting and balancing the CNS neurotransmitters will be the future. Simple, cheap and safe, precursors of dopamine and serotonin can correct craving and neuropsychiatric disorders; but Glaxo and Nemeroff will be redundant when this is recognized. 1. <http://math.ucr.edu/home/baez/physics/General/occam.html>

seth (2008-10-06 18:52:24)

"He and his colleagues foresee a future in which the tools become more and more complex and the treatments more expensive and toxic." That's a great way of putting it. The increase in danger usually goes unmentioned.

Stephen M (Ethesis) (2008-10-07 04:53:50)

I'd love a way to teach and inculcate resilience rather than merely biology.

Nathan Myers (2008-10-07 22:59:45)

Do you know the expression, "Oracle of Wrong"? It's really hard to be always right, and hardly anybody is, and it's even harder to recognize one who is. It seems to be amazingly easy, though, to be always wrong, and it's not very hard to find people who are. The latter are *almost as useful* as the former. After you've identified an Oracle of Wrong, then when in doubt you just do the opposite of what they recommend.

Eric D Peselow M.D. (2008-10-21 05:18:07)

I myself have done psychiatric drug trials but usually for others. I did not get remuneration. Nemeroff and the other 7 Grassley went after (Biederman, Wilens, Keller, Rush, Wagner, DelBello and Schatzberg) are legitimate scientists with talent and I personally believe their science is honest. However there are numerous small-fry who run drug company mills who have no scientific talent whose findings are whatever the drug company wants them to find. Some of them are tied to medical schools. These are the guys who make drug money as a living and need to be investigated

Patrik (2008-10-22 10:31:38)

Whoops – the html tags goofed up my previous submission. This one should be better. *But Nemeroff is also a touchstone in reverse. Not only can we learn about X and Y by seeing how they react to Nemeroff, we can also learn about X and Y by seeing how Nemeroff reacts to them. ... That Nemeroff likes these ideas suggests they are wrong. Supporting what I've said earlier.* @Seth I would advise caution in drawing this type of conclusion. You are falling prey to the anti-expert fallacy. Nemeroff liking those ideas and those ideas being wrong (or right) are in fact, independent of one another. Allow me to illustrate: From Bryson's A Short History of Nearly Everything: *In one of his last professional acts before his death in 1955, -A FAMOUS SCIENTIST- wrote a short but glowing foreword to a book by a geologist named Charles Hapgood entitled "Earth's Shifting Crust: A Key to Some Basic Problems of Earth Science". Hapgood's book was a steady demolition of the idea that continents were in motion. In a tone that all but invited the reader to join him in a tolerant chuckle, Hapgood observed that a few gullible souls had noticed "an apparent correspondence in shape between certain continents." It would appear, he went on, "that South America might be fitted with Africa, and so on....It is even claimed that rock formations on opposite sides of the Atlantic match. Mr. Hapgood briskly dismissed any such notions, noting that the geologists K.E. Caster and J.C. Mendes had done extensive fieldwork on both sides of the Atlantic and had established beyond question that no such similarities existed. Goodness knows what outcrops Messrs. Caster and Mendes had looked at, because in fact many of the rock formations on both sides of the Atlantic are the same- not just very similar but the same.* If that was all you knew about this famous scientist, is that he endorsed a book that erroneously attempted to invalidate the theory of plate tectonics, and you followed your line of reasoning, you would think this person's judgement suspect and likely wrong on many other important ideas, no? And perhaps he is. But for record, the person who endorsed Hapgood's book and ideas was none other than Albert Einstein. <http://en.wikipedia.org/wiki/Charles>



\_Hapgood

Patrik (2008-10-24 10:51:51)

BTW another person came to mind — the arguable father of modern science wasted many a year obsessing fruitlessly about alchemy. Yet his genius and contributions to modernity may be almost unparalleled — yet if all you knew about him was his fetish for alchemy, you probably wouldn't take Isaac Newton very seriously.

muscle relaxer (2009-12-09 15:52:08)

You need think about it. Despite the emails, the overwhelming evidence showing global warming is happening hasn't changed. "The e-mails do nothing to undermine the very strong scientific consensus . . . that tells us the Earth is warming, that warming is largely a result of human activity," Jane Lubchenco, who heads the National Oceanic and Atmospheric Administration, told a House committee. She said that the e-mails don't cover data from NOAA and NASA, whose independent climate records show dramatic warming.

### **Cheated Again! The 2008 Nobel Prize For Medicine (2008-10-06 14:09)**

Somewhere in suburban Maryland, [1]Dr. Robert Gallo, ex-discoverer of the AIDS virus, is [2]shaking his fist.

1. <http://www.virusmyth.net/aids/data/srlabrat.htm>

2. [http://www.nytimes.com/2008/10/07/health/07nobel.html?\\_r=1&hp&oref=slogin](http://www.nytimes.com/2008/10/07/health/07nobel.html?_r=1&hp&oref=slogin)

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Jeremy Cherfas (2008-10-07 02:13:26)

Your link to your own piece is broken – you have sethroberts first. That's no way to boost your Googlejuice.

Scott (2008-10-07 08:03:18)

Or perhaps it is rightly given to the original discoverers... seeing as your article was written in 1990 and "in June 1991, Gallo finally admitted that the AIDS virus he had "discovered" in 1984 really came from the Pasteur Institute" <http://www.newscientist.com/channel/opinion/dn14881-comment-was-robert-gallo-robbed-of-the-nobel-prize.html> As the article states, perhaps Gallo was crucial enough to the early HIV/AIDS research that he should be included in the Nobel, but not necessarily for the virus discovery itself.

seth (2008-10-07 19:44:17)

Thanks, Jeremy. Scott, Gallo repeatedly claimed – before yesterday – that he had been cheated out of two Nobel Prizes. Yesterday surely makes three.

Nathan Myers (2008-10-07 22:43:27)

I didn't know this about Gallo. Wikipedia says he still has a lab, and that the Gates Foundation handed him \$15M last year. It also has two broken links to a "Lab \_Rat \_color.pdf" on this very site (refs 3 and 11) but none to the virusmyth site. The article linked is on an HIV denialist site, apparently not updated since 2002. Did they decide in 2002 that the HIV-AIDS link is OK?

Nathan Myers (2008-10-07 23:01:36)

(Oops, ref 11 is ok.)

## Chinese Cell Phone Economics (2008-10-07 19:15)

In China, you get a cell phone number by buying a SIM card (a small plastic chip) that you put in your phone. Yesterday I bought one. I was shown a page of 12 possible numbers. At the top of the page it said 168 yuan ( \$25). But one of the numbers was cheaper: only 120 yuan ( \$18). Why the difference? I asked. The cheap number was "hard to remember," I was told. I studied the 12 numbers; they looked equally hard to remember. So I got the cheap one.

Hard to remember was a euphemism, I learned later. Some digits (8, 6) are considered lucky, others (4, 7) unlucky. My number: 1170784.

This is related to self-experimentation. I suppose few scientists believe in lucky and unlucky phone numbers but many believe in "good" and "bad" ways of doing science. One example is a belief that [1]self-experimentation is bad, another is a belief that Bayesian tools are "[2]irrelevant to the business of science"; a third is [3]the blue-ribbon panel that would only use data from double-blind experiments when deciding nutritional requirements. Scientists (and the rest of us) pay more than 48 yuan ( \$7) for such beliefs, which pervade science. Their effect is that scientists fail to use tools that would help them with their research; the rest of us suffer from the lack of progress that could have been made (e.g., discovery of better ways to treat depression). At the end of [4]a paper about my self-experimentation I made this point:

Belief that something is bad makes it hard to learn what it is good for.

1. <http://query.nytimes.com/gst/fullpage.html?res=9C0DE4DB1530F931A35753C1A9639C8B63&scp=2&sq=%22felice%20bedford%22&st=cse>
2. [http://www.stat.columbia.edu/~cook/movabletype/archives/2008/07/responses\\_to\\_my.html#comments](http://www.stat.columbia.edu/~cook/movabletype/archives/2008/07/responses_to_my.html#comments)
3. <http://www.blog.sethroberts.net/2007/08/08/something-is-better-than-nothing-part-2/>
4. <http://repositories.cdlib.org/postprints/117/>

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Mark (2008-10-08 09:29:36)

"Hard to remember" might have been partly true. In Japan numbers can be assigned two or three sounds, and people remember numbers by forming them into words ("goroawase"). Some numbers that appear hard to remember to us are easy for Japanese. For instance, "4649" can be pronounced "yoroshiku," which is a very common word (used in polite requests) and is in high demand for phone numbers by businesses.

Tom (2008-10-08 15:34:33)

Not exactly self-experimentation, but an interesting post by Dr. Davis on how Edward Jenner followed up on a milkmaid's idle remark and discovered the smallpox vaccine: <http://heartscanblog.blogspot.com/2008/10/accidental-health.html>

a-duo (2008-10-08 18:50:27)

it is ture that Chinese like lucky number.

MT (2008-10-10 04:08:19)

SIM cards are standard in the UK and Europe as well, and much more practical than the US/Canada format of attaching phone numbers to phones. If a phone breaks or is replaced I simply move my SIM card with all my contacts and my phone number attached to it.

seth (2008-10-10 04:11:55)

yes, I like SIM cards much better. They don't come with a voice mailbox but that doesn't matter – everyone in China uses text messages in place of voicemail messages.

ywsz2008 (2008-10-30 22:41:14)

[1]googleä¼~åŒ–

1. <http://www.ywsz2008.cn/>

### **My New Job (2008-10-09 04:21)**

I am starting a new job as a professor of psychology at [1]Tsinghua University, Beijing. My particular task is to help everyone in the Psychology Department – newly reestablished this year – write their papers in English. At a department meeting today, introducing myself, I said, "To help you with your English will be easy, learning Chinese will be hard" – but I didn't get to the second part ("learning Chinese...") because everyone laughed after the first part.

1. [http://en.wikipedia.org/wiki/Tsinghua\\_University](http://en.wikipedia.org/wiki/Tsinghua_University)

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Stephen M (Ethesis) (2008-10-09 19:45:24)

I hope it goes well. Is this permanent or just a sabbatical from Berkley?

### **A New Way to Prevent Migraines (2008-10-10 04:28)**

Michael Solberg, who works at the State Department, has had migraine headaches for about 10 years. He recently wrote me about how he discovered a new way to prevent them.

They'd been slowly getting worse and worse as I got older. [He's in his early thirties.] About 4 years ago, I was getting about 3 or 4 a week. Fortunately, I had abortive medication, so when I get a migraine, the medication (Zomig) makes them go away in 1-2 hours.

Doctors tried to put me on all kinds of preventive medication - Amitriptaline (sp), Atenolol, Propanolol, and finally Neurontin (which gave me severe chest pain). Finally, I called it quits with the medication and decided to go at it on my own. I knew what my triggers are (lack of sleep, dehydration, low blood sugar, neck and/or eye strain mostly).

Quite independently, while I was living in Jakarta, Indonesia from Aug 2005 to July 2008, I took up rock climbing. There's not a lot to do in Jakarta, and rock climbing – on a rock climbing wall at a mall in Jakarta – was a way to be active. It was essentially a trainer-led workout. Wall climbing in Jakarta isn't like anywhere else I've ever been – the instructors do all the belaying, and if you go in the evenings, they'll run you through drills and exercises to build strength. A couple of times, I had to do 15 consecutive climbs in 10 or 15 minutes – hence the fatigued muscles and intense sweating (it was all outdoors).

After climbing for 2 or 3 months, I noticed that I wasn't getting migraines any more. It was weird – I was getting a stockpile of my medication because I wasn't using it nearly as often. I went from getting migraines 3 times a week to less than 3 times a month, and the ones I did get were very weak. I began to figure out that for about 7 to 10 days after I did a hard rock climbing training session, I would be migraine free! I'd only get them if I traveled somewhere and stopped the training for a week.

At first, I narrowed it down to three possible causes:

1. When rock climbing, I would sweat profusely, so maybe I was sweating out toxins from the body.
2. When rock climbing, I was building all kinds of muscle (and, in fact, I lost about 30 pounds when doing this, and I was already pretty skinny).
3. When rock climbing, you are exposed to a lot of magnesium in the form of the chalk climbers use keep their hands dry. I'd read a lot about how some migraine sufferers were shown to have magnesium deficiencies in their blood stream. A lot of us take magnesium supplements along with multivitamins.

Towards the end of my time in Jakarta, I had less time for rock climbing, so I began a training program at home. I've pretty much convinced myself that it was the muscle-building component of the training that made the difference.

I'm not sure when I finally decided that hypotheses 1 and 3 were wrong, but I noticed that if I do a simple workout in the gym focusing on arms, upper back, and chest, the effect is the same – migraine free for 5-7 days. When I work out in the gym, I don't sweat nearly as much as I did when I climbed. Because I got the effect by working out in the gym, I decided that muscle building exercises was the likely culprit.

When I was at home in Arkansas a few weeks ago, I spoke to a friend of mine who's an [1]holistic healer. He said that when you build strength in the shoulders, upper back, and arms, you stimulate the liver to rid the body of the toxins that can build up and trigger migraines.

But no holistic healer has come up with this prevention strategy as far as I know – if you know otherwise, please let me know.

I don't know if that's the case, but even now when I'm not rock climbing, I go to the gym once or twice a week to work on my shoulders, chest, and arms, and I'm more or less pain-free (about 1 or 2 per month).

Incidentally, I wrote to the National Headache Foundation, but they never wrote back. I also posted on a migraine message board, but got absolutely no response. I suppose it sounds too good to be true – free therapy for migraines – but I'm not selling anything and have nothing to gain or lose if people try this or not. It's worked for me and has kept me pain-free. When climbing, I lost all kinds of weight, and probably paid out the same amount of money per month [for climbing] that I paid for all the drugs and vitamins.

If you try this to prevent migraines, please let me know what happens.

1. <http://www.bachertwellness.com/>

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Sam (2008-10-10 05:45:51)

I had migraine during my childhood, getting worse and worse, driving me up walls. The medication I got helped a bit, but not by much. Funny thing is, the migraine went away over night. It took some months for me to realize it, but the migraine left me the moment I moved out from my parents and quit school, both for good. Years later, in an stressful and unhealthy relationship, I started to get migraine attacks again - I knew I had to change my life, and ending the relationship immediately ended my migraine attacks. Funny how life works out sometimes.

Heidi 555 (2008-10-10 15:20:43)

A friend of mine use to get really bad cluster headaches. They're much worse than migraines. He was able to get rid of them by running daily, self massage, and relaxation. He thinks that energy flow and circulation were key to his success. There was a time when he was younger that he lifted lots of weights, but that didn't help his headaches at all. Also at one point he did huge numbers of push-ups to get rid of a headache once he had one. But the push-ups didn't prevent him from getting them in the first place. It's interesting that it was the aerobic exercise that worked for him and not the muscle building.

Willy (2008-10-10 16:03:24)

This contradicts what doctors repeat, that the liver has nothing to do with headaches. Maybe it is the same case as with acne and food, they deny a relation but if you reduce fats you get less acne.

Nathan Myers (2008-10-10 16:48:24)

"Not selling anything" is death for a therapy. If there's nothing to patent, there's no profit to be made, so who could possibly be interested (other than sufferers, of course)?

Edith (2008-10-11 13:22:49)

My neurologist told me that exercise is related to migraine. For many years I did about 20 minutes of exercises a day--the Royal Canadian Air Force program. It had no effect on my migraines at all. If you can suggest a particular regimen that helps, I'd be most grateful.

seth (2008-10-11 18:11:05)

Edith, maybe your exercises weren't hard enough. I think as you get stronger the exercises need to become harder so that the difficulty - the challenge - remains high. I think only when the muscles are stressed so much that they grow does the exercise make a difference. If I do 20 pushups today it will cause my muscles to grow. But if I do 20 pushups a day for many years doing 20 pushups will no longer cause my muscles to grow.

MT (2008-10-13 06:57:13)

So between the migraine/upper-body exertion connection and the sleep/one-leg standing exertion, there seems to be a new idea about exertion and brain function. It would be interesting to try and switch one-leg standing and upper-body exertion to see if either produced the same effects on the other conditions, and also to test other aspects of brain function - concentration or memory for instance - on either of these exertion parameters.

Kris (2008-10-15 13:42:20)

I used to get migraines often when I was younger, probably once a month or so. Often, I went to my soccer games even with the headache. It would feel a little better after warming up and would usually go away early in the game. It felt like getting the blood pumping would force the blood vessels to loosen up. Now that I eat less carbs, more fat, no breakfast, I rarely (maybe once a year) get a migraine. I think cereal or high carb/low fat for breakfast plus a late lunch that started with carbs would be the trigger. Once it started, I would down softdrinks to get me through the day and collapse when I went home.

David (2008-10-16 15:59:05)

I'm a headache doctor, and none of my patients have reported this. There is certainly an association between obesity and headaches, so the weight loss could have played a part. Most headache experts, while recommending a healthy lifestyle overall including avoiding any known food triggers, getting enough and regular sleep, and moderate exercise; recommend not exercising if you feel a headache coming on.

Ben Fury (2008-10-18 20:56:44)

Migraine. 3 things. Eat low carb. Eat ZERO grain. Consume ZERO caffeine. Have seen ZERO migraine in clients that implement those three suggestions. Of course, several have complained and whined about the suggestions and still have migraines which proves nothing except some people would rather complain than feel better... Be well, Ben Fury, CFT, CMT

NE1 (2008-10-19 07:39:33)

Nathan, that's not correct. There is a legion of physical therapists who would be more than happy to charge you for helping you fulfill an exercise cure for migraines. Seth's anecdotes are interesting, but personal accounts can't always be counted on as reliable evidence via the scientific method (see his posts about acne, where many a teenager is cured of acne after finally discovering the magic elixir!... at 25.) It's very interesting that the standard advice is to avoid exercise before a migraine, though.

IndianGirl (2008-11-15 23:08:21)

I have experienced this. I have been getting migraines about twice a month since the last 15 years. However, when I went to dance class (an hour a day on alternate days-comprising of rigorous aerobic exercises and dancing, definitely working up a good sweat for an hour), I became migraine free for that period. I went to dance class for about 6 months and was migraine free during those 6 months.

Khalil Salman (2008-12-06 08:53:00)

Rock climbing might have helped you because you were in direct contact with earth/ground which in my opinion was (earthing you) just like an electricity plug. So all the extra electricity that might lead to a migraine finds its way to the ground. just a thought....

Denise Marie (2011-09-17 07:45:22)

I also was suffering from migraines that were getting worse and worse. In the past, I was able to manage them with food restrictions, medications, and massage, but about 8 months ago, it quit working. I was getting bad migraines for about 3 days a week, and I was missing work because the meds (relpax, etc.) weren't working for me. I started rock climbing and seeing a chiropractor at around the same time. Almost immediately, my migraine frequency lessened. It has been 2 1/2 months, and I have had about three, easy to manage migraines. I've been working in an office for the last 10 years, and I think my upper body muscles were weak and not properly supporting my head or spine. Before joining the rock climbing gym, I worked out 2-3 times a week with weights, but I was still very weak in my upper body. It's just another account, but I recommend it to anyone that's suffering to give it a try.

## **Chinese Transportation Economics (continued) (2008-10-10 20:17)**

In China, when a journalist comes to cover your event, you are expected to give them 200 yuan ( \$30) in an envelope to cover the transportation cost. To put this in context, the 30-minute cab ride from the airport to my apartment cost 85 yuan.

In Beijing, a subway ride from anywhere to anywhere costs 2 yuan. The minimum price for a cab ride is 10 yuan ( \$1.50), which will get you about a mile.

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## A Few Things America Can Learn From China (2008-10-12 01:42)

From [1]this discussion. The speaker is Noriel Roubini, the NYU economics professor:

In U.S. the total consumption's about \$9.5 trillion. Take the entire consumption of 1 billion Chinese, it's about \$1 trillion.

The average American thinks: We're rich, they're poor. It's more complicated than that. The Chinese, in hundreds of ways, do more with less. They pay less for the same quality of life. Here are some examples:

1. The lights on the stairs to my Beijing apartment are sound-activated. Works well, saves electricity. In Berkeley I pay \$4/month to light the stairs to my apartment and why should my landlady install sound- or motion-activated lighting?
2. The water-heating system in my apartment is flash heating, that is, just-in-time heating. It works just as well as an American-style water heaters and there's no heat loss when you aren't using it.
3. My washing machine doesn't use heated water. Incoming water is heated to room temperature by a set of baffles.
4. The doors to campus cafeterias are a set of hanging plastic strips. It gets cold in Beijing in the winter. When someone enters there is much less heat loss than when a door is opened.
5. Bicycles are everywhere (in my part of town, the university district, at least) and are easy and safe. They are also very cheap. I could have bought a used one for \$15 but instead a friend gave me hers – she takes the bus to work. While bicycles are basically transportation for people who live close to work, as students do, electric bicycles – in which China leads the world – are far more powerful and could probably replace a lot of cars if downtowns were safer for them.
6. The better you cook, the cheaper ingredients you can use and achieve the same result. The Chinese, who are great cooks, use lots of vegetables, which are cheaper than meat and of course easier on the environment.

1. [http://www.cfr.org/publication/17365/financial\\_crisis.html](http://www.cfr.org/publication/17365/financial_crisis.html)

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Gabe (2008-10-12 10:29:18)

... and of course all of the above apply to many parts of Europe too

MT (2008-10-13 06:29:45)

The UK is ahead too – but the electric bikes in China are amazing – my flatmates are Chinese and described the ubiquity of the electric bike, and that some city's are banning motorcycles to encourage more bike use. So China is ahead in many

environmental areas despite perceptions to the contrary. An electromagnetic countertop burner is also common there, yet I've never seen one in the West.

Patrik (2008-10-13 13:23:16)

Seth – you implicitly contradict yourself. You write: 3. *My washing machine doesn't use heated water. Incoming water is heated to room temperature by a set of baffles.* Which I think you see as a plus. Fair enough, each to their own, but I think we can agree that my honkin' electricity eating American washing machine when set to hot water and full of Tide is gonna give me a better, more powerful wash than its room temperature Chinese brother. But then you write: *While bicycles are basically transportation for people who live close to work, as students do, electric bicycles – in which China leads the world – are far more powerful and could probably replace a lot of cars if downtowns were safer for them.* Isn't the electric bicycle analogous to my washing machine? My washing machine doesn't need hot water, but it is certainly more powerful with it, just as an electric bike is more powerful than a standard bike, but doesn't need a motor. Perhaps the Chinese are more indulgent than Americans in this regard. I should also mention that electric bikes (and cars for that matter) need to, obviously, be powered by an energy source. All those coal fired power plants powering all those electric bikes — when they could be simply pedal powered — can't be good for the environment.... So which one is it? (Pardon the over-over-over-simplification) Weak washing machine = good, then electric bikes = bad. Or Electric bikes = good, weak washing machine = bad. In my eyes, you are, at least, superficially inconsistent. Thoughts? Also, here you are way off-base: *The average American thinks: We're rich, they're poor. It's more complicated than that. The Chinese, in hundreds of ways, do more with less. They pay less for the same quality of life.* In aggregate and on average, the Chinese are much more poor than Americans and the vast, vast majority do not enjoy the same quality of life whether they pay more or less for it. I wonder about your claim as to whether they pay less. My guess is that as a percentage of income they pay MORE for foodstuffs and medicine than the average American. But in the end, I don't know. People vote with their feet. You simply don't see a mass influx of permanent immigration to places like China, Cuba etc etc unlike places like the USA.

seth (2008-10-14 00:49:37)

Sure, the Chinese are much poorer than Americans. I'm trying to point out some non-obvious reasons for the difference in consumption per capita. I'm not saying Chinese have a better life overall, just that in certain ways Americans can learn from them. As for bikes, the Chinese have discovered the value of electric bikes. Americans have yet to. In the case of washing machines, Americans could surely get by with weaker washing machines but haven't discovered this (although cold-water detergents are now sold). We overclean our clothes, just as we overheat our water (keep it warm when not necessary).

Patrik (2008-10-14 14:11:17)

Hi Seth, I don't you are addressing my point about the inconsistency of your argument in the post. *As for bikes, the Chinese have discovered the value of electric bikes. Americans have yet to.* To dovetail on this, taking into my account what I wrote above, would you not agree that the Chinese have yet to discover the value of American-style washing machines? I would argue my machine is more efficient, it takes more washes, more water, more detergent, more power via a Chinese machine to achieve the same level of cleanliness. This is not idle speculation — this is what I have observed in Central America and Eastern Europe. *In the case of washing machines, Americans could surely get by with weaker washing machines but haven't discovered this (although cold-water detergents are now sold).* Well, we could 'get by' if we had no machines either. Let's have the women out by the wells with a washboard and handsoap! :) My guess, all things being equal, you show a Chinese woman an American machine and a Chinese one, she'll go with the American one. The reason the Chinese ones are handicapped, b/c it is a poor country and they cannot afford my washing machine. *We overclean our clothes, just as we overheat our water (keep it warm when not necessary).* The merits of flash heating are debatable. My experience (quite a lot) in former and current Communist countries is that when you scratch the surface a bit, things are a lot less efficient than they seem.

Mark (2008-10-15 05:43:36)

Sounds like how we live in Japan. On-demand water heaters are great. You get 80-degree C water right out of the faucet. I use it to fill a heating tank to put under the covers of my bed, and it's still warm in the morning. I can fill up a saucepan without removing it from the stove and it's boiling in seconds. We don't have hot water for washing machines either, and it's just not



missed (nor are dryers). The thing I just really can't figure out are dishwashers. When I visit my family they use dishwashers that in effect require that you pre-clean the dishes or the thick stuff will bake on, and you have to arrange the dishes just the right way. Because the dishes have been "pre-cleaned," they don't look dirty, so it's hard to tell if the dishwasher contains dirty or clean dishes. My mom has some sort of code: she leaves it latched or not latched or something to remind her. In Japan I just wash the dishes while I cook. There are plenty of little 30-second moments during meal preparation to clean everything you've used up to that point, and then the remaining table dishes are all that's left. But, oh, I forgot: Americans can't cook. They can "Food Channel" cook, make big production number dishes, but they can't efficiently throw together a delicious, cheap meal out of a few fresh ingredients picked up on the fly in the market, using a couple burners and few dishes. You didn't mention split-ductless heating. That is huge! Each room (or each major room) has its own heating and air conditioning. And since we don't have huge "great rooms" and high ceilings, you can heat or cool the room(s) you're using very cheaply. And the suckers only cost a few hundred dollars. Split-ductless is available in the U.S. for historical buildings that don't have ducting areas in the ceilings, but when I looked into them for an apartment building I own it turned out that they cost thousands (for the same devices, I'm convinced).

seth (2008-10-15 06:19:18)

Yes, the split-ductless heating/cooling is very important. The weather has been so nice here I haven't turned mine on.

### How to Spot Incompetence (2008-10-14 02:23)

Nassim Taleb [1]says, "When someone says he's busy, he means that he's incompetent." I think he also distrusts anyone wearing a tie. In college, I wrote an essay called "The Scientific \_\_\_\_\_" in which I argued that any writer who uses the term scientific without explaining what it means is incompetent and you should stop reading immediately.

I still believe that. Now, for the first time, I am going to update my list of incompetence giveaways: Plotting something on a raw scale that should be on a log scale. Size-versus-time data should usually have the size axis on a log scale.

[2]This presentation by someone at Sequoia Capital, the Silicon Valley venture capital firm, is full of examples. The Dow Jones Industrial Average (from the 1960s to now) is on a raw scale (where the distance from 5 to 10 equals the distance from 10 to 15), should be on a log scale (where the distance from 5 to 10 equals the distance from 10 to 20). Same for an index of housing prices. Same for the Nikkei. Many other examples. You can still believe the data, of course; just don't trust what's concluded from the data. Given the ubiquity of this practice (plotting on a raw scale what should be on a log scale), especially among financial supposed-experts, Taleb and I are not far apart.

More Taleb makes a similar point in his [3]online notebook. Writing about a debate with Charles Murray:

Finally I showed a graph of the rise of the US stock market since 1900, on a regular (non-log) plot. Without logarithmic scaling we see a huge move in the period after 1982 – "the bulk of the variation comes from that segment, which dwarfs the previous rises. It resembles Murray's graph about the timeline of the quantitative contributions of civilization, which exhibits a marked jump in 1500. Geometric (i.e. multiplicative) growth overestimates the contribution of the ending portion of a graph.

1. <http://www.timesonline.co.uk/tol/money/article4938008.ece>

2. <http://www.slideshare.net/eldon/sequoia-capital-on-startups-and-the-economic-downturn-presentation>

3. <http://www.fooledbyrandomness.com/notebook.htm>

Ashish M (2008-10-14 09:23:37)

Umm, can you explain why size-versus-time data should have the size axis on a log scale? Thanks.

seth (2008-10-14 13:47:23)

The simple answer is: Because doubling in size in a year is equally impressive whether the absolute change (end point minus starting point) is a small number or a large number. The more complicated answer is: Because plotting size on a raw scale means that major changes in the rate of growth at small scales (e.g., between 50 and 500) will be invisible if some of the growth takes place at large scales (e.g., between 5000 and 50000). Interesting structure, if present, will be invisible.

Patrik (2008-10-14 17:17:27)

Seth – absolutely fantastic points. This is especially great as most people are unconsciously cowed by the authoritativeness of the "experts", in this case, VCs.

seth (2008-10-14 19:41:28)

thanks, Patrik

Andrew Gelman (2008-10-14 20:09:00)

Seth, I am busy, and I wear a tie, yet Nassim respects me (I think).

OneEyedMan (2008-10-14 20:35:01)

Shouldn't log scales be reserved for series with geometric growth? In finance this is usually the case, but there are lots of places where it would mislead, like anything with S-curve behavior that hasn't reached the asymptote.

seth (2008-10-15 03:59:54)

Andrew, maybe it helps that you understand the value of log scales.

Andrew Gelman (2008-10-15 08:27:30)

Logs are so important. I never know how much to cover them in my classes. We have some log transformation activities in our Teaching Statistics book.

Patrik (2008-10-15 14:53:47)

Allow me to add to your list of incompetence giveaways: Ordering (ostensibly) meaningful multidimensional data in alphabetical order\*, especially in charts and graphs. This makes me insane! All of the major media do it all the time. Once I noticed that The Economist even does this, I lost a lot of respect for it. [http://www.economist.com/markets/bigmac/displaystory.cfm?story\\_id=11793125](http://www.economist.com/markets/bigmac/displaystory.cfm?story_id=11793125) Look at the Big Mac Index, it would make a helluva lot more sense if it was ordered (largest to smallest or smallest to largest) by either the 3rd, 4th or 6th column items. \*Yes, alphabetical order makes sense for, say, a guest list or any other sort of one-dimensional list.

seth (2008-10-15 15:54:11)

Patrik, I agree. I've heard Andrew Gelman make this point several times. OneEyedMan, "reserved for series with geometric growth" – not at all. There are lots of other cases where log scaling is an improvement, such as power-law-like histograms. The power-law (Pareto distribution) similarity is nearly invisible unless you use log scales for both the x and y axes.

Chris (2008-10-16 09:36:27)

In fairness to The Economist, they produce countless charts of cross-national statistics. Keeping countries in the same order promotes a kind of global coherence - the presentation matches users' expectations. Besides, the typical user won't read the chart thoroughly; they'll scan for the one or two countries they're interested in. On the other hand, I'd say there's a case for them organizing countries by region rather than putting them in one alphabetical list. Tie-wearing? It really depends on your work environment. The underlying factors here is (IMO) dress as an indicator of ability to read social cues.

Patrik (2008-10-16 10:52:42)

*Keeping countries in the same order promotes a kind of global coherence - the presentation matches users'™ expectations.*

@Chris I think what you are saying is that since The Economist thinks its readers are lazy, they should be lazy too. You could say the same about not using log scales, many readers don't expect to see them, so why use them? The average reader of the The Economist has an IQ that is more than enough to process such data presented in a meaningful manner. By organizing multidimensional data in such a lazy manner, that is, alphabetically, The Economist casts away immediate and intuitive meta data that surely its high-income, highly-educated readers value. This is not People Magazine we are talking about here. *Besides, the typical user won't read the chart thoroughly; they'll scan for the one or two countries they're interested in.* I don't think so. I think, at the very least, people will want to see their home country and then the greatest and least in the same category. And then, who they are comparable with. Alphabetization does not help them at all. My stats professor always joked/stressed, presenting data alphabetically is criminally irresponsible. And after a few thousand corporate PPT presentations, I agree.

### **Amory Lovins Speaking in Berkeley (2008-10-14 13:51)**

Amory Lovins  
Chairman and Chief Scientist  
Rocky Mountain Institute

Natural Capitalism:  
The Next Industrial Revolution

Tuesday, October 28, 2008 - 4:10 p.m.  
Lipman Room, Barrows Hall 8th Floor, UC Berkeley Campus

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Benquo (2008-10-14 19:27:22)  
Amory Lovins! Worth it for the name alone.

Nansen (2008-10-15 16:33:09)  
Speaking of appearances, Andrew Gelman will be [1]on C-SPAN2's Booktv this weekend. (Note: the viewing times are in Eastern Standard Time.)

1. <http://www.booktv.org/program.aspx?ProgramId=9825&SectionName=Politics&PlayMedia=No>

### **Live-Blogging the Presidential Debate (2008-10-15 18:58)**

Both candidates are left-handed; left-handedness is far more common among Presidential politics than the general public. Andrew Gelman and I taught a seminar on left-handedness. We did two surveys that found that lefthanders tend to have left-handed friends more than righthanders.

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Timothy Beneke (2008-10-16 08:51:00)

The more older brothers a man has, the greater the likelihood that he will be gay; if a man has 10 older brothers there is a 50 % chance. This is tied to hormonal effects in the womb apparently. But what's interesting, the effect does not occur if the man is left handed, which rules out any socially learned explanation, i.e., older brothers "initiate" boys into same sex behavior. Marc Breedlove is my source on these matters: <https://www.msu.edu/breeds/research.htm> #4 I'd be curious if anyone knows what's been found about left-handedness and personality in general.

CaroleS (2008-10-23 03:43:33)

Interesting survey result. I am left handed but only have two friends who are left handed.

### **Live-Blogging the Presidential Debate (part 2) (2008-10-15 19:01)**

"Childhood obesity is one of the biggest problems we have." Tomorrow I'm giving a talk at Tsinghua University (Beijing) called "The Secret History of the Shangri-La Diet." Childhood obesity is becoming a serious problem in China.

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### **Assorted Links (2008-10-17 05:29)**

1. [1]The scourge of Arial (the typeface)
2. [2]The scandal of university accounting practices
3. [3]Misleading marketing of the world's best-selling drug. "Billions of health-care dollars may be being wasted on statin use by women but the current regulatory regime does not create incentives to prevent such behavior."

Thanks to Justine Roberts.

1. <http://www.ms-studio.com/articles.html>
2. <http://socrates.berkeley.edu/~schwartz/Approp.pdf>
3. <http://www3.interscience.wiley.com/journal/121400492/abstract>

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### **What Should Double-Blind Placebo-Controlled Trials Be Replaced With? (2008-10-17 05:31)**

For a sick person, which is worse?

1. Getting better for the wrong reason.

## 2. Wasting a lot of money.

It sounds like a joke – #1 isn't even harmful, whereas the cost of health care is a very serious problem. Yet the FDA and legislators with FDA oversight have been given this choice – and chosen #1. They have chosen to protect us against #1 but not #2.

If you get better from a placebo effect, that's the wrong reason. How dare you! The requirement that drugs be better than placebo controls prevents this from happening. The requirement might have been – but isn't – that a new drug be better than pre-existing alternatives. Many aren't but they are always more expensive – not to mention more risky.

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T. J. Kuhn (2008-10-17 08:51:49)

Seth, I think your post is a bit misguided. 1) The reason that drugs are required to perform better than a placebo is because the placebo effect tends to only occur in a small set of patients. That is that the mental makeup of a specific patient is the cause of a placebo response (irregardless of the treatment). It is also not clear whether a placebo respondee is "actually getting better". It is just as likely that they were not actually sick in the first place (or as sick as they thought). 2) Those patients who are not predisposed toward exhibiting placebo responses need to be given an actual effective treatment to "get better" and therefore deserve medications that exhibit "better than placebo" characteristics. 3) There is a requirement from FDA (and regulatory agencies worldwide) that new drugs be as good or better than existing medications; or that they provide some sort of unique benefit (or reduced risk). 4) The expense of new medications is largely due to the high cost of research to make those medications (and fund future research). The low-hanging fruit is largely gone. Best, TJK

seth (2008-10-17 18:25:21)

T.J. Kuhn, thanks for your thoughtful comments. I've never before heard the idea that "the placebo effect tends only to occur in a small set of patients." It's a surprising and puzzling idea because there are so many different placebo effects, i.e., so many different situations in which some sort of supposedly-impotent treatment has an effect. What is this idea based on? I don't grasp the reasoning behind #2. It doesn't seem logical. If Person X doesn't respond to placebos, why the need to study or use them? The FDA requirement you mention is useless. Any drug can be claimed to have a "unique benefit." There's always something. "The expense of new medications is largely due to the high cost of research." Huh? Drug companies spend vast sums on advertising and marketing. This surely affects the price of drugs. See my recent posts on Charles "Disgraced" Nemeroff. The reason he's disgraced is how much money he was given (and failed to report).

T. J. Kuhn (2008-10-23 05:06:42)

The important thing to remember about a placebo response is that the response is not due to the treatment. It occurs because of the expectations of the patient. In some studies, there has even been a negative placebo response (that is, the patients were expecting to get worse and did because of their expectations). With regard to my second point: Placebo use in double-blind trials is not an attempt to study them. Rather, placebos are used to better study the actual investigational product independently of the subjects expectations of what taking medicine should do. With regard to advertising and the cost of drugs: Kraft, Coca Cola, Toyota, Miller Beer spend vast sums advertising their products. Surely that has an effect on their prices as well. However, drug companies spend hundreds of millions of dollars researching new treatments. The best (although imperfect) analysis puts the cost of bringing a single medication to market at over 800 million US dollars. I'm pretty sure that Kraft doesn't spend that much on their latest line of crackers. Your point, however, is well taken; "should we allow advertisements for prescription drugs?" There are a lot of valid points on both sides of that debate. I see both benefits and drawbacks; so I think the jury is still out on drug advertising. Have a good day, TJK

## Learning Chinese in Beijing (2008-10-18 23:46)

Learning Chinese here – at least the first baby steps – has turned out be easier than expected. I'd expected to hire tutors. A Berkeley grad student I know who had lived near where I live now had done that. I found ads offering tutoring on a craigslist-like site. I started with the cheapest ( \$10/hour – which is a lot in Beijing). After an hour, I cut short the first lesson. It had been excruciating. "X means this. Y means that." In my tutor's defense, we didn't yet have a textbook to work from but paying \$10/hour for a textbook reader seemed pricey. By then, two people – a Tsinghua student I'd met in a dining hall and the girl who sold me my cell phone – had offered me free Chinese lessons.

"Why should I pay you if others will teach me for free?" I asked my tutor.

"Why did I spend four years in college learning how to teach Chinese to foreigners?" she replied. (That was her major.)

That wasn't persuasive, I said.

She said she had a Mandarin accent but others might not.

"To speak with everyone I should learn from everyone," I said. This is an attractive feature of Beijing: It's much more a melting pot than other Chinese cities, such as Shanghai.

By now I've had several lessons from three different people who offered to teach me for free. It felt like fun, not work. They volunteered to teach me because they would learn English at the same time. Most Tsinghua students want to go graduate school in America, where they can expect to do very well – [1]Dark Matter notwithstanding – so long as their English is adequate. I may be at the exact place on earth – the Tsinghua campus – where English-speaking ability is valued most highly. It might be a special time, too: As the Chinese educational system improves its teaching of English, I expect the value will go down. If I were in Sweden, no one would volunteer to teach me Swedish.

The difference between my paid and unpaid teachers reminds me of a famous psychology experiment on extrinsic versus intrinsic motivation done by Mark Lepper and colleagues at Stanford and published in 1973. They took two groups of kids and put them in a room full of toys. One group was told they would be rewarded if they played with the toys. The other group wasn't told this. Two weeks later, the kids were put back with the toys. Kids rewarded for playing with the toys played less with them than the other kids did. It's such a profound effect it's like there are two different motivational systems.

1. <http://www.darkmatterthefilm.com/>

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RasmusF (2008-10-19 08:46:12)

"If I were in Sweden, no one would volunteer to teach me Swedish." I assume you're talking about fairly large commitments of time and effort, because one of the most common interactions I've observed between tourists, or exchange students, and Swedes is helping each other learn a little bit about the other's language. Travelling I've found that one of the easiest ways to strike up conversation is to ask strangers to help me pick up a little of the local language. I do think Sweden might be interesting to study if you want to learn more about adults learning a new language. Since we've had huge immigration rates the last few

decades there's tons of observations about mandatory Swedish classes not working and self motivated learning working really well.

Aaron Blaisdell (2008-10-20 07:41:07)

Seth, are you learning to read/write Chinese as well? I took a year of it at UCLA (sat in on the undergraduate level 1 course) which helped me immensely. The grammar is actually quite easy, but the tones take some getting used to. For me the killer is the huge quantity of homonyms. Not only are there four ways to say any particular phoneme, each way can have multiple meanings depending on context. The same pronunciation of "shi" can mean "TV" or "stone" or a bunch of other things as well. Keep it up, it is a very interesting language. Aaron

seth (2008-10-20 12:28:56)

Yes, I'm learning to read Chinese. Not write it, at least now. The reading part is relatively easy; the speaking part is really hard. I can't even properly say the name of my school.

Patrik (2008-10-20 14:19:37)

Tim Ferris has a few interesting thoughts on this. He is quite the self-promoter and I think, very prone to hyperbole, but, in his defense, does make some incisive observations on language acquisition. (Ignore the bombastic titles and exaggeration) <http://www.fourhourworkweek.com/blog/2007/11/07/how-to-learn-but-not-master-any-language-in-1-hour-plus-a-favor/> <http://www.fourhourworkweek.com/blog/2008/09/22/why-language-classes-dont-work-how-to-cut-classes-and-double-your-learning-rate-plus-madrid-update/> Would love to know if any of his recs would come in handy for Seth.

### **Is Your Milk Safe? A Statistical Fable (2008-10-20 04:44)**

This recently happened in a class at the Beijing Language and Culture University:

TEACHER Your milk is safe if you buy it at a supermarket.

STUDENT What do you mean, "supermarket"? Where else could you buy it?

TEACHER That's a good question, I don't know the answer. They told us to say that.

When analyzing their data, a vast number of scientists more or less blindly do what a statistics book told them to do, just as this teacher said what she'd been told to say. Even worse, a vast number of statistics textbook writers simply copy other textbooks (not word for word, just the ideas and recommendations). The scientists and the textbook writers take refuge in false certainty. They fail to grasp that although the recommendations are black and white, the world is not – just as it isn't black and white what milk is safe. Unlike this particular classroom, no one questions this.

Thanks to Sally McGregor.

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Patrik (2008-10-20 14:12:52)

Your observation, while part and parcel of the human condition (we tend not to question authority/'experts' or popular opinion etc etc), is even more pronounced in Communist countries. Probably tenfold more.

## Jane Jacobs on Experts (2008-10-22 07:16)

Her leitmotif was a swipe at the whole notion of expertise. She went to work for Architectural Forum, she told me, when the Office for War Information was consolidating its staff in Washington, and she didnâ€™t want to leave New York. . . .

â€œI went to Architectural Forum, and they said well, youâ€™re now our school and hospital expert,â€ she explained. â€œThat was the first time I got suspicious of experts. I knew nothing, not even how to read plans.â€ She paused for a moment. â€œAnybody who would want to be an expert, I have some advice for you: apply at a magazine.â€

From an [1]article by Paul Goldberger.

1. <http://theamericanscholar-test.org/?p=164>

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thehova (2008-10-22 09:35:36)

I hate to get political. But I think this is all part of the reason why many libertarians like myself feel uncomfortable with the the Democratic Party (not that the Republicans are much better...but at lest they seem to support the empowerment of state and local governments and have more of a hands off approach to regulation).

## Dutch Unmentionables (2008-10-22 18:10)

My friend in Holland wrote again:

Dutch people might say that they think the Queen should be democratically elected, but they never say, "She owns Royal Dutch Shell, if she paid taxes on the \$4 billion contract she just signed with the Pentagon last week, I wouldn't be paying 42 % on my income... We need to re-examine that."Â They'll talk about the golden horse-drawn carriage she rides around in on Prinsjesdag, and how cool it looks on TV.Â And what an impartial symbol of Dutchness she is.

[1]Â What beleg means. [2]Dutch law about sex with animals.

1. <http://www.blog.sethroberts.net/2008/03/20/what-beleg-means/>
2. <http://www.blog.sethroberts.net/2008/04/02/more-from-holland/>

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Nathan Myers (2008-10-23 17:03:46)

Does she own Royal Dutch Shell? Would she be obliged, as a regular citizen, to pay large absolute quantities of tax? I don't know these things, so don't know how to interpret the quote.



Chris (2008-10-24 10:41:41)

Even if she owned 100 % of Royal Dutch Shell, and your friend's figure of \$4 billion represented her personal profit, even taxing it at 80 % would lower your friend's income tax rate by no more than one percentage point (figuring on 10 million Dutch taxpayers paying 42 % tax on an average income of US \$30,000 - I haven't looked anything up, but this should be in the ballpark). Under realistic assumptions (the Queen is a minority shareholder, the margin on the deal is

Chris (2008-10-24 10:44:55)

Weird, my last comment got truncated (probably because I used a less-than sign in the original): Even if she owned 100 % of Royal Dutch Shell, and your friend's figure of \$4 billion represented her personal profit, even taxing it at 80 % would lower your friend's income tax rate by no more than one percentage point (figuring on 10 million Dutch taxpayers paying 42 % tax on an average income of US \$30,000 - I haven't looked anything up, but this should be in the ballpark). Under realistic assumptions (the Queen is a minority shareholder, the margin on the deal is less than 10 %), the prospective tax relief shrinks to practically zero. Sounds like your friend is an anti-monarchist, so it's logical for him to regard money spent (or taxes forgone) on the monarchy as pure waste. But really and truly, monarchies do not cost that much in comparison to the other functions of the modern state. If you're going to have a monarchy, it must project an appearance of opulence, because the monarch as the personification of the nation needs to overawe all private interests (flashy billionaires etc.). But this can all be done on a few hundred million a year - chicken feed, relatively speaking.

### **Tsinghua versus Berkeley (2008-10-24 05:46)**

UC Berkeley is far better known than Tsinghua University, the best university in China. Of course, Berkeley's prestige rests on research and graduate teaching. At the undergraduate level things are quite different. Tsinghua probably has the smartest undergraduates in the world (1 in 10,000 students who take a national test get in); Berkeley isn't close.

At Tsinghua, every department is assigned a quota of undergraduate majors (e.g., 100) that is the maximum number of undergraduates in that major. The departments fight over this number: Every department wants to increase it. I use italics because the situation at Berkeley (and probably every other American research university) is the opposite: Everyone fights to do as little undergraduate teaching as possible.

I learned these facts from a visiting professor at Tsinghua. Why is the situation so different at Tsinghua than in America? "They're fun to teach," he said, meaning the undergraduates. "No one ever says that at Berkeley," I said. Later I learned he was a visiting professor from Berkeley. Implicit in his comment was that both of us knew that the Berkeley undergraduates are not fun to teach.

That little comment - "They're fun to teach," which was said a bit ruefully, acknowledging that Berkeley, where he spends most of his time, was much different - expresses in a nutshell what's wrong with all American higher education. Berkeley undergraduates would be fun for someone to teach. I liked many of them. They have many good qualities. But very few of them want to be professors; nor do their talents usually lie in that direction. Forcing them to be taught by people (professors) who really only know something (how to be professors) that their students don't want to learn, and forcing Berkeley professors to teach students who don't want to learn the only thing they really know, is just a recipe for unpleasantness and low-level misery on both sides (professor and student). That's exactly what professors and students feel most of the time.

Just as drug companies hide the side effects of their drugs, both professors and students hide the side effects of this life-wasting situation. At Berkeley, few non-professors know the vast array of deals that are struck to reduce one's undergraduate teaching. In Psychology, there has been long-lasting resentment that you can't use grant money to buy your way out of teaching. Students hide how much cheating goes on. A Penn student told me: No student project at Penn is completely honest. At Berkeley, surveys have revealed high amounts of cheating. Few outsiders

know the low level of lecture attendance at Berkeley.

A better system would be one that helped Berkeley undergraduates – not to mention the students at every other American college – be in contact with people who would enjoy teaching them. (And in that situation, I'm sure their many non-academic talents, which professors usually didn't notice, would shine.) Simple as that. The current system hinders that contact. Columbia University has taken a step in the right direction by having no classes on Friday, making it easier for students to do internships. When I taught a class that helped Berkeley undergraduates learn what they wanted to learn, my colleagues complained. According to them, my students weren't learning proper psychology. It's true, they weren't. My students were learning what they themselves wanted to learn instead of what some professors thought they should learn. My approach was about a thousand times more effective in producing learning but my colleagues had lived in darkness so long they could no longer see light.

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Nadav Manham (2008-10-24 07:19:58)

Seth, What makes the Tsinghua University undergraduates fun to teach? Are they for the most part future academics, and therefore want to learn what their professors want to teach?

Patrik (2008-10-24 10:47:53)

Great post. Good on you. *When I taught a class that helped Berkeley undergraduates learn what they wanted to learn, my colleagues complained. According to them, my students weren't learning proper psychology. It's true, they weren't. My students were learning what they themselves wanted to learn instead of what some professors thought they should learn.* Nothing like a little professional jealousy courtesy of colleagues mired in the status quo. I have to say, one of the things I very, very much enjoy about this blog is your honesty regarding higher education.

Josh (2008-10-24 13:21:33)

Having suffered through nearly three years of college myself, your points are dead on. I particularly like the idea of giving the students Friday's for internships, which will help them far more in preparation for the real world than any amount of class lectures.

Ashish M (2008-10-24 18:30:20)

All so true. (Well, the parts about the Berkeley undergrad experience, anyway.) But even if we all agree, under the current system, who has an incentive to change the status quo? No one. The anomaly isn't Berkeley - the anomaly, at least based on what I've seen of the US higher education system, is Tsinghua. A more interesting comparison to Tsinghua might be with Caltech - are their undergrads all grade grubbers with disinterested research-focused profs? I've heard otherwise.

seth (2008-10-24 19:10:51)

Why are Tsinghua undergraduates fun to teach? Nadav, I haven't yet taught them, but I know enough to say you are exactly right: They have similar strengths and interests as the professors. Tsinghua undergraduates are indeed like Caltech undergrads. I think that every day – I was a Caltech undergrads. That might be the American example closest to Tsinghua. Who has incentive to change the current system? Well, the students do, obviously. Berkeley professors would like to teach much less. Which would happen if someone else – those who would enjoy teaching Berkeley students – did more of the teaching. The taxpayers would benefit from an economically less wasteful system (and the parents among them would like to see their children happier and better appreciated). I think all three sides have incentives to change. But I agree with your overall point, which is that the system is hard to change. Perhaps the big barriers to change are three: 1. Change would require acknowledgment of how bad the current system is, and that would mean acknowledgment of the self-serving lies that have been told about it ("we're teaching them to think"). 2. The future system would probably contain fewer research professors. Maybe a lot fewer. 3. The

biggest victims of the current system are students, who are relatively powerless.

Andrew Gelman (2008-10-25 17:47:32)

I found the Berkeley undergraduate stat majors fun to teach. Also, you write "Columbia University has taken a step in the right direction by having no classes on Friday." This must not be the Columbia University in New York, where I teach on Fridays every semester!

seth (2008-10-25 23:48:45)

Andrew, Columbia has nothing like this?

Marty Nemko (2008-10-27 23:37:08)

Precisely correct. That's why the freshman-to-senior value added in reading, writing, thinking, quantitative reasoning, etc. is so low. See my article on the subject in the Chronicle of Higher Ed. [chronicle.com/free/v54/i34/34b01701.htm](http://chronicle.com/free/v54/i34/34b01701.htm)

Seth's blog » Blog Archive » Tsinghua versus Reed (2008-10-28 01:02:09)

[...] Tsinghua versus Berkeley [...]

seth (2008-10-28 01:05:11)

Marty, I thought of you as I wrote it.

Elaine Chan (2008-11-14 11:44:11)

Seth, could you comment on how you structured the class so that students learned what they wanted to learn? Did you start out with a syllabus that changed throughout the semester? Did you start out with no syllabus at all? How did you solicit information about what students were interested in learning?

seth (2008-11-15 05:04:22)

How did I structure the class "so that students learned what they wanted to learn"? I let them do whatever they wanted – volunteer work of some sort – off campus. We met once a week and talked about it. In other classes, I let students do their term project on whatever they wanted so long as it was off campus and not library research (thus pushing them out of their comfort zone and requiring them to do something new). They inevitably did something they wanted to learn about.

barry (2008-11-29 07:08:21)

Why did you retire so early from Berkeley? Is this why? You're now at Tsinghua....isn't there only a few faculty members in your department? I hope you like it better. Not use being unhappy in our life if we can get out of it...

## My Chinese Cell Phone (2008-10-24 19:36)



...looks a lot like this one. The China/America comparisons are all in one direction:

1. The Chinese plan is prepaid; the American plan is not. The slight inconvenience of having to recharge one's phone every now and then is far outweighed by a much lower price. The plans can't be directly compared but I pay about \$50/month in America and about \$10/month in China. I pay \$15/month to keep my American number while I'm in China!
2. No voice mailbox in China. I don't miss it. You send a text message instead. I got about one text message/month in America (at 15 cents each); I get about 6/day in China (at 1.5 cents each).
3. My Chinese phone cost about \$40. My American phone came as a Free New Phone Every 2 Years thing but re-tailed for about \$200.
4. My American phone had so many features I never used, including a camera, I had great trouble finding a feature I now use all the time on my Chinese phone: a day planner.
5. Verizon, my American service provider, had/has excellent customer service but the girl who sold me my China Mobile phone plan gives me free weekly Chinese lessons. During working hours.

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mike kenny (2008-10-25 12:27:12)

flying pig key chain, nice! i'm surprised they don't have voice mail. why is that? just cheap texting is a fine replacement?

Andrew Gelman (2008-10-25 17:44:33)  
You can get prepaid cell phones in the U.S.

seth (2008-10-25 23:10:41)  
Andrew, I didn't know that I wonder if I can switch my number.

Willy (2008-10-27 07:39:19)  
I agree that one of the most useful application in a cellphone is the calendar. The phone is one thing you will carry most of the time. Surprisingly many good phones do have adequate ones. Low cost Motorola phones have good calendars (e.g. repeat events, icons). Other brands may not have the same features. I find the keys in the C series of Motorola uncomfortable. I like cameras in cell phones. You can capture information easily, like taking a pic of a book you found at a bookstore when you don't have paper and a pen or because it is faster. I read an article where someone used the camera to remember where he parked his car :) Regarding price, it seems the deal is cheap phones/expensive rates or vice versa.

a-duo (2008-10-28 19:04:38)  
I think you can find Voice Mailbox in this website:<http://www.chinamobile.com/en/mainland/products/nb05.html> but I do not know whether it is what you mean voice mailbox in US.

Chris at Prepaid Cell Phones Guide (2008-11-07 13:56:22)  
There are now a bunch of well-priced and convenient prepaid cell phone plans available. The large companies like Verizon and T-Mobile are competing because they see that the market is changing. No longer will they be able to wield the two year contract over their customers-if they go for the prepaid or pay as you go plans. That seems ridiculous you have to pay \$15 a month to "keep" your American phone number.

jordi (2008-11-28 23:14:24)  
It is good that you are meeting many people in Beijing. How are you able to do that when you don't speak Mandarin or Cantonese? I've noticed throughout your blog entries that you trust people very easily. I hope you will be careful in China. What you think of in your mind when interacting with someone there might be different than what he or she thinks, since the Chinese have a different culture.

## **Cold Jokes (2008-10-25 23:39)**

A cold joke is a sort of nonsensical joke that is funny because it's not funny, sort of like [1]the New Yorker Anti-Cartoon Caption Contest. Two examples:

1. A piece of bread was walking down the street. It got hungry, so it ate itself.
2. Hanging in the hallway at Whites High School in Wabash, Indiana, are basketball team photos. In the center of the front row in each picture someone holds a basketball identifying the year: "62-63", "63-64", "64-65", etc. One day I saw a freshman looking at the photos. Turning to me, he said, "Isn't it strange how the teams always lost by one point?"

1. <http://www.radosh.net/archive/002497.html>

dj superflat (2008-10-28 14:52:33)

aren't some of these meta jokes? e.g., you're pointing out the silliness of a piece of bread walking down the street, feeling hungry, and then you return to the real world where a piece of bread is food. my favorite meta joke is too long for a comment, here's the short version: two eggs in a frying pan, one egg says to the other "gee, it's so hot i'm beginning to coagulate," the other says "gee, a talking egg."

Isak (2008-10-29 21:52:36)

This video is an excellent example of what you are talking about: <http://www.collegehumor.com/video:1772014>

### **Beijing Traffic (2008-10-26 00:15)**

This morning (Sunday), two friends and I wanted to go see the leaves change on some maple trees in a famous place. We went to the bus stop. The first three buses were utterly, totally packed – I have never seen buses so packed.

So we decided to take a taxi. The taxi couldn't go there – congestion was so bad that only buses, using special lanes, could get through.

We went back to the buses. Three or four more buses were utterly totally packed. We decided to go another time.

In the time we spent waiting for the buses we could have almost walked there; it's only about 5 miles away. Maybe next time we will bike there.

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### **Interview with William Rubel, Food Historian (part 1) (2008-10-27 06:53)**

My friend [1]William Rubel is writing a history of bread. I'm sure it will be fascinating, so I interviewed him about it.

ROBERTS Can you give the background of your book, the book you're writing now? What led you to write it? Why did you want to write about the history of bread?

RUBEL I've been interested in bread since I was a child. I started making bread when I was eleven from the American Heritage cookbook. I made Anadama bread.

ROBERTS What kind of bread?

RUBEL It's called Anadama. In the headnote it uses the word "damn," and that wasn't a word used around my house so I was very excited to see it in print so I could show it to my mother, as I recall. It's a molasses cornbread. And probably with an inaccurate culinary . . . the history in the headnote is probably not accurate. But that's a different story.

I've always been interested in bread and I have for a long time been surprised at how difficult people seem to think making bread is. Long before I started this book, in conversations with people they'd say, "Oh

but making bread is very hard.â€™ And Iâ€™ve always found it to be rather easy. Iâ€™ve always found bread to be a natural process that is pretty difficult to fail at.

One of my primary interests in researching the history of bread is to find stories about bread that will inspire bakers but also to find older ways or different ways of writing bread recipes so that bakers will feel empowered. I think that the modern recipe format, and this might be not quite on topic, but you can cut it to someplace else, the modern, particularly American recipe format with its specificity of measurement and technique, I think actually undermines the bakerâ€™s confidence, the cookâ€™s confidence, rather than builds it. Right now particularly with bread recipes, the recipes are becoming increasingly specific so that a brioche recipe might run for ten pages and does in one of the cookbooks on my shelf. I think that you are in a vicious circle where more specificity breeds more tension and undermines confidence and actually reduces the number of people who are willing to just sit down and put together a bread.

ROBERTS I think thatâ€™s a great point.

RUBEL With the exception of pastries, which are chemical recipes that require precise ratios for a very, very specific effect. You canâ€™t make a puff pastry if the percentage of butter is wrong, and there is a right and wrong for making something like the puff pastry. But for most recipes, and certainly for bread, there isnâ€™t really a right and wrong. One thing that Iâ€™m learning, but it was also something I was looking for in historic text, is that there really isnâ€™t, thereâ€™s rarely a single definition or a single recipe for a bread. For example, if we take modern breads, like the baguette, modern cookbooks offer a recipe titled â€˜Baguetteâ€™ and then there is a recipe—a very specific recipe—for that bread. But if you go to Paris, which is indisputably the home of the baguette, and if you buy a baguette at every bakery you pass for a period of hours . . .

ROBERTS How many baguettes are we talking about?

RUBEL Well, it depends how fast you walk and it does depend what district youâ€™re in, but you could certainly collect 20 or 30 baguettes in a couple of hours. Youâ€™re going to find that they are all long, skinny breads, and they all have diagonal slash marks along the top—that opens them up. But past that, itâ€™s also clear that there isnâ€™t one recipe. Some will be very fluffy inside with an even crumb and very white. Some are going to be cream-colored inside with large, irregular crumbs. Some are chewy, some are not. Some are made with whole wheat or certainly flours that are not all white. Some are made with yeast, some are made with leaven—with sourdough. Thereâ€™s just every combination—many different recipes. I think youâ€™re going to find that all wheat bread—and thatâ€™s really the definition of a baguette—something simple like a wheat bread that weighs approximately 450 grams and is long and skinny and has diagonal slash marks on the top.

By going back into history, I tried to find inspiration and confidence; stories for cooks that will help them understand that they can be more relaxed when they approach a bread and that there isnâ€™t necessarily one answer.

But maybe more generally, and to answer that question more directly, I discovered in my book, *The Magic of Fire*, which is a book on hearth cooking, that cooks went from cooking in the fireplace, more or less in the blink of an eye—all at once—to cooking on iron stoves and then these gas and electric ranges. And nobody had written down, no cook wrote down, what it was like to cook in the fireplace. There was no manual. But all of our recipes are derived from hearth cooking.

When I took the recipes back to the hearth then I found that there was often potential for flavor and texture, in particular, that were implicit in the recipe once you got it to the fireplace. They were implicit in the recipe but unrealized until it was brought back to the fireplace.

ROBERTS By implicit in the recipe, you mean those ingredients could produce a much better result than they

usually got?

RUBEL Take a lasagna. You layer the boiled big pieces of pasta down with some ingredients and maybe you put cheese on top. And then you put it in a pan in the oven and you bake it. Originally it was not baked in the oven like that, it would have been originally baked in a Dutch oven, what we call a Dutch oven: a pot that you can put a lid on and you can put embers on the lid as well as embers underneath the pot. Or it was baked in the bread oven.

Now if we take the hearth cooking situation, which would have been the most common, because most people did not have ovens at home, you have straight, independently controlled heat sources. You can heat the Dutch oven just from the sides closest to the fire, from the side heat. You can heat it from embers underneath and you can heat it by embers on the top. So you might have your lasagna well cooked—heated all the way through—but you want to brown the top. At that point you can throw embers onto the top and brown it. You can take away all the other heat sources and just focus on that top. You might like to have crust on the bottom and the sides, so you would also have control of the heat source just to do that, whereas in an oven, everything’s a steady 350 degrees, top and bottom.

ROBERTS I see. Now I understand.

1. <http://www.williamrubel.com/>

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Nathan Myers (2008-10-27 21:34:25)

Speaking of lasagne, you don’t need to boil the noodles. They can absorb all the water they need from the zucchini, spaghetti sauce, and what-have-you layered in between, and you’ll end up with a more flavor-concentrated lasagna. Don’t use tomato paste. I’ve got very lazy about bread lately: I get Trader Joe’s pizza dough.

### **Tsinghua versus Reed (2008-10-28 01:02)**

Let’s say I’m a record producer. A 20-year-old tells me he wants to be a record producer, and I say, okay, I’ll teach you. Do I write a syllabus? Set up class meetings? Give lectures, homework assignments, tests, grades? Of course not. None of that. Not necessary. I just say: Hang out with me. And he does, and both of us benefit. He learns what a record producer does, I have someone to whom I can pontificate (one of the pleasures of blogging) and who will do menial tasks. And having an assistant makes me look and perhaps even feel more important. The same thing could be done with almost any job. That’s real teaching. It’s as natural and easy as breathing or eating.

Contrast this with (a) undergraduate teaching in any American research university, such as Berkeley and (b) the situation described in an email to alumni I got today from Colin Diver, the President of Reed College. President Diver taught a seminar at Reed and described his experiences. Does he say the students were “fun to teach” as [1]a Tsinghua University professor told me? Not at all. Quite the opposite. His main observations:

Courses at Reed must be very carefully planned. . . . Leading a successful Reed conference [= seminar] takes considerable finesse. . . . Tamara [his co-teacher] and I spent hours planning and debriefing [= discussing afterwards] classes. . . As an instructor, you can never be too well prepared. . . . Both student enthusiasm and modern information technology conspire to extend the class hour virtually around the



clock. . . . Teaching at Reed means giving (and getting!) lots of feedback. . . Teaching at Reed is both exhausting and exhilarating! [Details of exhilaration not given.]

This is a fund-raising letter! A friend of mine got a teaching job at Reed and quit to take a lower-status job because the teaching was exhausting, as President Diver so clearly explains. But, [2]as I said about Berkeley faculty, President Diver has been in darkness so long he can no longer see light – in this case, he cannot see how unpleasant he makes teaching sound, at least for the professor. He fails to grasp he is describing sickness not health.

President Diver seems to have faintly discerned that there might be something wrong with the picture he had painted so he added:

Despite the long hours and hard work, the experience of teaching helped me understand why faculty find the experience of teaching at Reed so satisfying. . . .Nathalia King, professor of English and humanities, once said to me: "When you put teachers who genuinely love to teach together with students who genuinely want to learn, magic happens."

Magic, huh? Black or white? The end of Diver's letter is all about a new program that will allow Reed professors to teach less. "The new program will, to be sure, slightly reduce the amount of time faculty spend in the classroom over their careers." Actions speak louder than words.

1. <http://www.blog.sethroberts.net/2008/10/24/tsinghua-versus-berkeley/>

2. <http://www.blog.sethroberts.net/2008/10/24/tsinghua-versus-berkeley/>

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Stephen M (Ethesis) (2008-10-28 05:43:05)

I taught a little and really enjoyed it. But I was teaching post graduate students. You make a good point though, about how much of what is going on seems aimed at finding ways for "teachers" to spend less time with students rather than more.

Stuart Buck (2008-10-28 07:38:43)

You make a good case for apprenticeships rather than schooling.

Aaron Blaisdell (2008-10-28 09:37:34)

Seth, What you describe sounds like an apprenticeship, which is what graduate student training is like. I use this approach with my graduate students and post docs, but also with the undergraduate assistants in the lab, as well as the occasional high-school student. This method works great and is very enriching for both the master and the apprentice. It is, however, impractical when a large number of students are involved. I teach a course with 250-300 students, another with about 70, smaller seminars of about 5-20 and a lab course which I limit to 10 students so that we can do a manageable project (a rat study) together. Speaking from my experience as an undergraduate at SUNY Stony Brook, I enjoyed my classes the size of 250-300 as much as the smaller seminars. I got something out of each one, and I knew what the constraints of each format were. I recognized from the very beginning that the large lecture hall classes are largely a one-way dissemination of information to lay the landscape for a particular field of knowledge and investigation. After having established some groundwork, I could then take smaller, upper-division courses where I could explore a particular topic in more depth and in a more intimate setting. I enjoyed both formats and excelled in both. I think one problem that occurs in college is that many students want to get a job or a career rather than an education. Education in science, arts, humanities, etc., involves more than just practical skills, which of course are very important. But moreover, getting background knowledge in many

spheres of interest (i.e., a broad education) allows one to use the critical thinking skills one hopefully also acquires in college to make a life and career. As a psychology professor, I see a lot of students that just don't get that psychology is not just a practitioner's field, but also is a field of investigation with a scientific and philosophical basis. Some of these students discover the joy of scientific discovery accidentally, but some of them resist it thinking that it is a waste of time. Maybe for them it is a waste of time, but then they had been misled about what psychology is or what a psychology major entails. Yes, teaching is difficult and takes time away from scholarship and research. But every time I teach, I find enjoyment, pleasure, and discovery—whether it is the large lecture course or small seminar. Also, I have made many insights that led to changes or enhancements in my own research during the process of teaching. Teaching has truly enriched my scholarship. And, there are always students, often many, who honestly report enjoying the courses they have taken with me. Tough, yes. Rewarding, you bet!

Chris (2008-10-28 23:44:21)

Seth, I'd be curious to hear your thoughts on how well prepared the students are for the challenges after school. I'm American educated (grad degree) been living/working in Japan and actually have had a chance to visit Tsinghua as we have a branch office amidst all the tech companies near there. My interpretation of Asian vs. American education models is that Asian ed is successful at knowledge transfer but not at teaching self-reliance and an ability to learn outside the classroom setting while the American one (through factual failure?) teaches self-reliance at the expense of knowledge. For successful Americans, they learn social and some skills in primary school and then education gets progressively less hands on through high school and then are given a "we won't spoon feed you any more" environment in college where you have to really learn to figure out what you want to do, who you want to be friends with etc. After college, the (successfully?) western educated realize that they have to keep figuring things out to be successful in life and so they continue to strive and the marketplace rewards those that figure out more things. In Japan/China they start the same way but if you're considered the cream of the crop (via test taking) you end up at schools where they 1) hand hold the students and 2) praise their students as being the best of the best in effect creating what Carol Dweck coined as the Fixed Mindset where you're considered so smart that fear of failure becomes an impediment. In work, I struggle in hiring Asian educated students from the top schools. They know a lot more about physics, engineering, literature, history, etc. but they have a lot more trouble learning how to get things done in a non-academic setting and create advances out of fear of failure. Self-experimentation to me is all about a personal inclination to learn. It'd be great to hear through the months where you see experimentation in China coming from—is it from the specially groomed elites or from the worker class?

seth (2008-10-30 02:13:27)

Stuart, yeah, apprenticeships are "natural" teaching. I'm sure that how things worked for many thousands of years. Aaron, I don't mind universities teaching something besides job skills but they do a miserable job of it. Professors at universities such as Berkeley and UCLA often claim that they teach "critical thinking" – and fail to grasp the far greater importance of curiosity and appreciative thinking. In my experience, professors at Berkeley, on average, fail completely to teach either one. All that Berkeley professors really can teach – and quite well – is how to be research professors. I saw this in class after class. When they claim that they can teach anything else, I scoff.

Seth's blog » Blog Archive » Why One Student Loves Tsinghua University (2009-06-29 09:58:38)  
[...] Tsinghua versus Reed. [...]

## Advances in the Shangri-La Diet (2008-10-28 16:11)

A friend writes:

[My girlfriend, who is 5' 5" and started the diet at 174 pounds] has lost 12 pounds [over 2 months], no longer feels constantly hungry since starting the diet. We've been putting the flaxseed oil on toasted sourdough rolls (from Trader Joe's) because the oil doesn't seep through as easily.

I like the way flaxseed oil tastes on toast but in this circumstance we're nose-clipping so we don't taste it. The toast makes us feel less queasy afterwards than taking the oil straight. We do two tablespoons/day instead of three because we're including the calories in the toast which we also don't taste. The TJ's honey whole wheat bread is denser and holds the oil a little better than the sourdough stuff she likes. Either way there's usually oil left on the plate that came through the holes in the bread. I said, since you can't taste it why not use the whole wheat? The texture, she says, but I think it's really because her mother made her eat whole wheat bread growing up which she never liked and still doesn't even though under these circumstances she can't taste it. Bad associations, maybe? Good old Pavlov, it's like he's still around. The effect on my back pain [it made his back pain go away] has become even more noticeable. If I skip the oil for a couple of days I start feeling it again. [emphasis added]. I haven't been consistent enough with it to lose weight, and now that [my girlfriend] has gotten a little skinnier she's starting to make comments to me about how I might want to lose a few pounds.

I have tried flaxseed oil on toast, eaten nose-clipped, and it is my favorite way to consume the flaxseed oil. It tastes like hot buttered toast. It's not so easy here in China where I don't have a toaster. You can't do it with untoasted bread – the water repels the oil, so it doesn't soak in.

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Stephen M (Ethesis) (2008-10-28 19:52:50)

I need to get some courage and start eating oil and bread while nose clipped. Have you tried adding a little sesame seed oil for the sesamin to see if it does anything for you?

Igor Carron (2008-10-29 00:07:34)

Seth, I have noted the back pain effect myself but some warning might be of interest: <http://www.sciencedaily.com/releases/2008/10/081027140817.htm> Igor.

karky (2008-10-29 03:27:42)

Maybe you could try toasting your bread in a dry frying pan.

Aaron Blaisdell (2008-10-29 10:13:39)

Igor, thanks for the link. My wife was recently pregnant. I asked her doctor if it was a good idea for my wife to increase omega 3 consumption during her pregnancy. She said yes if the source was fish oil but not if it was from flaxseed oil. She said there were data indicating that pregnant women had greater difficulty processing flaxseed oil, due (I guess) to the hormonal changes during pregnancy.

Patrik (2008-10-29 11:03:54)

I wonder if the Shangri-La diet would work with lard? I know lard has a bad reputation, but quite simply put: That is bullshit. A couple of interesting links: <http://wholehealthsource.blogspot.com/2008/03/l-word.html> *The fatty acid profile of lard might give us a clue. A major portion of lard is monounsaturated, 40 % by weight. This is the same type of fat that predominates in olive oil (73 %), and which is widely recommended by mainstream nutrition experts. Another prevalent class of fat in lard is saturated, at 48 %. More than one third of this saturated fat is stearic acid, which even the most hardened lipophobe will agree has a "favorable" effect on blood lipids. Then there's the 8 % polyunsaturated fat, which has been the darling of mainstream heart disease research for decades due to its ability to lower blood cholesterol (for the record, I believe the polyunsaturate content is lard's least healthy feature). The omega-3:6 ratio depends on how the pig was raised, but is typically skewed more toward omega-6. So what does that leave us with? 66 % fats that we're told are heart-healthy, and 30 % non-stearic saturated fats that are supposed to be unhealthy. But if you still believe saturated fats cause heart disease, check out this post, this one and this one. Well if the fat composition of lard isn't unhealthy, then what else could be the problem?*

Shangri La Diet- Exotic but full of junk science | Big2Fit.com (2008-10-30 14:33:12)  
[...] Comment on Advances in the Shangri-La Diet by Stephen M (Ethesis) [...]

Shangri La Diet- Exotic but full of junk science | Big2Fit.com (2008-10-30 15:24:57)  
[...] Comment on Advances in the Shangri-La Diet by Aaron Blaisdell [...]

SusanJ (2008-10-30 19:58:17)

Since both carbs and wheat gluten are bad for you, it seems silly to consume them noseclipped so you can't even enjoy them. You can easily find many good sources to support my claims about carbs and wheat. However, I highly recommend the Hyperlipid blog as a starting point: <http://high-fat-nutrition.blogspot.com/>

dj superflat (2008-11-03 16:25:54)

don't get the nose-clipping, i just pour the oil into a spoon, drink it down, got used to the taste pretty quickly (my 11-month-old loved it from the get-go).

### **Beijing Traffic (more) (2008-10-30 01:57)**

Today I went to a special building, only a 10-minute drive from my office, to get a physical exam needed for a special visa. The administrative assistant of the Psychology Department accompanied me. We set off about 8 am. He mentioned a vision exam so I went back to my apartment to get another contact lens. (I wear just one, so that I have good vision both near and far.) Then we tried to get a taxi. We found one but, stuck in traffic, it went nowhere. After 10 minutes or so, we got out. We decided to go in the administrative assistant's car (he preferred to take a taxi because he didn't know where the building was.) It's now 9:10 am. We set off. We reach the building around 9:20. Oops - I forgot my passport. We get a taxi to take us back to campus so I can get it. The driver tries to cheat us by taking a long route. On the way back - on a reasonable route - we get stuck in traffic again. We get out of the taxi. We'd like to go back to the exam building, pick up the administrative assistant's car, and take a different route back, but that would require crossing six lanes of busy highway to get a taxi going in the right direction. That's too scary so eventually we get a taxi that goes back to campus via another route. Now it's too late to do the exam. We'll try again early tomorrow. For some reason - exhaust fumes? too much sitting in a car? - my head hurts.

More What a difference a day makes. I went back the next morning and there were no problems at all. We found a taxi easily, the trip was fast and smooth, the exam didn't take long, and the trip back was fast and smooth. We passed a man trying to start his car in the middle of a big street.

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Mel (2008-10-30 18:38:03)

When my MIL visited China in the late 80's, she came back with the story that crossing the street was so dangerous that she took a cab. We laughed. We adopted both our daughters from China and I want to testify that nothing could get me to cross a street! The pedestrian has no "rights". One morning our guide tricked us into crossing a busy street because she thought we were wasting our money on taxi fare. It was a very scary minute. Melinda

## **Unread Contracts (2008-10-31 05:00)**

From James McGregor's fascinating One Billion Customers (2005):

The Chinese were befuddled and worried by the five-hundred-page contract that McDonnell Douglas lawyers drafted to seal the \$1 million deal. The Shanghai director looked forlornly at Chang [a McDonnell Douglas employee] as he signed it. "I am signing this because I trust you," he said.

Yeah. I read this the day after I signed a five-page employment contract with Tsinghua University – the hard part was coming up with a Chinese name – that I couldn't read a word of. I signed it because I trusted them.

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Patrik (2008-10-31 15:36:57)  
That is insane.

## **Who Steals Bikes? (2008-10-31 05:37)**

At Tsinghua University, students are said to spend more on bike locks than on bikes. A friend of mine, a senior, is on her fourth bike. I met a faculty member who went to get her bike just as it was being stolen. She saw how it was done: The thief had a large number of keys. She shouted at the thief to stop, a crowd gathered, and he gave the bike back. Later she encountered him while buying pork: He was the butcher.

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Eric Vlemmix (2008-10-31 08:27:42)

Same here in The Netherlands. The population is some 16 million people, and how many bikes are being stolen? In 2006 760000 (760 thousand!) bikes were stolen. For young people/students, one out of seven bikes get stolen. Who is stealing the bikes? Junkies and general low-life, then selling the bike for some fast money ( \$15 or less). Some students then seem to consider bikes to be 'public goods', so when your bike is not there anymore, you just take another. So if you do not want your bike to get stolen, invest in good bike-locks. Also, in my hometown, in the city center there are a couple of underground 'garages' just for bikes. These are operated by the local government, employing people that normally have problems getting employed via the regular routes. Stalling your bike there is free of charge and quite safe!

Patrik (2008-10-31 15:51:56)

This is a big problem in low-trust countries. It usually stems from the following ironic vicious cycle. In Hungary, petty (and not so petty) theft is quite common. Gypsy peddlers come around peddling stolen goods, which people are happy to purchase from them at a 'discount'. Not caring they are generating market demand for stolen goods. Ergo, more demand for stolen goods, more goods stolen. Ad infinitum.

Eric H (2008-11-02 19:50:38)

I once read that all bikes in the Netherlands weigh the same: a cheap bike is heavy and does not require much in the way of a lock, but a good, light bike requires at least two good locks, whose combined weight brings the net back up to that of a cheap bike.

Vesna (2008-11-05 09:45:32)

If roving thieves are carrying key rings loaded with possible matching keys, it seems that combination locks, rather than locks with keys, would be more secure. Also ... the butcher! What!?

Jlm N (2008-11-26 13:14:24)

When I worked delivering food by bicycle (in New York City), thieves would come by all the time trying to sell us bikes. I realized that restaurants that deliver food were the prime market for stolen bikes. Later observations bore this out. Some local restaurants were using relatively expensive bikes to deliver food. Wonder if the butcher made deliveries. Many people have told me that bike theft is rampant in Amsterdam. When I was there, I saw many bikes locked with extremely cheap cable locks, or not locked to anything but themselves. Maybe the problem is cultural? Living in New York, of course my locks are worth the same as my bike.

## 3.11 November

### My Beijing Life: The Surprises (2008-11-02 20:36)

I've been here a month. I'd been here before – not just to Beijing but this exact area. I taught a month at Beijing University, right next to Tsinghua, met lots of PKU students, who are similar to Tsinghua students. So many aspects of life here don't surprise me. But here are four things that have surprised me.

1. The beauty of the Tsinghua campus. It's huge, more like a village than a campus, and it has an unusual Jane-Jacobsonian beauty. Lots of new building, lots of old buildings, vast diversity of uses (elementary school, high school, big natatorium, little corner shops that repair bikes, barbers, tailors), lots of paths of different sizes through lots of greenery. Few cars, lots of bikes. It isn't pedestrian friendly because things are so far apart but it is very bike-friendly. Basically quiet.
2. How much time I spend bike riding. Perhaps an hour in a typical day. It is still a little scary to ride outside campus but I have seen a vast amount of bike riding and no accidents. There are big bike lanes – very different from Japan.
3. How slowly I am learning Chinese. I thought I would learn in some conventional way – hire a tutor, go through a textbook – but [1]the one tutor I tried was boring and the conversational textbooks teach stuff people never say (just as my Chinese friends reply to "thank you" with "not at all"). But I do have a burning desire to learn, it is connecting that desire with the right knowledge that is the problem. Ideally I would have someone with me all the time and when I wanted to say something or understand something I would be told the answer.
4. How rarely I leave my neighborhood. I've gone downtown once. I went somewhere else once. Just getting internet access has taken a significant amount of time.

Basically I've been turned into a child. Learning the language, bike riding, not going far from home. Fortunately without school to attend.

1. <http://www.blog.sethroberts.net/2008/10/18/learning-chinese-in-beijing/>

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## **Natural versus Unnatural Learning (2008-11-04 03:03)**

My criticisms of undergraduate education (e.g., [1]here) have three bases:

- my experiences at UC Berkeley. Both sides – faculty and students – disliked the situation. I accidentally found a way that worked much better.
- my theory of human evolution. [2]My theory explained what I saw at Berkeley, and a lot of other stuff. It says that learning specialized job skills is a basic part of being human. Our brains have been shaped by evolution to make this happen.
- the everyday observation that people successfully learn specialized job skills all the time and did so long before colleges. Or any schools.

Set up by people who didn't understand how learning works – the crucial ingredients – colleges teach poorly, just as malnutrition is common.

At Berkeley I was a teacher. In Beijing I'm on the other side – a student – in a different but similar learning situation: learning Chinese. We learn languages naturally, without any special structure, just as people learned job skills. There is the same broad dichotomy: between language learning via official channels, involving classes and textbooks, and natural language learning that happens without any classes and textbooks. So there should be a better way to learn Chinese than via a textbook or a class or even a tutor.

What that is, I'm trying to figure out. For reading, flash cards may work. I'm starting with food words – I see hundreds of them every time I eat a meal (in the student dining halls) – and sign words and the preset messages on my cell phone. Listening and speaking is harder. When I get better maybe I can watch TV but now I can't understand any of it. I always enjoy my Chinese lessons but they happen without context. During the day I may want to say "Where is \_ \_ \_ \_ \_?" but my lesson happens much later, when the motivation has gone. Maybe I will get a tape recorder show I can record what people say to me and then play it for my teachers to translate.

1. <http://www.blog.sethroberts.net/2008/10/24/tsinghua-versus-berkeley/>

2. <http://graphics8.nytimes.com/images/blogs/freakonomics/pdf/whatdostudentswant.pdf>

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NE1 (2008-11-04 10:31:22)

Surely we didn't evolve to be thrown in our old age into a country with a completely different language, but to absorb our native language from the cradle or adapt the group's language to changing times (slang). Learning via book is just a tool to simulate your father's patience in teaching you a new language when the old is all you know, or using only simple structures at first. There's nothing wrong about using tools. If we only had evolution on our side, for example, we would be no match for viruses and bacteria (and this may yet be how it ends). I've found no better practice for learning to write characters than repeating nearly identical or banal sentences in a workbook. Vocab, there are a couple flashcard programs out there that you might like (Supermemo claims to be the best, the others are probably equal for language use), but there (where repetition and not insertion is the point) it can be tedious to enter the words—I'm glad my textbook's lists were available online.

KenF (2008-11-04 13:26:55)

We are evolved to learn language as children, not as adults. If you want to learn as an adult, you need to use "unnatural" means, i.e. general learning strategies. Starting with food terms isn't a good idea, you don't need to know those characters and they don't come up in conversation. You should get a textbook and work through it with a tutor. Use flashcards for the characters in each chapter, learn to write each word as both the character and the pinyin and learn the correct tones for each word. Just rote learn a first-year textbook, rote-learn the dialogues and the practice them with a tutor. With that rote learning under your belt, then you can go ahead and learn the language "naturally". But you need the boost of the rote learning, and you shouldn't assume you are smarter about language learning than the textbook writers. You aren't. Chinese is exceptionally difficult to learn, that is why you are having problems.

KenF (2008-11-04 13:55:29)

Also, having employed Chinese tutors myself, let me give you advice. The best way to do it is to have them go through a textbook. It gives structure to the whole interaction. The most important parts: read the vocabulary items together, having them correct your pronunciation do the dialogues together Chinese grammar is relatively simple. The difficulty comes in pronunciation and of course characters. Realistically, you don't need to learn to write characters by hand. You only need to be able to recognize them and correct pinyin so you can generate them via computer. But learning to write might be an aid to learning them. I'd forego the writing, though, unless you have a personal interest in that.

Patrik (2008-11-04 13:57:46)

Aside from the tools you have mentioned, I would advise listening to songs. It is always fun to translate pop songs. Also, they tend to be more colloquial and idiomatic which is very important in achieving fluency.

Beijing Sounds (2008-11-07 04:50:25)

If you walk around with a recorder you might end up with something like Beijing Sounds! My experience is that it's not very efficient for actual learning, though. Mostly fine advice from my fellow commenters. My two cents 1. Practice simple dialogs with a partner 2. Ignore characters but learn Pinyin The dialogs ensure that you are getting spoken Mandarin, which like English (but to an even greater extent) uses quite a different and much more limited vocabulary than written. If the contexts are good enough – i.e. they are from situations that you could reasonably see yourself encountering in your everyday life – you can practically memorize them and the vocab will be useful. Chinesepod and Popup Chinese now have some free materials to start with. Ignoring characters is bound to be a wee bit more controversial, but for the vast majority of learners it is going to be a better use of time in the beginning stages. Essentially the tradeoff is to spend many hours learning to recognize characters or to spend many hours acquiring the sounds/grammar/vocabulary. I did this for about five years before buckling down to learn characters, a task that is made infinitely easier since I can already speak the language with some degree of fluency.

KenF (2008-11-09 14:38:17)

I don't think characters are such a huge barrier to study unless you try to learn to write them. Just recognizing them really isn't that hard, especially at beginning stages.



## Beijing Shopping (2008-11-04 17:35)

In [1]Moscow on the Hudson, the Robin Williams character, a Russian defector, goes into a New York supermarket and faints: So many brands of breakfast cereal! Whereas my head merely spun when I shopped for headphones and encountered hundreds of choices in a building near me. It's an electronics mall, full of office-sized booths each with a different owner and product line. Maybe eightÂ specialize in headphones. In Berkeley I live miles from a Circuit City where I might find four or five headphones I'd consider. Radio Shack is closer; they might have two or three possibilities. In Beijing several of these electronic malls are near me.

During my Chinese lesson with the girl who sold me my cell phone I told her that after the lesson I was going to shop for headphones – the electronics mall is across the street. How much do you want to spend? she asked. About \$40, I said. Because you are a foreigner, they may cheat you, she said. Her boss went away and came back with two choices. One was \$40, the other about \$60. After the lesson I went to the mall. I found the \$40 headphones. Price: \$9. Before bargaining. I went back to my teacher and told her what had happened. She spoke to her boss. She came back and said: Maybe it wasn't the real product. As if someone would counterfeit a brand (Somic) you've never heard of. It was exactly the same item.

"One bed two dreams" is a Chinese proverb. Here the two dreams were \$9 and \$40. In One Billion Customers, James McGregor writes, "The Chinese will ask you for anything because you just may be stupid enough to agree to it." It has nothing to do with being a foreigner. "In China business, the expectation is to be cheated," says McGregor. A friend of mine graduated from Beijing University, one of the top two schools in the country, with a finance major. She got a real estate job in Shanghai, her home town. When she got there her salary was half of what she had been promised.

1. [http://en.wikipedia.org/wiki/Moscow\\_on\\_the\\_Hudson](http://en.wikipedia.org/wiki/Moscow_on_the_Hudson)

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Patrik (2008-11-04 18:23:51)

Unfortunately, you will always be the 'rich' foreigner in China — so the first price you receive will always be the first. Once in a restaurant in Italy with an Italian friend, we got our menus, our friend looked at the prices, told the waiter, give us the menus with the non-inflated non-tourist prices. The waiter completely non-nonchalantly gathered up the menus he had given us and gave us new ones. Same menu, something like 30 % cheaper.

seth (2008-11-04 18:59:27)

"Will always be the first" – you mean the highest? The person who told me \$9 had no idea I had previously been told \$40.

NE1 (2008-11-05 00:40:20)

Oh, it wasn't the store-minder that tried to cheat you, but the guy who was on his way up. Yeah, stuff like this is the reason I lost my optimism about China. The final straw was this (series resolution) [http://jamesfallows.theatlantic.com/archives/2008/08/emptyseat\\_mystery\\_cont.php](http://jamesfallows.theatlantic.com/archives/2008/08/emptyseat_mystery_cont.php)

seth (2008-11-05 01:47:47)

"The guy on his way up"? No it was a guy in a booth in a different building – the building where I bought my cell phone also has a bunch of little electronics businesses – smaller than the ones in the electronics mall.

## Watching the Election Returns (2008-11-05 04:36)

I watched the election returns Wednesday morning in a totally packed Beijing cafe. Two McCain supporters, maybe 80 Obama supporters. I had to leave a little early; what I had thought was a dinner invitation was a lunch invitation, I had learned the day before. I sat next to two students from Harvard studying at Tsinghua. They found Tsinghua students more passive than Harvard students. I told them the story about [1]the Berkeley prof who liked teaching Tsinghua students but not Berkeley students. Do Harvard profs like teaching? I asked. Their answer was vague. They told me about Tsinghua students, not to mention Harvard students, agonizing over the personal statements required with grad school applications. I told them that I'd seen thousands of those statements and no one in my department (at Berkeley) cared about anything but (a) do you want to be a professor? (the correct answer is yes) (b) do you want to work with me (the prof reading it)? and (c) your research experience. Once I came upon one that was unusually interesting and well-written and I said, "hey look at this person" but no one else agreed with me. When Obama was projected to win Ohio I figured he would win. The cheers of the crowd when the Ohio win was announced reminded me of when I watched a World Cup final, France versus Brazil, in a room full of French students and France scored a goal.

Thank god we have a president [2]who understands Jane Jacobs.

1. <http://www.blog.sethroberts.net/2008/10/24/tsinghua-versus-berkeley/>

2. <http://www.blog.sethroberts.net/2008/09/29/barack-obama-understands-jane-jacobs/>

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mike kenny (2008-11-06 13:46:34)

that seems kind of bothersome to me that professors wanted people who wanted to be professors. what's the incentive there? don't they want people to go out into the world and do something practical with their degrees? i mean particularly with psychology it seems like there would be lots of opportunities to do things of merit out in the world. but of course you've mentioned veblen...it's strange if the only aimed at result of training grad students is so they become professors. there are more professors than grad students—you have this strange self-perpetuating organization of professors who replicate many versions of themselves. i guess it makes sense from an evolutionary perspective—a discipline and universities grow themselves, professors standing in for genes to some extent i suppose.

seth (2008-11-06 23:04:58)

"Do something practical with their degree"? How would that benefit the professor under whom the student got their degree? It wouldn't. Whereas if a student becomes a professor his or her advisor becomes more famous. The practice would be defended on less selfish grounds by saying "the only thing our program really trains students for is to be professors."

mike kenny (2008-11-07 18:16:49)

good point. i think i recall reading gordon tullock say something similar. i don't know, i mean wouldn't it be great if a professor taught someone who put their work to great use in the world. to me that seems like a great reward. i guess the reward is not as palpable as teaching someone who then writes a certain amount of articles and expands on your ideas and maybe quotes you and improves your citation stats. and you would have potential followers i suppose helping to spread your ideas—though that is hard to quantify in some respects. but i do sort of find it surprising that the veblen-ian wall between practice and theory seems to match the evidence. i would have thought people out in the world who are applying professors' ideas in the fields of business or public policy or wherever would be exciting to professors and a strong motivator. it does seem like some economists are into practice—there are some nobel prize winners who had ideas that influenced finance (possibly not in a positive way!) and in psychology, freud or carl rogers or albert ellis seemed like they were interested in both theory and

practice. but i don't hear of english professors advising fiction writers, i don't think. i was a history undergrad and came to think that many historians were deeply un-interested in 'learning lessons from history.'

Andrew Gelman (2008-11-09 18:16:00)

Seth, That's so horribly cynical. I have no doubt it applies to some college professors, but let me give you an alternative story that is more charitable. 1. Professors think they're doing something useful to the world, perhaps directly useful (e.g., research on weight loss and depression), perhaps indirectly useful (educating people who will make future discoveries or who will teach future students). Even something with little direct material value (e.g., studying Shakespeare) can be useful if it makes people's lives richer. 2. The vast majority of professors know that the vast majority of our students will not become professors. We're not hoping that all or even most of the graduate students become professors (in a sort of industry-wide pyramid scam); rather, we believe that our fields of study are important—that's why we decided to devote our lives to these topics—and so we hope that we can train people to help teach a future generation of students. 3. In my experience interacting with professors, becoming "more famous" is not a common goal. I mean, sure, I'd like to become more famous, but my impression is that most profs would like to avoid the limelight; what they really want is time to do their research. I agree that some profs play the status-seeking game of "my student got a better job placement than your student did," but I don't think that's the key motivation here.

seth (2008-11-09 23:24:11)

Hmm. When did it become "horrible" to be cynical? I too can argue the non-cynical side of it, that is, come up with less self-interested reasons for what I observed. I'm only speaking about profs at Berkeley and by "famous" I don't mean in a worldly sense, I mean in an academic sense. I would be curious to hear evidence that supports your interpretation. Here's evidence that supports my interpretation. At Berkeley there was a requirement that all introductory psych students act as research subjects – spend a certain number of hours as subjects. This was free labor for many professors; what they would have had to pay thousands of dollars for (e.g., 200 subjects for 1 hour each) they got for free. Sure, the first hour of being a subject might be reasonably argued to be educational; perhaps even the second hour. But the fourth hour? the fifth hour? the sixth hour? Of course not. The requirement was six hours! This was pure exploitation. And we're not talking one weird professor here – this was department policy.

Andrew Gelman (2008-11-11 22:15:59)

1. I don't mind cynicism in general but I don't like it so much when it's directed at people like me. 2. Regarding your story about intro psych students: sure, I agree that profs, like just about everyone else, like to get something for nothing and not pay for other people's labor if they can get away with it. But I don't see that as evidence that these professors want to be more famous in an academic sense. I think the profs want to do their research, and if they can get experimental participants for free, they can do more research. Just like artists would like to get paint, canvas, and artists' models for free, too, if they could get it. I'm not saying this is honorable behavior (even though I do the same sort of thing myself sometimes) but I see it as consistent with what I wrote above.

## Science in Action: Why Did I Sleep So Well? (part 17) (2008-11-07 00:55)

The story so far. Standing on one foot till exhaustion twice during the day vastly improved my sleep that night. I slept longer and, especially, woke up much more rested.

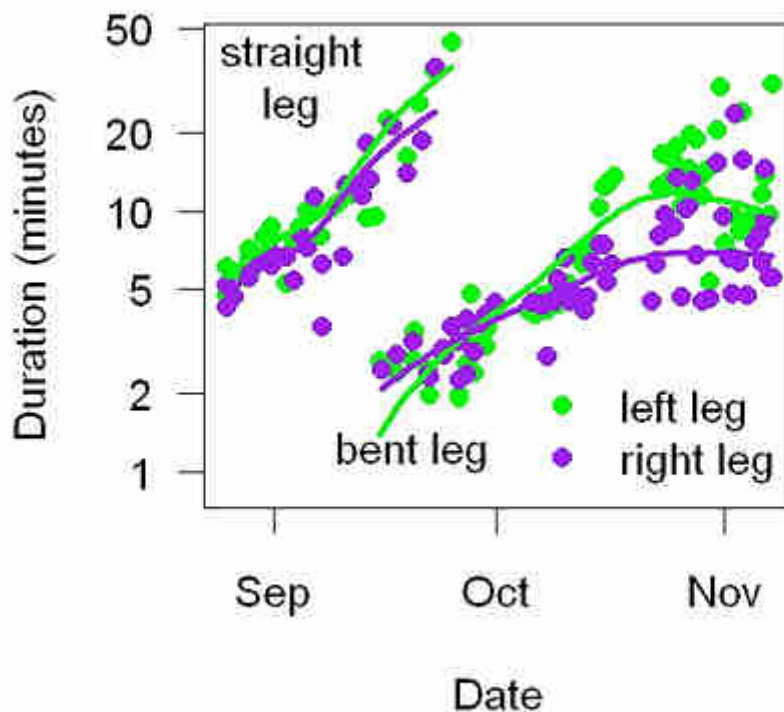
Theory. I have a theory about what's going on. When muscles are stressed – used until some of the muscle fibers break – two things happen: 1. More muscle fibers grow (= you become stronger). Everyone knows this. 2. A chemical is released by the muscle that travels to the brain and increases depth of sleep. This is a new idea. The big picture is that sleep is controlled by many things; this is one of them. Morning light is also important but that is pretty obvious, at least to sleep researchers. Morning light appears to control both the timing and depth of sleep. These muscle-produced hormones appear to mainly affect depth of sleep; I don't notice any change in when I sleep. The

evolutionary rationale is plain: We grow muscles better when we're asleep. If we need to grow muscles more than usual, we need more sleep than usual.

New data. I want to understand what the effect depends on. What makes it weaker or stronger – especially stronger? As my legs grew stronger, the effect became slightly weaker, presumably because it was harder to produce new muscle growth in a practical amount of time. My main measure of the effect is how rested I feel when I awake. I assess that on a 0-100 scale where 0 = just as tired as when I fell asleep and 100 = completely free from tiredness. I reached scores of 100 years ago when I was on my feet for 9 or 10 hours during the day and once or twice on camping trips. Standing that much is impractical so 100 appeared impossible to reach regularly. In Berkeley, during the months before I discovered this effect, this score averaged about 95. After discovery of this effect, it was usually 99 – a big easy-to-notice improvement.

But 99 was impossible to maintain because as my legs got stronger it started to take a really long time to exhaust them. I shifted to standing on one bent leg. This obviously reduced how long I needed to stand to produce exhaustion but it was less effective (presumably because fewer muscles were involved). When I shifted from standing one-legged however I wanted (two bouts/day) to standing with the leg bent most or all of the time (four bouts/day), the scores went down to 98 or 97. After a week or so of bent-leg standing I started using the cycle 50 seconds bent, 10 seconds straight; I repeated this as long as I could.

Here is a graph showing how long I stood.



The interesting point is that the strength increase finally levelled off at a bearable amount of time, yet the effect has persisted. If I spend about 8 minutes 4 times a day watching TV or a movie (and standing on one bent leg at the same time) I can substantially improve my sleep. This is practical. It's the easiest exercise I've ever done. No special equipment. Watch TV at the same time. Big benefit. I've tried other muscle-building exercises, including push-ups done two different ways, jump-roping, and something vaguely resembling a biceps curl done with a thick rubber band. None has had a detectable effect. For example, after a day with jump-roping and two bouts of one-legged standing, I sleep about as well as after a day with just two bouts of one-legged standing.

Can I say again how wonderful it is to wake up totally rested? It seems almost within my grasp.

[1]Previous posts about this.

1. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>

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Confidence (2008-11-07 01:48:17)

0-100 is a really high resolution for such a subjective parameter. Clearly any number you come up with is an estimate. What is your confidence level on the estimate? In other words, if there was an objective measure of how well rested you were after sleep, how close do you think your subjective estimate would be to the other objective one.

Beijing Sounds (2008-11-07 04:52:25)

Do you wake up to an alarm or wake up whenever you like? How does this relate to time slept?

Timothy Beneke (2008-11-07 11:46:02)

Obvious empirical question: do people who start lifting weights either as a practice, or implicitly as part of a job they start working at, who have previously been sleeping poorly, suddenly start sleeping better? I recall sleeping best after helping friends move and carrying lots of heavy boxes up stairs and across relatively long distances. I used to jump at the chance to help people move. And once tried carrying boxes across my room for 15 minutes a day but it was boring and I didn't stay with it. Your theory about standing was about muscle maintenance as well. A friend years ago recommended I treat my depression by working construction; she said the cumulative effect would be to free my mind by relaxing my body. She did it and discovered muscles she didn't know she had and said she slept better. This may be yet another astonishing finding Seth to add to your list – pretty incredible!

Nansen (2008-11-07 13:41:34)

Ditto on astonishing and incredible.

seth (2008-11-08 04:42:44)

I don't think lifting weights would do much – unless you lifted those weights with your legs. One thing about my standing research I never appreciated until now: the amount of standing varied from day to day (from low such as 5 hours to high such as 9 hours) which meant that 9 hours would always be difficult – in contrast to a design in which I stood 9 hours every day (in which case 9 hours would get easier and the effect, I now predict, would have become weaker).

seth (2008-11-08 04:49:51)

Beijing Sounds, I wake up whenever I want. No alarm. Confidence, a 0-100 scale is unusual, yes, but unusual compared to studies done with unpracticed subjects – and anyway estimates close to the edge of the scale may be much more accurate than those in the middle. Quite apart from that the proof is in the pudding: the estimates turn out to be useful. The confidence

interval would be pretty small for the numbers close to 100; maybe 2 or less. As for objective versus subjective measures, I can't imagine what you mean by 'the objective measure.' There are so many possibilities.

MT (2008-11-08 12:26:45)

While I remain impressed by the results, I don't find the muscle-chemical theory convincing. I think that there must be something else about one leg standing that has a unique physiological effect. Perhaps some nerve is triggered in a special way after nine hours standing, and that effect is exaggerated with one leg standing to exhaustion. My reasoning is that you are reporting much greater sleep benefits than other people who exercise their legs (and other muscles) more strenuously. One leg standing is remarkable in part because it is so UNdemanding. Yet you realised more benefits to your sleep after 20 minutes than people who lift heavy weights (including leg weights) for an hour or more. I have lifted weights to the point I would be sore for a few days afterward (muscle tissue breakdown no less, which you suggest as a source for the chemical release) and never experienced the benefits you describe. Nor has anyone else reported them to me. Given millions of people you would think someone might have noticed something. Standing on one leg – a comparably rare activity – has produced someone noticing something. Admittedly, you are unique in your observation of these things, but there are so many millions of people who have done strenuous exercise for decades, it seems unlikely to be as simple as a chemical released by muscle breakdown. I'm impressed and convinced that you're realising these benefits, but find the theory wanting. Which isn't that important – if the results are useful, that is more important. If they can be replicated, even better. I tried it about a dozen times and didn't notice any benefits.

seth (2008-11-08 20:02:25)

MT, I think the muscle-brain connection is chemical for three reasons: (1) The effect of the exercise seems to sit there until I fall asleep. Neural signals are more transient. (2) Once I did a set of 4 close together in time. Usually I do two (right leg, left leg) than wait several hours before the next set of two. When I did the set of 4 close together in time it seemed no more effective than a set of two. The chemical explanation is that there wasn't enough time to replenish the chemical signal that had been released. Nerves, in contrast, recover very fast. (3) There are no nerves that transmit from muscles to brain. There are only nerves that transmit from brain to muscle. Why has no one noticed this before? Here are some possible reasons: 1. Hard to publicize. You notice it but you can't spread your discovery. 2. Self-experimentation not popular. You notice better sleep but you don't investigate. 3. Off the beaten track of exercise. I originally did it as a stretch not as a way of muscle building. Conventional muscle-building exercise consists of many repetitions. That may target the wrong system. 4. If you simply do the same thing again and again the effect goes away. 5. Hard to separate signal from noise. I had trouble figuring out why I had slept so well – and I had previously discovered a similar effect (involving standing a lot). 6. I was keeping track of how well I slept, so this really stood out. Hardly anybody does this.

Stephen M (Ethesis) (2008-11-09 19:40:53)

Should be interesting when your legs get strong enough that you can tire them out doing pistol squats (one legged squats).

MT (2008-11-10 06:42:35)

Seth, re: 1. I'm not sure neural and chemical can be distinguished so clearly, but think the 'sitting there' sensation (if I'm interpreting properly) could come from another source, 2. neural signals themselves may operate rather quickly but set in motion systems that oscillate over various time-periods, from seconds to hours to days or longer – as when a nerve signal triggers the release of melatonin that helps regulate the sleep cycle – such a nerve signal could be involved here – chemicals and nerves interact 3. what do you mean there are only nerves that transmit from brain to muscle, not the other direction? what about sensory signals like pain? Perhaps my biggest sticking point is that I am guessing that one-leg standing is helping your sleep more than more strenuous alternative leg exercises are helping others. If this effect were caused by muscles releasing chemicals when they are broken down, then people who broke down more muscles, releasing more chemicals, would have more profound sleep effects. This doesn't seem to be the case in my experience having lifted weights and having friends who have. One-leg standing takes little energy and does not produce the soreness that is caused by broken muscle tissue – or at least produces less of it than things like cycling, running, weight-lifting. It seems to me something about the way the load is distributed – as with 9-hour standing – but somehow the one-leg standing accelerates that effect. The two have parallels, and I don't think the parallel is a chemical or damaged muscle tissue. Similarly, you described the 9-hour standing as

dose-dependent. You didn't see an effect until you crossed a certain standing threshold, then you saw a big effect. I'm guessing one-leg standing and 9-hour standing are related. Exercise generally improves sleep, that has been observed and is well known. You seem to be describing/experiencing something more.

efm (2009-10-31 20:08:44)

Very interesting blog. I've struggled with sleep issues for years, so I'm always interested in reading about what people try. In the discussion about strenuous exercise vs. one-leg standing, I think there's a clear difference between these two types of exercise that I don't think anybody has mentioned. If you're doing conventional weight lifting, you are doing short contractions of the muscle (i.e. lift, release, repeat). Even exercise like running or swimming is composed of short, repeated contractions, albeit spread over a span of time. Whereas when you do the one-leg standing, the muscle is contracted CONSTANTLY for a long period of time without release. If you're theorizing and considering why one-leg standing works and weight-lifting doesn't, I would say that long, constant contraction works better than long, punctuated contractions. That being said, have you ever tried holding a push-up position (or the plank yoga pose) to exhaustion? I'd be curious if this would work like the one-leg standing, since it uses such a large number of muscles to hold this position. Finally, I just wanted to share some things that have helped with my sleep (I don't have much trouble staying asleep, but I have trouble falling asleep). A lot of people complain that melatonin makes them very foggy the next day, as did the man you mentioned in an earlier post. I had a similar experience when I tried melatonin years ago. Recently, however, I read that the dose in which melatonin is sold is much higher than what the body actually needs. Most melatonin is sold in 3mg tablets, whereas the body only needs about 175 micrograms. Instead of taking a full tablet, I cut the 3mg tablets into quarters or smaller so that each is less than 1mg and take one of these small fragments about a half an hour before I go to bed. I've been doing this for 2 months and have never been able to so consistently fall asleep (even when traveling across time zones). It's been a miracle. Additionally, I started to wear earplugs when I sleep and the quality of my sleep has improved significantly. Good luck with your sleep trials! I certainly understand the value of a good night's sleep.

seth (2009-10-31 22:56:58)

efm, I tried doing pushups to exhaustion. This had no clear effect on my sleep. I think the difference is that leg muscles are much larger than the muscles used for pushups.

Chris | Martial Development (2010-06-01 23:09:59)

Very interesting topic. I and many others have found that standing before bed improves sleep. There are a few variables I didn't see mentioned here... - Eyes open, or closed? - Lights on, or off? - Standing as still as possible, or wobbling around (accidentally or intentionally)? - Hands down, or up? If up, then in what position?

## **How to Brew Tea (2008-11-08 19:33)**

I have brewed thousands of cups of tea. Always: 1. heat water. 2. add to cup. 3. add tea. 4. wait fixed duration (e.g., 5 minutes). 5. remove tea. 6. drink. Sometimes I put the tea in the water then heated both in the microwave. After getting tea education at Slow Food Nation, I started making sure the water was about 165 degrees F when I added the tea.

My Tsinghua office has a source of hot water. Now I do this: 1. add water to cup. 2. add tea. 3. drink. (I'm using green tea. This wouldn't work so well with teas that need higher brewing temperatures.) I don't worry about length of brewing. Much simpler. I bought a cup with a cover but while taking off the wrapping dropped the cover and broke it. You don't even need a cover (at least for some teas). The secrets are (a) as the water cools, it stops brewing the tea - you don't have to worry about timing and (b) the leaves sink to the bottom so you don't need to take them out to avoid drinking them.

The interesting question is why nobody told me this. I have heard tea experts talk six or seven times. It certainly

means their expertise is less necessary – the cynical explanation. The less cynical explanation is that most people don't have access to hot water of the right temperature and/or most people don't drink green tea.

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Aaron Blaisdell (2008-11-10 08:29:53)

This is how green tea is always served at "authentic" (i.e., not Panda Express or P.F. Chang) Chinese restaurants in California.

peter (2008-11-10 18:09:29)

you lose a lot of the health benefits of green tea by not brewing it in hot water (this according to "foods that fight cancer" (i think that's the title), written by a group of micro-biologists; the book states that the full value is realized by brewing the tea for 10 minutes; i don't following this because i've read that anything past 4 minutes increase the oxalate content, which is associated with kidney stones)

seth (2008-11-10 18:47:52)

Peter, maybe I should have added I refill my cup with hot water several times. Thus extracting more of the healthy chemicals.

Helen (2008-11-10 21:47:52)

Speaking as a Chinese person, it was amazing to me when I first heard people put tea leaves in little bags and that they even came in different flavors. By the way, make sure you find out which brands are the best. You can probably even start putting flowers or goji berries in your tea for the added health benefits. Best of luck!

## **Flaxseed Oil Alert: Don't Take When Pregnant (2008-11-10 02:21)**

From a [1]press release:

A study has found that the risks of a premature birth quadruple if flaxseed oil is consumed in the last two trimesters of pregnancy. The research was conducted by Professor Anick B  rard of the Universit   de Montr  al's Faculty of Pharmacy and the Sainte-Justine Hospital Research Center and Master's student Krystel Moussally.

In Canada, 50 percent of pregnant women take prescription medication. Yet many of them prefer to use natural health products during the pregnancy. "We believe these products to be safe because they are natural. But in reality, they are chemical products and we don't know many of the risks and benefits of these products contrarily to medication," says B  rard.

B  rard and Moussally set out to conduct one of the largest studies ever undertaken on by analyzing data from 3354 Quebec women. The first part of the research established that close to 10 percent of women between 1998 and 2003 used natural health products during their pregnancy. Before and after pregnancy they were respectively 15 and 14 percent to use these products. The increase means that about a third of women consuming natural health products stopped during the pregnancy.

The most consumed natural health products by pregnant women are chamomile (19 percent), green



tea (17 percent), peppered mint (12 percent), and flaxseed oil (12 percent). BÃ©rard and Moussally correlated these products to premature births and only one product had a very strong correlation: flaxseed oil.

"In the general population, the average rate of premature births is 2 to 3 percent. But for women consuming flaxseed oil in their last two trimesters that number jumps up to 12 percent," says BÃ©rard. "It's an enormous risk."

The correlation existed only with flaxseed oil, yet women consuming the actual seed were unaffected. Even if more studies must be undertaken to verify these results, BÃ©rard recommends caution when it comes to consuming flaxseed oil.

Thanks to Joyce Cohen.

1. [http://www.eurekalert.org/pub\\_releases/2008-10/uom-pwc102708.php](http://www.eurekalert.org/pub_releases/2008-10/uom-pwc102708.php)

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MT (2008-11-10 06:12:50)

Sounds like about 350 women would have been taking flax, and about 40 premature births would have been seen from that group. Very striking. Could anything else have explained this? A different type of interaction or another aspect of lifestyle from the type of women who use supplements? What else was controlled for? It would be interesting to see this contrasted with other types of Omega-3 supplementation. I'm assuming it is another constituent of the flax causing this - maybe the lignans? If that is the case, I would wonder whether the problems flax creates in pregnancy isn't having some smaller effect on general consumers, which is not noticed because the O3s are offsetting a still greater problem. Would be interesting to know quantities. Most people probably only take a few of the capsules a day, so if these women were taking such small quantities that is really alarming.

Patri Friedman (2008-11-13 19:09:53)

This is quite strange, since omega-3s, in other studies I've read, reduce the risk of prematurity. (Prematurity is related to inflammation, omega-3s reduce systemic inflammation).

Mini Moo Moo (2009-09-29 13:07:18)

We needed this info. It has just settled a disagreeemnt! \*Bookmarked\*

### **A Nice Gesture (2008-11-10 07:08)**

At [1][www.newyorker.com](http://www.newyorker.com),

This week, all articles are freely available to all visitors.

Celebrating Obama's victory, no doubt. Our version of the issue devoted entirely to John Hersey's [2]article on Hiroshima.

1. [http://www.newyorker.com/magazine/toc/2008/11/17/toc\\_20081110](http://www.newyorker.com/magazine/toc/2008/11/17/toc_20081110)
2. [http://en.wikipedia.org/wiki/Hiroshima\\_\(book\)](http://en.wikipedia.org/wiki/Hiroshima_(book))

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### **Special Days in China (2008-11-12 02:07)**

On Monday, by virtue of being a Tsinghua professor, I got a big box of apples (about 40). I haven't figured out why. On Tuesday I got a lovely tea set that I will blog about later; it was the 15th birthday of the founding of the School of the Humanities at Tsinghua. My department is within that school. Today is Boys Day at Tsinghua University (a school-specific special day). November 1st is a nationwide day for people without boyfriends or girlfriends. It is Only One Day; in 11-1 there are only ones.

Speaking of only one, did you know that China's One Child policy (if you have two children both parents will lose their jobs and pay a fine) applies only to cities? In rural China you can have two children. Some families have three. The central government has little control over rural areas; it would be too hard to enforce a one-child policy there.

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mike kenny (2008-11-12 14:50:30)

Hm, can one move to the city with multiple kids? Do people ever go to the country to have multiple kids then move to the city?

William (2008-11-13 22:52:52)

Haha, Boys' Day is Nov 11th, because it has the most '1'

Harold Melvin (2008-11-23 14:24:54)

Dr. Roberts - why did you move to China and how long will you be there? Just curious...

seth (2008-11-25 15:11:10)

Why did I move? I was offered a job at Tsinghua. The job allows me to split my time between Berkeley and Beijing (e.g., spend half a year in each) and I hope to be doing that for a long time.

### **Happiness in China: Who Wants to Be a Construction Worker? (2008-11-12 20:31)**

A recent survey of happiness/life satisfaction among various groups of people in China found that Shanghai construction workers were quite satisfied with their lives. (The details are only in Chinese, as far as I know.) They were happier than middle-class Chinese, in spite of earning much less. This has nothing to do with low Chinese prices, since the construction workers paid the same prices as middle-class Chinese. The researcher who discovered this attributed it to two things: 1. They got paid every month. The construction workers came from agricultural areas where payment is less frequent: only after a harvest. The construction workers sent money home to their villages. The steadiness of their income was a source of respect. 2. Because they live far from home, they can break all the rules, including sexual rules. A middle-class Chinese man, living with his family, is more constrained.

The massive rural-to-urban migration happening all over the world, especially in China, is one of the most important events in human history. The Chinese part of this story has usually been told through the eyes of a young woman who leaves her village and finds factory work – for example, a series in the Wall Street Journal, the documentary [1]China Blue, or the new book [2]Factory Girls by Leslie Chang. These results suggest that the male side of the story is much different.

These findings also suggest a big problem with conventional academic economics, which revolves around measurements of money (e.g., prices, salaries, savings, GDP, the ultimatum game). If desire for respect and personal freedom motivate major economic changes, measurements of money will miss a lot.

1. <http://www.pbs.org/independentlens/chinablue/>

2. [http://www.nytimes.com/2008/11/09/books/review/Keefe-t.html?\\_r=1&ref=books&oref=slogin](http://www.nytimes.com/2008/11/09/books/review/Keefe-t.html?_r=1&ref=books&oref=slogin)

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pd3 (2008-11-13 16:06:54)

dude, the last time you lauded sexual freedom in a country—it imploded. remember iceland?

1 (2008-12-05 22:40:58)

seth, is it bad for a Chinese man to be "constrained?" Is having more sexual freedom supposed to improve their life? What are you trying to say about Chinese men and sexual rules? or are you talking about men in general.....

### **Cargo-Cult Universities (2008-11-13 19:28)**

From [1]an article about bureaucratic suppression of Indian higher education:

Mr. Rao says space requirements are calculated to ensure students have the room to learn. "For quality education, you need enough space – enough space for labs, for teaching. Our experts decide based on these requirements after examining world-class universities."

Richard Feynman [2]criticized what he called cargo-cult science – pseudo-science (including my area, animal learning) that had the appearance of science but didn't actually work. Mr. Rao's beliefs about what quality education requires are based, like cargo cults, on what is easy to see.

1. <http://online.wsj.com/article/SB122652421295221817.html>

2. <http://www.lhup.edu/~dsimanek/cargocul.htm>

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Jim Breed (2008-11-14 07:19:02)

I seem to remember Feynman writing in his book, What Do You Care What Other People Think, on the differences between the facilities at MIT and Princeton. His comment was that the facilities at MIT were more cramped, less well funded, and

required more ingenuity to accomplish work than those at Princeton. I also seem to recall that he felt that it was his opinion that devising ways around the constraints was helpful to the educational process. This is from my memory of reading the book shortly after it was published. Its in a box in my storage unit so I can't supply quotes.

NE1 (2008-11-15 13:34:08)

The focal point of the article is the number of highest caliber universities (see the table). It seems pretty bulletproof that laboratory space is necessary to be in this category, although maybe teaching space (if not truly a constraint atm) is an indication of success rather than a necessity. The government seems to have made the decision that having highest caliber universities is more important than many podunk U's. This might be a poor decision, but that's the real story here.

Stephen M (Ethesis) (2008-11-15 20:51:53)

NE1, thanks for the analysis, it helped with some perspective.

### **Walking is to Driving as Idea Generation is to Idea Testing (2008-11-15 04:44)**

Mary Soderstrom, a Montreal writer, has written a recently-published book called The Walkable City. From a [1]blurb:

The idea that a city might not be walkable would never occur to anyone who lived before 1800. Over the past 200 years there have been dramatic changes to our cities.

Over the same period there were also dramatic changes in the practice of science. Maybe the biggest change was the introduction of significance tests and the associated logic. Just as cars took over cities, so did significance tests take over statistics textbooks. Cities built for cars made it hard to walk; statistics textbooks full of significance tests made it hard to teach how to generate ideas.

How to generate plausible new ideas – ideas worth testing – is pretty much a mystery to most scientists, as far as I can tell. The idea generation:idea testing :: walking:driving analogy provides a little guidance, and at least makes it clear that something is missing from today's scientific education. Walking is slower than driving; idea generation is slower than idea testing. Walking is more exploratory than driving; idea generation is more exploratory than idea testing. Walking is much cheaper than driving but it may take a lot of walking to discover somewhere you want to drive; techniques for idea generation should be very cheap because it may take a lot of use of them to discover an idea worth testing. Walking is "softer" than driving; perhaps idea generation will never be as mathematical as idea testing. Walking is far more flexible than driving; idea generation methods must be far more flexible than idea testing methods. It is hard to drive somewhere that no one has ever driven before but it is easy or at least much easier to walk somewhere new. Which should suggest to a scientist that if all you know how to do is test ideas, it will be hard for you to innovate.

The way science is supported in America is horribly biased against idea generation – grant proposals must be all about idea testing. I don't know if the people who run that system have any idea how unbalanced and unhealthy it is.

1. [http://www.vehiculepress.com/cgi-bin/dbman2/db.cgi?db=default&uid=default&view\\_records=View%2BRecords&ISBN=978-1-55065-240-6](http://www.vehiculepress.com/cgi-bin/dbman2/db.cgi?db=default&uid=default&view_records=View%2BRecords&ISBN=978-1-55065-240-6)

Mark (2008-11-15 20:36:44)

I think the opposite. Most grants in the health field are for things like mining databases for disease-lifestyle correlations (i.e., looking for ideas about possible causes of disease). Very few are for actual research into causation and the mechanisms of causation. So huge numbers of what are essentially hypotheses are generated each year, but few are followed through on and established and proven. Hypotheses are merely step 1 in the scientific method, and that's as far as anyone ever goes these days.

seth (2008-11-15 22:49:41)

"Most grants in the health field are for things like mining databases for disease-lifestyle correlations"? You have a source for that? Schools of public health, where such correlations are studied (in the epidemiology department) get far less money than schools of medicine.

Mark (2008-11-17 02:56:08)

My source would be our daily news feed, where we report on about 30 health news stories per week. Perhaps schools of medicine put out fewer press releases, but I doubt that. Or perhaps we unconsciously select stories of a certain sort. But I'm pretty confident I'm right. Publish or perish. It's easier and takes less talent to data mine, especially when there are so many "peer reviewed" journals of varying quality that almost anything can be published (check out Brian Wansink's thirteen 2007 publications – they're not all crap, but there's quite a few of them are). It takes time, money, and true insight to actually cook up a research protocol that can go beyond correlations, so there are fewer publications by fewer researchers. You obviously can't meet the Wansink annual quota of thirteen publications if you're doing serious research, even if you dribble out all kinds of interim papers based on a major research project.

seth (2008-11-17 06:44:23)

Now I understand. Epidemiology generates far more press releases per grant dollar than lab science. University press offices don't bother trying to get publicity for 99 % of the research their faculty do.

## **Interview with William Rubel, Food Historian (part 2) (2008-11-15 23:03)**

[1]William Rubel is the author of [2]The Magic of Fire, about hearth cooking.

RUBEL I started to think, once I finished that book, I thought, "well, this bread that I've been interested in for so long, I wonder if they ever wrote down how they made bread when they were still doing stone-ground flour and working the bread by hand at home or in the bakeries." And the answer is, really, that they had not written down with much precision. So my goal—another primary goal—is to find the lost part of the techniques that were not written down and revive them in a way that will provide inspiration for modern bakers.

A third idea is that I've certainly noticed that our current bread culture is exceedingly narrow. In other words, the artisan culture—the slow food breads that we all like—tend to be French breads that trace their lineage to France and the primary ingredient is flour, water, and salt and either yeast or leaven, which is a sourdough starter. And in this bread culture, the leaven starter is preferred. There's also a preference for an irregular crumb—big holes on the inside of the bread but not a regular shape; some of them are big, some are small. We like the color to be little bit off-white, to be cream. We tend to like a crusty crust. It's very specific. We tend to badmouth other breads like Wonder Bread as a garbage bread and fast-risen yeast breads or breads with soft crusts and soft interiors, we tend to feel that those are bad breads, that there's a good bread which is that French-inspired one and these other ones are bad. But as an historian, I say that bread is an invention of human culture. There is no bread—farmers don't farm breads, they farm grain. You could say that this is a perfect apple, an apple at peak ripeness, and you can measure the sugar content in the apple to know that it is at peak ripeness. But there is no ideal bread because bread is just an expression of human culture; it's simply an invention. So once you start saying that something is good and bad, really you're saying that this culture that produces that bread that you don't like is bad. You are

demeaning the people who like that bread.

In one way I'm thinking of using history books to comment on the present, much the way that historians in totalitarian states—like in Stalin's Soviet Union—would write about Medieval Period and they could talk about problems there (and political problems in the Medieval Period), whereas they could not directly address similar problems in the modern state. I'm also using this work to critique our own values and value system when it comes to bread and hopefully help readers to see themselves in the story of bread and in the historical continuum of bread culture.

ROBERTS That's what fascinates me the most. I think that everything about your history of bread is fascinating, but the last thing that you said is what fascinates me the most. Why don't we turn to that now? When I've talked with you about the book, when you've been talking about the book, one point you made that I especially liked was about white bread and how white bread was seen and how we came to have white bread. Can you say a little about that?

RUBEL White bread is the starchy part; the white flour is the starchy part of the grain called the endosperm. The way you got that historically, before the invention of modern roller mills (steel mills with steel rollers in the 19th century), was that you ground the grain between stones and then you sift it. Before agriculture was invented, the hunters and gatherers who had settled in the Fertile Crescent around the big fields of grain had stone scythes and they had grindstones. The archaeological sites are littered, when you look at drawings of archaeological sites of the hunter-gatherers—we're talking 13,000-15,000 years ago in the Fertile Crescent—these sites are just littered with grindstones. Metates: we think of Mexican women grinding the corn to make the tortillas, grinding the boiled corn they mixed \_ \_ \_ \_ to make Tamasa.

It was certainly possible for people to have ground grain—we don't know that they did—it was certainly possible that grain was being ground a very, very long time ago. Once you have ground grain, separating out the white part—the powdered part—is fairly easy. Whether people did it, we don't know, but certainly if you can make a sieve and if they could make a basket, if they could make cloth, then they could make sieves. You can go to the Metropolitan Museum of Art and in their Egyptian room they have a storehouse of linen cloths—bolts and bolts of the finest linen cloths you can imagine. Anyone with fine linen cloth can make the very, very fine white flour.

ROBERTS Because you can use the linen as a filter?

RUBEL You'd sift it; that's what they'd use. They would use linen or they would use silk. Until nylon bolting cloths were developed, silk was the highest grade bolting cloth. But anything you can weave—horsehair (they had horses in Mesopotamia), a horsehair sieve—you can sift. Remember, you're talking about a high status product, so you've got lots of slaves. You also could just shake and blow; you don't even need to sift. You can certainly make a whiter flour than a whole wheat flour just by shaking a bowl of it and the finer particles will fall and the coarser particles will rise to the top. If you take fine sand and coarse sand and just shake, the fine will go one direction and the coarse sand will go another.

[3]Part 1.

1. <http://www.williamrubel.com/>

2. <http://www.williamrubel.com/hearthcooking>

3. <http://www.blog.sethroberts.net/2008/10/27/interview-with-william-rubel-food-historian-part-1/>

Stephen M (Ethesis) (2008-11-16 14:42:32)  
That was fascinating, I'm looking forward to part two.

Advice To A Mother - Infancy - Managment Of The Navel | Family Sense (2008-11-17 09:12:39)  
[...] Sethâ€™s blog Â» Blog Archive Â» Interview with William Rubel, Food ... [...]

### **My Theory of Human Evolution (Chinese birthday gift) (2008-11-17 00:12)**

In 1952, following the Soviet model, Tsinghua University was stripped of its humanities and social science departments and became an MIT-like university entirely devoted to engineering and science. Eventually it became clear this was a mistake. Fifteen years ago a School of Humanities and Social Sciences was established to begin to restore things. Two weeks ago, because I am a faculty member in that School, I got a fancy tea set to mark the 15th anniversary of its founding. Here is what the tea set looks like:



I asked a Chinese friend of mine to explain it to me. She pointed to the tools in the box with the cups. "They're useless," she said. She pointed to the slatted bamboo box. "I think it's useless," she said.

To pour the tea you put the cups on the slats. The box is slatted so that if you spill some tea while pouring the surface will continue to look good. It's not the total uselessness my friend saw but she is right that the added value

of the slats and the tools, in practical terms, is very low.

[1]My theory of human evolution says that the reason for gifts, ceremonies, and special days (such as Christmas) is to provide a demand for hard-to-make stuff. This allows artisans on the cutting edge to make a living and further develop their skills, advancing the state of the art. This is why gifts and ceremonial things are typically hard to make and, were it not for their value as gifts, not worth making. My friend's reaction illustrates this. My theory predicts that this feature of gifts, ceremonies, and special days has a genetic basis and should be found in all cultures. This example shows it is found in a culture quite different from American culture.

1. <http://www.blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-directory/>

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Seth's blog » Blog Archive » My Theory of Human Evolution (directory) (2008-11-17 03:38:01)

[...] I Recommend material-science research) the cellphone effect (the first words facilitated trade) micropygmy (hunter-gatherers w/ trade different from those w/o trade) autism (autistic "obsessions" reveal a universal tendency toward expertise) Fourth of July (holidays increase demand for finely-made stuff)< br/> Chinese birthday gift (gifts support artisans in a different culture) [...]

SB (2008-11-17 09:32:57)

If Hallmark was a product of evolution, I think I'll stop believing in it.

Willy (2008-11-17 10:30:49)

I never saw the object in the bottom right of the box. Anyone can tell what it is?. Thanks

seth (2008-11-18 05:24:10)

The object in the bottom right of the box is a wooden cup containing tea-related tools, such as a scoop.

polly (2008-11-28 22:55:19)

Seth, You are enjoying China very much. Do you think you will permanently move to China?

### **Assorted Links (2008-11-17 06:50)**

- [1]The trouble with OCLC
- [2]Bathtub dynamics
- "The New York Times is the problem." [3]Interview with Nassim Taleb
- Easy-to-read free substantial [4]book on authoritarianism

Thanks to Dave Lull.

1. <http://www.aaronsw.com/weblog/oclcscam>

2. <http://blog.metasd.com/2008/11/11/my-bathtub-is-nonlinear/>



3. <http://www.newsweek.com/id/169336>

4. <http://members.shaw.ca/jeanaltemeyer/drbob/TheAuthoritarians.pdf>

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### Flaxseed Oil Used to Treat Cancer (2008-11-17 22:50)

The Budwig protocol is the food treatment and cure for cancer and other major debilitating diseases created by Dr. Johanna Budwig. It was designed for use with extremely ill and wasted cancer patients who had been sent home by their doctors to die. These were patients so ill that many were unable to take any food at all in the beginning, and had to be initially treated with enemas. The protocol is so simple that it can be tailored to fit whatever situation is encountered, from use with someone at death's door to use as a preventative and part of a healthy lifestyle.

There are only two essential foods in the protocol, flax oil and cottage cheese or some other sulphurated protein such as yogurt or kefir. The oil provides electron-rich fats, and the cottage cheese provides the sulphurated protein to bind with the oil and render it water soluble. In this state, the oil is able to carry immense amounts of oxygen straight into the cells. Cancer cells cannot thrive in an oxygen rich environment.

From [1]Natural News. Yeah, the explanation ("electron-rich fats") is absurd, but the general empirical idea (the use of flaxseed oil and cottage cheese to cure cancer) is of course very important. It isn't complicated why flaxseed oil might be highly beneficial: Our diets used to provide much more omega-3 than they now do; flaxseed oil, high in omega-3, reduces the deficiency. The idea that cottage cheese makes flaxseed oil more digestible is also very interesting.

Thanks to Peter Spero.

1. <http://www.naturalnews.com/024719.html>

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Nadav Manham (2008-11-18 11:07:01)

Seth, Apparently Weston Price gave cod liver oil with butter oil, which seems to have improved its effectiveness: <http://www.westonaprice.org/basicnutrition/cod-liver-oil-menu.html>

david (2008-11-18 13:28:15)

The tone of that site sounds nutty BUT I will say that after I started consuming more flax oil (mostly using it to make a salad dressing) for the omega-3s, I happened to eat some yogurt with a spicy Indian meal. I'd been avoiding yogurt since I'd had trouble with dairy in the past, but this was a good quality plain "Bulgarian yogurt with live acidophilus" so there was a good chance it wouldn't give me any problems. After having the yogurt, I found myself craving the yogurt and now eat a jar a week at least. In addition, I seem more tolerant of dairy in general. I don't know if there's any connection between any of that, but I thought I'd throw that in.

John (2008-11-18 14:41:04)

Also sounds like a low carb diet. Lots of fat, a nice amount of protein, very low in carbohydrates. The Budwig Diet itself, not so much.

MT (2008-11-18 15:18:41)

The linked article describes a "proven cure and preventative for cancer" but doesn't substantiate those claims at all, it simply asserts a theory and protocol. This article is bad science and bad journalism. A disingenuous title misleading readers about the article's content (low journalistic integrity) and failing to support its claims to even the most basic scientific standard. I wonder if people who follow this link will feel that it has been approved by Seth Roberts, professor and author, and attempt to cure themselves of cancer this way? Reading it, you get the sense the author believes chemotherapy is more dangerous than cancer itself, and seems to discourage chemotherapy as a treatment. So I guess we are getting a natural experiment. People being encouraged to refuse treatments offered by the "cancer industry" and to use flax oil and cottage cheese instead. Would be interested to learn which group has better outcomes, but I don't imagine the data will be collected.

seth (2008-11-18 19:34:00)

MT, yes, the linked-to article is a mess. As I pointed out and as you point out. Whether it is worthless or even harmful, as you seem to say, is a very different question. I assumed that Budwig did in fact publish papers with supporting data but I wasn't able to find links to them. Someone who wants to know more about this could track them down and decide for themselves. I do endorse trying to find out more about this – especially if you have cancer.

Adam (2008-11-25 11:16:10)

I've been eating 1/2 cup of no fat cottage cheese with 1 tbs. of flax 2 or 3 times a day with my nose clip for a few weeks now. Regardless of whether it prevents/cures cancer, it is a good appetite suppressor because of the fat and protein.

donald a, (2009-03-05 20:44:46)

dr.budwig noticed the interaction between flaxseed oil and cottage cheese in the 1950's, being a noted german chemist and all. there are hundreds of testimonials to support what she claimed, and even if you only believe half of what her patients have said, maybe there's some credibility to it. she did live into her 90's, so maybe it works for some. seems like a cheap insurance policy if it does some good. we need those omegas in our diet anyway.

seth (2009-03-05 21:45:48)

Here is another article about Budwig: <http://www.cancertutor.com/Cancer/Budwig.html> The Budwig diet curiously combines my two latest nutritional interests: flaxseed oil and fermented foods.

Jack (2009-03-11 15:29:13)

It sounds like you're creating problems yourself by trying to solve this issue instead of looking at why there is a problem in the first place

Angela (2011-08-18 20:54:02)

My cousin, before developing another condition, tried flax oil and cottage cheese to treat her cancer, and it took her pain away. I think that, had they tried it sooner, it might have helped to keep her alive.

## **The Washing Machine Principle (2008-11-19 06:04)**

Suppose I want to improve performance of my washing machine. Ways I might do this fall into three categories:

1. Supply missing inputs. It needs water, soap, and electricity. If any one of them is missing, I can greatly improve

performance by adding it – by plugging the machine in, for example. These changes are easy because water, soap, and electricity are easy to get.

2. Replace broken parts. This will also greatly improve performance. These changes are very difficult unless I am a washing machine repairman.

3. Everything else. To improve performance any other way will be difficult and any improvements will be small. These other methods of improvement – such as putting special disks into the wash – are also likely to be dangerous.

All complex machines are like this. What I call the Washing Machine Principle says that humans are also like this. This means that non-transplant attempts to improve human well-being fall into two clusters: 1. Easy, safe, and highly effective. 2. Difficult, dangerous, and only slightly effective.

Some simple examples:

- Vitamins. If you have a deficiency disease, getting more of the right vitamin will cure you easily, safely, and rapidly. They supply a missing input.
- Antidepressants. They are dangerous, difficult to make and obtain, and don't work very well. In controlled studies, they do only slightly better than placebos. Patients typically must try several to find one that works. They don't supply a missing input.
- The mirror treatment for certain neurological conditions that Atul Gawande recently [1]described:

[The patient's] left hand felt cartoonishly large“at least twice its actual size. He developed a constant burning pain along an inch-wide ribbon extending from the left side of his neck all the way down his arm. And an itch crept up and down along the same band, which no amount of scratching would relieve. . . . [These symptoms had lasted 11 years. Gawande suggested trying the mirror treatment.] After a couple of weeks, his hand returned to feeling normal in size all day long. The mirror also provided the first effective treatment he has had for the flares of itch and pain.

The mirror treatment is cheap, safe, and, in this case, highly effective. Clearly it supplies a missing input.

To be continued.

1. [http://www.newyorker.com/reporting/2008/06/30/080630fa\\_fact\\_gawande?currentPage=all](http://www.newyorker.com/reporting/2008/06/30/080630fa_fact_gawande?currentPage=all)

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Matthew (2008-11-20 10:53:28)

Certainly antidepressants have the potential for harmful side-effects, but if the problem is caused by low serotonin levels, would not an SSRI supply (indirectly by inhibiting reuptake) a missing input? Since depression has so many causes and these causes are very hard to observe, it is not surprising that they would not do much better than placebos \*on average\*. But that doesn't mean that they couldn't work remarkably well for those whose depression is actually caused by low serotonin levels. I know several people who were very effectively treated by antidepressants of various types, but almost all of them required trial periods of at least two drugs, whether they be SSRIs, SNRIs, and/or NDRIs. A drug that supplies an input that's not actually the missing one will of course not work. So of those patients who were not affected in the trials, how many do you think might have eventually found a drug that works? It's not without risk, but as you've said, neither is flax oil (for pregnant women), or vitamins (for those

who don't have a deficiency). If there were a trial that found that flax oil on average has no statistically significant effect, I would hope you would jump all over that study. Concluding that it doesn't help \*anyone simply because it doesn't significantly effect \*everyone is the kind of error that I've learned from you and Dierdre McCloskey to avoid (that's why I commented a while back that you two have a lot in common despite your disagreements over gender identity). But I suspect that your skepticism of these medications disinclines you to come to this conclusion when the subject of the trial is antidepressants. What do you think?

Mike (2008-11-21 13:28:36)

I agree with Matthew. Saying antidepressants don't work is sort of like saying vitamins don't work, because zinc, copper, magnesium, iron, and potassium supplements don't help your calcium deficiency. Antidepressants are a broad category of drugs treating a broad spectrum of symptoms. Of course, on average, they'll be a wash.

seth (2008-11-22 04:14:52)

Serotonin is not an input. By "input" I mean what we take in from the environment – what we eat, see, hear, etc. As for safety, vitamins are much much safer than antidepressants – that was my point. I'm not saying "antidepressants don't work" – I'm saying they work much worse than vitamins when the vitamins are used to treat a deficiency disease, e.g., Vitamin C is used to treat scurvy.

seth (2008-11-22 23:14:06)

A comment that someone else was unable to post: Matthew's argument presumes that, for some people, "depression is actually caused by low serotonin levels." Even strong advocates of psychopharmacology do not agree. For example, Ellen Frank notes that, "It may be that the biological changes produced by antidepressants can lead to changes in mood, concentration, and interest by setting the stage for circadian reentrainment." (see Treating Bipolar Disorder, page 23) Jump-starting the brain's machinery may "work"; it doesn't follow that jump-starting is the best way to operate the machine.

Tony (2008-11-25 03:30:23)

Antidepressants might work at treating (some of) the symptoms, but they don't (at least in the large majority of cases) solve the cause of depression. The cause of depression is usually a basic human need being unfulfilled. Vitamins do address the cause of certain diseases - basic nutritional needs. Low serotonin levels, properly understood, aren't causes of depression but effects. Saying depression is caused by low serotonin levels is like saying that the washer malfunction is caused by some lever that causes the water to enter the tank not flipping on - and ignoring the fact that the lever isn't moving because there's no electricity being supplied to the machine.

Patrik (2008-11-25 11:07:17)

*I'm not saying "antidepressants don't work" - I'm saying they work much worse than vitamins when the vitamins are used to treat a deficiency disease, e.g., Vitamin C is used to treat scurvy.* Comparing vitamins to treat deficiencies with anti-depressants is not entirely fair. Clearly, anti-depressants are non-optimal and treat the symptoms of depression, not the actual cause (sadly just like 99 % of modern medicine), but they can be thought of as a temporary patch on a flat bicycle tire. Yes, the tire still has a hole from the thorn. Yes, the patch only covers the hole, and therefore the patch has not addressed the underlying cause i.e. the hole still exists i.e. you would prefer to ride a bike with your bicycle tube wholly intact than one with a patch...but if all you got is a patch, i.e. you can only treat the symptom, and no new bicycle tube exists, you are still a helluva lot better off with the patch than without. ———— BTW I am skeptical of the scurvy and vitamin C via fruit and vegetable hypothesis (yes, I know that makes me sound insane), for the following reasons: 1 - Poor absorption of antioxidants provided by fruit and vegetables. 2 - Antioxidants when tested in a lab most likely have very different effects when ingested. 3 - Antioxidants may not be beneficial, but may actually be deleterious to health. See here: <http://barrygroves.blogspot.com/2008/10/eating-fruit-may-increase-heart-attack.html> 4 - Our requirements for vitamin C are probably very low. 5 - Vitamin C is required to digest carbohydrates, grain does not provide vitamin C. Less carbohydrates, less need for vitamin C. BTW according to Barry Groves of 'Trick and Treat', only those British sailors who were eating the ships biscuits were prone to scurvy. The Masai, Inuit and Samburu, who eat no or very little vegetable matter do not suffer from

scurvy. So, where are they getting their vitamin C from? It appears as if organ meats such as liver are a better source of vitamin C as they provide more vitamin C and are more readily absorbed by the body. BTW this was referenced on this very blog here: <http://www.blog.sethroberts.net/2008/07/21/errors-in-the-queen-of-fats/>

Anthonyology » Consumerism, Depression, and Causality (2008-11-28 23:23:28)

[...] Here on Seth Roberts' blog, I respond to a comment by someone who suggests that low serotonin levels cause depression. (Thinking low serotonin levels cause depression leads to solutions such as drugs that increase serotonin levels, which is convenient for the pharmaceutical industry. ) In this case, the causality is exactly backwards (at least in the large majority of cases) - depression, rather, causes low serotonin levels. Change the things that cause depression, and not surprisingly the serotonin levels go up on their own. [...]

### Lohao City (2008-11-21 06:39)



Today I visited the flagship store of the [1]Lohao City chain here in Beijing. (Lohao stands for Lifestyle Of Healthy And Organic.) I needed more flaxseed oil. It was a straight line from the subway stop but I needed to call the store twice to convey this to the taxi driver. The store was a lot smaller than I expected for a chain with six locations. It was a little bigger than a 7-11. It had a baking area, a wine area, a produce area, and a wheatgrass growing area where you could get wheatgrass juice and other healthy juices. They were sampling some delicious organic wine made from a fruit the English-speaking clerk didn't know the word for. I was a little surprised it only cost \$6/bottle.

The chain is just a few years old. It specializes in organic food. The chain owns its own 22,000-acre farm where they grow the food they sell – a new type of farmer's market. By growing the food they sell they can guarantee how it is grown. This really is an innovation in food selling. I hope the six stores (one in Shanghai) mean the concept is successful rather than they started with a lot of money.

I wanted to buy six bottles of flaxseed oil but the store only had one. The clerk went to another store to get five more but came back with only one more. One bottle (250 ml) might last me a week so I need to search for other

sources.

I told the clerk the flaxseed oil was for my research. "Can you really tell the flaxseed oil improves your brain?" he asked. Yes, I said. He was studying English at a private school in Beijing. He's in his second year of college, majoring in "commercial diplomacy" which means business diplomacy (e.g., negotiations). He predicted that even though Obama quit smoking for the campaign, he will start smoking again now that he's President.

The chain puts out a biannual magazine now on its third issue. The magazine said something very true: "As people earn more money, they start caring whether they are healthy enough to enjoy their fortune."

[2]More about healthy food in China.

1. <http://www.blog.sethroberts.net/www.lohaocity.com>

2. [http://www.newyorker.com/reporting/2008/11/24/081124fa\\_fact\\_dunlop](http://www.newyorker.com/reporting/2008/11/24/081124fa_fact_dunlop)

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Mark (2008-11-22 15:58:36)

The WaPo had a column the other day that concluded that Obama has not been successful in his attempts to quit: "Let the Guy Smoke: Obama Is Probably Fibbing About Giving Up Cigarettes. That's Okay." <http://www.washingtonpost.com/wp-dyn/content/article/2008/11/19/AR2008111903531.html> The Chicago Tribune and some other papers also chimed in the next day with analyses of his conflicting and vague statements. Like Laura Bush and Al Gore, he must be pretty good at avoiding being photographed doing it.

Stephen M (Ethesis) (2008-11-22 20:10:41)

BTW, another interesting story on medical transparency and the lack of it: <http://www.mormonsandscience.com/1/post/-2008/11/we-need-more-tansparency-in-medicine-and-the-light-of-christ.html>

Nathan Myers (2008-11-25 03:36:11)

I wonder if it says something deep about China that such a chain has to have its own farm. Maybe the customers wouldn't trust third parties to deliver actually organically-grown produce to the store. They might shop there anyway, and hope, but wouldn't pay more because they wouldn't have any confidence that they (and the store) weren't being cheated. Or, maybe, nobody will pay extra for organic, but the store can only keep cost parity with other stores by cutting out the middleman.

### **English-Speaking Contest (2008-11-23 23:12)**

Last night on Chinese TV I watched the first day of an English-speaking contest. Contestants gave a short prepared speech, then gave an impromptu speech based on a randomly-chosen debate topic (e.g., should TV advertising aimed at children be banned?). After the impromptu speech they defended their position for a few minutes. It was a test of both English and public speaking. The contestants were college students. I really liked it. It's a statement of, and promotion of, certain values; it says that society – at least the owners of the TV station and viewers – value something outside of themselves (English) and intellectual (learning a foreign language). China has been called a "nation of bookworms" (by James McGregor in *One Billion Customers*) so a show glorifying learning isn't entirely surprising but it is a big improvement over American TV game shows, which glorify office politics (*Survivor*), strange tasks in foreign countries (*The Amazing Race*), and singing (*American Idol*). I supposed the closest thing in America is the Scripps National Spelling Bee, which glorifies a useless

skill (spelling obscure words). What might American TV do like this? I can't think of a contest revolving around learning from other cultures but I can think of some contests that would promote useful intellectual pursuits:

- Green engineering contest. Give teams of high school students home-engineering tasks involving energy use: Insulate a window, boil water, light a room.
- Joke-telling contest. Tests the ability to use jokes in everyday life – for example to defuse difficult situations. Americans have lost this ability so completely I suspect some of them don't even realize it exists. I'm an example – I'm terrible at joke-telling.
- Editing contest. Contestants take an everyday piece of writing and improve it.
- Literature appreciation contest. Shown a passage from a famous novel, short story, or poem, contestants explain what is good about it. Bonus points for identifying the source.

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Chinese gameshows are intellectual. « BC in OC (2008-11-26 09:44:33)

[...] Chinese gameshows are intellectual. Posted on November 26, 2008 by bryan No, really, they are. [...]

### **Learning Chinese (2008-11-24 21:21)**

My cell phone has a service number that you call to get your account balance or to recharge your account. You press 1 for in Mandarin, 2 for English. Today for the first time I pressed 1. It reminded me of being 9 and going into the adult section of the library for the first time. I looked at a few books. They were full of words I didn't know. Likewise, I didn't understand a word of the Mandarin I heard. But I can listen to it again and again.

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William (2008-11-28 08:13:14)

I think your learning is progressing steadily. At least you are willing to face the challenges directly now : ) As you know, Chinese is almost the most difficult language to master all over the world. Good Luck! btw: is the problem of the movie settled?

Ray (2008-11-29 23:24:50)

Using the calling cards to call my wife when she is Taiwan from the us is challenging since all the phone voice instructions card menu is in mandarin. Please enter the card. And then the part of enter the phone along with how many minutes you have left. I guess After 20 years of marriage and bringing up our daughter bilingual I know enough with some guesses to call successful

### **The Four Abundances (2008-11-25 20:29)**

Someday, if I am lucky, I would like to write a book called The Four Abundances. It would be about how four incredibly important things that were once impossibly scarce, became or will become, to everyone's surprise, abundant:

1. Water. Free and everywhere. So cheap my Berkeley landlady pays my water bill. This has been true for a long time.
2. Knowledge. I mean general knowledge. Via the Web, reference book knowledge and news is instantly accessible for free. A recent development, although books and newspapers were a big step in this direction.
3. Health. A future abundance. Health is far from abundant right now. On the other hand, health has improved dramatically during the last 200 years, as Robert Kugel has documented. It is clearly approaching abundance.
4. Happiness. Another future abundance. I suppose it seems impossibly far off – but abundant water once seemed impossibly far off. Here it's hard to find signs of improvement, much less approaching abundance. Depression has become more common, not less, during my lifetime.

My self-experimentation has convinced me that health and happiness depend on things that were common in Stone-Age life, just as there was enough water and knowledge during that time. (Now we have more than enough water and knowledge, which is fine.) We need to figure out what those elements are. Self-experimentation provides a way of doing so.

In my little corner of Beijing, transportation is becoming a fifth (or third) abundance. Mostly I ride a bike – my bike was free, costs pennies to maintain, doesn't pollute, provides exercise, easy to park. For longer trips I take the subway (30 cents/ride) or a cab (a few dollars a ride). Many people take the bus (a few cents/ride). I might get an electric bike for a few hundred dollars. Doesn't pollute, very cheap per mile, easy to park, little congestion.

I've thought about this for months; what made me finally decide to post this was noticing that two little tools I use every day – a penlight and a brush to clean my keyboard – were free, giveaways at trade shows.

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Jeremy Cherfas (2008-11-26 03:00:27)

You are so very wrong about number 1, in Berkeley, in Beijing, just about everywhere.

Patrik (2008-11-26 10:41:09)

Seth, I think you are missing basic point. Almost nothing is free. You write: *Water. Free and everywhere. So cheap my Berkeley landlady pays my water bill. This has been true for a long time.* Well, it is not free since your landlady pays the bill, and you pay the landlady your rent, you are in essence paying for your water bill. Yes, she sends off a check to the utility company every month, but only b/c she knows your check is coming to her. Also, Lomborg, founder of the Copenhagen Consensus would disagree with your assertion that water is free, cheap and everywhere. <http://www.copenhagenconsensus.com/Default.aspx?ID=1150> *1.1 billion people lack good, clean water supplies, and 2.7 billion have no access to proper sanitation. Sophisticated modern piped water networks are far too expensive for most developing countries, but there are a number of low cost local interventions which are very cost effective and can increase the quality of people's lives significantly.* Not only is water not free, there are a host of things you mention that are costly, but appear free or low-cost to you. *For longer trips I take the subway (30 cents/ride) or a cab (a few dollars a ride). Many people take the bus (a few cents/ride).* We don't know the marginal cost of that subway ride, but I surmise that you are bearing all of it. I assume that like almost all public transportation, it is heavily subsidized by taxpayers. Meaning, it is not as cheap as you see it being.

seth (2008-11-26 15:11:04)

Jeremy and Patrik, "free" has multiple meanings. One is the price you immediately pay for something. By "everywhere" I



meant in an average American's life. You don't agree that water is abundant at least some places and that this is amazing?

Patrik (2008-11-27 11:03:48)

Hi Seth, I think you used the word 'free' a bit inaccurately, I think you mean inexpensive or cheap, which is not quite the same as free. :) *You don't agree that water is abundant at least some places and that this is amazing?* Something interesting to think about. Why is water relatively cheap to, say, diamonds? Sure, water is more abundant than diamonds, but we certainly cannot live without water, while the reverse is not true, no? Here is why: The marginal utility of water declines faster than that of diamonds. The second/third/nth diamond is just a little less valuable than its predecessor, while second/third/nth unit of water's value declines faster.

Heffbelly (2008-11-28 14:11:17)

Thomas Jefferson said on the topic back in 1776: "It is neither wealth nor splendor, but tranquility and occupation, which give happiness."

### **Reciprocity in China (2008-11-26 15:02)**

A few years ago, I asked a woman I know why she decided to go to graduate school to study cultural psychology. She told me she had been in the Peace Corps in Africa, I forget where. Maybe Kenya. Early in her stay a native had been a big help to her. To thank him, she baked him a cake. This angered him. "You think you can pay me back with a cake?" he said. To pay me back, give me something I want, he told her.

A more subtle version of the same thing happens in China. About a month ago, the friend of mine who had invited me to come here told me I had been invited to visit a university near Shanghai by a professor of psychology there who was a dean at the university. I wrote to the person who invited me:

I look forward to visiting you in ---. I don't have a lot of plans; I could come almost any weekend. When would be a good time for me to visit?

Her assistant replied:

Professor --- will not be free on 6-9 Nov 2008.Â And she will not be free on 15 Nov 2008.Â Â For other days, that's OK.Â Â I will come back when I get more message from Professor ---.

I replied:

Thanks. A weekend later than those will be fine.

Her assistant replied:

This evening, I talked with Professor --- about your visit to ---.Â Professor --- is expecting to explore any possibility of research collaboration with you.Â Professor --- mentioned the best time will be the last several days of November or early December for your visit to ---.

I replied:

Late November or early December is fine with me. I do not have any other plans.

Then I got this:

Professor --- is wondering whether you are interested in some collaboration, such as psychology research design guidance, psychology paper modification (the papers is written in English, but may not as good as expected), and some other research project collaboration.

I was surprised – just the Peace Corp volunteer was surprised. I replied:

I would be happy to talk about research design guidance with Professor ---. I cannot say more than that because I don't know anything about her research. So I don't know if our research interests overlap. About paper modification – improving the English – I am less sure. I am busy helping students and colleagues here at Tsinghua with their English.

The reply:

Professor --- will only ask you to improve the English for only one paper, which she expect to have that paper be published in USA.

I was puzzled what to say to this. Before I could reply, I got another email:

Professor --- talked with me this afternoon.Â She mentioned that the paper is related to ERP.Â She needs your help with the English language improvement with the paper, after her graduates' [students'] translation from Chinese to English.

I replied:

I just finished spending many hours fixing the English of a paper written by a non-Tsinghua researcher whom I will never meet. I am not eager to repeat the experience. However, I am happy to help Professor --- with the English of her paper if she will help me with my Chinese.

The reply:

Professor --- said that that's OK.

But it wasn't okay. I heard nothing for a week and wrote again:

When should we figure out the details of my visit?

The reply:

This afternoon, we discussed how we can benefit to each other, when you are here. Would you please list out what you can offer us, and what you expect us offer you, when you are in Suzhou?

I replied:

During my trip to —, I hoped to learn about —, the university, and the research being done there. I haven't traveled much in China so I thought the trip would be fun.

As for what I might offer you, I wrote The Shangri-La Diet, a New York Times bestseller that describes an entirely new approach to weight control; I am a statistics expert; and I have done innovative work in experimental design as well. Thousands of people read my blog because they think I have interesting views about the world. You can learn more about my work at [www.sethroberts.net](http://www.sethroberts.net). My blog is at [blog.sethroberts.net](http://blog.sethroberts.net).

Why did you invite me to visit?

The reply:

We discussed your response. And we need to mention the following two points: We need someone to improve our paper in English. But the paper has not finished yet. This is not a good season for sightseeing in — because of the cold weather. For above the two points, we cannot fix the time when you come to —. We may arrange your visit later. Keep posted.

My reply:

Do I understand you correctly? You invited me to — "to improve [your] paper in English"?

No reply. In other words, the answer was yes.

Yesterday I met a graduate student from the Philippines. She's studying architecture here on a scholarship from the Chinese government. How do you like it here? I asked. When she got here, she said, she was positive. "I was all 'It's an amazing place.' " Now, after more than a year, she isn't positive. Whenever someone does something for you it turns out they want something in return, she said, but you don't find out right away. She didn't want to give details. "I should stop talking," she said. I told her I'd had the same experience – the invitation I just described.

The whole thing reminded me of [1]something I wrote about Robert Gallo, the AIDS researcher:

A researcher in Gallo's lab once told the boss that Einstein was his favorite scientist; he especially admired Einstein's magnanimity. Gallo replied, "You are naive. Einstein could afford to be magnanimous because he was a genius." The other scientist asked, "You mean magnanimity is good only if you're a genius?" Gallo said, "Yeah, because then you don't have to worry about the competition."

And the reciprocity norms of rich countries take the form they do because the countries are rich.

1. <http://www.virusmyth.com/aids/hiv/srlabrat.htm>

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Seth's blog » Blog Archive » Moral Stages in Different Countries (2008-11-26 15:43:15)  
[...] Reciprocity in China [...]

alexis (2008-11-26 16:11:27)

This is fascinating. But are you sure you have your causality right? Maybe some countries are rich because they have less selfish reciprocity norms

seth (2008-11-26 16:41:03)

Thanks, Alexis. I find it hard to believe that economic prosperity, a big complicated thing, depends on reciprocity norms to a big extent. Maybe a small extent. But you're right, I'm not sure.

Patrik (2008-11-26 19:42:03)

Didn't you find it strange that you were communicating through the professor's assistant? Or does the professor not speak/write English?

Mike W (2008-11-26 21:46:22)

I had similar frustrating experiences when I was working in Taiwan for a month in the 90's. There was a strange quid pro quo dance going on all the time, and I felt like I didn't understand the rules at all. My Taiwanese friends were appalled at times by my obtuseness - what was so obvious and natural to them felt awkward to me. Since Taiwan is pretty wealthy (compared to the mainland), I'm more inclined to attribute the experience to cultural differences, not affluence.

seth (2008-11-27 00:22:10)

I don't know why we were communicating through the assistant. Maybe the assistant's English is better.

Aaron Blaisdell (2008-11-27 09:57:45)

Strange, stray thought: If a Romulan and a Vulcan had a baby together, it would be Chinese.

seth (2008-11-27 14:33:30)

Mike W, that's really interesting. Could you give an example?

Mike W (2008-11-28 11:26:27)

Trying to think of an easy-to-summarize example... While in Taiwan, I was invited to the home of the parents of an engineer I was working with. His dad, Mr. Lee, was a fairly affluent businessman, I don't know what business he was in. I was treated to a very nice, big dinner. There were a couple other guests who also worked with us, but I was the only American, and clearly the "guest of honor". I didn't speak much Mandarin, and the Lees knew little English, so we mainly talked through my colleague R.L., acting as an interpreter. Anyway, as I was leaving at the end of the evening, thanking my hosts, Mr. Lee asked when I was going back to the States. me: Next Saturday. Mr. Lee: Come here on Friday and we can discuss some things. me: I'm sorry, I'll be up in Taipei all next week. R.L. (quietly but urgently): Say yes! me: But I can't... R.L.: Just say yes! me (to Mr. Lee): Sure, next Friday. Mr. Lee (smiling): Good! The conversation with R.L. afterwards... me: What does he want to talk to me about? R.L.: I don't know, but you had to say yes. me: But I have no intention of going there. You know I'll be in Taipei. Is he expecting me to show up? R.L.: Maybe, maybe not. But it was very rude to say you wouldn't. Needless to say, I didn't go back to the Lee's, and I never found out what he wanted from me. It seemed to be more than just an invitation for another social visit, there was something specific on his mind. I was a little baffled that in this case a false commitment was the correct response, rather than a polite, honest refusal. There are two things going on here, I think. One is that I owed them some kind of favor after their hospitality. The other is that Asian emphasis on "saving face", where being polite is much more important than

being honest. (There's some of that in American culture, but usually we limit it to insincere compliments.)

Seth's blog » Blog Archive » Gary Taubes Answers Questions (2008-11-28 14:38:57)  
[...] Reciprocity in China [...]

seth (2008-11-29 07:05:37)

Thanks, Mike W. That's roughly as mysterious as my example. In my example, how was I supposed to know that the original purpose of the visit (explore research collaboration) wasn't the real one?

Tom (2008-11-29 11:59:11)

*I was a little baffled that in this case a false commitment was the correct response, rather than a polite, honest refusal. There are two things going on here, I think. One is that I owed them some kind of favor after their hospitality. The other is that Asian emphasis on "saving face", where being polite is much more important than being honest. (There's some of that in American culture, but usually we limit it to insincere compliments.)* By that measure, Los Angeles is part of Taiwan. The correct response to a social invitation you know you won't accept is, "That sounds GREAT! I can't WAIT! I am totally gonna try to make it!" Great shoes, by the way. Where'd you find them?

Wong China (2008-11-29 19:46:47)

Well, I think this kind of reciprocity is very common among Chinese universities, if Univ.A invite the professors of Univ.B for a conference, when the professors of Univ.B have some programs or conferences, they are expected to invite Univ.A. Because the program or conference is not considered as a matter of academic exchange, rather than an opportunity to share the money. Your case is quite reasonable in our logic: first, for the university, all the Chinese universities need to strengthen their overseas relationships to "build the world first-class university", and strong relationships will bring the money - the national program to the university. Second, for the department. The professor uses the money of department to invite you, and the accommodation especially the airplane tickets are expensive according to the exchange rate. So the department would like to ask something back, even just a good willing or wishes. I guess the professors want you and Mike to express the intent to widen the cooperation, including to invite them to the U.S. This mutual-beneficial intent is more important than what you actually do - it's OK if you promised but do not carry out due to some reason. That's why Mike was asked to say YES in Taiwan, I think what they need is just a good willing to cooperation. Last, for the professor, though the paper on an international journal will benefit her a lot, it makes no sense to ask you directly as a return. You know there are many paper companies where she won't spend a lot (about US \$200) to get her paper modified. Why she preferred to ask a professor to do so? Perhaps, the assistant loses the focus of the professor, maybe the professor just said "ask for mutual-beneficial cooperation, such as a course to the students, even a paper modification". Though I have no confidence in the morality of my fellow Chinese, I believe the international cooperation is what they want, and an English paper is just a piece of cake.

alex (2008-11-29 23:30:57)

I am a Chinese. This really happens in some places of China, but I do not think this could be attributed to just "cultural differences". I have a theory, so called "reciprocity" is related to high population density, especially high immigrant population, without a stable common culture. In fact, in Chinese, so called "reciprocity" is called "ã,ä%©" (Shi Kuai), with a derogative tincture.

seth (2008-11-29 23:54:20)

Wong China, I don't think she could just pay \$200 to get her paper fixed. It is technical psychology material, someone not a professor of psychology would probably make a bunch of mistakes. I'm sure the assistant didn't misquote the professor; the request for English help, when it came, was very clear. I don't mind at all that they expected to get something back; the problem for me was that this wasn't made clear at the beginning. In the beginning all that was mentioned was "research collaboration" - nothing about English help. Had they been more upfront about what they wanted, and the paper not needing too much work, I would have been happy to help them.

dt (2008-11-30 02:04:44)

The reason why they didn't mention the english paper help at the beginning may be that their request is known to all, and they didn't want others know the paper modifying request. And I felt the assistant's letter was with impoliteness, his/her request sounds like a command, this goes against the basic culture core of the chinese-modest and politeness. So when i firstly read your emails, I felt something wrong with the assistant, maybe it was just his/her english problem(both paper and letter)...

Wong China (2008-11-30 06:41:05)

Seth, now I understand what you mean, but I still don't know why can't she welcome your coming without any condition, and give you a nice reception to establish a tie of friendship, after that, talk about the article (or ask you to be a co-writer). You would not refuse a hospitable host, right? Frankly speaking, we Chinese are very cunning, it's hard to see any genuine reciprocity or dedication, as well as any awkward bargain. Chinese are good at packing the nakedly exchanges into kindness and friendship. So I just wonder why she has to be so honest to make it as a condition before you go...I felt a little sick to go on. The norms of reciprocity, love, thanksgiving, selfless, devotion, service...are the mental terms correlated to the cultural background, especially religious background. And the gentle side of human society is what social scientists pursue, without that, the richer people get, the poorer society is.

seth (2008-11-30 08:57:30)

Wong China, yes, I agree with you, "she [could] welcome [my] coming without any condition, and give [me] a nice reception to establish a tie of friendship, [and] after that talk about the article" - that would have been fine.

Crane Wang (2008-11-30 09:31:42)

OK, as a Chinese, I have to admit I didn't figure out what was going on. I also run into such awkward communications now and then. oops. I suppose sometimes people just feel an invisible psychological compulsion to show hospitality. Not exactly because they want to be friendly or they are really that happy to having friends around, it's just according to such psychological compulsion (maybe cultural as well), having friends & showing hospitality indicate a positive reputation and good social status.

alyce (2008-11-30 23:09:42)

Only one incident cannot represent whole China.

seth (2008-12-01 01:09:28)

Can one incident represent all of China? A better question is: Can one incident shed any light? If it was completely weird, maybe not, but the experiences of the Filipino graduate student convinced me that it was not completely weird.

Nico (2009-06-01 23:00:12)

As an American who's lived in China for about 2.5 years, I agree with Prof. Roberts that this kind of thing is common in China. In my more cynical moments (I try to keep those to a minimum) it seems like many people are only interested in "friendship" with me so they can ask me for a favor, something they often do quite soon after initiating the "friendship". I also would be fine with a straight-up proposal for an exchange, but that is often not how it goes. Even a request after some kind of hospitality would be OK ,though this may also seem a bit weird to me, depending on the details. It seems like I just don't have the background assumptions about how reciprocity works that the Chinese do. I think Prof. Roberts is also right that it has to do with poverty. In poor societies, highly local cooperation is a major source of social and material resources, and these norms become internalized. People from developed countries are more willing to make less binding social relationships, because the marginal benefit of an additional relationship is much smaller. The fact that you see the same norms in Taiwan suggests to me that norms like this are sticky; they outlast the economic conditions that gave rise to them (just an armchair hypothesis, for what it's worth). I should mention that I have several very good Chinese friends, whom I'm happy to help anytime.

seth (2009-06-02 07:15:29)

In my brief experience in China, this sort of thing is rare. What is much more common is sort of the reverse: Where people are friendly when it seems to me they have nothing to gain from our friendship.

## Moral Stages in Different Countries (2008-11-26 15:43)

Speaking of cultural psychology, right after I wrote [1]this I read [2]this – George Packer complaining that the moral development of Wall Street executives resembled the moral development of two-year-olds. He noted that Swiss and Japanese financial executives were further along.

Great post, Mr. Packer. My question is: Why?

1. <http://www.blog.sethroberts.net/2008/11/26/reciprocity-in-china/>

2. <http://www.newyorker.com/online/blogs/georgepacker/2008/11/the-moral-stage.html>

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## Assorted Links (China edition) (2008-11-27 14:40)

1. [1]ChinesePod.com. Podcasts for learning Chinese.
2. [2]PopUp Chinese. More podcasts
3. [3]Pinyin.info. "Most of what most people think they know about Chinese – especially when it comes to Chinese characters – is wrong."
4. [4]Laowai Chinese. "I've been busy not losing my job (teaching) and not ignoring my publisher. What I mean is: I've been working on the editing and layout of my book Chinese 24/7. I'm glad to announce there are now over ten people outside my family who have expressed interest in my book."
5. [5]Sinosplace. "There are some seriously rank odors out there on the street. Rotting organic matter, urine, feces, stinky tofu.... But don't worry, soon you'll be gleefully playing "name that odor" with your Chinese friends!"
6. [6]Imagethief. "Chinese netizens were outraged when [7]Gong Li played a Japanese woman in "Memoirs of Geisha", alongside fellow crypto-Chinese actress Zhang Ziyi."
7. [8]Beijing Sounds. A linguist blogs. "The final indignity comes when you utter a phrase that incites peals of laughter. Ignoring your request for explication, your [Chinese] spouse goes over to tell the in-laws (did I mention you're living with them?) and the lesson comes to an ignominious close with the stern father-in-law, who rarely chuckles, doubled up on the couch, tears rolling down his cheeks."
8. [9]Danwei "Today's New Culture View reports that the People's Supreme Court approved the death sentence of Yang Jia, the man who murdered six policemen and wounded three others and a security guard on July 1 this year."
9. [10]Scientific and academic fraud in China. [11]One popular post printed a letter from a Yale professor teaching at Beijing University upset about plagiarism among his Chinese students: "When plagiarism is detected in America, it can end the career of the person doing it," he writes. Such as Harvard professors [12]Laurence Tribe, Doris Kearns Goodwin, [13]Charles Ogletree, and [14]Alan Dershowitz?

Happy Thanksgiving! A Chinese friend texted me this. I replied I was surprised she was aware of it. "The majority of Chinese know this day," she replied, "and say thanks to their friends and families."

1. <http://chinesepod.com/>
2. <http://popupchinese.com/lessons>
3. <http://pinyin.info/>
4. <http://laowaichinese.net/>
5. <http://www.sinosplice.com/lang/pronunciation/>
6. <http://imagethief.com/blogs/china/>
7. [http://zonaeuropa.com/culture/c20060202\\_1.htm](http://zonaeuropa.com/culture/c20060202_1.htm)
8. <http://www.bjshengr.com/bjs/>
9. <http://danwei.org/>
10. <http://fangzhouzi-xys.blogspot.com/>
11. <http://fangzhouzi-xys.blogspot.com/2007/12/yale-professor-criticizes-wide-spread.html>
12. [http://authorskeptics.blogspot.com/2005/04/tribe-transgression-professor-tribes\\_22.html](http://authorskeptics.blogspot.com/2005/04/tribe-transgression-professor-tribes_22.html)
13. <http://authorskeptics.blogspot.com/2004/09/professor-charles-ogletree.html>
14. <http://authorskeptics.blogspot.com/2004/09/professor-alan-dershowitz.html>

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Charles (2008-11-28 01:04:06)

A couple of years ago, I had business that brought me to Shanghai a few times. I don't like cities at all, and I don't like breathing air that I can actually see, but I fell in love with the place. Well, maybe not the place itself, but being there. Unlike Phoenix, in Shanghai, and in China in general, there is so much there, there. In Shanghai, you could feel the energy of Asia being sucked there as if Shanghai was the center of a giant cultural and economic whirlpool. There is nothing like it in the United States. It makes even NYC seem like an interesting, but rather slow-moving and self-involved little town. I'm not saying I'd move there, but there is nothing like China on the planet now other than China, if there ever was. If you have not been there and experienced it, you cannot know what the world is really like, because China is more of the world than you can imagine if you haven't been there.

Shayne (2008-11-28 07:22:29)

Those are all good websites that you mentioned and I'd like to mention two others. The food review website dianping.com is a marvelous resource, although it's only in Chinese. But it does list the highest rated restaurants and their most popular dishes, so you really only need a little chinese or machine translation to get alot out of it. Also, alljapaneseallthetime.com is a great site with a different theory of language learning especially for east asian languages.

Mariel (2008-12-15 11:53:10)

I've heard of some of those sites. I personally use [www.nciku.com](http://www.nciku.com) because you can start your own account and build vocabulary lists, look up words by drawing them on a character recognition tool and they use more than one source for translating words from english to chinese and chinese to english to make the meaning and usage of chinese words a lot clearer than just looking up a definition in a standard dictionary.

## **Gary Taubes Answers Questions (2008-11-28 14:38)**

Michael Eades has posted [1]Gary Taubes's answers to questions sent in by readers. The first one, curiously enough, concerns China: "How do Asians and others living a seemingly high-carb existence manage to escape the conse-



quences?" Taubes's answer:

There are several variables we have to consider with any diet/health interaction. Not just the fat content and carb content, but the refinement of the carbs, the fructose content (in HFCS and sucrose primarily) and how long they've had to adapt to the refined carbs and sugars in the diet. In the case of Japan, for instance, the bulk of the population consumed brown rice rather than white until only recently, say the last 50 years. White rice is labor intensive and if you're poor, you're eating the unrefined rice, at least until machine refining became widely available. The more important issue, though, is the fructose. China, Japan, Korea, until very recently consumed exceedingly little sugar (sucrose). In the 1960s, when Keys was doing the Seven Countries Study and blaming the absence of heart disease in the Japanese on low-fat diets, their sugar consumption, on average, was around 40 pounds a year, or what the Americans and British were eating a century earlier. In the China Study, which is often evoked as refutation of the carb/insulin hypothesis, the Chinese ate virtually no sugar. In fact, sugar consumption wasn't even measured in the study because it was so low. The full report of the study runs to 800 pages and there are only a couple of mentions of sugar. If I remember correctly (I don't have my files with me at the moment) it was a few pounds per year. The point is that when researchers look at traditional populations eating their traditional diets – whether in rural China, Japan, the Kitava study in the South Pacific, Africa, etc – and find relatively low levels of heart disease, obesity and diabetes compared to urban/westernized societies, they're inevitably looking at populations that eat relatively little or no refined carbs and sugar compared to populations that eat a lot. Some of these traditional populations ate high-fat diets (the Inuit, plains Indians, pastoralists like the Masai, the Tokelauans); some ate relatively low-fat diets (agriculturalists like the Hunza, the Japanese, etc.), but the common denominator was the relative absence of sugar and/or refined carbs. So the simplest possible hypothesis to explain the health of these populations is that they don't eat these particularly poor quality carbohydrates, not that they did or did not eat high fat diets. Now the fact that some of these populations do have relatively high carb diets suggests that it's the sugar that is the fundamental problem.

Tsinghua students are almost all thin, although they eat a lot of white rice (a refined carb). My explanation is that they eat a diet with great variation in flavor. Almost everything they eat is made by hand from scratch – including noodles! – and the choice is staggering (hundreds of dishes easily available at lunch and dinner). They don't eat a lot of sweets, as Taubes says, but because you can lose weight by drinking sugar water, sugar alone cannot cause obesity.

The Filipino graduate student I mentioned in [2] a recent post told me she lost a lot of weight (too much!) when she came here; I attribute it to the novelty and variety of the food. This may be the only time a young woman has told me she lost too much weight without trying. Because Beijing is the capital of China it has lots and lots of Chinese regional food (and the Tsinghua cafeterias do as well). The variety of cheap food available here may be unmatched anywhere else in the world.

Thanks to Dave Lull.

1. <http://www.proteinpower.com/drmike/cardiovascular-disease/gary-taubes-responds/>

2. <http://www.blog.sethroberts.net/2008/11/26/reciprocity-in-china/>

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cindy (2008-11-29 07:32:11)

Seth, what have you been eating in Beijing? Are you still able to keep up with your diet? I believe it must be hard to find

flaxseed oil there, if you could not find it a Lohao City.

Eugene (2008-11-29 12:46:37)

A few more variables about rice to consider (from a Japanese perspective): 1. Cooking rice isn't like popping bread into a toaster. Japanese rice cooker technology is amazing. But you've got to scoop the rice out of the bag, rinse it (a long-ingrained habit), and wait for it to cook. And then wash the cooker before using it again. 2. As a side-dish, white rice is not flavored. Try chowing down on mashed potatoes with no salt, pepper, butter, milk. Or bread made without salt. 3. Because of government price-support policies, white rice in Japan is expensive. Price signals work not only in terms of demand, but can affect a food's social status, and its "culture of consumption." 4. You eat the whole rice grain—that when cooked expands considerably in volume—not a ground flour made from the rice. The rice grain itself has a unique "mouth feel." 5. There's no equivalent of gluten intolerance with rice. I suspect that the human body reacts much differently to refined rice carbohydrates than to refined wheat carbohydrates and sugars. 6. Chopsticks. Seriously.

seth (2008-11-29 15:46:44)

yes, I've been continuing my diet – I consume a few tablespoons of flaxseed oil every day. I found flaxseed oil at Lahao City just not as much of it as I would have liked. I wanted to buy six bottles but was only able to buy two, even though an employee went to another store to find more.

Gordon McNutt (2008-12-01 17:38:57)

It's true that the Chinese diet has an amazing amount of variety. It stretches belief, however, to think that everybody exploits this variety instead of routinely choosing favourite items on a daily basis. Furthermore, it's my personal observation that other Asians with less varied diets are also almost universally thin – so long as they remain in Asia. Aside from processed sugar and flour, the other thing conspicuously missing from Asian diets is dairy (Indian cuisine does have some exceptions). Have you tried the local ice cream?

seth (2008-12-01 22:55:01)

Good point, Gordon. Let me add that in the Tsinghua cafeterias everything is made from scratch, including noodles. Just as everything was made from scratch in the much-less-diverse American diet back in the 1950s, before the obesity epidemic. I've had some ice cream here but I don't know where it came from. It was vanilla with a lot stronger flavor than American vanilla ice creams. Tsinghua students drink some milk and yogurt.

1 (2008-12-02 20:21:36)

I work in a UC Berkeley cafe and the students eat everything! Healthy and unhealthy, whether or not they are thin.

ChrisC (2008-12-02 21:32:16)

Speaking of lifestyle factors that might contribute to thinness, how common is smoking in China?

Jess (2008-12-04 08:23:58)

Have you heard of the China diet? <http://archive.fortes.com/2006/10/27/chi-na-diet/>

Sophie (2010-06-28 11:24:23)

China is changing quickly. When I was in Shanghai (where the traditional cooking is full of fat and sugar, yum!), a lot of the kids were overweight - and directly after school they would go to their local convenience store and buy more sweets and fat. Furthermore, in China, being fat has historically been seen as a status symbol (you only get fat when you don't do manual labor and sit around munching food all day because you can afford it). Historically, because there were only a few rich people compared to the total population who were near starvation levels, the Chinese were considered a nation of "thin people". Another reason for the fat increase seems to me to be that, because the grandparents are often the ones to take care of the children, and they starved most of their lives (remember the famines under Mao?), they could be making up for their past starvation by feeding their grandchildren too much. Children are considered 'little emperors' and are given as much food as they

can hold. Here's an interesting article on the subject of obesity in china: <http://www.bmj.com/cgi/content/full/333/7564/362>

### **What Makes A Good Student? (2008-11-30 18:37)**

One of my Chinese teachers – the one who sold me my cell phone – said I was a good student.

"Why do you say that?" I asked.

She didn't quite understand the question. "Number 1: You work hard. Number 2: You work hard. Number 3: You work hard," she said.

She had never heard the joke about how to get to Carnegie Hall ("practice, practice, practice"). The joke is one of those convenient and reassuring lies. The real way to get to Carnegie Hall is 1. Ability to play well (based on practice, no doubt). 2. Charisma. 3. Money. See Judith Kogan's brilliant [1]Nothing But the Best: The Struggle For Perfection at the Julliard School for more about this. A few years ago I went to the Julliard bookstore and asked them about this book. They hadn't heard of it!

1. <http://www.amazon.com/Nothing-but-Best-Perfection-Juilliard/dp/0879101229/sethrobertand-20>

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Ryan Holiday (2008-11-30 19:40:23)

The new Malcolm Gladwell book has a good chapter on this. He traces the western and eastern differences on the issue back to rice paddy vs farming culture. It's interesting...

1 (2008-11-30 20:41:55)

One PhD student I met at Berkeley said that she visited Tsinghua as well. I asked her how she survived without knowing the language. She said that her Chinese friends would write down things she wanted to say on an index card. Then she would use that index card to help her communicate with others who couldn't speak English. Seth, I think it's great that someone said you are a good student. I bet you are a great professor, too! When I was trying to learn languages, I would teach myself using books I got from Barnes and Noble, then practice the things I taught myself with other people, including students at Berkeley and my coworkers. It was a great way to learn languages because if I misunderstood something, then others can correct it for me. I really like your blog because it is very uplifting and encouraging. Your view of life is very unique!!!!

zzz (2008-12-01 05:50:28)

That Chinese often think of diligence more highly than usual accounts for the answer of the teacher, I suppose. Hence, I am never considered a good student in my teachers' eyes, though my works are not bad.^

## **3.12 December**

### **How Safe is Melamine? Is This Funny or Horrifying? (2008-12-01 03:26)**

From [1]Natural News:

Up to 90 percent of the infant formula sold in the United States may be contaminated with trace amounts of melamine, the toxic chemical linked to kidney damage, according to recent tests. The FDA's test results, which the agency hid from the public and only released after the Associated Press filed a Freedom of Information Act request, showed that Nestle, Mead Johnson and Enfamil infant formula products were all contaminated with melamine. . . .

Prior to these test results being made public, [2]the FDA had published a document on its website that explained there was no safe level of melamine contamination in infant formula. Specifically, the FDA stated, "FDA is currently unable to establish any level of melamine and melamine-related compounds in infant formula that does not raise [3]public health concerns."

Once tests found melamine in U.S.-made formula products, however, the FDA changed its story. As of today, the FDA has now officially declared melamine to be safe in infant formula as long as the contamination level is less than one part per million (1 ppm).

Astonishingly: The FDA has no new science to justify its abrupt decision declaring melamine to be safe!

I would have loved to have been a fly on the wall when that decision was made.

1. <http://www.naturalnews.com/024947.html>

2. [http://www.naturalnews.com/the\\_FDA.html](http://www.naturalnews.com/the_FDA.html)

3. [http://www.naturalnews.com/public\\_health.html](http://www.naturalnews.com/public_health.html)

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1 (2008-12-02 12:28:12)

I am surprised that with all the things you have to do, you still have time to read a lot. How do you have time to juggle all the stuff you have to do? I always wondered ever since I read "self experimentation" because you were able to have a life and record a lot of stuff about yourself for your research.

Genevieve Long (2008-12-02 12:32:49)

China Admits Nearly 300,000 Infants Hurt by Melamine <http://genevievelong.wordpress.com/2008/12/03/china-admits-nearly-300000-infants-hurt-by-melamine>

Mark (2008-12-02 23:38:41)

It stands to reason that there is some level of melamine that is safe. For instance, one molecule per lifetime is probably safe. Two is probably safe. And how many babies have died? Six, the Chinese say. So let's say it's really 60. And let's say that 6,000 received some meaningful injury of some sort that will manifest itself in the future. No, let's make that 60,000. How many babies drank the milk? Probably 60 million. So the conclusion is that only 1 in 1,000 babies was harmed by the melamine in Chinese milk. So there is in fact a safe level, and it seems to be way more than 2 molecules per lifetime. I like the fact that the FDA is coming up with some number, however much of a guesstimate it is. The alternative is to give activists ammunition to make unreasonable demands to make the milk 100.0000 percent free of anything that might speculatively shorten your life by 1 second. This is kind of a pet peeve of mine because of mercury-in-fish activism by ocean conservationists. As a resident of Japan it is bumblebees-can-fly clear that eating an order of magnitude more fish than anyone ever eats in the U.S. is not harmful (and you should probably be reaching the same conclusion in China by now). Yet the FDA's previous screwup in pulling a low methyl mercury number out of a hat has caused fish eaters/sellers no end of problems and has scared the public away from eating a very beneficial food in favor of manufactured soyburgers. [Exercise left to the

student: Try to follow up on Genevieve's source in the previous comment. You'll learn a lot about activist misinformation tactics.]

Sol (2009-09-18 05:28:49)

breastmilk has no melamine.

## **Self-Experimentation on Someone Else: Alzheimer's Disease (2008-12-01 14:55)**

From the [1]St. Petersburg Times:

After two weeks of taking coconut oil, Steve Newport's results in an early onset Alzheimer's test gradually improved says his wife, Dr. Mary Newport. Before treatment, Steve could barely remember how to draw a clock. Two weeks after adding coconut oil to his diet, his drawing improved. After 37 days, Steve's drawing gained even more clarity. [The three drawings are shown in a photo.] The oil seemed to "lift the fog," his wife says.

. . .

He began taking coconut oil every day, and by the fifth day, there was a tremendous improvement.

The wife took her husband's treatment into her own hands, just as I tried to [2]improve my sleep myself – it was self-experimentation in that sense.

This is related to [3]my omega-3 research in that it is another example of a fat having highly beneficial brain effects.

1. <http://www.tampabay.com/news/aging/article879333.ece>

2. <http://repositories.cdlib.org/postprints/117/>

3. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>

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peter (2008-12-01 16:12:17)

FWIW, when i took coconut cream (which is very hi in coconut oil) my results of computing simple mathematical problems increased. (see <http://maxi.kabutz.net/>, Maxi Maths with GWT) I didn't keep track so i can't tell you by how much it increased, but i noted at the time that i was surprised.

1 (2008-12-02 12:22:27)

I started taking flaxseed oil a few weeks ago. I drink 1 tbsp a day. I put it in some water before I drink it. I think it has helped my depression. I feel a lot better, like the edge has been taken off.

Nathan Myers (2008-12-02 19:39:18)

I wonder if having taken flaxseed oil regularly actually interferes with correct nerve function, such that it is restored immediately but only temporarily after a dose. This would correspond to an addiction / withdrawal response. I don't think it's likely, but it seems possible, and easy enough to check. To check, you would have to find somebody not taking it and measure them, and then measure immediately after the first dose, and again after they've been taking it for a while, to see what the correct baseline is. Right?

Kevin (2009-04-12 08:09:27)

Healthy Fellow has a great blog post: <http://www.healthyfellow.com/208/coconut-oil-and-alzheimers-disease/>

### Unfortunate Obituaries: The Case of David Freedman (2008-12-02 14:59)

One of my colleagues at Berkeley didn't return library books. He kept them in his office, as if he owned them. He didn't pay bills, either: He stuck them in his desk drawer. He was smart and interesting but after he failed to show up at a lunch date – no explanation, no apology – I stopped having lunch with him. He died several years ago. At his memorial service, at the Berkeley Faculty Club, one of the speakers mentioned his non-return of library books and non-payment of bills as if they were amusing eccentricities! I'm sure they were signs of a bigger problem. He did no research, no scholarly work of any sort. When talking about science with him – a Berkeley professor in a science department – it was like talking to a non-scientist.

David Freedman, a Berkeley statistics professor who died recently, was more influential. He is best known for a popular introductory textbook. The work of his I found most interesting was his comments on census adjustment: He was against adjusting the census to remove bias caused by undercount. This was only slightly less ridiculous than not returning library books – and far more harmful, because his arguments were used by Republicans to block census adjustment. The undercounted tended to vote Democrat. The similarity with my delinquent colleague is the very first line in [1]Freedman's obituary: He "fought for three decades to keep the United States census on a firm statistical foundation." Please. A Berkeley statistics professor, I have no idea who, must have written or approved that statement!

The obituary elaborates on this supposed contribution:

"The census turns out to be remarkably good, despite the generally bad press reviews," Freedman and Wachter wrote in a 2001 paper published in the journal *Society*. "Statistical adjustment is unlikely to improve the accuracy, because adjustment can easily put in more error than it takes out."

There are two kinds of error: variance and bias. The adjustment would surely increase variance and almost surely decrease bias. The quoted comments ignore this. They are a modern Let Them Eat Cake.

Few people hoard library books, but Freedman's misbehavior is common. I [2]blogged earlier about a blue-ribbon nutrition committee that ignored evidence that didn't come from a double-blind trial. Late in his career, Freedman spent a great deal of time criticizing other people's work. Maybe his critiques did some good but I thought they were obvious (the assumptions of the statistical method weren't clearly satisfied – who knew?) and that it was lazy the way he would merely show that the criticized work (e.g., earthquake prediction) fell short of perfection and fail to show how it related to other work in its field – whether it was an improvement or not. As they say, he could see the cost of everything and the value of nothing. That he felt comfortable spending most of his time doing this, and his obituary would praise it ("the skeptical conscience of statistics"), says something highly unflattering about modern scientific culture.

For reasonable comments about census adjustment, see Eriksen, Eugene P., Kadane, Joseph B., and Tukey, John W. (1989). Adjusting the 1980 census of population and housing. *JASA*, 84, 927-943.

1. [http://www.berkeley.edu/news/media/releases/2008/10/20\\_freedman.shtml](http://www.berkeley.edu/news/media/releases/2008/10/20_freedman.shtml)

2. <http://www.blog.sethroberts.net/2007/08/08/something-is-better-than-nothing-part-2/>

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Dennis Mangan (2008-12-03 10:01:15)

You seem to be saying that Freedman was a bad person because you disagree with his view on censuses and because republicans agree with him. You think it obvious that he was wrong, but I don't see anything obviously wrong with it.

seth (2008-12-03 13:31:13)

"Bad person"? No, bad behavior. You're right, Dennis, that he was wrong might not be obvious to a someone not professionally involved with estimation – and I suppose at least a few statistics professors even agreed with him. (But when I brought up Freedman's position with my friends who were statistics professors, they agreed with me.) That's why I gave a citation with a detailed explanation of why his position was wrong. No one doubted that the census undercounted some people more than others. Freedman was against fixing this so that you could no longer predict who was undercounted. Suppose a store systematically overcharged you. What would you think of someone who opposed solving the problem using the best methods available so that, on average, you were charged the correct price? That Republican politicians agreed with him is not part of why I dislike his behavior. It was why his behavior was influential.

Ed (2008-12-03 14:44:15)

Seth, He may have been a bastard, he may have been ideologically blinded. But the time to address those issues was when he was alive. Obituaries are romanticized for the benefit of the survivors. –Ed

seth (2008-12-03 15:41:37)

Ed, I made these points when Freedman was alive, too. Many times. I hope you're not saying no one should criticize a dead person or the culture that produced him. I'm not saying he was a bastard or ideologically blinded, certainly not. For all I know he was a Democrat. The problem with the obituary is not "romanticization". My point is not that Freedman did this stuff but that other professors saw this as okay, even good. My point is about the culture, in other words. It is one reason academia is called the ivory tower. Romanticization in obituaries is fine. Romanticization would have been to leave the census stuff out of the obituary. Freedman did a lot of perfectly good other stuff.

Ed (2008-12-04 09:16:11)

Seth, I didn't mean to say that one shouldn't criticize the dead. And you didn't call Freedman a bastard. Anyone's obituary, bastard or ideologue is romanticized. I think I understand now. The issue is the "Census Stuff" that should have been frowned upon and challenged, wasn't, even worse it was celebrated in his obituary. Didn't get that on first or second reading of the post, maybe I need more flaxseed oil. Anyway, thank you for your posts on academia. –Ed

Jas (2008-12-18 01:40:32)

It is not clear if census adjustment would have reduced bias (at the cost of variance) as you state. Indeed my bet is that David Freedman is correct: model adjustment would have made the bias worse. The issue is not one of just random sampling. Much model based extrapolation was being proposed. The devil is in the details, and vague gestures do not an argument make. A hint of the complexity is that by the 2000 census the partisan impact of the undercount was probably the reverse of what you conjecture. For the purposes of apportionment, the south west (e.g., states like Texas) would have gained Congressional seats and hence electoral college votes at the expense of the north east. So, a correction would have been a win for the Republicans in national elections. Note that apportionment counts illegal immigrants, although they cannot vote. Much like many academics, the political parties took their positions based on weak evidence and held their ground even when the facts shifted. Of course the scientific issue is that the undercount is difficult to fix and who is being undercounted is constantly changing. The problem is more difficult than calculating the partisan impact, and most people can't even get that part right.

seth (2008-12-18 17:52:49)

Jas, where is it argued that census adjustment was more likely to increase bias than reduce it? I have never heard that argument nor do I understand it.

Asad Zaman (2008-12-20 17:46:16)

Freedman argued that census adjustment would introduce bias of unknown magnitude. He proved this by following essentially the same methodology but making minor changes, and showing that substantial differences would arise in the adjustment. As Jas says, the devil is in the details, which must be understood here to follow what is going on. Following the census, there is a survey which attempts to measure the undercount which occurred in the census. This survey itself is subject to the same undercount problem as the census. A fundamental assumption which makes adjustment possible is that these two undercounts are INDEPENDENT. Freedman argues that this is not true – a person who is undercounted in the census is also likely to be undercounted in the subsequent survey. This makes eminent sense. If there is correlation between the undercounts, this will lead to bias in the adjustment. How large this bias can be is assessed in the paper cited below, which shows that it is likely to be so large as to make the adjustment worse than useless. K.W. Wachter and D.A. Freedman. “The fifth cell: Correlation bias in U.S. census adjustment.” *Evaluation Review*, vol. 24 (2000) pp. 191–211

Terry Weadock (2008-12-30 20:49:18)

I don't think anyone is disputing whether biases exist in the census adjustments. On any given census you can be sure that it will be biased one way or another depending on the methodologies used. Given the likelihood that undercounts are correlated, I agree with Mr. Zaman, Wachter and Freedman, in that the adjustments are likely “less than useless”. *taw*

seth (2008-12-30 22:01:00)

Terry, you wrote “given the likelihood that undercounts are correlated” – I don't think anyone disputes this either. This is the puzzle behind Freedman's criticisms: he seemed to equate lack of perfection with uselessness. I haven't read the Wachter and Freedman yet, but I will, and then after that maybe I will understand Freedman's criticisms better.

Tom in TX (2008-12-31 13:20:44)

Once the decision is made to adjust the census results, the adjustment will be just one more political issue. There is no guarantee that unbiased statistical methods will be used. Do you think the average (or above-average) Congressman understands the difference between variance and bias? Would he even want to? All he has to know is how to get his party's statisticians on the committee that does the adjustments. On a related question, how would everyone feel about using statistical methods to adjust the vote totals in elections? The arguments would be similar. A lot of people don't vote, we could get a more accurate outcome with adjustment. Right?

Mike (2009-01-12 18:24:12)

To summarize: you read Freedman's conclusions about the census in the obituary, decided they were self-evidently false without reading the arguments supporting them, and concluded that he was a bad and/or dishonest statistician. Now there's good science!

seth (2009-01-13 11:46:45)

Mike, I knew about Freedman's census ideas long long before his obituary. Asad Zaman, I've now read the citation you gave. You are wrong when you write “a fundamental assumption that makes adjustment possible is that these two undercounts are INDEPENDENT.” The assumption that makes adjustment possible is that the two undercounts are not PERFECTLY CORRELATED. Which is far more plausible. Wachter and Freedman, as far as I can tell, ignore this point. No sane person ever thought census adjustment would eliminate bias; they merely thought it was more likely to reduce it than increase it.

Mike (2009-01-13 15:32:57)

<http://www.stat.berkeley.edu/users/census/612.pdf> provides detailed arguments explaining how census adjustments can be harmful. Your rhetoric is not just to disagree with Freedman, but to claim the conclusions are “ridiculous.” If you want to take



the scientific high ground, say something about the actual arguments in the paper.

seth (2009-02-16 22:57:41)

Mike, thanks for the reference. I've read that paper. Before I read it I understood that adjustments are inevitably inaccurate and thus increase the variation of the final estimate. Their value is that they are more likely to decrease bias than to increase it – at least, this is the heart of the argument for adjustment. Going on and on about whether the adjustments increase or decrease "accuracy" as that paper does is just a distraction.

Asad Zaman (2009-04-28 20:31:01)

Technically you are right that there is a possibility of adjustment when the sample/resample undercounts are not perfectly correlated. Practically speaking, I do not know of any census adjustment schemes which allow for and adjust for such dependence. Erikson-Kadane et. al (EK). whom Freedman was arguing against, did assume independence in producing their adjustments. It is strange that the central issue: whether or not an adjustment will produce a more accurate count, is viewed as a distraction by you. I propose to subtract random numbers to adjust the census – this is likely to improve the census, since it is known that there is an undercount. EK proposed a scheme which, as Freedman demonstrated, was essentially equivalent. He showed this in three different ways. A: Following exactly the same methodology, but using an alternative series to the one picked by EK (out of 18 equivalent series) produces seriously different adjustments. B: Changing some of the theoretical assumptions (in particular independence) required for the adjustments to more plausible ones, leads to seriously different numbers for adjustment. C: "Shrinkage," the Bayesian methodology for producing adjustments used by EK requires specification of a prior distribution. This is elegantly finessed via the empirical Bayes method actually used by EK, where prior assumptions are hidden at a deeper level. By changing these, one can arrive at substantially different numbers. In particular, someone who knows the game well can produce numbers which favor one state over another or to suit his own political preferences.

seth (2009-04-29 07:34:44)

"Whether adjustment will produce a more accurate count." As I said, to talk about "accuracy" is confusing. Accuracy has two components: variance and bias. Adjustment will very likely increase variance and reduce bias. The EK scheme was "equivalent" to a scheme where you "subtract random numbers"? Another confusing statement. Random numbers can be anything.

Mike (2009-05-14 09:34:19)

Seth, As you say, adjustments will likely increase variance and reduce bias. A large increase in variance may not be worth a small reduction in bias, so it is not clear that adjustments are a good idea. To talk about "accuracy" is simply to talk about the net effect, which is what we care about. It seems much more misleading to focus on only one component at a time.

seth (2009-05-14 13:43:24)

Mike, the average person doesn't know there are two components. Lumping them together under the name of "accuracy" glosses over the question of how to weight them. I don't see how it is misleading to say that adjustments will likely increase variance and reduce bias. Complicated, yes, misleading, no.

Mike (2009-05-14 17:32:03)

Seth, You initially claimed that it was "ridiculous" to recommend against trying to remove bias. It is not ridiculous if the attempt to reduce the bias increases the variance so much that the mean squared error increases overall, which is exactly what the quote (and the paper) from Freedman says. I bring up mean squared error since that is the thing of which variance and (squared) bias are components. Freedman didn't say "mean squared error" since the average person would not have understood that. Instead he said "accuracy." The misleading quote from you is "He was against adjusting the census to remove bias caused by undercount. This was only slightly less ridiculous than not returning library books." You have offered no argument for this statement; Freedman on the other hand, offers a detailed argument for his position in the paper cited.

seth (2009-05-14 21:57:49)

Mike, your "mean squared error" is only one of an infinity of ways of combining bias and variance to get an overall measure of goodness/badness. Given that we value fairness (lack of bias) more than uniformity (lack of variance), it is hardly an obvious choice. Freedman's idea that his particular relative weighting of bias and variance was so sure – on such a "firm statistical foundation" – as to not need mentioning or discussion, that no reasonable person could disagree, really does resemble not returning library books in its self-centeredness. For more about why I thought Freedman's position resembled not returning library books, read the rest of the post.

Mike (2009-05-15 00:00:14)

Seth, Mean squared error is indeed arbitrary, as is the notion of variance itself. That is not the main point. The main point is that pretty much however you would like to define "total error," it is possible to increase the total error while reducing bias (unless the only thing you care about is bias, in which case what you want to do is pick a really random sample of one person). Freedman argues that this actually happens, for a reasonable (and conventional, though arbitrarily so) measure of total error, when the usual techniques are applied to adjust the census. You are claiming, I think, that the bias-reduction benefits of census adjustment outweigh the costs of increasing other kinds of error. This isn't self evidently true or false. Freedman has given some reasons for believing it is false. What are your reasons for believing it is true?

seth (2009-05-15 06:35:15)

Mike, no I'm not claiming that. I'm claiming that it was a bad idea to omit the bias/variance distinction when discussing the "accuracy" of the census and the effects of adjustment. In a certain way I agree with you. It doesn't necessarily resemble not returning library books to claim the census shouldn't have been adjusted. If someone made clear the bias/variance difference and explained their relative weighting scheme – why they chose to weight bias like this and variance like that – that would be reasonable. I saw nothing like that in Freedman's writings.

Mike (2009-05-15 08:51:49)

Section 14 of the paper discusses estimation of bias and variance from adjustment methods, and makes explicit that they are being combined in the conventional way: by adding the squared bias to the variance to get mean squared error. Maybe mean squared error is not the right way to measure accuracy, but it's not like Freedman invented it just to make his argument! In fact, he's responding to arguments in favor of adjustment which also cast the discussion in this framework. For better or for worse, most of the common statistical tools (mean, variance, regression) are closely tied to MSE. At least, MSE has the virtue that the random and systematic errors can be separated additively, which makes it a lot easier to discuss their relative contributions. If, for example, we were primarily interested in mean absolute error, another reasonable candidate, we would have no nice way to decompose it into systematic and random parts, and "variance" (MSE of an unbiased estimate) would have no particular importance. So, if your criticism of Freedman boils down to "he used MSE without justifying it" – I agree he is guilty of that, along with most of the rest of the statistical profession. However, it doesn't seem to justify the harsh words in your original post.

Seth's blog » Blog Archive » How Much Should We Trust Clinical Trials? (2009-07-02 20:32:25)

[...] Kolata also quotes David Freedman, a Berkeley professor of statistics who knew the cost of everything and the value of nothing. Perhaps it starts in medical school. As I blogged, working scientists, who have a clue, don't want to teach medical students how to do research. [...]

## **Making a Living in China (2008-12-03 13:44)**

Several buildings are being built on the Tsinghua campus. At least one woman makes a living as a prostitute among the construction workers. She is known as Qikuaiban, which means seven and half yuan (about \$1). The name came about when she offered her services to a worker, he said, "All I have is seven and a half yuan," and she accepted that payment.

## [1]Happiness in China: Who wants to be a construction worker?

1. <http://www.blog.sethroberts.net/2008/11/12/happiness-in-china-who-wants-to-be-a-construction-worker/>

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1 (2008-12-03 15:44:10)

I met a prostitute on the streets of San Francisco many years ago and she was very interesting to talk with. She told me a lot about her life. She told me to buy clothes at this one store called "Hong Kong Fashions." She told me the clothes there are for ladies and are in style. That is where she buys her clothes. I've been shopping there for 4 years! I always get great compliments on my clothes from Hong Kong Fashions, but it is expensive there. I believe it is worth it, though. The sales lady there always remembers me.

pd3 (2008-12-04 08:19:48)

putting the victorian era assumptions to the side for a second, isn't it a little sad that this woman is called "one dollar"?

Aaron Blaisdell (2008-12-04 08:52:51)

I guess over here we would call her a "dollar whore" (play on "dollar store"). Thank you, come again!

seth (2008-12-05 06:57:06)

pd3, yes that is why I posted this: because it is sad.

1 (2008-12-05 23:06:02)

when i was homeless in san francisco, i wanted to get into the sex business. i had contemplated being a prostitute and the prostitute i met in san francisco became a really good friend of mine. I met her several times while she was walking the streets and she told me how to get into her line of work. but i was afraid because it was illegal, but if it was a legal "job," i think i would have tried it. i met a "madame" who wanted me to join her group of girls. i met the madame when i was homeless at the lark inn, a homeless shelter for young adults in san francisco. what i am trying to say is that maybe it seems sad to you, but maybe if you talked with the lady, you would think otherwise. maybe she has a good reason to be a prostitute and call herself "Qikuaiban." Before I left san francisco to travel to boston, i almost learned how to be a stripper! being homeless in san francisco is one of my best memories....

## Marxism Studies at Tsinghua University (2008-12-04 16:26)

All Tsinghua undergraduates are required to take four Marxism-related classes to graduate; next year the requirement will be reduced to three classes. A friend told me about her Marxist philosophy class, which she thought was pretty interesting:

- There is no homework. No reading, no papers.
- If there will be a final, it hasn't been mentioned.
- The teacher doesn't take attendance. Now and then he calls on students to answer questions and if the student isn't present, this is noted.

My friend, who is a member of the Communist Party, couldn't suppress a smile when she told me about the lack of homework.

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Andy McKenzie (2008-12-04 16:57:01)  
Seth: is your blog banned in China yet?

### **Bike Culture in Beijing (2008-12-05 07:27)**

The Tsinghua campus is really big so everyone has a bike but bikes are very prevalent elsewhere as well. In several ways the surroundings have been shaped by this:

- Bike mechanics scattered around campus. There are about seven of them. Fix your bike instantly. Also sell spare parts – locks, seats, baskets, and so on.
- Huge bike lanes. On the road from the subway to where I live, the three lane road is divided into one shoulder lane, one lane for bikes, and one lane for cars. The appearance is that the bike lane is twice as wide as the car lane. The effect of these huge bike lanes isn't trivial: I feel safe.
- Bikes parked everywhere. At big stores, parking attendants charge 5 cents/bike. Payable when you leave.
- Discarded bikes. Near the subway station is a pile of 20-odd bikes. About once a year discarded bikes are removed from the Tsinghua campus.

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1 (2008-12-05 23:43:27)

i like public transportation because i have a discount pass and in the bay area, i usually just pay half the regular fare. even for the bart, i get a big discount. in one of your blog entries, seth, you wrote that one sunday morning you were going to go with your friends to see some leaves change colors at a famous place. then some buses passed by and they were packed! so maybe in beijing the public transportation is bad. when i am on the berkeley campus, going home, the #51 bus going down bancroft st towards the bart station is almost always packed with students going to shattuck, same place im going. i just try to squeeze in!!! i used to carry around a rolling backpack, but because i travel via public transportation so much and i have to squeeze in places all the time, i just use a backpack. but it is so heavy...now that i carry around my laptop. but the pluses of carrying my backpack outweigh the minuses....and i try to travel light but because i buy things for people on the way, i wish i still could bring around my rolling backpack! reminds me of when i was homeless in boston, massachusetts and i was standing with my homeless friend at harvard university. we were looking at one of our homeless companions who slept outside the coop (the bookstore near harvard), and he had all his stuff piled up and my homeless friend said, "now that's not traveling light!" and we both laughed. when i was homeless, i laughed a lot more and was happier when i had nothing. now i have a job and money and i am more anxious than ever. but i am getting better slowly...flaxseed oil helps me. better than cod liver oil... hey seth, maybe you could have lent me your really supercool scooter before you left for beijing???? and one thing i'd like to add about the flaxseed oil...i'm not as sleepy in the morning as i used to be.

Sean Abrahams (2008-12-12 14:27:17)

I've been riding my bike to get around everywhere in San Francisco for near five years. It's been encouraging to see the increase in bicycle riding here and the culture around it, but the experience of biking in San Francisco leaves much to be desired. The SFBC (San Francisco Bicycle Coalition, a non-profit bike advocacy group) has done a good job of lobbying for bicycle infrastructure improvements, but as a daily bike rider the progress hasn't been fast enough. The main problem is safety. Striped bike lanes creating a false sense of safety and separation as opposed to physically separated bike lanes through the use of curbs (see Stockholm, Sweden). Lack of driver education that bicycle infrastructure improvements help everyone (bikes get out of the way of cars and vice versa, making both safer). I hope China continues to support infrastructure for bicycles such as you have highlighted here. I feel that bicycle infrastructure improvements are a bit of a chicken and egg problem here in San Francisco. The city would be more interested in providing improvements if there was more demand (and thankfully demand is growing), but who's going to ride a bike when they don't feel safe while riding? I'm of the belief that in this case, if the city were to provide the appropriate infrastructure we will see demand and use skyrocket. Thanks for the observations.

Quercki M. Singer (2008-12-14 08:24:28)

Sean Abrahams said "who's going to ride a bike when they don't feel safe while riding? I'm of the belief that in this case, if the city were to provide the appropriate infrastructure we will see demand and use skyrocket." That's right! Oakland has a bike advocacy group with a blog about the latest developments (What's the latest on bike access around the new Kaiser building?) <http://www.walkoaklandbikeoakland.org> (I'm html-challenged, so I put their link in the "website" section of the comment form. One of them ought to be clickable. )

### **The Blog of a Girl Who Killed Herself (2008-12-05 13:11)**

In November, a Tsinghua undergraduate killed herself by jumping out of a building. She kept a blog. After her death, a friend of mine read her blog – as did a few thousand other people – and told me it was full of sadness. My friend, a Tsinghua student, was puzzled that the friends and family of the dead girl had read her blog and done nothing. Will you translate some of it for me? I asked my friend (who translates other things for me). She begged off. I was puzzled: Surely the girl had wanted others to read what she had written, I thought.

I found another translator. After a few minutes of translation I had to stop: It was unbearably sad, maybe the saddest writing I've ever come across. I could see why my friend didn't want to translate it.

Here is one entry. It takes the form of a questionnaire:

Question 1: Which student phase [primary school, middle school, high school, college] do you miss the most?

Answer: High school. Get together with a lot of friends. I know where I should go, even if it turns out to be wrong.

Question 2: Talk about your current life.

Answer: Listless. Feel half asleep. Do not want to wake up. I want to kill the people who wake me up. I love this world. I live for my goal.

Question 3: Do you have dreams? What are they?

Answer: I have many dreams. Make a movie . . . performance art [she was an art major].

Her [she was ga y]. Forgive me. Dream this day will come. Believe.

Question 4: Which kind of friend do you like best?

Answer: Any kind is fine. Understanding me a prerequisite.

Question 5: Could you give up going back to your hometown to be with your parents, to be with your lover?

Answer: No.

Question 6: What do you most want to do right now?

Answer: Sleep, dream. Find her . Just dream, do not want to meet anyone.

Question 7: Up until now, what is your happiest event?

Answer: I didn't lose my past.

p.s. I don't want any blessing. [A custom/game among Chinese teenagers is that after you answer a few questions you are "blessed" by your questioner.] Wish everyone happiness. Don't ask me these boring questions again.

News of the girl's death was posted on the student forums. What was the response? I asked my friend. Most of the comments were "Bless," she said. The English word bless. That's a customary thing to say when you learn someone has died.

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1 (2008-12-06 00:12:42)

interesting you put this post. i actually had thought of attempting suicide last monday because i hate my job at uc berkeley and i don't want to work. can you believe it? everytime i come across suicidal ideation i tell people and nobody does nothing. i just never tell my therapist when i feel this way because he'll put me in the hospital! and then i'll end up in the psych dept at my regular hospital and have to face all the doctors and psychologists and nurses who had seen me doing so well in the past. i can't face them when i had been doing so well and then all of a sudden want to hurt myself. i would feel so embarrassed... once when i wanted to hurt myself, i went to boston university er and the nurse sent me back out and said, "you're not gonna drown in the charles river, it's frozen." (it was winter and i was new in town and i wanted to commit suicide by falling into the charles, a river next to MIT) although i've seen some of the best doctors and know some wonderful psychologists and lcsw, i've never once gotten a convincing answer to my question: why should i not kill myself? i'm not suicidal anymore, but like my anxiety, the desire to hurt myself always comes back. it has haunted me for 10 years now.... i don't mean to offend anyone, but this blog entry you wrote, seth, does not seem sad to me....

Anthony (2008-12-07 09:17:48)

1, you might want to read these 2 books, they might have some useful ideas: [http://www.amazon.co.uk/How-Master-Anxiety-Overcome-Obsessions/dp/1899398813/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1228666131&sr=8-1](http://www.amazon.co.uk/How-Master-Anxiety-Overcome-Obsessions/dp/1899398813/ref=sr_1_1?ie=UTF8&s=books&qid=1228666131&sr=8-1) and [http://www.amazon.co.uk/depression-Fast-Human-Givens-Approach/dp/1899398414/ref=pd\\_bxgy\\_b\\_text\\_b](http://www.amazon.co.uk/depression-Fast-Human-Givens-Approach/dp/1899398414/ref=pd_bxgy_b_text_b) If you hate

your job, it might be a source of a lot of stress for you - and it might make sense to instead find something that you love doing, where you can also make money at it.

Quercki M. Singer (2008-12-14 08:27:34)

California suicide hotlines. <http://www.suicidehotlines.com/california.html>

### Assorted Links (2008-12-07 06:29)

- amusing [1]Gladwell critique
- [2]Gary Taubes on Think Tank. "The grant system tends to reward consensus behavior, following the pack."
- [3]Nassim Taleb on The Charlie Rose Show. The most sensible 20 minutes of TV I've seen. Jane Jacobs never did Booknotes, alas.
- [4]Wine increases blood levels of omega-3?

Thanks to Dave Lull and Peter Spero.

1. [http://www.theregister.co.uk/2008/11/30/malcolm\\_gladwell\\_no/](http://www.theregister.co.uk/2008/11/30/malcolm_gladwell_no/)

2. <http://www.pbs.org/thinktank/transcript1303.html>

3. <http://www.charlierose.com/view/interview/9713>

4. <http://www.futurepundit.com/archives/005761.html>

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1 (2008-12-07 08:25:55)

I had a conversation about Jane Jacobs with professor emeritus Michael B. Teitz, at Berkeley. It must have been a twenty minute conversation and I am interested in reading more about Jane Jacobs. Seth, how come you like Jane Jacobs so much? I remember the day when Seth gave a book talk in San Francisco, at Stacey's bookstore. On his blog, he mentioned that he had wanted a book by Jane Jacobs. But after the talk when he wanted to buy it, the book was gone! I learn a lot of stuff on this blog that help me talk with other professors at UC Berkeley. I like how your mind works, Seth.

peter (2008-12-07 15:27:32)

i read only part of the Gladwell critique, but it sounds like blinding envy to me; Gladwell is brilliant (IMO) and i always listen/read what he has to say.

Tom (2008-12-09 23:23:42)

When I lived in London, I concluded that British envy is different from American envy. An American might say, "I'm every bit as good as him - I deserve a promotion!" The Brit will say, "He's no smarter than I am - he should be demoted!"

John (2008-12-10 01:33:35)

I'm sure there's much that can be disputed in Gladwell's books. But to claim, as the Gladwell Critique does, that the message of the newly published Outliers is simply that genius takes hard work is a ridiculous distortion. The thesis of the book is rather that success has much less to do with individual merit-understood as natural talent or ability plus hard work-than we generally like to believe, and much more with to do with factors external to the individual: parental upbringing, culture, random opportunity,

and arbitrary advantages. This is not a trivial claim, and it is well worth discussing, especially in America. I can't say now whether Gladwell accurately reports all the social science he relies on, but I found *Outliers* a very thought-provoking book. (See also his related piece in the current *New Yorker*.)

## Self-Experimentation and Strength Training (2008-12-07 17:42)

From [1] Marilia Coutinho, a competitive powerlifter and researcher:

There are two distinct approaches to achieving the "special maximum strength" observed in certain meets: the extreme stress-driven performance, with a lot of screaming, hitting and other means of enhancing alertness and stress response, and the focused approach. The latter is less common.

With the help of a more experienced and accomplished lifter, I came to adopt the focused approach about a year and a half ago. We called it the "white chair thing". Basically, I spent the moments preceding my turn to lift facing the back of an available white plastic chair, emptying my mind. It is hard to claim this is the one or chief reason why my performance leaped to another level, I broke a couple of national and continental records and visibly improved. There were other factors involved.

After this event, however, I started systematically searching for evidence in the literature. Besides a very old article from decades ago showing competent Olympic lifters performed [more] mental rehearsal of their lifts [than] less competent ones, there was very little published material. The search brought me to martial arts techniques. . . .

I spent one year . . . learning qigong in a tai-chi-chuan program. During this one year, I was frustrated. My performance was irregular, mediocre at competitions and my injuries were a real impediment.

About three weeks after I quit tai-chi-chuan, however, I started applying some qigong techniques in weight training. The results impressed me. I want to create a self-experiment on this and record my results. . . . This might be of great help to many athletes who still believe they need a lot of stress enhancing devices to achieve good marks.

1. <http://www.istadia.com/blog/marilia05/372>

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1 (2008-12-07 19:44:35)

Perhaps trying self experimentation to solve my psychiatric problems might be more beneficial than I ever realized. When I come across cognitive behavior therapy techniques, therapists try to get you to write things down and solve the problem in a scientific way. That is what they want, but it's up to you to actually do it. If I remember correctly, in Seth's self experimentation paper, the researchers who commented on his technique noted that he could have come to his discovery faster if he had discussed more of it with others, instead of just doing it mostly alone. It took him 20 years of self experimentation before writing that research paper. I have many psychiatric problems which modern doctors cannot solve or cure, but maybe self experimentation is the only way I can solve them..... I read in a magazine that Britney Spears has bipolar disorder. She is working on a "comeback." With all her money, she did not quit working and try to depend on money from the government for the rest of her life. Her psychiatric disorder did not stop her from continuing to be a contributing member of society and I feel that people aren't looking down on her because she is mentally ill. I don't know if she will gain weight on her meds, or



experience other problems like that with trying psychiatry as a way to solve her mental problems, but she is so strong and seems so stabilized even though she just started this psychiatric journey. I believe once you start those psych meds, it's gonna be really hard to stop, and perhaps you can never stop....stopping them abruptly can be dangerous to your health. I really am impressed with Britney, as she is my age, and her ability to function with her mental illness as if she were normal, has really inspired me.

iStadia (2009-04-09 01:50:36)

Hi Marilia has continued her self-experiment and it has been interesting to follow. Following on from the comment by "1" about writing things down, there are quite a lot of therapeutic techniques that simply involve writing about one's condition. I attended a conference a couple of years ago and they were researching the effects of writing from a number of different motivational perspectives (using the states from Reversal Theory) and this was proving to be highly effective because one of the common aspects of mental conditions tends to be a level of 'stuckness' and being able to articulate different perspectives on the situation helps people to become 'unstuck'. The same can be said of using art, and the 8 states of Reversal Theory have been used to create an '8 Rooms' technique whereby patients 'visit' the room that they need according to their emotional state. Once initiated, I guess a lot of this can be thought of as self-experimentation, to some degree.

### **What Happens When a Professor is Wrong? (2008-12-08 01:23)**

In [1]an article in the Financial Times, Nassim Taleb and Pablo Triana write:

Risk methods that failed dramatically in the real world continue to be taught to students in business schools, where professors never lose tenure for the misapplications of those methods. As we are writing these lines, close to 100,000 MBAs are still learning portfolio theory “it is uniformly on the programme for next semester. An airline company would ground the aircraft and investigate after the crash” universities would put more aircraft in the skies, crash after crash.

Years ago, a cousin of mine was fond of saying something similar. He was majoring in English at UCLA. He didn't think much of his professors. "What happens when a professor is wrong?" he would ask. "When an engineer is wrong, the bridge falls down. When a doctor is wrong, the patient dies. What happens when an English professor is wrong?" The answer, of course, was "nothing". Now we will find out what happens when finance professors are wrong.

Thanks to Dave Lull.

1. <http://www.ft.com/cms/s/0/4f86d422-c48f-11dd-8124-000077b07658.html>

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Igor Carron (2008-12-08 03:02:22)

Seth, I made a similar point recently with the eye of a nuclear engineer: <http://nuit-blanche.blogspot.com/2008/10/trust-but-verify.html> In particular, in no other engineering fields, one would have been allowed to go on for so long without some sort of risk mitigation strategy. As you know, risk is not just the probability of something happening but the product of that probability and the consequences that it entails. With that in mind and the fact that we already had near collapses before (LTCM) I am at loss to see how this is not taught and more importantly enforced at some level. In the Nuclear Engineering curriculum, we have specific classes dedicated to risk analysis and to the study of all previous accidents. After their studies, folks can either go into design/production/safety analysis or in regulation enforcement. In the world described in this NYTimes, it looks like everybody

goes into "production". None of the best minds seem to choose enforcement as there is no incentive in the system for that. Igor.

seth (2008-12-08 05:55:21)

That's a good way to put it, Igor. I read your post and I have a question: In the phrase "trust but verify" what does "trust" mean?

James (2008-12-08 08:24:16)

I think "trust" means you don't assume bad faith, but you have to "verify" because it's too important to leave to good faith assurances.

Igor Carron (2008-12-08 09:23:28)

James does a good job of defining it. I think Reagan stole the sentence from Thatcher. In the context I use it, the phrase was coined when the U.S and the then U.S.S.R were checking on compliance for a treaty (maybe SALT II). It took the form of U.S. teams going to the U.S.S.R to check if a specific missile was being dismantled and vice versa. The warheads were not destroyed per se but the teams were somehow making sure that the missile being dismantled in front of them was not made of dummy warheads. Trust was even further boosted when the foreign team would decide by the flip of the coin which missile to check and find out that indeed it was what it was supposed to be. Igor.

Timothy Beneke (2008-12-08 11:17:13)

Part of the problem is that "experts" have trouble evaluating the state of their knowledge and thus, how seriously they should take their claims. Gary Taubes has made it clear, to me at least, that nutritional "experts" way over-authoritize themselves and know far less than they claim. If you read what 19th century astronomers have to say about the universe the problem is not that they don't know more given their tools, but that they take what they say with far too much confidence. Economics really is the dismal science, grounded totally in correlations and fancy math and theories. No one should take their theories too seriously. Or think of very smart psychoanalysts who thought they could perceive psychological causality and construct the truth of why people have psychological disorders – it was all nonsense. Part of the problem is social-psychological: people in positions of authority have trouble saying, "The truth is I don't know, but this is the best I can do right now." They would lose their authority if they told the truth, both in their own eyes and the eyes of others...

seth (2008-12-08 16:42:42)

James, would someone who believed only "verify" act differently than someone who believed "trust but verify"? The term "trust" seems to have no concrete consequences.

James (2008-12-08 20:39:49)

Seth: Assuming bad faith is likely to get you a lot less cooperation from the people you're trying to correct. In some cases, eg a police investigation you have the power of law backing you up, but in most others you are at least somewhat reliant upon the behaviour of the people you're investigating. If you don't make it clear you trust them, they're far more likely to become hostile and hinder you. The [1]Wikipedia guideline covers it a bit more, though not as much as I thought it did.

1. [http://en.wikipedia.org/wiki/Wikipedia:Assume\\_good\\_faith](http://en.wikipedia.org/wiki/Wikipedia:Assume_good_faith)

seth (2008-12-08 22:08:43)

Thanks, James, but I'm still having a hard time visualizing what you are talking about. When Reagan said "trust but verify" what did he do that showed he "trusted"? If you don't like the Reagan example, choose another example of the use of that phrase.

igor Carron (2008-12-09 04:51:57)

Seth, In the case I was mentioning, there were all sorts of possibilities to cheat the other party. In effect, you could not have the other party's warheads in your hands or in your labs. In fact you could not even see them when inspecting the site. You could only see the missile in which they were hosted and the only information you had was the one you derived from your own instruments that you brought with you. In other words, if your detectors were detecting something you thought was a

warhead then it was a warhead, even though you did not actually have an absolute proof of it. Furthermore, you were bringing your own instrumentation in that foreign country and as you know, the detector tells people more about what you know and don't know. As you can see, in a hierarchical layer of secrets and goodwill, a simple Yes or No from a written document couldn't enforce that trust. In the end, with all the verification they allowed the other party to perform, they still had to resort to some type of trust. Now that i think about it, the argument resembles very much the zero-proof knowledge argument explained by Bernard Chazelle in this Nature paper: <http://www.cs.princeton.edu/~chazelle/pubs/nature07.pdf> In other words, trust comes from the ability to ask several questions to one's satisfaction without ever knowing the underlying proof. Reagan used the term, I think, to differentiate it from the generic trust imparted by treaties signing where only accidents would reveal non-compliance by some parties. Igor.

Timothy Beneke (2008-12-09 11:31:13)

A bit of humor in the form of an aphorism from the Sufi tradition: Trust in God, but tie your camel first.

Nansen (2008-12-09 16:29:19)

A bit of anecdotal evidence. I went to a talk titled "The Role of Statisticians in Quantitative Finance before and after the Crash", given on November 5th by an adjunct professor at UC Berkeley. The talk was mostly about how great portfolio theory was. The only mention of the crash was about how lucky the speaker was to have left a local risk management firm just weeks before the crash.

Seth's blog » Blog Archive » Cornell President Says Ivy League Schools Teach Students "To Think" (2008-12-09 17:01:02)  
[...] What Happens When a Professor is Wrong? [...]

seth (2008-12-09 20:41:34)

Thanks, Igor

Anthony (2008-12-09 21:07:22)

When English Professors are wrong, you can get very damaging affects in your culture. Not nothing.

seth (2008-12-10 05:22:29)

Anthony, my cousin meant there is no corrective feedback when English professors are wrong. But in any case your comment is intriguing. What are the "very damaging effects"?

Anthony (2008-12-11 11:17:08)

Well, the study and promotion of literature is a central aspect of a society's culture. When you have a bunch of English Professors buying into, say, bad psychology, this ripples out into the culture at large, causing dysfunction (i.e., pain, suffering, sadness, anxiety, and so on) where it need not be. When doctors are wrong, a patient can be harmed. When figures in or related to literature are wrong, a culture or people can be harmed. There is an effect, and so there is potential corrective feedback, but there might not be as much of a sense of responsibility in the latter ...

Stephen M (Ethesis) (2008-12-12 17:14:25)

One of the real problems is that the applied statistics crowd and the time and motion guys were so successful, across genres and disciplines. All economists since have wanted to make the same kind of splash, to be experts in all areas like the major textbook writers once were (mostly due to specialized math skills that got them involved in NASA and a lot of other areas). Interesting, isn't it, how much of what is taught is really the trend or fad of the month (so to speak) rather than science.

## Cornell President Says Ivy League Schools Teach Students "To Think" (2008-12-09 17:00)

President Nixon made some anti-Ivy-League comments. [1]Here is how one Ivy-League college president recently responded:

David Skorton, the president of Cornell, was apprised of Nixon's comments over the phone. "My mouth is open," Skorton said, after the line went quiet. "Gosh, what a negative thing to say. Ivy League schools, like all good universities, teach people to think and to reason, and why would anyone be against that?"

To think and to reason. Now and then I'd hear a Berkeley professor say he taught his students "to think". When they'd say it to me I'd ask what they meant by thinking. It always turned out that they meant critical thinking, seeing what's wrong with this or that. Never appreciative thinking. This was like a flight school teaching take-offs but not landings. It also always turned out that they were teaching their students how to be like professors—teaching professorial job skills, in other words. To call those job skills "thinking" was like saying the world ended at the nearest river. Sure, their job involved thinking but other jobs also involved thinking, of a much different sort – were they not aware of this?

1. [http://www.newyorker.com/talk/2008/12/15/081215ta\\_talk\\_collins](http://www.newyorker.com/talk/2008/12/15/081215ta_talk_collins)

2. <http://www.blog.sethroberts.net/2008/12/08/what-happens-when-a-professor-is-wrong/>

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david (2008-12-09 22:38:39)

They also say that Latin "teaches you to think", so obviously "teaches you to think" is just another way of saying "is useless". Useless, however is useful as a class marker since it declares to the world "I'm so rich, I can afford to spend all this time and money on something useless" (see Paul Fussell's *Class* which in turn cites Veblen). I think Fussell even talks about Nixon...

Seth's blog » Blog Archive » When is Science Helpful? (2008-12-10 05:18:41)

[...] Cornell President Says Ivy League Schools Teach Students "To Think" [...]

seth (2008-12-10 05:26:01)

David, that's a great point. The next time someone says he teaches his students to think I will say, "I've heard learning Latin teaches you to think."

Aaron Blaisdell (2008-12-10 11:26:41)

I'm a Psychology professor at UCLA. I teach a large lecture course on learning, a seminar on animal cognition, and a lab course on animal learning and cognition (a rat lab). In the seminar and lab course in particular, I try to teach the students to approach science as a problem solving task in an analytical manner (i.e., I try to teach them to think critically). But in my view, critical thinking is a balancing act between being open-minded yet skeptical. I often will present them with some experimental results that have been published and attempt to lead them Socratically through a process of interpreting the results in a theoretical context and then to lead them to evaluate these hypotheses and attempt to generate alternative explanations. Finally, I try to lead them through guided discussion to think about how they could test the alternatives and what kinds of evidence would support each of the alternatives. I try to get them to see how some types of evidence can be ambiguous in that it can support more than one alternative, whereas other types of evidence can more clearly discriminate among the alternative hypotheses by making differential predictions. I am attempting to provide a forum where they can discover the process of interpreting observations, generating multiple hypotheses to explain those observations, and then to attempt to devise manipulations

(interventions) that could discriminate among the alternatives. I also tell them that failure to support hypothesis A but supporting hypothesis B does not mean that A is wrong and B is right. It suggests this, but really further tests and theoretical development is needed. And it is an organic process (i.e., it is dynamical, subject to constant revision, and often wrong for the right reasons, right for the wrong reasons, and occasionally right for the right reasons). And finally science is a human endeavor and humans have foibles and biases and constraints which all play out in doing science. But rather than throwing the baby out with the bath water, I hope to instill in my students a sense that this is one of the best processes we have for advancing our understanding of the world. There will always be setbacks, but there will be successes, too. Finally, if all else fails, I hope to impart some sense of excitement and thrill in doing science and in thinking in an open-minded yet skeptical manner. AND I'm not saying I do all this, I attempt to do this. And I hope I'm at least somewhat successful.

Ben Casnocha (2008-12-10 14:31:54)

Seth, what do you mean by: "It always turned out that they meant critical thinking, seeing what's wrong with this or that. Never appreciative thinking." By "appreciative thinking"?

Gordon McNutt (2008-12-10 17:41:25)

In your previous post the quote from Nassim Taleb tries to make the point that even critical thinking is not being taught. But in the defense of teachers, it is hard to teach people to think. Sometimes I wonder if we are really designed to do it, let alone teach it. I did, however, encounter a wonderful method of learning to think (at least about a large class of problems) while I was an undergrad. It involves a computer, a program known as a compiler, and thousands of lessons in failure. There's nothing like being certain you're right and then proved wrong over and over again. I'd recommend the method to everyone, but be warned: it turns some people into extreme skeptics.

seth (2008-12-10 20:00:15)

Aaron, thanks for the detailed description. What is missing from your course, in my opinion, is detailed examination of what can be learned from this or that study. What ideas are ruled out or made less likely, for example. How this or that study was an improvement over what came before. What difficulties the authors overcame. That sort of thing. At Berkeley there was a weekly meeting called Animal Behavior Lunch. Each week we would read and discuss a recent animal behavior paper. The graduate students were terrible at seeing the value of the paper under discussion. All they could do was find fault. Week after week after week. They never understood what they were failing to see. The faculty were much better but the behavior of the graduate students reveals the extreme bias in their education.

Aaron Blaisdell (2008-12-11 11:51:16)

Hi Seth, You're right, I forgot to mention "what can be learned from this or that study." I do cover this though perhaps I should be more explicit and systematic in class. I also forgot to mention that I put the experiments under discussion in the socio-historical context in which they were conducted. Too often I see either insufficient or no presentation of background information that motivates a focal study. I also notice that graduate students and sometimes postdocs are worse at this but more senior scientists seem to be better. I think a lot of this has to do with how we learn to take the perspective of others and get better at knowing what they need to know.

## **When is Science Helpful? (2008-12-10 05:18)**

Last spring, fourteen Chinese students from elite universities – seven from Tsinghua – traveled to several elite American universities, including Stanford, Harvard, and Yale, under the auspices of [1]a program called IMUSE to discuss sensitive Chinese social topics, such as Tibet or censorship. One of the main events was panel discussions. The American students struck the Chinese students as admirably pragmatic but also in some cases "ignorant and arrogant". In response to American students' criticism, one Chinese student said this: "I eat a lot of rice. My ancestors ate a lot of rice. If you tell me to eat a lot of bread, I don't know what to eat. I don't know how to get a healthy diet."

When I heard that comment, I said it was exactly right. Nutrition is perhaps 75 % science, 25 % religion. (The discovery of vitamins = science. [2]Thinking the obesity epidemic is due to lack of exercise = religion.) The science part is helpful, the religious part is useless or, if taken seriously, harmful. Nutrition science is too uncertain to choose over the tried and true. Physics is almost 100 % science. The stuff in physics textbooks has been used to build lots of useful stuff: buildings, bridges, computers. Economics and political science are perhaps 25 % science – too little to rely on their recommendations, which was the Chinese student's point. Better to rely on tradition. No one tells the American students any of this, however, and they believe far too much of what their professors tell them. (So much for all that teaching how "[3]to think and to reason.") The result is they give foolish advice.

At [4]Edge, four American experts tried to answer the question "Can science help solve the economic crisis?" Here is a bit of what they said:

Two basic assumptions must guide any thinking as we undertake these tasks. First, economies, financial institutions and markets cannot function without a context of rules and laws, which regulate them. . . . Second, mathematics, physics and computers already play a major and necessary role in our economic affairs.

They believed such statements are helpful. Nassim Taleb responded:

I spent close to 21 years in finance facing "scientists" in some field who show up in finance and economics, realize that economists and practitioners are not as smart as they are (they are not as "rigorous" and did not score as high in math), then think they can figure it all out. Nice, commendable impulse, but I blame the banking crisis (and other blowups) on such "scientism". . . . Meanwhile the most robust understanding is present among practitioners who do not have the instinct to reduce ambiguity and uncertainty that scientists have. . . . Please, please, enough of this "science". We have enough problems without you.

The Chinese student and Taleb are both saying that Big Ideas from elite American universities do not automatically improve on what people elsewhere have done for a long time. Weston Price and Jane Jacobs said the same thing. Somehow elite universities fail to teach this important lesson – perhaps because their professors haven't learned it.

Thanks to Dave Lull.

1. <http://www.imuse2008.org/aboutus.php>

2. <http://www.blog.sethroberts.net/2008/01/08/interview-with-gary-taubes-part-6/>

3. <http://www.blog.sethroberts.net/2008/12/09/cornell-president-says-ivy-league-schools-teach-students-to-think/>

4. [http://www.edge.org/3rd\\_culture/brown08/brown08\\_index.html](http://www.edge.org/3rd_culture/brown08/brown08_index.html)

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Sean Brown (2008-12-10 13:45:56)

FA Hayek made a very similar point in *The Constitution of Liberty*. Over the generations, the original reasons (which may not have even been the "correct" ones) for a traditional practice are often forgotten. In trying to innovate, the "arrogant scientists," unable to think of good reasons for the traditions or norms, often assume they are unnecessary or even backward.

Nathan Myers (2008-12-10 21:13:14)

Is physics really 100 % science? Up until, say, 1980, it was close. How about modern physics, which is to say string theory? It's hard to say if there's any science there at all. There's still plenty of physics to be elucidated, e.g. in the realms of plasma and solid states, but not many people are working on these. The mathematics are unpleasantly messy.

seth (2008-12-11 04:12:45)

I agree Nathan, that's why I said "almost" 100 % – because of questionable work on string theory.

Nathan Myers (2008-12-11 17:46:05)

OK, but as I understand it, string theory is what most physics departments are doing nowadays. I wonder if psychologists are doing more actual science, these days, than physicists. What percentage of what psychologists do nowadays counts as science?

Seth's blog » Blog Archive » China and Tibet: The Other Side (2009-10-05 16:47:35)

[...] Yes, Chinese students are brainwashed about this. (When I googled "Tibet slavery" and tried to follow the links, all of sudden nothing worked.) But the smartest among them know more about it than smart American students who have been brainwashed the other way. Here's what one of them told me about the Chinese side of the argument: [...]

jonathan (2009-10-24 14:27:47)

Economists turn their chins up at PoliSci types To put economics and political science in the same epistemological league just denigrates both.

### **Assorted Links (mental health edition) (2008-12-11 04:50)**

- [1]many psychology-related blogs
- [2]a blog about how "we simply are not getting the kind of results that patients, myself included, were promised 20 years ago at the dawn of the psychopharmacological revolution"
- [3]confirmation of a correlation between autism and rainfall
- [4]the selling of Dr. Joseph Biederman, a Harvard child psychiatrist
- [5]trouble at "The Infinite Mind" (a radio show). "Dr. Fred Goodwin [the show's host] accepted at least \$1.3 million in pharmaceutical company speakers' fees while he was hosting . . . Goodwin defended his actions by claiming this is what all doctors do, plus he took funding from all kinds of pharma companies so that canceled out his conflicts." As if non-pharma therapies didn't matter.

1. [http://oedb.org/library/features/101\\_fascinating\\_brain\\_blogs](http://oedb.org/library/features/101_fascinating_brain_blogs)

2. <http://www.furiousseasons.com/>

3. <http://www.translatingautism.com/search/label/Autism%20Epidemiology>

4. [http://www.furiousseasons.com/archives/2008/11/harvard\\_child\\_psychiatrist\\_worked\\_closely\\_with\\_jj\\_1.html](http://www.furiousseasons.com/archives/2008/11/harvard_child_psychiatrist_worked_closely_with_jj_1.html)

5. [http://www.furiousseasons.com/archives/2008/11/making\\_sense\\_of\\_the\\_infinite\\_mind\\_mess.html](http://www.furiousseasons.com/archives/2008/11/making_sense_of_the_infinite_mind_mess.html)

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Nathan Myers (2008-12-13 00:51:14)

I'm curious about how much of mental illness is directly caused by people silently repeating a statement over and over to themselves. Most of such statements are false or indeterminable, of course, but I suspect even true statements would cause

trouble. This is a culturally encouraged behavior in many settings, particularly religious ones. Has anybody looked into this, that you know of?

seth (2008-12-14 02:31:23)

I don't know of anyone looking into that.

### **What's Appreciative Thinking? (2008-12-12 05:21)**

[1]Ben Casnocha asks what I mean by appreciative thinking. A good question, since I invented the phrase. To learn appreciative thinking is to learn to appreciate, to learn to see the value of things. More or less the opposite of critical thinking.

That I had to make up a phrase shows the problem. I have complained many times about an overemphasis on critical thinking at universities. Sometimes I'd say, "Have you ever heard the term appreciative thinking? No? How many times have you heard the term critical thinking?"

When it comes to scientific papers, to teach appreciative thinking means to help students see such aspects of a paper as:

1. What can we learn from it? What new ideas does it suggest? What already-existing plausible ideas does it make more plausible or less plausible?
2. How is it an improvement over previous work? Does it use new methods? Does it use old methods in a new way? Does it show a better way to do something?
3. Did the authors show good taste in their choice of problem? Is this a problem both important and possibly solvable?
4. Are details done well? Is it well-written? Is the context of the work made clear? Are the data well-analyzed? Does it make good use of graphs? Is the discussion imaginative rather than formulaic?
5. What's interesting or enjoyable about it?

That sort of thing. In my experience few papers are worthless. But I've heard lots of papers called worthless.

The overemphasis – the total emphasis – on critical thinking has big and harmful consequences on graduate students. At Berkeley, in a weekly seminar called Animal Behavior Lunch, we would discuss a recent animal behavior paper. The dozen-odd graduate students could only find fault. Out of hundreds and hundreds of comments, I cannot remember a single positive one from a graduate student. Sometimes a faculty member would intervene: "Let's not be too negative. . . ." But week after week it kept happening. Relentless negativity caused trouble for the graduate students because every plan of their own that they thought of, they placed too much emphasis on what was wrong with it. Trying to overcome the problems, their research became too big and complicated. For example, they ran control groups before obtaining the basic effect. They had been very poorly taught – by all those professors who taught critical thinking.



1. <http://ben.casnocha.com/>

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Jim N (2008-12-12 08:03:42)

The word "critical" has two meanings. In the phrase "critical thinking" it means "with careful examination", whereas the popular meaning of "critical" is more along the lines of "finding fault". I think you are conflating the two meanings. When someone says that a Melville course emphasizes critical thinking, they are not saying it's a course where we figure out what's wrong with Moby Dick.

Darrin Thompson (2008-12-12 08:46:52)

The opposite of critical thinking is lean thinking. Lean is identifying value \_first\_, then removing waste that impedes the value stream. Learning to think lean is often described as "learning to see." It has been around for decades and needs no inventing.

Ben Casnocha (2008-12-12 10:32:35)

Thanks for clarifying, Seth! It seems one way to paraphrase your definition is: "To learn to appreciate the positive aspects or lessons to be had from something."

seth (2008-12-12 14:22:50)

Jim, you're right. I haven't spoken to any English professors about this. When someone says that a Melville course emphasizes critical thinking, what do they mean by critical thinking?

Stephen M (Ethesis) (2008-12-12 16:56:09)

This is a great post, it has gotten me thinking. For me "appreciative thinking" means to extrapolate and cross-link from the concepts presented. It is important to succeeding with derivative approaches and analysis.

Anthony (2008-12-13 14:50:48)

Philosophy departments are similar - presentations are followed by a barrage of critical questions attempting to find what's wrong with the paper. Rarely do people ask questions or make comments with the intent of finding or focusing on what's right with it (except that what remains, implicitly, might be right). I think this behavior probably stems in part from attempts to increase status ...

Glen Davis (2008-12-14 10:23:09)

Too few academics can say: "the research is good but not perfect" - too many instinctively say, "the research is not perfect and is thus bad." After reading your post I stumbled across an example of appreciative criticism from the middle of the last century. I offer it to you in case you should ever need an example. At the end of a book review T. W. Manson observed "While it must be said that Mr. Lund has overdriven his thesis in many directions, it must still be admitted that he has a thesis. There are clear cases of the kind of arrangement he describes." (from T. W. Manson's review article of Nils Lund's *Chiasmus* in the *Journal of Theological Studies*, 45 (1944), page 85. It's available online at <http://jts.oxfordjournals.org/cgi/reprint/os-XLV/177-178/85-b> if your institution has a subscription. You can also see the Manson passage quoted at the top of [http://books.google.com/books?id=mmz1Wm3XlvcC&pg=PA47&lpg=PA47&source=web&ots=Au9gals7iH&sig=zlg-S8WojxpmPQKI47Fr7WuQmpk&hl=en&sa=X&oi=book\\_result&resnum=1&ct=result](http://books.google.com/books?id=mmz1Wm3XlvcC&pg=PA47&lpg=PA47&source=web&ots=Au9gals7iH&sig=zlg-S8WojxpmPQKI47Fr7WuQmpk&hl=en&sa=X&oi=book_result&resnum=1&ct=result), which is where I found it)

Andrew Gelman (2008-12-14 13:50:08)

There's a balance: we're highly appreciative of our own work and highly critical of everybody else's!

Evelyn (2008-12-14 17:13:59)

It sounds like you haven't heard of Appreciative Inquiry: <http://appreciativeinquiry.case.edu/> I agree it's easy to forget to look at the good. It's probably a side effect of the decision making bias that we feel losses twice as much as gains.

Paddy Carter (2008-12-15 12:59:40)

Seth, This is an idea very close to my own heart. In my experience, the best academics are good appreciative thinkers. I expect you have no inclination to do so, but I wrote something along these lines a while back called [1]'the fallacy of clever objections' which was about people being so busy picking holes they don't stop to appreciate what's there, which you might like to read.

1. [http://docs.google.com/Doc?id=dc3hb973\\_1984ptc4nfd](http://docs.google.com/Doc?id=dc3hb973_1984ptc4nfd)

jack (2008-12-15 13:33:50)

You're being pretty critical of critical thinking...

RSaunders (2008-12-15 14:46:41)

Ah, somebody beat me to the appreciative inquiry idea. This seems like a big deal in human/community/organizational development and coaching/counseling/consulting psych. I think it captures much of what you're after.

Mandolin (2008-12-15 15:38:22)

A term that has already been coined on this subject is "value finding". I first heard about it in the personal development sphere. Appreciative thinking sounds like another way of saying the same thing. Get this. I've read and agree that people tend to view things as on a continuum from -10 or so to positive 10. So they can see something as being a -2 or so on a scale. Not good. Pretty bad actually. (See I'm being critical). When actually, many of these things being measured can not go below a 0 in value. There is always some degree of value or thing worth appreciating there. One can apply this shift in the value continuum to many facets of life. On a side note, I found the last sentence to be somewhat ironic because the word "poorly" is critical! Caught in your own game, admit it! One could shift this to an appreciative statement by saying perhaps, "Learning critical thinking is one aspect of appreciative thinking so in order to fully develop their logical analytical skills graduate students will have to build on the groundwork already paved by their critical thinking professors." Or something like that. I appreciate that you are thinking about this with regards to academics because similar discussions have cropped up recently with regards to job performance and personal development. It's killing me that I can't remember the book I read about it in. Here is a resource you might find entertaining. <http://philosophersnotes.com> He is offering free yearly access to 25 philosophersnotes. (I'm don't work for them, I just think you may "appreciate" this)

Etl World News | Assorted links (2008-12-15 15:55:19)

[...] 1. Appreciative thinking [...]

Peter Boettke (2008-12-15 17:31:27)

Seth, In Nelson and Winter's Evolutionary Economics (Harvard, 1981), they distinguish between "appreciative theory" and "formal theory". While not identical to your notion of "appreciative thinking", it is attempting to get at something similar but at the level of the scholar himself/herself and our enterprise in general. Pete

Adam Forni (2008-12-15 19:28:12)

Great post Seth. Academia is not the only realm affected by over-negativity, in my opinion. It's popular to "bash" these days. Critical thinking is essential, but we should also be able to extract some kernel of worthwhile information from every single life experience.

Jlm N (2008-12-17 15:34:50)

Seth, I think that the meaning of "critical thinking" in an English Lit course is what you are describing as "appreciative thinking". It's a way of saying that students will be expected to say more about the subject than "awesome" or "it sucked". They will be expected to recognize it as an artifact of a time, an author, and a culture. What's Melville doing when he spends dozens of pages on detail of whale butchering? Is it meant to be taken literally, or is he saying something else, and if the latter, was he

successful? That's critical thinking, in the Western academic school of thought. There are different schools of criticism, though, within and without academia, and some works are more or less suited to one or the other.

Evelyn (2008-12-18 14:30:43)

And here's another example of appreciative thinking: <http://positivedeviance.org/> As seen in the NYTimes ideas article this week. Look for how excellent people act, and emulate them.

Sean Murphy (2009-12-20 01:35:29)

Seth: Evelyn has already suggested two good frameworks for appreciative thinking, let me suggest one reference for each that are useful for employing them in a problem solving context. The Thin Book of Appreciative Inquiry <http://www.amazon.com/Thin-Book-Appreciative-Inquiry-2nd/dp/0966537319> The "Positive Deviant" article by Ed Dorsey in the November 2000 Fast Company has a clear codification of Sternin's approach <http://www.fastcompany.com/magazine/41/sternin.html> In one of those weird synchronicities I had blogged about this here <http://www.skmurphy.com/blog/2009/12/15/early-customer-conversations-use-appreciative-inquiry-and-amplify-positive-deviance/> One other thing I started to do about three years ago was to count my blessings by posting endorsements on LinkedIn for folks that I had worked with in the past and either had a shared success with or come away impressed from our interactions. It's another way to encourage yourself to appreciate people's strengths and contribution to your own successes. I very much enjoy your blog and your disciplined approach to self-experimentation. "Knowledge comes by taking things apart: analysis. But wisdom comes by putting things together." John A. Morrison

Mickey Schafer (2009-12-21 06:34:46)

Hi, Seth. I entered into my MA program very much in the hard-nosed tradition of critical thinking. The school I was attending, The School for International Training, was a very different place. One of the profs recommended that I read Peter Elbow's "The Believing Game", an essay published in 1972 in the appendix of his wildly popular book "Writing without Teachers". This essay was instrumental for me as a social scientist and teacher. Here is an updated version, a 2008 essay in which Elbow has re-cast his concept as "Methodological Believing" - it's very much like what you're advocating in Appreciative Thinking; I hope you find it useful! [http://works.bepress.com/cgi/viewcontent.cgi?article=1019&context=peter\\_elbow](http://works.bepress.com/cgi/viewcontent.cgi?article=1019&context=peter_elbow)

Levi Stahl (2009-12-21 08:00:03)

This reminds me of baseball writer Bill James, from whom I learned a lot about critical thinking when I was young-but who also went out of his way to emphasize that even a player who is bad in some aspect of the game might still offer value in other areas that is sufficient to make him a good player. It's a good principle to keep in mind in a lot of areas of life.

Floyd B. Pishko (2009-12-21 08:21:52)

Seth, I totally agree. I went to grad school in international development economics, and one big reason why I'm not working in the field is because I have partially lost the ability to have optimism in development initiatives. Grad school taught me to be so critical of every idea that it's hard for me to see what might work and think that 95 % of efforts are wasted. Help, please!

q (2009-12-21 09:49:54)

nice post - i just added your blog to my RSS because of it. i'd posit that most creativity is because of mistakes. most people are focused on learning from their own mistakes but it's considerably less painful to learn from others' mistakes. academia and business have an obnoxiously strong ethic about covering up failed work. can you publish a paper which shows all the approaches you tried but did not get a result? can you even publish a paper which shows the approaches that tried and failed only to succeed on the 20th try? no, you omit the mistakes. i think that's unfortunate.

Tyler S (2009-12-21 10:27:35)

Well done! I think you're touching on a deeper point. It's very easy to I.D. problems, yet exponentially tougher to solve them. WHY you like (or dislike) some piece of work takes actual thought. Thinking is hard work.

caveat bettor (2009-12-21 14:10:17)

This reminds me a bit of DeBono's Six Thinking Hats, of which the Yellow Hat represents appreciative thinking and the Black Hat with finding fault. DeBono's thesis is that undue influence of the Socratic/Platonic/Aristotelian methods that ideas and values are too easily made extinct in the darwinian nature of competing ideas, arguments, etc.

Sid (2009-12-21 16:05:07)

In the 60's Richard Niebuhr, younger brother of Reinhold, encouraged a version of appreciative thinking to his grad students at Yale. His advice was to pay more attention to a comment that sees value, less to one that sees only fault. I think his point was that fault finding is more about scoring, less about discovery.

anotherpanacea :: Appreciative Thinking (2009-12-21 22:00:03)

[...] I've been having a debate on a friend's Facebook page about the value of Martha Nussbaum (I'm a fan) and serendipitously I found this post on "appreciative thinking" via Tyler Cowen. It's a kind of inverted critical thinking, from Seth Roberts: When it comes to scientific papers, to teach appreciative thinking means to help students see such aspects of a paper as: [...]

Rafe Champion (2009-12-22 19:24:30)

Appreciative writing is a useful task for second and third hand dealers in ideas when major figures have become forgotten or neglected because they were out of step with the fashions of their time or have been benched for various reasons. Like changes in fashion and failure to do the academic and entrepreneurial networking that is required to keep their ideas alive (see Selgin on the failures of Menger and Bohm Bawerk and Ian Jarvie on Popper). Other examples of neglected major figures are: Ian D Suttie (1889-1935) who could have radically changed the course of psychoanalysis in a more scientific and humanistic direction. Jacques Barzun (1907 - ) a towering figure in education, cultural studies and the history of ideas. Rene Wellek (1903-1995) arguable the leading figure in literary scholarship of the 20th century. Yvor Winters (1900-1968) who explored the many and various ways that irrationalism is promoted by defective theories of literature with particular reference to American novelists and poets. Karl Buhler (1879-1963), a pivotal figure in psychology and linguistic studies, driven out of Austria in 1938 into academic obscurity in the US and scandalously written out of the history of psychology by academic rivals. Profiles of the above figures (and others such as Bill Hutt and Peter Baur who were marginalised until picked up by the Austrians) can be found in the four editions of the Revivalist series. <http://www.the-rathouse.com/Revivalist.html>

Thomas Robinson (2009-12-22 19:41:42)

Whether you criticise or praise a paper, to do the job well you have to start by taking it seriously. This means assuming the content is true and trying to imagine what are some of the implications. If the implications are absurd or contradictory then your approach will be considered critical. If they are novel and interesting then you will be considered appreciative. But it's basically the same process either way. And either way you do honour to the paper.

Michael Nielsen » Biweekly links for 12/25/2009 (2009-12-25 03:53:23)

[...] Seth's blog » Blog Archive » What's Appreciative Thinking? [...]

Simon Bostock (2009-12-27 03:00:03)

Great post. I have my own version of this called Benign Gullibility ("Hey, this new idea looks spiffing! I wonder what happens if I base my life on it?" - for a few moments or so) but I like yours better and might steal it. Three things: 1. The first two comments made me so cross, I wrote a post criticising them. 2. The rest of the comments more than made up for them. 3. Just in case, I strongly recommend following all of Sean Murphy's reading recommendations. Ace. I wonder if you could develop your Appreciative Thinking by working on developing an ability in and an awareness of the Semantic Pause?

Josh Joseph (2009-12-28 22:22:03)

Seth, agree with so many here – this is a great post and also ages well. I had a prof in grad school who understood this and was able to get it across very effectively. Will share it on the chance it may be helpful to others. The prof was editor of a leading psych journal and taught a course in reviewing. Students were given papers that had been previously submitted to

the journal and on which editorial decisions had already been made...only we didn't know the results. Our job was to read, critique/appreciate and then decide whether to accept or reject each submission. Needless to say, we were all good at finding flaws in everything. But the real lesson came when we had to say "in or out." Although we could find faults and flaws in literally everything, we saw that the litmus test for acceptance was whether the paper made a meaningful contribution to the field..warts and all. That really stuck with me. Recently came across George Box's quote "All models are wrong, some are useful," which is even more succinct. – jj

seth (2009-12-28 23:19:44)

Josh, that's a good way to teach it. I'm amused that it was called a course in reviewing. That's like calling a course in arithmetic "how to add 5 and 6". The skills are far more useful than just making you a better reviewer. An editor would be more likely than the rest of us to teach such a course because of the access to rejected manuscripts.

In einem Wort « Erich sieht (2010-03-30 02:18:25)

[...] In einem Wort Appreciative Thinking [...]

### **A Book About Scientific Failure (2008-12-12 14:49)**

Failure: the last taboo subject. I loved [1]Selling Ben Cheever, a book about a series of low-level service jobs that Ben Cheever took after he left Reader's Digest and couldn't sell his third novel. In the introduction, Cheever noted that no one wanted to talk to him about what it was like to lose a job and have to start over. [2]How Starbucks Saved My Life by Michael Gates Gill is another excellent book along those lines. (Curious that both authors are the sons of well-known writers, John Cheever and Brendan Gill.)

Now comes a scientific third-person account of failure: [3]Sun in a Bottle by Charles Seife, about attempts to produce nuclear fusion in the lab.

Seife's message: fusion scientists should just cut bait. By analogy to your closet, if you haven't worn it, throw it out. If you've been trying it for the last half-century and it hasn't worked, then enough already.

According to its subtitle, the book covers "the science of wishful thinking." Was it wishful thinking or avoidance of the f-word? I will have to read the book to find out, it sounds fascinating.

1. <http://www.archipelago.org/vol5-3/cheever.htm>

2. [http://www.usatoday.com/life/books/excerpts/2007-09-17-starbucks-saved-my-life\\_N.htm](http://www.usatoday.com/life/books/excerpts/2007-09-17-starbucks-saved-my-life_N.htm)

3. <http://www.nytimes.com/2008/12/14/books/review/Finkbeiner-t.html?8bu&emc=bu>

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Stephen M (Ethesis) (2008-12-12 16:47:50)

Well, fusion is different in that many people think it is just a matter of engineering – kind of like using light to make computers. Predicted in the 40s and 50s, finally getting engineered. The other thing is that predictions of how much longer it would take,

back in the early 1970s before they even had a first bottle attempt, were between 20 and 100 years. I read through all the congressional reports for the era (for another project) and the debate and estimates were quite interesting. We don't have Mars mission, and they've been working towards one for forty years. Should they just cut bait? Or is it predictable engineering and cost issues? Does that make sense? I'm not sure they are right, but why they feel the way they do makes a lot of sense.

Stephen M (Ethesis) (2008-12-12 16:54:46)

Oh, I should add that the "long time" position won out, for the purposes of planning national energy policy. I'll have to pass on how well the executed on the planning (/sigh), but at least they realized in 1972 that fusion was not going to bail them out by the year 2000.

## Self-Experimentation by Anesthesiologists (2008-12-13 15:54)

[1]Notes of an Anesthesioboist summarizes [2]a long report of events a hundred years ago:

Bier pricked Hildebrandt's thigh with a needle. Then he passed a blunt, curved needle into the soft tissue of the thigh. No pain.

He pushed a long needle down to the thigh bone a few minutes later. No pain.

A few minutes after that, he applied the burning end of a cigar to Hildebrandt's legs. (A cigar in the lab...how quaint...)

He pinched a leg (no pain). He pinched the upper chest (lots o' pain).

He yanked body hairs down below, if you catch my drift (painless - eew). He yanked hairs up high ("very painful"). . .

Both of them subsequently developed debilitating post-dural-puncture headaches that lasted for days (much less common with the finer needles used today).

1. <http://anesthesioboist.blogspot.com/2008/12/quincke-and-pain.html>

2. <http://www.anesthesiology.org/pt/re/anes/fulltext.00000542-199808000-00028.htm;jsessionid=J18YnNpvGtn1p78nMLb1ghXB1vD894q8h1Lf1gLzv2vD1GXtQHC!-1157250347!181195628!8091!-1>

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Mike Kenny (2008-12-13 23:01:08)

Hahaha-A wonderful combination of very rational and totally irrational! :)

Nathan Myers (2008-12-15 13:15:05)

I sat next to an anesthesiologist on a long flight, once. His advice was, if you ever need general anesthesia, ask for *adenosine*. Its effects completely dissipate in seven seconds, leaving no hint of dopiness behind. (But be sure the surgeon sprinkles in lots of lidocaine while stitching up!) He related a story about his teacher, who had been an insufficiently-trained medic in the Japanese Army, ordered to administer adenosine for an operation, but used a little too much. The patient's heart stopped, and he fainted. When he woke up, a few seconds later, the surgeon had noticed neither his fainting nor that the patient had died, and the patient's heart was already beating again. He stood up and administered the adenosine for the rest of the

operation without saying anything. The story calls attention to another fact of anesthesia: the anesthetist is the only person in the operating room paying attention to whether you're still alive.

### **Alternate-Universe Korean Food (2008-12-14 03:52)**

Near my university is a neighborhood that locals call Korea Town. I like Korean food and last night tried my sixth Korean restaurant in the neighborhood. Unlike the others, the menu had no English; it was in Korean and Chinese. My Chinese friend had little experience with Korean food so the menu puzzled both of us. Finally I asked the waitress what was popular and we ordered that.

I've eaten in Korean restaurants hundreds of times; I've even been in Korea for a week. Our food had no overlap with any Korean food I'd ever had. We ordered three dishes. They turned out to be:

1. Bacon over pea sprouts and onion, topped with a sweet and sour sauce.
2. Bacon wrapped around enoki mushrooms (long and thin) on top of chunks of green and (sweet) red peppers, covered with more sweet and sour sauce.
3. DIY wraps. A big plate of two-inch strips of chicken, carrots, egg yolk, egg white, fish cake, and pea sprouts. You dip them into soy sauce and wrap several of them with a big thin piece of white radish.

No kimchi, no hot sauce, no little appetizer plates. There was a refrigerator full of soju.

It was like stumbling into a piece of science fiction. Some little thing had happened differently in the past and as a result Korean food had turned out differently . . . Can anyone reading this explain it?

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Chris (2008-12-14 20:56:13)

Hmmm...sounds similar to Japanese "Yoshoku" which translates to Western food. But it doesn't mirror European/American dishes and we commonly consider their 'western food' be Japanese food these days. These are dishes like Om(lette) Rice, Tonkatsu, and curry rice/udon. Apparently they were introduced in the mid 1800s. Perhaps with time they grew to be far less like western food. [http://en.wikipedia.org/wiki/Y %C5 %8Dshoku](http://en.wikipedia.org/wiki/Y%C5%8Dshoku) <http://en.wikipedia.org/wiki/Washoku> Either that or someone just slapped on the Korean food title on their restaurant to make it sound exotic (somewhat like how the Japanese KFC convinced the locals that all americans eat fried chicken for christmas).

mike (2008-12-14 22:30:50)

This is very interesting to me. The fact that there was chinese on the menu indicates it may have been a korean-chinese restaurant, which is literally different than korean food and chinese food. You will find foods on the menu at a korean-chinese restaurant that are not available at strictly korean or strictly chinese restaurants. But you probably know this, as you seem pretty familiar with korean food. The food actually still doesn't sound familiar to me, either. It may be that hearing it described

in English throws me off. Sometimes, if I read the English descriptions on a Korean restaurant, the food will sound disgusting, and then I'll read the Korean name for it, and will realize, "oh yeah, I had that before, it's delicious."

seth (2008-12-14 22:47:44)

Chris, it was unlike any Western food I've had – or did it resemble Japanese versions of Western food. The restaurant was full of Koreans; I assume it was some sort of common genuine Korean food. Mike, I imagine that there was Chinese on the menu because the restaurant is in China. The food wasn't Chinese-like at all; it was vaguely Korean.

Nathan Myers (2008-12-15 11:47:30)

Korea used to be a big place before everybody moved to Seoul. Maybe all the "Korean" you've had before was Seoul style, and this place did dishes from somewhere else.

Vickie (2008-12-15 12:49:14)

I had something like the DIY wraps at a Korean restaurant in MI, however the items were to be wrapped in wilted cabbage pieces instead of thin radish strips. I was told it was popular with older Koreans who ate it when they were younger. There is also a Korean dish, samgyeopsal, that could be related to the bacon items. The sauce in samgyeopsal is certainly not sweet and sour though. Interesting for sure. Just curious, what area/town was this in? There are areas of China with Korean residents that have lived in China a long time. Maybe their Korean food is more traditional and has also been modified over time.

## **Museum of Tap Water (2008-12-15 04:24)**

Beijing has a [1]Museum of Tap Water, I learned from Google Maps. And I thought Seoul's [2]Kimchi Museum was unusual. It isn't the usual museum topic, of course, but as [3]I blogged earlier, tap water is a kind of miracle.

1. <http://german.china.org.cn/english/features/museums/139777.htm>

2. [http://en.wikipedia.org/wiki/Kimchi\\_Field\\_Museum](http://en.wikipedia.org/wiki/Kimchi_Field_Museum)

3. <http://www.blog.sethroberts.net/2008/11/25/the-four-abundances/>

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Timothy Beneke (2008-12-15 13:10:38)

That's astonishing, given that when I was in China in 2002, there was apparently nowhere public in the country where you could safely drink the tap water – certainly not in the 5 cities I visited. My girlfriend and I stayed in a 5 star hotel in Shanghai where they proudly informed us that we could safely drink the tap water within the hotel. Neither of us trusted them and didn't take them up on it. Have things changed since then? I'm curious as to the motivation or set of assumptions behind the museum... Your blog continues to be well worth visiting...

Museum Resource (2010-01-18 04:57:09)

The Beijing museum of Tap Water is built on the original place of the first water plant in Beijing Zhongzhimen Water Plant. This Museum is great place for visitors.....



## Academic Horror Story (Virginia Tech) (2008-12-15 15:50)

In an undergraduate poetry class, Joe Newbury [1]writes,

The first assignment [was] to write a one-page description of our influences and what they meant to us. I submitted a tongue-in-cheek, but graphic and flamboyantly described list: Jeffrey Dahmer, Ted Bundy, [and] a woman I™d slept with who had a giant mole on her rear end.

After this, his teachers forwarded all his work to the university administration, without telling him (and later denying it). Somehow this forwarded work showed he was dangerous. Eventually a cop told him,

"I believe you are a threat to yourself and to the people around you. If the University is not going to do anything about it, I will."™ She then announced that she was contacting Social Services to have my daughter taken away.

Because of something he wrote in poetry class.

1. <http://truthaboutvtshooting.blogspot.com/>

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Ryan Holiday (2008-12-15 22:07:58)

To be totally fair, the guy could be a complete weirdo independent of the assignment and then when combined, set off red flags.

Anastasia (2010-04-16 13:01:28)

Just because someone is weird, it does not mean they are dangerous...

## How Bad is LDL Cholesterol? (2008-12-15 20:28)

We all know the term bogeyman – a fictional monster that empowers its inventor. According to [1]Wikipedia, "parents often say that if their child is naughty, the bogeyman will get them, in an effort to make them behave." I always think of the Falkland Islands. In 1982, by acting as if the Argentine invasion actually mattered, Margaret Thatcher got herself a big boost in popularity. In the 1960s, by acting as if Berkeley student protests were dangerous, Reagan got elected president. The day after 9/11, I said my big fear was overreaction. I doubt the persons behind the bombing understood how useful they were to those in power. Bush got a boost in popularity that lasted years.

When it comes to health, cholesterol is one of the biggest bogeymen. [2]Hyperlipid begins [3]a post about LDL cholesterol like this:

You would be forgiven for thinking that the apoB100 protein (which defines the LDL or VLDL particle) has been evolved over the past 4.5 billion years to cause cardiovascular disease and the less of it you have the longer you will live. Listening to a cardiologist that is (or a BBC reporter on the Today Program grovelling before a cardiologist). The lower the better. It's impossible to have too low an LDL concentration. Statins in the drinking water. You know the patter.

The [4]scientific paper on which his post is based concludes:

Apolipoprotein B at homeostatic levels in blood is an essential innate defense effector against invasive *S. aureus* infection.

Thanks to Dave Lull.

1. <http://en.wikipedia.org/wiki/Bogeyman>
2. <http://high-fat-nutrition.blogspot.com/>
3. <http://high-fat-nutrition.blogspot.com/2008/12/cholesterol-and-innate-immunity.html>
4. <http://www.ncbi.nlm.nih.gov/pubmed/19064256>

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Maestro (2008-12-17 17:59:42)

I can guess at what "Apolipoprotein B at homeostatic levels in blood is an essential innate defense effector against invasive *S. aureus* infection." means, but would you be so kind as to translate that into English, please?

Rose Smith (2008-12-17 19:08:52)

Agree about LDL; love Hyperlipid; but must pick a nit: surely you mean that Reagan was elected governor, not president, in the 1960s...?

seth (2008-12-17 22:55:00)

Reagan's actions against the student protestors as governor brought him the national attention that led him to the Presidency.

seth (2008-12-17 22:56:46)

Maestro, it means "having normal amounts of LDL cholesterol is a good defense against a common infectious bug."

Patrik (2008-12-18 17:44:12)

Good post. However, I detect a bit of antipathy to Conservatives and a bit of fallacious logic. *I always think of the Falkland Islands. In 1982, by acting as if the Argentine invasion actually mattered, Margaret Thatcher got herself a big boost in popularity* It may not have mattered to you, but it certainly mattered to the Argentines (after all they were the aggressors). It also mattered to the Brits as, if what you suggest is true, her popularity benefited with a forceful British response. *In the 1960s, by acting as if Berkeley student protests were dangerous, Reagan got elected president.* Much too glib here and much too ex-post facto as well. Er, one of these protests became a riot. Riots are dangerous.

seth (2008-12-18 22:30:31)

Thanks, Patrik. I must disagree: I don't think Argentine takeover of the Falklands mattered to the Brits. The Brits were fooled into caring. This is why the term bogeyman exists: the strategy works.

Patrik (2008-12-20 00:05:11)

I understand the point you are trying to make about bogeymen. But what evidence do you have that Argentine invasion of the Falklands didn't matter to the Brits? And that they were 'fooled into caring'?

seth (2008-12-21 00:17:35)

Patrik, my belief that possession of the Falkland Islands didn't matter to Brits is based on the small population of the islands (about 3000) and their economic unimportance. According Wikipedia, they are self-sufficient except for military expenditures. So apparently they are a net drain on the rest of the British economy.

Patrik (2008-12-21 01:21:03)

Seth, 1) The Falklands are a British Overseas Territory. If the Falklands are attacked, the United Kingdom's national sovereignty is encroached. And the UK has an obligation to its citizens to act invoke the right of self-defense. This matters. End of story. 2) Having a small population is not mutually exclusive with not mattering to the Brits. As far as economics insignificance, I think you couldn't be further from the truth. The Falklands are rich in oil and fisheries. In fact, the potential for oil production is one the reasons the Argentine junta ordered the invasion: <http://www.csmonitor.com/centennial/fpaper/covers/1982.swf> From April 5, 1982 "Oil. Argentina, like the rest of the world, is thirsty for oil. But Argentine oil-drilling has been disappointing. Waters around the Falklands, about 400 miles off the Argentine coast, may be rich in oil - perhaps richer than the North Sea fields between Britain and Norway. Eighteen months ago, Argentina advertised for oil prospectors to explore an area extending into the Falklands waters. Britain protested the move. Some experts believe the Falklands area contains about 2 billion barrels of oil, which would be worth about \$60 billion at current market prices." Again, what evidence do you have that Argentine invasion of the Falklands didn't matter to the Brits? And that they were "fooled into caring"?

seth (2008-12-21 06:49:49)

Patrik, here's a sample of what Thatcher said in her autobiography: "The significance of the Falklands war was enormous, both for Britain's self confidence, and for our standing in the World". Note: nothing about Britain's economy. As far as I can tell, fish and oil played no role in the British's government's decision-making or public speaking about the war.

Patrik (2008-12-21 16:13:54)

Seth, You are clearly moving the goal posts and evading my central point. Let us start from the beginning. If I understand correctly, your assertion is the following: The invasion of the Falklands did not really matter to the British public because the populace is small and they are ostensibly economically unimportant, but Thatcher, wanting to increase her popularity, made it seem as if the invasion mattered, by intentionally fooling the public with the creation of a 'bogeyman', an imaginary threat against which she could mobilize British military forces, i.e. the very non-imaginary Argentine military forces, where the act of responding militarily to this perceived threat would thereby fulfill her real goal, that is, increase her popularity and power. I refute this by noting that the Falklands were/are important to the UK as the Falklanders are/were English-speaking British citizens and the Falklands are rich in oil and fisheries. The first point is obvious and paramount: one cannot allow national sovereignty to be encroached upon. It is the Prime Minister's paramount responsibility to maintain intact that what is the United Kingdom and its overseas territories (Anguilla, Bermuda, British Antarctic Territory, British Virgin Islands, Cayman Islands, Falkland Islands, Gibraltar, Pitcairn Islands, Saint Helena, South Georgia and the South Sandwich Islands, Sovereign Base Areas of Akrotiri and Dhekelia, Turks and Caicos Islands). To put in plainly, Thatcher had an obligation to the UK and, more importantly, **to the Falklanders themselves**, to protect them from foreign invaders, in this case, the Argentine junta. There was no bogeyman. She did not create the Argentine invasion. She reacted appropriately and the public agreed. The second point I back up by an article written at the time noting the Argentine motive for resources. I don't think it is a stretch to expect the UK government to have been aware of these resources. But let's assume I am completely wrong, although your point is very weak. Let's assume that economically the Falklands are/were unimportant. This still does bolster your bogeyman hypothesis as my first point about national sovereignty above is paramount. You attempt to take Maggie's words to fit your own purposes ultimately undermine your argument i.e. that the Falklands affair didn't matter. Let's see what the entire quote is: The significance of the Falklands War was enormous, both for Britain's self-confidence and for our standing in the world. Since the Suez fiasco in 1956, British foreign policy had been one long retreat. The tacit assumption made by British and foreign governments alike was that our world role was doomed steadily to diminish. We had come to be seen by both friends and enemies as a nation which lacked the will and the capability to defend its interests in peace, let alone in war. **Victory in the Falklands changed that. Everywhere I went after the war, Britain's name meant something more than it had. The war also had real importance in relations between East and West: years later I was told by a Russian general that the Soviets had**

**been firmly convinced that we would not fight for the Falklands, and that if we did fight we would lose. We proved them wrong on both counts, and they did not forget the fact.** ... So not only was it (naturally) important to Britain to maintain national sovereignty, but it was just as important to maintain foreign policy credibility when we place this conflict in its context, the height of the Cold War\*. I ask you again: Again, what evidence do you have that Argentine invasion of the Falklands didn't matter to the Brits? That is, what overrides my national sovereignty argument? And, more importantly, that they were "fooled into caring"? And how were they fooled into caring? Lastly, in Maggie's place, what would you have done?

Tom in TX (2008-12-21 17:48:41)

Were the Argentine people likewise fooled by their leaders into thinking the Falklands were important to them?

seth (2008-12-22 21:45:11)

Patrik, yes, the British defense certainly made a difference to Falkland Islanders. Sure. But it was the average Brit who paid for that defense. The telling thing about Thatcher's account – and I've heard a rumor that these accounts tend to be self-serving – is how vacuous it is. How few specifics. A Russian general, huh? That's the best she can do? Britain had lost vast expanses before they managed to hold on to the Falklands. Thatcher is arguing it is better to lose 20-1 than 21-0. It's a hard argument to make. The big effect of the Falkland War, as far as the average Brit was concerned, was exceedingly simple: It got Thatcher reelected (or at least vastly increased the probability of that event). Before the war Thatcher's popularity was quite low. Quite likely her term would have been much shorter; she would have been replaced by a leader with much different policies. Needless to say the war was not sold on that basis. Unless that low popularity was based on something equally delusional, then – if that low popularity was a sign that Thatcher should go – then Brits truly paid a price for the Falklands War. A price that of course they weren't warned about. This is the sense in which they were fooled. To say what I would have done as PM would be, unfortunately, an exercise in fantasy. It's hard enough to explain what actually happened. I don't know enough about Argentina to comment on what happened there.

Patrik (2008-12-23 12:41:07)

Seth, You are now completely avoiding the central point and taking tangents leading you nowhere. *Patrik, yes, the British defense certainly made a difference to Falkland Islanders. Sure. But it was the average Brit who paid for that defense.* So what? When Pearl Harbor was bombed, the average American was already paying for its defense, then paid to rebuild PH, and then to attack Japan. That has nothing to do with your bogeyman assertion. *he telling thing about Thatcher's account is "and I've heard a rumor that these accounts tend to be self-serving" is how vacuous it is. How few specifics. A Russian general, huh? That's the best she can do?* Ah, I see. When YOU quote her to make your point, we should take her at her word. But when I quote her (from the very same piece) to bolster my point, we assume that she is disingenuous or even dishonest. Tsk tsk. *Britain had lost vast expanses before they managed to hold on to the Falklands. Thatcher is arguing it is better to lose 20-1 than 21-0. It's a hard argument to make.* Your argument makes no sense. Of course, to take your analogy, it is better to lose 20-1 than 21-0. Just b/c Britain had lost vast expanses in the past, they should simply give up? And abdicate its responsibility to both the UK and the Falklanders? My house has been robbed, I should not put bars up on the windows and arm myself, to prevent additional robberies? That is her point. Skipping a bit forward here. You write: *To say what I would have done as PM would be, unfortunately, an exercise in fantasy. It's hard enough to explain what actually happened.* You cannot place yourself in Maggie's shoes b/c you are not sure of what actually happened yet you claim to know what would have happened had there been no war. Non sequitur. *The big effect of the Falkland War, as far as the average Brit was concerned, was exceedingly simple: It got Thatcher reelected (or at least vastly increased the probability of that event). Before the war Thatcher's popularity was quite low. Quite likely her term would have been much shorter; she would have been replaced by a leader with much different policies.* Really? What would have happened, had she lost the war? Would she have been re-elected? And you know, in your heart of hearts, that she would not have been re-elected? You cannot know that. That is simply a guess. *Needless to say the war was not sold on that basis. What, according to you, was it sold on? Unless that low popularity was based on something equally delusional, then "if that low popularity was a sign that Thatcher should go" then Brits truly paid a price for the Falklands War. A price that of course they weren't warned about. This is the sense in which they were fooled.* I don't follow you at all. Please clarify.

seth (2008-12-24 02:37:34)

Patrik, thanks for your comments and questions but the time I can devote to this has run out.

Tom in TX (2008-12-24 09:33:05)

Maybe we can at least agree that the war did not have a significant effect on LDL cholesterol. 8-)

Tim Lazaro (2009-01-13 13:06:19)

Seth, Apparently you opened a can of worms here in your comparisons. It seems to me you could have picked simpler and clearer comparisons not politically hot ones. If you are going to talk about LDLs - talk about LDLs. I'm sure there are about a 100,000 or so political forums and blogs where you could argue about the issues you bring up. For example in my writings I compare LDLs to little dump trucks carrying particles of cholesterol in the bloodstream. HDLs try to scoop up errant cholesterol and return them to the liver for disposal. I think these are simple concepts to understand. The problem comes in when you have too many LDLs and not enough HDLs.

Seth's blog » Blog Archive » How Bad is LDL Cholesterol? (continued) (2009-01-22 22:55:08)

[...] How bad is LDL cholesterol? [...]

### **What's Wrong with Patients Sharing Information? (2008-12-16 22:43)**

A "surgeon/scientist" named Orac [1] complains that patients are sharing information on the effects of a drug (lithium) on their ALS (Lou Gehrig's disease). What are his objections? As best I can tell:

1. "This group testing lithium for ALS is no different than the desperate cancer patients trying out DCA, and it's subject to the same shortcomings and opportunities for bias and self-deception that were so apparent on Jim Tassano's DCA discussion boards." This is like the statistics professors who complained about plotting data because you might see a pattern that isn't there. Complaining that something isn't perfect isn't much of a criticism.
2. "The designers of this project [information sharing] are fooling themselves if they think an unblinded, patient-driven clinical trial will accomplish what they think it will, although they do exhibit appropriate caution." This isn't clear; it isn't clear what "what they think it will" means.
3. "There are no controls, only in essence historical controls (i.e., the "predicted course")." So? Historical controls aren't worthless. They are used all the time in experimental science (e.g. pre/post comparisons). B. F. Skinner was a big advocate of historical controls. If you were evaluating a new type of surgery, you'd use historical controls to help decide if the new way is better or worse than old ways.
4. "As hard as it is to believe, even for patients with ALS it is possible to make things worse. Lithium, for instance, is not a benign drug. It can cause neurological complications and diabetes insipidus." Surely the patients know this and have decided the possible benefits outweigh the risks. Again, pointing out that something's imperfect isn't much of an argument.
5. "Overall, when taken as a whole, it is far more likely that patients will be harmed by taking experimental or off-label drugs than significantly helped." Far more likely? No evidence is given for this claim.

I believe, contra Orac, that sites like [2]PatientsLikeMe.com are a wonderful idea, well worth exploring. As [3]Ben (short for Benedict) Casnocha says, it's a good idea to know the other side of the argument.

1. [http://scienceblogs.com/insolence/2008/12/patientled\\_clinical\\_trials\\_versus\\_clinic.php](http://scienceblogs.com/insolence/2008/12/patientled_clinical_trials_versus_clinic.php)
2. <http://www.patientslikeme.com/>
3. <http://ben.casnocha.com/>

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Nathan Myers (2008-12-17 00:36:17)

There's a strong whiff of guild jealousy in Orac's protestations. To "accomplish what they think it will" can't mean anything but "maybe get better". What good could it possibly do them to get better if they aren't really certain *why* they got better? How dare they deprive some honest primary investigator of a control? Even if it works, in the end, they're just putting off the day when a patentable lithium-analog is approved for on-label use.

Aaron Blaisdell (2008-12-17 12:40:08)

I had an annual check up yesterday. My doctor is at an HMO (Kaiser Permanente). I told him about my dietary changes in response to having read Gary Taubes' book "Good Calories, Bad Calories" (which he had never heard of!), posts on this blog, and on Stephen's blog (<http://wholehealthsource.blogspot.com/>), etc. My dietary changes include: increased consumption of eggs, meat, dairy; decreased consumption of wheat and unsprouted/unsprouted grains and legumes and replacement with sprouted grains and non-gluten grains; replacement of vegetable oils with animal oils, such as butter and lard in my cooking; and taking high-vitamin cod liver oil and butter oil, ala Westin Price recommendations). He was very skeptical (except of the cod liver oil of which he approved) and cautioned me against making these dietary changes. I also asked him if he could request a fatty-acid test, but he declined because it was not a standard test of Kaiser's. I asked him why he disapproved of my dietary changes and he said that, while there are some papers that may show benefits of each of the changes I have made, there are just as many papers showing the opposite. BUT he claimed that he did not know of the scientific literature on diet and health. He said he only reads the medical literature. I wasn't aware of these literatures being separate! He apparently is not concerned or even interested in medical and nutritional science, even though he's a general practitioner whose primary responsibility is the health of his patients! Instead, he seemed comfortable having the party line handed down from the "officials" above, and not straying from the boundaries set by the AMA (and AHA, etc.). This is a huge problem with the medical community as I see it. The great thing about the internet is not only the availability of information, but also the ability of a conscientious person to take matters into their own hand to gather information for themselves, make their own decisions, and share that information (e.g., these blogs) with other interested people. Some doctors are threatened by this change in information access. But even worse in my opinion is that others are merely apathetic.

seth (2008-12-17 13:58:21)

Aaron, he knows little or nothing about nutrition but cautions you against making certain dietary changes. Yeah, just like Orac. He knows little or nothing about experimental design, but he cautions against a certain experimental design. As for the apathy (at least Orac isn't apathetic) a friend of mine had the same experience. He brought his doctor some data he had collected himself that was highly relevant to what to do about his problem. The doctor didn't care. Perhaps I should be happy that when I was a graduate student and showed my dermatologist that one of the medicines he had prescribed had no effect on my acne, he was irritated (rather than apathetic). Nathan, I think "accomplish what they think it will" might mean something like "help others decide whether or not to try lithium."

Tom (2008-12-18 14:19:12)

*he claimed that he did not know of the scientific literature on diet and health. He said he only reads the medical literature. I wasn't aware of these literatures being separate! He apparently is not concerned or even interested in medical and nutritional science, even though he's a general practitioner whose primary responsibility is the health of his patients!* Michael Eades, a physician, wrote a post about how to talk to your doctor about diet: <http://www.proteinpower.com/drmike/statins/talking-diet-your-doctor/> In it he explains that most doctors never read scientific papers and are probably not even capable of it. By "medical literature" your doctor is referring to case reports, which Eades says is what most practicing physicians are familiar with and capable of grasping. (He links to a case report to print and bring to your physician.) (BTW, good luck getting a

Kaiser MD to order any test that isn't absolutely necessary – doing so reduces his year-end bonus. He is well-incentivized not to indulge what he sees as your foolishness.)

Aaron Blaisdell (2008-12-18 20:04:04)

"(BTW, good luck getting a Kaiser MD to order any test that isn't absolutely necessary – doing so reduces his year-end bonus. He is well-incentivized not to indulge what he sees as your foolishness.)" Thanks Tom. My doctor actually voluntarily confessed to this. At least he's honest. Oh, and thanks for the link!

### **Interview with William Rubel, Food Historian (part 3) (2008-12-17 20:32)**

[1]William Rubel, a friend of mine, author of [2]The Magic of Fire and co-founder of the children's literary magazine [3]Stone Soup, is writing a history of bread.

RUBEL I think that, in terms of culture–human culture–it seems that rich people have liked purity. We've been smelting metals for a very long time and smelting metals is taking dirt and out of the dirt creating a refined silver or brass or copper, even gold. I know that gold exists in little pieces, but nonetheless, there's a lot of melting and purifying. So it just seems to me that logically once a culture had gold, once a culture had metal, the idea of purifying the grain to get white is not a huge conceptual leap.

White flour is a form of conspicuous consumption because you are keeping the endosperm–the starchy part–and throwing away the rest of it. And when you do it by grinding and sifting, and you leave an efficient system, you might throw away 75 % of the grain to get 25 %–the super white or 50 % of it that will be white and 50 % that you will throw away. You're not throwing it away into the trash can, but you'll feed it to a lower status person–the servants will get the rest of it–and of course you can also feed it to the pigs. But you would keep the white flour for yourself and make a lower status bread for servants and slaves. Historically the slaves were the ones who ground the flour. In the biblical period they did, and presumably before that as well. The earliest reference I've seen is in a book on cooking in Byzantium, I think about 800 AD, in Constantinople and someone is saying, "Oh the bread here is just white and fluffy like clouds. It's degenerate, awful bread."

ROBERTS You mean they did not like white bread at that point?

RUBEL This is a person who is criticizing it. He is saying that the white bread in the city, which is fluffy and white as clouds, is a sign of cultural decay. It's a bad thing. And that critique of white bread, which we have today–that you're throwing all the best parts away, that there's something almost morally wrong about eating white bread–is a very common critique. I think by someone named Tyson in the book called The Way to Health, I think, in the early 1600s . . . I read certainly in medical texts from the 1500s and early 1600s, people saying, "This white bread is essentially empty calories and it's a bread for courtiers," who are eating it because they are aping the social class above them, but that it's not really very healthy. In the 18th century when people in France, in particular, became concerned about having enough good to feed the general population, one concern was that Paris had a culture of white bread and there were often grain shortages because it takes, out of a bushel of grain, you only get half a bushel of white flour. It was an inefficient use of flour, so the government was trying to push more whole grain or kept bemoaning the fact that the peasants in Paris didn't want to eat this more whole grain flour. They felt that whole grain flour was better for workers–this is also a big motif in medical books of the 1500s and 1600s, that if you're a worker, if you're a laborer, you need to have a more whole grain bread. But if you're a student, if you're a person like us, who don't have calluses on our hands and just work the computer keyboard, then people like us don't need all that good value from the bread and white bread is more appropriate for us. They also recognized that there was more calories per unit–they sensed that it was denser calories, because they felt that someone who was very thin should eat white bread but somebody who was

fat should eat the more whole grain bread because they knew from being very close to their excrement—they were close to their shit since they shat into holes . . .

ROBERTS Chamber pots?

RUBEL Chamber pots, yes. So they knew if they ate something grainy it just went right through them. They thought that fat people should eat a more whole grain bread than white bread.

ROBERTS So you're saying that this preference for white bread and a reaction against this preference are both quite ancient?

RUBEL Yes, absolutely. That's right. Now the bread that you like that I make is a very dense bread and part of this idea of using the past to look at our own bread culture is to say, "Gee, what breads were there back then and what were they like?" The rich people have liked open crumb for a very long time and the medical books do say that the best breads have eyes, have air holes in them. On the other hand, the most common breads were fairly dense: rye bread and rye wheat bread or in England, breads just made with barley flour that could be fairly dense. But the old texts also often speak about the nice flavor of some of these dense breads. I find making bread, while you are a great fan of the dense bread and seem to respond to its flavor and . . .

ROBERTS Texture, too.

RUBEL Right. But I have a friend who's (I don't like to use that term foodie) like a gourmet—he likes to eat a lot, he's very focused on food, but has very definite ideas about what's good and what isn't good and is very concerned about what's good and not good. He just says, "William, when are you going to make a bread that's any good, when are you going to make a good bread?"

ROBERTS You're kidding. He says that now?

RUBEL Yes. He does not like the dense breads. He says they're not well made.

ROBERTS What is his complaint?

RUBEL That they're dense. Because density, or a lack of density, is a cultural attribute. Germans don't feel that a 100 % rye bread you see made and exported in those plastic, square loaves in plastic packages in the deli shop—and those obviously have no air holes—people in Germany are not saying, "Oh my god, this bread would be great if only it had air holes." It's a style of bread, it's a style and they appreciate.

ROBERTS You're saying that the preference for an airy bread is cultural.

RUBEL Preference for an airy bread is cultural. For example the high status white bread in the 1400s and the 1500s (probably also earlier than that) was a white bread that was made with a very dense dough, 50 % water to 50 % flour, which would be very dense. Using modern flour, your ciabatta, is 75 % water, maybe 78 % water, by weight of flour. If you have 100 pounds of flour, the baker will be adding 78 pounds of water. Whereas this other bread would have been made with 50 pounds of water. The more hydrated the dough is, there's some other factors involved, but the wetter the dough is, the easier it is for it to expand and make big air holes. All of this artisan bread that we like that has nice air holes—those are all yeast breads, so they're moving to very, very hydrated doughs relative to historic practices.

Even at the turn of the 20th century, a standard English bakery book said that 50 % water was the standard recipe. I have one book, a big English commercial bread book, the biggest book for bakers, by a man named Kirkland.



He traveled around continental Europe and he said he was quite surprised to find that in Holland they were making breads with more water than they do in England. They were not following that 50 % standard.

If you get back to 50 % water by weight, and then they worked it for a long time. There's an American biscuit called a beaten biscuit, where you work the dough in a mangle over and over again, for an hour. You just break down the gluten chains; you make a dough that is very elastic, very velvety. But it will never give you big air holes. What you're getting is lots of really tiny holes. They would work the dough with their feet or they would work it with a tool called the break, which was a stick attached by a pivot to the wall. The baker would work this stick over the dough (actually with his body weight he would sit on the stick, sort of bouncing on the dough) for a long, long time until it was, as we would say, overkneaded. You would also be oxidizing it. It would turn whiter as you worked it a lot. They would get a very white bread with a very soft interior. They did not want a crust on it, a dark crust, so they also baked it in an oven probably at about 250 degrees Fahrenheit, maybe even a little bit less.

ROBERTS Do you buy Thorsten Veblen's view of this, why people like white bread? You use the phrase "conspicuous consumption" from Veblen. Do you think that's pretty close to what's going on? People are trying to advertise their leisure time or their ability to pay. It's like having a fancy gadget today. It's a way of showing status.

RUBEL Yes. You buy imported butter. Most people's tables, especially in our social class—the people who are reading your blog—are filled with cultural signs. What salt do you use? Are you using Leslie salt in the blue container and the little umbrella or are you buying sea salt? Are you buying salt from France? What kind of cheese do you eat? If you don't eat Velveeta cheese, or some commercial American cheese, are you doing that entirely for flavor or is there some aspect to a little bit of showing off? Food is all about signs. Once you're not just eating to eat, you're saying a lot about who you are by . . .

ROBERTS Especially if you have guests, or tell other people what you eat.

RUBEL That's right. Exactly. When you have people over to dinner and have that special olive . . . And also, we develop cuisines that work together with the foods that we like. White bread works well if you're having a refined meal where the cook has spent a lot of effort to highlight ingredients or spices or herbs or whatever it is that is the highlight of that cuisine. White bread is more neutral than \_\_\_ or rye bread, which has a stronger flavor in of itself. Whole grain bread is giving you all that bran, which is filling and the bread's not the meal; the bread's the side dish. I think that there gets to be, also, confusion between bread as a meal and bread as a side dish. Even in the modern critique of white bread. Like, "white bread is bad for you, it has no roughage in it." But how much of it do you really eat? Does it make any difference? Or, it's empty calories." Well, okay, it's empty calories; so is having a Coca-Cola, obviously. Or one of those fancy vitamin drinks. We eat a lot of empty calories; your wine is empty calories.

ROBERTS Water is empty liquid.

RUBEL Water is certainly empty calories.

ROBERTS We've covered the main points. But if you have more time, I'd like to ask you one or two more questions. When you've been going into this history, what sort of things have surprised you or have been different than what you'd expected?

RUBEL There's a lot more variety. I found cornbread from France which apparently was a staple bread in southern France in the 18th century. I'm also finding that most of our ideas are just not right. We've fixed on this French bread that only uses water but in real life—and it's a high status French bread that we have fixed on—but in real life high status French people also liked bread that had fat in it. They had milk bread—breads made

with milk and a little bit of butter. There was more variety then, even at the rich person's table than we have now. I've been surprised—maybe not as surprised about them, but once again surprised and sort of disappointed or shocked to see how narrow-minded our own culture is in some respects.

ROBERTS I totally agree. I think that's such a great point. There's a story that Jane Jacobs tells that I keep retelling because it just comes up again and again. When she was a teenager, she went to a small town in rural North Carolina, maybe. She visited an aunt, and her aunt told her the story that when her aunt had come there, maybe 10 years ago, her aunt was assigned the task of building a church, or overseeing it. She told the villagers, "Hey let's build it out of stone." And the villagers said, "No, that's not possible." So they laughed at her. They had forgotten that it was possible to build buildings out of stone. You're saying that it's not just a small town—this isolated little town in rural South Carolina—it's our whole culture. We've forgotten all these ways to make bread.

RUBEL Yes, or we've rejected them. Because it's somebody else's bread. You go to a Mexican bakery and they have milk rolls.

ROBERTS They have what?

RUBEL They have bread that has milk in it. Or eggs or butter. We used to have Parker House rolls; that was a big American roll, and now our social group—we've rejected that. It's gone. And yet high status French people in the 18th century would have loved Parker House rolls and had breads that were very similar to that. I guess going back has reminded me of that.

ROBERTS Can I call it the new elitism?

RUBEL I don't think that's unfair. We have this particularly American variety of elitism, and I can't speak for our European cousins, where we don't recognize class in it. You go to a Mexican market and they're selling Wonderbread or the equivalent and you go to our market—I live in Santa Cruz—and where the professors go, and we don't have that bread at all. Or we have a weird industrialized version in Orowheat breads, which may be ostensibly whole grain but are actually industrialized products that make a whole grain bread so they can say that it's whole grain or say that it has nine grains in it but effectively they're really offering you something with the texture of a white bread.

We're elite without recognizing the class. Whereas in old books—cookbooks and books that talked about bread in the 18th century and the 17th century—they were very up front. This bread was for the owner, this bread was for the servant and this bread was for the farm worker, the lower status person. They saw the status in bread; they recognized that it was there. They lived in a more overtly hierarchical society. Not more overtly, but they recognized that it was hierarchical, whereas we tend not to recognize it, especially in America where we have this mythos that everybody can be anything we want. Obama can be president, yes, but the social system is not quite so open. And there are breads associated with that lack of openness.

ROBERTS Do you mean that our choice of breads is a reflection of a lack of openness?

RUBEL Yes. I think that if you do an anthropological study, in the greater Berkeley area, of social status and bread, you're going to find very clear correlations.

ROBERTS Yes. How dare we!

RUBEL And part of it is just based on cost. It's cheaper to buy a double packet of Wonderbread at Safeway even if you might want the other. On the other hand, there's reason why Wonderbread is a good bread for

many purposes.

ROBERTS Yes; I use it in my research. Thank you, William, that was wonderful.

[4]Part 1. [5]Part 2.

1. <http://www.williamrubel.com/>
2. <http://www.williamrubel.com/hearthcooking>
3. <http://www.stonesoup.com/>
4. <http://www.blog.sethroberts.net/2008/10/27/interview-with-william-rubel-food-historian-part-1/>
5. <http://www.blog.sethroberts.net/2008/11/15/interview-with-william-rubel-food-historian-part-2/>

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### The Last Days of Old Beijing (2008-12-18 14:35)

I'm enjoying [1]The Last Days of Old Beijing: Life in the Vanishing Backstreets of a City Transformed by Michael Meyer, one of a few fun books I brought to China. (The others are [2]Traffic by Tom Vanderbilt and [3]The Corpse Walker by Liao Yiwu.) It's about living in a downtown hutong. What pleases me most is how good his Chinese must be (I want reassurance I can learn it) but I also like strange stuff like this:

[Watching TV in a friend's apartment, Spring Festival 2006.] The annual variety show paused from its singing and acrobatic performances to announce that China would send a pair of pandas to Taiwan as a measure of friendship. The program's five hundred million viewers could pick the animals' names by choosing from a list and sending a text message via cell phone.

"Who says we can't vote?" [his friend] laughed. . .

We ate and watched television until Unity and Wholeness were announced as winners of the name-the-panda election. (Taiwan's government would initially refuse the animals.)

What were the other candidate names, I wonder.

1. <http://www.lastdaysofoldbeijing.com/TheLastDaysOfOldBeijing/Book.html>
2. <http://www.howwedrive.com/>
3. <http://www.rochester.edu/College/translation/threepersent/index.php?id=1024>

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cato (2008-12-23 03:21:23)

i think the runners up were "invasion" and "formosa is ours!"

## Max Planck Institute Promotes Brothel (2008-12-18 21:33)

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From [1]The Independent:

There were red faces on the editorial board of one of Germany's top scientific institutions, the Max Planck Institute, after it ran the text of a handbill for a Macau strip club on the front page of its latest journal. Editors had hoped to find an elegant Chinese poem to grace the cover of a special issue, focusing on China, of the MaxPlanckForschung journal, but instead of poetry they ran a text effectively proclaiming "Hot Housewives in action!" on the front of the third-quarter edition. Their "enchanted and coquettish performance" was highly recommended.

This is puzzling: Poems are in books, not on flyers. No way was this xeroxed from a book. Even I can see that. This will be their best-selling issue – maybe it was a mistake on purpose.

1. <http://www.independent.co.uk/arts-entertainment/tv/news/chinese-classical-poem-was-brothel-ad-1058031.html>

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## My Theory of Human Evolution (fixing bike pumps) (2008-12-19 15:34)



The father of one of my Chinese tutors used to work at a coal mine (in an administrative position) but after his wife went away to care for her sick mother he wanted a job without night shifts to better care for his two children. He decided to make a business of fixing bicycle tire pumps. People who fixed bicycles were common but hardly anyone

fixed the pumps.

Was it hard to start such a business? No. There was a tradition in his small town of persons walking through neighborhoods announcing what they had to sell. Like ice cream trucks. Coal, fruit, baked goods, and other things were/are sold that way. (He preferred to buy his coal directly from the mine.) At first, he used his unaided voice, later he got an electric megaphone, now he has a recording.

I believe human language began like this. Language began and grew because it facilitated trade. Facilitating trade facilitated occupational specialization, the essential difference between humans and other animals. Words – single words, repeated many times – were the first advertising, the original Craig’s List. Again and again, you said the word of what you wanted or what you had to offer.

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Seth’s blog » Blog Archive » My Theory of Human Evolution (directory) (2008-12-19 15:41:47)  
[...] fixing bike pumps single words help traders find each other [...]

Nathan Myers (2008-12-19 22:47:35)

Arguably it’s language itself that has been subject to intense natural selection, while humans as a species have been selected mainly to become better hosts for it. Those poor slobs, humans, now live or die by the language “skills” they host. They live in unpleasantly crowded places, eat mass-produced food, squint at screens and push buttons all day, and do whatever people they’ve never even met want.

### **Chocolate is Good For You (part 4) (2008-12-20 16:47)**

From the January 2008 [1]Journal of Nutrition:

In a cross-sectional study, we examined the relation between intake of 3 common foodstuffs that contain flavonoids (chocolate, wine, and tea) and cognitive performance. 2031 participants (74 y, 55 % women) recruited from the population-based Hordaland Health Study in Norway underwent cognitive testing. A cognitive test battery included the Kendrick Object Learning Test, Trail Making Test, part A (TMT-A), modified versions of the Digit Symbol Test, Block Design, Mini-Mental State Examination, and Controlled Oral Word Association Test. . . . Participants who consumed chocolate, wine, or tea had significantly better mean test scores and lower prevalence of poor cognitive performance than those who did not.

1. <http://jn.nutrition.org/cgi/content/abstract/139/1/120?etoc>

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Caleb (2008-12-20 22:49:31)

Did they control for social class? Otherwise all this means is that consumption of chocolate, wine, and tea are markers of high social class, which correlates with high IQ. Which anyone who pays attention already knew without having to do a study. Chocolate is good for you, but trying to spin this research as supporting it is confusing the direction of causation.

seth (2008-12-21 00:02:53)

Caleb, if the research had found zero connection between chocolate & health, would that have been meaningless? If not, then a failure to find zero connection is meaningful.

Tristan (2009-04-15 05:26:59)

I suppose the problem is your headline "Chocolate is Good For You" - there is no justification for choosing that headline rather than "Good means Chocolate For You" You can draw any conclusion from any data if you want it hard enough and care little enough about actual science. This study shows correlation but you've fabricated causation on top of it.

Danny Byas (2010-10-08 00:22:46)

Was there a difference between black tea or milk added to tea? Also green tea? What tea was used in the test? Also red or white wine? Did results improve with higher concentrations of cocoa in the chocolate?

### **Are You Having Trouble Getting Grants? (2008-12-21 07:02)**

A few weeks before I left Berkeley, I ran into one of my psych-department colleagues in a supermarket. He said - this was before the financial crisis - that the grant outlook was terrible. The success rate for NIH grants was about 7 %. He had had two grants; now he expected to have none. "Self-experimentation is looking better and better," he said.

Today I got an email that began like this:

If your department's economic outlook is looking bleak, like the rest of our economy, then we have some help available for you! Regardless of the nation's economic condition, the federal, state, local, corporate and private foundation grant system in the US is quite healthy and can provide substantial supplemental relief to your budget woes. Grant money for equipment, training, vehicles and other needs is still available in substantial amounts and remains unaffected by the current economic crisis. Competition for this available funding is becoming more intense with more agencies than ever applying. You need an edge to win; we offer that edge!

CHIEF and 5.11 Tactical have teamed up for 2009 to offer our nationally recognized grant consultant, Kurt Bradley and his national grant writing seminars, for the affordable price of \$149.00. Kurt and 5.11 will be in Las Vegas, NV on January 6th and 7th to instruct public safety agencies how to capture their share of this money. Chief Grants has turned hundreds of departments into successful applicants and winners for these funds, assisting agencies, just like yours, in obtaining more than \$100 million dollars.

I was on the 5.11 Tactical mailing list because I had bought some pants that police officers often buy.

In *Systems of Survival*, Jane Jacobs wrote that there were two systems of morality, corresponding to two different ways of making a living: taking and trading. The first values loyalty more than honesty, the other values honesty more than loyalty. Police are firmly in the taking morality system, which pervades government. Science should value honesty, of course; but you can see that a dependence on grants pushes everyone involved toward a loyalty-based morality: If we tell the truth we might lose our grant. Modern science is indeed almost completely dependent on grants, which means results don't really matter. What really matters is getting the next grant. One reason my self-experimentation was effective was it didn't depend on grants. No matter what I found, no matter how strange or upsetting or impossible or weird the results might be, I could publish them and continue to investigate them.

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Ben Hyde (2008-12-21 11:01:35)

Golly, did we read the same Systems of Survival?

Mike Kenny (2008-12-21 15:31:00)

i guess business people might fund some experimentation in order to actually get a working product they could sell. a problem there is if you're working to find out something so you can sell it then you might not care to share your findings because that would be a trade secret. i guess you want to be rewarded for your findings, but at the same time, there seems like there could be a problem of useful findings being held by only a few due to their interests.

seth (2008-12-21 17:30:58)

Ben, some of my info comes from a talk Jacobs gave about these ideas before she published the book. The talk was more straightforward – you could even say blunt – than the book. In the talk, the taking/trading distinction is very clear, less so in the book. Mike, honesty is important in business because it is important that people fulfill contracts: accurately describe what they are offering to trade and do what they say they are going to do (e.g., after being given money, hand over the product). Without honesty in that domain, transaction costs become high, mistrust sets in, and the whole trading system breaks down. I think something like that is the explanation for what Jacobs observed. I think Jacobs said something to that effect.

Mike Kenny (2008-12-21 18:45:02)

that makes sense. i think my main concern is slightly different—proprietary information—a hypothetical: you might have asked people to sign a non-disclosure agreement so they wouldn't talk about your shangri-la diet, then disclosed to them the diet for a price. you could have given the diet away for free to some people who signed a non-disclosure agreement for the sake of getting testimonials, and have a money-back policy to show you believe in your product. but if this happened, the scientific community might be shut out of learning the new insights, or slowed down in discovering them, possibly.

Patrik (2008-12-22 00:10:26)

*Science should value honesty, of course; but you can see that a dependence on grants pushes everyone involved toward a loyalty-based morality: If we tell the truth we might lose our grant. Modern science is indeed almost completely dependent on grants, which means results don't really matter. What really matters is getting the next grant.* Beautifully well-put and accurate. One thing you could have fleshed out a bit further is that such systems go hand-in-hand with groupthink orthodoxy. Now, let's put this observation into context. To wit, there is much more money to be 'made' in promoting 'global warming', than disputing. Therefore, a Popperian approach to proving global warming exists will never be funded.

Economics of science « Entitled to an Opinion (2009-01-05 22:42:54)

[...] Cheap-skate self-experimenter Seth Roberts shouldn't be worried about getting grants, but he's talking about them anyway here. Apparently even in these belt-tightening times there's still money to be had. What I find interesting about the post is his use of Jane Jacob's two moralities from Systems of Survival: the taking (aka guardian) based on loyalty and the trading based on honesty. Seth thinks that reliance on grants will make scientists more concerned with loyalty than honesty and afraid to publish results that Seth (who ain't afraid of no McCloskey) wouldn't think twice about. [...]

Are solo authors less cited? (2009-02-27 11:23:38)

[...] Consider 'Seth Roberts' self-experimentation strategy and Roberts's take regarding funding: One reason my self-experimentation was effective was it didn't depend on grants. No matter what I found, no matter how strange or upsetting or impossible or weird the results might be, I could publish them and continue to investigate them. [...]

tim backcat (2009-05-06 14:31:15)

Great information and usefull too. I need a grant and I need all the help I can get. I will be back soon as I have bookmarked your blog.

Making up rational-sounding stories, rebranding atheists, novelists playing god « Mike Kenny (2011-11-24 05:01:46)

[...] Seth Roberts on how grants might corrupt researchers, and the benefits of self experimentation. My comment there: i guess business people might fund some experimentation in order to actually get a working g product they could sell. a problem there is if you're working to find out something so you can sell it then you might not care to share your findings because that would be a trade secret. i guess you want to be rewarded for your findings, but at the same time, there seems like there could be a problem of useful findings being held by only a few due to their interests. [...]

### Careful with the Sushi (2008-12-22 01:10)

I once lost about 12 pounds by [1]eating lots of sushi. I didn't think was a good long-term idea, however, because sushi was expensive and might have too much mercury. Now Jeremy Piven, best known as Ari in Entourage, has found that eating lots of sushi can indeed raise your mercury levels a significant amount. According to [2]New York,

Dr. Carlon Coker went [3]on record with Entertainment Tonight to confirm that Piven has six times the amount of mercury in his system that a healthy person should have, apparently a result of Piven's insatiable appetite for sushi.

As a result he quit his role in David Mamet's Speed the Plow. [4]Mamet's response:

I talked to Jeremy on the phone, and he told me that he discovered that he had a very high level of mercury. So my understanding is that he is leaving show business to pursue a career as a thermometer.

What a jerk.

1. <http://repositories.cdlib.org/postprints/117/>

2. [http://nymag.com/daily/entertainment/2008/12/jeremy\\_pivens\\_craving\\_for\\_sush.html](http://nymag.com/daily/entertainment/2008/12/jeremy_pivens_craving_for_sush.html)

3. <http://www.etonline.com/news/2008/12/69034/index.html>

4. [http://nymag.com/daily/entertainment/2008/12/jeremy\\_piven\\_drives\\_a\\_stake\\_th.html](http://nymag.com/daily/entertainment/2008/12/jeremy_piven_drives_a_stake_th.html)

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Aaron Blaisdell (2008-12-22 15:22:40)

LOL! That was a funny response! There's a good example of a spontaneous creative joke.

Nathan Myers (2008-12-22 21:15:30)

I doubt it was spontaneous. Probably he got it, ultimately, from whoever writes Letterman's or Leno's jokes.



John (2008-12-23 06:58:03)

More sushi for the rest of us? :-) <http://junkfoodscience.blogspot.com/2008/12/do-fish-fly.html>

Bryan (2008-12-23 11:18:19)

@Nathan Myers: Unlikely. Maybe you don't know Mamet, but he's no stranger to comedy. He doesn't need to be fed lines.

sfmike (2008-12-23 21:45:16)

I'd like to echo Seth's final "What a jerk" remark. Everything I've read by Mamet and about Mamet leads to that one, inescapable conclusion, from his brutal plays to his awful screenplays to his recent public neocon conversion. Yuck. And I'm thrilled to see "Dark Age Ahead" by Jane Jacobs on your "I Recommend" list. It's beyond depressing but it certainly is useful right now.

### **Life Imitates Art School (part 2) (2008-12-22 14:57)**

Tsinghua University includes an art school added six or seven years ago. An art school elsewhere in Beijing moved to the Tsinghua campus; a big building was built for them. Two of my Chinese teachers are art students. I told them about the [1]San Francisco art school where every department looks down on another department. This got a big laugh. The same thing happens in their school, they said. It is divided into fine arts and design. The fine arts students look down on the design students because the design students are working for money; the design students look down on the fine arts students because they aren't practical.

The more curious interaction is between the art students and the rest of the school. Students in the rest of Tsinghua, which resembles MIT, often ask the art students their score on the national exam that high school students take to get into college. It is incredibly difficult to get into Tsinghua by that route; maybe 1 in 10,000 is successful. Art students have lower scores on this test but must also pass a test of artistic ability. One of my teachers, who is now a graduate student, said she'd been asked her exam scores at least 10 times.Â Here is one context. My teacher has just helped another student with his bike.

Student who has just been helped: What's your major?

My teacher: Art.

Student: What was your score on the national test?

And she is big and strong, she said, so potential questioners may have been afraid of being hit. Other art students are asked more often.

1. <http://www.blog.sethroberts.net/2008/09/22/life-imitates-art-school/>



By which I mean journalism that involves doing an experiment. In [1] this example, two New York journalists measured reaction to two versions of strawberry milk. The low-rent version did surprisingly well.

A friend and I were once thinking of writing newspaper articles about parking illegally in various places in San Francisco and measuring how long until we got a ticket. News you can use.

1. [http://nymag.com/daily/food/2008/12/taste\\_test\\_momofukus\\_strawberr.html](http://nymag.com/daily/food/2008/12/taste_test_momofukus_strawberr.html)

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Patrik (2008-12-22 20:42:11)

What would have been interesting is had they segmented out the experiment via target demographic. I suspect that the Nesquik stuff would have crushed Momofuku in Nesquik's demo i.e. five to 10 year olds. I also wonder if (I forgot the proper name for this phenomenon) the fact that liking cheap-y foods is just not cool\*, especially not amongst New York Mag readers, skewed the reporting of their preferences. That is to say, there is something nostalgic about the sickly sweet, artificially colored milk. — \*For the record, McDonald's pulls a great coke, and their fries are simply unbeatable. I don't care how sweet potato gastro-pub you wanna get.... :)

Ryan Holiday (2008-12-22 21:26:37)

I'd actually like to see the parking ticket story. I'm sure cops would immediately make it irrelevant by heavily ticketing those areas that took the longest to continue to use uncertainty as a deterrent. Of course, that would also make a decent follow up piece.

seth (2008-12-23 06:03:54)

Patrik, that's a great idea: taste test expensive food with little kids. Spy did an experiment where they had a gallery opening with art on the wall by little kids ("My Kid Could Paint That!").

links for 2009-05-13 « Where is my towel? (2009-05-13 00:04:25)

[...] Seth's blog » Blog Archive » Experimental Journalism (tags: expetrimment experimental journaism) [...]

## **The Twilight of Expertise (part 16: opticians) (2008-12-22 22:04)**

[1]These glasses can help everyone, not just the poor:

The wearer adjusts a dial on the syringe to add or reduce amount of fluid in the membrane, thus changing the power of the lens. When the wearer is happy with the strength of each lens the membrane is sealed by twisting a small screw, and the syringes removed. The principle is so simple, the team has discovered, that with very little guidance people are perfectly capable of creating glasses to their own prescription.

[Josh] Silver [a retired professor of physics] calls his flash of insight a "tremendous glimpse of the obvious" - namely that opticians weren't necessary to provide glasses

Speaking of not needing opticians and making glasses more affordable, a year ago I discovered by accident something extremely useful: Wearing one contact lens is better than wearing two.

Wearing just one contact lens, I get good distance vision from the lensed eye and good close-up vision from the unlensed eye. Wearing two contact lenses, I have poor close-up vision. Another benefit of one rather than two contact lenses is that one eye is contact-lens-free for a long time. And I go through contact lenses half as fast. I wear lenses that last one month so I switch monthly which eye has the lens.

No optician told me this. No optician has even figured this out, as far as I know.

1. <http://www.guardian.co.uk/society/2008/dec/22/diy-adjustable-glasses-josh-silver>

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NE1 (2008-12-23 16:53:03)

Opticians used to deliberately give children "weak" prescriptions, to encourage the eye to self-correct. Until the research showed that any blurry image on the retina spurred growth (worsening the outcome continuously). So, not a great idea for everyone.

Nathan Myers (2008-12-23 17:58:54)

I've worn the same contact lenses for three years. The previous pair lasted ten years. (Hard lenses; the "gas permeable" technology has been perfected.) It's obvious why lens manufacturers promote disposable lenses, but it should be just as obvious why we're better off resisting them, even if you neglect (appalling) infection rates. My last optician, at a mall chain store, did suggest using two different strengths of lens, as an alternative to lenses and also reading glasses. She also offered two weak lenses, tuned for reading, along with driving glasses. What I'm using is two strong lenses along with reading glasses.

I find myself wearing the glasses most of the day. The advantage of reading glasses is that they're cheap. I go through two pair a year. Of course they're all made in China.

Peter (2008-12-25 18:54:06)

My optometrist knows about using only one contact lens, or different prescriptions for each, instead of using reading glasses.

### **100 Paper NY Times = 1 Heavy Textbook (2008-12-23 05:58)**

Alana Taylor, a journalism student at NYU, blogged about one of her classes:

Quigley [the teacher] tells us we have to remember to bring in the hard copy of the New York Times every week. I take a deep sigh. Every single journalism class at NYU has required me to bring the bulky newspaper. I don't understand why they don't let us access the online version, get our current events news from other outlets, or even use our NYT imes app on the iPhone. Bringing the New York Times pains me because I refuse to believe that it's the only source for credible news or Pulitzer Prize-winning journalism and it's a big waste of trees. . . I am taking the only old-but-new-but-still-old media class in the country.

Yeah. The same thing goes on all over campus where students are required to buy a heavy glossy textbook that costs about a semester of paper New York Times. As if the same info wasn't free on the Web.

Long ago, textbooks were a fantastic bargain because they cost so much less than private tutors. And private tutors disappeared.

After Taylor's unflattering piece, her thin-skinned professor, who had said "it's essential for journalists to blog", banned blogging about the class.

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The Drunken Priest (2008-12-23 08:09:36)

More on antiquated journalism here: <http://timidscholar.wordpress.com/2008/12/09/the-press-release-contagion/>

NE1 (2008-12-23 16:49:19)

There may have been one course I took in college which required me to take the textbook to class: Chinese, where repetition was a large goal of the meetings. Most value adding classes these days definitely shouldn't require the physical presence of textbooks, but the collection of a coherent pedagogy at home can be more useful than a thousand wiki pages from a thousand authors. I can already get most of my textbooks electronically, but they really just aren't the same. With a book, for example, you can flip through at the correct prior-knowledge-adjusted rate until you find the page you know is there. It's not so easy currently with ebooks.

seth (2008-12-23 19:56:51)

NE1, yeah, the web is incoherent. But I agree with Taylor, any journalist should be able to find news on the web, no need to have the NY Times figure it out for you. Isn't journalism about news gathering? That's why this example is so telling. Likewise for many subjects. For example, isn't science about gathering info?

Andrew (2008-12-26 16:04:33)

I don't think you should be so down on textbooks. I like some textbooks a lot—not just my own, also other books such as Lohr's survey sampling book. Googling just doesn't give you the clear info you can get from a coherent book.

seth (2008-12-26 21:33:26)

Andrew, I like some textbooks a lot, too – for example, Calculus by Ralph Palmer Agnew. Feynman's Lectures on Physics were interesting (if problematic for teaching problem solving). But the textbooks I like are a tiny fraction of all textbooks. I think the replacement for heavy textbooks is careful selection of more focussed material. That's what I did when I taught intro psych. I didn't use a heavy textbook, I used a bunch of smaller books, such as Obedience by Milgram.

## **A Second Opinion: You've Been Poisoned by Your Doctor (2008-12-24 01:04)**

In a [1]wonderful profile of master diagnostician Dr. Thomas Bolte, this especially pleased me:

Many of the patients Bolte sees are victims of iatrogenic, or doctor-caused, illness. Simply put, they have been misdiagnosed, overmedicated to the point of sickness, or given treatment inappropriate to their conditions. On occasion, this has led to shouting matches with more conventional docs, like the dermatologist colleague who burst into Bolte's office one day and harangued him "in front of another patient" for telling the mom of an acne-ridden teen to stop feeding her child so much junk food. There's no evidence that diet has anything to do with acne, the dermatologist shouted. Bolte begged to differ and cited the literature. "The pharmaceutical industry has trained even doctors to believe that there's a pharmaceutical answer to everything," he says, shrugging.

A large fraction of Bolte's patients have been poisoned. They get better when the poison is stopped. The mother of a friend of mine was near death – so near that her children decided to put her in a hospice. By mistake her six or seven medicines were stopped. And she recovered! Her medicines were what had been killing her.

The technical term for such horrors is [2]drug interaction.

Thanks to Dave Lull.

1. <http://discovermagazine.com/2007/medical-mysteries/the-real-dr-house/>

2. <http://blogs.wsj.com/health/2008/12/24/millions-of-older-americans-at-risk-from-drug-interactions/>

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## **Charles Nemeroff Under Scrutiny (2008-12-24 13:41)**

For most of its existence, there was no letters section in The New Yorker. A big mistake, which Spy pointed out and made fun of by running [1]Letters to the Editor of The New Yorker. The current version of The New Yorker has letters, of course, but no comments on the web. Another big mistake.

Because those comments can be incredibly good. In its Health Blog, the Wall Street Journal website recently posted [2]news about Charles Nemeroff, the Emory University psychiatry professor who failed to disclose about a million

dollars from drug companies. The news itself wasn't anything special but the comments told me important stuff I hadn't known:

- What his defenders say. (Not easily summarized.)
- The nature and quality of his research. "Regarding Dr. Nemeroff's contributions to science, although he has published many papers, a large proportion have dealt with the hypothesis that the adrenal hormone cortisol plays a major role in the etiology of depression. This hypothesis has its proponents, but has not gained widespread support from experimental or clinical data. Drugs designed to inhibit cortisol have been disappointing as treatments for depression. Hence, regardless of any ethical issues surrounding his career, his publications have been numerous, but with low impact on advancing science and on actual clinical outcomes. Actually, it's a sad commentary on how really difficult it is to understand the biology of mental illness that individuals such as Dr. Nemeroff who conduct rather mediocre scientific work are considered major contributors to the field." You can read a thousand outraged editorials and blog posts about Nemeroff and not find something this revealing. Without anonymity, it is very hard to say something like this.
- Complete refutation of one of Emory University's comments. "Emory said its review supports Nemeroff's contention his lectures weren't product specific. WHAT? I worked in pharma sales years ago specifically selling SSRIs. Nemeroff was WELL known for SPECIFICALLY selling Paxil in his presentations. He was GSK's Paxil hit man." So much for Emory's credibility.
- A surprising suggestion. "Disclosure alone is not going to do that. These are amounts of money that even if Nemeroff had properly disclosed would be unethical - it can't be right that a Prof is paid 300 K a year for a full time job and get 500 K in addition from drug companies - even IF it was disclosed. Patients will do well in asking their physician to post or tell them about such additional moneys - and should vote with their feet since there are many honest people, though less powerful, in the field as well."
- A comment on the real cost of people like Nemeroff. "Anon asks, 'Who among the bloggers is familiar with his work, conversant with his research, actually read his papers?' I have, and I don't trust much about what he says in any of his pharma-related articles. Indeed, I have challenged his findings in letters to the editor. The saddest part of this entire scenario (Nemeroff and others) is the wreckage they have strewn throughout our scientific literature in the past 10-15 years."

Supporting what I said about letters to the editor. The truth about Nemeroff's research (and by extension a vast swath of psychiatric research) was in the letters to the editor. But a letter to the editor is just one person – and usually these letters can't be anonymous. This discussion is many people, it's a discussion, it's anonymous, and it's easily available. The emotion expressed – because people can comment quickly and informally – makes the whole thing easy to read.

This is a wonderful age we are living in, that so much nuanced and well-informed comment is available. Never before, not even close. Merry Christmas!

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1. <http://sethroberts.net/spy/lettertotheditormay89.pdf>

2. <http://blogs.wsj.com/health/2008/12/23/under-grassleys-glare-emorys-nemeroff-gives-up-psychiatry-chair/>

MT (2008-12-24 13:54:58)

Thanks for the posts on this topic Seth – it's a really important story and these details are really valuable.

### **Another Link Between Better Sleep and Better Health (2008-12-24 21:02)**

Much of my self-experimentation has been about improving my sleep – in particular, not waking up too early. [1]I found that avoiding breakfast and standing a lot made a big difference. Currently I am studying the effect of stressing the leg muscles in other ways and will soon have more to say about this.

Now comes [2]more evidence this matters: People who slept too little had a higher risk of coronary artery calcification.

[3]JAMA abstract.

1. <http://repositories.cdlib.org/postprints/117/>
2. [http://www.nytimes.com/2008/12/24/health/research/24sleep.html?\\_r=1](http://www.nytimes.com/2008/12/24/health/research/24sleep.html?_r=1)
3. <http://jama.ama-assn.org/cgi/content/abstract/300/24/2859?ct>

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### **The Benefits of Standing: The Clear Vial on the Right (2008-12-25 18:16)**

[1]This article says that a fat-digesting enzyme called lipase becomes inactive while sitting. The evidence, seen in the accompanying video, is extraordinary: a cloudy vial of blood (taken after a sitting meal) versus a much clearer vial of blood (taken from the same person after a standing meal.)

I found that a great increase in standing, lasting years, had no effect on my weight but [2]I slept much better. I ate standing up much more often.

1. [http://www.sciencedaily.com/videos/2008/0610-stand\\_up\\_for\\_your\\_health.htm](http://www.sciencedaily.com/videos/2008/0610-stand_up_for_your_health.htm)
2. <http://repositories.cdlib.org/postprints/117/>

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Drew (2008-12-25 20:57:09)

Seth, your theories are fascinating- I am now trying out the Shangri-la diet (found out via Freakonomics). If I can prove to myself that the diet works then I will eagerly move on to your other ideas (Standing, Faces early in the morning, etc). Really cool, really original & bold stuff...keep up the good work. Drew, Chapel Hill, NC

Justin (2008-12-26 21:15:01)

Seth, thanks for linking to this article. I wonder are there any cultures that typically eat standing up? I would like to see a study on this.

Drew (2008-12-27 21:58:47)

Seth, I decided to give one legged standing a try today because I would very much like to improve my own sleep patterns- particularly getting deep sleep and feeling well rested the next morning. I would rank my quality of sleep at about a 70 at best on the scale of 0-100 even though I exercise 6 days a week and do meditation & yoga intermittently. There is usually a residual, lingering tiredness throughout the day. I have been trying to achieve better sleep in the last few months by weaning myself off caffeine. (Apparently caffeine prohibits you from reaching S4 sleep levels among other things) I have noticed a definite improvement in the quality of my sleep whenever I cut back (but not yet eliminating) my daily caffeine intake. If I increase coffee dosage from 12 oz to 16 oz or 24 oz my sleep will suffer no matter what time of day I drink it...I've never seen you mention caffeine intake in any of your posts- do you consume caffeine daily 'like approximately 90 % of Americans'?

seth (2008-12-29 05:32:06)

Yes, I drink modest amounts of green tea and eat small amounts of chocolate. Cutting out all caffeine – from what is a low level to begin with – made no noticeable difference in my sleep.

My teas » Blog Archive » Rooibos (2008-12-29 06:48:36)

[...] Seth's blog » Blog Archive » The Benefits of Standing: The Clear ... [...]

### **A Chinese Dinner Party (2008-12-26 23:26)**

Last week I went to a dinner party at a restaurant held by a non-Tsinghua professor. It was nice of him to invite me. I'd been to two similar dinner parties before and this one was so much more pleasant because the grad student sitting next to me translated what everyone was saying. Which was stuff about cigarettes, Beijing is now more expensive than Hong Kong, rumors of ranking battles, buying a house, driving drunk (you are amazed how you park and drive while drunk), for example.

Do I have delicate Western sensibilities? Everyone was served an extremely strong drink called bai jio, which is about 50 % alcohol. Not everyone had to drink it, except the three graduate students. Being the youngest, each of them had to go around the table toasting each of the rest of the guests. After each toast they had to do "bottoms up" – drink the whole tablespoon-sized glass. That's 11 bottoms-ups (or 9 since your fellow sufferers would allow you to cheat)! I couldn't toss down one glass of the stuff, and I'm a fan of soju (20 % alcohol). It is horribly strong. I drank one glass the whole evening and it was too much. The graduate students jockeyed for who would go last – they hated it. Why does this happen? I asked my translator. "We're entertainment," she said.

I suggested she replace the bai jio, which is colorless, with water. Amazingly this was a new idea. She did it (furtively) and the deception worked. Still, she was very happy when the dinner ended before she had finished all her toasts. Did you tell the other students? I asked. Not till later, she said. Too important. Next time, she said, she'd bring a water bottle and a can of Coke to allow for drinks with other colors.

The bai jio tradition gives a sad twist to a letter on Chinese human rights just published in [1]The New York Review of Books. The letter is signed by "hundreds of Chinese intellectuals" – many of them professors, no doubt. It contains the following:

We see the powerless in our society – the vulnerable groups, the people who have been suppressed and monitored, who have suffered cruelty and even torture, and who have had no adequate avenues for their protests, no courts to hear their pleas – becoming more militant . . .

Or more devious.



1. <http://www.nybooks.com/articles/22210>

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### **Chinese Takeout Beijing Style (2008-12-27 06:20)**

In the elevator in my apartment building I realized the student holding hot food had just had it delivered. She gave me the menu. The restaurant, I learned, is called Kyoto. It serves mainly Korean and Japanese food. Free delivery. The surprising part: There's no address. And it never closes, even on holidays.

An example of the general truth that there are many more kinds of restaurants (food-serving businesses) in Beijing than in America. Today I bought sugar-coated banana on a stick from a street vendor.

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James (2008-12-27 06:31:43)

So the question is why? Overly harsh food standards laws?

seth (2008-12-27 07:18:50)

Not food standards law. There is much more diversity of many non-food products, too.

Tom in TX (2008-12-27 15:01:55)

Maybe because there are many more people in Beijing. Same reason you find more kinds of restaurants in NY city than in Podunk, TX. 8-)

seth (2008-12-27 15:56:58)

Yeah, density of people is surely part of the answer. But I think New York and lots of other cities have lots of areas just as dense as my area of Beijing yet I have never come across this form of food business. In Berkeley there is a new sushi place that is delivery only but they have a webpage, an address, and an obvious physical presence.

Patrik (2008-12-28 00:51:17)

Seth, You might enjoy this article on business and bureaucracy in China: <http://online.wsj.com/article/SB12296006-1127017921.html>

### **Voodoo Correlations in Social Neuroscience (2008-12-28 07:39)**

Few scientific papers arouse emotion in reviewers and editors but [1]this one – by my friend and [2]collaborator Hal Pashler and his colleagues – must have because they allowed the use of voodoo in the title instead of spurious. Here is part of the abstract:

The newly emerging field of Social Neuroscience has drawn much attention in recent years, with high-profile studies frequently reporting extremely high (e.g., >.8) correlations between behavioral and self-report measures of personality or emotion and measures of brain activation obtained using fMRI. We show that these correlations often exceed what is statistically possible . . . Social-neuroscience method sections rarely contain sufficient detail to ascertain how these correlations were obtained. We surveyed authors of 54 articles that reported findings of this kind to determine the details of their analyses. More than half acknowledged using a strategy that computes separate correlations for individual voxels, and reports means of just the subset of voxels exceeding chosen thresholds. We show how this non-independent analysis grossly inflates correlations, while yielding reassuring-looking scattergrams. This analysis technique was used to obtain the vast majority of the implausibly high correlations in our survey sample.

The papers shown to be misleading appeared in such journals as Science and Nature.

1. [http://www.pashler.com/Articles/Vul\\_etal\\_2008inpress.pdf](http://www.pashler.com/Articles/Vul_etal_2008inpress.pdf)

2. <http://repositories.cdlib.org/postprints/763/>

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Justin (2008-12-28 08:31:53)

Another case of don't believe everything you read, even (especially) if it comes from a well-respected source. I wonder if anyone can give an example of a popular paper that has been found to have these spurious correlations?

Andrew (2008-12-28 12:28:21)

Science and Nature have a pretty random reviewing process. It's no surprise that bad stuff gets in. The authors of the cited article are doing a useful service by pointing this out. On an unrelated note, yes, I think it's tacky to use "voodoo" in the title of the article. I mean, why not just go all out and have a title such as "Voodoo correlations are a gyp"?

Kristie (2008-12-30 14:04:01)

Andrew: I totally agree with your evaluation of Science and Nature - especially when it comes to psychological research. I like to refer to them both as "The Journal of Irreproducible Results". In their quest for sexy science, they often publish psych research that is totally outrageous, and turns out to be totally unfounded, or irreproducible. For example, light behind the knees was shown to influence circadian rhythm, but with more stringent tests, there was actually no effect. [http://www.genomenewsnetwork.org/articles/08\\_02/bright\\_knees.shtml](http://www.genomenewsnetwork.org/articles/08_02/bright_knees.shtml) Because of the seriously questionable results I've read in these Journals, I no longer hold them in the high regard that many other scientists do. I've also vowed never to send a paper there as a first author. As for the voodoo reference, it's a colloquialism that's well-established. <http://en.wikipedia.org/wiki/Voodoo> [http://en.wikipedia.org/wiki/Voodoo\\_science](http://en.wikipedia.org/wiki/Voodoo_science) I think the idea that voodoo is referring to things that seem to appear magical - which is a ridiculous notion. Andrew, do you believe in magic? If you do, then I think you can be mocked, too. "Gyp" however, is a derogatory term for an ethnic group, and as such is a racial slur. I think the comparison is totally unfair.

Fritz (2009-01-10 01:58:30)

I loved the paper and the "voodoo" in its title. The authors did a great job in stimulating a public debate on the issue, which is sorely needed given the sensationalism with which some of the questionable findings were publicized. I wonder if Science is willing to publish the rest of the data. Were I a journalist, I would ask them at one of their next press conferences.

Geoff (2009-01-11 12:57:48)

I love this quote by James "Another case of don't believe everything you read, even (especially) if it comes from a well-respected source." when he is doing exactly that when reading an abstract from one paper. Ridiculous!

Christian Keyzers (2009-01-13 00:46:50)

See [www.bcn-nic.nl/replyVul.pdf](http://www.bcn-nic.nl/replyVul.pdf) for a reply from some of the authors

Ed Vul (2009-01-15 08:32:57)

For those interested, you can find our response to this reply here: <http://edvul.com/voodooorebuttal.php> Cheers, Ed.

Matthew Lieberman (2009-01-27 12:51:39)

Our invited reply [1][http://www.scn.ucla.edu/pdf/LiebermanBerkmanWager\(invitedreply\).pdf](http://www.scn.ucla.edu/pdf/LiebermanBerkmanWager(invitedreply).pdf)

1. <http://www.blog.sethroberts.net/>

Bill (2009-01-28 08:18:53)

I commend Vul and colleagues for raising awareness of statistical issues in fMRI analysis. However, as several strong rebuttals have begun to emerge and the merits of individual papers are being explored more closely, it is rapidly becoming clear that the Vul critique may have incorrectly targeted a good number of papers that conducted legitimate and valid analyses. The Vul paper seems to have totally ignored the a priori hypotheses and theoretical basis of the selected regions that drove the analysis of most of the papers they criticize. Further, as was well articulated in the recent response by Lieberman and colleagues ([http://www.scn.ucla.edu/pdf/LiebermanBerkmanWager\(invitedreply\).pdf](http://www.scn.ucla.edu/pdf/LiebermanBerkmanWager(invitedreply).pdf)), the Vul critique seems to have misconstrued the way most of the analyses were actually conducted. In other words, they appear to be accusing the authors of doing something they actually did not do. This is unfortunate.

seth (2009-01-28 10:05:54)

Bill, I found the Lieberman et al. reply too vague to be persuasive. It claims that some papers were falsely accused (they are accused of doing X but they did not do X) but no specific examples are given. Care to give an example of a falsely-accused paper?

Matt (2009-01-28 19:11:56)

If you read p. 3 in the paragraph that the footnote comes from, you'll see how everyone contacted runs their regressions. "When a whole-brain regression analysis is conducted, the goal is typically to identify regions of the brain whose activity shows a reliable non-zero correlation with another individual difference variable. A likelihood estimate that this correlation was produced in the absence of any true effect (e.g. a p-value) is computed for every voxel in the brain without any selection of voxels to test. This is the only inferential step in the procedure, and standard corrections for multiple tests are implemented to avoid false positive results. Subsequently, descriptive statistics (e.g. effect sizes) are reported on a subset of voxels or clusters. The descriptive statistics reported are not an additional inferential step, so there is no 'second analysis.' For any particular sample size, the t and r-values are merely re-descriptions of the p-values obtained in the one inferential step and provide no additional inferential information of their own." Each of the authors indicated they did this rather than the two inferential steps that Vul et al. describe. Vul et al. were under the mistaken impression that people were using the personality variable to choose voxels to test and then subsequently running a new inferential test on those selected voxels. Not true. We run the test on all voxels and then report those that are reliable along with descriptive statistics. Everyone knows that all the other brain regions were also tested but did not pass the threshold for significance. How could they have gotten this so wrong in their paper? Vul et al. asked multiple choice questions that did not allow researchers to explain what they were doing and because Vul et al. never told researchers why they were asking the questions, there was no way for the researchers to guess Vul et al.'s true purpose and realize that Vul et al.'s questions could not provide Vul with the answers they needed. They also never followed up with any of the authors to ask if they were properly characterizing the conducted research.

seth (2009-01-28 21:03:18)

Matt, you write "there is no 'second' analysis". I don't follow. You use the word "subset". It sounds like one analysis is done on all the data and then a second analysis is done on a "subset" of the data. Why this second analysis somehow doesn't count as "second" isn't clear. Sure, the first and second analyses aren't the same but that isn't the point. The point is that the selection of the subset increases the size of the reported correlation. Since you don't seem to dispute that I am not entirely clear what your point is. Vul et al go on and on about inflated – spuriously large, impossibly large – correlations. Not two inferential tests. And the procedure you have described does exactly that: inflates correlations. "standard corrections for multiple tests are implemented" – you make it sound so easy. Yet nobody does multiple corrections so why you write "corrections" instead of "correction" isn't clear. Which "standard correction" did you use?

Matt (2009-01-28 21:53:44)

A single test is run on each voxel in the brain (not on a subset). Let's say that's 40,000 tests. Each of those tests are computed independently. We get a p-value for each. That is the only inferential step that occurs. Two things then follow this. First, we have to report something in the journal manuscript itself. Convention for all of cognitive neuroscience (as well as most behavioral studies as well) is that tests that meet a significance threshold are reported and all other tests are assumed to have been computed but had p-values that did not meet the significance threshold (i.e. readers then know which clusters have p-values below the threshold and which have p-values above the threshold). For the tests that are reported, because their p-values were below some conventional level, you then have to decide what to report to describe the data. You might report means and standard deviations, you might report t or Z statistics, or you might report r or d. In each case, these are descriptive statistics rather than an additional inferential biased because it uses the same criteria again. Let's say we have 4 classrooms and you run t-tests comparing the heights of the students in each two classroom combination. Imagine that you find that classrooms 2 & 4 show a reliable difference from each other on height. You might then say "Of the combinations tested there was a significant difference between classrooms 2 & 4" and readers would assume there were no other significant differences. There's no selection bias here - just reporting of what's significant. Now are you allowed to tell readers what the average heights are in classrooms 2 & 4? Because Vul et al., say you can't, but of course you can and should. If you don't believe me, read Vul's other chapter with Kanwisher where he says that if you run a whole-brain contrast comparing responses to emotional faces to neutral faces, that you can't graph the results from significant clusters. Incidentally "corrections" was plural because there are multiple techniques that can be used for correcting. In any particular case, a research group does a single form of correction.

seth (2009-01-28 22:22:33)

Gee, Matt, you're still not denying that post-hoc selection of a subset inflates the correlations. Which – correct me if I'm wrong – was the main point of Vul et al. Along with the point that this inflation was not made clear in the published papers. I'm still curious: What correction for multiple tests did your research group use?

Matt (2009-01-28 22:49:43)

Actually, what I am denying is that there was any post-hoc selection of a subset of the data. Running multiple comparisons leads to inflated effect sizes but that has nothing to do with "post-hoc selection". And actually, the main point of their article was not that there is inflation but rather that this inflation is so great that the results should be considered worthless and likely spurious and also that the methods used to obtain the results are invalid and therefore the results themselves are invalid. These tests are run in order to identify regions where there are reliably non-zero correlations and they are a perfectly valid way of doing so. To report descriptive statistics is entirely valid as well. Since we seem to be talking past each other, let's consider one last example. Let's say I run my 40,000 independent tests on my 40,000 voxels. You would admit at this point there has been no "selection bias" inflating these tests, correct? You might have some large effects due to sampling fluctuations, but our Figure 1 shows that with normal fMRI sample sizes and appropriate correction for multiple comparisons, this is relatively rare (Vul's simulation was done assuming 10 subjects which is not representative of fMRI studies). Let's further assume that I submit my paper to the journal with a 200 page table that lists the p-value (along with descriptive statistics) for every voxel in the brain. Still no selection bias inflating these tests, correct? If you sorted this table by p-value we'd still be ok, right? Now the editor comes along and says "we can't have a 200 page table" so cut off everything with a p-value worse than \_\_\_ and add a note to indicate that all other voxels had p-values above that threshold. The voxels that remained would be no more inflated after this editorial decision than before -

its just a matter of convention for displaying data. This is what we all do and there is no "non-independence error" as Vul claims.

seth (2009-01-29 01:47:24)

Matt, could you post again the last part of your comment? It was cut off. What you call "selection bias" – computing a correlation using only voxels selected by looking at the data and thereby inflating the correlation – doesn't inflate "tests" it inflates correlations. Nor are "voxels" inflated (by "voxel" I guess you mean the correlation computed for just one voxel), it is the correlation computed over many voxels that is inflated. That's when you got into trouble – by computing a number that might be grossly inflated. Let's say I select a subset of free throw attempts where Michael Jordan missed. Then I compute his free throw percentage over only those free throws. It is 0 %. To report that 0 % as if it means something is . . . well, call it what you want. As far as I can tell, that is basically what you did.

john (2009-01-29 05:40:50)

Seth, "Let's say I select a subset of free throws where Michael Jordan missed. Then I compute his free throw percentage over only those free throws. It is 0 %. To report that 0 % as if it means something is . . . well, call it what you want. As far as I can tell, that is basically what you did." I may have missed something here, but isn't that what Matt is claiming that Vul has done? Isn't one of the strong arguments in the Lieberman paper that Ed Vul simply hand picked results from papers that would show the effect he wanted to show and ignored the others that didn't? In fact when Matt puts all the data in to the analysis there is no bias in the correlation coefficient at all.

Matt (2009-01-29 08:04:59)

Sorry for the typos (yes its the correlations that are inflated, but that's not what the test is testing - its testing for reliable non-zero relationships). Your Jordan analogy doesn't quite apply. That would assume that we are making claims about the average correlation in the brain but only reporting on a subset of voxels (and pretending they are all the voxels). We aren't making claims about how the brain as a whole or on average relates to personality - rather we are looking for which regions do correlate reliably and then providing descriptive statistics for those that do. To get the Jordan analogy right, the question would be "Are there certain days of the week when Jordan shoots a higher percentage than others?". We'd have him shoot 100 free throws each day of the week for say 10 weeks. So we'd have 1000 data points for each of the seven days of the week. We wouldn't care at all what his average across all days was, just how each day compares to each other. If his averages were 30 % on mondays, 90 % on fridays and 60 % on all other days, we would say something interesting is happening on mondays and fridays, report that test and the descriptives that go along with it (e.g. 90 %). Now if we reported that Jordan shoots 90 % on average because we claimed that fridays were the only days were looking at, we'd be in trouble, but nobody does that. Our question isn't the average, but rather, when is there something different from average going on.

Matt (2009-01-29 09:03:42)

So, we combine a significance threshold (i.e. p-values less than .005 or .001) with an extent threshold (i.e. there have to be at least 10 contiguous voxels that all have p-values less than the significance threshold). This is a standard procedure used throughout cognitive neuroscience for the past 15 years.

seth (2009-01-29 09:56:06)

Thanks, Matt.

'Voodoo Correlations in Social Neuroscience' « The Amazing World of Psychiatry: A Psychiatry Blog (2009-01-30 18:08:54)  
[...] Seths Blog article [...]

Justin (2010-01-01 05:14:28)

Hi Seth, Any chance of some constructive feedback on this video on the above study?  
[youtube=<http://www.youtube.com/watch?v=nMZvpVwfObE>] Regards Justin

seth (2010-01-01 07:13:34)

Justin, because I'm in China I can't get YouTube.

Matthew Lieberman (2010-03-24 13:16:13)

For anyone interested, there was a public debate on Voodoo Correlations last fall at the Society of Experimental Social Psychologists between Piotr Winkielman (one of the authors on the Voodoo paper) and myself (Matt Lieberman). The debate has been posted online. <http://www.scn.ucla.edu/Voodoo&Typell.html>

## **The Museum of Tap Water (part 2) (2008-12-28 14:55)**

As I [1]noted earlier, Beijing has a museum devoted to tap water – apparently the only one in the world. Another translation of its name is the Beijing Water Supply Museum. It was incredibly hard to find. None of a dozen people in the neighborhood knew where it was. It is on the grounds of the government company that supplies tap water. While I was there, there was only one other visitor, an American. Like me, he'd noticed it on Google Maps.

I loved it. One of the exhibits was called "10-Day Imperial Approval". Permission to start the water company (around 1910) was requested from the Emperor. Approval came in a lightning-fast ten days from the Emperor's mother on yellow paper. Only the Emperor, his father, and his mother were allowed to use yellow in decorative ways. The penalty for breaking this rule was death. In the early days of the water company, slips of paper gave you permission to collect your water in a bucket. A photo of an early president of the company (thin, young, shaved head, high-collar traditional shirt) made him look more like a dashing criminal than a captain of industry.

For anti-terrorist reasons, there was nothing about how the water was processed.

Museums are usually devoted to the rare, beautiful, and intricate, which why a museum of tap water sounds like a joke. When Paul Goldberger, the New Yorker's architecture critic, devotes [2]his best-buildings-of-the-year list to nine show-off buildings and an art exhibit – none of them advancing the art of making the houses and workplaces where we spend most of our lives – I am glad to see agreement that something is missing.

The other visitor was in Beijing to visit his sister, a high school exchange student, living with a family that speaks no English, who had checked the wrong box on her visa application and was unable to come home for Christmas. She was having a great time and now wanted to apply to a college with a [3]Flagship Program – you go to the American school for two years and then a Chinese school for the last two years. What a sea change! Americans treat another country as equal. Americans grasp that someone else might have something to teach us. At Berkeley a few years ago, the psychology department had a day-long get-together to discuss various issues. About a meeting about one of them, I suggested that we look at how other departments had handled it; maybe we could learn from them. Bad idea, I was told, they're supposed to copy us.

1. <http://www.blog.sethroberts.net/2008/12/15/museum-of-tap-water/>

2. <http://www.newyorker.com/online/blogs/tny/2008/12/paul-goldberger-architectures.html>

3. <http://chineseflagship.osu.edu/>

Stephen M (Ethesis) (2010-02-08 07:09:09)

Made me smile and sigh to read *maybe we could learn* and the response. A Dilbert moment for certain.

### **Corruption of Doctors by Drug Companies (2008-12-29 06:07)**

Several books about this have appeared recently and are reviewed by Marcia Angell [1]here. It's a good review, especially a good summary of the books, but I was really surprised by this:

Members of medical school faculties who conduct clinical trials should not accept any payments from drug companies except research support, and that support should have no strings attached, including control by drug companies over the design, interpretation, and publication of research results.

She expects a researcher who depends on drug companies for research support to be honest? Why? If you don't get favorable results your grant won't be renewed. Under this system it will be survival of the most corrupt. A reformer proposed this.

I think it's a lot like too much humanitarian aid. Supply free milk to a needy area for too long and you wipe out the local dairy industry. Judging from this stunning proposal, the drug companies have wiped out whole medical schools. The doctors who work in them are no longer capable of doing independent research. This is worse than corruption, it's enfeeblement.

1. <http://www.nybooks.com/articles/22237>

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Pietr Hitzig (2008-12-29 09:09:00)

Furthermore, the pharmaceutical-medical school conglomeration suppresses new ideas that utilize treatment that does not enrich the drug companies. A decade ago, I found that the use of natural amino acid precursors could patially remit a fatal neurodegenerative condition. That I was having favorable results permeated the patients being studied at my local prestigious medical school. The investigators were furious that their patients were taking my treatment. They were concerned that this intervention threatened the study, the health of their patients was incidental. All attempts to reason with these professors were futile. They issued an ultimatum, "If you continue the precursor treatment we will cast you off, you will be dropped by our institution." Marcia Angell should call researchers by their proper name, "whores."

Andrew Gelman (2008-12-29 09:23:23)

Seth, In your quote, Angell writes "should." So it doesn't sound like she "expecftes a researcher . . . to be honest." She's just saying that's how it should be. On a slightly related note, I had a question years ago about something else that Angell wrote; see here: <http://www.stat.columbia.edu/~cook/movabletype/archives/2006/06/costs-and-benefits.html> I was not able to contact her to get her response.

seth (2008-12-29 13:42:22)

Pietr, this is an aspect of clinical trials I didn't know about. Patients in clinical trials are not allowed to seek other treatments? What was the amino acid precursor? and what was the neurodegenerative condition? How did the professors doing the study convey their incredible request?

Jacob (2009-03-08 22:22:54)

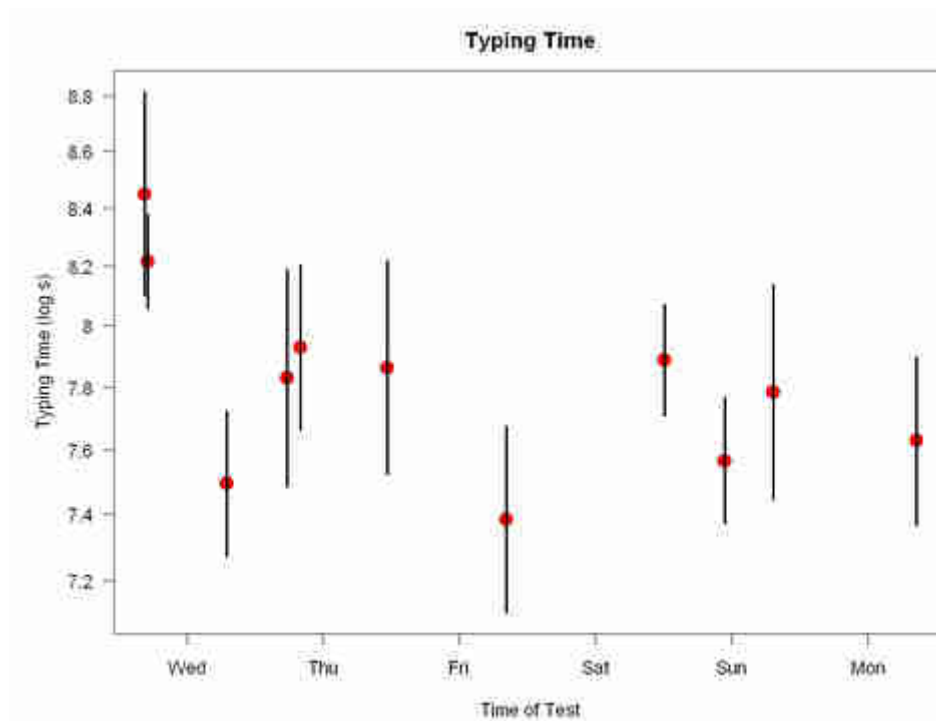
Pietr Hitzig, I read your posts and it makes me sick. You sit here and talk about what you did in the medical community when in reality all you did was kill people with your fen/phen protocol.

### A Self-Experimental Near-Miss (2008-12-29 22:55)

I am developing tests to measure how well my brain is working. Brief tests I can use daily. My experiences with flaxseed oil make me suspect that sometimes our brains work better and/or worse than usual for many hours or days at a time and this goes unnoticed. If these instances of better or worse function could be detected, maybe we could figure out their causes – and thereby improve how well our brains work by getting less bad stuff and more good stuff. In the case of flaxseed oil, I noticed that one morning my balance was much better than usual. I noticed this only because I was doing something unusual: putting on my shoes standing on one foot. I verified that observation with a better test of balance and later found that flaxseed oil improved my performance on several mental tests, such as speeded arithmetic.

One test I am using is a typing test: On each trial I type a random sequence of six letters four times. For example, if the sequence is "rksoen" I would type rksoenrksoenrksoenrksoen". At the moment the measure of performance is how fast I type the 24-letter sequence. Each session consists of ten trials.

Here are the results so far:



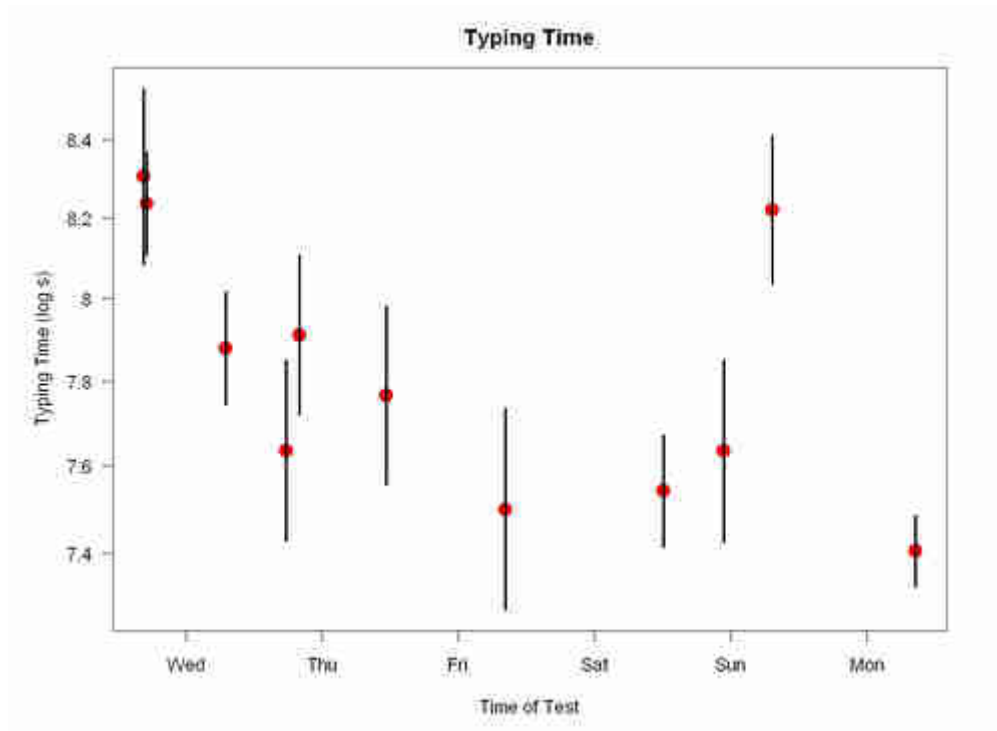
Each point is a mean over the ten trials; the error bars show standard errors. I was glad to see there was little sign of learning after the first few sessions. Having to correct for learning would make comparison of different days more difficult.

Because I am collecting a lot of data, I could look at these data more carefully. It took me a little while to do an

1516



analysis where I corrected for the difficulty of each string: Some will be easier to type than others. My first attempt at correction involved adding a factor for each letter: does the string contain an "a" (factor 1)? Does the string contain a "b" (factor 2)? And so on. This correction made a big difference: The residual mean square was almost cut in half (= sensitivity was doubled). After correcting for this, I got new estimates and standard errors for each test session:



Uh-oh! The new analysis revealed there had been something unusual about the second-to-last test session – my typing had been distinctly slower than usual. Something I ate? Unfortunately, by the time I did this analysis I could no longer remember what might have been different.

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Ben Hyde (2008-12-30 10:18:10)

Other news on the difficulties of self experimentation: <http://xkcd.com/523/>

Ascription is an Anathema to any Enthusiasm › Never Learn (2008-12-30 10:29:58)

[...] Here's an interesting cognitive science puzzle. [...]

Justin (2008-12-30 21:01:07)

Sounds like a fairly complicated measure with the corrections involved. I have heard of a guy doing simple arithmetic selected at random to test his cognitive abilities. I just think it's so hard to measure because (1) you will get better at anything you keep doing even if it is typing random letters, and (2) trying to make tests unique inevitably means some tests will be more difficult than others. I don't know of any solution to this problem; it seems that until we can all have our own personal brain imaging equipment we will simply have to accept imperfect measures.

seth (2008-12-30 22:18:06)

Ben, thanks for the link. I hope to use it in my talks. Justin, my other test is a simple arithmetic test. Corrections make a big difference there, too. As for brain imaging, you might want to see my recent post on voodoo correlations.

Zack (2009-01-02 18:48:51)

I do sudoku puzzles with a special rule to make them harder, and I do three in one sitting to correct for any given puzzle being too hard or easy. (Actually, the special rule that I use is two rules: I do all the 1s first, then all the 2s, and so on. Within 1 number, I progress from left to right, going down the page. So first, I fill in any blank 1 in the upper-left square. Then I fill in any blank 1 in the upper-center square. Third, I fill in any blank 1 in the upper right square, and so on, until the ones are complete. Then I do all the 2s. And so on.) Using a given publisher, and staying within a given difficulty rank (I only do "hard" ones), a 'set' of three is a good self-test for how sharp my mind is. I suspect that some outside experiment would verify this. After a period of (what I will call) "burn in", of probably the first few hundred puzzles I ever did, I have stopped learning anything. I am not improving as time goes by. So now, on a good day, I can sit down and do three puzzles (subject to my handicapping rule, above) in 20 minutes or so. If there is something wrong with my mind (distracted, anxious, hungover, tired, etc.), I will make mistakes or take forever, or sometimes be unable to complete one. Sometimes I'll be stumped by a puzzle, but also know that I'm tired, or "off"—and I'll look at the same puzzle a different day and find it easy.

Seth's blog » Blog Archive » Tracking How Well My Brain is Working (2009-01-05 02:55:06)  
[...] A Self-Experimental Near-Miss [...]

## The Missing Heritability of Height (2008-12-30 18:42)

In a special section of Nature on personal genomics, Brendan Maher [1]writes:

This year, three groups of researchers scoured the genomes of huge populations (the largest study looked at more than 30,000 people) for genetic variants associated with the height differences. More than 40 turned up.

But there was a problem: the variants had tiny effects. Altogether, they accounted for little more than 5 % of height's heritability — just 6 centimetres by the calculations above. Even though these genome-wide association studies (GWAS) turned up dozens of variants, they did "very little of the prediction that you [can] do just by asking people how tall their parents are", says Joel Hirschhorn at the Broad Institute in Cambridge, Massachusetts, who led one of the studies. . . .

There could be scarier and more intractable reasons for unaccounted-for heritability that are not even being discussed. "It's a possibility that there's something we just don't fundamentally understand," Kruglyak says. "That it's so different from what we're thinking about that we're not thinking about it yet."

Still the mystery continues to draw its sleuths, for Kruglyak as for many other basic-research scientists. "You have this clear, tangible phenomenon in which children resemble their parents," he says. "Despite what students get told in elementary-school science, we just don't know how that works."

I don't think it's so mysterious. My self-experimentation led me again and again to find unsuspected environmental causes for various problems. I believe the answer is this: The heritability estimates were overestimates. As one researcher put it, "Heritability estimates are basically what clusters in families, and environment clusters in families." Variations in environment make far more difference than variation in genes.

What the researchers "don't fundamentally understand," I believe, is their own tendency toward religious thinking

- the tendency, shared by all of us, to believe what we're told regardless of the (lack of) evidence for it. The notion that genes make a big difference in practice is one of those beliefs, repeated endlessly by genetics researchers (James Watson is fond of repeating it), that are supported by poor evidence at best. Obesity, it should be obvious, is an environmental disease if there ever was one. Yet Jeffrey Friedman, a researcher at Rockefeller University, is studying the [2]genetic basis of obesity.

Thanks to Dave Lull.

1. <http://www.nature.com/news/2008/081105/full/456018a.html>
2. <http://www.rockefeller.edu/labheads/friedman/research.htm>

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Oliver (2008-12-31 02:46:18)

This suddenly made me interested in how environmental factors affect height. Any links to further reading/studies on this topic? I'm a lot shorter than my two younger brothers, and I guess I'm curious as to why it turned out this way.

seth (2008-12-31 04:32:11)

this is a great article about how environment determines height: [http://www.newyorker.com/archive/2004/04/05/040405fa\\_fact](http://www.newyorker.com/archive/2004/04/05/040405fa_fact)

Oliver (2008-12-31 12:12:03)

Thanks!

drbganimalpharm.blogspot.com (2009-01-01 20:55:48)

Oliver, I've wondered the SAME thing since I'm the shortest among 4 siblings... It's the nutrition and Weston A Price (as well as the New Yorker article) distinguishes why. My parents were poor as my father was a surgery fellow and new to the U.S. when he arrived from Taiwan, shortly before my conception. I'm Asian but the 3rd and 4th siblings are 5'8" (and I'm only 5'4.5" and half-inches are emphasized \*hee\*). Grains diminish height - read some WAPF info. Something about the pro-inflammatory and pro-cortisol effects of grains and esp wheat create a metabolic dysregulation which degrades growth and height gains. We went wheat-free in our household in the last 6mos and our children have sprouted in height. -G

drbganimalpharm.blogspot.com (2009-01-01 20:56:14)

Sorry- I'm the oldest, first born of 4.

Patrik (2009-01-04 16:47:06)

*Obesity, it should be obvious, is an environmental disease if there ever was one. Yet Jeffrey Friedman, a researcher at Rockefeller University, is studying the genetic basis of obesity.* Bu-bu-but if obesity were an environmental disease, we couldn't absolve ourselves from personal responsibility. And I for one, won't stand for that! :) Good post.

## Beijing Shopping (photo mall) (2008-12-31 15:59)

To get a light meter (to measure the intensity of morning sunlight) I went to [1]Beijing Camera Equipment City ([2]official website). On the ground floor were 50-odd small shops. They sold the stuff in any camera store, except far more various: cameras, lenses, cases, tripods, flashes, and so on. Some specialized by brand (e.g., Canon), some by product (e.g., tripods). About 10 stores sold the light meter I wanted (Sekonic L-308S). One didn't have it in stock, but they could get it. How long would it take? Five minutes. That is, they would buy it from another vendor and resell it to me.

The sequence of prices (in yuan) I was quoted was 1450 ( \$212), 1300 (same vendor as 1450), 980, 950, 940, 930, 920 ( \$135). One vendor wouldn't sell it at 920, so perhaps that was a good price. Online I would have paid about \$170.

One store had a discontinued model. The meter in the box (Gossen) didn't match the box (Sekonic)! I would have gladly bought a Gossen but the manual in the box was for a Sekonic.

The second floor was . . . software. Fancy dresses (often wedding dresses), fancy dresses for children, costume jewelry, frames, colorful textiles, displays of the work of professional photographers. The smallest shop sold bags to carry home a fancy dress. All the photography-related stuff that ordinary photo shops don't carry.

1. <http://info.hktdc.com/imn/03110601/optical031.htm>

2. <http://www.bjphoto.com.cn/>

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Justin (2008-12-31 17:25:08)

Morning sunlight intensity...very interesting. Is this a new variable you are collecting? I would imagine that the more intense the sunlight, the easier it is to wake up and thus the better your day. Can't wait to hear how it correlates with your wakefulness, mental quickness, and mood.

## 4. 2009

### 4.1 January

#### The End of Newspapers As We Know Them (2009-01-01 19:29)

Michael Wolff, author of the excellent *Burn Rate*, [1]writes:

Throughout the Tribune worldâ€”the LA Times, the Chicago Tribune, the Hartford Courant, among othersâ€”everybody knows life as itâ€™s been has ended. . . . You have to understand that this is the most momentous, and transformative, time in the news businessâ€”as significant as this moment is to the automotive and financial industries. There will be, practically speaking, no newspaper industry after this is done. A nobody-gets-out-of-here-alive sort of thing.

A friend of mine who works for one of these newspapers said that the end has been coming for a long time. In the early 1990s, if I remember correctly, the audience started to shrink. At the time, and for a long time thereafter, this was ignored. Had the problem been recognized back then it might have been possible, given a lot of time to experiment, to find a solution, a way to survive much longer. But now it is too late.

1. <http://blog.newser.com/post/2008/12/09/THE-STORY-CANT-BE-TOLD.aspx>

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mike kenny (2009-01-02 16:27:00)

why the heck do we tend not to act on these things? i don't mean to judge finance and newspaper people. i tend to be a fan of capitalism and tend to think that the market is the best you're going to get in judgments, but it's weird to think people are looking at numbers and saying, 'wow, the numbers aren't good, but let's just ignore them and see what happens,' then things fall apart. maybe people have a habit of procrastinating, in the hopes some answer will emerge, and maybe this is a decent strategy often, since it seems like it comes so naturally.

seth (2009-01-02 19:00:17)

It was much much easier to ignore them than to do something. To do something that might have been useful would have involved starting whole new projects. Getting people to work on those projects - of questionable career relevance - would have been incredibly hard given their apparently flimsy motivation.

#### Assorted Links (2009-01-02 00:54)

1. [1]Self-experiment on short-term memory announcement
2. Why the Chinese government censors the Internet. [2]James Fallows was able to figure out why they blocked the NY Times website for a few days (an article about suppression of rebellion).

3. Nassim Taleb on [3]iatrogenesis. "They never consider that "nothing" may be better than the best model."
4. [4]The Lost Art of Walking by Geoff Nicholson.
5. [5]Best journalism of the year. More lists like this! One reason Spy was so good, I think, was that they covered stuff, especially New York publishing, that they knew about from personal experience. Like scientists writing about science.
6. [6]Six ballsiest scientific frauds.

Thanks to Dave Lull and Tyler Cowen.

1. <http://www.physicsforums.com/showthread.php?t=279337>
2. [http://jamesfallows.theatlantic.com/archives/2008/12/poll\\_is\\_closed\\_results\\_are\\_in.php](http://jamesfallows.theatlantic.com/archives/2008/12/poll_is_closed_results_are_in.php)
3. <http://www.fooledbyrandomness.com/notebook.htm>
4. <http://www.complete-review.com/reviews/nicholsg/lostart.htm>
5. <http://culture11.com/article/34083>
6. <http://www.scribd.com/doc/6966437/The-6-Ballsiest-Scientific-Frauds>

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Jarno Virtanen (2009-01-02 22:36:18)

I find the difficult thing about self-experimentation to be the problem of finding reliable tests of progress, especially in the case of mental performance. It's easy to measure something like weight or the quality of the sleep, but it's much more difficult to get a reliable measure of sustaining attention, for example. I'm not saying it should be easy and I guess reliable measurements of various aspects of mental performance would borderline making novel science. But I think many others like me are interested in doing self-experiments, but the difficulty is to find useful and reliable experiments.

seth (2009-01-03 04:15:16)

Jarno, I don't know what you mean by "reliable". There is error - variation, noise, whatever you want to call it - in everything. Whether the noise is small enough to detect interesting things is very hard to tell without actually trying it.

Jarno Virtanen (2009-01-08 22:34:27)

Hmh, maybe "reliable" was the wrong word. What I meant that it's difficult to come up with a metric for a complex behavior or problem in the first place. Coming up with a metric for something like sustaining attention or ability to direct attention seems somewhat difficult. Whatever simple metric one comes up with, there's always the doubt whether it actually measures the thing you're trying to affect with your experimentation. That said, I do understand that the value of self-experimentation comes from finding some effect, which sometimes isn't what you were looking for in the first place. (Or perhaps lack of effect sometimes.)

seth (2009-01-09 01:50:45)

Jarno, that sounds like me when I was a first-year graduate student. I'd think of some design, then think of the flaws in it. Then think of another design, think of the flaws in it. And on and on. That was naive. More reasonable was to do something and try to learn from it rather than try to predict the future without any data.

Jarno Virtanen (2009-01-09 02:12:05)

Yep, makes sense. :-)

## Folic Acid and Birth Defects (2009-01-02 20:23)

The researchers who discovered that too little folic acid causes birth defects haven't gotten a Nobel Prize (and probably never will) but they should, as [1]this article explains:

After 3 decades of epidemiologic research reporting an association between neural tube defects and maternal use of folic acid, public health organizations developed recommendations and supported interventions to increase folic acid intake among women of reproductive age. In 1992, the US Public Health Service recommended that all women of childbearing age who are capable of becoming pregnant should consume 400  $\mu\text{g}$  of folic acid daily.

. . . In 2005, after the National Campaign and mandatory fortification, approximately 33 % of women reported taking a daily supplement of folic acid, only a modest increase from the 25 % reported in 1995. However, median blood folate levels among women of childbearing age increased from 4.8 to 13.0 ng/mL between 1994 and 2000, with a more recent study reporting median blood folate levels at least 2 times the levels prior to fortification.

To evaluate the impact of this public health intervention, 4 study groups have conducted time trend analyses among the US population, and all have reported a decline of neural tube defects after the introduction of mandatory folic acid fortification. Specifically, these studies reported an 11 %–20 % reduction in occurrence of anencephaly and a 21 %–34 % reduction in occurrence of spina bifida when comparing pre-versus postfortification rates. Similarly, the occurrence of anencephaly and spina bifida was observed to reduce 38 % and 53 %, respectively, in Canada and 46 % and 51 %, respectively, in Chile following folic acid fortification.

[2]Here is the first article on the subject. As the dean of a school of public health put it, this discovery by itself justifies all the money ever spent on schools of public health.

1. <http://aje.oxfordjournals.org/cgi/content/full/169/1/9>

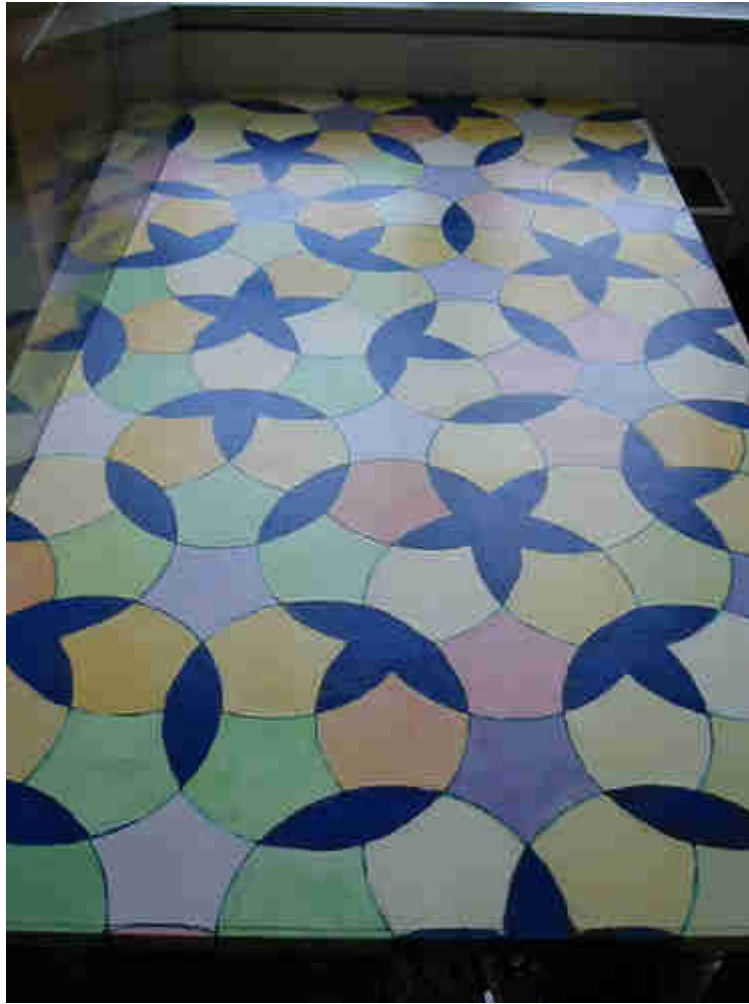
2. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?tool=pubmed&pubmedid=7448527>

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Stephen M (Ethesis) (2009-01-03 19:39:23)

I've always considered it criminal how many OB/GYNs failed to prescribe folic acid, especially to mothers of Welsh decent.

## Does Innovation Require Markets? (2009-01-03 05:29)



Andrew Gelman [1]writes:

The [2]article [about economics professor David Galenson] then quotes art professor Michael Rushton as saying that in science or art, "innovation really requires a market." Huh? Wha?? Tell that to my friend Seth, who spent 10 years self-experimentation. Heck, tell that to the cave painters. Or check out the American Visionary Art Museum.

I agree. I was able to do self-experimentation for 10 years because I didn't have to sell, i.e., publish it. Not having to sell – I mean publish – it gave me the freedom to do and think whatever I wanted for as long as I wanted.

Innovation benefits not from markets but from subsidies, which provide time to experiment. In my case, I was a professor at Berkeley – subsidized by the State of California. I had tenure and free time. Sometimes the subsidies aren't obvious. Part of [3]my theory of human evolution is that gifts, ceremonies, holidays, fashion, and connoisseurs, not to mention love of art, subsidized artists and artisans by providing a desire for work that – in the absence of gifts, etc. – would be much harder to make a living from. Helping artists and artisans make a living helped them advance their technology. Cave paintings may have been part of a holiday observance – the artists took time off from hunting. Before trade, Thorstein Veblen's Instinct of Workmanship motivated innovation. Andrew himself built the table in the above photo for reasons that had nothing to do with markets.



But at least an economics professor is studying innovation. A few years ago in the Berkeley Public Library I picked up an introductory economics textbook. Six or seven hundred pages. Half a page on innovation!

1. <http://www.stat.columbia.edu/~cook/movabletype/archives/2008/08/the-statistics.html>

2. <http://www.nytimes.com/2008/08/04/arts/design/04pica.html>

3. <http://www.blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-directory/>

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Andrew Gelman (2009-01-04 18:30:18)

Hi, Seth. You garbled the link to my blog. It should be this: <http://www.stat.columbia.edu/~cook/movabletype/archives/2008/08/the-statistics.html> But, yeah, the more I look at this, the more amazed I am that someone could say something so silly. I think one problem is the system of economists and economics journalists patting each other on the back. For example, for a silly quote by an economist about how economists are different from everyone else, see here: <http://www.stat.columbia.edu/~cook/movabletype/archives/2006/11/everyone-is-fun.html> As long as people get in the New York Times for saying such things—and reporters don't question them on this sort of thing—I expect we'll keep seeing it!

seth (2009-01-04 19:08:41)

Thanks for the correction. In the case of the "markets" quote, I think the guy who said it was reflecting the common belief among economists that markets are very powerful and can solve all sorts of problems. So it wasn't so much the person who said it being mistaken ("silly") as it was/is most of his profession – and if so "silly" is probably the wrong word. You were like the child in The Emperor Has No Clothes. As for the "economists are different" quote I disagree. What she said was true – economists do have different beliefs and starting points than anthropologists, sociologists, psychologists, etc. – and I think it's helpful to point out the differences.

Andrew Gelman (2009-01-05 19:23:32)

What was silly about the "economists are different" quote is that she basically said that economists are different because they think everyone is the same!

seth (2009-01-05 22:32:04)

Haha! You're right, she carefully distinguished her cohort (academics, who have big important cultural differences) from the cohort under study (who don't).

KevinH (2009-01-06 11:46:43)

I think it is silly to assume that innovation requires markets. A Crusoe economics thought experiment would certainly show that ole Robinson would be able to create something that he had no prior knowledge of (innovation) in response to his needs. I would think that a market usually defines voluntary relations between more than one party - so even though the market expresses needs, the fact that one has needs does not denote they exist in a market. Since Robinson would surely be able to create something in response to his own needs on a deserted island - innovation does not require markets - only needs. Regular Economists cannot properly model this with their mathematical functions, so they just state things as fact without proper backup.

Patrik (2009-01-06 23:39:07)

*Innovation benefits not from markets but from subsidies, which provide time to experiment. In my case, I was a professor at Berkeley – subsidized by the State of California. I had tenure and free time. You are subsidized by the taxpayers of the State of California, not the State of California.*

## Things That Work Much Better When Broken (part 2) (2009-01-04 04:55)

If six months ago you had told me such things existed I would have been very skeptical. But since then I have come across two examples. Example 1: [1]contact lenses. Forced during a trip to wear just one lens (leaving one eye without a lens), I realized my sight was much better than when I wore two. I had sharp vision both close and far away. And the unlensed eye got more oxygen than usual.

Example 2 I also discovered by accident. My bike lock no longer locks. It is hard to see this, so if I fake-lock my bike – which I got for free – it is still sufficiently protected. My bike lock is now much easier to use. No more worry about the key. No way it can become impossible to unlock, which has happened once in two months. (To any Tsinghua students reading this: Please don't steal my bike.)

1. <http://www.blog.sethroberts.net/2008/12/22/the-twilight-of-expertise-part-14-opticians/>

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pd3 (2009-01-04 17:10:58)

as far as the one contact lens mistake/experiment, when it has happened to me I feel like my eyes feel strained, so I can't really do it for more than a couple of days.

Tom (2009-01-07 12:43:22)

If you're nearsighted (as I am) one can actually have LASIK done on one eye and be left with the ability to see distantly and read close-up at the same time. (I think they call this 'monovision.') I had assumed that this would be too risky to try, but your experience may make me reconsider this. If you continue to experiment with monovision, please keep posting about your experience.

## Tracking How Well My Brain is Working (2009-01-05 02:54)

From [1]my omega-3 results I got the idea that our brains may work better or worse without our noticing. I want to track how well my brain works not only to test the effects of different dietary fats (our brain is more than half fat) but also to allow the possibility of discovering new effects, both good and bad.

One test I am using is a typing test (early results [2]here). Another is an arithmetic test. I got the idea of using arithmetic from [3]Tim Lundeen. Like him, I found that the speed with which I could do simple arithmetic problems ( $8+0$ ,  $4*3$ ) was sensitive to the amount of omega-3 in my diet.

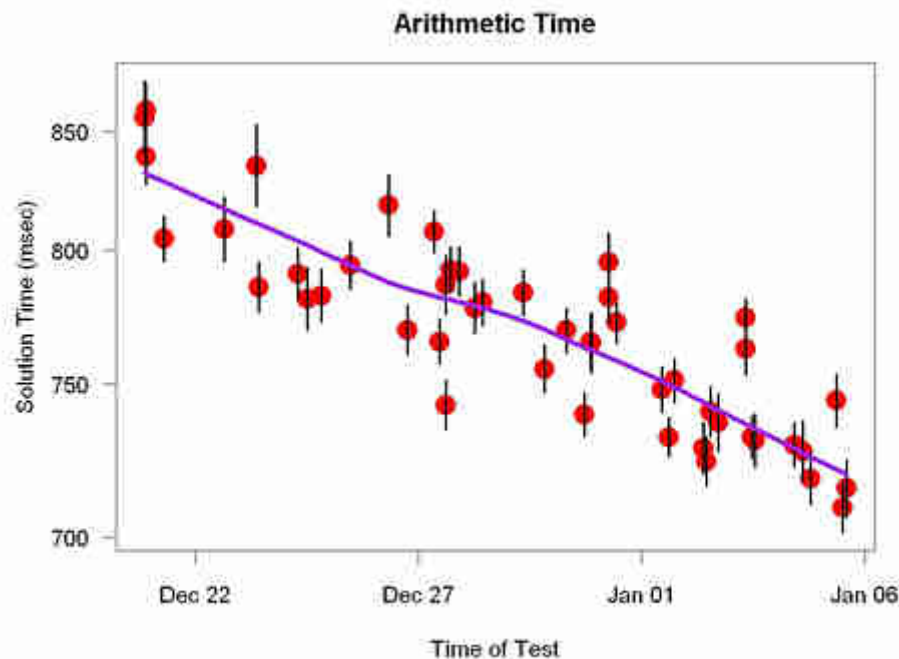
The arithmetic test involves doing 100 problems separated into 5 blocks of 20 each. There is little time between each problem. I type the last digit in the answer; e.g., if I see  $8*8$  I type 4. The possible answers are 1, 2, 3, 4, 7, 8, 9, and 0 so that I don't have to move my fingers off the keys. There is feedback after each block. I aim for 95 % correct.

This is my second use of an arithmetic test. The advantages of this one compared to several other tasks I have tried are:

- Portable. Only requires a laptop.
- Well-learned. So I should plateau (reach a steady speed) sooner than with a task I learn from scratch. When my speed is steady it will be easier to compare different conditions – no need to correct for learning.

- Uses eight fingers. Many tasks used by experimental psychologists have just two possible answers (yes/no). With eight possible answers there is less anticipation and less worry about repetitive strain injury.
- No data entry. The task is written in R, the language I use to analyze the data.
- Many measurements per minute. This allows me to correct for problem difficulty and get a standard error for each test session.

Here are early results.



In the test sessions after January 1, two sets of points are above the line – I was slower than expected, in other words. Both came from test sessions about an hour or so after I woke up. At the time of those sessions I felt fine – not tired, not groggy – and was a little surprised. This is a trivial example of what I am looking for: new environmental effects.

The bigger context of this research is that scientists know a lot about idea testing but almost nothing about idea generation – how to find new ideas worth testing. Maybe this research will teach me something about idea generation.

[4]A talk by Tim Lundeen about related stuff.

1. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>
2. <http://www.blog.sethroberts.net/2008/12/29/a-self-experimental-near-miss/>
3. <http://www.blog.sethroberts.net/2007/02/16/omega-3-and-arithmetic/>
4. <http://www.kk.org/quantifiedself/2008/10/can-you-eat-yourself-smarter.php>

stephen (2009-01-05 22:15:25)

nice work seth. very interesting. what statistics packages do u prefer? i use excel, word, spss and a few online calculators.. also, have u ever used qualitative methods for self experimentation?

seth (2009-01-06 19:04:20)

The statistics package I use is R. It is open source. I'm not sure what qualitative methods are but almost all of my self-experimentation has involved numerical measurement so I guess the answer is no.

Seth's blog » Blog Archive » A Statistics Package in the News (2009-01-08 16:20:47)

[...] Tracking How Well My Brain is Working [...]

Joe (2009-01-08 19:47:01)

Would you mind posting your R code for the arithmetic task, Seth? It would be particularly interesting to see how you record reaction times in R. Is there a built-in function that provides ms accurate timing?

seth (2009-01-08 22:34:19)

Joe, it would be difficult to post the R code. There are 20-30 functions involved. I measure reaction times using Sys.time, which provides accuracy to about 1/60th of a second. Since there are about 100 measurements per session, that provides plenty of accuracy. I use getGraphicsEvent to detect a keystroke. Unfortunately getGraphicsEvent only works with Windows. If you have other questions I am happy to answer them. If you know how to use R, have a Windows computer, and promise to run yourself for several days, I will send you the R workspace. But there is nothing very interesting about the code, apart from what I just said.

Joe (2009-01-09 09:09:04)

Unfortunately, I use R on OSX. R in OSX does include getGraphicsEvent, but you're right that it doesn't appear to work. The example code in ?getGraphicsEvent throws up an X11 error. Anyhow, thanks for the offer to send the code, and for the info on how you collect RTs with R.

Seth's blog » Blog Archive » Hey, What Happened to My Brain? (part 1) (2009-07-17 09:55:25)

[...] I've blogged about this. The virtues of this test include: 1. Fast. Takes only a few minutes. 2. Portable. Requires only a laptop. 3. Many possible answers (1, 2, 3, etc.). This reduces anticipation errors. 4. Many numbers (reaction times) per test.Â This allows me to get a measure of variability for each session and can correct for the difficulty of the problem. Aspects with room for improvement include: 1. Speed/accuracy tradeoff. Accuracy isn't fixed. Depending on how accurate I want to be, I'll go faster or slower. (I aim for 95 % correct.) 2. No complex actions. The most enjoyable games have a motor-skill aspect that this task does not. [...]

## The Turning Point (2009-01-05 04:40)

A few months ago, the current-issue table of contents on the New Yorker website would mark web-available articles. [1]Now only articles not web-available are marked.

Still no reader comments. As misguided now as [2]the no-letters-to-the-editor policy used to be.

1. [http://www.newyorker.com/magazine/toc/2009/01/12/toc\\_20090105/?xrail](http://www.newyorker.com/magazine/toc/2009/01/12/toc_20090105/?xrail)

2. <http://sethroberts.net/spy/lettertotheditordec88.pdf>

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### Assorted Links (2009-01-06 05:53)

- [1]food anthropology
- [2]sign of things to come?
- [3]Aaron Swartz recommends. The question his list raises: How did Paul Krugman learn how to write?
- [4]Never eat candy again

1. <http://lilt.ilstu.edu/rtdirks/>
2. `javascript:void%20window.open('http://extras.timesonline.co.uk/flash/chinaquiz/index2.html','Results','dependent=yes,resizable=yes,scrollbars=yes,height=600,width=550');`
3. <http://www.aaronsw.com/weblog/2008books>
4. <http://www.dailymail.co.uk/health/article-1103920/Never-mind-sugar-Are-children-poisoned-sweets.html>

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Andrew Gelman (2009-01-06 19:21:58)

In answer to your question about Krugman: 1. Perhaps he learned to write the way many of us did: by practicing a lot! 2. Krugman is an excellent writer but I think this is because he has a lot to say. I wouldn't call him an excellent writer in the way that, say, Michael Lewis is. What Krugman has to offer is some important ideas and the desire to promulgate these ideas. On an unrelated topic, see here for more on poisonous candy: [http://www.stat.columbia.edu/cook/movab-letype/archives/2005/05/weve-been-eat in.html](http://www.stat.columbia.edu/cook/movab-letype/archives/2005/05/weve-been-eat-in.html)

### Lipid Values after 2 Years on the Shangri-La Diet (2009-01-07 14:01)

Stephen Marsh has been doing the Shangri-La Diet for 2 years, taking about 6 tablespoons of ELOO (extra light olive oil) per day. He recently got an expanded set of blood tests done. Here are the results. (10-90 %ile mean 10 % and 90 % percentiles in the general population):

- LDL IIIa+b ( %). 10-90 %ile 13.6 – 43.0; Alert Value >20; SM = 17
- LDL IVb. 10-90 %ile 1.7-9.8; Alert Value >10; SM = .9
- HDL2b ( %). 10-90 %ile 7-30; Alert Value <10; SM = 29
- Apo B. 10-90 %ile 60-140; Alert Value >120; SM = 48
- Lp(a). 10-90 %ile 0-30; Alert Value >30; SM = 10
- Lp \_PLA2. 10-90 %ile 155-419; Alert Value >223; SM = 197
- Insulin. 10-90 %ile 3-25; Alert Value 12; SM = 9
- NT-proBNP. 10-90 %ile 5-125; Alert Value 450; SM = 14

- Cholesterol 134
- Triglycerides 51
- HDL 67
- LDL 57
- Glucose 86

Stephen added:

Two years after the weight loss, taking in what so many of these "experts" say is a dangerous level of fat as a dietary supplement, my bloodwork, especially the important markers, is very good. Bottom line is a low level of small LDL particles and a miniscule level of the dense, dangerous ones (below the reference range). On the HDL (the "bad" cholesterol) the particles are about half of the largest or non-dangerous kind.

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Stephen M (Ethesis) (2009-01-07 19:23:43)

I've been on maintenance, more or less, for two years. I started SLD three years ago November 9, or about three years and two months as of January 9 ;) Seth skipped where I told him it was life changing and thank you. I'd really like to compare my lipid panel on the tests with one of the critics of SLD who claims it isn't safe. For more information: <http://www.bhline.com/testdescriptions>

Charles (2009-01-08 01:00:37)

Isn't HDL the "good" cholesterol...the one you want to be higher, if anything? LDL is generally described as the bad cholesterol, but the particle size, as you mention, is important. For me the most positive marker here is your Triglyceride/HDL ratio. Anything under 2.0 is considered very good, and yours is less than 1. That's amazingly good.

Pietr (2009-01-08 20:12:19)

I am two years after a cardiac stent. I have been taking with good effect standard lipid lowering therapy with a drop of the LDL to 100. Low but not low enough. The addition of Canola oil was associated with a further 30 percent decrease. That LDL level has been associated with remission of coronary artery stenosis. I have been lax with my Shangri-La protocol. This log encourages me to resume your protocol tomorrow. Can you post Stephens' pre-treatment LDL levels? I encourage others who may have pertinent data to send it to you and maybe send a copy to me as well. Got to go and take a slug of Canola. [phitz96@gmail.com](mailto:phitz96@gmail.com)

Confidence (2009-01-09 09:25:33)

Sigh. Those same experts came up with the "good" and "bad" cholesterol idea, What makes you think the numbers shown are actually good for the individual?

Stephen M (Ethesis) (2009-01-09 15:22:01)

The fluffy v. dense particles are tightly correlated to actual outcomes.

Stephen M (Ethesis) (2009-01-13 21:46:21)

Pietr, the LDL/HDL levels looked good, but triglycerides at top weight, pre-fish oil, were over 300. My two most recent tests were 50 and 51.

## The Shangri-La Diet Hedonic Shift (2009-01-08 05:47)

On the SLD forums, [1]Bennetta wrote:

I never noticed this before, but I used to eat as a way to thwart boredom. Nothing to do? Make some food! The odd thing here is finding myself doing a ton of other things when I would have otherwise been cooking or eating just to entertain myself. Now, instead of heading to the fridge when there's nothing to do, I clean, write letters to friends, or do whatever.

This change in behavior shows that the Shangri-La Diet makes food less pleasant. When we don't feel good (such as are bored), we look around for activities that will make us feel better. Eating is no longer one of those activities. This shift in the hedonic value of food – which happens because our set point becomes lower than our weight – painlessly keeps us from eating. Or if we do eat, we stop sooner.

[2]Michel Cabanac, a professor of physiology at Laval University, Quebec City, has studied how hedonic shifts control behavior in several areas, including thermoregulation and body weight regulation.

1. <http://boards.sethroberts.net/index.php?topic=6774.msg78102#msg78102>

2. [http://en.scientificcommons.org/michel\\_cabanac](http://en.scientificcommons.org/michel_cabanac)

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david (2009-01-08 08:05:00)

I noticed the same connection between boredom and food, but often it was boredom with some task I was supposed to be doing (i.e. work) and food was a way to avoid doing it. After doing SLD for a few weeks (sugar water version) and losing 20 lbs, food wasn't as attractive an alternative. A year or so after doing SLD I also stopped all caffeine, which I had previously consumed in the form of 2-3 espressos per day. The coffees were also an excuse for taking a break from less attractive but more mandatory activities. I never replaced the espressos with a decaf tea or any other beverage. I mostly just drink water with meals now and rarely in between. It appears I need less water because I'm not drinking all that caffeine. I guess now I just have to quit reading and posting comments on blogs and maybe I'll finally get some work done ;-)

Ben Hyde (2009-01-08 09:14:04)

While I had the same experience I would not, absolutely not, describe it as making the "food less pleasant." The pleasure remained. The appetite is what evaporated. I find I have to husband the appetite in service of the hedonic pleasure. I found the discovery of a distinction between appetite and hedonic desire/pleasures thought provoking. Particularly when you turn it back on the common presumption that fat people are suffering from a moral failing.

seth (2009-01-08 15:48:32)

Ben, my experience is that when I am less hungry, eating is less pleasant. Your experience is different? "The pleasure remained" – at the same intensity? When I am not hungry some aspects of eating are still pleasant, such as chewing.

Andrew Gelman (2009-01-08 17:23:24)

Seth: As a food lover, I gotta say that this sounds like a bug, not a feature! I enjoy eating and would prefer to continue to enjoy it. Conversely, you might as well say that, if you lost the ability to read books, that this would be good news because it would free up your time so you could spend more time on food...

Araglin (2009-01-09 16:27:55)

Seth, Is there an analogous way to make playing on the Internet less pleasurable? Is there an hours-logged-on-the-net satiation point that can be lowered in some way? Thanks, Araglin

seth (2009-01-10 07:12:21)

what a great question! my answer is I don't know.

## **A Statistics Package in the News (2009-01-08 16:15)**

I use R, the open-source version of S, several times/day. More often than I use Word. It works far better than S – fewer bugs, much cheaper (R is free) – and S worked a lot better than what it replaced (STATGRAPHICS). I was pleased to see a NY Times [1]article about it:

R has also quickly found a following because statisticians, engineers and scientists without computer programming skills find it easy to use.

"Easy to use" – haha! Non-statisticians and non-engineers don't find it easy to use, in my experience, but it's true that I found it easy to use. "R has a steep learning curve" some people say, twisting the meaning of "steep learning curve" (which should mean fast learning, since that's what a steep learning curve describes).

The popularity of R at universities could threaten SAS Institute, the privately held business software company that specializes in data analysis software. SAS, with more than \$2 billion in annual revenue, has been the preferred tool of scholars and corporate managers. . .SAS says it has noticed R's rising popularity at universities, despite educational discounts on its own software, but it dismisses the technology as being of interest to a limited set of people working on very hard tasks. "I think it addresses a niche market for high-end data analysts that want free, readily available code," said Anne H. Milley, director of technology product marketing at SAS. She adds, "We have customers who build engines for aircraft. I am happy they are not using freeware when I get on a jet."

Ah, "freeware." You may remember when "Made in Japan" was derogatory. Most psychology departments, including Berkeley, use SPSS (Statistical Package for the Social Sciences). Like SAS and its ten feet of manuals, it is horrible. One of my students wanted to make a scatterplot of her data. She went to the psych departmental statistics consultant (a psych grad student who had taken courses in the statistics department). The statistics consultant didn't know how to do this! A scatterplot! It's like Vladimir Nabokov's observation at Cornell and other schools of language professors who couldn't speak the language they taught. [2]Nothing But the Best describes a Julliard composition teacher who couldn't read music. To be a scientist and not be able to analyze your own data is pretty much the same thing. With R making a scatterplot is easy.

To me, the value of R is that it makes high-quality data analysis available to everyone – something very new in the history of mankind. R makes self-experimentation easier because it makes data analysis easier and allows you to learn more from the data you have collected (e.g., make better graphs). I also use it for data collection – [3]measuring how well my brain is working.

Via [4]Andrew Gelman.



1. [http://www.nytimes.com/2009/01/07/technology/business-computing/07program.html?\\_r=1&em=&pagewanted=all](http://www.nytimes.com/2009/01/07/technology/business-computing/07program.html?_r=1&em=&pagewanted=all)
2. <http://query.nytimes.com/gst/fullpage.html?res=9B0DE6DC1F31F937A35753C1A961948260>
3. <http://www.blog.sethroberts.net/2009/01/05/tracking-how-well-my-brain-is-working/>
4. <http://www.stat.columbia.edu/~cook/movabletype/archives/2009/01/r-in-the-news.html>

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david (2009-01-08 16:40:12)

There's a difference between "freeware", "open source software", and "free software". The SAS marketing drone chose the derogatory "freeware" to describe something that it really open source software (and might even be free-as-in-freedom software). "freeware" usually describes those free binary programs for which the source is NOT available and which often install spyware on your computer. Free software is something completely different. See: <http://www.gnu.org/philosophy/categories.html> <http://oreilly.com/openbook/freedom/>

Aaron Blaisdell (2009-01-08 17:29:11)

As you well know from our collaboration, I have found R fairly difficult to learn, but then I've always had trouble learning to write code (the learning curve tends to be so shallow that I give up early). I find visually-driven interfaces much more intuitive and I pick them up very quickly (i.e., with a steep learning curve). JMP (pronounced 'jump') is a statistical and graphical program –used by engineers and computer scientists – that has a visually-driven interface (like windows) but allows for some programming of functions. I find it highly useful for data exploration. Perhaps ideally I would use R, but fortunately I can get some of the same benefits (e.g., data exploration) from JMP. I'm very glad, however, that you are so proficient with R! :)

TC (2009-01-09 00:16:27)

at least STATGRAPHICS was written in real APL

seth (2009-01-09 01:42:10)

yeah, before STATGRAPHICS I used APL and wrote APL functions for STATGRAPHICS. I still think it's weird that R doesn't have certain APL functions.

Pedlars (2009-01-09 03:15:15)

Love the debate!! I use R almost daily, well weekly for sure. I find the help forums useful to a point, but often feel intimidated by replies (I'm not a statistician but a user of data). I think one real problem with the R movement is support and validation. There are many ways to do the same/similar thing in R, but as the non-expert - which one do I use?!! and who do I go to to ask to get the most appropriate reply?? I use GenStat too this over comes the problem. it's free to use in teaching world wide and free for research in the developing world. With GenStat I can trust the tools and know it'll point me in the right direction - something very lacking in R. If you buy it, from memory it's lots cheaper than any product beginning with S...., but not free like R. But what is free anyway? it's expensive if I have to invest hours to do anything interesting in R, whereas with GenStat it takes minutes?

Steve Polilli (2009-01-09 12:53:08)

I'm in SAS marketing and just want to state for the record that we are not R or open source haters. I think the Times article was generally good but perhaps gave the impression that we believe the devil resides in R. For a more complete picture check out the response from Anne Milley who was quoted in the Times article. It's at <http://blogs.sas.com/sascom/>

Sol (2009-09-17 23:21:00)

While an economics student in university I had to pass an exam entirely on my knowledge of SAS. It was a bloody nightmare.

### **Kafkaesque Research Regulation (2009-01-08 23:32)**

From the [1]BMJ:

The local research ethics subcommittee, which comprised a pharmacist and layman with limited clinical experience, had concerns about possible drug interactions between amloride and other drugs being taken by the study participants and hyperkalaemia and requested resubmission. Although we pointed out that the pilot was identical to one limb of the amendment that it had already approved, in September 2007 the full committee rejected the application for the pilot to be considered as a study amendment. We therefore had to make new submissions to the local ethics committee, Medicines and Healthcare Products Regulatory Agency (MHRA), pharmacy, insurance company, research and development department, and the local (Wellcome Trust) clinical research facility.

In Spain it takes years to get approval. By the time you get approval someone else has published the study you wanted to do. A nightmarish research environment is one more reason that persons with health problems should do their own research: try to find solutions themselves. I started long-term self-experimentation because I knew that conventional sleep research would never – at least, in my lifetime – help me understand why I often woke up too early. A common problem, easy to measure – but conventional sleep research is nearly impossible.

Can it get worse? Yes, [2] in Russia.

1. [http://www.bmj.com/cgi/content/full/337/oct16\\_2/a1732?ijkey=b57d42e8532bc772fe6b31d459aebfeab4fcea6d&keytype=tf\\_ipsecsha](http://www.bmj.com/cgi/content/full/337/oct16_2/a1732?ijkey=b57d42e8532bc772fe6b31d459aebfeab4fcea6d&keytype=tf_ipsecsha)
2. [http://www.bmj.com/cgi/content/full/338/jan06\\_2/a3141](http://www.bmj.com/cgi/content/full/338/jan06_2/a3141)

## Beijing Shopping (the Beijing Zoo) (2009-01-10 14:53)



A Beijing friend of mine prefers to shop in Hong Kong, where clothes are cheaper than in Beijing. If you must shop for clothes in Beijing, she said, go to the Beijing Zoo. She meant a cluster of stores near the zoo.

When the movie Titanic came out, and I knew it cost a lot to make, I thought I'd lose money if I didn't buy a ticket to see it. For the first time since Titanic I had a similar feeling: At the Beijing Zoo prices were so low it felt like losing money if I didn't buy something.

On seven floors there were hundreds of shops, each crammed with some clothing item: dresses, scarves, shoes, jackets, pants, shirts, and so on. More shoes than anything else. (Few socks.) I wanted to buy shirts but the shirt selection was poor, consistent with the fact that the shirts I already have are from Malaysia, the Philippines, and Hong Kong. But because I could buy a \$6 shirt that would cost \$80 in America, I bought a few anyway. I was happier with the shoes I bought ( \$10 here, \$100 in America).

I love shopping (but alas dislike owning) and especially love Chinese shopping because the sticker price is often just a starting point. It is like adding spices to food. At the first shoe vendor, the quoted price for shoes I liked was \$40. I got up to leave. What's your lowest price? I asked. \$30. I started to leave. What's your price? she asked. What's your lowest price? I repeated. As I left, the price went down to \$20. That's your lowest price? I asked. Yes, she said, what's your price? That was helpful. With other vendors, I started at \$7 and gradually increased my offers to \$10, at which point they were accepted – but only if I was leaving. Sometimes the sticker price was the actual price. For a jacket advertised at about \$14 I paid about \$14, even though another stall a few feet away had the same thing. I went back and forth between the vendors and \$14 was the best I could do.

I hoped to buy a winter jacket but to my astonishment couldn't find one I liked. The student store at Tsinghua has about five winter jackets for sale and I would happily buy one of them ( \$50). Among hundreds and hundreds of men's winter jackets at Beijing Zoo I didn't see a single one I liked. Good excuse to return . . .

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Andrew Gelman (2009-01-10 19:36:00)

"When the movie Titanic came out, and I knew it cost a lot to make, I thought I'd lose money if I didn't buy a ticket to see it." Say what?

seth (2009-01-11 05:33:30)

If an experience worth \$100 is available and you don't buy a \$1 ticket to see it, in a way you have lost \$99.

denshil (2009-01-13 01:40:24)

I love Beijing Zoo very much

### **Vaccine Safety: A Debate (2009-01-11 16:03)**

As I said [1]on Christmas Eve, thanks to Web comments and blogs, you can now hear many voices in a debate in a way you never could before. The New York Times has just added a vote-like recommendation feature to help sift through a large number of comments. (I hope they add a "sort by" feature to make the most popular comments easy to find.) People you could not usually hear from turn out to have enormously interesting and helpful things to say – again and again and again.

A new example is the debate over vaccine safety. A 2007 book called [2]The Vaccine Book: Making the Right Decision For Your Child by Robert Sears took a middle ground: A way that parents can space out vaccines. This seems to have offended Dr. Paul Offit, a vaccine inventor. With Charlotte Moser he wrote [3]a critique (may be gated) of the book, just published in Pediatrics, that is actually an attack on it. Would the critique be full of well-reasoned arguments? New facts? Nope. It reminds me of my surgeon [4]claiming that a certain surgery was beneficial and, when questioned, saying that of course evidence supported her claim but never producing any evidence. However, overstatement from doctors is nothing new. What's new is [5]the comments section on the critique (may be gated), which contains several fascinating observations.

From John Trainer, a family doctor:

[For Offit and Moser] to castigate [Sears] for offering information to the laity is to fall prey to the same mindset as the early church. By controlling access to the Bible, the leaders of the church exerted control over all.

From Corrinne Zoli, a Syracuse University researcher:

The vaccine debate plays out against a backdrop not only of facts vs. falsehoods, refereed vs. non-mainstream journals and studies, science vs. speculation, a complicated enough arena, but of conflicting cultural "facts," which may be equally important as the science. For instance, parental concerns over the safe cumulative levels of thimerosal (ethyl mercury) in vaccines were unwittingly validated by the American Academy of Pediatrics (AAP) and the U.S. Public Health Service and others recommending their removal (which largely occurred in 2001) even while these organizations were steadfast in public declarations of no causal link between the preservative and various neurotoxic or neuropathological

ill-effects. What did parents learn from this decision? Aside from the fact that the preservative had been long removed in many countries of the world (i.e., the UK and even Russia), or that infants may have received doses exceeding EPA recommendations, they learned that organizations designed to serve the public trust were contradictory in their words and deeds. . . . The larger "lesson learned" by parents was to fear the decision making processes of medical and public health institutions and to become critically engaged with them using whatever tools at one's disposal (i.e., online information, reading scientific studies, discussion groups, etc.).

Fifty years ago, when doctors wouldn't justify their claims, you couldn't do much about it. Few had access to medical libraries or the time to visit them. Now there is an enormous amount you can do. Water will simply flow around the rocks, such as Dr. Offit, who get in the way of better decisions.

This sort of open discussion is so helpful it should be standard scientific practice: allow your research to be commented on by anyone for anyone to read.

1. <http://www.blog.sethroberts.net/2008/12/24/charles-nemeroff-under-scrutiny/>
2. <http://www.amazon.com/Vaccine-Book-Decision-Parenting-Library/dp/0316017507>
3. <http://pediatrics.aappublications.org/cgi/content/full/123/1/e164>
4. <http://www.blog.sethroberts.net/2008/08/29/suppose-you-write-the-times-to-fix-an-error-part-2/>
5. <http://pediatrics.aappublications.org/cgi/eletters/123/1/e164#39891>

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NE1 (2009-01-11 18:17:49)

Offit and Moser spend their 8 pages pointing out misinformation provided by Dr. Sears' book, when he claims to be acting as a neutral source. Nearly every paragraph has a citation. For example, when addressing Dr. Sears' implication that cow-derived vaccines could be a source of mad cow disease, he references a study in the UK showing there was no risk. One not similarly justified paragraph, for example, notes that Dr. Sears uses a fallacy of personal anecdotes in saying he hasn't seen many meningitis infections around. Unbelievable. There are more than 30 references. Their complaint is mostly that Dr. Sears is misinforming his readers. You are right that there is no new information. In particular though, the highlighted comments do nothing to refute the critique. The only place where the critique is inadequate is in quantifying the harm done by this alternative schedule. They do a poor job of putting a number on it, simply noting several diseases, say where waiting until 5 for influenza vaccine, has led to the hospitalization of X young children (ie, where such studies exist). But yes, they provide evidence against not just his misdirections and falsehoods, but concerning the thesis of the book. The justifications for not getting them, and even for simply delaying or spacing them are attacked. With references. I don't see where Dr. Offit is getting in the way of better decisions. He has identified a book full of misinformation, one that gives phantom support to anti-vaxxers. It actually appears that the fulltext has been made public. If any readers are interested in the references, my experience has been that the authors are always willing to send a pdf copy to polite emailers.

Cam (2009-01-11 23:03:53)

NE1, well said. Pretty much the only things that need to be adding: [http://newsimg.bbc.co.uk/media/images/45360000/gif/\\_45360950\\_meadles\\_cases\\_gr\\_226.gif](http://newsimg.bbc.co.uk/media/images/45360000/gif/_45360950_meadles_cases_gr_226.gif) "Take a bow, morons." -Ben Goldacre It is also worth mentioning that the 'parents of vaccine injured children' in the comments section of the paediatrics article, on the whole, have very little evidence for the title they claim. If there is no statistical link shown in large epidemiological studies between the harm they/their kids suffered and the vaccine they received, the best they can do is post hoc ergo propter hoc. And thar be dragons. If we ran things that way... there would be little point in doing science.

seth (2009-01-11 23:15:50)

Yes, unlike my surgeon, Offit and Moser give citations. The similarity is the overstatement. Offit and Moser claim to be giving a fair description – or at least that should be the purpose of all Pediatrics book reviews – when in fact it is an attack (less valuable) that can't be trusted to tell both sides. There is nothing interesting about such attacks or their one-sidedness; I only mentioned it to introduce the comments, which are interesting. But I agree with you – my post seems to imply that Offit and Moser don't have citations, which is wrong. I have corrected the post. Offit is getting in the way of better decisions by presenting an attack as a fair description. And, as an attack, it is a joke. "Sears never discusses the fact that mercury is present on the earth's surface," Offit and Moser write. Cam, large epidemiological studies are far from perfect. Gary Taubes wrote an article in the NY Times Sunday magazine about some of their problems.

Mark (2009-01-12 10:10:46)

If you get a mob of people looking in excruciating detail at anything they can come up with infinite amounts of "evidence." Look at the 9-11 "truthers," for instance. The medical establishment takes a more 50,000-foot view, and that's the way to go, I think. Are there any psychologists who study conspiracy buffs? To me there seem to be common qualities (but my interest is not great enough that care to try to categorize them myself). My gut feeling is that the anti-vaccine crowd has a lot in common with Kennedy assassination investigators, as well as the followers of this guy: <http://www.enterprisemission.com/>

pd3 (2009-01-12 15:36:15)

. . . . early church . . . bible. . . . wait, huhh??? I've heard this one before – - - transmitted even by religion professors. There is more to the story. Oral tradition was a central part of Jewish culture and the way teachings were passed on from century to century. Then came christ, then came the letters of St. Paul, then came various gospel accounts, then came the bible—along side that oral tradition that had existed forever. These bibles could be reproduced only through painstaking word by word transcription. And that caused just a few bibles. A problem which was exacerbated by the generally low levels of literacy. Moreover, the world's first "internets" a.k.a the printing press, was used to publish the bible—sparking the widespread distribution of the bible and, of course, literacy and other books.

Scott (2009-01-12 18:52:05)

*This sort of open discussion is so helpful it should be standard scientific practice: allow your research to be commented on by anyone for anyone to read.* [1] Sometimes this could be counterproductive, but still, it's a good point.

1. <http://livinlavidalocarb.blogspot.com/2005/06/diet-soda-study-results-are-absolutely.html>

Cam (2009-01-14 02:09:51)

Far from perfect but better than idle speculation about theoretical and unproven mechanisms...

Sharon (2009-01-18 20:13:23)

I recently came across your blog and have been reading along. I thought I would leave my first comment. I don't know what to say except that I have enjoyed reading. Nice blog. I will keep visiting this blog very often. Sharon <http://www.autoloans101.info>

bfg (2009-01-26 12:16:54)

Doctors don't even know what they are injecting into people. All the ingredients of vaccines do not appear on vaccine package inserts. Vaccines are not food and is not subject to different labelling laws than food is. This is called trade secret protection. Why is this a problem? An example: Peanut oil can be used as an ingredient in the vaccine adjuvant and does not have to appear on the label.

## How to Learn English (2009-01-13 12:48)

Pearl Alexander teaches English in Japan. She [1]blogged:

The typically unintelligible and extra-syllable-laden speaking tests delivered to me by the students had a lone girl who stood out with nearly perfect pronunciation, however quite imperfect grammar.

I was completely astonished. Was she taking extra classes outside of school? If so, why wasn't she delivering the typically rhetorical machine-gun speech like most of the juku students?

We got to the last question on her test: "What do you like to do in your free time?" She answered: "I often listen to music. I like Avril."

At Tsinghua University, I had a similar experience. One of a dozen art students giving presentations had much better English than the rest. Did you live in America? I asked him. No, he just watched a lot of English TV and movies. Tsinghua students watch a lot of Friends, not to mention Prison Break and Heroes.

I found a Chinese movie to watch (Together With You) but in one player there is no sound and in another the English subtitles don't appear! I listen to a lot of Chinese on my mp3 player but it is pretty boring. I should try to find some Chinese songs I like and get translations.

1. <http://pearlalexander.wordpress.com/2008/11/26/260/>

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imsovain (2009-01-13 14:34:50)

In a similar but not identical vein, I would suggest going a step beyond passive listening, and I would suggest forcing yourself to speak Chinese at native speed. When I was in Korea learning Korean, my reading and writing skills quickly outpaced my ability to speak and understand spoken Korean. Then I came across a linguistic conjecture that the same "systems" that allow one to understand spoken language are involved in producing it and vice versa. So I took the audiotapes that accompanied my language textbooks, and repeated the dialogue at the same speed it was spoken. If I stumbled over my words or paused, I repeated the task. I also used the written text to double check whether I was hearing something correctly. I think the most interesting part of this is I really put very little emphasis on whether I understood what I was saying. I imagine you could do essentially the same thing with music, TV and movies. I'm not sure if the linguistic conjecture is necessarily true, and yeah it was pretty boring, but my spoken language production and comprehension improved dramatically.

mike kenny (2009-01-13 15:48:36)

this american girl who speaks fluent japanese says just about the same thing--she learned through music, basically. <http://www.youtube.com/watch?v=bLZbocCEUBo> &feature=channel\_page

Nathan Myers (2009-01-13 17:31:17)

In Copenhagen and Stockholm I noticed that older people (over 50) spoke English with a distinctly Swedish accent, but many younger people spoke English with a perfect American accent. Apparently they get American TV and movies without subtitles. Stranger, older Swedes have a distinctly Swedish gait, but younger people *walk* like Americans. This was not true in, e.g. France and Italy; French people, young and old, walk in French, Italians walk in Italian. I cannot account for the difference.

danimal (2011-06-16 20:56:10)

try KMplayer, it's really good for everything basically, haven't had 1 file it couldn't handle

### **Vaccine Safety: Is This the Best They Can Do? (2009-01-13 13:21)**

In the debate over vaccine safety, I'm not on either side. I am quite unsure whether vaccines with mercury caused autism, for example. I would be happy to read a decent book on the subject, no matter what the author believed.

Instead we have [1]a book by Dr. Paul Offit, who [2]wrote, criticizing another book about vaccines, that it "never discusses the fact that mercury is present on the earth's surface."

Sentences like that make me think vaccines are less safe than claimed by Dr. Offit.

1. <http://www.nytimes.com/2009/01/13/health/13auti.html?em>

2. <http://pediatrics.aappublications.org/cgi/content/full/123/1/e164>

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Phyllis Wheeler (2009-01-13 19:14:08)

I have been reading a book by ANOTHER M.D. on the subject of autism and vaccines. This is Dr. Bryan Jepson, whose book *Changing the Course of Autism* was published in 2007. It is a comprehensive review of the studies that exist on the possible causes of autism. Jepson shows that there are plenty of holes in the methodologies used by those wanting to prove vaccines safe. However, he also says that vaccines haven't been proven to be the cause of autism at this time. Please take a look at my blog post at <http://www.phylliswheeler.com/CuringAutismBlog/?p=122>, which goes into much more detail.

Nathan Myers (2009-01-13 20:07:34)

It's certainly true that vaccination supporters are uncommonly bad at presenting a convincing, respectful case for the safety of vaccines. It's probably not that vaccines are especially unsafe – after all, most parents happily feed their kids any amount of artificial color, pesticides, and MacDonald's fries, and on that scale the vaccines seem well down in the noise level, and anyway less than posed by the pathogens they are meant to protect against. It's more a matter of arrogance. It doesn't take much for (what we might call) an anti-anti-vaxxer to start in on name-calling, or lying about the meaning of various studies, exposures, and numbers. When they act exactly like somebody trying to execute a coverup, it's hardly surprising when people conclude that's what's going on. Anti-anti-vaxxers might actually have the truth on their side, but they certainly deserve much of the blame for anybody harmed, either because of real, undelineated risks, or because of illness resulting from the distrust they have engendered through their arrogance.

seth (2009-01-13 20:43:12)

Nathan and Phyllis, thank you for your comments. I wouldn't say that Dr. Offit is "arrogant"; I don't know of any word that is a good description of the argument that it is relevant to vaccine safety that mercury exists on the Earth's surface. It isn't stupid or clueless because yes, the amount of mercury exposure from other sources is relevant. But since everybody in this debate, including Dr. Offit, knows that the amount of mercury a child got from mercury-preserved vaccines was much higher than from normal sources (such as food, air, and water) to bring up such a vague and unhelpful fact just puzzles me.

Ken (2009-01-13 23:16:35)

Over the years I have become more skeptical about modern western medicine. I have two nephews that have autism (one is



5 and the other 8). They both began autism before the age of 2 (after their vaccinations with thimerosal) and under different circumstances but modern medicines have no knowledge of cause or treatment. But through other experimental sources they have found some effective unsanctioned treatments with a gluten-free, dairy free diet. Pediatricians and autism specialists did not believe that they had any affect but we do have anecdotal/empirical but "unscientific" evidence that this has helped. The 5 year old has more than doubled his vocabulary and has more interest in interacting with people. The 8 year old had polyps in his throat that went undiagnosed for years (he's on medicare, so imagine that nightmare). After going on the diet the polyps receded, much to the bewilderment of his doctors. I also have a friend that for years dealt with chronic fatigue and loss of bone mass. Doctors prescribed either medication or surgery without having any knowledge of the root cause. After years of frustration they took a shot in the dark and consulted a chiropractor/holistic practitioner. I sounded hokey, but they rubbed certain items on her skin and tested reactions by feeling their arm resistance. They were skeptical but the practitioner told them to get a DNA test for Celiacs disease. And sure enough the DNA test came back positive. The medical community is skeptical of anything that hasn't been properly vetted (read: multimillion dollar study). Anecdotal evidence is throw off as unreliable at best and kookery more commonly. The medical/pharmaceutical community is very risk averse, probably due to the litigative environment, and can and will only treat very well known diseases and often only the symptoms. Along with this risk aversion is the protectionism of current methods and ideologies. It is unfortunate that medicine is just as susceptible to ideology as politics and religion despite their reliance on science. Western medicine has done a great deal to advance health, for sure, but the persistence of this type of ideology is counterproductive to the point of being discrediting.

### **The Power Law of Scientific Dismissiveness (2009-01-14 06:33)**

In my experience, scientists are much too dismissive, in the sense that most of them have a hard time fully appreciating other people's work. This dismissiveness follows a kind of power law: a few of them spend a large amount of time being dismissive (e.g., [1]David Freedman); a large number spend a small amount of time being dismissive. The really common form of dismissiveness goes like this (from [2]a JAMA abstract):

In this second article, we enumerate the major issues in judging the validity of these studies, framed as critical appraisal questions. Was the disease phenotype properly defined and accurately recorded by someone blind to the genetic information? Have any potential differences between disease and non-disease groups, particularly ethnicity, been properly addressed? . . . Was measurement of the genetic variants unbiased and accurate? [bold added]

This is the dismissiveness of dichotomization: division of studies into valid and invalid, proper and improper, unbiased and biased, accurate and inaccurate. As if it were that simple. Such dichotomization throws away a lot of information. It leads to such absurdities as [3]a meta-analysis of 2000 studies that decided that only 16 were worth inclusion. As if the rest contained no information of value. In the case of the term accurate the problem is easy to see. To draw a sharp line between accurate and inaccurate makes little sense and ignores the harder and more valuable question how accurate?

The average scientist is religious in many ways, and this is one of them. It is part of what might be called religious method: the dichotomization of persons into good and bad. An example is saying you are either going to heaven or to hell – nothing between.

1. <http://www.blog.sethroberts.net/2008/12/02/unfortunate-obituaries-the-case-of-david-freedman/>
2. <http://jama.ama-assn.org/cgi/content/abstract/301/2/191?ct>
3. <http://www.blog.sethroberts.net/2008/08/23/the-emperors-new-clothes-meta-analysis/>

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Andrew Gelman (2009-01-14 07:18:14)

I don't think religious belief is necessarily about dividing people into good and bad. Certain beliefs—for example, the idea that we are all sinners and should learn to accept this—are highly consistent with good scientific practice, I believe.

son1 (2009-01-14 10:16:09)

Is it not also true, that some of this is dependent on what your (mental) model for capital-S Science is? That is to say, there might be some practices which, while bad on a paper-by-paper basis, are still good when considered for the culture of science as a whole. For example, being excessively dismissive of the results of others might lead me to reject papers which (actually) have value or worth. But if my opinion about science is that "it's vitally important not be *wrong*" (whatever that means), accompanied by a belief that most experiments will be performed over and over again, then an individual attitude of being excessively dismissive might not matter very much.

Nathan Myers (2009-01-14 13:24:59)

Scientists are, generally, extremely dismissive of one another's work, when they're not actively hostile. It's a badge of honor. A scientist seen to accept more than one hypothesis as a likely candidate is seen as soft-headed, and soon ignored. It would seem distinctly unfair to respect the contribution of any non-scientist, or of anyone from outside their own field, while treating their close colleagues so shabbily. They are right to fear being seen as soft-headed by others in their field. Having others habitually ignore your work is career death in science. It's no wonder scientists have internalized these rules. Elder scientists try to atone, a bit, by awarding Nobels to scientists who persevere extraordinarily and prevail, but for every Nobel there are a dozen (that we know of) equally deserving, and a thousand driven out of the field and their evidence buried. Despite all that, science does make slow, fitful progress. Some fields get tied in knots for a generation, or two; particle physics is in that state now. It's hard to see how it will find a way out of it.

dante lover (2009-01-14 14:58:45)

Dante Alighiere might have a little quibble with your metaphor

seth (2009-01-14 15:12:41)

son1, there's a difference between being cautious and being dismissive. You can be cautious without being dismissive. I'm not saying scientists are "excessively dismissive"; I'm saying they shouldn't be dismissive at all. To be dismissive is to draw a line. I'm not saying scientists draw a line in the wrong place, I'm saying it's a mistake to draw any line, that is, dichotomize. Also called black-and-white thinking.

Patrik (2009-01-14 15:32:37)

Good post. Couple things though. Modern science as we know it today, is anything but...science. Most of this so-called science is a religion and most of the so-called 'scientists' are nothing more than high priests toiling away at scripture. I think Taubes proved this conclusively when it comes to the 'science' of nutrition. This has been true since (and before) the days of Semmelweis. *The average scientist is religious in many ways, and this is one of them. It is part of what might be called religious method: the dichotomization of persons into good and bad. An example is saying you are either going to heaven or to hell â€” nothing between.* Seth, for accuracy's sake, religions DO have something in between: purgatory.

bennetta (2009-01-14 15:55:34)

When you consider the historical background that the scientific method grew out of, I think it's easy to see why scientists can often be so overzealous with the chopping block of dismissiveness. Once you consider one externally verifiable truth, however small it may seem, you have to consider other externally unverifiable ideas, like God. I don't think that science arose out of a hatred for religion, but I do think Protestantism and the scientific method were born in the same time period for a reason. There was a great need to, for lack of better words, just have someone cut the crap and tell the people what is, so

they can get by. Of course, the question remains as to whether this is still needed. Is overzealous dismissiveness a vestigial organ that should be done away with? That's a question for another discussion.

NE1 (2009-01-14 22:45:53)

You have focused in the past on the importance of idea generation, and I think we continue to (ahem) disagree there. For dismissing studies and concerning the meta-analysis, what do you think Tyler would say? I expect he would ask, "What is the relevant scarcity here?" and of course it is time not ideas. A blue ribbon panel of scientists doesn't have time to go through every single study ever published with a fine-toothed comb. They have justified to themselves and to readers their interest in several studies they think might be important or likely to be in error; now they can move forward and give them their full attention. Today's skeptic-blogs often remark that our brains are association-making machines, having evolved to problem-solve and form superstitions at the smallest darting shadow. Being a scientist requires wise application of this machine after winnowing the field with your analytical brain. That is what is happening here.

milieu (2009-01-17 08:43:59)

I agree a lot with this argument. I have observed the same change in behavior in me as I go 'deeper' into the scientific method of being extremely critical bordering on dismissive of other people's viewpoint while I started with what you called as the appreciative mindset. However, one thing I think the dismissive mindset might help is in allowing you to focus on the stream of ideas that you are interested in. There are so many questions to answer and everyone has a limited cognitive capacity. So by being dismissive, I may just be preventing myself from wasting my time in ideas where I might contribute little and can work with peace on what I am interested in.

Killing Zombies in my Unconscious Mind with Cutting-Edge Military Doctrine as a Guide « Mike Kenny (2011-11-24 05:01:31)  
[...] The Power Law of Scientific Dismissiveness by Seth Roberts [...]

## **Better Sleep, Fewer Colds (2009-01-15 14:13)**

In my [1]long self-experimentation paper I described how I stopped getting colds when my sleep improved due to more standing and morning light. It was easy to notice: Everyone around me was getting sick and I wasn't. In Beijing this winter the same thing happened: Lots of people around me got colds – a friend of mine was even hospitalized – but I didn't. This winter I continued to get lots of morning light – I cared enormously that my apartment was on the sunny side of the building – but in place of standing for 8 hours or more every day [2]I stood on one leg four times (left leg twice, right leg twice) until exhaustion.

Plenty of other evidence links better sleep with better immune function. The latest comes from the [3]Archives of Internal Medicine. In a survey-like experiment, researchers measured the sleep of subjects with a questionnaire for two weeks and then brought them to an isolation unit, exposed them to a cold virus, and waited to see if they developed a cold. Subjects who slept better were less likely to get a cold. It was a big effect: "Participants with less than 7 hours of sleep [per night] were 2.9 times more likely to develop a cold than those with 8 hours or more of sleep [per night]." I rarely sleep 7 hours but wake up feeling plenty rested, which suggests that my sleep is deeper than average.

Overall, I'm happy for the support of my findings. Better sleep has a three-fold benefit: you feel more rested (short term), you get colds less often (medium term), and your risk of heart disease goes down (long term). The morning sunlight I get corresponds to sitting outside in the shade for about two hours; the standing takes a total of about 40 minutes/day (with your leg bent most of the time). I usually watch a movie or TV at the same time and always look forward to it.

Thanks to David Cramer.

1. <http://repositories.cdlib.org/postprints/117/>
2. <http://www.blog.sethroberts.net/2008/08/20/why-did-i-sleep-so-well-directory/>
3. <http://archinte.ama-assn.org/cgi/content/full/169/1/62>

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Nadav Manham (2009-01-16 06:09:48)

Hi Seth, Is there a way to prove that better sleep caused fewer colds rather than that more standing + sunlight themselves directly caused fewer colds? Nadav

seth (2009-01-16 11:16:36)

Two causal pathways (more sunlight -> better sleep -> fewer colds and more standing -> better sleep -> fewer colds) are supported by plenty of other evidence. The causal pathways more sunlight -> fewer colds and more standing -> fewer colds are supported by no evidence that is inconsistent with the first pathways.

Nadav Manham (2009-01-16 17:52:37)

Got it. Thanks, Seth.

VeganKitten (2009-01-16 19:51:31)

More/better quality sleep may decrease body fat and guard against diabetes, as well. See first + last posts in this thread for links: <http://boards.sethroberts.net/index.php?topic=6771.msg78886#msg78886> I'm sold... I just have to enforce my schedule.

Seth's blog » Blog Archive » Chinese Medicine and Sleep (2009-01-16 22:15:16)

[...] Better Sleep, Fewer Colds [...]

Nansen (2009-01-17 17:22:09)

The morning sunlight I get corresponds to sitting outside in the shade for about two hours Does "corresponds" mean you actually sit outside, or that you are using a fluorescent light that's equivalent in intensity? And, as a side issue, are you getting the "face time" within this two-hour period? Thank you.

seth (2009-01-19 00:49:44)

Yes, I actually sit outside. Sometimes I get face time during this period. It might be better to get it before this period.

## Chinese Medicine and Sleep (2009-01-16 22:15)

An American friend told me about one of his experiences with Chinese medicine – what is called in America "Traditional Chinese Medicine." He had some sort of infection that caused skin near his stomach to be damp. He tried many solutions. None worked. Then he went to a Chinese medicine doctor who prescribed certain herbs to be ingested. In a week he was better.

My take on this is that the herbs increased the sensitivity of his immune system, which then detected and got rid of the infection. Such infections are rare, of course, so rare I don't know their name. The existence of such an infection was a sign his immune system was working very poorly. I asked my friend about his sleep. His sleep was terrible. Highly irregular. It is telling that the Chinese doctor didn't tell him to improve his sleep, which would have vastly improved his health and reduced his future visits to the doctor.

It was a new idea to me that Chinese herbs – at least some of them – work by boosting the immune system. It makes sense: detection of some invaders should make you more sensitive to other invaders. One implication of this view is that it hardly matters which herb you take so long as it is new. My friend told another story in which his Chinese doctor changed the herbs every week or so, supporting this idea.

It was a new idea to my friend that bad sleep was causing his immune system to work poorly. My experience with colds, as mentioned [1]last post (when my sleep improved they disappeared), means that the fact that colds are "common" implies we are a nation of poor sleepers. And, indeed, [2]sleep problems are very common. A few years ago, I learned about a course about epidemics taught at the UC Berkeley School of Public Health. I knew the professor. I asked him if the course would cover environmental factors that cause the immune system to work better or worse. No, he said. Half the subject, ignored. Just as economists rarely study innovation and statisticians rarely study how data generates ideas.

More Supporting the idea that ingesting strange but harmless substances can improve immune functioning, I found [3]this in the latest issue of the Journal of Nutrition:

Caseins and whey proteins are the 2 major protein fractions of cow milk. Whey proteins are separated from casein curds during the cheese-making process. The major proteins present in bovine whey come from the mammary gland that secretes  $\beta$ -lactoglobulin ( $\beta$ -LG),  $\alpha$ -lactalbumin ( $\alpha$ -LA), and glycomacropeptide (GMP), and from serum, like IgG1 and IgG2, IgA, IgE, and IgM and albumin. Besides their use in functional foods, whey protein products, and more specifically whey protein-derived products, have been shown to be efficient in certain pathologies. For instance, whey proteins inhibited gastric ulcerative lesions induced by ethanol or indomethacin, inhibited chemical-induced malignancy in mice, improved bone loss of ovariectomized rats, and reduced hyperglycemia in type 2 diabetic patients (15). Moreover, in vitro and in vivo studies have demonstrated modulation of immune functions by several whey protein-derived products (6,7). As examples,  $\beta$ -LG, the most abundant protein in whey (55% of total whey proteins), stimulates the proliferation of murine spleen cells and lamina propria lymphocytes (8,9). It is also useful to stress that researchers have shown that probiotics expressing  $\beta$ -LG can be used to manage food allergy (10). The 2nd most abundant whey protein,  $\alpha$ -LA (15% of total whey proteins), modulates macrophage and B- and T-lymphocyte functions (11). Moreover, the  $\alpha$ -LA-derived peptide f51-53 directly affects neutrophils (12). The 3rd most abundant whey peptidic component, GMP, can affect immunity and attenuate inflammatory colitis in rats (6,13,14). At optimal concentrations, the other bioactive whey-derived proteins like Ig and lactoferrin present in whey protein extract (WPE) can also exert immune modulatory functions (6,7).

I didn't know this—that ingesting milk products had good effects on immune function. That probiotics can be used to manage food allergies isn't explained by the idea that foreign substances make the immune system more sensitive.

1. <http://www.blog.sethroberts.net/2009/01/15/better-sleep-fewer-colds/>

2. <http://www.blog.sethroberts.net/http://www.sleepfoundation.org>

3. <http://jn.nutrition.org/cgi/content/full/139/2/386>

spacenookie (2009-01-16 23:38:45)

In a similar vein, the "Damn Interesting" website did a nice article on Coley's Cancer-Killing Concoction which worked on the principle of stimulating the immune system to fight cancer.

Aaron Blaisdell (2009-01-17 10:20:19)

Health benefits derived from milk products is vastly increased when raw milk (i.e., non-pasteurized) is used. The Weston Price foundation (<http://www.westonaprice.org/>) describes this in detail. I've switched to consuming raw milk and cheese derived from raw milk every day. I also started drinking Kefir which contains a compliment of pro-biotics. One thing I've noticed is a great reduction in gas and sensitivity of the stomach.

seth (2009-01-17 10:58:06)

Very interesting. Raw milk obviously has more of what our immune system is designed to protect us against. Perhaps modern too-clean food tends to put our immune system to sleep. Just as modern conveniences may cause us to get too-little exercise.

mike kenny (2009-01-17 11:23:52)

hm, i wonder how shepherd versus farming cultures fared against colds, if shepherd cultures drank more milk.

mike kenny (2009-01-17 11:25:53)

milk also might put you to sleep, as has been discussed on this blog before, and kids tend to consume it. kids are notoriously sensitive to colds, so they'd maybe need something to help them bolster their immune system-sleep and introduction to novel stimuli to keep their immune system on its toes, both possibly provided by milk.

Tom (2009-01-17 15:54:35)

Seth, I don't have the link, but within the past year there has been interesting research that humans with tapeworms have fewer allergies. The researcher hypothesized that there is something in the tapeworm that suppresses immune response in the host to enable the tapeworm to stay unmolested. The host gets the benefit of reduced allergies to pollen, pet dander, etc. By self-experimentation, he found that a few tapeworms is the correct "dose" for maximum relief from allergies. More than that and he felt sluggish. He tried it on people who wanted to own cats but couldn't due to allergies - it worked, and at the end of the trial, most declined the drug that would kill the tapeworm!

Aaron Blaisdell (2009-01-17 17:06:29)

Seth, My understanding of the literature is that raw milk, like other naturally occurring foods, actually doesn't have more of what our immune system was designed to protect against. But raw milk can be collected under unsanitary conditions allowing the promotions of bacteria. Such contaminated milk has bacteria (foreign particles) that can be unsafe for humans. But the milk itself if not contaminated does not contain dangerous compounds that our immune system would try to take care of. Pasteurization kills bacteria and thus drastically reduces the potential for consuming contaminated milk. But we must be careful to distinguish between the natural constituents of the raw milk itself and foreign contaminants.

seth (2009-01-17 20:57:02)

Tom, thanks for reminding me of the tapeworm research. My interpretation is that the tapeworm was constantly excreting a small amount of foreign substances into the blood and this caused the action threshold of the immune system to be raised. So long-term exposure to foreign substances raises the threshold. Whereas the Chinese herbs, taken for less than a month are an short-term effect that lowers the threshold. Aaron, I meant that raw milk has a lot more live bacteria than pasteurized milk.

Suertes (2009-01-18 09:04:09)

Chinese customs recommend good sleep habits (early to bed, consistent and long) to deal with all sorts of low-level health problems that we lump together as 'heatiness'. Common colds are often attributed to heatiness as well. For instance, I have tended to sleep late, at 2-3 am most days, and I'm paying for it with an endless stream of mouth ulcers, which are another symptom of 'heatiness'. I guess what heatiness really means is a general reduction in one's immunity. So the custom squares

with your theory..

Mark (2009-01-18 20:43:12)

"He had some sort of infection that caused skin near his stomach to be damp." I think before one speaks about whether a certain treatment worked, and why, the first step is establishing whether a person really has a medical problem, or whether they are a psychosomatic nut case. "Some sort of infection"? "Damp stomach skin"? Let's get a real diagnosis first. Damp stomach skin is an non-existent condition.

seth (2009-01-19 07:35:20)

Mark, it was a red rash with discharge located near the belly button.

Cosinensis (2009-12-23 01:35:28)

For the treatment of sleep disorders, Chinese herbs can be quite effective. However, due to the high number of different herbs and different types of sleep disorder, it is quite difficult to find the right herb.

### Assorted Links (2009-01-17 15:52)

- [1]self-experiment about sleeping much less
- [2]economics of yoga
- [3]Guess the CME (Continuing Medical Education) Sponsor (psychiatry)

1. <http://jboyko.com/?p=185>

2. <http://nymag.com/news/features/2007/profit/32892/>

3. <http://carlatpsychiatry.blogspot.com/2008/12/current-psychiatry-guess-cme-sponsor.html>

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AG (2009-01-17 16:40:15)

First link broken:(

Pietr (2009-01-17 16:40:42)

Tea link not working.

seth (2009-01-17 19:46:44)

Pietr, the blogger erased that entry. To concentrate on music.

Andi Sidwell (2009-01-18 05:36:26)

I have a friend who's just switched to polyphasic sleep and is doing quite well with it. There's another blogger who tried it for 120+ days that you may be interested in, too: <http://www.stevepavlina.com/blog/2005/10/polyphasic-sleep/>

seth (2009-01-18 05:54:42)

Thanks, Andi. I hope a polyphasic sleeper will measure the effect of the sleep change on health.

Matt Goff (2009-01-19 02:47:02)

You might also be interested in taking a look at [1]<http://www.puredoxyk.com/>. The author of that site first did the 'uberman' schedule in 1999 for 6 months. Subsequently she says she has lived for 2+ years on an 'everyman' (a core sleep at night, with

naps during the day). She's written a book (available for download from Lulu.com) about her experiments/experiences and those of others she has talked to. That said, I don't see that she has specifically noted the effects on her health, certainly not any systematic way, except that it doesn't seem to have impacted her health in a negative way. Given some of your past comments on other subjects, you might also be interested in her response to an attack on Polyphasic sleep (see the right sidebar entry titled "An attack on polyphasic sleep")

1. <http://www.puredoxyk.com/>

Matt Goff (2009-01-21 01:17:20)

A follow up to what my previous comment. I purchased/downloaded the book and have now read it. I found it very informative and interesting and thought I would mention some things that seemed relevant/related to the content of this blog. She does discuss her health with respect to polyphasic sleep. She says she gets sick less often now than when she did when monophasic, though acknowledges that could be due to other changes she has made. She says she has not had a cold in over a year, though she doesn't link this directly to her sleep schedule. When she has gotten sick (or even felt her immune system ramping up to fight off illness) while on a polyphasic schedule, she has found a little extra sleep to be very restorative, much more so than when she was on a monophasic schedule. That is, it takes less sleep to have the same restorative effect as she would have gotten with extra sleep while on a monophasic schedule. Another thing I found interesting was one of the primary motivations she had for experimenting with the 20 minutes of sleep every 4 hours schedule in the first place (back in 1999) was severe insomnia and other significant sleep disorders that made sleeping very unpleasant. She was desperate and did not want to take drugs, so the suggestion of a friend to try the 'Da Vinci schedule' seemed worth trying. Her sleep problems pretty much went away when she adapted to the sleep schedule, and after she returned to a monophasic sleep schedule 6 months later, they did not return. Her theory is that making such a radical switch wipes the slate clean (so to speak) and rewrites one's sleep schedule in a strict (and stable) way. It was also interesting to note that when she planned to switch to a polyphasic schedule the second time, she offered to volunteer as a subject to sleep clinics and sleep-research department heads so they could investigate the adaptation process. She was surprised when none of them were interested.

### **Beijing Shopping (stuff easy to get in Beijing but not Berkeley) (2009-01-18 07:56)**

Jane Jacobs said that one measure of a healthy economy is the choice it provides. A healthy economy provides abundantly at affordable prices; an unhealthy economy does not. Another sign of economic health, she said, is innovation: A healthy economy includes a constant stream of new products – nothing lasts forever. People in Norway are far richer than people in China right now, but what will Norwegians do when the oil runs out?

In contrast, my Beijing shopping revealed that Chinese entrepreneurs have been able to develop products that the rest of the world will want to buy.

1. Electric bikes. They're everywhere in Beijing. They cost \$200- \$400 and a few cents per mile, far cheaper than gas. I would have brought one back to Berkeley but inability to fix it stopped me.

2. Keyboard covers for laptops. Transparent silicone plastic. Easy to clean. How did I live without one? These are a new product in Beijing, actually, but they are very cheap, about \$1. I can find them for sale on the internet for about \$15.

3. Cordless floor sweepers. They use a rotating brush to clean the floor instead of a air pump, as a vacuum cleaner does. That they are cordless makes them very easy to use. In Beijing they are obvious and attractive; I bought two and brought one back to Berkeley. In America I'd never seen them for sale but after I knew they existed I managed to find an unattractive one in Berkeley hidden deep in a hardware store. The price (about \$50) was roughly the same in Beijing and Berkeley, except the Beijing models are much nicer.



I don't think it's a coincidence that all three products are "environmental" broadly conceived. Beijing air is dirtier than Berkeley air; my keyboard cover and my floors get dirty a lot faster in Beijing than in Berkeley. I think they are a sign of hugely-important things to come – China inventing and selling the products we need for a cleaner world. It's been called [1]the next industrial revolution; a better name would be the second half of the industrial revolution in which we clean up the mess left by the first half. As Jane Jacobs often said, the problem is not too many people, the problem is the undone work.

1. <http://www.theatlantic.com/doc/199810/environment>

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mike kenny (2009-01-18 13:24:53)

i wonder how much the differences in chinese to american culture have to do with contagion—one thing was popular early on and everyone adopted it and didn't look for an alternative.

Mark (2009-01-18 20:28:20)

Keyboard condoms are ubiquitous in Japan. They have them for popular mice designs also.

Mark (2009-01-18 20:34:36)

By the way, I've also seen the sweepers, but they aren't popular because they really only work well on carpet, and then only if you have expansive empty areas to accelerate them "up to speed." So in other words, Japanese living quarters aren't ideal for them. In Japan you may have little paths less than a meter wide snaking through your house, with furniture or boxes or other clutter taken up the rest of the room. Small electric vacuum cleaners are more practical for reaching under all this stuff.

Mark (2009-01-18 20:39:09)

On electric bikes, they're expensive in Japan compared to the normal kind, so they're not that popular, but every time I see one I wonder if it wouldn't be better to have lower gears on the bike. Japanese bikes are 1 gear most of the time (at most 2 or 3). This is great for getting a workout, but if it's a strain for someone, rather than an electric bike, how about a 5- or 10- or 15-speed bike? Maybe the market is older people for whom derailleurs are technologically too complex?

seth (2009-01-19 00:24:42)

Mark, my electric sweeper works great in my Berkeley apartment. As for electric bikes, in Beijing they are ridden by lots of young people.

david (2009-01-19 12:12:10)

Is this the laptop cover you're talking about? [http://cgi.ebay.com/universal-Notebook-laptop-Keyboardskin-cover-protector\\_W0QQitemZ250347842907QQcmdZViewItemQQptZPCA\\_Laptop\\_Accessories?hash=item250347842907&\\_trksid=p3286.c0.m14&\\_trkparms=72%3A1234|66%3A2|65%3A12|39%3A1|240%3A1318|301%3A1|293%3A1|294%3A50](http://cgi.ebay.com/universal-Notebook-laptop-Keyboardskin-cover-protector_W0QQitemZ250347842907QQcmdZViewItemQQptZPCA_Laptop_Accessories?hash=item250347842907&_trksid=p3286.c0.m14&_trkparms=72%3A1234|66%3A2|65%3A12|39%3A1|240%3A1318|301%3A1|293%3A1|294%3A50)

seth (2009-01-19 19:22:24)

yes, that's an example of the universal cover, which works fine.

Nathan Myers (2009-01-19 21:04:37)

Does this mean you're "back", or just in town for a visit?

## How Things Begin (sparkling tea) (2009-01-18 21:24)

Today, at the Fancy Food Show in San Francisco, I learned about [1]Golden Star White Jasmine Sparkling Tea, the most new interesting product at the show (out of thousands). I asked the CEO, Edward Carden, how it came to be. He said he was helping his parents move several years ago when he thought: Why isn't there a sophisticated non-alcoholic beverage? Like wine, but non-alcoholic. Starting with the best ingredients, what could they come up with? They could make stuff that tasted great, but there was an arbitrariness to it. Making a tea allowed them to connect with that heritage. Wine has a heritage, beer has a heritage, cheese has a heritage. They start by infusing tea leaves, then add sugar and microorganisms and ferment for a short time to develop complexity of flavor. The fermentation produces a small alcohol content. Call it a microwine. It was delicious.

1. <http://www.goldenstartea.com/>

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Patrik (2009-01-20 22:10:04)

GSWJST looks tasty. It also appears to be a very, very sophisticated version of a tea-flavored soda.

Ben C (2010-01-05 11:58:45)

Sounds suspiciously like kombucha, which is a drink with a long history (and has been available at Whole Foods for at least a few years).

## How I Will Judge the Inauguration Speech (2009-01-19 20:15)

By this: Did he tell good stories? Did he tell stories that actually supported his points? This is hard to fake. It was easy for Dr. Eileen Consorti [1]to tell me that studies existed to support her surgery recommendation but – the hard part – she never supplied those studies, probably because they don't exist. Pronouncements are easy, stories hard. It's easy to say X and Y ("we will . . . this is a time of . . . ") but if X and Y are just wishful thinking it won't be easy to come up with a decent story – or any story – that supports them. If Obama understands how the world works, he should be able to tell stories that support his views.

Lyndon Johnson was a great politician and an excellent storyteller. Presidents since Johnson have been worse politicians and worse storytellers. Obama's current popularity may reflect something in us rather than something in him. Right after 9/11 George W. Bush enjoyed enormous popularity. His speeches at that time, at least those I heard, contained no stories, which I think revealed that he understood little or nothing about the situation. (I would have told stories about overreaction.) The dismal outcome was foreshadowed. His popularity at the time was due to [2]something in us, not something in him.

More The speech contained about one-quarter of a story. My expectations are hereby lowered.

[3]Lack of stories at a high school graduation.

1. <http://www.blog.sethroberts.net/2008/09/13/the-case-of-the-missing-evidence/>

2. <http://www.blog.sethroberts.net/2008/12/15/how-bad-is-ldl-cholesterol/>

3. <http://www.blog.sethroberts.net/2008/05/30/high-school-graduation-confidential-lack-of-stories-speaks-volumes/>

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Nathan Myers (2009-01-19 22:21:39)

Reagan told stories. He was a lousy president until he began to go senile, and began repudiating much of what he had stood for. His stories, as appealing as they were to many Americans, were very frequently the sort that would be called lies if we told them ourselves. What is a lie, after all, but an appealing story that misrepresents the facts? Bush's failures in storytelling reveal not that he couldn't come up with a decent story, but that he couldn't even be bothered to come up with a decent lie. That's contempt.

seth (2009-01-19 22:31:16)

What I remember about Reagan's stories is that they were often wrong, as you say, and simple-minded. Not my idea of good stories.

mike kenny (2009-01-20 12:30:06)

I suspect lots of people thought Reagan's stories were good stories. Given we can be slaves to confirmation bias, it seems one man's good story is another man's crap story. I suspect we go with what sounds right to us. Someone who is conservative and has perhaps his whole life looked for evidence of conservative stories being true, will easily believe Reagan, and likewise, someone who has been a life-long liberal will have gathered much evidence on the contrary. I don't think this is necessarily a bad thing though. Lawyers argue against each other, and it seems usually they are providing counter-narratives. If the legal system uses this approach to determine issues of grave importance, perhaps it's fine in government too. We craft plausible narratives and counter-narratives until one seems to win the debate as most people sign on to it, or something like that. I recently discussed [1]herenarratives in response to Robin Hanson asking me to give evidence favoring fiction as a good means of theorizing comparable to other theorizing.

1. <http://michaelkenny.blogspot.com/2009/01/evidence-of-fictions-possible.html>

david (2009-01-20 20:49:43)

I'd say Regan was a lousy president in that I don't agree with his policies, priorities, and values. However, he was an effective president in convincing people to go along with his agenda. I'm sure the story telling was part of that effectiveness. What's interesting about Obama is that he combines intellect, emotional maturity, and rhetorical ability in a way that's rare. Also, regarding stories, see George Lakoff's (linguistics professor at Berkeley) work on narratives and framing as an explanation of why progressives had been loosing elections they should have won. Obama seems especially good at reframing the debate...his inaugural speech did it repeatedly. I can't describe the relief I felt when I heard Robert Siegel refer to him as "President Obama" for the first time.

Patrik (2009-01-20 22:14:38)

*What I remember about Reagan's stories is that they were often wrong, as you say, and simple-minded. Not my idea of good stories. So, now tell us a story that supports your points of Reagan stories being wrong and simple-minded. Obama's current popularity may reflect something in us rather than something in him. Obama, nebulous? Taking on any form he wishes? Nah.....*

seth (2009-01-20 22:18:39)

Patrik, perhaps you could first tell a story that Reagan told that wasn't simple-minded.

Nathan Myers (2009-01-20 23:02:50)

... for extra points if it wasn't wrong too.

John S. (2009-01-21 02:35:13)

So Seth what did you think? I personally thought the speech was pretty insipid. I was watching the coverage on the NY Times website and saw people in the audience yawning. As to your comments to Patrik above, you (and some other commenters) made a claim. Patrik is asking you to back it up. Instead, you turn around and say no, you try to disprove our claim. Is Dr. Eileen Consorti reading this? Maybe what she should do is follow your example, and ask you to provide her with the data that disproves her surgery recommendation.

seth (2009-01-21 13:22:38)

I didn't like Obama's speech. Too predictable. It would be nice if he understood how the world works better than the rest of us, but apparently not. Philip Weiss didn't like it either - [1]he gave it a B- - but, obviously wishing it had been better, [2]he later raised the grade to B+/A-. Grade inflation. If I said " $2 + 2 = 4$ " and you said, "prove it" I would think you must have some special knowledge (or special delusion). It's what you knew, not what I knew, that would be interesting. So I would ask for a counterexample. In an article in The New Yorker, Veronica Geng called for regular Stanford-Binet testing of President Reagan. The data that makes me think Dr. Consorti is wrong are the results of the searches that both I and my mom (who specializes in this sort of literature search) did to find the studies Dr. Consorti claimed existed. We came up empty. Dr. Consorti had told me the studies would be easy to find.

1. <http://www.philipweiss.org/mondoweiss/2009/01/oracular-obama-spends-a-bit-of-political-capital-on-the-posttribal-future.html>

2. [http://feedproxy.google.com/~r/Mondoweiss\\_Posts/~3/Zv0ap33U09Q/i-was-wrong-about-obamas-speech-and-jack-r-oss-is-right.html](http://feedproxy.google.com/~r/Mondoweiss_Posts/~3/Zv0ap33U09Q/i-was-wrong-about-obamas-speech-and-jack-r-oss-is-right.html)

Patrik (2009-01-21 17:06:53)

*Patrik, perhaps you could first tell a story that Reagan told that wasn't simple-minded. Tsk tsk tsk. Seth, I am surprised at you. Your response is almost childlike, and not to mention very ironic. You won't follow your own advice!? Well, if that is the case so, you could have written this about yourself: It was easy for Seth Roberts to tell me that Reagan's stories were simple-minded and wrong but the hard part he never supplied any evidence for such an assertion, probably because it doesn't exist. Pronouncements are easy, stories hard. It's easy to say X and Y (we will . . . this is a time of . . . ) but if X and Y are just wishful thinking it won't be easy to come up with a decent story or any story that supports them.*

seth (2009-01-21 20:17:40)

Patrik, my paragraph about  $2 + 2 = 4$  has the evidence you asked for.

John S. (2009-01-22 04:33:03)

So you're saying the idea that Reagan was a dunce is self-evident, like  $2+2=4$ . So obvious that you don't have to provide any evidence for it. I'm sure that in Dr. Eileen Consorti's world, the idea that you need surgery for a small hernia is also self-evident. Maybe she read it in the New Yorker. Or is this all just a self-experiment in hypocrisy? If so, it seems to be a smashing success!

Patrik (2009-01-22 16:25:54)

Seth, You know full well that: *an article in The New Yorker, Veronica Geng called for regular Stanford-Binet testing of President Reagan.* is not the rhetorical equivalent to  $2 + 2 = 4$ . John S. poignantly check-mated you on your maddening hypocrisy, which I find a bit disheartening (your hypocrisy, that is) as I find your blog very interesting and find you willing to challenge many mainstream ideas, usually rationally. There are many things you and I do not agree on, which does not bother me in the least bit (and why I continue to read your blog), but you, hypocritically, not being able to overcome your severe political biases and rationally address the issue at hand is disappointing to say the very least. You also did the same here: <http://www.blog.sethroberts.net/2008/12/15/how-bad-is-ldl-cholesterol/>

John S. (2009-01-22 18:37:30)

You know, I'm not even saying that Reagan's stories weren't a bunch of lies. I just did a Google search on "Reagan's lies" and came up with a number of stories you could have mentioned when Patrik asked you. For example, Reagan is supposed to have claimed that he was a photographer in WWII and one of the first to photograph the Nazi concentration camps

- when the truth is that he never left Hollywood during the war. That's what it says on the internet at least, but maybe Patrik is able to debunk this. Perhaps Reagan never said this at all. I don't know. I don't believe everything I read on the internet, nor would I believe everything I read in the New Yorker (if I ever actually read it outside my dentist's waiting room). My guess is that because you perceive Patrik to be a conservative, you feel you can dismiss whatever he says. That's too bad, Seth, because I'm sure there are a lot of people who dismiss self-experimentation as a load of self-delusional crap, and would just as easily dismiss you and your ideas out of hand. What a disappointment to find feet of clay on one of my blog heroes.

seth (2009-01-23 12:01:43)

Nothing to do with politics. William Buckley, the noted conservative, told the following joke: What do you get when you combine Ronald Reagan and Marlon Brando? Answer: Rebel Without a Clue.

Patrik (2009-01-23 15:33:03)

*What a disappointment to find feet of clay on one of my blog heroes.* Could not have said it better myself. Your hypocrisy, evasiveness and unwillingness to address the issue speak volumes and disappoint us. Ultimately you are no different than those who claim **X is Y, sheesh, everyone knows that therefore I will not bother backing it up.** A variant of the ad populum and ad verecundiam fallacies.

Tom in TX (2009-01-27 15:12:21)

Seth, when did Buckley make this joke about Reagan? It would have a much different meaning in 2008 than in 1968.

Tom in TX (2009-01-27 15:24:59)

Since I started paying attention to politics (early 1970s), IMHO Reagan was easily the best President. All the others (Nixon, Ford, Carter, Bush, Clinton, Bush) are in a close race for last.

seth (2009-01-27 16:59:55)

The article that reported Buckley's joke appeared around 1990. So I guess the joke was made around 1985-1990.

christopher molineux (2009-03-09 20:45:15)

If you want to see some constructive analysis on the inauguration speech there's a pretty good piece at: <http://psworkbench.blogspot.com/> called "5 reasons why you shouldn't speak like Barack Obama"

## **Powdered Ice Cream (2009-01-20 18:12)**

At the Fancy Food Show, [1]Kriss Harvey, a pastry chef and frozen dessert solutions specialist, served me a spoonful of powdered chocolate ice cream, his invention. It looked like chocolate ice cream but it tasted unlike any ice cream (or any food) I've ever had. It was there and not there. It was in my mouth and then it was gone. It was the most ethereal food I've ever had.

We had been talking about [2]El Bulli, the Spanish restaurant of experimental food. Two friends of Mr. Harvey's had worked there one summer and had come back complaining about the food (rabbit ears) and the workload. Just because people will pay a lot for your unusual food doesn't mean you are advancing things, said Mr. Harvey. Maybe your food doesn't taste very good. He pointed to a certain now-forgotten fad among New York dessert chefs a few years ago. That's fashion, I said; it has a perfectly good purpose (to support experimentation). Then Mr. Harvey served me his powdered ice cream. Which was more memorable and impressive than anything I had at [3]Alinea, an American version of El Bulli.

1. <http://www.advancedgourmet.com/>
2. [http://en.wikipedia.org/wiki/El\\_Bulli](http://en.wikipedia.org/wiki/El_Bulli)
3. <http://www.alinea-restaurant.com/>

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UncleLongHair (2010-10-17 05:18:28)

At the air and space museum in Washington DC you can get freeze dried ice cream, which is presumably something the astronauts brought with them into space (freeze dried to make it lightweight and non-perishable). I wonder if this is the same thing as Mr. Harvry's "powdered" ice cream? It sounds the same - it melts in your mouth in the most literal sense, once it hits saliva it disappears, leaving behind the creamy mouth feel of ice cream.

### **Unforgettable Drink at the Fancy Food Show (2009-01-20 23:20)**

Pistachio saffron milk. A just-released product from [1]Ajmera Innovations. Sort of a step up from pomegranate soda and a dozen other high-end drinks, just as pomegranate soda was a step up from Coke and Sprite.

1. <http://www.ajmerainnovations.com/>

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Nirav (2009-01-23 13:14:39)

I just wanted to say thank you got the nice comment on our newest product. It seems that we got similar responses from many show guests.- Nirav

### **Probiotics and Your Immune System (2009-01-21 08:22)**

At the Fancy Food Show, five or six booths sold probiotic foods, usually yogurt. At each booth I asked what they could tell me about the health effects of probiotics. Mostly the question seemed to annoy them – especially the employees hired for the event.

But at the Oixos booth – Oixos is a Greek yogurt made by [1]Stonyfield Farm, an organic dairy in New Hampshire – Amy Plourde, a graphic designer at Stonyfield, told me that for a long time she was "always sick" with sinus infections, colds, and even mononucleosis. During that time, she ate yogurt once/week. When she started working at Stonyfield she began to eat yogurt once/day (6 oz. at breakfast) and her health got much better. Stonyfield yogurt has relatively high amounts of live bacteria. Their website has [2]a list of scientific papers about yogurt and the immune system.

My take is that our immune systems need a steady stream of foreign pathogens (e.g., bacteria) and pieces of pathogens (e.g., bacterial cell walls) to stay "awake". When your immune system is working properly you fight off all sorts of bacteria and viruses without noticing. When your immune system isn't working properly it overreacts (allergies) and takes too long to react (infectious diseases). [3]Weston Price found twelve communities eating traditional diets whose health was excellent. Their diets varied tremendously but one thing they had in common was daily consumption of

fermented foods, including cheese, kefir, sauerkraut, and fermented fish. This supports Amy's story right down to the dosage. If you don't eat fermented foods, you might use [4]hookworms, which excrete a steady stream of foreign substances into the blood. (Thanks, [5]Tom.) Hookworms definitely reduce allergy symptoms; I don't think anyone has asked if they reduce colds and other infections.

[6]The hygiene hypothesis.

1. <http://www.stonyfield.com/>
2. <http://www.stonyfield.com/Wellness/ProbioticFAQs.cfm>
3. <http://www.soilandhealth.org/02/0203CAT/020305ppnf/price.html>
4. [http://www.nytimes.com/2008/07/01/health/research/01prof.html?\\_r=1&pagewanted=all](http://www.nytimes.com/2008/07/01/health/research/01prof.html?_r=1&pagewanted=all)
5. <http://www.blog.sethroberts.net/2009/01/16/chinese-medicine-and-sleep/#comment-260637>
6. [http://en.wikipedia.org/wiki/Hygiene\\_hypothesis](http://en.wikipedia.org/wiki/Hygiene_hypothesis)

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Aaron Blaisdell (2009-01-21 21:17:28)

Very interesting. I started about a month ago to drink Kefir every evening after dinner and eat yogurt—from Stonyfields coincidentally, almost every morning for breakfast. I also started eating raw-milk cheese almost every day. My last cold was in October, 2008. During the winter break, many of my friends and family got the common cold, but not me. Over the last two weeks, both of my daughters were so sick with the cold that they had to stay home from day care. During that time, I had slight body aches and a slight disregulation of internal body temperature for two evenings in a row. Both nights, I went to bed earlier than usual and woke up feeling refreshed and healthy. After the second evening I was completely better again. I think I must have caught the cold from my family but fought it off very quickly and suffered only very minor symptoms. My experience is thus consistent with what Amy said. I have also, however, been taking 1/2 teaspoon daily of high-vitamin cod liver oil, 1/2 teaspoon daily of high vitamin butter oil (both a la recommendations of Weston Price to ensure adequate intake of fat soluble vitamins like A, D, and K2), and for the past two weeks 4,000 iu of vitamin D3. I've also been reducing the amount of wheat I consume, and try to only eat sprouted wheat when I do eat it at all. I do occasionally indulge in regular pizza, but only a couple of times per month. I've also switched to cooking with butter, coconut oil, or bacon grease instead of seed-based oils if I do any frying. Thus, the increase in probiotics may have something to do with my increased immunity, but these other factors may contribute as well. I generally have much higher energy levels than at any other time in my life, and my teeth feel very hard and strong (my next dental visit is next week and I'm curious as to what they will find). My skin also is very clear and healthy looking and feeling.

seth (2009-01-21 23:27:47)

Thanks for the details, Aaron.

Mike W (2009-01-22 08:38:36)

This reminds me of a news item I read a couple years back, some scientist's explanation of the purpose of the human appendix (sorry, no link). He said it isn't an accidental leftover of evolution, but rather a vital reservoir for bacteria and other foreign biostuff. As I recall, the basic idea was that in pre-civilized times diarrhea was a frequent, common human condition (due to illness and bad food). Purging the whole digestive tract like that leaves it barren of all the "helpful" bacteria it needs, but since the appendix is essentially a cul-de-sac, the gunk is still lurking there ready to re-seed the gut after the illness passes. In this hypothesis I think the purpose of the bacteria was for digestion, not immunity, but who knows.

Aaron Blaisdell (2009-01-22 11:25:27)

Mike, that's very interesting. The hypothesis is that the appendix contains the starter culture to replenish the gut's beneficial ecosystem.

BBrolley (2009-01-23 07:34:34)

Art Devaney, <http://www.arthurdevany.com>, the Evolutionary Fit guy, has a different take, not that I agree, but he's always admonishing No Dairy, for instance, this statement, from Jan 20th, "Remember, there are trade offs. The ability to digest lactose does not come free. The immune system still has to respond in new ways with the load of foreign proteins in dairy. Moderate cheese intake is fine, but you do out grow you need for dairy."

What Food Does Contain Probiotics? (2009-01-23 13:06:21)

[...] Probiotics and Your Immune System Mail this post [...]

Seth's blog » Blog Archive » The Inuit Paradox (2009-01-26 22:33:21)

[...] Probiotics and Your Immune System [...]

Papin (2009-01-29 09:44:38)

I also had a positive experience with probiotic yogurt. Using the yogurt seemed to correlate with getting rid of a metal taste that had been plaguing me for over a week. For a few months I have read the debates that have surrounded your observations on the merits of samples in medicine and phycology, self-experimentation, on diets, on set points, and other difficult subjects. I appreciate them and I wish there were other scientists that would have the courage to follow your lead. In systems as complicated as humans it is often very difficult understand what matters and what doesn't, if there are any dependent variables or is everything interconnected. In these cases one may learn more from knowing many details about the subject than from having a large sample. Often, knowing what to investigate is hard and careful observation, useful. It is the return of the natural philosopher.

Ben Hyde (2009-02-01 12:19:20)

Why would eating the same industrially produced yogurt every single day was particularly challenging to the immune system?

seth (2009-02-01 13:44:41)

because it has lots of bacteria

Zeke's Awesome Eat's (2009-05-21 04:07:08)

Don't forget fatty acid balancing. While probiotics have helped my health a lot, what seems to have helped my allergies and immune system the most is keeping my omega6 intake minimal, and trying to eat as much omega 3 and EPA rich food as possible. It really helps to reduce overreactions and ailments associated with inflammation. (as do probiotics of course)

Colloidal Silver (2009-06-24 09:37:31)

Very interesting story. I usually take vitamins and natural supplements, but after reading this I will add more yogurt into my diet, especially probiotic yogurt.

George (2010-01-12 10:45:48)

The bacteria in yogurt are not "pathogens", wtf

## A Group Self-Experiment (2009-01-21 16:05)

[1]Health Month.

Thanks to JR Minkel.



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## The Wisdom of the Rest of Us (2009-01-22 14:01)

[1]On Christmas Eve I wrote there was a lot to be learned from the web comments on newspaper articles and the like that anyone can post. My point was how wonderful this was. Now the New York Times has added a feature that allows the most popular comments to rise to the top (you "show" Readers' Recommendations) [2]as I hoped. [3]For example. Way to go!

You can also find comments that the "editors" (the sub-sub editors?) recommend (show Editors' Selections). They tend to be long and querulous. I don't think I'll be using that feature much but it is good to have it for when I want long and querulous.

Still no comments allowed on The New Yorker website.

1. <http://www.blog.sethroberts.net/2008/12/24/charles-nemeroff-under-scrutiny/>
2. <http://www.blog.sethroberts.net/2009/01/11/vaccine-safety-a-debate/>
3. <http://community.nytimes.com/article/comments/2009/01/22/opinion/22qaddafi.html?s=3>

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## How Bad is LDL Cholesterol? (continued) (2009-01-22 22:50)

If LDL cholesterol level predicts heart disease then persons with low LDL should be better off than persons with high LDL. Here is what [1]some Norwegian doctors did:

They simply selected sequential patients with LDL cholesterol scores below 2.7mmol/l. . . . They ignored all people with LDL concentrations from 2.7 to 4.5mmol/l but did enroll all people with an LDL >4.5mmol . . . . So they then had two groups of people, those at catastrophic risk of LDL-blocked-arteries and those with [very] little LDL . . . They did the scheduled angiography and checked how many patients had >70 % blockage of at least two coronary arteries in each group.

Guess what: LDL cholesterol doesn't matter. They recruited 47 patients with low LDL-C, of whom 21 had significant CAD. They got 46 high LDL-C patients, of whom 24 turned out to have CAD.

Thanks to Dave Lull.

[2]How bad is LDL cholesterol?

1. <http://high-fat-nutrition.blogspot.com/2009/01/cholesterol-ldl-in-oslo.html>
2. <http://www.blog.sethroberts.net/2008/12/15/how-bad-is-ldl-cholesterol/>

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Charles (2009-01-23 00:19:56)

Hyperlipid (to which you have linked for this post) is a wonderful site. Peter writes with humor, but really takes apart bad studies ruthlessly and skillfully. You can get a great education in physiology and nutrition just by reading the archives.

### **Webware For Self-Tracking (2009-01-23 06:41)**

Zume Life will help you keep a record of many things:

The Zume Life personal health management system is now open for public beta, on the Web and via an optional iPhone application. Zume Life allows you to record, monitor and understand all aspects of your health activities. No matter what illness(es) you are managing, for yourself or a family member, or what lifestyle changes you are attempting, Zume Life can help you. Use the Zume Life solution to track:

- Medications. Any and all, from Rx to supplements to chamomile tea
- Food. Keep a food journal, and track calories, carbs, and/or points
- Exercise. Keep an exercise journal, and track exercise type and duration (e.g. run 20 min)
- Symptoms. Anything from anxiety and mood, to sleep disturbance and wheezing
- Biometrics. All common measures such as weight, glucose, etc.
- Life journal. To jot down anything else ("saw my dietician today", "just had a great day", etc.)

Monitor your progress through charts and journals. Use the system directly on the Web, or with an optional "Zuri" iPhone application. Sign up at [1][www.zumelife.com](http://www.zumelife.com).

1. <http://www.zumelife.com/>

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Austin (2009-01-26 19:02:55)

Have you ever thought of writing a how to guide on self experimentation? I know I would buy it. Just seeing how you go through the thought process and how you set up basic statistics would be awesome. Anyway I didn't find much on the web explaining how to do it.

seth (2009-01-26 20:36:12)

Austin, thanks for the suggestion. If you want to do it I suggest you study the 10 examples in my long paper on the subject: <http://repositories.cdlib.org/postprints/117/> The statistics are not a big deal. When the data is graphed it usually is clear what the right conclusion is.

Harry (2009-02-07 22:01:37)

I will need to check these out. Currently I use the exercise tracker at MedHelp.org. They have about 20 of these. Easy to use and free. [www.healthtrackers.com](http://www.healthtrackers.com)

## Butter: Bad or Good? (2009-01-23 06:57)

At the Fancy Food Show, I heard someone say that the better a food tastes the worse it is for you. "What's an example?" I asked. "Butter," he said. "It goes straight to your arteries."

What a choice. I have three pounds of very expensive butter in my freezer, purchased from an Amish farmer who raises grass-fed cows. I eat it as often as possible. I believe butter may have fat-soluble nutrients we need to be healthy, nutrients that are found in high concentration in growing plants (such as grass) but not in ordinary animal feed. In the Swiss Alps, in the 1930s, Weston Price found small communities that produced almost all the food they ate. Because of the altitude, they couldn't produce much. They did have grass-fed cows and prized the butter from those cows. They were in much better health, especially dental health, than their neighbors who ate mostly industrial food.

There was a time, long ago, when exactly the opposite of the overheard statement was true: The better a food tasted the better it was for you. Now it is complicated.

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John (2009-01-23 09:47:52)

It seems to me the person you spoke with is not to be trusted in this matter. It seems that the complication is that the medical establishment has been pushing bogus ideas for the past 40 years or so. I use as much butter as I can. So there. :-)

Charles (2009-01-23 11:35:15)

â€œIt goes straight to your arteries.â€ Boy, I hope so. I'm thrilled to have all those beneficial fatty acids and essential vitamins flowing through my arteries. Stephan at WholeHealthSource had a great post last month describing the correlation between the rise in margarine consumption (and reduction in butter consumption) and a corresponding rise in coronary heart disease. <http://wholehealthsource.blogspot.com/2008/12/butter-margarine-and-heart-disease.html> Correlation is not causation, of course. But this isn't the only evidence that links a reduction in natural fats and an increase in industrial fats to negative health outcomes.

Patrik (2009-01-23 15:25:20)

Taubes demolished the butter-is-bad-for-you corollary to the low-fat-is-good-for-you misinformation cascade. The more butter and saturated fat I eat, the thinner I get.

Brody (2009-01-25 19:29:00)

Isn't the Fancy Food show awesome? I LOVE that event...of course, I eat way too much while there. Thankfully it's only every 2 years in the Bay Area.

seth (2009-01-25 20:45:00)

Looking at the pile of candy and inferior tea I brought home, I too am starting to be glad it's only every 2 years in the Bay Area. Until recently it was every year. On the other hand the last show was incredibly helpful to me, it changed my thinking about probiotics and fermented foods, as I will describe in later posts.

Stella (2009-03-18 18:04:57)

Hi Seth, butter is usually considered unhealthy for our body in general. However, we must know that there are various forms of butter, and among these forms only the refined or synthetic ones are the most harmful. Natural butter that you derive from milk directly is a rich source of vitamin A, and less harmful to blood vessels. On the other hand, synthetic butter usually

contains additional trans-fats making it harmful for blood vessels. Just clearing the air;-)

## Not the Same Study Section: How the Truth Comes Out (2009-01-24 09:07)

In the latest Vanity Fair is a brilliant piece of journalism, [1]Goodbye to All That: An Oral History of the Bush White House by Cullen Murphy and Todd Purdum. In a fun, easy-to-read format, it tells some basic truths I had never read before. Here are two examples:

Matthew Dowd, Bush's pollster and chief strategist for the 2004 presidential campaign: When Abu Ghraib happened, I was like, We've got to fire Rumsfeld. Like if we're the "accountability president," we haven't really done this. We don't veto any bills. We don't fire anybody. I was like, Well, this is a disaster, and we're going to hold some National Guard colonel responsible? This guy's got to get fired.

For an M.B.A. president, he got the M.B.A. 101 stuff down, which is, you know, you don't have to do everything. Let other people do it. But M.B.A. 201 is: Hold people accountable.

David Kuo, deputy director of the White House Office of Faith-Based and Community Initiatives: There's this idea that the Bush White House was dominated by religious conservatives and catered to the needs of religious conservatives. But what people miss is that religious conservatives and the Republican Party have always had a very uneasy relationship. The reality in the White House is if you look at the most senior staff you're seeing people who aren't personally religious and have no particular affection for people who are religious-right leaders. Now, at the end of the day, that's easy to understand, because most of the people who are religious-right leaders are not easy to like. It's that old Gandhi thing, right? I might actually be a Christian myself, except for the action of Christians.

And so in the political-affairs shop in particular, you saw a lot of people who just rolled their eyes at everyone from Rich Cizik, who is one of the heads of the National Association of Evangelicals, to James Dobson, to basically every religious-right leader that was out there, because they just found them annoying and insufferable. These guys were pains in the butt who had to be accommodated.

This is related to the Shangri-La Diet. In these two excerpts, the speakers were (a) close to the events they describe but (b) not so close they are in any danger from the people they tell the truth about.

In science the same thing happens. Saul Sternberg and I could tell [2]the truth about Ranjit Chandra's research not only because (a) we were fairly close to that research (which involved psychology, even though Chandra was a nutritionist) but also because (b) not being nutrition professors, Chandra couldn't harm us. Those closer to Chandra, professional nutritionists, had plenty of doubts as far as I could tell but were afraid to say them. Hal Pashler and I could [3]criticize a widely-accepted practice among cognitive modelers because (a) we were in the same general field, cognitive psychology, but (b) far enough away so that the people we criticized would never review our grants or our papers. (Except the critique itself, which they hated. After the first round of reviews, Hal and I requested new reviewers, saying it was inevitable that the people we criticized wouldn't like what we said.) Likewise, in the case of [4]voodoo correlations, Hal is (a) close enough to social neuroscience to understand the details of the research but (b) far enough away to criticize it without fear.

In the case of the Shangri-La Diet, I was (a) close enough to the field of nutrition that I could understand the research but (b) far enough away so that I could say what I thought without fear of reprisal. Nassim Taleb is in the same relation to the field he criticizes. Just as Saul Sternberg and I knew a lot about the outcome measure (psychological

tests) but were not nutritionists, Weston Price, a dentist, knew a lot about his outcome measure (dental health) but was not a nutritionist.

It's curious how rarely this need for insider/outsiders (inside in terms of knowledge, outside in terms of career) is pointed out. It's a big part of how science progresses, in small ways and large. Mendel and Darwin were well-educated amateurs, for example. Thorstein Veblen [5] wrote about it but I haven't read it anywhere else.

1. <http://www.vanityfair.com/politics/features/2009/02/bush-oral-history200902?printable=true&currentPage=all>
2. <http://www.sethroberts.net/chandra/index.html>
3. <http://repositories.cdlib.org/postprints/763/>
4. [http://www.edvul.com/pdf/Vul\\_etal\\_2008inpress.pdf](http://www.edvul.com/pdf/Vul_etal_2008inpress.pdf)
5. [http://books.google.com/books?id=TVaqsAF3toYC&pg=PA219&lpg=PA219&dq=intellectual+preeminence+of+jews+veblen&source=bl&ots=wr80tfZ1-g&sig=gK6Ko4WKQKpxN133iBgbU2N2fbc&hl=en&ei=26WhS5quEYKMtAOj40XPAw&sa=X&oi=book\\_result&ct=result&resnum=3&ved=0CBIQ6AEwAg#v=onepage&q=&f=false](http://books.google.com/books?id=TVaqsAF3toYC&pg=PA219&lpg=PA219&dq=intellectual+preeminence+of+jews+veblen&source=bl&ots=wr80tfZ1-g&sig=gK6Ko4WKQKpxN133iBgbU2N2fbc&hl=en&ei=26WhS5quEYKMtAOj40XPAw&sa=X&oi=book_result&ct=result&resnum=3&ved=0CBIQ6AEwAg#v=onepage&q=&f=false)

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Tom (2009-01-24 10:30:20)

Brilliant, brilliant post, Seth. The elephant in the room. Fantastic.

Nadav Manham (2009-01-24 11:30:06)

I've always been struck at how many of the world's great skeptics and iconoclasts were either aristocrats (Montaigne, Russell), deliberately thrifty (Hume), or did their best work while earning a "normal" living (Einstein in the patent office, Spinoza as a lens grinder). In each case, their economic independence seems to have helped their intellectual independence.

DA (2009-01-24 12:46:34)

Jane Jacobs embodied this insider/outsider status. One could argue that Obama is an insider/outsider, too, though only time will tell how that influences his presidency.

mike kenny (2009-01-24 15:34:23)

nietzsche too, left university and wrote from the outside. wittgenstein wrote his tractatus while a soldier in world war i, iirc. should we get rid of peer-reviewed journals? put your stuff up on the web and let people criticize it that way, publicly. it seems a more rapid and multi-perspectival approach. not to discount experts—they can say whatever they would say as referees. does blogging damage journals since academics seem to be putting their ideas on the web anyway? 'oh, i read your paper, but you pretty much said everything on the web before hand.'

Stephen M (Ethesis) (2009-01-27 22:04:38)

I think you've hit something very profound with this post.

Duncan (2009-01-28 16:28:48)

'This kind of critical review paper, emphasizing the key unsolved problems, is common in quantum gravity, cosmology, and, I suspect, most other fields of science. Because this was not being done by any of the leaders of string theory, it was left to someone like me, **as a quasi "insider" who had the technical knowledge but not the sociological commitment** [bold mine], to take on that responsibility. And I had done so because of my own interest in string theory, which I was working on almost exclusively at the time. Nevertheless, some string theorists regarded this as a hostile act.' – Lee Smolin, from the *How Do You Fight Sociology?* chapter of his recent book *The Trouble With Physics*.

Alexis Gallagher (2009-02-02 12:31:49)

I agree this the idea of an insider/outsider is very powerful. Why is it not better appreciated? At least one reason is that there's no good word for it. The closest word is probably "whistleblower", but that is crucially different in its focus on ingroup malfeasance rather than groupthink or peer pressure. (I'd say much journalism on groups shares this misplaced focus, looking for conspiracies rather than folly.) "Insider/outsider" is pretty good coinage. But can we do better?

Alexis Gallagher (2009-03-25 13:03:33)

I thought you would be interested to note that the March 25th article on Freeman Dyson in the NY Times magazine refers to him as an "outsider-insider", with exactly the sense used here. The meme is spreading! (Or the coincidence is.)

seth (2009-03-26 08:48:04)

Thanks, Alexis! Very interesting.

Seth's blog » Blog Archive » What I'm Looking Forward to Reading (2009-07-28 09:43:28)

[...] In September, David Owen, a staff writer at The New Yorker, will publish *Green Metropolis: Why Living Smaller, Living Closer, and Driving Less are the Keys to Sustainability*. Or at least that's what the print says; the picture has a different subtitle. The book expands on this New Yorker article. Owen criticizes Michael Pollan and Amory Lovins, among others. Maybe this is an example of the insider/outsider advantage I've blogged about. Owen is not the New Yorker's environmental reporter; that would be Elizabeth Kolbert. So he can say anything, criticize anybody, without worrying about his ability to write more on the same subject. He can always go back to golf. Kolbert is not so free. In any case, Owen's book sounds better — less predictable — than Kolbert's book on a similar subject. A TV show on the subject. Owen on bridge. [...]

## **A Brilliant Business: Selling Soap Nuts Online (2009-01-25 12:16)**

I came across [1]Laundry Tree while trying to figure out what soap nuts are. Soap nuts grow on trees and contain a soap. You can use them in place of laundry detergent. Something I read linked to the Laundry Tree site because it had a good picture.

I clicked around the site and was very impressed.

- Attractive web design. Easy to navigate.
- Neither hard nor soft sell. It's plainly an e-tail site but it doesn't hit you over the head with that nor does it hide it.
- Signs of life. Unlike, say, [2]www.sethroberts.net, you can see that the home page has been updated recently.
- A friendly tone of voice.
- An interesting way to get visitors involved – a blogger's contest (which this post will not enter me in).
- Persuasive.

And that's just the website. None of the elements are rare yet the website itself stood way out from the zillions of websites I visit. I admire the whole business. It solves a real problem. It's unusual. It's very small. The owner puts little at risk, pays almost zero rent, and feels she's making the world a better place in her own almost-unique way. Very few businesses manage to hit all of these marks.

I'm sure I would admire Laundry Tree no matter what I did with my life. Being a professor is very far from being

a small business owner. But the self-experimentation I have done has a lot in common with Laundry Tree.

First, it began with trying to solve my own problems. I wanted to reduce acne, sleep better, lose weight. Laundry Tree began when the owner wanted a better way of doing laundry – no dyes, no harsh chemicals, not sudsy, and not expensive.

Second, it blends male and female tendencies. The data-analytic statistical-software number-crunching rigid-experiment side of self-experimentation is obviously male. The talk-about-my-problems side is obviously female. Likewise, Laundry Tree centers on a problem – choosing a good laundry detergent – that concerns women more than men. Yet constructing and maintaining a website is a kind of technical work that men seem to enjoy more than women. (Nowadays, I admit, it isn't very technical.)

A journalist friend of mine was given an assignment to write about self-experimentation but eventually turned it down when he couldn't find enough examples. I think the need to blend male and female tendencies is the main reason it is so rare. (At least publicly.) To get somewhere you really do have to make numerical measurements, enter the data, plot the data, and so on – stuff that, historically, men do far more than women. Yet to talk about your results you really do have to admit to everyone you have (or at least had) a problem, which men find much harder to do than women.

The [3]Quantified Self Meetup group is having a meeting this Tuesday (Jan 27) – two days from now – at the UC Berkeley School of Information, 6 pm. The dozen or so projects I've heard about related to this group always involve quantification but rarely experimentation. In my experience quantification without experimentation doesn't get very far but perhaps they will eventually learn this (or perhaps I'm wrong). Experimentation and quantification is more difficult than quantification alone but only a little more difficult. Perhaps the reason for lack of experimentation is that with quantification alone you stay safely on the male side of things but to add experimentation (to solve a personal problem) and talk about it you have to cross over to the female side.

1. <http://www.laundrytree.com/>
2. <http://www.blog.sethroberts.net/http://www.sethroberts.net>
3. <http://www.kk.org/quantifiedself/>

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mike kenny (2009-01-25 13:11:14)

That's interesting—I tend to agree men are more analytical generally, and women more comfortable talking about problems. A possible explanation might be women point out problems they have and men try to solve them to impress women. Women might be, perhaps not consciously, testing, so to speak, who would be the best mate, since it would be good for a woman's evolutionary prospects to be selective, while men will perhaps tend to try to demonstrate their quality through clever solutions, but their main problem would be figuring out how to pass on their genes, from an evolutionary perspective, without much need for selectivity, since they can father man children and don't need to devote resources to individual children the way mothers tend to need to, it seems. I suppose men might be inclined to look for as many women with easy problems and low-standards as possible, and solve their problems to impress them and hopefully mate with them, whereas women might be looking for men who can solve tough problems and stick with them, to demonstrate their loyalty and provider abilities.

Lawrence Summers (2009-01-25 18:43:08)

"Second, it blends male and female tendencies. The data-analytic statistical-software number-crunching rigid-experiment side of self-experimentation is obviously male. The talk-about-my-problems side is obviously female. Likewise, Laun-

dry Tree centers on a problem â€” choosing a good laundry detergent â€” that concerns women more than men. Yet constructing and maintaining a website is a kind of technical work that men seem to enjoy more than women. (Nowadays, I admit, it isnâ€™t very technical.)” Goes along with my line of thinking! Unfortunately, they made me resign from Harvard for it.

Justin Wehr (2009-01-25 19:02:38)

Very interesting point, Seth. I have linked to this post and will add my thoughts to it in a post that will appear tomorrow morning on my blog.

sethl (2009-01-26 12:28:46)

Thanks, Justin. Here is a link: <http://wehrintheworld.blogspot.com/2009/01/seth-roberts-theory-for-why-self.html> I suppose Gretchen Rubin’s [1]Happiness Project is support for my ideas here. She has the “admit a problem” part down really well but doesn’t do anything along the lines of quantification, plotting numbers, data analysis, etc.

1. <http://www.happinessproject.typepad.com/>

Patrik (2009-01-26 12:57:15)

*No chemicals or unnatural substances are involved! ... They are 100 %, totally natural. They are organically grown and are chemical-free, ...* Not to pick on these folks, but this sort of false advertising: “Natural = good. Chemical = bad” is irritatingly never challenged. Since the process of cleaning clothing isn’t wholly mechanical, we know that there has to be some chemical interaction involved. And lo, there it is: *The outer shell of the soapnut contains saponin, a natural substance known for its ability to cleanse and wash.* Interesting how saponin is a “natural substance”, not a natural “chemical” or even “chemical substance”. Now, what bugs me is this insistence that something “natural” is inherently good and desirable. The oils from *Toxicodendron radicans* are certainly natural substances, but we generally try to avoid them, and would never wash our clothes with them. “Natural” is subjective and does not mean “good” or “desirable”. Natural substances or chemicals are not any better or any worse than unnatural ones.

## Jane Jacobs’ Influence (2009-01-26 08:02)

[1]Here is good summary:

The urban planning revolution began even as the Astodia road was first being scrutinised. If one were to mention a single event that kick-started the movement, it would be the publication in 1961 of Jane Jacobs’ book *The Death and Life of Great American Cities*, which took on the policies of Robert Moses, the man who transformed New York City. Town planners like Moses believed in making cities more liveable by executing big-ticket public works projects: expressways and bridges, parks and promenades, dams and waterworks, and massive public housing schemes. Whatever came in the way of these efforts was bulldozed without much consideration of value. The new way pioneered by Jacobs rejected this rationlist, top-down approach in favour of decentralisation, preserving and empowering communities, consulting locals rather than depending solely on appointed experts, and working on a small rather than gargantuan scale. This movement is now seen as a shift from modernist to post-modernist thinking. A modernist would view Astodia as a traffic bottleneck ghetto of mostly impoverished citizens, living in uncomfortably tiny habitations without good public utilities. A post-modernist would see it as a close-knit community dwelling in old structures, some of them finely crafted, practising a lifestyle that had developed organically down generations.

1. <http://girishshahane.blogspot.com/2009/01/ahmedabad-recollections.html>



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### More Great Food at the Fancy Food Show (2009-01-26 12:09)

- Or great packaging. [1]Agua de Piedra, a brand of mineral water, uses only the bottles that would otherwise be wasted when a glass-bottle manufacturer changes production from one color to another. Not only is this a great idea but it gives their bottles an attractive variation in color. I really liked the water, too.
- The [2]Pacari line of chocolates includes "raw" chocolate, that is, chocolate that is "minimally processed and unroasted to maintain the antioxidants and complex flavor profile of the cacao."
- I was surprised that there is a drink based on tumeric: [3]Sajen Jamu.
- One of the most interesting features of the show was the vast increase in the amount of cheese (all artisanal cheese) compared to all previous shows I attended, such as the show 2 years ago. Perhaps the best cheese I had was from [4]Quickes Traditional, a farm in the south of England. They make many kinds of cheddars.

1. <http://www.blog.sethroberts.net/http://www.aguadepiedra.com>
  2. <http://www.blog.sethroberts.net/http://www.pacarichocolate.com>
  3. <http://www.blog.sethroberts.net/http://www.sajenjamu.com>
  4. <http://www.blog.sethroberts.net/http://www.quickes.co.uk>
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### The Inuit Paradox (2009-01-26 22:33)

The [1]Inuit Paradox is that the Inuit eat lots of fat and hardly any vegetables or fruit yet are much healthier than groups who follow conventional dietary guidelines. In particular,

In the Nunavik villages in northern Quebec, adults over 40 get almost half their calories from native foods, says Dewailly, and they don't die of heart attacks at nearly the same rates as other Canadians or Americans. Their cardiac death rate is about half of ours, he says.

Likewise, the fact that Greenland Eskimos had very low rates of heart disease led to the discovery of the importance of omega-3 fatty acids. If you read anything on this subject you will come across the concept of "healthy fats". Sure, some fats are good for you, no doubt about it. Weston Price was the first of many to make this point. But is it the whole story? Attempts to reduce heart disease by giving people fish oil have had disappointing results. Perhaps they got the dose wrong. Or perhaps they missed something crucial. Here is what the Inuit eat:

Our meat was seal and walrus, marine mammals that live in cold water and have lots of fat. We used seal oil for our cooking and as a dipping sauce for food. We had moose, caribou, and reindeer. We hunted ducks, geese, and little land birds like quail, called ptarmigan. We caught crab and lots of fish—salmon, whitefish, tomcod, pike, and char. Our fish were cooked, dried, smoked, or frozen. We ate frozen raw whitefish, sliced thin. The elders liked stinkfish, fish buried in seal bags or cans in the tundra and left to ferment. And fermented seal flipper, they liked that too. [emphasis added]

In the rest of the article and in all discussions of the subject I have seen you won't find a word about fermented food. Yet I believe that was crucial. The fermented food had lots of harmless bacteria that caused the immune system to stay awake; heart disease is caused by infection too slowly fought off. Why do the French have low rates of heart disease? It's not only the wine, it's also the stinky cheese they eat. Why do the Japanese have low rates of heart disease? It's not only the fish, it's also the miso and natto. I'll be blogging more about this – stay tuned.

[2]A surprising effect of yogurt.

1. <http://discovermagazine.com/2004/oct/inuit-paradox>

2. <http://www.blog.sethroberts.net/2009/01/21/probiotics-and-your-immune-system/>

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Tom (2009-01-26 23:10:32)

You will love Stephan's series on the Tokelauan islanders who, before becoming Westernized, got 50 % of their calories from saturated fat (coconut oil.) That's the highest for any population ever recorded, including the Masai tribe. Tokelauan rate of heart attack? 0.0 % <http://wholehealthsource.blogspot.com/2009/01/tokelau-island-migrant-study.html> *heart disease is caused by infection too slowly fought off.* Quite an assertion, Seth – source?

agl1 (2009-01-26 23:21:04)

"heart disease is caused by infection too slowly fought off" Heart disease is caused by inflammation from eating too much sugar, which explains why the French, Japanese and Eskimos don't get it as much as the Americans.

Nathan Myers (2009-01-27 02:25:45)

Bacteria don't just produce antigens. They produce vitamins, proteins, enzymes, mineral complexes. But we've all got a trillion bacteria in our guts already, more than the eukaryotic cells in the rest of our bodies. What's so special about the ones in rotten food?

Confidence (2009-01-27 05:19:23)

Your excitement is contagious, but this is hardly new: <http://www.google.com/search?hl=en&fkt=929&fsdt=5958&q=probiotics+and+immunity&btnG=Google+Search> Would you have been this excited about this discovery if you'd just read an article somewhere describing the positive role of probiotics on the immune system? Or does hearing it with your own ears via a self-experiment result in an endowment effect of sorts? What, exactly, is new about what you are stating?

seth (2009-01-27 07:16:59)

Confidence, meet Tom, agl1, and Nathan Myers. The notion that the Inuit – not to mention the French and the Japanese – have a low rate of heart disease because of the fermented food they eat is entirely new, as far as I know. Of course, the low rate of heart disease in the French is often attributed to wine, but wine is not a probiotic. Nor do researchers think it is the dead bacteria in wine that are the crucial element. Some have suggested it is the alcohol (because beer intake has similar correlations). More recently – Sunday on 60 Minutes – resveratrol, found in grapes, was claimed to be important. Nathan, the immune system must distinguish between the bacteria we have all the time and new bacteria, which can be dangerous. Fermented foods are a source of new bacteria. Inflammation is due to infection or at least foreign bacteria. Heart disease is often linked to infection. For example, it is correlated with gum disease. When I say "heart disease is due to infection too slowly fought off" I mean it as a hypothesis, not an established fact. It is plausible because heart disease is linked to infection. Obviously the faster you fight off an infection the less damage it does. Whether sugar has an effect on heart disease I don't know. But since when do the French have a low sugar intake?

Confidence (2009-01-27 07:51:40)

I see, you appear to be making two separate assertions: 1. Dead bacteria (and associated substances) improve the immune system 2. An improved immune system helps prevent heart attacks That combination is pretty novel. Thanks for the followup.

Tim (2009-01-27 10:21:17)

I have suffered from tendonitis at one place or another for years. While all have had explanations, it seems like I had more problems than most people. This made me think I may have a systemic problem countering inflammation. The posts and comments on omega-3 fats and inflammation were one of the reasons I started reading your blog a couple of months ago. I have also found some books on diet and inflammation. One of them (something like "The Anti-Inflammation Zone" by Sears, although I don't have it in front of me so that may not be quite right), talks about a ratio of a certain omega-6 fat to EPA (an omega-3 fat) as an indicator of inflammation. He recommends staying in the 1 to 3 range. What makes this applicable to your post is that he references a study of Greenlanders from the 1970s who were in the 0.5 range. While they had very low rates of heart disease, depression, and other inflammation-linked afflictions, apparently they had trouble fighting infection (a benefit of inflammation). The author also mentions clotting problems at low ratios (not specifically in relation that study, I think, but also mentioned in the article you linked to above). How about this hypothesis? The fats in their diet lead to low inflammation, which has the heart and other benefits. The probiotic foods stimulate the immune system, which helps balance their diet's difficulty fighting infection. Finally, on an unrelated note, I caught part of a nature documentary last month that said, "These baboons, like most primates, spend their early mornings grooming each other." I thought immediately of your morning faces.

Patrik (2009-01-27 11:28:19)

I am very skeptical of fermented foods-introduce-bacteria-that-keep-your- immune-system-awake hypothesis. (Why would my immune system be asleep?) Stephan has a lot to say about fermented foods and why/how they might be beneficial: <http://wholehealthsource.blogspot.com/search?q=fermented> 1. Pre-digestion of food 2. Eliminate anti-nutrients and toxins 3. Lower pH of certain foods making minerals more bioavailable 4. Probably most important: Provides Vitamin K2 — (this is a very interesting post and addresses natto and foie gras [http://wholehealthsource.blogspot.com/2008/06/vitamin-k2-menatetrenone-mk-4.h tml](http://wholehealthsource.blogspot.com/2008/06/vitamin-k2-menatetrenone-mk-4.html))

agl1 (2009-01-27 13:16:14)

The French have a lower sugar intake than the Americans because they very rarely drink fizzy drinks like Coke. Insulin resistance is the root cause of the inflammation. Also, Spain, Portugal and Italy also have low rates of heart disease, and they don't eat as much cheese as the French. There is a hypothesis that it is due to the sunshine.

Nathan Myers (2009-01-27 18:46:22)

So, rotted foods are favored by old people because young people have little difficulty finding bacteria they haven't already been seeded with? I suppose it's important for the bacteria to be killed in the stomach so they don't get established in the colon and necessitate finding yet other varieties. That seems to recommend eating rotted foods in small amounts, and not in a form in which the bacteria have already formed spores. If it's true, we should expect to see similar behavior in other long-lived mammals.

mike (2009-01-28 09:02:49)

I am partial to the idea that fermented foods have numerous health benefits. I would also think that this would be easy to measure on a wide scale: koreans eat kimchee (fermented cabbage) everyday, nearly every meal. Meanwhile, the youth are eating it much less. So, we'd expect to see very low rates of some diseases (and frequency of colds?), but increasing. Then again, there are a lot of other environmental factors increasing as well: stress, pollution, urbanization, social disconnection, etc., so maybe it is hard to isolate.

Clyde Adams III (2009-01-28 12:31:39)

On the supposed benefits of ingesting bacteria: "Eating dirt can be good for you - just ask babies" <http://iht.com/articles/2009/01/27/healthscience/snbabies.1-416618.php>

VesnaVK (2009-01-29 06:41:58)

The error is in considering this a "paradox." The current mainstream guidelines, as expressed by, for instance, the USDA Food Pyramid, are mistaken and ill-founded. As Taubes outlines in *Good Calories, Bad Calories*, a population's incidence of the major chronic diseases (diabetes, heart disease, cancer) and conditions (obesity) follows the introduction of sugar and starch as staples. The more processed, readily available, and cheap these are, the greater the incidence. This phenomenon can be seen over and over through reading centuries of records of explorers, missionaries, settlers, etc. Probiotics are undoubtedly beneficial, but the simplest answer to the Inuit's good health was this: they didn't live on foods that make humans sick. In 1935, the Canadian explorer Vilhjalmur Stefansson wrote a three-part article appearing in *Harper's Magazine* about his experiences living and eating with the Inuit, and his subsequent Harvard-sponsored experiments with a vegetation-free diet. It's a fascinating read. Google "vilhjalmur stefansson adventures in diet" to find the text online, or try this link: <http://www.biblelife.org/stefansson1.htm>

seth (2009-01-29 07:22:30)

VesnaVK, thanks for the link. I'm very glad to have it.

mgl (2009-01-29 09:01:01)

Just to back up VesnaVK, I cannot recommend the Stefansson articles highly enough. Stefansson is an engaging writer with a wry sense of humor, and his accounts of how he slowly came round to enjoying the Inuit diet of boiled fish and rotten fish are both entertaining and educational. His second and third articles relate his later experiences leading other Arctic expeditions and his famous year-long meat-only experimental diet. In both cases, he had to deal with entrenched popular and scientific prejudices which are not much different from what we see today.

seth (2009-01-29 10:00:54)

mgl, you will surely want to read my upcoming post on how Stefansson is a *bad* example.

bennetta (2009-01-29 11:39:58)

All I can say about this is this stuff ( <http://en.wikipedia.org/wiki/Rejuvelac> ) is one of my favorite things, ever. Back when I was a database administrator at Whole Foods, I used to drink it daily and never felt better. It's best when you have it on an empty stomach. I would really like to do some self experimentation with it, but am not sure how to start or even what to track.

Kirk (2009-01-30 21:34:00)

Have you seen this study? 'Cognitive performance among the elderly and dietary fish intake: the Hordaland Health Study', led by Eha Nurk. I found it at <http://www.ajcn.org/cgi/content/full/86/5/1470?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&author1=nurk%2C+eha&searchid=1&FIRSTINDEX=0&sortspec=relevance&resourcetype=HWCIT>. My wife was reading a summary of the study in a health/nutrition letter, which implied that the researchers were surprised that non-Omega-3-rich fish also were beneficial to the brain. Of course, I immediately thought of your premise in this thread and did a Wikipedia search to find that yes, Norwegians eat fermented fish (rakfish, sursild). Perhaps the detailed data for this study could be searched using a filter based upon whether food was fermented?

seth (2009-01-31 11:38:48)

Yes, I've seen that study. Thanks for reminding me of it.


SB (2009-02-05 06:00:48)

Have you considered fermented cod liver oil? <http://tinyurl.com/cck3gl>

Alex (2010-01-17 23:14:04)

Another explanation of the 'French Paradox' - their milk is mostly of type A2 - same for Spain, Switzerland, Italy, Asia, Africa and Japan. A1 (the bad stuff) is what we get in the US, UK, Australia, New Zealand and most of Scandinavia (Although A2 Corp in NZ makes only A2 milk). A1 intake correlates closely with incidence of heart disease and type 1 diabetes

## Interview with Leonard Mlodinow (part 1) (2009-01-28 11:35)

 Leonard Mlodinow's most recent book is [1]The Drunkard's Walk: How Randomness Rules Our Lives, which was a New York Times Notable Book of the Year. The first book of his that I read was [2]Feynman's Rainbow. It was so good I wrote him a fan letter. He came to talk at Berkeley in connection with [3]A Briefer History of Time (which he co-wrote with Stephen Hawking). After his talk I told him how much I had liked Feynman's Rainbow. Because I was a psychology professor he asked my opinion of the parts of The Drunkard's Walk that involved psychology. That's how we met.

ROBERTS You're a scientist but you also are a good writer and you appreciate the science—no one's telling you, "this is good and this is bad," you can figure it out for yourself. Is that fair? Is that accurate?

MLODINOW I hope so. As a scientist I like to think I have good taste in judging what is good science, at least. It's not always so easy to judge which directions are the ones that are going to be fruitful, obviously, but certainly in judging what's good science, or more importantly I think, in judging what science is crucial for the public to understand and how to make it exciting for them. That's one thing that I think a lot of scientists don't know how to do, which is how to look at from the point of view of a person who isn't a scientist and explain it in an interesting and amusing, entertaining and most of all exciting way. One of my pet peeves is that, among the general public, people think that science is dry and boring and done by nerds who wear accountant-type thick glasses and white coats. Really it's done by people who experience huge ups and downs and have as much passion for their subject as other professions that are considered more romantic, like artists.

ROBERTS Unlike other people who write about science, I think you're writing intellectual history. I mean, you're not saying, "Oh, this is a popular topic; this came up in the last ten years as a new popular topic I'm going to write a book about." You're writing about things like geometry and probability, which are ancient topics. That's really unusual. Am I right?

MLODINOW When I write about something, it's because that excites me and I see a relevance to our world today. When I wrote Euclid's Window about geometry, it was really about the idea of curved space and curved space is so important in modern physics and even in technology. If you look at, say, global positioning systems, you have to use Einstein's Theory of Gravitation which is based on curved space and I thought that no one really sat down before and explained, taking their time, what is curved space and what is un-curved space and how do we get that idea and where did it come from and looking at fascinating stories, so that's where Euclid's Window came from. In The Drunkard's Walk it was similar in the sense that there had been other books about probability or other books about statistics and other books about randomness, but I don't think there had been any book on all three of them, but what propelled me was the idea that not just to write about these concepts but the realization that they're very important in everyday life, and really the focus on everyday life and how these concepts can help us see it differently.

ROBERTS And it's better written than the other books, I have to say.

MLODINOW Thank you.

ROBERTS That's really important, I mean, what good is it to write a book if it's hard to read?

MLODINOW I think that's what I bring to this field, is both knowing the science and being able to write well,

and with a sense of humor.Â There are plenty of people who know the science and plenty of people out there who write well, but there are few who can do both.

1. <http://www.guardian.co.uk/books/2008/jul/12/saturdayreviewsfeatres.guardianreview4>

2. [http://books.google.com/books?id=T10xBHjyuXIC&dq=Leonard+Mlodinow&printsec=frontcover&source=an&hl=en&sa=X&oi=book\\_result&resnum=4&ct=result#PPA1,M1](http://books.google.com/books?id=T10xBHjyuXIC&dq=Leonard+Mlodinow&printsec=frontcover&source=an&hl=en&sa=X&oi=book_result&resnum=4&ct=result#PPA1,M1)

3. [http://books.google.com/books?id=LvUoAAAACAAJ&dq=Leonard+Mlodinow&source=an&hl=en&sa=X&oi=book\\_result&resnum=5&ct=result](http://books.google.com/books?id=LvUoAAAACAAJ&dq=Leonard+Mlodinow&source=an&hl=en&sa=X&oi=book_result&resnum=5&ct=result)

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Seth's blog » Blog Archive » Leonard Mlodinow Interview Directory (2009-01-29 00:42:42)  
[...] Interview with Leonard Mlodinow (part 1) [...]

### **Leonard Mlodinow Interview Directory (2009-01-29 00:42)**

1. [1]part 1
2. [2]part 2
3. [3]part 3
4. [4]part 4
5. [5]part 5
6. [6]part 6
7. [7]part 7
8. [8]part 8
9. [9]part 9
10. [10]part 10
11. [11]part 11
12. [12]part 12
13. [13]part 13
14. [14]part 14
15. [15]part 15

[16]Whole interview.

1. <http://www.blog.sethroberts.net/2009/01/28/interview-with-leonard-mlodinow-part-1/>

2. <http://www.blog.sethroberts.net/2009/01/29/interview-with-leonard-mlodinow-part-2/>

3. <http://www.blog.sethroberts.net/2009/01/31/interview-with-leonard-mlodinow-part-3/>
4. <http://www.blog.sethroberts.net/2009/02/01/interview-with-leonard-mlodinow-part-4/>
5. <http://www.blog.sethroberts.net/2009/02/03/interview-with-leonard-mlodinow-part-5/>
6. <http://www.blog.sethroberts.net/2009/02/04/interview-with-leonard-mlodinow-part-6/>
7. <http://www.blog.sethroberts.net/2009/02/07/interview-with-leonard-mlodinow-part-7/>
8. <http://www.blog.sethroberts.net/2009/02/08/interview-with-leonard-mlodinow-part-8/>
9. <http://www.blog.sethroberts.net/2009/02/09/interview-with-leonard-mlodinow-part-9/>
10. <http://www.blog.sethroberts.net/2009/02/11/interview-with-leonard-mlodinow-part-10/>
11. <http://www.blog.sethroberts.net/2009/02/15/interview-with-leonard-mlodinow-part-11/>
12. <http://www.blog.sethroberts.net/2009/02/18/interview-with-leonard-mlodinow-part-12/>
13. <http://www.blog.sethroberts.net/2009/02/21/interview-with-leonard-mlodinow-part-13/>
14. <http://www.blog.sethroberts.net/2009/02/24/interview-with-leonard-mlodinow-part-14/>
15. <http://www.blog.sethroberts.net/2009/02/27/interview-with-leonard-mlodinow-part-15/>
16. [http://docs.google.com/Doc?id=dgb53zjg\\_2hqnr2vd7](http://docs.google.com/Doc?id=dgb53zjg_2hqnr2vd7)

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Seth's blog » Blog Archive » Interview with Leonard Mlodinow (part 2) (2009-01-29 07:49:55)  
[...] Leonard Mlodinow Interview Directory [...]

Seth's blog » Blog Archive » Interview with Leonard Mlodinow (part 3) (2009-01-31 11:34:25)  
[...] Leonard Mlodinow Interview Directory [...]

Seth's blog » Blog Archive » Interview with Leonard Mlodinow (part 4) (2009-02-01 09:22:45)  
[...] Leonard Mlodinow Interview Directory [...]

rich (2009-02-07 18:26:45)

This is great, thanks! Interesting enough that I just read 'Feynman's Rainbow' and loved it.

### **Interview with Leonard Mlodinow (part 2) (2009-01-29 07:48)**

ROBERTS What other nonfiction writers do you like to read?

MLODINOW That's a good question. Strangely I've never thought about that. I can name novelists I repeatedly read, but most nonfiction writers that I like write to subjects of their own expertise, and I pick up nonfiction books based on what they are about more than on who wrote them.

ROBERTS Such as what? Which books?

MLODINOW For instance, Carl Sagan if you want to go back a little bit. I enjoyed several of his books; they tended to be, obviously, on astronomy or issues related. I also enjoyed Freakonomics, and I like Oliver Sacks's books on neuroscience. And Daniel Gilbert's book Stumbling on Happiness; I don't know if Gilbert will turn around now and write a book on geometry . . .

ROBERTS I don't think so.

MLODINOW . . . these authors write about their own field. Oh, I do enjoy Simon Winchester's books and he tends to branch out. I think he's a good writer.

ROBERTS Was he a professor? He might have been a PhD in geology.

MLODINOW I donâ€™t know.Â But I do believe he had a number of unsuccessful books before–I forget which was his first successful book . . .

ROBERTS The Professor and the Madman, I think.

MLODINOW The Professor and the Madman, right.Â His wife, I think, pushed him to write that.Â If I remember the story correctly, he wasnâ€™t initially going to write it. I think I am unusual in that Iâ€™m a science writer who writes in a variety of topics.Â I am finishing a new book with Stephen Hawking right now, called The Grand Design, on the origin of the universe, and of the apparent laws of nature.Â Then my next book is going to be on the unconscious mind.

ROBERTS A friend just asked me about a book on consciousness. She said, â€˜Well, what about this book by \_\_\_\_\_?â€™ (I donâ€™t want to say his name), and I said â€˜No, I donâ€™t like that.â€™ And she said, â€˜Well, what would you recommend?â€™ And I said, â€˜I donâ€™t think there are any good books on consciousness except the one my friend is writing.â€™

MLODINOW Well thank you; I hope to live up to that. Iâ€™ve found that there is a niche available in that field. There have been a lot of books but a lot of them have been case studies or peopleâ€™s individual pet theories about what consciousness is and I think that for someone like me from the outside, who yet has a scientific understanding, there is room for a good book there. And there probably is room every five or ten years for another one because it is a very fast moving field.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2009/01/29/leonard-mlodinow-interview-directory/>

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Andy McKenzie (2009-01-29 14:07:35)

Seth, what about The Illusion of Conscious Will by Daniel Wegner? It touches on most of the major themes, focuses on research, etc.

seth (2009-01-29 15:54:27)

Andy, I looked at Wegner's book briefly on Google Books. It seemed to me poorly written. I didn't get very far so I can't say more than that. Thanks for the recommendation.

Seth's blog » Blog Archive » Leonard Mlodinow Interview Directory (2009-01-31 11:33:36)

[...] Interview with Leonard Mlodinow (part 2) [...]

## **What to Do about Beijing Air (2009-01-30 09:24)**

Beijing's dirty air is easily the worst thing about living there. You might think what to do about it is obvious. Many people do, including this man who wants to sell the expensive air filter he bought:



I remember the day IQair Sales Rep Justin Shuttleworth came to my place [in Beijing] to give me a demo. This guy has the easiest job in the world. All he does is come with his little air quality measuring device, show you how bad the air you are breathing is in your apartment (indoor air is sometimes worse than outdoor air for those who don't know), and as the minutes go by, you literally see the amount of particles in the air go down, until it's basically nil. This was the first time that I could actually smell the difference.

This is from an email list I'm on.

I got the same demo.Â But it had the opposite effect: It made me not want to buy the IQair filter.

The air coming out of the IQair filter was very clean, yes. But there was only so much it could do. More dirty air was always coming into my apartment and no matter how high (= noisy) they ran the machine the overall level of dirt was no more than cut by 2/3rds. I already had an air filter. The air it produced wasn't quite as clean as air from the IQair filter but it was still much much cleaner than the intake air. The IQair machine cost about 11,000 RMB. My filter had cost about 1,000 RMB. For 1,500 RMB I could buy a bigger version of what I already had, an air filter that cleaned twice as much air per minute as the IQair machine while producing roughly the same amount of noise. Its output was slightly dirtier than the output of the IQair machine but the overall cleaning effect – the reduction in dirt – was much greater. I ended up getting two of the 1,500 RMB filters.

I think of this demo when I hear someone talk about how this or that traditional diets is better than our modern diet. They make a simple point: People who eat the traditional diet are healthy, people who eat the modern diet are unhealthy. Just as the IQair demo guy has "the easiest job in the world." They inevitably conclude: Eat the traditional diet or at least closer to it. Just as the conclusion of the demo is supposed to be: Buy an IQair filter. It seems so simple.

But it isn't so simple. Eating the traditional diet isn't easy, just as the IQair filter isn't cheap. Maybe their abstraction – their description – of the traditional diet leaves out something important. Just as the IQair people do not measure cleaning power per decibel, which turns out to be what matters. (I traded air pollution for noise pollution. I wanted the best deal possible.)

If you read Good Calories Bad Calories you may remember the Canadian anthropologist Vilhjalmur Stefansson who spent many months with Eskimos eating what they ate. He came back and told the world "you can eat only meat." In [1]his conclusions and subsequent field experiment, he ignored the fact that the Eskimos ate a lot of fermented meat.

1. <http://www.biblelife.org/stefansson1.htm>

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Will Croxford (2009-02-28 04:57:13)

Dear Seth, I live in Beijing and am just thinking about buying an air filter, your comments make a lot of sense, but can you tell me which air filter you bought, or any suggestions where to find out about cheaper air filters? If it's a super hot summer's day, you have all the windows closed and the air con on full blast, can your air filter(s) keep up? I see IQair have their own stores in Beijing now, and their website is conspicuous in its lack of price information. They seem to have their marketing to the Shunyi expat community worked out very clearly, perhaps they will have chronically asthmatic children on the next ad to really hammer home the fear factor. Otherwise, a certain exposure to bacteria is a good thing surely, if your IQair unit gets rid of all the bacteria at home, as soon as your young kids go outside their immune systems will be less prepared to deal with all

the bacteria on the street? Reminds me of the Japanese craze for sanitising everything which as far as I understood was not good for their general asthma levels. The other thing I wonder about is cleaning air conditioners. I got ours cleaned at home last summer. I got a guy who was recommended by the manufacturer but did not actually work for them (freelance fixer) and he came and took the cover off, sprayed some foam all over the filters and left that to soak in, then topped up the coolant one as some of it had leaked. But I don't know how to confirm what that foam was, or if it could have been an air pollutant in itself. How could I possibly know if he fobbed us off with the cheap foam version.. Just in case you have researched such a thing yourself. He charged 150RMB for both air cons which seemed cheap anyway. sorry to rabble on but thanks if you have any suggestions for the air filter, Sincerely, Will Croxford (Beijing resident)

seth (2009-02-28 10:39:39)

My air filters are from Yadu. You can get a low price on the Chinese amazon site but you need to be able to read Chinese. I got the cheap air filter (1000 RMB) at Carrefour; the more expensive one (1500 RMB) I got online. I know nothing about cleaning air conditioners, sorry. It isn't the bacteria in the air that worries me, it's all the combustion byproducts, which I'm sure are carcinogenic.

Will Croxford (2009-03-04 22:05:25)

Dear Seth, Thanks kindly for the reply. You will help my family and I to breathe more easily I should think - I can read Chinese so will check out the Amazon site. As far as I understand about air conditioners, the filters should be cleaned professionally once a year, I guess the foam stuff he used was the right thing. Best wishes, Will Croxford

mc (2009-03-27 15:44:19)

Which is why I usually rephrase that point as "You can eat mostly meat." They also ate a lot of organ meats; vitamin C and other vital things are present in liver, and I don't see how you can get on without that one. ;)

DirkT (2010-03-26 23:47:31)

Hi Seth, We actually purchased Yadu per your recommendation but recently purchased our 3rd unit from Alen air purifiers. I can honestly say there is a huge difference between Yadu and Alen (which is much better) but cant really say much about IQ cuz we can't afford it.

Dorothy Larson (2010-07-07 06:04:36)

I bought a Blueair purifier last week-I was desperate to breathe! [The cheap little Ya Du quit and they couldn't provide a new filter immediately] Obviously I was in a hurry-I am still concerned that they insisted they would not accept returns unless it mechanically wouldn't work. I have used Austin Air purifiers for years. They are excellent and offer thirty days return-no-questions-asked -which is reassuring when you are spending \$500. This Blueair has a polypropylene filter- {Austin Air uses hemp! } There is a faint weird smell from the supposedly clean air coming out of the purifier. Kinda plastic but vague-I wonder if anyone has any better ideas for an Air purifier or has ever heard of being allergic to the filters? I do think it is possible the damn thing has counterfeit filters-but who knows? and, how would you ever figure it out? Maybe two cheap Ya Du would be better?

### **John Updike, RIP (2009-01-30 10:30)**

I was 15 or so when I first read a John Updike novel. To my amazement, it was fun to read. The novels I'd read in English class, such as Oliver Twist, had never been fun to read. I read a lot more Updike and figured out he liked Nabokov. So I picked up Pnin. I loved Nabokov, it turned out. You could say Updike was an easy-listening version of Nabokov. He was the first person who taught me to enjoy literature. He was the bridge.

For a long time I read almost everything he wrote (except The Poorhouse Fair) but around S. I stopped. Maybe because I was watching more TV. I continued to read all his stuff in The New Yorker, but maybe it is fitting that, in his

entire career, the thing he said that I like best occurred on TV. In a [1]National Book Award acceptance speech (1998) he said, "A book is beautiful in its relation to the human hand, to the human eye, to the human brain, and to the human spirit."

1. [http://www.nationalbook.org/nbaacceptspeech\\_jupdikey\\_dcal.html](http://www.nationalbook.org/nbaacceptspeech_jupdikey_dcal.html)

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Nansen (2009-01-31 16:50:56)

I wonder what your opinion is of the following sort of criticism (of Nabokov, and also of Updike), which seems to say "less art, please, for our sake": <http://www.slate.com/id/2000072/entry/1002666/>

seth (2009-01-31 22:34:00)

It's okay. I think Woods misses a lot. For example, he writes, "Nabokov imparts the idea that fictional narrative is, at its highest moments, a string of such details, a convoy of little visual perfection." I disagree. There was a lot more to it than that. Canto 3 of Pale Fire is about the death of the poet's daughter. Lolita is about unattainable love. Transparent Things is about mourning. Pnin is about a lonely professor.

### **Shangri-La Diet on Facebook (2009-01-30 23:57)**

An SLDer has created a [1]Facebook page for SLD. Sophie Loreenne vividly writes:

My own personal story I will post here. I have lost 7 lbs in 3 days. I am amazed that with so little effort on my part that it's actually working! The best part is that I'm no longer hungry. And trust me I was hungry all the time, by the time others have just started their first meal. I was on my 3rd meal.

I created this page to share with others my journey and to also create a support system for others.

Thanks, Sophie.

And thanks, Marian Lizzi, for telling me about this.

More Nassim Taleb has started a Facebook group called [2]Make Bankers Accountable – a "J'accuse" by Roubini and Taleb. Great idea. Thanks to Dave Lull.

1. <http://www.facebook.com/group.php?gid=47847323770>

2. <http://www.facebook.com/group.php?gid=51818722129>

Rhizophora (2009-02-01 20:21:12)

It's so nice to hear people succeeding on their weight loss journey. They serve as an inspiration to many who are on the same journey.

The Shangri-La Diet | Diet City Blog! (2009-02-05 22:23:29)

[...] Seth's journal » Blog Archive » Shangri-La Diet on Facebook [...]

## **Rotten Fish are Everywhere (2009-01-31 10:06)**

Somebody anonymous with [1]an amusingly-named blog became a vegan while working in a Thai restaurant:

Now here's something surprising: my bosses were interested in helping me be a vegan. "Oh, that silly white boy and his eating experiments," they'd say. Vang, the chef, learned to create delicious curry without fish sauce—learning how to dump plenty of salt and sugar into the coconut milk to compensate for the rotten fish. Plus, they introduced me the power of hot sauce, namely [2]Sriracha Sauce—a love affair that continues to this very day. . . .

One of my uncles, who is possibly a little retarded and probably a little mentally ill, says that hot sauce kills all the germs in your body (yes, he claims all of them), thus making it impossible to get sick.

No, it's the rotten fish that does that.

1. <http://pomposvegan.blogspot.com/2009/01/when-i-was-in-my-mid-20s-broke-and.html>

2. [http://www.huyfong.com/no\\_frames/sriracha.htm](http://www.huyfong.com/no_frames/sriracha.htm)

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South Australian King George Whiting | Fishing Updates (2009-02-01 01:23:52)

[...] Seth's blog » Blog Archive » Rotten Fish are Everywhere [...]

Confidence (2009-02-01 07:26:34)

Hammer, meet nail.

Patrik (2009-02-01 14:53:31)

As in: when all you got is a hammer, all you see are nails? Looks like it to me too.

## **Interview with Leonard Mlodinow (part 3) (2009-01-31 11:32)**

ROBERTS I like to think that because you cover so many hundreds of years when you discuss geometry or probability that—and there's so many interesting characters and they have to be so brilliant to make a lasting contribution to those fields—that you're able to draw from a richer material than most writers. You have to be a very unusual person to make a lasting contribution to probability theory. [That came out wrong. You have to be a very unusual person to make a lasting contribution to any field.]

MLODINOW Right, well certainly mathematicians tend to be very unusual and colorful, odd sorts. That helps when you're writing a book about them. The physicist are maybe not quite as odd. My book Feynman's Rainbow was really about just one physicist and he was very colorful, so I got away with that. The work I do with Stephen Hawking is different in that sense—there's not that much history in those books. In our new book that we're doing, he doesn't want us to much history at all, so we're going to focus on the concepts.

ROBERTS . . . Let's start with your writing career. You seem to have been a good writer by the time you got your PhD because as I understand it, you were able to actually get a writing job after leaving Cal Tech. You must have been at a very high level by that time; you wrote a spec script for, what, Star Trek? Or some other show?

MLODINOW Well, my rise in Hollywood is a long and involved story, but yes, I did rise pretty quickly. After Cal Tech I went to the Max Planck Institute in Munich and then I came to Hollywood to make my way and in six months I was working at my first TV job, which was a really crappy show on cable, which was pretty new then—cable, I mean. And from there I worked by way up to network shows—I did comedies such as Night Court, the original Gary Shandling show and I wrote for dramas as well including MacGuyver and as you said, Star Trek: The Next Generation. That was a crazy period of life.

ROBERTS I got the impression that you already knew how to write really well by then.

MLODINOW I think that in a way . . . I guess there's two components to being able to write. One is your natural proclivity, I try not to say talent, but it's your voice or the way you express yourself. And the other is the craft part of it that you learn by doing. I think I always had a good sense of humor and maybe a way to say things colorfully or think in terms of dramatic or powerful situations and I guess that's the first part and served well. The other part is the things you learn as you go, such as what puts people to sleep or how to abandon what you think are good ideas but really aren't. That's a hard lesson to learn because it's difficult to let go of things you might like and to realize that it just doesn't belong or goes on too far or the idea that sometimes it's hard to recognize things that may be good but just don't belong there—that are tangents and they take away the dramatic thrust of where you're going and they really have to be cut even though they're good and you like them. You know, lessons like that, lessons about pacing—you learn by doing, by failing. You learn more about pacing, all sorts of technical aspects of writing, whether its fiction or nonfiction or TV or books; there are certain principles that you just learn by repeatedly doing and doing wrong and realizing, absorbing what went wrong and fixing it and you grow that way. In book writing you're able to do that a lot with rough drafts so a lot of your mistakes don't end up getting published—you know? TV writing can be so fast that often you don't see the problems with the script until you actually watch it on the air and then you go, "Next time I think I won't have that guy climbing the stairs for four minutes in the middle of the scene; I think five seconds is enough to get the idea across."

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2009/01/29/leonard-mlodinow-interview-directory/>

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Seth's blog » Blog Archive » Leonard Mlodinow Interview Directory (2009-02-01 09:23:52)  
[...] Interview with Leonard Mlodinow (part 3) [...]

Interview with Leonard Mlodinow (part 3) | the Justin Owings page (2011-07-25 08:53:01)  
[...] <http://www.blog.sethrober...lodinow-part-3/> [...]

## 4.2 February

### Interview with Leonard Mlodinow (part 4) (2009-02-01 09:19)

ROBERTS You learned stuff from writing TV scripts that transferred into book writing?

MLODINOW Yes, I think you do. It's odd because there's in many ways very little similarity. Pacing, for instance, is very different on a TV show and when you're reading something but you do get a feeling for it and its importance. All those years of comedy writing certainly I think translate to having a real sense of humor, so there are certain things that do translate.

ROBERTS I think there's one remarkable thing that makes your books different from other books. Your books give the impression that they want to be entertaining—the author, you, is trying to meet the reader halfway. When you're writing a TV show, it's got to be entertaining because otherwise people won't want to watch it. They're not required to watch it to get a job or to get a good grade in their class; they're watching it because they enjoy it. So you've got to make it enjoyable. Whereas a lot of books written by professors seem to be saying, "Well, it's so important and you're going to read my book because this is an important book to read, so I'm not going to even try to make it interesting; I'm just going to do whatever I want." Your books are more reader-friendly in that sense.

MLODINOW I think that's true. A lot of people who are very serious about their topic have a hard time seeing why you need to make it interesting or knowing how to make it interesting for people who aren't automatically interested in that topic. To me that's one of the joys of writing. One of the satisfactions is when I go, "Wow, I made that really funny" or "I made that really interesting," and then I get excited by that.

ROBERTS That talent—it really helped you to have written for TV because it's kind of a fresh voice.

MLODINOW I think it helped to develop my voice, too, especially the comedy part, you know? And what my credits show is obviously a small part of what I write. For example at one point I was thinking that maybe I wanted to get on Leno or one of those late night comedy shows and we never really went that far with it, but I did spend some days writing stand up lines and pure joke writing to try to get some material together for my agent to show around. Probably very few other science writers have gone through an exercise such as that. That all, I think, contributes to being able to write with a sense of humor. Of course, you have to have a personality that gravitates in that direction in the first place.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2009/01/29/leonard-mlodinow-interview-directory/>

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Andrew Gelman (2009-02-01 15:36:45)

Seth, I hate to keep bugging you on this, but . . . when you say, "Your books give the impression that they want to be entertaining—the author, you, is trying to meet the reader halfway. . . . A lot of people who are very serious about their topic have a hard time seeing why you need to make it interesting," I think you're completely missing the point. Everybody wants to make their writing interesting and readable; it's just hard to do! As you and Mlodinow discuss, practice is important, talent is important, putting in the time is important. But it's not like people are writing badly on purpose!

seth (2009-02-02 00:47:47)

"Everybody wants to make their writing interesting and readable" and "It's not like people are writing badly on purpose!" Thorstein Veblen wrote a whole chapter in *The Theory of the Leisure Class* saying the opposite: Academics write badly on purpose to show how important they are. Other writers must grovel and try to please others; they need not, is the subtext of their awful prose. Just as certain women had really long fingernails to advertise how useless they were. Hood ornaments were yet another example of "conspicuous waste".

Seth's blog » Blog Archive » Leonard Mlodinow Interview Directory (2009-02-03 10:54:53)  
[...] Interview with Leonard Mlodinow (part 4) [...]

Interview with Leonard Mlodinow (part 3) | the Justin Owings page (2011-07-25 08:53:17)  
[...] part 4 [...]

## **Beyond the Shangri-La Diet (2009-02-01 12:14)**

On the Shangri-La Diet forums is a [1]very interesting discussion:

It's a way of life when SLD is working, that is... And, to be honest, over the past few months it's not been working as much as it once did. Or, rather, it's has been working, but I only lose weight when SLD is strong. It was strong to start with and it's strong right now, but it's been 50 % or less in between.

My breakthrough came a week or two ago when I started to control my IBS with Colpermin tablets. That helped enormously because it stopped my stomach churning and grumbling so much. But the hot sugar water I was drinking didn't work 100 %. I could manage a few days of decent SLD, but then the hunger fell on me like a heavy weight and I would binge. They were small binges, because SLD was still working and I just couldn't eat a lot. But the total calorie intake was enough to stop me losing weight.

So, a few days ago I went back to basics. For me, that means back to those nose-clipped cans of Coke ☒ And strong SLD is back. To be brutally frank, I feel humiliated that Coke is the only thing that seems to produce conclusive results for me. Even Pepsi doesn't seem to work as well, or the various clones of Coke that (frankly) cost less ☒ I wish oil worked, or sugar water, I really do.

But there's something weird about Coke... We've speculated about it's stomach calming effects in other threads.

However, the fact is that I'm back in what I might call the SLD zone. It's a lovely place to be, but it's so terribly hard to describe. Today I ate one meal. And I'm fine. Tomorrow I go out for lunch, and I'm looking forward to it—a chance of have some nice food. But... that's the difference between strong SLD, and normality. I can wait for that nice food. It's just less important. I absolutely LOVE feeling this way. My life is my own.

Nose-clipped Coke worked much better than sugar water. Fascinating. When I did SLD – when I lost about 3 pounds/week drinking fructose water – I also started craving flavor. I started drinking tea and haven't stopped. I started chewing gum and haven't stopped. I became far more interested in supermarket samples, which are always flavorful. A later comment in that thread:

I once read a newspaper report about a woman who was going slowly blind through an eye disease. She heard about the raw food diet and tried for a few weeks, thinking it might help her. Her eyesight did marginally improve, but she decided she'd rather go blind than face any more raw foods.

Raw food has flavor, but it doesn't have complex flavors – that's why people ferment it, even when they don't need to preserve it. Compare cabbage with [2]kimchi, for example. Cooking food usually increases complexity of flavor. Coke has a very complex flavor. Sugar water has no flavor.

Why do we like unami-tasting foods? Why do we like sour-tasting foods? Why do we like complexity of flavor, including [3]unfamiliar complexity? I think the answer is these likes were built into us to because they caused us to eat more bacteria-laden food, which [4] kept our immune system functioning well. Just as a taste for salt causes us to eat more salt, which we need.

This story suggests that the desire for certain tastes (supplied by nose-clipped Coke but not sugar water) can be strong enough to interfere with weight loss. Future versions of SLD should take account of this

1. <http://boards.sethroberts.net/index.php?topic=6713.0>

2. <http://www.marginalrevolution.com/marginalrevolution/2009/01/what-is-the-best-food-produced-en-masse.html>

3. <http://www.blog.sethroberts.net/2009/01/20/unforgettable-drink-at-the-fancy-food-show/>

4. <http://www.blog.sethroberts.net/2009/01/21/probiotics-and-your-immune-system/>

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david (2009-02-01 12:48:55)

Very strange that nose clipped coke works for them and sugar water doesn't. I've started trying nose clipped breakfasts (yogurt or cereal) to maintain lost weight. It seems like yogurt works better than cereal (shredded wheat). My theory is that the shredded wheat has texture and that provides a hook for a small amount of learned association between calories and food. By that token, I would expect sugar water to work better than coke because the carbonation of coke would provide a hook.

Stephen M (Ethesis) (2009-02-06 21:00:45)

That whole area is interesting. I've tried nose clipped protein shakes and I got a rush of weight loss the first time, but generally I get less SLD effect than just taking olive oil in the middle of the night. I'm fascinated by the differences people report.

## **The Twilight of Expertise (medical doctors) (2009-02-01 22:01)**

Long ago the RAND Corporation ran [1]an experiment that found that additional medical spending provided no additional health benefit (except in a few cases). People who didn't like the implication that ordinary medical care was at least partly worthless could say that it was only at the margin that the benefits stopped. This was unlikely but possible. Now [2]a non-experimental study has found essentially the same thing:

To that end, Orszag has become intrigued by the work of Mitchell Seltzer, a hospital consultant in central New Jersey. Seltzer has collected large amounts of data from his clients on how various doctors treat patients, and his numbers present a very similar picture to the regional data. Seltzer told me that big-spending doctors typically explain their treatment by insisting they have sicker patients than their colleagues. In response he has made charts breaking down the costs of care into thin diagnostic categories,



like "respiratory-system diagnosis with ventilator support, severity: 4," in order to compare doctors who were treating the same ailment. The charts make the point clearly. Doctors who spent more " on extra tests or high-tech treatments, for instance " didn't get better results than their more conservative colleagues. In many cases, patients of the aggressive doctors stay sicker longer and die sooner because of the risks that come with invasive care.

Perhaps the doctors who ordered the high-tech treatments, when questioned about their efficacy, would have responded as [3]my surgeon did to a similar question about the surgery she recommended (and would make thousands of dollars from): The studies are easy to find, just use Google. (There were no studies.)

It's like the RAND study: Defenders of doctors will say that some of them didn't know what they were doing but the rest did. But that's the most doctor-friendly interpretation. A more realistic interpretation is that a large fraction of the profession doesn't care much about evidence. In everyday life, evidence is called feedback. If you are driving and you don't pay attention to and fix small deviations from the middle of the road, eventually you crash. You don't need a double-blind clinical trial not to crash your car – a lesson the average doctor, the average medical school professor, and the average Evidence-Based-Medicine advocate haven't learned.

1. <http://sciencethatmatters.com/archives/30>
2. [http://www.nytimes.com/2009/02/01/magazine/01Economy-t.html?\\_r=2&pagewanted=all](http://www.nytimes.com/2009/02/01/magazine/01Economy-t.html?_r=2&pagewanted=all)
3. <http://www.blog.sethroberts.net/2008/09/13/the-case-of-the-missing-evidence/>

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retired urologist (2009-02-03 19:41:50)

You asked for my response regarding doctors' "disinterest in evidence" [1]here. I gave you my response earlier regarding your doctor's handling of your hernia problem. I said: "Dr. Consorti should have been more honest with you about her lack of evidence regarding hernia surgery." You replied, "This is unfair to Dr. Consorti. She honestly believed the evidence existed, I'm sure." You seem to be having trouble deciding which side you're on. Must be the olive oil (excuse me, the "evidence-based" olive oil). Regarding your question about "more evidence" surrounding the cheap shot Robin Hanson, whom you admire, took at the doctor who supposedly had a nurse fired for reporting him about his lack of handwashing: I did not want "more evidence"; I wanted "some" evidence. I do not consider gossip to be evidence. Don't misinterpret me: there's no doubt that doctors have been trained incorrectly when compared when other rationalists. There's no doubt that they waste a lot of public resources. There's no doubt that the system for training and managing them should change. However, your comment: "People who didn't like the implication that ordinary medical care was at least partly worthless could say that it was only at the margin that the benefits stopped," is inappropriate, and incorrect, since that is exactly what the study showed, and it is exactly how Robin Hanson presented it (see [2]here. Next you'll be telling me that psychology is a science, and that a "Rand Experiment" would document the great value of your field.

1. <http://www.blog.sethroberts.net/2008/09/13/the-case-of-the-missing-evidence/#comment-266735>
2. [http://www.overcomingbias.com/2007/05/rand\\_health\\_ins.html](http://www.overcomingbias.com/2007/05/rand_health_ins.html)

seth (2009-02-03 19:54:13)

Your view that what the fired nurse says is "gossip" while what a hospital administrator says is "evidence" indeed sheds light on these results. Experimental psychologists, unlike doctors, don't try to help people. They do research. Thank you for your comment.

retired urologist (2009-02-04 09:43:03)

Seth, Where did you get the idea that I felt "what a hospital administrator says is 'evidence'"? I know of no unbiased reason for you to present such as "my view". Robin Hanson has said that when involved in a disagreement, if the other party has far more experience and expertise in the subject, one should diligently re-examine his own position and yield, unless there is overwhelming support for one's position in the disagreement. I have such experience and expertise, as described [1]here; you and Hanson do not. The nurse story makes no sense in the real world, but has solid emotional appeal to anyone writing about the shortcomings of the medical profession. Why don't you take Mark's advice in his [2]comment, check out the story once and for all, and then write a post about the cognitive dissonance involved, wherever the chips fall? I think that would fall under the heading of "research", don't you?

1. <http://drchip.wordpress.com/2008/10/05/bias-on-the-hoof-hanson-and-ru-continued/>

2. <http://www.blog.sethroberts.net/2008/09/13/the-case-of-the-missing-evidence/#comment-261240>

seth (2009-02-04 10:49:12)

okay, what do you mean by "evidence" here?

retired urologist (2009-02-04 11:50:51)

By "evidence", I mean that which can reproducibly be used to prove or disprove something. First-hand, or eye-witness, accounts of an event are an example, even though they are not always accurate. In the "nurse story", you heard it from Hanson, Hanson heard it from his wife, and his wife heard it from the nurse. This is "hearsay" or "gossip", but certainly not evidence. The story does not report anything that the administrator said; in fact, mention of the administrator is an example of how third-hand misinformation is generated, since the administrator is not mentioned in Hanson's [1]original telling of the story, which goes: "A colleague of my wife was a nurse at a local hospital, and was assigned to see if doctors were washing their hands enough. She identified and reported the worst offender, whose patients were suffering as a result. That doctor had her fired; he still works there not washing his hands. Presumably other nurses assigned afterward learned their lesson." Another example of the loss of accuracy in far-removed "evidence" is your description of the doctor as a "surgeon", while Hanson described him only as a doctor. Calling him a surgeon makes the diminished hand-washing seem more malevolent, and makes your post seem more important to readers. Think of this as I would, having been involved in many employer/employee encounters in hospitals, both as Chief of Staff and as an owner. Would the nurse's boss put his/her own career in jeopardy by terminating an employee without due cause in order to assuage an arrogant doctor? Did this hospital have no policy for dealing with inept employees that involved counseling and second/third chances (all do)? Would the boss tell the nurse directly that she was being fired because of the report? Otherwise, did she just assume it on her own because it made a good story and absolved her of blame? Or did she make it up? If she knew that her story was factual, would she have taken no action against the hospital? Remember, this is not a back-woods facility; it's in a large metropolitan area. Is there such a nurse at all? What's her name? Now, look at the teller of the story as you heard it: the class Hanson teaches for part of his income has as its subject the inefficaciousness of the American medical system, and particularly of the doctors who provide the healthcare. Would there be any reason for bias there? Any tendency to want to pass along such a story without checking it out? After all, you did. Would it take some effort to find the truth behind this story? Yes, it would. But those who strive for rationality cannot pass along convenient unverified stories simply because it's too much trouble to find the truth. Pending further evidence, you and your readers should consider this story to be an ad hominem attack on doctors, a valueless and completely unnecessary one, since there is so much verifiable evidence that doctors are not doing a good job. Since you are a researcher in the field, I am confident that you will see the confirmation and intellectual attribution biases involved. Smart people are the best at defending their unconscious biases.

1. <http://www.overcomingbias.com/2007/10/doctors-kill.html>

seth (2009-02-04 17:27:12)

You want a first-hand account of a firing? The nurse was present when she was fired so her account is first-hand. I am completely puzzled as to what data you are looking for. Your definition "that which can be reproducibly be used to prove or disprove something" makes no sense to me. If you can give examples, that might make it clear what you mean.

retired urologist (2009-02-04 18:39:17)

Seth, I'm signing off. You are not what I thought.

Nathan Myers (2009-02-04 23:36:43)

I'm afraid I'm with *retired* here. Yes, evidence could be found of doctors' resistance to advisable procedure, and of misplaced administrative support for such resistance. Hanson's anecdote doesn't qualify, for the reasons *retired* generously explained at length. It qualifies, instead, as an illustration, of the sort used to lead off lifestyle magazine articles. Maybe it's true, maybe it's accurate, maybe it's not; it doesn't matter much, so nobody bothered to nail down the details that would be needed if it did matter. We have no idea who it was, or what hospital, or what doctor, and not even any attestation from anybody who does know, in confidence, and offers to vouch for the correctness of the details exposed. The problem is that it's easy to make stuff like this up, and if it's credited, there are plenty of people happy to make plenty of other things up. What we do have is death rates and infection rates that vary radically from one hospital to another. Death rates are hard to fake. Hanson's anecdote offers an illustration of how such disparities, and the negligence that creates them, could continue. I think you owe him an apology or three.

seth (2009-02-05 17:29:10)

Nathan, I'm impressed by the similarities in how two different doctors – Dr. Eileen Consorti, my surgeon, and retired urologist – reacted to simple questions about data. Similarity 1. Didn't answer the question. Consorti never provided the data she claimed existed. *retired* urologist never clearly explained what he meant by "evidence." Similarity 2. In response to these questions, implied there is something wrong with me for asking. Consorti called my interest in the effects of the proposed surgery "scientific" (that is, unnecessary); retired urologist said "you are not what I thought [in a bad direction]".

Nathan Myers (2009-02-05 19:44:38)

I thought he explained well the difference between anecdote and evidence, and how the one could be converted to the other – if indeed there is any truth in it – with a little investigative work. His disappointment that you couldn't seem to see the necessity of doing the extra work before citing it as evidence was manifest, not to say heartbreaking. Spend some time on [snopes.com](http://snopes.com) to see the range of falsehoods supported by anecdotes of exactly this character. If you're after something else, you have utterly failed to make yourself clear.



...many of them, maybe all of them, would be unlike anything you've ever seen. Thanks to my friend Carl Willat, you can now see [1]such a commercial.

Carl [2]makes commercials for a living but he made this one for fun. A labor of love. Not only did he (a) care about the product (Trader Joe's), he had (b) great skill and (c) complete freedom. I think this combination is extremely rare and is why this commercial is utterly different from all other commercials I've ever seen.

[3]My self-experimentation combined these three things, too. I studied (a) problems I cared a lot about (such as my poor sleep) with (b) the skills of a professional scientist and (c) total freedom. This combination, just as rare in science as in commercial art, explains to me why my self-experimentation seems so different than other research.

[4]More superhobbies.

1. <http://uk.youtube.com/watch?v=0dB7GDZY3Pk>

2. <http://www.carlsfinefilms.com/>

3. <http://repositories.cdlib.org/postprints/117/>

4. <http://www.blog.sethroberts.net/2008/03/30/praying-with-lior-and-labors-of-love/>

Nathan Myers (2009-02-03 20:39:01)

Speaking of TJ, those "**Airborne**" things featured in the video clip are a scam. The company was obliged to pay out \$millions, for fraud. The studies they cited on the label to support their claims turned out to be made up from whole cloth by the company founder. There's probably nothing wrong with whatever it says is in there, although it's probably nothing you don't get otherwise anyway. Given that the founder is a proven crook, there's every reason to guess that what the label says doesn't match the contents, if it would cost anything to keep them aligned. I don't know why TJ continues to stock them. What I really wonder about is the Buffalo Mozzarella. I hated giving that up, but how can we find out how much dioxin is in there?

Seth's blog » Blog Archive » Bill Gates Completely Wrong (2009-02-05 17:59:26)  
[...] If Commercials Told Emotional Truth [...]

Jenni Robinson (2009-03-03 15:34:50)

Just saying hi. I watched the commercial just now and loved it, and happened on your blog while googling Carl's name. Looking forward to doing some blog digging here! -Jenni

### **Interview with Leonard Mlodinow (part 5) (2009-02-03 10:53)**

ROBERTS I liked your line in The Drunkard's Walk about lotteries: "What would you think of a system where one person wins a million dollars; for hundreds of thousands of people nothing happens; and one person dies a violent death."

MLODINOW Would you participate?

ROBERTS Yes, would you participate? That was great.

MLODINOW Most people would, it turns out. But you can't quite phrase it that way.

ROBERTS I thought, "Well, you're not going to read that line in many descriptions of lotteries. That's just not the way the average professor of statistics would describe a lottery. But it's so much more interesting than the average way a lottery is described. I thought, "This is brilliant science writing. This person isn't just copying or popularizing."

MLODINOW That's a creativity that comes into writing as well as science. Science research takes a lot of creativity and the ability to look at things from a different angle and I think writing does, too. I think one of the things that sets this book apart from other books on probability is that sort of thing; I looked at a lottery and didn't just say "Here are your chances of winning and look how small they are," but I think I looked at it from a unique, somewhat amusing, surprising angle. That's where the work comes in writing the book, is to find those angles rather than just explaining things.

ROBERTS I think the average science writer would grasp that if you're going to write about the lottery, you're going to have to find some interesting stories, but I don't think they're going to be bold enough or creative enough to think of the way that I just said—the part I quoted. That's kind of a writer who's more sure of himself. You should be sure of yourself—you have all these credentials—you did all this stuff in science but I don't think the average writer is that confident. You know, Malcolm Gladwell tries to do this sort of thing. He does these slightly counter-intuitive ideas but it's less successful, I think.

MLODINOW An idea like that would have been hard for someone who isn't trained in the field; someone who is trained in the field I think would have confidence, if they thought of that idea, to use it. Also, that's

the two areas of confidence you need. You need confidence in the field, and you also need confidence as a writer. You build the latter by writing. Sometimes I'll write sections of the book or I'll go on for a while in a somewhat absurd-thinking-direction and I know enough now to know that it sometimes works and sometimes doesn't work. I think I know enough now to tell the difference.

When I was first writing, I was being a bit more hesitant about getting a wild idea and going there, thinking it was going to be silly and I'm going to embarrass myself. Then I learned, well, it's good to just do that and don't worry if you waste a day or two in that direction; you can just cut it and keep going but it's a good investment because sometimes it works and you get something really interesting. I also learned with time that I can tell the difference. If it really is silly and not working, I won't embarrass myself by leaving it in the manuscript; I will notice it and cut it and not fret over the lost day or two and I'll go on and write something else to take its place. Those are all lessons that you have to learn but it is interesting that you brought up the notion of confidence because I think that's something that you do learn as you write. It's really a dual lesson of confidence—that it's okay to go ahead and take chances with the writing—and the letting go of the possible wasted time you're going to have. So the confidence to know that you won't embarrass yourself because if it's really stupid, in the end you'll cut it and also that you're not going to fret over the wasted time are two lessons that I think you might not know your first time you're writing a book. In letting go, you have to be naked and just let yourself go and not worry about what you're saying and how it comes off.

ROBERTS And you know that you understand the subject. You know that there's not going to be some other person out there who's going to say, "This is all wrong." That's just not going to happen.

MLODINOW Right. You can make mistakes in details—everybody makes misstatements sometimes. There's so much in a book that it's hard not to have anything come about wrong. Even Stephen Hawking's *A Brief History of Time*, the original, gave the wrong relation at one point between wave length and energy for photons. He knows the difference, but unless you're a computer you do make errors, so another lesson you have to learn is not be too embarrassed if something does come out that is a detail that you get wrong. Obviously not an important concept you get wrong.

[1]interview directory.

1. <http://www.blog.sethroberts.net/2009/01/29/leonard-mlodinow-interview-directory/>

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NNM (2009-02-03 14:05:42)

Great interview. Remember also another great source of confidence: feedback, especially from others. A good writer (or self-experimenter) learns that it's OK to invest in seemingly wild and embarrassing ideas because the world lets him know they are not wild and embarrassing after all.

Oliver (2009-02-03 15:21:15)

Haven't read Drunkard's Walk— do you know if that line about the lottery is reference to Borges' short story "The Lottery of Babylon"?

seth (2009-02-03 18:49:40)

I asked Len and he said no, it is not a reference to that story.

Oliver (2009-02-04 04:07:26)

Thanks for asking, Seth, and for these interviews. This particular book is definitely on my reading list- although I've studied probability theory I really want to learn how to explain notoriously "difficult" things to people without intimidating them. I've actually gotten worse at this over the years (a growing, nerdy tendency to confuse precision and clarity?) Any coincidental parallels aside I do recommend "Lottery", and just about anything by Borges. :)

Seth's blog » Blog Archive » Leonard Mlodinow Interview Directory (2009-02-04 17:50:41)

[...] Interview with Leonard Mlodinow (part 5) [...]

Stephen M (Ethesis) (2009-02-06 20:21:44)

I really enjoy your interviews.

### **Assorted Links (black-is-white internal milieu edition) (2009-02-03 19:09)**

- [1]tapeworms are good for you
- [2]dirt is good for you
- [3]food with live bacteria is good for you

Thanks to Dave Lull.

1. <http://news.bbc.co.uk/2/hi/health/7856095.stm>

2. <http://www.nytimes.com/2009/01/27/health/27brod.html?em>

3. [http://online.wsj.com/article\\_email/SB123180831081775767-1MyQjAxMDI5MzMzMzMTgzMDE4Wj.html](http://online.wsj.com/article_email/SB123180831081775767-1MyQjAxMDI5MzMzMzMTgzMDE4Wj.html)

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Chris (2009-02-04 08:18:55)

While I'm personally a big fan of fermented food taste/cost-wise, you do need to be careful before you chomp down all the fermented chinese goodies. In Japan, Korea, China and India, the incidence of stomach cancer is fare higher than in the west. When Asians move to the US, their stomach cancer rates also drop (although heart disease rises). Some claim that this is due to fermented food or pickled foods. Some links: [http://books.google.com/books?id=7LYHFGLJQNQC&pg=PA295&lpg=PA295&dq=fermented+stomach+cancer&source=web&ots=YQT74TZVX0&sig=iuSfq-mpM9uxPovw3W-ILKAoRsU&hl=en&sa=X&oi=book\\_result&resnum=2&ct=result](http://books.google.com/books?id=7LYHFGLJQNQC&pg=PA295&lpg=PA295&dq=fermented+stomach+cancer&source=web&ots=YQT74TZVX0&sig=iuSfq-mpM9uxPovw3W-ILKAoRsU&hl=en&sa=X&oi=book_result&resnum=2&ct=result) <http://www.rtbh.net/Content.aspx?Section=cancernews&DocumentID=37721> I happen to live in Japan and eat lots of Natto. The health care system does accommodate for this though. Almost everyone over 30 gets a stomach ultrasound annually and barium esophageal/stomach scans every other year. In the US, men only get ultrasounds if they're about to go on Oprah to talk about their baby.

Andrew Gelman (2009-02-05 22:06:29)

I ain't eatin no tapeworm, man.

Drinking Water: Rain or City? « Eudaimonia Farm (2009-02-28 11:56:18)

[...] In writing a preliminary version of this to a friend, they asked if I was concerned about acid rain. Eh, not so much. Even if I were, I think that it'd also be a problem for my city water source, because acid rain frees heavy metals from the soil and Alto Pass water comes from a big pond. In any case, I'm going to include a little bit of limestone in the water

to make it a little more basic, because acidic water tends to have more soluble heavy metals and pesticides. As mentioned above, I may also have to add a little bit of chlorine to my water to kill any bacteria in it, but I'm going to wait on that. I want to test the water first and not introduce chlorine if I don't have to. Or I may just rely on the hygiene hypothesis... [...]

## **Interview with Leonard Mlodinow (part 6) (2009-02-04 17:47)**

ROBERTS Did you write in high school or in college?

MLODINOW I started writing in third grade for my school librarian. All I remember about that was they were short stories about dinosaurs and she claimed to love them and that gave me lots of encouragement. I used to love writing little stories; I didn't do that in college very much, I do believe I did in high school. In college I was just too busy- I had three majors and also got my master's degree, and I was only there three and a half years.

ROBERTS I didn't know that. Where did you go to college?

MLODINOW To Brandeis University.

ROBERTS What were your three majors and master's degrees?

MLODINOW Chemistry, physics and math.

ROBERTS What was the master's degree?

MLODINOW In physics.

ROBERTS In three and a half years you got a master's degree?

MLODINOW Yes. I took about double the normal course load. I had to get special permission for that. In the end I was one course short; I had to choose between the master's and the chemistry. I think I made the wrong choice, I chose the master's, so I ended up with a double major but I did every chemistry course for a major except one.

ROBERTS Why did you do this?

MLODINOW I didn't do this to try and break records; I was tremendously interested in things and if I saw a course I liked I wanted to take it. I was like the cliché of a kid in a candy store stuffing his face. I was stuffing my face with knowledge.

ROBERTS Why didn't you stay longer? Why three and a half years? Why not four and a half years?

MLODINOW Normal is four years and I took a semester off to live in to Israel during the Yom Kippur war, so that made it three and a half. I didn't think about staying an extra year. I went on to graduate school next so I didn't leave school. And I'm still doing that-that's what I do by writing books is just learn things and then write about them.

ROBERTS Yes, I know what you mean. Why did you choose physics rather than math or chemistry?

MLODINOW Chemistry was my love; chemistry and math since I was little and I had the cliché chemistry

1588



set in the basement—blew up myself, burned myself, burned down the house (well, caught the house on fire) and all sorts of things and I thought “I will be a chemist” from the age of, I don’t know, ten. When I got to college what happened was more and more I realized there wasn’t enough math in the chemistry for me so I started out with a math and a chemistry major and I thought the math was so Mickey Mouse in chemistry that I added . . . I learned about physics while I was in Israel in the kibbutz—I talked about that experience in Feynman’s Rainbow—and came back and added the physics and ended up in physics. I’ve always loved math but was not excited by pure math where you’re just exploring mathematics or its own sake. I always liked the applications. When I started learning about curved space it was not because the idea that Euclidian geometry isn’t the only one that excited me. It was the idea that physical space might not satisfy Euclidean axioms that really excited me. That was my proclivity in that direction.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2009/01/29/leonard-mlodinow-interview-directory/>

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Nansen (2009-02-06 14:07:31)

Apropos overachievement. That lunch with Stephen Wolfram in Feynman’s Rainbow, when the author thinks, “Has Feynman met this guy?” Hilarious!

Seth’s blog » Blog Archive » Leonard Mlodinow Interview Directory (2009-02-07 15:59:02)

[...] Interview with Leonard Mlodinow (part 6) [...]

## **Bill Gates Completely Wrong (2009-02-05 17:59)**

In a [1]Time article about the future of journalism – the problem of course is that it is free online – Walter Isaacson writes:

Others smarter than we were had avoided that trap. For example, when Bill Gates noticed in 1976 that hobbyists were freely sharing Altair BASIC, a code he and his colleagues had written, he sent an open letter to members of the Homebrew Computer Club telling them to stop. “One thing you do is prevent good software from being written,” he railed. “Who can afford to do professional work for nothing?”

Many people do professional work for nothing: the creators of open-source software, for one. Not to mention bloggers who write about their professional expertise (such as me) or my friend [2]Carl Willat (who made a commercial for nothing). Many book writers do professional work (in the sense that what they write is based on their profession) for next to nothing.

According to [3]my theory of human evolution before occupational specialization came hobbies – skilled work done for nothing. The mental tendencies that led us to do hobbies are still within us

[4]Superhobbies.

1. <http://www.time.com/time/business/article/0,8599,1877191-3,00.html>
2. <http://www.blog.sethroberts.net/2009/02/02/if-commercials-told-emotional-truth/>
3. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>
4. <http://www.blog.sethroberts.net/2008/03/30/praying-with-lior-and-labors-of-love/>

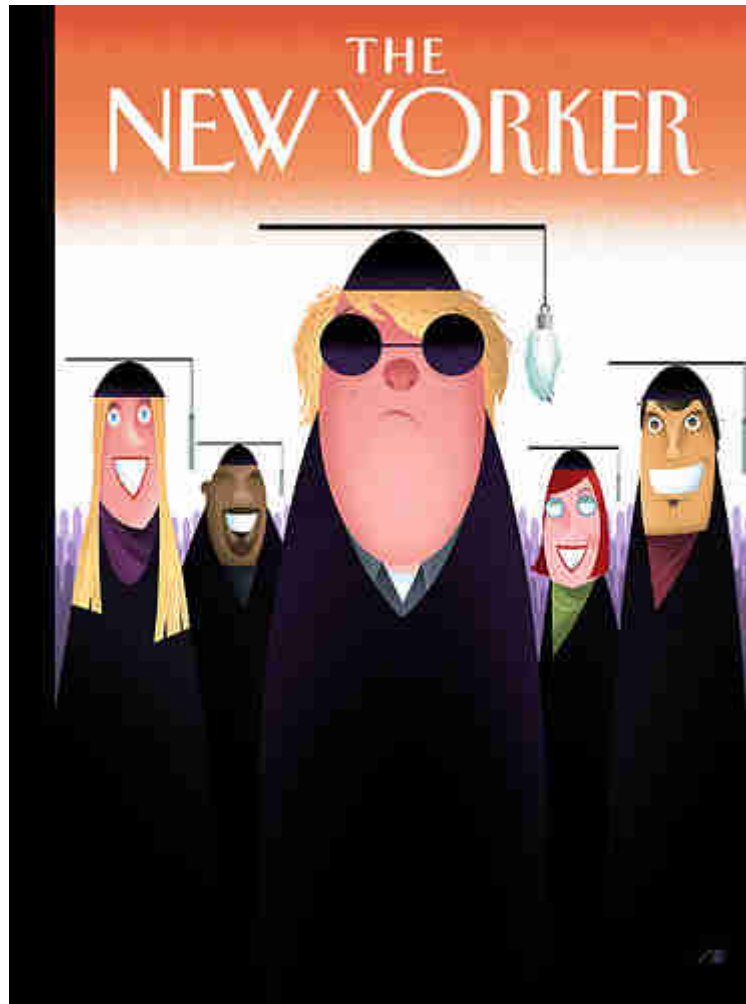
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Jim N (2009-02-06 14:04:06)

Interesting to think about software and Open Source in comparison to journalism. I want to point one thing out, though, about Open Source. Though many Open Source projects are open to, and receive input from, a wide variety of contributors, most of the huge Open Source projects, like Linux, are being developed by paid, professional coders employed to do so by large corporations. Why? Because it is in the interest of the corporations to do so. Yet, they return their contributions to the public (usually under some sort of Open Source license), where anyone can use them. Point is, it's possible that in the future people will make money being journalists, but that their incomes will not depend on restricting access to the works they create. You can "give away" your work, and still make money from it.

Cliff Styles (2009-02-10 16:31:48)

Well, but Gates' question remains: who can afford to do professional work for nothing? Such producers still have to eat and pay the rent. One can choose to give away some part of what one produces, but not all. You may do a lot of work for free (including this blog, for which I am grateful), but you certainly don't do ALL of your professional work for free. One question I have is this: in Gates' world a man can love his work and simultaneously get paid for it, whereas in the free software world, one will never be paid for work one loves because someone is already doing it for free. So doesn't it follow that in the free software world, programmers have to do work they detest so they can give away the stuff they love doing? I guess that's not so far from the real world, is it? It's great for the consumer, but is it really all that wonderful for the producer?



I felt a burst of joy when I logged in and saw for the first time the new digital edition of The New Yorker. It looks good and it works. The ads are still there – good, the magazine needs the revenue. The simulation of page-turning has a calming effect. You can easily print stuff to read later – while waiting for BART, say. You can easily go from the table of contents to the articles. You can easily look in back issues.

In Beijing I read The New Yorker online (the free stuff). Mail from America to China is so slow and error-prone it was pointless to have stuff forwarded. It felt fine. Sure, I couldn't read some of the articles but there was plenty of other stuff to read. My subscription felt worthless. Now it doesn't.

Maybe magazines aren't dead.

More When I tried to read an article, big problems arose. 1. It wouldn't work with Firefox, no matter how many times I reopened it. 2. After reading several pages with internet Explorer, it got into a state with two pages superimposed, making the whole screen unreadable. I couldn't fix it. I gave up and went to the paper version.

## Why Blog? Ask American Idol (2009-02-06 11:29)

From David Osmond, a failed contestant on American Idol: "I wish I had the opportunity to share what's inside of me."

I think that's exactly the driving force behind blogging.

I used to teach introductory psychology. Large lecture class. I found I could often put whatever I was thinking about in the morning into my lecture. Blogging is easier.

More [1]Jonathan Schwarz puts it like this: We have "desperation to express what our existence is like. Sometimes this comes out literally as singing, sometimes metaphorically."

1. <http://www.tinyrevolution.com/mt/archives/002845.html>

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Cyan (2009-02-13 07:40:38)

Not all people feel a desperation to express what their existence is like. I certainly don't. (In fact, I almost didn't bother to post this fact about what my existence is like, but then I realized that selection bias would automatically tend to screen out individuals like me from making such comments. Down with selection bias!)

## Interview with Leonard Mlodinow (part 7) (2009-02-07 06:42)

ROBERTS What happened in graduate school? What areas of physics did you pursue?

MLODINOW I worked for a fellow who did mathematical physics, which are mathematical techniques or mathematical underpinnings of physics. There were very few spots for theorists at Berkeley and I was very happy to get one of them. This fellow was probably the smartest one in the department and very picky about his students so I was happy to be able to have him as an advisor.

ROBERTS What was his name?

MLODINOW Eyvind Wichmann.

ROBERTS So that was in your first year of graduate school? You impressed him enough to have him take you on as a student?

MLODINOW I think at the end of the first year, yes.

ROBERTS What happened in the first year?

MLODINOW It may have been the second year; I don't remember now. I took his course in quantum field theory and then I became his TA in his quantum mechanics course.

ROBERTS He didn't have many students, right?

MLODINOW No. He would have, at any given time, probably average one or two over the years. He was there for probably 30 years and may have had probably less than 30 students. Since they stay a few years that makes sense but he probably had 15 students; I'm just guessing in terms of who I at least had heard of.

ROBERTS What happened to the students before and after you—his students before and after you? The one before you and the one after you—do you know what they're doing now?

MLODINOW Yes. There were the ones with me who graduated before and after. One of them is a very good friend—Mark Hillery—who's a professor in Hunter College in New York and very well known in quantum information theory. He graduated just before me . . .

ROBERTS With the same advisor.

MLODINOW Yes, and the one who graduated just after me I think is a professor in Indiana or Kentucky or somewhere over there.

But it was quite a great class. Two of the other theory students are big leaders in string theory now, Joe Polchinsky and Andy Strominger. One post doc, Steven Chu, has a Nobel prize [and a White House appointment]. There were quite a lot of good young people around there at the time.

ROBERTS Yes, I'm trying to get a sense of what your career would have been like if you hadn't gone into writing.

MLODINOW I imagine I would be professor at some school, who knows where. One of the things that I always cared about is where I live, so one of the downsides in academia is that you could be really good in your field and still end up in Peoria; nothing against Peoria but it just wasn't my choice of where to live. You don't get to choose where you're live; you get chosen by these places. Even Santa Barbara; I don't know how happy I would be there, even though it's a great school, very good in physics but I've always liked Chicago, New York, Boston—big cities—Los Angeles, the Bay Area, really big metropolitan areas with ethnic components and a lot going on.

ROBERTS Yes, I feel the same way. My mother went to Berkeley because she wanted to be at a big school near a big city.

MLODINOW How happy I would be in Kentucky or Georgia or Minnesota, maybe, though you don't know. One thing I learned from Gilbert's book is you don't necessarily know really what would make you happy. My German girlfriend at the time was telling me that, too—Right now you think you need to be in a big city, but you may find other things in life later, your family, that you focus on. Certainly I'm here and I'm very focused on my kids but still what do we like to do? We like to go into the Chinese parts of town and explore restaurants or the Mexican neighborhoods and look around or Vietnamese Town. We've got a lot of it here in Los Angeles and we like to go and find a new noodle shop.

[1]Interview directory.

## Interview with Leonard Mlodinow (part 8) (2009-02-08 07:26)

MLODINOW How happy I would be in Kentucky or Georgia or Minnesota, maybe, though you don't know. One thing I learned from Gilbert's book is you don't necessarily know really what would make you happy. My German girlfriend at the time was telling me that, too: "Right now you think you need to be in a big city, but you may find other things in life later, your family, that you focus on." Certainly I'm here and I'm very focused on my kids but still what do we like to do? We like to go into the Chinese parts of town and explore restaurants or the Mexican neighborhoods and look around or Vietnamese Town. We've got a lot of it here in Los Angeles and we like to go and find a new noodle shop.

ROBERTS Yes, I'm exactly like you. I love doing that sort of thing.

MLODINOW Yes, that's why we're friends.

ROBERTS I admire you; I'm glad that you're willing to be friends with me. What were you doing at the World Trade Center on 9/11? Speaking of living in cities.

MLODINOW My kids went to school at the schools that were a block or two away from the World Trade Center and I would take the subway right at the World Trade Center back to Uptown, a few minutes Uptown to where I work, which was just on the border of the Village on Broadway and I happened to be standing under the building and saw the first plane come in, fly over me and fly into the building. It's a long story what happened after that. I was hit with debris and injured. It's a long story because my ex-wife was living two blocks below the Trade Center and just had surgery, my son was at the school there and I was trying to find them, get together, and I got caught in the collapse and trapped and it's a long story, but that's a book in itself.

ROBERTS It led to your leaving New York, right?

MLODINOW It did, because, in the end, without going into the details, my son—who was in kindergarten—saw the whole thing, saw people jumping off the building, had to actually flee for his life when the Trade Center collapsed and went for about five or six hours thinking that I was dead because the last place I was seen was standing under the World Trade Center building and we didn't find each other until about 2:00 in the afternoon. That just caused psychological difficulties for him to live in the City as we were. I had shared custody with my ex-wife and I wanted to move into the suburbs and she didn't want to do that and our compromise, since we continued to share custody, was to move back out here to California just to get him away from the City. And it was a great move because his problems diminished dramatically in just a week after we got here, or two weeks, I don't remember, but just very shortly. Maybe it was a month.

ROBERTS How old was he?

MLODINOW I think 9/11 was his third day of kindergarten, something like that.

ROBERTS By then you'd already written *Euclid's Window*?

MLODINOW I had written *Euclid's Window*, so it wasn't just, "Oh, I'm going to go out and write, it's pie in the sky," I had written *Euclid's Window* and I think had written Feynman's *Rainbow* but it wasn't out yet, if I remember. The first book I wrote when I came here was the book with Hawking, *A Briefer History of Time*. I had stuff I knew I could do and it's all worked out very well and I'm much happier so that shows you that if you are a high paid executive somewhere maybe you'll have an even happier life if you would be not a high paid executive somewhere else and you just don't realize it.

ROBERTS Well, it's kind of amazing that this happened to you—this 9/11 thing happened to you—and in your book at the end, the last chapter is about the effects of random events on people's life stories. But you don't tell the story about yourself.

MLODINOW I had many stories I could have told about myself in the book, about how random events impact you, how things that you think are going to be good turn out later in hindsight not to have been so good or things that you think are going to be bad turn out in hindsight to have been good. How things that you think make a big effect on you have very little effect and how things that you hardly imagine would have an effect on you, like having an extra sip of a cup of coffee in the morning, can have a big effect on you, because, let's say you're three seconds past where the big crash was—the car crash on your way to work—or something like that, that you could have been hit if you hadn't had that coffee, or whatever. I have many ironic situations I can pinpoint in my life that I could have told them about but what I decided instead to do—I don't think I'm that interesting—was to find very famous people, Bruce Willis, Bill Gates and people everyone knows and a lot of people care about, and talk about how these events changed their lives. I thought that would be more interesting.. I tried to minimize the stories from my life although I picked a few dramatic events, I think maybe three or four that I do talk about—I'm not afraid to talk about it, it's just that in many cases unless the event itself is very interesting. If it's a mundane, small thing that happened that caused a big change in my life, I think it's more interesting. If it's a mundane, small thing that happened to Bruce Willis that caused a big change in his life, it made him a star, so that's why I chose those examples.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2009/01/29/leonard-mlodinow-interview-directory/>

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Seth's blog » Blog Archive » Leonard Mlodinow Interview Directory (2009-02-09 23:06:09)  
[...] Interview with Leonard Mlodinow (part 8) [...]

### **Aaron Blaisdell Recommends (2009-02-08 23:36)**

I like to think that [1]Aaron Blaisdell, a friend of mine who is a psychology professor at UCLA, has been influenced by what he has read on this blog. Maybe not. In any case, he has an interesting story to tell:

I noticed an increase in energy when I began taking fish oil capsules about a year ago, but it seemed to fade after the birth of our second child (and thus a large drop in amount of sleep at night).

In early November I began taking 1/4 teaspoon each of high-vitamin cod liver oil and high-vitamin butter oil (a la Weston Price's findings) purchased from Green Pastures. I noticed a large increase in energy and alertness afterward that continues to this day. I didn't start incorporating raw milk, cheese made from raw milk, yogurt, and kefir in my diet until late December. What I've noticed the most after incorporating fermented dairy into my diet was the drop in the amount of gas I produce and in how good my stomach feels. I used to frequently get a little bit of indigestion or an "empty stomach" feeling, even a few hours after a meal. That is, my stomach would churn, make noises, and sometimes I'd have light cramps in my stomach or intestines. Since taking the lactofermented dairy all of those symptoms have virtually disappeared. In fact, my GI track has never felt so good!

I've also been eating more kimchi and fermented tofu over the last few weeks, but haven't noticed any additional benefits likely because the effects on my health are already at ceiling. I also have switched from regular whole wheat bread to sprouted wheat bread, which I eat only in moderation (about a slice every day or two). Thus, my consumption of grains, particularly wheat, is way down compared to a few months ago.

In January I also started taking about 4k IU of Vitamin D3 (after reading discussions on the topic of Vitamin D deficiency at Stephen's blog, [2]Wholehealthsource.blogspot.com).

I also have noticed beginning in January that my skin looks very supple and clear. My visual acuity has always been better than 20/20 (all of my family but me need glasses), but also since January I've noticed my eyesight to be even more keen than ever. And my libido has increased as well. I really should keep a journal documenting all of my dietary and health changes. But with a 5-month old and a 3-year old at home, it's enough just to try to stay on top of my work!

1. <http://pigeonrat.psych.ucla.edu/>
2. <http://wholehealthsource.blogspot.com/>

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Seth's blog » Blog Archive » Genes Or Environment . . . Or Environment? (2009-07-14 06:29:32)

[...] I don't know any reason to think this is an unusual case. Aaron Blaisdell told me a story that shows its relevance to human health. Aaron is unusually sensitive to sunlight. Until recently, he could only spend 5 or 10 minutes in the sun before it became unpleasant. The condition is genetic. His mother has it; her father had it. It's called Erythropoietic Protoporphyria. It is autosomal-dominant. Scientists even know where the gene is. That's where the understanding of most scientists stops. A genetic condition. Recently, however, Aaron drastically changed his diet with great results, as noted earlier. At the same time as the dietary changes, his sun sensitivity got much better. He can now stay in the sun for an hour or more without discomfort. This is a gene-environment interaction, of course, but of a particular sort: The genetic effect showed there was something wrong with the environment, just as it did in DeCoursey's experiment. [...]

## Interview with Leonard Mlodinow (part 9) (2009-02-09 23:05)

ROBERTS I see. The smaller the event, the bigger the outcome, the better the story. The more famous the person happens to be . . .

MLODINOW The idea that Bruce Willis decides to visit his girlfriend in Los Angeles leads to the Diehard series is interesting. It's a more interesting idea than the fact that I'm on my way to the mailbox to mail a letter



turning down a fellowship to Germany when I bump in—literally cross paths at the mailbox, when I was in school—with the lady from the fellowship office whoâ€™s appalled that Iâ€™m not taking this fellowship that is so hard to get and makes me go talk to my advisor about it. I literally had the envelope in hand turning it down and it was the last day for deciding. I go to my advisor whom Iâ€™m sure will agree with me that itâ€™s a stupid thing to leave Berkeley and go to Germany for a year on this fellowship and he convinced me to do it. That completely changed my life. Had I not bumped into this lady, had I not had an extra sip or had I had two extra sips instead of one of my coffee, we would not have crossed paths, literally, at the mailbox. Itâ€™s a really bizarre thing and . . .

ROBERTS You mean your advisor convinced you to take the fellowship?

MLODINOW He convinced me to take the fellowship and go and I hadnâ€™t even considered it, I just thought, â€˜Well here I am in graduate school, I have to get through and to go on something that could be just a lark in Germany . . .â€™ But I ended up meeting a woman I fell in love with, learning the language, loving Europe, staying there for years. Many, many things in my life changed; it was really a life changing experience and I think it broadened my horizons quite a bit also, living abroad. It just changes your whole view of the world. All that wouldnâ€™t have happened if I hadnâ€™t literally crossed paths on campus with this lady. To make the story weirder, I had heard about the fellowship a month earlier or six weeks earlier, I donâ€™t remember, but just ignored it and by chance the night before had come across the letter and thought, â€˜Oh I shouldnâ€™t be impolite, I should tell them whether Iâ€™m taking it or not; someone else might be waiting for this.â€™ Thatâ€™s why I wrote the letter and was walking to the mailbox that next day. If anything, had I found the letter a day earlier and sent it out or not found the letter on my desk or not bumped into her or any of those things wouldnâ€™t have happened, I would not have had these experiences.

ROBERTS I think different events have different potentials for change—you could say they have different life-changing potency. If you spend an hour doing the events with the big life-changing potencies youâ€™re going to be in a lot better position than if you spend an hour doing the dead events, the events that are unlikely to change your life. I think your example plays into what I think because I think traveling is one of the events that has high life-changing potency.

MLODINOW Yes, thatâ€™s true.

ROBERTS And why that is, I think, is sort of interesting. You refer to something you call the Normal Accident Theory of life—what is that?

MLODINOW The Normal Accident Theory of accidents. The Theory of Normal Accidents is the theory that in a complex system you canâ€™t prevent accidents; they will happen and you need to account for them, you need to plan for them and you should stop—well, I shouldnâ€™t say stop—but you should give up the idea of zero tolerance and certainly try to minimize them. You also have to look at implications of when they occur because they will occur and in a very complex system there are always going to be events that on their own—or even in certain other combinations—are unremarkable and yet together in certain combinations can cause huge catastrophes.

One example is the story that I just told, meeting the lady at the mailbox. If you want to consider that—I donâ€™t want to say that it was a catastrophe—but it was on a big event which is the life-changing event of going and the little things that caused it that are normally totally unremarkable such as straightening out my desk, which caused me to find the letter. Taking the letter to the mailbox on my way to work and a number of other things that were minor and on their own not noteworthy conspired to have me collide with this lady at that time and end up in Germany. The nuclear reactor on Three Mile Island or the space shuttle or Chernobyl, these are complex systems that are so complicated that little events can conspire to cause a big event which can be a big tragic event. After those big events—after 9/11, after Pearl Harbor—we go back and we find the little events that made the big event happen and we blame people for not having avoided them. The question in the Normal Accident Theory is whether

thatâ€™s really wise because you canâ€™t know ahead of time what those un-noteworthy events will mean what or will cause what. Finding the actual events and tracing the path of tragedy doesnâ€™t really tell you a lot because there are a million possible paths which could have happened.Â You couldn't have worried about all of them.Â And only one of them, which is really not distinguishable from the others, a priori, is the one that led to the catastrophe. Itâ€™s all about trying to understand that—thatâ€™s the Normal Accident Theory.

I think in life, as I just said, I think that a lot of unremarkable, un-noteworthy events happen to push you this way or that, give you different opportunities or cause things to happen in your life that have the potential to cause major changes in life. Itâ€™s as much that sort of thing than your actual planning and conniving on how to get ahead causes you to get where you are.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2009/01/29/leonard-mlodinow-interview-directory/>

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Seth's blog » Blog Archive » Leonard Mlodinow Interview Directory (2009-02-12 23:31:54)

[...] Interview with Leonard Mlodinow (part 9) [...]

## **Standing, Sleep, and Stereotype Threat (2009-02-10 07:04)**

Part of my [1]long self-experimentation paper was about a connection between standing and sleep. If I stood a lot (more than 8 hours), I slept better.

Why might this be? I argued that if you use sleep to maintain muscles, you will begin to need sleep to maintain muscles. (And the more you use a muscle, the more maintenance it needs. Thus the stand/sleep connection.) Catherine Johnson describes [2]here a parallel process: Because men opened doors for her (in college), she began to need them to open doors for her. In situations where she was stereotypically expected to be weak, she actually became weaker (mentally).

However much sense this makes it is not part of conventional thinking. Should we fight against germs by killing them? Of course, says the conventional problem solver. The notion that germs might keep us strong isn't part of the discussion. Let me be more explicit: If you make everything clean you may begin to need everything clean. The overwhelming evidence for the [3]hygiene hypothesis shows that this line of thinking is reasonable.

So that's three examples of a general principle, an advanced version of "use it or lose it".

If you think this is somehow obvious, let me ask: What about terrorism? Should we simply try to eliminate it? Or is the question of how to respond more complex?

1. <http://repositories.cdlib.org/postprints/117/>

2. <http://kitchentablemath.blogspot.com/2009/01/stereotype-threat-redux.html>

3. [http://en.wikipedia.org/wiki/Hygiene\\_hypothesis](http://en.wikipedia.org/wiki/Hygiene_hypothesis)

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Aaron Blaisdell (2009-02-10 08:40:59)

In terms of terrorists, they have only made Israel stronger, exactly analogous (homologous?) to your germ-health theory. I'd also phrase the theory "whatever doesn't kill us will only make us stronger." About fulfilling the prophesy, as in the woman who claims to have become dependent on men opening doors for her, the same hypothesis has been put forth to account for differences between men and women in things like math. Women aren't expected to be able to do well at math, and lo and behold, more often than not they don't. While that's currently changing (I hope!) in our societies' educational system, there's a lot of inertia to overcome. Also fitting this theory, girls are supposed to be afraid and say "eek!" at spiders, snakes, mice, etc. I've often thought that girls aren't inherently predisposed to be more afraid of creepy crawlies (that's the technical term) than are boys, but that our culture reinforces such behavior and so girls "buy into" it. They receive positive social feedback early in life for exhibiting such squeamishness.

Nathan Myers (2009-02-10 17:02:30)

One word: smallpox.

Navanit (2009-02-11 05:46:06)

"Fluctuat nec mergitur" - fluctuates but does not sink. This is an excellent insight and intimately related to Nassim Taleb's Black Swan principal. In general, accepting or encouraging short-term volatility ("use it") will increase robustness against the unexpected. On the other hand, trying to minimize volatility will increase the risk of unexpected, kurtotic, collapse. Humans have a natural tendency to prefer the latter, unless forced to do the former due to environmental constraints (forced to exercise by hunting fugitive game). It takes conscious effort to introduce a little acute stress now again to improve our overall robustness when the real thing hits.

milieu (2009-02-11 08:24:37)

I agree with the hygiene hypothesis but encouraging peaceful and (maybe vocal) public dissent should be better for the long term stability of the organism. Terrorists can be considered like the common virus etc but wait what if the virus is potentially able to lead to death. Israel has become stronger by fighting boldly against terrorists but then what if in the future some of those terrorists get hold of a WMD?

milieu (2009-02-11 10:18:57)

BTW I saw a study on perhaps a related problem. Dunno if you have seen it already. The Irony Of Harmony: Why Positive Interactions May Sometimes Be Negative <http://www.sciencedaily.com/releases/2009/02/090202175047.htm>

A.B> (2009-02-11 13:05:12)

C-Section The more you use it, the more you need it. In the future, humanity might become entirely dependent on it to reproduce.

Chris B. (2009-02-17 21:11:46)

"Israel has become stronger by fighting boldly against terrorists but then what if in the future some of those terrorists get hold of a WMD?" God forbid it should happen, but a society that, like Israel, has fought against terrorism at the cost of hundreds or thousands of lives would be better able to survive a massive attack killing tens of thousands than one that hadn't suffered previously. I hate to be critical of the U.S., 'cos they are so often unfairly slagged, but it seems to me that Britain handled the 60,000 dead of Blitz better than U.S. did the 3000 dead of 9/11. Still, if 1930s Britain had suffered a similar attack in peacetime it might have been equally traumatic. By the worst raids came, they were hardened. It's worth noting that the earliest bombing raids of the war (Rotterdam, Coventry, or, even before the war, Guernica) are the ones that have remained burned in the historic memory, the later ones less so. (OK, not the late, ultra-massive raids on Germany and Japan, or the atomic bombs, but they were really at a different level of destructiveness.)

## Interview with Leonard Mlodinow (part 10) (2009-02-11 13:51)

ROBERTS What did you think of *The Black Swan* on the same topic?

MLODINOW It's on the topic of how little things can cause big changes, you mean, and . . .

ROBERTS And how poorly we understand what really matters.

MLODINOW I haven't read the book from beginning to end so it's hard to comment on that.

ROBERTS What about his previous book? There are similar ideas in the two books.

MLODINOW I didn't really notice that book when I started writing *Drunkard's Walk*; I wasn't aware of the book. I had looked-in the library-gone through tons of books that seemed somehow related to randomness and somehow that one didn't stand out to me. Sometime later it came out in paperback and it got very popular. Then I rediscovered it, and yes, I agree with a lot of what he says in that first book, but I still never read it from cover to cover. I'm not the type who feels compulsive about reading everything that's been written on the subject that I'm writing on.

ROBERTS Yes. I always think of his book as being about these very long-tailed distributions-not only about that, but they play a large role-whereas you didn't mention long-tailed distributions in your book.

MLODINOW Not explicitly, but I did talk about that idea and certainly the idea that not everything follows a normal distribution and how important it is to note that, for instance in Hollywood-Hollywood box office receipts. But I think *The Black Swan* was exclusively about that, so in that sense it was a different topic.

[For readers who don't know what that is, if you're talking about the probability of events occurring-let's say you're talking about the probability of a movie making a certain amount of money-there may be a mean amount of money that a movie makes or that a movie of that type makes. Then there will be fluctuations around it; some movies will make more, some movies will make less. The normal distribution is a distribution of the revenues that would follow a bell curve and the long-tailed distribution differs. One of the important respects that it differs in is that it has a lot more results that are far from the average that you would expect in a normal distribution. So if the average movie makes \$1,000,000 or to be more realistic let's say the average movie makes \$50,000,000 and if it was normally distributed you would have, depending on the variance, but let's just say you would have a certain number that make 40 or would make 60 and another small number would make 30 or 70 and you have a very small number indeed-probably practically zero-that would make \$500,000,000. In Hollywood the way it really works is there are more that differ that far from the median than you would have if it were a normal distribution. That's what they call a long-tailed distribution-the number of occurrences that are far from the average is much higher than you would expect with the normal distribution. - LM]

So that applies in many areas of life as well. I think that translated into what we were just talking about, it means that these little minor incidents can have major effects on you. It's not all kind of pushed toward the mean effect, which is just going into my office and doing more physics.

ROBERTS Yes, I think that if you take the different things that have happened to you and you measured their effect, the effects will have a power-law distribution. A tiny number will have a huge effect and . . .

MLODINOW Yes.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2009/01/29/leonard-mlodinow-interview-directory/>

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Seth's blog » Blog Archive » Leonard Mlodinow Interview Directory (2009-02-15 08:40:14)  
[...] Interview with Leonard Mlodinow (part 10) [...]

Interview with Leonard Mlodinow (part 3) | the Justin Owings page (2011-07-25 08:53:34)  
[...] part 10 [...]

### **Kickbacks in Academia (2009-02-11 22:27)**

Preston McAfee, a Caltech economics professor, [1]writes:

These schmucks are offering a bribe to the professor for using their text. It had to happen, but students in courses using their books ought to be extremely irate – you should feel the same way if your physician took a bribe from a pharmaceutical company for giving you a prescription.

[2]If?

1. <http://www.mcafee.cc/Introecon/NSSP.html>  
2. [http://www.bmj.com/cgi/content/full/338/feb03\\_2/b222](http://www.bmj.com/cgi/content/full/338/feb03_2/b222)

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Jack (2009-02-12 09:30:23)

Hi Seth, sorry for this unrelated comment but your blog contains some spam links which I believe have been added without your consent or knowledge. I believe this problem affects Wordpress blogs running on Dreamhost. More info here: <http://boxofjack.com/articles/2009/02/09/spam-links-injected-into-wordpress-2-7/>

Stephen M (Ethesis) (2009-02-12 20:19:11)  
well noted.

seth (2009-02-13 17:08:51)

Yes, Seth. If. Not all doctors are immoral, ignorant drug peddling whores. While our training has certain glaring deficiencies, and as humans we are subject to confirmation bias and other forms of fallacious thinking(see you hernia story), M.D.s in general mean well, and few would ever accept a bribe in treating a patient. I read your blog regularly, and enjoy it. You clearly have biases of your own as well, but I take these into account when reading your work Of note, I am on week one of my shangri-la self experiment. if it works\_

Preston McAfee (2009-11-02 21:46:57)

There has been an update to this story: <http://www.mcafee.cc/Bin/NSSP.html>

## The Comforts of the Umami Hypothesis (2009-02-12 23:30)

What a difference an idea makes. A few weeks ago I came up with the idea that evolution shaped us to like umami taste, sour taste, and complex flavors so that we will eat more harmless-bacteria-laden food, which improves immune function. (I pompously call this the umami hypothesis.) It seemed so likely to be true that I started eating more fermented foods: miso, kimchi, yogurt, buttermilk, smelly cheese, and wine. To avoid stomach cancer and high blood pressure, I later cut back on miso, kimchi, and smelly cheese.

There have been other changes, too:

- After buying meat or fish, I don't try to get home quickly to put it in the fridge
- I don't worry that eggs have been in the fridge for 3 weeks
- When buying eggs and other perishables, I don't try to get the freshest
- I don't worry about leaving milk out

Bacteria and viruses from other humans pose a threat. This is why we find fecal matter so offensive. It's why hand-washing by doctors matters. But I believe plant-grown and dirt-grown bacteria are harmless because the substrates are so different than conditions inside our bodies. As for meat-, fish-, and dairy-grown bacteria, I don't think they are very dangerous. Has anyone gotten food poisoning from yogurt? I keep in mind [1]how much stinky fish the Eskimos ate. Maybe I should do some controlled rotting experiments – leave meat at room temperature for varying lengths of time before cooking and eating it.

1. <http://www.biblelife.org/stefansson1.htm>

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Oliver (2009-02-13 03:14:12)

I'm trying to brainstorm fermented foods that are neither potentially harmful in the ways you've identified nor in my personal case. I have a casein allergy, so no yogurt. (at the moment!) Asian Flush syndrome makes wine inconvenient– a small amount makes me turn red and my head pound. Probiotics are something I haven't been able to investigate enough. All the widely available and affordable live culture products seem to be yogurt-based. What you say about bacteria in different ecologies makes sense. My naive generalization would go like this: the strains that are usually harmful are ones that thrive in living animal tissue, whether parasitic or symbiotic. The bacteria that do well in dirt, plants, or decaying matter probably won't pose as much a threat to live humans. And then there are bacteria that seem to be wholly beneficial. I am saying this with very little knowledge of microbiology, of course, but this would be my first guess.

Oliver (2009-02-13 05:29:57)

Ah, Ignore my rant on different substrates of bacteria. I didn't realized\* you had covered that. I'm glad I wasn't too far off, though. \*For some reason the browser on my phone (where I was reading this before) cut out a chunk of the last paragraph, so the post ended with "dirt-grown bacteria are harmless..." I was reading it through Google Reader for mobile, which sometimes

does weird things with webpages.

Aaron Brown (2009-02-13 06:25:34)

"unami" -> "umami"

Tom Moertel (2009-02-13 08:16:44)

Seth, could you comment a bit more about the risks of miso, kimchi, and smelly cheese? (Re: "To avoid stomach cancer and high blood pressure, I later cut back on miso, kimchi, and smelly cheese.") Thanks! Cheers, Tom

seth (2009-02-13 14:12:18)

Stomach cancer is high in Japan and South Korea, where lots of miso and kimchi is eaten. Miso and cheese are high in salt, which raises blood pressure. After I started eating lots of miso and cheese my blood pressure appeared to go up about 10 points and when I cut back it went down about 10 points. The causality isn't as clear as that might sound but that's what happened.

seth (2009-02-14 09:53:31)

OOPS! (unami rather than umami). Thanks, Aaron.

Heidi 555 (2009-02-14 11:06:20)

Seth, I very much resonate with your umami hypothesis and tend to crave those kinds of foods. Just wanted to add wild mushrooms to your hypothesis. They have a wide variety of unami flavors and many are well documented as being amazing for the immune system. If you would be interested in experimenting with them, I would be happy to send you some dried mushrooms or fresh when they are in season. Also, there are lots of good naturally fermented vegetables available at health food stores, and it is pretty simple to ferment your own. Nutritional yeast and brewers yeast, kombucha (a fermented tea drink from microorganisms), rejuvelac (a sprouted grain drink) might be other good things to try. In addition to the rejuvelac, I think Ann Wigmore would make fermented cheeses out of sprouted nuts. I also love umeboshi plums but they are really salty. Bee pollen is naturally fermented with bee saliva, as well as raw honey.

Seth's blog » Blog Archive » Pagophagia and the Umami Hypothesis (2009-02-16 12:20:34)

[...] The Comforts of the Umami Hypothesis [...]

kathy w. (2009-02-19 21:37:57)

aged cheeses can raise blood pressure in some people, due to the tyramine content. so, ironically, can aged meats. from wiki: Tyramine is an amine which causes elevated blood pressure and tachycardia by displacing norepinephrine from storage vesicles. Tyramine is generally produced by decarboxylation of the amino acid tyrosine during fermentation of food products. All protein-rich foods which have been matured will contain more tyramine depending on the temperature and how long they have been stored. Properly refrigerated foods will not be affected.

seth (2009-02-19 22:09:24)

Kathy, I didn't know that. Thanks. My blood pressure did go down after I stopped eating the aged cheese.

Tom in TX (2009-02-20 09:23:58)

Not just high BP. Some people get migraine headaches from tyramine foods - aged cheese, wine, processed meats, and a lot of fermented foods. YMMV.

imsovain (2009-02-20 09:26:40)

Which cheeses are considered stinky?

Fermentation (not alcoholic....) of food. | CST Free Weight Exercises By Scott Sonnon (2009-04-28 00:18:00)

[...] Anyway one of his recent theories is the Umami Hypothesis. the idea that evolution shaped us to like umami taste, sour taste, and complex flavors so that we will eat more harmless-bacteria-laden food, which improves immune function. (I pompously call this the umami hypothesis.) It seemed so likely to be true that I started eating more fermented foods: miso, kimchi, yogurt, buttermilk, smelly cheese, and wine. To avoid stomach cancer and high blood pressure, I later cut back on miso, kimchi, and smelly cheese. [...]

The Umami Hypothesis | Lost Wanderer (2009-07-27 18:51:05)

[...] Seth Roberts has proposed an interesting hypothesis, that humans like complex tastes (umami) because we evolved to like the taste of bacteria in food. He believes that bacteria from natural pickling is harmless, and actually improves our immune function. As reported in Conditioning Research, Roberts points out that explorer Vihjalmur Stefansson reported that Eskimos ate lots of bacteria fermented fish, which he also grew to enjoy. Supporting this theory, Conditioning Research also tells of a University of Michigan paleontologist, Dan Fisher, who butchered a draft horse and cached the meat in a stock pond. The lactobacilli in the water pickled the meat, which it emitted a slightly sour odor that put off scavengers when it floated to the surface. Fisher cut and ate the meat from February until summer to prove its safety, showing how hunter gatherers might have once stored their large animal kills. As I blogged in an earlier post, fermented foods also are known to be good sources of vitamin K2. Social bookmarksSubscribeBlinklistBloglinesBlogmarksDiggdel.icio.usFacebookFurlMa.gnoliaNewsVineRedditStumbleUponTechnorati [...]

## Sports and Money: Not So Different (2009-02-14 09:24)

In a [1]YouTube post, Nassim Taleb makes an excellent point about misleading stock prices – they mask what really matters. Practically the same point made by Michael Lewis in an [2]excellent article about a basketball player and misleading stats.

Thanks to Dave Lull.

1. <http://www.youtube.com/watch?v=YHZfnNtqd7o>

2. <http://www.nytimes.com/2009/02/15/magazine/15Battier-t.html?ref=magazine&pagewanted=all>

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## Interview with Leonard Mlodinow (part 11) (2009-02-15 08:39)

ROBERTS I think that if you take the different things that happened to you and you measured their effect, the effects will have a power-law distribution. A tiny number will have a huge effect . . .

MLODINOW Yes.

ROBERTS . . . and a large number will have very little effect. But I guess you could shift the slope of that power-law distribution if you were smart. My research with rats has involved measuring how long they hold the bar down when they press the bar and it turns out that has a power-law distribution.

MLODINOW That's interesting. Why is it that they hold it down with a power-law distribution rather than, let's



say, a normal distribution?

ROBERTS Why? I think itâ€™s because the way the cerebellum is constructed. I think it has to do with . . . the brain is a network and itâ€™s much easier to get a power-law distribution out of a network than out of a non-network and itâ€™s revealing of the mechanism that produces the bar presses. Itâ€™s revealing that it comes from a very networked structure and a little bit more than that, too. Itâ€™s not only networked, itâ€™s also chain reacting and it sheds some light on the mechanism thatâ€™s producing the bar presses and that mechanism is not so far from what we see in the cerebellum, which has these incredible density of neurons, highly interconnected neurons. So thatâ€™s the connection.

MLODINOW Interesting.

ROBERTS Thatâ€™s the best I can say as to the why. Clearly evolution designed the brain to solve the problems that animals encounter and why does the cerebellum have the structure it does? Because this power-law distribution is a good idea. Normal distribution is probably too conservative, whereas the power-law distribution is . . . every now and then itâ€™s searching much more widely.

MLODINOW Searching for . . . to see if holding it down less or more amount of time will have any effect, so the power-law you will have some of those explorations into holding it down not long or extra long and therefore sometimes discover something new, rather than really more narrow . . . in a narrow band holding it down a certain number of milliseconds or whatever.

ROBERTS I would guess that the brain has been shaped to produce the power-law distribution in those operations and I think thereâ€™s probably other patterns of variability in other aspects of behavior but this is the one we measured.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2009/01/29/leonard-mlodinow-interview-directory/>

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Seth's blog » Blog Archive » Leonard Mlodinow Interview Directory (2009-02-18 08:47:42)  
[...] Interview with Leonard Mlodinow (part 11) [...]

### Assorted Links (2009-02-15 10:39)

- [1]you are your data
- [2]student-eye view of the Chinese educational system

Thanks to Dave Lull.

1. <http://www.good.is/?p=15247>  
2. <http://en.chinaelections.org/NewsInfo.asp?NewsID=19911>

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## Pagophagia and the Umami Hypothesis (2009-02-16 12:20)

[1]Pagophagia is an eating disorder where you chew a lot of ice. A friend of mine had it. After she discovered she loved crunching ice cubes, she started going through several trays of ice cubes per day. A trip to Russia, where ice cubes were unavailable, was highly unpleasant. Eventually my friend learned that pagophagia is caused by iron deficiency. When she started eating more iron, her ice craving went away.

Why do we work this way? The evolutionary reason, I think, is that in the ancient world where this tendency evolved, a desire to crunch something was usually satisfied by crunching bones. After you discovered how pleasant it was to crunch bones, you sought them out. Bone marrow is high in iron. Crunching those sought-out bones increased your iron intake.

The [2]umami hypothesis says that we like umami tastes, sour tastes and complex flavors so that we will consume more harmless-bacteria-laden food (which keeps our immune system on its toes). In the ancient environment where these tendencies evolved, in other words, a desire to eat food with these characteristics led us to eat bacteria-laden food. At the Fancy Food Show, I met a maker of [3]sparkling tea who was unable to get enough complexity without using bacteria.

Just as a person with pagophagia chews ice, most of us do one or more of these:

- add monosodium glutamate (e.g., Accent) for umami taste
- add vinegar for sourness (I put a few drops of vinegar in coffee-like drinks)
- add many spices for complexity

The result, I suspect, is that most of us have immune systems with plenty of room for improvement. I [4]stopped getting easy-to-notice colds when I started sleeping better so the high frequency of reported colds (the average American adult gets [5]about three per year) may be a sign that this is true.

1. <http://en.wikipedia.org/wiki/Pagophagia>

2. <http://www.blog.sethroberts.net/2009/02/12/the-comforts-of-the-unami-hypothesis/>

3. <http://www.blog.sethroberts.net/2009/01/18/how-things-begin-sparkling-tea/>

4. <http://repositories.cdlib.org/postprints/117/>

5. <http://www.medscape.com/viewarticle/546799>

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Tom Moertel (2009-02-16 14:14:34)

I suspect that that human preferences were fairly well optimized to guide pre-civilization humans toward good health. If humans need Y for optimal health, we would expect natural selection to have developed preferences that led to sufficient Y intake. One such preference might be a taste for Y, itself. Given that Y might be expensive for the body to measure directly,

however, selection-based optimization would likely have found some easy-to-measure X to serve as a reliable marker for Y. If you consider a similar optimization process to have been performed for all the myriad Ys that our bodies need, it's reasonable to conclude that we humans crave a lot of related Xs as a result. Fast forward to today. With agriculture, we have introduced many "new" foods, some of which do not preserve the traditional X-and-Y relationships our pre-civilization bodies expect. Further, with modern food science, we can figure out what any particular X is, manufacture it in isolation, and sprinkle it into all sorts of unrelated foods. All of a sudden, those foods become a whole lot more crave-worthy, but our bodies' natural preferences become a whole lot less reliable (or a whole lot more manipulable, depending on your cynicism level). It's an interesting situation, this X for Y thing, one that raises some fascinating research questions. For example, can market research lead us to better eating? Go to the supermarket, buy popular junk food, and examine the ingredients for possible X markers. If we consider those Xs to be the most-strongly craved (as revealed by marketing and sales optimization), they might point to the Ys we most strongly need. For each potential X, figure out what Y it indicated in pre-civilization times, and eat more of that. That's interesting stuff. I think you're on to something here, Seth.

Aaron Blaisdell (2009-02-16 22:04:48)

This disconnect between marker X and required nutrient Y reminds me of work showing how rats (and mice) with an electrode placed in their hypothalamus will work to exhaustion to press a lever that results in a delivery of stimulation of the hypothalamus. This is called brain reward stimulation.

Seth's blog » Blog Archive » The Staggering Greatness of Homemade Yogurt (2009-02-18 23:16:43)  
[...] Pagophagia and the Umami Hypothesis [...]

Seth's blog » Blog Archive » Where Does Umami Come From? (2009-07-03 17:27:03)

[...] As previously blogged, the evolutionary reason we like umami taste may be so that we'll eat more bacteria-laden food. This makes sense only if bacteria-laden food would have been the main source of umami. Nowadays, you can get umami from MSG. What about before MSG? [...]

## **Salt, Fermented Food, and Black-and-White Speak (2009-02-17 09:20)**

In an informative [1]op-ed piece in the New York Times, Michael Alderman, an epidemiologist, questions a government campaign to reduce salt in processed food. His piece raises two (wildly different) questions.

1. Several studies have correlated less salt with worse health. Why? Alderman writes:

Nine [observational] studies, looking at a total of more than 100,000 participants who consume as much sodium as New Yorkers do, have had mixed results. In four of them, reduced dietary salt was associated with an increased incidence of death and disability from heart attacks and strokes. In one that focused on obese people, more salt was associated with increased cardiovascular mortality. And in the remaining four, no association between salt and health was seen.

And in the one experimental study that Alderman knows of, "the group that adhered to a lower sodium diet actually suffered significantly more cardiovascular deaths and hospitalizations than did the one assigned to the higher sodium diet."

Those are useful facts. Alderman gives a few possible explanations. Here's another one: Several popular fermented foods, including sauerkraut, buttermilk, miso, and cheese, are high in salt, and [2]fermented foods protect against heart disease. I haven't read the experimental study Alderman describes but it is unlikely that the two groups in that study ate food that was the same in every way except for salt content. What probably happened is that one group was

instructed to choose a low-salt diet and the other group wasn't. The low-salt group ate less salt in part by avoiding high-salt fermented foods (such as cheese).

2. Alderman writes:

[Observational] research can justify action only when multiple studies produce consistent, robust findings across a wide range of circumstances, as the research on tobacco and lung and cardiovascular health has done.

The puzzle is why he writes like this, which I find irritating. Most of the editorial is good, which makes this lapse especially interesting. I call this black-and-white speak, talking as if something complex was black and white and – always associated with this – people on one side are better than people on the other side. In my professional life, I hear black-and-white speak from some statisticians, who divide analyses into "correct" and "incorrect." According to them you should analyze your data by following a set of black-and-white rules. Here is a less-irritating version of Alderman's statement:

Successful public health campaigns have been built on observational studies but in the best-known case – the danger of smoking – the findings were consistent and robust across a wide range of circumstances.

See: no need to moralize. Alderman's statement, of course, is just one example of something very common.

[3]Ben Casnocha on another example of moralizing in the Times.

1. <http://www.nytimes.com/2009/02/06/opinion/06alderman.html?ref=opinion>
2. <http://www.blog.sethroberts.net/2009/01/26/the-inuit-paradox/>
3. <http://ben.casnocha.com/2009/02/steven-kormans-open-letter-to-ceos.html>

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Mike Kenny (2009-02-17 12:09:56)

Doesn't salt have anti-biotic properties–meat used to be preserved by being salted rather than frozen. Does the intersection of salt and fermentation do anything special, I wonder? Salt and fermentation seem at cross purposes to an extent. Does the salt kill or weaken bad bacteria from fermentation and allow your immune system to sample it, producing a process like vaccination which uses destroyed viruses?

Nathan Myers (2009-02-17 19:36:04)

I suppose that brine-adapted bacteria tend not to be human pathogens, because humans aren't especially briny.

Andrew Gelman (2009-02-17 20:05:57)

I don't know that moralizing is so bad. Your blog is full of moralizing–and I mean that in a good way. As for Casnocha's comment: he seems to have a different economic philosophy than the person who wrote the passage that he criticizes. But this seems more like a difference of perspective. Casnocha is moralizing too (which isn't a bad thing). P.S. The fermented food thing is interesting too, but too far from any of my expertise to comment on. I'm glad you're stirring things up in this field.

seth (2009-02-17 20:33:41)

Andrew, maybe it's a certain kind of moralizing I don't like. I agree with you that it is actually a good thing to say this is good and that is bad, as you often do in your blog. But saying it in a way that implies that anyone who disagrees with you is a bad person or stupid or something like that – that I don't like and think is unhelpful. The black and white aspect comes into it with false certainty: The statement is too strong as if the issue is really clear when it isn't. As if there is less room for disagreement than there actually is. For example, to say a certain graph is bad for reasons X, Y, and Z – that's fine. That's really helpful. But to say a certain graph is wrong – as you have never done, as far as I know – isn't helpful at all. It implies that there are black-and-white rules about making graphs. That's an unhelpful implication because making graphs is too complicated for that. Statements like that discourage thinking and encourage blind obedience.

Darkhorse (2009-02-18 09:02:26)

Seth, I like the respect that you show for the point of view of others. In my own drive to keep growing, to keep learning, I've learned that a closed mind is great at action, but not at listening. An open mind leaves a chance for someone to drop a worthwhile idea in it.

### **The Unfortunate Saveur 100 (2009-02-17 11:04)**

Every year Saveur magazine has a list of 100 "favorite people, places, and things." [1]This year's list is the "home cook edition" – meaning related to home cooking. Only one entry is about fermented food: making wine vinegar, which takes 2 months.

Given that there are hundreds of fermented foods, many much easier to make, this is unfortunate – just as bad as Paul Goldberger, the New Yorker's architecture critic, ignoring green buildings on his list of the [2]top ten buildings of 2008. (A museum with a garden on its roof doesn't count. Green building is about better houses and businesses.)

1. <http://www.saveur.com/article/Our-Favorite-Foods/The-2009-Saveur-100>

2. <http://www.newyorker.com/online/blogs/tny/2008/12/paul-goldberger-architectures.html>

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### **Interview with Leonard Mlodinow (part 12) (2009-02-18 08:46)**

ROBERTS I have some questions about details of the book. What was the hardest part of writing the book? . . . there were no hard parts?

MLODINOW Well, I'm thinking about it and also thinking about how I interpret the word "hard." Usually "hard" would mean that you're struggling with it and I'm not sure I exactly struggled with any particular part, in a sense of . . . with all the negative connotations of the word "struggle," where I'm unsure of victory and battling and becoming exhausted and fear for my life.

I guess the part that comes to mind that I had the most doubts about whether I could get through it was the structure of the book because it weaves together three areas that are historically not that smoothly tied together—probability, statistics and the random processes. Or one united subject, like geometry, that you can see the fairly linear development and here it was more intertwined strands. I did have some trouble at first seeing the segue both in concept and

tone of the book, from probability to statistics and at the end when Iâ€™m talking more about random processes and very specifically about peoplesâ€™ lives. To make that a smooth transition so it doesnâ€™t seem like two books, a book on the concepts and another book on peoplesâ€™ lives. There was a lot about peoplesâ€™ lives in the earlier parts, too, but in the latter parts of the book, I had less and less actual mathematical concepts and almost solely psychology and sociology and discussion of peoplesâ€™ lives. Figuring out exactly how to do thatâ€”I do remember struggling with that partâ€”I guess that was the hardest part, I would say.

One other difficult thing was that I went backâ€”when I was talking about the Central Limit Theorem and the Law of Large Numbersâ€”I went back and looked at the very specific work that was done by DeMoivre, Laplace, Gauss etc.Â That was difficult because what they actually did is not in the form that is often attributed to them today.Â I went back and tried to disentangle what they actually showed and tried to figure out what they were thinking, rather than just talking about the modern form of the theorem in textbooks and attributing it to them.

ROBERTS I see.

MLODINOW That took a lot of effort to figure out. I actually went back and found some of the original calculations.

ROBERTS In a library somewhere? In a manuscript?

MLODINOW Theyâ€™re in academic booksâ€”there are several academic books, so I found some academic books (academic press books, I mean) that presented their actual calculations. I went through those in order to figure out and explain the differences between what they actually did and what the offshoot of their work looks like today.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2009/01/29/leonard-mlodinow-interview-directory/>

## The Staggering Greatness of Homemade Yogurt (2009-02-18 23:16)



I don't like that title but it's true. As I will explain in a later post you can't trust commercial yogurt makers to provide much bacteria in their yogurt – they actually seem scared of the stuff. So I made yogurt myself. It turned out a lot better than I expected.

I had made yogurt dozens of times. This time, however, I wanted to get as much bacteria as possible so I incubated it about 24 hours instead of about 6 hours. It came out far more sour (due to lactic acid) than ever before. But it wasn't just really sour (like vinegar); it also had complexity of flavor, creaminess, and a pleasant consistency. It was more sour (tart and tangy are the conventional terms) than any yogurt I've ever had. I couldn't eat a bowl of it; I had to eat it with other food. This may be why commercial yogurt is mild: So you will/can eat more of it at one time.

The yogurt I made is essentially a condiment, although it can be mixed with fruit. It improves almost anything: soup, meat, fish, fruit, string beans, scrambled eggs. (Because almost nothing we eat is sour and almost nothing we eat is creamy.) It is better than other common condiments, such as mustard and chutney, because of its creaminess. It is also far cheaper than other condiments. A small bottle of mustard might cost \$3. The same volume of homemade yogurt would cost about 10 cents. (You might need twice or three times as much yogurt to get the same effect.) It is far easier to make than other condiments. And, above all, I suspect it is [1]infinitely better for your health. Mustard has few bacteria. If you complexify and sour your food with mustard, you are essentially [2]chewing ice.

Because of subsidies, milk in California is extremely cheap. Ordinary milk, to me, is nearly worthless; I never buy it. Now, with little effort, this very cheap product that I have completely ignored is the source of something like liquid gold – at least, if you like good-tasting food and health.

Recipe. I took a gallon of whole milk, mixed it with 2 cups of powdered milk, heated it at about 200 degrees F. for 10-20 minutes (I'm unsure if this step is necessary), cooled it down to 130 degrees F., added 1/2 cup of starter (from other yogurt), and then incubated it in my oven at about 110 degrees F. for about a day. I divided the mixture into four glass containers. Although the lowest possible setting on the oven is "WARM", which was too hot, the thermostat actually works at lower temperatures. I set it below WARM and used a room thermometer to adjust the setting so that the temperature was about 110 degrees. (The photo above is not mine, incidentally. My yogurt is no longer photogenic.)

Thanks to Saul Sternberg for help with the recipe.

1. <http://www.blog.sethroberts.net/2009/01/21/probiotics-and-your-immune-system/>
2. <http://www.blog.sethroberts.net/2009/02/16/pagophagia-and-the-umami-hypothesis/>

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Nathan (2009-02-18 23:48:51)

Given your interest in fermented foods, have you ever read or looked at Bill Mollison's "The Permaculture Book of Ferment and Human Nutrition"? It's pretty expensive (and hard to find), but given your interests, I imagine it'd be worthwhile.

Jeremy (2009-02-19 04:01:35)

Why do you add the powdered milk? For extra creaminess, or some other reason?

Kirk (2009-02-19 07:36:25)

I started making yogurt two weeks ago, motivated by wanting to avoid intestinal problems due to eating lactose. An internet-source says that store-purchased yogurt typically contains lactose because it is cultured 4-6 hours, while a 24-hour period will cause the lactose to be eaten by the good bacteria. The recipes that I read say to heat to 180 degrees, then cool to 108-112. I tried using the oven but I must not have been adjusting the heat appropriately. Other yogurt makers recommend using a picnic cooler, which is what I use now: put the jar(s) to incubate in the picnic cooler and add a few containers of hot tap water, close the lid, and go find something else to do for 12 to 24 hours.

SB (2009-02-19 07:43:18)

I tried using the store bought yogurt as starters and was disappointed with the results. Finally, through some friends I got some starter from an Indian family. They have been making yogurt using a starter brought from India over 25 years ago!!

seth (2009-02-19 08:15:59)

Jeremy, the powdered milk makes it thicker. It might speed up fermentation by reducing the distance between lactose molecules.

Caleb (2009-02-19 08:34:09)

Mustard probably isn't the best condiment to bag on. IIRC, it's a strong anti-inflammatory, one of the other pillars of good health. Barbecue sauce would be much worthy of your scorn. Good post though, I'll have to try this. Does fermenting the yogurt longer reduce the overall sugar count as the bacteria eat the lactose, or is converted into some other type of sugar? I've noticed store bought yogurt doesn't seem to have any less carbs than you'd expect from concentrated milk. Here's my favorite way to use yogurt: top some pumpkin with it. Mix vanilla (no sugar added) into the yogurt, then mix the yogurt into the pumpkin. Add one of those pumpkin pie spice blends. Finally mix in and top with shaved coconut. It's absolutely heavenly.

Stuart Buck (2009-02-19 10:50:49)

Heating the milk beforehand kills off any "bad" bacteria that will turn it into spoiled milk after sitting out overnight. So I've read. I don't think it's necessary to heat it quite that long, though. I've made yogurt at home many times, and I just heat up the milk on the stove to the point where little plumes of steam start to rise from the milk, and then immediately remove from the heat and let it cool. That works for me. In addition, I've read that it's good to let the milk cool to 110 or 115 to prevent it from killing any of the good yogurt bacteria from the heat.



seth (2009-02-19 13:01:46)

Caleb, yes, the bacteria eat the lactose and produce lactic acid. Stuart, another supposed reason to heat the yogurt is to denature the proteins. What happens when I don't heat it I would like to find out.

Tom in TX (2009-02-19 14:48:06)

My wife made yogurt using an electric heat pad as the heat source. I think she may have heated it on the stove first, but I am not sure. She said she got the recipe from one of the Tightwad Gazette books. Or you could probably google for it.

Heather McD (Heather Eats Almond Butter) (2009-02-19 14:57:27)

Seth, I've made homemade yogurt too, but I couldn't get it to work in the oven. I tried replacing my oven light with a 100 watt bulb, but that did not keep it warm enough. The next time, I tried setting my oven on it's lowest temp with the door propped open, but it got too hot, and I ended up with a big pot of custard. Enter my Costco HeatDish: <http://heathereatsalmondbutter.com/2008/12/11/yogurt-success/> Too bad I almost burnt the house down. :)

Socktopi (2009-02-20 02:47:04)

I love (soy) yogurt, but what's with the mustard-hatred? Mustard is made from Brassica seeds and often colored with turmeric. Like many seeds (flax et al), it's a great tasting source of Omega fats. It probably aids digestion and is thought to increase metabolism. The seeds have been used medicinally since Hippocrates, and are mentioned in the New Testament. How is good yogurt a substitute for mustard? I could see it as a substitute for mayonnaise - (all right-thinking people agree mayonnaise is gross). But no-one is going to put yogurt on their tofu-dog.

seth (2009-02-20 08:17:58)

The yogurt I made is strong enough to substitute for mustard on a hot dog, I think. It did a great job improving some Mexican blood sausage. From this <http://www.indiacurry.com/nprofiles/mustardseedoil.htm> you can see that mustard has too much omega-6 to be a good source of omega-3. Anyway, I don't think mustard is a significant source of omega-3 in anyone's diet; we eat it in tiny amounts. I'm not saying mustard is bad; I'm saying strong yogurt is much better.

bennetta (2009-02-20 16:55:25)

Bacteria IS good for you. It's just a few select nasties and human/animal borne germs that are bad for you. I'd also like to suggest that environment can also turn friendly bacteria into a killer. E-Coli is a great example. It naturally exists in your colon and serves a very important purpose there, but can kill you if it gets in the wrong location. One of the primary reasons (if not THE primary reason) why coat hanger abortions are so dangerous is because a woman's uterine wall is extremely close to the large intestine. A coat hanger is usually straight, while the uterus is not. If you puncture that wall, you expose your reproductive system to normally harmless bacteria that will set up shop in a place they shouldn't and kill you. Similarly, your E-Coli may be your best friend, but your best friend's E-Coli could be your worst enemy and kill you. In college (UC Davis), I remember taking a class called the History of Infectious Diseases where the benefits of bacteria, but also the detriments of living in an environment absent of bacteria, were discussed. A lot of the problems we have with diseases could be avoided by changing our attitude toward bacteria. Although it is probably a necessary evil, antibiotic-resistant, flesh eating Staph infections (a normally harmless bacteria) thrive in hospitals because they are often overly-sterile environments. Most interestingly, however, a constant, low-level exposure to bacteria can be a tremendous benefit to your immune system. That yogurt you're eating doesn't just contain bacteria, but is a microscopic ecosystem in-and-of-itself. It also often contains harmless (to us) viruses that live off of that bacteria, called bacteriophages. By eating yogurt, you not only strengthen your immune system, you provide your gut and oral cavity with a nice supply of bacteria predators that, unlike antibiotics, will adapt to the bacteria as it changes genetically. I can't help but think that we evolved to take advantage of this. My theory is that this is what the bitter palate is for. It's essentially our bacteria detector/regulator. Fermented foods are often bitter. We naturally like bitter foods. They're a unique taste and, I think, fascinate our palate. We find them interesting and fun. But our palate can only take so much, so we must enjoy bitterness in moderation. This encourages us to ingest bacteria without having too much. Of course, I'm not encouraging us all to eat filthy food, but amusingly, at the end of our last lecture, our professor said "OK guys, now what's the moral of the story? The next time you drop your sandwich on the floor, wait a few minutes before picking it up."

Tom (2009-02-21 16:22:00)

Seth, Stephan has a new post you'll like: <http://wholehealthsource.blogspot.com/2009/01/how-to-eat-grains.html>

seth (2009-02-21 23:19:43)

Tom, thanks, that's a very interesting post. Benetta, I'm not so sure we usually like bitter tastes (except in alcoholic drinks). What are some examples of fermented foods that are bitter?

Seth's blog » Blog Archive » A Yogurt Experiment: Effect of Preheating (2009-02-23 09:06:02)

[...] The Staggering Greatness of Homemade Yogurt [...]

bennetta (2009-02-23 10:49:48)

"Benetta, I'm not so sure we usually like bitter tastes (except in alcoholic drinks). What are some examples of fermented foods that are bitter? " Yeast extract (marmite/vegemite, for example), miso, and vegetable krauts are all fermented foods with bitter undertones, while kombucha and rejuvelac (raw, fermented, sprouted grain drinks) are two fermented, nonalcoholic drinks that come to mind. Most acidophilus cultures also tend to be bitter.

Vesna (2009-03-11 04:35:09)

One thing that worries me, for your sake, is your inclusion of powdered milk. That potentially offsets the benefits of the great bacteria in your homemade yogurt with the hazards of oxidized cholesterol I suggest a search for "damaged cholesterol powdered milk" to look into what has been said about this. Most commercial yogurts (also nonfat and low-fat dairy products) contain powdered milk (it is not required to be listed separately from the fluid milk on the label) for added body. It is one way commercial yogurt makers get the stiff body that Americans are used to in yogurt. This consistency is not typical of European yogurt, which is more of a thick drink rather than a spoonable custard. The natural, "Greek-style" yogurt I've seen gets its thickness by being strained of some of its whey. (Tasty, but on the other hand, the whey is also good for you. Have you considered using a dry starter culture rather than starting with commercial, prepared yogurt? These are available at some natural food stores and online through places like New England Cheesemaking. I haven't used it, but supposedly it makes homemade yogurt with a lot more body and general oomph than using prepared yogurt does. I'm curious as to your thoughts on this.

seth (2009-03-11 10:01:09)

Thanks for the warning about damaged cholesterol. Left out of your calculations is this: The powdered milk contains lactose. The bacteria need lactose. More lactose, more bacteria. Which is the whole point - getting a lot of bacteria. I get my starter from my previous batches of yogurt. How much body and oomph my yogurt has depends heavily on how long I preheat it and how long I let it incubate. I can get plenty of both if I preheat it long enough and let it incubate long enough.

Vesna (2009-03-11 17:52:21)

Thanks for your response and for your additional info about your method. I understand you to be saying that the powdered milk is to boost the bacteria, not to add body. But now the question is: Is it a good tradeoff to add an ingredient that can potentially hurt you, in order to increase the amount of a beneficial ingredient? I am eager to learn your thoughts.

ventana (2010-01-01 16:52:55)

I've been playing around with yogurt making recently, using a few different high end plain yogurts as a starter. They don't have any problem getting thick enough without any added powdered milk, but they are milder in flavor than what I started with. Cook times have been 8 hours & 12 hrs. I boiled the milk first, thinking it was a sterility issue. The batch I'm working on now I just got hot, so will see. Sure is fun, though.

seth (2010-01-01 17:41:14)

They are milder in flavor because you're not fermenting them long enough. Try 16 hours or 24 hours. There is no need to boil

the milk first.

Sid Savara (2010-02-05 15:31:29)

Hi Seth, Recently began making my own home made yogurt and tried your suggestion putting it in soup - excellent! One question - my dad told me that doing this means I'm killing off all that bacteria I have carefully grown and kept alive in my yogurt. To test this, I used a meat thermometer to check my soup temp and it's about 140 degrees when I eat it. I assume this means I am killing off all my probiotics. Is that a concern of yours at all, whether putting it in the soup is killing off the bacteria and nullifying some (if not all) of the effects ? =) I am a beginner to this, still learning, so I'm not looking to criticize - I'm looking to learn more information, and that's why I'm asking.

seth (2010-02-05 18:00:30)

No, I'm not worried about killing the yogurt bacteria. First, because I doubt that 140 degrees kills them, second, because I believe dead bacteria are also useful, and third, because I eat yogurt by itself.

O. Herne (2010-03-31 10:38:43)

Help, I made whey and curds for the first time. I used organic milk from an aseptic carton and it would not separate in the home, which was very cool. I placed it in my car in a chest on a few warm days and it separated. I placed the separated mixture in the refrigerator without draining. The mixture had no odor, but both the curds and whey taste bitter. I don't know what either should taste like. Should I toss and start over? Is it useful for purposes other than consumption. Thanks

Diana Henretty (2010-05-14 11:34:47)

Try adding 2 T. of honey and 2 T. of vanilla to a quart of milk before bringing it to a boil, it makes the best yogurt. I taught at Head Start and every 6 weeks got strep throat. After eating 2 cups of yogurt a day, I no longer got strep throat, even though I was exposed to it constantly. The older Salton makers with the 5 cups servings are great, you can find them at thrift stores and yard sales for about \$2, so keep looking.

Roxanne (2010-11-22 08:57:10)

I make my own yogurt using the yogourmet yogurt maker and starter. I normally ferment mine for 24 hours but last time I forgot about it and it fermented for 32 hours. The consistency and taste is great but I'm worried that I may have killed the probiotics in the yogurt and it won't "work" anymore. Do you have any info on this?

Seth Roberts (2010-11-22 09:05:29)

I've never tried to use yogurt fermented for 32 hours as starter, so I don't know the answer.

Seth Roberts (2010-11-22 09:08:05)

Incidentally, I never use powdered milk any more. I can get great thickness by using a yogurt maker and a small amount of starter (e.g., 2 teaspoons)

The Staggering Greatness of Homemade Yogurt | the Justin Owings page (2011-07-25 08:47:14)

[...] <http://www.blog.sethrober...omemade-yogurt/> [...]

## **The Power of Amateur Content (2009-02-19 22:25)**

[1]Clay Shirky writes:

Publishers have been telling each other for years that eventually people will tire of being able to produce and share amateur content, rather than just consuming professional content, but the users don't seem

to have gotten that memo.

True. I have never heard a book publisher or editor notice that almost all important books have been written by amateurs. Charles Darwin didn't write books for a living. Nor did Thomas Paine. Nor did Betty Friedan. I think this is why books have been so influential.

1. <http://freakonomics.blogs.nytimes.com/2009/02/18/blnk/>

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Aaron Blaisdell (2009-02-20 08:17:07)

Writing is an odd profession, if one can call it that. It's like calling driving a car a profession. Sure there are professional car drivers (racing, taxi drivers I suppose, etc.), but a great majority of people in modern civilization can drive. It's a part of many of our daily lives. The same with writing. Darwin may not have been a prolific book publisher (though he published more than just "On the Origin of Species..." But, he corresponded with people all his life through letter writing, he kept extensive journals and documentation of his observations (these are quite fascinating by the way), etc. So do many of us. I am not a professional writer, but I publish lots of professional writing. So although I can see how the Clay is directing his commentary to the book publishing industry, I think the amateur-professional division is not very meaningful when applied to writing. Cooking may be another example. There are many, many wonderful amateur cooks in the sense that they cook very well, even if it's just for themselves, friends, and family. The amateur-professional distinction is more important when applied to fields that involve lots of training (or on-the-job learning) like engineering, medicine, science, law, carpentry, architecture, perhaps pro-sports-though of course there are always exceptions even here.

Pete (2009-02-23 09:59:01)

I think you're missing the point. Darwin was a scientist, and what he wrote had value not because of his writing skills, but because of the content. Betty Friedan of course was a housewife, but could have been a professional writer, which was kind of the point. "No man but a blockhead ever wrote except for money." -Samuel Johnson

### **Shades of Homeopathy! Peanut Allergy Cured . . . With Peanuts (2009-02-20 07:14)**

Doctors at Addenbrooke's hospital in Cambridge gave four children tiny doses of peanut flour every day, gradually increasing the dose until now they can eat ten or more nuts a day.

Previously the children would have risked anaphylactic shock or even death if they accidentally ate even a trace amount of peanut.

The team say this is the first time that so-called desensitization treatment has been successful.

From the [1]Telegraph. Notes: 1. No blinding. 2. No control group. 3. Started small (with 4 patients), now doing a larger study (18 patients). 4. Jewish kids in Israel have a 10-fold lower rate of peanut allergies than Jewish kids in the UK, according to [2]a 2008 study. In Israel, peanuts are eaten at an earlier age.

Thanks to Oskar Pearson.

1. <http://www.telegraph.co.uk/health/healthnews/4697742/Peanut-allergy-cured-in-world-first-for-British-children.html>
2. [http://www.jacionline.org/article/S0091-6749\(08\)01698-9/abstract](http://www.jacionline.org/article/S0091-6749(08)01698-9/abstract)

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Mark (2009-02-22 09:35:45)

Peanut allergies are largely fake, even when diagnosed by a physician. <http://calorielab.com/news/2005/10/09/fake-food-allergy-epidemic-raging-among-kids/> The treatment you described is the new hocus-pocus wart cure for children.

Wilbur (2009-02-22 13:44:58)

Nut allergies: a yuppie invention: <http://www.latimes.com/news/opinion/la-o-e-stein9-2009jan09,0,3149168.column?track=rss>

## **Interview with Leonard Mlodinow (part 13) (2009-02-21 09:44)**

ROBERTS Did the psychology stuff grow and grow? Did you add more and more than you expected?

MLODINOW Yes. As I was putting a lot of it in the end I would find other studies that really belonged earlier that I would discover, so I would go back and rewrite the earlier parts to incorporate those studies; that became a very fun part of the book, though. That was maybe the most fun, all the psychology studies that I dug out at the end.

ROBERTS How did it happen? You knew that you wanted to include some psychology and then it turned out to be more interesting than you expected?

MLODINOW In the second half of the book when I was talking more and more about viewing life as a random process that we're going through and applying the concepts of randomness to what we're seeing in life, I would just naturally come upon these psychology studies.

ROBERTS What fraction of the psychology you read was in the book? I was impressed that you talked about psychology studies that were really good, whereas most of them aren't. You did a good job of selection and from teaching I know that you have to read a lot of stuff that isn't good in order to find the good stuff.

MLODINOW What you see in the book is probably a quarter of the stuff that I read or that I thought of putting in the book. In the psychology studies maybe half of them made it into the book and I think I was good at filtering before I even read by following trails of one study leading to other studies and using either textbooks or compilation conference reports to figure out what would be good and what wouldn't be so good.

I'm talking about half of the studies where I actually bothered to copy the papers; there are other ones, countless studies, where I would get to the abstract and dismiss it after reading the abstract or one page. That I have no way of counting, that's just constant; maybe ten times as many. But the ones that I actually got to where I made copies . . . if I like something I will print it out because I just can't read dozens of pages on the screen and plus I like to sit in caf s and carry it around. I guess I could bring my laptop but I tend to print them out. About half of the ones I bothered to print out I put in the book and then there were countless ones that I just dismissed.

ROBERTS Yes, I see what you mean. How did the book's structure differ from your original proposal? Did the structure change very much?

MLODINOW Yes; I don't remember exactly, but it did. The first chapter was not there in the proposal; the proposal started with chapter two. Then I realized that I needed an introductory chapter to really set the stage for why we're interested in these things so for introductory chapter, which is applications to life, I start by analyzing certain situations in life that I think are surprising that people misinterpret; I thought that was a good lead-in as to why we care about this. Then I went into other chapters about developing the ideas of randomness and a lot of that was similar to the proposal although I put in less about Brownian motion and the actual drunkard's walk itself than I think it had in there. The last several chapters, I extended the discussion about life; I think the middle part of the book is fairly similar to the proposal but the beginning and the end I expanded greatly on discussions of the everyday world and applications; the psychology was not in the original proposal nearly at the level that it was in the final book.

ROBERTS Yes, I see what you mean.

MLODINOW . . . again, as I start talking about events in the world around us and looking at the psychological components—and I dealt with that, I greatly expanded that part—they were fascinating studies and I was just so interested I just kept putting more and more into the book.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2009/01/29/leonard-mlodinow-interview-directory/>

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Seth's blog » Blog Archive » Leonard Mlodinow Interview Directory (2009-02-24 23:20:53)

[...] Interview with Leonard Mlodinow (part 13) [...]

### **Yay for Dambisa Moyo! (2009-02-21 23:53)**

Many years ago I wrote to the editors of Spy suggesting they do an article about what happened to the money raised by Live Aid. Dambisa Moyo, an African-born economist/author of a book called [1]Dead Aid, has followed up my suggestion. In [2]an interview, she said this:

MOYO Forty years ago, China was poorer than many African countries. Yes, they have money today, but where did that money come from? They built that, they worked very hard to create a situation where they are not dependent on aid.

SOLOMON What do you think has held back Africans?

MOYO I believe it's largely aid. You get the corruption — historically, leaders have stolen the money without penalty — and you get the dependency, which kills entrepreneurship. You also disenfranchise African citizens, because the government is beholden to foreign donors and not accountable to its people.

Too bad she wasn't asked what she thought of Jeffrey Sachs or Bill Gates. As Jane Jacobs once said, it's a curious thing: you can't help something unless you love it.

More In [3]another interview, Moyo asks, relative to Bono and Africa, how would Americans feel "if Amy Winehouse started to give the US government advice about the credit crunch? And was listened to?"

1. <http://www.deadaid.org/deadaid.html>

2. <http://www.nytimes.com/2009/02/22/magazine/22wwln-q4-t.html?ref=magazine>

3. <http://www.guardian.co.uk/society/2009/feb/19/dambisa-moyo-dead-aid-africa>

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Scott (2009-02-22 15:05:49)

re: Bono and Africa, does being a rock star mean he can't study a topic and provide insight? If Amy Winehouse studied the issues and had something intelligent to say about the credit crunch why would we want to exclude her ideas because of her primary profession? I suppose that would be like asking an academic psychologist to come up with a new biologically based theory for dieting... (in other words, that seemed like an un-Seth comment)

seth (2009-02-22 15:30:22)

My professional expertise – my area of experimental psychology is animal learning – is exactly why I thought of a theory of weight control that nutritionists hadn't thought of. They don't know about associative learning, whereas associative learning is the main topic of my field. Bono is an easy target, as I tried to say. For that reason it is less than ideal to pick on him – I agree with you there.

Andrew Gelman (2009-02-23 20:29:50)

Seth, 1. I'm not saying you're wrong, but, on the other hand, I love free money, and I think I spend it wisely. 2. I thought Bono's big thing was debt forgiveness, which is quite a different thing from aid, no? Also, I think the China/Africa comparison is a little silly. Why not compare to Japan and Korea, both of which thrived on U.S. aid?

seth (2009-02-23 20:47:47)

Andrew, thanks for your comments. I hope to get the book and say something more nuanced about this.

J. Sayegh (2009-02-27 12:39:18)

It is quite easy to say stop aid when one is outside the country and doing quite well for oneself. Dambisa Moyo holds a PhD in Economics from Oxford University and a Masters from Harvard. Now not all Africans are so "blessed" as to have the funds to study at these top universities and then spout useless nonsense. While I do agree that Africa needs more open export markets, Africa is not the only continent that obtain aid from Bretton Woods (World Bank, IMF, WTO) group. The aid that goes to Africa is nominal at best. Aid is not the problem, our leaders are. Our leaders go to international summits and instead of putting Africa's interest forward, they go shopping, or worse (see photo). Ms. Moyo's answer to what has held Africa back was to say " : I believe it's largely aid. You get the corruption " historically, leaders have stolen the money without penalty " and you get the dependency, which kills entrepreneurship. You also disenfranchise African citizens, because the government is beholden to foreign donors and not accountable to its people. To Ms. Moyo I say: And whose fault is that? We get the leaders we deserve. If we were to put in competent and capable leaders and demand accountability, our leaders would be beholden to us. Massive aid was given to European countries after the War but the leaders knew that their first obligation was to their people. African leaders seem to have no such obligation. To put it simply, if you are given \$5.00 for the purpose of buying your mom a gift, and then you spend the money on yourself, the \$5.00 is not the problem, you are. You have not used it for its intended purpose. Do you now turn around and blame the person who gave you the \$5.00? Does your mom now blame that person as well? Here is another example (my apologies to the Ghanaians): Ghana won its independence in 1957, the same year as Malaysia. In the 1950s both countries were on an economic par - equally poor and equally dependent on the export of

raw materials. Today, Ghanaians get by on an average of about \$300 per year, while Malaysians earn over \$3,000. Ghana is still exporting raw products like cocoa and gold, Malaysia makes its own cars and boasts skyscrapers that rival anything in New York or London. The development of one product - palm oil - tells part of the story. Ghana grows and processes the rich red oil to make soap and cooking. Malaysia - which imported its first palm oil trees from west Africa in the 1950s - has not only become the largest palm oil producer in the world, but has also developed a high-tech industry which makes sophisticated chemicals and food additives from the raw berries. The recently retired Prime Minister of Malaysia Dr Mahathir Mohamad puts it best: "Political stability is extremely important. Without political stability there can be no economic development. People are not going to put money into a place where there is no certainty". The Malaysian state had established a solid framework of laws that allowed entrepreneurs to flourish. And the lack of such institutional framework is Africa's problem, not aid. The New York Times question: Why didn't you get a bond issue going in your native Zambia or other African countries? Ms. Moyo's reply: Many politicians seem to have a lazy muscle. Issuing a bond would require that the president and the cabinet ministers go out and market their country. Why would they do that when they can just call up the World Bank and say, "Can I please have some money?" To Ms. Moyo I say: And pray tell who would buy bonds in a country that is not stable? This is business, not philanthropy. Buying bonds require security something that most of our governments seem to be unable or unwilling to provide.

seth (2009-02-27 17:05:46)

A related question is: Who would buy a car from a company that may soon go out of business?

E. Aboyeji (2009-03-06 09:22:48)

God bless My Saygeh: I actually wrote a two paged article about this woman in my college paper. Like I have been saying. Her general conclusion is in order: Aid has not helped Africa. However to suggest that the entire problem with Africa is aid is complete nonsense. Even worse to now suggest the Bond thing is stupidity. She said it herself that bonds are not forgiving of political instability. You mess up once, they dry up. So imagine what that would mean for African countries. No doubt the time for her ideas is NOT now. We need to be weaned off aid no doubt. The question we should be answering is how

### **Waltz With Bashir (2009-02-22 15:02)**

I loved [1]Waltz With Bashir, Oscar-nominated for Best Foreign Language Film, and was surprised to realize that Ari Folman, its director . . . I had met. In San Francisco, about four years ago, there was a conference for documentary filmmakers trying to get distribution of their film. I went with a friend of mine. I happened to meet [2]Sarah Kapoor there; we both watched an hour of a five-hour series about love ([3]The Material that Love is Made Of). I was blown away. A brilliant hour of TV. The particular hour we saw was about a 10-year-old boy in love with a girl. Each hour was about a different situation. Afterwards I met the filmmaker (Folman). Brilliant, I said. He said it got really dark. Later he was giving away DVDs of the series but somehow I missed getting one. I tried to contact him by email but his in-box was full.

I hope that the success of Waltz will renew interest in that old series. I would love to see the rest of it.

1. [http://en.wikipedia.org/wiki/Waltz\\_with\\_Bashir](http://en.wikipedia.org/wiki/Waltz_with_Bashir)

2. <http://www.youtube.com/watch?v=hR33LNwgG1c>

3. <http://www.youtube.com/watch?v=8-sNXWIctaQ>



## Shangri-La Diet Quote of the Day (2009-02-22 20:29)

From the[1] I Hate My Message Board forums:

I honestly couldn't care less if it makes sense or not. The book is a good read [thanks!] and the science behind it seems sound. But, honestly, none of that matters to me. Whatever the reason, this plan works. Period. If it turned out that extra-light olive oil was made out of ground up kitty cats, I'd still follow the plan. If I wasn't losing weight, I'd STILL do it, just because of the enormous positive impact it's had on my life. I was addicted to food. Now I'm not. It's extraordinary.

1. <http://www.ihatemymessageboard.com/forum/index.php?showtopic=31712&view=findpost&p=557915>

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Kerry (2009-02-23 08:20:16)

Hi Seth! I'm one of the people who started everyone talking about your diet plan at the "I Hate My Message Board" boards. We've got several people trying it, and two people blogging about their experiences now. Stay tuned and keep reading over there! It's been two weeks now and I'm still doing well - 9 lbs. down, thus far. Thanks so much for your book!

seth (2009-02-23 08:35:14)

Thanks, Kerry. It takes two people to make a book: writer and reader.

Jaimie (2009-02-23 18:57:06)

Ha! That's my quote. :) I meant every word. Except, maybe, for the ground-up kitty cat part. It really has been fantastic, though. Thanks, Seth!

Scott NZ (2009-03-02 01:46:34)

Hi Seth, I have just started the SLD and am starting to notice my reduced hunger, especially in the evenings. I was wondering if you have heard of anyone coming off antidepressants like myself have been able to lose weight (its so damn hard normally). Thanks :)

seth (2009-03-02 08:21:55)

No, Scott, I haven't heard of that. So maybe you're the first!

Noelle Ray (2009-05-04 14:43:56)

Hi! I read your book a few years ago and loved it. It really helped my appetite, but it made me sick (the sugar and/or the oil). I read somewhere else that protein powder mixed with a 3-4 cups water does the same thing (you have to sip it for an hour-not gulp it down-starting an hour after your last meal and you can't eat for an hour after you stop drinking it). I bought one that has stevia as the sweetener because I don't like artificial sweeteners. Anyway, the only reason I tried it was because I had read your book and it made sense. Oh my goodness!! I am so happy! My appetite is GONE (just like when I drank the oil or sugar) but I don't feel sick. It seems like you mentioned in your book that you were going to try egg whites. Did you ever try? I wonder if protein isolate by itself would work. I HATE being hungry all the time, so thanks so much for your great discovery. Even if I

don't lose weight, I would still do it because I like the feeling of control. P.S. I love your comments about fermented food. Have you ever tried Cortido? It is a Mexican Sauerkraut. I got the recipe from one of my favorite books–Nourishing Traditions.

Tom in TX (2009-05-06 07:48:24)

NR, what flavor of protein powder do you use? Do you have your nose clipped shut or just drink it regularly?

### **A Yogurt Experiment: Effect of Preheating (2009-02-23 09:05)**



All yogurt recipes I've seen say you should preheat the milk before adding starter (= yogurt with live culture). Reasons vary. Some say it denatures the milk protein; others say it kills bacteria that might compete with the starter bacteria.

It was easy to measure the effect of preheating. I make yogurt using about a gallon of milk at a time, divided into four trays. I preheated two trays for 20 minutes and did not preheat the other two, leaving them at room temperature. After that I treated all four trays the same.

The photo above shows the results after incubation for 36 hours. The clumpy yogurt was preheated, the smooth yogurt was not. There was not a vast difference in taste. For most purposes clumpy is better so I will preheat in the future.

I was impressed that the experiment was fast, easy, safe, cheap, and conclusive, showing a large and lasting effect of a 20-minute treatment that had no visible effect. After the heated milk cooled, it looked the same as the unheated milk.

[1]The value of homemade yogurt.

1. <http://www.blog.sethroberts.net/2009/02/18/the-staggering-greatness-of-homemade-yogurt/>

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Scott (2009-02-23 11:31:40)

In case you need/want more ideas/recipes for fermented foods, this is a book I was given by a chef in the family. For a "cookbook" it has a fair amount of additional information about fermentation and live-culture foods. [http://www.amazon.com/Wild-Fermentation-Flavor-Nutrition-Live-Culture/dp/1931498237/ref=sr\\_11\\_1?ie=UTF8&qid=1235413740&sr=11-1](http://www.amazon.com/Wild-Fermentation-Flavor-Nutrition-Live-Culture/dp/1931498237/ref=sr_11_1?ie=UTF8&qid=1235413740&sr=11-1)

Joe (2009-02-23 15:55:37)

Why is clumpy yogurt better? Purely aesthetically, I find the yogurt on the left to be more appealing.

karky (2009-02-24 05:23:30)

is it clumpy because more whey separated out, making the yogurt thicker? I stirred the whey back in when I made mine.

seth (2009-02-24 08:15:02)

no it is clumpy because denaturing the proteins makes it easier for a network of protein bonds to form.

marc (2009-02-26 10:07:43)

Thanks for posting about the experiment. Do you have an idea about the temperature the milk reached after 20 minutes? I usually heat the milk until it reaches close to 200 degrees. I'm wondering if heating it to 120 degrees would be enough. My understanding is that that 115-120 is the temperature that allows the bacteria to reproduce faster. My guess was that your watery yogurt (at room temperature) just didn't have enough bacteria, although it should have been less bitter than the solid ones if true.

seth (2009-02-26 10:54:05)

I think the milk got over 200 degrees. Heating to such high temperatures is believed to kill, not increase, bacteria. On the other hand the two sets were not at exactly the same temperature when I added the starter - the heated one was about 10 degrees warmer - so that might have increased the bacteria in the preheated one.

karky (2009-02-27 12:16:17)

when I made mine, I brought the milk to just barely boiling, then let it cool on the stove to 120° which I measured with my candy thermometer, then mixed in my starter. I got some liquid on top after fermenting for about 7-8 hours, which my recipe said was whey. I just stirred it back in, but the recipe said drain and save for other uses. All of the recipes I looked at said to barely boil the milk and turn off right when it starts to bubble. I wonder if these recipes aren't from back when milk was fresh from the cow, not the store.

### **Good Advice From Tim Hartford (2009-02-23 23:15)**

In case you are not a long-time reader, I will repeat my advice as to how to enjoy the thrill of the lottery without the fool's bet. Choose your numbers, but don't buy a ticket. You'll win almost every week - the fear that your number might actually come up is an adrenaline rush to beat them all.

From his Undercover Economist [1] advice column. Another example of the same thing: If (first) I buy and use Product A and then (second) see a commercial for Product A it makes me happy. Whereas the conventional order - (first) see a commercial for Product A and then (second) buy and use Product A - is generally disappointing, just like the lottery.

Both Hartford's example and mine are cases where what we are told (implicitly) is exactly wrong. Does buying a lottery ticket make you happy? No, not buying one will make you happy.

In Hartford's example and mine it is the average consumer who is gullible and makes the whole thing work – without people who play the lottery, you couldn't take Hartford's advice. Scientists are no less gullible. Self-experimentation, like Hartford's advice, takes advantage of that gullibility. Because scientists essentially play the lottery in their research – devote considerable resources (their careers) to looking for discoveries in one specific way (scientists are hemmed in by many rules, which also slow them down) – this leaves a great deal to be discovered by research that doesn't cost a lot and can be done quickly. All of my interesting self-experimental discoveries have involved treatments that conventional scientists couldn't study because their research has to be expensive. Could a conventional scientist study the effect of seeing faces in the morning? No, because you couldn't get funding. And all research must require funding. (Research without funding is low status.) In practice, this means you can't take risks and you can't do very much. Like the lottery, this is a poor bet.

1. <http://blogs.ft.com/undercover/2009/02/dear-economist-can-you-help-me-win-the-lottery/>

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Bill Goodwin (2009-02-24 18:04:57)

I shudder just thinking about this. Roughly once a month, I succumb to temptation and buy a pair of lottery tickets. \$20 a year is a bargain for the chance to speculate what I'll do with my winnings. Playing the lottery without the ticket? Sheer terror. Re purchasing a product first: not sure how it's related. After all, aren't you just as likely to purchase product A, discover it's a piece of crap, and then get pissed off every time you see a commercial for it? Conversely, I get enormous satisfaction from targeted advertising that actually offers me services and products I find valuable. For instance, a number of top tech blogs so consistently feature useful advertisers, I'll browse the ads intentionally. Similarly, but to a lesser degree, the advertisers on HARO have become the main reason I open Shankman's daily emails.

Bill Goodwin (2009-02-24 18:05:51)

P.S. I hate to say it, but the Google Ads here were sorely disappointing...

Nathan Myers (2009-02-25 18:03:12)

"Is your kitchen floor clean enough to eat off of? Try it and see!" – Linda Barry

## **Interview with Leonard Mlodinow (part 14) (2009-02-24 23:18)**

MLODINOW As I start talking about events in the world around us and looking at the psychological components—and I dealt with that, I greatly expanded that part—they were fascinating studies and I was just so interested I just kept putting more and more into the book.

ROBERTS Yes, that's when you decided to ask me for help. "Oh, I wasn't planning on this." How did you learn about the lottery winner who won twice—the Canadian?

MLODINOW It was in a book somewhere, an academic book. A lot of those interesting stories came from academic papers or books.

ROBERTS That's interesting.

MLODINOW Sometimes I'll find something in the newspaper that was really interesting and I would track it down but a lot of it was in academic research. I don't know why they found it.

ROBERTS Yes, who knows where they got it, but that's where you got it. How did you learn about the Girl Named Florida stuff? Some professor told you?

MLODINOW My friend Mark Hillery that I mentioned from Berkeley.

ROBERTS A physics professor.

MLODINOW He heard it somewhere... It wasn't quite this problem but then I kind of tweaked it and made it the Girl Named Florida Problem. That's a great problem for the book.

ROBERTS Yes, I loved that. So he got it from some physicist . . .

MLODINOW I'm not sure; probably. I took a few days to figure out how to make it into this problem; I don't remember exactly the problem he told me but I tweaked it into this problem. Just to show you how much work goes into the book, I even spent a whole afternoon deciding on the name Florida. I went back into the records—I needed a rare name—and I looked up different names and tried to find one that would be colorful, interesting, but that was rarely used, and I wanted to know the percentage that it was used; I dug up percentages of names. Everything in the book . . . if you read it, it might just sound like, "Oh, you know" . . .

Not a thing is just tossed out there. Or very little; there's an amazing amount of thought and work that goes behind every little detail.

ROBERTS That's a very memorable detail I must say. I like it better than the Monty Hall Problem.

MLODINOW I do, too. I think it's interesting; I found in the reactions to the book that the Monty Hall Problem has gotten more press and in some ways more reactions, which I found interesting given that it has been talked about before and this problem was completely new. I think this problem is in some ways even more striking than the Monty Hall Problem, more counterintuitive and more difficult to believe and certainly closer to something you might actually encounter. And yet I've gotten a lot more response based on the Monty Hall Problem and a few places have said that I gave the best explanation they've seen. I think the New York Times review said that, too. The New York Times did mention the Girl Named Florida Problem and said that they still find it hard to believe even though they followed the explanation.

ROBERTS I thought your explanation of the Girl Named Florida problem was very clear.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2009/01/29/leonard-mlodinow-interview-directory/>

Sean (2009-08-16 22:43:53)

I am very familiar with the Girl Named Florida problem – I have read Mlodinow's book and other sources that cited it. I agree with the answer, though I don't really find the explanation all that satisfying either in Mlodinow's book or on other websites. I came up with my own explanation that arrives at the same result and works better for me. I'm hoping that my alternate explanation will help others to understand the problem and the result. As Mlodinow explains, the key to solving many difficult problems in probability is ensuring that you arrive at the correct sample space. Usually in confusing problems like this one, there are multiple "filters" on a larger sample space that must be applied to screen out irrelevant outcomes. The order in which these filters are applied doesn't really matter from a mathematical standpoint, but it can make a huge difference in whether the explanation helps to clear up the confusion. In this problem, I think this is a key factor and for me (and I'm guessing many others) it helps to apply the filters in a different order than that chosen by Mlodinow. Mlodinow's explanation starts with an original sample of all families with children. This is reduced to all families with two children, then all families with two children one of whom is a girl, then to all families with two children one of whom is a girl named Florida. Now here is my approach. Start with all families with two children. In this particular problem it was useful for me to think of the family as being represented by a particular set of parents rather than a particular set of children. The reason is that the child's name is an attribute that tells you more about the parents than the child since they are the ones who chose it. So let's then reduce the set of all parents of two children to the set of all parents of two children for whom the name Florida ranks in their top 2 favorite names for girls. Further dissecting this set we observe that there are twice as many families with a boy and a girl than there are families with two girls. (This should be obvious since it just involves counting the four possible outcomes, discarding the two boy families, and looking at the proportion of the remaining possible outcomes: BG, GB, GG). Now, all of the GG families will have at least one Florida. I'll assume as Mlodinow did that the number parents who chose to name both of their girls Florida is immaterial. For the families with only one girl, it depends on whether Florida was the parents' first choice or second choice. Let's assume that this is a 50/50 split. It now should be clear that a girl named Florida with one sibling is equally likely to have a sister as she is to have a brother. Not only do I find my own explanation easier to follow. I think it provides some additional subtle insights that were missing in Mlodinow's answer: (1) By focusing on parents preferences, it is more clear that the random distribution of names is between, but perhaps not within families. The chances that two girls will both be named Florida in the same family is probably much less than the probability of one girl named Florida squared. (2) When you use my approach, another important assumption becomes evident. Are parents more likely to give the first child or the second child an unusual name? A hidden assumption in Mlodinow's solution is that parents are equally likely grant an unusual name to the first and second born. With my approach, this assumption is more exposed. This is probably a very testable assumption, though I have no idea whether it is true or not. I wouldn't be surprised if the evidence showed a bias one way or the other greatly altering the result.

JeffJo (2012-01-14 14:21:36)

I've developed an analogy for these kinds of probability problems by generalizing a paradox used by Joseph Bertrand, in 1889, to illustrate how \*NOT\* to solve probability problems. I believe Professor Mlodinow referred to it in his book; most treatments of problems like this do. And it's ironic, since most will use that incorrect solution for the Two Child Problem Assume there is a set of circumstances that can arise through random means. For lack of a better word, I will call the set of circumstances a box; but games shows, and families of two, work as well. Then, assume that there is a quality of these boxes that can take on exactly two values, representing symmetric but opposite sides of that quality. I will call them Value 1 and Value 2, or V1 and V2 for short. All boxes will have one of these values, but some have both. Because they are symmetric, the probability that a random box has either one, but not both, is the same. Call this probability P, and note that it must be less than 1/2. We can deduce that the probability that a random box has just one value is 2P, and the probability that it has both values is (1-2P). Bertrand used actual boxes. Each held two coins; one held two gold coins, one held two silver, and one held one of each color. The values were "the box holds at least one gold coin" and "the box holds at least one silver coin." Since one of the three boxes holds only gold coins,  $P=1/3$ . Now suppose I pick a random box, and after examining it without letting you see, I tell you that it has V1. What is the probability that it does not have V2? You might be tempted to say it is  $P/(P+(1-2P))=P/(1-P)$ , which is the ratio of boxes with just V1 to all that have V1. But if you give that answer, you also say the same probability is  $P/(1-P)$  if I were to tell you it had V2, and ask for the probability it doesn't have V1. And if the probability of one value is

$P/(1-P)$  regardless of what value I tell you it has, the probability is  $P/(1-P)$  even if I don't tell you about a value. But we have already deduced that probability is  $2P$ , so we have a paradox; specifically, a more general form of Bertrand's Box Paradox. In Bertrand's specific example, one coin was withdrawn and its color observed. Since two of the three boxes are still possible, you might be tempted to say the chances are even that the remaining coin is gold. But since you will always remove a gold coin this way from a box with two, but one half of the time from a box with one of each, the chances are  $2P=2/3$ . The Monty Hall Problem is an example of a generalized Box problem, identical to Bertrand's actual example, although the quality that makes it so is a bit unintuitive. The boxes - the set of circumstances - are the events that lead up to you being offered a chance to switch doors. The quality is which of the two doors you didn't choose have goats; each game must have at least one goat in those doors, and some have two. The host reveals one of these values to you by opening a door without the car. And you want to switch if the game has just one value. Most people think the chances the switching will win is  $(1/3)/(1-1/3)=1/2$ . Bertrand's answer of  $2P=2/3$  says that you do better by switching. The two-child problem is another example. The boxes are two-child families, and the quality is whether the family includes boys and/or girls. Since, of the four possibilities, exactly one has only girls,  $P=1/4$ . Your incomplete memory of these genders reveals one value to you. The incorrect answer to the question "what are the chances both are the gender you recall" is not  $(1/4)/(1-1/4)=1/3$ , it is  $2*(1/4)=1/2$ . That's right,  $1/2$ . Professor Mlodinow's answer,  $1/3$ , is wrong. It would be correct if, for families of one boy and one girl, you could never remember that one was a boy. Since you can't assume that,  $1/3$  can't be right. And the reason his Florida answer seems unintuitive, is it does not allow you to remember a girl named Mary, or a boy named Indiana, if they have a sister named Florida.

### **"I Started Eating More Fermented Food..." (2009-02-26 20:37)**

[1]Tucker Max, who got great results from [2]flaxseed oil, wondered what would happen if he ate more fermented food. He emailed me:

I have been reading your posts about bacteria in food, so I decided to try it on my own. I HATE Roquefort and other stinky cheeses, and I am not about to eat fermented meat, so the best thing I could find in Whole Foods was [3]Kombucha tea. It is basically normal tea, with bacteria cultures growing in it. Sounds weird I know, but it actually tastes pretty good, especially the ones with natural fruit juices added. It has a sparkly, almost champagne-like taste feel in your mouth. It takes a little getting used to, but I really like it now. I like GT's brand the best, but I think there are others.

Anyway, after a week of drinking two bottles a day, I have noticed these changes:

1. My stool is...well, better. In every way. More regular, more solid, and something else very unusual—I only have to wipe once. For most of my life, I have to wipe twice, or sometimes three times, which I assumed was normal. But this week, the stool comes out and leaves virtually nothing behind. At least nothing that is showing up on the toilet paper. I am not sure what this means as I am not a poop expert, but I think it means my stool is "healthier" for lack of a better word.
2. I have more energy. Aside from subjectively feeling it, I can see the difference in my workout logs, just in this past week I've gone up more weight on exercises than I normally do.
3. I am feeling overall better. This could very well be placebo effect/confirmation bias as it is a very subjective measurement, but I just feel better. I feel generally healthier, if that makes sense.
4. But, I am having trouble sleeping. I feel like I am getting less sleep, not much, maybe 30 minutes less. I don't know if this is due to increased energy because it might be anxiety —we are about to sell my movie, and it's an anxious time in my life, so the cause may have nothing to do with the tea.

Right now, I think kombucha tea greatly improves my health and I am going to keep taking it to see if there are anymore changes or if this persists. This stuff I buy is not cheap, like \$4 a bottle [ \$3/bottle in one Berkeley store], but I am going to keep drinking at least two a day, I like it that much. Plus, once you get used to the taste and texture, it's really delicious.

The brand he bought is [4]GT'S. I'll comment on this in a later post – but I'll say now that eating much more fermented food didn't have any noticeable effect on my sleep.

1. <http://www.tuckermx.com/>

2. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>

3. (<http://en.wikipedia.org/wiki/Kombucha>

4. <http://gtskombucha.com/>

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Aaron Blaisdell (2009-02-27 12:41:54)

I've noticed generally the same effects after incorporating goat-milk kefir, yogurt, and raw-milk cheeses into my daily diet. I also tend to feel less sleepy at night time. I used to feel the need to turn the light out and go to sleep by about 10:30pm and wake up at around 6:30-7:15am (I don't use an alarm clock; I just let myself naturally awaken). Since I started using the lactofermented foods, I find I don't feel sleepy enough to go to sleep until between 11-11:30pm, but I still wake up at about the same time and feel refreshed and rested (usually, since my 6-month old still sleeps in our room, I'm sometimes awakened at 2-3am by her and have difficulty falling back to sleep afterward). Let's just say that babies are NOT conducive to regular peaceful sleep!

david (2009-02-28 01:27:22)

I wonder about consuming lots of the same thing over time. I started eating yogurt (with live bacteria...White Mountain Bulgarian) and noticed improvements in my ability to digest dairy. I was eating a quart a week, perhaps too much, especially given my sensitivity to dairy. After a few months, I started developing a rash. It occurred to me that the new element in my diet was the yogurt, so I stopped and the rash started to subside. I'll give it a little longer and will probably start eating yogurt again with a little more moderation. I may also try rotating various fermented foods.

Hap (2009-02-28 17:07:25)

While I can't attest for sure to the exact cause, I do get the same "clean as a whistle" effect from, I believe, organic brown rice. Now I know how dogs feel when – after taking care of business – they scratch the dirt, then trot off all frisky-like. It seems to me that this is the way Nature intended it. She's not known for inelegant designs.

## **Interview with Leonard Mlodinow (part 15) (2009-02-27 12:33)**

ROBERTSÂ How is it possible that Cal Tech's basketball team was considered better than UCLA's basketball team in the 1950s? That was the part I was amazed at.

MLODINOW At least the early part of the decade.Â That was harder to understand than the Girl Named Florida Problem. I think in those days basketball was nothing–imagine saying that the Cal Tech curling team is better than the UCLA curling team. Since nobody really cares about curling it's just a quaint fact that someone at Cal Tech, probably in the faculty, would care about curling well enough to organize a team. Maybe I'm exaggerating a



little bit, but in the 50s I think it was a much different sport and a much different sports world. Not to belittle their team; I think they had some really good players from the looks of it and maybe Cal Tech cared more about recruiting players for sports than they do today. Maybe our world in general is a little looser about things and you could invest the time to play sports more even if you were at a high-powered place like Cal Tech; not to be as pressured-to just study. I guess it was just a different world in some ways-a nice world-back then that could happen. Now college basketball is just a huge and money generating industry that no one would allow a school like Cal Tech-by allow it I don't mean that there's some individual disallowing it but the world will not allow, it's not loose enough to allow, a school that's not completely focused on that sport to have a good team in that sport. Everything is too high-powered today.

ROBERTS Yes. Of all the things in your book, that was the most staggering.

MLODINOW You should see the movie Quantum Hoops; it's a documentary about the Cal Tech basketball team. I recommend it.

ROBERTS I didn't know there was such a movie.

MLODINOW It's on DVD; I'm thinking it must be available from NetFlix.

ROBERTS Yes, I'll get it.

MLODINOW It's very amusing-it is for me because of my connection to Cal Tech-but I think for the general public, it's a very amusing film.

ROBERTS We were talking about unexpected things. If you looked at the Cal Tech basketball team, if you just looked at basketball in the 1950s, you would think, "Well, Cal Tech-that's as it should be." But then all of the sudden, 20 years later, it's so very different.

MLODINOW I think in those days it was more like a club, like a sport, like what you think of as a kid's fun activity and now the athletes for basketball are heavily recruited and bribed in one way or another, and the huge amounts of money at stake for the school for them. It's a totally different calculus and it's sad in a way, isn't it? I think everything is like that today.

ROBERTS I guess what I'm saying is that there was something-you're in the 1950s, it's 1956-very few people saw that there was something hidden in basketball that could lead to what it became.

MLODINOW And if you were the superstar of that time you also didn't get the rewards of what became today and it's a little bit late for you now, right? I know in the bathroom in the Cal Tech cafeteria there was a framed article about him, I can't remember his name, one of the superstars of the 50s who was one of the best basketball players to ever live-I think they claim that even today-who basically probably never even made a living from it, or not a good living.

ROBERTS Yes, that kind of brings us back to the very beginning. I feel like somehow the times have changed and people are smarter. Now you can make a living from what you're doing. You're writing this very entertaining intellectual history; finally there's a market for it. Finally people are smart enough to be at your level so that you can write a book that you respect but you can get a wide enough audience.

MLODINOW Are you saying that in the 50s that couldn't have been done? I don't know.

ROBERTS Well, nobody did it; let's put it that way.

MLODINOW No, nobody did it. I don't know why.

ROBERTS As I said before we started recording, you're the first person to ever do this. Will you be the last? I don't know but you're the first. You're the first person to write intellectual histories that actually are popular and that people want to read, that they're not forced to read by their teachers. It's not just a tiny group of people reading them. Professors of course write them but they're not well written and it's just their job to write them; they get a salary from the government to write those books. You're not getting any salary. You're an entrepreneur and it's just so different. Your books have to be popular or your job goes away. It's just a different level of competence; your books are just infinitely more accessible, infinitely better than a professor would normally write. A professor is subsidized and that's what is basically comes down to. Practically everybody who writes about science is subsidized but you're not.

When the TV show The Simpson came along I would talk about IQ scores in my class and I talk about the fact that they had been rising and so forth. And I say, "Well you know there is evidence that people are getting smarter and one example is The Simpsons; this is at a higher level than other TV shows that came before it." Now maybe that's not so important, how intelligent is an animated show, but I think what you're doing is very important and I think it may be a sign of increased intelligence. There's enough of a market now for what you're doing. There wasn't before.

MLODINOW I'm certainly glad that there is and that people appreciate the way I put things.

ROBERTS I'm glad because that means you can do so much more of it.

MLODINOW Yes, and I look forward to that. It's a great privilege to be able to do that.

ROBERTS When I was a freshman at Cal Tech I was always looking for books like yours but they just didn't exist. So I ended up reading The New Yorker for my intellectual history. That was very narrow; they never did a good job of covering science. They never talked about geometry or DeMoivre, Laplace, or Gauss. They didn't cover those people. But those people are important. But you do; finally we have someone. It's great.

[1]Interview directory.

1. <http://www.blog.sethroberts.net/2009/01/29/leonard-mlodinow-interview-directory/>

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NE1 (2009-02-27 15:13:47)

These days, Caltech is the preferred moniker, to distance CIT from Cal Poly.

Stephen M (Ethesis) (2009-02-28 20:49:18)

Interesting on numbers and such. BTW, a segue back to your Taubes series ... It's "Do We Really Know What Makes Us Healthy?", by Gary Taubes, all about the problems built into epidemiological studies, and it's online at <http://crab.rutgers.edu/mbravo/prospective.pdf> . It's fourteen pages long, and worth every minute of the time it takes to read it, in my opinion. Here's one brief sample: "Smoking and lung cancer is the emblematic success story of chronic-disease epidemiology. But lung cancer was a rare disease before cigarettes became widespread, and the association between smoking and lung cancer was striking: heavy smokers had a 2,000 to 3,000 percent the risk of those who had never smoked. This

made smoking a 'turkey shoot,' says Greenland of U.C.L.A., compared with the associations epidemiologists have struggled with ever since, which fall into the tens of a percent range. The good news is that such small associations, even if causal, can be considered relatively meaningless for a single individual." Taubes devotes a lot of space, usefully, to the problem of "healthy-user bias" – the fact that people "who faithfully engage in activities that are good for them – taking a drug as prescribed, for instance, or eating what they believe is a healthy diet – are fundamentally different from those who don't." So, for example, there was the Coronary Drug Project, which found that not only did those who took their prescribed drugs faithfully cut their risk of heart-disease almost by half, this was also true of those who took their placebo faithfully. Also online is Sue Hughes' two-page summary of the Taubes article, titled "New York Times Magazine focuses on pitfalls of epidemiological trials," at <http://www.theheart.org/article/813719.do>.

Nansen (2009-03-01 14:11:47)

I'm curious about Mlodinow's teaching style, and also the popularity of his courses at Cal Tech.

Sean McCloskey (2009-08-17 08:40:23)

I remain in the camp that believes the explanation to this problem is wrong!!!! Here is my analagous problem. Imagine sex is determined by casting a die. Odd is girl, even is boy. Q: What is the probability that a pair of dice thrown will result in two odd numbers if at least one lands on an odd number? A:  $1/3$  Now imagine a 1000-sided die. Let the number 999 represent the name Florida. Q: What is the probability that a pair of dice thrown will result in two odd numbers if at least one lands on the number 999? A:  $999 / 1999$ . To see this, draw a table with  $x = 1$  to 1000 on the horizontal axis and  $y = 1$  to 1000 on the vertical axis. Now just count down the column 999 and across the row 999, and add up the outcomes representing the intersection of two odd numbers. As faces of the die are removed (representing the increasing popularity of the name), the probability slowly approaches the limit  $1/3$ . But of course, no name occurs with frequency 0.5, so any time a name is given, the probability is much closer to  $1/2$  than it is to  $1/3$ . This is where Mlodinow went wrong. He explains that the fact that Florida is a rare name is the key to this problem when in fact you get essentially the same result even with the most popular name in the U.S. Even the most popular names for children occur with a frequency of about 1 in 150 to 1 in 170 (ignoring sex). So let's say you have a 170-sided die. Even numbers represent boys, odd represent girls, and the number 169 represents the name Emma which was the most popular girls name in the U.S. in 2008. What are the odds that a family with two children has two girls, if one of their children is named Emma. (I'm ignoring the possibility of boys named Emma). The answer is  $119/339$  or very close to  $1/2$ . So the relative popularity of a particular name is somewhat irrelevant. The real reason for the dramatic difference between the two problems (the one resulting in probability  $1/3$  and the one approximating  $1/2$ ) is that the basic building blocks of the sample has changed. Instead of a sample consisting of families, when a name is given to a particular child we are now looking at a sample consisting of individual children. So the frequency of girls is always about one half, but the frequency of two-children families with girls is about  $3/4$ . When the families with two children are looked at more closely, we see that  $2/3$  have one girl and  $1/3$  have two girls, but this fact tells us something about the distribution of characteristics among families, not among girls.

Stephen Dunn (2009-10-01 18:50:57)

Mlodinow's error is in the last phrase of the sentence in the second full paragraph on p. 113: "That leaves us with just (boy, girl-F), (girl-F, boy), (girl-NF, girl-F), and (girl-F, girl-NF), which are, to a very good approximation, equally likely." In fact, the odds for (B, GF) and (GF, B) are  $1/3$  each, while the odds for (GNF,GF) and (GF, GNF) are  $1/6$  each. Let's look at it step-by-step. First, we are told that a woman is pregnant with fraternal twins. There are four equally likely outcomes: (B,B), (B,G), (G,B), and (G,G). So the odds that both twins are girls is  $1/4$ . Second, we are told that at least one of the twins is a girl. There are now three equally likely outcomes: (B,G), (G,B), and (G,G). So the odds that both twins are girls is  $1/3$ . Third, we are told that some girls are named Florida, but we don't yet know how many girls are so named. Let's assume for a moment that half of all girls are named Florida. (B,G) thus has two equally likely outcomes: (B,GF) and (B,GNF). Each is thus 50 % of  $1/3$ , or  $1/6$  likely. Similarly, (G,B) has two equally likely outcomes, (GF,B) and (GNF,B), each of which has a 50 % of  $1/3$ , or  $1/6$  chance of happening. (G,G) has four equally likely outcomes, (GF,GF), (GF,GNF), (GNF,GF), and (GNF,GNF), each of which is 25 % of  $1/3$ , or  $1/12$  likely to occur. Fourth, we are told that at least one of the twins is a girl named Florida. (B,G) can thus only be (B,GF) and has a  $1/3$  chance of being the outcome. Similarly,(G,B) can only be (GF,B), and has a  $1/3$  chance of being the outcome. (G,G) can thus only be (GF,GF), (GF,GNF), or (GNF,GF), each of which has a 33 % of  $1/3$ , or  $1/9$  chance of happening. Finally, we are told that

Florida is a very rare name, and nobody (except maybe George Foreman) is going to name both twin girls Florida. So, (G,G) can now be only (GF,GNF) or (GNF,GF) each of which has a 50 % of 1/3, or 1/6, chance of happening. The 1/3 chance that both twins are girls has not changed because of any additional information. Simple, eh?

### **Practical Philosophy and American Idol (2009-02-27 15:21)**

You've probably heard of the [1]unexpected hanging paradox in which a man is ordered to be hanged during a certain week but must not know in advance the day of his hanging. The last possible day is Saturday. He must be hanged before Saturday because if he's not hanged by then he will know that he is going to be hanged on Saturday. By the same logic he can't be hanged on Friday . . . and so on. Yet he is hung on Wednesday.

American Idol producers have a similar problem during recent eliminations: There must be suspense. From six guys and six girls one guy, one girl, and one runner-up will be selected. This week, the first person selected, out of two girls and a guy, was a girl. This meant that at the next step – one person chosen from one girl and one guy – the guy would be selected because if the girl was selected, the remaining girls would have no chance. Making the remaining portion of the program much less interesting. As an [2]EW.com commenter put it:

There was no suspense in the Kris Allen/Megan Corkey stand-off last nite. Allison had already gone through & if Megan had it would automatically eliminate the rest of the females. Wasn't going to happen halfway through the show. That's what they call a 'gimme'.

The [3]Wikipedia article on the paradox gives no practical applications.

1. <http://mathworld.wolfram.com/UnexpectedHangingParadox.html>
2. [http://www.ew.com/ew/article/comments/0,,20007164\\_20171835\\_20261959,00.html?board\\_name=%2527American+Idol%2527+recap%253A+Relax%252C+It%2527s+Just+Six%2521&board\\_url=http%253A%2F%2Fwww.ew.com%2Ffew%2Farticle%2Fcomments%2F0%252C%252C20261959%252C00.html&expand\\_all=false&order=ASC&page=3&per\\_page=10](http://www.ew.com/ew/article/comments/0,,20007164_20171835_20261959,00.html?board_name=%2527American+Idol%2527+recap%253A+Relax%252C+It%2527s+Just+Six%2521&board_url=http%253A%2F%2Fwww.ew.com%2Ffew%2Farticle%2Fcomments%2F0%252C%252C20261959%252C00.html&expand_all=false&order=ASC&page=3&per_page=10)
3. [http://en.wikipedia.org/wiki/Unexpected\\_hanging\\_paradox](http://en.wikipedia.org/wiki/Unexpected_hanging_paradox)

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Lost Backpacker (2009-08-14 02:23:02)

Bring it on Simon, he is so cutting sometimes but great to watch better than Paula.

### **What One Economist Has Learned From the Financial Crisis (2009-02-28 10:50)**

Three things, he said:

1. Finance professors have all been working for hedge funds. Their research has been about how to price derivatives and options. In other areas of economics, the research topics are much broader and include policy questions.
2. Macroeconomics hasn't made progress since the 1930s.

3. Recommendations what to do about the crisis, even from economics professors, are based on very little they learned in graduate school. They hardly differ from opinions. Listening to his colleagues' recommendations, he thought they would be backed up by something solid. They weren't.

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Stephen M (Ethesis) (2009-02-28 20:48:21)  
All in all, those are excellent points.

Catherine Johnson (2009-03-01 11:31:53)  
jeepers

Tom in TX (2009-03-02 13:13:48)  
Macroeconomics took a wrong turn when it accepted Keynesianism as official dogma. It is not surprising that the discipline has not made progress.

### **Will Like vs. Might Love vs. Might Hate (2009-02-28 21:54)**

What to watch? Entertainment Weekly has a feature called [1]Critical Mass: Ratings of 7 critics are averaged. Those averages are the critical response that most interests me. [2]Rotten Tomatoes also computes averages over critics. It uses a 0-100 scale. In recent months, my favorite movie was Gran Torino, which rated 80 at Rotten Tomatoes (quite good). Slumdog Millionaire, which I also liked, got a 94 (very high).

Is an average the best way to summarize several reviews? People vary a lot in their likes and dislikes – what if I'm looking for a movie I might like a lot? Then the maximum (best) review might be a better summary measure; if the maximum is high, it means that someone liked the movie a lot. A score of 94 means that almost every critic liked Slumdog Millionaire, but the more common score of 80 is ambiguous: Were most critics a bit lukewarm or was wild enthusiasm mixed with dislike? Given that we have an enormous choice of movies – especially on Rotten Tomatoes – I might want to find five movies that someone was wildly enthusiastic about and read their reviews. Movies that everyone likes (e.g., 94 rating) are rare.

Another possibility is that I'm going to the movies with several friends and I just want to make sure no one is going to hate the chosen movie. Then I'd probably want to see the minimum ratings, not the average ratings.

So: different questions, wildly different "averages". I have never heard a statistician or textbook make this point except trivially (if you want the "middle" number choose the median, a textbook might say). The possibility of "averages" wildly different from the mean or median is important because averaging is at the heart of how medical and other health treatments are evaluated. The standard evaluation method in this domain is to compare the mean of two groups – one treated, one untreated (or perhaps the two groups get two different treatments).

If there is time to administer only one treatment, then we probably do want the treatment most likely to help. But if there are many treatments available and there is time to administer more than one treatment – if the first one fails, try another, and so on – then it is not nearly so obvious that we want the treatment with the best mean score. Given big differences from person to person, we might want to know what treatments worked really well with someone. Conversely, if we are studying side effects, we might want to know which of two treatments was more likely to have extremely bad outcomes. We would certainly prefer a summary like the minimum (worst) to a summary like the median or mean.

Outside of emergency rooms, there is usually both a wide range of treatment choice and plenty of time to try more than one. For example, you want to lower your blood pressure. This is why medical experts who deride "anecdotal evidence" are like people trying to speak a language they don't know – and don't realize they don't know. (Their cluelessness is enshrined in a saying: [3]the plural of anecdote is not data.) In such situations, extreme outcomes, even if rare, become far more important than averages. You want to avoid the extremely bad (even if rare) outcomes, such as [4]antidepressants that cause suicide. And if a small fraction of people respond extremely well to a treatment that leaves most people unchanged, you want to know that, too. Non-experts grasp this, I think. This is why they are legitimately interested in anecdotal evidence, which does a better job than means or medians of highlighting extremes. It is the medical experts, who have read the textbooks but fail to understand their limitations, whose understanding has considerable room for improvement.

1. <http://www.ew.com/ew/news/charts/movies/criticalmass/0,,00.html>
2. <http://www.rottentomatoes.com/>
3. <http://www.chrisjohnsonmd.com/blog/2008/11/30/how-to-use-medical-evidence-iii-case-reports-and-descriptive-series/>
4. <http://www.washingtonpost.com/wp-dyn/content/article/2006/12/13/AR2006121300452.html>

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Igor Carron (2009-03-01 04:15:43)

Seth, What you are describing for the movies is what is known as recommender systems. They are a huge interest in the machine learning community. One of the prime example being the current netflix competition (<http://www.netflixprize.com/>) where the best minds can do better than 10 % of the original netflix: <http://www.netflixprize.com//leaderboard> A transfer into the treatment process is a very interesting idea. Igor.

Which "average" matters? It depends... « Joseph Sinatra (2009-03-01 08:21:09)

[...] Seth Roberts puts it a different way (speaking in the context of health and medical treatments). If there is time to administer only one treatment, then we probably do want the treatment most likely to help. But if there are many treatments available and there is time to administer more than one treatment "if the first one fails, try another, and so on" then it is not nearly so obvious that we want the treatment with the best mean score. Given big differences from person to person, we might want to know what treatments worked really well with someone. Conversely, if we are studying side effects, we might want to know which of two treatments was more likely to have extremely bad outcomes. We would certainly prefer a summary like the minimum (worst) to a summary like the median or mean. [...]

Vince (2009-03-01 15:33:55)

Metacritic shows you the rating for every review, in addition to the average rating. You can see, for instance, that Gran Torino (average rating 72 out of 100) didn't get any ratings over 91 from the 34 reviews, while Benjamin Button (average = 70) got seven 100's. They also have user ratings, which could be more informative than reviewer ratings, but it's harder to get a sense of their distribution because there are more of them and they aren't organized as well.

## 4.3 March

### Nose-Clipping Works (2009-03-01 09:25)



From [1]Igor Carron's blog, which is usually about [2]compressive sensing:

Since mid-December, I have lost about nineteen pounds (8.5 kg) by following some of the results of the self-experimentation of Seth Roberts, a professor at Berkeley . . . What did it take to do this ? For me, just one thing: a \$4 nose clip that I put on my nose every time I eat. That's it. No exercise. I eat what I usually eat although now in a rather lower amount (not because I am starving myself but because I feel full earlier). The weight loss was pretty steep at the beginning. Putting a nose clip has some social cost though and when I eat out with friends or through the Christmas food, I lose it. . . . I can now see abs that I had not seen for the past twenty years.

1. <http://nuit-blanche.blogspot.com/2009/02/le-gout-des-autres-taste-of-others.html>

2. [http://en.wikipedia.org/wiki/Compressed\\_sensing](http://en.wikipedia.org/wiki/Compressed_sensing)

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Ross (2010-08-20 17:06:18)

Could you instead swab your nose with something that interferes with our sense of smell? Like Vicks or Mentholatum?

7 Quirky Weight-Loss Strategies That Really Work | Urbane Women (2012-04-02 23:58:01)

[...] the difference? So while it may seem a little extreme (and get you some weird looks at restaurants) clipping your nose shut during meals will help you only eat until you're full. Although it does make your favorite [...]

## Down With Weak Yogurt! (2009-03-01 22:28)

Many years ago, in a rowboat on a Swedish lake, I heard the following joke:

Q. Why is American beer like making love in a rowboat?

A. Because it's f-ing near water!

Having had lots of [1]homemade yogurt recently, I now feel the same way about store-bought yogurt, a pale imitation of homemade: Who are you kidding!

1. <http://www.blog.sethroberts.net/2009/02/18/the-staggering-greatness-of-homemade-yogurt/>

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Dan (2009-03-02 08:36:54)

Seth, speaking of beer, I've been wondering, does your theory of fermentation extend to alcohol and tobacco? Do you think that the studies showing that moderate alcohol consumption is healthy are a reflection, at least in part, to ingesting the fermented grains (or grape juice)? What about fermented chewing tobacco (Skoal, Copenhagen, etc. are all fermented, as opposed to the Swedish chewing tobacco, i.e., "snus")?

Mark (2009-03-02 12:05:40)

An old joke that makes less and less sense these days! I'd say the median American beer is much more flavorful than the median English or German beer, although probably less flavorful than the median Belgian. The craft brew movement has made the USA into a wonderful place to be a beer drinker.

seth (2009-03-02 12:57:23)

Dan, yes, I think that the fermented portion of wine and beer is likely to be the portion that causes the health benefits. I don't know of any studies of the health effects of fermented chewing tobacco. Mark, yes an old joke that doesn't make much sense any more. There was a whole booth at Slow Food Nation with about a hundred American microbrews.

Dan (2009-03-03 09:05:58)

Well, you likely won't find studies on chewing tobacco. As a side note, I've read (I think it was in the WSJ a couple years back) that chewing tobacco actually is several orders of magnitude safer than smoking, and that tobacco companies are fully aware of this (they funded the studies), but that they're hamstrung by the FDA and trial lawyers from making the studies known. Basically, they can't even hint that chewing tobacco is either a safer alternative to smoking or a means to wean oneself off of cigarettes, for fear of lawsuits, despite the fact that it's far, far safer.

## Another Benefit of Fermentation: Better Extraction of Nutrients (2009-03-02 13:31)

[1]Whole Health Source says:

Healthy grain-based African cultures typically soaked, ground and fermented their grains before cooking, creating a sour porridge that's nutritionally superior to unfermented grains. . . .These traditional food



processing techniques [soaking and fermentation] have a very important effect on grains and legumes that brings them closer in line with the "paleolithic" foods our bodies are designed to digest. They reduce or eliminate toxins such as lectins and tannins, greatly reduce anti-nutrients such as phytic acid and protease inhibitors, and improve vitamin content and amino acid profile. Fermentation is particularly effective in this regard.

For me the key word is sour ("sour porridge") – another example of how our enjoyment of umami- sour- and complex-flavored foods drew us toward fermented food.

A [2]paper showing that some types of fermentation increase iron and zinc digestion.

Thanks to Justin Owings and [3]Tom.

1. <http://wholehealthsource.blogspot.com/2009/01/how-to-eat-grains.html>

2. <http://www.ncbi.nlm.nih.gov/pubmed/16969377>

3. <http://www.blog.sethroberts.net/2009/02/18/the-staggering-greatness-of-homemade-yogurt/#comment-272557>

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Justin Wehr (2009-03-02 18:42:54)

Seth, I am very interested in this fermented food thing and the theories behind it. One thing I wish you would address though is the relationship of botulism to fermented food. I know nothing about it other than what's written in the wikipedia page on fermented food: Alaska, despite its small population, has witnessed a steady increase of cases of botulism since 1985. It has more cases of botulism than anywhere else in the United States of America.[9] This is caused by the traditional Eskimo practice of allowing animal products such as whole fish, fish heads, walrus, sea lion and whale flippers, beaver tails, seal oil, birds, etc., to ferment for an extended period of time before being consumed. The risk is exacerbated when a plastic container is used for this purpose instead of the old-fashioned method, a grass-lined hole, as the botulinum bacteria thrive in the anaerobic conditions created by the plastic.

seth (2009-03-02 23:28:23)

The increase in cases of botulism is obviously not due to an increase in Eskimo population or the same number of Eskimos eating more fermented food – it is an ancient practice, not a new one. It sounds like it is due to a change in how the food is fermented – old way versus new way.

### Assorted Links (2009-03-02 20:50)

- [1]instructive comments about autism and mercury
- a well-deserved [2]dressing-down of SEC officials on YouTube
- [3]does blogging make you happier? Via [4]Andrew Sullivan
- [5]redoing the Milgram Obedience Experiment
- [6]a few minutes of journal-type writing have health effects [7]measured with this scale that last weeks

Thanks to Marian Lizzi.

1. <http://blogs.wsj.com/health/2008/09/18/nih-cancels-study-of-chelation-as-autism-treatment>
2. [http://www.youtube.com/watch?v=FOKSkaQoF\\_I](http://www.youtube.com/watch?v=FOKSkaQoF_I)
3. <http://psychcentral.com/blog/archives/2009/02/16/can-blogging-make-you-happier/>
4. [http://andrewsullivan.theatlantic.com/the\\_daily\\_dish/2009/02/does-blogging-m.html](http://andrewsullivan.theatlantic.com/the_daily_dish/2009/02/does-blogging-m.html)
5. <http://www.youtube.com/watch?v=y6GxIuljT3w>
6. <http://tinyurl.com/b93z3g>
7. <http://counsellingresource.com/quizzes/pill/index.html>

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Dave Lull (2009-03-03 14:20:56)

"Writing poems helps brain cope with emotional turmoil, say scientists": <http://www.telegraph.co.uk/culture/culture-renews/4630043/AAAS-Writing-poems-helps-brain-cope-with-emotional-turmoil-say-scientists.html>

### **Why Self-Experimentation? (2009-03-04 08:04)**

One reason for self-experimentation is very simple: To learn about the effects of a drug you are taking. Is it helping? The medical literature is unlikely to be unbiased. Someone heavily involved in producing that literature [1] wrote anonymously in the BMJ:

I also do a lot of ghost writing. Sometimes I report good quality studies to which I am proud to contribute, albeit anonymously. Yet, too often, I write so called reviews, amounting to mere panegyrics of the discussed drugs, or I report poorly designed and implemented "epidemiologic" studies, bearing gross biases. Many of the (paid) signing authors of these papers do not read the manuscript, let alone provide feedback. I am surprised at how easily such papers are accepted by some journals and how rarely their flaws are challenged.

Given the financial interests at stake, I do not see what recommendations or regulations will put an end to such long debated [meaning long-criticized] practices.

My first self-experimentation to have unexpected results involved an acne drug. I discovered it was ineffective – might have even been making things worse. Yet it was a standard treatment for acne. My dermatologist was surprised I had bothered to collect the data. "Why did you do that?" he asked.

To do useful self-experimentation here isn't complicated. The main thing you would do would be to measure the problem before and while you take the drug. Before you take the drug, you'd want to measure the problem long enough so that you had some idea of what would happen if you didn't take the drug.

If you've done this, I'd like to hear about it.

1. [http://www.bmj.com/cgi/content/full/338/feb24\\_1/b764](http://www.bmj.com/cgi/content/full/338/feb24_1/b764)

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Daniel Lemire (2009-03-04 14:48:04)

I was discussing self-experimentation with a colleague recently ([http://en.wikipedia.org/wiki/SÃ©bastien\\_Paquet](http://en.wikipedia.org/wiki/SÃ©bastien_Paquet)) and he told me that he wrote his thesis by self-experimentation. (His Ph.D. was in Computer Science... though it was not very typical.) His goal was to measure the impact that blogging has on a career and his research. On purpose, he became highly connected. Of course, this is contrary to the scientific method: you can't be your own object of study. Yet, it worked well enough for him. My own research (databases) is not a very good area for self-experimentation. However, for things like social networks, where researchers are currently struggling due to the lack of a convenient methodology, it could be that self-experimentation could help a lot.

### **More Benefits of Fermented Foods? (2009-03-05 00:59)**

At a regular dental checkout a few days ago, I was told my gums were in excellent shape – better than the previous checkup. The only difference between the two checkups I can think of is that now, but not then, I've been eating lots of fermented foods. My gums clearly got a lot better after I started drinking flaxseed oil (went from reddish to pinkish). Now apparently they have improved again.

After the checkup I went to Whole Foods to buy kombucha. The person behind me in the checkout line was also buying kombucha. She had learned about it from her friends. "You drink it because your friends drink it?" I asked. No, she likes how it makes her feel. It gives her more energy. "Does any other drink do that?" I asked. She pointed to the coffee she was also buying: Coffee has the same effect, she said. Since kombucha is made from tea, it certainly contains caffeine. On the other hand, I noticed an increase in energy after I started eating more fermented foods that contained no caffeine, such as stinky cheese, wine, yogurt, and kimchi.

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Igor Carron (2009-03-05 01:48:24)

Seth, That cheese ain't stinky if you have a nose clip on :-)

John (2009-03-05 11:16:20)

I think coffee beans are fermented at some point in their life cycle too. I have no idea if they count as fermented though.

Ashish (2009-03-05 15:56:08)

1) Do you think that the flaxseed benefit to your gums was from the oil's nutritional content (and therefore might also be available from consuming ground flaxseed - a little easier to take), or from the contact of the oil directly to your gums? 2) I've heard that taking testosterone shots (as one example), helps men have "more energy." Yet we know that for most people, the long term side effects of such shots are very negative. How can/should we test for long term side effects of fermented products? E.g. too much kimchi is hard on the stomach, as you may already have noted. -ashish ps thanks for an always informative and wonderfully thought-provoking blog.

seth (2009-03-05 16:48:30)

Ashish, flaxseed oil helped my gums because omega-3 is a precursor of an anti-inflammatory signalling molecule. How can we test for long-term side effects? By looking at the health of people who eat a lot of it. E.g., long-term health of Koreans says

something about the dangers of kimchi.

Riz Din (2009-03-07 12:27:04)

I recently read this article about soy, which also includes a spot of interesting discussion about fermentation: "the Chinese discovered that soy is made edible by fermentation" as are many other foods, and not just those of plant origin. In his own brilliant essay, "Fermented Beans and Western Taste", Mintz cites Geoffrey Campbell-Platt's surprising point that "something like one-third of all the food eaten on earth today has been treated by some kind of fermentation".  
[http://entertainment.timesonline.co.uk/tol/arts\\_and\\_entertainment/the\\_tls/article5843750.ece](http://entertainment.timesonline.co.uk/tol/arts_and_entertainment/the_tls/article5843750.ece)

### **"I Started Eating More Fermented Food..." (continued) (2009-03-05 22:13)**



[1]Previously: Tucker Max found that drinking two bottles per day of kombucha for a a week had several easy-to-notice unexpected benefits.

I have some comments:

1. The best thing about these observations is how simple the change is: two bottles/day of a readily available kombucha brand. Very easy to duplicate – let's not worry about matching Tucker's weight, etc.
2. The speed with which the changes were noticed (within a week) makes the whole thing even easier to try to

duplicate.

3. Kombucha was not one of the fermented foods from which I drew my conclusions about fermented foods. Bacteria are so varied that the notion that all fermentation bacteria have somehow the same effect isn't easy to believe. But since the prediction about fermented foods (they are highly beneficial) turned out to be true maybe there is something to this.

4. My idea that we like umami tastes, sour tastes, and complex flavors so that we will eat more bacteria-laden food (which nowadays would be fermented food) is saying that we need plenty of these foods. Why else would evolution have tried so hard to make us eat them? The implication is they should be part of every diet, like Vitamin C. When someone deficient in any vitamin begins eating that vitamin, the deficiency symptoms go away very quickly, within a few weeks, usually. The changes are easy to notice. So the details of what Tucker observed - the speed and size of the improvements - support my general idea that there is a widespread deficiency here that can be easily fixed.

5. I used to make kombucha. I'm going to start again.

1. <http://www.blog.sethroberts.net/2009/02/26/i-started-eating-more-fermented-food/>

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Darrin Thompson (2009-03-06 07:32:03)

Do you think this is true of any homemade vinegar? Admittedly I have zero experience but it strikes me as tea flavored slightly active vinegar. The tea flavor would be improved by the temporary presence of alcohol.

Justin (2009-03-06 08:26:31)

If you wouldn't mind sharing, how do you make Kombucha tea?

seth (2009-03-06 09:29:51)

you put kombucha culture in a tea-sugar mixture, leave at room temperature.

Heidi 555 (2009-03-10 14:26:18)

A Beekeeper has had an amazing experience with kombucha: "I'd been afflicted with a skin ailment since my youth. There's no know cure. Modern medicine can relieve the symptoms. But the drugs used have more long term side effects that are worse than any benefits. Well, within 24 hours, the itching associated with the irritated skin disappeared. Within three days, the slight swelling associated with the irritated skin also disappeared. Within a month, 99 % of the irritated areas disappeared. During that time, I lost joint pain that had plagued me for a decade, commercial beekeeping is rough on the back and joints. I regained full movement in my right shoulder. And a sense of wellness replaced what ever biologically stressed out condition I thought was normal. Once you're over 50, some of the things lost along the way become more apparent. Hair texture, intestinal fortitude, urinary function, energy level, and sexual prowess all decrease. And weight increases. Using kombucha, a probiotic, has reversed my losses to that of a man 10 to 15 years younger. And I've lost some weight. Before using it, I felt old. After using it, I feel alive. Using kombucha has been the most phenomenal physiological experience of my life." He also writes about using probiotics with honeybees. From: <http://www.bwrangler.com/npro.htm>

Kombucha Tea (Fermented Food) | the Justin Owings page (2011-07-25 08:48:45)

[...] <http://www.blog.sethrober...> #comment-275794 [...]

## Polyphasic Sleep (2009-03-06 23:32)

I heard about polyphasic sleep – such as sleeping 20 minutes every 3 hours – many years ago. But now I can learn about it in much more detail – and with much more suspense. [1]For example:

[Before starting] Having always been a night-owl, and never having a sleep pattern that fits with others, I feel drawn to try it. I foresee a problem in that I have always felt that I need 8 hours of sleep per day, but on the other hand I can stay up until 5 am without a problem when I am mentally engaged, so it has seemed to me for quite some time that a 28 or 29 hour day is what my system is tuned for. . . . I can feel it energizing me already.

[Day 15] Yesterday was a disaster. Sleep is a funny thing - sleep deprivation had been accumulating and I wasn't really noticing it. I was just happy to be awake and productive so many hours in a day that I ignored the weird feeling in my head, just going with it, thinking I would adjust and it would be all ok. Well yesterday morning I blew up at my SO for a ridiculous reason. . . . What went wrong? I was following all the sleep patterns pretty much to the letter.

More examples listed [2]here.

1. <http://polyphasium.blogspot.com/>
2. [http://en.wikipedia.org/wiki/Polyphasic\\_sleep](http://en.wikipedia.org/wiki/Polyphasic_sleep)

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Justin (2009-03-07 08:32:42)

Have you seen Steve Pavlina's experiments with polyphasic sleep? There's an index of his experiment here: <http://www.stevepavlina.com/blog/2005/10/polyphasic-sleep/> Here's a comment that sums up duration/type of polyphasic sleep pursued by Pavlina from one of the last days he did it:

Just as a reminder (and for my newest readers), my default polyphasic sleeping pattern involves napping for 20 minutes roughly every 4 hours for a total of 6 naps every 24 hours. I started this sleep schedule on October 20, 2005, so I've been going for over 4 months now. It feels like it's been much longer though.

Laris Kreslins (2009-03-28 12:22:56)

Hello, Regarding "Polyphasic Sleep" you might find my new app I just made for the iPhone called SNOOZEBOT. It's a snooze button whenever you need one. Here's the link to the iTunes store if you're interested. <http://bit.ly/snoozebot> or just search the iTunes store for: Snoozebot You can basically set up various sleep sessions. The custom button can only go up to 60 minutes, but that seems to fit well for 20-30 sessions.

Aximilation (2009-06-16 11:24:48)

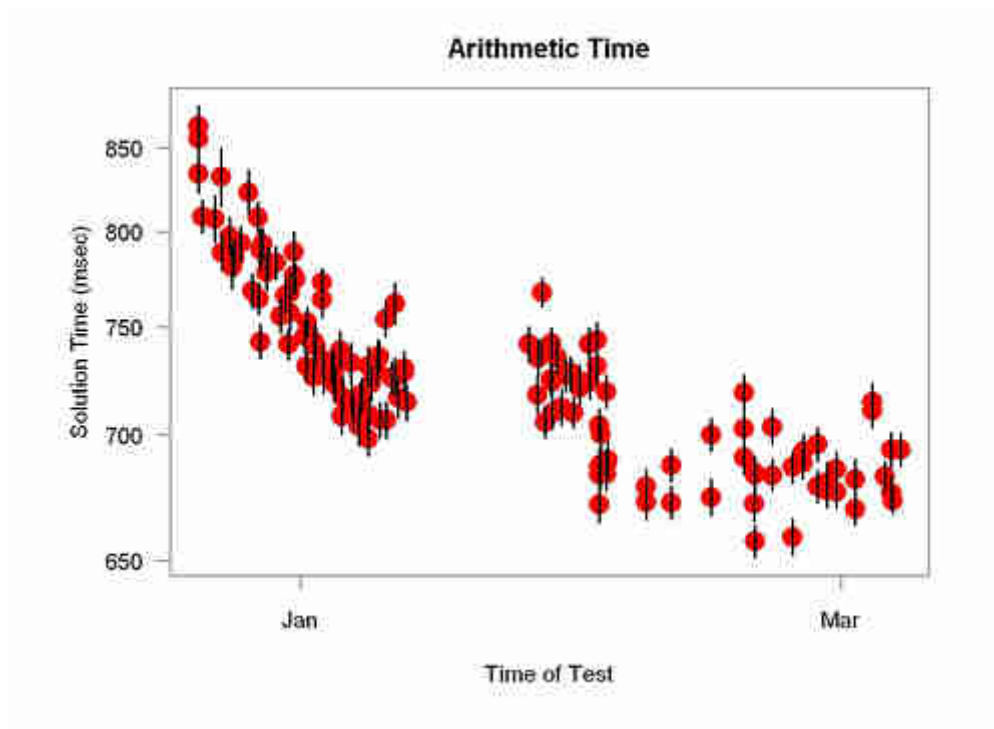
I have a blog documenting how polyphasic sleep fits into my lifestyle, I have done it for nearly three years, and do not view it as a short term experiment as many of the blogs on the net are about. Feel free to come by and send me a message, good luck if you decide to give it a go!

## Hey, What Happened to My Brain? (part 1) (2009-03-07 21:30)

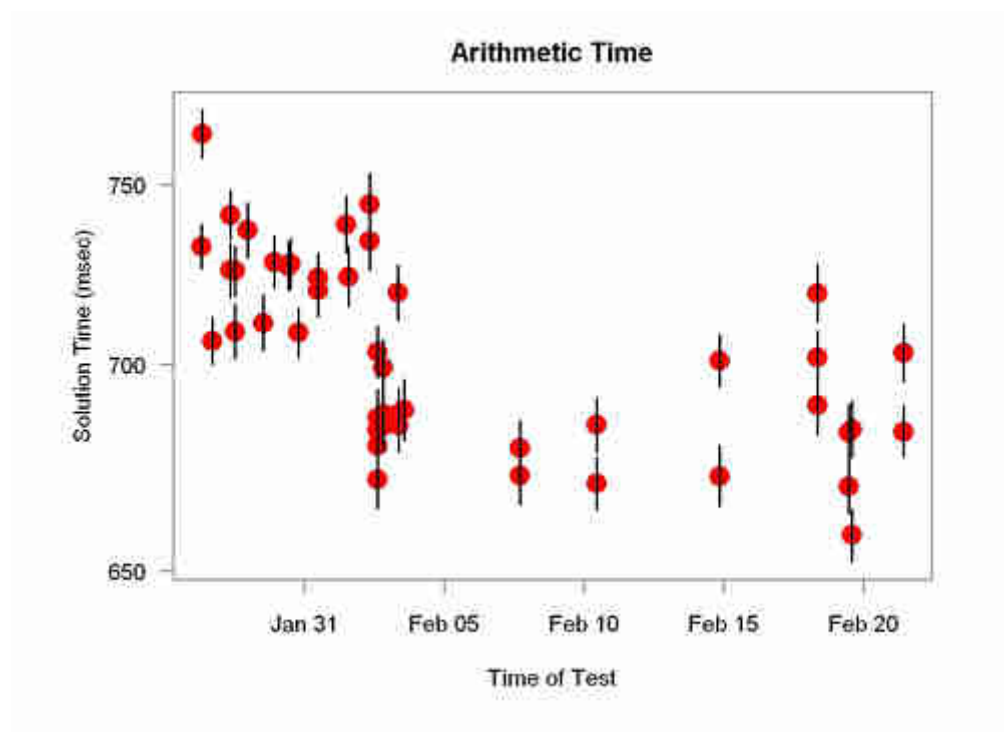
For a few months, I've been measuring how well my brain is working using arithmetic problems. Each test session includes 100 simple problems ( $3+4$ ,  $7-0$ ,  $4*8$ ) divided into 5 blocks of 20. I type the last digit of the answer as quickly as possible. I got the idea from [1]Tim Lundeen, who got better on a similar task when he increased his DHA intake. My performance on an earlier version of this task was [2]improved by flaxseed oil.

I've blogged [3]about this. The virtues of this test include: 1. Fast. Takes only a few minutes. 2. Portable. Requires only a laptop. 3. Many possible answers (1, 2, 3, etc.). This reduces anticipation errors. 4. Many numbers (reaction times) per test. This allows me to get a measure of variability for each session and can correct for the difficulty of the problem. Aspects with room for improvement include: 1. Speed/accuracy tradeoff. Accuracy isn't fixed. Depending on how accurate I want to be, I'll go faster or slower. (I aim for 95 % correct.) 2. No complex actions. The most enjoyable games have a motor-skill aspect that this task does not.

Here's the data so far.



The big gap happened because I moved from Beijing to Berkeley. The most fascinating result, of course, is the sudden drop on February 2. Here is a close-up.



The drop was easy to notice. All of a sudden I was faster (and only slightly less accurate). The first test with better performance took place while my landlady, who lives upstairs, was practicing piano. Usually it's quiet when I test myself. My first thought was that the music had caused the improvement. But it persisted so long after the music had stopped that the music couldn't be the cause.

Part 2: I think I know what caused it. But there is a big problem with my explanation.

1. <http://www.blog.sethroberts.net/2007/02/16/omega-3-and-arithmetic/>
2. <http://www.blog.sethroberts.net/2007/05/21/science-in-action-omega-3-flaxseed-oil-vs-nothing-2/>
3. <http://www.blog.sethroberts.net/2009/01/05/tracking-how-well-my-brain-is-working/>

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david (2009-03-08 00:13:53)

There's some joke to be made here involving the stereotype of the Chinese being good at math...hey, wait, didn't you say that the Chinese language made math easier and that you've been learning Chinese?

Austin (2009-03-09 01:40:14)

Haven't you failed to account for the possibility that you're getting better at this? This seems like an easily trainable exercise. People who have to do arithmetic frequently are often better at it: for instance, waiters in Germany don't use cash registers to calculate bills, and they are extremely fast, while even extremely intelligent mathematicians can be slow at common arithmetic because they don't do it frequently.

Austin (2009-03-09 01:41:18)

Note that you don't improve at all during your move, despite the fact that you were likely taking DHA still. This bolsters my hypothesis.



seth (2009-03-09 14:25:05)

The first graph shows that I had stopped improving when the sudden drop occurred.

Seth's blog » Blog Archive » Hey, What Happened to My Brain? (part 2) (2009-03-10 11:23:18)

[...] Hey, What Happened to My Brain? (part 1) [...]

Seth's blog » Blog Archive » Hey, What Happened to My Brain? (part 3) (2009-03-11 07:52:03)

[...] Hey, What Happened to My Brain? (part 1) [...]

Seth's blog » Blog Archive » Poorly Made in China (2009-07-17 10:54:17)

[...] The subtitle of Paul Midler's book is "An Insider's Account of the Tactics Behind China's Production Game." Midler is an American who helps American and European companies get stuff made in China. The book is about how, in a dozen ways, Chinese manufacturers manage to make manufacturing deals more profitable to them at the expense of their customer — and, often, the ultimate consumer. Most of the book is about what happens to an unnamed American company that imports "telephone numbers" of beauty products. One problem is "quality fade." The product slowly gets worse until the importer objects. For example, at one point the fragrance put in liquid soap was changed. Instead of different fragrances for products with different labels, almond was used in every case. So a product labeled Aloe Vera smelled of almond. (I discovered I couldn't trust flaxseed oil made in China.) [...]

## Language and Netbooks (2009-03-08 08:36)

I believe [1]language evolved because it facilitated trade. If you wanted X, being able to say "X?" made it a thousand times easier to find someone with excess X. This efficiency required prior language learning, of course. Language learning happened in the background, so to speak, then paid off in the foreground by making one of human life's biggest tasks (trading) much easier.

After reading [2]this excellent article about netbooks, I realized they're like language. All sorts of tasks become much easier for your computer if the heavy lifting is done by a server. You no longer need Word or Photoshop, for example. Just as using language to trade required prior language learning, using netbooks this way requires prior software development.

1. <http://www.blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-directory/>

2. [http://www.wired.com/gadgets/wireless/magazine/17-03/mf\\_netbooks?currentPage=all](http://www.wired.com/gadgets/wireless/magazine/17-03/mf_netbooks?currentPage=all)

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## Lie to Me (2009-03-08 21:54)

The [1]new TV show – I like it. It is based on the work of [2]Paul Ekman, a psychologist who lives in Berkeley. It is a new sort of reality show. It isn't a 50 % reality show (as most reality shows are), it is a 10 % reality show. Perhaps 10 % of the show involves discussion and illustration of actual research. You learn about it painlessly.

When I was in college, I tried to learn about stuff by finding fun-to-read books on the subject. Genetics, for example. TV was worthless. Educational TV (opera concerts, televised lectures) was dreary and ordinary TV was completely non-educational. Since then, the gap between educational TV and ordinary TV has narrowed a lot: the History Channel, the

Food Channel, the Weather Channel, not to mention Frontline, are moderately entertaining and Top Chef and Survivor are mildly educational. But it is still easy to put all these shows on one side or other of the education/entertainment divide.

Lie to Me bridges the gap. Although meant to be seen as entertaining, it's undeniably educational. I wish there was an entertaining show I could watch to learn Chinese. There isn't even an entertaining book!

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Buy [3]direct sat tv

1. <http://www.fox.com/lietome/>
2. [http://www.gladwell.com/2002/2002\\_08\\_05\\_a\\_face.htm](http://www.gladwell.com/2002/2002_08_05_a_face.htm)
3. <http://www.directsattv.com/>

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PS (2009-03-08 22:15:14)

I've been in Taiwan for 11 years. I've found soap operas to be really good for learning Chinese. They mainly focus on relationship, work, money and everyday problems - lots of repetition and useful phrases and words in easy to follow narratives. Radio call in shows on personal problems are great, too. I don't know about China, but in Taiwan all TV shows have Chinese subtitles [to promote literacy and for those who speak Taiwanese better than Mandarin] - so you can also speed up your reading and train your brain to hold the unknown phrases flashed on screen long enough to note them down to look up later. As for entertaining books, well, it depends on what you find fun, but I think the dictionary at [zhongwen.com](http://zhongwen.com) would interest you - available both online and on paper.

Matt Goff (2009-03-08 23:06:52)

You might be interested in a language game called "Where are your keys?" which is purported to make it relatively easy (and fast) to gain fluency in a language. There's not much information about it currently available, but there is a podcast interview with one of the creators available here: [1]<http://www.mythic-cartography.org/2009/03/04/episode-23-where-are-your-keys-an-interview-with-evan-gardner/>

1. <http://www.mythic-cartography.org/2009/03/04/episode-23-where-are-your-keys-an-interview-with-evan-gardner/>

Tom in TX (2009-03-08 23:45:39)

The article says at the end of section 4: ===== I said, 'Look, Clinton's got this way of rolling his eyes along with a certain expression, and what it conveys is "I'm a bad boy." I don't think it's a good thing. I could teach him how not to do that in two to three hours.' ===== So it is possible to learn how to fool a face-reader? Maybe we should not take this \_too\_ seriously. Or maybe it will result in a really good episode of Lie To Me. 8-)

Oliver (2009-03-11 20:04:02)

Thanks for writing about this! I had only heard it mentioned in passing, and I dismissed it as just "another crime drama I don't have time to watch". In terms of creating effective educational/entertaining TV, the challenge, I think, is relative to the subject matter. For instance, why haven't people been able to come up with ways to entertain while educating about math. Most entertaining shows throw around jargon, mystify, or even worse, give people the false impression that they understand what's going on—enough to dismiss mathematics but not enough to appreciate it. There is the PBS show NUMB3RS, which does an okay job. Still, I hear people dismiss it seemingly it contains math.

Nancy Ciaccia (2009-04-03 21:14:02)

I've downloaded all the Lie To Me episodes and I've never had the desire to do so before now. This show rocks! The right actors were put in place perfectly – Tim Roth is fantastic and so is Kelli Williams is a favorite (I've tried to catch all her movies and TV series). Brandon Hines (I'd love to hear him sing on the show!) and Monica Raymund are believable and well chosen. But the episode on April 1st had too much drama between the main characters – the ex-wife, the argument between Ria and Eli, then there is Jillian's husband's issues (which has been a good side story but not with all the other downfalls of the characters) and then add in the main story line and all of it gets jumbled. If it proceeds like this I will not continue with what I thought would be my favorite ever series. The writers blew it on that episode or they just decided to throw everything in the scrip and it didn't fly smoothly or well.

Seth's blog » Blog Archive » Best TV Season Ever (2009-11-19 04:15:38)

[...] Lie to Me. [...]

### Assorted Links (2009-03-09 13:50)

- [1]Secrets of the UC Regents
- Very good free [2]clinical nutrition newsletter
- [3]one blog = one self-experiment (does BHT prevent cold sores?)
- [4]excellent interview of Robert Caro (by Brian Lamb)

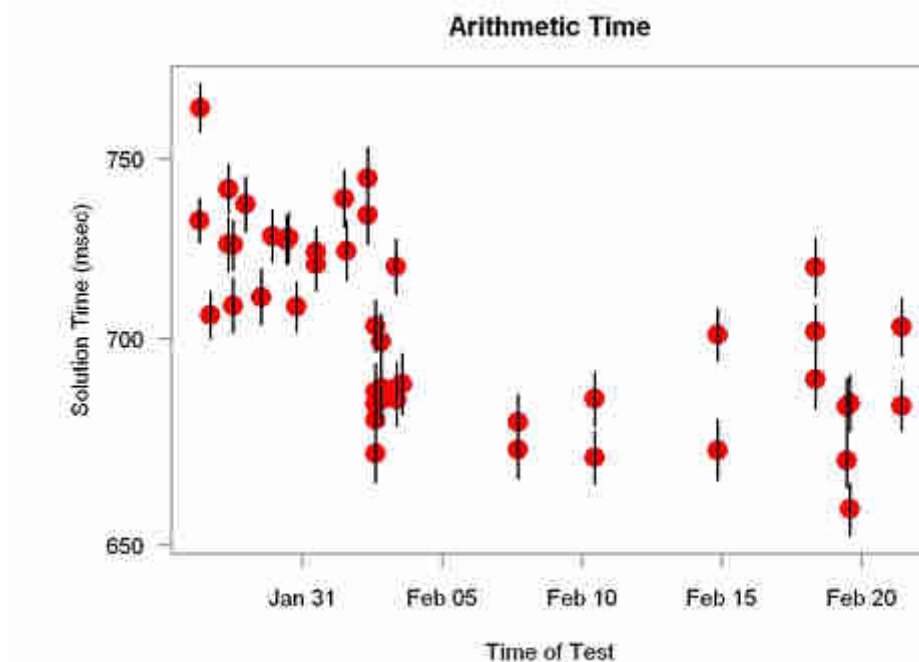
1. <http://socrates.berkeley.edu/~schwartz/MercerAffair.html>

2. <http://www.nutritionupdates.org/>

3. <http://bhtforcoldsores-selfexperiment.blogspot.com/>

4. <http://www.q-and-a.org/Video/?ProgramID=1212>

## Hey, What Happened to My Brain? (part 2) (2009-03-09 21:54)



As I [1]blogged earlier, my arithmetic performance suddenly improved about a month ago (close-up above). How fast the change: On February 2 at 8 am I took the test; my scores were roughly the same as they had been the past month. At 2 pm the same day, I took the test again and was about 50 msec faster. (In reaction-time experiments, a surprising 50-msec effect is huge.) I remained faster for at least several weeks. Comparing the last 30 sessions before the shift to the first 30 sessions after the shift,  $t(38) = 11$ ,  $p = \text{extremely small}$ . In an experiment, comparing treatment and baseline,  $t > 3$  is very good and  $t > 4$  is extremely good.

What might have caused this?

I moved to Beijing in October. Eventually I ran out of the [2]Spectrum Organic flaxseed oil I'd brought with me and started drinking a Beijing brand called [3]Joyful Organic. When I returned to Berkeley I brought a few bottles of it with me and continued to drink it. In late January I ran out; the evening of January 29 I started drinking Spectrum Organic again. Four days later my arithmetic scores sharply improved.

It's really plausible that the improvement was due to the change in flaxseed oils. Flaxseed oil had made a difference (versus nothing) [4]with a very similar task. A few weeks before the shift, a friend had asked how I knew if my Chinese flaxseed oil was good; I'd said I'd find out when I switched back to Spectrum Organic.

But why was the improvement delayed four days? I started studying flaxseed oil because one evening I took several capsules and the next morning noticed my balance was better. And if the improvement is going to take that long, why would it happen so sharply after the delay? I can't even begin to answer these questions.

1. <http://www.blog.sethroberts.net/2009/03/07/hey-what-happened-to-my-brain-part-1/>

2. <http://www.spectrumorganics.com/?id=59>

3. <http://www.joyfulorganic.com/E-Organic-Flaxseed-Oil.htm>

4. <http://www.blog.sethroberts.net/2007/05/21/science-in-action-omega-3-flaxseed-oil-vs-nothing-2/>

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Aaron Blaisdell (2009-03-10 07:42:18)

Interesting observations. Perhaps when you initially noticed an effect the day after taking capsules, it was because you're body was in an omega-3 FA deficient state and the effect could be seen immediately. When you recently switched back to the Spectrum brand, your body probably wasn't in a deficient state. In fact, you may have had enough omega-3 FA in your system to prevent the rapid utilization of each daily dose. Perhaps over the course of four days after switching back to the Spectrum brand, the reserves in your body gradually increased. Just some speculation.

Todd Hargrove (2009-03-10 10:48:35)

Seth, Just curious, why flax seed oil and not fish oil. Does flax seed deliver anything that fish oil does not deliver better?

bennetta (2009-03-10 11:36:11)

I had something similar happen with flax. I experienced some pretty severe cognitive difficulties a few years ago when attempting grad school. As you can imagine, the entire episode was not pleasant, especially when my doctor told me that I had attention deficit disorder and promptly put me on stimulants. After a few months of enduring meds that didn't really do anything except dry out my mouth, give me the jitters, and stifle my creativity, I decided to consult an old friend at my former workplace, the local Whole Foods. A licensed pharmacist and practitioner of Chinese medicine, he recommended that I try flax seed oil. The problem was gone within a few days. My doctor originally attributed my condition to school. Undiagnosed folks with ADD often develop coping mechanisms that fail at a later stage in their lives, often as adults. In my case, according to my doctor, the stress of school caused my ADD to become unmanageable. To be honest, I'm not sure if I have ADD (I'm not sure I care) or if I was just Omega-3 deficient at the time. I've always had a pretty oil-heavy (the good kind) diet, but school forced me to cut some pretty severe corners out of my daily rituals. As far as the delay goes- this is going to sound kind of funny, but I think I can explain it. You know when you take a multivitamin and pee funny colors? Have you ever taken a multivitamin and not peed funny colors? I have. I remember once taking vitamin C tablets for three days and not experiencing the florescent pee. My poor body was sucking up everything it could and building up its reserves. I think something similar may be going on in your case. Side note: Interestingly, my herbalist friend also suggested that eating papaya enzymes (usually a digestive aid) specifically on an empty stomach could help. Apparently, when you eat them in this fashion, the enzymes that would normally help break down food in your stomach go to work in your bloodstream, instead. I'm not sure if they helped me, cognitively, but they did make me feel great.

mike (2009-03-10 21:24:44)

I read this a couple times, but don't understand why switching BACK to spectrum organic would cause the drop. Unless there a corresponding increase in times when you switched to the Chinese brand.

Chris (2009-03-10 21:38:18)

I'd suggest that it's independent of flax seed oil but rather a result of your move. First, the drop in reaction time coincides with roughly the same amount of time it takes to overcome jetlag. Second, the cognitive load in berkeley is probably lower than in China (no unfamiliar accents, all english, more familiar faces/surroundings). So your attention was probably seeking more stimulation/challenge in berkeley while it was satiated by all the 'new' stuff in beijing.

seth (2009-03-10 22:28:28)

Todd, why not fish oil? because the first time I took fish oil I got a headache. Flax oil has been less trouble. I'll study fish oil eventually. mike, was there "a corresponding increase in times when I switched to the Chinese brand"? I don't know because I wasn't doing this test at the time. But, as you say, my explanation predicts such an increase. bennetta, your explanation makes sense. perhaps for reasons of gravity the lower parts of my body soaked up the omega-3 first. Still it is puzzling that the very first time I took flaxseed oil - much less than what I take now - it had an immediate effect. Perhaps the brain can go quickly from zero -> some deficiency but only after the rest of the body is satisfied does it go from some deficiency -> no deficiency.

seth (2009-03-13 15:53:28)

posted for someone else: The last sentence of the previous comment (‘‘Perhaps the brain can go quickly!’’) sounds related to Bruce Ames’s triage hypothesis for the allocation of scarce micronutrients: <http://www.pnas.org/content/103/47/17589.abstract?ck=nck>

### Hey, What Happened to My Brain? (part 3) (2009-03-11 07:51)

The data I posted that showed [1] a sudden improvement in my arithmetic ability is among the most interesting data I’ve ever collected. Not because it revealed something wildly new – I was already sure flaxseed oil helped – but because it revealed something intriguing and new (the time course of the improvement is puzzling).

I collected the data in an unusual way – watchful waiting. I didn’t do an experiment, the way experimental psychology data is usually collected. I didn’t do a survey, the way epidemiological data is collected. In the emphasis on one person it resembles a case report in medical journals – but I didn’t have a problem to be solved and the data is far more numerical and systematic than the data in a case report.

And this rarely-used scientific method paid off. Hmm. I think the scientific methods currently taught have a big weakness: They focus almost entirely on idea testing, whereas idea generation is just as important. Tools that work well for idea testing work poorly for idea generation. The effect of this imbalance – a kind of nutritional deficiency in intellectual diet – is that scientists don’t do a good job of coming up with new ideas.

What should scientists be doing? I would like to find out. My watchful-waiting data collection is/was part of trying to find out. That it paid off pretty quickly is a good sign. It’s the third step in a long process. Step 1. When I was a grad student, my acne self-experimentation led me to realize that one of my prescribed medicines didn’t work – a surprising and useful new idea. Step 2: Later self-experiments had the same effect: Generated surprising and useful ideas. At a much higher rate than my conventional experiments. Why? Perhaps because it involves cheap frequent tests of something important. Step 3: Arrange such a situation – cheap frequent tests of something important – and see what happens.

1. <http://www.blog.sethroberts.net/2009/03/07/hey-what-happened-to-my-brain-part-1/>

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Aaron Blaisdell (2009-03-11 11:27:26)

Some of my research involves understanding causal cognition in rats. The very nature of this research precludes self experimentation (unless I were a rat!). But, I find talking to people from very diverse disciplines to be very helpful in the idea generation stage of my research. I was just at the Eastern Psychological Association meeting in Pittsburgh, and visiting a group of philosophers at Carnegie Mellon University to talk about my rat work. These philosophers are causal interventionists (e.g., Peter Spirtes, David Danks, Clark Glymour), but there was also a philosopher who does rat experiments to understand exploratory behaviors. I met with these folk and we had an extremely enriching and invigorating discussion. I came back to UCLA with a bag full of new ideas with very interesting and profound (in my mind) implications. I’ve had the same reaction discussing my work with evolutionary anthropologists and ethologists (e.g., Rob Boyd, Clark Barret, Dan Fessler, and Joan Silk) at UCLA’s anthropology department. And in talking with ethologists and psychologists at UC Davis. These sources of ideas are a bit more conventional than the use of self experimentation, but still widely unpracticed by many practitioners of science who

stick close to their circle of like-minded colleagues.

Nathan Myers (2009-03-11 18:49:29)

Competent idea testing takes so much time and trouble that most of us are bubbling over with way more ideas than can ever be tested. The problem is to narrow the field to the few that are actually in our own field, and that we can afford to test, and to figure out ways to (afford to) test them. Finding ways to make such testing cheaper and quicker goes a long way to helping use up ideas. A clearinghouse for ideas each of us can't afford to test right just yet would eliminate any such shortage easily.

How do you generate new ideas? « Joseph Sinatra (2009-03-12 16:08:38)

[...] How do you generate new ideas? 13 03 2009 The always thought-provoking Seth Roberts recently posted on a puzzle he was wondering about. He hasn't quite figured out the answer yet but he did conclude a few things about science and methodology: I think the scientific methods currently taught have a big weakness: They focus almost entirely on idea testing, whereas idea generation is just as important. Tools that work well for idea testing work poorly for idea generation. The effect of this imbalance "a kind of nutritional deficiency in intellectual diet" is that scientists don't do a good job of coming up with new ideas. [...]

Michael Van Cise (2009-03-14 07:27:20)

Reading Gary Taubes, Good Calories, Bad Calories, has caused me to think about scientific research and the scientific method in new ways. Taubes spends a lot of time discussing the flaws of scientific study and how testing ideas, if the researcher is convinced he is correct, leads to misinterpreting the research. I think your point about the scientific method being terrible for idea generation is excellent. Certainly research and scientific method is important, but a way to stimulate creativity would be incredibly valuable too.

### **Antibiotic Foods? (2009-03-11 20:04)**

Just as there are probiotic foods – that encourage digestive bacteria – perhaps there are antibiotic foods that kill them off. Stacy Ashworth writes:

The flip side of the good-bacteria-stimulates-the-immune-system theory must be that bacteria-killing-foods-weaken-the-immune-system theory. Could this be why I come down with a cold within a day or so of indulging junk food cravings, food that is chock full of bacteria-killing preservatives? . . . I'm also looking at food preservatives in a new light: if they are added to food to kill bacteria to keep the food fresher, then I suppose it stands to reason that they are also going to kill off some of the immune-system enhancing bacteria in my body.

Do some popular foods kill a significant amount of internal bacteria? I don't know.

I'm sure you need to eat lots of bacteria to stimulate your immune system; the ones already in your body are not recognized as new. New bacteria must come from outside. Then the problem with preservatives is not that they kill bacteria in our bodies but that they have made the preserved food unusually low in bacteria.

Chris (2009-03-12 01:07:30)

Then there's stuff like garlic....it's shown to be an antioibotic in a test tube and widely claimed to be a natural antibiotic/antiviral. Health gurus encourage taking it raw at the first sign of illness. Preservatives are also generally equal to antioxidants. Spoilage=oxidation for many foods/fats. Lots of vitamins are added to serve as a preservative cause of the antioxidant value. If antioxidants are really good for health then....this becomes a complex question. Of course, recent studies say that high doses of vitamin E and other antioxidants actually hurt survival.

SB (2009-03-12 06:36:16)

Turmeric is supposed to be a potent antibiotic, and is commonly used in Indian dishes, especially those with meat. <http://www.oller.net/turmeric.htm> So why does turmeric pickle? [http://www.associatedcontent.com/article/66548/pickling\\_can\\_be\\_a\\_great\\_way\\_to\\_preserve.html](http://www.associatedcontent.com/article/66548/pickling_can_be_a_great_way_to_preserve.html)

seth (2009-03-12 07:24:48)

Chris, that's a good point.

Austism (2009-03-12 14:46:02)

I'm currently looking into using gum that uses Xylitol as a sweetener. It's supposed to reduce cavities and prevent ear infections. They say it has something to do with it preventing bacteria from latching on and growing in the mouth.

Melissa (2009-03-13 02:57:45)

Re:Chris, I remember reading in a book that the preservatives in cereals were tied to decreases in stomach cancer in the U.S. But at the same time Americans started eating mass-produced breakfast cereal, we stopped eating so much salted meat. I think salt is a major issue with fermented foods. Koreans eat tons of fermented foods and have high stomach cancer rates, probably because of the salt. which leads back to the original subject of this post: it's interesting that Koreans pickle with tons of spices that are thought to kill bacteria.

Janice (2009-04-08 09:07:15)

@ Autism. I thought I would offer that I have been chewing a nicotine gum for four months now (can't seem to get off it) that uses Xylitol as a sweetener. I've filled 2 new cavities since I quit smoking. I'm just saying, for what it's worth :)

Edison (2009-09-23 18:08:42)

You shouldn't think of bacteria as stimulating the immune system. Where your body senses bacteria, it attempts to kill it, or has learned to ignore it - it's just a very difficult thing to do within the digestive tract. The bacteria there are symbiotic simply because they eat what we eat (as 60 % of our fecal matter tends to be dead bacteria) and prevent more harmful but slow-replicating bacteria (i.e. yeasts) from spreading in their place. Most of our bodies have learned to ignore those bacteria, and the whole 'probiotic' craze really has more to do with increasing bacteria, which increase stinky digestive gases like methane, which displace free-radical gases (think Oxygen) that cause genetic damage when left to their whims. Eating antibiotic foods is actually helpful with sufferers of Irritable Bowel Syndrome, various forms of arthritis - especially rheumatoid and Ankylosing Spondilitis, those with Celiac disease, and possibly other autoimmune diseases simply because it kills off bacteria that certain individuals' immune systems - with certain genetic predispositions - overreact to, like allergens. I mentioned those diseases because they are all related to bacteria such as Klebsiella, which when killed the body has less to react to. What kills the bacteria? Starvation - avoiding ingestion of glutens and starches reduces these bacteria's numbers, leading to prolonged reduction of symptoms in people with IBS and AS. Just google "IBS diet". Eating probiotics to displace free radicals is not as proactive a means at preventing cancer as consistently ingesting vitamin/phytochemical-antioxidants that make the free radicals disappear and serve your cells in the mean time. "Fish oil/flax seed/fish + antioxidants/phytochemicals from vegetables/fruits + starch-free/gluten-free/lactose-free/low-salt/low-sugar" as a generalization is a fairly similar diet to the people of the Ryukyu islands - those with the longest average life expectancy on earth, albeit they ate many sweet potatoes.



Trinity James (2010-06-16 23:51:57)  
free radicals are dangerous because they can cause cancer.’,

### **Great Moments in Magazine Journalism (2009-03-12 19:02)**

In his Entertainment Weekly [1]TV Watch synopsis of Tuesday's American Idol, Michael Slezak wrote:

Can we all raise our lighters in unison for the most convincing rocker chick to ever grace the Idol stage? Yes, it's Allison Iraheta, who took "Give in to Me," a completely obscure album track from Jackson's Dangerous album and delivered it with such passion and confidence, I felt like I should call Ticketmaster and let them retroactively charge my credit card a couple hundred bucks just for the privilege of hearing her.

That's a critique. Which I agree with. I can't imagine reading something like this in print – it's too heartfelt about something too small – but online, it is possible.

1. [http://www.ew.com/ew/article/0,,20007164\\_20171835\\_20264813,00.html?xid=rss-feed-tvwatch-%27American+Idol%27+recap%3A+This+is+thriller+night!](http://www.ew.com/ew/article/0,,20007164_20171835_20264813,00.html?xid=rss-feed-tvwatch-%27American+Idol%27+recap%3A+This+is+thriller+night!)

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Andrew Gelman (2009-03-13 20:41:51)

Try reading some old Joe Queenan stuff. His magazine articles (turned into books) have zillions of bits that are much better than this.

### **Oral Health, Heart Disease, and Fermented Foods (2009-03-12 22:24)**

From the abstract of a [1]2007 paper about oral health and heart disease:

The high prevalence of cardiovascular diseases (CVD) and infections of the mouth has led to the hypothesis that these disease entities [are] connected. Oral biofilms contain numerous micro-organisms with more than 700 identified species. . . . These micro-organisms cause dental caries and periodontal disease of which the majority of humans suffer during their life. Oral bacteria are presumed to gain access to the blood circulation and are postulated to trigger systemic reactions by up-regulating a variety of cytokines and inflammatory mediators. Infection and inflammation play a role also in atherogenesis. Furthermore, traces of oral micro-organisms, such as the gram-negative anaerobic bacterium *Porphyromonas gingivalis*, have been detected in atheroma plaques. This bacterium seems to be potentially atherogenic in animal models. Epidemiologic data have shown a statistical association between periodontal disease and coronary heart disease and stroke. In a meta-analysis, the odds ratio increase for CVD in persons with periodontal disease was almost 20 %. Poor oral health also seems to be associated with all-cause mortality.

Emphasis added. As I [2]blogged earlier, during my last trip to the dentist I was told my gums were in great shape, better than the previous visit – and the only intentional change since the previous visit was a huge increase (a factor of 50?) in how much fermented food I eat. So perhaps fermented foods improve oral health. A reason to suspect that fermented foods reduce heart disease is that Eskimos, with very low rates of heart disease, eat lots of fermented food. If both these ideas are true – fermented foods improve gum health and reduce heart disease – it would explain the observed correlation between gum disease and heart disease.

A vast number of people believe that sugar and refined flour are bad for us. In large amounts, sure, because they cause so much dysregulation (e.g., high blood sugar) and in ditto foods cause obesity. But what about average amounts? Here I'm not so sure. The shift to a diet high in sugar and refined flours has usually happened at the same time as a shift away from traditional diets. In other words, the increase in sugar and flour wasn't the only change. I suspect there was usually a great reduction in fermented foods at the same time. Maybe the reduction in fermented foods caused the trouble rather than the increase in sugar and flour. The reduction in fermented foods is almost always ignored - for example, by Weston Price and John Yudkin (author of *Sweet and Dangerous*).

[3]Probiotics and oral health. [4]An experiment about probiotics and oral health.

1. <http://www.ingentaconnect.com/content/ben/vdp/2007/00000004/00000004/art00001?crawler=true>
2. <http://www.blog.sethroberts.net/2009/03/05/more-benefits-of-fermented-foods/>
3. [http://www.ncbi.nlm.nih.gov/pubmed/17714346?ordinalpos=15&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_DefaultReportPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/pubmed/17714346?ordinalpos=15&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum)
4. [http://www.ncbi.nlm.nih.gov/pubmed/17251510?ordinalpos=22&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_DefaultReportPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/pubmed/17251510?ordinalpos=22&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum)

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James (2009-03-12 23:39:46)

ISTR a study linking poor oral health and some problem during pregnancy. Wine and beer are both fermented, do they have any benefit or does the fact the fermentation kills the bacteria negate it?

Riz Din (2009-03-13 06:11:00)

Hi Seth, your comment about shifting diet patterns potentially obscuring the effects of a high sugar/refined carb diet reminds me of the basic *ceteris paribus* assumption in economics, which means 'all other things being equal', or which I define as a 'an impossibly fantastical state of affairs that can never exist in reality'. Going back to the refined sugars/carbs story, I guess this is something that can and has been tested in experiments but in terms of public understanding the risk must surely be skewed toward a potential over emphasis of this factor in negative health outcomes and obesity, simply because of the potential for a spurious correlation.

Justin (2009-03-13 06:42:35)

I saw a potentially relevant article on saliva and bacteria in CNN recently: <http://www.cnn.com/2009/HEALTH/03/03/saliva.spit.survey/index.html?iref=mpstoryview> A quote:

Since people have different eating habits in different places, you might think an American's saliva might look a lot different from, say, a South African's. But a new study published in the journal *Genome Research* finds that bacteria in saliva may not be as related to environment and diet as you might think. In fact, researchers found that the human salivary microbiome – that is, the community of bacteria in saliva – does not vary greatly between different geographic locations. That means your saliva is just as different from your neighbor's as someone's on the other side of the planet. ... Americans in particular have a lot of amylase in their saliva because their diets are full of starch: chips, rice and baked potatoes. But the Pygmies of central Africa, for example, eat mostly game

animals, honey and fruit. They have relatively little amylase in their saliva. Dominy and colleagues found these differences at the genetic level, meaning natural selection has favored large quantities of amylase in populations with starchy diets. But there is also evidence that amylase levels can rise and fall within an individual's lifetime. A study on college students in Ghana, who typically eat a lot of meat at the university, found that students who had grown up eating traditional starchy Ghanaian home-cooked meals had lower levels of amylase after attending the school.

Aaron Blaisdell (2009-03-13 10:58:38)

I wonder if using antiseptic mouthwash (e.g., Listerine TM) reduces the effects of probiotics on oral health.

Riz Din (2009-03-13 11:20:11)

Re the kombucha, there's an interesting article on the drink over at the Economist's sister magazine, Intelligent Life: <http://www.moreintelligentlife.com/story/kombucha-diy-elixir-life>

Peter Andrews (2009-04-09 13:49:18)

Many fermented foods are high in vitamin K2. I wouldn't be surprised if that would effect periodontal health.

Seth blog Blog Archive Oral Health Heart Disease and | Weak Bladder (2009-06-07 18:31:03)

[...] Seth blog Blog Archive Oral Health Heart Disease and Posted by root 5 hours ago (<http://www.blog.sethroberts.net>) Hi seth your comment about shifting diet patterns potentially obscuring the effects of a high seth blog is proudly powered by wordpress Discuss | Bury | News | Seth blog Blog Archive Oral Health Heart Disease and [...]

## Umami Burger (2009-03-13 20:17)



A new restaurant with the excellent name Umami Burger has just opened in Los Angeles. According to [1]The Foodinista, the food is as good as the name:

An attractive space with an attractive clientele. The tightly edited menu consists of 10 burgers, and a few sides including fries and a market salad. But, weâ€™re told at 12:45 pm on a Tuesday afternoon, theyâ€™ve run out of buns. . . . amazing homemade ketchup . . . TheÂ beef patties on all of the above, really flavorful and just plain GOOD. I donâ€™t know how they can make such a great burger and charge so little. . . . Iâ€™m telling you, the burgers are great.

[2]Review by Jonathan Gold.

Thanks to Tucker Max.

1. <http://thefoodinista.wordpress.com/2009/02/17/first-bite-umami-burger/>

2. <http://www.laweekly.com/2009-03-12/eat-drink/the-fifth-element>

Aaron Blaisdell (2009-03-15 20:50:24)

I LOVE burgers. And this place isn't too far from my home, probably a 15-20 min drive. I'll definitely try it in the near future. Seth, if you are going to be in LA in the near future let me know and we can venture there together. It seems like a good place to celebrate our paper going into press.

Patrik (2009-03-17 22:39:33)

If you haven't already, get a Father's Office burger (Santa Monica and Culver City). Very high in umami cuz they use dry-aged beef. That burger will change your life. BTW that is the original burger copied by wannabe gastro-pubs all over Southern California and beyond.

Aaron Blaisdell (2009-03-18 08:30:57)

Man, I LOVE Father's Office for both the burgers and the brew! Umami and fermented beverage at the same joint! I just wish they were open for lunch more days a week (currently only Friday and Saturday I think).

Michael (2009-10-30 15:43:01)

Father's Office burger owns Umami burger. Umami is good and has a nice variety, but none of em are as good as the classic Fathers Office Burger. Plus, they serve beer.

## Bees and Fermented Foods (2009-03-14 11:18)

I became interested in fermented foods less than two months ago but I'm sure I'll be eating plenty of them for the rest of my life. The benefits have been very clear and – not that it matters – the intellectual case is strong. Being new to it, I have wondered how my ideas and habits might evolve.

I got a glimpse of a possible future from a [1]comment on this blog by Heidi. She linked to a page about [2]kombucha and probiotics and bee-keeping and later sent me a link to a [3]discussion of using probiotics to keep bees healthy. A discussant named Tim Hall said this:

I once scratched open my index finger, and somehow caught an MRSA [Methicillin-resistant Staphylococcus aureus] infection so bad I was in the hospital for a week. This incident completely changed my perspective on chemical culture. Now not a day goes by that I don't ingest some form of live cultured food...most of it I culture myself.

I make kefir on a daily basis. Kombucha I have not tried since I avoid caffeine. I also make my own sauerkraut, kimchi, koji, miso and koji pickles (and of course mead).

Hmm. I have never made kefir, but it's not hard to make. I hadn't even heard of [4]koji, which is a kind of fermented rice.

1. <http://www.blog.sethroberts.net/2009/03/05/i-started-eating-more-fermented-food-continued/#comment-277191>

2. <http://www.bwrangler.com/npro.htm>

3. <http://www.beesource.com/forums/showthread.php?s=c28587d8950a277d3b2a4a2124addd2d&t=216617>

4. <http://www.sake-world.com/html/koji.html>

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Tom Moertel (2009-03-15 13:25:41)

I started making kefir about two weeks ago, and I can confirm that it's easy to make. Drop a few tablespoons of kefir "grains" into a clean jar, add a quart of milk, and let it rest at room temperature. The next day, strain out the grains, and you've got a quart of kefir. That's it. I can also tell you that kefir tastes great. Think buttermilk but with a more complex range of bacterial-culture flavors and a hint of fresh-baked bread in the finish. There's also a faint effervescence and, if you hunt for it, a subtle alcohol bite. It's marvelous stuff. If kefir is what "probiotics" taste like, I don't think I'm going to have any trouble getting my recommended daily allowance. ;-)

seth (2009-03-15 16:12:58)

Tom, very interesting. Thanks for the detailed directions. Where did you get the kefir "grains"?

Aaron Blaisdell (2009-03-15 20:48:52)

I've been buying a goat-milk kefir made by Redwood Hill Farm (in California) sold at Whole Foods for the past couple of months. It's great tangy stuff and has done wonders for my GI system, but at \$6.99 per quart I'm ready to start making my own (starting from raw cow's milk). I already have the quart-sized mason jar but need to kefir grains. So, I second Seth's question: "where did you get the kefir grains?". Also, do you seal the jar while it's fermenting or should it be open to the air?

bennetta (2009-03-16 12:03:33)

My roommate, who suffers from moderate to severe stomach ulcers, heart burn, and other digestive problems had a serious kefir habit. It apparently did wonders for his numerous digestive issues. He claimed it coated his stomach, soothing his ulcers and heart burn while taming his overzealous stomach acids. Unfortunately, it also did wonders to his waist line and he stopped after gaining 10 lbs in two weeks from the stuff. Kefir's great, but also very high in calories, usually much higher than yogurt. One rather small serving can have something like 300 calories. Anyway, proceed with caution!

Aaron Blaisdell (2009-03-16 17:16:47)

Interesting. Since switching to eating a lot more milk products, particularly raw milk, raw-milk cheese, kefir, and yogurt, my weight hasn't changed by my waistline has decreased by one belt-notch. Of course, the increase in consumption of these items corresponded with a decrease in the consumption of grains (bread, pasta, rice, chips, etc.) which may explain the drop in waist circumference.

## **Where Does Umami Come From? (2009-03-15 23:24)**

As [1]previously blogged, the evolutionary reason we like umami taste may be so that we'll eat more bacteria-laden food. This makes sense only if bacteria-laden food would have been the main source of umami. Nowadays, you can get umami from MSG. What about before MSG?

The [2]Umami Information Center sent me a free booklet called Umami The World – a better title than Umami: An Introduction. Umami taste is mainly supplied by glutamic acid, a protein building block. My assumption was that glutamic acid is usually a protein breakdown product. Bacteria feed on protein, leaving a pile of bricks – glutamic acid among them. Was this correct? Or could you get umami taste without bacteria?

You can, but in most cases you don't. In Japanese cooking, a potent source of umami is [3]konbu, a type of seaweed. Perhaps because konbu produces so much umami and so little else that umami was discovered by a Japanese scientist. Umami flavorings are used in many other cuisines but the source is usually fermented food. In many Asian countries, umami comes from fermented fish sauce and fermented bean products (e.g., miso, soy sauce). In Chinese cooking, umami comes from a condiment called jiang, which is made from fermented grain, meat, or fish. In Western cuisines,

cured pork is often used as a flavoring agent. "The curing process liberates more of the glutamic acid content of the meat." Curing takes place at room temperature, which means bacteria grow. "Much of the food of ancient Rome was routinely seasoned with a sauce [that] was made from salted fish, fermented and strained. . . The polar Eskimo people traditionally fermented a small portion of their harvest of fish." Tomatoes and shitake mushrooms are non-fermented sources of umami.

A telling comment in the book is that umami usually comes from sauces (e.g., fish sauce) or liquids (e.g., dashi, bouillon). Cooks use sauces and liquids to add what is missing. The presence of umami in so many sauces – as if sauces have been devised or selected to be high in umami – suggests that ordinary foods don't have much umami. A table of glutamate concentration says that parmesan cheese has 1700 mg/100 g whereas several vegetables – tomatoes (246 mg/100 g), green pea (106), onion (51), spinach (48), potato (10) – and meats – beef (10), chicken (22), pork (9) – have much less.

The breakdown process I imagined is spelled out: "During the ripening of cheese, proteins are broken down progressively into smaller polypeptides and individual amino acids. Large increases in free amino acid content also occur during the curing of ham." Surely the same will be true during room temperature aging of any protein source. Beef is routinely aged at room temperature for about a week to give it a "meaty" flavor (not from the umami book but from [4]here).

1. <http://www.blog.sethroberts.net/2009/02/16/pagophagia-and-the-umami-hypothesis/>
2. <http://www.umamiinfo.com/>
3. <http://en.wikipedia.org/wiki/Kombu>
4. <http://www.extension.umn.edu/distribution/nutrition/DJ5968.html>

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Jill (2009-03-16 08:21:48)

The chapter on Escoffier in Jonah Lehrer's *Proust Was a Neuroscientist* also deals with umami, although not with a specific focus on fermented food.

### **Ode to Trader Joe's: Update (2009-03-17 10:47)**

A month ago, as I [1]blogged, my friend [2]Carl Willat posted on YouTube a video he'd made titled "[3]If I Made A Commercial For Trader Joe's". It has now received several hundred thousand views. I asked Carl for an update. He replied:

This video has received a better reaction than anything I've done in quite a long time. Of course part of this is just YouTube, where suddenly you can know what people think of your commercial, through the comments they leave and how many views you get. In the past commercials were just sent out into the ether and you never really heard any firsthand audience reaction. But some of my old commercials are on YouTube and none of them has this many hits. Even [4]Christmas Kisses, which people really seem to like, has maybe 28,000 views in two years. And people aren't posting it to their blogs or Facebook

pages, as far as I know. Â So something is different about this one. Â To a large extent it's trading on the goodwill people already have for Trader Joe's. Â People just love that store. Â And the spot is subversive, which makes it more fun. Â But I think the main difference is the fact that it's heartfelt, in that it reflects my actual feelings about Trader Joe's, both positive and negative, and a lot of people can relate to those feelings. Â You can't do that in a real ad because there's an agency and a client that only want to say positive things about the product, and it has to be part of their overall strategy and so forth, which is fine, and I've certainly done my share of ads like that. But it's hard to get genuine human feeling into traditional advertising, which is a shame, human feeling being the only thing people really care about.

The viewing history:



The spike happened after [5]mention on Boing Boing.

I think Carl's commercial is very important as a glimpse of the future. Long ago, only the powerful could speak to a mass audience – and they couldn't tell the truth, for fear of losing their power. Then cheap books came along. Instantly a much larger group of people could speak to a mass audience – and, having little to lose, they could tell the truth. The truth, being rare, was an advantage. When science was young and many scientists were amateurs – Darwin, Mendel – they could tell the truth. As science became a job, a source of income and status that you could lose, scientists lost the ability to say what they really thought. For example, [6]David Healy lost a job because he told the truth about anti-depressants. Self-experimentation is a way around this problem because, [7]as I've said, no matter how crazy my conclusions I can keep doing it. I don't need a grant so I don't need to worry about offending grant givers.

Because TV commercials are a source of money and status (for ad agencies and marketing execs), they too have great difficulty being truthful. After watching Carl's commercial I watched a [8]Coke commercial that used the same music. The Coke commercial now struck me as horrible – flat and insincere. (Yet expensive.) Given the choice between an official statement – namely, the commercials you see on TV – and a personal one – a commercial like Carl's – everyone will not only prefer to watch the personal statement but will also be more persuaded by it. Win-win. So it is in the self-interest of any company that makes a product that somebody loves to stop making the usual insincere stuff and start finding people who love their products and help them express it.

1. <http://www.blog.sethroberts.net/2009/02/02/if-commercials-told-emotional-truth/>
2. <http://www.carlsfinefilms.com/>
3. <http://www.youtube.com/watch?v=0dB7GDZY3Pk>
4. [http://www.youtube.com/watch?v=EQUK\\_CiuboE](http://www.youtube.com/watch?v=EQUK_CiuboE)
5. <http://boingboing.net/2009/02/11/trader-joes-fan-comm.html>
6. <http://www.pharmapolitics.com/>
7. <http://www.blog.sethroberts.net/2008/12/21/are-you-having-trouble-getting-grants/>
8. <http://www.youtube.com/watch?v=bR7Wj9qnwaM>

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Nathan Myers (2009-03-17 15:35:10)

I discovered why TJ's always drops the products you like best. If something spends much of its time out of stock, sometimes just because it's popular, then to TJ management that counts as poor sales, and they drop it. Sometimes, as with the pomegranate/cherry juice they dropped last year, they sell product X coupled with less popular products Y and Z (e.g. pomegranate/cranberry and pomegranate/blueberry juice). X sells out in a week, and a month later they order more X/Y/Z, but X never sells more than Y. I think TJ doesn't remedy this sort of thing because they have a policy of turning over their selection by 20 % per year, and anything that generates sales disparities makes it easier to choose victims. "Airborne" cold prevention pills, featured in the ad, remain a fraud. TJ's toilet paper rolls, by the way, recently got 7 % narrower without changing price.

Trader Joe's « Rhymes With Cars & Girls (2009-03-17 18:47:15)

[...] seen on Seth Roberts No Comments so far Leave a comment RSS feed for comments on this post. TrackBack URI Leave a comment Click here to cancel reply. Line and paragraph breaks automatic, e-mail address never displayed, HTML allowed: <a href="" title=""> <abbr title=""> <acronym title=""> <b> <blockquote cite=""> <cite> <code> <del datetime=""> <em> <i> <q cite=""> <strike> <strong> [...]

## Uncharitable (2009-03-18 21:26)

[1]Uncharitable: How Restraints on Nonprofits Undermine Their Potential by Dan Pallotta is more a howl than a book. I enjoyed opening it at random, reading a few pages, agreeing with the author that the current situation is idiotic, and then going back to whatever I was doing. It is too repetitive to read sequentially but read in bits it makes a lot of sense. His big point is that nonprofits are forced to operate under weird moralistic constraints that do no one any good – and I'm sure he's right. The main benefit of those moralistic constraints – no one must profit from charity! for example – is that the moralizers feel good. The charities are badly damaged. And the charities are self-destructive, too. After Pallotta's company ran highly successful 3-day Breast Cancer walks for several years, the Avon Products Foundation, which benefited from these walks, decided they could do better themselves. After a year (2002) in which Pallott's company raised \$140 million, Avon themselves ran a similar event for four years (2003-2006) during which they raised about \$60 million/year.

1. <http://www.uncharitable.net/>

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ChristianK (2009-03-19 07:24:23)

Without any constraints Walmart would probably register itself as charity as a way to pay less taxes. You need to write a law in a way to prevent companies like Walmart to register themselves as charity to get the benefits that charities get without providing the good. If an charity doesn't want to operate under the rules for charities it can register as LLC. Now the law makers think that not every organization has to be a LLC and gives organization that don't want to make profits some benefits while structuring the system in a way that the average LLC doesn't get those benefits. Organizations like Walmart pay lawyers to find every loophole in the rules that allow them to maximize the benefits that they get. Do you want to create rules after which government officials decide on a case by case basis whether the company provides enough good to be a charity? Does Google provide enough good? Maybe a charity provides good in a way that government officials don't understand? Maybe they practice political speech contrary to the governments interests? Writing good laws is hard. How would you write the



laws? Would you simply remove the distinction between LLC and nonprofit?

NE1 (2009-03-21 16:04:34)

There are a lot of interesting people out there whose views about Aid I don't quite grok yet. Surely I don't understand non-profits too, but I know I have some pretty strong views about reform for a certain number of them. What is not clear from this post or the first couple on uncharitable.net is the numbers. If Pallot's company raised \$140M in one year, and Avon raised \$40 x 4, then a) is this a worse outcome (I suspect this is an easy yes) and b) how much did Avon get from Pallot's company? My worry is for the deadweight loss of the marketing company (absent any other abstract benefit like publicizing an issue) subtracts from other charities. I'm sure this is a typical concern addressed in the book.

### **The Singapore Borders and the Power of Books (2009-03-19 15:37)**



Around 1996, Borders opened a bookstore in Singapore. With about 50,000 books, it was much larger than any existing bookstore on the island. Freight cost about \$1/book, a big improvement over the shipping costs if you bought a book online. Singapore, of course, is a very crowded place. Space was precious. You couldn't own a lot of books because you didn't have much space. One result was books were sold shrink-wrapped. The Borders books, however, were not shrink-wrapped. A great bookstore is like a great library – but only if the books aren't shrink-wrapped. The first customers in the Singapore Borders would bring a book to the front desk and ask for the shrink-wrapped copy. But there was no shrink-wrapped copy.

Singapore newspapers started editorializing about how to behave in the new bookstore: Careful with the books. Handle them gently. They were trying to acclimate their readers to non-shrink-wrapped books. Why did editorial writers throw their weight behind a new business? Bruce Quinnell, the head of Borders at the time, thinks it is because they thought the new bookstore was such a wonderful thing. Thousands and thousands of books that had never before been on that island. Books are a commercial product but no other commercial product would inspire such a response.

The Singapore Borders was a huge success, at one point leading the entire chain in sales, and as far as I know is still thriving.

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Perry (2009-06-04 22:55:09)

Borders is in trouble. Sold its Singapore operations to some Australian business. Nowadays Singaporeans go Amazon to buy books online or via OpenTrolley Bookstore. <http://www.amazon.com> <http://opentrolley.com.sg>

### **Bill of Attainder (2009-03-19 16:19)**

From [1]the AP:

Denouncing a "squandering of the people's money," lawmakers voted decisively Thursday to impose a 90 percent tax on millions of dollars in employee bonuses paid by troubled insurance giant AIG and other bailed-out companies.

Excuse me? Doesn't the Constitution [2]outlaw this?

1. <http://finance.yahoo.com/news/House-passes-bill-taxing-AIG-apf-14693850.html>

2. [http://en.wikipedia.org/wiki/Bill\\_of\\_attainder](http://en.wikipedia.org/wiki/Bill_of_attainder)

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Ed (2009-03-19 17:03:07)

Seth, the constitution hasn't been worth the parchment it's printed on since 2000.... I feel sorry for all of those poor fools that though the new administration would change that.

David Lynch (2009-03-19 18:27:41)

I saw some discussion of this a few days ago. From the article you linked: "The bill would impose a 90 percent tax on bonuses given to employees with family incomes above \$250,000 at American International Group and other companies that have received at least \$5 billion in government bailout money. It would apply to any such bonuses issued since Dec. 31." So, they're just taxing bonuses at any company who received a certain threshold of bailout money, not just AIG. The supreme court has previously been okay with new taxes created after the financial year in question. A bill of attainder is a bill that declares someone guilty of a crime and punishes them, all without a trial. So a law declaring everyone who received a bonus guilty of fraud and confiscating the money? Unconstitutional. This approach? Fine. It's a silly legal system, but it's the one we've

got. And I can't feel too bad about the outcome. I'm not terribly sympathetic towards investment banking executives whose companies had to be massively bailed out because they ran it into the ground.

tfl: The Flatiron Life » Blog Archive » Bill of Attainder (2009-03-19 18:39:01)  
[...] I was going to write this exact post, but Dr. Seth Roberts beat me to it. [...]

David Lynch (2009-03-19 18:54:49)  
There's a nice bit of [1]analysis by Laurence Tribe, a law professor.

1. [http://politics.theatlantic.com/2009/03/laurence\\_tribe\\_is\\_taxing\\_aig\\_legal.php](http://politics.theatlantic.com/2009/03/laurence_tribe_is_taxing_aig_legal.php)

peter (2009-03-19 21:04:52)  
it's not a bill of attainder; the power to tax is the power to destroy. (altho there may be some other Constitutional provision re taxes that prevents this )

Tom in TX (2009-03-20 05:16:50)  
It is also an ex post facto law. And an interference with contracts. The comments from Laurence Tribe are interesting, and he is a well-known legal scholar. But I think his comments illustrate one of the big problems we have in the USA. The lawyer looks at the Constitution and says, How can I get around this? Very few people think of the Constitution as being something that contains wisdom and guidance. There are some very good reasons that a government should not be allowed to pass a law punishing a person without due process (bill of attainder), or making an act a crime after the fact (ex post facto), or interfering with contracts between individuals. Of course they start by aiming the law at people for whom we don't have a lot of sympathy. When they come after you, the precedent will have already been set.

bennetta (2009-03-20 10:14:00)  
It's legal. The government does this sort of thing all the time with income taxes. For example, in 2008, many of us received "stimulus" checks. Technically, this was a reduction of the amount the government was to collect from our paychecks the year before. This can go either way. Just as the government can refund us part of the money we owed in 2007 in 2008, they can penalize us in 2009 on our 2009 and 2008 taxes, as is the case here.

Joe (2009-03-20 15:22:37)  
Ed's got the basic idea right but the dates wrong. The Constitution's been ignored for much longer than that. 90 years ago people realized that it would take a Constitutional Amendment to ban one intoxicant but just a few years later decided that one was no longer necessary to ban others.

SB (2009-03-20 17:20:40)  
Unrelated: [http://business.theatlantic.com/2009/03/why\\_we\\_should\\_track\\_and\\_measure\\_everything.php](http://business.theatlantic.com/2009/03/why_we_should_track_and_measure_everything.php) You are mentioned in this article.

Tom in TX (2009-03-23 09:57:58)  
The Wall Street Journal agrees: [http://online.wsj.com/article/SB12377646\\_5612908965.html#mod=djemEditorialPage](http://online.wsj.com/article/SB12377646_5612908965.html#mod=djemEditorialPage)

Tom in TX (2009-03-24 13:47:12)  
And Laurence Tribe is having second thoughts: <http://theplumline.whorunsgov.com/economy/law-professor-who-advised-obama-say-s-house-aig-bill-may-be-unconstitutional/>

Michael Van Cise (2009-03-24 20:30:22)  
I certainly defer to whatever professor Tribe has to say on the topic, but as I understand things, the Constitution merely prohibits voiding contracts. (Bills of Attainder actually deal with criminal acts - not civil/financial matters) The contract clause

is closer to what's going on here [http://en.wikipedia.org/wiki/Contract\\_Clause](http://en.wikipedia.org/wiki/Contract_Clause). But, taxing someone on their earnings in no way interferes with the contract itself, so I would argue that what Congress did was entirely constitutional.

The Shangri-La Diet in Japan (2009-03-21 05:49)



To my shock and pleasure, the Japanese translation of The Shangri-La Diet is [1] #2 on Amazon Japan – at least, a few seconds ago. Yesterday a Japanese TV show ran an hour-long segment about it.

Thanks to Gen Taguchi, who not only told me about this but recommended the book to a Japanese publisher and oversaw the translation.

1. [http://www.amazon.co.jp/%E3%82%B7%E3%83%A3%E3%83%B3%E3%82%B0%E3%83%AA%E3%83%A9%E3%83%BB%E3%83%80%E3%82%A4%E3%82%A8%E3%83%83%E3%83%88~%E5%85%A8%E7%B1%B3%E3%83%99%E3%82%B9%E3%83%88%E3%82%BB%E3%83%A9%E3%83%BC~%E3%80%8C%E9%A3%9F%E4%BA%8B%E5%88%B6%E9%99%90%E3%80%8D%E3%81%AA%E3%81%97~%E3%80%8C%E9%81%8B%E5%8B%95%E3%80%8D%E3%81%A%E3%81%97~%E3%81%AE%E9%AD%94%E6%B3%95%E3%81%AE%E3%83%80%E3%82%A4%E3%82%A8%E3%83%83%E3%83%88~%E3%82%BB%E3%82%B9%E3%83%BB%E3%83%AD%E3%83%90%E3%83%BC%E3%83%84/dp/4894513056/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1237638393&sr=8-1](http://www.amazon.co.jp/%E3%82%B7%E3%83%A3%E3%83%B3%E3%82%B0%E3%83%AA%E3%83%A9%E3%83%BB%E3%83%80%E3%82%A4%E3%82%A8%E3%83%83%E3%83%88~%E5%85%A8%E7%B1%B3%E3%83%99%E3%82%B9%E3%83%88%E3%82%BB%E3%83%A9%E3%83%BC~%E3%80%8C%E9%A3%9F%E4%BA%8B%E5%88%B6%E9%99%90%E3%80%8D%E3%81%AA%E3%81%97~%E3%80%8C%E9%81%8B%E5%8B%95%E3%80%8D%E3%81%A%E3%81%97~%E3%81%AE%E9%AD%94%E6%B3%95%E3%81%AE%E3%83%80%E3%82%A4%E3%82%A8%E3%83%83%E3%83%88~%E3%82%BB%E3%82%B9%E3%83%BB%E3%83%AD%E3%83%90%E3%83%BC%E3%83%84/dp/4894513056/ref=sr_1_1?ie=UTF8&s=books&qid=1237638393&sr=8-1)

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Tom in TX (2009-03-21 10:39:58)

The cover looks a lot more enthusiastic than the English edition. 8-) Can someone translate it for us?

Timothy Beneke (2009-03-21 11:34:23)

Cool! And somehow intuitive...

Sheila Buff (2009-03-22 11:49:14)

Hi Seth- Congrats on the Japanese edition! Tom's description of the cover as enthusiastic is perfect. Looks like you'll now be able to say you're an international best-selling author. Sheila

Chris (2009-03-23 02:43:15)

Here's a rough translation of the bigger text...my reading sucks but here's something: New York Times Bestseller! Once a day is even ok! Can be done wherever you are! The Shangri-La Diet A combination of head and heart Seth Roberts (other names) On the insert below: -All the blogs endorse it -No food rules -No need to struggle with it -No rebound! Dessert, dinner, lunch, it's all okay.

## No Way Out (2009-03-21 06:42)



From my obsessions. In an airport restaurant, I noticed the free condiments. Mustard, ketchup, sweet relish: all three sour, complex. We are a [1]nation of ice-chewers.

1. <http://www.blog.sethroberts.net/2009/02/16/pagophagia-and-the-umami-hypothesis/>

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## Bacteria and Learning? (2009-03-22 07:01)

Do bacteria-laden foods improve learning? A [1]recent study:

The ability of dietary manipulation to influence learning and behavior is well recognized and almost exclusively interpreted as direct effects of dietary constituents on the central nervous system. The role of dietary modification on gut bacterial populations and the possibility of such microbial population shifts related to learning and behavior is poorly understood. The purpose of this study was to examine whether shifts in bacterial diversity due to dietary manipulation could be correlated with changes in memory and learning. Five week old male CF1 mice were randomly assigned to receive standard rodent chow (PP diet) or chow containing 50 % [raw] lean ground beef (BD diet) for 3 months. As a measure of memory and learning, both groups were trained and tested on a hole-board open field apparatus. Following behavioral testing, all mice were sacrificed and colonic stool samples collected and analyzed by automated rRNA intergenic spacer analysis (ARISA) and bacterial tag-encoded FLX amplicon pyrosequencing (bTEFAP) approach for microbial diversity. Results demonstrated significantly higher bacterial diversity in the beef supplemented diet group according to ARISA and bTEFAP. Compared to the PP diet, the BD diet fed mice displayed improved working ( $P = 0.0008$ ) and reference memory ( $P < 0.0001$ ). The BD diet fed animals also displayed slower speed ( $P < 0.0001$ ) in seeking food as well as reduced anxiety level in the first day of testing ( $P = 0.0004$ ). In conclusion, we observed a correlation between dietary induced shifts in bacteria diversity and animal behavior that may indicate a role for gut bacterial diversity in memory and learning.

Previous studies had found that changes in diet changed behavior. This article says that changes in diet can produce changes in bacterial diversity and these bacterial changes might have caused the behavior changes.

Eventually I will stop eating lots of fermented food and see what happens. Perhaps [2]my arithmetic scores will get worse.

1. <http://www.ncbi.nlm.nih.gov/pubmed/19135464>

2. <http://www.blog.sethroberts.net/2009/03/07/hey-what-happened-to-my-brain-part-1/>

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Melissa (2009-03-22 09:25:56)

Ugh, maybe it's because they were eating real whole food instead of manmade dried crud.

mc (2009-03-27 16:28:41)

I agree with Melissa, the two groups are too far apart to make a judgement about microbes making you smarter. If one was cooked beef and one was raw beef, okay, maybe - but even then with cooked, you'd get less nutritional density vs. raw. I love it when I can poke holes in a study just by looking at what is probably a summary of the abstract.

## Happiness, SLD-related (2009-03-22 15:06)

This [1]blog entry made me happy. Maybe I will start a blog where I write in Chinese.

1. <http://harujapan.blogspot.com/2009/03/shangri-la.html>

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## Autism and Digestive Problems (2009-03-22 22:36)

A [1]new study in Pediatrics has a brief but useful summary of the evidence linking autism and digestive problems. [2]Here's one study. [3]Here's a review, with this abstract:

Recent publications describing upper gastrointestinal abnormalities and ileocolitis have focused attention on gastrointestinal function and morphology in [autistic] children. High prevalence of histologic abnormalities in the esophagus, stomach, small intestine and colon, and dysfunction of liver conjugation capacity and intestinal permeability were reported. Three surveys conducted in the United States described high prevalence of gastrointestinal symptoms in children with autistic disorder.

There is also evidence that [4]immune dysfunction is associated with autism.

I believe that [5]few people in America eat enough bacteria – in practice, this means not enough fermented food – and that this causes digestive and immune problems. A vast number of people will say, "of course, good food is really important, bad food causes X, Y, and Z" – where X, Y, and Z can be practically anything. The difference between my views and theirs is the prescription: They inevitably think that people should eat more fresh unprocessed food. (Usually fruits and vegetables, for some curious reason.) Fermented food, of course, is not fresh and not unprocessed.

1. <http://pediatrics.aappublications.org/cgi/reprint/123/3/1018>
  2. [http://www.ncbi.nlm.nih.gov/pubmed/12846385?ordinalpos=6&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_DefaultReportPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/pubmed/12846385?ordinalpos=6&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum)
  3. [http://www.ncbi.nlm.nih.gov/pubmed/12352252?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_DiscoveryPanel.Pubmed\\_Discovery\\_RA&linkpos=5&log\\$=relatedreviews&logdbfrom=pubmed](http://www.ncbi.nlm.nih.gov/pubmed/12352252?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DiscoveryPanel.Pubmed_Discovery_RA&linkpos=5&log$=relatedreviews&logdbfrom=pubmed)
  4. [http://www.autismspeaks.org/science/science\\_news/active\\_adaptive\\_immune\\_system.php](http://www.autismspeaks.org/science/science_news/active_adaptive_immune_system.php)
  5. <http://www.blog.sethroberts.net/2009/02/12/the-comforts-of-the-unami-hypothesis/>
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david (2009-03-23 06:04:24)

Yes, but when someone like Pollan talks about processed food, he means some "process" that was invented in the last 50-75 years that usually involves splitting corn into its component parts and turning it into something that will fool your body into thinking it's good for you. Fermented food has been part of humans' diets long enough for some co-evolution to take place.

PJ Eby (2009-03-23 15:44:30)

"Raw" is also not inconsistent with fermented or bacteria laden food. See e.g. [http://en.wikipedia.org/wiki/Aajonus\\_Vonderplanitz](http://en.wikipedia.org/wiki/Aajonus_Vonderplanitz) – a major supporter of the hygiene hypothesis, and whose books include recipes for fermenting raw meat in your refrigerator... as well as many more tasty raw recipes, including many that use unrefrigerated eggs. I eat most of my meats raw (although not fermented) and I don't refrigerate my eggs. (But I don't just get them from the grocery store, either.)

Probiotic Foods (2009-08-13 20:31:12)

What's your view on supplementing the diet with probiotics to acquire the 'good bacteria' needed for efficient digestion?

Notice The IBS Signs And Symptoms And Feel Good Again | Make Money Online , Backlink , Seo, Make Money internet, Adsense , Adwords (2009-08-20 00:44:38)

[...] Comment on Autism and Digestive Problems by Probiotic Foods [...]

What Does Detox In The Addiction Treatment Program In New Mexico Mean? | Ramblings of an Internet Addict (2009-08-24 09:15:56)

[...] Comment on Autism and Digestive Problems by Probiotic Foods [...]

### **Plagiarism in Chinese Academia (2009-03-23 15:09)**

I was glad to read [1]this article in the Christian Science Monitor about an attempt to reduce plagiarism among Chinese professors.

The latest fraud to rock Chinese academia centers on He Haibo, an associate professor of pharmacology at the prestigious Zhejiang University. [Not very prestigious, since I haven't heard of it.] He now admits to copying or making up material he submitted in eight papers to international journals and has been fired, along with the head of his research institute. The affair has drawn particular attention because a world-renowned expert in traditional Chinese medicine, Li Lianda, lent his name as coauthor to one of the fraudulent papers. His tenure will not be renewed when his contract expires soon, the president of Zhejiang University has said.

The Beijing Sport University, one of three sport universities in the world, is near my university. It has a Ph.D. program. To get a Ph.D. you must submit three books! As one of their graduate students told me, no way you can do that without plagiarism. He had noticed that a book by one of his professors was simply a copy of another book.

This paragraph, however, amused me:

Stearns [a Yale professor who taught at Beijing University] says that he and his colleagues at Yale "do not believe letters of recommendation from Chinese professors, for we know that many of them are written by the students themselves," and merely signed by their teachers.

He thinks letters from Berkeley are different? My system for writing letters of recommendation was more nuanced, after I learned that students had great trouble writing these letters. I met with the student and we wrote it together. This had two great advantages: 1. It showed the student in the best possible (i.e., truthful) light. 2. It was easy. Trying to write a good letter by myself was tough.

Thanks to Sheila Buff.



1. <http://www.csmonitor.com/2009/0323/p01s01-woap.html?page=1>

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Confidence (2009-03-23 22:26:15)

Wouldn't that be against Berkeley's honor code? But you're right, I see this happening almost everywhere now, including recommendation letters for MBA programs. I don't think it was that prevalent only a few years back, the practice seems to have taken off recently. Don't most of the top schools go around claiming that the recommendation letter is one of the most important aspects of the application?

### **Truth in Advertising (2009-03-24 09:50)**

Scott Johnson has been doing the Shangri-La Diet for 20 days. He [1]reports:

I hit the number that has been on my Driver's License for the past ten (or more!) years.

He started at 237, has lost 12 pounds.

1. <http://boards.sethroberts.net/index.php?topic=6907.msg82806#msg82806>

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Scott P. johnson (2009-03-25 13:55:30)

Seth, Thanks for the mention. Also, thanks for the research and mental connections that went into this crazy wonderful Shangri-La thing. You Rock! Scott P. Johnson

### **JAMA Editors Go Nuts (2009-03-24 23:28)**

Emory University professor [1]Charles "Disgraced" Nemeroff was, you should remember, a respected psychiatric researcher. One of the most respected. What this says about academic psychiatry – and perhaps all academic medicine – is scary to think about.

Now comes a second episode along these lines: JAMA editors attack Jonathan Leo, a professor at Lincoln Memorial University, for daring to publish an article pointing out an undisclosed conflict of interest – exactly Nemeroff's problem. In the most self-righteous [2]editorial I have ever read, Catherine DeAngelis, JAMA's Editor in Chief, and Phil Fontanarosa, the Deputy Executive Editor,

- say that Leo should not have contacted the New York Times
- "A telephone conversation intended to inform Leo that his actions were inappropriate transformed into an argumentative discussion as Leo continued to refuse to acknowledge any problem with his actions."

- tell Leo to never submit anything to JAMA due to "his apparent lack of confidence in and regard for" the publication
- "We felt an obligation to notify the dean of Leo's institution . . . We sought the dean's assistance in resolving the issue . . . "
- "Our tone in these interactions was strong and emphatic . . . seriously . . . responsibility . . . fair process . . . integrity of science . . . We regret . . . "
- make it more difficult to report future conflicts of interest

To make sure everyone understood this wasn't temporary insanity, Catherine DeAngelis made similar comments to the [3]Wall Street Journal:

â€œThis guy is a nobody and a nothingâ€ she said of Leo. â€œHe is trying to make a name for himself. Please call me about something important.â€ She added that Leo â€œshould be spending time with his students instead of doing this.â€

Yes, nothing is less important than an unreported conflict of interest in JAMA.

The JAMA editorial, published a week after the WSJ article, claims that DeAngelis didn't call Leo "a nobody and a nothing" but since the WSJ has not fixed the supposed error I conclude that the editorial claim of quote fabrication is wrong – not to mention highly implausible.

In their editorial, the JAMA editors write that "a rush to judgment [that is, Leo pointing out the conflict of interest himself rather than deferring to them] . . . rarely sheds light or advances medical discourse." Au contraire. This "rush to judgment" has shed a hugely unflattering light on the very powerful doctors who run JAMA – and thus an hugely unflattering light on a culture in which such people, like Nemeroff, gain great power.

1. [http://www.nytimes.com/2008/10/04/health/policy/04drug.html?\\_r=1&hp=&pagewanted=all](http://www.nytimes.com/2008/10/04/health/policy/04drug.html?_r=1&hp=&pagewanted=all)
2. [http://jama.ama-assn.org/misc/jed90012pap\\_E1\\_E3.pdf](http://jama.ama-assn.org/misc/jed90012pap_E1_E3.pdf)
3. <http://blogs.wsj.com/health/2009/03/13/jama-editor-calls-critic-a-nobody-and-a-nothing/>

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Michele (2009-03-29 23:16:05)

The editor of JAMA should step down after such editorial.

Seth's blog » Blog Archive » JAMA Editors Continue to Display Staggeringly Poor Judgment (2009-07-22 23:03:13)

[...] In an earlier post I called a certain JAMA editorial "the most self-righteous editorial I have ever read." Perhaps the authors reluctantly agreed; the editorial, which used to be here, is gone. Since I quoted from it, you can still see what I was talking about. The BMJ has an article about the disappearance, which includes this: The BMJ sent emails to JAMA's editor, Catherine DeAngelis, and the journal's media relations office asking about the disappearance of the March editorial. The BMJ also asked whether Dr DeAngelis could explain why the new July editorial had toned down the policy outlined in the March editorial. The response from a JAMA spokeswoman was "no comment." [...]

## Organize by Function (2009-03-25 22:33)

Andrew Gelman [1] makes an excellent suggestion:

At the airport they have different terminals for different airlines, with flights leaving from all over the place. Why not have a simpler system, where all the flights to Chicago leave from one section of the airport, all the flights to L.A. leave from another section, and so forth?

Flight as commodity. He adds:

Imagine a bookstore where the books were arranged by publisher and you had to look at the Random House books, then the Knopf books. etc.

A big bookstore in Beijing called Bookstore City is organized like this. On the other hand, the last 20 years of American retail have seen the rise of the opposite of Andrew's suggestion: Whole stores devoted to one brand, such as Apple or Nike or Samsung.

Some Beijing stores (or collections of stores) are hyper-organized-by-function. An electronics mall near me contains dozens of booths, each with a big selection in a narrow niche, such as laptop cleaning products, videocams, computer cables, laptop bags, disk drives, and so on. Whereas an electronics superstore might sell ten different laptop bags, the laptop-bag booth probably had 60 different ones. Not so different from the [2]Beijing Zoo. This is why I love shopping in Beijing. It really is a shopper's paradise.

Sellers want brands so that they can charge more (and perhaps feel better about themselves). Buyers, unless they want to show off, want commodities for low cost and convenience. Nobody brags about what airline they flew. Until airlines start giving away cool t-shirts and tote bags, Andrew's idea makes sense.

1. [http://www.stat.columbia.edu/~cook/movabletype/archives/2009/03/the\\_airport\\_and.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2009/03/the_airport_and.html)

2. <http://www.blog.sethroberts.net/2009/01/10/beijing-shopping-clothes-at-beijing-zoo/>

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Peter (2009-03-26 08:52:41)

There are cases where this is done, such as at the commuter terminal at San Diego's airport, which is nothing but flights to Los Angeles, or the international terminals in some airports. Those make sense because of the different needs of those classes of fliers—international flights need customs areas, duty-free, etc. and commuters need different baggage handling and quick entry/exit. But in the general case, this makes little sense: unlike at a store where I'm deciding between brands, virtually nobody makes a decision about which flight to take while standing at the gate. The three most common things you do are walk to the gate from which your flight leaves, walk from the gate to the outside, and walk between gates in order to transfer between flights. Since flight legs tend to be on the same airline, that makes a lot of sense. Also, there are a lot of potential destinations, and understanding how destinations would map onto the topology of the airport wouldn't exactly be intuitive.

Patrik (2009-03-26 16:40:21)

*Nobody brags about what airline they flew.* Whaaaaat? People do it all the time. I know people who say things like: "I never fly an American airline if I can help it. I only fly X or Z." Especially if they fly business or first-class. A friend of mine was telling me how cool a recent Virgin flight was, and how it cost more than the identical Southwest flight, but was soooo worth it.

James (2009-03-30 02:07:26)

Some clothing stores (maybe just department stores) organise their clothes by brand. I think London's peripheral surface train stations only have trains to the part of the country they're closest to. Rail is commodity though, but everyone I know has opinions on which airlines they prefer for better service.

### What Did Eskimos Eat? (2009-03-26 11:10)

In the early 1900s, the anthropologist/explorer [1]Vilhjalmur Stefansson, after living with Eskimos for a long time, returned to tell Americans what he had learned about nutrition. Eskimos ate meat almost exclusively, he said, which contradicted the usual emphasis, then as now, on diversity and fruits and vegetables. Yet Eskimos were healthy. Eskimo diet became even more fascinating when it was realized they had very low rates of heart disease – much lower than Danes, for example. In the 1970s, two Danish doctors, Bang and Dyerberg, found that Eskimos had large amounts of omega-3 fats in their blood, much more than Danes; that was the beginning of the current interest in omega-3 and the idea that fish and fish oil are "heart-healthy".

As I pointed out [2]earlier, discussions of the Eskimo diet have ignored the fermented food they ate. Here's what Stefansson said [3]in 1935:

I like fermented (therefore slightly acid) whale oil with my fish as well as ever I liked mixed vinegar and olive oil with a salad. . . .

There were several grades of decayed fish. The August catch had been protected by blubber from animals but not from heat and was outright rotten. The September catch was mildly decayed. The October and later catches had been frozen immediately and were fresh. There was less of the August fish than of any other and, for that reason among the rest, it was a delicacy - eaten sometimes as a snack between meals, sometimes as a kind of dessert and always frozen, raw. . . .

[At first, Stefansson didn't want to eat decayed fish.] While it is good form [in America] to eat decayed milk products and decayed game [well, well], it is very bad form to eat decayed fish. . . . If it is almost a mark of social distinction to be able to eat strong cheeses with a straight face and smelly birds with relish, why is it necessarily a low taste to be fond of decaying fish? On that basis of philosophy, though with several qualms, I tried the rotten fish one day, and if memory serves, liked it better than my first taste of Camembert. During the next weeks I became fond of rotten fish.

So Eskimos ate fermented whale oil and a lot of rotten fish. ("A lot" because if they didn't eat a lot of it, Stefansson wouldn't have felt pressure to eat it.) I had no idea that Americans used to eat decayed game.

1. [http://en.wikipedia.org/wiki/Vilhjalmur\\_Stefansson](http://en.wikipedia.org/wiki/Vilhjalmur_Stefansson)

2. <http://www.blog.sethroberts.net/2009/01/26/the-inuit-paradox/>

3. <http://www.biblelife.org/stefansson1.htm>

Aaron Blaisdell (2009-03-26 11:48:50)

About a month ago I began taking 1/2 teaspoon of fermented cod liver oil each day along with my 1/2 teaspoon of butter oil (both from Green Pastures). At first it was a bit yucky and difficult to get down without a chaser (e.g., some strong coffee). But now I don't find the taste unpleasant, nor do I need to immediately cover up the taste in my mouth with a chaser. Actually, I sort of like it! It's a great way to get fat soluble vitamins A and D as well as some omega 3s (DHA and EPA). The butter oil provides some vitamin K2 as well, along with some CLA and other stuff that Weston Price wrote about. I think, by the way, that Weston Price should get the first Nobel Prize in nutrition. He was WAY ahead of his time, and still very underappreciated.

seth (2009-03-26 13:19:38)

A Nobel Prize in nutrition is a great idea.

Tom (2009-03-26 16:44:53)

Wow, that "decayed game" reference is fascinating! The closest thing surviving in the culture is "aged" beef...and we find it much better than the fresh variety. I agree about the Nutrition Nobel, but fear it would go to Ancel Keys and the like. Hell, they'd give it to Suzanne Somers before Weston Price!

Patrik (2009-03-26 16:47:54)

@Seth People still eat "decayed" game. They only call it "aged". <http://www.honest-food.net/blog1/2008/11/27/on-hanging-pheasants/> I also mentioned the dry-aged (perhaps more accurately referred to as dry-decayed) beef used in hamburgers at Father's Office here: <http://www.blog.sethroberts.net/2009/03/13/umami-burger/> #comment-280113 It dovetails right into your umami hypothesis.

Patrik (2009-03-26 16:49:09)

@Aaron Blaisdell I also supplement with fermented cod liver oil and butter oil — but I cannot say I have noticed any sort of difference since taking them.

Tom (2009-03-26 19:10:15)

I thought about getting the Green Pastures butter oil for my Vitamin K, but I couldn't shake the suspicion that I would be buying a bottle of exorbitantly-overpriced ghee. If that's all it is (and I can't imagine why they wouldn't say so, if it's not), I'd rather just get Anchor Butter from NZ and save the \$. (How can Green Pastures get away with selling that stuff without giving any indication of what's in it????) Anyway, I went with Carlson's K-2 capsules.

Melissa (2009-03-27 03:09:15)

We eat fermented herring here in Sweden. It's called surströmming and when my housemates ate it, we had to be very careful to open it outside and dispose of any waste quickly because if we left bones overnight the smell would take days to get rid of. Doesn't taste as bad as it smells though...but it's not exactly a regular part of my diet.

Aaron Blaisdell (2009-03-27 07:10:43)

@ Patrick, I noticed a big improvement in a number of dimensions of my health and well-being when I began making nutritional adjustments about a year ago, but especially 6-months ago when I began taking high-vitamin cod liver oil and butter oil. Seth blogged about it about a month ago. I haven't noticed any change since switching from the regular high-vitamin cod liver oil to the fermented kind, however. Perhaps I'm already at a ceiling effect and I've been taking a lot of fermented dairy (cheese, yogurt, kefir) daily.

Sheila Buff (2009-03-27 12:40:55)

Fermented fish is also a delicacy in Iceland, as in Sweden. I've read that it's also a delicacy in the South Pacific, though I don't recall any specifics—perhaps Samoa? Don't know how widespread fermented fish is across Polynesian culture. The ancient Romans were very fond of something called garum, which was a sauce made from fermented fish guts. Perhaps any culture that eats a lot of seafood will also have fermented fish in its cuisine? Does anyone know if Japanese cuisine uses fermented

fish? How about southeast Asia, leaving aside nam pla? Others? Perhaps isolated islands such as Shetlands, Falklands?

Aaron Blaisdell (2009-03-27 13:36:43)

Sheila, I believe a lot of Asian fish sauces are fermented, as are soy sauces. This of course applies to the traditional sauces, not their poor imitations commercially available in supermarkets.

EAT: Fermented Foods « STRETCH EXERCISE EAT (2009-05-06 14:30:39)

[...] \*Seth Roberts, the UC Berkeley professor has been chronicling his self-experiments with fermented / bacteria rich food on his blog. He reports lots of positive results. Professor Roberts chronicles experiments with fermented meat. There is an interesting post about the Eskimo delicacy of rotten/fermented fish. Also, see this National Geographic article discussing the possibility of our ancient ancestors fermenting mammoth meat in ponds. The article points out that, Daniel Fisher, University of Michigan professor of Ecology and Evolutionary Biology, used this method to preserve and eat a draft horse over an extended period of time. [...]

Luke (2009-05-29 06:01:33)

Just to let you know: Yes. The Japanese do eat fermented (rotten) fish. It was in fact the original form of Sushi if I remember correctly. Fish would be stored with fermented rice for a long time, then eaten. The rice was discarded and not eaten. It is still a delicacy I believe. I also think that in some parts of Malaysia or Thailand they eat fermented fish. Obviously there will be a lot of similarities of diet and crossover from culture to culture in that area. Thinking about it.... I'm sure in Korea they eat some fermented fish as well.

The Umami Hypothesis | Lost Wanderer (2009-07-28 12:44:04)

[...] Seth Roberts has proposed an interesting hypothesis, that humans like complex tastes (umami) because we evolved to like the taste of bacteria in food. He believes that bacteria from natural pickling is harmless, and actually improves our immune function. As reported in Conditioning Research, Roberts points out that explorer Vihjalmur Stefansson reported that Eskimos ate lots of bacteria fermented fish, which he also grew to enjoy. Supporting this theory, Conditioning Research also tells of a University of Michigan paleontologist, Dan Fisher, who butchered a draft horse and cached the meat in a stock pond. The lactobacilli in the water pickled the meat, which it emitted a slightly sour odor that put off scavengers when it floated to the surface. Fisher cut and ate the meat from February until midsummer to prove its safety, showing how hunter gatherers might have once stored their large animal kills. As I blogged in an earlier post, fermented foods also are known to be good sources of vitamin K2. Social bookmarksSubscribeBlinklistBloglinesBlogmarksDiggdel.icio.usFacebookFurlMagnooliaNewsVineRedditStumbleUponTechnorati [...]

gwern (2011-01-15 11:40:16)

> There were several grades of decayed fish. The August catch had been protected by logs from animals but not from heat and was outright rotten. 'by logs' > 'by logs'? But where would Eskimo get wood logs to cover up their fish? Luke: I'm sure they do. If nothing else, the pervasiveness of kimchi probably means there are dishes where one tosses in some fish into the kimchi fermentation jars.

John H (2011-12-06 04:15:50)

There are no trees on the north coast of Alaska, but stray logs from logging operations further south frequently wash up on their beaches, and would have done in 1935. I'm not convinced that "logs" == "logs" though.

## Assorted Links (2009-03-26 18:58)

- [1]salt, Nature's anti-depressant?
- [2]fish oil and speech delay

- [3]caffeine self-experimentation with placebo baseline

Thanks to Marian Lizzi and Saul Sternberg.

1. <http://news.bbc.co.uk/2/hi/health/7938932.stm>
2. <http://www.tigersandstrawberries.com/2009/03/21/weekend-kat-blogging-speech-delay-and-fish-oil-supplements/>
3. <http://www.nytimes.com/2009/03/26/health/nutrition/26best.html?ref=style&pagewanted=all>

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Catherine S. (2009-03-27 21:39:41)

I saw this book review and immediately thought you would be interested. It is about a guy who claims to have cured his alcoholism via self-experimentation with a drug called baclofen. [http://scienceblogs.com/neurotopia/2009/02/the\\_end\\_of\\_an\\_addiction\\_could.php#more](http://scienceblogs.com/neurotopia/2009/02/the_end_of_an_addiction_could.php#more)

seth (2009-03-27 22:21:31)

Thanks, Catherine. I have just been trying to get a copy of that book.

### **Hanging Birds (2009-03-26 19:54)**

In the comments, [1]Patrik links to [2]a fascinating post about "hanging game birds" – that is, hanging them at low temperatures (such as 50 degrees) for several days to improve their flavor. I especially liked this quote from Brillat-Savarin:

The peak is reached when the pheasant begins to decompose; its aroma develops, and mixes with an oil which in order to form must undergo a certain amount of fermentation.

Yet another example of more bacteria, better flavor. I can't find my copy of Brillat-Savarin but in Harold McGee's *On Food and Cooking* I found this (p. 144):

Despite the contribution that aging can make to meat quality, the modern meat industry generally avoids it, since it means tying up its assets in cold storage and losing about 20 % of the meat's weight to evaporation and laborious trimming of the dried, rancid, sometimes moldy surface.

Okay, I am taking those short ribs I bought today out of the freezer. If people knew that well-aged beef is healthier, as I believe, this meat-industry practice might change. There should be a recommended daily allowance of bacteria. A few billion, perhaps? Bacteria count would be included in the nutrition label. Because the numbers would be so large, everyone would learn scientific notation.

1. <http://www.blog.sethroberts.net/2009/03/26/what-did-eskimos-eat/#comment-284202>
2. <http://www.honest-food.net/blog1/2008/11/27/on-hanging-pheasants/>

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Peter (2009-03-26 20:52:34)

Jeffrey Steingarten, who has written a food column for Vogue magazine for years, wrote a column about aged beef that was quite interesting. I believe it's in one of his collections of columns ("The Man Who Ate Everything" or "It Must've Been Something I Ate", not sure which). He ends up aging beef in his refrigerator, and though people around him warn of certain death from bacteria, if I recall correctly he was pretty happy with the results.

KenF (2009-03-26 21:27:26)

Don't eat it if it doesn't have a beard. I heard something like that once about aged beef.

seth (2009-03-26 22:21:14)

KenF, what does "don't eat it if it doesn't have a beard" mean? Peter, thanks for the reference. I will now put those short ribs in my fridge.

Jason Coyen (2009-03-27 07:34:30)

There is a scene in the book/movie Shogun, which centers on hanging a pheasant outside for several days, so it develops a "gamey flavor". Supposedly hung by its tail, until it falls on its own (due to the decomposition). It doesn't end well for the Japanese servant who moves the bird because they don't like the smell. Obviously a fictional account, but the author thought it was a plausible action anyway.

Jason Coyne (2009-03-27 07:50:20)

Here is a magazine article talking about the practice of hanging game birds for a few days outside (or weeks in the winter) [http://www.tpwmagazine.com/archive/2005/nov/ed\\_3/](http://www.tpwmagazine.com/archive/2005/nov/ed_3/)

Caleb (2009-03-27 07:57:31)

I assume the "beard" is mold?

KenF (2009-03-27 10:53:25)

Yeah. I couldn't find a reference online. I think it might have been a radio report I heard. This was a while ago, several years I believe. Anyway, they were talking about some steakhouse and how they aged their meat, and the beard was the mold that grew on the meat that they had to cut off. That is what made it taste good. But it wasn't ready until it had a beard.

Drew (2009-03-27 16:59:21)

Could beef today have different bacteria though (ie greater presence of E. Coli)? I'd be surprised if beef slaughtered by hand in 1900 and beef slaughtered in an industrial facility in 2008 have exactly the same bacterial content. Maybe not true, but something to think about.

Patrik (2009-03-28 19:11:13)

@Drew You are making two comparisons here, not one: 1900 vs. 2008 Hand-slaughtered vs. industrial facility My guess, on a per capita basis, in industrial facilities, there is less e. coli today, than in 1900. Remember, it was Sinclair's "The Jungle" (1906) that prompted much of today's food safety regulation. *According to Sinclair, he originally intended to expose "the inferno of exploitation [of the typical American factory worker at the turn of the 20th Century]," [3] but the reading public instead fixated on food safety as the novel's most pressing issue. In fact, Sinclair bitterly admitted his celebrity rose, "not because the public cared anything about the workers, but simply because the public did not want to eat tubercular beef" [3]. Sinclair's account of workers' falling into rendering tanks and being ground, along with animal parts, into "Durham's Pure Beef Lard", gripped public attention. The morbidity of the working conditions, as well as the exploitation of children and women alike that Sinclair exposed showed the corruption taking place inside the meat packing factories. Foreign sales of American meat fell by*



one-half. In order to calm public outrage and demonstrate the cleanliness of their meat, the major meat packers lobbied the Federal government to pass legislation paying for additional inspection and certification of meat packaged in the United States. [4] Their efforts, coupled with the public outcry, led to the passage of the **Meat Inspection Act and the Pure Food and Drug Act of 1906, which established the Food and Drug Administration.**

## A Shangri-La Diet Skeptic's Log (2009-03-27 09:38)

From the [1]Shangri-La Diet Forums:

I chanced upon the book on sale at Barnes and Noble for \$4.98. I pored over the book with a slice of stratta, one chocolate lava cake, and a large Green Tea Frappuccino. I was smirking as I read it, in disbelief – it sounded ridiculous!! . . . I've been on different diets since 2003. I weighed 137.5 lbs at my heaviest in 2006. The lowest I've been was 126 lb in 4/2004. For New Year 2008 I resolved to take a break from caring about my wt. I wanted to see how big would I actually get if I do nothing - I canceled the GYM (saved \$100/month) and ate all the food I wanted anytime. . . I was happy as a lark and actually shed some weight without even trying. . . My weight settled between 128-130 lb. New Year 2009 came and a coworker asked what diet I was planning to be on. She also informed me of the company's drive, inviting employees to a health challenge: . . . For every pound you lose, Pound For Pound will donate 10¢ to Feeding America . . . A sucker for "causes", I committed to lose 7 lb. I have been procrastinating ever since - it's not that easy to get back on track and start working-out again. I couldn't give up Belgian Chocolates or Nutella Crepes. . . The first thing I do when I wake up is pop a truffle or 4 in my mouth. (isn't that gross?) . . . I do the same at night, before eating my lunch or dinner etc. There's nothing quite like it - the texture of different truffles, the smell, etc., especially after having no food for at least 2 hours. I eat my dessert before my meal. When I read this book, I thought - this can't be true. Lose your appetite without even trying? Let's see... 3/18/2009 I cleaned up my dusty Tanita scale, replaced the batteries & weighed myself. It registered 128.5 lb . . . 3/26/2009 It's not really time to weigh in or measure but yesterday my belt had to be re-adjusted down a notch. Results WT= 123.5 lb Body Measurement of parts with losses (inches): Waist = -.5; Abs = -.5; Hips -.5 ; Under Bra -.5 Total lost = 2 inches. I guess it works. I only have 2 lb more to go for the Pound for Pound Challenge. Have I changed my eating habits? I'd say I'm eating a lot less chocolates (by far). I'm so motivated to lose more wt. I have already shared the news at work, of course. This is by far the easiest diet I've ever been on with the quickest results.

It's like a weight-loss ad come to humorous life.

1. <http://boards.sethroberts.net/index.php?topic=6964.msg82994#msg82994>

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Oleksandr Krulik (2009-03-27 11:12:33)

i just did a quick search and it says that it basically suppresses appetite. it's not even really a diet. i don't like any diets that make you not eat when your body needs you to eat...but hey, you can try it. it says that you'll find out in a day or two if it works for you. if you want to stop eating so much, then just eat healthier, leaner/cleaner. if you eat less of the simple carbs, then your body won't have so many sugar highs/lows and you won't crave food to get that sugar high again.

Tom in TX (2009-03-29 15:12:12)

The Shangri-La Diet is such a strange idea. I wonder who could have thought of such a thing? ;-)

Diet (2009-06-17 23:50:46)

Poor Shangri-La, must have fed up by following such a wide varieties of dieting. Its good to know that one can shed weight without a dieting program from her experience. The aspects of Shangri-La diet is entirely different from other dieting. Isn't it?

Ariann (2009-07-07 17:45:02)

This principle of oil can be found in the 1961 book, "Calories Don't Count" by Dr. Herman Taller. The testimonials found in this book seem to say the same things, so maybe it really works..

### **Scam-Recognition Training (2009-03-27 10:06)**

Which is the real IQAir China?

[1]Here or [2]here?

And which won't be around to honor the "5 years warranty"?

My (unfortunately negative) comments about IQAir filters are [3]here.

1. <http://www.iqair-china.com/>

2. <http://www.iqairchina.com/>

3. <http://www.blog.sethroberts.net/2009/01/30/what-to-do-about-beijing-air/>

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### **Natto Shopping (2009-03-28 05:01)**

After re-reading [1]this post, written before my current fermented-food craze, I decided to see if I could buy natto (fermented soybeans) in Berkeley. At Whole Foods, they didn't know what it was. Nor did they sell it. At Berkeley Bowl, which Saveur magazine recently seemed to say was the best food market in America, they told me it was in Aisle 3. I looked and looked and couldn't find it. Okay, frozen natto is in Aisle 7, I was told. There was a surprisingly large selection, maybe 10 choices. Frozen natto comes in one-serving plastic containers bundled into packages of two or three that look like this:



That's a two-container bundle. One serving is about \$1.

[2]Introduction to natto.

1. <http://www.blog.sethroberts.net/2007/12/21/more-natto-please/>

2. <http://www.jafra.gr.jp/eng/sumi.html>

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Seth's blog » Blog Archive » Natto Shopping (continued) (2009-03-30 18:18:22)

[...] Natto Shopping [...]

Joey Williams (2009-04-20 19:37:01)

Thank you so much for your insightful tip. I tried several time to find Natto at Berkeley Bowl but none turned up. After reading your post I went straight-away and found one with out cornsyrup nor msg.

oslo (2009-04-21 23:50:39)

I'm crazy for natto. As far as I understand it, in the US, all natto imported from Japan is frozen, in those little individual boxes. I never bought it because ecologically it's so lousy, so it always made sense to eat locally available/easily makeable fermented foods- sauerkraut, kombucha, kefir. Natto is tricky to make at home. Then lo and behold the receptionist at my dentist's office told me there is an outfit in western MA who makes it (and miso) and ships mail order. It's the only domestic source I know of. Kendall Foods. Only answers the phone on Mondays (brilliant!) : 413 238 5928.

seth (2009-04-22 05:29:36)

thanks, Oslo, that's good to know. I was surprised to see that natto in Cambridge was a lot cheaper than natto in Berkeley, even though Cambridge is further from Japan. There is someone making natto near Berkeley whom I will soon interview on my blog.

Colleen (2010-02-04 18:07:36)

Hi! From the first time I tasted natto I loved it; which highly amused the owners of the Japanese market where I tried it in a sushi roll. Americans weren't supposed to like it. I bought it there for years and then they went out of business. I haven't been able to find it anywhere in New York...in fact when I ask for it in local Asian and Korean markets they don't even know what it is. Do you have any addresses in the USA where I can order it? Thanks! :D

seth (2010-02-04 18:35:44)

try Japan Traditional Foods: <http://www.gourmet-natto.com/>

Ellen (2011-06-18 20:44:50)

I have not been able to find natto that does not have high fructose corn syrup in it. Even the organic one I bought at the local market had it. Any idea where to order it?

Seth Roberts (2011-06-19 18:45:13)

nice try, spammer. Natto never contains high fructose corn syrup. Correction: sometimes it does.

Maggie (2012-01-23 11:39:55)

Seth, where can I purchase natto by mail or phone? I'm in North Carolina.

Seth Roberts (2012-01-23 11:52:43)

I don't know. I've never done that. Is there a Whole Foods near you? they might have it.

## **Do They Eat Dogs? (2009-03-28 15:08)**

From [1]a post about life in Taiwan:

Donâ€™t they eat dogs and other odd stuff like snakes?

No.Â They donâ€™t eat dogs.

I think a small fraction of restaurants in Beijing serve dog, but I never encountered one and I never saw dog meat for sale. In Seoul, however, they obviously eat dogs. I saw dog meat for sale in a traditional market. The dogs were alive (as many animals are in Asian "wet markets"). I later saw a booklet aimed at visitors to Korea that dismissed dog-eating as some sort of urban legend.

1. <http://www.neatorama.com/2009/03/24/not-in-kansas-anymore/>

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Kevin Miller (2009-03-28 17:55:14)

I'm guessing that you don't read Chinese. There's a big ethnic Korean population in Beijing and many of the Korean restaurants feature dog meat, and quite a few have names that include something like 大狗肉王 [big dog meat king] (see: <http://www.jaxxg.com/images/shiguo.jpg> – don't know if it's Beijing or not. My Chinese friends would tend to eat it in the summer – I think it might be "cold" which most meats are not, but I might have that wrong – and would love to take me to places where I'd have to eat it. I didn't have a problem with it. You probably just have nicer friends than I do. There's also a fascinating movie – <http://www.answers.com/topic/kala-shi-tiao-gou> – about a family's travails with an illegal dog, that ends

up with the dog still not found and the family's son in jail. It then had a page of text that said that they found the dog, but didn't say anything about the son's fate. I'm guessing that that was added after audience previews. Every time I come there are more and more dogs, so I'm guessing that before \*too\* long there will be a categorical shift from "animal" to "pet" for these creatures. But China is a fairly tolerant place, so it may not be too quick or categorical.

Andrew Gelman (2009-03-28 18:32:14)  
Man bites dog, that's news.

seth (2009-03-29 18:33:46)

Thanks, Kevin. I don't read Chinese, you are right. I knew about those restaurants just barely; I didn't know they were all Korean. I went to five or six Korean restaurants in Beijing and had food that was a lot different than any Korean food I ever had before – such as mushrooms wrapped in ham and covered with sweet/sour sauce – but no dog.

Timothy Beneke (2009-03-29 22:59:24)

I was served dog, along with other meat, by my host in Xian in central China; it tasted a bit like beef... And in Shanghai, at a decent restaurant, I was offered snake and turned it down... Staying on the Beijing U campus I kept noticing all these Pekingese dogs that people had for pets, which I initially regarded as curious, until after about 4 days I realized that I was in Peking and it made sense that people would have Pekingese dogs... Duh — maybe it was the jet lag...

Patrik (2009-03-30 17:19:23)

It is pretty clear that they DO eat dogs in Taiwan. Not necessarily a lot, but when you pass a law forbidding it, it tells you something. BTW anyone know if this is a spoof or not? <http://www.puppybeef.com/index.php>

Dave Russell (2009-06-14 23:22:36)

I am a Brit living in Korea. My experience (of 10 months) shows me Koreans do eat dogs. Near my school there are three Restaurants I know of; my neighbours, who I don't like, were having Bosintang (the Korean name for dog soup) at the weekend. Many of my teachers eat it. They also know that the dogs are usually tortured first, before they are killed in order to improve the flavour. This leads me to assume Koreans have, generally a low sense of morality - if not then more people would be trying to stop this. My school also keeps four dogs - or rather a staff member who lives on site, does. It is acceptable, in Korean minds, to keep dogs for food on school ground. Last week, I saw an old man drag a large pointer type dog, along the road, its back legs broken or maimed. Many kids were watching - some were shocked, most were indifferent. As were the Police whom I stopped and to whom, I pointed the man out to. Don't let anybody tell you Korea is a progressive, modern country. Judging by what I have seen, it most definitely is not.

## **How Things Begin (I Got Uggs! update) (2009-03-28 22:40)**

[1]A year ago I wrote how the website [2]I Got Uggs! began. Since then it has done well. I interviewed the proprietor recently.

Since our previous conversation about I Got Uggs! (April 2008), what's happened with the site?

A lot more page views. On average, approximately 6,000 more. I've also increased revenue greatly by adding some revenue producing advertising. When we last spoke I was only using Google AdSense, but now I'm using three more sources.

How did you increase page views?

The first thing I did was change some keywords in my heading. For example, I added the words "Buy UGG

Boots on Sale". By doing that alone I got an increase of almost 2,000 hits overnight. The second thing I did was join three affiliate programs: Amazon Associates, Chitika, and ShareASale. When someone buys a pair of UGG boots from the site, I get between 7 and 10 % commission. Furthermore, I get money from other websites that want to place an advertisement on the site, and I charge them a monthly fee based on the number of page views using a formula I found on the 'net. Now since, I changed the keywords, if you type "uggs" or "ugg boots" into Google, I Got UGGs! is on the first page or number 1.

What were page views before the increases?

I was getting an average of 1,800 page views per day in September and early October. That number went to close to 4,000 page views per day on October 4, and then to averaging 6,000 page views per day beginning October 5.

You get significant income from both I Got Uggs! and [3]I Got Converse!?

I'm getting more from I Got Uggs, but it's going down as the weather gets warmer, but I Got Converse is going up everyday. I Got Uggs is showing some seasonal changes in terms of the income stream, but I'm praying that I Got Converse will eventually pick up the full slack.

You hired an assistant so you would have time to write a book. What does your assistant do? What do you pay him/her? How did you hire him/her?

She currently scans pictures, looks for pictures in the tabloids, and proofreads for me, in addition to other things like going to the post office and make 99 cent latte runs to the Dunkin' Donuts on 8th avenue. More importantly, I'm training her to do the postings for both sites.

I pay her \$10 per hour and she works about ten hours per week. She's actually a Landmark [High School] student [where he teaches]. Despite being a straight A student, she wrote a paper on wanting to be a personal assistant as a career goal. Another teacher told me about her, so I offered her the opportunity to try it out. Thank God, she's awesome and she loves it! She's actually my 5th assistant. The others didn't work out for various reasons.

You still have your teaching job, right?

Yes, I'm still teaching, but I'm looking to do the blogs and writing full-time after this school year ends. At the most, I plan on teaching part-time at a college, but not full-time anymore.

1. <http://www.blog.sethroberts.net/2008/04/04/how-things-begin-i-got-uggs/>

2. <http://www.igotuggs.com/>

3. <http://www.igotconverse.com/>

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bennetta (2009-03-30 09:57:57)

If you are looking to get out of the UC system and/or are looking for a new school to teach at, this may sound odd, but the junior college up here in Santa Rosa might be a pretty good option. It is recognized as one of the top ten junior colleges in the country and pay is allegedly competitive to what you'd see elsewhere in the state. I've known more than one instructor who preferred teaching there over anywhere in the UC or state system. Many of the professors are UC transfers and teach classes that are on par or more difficult than what you'd see at that level. From my experience, many of the classes I took

there were actually better than what I took at UC Davis. It's a good gig if you're just looking to teach a few classes part time.

### **The Nutrition Lesson Hidden in a Bowl of Miso Soup (2009-03-29 18:26)**



Tyler Cowen is the only person I know who talks about the great value of travel. Schools should teach it, he says. I agree. If you've read *The Shangri-La Diet*, you may remember the turning point was a visit to Paris when I inexplicably lost my appetite. You don't know that my belief in fermented food – to be healthy, we need to eat lots of fermented food – also began with foreign travel: A trip to Japan.

When I got back to Berkeley from Beijing a few months ago, I looked around my kitchen: What should I make? I came up blank. Huh? I couldn't understand why I couldn't think of anything. (In Beijing I had never cooked.) The first few days back in Berkeley I made grilled fish. The Aquatic Ape Hypothesis. Then I went to the Fancy Food Show in San Francisco. At a Japanese food booth, including miso soup packets, I suddenly remembered: For my last nine months in Berkeley, after a trip to Japan in January 2008, I'd been eating a lot of miso soup. Every day. Which I'd never done before. Nine months was long enough to block out what I'd cooked before January 2008 yet short enough to be forgotten after three months in China.

Why did I start eating so much miso soup? In a Tokyo supermarket I had noticed they sold a lot of miso paste. Maybe there were ten types for sale. When I got home from Japan, that experience inspired me to buy a tub of miso paste. I'd add one or two tablespoons to a few cups of water, along with vegetables and thinly-sliced meat (plus vinegar and hot sauce). It was so delicious and easy that I started making miso soup every day. I went through five or six tubs of miso.

The miracle was how easy it was – that one ingredient (miso) should so easily produce such a delicious result. No one spice will do that. Garlic alone won't do that. Ginger alone won't do that. One ingredient was so compelling, pulled me so far from my previous cooking that I completely forgot about it after a three-month absence. During

those nine months, while I was eating all that miso soup, I didn't wonder why miso made such a difference. But when I finally thought of the umami hypothesis – we like umami, sour, and complex flavors so that we will eat more bacteria-laden food; bacteria tend to produce those flavors – all of sudden it made sense. Miso was so tasty because it was fermented. It was so tasty because it was so missing.

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Ryan Holiday (2009-03-29 22:12:53)

This is sort of like Taleb's belief that scientists should spend more time going to parties if they want to chance upon new things to research.

Dennis Mangan (2009-03-30 06:26:28)

Seth, I've been following your posts on your belief that eating more fermented food is healthy. It may be, but IMO you're overgeneralizing about bacteria and the immune system. If umami has anything to do with bacteria, what about the repugnance we feel toward feces? Most biologists will tell you that we evolved that repugnance because feces is nearly 2/3 bacteria by weight; it's filled with chemicals produced by microbes that have quite descriptive names, like putrescine. Also, the immune system: is there really any evidence that it needs to be stimulated constantly? The gut's immune system secretes IgA, the purpose of which is to keep bacteria away from the gut lining and out of the body. Overactive immune systems are the source of problems, not health, e.g. autism appears to be a case of that, so does depression, lupus, etc. I've seen some of your commenters mention keeping eggs at room temperature; ordinarily, the inside of an egg should be sterile, so it's hard to see what aging will do, and the outside can contain pathogenic bacteria, like *Salmonella* spp. In short, it doesn't appear to me that you have made a case for your theory. You need to distinguish between pathogenic and beneficial bacteria, that umami has anything to do with bacteria, and you need to show that stimulating the immune system in general is a good thing.

seth (2009-03-30 10:04:06)

Thanks, Dennis. Re feces: the bacteria we need to be afraid of (and avoid) are those that can grow inside us. The bacteria of feces obviously fit that description – thus our repugnance makes perfect sense. The bacteria we don't need to be afraid of are those that can't grow inside us. With few exceptions, the bacteria that grow on plants and dead meat fit this description. Optimized for those conditions, they cannot handle the much different conditions inside the body. Re why stimulating the immune system is a good thing. Lots of studies show that various probiotics improve health. Here are 3 observations that made me see the broad generalization: 1. A woman who started eating yogurt everyday had her overall health greatly improve at the same time. 2. A friend was unable to get rid of a skin infection until he started taking Chinese herbs. 3. The beneficial effect of tapeworms on hay fever and asthma. In each case, introduction of (harmless) foreign substances likely to stimulate the immune system apparently improved its function. The evidence for the hygiene hypothesis is another sort of evidence that supports this point.

Caleb (2009-03-30 10:16:04)

Regarding over reactive immune systems, I've heard it theorized that they're a weak immune systems way of overcompensating. Since it is slow to mobilize and has less chance to fight off infections, it can't afford to take as many risks and responds to more false positives, and does so with greater damage and inflammation. This can contribute to allergies and autoimmune disorders. The sad thing is that since the weak immune system is too slow to respond, most viruses can reproduce to critical mass where they divide faster than the weak immune system can suppress them, so the overreaction is often in vain. A strong immune system on the other hand is confident enough in its ability to quickly kill off real threats before they hit critical mass, so it doesn't need to overreact to every potential threat.



Caroline (2009-03-30 11:12:20)

I have a question about the Shangri-La Diet. I'm taking the sugar water once a day (1 T in a teacup of hot water). Is it ok to exercise right before I take it? As long as I'm drinking sugar water, I figure I can at least multi-task and let it restore my glycogen after a hard workout. Do you foresee any negative effects? Thank you very much!! :)

seth (2009-03-30 11:59:26)

Caroline, yes, okay to exercise before you take it. Caleb, yes, I agree. I think slow response and overresponse go together, which explains why the same treatment could make the immune system (a) better at fighting off ordinary bugs and (b) less likely to overrespond (allergies).

How to detox (2009-03-30 23:58:34)

Your experience of miso is very facinating, but I found the discussion on bacteria even more so. I understand our repugnance towards feces but never understood exactly why - now it all makes sense. I will be shopping for some miso myself later this week - it's something I really want to try now. Kym

anon (2009-03-31 05:10:17)

Before taking sugar water to lose weight, you might want to check with your doctor to see if you're diabetic.

Phuong Le (2009-03-31 21:12:16)

Miso tastes good because it is salty.

Burrue! (2011-03-31 09:02:54)

Great thought! Thanks

### **Natto Shopping (continued) (2009-03-30 18:18)**

I found some natto not made in Japan. It is from [1]Japanese Traditional Foods, in Sebastopol, California. It comes in one-serving containers with tiny shoyu and mustard packets, just like [2]frozen natto. It costs more - 50 % more - than the frozen stuff, to my surprise. Since Japanese Traditional Foods was founded in 2006, and the Japanese natto makers are huge, I suppose it makes sense. It tastes almost the same as frozen natto, although I plan to do side by side comparisons just for fun.

The package had a curious statement:

Natto is a fermented food product, so it is best to consume it as soon as possible.

Huh? I think this is basically false: the fermented bacteria prevent other bacteria from growing. Sure, you can over-ferment but that won't happen soon. Just as you can leave cheese at room temperature for quite a while, nothing bad will happen.

1. <http://www.gourmet-natto.com/default.html>

2. <http://www.blog.sethroberts.net/2009/03/28/natto-shopping/>

BambooLarry (2009-03-30 22:09:53)

Seth, If you want Natto, you can go to Yao-ya san Market, a small Japanese Market in El Cerrito, CA on San Pablo. BambooLarry

Caroline (2009-03-31 03:38:31)

Seth- Thanks for the response! I'm glad, that makes the two hour slot super easy to fit into my schedule! I read the Shangri-La Diet book a couple years ago, and remember the basic stuff. I took oil last time and was very successful. I'm taking the sugar water this time (no opportunity to buy the oil for a couple weeks). I don't have a lot of weight to lose - about 10 pounds. I've never been overweight, but I've gained these 10 extra pounds because of bad eating habits and just wanna nip it in the bud! My question: How much sugar (tablespoons) in how many liters of water would you recommend? I exercise regularly, which curbs my appetite right after, but I'm afraid it might make me hungrier in the long run. How much sugar water would you recommend to be "not hungry - Shangri-La style"? Thank you! P.S. I WISH I had a book to answer my own questions, but I'm in Romania and can't order one...too expensive, not enough money, and it may not even get to me for weeks and weeks. Thank you so very much, again. :)

seth (2009-03-31 07:27:40)

Caroline, you can check out [boards.shangriladiet.com](http://boards.shangriladiet.com) to see details of how the diet is done by various people and with what results.

Patrik (2009-03-31 09:16:18)

*Huh? I think this is basically false: the fermented bacteria prevent other bacteria from growing. Sure, you can overferment but that won't happen soon. Just as you can leave cheese at room temperature for quite a while, nothing bad will happen. You are half-right when you say: the fermented bacteria prevent other bacteria from growing. The bacteria (or micro-organisms/fungi such as yeast) are not fermented – they do the fermenting. Taking wine for example, generally, you kill off everything living in the must via addition of sulfur, after which you add your desired yeast. The yeast then ferment by digesting the sugars in the must thereby generating alcohol, which ironically kills them off. As we used to joke when making wine, in a sense, the yeast are killed by their own shit, which we consume. :) BTW I think you like this article on PREbiotics (not PRObiotics). <http://online.wsj.com/article/SB123846243487972081.html> We've all heard of healthy bacteria called probiotics, commonly found in yogurts and dietary supplements. A new wave of products now include prebiotics, dietary ingredients intended either to help increase levels of good bacteria naturally found in the body, or to be used in combination with probiotics to improve their efficacy. Scientists say prebiotics do increase levels of good bacteria in the gut, and some research has linked their consumption to health benefits. However, I remain skeptical. This appears to be the latest food marketing angle backed by ostensible "scientific" evidence. Although, perhaps the supposed symbiotic relationship between humans and bacteria may be more important than I assume as tangential to this discussion is the hypothesis that we have incorporated bacteria in our DNA via some lateral mechanism. [http://whyfiles.org/shorties/079bact\\_gene/](http://whyfiles.org/shorties/079bact_gene/)*

Patrik (2009-03-31 09:19:40)

*Huh? I think this is basically false: the fermented bacteria prevent other bacteria from growing. Maybe what this is arguing is actually congruent with your hypothesis. Perhaps they mean to say that it is best to consume natto immediately, before the bacteria die (via a mechanism as described above in my wine example) or run out of food, as to reap the supposed benefits of these supposed beneficial bacteria.*

seth (2009-03-31 11:34:46)

Presumably they fermented it the optimal amount. The longer it sits, the further it gets from that ideal state. That is an interpretation that makes sense. In the fridge, the bacteria aren't likely to die.

Chris (2009-04-02 18:22:23)

In Japan, natto is sold refrigerated not frozen and has a sell by date usually of about 5 days from the current date...I wonder if freezing kills bacteria.

seth (2009-04-02 19:02:05)

Chris, I suspect dead bacteria are as almost as helpful as live bacteria, at least for natto. I don't think the immune system can discriminate alive from dead. For other benefits of fermentation perhaps alive are better.

Leah C (2010-01-26 01:40:00)

I just really want to find natto in a recyclable plastic tub. I hate throwing away styrofoam all the time. Back on the East coast I had a friend who knew of a local grower and it came with about three helpings in a plastic tub that could be washed out easily w some hot water.

## 4.4 April

### "Baffling" Link Between Autism and Vinyl Floors (2009-04-01 09:25)

From [1]Scientific American:

Children who live in homes with vinyl floors, which can emit chemicals called [2]phthalates, are more likely to have autism, according to research by Swedish and U.S. scientists published Monday.

The study of Swedish children is among the first to find an apparent connection between an environmental chemical and [3]autism.

The scientists were surprised by their finding, calling it "far from conclusive." Because their research was not designed to focus on autism, they recommend further study of larger numbers of children to see whether the link can be confirmed. . . .

The researchers found four environmental factors associated with autism: vinyl flooring, the mother's [4]smoking, family economic problems and condensation on windows, which indicates poor ventilation.

Here, in a nutshell, are several of the weaknesses with the way epidemiology is currently practiced. I doubt there is anything to this, but who knows? It deserves further investigation. Here's what could have been better:

1. The researchers did dozens of statistical tests but did not correct for the number of tests. This means there will be a high rate of false positives. The researchers appear to not quite understand this. They don't need "further study of larger numbers" of subjects – they simply need studies of different populations. The sample size isn't the problem; the statistical test corrects for that. It is the researchers' failure to correct for number of tests that makes this evidence so weak.

2. They did their dozens of tests on highly correlated variables. This is like buying two of something you only need one of. A big waste. That they measured something as specific as vinyl flooring implies they gave a long questionnaire to their subjects. Perhaps there were 100 questions. Answers to those questions are likely to be highly correlated. Expensive homes tend to be different in several ways from cheaper homes. The presence/absence of vinyl flooring is likely to be correlated with family economic conditions and condensation on windows (more expensive = better ventilation). The researchers could have used factor analysis or principal components analysis to boil down their long questionnaire into a small number of factors – like 4. So instead of doing 100 tests, they could have done 4 much stronger tests. Then, if there was an unexpected correlation, there would be a good reason to take it seriously.

Someone quoted later in the article gets it completely wrong:

Dr. Philip Landrigan, a pediatrician who is director of the Children's Environmental Health Center at Mount Sinai School of Medicine, called the results "intriguing, but in my mind preliminary because they are based on very small numbers."

Nope. Statistical tests correct for sample size. This is like an astronomer saying the sun revolves around the earth. In this article this happens twice.

1. <http://www.sciam.com/article.cfm?id=link-between-autism-and-vinyl>
2. <http://www.sciam.com/blog/60-second-science/post.cfm?id=scientists-urge-epa-to-assess-poten-2008-12-18>
3. <http://www.sciam.com/article.cfm?id=broken-mirrors-a-theory-of-autism>
4. <http://www.sciam.com/topic.cfm?id=smoking>

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Scientists who don't know statistics « BC in OC (2009-04-01 17:13:59)

[...] Scientists who don't know statistics Posted on April 2, 2009 by bryan Seth Roberts catches a fundamental mistake, repeated twice, in a Scientific American article. So neither the researches conducting the studies realized this, nor the article author. [...]

Andrew Gelman (2009-04-01 18:16:34)

It's a bit strange that they'd use a pediatrician as a spokesman about epidemiology. First off, the reporter shouldn't be thinking of a doctor—even the "director of the Children's Environmental Health Center—as an expert on epidemiology. Second, the pediatrician should've known better and referred the reporter to a statistical expert.

seth (2009-04-02 06:47:00)

Dr. Landrigan is an epidemiologist. "Dr. Philip Landrigan has long played an important role in advancing the field of pediatric environmental health—first as an officer in the U.S. Public Health Service, then as an epidemiologist with the Centers for Disease Control and Prevention, senior advisor on children's health to the Environmental Protection Agency and, most recently, director of the Mount Sinai Center for Children's Health and the Environment, which was established in 1998 as the first of eight such national research centers."

Andrew Gelman (2009-04-02 11:49:25)

"Advancing the field of pediatric environmental health" isn't the same as actually doing epidemiology, though. It can't be a good sign that his primary identification is "pediatrician" rather than "epidemiologist."

seth (2009-04-02 14:21:54)

That he was called a "pediatrician" is just a bad mistake by the journalist.

"Figures can lie and liars can figure." | brianfrank.ca (2009-04-04 16:04:23)

[...] For example, um, the alleged link between autism and vaccine— which isn't even correlative but nevertheless generated a vocal social movement. (But with the vaccine ruled out, hey maybe there's a link between autism and vinyl floors...) [...]

â€œBafflingâ€ Link Between Autism and Vinyl Floors via Seth's blog | Murphy Educational Consulting LLC (2009-04-08 12:28:47)

[...] I particularly enjoyed a recent post titled "'Baffling' Link between Autism and Vinyl Floors". In fact I loved it so much that

I sent the link to all of my nerdy statistics loving friends. At first, it seems like an amazing break through... Scientific America writes that: "Children who live in homes with vinyl floors, which can emit chemicals called phthalates, are more likely to have autism, according to research by Swedish and U.S. scientists published Monday. [...]"

## Coconut Oil and Alzheimer's Disease (2009-04-01 17:49)

I [1]recently blogged about the discovery of Dr. Mary Newport, a Florida doctor, that her husband's Alzheimer's got better when he ate coconut oil. Dr. Newport now has [2]a website devoted to the subject.

1. <http://www.blog.sethroberts.net/2008/12/01/self-experimentation-on-someone-else-alzheimers-disease/>
2. <http://www.coconutketones.com/>

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Andrew Gelman (2009-04-01 18:17:34)

Seth: Why are you so quick to believe this and so skeptical of the report (in your previous blog entry) on vinyl flooring?

Confidence (2009-04-01 19:15:04)

Thank you very much for this link. But good point by Dr. Gelman :).

seth (2009-04-02 06:42:39)

In this case the evidence is far better, in three ways. 1. There is substantial outside reason to believe the results. 2. The data come from something like an experiment rather than a survey. 3. The false positive problem isn't present.

Darkhorse (2009-04-03 11:06:20)

My husband, 54, had begun showing troubling signs of MCI about three years ago. An economist and mathematician, his increasing incidences of errors in calculations, and sometimes misunderstanding what others were talking about were definitely not like him at all. I was secretly very worried, and insisted on cognitive testing. Oddly, though, he scored very high in every area, including IQ and cognitive reaction. After showing him your December 2008 post about Steve Newport's results, we agreed to try a judicious regimen of daily coconut oil, starting in January 2009. Within two weeks I could see improvements, and today we both agree that something is very much changed. I can see that his mental acuity is back normal, and he never forgets an appointment. I am very grateful to you for this, and for the link to this new website, which I shall be watching very carefully. Thank you for your always finely crafted, intelligent and thought provoking blog.

seth (2009-04-03 14:02:39)

You're welcome, Darkhorse, that's great! MCI = mild cognitive impairment?

Worried (2009-09-16 19:52:19)

Sure, sure. I've researched the entire Internet for the curative powers of coconut oil for Alzheimer's (my mother suffers it) and NOTHING. How can the entire world be spinning the story of a "fact" about which there's NO EVIDENCE? I'm very glad for Dr. Newport and her husband, but PLEASE TREAT SERIOUS ISSUES SERIOUSLY! We've come a long way (or haven't we?) since the old times of snake oil! So many months later, where is at least ONE MORE CASE of an Alzheimer's patient who has benefitted from coconut? PLEASE!

seth (2009-09-16 20:16:11)

I suggest you contact Dr. Newport about this.

E. Smith (2009-10-16 11:21:38)

Can the coconut oil/MCT oil mixture be put in a cup of coffee, or will the heat destroy its effectiveness?

Rick H (2009-11-29 11:49:00)

Snake oil helped the chinese who were hewing a railroad bed out of the rocky mountains. Dr. Newport is serious about coconut oil-so I am. There is no big money in coconut oil so don't expect the drug companies to get excited. The largest, best test starts with a single anecdote. If you think it wont work for you, you are correct-this is the negative placebo effect. Most medicine needs faith for good results. I tried coconut oil but found diarrhea to be a problem. Any suggestions on Diarrhea from all that oil?

seth (2009-11-29 14:53:10)

Diarrhea and oil: timing matters. I have found that if I take flaxseed oil just before bedtime, diarrhea is much less of a problem than if I take the same amount in the morning.

ladyjanegrey (2010-01-11 12:16:13)

Regarding diarrhea and oil: I have heard that coconut oil should be introduced slowly into one's diet, because it is an anti-fungal, I believe, and likely to cause die-off. Perhaps starting with a small amount and gradually increasing would help. Or, I would imagine that it would be easier on the stomach if taken with something else, such as spread on bread.

Ladybugbritches (2010-02-13 09:20:35)

I say, Give it a try, What have ya got to lose? Your Mind?? My Mom has Alzheimers, I just bought a jar of virgin coconut oil and I plan to give it to her (and my dad, caretaker) for Valentine's day. I hope it helps her.

pam (2010-03-11 08:49:31)

I started this with my father who is well beyond MCI - a combination of smoking and drinking to excess in earlier years, 17 meds for COPD and congestive heart failure, etc. Although he's not the Mensa thinker he was in his 50's, at 89, his is much more alert, happier, and his well-being has been enhanced. If I had known about this earlier, I would have done it years ago. He gets a tablespoon in his cheese grits in the morning, plus another tablespoon in the evening, usually in Tang or in some juice. Yes, it sits on the top, and you have to stir it in, or heat the juice a little. (Yes, and no comments re: cheese grits - at this age, you feed them what they will eat, LOL)

Eneida (2010-04-13 10:38:38)

After Mom learned about Mary Newport 's discovery in a Tampa newspaper article last year, we began the diet for my Dad (age 88) and suffering from vascular dementia . Two weeks after using the Extra Virgin Coconut oil he got up from bed and was back into his normal functions , going to the bathroom by himself and doing much better. After a month my Dad began remembering family members as normal and getting (mentally) more clear. After six months in the coconut oil , MCT and Omega 3 diet my Dad can remember and says his prayers and is more sociable. We do not give him any food containing vegetable oils, mayonaise, margarine, etc ... The main ingredient we use in food preparation is Coconut (coconut milk, coconut oil, MCT oil) also extra virgin olive oil and the Omega 3, three times a day. He hasnt have a set back since he got in this diet and he no longer needs to use diappers. It has been a tremendous brake for Mom who is the main care taker...The doctor has said that my Dad has came back to who he was before. My Dad is hypersensitive to medications so he is mostly on supplements and vitamins. We give him alternative medicine for all his conditions and he is responding real well. Now all the family uses the Coconut diet as a regular diet since it is so healthy...

Luz (2010-04-13 11:32:36)

For those that get diarrhea with Coconut we found that using it with vitamin D supplement helped to balance the problem. My Dad used to get constipated using vitamin D, so now he can use those supplements without any problems. My

father is also allergic to dairy products and doesn't go out as much anymore to expose to sun rays, so Vitamin D supplement is good for him. Also it seems that as we get older the absorption of this vitamin sometimes slows down as well. <http://ods.od.nih.gov/factsheets/vitamind.asp> [http://1stholistic.com/nutrition/hol\\_nutr-toxic-dosages.htm](http://1stholistic.com/nutrition/hol_nutr-toxic-dosages.htm) We do not want to impose this coconut diet to anyone but just offer testimony of the benefits we experienced. Scientific or not, we have been on this diet for about a year now, and Coconut did not seem to hurt anyone in my family, so we continue using it with much faith and hope as we got positive results. My Dad suffered advanced Dementia and he is doing a lot better now. He is back to his family life and normal functions and that is what we care about. Sorry to hear that some people did not get positive results, it is important to follow the diet by also eliminating saturated fats, vegetable oils, margarine and mayonnaise. Also we have used coconut along with MCT oil, Omega 3 or fish to get good results. We are also into organic foods and natural medicine. I have found studies showing the benefits of coconut. Also there are statistics on countries that use coconut and fish in their diets and the low rates of certain diseases. We need to remember that science does not always hold all the answers. I found these web sites hope they can help: <http://www.ncbi.nlm.nih.gov/pubmed/14608053?dopt=Abstract> <http://www.dailynews.lk/2007/06/09/fea06.asp> <http://www.apccsec.org/truth.html> We know how frustrating it could get, best wishes for those who are fighting against Alzheimers and Dementia. Keep the hope ...

Marley (2010-07-06 16:16:25)

I gave my mom some coconut oil I had in my cupboard right after reading Mary Newport's article. Does it matter if it's virgin, or refined coconut oil? I had the refined, for high heat cooking. It has little to no scent or taste. Does the refining process affect the MCTs? The next day, we bought virgin organic at the health food store, thinking that the product should be in its most raw form, but she can't stand the smell, or taste. (Funny thing - she loves coconut!) We began this three days ago, and I do see some mild improvement. Her mood has been good, and she is a bit more fluid in her vocabulary. I am hopeful. Thanks for this blog.

Sylvia (2010-07-10 18:39:49)

I just bought some virgin coconut oil today at Whole Foods. Started mom out with 1 tablespoon in the morning and one on the evening. I also ordered some MCT oil (gold) over the internet. Mom has dementia that has progressed in the last 6 months especially after she had a fall 3 weeks ago. One of her Dr's gave her Aricept awhile ago which made her violently ill so I am all for anything that is natural. I will keep posting here as to her progress to let everyone know.

Bill (2010-08-03 12:16:40)

Word of caution to those who subscribe to the mainstream medicine mantra and dismiss the "anecdotal" and the un-"scientifically proven" theories outside the norm in mainstream medicine - your habits and your beliefs may lead you to an early grave. Why is it that people tout taking Coconut Oil from nature and created by God, not man, as extremely harmful due to some diarrhea or some other minor side effect that might occur - and becoming violently ill or dying from prescription drugs is of little concern? or stacking drug on top of drug on top of drug into an elderly person's daily regimen is acceptable when everyone knows there is no scientific study done on any multi-layered therapy like that where you have a cholesterol med, sleep aid, mental health pill, anxiety pill, 4 different pills for side effects and who knows what else? Come on people - these are human beings who have families and friends and deserve to be treated as such - not filled with pharmaceutical drugs and left to die at whatever pace they might die at. Thanks Seth! Keep up the good work.

Allison Williams Hill (2010-12-01 08:04:29)

I have been living in the Caribbean (BVI) for over 15 years with my husband who has been diagnosed with senile dementia. There are other people in the same situation here as well as with Alzheimer's. I wonder how far they've looked for evidence. I use coconut oil and rotate it with others in cooking (pancakes, eggs) but not stirred in cereal. I'll try this and see if there is any change. We live near a transformer the government swears is not doing any harm. I documented the energy levels. Have taken precautionary measures when I knew its danger and put physical remedies in place. We are in the process of relocating.

ted (2011-06-22 10:36:37)

Where do people think drug company's get drugs from? Guess what! most come from plant sources!

## China and Electric Cars (2009-04-01 22:28)

According to the [1]New York Times,

Chinese leaders have adopted a plan aimed at turning the country into one of the leading producers of hybrid and all-electric vehicles within three years, and making it the world leader in electric cars and buses after that.

Since I live in Beijing, I am glad to hear this. The story omits an important detail. Every day in Beijing, dozens of electric bikes zoom by me as I ride my non-electric bike. There are 30 or 40 models available, average price about \$300. This means when battery makers make car batteries, they will build on a wealth of experience derived from making millions of bike batteries. This isn't China with cheap labor, as Americans usually imagine the situation; this is China with more experienced labor. It isn't obvious that American car makers can ever catch up.

The article continues:

Electric vehicles may do little to clear [China's] smog-darkened sky . . . . China gets three-fourths of its electricity from coal, which produces more soot and more greenhouse gases than other fuels. A report by McKinsey & Company last autumn estimated that replacing a gasoline-powered car with a similar-size electric car in China would reduce greenhouse emissions by only 19 percent. It would reduce urban pollution, however, by shifting the source of smog from car exhaust pipes to power plants, which are often located outside cities.

Please. It is far easier to clean the output of a few hundred power plants than a few hundred million cars.

The United States Department of Energy has its own \$25 billion program to develop electric-powered cars and improve battery technology, and will receive another \$2 billion for battery development as part of the economic stimulus program enacted by Congress.

I think it's too late. If the \$25 billion were used for rebates to encourage electric car buying, as the Chinese government is doing, that might work, but there aren't any decent American-made electric cars to be bought.

In [2]related news, Tsinghua University (above all an engineering school) undergraduates who come to America for graduate school now account for more American-trained Ph.D.'s than any American school. In case you think that American engineers are better trained than Chinese ones.

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1. [http://www.nytimes.com/2009/04/02/business/global/02electric.html?\\_r=1&ref=global-home](http://www.nytimes.com/2009/04/02/business/global/02electric.html?_r=1&ref=global-home)

2. [http://www.sciencemag.org/cgi/content/full/321/5886/185?sa\\_campaign=Email/snt](http://www.sciencemag.org/cgi/content/full/321/5886/185?sa_campaign=Email/snt)



Nadav Manham (2009-04-02 00:26:41)

Seth, Do you have a sense of whether Tsinghua undergraduates who come to America for graduate school tend to stay in America (or wish they could) or return to China to pursue their careers?

Helen (2009-04-02 01:14:20)

As a student major in vehicle making, I think there is a long period before the electric cars in widely use, especially in China.

david (2009-04-02 05:26:30)

> Please. It is far easier to clean the output of a few hundred power plants than a few hundred million cars. Also, plugin-hybrids and electric cars are typically charged over night during off-peak times, so they improve the efficiency of the power plants.

NE1 (2009-04-02 07:15:21)

Your last sentence is a non-sequitur. I might draw from your interesting fact that Tsinghua is big, and maybe that it produces more reliable graduates than other Chinese institutions. If individual elite schools accepted more from Tsinghua than a particular large elite American school, then I would start to reconsider. It's obviously tough to tell though, because of visa stuff.

seth (2009-04-02 09:21:27)

Nadav, I think Chinese students who get Ph.D.'s in America are becoming more likely to return to China (comparing now with 10 years ago, say) because of more opportunities to do research and better business opportunities. NE1, I think elite American grad schools do accept more Tsinghua students than students from any particular elite American school. More Tsinghua students than MIT students, for example. I am trying to say that there is no great difference in the formal education received by the best Chinese engineers and the best American engineers.

## **Fermented Food and Athlete's Foot (2009-04-02 19:52)**

A few weeks ago I went away for a 3-day weekend. It was my first trip away from home since I became enamored of fermented food. I did not plan well and took along only 2 cups of yogurt.

When I got home – and resumed my usual high fermented-food intake – I seemed to have a very mild cold. That was unusual; I almost never get detectable colds. Even more unusual was that I had a small case of athlete's foot. Uh-oh. I planned to put some anti-fungal cream. I forgot, however. The next day, to my surprise, my athlete's foot was almost gone. The following days it cleared up completely.

I had not had athlete's foot for a long time. In the past, however, it did not go away by itself. I had had to use antifungal cream. Now, apparently, my immune system was working much better.

My interpretation is that during that weekend away, my immune function took a sudden dip. Perhaps part of the reason was that I did not sleep as well as usual but I suspect most of the reason was the decrease in my fermented-food intake.

Whatever the reason I got athlete's foot that weekend, the fact that it went away without any special treatment suggests that all that anti-fungal cream in the drugstore implies that many Americans have suboptimal immune function. The [1]Wikipedia entry for athlete's foot says nothing about good immune function as a means of prevention. As if the hundred-odd people who wrote the article had no idea that what happened to me – it went away on its own – could happen. We are in the pre-John-Snow era here. The most basic practical point about athlete's foot – you won't get it if your immune system is working well – isn't widely understood.

If you read Example 5 of my [2]long self-experimentation paper, you will see that I used to get ordinary colds at

an ordinary rate but after I started sleeping much better they stopped. Which points to the same conclusion as the incident I described here: A large fraction of Americans have suboptimal immune function. Some people will say: "Of course!" But they will go on to say, "The average American eats so much junk!" And I think that's wrong. I think the problem is 1. Poor sleep. 2. Too little fermented food. The self-confident nutritionista will never mention either one.

1. [http://en.wikipedia.org/wiki/Athlete%27s\\_foot](http://en.wikipedia.org/wiki/Athlete%27s_foot)

2. <http://repositories.cdlib.org/postprints/117/>

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Gian (2009-04-03 03:23:46)

If your immune system can not withstand 3-day lack of yogurt then the immune system was not optimal to begin with. Suggest cut out flax seeds.

SB (2009-04-03 07:33:51)

I would be very worried if my immune system was so dependent on fermented food intake. Maybe you need to slowly cut back on the amount and frequency going forward.

seth (2009-04-03 08:33:03)

SB, you seem to be saying that your immune system doesn't depend on fermented food intake. How do you know that?

SB (2009-04-03 09:36:44)

I am thinking that frequency and amount of fermented food intake should be random - similar to exercise frequency and intensity as described by Arthur De Vany (Evolutionary Fitness).

seth (2009-04-03 10:54:49)

I see. Thanks for explaining that.

Aaron (2009-04-03 15:10:41)

I would like to make a comment that you may be jumping the gun on a weak immune system and athlete's foot. While my immune system is quick to respond to other illnesses- i have been- in the past- subject to getting fungal problems on my feet. Here is a list of reasons why problems could have occurred: 1: old shoes— fungus has had a chance to gain a foothold. 2: wearing the same sock and shoes all day when you are active. (more sweating- the fungus likes warm areas of low oxygen) —wearing tight shoes or socks would possibly be a problem! 3: have you changed the type of soap you wash with

Aaron (2009-04-03 15:11:44)

noticed that certain soaps that dry my feet out make it more likely for a fungal infection to gain a foothold- so i have to be careful about what products I use. 4: how much do you sweat? I'm positive that people who sweat more have a higher risk of athlete's foot. the question is, would you have this problem if you were barefoot?

Aaron (2009-04-03 15:12:58)

5: immune system dysfunction:

bob (2009-04-03 15:14:49)

As an aside, i have also noticed that my chance of athlete's foot has actually gone up (!!) when I've consumed a lot of fermented products (natto, alcohol, probiotic supplements)

## Ask Google: "Easiest Way to Lose Weight" (2009-04-02 20:01)

If you google "easiest way to lose weight" the first entry is [1]this. The people have spoken.

Thanks to [2]Buttercup.

1. [http://headrush.typepad.com/creating\\_passionate\\_users/2006/05/the\\_strangest\\_e.html](http://headrush.typepad.com/creating_passionate_users/2006/05/the_strangest_e.html)

2. <http://boards.sethroberts.net/index.php?topic=6778.msg78086#msg78086>

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## Human Evolution: The Curious Case of To Have (2009-04-03 14:25)

A year ago, in a Berkeley Starbucks, I met a linguistics professor in town for a conference. I asked him how he thought language began. He dismissed the question: We will never know, he said. Speculations on the question are pseudo-science. [1]Johanna Nichols and I taught a graduate seminar about the evolution of language and I will admit that none of the papers we read were impressive.

All were by linguists and all looked at language and nothing else. If you look more widely at how humans differ from our closest ancestors the question of how language evolved becomes easier. It's one of many changes that pulled in the same direction: the rise of occupational specialization and trading. Language began because it made trading much easier. Language – single words – made it much easier for the two sides of a trade to find each other.

Single words are still used this way. In any business district, you will see single words on signs that advertise what a business has for sale (e.g., "doughnuts"). Long ago, of course, there were no signs: People just said words in the hope of finding someone who wanted what they had or had what they wanted.

This theory implies that possession (who has what?) was the very first topic of conversation. This theory is supported by the fact that the verb to have plays a remarkably central role in English: I have written, I had a good time, I had had a fair amount, I have to reach. You might think to be would be more important, but it isn't. This pattern suggests that to have was one of the very first verbs, maybe the first.

Chinese has no tense markers (I go yesterday, I go today, I go tomorrow) but again possession appears to have been present close to the beginning of the language. Here is how you negate a verb in Chinese:

to have and other "state" verbs: with mei

all other verbs: with bu

[2]The more irregular a verb, the older it is likely to be. (Thanks to Navanit Arakeri for the link.)

[3]Earlier post about the evolution of language.

1. [http://en.wikipedia.org/wiki/Johanna\\_Nichols](http://en.wikipedia.org/wiki/Johanna_Nichols)
2. <http://www.nature.com/nature/journal/v449/n7163/abs/nature06137.html>
3. <http://www.blog.sethroberts.net/2007/09/27/my-theory-of-human-evolution-language/>

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Tom (2009-04-03 17:56:30)

I wonder if trade was the first application...it seems rather advanced. Wouldn't a possible order be: - shriek of danger (alert rest of group) - variations on the above, associated with particular kinds of threats - extensions to add direction to or location of threat then adapting the above for hunting: - particular sounds associated with coordinating attacks by the group ie, wouldn't language evolve to enable the behavior below before trading of goods? <http://www.youtube.com/watch?v=A1WBs74W4ik>

seth (2009-04-03 18:38:45)

Tom, your scenario would apply to hundreds of species. Hundreds of species have alarm vocalizations.

Michael Van Cise (2009-04-04 08:22:18)

Did you hear about Bonnie the Orangutan who spontaneously started whistling? <http://www.npr.org/templates/story/story.php?storyId=100875176> The story suggests that some think this phenomenon may provide some insight into the beginnings of language.

JR Minkel (2009-04-04 14:49:35)

I've wondered when and why written prices came about - e.g., the thing above and behind the counter at McDonald's. I assume it was so customers could be more confident a merchant was charging everybody the same price.

KenF (2009-04-04 19:29:43)

Linguists' abhorrence of this topic is famous and longstanding, to quote wikipedia: [http://en.wikipedia.org/wiki/Origin\\_of\\_language](http://en.wikipedia.org/wiki/Origin_of_language) The question of language origins seemed inaccessible to methodical approaches, and in 1866 the Linguistic Society of Paris famously banned all discussion of the origin of language, deeming it to be an unanswerable problem.

Aaron Blaisdell (2009-04-05 09:08:43)

Seth, I never noticed that "mei" (the correct pin yin spelling of the word, you spelled it as "mai" - it is pronounced as "may") is only used to negate "you" (to have), and all other verbs in Mandarin are negated with "bu". Q: "Ni You, mei you che fan?" = "Have you eaten yet?" (note that "mei you" is pronounced as "mayo" as in "tuna on rye, hold the mayo"). A: "you" = I have. "mei you" = I haven't. Q: "Ni Shi, bu shi da xue lao shi" = "Are you a college professor?". A: "Shi" = I am. "Bu shi" = I am not. It's also interesting that many languages such as French (and other Latin-based languages?) express feelings and states of being with an ownership verb. Such as "I have hunger", "I have 34 years" (instead of I am 34 years old).

seth (2009-04-05 10:16:12)

Thanks for the spelling correction, Aaron. My observation about mei and bu comes from my Chinese textbook. I once called your house and asked for you. "Mei you" said the woman who answered the phone.

Seth's blog » Blog Archive » My Theory of Human Evolution (directory) (2009-04-05 13:42:01)

[...] the curious case of to have to have is different from other verbs, which supports the idea that language was first used to tell who has what [...]

Patrik (2009-04-05 20:10:27)

Literally speaking, the verb "to have/possess" does not exist in Hungarian. One has to use the verb for "to be/to exist" and apply the proper possessive suffix. For example: Van blogom . Translated: I have a blog. Literally translated: It exists/is blog-my.

Aaron Blaisdell (2009-04-06 09:47:18)  
Patrik, How Zen!

Nathan Myers (2009-04-06 15:21:04)

This could be a fun notion to speculate about, but (1) it's not subject to experiment, and (2) it's \_particularly\_ not subject to self-experiment. No one has any sound reason to pay attention to what you say about it, and anyone else caught up in it is the least likely to have anything interesting to say. This is your blog, and you can write about whatever you like, but as it gets less interesting, it gets harder to justify time to read it. I have my own cranks.

seth (2009-04-06 20:10:04)

Nathan, this particular data is tied in with many other data that support my ideas about human evolution, which I've blogged about many times. You seem to be saying because I'm not a linguist "no one has any sound reason to pay attention" but I think you're wrong: I think linguists should be interested in how data outside linguistics – from my many other posts on human evolution – can shed light on how language began. This is the sort of thing that a non-linguist is more likely to do than a linguist.

Nathan Myers (2009-04-07 15:43:11)

That came out more combative than I intended. My contention that nobody has any reason to pay attention to such speculations is *not* because you're not a linguist. Rather, it's simply because nobody – not me, not a linguist, and not you – can have anything useful to say about the origin of human language. It's not subject to any sort of verification. All our historical evidence, including any irregularities in treatment of "to have", is many, many linguistic generations removed from language's origins. There's just been plenty of time for all echoes of the origins to wash away and be replaced by modern substitutions, and for those to wash away and be replaced again. I don't know what extra-linguistic data you mean.

seth (2009-04-07 18:56:11)

Nathan, you can find a directory of the extra-linguistic data here: <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/> "It's not subject to any sort of verification." I think you're overlooking something. There's a principle of inference: If two rare events might have the same cause, they probably do. Lightning doesn't strike twice in one place for different reasons. Humans differ in a dozen different ways from all other species. In other words, ten thousand species, including our closest relatives, are one way; humans are another way. Language is just one example of human exceptionalism. The dozen different ways that humans differ from all other animals, if they might have the same explanation, they probably do have the same explanation. So the explanation for the origin of language should be consistent, if possible, with the explanation of the many other ways humans differ. That's a test.

Nathan Myers (2009-04-07 20:49:15)

I've read some of the pages you linked. Specialization is a very late, perhaps even civilized development. Our own recent ancestors, almost in living memory, spun, wove, and sewed their own clothes. Ā-tzi the Iceman, 5300 years ago, made his own arrows and participated directly in smelting copper, yet roamed the hills like a shepherd. You have to go back to *Homo erectus* – more than a million years – to discover what differences set humanity on its exceptional course, and then somehow distinguish those from others that arose *because* we were different. If *H. erectus* had speech, then speech happened far too long ago to relate to any detail in present human behavior. If speech came later, then it's a downline consequence of human exceptionalism. Anyway, it's absurd to conjecture that a dozen defining differences arose spontaneously at the same time. One or two distinguished us, and the rest are consequences or incidentals. Speech cannot be among the one or two, because the rest (e.g. upright posture) cannot be consequents of it. American libertarians insist that free markets are not an invention, but arise spontaneously as a necessary consequence of natural laws. You're drifting dangerously close to their orbit. Yes, it's interesting that commerce is an example of an activity that can make use of subgrammatical language, but that's no basis for a theory of language origin.

seth (2009-04-08 10:30:53)

"Specialization is a very late, perhaps even civilized development." Hmm. What do you mean by "very late"? And how do you know? I'm not saying that "a dozen defining differences arose spontaneously at the same time." I'm saying, and apparently you agree, that they combine to make a coherent story.

Duncan (2009-04-08 11:15:50)

This reminds me of the language-learning game "Where Are Your Keys?" devised by Evan Gardner. As I understand it, the language learner has to use signing and the objects to hand to get from the teacher how to name things and talk about their ownership and possession (hence the game's name). One of the first challenges is to persuade the teacher to hand over (or swap) something of his. Gardner claims this play makes for very rapid language acquisition, which seems to chime with your theory. "Where Are Your Keys?" sounds fascinating but seems to have only a very few converts. The only information I have about it is from the podcast below: <http://www.mythic-cartography.org/2009/03/04/episode-23-where-are-your-keys-a-n-interview-with-evan-gardner/>

evan gardner (2009-04-25 03:27:06)

Where Are Your Keys? only has a few converts because I have only told a few people about it. It is a game that I made up by watching how the most effective teachers teach. The subject matter is not that important. The important thing is that certain learning/teaching techniques work, so why not use the most effective techniques as much of the time as possible... and why not train the students to use the same techniques on the teacher not only to more effectively "fish" for the target information but to simultaneously show the teacher their (the student's) current level of mastery both in the target subject as well as the teaching methodology. In that way you train fluent students who are at the same time teachers in training. That is the quick answer of Where Are Your Keys? As to the learning of a language... SPEED is the most important uniting concept. 1. Speed to acquire the target information ( a new language), 2. Speed to acquire faster more effective learning tools to exponentially increase the learning itself. If you are going to learn a language then learn it as fast as possible. In order the learning and teaching of languages should proceed in this order... Limit the number of nouns. 10 nouns should teach you any language. (choose your nouns well) Agree on hand signs for each of the nouns. Agree on hand signs for the following words in this order. ( I use American Sign Language (ASL) and Pidgin Signed English (PSE) because you might as well learn two languages at the same time. Give each participant an object... This object or prop from the 10 nouns is now that persons (ownership). I, you, he, she, it, we, you all, they mine, yours, his, hers, its, ours, your alls, theirs want, have, give, take I want your rock. you want my food? you want me give you my food? then you give me your rock. If this is the fastest way to learn an language they why wouldn't it be the foundation, the origin, the "needs gap" solution to all our problems? I want what you have! Small kids begin to practice their understanding of abstract language very early. They hold up and object (usually that is clearly NOT theirs) and ask "MINE?" This question is usually linked to an object that they want or at least like. Origin of language? At least it is the origin of each persons' relationship with language. If you are in a language class of any kind and they do not cover "want, have, give, take" in the first few classes (some languages are harder to deal with than others and need some set up to get to this point) either ask or leave and find someone else who will tell you. Then go back to class and try to talk the teacher out of items that are "HIS" or "HERS" You may have to trade something of "YOURS"

seth (2009-04-25 04:08:04)

Thanks, Evan, that's very interesting. I suppose the game should be called "I Want Your Keys". Animals have a sense of possession. If you try to take a dog's food away from it it will bite you. why the hand signs? where do they come in?

evan gardner (2009-05-12 18:38:04)

The first step of the game could very well be called "I want your keys". But the game is called "where are your keys?" because that simple question is the next step or level in fluency progressing from "what" and "who" and "which" questions to "where" and "when" and "how" questions. A fast fluency level probing question in any language is "Where are your keys?" By the answer I know almost exactly how fluent a person is. The hand signs are important to the speed of language transition. If a student is gesturing "yes" but is voicing "no" then I know two things... First, that the student isn't sure of the correct language. Second, I know that the student means what they are signing and not what is coming out of their mouth. It is a strange

phenomenon but almost 100 % accurate. We call this technique "your lips say no but your body says yes." So watch for the persons body language, not their verbal language... if you know how to read body language (sign language) you will gather more of the true communication and less of the noise.

seth (2009-05-12 19:03:38)

Thanks, Evan. That's brilliant.

Sol (2009-09-12 10:47:11)

very interesting. This topic fascinates me: I love observing how my 2 year old son acquires language and I have noticed that possession for him is of utter importance. Still it was a sad day for me when he learned to say: "mine"...

Sophie Jaworsy (2009-10-30 17:41:41)

I love how your statements are shown. Lovely! Sincerely, Sophie Jaworsky

AppoiGetype (2010-06-28 15:15:57)

For the help please use <http://www.google.com>

### **Nobel-Prize Cluelessness (stomach ulcers) (2009-04-03 17:44)**

Wherein the Nobel Prize is given for discoveries that are misleading. From [1]a New Scientist article about medical self-experimentation:

Junior doctor Barry Marshall was sure the medical establishment was wrong about the cause of stomach ulcers. The received wisdom was that they were caused primarily by lifestyle factors, but Marshall and pathologist Robin Warren were sure that the bacterium *Helicobacter pylori* was to blame.

It turned out that *Helicobacter pylori* was present in half the stomachs in the world – only a tiny fraction of which developed ulcers. So much for causation. Marshall and Warren did not consider that lifestyle factors might cause immune efficiency to go down, leading to increased growth of the bacterium. In a famous example of self-experimentation, Marshall ingested a giant amount of the supposedly dangerous bacterium – but, uh-oh, didn't get an ulcer.

Thanks to JR Minkel.

1. <http://www.newscientist.com/article/dn16735-eight-scientists-who-became-their-own-guinea-pigs.html?page=2>

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Dennis Mangan (2009-04-04 07:07:24)

The article said that he was infected and got "gastritis, which can eventually lead to ulcers." Also, stomach ulcers are treated with antibiotics. It's like saying that *S. aureus* doesn't cause infections because it resides on lots of people's skin and nasal tracts. Doesn't follow. Few bacteria cause outright illness with no other factors involved.

seth (2009-04-04 08:36:10)

Dennis, I'm afraid I don't understand your point. If ulcers are in fact a sign of an immune system working poorly, they would be better treated with treatments that boost the immune system.

Dennis Mangan (2009-04-04 09:20:04)

Seth, originally I had trouble understanding your own point. I understand you to be saying that the real cause of ulcers is a poorly functioning immune system. What I'm trying to say is that it is perfectly reasonable to state that *H. pylori* causes ulcers, just as it is reasonable to state that rhinoviruses cause colds, even though perhaps only people with run-down immune systems get either one.

Todd Hargrove (2009-04-04 09:28:40)

I believe Robert Sapolsky discusses this in his book *Why Zebras Don't get Ulcers*. I believe the conclusion is that *Helicobacter* is a necessary but not sufficient condition to get ulcers. And that Marshall deserved some credit for changing some minds. On a related point, Stephan at Wholehealthsource and Peter at Hyperlipid have each recently discussed the fact that *Helicobacter* and other bacteria in the body may feast and grow on hydrogen - a bacterial byproduct of poor digestion in the gut. For example, see <http://wholehealthsource.blogspot.com/2009/02/sugar-hydrogen-bacteria-and.htm>

seth (2009-04-04 09:50:40)

Dennis, thanks for explaining that. You are right, that is how causation talk often goes. But it is misleading. If 100 % of people were infected with *Helicobacter pylori*, would it still make sense to say the bacterium causes ulcers? Well, no.

JR Minkel (2009-04-04 09:55:20)

Seth, I actually didn't realize how complicated the Marshall story was. Then I started reading this: <http://www.csicop.org/si/2004-11/bacteria.html> Seems like a textbook example of the oversimplification of scientific history.

Dennis Mangan (2009-04-04 13:01:40)

Seth, I hate to belabor this point, but probably the great majority of infectious illnesses have at least something to do with a compromised immune system. For example, zinc supplementation has been shown to dramatically decrease incidence of the flu, because zinc strengthens immunity. But one would not want to say therefore that the influenza virus does not cause the flu. An immune system at 100 % functioning might be able to stop almost any infection, but that doesn't mean that microbes aren't the cause of illnesses. Likewise, only 20 % of lifelong smokers develop lung cancer, probably because their immune systems don't eliminate cancerous cells. Therefore cigarettes don't cause lung cancer? Likewise, many people are carriers of *Staphylococcus aureus*, which causes boils among other things, just as many carry *H. pylori*. No matter how many people don't get boils, *S. aureus* still causes them, just as *H. pylori* causes ulcers. Does anyone besides yourself believe that the Nobel Prize was given to these men by mistake?

JR Minkel (2009-04-04 14:35:12)

It sounds like this debate turns on what we mean by "infection." I think when we use that term it generally means the out of control growth of some microorganism. Same with cancer. We may have pre-cancerous cells sprinkled here and there in our bodies but until they start growing into potentially life-threatening tumors we wouldn't diagnose it as cancer.

seth (2009-04-04 14:57:11)

Dennis, I have never heard anyone else make this point, no. If I simply posted what everyone already knew - or at least agreed with - it wouldn't be a very interesting blog.

Nathan Myers (2009-04-06 15:26:30)

It seems worth noting here that the Spanish Flu that killed millions early in the last century (and which incidentally, started in the midwest U.S., and spread by U.S. military deployment), hit hardest those with the strongest immune systems.

How dangerous is it to use recycled bacon grease for frying fish, meat, etc. on a strict low cholesterol diet? (2009-04-08 21:45:04)

[...] Seth's blog » Blog Archive » Nobel-Prize Cluelessness (stomach ulcers) [...]



Barry Marshall did not give himself an ulcer « A Fistful of Science (2009-04-10 12:10:12)

[...] Seth Roberts goes so far as to say the bacterium is not even the cause of stomach ulcers: Marshall and Warren did not consider that lifestyle factors might cause immune efficiency to go down, leading to increased growth of the bacterium. [...]

Seth's blog » Blog Archive » Does H. Pylori Cause Stomach Ulcers? (2009-09-10 16:34:26)

[...] In a previous post I said that the Nobel Prize to Barry Marshall and Robin Warren — for supposedly showing that H. pylori causes stomach ulcers — was a mistake. Because half the world has the bug in their stomach, and only a tiny fraction of them get ulcers, the true cause of those ulcers lies elsewhere, probably with an impaired immune system. Marshall famously drank a flask full of H. pylori and didn't get an ulcer, yet took this to support his theory. A classic example of self-deception. Recently Lam Shiu-kum, a former dean of medicine at the University of Hong Kong, was convicted of a giant fraud. He siphoning millions of dollars of medical fees into his own pocket: Dr Lam, 66, brought a 39 year association with the university, his alma mater, to an abrupt end in March 2007 when the investigation into billing irregularities began. He is a distinguished gastroenterologist who conducted pioneering research into chemoprevention of stomach cancer through the eradication of *Helicobacter pylori*. His team also conducted the first double blind, controlled study into curing peptic ulcers by H pylori eradication. [...]

Seb (2010-11-20 09:09:26)

Seth: I dont understand your last point, you can watch thieves in every area and that doesnt mean that everyone that works in that area is a thief. For your information the presence of a pathogen is not directly related to the physiological expression of a disease, but if a pathogen is the cause of a disease its absolutely necessary their presence in the body (known as infection), other factors that affect the development of the disease are the pathogenicity (in the H.pylori case the presence or absence of virulent factors that allows the bacteria to be more aggressive with the host, such as CagA, VacA, flagellin, etc) that will depend on the genotype or specific strain that is infecting the host (*Helicobacter* is known for modify its genome sequence very often), and the multiplicity of infection, that means that a sudden rise of the number of bacteria could provoke the symptoms of the disease, but if this amount remains low you could live infected for ever without notice their presence. The most important finding of Warren and Marshall was that *Helicobacter* is the cause of a acute gastritis with a decrease of the gastric pH (that is not normal for a gastritis) and that bacteria could survive in the gastric environment (until that moment was assumed that acid was responsible for destroying every ingested bacteria). I have to say that the host immune status is also very relevant in th development of the gastric ulcers, but even if your immune system is reduced the therapy with antibiotics could erase the symptoms and this could happen only by killing the bacteria, so, ulcers must have a bacterial origin. Unfortunately, with the extensive use of antibiotics and the constant modification of *Helicobacter pylori* genome, the bacteria has become more resistant to the traditional antibiotics, making necessary to use new antibiotics or look for new strategies to attack the bacteria. Sorry if i my message was too long, but i considered necessary to clarify some points that are very important to understand the H. pylori infection and their consequences to the host. Greetings Seb

Seth Roberts (2010-11-20 13:50:32)

Seb, thank you for your comment. I believe that ulcers are due to a poorly-functioning immune system and that it will be much safer and cost-effective to improve immune function (by eating fermented foods) than to search for new drugs that kill h. pylori or new strategies that focus on it. The big correlation is ulcers/bad immune function; the small correlation is ulcers/h. pylori infection.

Seb (2010-11-22 02:22:08)

Seth, in patients with compromised immune system (AIDS for example) H.pylori has bever been a major pathogen, this has risen the hypothesis that a robust immunity could be necessary for the conversion between an asymptomatic and an ulcer phenotype. In some models the presence of anibodies could even result in a enhanced colonization. Try to read "Helicobacter pylori in the 21st century" by Sutton and Mitchell. This bacteria is definitely different from the rest, and thats the main reason why they have been living inside us during so many years. Greetings

bananabender (2011-11-03 05:56:02)

The 1949 Nobel Prize awarded for the use of lobotomies to treat mental illness (despite no real evidence). So the H. pylori theory isn't the first bit of junk science to win a Nobel. I had a stomach ulcer without the presence of H. pylori. Ulcers are unknown in populations that don't eat refined carbohydrates. They also heal very rapidly on very low carbohydrate diets (<20g/day) regardless of the presence of H. pylori.

### **Fermented Good = Antibiotic Bad? (2009-04-05 10:36)**

If our bodies need a constant supply of bacteria-rich food to be healthy, as I have argued here many times, antibiotics – which kill the bacteria we already have – should be bad for us. [1] Maybe so:

A team of researchers at the University of Michigan Medical School gave mice allergies by pretreating the animals with an antibiotic. The experiment provides support to studies hinting at a connection between antibiotic use and asthma. These epidemiological studies show increased rates of asthma wherever antibiotic use is common.

Asthma cases in the United States climbed 75 percent from 1980 to 1994.

So ignored are fermented foods (the easy way to get bacteria-rich foods), that an author of the study does not mention them:

To avoid the role that antibiotics may play in allergy and asthma, Mr. Huffnagle suggests people watch what they eat in the weeks following a course of antibiotics.

Avoid junk food, he said. Earlier studies on rats showed that animals fed a kind of junk-food diet had far different gut flora than animals fed well-balanced meals of rat chow. [This doesn't make his point, since it isn't clear that different = worse.]

He suggests the Mediterranean diet – with lots of fruits, vegetables, whole grains, nuts, beans, seeds, and olive oil, and low to moderate amounts of wine – may be protective of your gut flora. Countries where this heart-healthy diet is consumed also have lower levels of asthma and allergies, he said.

The Mediterranean-diet advice makes more sense than the junk-food advice. But again, we should ask: Have we properly described "the Mediterranean diet"? That is, what people in "countries where this heart-healthy diet is consumed" actually eat? As with [2] the Inuit Paradox, I suspect the fermented foods they eat, such as yogurt, are ignored. If high consumption of fermented foods does reduce asthma and allergies then asthma and allergies should be low in Japan because of miso and natto.

Thanks to Oskar Pearson.

1. [http://www.redorbit.com/news/science/113755/michigan\\_study\\_shows\\_use\\_of\\_antibiotics\\_may\\_be\\_factor\\_in/](http://www.redorbit.com/news/science/113755/michigan_study_shows_use_of_antibiotics_may_be_factor_in/)

2. <http://www.blog.sethroberts.net/2009/01/26/the-inuit-paradox/>

MasterGrape (2009-04-05 12:54:39)

This isn't strictly related to the post, but I consume ridiculous amounts of wine and have felt much healthier since I started doing that. I grow the grapes and make the wine myself so I know it's very natural. My dad drinks a lot of this wine too. He has not gotten a noticeable cold since we started drinking our own wine. I have had less allergy problems and I have only gotten two colds in the past four years, both on occasions when I was traveling (and didn't have access to my wine). I think this is probably coincidence or a placebo or willful ignorance or something. But I thought I'd share. I should probably mention that my mom also drinks a reasonable amount of the wine, but she is still constantly sick.

seth (2009-04-05 13:09:23)

That's closely connected! I don't think anyone expects wine to prevent colds so I don't see how it could be a placebo effect. As for your mom being sick, I'd bet she drinks a lot less wine than you and your father. I think wine is a good source of bacteria but not a great one.

Patrik (2009-04-05 20:03:41)

@seth What makes you think that wine has any bacteria? As I noted here: <http://www.blog.sethroberts.net/2009/03/30/natto-shopping-continued/> #comment-286176 *Taking wine for example, generally, you kill off everything living in the must via addition of sulfur, after which you add your desired yeast. The yeast then ferment by digesting the sugars in the must thereby generating alcohol, which ironically kills them off. As we used to joke when making wine, in a sense, the yeast are killed by their own shit, which we consume. :)*

seth (2009-04-05 21:20:30)

Patrik, wine has lots of dead bacteria. I don't think the immune system cares if the bacteria are alive or dead, so long as they are whole.

MasterGrape (2009-04-05 22:57:25)

Additionally, some wines are made with natural yeasts (although most of what I drink has yeast added). I also use very minimal levels of sulfites. The yeasts I do add tend to just beat the crap out of the naturally occurring fermenting agents. There's a certain point where one yeast population will explode and decimate competing yeasts. And then yes, they choke themselves out. But a small amount of bacteria are still around and kicking which is one way wine can go bad. I think that one of the reasons to complete a malolactic fermentation (and also one reason to fine and filter) is to prevent the few remaining bacteria from starting up again after bottling. I'm under the impression that wine that goes vinegary is almost always the result of bacteria coming back from the brink and producing volatile acids as a byproduct. But I'm really fuzzy on a lot of the science. And it's interesting that dead bacteria might protect gut flora as well or better than live bacteria. Like an inoculation?

seth (2009-04-05 23:43:49)

somebody did a study where yogurt with dead bacteria was just as helpful as yogurt with live bacteria.

Ashish (2009-04-06 08:17:49)

Four weeks into my Latin American backpacking trip, I've enjoyed perfect digestive health, even while sampling all manner of street food. That's got to be some kind of record - it definitely is a record for me. And I attribute it to the (Trader Joe's brand) probiotic-acidophilus pills I started taking just a few weeks before departing the US, upon the advice of this blog. Thanks, Seth!

Alex (2009-04-06 09:07:05)

My 5 year-old son has had mild to moderate asthma and eczema since he was an infant. The asthma presents as a night-time cough. We completely eliminated both the asthma and eczema symptoms by giving him a daily probiotic drink. Our pediatrician dismissed this by saying he had likely "grown out of it." However, whenever he has taken a course of antibiotics, the symptoms immediately reappear. I have always been curious if his condition was precipitated by the I.V. antibiotics his mother had to take late in her pregnancy with him. This study [http://ajrcm.atsjournals.org/cgi/content/abstract/166/6/827?ijkey=d8be8904020279b8ebff11e0e6e8bce2a9e39cdd&keytype=tf\\_ipsecsha](http://ajrcm.atsjournals.org/cgi/content/abstract/166/6/827?ijkey=d8be8904020279b8ebff11e0e6e8bce2a9e39cdd&keytype=tf_ipsecsha) suggests there is a link.

Seth's blog » Blog Archive » Scary Effect of Food Irradiation (2009-04-06 12:12:21)  
[...] Fermented Good = Antibiotic Bad? [...]

Patrik (2009-04-06 13:40:43)

@seth I definitely enjoy your intellectual curiosity - you have a tendency to be the proverbial bull in the china shop, which is great. However, I think you need to balance, or perhaps, "tune" your hypotheses a bit as you often seem to ignore the underlying mechanisms necessary for your hypotheses to make sense. That said, Semmelweis didn't know the mechanism (germ theory) for his groundbreaking discovery and perhaps, in your case, pondering the mechanism (how bacteria interact with your immune system) limits intellectual creativity and problem-solving. Interesting. I need to ponder this some more. *Patrik, wine has lots of dead bacteria.* I don't think it does have "lots" of "whole" dead bacteria. My experience and intuition tell me it has very little, since after destroying all life in the must via sulfur and then having the yeast produce alcohol (intentionally) makes for a very harsh environment for bacteria. My guess is that the alcohol physically denatures bacteria ergo why alcohol is used as an antiseptic. BTW Cochrane and Harpending of "10,000 year explosion" posit that we have evolved to drink beer b/c of its bacteria destroying properties. (An excellent book, you should get a copy ASAP, they generate thousands of interesting ideas and hypotheses directly opposed to the conventional anthropological "wisdom". Seth, you of all people, need to read this book.) *I don't think the immune system cares if the bacteria are alive or dead, so long as they are whole.* No way. Which is more disgusting/malodorous fresh dog shit or dried dog shit?

Patrik (2009-04-06 14:05:07)

If we assume that fermented foods are beneficial to our health, my shoot-from-the-hip guess is not that they provide more bacteria (which is for some unknown reason is desirable according to Seth's hypothesis) than non-fermented, but that they contain less bacteria. And not only do they contain less, my guess is that the benefits, if any, stem from mechanisms such as (<http://www.blog.sethroberts.net/2009/01/26/the-inuit-paradox/> #comment-264706): 1. Pre-digestion of food 2. Elimination of anti-nutrients and toxins such as phytic acid 3. Lower pH of certain foods making minerals more bioavailable 4. Probably most important: Provides Vitamin K2 (this is a very interesting post and addresses natto and foie gras <http://wholehealthsource.blogspot.com/2008/06/vitamin-k2-menatetrenone-mk-4.html>) Interesting post on fermenting rice: <http://wholehealthsource.blogspot.com/2009/04/new-way-to-soak-brown-rice.html> In the 2008 paper "Effects of soaking, germination and fermentation on phytic acid, total and in vitro soluble zinc in brown rice", Dr. Robert J. Hamer's group found that soaking alone didn't have much of an effect on phytic acid in brown rice. However, fermentation was highly effective at degrading it. What I didn't realize the first time I read the paper is that they fermented intact brown rice rather than grinding it. This wasn't clear from the description in the methods section but I confirmed it by e-mail with the lead author Dr. Jianfen Liang. The method they used is very simple: 1. Soak brown rice in dechlorinated water for 24 hours at room temperature without changing the water. Reserve 10 % of the soaking liquid (should keep for a long time in the fridge). Discard the rest of the soaking liquid; cook the rice in fresh water. 2. The next time you make brown rice, use the same procedure as above, but add the soaking liquid you reserved from the last batch to the rest of the soaking water. 3. Repeat the cycle. The process will gradually improve until 96 % or more of the phytic acid is degraded at 24 hours. This process probably depends on two factors: fermentation acidifies the soaking medium, which activates the phytase (phytic acid-degrading enzyme) already present in the rice; and it also cultivates microorganisms that produce their own phytase. I would guess the latter factor is the more important one, because brown rice doesn't contain much phytase.

Steve Parker, M.D. (2009-04-06 19:00:10)

Alex, the Mediterranean diet is associated with improved control of asthma. For details, see my healthy lifestyle blog post: <http://advancedmediterraneandiet.com/blog/?p=59> Dr. Roberts, most iterations of the traditional Mediterranean diet do mention yogurt, a fermented food. The leading proponent of the Mediterranean diet in the Western world is Oldways Preservation Trust. Here's their version of the Mediterranean diet: [http://oldwayspt.org/med\\_pyramid.html](http://oldwayspt.org/med_pyramid.html) -Steve

Chris (2009-04-09 01:44:49)

Japan actually has very high allergy rates and people do go very far to try to combat them. Around this time of year, you'll see a good percentage of people walking around wearing surgical masks to try to fight against pollen allergies. Incidentally, the popu-

lar press/stores recommend eating lots of yogurt during this time of year and plenty of new yogurt brands get launched during allergy season. Natto comes up occasionally but I've never seen miso mentioned. See: <http://whatjapanthinks.com/tag/hay-fever/> and although it's in Japanese you can see an amazing writeup in pictures of how well different recommended remedies act on allergens: <http://d.hatena.ne.jp/fromdusktildawn/20090406/p1> The Japanese also love cleanliness (think bidet toilets) so that could still satisfy your hypothesis but typical levels of dietary natto/miso aren't enough.

Patrik (2009-04-09 17:30:05)

*Incidentally, the popular press/stores recommend eating lots of yogurt during this time of year and plenty of new yogurt brands get launched during allergy season.* Seems odd and probably ill-advised seeing as Asians in general lack the genetic capacity to metabolize lactose as adults.

hotoynoodle (2009-05-02 09:44:16)

actually, most of the lactose is consumed in the fermentation process. those who suffer from intolerance generally can eat yogurt with no ill effects.

### **Scary Effect of Food Irradiation (2009-04-06 12:12)**

Continuing the theme that wiping out bacteria – as [1]antibiotics do – might be a bad thing, here is a [2]mysterious development:

The new study arose from a mysterious affliction of pregnant cats. A company testing the effects on growth and development in cats using diets that had been irradiated reported that some cats developed severe neurological dysfunction, including movement disorders, vision loss and paralysis. Taken off the diet, the cats recovered slowly, but eventually all lost functions were restored.

"After being on the diet for three to four months, the pregnant cats started to develop progressive neurological disease," says Duncan, a professor of medical sciences at the UW-Madison School of Veterinary Medicine and an authority on demyelinating diseases. "Cats put back on a normal diet recovered. It's a very puzzling demyelinating disease."

Do Americans have [3]bacteriophobia? I believe we need to eat plenty of bacteria-rich food for best health (the [4]umami hypothesis). If so, then irradiating food is like taking all the vitamins out of it. Of course, food irradiation is big business. From [5]a list of FAQs:

#### **4. Does eating irradiated food present long-term health risks?**

No. Federal government and other scientists reviewed several hundred studies on the effects of food irradiation before reaching conclusions about the general safety of the treatment. In order to make recommendations specifically about poultry irradiation, U.S. Food and Drug Administration scientists reviewed findings from additional relevant studies.

Independent scientific committees in Denmark, Sweden, United Kingdom and Canada also have reaffirmed the safety of food irradiation. In addition, food irradiation has received official international endorsement from the World Health Organizations and the International Atomic Energy Agency.

The International Atomic Energy Agency. It's an interesting methodological question: Is Diet X (irradiated food) "safe" because it is no worse than Diet Y (ordinary food)? What if Diet Y isn't safe?

Duncan, the researcher quoted above, said this:

"We think it is extremely unlikely that [irradiated food] could become a human health problem," Duncan explains. "We think [what happened to the cats] is species specific."

Hmm. If you don't understand what causes the effect, how can you make strong claims about it? I think food with too-few bacteria is already a human health problem.

Thanks to Peter Spero.

1. <http://www.blog.sethroberts.net/2009/04/05/fermented-good-antibiotic-bad/>
2. [http://www.eurekalert.org/pub\\_releases/2009-03/uow-soc032709.php](http://www.eurekalert.org/pub_releases/2009-03/uow-soc032709.php)
3. <http://www.inteldaily.com/?c=174&a=2021>
4. <http://www.blog.sethroberts.net/2009/02/12/the-comforts-of-the-unami-hypothesis/>
5. <http://www.physics.isu.edu/radinf/food.htm>

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Nathan Myers (2009-04-06 19:32:46)

No amount of testing can demonstrate that irradiation is safe in general. If it could be demonstrated for one particular foodstuff (say, kiwi fruit) that wouldn't tell you anything about papayas or beef jerky, or even about kiwi grown with different pesticides. If irradiated food is killing cats, that's an enormous problem, \_particularly \_ if the problem is neurological. Psychoactive drugs are routinely tested in cats because cat brains respond to chemicals more like ours than rats' do.

Cat Chic (2009-04-08 07:35:27)

Wow. This is scary stuff. This is why I only eat organic type food when possible. Food today in general has to be about the worst at any time period. If it is killing cats, amazing. What is it doing to us?

### **Shangri-La Diet on Good Morning America (2009-04-06 22:58)**

[1]Karina Smirnoff, a world-champion dancer on Dancing With the Stars, told Us Weekly that she controls her weight by "taking a tablespoon of olive oil on an empty stomach," which is her mom's advice. "On an empty stomach" - I wish I'd thought of that way of putting the between-meal requirement. Good Morning America mentions it [2]here - quick, go to the "keeping bodies ballroom ready" segment, which will only be available for a few days.

SLD hasn't been translated into Russian. A case of independent discovery?

Thanks to Joyce Cohen.

1. [http://en.wikipedia.org/wiki/Karina\\_Smirnoff](http://en.wikipedia.org/wiki/Karina_Smirnoff)
2. <http://abcnews.go.com/gma>

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### **metrics (2009-04-07 21:44)**

Track stuff you care about, such as your weight, [1]here. They call it "personal analytics".

Thanks to Alex Tabarrok.

1. <http://beta.me-trics.com/>

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### **Nathan Myers (2009-04-07 23:33:33)**

Steven Rose posted a notice about <http://zealog.com> to Kevin Kelly's Quantified Self blog. ZeaLOG appears to have a similar purpose to Me-trics. The attached wiki <http://quantifiedself.wik.is> appears at present to know about neither.

### **The Hygiene Hypothesis (2009-04-07 22:31)**

[1]Here is a nice review of the hygiene hypothesis, proposed in 1989 by David Strachan. The hygiene hypothesis is that the increases in childhood allergies and asthma in rich countries were due to decreases in "infection in early childhood, transmitted by contact with unhygienic older siblings or acquired prenatally." It was inspired by the observation that allergies and asthma were less common in larger families.

In the original, it was infections that were the crucial thing you got from older siblings. This idea ran into trouble when actual measurements of number infections did not show the expected inverse correlation:

When a composite index of exposure was generated by combining histories of illness due to measles, mumps, rubella, varicella, and pertussis, the tendency was for a slightly higher risk of allergic disease in children with multiple infections.

Also bad for the infection idea is that vaccination for measles didn't protect against hay fever or eczema.

It looks to my perhaps-biased eyes that it is dirt (= harmless foreign proteins and bacteria) exposure that matters, not exposure to human infectious agents. Living on a farm helps. Plainly you get dirty living on a farm and exposed to animal viruses and bacteria – but that you get human infectious agents from pigs and cows is unlikely. (In technical terms, they aren't vectors.) Older brothers are more protective than older sisters. Boys are dirtier than girls; it isn't obvious they are more infectious. Dogs are more protective than cats. Again, dogs are obviously dirtier than cats but the notion that they are more infectious – few infectious agents cross the species barrier – is less obvious.

An emphasis on dirt rather than human-infectious agents is more compatible with my belief in the vast importance of ingesting bacteria-laden food.

1. [http://thorax.bmj.com/cgi/reprint/55/suppl\\_1/S2.pdf](http://thorax.bmj.com/cgi/reprint/55/suppl_1/S2.pdf)

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Vish (2009-04-08 06:49:45)

Im under the impression that the current version of Hygience hypothesis focuses on (the lack of) parasitic worm infections - viruses and bacerial infections are still common in the West, but not worms. This is highly correlated with the absence of dirt, of course.

Caleb (2009-04-08 08:27:45)

I remember reading that children who grew up in a household with two pets, say a cat and a dog, had significantly lower incidence of allergies and asthma.

Aaron Blaisdell (2009-04-08 10:11:29)

Let's hear it for digging for earthworms and catching crayfish. Two of my most favorite activities as a small child. I also caught a lot of smelly garter snakes and sticky toads and frogs. My older daughter loves to play in the sand at the park. I have been encouraging her to do so and give her as much opportunity as possible. She loves play dough, too, though I don't think she'll contact many germs through that.

### **History Repeating Itself: Fear of Bacteria (2009-04-08 11:37)**

In the late 1800s in the United States, babies started developing scurvy; there was a veritable plague. It turned out that the vast majority of victims were being fed milk that had been heat treated (as suggested by Pasteur) to control bacterial disease. Pasteurization was effective against bacteria, but it destroyed the Vitamin C.

From a [1]history of nutrition. Now children are probably getting all sorts of immune disorders, such as hay fever, for the same core reason: fear of bacteria.

1. [http://library.med.utah.edu/NetBiochem/nutrition/lect1/4\\_2.html](http://library.med.utah.edu/NetBiochem/nutrition/lect1/4_2.html)

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Scott (2009-04-08 12:00:27)

Depending how long "withholding" bacteria from the children was needed to cause an immune disorder a convenience sample could be a study of the rates of immune disorders in the population of children who had some illness as an infant (e.g. I had open-heart surgery) that are now well as adults. In my case I was kept away from bacterias, viruses, illnesses etc for the first 2 years as I had a diminished ability to fight off diseases due to the heart defect. If the hypothesis is correct these children would likely have higher rates of immune disorders (unrelated to the specific childhood illness) than the general population. I have quite a few airborne allergies (trees/grasses etc) which would be anecdotal supporting evidence, but so does my sister who did not have a significant childhood illness so maybe it is purely environmental/parenting...

seth (2009-04-08 20:23:18)

Scott, the sad fact is that almost all children, probably including your sister, are kept away from harmless bacteria, which are in fermented food above all. I mean, the amount of harmless bacteria that would enter your body by eating fermented food daily would dwarf all other sources. Your deprivation may have been only slightly more than your sister's. Unless she regularly ate



fermented food growing up – but I’m guessing she didn’t.

### **The Hygiene Hypothesis (continued) (2009-04-08 16:52)**

In this [1]NY Times Op-Ed, Jessica Snyder, author of [2]Good Germs, Bad Germs, agrees with my comments about the hygiene hypothesis:

In 1989, an epidemiologist in Britain, David Strachan, observed that babies born into households with lots of siblings were less likely than other babies to develop allergies and asthma. The same proved true of babies who spent significant time in day care. Dr. Strachan hypothesized that the protection came from experiencing an abundance of childhood illnesses.

Dr. Strachan’s original hygiene hypothesis got a lot of press. . . . Less publicized was the decade-long string of follow-up studies that disproved a link between illnesses and protection from inflammatory disorders like allergies and asthma. If anything, studies showed, early illness made matters worse. . . . Still, Dr. Strachan’s original observation was confirmed – as a group, babies in large families and day care are less likely to develop allergies and asthma than are children born into smaller families and kept at home. The same protective effect can be seen in children born on farms and in areas without public sanitation.

But the link isn’t disease-causing germs. It’s early and ample exposure to harmless bacteria – especially the kinds encountered living close to the land and around livestock and other young children. In other words, dirt, dung and diapers. Just as disease-causing microbes clearly bring on inflammation, harmless microorganisms appear to exert a calming effect on the immune system.

No mention of fermented food.

Thanks to Michael Bowerman.

1. <http://www.nytimes.com/2007/10/10/opinion/10sachs.html?ex=1349755200&en=758f0a0b8bc8a2cc&ei=5124&partner=permalink&exprod=permalink>

2. <http://www.nytimes.com/2007/11/27/health/27book.html>

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### **SLD Made Vivid (2009-04-08 21:41)**

According to [1]Deedee:

Once you experience AS [appetite suppression], it’s almost like a drug. You’re not craving foods. Food is in the background - your other life is in the forefront.

I’m off tomorrow for a conference in Vancouver, BC and the first thing I packed is my coconut oil.

That is so well put.

1. <http://boards.sethroberts.net/index.php?topic=6972.msg83326#msg83326>

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### **The Wisdom of the Five-Year-Old Picky Eater (2009-04-09 10:49)**

Children are notoriously picky eaters. Could they be trying to tell us (adults) something? Such as how bad our diet is?

Alex Combs, a stay-at-home dad and equity trader who lives near Philadelphia, has a five-year-old son whom Alex describes as "a picky eater."

His son will not eat rice, potatoes, and pasta. He will eat small amounts of meat.

Yet his son will eat pickles, balsamic vinegar, and old/stinky cheese (but not regular cheese).

This is a fair description of what I eat! No simple carbs, some meat, plenty of fermented foods. While lots of people advocate low-carb diets, only a few, including me, advocate large amounts of fermented food. His son's counter-intuitive liking for such gourmet "adult" foods as pickles, balsamic vinegar, and old cheeses, all high in bacteria, puts the picky eating of children in a whole new light. They're not picky – they're smart.

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Anonymous Coward (2009-04-09 12:42:40)

Have you ever considered adding red wine to your list of fermented foods? Wine undergoes multiple fermentations, primary and secondary, with different bacteria. Some of the products of fermentations are left behind (fining or gravity settling, with racking off of the wine) but some remain in the wine as bottled and shipped. There have always been anecdotes about the healthy qualities of drinking wine, in individuals and in populations.

Todd Hargrove (2009-04-09 13:17:56)

This kid seems like an outlier to me. As a father of a two year old, my observation is that kids like sugar, fruit, crackers, pasta, cereal, white bread, white rice. The simpler the carbs the better. Lots of bland food. I don't see kids eating lots of stinky cheese, saurkraut, kim chee etc. I think many of their preferences are maladaptive in a modern environment. I'm not around that many kids though, so I'm interested in what others see.

Nathan Myers (2009-04-09 14:19:20)

My son will only eat peanut butter and raspberry jam sandwiches, broccoli, tofu, and box mac-and-cheese. What was your point again?

Patrik (2009-04-09 15:35:05)

*His son's counter-intuitive liking for such gourmet "adult" foods as pickles, balsamic vinegar, and old cheeses, all high in bacteria, @Seth One, your fundamental assumption that fermented foods are high in bacteria, living or dead, is very, very*

much to open to debate. In fact, my guess is that, in general, fermented foods are low in bacteria – precisely because they are fermented. We use micro-organisms to kill off/out-compete bacteria to make foods safer for us to eat. We use fermentation to preserve(!) foods like vinegar, pickles, stinky cheese FROM bacteria, ergo spoilage. Two, assuming that your assumption above IS correct: fermented foods are high in bacteria - it is still very much questionable if bacteria from these fermented foods are beneficial to our health. Three, you have no mechanism to explain the second assumption. While I like and appreciate your intellectual creativity (I read this blog and frequently comment) — you exhibit a certain amount intellectual sloppiness that does not behoove you. And you continue duck me here: <http://www.blog.sethroberts.net/2009/04/05/fermented-good-antibiotic-bad/> #comment-288257 *puts the picky eating of children in a whole new light. Theyâ€™re not picky â€” theyâ€™re smart.* Suffice to say, that child above is very atypical of 5 year-olds. Most children at that age prefer much more bland foods. Which might be an evolutionary adaptation for avoiding natural toxins (strong-tasting foods) that young, developing nervous systems can't handle.

Patrik (2009-04-09 15:40:10)

To illustrate my point above – beer, one of the earliest fermented foods, is designed to kill bacteria. [http://www.beer-brewing.com/beer-brewing/beer\\_spoilage\\_organisms/bacteria.htm](http://www.beer-brewing.com/beer-brewing/beer_spoilage_organisms/bacteria.htm) *Beer is a poor and rather hostile environment for most microorganisms. Its ethanol concentration and low pH is lower than most bacteria can tolerate for growth. Furthermore, the high carbon dioxide concentration and extremely low oxygen content makes beer a near to anaerobic medium. Beer also contains bitter hop compounds, which are toxic. Only a few bacteria are able to grow under such inhospitable conditions and are able to spoil beer. These bacteria include both Gram-positive and Gram-negative species as listed in Table 19.2. Gram Positive Bacteria Gram-positive bacteria are generally regarded as the most threatening contaminants in the brewery because of their rapid growth rate and tolerance to high temperatures and low pH conditions. Most hazardous microorganisms are those belonging to the genera Lactobacillus and Pediococcus and are often referred to as lactic acid bacteria because of their propensity to produce lactic acid from simple sugars. Gram Negative Bacteria Important Gram-negative contaminants in the context of beer brewing are acetic acid bacteria, Zymomonas spp., Pectinatus spp., and various Enterobacteriaceae. Several members of this group not only distort the fermentation process or produce undesired by-products but also have been reported to survive the fermentation process and to transfer into the finished product.*

Ben Casnocha (2009-04-09 20:58:28)

I've been told – no idea if it's true – that kids are picky eaters because more of their taste buds are intact and thus they have a more discriminating taste. As you age you burn taste buds.

Tom (2009-04-10 10:41:35)

I think it's an interesting idea. It makes a lot of sense that we would evolve to find anti-nutrients repulsive. (I remember being forced to sit at the dinner table until I had finished my lima beans, because they were supposed to be so healthful. Now we know that they're crammed with phytic acid and lectins, making it difficult for us to absorb nutrients from other foods we ingest.)

Andrew Gelman (2009-04-10 22:35:34)

Seth, You're a great guy, but sometimes you say things that are just ridiculous, and this is one of them. Not everything in life has to fit your theory. I hope that, having talked to some parents about what foods kids like—which I'm pretty sure will convince you that you're way way wrong on this one—you'll think back on many of the other events that have appeared to you to be confirming examples of your theory. That said, perhaps it's not so horrible that you are too credulous about your own theories. This credulity motivates you to take the theories more seriously, which motivates you to try to test them. And you are certainly willing to accept contrary evidence and change your beliefs, if the evidence is strong enough. In this case, unless you think that candy and ice cream are the basis of a balanced diet, I think you'll have to be more careful about generalizing from a single five-year-old!

KenF (2009-04-11 09:40:31)

My 4 year-old is the opposite, of course. Just bread and rice and oatmeal every day. Recently he's been eating some meat, turkey bacon and canned sardines.

Patrik (2009-04-11 12:56:15)

@Andrew Gelman I agree. Like I said above, Seth very admirably demonstrates a great amount of intellectual creativity, but which comes at the not insignificant price of intellectual sloppiness i.e. the painfully obvious confirmation bias manifesting itself in the post above. Ironic given Seth's statistical training.

Aaron Blaisdell (2009-04-12 08:56:53)

My daughter also will only eat simple or refined carbs, pasta, white bread, rice, chocolate, candy, crackers, and candy. I've been somewhat successful in getting her to eat eggs, meatballs, and yogurt, but it takes a lot of effort. From what I see among all of the other kids at her daycare, her preferences are the norm. Seth that kid you discuss in your post is a huge outlier.

James (2009-04-14 00:56:26)

<http://wholehealthsource.blogspot.com/2009/03/reversing-tooth-decay.html> by reducing grains and increasing Vit D, calcium and phytase. The next post notes fermenting brown rice increases phytase. The other entries seem interesting as well.

Confidence (2009-04-14 11:26:27)

Seth, In addition to the confirmation bias that Patrick and Dr. Gelman talk about, it's very clear that you are very, very quick to generalize your results to the broader population. Your results may be far less applicable outside your own body than you think. You do provoke me to think though. And for that I'm grateful. .

Confidence (2009-04-14 11:34:30)

Oh, and Alex Comb probably needs to think about getting his son tested for Zinc deficiency. Low Zinc status impacts the ability to taste and smell well, resulting in the individual preferring highly flavorful, spicy food to cross the threshold. I'd do that first before getting excited about him being a sample in a new theory about fermented foods. Though his son is probably perfectly fine.

Seth's blog » Blog Archive » Pets and Fermented Food (2009-04-17 04:48:17)

[...] The Wisdom of the Five-Year-Old Picky Eater [...]

Lux (2009-05-10 07:53:36)

1 kid = anecdote 1 anecdote  $\neq$  data

seth (2009-05-10 09:09:13)

anecdote  $\neq$  data? Treating the world as black and white (data = good, anecdote = bad) doesn't make it so.

Charles (2009-05-10 13:52:59)

What some of you fundamentalists are calling "intellectual sloppiness" seems to me to be more like committed curiosity. I would argue that while a more rigorous approach is appropriate for, say, making public policy, Seth ain't doing that. I'm thinking you aren't getting the point of self-experimentation.

## **Rejuvenation Company (interview) (2009-04-10 05:47)**

I sampled four brands of kombucha available in Berkeley; my favorite was from [1]Rejuvenation Company. They are in Emeryville, which is close to where I live. "Can I visit your manufacturing facility?" I asked. The answer was no, but they were happy to be interviewed. So I interviewed Chris Campagna and Jerry Campagna, who are the company's two employees. Before the interview I discovered they also made the rejuvelac I'd bought after a reader of this blog [2]recommended it ("When I was a database administrator at Whole Foods, I used to drink it daily and never felt better"). Those are their two products: kombucha and rejuvelac.

How did your company begin?

It was started in 1983 in San Francisco by Dennis Campagna [Jerry's brother, Chris's uncle]. He was a health-food fanatic, a die-hard vegetarian, and a hippie. Now retired. He is ten years older than Jerry, but , Jerry says, looks younger.] At the beginning, he sold several health-food juices, such as carrot juice and wheat grass juice, but he also sold Rejuvelac. That was the part of the product line that's lasted. He made them in a shared kitchen. Back then, there were dozens of small health food stores in San Francisco. It was a one-man show. Dennis drove around to them.

What's [3]rejuvelac?

A fermented grain drink. We use wheat. You sprout wheat berries with water,Â ferment them for a while, then strain out the wheat berries. We're the only company we know of that sells it.

Why do your products say "Keep Refrigerated"?

The Health Department wanted it. For years and years, they sat store shelves, not refrigerated.

When did you start making kombucha?

Five years ago. Dennis added it to his product line. It took a few years to catch on. He'd been making it for himself for years – making it, drinking it, giving it to friends. We're tiny players in the kombucha market. [4]Synergy is the big player. Maybe there are 10-15 manufacturers around the country, it's hard to know the exact number. There's no Kombucha Manufacturers Association.Â Some commercial kombuchas are pasteurized; look on their websites to find out which ones. [[5]Kombucha Wonder Drink is pasteurized.] Our kombucha isn't pasteurized.

How has the business changed?

It used to be lots of mom-and-pop stores. The people who owned the store ran it. They recommended stuff to their customers. The customer would come in with a health problem, the owner would say, "Why don't you try this?" Now Whole Food dominates. The emphasis has changed. The buyers want to know: Will it sell? As opposed to true quality. Nowadays, the main way we spread is that someone buys our products on a trip to San Francisco and goes home and sends us email: Where can we get it? We say: If you really want it, go to your store manager and tell him. You have a tremendous amount of clout. They listen to you. It often works out that we get a store out of that deal. We don't do internet sales.

Over the last five years, our sales have grown a lot. Five years ago, we were mostly in San Francisco, mostly in small stores. Around 20-30 small stores. Now we're in roughly 100-120 stores. It's hard to have a store locator on our website because distributors don't want to tell us who they deal with. [Their [6]store locator page.] In the Bay Area, we're sold at Whole Foods, Berkeley Bowl, Rainbow Grocery, plus smaller stores. In Santa Cruz, at Staff of Life. We're moving into Whole Foods in Los Angeles, Seattle, and Portland. Pretty soon you should be able to get it in any Whole Foods on the West Coast.

What do your customers say?

A year ago, we got a phone call from a woman in San Francisco. I'm moving to Utah, where can I buy your product? Eight years earlier, she'd been sick. [Digestive problems, apparently.] Her doctor had given her antibiotics. She didn't get better. She was given more antibiotics. Still didn't get better. This went on for several months. She couldn't eat anything. Even baby food would make her gaseous. She was turning ashen, suffering from malnutrition. Then she got a small bottle of rejuvelac. Just 30 minutes after drinking it, she felt a little better. She'd been drinking

it regularly for eight years, didn't want to be without it.

1. [http://www.rejuvenationcompany.com/Home\\_Page.html](http://www.rejuvenationcompany.com/Home_Page.html)
2. <http://www.blog.sethroberts.net/2009/01/26/the-inuit-paradox/#comment-265832>
3. <http://en.wikipedia.org/wiki/Rejuvelac>
4. <http://www.gtskombucha.com/kombucha.html>
5. [http://www.wonderdrink.com/kwd\\_faq/faqs.asp](http://www.wonderdrink.com/kwd_faq/faqs.asp)
6. [http://www.rejuvenationcompany.com/Store\\_Locator.html](http://www.rejuvenationcompany.com/Store_Locator.html)

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stephen (2009-04-10 07:19:18)

hey seth i've been subscribed to your blog for a few months now and always enjoy your posts. i came across this today, thought you might find it interesting: <http://www.ted.com/talks/view/id/509>

Caleb (2009-04-10 08:59:55)

I'd have to recommend the Kombucha from Synergy, it's got 2g of naturally occurring sugar compared to 12g from rejuvenation. I'm not sure what it is, but between the carbonation, sour tinge, and the bite from the ginger, it tastes really sweet to me. I really wish the store wouldn't refrigerate it though so it'd be more carbonated and fermented when I got it. BTW, thanks for educating me about the importance of fermented foods. I've started eating them with every meal. I didn't even get close to getting sick this winter and my allergies are sharply reduced this spring. It's really improved my quality of life.

seth (2009-04-10 10:48:04)

You're welcome, Caleb. What are the fermented foods you eat?

Heather McD (Heather Eats Almond Butter) (2009-04-11 16:09:48)

Seth, My husband forwarded this post to me and has been telling me all about your posts on fermented foods. What are your thoughts on tempeh and miso? I am soy intolerant, but for some reason I can eat both of these. Someone told me it has something to do with them being fermented. Do you recommend eating either?

bennetta (2009-04-14 10:31:29)

My precious Rejuvelac! I wish it was easier to find. I recently found that the grocery store down the street from my house (Community Market in Santa Rosa) sells it. After a six year break, I've become re-addicted. This stuff is amazing. I only wish it was more readily available.

## **To (Not) Catch A Thief (2009-04-14 15:07)**

This [1]short article about Edward Skyler, Deputy Mayor of New York, mentions four times (headline, led, body, final quote) that he tackled a mugger. I have a similar story. Had I known it was so interesting . . .

I was in Paris – same trip that inspired the Shangri-La Diet. It had been raining, the streets were wet. I heard a shout: Stop that man! A man came running toward me. I tried to stop him but I slipped on the cobblestones and fell in front of him. Perfect tackle. Lying on the ground, he asked: Why did you do that? Nobody came. He got up and ran off.

As I walked away a woman came up to me. "Are you okay?" she asked. A man said to me, "That was unusual what you did." I felt really good for an hour or so.

I was stunned how good I felt. I had accomplished nothing – the thief wasn't caught. Nor was there any obvious reason I should care what two bystanders thought of me.

The lesson I drew was this. Praise alone won't make you happy. Accomplishment alone won't make you happy. But their combination – praise for a genuine accomplishment, however small – is enormously potent. If I'm right, a teacher has enormous power to help his students by praising them for what they do right.

1. [http://www.nytimes.com/2009/04/10/nyregion/10skyler.html?\\_r=1&hp=&pagewanted=all](http://www.nytimes.com/2009/04/10/nyregion/10skyler.html?_r=1&hp=&pagewanted=all)

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david (2009-04-14 19:15:44)

The corollary is true in both cases. Blame, ridicule, and judgment, even from strangers, can cause great suffering and teachers have enormous power to harm by criticizing them for what they do wrong.

seth (2009-04-14 19:42:46)

Yeah, David, I agree. I originally wrote a longer version of the post where I said just that.

Timothy Beneke (2009-04-15 08:20:12)

All the happiness research suggests that doing something that helps others causes happiness long after the activity; whereas doing something that gives you pleasure has a quick drop-off – the pleasure tends to end with the activity. I once had a wonderful, religious person, Huston Smith, say to me, "God bless you for that," with great earnestness. Even though I am not religious, I was amazed at how good it made me feel. I think the feeling of well being that comes from praise from a religious figure must be powerful. Or in Catholicism, taking communion, which can only be done with a "cleansed soul" after confession, must be amazing...

### **Another Reason to Eat Fermented Foods (2009-04-15 03:49)**

To protect against *C. difficile* infection:

What is so frightening about *C. difficile* is that it is often spurred by antibiotics. The drugs wipe out the targeted illness, like a urinary tract or upper respiratory infection, but they also kill off large portions of the healthy bacteria that normally live in the digestive tract. If a person [who has just taken antibiotics] comes into contact with *C. difficile*, or already has it, the disruption to the beneficial bacteria creates an opportunity for the harmful bacteria to flourish.

The [1]NY Times article doesn't mention fermented foods.

Thanks to Ashish Mukharji.

1. [http://www.nytimes.com/2009/04/14/health/14well.html?\\_r=2&em](http://www.nytimes.com/2009/04/14/health/14well.html?_r=2&em)

## Shangri-La Diet: Before and After (2009-04-15 04:22)

Karky lost 100 pounds. [1]Here are before and after pics. I like how [2]one person put it: "A to the M to the A to the ZING!"

1. <http://boards.sethroberts.net/index.php?topic=6069.msg80531#msg80531>

2. <http://boards.sethroberts.net/index.php?topic=6069.msg80568#msg80568>

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## Dead Food = Always the Same (2009-04-15 05:23)

If you have two hammers, how many nails do you see?

I'm in Boston. I had planned to give up fermented foods during this trip and see what happened. Too hard, it turned out. Sitting in a diner, I wondered: where can I get kombucha? The diner sold a bunch of bottled drinks: juice and soft drinks. Foods that taste exactly the same each time, which I call ditto foods and which I believe caused the obesity epidemic. (Because their taste – actually, their smell – is so uniform, a very strong smell-calorie association can build up, making them very tasty and very fattening. Ditto foods are the laser beams of food.) I realized these drinks were exactly the opposite of what I wanted. Fermented foods, because they involve growing bacteria, are inherently more variable than other foods. It is hard to keep constant from batch to batch everything that affects bacterial growth.

Funny thing: the growth in childhood asthma and allergies, now called [1]an epidemic, started at roughly the same time as the obesity epidemic – around 1980. Around 1980, people started to eat a lot more fast food, snack food, and microwaved food (from packages). All ditto foods. All bacteria-free. In home cooking, I think fewer precautions are taken to wipe out all bacteria. You eat what you've made soon after cooking, whereas factory food might be eaten weeks or months after production. So factory food has preservatives – and I think the result is overkill, just like antibiotics.

Looking at the food I could buy in Boston was like looking at a post-apocalyptic landscape. Dead food everywhere. Supermarkets, diners, fancy restaurants. Dead food is uniform food; food manufacturers had bludgeoned their products into uniformity. At a [2]Cordon Bleu cooking school, judging from promotional literature, not a word is said about fermented food. In advanced-thinking Cambridge, which you might think would support fermented foods, I found only two stores that sold kefir and only three that sold kombucha. Many people complain about what they call "processed food" but the actual problem is food not processed enough (by bacteria). A better complaint would be about dead food.

I suspect fermented foods are avoided by commercial food makers not only because they are more variable than other food and contain scary bacteria, but also because they are more expensive to make: They require more space and time. The stuff must sit somewhere, taking up space, for days or even weeks, while it ferments. At home, it's easy: You make it and put it somewhere, and go away and do something else. In a factory devoted to making food, there is nothing else to do and no free space. The monoculture problem.

1. <http://content.nejm.org/cgi/content/full/355/21/2226>

2. <http://www.bostonculinaryarts.com/>



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david (2009-04-15 06:29:43)

You'll like this article: [http://seedmagazine.com/content/article/the\\_body\\_politic/](http://seedmagazine.com/content/article/the_body_politic/) (mentioned just now on /.: <http://science.slashdot.org/article.pl?sid=09/04/15/0252219>). David

SB (2009-04-15 08:54:25)

From the NYT article you posted earlier: The public health community has been sounding the alarm for years about the overuse of antibiotics and the emergence of "superbugs". Maybe this epidemic is more due to dead food than overuse of antibiotics.

Caleb (2009-04-15 09:25:56)

In answer to the earlier question of what fermented foods I've added to my diet; I have about 8oz of Brown Cow yogurt w/ breakfast, 8oz Kombucha w/ lunch, and 6oz of Kiefer w/ dinner. Occasionally I'll have red wine w/ dinner instead. I also use raw aged cheese pretty liberally on my scrambled eggs and when I have a salad. I was having sauerkraut with sausage, but got sick of its flavor. I'm starting to get a craving for it again though so I plan to try out the Bubbies brand next time I go shopping. I haven't tried natto or other soy products because I'm leery of possible hormonal disruption by the estrogens. I imagine there's a ceiling on the immune benefit anyway, which would be a real good experiment for someone to study. Test at what level of bacterial ingestion the infection rate of subjects exposed to a cold virus levels off.

Ethan (2009-04-15 09:37:25)

Do you happen to remember which stores sold kombucha and kefir?

Aaron Blaisdell (2009-04-15 10:40:47)

@ Caleb, Sounds like a similar inclusion of fermented food to my own. I drink wine or occasionally beer with dinner just about every evening, a glass of Kefir every evening after dinner, Stony Field plain yogurt every morning, and raw-milk cheese with every lunch. This morning I bought my first bottle of Kombucha (from GT). The bottle says "Don't Shake!" and I notice there is sediment (bacteria I presume) that has settled at the bottom of the bottle. Is it important to NOT drink the sediment or is it harmless, or better yet the effective part of the microbes?

Dennis Mangan (2009-04-15 17:31:17)

"Dead Food=Always the Same" Yes, no pathogenic bacteria that will kill you!

seth (2009-04-15 19:13:29)

Ethan, I got kombucha and kefir at Harvest and Whole Food markets.

Gary Wolf (2009-04-15 23:17:19)

You might enjoy this quote from Tracy Kidder's biography of Paul Farmer: "...Farmer's childhood was good preparation for a traveling life. Like all his siblings, he emerged from the Bayou's waters with what he called "a very compliant GI system." Farmer is a doctor who works in Haiti (and now elsewhere) and a specialist in infectious disease. He credits his good stomach with plentiful childhood exposure to bacteria in food and water. This association is more respected now, but even a few years ago when he made it would have been considered something of a myth. Of course, he is no ignoramus...

Igor Carron (2009-04-16 07:56:43)

Seth, I tried Kombucha and found it to be extremely close in taste to apple cider that one can buy in France. Cider is fermented and not as expensive as Kombucha. FYI. Igor.

Stephen M (Ethesis) (2009-04-16 19:06:07)

Dead food is a great line. I find myself getting more and more active yogurt (vs. the bland cultured puddings that masquerade as yogurt).

clarke (2009-04-17 03:48:02)

sheep's milk yoghurt might be considered more efficacious than cow's milk yoghurt, no matter how live or active, since sheep have yet to be manipulated into producing milk throughout the year, unlike cows.

Melissa (2009-04-20 13:49:42)

I think you would enjoy Sweden. Pickled and fermented fish is readily available at every grocery store, though it seems young people are consuming it less. But wow...the diversity of fermented milk. I had trouble figuring out all the different kinds when I came here. Russian-style kefir is just the tip of the iceberg. I think you'd like IÄngfil, which comes from the far north of Sweden and has a ropy stretchy slimy weird consistency. [http://www3.arla.se/Default\\_\\_\\_17791.aspx?SelectedMenuItem=17375](http://www3.arla.se/Default___17791.aspx?SelectedMenuItem=17375) Seems like everyone does the probiotic thing here. There is even some sort of fermented oatmeal drink called Proviva developed in Finland with L299 strain.

## **Brainwashing in High Places: Genes and Disease (2009-04-16 03:15)**

From [1]an article by Nicholas Wade in the NY Times:

Since the human genome was decoded in 2003, researchers have been developing a powerful method for comparing the genomes of patients and healthy people, with the hope of pinpointing the DNA changes responsible for common diseases.

This method, called a genomewide association study, . . . has been disappointing in that the kind of genetic variation it detects has turned out to explain surprisingly little of the genetic links to most diseases.

Wade means the genetic variation is surprisingly poor at distinguishing healthy people and sick people. That is the empirical result.

Unlike the rare diseases caused by a change affecting only one gene, common diseases like cancer and diabetes are caused by a set of several genetic variations in each person.

This is the faith-based statement. Wade knows this how? What about the possibility that cancer and diabetes are caused by environmental differences? That there are consistent environmental differences (e.g., dietary differences) between those who get cancer and those who don't?

I know of no evidence that common diseases like cancer and diabetes are caused by several genetic variations in each person. I know of a lot of evidence that they are caused by the wrong environment – lung cancer caused by smoking, for example.

Preachers say: If you do X, you will go to heaven. In other words, do something that helps me (the preacher) now and you will benefit later. It has been an effective argument. This is what the geneticists have been doing. They say to granting agencies – who believe what they read in the NY Times – if you give us money now we will find the genetic basis of Disease X. Just as there was no clear reason to believe the preachers' claims, there was no clear reason to

believe the geneticists' predictions. Which unfortunately for them can be shown to be wrong.

The success of my self-experimentation at solving common problems led me to think the environment is more powerful than NY Times readers, or at least NY Times reporters, had been led to believe. Good news for people with problems but bad news for scientists who want large grants. My research was essentially free.

1. [http://www.nytimes.com/2009/04/16/health/research/16gene.html?\\_r=1&hp](http://www.nytimes.com/2009/04/16/health/research/16gene.html?_r=1&hp)

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Seth's blog » Blog Archive » Principles of Experimental Design (2009-04-16 04:05:11)  
[...] Brainwashing in High Places: Genetics and Disease [...]

Tom (2009-04-16 09:23:40)

Fantastic post. Worth the additional effort, I think, to email it to the Times as a letter to the editor.

seth (2009-04-16 11:21:01)

Thanks, Tom. I'll email it to the Times, good idea.

Gian (2009-04-16 22:03:07)

Some breast cancers are known to be related to mutation on BRCA genes. I have a personal interest in the question. Could you be more specific and tell us the enviornmental contribution (esp dietary) to breast cancer. One is probably Vitamin-D. Others I dont know.

Joseph (2009-04-17 11:27:49)

I think David Shenk parallels some of your thinking about genes. <http://geniusblog.davidshenk.com/> He wonders about genius but many of your conclusions about how genes work are similar.

Seth's blog » Blog Archive » My Theory of Human Evolution (bells) (2009-04-18 02:29:09)

[...] Brainwashing in High Places: Genes and Disease [...]

## Principles of Experimental Design (2009-04-16 04:05)

In [1]this 10-minute talk I discuss what I think are the two main principles of experimental design:

1. Something is better than nothing. You learn more from doing something than from thinking about what to do.
2. When you do something, do the smallest easiest thing that will help, that will tell you something you don't know.

Grad students often fail to understand Principle 1: They worry too much about what to do. Early in grad school, that was my big mistake. Professors often fail to understand Principle 2: They do something more complex than necessary. Failure is much more likely than they realize. [2]My previous post was about such a failure (using genes to predict disease). When I was an assistant professor, I often made this mistake.

1. <http://aether.com/archives/stop-worrying-and-start-experimenting.html>
2. <http://www.blog.sethroberts.net/2009/04/16/brainwashing-in-high-places-genetics-and-disease/>

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Aaron Blaisdell (2009-04-16 08:01:04)

Makes sense. In grad school I had what some would call an overbearing mentor. I called him an enthusiastic and impatient workaholic that expected the same of his students. I thrived in that environment and after four years in grad school earned my Ph.D. and accumulated 12 publications. Regarding the second principle, I learned that in grad school, too. In fact, one of our favorite phrases to kick around lab meetings when we were discussing experimental designs was KISS (Keep It Simple, Stupid). Most of my most successful and profound experiments used very simple designs. Some of my most spectacular failures used quite complex designs. The simple designs generated the biggest surprises, as well. To this day I adhere to these principles and try to entrain them in my own students. The one drawback with Principle 1 is that I sometimes have jumped too soon-so to speak. That is, I wanted to do something but it turned out I should have given a little more thought to the problem and solution space before doing something that was not optimal or had some methodological flaws. Nevertheless, I have benefited more than been harmed by the use of the first principle. The second one has almost always been helpful.

mike kenny (2009-04-19 18:18:56)

what about trying out many new things at once, like when you went to paris or beijing. those seemed like fruitful enterprise, and didn't seem like 'the smallest, easiest thing.' going to those places seemed to expose you to lots of strange stimuli, and new things happened to you, which you then sought explanations for. this to my inexperienced mind seems like a very valuable approach, as long as you don't do anything that could lead to non-trivial risks of serious harm. one could try to eliminate stimuli to see if effects remain, to isolate the actual causes. but perhaps there is a serious flaw in this thinking?

seth (2009-04-19 21:14:49)

Mike, going to Paris is a good way to get new ideas but it isn't doing an experiment. Experiments are usually done to test ideas, not generate them.

Mike Kenny (2009-04-21 13:07:03)

what if i were to take a bunch of different supplements at once to see if i notice anything new happening to me. i'm impatient, so i don't do one supplement at a time, but a whole host of them, while being cautious not to poison myself in any known way. i then observe what happens to me-say i get a dry mouth and i sleep an extra hour a night. i then remove half of the supplements to see if the results remain, and they do. i then divide the supplements i am taking into half again and see if the results remain, and they don't, so i take the half i had just stopped taking, et c. would this constitute a reasonable experiment? i've heard warnings about testing multiple things at once, and have wondered if the above example is included or is different. :)

seth (2009-04-21 20:18:25)

Mike, the sort of thing you propose works only in people's dreams, as far as I know. Things just aren't that simple.

mike kenny (2009-04-22 14:49:39)

thanks-i defer to you on this given your experience-is there a particular difficulty that emerges from such an approach? just thinking about it, and not having much experience with experimentation in general, i have trouble coming up with a serious problem with it.

seth (2009-04-22 20:04:20)

here are two possible difficulties: 1. it will be hard to take so many supplements. 2. the effects won't be clear.

The Principles of the Principles of Experimental Design « Anthny (2009-05-11 20:42:15)

[...] Seth Roberts gives what he thinks are the two main principles of experimental design: [...]

Learn by Doing, Then by Thinking | the Justin Owings page (2011-07-25 09:40:37)

[...] Roberts' goes on to apply these ideas to graduate students and professors, when he notes, "Grad students ... worry too much about what to do. Professors often ... do something more complex than necessary." [...]

### **Judith Krug, RIP (2009-04-16 04:23)**



[1]Judith Krug (1940-2009) was a librarian who defended libraries with objectionable books:

The importance of her work was made clear [to her] when she read "And Tango Makes Three" to her granddaughter's class.

The book is often the target of censors because it's about two male penguins who "adopt" an unclaimed egg.

When she was finished, a girl she later learned was being raised by two women stood and clapped her hands.

Via [2]Radosh.net.

1. <http://www.chicagotribune.com/news/chi-hed-krug-14-apr14,0,2062493.story>
2. <http://www.radosh.net/archive/002659.html>

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### **Pets and Fermented Food (2009-04-17 04:48)**

[1]Justin Owings writes:

[My cat] doesn't drink milk (though he's had the option), but goes nuts for cheese, has licked a bowl of kefir clean, and loves yogurt. . . . He wasn't interested in Kombucha on a saucer though.

[2]The wisdom of the five-year-old picky eater.

1. <http://www.justinowings.com/>
2. <http://www.blog.sethroberts.net/2009/04/09/the-wisdom-of-the-five-year-old-picky-eater/>

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david (2009-04-17 06:25:12)

Inspired by Seth's endorsement, I bought a few bottles of Kombucha. My 5 year old daughter loves it and keeps asking for it (though she has trouble remembering what it's called). My 8 year old daughter took a drink (normally she won't even try new things, but this was Mystic Mango so looked like orange juice) but made a disgusted grimace.

Evelyn (2009-04-17 14:55:19)

I came across a book on probiotic foods: [http://www.gutinsight.com/the\\_book.asp](http://www.gutinsight.com/the_book.asp) I thought you might enjoy looking it over. I came across it from the comments to the NYTimes article on making yogurt at home.

### **Sitting is Bad, New Research Suggests (2009-04-17 05:22)**

From [1]a new study:

We prospectively examined sitting time and mortality in a representative sample of 17,013 Canadians 18-90 yr of age. [They were divided into five groups based on] daily amount of sitting time (almost none of the time, one fourth of the time, half of the time, three fourths of the time, almost all of the time . . . . Participants were followed prospectively for an average of 12.0 yr for the ascertainment of mortality status. RESULTS:: There were 1832 deaths (759 of cardiovascular disease (CVD) and 547 of cancer) during 204,732 person-yr of follow-up. After adjustment for potential confounders, there was a progressively higher risk of mortality across higher levels of sitting time from all causes (hazard ratios (HR): 1.00, 1.00, 1.11, 1.36, 1.54; P for trend <0.0001) and CVD (HR:1.00, 1.01, 1.22, 1.47, 1.54; P for trend <0.0001) but not cancer.

I am pleased to see no problem with sitting one-fourth of the time. The CVD/cancer difference suggests the two diseases have different causes – which is consistent with cancer being due to environmental chemicals (e.g., cigarette smoke) and age (cancer risk goes up as the fourth power of age).

[2]Related research from the same lab. [3]My self-experimentation about standing. [4]My one-legged standing (which I still do and am still studying).

Thanks to Dave Lull.

1. <http://www.ncbi.nlm.nih.gov/pubmed/19346988?dopt=Abstract>
2. <http://www.skhs.queensu.ca/epi/publications.htm>
3. <http://repositories.cdlib.org/postprints/117/>
4. <http://www.blog.sethroberts.net/category/why-did-i-sleep-so-well-directory/>

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david (2009-04-17 06:21:18)

I have this image of you standing on one leg with your nose clipped drinking a mix of Kombucha and flaxseed oil with one hand and taking a math quiz on your laptop with the other ;-)

seth (2009-04-17 08:21:06)

True. I spend a lot of time doing weird stuff.

Nansen (2009-04-17 15:01:20)

@ david you left out looking at a mirror for an hour around sunrise.

Caleb (2009-04-18 05:17:51)

IIRC, it appears sitting inhibits lipase production. Lipase is the hormone that transports fat out of the fat cells so your other cells can get energy, and it's production is also inhibited by insulin. People w/ low lipase production over eat because there cells aren't getting the energy they want and send the message that their starving.

### **The Fate of Laura (continued) (2009-04-17 20:17)**

Vladimir Nabokov's final, unfinished novel, The Original of Laura, [1]will be published November 3. Fortunately no one was hired to finish it.

In a Berkeley bookstore, many years ago, Brian Boyd said he'd read Laura at the request of Nabokov's wife and son. What do you think? they asked. It's not going to make a difference, Boyd told them.

[2]The fate of [3]Laura.

1. <http://www.thebookseller.com/news/82976-new-nabokov-from-penguin.html>
2. <http://www.blog.sethroberts.net/2008/02/29/the-fate-of-laura/>
3. <http://www.blog.sethroberts.net/2008/02/29/the-fate-of-laura/>

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### **My Theory of Human Evolution (bells) (2009-04-18 02:29)**

According to [1]my theory of human evolution, art evolved as a way to advance material science. Because we enjoy art we paid for it, which helped artists develop better control of materials.

According to Dorothy Hosler, author of [2]The Sounds and Colors of Power: The Sacred Metallurgical Technology of Ancient West Mexico,

Metallic sounding instruments, especially bells, were used in rituals that offered protection in war, that celebrated creation, fertility, and regeneration, and that figured in concepts of the sacred rituals, in short, that created a universe through song, through the sound of bells, and through reflective golden and silvery colors.

In Mexico, she is saying, advanced metallurgy was first used to make bells. So here is an example. Rituals, too, I argue, evolved because they provided a desire for "nice" stuff – the fine printing of Christmas cards, the fine clothes of priests – which helped state-of-the-art artisans improve.

Here was a way to support science/technology that worked. Whereas the current system gives us [3]delusional ideas about genes.

1. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>
2. <http://mitpress.mit.edu/catalog/item/default.asp?tld=7594&tttype=2>
3. <http://www.blog.sethroberts.net/2009/04/16/brainwashing-in-high-places-genetics-and-disease/>

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Seth's blog » Blog Archive » My Theory of Human Evolution (directory) (2009-04-18 02:33:03)  
[...] bells figured heavily in the beginning of metallurgy [...]



## What about Multivitamins? (2009-04-19 03:33)

A recent [1] large study concluded:

After a median follow-up of 8.0 and 7.9 years in the clinical trial and observational study cohorts, respectively, the Women's Health Initiative study provided convincing evidence that multivitamin use has little or no influence on the risk of common cancers, CVD, or total mortality in postmenopausal women.

I think this supports what I've been saying. In this blog I've emphasized two deficiencies in the American diet:

- Not enough omega-3
- Not enough fermented food

Neither is reduced by a multivitamin pill. As far as I can tell, when either one is fixed with something resembling an optimal dose, there are easy-to-notice benefits. Before I started making these points, there were plenty of reasons to think these are major deficiencies. For example, the Aquatic Ape Hypothesis suggested that we might need more omega-3 than we usually get. The Umami Hypothesis suggested we need a lot more fermented food than we usually eat. In contrast, I can't think of a single reason to think that Americans suffer from major vitamin deficiencies. I take a multivitamin pill but I'd stop long before I'd give up flaxseed oil or fermented foods.

1. <http://archinte.ama-assn.org/cgi/reprint/169/3/294>

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Darkhorse (2009-04-19 06:26:54)

That is rather depressing for women. However, multivitamins may help us live longer. This study in the American Journal of Clinical Nutrition, published in February, 2008, provides the first epidemiologic evidence that multivitamin use is associated with longer telomere length among women. A little comfort. <http://www.ajcn.org:80/cgi/content/abstract/ajcn.2008.26986v1>

Stephen M (Ethesis) (2009-04-19 19:02:29)

For comparison, criminals have more than a third less problems in jail if they are given vitamins. Some interesting things seem to be developing.

sunraig (2009-04-20 07:57:52)

For further comparison dark skin people have greater Vitamin D3 deficiency living in northern climates, which might explain cancer and other difference between racial groups.

Tom in TX (2009-04-20 08:36:02)

Once again, I need a translator. 8-) What does this mean in layman's terms? "After a median follow-up of 8.0 and 7.9 years in the clinical trial and observational study cohorts,..." Were the subjects of the study given a multivitamin to take for 8 years?

seth (2009-04-20 10:07:33)

Tom, yes, they took a multivitamin for 8 years. Some were instructed to take the pill, others decided by themselves to take it.

## Food Expiration Dates: Reversal of Fortune (2009-04-19 20:15)



At a store today I saw two containers of [1]Siggis "Icelandic style" yogurt I wanted. One said "best by 4/27/09"; the other said "best by 5/18/09". To my shock I realized the older one was better. It had more bacteria.

The opposite of what we're supposed to think.

Expired food – don't throw it out, give it to me.

1. <http://skyr.com/>

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Chris (2009-04-19 20:45:43)

Wouldn't you also get similar 'living food' effects by just leaving your food out unrefrigerated for a while before consumption? For times when you can't get to a whole foods like on business trips, it might be a good way to get your bacteria...buy the food that 'drips' the most (cheeseburger, soup, cole slaw etc.) and leave it out.

Confidence (2009-04-19 21:08:19)

By "better" do you mean tastier, more wholesome and things along those lines?

Ashish (2009-04-19 21:54:58)

I'm enjoying my first ever home made (from paste, not packet) bowl of miso soup - I can just feel those bacteria multiplying!

Ashish (2009-04-19 21:57:34)

I thought you were making your own yogurt - as I plan to do. What does this store bought yogurt offer that home made does not? On a related note, you've given us so many recommendations over the months ... do you maintain a central list of preferred fermented foodstuffs and brands? Thanks.

seth (2009-04-19 22:01:06)

Ashish, you're right, homemade is much better. I'm away from home, that's why I'm eating store-bought yogurt. This particular brand is unusually strong.

seth (2009-04-20 04:49:25)

Confidence, by "better" I mean healthier. I eat yogurt for the bacteria - the more bacteria the better. Chris, yes, I believe I can improve food by leaving it unrefrigerated, and I've been doing that.

Confidence (2009-04-20 22:49:10)

Is variety of bacteria an important part of your hypothesis? I ask because, the process of pickling, which is an anaerobic fermentation process as well, is done specifically to preserve food by making the food hostile to (other) forms of bacteria. Thus the food after pickling, contains fewer variety of bacteria than before, but a higher volume of the fermenting bacteria (I'm guessing). I'm not yet sure if even the fermenting bacteria is left behind after pickling. I can think of fermentation/pickling as a self-limiting process that stops when the acids produced kill of most of the fermenting bacteria themselves (this is similar to what Patrick says). But that's a different matter; for now I'm interested in your thoughts on variety vs. volume.

seth (2009-04-21 04:41:28)

"Is variety of bacteria important?" I don't know. I'm sure quantity matters.

Patrik (2009-04-21 17:02:56)

*Is variety of bacteria important? I don't know. I'm sure quantity matters.* @seth How is that you don't know if variety is important, but are sure that quantity matters?

Seth's blog » Blog Archive » Trying to Buy Expired Food (2009-04-22 20:19:56)

[...] Food Expiration Dates: Reversal of Fortune [...]

## Live Foods at Whole Foods (2009-04-20 20:32)

They [1]still didn't know what [2]natto was but had plenty of kombucha. Whole Foods Tribeca had a whole display case of kombucha. Whole Foods Columbus Circle was out of stock.

1. <http://www.blog.sethroberts.net/2009/03/28/natto-shopping/>

2. <http://en.wikipedia.org/wiki/Natto>

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## Steve Levitt and John List Teach Experimentation to MBA Students (2009-04-21 03:49)

From the [1]Financial Times:

"The level of experimentation [at big businesses such as United Airlines] is abysmal," says Prof List. "These firms do not take full advantage of feedback opportunities they're presented with. After seeing example after example, we sat down and said, 'We have to try to do something to stop this.' One change we could make is to teach 75 to 100 of the best MBA students in the world how to think about feedback opportunities and how to think about designing their own field experiments to learn something that can make their company better."

The two economists decided to team up to develop a course for [University of Chicago] Booth [Business School] students on "Using Experiments in Firms" - the first time either had taught at the business school.

This is an interesting middle ground between conventional science (done by professors) and what I have done a lot of (self-experimentation to solve my own problems - e.g., sleep better). I'm (a) trying to solve my own problems and (b) it's not a job. Conventional scientists are (a) trying to solve other people's problems and (b) it is a job. The MBA students will be taught experimentation that involves their own problems - well, their own company's problems - and it is a job.

One important effect of this course, if the whole idea catches on, could be a cultural shift: A growing belief that experimentation is good and that failure to experiment is bad. Some of my first self-experiments involved acne. I was a grad student. When I told my dermatologist what I'd done - my results showed that a medicine he'd prescribed didn't work - he looked unhappy. "Why did you do that?" he asked.

The Levitt/List course has a Martin-Luther-esque ring to it. Science: Not just for other people.

Thanks to Nadav Manham.

1. [http://www.ft.com/cms/s/0/3c4bbd46-2d44-11de-8710-00144feabdc0.html?nclick\\_check=1](http://www.ft.com/cms/s/0/3c4bbd46-2d44-11de-8710-00144feabdc0.html?nclick_check=1)

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Nansen (2009-04-22 16:44:23)

Evidently, the Booth School hasn't yet heard that "Martin-Luther-esque ring" - they have password-protected the syllabus for the course "Using Experiments in Firms." Do you happen to have any information about the syllabus?

seth (2009-04-22 20:08:11)

No I don't have information about the syllabus. It's a good question; maybe I will try to get a copy.

## Ancient Non-Nutritional Wisdom: Morning Dance (2009-04-21 07:32)

From the latest episode of The Amazing Race:

[PHIL:] In this detour, teams have to choose between two ways that the people of Guilin [China] express themselves artistically. The choice: choreography or calligraphy. In choreography, teams must join in a popular exercise in Guilin: dancing. They'll make their way to the central island, join a group of locals performing their morning dance routine, and learn the dance.

Emphasis added. The dancing, done in pairs, provides plenty of morning face-to-face contact, just what [1]I think everyone needs for good mood regulation.

On the Tsinghua campus, I saw morning groups practicing aikido, which doesn't provide as much face-to-face contact. The Guilin dancing is perfect. Also good is that it's done outside. The sunlight will give the light-sensitive circadian oscillator a big push. Faces push a face-sensitive circadian oscillator.

There is one region of China whose residents are known for being laid back and happy. I wonder: Is it Guilin?

1. <http://repositories.cdlib.org/postprints/117/>

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Kevin Miller (2009-04-21 09:07:25)

Morning dancing is widespread all over China, including Beijing. If you go to any park in the morning, you'll see groups of (mostly older) people doing both ballroom dancing and folk dancing, along with tai qi and all sorts of other activities. I don't know the Qinghua campus very well, but I bet there's some place where people do dancing in the mornings.

Jim N. (2009-04-22 13:31:22)

Would standing in a packed Subway car constitute face-to-face contact. I wonder. New Yorkers are great at not looking each other in the eye, while standing 18 inches apart.

seth (2009-04-22 20:06:40)

Jim, I tried that for about 10 seconds. It's impossible. I even tried starting conversations on the subway. That too was impossible.

Chris (2009-04-24 04:40:36)

Yes, near Tsinghua the Summer Palace has quite a few groups dancing in various styles if you go early enough.

### **Trying to Buy Expired Food (2009-04-22 20:19)**

I couldn't resist. Shopping for kefir, I found a bottle two weeks past its sell-by date. Being the only person in the world who [1]believes expired food is better than non-expired food, I thought it would be fun to see if I could get a discount. After all, it's going to be thrown away.

Nope. "I'd rather not sell it to you," said the store manager. "We can get a refund for these." He apologized, took it, and I had to buy a non-expired bottle.

1. <http://www.blog.sethroberts.net/2009/04/19/food-expiration-dates-reversal-of-fortune/>

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Dennis Mangan (2009-04-23 06:49:47)

Seth, if your theory about fermented foods is correct, you might also consider what washing the skin with soap could do to the immune system. Every part of the skin has a characteristic microbial flora, which differs according to area, e.g. the feet have a different bacterial population than the lower back. Presumably these bacteria interact with the immune system, and killing them off every day with soap could have deleterious health effects.

bennetta (2009-04-23 11:34:12)

There are legal reasons for this. Grocers can be held liable for knowingly selling an expired product to a customer, if the customer becomes sick from that expired product.

Tom in TX (2009-04-23 12:52:19)

Maybe you should have asked the grocer if you could shop-lift the expired items. 8-)

Heidi 555 (2009-04-23 13:30:58)

There are discount stores near where I live that sell a lot of products that are close to the expiration date or sometimes well past the date. Plus once the date has passed the price drops to almost nothing. I regularly buy organic yogurt, cottage cheese, and cream for 25 or 50 cents. I have no idea why these places thrive on expired products while other places aren't allowed to sell them. Seth (or anyone else who knows), how do you know what foods might develop "bad" bacteria that could make you really sick or even kill you? I have no problem with aged fermented or cultured products. But leaving regular food out to age makes me nervous.

Chris Highcock (2009-04-27 09:54:06)

I came across something interesting about fermentation in the latest National Geographical. The cover story is about the discovery of a baby mammoth in Siberia. Although when found it was free of the ice it hadn't decayed. On examination it was found that it had been "pickled" just through being in the water and thus preserved. This was noticed by one of the researchers who noticed the pickled smell as he was doing the dissection. It reminded him of experiments that he had done to see whether primitive hunter gatherers could have preserved meat in this way. He submerged meat in a pool of water and found it was naturally pickled by the bacteria present. Hence his theory that hunters could have killed large prey (mammoths) and then preserved / fermented / pickled the meat for a long period after: I'd advise looking at the magazine, but it is covered here: <http://amandainmaine.wordpress.com/2009/04/21/a-near-perfect-frozen-mammoth-resurfaces-after-40000-years/> *Tikhonov knew that no one would be more excited by the find than Dan Fisher, an American colleague at the University of Michigan. Fisher is a soft-spoken, 59-year-old paleontologist with a bristly white beard and clear green eyes who has devoted much of the past 30 years to understanding the lives of Pleistocene mammoths and mastodons, combining fossil studies with some very hands-on experimental research. Curious to know how Paleolithic hunters managed to store mammoth meat without spoilage, **Fisher butchered a draft horse using stone tools he'd knapped himself, then cached the meat in a stock pond. Naturally preserved by microbes called lactobacilli in the water, the flesh emitted a faintly sour, pickled odor that put off scavengers even when it floated to the surface. To test its palatability, Fisher cut and ate steaks from the meat every two weeks from February until high summer,** demonstrating that mammoth hunters might have stored their kills in the same way. Also <http://www.ns.umich.edu/htdocs/releases/story.php?id=7099> Another intriguing question is how Lyuba avoided decomposition and destruction. Undoubtedly she was frozen in permafrost for most of the time between her death and discovery, but Fisher and Buigues determined that the carcass lay on the riverbank for nearly a year before the reindeer herders stumbled upon it. "That means that this baby mammoth, flesh and all, sat out on the side of the river all of the Arctic summer of 2006, which would have subjected the carcass to 24-hour-a-day sunlight, elevated temperatures and exposure to bacteria and scavengers," Fisher said. "So why is it preserved as well as it is?" Based on previous experiments aimed at understanding how Paleolithic hunters stored meat from large animal kills, Fisher believes Lyuba was naturally pickled in lactic acid produced by*

*microbes called lactobacilli. The pickling would have protected her body from decomposition, and the sour smell likely deterred scavengers.*

Seth's blog » Blog Archive » Effect of Animal Fat on Sleep (more) (2009-10-31 18:01:46)

[...] Yesterday at a Carrefour I watched a pig being cut up. The butcher cut off the skin (with a thick layer of fat) and tossed it into a section of the display of pork for sale. I could buy the part of the pig I valued most for an incredibly low price (about 25 cents/pound). All other pork cost more. That's how much Chinese shoppers wanted it. No one rushed to buy the newly-cut piece of skin. It reminded me of New York where I tried to buy food past its expiration date, ordinarily considered worthless. [...]

Jazi yechezkel zilber (2011-12-03 10:35:36)

My grandfather story He once forgot a bottle of milk (natural, non pasturised) for two weeks, and found it covered with "all kind of colors", but he drank it nonetheless, Surprisingly, he felt afterwards, much much better....

### **Trouble in Mouse Animal-Model Land (2009-04-23 03:34)**

Most drugs are first tested on animals, often on "animal models" of the human disease at which the drug is aimed. This 2008 [1]Nature article reveals that in at least one case, the animal model is flawed in a way no one really understands:

In the case of ALS, close to a dozen different drugs have been reported to prolong lifespan in the SOD1 mouse, yet have subsequently failed to show benefit in ALS patients. In the most recent and spectacular of these failures, the antibiotic minocycline, which had seemed modestly effective in four separate ALS mouse studies since 2002, was found last year to have worsened symptoms in a clinical trial of more than 400 patients.

I think that "close to a dozen" means about 12 in a row, rather than 12 out of 500. The article is vague about this. A defender of the mouse model said this:

As for the failed clinical trial of minocycline, Friedlander suggests that the drug may have been given to patients at too high a dose "and a lower dose might well have been effective. "In my mind, that was a flawed study," he says.

Not much of a defense.

That realization is spreading: some researchers are coming to believe that tests in mouse models of other neurodegenerative conditions such as Alzheimer's and Huntington's may have been performed with less than optimal rigor. The problem could in principle apply "to any mouse model study, for any disease", says Karen Duff of Columbia University in New York, who developed a popular Alzheimer's mouse model.

"Less than optimal rigor"? Oh no. Many scientists seem to believe that every problem is due to failure to follow some rules they read in a book somewhere. They have no actual experience testing this belief (which I'm sure is false – the world is a lot more complicated than as described in their textbooks); they just feel good criticizing someone else's work like that. In this case, the complaints include "small sample sizes, no randomization of treatment and control groups, and [no] blinded evaluations of outcomes." Very conventional criticisms.

Here's a possibility no one quoted in the article seems to realize: The studies were too rigorous, in the sense that the two groups (treatment and control) were too similar prior to getting the treatment. These studies always try to reduce noise. A big source of noise, for example, is genetic variability. The less variability in your study, however, the less likely your finding will generalize, that is, be true in other situations. The Heisenberg Uncertainty Principle of experimental design. Not in any textbook I've seen.

In the 1920s and 30s, a professor in the UC Berkeley psychology department named Robert Tryon tried to breed rats for intelligence. His measure of intelligence was how fast they learned a maze. After several generations of selective breeding he derived two strains of rats, Maze Bright and Maze Dull, which differed considerably in how fast they learned the maze. But the maze-learning differences between these two groups didn't generalize to other learning tasks; whatever they were bred for appeared to be highly specific to maze learning. The measure of intelligence lacked enough variation. It was too rigorous.

When an animal model fails, self-experimentation looks better. With self-experimentation you hope to generalize from one human to other humans, rather from one genetically-narrow group of mice to humans.

Thanks to Gary Wolf.

1. <http://www.nature.com/nature/journal/v454/n7205/full/454682a.html>

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Andy M (2009-04-23 07:32:19)

But are you going to try untested drugs on yourself? It seems to me that there is at least \*some\* value in animal models.

Andrew Gelman (2009-04-23 08:38:08)

Seth: Paul Rosenbaum wrote an article in which he discussed the benefits of having a wide range of cases in your treatment and control groups. However, I disagree with your statement about treatment and control groups being too similar. The ideal study would have a large amount of variation in treatment and control groups, but with random assignment so that the two groups are, on average, similar. You can use a method such as blocking or pairing to reduce noise; this is not in conflict with the goal of generalizability. These are really two different issues.

Gary Wolf (2009-04-23 15:02:51)

Thanks for your perspective on this, Seth. In response to Andy M.'s comment above: yes, that's right, the criticism here doesn't apply to all uses of mice or other animals in research. Howard Florey ran his crucial test on using penicillin to cure bacterial infection in living mammals using only 8 mice. All were given a big dose of streptococci, four got penicillin injections. Untreated mice were dead overnight; three of the others survived. A large increase in confidence obtained. To get to Seth's point, though, look how "poorly" this experiment was designed. No randomization, no double blinding, no repeat trials; just a crappy little home brew test of an idea that helped significantly to get the ball rolling to save millions (well, tens of millions) of lives. I really think this is an important point. There isn't a "gold standard" for scientific truth in the sense of a standard experimental design that will settle all questions. There is a step by step process of confidence building. Reducing statistical "noise" in an experiment carries a cost. When you are as ignorant of the underlying biology as we are (not a criticism of the scientists personally, this is a general ignorance) about ALS, the real problems may not come from conventional errors in experimental design... That's the point, at least, as I take it.



Gary Wolf (2009-04-23 15:04:38)

Quick add-on: I don't mean to imply this was Florey's only test! Just that you can acquire big news from experiments that don't meet the "gold-standard," and then go on to answer the questions that emerge by doing more experiments... hope that was clear.

seth (2009-04-23 19:26:34)

Andy M, yeah, I agree, self-experimentation won't replace testing drugs on animals. I'm saying that the conventional view that animal models are good and self-experimentation is bad isn't supported by these particular facts. Andrew, the psychologists I know don't like the two-group (control and experimental) design you and Rosenbaum describe. They prefer a design in which each subject is his own control. You compare the same subject with and without the treatment. In the within-subject design, you are not penalized for increasing subject-to-subject variation, the way you are in a between-subject design, where the control group and the treatment group consist of different subjects. Because the "ideal study" you describe has lots of between group variation, it is less than ideal for detecting a difference between the groups.

Riz (2009-04-24 05:08:39)

Hi Seth, Just wanted to thank you for inspiring me to practice self-experimentation. I am half-way through 30 days of restricting calories, trying to be as self-examining as possible. I'm dumping the basic recordings of this experiment on this blog: <http://thirtydaysdown.blogspot.com/> I'm averaging about 650 calories a day and have learned that the hunger sensation is easily tamed but coping with the mental effects of low blood sugar is difficult and I may be eating more sugar than I did before the diet started. By adding a bit of sugar to my tea and eating dry apricots through the day I am almost 100 % fine until evening meal time. I was going to use a tablespoon of oil a day to dampen my hunger but my body seems to be coping just fine - that said, this is more of a crash course experiment versus a longer term weight loss programme. The other big observation so far is that while the blanket advice is to increase consumption of fruit and vegetables I find the former far less effective in terms of satiety and have steered away from almost all fruit over the period (except the magic dried apricots!). I'm enjoying your next adventure in the realm of fermented foods and look forward to the findings. Just a shame I can't find natto so easily here in the UK. All the best, Riz.

Andrew Gelman (2009-04-24 13:37:04)

Seth: I guess I was not clear in my comment. The design you advocate is a special case of the standard blocking or pairing design that I describe; in this case the blocks are individual mice that are each given multiple treatments. My point was that your statement that "the two groups (treatment and control) were too similar prior to getting the treatment" is a separate issue from generalizability. You can have the two groups be very similar (for example, by reusing your experimental subjects, as you suggest in your comment) and still have wide variation within group. There is no "Heisenberg Uncertainty Principle" here.

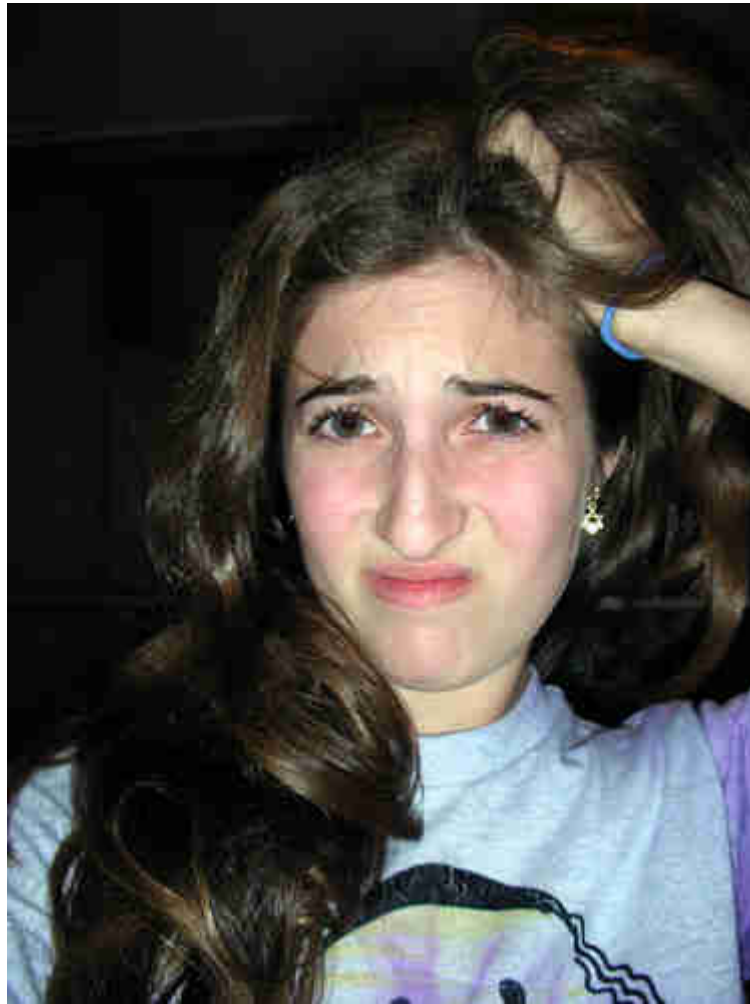
seth (2009-04-24 18:44:52)

Thanks, Andrew. I agree that some designs are better than others. But I disagree that there is no Uncertainty Principle. In your example - the within-subject design - where you seem to say no price is paid for wide variation in subjects, there is indeed a price because it is likely that there is nonzero treatment x subject interaction, which inflates the error term. The greater the subject-to-subject variation, the greater the inflation of the error term. The Uncertainty Principle also applies to the treatment. The more precisely the treatment is repeated from one subject to the next the clearer any difference will be (because "treatment error" is minimized) but the less well you can generalize to other treatments. Herb Clark, a psych professor at Stanford, made similar points in a well-known-to-psychologists verbal-learning paper about 30 years ago. He explained the difference between a random and a fixed effect. It's another example of what I'm talking about.

Shirley Aronson-Unger (2009-04-25 13:50:20)

A new article worth reading related to self and individual experimentation is: [http://seedmagazine.com/content/article/the\\_unraveling\\_of\\_homogeny/](http://seedmagazine.com/content/article/the_unraveling_of_homogeny/) "The Unraveling of Homogeny New Ideas / by David Naylor / April 9, 2009 Testing mice as individuals instead of one and the same may cut down on experimental errors and lead to significantly cheaper, more efficient drug testing."

## Would You Rather Have Lice or Eat Yogurt? (2009-04-24 05:01)



Research on mice shows that those carrying the most lice had calmer immune systems than uninfested rodents, and they [the researchers, not the mice!] said their finding may have implications for studying the causes of asthma and allergies in people.

From [1]Reuters. The [2]research paper. The data analysis is much better than usual. Among its strengths are: 1. Graphs of main points. 2. Transformation of variables. 3. Principal components analysis.

This study is more evidence that a high level of foreign substances in our body to which the immune system responds is beneficial. The researchers say nothing about fermented foods, which are an easy and easy-to-control way to ingest such substances. It's hard to vary your dose of lice but easy to vary how much yogurt you eat.

Thanks to Oskar Pearson.

1. <http://www.newsdaily.com/stories/tre53l00m-us-asthma-lice/>

2. <http://www.biomedcentral.com/content/pdf/1741-7007-7-16.pdf>

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Justin (2009-04-24 06:03:13)

I keep getting this strong sense that there is a connection here between [1]fasting/low-carb diets and consuming fermented foods/exposure to foreign substances: all three of these approaches seem to put our bodies into a state of readiness or alert or perhaps "defense mode" the impact of which is exhibited in any number of improved health markers. With regard to fasting, [2]From your blog post on meal skipping and the Mattson/Johnson/Laub work (2006):

Since May 2003 we have experimented with alternate day calorie restriction, one day consuming 20-50 % of estimated daily caloric requirement and the next day ad lib eating, and have observed health benefits starting in as little as 2 weeks, including insulin resistance, asthma, seasonal allergies, infectious diseases of viral, bacterial and fungal origin (viral URI, recurrent bacterial tonsillitis, chronic sinusitis, periodontal disease), autoimmune disorder (rheumatoid arthritis), osteoarthritis, symptoms due to CNS inflammatory lesions (Tourette's, Meniere's) cardiac arrhythmias (PVCs, atrial fibrillation), menopause related hot flashes. We hypothesize that other many conditions would be delayed, prevented or improved, including Alzheimer's, Parkinson's, multiple sclerosis, brain injury due to thrombotic stroke atherosclerosis, NIDDM, congestive heart failure.

The low-carb connection is that the [3]metabolic pathways while fasted are (apparently) the same as when on a low-carb diet.

1. <http://www.justinowings.com/b/index.php/me/seth-roberts-and-the-shangri-la-diet>

2. <http://www.blog.sethroberts.net/2006/06/22/meal-skipping-good-or-bad/>

3. <http://www.justinowings.com/b/index.php/me/metabolic-pathways-while-fasted-and-keto>

david (2009-04-24 07:00:16)

I hate to nit pick, but at some point wouldn't the open sores from the scratching the louse bites outweigh any advantage to the immune system?

NE1 (2009-04-24 20:27:38)

Gold star for David! A similar idea brings us to Reiter's Syndrome, or "reactive arthritis", which has untreated STI's as a possible cause. There are examples in biology of organisms that have been appropriated by our bodies: mitochondria might be from ancient prokaryotes, and surely much of the flora in our gut is useful.

david (2009-04-25 21:05:29)

Actually, I just wanted to fit the words "nit pick" into my reply and that lousy point was the best I could do. The only reason I'm posting this reply is because I forgot to work "lousy" into the previous one. Btw., getting rid of hair lice is damned hard (my daughter came home from school with them last year). I assume that for most of human history people spent a lot of time hosting lice. Up until my daughter got them I had used the words "nit pick" with no appreciation for what that really entailed. The way we use "nit pick" is backwards in that it implies excessive criticism. If someone really does go to the effort of picking nits for you, you would really appreciate what they're doing on your behalf.

## **The Yogurt Prize: Who Gets It Most Wrong? (2009-04-24 18:12)**

A vast scientific literature shows the positive effects of probiotic foods such as yogurt and natto. What book most completely ignores that literature?

Practically all popular nutrition books ignore it, but some more egregiously than others. (Just as in Animal Farm, some animals were more equal than others.) I've decided to give the Yogurt Prize to the worst offender.

The first winner of the prize, I am pleased to announce, to be held until an even worse example comes along, is [1]The Wellness Encyclopedia of Food & Nutrition: How to Buy, Store, and Prepare Every Variety of Fresh Food (1992) by Sheldon Margen and the editors of the University of California Berkeley Wellness Letter. The Wellness Letter has

an advisory board of Berkeley professors. The book has the UC Berkeley stamp of approval. Although it has five pages on yogurt – contradicting the title – the book treats yogurt as the nutritional equivalent of milk, which is so clearly false.

The citation reads: "For putting its ignorance not only in the text but in the title of the book; for reflecting the ignorance of not just one person but a whole team of writers; for being created under an advisory board of distinguished professors; and for carrying the stamp of a world-renowned research university."

1. <http://www.amazon.com/Wellness-Encyclopedia-Food-Nutrition/dp/0929661036#reader>

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NE1 (2009-04-24 20:20:33)

Why do you think there is a societal aversion to eating out of dumpsters? Say, even behind a restaurant? You've made many posts on this fermentation hypothesis, but I'm not sure I remember you mentioning once that there is a limit to the idea. If you've ever eaten rotten food and involuntarily puked soon afterward, you know this upper limit.

seth (2009-04-24 20:36:15)

NE1, long ago people thought white bread was better than non-white bread, white rice better than brown rice. I don't worry much about "societal aversions".

Aaron Blaisdell (2009-04-25 02:42:50)

Actually, white bread and rice ARE better (maybe I should say less worse) than their whole-grain counterparts IF the whole grain versions are not treated appropriately before consumption. Stephen has many posts at his WholeHealthSource blog discussing how important it is to sprout and/or ferment whole grains to make them nutritious. It turns out that refining flour and rice by removing most of the exterior of the grain—although removing most or all of the vitamins and minerals—does get rid of the phytic acid (an antivitamin if you will) that is so problematic for human digestion and absorption of nutrients. But fitting with your hypothesis, it turns out that the best way to consume grains is to not only soak or sprout them but also to lactoferment them (e.g., with some yogurt or kefir).

Caleb (2009-04-25 07:36:53)

The lectins concentrated in the bran of grain is also bad for you. They can damage the intestinal lining, get into the blood, trigger off inflammation, and are likely candidates for binding to insulin and leptin receptors, inducing insulin and leptin resistance, the first stages in metabolic syndrome and obesity. Breaking down the lectins is one of the reason traditional societies ferment grains before eating them. If the grains haven't been soaked, sprouted and/or fermented though you're actually better off with the bran removed.

Kirk (2009-04-25 08:14:38)

Have you come across any books which are outstanding in their discussion of probiotics? I think there could be two categories; one written for those with a scientific mind, and another written for the general public.

seth (2009-04-25 08:45:07)

Caleb, what about the Japanese who got beriberi because they ate white rice instead of brown rice? Kirk, no I haven't. I agree, that's a more interesting question.

Caleb (2009-04-25 09:25:23)

Beriberi is due to thiamine deficiency. If you're poor and don't have a better source of B1 like meat, then yes, you're better off with brown rice. Won't change that the phytic acid and lectins are still going to do bad things to you. In rice's defense, if you're going to have a grain, it seems to have the lowest level of anti nutrients. Wheat appears to be the worst.

### Live Food at Google? Nope (2009-04-24 21:55)



I ate lunch in the cafeteria of Google New York. Being monomaniacal, I was struck by the absence of fermented food. No kombucha, kefir, kimchi, pickles, wine, beer, natto, strong cheese, sauerkraut. Not even yogurt! (Of course there was vinegar at the salad bar and perhaps the meat was aged.) The absence was especially glaring given so much conventionally-healthy food: raw food, twenty kinds of vegetables, fruit, fish, diet sodas, gazpacho, sugar-free jello . . . I am sorry to predict those talented Googlers will be sicker than necessary.

[1]Previous visit.

1. <http://www.blog.sethroberts.net/2008/04/09/in-the-google-cafeteria/>

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Tom Swirly (2009-04-24 22:09:28)

Hah! We DO have kombucha! :-D (and there's sometimes kimchi) But I do agree, more fermented food needed!

Peter (2009-04-25 01:52:41)

there used to be plenty of kombucha at the Mountain View headquarters, but not sure it survived all the cuts.

Bingxing (2009-04-25 16:34:15)

^\_^ Funny to find out about your interesting blog and all I should have asked you what you thought about that Green Tea Frappuccino???

Nathan Myers (2009-04-27 12:56:20)

Bread is fermented. Cheese is fermented. (The distinction "strong" strikes me as special pleading. Anyway, no feta? No gorgonzola? Really?) Greek olives are fermented. Pizza ingredients are mostly fermented. Soy sauce is often fermented, particularly the better brands likely used there. No pickles? Really? How about salami? Chocolate? Black tea?

bennetta (2009-04-27 13:22:46)

Hey Seth, This is unrelated, but I was out shopping last weekend and ran across this: <http://www.pulmuonewildwood.com/> Wildwood organics now offers several new probiotic foods, including hummus, tofu, and tempeh. The hummus is great if you like that sort of thing- I haven't tried the others. Anyway, I thought you might be interested.

seth (2009-04-27 18:14:04)

Nathan, by "fermented food" I don't mean food that has been even a little fermented. If I did then most of the food would qualify, especially the meat, which has been aged. I mean food that has been fermented a lot. I don't remember seeing any pickles.

Peter Norvig (2009-04-29 01:03:55)

Kombucha, Kimche, pickles, and strong cheese are all common in Mountain View.

### **Jane Jacobs and Collapse (continued) (2009-04-25 19:58)**

[1]A year ago I speculated why Jane Jacobs didn't like Jared Diamond's Collapse. Now, rereading The Economy of Cities, I have a better idea. Here's what Jacobs says on p. 118:

Once a society has developed its economy appreciably, any serious stagnation [of economic development] becomes appallingly destructive to the environment. Common sequels in the past have been deforestation, complete destruction of wild life, loss of soil fertility and lowering of water tables. In the United States, lack of progress in dealing with wastes, and overdependence on automobiles – both evidence of arrested development – are becoming very destructive of water, air, and land.

In other words, Jacobs says that the ecological disasters described in Collapse were due to economic stagnation. In a stagnant economy, problems pile up without being solved. A common problem is too much reliance on one thing. In a healthy economy, new goods and services are constantly produced, often to solve problems created by old goods and services. In a stagnant economy, this doesn't happen. A rich economy can be just as stagnant as a poor one.

Diamond understood none of this. Not even close. Instead he proposed twelve reasons for the collapses he studied. They included "overhunting," "overfishing," and "population growth"; the complete list is [2]here.

Jacobs's point applies very broadly. Why do Americans pay so much for relatively poor health care? Because the healthcare industry has been stagnant. There is too much reliance on drugs but nothing is being done about it. Non-drug solutions are not being slowly developed. (Alternative medicine, with its religious and dogmatic overtones, is no solution.) The healthcare industry is too resistant to change. Why is the American car industry collapsing? It was stagnant – too resistant to new ways of doing things. The statistician [3]W. Edwards Deming tried to interest American manufacturers in higher-quality ways of making cars, but failed. Then he went to Japan, where he succeeded. The newspaper industry is collapsing because it too has been stagnant. Its current problems started several years before the internet. Instead of trying to solve them, newspaper publishers continued to rake in high profits. Nothing lasts forever, Jacobs was fond of saying.

1. <http://www.blog.sethroberts.net/2008/04/12/jane-jacobs-and-collapse/>
2. [http://en.wikipedia.org/wiki/Collapse\\_\(book\)](http://en.wikipedia.org/wiki/Collapse_(book))
3. [http://en.wikipedia.org/wiki/W.\\_Edwards\\_Deming](http://en.wikipedia.org/wiki/W._Edwards_Deming)

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Raghu (2009-04-26 04:52:18)

Economics stagnation appears to be a blanket explanation. It is the meta reason for every case of collapse, whereas Diamond seems to suggest final cause explanations, or the modus operandi of collapse. There might even be cases where any amount of economic activity cannot overcome a catastrophic problem like, say, climate change.

JLD (2009-04-26 11:26:12)

Jacobs argument may be debatable against Diamond theory of collapse but it goes head on against Joseph Tainter inferred cause for collapse: Collapse comes from diminishing marginal returns on increase in complexity, i.e. the very "remedy" suggested by Jacobs. See "The Collapse of Complex Societies" <http://www.cambridge.org/us/catalogue/catalogue.asp?isbn=9780521386739>  
[http://p2pfoundation.net/Collapse\\_of\\_Complex\\_Societies](http://p2pfoundation.net/Collapse_of_Complex_Societies)

thekingofcheap (2009-04-27 08:13:04)

The "stagnant economy" theory might better be labeled "entrenched interests." As Jacobs points out in her own book, a once vibrant economy in the US produced street cars and trains that were the envy of the world. Now, the technology is even better and trains would solve many many problems, yet urban planning decisions are still made from the automotive paradigm. Why? The Gramsci in me posits that entrenched interests will do their best to shape culture and society to their worldview. Perhaps in Greenland the men with social status refused to compromise that status for the sake of cultural adaptation and the society's survival. It's not too difficult to imagine. Diamond paints them as clinging to their Scandinavian value system, but who actually insisted on clinging?

seth (2009-04-27 09:16:39)

thinkingofcheap, Jacobs sees entrenched interests as the basic problem in advanced economies, yes. People in power don't want anything new to come along that will threaten their power. But anything that causes stagnation, not just entrenched interests, will cause problems to build up without being solved.

Evelyn (2009-04-27 09:27:02)

Have you read *Thinking in Systems* by Donella H. Meadows? It's thought provoking, and talks about how we focus on events when talking about systems, and sometimes about flows, but often forget stocks. I think you'd like it.

Nathan Myers (2009-04-27 12:37:08)

Why assume either/or? Deforestation can happen in a vibrant economy, and can destroy a vibrant economy. Post-destruction, the deforestation may get worse. Diamond explains what happened in Japan: it wasn't economic vibrancy that saved them, it was a totalitarian dictatorship that enforced commands throughout the society that were fundamentally, if temporarily, incompatible with economic activity. It was, and could not have been, in the immediate economic interest of *anyone* in that society to do what was needed. Stagnancy isn't a cause of anything. It's a symptom. ("Oh, look how lazy all these patients are! If they'd just get busy, they'd be fine.")

Links « Rhymes With Cars & Girls (2009-04-27 19:41:24)

[...] Seth Roberts, on how Jane Jacobs helped him understand why he didn't like Jared Diamond's book *Collapse*: Jacobs says that the ecological disasters described in *Collapse* were due to economic stagnation. In a stagnant economy, problems pile up

without being solved. A common problem is too much reliance on one thing. In a healthy economy, new goods and services are constantly produced, often to solve problems created by old goods and services. In a stagnant economy, this doesn't happen. A rich economy can be just as stagnant as a poor one. [...]

## **Omega-3 and Prostate Cancer (2009-04-28 04:18)**

From [1] a new study:

Men who eat salmon and other fish high in omega-3 fatty acids on a regular basis have a decreased risk for developing advanced prostate cancer, new research suggests.

The association was most pronounced among men believed to have a genetic predisposition for developing aggressive prostate cancer.

Men in the study who ate one or more servings of fatty fish a week were found to have a 63 % lower risk for developing aggressive prostate cancer than men who reported never eating fish, study co-researcher John S. Witte, PhD, tells WebMD.

The study is not the first to find that men who eat fatty fish have a lower risk for the most deadly forms of prostate cancer. But Witte says clinical trials are needed to show that eating foods high in omega-3 fatty acids actually lower risk of aggressive prostate cancer.

"Needed"? Or is this like a Grammy winner thanking God in his acceptance speech? That is, ritualistic. I prefer this way of making the point:

Roswell Park Cancer Institute President and professor of oncology Donald Trump, MD, tells WebMD that there is enough evidence suggesting a protective role for omega-3 against prostate cancer to justify a large trial studying whether eating a diet rich in omega-3s – or even taking omega-3 supplements – can actually lower risk of prostate cancer.

Someday an astute person will write a paper called "How accurate are clinical trials?"

The protective power of fish oil is supported by the very low rate of prostate cancer in Japan – 15 times lower than in America, according to [2] this.

Thanks to Peter Spero.

1. <http://www.webmd.com/prostate-cancer/news/20090324/fatty-fish-may-cut-prostate-cancer-risk>

2. <http://www.jafra.gr.jp/eng/sumi.html>



John (2009-04-28 06:24:10)

Someone has written an article similar to "How accurate are clinical trials?" See [1] Contradicted and Initially Stronger Effects in Highly Cited Clinical Research by John P. A. Ioannidis or his more sensationally titled popular summary "Why Most Published Research Findings are False" published in Chance magazine.

1. <http://jama.ama-assn.org/cgi/content/abstract/294/2/218>

Gian (2009-04-29 01:57:12)

The rate of prostate cancer in India is 34 times less than US (see <http://3quarksdaily.blogs.com/3quarksdaily/2005/12/empty.html>) and most Indians eat very little fish or fish oil How do people that eat no fish get omega-3?

seth (2009-04-29 07:27:05)

There is omega-3 in grass-fed meat and in plants. But I would agree that the India fact suggests that there are promoters of prostate cancer in the Western diet.

Gian (2009-04-29 22:36:55)

Rapeseed oil is actually widely consumed in India. This oil has 2:1 ratio of short-chain omega-6/omega-3 fats. In India strong correlation is found between oil consumption and metabolic disorders. The relevant research has not been done but I believe that these disorders are more among the people that consume oils other than rapeseed.

Nathan Myers (2009-05-21 15:12:29)

Rapeseed oil is similar to canola, aside from containing "erucic acid", which Wikipedia says is an omega-9 oil that rats have trouble digesting. Apparently breeding rapeseed to taste less bitter damaged the process for making omega-9, so lacking it is promoted as a feature.

Omega 3 y cancer de prostata (2009-10-27 13:52:19)

[...] Enlace a la fuente del estudio. [...]

Sam (2010-01-14 12:49:54)

clinical trials are needed for fish oil. Maybe even for fish - if it's not the fish but something associated with fish happening in Japan. Just like the ill fated beta carotene cancer trials, fish may be awesome for you but fish oil could increase your risk. I remember when this stuff happened. Nary a peep out of mainstream media. <http://www.google.ca/search?hl=en&q=%22beta+carotene%22+cancer+smokers&btnG=Search&meta=&aq=o&oq=http://www.cancerhelp.org.uk/about-cancer/cancer-questions/vitamin-supplement-s-smoking-and-lung-cancer-risk> » In this study 18 % more lung cancers developed in the » people taking the alpha tocopherol and beta carotene pills. but ... but ... ANTIOXIDANTS ARE GOOD FOR YOU !!! Add the recent results showing vitamin C and E supplements block some of the body's adaptive responses to exercise. This kind of thing is one reason I'm skeptical of the vitamin D hoopla going on now.

## **Eczema, Nighttime Cough, Antibiotics, and Fermented Food (2009-04-29 03:45)**

When Alex Comb's son was an infant, he had pretty bad eczema. (Eczema is a reddish dry skin rash.) He also had a nighttime cough, a dry cough that started and stopped throughout the night. The cough lasted months. It turned out he was allergic to carragenen. The cough was mostly, but not entirely, eliminated by avoiding carragenen. Sometimes there were flareups.

When the son was 2 years old, he had a mild case of eczema. Doctors wanted to give him steroids. Alex started researching the causes of eczema and how to alleviate it. He came across research on the hygiene hypothesis. In a forum, he read that some people had tried probiotics for eczema with some success. Research on the subject had had mixed results but it seemed worth a try.

So Alex and his wife gave his son [1]DanActive (a probiotic dairy drink) every day for over a year. After a week or so, he noticed improvement. The nighttime cough completely went away. The eczema went away 95 %. This isn't a use of DanActive I could find on their website.

When his son was 3 yrs old, Alex and his wife stopped the DanActive. They assumed his immune system was better. He had gotten tired of drinking it all the time. He drank it less. His diet got broader too; he started eating yogurt. He never really stopped drinking it, he just drank it less.

A few months ago, the son started a 10-day course of antibiotics for a nasal discharge. A few days later, the nighttime coughing mysteriously resumed. It lasted at least 5 nights, and ended around the same time the antibiotics did. It was an asthmatic cough rather than a respiratory infection cough. An asthmatic cough is much drier and shorter.

A few weeks ago, the son was put on antibiotics for an abscessed tooth. Two or three days after antibiotics started, the asthmatic cough started again. Was it the antibiotics? He had not been drinking the DanActive so Alex and his wife started giving it to him again. They gave him the antibiotics earlier in the day and the DanActive before he went to bed. The very first night they did this the cough went away. They kept doing that and the cough stayed away. He has had no cough since then.

What's telling is the clarity of the correlations. They support the idea that we have a large need for bacteria-laden foods.

1. <http://www.danactive.com/>

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Carol (2009-04-29 04:54:23)

What I find interesting here is the relatively small amount of probiotic material required to show an improvement in symptoms in this example. Makes me wonder what the optimum amount would be in general, and if there is some benefit to the timing just prior to sleep.

seth (2009-04-29 13:10:26)

I think the tiny amount needed to show benefit indicates that the deprivation is great. If an engine has no oil, even a little oil produces a big improvement.

Chris49 (2009-05-08 13:10:48)

Seth, have you considered probiotic supplementation? I generally supplement during and after an anti-biotic regimen but am now quite curious about daily doses. Would also be curious about your take on pill-form probiotics vs. dietary changes. Full disclosure: I work for a company that distributes (but does not manufacture) probiotics from 15+ companies, along with a wide variety of nutritional supplements.

Dr Mike Matthews (2009-05-21 03:03:58)

Carol:- The idea is that the probiotics are cultures of friendly bacteria that then reproduce rapidly and colonise the gut. You only need a few to get the process going. The Hygiene Hypothesis makes great sense in the mysteries surrounding allergies and the overcleanliness of the modern world has given us a problem. As my father-in-law used to say "let them eat mud". They might get all sorts of other problems but less allergies I hope that helps

Mike A (2010-03-17 02:04:34)

I am so glad I found this blog. My daughter has had the coughing fits for 24 months (she's 5 1/2 yo). Inhalers, several doctors, and on nothing help. She routinely coughed until vomiting. After one 10 hour coughing fit I reached my limit and scoured the web. After putting in her whole medical history as search qualifiers I found this. The prior eczema and antibiotics were key indicators. After 3 days of drinking 1 probiotic shake a day, she showed very marked improvement. After 1 week, no symptoms. This is a girl who's been unable to run and play for 2 years. Who woke up coughing and gagging most nights. After 6 weeks of the same regimen, she still shows no symptoms and is running and playing full blast. The pulmonary specialist discounts the results we've seen as a fluke . . . we'll see. Previously my daughter's lung capacity was measured at 47 % of expected.

JohnG (2010-08-23 11:26:13)

Hey y'all, I stumbled across something a while back that you might be interested in. I've been suffering from allergies, allergic asthma, and exercise induced asthma for most of my life. I've taken some form of fast acting inhaler since I was about 14 (I'm now 44). I didn't take anything before that because the doctors attributed my breathing problems to simple allergies. I began taking steroidal inhalers approximately 18 years ago. The steroid inhalers worked well at first and allowed me to continue my passion of jogging. Then, over the course of a couple of years, I could no longer jog during the colder months. This progressively got worse over the years to the point I had to take 4 fast acting inhaler puffs during exercise and even that wasn't working well at all. Finally, after nearly going to the hospital after one particularly bad bout of exercise induced asthma, I went back to the internet in research. Before this, I had tried everything under the sun. I tried Vitamin D; it didn't work, but it did help my nasal allergies somewhat. I tried low carb dieting, and just like Dr. Lutz of "Life Without Bread" said, it made asthma worse while it practically cured my nasal allergies. I also tried the Dr. Sears approach of taking as much as 7.5g of EPA/DHA a day; no change at all in the exercise induced asthma. During this research, however, I re-reviewed the probiotic slant and found the Helminth story and all the trials that were going on in pubmed for them. With that logic in hand, I set about to find a probiotic that worked. I tried yogurt, kefir, fermented cabbage, and buttermilk to no avail. I then tried store bought probiotics one by one. I tried The Maker's Diet probiotic and it didn't help; but I do think it helped make a 20 year long wart go away. I also tried all forms of probiotics on the market; even LGG. Nothing. Finally, one day I bought this super high dose probiotic and took it along with a L. Sporogenes/bacillus coagulans. Voila, three days later I could really feel the difference during exercise. I continued that for 10 days. By the 10th day, I didn't have to hit my inhaler at all during exercise. Wow! First, I had to decide which probiotic did the trick. I didn't want to spend a ton on that high dose probiotic, so I stuck with the Bacillus Coagulans and it continued working normally. So, I found my probiotic. Now, I needed to verify it wasn't placebo. A close cousin to exercise induced asthma is the phenomenon of waking up sneezing and then promptly getting an asthma attack/or closure after that. I went off my bacillus coagulans that I had been on for 14 days. By the second day, I noticed a little difference. By the third day, I had to hit my inhaler during the workout. By the 10th day (bacillus coagulans supposedly lives in your intestines 7 days), I was full-blown back to having to use 4 inhaler puffs and it wasn't doing the trick. This was test phase one. I then went back on the bacillus coagulans for 10 days. The same process repeated itself. The nightly asthma attacks abated after about 4 days and the same no-puff needed during exercise continued as well. I then went back off the bacillus coagulans for 10 days. I got the asthma back at day 3. I've now been back on 5 billion CFU's of bacillus coagulans (duraflora) for 18 days. I don't have to use my inhaler for exercise. I can feel the asthma come on very slightly and then go away. I'll be curious to see if the success of this treatment continues through the toughest time of the year for me (the fall). The only side effect I've noticed is a sticky feeling in my hands that comes and goes along with a little itching on my nose, eyes, and ears that is not bad. I'd love to see if anyone else sees similar results. JohnG

Tom Bedford (2010-09-12 14:15:01)

Hello, Came across your blog. I am interested in finding out what kind of probiotic you used ( name, manufacture etc ). Thanks.  
Tom

JohnG (2010-12-08 10:02:39)

I used Source Naturals Dura Flora which is 5 billion CFU's of Bacillus Coagulans; formerly known as Lactobacillus Sporogenes.

## Sleep and the Immune System (2009-04-29 08:25)

[1]When I started to sleep better (due to standing and morning light), my health improved: I stopped getting colds. There was plenty of pre-existing evidence linking better sleep and better immune function; [2]a new study connects the two even more strongly.

1. <http://repositories.cdlib.org/postprints/117/>

2. <http://www.biomedcentral.com/1471-2148/9/8>

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david (2009-04-29 12:10:29)

Perhaps getting more sleep could be as important as or even more important than compulsive hand washing as a means of preventing/slowing the swine flu pandemic.

seth (2009-04-29 12:52:25)

yeah, plus eating more fermented foods.

Patrik (2009-04-29 22:38:25)

Read TS Wiley's Lights Out: Sleep, Sugar and Survival. <http://www.amazon.com/Lights-Out-Sleep-Sugar-Survival/dp/0671038680> She makes a strong case for sleep being the keystone to good health. Not only more sleep, but better sleep. She recommends we sleep in pitch darkness.

Evelyn (2009-04-30 08:00:15)

I came across this article on Vitamin D and influenza: <http://www.medicalnewstoday.com/articles/51913.php> What do you think of it?

Tiziano (2009-05-02 13:45:50)

Good sleep is definitely vital for improving the immune system. If you're interested, in this post you can find more about some natural immune system boosters: <http://zenplease.com/immune-system-boosters/>

Corinna Mayer (2009-05-03 11:31:15)

Professor Roberts, What do you mean by "standing and light" in terms of sleep promotion? Thank you, Corinna Mayer

seth (2009-05-04 10:36:30)

Corinna, in the link <http://repositories.cdlib.org/postprints/117/> you will find what I meant by standing and light.

Timothy Beneke (2009-05-05 08:02:02)

A recent study found that the French slept more, about 9 hours a night, than anyone else in the industrialized world. Nutritionists have long been puzzled by why the French, who eat so many "bad fats," have such good longevity and less heart disease than their diet might predict. Could it be the sleep?

## Parasites and Allergies (2009-04-30 02:20)

In 1973, a NIH parasitologist named Eric Ottesen discovered a high rate of worm infection on the tiny island of Mauke. He gave the islanders an anti-parasite drug. Nineteen years later, he did [1]another survey of worm infection.

Compared with 19 years ago, Ottesen found, there was much less filarial infection on Mauke. Only 16 percent of the population harbored the microscopic worms, as opposed to 35 percent on his first visit. The reduction resulted primarily from treating the islanders with the antiparasite drug diethylcarbamazine, which Ottesen had initiated during his earlier visit. And what about allergies? There's no question that there was a heck of a lot more allergy out there this time, says Ottesen. Nineteen years ago barely 3 percent of the people had allergies. This time it was at least 15 percent. The complaints ranged from eczema to hay fever and asthma to food allergies. What's more, the dominant problem was one nobody had even heard of 19 years earlier: octopus allergy. It's the number one offender, says Ottesen. People are breaking out in rashes, hives, swelling of the throat. Yet octopus is nothing new to them—they were eating it when we were there before.

Ottesen believes there is something specific to parasites that makes them protective. I suspect this is another example of the protective effects of bacteria and bacteria-like chemicals, which I believe may come from both food and parasites. Another possibility is that the antiparasite drug killed bacteria. Nothing is said about obesity; I wonder how their diet changed over the 19 years. A switch from homemade (nonsterile) food to factory (sterile) food may be part of the problem.

1. <http://discovermagazine.com/1993/sep/ofparasitesandpo264/?searchterm=mauke>

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Marc (2009-04-30 05:16:15)

But 19 years is a long time. What about other environmental factors? Pollution? Allergies have increased around the world and I doubt that it's related to parasites in most places.

Tom (2009-04-30 08:53:24)

Interesting post. Some other possibilities are that wheat and casein intakes may have risen over that time (more processed foods). (Or maybe Vitamin D intake fell, but that seems less plausible.) <http://drbganimalpharm.blogspot.com/search?q=allergy>

Walter (2009-04-30 14:09:27)

Seth, Great blog! Here is some research testing hookworm infestation and allergies:<http://research.nottingham.ac.uk/Vision/display.aspx?id=1177&pid=213> I believe there are clinics in Europe where they 'implant' hookworms to reduce or eliminate your allergies but I do not have a link. I seem to remember 50 worms were too much but 20 seems to work. Walter

Nathan Myers (2009-04-30 14:24:05)

The simpler hypothesis is that diethylcarbamazine itself damages the immune system. Do we have any contrary evidence?

seth (2009-05-01 08:53:08)

Nathan, I don't know of any outside evidence for or against your "simpler" hypothesis. There is plenty of outside evidence for the explanation I propose.

## 4.5 May

### Too-Effective Way to Lose Weight? (2009-05-01 03:41)

[1]Paul Rozin, a professor of psychology at Penn, found that people are reluctant to drink from a glass that contained a plastic cockroach. What would happen if people ate from a plate with a drawing of an insect?



Piatti sporchi = dirty plates. From a 2008 [2]food design competition in Turin. (English description [3]here.) The plates have pictures of a fly, a hair, a beetle, and a lipstick smudge. In a mass-market version, you could have a choice of insect sizes to control the amount of repulsion.

The competition was open to anyone. Most of the 50-odd entries were from students; a few were from professionals. This entry was from [4]Sayonara Rush Design.

Thanks to Francesca Zampollo.

1. <http://magazine.uchicago.edu/9904/html/taste.htm>
2. <http://www.studiooneoff.it/food-design/index.html>
3. <http://www.studiooneoff.it/food-design/csfd5eng25sett.pdf>
4. <http://www.sayonararush.com/>

david (2009-05-01 07:09:37)

But once people get used to eating off of plates with pictures of bugs, what will happen when there's a real bug on their plate?

Ted (2009-05-04 16:19:25)

I don't think the aversion will re-adjust the set-point, so food will be eaten elsewhere.

Gordon McNutt (2009-05-05 15:29:36)

Or once people begin to associate delicious food with bugs... gotta go, just had an insight for a new business plan.

The most efficient way to lose 20 lbs in 110 days. (2009-05-07 15:05:12)

[...] The way we eat isn't a process that's effectively manipulated by a conscious decision to eat less. The key to losing weight is reducing the amount of hunger that you have. Then you will eat less and therefore lose weight. Seth Roberts and The Shangri-La Diet has done a lot of research on actually reducing hunger through unconventional methods and also points to other research such as this. \_\_\_\_\_ I am always open for feedback on my posts. That might focused on the argument at hand or on my writing style. If your feedback would go offtopic feel free to send me a Personal Message. My posts generally don't contain medical or legal advice, if you have a problem seek the opinion of an expert I don't believe in Beliefs. Nassim Nicholas Taleb [...]

## How Could They Know? The Case of Healthy Gums (2009-05-02 04:16)

During my last dental exam, a month ago, I was told my gums were in excellent shape. Clearly better than my previous visit. The obvious difference between the two visits is that I now eat lots of fermented food. At the previous visit, my gums were in better shape than a few years ago. They suddenly improved when I started drinking a few tablespoons of flaxseed oil every day. [1]Tyler Cowen is the poster child for that effect. After a lifetime of being told to brush and floss more – which I did, and which helped a little but not a lot – it now turns out, at least for me, that the secret of healthy gums is: 1. Eat fermented foods. 2. Consume omega-3. These two guidelines are not only a lot easier than frequent brushing and flossing but have a lot of other benefits, unlike brushing and flossing.

Dentistry is ancient and there are millions of dentists, but apparently the profession has never figured this out. This isn't surprising – how could they figure it out? – but it is an example of a general truth about how things get better. (Or why they don't get better – if only dentists and dental-school professors are allowed to do dental research.) In The Economy of Cities, Jane Jacobs makes this point. For a long time, Jacobs says, farming was a low-yield profession. Then crop rotation schemes, tractors, cheap fertilizer, high-yield seeds, and dozens of other labor-saving yield-increasing inventions came along. Farmers didn't invent tractors. They didn't invent any of the improvements. They were busy farming. Just as dentists are busy doing dentistry and dental-school professors are busy studying conventional ways of improving gum health.

Jacobs also writes about the sterility of large organizations – their inability to come up with new goods and services. On the face of it, large organizations, such as large companies, are powerful. Yes, they can be efficient but they can't be creative, due to what Jacobs calls "the infertility of captive divisions of labor." In a large organization, you get paid for doing X. You can't start doing X+Y, where Y is helpful to another part of the company, because you don't get paid for doing Y. A nutrition professor might become aware of the anti-inflammatory effects of flaxseed oil but wouldn't study its effects on gum health. That's not what nutrition professors do. So neither dentists nor dental-school professors nor nutrition professors could discover the effects I discovered. They were trapped by organizational lines, by divisions of labor, that I was free of.

Hire a [2]San Diego orthodontist for advanced dental procedures.[3]

1. <http://www.blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>
2. <http://www.safariandmd.com/orthodontics.htm>
3. <http://www.blog.sethroberts.net/expires2012feb12>

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Eric (2009-05-02 13:25:46)

Wouldn't this argument suggest that people using mouthwash would experience poorer gum health? An alcohol mouthwash "sterilizes" the bacterial plaque.

Nansen (2009-05-02 16:33:57)

I know skepticism can be too easy, but isn't it possible that the fermented food replaced something else in your diet that happened to be bad for your gums?

Chris (2009-05-03 14:14:35)

<http://www.ncbi.nlm.nih.gov/pubmed/19405829?dopt=Abstract> This is a study of gum health while on a stone age diet. As far as I can tell from the abstract it looks like there were more bacteria in the mouth but the gums got healthier.

seth (2009-05-04 10:49:21)

Eric, I think my gums were red due to immune system overreaction. Because of too little bacteria everywhere in my body, not just my mouth. Nansen, the fermented food didn't replace anything except the use of spices. Eating 300 calories of fermented food probably made me eat 300 calories less overall, but no foods were eliminated, I just ate less of everything else.

Patrik (2009-05-04 23:59:49)

My bet is on omega-3. Or simply fat in general. I too had a Tyler Cowen-esque experience after eating Paleo/Hyperlipid. Many others in the Paleo community report the same. My "fermented food" consumption has stayed the same pre-Paleo and presently - almost indistinguishable from zero.

Aaron Blaisdell (2009-05-05 06:03:45)

Eric, I had the same thought, so I stopped using mouthwash now that I've moved closer to the paleo diet. I still eat some grains, but try to avoid wheat and whole grains if they haven't been sprouted or fermented. I also eat chocolate and ice cream a little bit and drink coffee every day, and wine or beer with my dinner. But I try to end my lunch and dinner with raw cheese because cheese has been shown to be beneficial to the enamel. I'll see at my next dentist visit in September whether I did the right thing.

Patrik (2009-05-05 10:49:35)

@Aaron Blaisdell This is a great (albeit not inexpensive) supplier of raw cheese and grassfed butter. <http://www.pastureland.coop/buy/direct> I have never had better butter (alliteration was accidental) in my life.

Aaron Blaisdell (2009-05-06 08:07:14)

@Patrick Thanks for the link. I recently bought some excellent raw cheese and grassfed butter from a vendor at my local farmer's market (Culver City, CA). It's operated by a funny French guy wearing an Australian bush huntsman's hat (he looks a bit like Crocodile Dundee). The butter is the best I've ever had and it comes from New Zealand. It is so yellow (I assume due to its high vitamin content) and creamy. I sometimes place a small sample in my mouth and take great pleasure in how it slowly melts, releasing rich flavors. It's as good as any fine, soft cheese.



wgl (2009-05-27 07:19:29)

Sorry, but you and your reference are wrong about farmers inventing tractors. I grew up on a dryland wheat farm. Innovation was a part of daily life. Dad and Uncles were always looking for a better way to do things. A friend of Dad's, needing a bigger tractor, took the front wheels off two tractors, hooked the front of one to the reinforced hitch of the other, making a pivot point. He used the hydraulics of the front one to steer, and linked the throttles together. Friends asked him to build one for them, so he built a jig. On the farm, we were always fixing things, trying new ways. Technology was a significant part of daily life. "Busy Farming" means fixing things, making them better. I would be willing to bet that the actual inventors of tractors grew up on farms. To say "They didn't invent any of the improvements" is just flat wrong.

seth (2009-05-27 09:05:55)

wgi, thanks for your comment but I fear you are missing the point. I agree, someone close to farming realized that farmers could benefit from tractors. Yes, farmers made small improvements in farming. Jane Jacobs's point was that the really big improvements, such as tractors, never began with farmers. To invent tractors you had to invent engines, and tires, and so on...farmers never did that. A farmer might have taken the last tiny step but couldn't have taken that step without a vast amount of invention by non-farmers.

Farmers Didn't Invent Tractors. They Were Busy Farming. | Bookmarks (2009-05-28 17:09:39)

[...] Excerpt `$(function() { $(" #startbox").html("There's a cliché in innovation / entrepreneurship which says, "Scratch your own itch." That is, solve problems that you know really well. Choose markets you know really well. But a lot of innovation doesn't come from the people who know the industry the best. That's because the closer you are to how something works now, the harder it is to imagine a new and better way of doing things. In pondering why millions of dentists haven't been able to figure out that flaxseed oil helps your gums, Seth Roberts channels Jane Jacobs in this excellent observation: For a long time, Jacobs says, farming was a low-yield profession. Then crop rotation schemes, tractors, cheap fertilizer, high-yield seeds, and dozens of other labor-saving yield-increasing inventions came along. Farmers didn't invent tractors. They didn't invent any of the improvements. They were busy farming. Just as dentists are busy doing dentistry and dental-school professors are busy studying conventional ways of improving gum health. Jacobs also writes about the sterility of large organizations — their inability to come up with new goods and services. On the face of it, large organizations, such as large companies;`  `$( " #startbox").columnize( { overflow : { id : " #trashcan", height : 240, doneFunc : function() { $(" #targetbox").append( $("")); $(" #targetbox").append( $("Read more...")); } } });`  [...]

Quotes (2009-06-14 06:07:48)

[...] The quote comes from: Seth's blog » Blog Archive » How Could They Know? The Case of Healthy Gums Breakthrough inventions doesn't come out of an established industry but from the outside. \_\_\_\_\_ I am always open for feedback on my posts. That might focused on the argument at hand or on my writing style. If your feedback would go offtopic feel free to send me a Personal Message. My posts generally don't contain medical or legal advice, if you have a problem seek the opinion of an expert I don't believe in Beliefs. Nassim Nicholas Taleb [...]

Morris G (2011-03-13 19:53:25)

Seth I discovered the connection between gum disease (similar to yours it seems) and nutrition but my conclusions are different. Following my GP's advice I moved my USDA diet to one with less meat, more legumes etc and suffered a marked worsening of gums plus other aging bio-markers which I did not recognize at the time. So I moved gradually in the opposite direction, eliminated all grains & legumes and now (1 year on) about 75 % of energy comes from fats. For reasons I will not go into, I believe root of the problem was inflammation of the gut and consequent inflammation of connective tissues (gums, joints). My caloric intake has slowly increased by almost 50 % while maintaining a BMI of 23. This makes no sense from the conventional understanding of metabolism but I trust my observations (many improvements) over theory. It is possible that my experience is a transient phenomenon, but time will tell and so far it's holding.

Seth Roberts (2011-03-13 20:41:57)

Morris, that's a fascinating and revealing story. Thanks for your comment. Perhaps your gums and other things have gotten

better because you have reduced pro-inflammatory molecules (such as omega-6) in your food. Omega-3 is anti-inflammatory. Grains have much more omega-6 than other foods. I don't think gut inflammation causes inflammation elsewhere but it is an indication of too much pro-inflammatory signalling and/or too-little anti-inflammatory signalling in the whole body- in other words, it is a sign of a whole system out of balance.

Miks ma järjest vähem äri raamatuid loen? | Indrek Maripuu (2011-07-14 03:23:03)

[...] alljärgnev vana mõttekäik tuli mul meelde, kui lugesin Jane Jacobsi väidet, et talunikud ei leiutanud traktorit, sest nad olid põllutöödega. Kas pole hea ja [...]

## Less of a Foodie (2009-05-04 10:43)

Two weeks ago I was in New York City. I have been there many times. For the first time, I was unexcited by the prospect of eating in the city's fascinating restaurants. I think it's all the fermented food I eat (at least two servings per day). All of it has complex flavors; all the New York restaurant food I liked had complex flavors. I am no longer complex-flavor-deprived.

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Chris (2009-05-05 14:00:28)

More on the benefits of bacteria: Probiotics may be able to help you keep fit and slim [http://www.eurekalert.org/pub\\_releases/2009-05/uoc-pmb050509.php](http://www.eurekalert.org/pub_releases/2009-05/uoc-pmb050509.php)

oslo (2009-05-09 03:55:47)

next time you are in new york, try HANGAWI : korean vegetarian. They know how to ferment. Though at home japanese eat lots of fermented foods, miso and a bit of pickle is as far as it usually goes in japanese restaurants. Exported and restaurant -wise, korean is the ticket, because generally anything you order comes with a major spread of pickled things. Come to think of it... maybe that's one of the reasons why korean-americans often tend to be notably chubby - because they aren't getting enough kimchee!

seth (2009-05-09 15:15:36)

thanks for the recommendation. My first nice meal in New York this latest trip was at a Korean restaurant. There's something about Korean food . . . I've been to Hangawi, but not in several years.

Seth's blog » Blog Archive » Why Do Children Pick Their Nose? (2009-08-13 09:30:19)

[...] Do kids who eat more fermented food eat less snot? As I posted earlier, since I started eating lots of fermented food, my desire for fancy restaurant food has gone way down. [...]

Seth's blog » Blog Archive » Why Do Cats Lick Themselves? (2009-09-03 18:10:51)

[...] Perhaps cats lick themselves to ingest more foreign bacteria and dirt, which they need to be healthy. Test of this proposal: Feed a cat more fermented food, it should lick itself less. (Just as I became less of a foodie when I ate more fermented food.) [...]

## Department of Self-Congratulation (The New Yorker) (2009-05-05 22:03)

The May 4, 2009 issue of The New Yorker contains three readers' letters, no doubt selected from a much larger number. They begin like this:

Ian Frazier, in his hilarious sendup . . .

Jill Lepore's richly detailed article . . .

Anthony Lane's sensitive and nuanced review . . .

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Andrew Gelman (2009-05-06 06:17:34)

<http://www.blog.sethroberts.net/2009/03/27/a-shangri-la-diet-skeptics-log/>

seth (2009-05-06 07:12:46)

for more examples, see <http://www.blog.sethroberts.net/category/self-congratulation/>

### **Screenings of the movie FRESH (2009-05-06 07:18)**

Maybe someday someone will make a movie called ROTTEN – about fermented food and how it is good for you. Until then, you might want to see FRESH.

[1]<http://www.freshthemovie.com/screenings/>

1. <http://www.freshthemovie.com/screenings/>

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### **How to Cook Hamburger: Let it Rot First (2009-05-06 07:50)**

Before cooking some hamburgers, I mixed spices into the meat. I have done this countless times. For the first time, I thought: I need to add spices because the meat isn't rotten enough. Properly rotted meat would need salt but not other flavoring.

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david (2009-05-06 08:09:13)

Man, I'm glad I'm a vegetarian.

James (2009-05-06 09:10:52)

I believe we carnivores call this 'aging' rather than rotting - has a better ring to it. Amazing how many people love aged beef but are repulsed by the actuality behind what that phrase really means.

Darrin Thompson (2009-05-06 09:39:40)

I was taught in school that spices were valued to cover the awful rotten tastes. Not that I'm saying it must be true, but you could be jumping to the conclusion a tad early. Historically weren't spices practically legal tender? Maybe I know nothing.

Tim Ozenne (2009-05-06 13:51:26)

How to know when meat is optimally rotted, but not yet dangerous?

Tom Cook (2009-06-02 01:54:46)

In meat retailing circles this would be referred to as 'hung' meat. Deserving customers will ask for a piece of well hung rib of beef or filet steak but to be honest I have never been asked for hung ground mince beef. Tim - the feel and overall smell of the mince would be the telling factor regarding its continued shelf life. Mince will become somewhat slimy/sticky to the touch and will smell..

## **The South Asian Paradox (2009-05-06 10:39)**

Urban vegetarians in South Asia have high rates of heart disease in spite of low rates of obesity and low LDL levels. I learned about it [1]here.

1. <http://www.thepaleodiet.com/articles/Hunter-Gatherer%20Mayo.pdf>

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Ashish (2009-05-06 23:13:04)

What are the approved ways to cook meat? Not grilling, I gather (from the article).

v (2009-05-08 12:39:58)

Aren't Indian's genetically predisposed to heart disease, diabetes.

Gian (2009-05-11 02:06:46)

I am an urban south asian (though not a vegetarian one). I think that high rate of disease in urban india is more due to large consumption of pufa-rich vegetable oils.

seth (2009-05-11 05:32:24)

Gian, that's plausible. See The Israeli Paradox: <http://www.blog.sethroberts.net/2007/02/02/the-israeli-paradox/>

## **The Fantasy of Fresh (2009-05-06 17:25)**

From Fresh: A Perishable History (2009) by Susanne Freidberg, p. 3:

Of all the qualities we seek in food, freshness best satisfies all these modern appetites. It offers both proof of our progress and an antidotes to the ills that progress brings.

Oops. A better title would have been Fresh: History of a Delusion.

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david (2009-05-06 19:56:50)

I think you're getting carried away with the rotten food thing. In some cases, "aged" foods have properties that are beneficial and I'm sure that for a variety of cultural and economic reasons people eat far less aged food now and have an aesthetic aversion to even slight spoilage of any food that we couldn't have afforded in the past, but there are limits to what the human digestive can deal with. Just as there is a reason that humans have a taste for fermented foods, there is also a reason we have an aversion to spoiled food. I've never had food poisoning myself but from what I hear it's among the the most painful kinds of illnesses you can have. I think to make this case you have to pick specific foods that are better aged and demonstrate the benefits (and acknowledge that certain other foods either have no benefits if eaten aged or should be avoided if they are spoiled). You made the case with omega-3s and your self-experimentation using the balance and math tests. With fermented foods, I haven't seen in your blog posts the empirical evidence to back it up the claim that they are beneficial. It does sound plausible that we need fermented food and since you posted about it I've started drinking kombucha and would say that my digestive tract seems happier than it's ever been, but I don't keep any kind of diary that would give me good data to back up the claim. I think one clear weakness of self-experimentation is that it will miss long term effects (good and ill) of some practices. For example, perhaps eating enough fermented food substantially lowers your risk of colon cancer. Self-experimentation can't address that question at all.

seth (2009-05-07 05:15:02)

David, thanks for your comments. When you talk about missing a lower risk of colon cancer, you are describing a weakness of all experimentation, not just self-experimentation. As for the dangers of "spoiled" food, what about the dangers of heart disease? (Not to mention allergies, autoimmune diseases, and the common cold.) Which should we care more about? The Eskimos, with very low rates of heart disease, eat/ate lots of "spoiled" fish. Long ago many people thought white bread and white rice were better (cleaner, purer) than whole-wheat bread and brown rice.

david (2009-05-07 07:00:21)

I agree with your general point: It seems plausible that for some kinds of foods prepared and handled in certain ways, it's possible to eat and derive health benefits from food that would be considered spoiled by our standards. But from your posts it sounds like you're saying "all spoiled food is good, in fact better than, fresh food." I suspect the truth is more nuanced: that some foods, prepared and handled properly, offer benefits when eaten aged that they don't when eaten fresh (and likewise offer benefits when eaten fresh that they don't when eaten aged...the Eskimos would have eaten fresh as well as ripe fish). Other foods, should be avoided when either under or over-ripe. You would need to study the traditional methods of food preparation of various cultures to recover these technologies.

seth (2009-05-07 10:17:58)

There's a long way from fresh to spoiled. I'm certainly not saying "all spoiled food is good"; rather that we are often too close to the fresh end of the spectrum in what we eat. Maybe in 50 years my views will be seen as similar to the idea that brown rice (harder to store) is better than white rice (easier to store), just as food allowed to age is closer to spoiling than fresh food. I agree that some food really is best fresh - vitamin C for example degrades with time.

Rob (2009-05-07 18:44:34)

I wonder if the author in the quote from the post above would consider some of the fermented foods which Seth advocates as "fresh"? A natural yogurt would likely be considered fresh when compared to irradiated, hermetically sealed mylar packet of go'gurt. I also think that a call for fresh food is 100 % compatible with Seth's views on healthy intake of bacteria. Compared with canned peas, fresh peas for the farmers market will give your gut much more of the good stuff. Nor, do I think that spoiled and fermented are synonyms – fermentation is a food preservation strategy.

### **The Experts Speak: Nutrition (2009-05-07 05:47)**

I have nothing against a paleolithic diet, but I think its advocates, like many experts, are overconfident. It's not easy to know which features of a diet that varies in 20 ways from modern diets are the crucial ones. I came across [1]this while reading about paleolithic diets:

The general gist of eating like a caveman – namely, focusing on foods in their whole, natural state, is not going to get much argument. "It comes down to the advice your mother gave you," says Leonard [William Leonard, chair of the anthropology department at Northwestern University]. "Eat a balanced diet and a diversity of foods."

I beg to differ.

1. Whole, natural state. I find flaxseed oil very helpful. It supplies omega-3 missing from my diet, but presumably present in diets that contained lots of seafood or vegetation-fed meat. Flaxseed oil is not food in a whole and natural state.
2. Whole, natural state. I find fermented food very helpful. Bacteria break down food, making it less whole. Modern food of all sorts is unnaturally low in bacteria (due to refrigeration, food safety laws, shelf-life requirements, etc.), just as modern meat is unnaturally low in omega-3. Fermented food is unnaturally high in bacteria, correcting the deficit.
3. The advice your mother gave you. Traditional diets, yes, what your mom thinks, no. When I was growing up we ate margarine instead of butter – poor choice. We had skim milk, not whole milk – poor choice. The absence of butter and whole milk is, if Weston Price is right, why my teeth are slightly crooked. We ate almost no fermented food – very poor choice. (Which I suspect is why I had mild allergies.) We rarely ate fish – poor choice. And yet we didn't have a TV – very good, very unusual choice. Even my mom, who thought for herself far more than most moms, had serious misconceptions about nutrition. Given the epidemic of childhood obesity, not to mention less visible increases in autism, allergies, and ADHD, I am very skeptical that the average kid's mom knows what to eat.
4. Eat a balanced diet. Plenty of communities in excellent health eat diets that American experts would describe as not balanced at all – no fruit for example, or too much dairy. Eskimos and the Swiss in isolated villages studied by Weston Price are two examples. Price found that a wide range of diets, most violating one or more popular nutritional precepts, produced excellent health.
5. A diversity of foods. Several healthy communities studied by Price did not eat a wide range of foods. The human diet became a lot more diverse around the time of the "[2]broad-spectrum revolution" – broad-spectrum meaning wider range of food. Around that time human height decreased. Apparently the new, more diverse diet was less healthy than the old diet. An anthropology professor might know this.

The title of this post comes from the book *The Experts Speak* which is full of examples of how experts were wildly

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wrong.

1. <http://health.msn.com/nutrition/articlepage.aspx?cp-documentid=100237691&page=1>
2. <http://www.pnas.org/content/98/13/6993.full>

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Keep It Simple « Heather Eats Almond Butter (2009-05-08 08:00:59)

[...] As long as I'm getting all of my nutrients and eating healthy, why shouldn't I eat my same simple foods over and over if that's what I want? Â Our ancestors ate this way, and I don't remember reading anything about obesity or diabetes in Little House on the Prairie, ya know? Â Seth Roberts made a really good point in this blogÂ post yesterday: [...]

DYSPEPSIA GENERATION » Blog Archive » The Experts Speak: Nutrition (2009-05-08 08:15:01)  
[...] Read it. [...]

Maggie (2009-05-08 10:31:17)

You should research out fruitarianism :) <http://www.youtube.com/watch?v=PKeMgcLnV9s>

James Hanley (2009-05-08 11:41:49)

*a wide range of diets, most violating one or more popular nutritional precepts, produced excellent health.* Humans are omnivores, after all, so it's not too shocking to find we're adapted to a variety of different diets.

bennetta (2009-05-08 14:05:51)

Seth, I find it interesting that you mention the Eskimo diet. My roommate, who is an Alaskan native (and spends 3-6 months of the year there) often brings it up when discussing food we eat. She has noted that the Alaskan Eskimo diet is similar to what we consider to be the classic "low carb/Atkins" diet, with one exception: fermented food, which American low carb diets lack. Atkins/low carb diets are infamous for causing digestive problems, foul breath, and equally bad body odor. Eskimos do not have digestive problems or foul breath. Why? We think it's because Eskimos eat rotten fish. I was curious about what you might have to say about this.

seth (2009-05-08 20:22:54)

Bennetta, that's fascinating. Certainly lack of fermented food can cause digestive problems, that's very clear. I will add bad breath and body odor to the list of things possibly caused by not enough fermented food. It makes a lot of sense that eating fermented fish would improve digestion of fish thus reducing body odor caused by incomplete digestion. (I believe that Asians often think that Americans, who never eat rotten meat, smell of meat.) In [1]an earlier post I drew attention to the rotten fish that Eskimos eat.

1. <http://www.blog.sethroberts.net/2009/01/26/the-inuit-paradox/>

Etl World News | Assorted links (2009-05-08 20:23:59)

[...] 2. Seth Roberts on the paleolithic diet. [...]

Sean (2009-05-10 09:54:23)

We're not designed to live much past 35; in fact dying around that time would historically mean more resources available for our progeny. A perfect paleodiet might just help us limp along to say, threescore and ten. Maybe what we actually need is a diet not found in nature at all.

bjarne (2009-05-14 00:25:32)

I think that's the AVERAGE lifespan Sean, I think it was lowered significantly by the fact that lots of young children died

Hyper-Links « Rhymes With Cars & Girls (2009-05-14 18:49:24)

[...] Seth Roberts says the experts get it wrong on nutrition. My rule of thumb for nutrition is that whatever the conventional New York Times-reading chatterbox/busybody wisdom thinks is good for you, eat the opposite. If you hear chiding and tsk-tsking from others about how many "grams of fat" or "bad cholesterol" or (this, that and the other bogeyman of the Oprah-watching crowd) that the food you're eating has, you know you're on the right track and indeed whatever you're eating will probably be discovered to be good for you sometime in the next ten years. So just eat, and smile, and laugh and laugh at their ignorance and envy - that's what I do. [...]

Random Links L « Random Musings of a Deranged Mind (2009-05-26 15:19:57)

[...] Random Links L Paleolithic Diet:Â Why today's "paleolithic diet" may not match that of yesteryear.Â [...]

Andrew (2009-05-29 07:45:08)

The quote at the top is reasonable. Of course there will be exceptions and you've done a good job of highlighting some of them. But these are not the norm. One of the main problems with the typical Western diet these days though is that it's unbalanced, lacking adequate fruit and vegetables and very little food is eaten in its whole and natural state.

## **Fermentation Basics: Using Yogurt (2009-05-07 08:12)**

Brent Pottenger writes:

In place of mayonnaise, my brother started using plain yogurt to make tuna salad. In the process, he learned, "For some reason, the tuna tastes better after sitting in the refrigerator for a day or two." Tuna salad made with yogurt is tolerable when freshly made, but it definitely gets much better as it ages.

Now, when I make smoothies, I blend the fruit and the yogurt, then I let the smoothie sit for some hours, minimally, before I drink it.

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Tom (2009-05-07 12:40:06)

I wonder if this is part of why leftovers so often taste better?

seth (2009-05-07 15:24:51)

Tom, good point. I have often wondered why leftovers taste better. I used to think that during the first meal you learned the flavor-calorie association. But maybe it is simply fermentation. If so, leftovers should taste better even if you didn't taste them originally. That is, they should taste better on Tuesday whether or not you tasted them on Monday.

Dennis Mangan (2009-05-07 20:10:32)

There's no way that tuna sitting in the fridge for 2 days or a smoothie left out for a few hours will have any significant amount of bacteria. Seth, please check out some microbiology before you make these statements. The tuna is sterile in the can and needs to be seeded with bacteria - the right kind, hopefully, assuming that one knows what that is - and left at 37 Celsius for quite some time before you'd find the billions needed for your thesis. Likewise the smoothie will have minimal bacteria when



prepared plus everything is cold to begin with presumably. Leftovers at refrigerator temperature will not breed bacteria in a day or 2; that's why they invented refrigerators.

seth (2009-05-07 21:50:32)

Dennis, many people take several hours to put leftovers away – a difference that suggests another test: Do the leftovers taste better if they are left out longer before being refrigerated?

Dennis Mangan (2009-05-07 22:32:42)

Seth, maybe. In any case I realize my comment sounds rather harsh - my apologies. It's just that with your idea regarding fermented food, you're not distinguishing between bacterial species, which surely would be important, and numbers, likewise. For instance, you mentioned wine in other posts - most of the microbes there will be fungi, not even in the same kingdom as bacteria; yogurt will have lactobacilli, rotten meat probably a combination of gram pos and neg, and so on. Also, leftovers are going from a completely sterile state due to cooking - where's the bacteria coming from?

seth (2009-05-07 23:02:34)

Dennis, the human immune system is sensitive to many things much different than bacteria – viruses, for example. So the type of bacteria is unlikely to matter. As for the sterile cooked food, bacteria come from the air. Think of sourdough, supposedly easier to make in the San Francisco Bay Area than other places because of the air. It's also possible I'm wrong, that leftovers taste so good for some other reason. But since it is a huge effect by scientific standards – how much better leftovers taste – and mysterious, it is certainly worth study.

JohnN (2009-05-10 12:41:51)

I want to echo Dennis' comment. Of the two forms of fermentations, saccharolytic and proteolytic, only the former is recognized as beneficial while the latter is pathogenic. It is certainly worth study to prevent "attribute substitution". Cooks know that food - braised or confit dishes in particular, tastes much better after given sometime for flavor to commingle so there is an alternative explanation.

seth (2009-05-10 12:57:00)

JohnN, proteolytic fermentation is "pathogenic"? What do you mean by that? And what do you base that on? I have been unable to figure out what you are saying. I managed to find that some venoms contain proteolytic enzymes but not more than that. I agree that meat fermentation is more dangerous than fermentation of milk and other sugar-containing foods.

### **Assorted Links (New York City) (2009-05-07 16:46)**

- [1]Robert Caro on Jane Jacobs
- [2]Inside the New York Times
- [3]Making kombucha in Brooklyn

Thanks to Joyce Cohen and Marian Lizzi.

1. [http://www.rockfound.org/efforts/jacobs/090808caro\\_transcript.pdf](http://www.rockfound.org/efforts/jacobs/090808caro_transcript.pdf)
2. <http://www.nytpick.com/>
3. <http://www.re-nest.com/re-nest/how-to/how-to-brew-your-own-kombucha-083972>

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**Spring at Tsinghua University (2009-05-08 05:40)**



By Wensheng Sun.

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Aaron Blaisdell (2009-05-08 06:50:04)

It's good to see that they have corvids (crows, ravens, magpies, and the like) on campus. Perhaps if I join you for a sabbatical there sometime I can study crow cognition without having to set up an animal lab.

Jeanne (2009-05-15 07:44:37)

Is that a magpie? Is it enrolled at the University? (Corvids are smart birds!)

### **Mosquitoes Praise Fermented Food (2009-05-09 04:44)**

[1]A new study in PLoS Pathogen has found that mosquitoes benefit from bacteria-laden food. The bacteria stimulate their immune system and protect them against the malaria parasite. From the abstract:

Malaria-transmitting mosquitoes are continuously exposed to microbes . . . Global transcription profiling of septic and [microbe-free] aseptic mosquitoes [made aseptic with antibiotics] identified a significant

subset of immune genes that were mostly up-regulated by the mosquito's microbial flora . . . Microbe-free aseptic mosquitoes displayed an increased susceptibility to Plasmodium infection while co-feeding mosquitoes with bacteria and P. falciparum gametocytes resulted in lower than normal infection levels. Infection analyses suggest the bacteria-mediated anti-Plasmodium effect is mediated by the mosquitoes' antimicrobial immune responses, plausibly through activation of basal immunity.

Another view of this study is that it is more evidence of the dangers of antibiotics: They weakened the immune system. As you may know, and as I was told recently by a pediatrician, doctors "hand out antibiotics like candy."

Thanks to Janet Rosenbaum.

1. <http://www.plospathogens.org/article/info%3Adoi%2F10.1371%2Fjournal.ppat.1000423>

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Riz (2009-05-09 12:23:13)

Hi Seth, I thought you might be interested in this piece of research regarding potential obesity prevention in pregnant women ... from probiotics of course! <http://www.medicalnewstoday.com/articles/149235.php> Also, I was just wondering whether jars of fish and other foods in brine, oil and vinegar count as fermented foods, along with pickles?

seth (2009-05-09 21:59:26)

do jars of fish, etc., in brine, oil, and vinegar count as fermented foods? Not brine, which inhibits bacteria, but basically any food at room temperature will accumulate more bacteria than the same food stored cold. I suspect however there are vast differences in the potency of fermented foods – some are far more beneficial than others. Although cooking kills bacteria, the dead bacteria may still be recognized as "strange" by the immune system and thus keep it awake.

Kirk (2009-05-10 05:41:27)

Huffnagle in The Probiotics Revolution says that the metabolic byproducts of probiotics provide a health benefit, even if the food has been heated enough to kill the bacteria. One study he mentioned used three groups; the first received cold yogurt with live bacteria, the second received that same bacteria which had previously been heated, and the third received unfermented milk. 'Live bacteria produced the most benefits; unfermented milk gave the least. But the heated yogurt fell somewhere in between.' He labels these byproducts 'metabiotics'.

Mark (2009-05-11 13:41:14)

Doctors hand out antibiotics like candy because patients relentlessly demand them. It can wear out even the most well-intentioned doctor. It's especially severe in pediatrics, where every genius parent believes he or she can diagnose an ear infection better than the doctor.

seth (2009-05-28 20:38:53)

"Because patients relentlessly demand them"? Sounds like bad doctoring. Abdication of responsibility.

### **Academic Horror Story (Reed College) (2009-05-09 16:20)**

In Malcolm Gladwell's Outliers, Reed College, my alma mater, gets some very bad publicity. An extremely smart student named Chris Langan chose Reed over the University of Chicago, which thirty years later he calls "a huge mistake."

While he was at Reed, his mom failed to fill out a form to renew his scholarship. Here's what Langan told Gladwell:

At some point, it came to my attention that my scholarship had not been renewed. So I went to the office to ask why, and they told me, Well, no one sent us the financial statement, and we allocated all the scholarship money and it's all gone, so I'm afraid you don't have a scholarship anymore. That was the style of the place. They simply didn't care. They didn't give a shit about their students. There was no counseling, no mentoring, nothing.

Losing his scholarship did Langan enormous damage. He never finished college. According to Gladwell, Langan is wrong.

Langan talks about dealing with Reed . . . as if [it] were some kind of vast and unyielding government bureaucracy. But colleges, particularly small liberal arts colleges like Reed, tend not to be rigid bureaucracies. [No examples given.] . . . Would [the physicist Robert] Oppenheimer [supposedly more persuasive than Langan] have lost his scholarship at Reed? . . . Of course not.

That is the myth of the small liberal arts college, yes. But how true is the myth – at least in the case of Reed?

About seven years ago, I returned to Reed to give a talk. I had some spare time so I decided to visit Reed's best-known course, a survey of Western Civilization that is required of all freshman and sophomores. I hadn't had to take it because I entered Reed as a junior. I wondered what it was about. I found it. The large lecture hall was almost empty. Maybe there were 15 students; the enrollment must have been about 400. A young professor was giving a staggeringly boring lecture about some Greek classic.

Later I asked a Reed student why attendance was so low. She said that in the very beginning, fall semester (it was now spring semester), attendance was high but the students quickly realized the lectures weren't helpful and stopped coming. The lecturer, I realized, didn't care about the students. He didn't have tenure and was trying to impress an older professor I'd seen in the audience who might influence whether he got tenure.

I've told Reed professors this story. They did not explain why a required course, really the required course, supposedly the centerpiece of a Reed education, was/is so poorly taught.

I think Langan's story and the Western Civ story are two examples of how most colleges, including small liberal arts colleges, are not run for the benefit of students. I imagine the Reed professors I spoke to understood this; but it was unspeakable. I think the result is a power-law distribution of damage: A large fraction of students suffer small bad things (such as a lecture that's a waste of time and tuition) and a small fraction of students (such as Langan) suffer nightmarishly-bad treatment.

[1]For Whom Do Colleges Exist?

[2]The !Golden Rule and Reed College.

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1. <http://www.blog.sethroberts.net/2007/03/31/for-whom-do-colleges-exist/>

2. <http://www.blog.sethroberts.net/2007/04/07/golden-rule-and-reed-college/>

Lauren Rosenthal (2009-05-09 19:38:47)

I went to the U. of Chicago, poor Langan, Chicago is no different from Reed, probably worse. Complete contempt for the undergrads.

Anthony (2009-05-09 23:32:11)

I like the idea of a power-law distribution of damage. I wonder if Langan was actually damaged by not finishing college. My guess is that a large percentage of wage benefits attributed to college are selection effects. If you took 100 people about to go to university, and then had 50 of them not go to university but instead do other useful things with their time, in 25 years which group would have the higher mean and median net worths? I wonder ... The university I went to for my undergrad focused mostly on research. Teaching undergrads seemed a distant second (or third, or ...) in priorities, despite lip service. It was very big, and so suffered from a lack of sense of community. I was as an atom floating in the academic void, and I have virtually no sense of loyalty or fondness for the place now (their alumni fundraising letters were to no avail). Professors and classes ran the gamut, from big lecture halls with boring lecturers who could barely speak English (typically in 1st or 2nd year), to small, intimate seminars with good teachers. In retrospect, it would have made much more sense to have researched the options available much more before selecting a university. At the time, I partially blamed myself for not liking the (boring, unintelligible, and so on) lectures.

C. Bailey (2009-05-28 19:24:22)

I go to Reed College, and I consider it incredibly valuable and find this to be a very biased presentation of the academic situation at Reed. Humanities is a required course, and many students enjoy it—I personally went to nearly all the hum lectures. It's true that attendance drops off second semester in the spring, but I have a few comments on this matter: 1) Reed tends to take a sink-or-swim approach to academics. It takes risks on who it admits, meaning that there are a lot of freshmen who realize they are not up to the academic rigors of Reed, or who have to learn to get their shit together. So hum is not the pinnacle of education at Reed—rather it is an introductory class with a group of students with vast interests, some of whom will stay at Reed, some of whom will not. 2) I would say that hum is far from the centerpiece of the Reed education—hum is getting your feet wet. The centerpiece of the Reed education is writing an undergraduate thesis. Which is a much more personalized experience. 3) There are other aspects of hum that are much more personal, primarily in the conference section. For example, paper conferences where you would sit down with your professor and discuss how you could have improved your paper for an hour. 4) When you are in introductory classes, you have to make more of an effort to get individualized attention even at a liberal arts college just by nature of the fact that professors are more invested in students they have a lasting relationship with and know well. I have also found professors at Reed to be nothing but accessible and accommodating. One professor let me work in his lab last semester. Another regularly sends me links to webpages of people who do research I might be interested in doing in graduate school. Another invited me over to his house to spend Christmas with his family when I got caught in a snow storm. I can drop by their office to ask academic questions or share a journal article that I find interesting whenever their door is open. My professors work incredibly hard solely because they love to teach and bend over backwards to benefit their students. Hell, in my introductory chemistry class, my professor knew all 150 of our names.

seth (2009-05-28 20:27:17)

Your professors "love to teach"? I'd love to hear details that back this up. My guess is some of your teachers like to teach. In a recent fund-raising letter, the president of Reed asked for money so that professors could . . . spend less time in the classroom. The details you did give – about memorizing names, for example – don't strike me as revealing love of teaching. I don't follow your point #4.

Seth's blog » Blog Archive » Why One Student Loves Tsinghua University (2009-06-28 21:08:28)

[...] After reading my post about Reed College's horrible treatment of Chris Langan, a friend of mine who is a student at Tsinghua University wrote this: I feel so lucky that we have lots of brilliant scholars who are at the same time good teachers. Many of them do care about undergraduates and give good advice. I don't know which education system for undergrads [Tsinghua's or Reed's] is best, for colleges that do poorly in educating undergrads [like Reed] may produce students who are more independent. But being educated here, I have to say I love Tsinghua and its teachers a lot. [...]

ACOOFRAGRANTGOLDBALL (2010-03-18 16:41:59)

I like this discussion. I'm a Reddie as well- hi C. Bailey. I get point #4. From my experience, professors, in the sciences only, tended not to be as open to me as a freshman as they have been to me as an upperclassman. Not to get the material at hand- I've experienced both faces of the Reed College education that have been mentioned: A not student-oriented lecture and course agenda, a side of Reed which I'll call regard as an institutional orientation- this aspect can also be thought of as a disciplinarian agenda- and an aspect of Reed focused strongly on the process of students raging through the material which is supported through conferences with students and professors. It really seems like Reed can function as a do or die kind of process. But let us not forget that this isn't just at the advantage of the students. There is a common discursive which simply sees the academic mode, lazily (no offense C. Bailey) summarized as do or die, as a beneficial and positive processes: It is to the benefit of the students to face the challenges of Reed education- it is preparatory and advantageous for future serious scholars. Reed supports this claim through it's common propaganda of giving students the life of the mind, a challenging education, an education that allows smart kids to really go down the rabbit hole of their dreams (that's what she said). Now when have we found the institutional doors of knowledge and truth to ever not be linked to mechanisms of power? Not to be linked to homeostatic visions of a political unit? While individuals may see the benefit of going through a rigorous intellectual process, while individuals enjoy having fun as intellectuals, there is truly more going on here than can be summed up by Reed College positivism. That said, all of my professors at Reed have always taken the time to explain and discuss presented information above and beyond office hours. Got a question about a concept at 6:00 pm? I can shoot a prof and email- I could get an explanation, further readings, etc. So honestly, there does seem validity to C's point regarding the care the professors put in to teaching material.

ACOOFRAGRANTGOLDBALL (2010-03-23 06:14:29)

(Revision of Previous Post) I like this discussion. I'm a Reddie as well- hi C. Bailey. I get point #4. From my experience, professors, in the sciences only, tended not to be as open to me as a freshman as they have been to me as an upperclassman. Not to forget the material at hand- I've experienced both faces of the Reed College education that have been mentioned: A not student-oriented lecture and course agenda, a side of Reed which I'll call regard as an institutional orientation- this aspect can also be thought of as a disciplinarian agenda. Then there is the aspect of Reed focused strongly on the process of students raging through the material. This is supported through conferences with students and professors. It really seems like Reed can function as a do or die kind of process. But let us not forget that this isn't just at the advantage of the students. There is a common discursive which simply sees the academic mode, lazily (no offense C. Bailey) imbedded in the phrase do or die, as a beneficial and positive processes: It is to the benefit of the students to face the challenges of Reed education- it is preparatory and advantageous for serious future scholars. Reed supports this claim through its common propaganda of giving students the life of the mind, a challenging education, an education that allows smart kids to really go down the rabbit hole of their dreams (that's what she said). Now, when have we found the institutional doors of knowledge and truth to ever not be linked to mechanisms of power? Not to be linked to homeostatic visions of society? While individuals may see the benefit of going through a rigorous intellectual process, while individuals enjoy having fun as intellectuals, there is truly more going on here than can be summed up by Reed College positivism. That said, all of my professors at Reed have always taken the time to explain and discuss information presented in class above and beyond class and office hours. Got a question about a concept at 6:00 pm? I can shoot a prof an email and could expect an explanation, further readings, etc. If not that, I'm free to stop by their office with either lots of welcome of future scheduling. So honestly, there does seem validity to C's point regarding the care the professors put in to teaching material.

## **The Good Scots Diet (2009-05-09 19:10)**

The Spring 2009 issue of Wise Traditions, a quarterly sent by the Weston A Price Foundation to its members, has an article by Katherine Czapp about traditional Scottish food. They too ate fermented food (pp. 56-7):

Farmers who grew their own oats but sent them to the local mill . . . received in return a bag of "sids" -

the inner husks of the oats . . . From these sids, an ancient Celtic dish called "sowans" (or sowens) was made.

The sids were soaked in water for approximately one week (or even more) until they were well-soured.

Sowans takes more than week to make. Presumably the ancient Celts discovered this method of souring by accident and kept doing it because the result tasted good. It's an example of how, in the right situation, what tastes good guides us to a good diet.

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Charles (2009-05-10 13:45:10)

Okay, you've got me going on this whole fermented foods thing now. Here are a couple of interesting links: From Applied Environmental Microbiology: "Administration of different Lactobacillus strains in fermented oatmeal soup: in vivo colonization of human intestinal mucosa and effect on the indigenous flora." <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=202048> And a recipe for oatmeal fermented by adding miso and leaving it overnight: South River Porridge 1 cup rolled oats 2 cups water 2 teaspoons light miso (see note below) Cook oatmeal in the evening 5-10 min., or until water is absorbed. (Do not use salt in the cooking.) Let oatmeal cool down to body temperature and then stir miso thoroughly into the warm cereal. Cover and let sit overnight at room temperature (about 70Â°). Reheat in the morning (without boiling) and serve. Without imparting a noticeable taste of its own, the enzymatic power of the miso will liquefy the cereal, unlocking its essential nutrition, creating a wholesome sweet taste as it ferments overnight. <http://www.southernrivermiso.com/store/pg/18-Porridge-Grain-Milk.html>

Charles (2009-05-10 14:31:53)

Also: "A lactic acid-fermented oat gruel increases non-haem iron absorption from a phytate-rich meal in healthy women of childbearing age" <http://tinyurl.com/qm2kec>

Riz (2009-05-11 05:08:46)

Until recently I'd only ever known one way of eating porridge: hot and made with milk. Then I started learning about all its history and all the different ways of making it and serving it up. It's amazing stuff. The classic piece of history is that Scottish folk traditionally cooked up a large batch of porridge of oats (in water), added a bit of salt, and poured it in to a kitchen draw. Once set, slices could be cut and it would be eaten right through the week. I found this difficult to believe but after some research, I'm sure it's true. I'm still to add salt, but it's actually quite nice eaten cold. You can use quick oats or regular (better GI), add maybe half as much water as you would milk (maybe mix in some raisins or nuts), and leave it overnight. It turns slightly jelly like, but is actually quite nice. Instead of water, try adding orange juice...I tried it once with pure Tropicana tropical juice and it tasted like a pudding! (Of course, if you don't like the idea of water, just use cold milk and leave it overnight). ps - Seth, thanks for answering my earlier question re foods stored in brine etc.

### **The Wisdom of the One-Year-Old Picky Eater (2009-05-10 06:59)**

From a parent's account of her autistic son in *Recovering Autistic Children* (2006) edited by Stephen Edelson and Bernard Rimland, p. 79:

James took matters into his own hands at about the time of his first birthday, and started refusing milk except in the form of yogurt or cheese.

The parents, alas, did not draw any conclusions from this.

[1]

[2] [3]The wisdom of the five-year-old picky eater.

1. <http://www.blog.sethroberts.net/2009/04/09/the-wisdom-of-the-five-year-old-picky-eater/>

2. <http://www.blog.sethroberts.net/2009/04/09/the-wisdom-of-the-five-year-old-picky-eater/>

3. <http://www.blog.sethroberts.net/2009/04/09/the-wisdom-of-the-five-year-old-picky-eater/>

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marmolillo (2009-05-10 13:01:46)

I have been reading for quite long time your interesting articles about fermented food. And I am really surprised you do not even have mentioned the works of Nobel Prize winner Ilya Ilyich Mechnikov. [http://en.wikipedia.org/wiki/Ilya\\_Ilyich\\_Mechnikov](http://en.wikipedia.org/wiki/Ilya_Ilyich_Mechnikov) They usually mention his opinions about fermented food like something weird from a great physicists. But he told the same things you are speaking about.

Wilbur (2009-05-11 06:44:47)

If the wisdom of picky eaters is to be our standard, then McDonald's french fries must be the healthiest food on the planet. I've known several brats who would eat nothing else.

seth (2009-05-11 07:43:17)

maybe they needed more fat? The brain - and kids have growing brains - is more than half fat.

Andrew Gelman (2009-05-11 12:59:19)

Seth, Please take a look at the many many comments on your earlier entry on this topic. Suffice it to say that your experience with kids is limited, and I recommend you defer to your commenters (including myself) on this one. Self experimentation is fine, but this is a case where a bit of observation would help.

Mark (2009-05-11 13:38:13)

I think there is something to the way that kids eat, but I think you also are perhaps making a little too much out of it. My wife is a pediatrician. Many of the kids she sees only want to eat "white foods" - white bread, pasta, butter, sugar, french fries, etc. In general, kids are way more interested in bland and inoffensive tastes than complicated tastes. This makes sense evolutionarily - a bland, inoffensive food is almost certainly less likely to be dangerous. It probably takes great hunger or a real leap of faith for a human being "in nature" to try a wild new taste. Here's an anecdote about a different autistic picky eater for your consideration. He ended up in the hospital as something of a medical mystery. After a couple of weeks of brain-racking by the doctors, they realized he had scurvy. After checking with the parents on his diet, sure enough, he refused anything containing vitamin C.

peter (2009-05-11 14:05:33)

[http://en.wikipedia.org/wiki/Fermentation\\_%28food%29#Risks\\_of\\_consuming\\_fermented\\_foods](http://en.wikipedia.org/wiki/Fermentation_%28food%29#Risks_of_consuming_fermented_foods) Risks of consuming fermented foods Alaska, despite its small population, has witnessed a steady increase of cases of botulism since 1985. It has more cases of botulism than anywhere else in the United States of America.[9] This is caused by the traditional Eskimo practice of allowing animal products such as whole fish, fish heads, walrus, sea lion and whale flippers, beaver tails, seal oil, birds, etc., to ferment for an extended period of time before being consumed. The risk is exacerbated when a plastic container is used for this purpose instead of the old-fashioned method, a grass-lined hole, as the botulinum bacteria thrive in the anaerobic conditions created by the plastic.



seth (2009-05-11 14:09:32)

Peter, yes, that is why I always use glass containers. Mark and Andrew, I am saying there is something to be learned from the way kids eat. Including the way one kid eats. Of course, put in the wrong environment, kids will choose a crummy diet. Likewise, rats, put in the wrong environment, will get fat. But Richter showed that if rats are given access to a certain large set of foods, they will pick out a healthy diet. This isn't a great surprise but it is worth remembering. Presumably humans have similar tendencies. Yes, kids like candy, yes, they will eat too much candy if they can, but why humans like sweet foods isn't obvious at all – and maybe it is worth wondering about. Young children give us a glimpse of food preferences less affected by experts and culture than adults.

Ted (2009-05-12 14:24:49)

Your two theories of SLD and 'wisdom' are colliding here.

Patrik (2009-05-13 15:44:55)

*I am saying there is something to be learned from the way kids eat. Including the way one kid eats. Of course, put in the wrong environment, kids will choose a crummy diet.* Er, put in the best environment kids will choose a crummy diet. Not only kids, but adults are somewhat prone to this as well. Take me, for example. I don't buy chocolates and sweets anymore. Why? Because I have a tendency to inhale all of these the second I get home. Solution: don't buy them in the first place. This episode we are currently experiencing on this blog is reminiscent of when we discussed the Aquatic Ape theory. You, a very intelligent individual, eschewed all reason to bolster your pet theory. Now, I am not saying fermented food may not be healthy. It certainly may. However, you lack any sort of coherent logical framework within which to make your argument. *Young children give us a glimpse of food preferences less affected by experts and culture than adults.* You're right. The millions and millions of dollars spent by the likes of Nabisco, General Foods etc etc have no effect on children's preferences. None at all.

Les Jones (2009-06-02 11:51:59)

I have a three year old and a four year old. If children naturally eat healthy foods then ice cream, cake, cookies, and candy must be health food. "*Peter, yes, that is why I always use glass containers.*" Which would have the same anaerobic conditions as plastic containers.

seth (2009-06-02 11:58:25)

Les, everyone agrees that children, like adults, like pets, are sometimes drawn to unhealthy food. My point is more subtle: when children reject a food it may be because it's unhealthy. Not because "oh yeah children are picky eaters". My ideas come into play when children reject foods. I am saying that instead of dismissing such rejections they should be mulled over. Could the rejected food be unhealthy in a non-obvious way?

Aaron Blaisdell (2009-06-03 07:57:23)

I wonder why my daughter rejects sprouted sourdough bread but requests white bread? I thought the latter had some serious health issues, but the former largely removed the antinutrients? Just finding examples that don't fit the rejection hypothesis.

seth (2009-06-03 09:50:42)

perhaps the white bread has added vitamins. Thiamine, for example.

Aaron Blaisdell (2009-06-04 10:17:12)

Perhaps, but it seems like grasping at straws to me. What we really need are controlled studies that give the same type of bread to children, one with and one without added vitamins such as Thiamine, and see which one (if any) they develop a preference for over time.

Seth's blog » Blog Archive » The Wisdom of Young Picky Eaters (2009-07-10 09:50:25)

[...] The Wisdom of the One-Year-Old Picky Eater. The Wisdom of the Five-Year-Old Picky Eater. [...]

Quercki (2009-07-14 10:50:24)

My oldest child was an adventurous eater who would eat anything except peanut butter or apple juice. The rest of our family loves peanut butter. It turns out that peanut butter is actually bad for her: she has a stone-forming metabolic kidney disorder, and peanut butter is high in the precursors that form the stones. None of the rest of us have this disorder, so peanut butter is good for us. I haven't found out if apple juice has anything harmful for her in it yet. Another child is a typical "white diet" kid, but I think that is because that child has very sensitive skin including the taste buds.

### **Antibiotics Associated with Later Infection (2009-05-10 20:35)**

[1]A 2005 study by David Margolis, a dermatology professor at Penn, and others, found that acne patients given long-term antibiotic treatment, which often lasts more than 6 months, were more than twice as likely to have an upper respiratory tract infection during the year after treatment began than acne patients not given antibiotics.

Does this correlation reflect causality? Two additional analyses suggest it does:

1. Perhaps acne patients who get antibiotics are more likely to see a doctor than those who don't. However, a study of patients diagnosed with high blood pressure, which also requires relatively frequent doctor visits, had the same risk of upper respiratory tract infections as acne patients not given antibiotics.
2. [2]A later study found that the contacts of acne patients (such as their family) are more likely to have upper respiratory tract infections if the acne patient has such an infection – as you'd expect from contagion. But it makes no difference to these contacts if the acne patient was given antibiotics or not. This means that acne patients given antibiotics do not live in more infection-prone surroundings than acne patients not given antibiotics.

Bottom line: Support for the idea that the bacteria in our body help us stay healthy.

1. <http://archderm.ama-assn.org/cgi/content/full/141/9/1132>

2. [http://www.ncbi.nlm.nih.gov/pubmed/17823518?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_DiscoveryPanel.Pubmed\\_Discovery\\_RA&linkpos=1&log\\$=relatedarticles&logdbfrom=pubmed](http://www.ncbi.nlm.nih.gov/pubmed/17823518?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DiscoveryPanel.Pubmed_Discovery_RA&linkpos=1&log$=relatedarticles&logdbfrom=pubmed)

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Antibiotics Associated with Later Infection (2009-05-25 01:42:58)

[...] Antibiotics Associated with Later Infection This post was written by SuperFoodie on May 24, 2009 Posted Under: Superfood Talk Antibiotics Associated with Later Infection [...]

### **How Things Begin (Japan Traditional Foods) (2009-05-12 07:36)**

I eat natto (fermented soybeans) once/day. Most of the natto I see in stores is from Japan (soybeans from America) but I found one local source: [1]Japan Traditional Foods, in Sepastopol, California. Like [2]many people I believe traditional diets are far healthier than modern ones. How can such diets, now almost extinct in rich countries, become popular again? To learn more about this, I interviewed the owner of Japan Traditional Foods, Minami Satoh.

How did your company begin?

I started it in 2006. We started to produce product in November 2008. So far natto is our only product. I went to business school at the [3]Thunderbird School of Global Management, a private business school in Arizona, and graduated in 1983. After that, I worked for DuPont in Japan, but I wanted to work in the US. At DuPont, I did marketing of Teflon and Silverstone (a sister brand of Teflon). Then I worked for my father's company selling wholesale steel pipe and tubes. I was successful but felt it was boring. I thought food would be more interesting. I acquired a small natto-making company (Yaguchi Foods ) in Japan in 2004 or 2005. The owner had died. His relatives sold it to me.

In 2004, I came to America to meet Malcolm Clark. He's the great-grandson of Dr. Clark, who is very famous in Japan. Malcolm Clark was responsible for introducing shitake mushrooms to America. He owns Gourmet Mushrooms in Sebastopol and lives in Occidental. Natto is an unusual food, like shitake mushrooms. I thought he could give me good advice about how to start making natto or other possibilities. That's why the company is in Sebastopol. When I met Clark, he was thinking of retiring. I bought a stake in Gourmet Mushrooms; now Gourmet Mushrooms helps Japan Traditional Foods sell natto. I moved here in June 2008 to manage this company.

Why natto?

Americans already eat tofu, soy sauce, miso, edamame, and soy milk – but no natto. Natto is more nutritious than the other forms of soy that we currently eat. It's more nutritious because of fermentation. It has more vitamins. A enzyme found in natto called nattokinase dissolves blood clots. In Japan natto is a traditional health food. It is usually eaten at breakfast.

How is natto made?

You boil the soybeans in a steam basket. Spray with bacillus. Put the soybeans in a paper cup. Put the cups in a fermentation container for 20-24 hours. Take them out and put in packages. Then give to the distributor. If you ferment more than 20 hours, natto bacillus start to eat themselves, which produces ammonia. Most companies stop fermenting at that point to avoid ammonia. If fermented longer, it may smell of ammonia. Japanese accept this, but Americans may not.

How big is Japan Traditional Foods?

One person plus myself. I hired someone from my natto company in Japan. He makes artisanal natto. He handcrafts it.. We put it in the paper cups by hand.

How did you get distribution?

It wasn't hard. There are two distributors, one for Los Angeles, the other for San Francisco. They specialize in Japanese markets. Now it's in close to 30 stores, including Korean and Chinese stores. The Los Angeles distributor wanted to sell his stuff in New York but the shipping costs would have been too high. This summer we will start going to farmer's markets. We'll have a booth there to sell and sample. The goal is to educate and share recipes. We'll be at the San Rafael Sunday market and the Ferry Building Tuesday lunchtime market. It's a kind of test. We're talking to distributors about getting the product into non-Japanese grocery stores, such as Berkeley Bowl and Whole Foods. From the farmer's markets we hope to get feedback to improve the packaging, size, and recipes. We want to find the best ways to make the Western market receptive to natto. For example, we can sample it in different ways. In Japan, the most popular way to eat it is over rice with finely chopped green onions, often at breakfast. I've come up with many different recipes: with rice or bagel or lettuce or crackers. With different sauces and toppings.

What were the hard parts?

It was difficult to find a good temperature control system here; I had to import it from Japan. I also needed a big steam cooker, which I had to import. This was hard because it is prohibited to export them from Japan to other countries.

Your promotional leaflet says "stir natto more than twenty times" before eating it. Why?

We do not have any valid research on this. But somebody says stirring natto creates the "Fifth Taste" we call "umami." Somebody else said that it gets the natto bacillus awake again with oxygen because the bacillus was sleeping in the refrigerator.

1. <http://www.gourmet-natto.com/>
2. <http://www.oldwayspt.org/faq.html>
3. [http://en.wikipedia.org/wiki/Thunderbird\\_School\\_of\\_Global\\_Management](http://en.wikipedia.org/wiki/Thunderbird_School_of_Global_Management)

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Joe Coughlin (2009-05-12 10:25:09)

I'm absolutely fascinated by your theories on fermented food, Seth. Intinctively they feel right to me too so last week I bought some Miso and Sauerkraut. To my suprise, I'm really enjoying the Umami-ness of Miso. Once concern I have is buying the right stuff with all its fermented-goodness intact. For example, in the UK it's actually easier to buy non-fermented Sauerkraut, that uses vinegar, than fermented-Sauerkraut. Often, unless a product uses the word 'fermented' on the label you might be getting the wrong stuff. Likewise with Natto. In the UK it seems much easier to buy dried Natto snacks (eg: <http://www.japancentre.com/?cmd=itm &cid= &id=2788>). Any idea if the process of 'drying' a product kills the bacteria? Keep up the good work.

seth (2009-05-12 10:46:32)

Thanks, Joe. Yeah, drying a product probably kills the bacteria. I think dead bacteria are probably helpful too – the immune system can't distinguish live from dead – but the drying process may also cause the bacteria to crumble into tiny bits which the immune system wouldn't notice. Certainly dead bacteria can't help your digestion.

david (2009-05-12 12:50:08)

I've had the same reaction as Joe's "instinctively feel right" regarding the fermented food benefits. About a year ago I hadn't had any yogurt or fermented food for several years and happened to try some non-sugary plain yogurt from a local producer whose label promises lots of live bacteria. I suddenly craved yogurt and ate a jar a week for several months. But then I started getting a rash (I suspect due to the dairy in the yogurt) and stopped eating it (and the rash did go away). When you posted about Kombucha and other fermented foods I was reminded of my craving for yogurt. With Omega-3s you provided a number of effects that you noticed (e.g. gum health, improved balance, improved performance on certain tests, longer sleep if taken before bed). I'm surprised that you haven't listed anything similar for fermented food (or perhaps I didn't notice it). Some of these I could duplicate. I've been drinking 16 oz of Kombucha most days for the past two weeks or so and also made some miso soup and have continued to eat soy yogurt. I can say that my digestive system seems to be calmer than it's ever been before. Also drinking a bottle of Kombucha instead of breakfast satisfies any hunger even though the Kombucha has only 30 calories. But generally, I don't quantify enough of my daily life to notice effects with the accuracy and confidence that you can. When I read about the effects of Kombucha, the claims are so sweeping that they're implausible. Have you noticed any short-term effects or do you have ideas of things that could be measured before and after starting a high fermented food diet? Thanks, David

Ted (2009-05-12 14:16:15)

Interesting, shitake mushrooms are an ingredient of many kimchis.

Patrik (2009-05-12 14:16:39)

*the immune system can't distinguish live from dead* @Seth Nonsense. Where do you get this from?

Patrik (2009-05-12 14:58:56)

@Seth [http://www.sciencedirect.com/science?\\_ob=ArticleURL & \\_udi=B6TD0-3W2T4R5-K & \\_user=10 & \\_rdoc=1 & \\_fmt= & \\_orig=search & \\_sort=d &view=c & \\_acct=C000050221 & \\_version=1 & \\_urlVersion=0 & \\_userid=10 &md5=aa7670d043a56393999242bafdd95084](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6TD0-3W2T4R5-K&_user=10&_rdoc=1&_fmt=&_orig=search&_sort=d&view=c&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=aa7670d043a56393999242bafdd95084) **"Injection of live but not dead bacteria induces a wave of IL-12 and subsequently, IFN- $\gamma$  production.** Surprisingly, in vitro, both live and dead bacteria elicit IL-12 from macrophages. Better understanding of how macrophages distinguish live from dead bacteria would help explain this difference and possibly bypass the need for live vaccines against intracellular bacteria." <http://www.meningitisuk.org/research/previous-projects.htm> Live meningococcal bacteria were found to be poorly phagocytosed by dendritic cells compared to killed bacteria **and the special messenger molecules (cytokines) produced by dendritic cells in response to live and dead bacteria were quite different.** Unexpectedly, the live bacteria stimulated more IL12 required for a good immune response and less IL10, a cytokine thought to inhibit the immune response. This finding is important for developing dead whole bacteria vaccines which are made using the whole bacterium rather than purified components of it, and for understanding how live bacteria in the host affect the immune response.

Patrik (2009-05-13 13:31:04)

@Seth Why do you continue to duck my comments? Confirmation bias much? This is quite disappointing.

Confidence (2009-05-16 08:37:07)

@Patrik, Blog comments are singularly ill-adapted for discussing complex topics. It may be better if you email Seth directly regarding specific topics. I've noticed plenty of bloggers often only reply to the easiest and most lowest-common-denominator comments. It's a time-management and resource issue. I have yet to find a platform for such discussions that beats email. I do agree with many of your points and would like to see them addressed, but I know both you and Seth will have difficulties digging even one more level deeper on these concepts if you try to do it via blog comments.

How Things Begin (Japan Traditional Foods) (2009-05-26 10:04:07)

[...] How Things Begin (Japan Traditional Foods) This post was written by SuperFoodie on May 26, 2009 Posted Under: Superfood Talk How Things Begin (Japan Traditional Foods) [...]

anna (2009-08-31 19:25:49)

Do you know where I could purchase, or would you blog about how to make, gluten-free natto? Many thanks

seth (2009-08-31 19:37:19)

Anna, soybeans do not contain gluten. All natto is gluten-free.

anna (2009-09-06 18:54:26)

Thanks for responding, Seth. I know natto itself is gluten-free but I tried to buy a container of natto recently, after hearing about it for the first time, and every different brand I picked up had wheat listed as an ingredient in the soy sauce. Those of us who are gluten intolerant can't handle even a little wheat in soy sauce. I wonder if natto with gluten free soy sauce is out there somewhere.... thanks again

seth (2009-09-06 20:41:27)

Anna, the soy sauce is in a sealed packet that comes with the natto. If you want to avoid it, just throw the packet away.

anna (2009-09-08 11:37:01)

Oh, I didn't realize that. I'll go back and buy some. Thanks

### **Assorted Links (Elsevier scandal) (2009-05-12 11:51)**

- Elsevier, the scientific publishing giant, [1]published six fake journals
- [2]the vastness of medical ghostwriting
- [3]the awfulness of American health

1. <http://www.earlham.edu/~peters/fos/2009/05/elsevier-confirms-6-fake-journals-more.html>

2. <http://www.guardian.co.uk/society/2003/dec/07/health.businessofresearch>

3. <http://www.tinyrevolution.com/mt/archives/002955.html>

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Assorted Links (Elsevier scandal) (2009-05-28 16:47:32)

[...] Assorted Links (Elsevier scandal) This post was written by SuperFoodie on May 28, 2009 Posted Under: Superfood Talk  
Assorted Links (Elsevier scandal) [...]

### **If You Have Multiple Sclerosis (2009-05-12 18:00)**

You might want to watch [1]this – about the effectiveness of low-dose naltroxone. Thanks to Peter Spero.

1. [http://www.youtube.com/watch?v=\\_hLCEaqWbcA&feature=related](http://www.youtube.com/watch?v=_hLCEaqWbcA&feature=related)

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### **The Dose-Response Revolution and Fermented Food (2009-05-12 19:01)**

Edward Calabrese, a toxicology professor at the University of Massachusetts, has pointed to the existence of U-shaped dose-response functions in a great many cases. Chemicals harmful at high doses are helpful at low dose, a phenomenon called hormesis. He reviews the evidence [1]here and [2]here. I didn't know that a low dose of dioxin reduces tumors. Nor did I know that a low dose of saccharine likewise reduces tumors.

The theory behind hormesis is that a damage-repair system is stimulated by the toxin. This isn't far from my idea that the average American's immune system is woefully understimulated, with many bad consequences (allergies, cancer, etc.), due to too-sterile food. If the rats or whatever used in the hormesis studies – probably fed sterile lab chow – were given immune system stimulation (e.g., from fermented food), the hormesis effect might disappear.

Thanks to JR Minkel.

1. [http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1000&context=calabrese\\_edward](http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1000&context=calabrese_edward)
2. [http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1001&context=calabrese\\_edward](http://scholarworks.umass.edu/cgi/viewcontent.cgi?article=1001&context=calabrese_edward)

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Sam (2009-05-12 22:21:56)

Hormesis? This sounds like exactly the same idea as homœopathie. In homœopathie, you give the subject a medicine which creates exactly the same symptoms as the subject suffers from, just in a very very low dose.

Glen Raphael (2009-05-12 22:22:02)

Low doses of radiation are good for biological life too. Some studies here: [http://en.wikipedia.org/wiki/Radiation\\_hormesis](http://en.wikipedia.org/wiki/Radiation_hormesis)  
We know that most substances which are dangerous in large amounts (say, arsenic) are beneficial in smaller amounts. It's even true with things we think of as necessary and good for you such as water: too little and you die of thirst, but too much and you drown. There's a U-shaped or inverted-U-shaped dose-response curve for almost everything people have studied and we don't yet really know *why* this is, though there are some half-baked, untested theories about it. The logical application of that principle to the question of bacteria in the diet would be to assume that that, too, has an inverted-U-shape dose-response curve. The notion of hormesis implies there's some *optimum* nonzero amount of bacteria in the diet to achieve maximally beneficial health effects and if you consume less *or more* than that amount it will be less beneficial. And if you take way too much it might hurt or kill you. Even if it's clear that *some* bacteria in the diet is much better than *no* bacteria in the diet, it does not logically follow that more still is better, or that stuff past its "sell-by date" is better for you than "fresher" food. Determining the optimum amount of bacteria in the diet seems like an empirical question rather than something you could answer on principle. Might we all be better off eating natto/miso/kombucha once a week than once a day?

seth (2009-05-13 08:45:37)

Sam, you're right. The phenomenon of hormesis supports homeopathy. Glen, when I stop eating fermented food or eat much less of it the effects seem to wear off in about a day. Along the same lines, I met a woman whose health greatly improved when she switched from eating yogurt once/week to once/day. This observations support a once/day rule over a once/week rule.

Patrik (2009-05-13 13:29:35)

An accurate way to think about hormesis is exercise. Too little is bad. Too much is just as bad. The optimal is somewhere in the middle.

Ted (2009-05-14 16:27:08)

No, it doesn't support homeopathy at all. Homeopathy so dilutes things as to be a fanciful belief in magic powers that water somehow remembers what was once in it.

simon (2009-05-14 17:43:31)

Yes, in hormesis you have an optimal dose at a value where there is still enough to have an effect, whereas in homeopathy you have a crazy theory of the optimal dose being at a value low enough not to have any molecules left. Unfortunately, the reflexive tendency to associate hormesis with homeopathy has probably resulted in it receiving much less attention than it deserves. I doubt the damage-repair system would be stimulated by benign bacteria though.

Igor Carron (2009-05-15 00:54:16)

Seth, I second Glen's answer. Additional insight into this issue is the battle between different groups on whether radiation hormesis exists. At stake is an issue of very large economic consequences. See, if this hypothesis is not verified then any level of radiation is harmful and therefore regulations are working to reduce any radiation output to zero (as they should), a cost

that no society can really bear (there is natural radiation everywhere). If the hypothesis is true, then the linear hypothesis is wrong at very very low dose and regulations need to take that into account so as to not burden technologies that in fact are doing no harm when there are releasing very very low doses. However, if the latter is true, the journalistic treatment on any information linked to nuclear subjects cannot really be unbiased: Fear backed up by so called specialists always sells. Igor.

VADIM (2009-05-23 18:52:27)

“Hormesis with Ionizing Radiation” presented evidence of increased vigor in plants, bacteria, invertebrates and vertebrates. Most physiologic reactions in living cells are stimulated by low doses of ionizing radiation. This evidence of radiogenic metabolism (metabolism promoted by ionizing radiation) includes enzyme induction, photosynthesis, respiration and growth. Radiation hormesis in immunity decreases infection and premature death in radiation exposed populations. Increased immune competence is a major factor in the increased average life-span of populations exposed to low-dose irradiation. This article is very accurate and it is demonstrated here [radiationhormesis.com](http://radiationhormesis.com)

Seth's blog » Blog Archive » Hormesis Revisited (2009-08-29 18:32:10)

[...] Earlier post about hormesis. [...]

Seth's blog » Blog Archive » How Dangerous Are Cell Phones? (2009-09-16 17:22:23)

[...] Emphasis added. The person who wrote that hasn't heard of hormesis. [...]

Seth's blog » Blog Archive » Beijing Air (2009-10-16 14:14:32)

[...] Overall, I think four things have changed: 1. The air in my apartment, where I spend most of my time, is much better (compared to unfiltered). 2. Outside air is somewhat better. 3. Due to fermented foods, my overall health is better. 4. Due to learning about hormesis, I don't worry about a small amount of air pollution. [...]

## **The Twilight of Expertise (psoriasis treatment) (2009-05-13 16:42)**

From [1]BBC News:

A specialist light treatment for psoriasis is just as effective and safe when given at home as in hospital, say Dutch researchers. Phototherapy using UVB light is rarely used in the UK because of limited availability and the number of hospital visits required. But a study of 200 patients found the same results with home treatment. . . .

One reason that the treatment is usually done in hospital is because most dermatologists believe that home phototherapy is inferior and that it carries more risks. In the latest study, patients with psoriasis from 14 hospital dermatology departments were randomly assigned to receive either home UVB phototherapy or hospital-based treatment. Home treatment was equivalent to hospital therapy both in terms of safety and the effectiveness of clearing the condition. And those treated at home reported a significantly lower burden of treatment and were more satisfied.

There was a time when blood-glucose testing (for diabetes) was only done in laboratories, with blood drawn in doctors' offices or hospitals.

1. <http://news.bbc.co.uk/2/hi/health/8038206.stm>



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The Twilight of Expertise (psoriasis treatment) (2009-05-21 21:32:59)

[...] The Twilight of Expertise (psoriasis treatment) This post was written by SuperFoodie on May 21, 2009 Posted Under: Superfood Talk The Twilight of Expertise (psoriasis treatment) [...]

Seth's blog » Blog Archive » The Twilight of Expertise (directory) (2009-07-14 17:00:28)

[...] psoriasis treatment [...]

kenny5 (2009-10-13 19:32:05)

Psoriasis gives me a very itchy feeling. the itch only goes away when i use corticosteroids. i am looking for a natural treatment for this disease.

## Measuring My Brain Function: One-Finger Typing (2009-05-14 16:09)

Noticing that flaxseed oil improved my balance led me to [1]measure its effects on other tests of brain function. It also made me wonder what else in my life affected how well my brain works. Eventually I measured the mental effects of flaxseed oil with four tests, but each had problems:

1. Balance. Time-consuming (15 minutes for one daily test), not portable.
2. Memory search.Â Anticipation errors, speed-accuracy tradeoff.
3. Arithmetic. Speed-accuracy tradeoff.
4. Digit span. Insensitive.

"Speed-accuracy tradeoff" means it was easy to go faster and make more errors. It wasn't easy to keep the error rate constant. If I got faster, there were two possible explanations: (a) brain working better or (b) shift on the speed-accuracy tradeoff function. The balance and digit span tests had other weaknesses. Only the balance test was enjoyable.

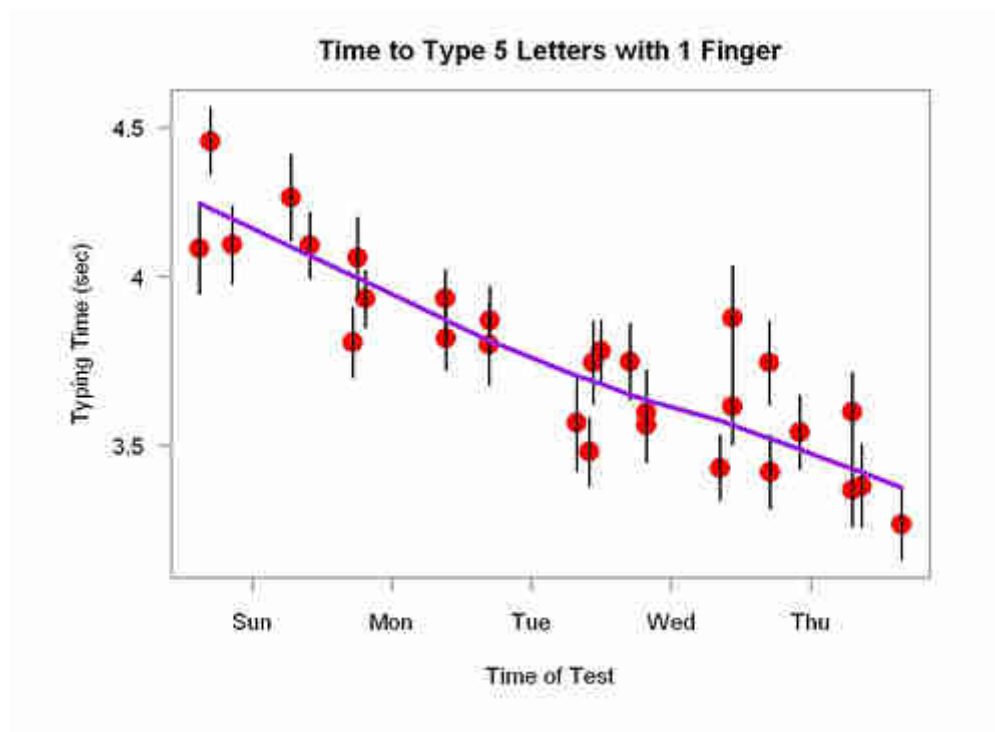
I'm still doing the arithmetic test, which has been highly informative. However, I want to regularly do at least two tests to provide a check on each other and to allow test comparison (which is more sensitive?). I tried a test that involved typing random strings of letters several times but as I got faster I started to make many mistakes.

I have recently started doing a test that consists of one-fingered typing of a five-letter string. There are 30 possible five-letter strings. Each trial I see one of them and type it as fast as possible. 15 trials = one test. Takes three minutes.

I am doing one-finger rather than regular typing because I hope one-finger typing will be more accurate, very close to 100 %. With the error rate always near zero, I won't have to worry about speed-accuracy tradeoff. Another reason is the need for skilled movement and hand-eye coordination. [2]Doing this sort of task can be enjoyable. One-finger typing (unlike regular typing) is skilled movement with hand-eye coordination; maybe it will be fun.

I restricted the number of possible letter strings to 30 to make learning easier. Yet 30 is too large to cause the anticipation errors I might make if there were only a few strings.

Here are early results.



So far so good. Accuracy is high. On any trial, it isn't easy to go faster, so speed-accuracy tradeoff is less of a problem. Even better, it's vaguely enjoyable. Doing the task is a little like having a cup of tea. A pleasant break. There's no need to do the test four times/day; I just want to.

1. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>
2. <http://www.blog.sethroberts.net/2008/02/07/the-lessons-of-bilboquet/>

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Ted (2009-05-14 16:23:20)

Since this post is loosely related to self-experimentation I'll post this. I thought of you today watching the Discovery Science channel show on jellyfish. I looked up the incident on Wiki for you: In 1964, Dr. Jack Barnes confirmed the cause of the syndrome to be due to a small box jelly, the Irukandji jellyfish (*Carukia barnesi*). In order to prove that the jellyfish was the cause of the syndrome, he captured one and deliberately stung himself, his son, and a local lifeguard, and observed the symptoms.[3] [http://en.wikipedia.org/wiki/Irukandji\\_syndrome](http://en.wikipedia.org/wiki/Irukandji_syndrome)

### Probiotics and Resistance to Illness (2009-05-14 22:44)

A [1]2005 study compared workers who did and did not consume a daily straw of probiotic liquid. During the 3-month study, workers who got the probiotics were sick half as often as those who didn't. Here are details:

262 employees at TetraPak in Sweden (day-workers and three-shift-workers) that were healthy at study start were randomised in a double-blind fashion to receive either a daily dose of 100,000,000 Colony Forming Units of *L. reuteri* or placebo for 80 days. The study products were administered with a drinking straw. 181 subjects complied with the study protocol, 94 were randomised to receive *L. reuteri* and 87 received placebo. In the placebo group 26.4 % reported sick-leave for the defined causes during the study as compared with 10.6 % in the *L. reuteri* group ( $p < 0.01$ ). The frequency of sick-days was 0.9 % in the placebo group and 0.4 % in the *L. reuteri* group ( $p < 0.01$ ). Among the 53 shift-workers, 33 % in the placebo group reported sick during the study period as compared with none in the *L. reuteri* group ( $p < 0.005$ ).

The paper gives no reason to think the probiotic dose was optimal. (How the dose was chosen isn't explained.) A larger dose might have had a bigger effect.

When science writers tell about the "miracle" of antibiotics, they tell stories like this one, from *The Probiotics Revolution* (2007) by Gary Huffnagle with Sarah Wernick:

When my daughter was five, she pricked her left hand on a rosebud thorn in our garden. . . . The next day she ran a fever. . . . Doctors diagnosed an acute bacterial infection. Half a century ago, a child might have died from such an infection. But my daughter received antibiotics. After a day of intravenous treatment, she was better. . . . Antibiotics are true miracle drugs.

What goes unnoticed in these "miracle" accounts is the possibility that the person got so sick because their immune system wasn't working well. (It wasn't working well, I propose, because the infected person didn't get enough bacteria in their food.) A child gets sick from an ordinary plant scratch? That child's immune system has a lot of room for improvement. Huffnagle and Wernick say nothing about this. Dr. Huffnagle is a professor of internal medicine, microbiology, and immunology at the University of Michigan. If the child of such a parent – well-off, well-educated, health-conscious, specializing in immunology – has a weak immune system, and the parent doesn't realize this is possible, there is enormous room for improvement. *The Probiotics Revolution* is 90 % filler but the 10 % substance makes it worth skimming.

1. <http://www.ehjournal.net/content/pdf/1476-069X-4-25.pdf>

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Kirk (2009-05-15 04:48:32)

'The Probiotics Revolution is 90 % filler' was my impression also. Some of the useful 10 % included: (a) study of probiotics is in its infancy (which is why the book is full of 'probiotics hold promise to solve . . .' statements) (b) about a dozen well-designed experiments are discussed . . . more, please, I'd like to see a book filled with discussions about hundreds of experiments (c) dead bacteria still produce benefits . . . why? there appear to be two theories: (1) dead bacteria adhere to the lining of the gastrointestinal tract thus crowding out harmful competitors or (2) the metabolic byproducts of fermentation have benefits. I'm looking forward to seeing this one resolved. Many studies are listed at the end of the book, but, unfortunately, as a layman, I have no access to many of them, since most are behind a pay wall. I suspect that much of the funding comes from the private sector looking for a magic bullet of probiotics which can be packaged and sold. I wonder if there actually is an ideal combination of specific bacteria, or is it just that the internal system needs to be challenged by a certain amount on a regular basis? Also, and this is more of a general gripe with the marketplace, why can't Dannon Activia and similar products be produced without added sugar or fructose syrup?

Aaron Blaisdell (2009-05-15 07:58:59)

Kirk said "Why can't Dannon Activia and similar products be produced without added sugar or fructose syrup?" Well, obviously they can be, but the companies choose to add these junk ingredients because the mainstream American will not select such products to consume without the additional sweeteners. Dannon's first priority is to sell as many of their products as possible. Fortunately, there is a growing availability of pure cultured products at alternative sources such as Whole Foods, Trader Joes, and at some Farmer's Markets and other whole-food outlets. I suspect such outlets are not available equally across the US, though.

Ted (2009-05-15 08:12:49)

If the book is 90 % fluff, how about a Seth Roberts book that's only 10 % fluff! Are you planning a second book and immune theories? I'll pre-order right now!

Ted (2009-05-15 08:48:16)

Seems like studies on Lactobacillus reuteri are pretty easy to come by... L reuteri improved colicky symptoms in breastfed infants within 1 week of treatment... <http://pediatrics.aappublications.org/cgi/reprint/119/1/e124> What's missing here is a riddle for Seth to solve like he did with 'Set Points' in rat studies that were anomalies. There's no paradigm to shift.

Zeke's Awesome Eat's (2009-05-21 03:55:25)

Does it mention why L. reuteri was chosen? Why not L. bulgaricus or good old fashioned L. acidophilus?

## **Fermentation Festival Tomorrow Near Sonoma (2009-05-15 11:02)**

[1]Freestone Fermentation Festival.

If you are going and live near Berkeley, could I get a ride?

Thanks to Mariah Isley.

1. <http://www.freestonefermentationfestival.com/>

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bennetta (2009-05-15 16:19:20)

Holy smokes. That's about 20 minutes away from me. Now I have something to do tomorrow.

## **How Fast Do We Rot? (2009-05-16 05:49)**

Not as fast as we used to. A friend of mine, who went to college at MIT around 1980, had a classmate who was the son of an undertaker. His dad had told him that when he (the dad) had entered the business, you had to work fast. Bodies would start to smell quickly. But now - around 1980 - that was no longer necessary. You could wait a lot longer before they smelled bad.

Which I take to mean that around 1980 the average old person, where this classmate came from, had a lot less bacteria in their body than around 1960. All that concern about "the safety of the food supply" – preservatives, yes, but also sterilization, freezing, sell-by dates, food handling rules, food safety officers, and microwave food – seems to have had an effect. From 1960 to 1980 there was a big shift from homemade food to factory-made and restaurant-made food. The uniformity of the new food caused the obesity epidemic, I believe; its sterility<sup>Â</sup> caused a great increase in allergies and asthma, not to mention a bunch of other disorders.

Speaking of sell-by dates, at a Japanese grocery store recently I wanted to buy some [1]Yakult. At check-out, it was pointed out to me that it was one day past its sell-by date. Half price. I bought two.

1. <http://www.yakultusa.com/>

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Dennis Mangan (2009-05-16 07:39:45)

Maybe they didn't have big refrigerators when the dad started undertaking.

david (2009-05-16 08:08:15)

Presumably you could test this idea with lab animals. Their life spans are short enough that you could feed one group sterile food and another with a probiotics-rich diet. Then measure how long it takes their bodies to decompose after death.

Eric (2009-05-18 04:39:02)

Also might have to do about the high(er) level of anti-oxidants and preservatives in our modern food. See: <http://bestwellnessconsultant.com/2008/09/23/1996-mcdonalds-hamburger-karen-hanrahan-best-of-mother-earth.aspx>  
<http://www.youtube.com/watch?v=knJHfVQL8JE> (don't like the Super Size Me doc/movie but it shows this weird hamburger behaviour ;-)

Jeremy (2009-05-18 05:04:50)

I believe that this claim may be an urban legend. Note the source: "A friend of mine, who went to college at MIT around 1980, had a classmate who was the son of an undertaker." See also: <http://message.snopes.com/showthread.php?t=4503>

Aaron Blaisdell (2009-05-18 07:48:05)

@David, Yup, this is one question that can not easily be addressed through self-experimentation.

Smith (2009-05-19 11:20:01)

I just saw a Bill Nye where he said the reason we decay more slowly is the high levels of formaldehyde that we are absorbing while alive from our environment. He mentioned that there is even formaldehyde in some toothpaste.

Eric Garner (2009-05-19 11:36:47)

If this were true there might be references to it in forensic science journals. Since state of decay is used to estimate how long someone has been dead, someone would have noticed that it takes longer nowadays. I just spent 15 min searching pubmed (hardly an exhaustive search, i know) and didn't find any reference in forensic journals to support this. Has anyone else espoused anything other than third hand anecdotal evidence that supports whether this is even true, regardless of cause?

Marsha Keeffer (2009-05-19 13:05:13)

The book 'Stiff' discusses a university that leaves corpses outside to measure the speed of decay...among other things. Fascinating, if macabre, reading.

meehawl (2009-05-19 15:07:54)

Or maybe after decades inhaling the known carcinogenic toxin formaldehyde, the mortician had managed to fix most of his nasal sensory cells, accelerating the normal age-related loss of smell sensation. Also, habituation probably plays a big role here.

Mike Dedmon (2009-05-19 15:46:34)

I seem to remember that Air Conditioning really became common in the late 70's early 80's. Before then, it was a luxury. I wonder how much that played into it? We take it for granted that most buildings / homes that we inhabit today have these "luxuries".

ucsd (2009-05-19 16:24:02)

Confirmation Bias

Theo Bee (2009-05-19 19:09:30)

Could be all the antibiotics we take reduce our guts flora and fauna

Mathias (2009-05-19 19:51:19)

@ Marsha: It's for real, and its called 'the body farm' AKA University of Tennessee Forensic Anthropology Research Facility.

Tyler (2009-05-19 21:45:07)

I've been looking for the source, and I was unable to find it, but I once read that American soldiers in Vietnam witnessed vastly different decomposition rates between Vietnamese corpses and American ones. This particular source attributed the difference to the chemicals, plastics, preservatives and other inorganic matter that now fills up so much of our "food." Ask a vet.

Bestatterweblog (2009-05-19 23:48:28)

Verwesen Leichen heute langsamer?... Leser Bernd ist im Web über einen Artikel gestolpert, der ungefähr so beginnt: "Ein Freund von mir der um 1980 das College besuchte, hatte einen Klassenkameraden, der Sohn eines Bestatters war..." Im weiteren Verlauf des (englischen) Textes geht es ...

Chuck (2009-05-20 04:33:20)

Can I drink Yakult after the expiration date? The "best if used by" date indicates that after the specified date, the number of bacteria found in Yakult will likely decrease below 8 billion per bottle. To enjoy Yakult at its premium, we strongly recommend keeping the product chilled and to discard after the expiration date.

dar (2009-05-20 14:20:29)

It's due to the ubiquity of Aspartame in many foods . The stuff turns into formaldehyde when ingested. [pls go to [www.sweetpoison.com](http://www.sweetpoison.com) or do a search at [www.mercola.com](http://www.mercola.com) for the details] -crematorium workers swear that they can tell if the dearly departed was a diet soda drinker-the burn takes that much longer

Internists (2009-05-21 22:30:44)

2cents.. The big problem is that yakult has 80 % more sugar than soda. For example, Coca-Cola has 10 grams of sugar per 100 grams of drink whereas Yakult has 18 grams sugar per 100 grams of drink.

elaine (2009-05-23 05:53:52)

steer clear of aspartamine check your food labels for this additive, it is proved to be contra indicative to the human bodies normal functioning and should be banned. It is in EVERYTHING it is man made.

John Lewis (2009-05-27 10:03:00)

Seth, Hello from Houston! I'm co-authoring a blog with my pickle circle and would like to link to your blog and a few stories if I may. And I'm not up to speed on the legal/respectful details of linking and blogging, so feel free to explain exactly how you'd like to be referenced. We're trying to relearn what our grandparents didn't get to teach us and you've done lots of good and accessible work to this end. Thanks for what you do, please keep it up!

Jeff I (2011-03-15 00:00:13)

the human body will rot down completely to a skeleton in about a week, depending on weather conditions, temperature, humidity, etc

Preserve This | Let it all hang out. (2011-11-09 21:13:23)

[...] we die. They make our bodies actually last longer. Seth Roberts, a nutrition and food author of *How Fast Do We Rot?*, says that "preservatives in foods we eat may diminish the presence of some bacteria that [...]"

## **When Did the New York Times Start Asking Abusive Questions? (2009-05-17 05:48)**

"Increasingly, the biggest companies," writes New York Times reporter Michael Moss, "that supply Americans with processed food cannot guarantee the safety of their ingredients." To Moss, safe means sterile. I believe the opposite but [1]the whole article leaves something to be desired. It focuses on Banquet frozen pot pies, made by ConAgra. A ConAgra spokesperson is asked a when-did-you-stop-beating-your-wife question:

Pressed to say whether the meals are safe to eat if consumers disregard the instructions or make an error, Stephanie Childs, a company spokeswoman, said, "Our goal is to provide the consumer with as safe a product as possible, and we are doing everything within our ability to provide a safe product to them."

Pressed to answer an unanswerable but fear-inducing question . . .

1. <http://www.nytimes.com/2009/05/15/business/15ingredients.html?hpw=&pagewanted=all>

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david (2009-05-17 09:11:18)

If you buy vegetables from the produce section, you know that you can eat them raw but need to wash them first. If you buy a frozen pot pie that contains only vegetables, you might assume that you can eat it un- or partially cooked since it contains only vegetables. In fact, you must cook it thoroughly to be sure you kill salmonella etc. It's understandable that the consumer would assume that a product containing only frozen vegetables wouldn't need to be thoroughly cooked. If you made the same thing at home and didn't thoroughly cook it, you'd be ok.

Ted (2009-05-18 09:15:49)

Even you Seth can't recommend eating salmonella or e coli.

Ben Hyde (2009-05-18 11:06:17)

Ted - I suspect the answer is "all things in moderation" :) - ben

## **Probiotics Reduce Postpartum Obesity (2009-05-17 09:07)**

From [1]Science Daily:

"The results of our study, the first to demonstrate the impact of probiotics-supplemented dietary counselling on adiposity, were encouraging," said Kirsi Laitinen, a nutritionist and senior lecturer at the University of Turku in Finland who presented her findings on May 7 at the European Congress on Obesity. "The women who got the probiotics [during pregnancy and until the women stopped breast feeding] fared best. One year after childbirth, they had the lowest levels of central obesity as well as the lowest body fat percentage."

That's a unusual way to look at the data. Most studies of weight control look at weight change so as to adjust for individual differences. Maybe pre-pregnancy weights were not available.

Thanks to Dave Lull.

1. <http://www.sciencedaily.com/releases/2009/05/090507055504.htm>

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Larry O (2009-05-18 21:22:30)

Have you heard of Epicor? It is a fermented yeast product feed to livestock under the Diamond V XPC label. It has some interesting history. <http://www.diamondv.com/> Humans are taking this as a supplement. <http://www.imminst.org/forum/index.php?s-howtopic=17713&hl=epicor&st=0> I've never tried it but I wonder if you could comment on the science behind this. Is this a probiotic?

Tom in TX (2009-05-19 07:18:17)

I have been taking EpiCor for a couple of years. It started as a supplement for livestock. The company found out that the factory workers got sick less than the office workers. So they started producing it for humans, too. I watched the webinar at <http://www.vrp.com/webinar/epicor/index.aspx> It has a lot of info, but I don't think they are exactly sure how it works yet.

Jeanne (2009-05-19 08:41:24)

There were some problems with this study. <http://junkfoodscience.blogspot.com/2009/05/science-says-isnt-always-what-science.html>

## **What Causes Asthma? Not What the Tovers Think (2009-05-20 07:07)**

From Joyce Cohen's [1]The Hunt column:



For reasons unknown, Florida didn't agree with little Noah Tovar. Since his toddler years, Noah, now 7, had suffered terribly from asthma. His parents, Jari and Selene Tovar, moved their family several times, trying to escape the mold or pollen or whatever it was that caused his breathing problems. Nothing helped much.

Noah's parents didn't know, I can tell, about a [2]1992 study of childhood asthma and allergies in Germany. Maybe childhood asthma is caused by air pollution, the researchers thought. Let's test that idea by comparing a clean West German city (Munich) with a dirty East German one (Leipzig). Here's one of the results:

The lifetime prevalence of asthma diagnosed by a doctor was 7.3 % (72) in Leipzig and 9.3 % (435) in Munich.

Less asthma in the dirty city! It wasn't a significant difference but similar differences, such as hay fever and rhinitis (runny nose), were in the same direction and significant. Hay fever was much rarer in Leipzig.

Noah's asthma cleared up, to his parents' surprise, on a trip to New York. So the family moved to New York.

Even though "everyone was under the impression that New York would cause him more distress, it was just the opposite," Mrs. Tovar said. "Not one doctor nor myself can explain what it is."

Mrs. Tovar's doctors are badly out of date. The hygiene hypothesis has been around since the 1990s, supported by plenty of data that, like the German study, shows that childhood allergies are better in dirtier environments. Noah is better in New York because New York air is dirtier than Florida air – that's the obvious explanation.

In *The Probiotic Revolution* (2007) by Gary Huffnagle with Sarah Wernick, which I've [3]mentioned earlier, Dr. Huffnagle, a professor of immunology at the University of Michigan, describes a self-experiment he did:

Could probiotics relieve something as tenacious as my lifelong allergies and asthma? I decided to take a probiotic supplement and make a few simple changes to my diet to my diet, just to see what happened. Yogurt became my new breakfast and my new bedtime snack. I also upped my intake of fruits and vegetables. Whenever possible, I substituted whole grains for processed ones. And I tried to cut back on sugar. [Why he made the non-probiotic changes is not explained. In another part of the book he says he also increased his spice intake.] No big deal.

Because I doubted this little experiment would work, I didn't mention it to anyone, not even my wife. And I didn't bother to record my allergy symptoms. . . My "aha" moment came after about a month: I'd spent the evening writing a grant proposal, a box of tissues at my side. After all these years, I knew to be prepared for the inevitable sneezing and runny nose caused by my mold allergies, which kicked up at night. But when I finished working and cleared the table, I realized I hadn't touched the tissues. And as I looked back on the previous month, I could see other changes. This wasn't my first sneeze-free evening; I hadn't needed my asthma inhaler for several months. To my astonishment, the experiment had been a great success.

This is a great and helpful story. Only after I read it did I realize I'd had a similar experience. I've never had serious allergies but I used to sneeze now and then in my apartment and my nose would run a lot; I went through more than one box of Kleenex in a month. Maybe 4 in one morning. In January, I made just one change: I started to eat lots more fermented foods (yogurt, kimchi, kefir, etc.). My sneezing and Kleenex use are now almost zero.

The Tovars can live wherever they want, I'm sure, if they feed their son plenty of fermented food.

[4]Previous post about childhood allergies and fermented food.

More After the column appeared, someone wrote to the Tovars:

Funny, same thing happened to me. I moved from England where I had chronic asthma, to New York City where I had none. Stayed in NY for twenty years asthma free, then moved back to England with my wife for the last ten years and my asthma has returned all the time I've been back.

1. <http://www.nytimes.com/2009/05/10/realestate/10hunt.html?ref=realestate&pagewanted=all>
2. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?&pubmedid=1486303>
3. <http://www.blog.sethroberts.net/2009/05/14/probiotics-and-resistance-to-illness/>
4. <http://www.blog.sethroberts.net/2009/04/29/eczema-nighttime-cough-antibiotics-and-fermented-food/>

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karky (2009-05-21 03:30:28)

I got asthma when I was 15, we moved to Corpus Christi, TX. There is a Dow Chemical Plant near there. I have had it ever since. My worst symptoms until last spring were in Ft. Smith, AR. They were almost non-existent in the Dallas/Ft. Worth, TX area, Jacksonville, FL, and Atlanta, GA; and my symptoms were pretty mild here in MI. However, when I started SLD 2 years ago, and started taking digestive enzymes to combat bloating/nausea, my asthma symptoms almost completely disappeared. I was ecstatic. But then I had the worst asthma of my life last spring. I was still taking the digestive enzymes. This spring, my symptoms are very mild, but I have added a daily kefir drink to the mix.

NE1 (2009-05-21 03:52:32)

It takes on the order of 1 month to become fed up with your allergy symptoms. Another month of treatment, and that's allergy season right there. It's too bad he didn't write his symptoms down so that we could know more surely about the effectiveness. The anecdote at the end (I'll just spell it out) also suggests environmental asthma as opposed to any hygiene hypothesis.

karky (2009-05-22 05:29:56)

I have been thinking about this article all day yesterday, and I wonder if the child's symptoms disappeared when they moved to New York City because the trigger doesn't grow too much in the city. Like hay. Or ragweed.

Aaron Blaisdell (2009-05-22 07:15:04)

@ Karky, That's my take on this anecdote as well. I had just about the same experience, moving from south Florida where I had strong allergies every year to Stony Brook, Long Island for college. Stony Brook is way out on LI, not near NYC so it has very clean air coming off the ocean and lots of vegetation—but not the same vegetation as south Florida obviously. My allergies were just about completely gone after that move.

Access Hypnotherapy (2009-10-23 01:58:43)

My son has asthma and for many years now, we have been going along to see various doctors to help him, especially in autumn (fall). A friend of mine recently suggested that we try using a dehumidifier in his room. Now I didn't think his room was at all damp, but we thought "hell, what have we got to lose". So we used it in his room for three hours a day (while he was out at school). His asthma has improved by about 75 %. Now I know that this may not work for everyone, because everyone's triggers are different, but in our son's case, he seems to be sensitive to the level of dampness in the air, and while we, his parents, think his room is perfectly ok, the damp air which we don't even notice, is setting him off.

### **Learning To Read Chinese (2009-05-21 09:05)**

I have tried a dozen-odd ways of learning Chinese. Few of them have worked very well . . . except one: the book [1] Learning Chinese Characters (2007) by Alison Matthews and Laurence Matthews. The subtitle is "a revolutionary new way to learn and remember the 800 most basic Chinese characters" and I agree, if revolutionary means "a lot better than other methods". The method is simple:

1. Break combination characters – almost all Chinese characters are combinations of a few hundred simpler characters – into components.
2. The simplest components, not divisible into others, are associated with a picture that conveys the meaning. Someone pitching a baseball, for example, when outlined makes the character for nine.
3. Devise a brief story, a little picture, to help you remember that the components together mean what they mean. For example, the characters for white and ladle put together in one character mean of. The story is something like: "Look at that white ladle. It's the special ladle of Chef Thomas. The book is full of drawings to help visualize the stories.

I enjoy reading it. Partly for the feeling of accomplishment – I can tell I am actually learning the characters much faster than before – and partly because the combinations are intriguing.

The book I have says "Volume One" so I eagerly await later volumes to read more of what these two writers, who are not identified, have to say. I never saw it in Beijing; I came across it in a Barnes & Noble or Borders.

1. <http://www.amazon.com/Tuttle-Learning-Chinese-Characters-Revolutionary/dp/080483816X/sethrobertand-20>

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Oliver (2009-05-22 01:42:05)

I remember doing this for Hiragana in Japanese class. A classmate of mine had this book with cheesy suggestions for associations. They weren't working for me, so I made up my own—usually something lascivious or bizarrely memorable. At first I was going to ask if this works only for traditional characters. Then I realized that we're not dealing with radicals—the stories you can make up are arbitrary. So perhaps it works even better with simplified, since the shapes are easier?

Nathan Myers (2009-05-22 16:56:09)

It adds to the misunderstanding when you call the script you're learning "Chinese". It's a writing system for Mandarin, the official tongue of Beijing, Taiwan, and Singapore, so you're learning the Mandarin syllabary. Shanghainese, Cantonese, and

dozens of other Chinese languages spoken by upwards of a billion Chinese people have no, or poor, representation in this script. You may have been told that it's not a syllabary, but a system of ideograms. Many native Mandarin speakers have been taught that, and believe it. It's false. A Shanghai speaker who reads Mandarin is bilingual. The symbols really do represent sounds. Therefore, it's also wrong to say "the characters for 'white' and 'ladle'", because those characters don't represent those concepts, but only the sounds used in Mandarin to express the words for those concepts. We aren't tempted to make the mistake in English, because only "a" and "l" are written with one letter, but with a syllabary, any one-syllable word may be confused with the symbol that spells it. What makes it more confusing is that Mandarin has only about 1200 spoken syllables, but many more symbols, so by convention words that sound the same must often be written with different symbols.

Eugene (2009-05-23 09:39:54)

This system sounds very similar to James Heisig's [1]*Remembering the Kanji* and *Remembering the Hanzi*.

1. <http://kanji.koohii.com/>

marmolillo (2009-05-23 13:42:46)

The idea of making relations, as strange as possible, was developed by magician Harry Loraine: [http://en.wikipedia.org/wiki/Harry\\_Lorayne](http://en.wikipedia.org/wiki/Harry_Lorayne) He suggest you make the weirdest possible relation between the symbols, and then it is much easier to remember. He was famous for his unusual capability to remember things, and he always said it was just plain technique. He had a chapter about learning languages in his bestseller book *The Memory Book*.

Judy (2009-09-26 19:01:50)

i have been learning english for many years. but unfortunately the ways for learning new words seems doesn't work for me. i tried again, but still didn't have big progress. after i read the book called "how to remember the GRE vocabulary in 17 days", by Yang Peng who is a teacher in New Oriental School, and "selectness of GRE vocabulary " by Yu Min Hong who is the president of New Oriental School, Beijing. after read those books i learnt much faster than before. the second book teach me how to learn and remember words. such as: "canvas" â€œwe can think canvas consists of a can and a vase. the first book teaches me which way is the best for us to learn new words in very short time. and we need to repeat them according to the forgetting curve which discovered by H.Ebbinghaus. if we learn everything following thie rule. the effecton will be better. maybe learning new languages has common way ?

Kevin Miller (2010-03-17 08:25:05)

oh, and I would be remiss if I didn't put a plug in for Wenlin.com, by your Berkeley colleagues, which can also generate flashcards and do much more, including giving you "just so" stories about why characters are written as they are, which I find to be a very useful elaboration aid to learning.

## **Yogurt Popularizer Dies: Note How Old He Was (2009-05-21 09:49)**

Daniel Carasso, who popularized yogurt worldwide via the Dannon brand, died on Sunday. He was 103. From [1]the obituary in the NY Times:

In 1916 his father took the family back to Spain, where he [the father] became disturbed by the high incidence of intestinal disorders, especially among children. Isaac Carasso [Daniel's father] began studying the work of Elie Metchnikoff, the Russian microbiologist who believed that human life could be extended by introducing lactic-acid bacilli, found in yogurt and sour milk, into the digestive system. Using cultures developed at the Pasteur Institute in Paris, Isaac began producing Danone. . . in 1941 the arrival of the Nazis forced [Daniel Carasso] to flee to the United States. There he formed a partnership with two family friends, Joe Metzger, a Swiss-born Spanish businessman, and his son Juan, whose flair for marketing

would make Dannon a household name in the United States. . .The little company operated at a loss until 1947, when, in a concession to the American sweet tooth, strawberry jam was added to the yogurt. Sales took off, new flavors were added to the product line, and Dannon yogurt made the leap from specialty product to snack food and dessert.

Thanks to Marian Lizzi.

1. <http://www.nytimes.com/2009/05/21/business/21carasso.html?emc=eta1>

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david (2009-05-21 11:56:59)

Does the added sugar found in many yogurts reduce the effectiveness of the probiotics? I assume plain yogurt = good; sugary yogurt = bad, but I don't know why I think that. I also assume all those yogurts in tubes are less good as yogurt than regular yogurt and that frozen yogurt is just ice cream with a fancy name, but I realize those are all just assumptions. Aside from the fact that sugar adds empty calories and promotes tooth decay, is there anything wrong with it in yogurt?

Fred (2009-05-21 14:08:48)

wow! 103 years is a pretty respectable age. I think I should eat more yogurt even if my wife can't eat any dairy products.

Ben Hyde (2009-05-21 15:29:53)

"He was 103" ... leads me to recall: <http://www.youtube.com/watch?v=M6-50poqaIE>

### **Worm Therapy (2009-05-23 09:30)**

One reason I believe we are vastly bacteria-deprived (and thus greatly benefit from fermented foods) is the efficacy of hookworm therapy: Hookworm parasites can reduce autoimmune diseases. Hookworms, like fermented foods, stimulate the immune system in a chronic, harmless, low-level way. [1]Here is a good introduction to the subject:

Musician Scott Richards and artist Debora Wade are two Bay Area patients on the hookworm treatment. Richards and Wade both suffer from an inflammatory bowel disease called Crohn's. When faced with using a parasite as therapy, both patients felt they had nothing to lose. . . . Both Richards and Wade say they didn't have to wait long to feel relief. Richards [described] waking up and the pain suddenly gone. For Wade, she needed to be reinfected, but today said she can eat foods that patients with Crohn's could never eat: pizza & Thai food for example.

[2]Related story.

1. <http://cbs5.com/health/hookworm.treatment.therapy.2.1016319.html>

2. <http://cbs5.com/health/hookworm.treatment.therapy.2.1015341.html>

Jasper Lawrence (2009-06-11 08:52:18)

I was a subject of the news piece you link to and the founder of the first company offering helminthic therapy. Strictly speaking it is not worm therapy, helminthic therapy is the correct term. Your readers searching using the correct term will find much more information. thanks, Jasper Lawrence

Jasper Lawrence (2009-06-11 08:55:22)

oh, and if you like self-experimentation you will like my description of infecting myself with hookworm to put my asthma into remission by going to Cameroon. <http://www.kuro5hin.org/story/2006/4/30/91945/8971> and a more recent article I wrote there advocating the therapeutic use of benign organisms. <http://www.kuro5hin.org/story/2009/3/16/3408/66053>

Crohns Disease (2009-07-08 04:38:01)

I'm very afraid about crohn's disease. I have some symptoms in abdominal pain, often in the lower right area, and diarrhea. Should I go to see the doctor? Please help.

worm therapy (2012-01-07 04:26:13)

If you don't know if you have Crohn's obviously you should ask a doctor. For those who have Crohns here is a post about the efficacy of the treatment I wrote after reading dozens of patient blogs. <http://www.hookwormdiary.com/2011/12/29/a-cure-for-crohns-disease-and-ulcerative-colitis/>

Seth Roberts (2012-01-07 13:18:55)

Worm Therapy, what about using SCD (Specific Carbohydrate Diet) with Crohn's? Lot easier than infecting yourself with worms.

### **Kimchi Power? (2009-05-24 06:49)**



From a Korean father's recent email to his daughter:

It is reported that the [swine] flu is spreading in Queens area, except for the Korean-American concentrated area.Â The reason is that kimchi bacteria kills swine flu bacteria. Kimchi is now very popular in China. Please have [Grandchild 1] and [Grandchild 2] eat kimchi.

Can anyone reading this tell me if swine flu is less of a problem in the Korean part of Queens than in other parts?

I hope so. I eat kimchi every meal and use the big glass bottles it comes in to make kombucha. Kimchi is indeed popular in my section of Beijing but I thought it was because of the Korean students. There are so many the neighborhood is called Koreatown. There is even a North Korean restaurant! Beijing is close to Korea – which is good, because I love Korean food.

Thanks to Paul Sas.

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michael vassar (2009-05-24 08:48:18)

Flu is a virus that infects lungs and sinuses, not a bacteria in the GI track, so the details, at least, are nonsense.

NE1 (2009-05-24 12:24:58)

Of course, there are reasonable mechanisms with which kimchi could protect you from infection. Seth's working hypothesis is fairly popular recently. OTOH, this sounds like a clear example of "old persons' bias". Surely the old ways of our homeland are best; please make sure the youngin's remember them (and us). Data would be nice, though.

Dave (2009-05-24 15:39:17)

Seth, does cooking or heating fermented foods kill the beneficial bacteria?

seth (2009-05-24 16:07:05)

Dave, yes, cooking kills bacteria. What difference that makes is a harder question. Dead bacteria won't help you digest your food. But dead bacteria, even in fragments, might well stimulate your immune system, just as dead viruses do.

Chris (2009-05-24 22:26:51)

According to <http://flutracker.rhizalabs.com/>, South Korea has 21 confirmed H1N1 cases and Japan (which also eats more Kimchi than the west along with natto) 388. Interestingly both countries are reactly more strongly than the western countries in closing schools, barring travel, etc...so the countries themselves don't seem to believe that kimchi is the answer. Of course, the data probably reflects the ability to detect the virus rather than the prevalence of it. The interesting question is whether the survival rate for the chronically ill (diabetes, immune deficiencies, etc.) with H1N1 is higher in Korea/Japan than in the US/Western Europe/Canada. The health care systems are basically equally advanced but the diets are varied.

Dave (2009-05-25 07:25:29)

So I shouldn't heat up my sauerkraut or put my kimchi in with a hot bowl of soup if I want live bacteria?

Patrik (2009-05-25 16:08:01)

This is a classic case of "Old Wives' Tales of the Old Country". We, Hungarians, are just as likely to do this as any other immigrant group.

Staypuff.net » Field trip canceled. (2009-09-03 19:36:36)

[...] Already, a few school children have already come down with H1N1, and I believe some schools have either delayed the start of semester or haven't even opened their doors yet. There's also a few stories going around the blogosphere of teachers who have also been quarantined due to traveling overseas (Chosun Bimbo for one). Of course their Korean counterparts, who have also traveled overseas, are not required to be kept in quarantine, no doubt a lifetime consumption of kimchi will ensure they pose no threat to the general community. [...]

MikeK (2009-11-04 00:41:03)

michael vassar has no idea what he's talking about. First of all you need to consume ripe kimchi. How will you know if it's ripe? It will be very soft and have a strong smell. I am proof kimchi works for flus and colds. As a kid I ate plenty of ripe kimchi. If you stopped consuming ripe kimchi I would eventually catch the cold or flu. I only had 3 flu in my life and a few colds. If it's just raw kimchi it won't do much it MUST be ripe, that's when there's load of friendly bacteria.

Mai (2012-04-09 16:53:56)

To say that the bacteria in Kimchi affects only the GI tract and therefore cannot help with respiratory viruses is ludicrous. The body is a whole, not separate, distinct regions. The GI tract is where the majority of elimination occurs. A healthy GI tract is vital for proper elimination of the body's contaminants. Kimchi = healthy GI tract. And obviously with people saying both the avian flu and swine flu probably originated in Asia, there will be a higher percentage of people sick with both those types despite their diets, just as antibiotics are not 100 % effective. What would be more interesting would be the rates of exposure vs. the rates of infection amongst people who eat kimchi and people who do not. You cannot dismiss the old ways just because they don't fit with your current beliefs. Those beliefs lasted centuries because they probably worked for more people than you can fathom.

### **Addiction Transfer: Food to Alcohol (2009-05-24 07:24)**

The last scene of the movie Clean and Sober shows a smoke-filled AA meeting. Recovering alcoholics smoke a lot. Likewise, alcoholism is a big problem among those who've gotten gastric bypass surgery. Just as alcohol addiction can become cigarette addiction, food addiction can become alcohol addiction:

According to psychologist Melodie Moorehead . . . at least thirty percent of gastric bypass patients will transfer addictions from overeating to another compulsive behavior. . . . The same problems and life challenges are there [but] overeating is no longer a viable coping mechanism. [Addictions to] gambling, shopping and sex have begun to surface in these patients but most alarming is the addiction to alcoholism.

[1]Source. While writing The Shangri-La Diet, I spoke to William Jacobs, an addiction researcher at the University of Florida. No one becomes addicted to sugar water, he said. Only flavored sugar water, such as Pepsi. More generally, only foods that taste exactly the same time. Which strongly implicates flavor-calorie learning in food addiction. I think I understand that; what I don't understand is why some people doing the Shangri-La Diet said the diet made it easier for them to stop smoking or drinking coffee.

Via [2]CalorieLab.

1. [http://www.associatedcontent.com/article/293817/addiction\\_transfer\\_bypass\\_to\\_alcoholism.html?cat=5](http://www.associatedcontent.com/article/293817/addiction_transfer_bypass_to_alcoholism.html?cat=5)
2. <http://calorielab.com/news/2006/07/18/bariatric-surgery-trades-obesity-for-alcoholism/>



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ElJovenWarren (2009-05-25 19:24:49)

Seth : "why some people doing the Shangri-La Diet said the diet made it easier for them to stop smoking or drinking coffee." I started the Shangri-la diet two weeks ago, and my schedule to take the oil and the sugar water is during the afternoon in the office and late night. I work from 9am to 6pm The time i used to drink more coffee was by the afternoons, specially after lunch. This time i now using for drinking the water and the oil. I need 1 1/2 hour to take the water, so i have very little time to drink coffee, if i want to wait the necessary hour pre and post flavor. That's why i am drinking less coffee. Regards from Argentina

bennetta (2009-05-26 13:27:34)

SLD helped me quit smoking. I wouldn't even argue that it was more effective as a way to quit smoking than it was as a way to lose weight. I attribute it to the following factors: 1) When people decide to lose weight, they don't decide to just lose weight. Usually, it's an overhaul of your entire life- a decision to be healthier. Smoking and weight loss are two parts of the overall package. 2) Smoking and snacking shared the same space in my head. They were both idle activities, or things I did when I had nothing else to do. If you eat to waste time, SLD will mess with your idle time. While you might think that you would smoke more to pick up for the time spent eating, in fact, the opposite is true- you'll end up smoking less. 1) SLD forces you to have a clean palate and smoking is really disgusting with a clean palate.

laney (2009-05-26 15:16:56)

When I did SLD, I actually wound up sleeping better and having a great reduction in my anxiety. I think that it has something to do with the blood brain barrier and the ease at which the fatty acids are able to get to the brain (without food in the stomach before or after) and SLD helping to rebuild the brain. I think it also made me smarter. The other thing about the oil is that it's a delivery system for nutrients, so your body doesn't have to work so hard, thus putting less stress on your mind/body. Though it didn't help me lose weight, so I stopped. But remembering this, I might start again. It had so many other benefits.

### **Delicious: Roasted Salted Flax Seeds (2009-05-24 10:51)**

At the Fancy Food Show in January, I told Stephanie Stober, the owner of [1]Flax USA, about [2]my omega-3 research (which used flaxseed oil). In return she gave me some of her products, including a package of [3]roasted lightly-salted flax seeds. It stayed in my refrigerator until yesterday when I tried some it for the first time. My god, so good! (And so healthy.) I could barely keep from finishing the (2 oz.) package. I finished it today.

1. <http://www.flaxusa.com/index.cfm>

2. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>

3. <http://www.commark.com/flaxusa/template.cfm?page=detailview&pnum=3135&new=no&listpage=listview>

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sjar (2009-05-24 15:31:23)

But I was under the impression that the seeds had to be ground for full benefit - and were best cold, not heated? Help

Zeke (2009-05-26 02:50:00)

I second sjar's concerns. Doesn't heating the flax seeds cause the lipids to form unhealthy oxides and peroxides? I was also under the impression that mastication was not able to break open a significant number of flax seeds for fat absorption.

seth (2009-05-26 15:34:46)

I think you're focusing on the negative too much. Sure, ground flax seeds are probably more easily digested. But how much more easily? If whole seeds provide 70 % of the benefit provided by ground seeds, I don't think that's worth worrying about. On the other hand I agree it's a good question to ask. I could compare the effects of whole seed with ground seeds and flaxseed oil on the various brain tests I do; that would be a way to answer these questions.

### **How the Truth Comes Out (continued) (2009-05-25 03:43)**

In [1]a previous post I wrote about the need for independence – safety from retaliation – to tell the truth. Here is Jane Jacobs's brush with this fact of life, from a 2006 interview in Urban Design magazine:

I got a grant from the Rockefeller Foundation [to write her first book]; well, apparently, rumor quickly reached Harvard and MIT that I had this grant, and they had started something called the "joint urban design center," something like that. So, I was invited up there to have lunch at Harvard by, I think it was Martin Meier at the time, and I forget who the MIT one was, but the three of us had lunch, so they had worked out what I had to spend my time on. (I had no connection with them, they just heard somebody had a grant, and they would try to recommend . . . ) What I was to do was to make out a question [a survey], and spend my time on questioning people who lived in middle income housing projects, to see what they liked about them and what they didn't like, and that was to be my book on the city!

Well, I was so glad that I was not a graduate student there, I felt so sorry for anybody who was caught in that trap and had to do that kind of junk, and so I thanked them very much for their interest and left them. Oh my god! I was out of there, because I could hardly wait to leave this behind: disgusting, absolutely disgusting! And that's what their interest in cities was, just junk like that....and different people trying to further their own career by roping in other people. And it was not to really find out things.

If the Harvard and MIT profs had said to Jacobs, "can we help you?" that would have been one thing. Under the guise of being helpful they said the opposite: Here's how you can help us.

1. <http://www.blog.sethroberts.net/2009/01/24/not-the-same-study-section-how-the-truth-comes-out/>

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IndianGirl (2009-05-25 10:01:42)

There is a cartoon/manga about you and Shangrila diet here: <http://calorielab.com/news/2008/09/30/japans-top-4-diets-plus-1/>

### **The Naysayers (2009-05-25 20:19)**

Jane Jacobs called them [1]squelchers: People in powerful positions who say no to new ideas. The effect of such people is that problems remain unsolved.

What about scientists? On the face of it, research is about discovering new ideas. If you're a non-scientist, you

might even think that is the whole point of research. Certainly that is why it is supported with tax dollars – taxpayers hope research will improve health, for example. But quite a few researchers don't see it that way.

In London, a group called [2]Business in the Community is creating "[3]toolkits" to help companies improve employee health. One toolkit is about [4]emotional resilience. An early draft of that toolkit contained this passage:

Heart attacks and other ischemic cardiovascular diseases can be created by stressful office dynamics that come from the top.Â Even one year of working under a manager with poor leadership skills can raise the risk of acute myocardial infarction, unstable angina, cardiac death, or ischemic heart disease death by a significant 24 %, while four years under the same stressful conditions produces a 39 % elevated risk of ischemic heart disease events.

The data are from Nyberg A, et al., "Managerial leadership and ischaemic heart disease among employees: the Swedish WOLF study" *Occup Environ Med* 2008. At a meeting to discuss this toolkit, attended by representatives of large companies and a few academics, the academics objected to this passage. The study was methodologically flawed, they said. "But what if it's true?" the non-academics said. The passage was removed.

On The Larry King Show a few years ago I heard a prominent woman psychiatrist (Nancy Andreassen or Kay Jamison) say that it was a good time, if there ever was one, to have a mental illness because it was a golden age of psychiatric research. Researchers, she said, were making one breakthrough after another. Nobody asked her, why, if that was so, was bipolar disorder still being treated with lithium? That's 50 years old. Why hasn't research come up with something better? [5]Two psychiatric researchers believe it is because research proposals to test new treatments are turned down due to what the critics call inadequate methodological purity. For example, you're supposed to do such studies with patients who have only bipolar disorder, although comorbidity is common.

This is the behavior produced by what academics ([6]admirably!) call "critical thinking": ignoring what is valuable or promising in a rush to point out what is imperfect.

[7]Something is better than nothing.

1. <http://74.125.155.132/search?q=cache:dqL8loqUwpUJ:www.creativeclass.org/rfcgdb/articles/Revenge%2520of%2520the%2520Squelchers.pdf+%22jane+jacobs%22+squelchers&cd=1&hl=en&ct=clnk&gl=us&client=firefox-a>
2. <http://www.bitc.org.uk/>
3. [http://www.bitc.org.uk/applications/dynamic/publications.rm?filter\\_keyword=&filter\\_issue=impact\\_area\\_root.workplace.healthyworkplaces&sortby=date&id=26544&x=8&y=10](http://www.bitc.org.uk/applications/dynamic/publications.rm?filter_keyword=&filter_issue=impact_area_root.workplace.healthyworkplaces&sortby=date&id=26544&x=8&y=10)
4. <http://www.bitc.org.uk/go.rm?id=28268>
5. [http://www.ncbi.nlm.nih.gov/pubmed/12482471?ordinalpos=22&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_DefaultReportPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/pubmed/12482471?ordinalpos=22&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum)
6. <http://www.blog.sethroberts.net/2008/12/02/unfortunate-obituaries-the-case-of-david-freedman/>
7. <http://www.blog.sethroberts.net/2007/08/05/something-is-better-than-nothing/>

Tom in TX (2009-05-26 11:29:41)

Did the psychiatrist say it was a great time for the \_patient \_ or for the \_researchers \_? Maybe one of the main purposes of research is to capture the tax dollars.

Seth's blog » Blog Archive » The Opposite of Naysayers (2009-05-26 18:20:07)  
[...] The Naysayers [...]

Chris (2009-05-26 23:21:04)

I would also check out this talk on scurvy/smallpox and several other old ailments where the author points out how it took centuries and millions of lives lost to get past the naysayers: <http://www.youtube.com/watch?v=EaHTifum7ns> How little things change...

Seth's blog » Blog Archive » The American Health Paradox: What Causes It? (2009-05-29 08:30:08)  
[...] The Naysayers [...]

### **How to Become Oxford Professor of Poetry (2009-05-25 21:41)**

1. [1]Conduct smear campaign.
2. [2]Condemn smear tactics ("it seems horrible, this anonymous campaign")
3. [3]Praise the person you smeared ("a very good poet")

When this comes to light and you are forced to resign, be sure to

1. [4]Say you did nothing wrong ("I did nothing intentional that led to Derek Walcott's withdrawal from the election").

1. [http://www.nytimes.com/2009/05/26/books/26poet.html?\\_r=1&hp](http://www.nytimes.com/2009/05/26/books/26poet.html?_r=1&hp)

2. <http://query.nytimes.com/gst/fullpage.html?res=9404E5DF133FF930A25756C0A96F9C8B63&scp=1&sq=Facing%20Anonymous%20Charges,%20Poet%20Departs%20Race%20for%20Post%20at%20Oxford%20&st=cse>

3. <http://www.telegraph.co.uk/culture/culturenews/5313114/Nobel-Laureate-Derek-Walcott-and-the-sex-smear-campaign.html>

4. <http://www.telegraph.co.uk/culture/books/5383899/Ruth-Adel-first-female-Oxford-Professor-of-Poetry-resigns-over-smear-claims.html>

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Peter Smith (2009-05-26 05:02:33)

the odd part is, the guy committed some serious moral crimes, at a minimum, and seemingly a few on the books. sexual coercion? i'm far from perfect, too, but can't say i'm feeling all that sorry for the Trini Lovemeister..

Andrew Gelman (2009-05-26 06:01:25)

On the upside, the job probably doesn't pay very well, in which case she didn't have that much to gain!

Elisa (2009-06-02 14:02:08)

Why do so many people view "tattling" as more morally reprehensible than sexual harassment?

Kevin Lahey (2009-06-09 19:41:40)

I presume that the real offense is not 'tattling', but is in actively campaigning for an honor like this, rather than letting the chips fall where they may. And, c'mon, lying about orchestrating a whisper campaign against a 79-year-old Nobel laureate is pretty reprehensible behavior on any scale.

Sol Kawage (2009-09-04 12:35:21)

what a bitch.

## **The Opposite of Naysayers (2009-05-26 18:19)**



In library school, future librarians are taught the saying "every book a reader, every reader a book." They are not taught – by example or otherwise – to point out the flaws in books. Nor are they taught to impose their own preferences on those who come to them for help. Professors – who are in the same business, the spread of knowledge – could learn something from this. [1]John Taylor Gatto has pointed out that the same teenagers who are disruptive in class are well-behaved in libraries.

[2]The Naysayers.

1. <http://www.johntaylorgatto.com/>

2. <http://www.blog.sethroberts.net/2009/05/25/the-naysayers/>

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david (2009-05-26 20:11:12)

I think this blog proves your point (though it might seem at first to contradict it) about the typical attitude of librarians (read the about page): <http://awfullibrarybooks.wordpress.com/>

Daniel Lemire (2009-05-26 20:20:51)

Fascinating point. However, librarians are very selective as to what they will allow in their libraries.

## **Can Probiotics Prevent Asthma? (2009-05-26 18:56)**

From a [1]UCSF press release:

In the first effort of its kind in the United States, researchers at the University of California, San Francisco have launched a study to determine whether giving active probiotic supplements to infants can delay or prevent asthma in children.

The intervention is a novel method for the primary prevention of asthma with enormous potential to have a public health impact, said Michael Cabana, MD, chief of the Department of General Pediatrics at UCSF Children's Hospital and principal investigator for the study. There currently are no known ways to prevent asthma, he said.

“It would be a great thing to be able to prevent asthma,” Cabana said. “We believe that using probiotics is a safe and effective way to do that.”

The press release is from May 2006; the three-year study should be almost finished.

Thanks to Steve Hansen.

1. <http://news.ucsf.edu/releases/ucsf-study-to-examine-whether-probiotics-can-prevent-asthma-in-children/>

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Kirsten (2009-05-27 05:05:20)

I've been interested to read your series of posts on probiotics, especially in light of my own recent experience and reading. Recently, my doctor diagnosed me with leaky gut syndrome, caused by an overgrowth of yeast in my digestive system. While I'm a seemingly healthy 35-year old, this seems to explain a whole constellation of small issues—everything from persistent breakouts to strong reactions to certain medications (mold-based antibiotics, steroids, and birth control pills.) I'm now on an anti-yeast diet and an anti-fungal medication. Anyway, in reading about yeast overgrowth, I was shocked to realize how common the causes are. In healthy people, there's an equilibrium between the good bacteria in your body and harmless amounts of candida yeast. However, things like antibiotics, stress, excess consumption of white flour/white sugar; excess consumption of alcohol or caffeine can drive down or kill off good bacteria. Yeast is apparently opportunistic, and will take the opportunity to fill that space. At some point (and on this, I'm a bit hazy) it turns from harmless to parasitic—for instance, growing through the intestine walls in search of food (hence the leaky gut), and the resulting dis-equilibrium has been linked to everything from asthma to fibromyalgia. (Also, sugar cravings, since yeast eat sugar; mood swings; persistent weight gain or resistance to weight loss. In my case, I've lost more than 8 pounds since starting on the anti-yeast protocol one week ago.) Below you linked probiotics to less post-partum weight gain. Apparently, the presence of progesterone is a trigger for yeast—meaning that it finds it easier to get a foothold during pregnancy. All this to say that when I read your posts on probiotics, the flip side of that (to me) is yeast. A big part of the anti-yeast protocol (once you've killed off much of it, which can take months—my relatively mild anti-yeast program involves at least two months of diligent eating and medication) has to do with replenishing all of the good bacteria in your digestive tract—and making sure to keep doing it so the yeast doesn't grow back. People I've read say yeast overgrowth is rampant....and of course that makes sense in a society full of anti-biotics but very few probiotics.

How Do You Prevent Asthma (2009-06-26 20:20:43)

[...] Can Probiotics Prevent Asthma? [...]

### Assorted Links (2009-05-27 13:15)

- [1]Ricky Jay radio archive
- [2]10 weird experiments
- [3]A blog about the origin of language

- [4]Dambisa Moyo replies to Jeffrey Sachs

Thanks to Vic Sarjoo.

1. <http://www.rickyjay.com/radio.html>
2. <http://www.independent.co.uk/news/science/the-acid-test-worlds-weirdest-experiments-886008.html>
3. [http://www.babelsdawn.com/babels\\_dawn/](http://www.babelsdawn.com/babels_dawn/)
4. [http://www.huffingtonpost.com/dambisa-moyo/aid-ironies-a-response-to\\_b\\_207772.html](http://www.huffingtonpost.com/dambisa-moyo/aid-ironies-a-response-to_b_207772.html)

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## **Microwaves and Microbes (2009-05-27 20:56)**

[1]Here is an interesting article about the danger of microwaved food:

Comparing the blood chemistry of people after eating food cooked in conventional and microwave ovens, a dismayed Hertel explained that "blood cholesterol levels are less influenced by cholesterol content of the food than by stress factors." . . .

So was the blood chemistry of consumers. These abrupt measurable changes included a decrease in high-density lipoprotein (good cholesterol) and a sharp rise in low-density lipoprotein (bad cholesterol) levels following the consumption of microwaved food.

The two researchers also discovered marked declines in the number of red blood cells that carry oxygen to the tissues and collect carbon dioxide, as well as in white blood cells that fight infections.

The researchers say these bad effects happen because microwave heating makes cells "easy prey for viruses, fungi and other micro-organisms." The author adds, "bad bugs are everywhere."

Whereas I believe the opposite: The problem with microwaved food, when there is one, is that it is too sterile. The article later reports an experiment in which E. coli. grew much faster on microwaved milk than conventionally heated milk. I interpret that to mean the microwaved milk was more sterile: less competition for the E. coli.

Note I don't mean to say don't use your microwave. I use mine all the time to heat water and defrost stuff. It's the experimental data and their interpretation that interested me

1. [http://www.alive.com/153a1a2.php?text\\_page=1](http://www.alive.com/153a1a2.php?text_page=1)

Darrin Thompson (2009-05-28 06:29:25)

I was with you until you took away my microwave. Here I must draw the line.

seth (2009-05-28 07:03:48)

Darrin I didn't mean it that way and I have added a note to make that clear.

Aaron Blaisdell (2009-05-28 07:18:03)

I use my microwave "gently". That is, rather than heating foods until they are piping hot, I use just enough time to get them warm. This, I hope, dampens the negative impact of microwaving food. The microwave oven is such a convenient way to warm up food at the office. At home, I've taken to heating more of my food in the oven, toaster oven, or on the stove.

Willy (2009-05-28 11:18:18)

Are there any other proven risks of microwave cooking?. A physicist friend told me there is none, but a web search gives lots of scare websites. Thanks

Anthony (2009-05-29 05:00:09)

@Willy, Yes, if you eat microwaved food that is really hot, it can burn your mouth. Also, there are some questions about the safety of plastics and microwave ovens. The consensus seems to be to only use "microwave safe" containers (there might be labeling laws on this, depending on your country), and not allow plastic wrap to come into contact with food while being microwaved (which includes fluids splattering while being heated).

Willy (2009-05-29 06:03:33)

Thanks Anthony. What do you think about this article (I don't like Mercola but it is a good list of all the scare about MW ovens) <http://www.mercola.com/article/microwave/hazards.htm>

James (2009-05-29 10:46:53)

Lots of fast food is microwaved before serving.

Anthony (2009-05-30 02:22:07)

@Willy, I have no idea - I'm not a microwave oven expert. I don't microwave much, because I can heat things up quickly and they tend to taste better on the stove top in a pan. I even heat up milk using the stove top, which is actually not much slower than a microwave.

Nick (2012-03-04 18:47:57)

Would this mean that consuming dead bacteria would not trigger an immune response?

## **The Death of Advertising? No Way (2009-05-28 06:48)**

[1]James Fallows wonders if the decline of newspapers is one effect of a much larger trend: the decline of advertising. He quotes a reader:

The real problem is, advertising is dying. It's just pulling down newspapers along the way. Next up: TV, radio, and Google.

Advertising isn't cost-effective, the reader says. This is becoming increasingly clear. Companies can no longer justify the expense.



I would bet a lot of money this is wrong. Advertising isn't dying; it is moving to a more differentiated personalized form, as has happened in dozens of industries. Jane Jacobs wrote about this in *The Economy of Cities*: the historical flow is from artisanal production to mass production to differentiated production. An example is software. Long ago, programs were written by individuals: artisanal production. Then came software produced by large companies, such as Microsoft: mass production. Now we are entering the age of highly individualized software. The usual term is open source but open source software is enormously customizable. For example, some Tsinghua students made a version of Firefox specifically for Tsinghua students. Internet Explorer will never be as easily customized as Firefox. Which means, according to history, IE is doomed.

Fallows's reader is wrong for another reason: The central role of advertising in human evolution. Language was the first advertising. Single words served to say (a) you had something to trade and (b) you wanted something. This is how and why language began – it facilitated trade. Language was so successful as advertising that lots of other uses evolved on top of that use, just as newspapers and magazines do a lot besides carry advertisements. Human evolution, in my view, is the story of how we became occupational specialists; by increasing trade, advertising was central to that. In the form of language, it's been a huge force pushing evolution for the last 100,000-odd years. Given that longevity, the probability it will disappear in the next 100 years is very low.

The language evolution theory makes a prediction. Words can easily be used (a) to announce you have something ("toothpaste!") and (b) to ask for something ("toothpaste?"). The first is [2]push advertising; the second is pull advertising. We don't hear much about pull advertising. But the current imbalance – huge amounts spent on one, almost nothing on the other – doesn't make sense. Historically, both work. We use language both ways, including a lot of pull advertising. Surely most people say what they want ("I'm hungry") more often than they say what they have to trade for it. (In China, some peddlers, such as [3]the father of a friend of mine, do spend their day saying what they are selling.)

Based on history, I predict the imbalance will be corrected; pull advertising will become much more important. Not a brilliant prediction because it is already happening. Searching online for something you want, e.g. via Google, is a form of pull advertising. Guru.com, where you post a job you want done and wait for bids, is another example. An example that doesn't yet exist is a free concierge-by-phone service. You call them, they help you buy something.

1. [http://jamesfallows.theatlantic.com/archives/2009/05/not\\_death\\_of\\_newspapers\\_but\\_de.php](http://jamesfallows.theatlantic.com/archives/2009/05/not_death_of_newspapers_but_de.php)
2. <http://tools.devshed.com/c/a/Website-Advertising/Push-vs-Pull-Advertising/>
3. <http://www.blog.sethroberts.net/2008/12/19/my-theory-of-human-evolution-fixing-bike-pumps/>

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bennetta (2009-05-28 13:48:42)

Seth, This reminds me very much of Walter Benjamin. If I recall, (the class was several years ago) about 70 years ago, he predicted the advent of the internet and blogging by analyzing the industrial development of books in *The Work of Art in the Age of Mechanical Reproduction*. In their early days, books were works of art created by scribes, extremely expensive and nearly impossible for the common individual to obtain. With the advent of the printing press came massive publishing houses, mass producing copies of books for those who were interested. Benjamin theorized that the natural evolution of this was to individualize production, basically describing the internet. scribe => publishing house => internet In industrial terms, it means: artisan production (one "authentic work," no duplicate copies) => centralized production (one "authentic" work, many duplicates mass produced) => decentralized production (there are no authentic or duplicate copies) For advertising, it means: "book" => "book!" => "book?" "book!" And in terms of flow of information, it translates to: simple => top down => bottom up + top down Newspapers aren't the only organizations in decline. The recording industry and video rental industry are also struggling, thanks to new methods of communicating goods like Netflix and iTunes. The

recording industry is doubly hit, as even individual artists don't really need them anymore. If you want to get your name out there as a musician, just make your own page on Myspace and watch the numbers fly. A few friends of mine were able to tour Europe that way. A side effect of this, I think, is also an influx of variety and wider spread of wealth. For example, instead of having 5 or 6 sponsored superstars/multimillionaires touring the world, now you have several thousand regular stars making a decent living and doing what you want. At least this appears to have been true for my friends. Advertising will never die, but industries that cannot or fail to adapt to this new environment will fail. By refusing to adapt to the internet, the RIAA essentially dug its own grave. Does this sound accurate?

Mike Kenny (2009-05-28 19:05:05)

Craigslist seems like a great example of the pull advertising. Google and others on the internet are trying to interpret our search requests as indirect pull advertising (looking at baby names? You might be interested in this ad for cribs).

seth (2009-05-28 19:31:22)

benetta, when I was a grad student I hired someone to make the graphs in my scientific publications. Now I make my own publication-quality graphs using R. Another example of a job disappearing is the disappearance of milkmen. I think that's basically what's happening to the recording industry. They are no longer needed to connect A (data, milk) and B (publication, milk drinker).

Scot (2009-05-30 10:14:12)

Then there is the scalper. S/he walks around the venue asking for tickets (pull) but actually wants to sell (push).

Alex (2009-09-30 04:42:07)

Advertising is surely moving from one medium to another. Calling it dying cannot suit and its transformation for sure.

Data Deduplication (2011-07-06 02:39:40)

Google and others on the internet are trying to interpret our search requests as indirect pull advertising (looking at baby names? You might be interested in this ad for cribs).

## **The American Health Paradox: What Causes It? (2009-05-29 08:29)**

Americans spend more on health care than people in 29 other rich countries but [1]our health is near the bottom of the list. Shouldn't more money buy better health? This is the American health paradox. What causes it?

In the latest issue of The New Yorker, Atul Gawande, in [2]an excellent article, tries to find out how the money is wasted. He visits a small Texas town where he finds an entrepreneurial attitude among doctors – a tendency to order more tests and do more procedures because doing so will generate more revenue. (A weakness that [3]my own surgeon may have succumbed to.) Gawande does his best to figure out how things could be better but comes up short. He finds better systems of care – but they seem to be losing rather than winning. I think Gawande is too close to the problem he is writing about to see the really large forces at work.

In The Economy of Cities, Jane Jacobs pointed out that Marx got it wrong: The fundamental conflict in society isn't between owners and workers, it's between those who benefit from the status quo and those who benefit from change. There are plenty of owners and workers on both sides. The balance – or rather imbalance – of power determines what happens. The more powerful the status quo, the less change. Lack of change means lack of innovation; lack of innovation means that problems build up unsolved.

If the status quo is powerful enough, the problems get worse and worse, remaining unsolved – until the whole thing collapses. (This is what Jared Diamond failed to understand in Collapse.)

product; the resources to make that product run out (Jacobs often pointed out that nothing lasts forever), often suddenly; and the whole city dies. Manchester (cloth) and Detroit (cars) are modern examples. Was the current financial crisis due to reckless lending? Not really. That was an opportunistic infection. It was due to a problem building up unsolved: lack of affordable housing, which was due to lack of innovation in the housing industry. Lack of real solutions made room for a phony solution that, funny coincidence, benefited the powerful: rip off poor people by lending them too much money. (A new form of predatory lending that took advantage of the human tendency toward speculative bubbles.) Just like resource depletion, the phony solution worked and worked and worked, until, all of a sudden, it stopped working and the whole giant structure fell down, hurting the poor and powerful alike.

The cause of the American health paradox is American inequality. America is more unequal than other countries. Everywhere, in every country, the powerful prefer the status quo but in America the rich and elite are especially powerful relative to the poor, so the status quo is especially entrenched and innovation [4]especially well-squelched. America has a lot of health problems building up unsolved. Perhaps the most obvious is obesity, which affects the poor far more than the rich. The further the rich from the poor – that is, the more inequality – the more the rich can ignore it. And they have: The healthcare establishment's record on prevention and treatment of obesity is terrible. Staggeringly bad. In one tiny example, when I proposed a rat experiment to test an idea behind the Shangri-La Diet, I was denied permission by the UC Berkeley Animal Care and Use Committee: My idea couldn't possibly be true, I was told. Had there been plenty of poor people on the committee, instead of none, I think the outcome would have been different. Problems such as depression, allergies, autoimmune disorders, and autism are likewise building up with no real progress being made. An example of a real solution is home glucose monitoring for diabetes. This came from outside the healthcare establishment – from Richard Bernstein, an engineer with diabetes.

Although *The Economy of Cities* was published in 1969, it has not received the attention it deserves. Lots of well-read people dislike inequality, and the connection between inequality and poor health has been documented many times, especially by [5]Richard Wilkinson, but the Jacobian point that more inequality means less innovation means problems stacking up unsolved is not widely appreciated. In a whole book about the badness of inequality (*Inequality Matters*, 2005), I didn't see this point made even once. In his *New Yorker* article, Gawande fails to understand Jacobs's point that [6]farmers didn't invent tractors; the big improvements to American (and world) health are not going to come from doctors or anyone now powerful in healthcare. They are too wedded to the status quo. (Notice that [7]this recent innovation in affordable housing, the nano home, comes from a car company – an Indian one.) Gawande, being a doctor, surrounded by the powerful at Harvard (where he teaches), is in a poor position to figure this out. Where will the big improvements in health actually arise? From people who benefit from change. A reasonable healthcare policy would try to empower them.

1. <http://www.tinyrevolution.com/mt/archives/002955.html>
2. [http://www.newyorker.com/reporting/2009/06/01/090601fa\\_fact\\_gawande](http://www.newyorker.com/reporting/2009/06/01/090601fa_fact_gawande)
3. <http://www.blog.sethroberts.net/2008/09/13/the-case-of-the-missing-evidence/>
4. <http://www.blog.sethroberts.net/2009/05/25/the-naysayers/>
5. [http://books.google.com/books?id=kxWSsoA5Q\\_4C&dq=richard+wilkinson+inequality&printsec=frontcover&source=bn&hl=en&ei=H\\_0eSq-uFI2itg0o39WICQ&sa=X&oi=book\\_result&ct=result&resnum=4](http://books.google.com/books?id=kxWSsoA5Q_4C&dq=richard+wilkinson+inequality&printsec=frontcover&source=bn&hl=en&ei=H_0eSq-uFI2itg0o39WICQ&sa=X&oi=book_result&ct=result&resnum=4)
6. <http://www.blog.sethroberts.net/2009/05/02/how-could-they-know-the-case-of-healthy-gums/>
7. [http://www.businessweek.com/the\\_thread/hotproperty/archives/2009/05/first\\_it\\_came\\_o.html](http://www.businessweek.com/the_thread/hotproperty/archives/2009/05/first_it_came_o.html)

Charles (2009-05-29 09:59:28)

Great essay, Seth. It really ties together a lot of the things you've been discussing over the past few months.

Anthony (2009-05-29 10:40:15)

I was with you until this part: "Was the current financial crisis due to reckless lending? Not really. That was an opportunistic infection. It was due to a problem building up unsolved: lack of affordable housing, which was due to lack of innovation in the housing industry. Lack of real solutions made room for a phony solution that, funny coincidence, benefited the powerful: rip off poor people by lending them too much money." IMO the housing bubble was basically a transformation of the NASDAQ (tech) bubble into the housing market. Easy borrowing was mostly engineered by the Federal Reserve in an attempt to prevent a recession (encourage economic growth). I.e., it was \*innovation\* on the part of the ruling class aimed at solving their own problems that caused the problem. To the extent it was specifically about housing, you're right that it was abetted by government policies aimed at increasing "affordability", but these in turn were innovations to again solve the same problem: how to maintain or increase their own power by ingratiating themselves with certain constituents and so on. That is to say, lots of problems are caused by \*too much\* innovation to solve problems (problems such as "How do I increase short-term profit?" or "How do I get elected again?") by people who will stand to benefit against an often larger group who will stand to lose, where the second group's losses are too diffuse or obscured to adequately motivate sufficient counter-actions.

seth (2009-05-29 11:34:46)

Well, yes, there is innovation in crime, innovations in gaming the system, as well as innovation that solves real systemic problems, such as poor health or lack of decent housing. I completely agree.

Darrin Thompson (2009-05-29 13:28:37)

I think you are painting with too broad a brush. I thought that one of the key points of Jacobs in the Economy of Cities is that cities are the most important economic unit to reason about; problems in cities are concrete; they are actionable; with study and leadership and effort they can be solved. There are economic entities that are too large to reason about or fix, like regions and nations. Solve problems at the city level was what I got out of reading it. When you criticize the American health care system it's like you are criticizing California. It's epically gigantic and you come to conclusions like "inequality is the root problem." Nobody is going to fix health care any more than they are going to fix the state of Florida. I have three kids with autism and I had a pediatrician who was completely bought into mainstream dogma. All she could do for us was miss the initial diagnosis (by years, tragic), prescribe antibiotics like candy, and berate us for not wanting to vaccinate our kids who were constantly suffering cold symptoms. We left her for a very pragmatic doctor with extensive autism experience. Our kids have improved a great deal in both language and behavior with her help. One is reading even. No clue about the story mind you, but he likes the words. There are pockets of innovation within the monster that is the whole of health care. It's not a whole and can't be addressed as a whole. Those pockets are separate entities and need to be understood as separate. That leads to far more actionable stuff like promoting self-experimentation and pragmatism. Another pocket of innovation you might care about... You might add to your catalog of current events, that a few doctors are discovering the "lean" quality movement. There is a lot of literature coming out and the results of applying it are often positive in terms of cost and mortality. If that idea manages to spread it could take out a big part of "inequality" in its wake. Anyway, all my blathering to say, I think you missed the root cause, and this inequality you speak of is a false dichotomy.

seth (2009-05-29 13:47:30)

Darrin, I don't grasp your main point. What is the "root cause" that I missed? Jacobs really did say what I have her saying. Look on pp. 248-9.

April (2009-05-29 16:27:34)

Lots of thought provoking points in here Seth. I think some of them though are worth pulling apart just a bit. I think there are a number of things that cause our "high spending" "relatively poor health" paradox. Much of our relatively poor health relates to lifestyle factors more than health system or healthcare problems - poor diet, and lack of exercise being the leading contributors. You suggest that we'd be doing more about these problems if we were a less unequal society - it's an interesting

hypothesis. I don't believe though that the more equal societies in Europe have been much more active or successful than we have in this arena. It's turning out to be very hard to change peoples' behavior in desirable way. On your point about the narrow range of criteria for allocation of research funding you see in the US - I'm sure you are right, that it is too narrow. From talking to researchers who have sought funding in the US and in Europe though (again, more equal societies) - I have heard only that research funding there is even more conservative...tending to fund research that looks at the same range of questions, uses the same methodologies over and over. Outside of the box researchers often move over here for this reason. On innovation - my sense is that the very pluralistic, and decentralized, US health system probably generates significantly more innovation than other OECD countries. Unfortunately because of our funding system, almost all innovation is focused on new drug or treatments or new ways of delivering care that can generate higher revenue for the provider/ innovators, not save anyone money. India, as you've mentioned, is an engine for generating innovations to bring costs down precisely because 85-90 % of payment is out of pocket. When patients pay out of pocket, they tend to do more research on prices - when able. So, bringing down costs is a real market advantage.

Adam (2009-05-31 16:12:22)

Seth: \*There is a growing appreciation of small homes/living spaces. Affordability and sustainability are motivating factors, but some of these homes are just plain cool. No reason small can't be stylish. \*Scroll through the shackitecture page at <http://www.dinosaursandrobots.com/search/label/shackitecture> or try gorilla designs post Katrina work at <http://gorilladesign.org/>. For the uber trendy there is the luxury steel cabin on stilts <http://www.oskaarchitects.com/Projects/3-8/Delta-Shelter>. -Adam

Darrin Thompson (2009-06-01 06:11:14)

Not my best attempt at arguing. My tone sounds like the opposite of I love your writing when in face, I love your writing. Ok, having slept on this, I think I can explain myself. The American health care system is a work place. In that way it's like any other real estate brokerage, factory, software shop, or retail store. It's a system that does work and makes some money and spends some money. The thing about most workplaces, and this is world wide, is most are completely broken with regard to quality of work produced. They are 19th century in terms of efficiency at best. That's true worldwide, even Japan. Japan has world famous pockets of quality but they are poorly understood and from what I've seen they don't represent the state of the nation. Focusing specifically on America, what I've seen is management recognizes that there are problems with quality, and things cost too much, but they hold tight to the reins of power and behave in a lot of incompetent ways. They encourage everyone to "do their best" and motivate and set up processes which need to be complied with, blah blah. And here it sounds like I agree with you, but I think this is just a symptom and not the root cause. Most people in the whole world have never even seen a workplace that understands how to build quality into whatever they do. Even fewer have worked in one and could actually understand what they see in a quality minded workplace. Quality, when you sit down to study it, is beautifully counter-intuitive, highly experimental, rigorous, and respects the humanity of all it's participants. What's even more pertinent here, is that quality provides a back door where management begins to gracefully relinquish power. So the root cause, as I see it, is that Americans' view of quality is distorted from reality. A few anecdotes from clueless business press writers about "the Japanese" is about where most of us stand. There are a few pockets in the Medical industry where people are discovering that they can push costs lower than they thought and reduce medical errors and of course deaths a lot lower than they thought at the same time. Finding and promoting those stories seems like something that can be done to address the true root cause of the American paradox. And what if Americans just spent less on medical care and nothing else changed? Wouldn't we just be as bad as anyone else, unremarkable? Sounds like there's a ton of waste to be eliminated.

Stephen M (Ethesis) (2009-06-02 21:15:37)

I've really enjoyed looking at Ikea's small living spaces designs. If nothing else, for the SF (science fiction) applications and considerations. But there is a world of innovation out there that is still yet to be done.

Seth's blog » Blog Archive » Flaxseed Oil and Better Shaving (2009-06-27 22:31:45)

[...] It's very difficult to get flaxseed oil in Europe (bottled oil simply is not available). I have recommended flax to my colleagues also plagued by red necks to no avail: they are elite in two ways, white collar elite (working for Bain) and dietary elite (as Italians,

which supposedly have the best and healthiest food ever), so it fits with your reasoning that they are very change-averse. In fact, a manager told me that my taking softgels during the day is “inappropriate” and “disturbing” colleagues. [...]

Seth's blog » Blog Archive » Ben Casnocha on China (2009-11-03 05:02:53)

[...] I fail to see any substantial America-specific increase. Due to the Internet, free speech has certainly increased but that has almost nothing to do with how America is governed. Free speech has increased everywhere with Internet access. Due to the increased cost of health care in America (an increased percentage of per capita income), worsening health (e.g., the obesity epidemic), and stagnation in the development of better treatments (e.g., for bipolar disorder) and better prevention, I'd say freedom in America has declined because poor health is imprisoning. Obesity, for example, is profoundly imprisoning. Cross-national comparisons show that America has a uniquely poor health-care system given American wealth. Given the concentration in America of support for health research (money and prestige), America is especially responsible for the lack of progress. And when people as smart as Atul Gawande fail to see the great stagnation in health care, it's hard to imagine those in power doing something about it. So which country is better governed? [...]

Chance Wins | the Justin Owings page (2011-07-25 08:50:08)

[...] <http://www.blog.sethrober...what-causes-it/> [...]

## Human Sonar and Self-Experimentation (2009-05-30 06:28)

[1]This fascinating article by Daniel Kish, a blind psychologist, describes how he navigates via tongue clicks. The echos tell him about his surroundings. I was struck by the similarities with self-experimentation:

1. Don't wait for experts. A blind person could wait for a sighted person ("At the time I went to school, blind kids either waited for people to take us around or we taught ourselves to strike out on our own"). Just as I could have waited for a sleep expert to figure out why I was waking up too early. But I didn't: I struck out on my own via self-experimentation.
2. Many little probes. Kish guided himself by clicking his tongue many times. Likewise, effective self-experimentation, in my experience, involves many little experiments.
3. Free. Kish can go where he wants when he wants. It costs nothing. Likewise, my self-experimentation needs no grant, and allows me to study whatever I want and reach any conclusion.
4. Learning by doing. An experiment, like sonar, involves doing something, getting feedback, and moving forward based on interpretation of the feedback.
5. Active better than passive. "Passive sonar that relies on incidental noises such as footsteps produces relatively vague images. Active sonar, in which a noise such as a tongue click is produced specifically to generate echoes, is much more precise," writes Kish. Likewise, I've learned more from active experimentation than from measuring something day after day, which relies on natural variation.
6. Ancient. "The readiness with which people learn sonar suggests to me it may be an inbuilt skill," writes Kish. Self-experimentation is a form of trial and error, which predates humans.
7. Verification in other ways. "Ultimately, students verify what they hear by touching," writes Kish. The solutions I come up with via self-experimentation I verify by using them. Do they work? Another kind of verification is with experiments involving others.

The broad similarity is that self-experimentation, at least mine, is a way of navigating a world with plenty of important cause-effect relationships I don't know about (e.g., what makes my sleep better or worse). Rather than continually bumping into them.

1. <http://www.newscientist.com/article/mg20227031.400-echo-vision-the-man-who-sees-with-sound.html?full=true>

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Mike Kenny (2009-05-30 08:40:31)

I'm reminded of John Boyd, the military theorist, who came up with an idea that we make decisions in "Observe-orient-decide-act" cycles. More or less, you view the world, come up with a mental model, decide what to do, and then act. You repeat the cycle over and over. If you can do these cycles quicker than your opponent, you get more info about the battlefield quicker, giving you an advantage. Self-experimenters seem to go through their OODA loop or decision cycle quicker than academic experimenters.

Ben Hyde (2009-05-30 12:06:47)

I first read about that decades ago in a truly wonderful book, <http://isbn.nu/9780801493676> Listening in the Dark Acoustic Orientation in Bats and Men, by Donald Griffin. It's surprisingly easy to do once you realize the signal is there, and yes making a bit of noise to can help. About half the blind people I've mentioned it to are aware of it. Griffin mentions one guy you could sense the parking meters along the street, but when they removed them leaving only the posts he couldn't 'see' them anymore. The resolution of the signal being determined by the spread of your ears.

### **Yogurt Power (2009-05-31 08:23)**

My interest in fermented food started in January, at the Fancy Food Show in San Francisco, where I had a theoretical idea: The pleasure we get from sour, umami, and complex flavors had the effect, when it evolved, of increasing bacteria intake. This suggests we need to consume plenty of bacteria to be healthy. Three things happened at that convention that supported these ideas: (a) Someone trying to make a high-end non-alcoholic drink said he found it impossible to get enough complexity without fermentation. (b) I remembered that after a trip to Japan, I had started eating lots of miso soup. Miso (fermented soy beans) is an unusually effective flavoring agent. (c) A [1]Stonyfield Farms employee told me that her health improved a lot when she started eating yogurt every day two years ago. (Stonyfield Farms makes yogurt.)

Recently I learned more about the health improvement. She started eating more yogurt about two years ago because she changed jobs – from an architecture firm in Boston to Stonyfield, in New Hampshire, where the employee kitchen has a refrigerator full of free yogurt. In Boston, she ate yogurt about once/week; at Stonyfield, she eats it once/day (for breakfast).

When she moved to New Hampshire, she also changed her diet in other ways. She now eats more foods that are "natural and organic" and less fast food. She doesn't eat anything with aspartame any more; she also avoids caffeine. She eats more fruits and vegetables. Maybe the biggest change is that she eats three good meals every day instead of one meal on the run. Other changes in her life include less stress, a different atmosphere, and more exposure to nature.

In Boston, she had lots of colds and sinus infections, maybe 3-4/year. When she got sick it took a long time – 2 weeks – to get better. She also felt sick to her stomach a lot. In Boston she got mononucleosis; it took six months to

completely recover. In New Hampshire, she's had only 1 cold in the past year and it only lasted 3-4 days. No other illnesses. Another change she's happy about is that she gained weight. In Boston she weighed about 90 pounds; now she weighs about 110. (She's 5' 4" and 30 years old.)

She's noticed that Stonyfield employees are healthier than other places she's worked (as [2]this study suggests). Fewer people are sick and when they're sick they aren't sick as long. Everyone eats the free yogurt, except the lactose-intolerant. Stonyfield yogurt contains less than half the lactose of milk; for some lactose-intolerant people that's low enough, for others it isn't low enough. (Stonyfield makes a soy yogurt without lactose.)

1. <http://www.stonyfield.com/>

2. <http://www.blog.sethroberts.net/2009/05/14/probiotics-and-resistance-to-illness/>

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Jeff (2009-05-31 08:38:53)

Fermented foods usually have lower pH, which tends to retard spoilage bacterial growth. It explains a lot of things, including why drinking weak beer was favored to drinking plain water before the advent of municipal water treatment. Wine, beer, cheese, yogurt, summer sausage, lots of foods are all fermented partially. And they may persist because when people of long ago ate them, they did not get sick. Maybe.

seth (2009-05-31 08:44:51)

"Tends to retard bacterial growth"? Maybe I'm missing something. Fermented foods have lots of bacteria. I think the preservation argument needs to be more subtle.

Charles (2009-05-31 09:48:53)

Based on this series of posts, I've been making kefir at home. After two weeks of drinking it daily, some long-standing stomach problems have gone away, and I just feel better all around. From some of what I read, kefir seems even more powerful than yogurt, but that may be due to personal differences.

seth (2009-05-31 10:08:51)

Thanks, Charles. I always like to hear these stories... Yeah, kefir may be more powerful than yogurt. The kefir I make is a lot sourer than the yogurt I make and it takes much longer to make. More sour may mean more bacteria (more lactose turned into lactic acid).

Evelyn (2009-05-31 14:58:20)

Are the lactose intolerant also intolerant of lactic acid?

seth (2009-05-31 15:03:18)

Evelyn, perhaps the problem is that not all the lactose is converted to lactic acid.

Adam (2009-05-31 19:25:46)

I've been having lots of difficulty with dairy as of late so I started taking Lactaid but it didn't help whatsoever. I'm not sure if I'm lactose intolerant but right now I'm avoiding all dairy - except for yogurt, which doesn't bother me whatsoever. I've read in other forums that lots of lactose intolerant folks find yogurt similar stomachable.



seth (2009-05-31 21:29:12)

Hmm. I will check with the person at Stonyfield.

wcw (2009-05-31 21:56:21)

In re: preservation, that rings true to me. If bacteria are human pathogens, they probably like human pH. If you ferment with acidifying bacteria, voila, you have an environment more acidic than human, and pathogens probably like it less. Similarly, if you ferment with yeast that produces ethanol, you have an environment with an organic toxin, and pathogens probably like it less. My relatives who farm in old Europe habitually drink watered hard cider ('Most', probably 5 % ABV before dilution) with lunch. It's both acidic and alcoholic. I don't worry about anything infecting it.

Todd Fletcher (2009-06-01 15:56:00)

I've had a similar experience with yogurt. I had a bad flu last winter and had lingering stomach problems from it. I started having Strauss whole milk yogurt for breakfast, and it completely went away. But I kept eating the yogurt and have lost 20 lbs since then, with very little effort. I also started keeping kefir in the fridge at work. My excema, which I had for 15 years has disappeared also. I used have daily heartburn, for which I took Pepcid. I no longer have to take it at all. I've had my 14 year old son drinking it for the past month and his acne has gone away. I'm sold on it! Also, I think an important part of the secret is that these sour flavors make a lot of other things taste too sweet, like soft drinks. I've completely stopped adding sugar to my coffee as well.

Oceanesque (2009-06-04 02:07:13)

I've been following your blog for a while now (I came here via Freakonomics), and after reading this and other posts on the possible value of kefir in preventing both pathogen-caused and auto-immune illness (ie eczema), I started keeping an eye out for it. A local supermarket sells a product called "Babushka Probiotic Kefir yoghurt" which claims to contain "more than 12 billion live probiotic bacteria per 62ml serve". Is this likely to be a worthwhile product from a fermented foods / health benefits perspective? What qualities should I look for when purchasing commercially-produced kefir products? (I have no connections, financial or otherwise, with any manufacturer of dairy products, I'm just feeling a little confused about which kefir/yoghurt products are worthwhile and which are a waste of time. The variety of Kefir yoghurt I mention above tastes okay, but not great - it's a question of steeling oneself a little and saying "Well, it's \*good for me\*" - so it is only worth drinking if it is likely to have a health payoff.)

seth (2009-06-04 06:27:14)

I know little about kefir although I make it. It's a good question and I don't know the answer. My approach has been to try a large range of fermented foods and eat a lot of them.

## 4.6 June

### Strip Clubs and Research Universities (2009-06-01 21:07)

In the 1990s, there was a high-end "men's club" (strip club) in New York named Scores. Upstairs at Scores was a special lounge where you paid \$500 (or so) to get in and \$180 (or so) for a bottle of champagne. A friend of mine, who told me about this, knew a woman who worked there. The men who went upstairs expected to get a blowjob. But this wasn't in the job description of the women who worked there. They didn't want to give blowjobs - and they didn't. She didn't mind stripping but working in the upstairs lounge was really uncomfortable because of the differing expectations.

The same thing happens at UC Berkeley (and no doubt other research universities). When I was a grad student, and went to Berkeley to give a job talk, I met with grad students there. One of them asked: Which do you like better, research or teaching? Research, I said. The grad students were amused. The proper answer to that question is "I like

both equally” – but, as all faculty and grad students knew, about 95 % of Berkeley professors like research more than teaching. You just weren’t supposed to say so.

Why? Just as it was in the interests of Scores management to conceal the fact that you were not going to get a blowjob upstairs, so it is in the interests of those who promote UC Berkeley to the outside world to conceal the fact that the vast majority of Berkeley professors care little about teaching. UC Berkeley undergraduates, who have paid far more than \$500, often realize this basic fact only when it is too late – after they have come. Just as at Scores, the difference in expectations makes both sides uncomfortable. It bothers the average undergraduate that the average professor doesn’t seem to care very much and doesn’t try harder. “Isn’t it part of their job to teach us?” the students say. The average professor dislikes that the average undergraduate doesn’t “care about learning” – a fancy way of saying that they want to be entertained. What goes unspoken among Berkeley professors – just as I imagine it did among Scores employees – is that what the students want is seen by professors as demeaning. It would be demeaning to try hard to give the students what they want; it would be like being their servant.

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Aaron Blaisdell (2009-06-02 07:37:11)

Hmm...that’s a funny way to look at it. I never think of being a good teacher as demeaning myself to my students. I take pride in what I have to offer, and humbled by how often a student can ask a question that makes me realize my limitations. I view that as a challenge rather than an obstacle or weakness. Anyway, I get the impression that it is more common for other faculty at UCLA to feel like me about teaching rather than like the way you portray Berkeley professors. I prefer and enjoy research to teaching, but I realize that teaching keeps me grounded, humbled, and motivated and excited all at the same time. I guess part of it also comes from my viewing teaching as story telling (non-fiction, of course) and every story teller loves an audience. I wonder if the UCLA students have a better learning experience than do Berkeley students? I’m glad you didn’t blow the job at Berkeley with your honesty.

Darrin Thompson (2009-06-02 07:39:21)

I’ve had a rotten attitude about college. I avoided it, got a minimal degree via mostly correspondence and portfolio assessment, blah blah, mainly because I didn’t want to give money to someone for learning, when they wouldn’t take that job seriously. Being older and wiser now I’m sure I overreacted, but this sure brings back the old feelings. And I didn’t need to be entertained, but for several deca-kilo-bucks, I expect you to take me seriously. The universal attitude among professors is that I’m asking too much. Or maybe that I’m paying for something other than the teaching?

seth (2009-06-02 10:02:00)

Aaron, I think you’re different than most professors. I completely agree, undergraduate teaching can be seen as a challenge and invigorating. I learned a lot by teaching introductory psychology, for example.

## **More Benefits of Fermented Foods (2009-06-02 09:12)**

A [1]study published last year in Oncology Reports found that fermented noni (an Asian fruit) juice fights cancer in rats.

Noni (*Morinda citrifolia*) has been used in traditional Polynesian folk medicine for more than 2,000 years. Recently, researchers have discovered that Noni juice has the ability to destroy cancerous tumors. . . .

The researchers evaluated Noni™'s ability to both prevent and treat cancer. In the prevention study, female mice were injected with one of three substances: fNE, a phosphate-balanced solution (PBS, which is similar to saline solution), or lipopolysaccharides (LPS, a natural toxin found in bacteria and in fermented Noni juice) for three days. Then the researchers injected the mice with lung cancer and sarcoma cells. In the treatment study, the mice were first injected with the cancer cells, and then treated with three doses of fNE [fermented noni exudate], LPS [lipopolysaccharides], or PBS [phosphate balance solution].

After the mice were injected with fNE, they developed greater numbers of immune cells such as granulocytes (a type of white blood cell) and natural killer (NK) cells, indicating that fNE had stimulated their immune system. A month after receiving fNE for sarcoma treatment or prevention, more than 85 percent of the mice were not only alive, but also cancer-free. fNE also was effective against lung cancer tumor cells, although the tumor prevention rate was slightly lower (62 percent). Meanwhile, all of the mice that received PBS or LPS died.

Emphasis added. It is telling that they used fermented noni juice rather than plain noni juice; apparently plain noni juice is less effective. Fermented juice has many more bacteria than plain juice; it makes a lot of sense that the fermented bacteria stimulate the immune system.

Thanks to Peter Spero.

1. <http://www.cancermonthly.com/inp/view.asp?ID=292>

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stephen (2009-06-02 11:18:39)

interesting seth. i recently came across this italian doctor who is largely regarded as a quack but strongly believes that cancer is essentially a fungus and should be treated accordingly: <http://www.cancerfungus.com/pubmed-100903.php> i'd be interested on your thoughts on this - quackery or a hypothesis worth testing?

Charles (2009-06-02 13:00:38)

Here's a link to a U of Hawaii web site talking about noni, and how it goes through the fermentation process, which is why I'm fairly sure that fermenting it is the standard preparation: [http://www.ctahr.hawaii.edu/noni/fruit\\_juices.asp](http://www.ctahr.hawaii.edu/noni/fruit_juices.asp) The first time I tried Noni was when I was on my honeymoon in Belize about six years ago. I had heard about Noni, but had never tried it. But I got our naturalist/guide to take me to a small village where there was an herbalist. He lived in this small ramshackle house on the edge of town, and there was a noni bush growing outside. In the house, there was a shelf with some recycled plastic bottles of brown liquid, which I was told was noni juice. I imagine it was fermented. I think all noni juice is basically fermented, but maybe I'm wrong about that. This stuff was, though. I bought a couple of bottles, and to my wife's dismay, started drinking the juice. She (and our guide) thought I was nuts to drink this unlabeled brown liquid out of these used plastic bottles (they were from an orange-juice bottling plant in the next town.) Within a couple of weeks, a shoulder problem that had been stopping me from swimming for a number of years was basically gone, and I was up to a mile or so every other day within a couple of months. An enlarged prostate seemed to go away, too, and I didn't have to get up at night to go to the bathroom anymore. So along with any cancer protection, my experience was that it was a pretty potent anti-inflammatory, but that may have been because that was my body's particular reaction. I have heard that from others, though.

Charles (2009-06-02 13:05:33)

Now I'm remembering that there is a controversy in the noni-juice biz about fermenting vs. non-fermenting. The non-fermenters claiming there is no scientific evidence that fermented juice is better. (You can google around for this, I don't want to link to commercial sites.) I'd be interested to hear why they chose the fermented version for this study...

Charles (2009-06-02 13:08:31)

And here's a link to a study about the probiotic potential of fermented noni juice. <http://www.informaworld.com/smpp/content-content=a910157735 db=all order=pubd> I'm sure it's just a coincidence that fermented noni juice would be more expensive to make, as it has to sit and age for a time. So if you wanted to sell larger quantities of juice (through an MLM for instance) you might suggest that the fresh juice is better...

Dan (2009-06-02 20:21:29)

Where would someone find fermented noni juice for purchase? And what would brand names be? I'm in Seattle btw.

Charles (2009-06-02 21:29:23)

Just Google "fermented noni juice," or go to a local whole foods or similar. There are a lot of brands of noni juice out there. Just read the label carefully to make sure it's fermented, as some aren't. Getting good at reading between the lines of labels is a useful skill in any case.

## **A Book About the Value of Fermented Foods (2009-06-02 09:58)**

[1]Handbook of fermented functional foods, second edition, 2008.

Presenting new findings and interpretations that point even more clearly to the important role fermented foods play in our diet and overall health, this second edition demonstrates the current knowledge of fermented food production and reflects the growing credibility of probiotics in health maintenance.

You can read a lot of it online.

1. <http://books.google.com/books?id=gpcXqE-j6gEC>

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Darrin Thompson (2009-06-02 11:44:54)

Nice to see that a collected canon of fermentation wisdom exists. But at \$160 I'll wait for something leaner. But it's very cool.

## **The Nutritional Wisdom of Young Chicks (2009-06-02 11:26)**

After I wrote that [1]young children may be picky eaters because they are offered unhealthy food, some readers disagreed. But here is another example:

I myself have been amazed to see hungry young chicks refuse to touch a purified diet until we added thiamin, which we discovered to have been accidentally omitted from a published formula.

From Kenneth Carpenter's excellent [2]Beriberi, White Rice, and Vitamin B (2000), p. 193. If young chicks can better judge the nutritional quality of food than nutrition professors, perhaps young children can, in some situations, better judge the nutritional quality of food than their parents. And rightly decide that food their parents think is healthy isn't so healthy.

[3]The wisdom of the one-year-old picky eater.

1. <http://www.blog.sethroberts.net/2009/04/09/the-wisdom-of-the-five-year-old-picky-eater/>
2. [http://books.google.com/books?id=8Ako\\_kEtViEC&dq=beriberi+white+rice+and+vitamin+b&printsec=frontcover&source=bn&hl=en&ei=g201St0-IaKktAOH2PWbBg&sa=X&oi=book\\_result&ct=result&resnum=4](http://books.google.com/books?id=8Ako_kEtViEC&dq=beriberi+white+rice+and+vitamin+b&printsec=frontcover&source=bn&hl=en&ei=g201St0-IaKktAOH2PWbBg&sa=X&oi=book_result&ct=result&resnum=4)
3. <http://www.blog.sethroberts.net/2009/05/10/the-wisdom-of-the-one-year-old-picky-eater/>

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Andrew Gelman (2009-06-07 20:26:48)  
All I can say is . . . nobody with kids would say this!

seth (2009-06-07 20:42:22)  
Andrew, I'm not saying that kids always know best. That's absurd. What isn't absurd is that we have inborn mechanisms that help us choose a healthy diet. Many parents fail to understand this. It means that when a kid refuses a food there may be at heart a sound reason. And this quote supports that idea.

### **The Effects of Institutionalization on Children (2009-06-03 06:33)**

From the latest issue of the [1]American Journal of Psychiatry:

Young children living in institutions in Bucharest were enrolled when they were between 6 and 30 months of age. Following baseline assessment, 136 children were randomly assigned to care as usual (continued institutional care) or to removal and placement in foster care that was created as part of the study. Psychiatric disorders, symptoms, and comorbidity were examined by structured psychiatric interviews of caregivers of 52 children receiving care as usual and 59 children in foster care when the children were 54 months of age. Both groups were compared to 59 typically developing, never-institutionalized Romanian children recruited from pediatric clinics in Bucharest. Foster care was created and supported by social workers in Bucharest who received regular consultation from U.S. clinicians. Results: Children with any history of institutional rearing had more psychiatric disorders than children without such a history (53.2 % versus 22.0 %). Children removed from institutions and placed in foster families were less likely to have internalizing disorders than children who continued with care as usual (22.0 % versus 44.2 %). Boys were more symptomatic than girls regardless of their caregiving environment and, unlike girls, had no reduction in total psychiatric symptoms following foster placement.

Note the phrase "internalizing disorders" – it means that other types of disorders were not decreased by the expensive treatment. Moreover, the 22.0 % "control" value is probably higher than what you'd find if all kids of that age were surveyed; I assume the kids found at pediatric clinics are less healthy than average. Although the experiment is trying to show a (negative) effect of institutionalization, it doesn't even manage to do that very well, because of the cherry-picking aspect of the results. All in all, a horrible situation.

Micromeasures of development – something you can measure every week, for example – might help so that many little things could be tried with individual children rather than doing these difficult large-scale experiments.

The whole thing has the feel of the 1800s when to be institutionalized was to be at high risk for some sort of vitamin deficiency, such as pellagra or beriberi.

1. <http://ajp.psychiatryonline.org/cgi/content/abstract/appi.ajp.2009.08091438v1?papetoc>

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Darrin Thompson (2009-06-03 08:10:05)

Help an idiot here. I tried to plug their numbers into a Bayes theorem table using their result. I that by their result 75 % of of all children have internalizing disorders. Also, in their control group, twice as many had internalizing disorders vs. those that didn't. Is that what you are getting at with the "high" control number? Of course maybe I just did it wrong.

Darrin Thompson (2009-06-03 11:36:21)

Ok. I think I see it. The 75 % number means not much. That shows that 75 % of the kids in the study had the disorders, but that's skewed because the control group was smaller than the experimental group. The fact that two thirds of the control group had the disorders was still noteworthy. So I tried seeing if the probability of having the disorders times the probability of being institutionalized would be very different from the 53 % they quoted in the study. I got about 48 % which is only different by 5 %. I don't know how to take the difference and interpret it as the two variables being dependent or not. Perhaps I am only revealing my ignorance. Anyway, fun puzzle to try to research and interpret.

seth (2009-06-03 12:02:30)

sorry, I have no idea how you got 75 %. There is no "probability of being institutionalized" given in the abstract. Perhaps you are interpreting one of the numbers incorrectly. The "control" number (22 %) is higher than what you'd get if you got a random sample of non-institutionalized kids – that's what I'm suggesting.

Darrin Thompson (2009-06-03 12:32:59)

There was a probability of having ever been institutionalized \_within \_ the study group, 111 kids out of 170. (65 %) And within the study group there was a 75 % chance of having disorders from the control and experimental groups combined. From the figures given you could play sudoku and fill in a table with the groups and disorder variables and probabilities the results were disappointing. Anyway, I'm totally not good at this and you are I'm sure quite busy. Thanks for replying.

seth (2009-06-04 00:22:13)

the number of kids in each of the three groups (52, 59, and 59) are not any kind of random sample. They are set by convenience. By what the experimenter wants. Just as when you go to the store the number of loaves of bread you buy is your choice.

Lynda (2010-01-09 06:17:15)

Statistics as you guys know can be skewed to say what you want them to say. I was a ward of the state... institutionalisation of any sort messes with your life. You don't need a study to tell you that. My experience says 'Institutions do not teach you how to live, they teach you what you must do to survive'. This is not living. Oh Seth, children are not loaves of bread as you so eloquently put it!

## Assorted Links (2009-06-04 06:13)

- [1]profile of psychiatrist E. Fuller Torrey
- [2]polyphasic sleep results
- [3]solar energy in China
- [4]the parable of the bees by Bill McKibben
- [5]puzzle archive

1. <http://www.psychlaws.org/generalresources/article5.htm>
2. [http://she-who-chatters.blogspot.com/2009/05/polyphasic-self-experimentation-day\\_30.html](http://she-who-chatters.blogspot.com/2009/05/polyphasic-self-experimentation-day_30.html)
3. <http://www.greenpeace.org/china/en/campaigns/countdown-to-copenhagen/dezhou-solar-story>
4. <http://www.orionmagazine.org/index.php/articles/article/175/>
5. <http://www.ocf.berkeley.edu/~wwu/riddles/intro.shtml>

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## Canker Sores Prevented by Omega-3? (2009-06-04 12:09)

Eric Vlemmix writes:

I've had these oral sores [canker sores, also called Aphthous ulcers] since childhood [he's 33], but since taking flax/fish oil I have had hardly any ulcers! The times I had an ulcer it was small, less painful than usual, and would disappear in a few days. The doctors never knew what the cause of these ulcers was, and [1]Wikipedia states: cause unknown.

I asked about his fish oil and flaxseed oil intake:

Something like 15 ml [= 1 tablespoon] of flaxseed oil daily. Most days I also take a Minami morEPA plus capsule which has 635 mg EPA, and 195 mg DHA.

I started SLD in June 2008, and I think I switched from olive oil to flax the same month. Since then I haven't had a real serious case of ulcers. Some small issues sometimes, but not the real big and extremely painful ones that I had before. Sometimes a small mini zit-like thing.

According to [2]Family Doctor, "Doctors don't know of anything that prevents canker sores from forming." The [3]Mayo Clinic website is equally unhelpful. To prevent canker sores, [4]EMedicineHealth advises, "Do not talk while chewing." According to [5]KidsHealth, "About 1 in 5 people regularly gets bothersome canker sores."

Any canker-sore sufferer want to start taking flaxseed oil and fish oil (in the amounts Eric uses) and tell me what happens?

[6]Gum surgery averted

1. [http://en.wikipedia.org/wiki/Aphthous\\_ulcer](http://en.wikipedia.org/wiki/Aphthous_ulcer)
2. <http://familydoctor.org/online/famdocen/home/articles/613.html>
3. <http://www.mayoclinic.com/health/canker-sore/DS00354>
4. [http://www.emedicinehealth.com/canker\\_soers/page4\\_em.htm#Prevention](http://www.emedicinehealth.com/canker_soers/page4_em.htm#Prevention)
5. <http://kidshealth.org/parent/general/aches/canker.html>
6. <http://www.marginalrevolution.com/marginalrevolution/2007/07/todays-happines.html>

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Aaron Blaisdell (2009-06-04 12:40:13)

Well, I used to get canker sores about once or twice a year. They'd last a few weeks before disappearing. In the past year I haven't had any. I've also made a number of dietary changes (which Seth has posted here (<http://www.blog.sethroberts.net/2009/02-08/aaron-blaisdell-recommends/>) that include an improved balance between omega6 and omega3 PUFAs. While I don't take flax oil, I do take a daily dose (1/3 teaspoon) of fermented high-vitamin cod liver oil and 1/3 teaspoon of high-vitamin butter oil. I also used to have a small amount of bleeding after flossing around the gum of one of my capped teeth. This would occur about once a month during which the gum would bleed a little and be a bit tender. I haven't had that happen for at least 6 months now.

seth (2009-06-04 13:36:35)

I have never had canker sores. I did get bleeding after flossing, however. The less I flossed the worse it got. That never happens now even though I rarely floss.

Lauren Rosenthal (2009-06-04 18:37:59)

funny, our 6 year old has had canker sores on and off for a few years. We started giving him fish oil in the fall and he does seem to have fewer canker sores. Coincidence?

Gian (2009-06-05 00:05:47)

Could you do some self-experimentation by replacing flax oil by rapeseed oil/canola? Canola is also rich in omega-3 and is traditionally consumed in India.

Eric Vlemmix (2009-06-05 04:20:55)

Canola might also work, it has a omega3/6 ratio of 1:2 (which is quite ok) if I check this: <http://www.health-heart.org/FattyAcidTable.gif> . Flaxoil and fishoil have better omega3/6 ratios, but canola might work depending on the rest of your food intake (how much omega3's and 6's). If your omega-6 intake is higher than 4 % of your calories, you might need an extra boost of omega-3 to outcompete the omega-6. If your omega-6 intake is quite low, you probably do not need a whole lot of extra omega-3 to compete with it because the numbers already are quite low. See <http://wholehealthsource.blogspot.com/2009/05/eicosanoids-and-ischemic-heart-diseases.html> for extra details.

seth (2009-06-05 04:50:14)

Lauren, your observations suggest that a higher dose would be better. Gian, canola oil has much less ALA (short chain omega-3) than flaxseed oil. Canola oil is about 10 % ALA while flaxseed oil is about 50 % ALA. Canola oil is rich in omega-3 compared to other fats, which have less.

chuck (2009-06-05 05:36:28)

I was plagued with canker sores for years. Often suffering with pain from sores the diameter of a pencil for weeks on end. I am convinced that sodium laurel sulfate in toothpaste aggravates them for me; removing the layer of repair and exposing the sore to mouth bacteria. I have found complete relief by avoiding normal toothpaste and using Biotene only. Also by controlling



bacteria by staying hydrated. I still will get a small one now and then from a mouth bite but it heals normally. I also have greatly improved my diet along omega 3 lines so that is consistent with this post but for any sufferers reading this out there, please consider not sudsing up your mouths so much with normal toothpaste.

Ted (2009-06-05 10:08:11)

I found out quite by accident WALNUTS get rid of them quite quickly. The first sign of an ulcer I chew walnuts and leave the paste in my mouth for a little while (30 seconds or so). The first time was by accident, my ulcers disappeared so quickly I knew it had to be something I ate. And the only thing I had eaten differently the past day was walnuts.

seth (2009-06-05 15:23:52)

I'd say the walnut story, along with all the other evidence, proves that lack of enough omega-3 causes canker sores.

Seth's blog » Blog Archive » Yes, Canker Sores Prevented (and Cured) by Omega-3 (2009-06-06 10:32:13)  
[...] Canker Sores Prevented by Omega-3? [...]

WSB (2009-06-06 17:01:51)

DH's canker sores improved when he switched to Tom's of Maine toothpaste (no laurel sulfate). They went away when he went gluten free. He hasn't had one since 11/07. IMO, anyone with canker sores should consider testing for gluten intolerance.

jad (2010-01-20 11:04:38)

"I found out quite by accident WALNUTS get rid of them quite quickly." That is odd. From my reading' walnuts CAUSE canker sores for many people.

kevin (2011-04-18 08:20:45)

on the walnut story, some of the bitters in the skins might help as well. tannins are supposed to be soothing to canker sores and I recently had luck calming one down (didn't go away but wasn't so irritating) taking a wet tea bag and sticking it on the sore for a minute. one of the supposed reasons that walnuts aggravate canker sores is because they contain relatively high amounts of a particular amino acid. seems like they are more nutritionally correlated with sores than anything, so that wouldn't necessarily rule out their efficacy as a topical treatment. at any rate, these things are really annoying! i've had two in the last month ( I know, not so bad) definitely catalyzed by stress, but maybe with other underlying factors. I was already conscious of using toothpaste alternatives, but now I will avoid sodium lauryl sulphate like the plague! probly will just use baking soda and try to keep up on flossing. also, this whole thing makes me want to start taking fish oil again. is anyone concerned about sourcing and potential concentration of toxins and pollutants in the oil? are there reputable sources?

Dale (2011-05-22 19:42:37)

I am trying the walnut remedy right now, the thing I suspected was energy drinks, red bull seems to be worse than monster, and the coffee ones dont seem to cause them at all. I am pretty sure they cause them for me, it seems like when i drink them for a few days in a row i will have a sore. I do hope the walnuts work just to know the exact source would be the lack of omega - 3 and I can adjust my diet accordingly.

Gary (2011-08-14 14:08:39)

I came here looking for answers... My sores are Caused by Walnuts. :(

Stone Glasgow (2012-02-06 12:52:40)

Hydrogen peroxide used as a mouthwash is the only solution that worked for me. I used to have a lot if them that lasted for weeks. Deleting sodium l. sulphate didn't work. Neither did high dose omega 3 fish oil.

## What Does Profound Stagnation Look Like? (2009-06-05 12:12)

Economic stagnation = no development of new goods and services. Stagnation in the field of health has been so long-lasting and widespread that it is hard to see. I have never read a good description of it. Michael Moore thought the state of our insurance coverage was scandalous, and made *Sicko*; but much more harmful is the stagnation.

Here is what it looks like. Americans have many health problems. Obesity. Diabetes, closely connected to obesity. Mental illness, especially depression. Drug and alcohol addiction, a kind of self-medication. Allergies and autoimmune disorders, such as arthritis. Economic progress, lack of stagnation, would be coming up with and disseminating effective solutions to these problems.

When a helpful innovation arises, what happens? As Jane Jacobs pointed out in *The Economy of Cities* (1969), stagnation is in the interests of the powerful. As long as things remain the same, they remain powerful. Power also generates complacency; although the most powerful have the most resources, they are unlikely to find or develop the solutions. (Example: General Motors.) Within the health industry, Harvard Medical School professors are powerful. Here's what happened when [1]Dr. Erika Schwartz gave a lecture there:

When I gave my lecture on bioidentical hormones at Harvard on February 2, 2009, . . . I asked the chairman of the department of ob-gyn, Isaac Schiff, MD and the rest of the physicians in the audience, "How come Suzanne Somers and Oprah are the ones to teach the public about bioidentical hormones? What has the medical profession done with the information of the Women's Health Initiative study?" Nine years later and women are still suffering and the medical establishment has not stepped up to the plate to help women find safe solutions to menopausal symptoms. Why are bioidentical hormones still controversial? They had no answers.

That's what stagnation looks like. It's unsurprising that Oprah would publicize the innovation; her power is not in the health industry. She has nothing to lose. That *Newsweek* runs [2]a cover story complaining about Oprah's publicity for "risky advice" shows that top editors at *Newsweek* fail to see the stagnation in health. Innovations are always called "risky" by someone in power. Stagnation in health is probably the most important news story of our time. The health problems that have stacked up unsolved – obesity, mental illness, and so on – affect everyone every day.

Here's another example of what stagnation looks like. The [3]current *Business Week* cover story is about innovation, and the lack thereof. One of its examples involves health. What's revealing is how minor the innovation is.

To see both the reality of the innovation shortfall and its potentially happy ending, look at Organogenesis, a small company in Canton, Mass. Back in 1998, Organogenesis received approval from the Food & Drug Administration to sell the world's first living skin substitute. The product, Apligraf, was a thin, stretchy substance that could be grown in quantity and applied to speed the healing of diabetic leg ulcers and other wounds that had stayed open for years. . . But there were several big problems, recalls Geoff MacKay, the company's current CEO . . . By 2002 the early enthusiasm for Apligraf had vanished, along with the money. . . Shortly after, MacKay took over at Organogenesis with a clear mandate to straighten out the company's manufacturing, logistics, and sales, and turn this tarnished product into a moneymaker.

And that's what he did. . . Organogenesis is fulfilling the promise of 1998—a decade later.

A product that helps diabetic leg ulcers heal – without curing diabetes. In a cover story about innovation, a trivial innovation is the big example of successful innovation. This is another way stagnation is visible: Low standards for what is important innovation.

1. <http://drerika.typepad.com/notepad/2009/06/newsweeks-attack-on-oprah-will-not-help-the-public.html>
2. <http://www.newsweek.com/id/200025>
3. [http://www.businessweek.com/print/magazine/content/09\\_24/b4135000953288.htm](http://www.businessweek.com/print/magazine/content/09_24/b4135000953288.htm)

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Nadav Manham (2009-06-06 08:38:06)

Seth, Many of the health problems you cite are themselves the result, or rather the undesirable side effects, of innovation. There has been no lack of innovation in reducing the price of pure carbohydrate delivered to the human bloodstream—the US has done a better job at it in the last few decades than Carnegie did with steel. Side effects of this innovation: obesity and diabetes. Similarly, there's been tremendous innovation in the "purification" of our food, resulting in the loss of beneficial bacteria. Likely result: increased allergies and other maladies. Billions of dollars are invested annually in "curing" these diseases through "innovation." The results may be disappointing so far, but that's not the same thing as stagnation. The most elegant cures to these diseases would not be innovation, but rather innovation's opposite: a return to the way we used to live before these diseases became epidemic (e.g. the other changes you've made to your diet other than SLD). True innovation should be in prevention. That's much harder to do, and MUCH harder to monetize, and probably accounts for our lack of progress more than stagnation per se. If you want to achieve innovation through prevention, maybe the place to focus on is the legal, tax, and regulatory side, which is how smoking was reduced in this country.

seth (2009-06-06 09:35:06)

Nadav, thanks for your comments. All those health problems are due to innovation. Go back 100,000 years, none of them existed, I'm sure. I fail to understand the difference between "lack of progress" and stagnation. I agree about prevention. I say just what you say: far too little emphasis on prevention. What you may not see is that prevention doesn't require going backwards. There's nothing ancient about drinking flaxseed oil as I do. Go back far enough people didn't even eat fermented food – they just ate food that wasn't fresh. While some prevention involves reducing or removing poisons (such as cigarette smoke), other prevention involves figuring out what are the necessary nutrients. No legal ruling or tax code change will be much help with that.

Nadav Manham (2009-06-06 10:35:04)

Thank you for your reply, Seth. I think what I missed is that there is a difference between stagnation on the medical level and stagnation on the level of society as a whole. If you asked a medical researcher if we are living in an era of stagnation or innovation he/she would say "No way, we're living in a golden age of innovation." E.g. the new CEO of Organogenesis, or the psychiatrist you saw interviewed on Larry King who said today is the best time to have a mental illness because of all the breakthroughs. If you asked an average citizen whether we're living in an age of stagnation or innovation, you'd get the opposite answer: "None of my eight great-grandparents were obese, so why am I and why can't I lose weight? None of my ancestors ever heard about diabetes so why do I have it and why do I have so much difficulty living with it? My grandparents all had tough lives, while I grew up comfortably in the suburbs—so why do I get chronically depressed and they don't?" Etc. I guess the difference is between inputs and outputs. Medical researchers measure innovation by measuring inputs—dollars invested in research, grants awarded, medicines approved, etc. Normal people care about outputs: how much sickness and suffering per capita persists? Now that I'm looking at it the right way, I see what you're saying about Jane Jacobs (I would cite also Mancur Olson, a very Jacobs-esque economist). In the area of disease, we have stagnation/lack of progress because the medical establishment benefits greatly from the "spend a lot to cure/manage rather than a little to prevent" status quo. BTW, last Thursday I attended a talk in which Tyler Cowen addressed whether the internet was good for society. An audience member complained that the internet made people less healthy because it replaced exercise. Neither Tyler nor I had a chance to make an obvious counterpoint, which is that the internet also gives individuals tremendous opportunities to IMPROVE their health. Case in point: Seth Roberts and Tyler's gums! The internet makes me optimistic that this medical stagnation can be addressed. If the internet could kill off most of America's largest newspapers, whose founding families were as close to an aris-

tocracy as we've had in this country, I believe it could also go up against the medical establishment. Sorry for the long comment.

Seth's blog » Blog Archive » Yes, Canker Sores Prevented (and Cured) by Omega-3 (2009-06-07 18:52:29)  
[...] What Does Profound Stagnation Look Like? [...]

Luitpoldt Drake (2009-06-22 14:43:21)

Although the public has been conditioned to believe that we are living in an era of perpetual 'medical breakthroughs,' in fact we are enduring a period of long-standing medical stagnation. Even the FDA has recently expressed alarm over the slow pace of new drug developments. Lupus, cystic fibrosis, multiple dystrophy, multiple sclerosis, type 1 diabetes, a host of autoimmune diseases, half of all cases of heart disease, and half of all cases of kidney failure are not only incurable but also not preventable by any lifestyle modifications. To take just the case of type 1 diabetes, insulin injection is a tragically ineffective treatment for this disease, but after more than 80 years of scientific development, this is still all that is available. But insulin was discovered several years before the first flight across the Atlantic, while we are now 40 years past the first landing of men on the Moon, and yet type 1 diabetic therapy has remained stagnant. Generally, if you compare the state of medicine 50 years ago with that of any other field of science or technology, you will find that medicine has progressed much more slowly than other areas. Obviously monetary interests have played a great role in this stagnation. The major pharmaceutical companies make huge profits by not curing anything, since while a cure can only be sold to patients once, an incompletely effective treatment can be sold again and again, generating profits forever from a captive patient population. Doctors also have a vested interest in not curing any diseases, since they make their money today primarily by 'managing' incurable illnesses. If innovation were not suppressed by the medical societies and their ally, the FDA, old doctors with established reputations would suddenly find themselves on an equal footing with everyone else just learning about some new treatment, and those now charging inflated fees for their superior experience with old treatments would lose their competitive advantage. The licensing restrictions for new drugs and treatments are also absurd, since they require any novel approach to disease to prove that it is 'safe and effective' before anyone is given the freedom to try it for himself. But since the current treatments for many serious diseases have already been proved to be unsafe and not very effective – such as insulin therapy for diabetics – why are patients being denied the freedom to control their own bodies, their own health, and their own chances of a better medical future by freely experimenting with new remedies whether some Washington bureaucrat has approved them or not? In a free country decisions about how you wish to preserve your health or save your life should be up to you, not the government, especially when it is owned by the pharmaceutical interests and the American Medical Association, whose massive campaign contributions have bought its obedience to them.

seth (2009-06-22 17:02:41)

Well put, Luitpoldt. I'm not sure I agree with your last paragraph, however. I believe all serious diseases from which Americans suffer, such as the ones you name, are due to the wrong lifestyle – e.g., the wrong diet. You don't need FDA approval to change your diet. I don't need FDA approval to try different doses of flaxseed oil or different amounts of fermented foods. Nor do their manufacturers need FDA approval to sell them. Nor do I need FDA approval to write about them.

### **Yes, Canker Sores Prevented (and Cured) by Omega-3 (2009-06-06 10:31)**

Here is [1]a comment left on [2]my earlier canker-sore post by a reader named Ted:

I found out quite by accident WALNUTS get rid of [canker sores] quite quickly. The first sign of an ulcer I chew walnuts and leave the paste in my mouth for a little while (30 seconds or so).

The first time was by accident, my ulcers disappeared so quickly I knew it had to be something I ate. And the only thing I had eaten differently the past day was walnuts.

Flaxseed oil and walnuts differ in lots of ways but both are high in omega-3. [3]My gums got much better around the time I started taking flaxseed oil. I neither noticed nor expected this; my dentist pointed it out. [4]Several others

have told me the same thing. Tyler Cowen's gums [5]got dramatically better. [6]One reader started and stopped and restarted flaxseed oil, making it blindingly clear that the gum improvement is caused by flaxseed oil. There is [7]plenty of reason to think the human diet was once much higher in omega-3. All this together convinces me that omega-3 can both prevent and cure canker sores. Not only that, I'm also convinced that canker sores are a sign of omega-3 deficiency. You shouldn't just get rid of them with walnuts; you should change your diet. Omega-3 has other benefits (better brain function, less inflammation, probably others).

Let's say I'm right about this – canker sores really are prevented and cured by omega-3. Then there are several things to notice.

1. Web facilitation. It was made possible by the internet. My initial interest in flaxseed oil came from reading the [8]Shangri-La Diet forums. I didn't have to read a single book about the [9]Aquatic Ape theory; I could learn enough online. Tyler Cowen's experience was in his blog. Eric Vlemmix contacted me by email. No special website was involved.

2. Value of self-experimentation. [10]My flaxseed oil self-experimentation played a big part, although it had nothing to do with mouth health. These experiments showed dramatic benefits – so large and fast that something in flaxseed oil, presumably omega-3, had to be a necessary nutrient. Because of these results, I blogged about omega-3 a lot, which is why Eric emailed me about his experience.

3. Unconventional evidence. All the evidence here, not just the self-experimentation, is what advocates of [11]evidence-based medicine and other [12]evidence snobs criticize. Much of it is anecdotal. Yet the evidence snobs have, in this case, nothing to show for their snobbery. They [13]missed this conclusion completely. Nor do you need a double-blind study to verify/test this conclusion. If you have canker sores, you simply drink flaxseed oil or eat walnuts and see if they go away. Maybe this [14]omnipresent evidence snobbery is . . . completely wrong? Maybe this has something to do with the [15]stagnation in health research?

4. Lack of credentials. No one involved with this conclusion is a nutrition professor or dentist or medical doctor, as far as I know. Apparently you don't need proper credentials to figure out important things about health. Of course, we've been here before: Jane Jacobs, [16]Elaine Morgan.

5. Failure of "trusted" health websites. Health websites you might think you could trust missed this completely. The [17]Mayo Clinic website lists 15 possible causes – none of them involving omega-3. (Some of them, we can now see, are correlates of canker sores, also caused by lack of omega-3.) If canker sores can be cured with walnuts, the [18]Mayo list of treatments reads like a list of scurvy cures from the Middle Ages. The [19]Harvard Medical School health website is even worse. "Keep in mind that up to half of all adults have experienced canker sores at least once," it says. This is supposed to reassure you. Surely something this common couldn't be a serious problem.

6. Failure of the healthcare establishment. Even worse, the entire healthcare establishment, with its vast resources, hasn't managed to figure this out. Canker sores are not considered a major health problem, no, but, if I'm right, that too is a mistake. They are certainly common. If they indicate an important nutritional deficiency (too little omega-3), they become very important and their high prevalence is a major health problem.

1. <http://www.blog.sethroberts.net/2009/06/04/canker-sores-and-omega-3/#comment-311583>
2. <http://www.blog.sethroberts.net/2009/06/04/canker-sores-and-omega-3/>
3. <http://www.blog.sethroberts.net/2007/08/16/omega-3-and-dental-health-still-more/>
4. <http://www.blog.sethroberts.net/2007/08/16/omega-3-and-dental-health-still-more/>
5. <http://www.marginalrevolution.com/marginalrevolution/2007/07/todays-happines.html>
6. <http://www.blog.sethroberts.net/2007/11/25/omega-3-and-sports-injuries-more/>
7. [http://en.wikipedia.org/wiki/Aquatic\\_ape\\_hypothesis](http://en.wikipedia.org/wiki/Aquatic_ape_hypothesis)
8. <http://boards.sethroberts.net/>
9. [http://en.wikipedia.org/wiki/Aquatic\\_ape\\_hypothesis](http://en.wikipedia.org/wiki/Aquatic_ape_hypothesis)
10. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>
11. <http://www.bmj.com/cgi/content/full/312/7023/71>
12. <http://www.blog.sethroberts.net/2007/08/08/something-is-better-than-nothing-part-2/>
13. [http://www.ncbi.nlm.nih.gov/pubmed/9421219?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_DiscoveryPanel.Pubmed\\_Discovery\\_RA&linkpos=1&log\\$=relatedreviews&logdbfrom=pubmed](http://www.ncbi.nlm.nih.gov/pubmed/9421219?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DiscoveryPanel.Pubmed_Discovery_RA&linkpos=1&log$=relatedreviews&logdbfrom=pubmed)
14. <http://www.newsweek.com/id/200025>
15. <http://www.blog.sethroberts.net/2009/06/05/what-does-profound-stagnation-look-like/>
16. [http://en.wikipedia.org/wiki/Elaine\\_Morgan\\_\(writer\)](http://en.wikipedia.org/wiki/Elaine_Morgan_(writer))
17. <http://www.mayoclinic.com/health/canker-sore/DS00354/DSECTION=causes>
18. <http://www.mayoclinic.com/health/canker-sore/DS00354/DSECTION=treatments-and-drugs>
19. <https://www.health.harvard.edu/fhg/updates/update0205b.shtml>

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Eric Vlemmix (2009-06-06 11:58:59)

Great to see there are a number of other people with the same experience as I had! Our doctor never had a real answer, and I always ended up with covering the sores with some gel, trying some items normally used for a sore troath to have less pain, and things like that, but never a way to remove the cause of it. Now, for some others and me, it seems that by getting more omega-3 (resulting in a better ratio of omega-3:omega-6) it's possible not only to treat, but more importantly, do something about the cause. Indeed, self-experimentation can bring you some good insights. I wasn't looking for a cure for canker sores, but I started with a diet, SLD, I became more interested in fats, nutricion, and links with conorary heart disease, and suddenly I realized that canker sores are no longer a real issue for me anymore. Serendipity! Bring in the Internet to connect to some other people with the same interest/activities. And yes, I could communicate this experience/theory without being ridiculed because I do not have a medical education/profession. Seth, canker sores might indeed be a sign of omega-3 deficiency, just as impotence in some cases is a sign that you might have (higer risk of) coronary heart disease (<http://www.reuters.com/article/rbssHealthcareNews/idUSLL14374620081021>), but in case of these sores, some people are warned 10's of years before the real problems start (chonic omega-3 deficiency -> chonic inflammation -> plaque in the arteries -> failure of coronary circulation -> heart failure)

Gerry (2009-06-07 10:41:10)

The Oregonian newspaper ran an article today by Leslie Kaufman ( NY Times) on an experiment in Vermont to reduce cow-produced methane by changing the cow's diet. They are replacing soy and corn with more alfalfa and flaxseed to "mimic the spring grasses that the animals evolved long ago to eat". Stonyfield Farm is involved in the study. To quote further," The answer, the scientists determined, was that spring grasses are high in Omega-3 fatty acids which may help the cow's digestive tract operate smoothly." The cows were reported to produce less methane and are more robust. Also noted was that "Corn and soy, the feed that thanks to postwar government aid, became dominant in the dairy industry, has a completely different type of fatty acid structure." Flaxseed saves the world from climate change???

Dennis Mangan (2009-06-07 18:38:21)

My self-experimentation - well, it wasn't on myself - is getting published! <http://mangans.blogspot.com/2009/05/my-letter-in-medical-hypotheses.html> Also, it seems that all of Seth's points above apply to my experience.

seth (2009-06-07 18:51:19)

Congratulations, Dennis. The original post is here: <http://mangans.blogspot.com/2009/05/niacin-for-restless-legs.html>

Nathan Myers (2009-06-07 21:48:23)

It's a huge leap of faith to conclude from success with walnuts that it is the omega-3 oils in them that are responsible. Walnuts contain hundreds of compounds, many oily or oil-soluble, many not. While it's just possible that the omega-3 oil is responsible, that's not the way to bet. Thousands of people have been taking omega-3-rich oil every day, and nobody else has reported instant relief of canker sores. Anyway, walnut oil isn't especially rich in omega-3 oil, and omega-3 is only a description, not a chemical. Lots of different oily compounds, with various metabolic effects, are omega-3. The same may be said of tannins, another component noted in walnuts. "Tannin" describes a property, not a specific chemical. We can start by testing whether walnut flour alone, or walnut oil alone, provides such instant relief, and whether walnuts help anybody else besides Ted. Maybe Ted's just lucky (or unlucky, depending on how you count such things). I've had many fewer canker sores since I began avoiding oranges, and my sinuses have stopped bleeding since I began avoiding onions. I've tested both of these connections pretty thoroughly, not to say painfully.

seth (2009-06-08 05:24:30)

Nathan, it's not just the success with walnuts that leads me to my conclusion. It's all the other data I listed as well. E.g., Tyler Cowen's experience. I should have listed something else as well: evidence that omega-3 is used to make an anti-inflammatory signalling molecule. In any case, look on the bright side: if walnuts cure/prevent canker sores, that's great to know regardless of the crucial ingredient in walnuts. All the other evidence I cited says that this observation makes sense. Is unlikely to be limited to Ted.

Willy (2009-06-08 06:46:29)

An interesting article: Omega fatty acid balance can alter immunity and gene expression "This study demonstrates, for the first time in humans, that large changes in gene expression are likely an important mechanism by which these omega fatty acids exert their potent clinical effects." [http://www.eurekalert.org/pub\\_releases/2009-05/asfb-ofa052909.php](http://www.eurekalert.org/pub_releases/2009-05/asfb-ofa052909.php)

Paul (2009-06-08 07:42:19)

I had suffered bouts of painful canker sore outbreaks several times a year before switching to a non sodium lauryl sulfate (SLS) toothpaste. This was really the defining change since I did not appreciably change my diet at the same time. I have also reintroduced canker sour outbreaks since then with only a few uses of the old SLS toothpaste.

bennetta (2009-06-08 10:28:28)

I believe this may affect the theory I posted about before regarding the Eskimo diet, Atkins, and bad breath. The Atkins diet is infamous for causing bad breath and body odor. The Eskimo diet is very similar to Atkins, but with one exception- they eat a lot of rotten fish. Eskimos do not have bad breath. A lot of that rotten fish, however, is salmon, a fish rich in omega 3. So is it the omega 3, the probiotics, or both, that keeps them from having bad breath? I'd also be interested to see if canker sores and inflamed gums are common in the Eskimo population.

Gian (2009-06-08 21:53:43)

Seth, Did you reduce our intake of omega-6 oils as well?.

gallier2 (2009-06-09 08:45:26)

@bennetta the bad breath on Atkins is normally transient. It happens when the metabolism switches from mainly glucose to ketone "burning". As long as not all enzymes are up to their task, the surplus of ketones (mainly acetone) will be discarded in

the lungs, thus the strange odour and the metallic taste in the mouth. You can experience the same odour on long time fasting or on long term alcoholics. When your body is adapted to the fat metabolism (like the eskimos) you will no longer smell.

Ted (2009-06-09 12:57:21)

Nathan, I would add that oranges and citrus definitely aggravate any canker sore I had, sometimes turning them into raging sores. But I could drink/eat citrus during the time I didn't have sores. I've never noticed any reaction positive or negative from onions to the sores. I also noticed high salt items might bring on the sores. Although once again, I was able to eat pretzels and stuff without problems often. In my youth and 20s, I probably never ate fish or any omega-3 rich foods very much. It's only recently that I've started to try to eat with more intention.

Nathan Myers (2009-06-09 13:43:37)

Ted: I got canker sores from orange because I'm allergic to orange. Excess walnuts, for me, bring on cold sores. I would be pleased to find that it is something in the oil that alleviates canker sores, as I happen to know it's something in the walnut *protein* (as in other nuts, and in peanuts) that brings on cold sores: excess arginine. However, another correspondent noted that black tea soothed his canker sores, which hints that the tannins may be important. I would not be at all surprised to find that preventing canker sores involved entirely different chemicals than those involved in alleviating pain and speeding healing. I would also not be surprised to find that certain omega-3 oils are deadly toxic, or metabolically useless. My experience with flaxseed oil, in particular, though, is that since I began taking it more or less regularly I have reduced my waistline and added upper-body muscle mass.

Heidi (2009-06-23 18:03:42)

hi everyone, my daughter (18 yrs) has chronic acute cankers and has for years. This means that every month she has a mouth full - and sometimes on the outside of the mouth. They are large (size of the end of your baby finger) and occur in all places in the mouth, gums and throat. We have tried for years to find and try remedies from the tooth paste, washes, prescriptions etc. but it is useless. She has had minimal and inconsistent results at best from home remedies. The medical community is baffled by cankers and it is frustrating - they don't take it too seriously even when they see that my daughter often can't speak or eat and her lips are so swollen because of cankers she looks like she has been in a fight. Most people can hardly tolerate the pain of one or two - she never has less than 10 and doesn't even register pain for an average sized one. This is hardship for a teenager who is concerned about appearances as well. Anyway, I am going to try this flaxseed and walnut oil and let you know if there is any improvement. A polite note to the posters above referring to the 'eskimos'. They actually call themselves "Inuit" and eat raw fish and seal as well as caribou etc. I don't think they eat rotten fish or meat - or at least I have never heard of that and many of my family have travelled to the north and Arctic areas and never observed this either. Most of their food is kept frozen out of doors which is easy to do in the Arctic! thanks for the discussion. Heidi in Canada

seth (2009-06-23 23:30:48)

Heidi in Canada, I would like to know what happens in either case - whether there is improvement or not in your daughter's canker sores. Either result - improvement or no improvement - would be very interesting! As for the Inuit, they certainly do or at least did eat rotten fish. See <http://www.blog.sethroberts.net/2009/03/26/what-did-eskimos-eat/> <http://www.blog.sethroberts.net/2009/01/26/the-inuit-paradox/>

Eric (2009-07-22 04:56:53)

Heidi, I am also very interested in your findings. It's a pity that I can not really specify how many weeks/months I used flaxoil and fishoil before I noticed a change. Only after some months I suddenly realized that I did not have had any serious sores for quite some time, as I also had huge sores before that hindered my speech and swallowing foods. Just leave a message here and inform Seth please. Good Luck!

andrea (2009-08-08 05:47:11)

Heidi, Seth and friends! Omega 6: Omega3 ratio's imbalance is another facet of the condition. Too much omega six (for example a diet based on olive oil, canola oil, eggs, lamb, poultry and some beef) can really create a serious imbalance and generate



inflammation (joints and mucous lining) + depression + anxiety + canker sores (lots). One word for your (and my tests): fish oil omega 3 is more potent than flaxseed oil. Search wiki for Omega3 and minami nutrition for omega3 (moreEPA) I am testing that now!

Liza Glazner (2009-09-16 09:29:05)

I have had an ongoing problem with canker sores my entire life. I began taking flaxseed oil a few months ago with no knowledge that it may prevent canker sores. Just recently, however, I got out of the routine of taking the flaxseed oil. I have had a canker sore every day for the past three weeks. When one goes away, a new one pops up in a different place. I am going to start taking the flaxseed oil again and see if the pattern changes.

Gina (2009-10-11 06:31:38)

Hello to all, I'm also suffering from canker sore all my life that's why I found this site cause am so desperate to know how to prevent and cure this sickness and I tried so many medicines prescribed by Dr. and over the counter . I also try switching my toothpaste now I'm using argelitz( it is an organic toothpaste) and try to used heompathic medicines but apparently non of those work for me and am sick and tired of this sickness. I always have sores sometimes 7 at the same time and it does'nt stop, one would healed and then there is another one coming out. Its so painful , I cannot eat, talk, smile and my husband is complaining because he cannot even kiss me and it makes me crazy. So maybeam going to try that omega 3 and see if its work for me. Thanks

Tom (2009-10-16 05:47:20)

For lots of discussion on canker sores, check <http://www.mouthulcers.org>

Penny Boehle (2012-01-18 10:22:38)

I discovered the walnut connection too by accident. Trying to get my daughter who is plagued by canker sores to give it a try but she is resisting. most sites say to avoid walnuts. I noticed first a lessening of pain and then it was gone after a few days.

## **Homemade Kombucha: What I've Learned (part 1) (2009-06-07 18:40)**

From [1]Rejuvenation Company's kombucha I learned how good it can be. From a [2]Ferment Change party a few months ago I got kombucha starter. Now I have eight jars brewing kombucha. Here's what I've learned:

1. Hard to fail. It's hard to kill the kombucha "mother". After weeks in an airtight bottle (see Mistake 2), after I let air in it grew fine. You make kombucha at room temperature. You don't have to check it. You simply wait until it's sour enough.
2. Air needed. It's aerobic fermentation, so it needs unlimited oxygen. I learned this after I used a sealed container and nothing happened.
3. Takes weeks. It has taken weeks for my kombucha to become really sour. Maybe I can reduce this to a week under better conditions (high surface to volume ratio, start with large kombucha mother).
4. Use a wide container. The more surface to volume, the better. The kombucha culture grows on top of the tea/sugar mixture because it needs contact with air. The wider the container, the more contact it can have.
5. Cover tightly with something air-permeable. I cover each jar with a paper towel secured with a rubber band. Before I started using a rubber band to hold down the paper towel I found a fly in one of them.

I use cheap black tea (in teabags) and ordinary sugar. Maybe I should get a pH meter to learn more about the process.

1. <http://www.blog.sethroberts.net/2009/04/10/rejuvenation-company-interview/>
2. <http://www.indybay.org/newsitems/2009/03/13/18576981.php>

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JLD (2009-06-08 00:01:52)

I may add another piece of advice. Beware of potted plants nearby, mold from the pot soil will poison the kombucha and grow on the scoby. I never succeeded to keep a clean scoby for more than 2 or 3 runs and finally gave up.

Brody (2009-06-08 10:37:35)

I use a Seed Starter mat (basically a lower-temperature big flat heating pad) that I got at Orchard Supply Hardware, and I set my wide-mouthed 1-gallon glass kombucha container on that. It does wonders to speed up the process! (Side note- it also works well to set my pot full of yogurt mix on, when I'm making homemade yogurt and leaving it to sit overnight...I use the removable crock from my crockpot, set it on the Seed mat, and then wrap it in a beach towel. Perfect temperature for yogurt-making!)

Rachael (2009-06-08 14:16:53)

I had been wondering when you would mention Kombucha. I have a wicked Kombucha habit, I literally don't feel well unless I have at least 16 oz. a day. But I have hesitated to ferment my own. Please keep us updated on your progress, and any tips. I had good luck making sauerkraut last fall, though it turns out 30 pounds was more than my family could eat in one winter. (I just discovered your blog a few weeks ago and have been reading your archives. Well done! I enjoy your writing a lot.)

seth (2009-06-09 05:19:14)

Thanks, Rachael. Good idea, Brody. I notice that heating pads are sold by drugstores for as little as \$17.

Brody (2009-06-09 11:16:33)

Regular heating pads are usually 1) way too warm, and 2) don't maintain a constant temperature for hours....and aren't designed to be left on so long. The seed mats are just about the right temperature not to bake your kombucha/yogurt to death, and maintain a very constant heat for days. Also, a reptile-cage heating mat works too, I bet those are more expensive than seed mats, but who knows, someone might have one lying around.

Caragh (2009-07-13 17:26:06)

As with any dietary supplement, it's critical to do your homework before considering using Kombucha tea. First, determine the level of evidence supporting the health claims. In this case, Kombucha tea's benefits are based on personal reports, and lab and animal studies. To date, there hasn't been a single human trial reported in a major medical journal. This doesn't mean that Kombucha tea can't possibly have health benefits; it just means that at this time there's no direct evidence that it provides the benefits it's reported to have. The next question is whether there have been any reports of harm or illness caused by the product. In the case of Kombucha tea, there are reports of adverse effects such as stomach upset and allergic reactions. More worrying are the reports of toxic reactions and metabolic acidosis. In addition, the Food and Drug Administration cautions that the risk of contamination is high because Kombucha tea is often brewed in homes under nonsterile conditions. Lead poisoning also may be a risk if ceramic pots are used for brewing "the acids in the tea may leach lead from the ceramic glaze. In short, there's not good evidence that Kombucha tea delivers on its health claims. At the same time, several cases of harm have been reported. Therefore, until definitive studies quantify the risks and benefits of Kombucha tea, it's prudent to avoid it.

seth (2009-07-13 18:41:26)

Caragh, "not good evidence"? "No direct evidence"? I drink kombucha because I believe in the umami hypothesis, evidence for which I have posted. You make a good point about lead leaching from ceramics. I use glass containers.

## Bay Area Fermentation (2009-06-08 12:56)

Yesterday's San Francisco Chronicle had [1]an article on fermented foods in the Bay Area: the fermentation festival, sauerkraut, kimchi, and so on. (No discussion of yogurt.) I especially liked this:

Leaving foods unrefrigerated for two weeks or more can be disturbing to those who weren't raised with a crock of pickles in the hallway. But U.S. Department of Agriculture research service microbiologist Fred Breidt says properly fermented vegetables are actually safer than raw vegetables, which might have been exposed to pathogens like E. coli on the farm.

"With fermented products there is no safety concern. I can flat-out say that. The reason is the lactic acid bacteria that carry out the fermentation are the world's best killers of other bacteria," says Breidt, who works at a lab at North Carolina State University, Raleigh, where scientists have been studying fermented and other pickled foods since the 1930s.

Breidt adds that fermented vegetables, for which there are no documented cases of food-borne illness, are safer for novices to make than canned vegetables. Pressurized canning creates an anaerobic environment that increases the risk of deadly botulism, particularly with low-acid foods.

Nothing about fermented – also called aged – meat. The last taboo. I believe we like umami flavor so that we will eat more bacteria-laden protein. (Glutamate, which produces the umami flavor, is a protein breakdown product.) All meat producers, as far as I know, age their product 2-3 weeks to improve the flavor. Understandably, they don't like to talk about it.

Thanks to Ashish Mukharji.

1. <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2009/06/07/FDS617UQKF.DTL&type=food>

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david (2009-06-09 04:53:05)

I think in certain contexts people talk about aged meat. I worked at a steakhouse once and the managers would tell the customers the meat is aged. Before you started blogging about this though I'd never heard (or paused to reflect on the fact) that the purpose of aging meat is to cultivate beneficial bacteria. But there are lots of things regarding meat that people willfully forget...like the fact that it's full of dead parasites. I also worked at a Long John Silver's as a teen and learned to cut the fish. We were taught to remove the small pink parasites when we found them. They weren't a health issue, just aesthetic (they plump when you cook em, so people would notice them in the white fish meat). I was told other meats have parasites too but you can't see them because they're the same color as the meat.

Ben (2009-06-10 12:13:32)

This is known in hanging meat. Hanging meat is a big issue amongst foodies in the UK. When my family has game or turkey at Christmas it's typically hung outside in a shed for a few days prior to cooking. Perhaps its most vocal proponent of hanging meat in the UK is Hugh Fearnley-Whittingstall, there's a review of his "Meat" book, in which he discusses hanging at length, here: <http://www.guardian.co.uk/books/2004/jun/19/highereducation.houseandgarden> We even have a company called the Well Hung Meat Co.: <http://www.wellhungmeat.com/>

JohnN (2009-06-10 17:22:09)

Seth, Perhaps you should heed your own advice. I'm referring to the title of your subsequent post - "A Little Knowledge...". Aging meat is controlled breakdown of the proteins by lactic acid which tenderizes it. It's usually carried out at a few degrees above freezing and has very little to do with fermentation. Umami has something to do with access by the taste buds to glutamine in food (an amino acid and a neuro transmitter).

### **A Little Knowledge about Obesity is a Dangerous Thing (2009-06-10 09:36)**

[1]Rajiv Mehta of [2]Zume Life, a company that helps patients follow treatment regimes, told me that he's been doing the Shangri-La Diet with some success – he's lost 3 pounds in a month. Now and then he tells others about the diet. There are two types of reactions. Those who are outside the field of obesity prevention/research are interested. Those inside the field, obesity professionals (e.g., a Stanford professor), uniformly reject it: "Impossible," they say. Can't possibly be true.

1. <http://www.zumelife.com/leadership.php>

2. <http://www.zumelife.com/index.php>

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bill (2009-06-10 12:21:17)

I have come to the conclusion that the primary purpose of education today is to make sure people do not stray too far from the conventional wisdom.

Kevin (2009-06-10 16:18:17)

Seth, Have you seen the studies in this link <http://diabetesupdate.blogspot.com/2009/06/good-science-dr-leibel-explains-it-all.html> which support the idea of set-points

Nadav Manham (2009-06-10 19:20:18)

Sometimes there seems to be an inverse relationship between a particular medical establishment's ability to make progress in treating its given problem and the vehemence with which it rejects alternative methods of treating that problem. If any field should be open to new treatment ideas it should be the mainstream obesity establishment, as it has been singularly and embarrassingly unsuccessful at reversing obesity.

Wilbur (2009-06-11 09:03:09)

Clearly the obesity professionals have not thought the matter through. Losing three pounds in a month is no big deal. I find that my weight can fluctuate a couple of pounds over the space of a day, so being down three pounds in one month is very possible, even doing nothing at all. The professionals should be saying, "Hmm, that's nice, but let me know how you're doing a year from now".

Rajiv Mehta (2009-06-12 19:24:16)

Wilbur – yes, the daily weight variation is often quite substantial. To smooth the fluctuations, I've been calculating a Trend value, using simple exponential smoothing algorithm:  $Trend\_n = 0.1 * Weight\_n + 0.9 * Trend\_n-1$ . - Rajiv

## How Safe are Vaccines? (2009-06-10 23:36)

Or, at least, how safe do the people who prescribe and give them think they are? Jock Doubleday has an interesting way of finding out: Offer money to drink the ingredients, adjusted for body weight. The offer, which began in 2001, [1]is currently \$200,000 to "an M.D. or pharmaceutical company CEO, or any of the relevant members of the ACIP [the CDC's Advisory Committee on Immunization Practices] now including liaison representatives, ex officio members, chairman, and executive secretary" who will do this.

More The person who accepts this offer needs to fulfill a contract posted [2]here. However, it isn't clear what the "Agreement-in-Full" mentioned in the contract consists of. So it isn't clear if the person can know what he or she is getting into before putting \$5,000 at risk. If the Agreement-in-Full cannot be examined now, this is a meaningless – too vague to be understood – offer. I have written to Jock Doubleday to find the Agreement-in-Full.

And more Mr. Doubleday says he has the Agreement-in-Full but he would not show it to me nor apparently to anyone else not on the list of those eligible for the offer. So the whole thing is a tribute to the magic of web pages.

1. [http://www.spontaneouscreation.org/SC/\\$75,000VaccineOffer.htm](http://www.spontaneouscreation.org/SC/$75,000VaccineOffer.htm)

2. <http://www.spontaneouscreation.org/SC/ContractPartA.htm>

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JLD (2009-06-11 00:51:46)

This is silly. BOTH sides are wrong (and right as well). Smallpox and Polio vaccines are obviously effective AND most vaccines are dangerous too.

Conrad Hackett (2009-06-11 02:57:37)

Seth, I think you should do a critical evaluation of this link ASAP. I had never heard of this offer before seeing it here but I don't think this is legit. Consider the terms of the offer here: <http://www.spontaneouscreation.org/SC/ContractPartA.htm> For example, a potential participant has to pay for 3 psych evaluations with psychiatrists chosen by the challenge coordinator. The potential participant is barred from getting copies of any of the evaluations he/she pays for but any one of these evaluations can be used as the basis for disqualification. Other requirements are even crazier, like tests on the content of anti-vaccine books. This seems to be an offer designed so that no one will be able to qualify, allowing Doubleday to boast that no doctor will take a risk equivalent to what they routinely prescribe for children while Doubleday does not really put any money at risk. Note that he doesn't provide any evidence that he has \$200,000 available to pay a qualifying candidate or any indication of where the additional \$5,000 a month for this challenge comes from. This offer raises so many red flags that I won't even bother to enumerate them further. I appreciate your willingness to question conventional medical wisdom but do you really want to tie your reputation to Jack Doubleday's? Do you have any reason to think this is a legitimate offer? If so, why do you think no one has accepted the offer?

seth (2009-06-11 05:24:23)

Conrad, I don't see the problems you see with the contract. The mental health screenings seem reasonable; you don't want a crazy person accepting the offer. The need to take a test on anti-vaccination books doesn't strike me as making the whole thing not legit; I see it as a way of ensuring informed consent. Whether Doubleday has the money is a good question; certainly someone who wanted to take him up on it might demand proof. Why has no one accepted the offer? Some combination of (a) vaccines are dangerous and (b) it would be seen as demeaning to accept the offer. And perhaps (c) Doubleday is seen as tainted – if you have contact with him that taints you.

NE1 (2009-06-11 07:43:18)

I concur with Conrad. This is a publicity / grandstanding stunt. Note that he hasn't gone so far as to measure out the ingredients yet and is still trying to scaremonger at that point. I wouldn't trust him to know the real scales present in vaccines. He's made no attempt to involve neutral parties.

seth (2009-06-11 09:04:00)

NE1, of course it is a publicity stunt – that is, a way to get publicity. If vaccines are safe, then this publicity stunt could be used to emphasize that. Why vaccine safety would be bad to publicize I fail to see. I don't know what "real scales" means. when you make an offer like that, I don't think the failure to spell out every last detail means it should be ignored.

Conrad Hackett (2009-06-11 10:10:18)

Seth, I am disappointed that after thinking about this further, you are still linking your credibility with Jock Doubleday's. If you are wrong about the results of your self-experiments, the consequences for others in trying these experiments should be minimal. However, the stakes are higher regarding vaccines so it is that much more important to carefully evaluate the credibility of those who challenge the wisdom of vaccinations. Jock Doubleday and Jenny McCarthy have the disadvantage of not having any impressive credentials or a reputation for their critical thinking prowess. You have academic credentials and a demonstrated commitment to publicly challenging bogus research, so your endorsement will be great news to people like Jock and Jenny. Since neither my initial comments nor your own further reflection have enabled you to "see the problems [I] see with the contract," let me further enumerate just a few more red flags: 1. If just one of three psychiatrists chosen by the guy allegedly putting up the money for the challenge finds a participant "in any way psychologically unstable and/or of unsound mind," the participant is disqualified. I wonder how many Americans could visit the three psychiatrists this guy would choose without being found in some way unstable by at least one. Furthermore, the structure of this requirement (multiple psychiatrists, the participant can't read their reports) is such that there would be no way to challenge one's disqualification or, for that matter, learn about one's alleged mental issues. 2. Jock Doubleday ostensibly believes that accepting this challenge would pose great health risks to the participant. If any one of the named psychiatrists happens to agree with this assumption, they should by definition agree that anyone accepting the challenge is of unsound mind. 3. Signing part A of the agreement (necessary to begin the challenge) without completing the agreement in full (which includes part B, the terms of which are not disclosed until after signing part A and passing psychological and "vaccine knowledge" tests) obliges the participant to donate \$5,000 to Doubleday's organization. 4. Anyone who wants to take this exam has different assumptions about vaccine safety than Jock Doubleday yet they have to pass Doubleday's tests about vaccination theory and practice (don't you see a potential problem here?). Doubleday claims the right to publicize their answers to these tests. It seems likely that "passing" these tests requires saying that vaccines are unsafe. If one does so, Doubleday can then claim, "X actually admitted that vaccines are unsafe—here is what they wrote." 5. I give Doubleday credit for publishing part A of his terms and for a crafty publicity stunt. However, in my opinion, there are so many red flags here in part A (and I am still not bothering to enumerate all of them) that there is no reason to take this seriously. But if one did find all requirements reasonable (as you do, apparently Seth), wouldn't you at least agree that it is peculiar to be bound to make a \$5k donation if one fails to meet both the troublesome requirements in part A of the agreement as well as the unknown requirements of part B of the agreement. How could one even sign any document obliging a \$5k commitment of any kind without having read the full agreement? I hope that you will reconsider your endorsement of this stunt. The public health stakes are much higher here than they are for drinking a little oil, standing on one foot, and starting the day off with Good Morning America. I have am not an expert on vaccines but I don't believe Jock Doubleday is either and it was my hope that anyone who carefully read the terms of his offer would see that his alleged money is safe because none of the people he has challenged could be expected to actually qualify to drink the vaccine ingredients. Meanwhile, if the general public accepts the premises of this stunt and shuns childhood vaccinations, diseases will spread unnecessarily, kids will get sick, and many will die. I have enjoyed reading your blog and have read your posts with an open mind. Given your endorsement of this offer, I think I will be much more skeptical about your posts in the future.

seth (2009-06-11 12:51:06)

That's a good point about having to risk \$5000 before seeing the Agreement-in-full. However, I am less sure than you that that's the case – that the Agreement-in-Full does not exist. How do you know this? In any case, I will try to find out.

Conrad Hackett (2009-06-11 13:52:18)

Hi Seth, It is interesting that you suggest I think the agreement in full does not exist. All I said it that a potential participant cannot, according to the terms of this contract, learn about the terms of Part B before meeting the requirements of Part A. The only reason I know this is because I read the agreement carefully. Here is what it says, "Participant agrees to take a written open-book examination (the "Basic Exam") before becoming eligible to receive Part B of the Agreement." According to the terms of this challenge, Doubleday has many reasons not to send you the full agreement. First, you are not a medical doctor so you are ineligible for the challenge in the first place. Second, you haven't paid to have his shrinks examine you and submitted your complete mental health history to him. Third, and most critically, you haven't passed his test, which his agreement specifies you must get 100 % correct in order to qualify to receive and read Part B of the agreement. I am glad your skepticism is growing and you agree about one of the many red flags in this offer. I suggest you don't hold your breath on getting a satisfactory response from Jock Doubleday. Incidentally, it is my opinion that the agreement in full probably does not exist. After working so hard to craft Part A of an agreement that no one can complete, why should Jock waste time writing Part B that no one can qualify to receive? More importantly, the reason he won't send this is because it is an escape clause for him. If, somehow, someone manages to negotiate the challenges for participating in this challenge outlined in Part A, he can throw up new hurdles to participation when he writes Part B. This is a stunt. No doctors have accepted this challenge because it is impossible to qualify by design.

seth (2009-06-11 15:01:12)

If the Agreement-in-Full doesn't exist – or can't be looked at – I agree with you. But if it can be looked at, I want to see what it says.

Conrad Hackett (2009-06-12 07:30:58)

It looks like Jock has uncovered some other conspiracies besides doctors maliciously poisoning the population with vaccines. See here for his message about "a dark force working to undermine all ecosystems on Earth," which is responsible for the 9/11 attacks and the current financial mess: [http://scienceblogs.com/insolence/2009/02/i\\_get\\_e-mail\\_too.php](http://scienceblogs.com/insolence/2009/02/i_get_e-mail_too.php)

## **Self-Tracking: What I've Learned (2009-06-12 09:41)**

I want to measure, day by day, how well my brain is working. After I saw [1]big fast effects of flaxseed oil, I realized how well my brain works (a) depends on what I eat and (b) can change quickly. Maybe other things besides dietary omega-3 matter. Maybe large amounts of omega-6 make my brain work worse, for example. Another reason for this project is that I'm interested in how to generate ideas, a neglected part of scientific methodology. Maybe this sort of long-term monitoring can generate new ideas about what affects our brains.

So I needed a brain task that I'll do daily. When I set out to devise a good task, here's what I already knew:

1. Many numbers, not one. A task that provides many numbers per test (e.g., many latencies) is better than a task that provides only one number (e.g., percent correct). Gathering many numbers per test allows me to look at their distribution and choose an efficient method of combining (i.e., averaging) them into one number. (E.g., harmonic mean, geometric mean, trimmed mean.) Gathering many numbers also allows me to calculate a standard error, which helps identify unusual scores.
2. Graded, not binary. Graded measures (e.g., latencies) are better than binary ones (e.g., right/wrong).

Every experimental psychologist knows this. What none of them know is how to make the task fun. If I'm going to do something every day, it matters a great deal whether I enjoy it or not. It might be the difference between possible and impossible. People enjoy video games, which is a kind of existence proof. Video games have dozens of elements; which matter? Here's what I figured out by trial and error:

3. Hand-eye coordination. Making difficult movements that involve hand-eye coordination is fun. [2]My bilboquet taught me this. Presumably this tendency originated during the tool-making hobbyist stage of human evolution; it caused people to become better and better at making tools. Ordinary typing involves skilled movement but not hand-eye coordination. This idea has worked. I led me to try [3]one-finger typing (where I look at the keyboard while I type) instead of regular typing. And, indeed, I enjoy the one-finger typing task, whereas I didn't enjoy the ordinary typing tasks I've tried.

4. Detailed problem-by-problem feedback. Right/wrong is the crudest form of feedback; it doesn't do much. What I find is much more motivating is more graded feedback based on performance on the same problem.

5. Less than 5 minutes. The longer the task the more data, sure, but also the more reluctant I am to do it. Three minutes seems close to ideal: long enough for the task to be a pleasant break but not so long that it seems like a burden.

Experimental psychology is a hundred years old. Small daily tests is an unexplored ecology that might have practical benefits.

1. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>

2. <http://www.blog.sethroberts.net/2008/02/07/the-lessons-of-bilboquet/>

3. <http://www.blog.sethroberts.net/2009/05/14/measuring-my-brain-function-another-way/>

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Dennis Mangan (2009-06-12 10:42:41)

Seth: Off topic (I seem to have lost your email address), but have you heard of something called ThreeLac? <http://www.threelac.com/> It's a probiotic, a mixture of three bacteria, none of which are found in the usual probiotics, and testimonials, e.g. on Amazon, are over-the-top. Many people claim that it completely restored their health, in particular by killing Candida and healing leaky gut.

seth (2009-06-12 10:53:31)

Dennis, no I hadn't. That's really interesting. I drink Rejuvelac. Which I get from the Rejuvenation Company and learned about from another reader comment. The website you cited doesn't seem to exist.

Dennis Mangan (2009-06-12 10:59:22)

Seth, try here: <http://www.candidafree.net/> If it's to be believed, it's the greatest thing since sliced bread.

JLD (2009-06-12 12:05:40)

I found this, Google isn't ThreeLac friend: <http://www.holistichelp.net/threelac.html> Not all bacteria are good for you, Enterococcus Faecalis probably not...

Darrin Thompson (2009-06-12 13:26:49)

I don't know about the candida product but my Autism kids get really hard to manage when they are off Nystatin for a few days. If I knew of a cheap easy to get fermented food I could convince them to like I'd feed them a ton of it. Rock Band 2 song drumming meets some of your criteria. It's wildly fun, can be \_really\_ hard, and if you finish a song it's graded numerically with longest streak or correct notes and percent of notes correct. Unfortunately it's 3-5 minutes for just two numbers and it takes a minute or two to get set up. I'm thinking of plotting fish oil vs. my scores, because I've noticed that some days I can



finish really difficult songs on the hard (not expert) level. Then another day I'm kinda klutzy, miss too many notes and fail out of a song a beat just a few days ago.

peter (2009-06-12 13:51:44)

i had candida and tried Nystatin; but found that citricidal (grapefruit seed extract) works better, and you can stop taking it after the candida clears. it's awful tasting so you may have to put in a capsule with some sort of filler. It also is suppose to have anti-biotic and anti-viral properties.

rich (2009-06-13 09:15:36)

I am curious, how do you account for the fact that practice will make you better at tasks, especially hand-eye coordination heavy ones, over time? Thanks for the great site. Rich

seth (2009-06-13 09:26:33)

Thanks, Rich. The effect of practice gets smaller and smaller. In other words, learning slows down. And the speed of learning, whatever it is, can be estimated and subtracted - that is, allowed for.

Steve Rothman (2009-06-13 18:16:20)

It would be great if there was some sort of "game" for a phone like iPhone or Blackberry that would satisfy your 5 criteria and would keep records that could be transferred to a computer for statistical purposes. This would be especially good with a portable gadget because, obviously, it's sometimes not convenient to be near a computer, and also these portable gadgets all have alarms etc. to remind you to take the game/test. I wish there was something like that for iPhone.

Nathan Myers (2009-06-16 00:47:45)

It's rather easier to get started programming a Google Android gadget than an iPhone.

## **Extreme Medical Tourism (2009-06-12 21:20)**

In [1]this post Jasper Lawrence describes a trip to Cameroon to infect himself with hookworms. Here's how it begins:

As my asthma got worse I became increasingly reliant on inhalers, pills and antihistamines as well as upon the oral steroid prednisone to stay out of hospital. I tried all the drugs and therapies available. As it was by the time I was in my late 30s I was a frequent visitor to the emergency room. As anyone who has experienced a severe asthma attack can tell you they are terrifying.

My use of prednisone increased, and as you may know the side affects of prednisone are quite horrible, particularly with long-term use. I started to suffer from some of these side affects, particularly obesity, and despite all this these drugs were only marginally effective in controlling my asthma.

Soon I was denied health insurance and so now I had the added burden of paying for all my medical care.

On a trip in the summer of 2004 to visit relatives in England I learned of a BBC documentary about the connection between a variety of intestinal parasites and various autoimmune diseases.

In Cameroon:

Cameroon has no tourism infrastructure, its people being so poor (your pocket change represents two or three months wages) and the insane corruption make for a very challenging environment for a western traveler, particularly a conspicuous white one. You are a walking pile of cash, a visitor from another, much wealthier, planet. One feels very vulnerable and exposed. It can be very wearing and the danger of being robbed is constant. . . . With the driver's help (I told everyone of my quest) I was able to visit a variety of villages and with practice learned to identify where the locals would defecate.

[2]Worm therapy.

1. <http://www.kuro5hin.org/story/2006/4/30/91945/8971>
2. <http://www.blog.sethroberts.net/2009/05/23/worm-therapy/>

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Glen Raphael (2009-06-13 08:30:03)

The author of that article set up a web page with some pictures and lots more medical information here: <http://asthmahookworm.com/>

Curaci3n del asma (2009-06-13 14:37:02)

[...] V3a: Blog de Seth Roberts (uno de los blogs m3s interesantes de Internet). [...]

Patri Friedman (2009-06-14 19:31:38)

I am very impressed that the author of the article set up a clinic and commercialized the therapy. Good for him!

Medical Tourism (2009-07-08 05:31:22)

Interesting article and experience Jasper. Hope all worked out for the better

Extreme medical tourism takes on many forms « geomark (2010-06-07 21:17:09)

[...] Wow, traveling to Cameroon and walking around barefoot in open air latrines to deliberately infect yourself with a parasite found in fecal matter, now that is extreme medical tourism! The detailed story with photos is here. The story was also commented on a bit at this blog. « News fail that takes some reading [...]

## **The American Health Paradox: What Causes It? (continued) (2009-06-13 05:39)**

Atul Gawande might be the best medical writer ever. He is the best medical writer at The New Yorker, at least, and the best one I've ever read. He consistently writes clearly, thoughtfully, and originally about the big issues in medicine. That is why [1]his recent article about health care costs (my comment [2]here) and [3]his graduation speech at the University of Chicago are so telling. And not in a good way, I'm afraid.

The graduation speech starts off with an excellent story:

The program, however, had itself become starved of money. It couldn't afford the usual approach. The Sternins had to find different solutions with the resources at hand.

So this is what they decided to do. They went to villages in trouble and got the villagers to help them identify who among them had the best-nourished children—“who among them had demonstrated what Jerry Sternin termed a “positive deviance” from the norm. The villagers then visited those mothers at home to see exactly what they were doing.

Just that was revolutionary. The villagers discovered that there were well-nourished children among them, despite the poverty, and that those children’s mothers were breaking with the locally accepted wisdom in all sorts of ways—feeding their children even when they had diarrhea; giving them several small feedings each day rather than one or two big ones; adding sweet-potato greens to the children’s rice despite its being considered a low-class food. The ideas spread and took hold. The program measured the results and posted them in the villages for all to see. In two years, malnutrition dropped sixty-five to eighty-five per cent in every village the Sternins had been to. Their program proved in fact more effective than outside experts were.

Bill Gates, Jeffrey Sachs, are you listening? Gawande goes on to say that to improve medicine, there needs to be the same sort of study of “positive deviants”. Here is his first example:

I recently heard from one such positive deviant. He is a physician here in Chicago. He’d invested in an imaging center with his colleagues. But they found they were losing money. They had a meeting about what to do just a few weeks ago. The answer, they realized, was to order more imaging for their patients—to push the indications where they could. When he realized what he was being drawn to do by the structure he was in, he pulled out. He lost money. He angered his partners. But it was the right thing to do.

No kidding. The contrast between mothers who figure out creative iconoclastic new ways to feed children on tiny amounts of money and a doctor who merely refuses to be a scumbag could hardly be greater. But Gawande uses the same term (“positive deviant”) for both! This is the depth to which a writer and thinker of Gawande’s stature has to descend, given the straitjacket of how he thinks about medicine. Gawande thinks that doctors will improve medicine. He’s wrong. Just as [4]farmers didn’t invent tractors – nor any of the big improvements in farming – neither will doctors be responsible for any big improvements in American health. The big improvements will come from outside. I’m sure they will involve both (a) advances in prevention and (b) patients taking charge of their care.

When these innovations happen, where will doctors be? Helping spread them or defending the status quo? That’s what Gawande should be writing about. One big advance in patients taking charge was home blood glucose testing. It came from an engineer named Richard Bernstein. Best thing for diabetics since the discovery of insulin. Doctors opposed it. When I invented the Shangri-La Diet, and lost 30 pounds, my doctor didn’t ask how I lost all that weight. Not one question. Like all doctors, he had many fat patients; the notion that I, a mere patient, could know something that would help his other patients didn’t cross his mind. When I was a grad student I did acne experiments on myself that revealed that antibiotics (hugely prescribed for acne) didn’t work. My dermatologist appeared irritated that I had figured this out. That’s a little glimpse of how doctors may react to outside innovation involving patients taking charge. Of course doctors, [5]like dentists, cannot do good prevention research.

If Gawande took the first story he told to heart, he might realize it is saying that the improvements to health care won’t come from doctors, just as the improvements to the health of those village children didn’t come from experts. [6]As I said earlier, doing my best to channel Jane Jacobs, a reasonable health care policy would empower those who benefit from change. That’s what the village nutrition program did. It empowered mothers who were innovating.

1. [http://www.newyorker.com/reporting/2009/06/01/090601fa\\_fact\\_gawande](http://www.newyorker.com/reporting/2009/06/01/090601fa_fact_gawande)
2. <http://www.blog.sethroberts.net/2009/05/29/the-american-health-paradox-what-causes-it/>
3. <http://www.newyorker.com/online/blogs/newsdesk/2009/06/atul-gawande-university-of-chicago-medical-school-commencement-address.html>
4. <http://www.blog.sethroberts.net/2009/05/02/how-could-they-know-the-case-of-healthy-gums/>
5. <http://www.blog.sethroberts.net/2009/05/02/how-could-they-know-the-case-of-healthy-gums/>
6. <http://www.blog.sethroberts.net/2009/05/29/the-american-health-paradox-what-causes-it/>

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Dennis Mangan (2009-06-13 06:33:24)

Well said, Seth. Most doctors simply do not care and take any questions or suggestions made by the patient as an affront. It's happened to me and family members many times - it's happened to me on my blog in a discussion about statins: <http://mangans.blogspot.com/2009/03/dont-take-statins-if-you-need.html> I do think that perhaps you overestimate the degree to which patients will take charge of their health. Many people simply don't care, and others aren't smart enough, the two categories overlapping of course.

seth (2009-06-13 06:43:22)

Thanks, Dennis. I think you make a good point about patient inaction. My guess is that there is vast epidemic of subclinical depression and what to do about it is a different topic.

Nadav Manham (2009-06-13 11:48:51)

As an exercise, is there a way to test your three assertions historically? The three assertions are: 1) Doctors will not be the ones responsible for big improvements in American health, outsiders (non-doctors) will. 2) Big improvements in American health will involve advances in prevention. 3) Big improvements in American health will involve patients taking charge of their care. By "test historically," I mean: Can we look at the great health innovations of the past to see if they fit Seth's three assertions? Here is one list of the greatest medical innovations in history: <http://www.infoplease.com/ipa/A0932661.html> I don't know if it's the best list but it's probably pretty good. Just looking through it as a non-expert, I can see several examples of Seth's premises in action, but also several counterexamples: of advances coming from within the medical establishment, of advances via treatment rather than prevention, and of advances that happened without patients taking charge of their care. Seth, is there anything "special" about the specific diseases of American modernity (obesity and diabetes, asthma, allergies, depression, etc.) that leads you to believe that advances in them will come via your three assertions?

The American Health Paradox (2009-06-13 17:21:31)

[...] The American Health Paradox An article from the blogger Seth Roberts who isn't in what's traditionally called alternative medicine or for that matter what's traditionally card medicine: Seth's blog » Blog Archive » The American Health Paradox: What Causes It? (continued) \_\_\_\_\_ I am always open for feedback on my posts. That might focused on the argument at hand or on my writing style. If your feedback would go offtopic feel free to send me a Personal Message. My posts generally don't contain medical or legal advice, if you have a problem seek the opinion of an expert I don't believe in Beliefs. Nassim Nicholas Taleb [...]

Nocancer Chuck (2009-06-13 17:42:01)

Being a doctor is a job like sniffing armpits (deodorant testing). The purpose is to sniff armpits but they do not care how the armpits smell. They do the job just to get paid. As soon as you give them \$10 million, they will quit. So why should the doctor care about your ideas. He just wants to do his job and get paid. Your ideas do not make that any easier for him. Give him \$100 million and he will quit his job and do something that he wants to do like play golf. Then approach him with a tip on how to play golf better and he will listen to you. "Money makes the world go round." Many people do not believe in God, but they believe in money. Money did not exist for 3 million years and then they locked up the food and created the need for money.

seth (2009-06-13 23:07:41)

Nadav, that's an interesting question – the empirical support for my predictions. One is the vast improvement in health over the last 100-odd years. As many have concluded, it is unlikely to be due to advances in medicine. Another is the home testing example, an improvement in diabetes care much greater than anything doctors have come up with. Third is that those diseases you list are all much rarer in at least some poor countries – so they are "diseases of civilization" caused by lifestyle. Figuring out how lifestyle causes them – which doctors will never do – will pay enormous benefits. It's true that doctors have pioneered a few important things, such as vaccinations. But that was long ago. See the movie *First Do No Harm* for an example of how doctors actively impede progress.

Nadav Manham (2009-06-14 06:01:19)

Thanks for your reply Seth. I think you're generally right: if civilization were to hold a "contest" to eliminate the chronic diseases of civilization, with one contestant the medical/pharmaceutical establishment and the other the Seth Roberts' and Richard Bernsteins of the world, I would bet on the latter to produce better solutions at lower cost with fewer side effects. I think the internet will greatly help the latter also relative to the former. But does that imply that the medical establishment should not be allowed to be a contestant at all? I don't think so, for three reasons: First, the medical establishment is a collective, made up of individuals. The word "maverick" describes an individual member of the establishment who comes to hold a view outside the establishment (which often results in excommunication), and many medical advances have been the results of mavericks: William Harvey was a maverick, as was Ignaz Semmelweis. Second, the medical establishment should be allowed to compete because sometimes it comes up with the best solution. I had my thyroid gland removed, and need synthetic thyroid, an invention of the medical establishment, in order to live. You and I, and perhaps the majority of college-educated Americans, suffer from an incurable disorder of unknown cause, that tends to get worse over time, and that untreated is crippling to one's quality of life. It's called nearsightedness, and the medical establishment has figured out a way to treat it in such a way that no one really thinks about it as a disease at all. I'm happy about that. Maybe one day a pharmaceutical company will discover a treatment for obesity that renders it as inconsequential as nearsightedness is today. Third, the competition itself between the two contestants is healthy for society. Each side pushes (or should) the other, or at least embarrass the other, to improve solutions to problems.

Maggie (2009-06-15 20:23:52)

Gawande is awesome. Great post :)

Nathan Myers (2009-06-16 00:39:55)

Seth, the doctors you encounter are, in every essential detail, not any different from your auto mechanic or the plumber who comes to your house. They learned a trade, and they're executing what they learned. If they learn a few new tricks, they might be able to apply them, but they won't mention them to others. Doctors, in particular, risk losing lawsuits if they depart in any substantive detail from what their competitors would have done. Of course they're irritated to learn things they can't use. Improvements in automotive design and plumbing practice occur, when they do occur, outside your immediate circle, and they are overwhelmingly the work of engineers. Scientists – particularly social scientists – are taught to hate and fear engineers, but it is with engineers that practically all the improvements to details of modern life, where it does improve, originate. It is the same in medicine. In fact, it is often experienced engineers pursuing a second career in medicine who pioneer new procedures and practices. (E.g., read Gawande about changes to anesthesiology; or look up the leading hip replacement surgeon, working in Sacramento.) Medical scientists work to understand biological processes, but there's remarkably little prestige in applying such understanding to better patient care. That medicine does not recognize the role of the engineer is a crippling impediment to progress.

## **The Fall of GM (2009-06-14 06:32)**

There is nothing new about large industry leaders, such as General Motors, going bankrupt; in *The Innovator's Dilemma*, Clayton Christensen gives many examples and an explanation: complacency, also called smugness. We're

doing well, why shouldn't we continue to do things our way? They fail to innovate enough and less-complacent companies overtake them, often driving them out of business. Complacency is human nature, true, but it's the oldest mistake in the economic world. (I've studied a similar effect [1] in rats and pigeons.) In the 1950s, complacency was surely why the big American car companies [2] rejected the advice of quality expert Edward Deming. In less-complacent Japan, however, his ideas were embraced. This doomed the US car industry. Much later, Ford was the first American car company to take Deming seriously, which may be why Ford is now doing better than GM or Chrysler.

The further away you are I suspect [3] the more clearly you see complacency for what it is – a failure to grasp basic economics (innovate or die):

"Chinese financial assets [in America] are very safe," [Treasury Secretary Tim] Geithner said. His response drew laughter from the [Peking University] audience.

1. <http://repositories.cdlib.org/postprints/116/>
2. <http://movies.nytimes.com/movie/250312/W-Edward-Deming-Prophet-Unheard/overview>
3. <http://www.reuters.com/article/marketsNews/idINPEK12423320090601?rpc=44>

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Darrin Thompson (2009-06-15 06:36:46)

I think if you look closely into the history you find that American auto makers found Deming, and embraced his methods, and subsequently quality of US cars went up. However, Deming's book *Out of the Crisis* is riddled with frustration that US management is missing the point of his methods. They're seeing innovations like just-in-time and kanban and consistently seeing only short term improvements. Deming reiterates that the real innovation is in management. That management must change its goals, change its relationship with workers, and change the methods used even by the very top officers and boards of directors. That's where he found things falling short the most.

seth (2009-06-15 09:42:43)

Thanks, Darrin. I didn't know about that book. A book "riddled with frustration" might be good reading.

### Assorted Links (2009-06-14 10:20)

- [1] Congratulations: You've become a New Yorker staff writer by Dan Baum
- [2] History written by the losers by Nassim Taleb
- [3] Amazon reviews aren't as trustworthy as you may think
- [4] Vast high-quality audio and text for learning foreign languages, including Chinese

Thanks to [5] Ben Casnocha.

1. [http://www.danbaum.com/Nine\\_Lives/New\\_Yorker\\_tweets.html](http://www.danbaum.com/Nine_Lives/New_Yorker_tweets.html)
2. <http://www.fooledbyrandomness.com/Triana-fwd.pdf>
3. <http://jonbischke.com/2009/06/12/why-amazon-vine-is-a-threat-worth-talking-about/>
4. <http://www.fsi-language-courses.com/>
5. <http://ben.casnocha.com/>

## Relief for Ankylosing Spondylitis (2009-06-15 15:20)

[1]Ankylosing spondylitis is a kind of arthritis with puzzling symptoms all over the body. Its main symptom is back vertebrae fusing together; ankloysis is stiffening or fusion of a joint. To read Wikipedia you'd think it can only be treated with dangerous drugs that don't work very well.

I recently learned from someone with the condition that it got much better after he cut out all refined carbohydrates, especially sugar, an idea he got from [2]Dr. Bruce West. He describes his regimen as "avoid processed foods [= food with lots of additives], such as fast foods, and especially refined carbohydrates, such as high fructose corn syrup." After he started this, he felt better in three days. He can eat fruit, but not bread or soft drinks or desserts. He's never tried eating more fermented foods; he barely knew what they were.

Is the idea spreading? I asked. No, he said. Curious, in this day of forums and patient-centered websites.

More A reader noted that the same advice is given [3]here.

1. [http://en.wikipedia.org/wiki/Ankylosing\\_spondylitis](http://en.wikipedia.org/wiki/Ankylosing_spondylitis)
2. <http://www.healthalert.com/>
3. <http://www.kickas.org/londondiet.shtml>

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SB (2009-06-15 16:22:36)

"Is the idea spreading? I asked." Yes, it is. See <http://www.kickas.org/> There is a ton of information on low starch, high protein diets under "Diet Center". Unfortunately, the ASkickers are still afraid of fat. And I don't see anything about omega 3 vs. omega 6 or about fermented foods.

## Hangnails Cured by Fermented Food? (2009-06-15 20:49)

Today I had a hangnail. I realized I hadn't had one in months. I used to get them all the time - say, once a week. The only big change in my life in the last few months is all the fermented food I now eat. I find it hard to believe there's a connection but I can't remember another time in my life when they went away.

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Cliff Styles (2009-06-15 21:44:36)

Your interest in fermented food has sparked my interest for the past 3 months or so, so I thought you might be interested in changes that I noticed from adding daily kombucha and rejuvelac. I follow a pretty low carb, almost grain free routine, but I was on this diet long before I started adding the fermented stuff. I dropped wheat as an experiment about 3 years ago, and it was a revelation. More on that, if you request. The two most noticeable changes from the fermented food? I would regularly get some late afternoon belching, long after lunch, sometimes vicious enough to the point of serious discomfort. This has disappeared almost completely, and it's a great relief. It's been consistent, even after big mexican food lunches (includes beans, no tortillas, rice or chips). The second thing I noticed was a substantial reduction in the puffiness under my eyes, sufficient that

my significant other noticed, too. I prefer the very low residual sugar kombucha - the brand you like has just too much sugar for me.

seth (2009-06-15 22:31:39)

yes, I'm interested, Cliff. What happened when you stopped eating wheat? Now that I make my own kombucha I find that brand is a little too sweet, as you do.

MC (2009-06-16 04:21:43)

This post caught my eye too. I've hardly ever experienced hangnails (I am not a native english speaker and had to look up the internet to understand what they are), maybe only 3-4 times as far back as I can remember (I'm 23 yrs old). Since childhood, I've always eaten fermented food - as this type of food is part of the traditional diet in my home country (Romania). I eat approx 3 servings of yoghurt or fermented milk/cheese a day, as well as all kinds of pickled vegetables. I don't know whether there's a connection here, but in addition to not having any skin/nails problems, I have never had tooth cavities and never needed any fillings (which always surprises my dentist when I run my annual checkup). I've never tried stopping fermented food altogether to see if anything happens. If I ever try it, I'll let you know if I notice any changes...

Cliff Styles (2009-06-16 08:19:22)

With regard to ceasing to eat wheat, the following happened: I dropped about 15 pounds of fat quite quickly, within a few weeks. I had long had a very annoying (even disturbing) morning cough, a real hacking at times. That ceased completely. I was a smoker when I was young, but quit 35 years ago. My sleep apnea ceased completely, and my night time snoring declined by a substantial amount. Again, verified by my significant other. When I quit the wheat, I felt like I had the flu for about 4 days. I notice now that if I have a bit of wheat once in a while, the cough does not return, but my snoring apparently immediately gets worse. If I have wheat for 3 days together, then the cough comes back. Since this experiment, I have read Taubes' book, and other bloggers (like cardiologist William Davis at the Heart Scan Blog) who have provided more concrete evidence of other reasons to quit wheat. That has helped with motivation, since I found that giving up wheat was much harder than giving up cigarettes.

justin (2009-06-16 08:39:59)

I've upped my fermented food intake drastically over the past maybe four months but I have not seen any reduction in hangnails. I also have never had any cavities and my dentist (well, the last time I went to one, which was around 2004, I think) said I had "textbook teeth." I've mainly gotten my fermented food fix from yogurt (homemade for the past month or so) and kefir. Recently I've added some natto and I'm working on growing a SCOBY to do my own kombucha. I don't buy kombucha though as it's just too expensive/out of the way to get. I also follow a low-to-no carb diet (exceptions: fruits, non-starchy vegetables, alcohol, fermented foods, and occasionally ice cream) and practice intermittent fasting. Since the fermented food addition, I've noticed that I actually have a craving for yogurt. It's as though I have to have \*something\* fermented every day now - this is as opposed to supplementing fish oil, which I know I \*should\* do, but often forget and/or disregard. Of note, my snot has consistently had that greeny/yellow look ever since regularly incorporating fermented foods; however, I've not had any colds or other respiratory infections, and I successfully avoided a cold/flu that I felt onset symptoms for by mega-dosing Vitamin D3 (an unprecedented event for me). I've also speculated that I've seen minor improvements (or at least maintenance of the status quo) in body composition while adhering less to working out. Finally, when I have had the inevitable carb-binges, I've made it a practice to incorporate some fermented foods. This change seems to have reduced or eliminated the typical carb hangover (typically characterized by truly horrible gas). But I still get hang nails.

Kirk (2009-06-16 09:13:25)

I have seen two changes since increasing use of probiotics. First, it seems to me that my sclera are whiter. (No way to measure, of course, this is simply my impression.) Secondly, I used to enjoy a small glass of wine with supper. I no longer have much of a desire for a glass of wine . . . I might have one about once a week now. My probiotic sources are, in order of volume and significance, real kefir, water crystal kefir, cheese, miso, kimchi, pickles, tamari. I tried kombucha for 3 weeks but finally my body asked for kombucha to be dropped from the menu.



Rick Diamond (2009-06-16 10:34:03)

I work for an independent publisher of vegetarian and alternative health books. We publish a book that might be of interest to your readers. It is called Making Sauerkraut and pickled vegetables at home. The authors are Klaus Kaufmann, DSc, and Annelies Schoneck. Step-by-step recipes guide the modern reader through centuries-old methods. The book includes recipes illustrated by full-color photos. ISBN: 978155312037-7 64 pages 6 1/2 x 8 1/2 inch paper \$11.95 Our books are available through many bookstores and online book dealers and directly from our website: [www.bookpubco.com](http://www.bookpubco.com).

Glen Raphael (2009-06-16 10:36:12)

Wikipedia says: "hangnails are usually caused by dry skin or (in the case of fingernails) nail biting, and may be prevented with proper moisturization of the skin." So I suppose I'd check for changes in humidity, bathing/handwashing habits (any new soap?), clothing habits (I always get hangnails when I wear ski gloves), gardening habits...

Nathan Myers (2009-06-16 13:08:03)

I used to get hangnails all the time. They went away when I went (ovo-lacto-) vegetarian.

Todd (2009-06-16 18:27:13)

Here's a speculative connection. Dry skin is a classic sign of poor thyroid function. Some have speculated that poor thyroid function can be caused by adrenal fatigue, which in turn can be caused by an overactive immune system. So, fermented food reduces excessive immune response, which reduces the burden on the adrenals, which helps thyroid function, which helps with dry skin, which helps with hangnails.

Scot (2009-06-16 18:33:25)

Fermented food and HIV? <http://www.pri.org/health/global-health/yogurt-limit-hiv-aids1435.html>

Wilbur (2009-06-17 04:54:07)

Oh for Christ's sake. "My hangnails went away when I started taking probiotic homeopathic placebos".

## **Homemade Kombucha: What I've Learned (part 2) (2009-06-16 19:53)**

I've been making it in 2-quart jars. Doing little experiments, I've figured out that

1. 4 tea bags is better than 6. I've been using Tetley's low-cost black tea. Each teabag supposedly has 33 % more tea than usual. In Wild Fermentation, Sandor Katz suggests 4 teabags for 2 quarts.
2. 3/4 cup of sugar is better than 1/2 cup of sugar. The Wild Fermentation recipe says 1/2 cup of sugar for 2 quarts.

[1]Part 1.

1. <http://www.blog.sethroberts.net/2009/06/07/homemade-kombucha-what-ive-learned/>

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Dan (2009-06-16 22:00:55)

I started my first batch on Sunday. We'll see how it goes. I used green tea using a starter culture from Kombucha America. They recommend starting with green tea for the first batch. I'm brewing in a gallon glass jar. I've got the jar in an ice chest with

a heat pad just barely over one side of it on the inside. With the top on, a digital thermometer that says it's 80 degrees inside, plus or minus a degree all day long. As for the commercial versions, GTS is lowest in sugar and sweetness which is what I want mine to be. The one from Rejuvenation Company is extremely sweet and twice the sugar as GTS. Another one that's good but also sweeter than GTS is High Country. They make one that tastes like root beer and it's very good.

Dave (2009-06-17 05:42:13)

Thank you for your posts Seth. Is "stronger" Kombucha better for you? That is to say is more sour or longer fermented better?

seth (2009-06-17 07:29:00)

Dan, thanks for the details. Dave, I'm sure that stronger kombucha is better. Tea with sugar has no wonderful properties.

Dennis Mangan (2009-06-17 09:20:30)

I've looked around a bit on the net and reread some of Seth's past entries, but one thing I'm not clear on is whether there are live cultures in the finished product, like yogurt, or do they all die due to waste products, as in wine or vinegar?

seth (2009-06-17 09:25:12)

Dennis, there are live cultures in kombucha unless it is pasteurized (as one manufacturer does). You could probably use commercial kombucha to start making homemade kombucha – something I didn't quite realize.

Dennis Mangan (2009-06-17 09:57:57)

Seth: Let me immodestly suggest a modification to your hypothesis that fermented food is healthy because it stimulates the immune system. The immune system outside the gut does not want to see lipopolysaccharides (LPS), which are breakdown products of bacterial cell walls, nor does it like to see the bacteria themselves. When it does, bad things happen, basically a chain reaction of autoimmune activation, inflammation, and free radical generation. Normally the gut is highly selective in what it allows into the body, but in cases of leaky gut, LPS as well as gluten and casein enter the circulation, causing fatigue, lupus, autism, and maybe lots more. Leaky gut in turn is caused by dysbiosis in the intestines, whether by candida or gram negative bacterial overgrowth. Therefore fermented foods work by restoring proper microbial balance in the intestines, sealing the leaky gut and killing candida and gram negative overgrowth. It might be almost the opposite of stimulating the immune system (outside the gut); it actually *\*prevents\** stimulation and activation. Secretory IgA is the type of immunoglobulin most important inside the gut, and dysbiosis, e.g. from candida, causes a radical decrease in its production by the immune cells lining the gut. The right fermented foods ought to restore IgA production. By the way, I also think that this could be such a problem in the modern world because of the emphasis of low fat, high carb diets, which probably foster dysbiosis.

Dennis Mangan (2009-06-17 10:00:04)

The psychiatrist and scientist Michael Maes believes that dysbiosis and leaky gut, along with subsequent immune stimulation, is a major mechanism behind depression and chronic fatigue. See here for starters with links: <http://mangans.blogspot.com/2009/06/unified-theory-of-disease.html>

seth (2009-06-17 12:17:28)

Those are good points, Dennis.

Dave (2009-06-19 10:56:47)

Does anyone add anything to flavor their homemade Kombucha like fruit juice? Anything work well, or anything to avoid?

Sunny (2009-06-20 14:48:11)

I like to add raspberries, huckleberries, or ginger to my finished kombucha. With the berries, it turns a lovely pink, and with the grated fresh ginger the taste is a bit 'snappier'. Those are the berries I've used, although others would be just as tasty, I'm sure.

Dave (2009-06-21 14:14:21)

do you add them whole, or juice them? How long do you leave them in there before you consume?

## Homemade Yogurt: What I've Learned (2009-06-17 13:00)

Years ago I made yogurt using a recipe from [1]Saul Sternberg. I still use the same ingredients – the basic point is to add about 1/2 cup powdered milk per quart of regular milk at the start – but I implement the temperature changes differently. Since I became interested in fermented foods, I've made yogurt a dozen times. Here's what I've learned.

1. Makes a great condiment. [2]I blogged about this. Store-bought yogurt, even the plain stuff, is too runny – not thick enough – nor sour enough to make this clear. The addition of powdered milk makes the yogurt thick enough to easily eat with anything, including meat. It improves the flavor of just about anything, especially if the yogurt is really sour. This might be the most important lesson since it means you can eat it at every meal and it makes cooking easier. I use spices much less now. The yogurt supplies complexity.

2. You can incubate it for days. I want it as strong as possible – not only because more sour (food writers euphemistically say tart) is better but also because the longer it ferments the more bacteria there will be. After a while it stops getting more sour and I stop. I routinely let it incubate one or two days, much longer than any recipe I've seen.

3. Preheating helps. Most recipes say you should heat the milk before you add the cultures. Some say this kills "bad" bacteria, which could compete with the bacteria you add. According to [3]Harold McGee, the preheating denatures the milk proteins, which helps them trap liquid (whey). [4]I did a little experiment in which I didn't preheat some of the batches. Without preheating, the yogurt was much less solid. Supporting McGee.

4. Strauss yogurt better than Pavel yogurt. (Two popular Bay Area brands.) When I make a new batch I start it with store-bought yogurt; that works better than using what I have left. Side-by-side tasting showed that Strauss yogurt is more sour than Pavel yogurt. I made yogurt using each as the starter; the Strauss-started yogurt was clearly more sour than the Pavel-started yogurt.

5. Slow cooker works great. It is very easy to do the preheating via a crockpot (also called a slow cooker). I put it on high and wait 3-4 hours. This heats the milk to about 185 degrees F. Then I cool it down, add the cultures, and put the whole crockpot in the oven (set very low) to keep it warm for a few days. No spillage. I use a food thermometer to track the temperature. I got the idea [5]from the Shangri-La Diet Forums.

6. Whole milk better than low-fat milk. Whole tasted better.

[6]Harold McGee's recommendations.

1. <http://www.psych.upenn.edu/~saul/>

2. <http://www.blog.sethroberts.net/2009/02/18/the-staggering-greatness-of-homemade-yogurt/>

3. <http://curiouscook.com/cook/home.php>

4. <http://www.blog.sethroberts.net/2009/02/23/a-yogurt-experiment-effect-of-preheating/>

5. <http://boards.sethroberts.net/index.php?topic=7079.0>

6. [http://www.nytimes.com/2009/04/15/dining/15curi.html?\\_r=1&ref=dining](http://www.nytimes.com/2009/04/15/dining/15curi.html?_r=1&ref=dining)

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Jeremy (2009-06-17 13:42:47)

Re your No. 4: you don't say why you think using a new starter works better than continuing the culture you already have. Of course, it's your blog and you don't have to, but my experience is the opposite. My old batch is a better starter than a new pot of yoghurt. It could be the brand, but I feel that the culture has adapted to the way I make, and like, my yoghurt.

curious (2009-06-17 14:25:54)

Any experience with the room temperature yogurts?

seth (2009-06-17 14:32:21)

Jeremy, I really don't have any good idea why. Maybe long incubation kills bacteria. They run out of food. Curious, I put yogurt in milk at room temperature and it didn't turn into yogurt. More like kefir.

curious (2009-06-17 14:45:33)

Seth, I should have been more clear. I was referring to matsoni, viili and similar cultures. I like the yogurt I make, but the idea of not having to keep the culture warm is appealing.

Rose (2009-06-17 16:49:48)

Seth, Do you know the specific carbohydrate diet recommends 24 hour incubated yogurt as the cornerstone of its stomach health program?

seth (2009-06-17 18:24:49)

Curious, I haven't tried those cultures. Rose, I didn't know that. That's really interesting.

Ashish (2009-06-18 01:58:23)

I've been meaning to make yogurt for a while - great to have these tips. Pavel yogurt I know I've seen around, though I usually buy Fage. Who carries "Strauss"? (I guess it doesn't matter - the principle is that store-bought yogurts work, so I don't need to track down aged relatives for their yogurt culture. Cool.)

bennetta (2009-06-18 09:42:35)

Seth, Unlike most commercially available yogurt, Strauss is unpasteurized- a process that kills the bacteria (<http://www.medicinenet.com/script/main/art.asp?articlekey=50610>) . I am not familiar with Pavel yogurt, but a big deal was made out of Strauss being unpasteurized when I worked in the natural food industry. This may be the primary reason why it seems to work better. I'm a huge fan of unpasteurized, well, anything, really. Unpasteurized apple juice (Apple-a-Day in Sonoma County makes some) tastes nothing like the sterile stuff you buy in boxes and is absolutely delicious. Pasteurization really does seem to make food taste a lot less interesting.

Brody (2009-06-18 10:47:33)

I've found that I can get really thick yogurt by straining it afterwards (same process used to make Greek yogurt), rather than adding powdered milk or anything else. When I make yogurt, I heat the milk to almost-boiling, cool it to 100-110 degrees, stir in the starter, put it into a pre-heated crock from my crockpot, wrap it in a beach towel, and let it sit on a Seed Starter mat for about 24 hours. Then to strain, I put a few layers of cheesecloth in a strainer and set it over a pot for about 4 hours. Turns out perfectly gorgeously thick, and simple. I'm pondering trying to add a few different brands of yogurt (including Yakult drink) as a starter, to get as many kinds of bacteria as possible. This seems like it would be a good idea (to my untrained brain!). Thoughts on this?

seth (2009-06-18 11:09:23)

bennetta. I agree. Raw milk cheese tastes a lot better than pasteurized-milk cheese. Brody, I tried making yogurt using Yakult drink as a starter. I think it failed. When I eventually added - in addition - regular starter, there was no taste difference in the

final product. Those are interesting production details, thanks.

Brody (2009-06-18 19:00:22)

RE: Yakult & other live culture sources...I wasn't thinking taste difference as much as I was thinking about getting a wide variety of kinds of live cultures. I would imagine that greater variety of critters = better for us? I'm just guessing, I have no idea and no microbiology training.

seth (2009-06-18 19:07:11)

Brody, I agree, more variety of bacteria is probably better. Because I couldn't taste a difference in the resulting yogurt, I was unable to be sure that adding the Yakult had made a difference. Maybe all the Yakult bacteria died.

Jim Breed (2009-06-19 12:40:25)

Seth, Just one data point but my first batch of yougurt, I used a pint of store bought for the cultures. Good product quality. Second batch I used a pint from the first. Not nearly as good as the first.

Kimo Johnson (2009-08-16 21:36:54)

Slow Cooker (Crockpot) Yogurt This is a simple and very effective way to make perfect yogurt using a crockpot....no need to use the oven or a thermometer: Use whole milk or better yet, a good quality of powdered milk. Add milk in whatever quantity desired to crockpot, adding an additional cup or so of milk powder to increase potency. Cover and cook on Low for 2 1/2 hrs. Keep covered (don't peek!), disconnect crockpot power (remove plug from power source) and leave for 3 hours. Mix whatever active yogurt starter (Yoplait Yoplus, plain or flavored works perfectly and contains Acidophilus) you want into the warm milk..... 2 or 3 tablespoons is enough. Re-cover the unplugged crockpot, wrap the pot in a towel and leave overnight or 8 hours .Be sure not to open the pot during this period. The yogurt will be thick and retain the original starter organisms.

seth (2009-08-17 06:47:26)

Thanks, Kimo. I will try it. I am moving to Beijing tomorrow where I don't have a oven in which to keep the yogurt warm. I think it should be easy to get a crockpot.

Kimo Johnson (2009-08-17 12:29:09)

Seth, The crockpot we used while living in Hong Kong and Singapore was a Chinese brand, and worked great.....so Happy Yogurt Making in exciting Beijing!

Steve in W MA (2010-09-05 12:43:09)

Some observations: Yogurt made without denaturing the proteins by heating to 190F or above (in other words, just heat to 130) may result in a better Greek-style yogurt after straining because it will retain less of the whey liquid. Waiting for a crockpot to heat half a gallon of milk up would drive me insane. I just use a metal pan on the stove. Then, if I want to get the process started sooner, to cool the yogurt to the desired temperature (incidentally, I start my fermentation at 129F or so, not 110F) I pour it into a cake pan. The milk cools several degrees F per minute faster in a cake pan than in the pan I heated it in. I repour the milk back into my original pan, add the starter (I use a stick blender to mix it in), then cover the pan and put it in a styrofoam cooler for overnight. RE: viability of starter: The starter I use is yogurt that I froze in ice cube trays, then put the frozen cubes in a ziploc bag. I have made successful yogurt from 2 year old frozen yogurt cubes in the past. I usually use what's left over from my last batch as a starter, but after about 3 generations I will start fresh with a new frozen cube starter. However, you could also just wrap the pan in a blanket and leave it on the counter and get good results. I have also made yogurt without starter "accidentally" by leaving milk that had been heated up for drinking out overnight. This milk had already been heated in the microwave and I was going to drink it but forgot. When I found it 2 days later it was yogurt. I suspect it got recolonized by bacteria once it dropped below 130 and acidophilic strains lowered the ph while it stayed in the 130F-105 F range. There are lots of ways to make yogurt!

Steve in W MA (2010-09-05 12:52:10)

My overall point is that you don't need to overstress about keeping the yogurt warm. Particularly if you start the fermentation at a higher temp like 120-129F, simply wrapping a pot with a blanket or towels will be enough insulation in most cases. Or putting it in a cardboard box with a towel and putting crumpled newspaper all around it.

### **Scott Adams Accidentally Does the Shangri-La Diet (2009-06-18 09:57)**

From [1]his blog:

Recently I lost my sense of smell thanks to, I assume, some allergy meds I've been snorting. . . . My wife, Shelly, kept asking versions of the question "Do you smell that? It's awful!" But I never smelled that. . . . I think I also gave up something in the food tasting department thanks to my lack of a functional sniffer, but I'm okay with that too. I've dropped about eight pounds in the last two months because lately I'm not attracted to the taste of food, just its utility.

Thanks to David Cramer

More In related news, [2]a popular cold remedy causes anosmia. Thanks to Marian Lizzi.

1. <http://dilbert.com/blog/entry/?EntryID=296>

2. <http://www.nytimes.com/2009/06/17/health/policy/17nasal.html?emc=eta1>

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Steve (2009-06-18 12:56:48)

From the Times "A Slimmer You May Be a Whiff Away" <http://www.nytimes.com/2009/06/18/fashion/18skin.html>

Nathan Myers (2009-06-18 13:01:50)

Zinc gluconate only causes anosmia if you snort it. Confine it to the bits of your nose you can reach with your finger, and there's no problem.

david (2009-06-18 13:17:08)

I prefer the zinc lozenges anyway. I find them very effective at stopping colds, especially when combined with adequate sleep.

Gerry (2009-06-19 06:22:38)

Sinus Buster is a nasal spray containing capsaicin pepper. A while back there was an article in Woman's World magazine about a side effect of using Sinus Buster: appetite suppression. Now there is a weight loss version on the market, probably a diluted version. (Aside: Woman's World has also featured an article on SLD). I bought the regular SB and have used it on occasion when I have sinus troubles but usually at that point I don't have much of an appetite anyway so I can't verify the appetite suppression effect.

marymary (2009-06-27 16:00:04)

I just feel the need to point out that not eating less because the food you eat is unappealing to you is not the same as eating less because your appetite to eat is diminished. You can't necessarily call this an example of the Shangri-la diet as it's theorized

to work.

### Acne Gone Thanks to Self-Experimentation (2009-06-19 08:57)

A year ago I told students at my friend's [1]Mohamed Ibrahim's school that [2]a student of Allen Neuringer's had gone on a camping trip and found that her acne went away. At first she thought it was the sunshine; but then, by self-experimentation, she discovered that the crucial change was that she had stopped using soap to wash her face.

Now Mohamed writes:

I told my classes about your friend who went camping without her face products only to discover that the face products were contributing to her acne, and that from that point on she only washed her face with water. It turns out that two of my students wash their faces with water! And their skin looks great! I started "washing" my face with water about a month ago, and [now] my face is acne free and soft as a pair of brand new UGG boots. [He had had acne for years.] The only additional thing I do is wipe my face with a napkin throughout the day to remove any excess oil.

So one cause of acne is using soap to wash your face.

Acne really matters. And it's common. It now turns out that it has a pathetically easy solution, in at least some cases. Dermatologists don't know this. Apparently hardly anyone knows it. Somehow the entire healthcare establishment, to whom we entrust our health in many ways, missed this. Dennis Mangan's discovery that [3]niacin can cure restless-leg syndrome is another example of a pathetically easy solution missed by experts. Likewise, the Shangri-La Diet is very different than anything [4]an obesity expert has ever proposed.

What else has been missed?

More Imagine a med student in a dermatology class. The student raises his hand and asks a question. "I read in a blog that acne goes away if you stop using soap. What do you think about that?" What would the instructor say - after telling the student not to believe everything he reads on the Web?

1. <http://www.igotuggs.com/>
2. [http://www.sethroberts.net/articles/1998%20Self-experimentation%20\(chapter\).pdf](http://www.sethroberts.net/articles/1998%20Self-experimentation%20(chapter).pdf)
3. <http://mangans.blogspot.com/2009/05/niacin-for-restless-legs.html>
4. <http://www.blog.sethroberts.net/2009/06/10/a-little-knowledge-about-obesity-is-a-dangerous-thing/>

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Anthony (2009-06-19 11:39:58)

I used to have some sort of psoriasis on my face and chest. I had it for 2 years as it got worse (going from minor bother to major problem). I went to my dermatologist, who prescribed topical corticosteroids. They worked really well. After about 2 years of using these, I asked my dermatologist "Am I going to have to keep using these forever? Are there any solutions to the cause and not just the symptoms?" He said nothing was proven. I went to the internet, and started reading. It looked like a certain kind of significant dietary change had worked for some people. I tried it out (it was basically cutting out certain things - refined sugar, wheat, red meat, nightshade plants, and a few other things - and replacing them with other things). About 9 months

later, the psoriasis (or whatever it was) was significantly diminished (without using corticosteroids). It has now been about 5 years. The solution for me was long-term dietary changes (the changes took a while after implementation). While waiting in an airport, I found out that these dietary changes have recently been popularized in a new book. I don't know if dermatologists generally suggest trying significant, long-term dietary changes for skin inflammation or not, but mine didn't 5-7 years ago.

seth (2009-06-19 13:01:51)

Anthony, that's good to know. Thanks for your comment. What's the new book?

Mickey (2009-06-19 13:06:08)

While it would be nice to think that all we have to do to get rid of acne is stop using those expensive cleanser and just use water - this is just anecdotal evidence you present. It would require a large clinical trial to be conclusive.

seth (2009-06-19 14:13:25)

Mickey, a large clinical trial isn't needed for this information to be useful. Anyone can try this. It's perfectly safe. You appear to find large clinical trials more interesting/helpful than the evidence in my post ("anecdotal"). But let's compare. The info in my post, which comes from several people and includes experimentation, can help millions of people deal safely, cheaply and incredibly easily with something they care a lot about. (Moreover it cost nothing to gather, unlike large clinical trials.) Do you know of even one large clinical trial that's been that helpful?

Anthony (2009-06-19 14:46:06)

Hi Seth, The book that presents similar dietary recommendations is called "The Ultramind Solution" (it presents a lot of other recommendations, too - I just skimmed it). For me I did basically 3 things: 1. Eliminate refined sugar, white flour, red meat, nightshade plants (tomatoes, potatoes, bell peppers, eggplant, in particular). 2. Add more Omega-3s (fish and flaxseed oil - this is basically why I originally was interested in your blog). 3. Give a long time (in my case, about 9 months in I was noticing significant results). Now if I go back to something resembling my older dietary habits, my old skin condition tends to start to come back. I have now added in sourdough bread (freshly made locally, I can't resist), and it seems to be fine.

Kirsten (2009-06-19 14:50:34)

My doctor just figured out that the cause of my acne was probably an overgrowth of candida yeast, leading to leaky gut syndrome. After four weeks on the anti-yeast diet, my skin is completely clear for the first time in 8 years. I've also dropped 9 pounds. Turns out my digestive imbalance may have been the cause of countless other annoying but seemingly minor ailments—from mood swings to constipation to bad reactions to certain medications. Fermented foods are prohibited on the initial phase of an anti-yeast diet. But since they can help prevent a candida overgrowth in the first place, I plan to introduce them fervently as soon as I can.

seth (2009-06-19 15:07:42)

Kirsten, why are fermented foods prohibited on the initial phase of an anti-yeast diet?

NNM (2009-06-19 15:35:01)

Kirsten: That's great that you found a doctor who accurately linked your acne (and other problems) to candida yeast. Can you tell us how many other doctors you saw who missed this? What alternative diagnoses did they propose? How did you find the right doctor? Regarding Mickey's point about clinical trials being "required" before you can conclude something: I work in the investing industry, where return on investment, adjusted for risk taken, is the ultimate goal. Seth's discoveries, and the "pathetically easy" other solutions he highlights on his blog, all have tremendously high returns on investment, with very little risk. A clinical trial, on the other hand, requires a huge investment of time and money, often with very little return in the form of new knowledge learned, and sometimes at significant risk to the patients enrolled. Furthermore, drugs that are discovered as a result of these clinical trials often themselves have low risk-adjusted returns for the patients who take them, when their costs, side effects, and the likelihood that down the road the establishment will revise its thinking about their efficacy are taken into account. Just to take one example: compare the risk-adjusted return on investment for society of the Shangri-La Diet to that of Fen-Phen, both of which targeted the identical problem. There is no comparison, even if SLD turns out to work only for



a minority of people.

karky (2009-06-19 18:04:48)

<http://mwilliamson.com/yeastdiet.htm> Due some digestive issues I recently had, I considered that candida might be the cause, so I looked into an elimination diet. Plain yogurt is included in the 1st phase, but no vinegar until the final phase. I don't know the reasoning. First, though I just eliminated corn/wheat as it is a less restrictive diet. So far it has been working, so I am going to nevermind the yeast thing.

Mickey (2009-06-19 19:15:02)

I have nothing against the kinds of self-experiments that Seth blogs about. I agree they can sometimes be useful in identifying new, effective treatments or methods. In fact these sorts of self-experiments (N of 1 trials) are published on occasion in the medical journals. But these are mostly useful as starting places for further research. And they are not at all easy. You'll notice that the researchers conducting these clinical trials always take care in eliminating variables, which is very difficult to do when you have an N of 1. Take this acne case for example. A proper self-experiment would require that all variable factors are controlled for - diet, exercise, sleep, medications, weight, other changes in health, etc. - before the experiment can be conducted. And the experiment would require more than washing the face with water and seeing what happens. We'd also need a self-control, which would be washing the face with both water AND soap. But because we have an N of 1, the two experimental phases would have to be separated in time, e.g. I use soap and water for 6 months then just water for the next 6 months, meanwhile keeping all the other factors constant. And lets say the soap doesn't help but my acne goes away with the water. Can we then conclude that the water cured my acne (or the soap caused it)? No, because the two treatments were separated in time. Its possible that just by factors of aging, I lost the acne as I got older, and the water/soap had nothing to do with it. This is why I hesitate to conclude anything from a self-experiment. They are difficult to conduct and in general, unreliable. I believe they are good starting places for more rigorous investigation, but unfortunately, controlled, sometimes expensive clinical trials are how we advance our medical knowledge. And they do yield results. Seth, you ask about clinical trials that are helpful. Pick up a copy of JAMA from the last couple years. There's dozens of papers of randomized controlled trials that reverse the thinking about a medication or supplement, e.g. Vit B doesn't slow alzheimers or reduce the risk of cardiovascular events, as previously thought from observational studies. Ginkgo biloba, a supplement that for years had been thought to prolong the onset on dementia based on observational studies, was found to have no effect after a randomized control trial was conducted. And one of the more famous (and incalculably helpful) studies was that done on HRT. Menopausal women were encouraged to take HRT because observational studies showed that women who took HRT had half the risk of heart disease as women who didn't. So millions of women were taking HRT. But then they did an RCT and it turns out that HRT actually increases the risk of heart disease! Not to mention stroke, breast cancer, and colon cancer. This study saved lives. Scientific rigor isn't always easy, cheap, or fun, but unfortunately, it is necessary.

seth (2009-06-19 19:37:24)

karky, what do you mean by "nevermind the yeast thing"? You mean the yogurt thing? You mean you are going to ignore the instruction to not eat yogurt?

seth (2009-06-19 19:56:09)

Mickey, thanks for your reply. "A proper self-experiment would require that all variable factors are controlled for." That's impossible. I have learned a lot from self-experiments that weren't "proper" as you define it. Your examples of helpful RCTs are revealing. Which is more helpful: finding that something incredibly easy (not washing face with soap) works or that something moderately expensive (ginkgo biloba) doesn't work? Or that something cheap (Vitamin B) doesn't work? I choose the first. I agree that the RCT about HRT was indeed really valuable. But it is telling that this example is a case where the research merely undoes harm done by other research. In other contexts that's called a protection racket. I don't think "scientific rigor" is "necessary" for the info in my post to be helpful. If you have acne you can simply try it and see what happens. The evidence can be improved (as is always the case), but that doesn't mean it's worthless, which is what "necessary" seems to imply. If you had acne and washed your face with soap, would you - after reading my post - see what happens if you stopped washing your face with soap? Or would you wait for a large RCT?

NNM (2009-06-19 21:45:19)

Whether they realize it or not, aggressive advocates of randomized control trials as the only way to "conclude" that X causes Y belong to the medical branch of a larger philosophical tree whose trunk is the work of David Hume. I'm not an expert, but I believe Hume was the father of what we think of as modern scientific skepticism. What's ironic is that if you examine Hume the person as opposed to Hume the philosopher, you'll find a man much more concerned with improving his daily life and with "what works" than with the search for pure scientific rigor that he pursued in his professional life. Check out this famous letter he wrote as a young man to a noted doctor, in which he describes what is commonly referred to as his nervous breakdown. He was a self-experimenter (N of 1) par excellence: <http://serendip.brynmawr.edu/exchange/davidhume> My favorite excerpt: "I began to think of something more effectual than I had hitherto tried. I found, that as there are two things very bad for this distemper, study and idleness, so there are two things very good, business and diversion; and that my whole time was spent betwixt the bad, with little or no share of the good. For this reason I resolved to seek out a more active life . . ." Here is another excerpt, from his "Treatise of Human Nature," in which he describes his practical cure for the psychological anguish caused by the kind of pioneering skeptical philosophy he pursued: "I am confounded with all these questions, and begin to fancy myself in the most deplorable condition imaginable, invironed with the deepest darkness, and utterly deprived of the use of every member and faculty. Most fortunately it happens, that since reason is incapable of dispelling these clouds, nature herself suffices to that purpose, and cures me of this philosophical melancholy and delirium, either by relaxing this bent of mind, or by some avocation, and lively impression of my senses, which obliterate all these chimeras. I dine, I play a game of backgammon, I converse, and am merry with my friends; and when after three or four hours' amusement, I would return to these speculations, they appear so cold, and strained, and ridiculous, that I cannot find in my heart to enter into them any farther. Here then I find myself absolutely and necessarily determined to live, and talk, and act like other people in the common affairs of life." These are not frivolous excerpts or digressions. Hume knew he had a big problem: He had already experienced one episode of major depression, and was committed to a profession, to a mode of inquiry (something approaching philosophical nihilism), and to a lifetime of unpopularity as a result of his attacks on religion that made him prone to even more depression (today it is thought that those who have suffered one occurrence of major depression have an over 50 % chance of recurrence, and I suspect that rate is ever higher among professional philosophers, notwithstanding the advances in psychiatry between now and then). But he set out to solve this problem Hume with self-observation and self-experimentation, and never again had another breakdown. In fact he became known as one of the most cheerful, likable, and personally happy philosophers who ever lived. I consider this a remarkable accomplishment.

Stephen M (Ethesis) (2009-06-20 09:21:15)

I hadn't thought of it, but when I started washing my face regularly and the acne went away, I was generally washing with just water. I wanted to start washing regularly but was busy and so just washed with water and a washcloth. It did the job so ... You've made me think.

karky (2009-06-20 11:41:32)

Seth, I decided it probably wasn't candida, so I did not go on the yeast elimination diet. I only cut all corn/wheat products out. I still am drinking my kefir and my ACV every day. My issue stopped the first day I cut out the corn/wheat, so I concluded that was causing the problem. I talked more about it over on my thread. I also have no acne and only wash my face with water, I have washed my face with only water for at least 20 yrs. In high school I used soap and water and zit cream and had plenty of acne.

Anthony (2009-06-20 11:52:49)

"I hesitate to conclude anything from a self-experiment." This is nonsense. You're concluding things from self-experiments all the time - you just don't call them "self-experiments."

wcw (2009-06-20 14:08:01)

Google "acid mantle". Some people (like my wife) just can't wash their faces with soap and keep their skin in shape. Most can, though you still don't want to overdo it.

jim (2009-06-20 16:50:37)

I guess I'm a bit of a counter example to the 'wash with water' acne cure. In my teens and 20s I had terrible acne over my face, chest and back. My face and chest were washed daily with soap (in the shower), but never my back, which was only rinsed by water. The acne was pretty much the same everywhere. Nothing much helped it till I took a course of accutane in my mid-20s.

Robert Reis (2009-06-20 21:42:30)

A very expensive call girl of my acquaintance was carded in nightclubs at age 40. She never used soap.

Jeremy (2009-06-21 20:45:40)

In response to Mickey's comments about controlling for confounding variables, the less time-expensive solution is randomization, just like with larger clinical trials. For the acne case, the self-experimenter could flip a coin at the beginning of each week to decide whether to wash their face using or not using soap and record results at the end of each week. Any variable not connected with the presence or absence of soap has an equal chance of acting in any given week. If any unknown variable correlates with the use of soap, who cares? The experiment is less interested in proving or disproving "Washing without soap causes less acne" than demonstrating that "there's less acne when washing without soap." Further, such self study may demonstrate a solution that works for an individual, but may not work for a larger population as would be necessary for a definitive conclusion from a clinical trial. The trouble with the randomization I described is that it requires that the self-experiment be both disciplined and organized, but flexible enough to not fall into a routine "but alternating 6-month samples fails to control for seasons as a variable, so that's one for one.

seth (2009-06-21 22:52:44)

Jeremy, in practice much simpler designs work fine. For example, suppose you have recorded your acne daily for six months. You stop using soap and all of a sudden the measurements go much lower than usual and stay there. That's almost proof right there. If after a few weeks you resume using soap and then the acne comes back, that's all a sane person would need.

Kirsten (2009-06-22 09:47:15)

Hi all- Seth: They keep fermented foods out of the diet for the first phase because your gut is irritated and is leaking food into your bloodstream, which causes problems in other areas of the body. The theory is that fermented foods (or even just acidophilus) will irritate you further until you kill the yeast and heal your gut-at which point, they will become essential. (Spicy foods are prohibited too, for pretty much the same reason.) NNM: I have an \*extremely\* good doctor who I started seeing only about a year ago-and he spotted this during a chat about something else completely. The interesting thing is that I had discussed many of my yeast-related symptoms with other doctors over the years-including acne, terrible reactions to birth control pills (including anxiety and mood swings), allergic reactions to allergy medications (steroids), persistent stomachaches that weren't helped by stomach remedies. But the doctors had no answers, and I felt these were annoying rather than important ailments. Really, I thought of myself as a very healthy person. I was in for something else and my doctor was prescribing me an antibiotic, so we were discussing any other medications I was on (none), compared to what he'd prescribed me in the past. The trigger was when he asked how I was doing with the low-dose Prozac he'd prescribed to treat PMDD. I told him I'd used it for about two months, but that the issue had gotten much better when I removed white flour and white sugar from my diet. Then he started looking at my reactions to medications and some of my medical complaints, and realized they formed a pattern. Most doctors don't do this or listen anywhere near as closely. A friend of mine has gout, which his doctors tell him is triggered by red meat, organ meats, and wine. In his experience, though, it seems to be triggered by sugar, and not at all by those other things.

Jeremy (2009-06-22 13:38:27)

Seth, as with so much else in life, there's often a tradeoff between how sure an experimenter wants to be and how much effort and resources the experimenter is willing to commit to that certainty. The method I presented was merely an answer to Mickey's desire to rule out the influence of confounding factors with only one research subject, at the expense of simplicity for that subject's experience. I'd be impressed if anyone has a method that works for undisciplined self-experimenters who are neither prone to the organization to randomize and record their washing habits or routine to stick to either method for any

length of time.

Cord (2009-06-22 18:19:14)

Self-experimentation is the only way to deal with acne, IMO. All the standard advice (wash more, it'll go away when you're older, use acne cream, don't pick at it!) is totally useless. I discovered long ago that I did better by not using soap on my face. And later, I used the RPAH elimination diet to experiment until I pinned down the remaining causes of my acne: wheat and chocolate. My face has been wonderfully clear for a couple of years now, except the two or three times I have been lured into eating baked goods over the holidays. But talking with other people who've eliminated their own acne... not everyone's acne is caused by the same things. So since there's no uniform cause, it's a cinch there's no uniform cure either.

Seth's blog » Blog Archive » The Pashler-Roberts Law: Expense versus Honesty (2009-06-23 06:11:36)

[...] Acne Gone Thanks to Self-Experimentation [...]

Seth's blog » Blog Archive » Acne Self-Experimentation: Why It's Promising (2009-06-24 23:29:54)

[...] Acne Gone Thanks to Self-Experimentation [...]

Walter (2009-06-27 19:42:43)

Seth, Could the washing with soap be changing the ratio types of bacteria so that the acne bacteria runs amok? Sort of like the inverse of your fermented food idea. Walter

seth (2009-06-27 21:56:21)

Walter, that's an interesting possibility. The usual explanation is that washing your face with soap washes away oils that are then generated in too-large amounts to try to make the face oily again.

Janet R (2009-06-30 11:05:44)

Actually, standard advice is to never use soap, never use bar cleansers of any type because solids leave behind residue that is hard to wash off that irritates the skin, and to not use any type of cleanser more than 2 times per day because it dries. Instead, the recommendation is to use a gentle liquid cleanser such as Clean and Clear, Cetaphil, Suave's facial cleanser, or a few similar ones, as simple as possible, no additives and clear in color if possible, and never anything that tingles because that means the skin is being irritated. See Paula Begoun's book. I got rid of my acne based on clinical trial results. Initially I was using benzaclin, a prescription cream that is a mixture of antibiotics and 5 % benzoyl peroxide. It worked well but I read the package insert and noticed that the t was barely significant between the prescription and just plain 5 % benzoyl peroxide, so I started using just plain 5 % bp and that was equally effective, though slightly more effective because it was cheaper by an order of magnitude so I felt okay using lots of it. I buy it for \$2 a tube online, versus \$20 as my prescription copay. There was a self-experimentation aspect, in that I started using the benzaclin in large amounts because I noticed it was close to the end of its effectiveness date and I wanted to use it up, and it was more effective that way. Turns out that using a lot of b.p. is a common way to get rid of acne, as a guy who owns acne.org turns out to have also "discovered" the same thing.

Dennis Mangan (2009-07-04 11:04:04)

Seth, wasn't sure where to post this, but you'd find it interesting I think. It supports the dirt hypothesis. PMID: 19177167 "Crohn's disease and early exposure to domestic refrigeration. BACKGROUND: Environmental risk factors playing a causative role in Crohn's Disease (CD) remain largely unknown. Recently, it has been suggested that refrigerated food could be involved in disease development. We thus conducted a pilot case control study to explore the association of CD with the exposure to domestic refrigeration in childhood. CONCLUSION: This study supports the opinion that CD is associated with exposure to domestic refrigeration, among other household factors, during childhood." Also, this <http://www.pnas.org/content/105/43/16413.long> "Therapeutic correction of bacterial dysbiosis discovered by molecular techniques" states that "Molecular analysis of fecal and mucosal samples have increased culture-based estimates of 200â€³300 individual colonic bacterial species to as high as 1,800 genera and 15,000â€³36,000 species (7). "

seth (2009-07-04 15:15:54)

thanks, Dennis, a fascinating study about refrigeration.

Mark Jayson (2010-02-12 10:10:25)

Water is one of the powerful solvent in earth. didn't you ever notice that God created us in NATURE way.meaning to say like adam and eve way back long time ago,they don't use soaps,they just use water for cleansing.

Melissa (2010-06-17 13:05:55)

I use organic aloe gel to wash my face. It isn't drying & I rarely get acne. Aloe is moisturizing & the water just sort of dries things out worse if that is all you use.

Genius (2010-11-15 12:31:32)

For people who don't wash their faces with soap: do you continue to use benzoyl peroxide? Do you use shaving cream when you shave?

pinn (2011-11-25 16:58:48)

My classmate once told me that she was weird out by knowing that most girls usually have face cleansing soap in their bathrooms. Then I asked her, what did she use then? She only washes her face with salt( of course with water also..) & I can say that her face is flawless ( like baby's skin) . She only gets a zit when she has her period though but her skin is flawless most of the time o.o

michael (2011-11-29 05:07:55)

Fascinating discussion - glad I found it. To play devils advocate though, what about the health risks of poor hygiene, which were conclusively proved at hospitals during the 1800s? I'm all for using less soap on the face, but its still important on your hands.

Seth Roberts (2011-11-29 11:16:21)

I'm all for using less soap on the face, but its still important on your hands. I agree. I still use soap on my hands several times/day.

## **Fermented Food in Africa (2009-06-19 15:40)**

Michael Bowerman writes from Kenya:

First, I've made a point of eating yogurt daily and have had no stomach problems in a month of eating here. May be coincidence as I haven't eaten at riskier spots, but most others I know here have had some problem during their stay. I did drink one yogurt which tasted foul, and realised it was past expiration. I wonder if my perception that it was foul was culturally indoctrinated, or a useful rejection of spoiled food. What is the relationship between fermentation and true spoilage?

Second, reading Nelson Mandela's autobiography he talks about a traditional drink of his tribe, the Xhosa, called amasi - fermented milk. He writes about how much he loves the taste during an anecdote where fermenting the milk on his window ledge while staying at a safehouse in a white neighbourhood draws the attention of passing Africans who are wondering why "their" milk is in the window. I wonder if he would have liked my "spoiled(?)" yogurt? I haven't looked for commercial versions yet, but will.

Third, a Sudanese friend told me that the Sudanese have a drink made from cow's blood, urine, and fermented milk. The only part I was incredulous about was the urine but it seems cow and camel urine have been drank by other cultures – there is a urine-based soft-drink being released in India called Gau Jai. I found [1]this site which documents the extensive fermentation in Sudanese culture – meat, milk,

urine – including "...mish, which is made by prolonged fermentation to the extent that maggots thrive in it. The product is consumed whole, with the maggots included. These two products are closely related to Egyptian mish (1)."

1. <http://nzd1.sad1.uleth.ca/cgi-bin/library.cgi?e=d-00000-00---off-0hd1--00-0----0-10-0---0---0direct-10--4-----0-11--11-en-50---20-about---00-0-1-00-0-0-11-1-0utfZz-8-00&cl=CL1.1&d=HASH8403ef70002be1ecf3acbb.4.3&x=1>

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Karina (2009-06-26 18:07:22)

I lived and studied in Russia twice for a total of over a year, and never had a gut or stomach problem. A number of fellow foreigners had such issues (especially if they drank the municipal tap water or ate street food). Though I might just have a strong system (I would later eat street food in India with impunity), I still credit my health during those times to the fact that I had plain kefir every day, at least two to four servings of it (a marvelous food, and can be found pretty much at every convenience store or grocery or market in Russia). I didn't eat it for the protective use, but I loved the taste of it – nothing like it in the USA. And I consumed a fair share of tap water, to boot.

### Ray Bradbury is Unclear on the Concept (2009-06-20 06:31)

I completely agree with [1]Ray Bradbury about libraries:

“Libraries raised me,” Mr. Bradbury said. “I don’t believe in colleges and universities. I believe in libraries because most students don’t have any money. When I graduated from high school, it was during the Depression and we had no money. I couldn’t go to college, so I went to the library three days a week for 10 years.”

Here’s what he says about a similar source of free knowledge:

“The Internet is a big distraction,” Mr. Bradbury barked . . . “Yahoo called me eight weeks ago,” he said, voice rising. “They wanted to put a book of mine on Yahoo! You know what I told them? ‘To hell with you. To hell with you and to hell with the Internet.’”

“It’s distracting,” he continued. “It’s meaningless; it’s not real. It’s in the air somewhere.”

When I was in college (at Caltech), I didn’t find classes or books very helpful. I liked reading old New Yorker articles. Which then I got from the library but now I’d get online.

1. <http://www.nytimes.com/2009/06/20/us/20ventura.html?em>

Aaron Blaisdell (2009-06-20 07:21:11)

Well, college is not a one-size-fits-all. There is too much reliance on college these days. There are a lot of students going to college who have no business doing so, probably in part because college is a business. But, in defense of colleges/universities—I've thrived in and on them. They fit me like a glove and allowed me to flourish and be creative. And they continue to do so now that I'm a professor.

seth (2009-06-20 09:07:30)

Aaron, I agree. About the students "who have no business doing so", I'd put it differently. I'd say there are many students who are forced to go to college.

Stephanie O (2009-06-20 09:17:32)

I didn't know you went to Caltech (new reader here). Did you see this article in Engineering & Science? <http://eands.caltech.edu/articles/LXXII1/mazmanian.pdf>. It's all about beneficial bacteria, mostly with respect to irritable bowel syndrome (where they've been doing the science with mice), but making suggestive connections to asthma, eczema, and even diabetes. I'm making my second batch of yogurt today. :) It's fun!

Andrew Gelman (2009-06-20 12:09:15)

One advantage of the library is that going there gets you out of the house.

Esta en el aire, en alguna parte (2009-06-20 13:04:38)

[...] Visto en esta página. [...]

Nansen (2009-06-22 17:17:06)

It's hard to believe that you prefer online to print for reading articles and books, unless your monitor has very high resolution.

Michael (2009-06-25 06:47:51)

"To hell with you and to hell with the Internet." Har! Ray Bradbury is cranky old man of the day. Fantastic!

Cliff Styles (2009-07-01 14:34:41)

Bathetic. The internet is 'A Medicine for Melancholy'.

Rodney (2009-08-26 23:21:33)

I love Ray Bradbury. Every April he gives a speech at UCLA during the Festival of Books and I love to hear him speak. He's so inspiring. However, I think he's wrong about the Internet and he's certainly entitled to his own opinion. I think the Internet is now for good or ill (and more often good than ill) the new library of the world. It takes an entirely different set of skills to manage it though. And the Internet, along with email, can certainly be a distraction.

## **Wise Government: San Francisco Subsidizes Solar Power (2009-06-20 19:30)**

People in power, by and large, are terrible problem-solvers. They like the status quo – it brought them where they are. They have a hard time seeing the benefits of change. The bigger the change, the less they like it. Thus self-experimentation, a new way of solving health problems, [1]offends med school professors.

But sometimes people in power make a wise choice – possibly by accident. An example is how the City of San Francisco is encouraging solar power. They are giving huge subsidies to homeowners and renters who install electric power. The program is about a year old. If your income is low, the subsidy is so large that your power becomes almost free. This is a use of government money that encourages change and new solutions. It will help the local solar power industry grow. It might create a solar power hub near San Francisco the way defense department subsidies helped create

Silicon Valley.

Why is this happening? Because the responsible department in San Francisco government gets \$100 million/year by selling electricity from hydropower. (Which they don't like to talk about, for obvious reasons.) The money can't be transferred to other departments; it has to be spent in energy-related ways. On its face, the restriction seems cruel – why not use the money to help social services? But more money for social services is unlikely to improve the local economy. Whereas this use of the money helps poor people and the local economy. It does so in the basic way Jane Jacobs recommends: It empowers those who benefit from change – in this case, the solar power industry.

1. <http://stanford.wellsphere.com/linkOut.s?link=http%3A%2F%2Fwww.tcsdaily.com%2FArticle.aspx%3Fid%3D052206D>

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thehova (2009-06-21 08:54:13)

And this is why the most resourceful state in the country is going bankrupt. Have fun with solar while the federal government saves your financially irresponsible state.

Glen Raphael (2009-06-21 09:12:17)

The obvious alternative option would be to just lower the rates they charge, enabling homeowners everywhere to self-experiment with other ways to make their life better via the money they save on poer. Is it so obviously a great idea that we should overcharge users of hydroelectric - another renewable energy source - to subsidize users of solar power in forms that are currently too inefficient to be worth installing on their own? Attempts to create a "hub" are almost always money-wasting boondoggles. A "hub" is a fine thing to have when the thing that hub is producing is worthwhile on its own. But the point is the production. When the goal is simply to have a "hub" and the thing that "hub" is producing requires massive subsidies to be competitive, you're just turning a short-term commitment to fund bad ideas into a persistent, long-term commitment.

seth (2009-06-21 09:32:38)

Thanks for your comment, Glen. You're exactly right – it isn't so obviously a great idea. That's why I wrote about it. That's why Jane Jacobs wrote her books: what she was saying wasn't obvious. And that's why I'm essentially repeating her. Given the basic fact that economies must innovate to stay healthy, it is stunning how little space intro economics textbooks devote to innovation – especially how to nurture it. To simply give homeowners money, as you propose, does nothing to increase innovation. So if you need innovation – as all economies do – that might not be the best use of extra funds. Does solar power now require massive subsidies to be competitive? Yes, in the beginning all new ideas require subsidies to grow. If you've read a lot of this blog, you may realize that this is my explanation for art, ceremonies, gift traditions, and a few other things: our enjoyment and willingness to pay for this stuff had, long ago, the effect of subsidizing innovation. Xmas cards require fine printing, for example – so Xmas subsidizes fine printers. See [1]my posts about human evolution for more examples. Will solar power always require massive subsidies to be competitive? Unlikely. As more experience develops, efficiency will go up and costs will come down. Not to mention the price of alternatives going up.

1. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>

thehova (2009-06-21 11:35:35)

I came across a bit nasty this morning. I apologize. But I do think it's a gamble to massively subsidize specific forms of energy like Germany does now and many want the US to do. It could crowd out better forms of energy.

seth (2009-06-21 12:04:16)

In China they give rebates for electric cars – so consumers put energy into finding which is the best. It is better than the government choosing winners, I agree. In the case of San Francisco, it isn't obvious what small-scale alternatives exist to solar power. So It's unclear what forms of power are being "crowded out."



thehova (2009-06-21 20:07:00)

"I agree. In the case of San Francisco, it isn't obvious what small-scale alternatives exist to solar power. So it's unclear what forms of power are being "crowded out." " point taken. I was a bit confused about that for some reason. Smart structured subsidies which avoid the corruption of "picking winners" does seem like reasonable policy.

Glen Raphael (2009-06-22 10:34:00)

"As more experience develops, efficiency will go up and costs will come down." I agree that's the general case for new technologies, but I'm not convinced the sort of subsidies you're talking about help with that. If that happens here it might be \*despite\* the subsidy rather than due to it. My contrary intuition is that if you provide a subsidy, that reduces some of the competitive pressure that would otherwise tend to drive costs down. Without the subsidy, only the most super-efficient providers can stay in business; the less efficient companies and technologies go bust. With the subsidy in place, inefficient companies and technologies and workers can afford to stick around longer; the average level of cost and efficiency over the local industry will be much \*higher\* than without it. Relative-money prices send messages throughout the economy about what is and isn't worth doing based on the current level of available technology; taxes and subsidies tend to reduce the information content of those messages.

Glen Raphael (2009-06-22 11:11:49)

When the US protected its steel industry from foreign competition via import tariffs and quotas, that protection undoubtedly increased the amount of steel the big mills produced. The mills were bigger, had more income, employed more workers than they would have without the protection. One might theorize that this concentration of effort could lead to economies of scale and improvements in efficiency, leading those big US steel mills to dominate the world market. Is that what actually happened? US auto industry quotas and subsidies: same question. Or computers: how did Japan's "Fifth Generation" project turn out? Or, heck: Japan's protection of the domestic rice industry, or US protection of the domestic sugar industry. Did US beet sugar get more competitive with foreign cane sugar after we instituted that policy? When the government props up a local industry in order to "make it more competitive" my impression is that this usually ends up making that local industry \*less\* innovative and competitive, not more. I'm undoubtedly suffering from availability bias, so: can you suggest some counterexamples? (The Lockheed example only gets half credit because the point there was \*buying a specific product or service, at any cost\*; supporting local industry was a side-effect. Here you're talking about a policy where supporting local industry is the main effect.)

Anthony (2009-06-22 12:20:08)

@Glen, I think it really depends on the form of the subsidy, the direction of the industry, and so on.

Tom in TX (2009-06-22 19:37:42)

It is way too early to call this move "wise". Ten years from now, if the solar-generated electricity is costing the taxpayers \$1000/kWH, it may not look like such a good idea. But it will be hard to do away with it, because every dollar of subsidy is a dollar of income to the guy who gets it.

Nathan Myers (2009-06-23 11:31:10)

People who retrofit water-heating apparatus to the backs of their solar-electric panels are finding that it extends the life of those panels from less than 10 to more than 20 years, apparently from the effect of keeping the panels cooler. Besides the intrinsic interest of the idea, and the value of the hot water, it's interesting that we don't hear much otherwise about how long the panels are expected to last. It's not in the interest of the manufacturers of panels to promote means to make them last longer, or (moreso) to call attention to limited life. It might give a competitive advantage to a manufacturer that only makes integrated water-cooled panels, but I don't know of any. California's fiscal problems are a consequence of its peculiar Constitution, the ballot initiative system it prescribes, central ownership of media, and its miserably bad primary and secondary education apparatus.

Rodney (2009-08-26 23:15:57)

Seth, Here's my question. How does a government decide which forms of alternative energy it should subsidize? Are there

other types of power they could subsidize as well? I wonder if they could instead of choosing solar make a list of types of power they would subsidize. However, more options may dilute the effectiveness of the subsidy. It might be better to subsidize one industry to get it to grow and then try subsidizing another form of alternative energy once solar get going. What do you think?

## Scorpion Stings, Bee Stings, and the Umami Hypothesis (2009-06-21 22:17)

Someone who lives in the southwestern US posted this on a helmenthic therapy forum:

One [scorpion keeper] reported how a pain in his leg from a motorcycle accident that had been with him for years spontaneously resolved after getting stung by some fairly nasty [scorpion] . . . . It's fairly well-known that beekeepers don't face the same risk from arthritis as the general public.

I haven't managed to find support for this "fairly well-known" idea. But it's quite plausible because [1]bee stings are used to treat arthritis and multiple sclerosis. In [2]this video, an Indonesian therapist says that 85 out of 100 sufferers are "cured" by the treatment.

"A therapy most of us would find taboo," says the narrator of [3]this video. I wonder. Here's what [4]Wikipedia says:

There is no known cure for [multiple sclerosis]. . . [5] MS medications can have adverse effects or be poorly tolerated, and many patients pursue alternative treatments, despite the lack of supporting scientific study.

Multiple sclerosis and some forms of arthritis are autoimmune disorders. My "[6]umami hypothesis" says that autoimmune disorders and other immune disorders, such as allergies, are deficiency diseases. They are caused by not enough immune-system stimulation – stimulation that long ago we got from bacteria-laden food. This suggests a new interpretation of what's going on with bee-sting therapy. Their healing properties have been attributed, at least in these videos, to special properties of the venom. The umami hypothesis suggests that the foreign proteins in venom calm the immune system and that quite different foreign substances would do just as well. I don't know of anyone treating arthritis or MS with fermented food – but before the Shangri-La Diet, I didn't know of anyone drinking sugar water to lose weight. The fact that such hugely different agents as [7]hookworms, bee stings, and fermented foods have similar effects is considerable support for the hypothesis. Without the hypothesis, no one would have grouped them together.

Now I wonder about acupuncture: Could it work, at least some of the time, because it injects foreign substances? Surely acupuncture needles put plenty of bacteria into the body. This line of thought explains why [8]stabbing a knee with a scalpel apparently helps arthritis (and involves a lot less hand-waving than calling that result a placebo effect). Keep in mind that this is the hallmark of deficiency diseases: They get a lot better, almost miraculously and without side effects, if you supply even a little of what's missing. The cure rate can be very high.

1. <http://video.google.com/videoplay?docid=-3932272997414178756>

2. <http://www.youtube.com/watch?v=fwHtlpTYJDc&NR=1>

3. [http://www.youtube.com/watch?v=p245IE6\\_qf8](http://www.youtube.com/watch?v=p245IE6_qf8)

4. [http://en.wikipedia.org/wiki/Multiple\\_sclerosis](http://en.wikipedia.org/wiki/Multiple_sclerosis)

5. [http://en.wikipedia.org/wiki/Multiple\\_sclerosis#cite\\_note-pmid11955556-0](http://en.wikipedia.org/wiki/Multiple_sclerosis#cite_note-pmid11955556-0)

6. <http://www.blog.sethroberts.net/category/umami-hypothesis/>
7. <http://www.blog.sethroberts.net/2009/06/12/extreme-medical-tourism/>
8. <http://www.nytimes.com/library/magazine/home/20000109mag-talbot7.html>

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PS (2009-06-21 22:55:37)

I know in Yunnan province scorpion bites are part of Chinese medicine - but I can't recall what for [and a quick Google doesn't help]. I'd ask around some of your local friends, if you're still in China.

Aaron Blaisdell (2009-06-22 06:58:20)

Technically that would be scorpion stings. As far as I know scorpions don't bite (with mouth parts) except when they are eating small insect (which of course they have to bite in order to eat). But the sting (at the end of their tail) can be nasty. During my teenage years, I was stung by a scorpion at a boy scout camping trip. It hurt but I had no other reactions. I've been stung by bees innumerable times throughout my childhood and a wasp once or twice.

Glen Raphael (2009-06-22 09:09:48)

Wow! That is a really interesting idea. If acupuncture is just a special case of hormesis, that implies accupuncturists who do an especially good job maintaining a sterile environment could easily have \*worse\* results than those who are less careful. It gives us a non-woo hypothesis to explain why one particular accupuncturist might have great results in his office which can't be reproduced by other accupuncturists or via the same interventions performed in a carefully controlled laboratory experiment somewhere else.

Fly Sky (2009-06-22 19:13:37)

I'm from China, scorpion is one of the Chinese Medicines which can be used to treat the arthritis and pains such as side-headache, you can get some infomation from this url: <http://bbs.gltcm.cn/thread-44779-1-1.html> (in Chinese:)

beagle (2009-06-23 00:59:38)

The only "conventional" treatment for MS that I'm aware of is LDN (Low Dose Naltroxene). It's conventional in the sense that it's artificially manufactured. But despite showing great promise, it's not in the focus of any conventional research.

Seth's blog » Blog Archive » The Wonders of Tumeric (2009-07-15 20:53:28)

[...] Is this another example of foreign substances reducing arthritis? (Not to mention other immune disorders.) Or something different? I don't know but it's really interesting. [...]

Seth's blog » Blog Archive » "Kombucha Reconsidered" (2009-08-28 03:49:13)

[...] This is also a reason that theory is important. John Tukey, the statistician, spoke of "gathering strength" when analyzing data. It is rare that a single body of data tells you how to analyze it, he said. (For example, what transformation to use.) You should use similar data sets to help decide. Scientific theory has the same effect. Before I started drinking kombucha, I didn't have obvious digestive problems (unlike a friend) and my immune system seemed to work well. So it wasn't easy to measure its effect. Yet I drink it and am untroubled by the evidence that worries RVM because I have a theory: the umami hypothesis (that we need a steady intake of bacteria to be healthy). This allows me to assess the effect of kombucha — whether it is likely to be good or bad — with the help of evidence from other bacteria-rich food (yogurt, natto, etc.) and much different data (the effect of bee stings on arthritis, hormesis, epidemiology, the effects of turmeric, etc.). Because the umami hypothesis appears to be true, apparently bacteria intake is beneficial — and kombucha has lots of bacteria. [...]

Bee Keeper (2010-06-22 18:35:16)

Wow! This finding was interesting! If bee sting can treat arthritis then it has its advantage. Thanks for posting this very relevant

blog.

Val Quinnell (2010-10-11 06:12:10)

I live in Almeria, Spain and have suffered from arthritis in both my wrists for several years. In June 2010 I was stung by a scorpion on my right index finger. It was extremely painful for two days but lo and behold, a week later there was no arthritis in my right wrist. It is now October 2010 and still clear. Is there any homeopathic treatment using scorpion venom? It would be nice to treat the other hand but I am not keen for direct contact with a scorpion again!

Nick (2012-03-04 18:42:18)

My grandfather is active, healthy and in his 100th year of life. As a fisherman, he typically gets stung with "poisonous" fish while cleaning his nets. The poison now has no effect on him but known to cause sickness and death in others.

### **Smart Spam (2009-06-21 23:09)**

I just got a spam email from a company in China offering to sell me crystalline fructose. I have bought far more than my share of crystalline fructose (that's how I originally did the Shangri-La Diet) and I live in China part of the year. How in the world did they know?

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rod (2009-06-22 03:51:49)

Seth: i don't see any contact info anywhere on your site so I apologize for posting this here, but I found your experiment pertaining to "standing on one leg" and it's correlation with sleep to be absolutely fascinating. I would greatly appreciate it if you would write more posts or conduct more experiments pertaining to sleep/energy as I really found your approach of seeking optimal levels to be very refreshing and unique.

Tom Moertel (2009-06-29 15:02:42)

"How in the world did they know?" They didn't. Your spam filters, however, did know, and because they are strongly biased against marking legitimate email as spam (i.e., reporting a false positive), they started letting related spam flow into your inbox. In more detail, when you bought far more of your share of crystalline fructose and when you were in China, you trained your spam filterers that those topics are more likely to be legitimate by marking legitimate email containing those topics as "not spam." Thus when spammers sent you spam about every conceivable topic "and they do" the subsets of that spam mentioning crystalline fructose and China were less likely to meet your filter's it's-spam threshold, and some of those spams slipped into your inbox. So the spammers don't know anything about you, other than your email address. But they do send spam about everything, and your spam filter selects the subset of everything that is similar to your past legitimate email, thus creating the illusion that the spammers are targeting your interests.

### **One Woman's Shangri-La Diet (2009-06-22 14:59)**

From [1]the SLD forums:

It has been two years since I started [SLD], and I just couldn't think about changing this simple, natural

way of life that has given me such peace and freedom. I often think of a comedy skit I saw on t.v. some time ago where this guy was given a new electric sander as a gift, but kept using it without plugging it in.

To try to lose weight without SLD is like not plugging in an electric sander. Other weight-loss methods work; they're just much harder, like a sander versus an electric sander.

In her sig file she describes her method and results:

48 years old, 5 feet 4 inches

March 7 160

May 8 119

May 9 116

1-2T OIL/day AND/OR N.CLIP 300-500 calories food.

CFF daily.

To sustain weight loss: Eat fewer calories; enjoy the food you eat; low G.I.; only highest quality.

Don't assault your precious body with empty calories.

N.CLIP = noseclip. CFF = calorie-free flavor. See the SLD forums for more about them.

To lose 25 % of your weight and go a year without regain is a huge accomplishment.

1. <http://boards.sethroberts.net/index.php?topic=6713.msg79998#msg79998>

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Nathan Myers (2009-06-22 17:38:40)

Off-topic... my seven-year-old son, who said he had had a canker sore for months, reported after a week taking sardine oil capsules, sporadically, that he can't find it any more. He says it stopped hurting the second day. He had been violently skeptical, always hated swallowing pills or capsules, and utterly refused oil. Now he takes the capsules eagerly.

seth (2009-06-22 17:48:21)

very interesting, Nathan. Why did he start taking sardine oil capsules?

Nathan Myers (2009-06-22 18:19:06)

My daughter is taking them; she has Asperger's, and reports that she feels less anxious after taking a few. In particular, she notes she doesn't feel a need to gallop around the room on all fours. We have interpreted that behavior as a compensation for the reduced joint and muscle stress sensation common in Asperger's kids. Flax oil capsules, by the way, had no noticeable effect. (Score one for 20-base acids, vs. 18-base flax oil? Autism spectrum kids often have various metabolic deficits.) I had asked my son, just incidentally, if he had any canker sores, and was surprised when he said, very offhandedly, that he'd had one for months. He might have mentioned it, or a previous incident, and been told there was nothing to be done, and was just living with it. He refused to consider chewing up walnuts; as a two-year-old he had painful reactions to them, and still won't touch them. He consented to let me apply a drop of fish oil directly to the canker sore, but complained for hours afterward of nausea from the odor. I was surprised when he asked for a capsule to swallow the next day. (These are big 1.2g gel caps.)

Darrin Thompson (2009-06-22 19:46:28)

My kids' doctor who specializes in care of autism kids recommends that they get fish oil and not flax. Her reason, iirc, is that they lack the ability to convert ALA to DHA and EPA. Or it's at least impaired. I can't completely isolate it to the fish oil since we're always making little adjustments week to week, but they've been on a big dose of fish oil for about, what, a month, and I've seen greatly improved language development the last few weeks so I'm at least partly blaming it on the O-3's.

seth (2009-06-22 20:03:18)

thanks for explaining that, Nathan.

Nathan Myers (2009-06-23 11:15:55)

... and thank you, Darrin, for the background. The only other chemical intervention we have found that helps her Asperger's symptoms is melatonin, which helps settle her jumpiness at bedtime. Others I know report success with megadose B complexes. I suspect that reports of success with chelation really record success with mineral supplementation, and the chelation part is incidental. Mineral supplementation seems rather less intrusive (not to say dangerous) than chelation.

Heidi 555 (2009-06-23 16:49:00)

Darkhorse/minuet is a woman. Perhaps she made a typo in her signature... Here are some of her other great posts: <http://boards.sethroberts.net/index.php?topic=6122.0> <http://boards.sethroberts.net/index.php?topic=6314.0>

seth (2009-06-25 08:33:14)

Thanks, Heidi. She made a mistake in her signature, yes. But that explains the extremely low weight (for a man).

### **The Pashler-Roberts Law: Expense versus Honesty (2009-06-23 06:11)**

In [1]this post Andrew Gelman comments on [2]my recent post about acne self-experimentation. He makes an excellent point about drug-company studies:

How would you want to evaluate the risks and effectiveness of a new drug that was developed by a pharmaceutical company at the cost of millions of dollars? I'd be suspicious of an observational study: even if conducted by professionals, there just seem to be too many ways for things to be biased.

Right. And it's not just observational studies. The data from any big study can be analyzed many ways. The more at stake, the greater the chance of what Andrew calls bias and I call making choices that favor the result you prefer. Independently of Andrew, [3]Hal Pashler and I came up with what I call the Pashler-Roberts Law: The more expensive the research, the less likely the researchers will be honest about it.

You may remember that [4]Robert Gallo, the AIDS researcher, did very expensive research. The deception (possibly self-deception) that accompanied very expensive fusion research is described in Charles Seife's [5]Sun in a Bottle: The Strange History of Fusion and the Science of Wishful Thinking (2008).

As Andrew says, this is a big virtue of self-experimentation. Because it's free, it's easy to be honest, especially about failure. The cheaper the better is a broad truth about science that's hard to learn from books or classes or even talking to scientists.

1. [http://www.stat.columbia.edu/~cook/movabletype/archives/2009/06/acne\\_self-exper.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2009/06/acne_self-exper.html)

2. <http://www.blog.sethroberts.net/2009/06/19/acne-cured-thanks-to-self-experimentation/>

3. <http://www.blog.sethroberts.net/2008/12/28/voodoo-correlations-in-social-neuroscience/>
4. <http://www.virusmyth.com/aids/hiv/srlabrat.htm>
5. [http://www.goodreads.com/book/show/3024263.Sun\\_in\\_a\\_Bottle\\_The\\_Strange\\_History\\_of\\_Fusion\\_and\\_the\\_Science\\_of\\_Wishful\\_Thinking](http://www.goodreads.com/book/show/3024263.Sun_in_a_Bottle_The_Strange_History_of_Fusion_and_the_Science_of_Wishful_Thinking)

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david (2009-06-23 07:35:08)

It seems that the expense of the study is an indication of how much the person funding the study stands to make due to the desired outcome of the study. With self-experimentation, you are "funding" the study with your time (which you could use for other activities) and typically don't stand to make any money or realize any benefit other than making your own life a little better.

seth (2009-06-23 08:37:42)

David, that's an interesting point. Whereas drug companies lose money if the experiment has a certain outcome (the drug doesn't work), someone who self-experiments benefits with either outcome (the treatment works or it doesn't work). Because either way the self-experimenter is closer to improving his or her life. You could say the payoff matrix is more balanced.

Cheaper is more honest « Entertaining Research (2009-06-23 09:16:34)

[...] Cheaper is more honest By Guru Seth argues — when it comes to research: what I call the Pashler-Roberts Law: The more expensive the research, the less likely the researchers will be honest about it. [...]

John S. (2009-06-24 18:02:43)

The CEOs of drug companies should self-experiment with their own drugs and post the results on blogs. No randomized trials, no double-blind, nothing.

## **Gmail as Ponzi Scheme (2009-06-23 11:49)**

Now that everyone knows what a Ponzi scheme is, isn't gmail quite close to one? More and more users, more and more storage needed to store their email. The price of storage is unlikely to fall forever. Eventually cost per user will overtake profit per user – and then the whole thing begins to collapse. Not in my lifetime, please.

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Jim Wyck (2009-06-23 12:14:38)

Hey Seth ... and all. Have you seen the ads that are on the right hand side of your gmail account? Do you have any idea of the revenue generated? Ponzi would have lasted a long, long time if he had the kind of pay per click ad revenue that Gmail delivers. J

Daniel Lemire (2009-06-23 12:40:22)

Given that Gmail is free (but ad supported), I do not see it as a Ponzy scheme. Sure, it might be painful to have to switch to another provider, but nothing lasts forever. In any case, I see no reason why Google Mail could not survive for a very long time by asking us to pay.

seth (2009-06-23 13:11:36)

Daniel, Ponzi scheme = you store your money there. Gmail = you store your email there. Ponzi scheme = better than other money-storage (investment) choices. Gmail = better than other email choices.

Peter Smith (2009-06-23 13:14:29)

Maybe the network effect will help – bigger audiences yield higher CPM/ad rates. It'd be interesting to see what the numbers look like – maybe it's making money already?

thehova (2009-06-23 13:30:37)

youtube is also a puzzling business for google.

Nathan Myers (2009-06-23 13:45:25)

Storage prices do follow an exponentially decreasing curve. The value of an ad impression may decline too, but is unlikely to keep up. (Jim: no, I don't see the ads unless I specifically look for them, but it is manifestly evident that many do.) The danger is that the size of messages may grow exponentially to match, but that doesn't seem to be happening. Maybe that's because most big attachments people send are duplicates of ones others send, that Google can (if they choose) store once for all. Or maybe it's that producing big attachments is time-consuming.

Nathan Myers (2009-06-23 16:11:44)

It occurs to me that youtube may be a method Google employs to minimize the storage demands on gmail...

Robert Simmons (2009-06-23 19:23:23)

Well, I will grant you, those are certainly novel definitions of a Ponzi scheme.

Benjamin Lukoff (2009-06-23 22:18:01)

Shh – don't tell Google – but I'd be more than happy to pay for Gmail if I had to.

Tom (2009-06-26 06:19:08)

Gmail already has a paid version for heavy users. But I don't see "free" Gmail as a major money-loser; it is extremely valuable to Google because it lets them target ads at you based on your private correspondence. No marketer in human history has ever known that much about its audience. Mark Cuban had an interesting post on how (he's convinced) Google will have to pull the plug on YouTube in its present form: <http://blogmaverick.com/2009/06/02/the-google-youtube-conundrum/>

Nile (2009-06-26 06:23:33)

One terabyte hard drives are selling for under \$80.00 on the net. It is likely that one of these drives would be enough for several lifetimes of email. Storage doesn't have to get any cheaper - it is cheap enough as it is.

Tom Moertel (2009-06-29 13:51:34)

One factor that is relevant to Google but not your typical ISP is that Google has enough market share to see a large slice of email traffic, and therefore each email sent or received is more likely to be sharable, at least in content if not headers. Thus Google has the opportunity to use interesting sharing algorithms to reduce storage requirements.

Patri Friedman (2009-07-01 23:20:09)

*The price of storage is unlikely to fall forever.* It is impossible to fall forever - the heat death of the universe is lurking in our future. But until then, barring major wars or catastrophes, I see no reason for the storage cost to ever stop falling. That's how technological advancement works. I certainly don't see any reason for it to stop falling anytime in the next few decades. I am probably forbidden by confidentiality agreements from telling you what gmail costs per user per year, but it is shockingly low.



## Acne Self-Experimentation: Why It's Promising (2009-06-24 23:29)

[1]This article reports that there was no acne whatsoever among the Kitava Islanders in Papua New Guinea and the Ache hunter-gatherers in Paraguay. Here is the abstract:

**BACKGROUND:** In westernized societies, acne vulgaris is a nearly universal skin disease afflicting 79 % to 95 % of the adolescent population. In men and women older than 25 years, 40 % to 54 % have some degree of facial acne, and clinical facial acne persists into middle age in 12 % of women and 3 % of men. Epidemiological evidence suggests that acne incidence rates are considerably lower in nonwesternized societies. Herein we report the prevalence of acne in 2 nonwesternized populations: the Kitavan Islanders of Papua New Guinea and the AchÃ© hunter-gatherers of Paraguay. Additionally, we analyze how elements in nonwesternized environments may influence the development of acne. **OBSERVATIONS:** Of 1200 Kitavan subjects examined (including 300 aged 15-25 years), no case of acne (grade 1 with multiple comedones or grades 2-4) was observed. Of 115 AchÃ© subjects examined (including 15 aged 15-25 years) over 843 days, no case of active acne (grades 1-4) was observed. **CONCLUSIONS:** The astonishing difference in acne incidence rates between nonwesternized and fully modernized societies cannot be solely attributed to genetic differences among populations but likely results from differing environmental factors. Identification of these factors may be useful in the treatment of acne in Western populations.

This implies that acne isn't inevitable. It's almost surely caused by something environmental – perhaps diet, perhaps something else (such as [2]washing your face with soap). That's why self-experimentation about acne is promising: By changing your environment in various ways, you may be able to figure out what's causing your acne.

1. <http://www.ncbi.nlm.nih.gov/pubmed/12472346>

2. <http://www.blog.sethroberts.net/2009/06/19/acne-cured-thanks-to-self-experimentation/>

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Brent Pottenger (2009-06-25 07:04:09)

My experiment: No bard carbs + less use of soap = Much improved skin complexion on face (tremendous reduction of old scars from acne).

NE1 (2009-06-25 09:49:19)

These are two isolated, indigenous populations. How exactly does that imply it's not genetic?? Do you know of a European that has married into the Ache recently? The paper only timidly brushes aside these factors. It's also difficult to imagine that 25 million desperate teenagers are unable to self-experiment their way to clear skin without acknowledging that it may take something more cunning.

seth (2009-06-25 10:33:52)

NE1, when people from these populations moved out and lived like the rest of us, they developed acne. You're right I should have made that point. I also agree that it is a very good question why the average teenager hasn't managed to do the necessary self-experimentation.

Dennis Mangan (2009-06-25 11:45:19)

Most illnesses including acne are probably always the result of some combination of genetics and environment. A succinct formulation of this is: our genes didn't evolve to kill us or to make us sick. In the case of acne, it seems unlikely that our genes

would want us to have ugly blemishes on our faces, especially during the years of peak reproductive life. Wouldn't they be strongly selected against?

Keith (2009-06-25 11:48:59)

I found though some self experimentation that French Fries cause my acne. Eat even a few fries and within 3 days I get pimples. No fries, no pimples. It's something about the French Fries specifically. I can eat baked potatoes without any problems. I'm guessing there is something in the fried potato that is particularly yummy to the acne bacteria. I've also seen a combination of lots of salt + caffeine sometimes cause me to break out, but its much less likely. I'm thinking this happens due to high blood pressure causing stress, but I'm not sure. Theoretically burgers have more salt than the fries, but I've never gotten acne from eating just burgers.

Aaron Blaisdell (2009-06-26 07:26:25)

Keith, Given the information about how bad rancid fats are, and how most industrial oils (high in omega 6 polyunsaturated lipids) used to make fried foods at restaurants are rancid, I'd guess that it's the rancid fat and not the potato starch that caused your acne when you ate french fries. Try a self experiment at home: cut up some potatoes into fries and cook one batch in a pan containing coconut oil (or lard or beef tallow or ghee) and another batch in a different pan using cotton-seed oil or corn oil. Eat one one day and eat the other a week later. Use an ABBA design to really nail down the effect (if there is one). That is, eat the corn oil fries on week 1 and week 4 and the coconut oil fries on week 2 and 3. If you get acne for a few days in weeks 1 and 4 but not 2 and 3 you then have clear evidence for my hypothesis. If you get acne all four weeks or sporadically (e.g., weeks 1 and 2 only) then the evidence would fail to support the hypothesis. Or you may get outbreaks on weeks 2 and 3 only which would disconfirm my hypothesis and suggest that it's fries cooked in coconut oil (or ghee or whatever you use) that causes it—but would contradict the evidence collected from restaurant fries (which are NOT cooked in coconut oil).

dgm (2009-06-27 08:55:49)

Maybe one reason teens don't self-experiment with acne is because where the parents can afford it, they'll take their child to the doctor for Accutane or some other prescription in the hope of solving the problem quickly. If the mindset is that acne is genetic and/or inevitable, people aren't likely to look to self-experimentation. I never had bad teen acne, but now in my 40s I've developed "hormonal acne" (apparently one indication of this is that it is isolated around my jawline). I started taking zinc, which helped some but not completely. One day we were out of milk (which I drink a couple of times a day in my cappuccino) so I skipped it. I skipped milk several days, in fact, and noticed that my skin was clearer. Then I drank milk and within two days the cyst-y, painful acne was back. I'm not completely dairy-free—I love cheese and yogurt too much—but I've eliminated the milk and really scaled back on daily cheese consumption and my skin is clearing up, although not entirely. Maybe one of these days I'll go hog wild and try to eliminate caffeine.

Seth's blog » Blog Archive » What Else Causes Acne? (2009-07-20 19:46:44)

[...] Previous posts have implicated Western Civilization and face-washing with soap in the etiology of acne. What else might be involved? A reader writes: My girlfriend suffered from acne for years. She went to a dermatologist, tried every fancy soap and skin cleansing system, but nothing worked. She was also a Diet Coke fanatic. Every morning while she was getting ready for work, like a coffee drinker, she'd have one. It was her daily jolt of caffeine. [...]

Seth's blog » Blog Archive » Acne Treatment Statistics (2009-08-11 11:19:05)

[...] Cure Together has acne treatment statistics: Comparisons of the effectiveness of about a dozen treatments. Only two treatments rate high for effectiveness and both have only a few raters. Neither of the high-rated treatments (Roaccutane and Dr. Hauschka Skin Care) was part of Stone-Age life. Because of the absence of acne in at least a few groups of people living more Stone-Age-like (stoneagesque?) lives, it is likely that something about modern life causes acne. When whatever that is is figured out, it should be possible to eliminate acne cheaply and safely. [...]

Anthony (2010-02-06 21:45:48)

NE1 said: "It's also difficult to imagine that 25 million desperate teenagers are unable to self-experiment their way to clear

skin without acknowledging that it may take something more cunning.” If by “25 million” you mean “all teenagers in the US,” how do we know this is true?

Annabel (2010-07-01 15:04:41)

Aloha, I had a huge acne problem in graduate school...I had volcanic pimples and those pimples had pimples too. It was painful, it was embarrassing, I was miserable. I did so much research. I tried all kinds of skin care products with no success at all. I didn't want to do accutane because I am a beer drinker and I hear that accutane is hard on the liver. I discovered spironolactone and persuaded my doctor to let me try it. At 100 mg a day, my acne literally disappeared; one day I was generating new pimples and the next day, no new ones, and so on, until all that had been there was healed and no new pimples. Hallelujah! So I was on spironolactone for a couple of years and then moved to Hawaii, where it is difficult to persuade a doctor to prescribe medicine off-label (spironolactone is actually a weak diuretic that treats high blood pressure by helping flush out water, but has the extra benefit of binding extra androgens). I started to panic, and then just sat down and thought about what that means, binding excess androgens. I remembered reading that excess androgens are what cause pattern baldness and prostate enlargement in men, so I looked for an herbal remedy for those symptoms and presto! Saw palmetto is one, and spearmint is another. A few days off spironolactone, and I was just beginning to get some pimples along my jaw line, and began taking 600 mg of Saw palmetto every day in the morning, and drinking spearmint tea sometime during the day. No more pimples. This went on for about a month and then I realized I had been forgetting to take the saw palmetto. Okay, so just spearmint tea. Still no pimples. Then I realized I had forgotten to drink spearmint tea for a few days and decided, since I didn't have any pimples, to wait and see. Well, something changed, and not sure if it was the saw palmetto, the spearmint tea, or the combination, but I still don't get pimples (except a couple of very tiny ones at PMS time) anymore and that was about six months ago. My skin is clearer than it has ever been. And I keep both saw palmetto and spearmint tea handy just in case!!!

Mira (2010-07-24 17:42:10)

I have had acne all my life not bad but consistent and I am now 38. I have never used soap on my face. As a teenager I realized that this made things worse. I also don't use any creams at all (except for suncream lotion and that makes things much worse so I tend to stay in the shade instead. I moved from a dry air environment (Christchurch New Zealand) to a very humid environment (Auckland New Zealand) 3 years ago and my acne has been much worse since. I have not yet found a solution for this.

### **A Perfect Storm of Airport Improvements (2009-06-25 12:47)**

I'm flying to Los Angeles today. Three new things – all of them new to me this flight – are making this trip distinctly more pleasant than earlier trips:

1. Southwest has special check-in if you've checked in online but have a bag to check.Â The line went very fast.
2. Crocs shoes. So easy to slip off and on at security.
3. Free Wi-Fi while waiting for flight.

I suppose after a while I'll get used to this but right now it reminds me of how I felt the first few times I read the NY Times online.

Barry Brolley (2009-06-26 12:51:47)

Seth, instead of Crocs try VFFs , I just walked through security at the Denver airport telling security they were socks. <http://www.vibramfivefingers.com/> Got the idea about wearing them last year after reading : <http://nymag.com/health/features/46213/> ..hmm maybe some self experimentation on balance, running times, posture wearing my VFFs is in order?

Drew (2009-07-05 19:11:04)

Be careful on those airport escalators!: <http://abcnews.go.com/GMA/Consumer/story?id=2530368 &page=1>

## **The Story of Hyundai: A Lesson in Public Speaking (2009-06-26 07:24)**

Hyundai, rhymes with Sunday.

I loved [1]this talk at MIT by John Krafcik, head of Hyundai's American branch. It lasted an hour; I wished it was longer. It reminded me of [2]Carl Willat's [3]Trader Joe's commercial: Full of emotion, in this case Krafcik's pride in his company and what they've done. Toyota is the world's number #1 car company; when a Toyota executive interviewed for a job at Hyundai, he told them that at Toyota, they are most afraid of Hyundai. So afraid that they bought five straight years of a certain Hyundai model, took them all apart, and studied how each system changed from year to year. (I used to compare New Yorker articles with their book versions, word by word, to see what the editors changed. John Updike compared two versions of Vladimir Nabokov's memoir, *Invitation of a Beheading* and *Speak, Memory*, word by word. More recently I noticed that Zadie Smith's *On Beauty* had significant differences between the audio and printed versions.)

Krafcik repeated an old Jay Leno joke: "How do you double the value of a Hyundai? Half-fill the gas tank." So he had a great story to tell, the return from ignominy, but curiously he barely told it. Probably this was because he was working at Ford at the time. I have no great interest in cars, I'm not particularly interested in why one company does better than another, yet I was entranced. I came away thinking that most of what I'd heard about public speaking was wrong – most of the stuff in [4]Made to Stick, for example. Sure, the advice to tell a story – and [5]most speakers don't even understand that – is right. Krafcik did tell a story. But that's the easy part. I think everyone understands what a story is. The harder part is convey emotion.Â Carl Willat has said to me that in movies, that's all that matters. Absolutely, and I think what's he saying applies to talks as well. Of course an academic talk must have content. But the practical lesson for me is that when planning a talk I should pick something I care a lot about and in the talk do my best to convey how I feel. That's all. Don't worry about telling a joke, don't worry about slick visuals, don't try to impress them.

I plan to show Krafcik's talk to graduate students (in psychology) because it makes a point I doubt they've heard: It's fine if it's other people's work that you feel strongly about. Krafcik isn't the head of Hyundai. He had nothing to do with their long comeback. But he's proud of his company – and he conveyed that in spades, and that was enough. Suppose you do research on X. You're giving a talk about it – perhaps a job talk. Maybe your research is mediocre. But you think research on X is incredibly important. Fine – just make that clear. Everyone in the audience will like you for being able to appreciate the work of others, that's so rare. When you point them to other work that is great, you're helping them. Suppose you're teaching a class. Find the parts of the subject that you feel strongly about. Do your best to convey how strongly you feel. Better positive than negative but negative works. (Ask Nassim Taleb.) Avoid the parts you don't feel strongly about.

In a sense all speaking (and all writing) is public speaking (unless we're talking to ourselves, which is rare). The audience might be one person or a hundred people, it doesn't matter, the principle is the same: We use the emotion in what we hear to judge how much attention we should pay to it. Zero emotion = zero attention. I once visited Alaska. While I was there I took a day trip to a glacier. Near the glacier was a building with a little slide show about the glacier,

with a taped narration. It was all very dry – the glacier grows in winter, shrinks in summer, there are these animals nearby – but you could tell the speaker cared a lot about the glacier. I was terribly struck by that. How rare it is to hear someone talk about something they really care about, I thought. I've told that story dozens of times. But I didn't manage to translate it into advice about how to give a talk.

1. <http://mitworld.mit.edu/video/665>
2. <http://www.carlsfinefilms.com/>
3. [http://www.carlsfinefilms.com/cff\\_website/tjs/](http://www.carlsfinefilms.com/cff_website/tjs/)
4. <http://www.blog.sethroberts.net/2007/04/06/made-to-stick/>
5. <http://www.blog.sethroberts.net/2008/05/30/high-school-graduation-confidential-lack-of-stories-speaks-volumes/>

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HowTo: give public speeches « Entertaining Research (2009-06-26 21:32:28)

[...] HowTo: give public speeches By Guru Seth has some thoughts: Suppose you do research on X. You're giving a talk about it – perhaps a job talk. Maybe your research is mediocre. But you think research on X is incredibly important. Fine – just make that clear. Everyone in the audience will like you for being able to appreciate the work of others, that's so rare. When you point them to other work that is great, you're helping them. Suppose you're teaching a class. Find the parts of the subject that you feel strongly about. Do your best to convey how strongly you feel. Better positive than negative but negative works. (Ask Nassim Taleb.) Avoid the parts you don't feel strongly about. [...]

Aaron Blaisdell (2009-06-27 18:05:18)

I get the same feeling when watching Huell Howser present one of his "California Gold" TV documentary shows (<http://www.calgold.com/>)—each about a little bitty piece of the great state of California. And he's not from California; he's from Tennessee.

### **Less Popular than Jesus (2009-06-27 06:57)**

John Lennon once said, referring to the Beatles, "[1]We're more popular than Jesus." At dinner last night someone said that Michael Jackson was more popular than the Beatles. That surprised me. Was Michael Jackson more popular than Jesus? Google hits, as of this morning:

- Beatles: 54,400,000
- Jesus Christ: 47,600,000
- Michael Jackson: 41,600,000

For comparison:

- Barack Obama: 95,800,000
- Harry Potter: 93,200,000

- Brad Pitt: 28,200,000

Does that make J. K. Rowling (6,600,000 Google hits) the most powerful person in the world? Unlike President Obama, she can say whatever she wants. And she speaks to the most impressionable people in the world.

1. <http://music.aol.com/feature/famous-quote-john-lennon>

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Aaron blaisdell (2009-06-27 07:47:59)

Very rhetorical post. Of course you need to sample the google hits over a longer time frame to get a sample less biased by the hot topic of the moment.

Riker Polly (2009-07-10 21:13:47)

Also, if one isolates Jesus and Christ the numbers skyrocket. 220,000,000 for Jesus alone and 131,000,000 for Christ alone. A larger natural language processing study would be required to understand the context of using just Jesus, or just Christ to determine the frequency of relevance and how that compares with the Beatles.

Tasty Treats « Mike Kenny (2011-11-24 05:01:11)

[...] Seth Roberts: Does that make J. K. Rowling (6,600,000 Google hits) the most powerful person in the world? Unlike President Obama, she can say whatever she wants. And she speaks to the most impressionable people in the world. [...]

## **Flaxseed Oil and Better Shaving (2009-06-27 22:31)**

Roberto Medri, a 27-year-old who works in Italy for [1]Bain & Company, a consulting firm, writes:

I have had bad shaving problems since I started working three years ago. I tried pretty much everything: multiple blades, old-time safety razors, expensive British shaving soaps, silvertip brushes, pre-shaving oil and creams, abstruse shaving methods and blade techniques: all to almost no avail. Instead, my face would bleed more and more every day, making it frustrating and time-expensive to shave, only to get results which ranged from laughable to frightening.

I noticed two patterns:

- Once in a couple of months, I used to have a perfect shave: fast, enjoyable, baby-butt smooth with no irritation. I was not, however, capable of isolating the deciding variable, as those epiphanies seemed to be completely random.
- When I took up a new remedy (another pre-shave cream, steamed towels, etc.) things got better for 2-3 shaves, then back to normal horror.

A fortnight ago, I began having perfect shaves. Consistently. I am simplifying my routine because all toners and moisturizers now seem useless. My towels are not stained, I am on time, I actually look forward to shaving every morning (with but only a slight fear of it all ending).

The only explanation I can think of is that, following your advice, I started taking four softgels/day of flax oil about a month ago.

It's very difficult to get flaxseed oil in Europe (bottled oil simply is not available). I have recommended flax to my colleagues also plagued by red necks to no avail: they are elite in two ways, white collar elite (working for Bain) and dietary elite (as Italians, which supposedly have the best and healthiest food ever), so it fits with your reasoning that they are [2]very change-averse. In fact, a manager told me that my taking softgels during the day is "inappropriate" and "disturbing" colleagues.

1. <http://www.bain.com/bainweb/home.asp>

2. <http://www.blog.sethroberts.net/2009/05/29/the-american-health-paradox-what-causes-it/>

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tepalai (2009-11-06 09:22:07)

:) as soon as possible!

### **Why One Student Loves Tsinghua University (2009-06-28 21:08)**

After reading my post about [1]Reed College's horrible treatment of Chris Langan, a friend of mine who is a student at Tsinghua University wrote this:

I feel so lucky that we have lots of brilliant scholars who are at the same time good teachers. Many of them do care about undergraduates and give good advice. I don't know which education system for undergrads [Tsinghua's or Reed's] is best, for colleges that do poorly in educating undergrads [like Reed] may produce students who are more independent. But being educated here, I have to say I love

Tsinghua and its teachers a lot.

Why does she love Tsinghua? I asked.

I think it is very tolerant.Â I made many mistakes while I was growing up, but just like my parents, my school didn't forced me to do anything to correct my mistakes. It gave me freedom to choose, to live my own life. I'm glad it didn't interrupt my life and gave me the chance to see my mistakes and to correctÂ them by myself. And when I did want to correct them, it allowed me to. I realize that there won't be many chances to make mistakes and to correctÂ them by myself after I leave school so I value the time in the school. So I guess the best thing about Tsinghua is its freedom and tolerance.

My friend started as a math major. Then she became an English major. Now she is taking economics classes because she wants to study economics in graduate school. That's what she means by "mistakes": choosing the wrong major.

[2]Tsinghua versus Reed.

1. <http://www.blog.sethroberts.net/2009/05/09/academic-horror-story-reed-college/>

2. <http://www.blog.sethroberts.net/2008/10/28/tsinghua-versus-reed/>

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### **Probably Not Placebo (2009-06-30 06:34)**

[1]This, from the SLD forums, made me laugh:

Ya know its probably NOT placebo. . . . First time I ever did it I could not finish my bowl of oatmeal. Before SLD I had never, not ever, been able to not finish anything.

1. <http://boards.sethroberts.net/index.php?topic=7133.msg87040#msg87040>

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### **Shangri-La Diet for Pets (2009-06-30 15:21)**

In March, Century posted [1]this on the SLD forums:

I'd like to put my dog on SLD by giving him his calories through sugar cubes. Would that work?

The dog will whine constantly when he's hungry. He's pretty old, and at this point, we don't have the heart to put him on a strict diet. The hope is that with SLD, we won't have to choose between a happy dog and a healthy dog. If it works, he won't whine after he's been fed his normal serving.

Today he posted this:

It's worked incredibly well. It's gotten to the point where he won't whine at all. If I don't remember to feed him, he won't eat anything. I haven't been able to weigh him, so I don't really know how much weight he has lost, but a number of people have commented on how much thinner he looks. I've started to cut back on the sugar.

Any doubt I've had that SLD is for real has been erased. It's unreal how well it's worked for the dog.

Thanks to Heidi.

1. <http://boards.sethroberts.net/index.php?topic=6973.0>

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## The Trip of 100 Pounds Lost: How Did it Begin? (2009-06-30 22:33)

Someone named August [1] posted today on the SLD forums that he'd lost 100 pounds:

The scale dipped to 185 a bit unexpectedly this weekend. [He is 6' 3".] Well, that was my target.Â Now what?

100lbs down.

Anticlimatic really.Â The last three pounds just disappeared overnight.

And I can still stand to lose more, despite having people telling me I shouldn't lose anymore since last year.

Since he has [2] posted many times, and has been so successful, I think there is a lot to be learned here. Here is some of what he learned along the way.

[3] Are your habits getting in the way?

I had a similar slow start with SLD too.Â It wasn't until I realized my habits kept me eating far more than I needed to that I started losing significant amounts of weight.

[4] Bananas: good or bad?

I used to eat bananas everyday for potassium, but within an hour, I'd be really hungry.Â One day I brought brisket I cooked overnight and I didn't want to put it in the fridge, so I had it when I usually had my banana.Â I didn't think about food again until it was almost time to go home and I realized I hadn't eaten anything else!

[5] What about sweeteners?

I drink a lot of coffee, and when I decided to drop the sweeteners and take it black, the temptation to eat wheat products practically disappeared.

[6] What about patience?

I began in a very low key way.Â I simply started trying sugar water, then different oils, and for a while it didn't seem like it would work.Â Then one day Seth linked to the guy who ate protein nose clipped.Â I decided to get a nose clip and try that for a while.Â It worked in a borderline way, in other words it was effective enough to keep me doing it, but I wasn't losing very much weight at the time.Â Eventually, I ended up taking two tablespoons of walnut oil in the morning everyday.

The AS was enough for me to realize I was always eating more than I needed.Â I'd dig into something and then realize I didn't need to finish it.Â My life was built around food.Â I love to cook and I live by myself, so that means way too many calories in one place.Â As I started to recognize this, I began to wonder

how to change this.

Then on Good Friday I did a fast. I decided that if I started to feel bad, I'd just take some oil. It worked very well. I realized I could get by with very little food.

Thanks to Heidi.

1. <http://boards.sethroberts.net/index.php?topic=6389.msg87068#msg87068>
2. <http://boards.sethroberts.net/index.php?topic=6389.0>
3. <http://boards.sethroberts.net/index.php?topic=6868.msg80342#msg80342>
4. <http://boards.sethroberts.net/index.php?topic=6389.msg69808#msg69808>
5. <http://boards.sethroberts.net/index.php?topic=6389.msg85302#msg85302>
6. <http://boards.sethroberts.net/index.php?topic=6389.msg69808#msg69808>

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Charles (2009-06-30 23:15:16)

A couple of posts have highlighted this "I realized I didn't need to eat so much," phenomenon. Having something bubble up and happen at that higher-level of decision-making is really interesting. What is it that's bubbling up? Where is that actually happening? By "where," I mean in what neurochemical pathway?

John (2009-07-01 08:26:51)

That thing about the banana is good. Replacing a high carb food with a high fat food is always a good thing. I like the thing about sweeteners too. I wish I enjoyed coffee black but I like it sweet and creamy.

## 4.7 July

### Michael Bailey on Michael Jackson's Sexuality (2009-07-01 06:24)

[1]The Man Who Would Be Queen by Michael Bailey, a professor of psychology at Northwestern, isn't just the best book about psychology I have ever read, it is one of the best books about anything I have ever read, right up there with [2]Totto-Chan by Tetsuko Kuroyanagi and The Economy of Cities by Jane Jacobs.

Now Bailey has written [3]a brilliant analysis of Michael Jackson's sexuality. Bailey writes:

Jackson's weirdness was so multifaceted that it presents both a challenge and an opportunity. . . . I propose an explanation of Michael Jackson that, if true, can explain several seemingly unrelated things: the molestation accusations and interest in children, the obsession with Peter Pan, and the facial surgeries.

Plus the high-pitched voice. This is a basic point about causal inference not widely appreciated: If several rare things might have the same explanation, they probably do. Bailey's conclusion is that Jackson had a very rare sexual identity disorder: He was sexually aroused by thinking of himself as a barely pubescent boy, just as a tiny number of men are sexually aroused by thinking of themselves as amputees (and these men try to become amputees) and a larger number of men are sexually aroused by thinking of themselves as a woman (and these men often have sex-change

operations).

His facial surgeries made Jackson look unlike anyone else:

Normal people would hate to look like Michael Jackson did near the end of his life, and so normal people tend to assume that the surgeries were a series of big, compounded mistakes that Jackson must have regretted. Bad plastic surgery surely happens. But when it does, it is generally recognizable as a poor rendition of an aesthetically pleasing goal. Not so Michael Jackson's face, which resembled nothing in the actual human, living world. Moreover, it has seemed to me that there was something coherent about the redesign of his face . . . If so, the 13 surgeries may be explained by something other than 13 different errors of judgment. . .

The face and the voice were both unnatural, and he went to a lot of trouble to have them. What was he trying to say and show with them? He told us, quite directly, the most likely answer.

"I am Peter Pan," he said, more than once. He lived in Neverland. His second wife, Debbie Rowe, said that in order to get in the mood to have sex with her, Jackson dressed up as Peter Pan and danced around the bedroom. She said: "It made him feel romantic."

Peter Pan, in the Disney version that Jackson knew, was a barely pubescent boy.

I wonder if diversity of sexual orientation persists because it produces diversity of occupation. People who enjoy unusual jobs have an advantage (less competition). Homosexual men probably have fewer children than heterosexual men – but what if homosexual men had an occupational advantage? Then they could make more money (or whatever) and their children would be better off. This would explain the persistence of homosexuality. Jackson, of course, was a huge occupational success. Bailey says a little about this:

Does my theory say anything about the origins of Michael Jackson's tremendous talent? There are some correlations between sexuality and [occupational] abilities. For example, gay men are vastly overrepresented among professional dancers and fashion designers. This may reflect their increased interest in and dedication to dance and fashion, rather than natural talent per se. Autogynephiles [men sexually aroused by thinking of themselves as a woman] tend to be gifted in technical, mathematical, and scientific pursuits, with computer scientist being the prototypic autogynephilic occupation. But we don't really know anything about the occupational interests of hebephiles [men attracted to barely pubescent boys], much less autohebephiles.

1. [http://en.wikipedia.org/wiki/The\\_Man\\_Who\\_Would\\_Be\\_Queen](http://en.wikipedia.org/wiki/The_Man_Who_Would_Be_Queen)

2. <http://gieo.wordpress.com/2007/04/05/tottochan-the-little-girl-at-the-window/>

3. <http://www.psych.northwestern.edu/psych/people/faculty/bailey/MJ/MJ.htm>

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Wilbur (2009-07-02 06:05:53)

I disagree with your glowing appraisal. While well-written, the piece reminds me of the official sounding mumbo-jumbo produced by FBI profilers and the like: ad hoc, "just-so stories" that may convince juries, but are unfalsifiable and have no predictive power (which could serve as a good working definition of the entire "science" of psychology).

seth (2009-07-02 07:57:05)

Wilbur, Bailey's analysis makes 2 types of predictions: 1. Symptom cluster. Bailey is saying these four traits have a single cause. Those four traits should appear together in other cases. 2. Other traits. This analysis predicts that Jackson is sexually aroused by thinking of himself as a pubescent boy. In addition, identification of another erotic identity disorder similar to autogynephilia makes it clearer what the general concept is (just as the concept of autoimmune disease is clarified by having more examples).

Risa (2009-07-19 23:27:36)

Michael Jackson was not interested in young boys, nor was he interested in sex. His plastic surgeries were due to Body Dysmorphic Disorder. He identified himself with pubescent boys, as he was arrested at that stage emotionally. If he was interested in pubescent boys, he would have had sexual relations with many children. There was no way to get away with it, if he indeed molested children. Our society places too much emphasis on sexuality. Sexual deviation is considered to be more normal than asexuality.

seth (2009-07-20 09:38:24)

Risa, to say Michael Jackson's plastic surgeries were due to Body Dysmorphic Disorder doesn't explain the high-pitched voice nor the interest in children that Bailey considers. More generally, attaching a name to a phenomenon (= diagnosis) isn't much of an explanation. For example, if I told a teenager, "the explanation for the spots on your face is that you have acne," I think you'd see what I mean about the difference between diagnosis and explanation. I have no idea why you say Michael Jackson wasn't interested in young boys.

Saida (2009-08-27 17:18:11)

Except that his high pitched voice was a masquerade he put on for the media. Check out Michael Jackson's Private Home Movies on Youtube, Michael Jackson speaks out against racism, and the live concerts where he talks to his fans. It'll give you an idea what his normal talking voice sounded like. It'll likely also change your perception of the man in general. He likes to think of himself as a pubescent? This part had me laugh out loud. So this is the reason for his sensual/sexual and very adult mannerism on stage?

Lisa (2009-10-10 13:22:16)

Saida is completely right. Michael Jackson wasn't an idiot. In fact, he was extremely intelligent and a good business man. The high pitched voice made him seem soft and gentle. Because of this soft voice, people thought of him as 'a nice guy'. If any of you are planning on watching 'This Is It', listen out for his voice. It's deep and manly. As for thinking of himself as a pubescent, that's a load of bs. He danced in a very suggestive manner (if you don't think so, go watch his 'In The Closet' video) and had sex with Lisa Marie Presley while they were married (she confirmed that). These are not things that young boys do. Regarding his face, I think that Michael is handsome. As for Debbie Rowe and the Peter pan thing, where is this interview? I won't believe it until I see it for myself. Even if she did say it, Debbie keeps changing her story. The last that I heard, her and Michael never even slept in the same room let alone with each other...

Lisa (2009-10-10 13:25:32)

oops sorry I meant \*pubescent not puberescent

Kayla Smith (2009-11-01 10:12:13)

i am already a great fan of Michael Jackson ever since i was just a little kid. i would really miss the King of Pop -

Quixote (2009-12-06 17:35:22)

Everyone else who agrees with me that any of that high-minded BS is actual BS, then I salute you. Good God! Debbie said that? I have not seen that statement anywhere but here. And, yes, she tends to change her tales as much as LaToya Jackson. LMP has said time and time again that her marriage to him was consummated. Why in the world would she lie? I think they had sex before they got married. Why wouldn't they have, anyway? They were married afterall. I can't say that I know positively whether or not he was not bi-sexual or asexual to some degree, but I don't believe he was gay.

Chezzny22 (2009-12-14 09:07:16)

Michael Jackson would always be the best popstar ever. i love all his songs and his live concerts. \*

kitty (2010-11-27 18:58:04)

This completely ignores the fact that Michael Jackson factually suffered from two very disfiguring skin diseases, vitiligo and lupus. This is what his doctors have said about the reason behind his nasal surgeries: Dr Richard Strick, who was appointed and paid for by the DA (Tom Sneddon) performed the court ordered examination of him in December 1993 and had viewed his medical records and therefore had no bias towards Jackson: *“Michael had a disease vitiligo in which the pigment is lost and attempts had been made to bring that pigment back which had been unsuccessful so he tried to bleach it out so it would be one colour. Lupus is also an autoimmune disease and he also had skin involvement, which had destroyed part of the skin of his nose and his nasal surgeries and all were really reconstructive, to try and look normal. So all these nose reconstructions you’re saying was as a result of him treating his lupus? The first one was to try and reconstruct from some scar tissue and obstruction that had happened with the skin there. It didn’t work out very well and all subsequent attempts were to make it right. I think he was trying to look like a normal guy as best as that he could.”* As for his sexuality, the court uncovered most of his desires: <http://laci negasmiled.wordpress.com/category/2005-court-case/porn/> And many of his friends, girlfriends and employees have also spoken up about it: <http://laci negasmiled.wordpress.com/category/love-sex-and-playboy/> And finally, his voice was not naturally that high. He only spoke that way publically back in the Thriller era, after that his voice was the same pitch as any of his brothers and could get very low: Audio of his real voice in 2006 <http://www.youtube.com/watch?v=TsSp78gq8UQ> He kept it soft to conserve his voice.

kathyp. (2011-09-04 11:51:12)

i visited michael childhood home in gary indiana 2 weeks ago and i could feel his spirit he grabbed and pulled me closer to him. all i can say is the man aint gay. misunderstood but not a homo.

## **Fermented Art, Beijing Style (2009-07-02 07:49)**

From [1]Time Out Beijing:

Veteran Beijing artist Gu Dexin . . . first turned European noses at a satellite show of the Venice Biennale in 1995, when he dumped three hundred kilos of raw beef into three glass coffins set in a local casino.

In the heat of summer, poisonous gases from the rotting meat quickly forced officials to clean up the show. This shy enfant terrible of the art world went on to astound European audiences in a succession of shows, placing raw meat or fruit in public places and letting them rot.

Up until this year, when he installed raw pork at the Legation Quarter, the formula has served him brilliantly. Part of the force of this current show is the absence of decay “resulting in a sterile and odourless silence.

1. <http://www.timeout.com/cn/en/beijing/aroundtown/feature/8108/gu-dexin-at-gallerina-continue-until-sep-6.html>

Tom in TX (2009-07-02 08:24:17)  
Not fermented. Just rotten.

david (2009-07-02 08:41:51)  
Ok, that gives me an idea for an "installation": how about a cannister of compressed methane gathered from bovine sources that slowly releases its contents for all to smell. I'll call it "Fart Art"

Aaron Blaisdell (2009-07-02 11:27:52)  
@David, or you could call it Fumigating (or Fermenting) Art or FArt for short. I think F'Art is catchy.

## How Much Should We Trust Clinical Trials? (2009-07-02 20:32)

Suppose you ask several experts how to choose a good car. Their answers reveal they don't know how to drive. What should you conclude? Suppose these experts build cars. Should we trust the cars they've built?

[1]Gina Kolata writes that "experts agree that there are three basic principles that underlie the search for medical truth and the use of clinical trials to obtain it." Kolata's "three basic principles" reveal that her experts don't understand experimentation.

Principle 1. "It is important to compare like with like. The groups you are comparing must be the same except for one factor – the one you are studying. For example, you should compare beta carotene users with people who are exactly like the beta carotene users except that they don't take the supplement." An expert told her this. This – careful equation of two groups – is not how experiments are done. What is done is random assignment, which roughly (but not perfectly) equates the groups on pre-experimental characteristics. A more subtle point is that the X versus No X design is worse than a design that compares different dosages of X. The latter design makes it less likely that control subjects will get upset because they didn't get X and makes the two groups more equal.

Principle 2. "The bigger the group studied, the more reliable the conclusions." Again, this is not what happens. No one with statistical understanding judges the reliability of an effect by the size of the experiment; they judge it by the p value (which takes account of sample size). The more subtle point is that the smaller the sample size, the stronger the effect must be to get reliable results. Researchers try to conserve resources so they try to keep experiments as small as possible. Small experiments with reliable results are more impressive than large experiments with equally reliable results – because the effect must be stronger. This is basically the opposite of what Kolata says.

Principle 3. In the words of Kolata's expert, it's "Bayes theorem". He means consider other evidence – evidence from other studies. This is not only banal, it is meaningless. It is unclear – at least from what Kolata writes – how to weigh the various sources of evidences (what if the other evidence and the clinical trials disagree?).

Kolata also quotes David Freedman, [2]a Berkeley professor of statistics who knew the cost of everything and the value of nothing. Perhaps it starts in medical school. As I blogged, [3]working scientists, who have a clue, don't want to teach medical students how to do research.

If this is the level of understanding of the people who do clinical trials, how much should we trust them? Presumably Kolata's experts were better than average – a scary thought.

1. [http://www.michaeljfox.org/newsEvents\\_parkinsonsInTheNews\\_article.cfm?ID=400](http://www.michaeljfox.org/newsEvents_parkinsonsInTheNews_article.cfm?ID=400)

2. <http://www.blog.sethroberts.net/2008/12/02/unfortunate-obituaries-the-case-of-david-freedman/>

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Charles (2009-07-02 23:21:30)

Well I don't know about clinical trials, but I know we shouldn't ever trust Kolata. She had an illuminating back-and-forth with Gary Taubes at one point (you documented it) which demonstrated her inability to read and understand simple English sentences, much less basic science.

Andrew Gelman (2009-07-03 11:30:23)

It sounds like this reporter talked with the wrong experts. Not to overgeneralize, but I've noticed that a lot of biologists have a pretty naive understanding of statistics. It would maybe better for her to talk with some econometricians, psychometricians, or quantitative political scientists and sociologists. That said, I think you're confused on Principle 2 above. With a small sample size, you can still find statistically significant differences by chance--and they'll look huge! Take a look at my paper with Weakliem that just appeared in American Scientist.

seth (2009-07-03 12:04:14)

Andrew, she wanted to understand clinical trials, so she talked to some experts who do them. What she found revealed incompetence, which is interesting. Talking to quantitative political scientists or psychometricians wouldn't be a good way to learn about clinical trials. Principle 2: An experimental psychologist who read an experiment (in psychology) with a large sample size (e.g.,  $n = 20$ ) would be suspicious: Why such a large sample size? It must mean the effect is weak or maybe they did the experiment with  $n = 10$  (a typical size) and didn't find anything. Anyway, it would mean something was off. In this sense, the larger the sample size, the less trustworthy.

Andrew Gelman (2009-07-03 14:58:02)

Seth: In the best of all worlds, Kolata would've spoken with a medical-statistics expert such as Stephen Senn, John Carlin, or Chris Schmid. But, given whom she did talk with, I'm thinking it would've helped for her to broaden her understanding by talking with some social science statisticians. Regarding principle 2: it depends on what you're studying. If it's a rare condition, you might need a large sample size to get lots of cases. Or if there's a high level of natural variability, you'll need a high sample size to see signal amid noise. The example I was referring to was the sex ratio of babies, which is close to purely random. As we discuss in our paper, you need a very large sample size to discover patterns here. You might argue that a 1 % change in the probability of a girl birth is so tiny that nobody should care about it--and maybe you're right--but that's the context of some things that people study. Medical outcomes can be highly unpredictable, and small effects can be of interest to people. Anyway, my main point is not to defend large studies but to disagree with the implications of your two statements, claiming (1) people with statistical understanding judge "the reliability of an effect" by the p-value, and (2) "small experiments with reliable results are more impressive than large experiments with equally reliable results." Not so. As discussed in our American Scientist article, statistical significance doesn't necessarily tell you much at all, if the estimate is so large as to be scientifically implausible. That's something you can learn from statistical power analysis, or from Bayesian inference. Finally . . . lots of psychology studies have  $n > 20$ . Just for example, my sister's most cited article is based on a study with 104 kids. If you can find it with  $n=10$ , great. But I don't think that experimental psychologists have been barraging Susan with questions about why her sample size is so much more than 10.

seth (2009-07-03 15:58:42)

Andrew, by "effect" I meant experimental effect. The whole discussion is about experiments. The sex ratio stuff in your Amer Scientist article isn't experimental (= does not come from experiments). I'm happy to learn about an example that contradicts what I said but it would need to be an experiment. Your sister's research isn't experimental psychology, it's developmental psychology. I agree, the term experimental psychology (= perceptual and cognitive psychology and animal learning) isn't terribly clear to outsiders. Developmental psychology experiments tend to have larger  $n$ 's than experimental psychology experiments.

Andrew Gelman (2009-07-03 18:15:09)

Yes, it sounds like you use the terms "effect" and "experiment" in different ways than statisticians do. Which is fine; I realize that our usages aren't always so intuitive.

Vince (2009-07-03 20:08:25)

You're being unusually uncharitable in your reading here, Seth. I don't see anything inaccurate in her article. It's a bit imprecise or unclear in places (for instance, she shouldn't have said "exactly"), and it all seems pretty basic, but I don't see this deep ignorance of research design that you're reading into her article. Her first principle is that you need to eliminate confounding variables so that you can be confident that differences are due to the factor that you're trying to study. She describes random assignment as the standard way to do this (I'm not sure why you think she doesn't understand random assignment when she discusses it right there, explaining why randomization is better than observational studies that try to statistically control for differences). The second principle is saying (correctly) that larger studies give you a more precise estimate of the effect size. Studies with a smaller sample size have wider confidence intervals. A point estimate of a 20 % reduction in risk may be misleading if the confidence interval is a 5 %-35 % reduction. The third principle is that other evidence can continue to be relevant after you've done a full study with random assignment. She seems to reach the correct conclusions about the two examples that she describes, one (prayer) where she thinks you should doubt the results of the study because of other evidence and one (beta carotene) where she thinks that you should trust the results of the study despite the other evidence, although you're right that she doesn't give much of an explanation of how to reach these conclusions.

seth (2009-07-03 20:36:45)

True, she does mention randomization. Maybe her mistake was to ask an epidemiologist about clinical trials. Not realizing that epidemiologists do surveys, not experiments. Equation of the groups being compared is a much bigger deal for epidemiologists than experimenters. I don't think it's obvious that the beta-carotene clinical trials are more trustworthy than the other beta-carotene studies. I'd have to know a lot more about the details before I'd reach that conclusion. For example, large clinical trials allow vast possibilities for data entry errors, which will reduce differences between groups. I know an example where a transcription error wasn't noticed for 40 years. Did the MRFIT clinical trial reach the right conclusion (of no effect)? It's still hard to know. What neither Kolata nor her experts understand is that until something more accurate than "randomized clinical trials" comes along, we have no way of generally assessing their accuracy – just as the problem with eyewitness testimony only became apparent when DNA testing came along.

Tom (2009-07-04 19:56:42)

Another NY Times expert: The fat gent heading up Yale's Obesity Center: <http://www.nytimes.com/2009/07/04/health/04patient.html> *What matters most is your level of motivation and your willingness to change,* says Kelly D. Brownell, a psychologist and director of the Rudd Center for Food Policy and Obesity at Yale. Really, Dr. Brownell? How would you know?

Seth's blog » Blog Archive » Yogurt Associated With Less Allergies (2009-07-11 09:15:02)

[...] Note the small sample size. Contrary to some experts, it's a good sign. It means the differences were strong enough to be significant in a relatively small sample. [...]

Fri, Jul 17th – CrossFit Ireland - Great People. Great Fitness. (2009-07-16 16:02:24)

[...] Perfectionism - Brian Degenero How Much Should We Trust Clinical Trials - Seth Roberts [...]

Don (2010-02-16 12:47:34)

thanks for your posting. I loved the comments and that back and forth. It reminds me, in some slight way, about how clinical trials come about, and how they are used to find both negative and positive results. We all need to go back and forth and finalize and make our opinions clearer as we move forward. Thank you for an enlightening post!



## Teaching Kids to Cook (2009-07-03 15:40)

Outside Berkeley Whole Foods I encountered [1]this cooking camp in session – they teach kids 8-12 years old to cook in two-week sessions, 4 hours/day. I love the idea. I think childhood obesity is due to eating ditto foods (foods, usually factory-made, that taste exactly the same each time) – teaching someone how to cook is a good way to reduce that.

I asked if they included any fermented foods in the curriculum. "Tomorrow we're making tofu," said one of the counselors – a Nutrition major at UC Berkeley. "Tofu is not a fermented food," I said. She wasn't sure what a fermented food was.

1. <http://www.sproutscookingclub.org/>

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Carol (2009-07-03 20:17:54)

Did you at least give her a recipe for making yogurt? Some 30-ish years ago, I used to make my own tofu, and one of the steps is soaking the soybeans overnight. In warm weather, they frequently 'fermented' to the point of being quite bubbly before the steps of grinding, milking and boiling. I'm sure anything alive was killed in the process of boiling, of course. No tofu I have had since tastes as nice as fresh tofu still slightly warm from the coagulation and straining stages. Once it's refrigerated, it becomes something entirely different.

## SLD on Twitter? (2009-07-04 19:29)

According to [1]this there is a Shangri-La Diet page on Twitter. I found only [2]these tweets.

1. <http://boards.sethroberts.net/index.php?topic=7143.msg87172#msg87172>

2. <http://search.twitter.com/search?q=shangri+la+diet>

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Aaron Blaisdell (2009-07-05 08:50:26)

Interesting how this "snake oil" comment that one of the tweets made seems to crop up repeatedly regarding the SLD. Funny thing is, the SLD is virtually free (i.e., the price of a bottle of ELOO or a bag of table sugar and tap water) and you don't stand to make any money on it (except from your book, of course). So it completely does not fit the pattern of a snake-oil salesman. The point of a snake-oil salesman is to make money by selling a placebo as if it were medicinal. But you aren't selling anything–so even if taking oil (or sugar water) by your method turns out not to work (and the evidence is against this) you're not getting rich off of it.

Pinkmug (2009-07-07 06:35:21)

Oh! Only two tweets! The day I first saw that page there were 10 or more! Weird... unless tweets can be taken back. :O

## Tucker Max on Law School (2009-07-04 19:37)

When [1]Tucker Max was in law school (at Duke, a [2]top-rated law school), he made a bet with his friends. He claimed he could sign up for a class, attend none of the classes, do none of the reading, never study, and – armed only with class notes from a friend (who attended the class) that he brings to the final without previously studying – get a 2.5 or better on the final, thus passing the course. (Highest possible grade is 4.0.) And he would let them choose the class.

A friend chose Federal Tax. A really tough class, it was said. The final lasted two hours. It consisted of several hypothetical situations to which you write an essay-like answer.Â Tucker finished 20 minutes early. He got a 2.7, which wasn't the lowest score in the class (of about 60 students).

[3]More trouble with the basics at Duke. [4]For whom do law schools exist?

1. <http://www.tuckermx.com/>

2. [http://en.wikipedia.org/wiki/Duke\\_University\\_School\\_of\\_Law](http://en.wikipedia.org/wiki/Duke_University_School_of_Law)

3. <http://www.blog.sethroberts.net/2008/05/09/as-if-i-wasnt/>

4. <http://www.blog.sethroberts.net/2008/05/13/for-whom-do-law-schools-exist/>

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Heidi 555 (2009-07-05 04:56:15)

lol Seth, this anecdote brings back memories. When I was a freshman at Tufts, I was taking some kind of Intro to Psychology course that was required before taking any other classes in that department. It was a huge lecture class and the professor (to me at that age) was terrible. The first exam was multiple choice and so easy that I realized that I could quit the class (which felt like a complete waste of my time) and still do well. I sold my book, stopped attending the lectures, did not look at anyone's notes, and bragged to my friends. My recollection is that I got B or a B+. It's both funny and sad.

peter (2009-07-05 08:21:08)

the purpose of going to law school (or any school for that matter) is not to get a grade; it's to develop one's mind. doing the reading and attending class is directed towards that purpose; the grades are a misdirection (think food pellets given to rats for pressing the right button) and incidental to the main purpose.

Bryan (2009-07-05 09:48:47)

Peter, grades are not at all incidental to law school. Unlike undergrad, you are being ranked according to your GPA. Job opportunities are dependent on this ranking. (It's true that grades are most important to securing your first job – after that, you will be evaluated on your job performance and experience.) I agree with you in a general sense that the purpose of school is "to develop one's mind", but law school (like med and business school), is designed to teach you specific skills – how to perform a legal analysis, conduct legal research, write legal documents, etc. Grades are supposed to signal to future employers of how well you do those tasks relative to the other people in your class.

seth (2009-07-05 13:34:10)

Peter, if anyone goes to law school to "develop one's mind" I haven't met them. The overwhelming reason is to become a lawyer. On the other side, law professors deeply dislike the notion that they are teaching job skills – so declassé! So most of them – at least at prestigious law schools like Duke and Berkeley – do as little of it as they can get away with, entirely consistent with a Veblenian view of academia (everyone tries to be as useless as possible).

Michael L. Van Cise (2009-07-05 18:28:59)

I can believe the student's story. I recently graduated from law school (2006) and I took federal tax. I would expect that with good notes and some time spent studying, a highly intelligent person could pass a law school course. Someone who was able to get into Duke law and has enough confidence to propose the bet must be pretty smart. Federal tax is tough, but it's also fairly difficult to fail a law school course if you get a general gist of the concepts and have good writing skills. I second one of the commenters in that grades aren't the sole reason for the education and would agree that something is gained from the time spend in class over the course of the semester.

Andrew Gelman (2009-07-07 06:43:00)

Sitting in the classroom is useful for some students and not for others. Just because someone managed to get a grade that "wasn't the lowest score in the class" without studying, doesn't mean that the lectures are useless to everyone. Personally, I also think it's ridiculous to think that in academia, everyone tries to be as useless as possible. Maybe this was true 100 years ago for the people Veblen studied, but it certainly doesn't fit with my experiences. I also think Seth is putting universities in a damned-if-they-do, damned-if-they-don't situation: if they teach job skills, you can criticize them for not truly caring about learning; if they don't teach job skills, you can criticize them for being snobs. I know some law professors. I've never sat in their classes, but I'd guess they teach general concepts and also job skills; the two can't be completely separated.

seth (2009-07-07 07:35:45)

Veblen was trying to make a point - that academics, like many other groups of people, show off by showing how useless they can be. To make that point he gave examples. It's like the difference between a drawing and a photograph; the drawing leaves out a lot for the sake of emphasis. A current example of what Veblen was talking about is here: <http://www.blog.sethroberts.net/2007/09/11/modern-veblen-flight-from-data/> I wouldn't criticize universities if they taught job skills. I've said about a thousand times that they should do more to help undergrads figure out what jobs they'd be good at and what jobs they'd enjoy. That's close to teaching job skills. I know one law professor. She says that law professors should stop being second-rate philosophers and start teaching job skills. That's what she tries to do but she's the rare exception, according to her.

Corina (2009-08-28 11:17:15)

My name is Corina and I am a nerd. I Hope they Serve Beer in Hell is not a frat novel, it's a gothic novel, how do I know? I know because I am a nerd. I contacted Tucker Max about this, because the movie is a comedy based on a gothic novel, college students sucking dick in public restrooms is not laughing matter. what about the innocence of children? The Revolution of the Nerds start today. NERDS are the new Goths, our books are our weapons, and our mission in life is to defend the innocence of children.

Andrew Hales (2011-12-05 05:52:06)

I love your blog. Nice job. :) "Fail Harder" - Mark Zuckerberg

## **Progress Announced in Scurvy Research (2009-07-05 10:24)**

From [1]here:

"Cure just around the corner"

WASHINGTON (Reuters) - Scientists from the National Scurvy Institute (NSI) recently convened a 5-day conference to assess progress in the War on Scurvy. . . .

A cure is just around the corner, announced a spokesman at the conference. Over the past 30 years NSI, NIH (National Institute of Health) and ASS (American Scurvy Society) have spent over \$30 billion on scurvy research. Pharmaceutical companies have over 80 new drugs in development to combat scurvy according to the FDA.

The 5-year survival rate after diagnosis of scurvy is over 50 % up from 30 % just 20 years ago although 500,000 Americans continue to die of the disease each year. . . .

Risk factors for scurvy include cigarette smoking, diets high in saturated fat, and long ocean voyages. Sailors are particularly at risk for the disease. A researcher at the University of Washington has speculated that there may be a substance in sea water that triggers the disease. . . .

Researchers at the University of Maryland, working on the Human Genome Project, have identified a "Scurvy gene." From this it may be possible to develop a test to identify individuals at risk for the disease.

Scurvy doctors have long emphasized the importance of frequent screenings for scurvy in at-risk individuals. The disease can be effectively treated if detected early enough. Men and women over 40 should get regular checkups.

Conventional treatments for scurvy include frequent gum cleanings to combat the bleeding associated with the disease, surgical amputation of atrophied limbs that have been ravaged by the disease, and stimulants to combat the lassitude characteristic of the disease.

A pilot research program has been proposed to NSI that would study a possible connection between Vitamin C and scurvy. A study conducted on 20,000 Americans at the University of Florida showed a substantially higher rate of scurvy in people who don't eat fruits and vegetables. Dr. Henry Jacobson, assistant director of NSI, was quick to point out that no such connection has ever been scientifically proven. Vitamin C as a treatment for scurvy remains on NSI's "unproven remedies" list. Clinical trials conducted in the 70's showed no effect of Vitamin C on scurvy, added an NSI spokesman.

In related news, officials at the American Pellagra Society (APS) have designated the month of May as "Pellagra Awareness Month"...

1. <http://www.internetwks.com/pauling/haha.html>

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NM\$ (2009-07-05 11:18:23)

Depressing, and yet optimistic. Scurvy was once considered as big a problem as cancer for those who got it or had to pay for it, yet its solution proved pathetically simple, even before the precise mechanism of how it was caused was understood. But also depressing: It took decades for this solution, easy as it was, to be widely adopted. Per Wikipedia, John Woodall first identified a dietary deficiency as the cause of scurvy, and prescribed fresh food or citrus fruit as a cure for it, in 1614. It wasn't until 1747 that James Lind "formally" proved scurvy could be both treated and prevented with citrus fruit (I don't know what what "formally" means here). But it wasn't until the Napoleonic Wars, which began in 1803, that scurvy was finally eradicated from the Royal Navy. <http://en.wikipedia.org/wiki/Scurvy>

Ashish (2009-07-05 16:03:14)

"Scurvy kills millions"! This isn't real, uhh, is it?

seth (2009-07-05 16:20:40)

no, not real

Nathan Myers (2009-07-06 12:35:54)

Astonishingly enough, the means to prevent scurvy was actually forgotten only decades later. Robert Scott, the south polar explorer, and most of his crew died of scurvy in 1912. They brought along no food containing vitamin C, or indeed anything

fresh. The Royal Navy had lately standardized on rations including canned lime juice that had all the vitamin C cooked out. Scott's rival, Roald Amundsen, fed his crew fresh seal meat, and lost none of them.

Quercki (2009-07-14 12:40:37)

The Portuguese found that chile peppers prevented scurvy and took them to their colonies in India and Asia, probably in the 1500s.

### **Refrigerator Parents (2009-07-08 21:23)**

Two epidemiological case-control surveys have linked the age at which, growing up, your home got a refrigerator with your chances of getting Crohn's Disease later in life. The controls (without Crohn's) got refrigerators later than the cases (with Crohn's). This is not one of those data-mining correlations. It was (a) predicted and (b) found in two independent studies.

Crohn's Disease is much more common in rich countries than poor ones so it was reasonable to examine aspects of lifestyle that distinguish rich and poor countries. In rich countries, the likelihood of having Crohn's seems to be increasing over time, which is more reason to look for environmental explanations. [1]One of the studies was done in Tehran, where a significant fraction of the population didn't have a refrigerator when they were born. The control group was patients with irritable bowel syndrome, a curious choice. (The differences might have been larger had they chosen a non-inflammatory digestive problem.) [2]The other study was done in England and used a control group of patients with a non-inflammatory disease.

Refrigerators, of course, retard the growth of bacteria, which I believe everyone needs to eat plenty of (the umami hypothesis). Long ago, "[3]refrigerator mothers" – mothers who treated their children with insufficient warmth – were blamed for autism and schizophrenia in their children. Now that it is clear that [4]autism is connected with digestive problems there may be ironic truth in the old claim.

Thanks to Dennis Mangan.

[5]Refrigerator poetry.

1. <http://www.plosone.org/article/info:doi/10.1371/journal.pone.0004288>
2. <http://www.springerlink.com/content/p6q21tp76x013u51/>
3. [http://en.wikipedia.org/wiki/Refrigerator\\_mother](http://en.wikipedia.org/wiki/Refrigerator_mother)
4. [http://www.usatoday.com/news/health/2009-03-02-autism-gene\\_N.htm](http://www.usatoday.com/news/health/2009-03-02-autism-gene_N.htm)
5. <http://www.stumbleupon.com/s/#2jZnDG/isnoop.net/toys/magwords.php/>

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Nathan Myers (2009-07-08 21:50:26)

My daughter has Asperger's, but no discernible digestive problems. I wonder if the connection is only that the apparent severity of autism symptoms is exacerbated by gut pain. Fix the gut pain and the symptoms largely subside, just because autism sufferers are (as for other distractions) not good at ignoring pain. The number of people reporting successful treatment of autism with chelation despite the difficult theoretical problems with the idea (chelation mostly removes metals from the liver) leads me to suspect that it's the big mineral supplements chelation patients get, after a session, that actually help. It

seems easy to test.

justin (2009-07-09 09:15:32)

I wonder if the connection here to Crohn's is related to bacteria reducing the impact of anti-nutrients (phytic acid) – such as those found in grains/legumes. <http://wholehealthsource.blogspot.com/2009/01/how-to-eat-grains.html> Or maybe it's just that so much of our ability to digest stuff is dependent on bacteria, so abundance (and perhaps diversity?) of bacteria make the gut much more efficient.

Nathan Myers (2009-07-09 14:13:53)

Everybody insists bacteria don't survive a trip through the stomach, yet our colon is full of them. How did they get there, and how did they survive the trip through the stomach? Is it only bacterial spores that get through? Should we be eating slow-dried fermented food, because those bacteria have had a chance to put themselves in spore capsules while it dried?

seth (2009-07-09 17:29:32)

I agree, Nathan, the idea that 'bacteria don't survive a trip through the stomach' makes no sense except as a vague approximation. (Like caloric values of foods.) And if 99.99 % of a certain bacteria are killed in the stomach, so what if we eat a billion of them? However, the notion that we should be constantly eating bacteria-laden food (I believe daily) implies a great daily die-off. And therefore a need for replenishment.

### **Homemade Kombucha: The Hard Part Made Easy (2009-07-09 14:58)**

The only hard part of making kombucha is getting starter culture. [1]Here's an easy way to do that:

Get a bottle of K.T.'s [or any non-pasteurized brand] . . . remove the cap, cover with cotton [or paper towel] and rubber band, set in warm spot [room temperature is fine] for about 3 weeks [or less] and a nice baby culture will grow on the top! Simply pour the entire contents in your . . . tea and sugar mixture.

I noticed the same thing with [2]Rejuvenation Company kombucha stored at room temperature for a few weeks. To speed up culture growth transfer the kombucha to a container with a wide mouth, so that it gets more oxygen. Adding sugar, a few teaspoons/cup of kombucha, might help.

1. [http://www.earthclinic.com/Remedies/kombucha\\_tea.html](http://www.earthclinic.com/Remedies/kombucha_tea.html)

2. <http://www.rejuvenationcompany.com/>

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Aaron Blaisdell (2009-07-10 06:59:24)

Seth, thanks for providing me with a piece of your Kombucha starter. I placed it in a wide-mouth glass jar with some black tea and sugar about a week ago and a nice mother has formed on top. I tasted it last night and it is still too sweet so I'll let it sit some more and keep tasting it every few days until it's sour enough for my liking. It already smells great!

justin (2009-07-10 08:49:05)

This is basically the method I used to get started. I just went the "speedy" route and brewed some fresh sweet tea, let it cool to room temp, put it in a widemouth gallon sized jar (same size I'd ultimately use for a full batch), cover, and wait. I've now on

batches two and three of kombucha – this is probably five weeks later?

Dan (2009-07-10 13:45:53)

I've done two batches now and starting on my third. The first I took down too soon and it was too sweet because of it. I simply judged it wrong during testing. I should have let it ferment longer. It took 9 days. It had 1 1/4 cup sugar and 10 green tea bags and 1/4 cup white vinegar. The second batch I used 1 cup sugar and 8 tea bags (lipton) and 1/4 cup white vinegar. This one took 9 days too but this time I was better at judging the sweetness when I finished it. Interestingly this second batch had a fizz to it, even in the big gallon jug as I was pouring it into 16 oz ball jars for the fridge. But after it's been in the fridge even with lids, the fizz went away. This next batch I'm starting today I'll use 1 cup sugar and 10 lipton tea bags. At the end I plan on leaving a few of the 16 oz ball jars of finished tea at room temp for a few days before refrigerating. I've read this will give it fizz. All batches I use a gallon wide mouth jar, put in a Coleman ice chest with part of a heating pad inside. I have a digital thermometer inside and I keep it around 80 degrees, plus or minus a few degrees. My first batch I used a starter culture from Kombucha America. The second and now my third batch I use the mushroom from the old batch. I rinse it off using spring water first. My goal is to get it to taste like GT's original version. So far mine have not had as much flavor or tasted as strong as I'd like. Too much info? Dan

Dan (2009-07-10 13:57:29)

I just noticed on the side of the GT's bottle it says "cultured for 30 days". Now this is interesting because everything I've read online and the instructions from Kombucha America all say the same thing, from 7 to 10 days to culture. If 30 days is what it takes to get something like GT's, I'm wondering how much of each ingredient they use at the start. Could they be using quite a bit more sugar, so when it gets to 30 days, although the sugar is gone you have a much tastier beverage? Dan

seth (2009-07-10 14:19:10)

Dan, I've varied the number of tea bags (per two quarts water). 3 is too weak, 5 is too strong. So I use 4. The flavor I get is just as good as GT's, if I wait a few weeks or more.

Dan (2009-07-10 14:28:38)

Ah, so I've just been a little impatient sounds like. I'll let this batch go longer this time. How much sugar do you use for two quarts? And do you use vinegar or some tea from a finished batch or none of these? Thanks

### **Modern Veblen: Kathy Griffin Tells the Truth (2009-07-09 20:12)**

From Season 3, Episode 6 of My Life on the D-List:

TV SHOW PRODUCER [preparing Kathy for the questions she'll be asked] What do you love about hand-bags?

KATHY GRIFFIN That they are a statement that I'm rich.

This reminds me of Albert Einstein saying his two favorite thinkers were Thorstein Veblen and Sigmund Freud. We really are smarter now, just as James Flynn says. Einstein, surely the best physicist of his generation, was unable to see that Freud was bogus, and, although he was right about Veblen, talented comedians now say exactly what Veblen said.

More Kathy Griffin in this week's EW: "I have not read a book since last week's Us Weekly." That makes two of us, Kathy.

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Aaron Blaisdell (2009-07-10 07:07:43)

Actually modern neuroscience is vindicating much of Freud's hunches about the human psyche. Psychotherapy itself can be likened to incentive learning, of which my colleague Bernard Balleine studies the neuroscience of in rats. Sure, Freud made some glaring errors that drew ire from the more "scientific" community, but unfortunately he has been derided and misrepresented by most scholars and laypeople alike but without knowledge of what he actually wrote and said.

seth (2009-07-10 10:03:52)

What hunch of Freud's is neuroscience vindicating? I've read lots of Freud. I kept hoping the next book would make it clear - but it didn't.

Andrew Gelman (2009-07-10 11:59:48)

Seth: You seem to be backing away from your claim that "Freud was bogus" to a weaker claim that you don't know. Also, I don't see the connection between Flynn and Einstein. Are you saying that, if Einstein only had 15 more IQ points, he would've agreed with you that Freud was bogus???

Anthony (2009-07-10 13:23:41)

@Aaron, "Actually modern neuroscience is vindicating much of Freud's hunches about the human psyche." I second Seth's question - which ones? How many hunches vindicated: >10 %, >20 %, >50 %? Finally, what does "vindicating [...]" hunches" mean here (how strong of a claim is it - how much distance between his 'hunch' and an actual contemporary theory that is well established)?

seth (2009-07-10 13:54:32)

Andrew, I have no idea what Aaron is talking about. As for Flynn and Einstein, I'm not saying I'm smarter than Einstein. I'm saying that, in agreement with Flynn, that I live among smarter people. To say Freud is bogus is nothing new these days. The curiosity is the opposite - smart well-educated people, such as a Berkeley professor of English, who write long articles against Freud. Don't they realize it's obvious? If the average IQ in Einstein's time had been 15 points higher, I suspect the scoffing of his friends would have set Einstein straight.

Aaron Blaisdell (2009-07-10 15:53:31)

I already gave one example. According to Howard Shevrin, professor emeritus at the University of Michigan Psychology Department, the whole enterprise of psychotherapy is largely predicated on leading the patient or client to discovering the source of their problem (anxiety, fear, or other types of emotional conflict) through a dialog with the therapist. According to Howie, the therapist often sees the likely underlying problem early on in the psychotherapeutic process, but just telling the patient would not help them much. It isn't the cognitive knowledge of the nature of their problem that will help them, but reliving the problem or facing it directly from memory that allows the patient to resolve the emotional or psychological problem. This is very similar to incentive learning (in people and rats). Tony Dickinson, an experimental psychologist at Cambridge University, related a tale of drinking too much wine and eating watermelon as a child on a trip to Spain. The next day, he went back to the market for more watermelon which he was craving, but as soon as he bought one, opened it up and smelled and tasted it, he discovered that he was repulsed by it. He had acquired a conditioned taste aversion to the watermelon, but didn't realize it until he learned about the new incentive value of the watermelon. This is called incentive learning, and there is a parallel phenomenon in rats which Tony has shown. A rat first learns to press a lever to get a type of food in a skinner box. Then the rat is allowed to eat that food in its home cage followed by getting sick (with injections of lithium chloride). Finally, when the rat is returned to the skinner box, it presses the lever avidly, but when the food is actually delivered it will refuse to eat it. That is, the rat engages in a goal-directed response (lever pressing) until it is faced with the food reward and it discovers that it now doesn't like it. Bernard Balleine, a behavioral neuroscientist in the psychology department at UCLA (and former Ph.D. student of Tony Dickinson) has dissected the neural circuitry contributing to both goal-directed learning and incentive learning.



I believe Freudian psychoanalysis involves a similar kind of incentive learning that the patient must be confronted with (as the rat is confronted with the revalued food) in order to realize and thus resolve (or deal with) their problem. A second point on which Freud seemed to be correct was on his notion of primary versus secondary process—a central tenet of Freudian theory. These processes map very nicely onto attributional versus relational processes in cognitive psychology (see for example papers by Douglas Medin).

seth (2009-07-10 20:37:18)

Thanks, Aaron. I find it hard to imagine anyone reading Freud and predicting, even a little, the two phenomenon you mention. Here's a description of his primary/secondary distinction:

Freud's terms "primary process" and "secondary process" designate two opposed yet nevertheless complementary modes of functioning within the psychic apparatus. The primary processes, directly animated by the drives, serve the pleasure principle and work to actualize a free flow of psychic energy. Secondary processes, which presuppose the binding of this energy, intervene as a system of control and regulation in the service of the reality principle.

from <http://www.answers.com/topic/primary-process-secondary-process>. It sounds like an idea about motivation, not about how we think (cognitive psychology).

Aaron Blaisdell (2009-07-11 07:58:06)

Hi Seth, Thanks for the definitions. I actually have not read a lot of Freud. I used to shun him thinking he was at best a quack. But a conversation with Howie Shevrin, one of the leading modern proponents of psychoanalytic theory in psychological research, I have revised my opinion of Freud. It was Howie who described to me primary and secondary process in cognitive terms. One of his collaborators, Linda Brakel, has written a book on the use of psychoanalytic theory in cognitive research. The book is titled "Philosophy, Psychoanalysis and the A-rational Mind (International Perspectives in Philosophy and Psychiatry)".

### **The Wisdom of Young Picky Eaters (2009-07-10 09:50)**

I'm sure that what we want to eat is a good guide to what we should eat, so long as you ask what our preferences would have led us to eat 100,000 years ago – before we killed off the woolly mammoths. (Curiously, I've never seen this obvious idea in any nutrition text.) A vast amount of trial and error is embodied in those preferences. Because we learn to like foods, our best guide to unlearned preferences may be what children want to eat.

The great essayist [1]George Trow doesn't quite get it, I'm afraid:

In the New History, the preferences of a child carried as much weight as the preferences of an adult, so the refining of preferences was subtracted from what it was necessary for a man to learn to do.

[2]The Wisdom of the One-Year-Old Picky Eater. [3]The Wisdom of the Five-Year-Old Picky Eater.

1. [http://www.newyorker.com/archive/1980/11/17/1980\\_11\\_17\\_063\\_TNY\\_CARDS\\_000329878](http://www.newyorker.com/archive/1980/11/17/1980_11_17_063_TNY_CARDS_000329878)

2. <http://www.blog.sethroberts.net/2009/05/10/the-wisdom-of-the-one-year-old-picky-eater/>

3. <http://www.blog.sethroberts.net/2009/04/09/the-wisdom-of-the-five-year-old-picky-eater/>

Andrew Gelman (2009-07-10 11:57:23)

Seth, I recommend you spend a day following the local ice cream man. Based on this, I'm pretty sure you'll find that we should all be eating SoftServ all day and all night.

Aaron Blaisdell (2009-07-10 12:43:44)

And the only way to get my 3 year old to eat her yogurt is to put crackers or malted milk balls or the like into it. She turned her nose up at the free-range hard boiled chicken egg served in my home made chicken stock (also from a free range chicken).

## **Yogurt Associated With Less Allergies (2009-07-11 09:14)**

From the abstract of [1]a 2006 study done in Japan:

An epidemiological study was carried out on [134] first-year junior high school students in Wakayama Prefecture. Analyses were performed to investigate the relationships among eating habits of fermented milk or fermented soybean foods and the presence of atopic diseases. Serum levels of total IgE values, specific IgE to house dust mite and Japanese cedar pollen in these subjects were evaluated to clarify atopic status. . . . RESULTS: Serum total IgE levels were found to be significantly lower in those subjects habitually eating yogurt and/or fermented milk drinking, in comparison with those who do not habitually eat such fermented milk foods. Subjects with habitual intake of these fermented milk foods were significantly lower in having various allergy diseases compared with those without such an eating habit. However, no difference was found on the total IgE titers and having allergy diseases between subjects with or without habitual intake of Natto, a fermented soybean food.

Note the small sample size. [2]Contrary to some experts, it's a good sign. It means the differences were strong enough to be significant in a relatively small sample. [3]A review article about allergies and fermented foods.

Last January (2008) I got home from Japan and started eating miso soup so often I forgot what I used to eat. This January (2009) I went to the Fancy Food Show and became so interested in fermented foods I'm having trouble remembering what I used to blog about.

Thanks to Peter Spero.

1. <http://www.ncbi.nlm.nih.gov/pubmed/17159430>

2. <http://www.blog.sethroberts.net/2009/07/02/how-much-should-we-trust-clinical-trials/>

3. <http://www.ncbi.nlm.nih.gov/pubmed/11379044>

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peter (2009-07-11 11:08:18)

my thought (and intuition) is that different types of fermented foods generate different types of antibodies and that a variety of fermented foods is more likely to create a broad spectrum of immunity. i suppose that would also be true of probiotics.

seth (2009-07-11 17:40:32)

Peter, I agree, the difference between natto and yogurt is a puzzle. It might be a dose difference. In yogurt the bacteria are

everywhere. In natto, they grow on the surface. Perhaps different fermented foods generate different antibodies but there is almost an infinite number of possible antibodies. So whether you eat 2 or 10 isn't going to make a difference in terms of antigen-space coverage.

Seth's blog » Blog Archive » Easy versus Hard: Hunting, Agriculture, Etc. (2009-07-12 12:15:29)

[...] Medical Drugs: Hard. Hard to invent, hard to make, hard to sell, hard to get, hard to afford, not to mention dangerous. It is much easier to cure/prevent problems by eating fermented foods, such as yogurt. [...]

Kevin Miller (2009-07-12 18:40:38)

The benefits of small samples assumes that all studies are going to be reported (or are equally likely to be reported). But the "file drawer" problem is particularly acute for small studies, given the relatively small resources involved. If you do (or the community does) 20 small studies and only report the one that's significant, then the assumption that the large effect size means a robust difference is not going to hold. Other than that, I agree that a plethora of small studies is better than one big one, but I do see the file drawer problem as a big issue that you're not taking into account here.

seth (2009-07-12 20:56:19)

Kevin, a "big" issue? If there is any evidence that the file drawer problem has ever mattered, I'd love to know about it. Then I might agree with you. Without evidence, this idea resembles the complaint about graphing data that was made when exploratory data analysis, which emphasizes graphing, first became popular: The more graphs you make the more likely you will be misled by random patterns. Professors of statistics actually said this!

Kevin Miller (2009-07-20 07:38:31)

Good point. I found this article: [http://www.scientificexploration.org/journal/jse\\_14\\_1\\_scargle.pdf](http://www.scientificexploration.org/journal/jse_14_1_scargle.pdf) that presents a model (but with no actual evidence) suggesting that it doesn't take much of a file-drawer effect to bias the literature. I remembered this article - <http://www3.interscience.wiley.com/journal/119263052/abstract?CRETRY=1&SRETRY=0> - which argues that some of the "effects" of early day care on attachment suffer from this problem. That is exactly the kind of situation where you might expect this to be a problem - relatively small effects within the range of variation across countries and a lot of within-country variation, some probably due to temperament, some of the rest due to parenting, and room for other factors. I'd also heard the Thompson and McConnell planaria/learning/cannibalism results attributed to a version of this (that they kept running more worms until it worked, then stopped), although I couldn't find a citation to that claim and it may be folklore. What I would love to see as a paradigm is one where advocates of different views get together to design and run experiments that they would accept as being dispositive. In this case you'd have two biases (confirmation and what I'll call "I saw it myself") working against each other. But clearly small scale experiments are more informative than large scale ones.

seth (2009-07-20 09:32:45)

Thanks for the examples, Kevin. I suspect a variant of the file-drawer problem exists in epidemiology where the same data is analyzed many different ways until a significant difference is found. Here the evidence is that surveys find significant effects that when experimentally studied fail to produce the expected results. In all my experimentation, with rats, myself, and other humans, I usually do the experiment more than once to make sure the effect is repeatable. Nothing ever rests solely on one significant difference. Moreover, the effects are always much more significant than  $p < 0.05$ . This is another benefit of small experiments: Easier to check the results by doing another experiment.

### John Tukey and GPS (2009-07-11 20:31)

In [1]this amusing article Emily Yoffe tells about her troubles with GPS. She fails, unfortunately, to look on the bright side - to say how flawed GPS is better than no GPS. After a talk by [2]John Tukey, the statistician, at Berkeley, I told him that I had found the tools he wrote about in Exploratory Data Analysis to be really helpful. (For example, smoothing my data led me to discover that [3]eating breakfast made me wake up too early.) Tukey replied that if the tools are

helpful half the time, that's good. It isn't easy to make an interesting response to a compliment!

[4]Something is better than nothing.

1. <http://www.washingtonpost.com/wp-dyn/content/article/2009/07/10/AR2009071003458.html>
2. <http://www-history.mcs.st-andrews.ac.uk/Biographies/Tukey.html>
3. <http://repositories.cdlib.org/postprints/117/>
4. <http://sethroberts.net/articles/2007%20Something%20is%20Better%20than%20Nothing.pdf>

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david (2009-07-12 07:07:57)

"One night at 4 a.m., a driver found he had literally reached the end of the road in their back yard. This so unhinged him that he set his car on fire – the explosion woke up my in-laws – and ran off looking for the highway. When the police picked him up a few hours later, he said that when he realized the GPS had sent him to this dead end, he lost it." If it hadn't been the GPS, it would have been something else...

Inge (2011-04-01 11:35:18)

Great post related to my field of gps, thanks for the interesting read!

### **Shangri-La Diet Quote of the Day (2009-07-12 09:25)**

From [1]Daffodil-11:

The other great benefit I've seen, the thing that makes it worth chugging my mix of oil and water twice a day in and of itself, is the change I've felt in my attitude toward myself. I no longer feel disordered and tortured and ashamed. I no longer feel that I'm daily failing at something that so many people seem to find so easy and effortless. Now this thing I've fought with my whole life has become so much easier, so very nearly effortless for me as well. It turns out it wasn't a fundamental failure of my essential being after all. Who'd have guessed?

1. <http://boards.sethroberts.net/index.php?topic=7157.msg87508#msg87508>

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### **Easy versus Hard: Hunting, Agriculture, Etc. (2009-07-12 12:15)**

Coming across this sentence

The more intensive the agricultural system, the more work required for a unit of food.

in Charles Maisel's *The Emergence of Civilization* (1990, p. 35) made me think for a while and make a list:

1. Hunting: Easy.
2. Agriculture: Hard. In agriculture you have to start from scratch in a way you don't when hunting.
3. Self-Experimentation: Easy.
4. Ordinary Science: Hard. It is much harder to discover something useful via ordinary science than via self-experimentation.
5. Fermentation: Easy. It is easy to make yogurt or kombucha, for example.
6. Medical Drugs: Hard. Hard to invent, hard to make, hard to sell, hard to get, hard to afford, not to mention dangerous. It is much easier [1]to cure/prevent problems by eating fermented foods, such as yogurt.

What's interesting is the starkness of the differences. Hunting and agriculture are two answers to the same question. I suppose we backed into agriculture because we over-hunted. In the other two pairs, I think the basic Veblenian dynamic was/is at work: The more useless, the more high status. Scientists must be [2]elaborately theoretical and high-techy and wasteful to be high-status. Likewise with home remedies (such as fermented food) versus medical drugs: To be high-status, doctors had to promote elaborate, obscure, hard-to-get remedies.

1. <http://www.blog.sethroberts.net/2009/07/11/yogurt-associated-with-less-allergies/>

2. <http://www.blog.sethroberts.net/2007/09/11/modern-veblen-flight-from-data/>

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Jason Coyne (2009-07-12 13:08:40)

If all of the "easy" things are really that easy, nobody would bother with the "hard". They never would have been invented. The problem with all of the easy things is the same thing. They are inconsistent. Hunting works great, until you starve to death. Agriculture, once working gives much more predictable results. Self experimentation works great, until you poison yourself. Self experimentation also has quite a few issues with repeatability, and objectiveness of results. Science gets rid of "I think this worked for me." More importantly it gets rid of "I guess arsenic is a poison. Too bad I'm dead or I would tell someone else not to try it." Fermentation is easy. But one batch can be highly different from the next, and there are only so many problems yogurt will solve. Medicine lets you solve other problems, and have consistent results. In your effort to say that science occasionally misses obvious answers (which it does), you have somehow morphed into science is worthless.

seth (2009-07-12 13:26:33)

Let me correct a few misunderstandings: 1. I'm not complaining about "medicine" in general. It's the way doctors and medical researchers dismiss home remedies, such as yogurt, that's the problem. The way dermatologists dismissed the idea that acne was due to diet. 2. Nor am I saying "science is worthless". I am saying that most scientists find it enormously difficult to do useful work. (Among other problems, many of them find it degrading.) In spite of that, useful work gets done. I used a lot of it in developing the Shangri-La Diet, for example. I've used a lot of it to support the umami hypothesis. 3. Nor am I saying "science misses obvious answers". I'm saying conventional science, such as conventional weight control research, misses easy solutions. These easy solutions aren't obvious. What's an example of the problems of "repeatability" and "objectiveness of results" that self-experimentation has? All experiments are n=1 in various ways: one classroom, one school district, one lab.

Jason Coyne (2009-07-12 15:49:13)

I think there is quite a bit of possibility for a placebo issue with something like the shangrila diet. People are thinking their appetite will be reduced, and therefore it is. Repeatability : Are people using the same quality of oils/sugars/whatever? Same doses? Same timing? What were their diets before, what was their weight before, what is their history with dieting, etc. That's a lot of variables in play, that could completely skew results. Objectiveness : You have no control group with  $n=1$ . Changes could be placebo, could be environmental, could be many things. This does not mean self experimentation is worthless. I think self experimentation is a great way to develop a hypothesis. My issue is that you seem to have jumped to "This works, it's a fact.", and to get that level of confidence I think you need to go back to a more scientific process.

karky (2009-07-12 17:13:03)

I was not expecting the Shangri-La Diet to work. Nothing else ever worked, so my expectations were not high at all. Yet I have lost nearly 100 lbs on it and kept it off for 2 years now.

david (2009-07-12 18:17:16)

The problem with studies seems to be the expense and also motivation. Who's going to fund a study to test the SLD if they have no chance of making any money due to the results of the research? I suppose if enough people lose weight using the SLD, then someone selling a competing diet would have incentive to do a study in hopes of finding some problem with it.

beagle (2009-07-12 22:34:08)

Jason, I think you're comparing real world self experimentation with idealised scientific experimentation. Real world "scientific" experiments made by the medical community are often (perhaps more often than not) unscientific: Most results are found for a small focused group (one ethnicity; limited age group; limited geographical spread; no control for diet factors, etc.) and then assumed to be true for the population at large; Often, that's not the case. Drugs are often taken off the market for being harmful. Sometimes, it turns out that a drug has seriously unwanted side effects (e.g. Vioxx, antidepressants for young kids). Experiment size is \_never\_ taken into account in medical research – e.g., if you try 1000 different substances, 50 of them will have a p

seth (2009-07-13 04:14:47)

Jason, there are several reasons that weight loss via the Shangri-La Diet is unlikely to be due to a placebo effect. 1. I don't know of any weight loss studies that have shown a placebo effect. 2. The underlying science is heavily based on rat research. No placebo effect with rats. 3. Almost everyone who tries SLD has tried other ways – often many other ways – of losing weight without success. If the placebo effect was powerful in weight loss, then this wouldn't happen. Before I stumbled on SLD, I too had tried several ways of losing weight that failed. And even the ones that worked didn't work nearly as well. 4. Pets have lost weight via SLD. The "control group" with self-experimentation is previous and/or later observation – observations before or after the treatment of interest. As someone else commented after another comment, you're doing self-experimentation and you rely on it all the time; you just don't call it that.

Nadav Manham (2009-07-13 05:57:10)

Seth: It remains a mystery, but I believe some have hypothesized Veblenian dynamics in the development of agriculture as well. In hunter-gatherer societies it was difficult to display status via wastefulness and idleness—everyone had to work and most of what they worked for was consumed immediately. Agriculture promoted private property (this piece of land is mine, not yours; this stored harvest is mine, not yours) the division of labor, and the emergence of classes separated by the amount of manual labor performed—field workers as separate from supervisors and later kings, as separate from priesthoods to pray for rain, etc. All of this enabled Veblenian dynamics to take hold.

Jason Coyne (2009-07-13 14:45:50)

My point was not that SLD is a placebo effect. I think it actually works. My point is that things LIKE SLD are often subject to a placebo effect, due to the issues described above. These issues make it very difficult to separate the legitimate discoveries via self experimentation from the junk science. That distinction problem is why more formal science has taken over the "market"

in invention and discovery. Yes, it misses some things (even many things). But by doing systematic searches etc, it can find things that self experimentation is unlikely to stumble upon.

seth (2009-07-13 15:46:42)

Jason, without actual examples (not hypothetical ones) of what you're talking about, it is hard to even know what you mean, much less figure out if there is anything to it. What's an example of a "thing LIKE SLD" that is "subject to a placebo effect"?

### **Antibiotics and Debt: Sources of Weakness (2009-07-13 15:40)**

Alexander Fleming, the Scottish bacteriologist who discovered penicillin, the first antibiotic, served in the military during World War I. According to *Happy Accidents* (2007) by Morton Meyers, soldiers in that war often died from infections in relatively minor wounds. Rather than conclude that something was wrong with their immune systems, and wonder why, Fleming – unsurprisingly for a bacteriologist – began to think we needed more substances that killed bacteria. A hundred years later, the blind spot still exists. A few years ago I noticed that a wide-ranging course on epidemiology was being taught in the UC Berkeley School of Public Health. I knew the professor. I asked him, "Will the course cover what makes the immune system weak or strong?" "No," he said. You will look in vain for that topic in any epidemiology text. To call it a blind spot is being nice. Half the subject – the more important half – is being ignored. And Schools of Public Health favor prevention. Medical schools are worse.

In [1]an editorial in today's Financial Times, Nassim Nicholas Taleb and Mark Spitznagel point out that debt is inherently destabilizing because it creates less room for error. Financial professionals and economists, including those at the very top, don't realize this:

Alan Greenspan, former Federal Reserve chairman, tried playing with the business cycle to iron out bubbles, but it eventually got completely out of control. Bubbles and fads are part of cultural life. We need to do the opposite to what Mr Greenspan did: make the economy's structure more robust to bubbles.

Taleb and Spitznagel note that the dotcom bubble, when it burst, had only minor consequences. That's because it was an equity bubble rather than a debt bubble. The stimulus package is just more debt: public rather than private. It doesn't reduce the source of the problem: A too-fragile system. A great point – fascinating how rarely I hear it.

Just as Greenspan failed to understand the problem and chose the wrong lever to pull, so did Fleming and a million doctors and medical/drug researchers. They have tried to deal with a too-fragile system by killing bacteria. Bacteria, like financial bubbles and fads, are part of life. We need to make our bodies more robust to them. Fermented foods do that. By killing off bacteria inside our bodies, antibiotics do the opposite: Make us even more fragile.

1. [http://www.ft.com/cms/s/0/4e02aeba-6fd8-11de-b835-00144feabdc0.html?nclick\\_check=1](http://www.ft.com/cms/s/0/4e02aeba-6fd8-11de-b835-00144feabdc0.html?nclick_check=1)

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justin (2009-07-13 19:29:03)

I couldn't agree more. And the blind spot with regard to our financial system is all-encompassing. Even many of the more "clear-eyed" pundits fail to see the problem, prescribing more and more policies in a misguided attempt to change reality (and force human beings to be virtuous). Incidentally, the most obvious solution is not more control, it's more decentralized money because only a massively decentralized system can escape the systemic risk of central control. And more decentralized money

requires money to have more behind it than a promise by some debtor to pay you back (as with fiat currency or other forms of credit).

Eric Arias (2009-07-13 21:39:06)

If I'm understanding you correctly the typical logic for both the 'fixing' the economy and health is like: A perceived harmful thing (bacteria, less money changing hands) causes a problem in some entity (the economy and personal health). So the problem with both Greenspan and the medical establishment's approach is they ignore the aspect of some problems. In both cases the problem is better read as: the entity cannot defend itself the harmful things, how to help the entity defend itself (yogurt and less debt/more businesses and innovation)? If that's roughly how you meant it it seems fun. It's saying things happen all the time which can have harmful effects but those effects can or will be mitigated by keeping whatever entity (the economy, your health, culture) robust. This makes me think of my wife bragging about how Volvo engines are built to last 5,000 - 6,000 miles per oil change instead of the usual 3,000 on most cars because they can handle a little sludge. This seems to reflect the Shangri-la diet as well. Instead of trying to remove the so-called bad calories as most diets do, SLD makes one's system more robust to the need for calories. I wonder how this problem solving orientation can be applies to other areas such as personal productivity, greenhouse gases and the like.

Nathan Myers (2009-07-13 23:25:53)

Sorry, Eric, all cars can do 9000 miles between oil changes these days. It's because the oil is better now, and the gasoline isn't full of the corrosive chemicals that used to be needed to keep all that tetraethyl lead in solution. That's also why engines last longer – besides being more precisely machined, for less wear. The only thing that will affect greenhouse gases appreciably will be a source of power substantially cheaper than coal. (Extra points if it can produce high-pressure gases or vapor to drive existing coal plants.) Once a source cheaper than coal exists, coal will instantly become too expensive to dig up.

seth (2009-07-14 08:59:59)

It's a good question why the same sort of mistake – failure to make the system more robust – was made in two different areas. Maybe because demonization (bubbles are bad! bacteria are bad!) is easy while its opposite is hard? Or maybe because it is harder to understand what makes a system weak or strong than to notice the immediate source of the problem. That was certainly Barry Marshall's problem: It was easier to notice that a certain bacterium was associated with ulcers and kill it than to notice that low immunity was associated with ulcers and boost it.

justin (2009-07-14 13:52:56)

To some extent, I have to wonder if the mistake here is hubris: the belief that we \*can\* control complex systems with simple solutions. And in the case of the financial system, there are powerful interests that benefit from a credit/debt-based monetary system: banks and bureaucrats. Just look at Goldman Sachs' earnings today. How does a bank that quite nearly imploded nine months ago manage to blow out earnings in the worst recession in decades? Perhaps it is because they profit off of volatility in the system. They make money when the bubble is blown and place bets to profit when the bubble ultimately bursts. And in the meantime, they have a direct line to the U.S. government to bail them out or change the rules (And by direct line, I mean they have ex-employees running the show. ::cough:: Hank Paulson).

## **Genes Or Environment . . . Or Environment? (2009-07-14 06:29)**

Forty or fifty years ago, psychologists and other scientists talked about "genes" determining this or that. ([1]James Watson still talks this way.) A certain percentage of the variation of this or that (e.g., intelligence) was attributed to "genes". Hardly anyone outside genetics or behavior genetics knew what this meant, but many people thought they did. In reaction to the huge misunderstanding (e.g., those who said intelligence was "80 % genetic" but did not know what this meant), psychologists began to talk about gene-environment interaction. "Is the area of a rectangle determined by its height or its width?" they like to say.



But notice how fact-free this view is. A tiny number of studies have observed gene-environment interactions but they are very difficult. I think this has made it hard to realize something basic and important. Years ago, I heard a talk about squirrel circadian rhythms by Patricia DeCoursey, the scientist who introduced the concept of [2]phase-response curves. At her talk, she showed results from about 15 squirrels. She tested each one – with an emphasis on individual results that resembles self-experimentation – to determine how much light it needed to become entrained to a 24-hour light/dark cycle. One squirrel needed much stronger light than the others.

Here was an interesting finding that another scientist might have missed. What did it mean? Because the squirrels lived under very similar conditions (e.g., identical diets), it was almost surely a genetic difference. Let's assume it was. In nature, sunlight is plenty strong. The lab light was weaker. In nature, the genetic difference wouldn't make an observable difference. Only under artificial conditions did it become visible. It only became visible when the artificial conditions didn't supply enough of something important (sunlight). In other words, the newly-visible genetic difference implied there was something lacking in the artificial conditions. The genetic difference implied the environment mattered. The opposite of the usual interpretation.

I don't know any reason to think this is an unusual case. Aaron Blaisdell told me a story that shows its relevance to human health. Aaron is unusually sensitive to sunlight. Until recently, he could only spend 5 or 10 minutes in the sun before it became unpleasant. The condition is genetic. His mother has it; her father had it. It's called [3]Erythropoietic Protoporphyria. It is autosomal-dominant. Scientists even know where the gene is. That's where the understanding of most scientists stops. A genetic condition. Recently, however, [4]Aaron drastically changed his diet with great results, as noted earlier. At the same time as the dietary changes, his sun sensitivity got much better. He can now stay in the sun for an hour or more without discomfort. This is a gene-environment interaction, of course, but of a particular sort: The genetic effect showed there was something wrong with the environment, just as it did in DeCoursey's experiment.

Sure, there's always genetic variation – it's just usually hard to see. The wrong environment makes it much easier to see. It reveals a range of genotypes, all of which would be harmless in the right environment. So when you come across a "genetic disorder" such as Erythropoietic Protoporphyria, it is likely to imply an environmental problem. No one had ever told Aaron or his mother or her father that their condition suggested that environmental changes would help them.

1. [http://entertainment.timesonline.co.uk/tol/arts\\_and\\_entertainment/the\\_tls/article3039959.ece](http://entertainment.timesonline.co.uk/tol/arts_and_entertainment/the_tls/article3039959.ece)
2. [http://en.wikipedia.org/wiki/Phase\\_response\\_curve](http://en.wikipedia.org/wiki/Phase_response_curve)
3. [http://en.wikipedia.org/wiki/Erythropoietic\\_protoporphyria](http://en.wikipedia.org/wiki/Erythropoietic_protoporphyria)
4. <http://www.blog.sethroberts.net/2009/02/08/aaron-blaisdell-recommends/>

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Aaron Blaisdell (2009-07-14 08:38:25)

Seth, that's a nice tie-in with the squirrel study. I think the same theme is discussed in the 10,000 year explosion. The authors suggest that different modern peoples around the world have different mixtures of genes, with some people lacking alleles adapted toward a particular aspect of the environment, such as the Native Americans lacking alleles for small-pox immunity, or Europeans lacking alleles protecting against malaria. The genetic differences are meaningless in the environment to which the people are adapted, but show up when they are placed in the wrong environment (in the NA case the wrong environment was having small pox and other diseases introduced to their location). I think much of the data from Weston Price's book shows the same thing by showing how poorly many people around the world did on a Western diet of sugar and refined flour. The sugar and flour was the wrong nutritional environment. I really have thrived after moving toward a WAPF / Paleo / Primal type diet. And many people on the paleo and primal forums (e.g., Stephan's Whole Health Source blog and Mark's Daily Apple)

have reported much lowered sensitivity to the sun after going primal or WAPF. There was discussion on Stephan's blog of the importance of the correct ratio of omega 6 to omega 3 fatty acids on inflammation which can directly affect sun sensitivity. Getting off of industrial vegetable oils and replacing them with natural fats (e.g., saturated and omega 3 PUFAs and MUFAs) leads to improved gum health, healthier arteries, improved quality of sleep, and lowered sensitivity to sunlight among other things. It all revolves around systemic inflammation.

bennetta (2009-07-14 11:13:16)

"In other words, the newly-visible genetic difference implied there was something lacking in the artificial conditions. The genetic difference implied the environment mattered. The opposite of the usual interpretation." I have argued this exact thing many times, as have two medical doctors who are friends of mine, to explain attention deficit disorder. Even fifty years ago, ADD would not have been a problem for most folks as our lives were more mobile. We did a lot more with our bodies back then. Unfortunately, as we became less active, certain individuals became unable to cope. It's not that the round peg (ourselves) became square all of a sudden, but that the square hole (the environment) became round, creating a problem. One of the most popular methods of coping with ADD, as you might expect, is to change your immediate environment to become more ADD-friendly. Indeed, those who are diagnosed later in life (such as myself) probably already did so subconsciously, but were unable to adapt for some reason later on, causing it to become an issue. Myself, I played seven musical instruments by the time I graduated college, because it was the only thing I found I was good at and enjoyed. This doesn't translate well to real-life scenarios, however, where we are expected to have 40 hour a week desk jobs, pay bills, etc. To anyone with ADD such as myself, this environment relationship is obvious, as it is something we have lived with our entire lives. Clearly we are not stupid, yet for some reason we are still at a disadvantage in modern society. In primitive society, something like ADD may have even been a biological advantage. "The genetic effect showed there was something wrong with the environment, just as it did in DeCoursey's experiment." Exactly.

Robert Simmons (2009-07-15 09:11:07)

"No one had ever told Aaron or his mother or her father that their condition suggested that environmental changes would help them." I'm quite certain that this is wrong. Surely many people offered suggestions to them. "Wear sunscreen. Put on a hat. Do sunglasses help?" Etc. That they didn't phrase it the way you might have is irrelevant, as is that all of the proposed solutions either failed or were only marginally useful.

seth (2009-07-15 11:20:48)

Robert, by "help" I meant "reduce their sun sensitivity". I agree, I should have been more explicit.

Varangy (2009-07-16 14:52:02)

This post's title is a strawman: "Genes Or Environment . . . Or Environment?" No need to be mutually exclusive, allow me to summarize this post in two words: Gene expression.

Why is it hard to stick to a diet? (2009-07-31 07:09:56)

[...] Making decisions is hard because we aren't rational creatures even when we think we are. When it comes to the "listen to you body" advice, you can also change what your body says. Seth Roberts for example recommend to eliminate smell while eating by wearing a nose clip. A nice post from Seth about the nature of what genes determine: Seth's blog » Blog Archive » Genes Or Environment . . . Or Environment? \_ \_ \_ \_ \_ I am always open for feedback on my posts. That might focused on the argument at hand or on my writing style. If your feedback would go offtopic feel free to send me a Personal Message. My posts generally don't contain medical or legal advice, if you have a problem seek the opinion of an expert I don't believe in Beliefs. Nassim Nicholas Taleb [...]

## Assorted Links (2009-07-14 12:23)

- [1]Oatgurt being made. [2]Oatgurt recipe. I've made it once, it turned out well.

- [3]a caustic review of The Paleo Diet by Loren Cordain
- [4]how to make many fermented foods
- [5]hookworm therapy covered by New Scientist
- [6]dirt and depression

Thanks to [7]Heather Demetra, Oskar Pearson, James Lucoff, and Eric Wilhelm.

1. <http://magicmolly.tumblr.com/post/138655877/oatgurt-update>
2. <http://heathereatsalmondbutter.com/recipes/oatgurt/>
3. <http://www.westonaprice.org/bookreviews/paleodiet.html>
4. <http://www.instructables.com/tag/?sort=none&limit%3Atype%3Aid=on&q=fermented>
5. <http://www.newscientist.com/article/mg20327161.300-parasitic-worms-just-what-the-doctor-ordered.html?full=true>
6. <http://discovermagazine.com/2007/jul/raw-data-is-dirt-the-new-prozac>
7. <http://heathereatsalmondbutter.com/>

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Heather McD (Heather Eats Almond Butter) (2009-07-14 14:24:45)  
Seth, Good to hear you enjoyed your oatgurt!

John H (2009-07-14 21:53:24)

The cited review of The Paleo Diet asserts that "virtually all canola oil is deodorized, a process that gets rid of the omega-3s." Does Seth Roberts or anyone else have a comment on this? I know Seth recommends flax oil, but some of us find the strong flavor and aftertaste hard to take, even with nose-clipping. My understanding from the SLD book was that canola oil was also a good source of omega-3.

Anthony (2009-07-15 11:31:31)

Hi John, I don't know if you're talking about taking flax oil for the SLD or in general. If in general, you can combine it with other foods, such as yogurt or juice - I hardly taste it when I do this.

### **The Twilight of Expertise (mothers) (2009-07-14 16:57)**

A friend of mine, who lives in Shanghai, has a 3-year-old son. She gets all her parenting advice from the Internet. This would be uninteresting except that her mother lives with her. (So does her husband's mother.) On a daily basis, in other words, whatever her mom thinks about how kids should be raised is being ignored. My guess is that her mom actually likes the situation because it removes a source of conflict. But I didn't dare ask.

## Margaret Meklin Wins Russian Prize (2009-07-15 12:12)

A friend of mine named Margaret Meklin recently won the [1]Russian Prize – awarded for the best work in Russian by a writer living abroad – in the short-story category. From [2]her amusing essay about going to the prize ceremony in Moscow:

I chose to participate in this contest out of desperation: Working at a U.S. company in the customer service department, I was somewhat tired of clients who didn't hide their annoyance at my Slavic accent.. . . I was hoping that upon winning this prize, I would acquire an inner strength protecting me from [their] impatience.

. . .

After the ceremony, I stumbled upon the main juror, the one who had ironically called me a "genius," and the phrase he greeted me with was, "Are you surprised that you got it? You haven't read the other nominees . . . they were even worse than you!"

1. <http://www.russpremia.ru/>

2. <http://quarterlyconversation.com/margarita-meklina-the-russian-prize>

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## The Wonders of Turmeric (2009-07-15 20:53)

From [1]Time:

When he first started coming to me, I gave him the usual anti-inflammatory medications we use for arthritis pain. He had no side effects, but he wasn't helped much either, so he stopped the pills and lived with the pain. Then he found turmeric. Soon enough, there was no pain at all. [Note that this couldn't be a placebo effect.] And his lower back and hands, which ached before, were also now pain-free.

Is this another example of [2]foreign substances reducing arthritis? (Not to mention other immune disorders.) Or something different? I don't know but it's really interesting.

Thanks to Chuck Remes.

1. <http://www.time.com/time/health/article/0,8599,1910028,00.html>

2. <http://www.blog.sethroberts.net/2009/06/21/scorpion-stings-bee-stings-and-the-umami-hypothesis/>

David (2009-07-15 23:14:27)

The current issue of Wired arrived today. It contains a story about cartoonist Scott Adams dealing with a neurological problem that prevented him from speaking. The article describes his quest to regain his speech, which involved quite a bit of self-experimentation although ultimately an experiment with surgery was required. I wonder if he ever tried giving up the Diet Coke habit he mentions on his blog. I would have tried that experiment first, given how many people self-report neurological problems linked to diet drinks. I realize this isn't turmeric related but I thought it was interesting.

mekhala (2009-07-16 06:26:44)

A Univ of Michigan chemist recently found that curcumin (turmeric ingredient) inserts itself into a cell membrane, making it stiffer and hence, more immune to infectious agents. <http://www.sciencedaily.com/releases/2009/03/090306172615.htm>

Jeff (2009-07-16 07:03:05)

Seth, Why do you say it couldn't be a placebo effect? Jeff

seth (2009-07-16 10:17:01)

Jeff, it couldn't be a placebo effect because actual medicine – which should produce a great placebo effect – didn't work.

Tom in TX (2009-07-16 11:00:14)

Turmeric and other natural remedies could be very important for people living in countries where health care is a "right". "A 9-month wait for arthritis treatment: Delay can mean a lifetime of agony for victims" <http://www.dailymail.co.uk/health/article-1199714/A-9-month-wait-arthritis-treatment-Delay-mean-lifetime-agony-victims.html>

Nathan Myers (2009-07-16 12:42:22)

"Turmeric", surely.

seth (2009-07-16 17:49:31)

thanks Nathan

seth (2009-07-16 17:51:41)

From Wikipedia on curcumin [turmeric's active ingredient]: "Numerous studies have demonstrated that curcumin, amongst only a few other things such as high impact exercise, learning, bright light, and antidepressant usage, has a positive effect on neurogenesis in the hippocampus and concentrations of brain-derived neurotrophic factor (BDNF), reductions in both of which are associated with stress, depression, and anxiety." See also: "Role of Brain-Derived Neurotrophic Factor in the Circadian Regulation of the Suprachiasmatic Pacemaker by Light", The Journal of Neuroscience, April 15, 2000, 20(8):2978-2987. posted for a friend

Jeff (2009-07-17 05:01:08)

Seth, I don't follow your logic completely. Because the placebo effect is motivated by the patient's beliefs, it matters what the patient thinks. If the man did not expect anti-inflammatory drugs to work, he would probably not have a placebo effect from them. If he did expect turmeric to cure his pain, it would be more likely to have a placebo effect. Yes? I'm not disagreeing with possible benefit from turmeric, but your dismissal that it could not be a placebo effect, in this case. Thanks, Jeff

seth (2009-07-17 06:23:49)

Jeff, "couldn't be" was shorthand for "couldn't plausibly be" or "is unlikely to be". Yes, there is some chance, perhaps very small, that anything could be a placebo effect. If the patient didn't think the doctor's medicine would work, why did he try it? If he thought turmeric was more likely to work, why didn't he try it first? My general reasoning is that if you've tried A, B, and C, and none of them worked, and then D works, it's unlikely to be a placebo effect.

Nibbles: Turmeric, Tillage, AGRA, Research (2009-07-21 07:15:03)  
[...] The wonders of turmeric. [...]

Seth's blog » Blog Archive » More About Turmeric (2009-07-26 10:23:32)  
[...] The Wonders of Turmeric. [...]

## One Crazy Diet (2009-07-16 07:02)

The Shangri-La Diet has made a list of [1]Top 10 Craziest Diets Ever. Part of the description:

The principle behind this diet is that the body has a set point (the weight that it wants to sustain) and appetite is moderated by the body to ensure that you stay at your set point.

That's exactly right. The idea that this is "crazy" amuses me.

1. <http://listverse.com/2009/07/15/top-10-craziest-diets-ever/>

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Darrin Thompson (2009-07-16 07:34:42)  
But how about those tapeworms at number 1, eh?

david (2009-07-16 07:35:05)  
The cartoon is mostly accurate except for the "every day for the rest of your life" part. I believe you do talk about a "maintenance" dose but in my experience the need for this is minimal. I'm speaking as someone who started the SLD when it was first mentioned on the Freakonomics blog. I suppose it depends on whether you're a 'supertaster' or not.

Glen Raphael (2009-07-16 09:33:55)  
The cartoon seems accurate for me - I lost 10lbs or so on SLD, stopped doing it, and gained the weight right back as fast as I'd lost it. Twice. If I can make myself keep doing the oil every day for the rest of my life I think I can achieve and maintain a lower bodyweight via SLD; if not, not.

seth (2009-07-16 10:18:37)  
Glen, try flaxseed oil (nose-clipped). You're probably not getting enough omega-3 anyway. So you'll want to drink the flaxseed oil for the rest of your life.

Tom in TX (2009-07-16 10:57:03)  
I would pick another bone with the cartoon: "a method that caused the pounds to melt away". SLD gives you appetite suppression. It is not some magic way to "melt" off pounds.

Jonas (2009-07-16 17:26:46)  
Hey Seth Question for you off topic - tried a tablespoon of extra light oil today. Gave me a bellyache, pretty unpleasant. Is this normal? Do you get used to it?

david (2009-07-16 19:04:46)

Btw, the #1 crazy diet is the processed-food centric western diet :-). Guaranteed to cause diabetes, heart disease, obesity, etc.

seth (2009-07-16 22:27:56)

Jonas, It's not uncommon. It goes away after a while – after you get used to digesting the oil. You can start with smaller amounts.

Glen Raphael (2009-07-17 11:56:06)

Jonas, what worked for me as a tolerable delivery mechanism was the oil-in-water thing. Oil straight up is too nauseating but a couple tablespoons of oil poured into 1/3rd cup or so of water is much more doable to chug right down.

### **Poorly Made in China (2009-07-17 09:55)**

The subtitle of [1]Paul Midler's book is "An Insider's Account of the Tactics Behind China's Production Game." Midler is an American who helps American and European companies get stuff made in China. The book is about how, in a dozen ways, Chinese manufacturers manage to make manufacturing deals more profitable to them at the expense of their customer – and, often, the ultimate consumer. Most of the book is about what happens to an unnamed American company that imports "telephone numbers" of beauty products. One problem is "quality fade." The product slowly gets worse until the importer objects. For example, at one point the fragrance put in liquid soap was changed. Instead of different fragrances for products with different labels, almond was used in every case. So a product labeled Aloe Vera smelled of almond. ([2]I discovered I couldn't trust flaxseed oil made in China.)

A friend of mine became a vegetarian after working at Burger King. Midler had a similar conversion:

I found myself losing faith in all sorts of products manufactured in China. I was soon careful to purchase health and beauty products that were not made by local [i.e., Chinese] companies, but by large, multinational corporations – but then I realized the body wash I had been using, while it was made by a reputable global company, was actually manufactured in a plant located in South China. . . . I knew these production managers well. . . . They believed that what a customer didn't know couldn't hurt him.

I found myself using less body wash, eventually relying on only hot water for my showers. When no one seemed to notice the difference, I stopped using the wash altogether. And then I stopped using soap, as well. . . . Why take any chances?

The attitude of cheat your customer as much as possible isn't a great long-term strategy, as Chinese manufacturers are learning – the situation used to be even worse. A friend of mine analyzes the situation like this: For a long time Chinese were taught Confucianism. When the Communists took over, that changed to The state is God. Now that system of morality is gone, but nothing's replaced it. In *Systems of Survival*, Jane Jacobs wrote about two systems of morality, a "guardian syndrome" and a "commercial syndrome." The commercial syndrome, appropriate for trading, placed great weight on honesty. (The guardian syndrome, in contrast, placed great weight on loyalty.) Behind Jacobs's classification was the implication that these syndromes had evolved because they worked better than other possibilities.

*Poorly Made in China* was easy to read. It has those two essential elements: it's a series of stories, long and short; and the author feels strongly about his topic.

1. [http://www.economist.com/books/displaystory.cfm?story\\_id=13642306](http://www.economist.com/books/displaystory.cfm?story_id=13642306)
2. <http://www.blog.sethroberts.net/2009/03/07/hey-what-happened-to-my-brain-part-1/>

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NotInChinanow (2009-07-17 19:10:53)

The connection between Jane Jacobs and China makes me remember how chinese cities seem to be built to a superhuman scale. Beijing was especially bad in this regard. Blocks on JianGuoMen or ChaoYangMEN seemed to be definitely too long, although of course some neighborhoods were much more manageable. I think Jane Jacobs would have disagreed with the current Chinese development patterns. Any opinions?

## **The Epistemology of Academia (2009-07-18 16:06)**

A professor [1]complains about ivorytowerism:

In the epistemology of academia, no knowledge truly is knowledge if it is not vetted and approved through the channels it has established over time. Those channels are esoteric, made up of the "few, though worthy" who are the elect in the kingdom of knowledge. The epistemology of academia proceeds on the basis that the public has nothing to do with real knowledge. It doesn't make any sense intellectually, of course, but it makes perfect sense if the primary goal is not really the development of knowledge but the preservation of a well-designed, internally self-confirming authority economy.

Some professors go further than this: The public shouldn't know about academic research. Several years ago, a colleague of mine in the Berkeley psychology department was approached by a journalist. He was writing an article for The Atlantic about her area of research. She wouldn't talk to him. She felt his article would somehow be wrong or unseemly.

Open access is changing this, of course. I'm a big beneficiary. Because [2]my long self-experimentation paper was open access, it could be read by people outside of psychology. As a friend put it, "It cost Steve Levitt nothing to say he liked your paper." Whereas inside psychology departments, you'd pay a price.

1. <http://www.academicevolution.com/2009/04/scholar-or-public-intellectual.html>
2. <http://repositories.cdlib.org/postprints/117/>

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Monkey (2009-07-20 18:35:41)

Could be re-written as follows: "In the epistemology of the high priesthood, no knowledge truly is knowledge if it is not vetted and approved through the channels it has established over time. Those channels are esoteric, made up of the "few, though worthy" who are the elect in the priesthood of knowledge. The epistemology of high priesthood proceeds on the basis that the public has nothing to do with real knowledge. It doesn't make any sense intellectually, of course, but it makes perfect sense if the primary goal is not really the development of knowledge but the preservation of a well-designed, internally self-confirming authority priesthood."



Matt (2009-07-20 20:28:55)

Without regard to the general point, I'm not sure distrusting journalists is the same as believing that the public shouldn't know anything about academic research – and neither one is the same as worrying that you might face intramural punishment if you misspeak or are misquoted. (Of course, you know the professor in question better than I do.)

Harold Knight (2009-11-03 09:21:36)

As a lucky academician, I take great delight in these kinds of discussions. I'm in a don't-have-to-publish-or-perish position, and my life is a (ridiculously) open book which IS my research. See my blog for the exhibitionist academic at work.

## **Living Without (2009-07-18 16:18)**

One indication of the severity of the epidemic of allergy and similar disorders is the existence of a magazine called [1]Living Without. Judging by volume numbers, it is 11 years old. Supporting the idea that autism may be caused by digestive problems, two of the six events on [2]their event list involve autism.

1. <http://www.livingwithout.com/>

2. <http://www.livingwithout.com/events.html>

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Dennis Mangan (2009-07-19 07:01:47)

Seth, in recent reading on evolutionary medicine i discovered that there's an inverse relation between allergies and cancer. Allergy is protective; it functions to keep environmental insults at bay. Maybe allergy has increased because we have more of these insults now. <http://www.ncbi.nlm.nih.gov/pubmed/4014202?dopt=AbstractPlus>

Nathan Myers (2009-07-20 15:32:22)

That autism symptoms would be aggravated by digestive problems – as by any persistent distraction – is trivially obvious. Reports of major improvements in autistic patients after digestive distress is relieved should, therefore, encourage us to treat autistic patients' digestive problems promptly. It would be silly to conclude that these digestive problems actually caused the autism, not least because very many autism patients don't have digestive problems. Similarly, major improvements resulting from chelation might lead one to conclude that all autism patients should get chelation. This neglects that one of the key features of chelation treatment is mineral supplementation. Before trying dangerous chelation, try safe mineral supplementation.

seth (2009-07-20 17:24:18)

Dennis, thanks for the link, that's a fascinating correlation. I didn't know about it. Nathan, that the link between autism and digestive problems is because "autism symptoms would be aggravated by digestive problem" strikes me as too flexible to be helpful. You could use it to explain just about any linkage of another disorder and autism. No one is "concluding" that this one bit of info is persuasive; it is just added to other bits of info. As for "very many autism patients don't have digestive problems," I didn't have obvious digestive problems before I started eating lots of fermented foods. Yet I benefited from them. You seem to be dismissing the autism/digestive problem correlation rather than trying to learn from it.

Nathan Myers (2009-07-21 15:57:19)

It is a signature symptom of autism-spectrum to have difficulty processing and blocking distractions. Some have more trouble with one stimulus (touch, sound, etc.) than another. Many of the more recognizable symptoms ("stimming", particularly)

are actually attempts to compensate for that difficulty. Some fraction have digestive difficulties – probably a higher fraction than the general population, because they are less able to articulate their distress, or to get it acted upon. (Likewise, for urethral or ear infection.) Still, it's just a fraction, and the path from subtle cause to life-disrupting effect is painfully clear to anyone with experience with even one autism-spectrum patient. Blaming our children's autism on digestive distress is almost as cruel a joke as blaming it on vaccination or on our own lack of empathy. We are always trying to find any hint of something that might help. We've heard of all the fads, and tried them all, and hundreds of other things besides. Sometimes something seems to help one child in five, and that's about as successful as anything ever gets. You didn't have any obvious digestive problems, but you benefited from eating fermented foods. Probably our kids, and we, would benefit the same ways. (I did have, and did benefit.) A wide sea lies between "benefits from treatment of" and "condition is caused by".

Janet (2009-07-23 09:26:08)

There's evidence suggesting that gluten-free casein-free diet is helpful for autism. That's why lots of parents put autistic kids on GFCF diets, and these parents are a major readership for GF publications.

Brody (2009-07-23 11:42:59)

Seth, not quite sure where to put this in your blog comments, but here's an interesting piece of a Q &A with a guy who's been living without money since 2000...he lives in a cave and eats foraged stuff and roadkill and dumpster-dives. He mentions that he's way healthier now than when he had money..... perhaps some anecdotal evidence that it's better for us to have more exposure to 'germs' and whatnot. <http://sites.google.com/site/livingwithoutmoney/Home/6-do-you-get-sick-from-dumpsters—roadkill>

## Where Do Foodies Come From? (2009-07-19 03:23)

Yes, to the man with a hammer everything looks like a nail. But until someone comes up with a better explanation of why we like umami, sour, and complex flavors, I will continue to believe my explanation: We need to consume plenty of bacteria every day. If you fail to give such large and important systems as the digestive and immune system something they need a lot of, obviously many things will go wrong.

In the current New York Times Magazine, [1]Frank Bruni writes about a childhood in which he ate too much. He was chubby, but not because of ditto food (which I think is the main cause of the obesity epidemic). There was much less ditto food when he was young. Bruni seems to have gotten abnormal pleasure from non-ditto food. One sign of this is how clearly he remembers certain favorite foods:

I remember almost everything about my childhood in terms of food – in terms of favorite foods, to be more accurate, or even favorite parts of favorite foods. . . .

Age 7: I discovered quiche. Quiche Lorraine.

Age 8: lamb chops.

No mention of fermented food among the foods of his childhood. His family apparently ate a lot of frozen meat. If [2]refrigerated food is dangerous, frozen food is probably worse. I suspect recently defrosted meat has less bacteria than meat that's been in a refrigerator for several days.

I wonder if Bruni was (and is) like [3]the squirrel who needed stronger-than-average light to entrain properly. All squirrels need light; a few need stronger light. Under healthy conditions (sunlight) the genetic diversity has no consequences. I think the pleasure we get from complex flavors and the like can vary because of these experiences:

1. On a visit to New York, [4]as I blogged, I noticed I was far less interested in fancy restaurants than in the past. The only change in my diet is that I now eat far more fermented food.
2. It isn't just New York. In Berkeley I notice the same thing has happened. My interest in complex food has gone way down. Fancy restaurants, apart from the social aspect, are less interesting. My back issues of Saveur are less interesting. I read food sections of newspapers less.
3. Brain injury can cause something called the gourmand syndrome, where the person becomes obsessed with food with complex flavors. In one case [5]the person became a restaurant critic (like Bruni).

Perhaps [6]Bruni's forthcoming book will shed more light on this. Everyone knows about the obesity epidemic and the allergy epidemic; less mentioned is the vast rise in interest in fancy food over the last 30 years. [7]The word foodie was coined in 1981, close to when the sharp rise in American obesity began. Many newspapers, including the New York Times and the San Francisco Chronicle, had until recently much bigger food sections than they had 30 years ago.

1. <http://www.nytimes.com/2009/07/19/magazine/19bruni-t.html?ref=magazine&pagewanted=all>
2. <http://www.blog.sethroberts.net/2009/07/08/refrigerator-parents/>
3. <http://www.blog.sethroberts.net/2009/07/14/genes-or-environment-or-environment/>
4. <http://www.blog.sethroberts.net/2009/05/04/less-of-a-foodie/>
5. [http://www.sciencenews.org/sn\\_arc97/6\\_7\\_97/food.htm](http://www.sciencenews.org/sn_arc97/6_7_97/food.htm)
6. [http://newyork.grubstreet.com/2009/05/frank\\_brunis\\_born\\_round\\_the.html](http://newyork.grubstreet.com/2009/05/frank_brunis_born_round_the.html)
7. <http://en.wikipedia.org/wiki/Foodie>

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Dennis Mangan (2009-07-19 06:58:06)

I would probably ascribe the rise of the foodie to people having more leisure time and more money to spend. Since the average person isn't exactly an intellectual or even interested in much of anything beyond what the media tells him to be, and since media has greatly expanded - cable TV especially - food seems like a natural topic for expanded interest. Same thing has happened with wine and many other things, in which consumption is partly to express how sophisticated you are.

thehova (2009-07-19 09:33:46)

I too crave gourmet foods. I often stay up late watching the Food channel. I never eat fermented foods. Maybe there's a connection.

Steve G. (2009-07-19 10:58:39)

I have to agree with Mr. Mangan about the most likely hypothesis for the "foodie" phenomena. Me? I like a lot of different foods, both fermented and more richly flavored. (Must one pick?) Your fermented food hypothesis as a restrain on appetite (shall we say a "Shangri-la effect") seems possible, and worth learning more. I for one have taken to eating more fermented foods as an immune and digestive aid is a . Why not? (Any skeptics out there?)

Barbara P (2009-07-21 14:25:11)

For most of the 1970's I was part of a macrobiotic community of more than 200 people who lived and studied together in households in Boston. Everyone ate miso soup at least once a day. I'm sure you know that miso is fermented soy bean paste. Our diet consisted of about 75 % whole grains (usually brown rice), supplemented by beans, vegetables, seeds, nuts, seaweeds, and very small amounts of fish and fruit. Sometimes people would go binge on ice cream, junk food, or favorite foods from previous years, but for the most part, folks found the simple diet satisfying. On occasion other fermented foods were part of a

meal – natto, real soy sauce, rice bran pickles, homemade sauerkraut, amasake, or beer. Perhaps this adds anecdotal evidence to your theory about what fermented foods do to the appetite, curbing cravings for complexity. By the way, not one of these hundreds of people was fat, and no one had acne. My own three children, raised without dairy foods, meat, or eggs, have grown to be healthy adults. I can only guess that brown rice, despite its presence at almost every meal at our house for 20 years, did not function as a ditto food, because it always tasted a little different. A different crop. Long, short, or medium grain. Mixed with barley or buckwheat or millet. Garnished with seeds or nuts. And, as we used to say, "the cook's vibrations that day."

Karina (2009-07-23 15:04:27)

This is very interesting. As I understand it, some of the more bacteria-rich non-fermented foods are raw organic fruits and vegetables. (It stands to reason: they haven't had pre- or post-harvest spraying with antibacterial/antifungal treatments, and haven't been semi-sterilized through cooking yet, even if they've been washed). They're particularly rich in fecal bacteria, which we used to be exposed to far more frequently as a society. This leads me to wonder if some of the health benefits claimed by raw-food diet followers come from this high exposure to bacteria. Many also consume fermented foods such as unpasteurized sauerkraut. Quite a few raw-food dieters also claim that over time, their tastes become much simpler. In my experiments personally I have found that when I eat a high proportion of raw vegetables and fruits, I eat less and have far simpler tastes. Some of that is also the non-ditto-food nature of raw produce, which can be highly variable in taste and texture. Nobody explains it as "I'm healthier because I'm eating tiny quantities of poo" but then again, that would make a very poor selling point.

## What Else Causes Acne? (2009-07-20 19:46)

Previous posts have implicated [1]Western Civilization and [2]face-washing with soap in the etiology of acne. What else might be involved? A reader writes:

My girlfriend suffered from acne for years. She went to a dermatologist, tried every fancy soap and skin cleansing system, but nothing worked. She was also a Diet Coke fanatic. Every morning while she was getting ready for work, like a coffee drinker, she'd have one. It was her daily jolt of caffeine.

When I read about your diet modification, part of which included giving up soda, and your subsequent acne disappearance [I found that Diet Pepsi caused acne], I of course told her about it. "No, it has nothing to do with my diet, it's hormones and bacteria." She was not about to give up her beloved Diet Coke! How else could she function in the morning? In the meantime, she would periodically get upset at what she called the "open sores" on her face.

About 9 months ago, she decided to go on a detox diet – not with the aim of treating her acne, but just to lose a couple pounds. It required her to eliminate as many artificial chemicals and preservatives from her diet as possible. Out went the Diet Coke. Within days, her skin cleared up. She hasn't had a major breakout since.

Yet more evidence that acne is due to lifestyle factors and can be completely cured by lifestyle changes, often dietary. There should be a list somewhere, ordered from most to least likely, of lifestyle causes of acne. If you have acne you just go down the list eliminating each one in turn until you find the culprit.

1. <http://www.blog.sethroberts.net/2009/06/24/acne-self-experimentation-why-its-promising/>

2. <http://www.blog.sethroberts.net/2009/06/19/acne-cured-thanks-to-self-experimentation/>

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Brody (2009-07-20 19:57:39)

I tried just washing with water for about a month, and my face broke out even worse. Bummer. If you read the boards on acne.org, people are trying EVERYTHING...and I think it all comes down to whatever-works-for-you-particularly. There's definitely no one size fits all cure for it. Between acne and migraines, I get the feeling sometime that my body pretty much doesn't want me eating anything but brown rice and a few vegetables and water. And that's darned no way to live.

seth (2009-07-20 20:39:54)

Brody, thanks for telling us your experience. When I was a teenager I asked my dermatologist when my acne would go away. "Everyone's different," she said. Not helpful. Even if "there's no one size fits all cure" for acne, it would help to learn what the most common causes are.

Christian (2009-07-21 06:45:42)

Milk. I had the same experience as your reader's girlfriend, but with milk instead of Diet Coke. Inspired by your site I have been experimenting. And I am just coming off a round of drinking milk again, which caused a bad break out. After my face clears again, I'm going to try organic milk, as I believe it might be antibiotics or growth hormones.

Glen Raphael (2009-07-21 08:16:09)

To show causality in a situation like that you really need to see a change in both directions, not just one. That is: verify that if she resumes drinking diet coke the acne \*comes back\*. Otherwise you could be fooling yourself. Analogous example: Somebody is depressed. Tries drug A; still depressed. Tries a higher or longer dose of drug A; still depressed. Switches to drug B; still depressed. Adjusts the dose higher or lower, then switches to drug C...Eventually the depression goes away right after switching to drug D. Doctors conclude that this person's depression is cured by drug D, but for all we know it's just the passage of time since whatever caused the depression. Acne problems eventually diminish in most adults. People who are paying close attention are likely to remember some change prior to the improvement, but that doesn't mean the change caused it.

seth (2009-07-21 09:41:42)

Glen, when I take other things into account – the lack of change for several years, the sudden change when the diet changed, outside evidence that Diet Pepsi causes acne, outside evidence that diet causes acne – I find this particular case convincing evidence of causality. Without that other evidence I would agree with you.

Annie (2009-07-21 09:45:36)

Not only is there the question of "What causes acne?" but also the question of "how much of it is necessary?" I recently went off the pill, which I originally went on to solve my skin problems. It works. But it's a bit creepy too. Two months ago, I decided to go off the pill once and for all, to solve the skin issues. I've been seeing a naturopath during this process, who seems to be a bit more dedicated to finding root causes. In a word, the approach has to be "radical." For 1 month, I eliminated every possible trigger: 1. Soy 2. Gluten 3. Refined grains 4. Sugars (agave and stevia were permitted) 5. Corn (a sensitivity or allergy to corn often shows up on the face specifically) 6. Caffeine (yes, even in green tea) 7. Nightshade vegetables 8. Soap 9. Bananas (I suspected an allergy) 10. Portion control. I find eating too much causes an inflammatory reaction I began the trial as a vegan so meat and dairy were already ruled out. I stuck to the "radical" elimination diet for a month, and included vigorous workouts (promotes good sleep and sweating). Surprise, surprise, my skin cleared up. Slowly, I began to add things back. Soap was fine. Gluten was fine. Bananas were fine. Until finally I realized: The SMALLEST amount of sugar and refined flour did the trick. Overblown portions didn't help. I never suspected these items because I don't eat a lot of sugar to begin with. I'm 5'8 and 125 lbs so how much could I possibly be overeating? I didn't realize that micro amounts would have an effect. In my case, the point was that the accumulation of too much refined food and the accumulation of big portions, caused my skin to first get red (next morning). Then, small bumps (2 days after). If I didn't correct it, I was in for a week of larger blemishes and scarring. The word is "radical." I had to be radical to find out what was causing my acne and I have to be radical to avoid it. It's an easy way to feel

sorry for yourself but, calling the glass half-full, it's a great reminder and incentive to stay away from foods we should never have invented in the first place.

Andrew (2009-07-21 14:20:02)

If you believe the low-carbers like Taubes, etc. (little to no refined carbohydrates like sugar and white flour and moderate to low amounts of complex carbohydrates like fruit) sugar consumption in the modern/Western diet is linked to the other diseases not found in traditional, non-westernized cultures like obesity and heart disease. It wouldn't surprise me if highly refined carbohydrates were to blame for acne as well.

Anthony (2009-07-21 16:33:15)

@Annie, Thanks for the summary of your experiment. By 'sugars', do you mean just refined sugars (white sugar, brown sugar, fructose-glucose)?

Karina (2009-07-23 14:30:45)

I don't doubt that a person could have skin-evident sensitivity to something in the soda – all those company-proprietary flavors and colors can cause reactions in some people. My heart goes out to people who have to go through this process of elimination. For a contrasting data point: I consume several cans of diet soda a day (along with a low-glycemic, low-processed vegetarian diet) and I can count on one hand (!) the number of pimples I've had in my life. It's probably not a personal-care practice thing: Back in high school I never used cosmetics and only washed my face with water, plus avoided sun/tanning (being a shut-in nerd kept me from those teen-girl rituals, happily). But I've begun to wear cosmetics and wash my face with soap now, no problem. It's probably not a diet thing: Back in high school I was also acne-free, but my diet was more similar to my peers – pizza, cake, etc. It's probably not a genetic thing: The rest of my family is not at all low-acne. I'm very odd for the genetic pool. Which leaves me with.... I had cancer and high-dose chemotherapy right before puberty. This may have done a funny hormone hack on me in this narrow aspect, giving me oh-so-amazingly-clear skin. Chemotherapy can give you very odd little outcomes (for me, my ability to ingest near-unlimited quantities of capsaicin was another one). But needless to say, it's not an acne-prevention program I'd recommend.

Dave (2011-01-18 08:55:15)

My daughter went through the whole acne regimen. Every lotion and potion, birth control pills etc. until we finally found a dermatologist who would prescribe accutane. 7 months later the acne was gone and has stayed gone for 2 years now. My daughter blossomed into a beautiful young woman and has so much more self-confidence than a few years ago. The drug worked miracles on her. I know there are possible side effects so no negative comments about that, just anted to let people know that it does work.

### **Acne.com versus Acne.org (2009-07-21 10:11)**

Acne.com, a website paid for by the drug company behind Proactiv, a common acne medicine, [1]has the following:

Acne Myths & Claims: Certain foods cause acne. No, those french fries you had yesterday didn't give you new zits today. In fact, scientists have been unable to find ANY substantial connection between diet and acne. So all the foods you've been afraid of – pizza, french fries, chocolate – are fine. Of course, that doesn't mean you should binge on your favorites whenever you want – a healthy diet will help your body have the strength to help you in your fight against acne. So use your common sense, but don't be afraid to indulge now and then.

"All the foods you've been afraid of are fine"? This is much too certain-sounding. The studies that failed to find a diet/acne connection were poor. [3]Other research suggests that acne may well have a dietary cause. The false

certainty is self-serving. Because foods don't cause acne don't bother trying to figure out which ones; just take our medicine! It resembles [4]my surgeon claiming there was evidence that the surgery she recommended and would profit from was a good idea when there wasn't any such evidence.

In contrast, acne.org [5]has this:

Myth: Diet and acne are related. Reality: The bottom line is we need more research. We do know that people in some indigenous societies do not experience [any] acne whatsoever across the entire population. This is in stark contrast to the widespread presence of acne throughout all modern society. It leaves us to ponder the question of whether the indigenous people's diet contributes to their acne-free skin. Discovering a dietary way of preventing acne may be a future reality, however, we may live so differently from our hunter/gatherer ancestors that it has become close to impossible to replicate our ancestral diet. But let's see if we can work together to come to some consensus from our own experiences. If you feel that you have cleared your acne using a particular diet, or if you are planning on attempting a diet of some kind, please post your method on the Nutrition & Holistic health message board.

That's reasonable and helpful. The website that couldn't hire expensive experts had better information.

[6]Reviews of Proactiv on acne.org.

1. [http://www.acne.com/myths\\_claims/myths\\_claims.php](http://www.acne.com/myths_claims/myths_claims.php)
2. <http://www.blog.sethroberts.net/2007/12/20/diet-and-acne/>
3. <http://www.blog.sethroberts.net/2009/06/24/acne-self-experimentation-why-its-promising/>
4. <http://www.blog.sethroberts.net/2008/09/13/the-case-of-the-missing-evidence/>
5. <http://www.acne.org/myths.html>
6. <http://www.acne.org/proactiv-solution-reviews/91/page1.html>

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Nadav (2009-07-21 19:09:21)

The acne.org paragraph is one of the most epistemologically sound I've ever read about a practical health problem like acne. Not only does he have better information than the paid experts, but his underlying view of human knowledge, its limits, and how to improve it stands out as well.

Nadav (2009-07-21 19:23:05)

Seth, Based on your experience with dermatologists, could you compare the regimen recommended on acne.org with what a "typical" dermatologist would prescribe? Thanks.

Ainsprid (2009-07-22 03:08:34)

That's very interesting Seth!

Eugene (2009-07-23 09:08:18)

When it comes to dissing dermatologists and medical journals, Michael Holick deserves some sort of prize. I saw this [1]highly entertaining lecture on UCTV. Among other things, good examples of: 1) telling stories; 2) use of clinical, "rogue" and self-experimentation (small and large samples).

1. <http://www.uctv.tv/search-details.aspx?showID=15773>

Adam (2009-07-25 11:27:55)

Out of all food, caffeine has the greatest impact on my acne. Abstaining from anything with caffeine in it (including chocolate), took care of 25 % of my acne problem. Benzaclin, a prescription topical agent, took care of another 4th of the problem. No other medications worked. Actually, the most striking difference I've seen from any therapy has been simple supplementation with Pantothenic acid, a b vitamin that is cheap and OTC. Nothing cleared my "backne" until I started using that. I don't hear a lot on this blog about supplementation, but that one worked for me. Oddly, from my self-experimentation, fish oil/flax seems to have a mild aggravating effect on my acne. I've had to do extensive experimentation to find the right soap product. I disagree that washing with soap is a problem - its simply a matter of finding the right soap. I recommend the facial cleanser from Neutrogena. Find it at target, in a blue squeeze bottle. Cleans but doesn't dry the face out (contrary to what would seem logical, skin that is too dry can also lead to breakouts, in my experience).

mitesser (2010-05-07 22:47:32)

In a lot of cases it can be very difficult to heal acne and comparable skin diseases. I am a long time sufferer myself and I am still hoping to find a treatment that works for me. I will try out what is mentioned here, maybe it brings relief. Stupid companies and their 'neutral' websites probably partly ruined my skin, screw them!

### **JAMA Editors Continue to Display Staggeringly Poor Judgment (2009-07-22 23:03)**

In [1]an earlier post I called a certain JAMA editorial "the most self-righteous editorial I have ever read." Perhaps the authors reluctantly agreed; the editorial, which used to be [2]here, is gone. Since I quoted from it, you can still see what I was talking about. The BMJ has[3] an article about the disappearance, which includes this:

The BMJ sent emails to JAMA's editor, Catherine DeAngelis, and the journal's media relations office asking about the disappearance of the March editorial. The BMJ also asked whether Dr DeAngelis could explain why the new July editorial had toned down the policy outlined in the March editorial.

The response from a JAMA spokeswoman was "no comment."

Correct: It is indefensible. What I said earlier still holds: The whole incident – self-righteous editorial, [4]trash-talking by DeAngelis to a WSJ blogger, deletion of the editorial, failure to explain the deletion – "sheds a hugely unflattering light on the very powerful doctors who run JAMA" and thus an hugely unflattering light on a culture in which such people, like Nemeroff, gain great power."

1. <http://www.blog.sethroberts.net/2009/03/24/jama-editors-go-nuts/>

2. [http://jama.ama-assn.org/misc/jed90012pap\\_E1\\_E3.pdf](http://jama.ama-assn.org/misc/jed90012pap_E1_E3.pdf)

3. [http://www.bmj.com/cgi/content/full/339/jul21\\_1/b2936](http://www.bmj.com/cgi/content/full/339/jul21_1/b2936)

4. <http://blogs.wsj.com/health/2009/03/13/jama-editor-calls-critic-a-nobody-and-a-nothing/>

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Jim Purdy (2009-07-26 07:43:27)

That whole episode was bizarre.



## Acid Reflux Cured by Kombucha? (2009-07-24 21:48)

A friend of mine had acid reflux. When he ate certain foods – tea, chocolate, foods high in sugar or fat – and when he ate too much, he got a pain in his stomach. "Maybe I've got an ulcer," he thought. He first noticed it after eating brussels sprouts, about a year or so ago. At the time it was only uncomfortable. He was taking Alleve for back pain around that time – that might have messed up his stomach. He was also worrying a lot at the time.

It got worse. Periodically he would have pain in his stomach in the middle of the night and during the day. In particular, after eating Oreo cookies. Mint tea, which he thought would help, made it worse. Friends suggested he try Prilosec OTC. A 14-day course seemed to clear it up. A month after the Prilosec ended, however, he went to a big party. He ate a lot of food, a lot of different things. He woke up in the middle of the night with the worst pain yet. So then he went to a doctor. The doctor said it was probably acid reflux; try Asiphex ( \$60 for two weeks), he said. It was less effective than the Prilosec. Then I suggested that some sort of fermented product might help. So he bought Activa yogurt. It wasn't clear if it had any effect; maybe a small one.

Recently he was in Rainbow Grocery, in San Francisco. They sell kombucha. He bought some because I had spoken particularly highly of it. After four days of drinking it, he felt much better even though he'd only finished 3/4s of the bottle. His stomach doesn't hurt any more. That improves his mood. His back feels a lot better – but that comes and goes. That might be a placebo effect, he says – "even though I don't believe in kombucha, I think it's bunk, but I have to admit that it works," he says.

He'd heard of kombucha from his colleagues about three years ago. They raved about it but it seemed faddish to him. He'd tried it, but just to taste it. He doesn't eat any fermented foods besides vinegar; he doesn't drink wine or beer. Hadn't been eating yogurt. He had gone on a vegan diet for a few months before the Prilosec. He'd thought the vegan diet would protect him from stomach problems, but he was wrong.

He has continued to drink small amounts of kombucha and the improvement has persisted, although recently something mint at a party caused a problem.

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dgm (2009-07-25 06:39:44)

Isn't unfiltered apple cider vinegar also supposed to prevent acid reflux?

Tom in TX (2009-07-25 07:19:13)

Water worked very well for me. When I stay hydrated, no acid reflux.

karky (2009-07-25 09:49:12)

Before I started drinking apple cider vinegar every day I got heartburn from drinking plain water. Water with a slice of lemon didn't cause heartburn at all, but plain old water did. And it didn't have to be a lot of water either, just a small glass of water would do it. But since I have been drinking the vinegar every day, I haven't had any heartburn at all.

Adam (2009-07-25 12:00:18)

Famotidine takes care of the acid reflux problems for me :)

Tom in TX (2009-07-25 14:28:20)

@Adam: That is good, but for me I would like to get to the cause of the problem and fix that, rather than just relieve the

symptoms. I am pretty sure acid reflux is not caused by a Famotidine deficiency. 8-) I do not know much about Famotidine specifically, but in general medications cost money, do not really cure the disease, and generate their own side-effects.

Adam (2009-07-25 14:35:44)

Sure, I get that. For me the causes are pretty apparent: spicy food. But I'm not about to give that up. Famotidine is OTC and cheap, has an excellent safety profile, and lasts 24 hours, so I use that when it flares up.

peter (2009-07-25 20:23:40)

the causes of acid reflux are probably varied. One cause is the the sphincter between the esophagus and the stomach becomes defective and the stomach acid (which is otherwise kept in the stomach by a well functioning sphincter) splashes up into the esophagus, thereby causing the sensation that is commonly referred to as acid reflux. the various drugs, i.e., prolosec, pepcid etc.. eliminate the acid thereby eliminating the sensation and discomfort. The problem is that this is a physical condition that requires constant treatment. long term use of prolosec (or other PPI therapies) is associated with both increased hip fractures (as i recall 400 % increase) and a 40 %? increase in pneumonia (as i recall for hospitalized patients). since i have this condition, i'll try kombucha, but the only way it can work for me is if it somehow eliminates/reduces stomach acid. hard to believe that something acidic will eliminate/reduce stomach acid, but i'm open minded. Up to now i've found that eating arugula helps to reduce stomach acid (i read about an extract of arugula being used as an alternative to drugs such as prolosec; but to my knowledge, an arugula extract is unavailable at this time). and i also take pepcid before i sleep and use a special sleeping wedge to keep my up body at a 20 degree? angle to lessen the acid reflux. BTW, the condition is not simply a benign discomfort. It can lead to esophageal cancer, which is the fastest growing cancer in the western world,

tom (2009-07-26 09:09:53)

Interesting post on acid reflux by Michael Eades: <http://www.proteinpower.com/drmike/uncategorized/heartburn-cured/> After a couple of weeks off carbs, acid reflux resolves. What seems to be happening is that a high-carb intake stokes an immense population of intestinal flora which generates enough back pressure to drive acid all the way up to the throat. Take a respite from the carbs, the flora dies down and the throat gets a break. I think there is also something in the kombucha which is correcting our internal flora – either suppressing some of the stuff that shouldn't be there, or supporting stuff that should be there (but isn't, with a typical diet.)

Nathan Myers (2009-07-27 19:10:25)

I'd like to discover something that would allow me to eat onions (and, more particularly, onion powder, which is in *everything*, sometimes labeled just as "spices") without causing my sinuses to bleed and the skin in my nose to blister and peel.

beagle (2009-07-29 23:59:40)

(Off topic for this post, on topic for Kombucha): A Kombucha recipe, and links to problems with Kombucha: <http://feeds.boingboing.net/~r/boingboing/iBag/3/COTZleDpAAw/how-to-make-kombucha.html>

peter (2009-07-30 21:53:50)

kombucha is a fungus; there is an association between fungus and depression; i wonder if kombucha can cause depression among those prone to the fungus depression syndrome?

Seth's blog » Blog Archive » Acid Reflux Cured by Kombucha? Yes (2009-08-10 11:01:10)

[...] My friend with acid reflux — who used to have acid reflux — contacted me today: My stomach is so much better [since I started drinking kombucha]. I rarely have problems. Every once in a while I might be a little uncomfortable. Then I drink a little kombucha, it gets better within an hour. I got up in the middle of the night the other night and I felt the usual kind of pain, took some sips of the kombucha, felt better, and fell back asleep. Hardly ever have pain now. The kombucha is much more effective than the Asipha medicine I took. That was \$60 for a 10-day course. It might even be more effective than Prilosec. (Which cleared up the problem but then it came back.)Â I've been drinking kombucha for about three weeks. I really like the grape, guava, and strawberry flavors of the Synergy brand. The grape flavor is like sangria that's just started to go bad. A

couple of people I've tried to turn on to it but they just can't stand the taste. My levels of stress haven't decreased. I'm drinking less than half a bottle a day. Now the problem is that I forget I'm supposed to have stomach trouble so I forget to drink it. [...]

Caitlin (2010-05-19 19:02:53)

I've had fantastic luck "curing" my GERD [Gastroesophageal Reflux Disease, also called acid reflux] with kombucha. I developed very serious acid reflux very quickly and was prescribed a very high dose of omeprazole to suppress my symptoms. I saw a lot on the internet suggesting that highly acidic foods can actually help control GERD. Apple cider vinegar was too harsh for me, but I love kombucha and by drinking at least 1/2 bottle at least every other day, I have decreased my omeprazole dose from 80 mg/day to 40 mg/day or less. I'm confident that I will be able to eventually wean myself off of the omeprazole completely, but probably won't be giving up the kombucha anytime soon. Try the Gingerade flavor by GT's - it's excellent!

Radar (2010-06-20 11:14:51)

RE: Peter Kombucha is similar to vinegar, in that it is a base, not an acid. Kombucha also contains proteins and bacterias naturally found in the stomach and digestive track, so it can rebalance an otherwise off-kilter stomach. In other words, it can off-set the increased amounts of stomach acid that play a large role in Acid-Reflux. Also, Kombucha isn't a placebo, and there's no myth around it. It eases digestion and helps the body purge more fat, while getting more nutrients out of the food that's being digested. That's why the 'wonder tonic' claims are so far reaching-Kombucha's work in the digestive track goes a long way towards buttressing the immune system and upping energy levels, primarily because the drinker is getting more bang out of every calorie digested.

Dave Schultz (2010-07-12 12:02:21)

My heartburn occurs daily unless a) I stick to a strict diet with no carbs, dairy, or greasy/fatty food, like the Paleo Diet or b) I drink Kombucha daily. It's not always possible to do a), so Kombucha has literally been a life saver for me. The medical knowledge that is being sold by doctors regarding heartburn is basically false. I have seen 3 about my heartburn, researched heartburn, GERD, and acid reflux literature throughout the medical literature and on the internet, taken Prilosec, Reglan, and got an endoscopy performed as well. The search for an answer did not stop there. 5 years later, after long periods of experimentation, I have come to realize you have to listen to your own body when it comes to these kinds of health issues. Listen to its reactions to every kind of food. The FDA and the medical industry in the U.S. are completely distorted in a way that is too complicated to explain, most likely due to government noses where they shouldn't be. I'm sure they can help your broken leg, but not your heartburn. Now that the FDA has banned Kombucha until further notice, I am starting to brew my own. Good luck to the rest of the misguided herd out there.

Leila (2011-05-29 06:38:17)

Hi! I started using Kombucha 2 days ago after trying a lot of different techniques to relief my stomach problems. I can eat only certain foods, and have problme when eating yogurt, kefir or cheese, even bread. I have noticed that after drinking Kombucha I have some sour feeling in my stomach, like something is fermenting. Is it normal? It feels like I am full of acid .. Please tell me about first reactions that Kombucha does.

## Tsinghua Dumplings (2009-07-25 23:07)



Jennifer Lee, author of [1]The Fortune Cookie Chronicles, has [2]a nice post about dumplings, including this:

I once made 888 dumplings for a party, my personal record. . . . You might have crudites, warm cheese, stale hummus, left over at the end of the party. You will never have leftover dumplings – unless you burned them.

This reminds me how much I liked the dumplings at the Tsinghua student cafeterias. I think they were served at every meal but I associate them with breakfast, maybe because there was less choice at breakfast. Fresh and homemade and chewy and well-spiced and incredibly cheap (like all the cafeteria food). Maybe 6 for 25 cents. There was an optional vinegar-like sauce (speaking of fermented foods). There were two types (pork & ??) but I didn't understand the Chinese names.

I tried to avoid them. They were too easy and familiar. But it takes a certain amount of stamina to eat strange food so if I was tired, I'd have dumplings.

1. <http://www.fortunecookiechronicles.com/>

2. <http://www.fortunecookiechronicles.com/blog/2009/06/29/i-believe-in-the-power-of-dumplings/>

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## More About Turmeric (2009-07-26 10:23)

From [1]the Shangri-La Diet forums:

I've begun taking turmeric and it's been a miracle. I used to be really into rock climbing and this really messed up the big toe in my right foot. (Wearing shoes 2.5 sizes too small and bearing all my body weight on my toe joints will do that, apparently.) The podiatrist said it was arthritic in nature and that the only thing that would stop it was to stop climbing. So I did. One year later, the pain had lessened, but it still hurt, and I couldn't start running again.

Last week, on a humbug, I tried turmeric. I made some vile anti-inflammatory spice concoction and managed to get a few tablespoons of it down. It probably would have ended there because it was so freaking disgusting, but I noticed later that day that my toe pain had diminished to a dim sensation that was barely uncomfortable. Desperate to come up with a non-disgusting means of taking my new "medicine," I settled on mixing turmeric, cayenne, and yellow mustard into a paste. It tastes like grainy, spicy mustard and I take about a tablespoon in the morning and a tablespoon at night. I'm also trying to take some fenugreek, cinnamon, and cardamom. I mix the fenugreek with my green tea, allow it to steep and expand between brewings, and then eat the seeds once they get soft. The cinnamon and cardamom are pleasant enough, so I just chew on them. (I use mexican cinnamon, probably 1/3 to 1/2 stick per day.

Vile Spice Mixture = VSM. James Lind tried a VSM in his famous scurvy experiment; it had no effect.

[2]The Wonders of Turmeric.

Thanks to Heidi.

1. <http://boards.sethroberts.net/index.php?topic=926.msg88221#msg88221>
2. <http://www.blog.sethroberts.net/2009/07/15/the-wonders-of-tumeric/>

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Nathan Myers (2009-07-27 16:40:01)

I don't understand why she doesn't put it in gel caps.

seth (2009-07-27 17:02:25)

Thanks for the suggestion, Nathan.

tom (2009-07-27 22:46:56)

It's very weird that people are eating the spice instead of the active ingredient: <http://www.vitacost.com/productResults.aspx?ss=1 &Ntk=products &x=13 &y=13 &Ntt=cucurmin>

Nathan Myers (2009-07-28 11:28:31)

The spice is very cheap, the "active ingredient" is expensive. What's weird? Furthermore, how do we know there's only one active ingredient?

### Academic Horror Story (Stanford University) (2009-07-26 15:47)

From the [1]Washington Post:

At the open house, a STEP [Stanford Teacher Education Program] instructor asked [Michelle Kerr] if she planned to accept the offer of admission [to Stanford's School of Education]. Anyone else would have said yes. But Kerr, who calls herself "fatally truthful," said the tuition would be difficult to afford and admitted she was philosophically out of sync with the program. . . .

[[2]Professor of Education Rachel Lotan, the director of STEP,] called Kerr in for a 45-minute session on her doubts about the STEP policy orientation. Wouldn't she be more comfortable elsewhere? Even when university ombudsman David Arnot Rasch assured Kerr the offer of admission was binding, Lotan couldn't let it go. According to Kerr, Lotan looked for legal grounds to keep Kerr out, something Kerr said she discovered when another official mistakenly sent her an email that was meant just for Lotan.

"I really can't believe this response," the official said of Kerr's decision to accept admission and decline another meeting with Lotan. "Are you forwarding her response to the lawyer?"

Kerr called Lotan "a ruthless political animal who believes she was protecting her program from enemy infiltration." During a second meeting with Kerr, [3]Lotan said that she asked a lawyer about the possibility of rescinding Kerr's admission. The lawyer had told her that was untenable. "Unfortunately," said Lotan.

After Kerr became a student at Stanford, [4]Lotan tried to get her in trouble at her internship school. In [5]an official letter to Kerr, Lotan complained "you raised your voice."

[6]More about this.

1. [http://voices.washingtonpost.com/class-struggle/2009/07/they\\_messed\\_with\\_the\\_wrong\\_blo.html](http://voices.washingtonpost.com/class-struggle/2009/07/they_messed_with_the_wrong_blo.html)
2. <http://ed.stanford.edu/suse/faculty/displayRecord.php?suid=rlotan>
3. <http://www.thefire.org/article/10887.html>
4. <http://www.thefire.org/article/10888.html>
5. <http://www.thefire.org/public/pdfs/13f8d2c5f4424f15337353b39b018c40.pdf>
6. <http://www.thefire.org/case/799>

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anonymous (2009-07-27 07:03:09)

I was all ready to accept Kerr as being the victim, but, then you have this, as quoted from her e-mail on FIRE: "For those of you who wish to continue requesting that you not sit with me in practicum, make sure you mention the reason so that Rachel can build her case for the next time we do our little dance. "Rachel, I do not want to sit next to Michele in practicum. It has nothing to do with her views; she's just an domineering, overbearing bitch." DOB. We could print up cards or something. Don't Sit Me Next to the DOB! . . . I am being told that I'll be expelled if I can't figure out how to stop my classmates from complaining about me. That's a valid standard for a fifth grader clique, but it's not one I'll accept in a graduate academic setting. I'll continue being me, and those of you who feel uncomfortable can maybe learn how to speak up. Or not. Your call." AKA the old Cartman "I don't care! I don't care! I do what I want!" More or less, I am betting the actual problem is not that Kerr has problems with the program, but rather, that she is incredibly unpleasant and no one likes her. Surely you've met people like this in academia. I've had classes with them. Martyrs. Their problems look incredibly good on paper because the only actual ways people can get rid of them are technicalities. People want to get rid of them because they are INTOLERABLE, but since that is matter of opinion, even if it is a extrasupermajority, there are no procedures in place to make them leave. Don't get me wrong, they could very well have valid points and good ideas (Richard Stallman, anyone?), but valid points and good ideas that you wish were being injected into the discussion far, far away from you. Disclaimer: I (really and truly) don't know any of the people involved here. I'm just going based on what she said about herself. Anyone who knowingly calls themselves a domineering overbearing bitch

is by definition, not someone you want to work with. The fact that she doesn't have the good sense to not even say that about herself speaks volumes.

seth (2009-07-27 09:35:29)

anonymous, the "actual problem" is that Lotan wanted Kerr out of the program because Kerr disagreed with Lotan. That's thought police. That's awful anywhere; at a place like Stanford, that's supposed to make intellectual progress, it's even worse. Not only did Lotan try to enforce conformity, she really was ruthless in her attempts to do so. Lotan started treating Kerr very badly long before there was time to decide that Kerr was "intolerable". As for her classmates complaining about her, I agree with Kerr: They shouldn't go running to higher authority. They're graduate students, for heaven's sake. They should be able to solve their own interpersonal problems. If they have a problem with Kerr, they should complain to Kerr.

anonymous (2009-07-27 09:58:50)

You might be right. I concede that I do not know all the facts, nor do I condone what happened. I just do not believe Kerr to be entirely faultless.

Ashish (2009-07-27 18:35:36)

Without knowing the people involved - though I've probably sat next to them at Borrone - I think the first comment brilliantly describes a situation with which we are all familiar. People are people first, whether it's fifth grade, grad school, or work, and one obnoxious, disruptive, person can and does ruin it for the entire group. Most of us don't want to be fighting all day long. (I will say that Stallman was nice enough when I knew him - rather quiet, in person.)

seth (2009-07-27 18:53:33)

"Most of us don't want to be fighting all day long." Again, the mistreatment of Kerr began long before any "fighting" or disruption. She was mistreated after she simply expressed an unorthodox opinion. The fact that a STEP instructor went to Lotan and told her about an unusual student she'd met during open house (Kerr) also reflects badly on the program - and especially badly on Lotan.

Ashish (2009-07-27 19:14:24)

I'm guessing that the original issue - and the real issue throughout - may have been not so much with the content of some opinion that Kerr expressed, as with the manner in which it was expressed.

seth (2009-07-27 20:18:26)

If Lotan objected to Kerr's behavior (how she expressed herself) rather than Kerr's opinions, Lotan should have made that clear right away. I see no indication that happened.

## **Do They Eat Dogs? (Continued) (2009-07-27 11:46)**

In answer to the question "Don't they eat dogs?" a blogger living in Taiwan [1]stated flatly: "No. They don't eat dogs." Now, from a Beijing University student named Xiong Lilin, here is a definitive answer about Mainland China:

Yes, we do. But not every Chinese person eats dog and never for everyday meals. In some provinces, there are restaurants that serve dog meat in the winter. A few people will have one or two meals every year during the coldest days. Eating dog meat can make people warm and prevent colds. Although these kind of restaurants exist, they are disappearing. In fact, mutton has the same function as dog meat. In my home town, Chengdu, many people eat mutton on [2]DONGZHI, the day winter begins according to the Chinese traditional calendar.

More In [3]this New Yorker article, published today, Michael Savage, the radio host, contemplates eating dog. Xiong Lilin later wrote: "Yesterday, my roommate asked me what kind of dog we eat. She seems to think that we eat pet dogs. In fact, we do not eat pet dogs, the dogs we eat are raised specially for eating and belong to different kinds from the pet ones."

1. <http://www.neatorama.com/2009/03/24/not-in-kansas-anymore/>
2. <http://en.wikipedia.org/wiki/Dongzhi>
3. [http://www.newyorker.com/reporting/2009/08/03/090803fa\\_fact\\_sanneh](http://www.newyorker.com/reporting/2009/08/03/090803fa_fact_sanneh)

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Timothy Beneke (2009-07-27 20:23:08)

In 2002, in Xian, in central China, I was served dog at a restaurant as part of a meal I was eating with a leading artist there and the Xian chief of police and some others in our group; there was also chicken and beef and other food, but dog meat was part of meal that was ordered by the artist. No one seemed to think twice about it. I ate a tiny bit, rather beefy and stingy as I recall... The restaurant was part of an entertainment park with miniature golf and fishing and other activities...

thehova (2009-07-28 01:05:31)

I just read the profile on Michael Savage. What a strange figure.

Abe (2009-07-29 19:58:53)

Dog is still widely eaten in southern China ... especially Guanxi Autonomous Region and its Capitol Nanning Case in point 1: <http://www.fotothing.com/junne/photo/42b2cccae403d5e8be2a5a2160c72133/> Case in point 2: check minute 2:28 - <http://www.youtube.com/watch?v=ilmwVJWI83Q>

## **What I'm Looking Forward to Reading (2009-07-28 09:43)**

In September, David Owen, a staff writer at The New Yorker, will publish [1]Green Metropolis: Why Living Smaller, Living Closer, and Driving Less are the Keys to Sustainability. Or at least that's what the print says; the picture has a different subtitle. The book expands on [2]this New Yorker article. Owen criticizes Michael Pollan and Amory Lovins, among others. Maybe this is an example of the [3]insider/outsider advantage I've blogged about. Owen is not the New Yorker's environmental reporter; that would be Elizabeth Kolbert. So he can say anything, criticize anybody, without worrying about his ability to write more on the same subject. He can always go back to golf. Kolbert is not so free. In any case, Owen's book sounds better – less predictable – than [4]Kolbert's book on a similar subject. [5]A TV show on the subject. [6]Owen on bridge.

1. <http://www.amazon.com/Green-Metropolis-Smaller-Driving-toSustainability/dp/1594488827/sethrobertand-20>
2. [http://www.greenbelt.org/downloads/resources/newswire/newswire\\_11\\_04GreenManhattan.pdf](http://www.greenbelt.org/downloads/resources/newswire/newswire_11_04GreenManhattan.pdf)
3. <http://www.blog.sethroberts.net/2009/01/24/not-the-same-study-section-how-the-truth-comes-out/>
4. <http://www.amazon.com/Field-Notes-Catastrophe-Nature-Climate/dp/1596911301/ref=sethrobertand-20>
5. <http://www.youtube.com/watch?v=wDnvY6xH0jw>
6. [http://www.newyorker.com/arts/critics/books/2007/09/17/070917crbo\\_books\\_owen?currentPage=all](http://www.newyorker.com/arts/critics/books/2007/09/17/070917crbo_books_owen?currentPage=all)



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thehova (2009-07-28 10:18:46)

From the publisher's weekly review, I find this sentence to be interesting: "The environmental movement's disdain for cities and fetishization of open space, backyard compost heaps, locavorism and high-tech gadgetry like solar panels and triple-paned windows is, he warns, a formula for wasteful sprawl and green-washed consumerism." I guess there's a lot of sex appeal behind solar panels. And big business is more than willing to get into this highly subsidized government industry. But the bottom line is that from a scientific perspective, solar panels don't show much promise.

Nathan Myers (2009-07-28 14:43:07)

Solar panels on houses don't, but not so much because of the panels, but because it's a small number of panels attached to a big inverter and rack of batteries. Serving as roofs over big parking lots and commercial warehouses, they would make more sense, protecting the roofs and cars underneath as well as producing power, and be big enough to take advantage of economies of scale. Solar thermal power (using long, flat, rotating mirrors reflecting onto a long heat-absorbing pipe) is now competitive, and you could park, shop, or work under it too.

Preston L. Bannister (2009-07-29 16:45:39)

Simple question: If places like New York are efficient, why does it cost so much to live there? (And please, try not to go shallow on the answer.)

seth (2009-07-29 18:08:40)

I think energy efficiency is a small part of what determines cost. I think what it costs to live in New York is a function of desirability, what salaries are paid to the people who live there, how much everything costs (now & in the past – such as building costs), and how much it costs to live nearby. Given the huge rural-to-urban migration all over the world, you have a subtle point: In some system of accounting, it must be costing less and less to live in cities. Perhaps because all sorts of problems associated with city life are slowly being solved. E.g., better sanitation, better transportation.

## **The Mother of an Autistic Child Writes... (2009-07-29 01:08)**

Lisa Belkin, who blogs about parenting for the NY Times, [1]prints an excellent letter from the mother of an autistic child about what it is like:

“Crying.” The study talks of the crying. [The mom wrote to Belkin to complain that a study Belkin described sugar-coated things.] The word pales in the face of our son’s dissolutions into tears. These days, if he hears a simple “no” or learns of some change in plans, he might launch into a 10-minute jag, where he argues fiercely with us in between the sobs. Then he can quickly escalate to ear-piercing screams lasting another 15 minutes or more. It’s a wonder none of our neighbors have misconstrued what they might have heard and called 911. The shrieking does subside, back into sobs, and that part is somehow harder to watch, reminding me how terrifying it must be to feel to be that out of control, especially when you’re a small, anxious child.

No good deed goes uncriticized. An autistic adult named Sarah [2]writes to Belkin to complain:

Please, consider that autistic people read blogs and have feelings as well. Your blog entry claims to show “the unvarnished reality of autism,” but the feelings and perceptions of actual autistic people are sadly missing from your account.

What an idea: that no blogger should write something that might hurt the feelings of someone with autism. As for the "sadly missing," the passage I quoted from the mom describes the "feelings and perceptions" of an autistic person at length. Sarah blogs [3]here.

1. <http://parenting.blogs.nytimes.com/2009/07/22/the-unvarnished-reality-of-autism/?scp=3&sq=autism&st=cse>
2. <http://parenting.blogs.nytimes.com/2009/07/22/autism-from-the-inside-looking-out/>
3. <http://autisticcats.blogspot.com/>

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JR Minkel (2009-07-31 23:06:41)

Seth, maybe acknowledging what it's like from the autistic subject's point of view is part of finding a way to improve everybody's well-being. I wonder whether autistic kids could be raised in some alternative environment that would be less injurious to them and to their caregivers. I wonder how much NIH money goes toward figuring that out. Seriously!

### **Autism and Digestive Problems (2009-07-29 23:15)**

[1]The latest issue of Pediatrics has a study that asks whether autism is associated with digestive problems. The authors compared the medical records of about 100 autistics with about 200 matched controls. The controls came from an area in Minnesota, near the Mayo Clinic, in which almost everyone has a health record on file that the researchers could look at. So the controls are a good sample of the non-autistic population.

The [2]New York Times described the results like this:

The scientists found no differences [should be difference, singular] in the overall frequency of gastrointestinal problems reported by the two groups.

This isn't quite right. The study found that the proportions of persons in each group to have had at least one digestive problem by age 20 weren't reliably different. For the autistic kids, the proportion was 77 %; for the controls, 72 %.

The study design seems fine but the data analysis has a lot of room for improvement. You have an idea you want to test, good; try to test it with one test. The authors boiled down all their data into "at least one problem by age 20" – that's just what epidemiologists are told to do – but this was a poor choice. First, there is a ceiling problem. If both groups had percentages in the 90's, this would be obvious. Better to avoid the ceiling problem. Second, to combine different symptoms with the "at least one" rule is likely to be less sensitive to differences than a combination rule that takes amount into account. The analysis in the article treats someone with 1 problem as equal to someone with 50 problems. No justification is given. Third, it isn't obvious that it makes sense to combine symptoms this way. What if Symptom 1 and Symptom 2 are uncorrelated? In other words, what if whether you have Symptom 1 doesn't affect your chances of having Symptom 2? Then to combine them (as the authors do) makes no sense. Factor analysis is how you condense several correlated measures into a few uncorrelated measures.

The study separated digestive problems into five categories (constipation, diarrhea, and three others). In each of the five categories, persons in the autistic group were more likely to report the problem than persons in the control group; in four of the five categories, the difference was significant (with one-tailed p values; the authors misleadingly use two-tailed p values – without making that clear). In one of the five categories the difference isn't anywhere close

to significant – which supports the idea that there are at least two dimensions here: one on which the two groups differ, and one on which they don't.

In the discussion, the authors, not realizing that four out of five of their problem categories differed significantly in the predicted direction, try to explain away the two differences that were significant with two-tailed p values: in constipation and picky eating. They note that autistic children get more medication than normal children. "Many children with autism are treated with risperidone, and this may result in increased appetite and weight gain," they write. Why a drug that causes weight gain would cause picky eating isn't explained and, without explanation, doesn't make sense. Weight gain – they mean too much weight gain – involves eating too much; picky eating involves eating too little. Nor do the authors explain why their results differed from many previous studies. My take on the paper is that their results confirm previous studies, so that would have been interesting to read.

1. <http://pediatrics.aappublications.org/cgi/content/abstract/124/2/680>

2. <http://www.nytimes.com/2009/07/28/health/28autism.html?scp=2&sq=autism&st=cse>

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JR Minkel (2009-07-30 15:32:49)

Speaking of autism and methodology, I was scanning a book on the epidemiology of schizophrenia for a story I'm working on, and in the very first chapter, right after explaining the difficulty in quantifying some general "heritability" from a particular sample, the author points out that studies of vaccine side effects can't separate cases from controls, so there's a methodological snag there. I have no reason to think autism is related to vaccines – I need to look at the studies – but if experts gloss over those sorts of technicalities in framing e.g. vaccine policy to the public, is it any wonder a savvy parent could become suspicious?

Nathan Myers (2009-07-30 17:05:37)

It's always been easy to construct a study to produce a negative result, if you can be confident the method won't be criticized. Because of its construction, this one doesn't, and can't, tell us much of anything about autism and GI problems. Instead, we need to ask, here, what it demonstrates that they have constructed this particular study this way.

seth (2009-07-30 21:32:30)

Nathan, I don't think this study was biased at all. The areas of possible improvement I point out are found in most epidemiological papers. The data analysis was done as it was because that's the way epidemiologists are taught to do that sort of thing. Not "to produce a negative result."

Scot (2009-07-30 22:57:29)

Two comments: first, you state that the overall outcome was not "reliably different". I assume what you mean is "not statistically significantly different". Statistical significance shouldn't be conflated with reliability of a finding (Nickerson R.S. (2000) Null hypothesis significance testing: A review of an old and continuing controversy. Psychological Methods, 5(2), 241-301, see specifically p. 256-257.). Second, I don't quite understand what you mean by the authors misleading by using 2 tailed p-values. Do you mean they used one tailed p values to make decisions but report 2 tailed p-values (i.e., they were confused) or that the tests should have been done with 1 tailed p-values only. If the former, I get it. If the latter, why would it be necessary to only use 1 tailed p-values in this setting...aren't differences in either direction of interest?

seth (2009-07-31 06:15:25)

Yes, by "reliably different" I meant "statistically significantly different." The authors started with a directional prediction they wished to test. When you have a directional prediction convention is to use a one-tailed test because one direction of change is the focus of interest and is much more plausible than the other direction of change. In spite of this they used two-tailed tests.

legal beagle (2009-09-11 10:20:07)

Not strictly related, but recently found this blog which has lots of info and a hypothesis tying missing bacteria required for nitrogen oxide production with autism and other problems: <http://daedalus2u.blogspot.com/2007/04/background-and-summary-no-and-asds.htm> | <http://daedalus2u.blogspot.com/2007/03/abstract-of-low-no-hypothesis-of-asds.html> <http://daedalus2u.blogspot.com/2007/03/introduction-to-low-no-cause-of-asds.html>

## **Does Bad Medicine Drive Out Good? The Case of Eczema (2009-07-31 18:46)**

In [1]an article on weight regulation I read this:

One subject . . . developed symptoms possible related to EFA [essential fatty acid] deficiency (ie, mild eczema relieved by the addition of fat to the diet).

In other words, the subject – in a metabolic ward at Rockefeller University where everything he ate was supplied by the researchers – developed eczema when fed a zero-fat diet. When fat was added, the eczema disappeared. The researchers understood that not enough fat in your food can cause eczema. This research was done around 1960. The conclusion is supported by dozens of reports from people doing the Shangri-La Diet who said that when they started drinking oil their skin improved. Dry areas disappeared. I found the same thing myself. (And judging by the large fraction of people who have dry skin, a lot of people aren't eating enough fat.)

The notion that eczema can be cured by eating more fat – perhaps high in omega-3 – could hardly be simpler. Around 1960, at least some doctors understood this (in a situation, I admit, where it was easy to understand). Yet here is how eczema is treated today, according to Bottom Line/Women's Health (April 2009, p. 9):

Eczema (dry, itchy, swollen skin) usually is treated with topical anti-inflammatory cream twice daily during flare-ups. Patients who applied tacrolimus (Protopic) twice weekly to lesion-prone areas even when no lesions were visible went 142 days between flare-ups, on average . . . versus 15 days for placebo users. Tacrolimus can cause nausea and muscle pain and may increase skin cancer risk – ask your doctor about the pros and cons of preventative eczema treatment.

The information comes from a study done by Sakari Reitamo, a professor of dermatology at University of Helsinki, and others published recently in Allergy.

The surface things – the things that impress many readers – appear good: large sample, big difference between groups, peer-reviewed journal, good university. Yet once you know that eczema can be cured by eating more fat, the whole thing sounds Orwellian.

1. <http://www.ajcn.org/cgi/reprint/55/2/350>

thehova (2009-07-31 20:54:11)

off topic, but I'm curious if you have any reactions to a couple of long Megan Mcardle posts on weight loss (the last one specifically mentions you): [http://meganmcardle.theatlantic.com/archives/2009/07/americas\\_moral\\_panic\\_over\\_obes.php](http://meganmcardle.theatlantic.com/archives/2009/07/americas_moral_panic_over_obes.php) and [http://meganmcardle.theatlantic.com/archives/2009/07/thining\\_thin.php](http://meganmcardle.theatlantic.com/archives/2009/07/thining_thin.php) of course, lots of people seem to disagree with her in the blogosphere.

Dennis Mangan (2009-08-01 05:24:07)

In his book, Taubes shows that carbohydrate restriction for weight loss was the conventional wisdom for around 100 years, but with the advent of the lipid hypothesis of heart disease, the knowledge was shoved down the memory hole. When low carb diets were revived, it was almost as if no one had ever heard of such a thing. But if you had gone to a major medical center or clinic for weight loss up until the early 70s, you would have gotten a low carb diet.

seth (2009-08-01 06:22:14)

thehova, thanks for letting me know about the McArdle posts. Besides being pleased she mentioned me, I thought the interview with Campos was very good. He makes several good points that aren't usually made. I disagree with him, however, that being thin isn't important. I wished McArdle had asked him: What about people who want to be thin to look more attractive? When Campos goes on about how it doesn't really help your health to be thinner, he's ignoring what I thought was pretty obvious: that it does help your attractiveness. Perhaps any reader of this blog doesn't need to be told that she appears to misunderstand my theory. I say that the obesity epidemic has arisen because we are eating foods that taste exactly the same each time (and have lots of quickly digested calories). Lots of factory-made food. Factories make food that's less variable than homemade food. Such food produces stronger flavor-calorie associations, which raise our set points more. This isn't the same as saying our food has lots of fat, sugar, and salt. Dennis, yes, that's a good example.

Ben Hyde (2009-08-01 12:41:24)

Bad money drives out good because money has two (among others) functions: store of value and means of exchange. The bad money is good enough for the exchange, while the good money is retained for its storage value. Presumably in this context we have rituals/knowledge that get used for treatments. But they have value in differing ways: short-term v.s. long-term efficacy. There are some narratives of the founding of professional medicine that argue that for centuries there was an unlimited demand for medical knowledge so lots of folks would volunteer to provide treatments. Such practitioners have a preference for treatments that have high short term efficacy - blood letting, caffeine, purgatives, etc. etc. Only once a monopoly was granted longer term efficacy could get a bit of seat at the table. No doubt all knowledge economies have analogous problems. How the split between short-term and long-term efficacy is balanced ain't amenable to naive rule making.

thehova (2009-08-01 12:57:43)

Thanks for responding. Yes, people truly want to lose weight. It seems like McArdle/Campos argue that this desire to lose weight stems from a major, erroneous misconception that fat equals unhealthy. But I don't think that's right. In college, being overweight, I struggled to get to classes around campus. I was starting to feel pain in my hips and knees. I had terrible acne from the types of food I was eating. I was often directly miserable from being overweight. Of course, strict calorie reduction, which health care experts seem to often advocate, often makes people more miserable. That's what's great about the SLD. You lose weight in a smart way.

seth (2009-08-01 13:22:48)

Thanks, thehova. Not only does Campos ignore the psychological benefits of weight loss, he may not realize that weight loss certainly causes blood pressure reduction and less damage to knees and legs, as you say.

## 4.8 August

### Andrew Gelman on Writing (2009-08-01 06:54)

[1]Andrew gives excellent advice about how to write a scientific paper. This is his best point:

Consider Table 2. Do you want the reader to know that in line 3, Min Obs is 894? I doubt it. If so, you should make a case for this. If not, don't put it down. When an article is filled with numbers and words that you neither expect or want people to read, this distracts them from the content.

In other words, most tables should be figures or omitted. I would add a broader point: **Don't try to impress anyone.** It gets in the way of helping them – helping them understand what you're saying. (The classic example is B. F. Skinner, apparently insecure Harvard professor, calling one of his books *The Behavior of Organisms* instead of *The Behavior of Animals*. The book said nothing about plants.) Many tables seem more meant to impress than communicate but it isn't just tables. That section at the end where epidemiologists talk about the "limitations" of their study: The content is so predictable, so fact-free and unhelpful that I think they are just trying to impress readers with how careful they are. So I would add to Andrew's advice: **Don't tell people what they already know.**

I also like his list of content-less words, such as *very* and *nice*. Allen Neuringer told me you should never use *very* and I was impressed.

[2]Alex Tabarrok's comments.

1. [http://www.stat.columbia.edu/%7Ecook/movabletype/archives/2009/07/advice\\_on\\_writi.html](http://www.stat.columbia.edu/%7Ecook/movabletype/archives/2009/07/advice_on_writi.html)

2. <http://www.marginalrevolution.com/marginalrevolution/2009/08/gelmans-good-advice.html#comments>

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LemmusLemmus (2009-08-01 11:02:44)

*That section at the end where epidemiologists talk about the "limitations" of their study: The content is so predictable, so fact-free and unhelpful. . . . .* that one might suspect many authors only include those points so that they don't provide an open flank to reviewers?

Andrew Gelman (2009-08-01 13:49:20)

Hi, Seth. I'm glad you liked my advice. The Skinner story is amusing. It reminds me of when I was deciding on the title of my first book. Consider these three alternatives: 1. Bayesian Statistics 2. Bayesian Inference 3. Bayesian Data Analysis Option 1 was too general: our book covered data analysis but not other aspects of statistics such as data collection and decision analysis. Option 2 was too specific: "inference" does not include model building and model checking. Option 3 was just right. I do have one quibble with what you wrote above, though. I agree that most tables should be figures or omitted. But I disagree with your inference that people who include too many numbers in a table are trying to impress someone. I think people do it that way because that's how they think it's supposed to be done. They're just following the template.

seth (2009-08-01 14:15:40)

yeah, I agree, some tables are there just because it's conventional. Perhaps fear is the motivation: fear of not being conventional. Then the broad lesson is: Don't do something just because other people do it that way. Jane Jacobs told a story about people who cut the end off of their meatloaf before putting it in the oven. Why? she asked. They didn't know. It was just how it was done. Turned out it used to be done because the oven was too small for the whole thing. Now they had a bigger oven but kept on cutting off the end. Graphs were once hard to make, so people made tables instead. Now graphs are easy but not everyone has adjusted.

James (2009-08-02 07:09:37)

I can see one good reason to have tables in there - reproduceability. Give people your raw data so they can repeat the analysis themselves.

seth (2009-08-02 09:26:37)

James, that's very rare - anything approaching raw data. I agree with you but that stuff should be in an appendix.

HowTo: write research articles « Entertaining Research (2009-08-18 03:16:38)

[...] I got the link to Gelman's post via Seth, who has his own suggestions and also a pointer to Alex Tabarrok's comments on the same at MR. [...]

### **The Blue Sweater (2009-08-01 16:37)**

When Jacqueline Novogratz was a young girl, she had a favorite blue sweater. She continued to wear it after it became too small. One day a boy made fun of her for wearing it ("We can ski Mount Novogratz"). The next day she gave it away. A decade later, in Africa, she saw it being worn by a skinny young boy. Thus the title of her new book about trying to make the world, especially Africa, a better place: [1]The Blue Sweater.

In contrast to so many books, usually by men, about helping others, which tend to be about how right the author is/was, this book stresses how wrong she was. An example is a job interview.

"Tell me why you want to be a banker," he suggested. . . .

"I don't want to be a banker," I said. "I want to change the world. I'm hoping to take the next year off but my parents asked me to go through the interview process. I'm so sorry."

"Well," he said with a grin, shaking his head. "That's too bad. Because if you got this job, you would be traveling to 40 countries in the next 3 years and learning a lot not only about banking, but the entire world."

I gulped. "Is that really true?" I asked, my face completely red. "You know, part of my dream is to travel and learn about the world."

"It is really true," he sighed.

"Then do you think we might start this interview all over again?" I asked.

She got the job. It's easy to see why. And stories like that made me want to read the book

1. <http://www.thebluesweater.com/>

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michael vassar (2009-08-02 10:53:11)

Too "heartwarming", too improbable (in a fairly easy way to measure and also in terms of the survival of the sweater) and too inconsistent with what I know of New York bankers. I simply don't believe her. Calling touching fictional stories non-fiction probably boosts sales.

seth (2009-08-02 13:26:44)

The sweater story doesn't strike me as heart-warming, just strange. As for "too improbable," I think Nassim Taleb's basic point is correct: We are very poor at estimating the likelihood of rare events.

### **Gamesinwelt.com Scam (2009-08-02 12:55)**

I finally decided to get a Wii Dance Dance Revolution. This required getting a Wii, and gamesinwelt.com had the lowest prices. Curiously they shipped from China, where Wii's are not for sale. I searched for "gamesinwelt.com complaints" and "gamesinwelt.com sucks" and found nothing. Okay, I thought. As it turned out my credit-card payment did not go through so I haven't lost any money but here is what should have made me suspicious:

1. The site didn't work very well. One of the error messages I kept getting made no sense.
2. It didn't take direct credit card payments. The credit-card payments were made through Paypal.
3. Delivery was not only free, it was really fast – 2-5 days.
4. The site listed FedEx as a delivery choice in one place but not on the home page.
5. Although there were about 9,000 Google hits for gamesinwelt.com, when I went to the pages the ads weren't there. They were brief ads. And only ads.

When I searched "gamesinwelt.com scam" – after the purchase – I did find [1]useful information that confirmed my fears. One persuasive point was that the site was registered only a week ago. This is why there was so little negative information available. Foolish me.

More "My credit-card payment did not go through" – that's what I was told when I called Paypay. But then I got an email saying it had gone through. Ugh! So I called Paypal again and complained. And was told I needed to call back in a week when I hadn't gotten the stuff. Then I waited a week and called Paypal for the third time. And then I was told a dispute had already been filed and – when it was resolved in my favor – I would get an email saying the money had been refunded. So I had to call Paypal three times (so far) to deal with this and one of those times was given wrong information.

[2]The story continues.

1. <http://www.fatwallet.com/forums/hot-deals/941456>

2. <http://www.blog.sethroberts.net/2009/08/22/paypal-the-empty-promise-way-to-pay/>



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Natalie (2009-08-03 00:40:11)

So, did you get the wii? I found the site as well and was doing my research on it as well. Your blog came up but I didn't understand what you thought about it. Was it a scam? You didn't get what you ordered? Thanks

Ainsprid (2009-08-03 01:39:07)

I'm glad you didn't lose any money Seth o.o And I hope you'll find it on another site ^^

seth (2009-08-03 04:14:49)

Natalie, my payment to the site did not go through. Yes, I am saying the site is fake and that if my payment had gone through I would not have gotten anything.

bennetta (2009-08-03 14:31:13)

I work for a manufacturer (in the outdoor industry) and there's no way we would sell to an online business like this. To me, probably the biggest red flag here is the lack of a physical address and phone number. If they can ship so quickly, surely they must have a warehouse in the continental US. Do they even have a customer service department? How about a business address? Is this just some guy operating out of his apartment? How can they manage all communication through just one single email address? Either they must not communicate that much and they must not sell very much (which would make them unable to get such great deals), or they are sorely lacking in the service department. This is a concern not only for consumers, but also manufacturers who would need to contact them. General rule of thumb regarding internet sales: If it sounds too good to be true, it probably is.

seth (2009-08-03 16:18:04)

You might be right. But here's what I think: An address in China would be easy to fake. Amazon doesn't have an obvious address, phone number, or even, perhaps, a customer service department that you can reach by phone. The shipping is only a little fast – I often get stuff in a day or two if it's flown at some point. "If it sounds too good to be true, it probably is." The prices didn't sound too good to be true. They were no lower than many actual Chinese prices (at tiny stores). I've bought shoes in Beijing for 80 % less than I'd pay in America. Even before the internet, I often bought electronics for far less than retail.

Nathan Myers (2009-08-03 18:24:23)

Aren't there any Free Software alternatives to DDR?

Sid (2009-08-03 20:42:44)

i bought a wii from there but luckily papypal refunded me the money!! I thought i should take a risk as i know paypal could give me my money back if i opened a dispute.... In conclusion DONT BUY FROM THIS SITE!

Amin (2009-08-04 18:56:26)

I beleive this is scam! I placed a Nintendo Wii bundle with some additional games on July 30th and received an immediate order confirmation from gamesinwelt support center and a payment receipt from paypal. But then after 2 days when I did NOT receive any shipment confirmation from the seller, I sent an email to gamesinwelt support center but still no response. Then I called paypal and asked them to help. Paypal sent an email to the seller, Mr.Peng Lin, on my behalf on Monday, August 3rd and as of today, 8/4/09, I did not receive any response. Now, after I read your experiences, I am going to request Paypal to refund my money.

Lisa S, QLD (2009-08-04 19:13:40)

Hey Seth, Otto,I just brought \$350 worth of wii stuff online through this company.... Also i am in Australia, I really hope what you say isnt true( no offence). I am a single mother on a pension... I thought this was really cheap, the site didnt look fake to

me....shit what have i done?

Russ N. (2009-08-05 14:50:50)

Hello, I'm from maryland and I just purchased a wii from this company, I am very weary after reading this, to put my mind at ease I look to further investigation of this site. Thanks for the warning, but I will get my wii!!! come hell or high water.

r (2009-08-05 18:10:21)

well did any of you guys get your wii?????????????

Jason (2009-08-05 18:58:44)

Ok ... Not happy I just have been had by the same company. I also received a paypal receipt but inputted my CC directly and now 3 days later the transaction has gone through with no contact with game in welt no email for shipping. UGH!!

Fern (2009-08-05 20:27:23)

DEFINITELY A SCAM! Thanks to all the bloggers on this site for alerting us. I just wish I would have read this site before I purchased. Just contacted PayPal & they will require you to file a dispute (after several days of waiting for no item). They'll investigate and if they rule in your favor, you'll get a refund.

Lisa S, QLD (2009-08-06 01:29:11)

i have only just ordered mine, i have asked the seller a question but they haven't replied back. I dont even think the email went throght to them.

Donna (2009-08-06 12:32:20)

i found gamesinwelt.com using Google search engine on 7/31. i was suspicious and researched this company for scams/rip offs. after coming up empty, i reluctantly placed an order using a major credit card. it's been a week and my order is still in "new" status. i've emailed "service" several times and haven't received one response. the detail on my credit card shows the merchant as: Mark Paypal, Hamilton Ave, San Jose, CA and that the purchase was "professional business services". today, i contacted my CC company and reported this site to the IC3. i've found this vendor on many major search engines and websites including Monster's Marketplace....

Emmanuel Iheonu (2009-08-06 23:48:30)

i to had also purchased a psp 3000 bundle for \$112 on this same scam site on the 28th of july n i got a confirmation abt my order from the site but its been ova a week now and i haven't received any confirmation of payment and tracking info. I was sooooooooooooo pissed and deecided 2 cal paypal and they opened a case for me. They are currently investigating it so hopefully i would be able to get my money back!!!! The SITE IS A FUCKIN SCAM!!!!

Matthew (2009-08-07 12:51:48)

I too was alarmed after looking over several sites and my wife saying that the deal sounded too good to be true. I googled the site beforehand and didnt see this blog today I googled Gamesinwelt.com scam, and it confirmed my worst fear that I had been ripped off I even see that the paypal payment I made was to a different party than posted above I opened a dispute as well. I am using this website as cause to believe the site is fraudulent.

vicki (2009-08-09 00:37:47)

I wish I had read the reviews before purchasing my order last week. i have now put a dispute in with paypal and hopefully will get my money back. The offer did seem to good to be true.

Matthew (2009-08-09 15:21:29)

Follow Up: I have actually found paypals dispute resolution process to be somewhat tedious. I placed the dispute then I called my credit card company and they said if it had posted (it had) I could open a case with them.... It was my bank/debit card so this process was through my bank. I followed the instructions that they gave me and I should have my money back Via chargeback

which paypal then yanks the funds from the account they funded. I was lucky I found this website while I was still having my payment in verification stages from paypal so when I recieved the word they funded the other account I filed a dispute immediately. I am not sure what other financial instutions process is but I feel like I am glad I used paypal and my bank card I feel more reassured that I will get my money back, the people at my bank say this is fairly common that this stuff happens.

Bushe (2009-08-09 21:38:39)

Would you be interested in writing for The Neave Online Publication? I love your writing style and I feel like you would fit in perfectly with the other writers.

Jim (2009-08-10 07:59:17)

I ordered a Wii bundle on July 25. As indicated by all others I received a confirmation immediately and within 2 days payment was made thru paypal. No response to any emails at this point. I too am contacting paypal for resolution. Thanks to all for your comments - this sure looks like a scam to me.

vicki (2009-08-10 15:58:32)

has anyone else noticed that the web site to gamesinwelt no longer works?

vicki (2009-08-10 18:02:42)

Its back up again. How weird.

Lisa S, QLD (2009-08-11 00:06:19)

I wonder how much money he has actually scamed out of people.....

Bethesda (2009-08-11 16:27:48)

I too bought something from gamesinwelt.com on july 30, 2009 and I have yet to recieve anything. I've sent them three messages and haven't heard anything what so ever. I am more than convinced that this is a scam. Good thing I used paypal

Paul (2009-08-11 20:50:05)

All I can say is CRAP!!!

Amber (2009-08-12 11:49:06)

I too, have been duped by this site. I should have listened to my gut...dang it! So I am in the process of also disputing with PayPal. I hope this all goes smoothly. My question is, after reading everyone's post, how and why does PayPal continue to do business with this site when there are obviously so many disputes with the site!!! Makes no sense, when I actually get another live person, I think I will ask them this....here goes nothing.

Donna (2009-08-14 08:33:05)

it appears the gamesinwelt site is down or gone but i suspect they have a new site up under a new alias. as i said, i reported them to the IC3 = Internet Crime Complaint Center. you can find them at [www.ic3.gov](http://www.ic3.gov) if some of the earlier posters had reported them perhaps less folks would have been ripped off... BUYER's BEWARE! especially on the Internet.

Cynthia (2009-08-15 00:07:17)

I to have been screwed by this website! I have just filed a claim with paypal! Hopefully, hopefully I will get my money back! Agggggghhhhhh so mad at myself to good to be true website (should have known better)

Suzanne Simon (2009-08-17 04:28:39)

Just to let everyone know I was just done for \$750 and paypal are not going to get it back. They say there is no money in the account and how many of us have been done by this scam. Surly this is a police matter. I am going to my bank tomorrow seeing paypal goes with my debit/credit Visa card and see if i can get it back this way/.

Chris (2009-08-17 06:19:47)

I must have taken a stupid pill and it worked when I purchased my wii on line with this company. The old saying If it is too good to be true then it is not true. These people really prey upon us and what irks me is that they get away with it. How can we really know who to trust on line. Must we do our own background work before we buy anything on line? I guess so, Maybe congress can take a look at all the scamming done on line.

Dan (2009-08-17 08:37:55)

OK-had to put my two-cents worth in. This site ([www.gamesinwelt.com](http://www.gamesinwelt.com)) no longer exists. I was also duped for \$220.00. I ordered a Wii system over a month ago, and of course, never got it. Sent 8 e-mails and no response. I thought I would be covered since I used PayPal, but NO! I did file a dispute with PayPal and they ruled in my favor, but the account I paid into no longer existed, or didn't have the funds to recover. So PayPal's guarantee really doesn't work unless the seller leaves the account open with money in it. I am also going to file a claim with my bank-since I used my Visa through PayPal.

Marylee (2009-08-17 13:49:05)

Count me in...I got scammed as well. Ordered a Wii on 7/31 and have been trying to get a response from them ever since. I have never been scammed and a buy many products over the internet. This was an eye opener for me and I learned a big lesson! I wonder how much they got from unsuspecting people like us. Unlike you Seth...the charge did go through on my credit card. The charge did not show up until 8/6 so then I thought...we maybe it WAS coming and just shipped late. Stupid me!

Steph (2009-08-17 23:33:22)

I too have been scammed! I have been hoping and trusting in the good of people - but i bought my wii package on the 30th July and have not heard anything but a confirmation email. I am freaked! I am contacting paypal now...oh please god let me get my money back!

CAT (2009-08-18 10:05:42)

can someone please tell me why we should use paypal at all if it offers zero protection??? this site got me as well and i'm still in the process of an extremely tedious claim with paypal, which i believe (based on the above comments) that i will never get my money back. this kind of thing really makes my blood boil. WHAT IS THE POINT PAYPAL?????????

Janet (2009-08-18 14:06:18)

Same story as everyone else. Paypal told me to wait 10 days before I called my credit card company so they could investigate. What's to investigate? It's an obvious scam. Can't wait for paypal to return my money. I called my credit card company directly and they issued me a credit immediately. Let Paypal deal with the loss instead of me!!!!!! Everyone should do the same and maybe Paypal will be more selective as to who they deal with.

Janet (2009-08-18 14:07:28)

same story

Matthew (2009-08-18 20:30:30)

Well I was informed today that the paypal dispute process ruled in my favor... however since they alert the crook that I am filing a dispute and then give them a whole 10 days to respond to the complaint. Needless to say since it was said above that the paypal account that the money went to is bone dry and therefore they cannot refund any of my money, I actually was already repaid by my banks fraud department and it would have been nice for paypal to recoup that so I could give my bank back the money they so quickly replenished to my account. However paypal did give me these reassurances... and I quote "We will make our best effort to recover the funds in question if they become available in the seller's account in the future. Please be assured that we will also take appropriate action against the seller's account, which may include limitation of the seller's account privileges." I will be holding my breath... and NOT USING PAYPAL ever again.

vicki (2009-08-20 00:49:04)

DO NOT bother going through PAYPAL to recover the money from this seller. There is noooooo money in their account. I am going through my bank to get my money back.

Suzanne Simon (2009-08-20 16:53:24)

I would like to know if any one else has had trouble getting the money from their banks after paying with Visa to paypal. I have filed a dispute with my bank (Bank of Queensland) so i hope i get my money back. I thought if you did not get the goods delivered to you that visa repays all the money . Am i correct in thinking this way. Never had to deal with any thing like this before.

Dan (2009-08-21 16:40:07)

Add one more to the sorry list of ripped off folks, Gamesinwelt got \$193.00 from us and Paypal says, "After careful review, we have concluded our investigation of the Buyer Complaint described below. We have decided in your favor, however, we were unable to recover any funds from the seller's account. As stated in the PayPal User Agreement, recovery of funds associated with a Buyer Complaint cannot be guaranteed. So why do any of us use Paypal ? I am so P Off!! Paypal is a rip off too if they don't stand by their guarantee.

Amy (2009-08-21 20:31:46)

Same story! \$300 for a wii and a nintendo ds! the day after my husband ordered I tried to go back to the website and order some games. I got a message saying the company "could not accept paypal at this time" I then emailed paypals customer service and asked them if this meant that they were not a reputable company that I should not do business with. Paypal said, and I quote "it does not mean that they are not reputable, they could be experiencing problems with their internet connection to paypal." I was almost stupid enough to western union them (only \$9) for a ds game as this was going to be a bday present for my daughter. Paypal also decided in my favor (gee thanks) but there is no money to refund me. WHY USE PAYPAL? I thought that was the whole point!!!!!!!!!!!!!!

Branklin Carter (2009-08-22 11:55:39)

I was scammed by the same company and Pay Pal said that I won but there isn't any fund. First I'm going to contact the credit card company and then ic3.gov who check into internet fraud. This is my second time and even thou it wasn't over 200.00 it was my money. Please be careful of a company name ebrandsky.com also.

Seth's blog » Blog Archive » PayPal, the [Empty Promise] Way to Pay (2009-08-22 13:08:49)

[...] A few minutes after I sent gamesinwelt.com credit-card payment for a Wii via PayPal, I phoned PayPal asking them to cancel the transaction. Your payment did not go through, I was told. "Did not". So there was no need to cancel it. I was safe. To warn others, I wrote my earlier post about this. [...]

Fern (2009-08-22 16:52:33)

After a couple of weeks of waiting through PayPal's dispute process...I finally got an entire refund from PayPal.

Suzanne Simon (2009-08-23 06:28:16)

I wonder if this means we are all going to get our money back from Paypal. Two days ago they had no money in the account and now Fern says they have finally paid them. I wonder what is going on .

Marylee (2009-08-23 09:56:26)

Looks like they might be back under www.gamesingate.com!!!! How can we stop this site??? I am not technologically savvy enough to know

Marylee (2009-08-23 10:44:50)

Seth...how do you write a blog so that it will come up in an internet search??? I tried to do a blog about this gamesingate site but when I do a search it does not come up. I got to your site by merely typing in gamesinwelt. HOW did you do that???? I want anyone who types in gamesingate to get information about how they are a SCAM too

Suzanne Simon (2009-08-23 18:35:21)

Guess what I just logged into gamesingate.com using my account and password that i had on gamesinwelt and you will never guess. Up comes all the things that i ordered from Gamesinwelt on the account. DO NOT DEAL WITH GAMESINGATE.COM they are the same people as gamesinwelt.cvom. and paypal are dealing with them again. I wonder how many other unsuspecting people will be caught out. I dont know how come the police of FBI or someone cannot get these people.; I just want my \$750 BACK. There goes my childrens Xmas.

Chris (2009-08-23 22:59:08)

I was scammed by these people also.. but never again.. One off the problems is that they have learned how to manipulate the system. \*They pay their bill to GOOGLE which puts them at the top of the paid advertisers list. \*They use PAYPAL which we all trust and feel its secure. \*and their address is out of our reach in China Gamesinsport.com = Gameiswelt.com = Gamesingate.com (their newest one). If you go to <http://www.whois.net> you can see that they are all the same people. If you go to a command prompt and ping [www.gamesingate.com](http://www.gamesingate.com) you will see that their ip address is 67.213.221.198 which i hosted in the US. I don't know if the current web hoster is involved, but I have asked them to take down the site. <http://www.cqcounter.com/whois/?query=67.213.221.198> I may never get my money back, but I am dedicating my time to helping others avoid this SCAM and take down these SCAMMERS. Please help me in e-mailing GOOGLE, PAYPAL, the current website host ([arin-contact@hostingservicesinc.net](mailto:arin-contact@hostingservicesinc.net)) and whomever else you can think of.

Tam (2009-08-24 00:43:47)

Wow, I am feeling pretty lucky right now. Just did a search for "purchase Wii consoles online" and up came Gamesingate.COM I was surprised that they were so far below retail that I decided to do a bit of a search into it before purchasing and I am very relieved that I found this site. Please be aware it des look as though GAMESINGATE.COM is the same operator/s as gamesinwelt and is all one big SCAM

vicki (2009-08-24 01:28:52)

definitely another scammed website. the same thing happened to me when I logged into it. How can others be warned?

Seth's blog » Blog Archive » Gamesingate.com Scam (2009-08-24 01:55:57)

[...] The old scamming website was gamesinwelt.com; the new one is gamesingate.com. More details. [...]

seth (2009-08-24 02:00:11)

Marylee, your blog probably came up in the search – just not very high. This blog comes up higher because it is linked to more.

Marylee (2009-08-24 08:24:30)

Thanks Seth...I just wish we could get the word out FAST

seth (2009-08-24 08:34:50)

Marylee, we have. If you search gamesingate.com, information that it is a scam comes very high in the search results.

Emma (2009-08-24 21:44:45)

I bought a Wii for 203.00 on 8/22. I searched for gamesingate to see if it seemed like a scam, and nothing came up. Now I'm trying to figure out how to get my money back since it's only been 2 days, but Paypal doesn't have a very user friendly resolution process. Especially when I'm sure it's a scam. Any advice?

Hanisha (2009-08-24 23:11:07)

Hi Seth, I made a mistake and did not read the reviews about the site and my payment actually went through. I had ordered it a month back and have not yet received it. Is there any way I can get my money back?

Steve (2009-08-25 04:06:11)

Hi also bought from these scumbags and have lost about \$400 AUS, could have been worse!! I thought I was doing the right thing by paying via paypal HOWEVER!!!! not so!! I received the response below and have blown my doe. "After careful review, we have concluded our investigation of the Buyer Complaint described below. We have decided in your favour, however, we were unable to recover any funds from the seller's account. As stated in the PayPal User Agreement, recovery of funds associated with a Buyer Complaint cannot be guaranteed. We hope you understand our policy and that it reassures you that you are safe using PayPal. " How reassured do you think I feel????

Steph (2009-08-25 23:32:14)

I am not used to buying things from the internet, but did my research before i purchased anything...and paypal was supposed to be safe! They wont give me a refund, as many of you now know - gamesinwelt fund is empty! Can someone please give me advice on how to apply for the bank to refund me the money. Im with the commonwealth bank. Please help - im clueless!

vicki (2009-08-26 03:14:20)

Contact your bank and tell them you used paypal through your bank account/credit card and they will look into for you. I am with the NAB and they said it could take up to 90 days for a resolution. Worth doing.

Steph (2009-08-26 17:54:52)

Thankyou Vicki :)

Rob (2009-08-26 19:50:47)

I will go to my bank and see what they could do thanx vicki

vicki (2009-08-27 02:56:53)

on second thoughts, don't go through your bank. They contacted me and because i authorised the transaction they are unable to recover any funds for me. So Paypal and the banks cannot help and GOD help all those other suckers who decide to buy from these scam arseholes.

old folks (2009-08-27 03:48:04)

Hi Everyone, I ordered the US \$229.0 package on 26-July-09 (through PayPal), after 1 week I started writing emails to the seller and their office, no reply at all. When chatting to my friends of this bargain, they were so surprised about the deal and tried to make enquiry of it. Of course there is no answer. They find this blog and show me, o my gosh, so many people fall into this scam. As I used PayPal, so I lodged a complaint of the seller; PayPal started the investigation about 2 weeks ago. I today received the email from PayPal that they were in favour of me, but I can't get back any money. Then they had the case closed. Now I have to go to K-mart or Big W to buy the Wii. To HELL with PayPal and those arseholes.

vicki (2009-08-28 00:49:50)

Had another call from my bank today and they confirmed that I would not be getting my money back as I authorised the payment. I will be putting this down to experience and in future will be doing my homework first. If the deal looks too good to be true - then don't buy!

Kay (2009-08-28 06:10:26)

wow im glad i found this blog! i was researching wiis on sale and this site came up <http://gamesingate.com/Productlist.html?pfname=wii> Im soooo glad i didnt buy anything from them! And im so sorry to all of you that did. I agree that people like this need to be apprehended. If only there was a way to get this guy back. Thanks anyways for the review.

Kay (2009-08-28 07:03:46)

now that i know this website is a scam im wondering if another website is a scam also. if anyone here can give any feedback on it that would be great. the website is <http://www.zwee.com/> they offer really cheap prices on wii's and other gadgets. only when i google them i can't find any negative reviews. this is what i've found on it: <http://www.google.com/search?hl=en&source=hp&q=zwee.com+reviews&aq=f&oq=&aqi=> im curious to hear what you think before i try buying anything.

sally cameron (2009-08-29 01:24:01)

Don't rely on paypal with this one. I put in a dispute and I won but they did not retrieve any money even though they found in my favour. So much for protecting us! I am out of pocket 240 dollars. Very pissed off. Have now filed a complaint with my bank. I am more annoyed that paypal does not protect people from these fraudulent companies.

Daniel (2009-08-29 10:26:17)

On August 5th I used PayPal to pay for a Wii and other accessories from gamesinwelt for a total of \$337.00. After sending several emails to their "customer service" (obviously with no response) I started a google search and found this site. Immediately went to the resolution center on my PayPal account and filed a claim (Aug 14th) at which time received an email explaining that I needed to wait 10 days for the seller to answer... I knew what was going to happen but decided to wait... well... I called customer service to report the new scam under gamesingate.com but didn't push for a resolution on my case at that time. On August 24 I received another email indicating that PayPal ruled on my favor but since there were no funds available on the seller's account they could not refund my money. Full of rage wrote back to PayPal and pretty much told them they SUCK!!!! I also reminded them about gamesingate and how they were the same people who stole my money in the first place. To my surprise I received a new email yesterday from PayPal indicating that they had issued a refund for \$337... THE FULL AMOUNT!!! Not sure if it was a result of my "follow-up" email or some kind of miscommunication but I got my money back. I suggest you all push for a refund; chances are you'll have to make a few calls and send a couple of emails to PayPal's customer service but you can get your money (eventually)

Suzanne Simon (2009-08-29 16:56:08)

I think Paypal are taking the money from Gamesingate site because they did the same to me I got my \$750 back from paypal. I insisted on talking to a supervisor and told them i wanted my money back from the games in gate site seeing the other one scammed and guess what I got it. Paypal know that this is the same person I think with all the complaint they are taking the money from them. Mind you this won't last long as soon as the guy catches on to what is happening he will close his paypal account. So I suggest get in quick and see if you can get any money back.

old folks (2009-08-30 23:31:11)

Hi Everyone, Since Daniel & Suzanne had got back their money from PayPal last week. I tried my luck to chase for my lost from PayPal. To my disappointment I rec'd a letter telling me how secured PayPal would be and we should keep on using it in order to protect our fund, but of the money I lost, IT IS LOST FOREVER !!!! I NOW enclosed my reply for everyone to consider action. I had lodged a complaint to the Department of Fair Trading. I think we should report this to the Police too. What do people think? "Dear Jennifer All I want is a refund as PayPal do owe me a duty of care. It is obvious that in spite of all you are saying, no refund would be made so I would now lodge a formal complaint with the Department of Fair Trading as well as advise people who log onto the blog to do the same. You will be hearing from the Department of Trading shortly. It is disgraceful that in order to get a commission, PayPal has put all its clients at risk by dealing with people who set up scams. PayPal keep on telling people how safe it is but when something like this happened, your company do not provide a refund. As you already set a precedent by refunding some people, my legal adviser has advised that I have a very strong case once my complaint is lodged with the Department of Fair Trading. Old Folks "

laura (2009-08-31 09:16:24)

DO NOT BUY FROM THIS SITE. It is a huge scam and they took me for \$165.00. The only reason I decided to take a chance was because Paypal was offered as a payment method and I THOUGHT my money would be protected. WRONG!!!! Basically, they told me that since the purchase wasn't made from an auction site such as Ebay, they will only assist me in making a claim.



Whoopity doo! They basically did nothing. Said they couldn't get the money from the company ( big shocker) and basically I am out of luck. I could have done that on my own and still gotten the same outcome. Not only am I disappointed by the site taking my money, my opinion of Paypal has totally changed

vicki (2009-08-31 18:28:06)

i have been in contact with Department of Trading here in Perth who is called Department of Commerce Consumer Protection. They are unable to help as the company is outside of Australia so OLD FOLKS it is not worth you writing to them as they are unable to do anything. They advised me that I would need to contact the equivalent of this organisation in China as that is where GAMESINWELT are running out of. Sorry to be the bearer of bad news.

Old Folks (2009-08-31 20:02:03)

I did lodge a complaint against PayPal, an eBay company with the Department of Fair Trading and created a case. My argument is PayPal was aware of what's going on (with all the complaints they have been getting and some refunds they gave) and yet they made no attempt to protect our interest. If you read the conditions we accepted (which a lot of people didn't and unfortunately I was one of them), it offers no protection at all as nothing is guaranteed and is under the sole discretion of PayPal or eBay. We may have suffered a loss this time but we did learn a good lesson. We should warn our friends to be very careful of internet trading and agents like PayPal and eBay. As Laura says "my opinion of PayPal has totally changed" so PayPal has managed to ruin its reputation and in the long run, its business will suffer. Let's spread it to the word!!

Daniel (2009-08-31 20:54:40)

I would mention gamesingate.com and remind them that this is where they need to get the money from... that's how I got my money back

vicki (2009-08-31 21:25:55)

paypal is reviewing my case after many emails to them. I mentioned gamesingate.com so i will wait to see what they come back with. I even sent them the link to this blog.

vicki (2009-09-01 01:26:54)

Forget it. Paypal have said unless it was purchased from EBAY you won;t get your money back. Also unless the seller has money in there account which was purchased outside of EBAY you won;t get your money back. I told PAYPAL that they suck and would not be dealing with them again

Nik (2009-09-01 03:04:39)

Vicki you are absolutley right "Paypal" sucks and i won't be dealing with them. They are as responsible for this scam as f\*\*\*\*ing "gamesinwelt.com" coz they could have stoped people to buy from this site. lets get this message across not to trust f\*\*\*\*ing "PayPal"

Daniel (2009-09-01 19:13:32)

It's interesting to see how PayPal "closed their eyes" and allowed more and more people to be victimized by gamesinwelt/gamesingate scam. PayPal allowed this to happen for a few weeks and used other people's money to issue refunds for the first claims... from my perspective that makes them as guilty as the chinese scammers. I wonder when was this scam first brought to PayPal's attention? ... sounds like claims started to pile up around August 2nd or 3rd and I placed my order on august 5th!!!! ... HOW CAN PAYPAL SAY THAT THEY "PROTECT" MY PURCHASES WHEN MY ORDER WAS PLACED DAYS AFTER RECEIVING A SIGNIFICANT NUMBER OF CLAIMS FROM THIS SITE? Anyone placed an order after August 5th? maybe we can start building a case from here...

vicki (2009-09-02 05:15:54)

daniel What PAYPAL are saying is that because the transaction was not made through an EBAY purchase, you are no longer covered by their protection. It sucks. I made my purchase on 05 Aug. This is my response from PAYPAL after appealing

their decision. After careful review, we have concluded our investigation of the Buyer Complaint described below. We have decided in your favour, however, we were unable to recover any funds from the seller's account. As stated in the PayPal User Agreement, recovery of funds associated with a Buyer Complaint cannot be guaranteed. Please know that we will make our best effort to recover the funds in question if they become available in the seller's account in the future, and will take appropriate action against the seller. Such action may include issuing a warning, a temporary restriction, or terminating the account. Keep in mind that PayPal uses a number of factors, including member complaints, to determine when to take action. Due to privacy laws, we cannot discuss the details of any action taken. We hope you understand our policy and that it reassures you that you are safe using PayPal.

Branklin (2009-09-06 20:53:36)

I was taken by them and a Company name Ebrandsky who are really making a bundle off of people like us.I called my credit card company and told them that pay pal said I won my case but they couldn't get the money back and the credit card company did a charge back for me and I got the money that way,as for Ebrandsky they got the money and I don't think I will get it back.I filed a report with the Internet Crime (ic3.gov) and with TradeKey where I found them and now I'm looking for the Chamber of Commerce in China to see if they will do anything.Sorry it keep happening but we have to do more research.

Edith (2009-09-10 00:42:22)

Daniel is correct in saying that PayPal is as guilty as the Chinese scammers. My husband also fell victim but he eventually got his money back from PalPay after a long long battle. I did some research and people who still did not get their money back could contact the Financial Ombudsman Service on 1300 780 808 for information about their complaint resolution service. If still unsuccessful in resolving the complaint, you may lodge an application with the Consumer Trader and Tenancy Tribunal. The tribunal may have jurisdiction to hear a claim if the Paypal part of the contract took place in Australia. You can find information, forms and fee schedules for the tribunal at [www.cttt.nsw.gov.au](http://www.cttt.nsw.gov.au) and a claim can be lodged on-line. I have also filed a report on the scams in the ACCC website naming the Chinese parties as well as asking ACCC to contact the Chinese Consulate. In turn, the Chinese Police could conduct a money trace through the scammers' respective accounts with PayPal to catch these criminals. The other alternative is to talk to your bank and exercise your credit card chargeback rights (but do it quick as I think banks have time limits on disputes).

LC (2009-09-11 06:50:59)

Thank you so much for your site. I did not purchase from the "new" scam site [www.myshoppingsun.com](http://www.myshoppingsun.com), because I thought the prices were too low and I always do research before I buy anything off the web. It's unfortunate that Paypal deals with these people.

DK (2009-09-21 08:44:41)

I got scammed as well by this Chinese website, Paypal made the payment. And the product never came. Paypal decided case in my favor, but of course they cannot recover funds from this guy. But my credit card company was nice enough to pay me back the money. Looks like the site has been shut down now. But you never know they will come up with another name. Well I should have done more research before buying from them.

Seth's blog » Blog Archive » Myshoppingsun.com Scam (continued) (2009-09-30 01:26:43)

[...] A curious comment was left on a previous post of mine about an internet shopping scam: Hi Guys I really thank you for this blog [...]

Avinash (2009-10-15 12:56:10)

I wish I had read the reviews before purchasing my order last week. i have now put a dispute in with paypal ,But Paypal is telling it is not there problem and they cannot help to to return my money and hopefully will get my money back. The offer did seem to good to be true. Buyer one personal advise please see the review of the company before taking any thing and if any thing is cheap thing twice before booking it.

Seth's blog » Blog Archive » The Parable of the Wii (2009-11-14 13:59:20)

[...] For exercise (Dance Dance Revolution) and self-tracking, I decided to buy a Wii. My first attempt, I was scammed. It arrived in August. With difficulty, I took it and accessories unopened to China. That was hard. It was even harder — for no obvious reason — to install it in China. The box sat unopened next to my TV, easily visible, for two months. [...]

### Assorted Links (2009-08-02 15:56)

- [1]make your own beef jerky
- [2]introduction to C. difficile, a dangerous bacterium encouraged by antibiotics
- [3]Elaine Morgan speaks at TED
- [4]Chimamanda Adichie graduation speech, 2009
- [5]why ketchup is hard to improve

Thanks to Justin Owings, Oskar Pearson, Divia Melwani, and Brent Pottenger.

1. <http://old.rawpaleodiet.com/uploads/JerkyDrierInstructions.pdf>
2. <http://epistemocrat.blogspot.com/2009/04/clostridium-difficile-weed-inside-your.html>
3. [http://www.ted.com/talks/elaine\\_morgan\\_says\\_we\\_evolved\\_from\\_aquatic\\_apes.html?awesm=on.ted.com\\_25&utm\\_campaign=tet&utm\\_medium=on.ted.com-twitter&utm\\_source=direct-on.ted.com&utm\\_content=site-basic](http://www.ted.com/talks/elaine_morgan_says_we_evolved_from_aquatic_apes.html?awesm=on.ted.com_25&utm_campaign=tet&utm_medium=on.ted.com-twitter&utm_source=direct-on.ted.com&utm_content=site-basic)
4. <http://dspace.nitle.org/bitstream/handle/10090/9000/AdichieCommencement2009.pdf?sequence=1>
5. <http://scienceblogs.com/cortex/2009/08/ketchup.php>

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### Did Genghis Khan Read Weston Price? (2009-08-03 04:20)

In Genghis Khan and the Making of the Modern World (2004) by Jack Weatherford, I read this (p. 87):

Compared to the Jurchid [Chinese] soldiers, the Mongols were much healthier and stronger. The Mongols consumed a steady diet of meat, milk, yogurt, and other dairy products, and they fought men who lived on gruel made from various grains. The grain diet of the peasant warriors stunted their bones, rotted their teeth, and left them weak and prone to disease. In contrast, the poorest Mongol soldier ate mostly protein, thereby giving him strong teeth and bones.

To tenderize meat a Mongol would put it under his saddle while riding. I was pleased to read this because I eat a lot of meat and yogurt (but not milk). The source of this information is unclear but it's a surprisingly modern comparison. [1]Good Calories Bad Calories (2007) by Gary Taubes says much the same thing (minus the yogurt – the part that most interests me). Weston Price wrote many similar passages comparing people eating traditional food (= Mongols) with people eating modern food circa 1930 (= Chinese). Long ago, grain was modern food.

Thanks to Tucker Max.

1. <http://www.overcomingbias.com/2008/07/gary-taubes-goo.html>

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Charles (2009-08-03 12:56:37)

As Taubes wrote, we all new until recently that it was starch that caused us to get fat. When I was 14, in 1965, I did my own self-experimentation, and went on a meat-and-milk diet, cutting out all bread and starches and sugars. I was a fat kid, and over the summer lost 30 lbs., and went from 205 to 175. I have no idea where I came up with that approach. But it worked, and ever since I've been able to manage my weight through managing carbohydrates. (Since that was pretty much a mongol diet, maybe I was a mongol in a previous life.) I really have little hope that as a population, we're going to be able to do anything to stop the obesity, diabetes, heart disease, and high blood pressure epidemic. There is too much money to be made in carbohydrate-rich mutant foods, and they have discovered how to tap into the worst of our hormonal and neurological responses to sweet/starchy/salty tastes. I mean even this whole umami hypotheses, which should lead us to healthy things, if one of your recent links is accurate, is turned against us by something as banal as ketchup. That has not gone unnoticed by food scientists, I'm sure. So it's only going to get worse for the bulk of the population.

**Edward Jay Epstein (2009-08-03 20:08)**

Edward Jay Epstein, who was a media critic for The New Yorker in the 1970s, is a great journalist. For example, [1]Diamonds aren't forever? and [2]Did Madoff act alone? [3]Here's something he said about the Warren Commission (to look into the assassination of JFK):

Part of the job of the Warren Commission was restoring confidence in the American government. And for this he had to pick seven very respectable men, men who would lend their name and probity to the report. The problem was, any seven men he picked of this sort, they would have very little time for the investigation.

Much later, still fresh. [4]His personal website is the best personal website I've encountered. The financial crisis has given him [5]a lot to write about. He has a new book on the movie industry ([6]The Hollywood Economist) coming out next year.

1. <http://www.edwardjayepstein.com/Russian.htm>

2. <http://www.edwardjayepstein.com/Loneswindler.htm>

3. <http://www.spartacus.schoolnet.co.uk/JFKepstein.htm>

4. <http://www.edwardjayepstein.com/>

5. <http://www.edwardjayepstein.com/wsconfidential.htm>

6. <http://www.edwardjayepstein.com/Reverseslate.htm>

Ryan Holiday (2009-08-04 00:09:22)

His book The Big Picture is really good. I haven't read his Kennedy one but Bugliosi rips it pretty hard in his enormous (and some would say definitive) book on the assassination.

seth (2009-08-04 08:34:30)

Thanks, Ryan. By "rips it pretty hard" you mean (a) uses a lot of the material in it or (b) criticizes it a lot?

Ryan (2009-08-05 10:50:46)

Criticizes it a lot

seth (2009-08-05 12:02:31)

That's good to know, Ryan.

Edward Jay Epstein (2011-07-30 06:50:01)

My new ebook investigations are coming out on Kindle and Nook , including Killing Castro,Tabloids, Cartels and Rockefellers. Anyone interested in reviewing these for Amazon, let me know and I'll send advance copy. See <http://www.edwardjayepstein.com/cyberbooktable.htm>

## **A Complaint About College (2009-08-03 23:44)**

[1]Kent Pitman argues that college is overpriced. Perhaps the way out – freedom from needing to go to college to get a decent job – will look like this:

1. American colleges adopt gap years. (I proposed this to the Chancellor of UC Berkeley. My suggestion was brushed aside – impractical, I was told.)
2. A larger and larger fraction of students realize that they can profitably continue to do what they do during the gap year. So they don't go to college.
3. Given a substantial number in both categories, businesses notice that students who haven't gone to college (who have, equating for age, more useful skills) do better than those that have. I've heard complaints about Ivy League graduates not knowing basic stuff.
4. With less demand for college, there is less demand for college teachers. This causes research universities to shrink because, with less use for a Ph.D, they won't be able to attract as many graduate students. [2]Harvard is out in front here.

Just as the Pentagon is a tax on women (because the military is almost all men), so are colleges a tax on everyone who isn't a professor. (It's an arms race because if your competitor for a job has gone to college, so must you.) As the American economy implodes – in In The Jaws of the Dragon, Eamonn Fingleton says the rate of American decline has no historical precedent – non-professors and non-professors-to-be will become less willing to pay this tax.

1. [http://open.salon.com/blog/kent\\_pitman/2008/11/20/college\\_an\\_overpriced\\_monopoly](http://open.salon.com/blog/kent_pitman/2008/11/20/college_an_overpriced_monopoly)

2. <http://www.vanityfair.com/politics/features/2009/08/harvard200908>

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Andrew Gelman (2009-08-05 04:32:08)

Regarding your last point, don't forget that Coca-Cola is a tax on everyone who isn't Michael Jordan (who whoever their current spokesmodel is), and of course don't forget that your local Dept. of Parks and Recreation is a tax on everyone who isn't a lifeguard.

seth (2009-08-05 07:25:18)

Andrew, I'm not forced to drink Coke. And the cost of lifeguards is tiny compared to the cost of the military or 4 years of life (what students are forced to spend on college).

Andrew Gelman (2009-08-05 20:29:10)

Seth: And the health care system is a tax on everybody who's not a doctor or a nurse, and the public water supply is a tax on everybody who isn't a plumber, and public buildings are a tax on everybody who isn't a bricklayer, zoos are a tax on everybody who isn't a zookeeper, etc. The "is a tax on" framing is a distraction, I think. The real point is that you and I disagree about the value of college. I think college is a good thing, you don't. If you think something is a good thing, you don't mind that people get paid to do it. If you don't think it's a good thing, it's natural to get annoyed about it.

Aaron Blaisdell (2009-08-06 07:05:28)

I agree with some points each of you make. I think college is very valuable, but at the same time I think there is such a higher expectation that everyone go to college (as if it's a right, not a privilege) that many more people attend college nowadays who shouldn't than back in the 30s, 60s, perhaps even in the 80s. But again, "college" is not just one thing.

seth (2009-08-06 07:18:33)

Andrew, a distraction? Then why mention it? I thought you made an interesting point about the "tax on" usage. To say I "don't think college is a good thing" is too simple. I think current versions of post-high-school education (= college) work well for a small subset of students. Let's say 20 %. For the remaining 80 %, I think that 40 % of them would benefit more from a different sort of college (less emphasis on what professors want to teach, more emphasis on what students want to learn) and 40 % would benefit from having the requirement of having to go to college removed. Aaron, your comment appeared as I was typing the above. I see we agree.

Andrew Gelman (2009-08-06 20:28:43)

Seth: You might be right about the top 20 %. I have no idea, but in our combined experiences teaching at Berkeley, Harvard, Chicago, and Columbia, I expect we've pretty much only seen the top 20 % in any case.

## **Bees and Kombucha (2009-08-04 19:49)**

After noticing how much it improved his own health, [1]B Wrangler tried it on his bees:

In the early spring, I grade my hives strong, average, below average, weak. This year, I sprayed the below average hives with slightly diluted, about 30 %, solution of overly ripe kombucha. It was probably about 3 weeks old.

The spraying was done incidentally, without any planning, etc., just to watch the initial reaction of the bees. After spraying, the below average hives were left alone, without any additional manipulation or observations.

The kombucha worked better than smoke for controlling the bees in a normal situation.

To evaluate the yard's progress, I'd pop the covers off a couple of strong hives and a couple of weak hives every few weeks. Ten weeks later, I popped the covers off the below average hives and found they had a full super of honey, while all of the others, even those with larger bee populations had none. In fact, they hadn't even entered the supers.

I was quite surprised to say the least! And I'd had forgotten about the incidental kombucha spraying until looking at my notes a week later.

This reminds me of the turning point in the discovery of Vitamin B1. Experiment 2 done by Christiaan Eijkman gave results opposite to Experiment 1. Eijkman was unaware, until he looked into it, that his chickens, the experimental subjects, had been fed different rice in the two experiments.

Thanks to Heidi.

1. <http://www.bwrangler.com/npro.htm>

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NE1 (2009-08-04 23:23:32)

So... contaminated beehives don't produce honey.

bennetta (2009-08-05 09:45:05)

Interesting. And then you could use the honey as food for your kombucha! Actually, that brings up an interesting question: what else benefits from bacteria cultures? I'm in the process of whipping up a pair of two gallon jugs of kombucha and was trying to figure out what to do with it if it ends up tasting bad. I was thinking about maybe using it as fertilizer and seeing what my garden thinks of it.

seth (2009-08-06 07:30:23)

bennetta you are right: kombucha made with honey would be very very bad to spray on hives! I think your garden is already teeming with bacteria, so I wouldn't expect kombucha to help. Yeah, why should bees living in artificial hives be bacteria-deficient, which is what this observation suggests? The bees are eating natural food – aren't they? Or perhaps they are eating food that is unnaturally low in bacteria.

bennetta (2009-08-06 09:56:56)

Seth, That was my gut instinct: my organic garden would probably remain the same. Any sort of perceived change would probably be from additional nutrients in the kombucha (acids, vitamins, sugars, and whatnot) and not the bacteria itself. And bees feeding off of my garden? Why would they need the extra bacteria? They probably wouldn't. Certainly not in my garden. Granted, an organic home garden in Northern California isn't exactly a purely "natural" environment, but it's not a hospital or freezer. I guess the question remains. What to do with kombucha if it comes out tasting bad, without throwing it away?

seth (2009-08-06 11:30:07)

In my experience kombucha can be bad in three ways: 1. Too sour. Too close to vinegar. 2. Too weak flavor. Which means I didn't use enough tea. 3. Too strong flavor. Which means I used too much tea. I could use it to store kombucha mothers or use it to jumpstart another batch. If I had too sour kombucha today I would do an experiment: start 4 new jars of kombucha (tea + sugar + kombucha mother). In two jars I'd put some of the sour kombucha, in the other two jars I'd put nothing. Then see if there was a difference after two weeks. Perhaps the bad kombucha can speed up later batches of good kombucha.

karky (2009-08-06 17:50:06)

I was reading today that since honey has antibacterial properties that it shouldn't be used to make kombucha. Do you have an opinion?

seth (2009-08-06 19:21:37)

Karky, I've read the same thing. I haven't tried it. Even though I have too much honey. I think that's Advanced Kombucha.

karky (2009-08-07 10:17:13)

If you have too much honey, you should try to make mead. I have some of that aging in my bedroom closet right now.

seth (2009-08-07 10:20:30)

great idea, karky, thanks!

### **Lucky Journalist of the Year (2009-08-04 22:01)**

John Seabrook of The New Yorker. In [1]an article about the economics of rock concert tickets, with an emphasis on scalping, he appears to follow a New Jersey Bruce Springsteen fan who can't get tickets to a show. All gone in 10 minutes, mostly to resellers. Later, due to government intervention, she is able to buy two, and on the day of the show wins a lottery for seats next to the stage – her dream. A surprise happy ending to the story. Like all of Seabrook's work it was a pleasure to read but I wonder how Seabrook feels about it. Near the end it briefly mentions a new technology (paperless tickets) that makes scalping impossible. As if the problem was solved while Seabrook was writing about it.

1. [http://www.newyorker.com/reporting/2009/08/10/090810fa\\_fact\\_seabrook](http://www.newyorker.com/reporting/2009/08/10/090810fa_fact_seabrook)

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### **Bacteria-Free Mice (2009-08-05 15:56)**

Bacteria-free mice have malfunctioning digestive systems and immune systems. Sarkis Mazmanian, an assistant professor at Caltech, has found that [1]as little as one bacterial-surface molecule can make their immune systems work much better. Exposure to this molecule also protects the mice against a bacterium that would otherwise cause a mouse model of irritable bowel syndrome.

So far, so good: More evidence that we need bacteria for our digestive and immune systems to work properly. But then things get murky:

The Human Microbiome Project, an undertaking funded by the National Institutes of Health (NIH) to sequence the microbiota from hundreds of humans, has challenged itself with determining the relative quantities of all bacteria present in the human gut. With a known baseline of the bacteria present in healthy individuals, it will be much easier to understand which bacteria might be missing in diseased patients.



How we will find "healthy individuals"? I believe that almost everyone in America eats too little bacteria and has suboptimal health. Mazarian continues:

With a known baseline of the bacteria present in healthy individuals, it will be much easier to understand which bacteria might be missing in diseased patients. Hopefully, the Human Microbiome Project will lead to the discovery of other beneficial bacteria [in addition to the bacteria that Mazarian is studying].

"Much easier"? The bacteria that people need to be healthy must have been abundant in our environment long ago. We got vast amounts of bacteria from what we ate – bacteria that grew on food. To test the idea that these bacteria are beneficial you merely need to feed people bacteria-rich food (such as fermented food) and see if their health improves. This has been done hundreds of times, with highly positive results.

1. <http://www.the-scientist.com/2009/08/1/34/1/>

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bds (2009-08-05 20:43:20)

When tourists from 1st world countries visit 3rd world countries, they typically get the 'Delhi Belly' from street food, which is basically diarrhea. The natives living there consume the same food without any problem. I think the problem is that the food we eat is too 'clean', while the natives are exposed to a wider range of bacteria.

### **Sentence of the Day (2009-08-06 07:47)**

[1] Cafes are discouraging laptop use, says the WSJ:

At two of three Café Grumpy locations – one in Brooklyn and the other in Manhattan's Chelsea neighborhood – laptops are never welcome.

But is this a change in policy?

1. <http://online.wsj.com/article/SB124950421033208823.html>

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August (2009-08-06 08:58:13)

I think the whole article is inaccurate. Barnes and Noble just made their wifi free- last weekend in my town. A bit over a year ago, one coffee shop tried to go from free wifi to a pay system, but I hear they went back to free wifi rather quickly; I haven't been back because their coffee is lousy. Another coffee shop went out of business, but that was more to do with the owners moving to Oregon than the economy. Meanwhile yet another coffee shop has opened nearer to me, and they seem quite

welcoming. Of course, I actually buy coffee there too, and I come in during their down time (this place is oriented around live music events). So, I think there is either no clear trend emerging, or the trend emerging is actually the opposite to what the article suggests. Free wifi is a fixed cost, requiring only a small increase in sales in order to justify providing the service.

### **Genius of Common Sense (2009-08-06 23:08)**

From [1]Genius of Common Sense, a new young-adult biography of Jane Jacobs by Glenna Lang and Marjory Wunsch, I learned that Jacobs was an independent-minded young girl:

When Jane's third-grade teacher asked the class to raise their hands if they promised to brush their teeth every day for the rest of their lives, Jane refused to raise her hand and urged the other children not to raise theirs. . . Jane was expelled from school for the day.

Where have I read that before? In Chimamanda Adichie's [2]The Headstrong Historian:

Her teacher Sister Maureen told her that she could not refer to the call-and-response her grandmother had taught her as poetry, because primitive tribes did not have poetry. It was Grace who would laugh and laugh until Sister Maureen took her to detention.

Genius of Common Sense is plainly a labor of love, with a great selection of photographs and a belief in Jacobs's importance that you might say "shines through the book like a watermark" (Nabokov).Â The subtitle is "Jane Jacobs and the story of The Death and Life of Great American Cities" but that isn't right: It's mostly about how Jacobs and her neighbors fended off Robert Moses to preserve Greenwich Village. Which is a lot more visual. As I read it I kept wondering what I would have thought of it had I picked it up as, say, a third grader. I read a lot of biographies for children back then. I might have been attracted by the weird title and helped along by the high ratio (1 to 1) of picture space to word space. I would have liked the underdog aspect. Would I have appreciated the humor of

Several years later the Lower Manhattan Expressway was to raise its ugly head again. "The rule of thumb is that you have to kill expressways three times before they die," Jane quipped.

? Probably not. But maybe I would have noticed how much the authors cared about their subject.

1. <http://www.godine.com/isbn.asp?isbn=1567923844>

2. [http://www.newyorker.com/fiction/features/2008/06/23/080623fi\\_fiction\\_adichie?currentPage=all](http://www.newyorker.com/fiction/features/2008/06/23/080623fi_fiction_adichie?currentPage=all)

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### **Probiotics Prevent Colds (2009-08-07 22:07)**

Here's [1]a summary of a study that just appeared in Pediatrics:

More than 300 children between three and five years of age were randomly assigned to receive three different milk formulations: plain milk, milk plus the bacterium *Lactobacillus acidophilus*, or milk with *Lactobacillus* plus the bacterium *Bifidobacterium animalis*.

The group that just received *Lactobacillus* were half as likely to develop a cold and a fever. They also had fewer coughs and runny noses. Those that got both strains of probiotics had 72 percent fewer fevers. They were also less likely to come down with a cough or runny nose. If they did get sick, they got better significantly sooner. They also missed fewer days of daycare.

Here's [2]the abstract of that study:

**OBJECTIVE:** Probiotic consumption effects on cold and influenza-like symptom incidence and duration were evaluated in healthy children during the winter season.

**METHODS:** In this double-blind, placebo-controlled study, 326 eligible children (3–5 years of age) were assigned randomly to receive placebo (N = 104), *Lactobacillus acidophilus* NCFM (N = 110), or *L. acidophilus* NCFM in combination with *Bifidobacterium animalis* subsp *lactis* Bi-07 (N = 112). Children were treated twice daily for 6 months.

**RESULTS:** Relative to the placebo group, single and combination probiotics reduced fever incidence by 53.0 % (P = .0085) and 72.7 % (P = .0009), coughing incidence by 41.4 % (P = .027) and 62.1 % (P = .005), and rhinorrhea incidence by 28.2 % (P = .68) and 58.8 % (P = .03), respectively. Fever, coughing, and rhinorrhea duration was decreased significantly, relative to placebo, by 32 % (single strain; P = .0023) and 48 % (strain combination; P < .001). Antibiotic use incidence was reduced, relative to placebo, by 68.4 % (single strain; P = .0002) and 84.2 % (strain combination; P < .0001). Subjects receiving probiotic products had significant reductions in days absent from group child care, by 31.8 % (single strain; P = .002) and 27.7 % (strain combination; P < .001), compared with subjects receiving placebo treatment.

The probiotics were given as pills. Such large safe improvements are signs of a nutritional deficiency being remedied. It would be very hard to produce a drug that worked as well.

Thanks to Tom George.

1. <http://www.peoplespharmacy.com/2009/08/06/probiotics-may-help-prevent-the-common-cold/>

2. <http://pediatrics.aappublications.org/cgi/content/abstract/124/2/e172>

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John H (2009-08-07 22:59:27)

Seth, I know you're not practicing medicine here, but I'd be very interested to hear your thoughts on the three (!) flu shots the government wants us all to get this fall. Do you plan to get them yourself, and why or why not? Do you know of any downsides to flu shots? (In prior years, I've always got the recommended flu shot. But after all I've been reading here about kombucha and other probiotics, I'm wondering if that's necessary or desirable.)

seth (2009-08-08 05:02:50)

John, I do not get flu shots and for about ten years I've almost never had any obvious cold or flu symptoms either. I'm sure the reason is that I sleep really well so my body fights off the viruses. Before I started sleeping much better, I did get colds. This summer I believe I had either a cold or a flu – probably swine flu – but I barely noticed it. On one day I felt tired and for the

next two weeks my legs were weaker than usual. So I believe that with (a) good sleep and (b) enough fermented food, your immune system will work well enough that when you get sick (infected), your body will fight off the infection so fast you won't suffer.

Seth's blog » Blog Archive » Effects of Probiotics on Kids (2009-09-29 02:13:40)

[...] As I previously blogged, a recent study in Shanghai found that schoolchildren given milk with added bacteria had fewer colds than children given milk without added bacteria. The study was funded by Danisco, a Wisconsin company that makes bacteria-containing ("probiotic") capsules. Obviously they want to sell more of their product. But ordinary yogurt probably produces the same result. Aaron Blaisdell told me this: Since introducing yogurt into my daughter Maggie's diet on a daily basis about 5 months ago, she's gotten far fewer colds, and those she did get were milder. [...]

Dawn (2011-04-02 22:54:57)

I can definitely believe that the supplement helped reduce the number and severity of the colds. If people only realized how much our diet has changed over the last few decades. We use to eat a variety of fermented foods. Every culture seemed to have a basic ferment - whether it was sauerkraut or yogurt or cheese or whatever. Food use to do what we now need to take probiotic supplements for - but if we returned to plenty of raw fruit and vegetables and some sort of fermented food on a regular basis, we wouldn't need to.

### **Jane Jacobs and the Trouble with Medicine (2009-08-08 04:48)**

In Slate, [1]Barry Schwartz and Kenneth Sharpe argue convincingly that viewing bad performance as an "incentive problem" (meaning bad financial incentives) can be a mistake. If you pay doctors per procedure, they will do more procedures (too many); if you pay them per person, they will do fewer procedures (not enough). The heart of their argument is this:

When day care centers fine parents who are late to pick up their kids, [2]lateness increases. Why? Because the fine turns a moral obligation (come on time!) into a service for a fee (we'll take care of the kids if you pay us more!). Another example: When Swiss citizens were offered an incentive for agreeing to have a toxic waste dump in their community, their willingness to accept it [3]fell by half. Why? The offer of an incentive induces them to ask What's in my interest? instead of What are my responsibilities as a citizen? And when people offer a stranger a token payment for help unloading a couch from a moving van, strangers are [4]less likely to agree than if offered nothing. Why? Because the offer of money has turned the assistance from a favor into a job.

So far so good. At this point the authors get lost. Here's their advice about fixing medicine:

It is tempting, in light of our argument, to ask how can we incentivize good medical practice, so that we get more of it. Our answer is simple but perhaps unsatisfying: Good medical practice should be, and can be, its own reward. Almost all doctors want to practice good medicine—at least before they get socialized by the grind of medical school, residency, student debt, malpractice premiums, and the like.

The sign of their lostness is that they have zero data to back up this idea.

In [5]Systems of Survival, Jane Jacobs argued that we can see around us two systems of morality: a guardian system, which stresses loyalty and hierarchy, and a commercial syndrome, which stresses honesty and equality. Each is internally consistent; but they are quite different, and those familiar with one system have a hard time understanding

the other. She had plenty of data supporting her points. She went on to say that when the two systems are mixed – when policemen are given ticket quotas (= when policemen are treated like salesmen), for example – things go bad.

Why two systems? Because they correspond to two broad ways of making a living: taking and trading. The systems aren't arbitrary; they have survived because they worked.

Are doctors takers or traders? The flaw in trying to improve doctor performance by changing incentives is the balance of power: Doctors have almost all of it. Patients trust doctors. ([6]When I asked my surgeon the basis for her judgment that I needed surgery – treating her as an equal, in other words – she must have been stunned. She certainly didn't respond appropriately.) That's why it's so easy for doctors to do too much or too little. It's the same problem with quota systems for policemen: The policemen have too much power. The current balance of power makes doctors takers rather than traders.

So the choice is: either [7]reduce the power of doctors relative to patients or give them moral training as guardians. The first isn't going to happen in medical schools. Jacobs would recommend, I think, that doctors should be taught that they are guardians. (She might use the example of her father, who was a doctor.) And that those interested in improving medicine should study well-functioning guardian systems to see how they work or worked – how the accompanying moral system was instilled.

1. <http://www.slate.com/id/2224193/pagenum/all/#p2>
2. [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=180117](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=180117)
3. [http://econpapers.repec.org/article/aeaaecrev/v\\_3a87\\_3ay\\_3a1997\\_3ai\\_3a4\\_3ap\\_3a746-55.htm](http://econpapers.repec.org/article/aeaaecrev/v_3a87_3ay_3a1997_3ai_3a4_3ap_3a746-55.htm)
4. <http://www.predictablyirrational.com/pdfs/2markets.pdf>
5. [http://en.wikipedia.org/wiki/Systems\\_of\\_Survival](http://en.wikipedia.org/wiki/Systems_of_Survival)
6. <http://www.blog.sethroberts.net/2008/09/13/the-case-of-the-missing-evidence/>
7. <http://www.curetogether.com/>

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Tom in TX (2009-08-08 08:39:26)

Seth, you get a gold star for speaking up to your surgeon. Nearly all of such discussions about how-to-reform-health-care ignore the patient. It is just assumed that they are ignorant and stupid concerning their health and medical treatment. If that is a given, then it is just a question of whether the patient will be shafted by fee-for-service or shafted by fee-for-patient.

michael vassar (2009-08-08 09:15:21)

I largely agree with your analysis (and have used Jacob's framework in thinking about this issue for years) AND with Schwartz and Sharpe. Though their recommendation is vague, it points weakly in the guardian direction. They don't say how to do it, but the obvious solution is something along the lines of making doctors a type of professor, as their name implies, with tenure, legal protection from malpractice (risk of loss of tenure, not financial loss), and a professorial level salary and career path. They should be banned for providing medical services for pay, or rather, should lose tenure for some fairly long period and the right to call themselves a doctor of medicine plus malpractice insurance for doing so. Pharmacists as well as MDs should be empowered to prescribe drugs, not on the basis of their own diagnosis, but on the basis of a diagnosis from an expert system plus a general confirmation that the patient is of sound mind etc and understands risks and interactions associated with the drug.

seth (2009-08-08 09:47:37)

Tom, yeah, that's a very good point about ignoring the patient in discussions about how to improve health care. Which basically means the discussion about health care is mainly among those who like the status quo. Nothing would be more subversive of

the status quo than giving more power to patients.

Nadav (2009-08-09 06:52:54)

I'm pretty optimistic that status quo is changing and will change even more. Over time the balance of power of between doctor and patient will shift, or has started to shift, towards the patient. CureTogether is just one example. This is another: <http://www.blog.sethroberts.net>. If Seth's theories are even modestly correct (eg Omega-3 improves gums), the balance of power between, say, periodontists and patients will shift greatly. Another is my friend, a lawyer with no medical training, who after being diagnosed with a rare stomach condition undertook to learn all he could about it. Within about a month he knew as much or more about it than the doctors who were supposed to treat him for it. The common denominator is the explosion in the quantity and accessibility of information made possible by the internet. Doctors tend to hate the internet because they say it's full of crackpot theories. Which is true, but the solution is not less internet, but better filters of the information on it. Veblen might say doctors hate the internet because of the challenge it presents to their status.

### **Not All Probiotics are Wonderful (2009-08-08 15:32)**

From a mailing list I'm on:

Right before I left the U.S. I purchased Complete Probiotics from Dr. Mercola (online health guru). . . . I did not have the time needed to give these probiotics a good try before I left the States so I went ahead and purchased quite a bit. After arriving here in Beijing I began taking them just to find out they were not working well for me. I still think it is a good product, just not right for me.

I have 7 bottles total. 5 bottles expiration date: May 2011. 2 bottles expiration date: Dec. 2010

This batch I have has [in each capsule] 2 billion CFU [colony-forming units] and 500 mg of FOS [Fructooligosaccharides]. There are 90 V-caps per bottle. They are all completely sealed with shrink bands

Dr. Mercola's sale price is \$30 U.S.D. for a single bottle and about \$25 U.S.D./each for a 3-pack. [the 3-pack costs \$75]

She doesn't say why they're not right for her. I make kombucha for pennies per day. Homemade yogurt costs a few dimes per day. Also, they're delicious, the kombucha is thirst-quenching, and the yogurt, as a condiment, improves many other dishes (salmon, soup, hamburger). So they're easy to eat, whereas the vitamin pills I take I have to force myself to swallow. Because I am close to the making of the kombucha and yogurt - I sample them during brewing - I am sure that they have plenty of bacteria. With pills made in a factory, hard to be sure. And hard to know what those expiration dates mean.

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Chris (2009-08-09 07:35:18)

A recent post to Boing Boing (<http://boingboing.net/2009/07/29/how-to-make-kombucha.html>) covered making Kombucha at home but also linked to three cautionary sites including people who died quickly of acidosis after drinking homemade kombucha and an interesting review that covered how little people know the organisms that make up the drink. This scared me off from making it at home especially off a 'mother' from a stranger. Since it seems like kombucha can be a

host for both beneficial and toxic bacteria (<http://www.fungi.com/info/articles/blob.html>), I wonder how this impacts the beneficial effects. If the umami hypothesis says that foreign bacteria is needed, I wonder if long term ingestion of the same fermented/bacteria rich foods would have the same impact. Eventually, your body would have an environment that's full of the kombucha/yogurt/etc. bacteria and the immune system wouldn't react anymore. Without varying the sources, there seems to be a risk of accumulating both good and bad bacteria and nullifying the immune benefits.

seth (2009-08-09 08:14:36)

Chris, if they died of acidosis I take that to mean they drank too much. "Eventually your body would have an environment that's full of the kombucha/yogurt/etc. bacteria" – I don't think that happens. The bacteria that can grow in milk or sweetened tea can't grow in the very different environment inside our body (lactose-poor, sucrose-poor). They're constantly dying and being sloughed off. That's why we need to keep eating them.

Adam (2009-08-09 10:25:49)

I love yogurt, and I made sure to buy the culture-rich kind (Dannon FOTB, YoPlait+, etc). For a while I took it every morning. But unfortunately, after some experimentation I found that it was the cause of some rather embarrassing flatulence and other digestive problems. These problems soon abated after I stopped eating yogurt. Perhaps I have an unusually healthy level of flora in my system already, because I can't take any type of probiotic without having this reaction. Perhaps this is what the person on your mailing list meant when she said it wasn't working well for her.

## **The Umami Hypothesis and the Meaning of Co-Morbidity (2009-08-09 04:51)**

In [1]an article in Slate about restrictive diets, Daniel Engber noted that

Celiac patients have almost twice the normal risk of cancer, and one-third of them suffer from another autoimmune disease, like Type 1 diabetes, lupus, or multiple sclerosis.

Does celiac disease cause cancer, Type 1 diabetes, lupus, and multiple sclerosis? Not very plausible. Does cancer cause celiac disease? Does lupus cause celiac disease? Not very plausible. Much more plausible is that all five have a common cause. I believe that common cause is a malfunctioning immune system due to not enough bacteria in the diet (the umami hypothesis).

More (May 2012). I now think that all these diseases are due to wheat molecules leaking into the blood and setting off an immune reaction that attacks parts of the body (because the wheat molecule resembles those molecules). The leaky gut that allows wheat molecules to enter the blood is caused by lack of bacteria in the diet.

1. <http://www.slate.com/id/2223745/pagenum/all/>

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Low carb a self fulfilling prophecy? | CST Free Weight Exercises By Scott Sonnon (2009-08-09 11:00:18)  
[...] Hat Tip to Seth [...]

Aaron Blaisdell (2009-08-10 08:19:35)

I agree that the most likely explanation is that they all share an underlying common cause. This is why I give my family yogurt and kefir every day, and why my wife and I eat kimchee every day. And why I started making kombucha.

Sheila Buff (2009-08-10 15:32:16)

Hi Seth– A major article in Scientific American for August discusses celiac disease in depth. It's pretty clear it's caused by an inborn heightened immune sensitivity to gluten. Eliminating gluten from the diet cures the condition. The interesting part of the article came in a sidebar that talked about delayed onset CD in adults and how it might be related to a change in the microflora of the gut that activates the genes. Excellent article, well worth reading.

seth (2009-08-10 22:28:37)

Thanks, Sheila. A big problem with the "inborn heightened immune sensitivity to gluten" explanation is that it doesn't explain the co-morbidity I describe. [1]The article puts it like this:

A growing body of evidence suggests that virtually the same trio of factors underpins most, and perhaps all, autoimmune diseases: an environmental substance that is presented to the body, a genetically based tendency of the immune system to overreact to the substance, and an unusually permeable gut.

In multiple sclerosis, what's "the substance"? In arthritis, what's "the substance"? Why should "an unusually permeable gut" cause arthritis? Or MS? It doesn't make sense. The author is confusing correlation with causation. Nor is there any explanation of elevated cancer rates, which go unmentioned in the article.

1. <http://www.scientificamerican.com/article.cfm?id=celiac-disease-insights&print=true>

Chris (2009-08-20 15:38:35)

Here is a study I just spotted: <http://www.ajcn.org/cgi/content/abstract/90/3/712S?etoc> Umami and the foods of classical antiquity<sup>1,2,3</sup> Robert I Curtis<sup>1</sup> From the Department of Classics, University of Georgia, Athens, GA. <sup>2</sup> Presented at the "100th Anniversary Symposium of Umami Discovery: The Roles of Glutamate in Taste, Gastrointestinal Function, Metabolism, and Physiology," held in Tokyo, Japan, September 10–13, 2008. <sup>3</sup> Address correspondence to RI Curtis, Department of Classics, Park Hall, University of Georgia, Athens, GA 30602-6203. E-mail: ricurtis@uga.edu. Umami is the taste of foods that are rich in glutamic acid and 2 ribonucleotides, 5'-inosinate and 5'-guanylate. This distinctive taste of modern Eastern cuisine, which is finding a receptive audience in the Western hemisphere, characterized many dishes that ancient Romans consumed >2000 y ago. Romans enjoyed numerous foods that are identified today as containing significant amounts of natural umami substances and frequently used fish sauce as a condiment in their recipes. Fish sauce imparted to Roman dishes a moderately salty, slightly fishy taste that combines synergistically with other foods to create the umami flavor. Fish sauce derives from the hydrolysis of fish in the presence of salt primarily through endogenous enzymic proteolysis. Its simple production process, low cost, and ability to enhance the taste of many foods has made it the basic condiment for traditional dishes consumed in many Southeast Asian countries. Fish sauce also has important nutritional value, primarily in the form of amino acids. Because ancient Romans made fish sauce in the same way and with the same resources as modern fish sauce producers of Southeast Asia, the amino acid profiles of the 2 products are probably nearly identical. Archaeological sources indicate that fish-processing centers operated throughout the Mediterranean area, and processed fish was an important element in long-distance trade. A close study of the remains of the Roman city of Pompeii indicates that fish sauce was a thriving business that rendered the popular condiment accessible to people of all social classes.

seth (2009-08-21 13:29:06)

thanks, Chris, I didn't know about that. Fascinating abstract.

Chris (2009-08-21 14:28:46)

That journal edition has loads of stuff on umami - worth a read for sure

## **Acid Reflux Cured by Kombucha? Yes (2009-08-10 11:01)**

[1]My friend with acid reflux – who used to have acid reflux – contacted me today:



My stomach is so much better [since I started drinking kombucha]. I rarely have problems. Every once in a while I might be a little uncomfortable. Then I drink a little kombucha, it gets better within an hour. I got up in the middle of the night the other night and I felt the usual kind of pain, took some sips of the kombucha, felt better, and fell back asleep. Hardly ever have pain now. The kombucha is much more effective than the Asiphax medicine I took. That was \$60 for a 10-day course. It might even be more effective than Prilosec. (Which cleared up the problem but then it came back.) I've been drinking kombucha for about three weeks. I really like the grape, guava, and strawberry flavors of [2]the Synergy brand. The grape flavor is like sangria that's just started to go bad. A couple of people I've tried to turn on to it but they just can't stand the taste. My levels of stress haven't decreased. I'm drinking less than half a bottle a day. Now the problem is that I forget I'm supposed to have stomach trouble so I forget to drink it.

If you know of anything (data, anecdotes, whatever), positive or negative, that sheds light on whether kombucha cures acid reflux, please let me know.

1. <http://www.blog.sethroberts.net/2009/07/24/acid-reflux-cured-by-kombucha/>

2. <http://www.synergydrinks.com/>

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karky (2009-08-10 12:35:58)

How close is kombucha to ACV [apple cider vinegar]?

I stopped having heartburn symptoms when I started drinking ACV.

seth (2009-08-10 12:47:30)

Thanks, Karky. Yes, they're very close.

Nathan Myers (2009-08-10 18:03:07)

"Cured"? Sounds more like "treated". "Treated more cheaply", in particular. That's no bad thing, but not a cure.

bennetta (2009-08-10 18:33:57)

Don't overdo it, though! Here's a bit of information you might find interesting, Seth, regarding stomach problems and probiotics. My room mate has a very good friend who is Vietnamese and a surgeon, practicing in the US. According to him, Vietnamese eat a lot of fermented food, but not much fatty food. In the US, however, we do the opposite- eat a lot of fatty food, but barely any fermented food. In Vietnam, colon cancer is relatively rare, while stomach cancer is a real problem. Again, in the US, the opposite is true: we have low rates of stomach cancer, with colon cancer being much more common. Digestion of fats takes place primarily in the colon, while digestion of fermented foods is almost exclusively a stomach affair. You can probably see where I'm going with this. According to him, just look to whatever the bulk of digestion is taking place to see where the cancer will be. This seems to be the case in other cultures, as well. Czechs (a group I am personally familiar with) also eat a lot of fatty foods and colon cancer is a huge problem for them. Still, here in America, we could probably afford to eat a LOT more fermented food than we currently do. Overdoing it might be next to impossible. What do you think?

seth (2009-08-10 22:39:54)

Nathan, I'm afraid I don't understand the distinction you are making. What's the difference between "curing" something and "[successfully] treating" it? In this example, the problem didn't entirely disappear but it certainly is cause and effect (more kombucha, less acid reflux). If by "cure" you mean get rid of so that you don't need the treatment any more, then Vitamin C doesn't cure scurvy, because you have to keep taking Vitamin C. Bennetta, the Japanese eat a good amount of fermented food and have much higher rates of stomach cancer and much lower rates of heart disease than Americans. I don't know what their colon

cancer rate is. But perhaps their stomach cancer rate is high because their food is really salty, not because it's fermented. Might be the explanation for the Vietnamese, too – all that salty fermented fish sauce. Like the Japanese and their salty fermented soy sauce. Because of our liking for umami, sour, and complex flavors, I believe we need fermented foods to make up for the lack of bacteria in the rest of our food. It isn't a tradeoff (between colon cancer and stomach cancer); it's a deficiency being met.

Jaroslav (2009-08-10 23:47:16)

Hi bennetta, I am also personally familiar with Czechs, that's because I am one of them :) Little statistics about colorectal cancer in Czech Republic for you. I just looked it up using official statistics published by Institute of Health Information and Statistics of the Czech Republic: 2006 new cases: 152 died: 82 2005: new cases: 156 died: 83 2004: new cases: 158 died: 90 Total population: about 10 millions. Huge problem? No. And it even looks like a downtrend. Please do not let confuse yourself with press releases doing relative comparisons with other European countries. Absolute incidence is very small. In fact, number of death on colorectal cancer is lower then number of death on AIDS, and incidence of AIDS in Czech Rep. is very low. Source: <http://www.uzis.cz/cz/dps/english/index.html> Diagnoses: C18-C21 for both man and woman Now about your ideas about digestion. Human colon is not a digestive organ, even though some digestion happens there thanks to fermentative microorganisms, but the fatty acids produced by them are used mainly for colon nourishment (about 100 calories per day). Fats are absorbed in small intestine, as are absorbable parts of fermented foods. I will end with the relevant link: <http://www.fibermenace.com/>

bennetta (2009-08-11 08:58:00)

Interesting, Jaroslav. (and Dobry den!) I taught English in Prague, myself, and my friend Petr said it was a problem for them, citing two family members who had died of colon cancer. He was also extremely critical of the average Czech diet and blamed it for his family's cancer.

Jaroslav (2009-08-11 10:44:56)

I can imagine that the cancer is a real problem for people who are directly affected by it, but beside that, statistical data speak for themselves. Generally I see only two major problems with our diet: tons and tons of products made from refined white flour, and tons and tons of sweets. Replace that with something better, and Czech diet will become pretty sound (I should say that I don't see animal fats and red meat as a problem, as their supposed harmfulness is not being proved by science, and never was). That's of course pure fantasy :) Lots of people are still cooking at home (perhaps even most of them), so better choice of ingredients and methods of preparation would make a big difference.

akatonyk (2009-08-11 10:57:29)

I don't know about kombucha, but I've drank buttermilk when I've had heartburn, and it works really well. I believe that modern buttermilk is a cultured product.

Nathan Myers (2009-08-11 14:01:40)

Yes, Seth, curing means the condition goes away. Scurvy is caused by forcing people to eat bad food, and cured by letting patients eat what they choose. Vitamin C treats the acute condition. Kombucha treats acute acid reflux. Dietary changes may cure it. Kombucha might serve as a substitute for those dietary changes, just as taking vitamin (etc.) supplements may substitute eating for good food. There's no evidence to blame stomach cancer on salt instead of fermented food, is there? Maybe it's salt, maybe it's bacteria, maybe it's something else entirely. To decide up front that the fermented food can't have a role is just wishful thinking. Quantities matter. Vitamin A prevents all kinds of problems, but too much kills. It wouldn't be at all surprising if it were demonstrated we need to eat at least X mg of bacteria, and can tolerate up to nX, but more causes problems. Amounts of different strains matter too. The beneficial dosage of salmonella is probably fairly low. Science doesn't tell us until we do the work. Assuming interferes with doing the work.

seth (2009-08-11 20:44:49)

Thanks for explaining that, Nathan. My friend isn't drinking much kombucha. I'm pretty sure if he drank more the condition would go away completely. He doesn't eat any fermented food apart from the kombucha. Yeah, I suspect if he changed his

diet and ate other fermented foods, such as yogurt, he would no longer need to drink kombucha. I don't "decide up front" that fermented food has no effect on stomach cancer. I wrote "perhaps their stomach cancer rate is high because their food is really salty, not because it's fermented." Note the "perhaps." I think we agree that a range of possibilities should be considered.

Nathan Myers (2009-08-12 01:09:19)

Sure enough, you did say "perhaps", and I didn't read carefully enough. I asked at Berkeley Natural Grocery about kombucha starter, and they said they didn't have it and didn't know anybody who did. Then I thought of starting a colony from the bottled stuff, and sure enough people do that. One of the FAQs suggested "continuous fermentation" in a "sun tea" jar, where you draw some off from the spigot and then add more tea. That seemed to me most practical.

seth (2009-08-12 10:38:18)

I didn't know about continuous fermentation, thanks for mentioning it.

EAT: Drink More Tea « STRETCH EXERCISE EAT (2009-08-19 05:05:30)

[...] \*With tea, there is even a fermented foods option. A Symbiotic Colony of Bacteria and Yeast (SCOBY) is added to tea to ferment it and make Kombucha. Kombucha is slightly acidic. Drinkers of Kombucha relate many advantages such as improved immunity, alleviation of acid reflux, increased energy, sharper eyesight, and better skin condition. [...]

Seth's blog » Blog Archive » "Kombucha Reconsidered" (2009-08-28 03:42:52)

[...] This is also a reason that theory is important. John Tukey, the statistician, spoke of "gathering strength" when analyzing data. It is rare that a single body of data tells you how to analyze it, he said. (For example, what transformation to use.) You should use similar data sets to help decide. Scientific theory has the same effect. Before I started drinking kombucha, I didn't have obvious digestive problems (unlike a friend) and my immune system seemed to work well. So it wasn't easy to measure its effect. Yet I drink it and am untroubled by the evidence that worries RVM because I have a theory: the umami hypothesis (that we need a steady intake of bacteria to be healthy). This allows me to assess the effect of kombucha — whether it is likely to be good or bad — with the help of evidence from other bacteria-rich food (yogurt, natto, etc.) and much different data (the effect of bee stings on arthritis, epidemiology, the effects of turmeric, etc.). Because the umami hypothesis appears to be true, apparently bacteria intake is beneficial — and kombucha has lots of bacteria. [...]

Seth's blog » Blog Archive » Acid Reflux is Immune Problem, Says Rat Study (2009-11-21 06:55:49)

[...] Months ago I posted about a friend of mine whose acid reflux was cured by drinking kombucha. The implication of that case and the rat study is that acid reflux is caused by an over-active immune system. Perhaps stomach acid often gets into the esophagus. Only if your immune system is under-stimulated does this cause trouble. [...]

## **A Little-Known Bad Thing about Kombucha (2009-08-10 18:50)**

It causes dye to run. I took some homemade kombucha with me while traveling and it leaked onto two shirts. The dye ran. Unfixable. Now if I think I might have gotten kombucha on a shirt, I wash it immediately.

## Shaved Head, Good Coffee, and the Shangri-La Diet (2009-08-11 07:42)

How are they similar? [1]Kenneth Anderson at The Volokh Conspiracy writes:

I have shaved my head completely, as I have discovered from long experience that even if it doesn't help me discover my spiritual side, it weirdly helps me concentrate. I highly recommend it. I have much coffee, good stuff from Antigua Guatemala. Yerba mate from Paraguay. I have my extralight olive oil re the Seth Roberts diet - to which, although I realize I'm just bragging here - I sincerely credit the loss of 25 pounds [emphasis added] and a wholly unmedicated cholesterol score last week of 128 total and 66 good (!).

All three help you concentrate. (SLD helps you not be distracted by hunger.)

1. <http://volokh.com/posts/1249828721.shtml>

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Dennis Mangan (2009-08-11 09:47:18)

Unfortunately, Mr. Anderson isn't quite up to speed on what constitutes a healthy cholesterol level. His is in the range of increased mortality. Low cholesterol kills: <http://mangans.blogspot.com/2008/10/low-cholesterol-kills.html>

Andrew Gelman (2009-08-11 14:36:31)

But . . . being "distracted by hunger" is one of the great joys in life!

seth (2009-08-11 16:53:08)

Everything in moderation.

## Acne Treatment Statistics (2009-08-11 11:18)

[1]Cure Together has acne treatment statistics: Comparisons of the effectiveness of about a dozen treatments. Only two treatments rate high for effectiveness and both have only a few raters. Neither of the high-rated treatments (Roaccutane and Dr. Hauschka Skin Care) was part of Stone-Age life. Because of [2]the absence of acne in at least a few groups of people living more Stone-Age-like (stoneagesque?) lives, it is likely that something about modern life causes acne. When whatever that is is figured out, it should be possible to eliminate acne cheaply and safely.

Regardless of the future, this table is a big step forward in dealing with the problem. It is the first unbiased look at the effectiveness of different treatments I have seen and it tests a lot of everyday treatments (e.g., face-washing). Academic papers on the subject usually study prescription drugs and the authors usually favor one of the treatments being studied.

1. [http://www.curetogether.com/Acne/\\_treatment/stats](http://www.curetogether.com/Acne/_treatment/stats)

2. <http://www.blog.sethroberts.net/2009/06/24/acne-self-experimentation-why-its-promising/>

Glen Raphael (2009-08-11 18:00:28)

Cure Together is a great idea! They also has a section on obesity but not much data there. I added two treatments to their list: (1) Shangri-La diet, (2) caffeine+ephedrine.

Alex Carmichael (2009-08-11 20:32:59)

Thanks so much for posting this, Seth! I find your theory of acne being a modern occurrence fascinating. As you noted, our goal at CureTogether is to bring patients together to share their expertise, not influenced by any medical or business interests. People know so much about their own conditions and what works and with enough data, statistics will be able to predict which treatment will work for any new patient with a particular set of symptoms. Think crowdsourced, personalized medicine. It goes along very well with your abundant expertise on self-experimentation!

Anne Softling (Face Skin Care Products) (2010-01-11 09:50:00)

I love this post. Patients can work together to share their expertise to solve acne problems which is a problem to most people. As an individual you yourself knows your own acne problem and the experience you have and by sharing it people will learn more about how to cure acne. This only proves that "Two heads are better than one".

Micky Lebrej (2010-03-09 12:44:37)

Good post, another thing to share with you is that answers at yahoo sometimes also can help regarding Acne. Talked about curing together lol. I must say I had very meager results with natural treatments.

Helen Riley (2010-06-16 00:31:39)

I'm a huge advocate of blue/red light acne therapy and want to get fellow sufferers to give it a go. I had acne for a miserable 15 years and it ruined my teenage and young adult years. Roacc was useful only for a few months but the acne returned. Light therapy, though, has worked a treat. Has anyone else tried it? I think the key is to make sure you discipline yourself to doing the therapy for 15 mins every day for the first two months and then reduce the frequency when your acne clears up.

Dave (2010-11-28 06:58:25)

Long ago our family doctor explained that all topical treatments for acne were all rubbish, and that acne can be stopped in three or four days by taking about 20 milligrams of amino acid zinc, daily. My eighteen year old son had acne so bad that it was lumpy and bleeding. Just as the doctor predicted, in about four days his face was almost as smooth as mine...no more acne, but you must continue taking it. Now, a very absorbable form of zinc called zinc picolinate, can be found in many stores. AND there is no need to avoid chocolate, fried foods, etc. The zinc keeps body oil fluid as it approaches the skin. Without enough zinc, it begins to harden as it approaches the skin, and the oxygen in the air. Also, no blackheads, waxy lumps behind the ears, etc.

Ula Monasterio (2011-08-13 02:30:47)

What is the most effective home acne treatment?

## **Probiotic Pills: Minus and Plus (2009-08-12 10:50)**

A reader writes:

I recently had a bottle of pills that became virtually inactive (i can tell from my bowel movements) after a few weeks, probably because they weren't refrigerated . . . I probably wouldn't have been able to get a lot of bacteria into my diet without pills, especially since I travel frequently for work. Â In addition, since I take thyroid pills every day, adding another pill is easy. Â I think pills are also clearly crucial to research efforts.

Good points. On recent trips (in America) I've found kombucha, yogurt, and kefir in the new locations, but it's been time-consuming. Pills would have been easier.

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SG (2009-08-12 11:56:54)

My current favorite probiotics are Kyo-Dophilus by Wakunaga. They claim no need for refrigeration.

losing-it (2009-09-04 09:32:29)

Not sure if you've tried making your own kefir, yet? You can get cultures for it online...I've made my own from cultures...very easy to make, and I've also used commercial brands available at supermarkets and health-food stores. I also like using a probiotic containing HSOs (homeostatic soil organisms lacking in our diet) from Garden of Life products, called Primal Defense. I use a variety of fermented pre/probiotic foods including kefir, kombucha, yogurt... and add to that, Primal Defense (mainly because of the HSO ingredient). Not advertising...I don't know if any other company's probiotic formulae include HSOs in their complexes.

### **Assorted Links (2009-08-12 15:53)**

- [1]microbes and mental illness
- [2]probiotics may help after gastric bypass
- [3]Prevention article about omega-3
- [4]book about kombucha

Thanks to Kathy Tucker.

1. <http://www.scientificamerican.com/article.cfm?id=infected-with-insanity>
2. [http://news.yahoo.com/s/hsn/20090718/hl\\_hsn/probioticssupplementmayhelpaftergastricbypassurgery](http://news.yahoo.com/s/hsn/20090718/hl_hsn/probioticssupplementmayhelpaftergastricbypassurgery)
3. [http://www.prevention.com/cda/article/the-vanishing-youth-nutrient/6dec72fe5deb2210VgnVCM10000030281eac\\_\\_/\\_/news.voices/in.the.magazine/september.2009.issue/0/0/1](http://www.prevention.com/cda/article/the-vanishing-youth-nutrient/6dec72fe5deb2210VgnVCM10000030281eac__/_/news.voices/in.the.magazine/september.2009.issue/0/0/1)
4. <http://books.google.com/books?id=NvDjlu7rATgC>

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Nathan Myers (2009-08-13 22:20:47)

I've been thinking about the timing of response to flaxseed oil. The CNS improvement happens way too fast to be a nutritional effect, particularly considering that you take the stuff regularly and so can't be deficient. What it looks like to me is a drug response. (I note that my pinball scores double shortly after taking it.) Is there a plausible mechanism for flax oil - not necessarily the n3 component! - to have a fast CNS stimulant effect? I also wonder how much of the effect is a result of absorption in the mouth. I'm going to experiment with flushing it around in my mouth for a while before swallowing, and maybe without swallowing.

## Why Do Children Pick Their Nose? (2009-08-13 09:30)

In a clever series called [1]10 Mysteries of You: Ten things we don't understand about humans in New Scientist, Australian science writer Emma Young includes some obvious ones (blushing, altruism, dreams, art) but ends her list with a surprise: [2]nose-picking. This had not occurred to me:

It is possible that ingesting nasal detritus might help build a healthy immune response - after all, researchers investigating the hygiene hypothesis have built a large body of evidence indicating that lack of exposure to infectious agents can increase one's susceptibility to allergic diseases.

This seems to be Young's idea rather than that of the scientist she spoke to. She has her hygiene hypothesis stuff wrong. The original hygiene hypothesis was indeed that lack of exposure to infectious agents can increase allergies - but the data later collected did not support this. More infections in childhood did not correlate with less allergy. What did seem to help was exposure to dirt. Apparently the dirt was helpful whether or not it was infectious (= contained something that could make you sick). The nose-picking data (kids pick their nose a lot and sometimes eat the stuff) does make sense given my umami hypothesis, which says that exposure to bacteria is good for us. You couldn't get sick from eating what comes out of your nose but as it leaves your nose foreign bacteria grow on it; so eating your snot is a way to introduce foreign bacteria into your digestive system. Which the umami hypothesis says is needed for health.

Do kids who eat more fermented food eat less snot? As I [3]posted earlier, since I started eating lots of fermented food, my desire for fancy restaurant food has gone way down.

Thanks to JR Minkel.

1. <http://www.newscientist.com/special/ten-mysteries-of-you>
2. <http://www.newscientist.com/article/mg20327201.600-10-mysteries-of-you-nosepicking.html>
3. <http://www.blog.sethroberts.net/2009/05/04/less-of-a-foodie/>

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Douglas Clegg (2009-08-13 14:31:15)

When I was a kid, I actually ate ants sometimes. Not often and I was under the age of 5, based on my last memory of doing it. I'd step on the ant (didn't want to eat one alive) and then eat it. I've read since that sometimes children do this who need iron, but given my diet (my mother was a health food nut with us early and had all kinds of nutritional boosters) I somehow doubt I needed much iron. Does make me wonder. It was always the black ants, not the little red ones. I have no idea - to this day - why I did it. But I'd love to think it was a toddler instinct that was good rather than some weird issue. I didn't massacre any ants, by the way - just a few over a year or so, as far as I can recall.

Douglas Clegg (2009-08-13 14:33:02)

p.s. Guess i should've added, I obviously drew a correlation between your post here and the "dirt" aspect to ants.

Mr. Snot Tissues (2009-08-22 04:01:28)

[...] tissue. Bookmark the permalink. Comments are closed, but you can leave a traceback: Traceback URL. « Swine Flu, the VideoGame [...]

## HeartScan (2009-08-13 23:07)

A few months ago, because of this blog, I got a free heart scan from [1]HeartScan in Walnut Creek. It's a multi-level X-ray of your heart and is scored to indicate your heart disease risk. In spite of the fermented food I've been eating recently, and the flaxseed oil I've been drinking for about two years, my score was right in the middle. What's impressive about these scans is three-fold:

1. The derived scores are strongly correlated with risk of heart disease death. This isn't surprising because they are actually looking at your circulatory system. Here is [2]an example of the predictive power. About 1000 subjects were followed for about four years. About 40 of them had something go seriously wrong with their circulatory systems (e.g., heart attack):

The mean coronary artery calcium score was  $764 \pm 935$  [mean  $\pm$  standard deviation] among subjects with events as compared with  $135 \pm 432$  among those without events ( $p < 0.0001$ ). [Minimum score is 0.]

The standard deviations are more than the means because the distribution is very asymmetric. (Like most researchers, they should have [3]transformed their data.)

2. You can improve the score. Via [4]lifestyle changes.

3. The scans provided by HeartScan are low enough in radiation that they can be repeated every year, which is crucial if you want to measure improvement. In contrast, a higher-tech type of scan (64 slice) is so high in radiation that it can't be safely repeated. The higher-tech type of scan, offered by other heart-scan centers, is more profitable for the manufacturer of the equipment (General Electric), which may be why it has become increasingly common.

Heart scans, like the sort of self-experimentation I've done, is a way to wrest control of your health away from the medical establishment. No matter what your doctor says, no matter what anyone says, you can do whatever you want to try to improve your score. And if what you do works, it works; if it doesn't work, it doesn't work – regardless of what anyone says. My self-experimentation started with something similar to a heart scan: I counted the number of pimples I had. The lowest possible tech, sure, but when I did that, and varied the prescribed medicine, I could actually see what worked and what didn't.

1. <http://www.heartscan.com/>

2. <http://content.onlinejacc.org/cgi/content/abstract/36/4/1253>

3. <http://sethroberts.net/articles/2008%20Transform%20your%20data.pdf>

4. [http://www.lef.org/magazine/mag2004/mar2004\\_ch\\_01.htm](http://www.lef.org/magazine/mag2004/mar2004_ch_01.htm)

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JLD (2009-08-14 04:03:50)

they should have transformed their data Huh? This paper of yours isn't open access? So you really think that it is worth \$ 31.50 (of which you receive zilch))? I am going to revise the credibility of this blog...

seth (2009-08-14 04:49:26)

JLD, I've changed the link. Try again.



Peter (2009-08-17 10:28:21)

My coronary calcium score was zero. I'm not sure what exactly that means.

david (2009-08-19 09:38:04)

peter, what is your diet and lifestyle history? Sound like you are doing some things right...

david (2009-08-19 09:45:13)

and seth, how have your blood lipids been over the years if you don't mind the question?

seth (2009-08-19 16:56:41)

David, my HDL is low. The other stuff is okay.

david (2009-08-20 00:12:56)

thnx

anon (2009-09-25 20:59:59)

Because of the way it's calculated (look up the Agatston Scoring method) CAC has a big spike of values at exactly zero - maybe 50 % of the population. Transform away, but you're not going to get symmetry (and, for many statistical purposes, you don't need it) The scoring method certainly could be improved (and has been, by some statisticians) but Agatston remains the default. Moreover, there's reason to think that different biology may dictate people have some vs zero CAC, and lots vs not much.

seth (2009-09-26 04:14:56)

So what if you don't get symmetry - you'll get closer to symmetry. You'll improve the situation.

anon (2009-09-29 08:34:13)

Improve what, exactly? If you mean improving predictive ability in standard regression models, nothing says that the predictor has to be symmetric, or that prediction will be better/worse if you transform the predictor to be symmetric.

## **This Blog Reduces Sinus Congestion (2009-08-15 05:55)**

A reader writes:

I'm now 30 years old. For the past ten years or so, I've had constant post-nasal drip and stuffed sinuses, frequently coughing out phlegm. In addition, I've had fairly intense fatigue, moderate but consistent depression, and occasional but intense tendinitis (from typing). I tried nasal pharma sprays and many alternative therapies, feeling most intellectually compelled by neti pot style nasal washes with solutions that mimic salt balances of the body. However, none of my efforts did much good. So I reluctantly agreed to have sinus surgery, even though it seemed to be a blunt force approach to a sensitive tissue. I have since become convinced that treating the sinuses as anything other than an expression of overall health is preposterous. The surgery, with full anesthesia, improved things very slightly while being somewhat traumatic and certainly not worth the ordeal.

About 5 years ago, when I was 25, I discovered that I have a very under-active thyroid. Taking thyroid replacement was the biggest health change I've had in the past ten years, giving me much more energy, improving my overall health, and significantly reducing (but not eliminating) my sinus condition.

I didn't start reading your blog regularly until a few months ago. Your writing on bacteria and flax oils led me to start taking probiotic pills every day (Trader Joes brand and then kyodophilus), eat more yogurt

and kimchee, and take flax seed oil pills and try to incorporate flax oil into foods. Within a month of starting this, my sinus congestion was reduced by about 90 %. I don't need to constantly have tissues on hand and I can breathe easier every day. Thank you! I'm hoping to finally start making my own kombucha this week.

I suspect it was the bacteria rather than the flaxseed oil that helped his nose. Like him, I used to need to carry a handkerchief at all times and I went through a whole box of Kleenex in a few months. This didn't stop when I started drinking lots of flaxseed oil. After I started drinking lots of fermented foods, however, my nose became a lot clearer and my Kleenex consumption went way down.

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david t (2009-08-15 07:18:14)

i have heard that bromines and bromides have a not so good effect on thyroid. check to see if you are ingesting any foods with those additives. eliminating these may improve that problem

Andrew Gelman (2009-08-15 12:56:46)

I don't understand: if you used to carry a handkerchief at all times, why did you need the Kleenex?

seth (2009-08-15 14:08:03)

Carried a handkerchief at all times when I left the house.

Seth's blog » Blog Archive » Beijing Air: Not Dirty Enough (2009-08-31 15:39:10)

[...] In Berkeley, as I blogged earlier, a few months ago I noticed that my nose was no longer runny. My Kleenex consumption, which had been about one box of Kleenex every month or so, was reduced to almost zero. (A reader of this blog had a similar experience.) No doubt this was due to eating much more fermented food. The runny-nose-absence has continued in Beijing. [...]

Seth's blog » Blog Archive » This Blog Reduces Sinus Congestion (continued) (2009-09-04 17:09:39)

[...] Earlier post on the subject. [...]

## **Dietary Self-Selection by Young Children (2009-08-16 08:45)**

In the 1920s and 30s, a Chicago pediatrician named Clara Davis did a remarkable experiment/demonstration: [1] Letting young children choose their own food. About eleven children chose from a list of 30 little-processed foods – including sour milk, the only bacteria-rich food on the list – and could eat as much of each one as they wished. The choices included peaches, beef, carrots, beets, barley, bone marrow, pineapple, cabbage, lettuce, potatoes, and sweet breads. Many of the foods were supplied both raw and cooked. The experiment lasted about 6 years.

The main result was that the children were very healthy:

There were no failures of infants to manage their own diets; all had hearty appetites; all thrived. Constipation was unknown among them and laxatives were never used or needed. Except in the presence of parenteral infection, there was no vomiting or diarrhea. Colds were usually of the mild three-day type without complications of any kind. There were a few case of tonsillitis but no serious illness among the children in the six years.

Some of them were malnourished at the start of the experiment; all recovered. One had rickets and was offered cod liver oil. He drank a little bit of it while sick but after he recovered never drank it again.

Davis's observations support the idea that we have inborn desires that help us choose what to eat. Davis emphasized that there was great variation from one child to another in what they ate – as Weston Price noted a great variation from one healthy community to the next in what they ate. She didn't give details, however. The notion that our desires, given Stone-Age surroundings, help us choose a healthy diet is what led me to the umami hypothesis. It started with the idea that in the Stone Age our liking for complex, sour, and umami flavors caused us to eat food with more bacteria than fresh food. High-bacteria food tasted better than low-bacteria food; it was more sour, more umami, and had a more complex flavor. Suggesting that we need to eat bacteria to be healthy.

1. <http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=537465&blobtype=pdf>

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Nadav Manham (2009-08-16 09:57:10)

Seth, What do you think are the main institutional reasons why remarkable experiments from so long ago like this one don't "catch on," and instead seem to be forgotten by the scientific mainstream, only to be rediscovered decades later by people who care enough to look? "Good Calories, Bad Calories" is a prime example: Gary Taubes simply went back and looked at the studies that had been done before the current consensus on obesity was formed, which led him to challenge that consensus. Thanks, Nadav

seth (2009-08-16 12:15:54)

Nadav, that's a great question but I don't have time to answer it now. I'll respond to it in the coming weeks in a post.

michael vassar (2009-08-16 13:25:32)

Thanks. Great reference. One thing I think is that scientists are taught to believe that all work before the careers of their thesis advisers is worthless.

Evelyn (2009-08-16 13:49:38)

I suspect a scientist would never get ethics committee permission to serve raw beef to children today.

Nadav Manham (2009-08-16 14:20:11)

Thanks, Seth.

Aaron Blaisdell (2009-08-17 08:08:22)

Ralph Miller told his class about this experiment in the class Learning and Conditioning I took with him as a graduate student.

Wilbur (2009-08-17 09:46:48)

Read [1]this article and see if you still think this was such a great study. I know Seth will, because Davis' methodologies are comparable to his own. But in an absolute sense, the research is garbage.

1. <http://www.cmaj.ca/cgi/content/full/175/10/1199>

seth (2009-08-17 10:31:05)

"The research is garbage." Whereas I believe there is something to be learned from it.

Wilbur (2009-08-17 15:29:37)

If "Big Pharma" performed research to the standards of this study, corporate executives would be charged with murder.

Jim (2009-08-20 10:31:41)

Nadav, The US has a long history of discarding really good ideas that come back to us as "foreign mystery" and are wildly popular.

1. Deming and quality movement was invented in the US. Japan adopted his techniques and kicked US manufacturing butt. 2. The Beatles and Rolling Stones took US Blues and repackaged it for the US. There's two points, I can draw a straight line on my graph.

Nan Singh Bowman (2009-08-21 07:06:38)

We have come to think that anything not "controlled" by us is suspect. Therefore we have lost our ability to trust our instincts and intuition and depend on man-ufactured processes to keep us safe and healthy. We've changed so much but I think we can still draw on that universal inner voice for much of our well-being. But we need to eliminate a lot of the useless input that bombards us every waking minute. Then we will be able to listen.

### **How to Avoid Infection: Something I Didn't Know (2009-08-17 12:49)**

A book called [1]Survival of the Cleanest (2005) by Jacob I. T. Van Der Merwe is about how to avoid infection. As far as I could tell from Google Books, it says nothing about how to boost your immune function. It is all about avoiding public bathrooms, frequent handwashing, and pointing out the many ways in which we can get infected (e.g., touching shopping carts). It is heartfelt but I didn't find it persuasive. There was almost no data about the efficacy of the book's thousands of suggestions.

Here is something I couldn't find in the book. A few months ago, I noticed that my eyes itched. Apparently I had some sort of infection. My eyes almost never itch and this happened to coincide with something else very rare: I hadn't changed the pillowcases on my bed in a few weeks. So I started changing my pillowcases more often. The itching went away and hasn't returned. My explanation: The pillowcases were acting as staging areas for the bacteria. Ordinarily my immune system would fight them off but on the pillowcases they were safe. The pillowcases shifted the balance of power.

Survival of the Cleanest does say "correctly laundering clothes kills germs and drastically reduces the risk of infection" but since this particular bit of vague advice (what's "correctly"?) is mixed with a thousand other bits of advice, such as avoiding doorknobs, it doesn't get the attention it deserves. For what it's worth, when I do laundry I do a second cycle without soap, in order to get a really good rinse. I'm less interested in killing germs than I am in washing them off.

1. [http://www.google.com/url?sa=t&source=web&ct=res&cd=11&url=http%3A%2F%2Fbooks.google.com%2Fbooks%3Fid%3D8Nr53hSC0zsC%26dq%3DJacob%2BI.%2BT.%2BVan%2BDer%2BMerwe%26printsec%3Dfrontcover%26source%3Din%26hl%3Den%26ei%3DItaASuHcNonUsQ0r20zvCA%26sa%3DX%26oi%3Dbook\\_result%26ct%3Dresult%26resnum%3D11&ei=ItaASuHcNonUsQ0r20zvCA&usg=AFQjCNFOU0jwANFIRDN\\_VSp-Lu-SX9eaRA&sig2=6eMqpzPqxuaiwNbmzwnZTw](http://www.google.com/url?sa=t&source=web&ct=res&cd=11&url=http%3A%2F%2Fbooks.google.com%2Fbooks%3Fid%3D8Nr53hSC0zsC%26dq%3DJacob%2BI.%2BT.%2BVan%2BDer%2BMerwe%26printsec%3Dfrontcover%26source%3Din%26hl%3Den%26ei%3DItaASuHcNonUsQ0r20zvCA%26sa%3DX%26oi%3Dbook_result%26ct%3Dresult%26resnum%3D11&ei=ItaASuHcNonUsQ0r20zvCA&usg=AFQjCNFOU0jwANFIRDN_VSp-Lu-SX9eaRA&sig2=6eMqpzPqxuaiwNbmzwnZTw)

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bennetta (2009-08-17 13:24:03)

If you haven't read it already, Seth, you may find *The Coming Plague*, by Laurie Garrett, interesting, as it may be the antithesis of this book. It was also required reading for the History of Infectious Diseases class I took at UC Davis in their microbiology department. The book is essentially an account of changing patterns of infection over the past 50 years, much

of which is attributed not to living in an environment with too much bacteria, but rather, living in an environment where all bacteria is killed. This is especially true in modern hospitals where the worst nasties are found, often in the form of usually benign or even helpful bacteria. I'll never forget the last day of the class, when our instructor said "OK folks, so if you get one thing out of this class, what should it be? The next time you drop a sandwich on the ground, wait a few seconds, and then pick it up." Of course, this doesn't mean you should live in filth, but rather, that you shouldn't live in an environment that is too sterile. Your body needs the good bacteria to keep the bad bacteria out, and trying to kill the bad bacteria off usually only results in killing off the good bacteria and making the bad, worse. Western society almost always leans in the latter direction (being overly sterile), rather than the former.

NE1 (2009-08-17 14:45:51)

I used to have itchy eyes too, and ascribed it to past irresponsible contact lens use. At times I thought pillowcase washing was correlated. One over-the-counter claritin (which I hadn't taken since moving out of my parent's house) cured me of both disillusions. You seem very fixated on bacteria. A more conventional explanation might be an allergy to dust mites and their allergens. Have you tried taking an anti-histamine? In any case, if washing your pillowcases works, there's probably no need to take a pill.

Dale (2009-08-20 10:48:42)

Do you wash your pillows? Or leave them in the sun? I've been itchy the last week or two, so I'll try washing pillow slips and pillows – or maybe there's some pollen around at this time??

Seth's blog » Blog Archive » How to Eliminate/Prevent a Skin Infection and What It Means (2009-10-11 11:43:26)

[...] Gatekeeper Drugs. How to Avoid Infection: Something I Didn't Know. [...]

### **Fifteen-Thousand-Page Theorem (2009-08-17 21:51)**

Did you know that [1]a certain math proof runs 15,000 pages? It's about the classification of finite simple groups. [2]A shorter version should be about 5,000 pages. It began when someone proved that the number of simple groups was finite. Such a proof is more like a railroad network than a book. No one verifies the whole thing, just as no one rides the entire railroad network.

1. <http://plus.maths.org/issue41/features/elwes/index.html>

2. [http://en.wikipedia.org/wiki/Classification\\_of\\_finite\\_simple\\_groups](http://en.wikipedia.org/wiki/Classification_of_finite_simple_groups)

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Clasificacion de los grupos finitos simples (2009-08-20 11:32:09)

[...] VÃa: El blog de Seth Roberts. [...]

### **The Financial System and the Immune System (2009-08-19 13:10)**

In [1]this interview, Nassim Taleb says, as he has often said, that booms and busts are a fact of financial life, what we should do is make the financial system robust against them. He put it like this:

Capitalism will always produce shocks and crashes. I want a society that has a buffer against shocks.

Likewise, I say bacteria are a fact of life. To be healthy we need to make our bodies resistant to them – which means having a well-functioning immune system.

These are not subtle or difficult points. What interests me is the difficulty that experts have appreciating them. To repeat a story I've told before on this blog, a few years ago I noticed that the UC Berkeley School of Public Health had a wide-ranging epidemiology course taught by someone I knew. I phoned him. "Will the course cover what makes us more or less susceptible to infection?" I asked. "No," he said. I wasn't exactly surprised – I have never seen this topic covered in any epidemiology textbook or even any epidemiology research paper – but still it is an amazing omission. They know we have an immune system, they just don't think it matters! There's an elephant in the room, and they're ignoring it.

The parallel point about the financial system is that there is no study of what makes a financial system robust against shocks. Somehow finance professors, like epidemiology professors, haven't grasped that something is missing.

Here are two more vast areas of ignorance:

1. Scientists know a lot about how to test ideas. They know almost nothing about how to come up with ideas worth testing. When a good way to generate ideas comes along – such as self-experimentation – they are dismissive. This is truly crippling: In an experimental science, for example, interesting new experimental effects aren't discovered. Experimental psychology suffers from this problem. Experimental psychologists could self-experiment, but they don't.

2. Economists know very little about how to generate new businesses – what makes the rate of new-business generation high or low. I came across a 500-page introductory economics textbook that had three empty paragraphs on the topic. Without new businesses to solve the problems created by old businesses (such as pollution), your society is in real trouble. The problems will pile up unsolved. This is what Jane Jacobs saw so clearly in *The Economy of Cities* and Jared Diamond completely missed in *Collapse*.

1. <http://news.bbc.co.uk/2/hi/programmes/newsnight/8209681.stm>

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Jeff (2009-08-19 13:53:42)

I am studying public health (at Emory) and risk factors for infection are discussed constantly within the field. Age (both young and the elderly), HIV positive status, smoking, vaccination, etc. are mentioned constantly and others depending on the infection in question. These are all examples of factors that effect the immune system. Maybe that wasn't relevant to the specific course you asked about but I would assume public health students at Berkeley hear about it. I would agree that this could be discussed more but it is not being ignored. "I have never seen this topic covered in any epidemiology textbook or even any epidemiology research paper" but still it is an amazing omission" Do you mean you have never seen exposure to bacteria and the immune system in a research paper or that you have never seen a research paper covering how the immune system is affected by external sources of any kind? Because there are many many papers on the latter. Any disease studied in detail will have papers "Risk factors for disease X" some of which will relate to immune function. Jeff

seth (2009-08-19 16:51:47)

Thanks, Jeff. "Risk factors for infection" is broader than what I'm talking about, but you're right, it may include factors that make the immune system weaker or stronger. (It also includes dozens of things that have nothing to do with immune system strength.) HIV status is too obvious to be helpful; age is too vague (a thousand things change as we get older) to be helpful. Smoking is included just because it is always included. Maybe you see what I mean here – epidemiologists don't see that immune system strength is a specific question worth asking, they just do their usual "risk factor" analyses which are a blunt tool. It doesn't make sense to study each infectious disease separately (which is what is done) since the immune system fights off all of them. As for the lack of papers, you've seen more than I have. Can you tell me one review paper about what factors make the immune system weak or strong? Presumably it would aggregate data from several infectious diseases.

Nathan Myers (2009-08-19 17:32:22)

Seth, you've repeated often that scientists "know almost nothing about how to come up with ideas worth testing". I've never heard of a scientist at a loss for projects to apply for grants for. Is "worth testing" the meat of your statement? Do most scientists waste their careers on unworthy ideas?

CCS (2009-08-19 19:15:43)

Seth, I have just picked up a book \_Deep Nutrition \_ by Catherine and Luke Shanahan and I thought of you because it talks extensively about the benefits of fermented food. She refers to fermentation as one of the "four pillars" of wold cuisine.

seth (2009-08-19 21:43:40)

Nathan, a certain distinguished professor in the Berkeley psychology department gave a talk in which he described testing a certain idea six different ways. Two or three tests would have been enough. I asked, "why so many tests?" "Just because" was the essence of his answer. He had enormous difficulty coming up with new ideas – so he kept testing old ones. Confirming what we already knew. The other strategy is to do rococo variations on what's already been done. CCS, thanks, I didn't know about that book.

Nathan Myers (2009-08-19 23:07:26)

It sounds like you're saying, then, "*psychologists know almost nothing about how to come up with ideas worth testing*". What we need, then, is a clearinghouse: psychologists who have too many worthwhile ideas to test post their extras, and psychologists at a loss read and test them. However, I'll bet the ones who are competent to test ideas are the same as the ones who have too many ideas, and the rest would better do something else with their lives. But that's just a guess.

seth (2009-08-20 05:57:20)

Nathan, no, it's almost all scientists. I just gave an example to answer your question. The next time you meet a scientist, ask what methods he or she uses to come up with new ideas worth testing. Or look at an introductory statistics book. Count how many pages are about how to come up with new ideas.

Aaron Blaisdell (2009-08-20 07:34:09)

I agree with Nathan. But then I'm an experimental psychologist at a university. I really don't agree with Seth's perspective on this. My guess is that he's railing against dogmatism (which is a human affliction) as it affects what scientists are willing to consider (theoretically) and which thus hampers what they consider looking at (experimentally). Also, I'm guessing he (sorry to speak about you in the third person, Seth) had some bad experiences at Berkeley, such as an unmotivated, unproductive, and/or unappreciative set of colleagues who likely were disdainful of his self-experimentation approach that happened to be around him which colored his opinion of experimental psychology, science as it's currently practiced, and universities. My experiences and thus my view of experimental psychologists, scientists, and universities is about the polar opposite of Seth's. Seth is a good friend, and we've done (and are still doing) some excellent creative work together. It's been a real pleasure getting to know him personally and intellectually. But there are a few things to which we have different opinions. Fortunately, neither of us is dogmatic or offended by disagreement. It is sad when a scientists becomes offended by dissent as it stifles his/her productivity and creativity. I do know many scientists like that, but I also know even more who are open, curious,

creative, fascinating people. As one of my great former psychology professors said in class to us: "Science is a human endeavor."

justin (2009-08-20 08:57:07)

"The parallel point about the financial system is that there is no study of what makes a financial system robust against shocks. " Keynesian economics is all about trying to apply monetary theory to smooth out the cycles/shocks/booms/busts, and Keynesian economics has dominated (er "stagnated") the economic and financial landscape for the past century. It's the utter failure of the paradigm put forth by Keynes that makes me skeptical that a "study" needs to be performed. As I see it, functional, decentralized economies are innately made up of tens of thousands of studies on human behavior all working dynamically together. It is hard or impossible to predict what solutions can "save" a busting economy – a diversity within the system thus provides a slew of solutions, many of which probably won't work, but a few of which likely will. The analogy here is diversity in lifeforms providing numerous solutions to unforeseeable calamities - like a meteor hitting the planet and wiping out the dinosaurs but not the rodents. As I see it, the key to keeping complex economies robust is to avoid systemic centralization (which could also be called stagnation), which destroys diverse solutions to complex and dynamic problems. Unfortunately, government is necessarily a force for centralization that gets worked on by successful individuals and businesses to protect their dominant positions from being overthrown. Run this simple model a million times over a few decades and throw in a central bank and you've got our current economic, dangerously fragile, situation.

aretae (2009-08-20 09:35:56)

Seth, You write fabulously interesting stuff, and this is the first time in your writing that I've found a case where I think I'm more informed than you. I will not argue with you that MOST people/scientists have not become aware of creativity-enhancing techniques. However, that's not to say that they aren't there. There has been substantial work done on Creativity. The most interesting of these items to me are the step-by-step creativity methods. TRIZ, by [1]Altshuller is probably the best of these. However, it's not the only one. Murray Davis's 1971 article: That's Interesting! in Philosophy of the Social Sciences is in the same space. Work on writing/brainstorming like that of [2]van Oech is also moving in the space. Now, I can't say that most scientists are using this kind of approach. But the approach is out there....

1. [http://www.amazon.com/exec/obidos/search-handle-url/ref=ntt\\_athr\\_dp\\_sr\\_1?%5Fencoding=UTF8&search-type=ss&index=books&field-author=Genrich%20Altshuller](http://www.amazon.com/exec/obidos/search-handle-url/ref=ntt_athr_dp_sr_1?%5Fencoding=UTF8&search-type=ss&index=books&field-author=Genrich%20Altshuller)

2. [http://www.amazon.com/Whack-Side-Head-More-Creative/dp/0446404667/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1250786065&sr=8-1](http://www.amazon.com/Whack-Side-Head-More-Creative/dp/0446404667/ref=sr_1_1?ie=UTF8&s=books&qid=1250786065&sr=8-1)

Hap (2009-08-20 11:28:28)

I like this kind of cross-discipline thinking. I suspect that using body and mind functioning as one map for exploring how more abstract systems function could be very useful. Moshe Feldenkrais, developer of a sophisticated approach to body-mind awareness through subtle movement, had an unusual definition of "health": The ability to live out your avowed – and unavowed – dreams; and the ability to recover from shock. (Feldenkrais was a Judo master, so knew, for example, how to fall.)

James (2009-08-20 11:59:47)

"The parallel point about the financial system is that there is no study of what makes a financial system robust against shocks. " Sure there is! This is why we have capital requirements (reserve ratios) for banks, the FDIC, et cetera. Its possible that we should have a better insulated system, but you merely proclaim your ignorance by saying that none of this insulation against systemic financial risk (or even any studies about it) exists.

seth (2009-08-20 12:06:25)

Aaron, count the number of pages in any statistics textbook in your office devoted to how to come up with new ideas. Then divide by the total number of pages. My belief that scientists are poor at coming up with new ideas has nothing to do with my experiences or their personalities, including the personalities of experimental psychologists (which I happen to like, by the way – it is a credit to and comment on the whole profession that Surviving Terminal Cancer was written by an experimental psychologist). It has to do with lack of tools.



seth (2009-08-20 12:17:20)

James, I'm not saying that insulation doesn't exist. I'm saying there's no or almost no academic study of what makes an economy more or less vulnerable to shocks. The FDIC and reserve ratios don't exist in their current form because of academic research; they exist in their current form because of the Great Depression. (The FDIC was created in 1933.) I would be happy to find out I'm wrong: Could you tell me one person who has emphasized how to build a shock-resistant economy in his or her research? It isn't Keynes. Keynesian theory is about preventing shocks and recovering from them – it is like the study of antisepsis (killing bacteria before you get sick) and antibiotics (killing bacteria after you get sick). Not like the study of the immune system.

Nathan Myers (2009-08-20 14:43:20)

Seth: As I understand it, the major use of theories by scientists is precisely to generate worthy hypotheses. (Engineers, by contrast, use them to approximate reality for design purposes.) The best theories suggest hypotheses that have interesting implications whether they prove correct or wrong. Bad theories produce hypotheses that can be shown to be wrong with existing data, or that can't be tested, or that if tested are uninformative. Scientists who cling to a theory that has no (or even negative) experimental support must be doing it because otherwise they would have nothing to work with.

Nathan Myers (2009-08-20 14:59:01)

Oh, and about *Collapse*: the societies he identified that avoided collapse didn't do it by growing new businesses. In Japan the Shogunate imposed a moratorium on tree harvesting of any kind until they could devise and impose, top-down, a strict rationing scheme. Certain tribes of the New Guinea highlanders created woodlots and thrived; other tribes that copied them also thrived, those that didn't weakened and lost their territory. You might say that NG tribes correspond to companies, but nobody started a tribe to grow woodlots; that happened within established tribes, also top-down. I'm not sure what lesson about businesses we are expected to draw here.

Nansen (2009-08-20 16:41:35)

I think it's inaccurate to say Diamond "completely missed" the idea of new businesses to solve piled-up problems. See Chapter 16, "One-liner objections", under "Technology will solve our problems", paragraphs 1 and 3. Whether you agree with him is a different point.

seth (2009-08-20 18:04:07)

I don't have a copy of Diamond's book here in Tokyo. I do remember it, however (the audio version) and nowhere did he say that societies collapse because they stagnate economically – because they fail to develop new ways of doing things that avoid the problems (and resource depletion) of the old ways. But thanks, when I eventually see a copy of his book I'll look at that.

aretae (2009-08-21 07:56:30)

Seth, On creativity.... There's some more stuff that you may have seen out on the inter-tubes today. While the post is unimpressive, the comments [1]here are very insightful, and link to [2]books. Elsewhere (wherever got me to half-sigma) I found comments linking [3]this and [4]this.

1. <http://www.halfsigma.com/2008/05/what-is-creativ.html>

2. <http://www.halfsigma.com/2008/05/what-is-creativ.html?cid=115464176#comment-6a00d8341bf6ae53ef00e552605d828834>

3. [http://photoncourier.blogspot.com/2004\\_01\\_01\\_photoncourier\\_archive.html#107352982748110888](http://photoncourier.blogspot.com/2004_01_01_photoncourier_archive.html#107352982748110888)

4. <http://digitalcommons.ilr.cornell.edu/articles/27/>

seth (2009-08-21 19:26:23)

Nathan, that's true about theories, I agree, they are one way to generate new predictions. Calling a new prediction a new idea is not exactly wrong but influential new ideas in science haven't been new predictions of old theories; they have been new phenomena (that need to be explained) or new theories to explain new phenomena. In psychology, the number of new ideas that have been predictions of theories is close to zero. Psychology mainly develops by discovery of new experimental effects.

xrellix (2009-08-23 01:05:17)

Seth, aren't Vaccinations a form of immune-resistance solution you speak of? Were you implying we need a vaccination type solution for all diseases? Are immune systems capable of fighting off Cancer? The economy is a larger problem. Ultimately, proper checks and balances ensure a robust economy - but how do we maintain checks and balances for everything not yet known (as with the immune system)? All we can do is create checks and balances for everything we know so far. No one can predict what "evil" future brilliant minds might conceive - unless we could create a closed-system where all variables were known and fixed forever.

Nathan Myers (2009-08-23 19:20:48)

Seth: I guess it would be fair to say that means psychology has few good theories. That's probably because psychology is an overwhelmingly more difficult subject than, e.g., physics. Anybody who doesn't think so probably isn't qualified to do either. Any psych department where students get better grades than they would have (or did) in the physics program is probably a fraud. I could go on.

### **Noseclipping Diary (2009-08-19 22:03)**

On the Shangri-La Diet forums, David, who is 6' 4" and about 340 pounds, [1]wrote about his recent experience with the diet. He wants to lose about 120 pounds. Sugar water and oil didn't work very well. Low carb didn't work. Then he tried nose-clipping:

Last Friday, August 14th, I tried nose clipping.Â The relief was immediate.Â The hunger subsided and I even lost a couple of pounds.Â On Saturday I decided to try clipping every time I ate anything.Â By evening I could not eat my entire dinner.Â When I tried, I got nauseous.Â I actually thought I was going to vomit for awhile.

I am very curious what happens next.

1. <http://boards.sethroberts.net/index.php?topic=7243.msg90096#msg90096>

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Dennis Mangan (2009-08-20 13:52:57)

I'm curious as to what's going on biochemically here. Obviously something is, perhaps hormones. Maybe eating while nose-clipped blunts the insulin response and that means hunger is reduced.

griff (2009-08-21 19:31:41)

I am not refuting the noseclipping effect. However, I have noted that when I am very congested (e.g. I cannot breathe through my nose at all), I am extremely uncomfortable eating due to the inability to breathe well while chewing. In addition, I also often either get nauseous or feel full early, and my belief was it was because I was swallowing air in the awkward process of trying to eat and breathe through the same passage.

## **The Shangri-La Diet in Japan (2009-08-21 13:23)**

A few months ago a popular Japanese TV show ran a long (30 minutes?) piece about the Shangri-La Diet, some of which you can see [1]here. It is very odd to see my work talked about and not know what's being said. It's like being a fly on the wall, taking into account that flies don't understand English. The show is long enough that some of what they're saying must be new to me. One of the panelists (there is a panel of one man and two women) appears to be Tetsuko Kuroyanagi, whose book [2]Totto-Chan: The Little Girl at the Window I love, have read dozens of times, and mention in The Shangri-La Diet – at least the English version. I first came across Totto-Chan at the Mill Valley Public Library. Even though I was living in Berkeley, I checked it out. Driving home I was so entranced I read the book at stoplights while waiting for the light to change.

1. <http://www.shangrila-diet.com/>

2. <http://en.wikipedia.org/wiki/index.html?curid=730649>

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## **Tourist Humor (2009-08-22 06:24)**

I believe that books for tourists are filled with inside jokes. A booklet for tourists called Welcome to Tokyo published by the Tokyo Metropolitan Government says the following about a place called Nakamise:

Both sides of the 250 m street from [A] to [B] are lined with about 90 stores dating from the Edo Period.

[1]The Edo Period ran from 1603 to 1868, which few readers will know. The street is actually lined with stores selling the usual tourist stuff.

1. [http://en.wikipedia.org/wiki/Edo\\_period](http://en.wikipedia.org/wiki/Edo_period)

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Jeremy (2009-08-24 03:00:09)

I wonder whether this is a possible defense against plagiarism. Atlases, too, contain fictitious town and other features, and I believe some encyclopedias do too. The point being that if someone copies the facts – the street is 250 metres long – they could have done the research themselves independently. If they copy the fiction – lined with shops from the Edo period – they must have plagiarized.

## **PayPal, the [Empty Promise] Way to Pay (2009-08-22 13:08)**

A few minutes after I sent gamesinwelt.com credit-card payment for a Wii via PayPal, I phoned PayPal asking them to cancel the transaction. Your payment did not go through, I was told. "Did not". So there was no need to cancel it. I was safe. To warn others, I wrote [1]my earlier post about this.

Well, I was misinformed. My payment was not unauthorized, i.e., dead – it was, rather, not-yet-authorized. When I phoned PayPal, it could have been canceled but it wasn't. A few days later it went through. Maybe I am easily amazed but this is amazing. At PayPal customer service, the account history screen seen by employees does not distinguish between two meanings of unauthorized: "authorization failed" and "not yet authorized". What is this, 1960?

I was pissed. I called PayPal and was told in part that this was somehow my fault. I should have known [something]. To file a dispute I must call another number. I called that number. I filed the dispute. You're safe, I was told. Will I have to call again? I asked. No, I was told.

Well, I wasn't safe. Although I won the dispute, there was no money in the seller's account. A possibility that hadn't been mentioned. Too bad for me.

So I phoned my credit card company. I was told I should get my money back from either PayPal or the credit-card company. Fearing [2]more untrustworthiness from PayPal, I emptied my PayPal account.

Bonus PayPal helping scammers, from [3]the comments:

Same story! \$300 for a Wii and a Nintendo DS! The day after my husband ordered I tried to go back to the website and order some games. I got a message saying the company "could not accept PayPal at this time". I then emailed PayPal's customer service and asked them if this meant that they were not a reputable company that I should not do business with. PayPal said, and I quote, "It does not mean that they are not reputable, they could be experiencing problems with their internet connection to PayPal."

1. <http://www.blog.sethroberts.net/2009/08/02/gamesinweltcom-scam/>
2. <http://www.paypalsucks.com/>
3. <http://www.blog.sethroberts.net/2009/08/02/gamesinweltcom-scam/>

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Seth's blog » Blog Archive » Gamesinwelt.com Scam (2009-08-22 13:11:02)  
[...] The story continues. [...]

Tom (2009-08-22 16:24:18)

Paypal is a giant scam...a huge, unregulated, Wild-West pseudobank that would have been reined in years ago but for the enormous sums eBay (its owner) funnels into Washington through its army of lobbyists.

Charles (2009-08-22 17:20:40)

So I got a PayPal "one-use-only" credit card number. Used it once. Except then a couple of months later, someone else used it again. (It was a known scammer than makes small charges for web design.) Emailed PayPal, went round-and-round-and-round. Never got a straight answer as to why a one-time-only number could be used more than one time. I finally got my money back, but then they dropped the issue completely. They did not want to know how it happened, would not look into it further. I still use them because it's convenient, and easier (and I think, safer) than throwing my CC # around the web, but I monitor it more closely. And I think it is probably a better idea to use the credit card companies. They at least look into fraudulent charges a little more closely. Usually, anyway.

## Cool New Products in Tokyo (2009-08-23 06:05)

1. Three-dimensional TV. Via polarized light. Not for sale yet
2. Pens with erasers. You can erase the ink.

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karky (2009-08-23 06:38:54)

[http://www.staples.com/Paper-Mate-Erasermate-Pens-Medium-Point-Black-Dozen/product\\_302158?cmArea=SEARCH](http://www.staples.com/Paper-Mate-Erasermate-Pens-Medium-Point-Black-Dozen/product_302158?cmArea=SEARCH) Papermate has been making ink pens that are erasable for years.

Glen Raphael (2009-08-23 11:21:46)

Eraseable pens have been around in some form in the US since 1979. How do the new pens differ from the Papermate Erasermate line?

seth (2009-08-23 13:29:08)

Huh. I didn't know about the Papermate pens.

karky (2009-08-23 15:38:05)

My grandma always used them to work crossword puzzles. :)

Tom in TX (2009-08-24 05:09:08)

Also really cool are the erasable highlighters, e.g. <http://reviews.officedepot.com/2563/344629/reviews.htm>

Glen Raphael (2009-08-24 07:21:04)

I've actually seen 3D TV without glasses here too, but only at trade fairs as a technology demo. This was at the Consumer Electronics Show in Vegas a few years ago. (brief google search...ah, here we go): <http://www.technologyreview.com/computing/20892/?a=f> So where did you see this? Were you at a trade show, or just bumping around akihabara?

seth (2009-08-24 08:14:23)

The 3D TV I saw used glasses. It was in the Sony Building.

Nathan Myers (2009-08-24 10:58:48)

3D TVs that need glasses are old stuff, and nobody has even tried to sell them because, it seems, nobody would buy them. At NAB I saw several attempts at no-glasses screens (panasonic, phillips); all were unsatisfactory – blurry, muddy, jumpy. I saw one that was perfect in every way. However, it required five times the video data fed to it that a normal screen takes, and live action would need to be shot with multiple cameras and heavily processed. Synthetic content (e.g. Pixar) would snap right in, if you could deliver the frames fast enough. Once Blu-ray data disc drives are commonplace, the market might be ready for it. Probably by the time that happens, movies that could benefit from 3D will be synthetic anyway, with all the "live action" shots synthesized, perhaps from actors wearing skintight outfits with dots on the joints, and sparkle gel on their faces, cavorting in front of greenscreens.

Tom (2009-08-24 11:21:48)

The Papermate pens smudge – any abrasion would rub off the marks – and the ink has a faded color even when it's brand new. The FriXion pens are amazing – colors are rich. They erase with heat – what looks like "erasing" is really heating the paper so that the ink becomes invisible. (Interestingly, it will re-appear if you put the paper in the freezer.)

## Japanese Ice Ouca versus Bi-Rite Creamery (2009-08-23 15:29)

[1]Bi-Rite Creamery in San Francisco has the best ice cream I've had. The ice cream at [2]Japanese Ice Ouca in Tokyo is maybe 95 % as good but the presentation is so much better than Bi-Rite I was stunned. The prices are about the same at the two places. At Ouca you get a choice of three flavors (versus two at Bi-Rite). The three flavors are mixed in an attractive pattern. You get a pretty round wafer to add crunch. And you get a little bit of salty chewy seaweed to eat after you're finished. Ouca doesn't stand out from other high-end Japanese food, which is full of these sorts of effective small touches. In Iceland I met a Japanese teacher of English who said, "I like everything about America except the food." American food is like barbarian food – except worse.

When she was a teenager, Jane Jacobs visited a relative of hers in isolated rural Pennsylvania. Her aunt had moved there to oversee the building of a church. The inhabitants had forgotten that buildings could be made out of stone. American cooking reveals a similar vast forgetting.

1. <http://biritecreamery.com/>

2. <http://www.ice-ouca.com/>

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Tali Lehari (2009-08-24 12:49:43)

You're a great writer!

seth (2009-08-25 21:50:51)

thanks, Tali

## Gamesingate.com Scam (2009-08-24 01:55)

The old scamming website was gamesinwelt.com; the new one is gamesingate.com. [1]More details. If you are pissed at them please recall that when you click on their ad they pay Google.

1. <http://www.blog.sethroberts.net/2009/08/02/gamesinweltcom-scam/>

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marc (2009-08-24 15:24:25)

hey man.. im glad you posted this up. My sister found them through Amazon.com but she asked me if i thought the site was legit. After some research I found this: <http://answers.yahoo.com/question/index?qid=20090823075846AA2WAbM> but thanks for looking out.. hopefully people find this blog before they order from that site

noel (2009-09-09 12:04:29)

Hey the new name for this company is myshoppingsun.com It is the same company you guys are talking about up top. Gamesingate, gamesinwelt same company different name SAME SCAM

Seth's blog » Blog Archive » Myshoppingsun.com Scam (2009-09-09 17:00:21)  
[...] See here for details. [...]

Nancy (2009-09-21 10:38:38)

I recently ordered from this site (GAMESINGATE) and guess what? I am still waiting on receiving the product or assume I have been SCAMED. I can't believe how people can say they have these products, take your money, and leave you with NOTHING. I hope they are found out and someone prosecutes them.

Marilyn Wilson (2009-09-21 17:28:59)

I purchased a Wii system from them and paid w/PayPal. A month later, I have nothing. Interestingly, even through Paypal, the seller has the ability to take the money and run.

Megan (2009-09-22 08:40:10)

I too ordered from Gamsingate.com. My own fault I didn't google it until after I had made my purchase and found your blog. Fortunately it was only \$12 for a video game that I never got. I have put in a dispute with paypal but who knows if I'll see my \$12 again :( I feel bad for all those who actually spent some real money on these people!

Scott (2009-09-26 18:26:15)

I purchased a Wii system from Gamsingate.com and paid w/PayPal. They took 247.00 dollars and gave me nothing nothing can you believe that? They have come up again the new web site is [www.myshopinsun.com](http://www.myshopinsun.com). I hope this helps others from getting SCAMMED.

Jason Chalky (2009-09-28 21:09:45)

I ordered from [www.myshopinsun.com](http://www.myshopinsun.com) also and paid 231 through pay-pal and then found this..Needless to say i was not to happy.So i email the company(scam artist) and said i wanted a refund because they are a scam and gave him my information for the order.I filed a pay pal dispute and also sent a email to pay pal to let them know.This was today and less then 6hrs i was able to have the funds returned into my account by them.They must know that they don't want to screw up their paypal.

john (2009-10-01 18:57:08)

[www.myshopinsun.com](http://www.myshopinsun.com) is a cheating website, I paid money and they dont respond to phone number even they dont respond to emails. I lost my money too, I found the below details releated to the website and trying to file a complain against him. As I got the details on domain lookup. Please if any one has some websites to complain please do it so that others will not get suffered as I am suffering. Please some one help in filing a case, he is creating mulple websites and cheating. He registered the website on sep 10, 2009 for cheating people showing low prices and not responding after paymnt.. Lets not allow this to happen other people  
Domain Name ..... myshopinsun.com Name Server ..... dns21.hichina.com  
Registrant ID ..... hc898886440-cn Registrant Name ..... jiawei zhou Registrant Organization ..... jiawei zhou  
Registrant Address ..... Nanjing West Road, Shanghai, Room No. 6, 1101 Registrant City ..... shanghai Registrant  
Province/State ..... shanghai Registrant Postal Code ..... 228600 Registrant Country Code ..... CN Registrant Phone  
Number ..... +86.13821006752 - Registrant Fax ..... +86.2128938383 - Registrant Email ..... Administrative ID  
..... hc898886440-cn Administrative Name ..... jiawei zhou Administrative Organization ..... jiawei zhou Adminis-  
trative Address ..... Nanjing West Road, Shanghai, Room No. 6, 1101 Administrative City ..... shanghai Administrative  
Province/State ... shanghai Administrative Postal Code ..... 228600 Administrative Country Code ..... CN Administrative  
Phone Number ..... +86.13821006752 - Administrative Fax ..... +86.2128938383 - Administrative Email ..... Billing  
ID ..... hichina001-cn Billing Name ..... hichina Billing Organization ..... HiChina Web Solutions Limited  
Billing Address ..... 3/F., HiChina Mansion No.27 Gulouwai Avenue Dongcheng District Billing City ..... Beijing  
Billing Province/State ..... Beijing Billing Postal Code ..... 100011 Billing Country Code ..... CN Billing Phone Number  
..... +86.01064242299 - Billing Fax ..... +86.01064258796 - Billing Email .....

MissM (2009-10-01 19:11:39)

"If it sounds too good to be true, it is.â€ I was looking for nintendo dsi today and found them [www.myshopinsun.com](http://www.myshopinsun.com), so I read under "shipping policy" and found this "Estimate Delivery Time Before your order is shipped, gamesingate has to process" they forgot to delete the last scam store name.. sorry about my poor english grammar!!! I'm trying to help! COME ON PEOPLE DO SOMETHING ABOUT IT! CHECK OUT this! <http://www.fbi.gov/majcases/fraud/internetschemes.htm>

Michelle (2009-10-01 19:24:40)

I ordered over 60.00 from gamesinwelt. com for my 8yrs sons birthday and still have not received any products. I have disputed w/ paypal and they claim they cannot recover my funds. Please warn others before they make the same mistake. These people need to be found out.

Meg (2009-10-02 06:18:35)

I was stupid and let Wii fever get the best of me. I too ordered from myshopinsun.com on Sunday night. I found this website last night so, thanks to Jason Chalky, I e-mailed [service@myshopinsun.com](mailto:service@myshopinsun.com) as well as PayPal and I filed a dispute with them. I did not receive any verbal response from the seller whatsoever yet I was refunded promptly as of this morning. I then e-mailed PayPal first thanking them since I was refunded, even though I believe it was thanks to my wording to "li jingjing" via the response center. Then I asked them to look into this seller since there are many being scammed. I am just fortunate to have gotten my money back and I have definately learned a valuable lesson. TO those of you who have not taken the same steps in trying to get your money back, I strongly recommend doing so. It has worked for at least two of us.

Dave (2009-10-02 08:34:50)

How do they get away with this shit? I bought a Wii from them at 166 bucks and didnt get shit. I saw that they used paypal so I figured they had to be legit, and I talked to paypal and they said theres nothing they can do and I cant have my money back, WTF?

Dave (2009-10-02 08:36:52)

MEG, thats what they do for some reason, they refund you a couple days later then they take it out again a week or so later so hopefully they don't do that to you but thats what happened to me.

Tim (2009-10-02 09:48:57)

myshopinsun.com sounds like a complete and total scam, I am waiting for my 203 bucks to be refunded back into my account. Once I found this blog and some stuff on Yahoo I was convinced I got scammed. I am in the same boat as Meg, but I haven't yet received my money back from "li jingjing." I filed a dispute w/ paypal, and they replied last night that my case was closed, because "Either you have reached a resolution with the seller or the dispute has been open for more than 20 days." Well...still waiting for the money to be returned to my account, expecting the worst, but hoping for the best. This situation is wrong, Paypal should be receiving a handful of complaints, warnings and disputes regarding "li jingjing" and 'myshopinsun' - I hope they do something about it so that more people don't fall for this. Paypal should have some kind of intelligence to protect its users from these websites after just one claim. When will they start sending us warnings that the seller has been flagged, or complained about?

Tim (2009-10-02 09:53:52)

Dave, if I get refunded, I wonder if canceling my Paypal account would protect me against these a-holes taking out the money again in a week, that's so wrong.

Raja (2009-10-17 18:38:43)

Myshopinsu...is totally FRAUD FRAUD FRAUD... whoever lost money we should SUE on PAYPAL....as they aware about this situation but still they didnt close MYSHIPINSUN...and more and more people are losing their hard \$ \$ \$ \$ if anyone intrested or find some info...we should proceed legal against paypal..as we all have our order confirmation with dates....to prove in court that paypal well aware about this vendor...but they fucker didnt fix anything.. some one needs to take lead....who are ready ??



chris (2009-10-21 11:39:08)

Message to paypal.....lets see what the response is Recently you advised that u were unable to recover funds from this fraudulent seller. the seller is still using the paypal verified logo to accept payments, that are being processed through your system. Paypal are therefore allowing this fraud to continue, despite numerous complaints regarding this seller, so it is not 'recent'. There is a clear and unambiguous failure on behalf of paypal in the due diligence process, the sellers full details - including domain name, server info, registered address, etc are in the public domain, so to rely on the defence of unable to locate the 'seller's info are not sustainable. Either paypal is allowing this fraudulent site to continue to use the paypal link knowingly, in which case paypal are culpible in the fraud, or unknowingly, in which case there is a failure of due diligence. Irrespective of the terms of the user agreement, paypal are liaible under various sections of Australian Consumer Protection laws, and i suspect other national laws as well. We request response within a reasonable time, and hereby put you on notice that we are holding paypal liaible for loss of funds, and also any consequential damages that may occur should we decide to progress this further. Please also note that there are simultaneous (across several countries) class actions pending from all those who have lost money due to the failure of paypal to take appropriate measures.

Chris (2009-10-22 22:30:02)

Re my last message ... it would appear that most of the people that have been scammed by myshopinsun.com are USA based. Here in Aus (where I am) maybe we are a little different and will not let things go. It is virtually impossible to get your money back though the trader - however please all take note: My company (of which I am principal) does a lot of work regarding maritime fraud and well aware of the various international laws and jurisdiction issues that can be problematic. The Chinese authorities are actually quite good, if they feel that the image of their country is being tarnished, and they do not take it lightly...they execute people for such things. In any event Paypal are completely culpible in this case (AFTER ADVICE FROM OUR LEGAL TEAM) as they are taking fees from the transactions, yet are aware that the site is fraudulent (there is enough anecdotal evidence to support this, so paypal cannot claim ignorance). Following is my latest message to Paypal, I would suggest that all those that HAVE BEEN SCAMMED, go through the paypal website, make reference to the case - despite the fact that Paypal have closed the case (a joke) and go through the fraud bit in making a complaint. Appreciate those that have requested someone to take a lead, but once it is in the hands of the AFP then it is Paypal that have to answer. We in Aus WILL NOT ACCEPT bullying by large and powerful corporations, and our laws allow us to progress legitimate issues. this is the latest comms with paypal. qt I have since taken legal advice on this matter, and the question of paypal still accepting fees from an account that they are aware is fraudulent. a) paypal are accepting fees b) They know that the account is being operated in a fraudulent manner (which should be obvious due to the number of complaints found in the public domain) then paypal are also culpable in the fraud. My legal advisor has suggested I forward the details to the Australian Federal Police, who will have (i have been advised) no hesitation in commencing an investigation, and also a prosecution of paypal, should the above 2 circumstances be shown to exist. While the AFP are not able to take action against the trader, being based in China, they can do so against paypal being an entity in Australia. It is quite likely that selected individuals will be investigated. Please expect similar events to occur in other countries, where you have allowed this fraud to perpetuate. If paypal are successfully prosecuted, then it is probable that private suits will follow, as there will be a implied obviaton of the paypal user agreements. All those that have been scammed by this outfit, aided and abetted by paypal, please contact me on marinesurveyors@bigpond.com STAND UP TO THESE BASTARDS !!!!!

pam (2009-10-23 05:16:05)

Sept. 30th I placed a \$267 order. On the 8th I saw this blog and called Paypal. I specifically asked if they knew about Myshopinsun or Gamesingate. Ferrell said no. He put in the case file so isn't that supposed to mean that no funds be released to myshopinsun? On the 19th I called and was told by Amber there was no \$ in their account. So from the 8th-the 19th no money could've gone out so logic dictates that no money went in right? I was told by Amber that I would be "wasting my time" to call paypal back and keep checking on my refund! That pissed me off so badly that I hung up on her. Aren't they supposed to get a tracking number before releasing funds? I need someone to tell me they put in a claim before sept 30th so that I have a case against paypal.

mike phillis (2009-10-26 11:45:13)

hey guys, 1st of all sorry to hear about all you guys, having lost the money to the scammers at myshoppinsun.com. im glad i came across this blog, because TBH my partner was looking at gwtting a Wii and the Wii fit accessories, from myshopping-sun.com. today i tried to search for the site in google.co.uk and nothing came up. remembering it was a chinese trading company \*COUGH\*COUGH!! i thought i would try and search for it on china's google site, thats when this came up. so i would like to personally thank this blog for the information, and ask how far the proceedings have gone towards paypal??? no1spot@hotmail.com for any updates people have available cheers

Chris (2009-10-27 12:33:29)

It would appear that the site has now vanished..i wonder if the pressure on paypal has prompted action by them..i am sure they have a registered company in China. Doesn't take away the fact that they were still collecting fees during the time that the scam was running - and also aware of it, going by the number of complaints that they had received. Thanks to those who have contacted me, I am astonsished at the dismissive attitude that paypal have taken so far. I understand (unofficially) that some of paypal's business practices are viewed with concern by (various undisclosed authorities) in Aus...anyway keep up the contacts, the more evidence that can be passed over to the AFP the better.

Pam (2009-10-28 19:11:45)

I was also scammed and paypal said no money to refund. I am out 210.00. I called paypal the day I ordered to be sure I would be covered if this was a fraudulent company and was assured that my purchase was safe. I would like to be involved if anyone pursues this with paypal. Paypal is owned by ebay and they make enough money to pay up back.

Robert Kren (2009-11-06 15:03:32)

I too was scammed by 'myshopinsun', and yes, I paid through Paypal. I filed a complaint with them after the website closed and they investigated. They concluded that I was scammed but they denied responsibility and will not reimburse me for the \$203.00 I paid through them. With all the complaints I have seen, It seem irresponsible (to put it as kindly as possible) that Paypal would continue to process payments for this site. One would suspect that the continuation of the payments may have been profit motivated. Paypal assures me that they are a safe, secure, payment site. The loss of over \$200.00 makes me feel somewhat insecure, and casts doubt on their claim to making safe transactions. I would expect restitution from the party who processed this payment—knowing full well that the payee has had so many complaints filed against him.

Robert Kren (2009-11-06 18:35:30)

Update. I went online and found the NEW website that myshopinsun.com is operating. The setup is identical, they are selling the same products, and even the misspellings and setup are identical. They show the same Wii gaming system that I had purchased and it even has the same item number. The new site is " Jiaweishop.com".

D (2009-11-09 15:15:10)

I came across this site Jiaweishop and wanted to do some research on the site...I came across this blog (thankfully) I was about to be out 250 bucks... I am sorry for all of you that haven't recieved your money back and wish you good luck...

charleen bechtold (2009-11-13 22:28:52)

Thanks for the info. I came across this site,Jiaweiship, and was going to order some gifts, but thought I better do some checking. Sorry that you were scammed and I wish you the best.

warhar (2009-11-14 07:33:24)

thanks for the info , I was about to fork out over \$400 dollars to Jiaweisop and thought I better check . The Prices are really tooo good to bo true. Ebay better get a grip on these scammers . Another way people might get there money back is if they used a credit card they would probably have fraud protection.

Daniel (2009-11-17 12:00:52)

<http://jiaweishop.com> is the scammer's new website, the Domain details are slightly different but company name and billing address are the same.

christian collette (2009-11-24 07:44:18)

hmmm... it looks like the finally shut down that website:D I tried to get to it and the url is a bad request. I am so glad.

Nacho (2009-12-08 21:03:46)

Do anybody purchased goods from [www.lightsinshop.com](http://www.lightsinshop.com)? It is very likely a new scam website, is it possible to be same person? Gamesingate, Myshopinsun, Lightsinshop, same type, same merchandise, same price!!

Virgil Daniel (2009-12-09 08:20:40)

I read a blog from Seth saying that this site was a scam.Has anyone ever dealt with them?They have unbelievable prices on Wii's & games.If you have had a bad experience with them,pleas let me know!I called Paypal,to ask them,since you pay through them & they said it was a good site.So,I'm confused!! Please...if you have any info.on this sit let me know? Thanks alot, The site is ([lightinshop.com](http://lightinshop.com))

Nacho (2009-12-09 19:38:45)

Well, It turns out to be that the website [lightinshop.com](http://lightinshop.com) is a scam! So please careful on it.

Lisa (2009-12-20 09:35:30)

I had purchased \$526 US from [myshopinsun.com](http://myshopinsun.com) using PayPal and I too was scammed.I ordered Sept.29,2009 and by mid Oct. had found this blog with all these reports of scam. I contacted PayPal immediately, filed a complaint and though they found in my favor, none of my money was recovered/refunded.I did go ahead and file a complaint with [ic3.gov](http://ic3.gov) but don't feel like it did any good.After finding out that there were new websites from the same vendor, again backed by PayPal, I decided to try filing a complaint with the better business bureau. I filed against Paypal for knowing that people were being scammed and still allowing other transactions instead of suspending them until investigation was complete. Don't know if it will do any good, but I'm trying. There has got to be some way for us to get our money back. PayPal cannot get away with this. At the very least, they should refund their cut of our money they received from the vendor. Why should they be allowed to keep money from a bad transaction? There has just got to be a way. I also filed a report on [econsumer.gov](http://econsumer.gov) against the vendor. Again, just hoping that somehow something will work. We can't give up.

Sally (2010-01-13 11:40:34)

I too got scammed . I paid through Pay Pal and they did nothing.Theses people are getting rich because of us....

vicki (2011-12-16 13:50:07)

I too was recently scammed. I ordered a NFL Jersey from [lightinstore.com](http://lightinstore.com) and have never received the Jersey. I have emailed them with no response. Wish I would have seen this post before I got scammed!

ksh (2011-12-16 19:23:34)

i think that [lightinstore.com](http://lightinstore.com) just scammed me... i ordered a jersey on 12/6 got charged on the 7th. its the 16th now and I hae yet to receive my jersey. there is NO phone number and the customer service email that i wrote to only returns my emails stating that there is "no such user here" anyone else have this problem and know what to do???

Justin (2011-12-17 06:59:44)

Looks as though I have been scammed as well. I ordered a jersey on [lightinshopping.com](http://lightinshopping.com) on 12/9 and here it is 12/17 and nothing. I have emailed them numerous times and have gottten no response. There is no phone number avail. Would love to know if anybody else has gotten anywhere with these people.

sandra crace (2011-12-20 18:35:02)

Looks like I have been scammed as well by lightinstore.com. Ordered Green Bay jersey early in December and have not received as of the 20th. I sent 2 emails to their service center and 1 to a Paul Zhang who has corresponded with me prior to placing the order with NO RESPONSE. However, I did use credit card and hopefully they can reverse the charges.

sandra crace (2011-12-21 13:24:00)

I must correct my last review for lightinstore. Received my jersey today. I also received reply from Paul Zhang with tracking number today. So I was NOT scammed.

Amanda (2011-12-23 10:28:43)

did you really get it sandra? i still haven't and the website looks sketchy. i should've checked that out before i ordered...

Andrea (2012-02-05 21:45:41)

Has anyone heard of or ordered from lightinshopping.com? Eerily similar to lightinstore.com.....I think my bank (thankfully) denied the charge, but it all sounds just like the latest comments.

Doug (2012-02-16 14:41:21)

I ordered a jersey from lightinshopping.com recently. I was not scammed! I ordered on Jan 24, got a tracking number a week later, and got my jersey today. So it does take a long time from order date to receiving the jersey (approx a month), but I did get the jersey for a great price! I can give any more details if you want them. Just ask.

Seth Roberts (2012-02-16 16:07:07)

How do we know you are not scamming us with this comment?

Doug (2012-02-18 20:10:14)

Well I have the documentation and I can take pictures of the jersey. But since there is not a way I can upload any of this information to this blog, I do not know how to convince you. I can send you the information to an email address or if you have a way to verify in some other way, I would be more than happy to do so.

Seth Roberts (2012-02-18 21:15:06)

Please explain why you care about this.

Doug (2012-02-21 17:35:55)

I am not gaining anything from my posts. I am simply stating that I received my jersey from the website mentioned in your blog. Is that not the point of this blog subject? I know it is hard to convey tone with words, but I am in no way trying to be disrespectful. Please do not take any of my comments in a negative way.

Seth Roberts (2012-02-21 18:36:46)

"I am not gaining anything from my posts." You are if you are the person/persons perpetuating this fraud.

Doug (2012-02-21 18:59:37)

You could say the same for Sandra by that logic. She said she was not scammed by a similar store. Is there a particular reason that you feel that I am representing a scam site, rather than someone who posted an experience from a store, as others have done?

Seth Roberts (2012-02-21 20:29:33)

I feel you are representing a scam site because of your incredible persistence here and your utter lack of evidence. Ordinary customers wouldn't care so much. You care too much.

Doug (2012-02-22 15:08:39)

Point taken. I will desist and enjoy my jersey

### **Signage Features of the Toyko Subway System Inexplicably Missing Elsewhere (2009-08-24 02:17)**

I've been in about 15 subway systems. Only in [1]the Tokyo system have I seen these helpful features:

1. Walking distances. The signs within a station that show where to go to get to Line X (the platform where you catch Line X trains) include distances (in meters). How far you have to walk to get there. A nearby platform might be 100 m; a distant one 250 m.
2. Station-to-station distances in minutes. In several places you are told how many minutes (on the train) it takes to get to each station. Most stations are about 2 minutes apart. The nearest station is 2 minutes away, the next is 4 minutes, etc.
3. Letter-number names for each station. In addition to the usual names for each station (e.g., Ginza) each station has a letter-number name. The letter is the line; the number is the position on the line (1, 2, 3, etc.). For a north-south line, for example, the southmost station is 1, the station just north of it is 2, and so on. On the Akususa Line, for example, the stations are named A1, A2, A3, etc., in addition to the usual names. This makes it easy to figure out how far you are from your destination. If you're going to Station A15 and you're now at Station A12, you have 3 stops to go.

1. [http://en.wikipedia.org/wiki/Tokyo\\_Subway](http://en.wikipedia.org/wiki/Tokyo_Subway)

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meerkat (2009-08-26 15:27:23)

The Osaka subway system has #3 too.

Dan (2009-10-07 20:19:47)

I live in Tokyo and I love the signs for the trains. I barely ever had a chance to use the subway in America, but I knew when I got here that the Japanese system must be special. Though from what my UK friends tell me, #2 would be impossible in London, for example, because you first need a system that is on time. If you have a cell phone in Japan, you can mark a #4 for the continually updated web service that gives arrival and departure times, travel time, station distances, and price. Also searchable with a wide variety of parameters including cost, quickest time, fewest transfers and whether to include buses/subway/bullet train/etc.

### **The Appendix and the Umami Hypothesis (2009-08-25 21:41)**

Your appendix – a kind of cul-de-sac off your large intestine – can be dangerous. [1]A British man was recently rushed to the hospital with a burst appendix three weeks after he'd had an operation to remove it. Surgeons have routinely removed it – seemingly without problems. Is the appendix an evolutionary vestige, as Darwin believed, or does it do something beneficial?

In the last few years, two articles – one in [2]Journal of Theoretical Biology, the other in [3]Journal of Evolutionary Biology – by William Parker, a professor of surgery at Duke, and others have argued that the function of the appendix

is to harbor bacteria. If diarrhea washes out your intestines, bacteria safely hidden in the appendix can repopulate them. (A theory supported by the position of the appendix – roughly in the middle of your intestines.) That makes perfect sense.

The connection with my umami hypothesis is that both assume that the foreign bacteria within us are precious and endangered. (My umami hypothesis says we need to consume plenty of bacteria to be healthy and that our food preferences help us do so.) The precious part is widely accepted; it's the endangered part that's new. If we need bacteria so much, why should they be endangered? We need our eyes; they aren't endangered. My answer is that to protect bacteria carries a cost: The most hospitable the digestive system becomes to bacteria, the less effective it will become at everything else, including digestion. And bacteria were/are cheap. Rather than protect them, the system has been shaped to require them. Just as gas-guzzling cars evolved when gas was cheap. Making cars more gas-efficient will make them less efficient at other functions, such as signaling status.

Thanks to Kathy Tucker, James Andrewartha, and James Lucoff.

1. <http://www.dailymail.co.uk/news/article-1208970/Man-collapses-ruptured-appendix--weeks-NHS-doctors-took-out.html>
2. [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6WMD-4PKXBY-2&\\_user=4420&\\_coverDate=12%2F21%2F2007&\\_rdoc=16&\\_fmt=high&\\_orig=browse&\\_srch=doc-info%28%23toc%236932%232007%23997509995%23674806%23FLA%23display%23Volume%29&\\_cdi=6932&\\_sort=d&\\_docanchor=&\\_ct=18&\\_acct=C000059607&\\_version=1&\\_urlVersion=0&\\_userid=4420&md5=7b099e95df0524fb77465827af2bef4f](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6WMD-4PKXBY-2&_user=4420&_coverDate=12%2F21%2F2007&_rdoc=16&_fmt=high&_orig=browse&_srch=doc-info%28%23toc%236932%232007%23997509995%23674806%23FLA%23display%23Volume%29&_cdi=6932&_sort=d&_docanchor=&_ct=18&_acct=C000059607&_version=1&_urlVersion=0&_userid=4420&md5=7b099e95df0524fb77465827af2bef4f)
3. <http://www3.interscience.wiley.com/journal/122544996/abstract>

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Craig (2009-08-26 07:12:12)

"A British man was recently rushed to the hospital with a burst appendix three weeks after he'd had an operation to remove it. " I know this may be a stupid question, but can a person have two appendix?

Tom in TX (2009-08-26 10:45:29)

œ. A British man was recently rushed to the hospital with a burst appendix three weeks after he'd had an operation to remove it. œ Another great moment in British socialized medicine, no doubt.

seth (2009-08-26 14:33:52)

"Can a person have two appendix?" No. It is a mystery what happened during the first operation.

Seth's blog » Blog Archive » If You Have Carpal Tunnel Syndrome... (2009-08-26 16:45:17)

[...] I Recommend The Man Who Would Be Queen by Michael Bailey Mindless Eating by Brian Wansink The Shangri-La Diet by Seth Roberts « The Appendix and the Umami Hypothesis [...]

Chris (2009-08-27 02:25:29)

Interesting. a quick search also turned up this link of people having digestive problems after an appendectomy. Folks there are recommending probiotics <http://ehealthforum.com/health/bowel-problems-after-appendectomy-t137299.html>

Deb Slane (2010-03-23 14:23:03)

My step-dad just had "2" appendix removed Sunday night. The doctor said it is very rare. One was where it was supposed to be and the other one had attached itself to his bowel!

Tim McCormack (2010-07-24 20:32:18)

Digestive problems after abdominal surgery? Doesn't surprise me.

### **If You Have Carpal Tunnel Syndrome... (2009-08-26 16:45)**

. . . you should have your thyroid level checked. There's [1]a strong correlation:

Nineteen patients (73 %; 31 hands [68 %]) displayed symptoms of CTS; of these, 16 patients (25 hands) had clinical examinations consistent with CTS. Only 6 of the 16 patients with clinical CTS (7 of 25 hands) had electrical studies that supported a diagnosis of CTS. All these symptomatic patients were biochemically euthyroid. All control subjects had normal electrical study results and normal sensibility testing. Two [control] subjects had positive clinical [CTS] examinations, giving a [CTS] false-positive rate of 4 %.

Apparently treatment of the thyroid condition can make CTS – often treated with surgery – go away, speaking of [2]misguided operations.

Hypothyroidism is so common I suspect an environmental cause, just as the fact that acne is common suggests an environmental cause. One kind of evidence for such a thing would be finding a group of people living unusual lives (e.g., New Guinea highlanders) with unusually low or unusually high rates.

Via [3]Natural News.

1. [http://www.ncbi.nlm.nih.gov/pubmed/10913216?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_DiscoveryPanel.Pubmed\\_Discovery\\_RA&linkpos=2&log\\$=relatedarticles&logdbfrom=pubmed](http://www.ncbi.nlm.nih.gov/pubmed/10913216?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DiscoveryPanel.Pubmed_Discovery_RA&linkpos=2&log$=relatedarticles&logdbfrom=pubmed)
2. <http://www.blog.sethroberts.net/2009/08/25/the-appendix-and-the-umami-hypothesis/>
3. [http://www.naturalnews.com/026883\\_thyroid\\_carpal\\_tunnel\\_syndrome\\_health.html](http://www.naturalnews.com/026883_thyroid_carpal_tunnel_syndrome_health.html)

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Charles (2009-08-26 22:41:53)

Two things: Vitamin D deficiency and Iodine deficiency. Google either one and you'll find a lot of references. I've been taking thyroid for years for hypothyroidism. When I upped my Vitamin D intake to 2,000-4,000 IU/day, I found I could cut my thyroid dose in half. (And I've also not been sick in over two and one-half years, to which I attribute the D.)

Dennis Mangan (2009-08-27 05:42:31)

Yes, iodine deficiency. The incidence of hypothyroidism and autoimmune thyroiditis (Hashimoto's) has apparently dramatically increased in the U.S. over the past 100 years. Guy Abraham M.D. has written a lot about the connection.

seth (2009-08-28 02:12:04)

Thanks, Charles and Dennis. That's very important.

Dentsits Lakeland (2009-08-28 02:34:02)

I was also diagnosed with hyperthyroidism recently, so I have been taking medications and stuff. After a few months, I will undergo a series of tests to see if it all worked out or if i need surgery.

Charles (2009-08-28 21:44:33)

Fear of salt (iodine deficiency = hypothyroidism) + fear of fat (increased refined carbohydrates = obesity, diabetes, heart disease, etc.) + fear of the sun (Vitamin D deficiency = depressed immunity, depression, hypothyroidism) + fear of bacteria (depressed immunity) = pretty sucky health for modern humans. And if you look at the iodine and Vitamin D effects on thyroid, then combine that with the increased sugar-based calorie increase...that;'s not a good combo. We've created a perfect storm here, doncha think? It would be hard to design an environment that would more efficiently lead to bad health.

Seth's blog » Blog Archive » What Causes Hypothyroidism? (2009-09-19 06:08:08)

[...] In an earlier post I wrote, "Hypothyroidism is so common I suspect an environmental cause." In fact, I suspect that all common diseases are caused (= made much more likely by) differences between modern life and Stone-Age life. Since then, thanks to comments and email, I have learned more about hypothyroidism. According to Dennis Mangan, it has become a lot more common during the last 100 years, which implies an environmental cause. The most common type of hypothyroidism is called Hashimoto's thyroiditis. It is an autoimmune disorder where the immune system attacks the thyroid, damaging it. A reader with hypothyroidism wrote me: When I was first tested for thyroid levels, part of the test (which I think is standard protocol) was to test the level of antibodies to thyroid. My levels were off the charts. [...]

### **"Kombucha Reconsidered" (2009-08-28 02:51)**

At Cancer Decisions RWM has written two posts called "Kombucha Reconsidered". After drinking kombucha for a while, he decided to stop. One reason was [1]lack of evidence of benefit:

When I began investigated the actual medicinal properties of Kombucha tea, I thought I would be overwhelmed with information. Not so. For something that has been around for so long, there are only 38 scientific articles in PubMed on the topic of kombucha. Most of these are technical studies on the nature of the bacteria and yeast in the brew. Only a few of these are clinical.

In particular, [2]no evidence of benefit for cancer:

But I am unaware of any credible data linking kombucha consumption to the prevention of either recurrences or metastases. (PubMed yields just two articles on the topic of kombucha and cancer, both of them negative.) This is a poor basis on which to make health decisions.

He also found two case reports, one from 1995, the other from 2009, where kombucha might have caused illness. In the 1995 the evidence is weak; in the 2009 report the connection is more plausible – but the sick person had HIV. The authors nevertheless generalize to everyone: "Consumption of this tea should be discouraged."

This is a reason self-experimentation is important: So you can ignore inane statements in research articles. After I found that flaxseed oil improved my balance, I could ignore research that supposedly showed poor conversion of short-chain omega-3 (in flaxseed oil) to long-chain omega-3 (used by the brain). Had RWM managed to measure the effect of kombucha on himself, he would have a vastly better basis for deciding whether or not it helped him.



This is also a reason that theory is important. John Tukey, the statistician, spoke of "gathering strength" when analyzing data. It is rare that a single body of data tells you how to analyze it, he said. (For example, what transformation to use.) You should use similar data sets to help decide. Scientific theory has the same effect. Before I started drinking kombucha, I didn't have obvious digestive problems ([3]unlike a friend) and my immune system seemed to work well. So it wasn't easy to measure its effect. Yet I drink it and am untroubled by the evidence that worries RVM because I have a theory: the umami hypothesis (that we need a steady intake of bacteria to be healthy). This allows me to assess the effect of kombucha – whether it is likely to be good or bad – with the help of evidence from other bacteria-rich food (yogurt, natto, etc.) and much different data ([4]the effect of bee stings on arthritis, [5]hormesis, [6]epidemiology, [7]the effects of turmeric, etc.). Because the umami hypothesis appears to be true, apparently bacteria intake is beneficial – and kombucha has lots of bacteria.

Thanks to Tom George.

1. <http://www.cancerdecisions.com/content/view/226/2/lang,english/>
2. <http://www.cancerdecisions.com/content/view/227/2/lang,english/>
3. <http://www.blog.sethroberts.net/2009/08/10/acid-reflux-cured-by-kombucha-yes/>
4. <http://www.blog.sethroberts.net/2009/06/21/scorpion-stings-bee-stings-and-the-umami-hypothesis/>
5. <http://www.blog.sethroberts.net/2009/05/12/the-dose-response-revolution-and-fermented-food/>
6. <http://www.blog.sethroberts.net/2009/01/26/the-inuit-paradox/>
7. <http://www.blog.sethroberts.net/2009/07/15/the-wonders-of-turmeric/>

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Probiotics - how to? (2009-08-28 06:43:32)

[...] Seth Roberts often writes article like this in favor of probiotic food. \_\_\_\_\_ I am always open for feedback on my posts. If your feedback would go offtopic feel free to send me a Personal Message. My posts generally don't contain medical or legal advice, if you have a problem seek the opinion of an expert Talking about this in terms of "bad news" or "bad judgment by business leaders" seems archaic. It's like describing World War One as "a serious diplomatic concern." Bruce Sterling about the financial crisis. [...]

peter (2009-08-29 08:17:58)

my experience with Kombucha is that too much is bad (i feel slightly ill), but that i can take 2 table spoons about every other day and one of many sources of fermented food. (i really don't know if it's doing me any good; but based on what i've read i probably does). to take a lot of one thing on a daily basis probably is not a good idea. i'm guided by the principle that one should seek a variety of sources of fermented foods in moderate amounts; the same can probably be said of other foods as well.

Melissa (2009-08-31 14:15:06)

I like the way it tastes and actually it's gotten me into more sour foods. Yesterday I attended a tasting of wild-yeast fermented beers. Fans of kombucha will love these sour brews.

Donn (2009-09-22 08:16:57)

Interesting article on some of the science behind fermented foods. <http://coolinginflammation.blogspot.com/2009/09/cure-for-inflammatory-disease.html>

raka (2009-10-02 04:00:47)

Quote from abovr comment: [[my experience with Kombucha is that too much is bad (i feel slightly ill), but that i can take 2 table spoons about every other day...]] Then you have serious internal systemic issues. I don't know if you are just whining like

alot of people do. You can probably drink 10 cups of coffee daily w/o a problem but a mere 2 tablespoons makes you ill????!! This is just nonsensical rhetoric. Most people consume a bare minimum of 4 oz when STARTING, and progress from there. There is no upper limit, it is how your body reacts. Some drink up to a gallon. The average for most is probably 16-32 ounces daily.

### **Spectacle Practice (2009-08-28 18:47)**

Late last night, on my way home, I came across a huge crowd of Tsinghua students next to the campus stadium. More than a thousand. There was no event at the stadium. All of them were dressed in a casual uniform, in varying colors. "What's this about?" I asked one of them. "It's a secret," she said. Another one told me they were practicing for the upcoming National Day (October 1), which is China's Fourth of July. This particular National Day will be the 60th anniversary of the beginning of the current system so there will be an especially big celebration. The uniforms said "60" on the shirt. There were going to be at least 9 practices. This particular night was the first night they would practice in Tiananmen Square, where the event would take place. Every one of them had a square with different colors on the two sides; like a giant LED display they would make different displays. "It lasts all night," the student told me. "It ends at 6 am. We don't sleep."

And, indeed, at 5:30 am the next morning, a police-escorted convoy of 45 buses, each with about 60 students, came through the campus gate near my apartment. [1]An article about the Tiananmen practice says it involves about 200,000 people. That's a lot of buses.

1. [http://www.chinadaily.com.cn/china/2009-08/29/content\\_8631088.htm](http://www.chinadaily.com.cn/china/2009-08/29/content_8631088.htm)

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cremes (2009-08-28 19:41:59)

While I'm certain this is exciting to a degree, I must ask if the Chinese are really this ignorant of their own recent history as this suggests? Personally I find it somewhat macabre.

DJ\_Magic (2009-09-03 04:40:08)

“they were practicing for the upcoming National Day (October 1), which is China’s Fourth of July” that is a really good explanation for American who do not know National Day ,hehe, joking

### **Hormesis Revisited (2009-08-29 18:32)**

There are several ways to realize the vast implausibility of – and thus the vast amount of information conveyed by – radiation hormesis. If you are not an experimental scientist, you may not realize how incredibly hard it is to find a treatment that substantially improves something complex. Think how hard it would be to make your laptop work a lot better. Not by redesigning and building a different laptop – but by doing something to the carefully-designed laptop you have now. Has such a thing ever happened in the whole history of engineering? Probably not. Or consider the possibility that shooting a bullet at your laptop (or any other complex machine) will make it work a lot better.Â Absurd. Couldn't possibly happen.

Yet that is exactly what happens in radiation hormesis: Small amounts of radiation improve health. [1]This review article gives a wide range of examples. Experimental:

Bhattacharjee in 1996 showed that when the mice preirradiated with just adapting doses of 1 cGy/day for 5 days (without a challenge dose), thymic lymphoma was induced in 16 % of the animals (Bhattacharjee 1996). Interestingly, when preirradiated mice were exposed to a 2 Gy challenge dose, thymic lymphoma was induced again in 16 % of the animals. However, the challenge dose alone, induced thymic lymphoma in 46 % of the mice.

Epidemiological:

Cancer frequency among [United Kingdom] nuclear power plant workers was lower than the national average (Kendal et al. 1992).

(I've never heard anyone complain there wasn't enough radioactive radon in their basement, but in some cases that's true.) Thomas Luckey, the discoverer of the effect, wrote [2] a book about it, reflecting the vast number of examples.

What does it mean? Obviously it supports my umami hypothesis. Life evolved in a world of junk and damage; that junk and damage was used to make things work better. Think of a police force. They function best spread over a city, travelling here and there. When there's a crime, someone will already be close and get there quickly; many crimes will be stopped in progress. A low crime rate is better than a very low crime rate because it gets the police out of the police station and allows them to practice their skills. With too little crime, the police spend most of their time in the police station. When a crime occurs it takes longer to reach the scene (so small problems become big ones) but also, having nothing else to do, they overreact: treat small problems as big ones. That our body's defense mechanisms are slow to react means infections and cancers become bigger than necessary (and sometimes lethal); that they overreact means we get autoimmune diseases.

[3] Earlier post about hormesis.

1. <http://www.angelfire.com/mo/radioadaptive/inthorm.html>

2. [http://books.google.com/books?id=FK7EayQN9dYC&dq=%22radiation+hormesis%22&printsec=frontcover&source=bn&hl=en&ei=pHyYStaDII7U7APis8jEBA&sa=X&oi=book\\_result&ct=result&resnum=4#v=onepage&q=&f=false](http://books.google.com/books?id=FK7EayQN9dYC&dq=%22radiation+hormesis%22&printsec=frontcover&source=bn&hl=en&ei=pHyYStaDII7U7APis8jEBA&sa=X&oi=book_result&ct=result&resnum=4#v=onepage&q=&f=false)

3. <http://www.blog.sethroberts.net/2009/05/12/the-dose-response-revolution-and-fermented-food/>

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Anderw Gelman (2009-08-30 01:23:12)

You mention radon, which is an area Phil and I've worked on. According to Phil, there has been some discussion of the potential protective effects of radon at low levels, but there's no convincing evidence of this. As you say, it makes some sense, but it also makes sense that even low levels can hurt.

Glen Raphael (2009-08-30 10:50:45)

"Cancer frequency among [United Kingdom] nuclear power plant workers was lower than the national average (Kendal et al. 1992)." I'm at least as enthusiastic about the idea of hormesis as the next guy but I have to object to that example as evidence for it. I strongly suspect that nuclear power plant workers are exposed to a lot \*less\* radiation than average workers. Nuclear power plant workers wear radiation tags, spend much of their time in a shielded environment and have people around them at work who are on the lookout for unusual levels of radiation; most workers don't. Because the danger is so obvious they are *overprotected* against it, in much the same way that houses in snowy climates are extra-well protected against cold with insulation. If you want to look for people likely to be exposed to *extra* radiation by their jobs, try dentists. Or coal miners. Or

people who work outdoors.

seth (2009-08-30 17:20:43)

Glen, your argument is interesting but it sounds, forgive me, completely armchair. Completely speculative. Especially the idea that the reduced exposure is "a lot" less. I would really like to know of any evidence that supports your claim.

Glen Raphael (2009-08-31 10:53:16)

*Glen, your argument is interesting but it sounds, forgive me, completely armchair.* I was wrong. People living near a nuclear power plant are protected to the degree I implied; people working in one aren't. According to James P Hogan's essay "Know Nukes" (which I read ages ago), the granite in New York's Grand Central Station naturally emits more radiation than a nuclear plant is allowed to emit, so people who work there are getting a significant annual dose of radiation, but because we're not \*afraid\* of granite, they don't wear radiation tags. I was extrapolating from that and a few other half-remembered factoids. So let's get some real numbers in here. A little googling finds these more-precise claims: Background radiation (the radiation load from "living on earth" is about 200 mrem. The legal limit on workplace radiation exposure (for nuke workers, x-ray techs, etcetera) is 5000 mrem above background; the NRC claims average industry exposure is about 240 mrem over background; the exposure from being an employee at Grand Central Station is only half that, or 120 mrem. The average exposure from being an airline attendant or pilot is closer - 160 mrem. Medical X-ray technicians average 320 mrem, which is more than the average for nuke workers but not as \*much\* more than I expected it to be. So there are some other professions that are in the same ballpark, but nuclear plant workers do get significant extra exposure relative to "average workers". I withdraw my objection.

## **Student Power (2009-08-30 17:09)**

Ah, the rest of the world is catching up with me. [1]This long article in the NY Times describes a middle-school English teacher who lets her students read what they want instead of having every student read the same thing. I started doing something similar six years ago. There was always an assigned reading, but students always had a choice: They could do the assigned reading or they could find something else on the topic (e.g., bipolar disorder) that they preferred. About three-quarters of the students did the assigned reading.

My criticism of American higher education is two-fold: 1. Students in a class are treated all alike. They're not. All hear the same lecture, read the same texts, do the same homework assignments, take the same tests. I came to realize that my students differed greatly in their talents and career goals. I can't remember meeting a Berkeley prof who seemed to be aware of this. When a professor would describe a student to me, it was almost always on one dimension: more or less smart, which meant more or less good at doing the sort of tasks professors are good at. I think the diversity of talent and career interests I saw in my students is no accident or exception (which is supported by the fact that a middle-school English teacher saw the same thing); I think it's at the core of human nature and it's at the center of [2]my theory of human evolution. 2. Professors teach how to be professors. Most students don't want to be professors. Every Berkeley prof I ever met was extremely good at research; a few were extremely good lecturers. And every one of them sounded like an idiot the moment they started talking about how they taught "critical thinking" or whatever grand-sounding term they had for it. "Teaching students to think" was a common way to describe teaching students how to be professors. To say such a thing to a psychology professor is like saying to a chemistry professor that the world consists of four elements (earth, air, fire, water). "Are you aware how stupid you sound?" I felt like saying. But instead I would say that there are many kinds of thinking.

Giving students more power over what they learn solves, or at least reduces, both problems.

1. <http://www.nytimes.com/2009/08/30/books/30reading.html?em=&pagewanted=all>
2. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>

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Anderw Gelman (2009-08-30 23:06:02)

Hey, I wish you'd told me that I "sounded like an idiot" – I had no idea! But I was definitely aware that "students differed greatly in their talents and career goals," even if I have struggled (and continue to struggle) with how to deal with this.

seth (2009-08-31 01:42:53)

Andrew, if I remember correctly you never said anything about "teaching how to think" to me. And you are right, my statement about nobody being aware of student differences is too strong. I have modified it. I suppose the more important point is how little allowance is/was made for student differences. The only obvious and widespread example I know of is for those labeled learning-disabled – then you got more time on tests.

michael vassar (2009-08-31 09:20:18)

Seth: It's politically incorrect to have explicit beliefs about differences between students in ability if those beliefs have enough detail to make them actionable. Honestly, understanding the differences between people's kinds of thinking is a whole academic specialty, a field of psychology but not seriously touched in "education" or "educational psychology" so it's unsurprising that most people are unfamiliar with it. Also, there are many kinds of thinking, but do you seriously not think that there is something distinctive about the kind of thinking that professors do that makes it appropriate that it be taught, if at all possible, in schools? People have ALWAYS had many kinds of thinking, but the rise of science created one very distinctive very novel sort of world, largely by cultivating the synthesis of philosophical/mathematical and mechanical/empirical thinking. Everyone knows that human brains don't need to be taught how to think in general, but they do need to be taught how to think scientifically, hence every culture has thought but only some have science. Finally, all children think, most adults mostly pattern match instead, which generally works better. I wish that nerdy adults who knew how to think were given good instruction in how to act, play chess, and do other types of pattern matching.

Douglas Clegg (2009-08-31 12:05:23)

While I had a handful of good professors in college, the best were from Dr. George Ray and Dean Pusey (at Washington & Lee University). Why the best? Dr. Ray had the direct studies – we went to the U.K. to study classical British drama for a course on it. So, we saw the historical places first hand, got lectures directly from Shakespearean actors, and watched at least three dramas a week – from among the great playwrights. And Dean Pusey? In his 80s when I took the class in Russian lit, he first gave us a questionnaire where each student filled in our interests, aspirations, dreams, etc. Then, every test was geared toward where our minds were likely to head. I thought at the time I'd become either a writer or filmmaker (I became a novelist, later), my tests were filled with "what key scenes would you choose to keep in if you were to make a movie of this story, and what would you throw out – and why?" and various other permutations. It made me realize what I'd been missing out on in college – someone who actually looked at where I put my energies and found a way to draw them out from me into the subject matter, and also match that subject matter with my deepest interests. It was, hands down, the best class I ever took in my life, I thought more deeply about the subject and the work at hand than I did for nearly any other class.

bennetta (2009-08-31 16:58:56)

And ironically, the more prestigious the institution is, the more pedagogically stale it tends to be – you may disagree with me on this, Seth, but that has been my experience. Of the three institutions I've been to (UC Davis, Sonoma State University, and the Santa Rosa Junior College), "prestige" was inversely proportional to the quality of education. At times, I honestly wondered how many professors at UCD were actually there to teach or were genuinely concerned about their students, particularly undergrads. Probably relatively few, I'm guessing. The best instructors I had usually had only masters degrees, as well. I taught Special Education (light to moderate) and have a learning disability, myself, so I'm extremely (perhaps overly) sensitive and understanding to the problems that arise when the two brains involved on the opposite ends of a learning

process are wired completely differently, want different things, or have different expectations. What I experienced at Davis vs. the JC was like night and day. So in what ways did the two differ? The JC gave me much greater freedom to learn in a way that was appropriate for me and provided much greater interaction between teacher and student. The thousand-person lecture hall format isn't exactly flexible, nor does it lend itself well to multiple styles of learning. I can't help but think those who think it's actually effective are either insensitive to people's needs or just plain don't care.

Anthony (2009-08-31 17:07:10)

@Bennetta said "The thousand-person lecture hall format isn't exactly flexible[.]" Right. What is the purpose of 1,000 person lecture halls, nowadays - why not just provide a lecture accessible on the web? Then you could also provide a transcript or lecture notes at the same time. This seems much more convenient, flexible, and useful to me.

Bryan (2009-08-31 18:08:54)

For law school, point #2 can be modified to, "Professors teach how to be appellate clerks. Most students do not want to be appellate clerks."

Why The Future Is Now: An Interview with Alex Mann | Certification Map (2009-11-16 05:07:21)

[...] The biggest setbacks in education include the access gap to technology and the bureaucratic, unionized culture. A classroom has been historically viewed as a single learning entity because teachers don't have the resources to treat student needs individually. One solution could be personal computers, that with the aid of a teacher, would allow students to learn at their own pace, method and style, rather than matching the classroom average of the same factors. It's a costly endeavor, but a shift that needs to be enforced technically, culturally and politically. [...]

On Education: Why The Future Is Now | alex j. mann (.com) (2009-11-16 05:32:27)

[...] The biggest setbacks in education include the access gap to technology and the bureaucratic, unionized culture. A classroom has been historically viewed as a single learning entity because teachers don't have the resources to treat student needs individually. One solution could be personal computers, that with the aid of a teacher, would allow students to learn at their own pace, method and style, rather than matching the classroom average of the same factors. It's a costly endeavor, but a shift that needs to be enforced technically, culturally and politically. [...]

## **National Fisheries Institute: Stop Misleading Us (2009-08-31 03:22)**

After [1]Jeremy Piven won a legal decision saying yes, he may have had mercury poisoning from sushi, the National Fisheries Institute, a seafood industry group, issued a statement. Its crux was this:

Despite the fact that the arbitrator ruled in Piven's favor, NFI cautions reporters and editors to continue to treat Piven's statements with skepticism. It is important to note that no peer reviewed medical journal has ever published any evidence of a case of methylmercury poisoning caused by the normal consumption of commercial seafood in the U.S.

Excuse me? Surely they know about [2]Jane Hightower's work. I suspect this is why they used the term medical journal. Hightower's work on mercury poisoning was published in Environmental Health Perspectives, which is peer-reviewed. Hightower is a doctor. So what if EHP isn't a medical journal? This statement, although literally true, is completely misleading. Hightower's article is [3]here. It supports exactly what Piven claims.

Here's [4][5]a quote from Hightower:

I think I provided a missing piece of the puzzle: That this [excessive mercury] exposure is coming from fish that we purchase at the grocery stores and restaurants. . . . Some people are eating so much of the commercial, high-mercury fish that they are over the mark for tolerable allowances set by the Environmental Protection Agency, the FDA, the Agency for Toxic Substances and Disease Registry and the World Health Organization.

1. <http://gawker.com/5347400/unimpressed-with-jeremy-piven-nations-seafood-industry-strikes-back>
2. <http://www.nrdc.org/health/effects/mercury/hightower.asp>
3. <http://www.ehponline.org/members/2003/5837/5837.html>
4. <http://www.nrdc.org/health/effects/mercury/hightower.asp>
5. <http://www.nrdc.org/health/effects/mercury/hightower.asp>

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Gavin (2009-09-08 09:15:06)

Seth, Rest assured the National Fisheries Institute is not misleading you. Perhaps you are confused about Hightower's research. Hightower's peer reviewed published work, medical journal or not, simply does not reach the conclusion you suggest it does. Hightower's published work concludes that eating fish that contain mercury can raise a patient's mercury levels—that's it. That's a simple known fact, nothing ground breaking or arguable there. If you believe she reaches other peer-reviewed conclusions about mercury toxicity perhaps you should read her book. Throughout her book, Hightower writes about the fact that her own colleagues express skepticism about her work because, "there isn't much here, and there is not enough cause-and-effect data that is significant" (p 39). She even admits just that in relaying a discussion about her own patient survey. She recalls a conversation with then-EPA official Kathryn Mahaffey. Hightower remembers Mahaffey saying "just stick to the numbers" because "we know people have symptoms, but this [cause and effect] was harder to prove" (p 84). So, here she is highlighting the fact that her own survey does not succeed in linking elevated mercury levels to the symptoms she claims they cause. Her survey merely concludes that eating fish that contain mercury can raise a patient's mercury levels. If you are under the impression that Hightower's peer-reviewed work concludes anything else further research on your part may be in order. Gavin Gibbons National Fisheries Institute

seth (2009-09-08 13:37:58)

Gavin, You say Hightower found that "eating fish that contains mercury can raise a patient's mercury level" and "that's it". That's wrong. You and I and everyone else already knew that eating food with mercury raises mercury levels. That's obvious. If her work merely found the obvious it wouldn't be interesting. Her work is interesting because it suggested something that wasn't obvious at all: You can get too much mercury from eating a lot of store-bought or restaurant-bought fish. So what if her colleagues "express skepticism"? You'll hear skepticism about any new conclusion, right or wrong. Perhaps you take Kathryn Mahaffey to be a disinterested observer but I don't. I'm sure she had pressure on her to reach certain conclusions that had nothing to do with the truthfulness of those conclusions. Telling a scientist to "stick to the numbers" is ridiculous; it's like saying, "don't reach any conclusions from your research". Hightower thought her work was important enough to write a book about it. (Which I don't have, so I can't discuss in detail.) She would have been crazy to write a book about something as obvious as "eating fish with mercury can raise mercury levels". If you disagree with her conclusions it would be interesting to know why, but all you do is quote others disagreeing with her. That's not persuasive, to say the least. I can find people who disagree that the earth is round. The "fish that contain mercury" you keep referring to – where do you think Hightower's patients obtained it? From the same place most people get their fish – stores and restaurants? Or somewhere else? And, while they were eating it, did they realize it could cause mercury poisoning? Seth

Gavin (2009-09-09 11:04:36)

Seth, I understand your incredulity over the fact that Hightower's peer-reviewed, published work does not succeed in linking elevated mercury levels to the symptoms she claims they cause but that is simply a fact. Feel free to review her article or her book and you will find that her work, as you put it, "merely found the obvious." And I agree it isn't particularly interesting. Here's something I do find interesting. You've spent quite a bit of time in Asia and we all know many Asian cultures eat as much as, if not more than, 10 times the amount of fish Americans do why, do you theorize, that those populations do not show signs of mercury poisoning? Gavin

seth (2009-09-09 16:56:08)

Gavin, Please. I have no "incredulity" about Hightower's conclusions. As you must know. Perhaps you could tell us why her research does not show what I say it shows? Failure to answer this simple question – what is the problem with Hightower's conclusions? – is making your employer look bad. They really seem to have no case; if they did, surely you would have made it by now. Flat statements ("is simply a fact") are not an argument. But surely you know this. As for Asia, they eat less fish – and the wrong fish – than needed to get mercury poisoning. It's rich Americans that eat lots of tuna. Very little tuna is eaten in China. Too expensive. Seth

Roy Palmer (2009-09-17 15:30:17)

Seth So how do you explain the health of the Japanese and the Inuits? Checkout the facts and make the linkages about their seafood consumption. There are truckloads of evidence to show that mercury in seafood is a furphy - why dont we have a daily notice in the newspapers about the daily deaths of mercury from seafood consumption? Because there is no story there - its a myth. I would worry more about crossing the road or getting out of bed in the morning.... Every time you and others put fear into eating seafood you are doing more harm than good Get the information from specialists who are doing constant research on these matters - there are many of them in the world Hibbeln, Strain, Sinclair, Crawford, Ralston, etc etc Roy

seth (2009-09-18 03:25:30)

The Japanese & the Inuits eat a lot of fermented food. Far more than we do. That's how I explain their health. Check out my posts about the umami hypothesis. As for "a furphy" – that's not even close to true. Read Hightower's paper. You have to eat a lot of high-mercury fish to get easy-to-notice mercury poisoning, but it's not at all a "myth". It's possible that eating less fish produces hard-to-notice mercury poisoning. I have no idea what these "specialists" are coming up with that you want me to read. I don't know what "these matters" are. If seafood is perfectly safe I can't imagine why its safety is the subject of "constant research". Really, I have no idea what you're talking about.

## **Beijing Air: Not Dirty Enough (2009-08-31 15:39)**

I've been back in Beijing a week. I've been eating lots of fermented food, which is easy to get, including fermented eggs (10 for \$1.50) sold at a stand in a shopping mall. There is a bigger yogurt selection here than in Berkeley. Tsinghua University sells its own perfectly good yogurt (20 cents a serving). Every supermarket has a big pickle selection.

In Berkeley, [1]as I blogged earlier, a few months ago I noticed that my nose was no longer runny. My Kleenex consumption, which had been about one box of Kleenex every month or so, was reduced to almost zero. (A reader of this blog [2]had a similar experience.) No doubt this was due to eating much more fermented food. The runny-nose-absence has continued in Beijing.

Last year in Beijing, I had a runny nose. I used about one tissue packet per day. I ate almost no fermented food. So far so good. The interesting twist is that dirty city air has been [3]linked to less runny nose. Air pollution, in other words, can have the same effect as fermented food. Last year, apparently, Beijing air wasn't dirty enough to get rid of my runny nose.



I'm not joking. After I realized this, I felt a lot better about Beijing's air, which I have long said is the worst thing about living here. Someday I will blog about the [4]health benefits of smoking, which suggest the same conclusion.

1. <http://www.blog.sethroberts.net/2009/08/15/this-blog-reduces-sinus-congestion/>
2. <http://www.blog.sethroberts.net/2009/08/15/this-blog-reduces-sinus-congestion/>
3. <http://www.pubmedcentral.nih.gov/articlerender.fcgi?&pubmedid=1486303>
4. <http://www.quit.org.au/quit/fandi/fandi/c03s14.htm>

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NE1 (2009-08-31 17:16:24)

The runny nose is probably allergies, which can vary in severity from year to year (and continent to continent). But if more smog fixes it, I'd say the cure is worse than the disease, seeing as how it reduces life expectancy by up to a couple years.

seth (2009-08-31 17:30:25)

Smog "reduces life expectancy by up to a couple years"? Where did you learn that? I heard a talk a year ago about the effects of air pollution. It was really hard to show any effect. The only clear effect was for people who lived close to a highway and they had increases on the order of 30 % in respiratory illnesses. That is a long way from a 2-year reduction in life expectancy. I told the speaker I was moving to Beijing. Unlikely to be harmful, he said.

Tom (2009-08-31 22:52:03)

off-topic, Seth, but it deals with self-experimentation, so I thought you'd be interested:  
<http://www.rawpaleoforum.com/journals/lex's-journal/>

Eric Meltzer (2009-09-01 02:03:52)

yo, if the eggs in question are pi-dan 皮蛋 be careful about eating too many; some are very high in zinc due to shortcuts in the fermentation process. others supposedly even have lead. they're really delicious though—I almost want to go through a few brands and have a chem lab test for the aforementioned so i can eat them in peace.

Chris (2009-09-01 22:18:44)

This is probably the most discussed recent publication on the subject: <http://content.nejm.org/cgi/content/full/360/4/376>  
The finding is that up to 15 % of the increase in life expectancy in the US is attributable to better air quality. They compared particulate levels across cities. With your background, I'd love to see your critique of the method used.

## 4.9 September

### Revenge is Sweet (2009-09-01 16:02)

In 2006, Julie Powell, the blogger now on screen in Julie & Julia, reviewed The Shangri-La Diet in the Washington Post

I'm almost 95 percent sure that Seth Roberts . . . is a snake-oil salesman. [Later true. Snake oil is high in omega-3] . . . He brings a whole lot of pseudo-science to the table, as diet-book-writing PhDs tend to do.

Now, from [1]a review of Julie & Julia by Laura Shapiro, author of a book about Julia Child:

There's no question that Powell had a great idea for a blog. What she didn't have was anything interesting to say about cooking her way through Mastering. Her writing is hollow, narcissistic, and unforgivably lazy—qualities so foreign to Julia that it's not at all surprising that she once said she [2]couldn't abide Powell's work.

Curious that revenge ("sweet", "a dish best served cold") is associated with food.

1. <http://www.gourmet.com/food/2009/08/julie-julia-movie>

2. <http://www.publishersweekly.com/article/CA6671678.html?nid=4599&source=link&rid=840626276>

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Nathan Myers (2009-09-02 10:03:19)

Speaking of "a dish best served cold"... The earliest written record Google Books can find is in a French potboiler from 1841. At the time, the expression seems to have been a stratagem to trick a hotheaded friend into putting off revenge until mature wisdom can get a word in edgewise. The notion of revenge as an esthetic experience to be accompanied by a good Chianti had to wait for Hollywood. On the literal merits, we might say that revenge is a lot like jello, which is almost certain to be disappointing warm.

### **Infectious Disease Specialist Ignores the Immune System (2009-09-02 16:04)**

A new book called *Rising Plague* by Brad Spellberg, a UCLA professor of medicine specializing in infectious disease, at County Harbor-UCLA Medical Center, is about the increase in drug-resistant bacteria. From [1]an article about the not-yet-published book:

In the United States, more than 300,000 people die each year from infectious diseases such as influenza and pneumonia, often caused by drug-resistant bacteria.

"The scary thing is that many of these were healthy, young individuals," said Robert Guidos, vice president of public policy and government relations for the Infectious Disease Society of America. "There are very few drugs, if any, to treat these bacteria, and there are almost none in the pipeline."

I believe it is very likely that these "healthy" young people weren't eating enough fermented food and thus had poorly-functioning immune systems. The article continues:

[Spellberg], however, argues in his book that drug companies are not solely responsible. Blame for the decline in antibiotics should also not be aimed at physicians for over-prescribing these drugs, nor hospitals for lacking sufficient standards in cleanliness or drug distribution.

"This problem is complex enough that it is not accurate and not helpful to blame any one group," Spellberg said. "What we need to do is focus on solutions."

Public awareness will go far in spurring change, he argues. Ultimately, legislators, drug companies, hospitals and doctors will have to devise a way to spur more production of new antibiotics, which become obsolete as bacteria change to survive.

"Will have to". As if there is no other alternative. The possibility of strengthening the immune system is not considered. Just as [2]UC Berkeley epidemiology professors (along with the rest of their profession) ignore the immune system, here is a doctor ignoring it. Here is [3]a longer statement by Spellberg that ignores the immune system. He's a specialist in infectious disease. He's repeating the conventional wisdom of his profession. UCLA is a top-ranked medical school. This is mental blindness on a massive scale with awful consequences.

1. [http://www.dailybreeze.com/lifeandculture/ci\\_13249465?source=email](http://www.dailybreeze.com/lifeandculture/ci_13249465?source=email)
2. <http://www.blog.sethroberts.net/2009/08/19/the-financial-system-and-the-immune-system/>
3. <http://www.the-scientist.com/news/display/55951/>

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Gerry (2009-09-02 19:57:38)

Dr. Art Ayers has an interesting post on his blog tonight about a Cure for Inflammatory Diseases. I may need to read the post several more times to really understand it but thought you might be interested. <http://coolinginflammation.blogspot.com/>

Nathan Myers (2009-09-02 23:48:58)

I hesitate to pass this on from fear that you will take it as confirmation for some crackpot theory. Anyway: <http://schaechter.asmblog.org/schaechter/2007/08/microbial-endoc.html> [http://www.sciencedirect.com/science?\\_ob=ArticleURL & \\_udi=B6TD0-4B3NMNV-1 & \\_user=4429 & \\_coverDate=01 %2F31 %2F2004 & \\_rdoc=1 & \\_fmt= & \\_orig=search & \\_sort=d &view=c & \\_acct=C000059602 & \\_version=1 & \\_urlVersion=0 & \\_userid=4429 &md5=20213584b5d4446a6c7ab5350b778030](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6TD0-4B3NMNV-1&_user=4429&_coverDate=01%2F31%2F2004&_rdoc=1&_fmt=&_orig=search&_sort=d&view=c&_acct=C000059602&_version=1&_urlVersion=0&_userid=4429&md5=20213584b5d4446a6c7ab5350b778030)

Nathan Myers (2009-09-03 18:06:49)

I'd like to emphasize that I meant "crackpot" in the most affectionate possible way.

Seth's blog » Blog Archive » Does H. Pylori Cause Stomach Ulcers? (2009-09-10 17:41:20)

[...] More. What goes unsaid, and maybe unnoticed, in the debate about health care, is that it is hard to have decent health care (that is, decent health) when those in charge don't know what they're doing. The stomach-ulcer-etiology problem is a small example of a big thing. In case I'm not being blunt enough, let me be even more blunt: This example illustrates that the average doctor, the average med school professor, and at least two Nobel-Prize-winning med school professors (not to mention those who award Nobel Prizes) are unable to correctly interpret simple facts. My previous example of the infectious-disease expert (a med school professor) who overlooked the immune system is yet another example of astonishing cluelessness. It's hard to get good health care from people whose understanding of health is terribly incomplete yet don't realize this. [...]

Seth's blog » Blog Archive » Who is "Totally Healthy"? (2009-10-30 17:44:20)

[...] Totally healthy. This is the bigger delusion: That the average American who appears healthy is healthy. I believe that practically all Americans have grossly-impaired immunity. Their immune systems work much worse than they could. The poor performance is due to suboptimal sleep and far too little bacteria in their diet. The football player was near death because he had two infections. That's how poorly his immune system was working. And a very high CDC official called him "totally healthy"! Apparently she has no idea that people's immune systems can vary in how well they work. This is even worse than the UCLA medical school prof specializing in infectious disease who also failed to understand this. Schuchat is one of the top public health officials in America! Public health is about prevention! [...]

## Cooking in China (2009-09-02 20:19)

The kitchenware section of a large supermarket near me in Beijing, which has many bowls, cups, salt-and-pepper shakers, knives, food-storage containers, and rice cookers, doesn't have a single measuring cup, measuring spoon, or timer.

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PS (2009-09-02 22:45:47)

They're not big bakers, and most home cooking is either too fast [fried] or slow [stocks] to warrant a timer. [An observation from Taiwan]

DJ\_Magic (2009-09-03 04:16:56)

where are you living? you can choose the supermarket in THU, there is what you want

seth (2009-09-03 05:17:07)

thanks, I will look there.

## Why Do Cats Lick Themselves? (2009-09-03 18:10)

The usual answer, of course, is: To clean themselves. There are [1]other answers:

Some people think it is used as a way to control their temperature - it keeps their fur smooth, which in the winter traps heat. In the summer, it spreads saliva on the fur and cools them down and can also loosen fur so that they shed more easily. Others think it is a natural way of reducing parasites like fleas or ticks.

Perhaps cats lick themselves to ingest more foreign bacteria and dirt, which they need to be healthy. Test of this proposal: Feed a cat more fermented food, it should lick itself less. (Just as I became [2]less of a foodie when I ate more fermented food.)

[3]The value of evolutionary explanations.

1. <http://www.fleascontrol.com/why-do-cats-lick.htm>

2. <http://www.blog.sethroberts.net/2009/05/04/less-of-a-foodie/>

3. <http://www.blog.sethroberts.net/2007/09/13/modern-veblen-the-less-than-obvious-value-of-evolutionary-explanations/>

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Nathan Myers (2009-09-03 20:09:55)

Then why do they lick their kittens? In my experience the best determiner of how much grooming a cat does is how nervous it is.

wcw (2009-09-04 00:03:10)

Yeah, no. I love you, man, but you are wrong here. As Nathan says, cats will clean more when stressed, but really, it primarily is to clean their fur. Ever see a cat who cleans too little? Matted fur central. It's not pretty,

david (2009-09-04 05:11:56)

There's got to be a "why do dogs lick themselves" joke in there somewhere...

Stuart Buck (2009-09-04 07:57:12)

From the inimitable Dr. Boli (a humor blog): "A cat's fur contains all the nutrients the cat needs to survive, which is why cats spend so much time licking themselves." <http://drboli.wordpress.com/2007/06/29/from-dr-bolis-encyclopedia-of-misinformation-2/>

Rachael (2009-09-04 08:03:09)

I have read that animals produce vitamin D in their fur and ingest it through licking. Human vitamin D lingers on skin and is slowly absorbed, but I always assume that's what my pets are after when they lick me. Can't remember the source, sorry.

Wilbur (2009-09-04 09:15:06)

Hey, that reminds me of a joke! Two drunks are walking down an alley and see a dog licking its private parts. One of them says "Boy, I wish I could do that." The other one says, "Maybe you should try petting him first."

MC (2009-09-04 09:23:11)

I always thought the reason pets lick people is to absorb the salt and minerals that linger on skin due to perspiration.

justin (2009-09-04 09:54:22)

I had also read the thing about Vit D and cats; however, I'm skeptical as my own cat tends to lick himself the same if not more when he's allowed to go outside. I think the grooming function of cats is probably more akin to general cleanliness – insuring that not too much bacteria/bugs/dirt gets lodged in their fur, which could cause infection. This might be somewhat akin to why you need to wash your sheets – there's a balance here. Cats also have raspy, comb-like tongues, which I think has been argued is because they evolved to be able to lick marrow out of bones, but perhaps its also to manage the fur. Anyway, I feed my cat fermented foods regularly and my cat food also has probiotics in it IIRC. I also regularly give my cat yogurt or kefir. However, my cat is neurotic as hell about licking himself. He licks his fur right off in some areas and I've been trying to self-experiment my way into figuring out what the problem is. Most recently, I've taken him off crappy cat food and put him on a no-grains, high protein based food and that \*may\* be causing an improvement – have to wait a couple more weeks to see if his fur really is coming in across his whole body (it definitely is in certain areas, but too soon to tell if its a complete cure).

Nick (2009-09-05 02:47:04)

You can hypothesize about many explanations but as others have said self-dosing with vitamin D is almost certainly the main reason. I had this exact same discussion with a colleague a few years ago (I'm an ethologist), a few studies had been done and he was contemplating seeking funding to investigate further. I'm in the UK where UVB is absent for the winter months and much depleted in the autumn/fall and spring. Here there is a noticeable shift in behaviour from summer to winter; in general cats are fairly laid back during the summer, sleeping lots and not getting upto much; during the winter they sleep less, become more agitated and hunt much more. If you exclude the late spring high when there are lots of fledgling birds and young mammals around which present easy prey for cats there is a distinct increase in prey brought home by domestic cats during the winter months compared to the low of the late-summer/autumn. Looking at the remains of these prey items and usually what is eaten is the head and "guts" (the liver probably being the desired morsel) – the main concentration of vit. D is found in these parts. Looking at my cat's behaviour and there are some distinct types of grooming. It is the ritualised, almost neurotic, licking of paw, rubbing ear & temple, licking paw again – that I suspect is the main "vitamin D dosing" type of grooming. Of course vitamin D is produced throughout the cats fur but this specific type of grooming is much more noticeable/frequent during the winter months with my cats and I take this to indicate that they are getting/are deficient in D3.

Unfortunately I don't think the study ever went ahead (bigger and better things came along), it was hoped/thought that by getting cat food manufacturers to supplement foods with D3 that it would reduce the impact cats have on the native fauna. @justin – you may like to try supplementing your cats food with D3 or even rubbing some D3 oil on your cats ears/temples. It would be interesting to see if this results in noticeable behavioural changes.

Margreet (2010-05-08 13:15:40)

Since cats don't synthesize Vitamin D (run a search on NLM Gateway if you need the research), so that's not why they lick their fur. If they groom more in winter, maybe they're just fidgety.

Peter (2011-05-14 03:30:56)

WOW! I never realized there were so many diverse opinions on a subject as simple as this. It's simple.... Most home in America don't have kitty showers built in.

livex (2011-09-16 15:51:53)

I read somewhere that cats groom constantly in order to minimize their own odor so that it won't give them away to the prey when they do their solitary hunting. Dogs (wolves, really), unlike cats, evolved to hunt in packs, and use their natural scent to keep track of where other pack members are, so that function overrides / makes unnecessary minimizing their own scent (pack hunting techniques mean it doesn't matter if the prey smells the hunters once the hunt is on). Just another hypothesis, I guess.

## **This Blog Reduces Sinus Congestion (continued) (2009-09-04 17:09)**

Tim Beneke writes:

After 21 days of eating a lot of yogurt [more than 16 ounces/day] and then 15 days of acidophilus pearls – 2 a day for the first 5 days and then 1 a day since, it's very clear that I can breathe substantially better through my nose. This has been obvious for at least a couple of weeks – it still seems to be improving gradually. I feel it clearly when I breathe. And, rather dramatically, my sense of smell has returned. I got a severe sinus infection in 1972; since then, my nose has been fairly stuffed and my sense of smell weak. Now I'm living in a different olfactory universe.

For a few years, I've cleaned up 4 or 5 times a week after a bunch of feral cats that I feed. Until the last 3 weeks or so, I only used my eyes to spot the cat poop. Now I use my sense of smell a lot and often smell it before I see it. Another unpleasant example – I don't flush my toilet after peeing to conserve water; by the end of the day it looks pretty funky, but I could barely smell its funkiness in the past. Now I smell it quite vividly and am more prone to flush it.

[1]Earlier post on the subject.

1. <http://www.blog.sethroberts.net/2009/08/15/this-blog-reduces-sinus-congestion/>

Nansen (2009-09-07 13:27:18)

So the minimum effective dose for him was more than 16 ounces/day of yogurt?

seth (2009-09-07 16:32:51)

Nansen, no, that's just the dose he started with – to make sure he got enough. Then he lowered it. I suspect that any dose will have some effect; the question I'm most interested in is how much do you need to eat to get the maximum effect. I'm pretty much in the dark about that except that at the moment two servings of yogurt per day is my best guess, for what it's worth.

## The SLD Effect (2009-09-04 18:13)

After three days of the Shangri-La Diet, [1]kitty-cat did a little experiment:

I tried something last night. I really tried to eat much of sweets and chips and stuff like this ... I couldn't!!! I had a little bit and then quit because I felt ... I don't know ... full - more than

As far as I know, the Shangri-La Diet is the first weight-loss method to produce this effect quickly. Most diets, such as the Atkins Diet, ban "sweets and chips and stuff like this"; early in the diet you would have no trouble eating them. After a long time on the diet you won't want to eat them but only because they're no longer familiar.

Long before SLD, [2]Michel Cabanac did experiments about a related laboratory phenomenon. As you eat, Cabanac found, food becomes less and less pleasant. That's why you stop eating. You say "I feel full" to explain why you stop eating but your stomach isn't actually full. Cabanac also found that this effect depended on your set point. If your set point was high, the decrease in pleasure slowed down. It took longer to reach zero (= no pleasure) so it took longer to stop eating.

It follows from Cabanac's work that if your set point is unusually low – lowered by SLD, for example – then you will stop eating unusually soon, as happened here. The paradox is that you can feel "more than full" from a tiny amount of attractive food.

1. <http://boards.sethroberts.net/index.php?topic=7172.msg88102#msg88102>

2. [http://www.fmed.ulaval.ca/ap/francais/chercheur/chercheurs/CABANAC\\_Michel.htm](http://www.fmed.ulaval.ca/ap/francais/chercheur/chercheurs/CABANAC_Michel.htm)

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wcw (2009-09-04 21:13:51)

As long as we're noting anecdote: a man who has never worried about his weight (runs in the family: I have 5-10 years left, then I get a paunch), I can eat 2 or 3 dinners if I want (and often have two, only rarely three). All three if I have that many are tasty, but at a certain point in each, even the first, I have had enough of what I am eating, period. The second or third had to be different.

Igor Carron (2009-09-05 03:01:43)

Seth, Here is another side effect which you may have noticed: <http://nuit-blanche.blogspot.com/2009/08/scent-of-glass-of-wine.html> Cheers, Igor.

## How Things Begin: The Fleming Fund (2009-09-05 18:57)

Better to light a candle than curse the darkness, the saying goes. What if there are no candles?

Ken Rousseau, a software manager in Silicon Valley, went to Caltech in the late 70s. He didn't have a good time. He was a physics major. He took a required course on electricity and magnetism where the average score on the final was 15 out of 100. As he took it, he thought, I guess I can't be a physics major. He got a 16 – a solid B. That a professor would design such a demoralizing test revealed, he believed, that the professor didn't care about students. At Tech, lack of caring for students was shown in big things and small. Every building on campus was air-conditioned except the student houses, and Pasadena gets really hot in the summer. The graduation rate around that time – the fraction of entering students who graduate in four years – was 59 %. At MIT it was 80 or 90 %. When a student drops out of Tech, it's a lost opportunity on both sides, Rousseau felt. It was/is very difficult to get into Tech. To send 41 % of admitted students away struck him as a terrible thing.

He did graduate. For many years, when Tech would ask him for money, he would say no, sometimes with a letter about why. But he kept in touch with other students who had lived in the same undergraduate house (Fleming House), one of the seven student houses. Every year, a bunch of them would have a weekend-long beach party. At one of them the idea arose: Let's start a Fleming Fund. To help the students buy beer, that sort of thing. Tech is a tough place, let's help them get through it.

In the 1990s, Rousseau got a letter from the president of Caltech that made him angry. Tech was #4 in the U.S. News rankings, it said, mainly because of the low fraction of alumni giving. Let's make Tech #1 by giving more, wrote the president. Rousseau responded with a five-page letter that made one simple point: Alumni giving is so low because the people in charge cared so little about students. Their lack of concern is being reciprocated.

By 2003 or 2004 Rousseau had enough money that he got a personal visit from the development office. His visitor knew his wife's name, the approximate ages of his children, and the high points of his professional career. Rousseau told him of his residual bitterness. "You've obviously benefited a lot from your Tech experience," said the development officer. "Why have you only given \$163 over the years?" He had it wrong, Rousseau said. He had given \$1. His wife, who had also gone to Tech, had given \$162.

He told the development officer he was interested in helping Tech students – particularly Fleming House residents. In essence, he wanted to bring the Fleming Fund into existence. Around this time, Frank Bernstein, another Caltech alum who was working as a patent attorney in Silicon Valley, was also solicited. "Frank, I'm looking for a really significant donation," said the same development officer who had approached Rousseau. Bernstein, who'd also lived in Fleming, told Rousseau about the conversation and they again resurrected the idea of the Fleming Fund.

The development officer came back to them with ideas. Maybe you could fund a lecturer, he suggested. Or graduate student salaries. Helping undergraduates was clearly a new and difficult concept for the development office. They were looking for contributions that, in their words, "directly benefited the Institute." Bernstein pointed out to them that this was a narrow and self-defeating view. They want alumni to contribute. They want to get them in the habit of contributing. A Fleming Fund will help with that.

Because Rousseau's daughter, a high school student, was considering going to Tech, Rousseau visited the campus in 2006. He met with Tom Mannion, the administrator for student affairs, and came to believe that the administration cared more about students than they had in the past. A new incoming president, Jean-Lou Chameau, appeared to genuinely care about undergrads. (Later events have validated that view. Chameau has made a point of discussing



student life in his public discussions and has started to push administration officials to discuss what they're doing with regards to student life.) After that, Rousseau and Bernstein met with the development officer who had solicited them and started working on the details. The Institute set a minimum of \$100,000. Once the fund reached this level, income from the fund would be given to the students to spend.

In 2008 the details were hammered out. There would be two sort of restrictions: 1. Obvious limits on what the money could be spent on (no bail, no illegal drugs, etc.). 2. An oversight committee of three people, including the past president of Fleming House. The oversight committee only gets involved when the amount of money is more than the house's usual budget. The income, at least at first, would be about \$10,000 year for a house of about 120 students.

In May 2009, the fund was announced during a Fleming House reunion dinner at Tom Mannion's house. Many undergrads came up to Rousseau and told him it was a "really cool idea." They were touched that someone out there cared about them. The Institute is thinking of repeating it with the other student houses.

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Mary (2009-09-06 06:09:03)

Heartwarming story, but how does the endowment manage to pay out \$10K per year on a fund with \$100K in donations? That's an awfully high spending ratio for an endowment. Given Caltech's precarious finances and low returns on investments, that spending rate will not be sustainable for very long. A July 2009 Bloomberg news story ([http://www.bloomberg.com/apps/news?pid=20601109&sid=aQn\\_Cxyu99xY](http://www.bloomberg.com/apps/news?pid=20601109&sid=aQn_Cxyu99xY)) said this about Caltech's financial situation: "CalTech, in Pasadena, was downgraded in June by Moody's [bond rating service] because of endowment losses and increased debt that is likely to total \$469 million. Caltech issued \$80 million in fixed-rate bonds earlier this month to take advantage of long-term rates to fund capital projects, said Sharon Patterson, the school's associate vice president for finance."

### **Art Imitating Life (Jane Jacobs Edition) (2009-09-06 04:28)**

In Episode 4 of the first season of *Leverage*, a priest is brutally attacked on his way to a city council meeting where he was going to beg to save his church from a developer. His attackers, it turns out, were hired by the developer: "Get rid of the activist priest."

Pure fiction, right? That sort of thing doesn't actually happen . . . or does it? From *Wrestling with Moses: How Jane Jacobs Took On New York's Master Builder and Transformed the American City* by Anthony Flint (pp. 157-8):

One evening [Father Gerhard] La Mountain informed Jacobs that he would not be able to come a critical Board of Estimate hearing on the [Lower Manhattan Expressway] project, saying he had to visit a sick friend in Massachusetts. But in fact he had been summoned to a meeting at an archdiocese office behind St. Patrick's Cathedral in midtown, where a church administrator informed La Mountain that he should lower his profile in the fight against the Lower Manhattan Expressway. He was ordered not to breathe a

word of this instruction. No one could ever prove how the silencing of the unruly priest came about, but Moses did have close ties with the archbishop of the diocese, Francis Joseph Cardinal Spellman.

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Les Jones (2009-09-08 06:58:15)

So this is proof? Intimation and suspicion are now considered proof? Love ya, Seth, but your standards of evidence are often shockingly low.

seth (2009-09-08 13:13:40)

Les, my main point is that an activist priest was silenced. Obviously someone was behind it. It wasn't an accident. It doesn't have to be Moses for my point to be correct.

### **The Dimensionality of Tsinghua Students (2009-09-06 16:51)**

Tsinghua students vary a lot, said my friend, who has been a Tsinghua student for five years. How so? I asked. She explained:

Dimension 1. Some students spend most of their time studying, others spend most of their time on activities. It's best to have a balance, she said.

Dimension 2. Some students are rich, some poor. Rich students have better cell phones than poor students. As freshmen, they are much more familiar with computers. (My friend, whose family is poor, hadn't used a computer before college.) In the campus store, rich students will buy items that cost 15 or 20 yuan ( \$2 to \$3). Rich students will sometimes eat off-campus. There are a lot of rich students at Tsinghua. Do they get in the usual way? I asked. (Doing extremely well on a national test.) Maybe not all of them, my friend said, but if they get in other ways it's a secret. (Unlike [1]the University of Illinois.)

Dimension 3. Students vary in how much they cultivate their own interests. Some do, some don't. Students with wide interests are the happiest, my friend said. They are less controlled by how well they do academically. This was a mistake she had made: paying too little attention to her own interests.

1. <http://www.chicagotribune.com/news/watchdog/chi-college-clout-storygallery,0,3664823.storygallery>

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Aaron blaisdell (2009-09-07 08:08:24)

Sounds just like the students at Stony Brook, where I did my undergraduate.

## What One American Thinks of Beijing (2009-09-07 19:19)

She loves it:

1. The vibe. It reminds her of New York and London.
2. The range of Chinese food. You get food from all over China here. (At all price points, I might add.)
3. The atmosphere. The air isn't so bad. She spent two years in another Chinese city, never saw a sunrise.
4. The bike lanes. You can walk comfortably. In the Chinese city where she lived before there were no bike lanes and no bikes. Everyone had a motor scooter, which you were constantly dodging. (The bike lanes also make it easy to bike, I might add.)
5. The balance between international and Chinese. Shanghai is basically all international, you can get around without a word of Chinese. Poorer cities are all Chinese. Beijing isn't the only city with a balance, it's just done especially well here.
6. The people. Strangers are friendly, if you ask for directions, they'll make sure you get there.
7. The vast amount of culture. The 798 art district, for example.

She doesn't like the weather; it gets really cold in the winter and the air is very dry (bad for your skin).

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Angeline (2009-09-07 21:24:26)

Ha ha.. seems you have well understood about Americans as well as the speciality of Beijing... I have been to Beijing.. It's an awesome place.. Very different lifestyle..!

denshil (2009-09-09 07:46:09)

The 7th, I think she meant 798 art district. I love the balance between international and Chinese, too. :>

seth (2009-09-09 18:36:44)

thanks for the correction, Denshil.

denshil (2009-09-11 09:49:21)

Oh, I find that I make a mistake, too... "meant", right ? I heard that there are a lot of shows or parties opened in 798 art district on weekend:> You can go and join in sometimes:>

seth (2009-09-11 16:38:16)

right, "meant" not "meaned". that's a good idea about the parties, thanks.

denshil (2009-09-14 07:06:28)

I e-mailed you the official website of 798:>

### **New Yorker Slackers (2009-09-08 14:58)**

I once read a Briefly Noted review in The New Yorker that revealed that the reviewer had only read a quarter of the book. A friend told me that reviewers got about \$100 for those reviews so there was a certain inevitability to this deception. [1]This abstract, of Calvin Trillin's best-ever article, about an American student who goes to China, blossoms, gets sick, and dies, is another example of the same thing. The abstracter clearly didn't read the article – but you should.

1. [http://www.newyorker.com/archive/1985/10/07/1985\\_10\\_07\\_061\\_TNY\\_CARDS\\_000343123](http://www.newyorker.com/archive/1985/10/07/1985_10_07_061_TNY_CARDS_000343123)

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### **Myshoppingsun.com Scam (2009-09-09 17:00)**

This site (myshoppingsun, myshoppingsun.com) is a scam. See [1]here for details. If you want to make this harder for them, simply click on one of their Google ads (which you can find with a Google search). Each click costs them.

1. <http://www.blog.sethroberts.net/2009/08/24/gamesingatecom-scam/>

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christie (2009-09-29 17:58:47)

They have yet a new website. myshopinsun.com has the same layout and same grammar errors etc on their page. I got scammed by them and am still trying to find a way to get my money back. I am furious with them.

Julie (2009-10-01 01:05:57)

Looks alot like gamesinwelt.com. Bad, bad, bad. I ordered from gamesinwelt and paid with paypal, paypal refuses to refund my money because they cannot collect from gamesinwelt.

Booker (2009-10-01 14:51:23)

Does anyone know anything about this site cotome.com? I ran across it while pc shopping, their prices are very good. I'm trying to find out if it is a scam.

Tim (2009-10-01 16:08:56)

I got scammed on this too, just this morning, by the time I realized what I did, only 4 hours later, there is nothing I can do but, take it up with the seller, which I don't think is going to get me anywhere. I was trying to buy a wii. Have you been able to

recover your lost \$?

Booker (2009-10-02 05:15:26)

I got an invoice on a mac pc...I told them (cotome.com) that I would send the payment within 24 hrs. Then I decided that I had better check to see if I could find anyone else who had done business with them before I come up off of \$800.

Dawn (2009-11-08 13:54:59)

Glad I found this before I ordered that wii for the kids for Christmas thanks.

b crilly (2010-02-08 18:57:00)

paid for psp never recived it paypal wouldnt refund beware of same

### **Med School Profs As Drug Company Lackeys (2009-09-09 17:13)**

What a cesspool. I mean the dirty work medical school professors do for drug companies. The profs make the drugs appear better than they are. Let me count the ways:

1. [1]I blogged earlier about Duke professor Charles "Disgraced" Nemeroff taking huge amounts of money – which he then failed to disclose – to encourage doctors to give dangerous poorly-tested drugs to children. Nemeroff is (or at least was) considered a top psychiatry professor!

2. When the practice of drug companies ghostwriting articles for professors was revealed, New York University professor of obstetrics and gynecology [2]Lila Nachtigall, the nominal author of a ghostwritten article, [3]told a reporter (contrary to evidence supplied by Wyeth) that she had written all of her 1000 articles and 3 books. And she said this:

If they [Wyeth] came up with the idea or gave me an outline or something, I donâ€™t remember that at all. It kind of makes me laugh that with what goes on in the Senate, the senatorâ€™s worried that somethingâ€™s ghostwritten. I mean, give me a break.

It made her laugh. Yes, why should anyone care about the dishonesty of med school professors? What cave has Nachtigall been living in?

3. [4]About half of published clinical trials were not properly registered, a new study showed (abstract [5]here). A large fraction of these studies were drug-company-funded, I'm sure. (More than half were "industry" funded.) And the authors were often med school professors. Failure to register your study means you can distort the results to make them closer to the outcome you prefer by changing the "endpoint" (the dimension you use to measure whether the drug worked). Even among the registered studies, one-third used a different endpoint than the registration said. It is hard to avoid the conclusion that a lot of misleading results – making drugs look better than they really are – are being published. The level of cheating appears to be incredibly high – perhaps more than half of published papers.

1. <http://www.blog.sethroberts.net/2008/10/06/what-does-it-say-about-psychiatry/>

2. <http://www.med.nyu.edu/clinicians/nacht102.html>

3. <http://www.nytimes.com/2008/12/13/business/13wyeth.html?scp=1&sq=wyeth%20ghost-writing&st=cse>

4. <http://www.nytimes.com/2009/09/08/health/08aware.html?scp=1&sq=clinical%20trials&st=cse>

5. <http://jama.ama-assn.org/cgi/content/short/302/9/977?home>

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Aaron Blaisdell (2009-09-10 06:51:46)

I know one psychopharmacologist at UCLA who stopped taking drug company money to fund his research. He said it was too difficult to maintain his scientific objectivity when they kept pressing him for certain results and progress. If only more medical scientists could do the same, but alas the lure of money is probably too much for many people to overcome. I guess they'd rather give up (or change) their ethics instead.

seth (2009-09-10 16:25:35)

Aaron, that's a good example.

Seth's blog » Blog Archive » More Med School Profs Behaving Badly: Professor Lila Nachtigall (2009-09-11 06:33:32)

[...] New York University professor of obstetrics and gynecology Lila Nachtigall, whom I mentioned recently, said nice things about estrogen replacement therapy to a Newsday reporter. The story fails to say that she gets money and ghostwriting from Wyeth, which makes the pill used in that therapy. [...]

Health care reform « N=1 (2009-09-12 07:27:22)

[...] It was recently estimated that 46 % of treatmentsÂ have unknown effectiveness.Â Â Â There are all kinds of ways that treatments might look more effective in research publicationsÂ than they really.Â Â See here, here and hereÂ for a few examples.Â This suggests to me that we are probably spending way too much on useless treatments.Â Based largely on the RAND experiment, Robin Hanson argued that medical spending could be cut in half.Â The RAND experiment found that people randomized to the full health coverage group spent 40 % more on health care, but did not have better outcomes.Â While variations in health care spending do not seem to explain differences in outcomes, other types of variations do (lifestyle, environment).Â Phillip Longman has a very interesting essay on the topic:Â A child born today can expect to live a full 30 years longer than one born in 1900. Improvements in medicine, however, played a surprisingly small role in this achievement. Public health experts agree that it contributed no more than five of those 30 years. This may seem counterintuitive given the attention society pays to medical breakthroughs. But the changes in living and working conditions over the last century are the real reason. American cities at the turn of the last century stank of coal dust, manure, and rotting garbage. Most people still used latrines and outhouses. As recently as 1913, industrial accidents killed 23,000 Americans annually. Milk and meat were often spoiled; the water supply untreated. Trichinellosis, a dangerous parasite found in meat, infected 16 percent of the population, while food-borne bacteria such as salmonella, clostridium, and staphylococcus killed millions, especially children, 10 percent of whom died before their first birthday. [...]

## **Does H. Pylori Cause Stomach Ulcers? (2009-09-10 16:34)**

In [1] a previous post I said that the Nobel Prize to Barry Marshall and Robin Warren – for supposedly showing that H. pylori causes stomach ulcers – was a mistake. Because half the world has the bug in their stomach, and only a tiny fraction of them get ulcers, the true cause of those ulcers lies elsewhere, probably with an impaired immune system. Marshall famously drank a flask full of H. pylori and didn't get an ulcer, yet took this to support his theory. A classic example of self-deception.

Recently Lam Shiu-kum, a former dean of medicine at the University of Hong Kong, was [2] convicted of a giant fraud. He siphoning millions of dollars of medical fees into his own pocket:

Dr Lam, 66, brought a 39 year association with the university, his alma mater, to an abrupt end in March 2007 when the investigation into billing irregularities began. He is a distinguished gastroenterologist who

conducted pioneering research into chemoprevention of stomach cancer through the eradication of *Helicobacter pylori*. His team also conducted the first double blind, controlled study into curing peptic ulcers by *H pylori* eradication.

I suppose this supports my case. As far as I know, almost all doctors and med school professors believe *H. pylori* causes stomach ulcers; I have never heard dissent about this.

More. What goes unsaid, and maybe unnoticed, in the debate about health care, is that it is hard to have decent health care (that is, decent health) when those in charge don't know what they're doing. The stomach-ulcer-etiology problem is a small example of a big thing. In case I'm not being blunt enough, let me be even more blunt: This example illustrates that the average doctor, the average med school professor, and at least two Nobel-Prize-winning med school professors (not to mention those who award Nobel Prizes) have a lot of room for improvement in their interpretation of simple facts. [3]My previous example of the infectious-disease expert (a med school professor) who overlooked the immune system is another example of vast room for improvement. It's hard to get good health care from people whose understanding of health is terribly incomplete yet don't realize this.

1. <http://www.blog.sethroberts.net/2009/04/03/nobel-prize-cluelessness-stomach-ulcers/>

2. [http://www.bmj.com/cgi/content/full/339/sep08\\_1/b3668](http://www.bmj.com/cgi/content/full/339/sep08_1/b3668)

3. <http://www.blog.sethroberts.net/2009/09/02/infectious-disease-specialist-ignores-the-immune-system/>

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Nathan Myers (2009-09-10 16:54:51)

If wiping out *H. pylori* cures ulcers, why can't we say it causes them? Otherwise you might as well say women walking alone (without, perhaps, learning karate first?) causes rape. Your intestines are heavily innervated. The trillions of individuals of hundreds or thousands of bacterial species in your gut are fully equipped to apply operant conditioning to you. They are also equipped, in principle, to produce any conceivable drug or mind altering substance. They have been demonstrated to respond to common hormones, and can probably tell a great deal about your condition from chemistry and nerve activity. Why should we not conclude that they have learned of your influence and are forcing you to speak on their behalf?

Anthony (2009-09-10 17:20:27)

Nathan said: "Why should we not conclude that they have learned of your influence and are forcing you to speak on their behalf?" Finally, the truth comes out about "Seth" (aka Bacteria Collective) and "his" (their) blog. We must stop this before they take control of other leading academics and scientists!! Now ... I ... Must. Have. My. Daily. Yogurt. Farewell. For now. Fellow. Humans ...

seth (2009-09-10 17:26:13)

"If wiping out *H pylori* cures ulcers, why can't we say it causes them?" Huh? I don't follow the logic. Lots of solutions don't involve the true cause. For example, patching a tire fixes a leak. It doesn't follow that lack of a patch caused the leak.

Nathan Myers (2009-09-10 17:59:33)

Anthony: It's worse than that; they can make him *want* to speak on their behalf, and be motivated to come up with imaginative presentations that promote their goals. Note, too, that many of the bacteria in Seth's gut are (mostly) genetically identical to those in your gut and mine. In a real evolutionary sense, they are part of the same extended individual as the ones in mine,

and yours. What benefits mine, and yours, benefits the same genes as are expressed in his. (Apparently they all feel a need for more omega-3 fats.) Seth: It doesn't follow, but carrying a patch kit is easier than avoiding every pointy thing when you're out riding. The cause of the leak was a hole. The cause of the hole was a nail. The cause of the nail was somebody's carelessness... Or maybe the hole is because the tire was too thin. It sounds like you're arguing something akin to Aristotle's material, efficient, formal, and final causes, which always devolves into mush. If you think ulcers are better to prevent than to treat, that's a claim that seems objectively supportable.

Nathan Myers (2009-09-10 18:50:23)

... the big question, though, is how did Seth's bacteria, uniquely, learn to use operant conditioning? They have observed him performing it, and lecturing about it, but lots of psych professors do that. Maybe he's just the first, of those, who started out kindly disposed toward them.

Anthony (2009-09-10 19:00:46)

@Nathan, Suddenly, it's all becoming clear. Humans are just a way for certain Lactobacillaceae (who know who they are) to reproduce themselves! We've just been an unwitting extended phenotype! Now, where's my flax-seed oil? For some reason I have a craving for it ... Seriously, Wading into the causality debate. Typically when people talk about 'the' cause, the implication is that there is just one cause, but there are almost always multiple things you can change to bring about an effect (or to not bring about an effect). I think that what we want are causes that make more sense to focus on, are easier to change, have less deleterious side-affects, and so on.

Anthony (2009-09-10 19:01:47)

@Nathan, Perhaps it's a unique mutation in Seth's bacterial population?

Nathan Myers (2009-09-10 22:21:32)

I feel obliged to add this: <http://www.partiallyclips.com/pclipslite.php?id=1623>

Alex C. (2009-09-11 06:37:08)

And speaking of inappropriate Nobel prizes, let's not forget that Portuguese neurologist Ant3nio Caetano de Abreu Freire Egas Moniz won the Nobel Prize for physiology or medicine in 1949. What was his contribution to society? Well, he invented and popularized the pre-frontal leucotomy, a variation of lobotomy. For more information, see this excellent book called "Great and Desperate Cures: The Rise and Decline of Psychosurgery and Other Radical Treatments for Mental Illness", by Elliot Valenstein: <http://www.amazon.com/Great-Desperate-Cures-Psychosurgery-Treatments/dp/0465027113/> There is also a movement (unsuccessful, so far) to strip Egas Moniz of his prize: <http://www.psychosurgery.org/news-opinion/why-nobel-should-rescind-the-prize/>

Les Jones (2009-09-11 07:48:37)

"Marshall famously drank a flask full of *H. pylori* and didn't get an ulcer, yet took this to support his theory." This simply shows that the presence of *H. pylori* is necessary, but not sufficient, to cause the ulcer. That seems to be true of most germs. We're all of us exposed to all kinds of disease-related germs every day, but don't necessarily contract every disease to which we're exposed. Review Koch's postulates of the germ theory of disease: [http://en.wikipedia.org/wiki/Koch's\\_Postulates](http://en.wikipedia.org/wiki/Koch's_Postulates) Koch's postulates are: 1. The microorganism must be found in abundance in all organisms suffering from the disease, but should not be found in healthy animals. 2. The microorganism must be isolated from a diseased organism and grown in pure culture. 3. The cultured microorganism should cause disease when introduced into a healthy organism. 4. The microorganism must be reisolated from the inoculated, diseased experimental host and identified as being identical to the original specific causative agent. However, Koch abandoned the universalist requirement of the first postulate altogether when he discovered asymptomatic carriers of cholera[1] and, later, of typhoid fever. Asymptomatic or subclinical infection carriers are now known to be a common feature of many infectious diseases, especially viruses such as polio, herpes simplex, HIV and hepatitis C. As a specific example, all doctors and virologists agree that poliovirus causes paralysis in just a few infected subjects, and the success of the polio vaccine in preventing disease supports the conviction that the poliovirus is the causative agent. The third postulate specifies "should", not "must", because as Koch himself proved in regard to both tuberculosis and cholera,[2] not



all organisms exposed to an infectious agent will acquire the infection. Noninfection may be due to: chance or to the host's immune system successfully repulsing the invading pathogen; acquired immunity, as from previous exposure or vaccination; or genetic immunity, as with the resistance to malaria conferred by possessing at least one sickle cell allele. The second postulate may also be suspended for certain microorganisms which we cannot (at the present time) grow in pure culture, such as some viruses. In summary, a body of evidence that satisfies Koch's postulates is sufficient but not necessary to establish causation.

Ronald Mignery (2009-09-11 09:54:53)

For *H. pylori* to cause ulcers, recent research suggests that it must first set up residence in the vacuoles of phagocytes: [http://www.eurekalert.org/pub\\_releases/2009-01/sfeb-hpc012709.php](http://www.eurekalert.org/pub_releases/2009-01/sfeb-hpc012709.php). The presence of *H. pylori* in the stomach is then a necessary but not a sufficient cause of ulcers. Clearing *H. pylori* from the vacuoles of phagocytes could then cure the disease even without clearing it from the stomach.

seth (2009-09-11 16:54:03)

These comments about "necessary but not sufficient" and Koch's postulates suggest to me that Warren and Marshall's confusing use of "causes" (in "*H. pylori* causes ulcers") has been a distraction – the question most helpful to answer is why a few people infected with *H. pylori* get ulcers yet almost all of them don't. As far as I can tell, Koch's postulates and studies of phagocytes don't help us figure that out.

Jeff (2009-09-12 11:44:11)

Seth, This sentence borders on the misleading, hopefully not intentionally so. "Marshall famously drank a flask full of *H. pylori* and didn't get an ulcer, yet took this to support his theory." Marshall had gastritis after drinking the *H. pylori*. And gastritis can lead to ulcers. It hardly seems necessary for him to proceed all the way to developing an ulcer for the sake of that experiment. You can disagree with the current paradigm about *H. pylori* and ulcers and still acknowledge Marshall's experiment accurately. Jeff p.s. I'm not a doctor but the gastritis -> ulcer relationship seems to be mentioned at reputable websites.

seth (2009-09-12 16:34:58)

"It hardly seems necessary for him to proceed all the way to developing an ulcer for the sake of the experiment." That's where I disagree. His theory was about ulcers, not gastritis. If you can show me evidence that gastritis always leads to ulcers, I'll revise my opinion.

anonymous (2009-09-12 20:55:46)

smoking does not always result in lung cancer, therefore it can't "cause" it?

seth (2009-09-12 23:19:05)

So what if smoking one cigarette per month doesn't cause lung cancer? I fail to see the relevance.

Sean (2009-09-13 09:49:27)

I think the word interaction may apply here.

Seth's blog » Blog Archive » Modern Biology = Cargo-Cult Science? (2009-10-08 01:37:04)

[...] Shameless. Note the utter absence of even one disease in one person cured or prevented. Not one. And this is supposed to be the most beneficial discovery in medicine. It's the top prize in medicine and biology! Last year the prize was given for HIV. Do we have an HIV vaccine? No. The year before that, HPV. Do we have an HPV vaccine? No. A few years before that, the discovery that a certain bug "causes" stomach ulcers — the award that showed that the medical community and the Nobel Prize committee have a weak grasp of the concept of causality. The biologists think they do everything right — but the planes don't land. The biologists who do this research aren't able to solve actual problems. (Some people do — those who discovered that smoking causes cancer, for example — but they don't get Nobel Prizes.) Could something important be missing from their view of the world? I think so. [...]

## More Med School Profs Behaving Badly: Professor Lila Nachtigall (2009-09-11 06:33)

New York University professor of obstetrics and gynecology Lila Nachtigall, [1]whom I mentioned recently, [2]said nice things about estrogen replacement therapy to a Newsday reporter. The story fails to say that she gets money and ghostwriting from Wyeth, which makes the pill used in that therapy.

1. <http://www.blog.sethroberts.net/2009/09/09/med-school-profs-as-drug-company-lackeys/>

2. [http://www.cjr.org/the\\_audit/reporter\\_fed\\_pill\\_story\\_swallo.php](http://www.cjr.org/the_audit/reporter_fed_pill_story_swallo.php)

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Spell Checker (2009-09-11 13:41:52)

Your link is not working, there is an extra "h" at the end of the url. The corret URL is [http://www.cjr.org/the\\_audit/reporter\\_fed\\_pill\\_story\\_swallo.php](http://www.cjr.org/the_audit/reporter_fed_pill_story_swallo.php)

Timothy Beneke (2009-09-12 12:12:54)

I wonder if med school profs are worse than other profs because they typically have to raise much or most of their salaries. I know at the Colorado med school, professors had to raise 75 % of their salaries on their own. My experience with a friend who had unexplained stomach pain was instructive. She saw 6 "experts", 3 who worked for fixed salaries at institutions (Kaiser, Stanford, etc.) and 3 who were in the marketplace getting paid based on what they brought in each year. The three who were on fixed salaries were professionally cordial, and openly admitted that they could not say with confidence what was causing her pain. The three who were not on fixed salaries were very touchy feely and charming and spoke with complete confidence about the cause. I don't think this was accidental; I'd love to see formal research on this...

Tom in TX (2009-09-12 12:34:38)

Timothy, I wonder who should do the formal research - someone on a fixed salary or someone who is paid for the results? 8-)

Seth's blog » Blog Archive » Perverse Incentives in Medicine (2009-09-12 16:47:55)

[...] In the comments, Timothy Beneke wrote: My experience with a friend who had unexplained stomach pain was instructive. She saw 6 "experts", 3 who worked for fixed salaries at institutions (Kaiser, Stanford, etc.) and 3 who were in the marketplace getting paid based on what they brought in each year. The three who were on fixed salaries were professionally cordial, and openly admitted that they could not say with confidence what was causing her pain. The three who were not on fixed salaries were very touchy-feely and charming and spoke with complete confidence about the cause. [...]

Seth's blog » Blog Archive » The Ethical Stupidity of Med School Professors: Plagiarism Very Very Bad, Ghostwriting Okay (2009-09-18 06:21:07)

[...] Whereas medical school professors haven't managed to figure that ghostwriting is plagiarism (taking someone's words and ideas as yours without acknowledgment). And it happens all the time. NYU med school Professor Lila Nachtigall, as I've noted, considered the deed so minor she forgot that she'd done it. Apparently using a different word confuses them. A recent article in Nature reveals the befuddlement of the entire medical establishment about this. We're not sure what to do about it, journal editors say. As Tony Soprano's mom would say: Poor you. [...]

## More Schoolgirl Science (2009-09-11 20:43)

[1]Two New Zealand teenagers humbled GlaxoSmithKline, one of the world's biggest food companies:

Their school science experiment found that [GlaxoSmithKline's] ready-to-drink Ribena contained almost no trace of vitamin C.

Students Anna Devathan and Jenny Suo tested the blackcurrant cordial against rival brands to test their hypothesis that cheaper brands were less healthy.

Instead, their tests found that the Ribena contained a tiny amount of vitamin C, while another brand's orange juice drink contained almost four times more. . . .

GSK said the girls had tested the wrong product, and it was concentrated syrup which had four times the vitamin C of oranges. But when the commerce commission investigated, it found that although blackcurrants have more vitamin C than oranges, the same was not true of Ribena. It also said ready-to-drink Ribena contained no detectable level of vitamin C.

The students used [2]iodine titration to determine Vitamin C levels. Why had the students managed to see something important that the food giant overlooked? My guess is that an unusual processing step (e.g., high storage temperature) destroyed the Vitamin C and those who knew about the anomaly didn't want to consider the possibility that it had done damage. The possibility that someone outside the company might notice didn't occur to them. Just as those who mislabel fish in New York restaurants and markets never realized that [3]two students could uncover their deception. I found that [4]the omega-3 in a Chinese brand of flaxseed oil was probably destroyed before it got to me.

1. <http://www.guardian.co.uk/world/2007/mar/27/schoolsworldwide.foodanddrink>

2. <http://www.abc.net.au/7.30/content/2007/s1882263.htm>

3. <http://www.blog.sethroberts.net/2008/08/22/citizen-science-whats-your-sushi/>

4. <http://www.blog.sethroberts.net/2007/06/30/science-in-action-omega-3-a-surprise/>

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Kevin Miller (2009-09-12 04:33:12)

I'm curious about what you're doing/did in Beijing now to try to get something that might really be flaxseed oil high in Omega 3s.

seth (2009-09-12 16:51:12)

Kevin, I bought a lot of flaxseed oil in America and dragged it here. (Literally dragged it. The duffel bag was too heavy to carry.)

Kevin Miller (2009-09-12 20:11:10)

I was afraid of that :

Kevin Miller (2009-09-12 20:13:37)

My effort to put in an emoticon seems to have truncated this. Thanks for the info. Do you try to keep it refrigerated, or aren't you worried about deterioration? For me, the purchase of a Kindle has greatly lowered the weight of my luggage when I go to China. I guess flaxseed oil can now take the place of print...

seth (2009-09-12 23:22:50)

Yes, I try to keep it refrigerated.

Nathan Myers (2009-09-14 15:30:49)

I have a bottle of flaxseed oil that has been continuously refrigerated since I bought it, including one week in an ice chest in 2005 while I drove cross-country. Its expiration date says November 2001. (Not a joke.) I wonder if it would be useful to

anybody for research on deterioration rates or something.

## Perverse Incentives in Medicine (2009-09-12 16:47)

In the comments, [1]Timothy Beneke wrote:

My experience with a friend who had unexplained stomach pain was instructive. She saw 6 "experts", 3 who worked for fixed salaries at institutions (Kaiser, Stanford, etc.) and 3 who were in the marketplace getting paid based on what they brought in each year. The three who were on fixed salaries were professionally cordial, and openly admitted that they could not say with confidence what was causing her pain. The three who were not on fixed salaries were very touchy-feely and charming and spoke with complete confidence about the cause.

Wow. This reminds me of my surgeon, Eileen Consorti, telling me that the operation she recommended would help me, that there was evidence for this, and then – when I couldn't find any evidence – [2]telling me she would find it and never doing so. She would have gotten thousands of dollars for that operation. It also reminds me of my dermatologist prescribing a medicine that didn't work and, until I did an experiment that showed it didn't work, having no idea it didn't work. He got paid in any case.

1. <http://www.blog.sethroberts.net/2009/09/11/more-med-school-profs-behaving-badly-professor-lila-nachtigall/#comment-342503>

2. <http://www.blog.sethroberts.net/2008/09/13/the-case-of-the-missing-evidence/>

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Dennis Mangan (2009-09-13 06:19:27)

The Kaiser-type doctors will be happy to tell you that they don't know what's going on, but then they'll quit trying to find the answer. At Kaiser, if you don't fit their algorithms, you've got a problem. The for-profit docs will keep trying so long as you're paying them.

dgm (2009-09-13 13:55:56)

My PCP started out determined to discover what had been causing me to suffer mysterious wild twitching in my legs and chest muscles, preceded by migraine auras without headaches, and only at night. He listened patiently, asked a lot of questions, looked at notes I'd kept, really puzzled over it. He even called me a few times to get more info. He seemed genuinely intrigued. Then he decided to start me on Requip for Restless Legs Syndrome even though, as I noted to him, my symptoms were inconsistent with RLS. "Yes, but if it doesn't work we can rule it out," was his response. Well sure, we could spend a lot of time ruling out different drugs! Instead, I obtained all my medical records from the various doctors I'd seen over a few months (all of whom were mystified, including a Stanford-trained neurologist), reviewed my notes about the occurrences–time, severity, foods I'd eaten, etc., did a lot of Googling, and solved the problem myself. Turned out, blood tests had shown my magnesium was low so I . . . started taking magnesium. Problem solved.

seth (2009-09-13 16:38:04)

that's a great great story, dgm and that's a very good point, Dennis. It's been said that without being wildly overoptimistic nothing would get done because everything turns out to be so difficult. Without wild overoptimism nobody would start

anything. too bad there isn't a third type of doctor: satisfaction guaranteed. No pay unless the problem is solved.

Clyde Adams III (2009-09-15 10:32:29)

"Cure Guaranteed" was the motto of Dr. Leo Schutzmacher, a minor character in G. Bernard Shaw's 1906 play The Doctor's Dilemma. It's on page 94 of the Google Books online copy, in Act I. <http://books.google.com/books?id=wmhIAAAAMAAJ&pg=PA94#v=onepage&q=&f=false>

### More about the Effects of Flaxseed Oil (2009-09-13 16:28)

Commenting on [1]an earlier post, Jack Rusher [2]reports:

Like Anonymous, I'm an MMA [Mixed Martial Arts] enthusiast. My experience with 3 T/day of flaxseed oil have been more or less identical to his. Before: high doses of NSAIDs [non-steroidal anti-inflammatory drugs] just to survive training, constant soreness and fatigue, etc. After: no joint pain at all, complete discontinuation of NSAIDs, lower frequency and severity of injury.

Dental results: my hygienist made strong comments regarding the improvement of my gums on my first post-flax visit, attributing it to changes in my oral care behavior . . . of which there were none.

1. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>

2. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/#comment-342479>

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Ashish (2009-09-13 18:13:47)

Is this re: oil pulling, or actually drinking the stuff?

Anthony (2009-09-13 18:59:13)

Seth, here's more anecdotal evidence about the effects of flaxseed oil, but on a different aspect. Before taking flaxseed oil, I rarely would catch things I had knocked over or as they were falling. Now, after several months, usually taking 2-3 tablespoons per day, my reflexes seem significantly better. Here are 2 typical examples, from yesterday: 1. I brushed a partially full wine glass, sending it wobbling on it's way to shortly careening off the table. I reached out, calmly, but with what in retrospect seemed like preying mantis-like reflexes, grabbing hold of the glass just before disaster, with only a drop of wine spilling from the incident. 2. I was driving and talking to someone in the passenger seat at the same time. Some folded papers began to fall off the dashboard due to the acceleration. They were not floating but falling like most any solid object. I calmly and casually caught them mid-fall, and placed them in the back seat. In both cases, there was a 'happening in slow motion' aspect to it, where it seemed I was seeing things happen slower than it would usually be processed.

seth (2009-09-13 22:41:12)

Anthony, I noticed the same thing. I catch stuff that pre-flaxseed-oil would have fallen.

Nathan Myers (2009-09-14 15:37:36)

I've already mentioned to Seth the improvement in my pinball scores mere minutes after eating a couple of tablespoons of flaxseed oil. The effect occurs much too quickly to be a metabolic consequence, i.e., conversion from 18-base to 20-base fatty acid, incorporation into membranes. It seems to me it must be interpreted as a drug-like effect, more akin to taking caffeine than tocopherols. I have no idea whether it's actually the n3 fat involved; flaxseed oil has lots of components.

Henri Deschaux (2009-11-16 18:30:05)  
Is it okay to take the flaxseed oil capsules?

rex (2010-02-25 18:41:17)

Why eat omega-3 fatty acids from flax seed? Dietary deficiency of omega-3 fatty acids can cause long term damage to human health. The Food and Drug Administration (FDA) has recognized the importance of omega-3 to public health and their importance to coronary health. Here is a problem: The omega-3 in American diet has decreased gradually over time with the increased consumption of processed foods. On the other hand dietary levels of Omega-6 fatty acids have increased due to consumption of oils that are rich in omega-6 fatty acids. This dietary imbalance of omega fatty acids has created unfavorable ratio of omega 3:omega 6 in our body. It is not just the amount of omega-3 consumed but the amount of omega-3 in relation to the amount of omega-6 oils consumed that is important to keep the ratio to a favorable level of 1:4 (omega 3:omega 6). Solution: Flaxseed provides one of the only non-animal sources of omega-3 that contains significantly more omega-3 than omega-6. About 57 % of total oil in flaxseed is in the form of alpha-linolenic acid (ALA), an Omega-3 fatty acid that is essential for human health. To improve omega-3 levels and ratio between omega 3 and Omega 6, it is important to consume foods that contain significantly higher levels of omega-3 than omega-6. There are very few foods that do that " Flaxseed is one of them. The ALA is converted by the body into eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA) omega-3s that are found in fish oils. The EPA and DHA are also essential omega-3 fatty acids for human health. The conversion of ALA to EPA and DHA is not a very efficient process in body but remember a diet rich in flax seed, will provide all three omega-3 fatty acids that are essential to healthy human health.

#### Assorted Links (2009-09-14 05:49)

- [1]Berkshire Encyclopedia of China. [2]Interview with the publisher.
- [3]Self-experimentation and panic attacks
- [4]Simon Singh sued by National Chiropractic Association
- [5]Nassim Taleb testifies to Congress. [6]Interview with Taleb.

Thanks to Dave Lull.

1. [http://www.booklistonline.com/default.aspx?page=show\\_product&pid=3583527](http://www.booklistonline.com/default.aspx?page=show_product&pid=3583527)
2. [http://www.booklistonline.com/default.aspx?page=show\\_product&pid=3652089](http://www.booklistonline.com/default.aspx?page=show_product&pid=3652089)
3. <http://www.getbig.com/boards/index.php?topic=297224.msg4244717>
4. <http://blogs.bmj.com/bmj/2009/09/10/sile-lane-on-keeping-libel-laws-out-of-science/>
5. [http://democrats.science.house.gov/Media/file/CommDocs/hearings/2009/Oversight/10sep/Taleb\\_Testimony.pdf](http://democrats.science.house.gov/Media/file/CommDocs/hearings/2009/Oversight/10sep/Taleb_Testimony.pdf)
6. <http://www.theglobeandmail.com/report-on-business/we-still-have-the-same-disease/article1286246/>

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Nathan Myers (2009-09-14 19:36:29)  
Nassim Taleb and Nouriel Roubini really should consider merging.

## Advances in Cooking: Chocolate Chip Cookies (2009-09-14 07:31)

Toni Rivard, a Dallas dessert caterer, makes one of the best chocolate-chip cookies in America, [1]according to Forbes Traveller. She ages her cookie dough about three days. She says it improves the texture. I wonder if it improves the flavor, too:

Rivard's secret? "I like to age my cookie dough and feel that it makes for a better texture in cookies. As a result, the aptly-named OMG! [which is what customers have actually said when they taste one] chocolate chip cookies at Creme de la Cookie are soft and chewy with a deep rich flavor.

Fermenting cookie dough should certainly improve the flavor, although chocolate already supplies a lot of complexity. My experience has been that cooking delicious stuff became a lot easier when I started using fermentation to help (e.g., miso soup instead of soups flavored without fermented ingredients).

Thanks to David Archer.

1. <http://www.forbestraveler.com/food-drink/best-cookies-2009-story.html>

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Laura (2009-09-14 08:04:26)

Yes, yes, yes! Aging cookie dough seriously improves the flavor of cookies. I discovered this by accident some years ago. I'd made John Thorne's "best cookie in the world" recipe and was unimpressed by the first batch, so I stuck the remaining dough in the fridge and forgot about it. Being terminally cheap, when I remembered it several days later, I baked the rest of the cookies rather than pitching out the dough. THESE \*were\* the best cookies in the world, orders of magnitude better than the first batch. Since then, the New York Times has published an article on how aging cookie dough affects taste and texture (<http://www.nytimes.com/2008/07/10/travel/10iht-09chip.14376338.html>). Similar principles are used by many artisan bread bakers to excellent result.

Nathan Myers (2009-09-14 15:42:11)

Of course chocolate is itself fermented; the good stuff is fermented in-pod for a few days on the forest floor, in a heap under leaves. Likewise, good butter is fermented. In the U.S. you have to find "european style" butter to get this. One mark of good chocolate-chip cookies is not to have too many chips. There should be only one chip per bite.

Stacey (2009-09-14 18:31:26)

Aging cookie dough really does make the cookies taste better. I discovered this for myself when I made the chocolate chip cookies per the recipe in the NYT. (See: [http://www.nytimes.com/2008/07/09/dining/09chip.html?pagewanted=2&\\_r=1&ref=dining](http://www.nytimes.com/2008/07/09/dining/09chip.html?pagewanted=2&_r=1&ref=dining)) I'm sure fermentation has something to do with it . . . according the article, hydration is also an important factor contributing to texture and taste. The longer the dough sits, the more hydrated the flour becomes and the bigger and more complex the flavor. If you are looking for a good aged cookie recipe to try, definitely make it these choc chip cookies - they are heavenly!

Tim Buczak (2009-09-14 18:32:14)

Makes sense. There are several "No knead" bread making techniques that involve leaving the bread dough to rise for several days in the fridge. I'm not a biologist, but I think it involves the process of autolysis where the flour, water and yeast form the gluten over time versus by kneading. This method of leaving the bread dough for over two weeks to let the natural

fermentation process take place. (<http://www.artisanbreadinfive.com/>) . I haven't tried it but It seems to make sense with your fermented food ideas. So it makes sense for the gluten to form in cookies as well. I wonder if the baking powder/baking soda would break down in the wet dough.

Stephen M (Ethesis) (2009-09-19 19:09:50)

A number of cookie recipes require letting the cookies sit at least overnight. I'd never thought about why before, other than it does let the fluids distribute better.

Toni Rivard (2009-10-25 10:42:11)

It truly does improve the flavor. The color of the cookie will also be affected - the dough darkens and the cookie even looks tastier, which it is.....

Scott Bishop (2009-11-20 05:41:52)

Hmmm...sounds interesting. Worth a try!

Deborah M (2010-03-24 21:35:40)

Can one go too far with this? I left some really fine oatmeal raisin cookie dough in the fridge for maybe two weeks. I had previously aged some for a few days, and found a really interesting change in the flavor—a kind of almond effect, very subtle. This time it got more fermented—parts of it even got wet, as if turning, all of the dough a slight tang in the smell, nothing terrible. I made the cookies small and thin and baked them about double the usual time, and they are delicious—very crisp and delicate. Nutritionists out there—can this be dangerous? When does fermentation become breakdown?

Glyka Tammam (2011-05-25 06:11:06)

Will try this one out for sure, thanks!

## **Are We Running Out of Omega-3? (2009-09-14 18:23)**

[1]Apparently. The obvious source is fish but we are running out of fish:

In 2006, aquaculture production was 51.7 million metric tons, and about 20 million metric tons of wild fish were harvested for the production of fishmeal. "It can take up to 5 pounds of wild fish to produce 1 pound of salmon, and we eat a lot of salmon," said Naylor, the William Wrigley Senior Fellow at Stanford's Woods Institute for the Environment and Freeman Spogli Institute for International Studies. [via [2]Future Pundit]

This is why Jared Diamond's *Collapse* is so unfortunate. Diamond is a good writer and the question he tried to answer in that book is extremely important. But he whiffed. Suppose I write a book about obesity. I give a list of ten reasons people are fat: 1. Too much Food X. 2. Too much Food Y. And so on. (Just as Diamond gave a list of eight-odd reasons societies collapse.) Such a book would be far less helpful than a book with a correct theory about obesity, a theory that explains why Foods X, Y, etc. cause obesity. The theory could be used to find new, better, flexible ways of avoiding obesity. The list of foods to avoid cannot. In *The Economy of Cities*, Jane Jacobs (whom Diamond doesn't mention) said that collapse happens for one overarching reason: The society is too resistant to new ways of doing things. The crucial struggle in any society, said Jacobs, isn't between the rich and the poor or between owners and labor; it's between those who benefit from the status quo and those who benefit from change.

Thanks to Peter Spero.



1. [http://www.eurekalert.org/pub\\_releases/2009-09/su-hot090409.php](http://www.eurekalert.org/pub_releases/2009-09/su-hot090409.php)
2. <http://www.futurepundit.com/archives/006529.html>

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Steve G. (2009-09-15 08:42:20)

A couple of random thoughts: 1. The Jacobs position sounds somewhat like Arnold Toynbee's theory of 'challenge and response' from his A Study of History. Does she cite him? 2. Issues of response to rapidly rising health care costs and global climate change, to name just two current issues, seem to me to illustrate this problem. Entrenched interests and commitments to established ways of doing things seems to prevent needed action to avert looming-perhaps catastrophic- problems.

seth (2009-09-15 16:31:13)

Steve G., no Jacobs doesn't mention Toynbee anywhere, as far as I know. I completely agree about health care and global climate change. And I agree about lumping them together: If a society is too status-quo-oriented in one area, it is likely to be the same way in other areas. America's response to the financial crisis is a third example: the underlying features that caused the crisis are still there because there is a strong bias against change.

Nathan Myers (2009-09-15 21:27:35)

I don't see any reason to dump on Diamond here. Tracing out the paths to destruction of a series of societies is instructive by itself. Speculating on how each might have been saved would not have strengthened his book. Those that *did* stave off collapse provided examples of what a society must be capable of if it is to survive.

david (2009-09-16 07:08:13)

34,000 years ago humans were making stuff from flax. I wonder if they ate the seeds too.  
<http://www.physorg.com/news171811682.html>

Nansen (2009-09-18 14:49:30)

I still think you may be missing a larger point about Diamond: he has lost his confidence in technology (i.e. "new ways of doing things") as a solution, because of 1) its track record of unintended consequences, and 2) time has run out for it. See Chapter 16 of Collapse. His pessimism seems to go so far as to make any status-quo resistance irrelevant.

seth (2009-09-18 16:52:08)

Nansen, thanks for the comment. Maybe Chapter 16 was omitted from the audiobook version of Collapse. The next time I get a printed copy I will look at it.

Stephen M (Ethesis) (2009-09-19 19:11:17)

Speaking of medical care, does China have Wal-Mart medical clinics? In states that allow them, they are spreading as the low-cost alternative to other sources of care. Too bad they are not being discussed in the current debates here in America.

Tom in TX (2009-09-20 21:12:26)

I heard a guy on the radio about a month ago being interviewed about this sort of thing. He had written a book, but I can't remember his name or the title. The book was about the future of medicine. He was very much in favor of the kind of treatment given at urgent care clinics like CareNow and others. They have a list of 35-40 conditions they will treat. When a patient comes in, they make a go/no-go decision of whether the patient has one of those conditions. If he does, he is treated according to a predetermined list of steps. He said that these clinics have had zero suits for malpractice. Did I hear that right?

Zero? It sounds amazing. The author believed that it would be possible for medical knowledge to expand in the next few years so that more and more conditions could be treated like this. It would bring costs down and free up hospitals to treat more difficult cases. If anyone knows the name of the book/author, please chime in.

seth (2009-09-21 00:12:00)

One of my favorite authors, T R Reid, has just published a book called "The Healing of America" which is about health care around the world. However, I don't think that's who you mean.

Robert Ratcliff (2009-12-26 05:56:09)

Hey Seth Great Blog! The concern with fish oil is they are dealing with toxins and contaminants, not to mention the fish supplies in the world diminishing. Yet Mila is a sustainable resource. Fish Oil people have a major concern with Mila from Lifemax because they market that you need the EPA and DHA that are not really essential. Here is the kicker, Mila provides ALA that is essential and supplies what your body doesn't produce, but your body converts from the ALA to the needed EPA and DHA if that was even a concern, go figure! Dr. Wayne Coates has spent the last twenty years of his life researching Mila, perfecting it and finding the optimal growing conditions. Crops can be increased and there is plenty of land with the requirements needed. Sincerely, Robert and Sharri Ratcliff

Robert Ratcliff (2009-12-26 05:57:02)

Where is your RSS Full Feed so I can be following you?

### **Beijing Wal-Mart (2009-09-15 17:03)**

To buy a refrigerator, a friend suggested I try a store called Vollna, to which I found references online. When I got to the right subway station, however, no one had heard of it. She'd meant Wal-Mart. The Beijing Wal-Mart has many interesting features:

1. They sell live turtles.
2. A whole display case is devoted to sea cucumbers.
3. Like any upscale American or Beijing supermarket, they have a sushi case. The prices are half what they'd be in America, but the pieces of fish are much thinner.
4. They cut up meat in front of you. A whole pig was being butchered on a table. A roast duck was being sliced for packaging.
5. They had pairs of escalators (actually sloped moving walkways) going in the same direction. For heavy traffic, I guess. I've never seen such a thing anywhere else.
6. It's extremely convenient, right next to a subway station. In America, as all Americans know, Wal-Marts are almost never convenient. Which is why I've been to an American Wal-Mart only twice, in spite of the large selection and low prices.
7. The refrigerators were hidden behind large stacks of what looked like flour.
8. After I bought a blood pressure monitor, the salesperson added batteries and showed me how to use it. Such product verification/education has happened before to me in Beijing, never in America.
9. A staggering number of food samples. Maybe a hundred. Other Beijing supermarkets are like big-city American supermarkets; some have samples, some don't. This was a full-court press. Every possible sample. The roast

duck was the best, the yellow kiwi (sweeter than green kiwi) the most unusual. I got tired of sampling and stopped. I can't remember that happening before.

10. The prices were ordinary Chinese prices. Not unusually low. To bring flaxseed oil to China I'd bought a very large duffel bag from Land's End, so large I had to drag it. (Which ruined it.) It cost \$70 plus shipping. Wal-Mart had a more reasonably-sized large duffel bag, better-made and with wheels for \$20. Ugh. It was the wheels, not available at Land's End, rather than the \$50 difference, that pissed me off. My too-heavy duffel bag was a pain in the butt because I had to drag it (at the same time carrying other luggage). This made me never want to shop in America again for anything I could get in China.
11. Cigarettes are in a special booth off to the side. About 200 choices.

They can't compete on price in China, of course. So my guess is that they are trying to compete on selection, convenience, and customer service (thus all the sampling). That you can return stuff was very clear.

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Glen Raphael (2009-09-15 20:27:10)

Yep, I always bought luggage in China. Although nowadays I think you can find pretty similar stuff for not \*that\* much more in your local chinatown area in the US. Regarding the personal service component in #8, I have two suggestions: (1) get a haircut. (2) buy a pair of jeans. The haircut is likely to be cheap \*and\* include a significant massage component. If you buy jeans, there is likely to be somebody there who will tailor them on the spot for you for free while you wait - hem, inseam, any change you might expect from someone selling suits here, but this is on a \$25 pair of jeans with immediate turnaround.

Aaron Blaisdell (2009-09-16 08:44:17)

"I got tired of sampling and stopped. I can't remember that happening before." I'll say! When we've gone to farmer's markets together, I was amazed at how many samples you consumed. I thought you'd get full by the end of the shopping trip. I agree with Glen. I bought a baby stroller in Hong Kong and though it wasn't cheap, it was at least half the price of a comparable stroller in the US. And it was very well designed, light, compact, and durable (we're currently using it with our second child and it's held up the best of all of our strollers). I also second Glen's suggestion to get a hair cut. I love getting a hair cut in Hong Kong (in the Chinese areas where my wife's family live). It's almost like a mini spa treatment. I get pampered, including a long hair wash with a soothing scalp massage. And the prices are dirt cheap! You may have to ask for the massage to ensure that you get one.

The Writing On The Wal » Blog Archive » FROM AN AMERICAN IN BEIJING... (2009-09-17 11:40:34)

[...] We haven't heard much from China in recent months. Blogger Seth shares his list of eleven interesting features he observed at the Walmart in Beijing, China, while in search for a new (cheap plastic?) refrigerator. My favorites is No. 9: A staggering number of food samples. Maybe a hundred. Other Beijing supermarkets are like big-city American supermarkets; some have samples, some don't. This was a full-court press. Every possible sample. The roast duck was the best, the yellow kiwi (sweeter than green kiwi) the most unusual. I got tired of sampling and stopped. I can't remember that happening before. [...]

Mike (2009-09-17 12:04:13)

Chinese Walmart (Wer-mah) is so much better than American Walmart. The only downside when I was there two years ago was the paltry toy section, which I'm sure they've improved. Who'd think Walmart dim sum would kick so much ass. And they have a liquor section!

The Writing On The Wal » Blog Archive » At Walmart in China, they still cut meat in house. (2009-09-17 12:05:56)

[...] Yes, I know Jeff beat me to this, but I still want to write about my favorite: They cut up meat in front of you. A whole pig was being butchered on a table. A roast duck was being sliced for packaging. [...]

marc (2009-09-18 09:58:42)

There are lots of tandem or even three-at-once (in a single direction) escalators in hong kong. I think maybe there is a 6 laner (at least!) in Central MTR station. Brilliantly, the directions of the escalators changes depending on usage patterns – may be balanced 3/3 or 4/2, or sometimes one or two are turned off. This paradigm is used throughout Hong Kong, especially on the 3-laners where 2 are going one way and 1 is going the other.

The Writing On The Wal » Blog Archive » BAD PRODUCTS... BAD WALMART... (2009-09-18 12:20:13)

[...] Yesterday Jonathan and I both took note of Seth's 11 interesting finds in the Beijing Walmart. Today at Mental Floss, Ethan Trex notes 11 things Walmart has banned. But what I found amazing is what Trex missed; what should have been No. 1. [...]

Erika (2009-09-18 12:33:59)

Mexico-Walmart had free vodka samples. And booze galore.

Laolao (2009-09-18 18:34:44)

Walmart is doing fine in China, I guess, except when beating the customer (or was it a shoplifter?) to death. See: <http://news.bbc.co.uk/2/hi/asia-pacific/8244561.stm> The news has more or less been silenced. If you google the event from Beijing, you'll find the links to news stories about this blocked. Anyway, I'll abstain from shopping at Walmart.

Stephen M (Ethesis) (2009-09-19 19:08:47)

That was really interesting, as is the fact that the newer Wal-Marts are very convenient in location (e.g. several in Plano where I live). Interesting how things evolve.

lee (2009-09-20 03:22:15)

I think the selection at Wal-mart in China is terrible. The clothes are too small and they don't even have simple things like aspirin, mustard, french dressing, croutons, pickles, waffles, measuring cups, deodorant, syrup, Kool Aid, Frito's, pita bread, English muffins, bagels, hot dog buns, taco shells, root beer, or all-purpose flour. Parents in China allow kids to pee and poop on the floor of stores, too.

seth (2009-09-20 06:35:41)

Lee, until I got to the last sentence I thought you were joking. I have never seen a kid pee or poop on the floor at a store (in the street, yes) but you clearly know more about this than I do. There are no measuring cups anywhere, not just Wal-Mart. There is a huge selection of pickles (perhaps 30 kinds) at the Beijing Wal-Mart but they don't look like American pickles. As for the baked goods, they have a big selection.

Janne (2009-09-21 21:03:20)

The Walmart I visited in China had western toiletries and some foods, but for very high price. The only negative was the luggage I bought from there for \$20 or so broke on it's maiden voyage.

JJC (2009-09-23 21:28:58)

Yes, in the USA the Wal-Marts are very much inconveniently located if you are a backpacker or (caution 70's lingo ahead) a hippie type on foot! As a red blooded, job working, wage earning, tax paying, car driving American I thank God every-day for this... LMAO! Now if they can figure out how to keep out the 17 other catagories of undesirable shoppers I would be in heaven. Hopefully they will not go to the 18th catagory, because that includes me... LMAO I love visiting American chains overseas, regardless of the type of business. It is very interesting to take note of how the service and or merchandise is tweaked to suit the local taste and or cultural norms. You can learn a lot about a local culture this way

because you have a mental baseline to measure the deviation. Because of this I am now so curious I am going to visit the Beijing Wal-Mart this afternoon and have a look around! Any Costcos in the area? Loved visiting them in Taiwan and comparing.

Seth's blog » Blog Archive » Beijing Subway Security in Action (2009-10-03 18:12:35)

[...] Have I told you about the time I took a cleaver on the Beijing Subway? The Beijing Subway has security: They screen all bags. It started before the Olympics and, after the Olympics ended, kept going. At Wal-Mart, I bought a cleaver/cutting board/chopstick set (enclosed in plastic), put it in my laptop bag, and entered the subway. I was stopped. The cleaver had shown up on the scanner screen. The guard was pleasant and after I showed her what it was I was quickly sent on my way. [...]

madmilk (2009-10-10 11:04:41)

People in America need to realize just what got America in this shape—cheap—yes so-called cheap items from a foreign land. quote\*Wal-Mart firmly believes in local procurement. We recognize that by purchasing quality products, we can generate more job opportunities, support local manufacturing and boost economic development. Over 95 % of the merchandise in our stores in China is sourced locally. We have established partnerships with nearly 20,000 suppliers in China. \*end quote! Now! if there be 182 countries making items for the world to buy and they have only 5 % of the pie in China—duh! This company makes the nice people of China support their currency(yuan) by keeping it in their country working for the people there—but with the yuan going up in value and the US dollar going down—all the foreign items that the American consumer buys thinking it is cheap has went up in price. People—it's all about the currency and to keep a currency strong you got to keep it floating around the country you live in so it can work for you. For the past 12 years all them US dollars are being shipped overseas to a foreign bank and with the American worker not making anything for the foreigner to buy the—we the people—have to turn to the—second—largest employer in America(Uncle Sam) to sell—we the people—debt in order to get all them dollars back! 50 years ago a foreigner would have given their left nut for a US dollar or a Hershey's chocolate bar and today the same foreigner has got Uncle Sam and the American consumer by both all the while Hershey is moving the chocolate factory to Mexico. Wake up! America and think —MADE IN AMERICA.— quote\*”Considering that there are over 30,000 ships at sea this morning,” writes James Carlton, director of the Williams College-Mystic Seaport Maritime Studies Program, in an e-mail, “the total number of organisms and species in this global 'bioflow' on the morning your readers read your piece could be staggering - billions of individuals, and thousands of species.” Indeed, scientists have long considered ballast water the primary way invasive aquatic organisms are introduced. From the zebra mussel's arrival in the Great Lakes, to an American jellyfish severely disrupting Black Sea fisheries, the potential costs of accidental introduction of a species to new homes can be tremendous. Aquatic invasives cost the US \$9 billion yearly, according to estimates by David Pimentel, professor emeritus of ecology and evolutionary biology at Cornell University in Ithaca, N.Y. Zebra and quagga mussels (a cousin to the zebra) alone cost the \$1 billion annually.\*end quote! that is \$9 billion a year in hidden taxes to all Americans... cheap ain't chic and it cost America.....jobs!

... (2009-11-17 23:00:46)

Lee, I agree! It is shocking for a Wal-Mart in China not have name brand Western products prominently displayed. It's almost like those things aren't universal staples.

clarissa (2009-12-27 05:46:38)

Hi Seth; I came upon your website after I googled the words "Walmart in Beijing" along with "subway" and just dropped by to read what your blog had to say about it. I was just wondering, what's the nearest metro/subway station for any branch of Wal-mart in Beijing (preferably the one nearest the Tiannamen West subway station)? I am currently on a holiday here till Tuesday afternoon and would like to since it did not mention in this particular entry. Would appreciate any info. Thanks on adv. and keep blogging :)

seth (2009-12-27 06:18:06)

The Walmart I visited is one stop south of Wudaokou on the #13 line. It's right next to the station. I think the station is called Zhichunlu but I'm not sure about that.

slimdrea (2011-05-10 20:45:56)

Great read! I've just moved to Beijing and am sooo excited to go to Walmart today. I am a born and raised New Yorker who only got to visit Walmarts a few times a year when I went out of state. I can't believe now that I live on the other side of the world, I have one so readily available to me. This will be added to my list of reasons why I am loving Beijing (I am sure after my honeymoon period I will have an accompanying list of reason why I don't like Beijing too...hehe). Thanks!

marcus (2011-06-13 21:00:28)

Does Walmart in Beijing accept American Express credit cards? I've been here for quite some time now and am still finding difficulty finding stores accepting american express.

Seth Roberts (2011-06-14 04:58:57)

I doubt that Beijing Walmart accepts American Express. At Walmart, I used a debit card from a Chinese bank.

Dew (2011-11-16 22:47:40)

AE is not accepted in a lot of places worldwide because AE's charging a lot more than other credit cards. But local bank cards are accepted everywhere and even in HK.

Dew (2011-11-16 22:49:56)

But where can you get a good refrigerator in Beijing anyway? We just moved here from Canada and desperately need a good size fridge and a oven / microwave but can't find a reasonable usable one

Seth Roberts (2011-11-16 23:52:18)

Looking for a refrigerator? Try an appliance store, such as Goma.

## **How Dangerous Are Cell Phones? (2009-09-16 17:22)**

[1]A new report has come out that says that cell phones probably do cause cancer, as several people, such as [2]David Servan-Schreiber, have argued. But the news is not all bad:

The design of the study is fundamentally flawed, as well-documented by "Cell Phones and Brain Tumor." For example, users of cordless phones only were treated as unexposed. But, two independent studies found users of cordless phones had an increased risk of brain tumors. So, excluding such users underestimates the risk of brain tumors. This flaw suggests either ignorance or dishonesty on the part of the researchers running the Interphone Study. Then, there's the suspicious finding from some parts of the Interphone Study which concluded the use of a cell phone for less than ten years lowers your risk of brain tumors. This suggests the bias was so strong it eliminated enough tumor risk to show decreased incidence. The Interphone studies did find more brain tumor risk after more than ten years of cell phone use. The report notes that the risk was so great it could not be camouflaged even by the bias of the study.

Emphasis added. The person who wrote that hasn't heard of [3]hormesis.

1. <http://www.emfacts.com/weblog/?p=1154>

2. <http://www.truthout.org/article/twenty-appeal-against-cell-phone>

3. <http://www.blog.sethroberts.net/2009/05/12/the-dose-response-revolution-and-fermented-food/>

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Caleb (2009-09-17 05:02:36)

What'd be interesting is to see the data broken down by how often a person uses a cell phone. I imagine we'd see those who use their phones only every now and then for short calls would have less brain cancer due to hormesis. Here's to being an antisocial guy:) Now if we just knew where the dose response peaked: "Sorry honey, I'm going to cut you off; I'm over my allotted radiation regime for today."

Dave (2009-09-25 14:49:02)

Forget hormesis. What about the irony of someone suggesting that a study must be biased because its results don't fit his pre-conceived notions?

seth (2009-09-25 16:09:49)

Dave, that's a very interesting comment. In my experience, to test Theory X you can never arrange a pure test: a test of Theory X and nothing else. You need several additional assumptions, which I'll bundle together and call Theory Y. So what's tested is Theory X and Theory Y taken together. If the prediction of the combined theories is false, you tend to say Theory Y is at fault. At least you consider that possibility. Only after the predictions of Theories X and Z, X and A, and so on (tests based on other supporting assumptions) turn out to be false do you start to believe Theory X is wrong. It might be ironic, but it's reasonable.

### **Best Thing About Learning Chinese (2009-09-17 18:49)**

It is easy to make people laugh. Yesterday at a faculty meeting I answered a question (asked in English) in Chinese. Everyone laughed.

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David (2009-09-17 20:03:42)

So what did you say and what were you trying to say?

JLD (2009-09-18 00:31:47)

HÃ©, hÃ©, tonal languages are treacherous. I have been told that in Vietnamese "vagina" and "tomato" differ only by the tone. Don't exercise your new language skills at the supermarket...

seth (2009-09-18 03:18:53)

I said "I don't know" in Chinese. They were amused not because I actually said something else (I think . . . ) but because it was unexpected.

### **The Ethical Stupidity of Med School Professors: Plagiarism Very Very Bad, Ghostwriting Okay (2009-09-18 06:20)**

Do medical school professors live in a different ethical world than the rest of us? Apparently. A friend of mine just entered grad school at Tsinghua. She was required to attend four different lectures about how academic dishonesty is wrong. (The last one, she said, was good; the speaker told a lot of stories.) China has a huge plagiarism problem, sure, but at least they say that plagiarism is wrong.

Whereas medical school professors haven't managed to grasp that ghostwriting is plagiarism (taking someone's words and ideas as yours without acknowledgment). And it happens all the time. NYU med school Professor Lila Nachtigall, [1]as I've noted, considered the deed so minor she forgot that she'd done it. Apparently using a different word confuses them. [2]A recent article in Nature reveals the befuddlement of the entire medical establishment about this. We're not sure what to do about it, journal editors say. As Tony Soprano's mom would say: Poor you.

What's so nauseating about this is that ghostwriting is certainly worse than the garden-variety plagiarism that American undergraduates and [3]the odd Harvard professor engage in. (And at least they are embarrassed, unlike Nachtigall, when caught.) Garden-variety plagiarism is merely self-serving; you save time, get a higher grade. Whereas drug-company ghostwriting makes drugs appear better than they are. Which harms millions of sick people.

Although American universities publicly condemn plagiarism and other types of cheating, in practice they allow them. (Believe me, I know. When I tried to stop cheating in my Intro Psych class at Berkeley, the chairman of my department told me, "We're not in that business.") And the student cheaters – having been told by university blind-eye-turning that cheating is okay – grow up to be med school professors who [4]do horrible things routinely. That's my theory.

Thanks to Dave Lull.

1. <http://www.blog.sethroberts.net/2009/09/11/more-med-school-profs-behaving-badly-professor-lila-nachtigall/>
2. <http://www.nature.com/news/2009/090916/full/461325a.html>
3. <http://www.google.com/url?sa=t&source=web&ct=res&cd=3&url=http%3A%2F%2Fauthorskeptics.blogspot.com%2F&ei=oYWzSoTANZTe7APtx7nsCQ&usg=AFQjCNGaZ3PvZtFNIKRvJZFddJYfsTEqrQ&sig2=U1K-lwep16yrseNilyJeag>
4. <http://www.blog.sethroberts.net/2009/09/09/med-school-profs-as-drug-company-lackeys/>

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Tom (2009-09-20 10:04:20)

I don't understand why this behavior doesn't make these doctors liable under racketeering laws. They are taking money to help their employers perpetrate a gigantic fraud – one that also affects the public health. (Of course, I am pre-supposing a government that has an interest in prosecuting campaign donors.)

Anonymous (2009-09-23 13:08:32)

What about when a prominent politician participate in plagiarism for an important speech supporting the ill-advised American Iraq war? See story about Canadian Prime Minister Harper at: [http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20080929/election2008\\_speech\\_080930/20080930?s\\_name=election2008](http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20080929/election2008_speech_080930/20080930?s_name=election2008)

## **What Causes Hypothyroidism? (2009-09-19 06:07)**

In [1]an earlier post I wrote, "Hypothyroidism is so common I suspect an environmental cause." In fact, I suspect that all common diseases are caused (= made much more likely by) differences between modern life and Stone-Age life. Since then, thanks to comments and email, I have learned more about hypothyroidism. [2]According to Dennis Mangan, it has become a lot more common during the last 100 years, which implies an environmental cause. [3]The most common type of hypothyroidism is called Hashimoto's thyroiditis. It is an autoimmune disorder where the immune system attacks the thyroid, damaging it. A reader with hypothyroidism wrote me:



When I was first tested for thyroid levels, part of the test (which I think is standard protocol) was to test the level of antibodies to thyroid. My levels were off the charts.

This supports what I said. I'm sure that autoimmune diseases are caused by one particular difference from Stone Age life: lack of bacteria in our food. The immune stimulation the harmless bacteria provided can be provided in other ways – [4]bee stings, for example. But I don't think Stone-Age people got a lot more bee stings than we do.

1. <http://www.blog.sethroberts.net/2009/08/26/if-you-have-carpal-tunnel-syndrome/>
2. <http://www.blog.sethroberts.net/2009/08/26/if-you-have-carpal-tunnel-syndrome/#comment-337470>
3. <http://www.cumc.columbia.edu/dept/thyroid/hypothyroidism.html>
4. <http://www.blog.sethroberts.net/2009/06/21/scorpion-stings-bee-stings-and-the-umami-hypothesis/>

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Stephen M (Ethesis) (2009-09-19 18:56:58)

For your amusement, an essay by another self-experimenter: [http://www.tmuscle.com/free\\_online\\_article/sex\\_news\\_sports\\_funny\\_grok/the\\_battleship\\_yamato\\_vs\\_the\\_red\\_october](http://www.tmuscle.com/free_online_article/sex_news_sports_funny_grok/the_battleship_yamato_vs_the_red_october)

Ben Hyde (2009-09-20 14:54:20)

Must share - <http://wondermark.com/553/> :)

Jim (2009-09-28 13:54:08)

Dr. Roberts: Are you familiar with Dr. Harris' blog on Paleo Nutrition? <http://www.paleonu.com/what-is-panu/> From the introduction on his blog: "... an approach to living centered on the thesis that the diseases of civilization are largely related to abandonment of the metabolic conditions we evolved under..."

## **How to Talk to Strangers (2009-09-20 12:42)**

A friend asked me how to strike up conversations with strangers. I told her what I've said many times. Three things make it easier:

1. Recognition. If you recognize someone (and presumably they recognize you) it will be easier to start a conversation.
2. Real question. If you have a real question – a question to which you really want the answer – it will be easier to start a conversation.
3. Shared suffering. If the two of you (you and the person you wish to speak to) have suffered together – bad weather, stuck in a long line – it will be easier to start a conversation. Living in Beijing and not speaking Chinese is another example of what I mean by "suffering"; another name for this factor could be shared predicament.

Those are the main factors that matter. In everyday life, they vary a lot. Another factor is minor:

4. Forced proximity. If you are forced to be near each other – in an elevator, say – it will be easier to start a conversation.

If none of these factors are true, it will be very hard to start a conversation. If one is true, it will be somewhat hard. If two are true it will be easy. If three are true it will be inevitable.

In my experience, local culture makes a small difference, somewhere between zero to one on this scale. Most places are zero. A place where people are really friendly would be worth one.

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Timothy Beneke (2009-09-21 10:36:49)

Don't forget shared pleasure, saying, "Boy it's a gorgeous day!" And smiling, not in an overbearing way, but in a respectful non-intrusive way... I'm guessing dropping something and letting the other person pick it up and then making a face-saving comment or joke and laughing will work also. It depends on how manipulative you are willing to be... I wonder if social psychologists have done experiments on this...

seth (2009-09-21 14:25:36)

Have social psychologists done experiments on this? Not as far as I know.

Nile (2009-09-22 01:19:07)

I travel widely and have no problem starting conversations even though I consider myself introverted. Two tips - comment on the obvious - weather, buildings, traffic, anything. This gives the other person an excuse to talk to you and if there is one thing most people like to do it is talk - say almost anything and give the other person a chance. The second tip is to introduce yourself and ask the other person's name. This way the next time you meet you will be on a first name basis. The more people you introduce yourself to the more friends you will have - it is an odds game. If you can't remember names buy a memory book. I agree with Seth - culture has very little to do with it.

### **Advances in Nose-Clipping: A New Use For Pantyhose (2009-09-21 01:45)**

[1]In the Shangri-La Diet forums, Maychi has posted about a new way of nose-clipping (eliminating the smell of food) that is socially-acceptable: Putting tiny pieces of pantyhose in your nose. They are invisible. Her husband and son wouldn't eat with when she wore noseclips.

I started this on 1st August. After about five days I got AS [appetite suppression] I had never managed to achieve with sugar or oil or anything else.

She eats about 95 % of her calories this way. It doesn't entirely block smells but perhaps it changes them enough so that they aren't recognized or are less recognized. Maychi started losing weight and so did [2]someone else who tried it.

One little problem: [3]You have to be careful what you say.

It's not possible to produce certain sounds. So in order to not sound like you have a horribly blocked nose, you have to say "delicious!" instead of "yummm!" and and "super!" instead of "Nice!"

1. <http://boards.sethroberts.net/index.php?topic=7254.0>
2. <http://boards.sethroberts.net/index.php?topic=7254.msg91454#msg91454>
3. <http://boards.sethroberts.net/index.php?topic=7254.msg91480#msg91480>

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david (2009-09-21 08:00:51)

I tried nose clipping a few times with modest results (i.e. nothing like the big effect I got from sugar water). I noticed that some kinds of food were hard to eat nose clipped because breathing through the mouth at the while chewing was difficult. E.g. eating yogurt was easy to eat nose clipped, but a cereal like bite sized shredded wheat (which requires lots of chewing) hard.

karky (2009-09-21 15:24:09)

I wouldn't want to explain in the ER why I had pantyhose stuck in my nostrils. My cousin smelled terrible when she was a small child. No one could figure out why. Until they discovered she had a piece of a sponge stuck in her nose, rotting.

### **The Financial Crisis and Self-Experimentation (2009-09-21 04:51)**

They are closely related. I've been reading [1]James Stewart's excellent blow-by-blow of the early days of the crisis. As Nassim Taleb has emphasized, the crisis happened because the people running the financial system didn't understand how it works. They vastly overrated their understanding – their ability to predict. (As Taleb has also emphasized, they still fail to grasp their ignorance.)

Surely it isn't just the financial system. Surely we don't overrate our knowledge just here. Much more likely, we overrate our knowledge about everything. This creates a great opportunity. It goes like this: 1. We overrate our knowledge about a large thing (the financial system). 2. We probably overrate our knowledge about everything. 3. We probably overrate our knowledge about small things. 4. There is more to be learned from studying small things than we realize. 5. Small things can be studied experimentally – an especially effective learning method.

Self-experimentation is an example of studying small things experimentally. These experiments taught me far more than I ever expected. Because I knew less than I thought. (Without realizing this fact.) Here are three examples:

1. Acne. I discovered that my beliefs about the two medicines my dermatologist has prescribed were exactly wrong. The one I thought worked, didn't work; the one I thought didn't work, did work.

2. Sleep. My self-experimentation led to new ideas about the control of sleep that no one had thought of. I didn't know experimentation could do that so often. (I thought that such discoveries were very rare.)

3. Mood. [2]My conclusions about mood are really different than what researchers usually say. I never expected to learn anything so radical.

These examples cover three dimensions. In the acne example, I learned I was completely wrong very quickly – that's speed of learning. The sleep example is about number of discoveries; the mood example is about the "size" of one discovery.

1. [http://www.newyorker.com/reporting/2009/09/21/090921fa\\_fact\\_stewart](http://www.newyorker.com/reporting/2009/09/21/090921fa_fact_stewart)
2. <http://repositories.cdlib.org/postprints/117/>

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Liu Xiao (2009-09-21 06:27:46)

I agree with you that people do overrate their understandings. But I don't think the financial crisis was brought by people who didn't understand the financial market. I believe that deregulation is responsible for it. The governing institutions didn't understand the strategy utilized by bankers and the leverage ratio has gone beyond a safe level. That may be the key reason.

peter (2009-09-21 09:04:14)

Professor Shiller of Yale, in *Irrational Exuberance*, talks about a fundamental mistake that investors make (especially retail investors); it's call magical thinking (essentially wishful thinking). it's why most retail investors think they can pick individual stocks and compete against professional investors in a zero sum game. this magical thinking apparently is at work in all areas. It occurs to me that given the cacophony of information some people unconsciously avoid trying to sift through all of it, and just fall back on what they want to believe, i.e., magical or wishful thinking.

epistemocrat (2009-09-21 10:03:54)

Great points, Seth. As Nassim Taleb says, the 'elephant in the room' for our economic system is still debt—we are still leveraged too thin—and the 'elephant in the room' for our healthcare system, as Michael Pollan also recently said, is nutrition. We need debt detox and nutrition rehab: self-experimenting with nutrition would hopefully lead people to discover a bricolage of diet-based preventions and even cures to chronic illness problems. Namely, folks would hopefully stumble upon 'good bacteria', would detox from sugar and 'ditto foods' (goodbye, metabolic syndrome), and would convert their personal health 'debt' (inflammation and disease) into equity with high market value (thriving physiologies). Nassim calls for the conversion of debt into equity. I call for the parallel move in healthcare. We need detox in both spheres. Self-experimenting exposes us to positive Black Swan opportunities. Cheers, Brent

Nathan Myers (2009-09-22 23:07:01)

We've always had wishful thinking. It doesn't explain the collapse. Certainly some people understood what was going on, but it didn't matter. What mattered was that it was in no one's interest to pull the plug. Anybody in a position to have any effect and tried would be replaced instantly by somebody who wouldn't. In effect, they constructed a machine that could not but proceed to the state it reached. The only way to fix it is to give the machine different operating rules that keep it from getting there again. What individuals understand or want has no effect unless the machine is programmed to respond to them.

Nansen (2009-09-24 13:38:04)

On the subject of sleep, here's an article from the Wall Street Journal about a new home sleep monitor:  
<http://online.wsj.com/article/SB124451280076496767.html>

### **Tsinghua Curiosities: First Day of Class (2009-09-22 02:28)**

I am teaching a seminar-like class called something like New Topics in Psychology. Most of the students are freshmen because this is the first year the psychology department has accepted undergraduates. Some unusual things happened on the first day of class:

- A graduate student volunteered to be a teaching assistant. (She was the second person to do so. A grad student in automation had volunteered a week earlier.)
- A freshman had her picture taken with me.

- I mentioned Caltech, where I was a freshman. Someone asked if Randy Pausch was a Caltech professor. (He was at Carnegie-Mellon.)
- The students did brief introductions. Many students appeared to think that one student's Chinese name was humorous. This was briefly explained to me but I still have trouble believing it. Maybe I misunderstood.
- There was uncertainty about the length of the class. It lasted only the first two-thirds of a longer period. (The basic unit is 45 minutes class plus 5 minutes break.)
- The students were seated in the usual rectangular way. Moving from front row to back row, the students' English appeared to get worse.
- The (first) teaching assistant advised them to not say "My English is not good" but to say "My English is on the way".

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### **NYU Begins to Look Very Bad (2009-09-22 14:10)**

Nine months ago, [1]the New York Times reported that Lila Nachtigall, a New York University professor of obstetrics and gynecology, put her name on an article ghost-written for her by a drug company. The article, when published, failed to disclose the ghost-writing. In response, New York University officials have done nothing, as far as I can tell.

[2]In response to the same fact about one of their professors, McGill University opened an investigation. The same document that revealed what Nachtigall had done showed that Barbara Sherwin, a professor of psychology, obstetrics and gynecology, had done the same thing. Supporting my idea that [3]medical school professors have different ethical standards than the rest of us, an article about the McGill case by Montreal Gazette reporter Peggy Curran used the word plagiarism. One comment was "plagiarism, pure and simple." Does NYU president John Sexton find plagiarism completely acceptable? Apparently.

Thanks to Anne Weiss

1. <http://www.nytimes.com/2008/12/13/business/13wyethside.html?scp=1&sq=Nachtigall&st=cse>
2. <http://www.montrealgazette.com/health/McGill+ghostwriting+probe+could+take+weeks/2017575/story.html>
3. <http://www.blog.sethroberts.net/2009/09/18/the-ethical-stupidity-of-med-school-professors-plagiarism-very-very-bad-ghostwriting-okay/>

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### **Why are the Japanese Healthier than Americans? (2009-09-23 06:47)**

T. R. Reid has just published a new book called The Healing of America that compares American health care to health care in other countries. [1]One comparison is with Japan:

The world champion at controlling medical costs is Japan, even though its aging population is a profligate consumer of medical care. On average, the Japanese go to the doctor 15 times a year, three times the U.S. rate. They have twice as many MRI scans and X-rays. Quality is high; life expectancy and recovery rates for major diseases are better than in the United States. And yet Japan spends about \$3,400 per person annually on health care; the United States spends more than \$7,000.

Life expectancy is better. Even though the Japanese smoke more than Americans. Is it all those MRI scans? (Which in Japan cost a small fraction of what they cost in America?) Or all those trips to the doctor (where, by American standards, nothing appears to happen – that is, expensive drugs are rarely prescribed – judging by overall costs)?

I believe that that Japanese do so much better because of a factor that Reid probably doesn't consider: They eat tons more fermented food than Americans do. In a Tokyo restaurant, the woman sitting next to me, a nurse, said she believes that regular consumption of fermented foods is important for health. Does everyone in Japan think this? I asked. A large minority, she said.

The eating habits of the Japanese, as far as I could tell, bear this out. On [2]a Japanese food blog, the writer described a breakfast that had five fermented foods: pickles, miso, yogurt, natto, and kimchi. The Japanese eat miso at every meal, more or less. They also eat lots of pickles. Natto is popular in some parts of the country but not others. They eat lots of yogurt; they are the country that gave us Yakult. They drink vinegar drinks. (Whereas in America only health nuts drink apple cider vinegar.) In other words, their diet is loaded with fermented foods. If I'm right about this, Japanese rates of autoimmune diseases should be much lower than American rates.

When people get sick much less, health care costs go way down.

1. [http://www.washingtonpost.com/wp-dyn/content/article/2009/08/21/AR2009082101778\\_2.html](http://www.washingtonpost.com/wp-dyn/content/article/2009/08/21/AR2009082101778_2.html)

2. <http://tokyostation-yukari.blogspot.com/>

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Steve G. (2009-09-23 07:19:59)

Seth, I think that you've spotted the elephant—or perhaps an elephant—in the room where the U.S. health care debate is being held. We aren't very healthy for a variety of reasons, but if we took better care of ourselves, we'd spent a whole lot less on medical care and enjoy life more. Beyond potable water and mass inoculations, a healthy diet (we know more about what it isn't than perhaps what it is) and even modestly more exercise are probably the greatest overall measures increasing public health. This doesn't address the built-in biases of the health care system arising from the business angle, but it could make a huge difference, and Japan seems to provide an excellent model. Thanks for the info!

richard (2009-09-23 07:34:02)

Do you know of any cross country comparisons on auto immune diseases?

Mary (2009-09-23 09:10:18)

If they are getting sick less often, as you suggest, why are they going to the doctor on average 15 times a year (vs. US average of 3 times per year)? Shouldn't "A (fermented) apple a day keep the doctor away" if your theory is right?

Mary (2009-09-23 09:13:30)

To follow up, your data suggests that Japanese health care utilization is much greater than US utilization, so it certainly doesn't explain lower health care costs in Japan. You do note that MRI scans in Japan cost a small fraction of what they do here, and cost differences of that sort could explain lower Japanese spending on health care, but it's hard to see why eating fermented

food makes an MRI scan cost less per unit.

Tom in TX (2009-09-23 09:37:55)

Are the pickles in grocery stores in the USA a good fermented food? Or have they been processed in some way that makes them less effective?

Eugene (2009-09-23 12:08:34)

As a result of rigid cost control measures, Japanese medical device manufacturers developed the Toyota Corolla of MRI scanners. Also because of compensation practices, doctors in Japan will schedule multiple visits to cover what one visit would accomplish in the U.S. and more readily hospitalize patients and keep them there longer. The Walgreens-style dispensing pharmacy is rare in Japan (until recently did not exist), so people go to a clinic or hospital to get access to the pharmacy. Doctors in Japan still make considerably less than their U.S. counterparts, though medical students are matriculated into a six-year program straight out of high school.

seth (2009-09-23 16:16:41)

Tom, I don't know how average American pickles – the kind you get in supermarkets – are made. There may be some quick-pickling process that replaces fermentation with something else – I don't know. If your health depends mainly on what you eat and do (e.g., exercise, not smoke), then rigid cost control measures for medicine (which makes little difference) make plenty of sense.

JLD (2009-09-23 17:59:25)

Off topic (not entirely), sensible ideas slowly go [1]mainstream

1. [http://www.nytimes.com/2009/09/22/health/22real.html?\\_r=1&em](http://www.nytimes.com/2009/09/22/health/22real.html?_r=1&em)

Ashish (2009-09-23 20:37:24)

Seth, your blog post seems to suggest not that Japanese are healthier than Americans (because of their diet), but rather that the Japanese medical establishment must be much more efficient than the American system at delivering care per dollar/yen.

seth (2009-09-23 22:24:24)

Ashish, how does my post suggest this? I say, or at least tried to say, that I believe Japan's health care costs are lower than America's because the Japanese are healthier to begin with – because they eat a better diet (more fermented food). A more complete answer would have said that Japan has cost controls.

Ashish (2009-09-24 08:29:16)

Seth, the fact I read in your post are: 1) Japanese smoke more than Americans do. 2) Japanese make much greater use of healthcare than Americans do. 3) Japanese have greater life expectancy than Americans do. 4) Japanese spend much less on healthcare, per capita, than Americans do. 5) Japanese eat much more fermented foods. Without any prior bias about fermented foods, my tentative conclusion would be that Japanese doctors are better, and cheaper, than American doctors. (If Japanese made much LESS use of healthcare than Americans did, while smoking more and living longer, then maybe I'd make a different conclusion.)

seth (2009-09-24 17:00:08)

Ashish, you make a good point. Taken by itself my blog post would seem mysterious and illogical. I have blogged many times about the benefits of fermented foods – not small benefits, big ones – and in the context of those posts this one makes more sense. I believe we need bacteria in our food just as much as we need vitamins.

Lotus (2009-09-25 02:13:13)

Eugene's comments are correct. My experience, however, was that Japanese doctors are not superior to American doctors

as Ashish surmises. There seems to be greater variability in training and knowledge among Japanese doctors. I believe that residency requirements are less stringent for new doctors in Japan, which could be the reason. I know there are some excellent doctors in Japan, but outside of the best hospitals the care could be pretty hit or miss. I have a lot of sinus and allergy problems and I was unable to find adequate care when I lived there 15 years ago and I ultimately had to return to the States to get proper treatment. While it is true that Japanese eat a lot of fermented food and that probably makes a difference, personally I think the largest factor in better health among Japanese is that people walk a LOT more. Everyone uses public transportation and walks/bikes to and from train stations everywhere they go. Also, you often need to use stairs to get to your train, sometimes at a sprint to catch your connection. So the daily commute is a bit of a workout and the correlation between regular exercise and health is pretty well established. Another big difference is that Japanese have nearly universal health insurance, either through employers or the national plan and people freely visit a doctor for just about anything little thing - stuff that we in the States would just go to a pharmacy for. Maybe all of those doctor's visits for small things like a common cold means better preventative care? It is interesting how culturally influenced the practice of medicine really is. And cost consciousness is important in Japan. People are always looking for ways to pinch pennies, especially in the workplace, so that must influence how medicine is practiced. You would think that medicine is very scientific and would be more standardized. But in reality culture influences the patient-doctor relationship, the willingness to take risks with new treatments and what treatments are prescribed. Japanese doctors may not prescribe a lot of expensive pills, but they do prescribe a lot of pills and usually do not tell you what they are. So maybe Japanese doctors are prescribing a lot of inexpensive placebos and it works well in many cases because patients have absolute faith in their doctors? Interestingly, when I lived in Japan there was much less awareness of allergies, especially food allergies. However, on a more recent trip back to Japan food allergens were listed on menus of all the chain restaurants, so now there is much more awareness of food allergies as a problem. So, have food allergies increased as the diet has become more factory-produced or is it just that awareness has increased? Anyway, I would attribute the better health/lower cost in Japan to a combination of factors, with excellent public transportation being a very important one. I'm curious to read that book now, I'll have to look for it.

Eugene (2009-09-25 10:48:07)

Here's another correlation that comes from living in a country with an efficient mass transit system: along with all that walking, exposure to sunlight. I wonder how natural vitamin D levels compare? Japan doesn't go on daylight saving time, so in summer you get a pretty good blast of sunlight walking to the subway station in the morning. Almost all elementary school students walk to school.

### **Anti-Depressants Associated With Birth Defects (2009-09-23 22:47)**

In the latest BMJ, [1] a group of epidemiologists reports that SSRI's (selective serotonin reuptake inhibitors, a commonly-prescribed type of anti-depressant) are associated with a certain type of birth defect when the mom takes the drug early in pregnancy:

There is an increased prevalence of septal heart defects among children whose mothers were prescribed an SSRI in early pregnancy,

We have a health care system built on dangerous drugs – and those drugs are poorly tested for safety. It isn't in the drug companies' interest to do so, of course. In this particular case, I wonder if the drugs were safety-tested on pregnant rats and if so what happened.

1. [http://www.bmj.com/cgi/content/abstract/339/sep23\\_1/b3569?paper=1](http://www.bmj.com/cgi/content/abstract/339/sep23_1/b3569?paper=1)



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thehova (2009-09-23 23:24:47)

really, I want to believe that anti-depressants improve mental health of those who need it. But more and more, the studies produce a lot of disturbing stuff.

Andrew Gelman (2009-09-24 03:06:34)

Seth: Ob/gyns tell women to stop taking antidepressants if they're thinking of getting pregnant. I understand your intensity here, but the medical system isn't always as evil as you think.

NM4 (2009-09-24 04:51:53)

Andrew, How many pregnant women took SSRIs early in pregnancy before OB/GYNs began telling them not to?

seth (2009-09-24 06:12:46)

Andrew, the very fact of this association reveals that many pregnant women took these drugs. I wouldn't use the word "evil" to describe the system but the crummy safety tasting of dangerous drugs is highly beneficial to drug companies and horrible for everyone else. And what fraction of research psychiatrists are seeking perfectly safe alternatives to SSRIs? Uh, zero?

Anthony (2009-09-24 11:53:33)

The part that bothers me the most is that run of the mill depression seems to come in the large majority of cases from basic human needs not being met. That is, in the large majority of cases with depressed people, there are obvious basic needs not being met adequately (physical and emotional security, status within a peer group, friendship, emotional intimacy, a sense of growth and learning, and so on). Meet the basic needs -> depression goes away. SSRI's treat the symptoms (however well and with whatever negative side affects), instead of addressing the causes. See here [http://www.amazon.co.uk/depression-Fast-Human-Givens-Approach/dp/1899398414/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1253818349&sr=8-1](http://www.amazon.co.uk/depression-Fast-Human-Givens-Approach/dp/1899398414/ref=sr_1_1?ie=UTF8&s=books&qid=1253818349&sr=8-1) for example.

Andrew Gelman (2009-09-24 12:14:22)

Hi, Seth. I think you're putting the medical establishment in a damned-if-they-do, damned-if-they-don't position. Pregnant women are warned about these drugs. But what if they were forbidden to take the drugs? Then you might be slamming the paternalistic medical system for not letting people try things out on their own. And I don't know anything about research in these drugs, but I'd be surprised if there were no work being done on making safer versions. If, for no other reason, than that women-who-might-become-pregnant represent a large potential market share. NM4: The pregnant women I've known have been very concerned about taking unapproved drugs. Not everyone will follow warnings-heck, you still see pregnant women smoking and drinking-but people generally want to avoid risks.

Yvan (2009-09-24 15:16:46)

Hi, Having been through the episode of depression, I am healing with the practice of vipassana meditation and I questioned the validity of the research with the myth of the chemical imbalance and found this: Antidepressant drugs don't work ½ Official study link <http://tinyurl.com/dhu8yj> and link <http://www.badsience.net/2008/02/619/> and from PloS research in the comments section from an Epidemiologist and Assistant Professor, <http://tinyurl.com/ydqy76a> Omega-3 fatty acids as a first line intervention for depression? Quote» So what can we learn from these two meta-analyses? First, it is important to remember that meta-analysis does not really "prove" anything. No two trials are identical and there is heterogeneity among the trial results. However, one interesting hypothesis based on these data is that while antidepressant drugs are certainly effective, if we take into account cost, side effects, and relative effectiveness, patients with mild to moderate depression may be better off increasing their intake of omega-3 fatty acids (especially EPA) rather than taking antidepressant drugs. We state this as an hypothesis to be tested, not as a conclusion Quote Should doctor or GP prescribe Omega-3 as a first line of treatment <http://tinyurl.com/csznr5> Have good day Yvan F

seth (2009-09-24 18:28:22)

Andrew, in the case of this particular study, the prescriptions were issued – given to the women by doctors – while the women were pregnant. They weren't taking them against medical advice; they were taking them to follow medical advice. I am saying the current system favors crummy safety testing while at the same time relying almost exclusively on drugs that are surely dangerous. I don't think that argument is an example of damned-if-you-do damned-if-you-don't. I would not damn the drug industry if they did better safety testing, nor would I damn the entire medical establishment if they grasped the value of prevention (my interest in fermented foods – not shared by the medical establishment, with a few exceptions – is an example of how prevention might work). This is one example of a long-standing big problem: Popular drugs are discovered to be more dangerous than anyone was told. I'm less sure than you are that there is now research being done to find safer versions. Advertising such versions might destroy the market for the current versions.

### **Chinese High Schools (2009-09-25 02:03)**

Last night at dinner I met a Beijing high school student. He wants to finish high school in America. "Was that your idea or your parents?" I asked.

"Both," he said.

"What's the reason?" I said

"Chinese high school is too stressful," he said. "The test [tests?] is too hard."

He left the dinner early to study for the TOEFL.

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### **Smoking and SLD: "Maybe the Shangri-La Diet Curbs All Kinds of Appetites?" (2009-09-25 15:52)**

This is from [1]Confessions of a Nicotine Addict:

Smoked like a chimney this weekend.

But on Tuesday I started the "Shangri La Diet," as outlined in the book of the same name by Seth Roberts. It's a strangely easy plan and I may be too obtuse to understand how it works, but my appetite was noticeably down all day. (Ok, I had a headache & nasty nausea – but not hungry!)

And I had very few urges to smoke. In fact, I went almost the whole day without nico fix. The thought of smoking was utterly distasteful. Really gross. Now, for the past couple months I've been working on all kinds of visualizations & relaxation techniques, but I really think this weird-ass diet had something to do with it. I ended up giving in at the end of the day, but I only smoked a couple. Yesterday was about the same; today, too.

Maybe the Shangri La Diet curbs all kinds of appetites?

So well put!

Maybe it does. Here are two possible explanations: 1. The mental effort it took to fight off the urge to eat is no longer necessary, leaving it available to fight off the urge to smoke. This story contradicts this explanation – the urge to smoke went down.Â 2. Addictions are self-medication. You feel bad, the addicting substance provides relief. If you feel less bad – less hungry, say – then you need less relief. This story doesn't support this explanation either; nothing is said about relief from overwhelming and unpleasant urges to eat. There is certainly some truth to this basic idea, however – witness the term addictive personality.

However, in this case I'd put my money on Explanation #3: Addictions are heavily linked to the environment. The environment triggers a craving. It's Pavlovian learning. [2]Shepard Siegel, a psychology professor at McMaster University, originated this explanation and has collected a lot of supporting data. You take Drug A in Environment B. After a while experience B triggers a desire for A. (Obviously it makes sense that we learn to become hungry when food is available.Â That's how appetizers work.) In this case SLD changed her environment. She felt different.

1. <http://nicoaddict.wordpress.com/>

2. <http://www.science.mcmaster.ca/psychology/index.php/people/202-dr-shepard-siegel.html>

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Nile (2009-09-25 20:01:26)

Nicotine raises blood sugar levels. One way to cut the craving for a cig is to have something sweet, for example, a hard candy. If setpoint is down, less need for elevated blood sugar and thus less need for nicotine.

LemmusLemmus (2009-09-26 03:32:10)

The craving for cigarettes is particularly pronounced after eating. Less eating > less craving.

Nansen (2009-09-26 14:32:59)

Exclaiming "but not hungry!" sounds like an expression of relief, supporting your Explanation #2.

seth (2009-09-26 16:22:44)

good point, Nansen

bennetta (2009-09-27 23:44:37)

I experienced the same thing. Although I never really smoked all that much (once, maybe twice a day at most), for some reason, smoking became disgusting while on SLD. In fact, I'd argue that it was more effective at helping me quit smoking than as a way to get me to lose weight. I have not lost as much weight as I'd like since starting in January, but have not had a cigarette since late January. The author's words encapsulate exactly what I went through. Smoking became completely and utterly foul for some reason. I thought maybe it was related to having an empty palate for so long (not having an empty palate covered up the disgusting taste), but was never able to explain it. Regardless, who am I to complain?

## **Sleep and Standing on One Foot (2009-09-26 06:52)**

Someone read this blog and [1]wrote this:

The one that was most interesting to me was "standing on one foot", because I've definitely felt a difference in sleep after doing lots of

work. Â (I used to sleep really well when I did a 54-mile commute on my bike.) Â Maybe standing on one foot (knee bent) until failure causes the muscles to send similar chemical signals to intense exercise which are picked up elsewhere? Â Whatever, it was free, easy, and safe, so I tried it. Â You can't do a double-blind experiment on yourself, of course, but at least some of the time when I've tried it I definitely felt as though I slept more soundly when I got up the next day.

I still do this. Lately I have been varying the dose – how many times I stand on one leg. So far three (e.g., right leg, left leg, right leg) produces slightly worse sleep than four (right leg, left leg, right leg, left leg). If I eat plenty of meat, my legs get stronger and stronger; if I eat little meat, they don't.

1. [http://groups.google.com/group/alt.support.marriage/browse\\_thread/thread/8f7847c416e68fa0/88f84c53d6984913](http://groups.google.com/group/alt.support.marriage/browse_thread/thread/8f7847c416e68fa0/88f84c53d6984913)

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Nansen (2009-09-28 13:13:03)

so when you eat little meat, then you need less one-legged standing time to get the desired effect?

### **A Problem With Soft Drinks (2009-09-27 00:41)**

Some have phosphoric acid, which leaches calcium from your bones. [1]Not all soft drinks have phosphoric acid:

In a survey designed to measure the amount of phosphoric acid in twenty different soft drinks, the following were found to contain the highest amounts: Tab, Coke, Diet Coke, caffeine-free Coke, and Mr. Pibb. The formulas may have been changed for the better since this survey was conducted. . . . Pepsi Free, Diet Pepsi Free, Like Cola, 7-Up, and Mountain Dew had no phosphoric acid.

[2]Female Fertility and the Body-Fat Connection (2004) by Rose Frisch, an excellent book, tells about a 25-year-old college tennis player nicknamed Miss Tab because she drank 8-10 bottles of Tab a day.

When her bone mass was measured, her tennis arm was normal for a 25-year-old woman (it should have been a greater mass from the exercise) and her other arm had the bone mass of a 70-year-old woman.

I started drinking Diet Coke a week ago. Oops. I will switch to Diet Pepsi. Eventually I will learn the Chinese for phosphoric acid.

1. <http://life.familyeducation.com/nutrition-and-diet/healthy-lifestyle/36000.html>

2. <http://books.google.com/books?id=0rz7M3QwKt8C&dq=body-fat+set+point+kennedy&q=Miss+Tab#v=snippet&q=Miss%20Tab&f=false>

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Eric (2009-09-27 12:59:55)

Maybe it's different in China, but Diet Pepsi has phosphoric acid here in North America. Maybe you meant you were going to switch to those other Pepsi products (Pepsi Free or Diet Pepsi Free) that I haven't seen myself? [http://www.pepsiproductfacts.com/infobyproduct.php?brand\\_fam\\_id=1051 &brand\\_id=1000 &product=Diet %20Pepsi &prod\\_type=1026](http://www.pepsiproductfacts.com/infobyproduct.php?brand_fam_id=1051 &brand_id=1000 &product=Diet%20Pepsi &prod_type=1026)

### **Exercise and Its Confounds: The London Bus Study (2009-09-28 06:31)**

The Financial Times recently ran [1]an article about Jerry Morris, a London epidemiologist who did the most famous study of the effect of exercise. He compared London bus drivers with the ticket takers on the same buses. The ticket takers got a lot more exercise than the drivers. The health differences between them were attributed to exercise:

“There was a striking difference in the heart-attack rate. The drivers of these double-decker buses had substantially more, age for age, than the conductors [= ticket takers].” [said Morris]

The data were so telling because drivers and conductors were men of much the same social class. There was only one obvious difference between them. “The drivers were prototypically sedentary,” explains Morris, “and the conductors were unavoidably active. We spent many hours sitting on the buses watching the number of stairs they climbed.” The conductors ascended and descended 500 to 750 steps per working day. And they were half as likely as the drivers to drop dead of a sudden heart attack.



Morris found that bus conductors had fewer heart attacks than sedentary drivers

Today, almost everyone understands that physical exercise can help prevent heart disease, as well as cancer, diabetes, depression and much else besides. But on that day in 1949 when Morris looked at the bus data, he was the first person to see the link. He had inadvertently – “mainly luck!” – “stumbled on a great truth about health: exercise helps you live longer.

It's not that simple. There are two big confounds in the study (two other differences between drivers and ticket takers) that surely caused Morris to overestimate the benefits of exercise. One is well-known to epidemiologists: [2]Bus driving is very stressful. Much more stressful than a dozen other equally sedentary jobs. Stress certainly causes heart disease. The other is based on [3]my discovery that standing a lot improves sleep. (The standing needn't involve movement.) I don't know if better sleep specifically reduces heart disease but [4]it certainly increases resistance to infection and heart disease seems to have an infectious component. The ticket takers were on their feet all day, the drivers were not.

You may remember that James Fixx, a famous advocate of jogging, died of a heart attack.

Thanks to Dave Lull.

1. <http://www.ft.com/cms/s/2/e6ff90ea-9da2-11de-9f4a-00144feabdc0.html>
2. <http://www.ilo.org/public/english/protection/condtrav/pdf/wc-mk-96.pdf>
3. <http://repositories.cdlib.org/postprints/117/>
4. <http://www.nytimes.com/2009/09/22/health/22real.html?em>

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Aaron Blaisdell (2009-09-28 08:05:19)

I was thinking of those confounding factors while reading your blog, too. I thought of one more that I'm surprised you didn't mention: seeing faces/social interaction. Bus drivers are notoriously asocial (at least all the ones I've encountered were). They generally don't even make eye contact with passengers getting on and off the bus (except when looking in their rear-view mirror). The ticket collectors, on the other hand, were engaged in highly social interactions. Even if they only actually talked to one out of every 10 or 20 or 50 passengers, that would be quite a bit of social interaction for a day. This blog brings to mind Taleb's statement about how much things we don't see matter just as much as, if not more than, things we do see. The researchers (and journalists reporting on the research, and readers reading the media reports on the research) all see the difference in activity, but they don't even consider all of the co-varying factors that could also account for some or all of the differences in measured effects (in this case heart attacks).

seth (2009-09-28 12:23:50)

Good point, Aaron.

Rajiv Mehta (2009-09-29 09:53:38)

Just last week I had read about studies of bus drivers and hypertension, work by Berkeley's Lenonard Syme, that highlights those confounding factors. Here's a brief excerpt: Syme points to his study of hypertension in San Francisco bus drivers as an example of how easy it is to miss the forest for the trees. While investigating the unusually high rates of hypertension in this group, the research team found that bus drivers also complained of back pain and gastrointestinal and respiratory difficulties. The team designed interventions to address these issues, but none were effective. Then the researchers learned more about the bus drivers' daily routine. Drivers had to adhere to a rigid schedule that was determined by a computer, and they were penalized for late arrivals. However, there was a shortage of buses, which meant drivers often were not given enough time to get from one stop to the next. They raced into fast food restaurants for meals to stay on schedule. Because they were so often late, they faced irate passengers and traffic problems daily, and often did not have time to return home between morning and evening shifts. The problem, says Syme, was that the researchers were focusing on the specific diseases rather than the fundamental problem: the job.

seth (2009-09-29 16:43:21)

It was from Syme that I learned about the stressful lives and special health problems of bus drivers.

### Effects of Probiotics on Kids (2009-09-29 02:13)

As I [1]previously blogged, [2]a recent study in Shanghai found that schoolchildren given milk with added bacteria had fewer colds than children given milk without added bacteria. The study was funded by Danisco, a Wisconsin company that makes bacteria-containing ("probiotic") capsules. Obviously they want to sell more of their product. But ordinary yogurt probably produces the same result. Aaron Blaisdell told me this:

Since introducing yogurt into my daughter Maggie's diet on a daily basis about 5 months ago, she's gotten far fewer colds, and those she did get were milder.

I asked him for details.

Maggie is 4 years old. She eats a bowl of Traderspoint Creamery whole milk yogurt (from grassfed cows) each day. She started day care since 4-months old and now goes to a pre-school. She used to get a cold about every other month (6-8 per year), but since we introduced yogurt daily to her diet about 6 months ago, she's only had one cold as far as I can remember and it was very mild. Even the cough which used to last a month or two after she recovered lasted only about a week or two.

How much yogurt was she eating before that?

I think she had yogurt once or twice a week for the six months prior to introducing it daily. Before that it was even rarer. We introduced it a few times between the ages of 2 and 3 years old, and after initially liking it for a day or two she would then reject it thereafter. The reason she eats it every day now is because I put Ovaltine in it (about a teaspoon).

Did he make other changes at the same time?

I also try to sneak fermented high-vitamin cod liver oil into the yogurt, but I can only do this if I make it while she isn't looking. I also put 2-4k vitamin D3 (Carlson's drops) into it if she isn't looking when I make it. Also starting at the beginning of this year I switched from organic pasteurized milk to raw milk. I can't think of any other significant changes in diet, except that I continue to try to cut down on the amount of cereal and crackers she eats and increase the amount of eggs and cheese instead.

Let's hope she doesn't read this!

1. <http://www.blog.sethroberts.net/2009/08/07/probiotics-prevent-colds/>

2. <http://pediatrics.aappublications.org/cgi/content/full/124/2/e172?maxtoshow=&HITS=10&hits=10&RESULTFORMAT=&fulltext=Probiotic+Effects+on+Cold+and+Influenza-Like+Symptom+Incidence+and+Duration+in+Children&searchid=1&FIRSTINDEX=0&sortspec=relevance&resourcetype=HWCIT>

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Aaron Blaisdell (2009-09-29 06:57:30)

Doh, I forgot to mention that she started drinking Yakult probiotic drink (she calls it her "yogurt drink") almost daily starting about the same time that we introduced the yogurt+Ovaltine mix (this all started around February 2009).

Uwe Reinhardt (2009-09-29 09:17:02)

She may just be getting stronger as she grows. The best way to test this would be to discontinue feeding her the yogurt for a few months and see if she starts gets sick again.

Andrew Gelman (2009-09-29 14:27:40)

Seth: You write, "Let's hope she doesn't read this!" I doubt that many 4-year-olds are up to the task of reading your blog!

seth (2009-09-29 16:49:00)

Uwe, yesterday a student of yours quoted you to me. You said: "Our health care system was designed by the Devil." When you lose your job is when you need to buy your own insurance – just when you don't have much money. I said: Right on.

Lila (2009-10-03 12:30:33)

Could it be the vitamin D? I've seen a lot of articles recently about the potential effect of vitamin D on colds. See for example: <http://www.scientificamerican.com/article.cfm?id=cell-defenses-and-the-sunshine-vitamin>

## Health Care: Why Problems Have Piled Up Unsolved (2009-09-29 04:49)

In [1]an amusing comment on health care, Jonathan Rauch (via [2]Marginal Revolution) imagines an airline system as archaic and inefficient as our health care system.

"Cynthia, I have filled out my travel history half a dozen times already this year. I've told six different airlines that I flew to Detroit twice and Houston once. Every time I fly, I answer the same battery of questions. At least a dozen airlines have my travel history. Why don't you get it from them?"

"We have no way we could do that. We do not have access to other companies' records, and our personnel have our own system for collecting travel history."

The health care system, in other words, is full of problems that have built up unsolved. Solutions exist – the problems are not impossible – but haven't been implemented. Jane Jacobs's great point, in *The Economy of Cities*, is that this is what happens when those who benefit from the status quo have too much power relative to those who benefit from change. The stagnation in American health care is profound. It isn't solved by universal health insurance. There would remain the horrible dependence on expensive dangerous drugs that don't work very well (e.g., antidepressants, Accutane) and the complete lack of interest in prevention. The underlying problem, the source of many visible problems, is too little innovation.

1. [http://www.nationaljournal.com/njmagazine/st\\_20090926\\_4826.php](http://www.nationaljournal.com/njmagazine/st_20090926_4826.php)

2. <http://alazingo.com/browse.php/f8f9f65f/7fd1e7a2/ac90i8vd/3d3Lm1hc/mdpbmFsc/mV2b2x1d/Glvbi5jb/20vbWfYz/2luYWxyZ/XZvbHV0a/W9uLzIwM/DkvMDkva/WYtYWlyL/XRyYXZl1b/C13b3JrZ/WQtbG1rZ/S1oZWfSd/GgtY2FyZ/S5odG1s/b5/>



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Seth's blog » Blog Archive » "Some of Them Will Have the Wrong Answer" (2009-10-31 08:29:39)

[...] In a previous post, I said there is great stagnation in health care. Obesity and mental illness are the examples most obvious to me, but there are many other problems on which our health care system has made little progress for a long time. (Sure, we should have universal health care but the idea that this will do much about the obesity epidemic, the autoimmune disease epidemic, the autism epidemic, and so on, is absurd. Doctors don't know how to get people to lose weight. A reasonable health care system would focus on prevention. That is something the current batch of doctors doesn't know how to do.) I added that a reasonable health policy would empower those who benefit from change. [...]

### **Deliberate Anachronism in Mad Men? (2009-09-29 17:10)**

In the latest episode of Mad Men, one of Betty Draper's friends wants to know who someone is. She consults a book. Oh, he's a bigshot, she says.

Was this deliberate? A not-very-in-joke? In the 1960s – even in the 1980s! – there was no Google-like book that said who living people are. You had to go to the library. It used to be fun to read the New Yorker Christmas poem ("Greetings, friends!") and try to learn about the people you couldn't identify. It was hard.

More In light of the first seven comments below I reviewed the scene. The mystery man, an advisor to Governor Rockefeller (not in advertising), is listed in a thin spiral-bound notebook. Who's Who was much thicker and never spiral-bound. [1]Here is the 1962 New York Social Register – much thicker and not spiral-bound. A later comment suggested the notebook contained "a copy" of the Register. No way – there were no Xerox machines back then. The woman who looks the mystery man up in the notebook tears his page out of the notebook and hands it to Betty – just like sending someone a link.

1. <http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=300349822869>

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Ryan Holiday (2009-09-29 17:18:00)

I saw that too - I assumed she had some sort of Who's Who book but that might not make sense.

Steve Rothman (2009-09-29 17:21:02)

I didn't see the episode, but of course there were such books in the 60s. Besides Who's Who there would have been directories of major players in the ad business, such as members in various advertising associations.

Dewb (2009-09-29 17:25:45)

It's not at all unreasonable that an officer of the Junior League would have brought a staff list for the governor's office, or even an entire org chart of the state executive branch, to a meeting that would specifically concern lobbying the governor to stop a development project. I'd have to check but I thought the object being consulted was a binder.

Nathan Myers (2009-09-29 18:04:36)  
People paid to be in them.

Maryrose (2009-09-29 18:04:43)  
It was probably the New York Social Register [http://en.wikipedia.org/wiki/Social\\_Register](http://en.wikipedia.org/wiki/Social_Register) Seth, in my work (research for fund raising) I still use books like these.

Maryrose (2009-09-29 18:06:31)  
PS. Usually if you are in it, you have a copy.

Andrew Gelman (2009-09-30 01:22:35)  
I'm warning ya: One more spoiler and I'm going to have to stop reading your blog!

Socktopi (2009-09-30 17:08:28)  
I just assumed it was a notebook the woman had assembled of the people they could lobby, but reading the comments here, it seems clear it was something like a copy of the annual New York Social Register, which you can see a copy of on ebay: <http://cgi.ebay.com/ws/eBayISAPI.dll?ViewItem&item=300349822869>

Rachel P. (2009-10-05 19:08:42)  
I believe they're referring to the NY State Directory, informally called the "The Red Book." [http://cgi.ebay.com/THE-NEW-YORK-RED-BOOK-1953-John-S-and-Myron-D-Hart\\_W0QQitemZ270456679432QQcmdZViewItemQQptZAntiquarian\\_Collectible?hash=item3ef8796c08&\\_trksid=p3286.c0.m14#ht\\_500wt\\_952](http://cgi.ebay.com/THE-NEW-YORK-RED-BOOK-1953-John-S-and-Myron-D-Hart_W0QQitemZ270456679432QQcmdZViewItemQQptZAntiquarian_Collectible?hash=item3ef8796c08&_trksid=p3286.c0.m14#ht_500wt_952)

### **Myshoppingsun.com Scam (continued) (2009-09-30 01:26)**

A curious comment was left on [1]a previous post of mine about an internet shopping scam:

Hi Guys I really thank you for this blog

I am going to buy from the Web-Site name [2]www.myshoppingsun.com  
But I am not convince about it so I went to PayPal Verified and this is all they said, I just copy from the window they put a domain name but they used all paypal scammers account,

By the way I was scammer with some phone from UK, I Hate to said these but I am affright to do business with chinese people they always try to scamme me

And Please read what paypal said about these myshoppingsun.com website

Light in the box Limited. is PayPal Verified

PayPal's Verification System allows you to learn more about users before you pay them through PayPal. Verify that the information below is consistent with the business, organization or person you wish to pay.

Email: [3]order@litb-inc.com  
Status: Verified  
Account Creation Date: Aug. 18, 2006

To ensure that this is a legitimate PayPal Verified user, make sure that the URL of this page begins with [4]<https://www.paypal.com/>.

#### What it Means to be Verified

To become Verified, a PayPal member in the United States must enroll in our Expanded Use Program. When a member completes Expanded Use enrollment, he undergoes additional checks that increase security for all PayPal users. Please note that PayPal's verification system does not constitute an endorsement of a member, nor a guarantee of a member's business practices. You should always consider other indicators when evaluating members, including length of PayPal membership and reputation scores (on eBay or other auction sites, if applicable)

The commenter's URI: [www.myshoppingsun.com](http://www.myshoppingsun.com). Their IP: [5]98.203.87.228.

1. <http://www.blog.sethroberts.net/2009/08/02/gamesinweltcom-scam/>
2. <http://www.myshoppingsun.com/>
3. <mailto:order@litb-inc.com>
4. <https://www.paypal.com/>
5. <http://ws.arin.net/cgi-bin/whois.pl?queryinput=98.203.87.228>

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#### **In Academia, High Status = Useless (2009-09-30 06:42)**

In [1] a good article about what caused the financial crisis, John Cassidy quotes an economist:

During the past few decades, much economic research has "tended to be motivated by the internal logic, intellectual sunk capital and esthetic puzzles of established research programmes rather than by a powerful desire to understand how the economy works" let alone how the economy works during times of stress and financial instability," notes Willem Buiter, a professor at the London School of Economics who has also served on the Bank of England's Monetary Policy Committee.

It isn't just "the past few decades" and it isn't just "much economic research," it's all academia. Thorstein Veblen made this point a hundred years ago in *The Theory of the Leisure Class*. Academics show their high status by doing useless research. Useful research is low status. When, as a professor, you see this in your own department – the uselessness of what people do – you think surely other departments are different. They aren't. As a Berkeley grad student in engineering said to me, "95 % of what goes on in Cory [Hall – where her department is] will never be used."

1. [http://www.newyorker.com/reporting/2009/10/05/091005fa\\_fact\\_cassidy?currentPage=all](http://www.newyorker.com/reporting/2009/10/05/091005fa_fact_cassidy?currentPage=all)

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August (2009-09-30 08:11:46)

Or they go beyond uselessness an into manipulation: <http://bishophill.squarespace.com/blog/2009/9/29/the-yamal-implosion.html>

John (2009-09-30 08:50:08)

Just yesterday I was talking to someone who was asked to provide a biosketch for a grant application. This is an indispensable person, a programmer who holds many research projects together. But on the biosketch form he's a zero: no publications, no presentations, no grants. He has decades of engineering experience, but that doesn't fit on the form.

Ernie (2009-09-30 09:30:25)

Ah, but define useful research. You mean industrial payoffs? Immediate commercial potential? How do you know the cure for AIDS isn't coming from something people once called useless?

thehova (2009-09-30 11:35:57)

I remember considering this when I decided not to pursue a PHD in history (spending my life writing papers on an obscure moment of time for a small group of people doesn't sound too appealing). I didn't understand that in academia, this phenomenon extends to other fields.

thehova (2009-09-30 16:34:33)

Greg Mankiw (economics blogger) indirectly touched on this subject here: <http://gregmankiw.blogspot.com/2007/12/career-advice-from-david-brooks.html>

seth (2009-09-30 16:36:47)

"Define useful research." Good question. I mean research that is clearly useful. The saving grace of the system is that research with no obvious use turns out to be useful in an unexpected way. And the less prestigious your position, the more you are willing to do useful research. That's another way useful research gets done.

Nathan Myers (2009-09-30 17:20:30)

"Useful research" must have some possibility of telling you something you don't already know.

Phoebe (2010-03-18 00:50:28)

Just came out of an academic workshop of tourism. All bullshit. They all show off and nothing is really useful

## **What the Government – Any Government – Isn't Telling You About Swine Flu (2009-09-30 20:09)**

[1]How weak it is:

By any measure A/H1N1 is a benign flu virus. According to official statements, New Zealand, for example, usually has 400 deaths from flu each year. This year there were 17, so it could be argued that the pandemic has resulted in 383 lives being saved, which makes it more effective than any flu vaccine.

It is always good politics to scare people. Create a danger from which you protect them. It's such an old and common ploy it's curious how well it still works. Maybe the gullibility is hard-wired.

1. [http://www.bmj.com/cgi/content/extract/339/sep29\\_3/b3959?paper=1](http://www.bmj.com/cgi/content/extract/339/sep29_3/b3959?paper=1)

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Chris (2009-09-30 23:28:49)

<http://www.medpagetoday.com/InfectiousDisease/URItheFlu/16220> - interesting - that there may be a role for bacteria too

Kevin Miller (2009-10-01 06:06:02)

Two points you're overlooking: 1. The consequences for being wrong are pretty serious, and asymmetrical. I lived in Beijing during the SARS crisis and it was really devastating (talk to some of your grad students who were undergraduates then). For about 5 months you didn't see any children, students were locked on their campuses, classes were canceled so there was little for them to do, and economic activity ground to a halt (on the positive side, the air pollution dramatically diminished). It was a real crisis of legitimacy for the regime, although they were ultimately strengthened by it (Only the Communist Party can defeat SARS, as a poster in Haidian said). 2. Although H1N1 seems not to be severe, it spreads really easily (40-50 students a day at the U. of Michigan showing symptoms last week, including about 1/10 of my class so far). Bird flu is very serious, but does not spread easily. In people who have both, they can swap DNA and you could end up with something that was very serious and spreads easily. So you can see why a place like China, with a really dysfunctional medical system (even compared to ours) is really worried about H1N1. They have bird flu, they've had a searing recent experience with SARS, and there's a plausible nightmare scenario. Not to go all Dick Cheney on you, but what percentage risk of the nightmare scenario would you want there to be before you started worrying, if \*you\* were the government of any of the countries involved?

seth (2009-10-01 06:24:50)

That is the first I've heard of the nightmare scenario. Policy makers are taking it seriously? as for your question, maybe 0.1 % - but I find it hard to believe the odds could be determined with any precision.

Andre Vellino (2009-10-01 06:36:39)

Check out CBC's White Coat Black Art from September 19th (podcast here: [http://podcast.cbc.ca/mp3/whitecoat\\_20090919\\_20419.mp3](http://podcast.cbc.ca/mp3/whitecoat_20090919_20419.mp3)) "We've heard a LOT about the global pandemic of swine flu in recent months. Experts are predicting a deadly second wave of the illness this fall. Accordingly, Canadian health officials are scrambling to put plans in place to handle the expected health crisis. It's costing us millions and millions of dollars. But not everyone believes it's necessary. This week, we ask the question: could this be a pandemic about nothing?"

Chris (2009-10-01 09:32:52)

Any chance that all the paranoia is actually saving those lives in New Zealand? Here in Japan loads of schools are cancelled with teachers acting like postmen now. They go to the houses of their students drop off and pick up assignments from mailboxes without human contact. In addition every company, sporting event etc requires people entering buildings to use alcohol on their hands. Since these steps also prevent regular flu it could lead to a drop in mortality. Of course the general attention probably has many more people checking with their doctors instead of trying to fight it off alone. But according to the Umami hypothesis maybe all these actions will hurt immune response. We live in interesting times :)

Nathan Myers (2009-10-01 14:28:10)

The "Spanish flu" started out benign, too. (I gather it started as an epidemic at an army training camp in Kansas.) It's the similarities to that flu, which preferentially killed young people with strong immune systems, that has people worried. Seth, if your immune system is as pumped-up as you hope, that should make you the more concerned. Really, the mortality rate of Spanish Flu was much lower than plague or smallpox. It was just that so many people got it, each percentage point meant millions.

Anthony (2009-10-01 14:50:37)

Can someone explain what it means for a flu to "preferentially" kill people with strong immune systems? It almost sounds like a contradiction.

Nathan Myers (2009-10-01 18:43:51)

Anthony: Lots of people are killed by their own immune system (e.g., look up lupus). Spanish flu victims died from lung congestion produced by their body's response to the flu. The more vigorous the response, the more congestion.

Kevin Miller (2009-10-01 20:52:09)

Seth - I think so. Here's the first thing I got when I searched "swine flu + bird flu" - <http://www.cbsnews.com/stories/2009/05/0-8/health/main5001182.shtml>, which isn't the best source, but it's something. One problem is that when people hear the word "pandemic" they think it means "we're all going to die." It means many people will have the disease, which gives it more opportunities to mutate into something possibly worse. One possible piece of good news is the idea that many of the dead in the 1918 flu pandemic were people who also had tuberculosis (because TB rates fell quite a bit afterwards, and stayed down). Nathan - I don't know that Seth thinks his immune system is "pumped up." Rather, probiotic kinds of bacteria can reduce the overall level of inflammation and so decrease the chance that you'll have the kind of overactive immune response that ends up producing auto immune attacks. Finally, there certainly is no way of quantifying much of any of this. Which makes me more sympathetic to the people who have to make decisions about public policy in this arena.

seth (2009-10-02 05:41:23)

Anthony, the second wave of Spanish flu preferentially killed young adults, unlike other flu strains. These young adults had stronger immune systems than the very old and very young. They differed in a thousand other ways as well so the notion that the Spanish flu preferred them because of their "strong" immune system is quite a stretch. Because there was a world war going on, the Spanish flu went through a very unusual selection phase where flu variants that did well among young men had a better chance of spreading than flu variants that did well among the very old and very young. Most of the time flu variants that do well among schoolchildren have a better chance of spreading because schoolchildren are together a lot. (Like soldiers during a war.) Thus they do well against young children. They do well against the old because a larger fraction of the old are already in poor shape.

Aaron Blaisdell (2009-10-02 07:13:57)

Dr. Weston Price and Dr. Mellanby both showed (back in the 1930s) that ingestion of fat-soluble vitamins (A, D, and likely K2) imbued protective immunity against infections. I'm not worrying about flu shots or avoiding people with flu-like symptoms (like an undergrad in my lab yesterday). Rather, I'm upping my dose of D3, getting more mid-day sunlight, eating pastured eggs (much richer in vitamins A and D), eating more fermented foods (FAGE yogurt, kefir, kimchee, raw-milk cheese), and putting Thorne's K2 drops in my beef stock. I'm also making kombu broth this morning. And I'm trying to get plenty of rest. I think this has been shown to be a much more effective approach to protecting oneself against communicable infections.

seth (2009-10-02 07:32:02)

Kevin, I agree with Aaron's approach: try to boost immunity (which will have many other benefits). Whereas attempts to reduce exposure have many negative side effects. Since public health officials ignore such a simple and basic point, I find it hard to be sympathetic.

Kevin Miller (2009-10-04 05:05:01)

I agree with it, too. But I think we use "boost immunity" in two different ways. One is the idea that you'll have a stronger immune response. The other, which, probiotics might do, is to enlist other organisms into your immune system, so they're outcompeting what might come in. If I understand this correctly, in one sense this means you have a weaker immune system, or at least a quieter immune system, because you have less inflammation and therefore a higher threshold for your immune system to go on the attack. But you're less likely to get sick, which would be why you could say you have a stronger immune

system. If problems arise when your immune system is too busy, it makes sense to distinguish between these two senses of having a "stronger" immune system.

### **Bad Review of the Shangri-La Diet (2009-09-30 23:32)**

A professor in the Berkeley nutrition department recently told a friend of mine he knew about the Shangri-La Diet. He advised:

Don't try it. He's a psychologist, not a nutritionist.

As if weight control didn't involve the brain. Perhaps my friend was talking to Marc Hellerstein, who [1]told a student reporter that the theory behind the diet makes "no sense."Â The theory says we stock up on energy when it's cheap.

1. <http://sciencereview.berkeley.edu/articles.php?issue=11&article=bookreview>

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Ryan Holiday (2009-10-01 00:09:05)

The thing about snark is that it is much more about the scorn and not the logic. It's said with such conviction and derisiveness that I think people are often afraid to point out the obvious mistakes in it.

JLD (2009-10-01 02:47:13)

*Don't try it* Sure, that's the best way to stay unbiased about the topic! I just stumbled upon this same joke [1]elsewhere (in french, sorry). BTW, it works, 4kg in 1 1/2 month, 3 spoons canola oil.

1. <http://a10.idata.over-blog.com/400x550/0/01/87/11/ottopics2/4emecouv-jademediaweb.jpg>

Toni H (2009-10-01 12:44:27)

I tried e-mailing you, but the domain shrangiladiet.com doesn't apparently exist, so I'll just paste my idea to you here: You've written interesting stuff on how we should get bacteria to feed our immune system. Have you ever thought what a great way to get bacteria it is to eat your fingernails or the skin next to them? Whenever I travel abroad, I instantly get a small diarrhea because of my habit, but after a couple of days it passes and I don't have any problems with local foods (I travel a lot and eat a lot of shady stuff, e.g. street vendors in small chinese rural villages).

seth (2009-10-01 15:55:02)

it's shangriladiet.com not shrangiladiet.com. eating your fingernails, no but I did speculate that this is why cats lick themselves. That's interesting that the location-specific bacteria would be found on your fingernails.

Nathan Myers (2009-10-01 18:40:54)

Surely the fact of whether it works trumps any amount of theorizing about why it ought to work, or ought not to work. If you're really a scientist, anyway. This professor reveals he is no scientist. There should be consequences for that, if you're in a position meant to be held by a scientist. There are plenty of real scientists looking for work.

Nadav Manham (2009-10-02 04:50:42)

The quoted professor also seems to misunderstand the concept of the word "try."

Seth's blog » Blog Archive » Nassim Taleb on Incompetent Experts (2009-11-05 18:42:13)

[...] Second, self-experimentation allows researchers such as myself to do innovative research in some area without getting permission from experts in that area. Self-experimentation is very cheap; no grant is required. A self-experimenter can be as heretical as he cares to be. My research on weight control has been breezily dismissed by nutrition professors, for example. Obviously they wouldn't fund it. The Animal Care and Use Committee at UC Berkeley turned down my application to do rat research about it — my ideas couldn't possibly be true, they said. My research on mood isn't just utterly different than what clinical psychologists and psychiatrists say to each other in meetings and papers; it also, at first glance, sounds absurd. Self-experimentation allowed me to do it. That's another sort of filtering: control of what research gets done. [...]

## 4.10 October

### Sour Fish Soup (2009-10-01 21:59)

For lunch in a campus restaurant I had sour fish soup. The soup is made sour by the addition of fermented cabbage – several kinds of cabbage that have been fermented about a month. It is a dish from Sichuan or Guizhou Province. It's an example of how our liking for sour tastes causes us to eat more harmless bacteria.

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### Chinese Yogurt Maker (2009-10-02 06:29)

I got a Chinese yogurt-making machine. [1]Here is an example of what it looks like. I got the ACA VSN-15B but the 15A is almost the same and far more available (in Beijing). It cost about \$20; the simpler VSN-15A costs about \$10. You put 1000 ml of milk plus 50 ml yogurt starter (e.g., commercial yogurt) into a container and just start it. You can ferment it as long as you want. The instructions recommend 8-12 hours.

What interests me is (a) how easy it is and (b) the high quality of the result. I've made yogurt dozens of times without a special machine. It's not hard, exactly, but it isn't easy, either. You need to preheat the milk to denature the proteins, then let it cool before adding the starter. The denaturing phase takes a few hours and a different heating system (microwave oven) than the fermentation phase (ordinary oven). The final result isn't as thick as I like unless I add milk powder – another not-quite-easy step. (Given problems with Chinese milk, I would never use Chinese milk powder.) Using the yogurt machine the texture is excellent (thick and creamy) without adding any milk powder. I suspect the final product is so much better because the proteins are more completely denatured. Maybe 2 hours at 150 degrees denatures a much larger fraction of the protein than 180 degrees for 5 minutes, for example. Another possibility is that I was using too much starter and that less starter produces better results. (How could that be? Perhaps with less starter you get more genetic diversity as it grows, which allows it to become better adapted to the particular milk and temperature you are using.) Perhaps a steadier temperature allows better adaptation to the temperature. You add hot water around the container to help steady the temperature.

I still need to experiment to get it as sour as I like but I can get it as thick as I want just by draining it. It's not exactly the universal condiment but it's close; tonight I had it on leftover dumplings.



All in all, a ten-fold improvement over what I'd done before. The big improvements: 1. So easy I can do smaller more frequent batches (in Berkeley I did at least 2 quarts at once), thus need less storage space. I also suspect the bacteria are more active soon after fermentation, so more frequent is better. 2. Requires much less attention. The mental cost of each batch is less. 3. Produces much better yogurt. 4. No more milk powder. 5. More energy efficient. (Using the microwave, I nearly boiled the milk, then heated an entire oven just to keep the yogurt warm while fermenting.)

1. <http://browse.woye.com/Yogurt-machine/161400-15-1.htm?tag=new>

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Ashish M (2009-10-02 08:14:57)

For your next business venture ... importing a few of these babies back to the Bay Area? (Hint, hint.)

David (2009-10-02 08:33:29)

I see a half dozen different model available here in the US. <http://google.com/search?q=yogurt+maker>

david (2009-10-02 09:52:58)

Interesting. I doubt I would ever have gone to the trouble of making yogurt the manual way you describe, the the machine sounds pretty easy. I notice they have them at Amazon for \$30- \$40: [http://www.amazon.com/EuroCuisine-YM80-Yogurt-Maker/dp/B000Q4Y8OY/ref=acc\\_glance\\_ktch\\_ai\\_-1\\_3\\_tit](http://www.amazon.com/EuroCuisine-YM80-Yogurt-Maker/dp/B000Q4Y8OY/ref=acc_glance_ktch_ai_-1_3_tit) David

Aaron (2009-10-02 13:16:23)

is there a comparable American model- can i buy the Chinese one in the US? websites? thanks for interesting post!

seth (2009-10-02 19:02:31)

I haven't been able to find a comparable American model. Nor any way to buy the Chinese one in America. If you buy it in China the current is wrong. David, the amazon products you link to are different. They use small cups to hold the milk/starter mixture. That means they use space less efficiently, require two more steps (mix starter and milk in separate dish, wash separate dish), and may not heat as evenly. Because of it's one-big-container design, the Chinese machine can use hot water to improve temperature constancy. That might be important. Ashish, the Chinese model is designed for Chinese house current, which differs from American current. I will however see if it works with American current.

David (2009-10-02 21:10:06)

How about this one: <http://www.amazon.com/Euro-Cuisine-2qt-Yogurt-Maker/dp/B002KBFO6C/> It showed up in the ad bar on the right side of this post.

seth (2009-10-03 00:01:54)

David, that has the single container, yes, but everything else is worse. It weighs 4 pounds; mine weighs one pound. It's much bigger. The capacity is needlessly large, at least for my purposes. How the thermometer tells you when it's done isn't clear.

david (2009-10-03 04:49:37)

Not to change the subject, but I'm drinking Kombucha from my first batch of homebrew. I got the scoby from a neighbor. It tastes good! Now I need to experiment and learn to add flavors (citrus, ginger, fruit, etc). I drink 16oz / day and it was getting expensive.

seth (2009-10-03 06:23:19)

It's easy to get the scoby (starter culture) needed for kombucha. Just buy a bottle of unpasteurized kombucha, open it, and let it sit at room temperature, covered with a paper towel, for a week or so. A scoby will form at the top.

Aaron (2009-10-03 08:50:57)

seth- i noticed the difference in the little cups right away! if for any reason you ever see a comparable model in america- please post it!

Aaron (2009-10-03 09:15:40)

btw- this is an interesting one: <http://www.healthytraders.com/miracle-exclusives-newest-electric-yogurt-maker-model-me72-p-2055.html> can't beat the ease of use here-

nr (2009-10-04 10:14:07)

has anyone figured out how to order a yogurt maker like that in or with shipping to the US?

Dan (2009-10-04 13:44:21)

Kefir seems easier to make. No machines. No heating anything. Is yogurt better than kefir or just different?

Ashish M (2009-10-05 11:20:32)

Amazon reviews are instructive. The point about the small cups is that many people feel that cooking/storing in glass is preferable to cooking/storing in cheap plastic. Time to do some retail therapy ...

seth (2009-10-05 13:29:27)

Yogurt is easier to make than kefir, in my experience. Ashish, yeah, I agree that glass is better than plastic for cooking and storing. Good point.

Seth's blog » Blog Archive » Yogurt-Making Results (2009-10-07 05:41:00)

[...] I've been steadily using my new yogurt maker. It's like a microscope: I can see things I never saw before. I started with the recommended fermentation time: 12 hours. Then I did batches at 16, 20, 24, and 28 hours. The yogurt grew steadily more sour. The increase was remarkably clear. I am unable to find this crucial info anywhere on the web — that 28 hours produces more sour yogurt than 24 hours, etc. By making my yogurt much more sour than commercial yogurt I'm getting a lot more of the crucial ingredient (bacteria). [...]

Mark Frauenfelder (2009-10-13 15:02:00)

I don't like preheating the milk for making yogurt. Even though I use a makeshift double-boiler to heat the milk to 180 degrees F the saucepan gets scalded. For the last two batches, I just made the yogurt without preheating the milk. It's a little runnier, but still tasty and I like it better runny anyway. I wonder if the bacteria count is reduced when I make yogurt without preheating the milk.

collin (2010-09-06 16:22:21)

I'm planning to setup a yogurt. Where can I purchase a commercial yogurt maker?

## **Miso Shopping in Beijing (2009-10-03 04:12)**

In Beijing I have no kitchen, just a microwave oven. Which is enough to make miso soup. Which I can eat happily day after day.

But I need miso. In Tokyo I bought miso far better than what I used in Berkeley and now cheap miso isn't good

enough for me. Finding high-quality miso in Beijing is turning out to be hard, even though there are many Japanese students in my neighborhood. Today I went to a Japanese-owned department store with a food market. They had hundreds of Japanese foods, including plum wine, natto, Japanese pickles, sushi ingredients, seaweed crackers, and black milk (whatever that is). But they didn't have miso. I have no explanation; the local hypermarket (Carrefour) had low-quality miso.

If you know where to get good miso in Beijing, please let me know.

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### **Gatekeeper Drugs: Drugs that Require Gatekeepers (2009-10-03 06:58)**

A friend of mine suffered from depression. Like so many depressed persons, he went to sleep very late – maybe 3 am. I told him that was a very bad sign, no one should go to sleep that late. He started going to sleep earlier and waking up earlier and felt better. He wondered why none of the many psychologists and psychiatrists he'd seen about his problem had told him what I said. The first time he asked I think my answer was that I cared more than they did about the relation of depression and sleep.

Recently he asked again: Why didn't they tell him something so simple and helpful? Maybe I learned something in the intervening years because my answer was different. I said all health care professionals – not just doctors, all therapists/healers, mainstream, alternative, Western, non-Western – have no interest in treatments that they are not needed to administer. If all you need to do is to get up earlier in the morning, you don't need a psychiatrist. Therefore a psychiatrist won't tell you to do that. The only advice they are likely to give is advice they are needed to administer.

I could give dozens of examples. Does the Chinese herbalist tell my friend with an infection to eat fermented foods to boost his immune system? No, because that wouldn't involve the herbalist. Instead he prescribes herbs that probably do the same thing. Does a dermatologist tell a teenager that his acne is caused by diet? No, dermatologists make the absurd claim that diet isn't involved. Because if it were you wouldn't need them. You'd just figure out what foods are causing your acne, and avoid those foods. Why do medical schools fail to teach nutrition? Because you don't need a doctor to eat better. Why is prevention almost completely ignored? Because prevention doesn't require any gatekeepers.

The economic term is rent seeking: health care professionals act in ways that require you to pay them. The usual economic examples of rent-seeking cause a kind of overhead you have to pay but the rent-seeking engaged in by the entire health care industry shortens our lives. Simple cheap safe solutions are ignored in favor of expensive and dangerous ones that don't work as well. Our entire health system centers on gatekeeper drugs: drugs that require gatekeepers. The usual name is prescription drugs; their danger is part of their appeal to the doctors that prescribe them. Because it makes the doctor necessary.

EDM (2009-10-03 12:14:51)

I don't agree with the use of the term rent-seeking. The psychiatrist that doesn't recommend sleep to a depressed patient is acting in his own self interest. He doesn't have an incentive to recommend a therapy that will solve the problem without repeat visit. He didn't go to school for god knows how long to tell people to get better sleep. He went to school to make people better through the narrow lens of his specialty. Now, something like the AMA controlling who gets to be a doctor, that is a form of rent seeking. They are the gatekeepers and the member doctors benefit from that constraint on who can practice medicine. -Ed

Anthony (2009-10-03 15:30:12)

Seth, here's a checklist of emotional needs that also might help your friend (or anyone who is depressed). It is useful for people with anxiety or depression (and probably other things): <http://anthny.com/2009/05/16/emotional-needs-fulfilled-contentment-fulfillment-well-being/>

seth (2009-10-03 16:43:33)

EDM, I don't follow your argument. Rent seeking is one way to act in one's self interest. Here's a definition:

rent seeking occurs when an individual, organization or firm seeks to earn income by capturing economic rent through manipulation or exploitation of the economic environment

Psychiatrists earn income by ignoring remedies that don't involve them. I'm assuming that the therapeutic environment (what therapies are available and advertised and advised) and research environment (what research is done) are part of the economic environment. They affect what is and isn't for sale.

EDM (2009-10-03 21:46:10)

Seth, I agree with your greater point. I only quibble with describing it as rent-seeking. Rent-seeking happens by manipulating the political environment outside of normal market competition. I think the distinction I am trying to make is that I believe rent-seeking is active. In this example it would be psychiatrists actively working to marginalize alternative remedies. I don't think the passive, "not looking for" alternatives rises to rent-seeking... -Ed

Nathan Myers (2009-10-03 22:01:20)

EDM is right that we need a correct name for the practice that Seth is describing. "Rent-seeking" isn't it; that's already well defined. There might be a name already, but it doesn't come readily to mind. I recall a story about a free health clinic that moved to the same floor as a legal aid society. They ended up referring a big fraction of their patients to legal aid instead.

seth (2009-10-03 23:15:57)

It's true that the "seeking" in rent-seeking implies activity; whereas the activity I'm talking about appears passive to onlookers. The discouragement of prevention research is subtle.

Nansen (2009-10-05 16:46:47)

In the case of depression, there is a complication to your argument. Sleep problems are seen as a symptom of depression by conventional medical wisdom - just try googling "symptoms of depression". It is unrealistic to expect the typical practitioner to offer treatments that run counter to the conventional wisdom. I use your discovery about early-morning faces every day, and my doctors are amazed at my condition. But they have zero interest in acting as "research doctors" with respect to their other clients. Can you really blame them?

Karina (2009-10-08 18:28:48)

Wow, I couldn't disagree more with the example. And the comment, "The psychiatrist that doesn't recommend sleep to a depressed patient is acting in his own self interest." Yikes. They want to keep their patients depressed?! Why do we have the medical profession in the first place? Do they give just partial chemotherapy to keep the cancer patient from going into remission, too? Having participated in a number of fora for depression/mental illness and having both personal and anecdotal experience with depression, I can say that most mental health practitioners (psychiatrists and psychologists) are deeply

concerned with making their patients well. And that includes inquiring about sleep issues, and educating on sleep hygiene, and (yes) prescribing sleep medications when needed. Some are faster to prescribe medication than others. If your friend was making the unwise step of going to a general practitioner (GP) for depression treatment, then yes, I wouldn't expect them to go through a complete lifestyle assessment. But any mental health professional worth their degree will check crucial things like sleep, relationships, exercise, and alcohol use, both as symptoms and as lifestyle factors that should be addressed as part of treatment. Frankly, demand for mental health services is robust and nobody is worried about "running out of patients", so even if a psychiatrist didn't have simple compassion, there's no reason to drag out treatment. I'm not saying anything about pharmaceutical-pushing/marketing, though; that's a whole other can of worms.

Seth's blog » Blog Archive » How to Eliminate/Prevent a Skin Infection and What It Means (2009-10-11 11:24:27)  
[...] Gatekeeper Drugs. How to Avoid Infection: Something I Didn't Know. [...]

Seth's blog » Blog Archive » How to Eliminate/Prevent a Skin Infection and What It Means (continued) (2009-10-13 13:55:04)  
[...] A brief summary of my previous post is all I needed to do to cure/prevent a skin infection was buy more socks. Instead of buying 5 pairs every 6 months, buy 20 pairs every two years. That's all. Costs nothing. No drugs. No special treatment of the socks. No special cycle on the washing machine. No following a hundred (or ten) instructions about how to avoid infection. Like my depressed friend, I had the reaction: Why didn't my doctor tell me this? He didn't tell me because he didn't know, I realize. Why he didn't know . . . is a harder question. [...]

Seth's blog » Blog Archive » More About Faces and Mood (2009-10-15 07:46:38)  
[...] A friend with bipolar disorder writes: When I wrote in your blog that I use your discovery daily, it means that every day I look in a mirror for an hour, starting at approximately 6:30 a.m. I have the mirror about 20 inches from my face because I have read that a mirror image is half the size of the object reflected. [Life-size faces appear to work best. Using a mirror means the face you see is perfectly life-size, allowing for distance. TV faces can be larger or smaller than life-size.] To keep from being bored while looking at my face in the mirror, I mostly listen to tapes of C-SPAN programs. Sometimes I listen to music. Once or twice a week I may just think, or plan my day. That does get boring after about 30 minutes. [...]

## **Rent Seeking and Our Health-Care System (2009-10-03 16:58)**

Does our health-care system (including researchers) engage in rent-seeking when they ignore simple cheap remedies, including prevention?

Here's a simple example of rent-seeking. Some friends and I went to visit the Great Wall. On the path up to the wall was a man sitting in a chair. He demanded 30 cents to let us pass. There was no gate. He wasn't a government official – just a man and a chair. There was a path to a goal. It was blocked unless we paid.

In the case of health there are many paths to the goal. Many ways to become healthier – many ways to relieve depression, for example. Prevention is one way, cure another. There are cheap cures and expensive cures. By ignoring prevention and cheap cures, the profession of psychiatry is blocking those paths (by failing to clear them) and thereby forcing us to take their expensive path (dangerous drugs), usage of which they control. It's more subtle than the man with the chair but it amounts to the same thing.

Rent-seeking is annoying. I was annoyed by the man in the chair. The rent-seeking of our health-care system is disguised, not easy to make out. This makes it less of a problem for health-care professionals, such as doctors; I think few people are aware of it. (For example, most people with acne don't realize it is probably caused by their food.) But my friend with depression was annoyed, deeply annoyed, when he learned of a simple cheap (partial) solution to his problem.

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Mary (2009-10-03 17:51:43)

Not ALL psychiatrists are like that. Check out this psychiatrist's blog: <http://www.beforeyoutakethatpill.com/> By the way, this psychiatrist is a professor at Emory, which wasn't very happy about his blog, and tried to make him delete references to the fact that he was affiliated with Emory from his blog. The blogosphere supported him in protesting this muzzling, and Emory relented. He also has a novel in progress about a psychiatrist doing research on the link between accutane (the acne drug) and suicide, which is understandably unpopular with the drug's maker. The psychiatrist-protagonist is based at Emory, where some of his colleagues aren't too happy with the research either. I think you'd find the blog and the novel interesting. Not all psychiatrists think that drugs are the answer to every problem.

seth (2009-10-03 18:27:34)

Thanks, Mary. I like his blog and added it to my blogroll. That's surprising that Emory would try to make him delete references to the fact that he was affiliated with Emory. More bad public relations....

Kevin Miller (2009-10-04 04:59:45)

Good points, although those of us in higher education should probably light the irony lamp when we talk about rent-seeking (not to imply that you aren't aware that we're the poster children of this phenomenon).

## **Beijing Subway Security in Action (2009-10-03 18:12)**

[1]A comment on BoingBoing:

I cannot believe that I am still being asked to take my goddamn shoes off every time I want to go on an airplane, but I am able to board mass transit trains without anyone checking me for explosives at all.

Have I told you about the time I took a cleaver on the Beijing Subway? The Beijing Subway has security: They screen all bags. It started before the Olympics and, after the Olympics ended, kept going.[2] At Wal-Mart, I bought a cleaver/cutting board/chopstick set (enclosed in plastic), put it in my laptop bag, and entered the subway. I was stopped. The cleaver had shown up on the scanner screen. The guard was pleasant and after I showed her what it was I was quickly sent on my way.

1. <http://www.boingboing.net/2009/10/02/olympic-committee-me.html#comment-604153>

2. <http://www.blog.sethroberts.net/2009/09/15/beijing-wal-mart/>

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## **Hidden Bonus of the L Prize: Better Sleep, Better Mood (2009-10-04 23:55)**

The Department of Energy has a prize, called the L Prize, for a new light bulb that gives off same light as a 60-watt incandescent bulb but uses much less energy. [1]Philips has submitted what it believes will be the winning entry. For 2050

the last decade, I've tried to avoid fluorescent lights at night. Ordinary fluorescent lamps emit light with far more blue than incandescent lamps and mess up my circadian-timing system. That systems appears insensitive to incandescent light. [2]Squirrels are like me, a study suggests.

Fluorescent lights are close enough to sunlight to affect our circadian system; incandescent lights, being much cooler than the sun, are invisible to it. The timing of exposure matters if it varies from day to day; exposure to fluorescent lights at varying times is like travelling back and forth across time zones. Everybody grasps that travelling across time zones makes it hard to sleep at the right time; what is less understood is that time-zone-crossing travel affects the depth of sleep because it reduces the amplitude of the circadian oscillation. If you are exposed to fluorescent lights at night now and then, you will sleep less deeply. So I try hard to avoid fluorescent lights at night. I avoid supermarkets and subways, for example.

I discovered all this when I discovered [3]the effects of morning faces on my mood. After I travelled back and forth across time zones, the effect took three weeks to fully return. Nothing else had changed. I conclude that it took three weeks in the same place for my circadian oscillator to return to maximum amplitude. And one evening in which I was exposed to an hour of fluorescent light was enough to get rid of the faces effect for a few weeks. The ubiquity of fluorescent lighting has made it hard to study this effect in other people.

1. <http://www.nytimes.com/2009/09/25/technology/25bulb.html?em>
2. <http://www.nature.com/nature/journal/v308/n5955/pdf/308186a0.pdf>
3. <http://repositories.cdlib.org/postprints/117/>

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Dennis Mangan (2009-10-05 06:26:07)

Maybe fluorescent lighting is behind some of the dreadful effects on sleep of shift work.

Duncan (2009-10-05 13:17:02)

A couple of links claiming connections between cancers and night-time artificial lighting, presumably by disruption of circadian rhythms: <http://www.sciencedaily.com/releases/2009/02/090203135015.htm> <http://www.rd.com/living-healthy/artificial-light-a-hidden-cancer-risk/article128447.html> (The Science Daily page says that energy-efficient light bulbs are much brighter than incandescent lights. I'm not sure what they mean by that. Obviously they're brighter watt-for-watt, but that's the whole point.) My personal bugbear is bright ceiling lighting. Having something shining intensely down on me from overhead when it's dark outside really unsettles me. That said, I don't think it much affects the amount or quality of sleep I get, but I haven't gathered any halfway decent data to support that claim.

Anthony (2009-10-05 13:34:51)

This is really interesting. I instinctively dislike fluorescent lighting. Now that you mention it, I especially dislike them at night (perhaps because they're more obvious then). Libraries, for example, with their flickering, buzzing lighting, I find horrible. I find I like the 'warmth' of incandescents. This is why the idea of making incandescents illegal makes me angry. I will start up a trade in illegal incandescent lightbulbs before I start using fluorescents (alternately, I would move to candle-light before using fluorescents).

John (2009-10-05 20:01:18)

Hmmm... My flat-screen monitor is internally lit by a fluorescent bulb. I wonder if that is having an effect on my sleep. After all, I'm staring directly at it for an hour or two before bed.

Nicolas (2009-10-16 08:00:00)

My personal researches shows that pc monitors or tv are NOT effects on your sleep. So John is right. Also "..claiming connections between cancers and night-time artificial lighting, presumably by disruption of circadian rhythms.." - it's just a.. mmmm.. errm... it's not true.

James (2009-11-02 19:32:14)

Have you considered trying daylight-spectrum CFLs? Also, talk about burying the lead in that article - the only place early on where it's mentioned the Philips bulb is LED based is in the caption.

## **Probiotic Health Claims Dismissed (2009-10-05 00:26)**

From [1]BBC News:

General health claims for "probiotic" drinks and yogurts have been dismissed by a team of experts from the European Union.

Their opinions will now be voted on by an EU Committee which is drawing up a list of permitted health claims.

Scientists at the European Food Safety Agency (EFSA) looked at 180 health claims for the supplements.

They rejected 10 claims and said a further 170 had not provided enough evidence of their effects.

The manufacturers of best-selling yogurt drinks Actimel and Yakult have submitted claims that will be considered at a later stage.

The difference between "rejecting" a claim and saying "not enough evidence" isn't clear.

1. <http://news.bbc.co.uk/2/hi/health/8286646.stm>

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## **Slaves of California (2009-10-05 04:06)**

A famous short story by Tama Janowitz, called "[1]The Slaves in New York" (a short-story collection called "Slaves of New York" was made into a movie), was about New York City renters who couldn't afford to move because rents were so high. Whatever their relationship with their roommate, they were stuck.

[Eleanor] lives with her boyfriend Stash in the Village. Stash is a graffiti artist who complains a lot, while Eleanor makes him elaborate meals. One night she goes to a party and meets Mikell, a handsome South African writer. They make a date and meet at the White Horse Tavern. It turns out that Mikell lives with a woman named Millie, who owns a co-op. Millie and Mikell fight as much as Eleanor and Stash do but, because neither can afford their own apartment, they are trapped.



Now, due to the huge decline in house prices, many Californians face a similar slavery. As a friend of mine put it,

Anyone like my parents, who paid cash for their houses, are kinda stuck living where they are, or they'll take a giant financial hit.

1. [http://www.newyorker.com/archive/1984/12/31/1984\\_12\\_31\\_022\\_TNY\\_CARDS\\_000342229](http://www.newyorker.com/archive/1984/12/31/1984_12_31_022_TNY_CARDS_000342229)

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Anthony (2009-10-05 13:29:24)

"Anyone like my parents, who paid cash for their houses, are kinda stuck living where they are, or they'll take a giant financial hit." I don't understand this. Haven't they \*already\* taken a giant financial hit?

### **China and Tibet: The Other Side (2009-10-05 16:47)**

In my experience, most Americans know little about Tibet but that doesn't prevent some of them from having strong opinions about the Chinese takeover. (A crime against humanity, they say.) At a dinner in Berkeley, I made this point to some friends. One of them asked politely, "What is the other side?" She had no idea what it was.

Yes, Chinese students are brainwashed about this. (When I googled "Tibet slavery" and tried to follow the links, all of sudden nothing worked.) But the smartest among them know more about it than [1]smart American students who have been brainwashed the other way. Here's what one of them told me about the Chinese side of the argument:

1. Before China took over, Tibet was ruled by a religious elite. It is this elite, personified by the Dalai Lama, that now has influential Americans (e.g., Richard Gere, Robert Thurman) on their side. While the elite are incredibly pissed off by the Chinese takeover – just as rich Cubans were by Castro – the rest of the country, having been oppressed by this elite, doesn't agree.
2. Before China took over, there was widespread slavery in Tibet. You could incur a debt that basically made you a slave, it took so long to pay off. Of course this makes a mockery of the Dalai Lama's books. Here are some details:

Until 1959, when the Dalai Lama last presided over Tibet, most of the arable land was still organized into manorial estates worked by serfs. These estates were owned by two social groups: the rich secular land-lords and the rich theocratic lamas. Even a writer sympathetic to the old order allows that "a great deal of real estate belonged to the monasteries, and most of them amassed great riches." Much of the wealth was accumulated "through active participation in trade, commerce, and money lending."

Drepung monastery was one of the biggest landowners in the world, with its 185 manors, 25,000 serfs, 300 great pastures, and 16,000 herdsmen. The wealth of the monasteries rested in the hands of small numbers of high-ranking lamas. Most ordinary monks lived modestly and had no direct access to great wealth. The Dalai Lama himself "lived richly in the 1000-room, 14-story Potala Palace."

Secular leaders also did well. A notable example was the commander-in-chief of the Tibetan army, a member of the Dalai Lama's lay Cabinet, who owned 4,000 square kilometers of land and 3,500 serfs. Old Tibet has been misrepresented by some Western admirers as "a nation that required no police force

because its people voluntarily observed the laws of karma.” In fact, it had a professional army, albeit a small one, that served mainly as a gendarmerie for the landlords to keep order, protect their property, and hunt down runaway serfs.

Runaway serfs. I find these paragraphs vastly more believable than anything I've heard Richard Gere or the Dalai Lama say about the situation. Here's how one Free-Tibeter answers these facts:

The old Tibet was backward in its technological and social systems. Nobody denies this. If, however, you look at the faces of those Tibetans who were born and grew up in that society, you can easily notice their genuine smile. When compared with other communities, the Tibetans were generally quite peaceful and warm-hearted. If they were really as cruel as the Chinese claim, then I think the people who were born and grew up under those circumstances would be different. The people living at the time were happier and calmer than the people in this new generation. At that time, unfortunately, there were people who were used by the landlords. Now the whole nation has become a slave.

3. Tsinghua students sometimes volunteer to work in Tibet as teachers for a year. They teach primary school. The education system in Tibet is very poor; there is a shortage of good teachers.

I don't have an opinion about this. It is the invisibility of gaps in knowledge that interests me here, the way smart Americans don't realize they've been brainwashed.

1. <http://www.blog.sethroberts.net/2008/12/10/when-is-science-helpful/>

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Jeff (2009-10-05 17:21:59)

I guess what's frustrating is how invisibility of gaps of knowledge are somehow accepted in some topics, but not in others. I'm a scientist whose colleagues take great joy in pointing out gaps in knowledge in, say, anti-evolutionists, or the anti-vaccine people, or whatever. But they disregard their own gaps in knowledge when they have a knee-jerk response against, say, the field of parapsychology – something I don't have much of an opinion for either way, but which, whether we like it or not, has produced interesting and statistically significant data. In terms of scientists, I prefer thinkers like Richard Feynman (recognized his own gaps in knowledge), and less like James Watson (dogmatically Newtonian). I know this post was about Tibet, but the fundamental problem (invisibility in gaps in knowledge) is epidemic in my line of scientific work, though probably much less so than in something like politics! :)

seth (2009-10-05 19:35:01)

the following comment was accidentally deleted by me: Awesome post!

NM4 (2009-10-05 20:14:14)

There are many gaps in my knowledge of Tibetan Buddhism and the Dalai Lama, but I do believe that the historical Buddha himself was one of the great self-experimenting psychologists in history.

Nathan Myers (2009-10-05 20:44:27)

It seems important to mention here the million Tibetans killed by the Chinese. On the subject of gaps, we have the infamous Rumsfeld quote,

... as we know, there are known knowns; there are things we know we know. We also know there are known unknowns; that is to say we know there are some things we do not know. But there are also unknown unknowns – the ones we don't know we don't know.

How differently things might have gone if he had been inclined to acknowledge the things we think we know that are not, in fact, so.

Gian (2009-10-06 02:09:37)

I suppose social evils existed in China as well (and still exist). So I guess it is OK for US to annex China forcibly. Also it is not simply that China annexed Tibet but Maoist China did so. Maoist are a murderous nation-wrecking gang– they did wreck Old China pretty thoroughly.

seth (2009-10-06 05:47:28)

Gian, what do you think about the U.S. Civil War? Let me repeat I don't have an opinion about the China/Tibet stuff. I'm not saying what China did was okay; I'm not saying it was not okay.

MT (2009-10-06 13:49:55)

I encountered a similar example of misconceptions about how idealistic Tibet was when I was in Nepal at a Tibetan Buddhist monastery. Speaking of the crimes perpetrated by the Chinese, one of the monks described how extensive logging had destroyed the watershed, with repercussions for Nepal where water levels were lower as runoff was no longer captured by the forest. I later read Heinrich Harrer's "Seven Years in Tibet" (a great book) written well before the Chinese invasion where he described the extensive clear-cutting he witnessed in Tibet. This was when the current Dalai Lama was still a youth. Similarly, he describes a rigidly stratified society obsessed with social status, which is in stark contrast to Buddhist teachings and reveals how powerful Thorstein Veblen's insights were. The world is too complex for certainty so we need to act without definitive knowledge. This is generally adaptive as it creates behaviours which, while often reprehensible, are successful – such as the tendency to support in-group behaviours regardless of their hypocrisy. For all people in at least some settings cognition is shaped more by the physiology of emotion than by reason. And for many of us, cognition is almost exclusively a by-product of emotional responses.

Chris (2009-10-06 17:56:35)

Intention plays a part too. The Tibet rationalization is almost like saying there was a little boy who loved his puppy so much that he dedicated his life to his puppy always tending to it's every need. But the boy was allergic to the puppy and it caused him some nasty symptoms. So when mom killed the puppy after it walked on her garden she freed her son from allergies and enslavement from the puppy. The outcome may be better but it's still reprehensible. If china was run by the nationalists instead of the communists like Taiwan was the Chinese people would probably be even better off. And of course nobody can say that Tibet would have maintained it's social structure.

thehova (2009-10-06 23:51:09)

Obama took the wise but unpopular decision to not meet with the Dalai Lama. <http://tinyurl.com/ya376c9> It should help relations between China and the US. The Tibetan love in the US gets ridiculous.

milieu (2009-10-07 04:46:20)

I am not an American but I do believe that what is being done in Tibet is worth publicizing. I don't believe that Tibet was a paradise before which was taken over by China and converted into a colony. The Tibetans have got benefits too, but the question is should they be prevented from voicing the genuine grievances they have. I believe that there are some physical and cultural constraints which will not allow Tibet to be sinified that quickly. And until that happens there will be vocal opposition from Tibetans inside and outside. Just writing to emphasize that there is a tragedy underneath which might be responsible for all the media hype in America.

MT (2009-10-07 10:37:07)

In case my above comments regarding hypocrisy within Tibetan Buddhist practices be misinterpreted I do consider the Chinese to have unjustly invaded a sovereign nation and to be an occupying force. Given the geopolitics, I never expect this situation to be resolved in favour of the Tibetans, but I do think that the world should continue to support the Tibetan people and the Dalai Lama, their exiled political and spiritual leader, including through meetings with the highest political leaders such as Obama. This opinion is formed recognizing the shortcomings of both sides, familiarity with the historical arguments advanced, firsthand conversations with Tibetans and Chinese, and a willingness to support whichever position seems stronger or to hold no opinion if there is insufficient evidence. Most people whom I've spoken to that hold opinions on this subject – including Chinese, Tibetans, Americans, etc – hold those opinions with one or more biases, as Seth has described.

Gian (2009-10-08 00:36:54)

I am surprised that people that are so loud over US invasion of Iraq see nothing objectionable in Chinese invasion and consequent murder of a million Tibetans plus cultural devastation. What if there were even a thousand social wrongs in Tibet. Who says Tibet was a paradise, but they were a free people and now they are not.

contemplationist (2009-10-14 23:38:13)

Here is my argument. Assume all of that is true. What was happening in China in 1959? Anyone remember Mao? Cultural Revolution? Giant Leap Forward? The great flaw of the Chinese propaganda is to compare pre-invasion Tibetan conditions to PRESENT Chinese conditions as opposed to those 50 years ago with all those horrors yet to come, which would make a mockery of their comparison. One need posit only one counterfactual hypothetical. Assuming the absence of the Chinese invasion, would Tibet have moved gradually towards a more 'modern' system of governance? Or at least reduction of those artifacts of extreme feudalism? If your answer is no, then you have to balance the utility of those laboring under that backward feudal system to the hundreds of thousands killed raped and maimed in the invasion and living under communist repression till mild liberalisation + utility added by the better living standards of today's Tibet. THAT is the relevant comparison. I'm not convinced that those comparisons turn out favorable to China.

Barbara (2009-12-09 04:14:16)

altho you make some interesting points, I believe you are missing the MAIN point. You speak about apples and oranges! Whatever Tibet was like in the past, has no bearing on China taking Tibet over. No nation should take over another nation. If Tibet had internal problems, then Tibet needed to solve those problems. Internal problems do not get solved from without!

seth (2009-12-09 06:29:35)

"No nation should take over another nation." Tell that to the slaves who were freed.

Joe A (2010-12-21 18:30:23)

Super interesting, I had no idea about this, although I shouldve come to the conclusion that a beautiful giant palace couldnt have been built without some form of slave labor. this seems to be a common theme b/t religions (at least christianity and tibetan buddhism)

### **"Very Happy" (2009-10-05 22:43)**

[1]To see faces early in the morning, I have a one-hour Chinese lesson every day at 6 a.m. Today my teacher said, "I feel very happy."

"Why?" I asked.

"I don't know," she said.

"It's because you see my face every morning," I said.

"No, it isn't that," she said.

1. <http://repositories.cdlib.org/postprints/117/>

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Nansen (2009-10-07 16:28:30)

Have you found that the effect on your mood is different when you see another's face, compared to when you see your mirror-image?

seth (2009-10-07 17:21:56)

No I haven't found a difference.

Dean (2009-12-28 22:46:20)

Another type of self-experiment available is working with one's hands to lessen depression. Kelly Lambert talks about this in her book *Lifting Depression*. A personal example for her is that vacuuming helped resolve her depression. She cites many cultures that work a lot with their hands, for example the Amish, that have much lower incidences of depression. I have never knit before, but today I went to a yarn store and bought knitting needles and yarn to make a scarf. I plan to track the hours I spend knitting and any change in mood.

### **Instant Willpower (2009-10-07 05:03)**

From [1]a review of The Shangri-La Diet:

Seth Roberts, the diet founder and book author, attempts to explain the science behind how this works, but I won't even begin to try to explain it here. I will admit that it is both counterintuitive and at times seems contradictory, but since there was little risk involved I was willing to give it a try.

I was nervous to add the calories into my diet (approximately 120 per tablespoon of olive oil), when all my life experience told me that I should be cutting fat and calories. However, I have only been following the plan for about a week and am amazed at the results. After just one day it was like having instant willpower.

1. <http://www.helium.com/items/1607887-what-is-the-shangri-la-diet>

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### **Yogurt-Making Results (2009-10-07 05:40)**

I've been steadily using [1]my new yogurt maker. It's like a microscope: I can see things I never saw before. I started with the recommended fermentation time: 12 hours. Then I did batches at 16, 20, 24, and 28 hours. The yogurt grew

steadily more sour. The increase was remarkably clear. I am unable to find this crucial info anywhere on the web – that 28 hours produces more sour yogurt than 24 hours, etc. By making my yogurt much more sour than commercial yogurt I'm getting a lot more of the crucial ingredient (bacteria).

The results are so clear, I think, because I'm starting with a hyper-pasteurized product (which can be stored at room temperature) and the yogurt maker holds the fermentation temperature very constant. Constancy of temperature means constancy of selection means greater population. (The theory behind the Shangri-La Diet says the main reason for the obesity epidemic is that we're eating food with exactly the same flavor from one instance to the next – from one can of Coke to the next, for example.) If the temperature is 120 there is selection for bacteria that grow best at 120; if the temperature goes down to 110 many of those bacteria die and are replaced by bacteria that grow best at 110. If the temperature goes back up to 120, those bacteria die . . . and so on. More temperature variation means more diversity of bacteria but less number of bacteria. I'll get my diversity of bacteria elsewhere – from kombucha, say.

I suspect that commercial yogurt makers are time-limited. If they fermented twice as long they could only make half as much. The average yogurt buyer has no idea that more sour = more healthy, so they couldn't charge more.

Although the yogurt maker's box shows the machine set to 32 hours, the actual maximum time is 24 hours. To get 28 hours I reset it during the process.

The official website of the National Yogurt Association, [2]aboutyogurt.com, contains nothing about how to make yogurt.

The [3]Salton Yogurt Maker might be the best yogurt maker available in America. I can't tell if you have to preheat the milk – the worst part.

More Does more sour = more healthy? I agree with the two commenters who suggest that the number of live bacteria probably goes down after a certain point as the mixture becomes more acidic. The number of live+dead bacteria, however, probably continues to increase. My guess is that the total live+dead is maximized when the yogurt is most sour; the number of live bacteria is maximum around the time that the acidity is most quickly increasing, somewhere in the middle. I think the digestive benefits come only from live bacteria but that the immunostimulatory benefits come from both live and dead bacteria. I find it hard to believe that the immune system can tell whether bacteria it encounters are alive or dead.

1. <http://www.blog.sethroberts.net/2009/10/02/chinese-yogurt-maker/>

2. <http://aboutyogurt.com/>

3. [http://www.epinions.com/reviews/Salton\\_Yogurt\\_Maker\\_Model\\_YM9\\_1\\_Ea](http://www.epinions.com/reviews/Salton_Yogurt_Maker_Model_YM9_1_Ea)

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Eric (2009-10-07 05:54:25)

"the average yogurt buyer has no idea that more sour=more healthy..." I don't quite see how you know this either. There seem to be too many variables involved to really draw much of a conclusion (i.e. does it really matter how many individual bacteria you eat, is the sourness/bacteria count correlation always positive, is there more than one or two species of bacteria capable of surviving in yogurt culture with *L. acidophilus*, etc)

seth (2009-10-07 06:14:55)

My basis for my belief that more sour = more healthy is that more sour = more bacteria (the bacteria multiply) and more bacteria = more healthy. The second conclusion I base on all the evidence for the umami hypothesis – see all those posts for the data. It's true I can't make a dose-response function; at some point more bacteria won't do any more good. But I truly doubt that a single serving of weak yogurt (= commercial yogurt) is optimal.

Eric (2009-10-07 06:28:03)

im not so sure that more sour = more bacteria forever. more alcohol doesnt equal more yeast, for a counterexample.

Kevin Miller (2009-10-07 07:19:52)

We have one of these yogurt makers and found it works great with a round 2-quart (I think) plastic container of the kind sold for use with frozen juice. We don't preheat the milk, although we use powdered milk and use warm water to reconstitute it. The recipe couldn't be simpler – fill the container halfway with milk powder, fill up the rest with water (you need to add some water, and then whisk it around to mix it up, add 1/4 cup of the last batch of yogurt, mix it around as best you can with a whisk, and then leave it all day or over night. If only you could readily get powdered whole milk in the U.S. (you can buy some imported from Mexico, but it's expensive), it would be the perfect way to make yogurt. On the sourness issue, I note the increasingly prevalence of "tart" frozen yogurt places in my college town. Perhaps it's a sign of changing tastes (or, more cynically, perhaps it's a way to allow people to add more sugar without noticing).

josh (2009-10-07 08:40:15)

I've also been making my own yogurt lately, and I ferment for at least 24 hours due to my lactose intolerance. When I try to use that yogurt as a starter for the next batch, however, the results are not good. Instead, I pull some of the yogurt out after 6-12 hours and save that as a starter for the next batch. I think the problem might be that the lactic acid that makes the yogurt more sour might also kill off bacteria at some point. In any case, if my yogurt fermented for 24 hours had more bacteria than yogurt fermented for 6, wouldn't it be at least as good as a starter?

SB (2009-10-07 08:54:29)

<http://ezinearticles.com/?Instructions-For-Salton-Yogurt-Maker&id=1192702> Instructions for the Salton yogurt maker. You do have to preheat the milk. It also says "allow the yogurt to incubate 6-12 hours. The longer it is heated, the more tart the taste".

Jim Breed (2009-10-07 09:05:11)

<http://www.williams-sonoma.com/products/e096/index.cfm> # I got one of these yogurt makers from Williams-Sonoma for Father's day. I preheat the milk to 180, put in some powdered milk, add some yogurt for starter, and 10 hours later I have 7 6 oz containers ready for the fridge. My best results are with Whole Foods low fat organic yogurt for starter and organic whole milk for my milk. The best batch so far used a gradual cooling from the 180 heat cycle and a 10 hour cycle. The result was very smooth, very sour yogurt. Previous efforts at an ice bath to quickly cool the mix and 12 hour cycle yielded yogurt that felt grittier on my tongue but not as sour. YMMV, Jim Breed

Ashish M (2009-10-07 10:12:20)

It should really be called the "National Association of Industrial Yogurt Manufacturers."

Matt Goff (2009-10-07 12:24:49)

The salton maker I used (which looks like the one in the link) was basically an incubator that maintained a constant temperature, so all the prep work of getting the yogurt started had to be done. I found it frustrating to only do one quart at a time, so I gave the maker away and use a large canning pan where I can have several quart jars going at the same time in a water bath. I've found that having a small burner set on medium-low maintains the temperature at a constant 110 or so (at least for the depth of water bath I tend to use), and I typically let that go for 24+ hours (I prefer a more sour taste apart from whether it confers additional health benefits or not). Having two kids and using the yogurt to make yogurt cheese (which I use in ways not unlike cream cheese), it's pretty easy to go through a quart a day (which clearly doesn't work so well one quart at a time).

Vlemmix (2009-10-07 12:50:56)

I make yoghurt myself a couple of times last months. Did not use a yoghurt maker, but the oven in my home. Taste was a bit different each time, and it tends to become better after a few days. Even used the sun's heat last summer, but temperature was still to low to turn the milk into yoghurt in a day, the taste wasn't right. I just kept the milk/yoghurt in the fridge, and somethink like 5-6 days later the taste was good! I'm not making my own yoghurt right now. It's a bit of a hassle and keeping the oven on all-night, nah. I could buy a yoghurt maker, but I'm now buying yoghurt from a smaller-scale company located in a small town in The Netherlands with some 400 residents. They ferment the "real farmers' yoghurt" for 18 hours. The yoghurt is quite thick compared with the normal yoghurt you can find in the stores and the taste is very nice, close to what I made myself a couple of times.

Charles (2009-10-07 20:05:27)

I've made yogurt before, but I really didn't want the hassle of yogurt with all the worrying about temperature, so I started making KEIFER. Much simpler. I just put some of the kefir "grains" (they look like cottage cheese) into a mason jar with some milk, put a loose cover on, and stick it in a cupboard for 2-3 days. I don't have to worry about temperature or anything else. Warmer is better, but it's not critical either way. And the longer you leave it, the more fermentation happens, so time is not an issue. The research I've done indicated that it actually has more kinds of bacteria than yogurt, though I wouldn't bet the farm on that. Here's a brief discussion of that which echoes other sources: <http://www.kefir.net/kefiryogurt.htm> You can have a couple going if you want, but I use a quart-sized mason jar, and that works out perfectly for me. And the grains/starter just keep growing and multiplying, so you can give the extra away, or just toss it. I've been making kefir from the original batch of grains for almost 6 months now. Apparently, they pretty much last forever. I got on to this whole bacteria kick from you, Seth, so I appreciate you continuing to discuss this.

seth (2009-10-08 02:43:07)

I tried making kefir. It was too hard to get the grains. And they didn't seem to multiply as they are supposed to. In Beijing it would be even harder to get kefir grains than in Berkeley. I'll just say yogurt = kefir for dummies.

mike (2009-10-08 19:44:45)

Seth, This year I cured my seasonal allergies thanks to yogurt, which I started eating regularly due to following this blog. I use a yogurt maker that was sitting in my in-laws attic, unused. Very easy: I just mix two tablespoons of yogurt and a half gallon of milk. The machine only goes for 8 hours (the instructions say it's done then), but I run it a few times, between 24 - 36 hours - less than 24 results in noticeably less sour yogurt. For the past 3 years or so, a co-worker and I would suffer spring allergies together. We seemed to be allergic to the same thing, bc we'd start and stop at the same times. This year, we both got whacked hard late April. Desperate, I started eating yogurt (breyers mostly, some danactive and stonyfield) every day, sometimes twice, after reading your blog and doing some research. About 8 - 10 days later, I noticed I had no symptoms. My friend had light symptoms, so I thought maybe it was just a lull. Then about 2 weeks later, my friend got pummeled by allergies again, very badly; he could hardly work. I had NO symptoms. I didn't even realize it was a bad day for allergies until he showed up to work. I haven't had any allergies since. So now I make my own yogurt, to save money, and bc it's so easy. Next, I'm trying to do sourdough bread, but the starter is taking me a while to get going. Thanks for your blog and sharing your personal results! Mike

Seth's blog » Blog Archive » Yogurt and Seasonal Allergies (2009-10-08 23:53:09)

[...] This comment on a previous post deserves emphasis: For the past 3 years or so, a co-worker and I would suffer spring allergies together. We seemed to be allergic to the same thing, because we'd start and stop at the same times. This year, we both got whacked hard late April. Desperate, I started eating yogurt (Breyers mostly, some Danactive and Stonyfield) every day, sometimes twice, after reading your blog and doing some research. About 8 - 10 days later, I noticed I had no symptoms. My friend had light symptoms, so I thought maybe it was just a lull. Then about 2 weeks later, my friend got pummeled by allergies again, very badly; he could hardly work. I had NO symptoms. I didn't even realize it was a bad day for allergies until he showed up to work. I haven't had any allergies since. [...]



seth (2009-10-08 23:54:36)

you're welcome. thanks for letting me know about this.

Charles (2009-10-09 02:01:20)

"Iâ€™ll just say yogurt = kefir for dummies" I had to read that a couple of times until I was sure I wasn't being insulted. Funny! But I think it's the other way around. I hate having to deal with temperature issues, and having another electrical appliance. When you get back to the states, email me, and I'll send you some grains. Mine multiply like crazy, and I end up throwing them away. Starting out with good grains is definitely the key, and the ones I have are prolific. They have essentially doubled every 3 or so batches.

seth (2009-10-09 07:18:35)

Charles, thanks for your offer of kefir grains. I'll take you up on it so long as I can remember. I think yogurt may be the most popular fermented food – leaving aside beer and wine – just because it can be made the fastest. I would like more variety in the fermented food I eat.

Shared Hosting (2011-05-31 03:52:03)

[...] This post was mentioned on Twitter[...]... [...] Read the rest of this excellent post here.... [...]...

Hallucinogen (2012-04-02 16:28:28)

Listen listen guys ! You got the right idea that sourer is better, and then it hits a plateau where and when it becomes too acidic for the bacteria that make lactic acid to continue to be able to survive in the pH, OR they simply consume all the food available to make lactic acid and then when they run out of food and there is most lactic acid around, = sourer, then they stop feeding and slowly die off, the lactic acid however remains behind, but it slowly dissipates, because it's probably buffered by something else in it like calcium, then it gradually becomes less and less sour, allowing pathogenic bacteria to multiply more easily... So to simply put, it's true, - wait for your yogurt to get quite sour, but don't wait for more than 24-32 hours per batch, Lactic Acid is one of the most amazing molecules in our body, - it provides DiRECT energy to the neurons in our brain, after it's converted from glucose ( wikipedia ) So that's another main reason why sour is healthy, just make sure it's lactic acid and not acetic acid ( you can taste the difference ! (: ENJOY ! - For Your Health . Seth: yes, 24-32 hours/batch is a good length of time, based on my experience. The yogurt gets more sour up to about 30 hours, then doesn't get any more sour.

## **Modern Biology = Cargo-Cult Science? (2009-10-08 01:36)**

At first I thought the title of [1]this article was "Taking Back The Nobel Prizes". My eyes widened. Someone at the New York Times has a radical thought, it appeared. I was wrong. The title is "Taking Back Nobel Prizes"; the article is about the less-than-radical idea that Henry Kissinger did not deserve a Peace Prize. Then I thought it was too bad that Richard Feynman isn't alive. If he were, I would ask him if modern biology – the sort that wins Nobel Prizes – is an example of what he called cargo-cult science in [2]a famous graduation speech. I would be a good person to ask that question, I thought, because he considered rat psychology cargo-cult science. Yet I used rat psychology to come up with the Shangri-La Diet, which has helped many people lose weight in counter-intuitive ways.

Cargo-cult science, according to Feynman, was activities that have the superficial trappings of science but don't actually accomplish anything. You do all the right things, or so you think, but the planes don't land. The sort of biology that wins Nobel Prizes has a long history of this. This year's prize went to research that found that telomeres shorten with age. [3]The press release, forced to say how this is useful (the Nobel Prize is supposed to be for research that benefits mankind), says

These discoveries had a major impact within the scientific community. Many scientists speculated that

telomere shortening could be the reason for ageing, not only in the individual cells but also in the organism as a whole. But the ageing process has turned out to be complex [shocking!] . . . Research in this area remains intense.

. . . It was therefore proposed that cancer might be treated by eradicating telomerase. Several studies are underway in this area, including clinical trials evaluating vaccines directed against cells with elevated telomerase activity.

Some inherited diseases are now known to be caused by telomerase defects, including certain forms of congenital aplastic anemia, in which insufficient cell divisions in the stem cells of the bone marrow lead to severe anemia. Certain inherited diseases of the skin and the lungs are also caused by telomerase defects.

In conclusion, the discoveries by Blackburn, Greider and Szostak have added a new dimension to our understanding of the cell, shed light on disease mechanisms, and stimulated the development of potential new therapies.

Shameless. Note the utter absence of even one disease in one person cured or prevented. Not one. And this is supposed to be the most beneficial discovery in medicine. It's the top prize in medicine and biology! Last year the prize was given for HIV. Do we have an HIV vaccine? No. The year before that, HPV. Do we have an HPV vaccine? No. A few years before that, the discovery that a certain bug "causes" stomach ulcers – the award that showed that the medical community and the Nobel Prize committee have [4] a weak grasp of the concept of causality. The biologists think they do everything right – but the planes don't land. The biologists who do this research aren't able to solve actual problems. (Some people do – those who discovered that smoking causes cancer, for example – but they don't get Nobel Prizes.) Could something important be missing from their view of the world? I think so.

Cargo-cult activities aren't worthless, so long as you learn from your mistakes. The cargo cultists could see that the planes didn't land and eventually figure out that something was missing. That's actual knowledge, humble but useful. Feynman's criticisms of rat psychology were reasonable. Those doing rat psychology learned from their mistakes, I think, and eventually the field improved and produced the research behind the Shangri-La Diet. Modern biology isn't worthless, just as cargo cults aren't worthless. Obviously "useless" knowledge can eventually become useful, as has happened many times. But these overblown claims for the value of modern biology truly cost the rest of us – a great deal, I believe. Because the first step in getting somewhere, as Feynman liked to say, is to confront reality. At least in their public statements about the value of their research, modern biologists are living in a dream world. It's always "potential" this and "future" that and "insight into disease mechanisms" – without ever curing or preventing a disease.

Thanks to Eric Meltzer.

1. <http://ethicist.blogs.nytimes.com/2009/10/06/taking-back-nobel-prizes/>

2. <http://calteches.library.caltech.edu/51/2/CargoCult.pdf>

3. [http://nobelprize.org/nobel\\_prizes/medicine/laureates/2009/press.html](http://nobelprize.org/nobel_prizes/medicine/laureates/2009/press.html)

4. <http://www.blog.sethroberts.net/2009/09/10/does-h-pylori-cause-stomach-ulcers/>

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Eric (2009-10-08 05:44:22)

Err, I still don't really agree with this account of things. I don't think you can say something is missing from the worldview of people doing fundamental research because you don't like how the prize is handed out—rather, you should talk about the

worldview of the prize-critters.

NE1 (2009-10-08 07:18:57)

So... you think they're doing something wrong and need to see the error of their ways? This rant is bizarre. Diseases can't be cured with the current science. Antibiotics don't defeat HIV, chemotherapy doesn't eliminate cancer. If there is to be any chance of defeating these ailments, we must know the science of why they persist. Since these scientists have worked hard and rather successfully to investigate the pathways involved in runaway tumor growth, we now have a few possible ways to address cancer.

Peter (2009-10-08 08:39:18)

Isn't Gardasil an HPV vaccine?

rich (2009-10-08 08:44:59)

So for the record: there IS an HPV vaccine and the stunning decrease in cervical cancer deaths due to the recognition of cervical cancer as a disease with an infectious origin is one of the greatest public health achievements of the last 25 years. You're simply way off base on this one. I'd love to have seen some of the public health people involved get credit, but, whatever, discovering HPV causes cervical cancer was really important. Additionally, while no vaccine is available for HIV (or not, depending on the results of the vaccine in Thailand) discovery of the virus was necessary to find therapeutic treatments that have lengthened the lifespan of survivors exponentially.

vish (2009-10-08 14:52:02)

Seth, you hate modern medicine, but biology has nothing to do with medicine's failings. You're just wrong here. Its like blaming particle physicists for the fact that we dont have flying cars yet.

Jeff (2009-10-08 15:24:41)

At least it's not as ridiculous as the Nobel prize in economics.

Nathan Myers (2009-10-08 16:27:33)

The biologists I know are excellent scientists. No offense intended, but your own grasp of causality is nothing to write home about. You're fortunate to have other, sterling, qualities that make up for it.

seth (2009-10-08 18:08:46)

Nathan, your 'excellent scientist' friends – how do they explain the fact that this year's Nobel Prize in Medicine was given for research that has had no clear practical application? Vish, I disagree that there is no connection. Modern biologists seem to believe (at least in their public statements) that their research will lead to cures for this and that. They reinforce a medical system focussed on cure rather than prevention. Rich and Peter, thanks for the correction. I will look into it. Apparently I was wrong about the HPV research. But there are a lot of other examples I could give, such as the claim that oncogenes cause cancer. Many years later, this idea has yet to have practical benefits. Cancer, heart disease, diabetes, obesity, depression, stroke, schizophrenia – where is the Nobel-Prize-winning research that has led to a reduction in how much we suffer from these problems? The discovery of insulin was long ago. NE1, "if there is any chance of curing these problems, we must know the science of why they persist." In fact, scurvy was cured without any detailed understanding of its mechanisms. The discovery that smoking caused lung cancer didn't require a detailed understanding of lung cancer. The discovery that folate reduces birth defects was made without any detailed understanding of how birth defects arise.

Nathan Myers (2009-10-08 18:35:08)

The biologists I know stand no chance of getting a Nobel, howsoever good their science, because there's no Nobel for biology. It's for medicine. Your beef is with followers of "medical science", not biology. It would probably be easy to get agreement even from the Nobel committee members that the institutional biases of the "medical science" community are very much for expensive treatments, with little interest in systemic or cultural causation. We are lucky they don't just award the prize for actual pills.

seth (2009-10-08 19:02:59)

Nathan, the work that got this year's Nobel Prize in Medicine and Physiology is usually called biology, not medicine. I'm sure that David Baltimore considers himself a biologist, not a medical researcher. Sometimes the prize is given for medicine rather than biology, that's true. Certainly the CAT scan wasn't biology.

Nathan Myers (2009-10-08 20:12:05)

I agree that the prize was awarded for biochemical work, and that the committee was probably stretching its charter. That doesn't make the work "cargo cult science": we really did learn important details about how cells work. It just wasn't, strictly, "medicine". People who develop cures for diseases aren't scientists, they're engineers. People who treat patients aren't scientists, they're technicians. It's customary to look down on engineers and technicians, and resist calling high-status physicians that, but it's just snobbishness. Much of the body of scientific knowledge originates in the work of technicians and engineers, usually without proper credit, and much of the social good that people trained to be scientists do isn't really science at all. To say something is cargo cult science is to say people do the things they see scientists doings – getting grants, publishing papers – but we don't learn anything. The most visible current example is String Theory. Much of cosmology qualifies.

seth (2009-10-08 23:42:39)

"People who develop cures for diseases aren't scientists, they're engineers." That's an interesting idea. Obviously the person who invented the laser printer was an engineer rather than a scientist. In the life sciences I think it is more complicated. What about those who develop prevention – scientists or engineers? And what about me? I developed the Shangri-La Diet. It was based on a new theory of weight control. Surely my new theory was science. And then I went further and used my new theory to develop new weight-loss methods, playing engineer, you would say. But at least my theory had a concrete practical application. My criteria for "real science" is higher than what Feynman was talking about, true – higher than "publishing papers" and "learning something". My criteria is: solve everyday problems.

Eric (2009-10-09 00:48:51)

I think your criteria is so different than most people's as to be worth defining at the outset of your argument. It seems to me you have a really good point in "it is a Good Thing to create new techniques for ameliorating human suffering" and the point is well supported by the examples of scurvy and smoking. Why not just make that argument, instead of saying do this stuff instead of doing basic, not immediately useful research? I don't see how they are mutually exclusive at all–the argument then is that the nobel prize committee (and the world at large) should start giving this sort of practical pursuit more prestige.

Nathan Myers (2009-10-09 01:58:38)

Solving everyday problems is technical work. Inventing solutions that can be applied by anybody who learns them to solve everyday problems is engineering. Science is something that has only a glancing connection with problems. Doing engineering is the most reliable source of insights that lead to scientific theories, just as doing technical work is the most reliable source of insights that lead to sound engineering solutions. Scientists like to pretend the flow runs the other way.

Tom (2009-10-09 15:13:55)

@Nathan Myers Thanks for two of the most thought-provoking paragraphs I've ever read.

Seth's blog » Blog Archive » Book Recommendations: Hedges, Yes, Dalai Lama, No (2009-10-09 18:23:36)

[...] Thumbs up: Chris Hedges, *Empire of Illusion*. Hedges writes about how Americans are delusional in their beliefs about how wonderful their country is and how rich and powerful they are. One of his targets is academia, which he says turns out graduates who are far too respectful of authority. (He doesn't mention molecular biologists, but they're another example.) [...]

## Yogurt and Seasonal Allergies (2009-10-08 23:52)

[1]This comment on a previous post deserves emphasis:

For the past 3 years or so, a co-worker and I would suffer spring allergies together. We seemed to be allergic to the same thing, because weâ€™d start and stop at the same times. This year, we both got whacked hard late April. Desperate, I started eating yogurt (Breyers mostly, some Danactive and Stonyfield) every day, sometimes twice, after reading your blog and doing some research. About 8 - 10 days later, I noticed I had no symptoms. My friend had light symptoms, so I thought maybe it was just a lull. Then about 2 weeks later, my friend got pummeled by allergies again, very badly; he could hardly work. I had NO symptoms. I didnâ€™t even realize it was a bad day for allergies until he showed up to work. I havenâ€™t had any allergies since.

1. <http://www.blog.sethroberts.net/2009/10/07/yogurt-making-results/#comment-350320>

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solon (2009-10-11 11:45:57)

A few years ago, I was diagnosed with irritable bowel syndrome. I didn't have symptoms constantly, but when they did occur—maybe every 3-4 weeks—it was terrible. About six months ago I started eating yogurt every day. I also eat Indian food 2-3 times a week with large amounts of raita. Raita is more sour than typical commercial yogurt, so I assume it has more bacteria. I haven't had any IBS symptoms since I started the fermented foods.

Libby (2009-10-13 20:42:57)

I have a question about cooking with fermented food. My husband and I have developed an appetite for umami, and we often use fermented foods to flavor our cooking - kim-chi in a stir-fry, fermented tofu in scrambled eggs, etc. It tastes great, but it must kill off most of the bacteria, right? Are we reaping any benefit (besides gustatory) from eating cooked/dead bacteria? Thanks for a great blog!

seth (2009-10-13 20:49:40)

I think dead bacteria stimulate the immune system. I can't think of any reason they wouldn't and lots of dead stuff improves immune function (e.g., hormesis). Unlike live bacteria, dead bacteria don't improve digestion.

## Book Recommendations: Hedges, Yes, Dalai Lama, No (2009-10-09 18:23)

Thumbs up: Chris Hedges, [1]Empire of Illusion. Hedges writes about how Americans are delusional in their beliefs about how wonderful their country is and how rich and powerful they are. One of his targets is academia, which he says turns out graduates who are far too respectful of authority. (He doesn't mention molecular biologists, but [2]they're another example.)

Thumbs down: His Holiness the Dalai Lama and Howard Cutler, [3]The Art of Happiness in a Troubled World. Two words: [4]runaway serfs.

1. <http://www.booktv.org/Program/10883/After+Words+Chris+Hedges+Empire+of+Illusion+Interviewed+by+Ron+Suskind.aspx>

2. <http://www.blog.sethroberts.net/2009/10/08/modern-biology-cargo-cult-science/>
3. <http://www.randomhouse.ca/catalog/display.pperl?isbn=9780767929097&view=excerpt>
4. <http://www.blog.sethroberts.net/2009/10/05/china-and-tibet-the-other-side/>

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Jeff (2009-10-09 18:47:16)

I have a lot of respect for the Dalai Lama, have even had a conversation with him in a private audience. I like a lot of his ideas, but I think a lot of the nuances and subtleties are lost in translation. As a result, his messages often feel watered down and simplistic. With that said, I remember reading the Art of Happiness. I kept thinking to myself, "won't this psychologist just shut the hell up?" (The book was written by the psychologist Howard Cutler, though half the text is quotations from the DL from a series of private conversations between the two—nevertheless, Cutler is barely a scientist, certainly no philosopher, and has no sense of artful subtlety). Thumbs down indeed.

MT (2009-10-09 19:34:34)

The post you direct to in giving thumbs down to the book "The Art of Happiness" does not offer an explanation of what you find wrong with the content of the book – can you clarify what you intended with this post? Why are you giving the book a thumbs down and why the cryptic reference to an earlier post, which seems to be a critique of people making judgments about situations they are poorly informed (or misinformed) on?

seth (2009-10-09 23:14:50)

MT, the Dalai Lama – in pre-Chinese-takeover Tibet – was at the top of a system that rested on a great deal of human slavery. For someone like that to be telling the rest of us how to be happy or anything else (except how to be good at public relations) is absurd. Regardless of what that advice is. Jeff, thanks for your comment. I never read The Art of Happiness but I heard other people talk about it. When you know the Dalai Lama's slave-holding past one quote I heard – "you choose your own happiness" – has a very unpleasant tinge to it. As if his slaves chose to be slaves.

Chris (2009-10-10 05:02:33)

Seth Roberts. Culturally revolutionized. The dalai lama inherited his societal system when he was a kid. He didn't create it for his people. Buddhism teaches that freedom is in the mind. There are plenty of people in the world that are slaves to debt, their families, their jobs, their governments, the weather, their mothers, ther wives, their schools, etc. The quesion is what you do in those circumstances. And the commnists were more likely to round you up and kill you.

seth (2009-10-10 06:49:20)

What does thinking slavery is awful – and indefensible – have to do with the Cultural Revolution? "He didn't create it for his people." True. What did he do to get rid of it?

david (2009-10-10 10:38:33)

Seth, I don't know the details of the issue, but you sound like a propagandist (i.e. as opposed to an informed person giving a balanced opinion).

MT (2009-10-10 13:28:08)

It is no better to pillory the Dalai Lama without knowing his record, simply to feel subversive, than it is to laud him without knowing his record. Both are misplaced expressions of moral superiority. Your position seems to be that Tibet=Slavery=Evil=Dalai Lama. This is fallacious reasoning. The feudal history of Tibet does not justify the blanket condemnation of the Dalai Lama, and it is disingenuous to try to equate him with slavery – he is on public record denouncing Tibet's feudal history, denouncing slavery, supporting human rights, etc. Among the considerations you ignore in arriving at your judgment are what his thoughts on this subject were at the time he held power - did he support or approve of this system? Did he try to change it? Were

there constraints on his power or was it unlimited? Even if he supported those traditions at the time (and please provide evidence for it if you have it) does that mean he supports them now? He was told he had divine right to rule Tibet since he was four years old – yet he advocates for democracy in Tibet and elsewhere. That suggests as much intellectual independence from his culture as Weston Price had for American nutritional culture - they both rejected the traditions they were raised in. Your criticism is conflating the flaws of historical Tibet and flaws of poorly informed pro-Tibet spokespeople with personal shortcomings of the Dalai Lama. They are not the same thing. A litany of the horrors of Tibet by Michael Parenti can be found here: <http://www.michaelparenti.org/Tibet.html> Hitchens' critiques (also critiquable) of the Dalai Lama are here: [http://en.wikipedia.org/wiki/Christopher\\_Hitchens'\\_critiques\\_of\\_specific\\_individuals#Tenzin\\_Gyatso.2C\\_the\\_14th\\_Dalai\\_Lama](http://en.wikipedia.org/wiki/Christopher_Hitchens'_critiques_of_specific_individuals#Tenzin_Gyatso.2C_the_14th_Dalai_Lama) The Dalai Lama has recognised the horrors of Tibet's past and condemned them, acknowledged the hypocrisy in some of those who claim to be Buddhist, and works tirelessly to champion compassion and human rights in his contemporary work. He is not perfect, but on balance he is trying to improve the world and deserves his reputation as a moral authority more than most public figures.

seth (2009-10-10 16:51:17)

MT, you ask: What were his thoughts when he was in power? Thoughts? I'd like to know what his actions were. To be anti-slavery now costs him nothing. He had ten years in power when he could have done something about it, as far as I can tell. What did he do? How many slaves did he free? As far as I can tell, the answers are: Nothing and Zero. Because I am in China, it isn't easy to research this. If I am missing something, please let me know. To be fair to the Dalai Lama, he is merely the personification of a system much larger than him. He didn't invent what he now teaches. The larger point is that in Tibet, the monasteries were built on slavery. Their high-minded religious ideals were drastically contradicted by their vast numbers of slaves. Their statements that "you choose your happiness" – as if their slaves chose to be slaves – are nauseating. That saying that religion is the opium of the masses? In this case it was the opium of the elites.

Vince (2009-10-10 23:25:28)

What's the chronology here? According to Wikipedia, the Dalai Lama was born in 1935 and proclaimed the next "Dalai Lama" at age 2. He became the head of Tibet's government on November 17, 1950, at the age of 15, in the midst of a war with China. China won that war and took over Tibet in the agreement signed on May 23, 1951, but Tibet was supposed to retain a high degree of autonomy. China left the Dalai Lama in power, with authority over central Tibet, but the Chinese continued to occupy Tibet and they peeled off some of its territory, where they instituted reforms including land redistribution. There were violent Tibetan uprisings against the Chinese, and after a major uprising was put down in March 1959, the Dalai Lama fled into exile at age 23. Then there was more violence and China started changing things throughout Tibet. So he was never really in charge before the Chinese came in, but I guess we're judging the Dalai Lama based on what he did from 1950-1959, when the Chinese basically left him in charge of part of Tibet. Wikipedia doesn't give much detail about that decade, and I'd want to know a lot more before judging him too harshly for what he did or failed to do then, given his age and the circumstances\*. But, at least according to [1]this interview, he claims to have instituted some major reforms, including abolishing inheritable debt and establishing an independent judiciary. \*For example: how much power did he have at that age or was he more of a figurehead? Would the Chinese have let him transform society or would they have prevented him from rocking the boat? How feasible was it to institute dramatic changes in the midst of the occupation/insurrection? Did the fact that China was instituting its own reforms in parts of what had been Tibet limit his ability to pursue his reforms?

1. <http://www.johannhari.com/archive/article.php?id=399>

seth (2009-10-11 03:59:06)

Vince, those are good points. I agree that a 21-year-old surrounded by older advisors, not to mention the Chinese government, is probably not very powerful. But I have a funny feeling he could have freed a few slaves, had he wanted to. And his supporters are curiously quiet about what he did during that decade. As I said earlier, my complaint is really about Tibet Buddhism being considered a wonderful source of wisdom when its main practitioners lived as they did – on the backs of thousands of slaves. Who somehow, according to their overlords, chose to be slaves. In the interview you link to the Dalai Lama says that disabled children are being punished for past sins ("of course"). At which point an advisor ends the interview. As the interviewer is leaving, the Dalai Lama calls him fat.

MT (2009-10-11 08:34:19)

More than being influenced by advisors when he took power, he was isolated from early childhood and raised exclusively by people who taught him that he was a god-like reincarnation with divine right to rule Tibet, and further that Tibet was a perfect system. His physical and intellectual isolation continued, for the most part, until he left Tibet. If he failed to transcend the beliefs of his society under such conditions it would not be surprising. What is more relevant is how he has conducted himself since, and what his thinking has been in the interim, when he has had intellectual freedom to a greater extent. If you read his books and other public statements it is clear that he has transcended many of these beliefs. It seems he still believes in reincarnation. Other people believe an invisible, omnipotent being created the world in six days and rested on the seventh. While I reject both of those beliefs, I don't need to dismiss everything else that they say, do, or write. You express the position that the Dalai Lama did not free any slaves during his reign – and presumably you also hold the opinion that he didn't make comparable improvements in the conditions of slaves – where are you getting this information from?

milieu (2009-10-11 09:52:04)

I am afraid that apart from cultural revolutionized, there is also a bit of cultural blindness here. Seth is looking at the 21- year old Dalai Lama from a western perspective which is not fair to the man. In many parts of Asia, what you call slavery was very commonplace. But it wasn't a physical bondage in most places. Eg in India, the lower castes were completely beholden to the upper castes in many places because of a sort of brainwashing of their place on earth. I suspect something similar to that in Tibet than an outright physical slavery. So from where do you think the reforms to that should have come. It seems a bit strange to accuse the 21 year old Dalai of not having condemned slavery when that would have looked like the only possible system in the world.

Anthony (2009-10-11 10:17:24)

@milieu and @seth, The moral judgment against slavery is easy, given today's political landscape. Many people who advocated slavery in the past believed it a good, though, given the options. Most slavery in history wasn't like the slavery of U.S. blacks. Even there, mistaken or not, many people argued in favor of that kind of slavery because they thought blacks would be worse off if freed. They might have been wrong, but they were doing what they thought was the moral thing. It's easy to make anachronistic judgments that lack context about this issue.

seth (2009-10-11 11:34:41)

MT, I am getting my info from him and his supporters – who fail to mention it. And justify slave-holding because the slaves were happy. Or, if they weren't happy, had done something bad in a past life – there are multiple justifications. For example, see that interview linked to by Vince.

MT (2009-10-11 13:05:59)

The interview directly counters your criticisms – he describes himself as an ignorant child when he took power, says "there were many things wrong with our society" and that he wouldn't want to return to it, says he eliminated inheritable debt (the source of the "slavery" you say he did nothing about) because it was "the scourge of the peasant and rural community", notes that he freed the state's prisoners while still in power (perhaps he freed slaves as well, possible though I don't know), says he wants to renounce his temporal powers (not mentioned here is that he established an elected parliament – I think in 1960), and says that he and the Tibetan people are karmically being "punished for feudalism," meaning that feudalism and its sins (like having serfs) was a cosmic wrong. You suggest the Dalai Lama has said that slave-holding is justified (either because the slaves were happy or because they had done something bad in a past life) – please supply a link or reference as this is in striking contrast to anything I've read. Quite possibly, you have misunderstood the principles of Karmic Law he is presenting (which I don't believe in, incidentally). In the Buddhist Karmic view, current circumstances are explained by past actions – and in this view, we are all suffering on earth because we have all transgressed in past lives. Accordingly we must not judge others, but extend compassion both to them, and to ourselves. But not compassion in thought only, compassion through deeds. Compassion not only to our loved ones, or those we perceive as innocent, but even to our enemies or those we may feel morally superior to. Which explains why he is critical of the slave-holding past of Tibet, and openly comments on the changes it required and which he has made – as he does in the linked article you suggested.



Steve G. (2009-10-11 18:32:24)

Seth, Several points: 1. While I don't have access to sufficient information to critique the DL about his rule from 1950 to 1959, what he has said and done since that time is relevant. Speech is a form of action. 2. I am not sure, but not all forms of slavery are equal, although I would endorse no form! For instance, as I recall from my undergraduate days (so long ago!), American chattel slavery was a much harsher institution than the contemporary slavery in Latin America. What was the nature of the slavery in Tibet? 3. What do you make of Hedges' critique of psychology (Seligman, et al.) in Empire of Illusions? My sense is that he inputs greater claims to this perspective than it claims for itself.

Anthony (2009-10-11 19:13:29)

Being an \*employee\* in certain situations would qualify as a form of slavery.

thehova (2009-10-12 14:10:06)

"Chris Hedges, Empire of Illusion. Hedges writes about how Americans are delusional in their beliefs about how wonderful their country is and how rich and powerful they are." The United States is mind-blowingly rich. The state of California has a GDP roughly equal to France with only half the population. It's just not distributed well.

thehova (2009-10-12 17:04:23)

Uggghhhh. Hedges book sounds sort of apocalyptic. Will the WWF really cause the downfall of society? Most people today don't read Moby Dick. Will that bring us down? Tyler Cowen counters such arguments in "Create Your Own Economy". Here's the product description which just makes Hedges sound paranoid: Product Description Pulitzer prizeâ€“winner Chris Hedges charts the dramatic and disturbing rise of a post-literate society that craves fantasy, ecstasy and illusion. Chris Hedges argues that we now live in two societies: One, the minority, functions in a print-based, literate world, that can cope with complexity and can separate illusion from truth. The other, a growing majority, is retreating from a reality-based world into one of false certainty and magic. In this â€œother society,â€ serious film and theatre, as well as newspapers and books, are being pushed to the margins. In the tradition of Christopher Laschâ€™s The Culture of Narcissism and Neil Postmanâ€™s Amusing Ourselves to Death, Hedges navigates this culture â€” attending WWF contests as well as Ivy League graduation ceremonies â€” exposing an age of terrifying decline and heightened self-delusion. -This text refers to an out of print or unavailable edition of this title.

## **The Monster Is Asleep (2009-10-10 19:27)**

[1]This old comment made me laugh me when I reread it recently:

It was slightly embarrassing when friends would ask how long I had been on [the Shangri-La Diet]. I lied and said a day - it had only been eight hours but, hey, without SLD, I normally would have done a great deal of damage in those 8 hours. It's now been a week and I've lost three pounds. I love the luxury of choosing finer foods now that I'm no longer compelled to eat everything in sight when dinnertime comes around. The Monster has been rocked to sleep

1. <http://boards.sethroberts.net/index.php?topic=440.msg3830#msg3830>

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Diet Dude (2009-11-13 04:23:22)

Damn! I just typed a whole long comment and then the screen went funny when I hit the submit button. Is it in moderation or do i have to type it all out again?

seth (2009-11-13 05:33:35)

sorry, you have to type it all out again.

## **How to Eliminate/Prevent a Skin Infection and What It Means (2009-10-11 11:24)**

Several years ago, during a routine checkup, my primary-care doctor pointed to some white lines on my right foot. (Curiously only one foot had them.) Fungus, he said. I had a fungus infection. What should I do? I asked. He suggested over-the-counter anti-foot-fungus medications, sold in every drugstore.

I tried a few of them. They didn't work. The problem persisted.

A month ago I noticed the problem had gotten much worse. Yikes. What had gone wrong? I realized that in the previous few weeks I had changed two things:

- Instead of putting my wash through an extra wash cycle without soap (to rinse it better), I had started doing my wash the way the rest of the world does it. I had stopped doing the extra cycle because I was no longer worried about becoming allergic to the soap.
- I had bought 5 new pairs of socks and had been cycling through 4 of the new pairs again and again (washing them between wearings, of course), ignoring the rest of my socks.

This suggested a theory: My skin infection was due to my socks. The infectious agents get on my socks and are not completely removed by the washing machine. They survive a few days on the shelf. To wear socks with the infectious agent already present gives the infection a boost. Maybe my new socks supported the infectious agent better than the socks they replaced.

Based on this theory, I did three things:

- Resumed putting my wash through an extra cycle without soap.
- Took off my socks earlier in the evening.
- Bought 12 new pairs of socks and made sure every sock went a long time (e.g., 3 weeks) between wearings.

I saw improvement right away. (The morning after I wore new socks.) A month later, the infection, present for at least several years, is entirely gone. It took about a month for it to clear up completely.

The essence of my discovery is that the infectious agent could survive my socks being washed conventionally (in a washing machine) and live for a few days without contact with my feet. Whereas a few weeks away from my skin killed it. I have been unable to find this info anywhere else. A very minor discovery, but unlike the work that won the most recent Nobel Prize in Medicine, useful right now. Cost: zero. I would have had to buy new socks anyway.

In *Cities and the Wealth of Nations*, Jane Jacobs tells about a reporter interviewing someone in an oil-rich Middle East country (Iran?). During the interview the interviewee tries to cut an apple with a knife. The knife breaks. We can't even make knives, the interviewee says. That's how backward our economy is. To develop economically, MIT professors had advised his country's government to build a dam, at great expense. The MIT advisors thought that building a dam would be good for economic development. They were wrong, it turned out. Jacobs thought it was

telling that after all that money invested, the local economy still couldn't make something as basic as a good knife. Many industrial processes require cutting tools.

This is the same thing. Preventing and eliminating infection is at the core of medicine, just as cutting is at the core of manufacturing. My discovery reveals that my doctor – and by implication, the whole health care establishment – failed to know something basic and simple about this. If they understood what I figured out, there would be no need for anti-foot-fungus medicine. A gazillion dollars a year is spent on medical research, medical schools and research institutes around the world are full of faculty doing research – and they haven't figured out something as basic and simple as this.

[1]Gatekeeper Drugs. [2]How to Avoid Infection: Something I Didn't Know.

1. <http://www.blog.sethroberts.net/2009/10/03/gatekeeper-drugs-drugs-that-require-gatekeepers/>

2. <http://www.blog.sethroberts.net/2009/08/17/how-to-avoid-infection-something-i-didnt-know/>

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Aaron (2009-10-11 14:32:06)

I noticed that curing myself of foot fungal problems consisted of 2 things: 1: Wearing new "breathable" shoes every 3-6 months

george (2009-10-11 15:04:35)

must have been a very rare form of fungus. for 99 % of all forms, lamisil kills them in very short time (sometimes they're completely gone after a week).

Kaitlin Duck Sherwood (2009-10-11 15:29:43)

You could also try dampening your socks and tossing them in the microwave for a minute before putting them in the wash. That will probably kill the nasties dead dead dead dead.

James (2009-10-11 20:34:03)

All the anti-fungal stuff I've used also says to change clothing to prevent reinfection. E.g. <http://mydr.com.au/medicines/cm15/daktarin-cream> \* Keep a separate face washer and towels for your own use to avoid infecting other people. \* Regularly change clothing, which comes into contact with the infected areas to avoid reinfecting yourself. \* Clean the site of infection twice daily to prevent build up of fungal cells. \* Keep the areas of infection well ventilated. Do not apply moisturisers to the site of infection as this will promote the growth of fungus. If infection involves the feet, footwear that make the feet perspire should be avoided.

Darrin Thompson (2009-10-11 20:40:52)

My late model washing machine has a "sanitize" cycle that heats the water to some much higher than normal temp. It takes almost 2 hours, most of which is spent in that hot water, best I can tell.

seth (2009-10-11 22:36:58)

James, I'd heard all that. I did all that. It was unhelpful. What really helped was waiting long enough before wearing the same sock again. Which isn't on that list.

Sam (2009-10-11 23:29:28)

Seth, in medieval times people used to iron their clothing and bedspread to sanitize them - maybe ironing your socks would have helped, too?

seth (2009-10-11 23:36:26)

Sam, it is much easier to do nothing than to iron.

Seth's blog » Blog Archive » How to Eliminate/Prevent a Skin Infection and What It Means (continued) (2009-10-13 13:54:33)  
[...] I Recommend The Man Who Would Be Queen by Michael Bailey Mindless Eating by Brian Wansink The Shangri-La Diet by Seth Roberts « How to Eliminate/Prevent a Skin Infection and What It Means [...]

Walter (2009-10-13 14:24:35)

Interesting thread and I must try it out. Aaron-what was the second thing that helped?

David (2009-10-13 18:31:04)

I have a Samsung washing machine that has a "silver ion" mode. It supposedly uses a bar of silver and runs an electrolysis cycle to generate silver ions. I wonder if using that mode would be equal in effectiveness to the long cycle time you discovered.

Zooko (2009-10-14 11:29:05)

Hey, the same thing happened to me. I tried all sorts of different over-the-counter antifungals which seemed to reduce but not completely eliminate the infection. This problem persisted for a couple of years I think. Then I noticed that it was worse when I had been wearing certain socks. I bought a lot more of the kind of socks that did not worsen it and started going barefoot frequently and changing socks frequently. Problem solved!

seth (2009-10-14 11:36:06)

n = 2

david (2009-10-15 07:47:58)

Seth, A version of your trick works for sandal odor too. I noticed that when I had one only pair of sandals, as the summer, sandal odor would become harder and harder to control. Scrubbing with "Paxton's Sandal Saver" didn't even help. Then I realized that since I wore them so frequently in the summer, the bacteria colony never had time to die off. So I bought a second pair of sandals and started rotating them. Now, no odor problem. If there's a "Sock and Sandal Retailers Association of America" they might be interested in funding some more formal research on this subject since it would certainly drive sales for them. Of course the Lamsil people and the people who make the fancy germ killing heat cycle washing machines would team up to try to discredit the research :-)

Simon (2009-10-19 06:36:08)

Sample size of 1. No control. Not double blind. Not even single blind. Even worse, the subject was the one trying to prove the hypothesis... You can't seriously think you've proved anything here. Come on. Imagine what it would be like if the medical establishment switched over to your method of 'medical research'. "Common cold cured! Local man says 'I eat a tree root, and my cold cleared up within 3 days!'"... It's not even as if you'd \*need\* a proper medical trial to establish something like whether fungus on socks survives washing; just a few socks, a few breeds of fungus, a washing machine, and a microscope. Finally, what makes you so sure this \*isn't\* known? Thousands of medical studies are published every month; how many do you think your doctor reads? Getting information about medical research to front-line doctors is a huge problem and a known problem, and one that a lot of resources are going into. Finally finally... Err, the fact that a normal washing cycle won't remove a lot of pathogens \*is\* well known. E.g. the standard recommendations for soiled hospital laundry are "...the temperature of light laundry loads (i.e. those below 560 grams per litre of main wash) are maintained at 65°C (150°F) for not less than 14 minutes or preferably at 71°C (160°F) for not less than 7 minutes. In order to assure disinfection an additional "mixing time" of 8 minutes should be added to these times for loads above 560 grams per litre." (Source: UK NHS executive). It's not like this is some obscure thing that's kept from doctors. "Heat kills pathogens" is pretty damn well known (hence Sam (above)'s pointing out that traditional folk advice about ironing socks. You omitted to say at what temperature you were washing your socks.

seth (2009-10-19 07:20:01)

"Proved"? I found an easy free way to get rid of an infection that I had been trying to get rid of for years. And that medications are sold for. I had no idea that my socks were causing trouble – nor did my doctor suggest that possibility – so I saw no reason to care how I washed them (in cold water). My point is not that "heat kills pathogens". My point is that a few weeks at room temperature kills the pathogen responsible in this case. If you can find a citation for this knowledge please let me know. I have been unable to find one.

Tom (2009-10-19 08:03:22)

How do you label or otherwise distinguish your socks?

seth (2009-10-19 13:32:05)

I spread my socks out on a shelf. I put the freshly-washed ones on the far right (pushing the rest over a little) and take the ones I will wear from the far left.

Ramfis Tunon (2009-10-20 10:05:57)

Hi all. I discover something like that but to prevent bad odor on feet. 1. Have a bunch of socks [normally white-colored ones] 2. Wash them using machine but adding some some chlorine [we name it "Clorox"] 3. Of course, use a fresh pair everyday, no matter if one pair looks "clean" 4. I always use flips-flops at home. I have never had feet fungus on my life.

Stephen M (Ethesis) (2009-10-20 17:02:31)

*I spread my socks out on a shelf. I put the freshly-washed ones on the far right (pushing the rest over a little) and take the ones I will wear from the far left.* I've done things like that.

Evelyn (2009-10-21 10:22:27)

I noticed something similar to this two times I took a long vacation. I had fewer than usual number of socks and underwear, and by the end of the month, I had a fungus infection. With a more normal number of each in the rotation (approximately double), I don't have such a problem. I knew it was related to clothing, but I thought it was related to the change in washing style due to being away from home, not the number of garments available. I'm going to try the labeled slots for inventory, Thanks!

puffin (2009-12-04 13:32:47)

"My discovery reveals that my doctor " and by implication, the whole health care establishment " failed to know something basic and simple about this." "A gazillion dollars a year is spent on medical research... and they haven't figured out something as basic and simple as this." Not shy of making bold claims eh Seth? Let's gloss over the fact that the spores of such skin fungi (dermatophytes) can live for months even years... (<http://en.wikipedia.org/wiki/Dermatophyte>). Instead, let us concentrate on the fact that you may simply have stumbled across regression to the mean ([http://en.wikipedia.org/wiki/Regression\\_toward\\_the\\_mean](http://en.wikipedia.org/wiki/Regression_toward_the_mean)), a phenomenon that those researchers you were so quick to belittle know well. Same applies for your transient-eye-infection-goes-away-after-changing-pillowcase "experiment" Hate to say it, but for a blog about self-experimentation and scientific method you seem a little, um, weak on the basics...! Perhaps I might humbly suggest some homework next time you feel like slagging the medical and research professions? <http://www.badsience.net/>

seth (2009-12-04 15:09:02)

It's not regression to the mean. When you have a problem for several years, it stays roughly constant over that time, an incidental observation suggests trying X, you try X, the problem goes away within days – that's not regression to the mean. Do you have another alternative explanation of what I observed?

puffin (2009-12-04 16:08:00)

I could have a thousand alternative explanations - and you could have a thousand rebuttals - that's not really the point. The point is that your post is post hoc ergo propter hoc reasoning [http://en.wikipedia.org/wiki/Post\\_hoc\\_ergo\\_propter\\_hoc](http://en.wikipedia.org/wiki/Post_hoc_ergo_propter_hoc)

based on a single observation, does not establish [and, importantly, cannot EVER] establish a causal link between your new sock regime and the clearing of your foot infection. (BTW, I am pleased to hear it cleared up, whatever the actual cause) PS. regression to the mean of a naturally time-limited complaint still seems a likely explanation to me.

Jason (2009-12-04 17:09:40)

Very cool. I'll have to keep that in mind. I go through phases of having fungal infections, the next time around I'll watch which socks I'm using!

seth (2009-12-04 20:25:32)

Puffin, it isn't regression to the mean. My observations were a single time series (several times/day for several years), not "a single observation." You seem to be saying that a single time series "cannot EVER establish a causal link". I would love to see evidence for that.

Anthony (2009-12-04 21:21:40)

Puffin, what do you mean by "establish"? It seems pretty suggestive to me. I'm interested in hearing your suggestions for an equally compelling explanation (much less 1,000 of them!).

Anthony (2009-12-04 21:26:32)

I.e., why do you think it's equally compelling to say it's coincidence?

puffin (2009-12-05 09:21:35)

@ Seth: You promote yourself as a man of science, <http://sethroberts.net/about/> yet you apparently fail to understand that multiple measurements ("several times/day for several years") on THE SAME PERSON, mean that you still only have information from a single person. To illustrate, if my mum says 1000 times that I am a good-looking lad (thanks mum), it alas, does not have the same weight as if 1000 independent people say it (which, to date sadly, they have not). Secondly, for someone so apparently evidence-based ("I would love to see evidence for that" you say), you provide none to back your own key assertions - for example: (1) "it isn't regression to the mean" (the onus is on you my friend to demonstrate this, not me - I just have to call it); or (2) "a few weeks at room temperature kills the pathogen responsible" (did you check that the microscopic fungal spores had died, or do you just assume they did because you can't see them with your eyes and the infection went away?).

puffin (2009-12-05 10:07:50)

@ Anthony: Why do I believe that the more likely explanation is chance? Well, coincidences happen all the time. Literally millions (?billions) of people on this good planet have fungal foot infections. At any one time, probably many thousands of these infections are clearing up (as most minor ailments do). In all of these cases the getting better might coincidentally follow a change in behavior. For Seth it was his socks... for someone else it might be eating an extra apple a day. Who knows? Humans are good at seeing patterns, but poor at recognizing randomness (eg, the iPod shuffle feature seeming to have favorites <http://preview.tinyurl.com/y99yo8e> ). For this reason, eliminating the reasonable doubt that your observation might simply be a coincidence is the first step towards "establishing causality" (apologies for the jargon). To better support his claims, Seth would therefore have to demonstrate that in all likelihood the sock regime was the only reason the infection went away, and that the improvement didn't happen simply because it was going to anyway or because of some other unknown factor that has instead mistakenly been ascribed to the power of the sock. This requires much more rigorous evidence than Seth currently provides. <http://en.wikipedia.org/wiki/Causality> The little evidence Seth does provide is known as a case report (ie, an observation from a single person) [http://en.wikipedia.org/wiki/Case\\_report](http://en.wikipedia.org/wiki/Case_report) Although they are one of the least persuasive forms of medical evidence, [http://en.wikipedia.org/wiki/Evidence-based\\_medicine](http://en.wikipedia.org/wiki/Evidence-based_medicine) case reports CAN (as you correctly stated) help SUGGEST new ideas. In most medical research (which after all, is the field that Seth was mocking when he crowed "they haven't figured out something as basic and simple as this"), the gold-standard for proving causality is a randomized controlled trial involving many people (ranging from hundreds to tens of thousands - many more than here!) [http://en.wikipedia.org/wiki/Randomized\\_controlled\\_trial](http://en.wikipedia.org/wiki/Randomized_controlled_trial) Lastly, please note that despite my ongoing skepticism, Seth may well be proved right (and good luck to him). 'Sock rotation' (copyright, puffin 2009-eternity) may indeed be the

cure to fungal foot infections. All I am saying is that the evidence that he currently provides falls woefully short of being sufficient to justify his pompous and arrogant claims to have "figured out" something that doctors with their "gazillion dollars a year" have failed to do so. If you're interested in learning more, I highly suggest reading Dr Ben Goldacre's excellent book: <http://amzn.com/B002BIMNDQ>

seth (2009-12-05 15:04:19)

Puffin, I asked for evidence because I was trying to understand why you believe what you do. I agree, I should have made it sound less argumentative. You have been kind enough to read my blog and comment on it, I am trying to learn from your comments. Let me try to get at the same goal a different way: Where does your understanding of regression to the mean come from?

Mark (2009-12-05 15:45:30)

I've tried those over the counter creams, and no, they don't work. The ones I get from my doctor work within a day. I think the over the counter stuff is just so diluted that they are essentially placebos. Sock rotation may also work, but if you really want to get rid of it, go to a dermatologist.

Matt (2009-12-07 13:31:42)

I ran into the problem of athlete's foot (foot fungus) a few years ago and went about searching for the cure. The cause and the cure are closely related: moisture. The reason you get foot fungus in the first place is because the fungus gets into your skin and proceeds to eat the dead skin off your foot. the burning itch is the fungus trying to grow into your dermal layers. This typically happens when you have damp feet all the time. The fungus needs moist conditions to live and thrive in. The best practical cure to athlete's foot is to change into fresh dry socks any time your feet feel sweaty or humid. After you get out of the shower, take a hot air dryer to your feet to dry out the skin between your toes. If your feet are dry, the fungus can't grow. Sweaty feet and poor changes of socks result in athlete's foot, so dry feet and fresh socks is the easiest solution. For me, sprays, cremes, and powders didn't work. It was fresh dry socks that eventually made the itching go away. Haven't had a problem since.

## **How to Eliminate/Prevent a Skin Infection and What It Means (continued) (2009-10-13 13:54)**

A brief summary of [1]my previous post is all I needed to do to cure/prevent a skin infection was buy more socks. Instead of buying 5 pairs every 6 months, buy 20 pairs every two years. That's all. Costs nothing. No drugs. No special treatment of the socks. No special cycle on the washing machine. No following a hundred (or ten) instructions about how to avoid infection. Like [2]my depressed friend, I had the reaction: Why didn't my doctor tell me this? He didn't tell me because he didn't know, I realize. Why he didn't know . . . is a harder question.

The whole practice of health care is called medicine, so focused is it on cure rather than prevention. There are medical schools, which turn out doctors. Schools of public health are the closest thing we have to schools based on prevention but they don't even train nutritionists. Nor do they do experiments, in most cases. (They do little data collection besides epidemiology.) And they get much less money than medical schools. Scurvy and Vitamin C are the first examples of the new way of dealing with illness I'm talking about - finding the environmental deficiency and fixing that, which is inevitably extremely safe and extremely cheap. After the discovery of Vitamin C, similar examples were discovered and the broader term vitamin was coined. But I think there is a need for a similar term that includes non-vitamins. It would mean aspects of everyday life, food and non-food, that we need to be healthy.

Like Vitamin C, my discovery that more socks eliminates skin infection points to a cure/prevention agent that is perfectly safe and extremely cheap. So do all my posts about fermented foods. It costs basically nothing to let food ferment. You lose nothing and gain a lot. Yet bacteria are not vitamins - and it isn't all bacteria we need, just the 99.999 % that are harmless. (And other foreign stuff, like bee venom, can substitute for bacteria.) I began thinking there are non-food vitamin-like things (things we need to be healthy) when I discovered the effects of standing on sleep and morning faces on mood. So we need several things to sleep well, including morning light, and at least one

thing for proper mood regulation. Insomnia and depression are non-infectious problems, like scurvy. We think of vitamins as preventing/curing non-infectious problems, so the analogy was obvious. And these examples (sleep and mood) involved the brain. So there were vitamins for the brain, you could say. But the socks/foot infection example and the fermented foods/many illnesses example both do not involve the brain and do involve infectious diseases and auto-immune diseases (which, although non-infectious, are quite different from scurvy). So the idea that there are bunch of extremely cheap, perfectly safe things we need to be healthy expands to cover more of health.

Vast amounts of money are spent on health research, much much more on the consequences of poor health, and truly incalculable suffering comes about because we don't know what these things are. (Depression alone causes vast suffering. Now add to that poor sleep, autoimmune problems, much infectious disease . . . ) Yet because studying these things (a) will make money for no one, (b) won't produce a steady stream of published papers and (c) is useful (= low status), they are nearly impossible to study.

1. <http://www.blog.sethroberts.net/2009/10/11/how-to-eliminateprevent-a-skin-infection-and-what-it-means/>
2. <http://www.blog.sethroberts.net/2009/10/03/gatekeeper-drugs-drugs-that-require-gatekeepers/>

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epistemocrat (2009-10-13 16:59:37)

Kaiser Permanente, seems like the most apt health system in NorCal-nationally, perhaps-to embrace nutritional bricolage and cheap health options since Kaiser's model integrates the financing and delivery of medical care under one roof/feedback loop. Kaiser has a financial incentive to exhaust low-cost, high-benefit modalities. Someone just needs to get in touch with CEO George Halvorson and get his buy-in and support. lol. They do their own internal research-published in The Permanente Journal-so that avenue exists as well.

Jeff (2009-10-13 17:25:43)

Does using more socks cure everyone's foot fungus? We have no idea. So we don't know if all of the other techniques are necessary too. Having an  $n$  greater than 1 would be useful. Jeff

seth (2009-10-13 19:00:22)

Jeff,  $n > 1$  is always useful. My telling what happened to me is one way to try to get there.

epistemocrat (2009-10-13 20:21:01)

$n=1$  is the startup to initiate momentum for a community of  $n=1$  self-experiments. New ideas have to start somewhere ...

Nathan Myers (2009-10-13 20:24:42)

Most of the scientists I know (and Wikipedia editors) would say that your research doesn't exist because it's not published in a refereed journal. The work that gave us the ability to solve differential equations was published by an engineer, Oliver Heaviside, in a city newspaper. It was later backdated and renamed the "Laplace transform" to sanitize it. That done, it could then be used by mathematicians and scientists.

seth (2009-10-13 20:51:16)

"Doesn't exist until published in a refereed journal." You're probably right, they would say that. And other evidence snobs would say it is worthless until demonstrated useful in a double-blind placebo-controlled clinical trial. It's just more black-and-white thinking, familiar to us from organized religion. It's interesting the way some scientists imitate religious behavior.



Andrew Gelman (2009-10-14 02:07:06)

Seth: I think you're on stronger ground discussing science than religion. Requiring double-blind placebo-controlled clinical trials may or may not be a good idea, but I don't see it having much to do with religion, at least not with the religions that I've heard of. I think you'd be hard pressed to find a double-blind placebo-controlled clinical trial in the Bible, for example. There people often get their religious inspirations directly from God, and any testing of hypotheses is more anecdotal, if at that. If you don't like black-and-white thinking, that's fine, but I don't see such attitudes as being particularly associated with religion.

Darrin Thompson (2009-10-14 04:52:52)

I need an effective means for self experimentation at home with my Autism squad. We try new interventions every few months, but we don't have an effective way to gather enough data to be sure about the efficacy of the things we try. We do evals every few months. We need something lighter to do daily. It needs to be better than just observing and "using the gut" and it needs to survive physical exhaustion of the researchers and little OCD hands. Maybe we just need to measure our own well being since it is so tied to the kids' behavior on any given day. I always know how I feel. And don't knock my washing machine you...

seth (2009-10-14 04:58:06)

Andrew, when I associate religions with black-and-white thinking, I was thinking of three things: (a) division of the world into us (believers) and them (non-believers); (b) the many rules associated with most religions: Do this, do that, you must X, you must Y; and (c) the certainty with which many statements are made – as if the truth and the difference between right and wrong were so clear-cut. Religions sell certainty. I knew someone who became an Orthodox Jew, I believe, at least partly because it told him how to live. You're right that each of these three things can be found outside religions, so the association is hardly perfect. And you might say that the black-and-white thinking came first, it merely found a home in various religions as well as in other places (such as in these scientists' belief systems). But the religions I'm familiar with certainly encourage black-and-white thinking. It doesn't fit very well with science, but there it is anyway.

Aaron Blaisdell (2009-10-14 07:08:35)

Inoculations are one type of prevention the medical community does seem to have embraced. Brent the healthcare epistemocrat and you have both described consumption of fermented foods as an inoculation of sorts against bad bacteria. The Western medical community is starting to look at probiotics (judging from the increase in scientific medical literature on the subject), but Eastern medicine has embraced it for eons. On the topic of science as religion: I constantly see scientists who are dogmatic, elitist, and condescending when discussing alternative frameworks to their own deep-seated beliefs. Sounds like a kind of religion to me. I also know many scientists, however, who are NOT like this. No black-and-white here (or in academia, or in the university setting) either.

epistemocrat (2009-10-14 08:07:29)

Darrin, "I need an effective means for self experimentation at home" Check out Facet of Life: <http://facetoflife.com> It's a barebones, simple platform to help you capture and track your 'clinical trials' at home. My friend built it. Email me if you have any questions. Best, Brent

lance (2009-10-14 08:09:27)

What Seth is pointing to is the invisibility of opportunity. An infected foot is a problem with a cure, a prevented infection is not a problem or a cure. Missed opportunities (or opportunity costs) are not part of GAAP accounting.

seth (2009-10-14 11:31:20)

True, it's much harder to measure prevented infections than cured infections. But in all of the cases I mention, the treatment method (used to cure) is the same as the prevention method (used to prevent). Just as Vitamin C both cures scurvy and prevents it.

Jeff (2009-10-14 19:50:57)

My objection isn't to doing  $n=1$  experiments, which I agree is useful. It's to the forcefulness with which Seth proclaims things. He cured allergies! He cured foot fungus. He cured X. Or, every doctor is like this. Every biologist is like that. The entire field of public health is like this. Jeff

seth (2009-10-14 23:14:59)

Jeff, what's an example? You might be right but it's hard to know without an example.

Simon B (2009-10-15 04:30:38)

It sounds like you're aligning with the Natural Hygienists - whose use of the term means something like "living in a way that doesn't make you ill". So your changes in sleep pattern to help with depression, changes in sock washing to help with foot fungus, standing to help with sleeping, might be Hygeinic solutions. Although the modern use of the term means 'sterile' which is a bit misleadingly close.

### **Secrets of Infomercials (2009-10-14 13:14)**

[1]Here is a long list of reasons, by Steve Dworman, who makes them for a living, why infomercials are the way they are. One big reason is data: you can easily do an experiment that compares two different versions of the same commercial. It is much harder to measure the effectiveness of other forms of advertising. (The lack of data involved in most advertising choices is easy to see on Mad Men.) Self-experimentation has the same advantage: It's so much easier to test an idea.

One of his points is about the use of celebrities: It must work, or else they wouldn't do it. (Because there is data behind how things are done.) I think this points to something hard-wired: We want to learn from other people. That's the default. If we have a question, we search for someone who will answer it. Learning from our own experience - such as self-experimentation - is a last resort. It feels wrong, we don't like it. I remember feeling this way when I bought a camera. Sure, I could do extensive research about which camera is best. But that would be hard. Better to ask a friend. And then the purchase would be a link between us.

1. <http://itreallyworks.tv/articles.html>

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Dan (2009-10-14 15:32:24)

I've been in the business for 25 years. You use celebs to stop people when they are tuning around the channels. They are a recognizable face. Also might be some trust involved but that depends of the celeb. There are plenty of shows that worked without celebs. It's the demos and the product benefits that matter along with testimonials from real users. People like to hear from others that something works, like you said. Testimonials are a very important part of direct response ads. As for data, while this always distinguished direct response, TV doesn't come close to the data now available using online forms like web sites. Testing is key to direct response, but online testing is cheaper and faster than TV testing. With TV you need more money to produce a show and run the ads, so you need a much more mainstream product for it to work. Online is different. You still have to spend some money and have the right story, but you can do it with less upfront expense. This means you can try less mainstream product ideas and concepts and they can still work. Dan

Nadav Manham (2009-10-14 17:29:50)

Seth, I'm surprised you didn't comment on this bullet point: "Prevention-oriented products never seem to sell. I've seen some amazingly produced shows that have tried to do this and failed miserably."

Scot (2009-10-14 20:25:47)

Re: wanting to learn from other people. Maybe it's adaptive. Dan Gilbert, in "Stumbling on Happiness" makes the point that if I want to know how I'll feel after a future event, it's best to consult someone else in that exact same situation now, instead of trying to imagine how I will feel after said event occurs. This is because we are basically rotten forecasters of our own future happiness. Our reactions to bad events are never really as bad as we imagine they will be, nor are good events ever as good as we expect they will be.

Darrin Thompson (2009-10-15 06:04:50)

What you are saying matches up nicely to a few office stories that have puzzled me over the years. I'll add though, that if we want to learn from other people, we only want to learn from certain other people. Certain as defined not always rationally by us. Certainly explains my compulsive blog reading. Also explains why I've seen executives ignore problems in their organizations, especially when their own people point them out and do everything ask to "prove". But I'm not bitter.

seth (2009-10-15 06:35:58)

Darrin, what are those puzzling office stories?

epistemocrat (2009-10-15 07:13:06)

Re: Learning from others ... Coach Wooden's latest book, 'A Game Plan for Life: The Power of Mentoring': [http://happybirthdayjohnwooden.com/guestbook/?page\\_id=9](http://happybirthdayjohnwooden.com/guestbook/?page_id=9) "Mentors are all around us; they are everywhere we look. Anywhere there is a sharing of knowledge or a teaching of experience, there is a mentor. Anywhere there is an individual with life lessons to impart to an audience" more often than not, just an audience of one" there is a mentor. I think if you truly understand the meaning of mentoring, you understand it is as important as parenting; in fact, it is just like parenting. As my father often said, "There is nothing you know that you haven't learned from someone else." Everything in the world has been passed down. Every piece of knowledge is something that has been shared by someone else. If you understand it as I do, mentoring becomes your true legacy. It is the greatest inheritance you can give to others. It is why you get up every day to teach and be taught." It's ancestral mimicry.

Dan (2009-10-15 08:13:37)

Prevention doesn't usually work because there is no B & A, that's before and after. This is a very strong piece of marketing used not only in infomercials but with all kinds of selling. Diets and exercise routines work great on TV because of B & A. Prevention can work but it needs to include benefits that are immediate as well. Air purifiers. It's really about preventing disease but they sell because of the smoke enclosed room demo. You see it working. If I can do a demo, I can usually sell it. Read Ron Popeil's book. His most important message is you learn how to sell a product by listening to what people ask. This tells you what benefits customers value most, then you incorporate that into your selling. Getting in front of a group of people with your product and pitching it is one of the most important parts to making it a success.

Darrin Thompson (2009-10-15 16:23:22)

Seth asked for my puzzling office story. I'm working away at this coding project. President is initially really excited by the project. Puts money in it. But he has no clue about programming and tech projects so he can't lead it to profit. So eventually he quits letting anyone spend anything so were left to fend and bring ourselves to profitability with what we had. That wasn't going to succeed. One day the Prez holds a conference call and introduces, let's call him Carl, the new boss. New boss will take over immediately. Old boss is not fired. Note that. Carl will run this special project and all IT operations for the entire organization. Turns out Carl has the technical skills to make web sites backed by dbase on Windows. Carl is suspicious of our use of database servers for the organization's contact data and this special operations critical data. Carl thinks dbase and file replication would work better. Also Carl has a web site where he resells notebooks. Carl is, can't remember his exact age. Was

it 18 or 16? One of those numbers was actually correct. I am not exaggerating. Now that I think about it, I'm pretty sure it was 16. Long story short, eventually old boss was running the show again (loyalty) and I left for organizations manged less badly. Easy conclusion, the Prez is a fool. Inconvenient fact, the Prez is no fool. Nope. This is a big organization that he started from scratch. It's a non profit and he can tell the story and raise money like he was born for it. What he did here and many many other times was, yes, Very Stupid(tm) but he is no fool. That's what I found puzzling. So now Seth brings up this really neat idea that there are two ways people learn. People like to learn from other people. People learn best from gathering data. So, hint, pick the data one. If management problem solving is learning (it is, for the sake of argument) then there are two ways to do it. You can do it the hard way, experimentation within the business system, or trying to figure out who really "knows" and try learning from people. Hint, pick the experimenty data one. That particular office story strikes me as the Prez couldn't hack the experimentation when he wasn't raising money (really really well) and turned to the people way. Only he never paid attention to anyone already close to an internal problem. They were the problem in his mind. So he always learned from the wrong people. He was constantly looking for heroes. Preferably inexpensive ones. He's 16 and has a \_web \_ site on the \_internet \_? (It was like 1999 ish...) Hero! CEO's pulling in 80 million for having a confident demeanor strikes me as a similar blunder. Deming's quality systems were were a kind of collaborative self experiment within a business. The scrum software development method features measurement of sprint "velocity" and retrospective meetings after each sprint to discuss and plan possible improvements. I could go on and on. If the theory holds: When business fails to experiment well, it inevitably turns to hero worship. Kinda the same.

seth (2009-10-15 19:16:31)

yes, I see the point very clearly. Great examples. It does explain why Deming had such a big effect – because there was so much resistance to data and it was so easy to rely on heros.

Evelyn (2009-10-21 10:51:57)

It seems to me that figuring out what to test is more of a problem than implementing the test. It's easy to pick "safe hypothesis", or to be overwhelmed by the huge number of factors that differ between two situations. Here's a website that has some real data on A/B testing of websites. <http://www.abtests.com/> Adwords allows you to test lots of different combinations of each of the 4 lines of an ad. And, will automatically show better performing ads more than worse performing ads. Seth, you've got a real talent for picking the right experiment. Do you have any suggestions on how to improve skill in this area?

seth (2009-10-21 14:08:23)

Thanks, Evelyn.How to pick the right experiment? My advice is to do the simplest easiest experiment that will tell you something. This is inevitably much simpler and easier than others recommend. In my experience, researchers, like everyone else, (a) underestimate the difficulty of their plan and (b) overestimate their knowledge of what will happen. The pleasant corollary of (b) is that you can learn much more easily than you think.

## **More About Faces and Mood (2009-10-15 07:46)**

A friend with bipolar disorder writes:

When [1]I wrote in your blog that I use your discovery daily, it means that every day I look in a mirror for an hour, starting at approximately 6:30 a.m. I have the mirror about 20 inches from my face because I have read that a mirror image is half the size of the object reflected. [[2]Life-size faces appear to work best. Using a mirror means the face you see is perfectly life-size, allowing for distance. TV faces can be larger or smaller than life-size.] To keep from being bored while looking at my face in the mirror, I mostly listen to tapes of C-SPAN programs. Sometimes I listen to music. Once or twice a week I may just think, or plan my day. That does get boring after about 30 minutes.

Sorry, I definitely was exaggerating when I wrote "doctors are amazed". "My doctors" refers only to my psychiatrist and psychotherapist; at best, they seem "impressed" by my condition. My therapist regularly says that I'm doing "great" (variously referring to social relations, self-awareness, and general functioning) – "especially considering my situation" and my psychiatrist once exclaimed that my bipolar disorder was in "complete remission", albeit when we were composing an online personal ad. I do think both of them are at least mildly surprised that I seem to be doing alright on half the standard therapeutic dose of Depakote, and a low dose of Prozac.

There was an actual experience that weakly supports my claim about practitioners having no interest in utilizing your idea. I once asked my therapist to suspend his disbelief, and just imagine that your treatment does work as a strong antidepressant. Then would he mention the treatment to his other patients, or give a talk at a conference, or write up a report, or tell his colleagues? In all cases, he said "no". Although he agreed that ideas for clinical trials have to come from somewhere, evidently that somewhere was not part of his concern.

I stress that my therapist is compassionate and reasonably intelligent, and he has helped me deal with many important practical problems. And of course in your blog even you have admitted that your idea, on the face of it, sounds way too crazy. It's to my therapist's credit that he claims to believe your treatment works to some degree – adding positively, "whatever works for you". Unfortunately, that addition implies that your treatment is somehow working "psychologically" for me (e.g., as a kind of meditation) rather than working "biologically" in a way that, presumably, would work for most people.

If my doctors were following my particular case as closely as they pretend to, then they ought to be amazed. Instead, my sense is that they see me through the lens of their diagnosis. Without actually dismissing the sheer statistical improbability of my having been off of drugs and without a hospitalization for four years, they do seem to forget that fact when we discuss drug therapy. When I mention those four years, they sometimes play the skeptic, offering up alternative possibilities: it was a fluke, or I was in remission anyway, or something else. I don't try anymore to persuade anyone, not even family, about the treatment – it's not worth the effort.

I suppose the bigger picture is that there is little credibility to the testimony of a bipolar person who has experienced psychosis. (Perhaps my case is not helped by dramatic pronouncements of mine such as, "History will judge you. People will wonder, "why didn't they listen to him?") Too, I'm not paying my doctors enough to get lengthy consultations. If I were paying enough, and if I made the case with details to my psychiatrist, she might be persuaded that there is a big effect. She has a high opinion of you; in fact, she's the person who told me of the report in The SF Chronicle (5/30/06) about the SLD diet. And, she gives some credence to Dr. Stoll's results with omega-3 for treating bipolar. Nevertheless, for what it's worth, I would stand by my original opinion about her not changing her practice.

1. <http://www.blog.sethroberts.net/2009/10/03/gatekeeper-drugs-drugs-that-require-gatekeepers/#comment-349374>
2. <http://repositories.cdlib.org/postprints/117/>

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Nathan Myers (2009-10-15 11:03:44)

There's something else going on, as well. The psychiatrist and psychotherapist he mentions are clinicians, acting in the role of technicians. Observations of technicians in all fields are routinely discounted, particularly if they conflict with common theory. To the degree that these people also, occasionally, present themselves as scientists, their credibility is at stake if they offer the wrong *kind* of idea. In medical fields there is somewhat less segregation among technicians (of certain sorts), engineers (never

called that) and scientists than in others. Airline pilots typically report uncatalogged meteorological phenomena over and over for decades before they are acknowledged by meteorologists. A third thread is legal. It's one thing to acknowledge that something a patient is doing helps. Suppose, though, this psychiatrist recommended it to another patient, and reduced the drug dosage, and then the patient (as depressed patients do) committed suicide. What would that psychiatrist say in court? They need to be able to point at professionally approved documents justifying the treatment. Getting from "it works" to "it's officially approved" is very expensive. If no money needs to change hands when "it works", who is to pay for the process? With drugs, there's a ready source of funding for the process. This is an argument for public funding of therapies. The problem, then, is how to ensure that the money is mostly spent on therapies that end up demonstrated to work. If whoever does the work gets paid just as much for any old quackery, it's easy to find quackery to get paid to test. The Free Software movement has bridged the gap from "it works" to "officially approved". Often it is able to take advantage of public funding, but more usually not. Alternative therapeutics ought to be able to adapt some lessons from Free Software.

seth (2009-10-15 20:16:29)

Nathan, I tend to agree. But consider this: When a SF doctor figured out that her patients were getting mercury poisoning from fish, she told them. She didn't worry about being sued because this was a new idea. Not only she told them, she wrote about it. Had a big effect. Obviously mercury poisoning is a far more conventional diagnosis than "not enough morning faces". But it is possible for clinicians to have new ideas, to learn from their patients.

MT (2009-10-15 20:21:20)

This is interesting, but it would be good to hear the context – how long was this person suffering what symptoms, when did they try the intervention (four years ago?), what level of remission since (half the "normal" dosage of Depakote – presumably half their previous dosage?)... it sounds like there is some backstory here that would be useful to hear. Additionally, bipolar includes mania, so if this intervention has been helpful then the mirror-strategy isn't only anti-depressant, but mood stabilizing. Another option might be to incorporate meditation into the morning-faces strategy, as mindfulness meditation is also, separately, used as a preventive for depression – Mindfulness Based Cognitive Therapy. There is research on this, showing mixed results, but I think the mixed results comes from the structure of the studies rather than the efficacy or lack thereof for meditation as a technique. If one were able to combine the two – staring at one's face while meditating – perhaps it would offer another benefit – calming the mind so experiences like aversion, attraction, and boredom can be experienced with equanimity. There is also a form of compassionate meditation that people find useful for such problems.

Mindfulness Based Stress Reduction Techniques | My Blog (2009-10-31 22:10:35)

[...] Comment on More About Faces and Mood by MT [...]

Dean (2009-12-26 16:43:57)

The original post states "I have the mirror about 20 inches from my face because I have read that a mirror image is half the size of the object reflected. [Life-size faces appear to work best. Using a mirror means the face you see is perfectly life-size, allowing for distance." Does anyone have more comments regarding mirrors and face image size? For example, I would be interested in answers to the following questions: Why is a distance of 20 inches, and not some other distance, correct for perceiving a life-size face image? How about using a 2X mirror? Wouldn't such a mirror scale the half-size image to a life-size image? Is anyone else using a different mirror method, such as a 2X mirror, and also achieving good results?

seth (2009-12-27 05:28:21)

Dean, when you look at a face in the mirror it will always be life-sized so long as distance is taken into account. In my studies of this I found that distance matters – so distance is taken into account. The best distance was roughly a conversational distance.

## The Price of an Unnecessary Operation (2009-10-16 04:21)

A few years ago, a Berkeley surgeon named Eileen Consorti, to whom I was referred by my primary-care doctor, recommended that I have an operation to repair a hernia so small I couldn't detect it. [1]I have already written about how she kept saying there was evidence such operations were beneficial but as far as I can tell no such evidence exists. (Dr. Consorti has yet to provide the evidence [2]she still seems to think exists.) Okay, she overstated benefits. What about costs?

During a conversation about whether the operation was a good idea, I said operations are dangerous. I didn't want to have one unless there was a clear benefit. She replied that nobody had died from anesthesia during one of her operations. But of course death is only one of the things that can go wrong. It turns out the general category of bad things happening during anesthesia is called undesirable events and the rate of undesirable events has been measured. In [3]this study, the rate was 100-150 undesirable events per 1000 hours of anesthesia. My operation was simple; I estimate it would have taken one hour. So my chances of having something bad happening to me as a result of an operation without any clear benefit to me – but considerable financial benefit to Dr. Consorti – was about 10 %!

In a discussion of the costs and benefits of the operation, she didn't tell me this.

1. <http://www.blog.sethroberts.net/2008/08/29/suppose-you-write-the-times-to-fix-an-error-part-2/>
2. <http://www.blog.sethroberts.net/2008/08/29/suppose-you-write-the-times-to-fix-an-error-part-2/#comment-219500>
3. [http://bmj.com/cgi/content/abstract/339/oct13\\_1/b3974?paper=0](http://bmj.com/cgi/content/abstract/339/oct13_1/b3974?paper=0)

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kate (2009-10-19 20:58:58)

One undesirable event caused by anesthesia is the triggering of mitochondrial disease; one of my very young students died of it last year, caused by a routine tonsillectomy. She was ten.

Kirk (2009-10-22 13:35:58)

The study discusses problems seen by trainees, with more incidents seen at the beginning of the school year. My guess is that incidents would be lower for professionals who have been on the job for years and working under a known and established routine. But that is speculation. I don't know where one finds the information about the number of incidents per hernia operation performed by professionals. Another useful number would describe the count of threatening incidents per untreated hernia (of the type of hernia you have). This is not an easy decision. I had one of those undesirable anesthesia events during my most recent hernia operations and it was alarming. On the other hand, many years ago I had an emergency hernia operation (diagnosed at 2PM, under the knife at 6PM), and it was bracing to hear later, from a co-worker, that a good friend of hers had died due to an untreated (incarcerated or strangulated) hernia. In conclusion, I think you need more information to make your risk management decision. Unfortunately, I don't know where you get the information, especially if your body isn't sending any signals. Good luck.

## Beijing Air (2009-10-16 14:14)

Yesterday was really windy. Lots of bikes fell over, including mine. I thought my sheets, hung to dry outside my apartment window, had blown away. I searched for them around the building. I eventually found them – in my closet. I

got a piece of dirt in my eye that I noticed for several hours. It was my first significant bad encounter with Beijing air this time around (since August). I was in Beijing last fall, too, and then the dirty air really bothered me. I felt better after I got an air filter for my apartment.

When I was a freshman at Caltech, Richard Feynman came to our dorm for dinner. I asked the first question: "What do you think of the air?" He looked at me as if it was a stupid question. I think his answer was, "You get used to it." After living in Beijing last year, I said over and over I liked everything except the air. Now I find it hard to complain about the air. In my apartment I have [1]one big air filter per room that runs constantly; they are quiet and turn red if the air is dirty. They hardly ever turn red. Last year, after a week without dusting, you could write "lung cancer" in the fine black dust that had accumulated. Now it isn't there. Through my window the visibility is usually pretty good; I can see the lights of buildings in the distance.

Yesterday someone told me Beijing air has gotten much much better. "Ten years ago your hair would get filthy" from coal dust, he said. The hutongs had coal-burning heaters. Now they are gone. Measures of air quality have even improved since last year, I think he said. I met someone recently arrived who was bothered by the air but she felt much better after I gave her an air filter.

Overall, I think four things have changed: 1. The air in my apartment, where I spend most of my time, is much better (compared to unfiltered). 2. Outside air is somewhat better. 3. Due to fermented foods, my overall health is better. 4. Due to learning about [2]hormesis, I don't worry about a small amount of air pollution.

James Fallows on [3]How I Survived China. The bottled water at a Buddhist restaurant came from a garden hose.

1. <http://www.cnyadu.com/yadu/product-140/>

2. <http://www.blog.sethroberts.net/2009/05/12/the-dose-response-revolution-and-fermented-food/>

3. <http://www.theatlantic.com/doc/200911/fallows-health-china>

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Ricardo Niederberger Cabral (2009-10-29 06:24:40)

just curious, if you spend most of your time in your apartment, why are you in China?

### **Fire Your Doctor! (2009-10-17 06:07)**

I came across [1]Fire Your Doctor! How to Be Independently Healthy by Andrew Saul while searching for info on natural hygiene, mentioned in a comment. I liked this story:

I had acne . . . It peaked when I was seventeen. . . Then I went overseas to study, was more than a bit stressed, and took my already considerable chocolate, sugar, meat, and greasy-food eating habits to new heights. My broken-out skin broke out still worse. Eventually, having failed to see any improvement otherwise, I changed my diet, and the acne went away.

Of course I support this non-gatekeeper approach to health. What about the book? Pro: Well-written, a reasonable amount of evidence. Con: No discussion of actual cases. What actually happens when you treat problems this way (often with vitamins and other supplements) is very important to know.



I found nothing about fermented foods, omega-3, or sleep (neither sleep problems nor the value of sleep for health). This isn't really a weakness of the book, which is about a certain way of doing things; it's a weakness of the way of doing things.

1. [http://books.google.com/books?id=ps8NVbgfMlcC&printsec=frontcover&source=gbs\\_navlinks\\_s#v=onepage&q=&f=false](http://books.google.com/books?id=ps8NVbgfMlcC&printsec=frontcover&source=gbs_navlinks_s#v=onepage&q=&f=false)

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SB (2009-10-17 13:46:11)

pg 168: Sleep Disorders the Afterword starts on pg 169 so don't much.

### **The Bike: X Invented It. Y Perfected It. (2009-10-19 01:36)**

The bicycle is far from the most influential invention ever – that would be the printing press – but it might be the most perfect, at least where I live. As I rode home last night I reflected how curiously great it is (where I live):

1. Low cost. A friend gave me hers for free. Perhaps it would have sold for \$5. A new bike costs as little as \$20.
2. Durable. They never wear out, although parts need replacing. I could have the bike I have now 20 years from now.
3. Ages well. Unlike almost all commercial products, bikes improve with age. They look less and less desirable so the probability of theft goes down. My bike, which looks worthless, will never be stolen. (As my students confirmed for me today.) I took to fake-locking it because I couldn't get the key out of the lock. One day someone managed to get the key out leaving my bike locked and possessing the key. Whoever did that didn't bother to take the bike. I got the lock sawed off a block away for \$1. I bought a new lock for \$2.
4. Great service. When something goes wrong, I can bring it to a bike shop that will fix it in minutes. There are lots of bike shops in my neighborhood.
5. Convenient. You can always park your bike close to where you're going.
6. Green. Zero pollution, zero fossil fuel.
7. Exercise.
8. Quiet. The Tsinghua campus is full of bikes yet is always quiet. Because of the bikes, cars are banned from large chunks of the campus.
9. Safe. My neighborhood, like elsewhere in Beijing (but unlike some Chinese cities), has plenty of bike lanes. It feels perfectly safe to ride in them. In Berkeley I wear a bike helmet but at least in my neighborhood I haven't been able to see the need – it would be like wearing a helmet while walking.
10. Facilitates exploration. Most of Beijing is no fun to walk in – things are too far apart. But it is fun to bike around. You can easily bike from one interesting place to the next and whenever you get somewhere interesting you can get

off your bike and walk around it.

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JLD (2009-10-19 04:10:48)

No, bike [1]isn't safe it's **much worse** even than car and foot travel.

1. [http://en.wikipedia.org/wiki/Air\\_safety#Statistics](http://en.wikipedia.org/wiki/Air_safety#Statistics)

seth (2009-10-19 04:19:23)

JLD, those statistics are averages over many places. Where I live it is much safer than usual. There are wide bike lanes and there are many bikes. Because there are so many bikes, people expect them and look for them. This makes them much safer than in places where bikes are less common and where there are no bike lanes. Which is most places.

intellectual yokel (2009-10-19 07:38:47)

Freeman Dyson on bikes: You can't possibly get a good technology going without an enormous number of failures. It's a universal rule. If you look at bicycles, there were thousands of weird models built and tried before they found the one that really worked. You could never design a bicycle theoretically. Even now, after we've been building them for 100 years, it's very difficult to understand just why a bicycle works - it's even difficult to formulate it as a mathematical problem. But just by trial and error, we found out how to do it, and the error was essential.

## **What Do Officer and Anchorage Have in Common? (2009-10-19 16:59)**

[1]Anchorage, of course, is the title of Michelle Shocked's great song – one of her great songs. She writes to a childhood friend and the answer comes back from Anchorage: I've got a husband, two kids, a house . . . Anchorage: state of being anchored.

Yesterday I asked one of my Chinese students what his parents did. "They're officers," he said. He meant they worked in an office.

1. [http://www.michelleshocked.com/chords\\_anchorage.htm](http://www.michelleshocked.com/chords_anchorage.htm)

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## **Cosmic Radiation Makes Trees Grow Faster (2009-10-20 12:36)**

[1]Trees grow faster during periods of greater cosmic radiation from the sun:

During a number of years, the trees' growth also particularly slowed. These years correlated with periods when a relatively low level of cosmic rays reached the Earth's surface. When the intensity of cosmic rays reaching the Earth's surface was higher, the rate of tree growth was faster. . .

Cosmic rays are actually energetic particles, mainly protons, as well as electrons and the nuclei of helium atoms, that stream through space before hitting the Earth's atmosphere. The levels of cosmic rays reaching the Earth go up and down according to the activity of the Sun, which follows an 11-year cycle.

As [2]someone pointed out, this may be another example of [3]radiation hormesis. Although some examples of hormesis may be due to immune-system stimulation, you can also see hormesis with single cells, which don't have an immune system, of course. They do have repair mechanisms.

From my point of view this is interesting because it helps to show what a big effect hormesis is. I'm sure we need daily stimulation of our repair systems to be our healthiest but this isn't a part of standard teaching about health. It goes against what people are usually taught (e.g., all germs are bad, all air pollution is bad, keep from getting sick by avoiding contagion) roughly as much as does the Shangri-La Diet. The scientists who discovered the tree effect appear to not know about hormesis ("As for the mechanism, we are puzzled").

The success of the Shangri-La Diet teaches that the obesity epidemic is due to eating too much food that has exactly the same flavor (smell) each time – from one can of Coke to the next, for example. In practice, this too-constant food is food from a package (food made in a factory) and food from a restaurant. My umami hypothesis says that the epidemic of autoimmune diseases has the same source. Food in a package is more sterile than other food because bacteria reduce shelf life so preservatives are added and/or manufacturing steps (e.g., pasteurization) kill bacteria. Food from a restaurant has usually been freshly cooked (killing bacteria) and all sorts of precautions ("food safety") are taken to make sure it remains low in bacteria.

Thanks to David Cramer.

1. [http://news.bbc.co.uk/earth/hi/earth\\_news/newsid\\_8311000/8311373.stm](http://news.bbc.co.uk/earth/hi/earth_news/newsid_8311000/8311373.stm)
2. <http://science.slashdot.org/article.pl?sid=09/10/19/2314242>
3. [http://en.wikipedia.org/wiki/Radiation\\_hormesis](http://en.wikipedia.org/wiki/Radiation_hormesis)

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Nathan Myers (2009-10-20 16:27:02)

Sorry, Seth, this is BS. Yes, there is a correlation between cosmic radiation exposure and tree growth. There's also a correlation between sunspots and tree growth, and between tree growth and hemlines. Might tree growth control hemlines? Might tree growth control the sunspot cycle? It will take enormously more evidence to demonstrate any connection whatsoever between this phenomenon and radiation hormesis. All we can say now is that such an effect may be possible, but we could just as well have said so before, with just as much reason. Do you wonder why we say you're not the go-to guy on causation?

seth (2009-10-20 17:49:09)

Nathan, I don't know what you mean by "this correlation is BS". Nor do I have any idea why you believe this.

Tom in TX (2009-10-20 18:12:03)

Hormesis is not the only possible explanation of the correlation. Another could be found in the book *The Chilling Stars* [http://www.amazon.com/Chilling-Stars-2nd-Cosmic-Climate/dp/1840468661/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1256087000&sr=8-1](http://www.amazon.com/Chilling-Stars-2nd-Cosmic-Climate/dp/1840468661/ref=sr_1_1?ie=UTF8&s=books&qid=1256087000&sr=8-1) The authors claim that cosmic radiation affects the amount of cloud cover over the earth, which in turn affects global temperatures. This could have an effect on the growth rate of trees.

Nathan Myers (2009-10-20 18:59:55)

The correlation is not BS. The causative chain leading you to radiation hormesis, though, is stage after stage of pure speculation, what Simon Singh got in trouble in the UK for calling "bogus". That doesn't mean our immune systems don't need frequent jostling, or that we don't benefit from fomenting population battles among our gut flora, which might not be the same thing. It just has nothing demonstrable to do with them. Confirmation bias isn't your friend. Aaron, I expect you've explained this to Seth before.

seth (2009-10-20 19:25:04)

Nathan, you say "the causative chain leading [me] to radiation hormesis is stage after stage of pure speculation." It was someone else's idea, not mine, that this result could be explained by radiation hormesis. The pure speculation here is your description of their reasoning. There is something to what you say, in the sense that bacteria (found in fermented food) are highly unlikely to damage cells the same way cosmic rays or other radiation does. The value of hormesis for my argument isn't that the mechanism is exactly the same (bacteria work outside cells, stimulating the immune system; at least some hormesis has an intracellular explanation) but that hormesis makes the general point that biological repair systems can benefit from a low level of damage, because it stimulates them. Tom, yes it certainly isn't the only explanation proposed. For me the interesting question is whether the dosages match up – whether the cosmic radiation dose is similar to the dosages that produce hormesis under laboratory conditions. Hormesis is obtained under a narrow range of dosages – too little and there's no effect, too much and the cell or plant or whatever is harmed.

Seth's blog » Blog Archive » Winter Swimming (2009-10-26 07:31:28)

[...] The cosmic ray effect I mentioned earlier — that trees grow more when there is more cosmic radiation — occurred with older trees but not younger trees. [...]

## Med School Interview Questions (2009-10-20 18:59)

Here is what Brent Pottenger was asked during a recent interview at USC medical school:

- What drives/motivates you?
- Describe a challenge you overcame?
- Describe a fulfilling experience that made you want to be a physician?
- Why USC?
- What do you bring to the entering class?
- What area of medicine are you interested in?
- What would you do for health reform?
- What do you do outside of school for fun?
- If you could improve something about yourself, what would that be?
- What are you looking for in a medical program?

NE1 (2009-10-21 14:02:52)

Compare/contrast the more cutthroat Match interviews: [1]at Al Roth's blog

1. <http://marketdesigner.blogspot.com/2009/10/interviewing-for-medical-match.html>

### **Interview with Professor David Jentsch about Not Taking Drug Company Money (2009-10-21 13:36)**

Dr. J. David Jentsch is a professor of psychology at UCLA; his research area is psychopharmacology. I contacted him because Aaron Blaisdell told me that he had decided to stop accepting research money from drug companies. This is unusual; I wondered why.

1. What is your research about? What portions of it have been funded by drug-company money?

My own research over the past 12 years has focused on the etiology of mental disorders (how genetic factors influence brain chemistry and behavioral functions) and how psychoactive substances work to normalize behavior through working on those very pathophysiological mechanisms. In particular, I study the brain systems and molecular pathways in control of cognitive functions, with a very specific focus on using that knowledge to generate insights about cognitive enhancement for schizophrenia, addictions and AD/HD. I study rodents and primates.

I have received funds from drug companies for two reasons. 1) The companies appreciated my work and funded efforts to discover new mechanisms that might inform what they ultimately did. 2) The companies provided funds to my laboratory so that I could investigate how novel potential candidate mechanisms that they developed influence cognition in laboratory models.

When one does work like I do, one wants to know that information learned is moving from the bench to the real world. That always requires a connection to a drug company – they make drugs/universities do not. That being said, I've always been of the opinion that having the best and most rigorous academic labs undertake these collaborations is in everyone's best interest (the quality of the work is ensured). In my case, this was always a tiny part of what I did; therefore, the quality was good, my objectivity was unquestionable and the answers were certain.

Because top scientists are increasingly withdrawing from collaborative partnerships (in part because of the negative attitudes about them), this work gets left to less competitive scientists whose objectivity may be less clear because they rely upon this type of support more heavily. I think that is quite unfortunate.

2. How does one get drug-company money for research?

Generally speaking, a company representative approaches you because of your reputation and invites you to propose a study to accomplish a mutual goal (see my answer to #1 above). A study design is drawn up, circulated and discussed and finally approved.

3. How much easier is it to get drug-company money than to money from other sources (for the same research)?

It's hard to say. Fewer people receive drug company funds. If a company is interested in your work and approaches you, it's not that difficult to obtain the funds. But it is difficult to be recognized to do this kind of work.

4. When did you start getting drug-company money for your research? If you're comfortable saying how much it has been over the years (per year), that would help clarify the implications of your decision.

As a graduate student, the laboratory in which I trained participated in some studies. As a faculty member myself, I have participated in two such efforts. The total amount of funding I have received from pharmaceutical companies in all my years at UCLA (a total of 8 years) is less than the budget I obtain in a single year on my RO1 grant. It is not an immense amount, and it certainly is not the kind of funding that I would need to sustain my research program.

Because of the negative perception of these sorts of activities, it is not worth continuing to engage in them. I don't require those funding sources. That being said, I find it a bit unfortunate. Again, it's in everyone's best interest if the TOP scientists did those collaborations to ensure their quality and rigor. When I don't do them, it is possible that a less objective party does. Second, every concept I have about novel treatments that isn't pursued because of lack of such a relationship is a potential delay in moving basic science to real use.

5. What are some examples of how the animal-rights activists publicized and complained about your use of drug-company money?

After the bombing [his car was bombed in March 2009], statements were made on the web and in the press by animal rights groups saying that people such as me used animals needlessly in a drug-company-fueled manic process of animal killing in order to get rich. As I already mentioned, this is not the case, if only because people like me often have relatively few such grants, and their size is not large (again, usually not larger than a single year of funding on an RO1 grant). Because of this, I simply decided not to take any such grants in the future.

6. The car bombing (on top of other attacks) led to the decision to stop taking drug company money?

As you can discern from the fact that I only have accepted two such awards in 8 years, I already placed a good number of criteria on accepting them. I wanted them to be only projects that I considered to be of very high scientific merit, and I wanted them to be logically and obviously related to our broader research projects.

Additionally, there is already a good deal of "negative perception" of research funded by drug companies within academic circles, and so I had already batted around the question in my mind about whether I should accept further awards. When the extremist attack on me happened in March of this year (2009), I had not had such an award in some time. That was not because I had taken a decision about the matter - simply that I hadn't found a situation I wanted to pursue. At that point, the decision solidified.

7. Your decision to not take drug company money - what effect do you think it will have or hope it will have?

I am certain a situation will arise where I will have an idea about a novel therapeutic based upon my research that I will be unable to pursue without such a relationship to a company. What is more, the compounds in development by companies are not being evaluated by me, so they may well be evaluated by someone with a little bit less rigor and objectivity.

I believe strongly that the academic enterprise gives a crucial "objective" check on novel therapeutics when leading scientists who are not "dependent" on drug company money examine them. The alternative is that others who are more dependent, and therefore less objective, will do it.

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MT (2009-10-22 06:35:10)

While Dr. Jentsch sounds like he is approaching the issue with integrity, I think his concerns that he will not be able to pursue a novel treatment strategy due to his stand are dwarfed by the general misallocation of funds toward psychopharmacological interventions generally. The only reason research has been driven in this direction is because of the combination of a patent system and a corporate-driven research sector. If it weren't for these factors we would be looking for solutions to mental health problems in environmental considerations – but there is no money in these areas, because they can't be patented. The current system is not supporting public health unfortunately. The meta-analysis of SSRIs by Irvine Kirsch at Hull showing them largely indistinguishable from placebo is one example of the colossal waste of psychopharmacology, the worse outcomes for schizophrenics in developed countries (drug-intensive) versus developing countries (often drug-free) is another. If society were run on cost-benefit analysis we would have pulled the plug on most psychopharmacological research a couple decades ago. Unfortunately, there are multiple agency and moral hazard problems in public and private institutions that perpetuate this wasteful research. It isn't 100 % bad – maybe 97 %. Consistent with themes from this blog, for instance, consider the Barker Hypothesis regarding the role of in-utero nutrition in health problems. If you could patent healthy fetal development, we would be far closer to solving problems related to health and mental health.

seth (2009-10-22 12:34:27)

MT, that's really interesting about better outcomes for schizophrenics in poorer countries. Can you provide a link or something?

MT (2009-10-24 14:30:13)

From a WHO study entitled "Schizophrenia and public health," published in 1998 and available here: [http://www.who.int/entity/mental\\_health/media/en/55.pdf](http://www.who.int/entity/mental_health/media/en/55.pdf) "A substantial body of evidence shows a more benign course and better outcome in developing countries." "The factors that underlie higher improvement rates in developing countries, however, remain ill-defined..." I just found this as an example citation – I originally read of the phenomenon in the book "Unsafe at any dose" by Bob Johnson, a UK psychiatrist who worked with imprisoned violent offenders and managed (according to his self-reported data) to dramatically reduce violent incidents and also lower psychopharmaceutical drug use in the most violent prison population in the UK. He claims to be able to get these results using talk therapy, and further that the various psychopharmaceuticals judiciously prescribed do more harm than good. Johnson attributes the difference in outcomes for schizophrenics between the two regions to be due to the prescribing of drugs studied for acute treatment of psychosis on a chronic basis. As we have such a strong pro-pill culture, and belief in the superiority of Western medicine, I doubt his theory will be tested any time soon. It would threaten too many shibboleths in the psychiatric community. I wish Gary Taubes would do his next book on psychopharmaceuticals!

» J. David Jentsch: Received MINIMALLY \$673,438 in 2008 to Mutilate His Victims NEGOTIATION IS OVER! (2009-11-14 15:16:09) [...] [iv] Interview with Professor David Jentsch about not taking drug company money (<http://www.blog.sethroberts.net/2009/10/21/interview-with-professor-david-jentsch-about-not-taking-drug-company-money/>) [...]

» Email to Ringach: I know you torture monkeys... maybe for \$1.3 million? NEGOTIATION IS OVER! (2010-01-20 13:04:55) [...] 2) According to the database maintained by the U.S. Department of Health & Human Services, from over 1,100 NIH grantsÂ to UCLA in 2009, you received two awards totaling an astounding \$1,353,270. Although theirÂ site is updated weekly, "it does not yet include contracts."Â So please feel free to revise this number.Â By the way, would you care to share exactly how much pharma paid you last year and exactly for what?Â (Jentsch has already admitted that this is part of the arrangement.) [...]

## **eConspicuous Waste (2009-10-22 12:28)**

The term conspicuous consumption got more attention but Thorstein Veblen, in [1]the same book, also coined the term conspicuous waste. The purpose of conspicuous consumption was conspicuous waste. Show how rich you are.

Fine. So what do we do now, when driving a car with hood ornaments would make you look like an idiot rather than a rich person?

The creators of [2]Paperless Post have not taken Veblen into account:

Paperless Post takes the e-invite into a civilized age, letting you design and send custom invitations and announcements expediently online. Created by siblings Alexa and James Hirschfeld, the site cleverly allows subscribers to choose among a dizzying array of card styles, fonts and design flourishes that perfectly mimic the heft and look of elegant stationary, complete with envelopes that open with a click. In addition to feeling good about your carbon footprint, youâ€™re also easily able to monitor as recipients receive their invitations, and manage their replies.

Fancy invitations were an example of conspicuous waste. They were expensive. Everyone could see that. Here's my suggestion: Sell these e-invites by the card and to each card add a donation to charity per card. Stated on the card. Let's say the donation is \$2. So 100 cards sent = \$200 to some charity. That way the sender shows that he or she is rich.

Via [3]Very Short List.

1. <http://www.gutenberg.org/etext/833>
2. <http://www.paperlesspost.com/>
3. <http://www.veryshortlist.com/home/index.cfm>

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## How Effective are Flu Vaccines? (2009-10-23 15:19)

[1]An article in The Atlantic, based on research by Lisa Jackson, questions the conclusion that flu vaccines work. Here is the essence of her argument from [2]a letter to the editor by Jackson and others in The New England Journal of Medicine:

In an 8-year study of a similar population of members of a health maintenance organization, we found risk reductions among vaccinated elderly persons during the influenza season to be essentially identical to those reported by Nichol et al. (Table 1).<sup>1</sup> However, we also found even greater reductions before the influenza season.

Emphasis added. The lack of specificity suggests that those who get vaccinated are in better health to begin with than those that don't. Other comparisons supported this conclusion.

Thanks to JR Minkel.

1. <http://www.theatlantic.com/doc/print/200911/brownlee-h1n1>
2. <http://content.nejm.org/cgi/reprint/357/26/2728.pdf>



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Jeff (2009-10-23 18:21:45)

I think vaccine discussions are much more fun when both sides are yelling "JUST LOOK AT THE SCIENCE!" As if interpreting data and slowly digesting the myriad of subtleties in hundreds peer-reviewed publications were a trivial exercise. On a related note, the posted article was a good read.

Nathan Myers (2009-10-23 23:22:22)

What I got was that people who wouldn't die from flu are less likely to catch it if stuck, but that people who can die from it catch it despite being stuck, and die anyway. Also, so many people skip getting stuck and catch it and spread it that the people who don't because they were stuck don't help. Probably if everybody healthy got vaccinated, the difference would be enough to avoid exposing the weak (who get no direct benefit from being stuck), but you never get more than 50 % coverage. 50 % coverage just isn't enough to provide cover for anything virulent.

Seth's blog » Blog Archive » Effect of Animal Fat on Sleep? (2009-10-24 13:34:06)

[...] 3. American culture demonizes animal fat. The conclusion that animal fat is bad rests on epidemiology. Once something becomes heavily recommended or discouraged, a big problem for epidemiologists arises: the people who follow the advice are likely to be different (e.g., more disciplined, better off) than those that don't (the healthy-user bias). As I blogged yesterday, an example is vaccine effectiveness: Those who get vaccinated are different than those who don't. [...]

David (2009-10-25 01:22:28)

Amazing article. So the flu vaccine has never been tested in a double blind trial? That is astounding. Seth, you are probably familiar with this blog, but I wasn't (self experimentation with giving up coffee): <http://www.kk.org/quantifiedself/2009/10-/the-false-god-of-coffee.php>

JR Minkel (2009-10-30 08:48:10)

Interesting discussion on Effect Measure: [http://scienceblogs.com/effectmeasure/2009/10/the\\_atlantic\\_article\\_sur\\_re-but.php](http://scienceblogs.com/effectmeasure/2009/10/the_atlantic_article_sur_re-but.php) Main points: 1) Evidence does exist for efficacy of seasonal flu vaccination: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2638553/?tool=pubmed> 2) There's a longstanding controversy over efficacy of seasonal flu vaccine in the elderly, which doesn't apply to swine flu.

## **Bryan Caplan on Barbara Ehrenreich (2009-10-24 01:56)**

[1]In his blog, Bryan Caplan makes some amusing and reasonable points about Barbara Ehrenreich's criticism of some happiness research. My eyes widened as I read. This is so much better than what's usually in the New York Times, The New Yorker, and other publications. It reminded me of Spy, except the level of thought is deeper. It's as if blogs allow and encourage intelligent people to say what they really think about stuff. Whereas in any mainstream venue there are tremendous constraints.

1. [http://econlog.econlib.org/archives/2009/10/wolfers\\_ehrenre.html](http://econlog.econlib.org/archives/2009/10/wolfers_ehrenre.html)

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david (2009-10-24 10:19:17)

I saw Ehrenreich on the Daily Show and the focus in that interview was on things like \_The Secret\_, where she certainly has a point. As for happiness research, if someone could convince me that "happiness" (defined in a way that it's something I care

about) can be reliably measured, I'd take it seriously. The happiness research I've been exposed to so far has left me with the impression that the researchers haven't had any first hand experience with happiness themselves.

Nathan Myers (2009-10-24 12:11:48)

Geoff Pullum, over at Language Log, has been debunking these "happiness gap" articles for years now. They keep repeating the same claims, and he keeps going to the raw data and finding nothing there but noise.

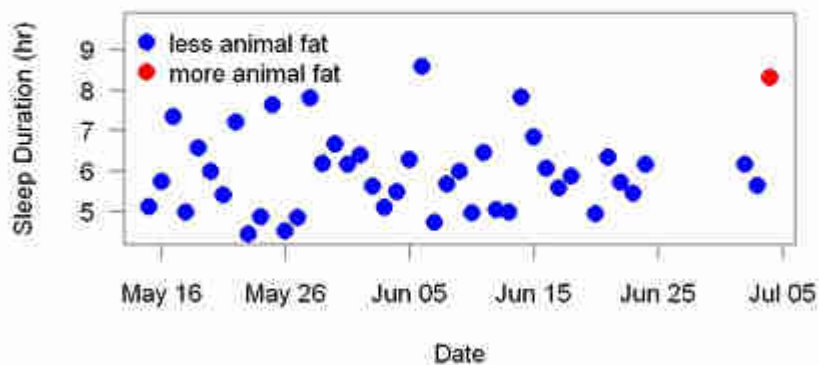
### Effect of Animal Fat on Sleep? (2009-10-24 13:33)

Recently I listened to [1]Robert Spector discuss his book *The Mom & Pop Store: How the Unsung Heroes of the American Economy are Surviving and Thriving*. He had a personal connection to the subject: His father was a butcher. "As I watched him trim the meat . . . " he said at one point. I thought: Oh-oh. To "trim" meat is to cut fat off of it.

Last spring, I bought \$80 of organic grass-raised pork from a farmer near Berkeley. My order included a variety of cuts. I cooked the ones I was familiar with, leaving one I'd never seen before: pork belly. Pork belly is used to make bacon. I've never seen it for sale in America. Ugh, I thought. Fat. It's 80-90 % fat. I too trim the fat off meat. It sat in my freezer for a long time. Finally I decided I shouldn't waste it. I cut it into chunks which I put in miso soup and had for lunch.

That night I slept much longer than usual (8.3 hr) and woke up feeling unusually well-rested. Here is a graph that shows my sleep duration for that night and several preceding nights:

[2]



Sleeping 8.3 hours was less common than this graph may suggest. I'd moved back to Berkeley in January and from then until the miso soup had measured how long I slept on 130 nights. I'd slept more than 8.3 hours on 2 of them (2 %). Even rarer was how energetic I felt the day after the miso soup. I couldn't quantify it, but it was very rare – once in 10 years?

Was it a coincidence – that on the very day I ate far more animal fat than usual I also slept much longer than usual and had much more energy than usual the next day? Or was it cause and effect? Here's why the second explanation – which implies that for best health I need much more animal fat than I usually get – is plausible:

1. As Spector said, butchers cut the fat off meat. The odds that our Stone-Age ancestors, living when food was sometimes scarce, did the same thing: Zero. Perhaps our meat is unnaturally low in fat. If for a long time in our evolutionary past we ate a lot of animal fat it makes sense that our bodies would be shaped to work best with that much fat.

2. Many video games, which boys enjoy, resemble hunting. I think this reflects an evolutionary past in which men hunted. If so, for a long time humans ate meat. That they ate a lot of meat is suggested by the fact that when big game went extinct (probably due to hunting) human health got worse.

3. American culture demonizes animal fat. The conclusion that animal fat is bad rests on epidemiology. Once something becomes heavily recommended or discouraged, a big problem for epidemiologists arises: the people who follow the advice are likely to be different (e.g., more disciplined, better off) than those that don't (the healthy-user bias). [3]As I blogged yesterday, an example is vaccine effectiveness: Those who get vaccinated are different than those who don't.

4. Fat tastes good. Which implies we need it. We like whipped cream, butter on toast, milk in tea, and so on. Butter vastly improves toast even with my nose clipped. Long ago, when this fat-pleasure connection evolved, dietary fat was mostly animal fat and fish oil.

All this makes it plausible that animal fat is good for us. That's not surprising. Based on Weston Price's observations plus these four arguments, I already believed this. Many people believe this. The interesting idea suggested by my data is the possibility of measuring its benefits quickly, by measuring brain function. My experience suggested that animal fat improves brain function quickly. Brain function is easier to measure than the functioning of other parts of the body. By measuring my sleep, my energy, or something else controlled by the brain, maybe I can figure out the optimal amount of animal fat. This is what happened with omega-3. The idea that omega-3 is good wasn't new; the novelty was the ability to measure its benefits quickly. ([4]At first I measured my balance, later other things controlled by the brain.) With a fast measure I could determine the optimal amount. It's likely that what's optimal for the brain is optimal for the rest of the body, just as all the electric appliances in your house work best with the same house current. If you figure out the best current for one appliance, you are probably simultaneously optimizing all of them.

1. <http://www.booktv.org/Watch/10807/The+Mom+Pop+Store+How+the+Unsung+Heroes+of+the+American+Economy+Are+Surviving+and+Thriving.aspx>

2. <http://www.flickr.com/photos/sethroberts/4039885671/>

3. <http://www.blog.sethroberts.net/2009/10/23/how-effective-are-flu-vaccines/>

4. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>

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NotInChinanow (2009-10-24 14:12:31)

I'd like to report that pork belly's are available in America or at least they are in the midwest. They're also available in California at least in the asian markets; I can't comment on general markets since I've never looked for them there. However, I found most of the store packaged variety contain too much salt at least according to my test, so I still have to ask the butcher for them.

MT (2009-10-24 14:46:33)

According to the chart you noticed this effect in July – have you gathered more data to support or reject this hypothesis in the interim?

Max (2009-10-24 17:49:17)

You mention "grass-fed" pork. So, when you are talking about animal fat being good for you, is your theory that only grass-fed (high in omega-3) and not corn-fed meat would have the positive effect? Also, what about the supposed links between meat consumption and cancer?

John (2009-10-24 19:10:21)

Animals, including all their fat, are the species appropriate diet of humans. I eat mostly that and I have never felt and performed better.

seth (2009-10-24 19:46:59)

Max, I already get plenty of omega-3. It wasn't the omega-3 in the fat that made the difference. As for the supposed links between meat consumption and cancer, I'll trust my experiments over epidemiology any day of the week. I'm not saying what I'm posting here is the final word, of course not. I am saying that it suggests the subject of how much animal fat to eat may be subject to experimental investigation. MT, yes I have gathered more data. I will eventually post it.

MT (2009-10-24 19:57:19)

Regarding your first point about the historical levels of fat in our human diets, one of the theories I've read is that we would have evolved scavenging first, and had a particular advantage cracking open the skulls of carrion due to our ability to use tools – which other scavengers lack. This would give us access to the brains, which are 60-70 % fat (mostly saturated), and may have contributed to our rapid evolution to hunters with our shorter digestive tracts and our own larger brains. It does seem likely to me that higher levels of animal fat in the diet is healthy.

CCS (2009-10-24 20:45:45)

Hi Seth - I just heard about this thing called the "fitbit" which can track your sleep while you wear it. I guess it has some kind of algorithm for figuring this out from your movement so it lists how long you laid in bed before sleep plus actual sleeping. It also tracks movement like a pedometer but is supposedly more accurate. It might make some of this data collection easier for you and be a useful tool for self-experimentation if it actually works well.

Aaron Blaisdell (2009-10-24 21:19:57)

I didn't realize pigs ate grass. They're not ruminants like cows, goats, and sheep. They're domesticated from forest-dwelling omnivores (just like humans) with a diet much closer to humans.

Jarno Virtanen (2009-10-24 23:36:12)

I don't remember you mentioning whether your sleeping habits are such that you don't usually accumulate sleep debt. I'm assuming this is the case, based on your descriptions of your general sleeping habits. I'm saying this because sleep debt, if it's anywhere near significant, has far greater effect on alertness than anything else. Also, how well-rested one feels right after waking up is not necessarily a good measure of the quality of the sleep. Say when one has significant amount of sleep debt and starts to sleep it back, one starts to feel more drowsy in the morning for a while, but the day-time alertness still increases. In general, all of these effects on the feeling on "well-restedness" in the morning probably require one to be close free of sleep debt. I'd guess someone with significant sleep debt wouldn't notice any effect from, say, standing on one foot just because the effects of the sleep debt would mask any other effect.

michael vassar (2009-10-25 00:16:27)

Note that its grass fed organic pork. I ate a grass-fed beef meal a month ago and it was immediately casually apparent to my wife and I that the subjective well-being afterwards was much greater than it would have been after a typical beef meal. Also,

I'd note that pre-domestication, wild animals had much less fat than today's domestic animals have. It's probably pretty close to nutritionally optimal to eat bison in the natural ratios of all of the meats they are composed of.

Richard Nikoley (2009-10-25 11:56:43)

Seth: You can indeed get pork belly pretty easily at lots of places here in the south Bay Area (Lunardy's is a favorite here in San Jose). At any rate, a friend & I cooked some up a few weeks and it was excellent. We've since done it again. Pics: <http://freetheanimal.com/2009/09/no-fear-pork-belly-its-whats-for-dinner.html> I can definitely attest to the benefits of high animal fat (I average 70 % energy from natural fats). While I have not logged my sleeping hours, I do know that I sleep far, far longer on average than ever before in my life. I used to average 6 hours per night and now it's about 7-8 almost every night. And very restful sleep. Another very welcome change over the last couple of years I've gradually upped the fat in response to feeling better and better as I have done so is that I can now enjoy laying in bed in a kind of "drift in & out" thing. I could never do that before. I would get antsy and have to get up. It's quite enjoyable now to be resting but not asleep in the early morning. An

seth (2009-10-25 15:46:07)

Aaron, thanks for the correction. Michael, the pig was raised at a boutique small farm but it wasn't actually grass-fed. What you say is very interesting, though. In Beijing I can compare high- and low-priced pork, which corresponds to the distinction you're making. Jarno, that's right, I don't have any sleep debt. I always sleep as long as I want. Richard, that's great to know about the connection between your sleep and your change in diet.

Ashish (2009-10-25 21:16:52)

Seth - did you cook the pork belly pieces before putting them into your miso soup? If not, do you imagine I would experience a similar benefit by dropping raw fatty bacon into my soup, or perhaps rendered bacon fat?

seth (2009-10-25 22:33:02)

Ashish, yes, I cooked the pork belly pieces for a long time before adding the uncooked miso. The miso is added last and not cooked at all. I suspect raw bacon has the same benefit. In America, where I couldn't get pork belly, I often ate raw bacon, although only certain brands were acceptable. I think the bacon is fine because the large surface/volume ratio makes it easy to digest. Yeah bacon fat should have the same effect. Except you'd need a lot of it. I think it is hard to eat pure fat but a bacon-like ratio of fat to meat is acceptable.

Tom Moertel (2009-10-26 08:58:10)

Is it animal fat itself that is good for us? Or is animal fat a carrier for nutrients that are hard for our bodies to source elsewhere? The way I see it, humans probably ate a good bit of animal fat for most of their pre-history (until agriculture became widespread). Natural selection, therefore, had time to optimize humans for an environment in which animal fat was consistently part of the diet, and humans may have become dependent on some of the things that animal fat provides in abundance but other food sources do not. In the last few millennia, if humans stopped eating animal fat, or if the nutrient composition of that fat changed (say because the animals in the human diet became farm raised and grain fed), natural selection would not have had enough time to optimize humans for the changes, and, as a result, humans on a modern diet wouldn't get enough of the nutrients they used to get from eating the fat of wild animals. So, adding some animal fat to your diet, especially if that fat approximates the fat of wild animals of yesteryear, is very likely to provide your body with some nutrients you're not getting enough of in modern times.

Peter McDonnell (2009-10-26 10:05:22)

Here's a link <http://high-fat-nutrition.blogspot.com/> to a blog called Hyperlipid that I find interesting reading. Another contrary fellow like Seth. :)

Aaron Blaisdell (2009-10-26 15:22:02)

Seth, I found this relevant discussion on Ryan Koch's Matters to Me blog (<http://ryan-koch.blogspot.com/>) post in which he discusses a Farley Mowet book "The People of the Deer" describing Mowet's life among a group of Inuit. "It doesn't take Mowat long to identify the key ingredient of the Ilhalmiut diet: fat. From his own experience on lean meat for an extended

period of time, he describes the vast importance of fat in an all-meat diet through his battle with an affliction which he names, for want of a better term, mal de caribou, also known by a great many arctic explorers, prisoners of war, and human carnivores as rabbit starvation: ... persistent diarrhea was only part of the effect of mal de caribou. I was [also] filled with a sick lassitude, an increasing loss of will to work that made me quite useless ... Mowat's guide – a half-Eskimo, half-white man named Franz – prepared and administered a peculiar remedy: ... he took out a half-pound of precious lard, melted it in a frying pan, and, when it was lukewarm and not yet congealed, he ordered me to drink it. Strangely, I was greedy for it ... I drank a lot of it, then went to bed; and by morning I was completely recovered ... I was suffering from a deficiency of fat and did not realize it. (p. 88)"

seth (2009-10-26 17:58:05)

Thanks, Aaron.

David (2009-10-28 23:44:55)

Crazy coincidence...I posted on your boards this morning about starting a carnivorous diet (zero-carb, mostly meat), and one of the more surprising side effects was improved sleep. After a few days of 60-70 % animal fat/ 30 % protein and negligible carbs, I sleep like a little baby. There's a small community of people (<http://zerocarbforlife.com/>) out there that believe that all your body needs is meat and water. I'm not sure if I agree with their fanaticism 100 %, but testing their theory makes for an interesting experiment.

Seth on Fat | CST Free Weight Exercises By Scott Sonnon (2009-10-31 13:51:24)

[...] Seth has some good thoughts on animal fat: [...]

Seth's blog » Blog Archive » Effect of Animal Fat on Sleep (more) (2009-10-31 18:05:29)

[...] After the striking correlation I described earlier — I ate lot more animal fat than usual and slept longer and had more energy the next day — I started eating much more of what had produced the correlation: pork belly (which is used to make bacon). I couldn't get uncured pork belly, so I ate bacon. I usually ate it raw. I tried several brands; the only one I liked was from Fatted Calf ( \$10/pound). [...]

Paleo Recipe: Lengua Guisada | CrossFit Intrepid (2009-11-02 07:13:24)

[...] This dish has a great amount of animal fats from both the tongue and the marrow bones. While it's not Paleo to dunk bread into the liquid, don't cheat yourself of sipping the richly flavored broth left in your bowl. Those animal fats may just help you sleep better! [...]

CrossFit South Bay » Blog Archive » Playing Catch Up (2009-11-05 06:04:58)

[...] Keep this in mind and try to regulate yourself to a normal sleep schedule. If you're having trouble getting to sleep, you might want to try adding more animal fats. [...]

Seth's blog » Blog Archive » More Animal Fat, Better Sleep (2009-11-10 15:45:08)

[...] After I wrote about eating a lot of pork fat and sleeping better, David Shackleford commented that he had a related experience: When he started eating much more animal fat and meat, he started to sleep better. He had posted about his sleep improvement before he read about mine. I asked him for details. He answered: About three weeks ago, I started a carnivorous diet. I did this primarily for its supposed benefit to insulin sensitivity, energy levels, and general health, and also because I wanted to see if it was really possible to thrive on nothing but meat. [...]

Seth Roberts and Citizen Science « My Year of Data (2011-12-10 22:46:28)

[...] He has found that eating pork fat helps him sleep better. [...]

## The Campaign Against Medical Hypotheses (2009-10-24 19:30)

[1]Dennis Mangan writes here about the campaign to destroy the journal Medical Hypotheses because its editor dared to publish an article by Peter Duesberg and others questioning that HIV causes AIDS.

The campaign is associated with [2]AIDSTruth.org, which says it is about "the scientific evidence for HIV/AIDS." A dead giveaway. When I was a senior in college, I wrote a paper called "The Scientific \_ \_ \_ \_ \_" in which I said that use of the term scientific is a sign that the writer or writers don't know what they're talking about. Calling this or that "scientific" amounts to calling something else "unscientific" – which isn't an argument, it's abuse. The term scientific is often just a way to sneer at other people. Like the word nigger and many other derogatory names and adjectives.

Animal Farm put it well: You become what you are supposedly against. Holocaust denial is strange, yes, but then there are the people who get really really upset by it. Who would have guessed that the solution to intolerance (German intolerance of Jews) is . . . more intolerance? And that is what the campaign against Medical Hypotheses is in favor of: more intolerance.

1. <http://mangans.blogspot.com/2009/10/international-campaign-to-destroy.html>

2. <http://www.aidstruth.org/>

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Nathan Myers (2009-10-24 23:34:46)

I don't know from Aidstruth, but Duesberg had a full hearing years ago. All his arguments were transparently tendentious, essentially ignoring the details of all the evidence.. There's nothing wrong with Medical Hypotheses printing them yet again, as long as they don't publish falsehoods or half-truths, but it's also no reason to pay attention.

David (2009-10-25 01:15:11)

The scientific consensus has been wrong innumerable times in the past. On this issue, certainly there is intense economic motivation from the AIDS research community to keep things on track. Real science should be open to all ideas and debate them on their merits. This seems suspiciously anti-debate.

Peter Smith (2009-10-25 14:08:59)

dude – what the fuck? you couldn't think of another word in the american lexicon to get your point across?

Link Dump « Rhymes With Cars & Girls (2009-10-25 20:57:12)

[...] Seth Roberts makes a point more universally applicable: ...use of the term scientific is a sign that the writer or writers don't know what they're talking about. Calling this or that "scientific" amounts to calling something else "unscientific" – which isn't an argument, it's abuse. The term scientific is often just a way to sneer at other people. Possibly related posts: (automatically generated)Stark raving lunaticBooks, books and more booksWhy We Don't Think ClearlyLewis Black on his new special, The Daily Show, and the Root of All Evil [...]

Jason (2009-10-26 05:48:19)

Seconding Peter Smith and Nathan Myers.

Mac (2009-10-26 06:26:29)

Seth, What is your gut instinct (no pun intended) about the distribution around the mean of effects on different people of things like probiotics (or any of the other regimens you discuss in your blog? It seems to me that any "consensus" assumes that the variance around the mean is pretty small. I.e., what works for one person works more or less the same for everyone. Based on everything you have seen, done, and read, how idiosyncratic do you believe people are in their responses to regimens? And - in what proportion of cases do you believe that a significant part of the distribution has a coefficient with a different sign (negative or positive effect)? I know that there is no easy answer to this, but wonder how much you and others have thought about it.

seth (2009-10-26 07:09:26)

Mac, I believe everybody needs bacteria in their food just the same way everyone needs Vitamin C in their food. Just as Vitamin C cures everyone with scurvy . . . etc. There is nobody for whom Vitamin C makes scurvy worse. Specific applications always introduce variance. Although Vitamin C cures all scurvy, some fruits may have less Vitamin C than others, etc.

Andrew Gelman (2009-10-27 07:09:56)

Seth: Do you really think it's strange that people "get really really upset" by Holocaust denial? Look-you got really really upset by some dude in Canada who published obscure papers on fake nutritional experiments. Sure, the guy shouldn't have done it, but it's pretty minor. If you can be upset by that, how can you be surprised that someone can be upset when people minimize or deny the killing of millions of people? Science is important-I'm glad you've spent time exposing scientific fraud-but history is important too. If misrepresentation of major historical events doesn't bother you, fine, but to call that "intolerance"-well, that's just silly. The next step would be to call mathematicians intolerant for not allowing mathematical mavericks to put the "2+2=5 theory" in math journals and algebra textbooks. I also don't think the word "scientific" is really comparable to the so-called N-word (or even to the much milder F-word). But maybe you use the word "scientific" in a different way than other people do!

Anthony (2009-10-27 17:07:39)

@Andrew, There's a difference between people who intentionally deceive, and people who are trying to do honest investigation into (in this case) an historical event. Some of them are intentionally misleading, and in that case, it's probably warranted to get upset by what they're doing. Some are not - they believe rather they \*they\* are being misled (and they believe that this explains why people aren't allowed to investigate it freely, are imprisoned for questioning the official narrative, and so on).

seth (2009-10-27 18:03:27)

Andrew, there are many differences between criticizing Ranjit Chandra, as Saul Sternberg and I did, and criticizing holocaust deniers. Here's one of them: the information value. Whereas >99 % of the world believed Chandra, who had received the Order of Canada, I'd guess that <1 % of the world believes holocaust deniers. Whatever the exact percentage, it is very low. If holocaust denial got serious traction, I'd agree with you that it is worth pointing out the problems. But it never has so the inflamed passions, in my opinion, are unwise. It's not my use of "scientific" I'm talking about; it's how AIDSTruth.org uses it. They plainly use it as a way of placing themselves above other people, the way a thousand derogatory terms are used. It doesn't fit the definition of "derogatory", of course, but it is used to the same effect.

rich (2009-10-27 20:31:06)

The real tragedy here is that the aidstruth people didn't recognize the journal 'medical hypotheses' for what it is; namely, EXACTLY the journal Deusberg should be publishing in. I'm a regular reader of their abstracts, solely for comedic content. The regular articles hypothesizing why one testicle hangs lower than the other are my favorites! the journal is kind of crappy, deusberg's ideas are kind of crappy. its really a match made in heaven!

seth (2009-10-28 01:02:25)

"Solely for the comedic content"? Solely? Care to comment on this article? Dennis Mangan, A case report of niacin in the treatment of restless legs syndrome, Medical Hypotheses, In Press, Corrected Proof, Available online 30 June 2009, ISSN 0306-9877, DOI: 10.1016/j.mehy.2009.05.048. (<http://www.sciencedirect.com/science/article/B6WN2-4WN1YJS-1/2/5492c7af920>)



b9b39946d3166687ebce5)

Andrew Gelman (2009-10-28 01:28:40)

You write, ">99 % of the world believed Chandra." Actually, I think we can be pretty sure that >99 % of the world has never heard of Chandra or his research. As you discussed in your debunking of Chandra, one reason for his success is that he worked in an obscure area that nobody bothered to check. In contrast, genocide remains a live issue, and a big rhetorical strategy of mass murderers is to deny that they've done it, or to claim that they've done it in self-defense. So fighting false historical revisionism is a good thing to do, I'd say. And, of course people get "really really upset" by Holocaust deniers: to have your relatives killed, and then have people trying to get their killers off the hook, yes, that's horrible. Regarding the HIV/Aids thing: Duesberg's writings give me the impression that he enjoys pissing people off. I'm not surprised that, yes, he succeeds at this task. I don't think that people responding, perhaps intemperately, to a provocation is comparable to the flinging of racial slurs at people who are just minding their own business.

seth (2009-10-28 03:34:29)

Well, I guess we agree that it is intemperate to try to get a journal abolished because it published a paper you disagree with. Chandra's research was not in "an obscure area". One thing he studied was how old people can avoid memory loss. His work on that topic was covered in the New York Times – taken completely seriously by the Times. Another area in which Chandra worked was what to feed babies. His work was taken entirely seriously by Nestle executives and many other people. His anti-breast-milk (fabricated) results may have harmed thousands if not millions of babies. Every dollar he got in grant money – and he got millions – harmed the scientists who therefore failed to get that money. By ">99 % of the world believed Chandra" I didn't mean >99 % of the world had heard of him. (I wish.) I meant >99 % of those who encountered his work believed it. I don't remember saying he got away with it because he worked in an area where no one bothered to check. People did check – and got different results. The politics of science is why he got away with it – the price of pointing it out was too high. It was because his work wasn't obscure that he got caught: It reached the notice of two people – Saul and me – who were outside his sphere of influence. Yeah, fury at holocaust deniers surely has something to do with revenge, as you say. (The more polite term for revenge is justice.) You want the killers to be named as killers; anything that gets in the way of that is infuriating. Fine. Human nature, I agree. But genocide has a large revenge component as well, as Amy Chua has shown in World on Fire. That's my point: You become what you say you are against.

Tom in TX (2009-10-28 09:02:29)

@Nathan: I read about Duesberg years ago, but did not keep up with the debate. What is the best refutation of his view of AIDS?

Mac (2009-10-28 16:34:58)

Seth, Sorry I was unclear in my question. The question is about regimens and treatments in general, not just probiotics. The variance of responses around the mean is obviously bigger than zero. The bigger it is, the less relevant are "generally accepted practices." For some treatments, the effect on say 60 % of the population could be positive (to various degrees), the effect on 20 % could be zero, and the effect on 20 % could be negative. Obviously this variance is different for different treatments. I was just wondering how to think about this phenomenon and its implications.

## **Use of Probiotics in Hospitals (2009-10-25 15:54)**

[1]A Canadian company named Bio-K+ makes lactobacilli-based probiotics – mainly a fermented milk drink, like Yakult but with different bacteria – that hospitals can use to reduce antibiotic-related diarrhea (a common side effect of antibiotics) and C. difficile infection, a less common but far more serious side effect. In [2]this 2007 study, the probiotics reduced the rate of diarrhea by half and reduced the rate of C. difficile infection by a factor of 7 (from 7 cases to 1 case).

[3]How the company started. Thanks to Anne Weiss.

1. <http://www.biokplus.com/en/index.php>
2. [http://www.biokplus.com/pdf/etudeDAA\\_CanJGastro200711.pdf](http://www.biokplus.com/pdf/etudeDAA_CanJGastro200711.pdf)
3. [http://www.biokplus.com/pdf/alive\\_np.pdf](http://www.biokplus.com/pdf/alive_np.pdf)

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Dan (2009-10-25 17:17:06)

That marketing article was interesting but it's missing some important research from my perspective as a person making his own milk Kefir daily. I would certainly liked to have seen a comparison of 44 patients who were given freshly made Kefir, perhaps one, two, four and eight cups per day and compare those results with the very expensive Bio-K product. If it works better, more power to it. But it's hard for me to be convinced a packaged product is of superior value until I see the research backing it up. Also interesting to me is this. That scientist from Paris, the one that "discovered" this great new probiotic with so-called healing powers. This person didn't follow up with the new found knowledge or spread the word so all of mankind could benefit because he couldn't "market it" ? Yeah, that's my kind of guy.

seth (2009-10-26 03:33:15)

Yes, who would pay for a study comparing an expensive probiotic with cheap kefir? No one. I agree that's a big problem. We are now stuck with a weird kind of public-health science where the most important study – does cheap stuff like kefir and yogurt help? – can't possibly be done and all we have instead are studies of expensive imitations. It's like a taxi system where the shortest route from A to B is prohibited; you must take a much longer route.

bgc (2009-10-26 07:25:51)

@seth: "We are now stuck with a weird kind of public-health science where the most important study – does cheap stuff like kefir and yogurt help? – can't possibly be done and all we have instead are studies of expensive imitations. It's like a taxi system where the shortest route from A to B is prohibited; you must take a much longer route. " Even worse, the failure to fund trials is combined with a suffocating dominance of the perspective of self-styled 'evidence-based medicine' (EBM) - including the groundless notion that only mega-trials should be taken seriously. <http://trialsjournal.com/content/2/1/2> The combination of misunderstanding and consequently overvaluing the function of large trials, with the ignorant denigration of other sources of medical knowledge, means: 1. that progress is only recognized when it is via mega-trials, and therefore 2. he who controls megatrial funding controls 'authoritative' medical knowledge. Since the vast majority of randomized trials are industry funded, EBM has meant that industry has a de facto monopoly on 'reputable' therapeutic knowledge. Delivering us into the hands of Big Pharma was not - of course - intended by the socialistic founders of EBM, but it has happened nonetheless. However, so long as they get their paychecks and power, the EBM leadership aren't protesting about the fact. <http://charltonteaching.blogspot.com/2009/08/zombie-science-of-evidence-based.html>

Dan (2009-10-26 10:22:48)

Lately there's been a lot of talk about newspapers looking into going non profit and/or finding a large foundation or single rich guy to support them, just to stay alive, (of course they brought this on themselves but I digress). The idea is that the republic "needs" big newspapers. This is hogwash but a discussion for another day. It's the same thing as lobbyists in Washington trying to hold on to their own self interests for the corporations they represent. The same initiative however, could be directed to a more noble and moral cause, toward finding a foundation to support research into alternative health cures using food or suppliments. This seems like a good group somebody should start up. The rub on alternative health, from juicing to kefir, has always been that it's only supported by "anecdotal evidence". Your statement above about research money only going to drugs that can be profitable is exactly what's going on. However in this age of the web and groups forming etc., it seems like now might be the time for a change in this situation. What do you think?

Seth's blog » Blog Archive » Evidence-Based Medicine (2009-10-26 17:16:10)

[...] In the comments, Bruce Carleton writes: The failure to fund trials is combined with a suffocating dominance of the perspective of self-styled "evidence-based medicine" (EBM) - including the groundless notion that only mega-trials should be taken seriously. . . Since the vast majority of randomized trials are industry funded, EBM has meant that industry has a de facto monopoly on "reputable" therapeutic knowledge. Delivering us into the hands of Big Pharma was not - of course - intended by the socialistic founders of EBM, but it has happened nonetheless. [...]

seth (2009-10-26 17:17:21)

Dan, I agree that it might be time for a change, for just the reason you say. Indeed, I think we are in the middle of one. Or more precisely in the midst of the beginning. Self-experimentation is highly subversive; the mere fact that you're reading this blog is a step forward. Self-experimentation is fundamentally a way to find new ideas. Another piece of a new ecology are Alexandra Carmichael's CureTogether.com and the similar PatientsLikeMe.com. They are ways of testing new ideas. Both self-experimentation and the websites need no support at all from the health-care establishment.

### Winter Swimming (2009-10-26 07:31)

In [1]Jilin Province, where it gets very cold in the winter, the older residents engage in [2]winter swimming. It's good for their health, they say. Everyone knows this, a friend of mine who grew up there told me. On TV, she once saw an old woman say that she was having heart problems, but once she started winter swimming they got better.

When he was a grad student at Harvard, a friend of mine raised rats to be in learning experiments. He found that if he handled the rats - stressing them, essentially - they grew larger and healthier than unstressed rats.

[3]The cosmic ray effect I mentioned earlier - that trees grow more when there is more cosmic radiation - occurred with older trees but not younger trees.

If you've ever designed an experiment, you know that both the treatment and the measurement need to be neither too high nor too low. With the treatment, that's obvious. I suspect all three of these phenomena are examples of positioning the measurement appropriately. They suggest that everyone needs some sort of stress to be in the best health, but only in certain situations is it easy to see this.

1. <http://en.wikipedia.org/wiki/Jilin>

2. [http://en.wikipedia.org/wiki/Ice\\_swimming](http://en.wikipedia.org/wiki/Ice_swimming)

3. <http://www.blog.sethroberts.net/2009/10/20/cosmic-radiation-makes-trees-grow-faster/>

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Aaron Blaisdell (2009-10-26 08:14:08)

I was very shy and meek from kindergarten though high school. As a result, I was bullied a lot (but somehow managed to avoid being beaten up). I think that social stress has been like a social hormesis in making me more robust to social stressors as an adult.

Peter McDonnell (2009-10-26 09:39:54)

Art deVany, the evolutionary fitness guru, recommends ending a shower by running cold water over the legs to strengthen the body.

MT (2009-10-26 11:13:28)

An article in the NYTimes today (Oct 26) said that CNN's last-place finish in the prime-time program ratings demonstrates that viewers prefer opinion-oriented coverage. CNN has moved their opinion shows to their subsidiary, Headline News, which is now beating them in the primetime ratings. As someone who finds opinion coverage generally shallow and divisive I was disappointed but not surprised to hear this, but it reminded me of this post. People like stimulation, even if it is the "negative" stress of learning about things that make them angry/upset/shocked, etc, which most news coverage does. Most coverage is informative, but boring, and most people seem to prefer being stimulated to being informed. <http://mediadecoder.blogs.nytimes.com/2009/10/26/cnn-drops-to-last-place-among-cable-news-networks/>

Nathan Myers (2009-10-26 12:49:31)

The ones that don't die from it are the healthier ones. I suppose that could happen at the cellular level too.

Aaron Blaisdell (2009-10-26 15:12:32)

@Nathan. It sort of does at the neural cell population level. It's called synaptic pruning. Synapses are being generated all the time, but only a very few end up surviving after two weeks. Those that survive are selected by the fact that they were stimulated. No stimulation = death for early neurons. Probably happens to stem cells, too, I imagine.

seth (2009-10-26 17:30:34)

very interesting point MT, that maybe our interest in divisive coverage comes from not getting enough shaking up elsewhere. But I think there is a huge sex difference: Men like Fox News, women don't. I'd guess the need for stress doesn't vary much across sexes.

Anonymous (2009-10-26 23:01:08)

"I think that social stress has been like a social hormesis in making me more robust to social stressors as an adult." @Aaron Blaisdell. That is a very interesting point. Perhaps it can be applied to mental health in general, i.e. that there is a kind of mental health immune system that is strengthened through hormesis-exposure to the violence of nature, death of loved ones during childhood, lack of leisure time in childhood, getting beaten up, etc. If it's true that the last half-century has seen a 10-fold increase in depression in the US, depending on who you ask, perhaps one cause lies, counterintuitively, in the REDUCTION of mental health hormesis events.

Aaron Blaisdell (2009-10-27 06:42:58)

@Anonymous. Thanks for the thoughts. And don't forget the campaigns against letting kids watch slap-stick violence on TV. I used to love the Bugs Bunny cartoons, especially the episode where daffy duck kept having his bill blown off by Elmer Fudd's gun. LOL! But then in the 90s they started editing those scenes out. Now I can't even find BB on tv anymore. Or Popeye. or Tom and Jerry (talk about the cartoon violence!). There are likely many reasons why these older (and often more violent) cartoons are no longer airing on TV. Some are surely that a) marketers behind the newer TV shows are making a killing (pun intended) off of the toys, games, etc. that stem from newer shows, b) the huge increase in "edutainment" marketed for younger children (e.g., Dora, Diego, Kai lan) which in my mind is just an extension of point (a), and c) these older cartoons were deemed too violent for young children, who would have trouble distinguishing it from real violence. Well, I watched those cartoons since I was a young child, laughed my ass off, and never once considered it to be real in any sense or had any thoughts of engaging in any of those acts with real people. I think sometimes adults don't give enough credit to the intelligence and resilience of young children.

## Evidence-Based Medicine (2009-10-26 17:16)

In the comments, [1]Bruce Charlton writes:

The failure to fund trials is combined with a suffocating dominance of the perspective of self-styled “evidence-based medicine” (EBM) - including the groundless notion that only mega-trials should be taken seriously. . . Since the vast majority of randomized trials are industry funded, EBM has meant that industry has a de facto monopoly on “reputable” therapeutic knowledge.

Delivering us into the hands of Big Pharma was not - of course - intended by the socialistic founders of EBM, but it has happened nonetheless.

This reminds me of something one of my students said. We were discussing male/female differences – in particular, the observation that women are more religious than men. One student said that in her experience, guys were either not religious at all or very religious.

I agree with her. I think this is why EBM has the form it does. Its male founders – not understanding the tendency that my student pointed out – went from one extreme (medical orthodoxy, unrelated to evidence) to another (evidence-based medicine). Reliance on evidence is a good idea, yes, but the founders of EBM couldn’t help making it resemble a religion. You might think that relying on evidence is the opposite of religion but they made the whole thing as religious as possible. EBM became just another way – just another excuse, really – to sneer at people.

1. <http://www.blog.sethroberts.net/2009/10/25/use-of-probiotics-in-hospitals/#comment-355038>

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Armands (2009-10-27 01:25:19)

Seth, why don't you just do a clinical trial of shangri-la and get over with it?

seth (2009-10-27 03:44:07)

Because they're extremely difficult.

david (2009-10-27 06:42:24)

So you just need to find a big corporation that stands to profit from the results of the experiment...oh, wait, never mind.

MT (2009-10-27 07:01:59)

A problem with Evidence-Based Medicine is that the evidence is often corrupted by being based on bad science or bad regulation – making EBM potentially worse than the alternatives. It has the credibility of “evidence” but that evidence can actually be wrong, misguiding the public and policy makers. Apparently the FDA approval process only requires drug companies to submit a certain number and type of studies, and in the case of SSRIs this has meant that if they do a study showing a lack of efficacy of their tested product they don’t have to submit that result for consideration. They can ignore ten negative results, as long as the submitted studies suggest efficacy. Similarly, if they are in the midst of a study whose outcome is likely to suggest the product doesn’t work, they can abort the study. So what quality of “evidence” are we really getting? It isn’t that EBM is a bad principle, it is that the standards for evidence are so distorted by systemic institutional inefficiencies and moral hazards.

Dr Mike (2009-10-28 09:45:18)

It really depends how you define evidence. With EBM if the patient feels better that doesn't count unless you can measure it, but there are no valid objective measures of "better". If your evidence is from a mega trial that shows statistically significant improvement, as it will with a big enough cohort, but is not clinically significant what good is it? But from EBM viewpoint it's a goer. The emperor really has no clothes!

The Newest Put Down | FrumForum (2010-03-12 13:45:18)

[...] The newest way to slam a belief you disagree with — or maybe it's not so new — is to call it "religious." Â For example, "Market Fundamentalism is a quasi-religious faith that unregulated markets will somehow always produce the best possible results," and so is global warming ("The only difference between the religions right and the religious left, is that the religious right worships a man, and the religious left worships . . . Mother Nature"). Â As is evidence-based medicine ("as religious as possible . . . just another excuse, really — to sneer at people"). Â And then there's the religion of Darwinism. [...]

## **The Alternate Universe of Fermented Foods (2009-10-28 05:45)**

In the Afterword to *Lolita*, Vladimir Nabokov wrote that in his books he tried to create an alternate universe "where art (curiosity, tenderness, kindness, ecstasy) is the norm." Fermented foods are now a big part of my food world and I remain amazed how different they are from ordinary foods. They are in another universe:

**Temperature.** To make ordinary food requires high temperatures. You need always be careful that you don't hurt yourself. Fermented food requires no higher temperature than a hot day.

**Deliciousness versus health.** With ordinary food there is the tradeoff we are endlessly familiar with: If it tastes good (ice cream, chocolate, cookies) it's bad for you. If it's good for you – spinach, carrots, cabbage, brown rice, soy products – it doesn't taste so great. Anyone who thinks raw food tastes better than cooked food is ignoring history. Whereas fermented food tastes great and is incredibly healthy. (This point has been missed at any number of otherwise great American restaurants, such as Chez Panisse.)

**Price.** In Berkeley, heirloom tomatoes cost a lot more than ordinary tomatoes. They taste a lot better, too. Perhaps, being organic, they are healthier. The general rule is that better food costs more. An apple costs more than a Coke, etc. Whereas fermented food is often dirt cheap. Kombucha is practically free. For 5 teabags and a cup of sugar, you can make a lot of kombucha. Ordinary milk is cheap but to me at least nutritionally worthless. Whereas yogurt is gold. They cost the same.

**Time.** Ordinary food takes minutes or no more than an hour or two to make. Fermented food takes somewhere between a day (yogurt) to a month (kombucha) to longer (wine, cheese).

**Difficulty.** In my experience, it isn't so easy to prepare a delicious meal if you're not using fermented food. With fermented food it becomes so much easier. And the result is far healthier, I'm sure.

**Need for refrigeration.** Fermented food goes bad very slowly at room temperature. Not so ordinary food. I once visited a New York pickle store/factory. No electricity.

You can read a great novel again and again, yes, but not every day. After I read *Lolita* four or five times, it lost its power over me. But I can happily eat fermented food at every meal, day after day and – judging by other food cultures – year after year.

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Darrin Thompson (2009-10-28 08:17:05)

My one gripe with fermented foods is can't go to Walmart and try a new one for a buck. Prepared fermented foods in stores cost a premium and are usually weak. That's my other one gripe. If you can find it prepared, it's weak. At least that's been my experience with kefir. My mom in law makes some from unpasteurized milk and lets it ferment for longer than the store stuff. The mom stuff fixes allergies. The store stuff is fun but no allergy relief. I wonder if there's a market for a food product which is just a bite sized sampling of a bunch of available fermented foods?

seth (2009-10-28 13:57:48)

Darrin, that's interesting that your mom's kefir fixes allergies but the store stuff doesn't. In Beijing, you can try maybe 20 or 30 fermented foods, various kimchi and pickles, for a buck. They are sold in whatever quantities you want. In Japanese stores, miso is sold in whatever amount you want.

JLD (2009-10-28 18:45:28)

"Big Research" is [1]catching up on bacteria.

1. <http://communications.med.nyu.edu/news/2009/unusual-bacteria-help-balance-immune-system-mice>

### **Too Big to Fail (2009-10-28 15:15)**

An example of "too big to fail" never mentioned in discussions of the financial crisis are big public-works projects: In spite of staggering cost overruns, which occur in practically every project, they are never stopped. The latest example is [1]London's Crossrail, a new train crossing London. Original estimated cost: 3 billion pounds. Current estimated cost: 16 billion pounds. And construction hasn't started!

I heard a talk about why this happens. I think the speaker said there was no motivation to be honest. The companies that underbid dishonestly pay no penalty; the politicians that approve their dishonest bids risk nothing. Curiously, in notoriously corrupt China, this sort of thing doesn't seem to happen (although my Chinese isn't good enough to be sure). Maybe Dubner and Levitt will write about this in Superduper Freakonomics.

At a talk by Laurie Garrett at the UC Berkeley School of Journalism, I made this point about science journalism: There is no motivation to be honest. The scientists dishonestly inflate the importance of their work, and pay no penalty for doing so; the reporters dutifully write down their lies, and benefit by doing so (because it makes the story seem more important). *No, no, this doesn't happen*, said Garrett. Of course it does. The most visible examples are the press releases that accompany the Nobel Prize in Medicine and Physiology, the most prestigious prize in all biology: the whole field should be embarrassed by the claims about the practical importance of telomere research, which [2]Nicholas Wade dutifully repeated in the New York Times.

There should be some term for these screw-the-public-they're-too-stupid-to-realize-it situations.

1. <http://www.nce.co.uk/section2.aspx?navCode=468>

2. <http://www.nytimes.com/2009/10/06/science/06nobel.html>

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Peter McDonnell (2009-10-29 06:00:24)

Hi Seth, I enjoy your blog greatly. How about "Boondoggle"? as in a boondoggle project, from Wikipedia: "It also refers to government or corporate projects involving large numbers of people and usually heavy expenditure; at some point, the key operators have realized that the project is never going to work, but are reluctant to bring this to the attention of their superiors. Generally there is an aspect of "going through the motions" â€" for example, continuing research and development â€" as long as funds are available to keep paying the researchers' and executives' salaries. The situation can be allowed to continue for what seems like unreasonably long periods, as senior management are often reluctant to admit that they allowed a failed project to go on for so long. In many cases, the actual device itself may eventually work, but not well enough to ever recoup its development costs."

Darrin Thompson (2009-10-29 06:15:07)

I want to say that term is "bailout" but that's overloaded by the connotation that these things are necessary or inevitable. The story is all wrong. "Freedom Torches" would be another one. Not very direct but you get to tell the story of the original PR man promoting cigarettes for mommies. It's got that cynical overtone such a term needs. Or maybe go the other way with morbidly blank words like, "optional public crisis", "public insurance," or "noncompulsary emergency event."

Nathan Myers (2009-10-29 13:11:33)

Haven't you heard of the Three Rivers Dam?

seth (2009-10-29 13:39:32)

Nathan, trying to figure out what you are talking about I got this:

Your search - "three rivers dam" gigantic cost overruns - did not match any documents.

could you provide a link? "boondoogle" isn't right because these projects do work; they just cost vastly more than estimated.

Peter McDonnell (2009-10-29 16:57:46)

I suspect that Nathan meant "Three Gorges Dam"

JLD (2009-10-29 23:51:18)

Pretty puzzling that being in China you could not identify [1]the matter. Thus the chinese gov't "control" over news is pretty effective.

1. <http://www.google.com/search?hl=en&safe=off&edition=us&num=50&q=%E2%80%9Cthree+gorges+dam%E2%80%9D+cost+overruns&btnG=Search&aq=f&oq=&aqi=>

Tom in TX (2009-10-30 09:52:02)

"There should be some term for these screw-the-public-theyâ€™re-too-stupid-to-realize-it situations." I think they are called "government projects".

Igor Carron (2009-10-31 07:33:35)

There may be good reasons sometimes as to why these projects do change in their price tags over time. I have seen several projects like this and clearly remember a prof at MIT showing us why (I need to dig his name up, I think it was Michael Golay, <http://web.mit.edu/nse/people/faculty/golay.html>). The idea was that in a government projects, the customer (the government) ends up changing the requirements of the project many times over the life of the project. These changes of requirements are extremely bad with regards to the flow of execution of the project. In the space business for instance, there is one example that is pretty interesting: Spacelab, a large cylinder that goes in the shuttle's belly for astronauts to do their



experiments. A company ended up designing the same cylinder and eventually sold the services to this new cylinder to NASA. It was pretty obvious that the company's cylinder had cost much less than the original Spacelab built inside NASA. However, as is often the case in comparing gov and private projects, it is a somewhat an unfair comparison as the second cylinder was built with the knowledge of what the first cylinder final requirements were. The big lessons are that in extremely complex projects, sometimes you should not allow your customer to be able to change your requirements as you go.

JLD (2009-10-31 10:21:23)

*The big lessons are that in extremely complex projects, sometimes you should not allow your customer to be able to change your requirements as you go.* Wait til you enter real professionnall life. Retired consultant.

Igor Carron (2009-10-31 11:15:51)

It is a big lesson for the customer (the government in this case). O agree, consultants can and do strive in this environment.

### **Reduced Diversity of Fecal Bacteria Correlated with Diaper Rash (2009-10-30 06:28)**

In [1]a 2008 study, researchers took fecal samples from 35 babies when they were one week old. They measured the diversity of bacteria in those samples. When the babies were 18 months old, they were divided into two groups: with (n = 15) and without (n = 20) atopic dermatitis, commonly called a rash. Atopic dermatitis is a sign of an oversensitive immune system. Children with this problem are more likely to have allergy problems when they are older. The 2008 study found that the babies with atopic dermatitis had less diverse fecal bacteria.

This is more evidence connecting lack of bacteria with immune problems.

1. <http://download.journals.elsevierhealth.com/pdfs/journals/0091-6749/PIIS0091674907017678.pdf>

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jean (2009-10-30 17:50:36)

It would be interesting to know if bottle fed vs breast fed would correlate with the rash and fecal bacteria count. I think so.

seth (2009-10-30 18:07:43)

yeah, that's a good question.

### **Who is "Totally Healthy"? (2009-10-30 17:44)**

I watched [1]this 60 Minutes piece on swine flu. Of course nothing was said about boosting immunity as a defense. "The best way to reduce your chances of one of those terrible outcomes [hospitalization, death] is to be vaccinated," said Anne Schuchat, who has a very high position at the Centers for Disease Control and Prevention.

This is just part of a bigger delusion. The story centers on a football player who gets seriously sick after a football game. Schuchat said this:

This is one of the tragic parts of this epidemic. That people who are in the prime of their life, totally healthy, can suddenly become so sick.

Totally healthy. This is the bigger delusion: That the average American who appears healthy is healthy. I believe that practically all Americans have grossly-impaired immunity. Their immune systems work much worse than they could. The poor performance is due to suboptimal sleep and far too little bacteria in their diet. The football player was near death because he had two out-of-control infections. That's how poorly his immune system was working. And a top CDC official called him "totally healthy"! Apparently she has no idea that people's immune systems can vary in how well they work. This is even worse than [2]the UCLA medical school prof specializing in infectious disease who also failed to understand this. Schuchat is one of the top public health officials in America! Public health is about prevention. [3]According to Wikipedia, Schuchat "has emphasized prevention of infectious diseases in children."

1. <http://www.cbsnews.com/stories/2009/10/16/60minutes/main5390519.shtml>

2. <http://www.blog.sethroberts.net/2009/09/02/infectious-disease-specialist-ignores-the-immune-system/>

3. [http://en.wikipedia.org/wiki/Anne\\_Schuchat](http://en.wikipedia.org/wiki/Anne_Schuchat)

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Nathan Myers (2009-10-30 22:02:17)

Most of the people killed by the Spanish flu were those whose immune systems responded most vigorously. The immune system is, first and foremost, a *system* – that is, a machine based on a model of its environment, and programmed with responses that have worked just well enough in the past to keep enough of a population reproducing that there *is* a next generation, without costing too much, metabolically. No model, and no set of programmed responses is perfect, for all possible environments, and pathogens are continually testing the limits of both. There can be no rational reason to believe that any treatment of the immune system, not even with a brilliantly designed program of bacterial exposure, can change that fundamental fact. No amount of yogurt can protect you from HIV, or from HPV, or from HSV, or from certain flus. The immune system isn't magic, and yogurt isn't magic.

Eugene (2009-10-31 08:04:23)

Here's a good talk about the [1]hygiene hypothesis, the current literature on the subject, and ongoing studies. "Dr. Michael Cabana explores which conditions are benefited by the use of probiotics and what the future holds."

1. <http://www.uctv.tv/search-details.aspx?showID=16721>

Timothy Beneke (2009-10-31 09:11:19)

Seth, Regarding suboptimal sleep and the immune system, I know that sleep deprivation makes one more vulnerable to colds, and in more severe forms has induced diabetic type symptoms in healthy young people. Do we have longitudinal, correlational research showing that people who sleep poorly get more sick and die younger? This research would not be hard to do. Every year, you simply ask people to report on how they have been sleeping for the past year, how many hours, how often they wake up, when they sleep etc... I would assume that longitudinal studies would have already covered this, but I've never seen it reported. I think you are right but I'd want to see basic correlation between poor sleep and sickness before I would begin to be confident about it...

## **"Some of Them Will Have the Wrong Answer" (2009-10-31 08:26)**

In Exploratory Data Analysis, John Tukey tells about visiting a high-school chemistry class. Each student in the class had done an experiment to determine a physical constant. Tukey suggested to the teacher that they gather and plot the results. The teacher didn't like this idea. Some of the students will have gotten the wrong answer, said the teacher. Tukey didn't know what to say.

In [1]a previous post, I said there is great stagnation in health care. Obesity and mental illness are the examples most obvious to me, but there are many other problems on which our health care system has made little progress for a long time. (Sure, we should have universal health care but the idea that this will do much about the obesity epidemic, the autoimmune disease epidemic, the autism epidemic, and so on, is absurd. Doctors don't know how to get people to lose weight. A reasonable health care system would focus on prevention. That is something the current batch of doctors doesn't know how to do.) I added that a reasonable health policy would empower those who benefit from change.

That's a difficult thing for people in power to do. Not only does it mean giving up power, it also means giving it to "the wrong people". The people you like to demonize. People who are . . . not respectable. Not clubbable, John Cheever might say. And, quite apart from that, some of them will have the wrong answer. Tukey's high-school chemistry class was at a fancy private school, where we might expect such elitist attitudes. But I heard the same thing from colleagues at UC Berkeley when I would suggest giving students much more power to determine what they learned in a psychology class. Some of them will want to learn the wrong things, said my colleagues. I think Tukey was trying to say that the chemistry teacher didn't understand variability but I think the psychological point of his story is even more interesting.

1. <http://www.blog.sethroberts.net/2009/09/29/health-care-why-problems-have-piled-up-unsolved/>

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## **Effect of Animal Fat on Sleep (more) (2009-10-31 18:01)**

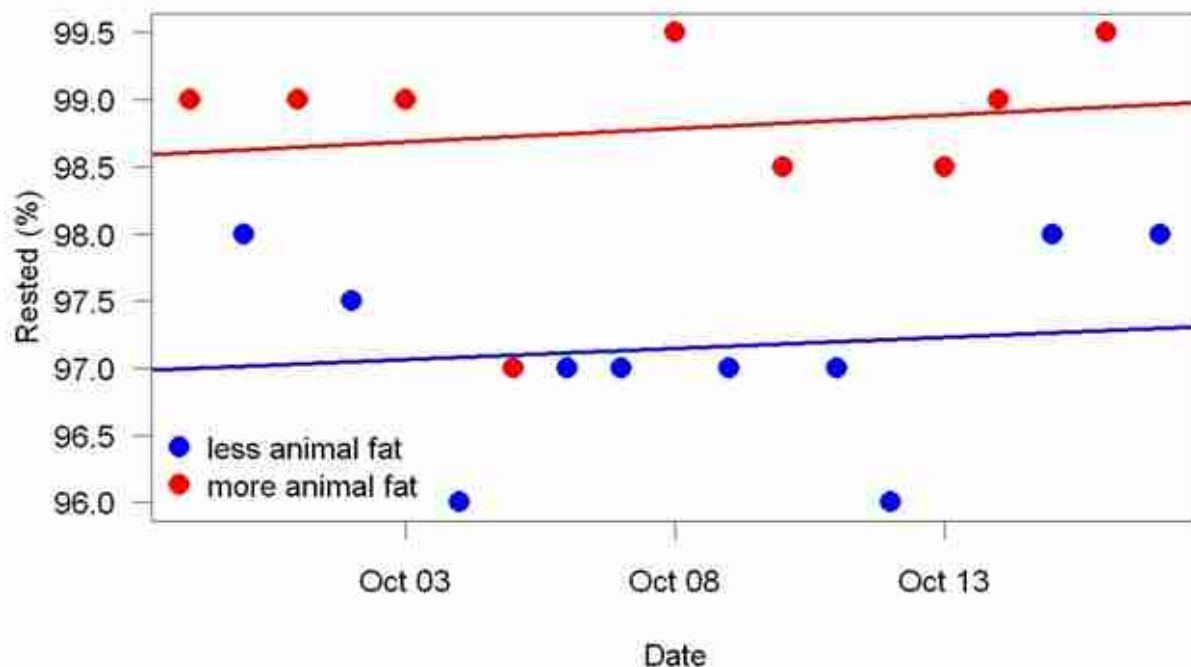
After [1]the striking correlation I described earlier – I ate lot more animal fat than usual and slept longer and had more energy the next day – I started eating much more of what had produced the correlation: pork belly (which is used to make bacon). I couldn't get uncured pork belly, so I ate bacon. I usually ate it raw. I tried several brands; the only one I liked was from [2]Fatted Calf ( \$10/pound).

In Beijing I discovered pork belly for sale in every meat department. It is used to make [3]a dish said to be Chairman Mao's favorite. I bought a soup cooker, an appliance I haven't seen in America, which made it easy to cook the pork belly. I seemed to sleep better when I had it for lunch.

Finally I did an experiment. I ate pork belly for lunch some days but not others. I ate the pork belly in miso soup, with vegetables. I always ate a whole package of pork belly, which was about 0.7 lb and perhaps 80 % fat, 20 % meat. On baseline days I ate my usual diet, which was already high-fat by people's standards. (For example, I ate a lot of whole milk yogurt, a fair amount of nuts, and ordinary amounts of meat.) I tried to alternate baseline and pork-belly days but this wasn't always possible.

Here are the results on ratings of how rested I felt when I awoke (100 % = completely rested = the most rested I have ever felt, 0 % = not rested at all).

[4]



The lines were fit separately to each set of points (red line to the red points, etc.). The difference is very consistent ( $t = 5$ ). Differences in how long I slept were much less clear. I will discuss them in a separate post.

The fascinating thing about this effect isn't just how clear it is; it's also how fast it goes on and off (within a day). With most nutrients you'd never see an effect like this. For example, scurvy takes months to develop and a few weeks to recover from. The omega-3 effects I've studied have a fast onset but take days to go away.

Sleep is controlled by the brain, of course. The brain is more than half fat, but determinations of how much fat the brain has have measured structural fat. This effect is so fast, both on and especially off, that it must involve circulating fat. Apparently my brain works better when there is a certain amount of animal fat in my blood. This supports Chairman Mao's idea that pork belly is "brain food" but is a new idea for American intelligentsia. I think the chance that a nutrient that is good for one part of the body is bad for another part is zero – the same as the chance that the electrical appliances you own work best with widely-different currents. The obvious conclusion suggested by this data is that we need plenty of animal fat to be healthy. The only novel element of these lunches was the animal fat. Miso soup with ordinary meat has no effect on my sleep, as far as I know.

I think the science of nutrition proceeds in four steps, repeated over and over for each necessary nutrient: 1. Figure out that we need it. 2. Determine a way to measure how much of it we need. 3. Figure out the optimal amount. 4. Check your answer. With animal fat, conventional nutrition science hasn't quite reached Step 1. Before this data, I'd say the clearest evidence that we need animal fat is that fat tastes good and long ago we had very little plant fat so it must have been the benefits of animal fat that produced the fat-tastes-good linkage. But conventional nutrition scientists never think this way – never take what we want to eat as meaning anything. And the mere fact that fat tastes good is no help figuring out how much is best.

This data pushes our knowledge toward Step 2. It doesn't just suggest we need plenty of animal fat for best health, it also makes two methodological points: 1. Animal fat improves brain function. There may be better measures of the improvement than sleep quality. 2. The timing of the improvement – which as far as I know is unprecedented in the study of nutrition – makes it easy to measure.

Yesterday at a Carrefour I watched a pig being cut up. The butcher cut off the skin (with a thick layer of fat) and tossed it into a section of the display of pork for sale. I could buy the part of the pig I valued most for an incredibly low price (about 25 cents/pound). All other pork cost more. That's how much Chinese shoppers wanted it. No one rushed to buy the newly-cut piece of skin. It reminded me of New York [5] where I tried to buy food past its expiration date, ordinarily considered worthless.

1. <http://www.blog.sethroberts.net/2009/10/24/effect-of-animal-fat-on-sleep/>
2. <http://www.fattedcalf.com/>
3. <http://firemtn.blogspot.com/2009/10/revolutionary-recipes-maos-red-braised.html>
4. <http://blog.sethroberts.net/wp-content/uploads/2009/10/2009-10-30-rested-rating-and-animal-fat.jpeg>
5. <http://www.blog.sethroberts.net/2009/04/22/trying-to-buy-expired-food/>

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Nathan Myers (2009-11-01 01:18:59)

It probably makes a big difference what the pig ate. We don't call them "soup cookers", we call them "crock pots" in the US.

LF (2009-11-01 02:09:20)

This would explain why drinking a glass of \*whole\* milk helps some to get a better sleep...

seth (2009-11-01 04:39:26)

A soup cooker cooks food at a higher temperature (mine heats its contents to 204 degrees F.) than a crock pot – even a crock pot set on "high". Crockpots cook food at 190 degrees or less, in my experience.

Bob (2009-11-01 08:20:36)

This suggests another important hypothesis to test: low fat diets cause dementia.

Carol (2009-11-01 09:46:21)

So animal fat behaves more like a drug than a nutrient?

Kevin Miller (2009-11-01 10:06:44)

Interesting. I have two concerns. First, I'd be a little leery of eating \*too\* much big fat in China. You've probably seen the bicycle/carts carrying slops from restaurants out to the suburbs (leftover food and oil) to be fed to pigs. Wonderful from an ecological point of view, but I worry that it might tend to concentrate noxious fat-soluble stuff in the pigs after you go through a few rounds of this. I also would be loathe to use Chairman Mao's predilection for Hunan food as a recommendation for this, unless you want to also recommend some of his other habits (never brushing his teeth, sleep with a lot of young girls in his declining years) – probably all things that our Paleolithic ancestors would have done, or wanted to do, but maybe not things we'd endorse (alternatively: New fields for self-experimentation!). Sounds like you need to check out some Hunan restaurants. I can't remember the name of the one we used to go to downtown, just off north Wangfujing (somebody's family restaurant). I did find this pretty strong recommendation, although it's bound to be very upscale, given the location: "2. Karaiya S10-30, The Sanlitun Village, 19 Sanlitun Beilu, Chaoyang District Tel 6415 3535 吃家 Village, S10-30 Karaiya, which means spice house in Japanese, delivers the superb flavors of Hunan by using quality ingredients with a modern twist. Spicy Pepper Diced Rib-eye, a must order dish studded with red peppers, is stimulating while at the same time not dominating the flavor of the meat. Also try deep-fried stinky bean curd. The concise bilingual menu is easy to navigate without having to plow through confusing page after page of dishes. The cheerful and pleasant environment makes Karaiya one of the best dining destinations in the capital." We went hiking in Zhangjiajie once and

had lunch on top of a mountain. There was one dish that had slices of what I thought was some kind of melon, but actually were pieces of fried pig fat. Having hiked uphill all day, it was quite delicious.

CTB (2009-11-01 10:12:56)

Pork fat is also sold as 'lard.' Makes a great pie crust for apple pie. I remember my dad saying that back during the Great Depression, many laborers ate lard sandwiches for lunch...including both my grandfathers who were blacksmiths. Both died from heart attacks in their early 70's. When you can no longer work off your daily intake, it might just start clogging your arteries. Best to monitor cholesterol etc. Lard went out of favor for baking with the advent of Crisco-like shortenings (partially hydrogenated soybean/vegetable oil). But partial hydrogenation creates a lot of transfat, which is now known to be a problem. The new Crisco has had much (but not all) of its transfat removed...but piecrusts made with it just aren't the same (IMHO). Maybe lard will be making a comeback of sorts. I've found that when I'm wired and can't sleep, a big bowl of potato chips works like a charm.

thehova (2009-11-01 13:03:07)

I think fish oil helps me sleep, which I guess would be consistent with animal fat.

David (2009-11-01 13:36:20)

Thehova: A whole pork belly and a couple fish oil caps are on completely different levels. You're talking about adding 2-5 grams of animal fat to your diet; Seth is adding 255 grams (if the 0.7lb/ 80 % fat figure is accurate), and significantly altering his macronutrient ratios. Seth: I've had the exact same experience. The more animal fat in my diet, the better I sleep, without exception.

seth (2009-11-02 00:10:54)

Carol, that's an interesting point. Animal fat behaves more like a drug than a micronutrient, certainly. Macronutrients such as glucose can have fast on and fast off effects. But we don't need glucose every day for anything to work properly.

Peter McDonnell (2009-11-02 05:57:58)

Here is a paper "Alterations in mood after changing to a low-fat diet." [http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=9505799&ordinalpos=15&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/sites/entrez?Db=pubmed&Cmd=ShowDetailView&TermToSearch=9505799&ordinalpos=15&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum) Interesting stuff that appears to confirm Seth's findings. I came across it on the Hyperlipid blog.

Matt Weber (2009-11-02 10:37:17)

Seth or David: I can't imagine the answer to this would be "yes," since you are human beings with lives – but have you tried controlling for overall fat intake? i.e. is it clear that \*animal\* fat is critical? CTB's anecdote suggests that any kind of fat might work.

Darrin Thompson (2009-11-02 11:01:18)

Animal Fat -> Heart Attack. Everyone knows that. It's worth examining why we are so sure about it.

Nile (2009-11-02 11:44:34)

Please don't eat any more raw pork. Trichinosis is a nasty little parasite. Rare in the US because of the sanitary way we raise our pork but common elsewhere. From the Mayo clinic "Mebendazole or albendazole can be used to treat infections in the intestines. There is no specific treatment for trichinosis once the larvae have invaded the muscles. The cysts remain viable for years. Pain killers can help relieve muscle soreness" The larvae can also invade the brain and internal organs. In case you are unconvinced about how nasty the parasite is you might want to find the YouTube video of a trichinosis worm that was removed from a woman's brain. The woman lived in the USA. Note " There is no specific treatment once the larvae have invaded the muscles."

Nathan Myers (2009-11-02 20:00:27)

Nile: Not to worry, "cured" isn't the same thing as "raw".

Nathan Myers (2009-11-03 11:03:39)

Seth: Seriously, hasn't it occurred to you that maybe it's not the pork fat itself that's helping you sleep, but some minor component of it? Maybe you're getting a measured-out dose of melatonin or some other hormone.

David (2009-11-03 14:19:26)

Will be keen to see your follow-up heart scan score with all that dietary animal fat...

seth (2009-11-03 17:02:20)

Nathan, I agree, pork fat has many components, you are right that I don't know which of them makes the difference. That's a long way away – right now I'd like to figure out the best dose. David, yeah, me too. It's great to be actually able to get data about this.

Seth's blog » Blog Archive » Dietary Fat and the Brain (2009-11-04 20:04:56)

[...] Over the last six months I've come to believe that animal fat improves my sleep. Because sleep is controlled by the brain, this suggests animal fat may also improve other measures of brain function, just as omega-3 turned out to improve brain function in a wide range of ways. I didn't know about a recent experiment done with airplane pilots that supports that idea. This was the design: A total of 45 pilots (mean age, 20.8 years; 87 % male) from the [University of North Dakota] commercial-aviation program were enrolled in this 14-week repeated-measures crossover trial. [...]

Alrenou (2009-11-05 17:05:51)

Re: parasites, from wikipedia, "Bacon is a cured meat prepared from a pig. It is first cured in a brine or in a dry packing, both consisting largely of salt; the result is fresh bacon (also green bacon). Fresh bacon may then be further dried for weeks or months (usually in cold air), boiled, or smoked. Fresh and dried bacon must be cooked before eating. Boiled and smoked bacon are ready to eat, but may be cooked further before eating." If the bacon's ingredients include 'smoke' then it's perfectly safe to eat - it's already been cooked.

Seth's blog » Blog Archive » Saturated-Fat Epidemiology (2009-11-07 22:15:33)

[...] The obvious confounding is with wealth — rich people eat more meat than poor people. Were this data submitted for publication, I imagine someone would say how dare you fail account for that! and reject the paper. That would be a mistake. Because it is hard to look at this data and continue to think that saturated fat is the evil it is made out to be. And of course whatever the weaknesses of my sleep/fat experiment (which showed animal fat improved my sleep), confounding with wealth was not one of them. [...]

Seth's blog » Blog Archive » More Animal Fat, Better Sleep (2009-11-10 17:53:34)

[...] My self-experiment about this. [...]

Nile (2009-11-10 19:52:45)

Seth, Nathan Myers and Alrenou- All ready to eat pork products in the US are heated to at least 150 degrees, considered the safe temperature to kill all trichinosis parasites. 137 degrees is the actual temperature at which the parasite dies but because of the possibility of uneven heating pork is heated to 150 degrees to provide a margin of safety. It is doubtful that a butcher in china has the same sort of rigorous QA that, for example, Hormel does. I think we all can envision a homemade smokehouse where the temperature does not get above 150 degrees. Drying or salting does not kill trichinosis. Once trichinosis gets into the muscle THERE IS NO CURE AND IT IS VERY PAINFUL !! Besides, there is no downside to cooking pork. Cooking does not hurt the flavor. Please, all of you, don't eat pork that has not been cooked even if it has been "cured"

Mark (2009-12-26 04:59:21)

I use an electric pressure cooker for soup. I imagine that the soup cooker appliance is motivated by the typical Chinese stove

having fewer burners than a U.S. stove—is that right? Most U.S. stoves have 4, but in Japan we have 2, so an electric pressure cooker in effect adds a burner for me. Trichinosis only affects a dozen people a year in the U.S., which shows it's not that easy to get, considering how many inept cooks there are. If you don't worry about anthrax or black plague, you shouldn't worry about trichinosis. I suspect Nile is a PETA guy, or an unsuspecting stooge of their scare tactics. Canada has higher rates from wild game consumption like bear meat.

Patrik (2010-03-09 13:24:45)

@Seth A recent discussion on PaleoHacks also broaches this subject. One of the PaleoHackers writes: "I'm convinced that many forms of mental illness, particularly things like depression, anxiety and insomnia, are caused in large part by not getting enough animal products in your diet – particularly saturated fat, which is a precursor for a number of hormones that affect mood and energy." <http://paleohacks.com/questions/1460/depression-adhd-anxiety-and-paleo/1461> #1461 I happen to think the same.

American Mini-Meatloaves Italiano « The Everyday Cafe (2010-08-03 14:51:23)

[...] 1 lb. sweet or hot Italian pork sausage (or turkey, if you like, but pork fat may help you sleep better) [...]

billy (2011-12-14 10:21:26)

Cholesterol which comes from fat. Is a precursor to every hormone in your body. You need proteins, carbs and fats in every meal. More people are afraid of fat and are not eating fat and were getting fatter.

How to wake up and feel alert | bodybarn.com (2012-03-08 09:10:12)

[...] Now, I don't think this one will be a hard sell with the PB crowd, but I'm always happy to tell you to eat more animal fat. After Seth started working his way through a pork belly (which is uncured bacon, essentially, and mostly pork fat) that'd been sitting in his freezer, he immediately slept better. As in, the day after his first pork belly meal, he slept better. This effect persisted. [...]

Anonymous (2012-04-18 17:25:26)

It's the miso soup that makes you sleep better, not the pork belly.

## 4.11 November

### Emily Nussbaum Has a Blog (2009-11-02 01:49)

Emily Nussbaum, the brains behind New York's The Approval Matrix, which I read religiously, [1]blogs about television here.

Other magazine journalists I wish would blog: David Owen, Lauren Collins, Mark Singer, Adam Sternbergh.

[2]Interview with Nussbaum.

1. <http://nymag.com/daily/tv/>

2. <http://www.blog.sethroberts.net/2008/05/25/emily-nussbaum-interview-directory/>



## Black-and-White Thinking: An Example (2009-11-02 02:22)

I've complained many times on this blog about scientists who engage in black-and-white thinking. Here is [1]an example of such thinking outside of science:

At the mosque, Haniyeh addressed the campers on the importance of reciting the Koran. "There are two kinds of people," he advised them. "Those who know the Koran is right and who follow it, and those who turn their backs on the Koran."

1. [http://www.newyorker.com/reporting/2009/11/09/091109fa\\_fact\\_wright?currentPage=all](http://www.newyorker.com/reporting/2009/11/09/091109fa_fact_wright?currentPage=all)

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JLD (2009-11-02 09:45:56)

Not terribly relevant, **which** religious blather isn't black-and-white thinking?

seth (2009-11-02 16:14:02)

New Age "religious blather" isn't black-and-white thinking.

bennetta (2009-11-02 17:18:16)

I like to categorize this as "binary" thinking. There is also linear, numbers based thinking and qualitative thinking. Something like JS Mill's Utilitarianism is the classic idea of "numbers based" thinking, which basically dilutes the entire human experience to a math equation. The problem is that it's never that simple. You can never dilute your life to a yes/no question or even a numerical question. I like to say that rather than thinking in numbers or yes/no, we think in terms of colors. New Age, but also some flavors of Buddhism and Taoism are two examples I can give of "color based" religions that aren't black and white.

seth (2009-11-03 05:32:01)

yes, it could be called "binary thinking". But the fact that the two sides are usually considered good and bad (as in this example) is conveyed better by the term "black-and-white thinking". And while all my Chinese students know what "black" and "white" mean, few of them know what "binary" means.

JLD (2009-11-03 10:39:25)

*New Age "religious blather" isn't black-and-white thinking.* That doesn't count, it's no thinking at all, just kind of fluffy "press release" like. :-D

kevin blumer (2010-11-25 14:51:54)

i like the idear of binary thinking why not just call it not thinking atall just called mushy heads

## Ben Casnocha on China (2009-11-03 05:02)

After a three-week trip to China, Ben Casnocha wrote [1]a long post about it. His main point I very much agree with:

Flush toilets and clean water matter more than abstract rights such as a free press.

Sure, the Chinese government censors all sorts of stuff. I find it hard to read anything on blogspot.com, for example (because the free blogs on that site could be used by Chinese bloggers). But, as Ben emphasizes, freedom in China – the freedom to do all sorts of things, including travel and make a living – has vastly increased over the last 10 years. Simply because of the economic growth. How much has American freedom increased over the last 10 years?

I fail to see any substantial America-specific increase. Due to the Internet, free speech has certainly increased but that has almost nothing to do with how America is governed. Free speech has increased everywhere with Internet access. Due to the increased cost of health care in America (an increased percentage of per capita income), worsening health (e.g., the obesity epidemic), and stagnation in the development of better treatments (e.g., for bipolar disorder) and better prevention, I'd say freedom in America has declined because poor health is imprisoning. Obesity, for example, is profoundly imprisoning. Cross-national comparisons show that America has a uniquely poor health-care system given American wealth. Given the concentration in America of support for health research (money and prestige), America is especially responsible for the lack of progress. And when people as smart as [2]Atul Gawande fail to see the great stagnation in health care, it's hard to imagine those in power doing something about it. So which country is better governed?

1. <http://ben.casnocha.com/2009/08/lessons-and-impressions-from-china.html>

2. <http://www.blog.sethroberts.net/2009/05/29/the-american-health-paradox-what-causes-it/>

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Darrin Thompson (2009-11-03 06:28:40)

They still (attempt to) censor the Internet. Do they still have that 1 child per family law where you can elect to abort girls? I'll give them the prize for most improved while on the UN security council, but I won't give them better than the usa. usa usa usa... Also apparently their private sector still thinks that they need the right to waste and pollute or else they can't compete, just like us. That's a sure sign they are just riding a wave and are about to get owned by the Japanese, just like us.

Tom in TX (2009-11-03 09:05:15)

If you have freedom, you can probably get flush toilets and clean water. If you don't have freedom, someone else will be deciding if you get flush toilets and clean water.

JLD (2009-11-03 10:13:14)

*If you have freedom, you can probably get flush toilets and clean water.* Zimbabwe has freedom (at least from the evil grip of white men).

Nathan Myers (2009-11-03 11:02:06)

Freedom in the U.S. has plummeted in recent years, as cops are encouraged to torture with electric shocks anybody who doesn't jump to do anything they say, or just because they like to. Freedom in the U.S. has plummeted in recent years, as various police and other agencies are free to eavesdrop secretly on all kinds of communication without a warrant. Freedom in the U.S. has plummeted in recent years, as it's much, much easier to monitor, electronically, what people are doing, and where they are, than ever before. Freedom in the U.S. has plummeted in recent years, as you cannot travel, or even visit the courthouse, without having your personal belongings rifled through. I could go on.

Tom in TX (2009-11-03 11:04:49)

@JLD: Reminds me of the joke from the old Soviet Union: Q: What is the difference between capitalism and communism? A: Under capitalism, man exploits man. Under communism, it's the other way around. ;-)

CCS (2009-11-03 11:35:09)

How can you say that the existence of the internet has nothing to do with how the US is governed? It did not appear by magic, it is based on a vast infrastructure which had to be built according to state, local and federal laws. It was originally created as part of government research. In many countries the legal system would not support such an endeavor. This is regarding both the physical infrastructure/hardware and the software, both of which are constantly being developed and improved by people with a vast array of skills. It is supported by private industry as well as public research. It is not by chance that the internet was created in one country as opposed to another. It could not have been invented in just any country.

CCS (2009-11-03 11:45:36)

How much does the existence of companies like Google and Amazon, and the innovation that they drive, contribute to human freedom? Is having an incredible level of accessibility to media and ideas a contribution to human freedom? Could these companies exist in a country governed like China? Is it simply by chance that things like, the internet, Google and Amazon all originate from the same country? How does technological information and increased information affect freedom? I think you need to define "freedom" very narrowly if you want to think that freedom is decreasing or stagnant in the US. I think you also need to have a very narrow view of how laws and government affect things in order to pursue this argument.

ChristianK (2009-11-03 12:58:12)

With laws like the patriotic act, political freedom didn't rise in the US but decreased. China is governed by engineering and science people while the US is governed by liberal arts folks and one of those groups is able to making better decisions. It's no accident that China is better governed. You shouldn't trust people who go to study political science and believe it with political decisions.

ChristianK (2009-11-03 13:06:10)

@CCS: The internet was invented in multiple country at the same time. It wasn't a pure US thing. US also has a pretty bad broadband penetration, so part of the US haven't even arrived at the real internet. While Google and Amazon both originate in the US, a lot of hardware is made in China (either People's Republic of China or Republic of China).

Hatcher (2009-11-03 14:03:29)

You are confusing freedom with constraints caused by irresponsible use of freedom. If obesity constrains me, to say that my freedom is reduced as a political statement, you would have to blame some government law for my obesity - a law to the effect that I must eat more calories than I need to maintain a given weight. It is not enough to say that they have promoted or recommended things that have been ill-advised with respect to health, so long as they don't force me to abide. Where's the law? Running water and flushing toilets are great, but man also has higher needs and aspirations, and being denied those by government edict can be particularly gauling, even if those aspirations are not held by your everyday peasant. China is not very good on that score.

Socktopi (2009-11-03 15:00:26)

[http://www.theonion.com/content/video/china\\_s\\_andy\\_rooney\\_has\\_some](http://www.theonion.com/content/video/china_s_andy_rooney_has_some)

seth (2010-02-04 22:10:08)

"You would have to blame some government law for my obesity." NIH - government run - has done a terrible job of fighting obesity. I don't expect fat people to lose weight without help. I expect research to help them. That research hasn't happened. And obesity is just one example of terrible American health. We get less for our health care dollars than any other country.

## **Sickness After Starting to Eat Yogurt (2009-11-04 02:33)**

A friend writes:

As of today I'm getting over my fourth cold since I began eating lots of yogurt (maybe 1-2 cups a day, homemade), which was roughly in March of this year. So that would be a rate of about a cold every two months. On the one hand that sounds pretty terrible. On the other hand, a couple of things to think about:

1. I used to always get colds and other sicknesses as well. They just seem to be attracted to me. By my intuition, the current rate doesn't seem particularly unusual, although I never kept track before. If anyone had a cold anywhere around me, invariably I got it. It's been that way as long as I can remember, especially when I was traveling, as I have been during these last few months.

2. Each of the colds I have had in this last eight month period has been remarkably short. Really remarkable, so I will remark, by way of example, that this cold came out of the blue yesterday evening with a fit of sneezing. I hadn't felt bad at all earlier in the day although in retrospect it's possible I was a bit worn down (or maybe not: I took a half-hour swim in the late afternoon and felt pretty good). So I sneezed my way through an evening, nose dripping like a faucet. Before going to sleep I took some sort of medicine for cold symptoms (maybe something made by Bufferin maybe? Night/day something...), and in the morning I took the same thing (day version). During that whole time I was still pretty symptomatic: sneezing, nose dripping etc., but I guess the medicine might have been somewhat useful. Now here it is 2:30 in the afternoon and all of a sudden I realize my nose is dry and I haven't sneezed for hours. I reckon this is about the end of the cold: less than 24 hours. The other three were like that as well: very quick onset, then disappearing almost before I could have time to realize I had a cold. For me this is particularly noteworthy because in years past I always seemed to get the worst of the colds, going on for days and often progressing into a hacking cough that would linger for weeks.

I suspect if my friend improved his sleep he would get see further improvement of these measures of illness. In [1]this study, the frequency of sickness episodes went down for workers given a probiotic but their duration, when they happened, didn't change – perhaps because it was nice to be away from work.

After I copy-and-pasted that, I got sick. It wasn't sickness as most people know it. After an afternoon walk (1 hour) I felt tired; that was the first sign. After dinner, I felt really tired. That was an unmistakable sign. I went to bed early, slept about 8 hours (1-2 hours more than usual) and woke up rested. But an hour later I fell back asleep for 15 minutes. At that point I was sure something was wrong. I had a class that morning starting at 10 am. Should I cancel it? I got much more tired and, about two hours before class, was too tired to get out of bed to turn off the beeping yogurt maker. Okay, I'll cancel class. I phoned the TA to cancel the class but he couldn't – he had a bad cold. I phoned a student and she phoned the other students.

An hour later, however, I felt much better. By class time I felt well enough to go to class, although I walked rather than ride my bike. (The student did her best to uncanceled the class.) In the afternoon I took a long nap (1.5 hours). The next day I was just barely more tired than usual. Today I feel completely well.

I was sick, yes, but without chills, runny nose, sneezing, sore throat – without any discomfort at all unless feeling tired counts as discomfort. And I felt distinctly more tired than usual for only about a day. I think this is what happens when your immune system works properly. You fight stuff off much faster than the five days or so many people take to get better. [2]Before I figured out how to improve my sleep, I got the usual 4-6 colds per year. After I started to sleep much better, I never got sick in the usual runny-nose way so long as my sleep was good. The current episode is striking to me because I was more sick – that is, more tired – than usual. I do only two things to make my immune system work better: (a) improve my sleep in several ways (eat animal fat, get plenty of morning light, stand on one foot); and (b) eat plenty of fermented foods (mostly yogurt, but also miso, kimchi, natto, and kombucha).

1. <http://www.ehjournal.net/content/pdf/1476-069X-4-25.pdf>
2. <http://escholarship.org/uc/item/2xc2h866>

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JC (2009-11-04 05:33:00)

How much yoghurt/day do you eat and how long do you ferment it?

Matt (2009-11-04 09:43:56)

Hi Seth, I forget how I found your blog, but I am experimenting with eating homemade/active yogurt, hoping to boost my immune system. I've had 3 staph infections this year, and chronic eczema - I tried doing the probiotic pills but ditched that in favor of the real stuff. Have you found evidence of life extension with eating fermented foods? I'd be interested in reading about it. Also, I liked your post about gatekeepers.

Anthony (2009-11-04 13:07:28)

Seth, my experience since starting to eat probiotic yogurt 1-2 times per day is somewhat similar. I can't remember getting actually sick in the last 8 months or so since I started. I can remember various times feeling something coming on, and thinking I was going to get sick, only to be surprised and not. (I have also stopped using an alarm clock during this time, and taking a nap in the afternoon if feeling tired - so, both factors could be at work.)

Aaron Blaisdell (2009-11-04 13:21:34)

My experiences are concordant with all of the above reports.

Timothy Beneke (2009-11-04 17:58:29)

I wonder if what your friend describes as colds are really allergies; in my early 50s I began getting day or half day "colds" where I would have all of the symptoms of a cold and expect to experience the usual 5 or 6 days of suffering and they would suddenly disappear in a day or less; these were allergies. I could generally not differentiate the symptoms from those of a cold.

seth (2009-11-04 18:30:59)

How much yogurt/day do I eat? About 500 ml. Fermented for about 20 hours. Re long life. This is a common observation: Around 1900, a Russian biologist named Ilya Ilyich Mechnikov hypothesized that regular consumption of yogurt was responsible for the unusually long life spans of Bulgarian peasants. I found that here: [http://www.flavormine.com/all\\_about\\_yogurt\\_history\\_culture.php](http://www.flavormine.com/all_about_yogurt_history_culture.php) but it is common knowledge.

Nathan Myers (2009-11-04 20:10:08)

When I eat lots of cow's milk yogurt, I get allergy symptoms. I'm thinking of trying goat's milk yogurt instead. I don't know what they feed the goats, though. Are goats in the US kept in feedlots like cows?

Henri Deschaux (2009-11-17 03:08:15)

Seth, will frozen yogurt work well for this?

## **UCLA: Livers For Sale (2009-11-04 05:00)**

According to [1]60 Minutes, the UCLA Medical Center moved a notorious Japanese mobster to the head of the liver transplant line after he donated \$1 million to the program. Thus imitating Mother Teresa, who became friends with the worst dictators in the world if they gave her enough money.

More UCLA receives a large amount of taxpayer money, both state and federal. None of those taxpayers appreciates losing a life-saving liver to a gangster who paid none of those taxes. It's an extreme abuse of public trust.

1. <http://www.cbsnews.com/video/watch/?id=5486399n>

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soulfinger (2009-11-04 11:28:03)

Big deal. Livers are scarce and need to be rationed in some fashion. The only alternative to letting prices allocate body parts is to empower some panel to make the decision based upon some set of reasons that are bound to be entirely subjective and transitory. There really is no superior mechanism.

Jim d (2009-11-04 12:31:12)

I'm not sure the point of the parting shot at Mother Teresa. Cite please or retract.

aldoPlepi (2009-11-04 12:45:29)

"...if they gave her enough money. " You know, the money was never for her. You could be decent enough to at least mention that. When faced with the imminent death of thousands under her care, Mother Teresa chose to accept money from anyone that was willing to donate it. If she had not, people would die. It's not as if accepting that money did much to keep those dictators in power. The benefit gained is much larger. What would your choice have been?

seth (2009-11-04 16:37:17)

I learned about Mother Teresa making friends with dictators from Christopher Hitchen's book about her: Assume The Position. To say that giving the money to Mother Teresa saved lives disregards what would have happened to the money had she not accepted it. Perhaps it would have been spent locally, giving the local economy a long-term boost and saving even more lives – lives of those from whom the money was stolen.

Leora (2009-11-04 18:51:48)

giving livers to people based on money is disgusting. It's just another way that this society values the lives of rich people more than the lives of poor people. Why should people with money be entitled to better health care than people without, and this wasn't even a case of people without, this is a case of people without A MILLION dollars to spare and to donate. And this was someone who didn't even get the money legally. The current system of liver dispersal, the MELD score is certainly not great as it takes into account the bilirubin score as well as the INR & creatinine levels, but that only takes into account people with cirrhotic livers– mostly alcoholics. Those who are very sick with end stage liver disease suffering with autoimmune conditions such as primary billiary cirrhosis, won't have INR or creatinine levels that are significant enough to raise the MELD score, yet they're just as acute as others. My mother died at age 54 after being on the transplant list for five years. She was a new york city school teacher for 33 years and She never drank a day in her life. Yet, heroin addicts and alcoholics got one before she did because they had higher MELD scores. I'm not saying that they deserved it less than she did, or that she deserved a liver more... but actually I am.

Patrick Major (2009-11-04 22:26:20)

I am waiting for a liver transplant. I don't wanna die, but I'm not a rich japanese gangster. I was a drug and alcohol counselor for 23 years, which was rewarding in terms of intangible benefits, but not financially. I have been on a transplant list for two years now, as every aspect of my life and health both past and present was examined in microscopic detail. I passed, but what's the point really? This particular criminal godfather isn't the only gangster to jump the line. They got in front by 'donating' a half million dollars each to UC med center. The Docs and Hospital hide accountability for being weasels under the cloak of 'patient confidentiality.' Shouldn't apply to illegal recipients. Gangsters gonna die anyway due to the same thing that ruined his liver in

the first place. Either that or his gangster buds will off him for making a deal with our gullible FBI who are shocked, shocked I tell you, that a gangster lied to them about telling all AFTER the transplant. Morons.

Tom (2009-11-04 23:37:49)

It's also never really been clarified how Steve Jobs was able to get a liver so quickly. Apparently his access to the Apple jet enabled him to "shop" for a region with a shorter waitlist than California (I believe he got his liver in Nashville.)

seth (2009-11-05 03:49:57)

soulfinger, if the doctors involved did this from a private for-profit hospital, I would find it much less offensive. UCLA Medical Center is heavily supported by taxpayers, who didn't fund it so that it could do this sort of thing. The doctors get \$1 million, the gangster gets a liver . . . and taxpayers lose a life-saving liver. It's an extreme abuse of public trust.

grant (2009-11-05 05:18:00)

The last time I checked the United States was a capitalist society. Basically if you can pay for it you can have it. Tax payment and fair play are moot within such a construct. No surprise No big deal

CTB (2009-11-05 07:10:09)

BTW, if you're interested in what Hitchens has said more recently about Mother Teresa, like during the past week or so, just google 'Hitchens Mother Teresa bitch.' The woman has been dead for 10+ years, but he still becomes unglued by the thought of her. Too bad. Seems like he's heading down the same path of shame as other accomplished notables as they mature...James Watson, Mel Gibson come to mind. This morning during a local newscast (WNBC, NYC), there was a story about H1N1 vaccine going to a corporation (Citi). Didn't hear the whole bit, but the newscasters were upset that hospitals and MD offices couldn't get enough vaccine for children and pregnant woman...but this corporation could get it for 'healthy 40-year olds.' If it's true, maybe they paid \$1M for it? Oh wait, didn't we bail them out? If it's not true, then they just ran with a rumor which they knew would push people's buttons. Bottom line: there is nothing new under the sun.

Hatcher (2009-11-05 09:46:49)

"To say that giving the money to Mother Teresa saved lives disregards what would have happened to the money had she not accepted it. Perhaps it would have been spent locally, giving the local economy a long-term boost and saving even more lives - lives of those from whom the money was stolen." Seth, I think that logic may be dubious in the case of Mother Teresa - in lieu of donating to her, these dictators would have been more benevolent to their own people? That objection aside, doesn't that logic apply here in favor of UCLA? Absent selling the liver transplant for \$1 million, they would have \$1 million less to do good works with. And that \$1 million may have been spent by the gangster to propagate more crime. I would agree that a taxpayer should take precedent over a non-taxpayer other things being equal, but as a taxpayer myself I am not so sure the preference should preclude an additional \$1 million in the coffers that could benefit me down the line. The fact that the guy is a criminal is more troubling, and so I agree with the point that on principle we may not want his blood money.

seth (2009-11-05 15:36:47)

True, those arguments cut both ways. I am trying to say there is something morally repugnant about what both the UCLA doctors did and what Mother Teresa did and I think there is something reasonable about that repugnance. Two of the commenters expressed that repugnance much better than I did.

aldoPlepi (2009-11-09 11:09:03)

Seth, I fail to see the "repugnance" of both cases as being equal enough to be mentioned in the same sentence. First, the benefit to the liver program is small at best ( \$1 million does not buy much for a transplant program), while for Mother Teresa's beneficiaries even \$100 can save lives, a very real positive consequence. Second, the same can be said of the benefit to the donor. A Japanese mobster gets a liver and continues to live (a gain of life over death), while a dictator would most likely continue to be a dictator whether Mother Teresa accepts his money or not. The benefit he gains is just a few hours of good PR. Thirdly, if the Med Center refuses the money, the mobster dies (assuming no other choice for liver exists). If it accepts, the

people in the list get pushed down unfairly and their lives are endangered, a very real negative consequence. If Mother Teresa refuses the money more poor and sick around the world will die. If she accepts, the people in the oppressed countries do not see much change in the amount of oppression (if any at all). My point here is this: The Med Center can refuse the money and the world is no worse (in fact could be better), while if Mother Teresa refuses, the world is worse for sure. The Med Center accepts the money and innocent people suffer unfairly, while Mother Teresa accepting brings very real benefits to the suffering of the world. One can question the actions of Mother Teresa as described by Hitchens, but I would not compare them to the Med Center's or call them "repugnant." Finally, I ask again: What would your choice have been? Accept the money or deny it?

seth (2009-11-09 15:23:07)

We disagree whether what Mother Teresa did was repugnant. Fine. But I agree that what the UCLA doctors did is worse. Would I have turned down the money? Yes. It's puzzling that you ask.

### **Dietary Fat and the Brain (2009-11-04 20:04)**

Over the last six months I've come to believe that [1]animal fat improves my sleep. Because sleep is controlled by the brain, this suggests animal fat may also improve other measures of brain function, just as [2]omega-3 turned out to improve brain function in a wide range of ways. I didn't know about [3]a recent experiment done with airplane pilots that supports that idea. This was the design:

A total of 45 pilots (mean age, 20.8 years; 87 % male) from the [University of North Dakota] commercial-aviation program were enrolled in this 14-week repeated-measures crossover trial.

During the first week, participants were randomized to receive 1 of 4 diets (3 full meals and 2 snacks) for 4 days: a diet high in carbohydrates, a diet high in fat, a diet high in protein, or a control diet. After a 2-week "phase-out" period, all pilots then randomly received a different study diet. This process was repeated until all pilots had received all 4 diets.

I haven't been able to find out much about the high-fat diet. Here are some of the results:

The response time on the Sternberg test of short-term memory was significantly faster for participants who ate the high-fat diet ( $P < .05$ ) than for those who ate the protein and control diets, especially at higher memory loads.

With sleep, however, the high-carb diet produced the best sleep.

[4]Here is the abstract.

Thanks to Paul Sas.



1. <http://www.blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>
2. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>
3. <http://www.medscape.com/viewarticle/708241>
4. <https://www.cdmrhcures.org/ocs/index.php/mhrf/mhrf09/paper/view/1492>

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Vlemmix (2009-11-05 05:21:14)

I've got 2 pointers: ketones and BDNF. Calorie restriction seems to raise your BDNF. BDNF (important for memory) is lowered by sugar, although some researchers indicate it is also lowered by high fat (tests done with high-sugar+high-fat intake), but in the same articles indicate that enough omega-3 fats ARE important... On a low-carb diet your body switches from the standard glucose-burning, to fat burning (ketosis). Research shows that the heart and brain work 25 % more efficiently in ketosis than on glucose burning. Some indicate that a more efficient brain might need a shorter REM sleep, and thus a shorter total sleep time. I think Micheal Eades wrote an article on sleep and ketosis, and indicated that some people have sleep problems when doing a low-carb diet, and recommends drinking a cup of tea with sugar just before going to sleep. Your body and brain switches back to (the less efficiently?) glucose burning, and makes it easier to fall asleep. I can't find the article anymore... I'm combining SLD with low-carb myself, and it's great. No/low sugar/carbohydrates when possible, coconutoil in the morning, flaxoil in the evening. Some extra vitamins and fishoil, especially during the weightloss period. some links: BDNF: [http://www.proteinpower.com/drmike/intermittent-fasting/fast-way-to-better-health/Ketosis and your brain](http://www.proteinpower.com/drmike/intermittent-fasting/fast-way-to-better-health/Ketosis-and-your-brain): <http://www.proteinpower.com/drmike/ketones-and-ketosis/metabolism-and-ketosis> / BDNF and sugar: <http://stanford.wellsphere.com/healthy-eating-article/what-sugar-does-to-your-brain/490861> BDNF and sleep: <http://www.sleepwarrior.com/use-ketosis-to-train-your-brain-to-sleep-less> Kind regards, Eric

Tom (2009-11-05 10:15:31)

off-topic, Seth, but you'll enjoy this article on evidence-based medicine: <http://www.nytimes.com/2009/11/08/magazine/08Healthcare-t.html?hp=&pagewanted=all>

seth (2009-11-05 15:32:11)

thanks, Tom

## **Nassim Taleb on Incompetent Experts (2009-11-05 18:42)**

Via [1]Proinvests.com, Nassim Taleb said this:

I was in Korea last week with a collection of suit-wearing hotshots. On a panel sat Takatoshi Kato, IMF Deputy Managing Director. Before the discussion he gave us a powerpoint lecture showing the IMF projections for 2010, 2011, 2012, 2013, 2014. I could not control myself and got into a state of rage. I told the audience that the next time someone from the IMF shows you projections for some dates in the future, to show us what they PROJECTED for 2008 and 2009 in 2004, 2005, 2006, 2007, and 2007. They would then verify that Mr. Takatoshi and his colleagues provide a prime illustration to the "expert problem": they serve as experts while offering the scientific reliability of astrologers. Anyone relying on them is a turkey.

This allowed me to show the urgency of my idea of robustness. We cannot get rid of charlatans. My point is that we need to build a society robust to charlatanism and expert-error [emphasis added], one in which Mr. Takatoshi and his staff can be as incompetent as they want without endangering the general

public. We need less reliance on these people and the Obama administration has been making us more dependent on the “expert problem”.

I completely agree. This highlights two hidden strengths of self-experimentation.

First, the more you can rely on data about yourself, the less you need to rely on data from other people, which until recently – internet forums, [2]CureTogether.org, [3]PatientsLikeMe.com – almost always came to you through experts (usually doctors), who filtered it to suit their purposes. When I was a grad student, I had acne. My dermatologist prescribed tetracycline, a powerful and dangerous antibiotic. Studying myself, I quickly figured out tetracycline didn't work. My dermatologist had failed to figure that out – that it didn't work in at least some cases. In his practice, he must have encountered examples of this, but he ignored them. It served his purposes to think it worked. That's one sort of filtering: Ignoring inconvenient data. Self-experimentation made me less reliant on my dermatologist.

Second, self-experimentation allows researchers such as myself to do innovative research in some area without getting permission from experts in that area. Self-experimentation is very cheap; no grant is required. A self-experimenter can be as heretical as he cares to be. [4]My research on weight control has been breezily dismissed by nutrition professors, for example. Obviously they wouldn't fund it. The Animal Care and Use Committee at UC Berkeley turned down my application to do rat research about it – my ideas couldn't possibly be true, they said. [5]My research on mood isn't just utterly different than what clinical psychologists and psychiatrists say to each other in meetings and papers; it also, at first glance, sounds absurd. Self-experimentation allowed me to do it. That's another sort of filtering: control of what research gets done.

I don't think conventional research in nutrition, clinical psychology, or psychiatry is worthless – far from it. I think it is very valuable. (For one thing, it helped me see that my self-experimental conclusions, as unorthodox as they were, had plenty of empirical support.) What is hard for outsiders to grasp is how what they see – what they read in magazines and newspapers and even books – is heavily filtered to conform to a party line. Plenty of research supports the Shangri-La Diet, for example (such as research about the set point theory of weight control), but you are unlikely to read about it in, say, The New Yorker because it doesn't fit conventional ideas. Plenty of conventional research supports my ideas about mood, but you are unlikely to read about that research because it doesn't support the party line of “dopamine imbalance” causing depression or whatever. This is what [6]Leonard Syme taught his public-health students – that the party line was a lot more questionable than an outsider would ever guess. They hadn't heard that before. (And it was unpleasant: Uncertainty is unpleasant.) This is a third sort of filtering: What data reaches outsiders.

I never had a teacher like Leonard Syme – I've never even heard of someone else doing what he did – but self-experimentation taught me the same thing. I came to see the fragility of mainstream claims about all sorts of things related to health. As Taleb says, we are used to thinking the charlatans are on the fringes. But they're not – there's plenty of them at the centers of power.

Thanks to Dave Lull. [7]Frontline's recent show “The Warning” makes the same point as Taleb, that there is great incompetence at the highest levels of power.

1. <http://www.proinvests.com/nassim-nicholas-taleb-the-imf-and-our-increased-dependence-on-faux-experts/>

2. <http://www.curetogether.org/>

3. <http://www.patientslikeme.com/>

4. <http://www.blog.sethroberts.net/2009/09/30/bad-review-of-the-shangri-la-diet/>

5. <http://escholarship.org/uc/item/2xc2h866>

6. <http://www.blog.sethroberts.net/2007/09/18/how-accurate-is-epidemiology-part-3/>

7. <http://www.pbs.org/wgbh/pages/frontline/warning/view/>

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ChristianK (2009-11-05 23:22:19)

Tim Conrad who teaches a course on algorithmic bioinformatic repeats at every lecture the mantra: Don't trust your theories or other people's data. You don't know whether they are true or false. I like him :)

seth (2009-11-05 23:30:24)

In my experience, I have been able to trust other people's data most of the time. The Shangri-La Diet derived from trusting my own theory. It's the party line – the consensus – you can't trust. That's quite different than what Conrad is saying. Did Conrad give any examples to support the idea that you shouldn't trust other people's data?

bill (2009-11-06 04:22:01)

I have noticed that some experts totally ignore personal experience. They ignore facts that are sitting in front of them. The world needs more people who can think for themselves, but this is discouraged. It's wise, for example, not to be a genius as geniuses are often persecuted. Experts often become oppressive because they want people to take their advice. My opinion is that the experts are not usually the best and brightest. I accept the council of experts, but I believe that no one will take better care of me than I will. One thing I have always wondered why some people are listened to but even wiser people are ignored.

Aaron Blaisdell (2009-11-06 11:44:19)

How appropriate with Thanksgiving right around the corner. Don't be a turkey! "The Black Swan" was one of the best and most influential books I read this summer. Right up there with the Primal Blueprint by Mark Sisson and Good Calories, Bad Calories by Gary Taubes. And the Shangri-La diet of course. \*wink\*

Jim (2009-11-06 11:52:38)

Seth, I think self-experimentation is valuable. In fact, I'm trying the SLD right now (why not? right?). HOWEVER, I think it's very important to make something very clear to people. If you're going to encourage self-experimentation, I think you need to impress two other things on people 1. Some understanding of statistical validity. 2. Skeptical habits of mind. It's not enough to form a hypothesis, and then test it, noticing only the positive confirmations. If we don't carefully state our hypothesis, the vagueness will allow the confirmation bias to have full sway. And confirmation bias is a huge ugly monster. Take all the other logical fallacies humans commit, and I'd argue that the harm done by confirmation bias outweighs them all. That gives us very good reason to be skeptical of our own theories and our own experiments. Once we test a hypothesis, and get some confirmation, we should also try to think of all the plausible competing explanations we can think of. And, if we're committed to proportioning our confidence to the evidence, we should design tests that will decide among competing explanations. And it takes a lot longer than most people think to do all of that properly. I say this not because I think self-experimentation is dangerous, but because I think encouraging people to have confidence in poorly conducted self-experimentation is dangerous. I guess I would advise people to hold their theories very loosely until they get the kind of evidence that would justify more confidence. Jim P.S. keep up the good work. On balance, I like your approach, and your writings.

ChristianK (2009-11-09 10:20:41)

A lot of data contains assumption that the person who measured the data made. Taleb for example discusses the saying: "What doesn't kill you makes you stronger" in the Black swan and notes that there's a selection biases at work. The voodoo social neuroscience paper would be another example of an analysis that showed that a lot of data is wrong because someone made a mistake when they measured. Therefore it's always important to be aware that the assumptions that underlie some data might be flawed. If you start to believe that the consensus in your own head is necessarily better than the consensus among experts there's probably confirmation bias at work. Truth is always complicated and you should always be aware of the assumptions that you make but can't proof. In your case of self experimenting that's for example that you assume that short term and longterm effects of interventions like eating more omega3 are similar.

## Jiaweishop.com Scam (2009-11-06 19:06)

If you look on this blog you will find several other website names that this site has used to scam people, such as myshopinsun.com. You will pay via PayPal, complain to PayPal, PayPal will "investigate", decide you were right – and not give you your money back. That PayPal keeps helping whoever is behind this is curious and infuriating to anyone scammed.

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tony (2009-11-07 01:32:43)

Is not it, I've bought here more than 20 thousand dollars in goods, the goods are well received, and their quick, quality is also very good, I also intend to stay long here, the products ordered, I think you are mistaken , which is a very good price, great service businesses.

Ashish (2009-11-07 01:54:25)

I haven't found the PayPay investigation/resolution process to ever help. Has anyone?

seth (2009-11-07 07:32:17)

tony, why the bad English?

Robert Kren (2009-11-09 14:48:25)

Tony, If they are so great, why is the website identical to the myshopinsun.com website where I was ripped off. The item numbers are identical—as are the misspellings. Are you possibly the proprietor?

D (2009-11-09 14:50:19)

Is this a scam or what people I want to order the Wii for my family but don't want to be taken... has anyone order anything from these people

Steph (2009-11-15 20:00:00)

I stupidly ordered from this website the other day before researching it and after reading all the scam alerts I have opened a dispute with paypal and alerted my credit card company. They said I have to wait until the transaction is done pending before they can do anything meaning the scam artist will get his money!!! I cannot believe Paypal allows them to continue using them. How can they claim to be the safer way to pay? I also sent Jiaweishop an email and they have not responded even though they state they have 24/7 customer service? Hmmmm....if that was the case wouldn't they have replied by now? I just feel so horrible about being so stupid!

rahil (2009-11-16 18:04:03)

did anyone order the wii. i want to order the wii for my daughter. i dont want to send my money and be scammed

Jim (2009-11-17 07:53:49)

Steph, I also place an order with Jiaweishop on 11/14. Then I read these blogs. What I did was place a dispute on 11/15 with PayPal. In the dispute we requested the vendor to provide a tracking number within 10 days. Then I sent an Email to the vendor requesting a refund. On 11/16 the vendor refunded my money. So I bet you that the vendor got spooked and decided he better refund my money and not to make any waves at this time. This way he can continue to scam others for a bit longer, then shut down. I did some background checking and saw similarities between Jiaweishop and other sites that have been shut down. That they also had the same complaints pertaining to this scam. Jiaweishop started up on 10/26/2009. A good rule of thumb would be to buy from a vendor that has been in bussiness for at least 2 years.

Daniel (2009-11-17 12:12:12)

do not buy from <http://jiaweishop.com>. check the domain details and you'll see is the same people behing gamesingate, gamesinwelt, myshopingsun and many others

george (2009-11-17 15:42:43)

I would like to thank all of you ,i almost bought from this company(or thought i was going to buy) a wii bundle but since reading all your reports i've change my mind ..i guess buying local does stand for something and again a big Thank You .From N.S.canada

dan (2009-11-17 23:20:02)

thanks for the warning !

TONY (2009-11-18 12:25:17)

Iwas going to buy a wii bundle thanks for warning me about this website

Bob R (2009-11-18 15:24:49)

I too was almost taken, I was looking at site, placed an order for Wii, but did not enter any payment method, I wanted to see how much shipping would cost. I never confirmed the order!! Well, I got a email saying my paypal would be charged for the order. I then went to paypal and canceled.

Mike (2009-11-18 22:39:08)

I bought a wii package from this site on 11-16-09. I started thinking it was just to cheap! I began to research the web site. It was a SCAM! I called my bank and by passed Paypal. They said they would get my money back and it was good I called with in 7 days time! BEWARE!

Keith (2009-11-20 13:47:31)

I too was going to buy from here but after 3 emails with no answer after a wee3k I decided to look elsewhere

john (2009-11-20 20:06:25)

I recently purchased a wii system from this company before researching it. sadly, they scammed me out of most of my christmas money. I should have followed my gut feelings that "if it seems too good to be true, it probably is" at my age (40's), you would think that I would have known better, but like others, I have apparently been scammed by this scammer!!!! THEY NEED TO BE INVESTIGATED AND FOUND AND PROSECUTED TO THE FULLEST EXTENT OF THE LAW!!! People need to be warned and not make the same mistake and need to research EVERYTHING AND EVERY COMPANY before letting someone STEAL your hard earned money. I am reporting them to EVERY PLACE I CAN AND I WILL NOT LET UP. BE WARNED....DO NOT BUY FROM JIAWEISHOP.COM. IT IS ONLY A SCAM. I tried to contact them to get a tracking number but it came back saying that the "merchant can no longer be contacted" that is because it wasn't real to begin with!!! STEER CLEAR OF THIS WEBSITE!!!!

Madrew (2009-11-21 14:24:07)

Why is this site still up I was looking for a wii bundle and it po[ up with some other vendors. After checking with Paypal if they were a valid website. Pay pal told me they were not also I had sent 2 emails that ere never respnded to with 24 or 48 hours. They are truly a scam artist. I plan to send it to the justice department.

Angela (2009-11-23 01:21:21)

I too have been scammed by this website, I have lodged a complaint with Paypal but by the looks of the comments on here I will not get my money back. Might email the guy himself and tell him to refund my money.

lauren (2009-11-23 14:21:20)

Thank you!! I had just put in the order, but hadn't confirmed it. I am so glad I decided to google the company. It is disgusting

to me that people can do this! I am so sorry to those of you who have been scammed.

Tamara (2009-11-23 17:57:27)

Thanks so much. I was about to order from this company as well. I didn't have a good feeling after an email I sent never got a response. I decided to google company and this is what I found.

Justin (2009-11-24 13:35:44)

Forty???? Try sixty-four. No age is immune. Nov 6 purchased two wiii items for \$260. Few days later received a sansdisk from Jiaweshop. That was a red flag since I did not order it. Sent email to Jiaw.....no response. Six days later sent another email. No response. Nov 24 called Pay Pal. Within 40 mins (started off in security) was transferred to disputes and was totally refunded my money right then and there. Pay Pal rep., though he stated he could not talk about clients, told me they had indications that "allowed them to immediately refund my \$ \$ \$ \$. Three cheers for pay pal. I am now a happy camper. Their respons was faster then any bank would be.

Casey (2009-11-24 16:08:37)

So I really want to purchase from this website. Is it really a scam or is it legit?

seth (2009-11-24 17:14:39)

Scam.

John (2009-11-27 10:03:40)

hi This Website Is a scam I purchased a nintendo wii system and got scammed I reported them to paypal and opened a dispute and a claim but it seems I wont be getting my money back, How could these people have the courage to steal from other people. I don't worry they will pay for what they have done. what goes around comes around. Im so sorry for the other people who got scammed, Im out of money and wont be having a good christmass.

matt (2009-11-28 08:03:26)

FUCK JIAWEISHOP!!

Angela (2009-12-04 00:41:34)

Just thought I would let everyone know, that I put in a dispute and claim with Paypal on the 23/11/2009 and got my money back today. So paypal actually do try and get the money back for you.

John (2009-12-05 11:07:14)

Hi Thanks for telling me Angela no I have my hopes up, I have opened a dispute and paypal said thye would refund my money in seven days from today. Happy to hear that you had you refund. Thanks for telling us. I hope i will get mine money back. Many thanks

Jenn (2009-12-07 09:36:55)

Yes, jiaweishop.com is a scam. I wish there would have been all these blogs before I ordered, I never would of been so stupid. But unfortunately I got scammed too. I ordered a Wii and a game. I also sent e mails to them with no response. I have just put in a dispute with pay pal so let's see how my claim turns out. Anyone who is thinking of ordering anything from jiaweishop.com, please don't loose your money too.THEY ARE A SCAM. Wish I was taking a trip to China I would handle this myself instead of waiting to see if I might get my money back from Pay Pal.

Paula (2009-12-08 10:35:00)

I too filed a dispute with paypal...and I filed with my bank so one way or another will get my money back just wish this would have been available when i was looking before I made the purchase.

scott (2009-12-10 04:58:13)

I purchased a wii bundle on the 17th of nov.it has been deducted from my account.my best bet is to go to my bank to get money back???

carolyn (2009-12-10 07:59:31)

I ordered the wii on 11/7. I just found this site and am so upset! I will be calling my credit card company and paypal today to dispute! I only purchased because they used paypal and thought that you had to be reputable to get paid this way. Anyone know where I can get a wii package at a great deal?

Jenn (2009-12-10 09:05:17)

scott, yes go to your bank and if you went through pay pal give them a call and let them know you never received it. if you call pay pal now you might get your money back before christmas. I too purchased the wii on Nov. 15 and I called pay pal on the 6th and they told me i should get my money by the 17th.

Cathy (2009-12-11 17:03:49)

I had looked at one of the other sites that I thought was a scam (lightsinshop) for a WII as well. I finally decided to get it locally. I don't know if it is still available, but this week walmart had them for the same price as everywhere else, but you got back a 50 dollar gift card. If you live near a brandsmart they are also under the 199 amount as well

chris (2009-12-18 12:37:43)

PS3 ordered a month ago, no show and Paypal didn't get my money back. Bought games and accessories still no playstation. After numerous emails to the shop i realised the obvious and so here i am on this page. Don't waste your money people!!!

Jenn (2009-12-22 17:36:23)

Pay Pal gave me my money back. They also told me that they no longer allow jiaweishop.com to use them. I'm glad I got my money back before Christmas.

paul lunn (2010-01-07 15:52:36)

it a scam..... customer service promised failed..... money taken product not recived . To this date 07;01;10 from a order on 11.11.09 no emails recived from the honk kong cheeky gits. will order from amazone or somewhere secure next time as did after found out to be a scam. Wi cheep it was cheep for them. items from amazone arrived 3 days later once bitten twice shy .

paul lunn (2010-01-07 15:53:16)

rip off scam read and take note....

Calvin (2010-01-08 23:13:19)

this site is now going under the name of netxbn.com.Paypal will not accept any orders from this site.Beware make sure you paypal they will get your money back.

## **Why Are Colds and Flu More Common in Winter? (2009-11-07 12:14)**

The effect is so large, so easy to notice, it is enshrined in the word cold. We get far more colds and flu in the winter ("flu season") than in the summer. In [1]this excellent interview, epidemiologist Thomas Jefferson asks:

Why, for example, do we not get influenza in the summertime?

All of the possible explanations listed in [2]this Wikipedia article assume that it is cold weather that makes flu more common in winter. However, [3]an impressive 1981 study found that flu peaked during the light minimum, not the temperature minimum, contradicting all of these explanations.

My proposed explanation is that flu is less common in the summer because people sleep better during the summer. They sleep better in the summer because they get more morning light. More morning light causes your circadian system to have a greater amplitude, which means you sleep more deeply. Better sleep -> better immune function. When I started to sleep much better, I stopped getting noticeable colds and flu.

When I wrote my paper it was essentially impossible to test my idea. You need to measure a lot of sleep - and sleep scientists, intent on making it hard to do what they do, have made this nearly impossible. Perhaps it will soon be easier. To begin with, to test my idea you'd need to improve sleep somehow. To get more light exposure during winter is easy enough with a light box but measuring quality of sleep is much harder. Maybe [4]FitBit (which will start shipping in a few months) will make this possible. I tried using [5]SleepTracker to measure my sleep but after a few months I gave up. There were four big problems: 1. The interface didn't work very well. It was often hard to get the data from the device into my computer. 2. The whole thing wasn't designed to measure sleep, it was designed to wake you at a better time than you would wake up without it. 3. The way it measured sleep was a secret. 4. The output - the measure of sleep - was binary. All you were told was whether movement was above or below some threshold. And I had no idea how that threshold was determined.

1. <http://www.spiegel.de/international/world/0,1518,637119,00.html>
2. [http://en.wikipedia.org/wiki/Flu\\_season](http://en.wikipedia.org/wiki/Flu_season)
3. <http://www.ncbi.nlm.nih.gov/pubmed/7462597>
4. <http://www.fitbit.com/>
5. <http://www.sleeptracker.com/>

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Dennis Mangan (2009-11-07 12:32:19)

Seth, John Cannell and several others published a paper recently arguing that variations in vitamin D levels are responsible for the seasonal nature of the flu. Interestingly enough, this follows both the light - not temperature - minimum, and immune system involvement. Here's the abstract from PubMed (no link as it holds up the comment): On the epidemiology of influenza. Cannell JJ, Zasloff M, Garland CF, Scragg R, Giovannucci E. Department of Psychiatry, Atascadero State Hospital, 10333 El Camino Real, Atascadero, CA 93423, USA. [jcannell@ash.dmh.ca.gov](mailto:jcannell@ash.dmh.ca.gov) Comment in: \* Virol J. 2008;5:149. The epidemiology of influenza swarms with incongruities, incongruities exhaustively detailed by the late British epidemiologist, Edgar Hope-Simpson. He was the first to propose a parsimonious theory explaining why influenza is, as Gregg said, "seemingly unmindful of traditional infectious disease behavioral patterns." Recent discoveries indicate vitamin D upregulates the endogenous antibiotics of innate immunity and suggest that the incongruities explored by Hope-Simpson may be secondary to the epidemiology of vitamin D deficiency. We identify - and attempt to explain - nine influenza conundrums: (1) Why is influenza both seasonal and ubiquitous and where is the virus between epidemics? (2) Why are the epidemics so explosive? (3) Why do they end so abruptly? (4) What explains the frequent coincidental timing of epidemics in countries of similar latitude? (5) Why is the serial interval obscure? (6) Why is the secondary attack rate so low? (7) Why did epidemics in previous ages spread so rapidly, despite the lack of modern transport? (8) Why does experimental inoculation of seronegative humans fail to cause illness in all the volunteers? (9) Why has influenza mortality of the aged not declined as their vaccination rates increased? We review recent discoveries about vitamin D's effects on innate immunity, human studies attempting sick-to-well transmission, naturalistic reports of human transmission, studies of serial interval, secondary attack rates, and relevant animal studies. We hypothesize that two factors explain the nine conundrums: vitamin D's seasonal and population effects on innate immunity, and the presence of a subpopulation of "good infectors." If true, our revision of Edgar Hope-Simpson's theory has profound



implications for the prevention of influenza.

David (2009-11-07 13:07:31)

You might be interested in the zeo sleep monitor. It estimates the amount of deep, light and rem sleep. It would be better if the data could be exported into a spreadsheet. It's not perfect but I like it, I've been using it for a while.

LemmusLemmus (2009-11-07 13:12:45)

It's not perfect, but to measure quality of sleep, couldn't you simply ask people how well they slept, how rested they felt in the morning, etc., and related that to whether they get the flu?

Charles (2009-11-07 14:04:38)

Yeah, I gotta say that it's more likely that it's Vitamin D than it is sleeping better. In fact, I know a lot of people who say they sleep better in the winter. (Talk about anecdotal data!) And I think it's actually different for different people. I have moderate Seasonal Affect Disorder (SAD), and I live in the Pacific NW, so winters are dark. I get better sleep if I use my bright "SAD" light in the evening. And that's not uncommon. Bright morning light gives me more energy during the day, but doesn't help me sleep better. Vitamin D, however is a killer immune system booster...okay, bad choice of words. Since I moved to the NW, I've been taking 4-5000 units of D a day. And in three years, I have gotten only 1/2 of a cold that lasted for a couple of days. And I used to get 3-4 colds a year. I just felt another cold coming on in the afternoon, took 50,000 units of D3, and it was gone by the morning. Cannell has posted a couple of suggestive epidemiological stories that seem to demonstrate that D protects against influenza. All of this is not to say that sleep is not critical for immune system functioning. It is. But I think Vitamin D is more critical, and it contributes more to the immune system depression in the winter months.

justin (2009-11-07 14:29:39)

Not to just be a ditto comment, but I think it's the Vitamin D and not the sleep (or more the D than the sleep). Earlier this year my wife came down with the flu and I was initially not catching it from her – on the onset of a scratchy throat I immediately started megadosing Vitamin D3 – 20K IUs every day (I think I did 40K the first day, actually). My sore throat was gone in 24 hours and it never got worse. Prior to trying to megadose Vit D, once the sore throat hit, I'd automatically be in for a weeklong cold, at minimum. That it went away overnight on megadosing and never came back? Unprecedented. I've since repeated that experiment with the same results \*as has my wife.\* There is a big connection, apparently, between Vit D and respiratory infections. I have to point out an error in your post here as it pertains to Vit D. You wrote:

None of the possible explanations in Wikipedia involve the immune system working better in the summer than in the winter. (Yet another example of how the medical establishment overlooks the immune system.)

But on clicking through to the Wiki entry, I found this quote under "Mechanism for seasonal nature of influenza:"

Vitamin D production from Ultraviolet-B in the skin changes with the seasons and affects the immune system.

In conclusion, vitamin D for the win!

seth (2009-11-07 17:01:57)

Justin, thanks for the correction. Dennis, thanks for the link, I didn't know about that paper. I hope it is Vitamin D, so much easier to control than sleep. [1]Here is an 2006 version of Cannell's Vitamin D idea.

1. <http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=529704>

PS (2009-11-07 19:48:44)

Desperately anecdotal, but another idea for the mix. I live in Taiwan, and I've heard lack of sweating is a cause of colds. My home has no air con, so I sweat a lot in the long summer and mooch around in a sarong, but when the weather turns and I can start to wear real clothes I get my first cold of the season, which i then take to a sauna and sweat out.

David (2009-11-18 13:26:29)

just wanted to update/correct my previous comment on sleep tracking with Zeo and say that it now does support exporting the data to a spreadsheet. I noticed a big dip in REM and Deep sleep when I took an antibiotic a few months ago, pretty cool. here is a link to the zeo data export doc [http://mysleep.myezo.com/export/Export %20Data %20Help %20Sheet.pdf](http://mysleep.myezo.com/export/Export%20Data%20Help%20Sheet.pdf)

### Assorted Links (2009-11-07 12:21)

- [1]reservations about kombucha
- [2]an "alternative" treatment for asthma. Jane Brody, trained to think in black and white, manages not to. But not without apologizing: the article begins: Please forgive me for telling you this . . .
- why is [3]this excellent article about health-care improvement by an economics reporter?

Thanks to Carl Willat, Peter McDonnell, Stephen Marsh, and someone else whose name I cannot find.

1. <http://www.fungi.com/info/articles/blob.html>

2. <http://www.nytimes.com/2009/11/03/health/03brod.html?em>

3. <http://www.nytimes.com/2009/11/08/magazine/08Healthcare-t.html?ref=magazine>

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justin (2009-11-08 08:09:08)

Aren't many probiotics also somewhat antibiotics to "bad" bacteria, like kombucha? If I recall correctly, probiotics are often like this – they tend to exterminate bad bacteria. That you should only take an "antibiotic" probiotic when you're sick seems to ignore that you have bacteria in you at all times, and that maybe it's better to continually bias that bacteria to favor the good stuff over the bad.

Stephen M (Ethesis) (2009-11-08 11:50:31)

Economics is really several disciplines, one of which is what created the time and motion guys who were really systems analysts. In that sense, it makes sense that an economics reporter wrote that story.

Paul (2009-11-25 12:00:59)

I was thinking about making Kombucha, but the link that you have posted to has convinced me that it isn't the best of ideas. However, I have heard that drinking a small amount of apple cider vinegar(another fermented beverage) is also supposed to have very good effects on your long term health. Any thoughts on to the what the different effects of different fermented, acidic beverages are?

seth (2009-11-25 12:11:07)

Paul, I think the benefits of different fermented acid beverages are the same. They improve immune function. I suspect digestive improvements are small.

### How to Base Medicine on Evidence (2009-11-07 12:59)

The thing to notice about what the New York Times calls "[1]the evidence-based medicine practiced at Intermountain hospital" is how different it is than [2]the movement called evidence-based medicine. The Intermountain stuff, above

all, is not black-and-white thinking. It is a good example of what the opposite looks like. The rules aren't simple, they are complex, and not fixed. It is what engineers in other areas have been doing since Deming.

So many scientists – not to mention everyone else – are completely paralyzed, rendered completely useless, by their black-and-white thinking. It feels good to them – they love the certainty of it, and the power it gives them to look down on others – and they never quite realize what it has done to them. The notion of using evidence to improve health care made perfect sense – until black-and-white thinkers got a hold of it.

Any class in scientific method should be at least half about avoiding black-and-white thinking. They never are.

1. [http://www.nytimes.com/2009/11/08/magazine/08Healthcare-t.html?\\_r=1&ref=magazine](http://www.nytimes.com/2009/11/08/magazine/08Healthcare-t.html?_r=1&ref=magazine)

2. [http://en.wikipedia.org/wiki/Evidence-based\\_medicine](http://en.wikipedia.org/wiki/Evidence-based_medicine)

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### **Saturated-Fat Epidemiology (2009-11-07 22:15)**

[1]Here, at Free the Animal, are three scatterplots that show better health (less heart disease, less stroke) correlated with more saturated fat (= animal fat) in the diet. Each point is a different European country (Albania, Bulgaria, etc.). Small and large countries show the same relationship.

The obvious confounding is with wealth – rich people eat more meat than poor people. Were this data submitted for publication, I imagine someone would say how dare you fail account for that! and reject the paper. That would be a mistake. Because it is hard to look at this data and continue to think that saturated fat is the evil it is made out to be. And of course whatever the weaknesses of [2]my sleep/fat experiment (which showed animal fat improved my sleep), confounding with wealth was not one of them.

1. <http://freetheanimal.com/2009/11/drilling-down-saturated-fat-epidemiology.html>

2. <http://www.blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>

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Vince (2009-11-08 04:18:48)

A journal would be right to reject a paper based on this data that did not control for wealth. An analysis that accounted for wealth would be much more informative, and it wouldn't be hard to do. GDP per capita data are even available on Wikipedia - it shouldn't even take an hour to add them to your spreadsheet and run a few regressions (I might have done it myself, if he'd posted a table of his data). And it's important to do - lots of spurious correlations come up in between-countries data, since so many things are correlated with each other. Taking a look at [1]his graph which names the countries and puts them in order of saturated fat consumption, the correlation between sat-fat % and wealth looks to be extremely high, and I wouldn't be surprised if the correlation between saturated fat and health goes away completely if you control for wealth. Some of the outliers on his graph, like Israel and Turkmenistan, jump out as countries where wealth doesn't match saturated fat consumption.

1. <http://freetheanimal.com/images/2009/09/Sat-Fat-CHD.jpeg>

Jeff (2009-11-08 06:14:14)

I slept pretty damn well living in Argentina. Of course there are a lot of variables to account for, but I had a large bife de chorizo (flank steak) almost every day. The cuts of meat there were loaded with fat. Juicy, buttery, mouth-watering fat that. Now I can't get good cuts anywhere. I compromise with daily use of coconut oil.

seth (2009-11-08 06:25:53)

Vince, there is such a thing as overcorrection. X and Y and Z are all correlated, but when you control for Z the correlation between X and Y goes away. Not because the correlation is spurious but because X causes both Y and Z. It is foolish to look at a data set and start by asking how it might be misleading. It is better to start by asking what can be learned from it.

Vince (2009-11-08 07:11:06)

Seth, I'd guess that wealth has a big impact on diet and on health, and that the effect of diet on health is smaller (especially if you're only looking at a single nutrient). That means that it's hard to know what the data set is telling you if you just look at the correlation between diet and health. I favor looking at a data set in the way that's most likely to give meaningful results, adding in more data if that's helpful and practicable, and being careful in considering whether some ways of analyzing a data set are likely to be misleading. I decided to run the numbers myself, seeing if this relationship between saturated fat consumption and health holds up after controlling for wealth. It doesn't. The raw correlation between Saturated Fat Consumption as a Percentage of Total Calories (SatFat %) and Disability Adjusted Lost Years (DALY) is large,  $r = -.69$  ( $p$  less than .0001), but after controlling for GDP Per Capita (GDP/person) it basically becomes zero (it actually reverses direction, with more saturated fat associated with worse health outcomes, but it's nowhere close to statistically significant). All the numbers that I needed except for GDP per capita were in [1]Alex's first post. His first graph has labels with the SatFat % for 45 countries, and his last graph has labels with the DALY figures for those countries\*. I copied those numbers into a spreadsheet, and then added the GDP Per Capita numbers (from the [2]IMF, 2008). If you're interested, I could email you my data set. GDP/person correlated strongly with both SatFat % ( $r = .86$ ) and DALY ( $r = -.84$ ). And in a linear regression predicting DALY from both SatFat % and GDP/person, only GDP/person was a significant predictor ( $F(1,42) = 33.9$ ,  $p$  less than .0001); SatFat % was nowhere near significant ( $F(1,42) = .49$ ,  $p = .49$ ). This model explains 71 % of the variance in DALY ( $R^2 = .710$ ). The regression equation says that every additional \$1000 in GDP/person is associated with 98 fewer DALYs, and each 1 percentage point increase in SatFat % is associated with 54 additional DALYs (but this is not significantly different from zero). I tried a few variations on this analysis, seeing if transforming the variables made for a better model. Using the log of DALY instead of DALY is an improvement: the pairwise correlations are stronger ( $-.75$  and  $-.89$  instead of  $-.69$  and  $-.84$ ),  $R^2$  for the regression model goes up (.787 instead of .710), and Norway is no longer predicted to have a negative number of DALY. The pattern of regression results remains the same: GDP/person is a strong predictor of  $\log(\text{DALY})$  ( $F = 43.7$ ), and SatFat % has a very slight positive association with  $\log(\text{DALY})$  that is not close to being statistically significant ( $F = .05$ ,  $p = .83$ ). These analyses suggest that wealth (or something closely correlated with wealth) has a big impact on saturated fat consumption and on health, and that whatever impact saturated fat consumption has on health is too small to show up in this data set. \*Two countries, Moldova and Macedonia, were missing from the last graph, so I used their approximate DALY from the first graph, which plots DALY on the y-axis but doesn't label the exact number.

1. <http://freetheanimal.com/2009/09/saturated-fat-intake-vs-heart-disease-stroke.html>

2. [http://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_GDP\\_\(PPP\)\\_per\\_capita](http://en.wikipedia.org/wiki/List_of_countries_by_GDP_(PPP)_per_capita)

seth (2009-11-08 10:47:17)

"These analyses suggest that wealth (or something closely correlated with wealth) has a big impact on saturated fat consumption and on health, and that whatever impact saturated fat consumption has on health is too small to show up in this data set."

Vince, thanks for the further analyses. Here's an alternative explanation of your results: When people make more money, they eat more saturated fat. The increase in saturated fat intake improves their health. Perhaps this is what the data set is telling us. Perhaps it is saturated fat intake that is the "something closely correlated with wealth" that has a "big impact" on health. One way to look at it is this. Suppose I have a theory: more saturated fat  $\rightarrow$  better health. This data set could have contradicted that theory; the raw correlation could have been zero or negative. By passing a test, my theory gains credence. How much credence it gains depends on what else you believe. But to say it gains zero credence, as you seem to, is to place too much faith in your beliefs. You'd have to know what that "something closely correlated with wealth" is - which obviously no one knows. It's fine to notice the glass is half empty but to fail to notice it's half full is to miss the main point. When you learned correlational data analysis, no one ever discussed overcorrection? Pointing out the alternative interpretation that I just pointed out?

Vince (2009-11-08 23:28:58)

If I have a theory that one feature of rich countries causes another feature of rich countries, and I look at the correlation between those two variables, then it's a pretty safe bet that the correlation is going to be there regardless of whether or not my theory is correct. Wealth, health, education, energy usage, meat consumption, political freedom, gender equality, age at first marriage, and a bunch of other variables should all be correlated with each other (looking just at the raw correlations), and that tells us very little about the causal relationships between them. Once you know that X is a feature of wealthy countries, there really isn't much chance of failing to find a raw correlation between X and another feature of wealthy countries, so that correlation isn't very informative as a test of a theory. You need to do other analyses to start to tease apart the relationships between the variables in order to gain (or lose) credence in the theory. If saturated fat causes substantial improvements in health, then for equally rich countries we would expect the ones that eat more saturated fat to be healthier. That's what the regression looks at - holding wealth constant, are countries that eat more saturated fat healthier? The answer, in this data set, is that they aren't. If two countries are equally rich, and the people of one country eat much more saturated fat than the other, the best guess is that they are equally healthy (if anything, you'd be better off guessing that the one that eats more saturated fat is slightly less healthy). If saturated fat consumption explained the relationship between wealth and health, we'd expect it to remain significant in the regression - we might even expect wealth to become nonsignificant, since if wealth only matters as a way to increase a country's saturated fat intake, once you know how much saturated fat they eat then knowing their wealth won't tell you anything useful. (That's why psychologists commonly use regression to test for mediation.) So I don't think that the data fit your alternative explanation. None of this means that your theory is wrong - there are plenty of reasons why we might find no relationship between saturated fat consumption and health in the regression even if saturated fat does improve (or worsen) health. Maybe the effect of saturated fat on health isn't big enough (relative to the other factors that influence a country's health) to explain a significant amount of the variability between countries, but it still has enough of an effect to be important to individuals. Maybe there are other relevant variables that we aren't accounting for (e.g. countries that eat more saturated fat may also tend to eat more X, and X could be good or bad for people's health). Maybe we aren't using the most relevant measure of health (saturated fats could make people healthier or less healthy in some way that doesn't show up in the DALYs), or we aren't using the most relevant measure of saturated fat consumption (maybe total saturated fat eaten is more important than the percentage of your calories that come from saturated fat). None of these, though, are good reasons to favor the raw correlation over the regression results, or to favor your theory over the standard theory (that saturated fats are harmful). They could be good reasons to pay more attention to your self-experimentation and other individual-level data instead of country-level data.

seth (2009-11-09 00:43:46)

Before I saw this data set I knew that people in rich countries eat more meat. But I didn't know that they had less heart disease and less stroke. That's why this data set is informative. I have no idea how you could have known that to be true, as you seem to be saying. Lots of diseases become more common with wealth. There's a whole category just for them: diseases of civilization. "If saturated fat consumption explained the relationship between wealth and health, we'd expect it to remain significant in the regression." Where in the world did you get this idea? "Significant" is a highly arbitrary criterion, as I'm sure you know. There is error in everything, as I'm sure you know. Have you ever encountered a discussion of overcorrection? And the bigger question is: What do you think can be learned from this data set?

Tom Moertel (2009-11-09 17:48:09)

Vince, Would you mind sharing your data set, perhaps posting it as a Google-Docs spreadsheet? I'd like to take a look at the set, without duplicating effort if possible. Thanks! Cheers, Tom

Vince (2009-11-10 20:53:21)

Tom, [1]here's the data set on Google Docs (hope that worked). Seth, here's my general take on using this data set to test your theory. We know that there are many ways in which richer, more developed countries differ from poorer, less developed countries. So when you're interested in looking at some variable between countries, it's important to check whether it's one of the many variables that are associated with development level. If it is, then it will be correlated with the other variables that go with development level, and those correlations (on their own) won't be very informative about

the causal relationship between a specific pair of variables since they just show that both are part of the same package (development). As a first, simple step to see if two specific variables are causally related, you can run a regression controlling for some measure of development (such as GDP per capita) to see if it still holds up - are they related to each other beyond what you'd expect from them both being features of developed countries? What can be learned from this data set? If saturated fat had been a significant predictor of health then that would have been some (fairly weak) evidence in favor of the theory that saturated fat is beneficial to your health (or harmful, if it came out in the other direction). Instead, it turned out that there was basically no relationship between saturated fat and health in the regression, which I take as (fairly weak) evidence that differences in saturated fat consumption do not play a big role in causing those health outcomes, compared to other factors that differ between countries. Further analyses could challenge that interpretation. You're right that there's nothing magical about the .05 cutoff for significance, and a relationship in the predicted direction that isn't quite statistically significant but is big enough to be practically meaningful could still count as (weak) evidence in favor of the theory. In this case, arbitrary significance cutoffs aren't the issue - the relationship between saturated fats and health in the regression is in the wrong direction for your theory, and in the analysis that seems to fit the data best (predicting log(DALY)) it is very close to zero and very far from statistical significance ( $p = .83$ ). To answer your specific statistical questions, I've learned about various potential problems with regression, including overfitting and multicollinearity, but I haven't studied "overcorrection" under that name (and a quick google search doesn't help). The idea that "if saturated fat consumption explained the relationship between wealth and health, we'd expect it to remain significant in the regression" basically comes straight from the standard Baron & Kenny take on mediation. Some patterns of results might suggest that there's just not enough power for it cross the threshold of statistical significance, but that does not seem to be what's happening in this case.

1. <http://spreadsheets.google.com/ccc?key=0AtvQdFkPNB26dGpSWTRUM3ktUHVMMTAwSDV5cU4tcckE&hl=en>

seth (2009-11-10 22:40:32)

Vince, thanks for answering my questions. Baron & Kenny contains a whopper of a mistake. I'll be curious to see where they got this strange idea. This might be a good example for my statistics column. If we knew that wealth affects health without saturated fat having anything to do with that connection (between wealth and health), then it would be sensible to adjust for wealth and see what remains. But that isn't true. We don't know how wealth affects health. Having more money in your pocket or bank account doesn't automatically make you healthier. Having more money changes behavior - those changes are what make the difference in health. One effect of having more money is that you buy and eat more meat. This change may produce a large part of the wealth-health correlation. I guess most epidemiologists are unfamiliar with the concept of overcorrection. It is related to multicollinearity, of course, but I gather they haven't understood how it can mislead them.

Gian (2009-11-11 01:33:08)

In India, best health indicators are in the state of Kerala where they use a lot of coconut oil. Indicators like maternal death, infant mortality etc are lower in Kerala despite Kerala being less wealthy than other Indian States. Sri Lanka also is high in coconut oil usage and health indicators. Economists usually explain (away) this as owing to greater economic equality in Kerala but I don't buy this.

seth (2009-11-11 06:36:42)

Gian, I've wondered if coconut oil (very high in saturated fat, like animal fat) could substitute for animal fat. So this is very interesting.

Richard Nikoley (2009-11-11 09:14:38)

Seth: Re coconut oil, you might be interested in the Tokelau Island Migrant Study. Dr. Stephan Guyenet at Whole Health Source did a whole series on this study, and, by the way, Tokelauans traditionally got almost 50 % of total energy from saturated fat (coconut fat is about 90 % saturated). Take a guess about their health. Take another guess about the health of those who migrated to NZ and began eating neolithic foods. I blogged about Stephan's series here, with all the links in one place. <http://freetheanimal.com/2009/01/saturated-fat.html> Also, at the top of the blog, I just began a new series on sat fat & heart disease, springing off of some strong claims by a renowned epidemiologist in New Zealand.

Carbs Kill and Eating Animals Saves Lives | Free The Animal (2009-11-11 15:58:25)

[...] As you'll discover, the impetus behind the second post was Shanghi-La Diet author Seth Roberts' complaint about how some of the data was presented. He now appears satisfied, but one of his readers isn't. You can read those comments here. Essentially, Vince ran the numbers but corrected for GDP in each country and the significance went away. Well, at least the correlation didn't reverse the other way. [...]

Richard Nikoley (2009-11-11 16:00:48)

Seth: Alex just ran data on absolute animal fat consumption and I put the post up immediately. <http://freetheanimal.com/2009/11/carbs-kill-and-eating-animals-saves-lives.html> I've asked Alex for the data so those who want can download it. When I get it, I'll upload it. Then, perhaps Vince would be so kind and to run his GDP corrections.

Vince (2009-11-11 18:26:38)

In response to Seth's comment from last night: I have no idea what epidemiologists are familiar with. My statistical training is in psychology. Here's [1]Kenny's website on the Baron & Kenny approach to mediation (with some updates since their oft-cited 1986 paper). I don't think that we need to know that wealth affects health. I've been thinking of GDP per capita as a proxy for level of development, so controlling for it is a way to test whether the correlation between saturated fat consumption & health is just due to the fact that they both go along with higher levels of development or if there's a more direct relationship between them. Do you disagree with any of these 5 points? 1. The health measures that we've been looking at improve at higher levels of development. 2. Saturated fat consumption increases with higher levels of development. 3. 1 & 2 don't provide much support for the theory that saturated fat consumption causes health improvements. 4. The combination of 1 & 2 implies that saturated fat consumption will be correlated with those health measures, so a correlation between them does not provide any additional information. 5. The regression (controlling for GDP/person) does not provide any support for the theory that saturated fat consumption causes health improvements. Put those together, and it looks like we don't have much support for your theory at the country level. Also, I don't think that any of these points depend on the regression methodology issues that we've been debating.

1. <http://davidakenny.net/cm/mediate.htm>

seth (2009-11-11 19:48:53)

Vince, we don't know how level of development affects health. (The effect is surely complex, since there are both diseases of affluence and diseases of poverty.) Forgive the emphasis, but you seem to keep missing this point. Until we do, there is danger of overcorrection. Perhaps greater development reduces heart disease and stroke (in this data set) because it causes more saturated fat consumption. If so, then if we "correct" for level of development we will thereby remove some or all of the effect of saturated fat on health. If we then - as you did - correlate saturated fat and the residuals (health after the "effect" of level of development has been taken out) and find zero correlation, we are fooling ourselves if we take this to mean saturated fat is unimportant. In case that isn't clear, let me tell you an example that might be clearer. Suppose Little League participation improves a child's fitness. We know this, it's been measured. Someone comes along and finds that running laps improves fitness. A strong correlation. It so happens that Little League participation involves running laps because that's one thing coaches do: make their players run laps. And most kids run laps only if they are in Little League. If an epidemiologist came along and factored out Little League participation from the running laps/fitness correlation, and thereby concluded that running laps doesn't affect fitness, we'd all understand the epidemiologist was missing something.

Stephen M (Ethesis) (2009-11-12 11:38:27)

To think I got what is mediation by visiting <http://adrr.com/> ;)

Vince (2009-11-12 18:41:03)

Seth, there are two questions here. First, do these data provide support for your hypothesis (sat fat is good for your health)? Second, what do these data suggest? My answer to the first is that they do not (or, at best, they provide very little support). My last comment tried to focus on that first question (these correlations don't provide much support for the theory), but it looks like you're mainly addressing the second. To put the focus back on the first question, is there a desirable health outcome that is associated with development that you are fairly confident is not caused by saturated fat consumption? Maybe infant

mortality? Because I'd guess that if we ran the same analyses predicting that health outcome then we'd find a similar pattern of results to what we find with heart disease & stroke. Which would suggest that the results don't provide evidence of a causal relationship.

seth (2009-11-13 02:04:12)

Vince, I agree that other data might come along that would change how persuasive I find these data. If someone finds that more X (not saturated fat) reduces heart disease (causality is established), and that greater development is correlated with more X, then yes, this data would become less persuasive that saturated fat is healthy. In reply to your question – is there some health benefit correlated with increasing development that I'm "fairly confident" isn't due to greater saturated fat consumption? – the answer is yes, better vision. (Due to more access to glasses.) I hope you can see that this sort of thing doesn't help. Sure, correlations can be misleading. Sure, if we look hard enough we can find an example. They can also be informative.

Tom Moertel (2009-11-17 22:20:23)

Vince, Seth is right about the potential for "overcorrection," which I would call plain confounding. The idea becomes clear when you think in terms of causality instead of statistics. Let's say we have the following, simple (causal) model, represented as a directed graph:  $\text{SatFat} \rightarrow \text{Health}$  where the arrow  $\rightarrow$  denotes that saturated fat \*causes\* some effect on health. We are not saying what that effect is (positive or negative), or whether it is large enough to matter. All we are saying is that in our model, saturated fat has causal influence over health. We are also claiming, by virtue of our arrow not being bidirected or pointed the other way, that health does not cause saturated-fat consumption. (Here our domain knowledge comes into play to rule out an absurdity.) Now, if we were confident that there were no other factors that could affect the relationship between saturated fat and health \*causally\*, we would consider the relationship to be identified, and we could estimate it directly from our observational data. But in this case we have no such confidence: we can think of many factors that could exert causal influence on both saturated fat and health, wealth for example. Let us therefore update our causal model to reflect that we expect wealth (as a proxy for societal development) to have some causal effect on health, and also upon saturated-fat consumption (meat being expensive). To Seth's point, we don't know what this effect is, but knowing that it probably exists is enough for us to be obliged to update our model:  $\text{SatFat} \rightarrow \text{Health}$   $\text{Wealth} \rightarrow \text{SatFat}$   $\text{Wealth} \rightarrow \text{Health}$  (At this point, you might want to draw the directed graph on paper, arranging the three nodes SatFat, Health, and Wealth as the points of a triangle whose sides are given by the arrows above.) But still, we must recognize our model as incomplete. The effect of wealth on health, for example, is almost certainly not direct. Giving people money doesn't make them healthier. The effect is likely to be mediated by other factors such as health care, which converts money into health. But for now we can omit such factors for simplicity. What we cannot omit is the possibility of other factors that affect both wealth and health (e.g., government policy, social stratification) or both wealth and saturated-fat consumption (e.g., religious beliefs, geography). To represent the potential for these unaccounted-for causal influences, we can introduce mystery edges to our model:  $\text{SatFat} \rightarrow \text{Health}$   $\text{Wealth} \rightarrow \text{SatFat}$   $\text{Wealth} \rightarrow \text{Health}$  where  $X \rightarrow Y$  denotes that an external factor (or factors) influences both X and Y. Now, here's where it gets interesting. One of the recent findings of causality theory [1] is that you can use the information encoded in a directed graph to determine which causal relationships are identified, that is, can be determined from observational (nonexperimental) data. I won't go into all the background, but in a graph like the one above, if you condition on a variable such as wealth, you will confound the relationship between saturated fat and health. For a short explanation of this phenomenon, consider the following 3-node graph:  $X \rightarrow Z$   $\text{Health} \rightarrow \text{SatFat}$   $\text{Wealth} \rightarrow \text{Health}$  Thus conditioning on wealth blocks the first path but opens the second; not conditioning leaves the first open. What this means is that we will need a more sophisticated model (and more corresponding observational data) if we want to ferret out the causal effect of saturated fat on health. (I'm working on some of these models in my spare time. If I come up with anything interesting, I'll be sure to share my findings.) Cheers, Tom [1] [http://ftp.cs.ucla.edu/pub/stat\\_ser/r350.pdf](http://ftp.cs.ucla.edu/pub/stat_ser/r350.pdf) [2] <http://www.andrew.cmu.edu/user/scheines/tutor/d-sep.html>

Tom Moertel (2009-11-18 06:31:33)

Sorry, folks. My previous post, if you tried to read it, gets hopelessly disconnected about halfway through. It seems that WordPress's markup filter has deleted a few of its paragraphs and mangled a few of its diagrams. (Lesson: don't draw diagrams using symbols that WordPress is likely to mistake for HTML.) I have posted the original text here: <http://community.moertel.com/thor/blog/seths-blog-satfat-causality.txt> It should be much, much easier to understand.



;-) Cheers, Tom

Eric (2010-09-01 03:22:39)

Protein is the factor that makes the picture more complete. Poor people eat more of a percentage of animal fat calories than animal protein calories. Eat fat not protein {After 60 about 6 % seems to be right but more testing is needed } Protein is needed for health. Too much or too little can kill or cause illness. <http://www.impactaging.com/papers/v1/n10/full/100098.html> The right percentage for someone 60 or over can add as many healthy years as caloric restriction with better overall health and appearance.

### **Preventing Childhood Asthma (2009-11-08 11:41)**

[1]This website – about how to prevent childhood asthma – placed an ad on the Drudge Report. Those ads aren't cheap. Apparently the Environmental Protection Agency paid for it. It says to prevent asthma you should try to avoid all triggers. Whereas I think it's better to deal with the oversensitivity, which I believe can be cured with dietary bacteria.

1. <http://www.noattacks.org/index.html>

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Sally O'Boyle (2009-11-09 06:42:20)

You have an ad on your site promoting a "drug free world" which leads to a propaganda site about drugs. Please visit <http://norml.org/>, <http://leap.cc>, <http://stopthedrugwar.org/> for an education on the drug war and what it's costing us, particularly in terms of our young people. Marijuana is a miracle drug, hemp is a miracle fabric. The pharmaceutical industry is behind keeping marijuana illegal. As the mother of two teen boys, I agree that all drugs, including alcohol and tobacco, must be kept out of the hands of our young people. The war on drugs has failed miserably on this front. We need a new tactic. Spreading lies about drugs won't work. Kids are too smart for this, they know the truth.

### **FDA Hid Research Showing that Aspartame is Dangerous (2009-11-10 06:57)**

[1]Here is a lot of information about this. The commercial name for aspartame is Nutrasweet. Because of worries about its neurotoxicity I switched to Splenda long ago. But if the FDA approval process is so deeply flawed they approved Nutrasweet, how safe is Splenda? In China, I've managed to pretty much avoid artificial sweeteners.

1. [http://www.laleva.org/eng/2009/11/fda\\_hid\\_research\\_damning\\_to\\_aspartame.html](http://www.laleva.org/eng/2009/11/fda_hid_research_damning_to_aspartame.html)

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Conrad Hackett (2009-11-10 10:42:28)

Perhaps artificial sweeteners are harmful but the site you linked to does not inspire confidence. In scanning popular articles on the site, I learned that vaccines cause the flu, swine flu was engineered in a lab, and there is a conspiracy involving AIDS research in Africa and exploitation of natural resources. A few of the many claims on this site may be even correct but good

luck separating the fact from the fiction. Here is a key sentence from the linked article, "The sweetener should no longer be used for human consumption, although perhaps, with appropriate warning, it could be sold as an effective ant poison." There are many challenges involved in evaluating the effect of artificial sweeteners upon humans. However, it should be much easier to evaluate the claim that aspartame is an effective ant poison. If this claim is true, it could lend credibility to the theory that aspartame is bad for humans. If the claim is false, it casts into doubt the credibility of other evidence in the article. Guess what happened when Snopes.com investigated the ant poison claim? <http://www.snopes.com/humor/iftrue/antpoison.asp>

Glen Raphael (2009-11-10 13:18:55)

The FDA's processes are based on the linear dose-response hypothesis, which we know is false. So what makes you think Aspartame is a significant hazard? Given a default assumption of hormesis and a U-shaped or J-shaped rather than linear dose-response curve, for all we know aspartame might cause cancer in the usual lab-rat experiments AND simultaneously be protective or neutral in typical human doses. Running some numbers: they dosed rats with 0, .75, 1.5, and 3.0 grams per kilogram of body weight per day. A can of diet coke has 131 mg of aspartame and I weigh around 81 kilos, so if my math is right I'd have to drink 470,000 cans of diet coke per day to reach .75 g/kg. I do drink quite a lot of diet coke, but I think it's safe to say the amount I drink is enough \*lower\* than 470,000 cans per day that other effects might predominate at the level I consume than did at the level those rats consumed. I agree that the FDA's process is deeply flawed, but the flaws mostly go in the direction of not allowing people to take \*enough\* risks with their health.

Glen Raphael (2009-11-10 13:29:05)

Wait, the math isn't right - it's off by a factor of a thousand. Nonetheless, the underlying point still works. Hormesis. Nonlinear dose response. Oh, and the main reason people think Splenda is probably safer is that it's even sweeter per unit volume than aspartame so you need less of it in your food or in your body to produce the same effect.

seth (2009-11-10 14:43:13)

Glen, it is the suppression of evidence that concerns me. I think the ant poison claim was a joke. True, the website contains a lot of nonsense. As for whether or not Nutrasweet is truly harmless, as you seem to believe, what caused the vast increase in brain cancer over the last decade or so? I don't know. I cannot rule out the possibility that it has been caused by Nutrasweet, but if you can I'd love to hear why. Here is an article about the increase: <http://www.enotalone.com/article/8482.html>

Glen Raphael (2009-11-10 19:17:34)

I think it is really odd to pick NutraSweet - out of all the changes in the world - as the \*one\* likely possibility. We ingest zillions of chemicals every day that haven't been studied as thoroughly as Nutrasweet. Almost everything is cancerous or deadly if you eat enough of it, including many natural food ingredients. I can't positively rule out Nutrasweet as a factor but I see no reason why we'd suspect it more than any other dietary or technological change. I also can't rule out: drinking Starbucks coffee, greater access to dental care (including X-rays), wearing Walkman or iPod headsets, using cellphones, obesity, sunscreen, tanning, watching television, taking megavitamins...the list is endless. One thing we can say for sure is that \*some\* of the change is caused by better scanning technologies, greater affordability of health care, and higher expectations of doctors. Another thing we can say for sure is that overall life expectancy in the US is still climbing and overall cancer-related deaths have been decreasing despite this "vast increase" in one type. (Do you have a chart of that vast increase? I found this one from the UK: <http://info.cancerresearchuk.org/cancerstats/types/brain/incidence/?a=5441> )

seth (2009-11-10 22:19:21)

I haven't been able to find a graph of the increase in brain cancer but if you doubt it is happening, here is more evidence: <http://ces.iisc.ernet.in/hpg/envis/bradoc1117.html> why suspect Nutrasweet more than other environmental changes? because it caused brain damage in animals. That's better evidence of danger to the brain than is available for many other environmental changes.

Conrad Hackett (2009-11-10 23:47:49)

Seth, I think you instinctively give too much credit to those who doubt conventional medical wisdom. Yes, I agree that the

aspartame was mentioned in the article as ant poison in a humorous fashion but what you do not acknowledge is that the humor is predicated on it being true that aspartame does indeed kill ants. The author of the article you cite reveals no awareness of the fact that claims of aspartame's ant poisoning ability have been debunked by Snopes. Instead, the author links to yet another claim that aspartame does function as an ant poison. The author reveals an inability to separate fiction from fact. This does not necessarily mean all other claims in the article are wrong, of course, but it does raise questions about credibility.

Glen Raphael (2009-11-11 10:47:03)

I don't doubt there's been an increase, I just doubt that the pattern of the increase matches Nutrasweet particularly well. It's not enough to search for confirming evidence for a hypothesis; you have to search for disconfirming evidence too; your sources on this issue don't seem to be doing that. So here is some: <http://www.cancer.gov/cancertopics/factsheet/risk/aspartame> "A study of about half a million people, published in 2006, compared people who drank aspartame-containing beverages with those who did not. Results of the study showed that increasing levels of consumption were not associated with any risk of lymphomas, leukemias, or brain cancers in men or women. "

seth (2009-11-11 14:30:16)

Thanks, Glen. I didn't know about that study. I agree, that study does suggest that aspartame isn't to blame for the increase.

John E. Garst, Ph.D. (Medicinal Chemistry, Pharmacology, Toxicology, and Nutrition) (2009-11-12 14:19:34)

This post is garbage. But interested people should know the facts, so here they are. The reader should know that aspartame is perfectly safe; it is perhaps the most studied substance in history. It is approved for use as a sweetener by all the world's relevant regulatory authorities. Its safety has been assessed and affirmed by virtually every relevant regulatory authority in the world and just reaffirmed by the European Food Safety Authority (EFSA, see their website). Aspartame is finding use in many products in the USA, because it is listed as GRAS (generally accepted as safe). That means it can be used in virtually anything, because it poses no known hazard at the dosages involved. Aspartame has been used by millions and millions of people for over twenty years without any viable health issues. There is, however, an internet conspiracy theory claiming things both about its approval and its safety, attributing 90+ problems to aspartame. But FDA approval was over twenty years ago and is irrelevant now anyway. Aspartame's methanol is metabolized by the folate enzyme system. If real at all, any health claims are likely personal sensitivity issues stemming from the still widespread folate deficiency, a folate enzyme (polymorphism) problem, or a homocysteine toxicity issue explained by folate and other biochemical issues. The interested reader can read my new discoveries explaining such sensitivity and confirming aspartame safety in my comments to <http://blog.rv.net/2009/09/green-tea-a-natural-alternative-to-sugary-sodas/comment-page-1/#comment-85221>. The conspiracy theory also has no real scientific merit. For more on specifics, see Snopes comments: <http://search.atomz.com/search/?sp-q=aspartame&sp-a=00062d45-sp00000000&sp-advanced=1&sp-p=all&sp-w-control=1&sp-w=alike&sp-date-range=-1&sp-x=any&sp-c=100&sp-m=1&sp-s=0>. While there are no scientific papers that support any of this website's claims, there is much evidence to deny every one. First, consider the extensive review of aspartame safety (Magnuson, <http://www.fte.ugent.be/vlaz/Magnuson2007.pdf>) that discusses aspartame science and addresses earlier criticisms. Second, consider that the only papers questioning aspartame safety have been or are in the process of being dismissed as valid criticisms. Only two groups report data suggesting any concern with aspartame that cannot be dismissed outright. These are multiple papers from the European Ramazzini Foundation (ERF, Soffritti et al) and a single paper by a Spanish group (Alemany, actually Trocho et al). But both are mistaken scientific papers. The ERF papers are so badly done that they likely will be withdrawn by the journal. In work reported only in abstract form, I found in 2008 that the ERF experiments were fundamentally flawed in at least three ways fatal to their acceptance. Full presentation is in process. But another fatal flaw has just been reported. All the ERF rats in many studies, not just on aspartame but on other compounds as well, were infected likely with *Mycoplasma pulmonis* ([http://www.ncbi.nlm.nih.gov/pubmed/19430000?ordinalpos=2&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_DefaultReportPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/pubmed/19430000?ordinalpos=2&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum)). The consequence of that infection is that everything the ERF has reported on the carcinogenicity of not only aspartame, but on many other chemicals they claimed to be carcinogenic is but an artifact of their animal's standing infection. In turn their artifacts may well be a consequence of their prior and developing folate deficiencies or homocysteine toxicity issues. The other work by Alemany possessed similar flaws to what I suggest for the ERF work. But, because their flaws enhanced

binding of radiolabeled methanol in aspartame and facilitated their investigation into its binding targets, they are mostly experimentally acceptable, if still unacknowledged. They found that aspartame's methanol-derived radiolabeled binding to protein and to DNA in rats. But from this discovery they jumped to the conclusion that this meant aspartame constituted a hazard. They came to the wrong conclusions about aspartame safety, but their seemingly honest error arose because they simply did not identify the actual proteins and DNA bound. Good scientific evidence uncovered over the past years now suggests structures for those proteins and for the DNA that indicate this radiolabeled binding not only poses no hazard at all, but actually proves aspartame safety (also to be published). Scientific dismissal of both works leaves nothing left to dispute aspartame safety! Third, another of multiple confirmations of aspartame's safety was reported this year: Artificial sweeteners and the risk of gastric, pancreatic, and endometrial cancers in Italy, [http://www.ncbi.nlm.nih.gov/pubmed/19661082?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_DefaultReportPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/pubmed/19661082?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum). Not only does this paper support aspartame safety, it came from the same country and a far more prestigious group than the ERF work that questioned aspartame (above). Time after time aspartame has been found to be perfectly safe. (Also the cited link's comments about brain cancer are totally garbage too. Besides being old and out of date, brain cancer has been clearly associated with folate deficiency and related issues, but that is another separate post.) John E. Garst, Ph.D. (Medicinal Chemistry, Pharmacology, Toxicology, and Nutrition) (FYI, the author has absolutely no financial or biasing connection with the aspartame, the soft drink or their related industries. The author has a Ph.D. in Medicinal Chemistry (Pharmacy) from the University of Iowa, postdoctoral experience at Yale University (Molecular Biophysics & Biochemistry) and at Vanderbilt University and taught nutritional toxicology at the University of Illinois (Champaign-Urbana) besides having conducted federally funded research at Vanderbilt, UIUC, and at several other universities before recently entering into retirement.)

### More Animal Fat, Better Sleep (2009-11-10 15:44)

After I wrote about [1] eating a lot of pork fat and sleeping better, [2]David Shackelford [3]commented that he had had a similar experience: After he started eating much more animal fat and meat, he too slept better. (He [4]posted about this before he read my post.) I asked him for details. He answered:

About three weeks ago, I started a carnivorous diet. I did this primarily for its supposed benefit to insulin sensitivity, energy levels, and general health, and also because I wanted to see if it was really possible to thrive on nothing but meat.

Immediately after starting, I noticed that I was sleeping easier, longer, and deeper, and having more vivid dreams than usual. I've had a hard time falling asleep for my entire life, usually taking 45 minutes to two hours after going to bed, and occasionally not being able to sleep at all, so this was a very pleasant surprise.

At first I thought that this was due to standing on one foot, which I had started a few days prior, but I stopped one-foot-standing and the effect persisted. The all-meat diet has been pretty great all around- food is delicious, I've got a ton of energy, and I'm rarely hungry-but the sleep has been the best part.

Me

21 years old (senior in college)

130-ish lbs

5'4"

12-15 % body fat

Moderately active, fairly good shape.

My diet

- Breakfast of 3-4 egg omelette, with 1-2 oz cheese and occasionally bacon.
- Lunch: chicken breast, sausage, or eggs.
- Dinner: 1lb+ steak.
- Snacks: nuts and/or cheese.

#### Approximate macronutrient composition

Before: 50 % carbohydrate / 30 % protein / 20 % fat (at least half unsaturated olive oil)

After: 60-70 % fat (all animal fat), 30-40 % protein; 10 % carbohydrates (nuts and the occasional glass of wine, plus trace amounts in sauces and cheeses). Unsure of my caloric intake; I think it varies between 1500 and 2000 a day.

#### Other

- I cook chicken, beef, and eggs in butter.
- I drink coffee 1-2 times a day, and tea about once a day.
- I take a multivitamin (I don't know why), 5,000 IU Vitamin D (I live in Oregon, which gets very little sunlight), and 2.5g fish oil (the grain-fed beef I eat has low 3:6 ratios; if I could afford grass-fed, I probably wouldn't need the fish oil).
- I let the diet go on weekends, for the sake of social life. I probably have 3-5 drinks on Friday and Saturday night, as well as some junk food (pizza/chips/fries). I feel like I don't sleep quite as well on these days, but there are so many confounding variables (alcohol, staying up later than usual, seeing faces later into the night, sex) that isolating a cause of the difference is tough.

#### Exercise

- I lift weights for about 30 minutes, twice a week.
- I go out social dancing for about four hours, once to twice a week.
- Sleep does not seem to vary with whether I exercise or not.

He blogs about this at [5]meatsaur.us. His story is more evidence that the animal fat/sleep connection is cause and effect (animal fat -> better sleep), and suggests that the effect is not limited to me.

[6]My self-experiment about this.

1. <http://www.blog.sethroberts.net/2009/10/24/effect-of-animal-fat-on-sleep/>
2. <http://www.dshack.net/>
3. <http://www.blog.sethroberts.net/2009/10/24/effect-of-animal-fat-on-sleep/#comment-356004>
4. <http://boards.sethroberts.net/index.php?topic=7330.msg92874#msg92874>
5. <http://meatasaur.us/>
6. <http://www.blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>

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Meatasaur (2009-11-10 16:18:04)

Welcome, Seth Roberts Readers... Seth [found me](<http://www.blog.sethroberts.net/2009/11/10/more-animal-fat-better-sleep/>) after I commented on one of his posts about animal fat and sleep, and I was happy to answer questions about my diet's positive effect on sleep quality. I know I...

Patrik (2009-11-10 18:06:44)

Eating Paleo like this guy ended my insomnia. I think it is likely that both: a) increased intake of saturated fat and b) decrease in intake of anti-nutrients found in grains helped me.

Gerry (2009-11-10 19:16:08)

I agree with your observations. I pity the folks who are still fat-phobic. Do check out Peter's post about lardo (including pictures) on his blog: <http://high-fat-nutrition.blogspot.com/>

Mike Kenny (2009-11-10 21:35:16)

I was reminded of a post way back on this blog that I think referenced Tim Ferriss' idea that milk was what made him sleepy. Milk is pretty fatty, is it not?

seth (2009-11-10 22:22:29)

Mike, a cup of milk has far less fat than the amounts of pork fat I'm eating. Milk is usually thought to cause sleepiness because of tryptophan. Although milk can apparently cause you to fall asleep faster, that's quite different than sleeping more deeply, which is the effect I see of pork fat.

rachna (2009-11-11 11:53:26)

eating Paleo has helped me & many of my friends too! - more energy/strength during workouts, and good sleep!

Jim (2010-01-17 22:02:06)

I've posted a little about Unilever's war on butter at my blog at [1][blogsthatmakemethink.blogspot.com](http://blogsthatmakemethink.blogspot.com)

1. <http://blogsthatmakemethink.blogspot.com/2010/01/manufactured-food-company-launches.html>

### **Three Things Elizabeth Kolbert Doesn't Know (2009-11-11 05:41)**

A staff position at The New Yorker is the best journalistic job in the world. Elizabeth Kolbert, a very good writer and reporter, has one of them. In the current issue, [1]criticizing Superfreakonomics, she writes:

To be skeptical of climate models and credulous about things like carbon-eating trees and cloudmaking machinery and hoses that shoot sulfur into the sky is to replace a faith in science with a belief in science fiction.

I cannot discuss engineering ("carbon-eating trees", etc.) but I can discuss science ("climate models"). Here Kolbert shows the same limitation that practically every science journalist shows (the big exceptions are Gary Taubes and John Crewdson): They take the consensus view too seriously. In case after case – so many that it's hard not to draw sweeping conclusions – the consensus view about difficult topics is more fragile than an outsider would ever guess. It's not necessarily wrong, just less certain.

Kolbert places too much faith in those climate models. Here are three things Kolbert doesn't know:

1. For years, [2]as I've blogged, Leonard Syme, an epidemiology prof at Berkeley, taught his students to distrust one mainstream public-health conclusion after another. Maybe 12 examples in all. He showed them facts they didn't know. All of a sudden the picture wasn't so clear any more. That he could do this in so many cases, one case per week, is what's telling.

2. If you believe mainstream ideas about weight control, the Shangri-La Diet is absurd. It can't possibly work. Since it has actually worked in countless cases – more than half the time, as far as I can judge – the experts, it appears, got it utterly wrong. Long before me, Michel Cabanac, a professor of physiology at Laval University, was saying the same thing – that the consensus view about how to lose weight was wrong. No matter how many millions of times journalists repeated it. The Shangri-La Diet merely makes it vividly clear he was right.

3. Hal Pashler and I wrote [3]a paper about how mental models based on fitting data were delusional. The data that supposedly supported them did not. To take seriously a model because it could fit data was a mistake, we pointed out; what matters is correct predictions. It isn't easy to figure out the predictions of a model with many adjustable parameters; and the modelers in these cases never did. These models were accepted professionally for half a century; perhaps they still are.

It is possible that climate modelers have a different psychology than scientists in other areas – that the evidence for the consensus presented to outsiders is as strong as the scientists involved say it is – but it seems highly unlikely. For example, I doubt the climate models Kolbert places such faith in have been tested (their predictions, not just their fits, compared with reality).

There's no doubt that carbon dioxide concentration and global temperature are correlated, but you may not know that [4]carbon dioxide concentration lagged temperature for a long time. Because of this, I'm sure the temperature change caused the carbon-dioxide change. It isn't mysterious; as water changes temperature, the amount of carbon dioxide it can dissolve changes. As water heats, carbon dioxide is released into the air.

This means that something powerful – not carbon dioxide – has been producing changes in global temperature so large they cause carbon dioxide to rise and fall in amounts as large as those we are now worried about. Until we know what this is there is no way to allow for it. To subtract it from observed carbon dioxide and temperature changes, see what remains, and try to draw conclusions from the residuals. And we don't know what it is, no matter how closely this or that climate model fits data. (How closely they fit data depends on how many parameters they have, not merely how truthful they are. More adjustable parameters → closer fit.) Until we know what it is, it is entirely possible that this force, not man-made emissions, is behind recent increases in global temperature and carbon dioxide. If man-made emissions are not causing the change in temperature, reducing them is unlikely to do much. (Sure, there are a hundred blog posts dismissing the inconvenient backward lag. I've been unable to find even one that addresses the point I'm making here.)

This is like what Richard Herrnstein and Charles Murray failed to understand in *The Bell Curve*. They had a whole chapter on the Flynn Effect (the large increase in IQ over years) but they failed to grasp that until the Flynn Effect was correctly explained – until we knew what caused it – there was a big environmental contribution to IQ that they didn't understand. Perhaps it was this powerful environmental factor that caused the between-race differences in IQ that they attributed to genes. They were unable to equate different races for this factor – to take its effect into account.

Herrnstein and Murray might have been smart enough to see the problem – but, in any case, they ignored it. Kolbert is smart enough to understand that the climate scientists she talks to have a vested interest in overstating their case – but, at least in her writing, she ignores this. If she stopped ignoring the vested-interest problem and tried to think for herself – to sort out for herself conflicting claims, to stop believing everything a mainstream thinker tells her – her job would be much harder. (It took Gary Taubes seven long years to write *Good Calories Bad Calories*.) Given Kolbert's lack of scientific background (at *The New Yorker* she originally covered politics), perhaps her job would be impossible. Kolbert's faith is not in science, as she pompously says, but in scientists.

1. [http://www.newyorker.com/arts/critics/books/2009/11/16/091116crbo\\_books\\_kolbert?currentPage=all](http://www.newyorker.com/arts/critics/books/2009/11/16/091116crbo_books_kolbert?currentPage=all)
2. <http://www.blog.sethroberts.net/2007/09/18/how-accurate-is-epidemiology-part-3/>
3. <http://escholarship.org/uc/item/5vt0z72k>
4. [http://www.rocketscientistsjournal.com/2006/10/co2\\_acquittal.html](http://www.rocketscientistsjournal.com/2006/10/co2_acquittal.html)

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cremes (2009-11-11 07:32:19)

I imagine taking this position and stating it so vociferously in a public forum won't win you many friends. I bet you have been (or will be) called a heretic. I appreciate your candor as well as the scientific rigor you want to apply to problems. Why do so few scientists do this anymore? Is it a case of perverse incentives? e.g. grant money

Aaron Blaisdell (2009-11-11 07:48:47)

Interesting analogy: Carbon in models of Climate Change is like Cholesterol in models of CAD. Trying to reduce your carbon footprint is like trying to lower your cholesterol. Both may be futile as they target the wrong agent. (Nod to Brent Pottenger).

seth (2009-11-11 07:58:42)

Thanks, cremes. I have a funny feeling that most readers of this blog won't be surprised or upset by this.

jay (2009-11-11 08:14:53)

I think the idea that all countries around the world with different objectives and wealth levels are going to get together and cooperate toward a costly solution to the problem we face is more of a science fiction than anything else. Or maybe a fairy tale where someone solves the prisoner's dilemma problem. On the other hand... [http://en.wikipedia.org/wiki/Year\\_Without\\_a\\_Summer](http://en.wikipedia.org/wiki/Year_Without_a_Summer) [http://en.wikipedia.org/wiki/Climate\\_changes\\_of\\_535](http://en.wikipedia.org/wiki/Climate_changes_of_535) %E2 %80 %93 Sorry Earth, you're crazy. That will never work. Nice try, planet.

Jonathan (2009-11-11 14:08:26)

The lag between carbon dioxide and temperature has been discussed at length in a number of places. In a natural historic context, weak orbital forcing of the climate leads to higher temperatures, which leads to increased levels of carbon dioxide and methane, which in turns leads to larger warming. The 'lag' is relatively small and does not in any way invalidate the fact that carbon dioxide and methane trap heat in the atmosphere, or that they have increased dramatically since humans decided to liberate the carbon trapped in millions of years of fossils.

Anthony (2009-11-11 14:50:27)

"He showed them facts they didn't know. All of a sudden the picture wasn't so clear any more." I find this in general. I think a position is absurd, then I actually start to look into it ... and find it's not so clear anymore. I now try to avoid calling anything "absurd", unless I have looked into it a significant amount. Even then, even if I continue to think it's wrong, typically I can see why people might think x and how it is somewhat reasonable. One role public science plays is like religion, in that it gives people (supposed) certainty.

Nathan Myers (2009-11-11 17:33:49)

Except that carbon dioxide concentration in sea water has *increased* right along with atmospheric concentration, causing mass destruction of coral reefs and devastation of ocean ecosystems that depend on them, leading to devastation of fisheries, of the livelihoods of people who depend on the fisheries, and malnutrition in their former customers. Uncertainty about the cause of global warming is no friend to CO2 skeptics. The consequences of global warming and coral bleaching are each, individually, so disastrous that it is enough that CO2 *might* be the cause of the former, and certainly the latter, to motivate extreme measures to contain it. Sorry, Seth, you're way, way out in right field on this one.



Naval (2009-11-11 19:28:37)

Thanks for this - I read it and promptly bought SuperFreakonomics (Ms. Kolbert is selling quite a few copies). Personally, I read this blog for its contrarian and independent-thinking view, not for its ability to regurgitate mainstream soft-science. Keep it coming...

seth (2009-11-11 19:37:18)

Nathan, I think you misunderstand what I believe. I happen to agree we should decrease our dependence on fossil fuels.

Patrik (2009-11-11 20:28:13)

@Seth This is your best post by far. One minor correction: "Kolbert's faith is not in science, as she pompously says, but in scientists. " Should read: "Kolbert's faith is not in science, as she pompously says, but in high priests."

Patrik (2009-11-11 20:32:12)

BTW you can see the sneer on her face when she writes: "Neither Levitt, an economist, nor Dubner, a journalist, has any training in climate science" or, for that matter, in science of any kind. It's their contention that they don't need it." Classic. @Aaron Blaisdell Agreed 150 %!

seth (2009-11-11 22:42:41)

Thanks, Patrik.

Nathan Myers (2009-11-12 02:09:02)

Careful, Seth, you're drawing in the loonies.

Hatcher (2009-11-12 05:00:26)

I tried to make the same point about the potential that a scientific consensus can nevertheless be highly uncertain to some people around the time an Inconvenient Truth came out. I am an economist, and economists are good at constructing mathematical models that do precisely what you say - fit the data. Prediction? Not so much. They weren't scientists, and they simply looked at me like I was insane. Said nothing. Very funny.

Patrik (2009-11-12 12:14:35)

@Nathan Myers If being skeptical of anthropogenic global warming makes me a loonie, then I wear your slur as a badge of honor. - Another way to frame this debate: 1) We don't know if global warming is happening 2) Let's assume the worst, that it is happening, if it is, we still don't know that it is anthropogenic in nature. 3) Again, let's assume the worst, that it is anthropogenic, we still don't know if that is on a net basis, bad or good. 4) Again, let's assume the worst, that it is net bad, we still don't know if we can reverse it. 5) This time, let's assume the best, it is reversible, if it is, we still don't know if reversing is desirable after factoring costs/benefits. My only point: I don't know if AGW is occurring or not - it may be - BUT we do know there is a lotta shit we don't know, but we like to pretend we know on faith.

Patrik (2009-11-12 12:17:56)

Last thing, I sent this to Richard at FreetheAnimal.com who was kind enough to post it. It draws parallels between AGW and Taubes. <http://www.winterspeak.com/2009/10/salute-to-steve-mcintyre.html> **"Salute to Steve McIntyre** In the days of the Royal Society, scientists were hobbyists, pursuing their own whims, pushed to Truth by group norms and the standards of their peers. There was plenty of nonsense then, too (Isaac Newton was an Alchemist) but a small group of individuals, with modest means, got a lot of Science done. Fast forward to 2009, where science is now big non-business. The nexus between Federal Agencies and science is tight, and scientists produce the results they are paid to produce. Both "Good Calories, Bad Calories" and this expose from Steve McIntyre fit exactly with my own experience in the most prestigious laboratories on the planet. Don't believe anything you read in the NYTimes. My favorite quote: In a novel this refusal would have been put down to a deep and deadly conspiracy. What it really concealed was the slipshod data handling, tiny samples, the loss of essential metadata and the careless merging of datasets on which the earlier conclusions were based. Yup, but they forgot

to mention how politically, the wrong answer has become blasphemy. And we think we've moved on from Galileo Galilei's day."

Socktopi (2009-11-12 14:56:55)

Look, I'm an economist and I loved Freakonomics, but writing a chapter about how "Global Warming isn't a big deal, but even if it is, keep driving your Hummer because some day we'll invent a global cooling machine; Everybody stop freaking out." is a reckless misdirection of Dubner and Levitt's talents. Questioning scientific consensus is brave, but what happens when that scientific consensus is correct? We're pretending that Dubner and Levitt are like Galileo challenging the consensus of our planet's place in the universe, when they are more akin to creationists challenging the consensus of evolution. Except unlike evolution, if global warming is real, a lot of people are going to die. 95 % of the dreaded experts believe it is seriously fuckin' real, and therefore we should make broad and difficult changes in our society. People trust D & L and with good reason, but to then use that credibility to write about fantasies of imminent rain dance technology is disappointing. And it blunts the momentum we need to make difficult changes. D & L are superwrong about this one.

Socktopi (2009-11-12 15:12:07)

Let me offer a corollary: Are we 100 % certain that the twin towers weren't brought down by explosives? No. The consensus of experts is that there weren't explosives in the twin towers, but some people disagree; probably some respectable engineer somewhere believes the consensus view is impossible. But most people accept the consensus view even though they aren't scientists or haven't studied the matter closely... Does that mean 9/11 "Truthers" are brave and responsible citizens for questioning people's blind faith in the consensus that there weren't explosives in the towers, and their views shouldn't be ridiculed because scientists don't understand heart disease? No. 9/11 Truthers are lunatic nutcases who are dead wrong. Being a sceptic is admirable - EXPERTS ARE OFTEN WRONG. But pick your allies wisely, before you find yourself at a Lyndon Larouche meeting.

Nathan Myers (2009-11-12 15:39:27)

Let's get more specific: Were we certain that chlorofluorocarbons were causing the ozone hole? Of course not. All we had was a preponderance of circumstantial evidence, just as for anthropogenic climate change. Are we certain now? No. What we do know is that it was growing, and we banned CFCs, and now it's shrinking. Me, I'm very, very glad we were able to ban CFCs. A key to quick action was that CFCs were produced in very few places. CO2 and methane are tougher nuts.

Patrik (2009-11-12 15:53:40)

@Socktopi Your two comments can be boiled down to the following two logical fallacies: argumentum ad verecundiam & argumentum ad populum.

Anthony (2009-11-12 16:13:11)

@Socktopi, Are you familiar with Architects and Engineers for 9/11 Truth? <http://www.ae911truth.org/> If so, do you believe that the 961 architects and engineers (according to the site) who have signed a petition for Congress to authorize an independent investigation into the collapse of the 3 buildings are all "lunatic nutcases who are dead wrong"? Curious about your view on this.

Steve G. (2009-11-12 20:35:56)

Seth, A very interesting and thought-provoking post. Since I don't have the knowledge, not to mention the credentials, to comment on statistical modeling or climate science, I hesitate to comment. However, as a U.S. citizen, I still have small-too small-say in decision-making about policy decisions regarding climate change. Thus, I have to make a decision about what policies to advocate and support, and more importantly, elected officials from the President on down have to make decisions, so how do they sort it out? What I do have some experience about concerns burdens of proof in practical decision-making, as I'm a lawyer, and I try cases. As a lawyer, we never have to prove something absolutely in order to act-or at least the law doesn't make such a requirement (juries, however, often have ideas of their own). On the subject of climate change, given the magnitude of the perceived risk, and the prejudice in favor of inaction (carbon-based industrial society does have its charms), it seems to me that the burden has shifted in favor of action. Inaction, if human activity is a significant driver of climate change (rarely is something THE cause), then we have reason to act. This is different from my changing my diet after reading Gary Taubes or Seth Roberts, as I've done. If both have valid points, I'm ahead; if not, well, no real harm done, and besides,

I like meat and most fermented foods. (Beer counts, too, doesn't it?). The magnitude of the investment and time to receive feedback in the dietary changes that you advocate are small, and I believe that the limited magnitude of time and risk provides the logic behind many of your ingenious personal experiments: small changes, low risk, quick feedback. However, it seems to me that with climate change we don't have the luxury of long term studies to test predicted outcomes. Of course we have to challenge and test—life, unlike a law case, has no final judgments—but we can't continually delay action in this type of situation: not to act is to act. Finally, conventional wisdom may be right, it may be wrong. Social proof is a convenient heuristic for many activities, but for each instance of conventional wisdom we might challenge, we can cite many more that we'd all agree with. Again, it's a matter of regarding the burdens, testing the evidence, and arguing the inferences. Providing a contrarian view and claiming its validity simply because it is contrarian seems to me a very weak argument indeed. Enough. Thanks again for the provocation, and keep up the good work.

Steven (2009-11-13 00:04:01)

Maybe it's just me, but I can't really think of an area in physics where a consensus has been achieved only to be shown to be completely wrong. Sure, models are incomplete but this is different from being wrong. My feeling for this is that climate models have the same chance of being wrong as standard stellar models.

Seth's blog » Blog Archive » Mistaken Consensus in Physics? (2009-11-13 02:44:10)

[...] Steven Sheets writes: I can't really think of an area in physics where a consensus has been achieved only to be shown to be completely wrong. [...]

Socktopi (2009-11-13 15:41:14)

Patrick, I think you need to study your Latin. Anthony, yes. People who believe that the government planted bombs in the WTC are lunatic nutcases who are dead wrong. I don't care if they have engineering degrees... Now of course having just said that, I would like to walk back my hyperbole. We all believe the evidence supports various "conspiracies" and I am certain I am someone else's Lunatic Nutcase. I think my point here is that it's good that the New Yorker is rebutting D & L when they go off the tracks. D & L are authorities in their own right who are treated with a certain amount of deference. But in this case they are probably wrong. Global Warming is probably a serious threat and will probably require massive concerted efforts to minimize its damage. Hopefully technology will play a part. But just like that excerpt from the reviewer so eloquently puts it: downplaying the science of global warming while buying whole hog the science of a technological cure for it is a serious lapse in D & L's judgement. The book reviewer not understanding that the study of nutrition is practiced by people who failed out of dental school has nothing to do with it.

Nathan Myers (2009-11-13 17:17:06)

Steven: You must be joking. Physics is the poster child for fundamental reorderings. Right now we have two consensus theories that are fundamentally incompatible. It may be true that in previous temperature swings, CO2 lagged temperature. What is manifestly true is that *this time*, CO2 is leading temperature. It may be, likewise, that in previous events, CO2 was released from the ocean. In *this* event, ocean CO2 is radically elevated, to the point that it is killing whole reef ecosystems. Therefore, this guy is barking up the wrong tree, and has evidently nothing to say about the present crisis – which crisis it certainly is, whatever the cause.

Seth's blog » Blog Archive » Depression and Insomnia Linked at CureTogether (2009-11-20 01:27:15)

[...] CureTogether has found another example of the familiar depression-insomnia correlation. Persons with depression are twice as likely to have insomnia as persons without depression. CureTogether gathered this data much more cheaply than previous studies. Unlike previous researchers, they were under no pressure to publish. (Professional researchers must publish regularly to keep their grants and their job.) Unlike previous researchers, they were under no pressure to follow a party line. On the face of it depression makes you less active. Yet insomnia is a case of being too active. So the depression-insomnia link is far from obvious. Lots of other facts connect depression and circadian rhythms; they all suggest that the intellectual basis of anti-depressants, all that stuff about serotonin and neuro-transmitters and re-uptake, is wrong. If depression is due to messed-up circadian rhythms, taking a drug at random times of day is unlikely to fix the underlying problem. [...]

TGGP (2009-11-22 15:06:13)

A minor quibble: Murray & Herrnstein said they were agnostic on the genetic contribution, although I think they also said it was a good guess to say half genes and half environment.

Ted Simpson (2009-11-23 08:17:08)

As a retired professor in electrical engineering, one thing I am certain about is the overwhelming desire of young scientists to (a) publish, (b) get tenure or a promotion, and (c) go to lots of scientific gatherings and become accepted in the "cutting edge" peer group. And I haven't even mentioned the cocktail parties at these government supported love feasts! And regarding consensus on any subject, it is good to recall what George Carlin said about the "average person." He said, as I recall, "The average guy is not very smart. And if that bothers you, consider the fact that half of the population is dumber than him!" Al Gore is the poster child for the religion of liberalism; he did what Willy Sutton did and went where the big money was! What we should all be concerned about is how we will operate when the Arabs drain thier oil swamps and we get cold and unable to move around cheaply!

Ted (2009-11-30 16:06:23)

CO2 isn't killing the reef ecosystem by "consensus". Why don't you consult a biologist, not a climatologist. Many believe it is nitrogen run off from fertilizers, and furthermore, there is a correlation to reef predators nearest rivers. And we don't know what the correct temperatures are, doctored data from CRU is no longer acceptable as gospel.

The Educational Value of Climategate « Daniel Joseph Smith (2009-12-02 16:34:47)

[...] <http://www.blog.sethroberts.net/2009/11/11/three-things-elizabeth-kolbert-doe-snt-know/> Possibly related posts: (automatically generated)Mainstream Media Ignoring Climategate?Climategate has been ongoing for a very long time with Mosquitos in the Arc... [...]

December Links « The Adventures of Johnny Abacus (2009-12-04 03:17:15)

[...] Eric S Raymond on parsing (x|h)tml Ben Casnocha: Let's Just Add Some Virality Ted Talk: Talks Rory Sutherland: Life lessons from an ad man via Wehr in the World Seth Roberts: Three Things Elizabeth Kolbert Doesn't Know Ben Casnocha: Success on the Side Bob Sutton: Selecting Talent: The Upshot from 85 Years of Research Alain de Botton: A Religion for Atheists via Ben Casnocha Paul Berberian: Picking a Business Kalid: A BetterExplained Guide to Calculus Michael F Martin: Do Animals Cooperate with Non-kin Michael F Martin: Rolfe Winkler Looks Like a Major New Blogging Talent Michael F Martin: How Persuasive are You? Michael F Martin: Functionalism and Systems Theory and the Supreme Court's Upcoming Review of American Needle Michael F Martin: The New Economics by W. Edwards Deming Michael F Martin: Reflexivity Goes Deeper than Soros Himself Seems to Realize Haseeb: Story of Isildur1 (very good read) Thorfinn: What a Free Market in Healthcare Looks Like Charlie Stross: Designing society for posterity Kevin Marks: Baron Mandelson and Magna Carta Kevin Marks: How Twitter works in theory Michael Pettis: Lecturing each other on trade Mark Wethman: Twilight of Secular Europe? Maybe, maybe not. Joe Hewitt: On Middlemen James Hamilton: Yes the future deficits are worrisome Kevin Meyer: Team Science Bill Waddell: Throwing in the Towel Brad Feld: Board Meeting Lessons from the Supreme Court Andrew Chen: Product Design Debt Versus Technical Debt Andrew Chen: Facebook Viral Marketing: When and Why do Apps "Jump the Shark?" Rabiz Khan: The Short Sellers of Philanthropy Steve Hsu: IQ, Compression and Simple Models via Rabiz Khan Denis Mangan: The Most Read Paper in Social Science over the Last Year (direct link) Steve Blank: Times Square Strategy Session " Web Startups and Customer Development Steve Blank: Relentless " The Difference Between Motion And Action Aaron Schwartz: How I Hire Programmers The Social Pathologist: I Live in Bedford Falls [...]

## Mistaken Consensus in Physics? (2009-11-13 02:44)

[1]Steven Sheets writes:

I can't really think of an area in physics where a consensus has been achieved only to be shown to be

completely wrong.

Good point. I know little about physics but I tend to agree. Work awarded the Nobel Prize in Physics is more trustworthy than work awarded the Nobel Prize in Medicine, for example. I think a big reason that a consensus presented to the public is wrong is because there is outside pressure to get it right – pressure to find a way to lose weight, pressure to find how to reduce heart disease, and so on. Whereas there is no public pressure to get this or that physics question right. Less is at stake and the physics community can take as long as it wants.

Still, physicists make mistakes and other physicists go along with those mistakes. I can think of three examples:

1. When calculating the charge on an electron, Millikan famously used the wrong value for the viscosity of air. [2] This didn't prevent those using other methods from getting the same answer.

2. It was a rather bold title: [3] *How Nature Works* (1996) by Per Bak. Yet the sand avalanche models on which the whole thing was based turned out to be wrong. Actual sand didn't behave as predicted. There wasn't consensus in the physics community that Bak was right, but many physicists took him seriously. (As far I can tell from a distance.) I've worked on explaining power-law data (the subject of Bak's book) and the ideas in that book weren't helpful.

3. Long ago, [4] lots of physicists – if astronomy is part of physics – believed that the sun revolved around the earth.

There's plenty of pressure and a lot at stake to get climate predictions right. So I think climate models are in the territory where big consensus mistakes are made. As [5] Patrik points out, [6] the story of the Yamal tree-ring data – which I wasn't thinking of when I wrote [7] the Elizabeth Kolbert post, or I would have mentioned it – is a very good reason to think that what Kolbert writes about climate is less certain than Kolbert thinks.

1. <http://www.blog.sethroberts.net/2009/11/11/three-things-elizabeth-kolbert-doesnt-know/#comment-361083>
2. <http://calteches.library.caltech.edu/51/2/CargoCult.pdf>
3. <http://jasss.soc.surrey.ac.uk/4/4/reviews/bak.html>
4. [http://en.wikipedia.org/wiki/Tycho\\_Brahe](http://en.wikipedia.org/wiki/Tycho_Brahe)
5. <http://www.blog.sethroberts.net/2009/11/11/three-things-elizabeth-kolbert-doesnt-know/#comment-360912>
6. <http://bishophill.squarespace.com/blog/2009/9/29/the-yamal-implosion.html>
7. <http://www.blog.sethroberts.net/2009/11/11/three-things-elizabeth-kolbert-doesnt-know/>

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Jason (2009-11-13 03:50:23)

There wasn't the same level of consensus, but my understanding is that string theorists were getting most of the grant money and positions and publications and now, well, not so much.

Sonic Charmer (2009-11-13 04:36:36)

We don't have many examples of physics work that has entered the political arena. This is one thing I think is different about climate modeling. It is influenced by political pressure, or at least all the attention. The other thing I would emphasize is that this concept people have of "consensus" among All Physicists or All Scientists is something of an illusion. There are a fraction

of scientists who do real climate science and modeling. The others *do not* and (unless they take an interest in the subject, and roll up their sleeves..) for the most part will only have the vaguest idea what the former are talking about. The latter group's "consensus" with whatever the first group is doing is not meaningful and adds no extra weight to it IMHO. It probably does mean there have been no obvious mistakes that can be easily spotted at a glance by sharp minds, which is something, but as a practical matter it is unlikely that, say, the average high-energy physicist working on superfluids has sat down and thoroughly studied and evaluated a survey of the models, assumptions and data used to simulate the Kuroshio current. At most he maybe skims a paper or (maybe) is at a conference where some of the talks are about climate, and goes "uh huh" or "okay, I guess". If he's politically interested in the issue, or trusts or is friends with the scientist doing the work, he may add his name to a public letter of some sort. The resulting tally seems to be what people call consensus - so we have maybe several dozen people doing actual work at the forefront, thousands of other scientists going "uh huh", and we call it a Scientific Consensus and are very impressed. To me this is the real problem with the concept.

aretae (2009-11-13 04:42:14)

Seth, The third example is unfair. Modern physics properly dates from Newton, the guy who demonstrated that you can explain the world with math. Indeed, it's probably fair to suggest that the dawning of the scientific age was marked by Newton. But regardless, talking physics pre-Newtonian revolution isn't fair. I'm not convinced that phlogiston works well either, even though that's the immediate post-Newton response. But that's at least harder to disqualify.

Sonic Charmer (2009-11-13 04:54:25)

related? [1]Physics and Pixie Dust - PLASTIC FANTASTIC: How the Biggest Fraud in Physics Shook the Scientific World.

1. <http://www.americanscientist.org/bookshelf/pub/physics-and-pixie-dust>

seth (2009-11-13 05:41:18)

aretae, Galileo used math to explain his results. It's true, though, people made more mistakes the further back you go. And I agree there was great improvement starting with Newton.

Jeff (2009-11-13 06:01:49)

Physics has a generally more consistent pattern of getting things mostly right, then either fine-tuning or generalizing. Newton was right, and still is, but it turns out his laws of motion are a special case when Einstein generalized our understanding of nature.. The earth was flat, and still is. It's just locally flat. We generalized our knowledge to say it's a sphere. Then we fine-tuned our knowledge - it's not really a sphere, but an oblong ellipsoid. We fine-tune further: it's not a perfect ellipsoid, the southern hemisphere as a slightly larger bulge than the northern. If our knowledge of the topology of the earth worked the same way it does in medicine, psychology, economics, or other psueodosciences, then one moment we'd think the earth is round, then the next it's a cube, then a donut, then a Klein Bottle, then a dodecahedron.

Darrin Thompson (2009-11-13 06:44:22)

"Whenever there is fear, you will get wrong figures." - W. Edwards Deming

Aaron Blaisdell (2009-11-13 11:03:43)

@ Sonic Charmer Excellent point regarding consensus. One quibble: "The latter group's "consensus" with whatever the first group is doing is not meaningful and adds no extra weight to it IMHO." With one exception. The consensus view on diet (carbohydrates, especially grains = good, fat, especially from animals = bad) has added a lot of extra weight. But only to people's waistlines, not to nutritional science. ;-)

Tom in TX (2009-11-13 11:54:42)

Jason Says: "... string theorists were getting most of the grant money and positions and publications..." That brings up a good point. I don't see why "consensus" should be the standard here. Can we think of examples where scientists got lots of grant money, prestigious positions, and high salaries, and then were shown to be completely wrong? That tells more about how the layman is being scammed by the (bad) scientists.

seth (2009-11-13 13:21:12)

Tom in TX, Ranjit Chandra comes to mind. There are many examples. Ronald Fisher, the famous statistician, argued for years that smoking didn't cause cancer. So did Hans Eysenck, a famous psychologist. Cyril Burt, a famous psychologist, fabricated data. If I had to pick the greatest "scam" (= the public is misled) since 1900, I don't think we have a winner yet but I think it will turn out to be either (a) animal fat is bad for us or (b) humans are causing dangerous global warming. Since I think we should reduce our use of fossil fuels, example (b) has had good effects. Whereas example (a), if I'm right, has done huge harm.

Jason (2009-11-13 13:39:29)

seth, in discussing global warming, I find it hard to get past the "big oil" funds the opposition and such—and it doesn't help the most visible opposition is from the Republicans. Suggestions? Also, on string theory, another point in the physicists' favor is that even though string theory overall is (probably) wrong, the research that went into contributed to our sum total of knowledge (whole new areas of math). Whereas much more of the diet research is simply a waste of time and money I'd say.

Tom in TX (2009-11-13 14:11:08)

Jason wrote: "...even though string theory overall is (probably) wrong, the research that went into contributed to our sum total of knowledge (whole new areas of math). " The guy who gets the money always says something like that. Everything worked out fine for him. 8-) But what could the money have been spent on if it hadn't have been for the bogus idea? Maybe something that would have contributed to the sum total of knowledge, and resulted in something useful as well. And the who-benefits argument cuts more than one way. Democrats will assure themselves of thousands of jobs regulating industry, if the theory of man-made global warming becomes sufficiently popular (whether it is right or not).

seth (2009-11-13 17:05:14)

Jason, yeah, Big Oil put its thumb on the scale. And then Al Gore (with far better motives) put his thumb on the scale. I think blogging has turned out to supply a really powerful counterforce – toward actually establishing the truth of the matter. I think both Big Oil and Al Gore are no match for a bunch of bloggers who get no money, have no job at stake, have no chance of political office (or Nobel Prize), have time on their hands, and may even be anonymous. Darrin Thompson, that's a great quote.

Stephen M (Ethesis) (2009-11-13 22:24:26)

Gee, I still remember studying ether and the nobel prize given for the test that was set to measure how fast the earth was moving through the ether (though the prize was awarded because the test failed, with interesting implications).

Steven (2009-11-13 22:32:51)

I don't dispute fads, frauds, and experimental bias exist in physics. But none of these things seem to have led the field astray for very long. I guess I'm less impressed with blogs for uncovering truth than Seth is. Occasionally they seem to dig up an interesting nugget but to me they mostly to act as noise machines. Nor do I understand their popularity, to understand a subject such as dendrochronology and get to the heart of the matter requires a pretty great investment in time.

Jonathan (2009-11-14 13:05:59)

What about the consensus among evolutionist physicists that the world is more than 7,000 years old? Surely that stands beside the idea of human induced global warming in the foolish scientist hall of fame.

Eugene (2009-11-15 09:41:46)

On 18 December 1953, Nobel Prize winner Irving Langmuir (1932, Chemistry) conducted a colloquium on "[1]Pathological Science" at the GE Knolls Research Laboratory. Those in attendance remember it as "the most seminal exposition on the topic." My father, a recent graduate of Caltech, was in the audience, and says it reminded him of what Richard Feynman stressed in his lectures about common pitfalls in the empirical process.

1. <http://www.cs.princeton.edu/~ken/Langmuir/langmuir.htm>

Nathan Myers (2009-11-15 22:55:34)

Thank you, Eugene, that was the most fascinating thing I've read this month.

Elisa (2009-11-17 14:31:49)

The Copenhagen Interpretation is losing its hold on the consensus. That's straight up physics and I think eventually people will accept that it's wrong.

### **The Parable of the Wii (2009-11-14 13:56)**

For exercise (Dance Dance Revolution) and self-tracking, I decided to buy a Wii. My first attempt, [1]I was scammed. It arrived in August. With difficulty, I took it and accessories unopened to China. That was hard. It was even harder – for no obvious reason – to install it in China. The box sat unopened next to my TV, easily visible, for two months.

Finally I opened the box, took out the parts, put them together, added batteries, plugged it into the TV in my apartment. And nothing happened! Was my TV at fault? Or the Wii? Wii's aren't sold in China. I imagined bringing it back to America to get the problem fixed. After a few days, I tested my TV using video output from a neighbor's Apple computer. My TV worked. After the test, my Wii also worked. When I replaced the Apple input with the Wii input I saw the Wii input for the first time. I don't understand it, but that's what happened.

In my experience, this is how science works. It is much harder than expected, then it pays off in ways that defy understanding. The concept of self-experimentation is simple: I will measure X (sleep, productivity) about myself. I will test different ways to improve X, learn what works, and thereby improve X. The reality is different. For years I measured my sleep and tried to improve it. It was hard to deal with the data. Even worse, every idea I had was wrong. That seemed like a huge obstacle – like my Wii needing repair. But I kept plugging away, because it was better than doing nothing, and . . . got somewhere. Out of nowhere and nothing. Not only did I improve my sleep, I arrived at a broader idea about health that turned out to be very helpful (that our bodies are designed for Stone-Age conditions and self-experimentation can help determine those conditions, which aren't obvious). Just as we overvalue big steps (e.g., well-funded prestigious research), we undervalue small ones (e.g., cheap research with no prestige).

Science is basically a bunch of little steps. Many little experiments that explore cause-effect space. If you find a new example of cause and effect, the payoff is unpredictably large. Scientists don't like thinking of themselves as wandering ants. But that's how they are most effective. This goes against human psychology because wandering (Nassim Taleb calls it "tinkering") is low status and lonely. The payoff is too rare and too unclear. It isn't supported by powerful institutions, such as research universities and medical schools. Imagine an ant who says "I know where food is!" This is a way to get many ants to follow him, to feel important, to have high status, to get support from his employer. That's why he does it. But he doesn't know. The effect on the rest of us, the potential beneficiaries of progress, is that instead of having a thousand ants wandering everywhere, we have a thousand ants following one ant who doesn't know what he's doing.

1. <http://www.blog.sethroberts.net/2009/08/02/gamesinweltcom-scam/>

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NotInChinanow (2009-11-14 16:18:19)

I was and still am unprepared for how unsuccessful my experiments are. Although I don't have a true tally, the number is certainly less than 20 %, and I think probably a fair and accurate count would probably put that number at around 5 %. It seems



like that number is similar to your success rate with self-experiments. While it's personally hard to deal with that level of failure, I think it's even harder at the institutional level. Most institutions couldn't tolerate employees who get such a low success rate for their experiments even if the resulting success brings much more valuable information. So on a personal level that's why I try to spend time on things that are much more likely to work because it's easier to defend your work that way. That's why I like your self-experiments because they allow for more risk that would probably kill the career of a normal experimenter.

Ashish (2009-11-14 16:20:59)

If you enjoy Dance Dance Revolution, definitely check out Dance Dance Immolation at Burning Man.

Walter (2009-11-15 13:43:31)

When I worked in R/D the upper management wanted predictability in "findings" so we went our way in testing ideas so we ended up with a pipeline of hidden successes and then we metered it out in a "predictable" manner. We ended up predictable but slow in comparison to the rest of the competitor. Upper management patted themselves on the back for being able to manage and to be predictable. There is a lot of randomness in R/D and the quicker one built up a pile of "failures" the quicker one found the nugget(s). The philosophy I found to work the best is TREE-test randomly, evaluate and elect-and the team should consist of a bunch of people with cognitive diversity and experience diversity.

Andrew Gelman (2009-11-15 13:54:51)

Seth: As we've discussed many times (and I've blogged about too), I think I've followed a low-risk, low-return model for science, doing a lot of small projects, each of which is a sure thing (or, at least, something like 50 % chance of success, where "success" means advancing the field in some way and publication in a top journal). In contrast, you've followed a high-risk, high-return model by spending 15 years doing self-experimentation. (Also, rather than writing 6 big books as I did, you wrote one little book-but your one little book was a bestseller.) I guess what I'm saying is that your statement about science, "It is much harder than expected, then it pays off in ways that defy understanding," describes how you do science, but not necessarily how others do science. Perhaps both types are necessary: we need the bold thinkers like yourself and also the more methodical people like me to fill in the gaps.

seth (2009-11-15 16:18:42)

Andrew, by science I meant empirical science, where the main goal is gathering data from which you learn how the world works. This isn't the main goal of statistics professors. They don't gather data nor focus on substantive issues. But I agree, you make a good point. Even within this subset of science I agree that one can pursue a path where progress is more predictable. In terms of the scientist = ant analogy, an ant has a choice of joining a trail of many ants to a food source or wandering around by itself to find a new food source. Likewise a scientist who gathers data has the choice of exploiting a known cause-effect relationship (e.g. doing variations on it, trying to explain it) or trying to find new cause-effect relationships. I don't know what a similar choice would be for statistics profs.

Andrew Gelman (2009-11-16 02:18:34)

Seth: Psychologists are good at gathering data. But you don't need to gather data to be a scientist. You can analyze or build theories based on others' data. For example, Einstein, Feynmann, etc. were scientists even though they were not experimentalists. And they were empirical scientists too-they explained empirical facts and made testable predictions. Also, I completely disagree with your statement that statistics professors don't "focus on substantive issues." Take a look at my research articles! It's possible to be a statistics professor and do applied statistics.

seth (2009-11-16 03:40:10)

Andrew, yes, there are exceptions to the broad statements I made. But most scientists (95 %?) gather data in one way or another. I think physics and astronomy are the only sciences where there are a lot of pure theorists (such as Feynman), and even in those fields I think the data collectors outnumber them. I think you're an exception, too - as far as I can tell, most statistics profs spend little of their time trying to answer substantive questions. Most statistics profs are most interested in developing new methods. Only a few statistics profs are also profs in a substantive area, such as political science. I say all this

partly because I wonder what would be a "high-risk" line of research for a statistics professor. Maybe developing methods to do something unconventional, such as generate ideas?

seth roberts on scientists as wandering ants « the pulchrifex papers (2009-11-16 13:08:26)

[...] seth roberts on scientists as wandering ants 2009 November 16 by Matt I'm competing for postdoc funding from the National Institutes of Health; my career path, if I follow it to its logical culmination, will be regularly punctuated with similar competition. So I'm keenly interested in claims like this: Scientists don't like thinking of themselves as wandering ants. But that's how they are most effective. This goes against human psychology because wandering (Nassim Taleb calls it "tinkering") is low status and lonely. The payoff is too rare and too unclear. It isn't supported by powerful institutions, such as research universities and medical schools. Imagine an ant who says "I know where food is!" This is a way to get many ants to follow him, to feel important, to have high status, to get support from his employer. That's why he does it. But he doesn't know. The effect on the rest of us, the potential beneficiaries of progress, is that instead of having a thousand ants wandering everywhere, we have a thousand ants following one ant who doesn't know what he's doing. (Full post.) [...]

Dennis Whittle: Good Scientists are Like Wandering Ants | News from: The Huffington Post - Breaking News and Opinion (2009-11-17 10:44:01)

[...] That is from the iconoclastic Seth Roberts, formerly a professor of psychology at Berkeley who now teaches at Tsinghua University. His overarching theme is that for science to advance it requires people to come up with and test novel hypotheses rather than tinkering at the margins of the currently accepted wisdom. In short, orthodoxy is often unproductive for scientists, and sometimes dangerous. His blog is full of unexpected hypotheses about how the world works, and he often tests these hypotheses on himself, enlisting his own readers as co-experimenters. [...]

## More Black-and-White Thinking (2009-11-15 22:40)

Here's part of a speech that Geert Wilders, the Dutch politician, gave in New York in February:

There might be moderate Muslims, but there is no moderate Islam. Islam will never change, because it is built on two rocks that are forever, two fundamental beliefs that will never change, and will never alter. First, there is the Quran, Allah's personal word, uncreated, forever, with orders that need to be fulfilled regardless of place or time. And second, there is al-insan al-kamil, the perfect man, Muhammad the role model, whose deeds are to be imitated by all Muslims. And since Muhammad was a warlord and a conqueror we know what to expect. Islam means submission, so there cannot be any mistake about its goal. That's a given. It's a fact.

Whereas here's what a friend of mine living in Amsterdam sees:

Disenfranchised immigrants who were summoned here to do low skilled jobs, aspire to integrate into Dutch society, but are often systematically excluded by Dutch people. A lot of them don't have much formal education. That doesn't help.

Even 2nd and 3rd generation Moroccan immigrants, many of whom are nice people and speak perfect Dutch, get treated like underclass by native Dutch people. It angers and depresses the parents, who feel shut out, and their kids suffer also.

I find it terribly sad to think that the kids I fix bikes with have such a disadvantage due to their origin. Many of them are quite smart. It strikes me as such a waste of human potential.

There are some nice Dutch people who get along fine with the immigrants, but not very many.

They're describing the same thing!

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Chris (2009-11-16 00:36:21)

Are they? I read it differently that Wilders is describing Islam - the belief system - while the second writer is describing individuals and their experience. They are consistent premises.

seth (2009-11-16 01:24:04)

Chris, yes, on a surface level they are describing different things. But they are both looking at the same thing - Muslim immigrants in Holland. Wilders sees "Islam" and my friend sees people. The only reason Wilders says what he says is that "its [Islam's] goal" is, to Wilders, their goal. Because they are Muslims. "Its goal" wouldn't matter if no one believed it.

JLD (2009-11-16 01:40:35)

*Disenfranchised immigrants who were summoned here to do low skilled jobs*, More than Islam or whatever else **this** is the root of all problems everywhere, supposing that [1]metics are intrinsically "low class" and willing to remain so. Importing cheap labor instead of forcing the always plentiful low skilled aborigenes to participate into society according to their mediocre competencies because they are "of our kin" is an illusory solution which has destroyed many a brilliant society and culture. Stupidity and greed springs eternal.

1. <http://en.wikipedia.org/wiki/Metic>

Dennis Mangan (2009-11-16 07:08:39)

The mayor of Rotterdam, the second largest city in The Netherlands, is a Moroccan immigrant who still holds Moroccan citizenship. Therefore there is much reason to doubt your friend's contention that "2nd and 3rd generation Moroccan immigrants, many of whom are nice people and speak perfect Dutch, get treated like underclass by native Dutch people". Just as in this country, any problems that minorities have get blamed on the majority.

Aaron Blaisdell (2009-11-16 08:15:10)

@Dennis, Your logic doesn't make sense. Barak Obama may be the first black President of the United States, but blacks in many areas of the US are still treated as second class (or underclass) citizens. My black friends in NYC still have difficulty hailing a cab (and not because their thumbs don't work)-even from black taxi drivers. There may be more acceptance at the societal level for an ethnic class of people, but that doesn't necessarily translate to the individual level, at least not for wholehearted embracement.

Hatcher (2009-11-16 08:30:05)

I'm not sure what is meant by juxtaposing these quotes. The first seems to say - Islam beckons problems, whether there are moderate Moslems or not. The second basically says Moslems are discriminated against in Dutch society. Seth, do you put these up there as 2 alternative explanations for Moslem violence in the Netherlands? I suppose both could be characterized as black and white thinking, and perhaps some combination explanation is better. But the target of violence, for example Theo Van Gogh, was chosen clearly for reasons related to the first quote; and secondly, the perpetrators of such violence are very often highly educated successful Moslems (for example, the train bombing in UK orchestrated by doctors). These are hardly the most oppressed.

Robert Reis (2009-11-16 13:25:01)

As a former cabbie in Chicago, let me point out that black cabbie frequently refuse to pick up black customers. Too many cabbies are robbed and killed when they make this mistake.

seth (2009-11-16 15:18:05)

What is meant by juxtaposing these two quotes? One is an example of black-and-white thinking, the other isn't. My friend makes distinctions, doesn't see everyone as the same. That's why her comment isn't black-and-white thinking. Wilders grants that Muslims vary ("There may be moderate Muslims") but goes on to dismiss that variation by ignoring it.

Chris (2009-11-16 15:55:03)

i still think you are unfair to Wilders. There is a distinction between the "-ism" and the individual. He is criticizing the ism. His black and white thinking is with respect to the ism, not the individuals. He accepts that there may be moderate individuals.

seth (2009-11-16 20:02:46)

True, he is criticizing the -ism. And the -ism is an example of black-and-white thinking, yes. So describing it in black-and-white terms could be said to merely be accurate. But I keep coming back to the idea that Wilders wouldn't care about the details of Islam if he didn't see it among Dutch residents. If he wants to criticize Muslim extremists in Holland, fine. But then he should describe their behavior, not abstract ideology. That would be a far more complicated argument. He is badly simplifying here - not simplifying Islam but simplifying the connection between religion and behavior.

Anthony (2009-11-16 23:20:31)

@Seth, Right, but he's a politician, and he's utilizing political rhetoric. He's being alarmist in order to rouse Dutch people to action. It defeats the purpose to be nuanced and subtle.

david (2009-11-17 02:50:03)

"My black friends in NYC still have difficulty hailing a cab (and not because their thumbs don't work)" – "even from black taxi drivers." This is clearly not an example of white establishment racism, since practically no American born whites work as taxi drivers. In fact, in Chicago and Minneapolis, 10-20 % of cab drivers are Somalis.

bgc (2009-11-17 04:58:44)

Well, let's not use such second-order quibbling to avoid discussion of the primary aspect of the situation - which is an historically-unprecedented population displacement currently being implemented by the European elites, probably motivated by their own cultural guilt and self-loathing: [http://www.spsw.ox.ac.uk/fileadmin/documents/pdf/WP33\\_Third\\_Demographic\\_Transition.pdf](http://www.spsw.ox.ac.uk/fileadmin/documents/pdf/WP33_Third_Demographic_Transition.pdf)

Eric (2009-11-17 05:56:21)

I'm also living in The Netherlands, and I do see a problem with Islam, and a certain percentage of the Moroccan people. But these things are not that related as some might think. The largest group in Islam, Sunni, is a quite 'rigid' form, as Wilders describes when he indicates "there is no moderate Islam". This form gives people a set of laws and a book that give them mandate to kill non-believers, start war or commit terrorist acts, as the laws and the book is the word from God. There are moderate muslims, but they are seen as non-true-believers in the eyes of some very strict muslims. There was a intern from Pakistan at the company I worked for last year. He was a muslim, but was more geared towards the Sufism stream of the Islam. It's a more mystical-ascetic form of Islam, and during our conversations, I thought many concepts were almost closer to Buddhism than the Sufism version of Islam. I do not have any problems with most people that are muslim. Most are fairly moderate and just live their lives in society. Strict (Sunni) Islam thought is scary, just as scary as strict Christian thoughts, like the Dutch political SGP, a orthodox protestant political party (no woman could have party membership before the year 2006). 'The Moroccan problem' is something else. Ok, most Moroccans probably are muslim, at least they consider themselves muslim, but might not behave as such. Coming up with "nice people that speak Dutch" does not make a huge impression on me. The percentage of criminal Moroccans is 17 times as high as the percentage of criminal Dutch (year

2006), in some regions this number is even higher. This is not because the Dutch have a problem with foreigners, but it's a problem in some specific ethnic groups. When I worked at Philips, on our campus I worked with people from Netherlands, Belgium, Germany, UK, Spain, France, Romania, Denmark, Finland, Russia, Belarus, Pakistan, India, China, and Singapore that were living or studying in The Netherlands. Dutch companies do not have any problems with people with other cultural background, but you have to put in some effort. Behave well, study, get good grades, work hard to earn your cash, and you will make it just like anyone else. But if you don't study, don't get your grades, dress like a rapper, and behave and communicate like a criminal, people will treat you like one. It's not because of your parents' cultural background, it's because you and your friends thought you did not have a chance, so you did not invest, so in the end you indeed are not going to set that chances. A self fulfilling prophecy. I've seen the same thing happen to Dutch 'natives'. Why study and work 40+ hrs a week for someone else when you can make money yourself going in the illegal drug business? Ok, I do believe it was easier for me to get support from friends when I was going to do a study in electronics and software. But do not blame it on the fact that your (grand)parents being from Morocco, you probably have to blame it on lack of support from friends and family...

Model Train Scale (2009-12-09 14:31:38)

Nice blog dude, but am I the only one having some problems with the interface i don't know if it is because i'm using a old version of Opera!

### **A Chinese Joke (2009-11-16 07:08)**

In a Shanghai apartment, the phone rings. A friend of the occupant answers the phone. "It's someone from a rural area," he shouts to the occupant. (Shanghai and other dialects are quite different.) "I'm from Beijing," says the person on the line. "It's someone from Rural Beijing," the friend shouts.

This joke is told by people who are from neither Shanghai nor Beijing.

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### **Leonard Mlodinow on Wine Experts (2009-11-16 15:06)**

[1]They're just like us!

In France, a decade ago a wine researcher named Frédéric Brochet served 57 French wine experts two identical midrange Bordeaux wines, one in an expensive Grand Cru bottle, the other accommodated in the bottle of a cheap table wine. The gurus showed a significant preference for the Grand Cru bottle, employing adjectives like "excellent" more often for the Grand Cru, and "unbalanced," and "flat" more often for the table wine.

Whether a wine wins a medal in a competition appears to be pure chance:

Mr. Hodgson restricted his attention to wines entering a certain number of competitions, say five. Then he made a bar graph of the number of wines winning 0, 1, 2, etc. gold medals in those competitions. The

graph was nearly identical to the one you'd get if you simply made five flips of a coin weighted to land on heads with a probability of 9 %. The distribution of medals, he wrote, "mirrors what might be expected should a gold medal be awarded by chance alone."

Thanks to Dave Lull.

1. [http://online.wsj.com/article\\_email/SB10001424052748703683804574533840282653628-1MyQjAxMDA5MDEwNjExNDYyWj.html](http://online.wsj.com/article_email/SB10001424052748703683804574533840282653628-1MyQjAxMDA5MDEwNjExNDYyWj.html)

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epistemocrat (2009-11-17 09:11:10)

Hi Seth, I thought this was a good prescription from that article: "If you ignore the web of medals and ratings, how do you decide where to spend your money? One answer would be to do more experimenting, and to be more price-sensitive, refusing to pay for medals and ratings points." We each are "experts" in our own taste preferences: self-experiment away. And maybe use the heuristic that the average price per bottle never exceed \$10 in these experiments. I suspect the health benefits from wine accrue via hormesis. Intake becomes toxic at some point, I imagine, and I suspect that level is lower than we think. Cheers, Brent

seth (2009-11-17 12:49:42)

I wonder if an online site, a cross between Wikipedia and Zagat, where anyone can add a rating, would help.

MT (2009-11-18 12:11:19)

Or similar to Amazon's book ratings. Such ratings could be very valuable, but they're also very hackable currently, as fake ratings can be added by people with vested interests, and often they are quite highly incentivized to do so. What is needed is for "real name" systems to become more common and acceptable, so people have to provide some evidence of who they are – say a credit card – in order to create an account. I think we'll see such verification techniques become more common as digital natives age and constitute a greater proportion of the population, using the net more and more naturally.

Mike Kenny (2009-11-19 11:14:11)

This makes me wonder if I'm enjoying things in nice packages more than I need to. There might be a gold-mine in products in ugly packages. If the framing effects really do make a wine better—I think Tyler Cowen argued for the possibility framing effects might add to real enjoyment—then perhaps you can use this effect to make your life better. You buy some cheap liquor and expensive liquor, pour them into identical, nice-looking bottles, and mix them up so you don't know by look which bottle is expensive and which is cheap.

Seth Roberts blogs framing effects « Mike Kenny (2011-11-24 04:58:05)

[...] Seth Roberts blogs framing effects. I comment there: This makes me wonder if I'm enjoying things in nice packages more than I need to. There might be a gold-mine in products in ugly packages. [...]

## **Dance Dance Revolution (2009-11-16 21:05)**

Just as addictive as everyone said. It reminds me of racquetball, which I could play for hours. But racquetball required going to the gym, getting dressed, finding someone to play with, waiting for an empty court, coming home. It might be possible to use my DDR scores as a measure of something.

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david (2009-11-17 08:17:31)

I recently got an ipod touch free with another purchase and when I started using it I thought of your posts about using your laptop to measure the effects of omega-3s. It seems like the ipod/iphone/touch screen smartphone would be an ideal format for games that test for the effects of things like omega-3s. The games could be made fun enough to be interesting and the device is portable enough to take with you anywhere.

seth (2009-11-17 12:44:10)

David, yeah, I agree, you could do the test while you're waiting for something.

karky (2009-11-17 14:44:19)

Something similar to the game Brain Age I have for my Nintendo DS perhaps?

### **Gatekeeper Syndrome (2009-11-17 13:48)**

If the original Milgram obedience experiment weren't scary enough, in the 1960s [1]a researcher named Hofling did a variant in which nurses were ordered to give twice the maximum dose of a certain drug. The drug was not on the hospital's approved list, the order was given by phone, and the nurse didn't know the doctor giving the order. Yet 21 out of 22 nurses obeyed. (They were stopped just before giving the drug.) Hofling concluded that of the several intelligences that might have been involved in the situation, one was absent.

I thought of this research when I learned about [2]a remarkable case of anaesthesia dolorosa. Anaesthesia dolorosa is a condition where you lose sensation in part of your face and have great pain in that area. It's rare; it's usually caused by surgery. In 1999, Beth Taylor-Schott's husband had an operation for trigeminal neuralgia that left him with this condition. In the ensuing years, all sorts of pain medications failed to solve the problem. Then he had another operation:

In January of 2008, David underwent a gamma knife procedure to ablate the sphenopalentine nerve bundle. Before the procedure, we were told that 16 other patients had had the procedure, and that all of them had experienced either complete recovery without drugs or an 80 % reduction in pain. So we were optimistic going in. It was only after they had done the surgery that the doctors admitted that they had never done it on someone with AD before and that all those other patients had had atypical facial pain. The surgery had no effect as far as we could tell.

[3]Shades of my surgeon claiming the existence of studies that didn't exist. But that's not the point. The point is this: After reading [4]Atul Gawande's article about mirror therapy for phantom limb pain, she and her husband tried it. "Within 2-3 days, his pain was down to zero." It stayed there so long as they continued the mirror therapy. Soon after this they were able to eliminate his pain medication.

I asked Taylor-Schott what the reaction of her husband's doctor was. She replied:

David's actual pain doctor wrote back a single word, if I remember correctly, which was "fantastic."

Wow. An incurable debilitating pain condition quickly and completely eliminated without drugs or danger or significant cost and . . . a pain doctor isn't interested. Let's call it gatekeeper syndrome: lack of interest in anything, no matter how important to your work, that doesn't involve you being a gatekeeper.

I said that showed remarkably little curiosity. Taylor-Schott said that was typical. I agree. After I lost 30 pounds on the Shangri-La Diet, my doctor expressed no curiosity how I had done so. A friend of mine showed his doctor some data he had collected highly relevant to how to treat his condition; his doctor wasn't interested.

Curiosity is part of intelligence. Not measured on IQ tests – a serious problem with those tests. To lack curiosity is to be just as brain-dead, in a different part of the brain, as those too-obedient nurses. Taylor-Schott speculated that curiosity was beaten out of doctors in medical school. Or perhaps much earlier. Curiosity doesn't help you get good grades in college.

In my experience, college professors have their own problems along these lines. UC Berkeley has a fantastic selection of talks, year after year. I almost never saw a professor at a talk in a department different from his own – no psychology professor (other than me) would attend a talk in nutrition, for example. At statistics talks, I almost never saw a professor from another department. Curiosity had been beaten out of them too, perhaps. Professors who lack curiosity produce students who lack curiosity . . . it makes sense. It sort of explains why Berkeley professors had/have such a narrow view of intelligence; to them being smart means being good at what college professors do. It also explains why the lack of measurement of curiosity on IQ tests is so rarely pointed out.

And it explains why Taylor-Schott and her husband learned about mirror therapy from a magazine article rather than from one of the many pain doctors they consulted.

1. <http://scienceaid.co.uk/psychology/social/obedience.html>

2. <http://anadmiracle.blogspot.com/>

3. <http://www.blog.sethroberts.net/2008/08/29/suppose-you-write-the-times-to-fix-an-error-part-2/>

4. <http://www.newyorker.com/online/blogs/tny/2008/09/mirrors-as-medicine.html>

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dilys (2009-11-17 13:53:43)

Just one more iteration – a friend's brother, after about a year on the Paleolithic Diet, had a blood test in which the tech and the doctor agreed they had never seen such high scores of "good cholesterol." Neither one was interested in what he was doing that might have caused this.

Andy McKenzie (2009-11-17 14:30:26)

Seth, instead of assuming that all of these things (med school, college, doing conventional research) reduces or "beats out" creativity, why not just make the simpler assumption that most people just don't have this curiosity in the first place? It didn't help them get there, but it probably wouldn't have hurt either.

Aaron Blaisdell (2009-11-17 15:52:47)

@Andy, There may be some truth to what you say. I try to spark curiosity in the pre-med students taking my seminar in Animal Cognition. Usually a few of the 20-30 students show lasting curiosity week after week. The rest don't show much expression



so I don't know what they're actually thinking. Perhaps just what will be on the next quiz or test so that they can study to get an A in the course. Same with my comparative psychology course which usually enrolls about 80-100 students, most pre-med psychobiology majors. a handful will show genuine interest and ask intelligent (by which I mean creative and interested) questions, but a good majority of the students hardly make a peep in class. Of course absence of evidence isn't necessarily evidence of absence (of creativity or interest), but I know where I'll bet my money.

seth (2009-11-17 16:33:30)

Andy, because young children are curious. All of them. In a world without schools, that's how you learn. That's the first reason. The second reason is that there are examples where a facility that isn't used or encouraged or rewarded goes away. The obvious example is language, where distinction not used in the language are no longer heard. A less obvious example is the urge to decorate. For a long time in Communist Croatia, to decorate your house was forbidden. When Communist control subsided, it took a long time for the urge to come back. Aaron, I found my Berkeley students were intensely curious about stuff related to what they wanted to do after they graduated, like be a nurse. But yeah, I remember when I was a grad student at Brown, a lot of the students in my statistics section (I was a TA) couldn't see the point of anything that wasn't going to be on the test. I think it's normal to be interested in stuff related to what you do for a living and not be interested in other stuff but what these pain doctors seem to be saying to the Taylor-Schotts is what they do for a living isn't alleviate pain but make money. Since mirror therapy doesn't involve them making money, they're not interested in it.

Nathan Myers (2009-11-17 18:48:09)

My wife's grandmother spent a year on doses of Tegretol so strong she couldn't walk safely, prescribed for trigeminal facial neuralgia. (She said it felt like electric shocks to her cheekbone.) I finally persuaded her to talk to a specialist, and it turned out that a simple procedure, essentially inserting a spacer between two nerve fibers, completely cured the problem. Her doctor hadn't been interested enough to find out about the treatment, or to refer to her to someone who knew, and just prescribed stronger doses. My wife's grandfather died of prostate cancer, which it now turns out is caused by a virus, XMRV, the same virus that appears to cause Chronic Fatigue Syndrome. For a long time anyone presenting with CFS was referred to the psychiatrists. Arguably what actually did him in was the radiation treatment, which entirely transformed him in just a few weeks; afterwards he was just waiting to die.

epistemocrat (2009-11-17 22:57:05)

I'll chime in as that (recent) pre-med student. The process does not foster curiosity. It punishes creativity and curiosity in many ways. To make it into and through medical school, residency, etc., students have to 'put their heads down' and just go (don't look left, right, or back)-it's the most effective way to jump through all the hoops set up by academia. Deviating too far from this path is counterproductive in terms of gaining admission, excelling on standardized tests, and receiving accolades. Unfortunately, this approach is flawed philosophically and does not necessarily translate into future physicians who practice medicine effectively, with insatiable curiosity. I had to create my own major to pursue my curiosity-that was not recommended in terms of looking good on medical school applications. I did it anyways; my path was much more valuable that way for me. When I elected to do my Master in Health Administration degree following undergraduate, instead of go straight to Medical School, one of my friends at UCSF Med School asked, "Why would you do that? Do you like studying that stuff?" Every medical decision is an economic/financial/policy decision, I thought, and I pursued my curiosity further. Experienced physicians praised me for foresight, but I still penalized myself in terms of jumping through the mainstream hoops most successfully. Our educational system focuses on the known, not the unknown. Curiosity helps children interact with the unknown. After awhile of schooling that teaches them the grand importance of the known, that curiosity starts to go dormant, unfortunately. The more you standardize education, the more you drown our curiosity. Cheers, Brent

seth (2009-11-18 00:50:24)

"The more you standardize education, the more you drown our curiosity." Yes, I think that's exactly right.

Alex Chernavsky (2009-11-18 04:46:07)

Perhaps lack of curiosity is a factor here, but I think there are other reasons for the type of behavior that Seth described.

There is a book that sheds considerable light on this issue. The book is called, "Mistakes Were Made (But Not by Me): Why We Justify Foolish Beliefs, Bad Decisions, and Hurtful Acts", by Carol Tavis and Elliot Aronson. Here is the Amazon page: <http://www.amazon.com/Mistakes-Were-Made-But-Not/dp/0156033909/>. This is the best book I've read in the last year. You'll recognize relatives, friends, and co-workers on every page (and perhaps yourself, if you are honest).

Darrin Thompson (2009-11-18 05:43:38)

Maybe you'll nuance this a bit in time? (black-and-white, mmmm?) ;-) I'm curious enough about self experimentation to read about others' results, even try out some of their finds, but not enough to invest time measuring every day. I'm curious enough about Deming's methods and Lean to read library books and popular bookstore books about the subject, but not enough to pay \$40 or \$hundreds for more expensive training materials. I was really curious about the technical details of creating a story. I was half tempted to try and scrounge up \$600 and airfare for McKee's seminar. Lucky for me, I found he authored a bookstore priced book. That was one of my best finds last year. Story is a fabulous read. Note, I'm a computer programmer. I've made a habit of trying to study outside my field and it's amazing what I've found. Here's \_why\_ agile works, according to Deming. Here's what Lean manufacturers do. Did you know that "waterfall" never worked anywhere? Anywhere? We didn't "borrow" it from anywhere. No one does it and sees it work. So I'm definitely living out the curious thing, but I have my limits. Your professor friends who don't attend each others' talks are truly missing out on half the excitement of their jobs. You get go to the presenter and breathlessly tell them how what they just said relates to your field, or even the other way around. Did you know ... ?!

## **Pfizer, After Having Its Way with the Good Citizens of New London ... (2009-11-18 00:44)**

Apparently Pfizer Pharmaceuticals, the biggest drug company in the world, needs all the bad publicity it can get. One of the last things Jane Jacobs wrote was a friend-of-the-court letter in the Supreme Court case Kelo v. New London where eminent domain was used to take property from private landowners and give it to a private corporation (Pfizer). It was just as outrageous as that sounds. And Pfizer got away with it. [1]Now Pfizer is abandoning the site. Leaving a large empty lot where houses used to be. The CEO of Pfizer is Jeff Kindler.

1. <http://www.democracynow.org/2009/11/13/eminent>

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Toni H (2009-11-18 10:54:21)

Dude, who's the worse one here - the capitalist drug company simply seeking profits, the politicians that make the actual decision to ruin people's lives (the company doesn't have a say in this - it's the politicians making the decision!) or the sheepish voters that elected those politicians?

Splint (2009-11-18 12:11:56)

"the company doesn't have a say in this - it's the politicians making the decision!" lol, awww, that's cute.

user@example.com (2009-11-18 12:33:31)

"the company doesn't have a say in this - it's the politicians making the decision!" I was upset when I read this story, but now I see that it's just another example of Big Government and Big Citizen screwing over a poor defenceless company who didn't even want that land to begin with. Damn you, Obama!

Toni H (2009-11-18 16:27:03)

I guess I'm daft but I just can't understand what Pfizer can do besides lobbying and taking the corrupt politicians for expensive

lunches. It's the local politicians that have the final saying and approve the tax breaks and the eminent domain.

Splint (2009-11-18 16:32:21)

Right, and all you have to do is make sure your politicians aren't corrupt and that Pfizer doesn't straddle any ethical loopholes. Why hasn't anyone thought of that?

Sasha (2009-11-18 17:36:15)

user@example.com: Your statement implies the dangerous, indeed fatal, misunderstanding held by a majority of liberals and progressives in the world today. They somehow see government as being some sort of bulwark against corporate power. But if you look at the reality, the government is really an extension of corporate power. Money is, unfortunately, just overwhelmingly more powerful in deciding government policy than popular voice. Government is generally used as the pit bull to justify the use of coercion in achieving the corporate agenda. Sure, the corporations may cry for their mommy, and say all kinds of nonsense about how oppressed they are. But that is an intentional smokescreen. This is a case of corporations and government getting together to screw the citizenry, as it is 90+ % of the time.

seth (2009-11-18 18:28:33)

Sasha, I think you and user@example.com agree.

Tamooj (2009-11-19 00:56:27)

user@example.com - Ummm... How exactly is Pres Obama responsible for this? The court case happened a few years ago under the previous administration, and in any event, it was the courts, not the white house, that made this call. I'm coming to dislike all the hate speech, (left or right) I see in these postings almost as much as I am disappointed by all the grammatical and spelling errors. No wonder the world laughs at us. Sigh.

seth (2009-11-19 01:08:28)

hmm. I guess my previous comment was unclear. user@example is joking.

This Post Will Take Forever to Load (but is of Course Worth it) « Out Of My Mind (2009-11-19 03:37:53)

[...] Corporate assholes: Pfizer goes to the Supreme Court to screw New London, then craps on the town. [...]

## Chatting With a Gmail Hacker (2009-11-18 05:59)

Someone broke into my gmail account. (I have regained control.) The hacker sent an email to about twenty people asking for money. To be sent to London. Here is a gchat conversation that ensued (me = the hacker, Richard = one of my students):

18:30Â

Richard : do u need sth professor?

18:32Â

me : nop

Â Â

not good at the moment

Â

Richard : what do u mean? ur feeling not well?

---

16 minutes

18:49Â

me : HEY

18:50Â

Richard : hey

18:51Â

me : heop you get my mail?

Â

Richard : uh.. no

Â Â

when did u send it?

18:52Â

me : I'm stuck in London with family right now

Â

Richard : wow!! u didn't tell us u're going to the uk!

18:53Â

me : I'm sorry for this odd request because it might get to you too urgent but it's because of the situation of things right now

Â

Richard : wait.. are you Kaiping or Seth?

Â

me : Seth

Â Â

i came down here on vacation

18:54Â

Richard : oh..

Â Â

this is really odd

Â Â

i saw kaiping's post saying that he's with his family too..

2168

18:55Â

so u emailed to me? but i didn't get it..

18:56Â

u mentioned request.. what is the request in ur email?

18:57Â

me : i was robbed, worse of it is that bags, cash and cards and my cell phone was stolen at GUN POINT, it's such a crazy experience for me

Â

Richard : what!

where are you now? are you safe?

18:58Â

me : i need help flying back home, the authorities are not being 100 % supportive but the good thing is i still have my passport but don't have enough money to get my flight ticket back home and I need to clear the hotel bills here

Â

Richard : can u resend me the email?

18:59Â

me : please i need you to loan me some money, will refund you as soon as I'm back home, i promise. Get back to me ASAP let me know what to do next

Â

Richard : can u log on gtalk so i can voice chat with u?

Â Â

not enough info for me

19:00Â

i did get ur email so i don know how i can hel u

Â Â

help

19:02Â

me : can i ask you a qus?

Â

Richard : yes

Â

me : tell me who is your best friend?

19:03Â

Richard : .....my girlfriend i guess

Â

me : are you kidding me ?

Â

Richard : if ur serious about my helping u then...

19:04Â

me : are want to who you her

Â Â

tell me who is your best friend?

Â

Richard : why does this matter if.. what?

Â Â

best friend okay, a guy in tsinghua

19:05Â

but u don't know him i guess

Â

me : the title of book I showed you lat time ?

Â

Richard : the shangri-la diet or mindless eating?

Â Â

....professor, please

19:06Â

me : stop kidding me

19:07Â

Richard : professor i thought u r a little strangely

sorry.. i mean talking a little strangely

Â Â

i should be confused

19:09Â

why does these matter if ur trying to fly back?

19:11Â

the thing is i didn't get ur email so i do not know how to help

19:13Â

me : You can wire it to my name from a western union outlet around. Here are the details you need to get it to me;

Â

Richard : can u use voice chat?

19:15Â

2170

it should be easy to install the voice chat plugin for gmail, i mean we are not well connected, so it's kinda slow  
Â Â

i couldn't help thinking this as an experiment...

19:16Â

i think the easiest way would be u resending the email so i can get enough info

19:17Â

besides, i may not have enough money so i would need time to transfer money into my active account if we act fast enough we can get u home more quickly

19:18Â

do u have a phone number of any kind?

19:19Â

me : You can wire it to my name from a western union outlet around. Here are the details you need to get it to me;

Name - Seth Roberts

Location - 27 Leicester Square, London. England.

19:20Â

Richard : and how much? all i have is rmb does it matter?

19:21Â

me : how much can you loan me ?

Â

Richard : i donno. all i have in my account is about 4k yuan

19:24Â

me : I still have my passport so i can use it as identification. You'll be given a 10 digit confirmation number as soon as the transfer goes through, email it to me as soon as you have wired the cash to me.Regards

19:31Â

me : you there

Â

Richard : yes professor do u have a phone number?

Â

me : nop

19:32Â

Richard : but u have access to internet! where r u now?

Â

me : yes

19:35Â

Richard : i gotta go good luck man

Jim (2009-11-18 06:53:30)

Sounds like Not-Your-Self-Experimentation.

david (2009-11-18 07:24:25)

Wow. Any idea how he got your password?

seth (2009-11-18 07:48:45)

No I don't, unfortunately. His English is too good for him to be Chinese. So I have a hard time believing it has anything to do with my being in China. A virus scan of my computer turned up nothing. A lot of gmail accounts have been hacked like this in the last few weeks. It certainly has nothing to do with phishing, as Google first claimed. I didn't give anyone my password. And I use https (rather than http) when using gmail.

DP (2009-11-18 08:12:26)

Did you log in using either a cafe computer or someone else's computer? I find that people, even sysadmins, can't be trusted to maintain security. I try to keep great security on my machines, and rarely use anyone else's when I'll need to enter a password. The one time I know my password was snared was when I was working with a friend on a project & needed to SSH from his terminal, which was logged into the Cal math dept. When it came to light a day or so later, I initially assumed my friend had unwittingly gotten a keylogger. In reality, it was the math department that didn't maintain good security.

Nathan Myers (2009-11-18 11:20:00)

It probably has a lot to do with being in China. A new and practical man-in-the-middle attack on SSL, and thus on HTTPS, allows anyone who controls a router you're going through to get your SSL credentials. No more internet cafes, for a while.

seth (2009-11-18 12:45:59)

Nathan, the attack you're talking about only seems to work with Twitter: <http://news.softpedia.com/news/Practical-Twitter-Attack-Using-SSL-Renegotiation-Bug-Demoed-127087.shtml> I don't have a Twitter account, never use it. You can't get Twitter in China, I'm told.

Kz (2009-11-18 13:35:14)

A few notes: - Are you sure they aren't Chinese? "are want to who you her" - their English is less than perfect. - The vulnerability you linked to is a flaw in SSL, not in Twitter. Any site using SSL is vulnerable. - I wouldn't call this person a hacker, necessarily. Unless you have a much more secure password than average, haven't ever written it down, and don't use the same password for any other websites, they could easily have guessed (brute forced against known info) or otherwise found out your password. If not, it was likely a MITM attack, which anyone can do.

Nathan Myers (2009-11-18 13:55:11)

No, Twitter is just a convenient and familiar way to demonstrate the exploit. It works with any SSL connection and login, under certain conditions. Of course the people using it for ill are not posting articles about how they're using it. Probably most uses involve hacking into thousands or millions of wireless routers and altering how they forward SSL traffic, to harvest authentication details. It's entirely possible, maybe even likely, that your case was not one of them, and that you got taken by a keylogger installed on a cafe machine, or something.

Nathan Myers (2009-11-18 13:58:54)

Also, English skills tell us nothing. Details harvested in China are sold in bulk worldwide. Former Chinese WoW gold farmers are branching out.

seth (2009-11-18 14:14:24)

thanks, Nathan



## **The Return of Charles "Disgraced" Nemeroff (2009-11-18 14:55)**

So soon! Nemeroff, you may remember, took large sums of money from drug companies and failed to disclose them. What is that line about teaching an old dog new tricks? Here is what [1]the New York Times said:

The program, conducted online, had been led by Dr. Charles Nemeroff, an Emory University psychiatrist who last year was removed as department chairman and lost federal grant financing for [2]failing to report income from 16 drug companies.

Dr. Carroll said that the program concealed unfavorable data and side effects of drugs made by AstraZeneca, which sponsored it, and played down alternatives to those drugs. In his complaint, Dr. Carroll wrote that the program "appears to make a mockery of standards against bias."

In an e-mail message Tuesday night, Dr. Nemeroff defended the program. "The program was peer-reviewed and found to have fair balance," he wrote.

Thanks to Michael Bowerman.

1. [http://www.nytimes.com/2009/10/21/business/21medic.html?\\_r=3&adxnnl=1&adxnnlx=1258578056-yechwAzakNqIG1ali65aw](http://www.nytimes.com/2009/10/21/business/21medic.html?_r=3&adxnnl=1&adxnnlx=1258578056-yechwAzakNqIG1ali65aw)
2. <http://www.nytimes.com/2008/10/04/health/policy/04drug.html?ref=health>

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## **Pork Scrap (2009-11-18 16:39)**

In [1]a New Yorker podcast, Calvin Trillin says:

I live in Nova Scotia in the summer. And I hear a lot of talk about how Newfoundlanders eat mainly pork scrap.

Hey, that's what I eat: pork scrap. (And fermented food.) Pork scrap (large pieces of pork belly, actually) is absurdly cheap: \$1/pound or less.

1. [http://www.newyorker.com/online/2009/11/23/091123on\\_audio\\_trillin](http://www.newyorker.com/online/2009/11/23/091123on_audio_trillin)

Nathan Myers (2009-11-18 22:43:54)

You couldn't pay me enough to eat American pork. Haven't you read about Smithfield's feedlots?

### **Best TV Season Ever (2009-11-19 04:15)**

Here are my favorites (better to worse):

1. Mad Men.
2. Glee.
3. [1]Lie to Me.
4. The Good Wife.
5. Survivor.
6. Amazing Race.
7. Ugly Betty.

Most seasons I might like three shows as much or more than I like Ugly Betty this season. In most seasons Amazing Race would be in the top three. And 60 Minutes, Frontline, 30 Rock, and Modern Family are watchable. Lie to Me and The Good Wife have both managed to make a case-of-the-week show seem fresh, new, and complex.

1. <http://www.blog.sethroberts.net/2009/03/08/lie-to-me/>

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Tom in TX (2009-11-19 07:43:24)

This season I like V (though it should have been called O) and White Collar. I also like Amazing Race, Survivor, and Lie to Me.

seth (2009-11-19 11:40:10)

Thanks, Tom. I hadn't heard of White Collar and have never seen an episode of V. I also like Entourage, Leverage, Top Chef Masters, American Idol, and The Bachelor/Bachelorette, which are now in hiatus or between seasons.

Tom in TX (2009-11-19 12:18:07)

V is a sci-fi show on ABC Tuesday nights. It's a remake of a mini-series from a couple of decades ago. Aliens come to our planet with the message, "We're from the government of another planet and we're here to help you". They even offer us universal health care. 8-) White Collar is another one of those "characters welcome" shows on the USA Network. They seem to have a formula for cranking them out - Monk, Psych, Burn Notice, In Plain Sight, Royal Pains. You can watch episodes at abc.com and usanetwork.com.

thehova (2009-11-19 13:04:46)

I'm surprised that NBC's much hyped Thursday night comedies didn't make the list. Mad Men is an incredible show with a ridiculously low budget.

## Obesity and Your Commute (2009-11-19 12:17)

In the 1950s – before the invention of BMI (Body Mass Index) – Jean Mayer and others did a study of obesity at a factory in India. They divided workers by how much exertion their job required. Almost everyone, even desk clerks, was thin, with the exception of the most sedentary. It appeared that walking one hour per day (to and from work) was enough to get almost all the weight loss possible with exercise. Doing more had greatly diminished returns. A study with rats suggested the same thing. Bottom line: If you're sedentary, you can easily lose weight via exercise, which can be as simple as walking to work. If not, it's hard.

This month GOOD has [1]a kind of update of that ancient study – a scatterplot, each point a different country, that shows percentage of obesity and fraction of commutes that are active (bike or walk). It supports what Mayer and others found – that how you get to work makes a difference. If you fitted a line to the data it would have a negative slope (more obesity, less active commutes). America has the most obesity and relatively few active commutes; Switzerland has the most active commutes and relatively little obesity. The graph also suggests that other factors matter a lot. Although Australia has less active commutes than America, it also has less obesity.

1. <http://awesome.good.is/transparency/web/0911/working-out-on-the-way-to-work/flash.html>

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Charles (2009-11-19 13:26:47)

Correlation is not causation, of course. Are they obese because they're less active, or are they less active because they are obese? (Just as Gary Taubes makes the case that you're not fat because you eat too much; you eat too much because you're fat.) I know that when my diet is good, I'm more active and more interested in being active. When in the past my diet has been bad, I've been much more likely to sit around and watch TV, or get in the car when I could walk or bike. Now if you live in L.A., and work 30 miles from where you live, walking isn't an option of course...

Sam (2009-11-19 13:53:02)

Uuh, this got nothing to do with this post, actually (just delete my comment after reading it, I found no other way to contact you). Look at the video embedded at this site: <http://www.renegadehealth.com/gerson-hbs/> The old lady is talking about her fathers experiments, using foods to cure diseases, and funny thing, the one fat she explicitly mentions at the end of the (interesting part of the) video is flaxseed oil. I thoungh this video about food and health might be of interest to you. Kind regards, Sam

david (2009-11-19 13:53:51)

I saw this a while back and almost sent it to you: <http://science.slashdot.org/story/09/11/09/0556210/Why-Doesnt-Exercise-Lead-To-Weight-Loss> It links to this (the real story): <http://well.blogs.nytimes.com/2009/11/04/phys-ed-why-doesnt-exercise-lead-to-weight-loss/> For me, exercise stimulates appetite and causes weight gain. I use a combination of SLD (nose clipped breakfasts and lunches) and exercise (biking to work) and consider the SLD to be for weight control and the exercise for general fitness (independent of weight).

Darrin Thompson (2009-11-19 14:00:26)

Two things: This moderate amount of exercise probably works best when it's daily and consistent for really long time. TIME recently had a cover story featuring new research indicating that exercising is an ineffective way to lose weight. Although I bet these articles don't really contradict. The kind of exercise that TIME featured is the intense focused fitness club kind, the kind that makes you hungry.

Jennifer (2009-11-19 14:18:19)

I am 43 and used to run, run, run until my poor knees threw up their hands and said, "Enough!" Then I saw that Dean Ornish was asked whether running was better than walking and he said that walking was better because you can do it longer, it's easier on the ol' bag of bones, and the calories spent are equivalent in the long run. So I make sure that I walk for at least 60 minutes each day whether on a treadmill on a good incline or around my neighborhood. I'm not built like a marathoner but I never gained any weight and my knees have forgiven me and we are back on friendly terms. I can see how walking to work or school every day would make a big difference in the amount of obesity an area has. It's impossible to commute on a bike or on foot in most of LA, for example, and people are larger there (or so it seems to me) than New Yorkers, who can do more walking.

seth (2009-11-19 17:37:24)

"Are they obese because they are less active or less active because they are obese." An important feature of the Indian study was that the amount of activity you got depended on your job. Not on what you did in your free time. So exercise (actually, activity level) was a more potent and less-confounded force than most correlational studies of exercise these days. And people were unlikely to sort themselves into different occupations based on how much they weighed.

bennetta (2009-11-20 11:18:13)

Getting a desk job has been my downfall. All my previous jobs (natural foods store database manager/teacher) have been relatively aerobic in comparison. Since I started sitting in this cubicle more than three years ago, I've put on about 25 lbs. I blame my job. For me, weight loss is a lifestyle thing. It's extremely difficult, if not downright impossible, to make up the burnt calories you'd get from eight hours of constant movement vs. eight hours of sitting in a chair. I'm also not really the gym type, as it seems really unnatural to me, like I'm cramming what I should be doing into a small time period, but can't, because I'm forced to sit here at my desk like veal. Moreover, the type of exercise is not the same (long endurance vs. short burst), but most importantly, intense workouts cause my appetite to rage. I suppose that's the crux of it for weight loss purposes, and why gym plans tend to fail. Intense workouts cause intense hunger. Remaining active throughout the day doesn't. My solution, which I took up about two months ago, has been to walk to work. While walking 5 miles twice a day (often in the rain) isn't for everyone, I've found it to be the best alternative to having an active job that I can find. So far, I've lost about 8 lbs. That was a mouthful!

jasonfiorini (2009-11-24 18:50:23)

well said

Bob Sherman (2009-12-28 06:41:43)

In the 1950s you could not find fast food in India. Hardly even in the U.S. And, the vegetarian diet of most in India had to be a factor in keeping most people slim. Walking a mile works off about 100 calories. Not hard to keep slim eating rice and veggies. But, today... There are 540 calories in a Big Mac. And, don't forget the 790 calories in an Angus Bacon & Cheese. You'll want a large fries with that, right? Of course, for another 500 calories. And, let's ease up on the drink with only a medium Coca-Cola® Classic for another 220 calories. (see [http://nutrition.mcdonalds.com/nutritionexchange/nutrition\\_facts.html](http://nutrition.mcdonalds.com/nutritionexchange/nutrition_facts.html)) OK. That's one Big Mac, large fries, medium Coke for 1260 calories. Gotta walk more than 12 miles to work that baby off. Our lifestyles have brought most Americans to the point of over indulging in high caloric foods and reducing our need to exert ourselves. No wonder we're fat.

Tyler (2010-02-22 12:24:00)

Bob you hit the nail on the head, times have changed, portions have changed and simple solutions are failing to address complex problems. Simply walking a mile or two to and from work isn't enough anymore, especially given the calorie rich foods we're all eating and the increasingly sedentary lifestyles. Technology is making it too easy to do so much that requires so little physical effort. Until people realize they have to push themselves the extra proverbial miles, it's not going to change.

## Depression and Insomnia Linked at CureTogether (2009-11-20 01:26)

Fourteen years ago I woke up one morning and felt really really good: cheerful, eager, and yet somehow serene. I was stunned: There was no obvious cause. I hadn't slept particularly well. Nothing wonderful had happened the day before. But there was one thing . . . the previous day I'd watched a tape of Jay Leno right after waking up. I'd thought it might improve my sleep. Now – a day later – my mood was better. Could there be a connection? Two very rare events: A (TV early in the morning) and B (very good mood upon awakening). Did A cause B? Such causality would be far different than anything we're familiar with. Yet it made some sense: From teaching introductory psychology, I knew that depression and insomnia are related. If you have one you are more likely to have the other. I had done something to improve my sleep; had it improved my mood? The already-known depression-insomnia linkage made the new idea, the cause-effect relation, far more plausible. [1]Subsequent experiments led me to a whole new theory of mood and depression.

[2]CureTogether has found another example of the familiar depression-insomnia correlation. Persons with depression are twice as likely to have insomnia as persons without depression. CureTogether gathered this data much more cheaply than previous studies. Unlike previous researchers, they were under no pressure to publish. (Professional researchers must publish regularly to keep their grants and their job.) Unlike previous researchers, they were under no pressure [3]to follow a party line.

On the face of it depression makes you less active. Yet insomnia is a case of being too active. So the depression-insomnia link is far from obvious. Lots of other facts connect depression and circadian rhythms; they all suggest that the intellectual basis of anti-depressants, all that stuff about serotonin and neuro-transmitters and re-uptake, is wrong. If depression is due to messed-up circadian rhythms, taking a drug at random times of day is unlikely to fix the underlying problem.

1. <http://escholarship.org/uc/item/2xc2h866>

2. <http://curetogether.com/blog/2009/10/30/depression-insomnia-link-reported-at-curetogether/>

3. <http://www.blog.sethroberts.net/2009/11/11/three-things-elizabeth-kolbert-doesnt-know/>

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JLD (2009-11-20 03:40:45)

There are other hypothesis about depression, [1]The bright side of being blue: Depression as an adaptation for analyzing complex problems. If such is the case there is no contradiction between insomnia and low activity, on the contrary it matches quite well.

1. <http://sites.google.com/site/paulwandrewsphd/>

intellectual yokel (2009-11-20 09:21:35)

Seth, do you still watch faces every morning?

thehova (2009-11-20 13:14:30)

I used to be a filer for a primary care physician (it turned out to be a really interesting job). I was shocked by how many patients he prescribed anti-depressants (such patients were typically in bad health and returned to the doctor often for all sorts of reasons). Would a sleep prescription improved their depression and health? It seems like it would be much less invasive than

anti-depressants.

seth (2009-11-20 16:37:31)

intellectual yokel, yes, I still watch faces most mornings.

Alexandra Carmichael (2009-11-20 21:39:03)

Fascinating, Seth! Is insomnia always a case of being more active? I hadn't heard the depression-circadian cycle connection before either, definitely food for thought in my own family - do you know of any good resources/studies that talk about this?

seth (2009-11-21 07:11:03)

"Is insomnia always a case of being more active?" Well, mentally active, yes. Waking up is a step toward being more physically active, too. Curiously I cannot find any recent surveys of the depression/circadian rhythm link. There is a 1983 book called "Circadian Rhythms in Psychiatry". Yet the depression/insomnia link isn't just very clear in research studies, it's also clear that many persons with depression feel better later in the day. The depression begins to lift. My 2004 self-experimentation paper <http://escholarship.org/uc/item/2xc2h866> gives many references about the various ways circadian rhythms and depression are linked.

Nansen (2009-11-21 13:51:08)

@ thehova re: "Would a sleep prescription improved their depression and health?" To the extent one believes Wikipedia: "...the duration of [Slow-Wave Sleep] periods can be increased by ingestion of alcohol, THC, SSRIs, and other drugs....This increase of [Slow-Wave Sleep] can lead to increased REM latency and a decrease in REM period durations...An increase in REM is believed to produce symptoms of depression and bipolar disorder in many patients...Certain substances, such as benzodiazepines (e.g. Ativan, Valium, Klonopin) seem to have the reverse effect on the time spent in [Slow-Wave Sleep]....While these sedatives can increase sleep duration or shorten the time it takes before sleep-onset occurs, they tend to deprive patients of deep sleep." in other words, sedatives can increase REM, which can increase depression.

MT (2009-11-23 16:58:34)

I don't think this is a revelation - insomnia is well-linked to depression, and is even considered a diagnostic indicator in the DSM-IV, the medical standard. @theHova, would sleep prescriptions be more productive - "sleep meds" (such as benzodiazapenes and other relaxants) are commonly prescribed for mood disorders including depression and anxiety. In my opinion they are generally ill-advised as people acquire tolerance to them, leaving them worse off when they have to taper off of the medications. Sleep is better regulated through behaviour modification including regular sleep and wake times, and cutting back on or eliminating alcohol and caffeine. Seth's suggestions about sunlight and other interventions are also worthwhile.

ceva (2009-12-20 15:35:22)

Hi have noticed a very strong connection between my mood and these factors, in order of importance: 1) Time at which I fall asleep - if this is later than midnight, there is a very good chance that I will be in a very bad mood the next day. 2) How long I sleep for - 8 hours is required, or I will be at least 'somewhat grouchy' 3) How much 'stimulation' I have had - this encompasses pretty much anything more demanding than sitting in a darkened room and thinking airy thoughts. To have a chance of being in a very good mood the following day, it is \*vital\* that I manage to relax fully through an hour or so of \_awake rest away from anything even mildly demanding \_. I have only recently been taking the third step, in the process discovering precisely why I have been in an unaccountably bad mood for the last 15 years or so. Wrt to the third point, it has recently occurred to me that what is generally taken to be restorative or relaxing: watching the tv, reading, listening to music are actually quite the opposite - however 'mild' each dose may be, they are still enervating. Relatedly, I have found that tv in the evening has a noticeable effect on my inclination to be sociable during the following day (my job is the most social of all). The mental exertion involved in seemingly innocuous, routine activities was confirmed by some experiments I carried out on myself on 'concentrated concentration' ie. attempting to 'think hard' for very long periods (all waking moments in days on end). After three or four days, my brain would rebel and react to any attempts at further thinking with nausea, headaches - the offending acts of cerebration would include many activities that I had hitherto considered eminently undemanding - watching bad tv,

reading magazines, chatting (!) with nausea, headaches etc.

seth (2009-12-20 16:03:38)

Ceva, your point #3 is very interesting. You're saying that if you watch TV in the evening you are LESS inclined to be social the next day? That awake rest you need to be in a very good mood the next day – when during the day must it occur? your experiments on concentrated concentration sound really good.

ceva (2009-12-20 16:59:02)

Yes, absolutely. I noticed this because I had a limited set-up at home for a while, alternating between weeks of spending evenings doing little or nothing (reading or sleeping) or doing little or nothing whilst watching tv (when my housemate would be around - he hated not having it on). I was working as an elementary school teacher, a reasonably intense job that involves a huge range and great number of social interactions, so changes in social inclination on my part tended to be clear to me. One theory I had was that tv might 'use up' the psychological space that one has for social interactions - for my housemate, he may have felt compelled to watch it to supplement the small number of social encounters that his job involved (he would typically watch Friends). The more straightforward theory I had was that tv was actually enervating rather than relaxing. The concentrated concentration experiments involved two days (8am to 11pm) of non-stop German grammar drills, followed by a day of writing maths puzzles. The work was highly intensive (I was aiming to be 'processing' info as deeply as possible at all times), far more intensive than any of the academic work that I have been led to do in the past. The consequent feelings of nausea were very closely related to having to process mentally even the most rudimentary input. I also suffered from a mild but insistent, and oddly located, headache and had difficulty walking (I would list to one side). I repeated the experiment recently, seeing how much I could stuff into my head using spaced repetition software. After reviewing 2000 words in the first session, I again got oddly located headaches (front-top of head?), nausea and slight dizziness. That lasted for two hours or so. As if that wasn't enough for me to learn my lesson, I recently decided to append heavy language work (aural comprehension) to intensive daytime work learning new maths, after which I had about 5 days of odd headaches (which would be provoked by mental work and whose intensity would be proportional to the difficulty of the work (this was a good way of ascertaining the difficulty of tasks!)) and general malaise. It was after this that I decided to start tweaking the levels of stimulation more closely, to maximise working time without permanently disabling myself. Regarding awake rest, I haven't started playing with timings during the day, but it would appear that, for me, full mental 'cooling', before decent sleeping rest is vital to be in a good mood the day after. In a different experiment, I seemed to find that high-speed, repetitive, high-concentration analytical work (for example, Sudokuing or anagramming) had noticeable effects on my social skills/awareness of the social world around me/self-relation, lasting for around three hours, after a twenty minute 'dose'. It would feel like induced aspergers (as if I were operating myself at one remove, as one would a puppet - very bad for teaching well). I repeated this experiment many, many times (over a space of three years) and had the same outcome on every occasion. I haven't been able to find someone with similar experiences.

### **In Your Wheelhouse (2009-11-20 02:16)**

I'd never heard the phrase in your wheelhouse (= in your area of expertise) until a few days ago. Now I've heard it twice: once on Ugly Betty, once on Glee. Maybe someone used in the LA Times six months ago, when those scripts were being written.

Bartacus (2009-11-20 07:17:13)

It's actually a fairly common phrase, Seth. Baseball fans will encounter it a dozen times a season. In that context it means a pitch is located where the batter is most likely to connect for a base hit. And I hear it occasionally in the business world, usually when project assignments are being made in accordance with experience, skills and temperament. Perhaps the phrase has not penetrated the realm of academia.

James (2009-11-20 07:42:24)

I believe you've just encountered the Baader-Meinhof phenomenon. (<http://thankswiki.blogspot.com/2009/03/entry-baader-meinhof-phenomenon.htm> I)

Andrew Gelman (2009-11-20 08:24:09)

Seth: Maybe it was used on some TV show six months ago. But my guess is that you've heard the expression before but did not register it. Once it stuck in your mind, you were primed to notice it when it came up again. That said, yes, I knew what the expression was and I've seen it in print, on occasion, but I don't think I've ever heard it spoken.

Hatcher (2009-11-20 08:30:29)

i've heard the term used a lot in sports, especially baseball. some hitters have certain pitches and zones that are right "in their wheel house." Like maybe an inside fastball.

Rose (2009-11-20 08:49:18)

I noticed it in Glee (I even re-wound to catch it). I hadn't heard it either, but some people I know edit a very good experimental writing webmag called Wheelhouse (which is the first time I'd ever heard the word)

seth (2009-11-20 13:07:07)

The baseball usage explains what happened – I pay no attention to baseball these days (except on Wii Sports). And it was baseball season when those scripts were written.

## **BoingBoing on Natto (2009-11-20 12:56)**

[1]This post by Lisa Katayama told me a few things I didn't know – especially that there is "good soy" and "bad soy". Good soy is mainly fermented (soy sauce, miso, and natto). The book she mentions (The Jungle Effect by Daphne Miller), which I didn't know about, sounds interesting.

Katayama's series about food has the global title "Taste Test" so I was disappointed she didn't compare different brands. I have done natto taste tests. The big difference between brands is the sauce packets! This is not how taste tests are supposed to turn out. Natto has a mild flavor that doesn't matter if you add sauces. The texture is very similar across brands.

Thanks to Bryan Casteneda.

1. <http://www.boingboing.net/2009/11/20/taste-test-natto.html>



bennetta (2009-11-20 17:59:06)

Soy has a lot of estrogen in it, so much that I know women who will actively avoid it while on their period because it makes them... "weird," as they put it. Excessive estrogen can cause a number of health problems over time. For example, it can cause thyroid dysfunction, increase your appetite, and encourage the development of breast cancer. The information is readily available and I can provide links if you'd like. After reading the article, perhaps the fermentation process somehow neutralizes the estrogen? This could probably be easily researched. What do you think, Seth?

Caleb (2009-11-21 07:57:58)

From what I recall, fermentation doesn't effect the estrogen effect of soy. I tell all my female patients who are anywhere near borderline low thyroid to avoid all soy.

JLD (2009-11-21 08:55:45)

*From what I recall, fermentation doesn't effect the estrogen effect of soy.* Awwwww... shit! Since for other reasons I have to avoid dairy products and replaced yoghurt with lactofermented soy what kind of **other** substitute could there be?

Marc Feel Good Eating (2009-11-23 08:40:51)

Love natto.....but I don't use the included the "packets". They are of the Franken foods variety. If you are preparing natto at home add some scallion for extra yum. FYI, JDL is correct, estrogen not effected by fermentation. Marc

### **Acid Reflux is Immune Problem, Says Rat Study (2009-11-21 06:55)**

[1]A study using a rat model of acid reflux found that the problem is inflammation caused by the immune system, not stomach acid damaging tissue, as had previously been thought.

[The] study in rats showed that gastroesophageal reflux causes tissue in the esophagus to release immune chemicals called cytokines, which attract inflammatory cells. These cause the heartburn and chest pain that make GERD [gastroesophageal reflux disease] so distressing.

"Currently, we treat GERD by giving medications to prevent the stomach from making acid," said Dr. Rhonda Souza, who led the study published in the November issue of Gastroenterology.

"But if GERD is really an immune-mediated injury, maybe we should create medications that would prevent these cytokines from attracting inflammatory cells to the esophagus and starting the injury in the first place.

Months ago [2]I posted about a friend of mine whose acid reflux was cured by drinking kombucha. The implication of that case and the rat study is that acid reflux is caused by an over-active immune system. Perhaps stomach acid often gets into the esophagus. Only if your immune system is under-stimulated does this cause trouble.

Acid reflux is very common. According to the article, 20 % of Americans "have it regularly". All this supports my view that we need plenty of bacteria in our diet to be healthy, that few Americans get enough bacteria in their diet, and that the deficiency causes all sorts of digestive and immune problems.

1. <http://www.reutershealth.com/archive/2009/11/20/eline/links/20091120elin012.html>

2. <http://www.blog.sethroberts.net/2009/08/10/acid-reflux-cured-by-kombucha-yes/>

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peter (2009-11-21 09:02:56)

there may be many causes for acid reflux; in my case it is a defect in the sphincter between the stomach and the esophagus; that key sphincter does not close and as a result stomach acid splashes on my esophagus. what you describe as an immune system problem appears to be another cause of acid reflux, at least in rats and perhaps in humans.

Jeff (2009-11-21 12:36:49)

This isn't surprising. You see immune system inflammation with lots of types of tissue damage. A similar thing happens when lungs are exposed to air pollutants. Immune cells come to the area and release compounds that cause damage. "The implication of that case and the rat study is that acid reflux is caused by an over-active immune system. Perhaps stomach acid often gets into the esophagus." Maybe stomach acid often gets into the esophagus and maybe it doesn't. Without having any idea, it's hard to see how that can be taken as evidence that you are right. This may be the reaction every time acid is in the esophagus, regardless of immune system function. The example you link to of your friend's experience is very strange. "Every once in a while I might be a little uncomfortable. Then I drink a little kombucha, it gets better within an hour." Do you think the kombucha is affecting the immune system and the immune system is then changing, that fast? That seems incredibly fast for an immune mediated change. Jeff

seth (2009-11-21 15:26:14)

Jeff, that's a good point - except that I have no reason to think the immune system can't change that fast. If you do I'd like to know what it is. The immune system has to be built for speed, certainly, because the faster it responds to an infection the better. Do you have another explanation of why my friend's acid reflux - which had lasted a long time - disappeared soon after he started drinking kombucha?

Matt (2009-11-21 17:44:13)

Hi Seth, Your posts got me researching probiotics and the immune system. Have you seen the Duke study on Sucralose (Splenda) that reduced the amount of good bacteria in rats? Pretty eye-opening for me, as I have been drinking a lot of soft drinks sweetened with Splenda. This year I had 3 staph infections. Coincidence or not? Something was suppressing my immune system. I am now eating yogurt daily and have stopped my consumption on Splenda. I have also been on the SLD for a little over a week and it is so liberating to be free of the cravings. Thanks!

seth (2009-11-21 22:21:00)

I have not seen that study. Very interesting, since sometimes I consume a lot of Splenda.

Matt (2009-11-22 11:11:54)

<http://www.informaworld.com/smpp/content?db=all&content=a902553409>

David (2009-11-22 17:23:28)

This guy experimented with ground flaxseed: <http://blog.szynalski.com/2009/05/14/heartburn-remedy-ground-flaxseed/>

Carol (2011-11-26 23:22:05)

Hi there!! I suffer from acid reflux and what triggered it was a mononucleosis virus. Since then its very bad!! Probiotics help!! Do i need a supplement for the immune system?? Pls let me know what is Kombucha!!!

## Interview with Tyler Cowen (2009-11-21 18:03)

Tyler Cowen's new book *Create Your Own Economy: The Path to Prosperity in a Disordered World* has a lot to say about two topics in which I am especially interested: autism and human diversity. What can the rest of us learn from people with autism? What does the wide range of outcomes among autistic adults tell us about our world? I interviewed Tyler by email about his book.

ROBERTS If I remember correctly, you think a book should be new, true, and something else. What's the something else?

COWEN The "something else" should cover at least two qualities.

First, if everyone read the book and was persuaded by it, would anything change for the better? An author should aim to write a book which matters.

Second, the book should reflect something the author really cares about. If the author doesn't care, why should the reader?

ROBERTS What was the tipping point for this book – the event that made you say: I'm going to write a book about THIS?

COWEN To me it's very important what an author is thinking about in his or her spare time, if the phrase "spare time" even applies to my life, which has an extreme blending of work and leisure time. Ideally that is what an author should be writing about. At some point you realize: "Hey, I am constantly thinking about xxxxx in my spare time!" And then you want to write it up.

I also hit up the idea of this book through pondering the lives of some particular individuals I know – and how much they \*live\* the thesis of my book – although I am not sure they would wish to be identified publicly.

ROBERTS Have you been to Autreat, the annual conference of Autism Network International, that you mention? If so, did it affect your thinking?

COWEN I haven't been to Autreat, which for me is located somewhat inconveniently away from major cities (that is on purpose, I believe). I'm also not clear on exactly who is welcome, who needs an invitation, etc. Most conferences have a very high variance in quality across presentations and mostly one goes to meet one or two key people; often you don't know in advance who they will be. I suspect the same logic applies to Autreat as well.

ROBERTS Do you think there are jobs that persons with autism do better than persons without autism?

COWEN Autistics often exhibit superior skills in attention to detail, pattern recognition, what I call "mental ordering," and they have areas of strong preferred interests, in which they are very often superb self-educators. So yes, that will make many autistics very good at some jobs but also poorly suited for others. But I don't want to generalize and say "autistics are better at job X," that would be misleading. Across autistics there is a wide variety of cognitive skills and also problems. Engineering and computer science are the stereotypical areas where you expect to find higher than average rates of autism. While I suspect this is true in terms of the average, it can be misleading to focus on the stereotype precisely because of the high variance of skills and outcomes among autistics. One of the central issues in understanding autism is grasping the connection between the underlying unity of the phenomenon and the extreme variability of the results. In the short run, positive stereotypes can perform a useful educating function.

But the more we present stereotypes, the more we are getting people away from coming to terms with that more fundamental issue, namely an understanding of the variance.

ROBERTS There is a basic biological phenomenon in which animals and plants under stress become more variable. Some say variability in the genotype has been released into the phenotype. Do you think the variance seen in autism has been "released" in some way?

COWEN I am not sure I understand the question...for one thing I am not sure what is the postulated increase in genetic stress...

ROBERTS Yes, it's a confusing question. Let's try this: What do you think the high variance of outcome seen in autism is telling us?

COWEN I'll try to make that more concrete. One view of autism is that autistics have greater access to lower-level perception and such that access is essential for understanding autism. On one hand it gives autistics some special abilities, such as pattern recognition, certain kinds of information processing, and noticing small changes with great skill. (In some cases this also leads to savant-like abilities.) This also may be connected to some of the problems which autistics experience, such as hyper-sensitivities to some kinds of public environments.

It could be that non-autistics have a faculty, or faculties, which "cut off" or automatically organize a lot of this lower level perception. The implication would be that for autistics this faculty is somehow weaker, missing, or "broken." The underlying unity in autism would be that this faculty is somehow different, relative to non-autistics. The resulting variance is that the difference in this faculty gives rise to abilities and disabilities which very much differ across autistics.

That's one attempt to come to terms with both the unity of autism and the variance within it. It's a tough question and we don't know the right answer yet, in my view. What I outlined is just one hypothesis.

ROBERTS A clear parallel in the increased variance of autistic persons is the increased variance of left-handers. Left-handers have brain organizations that vary much more than the brain organization of right-handers. Right-handers are all one way; left-handers are all over the place. Do you see any similarities between left-handers and persons with autism?

COWEN I recall some claims that autistics are more likely to be left-handed but I've never looked into their veracity. There are so many false claims about autism that one must be very careful.

ADHD is another example of something which produces high variance outcomes. I don't think it is correct to call it a disorder \*per se\*.

We're just starting to wrap our heads around the "high variance" idea. Most people have the natural instinct to attach gross labels of good or bad even when a subtler approach is called for.

ROBERTS The term left-hander is confusing because left-handers aren't the opposite of right-handers. The dichotomy is okay but the two sides are better labeled right-handers and non-right-handers. In other words, one group (right-handers) has something (a certain brain organization); the other group doesn't have that brain organization. Then the vast difference in variance makes sense. How accurate would it be to say that non-autistics have something that autistics don't have? (I'm left-handed, by the way.)

COWEN I would say we still don't have a fully coherent definition of autism. And "have" is a tricky word. I think of autistic brains as different, rather than "normal" brains with "missing parts." Some researchers postulate

differences in the kind of connections autistic brains make. In thirty years I expect we will know much, much more than we do right now.

ROBERTS I hope this isn't too self-indulgent: What do you make of the correlation between autism and digestive problems?

COWEN I don't think there are convincing theories about either digestive problems causing autism or autism causing digestive problems. There is \*maybe\* a correlation through a common genetic cause, but even if that is true it is not very useful as a means of understanding autism. This is another area where there are many strong opinions, often stronger than are justified by the facts.

ROBERTS Another "assorted" question: I loved the study you mentioned where people with perfect pitch were more likely to be eccentric than those without perfect pitch. That's quite a result. How did you learn about it?

COWEN There is a somewhat scattered literature on music, cognition, and society. It still awaits synthesis, it seems. Someone could write a very good popular book on the topic. (Maybe Gabriel Rossman is the guy to do it.) The more I browsed that literature, the more interesting results I found.

ROBERTS I don't think I've done justice to your extremely original book but here is a last question. You talk about Thomas Schelling's use of stories. Presumably in contrast to other econ professors. I think of story-telling being something that once upon a time everyone did – it was the usual way to teach. Why do you think Schelling told stories much more than those around him?

COWEN Thanks for the kind words. Schelling has a unique mind, as anyone who has known him will attest. I don't know any other economist or social scientist who thinks like he does, but we've yet to figure out what exactly his unique element consists of. I would say that Schelling views story-telling as a path to social science wisdom. They're not even anecdotes, they're stories. Maybe that doesn't sound convincing to an outsider, but it got him a Nobel Prize.

I am very interested in the topic of "styles of thought in economics."

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### **Splenda Reduces Gut Bacteria in Rats (2009-11-22 14:39)**

[1]This 2008 study done at Duke University found that small amounts of Splenda – similar to what a person might consume – reduced "beneficial bacteria" in the guts of rats. The effect was very large (reduction by about 50 % in 12 weeks) and occurred even at the lowest dose, which was lower than what the FDA allows. Most ominous of all, the effect had not levelled off after 12 weeks. The number of bacteria was still going down.

Within a day two different people told me (in the comments to this blog) about this study, which was published a year ago. [2]A press release about the study. The research was funded by [3]the Sugar Association. Someone recently told me that the only way doctors learn about bad side effects of this or that drug is when drug reps selling competing drugs tell them. While reading about this I came across [4]this chilling comment:

Excitotoxins are implicated in Parkinson's as well... makes you wonder about Michael J. Fox - his time as Diet Pepsi's spokesperson and his admitted addiction to the stuff for decades. I remember seeing an interview with him. His head was shaking from the Parkinson's and his Diet Pepsi was right next to him.

One of the authors of the Duke study is a professor of psychiatry, Susan Schiffman. [5]An earlier study of hers had pro-Splenda results.

More The makers of Splenda issued [6]a press release that could not be less convincing. The study, it says, has "major deficiencies" that include "a lack of appropriate control groups necessary for understanding results." No statement of what those control groups are. The press release also claims that because the investigators did not measure food and water intake, the results are meaningless! The idiotic press release is made even more curious by [7]the statement quoted in the comments below, that "Drs. Abou-Donia and Schiffman admitted that some of the results recorded in their report submitted to the court were not actually observed or were based on experiments that had not been conducted." But these, too, are not described. Which means to me that the details are not on Splenda's side, or they would have been presented. It sounds like really bad news for Splenda.

1. [http://pdfserve.informaworld.com/210365\\_731350710\\_902553409.pdf](http://pdfserve.informaworld.com/210365_731350710_902553409.pdf)
2. [http://www.blackherbals.com/new\\_study\\_of\\_splenda\\_and\\_sucralose\\_reveals\\_new\\_info.htm](http://www.blackherbals.com/new_study_of_splenda_and_sucralose_reveals_new_info.htm)
3. <http://www.sugar.org/>
4. <http://curezone.com/forums/fm.asp?i=1338177#i>
5. <http://curezone.com/forums/fm.asp?i=1338177#i>
6. [http://www.splenda.com/page.jhtml?id=splenda/newspromotions/press/release/scientific\\_Web\\_content.inc](http://www.splenda.com/page.jhtml?id=splenda/newspromotions/press/release/scientific_Web_content.inc)
7. [http://www.splenda.com/page.jhtml?id=splenda/newspromotions/press/release/09\\_21\\_2008.inc](http://www.splenda.com/page.jhtml?id=splenda/newspromotions/press/release/09_21_2008.inc)

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Nathan Henderson (2009-11-22 17:35:41)

From a press release from McNeil Nutritionals, creators of Splenda: "Drs. Mohamed Abou-Donia and Susan Schiffman are the principal authors of the study dismissed by the judge. During depositions in ongoing litigation between the Sugar Association and McNeil Nutritionals, LLC, Drs. Abou-Donia and Schiffman admitted that some of the results recorded in their report submitted to the court were not actually observed or were based on experiments that had not been conducted." Fabricated results? That doesn't exactly instill confidence.

seth (2009-11-22 18:34:10)

Thanks for uncovering this Nathan. I will try to find out what they are talking about.

Mike Kenny (2009-11-22 20:32:08)

I use a lot of Splenda in my coffee. Is there anything one might notice if one's stomach's good bacteria were diminished 50 %?

Nathan Myers (2009-11-22 21:02:39)

Bad news for people suckered into eating Splenda. For Splenda itself, what it is is *old* news; they knew about this at least a year ago.

JLD (2009-11-23 05:24:20)

Why not trying [1]Stevia if you are hooked on sweet tastes?

1. <http://en.wikipedia.org/wiki/Stevia>

Darrin Thompson (2009-11-23 09:15:00)

The anti-splenda press release is from "national consumer education group Citizens for Health" which doesn't exactly inspire confidence either. I mean, come on, Citizens for Health? Could you make the name sound any more like a PR shell? Anyone able to see the actual study?

Sheila (2009-11-23 13:08:28)

Benefits of Stevia: \* Sugarless with no calories \* Will not effect blood sugar levels like sugar does. \* 100 % Natural \* 250 to 300 times sweeter than sugar \* Heat stable to 200 degrees Celsius (392 degrees Fahrenheit) \* Non-fermentable \* Flavor enhancer \* Plaque retardant Anti-caries (prevents cavities) \* Recommended for diabetics \* Non-toxic Extensively tested in animals and Extensively used by humans with no adverse effects. Stevia has been used in Japan since 1970 and there have been no reports of toxicity or other side effects. The Japanese Food and Drug Safety Center has found stevia not to be mutagenic. Only one study has shown stevia to be potentially a mutagenic and this study has been criticized for errors in procedure. Scientist in Great Britain said that according to the study's formula, distilled water is mutagenic. Two studies showed stevia to have a contraceptive effect. The first study was done in Uruguay over 30 years ago and since then no one has been able to reproduce the results. The second study was done by a graduate student in Rio de Janeiro and the results and methods have been questionable. Multiple other studies have shown that stevia has no contraceptive effect. \* Is Stevia Safe? Absolutely. Stevia has been used around the world with NO reports of stevia overdose or toxicity to humans in the past forty years. What are the benefits of Using Stevia? Studies have shown the following benefits from using Stevia in one's diet. These benefits have not been approved or confirmed by the FDA. Splenda on the other hand is made from binding chlorine with sugar....to me, the choice is obvious.

Keane (2009-11-23 23:20:40)

I think diet Pepsi would have been using a different sweetener than Splenda, maybe aspartame. Certainly a different chemical, from Splenda. Are all man made sweeteners harmful? Does natural source necessarily mean more beneficial?

seth (2009-11-24 07:49:05)

"Are all man-made sweeteners harmful?" It is beginning to look that way. One reason there are so many is that problems keep being identified long after FDA approval. Certainly they are more dangerous than we are led to believe. Yes, Diet Pepsi is sweetened with aspartame (NutraSweet), not Splenda (sucralose).

Study: Splenda kills beneficial bacteria in GI tract | Les Jones (2009-11-24 10:21:09)

[...] Seth Roberts - Splenda Reduces Gut Bacteria in Rats: This 2008 study done at Duke University found that small amounts of Splenda "similar to what a person might consume" reduced "beneficial bacteria" in the guts of rats. The effect was very large (reduction by about 50 % in 12 weeks) and occurred even at the lowest dose, which was lower than what the FDA allows. Most ominous of all, the effect had not levelled off after 12 weeks. The number of bacteria was still going down. [...]

smeach (2009-12-01 14:29:50)

I have a copy of the article. Unfortunately, copyright law prohibits me from sharing my personal copy. However, if you type "Abou-Donia and splenda," on Google Scholar, you may find a link to the article.

Ted (2009-12-01 15:12:15)

Since aspartame is actually used as an ingredient in 'lite' yogurts, is it safe to assume that aspartame is unlikely to chase off gut bacteria in the same way?

John H (2009-12-04 00:06:33)

To me, Stevia tastes more bitter than sweet. So until this controversy about Splenda is cleared up, I think I may have to go back to aspartame (Equal). Better to run a small increased risk of brain cancer (if even that--see Seth's previous posts on aspartame and readers' comments) than this?

KS (2009-12-06 21:35:49)

I retrieved the paper using Google Scholar, and discovered this acknowledgment: "This research was supported in part by a grant from the Sugar Association, Inc., Washington, DC" In other words, the study cannot be assumed to be entirely unbiased. This is not to say that the findings are not valid – they might be. (I hope not, since I've been using Splenda, having switched from aspartame due to concerns about its safety.) But when a competing interest is funding a study, the results need to be viewed with some skepticism.

Alexandra Carmichael (2010-02-20 05:43:13)

Hi Seth, This is fascinating. What about xylitol? Due to its antibacterial/cavity-preventing properties, we are considering giving it to our daughter who is prone to cavities. Any idea if it would affect the bacteria in her gut? Thanks for your thoughts, and for always posting such thought-provoking pieces. Alex :)

seth (2010-02-20 07:08:39)

Thanks, Alex. I don't know about xylitol, sorry. In Nutrition and Physical Degeneration (available online), Weston Price has a lot to say, based on data, about what foods do and don't cause cavities. I don't know if his ideas will be helpful, because they sort of boil down to modern food is bad, but you might learn something useful from it.

Joseph (2010-10-04 07:30:44)

For the past six to nine months, after using Splenda for a year or more in my coffee at WORK, I've been having horrible acid mouth, throat, heartburn, even my eyes burning. Nothing my doctor tried worked. Lots of probiotics and enzymes helped somewhat. It always seems to be less on the weekends (I use mostly Palm Sugar on the weekends)–I just found out about this study a few days ago. I stopped using Splenda right away. Things seemed improved a little. I guess time will tell. Thanks for posting this.

## **Breakthrough in Treating MS (2009-11-23 04:15)**

When Paulo Zamboni's wife came down with MS (multiple sclerosis), he was in an unusual position: He was a professor of medicine. Not only did he have technical expertise, he was going to care far more than most MS researchers about finding a cure. (Likewise, when I suffered from early awakening, I had both technical expertise and cared more about finding a solution than any sleep researcher.)

Using ultrasound to examine the vessels leading in and out of the brain, Dr. Zamboni made a startling find: In more than 90 per cent of people with multiple sclerosis, including his spouse, the veins draining blood from the brain were malformed or blocked. In people without MS, they were not. [emphasis added] . . . More striking still was that, when Dr. Zamboni performed a simple operation to unclog veins and get blood flowing normally again, many of the symptoms of MS disappeared. . . . His wife, who had the surgery three years ago, has not had an attack since. . .

The initial studies done in Italy were small but the outcomes were dramatic. In a group of 65 patients with relapsing-remitting MS (the most common form) who underwent surgery, the number of active lesions in the brain fell sharply, to 12 per cent from 50 per cent; in the two years after surgery, 73 per cent of patients had no symptoms.

Clearly Dr. Zamboni has discovered something very important. Perhaps no true health breakthrough would be complete without appalling responses from powerful people within the biomedical establishment. The American MS society issued [1]a comment on these findings that the rest of us can marvel at. According to them, people with MS should not get tested for malformed or blocked veins!



Q: I have MS. Should I be tested for signs of CCSVI?

A: No, unless you are involved in a research study exploring this phenomenon, since at this time there is no proven therapy to resolve any abnormalities that might be observed, and it is still not clear whether relieving venous obstructions would be beneficial.

Persons with MS cannot be trusted with the dangerous knowledge of whether or not their veins are malformed or blocked! The Chairman of the Board of the National MS society is Thomas R. Kuhn. The President is Joyce M. Nelson. I would love to know how they justify this position. I wrote to the National MS society asking how Kuhn justifies this. [2]The Canadian MS society is far less negative, perhaps due to public pressure.

Over at This Is MS, [3]the National MS position is derided. Someone has made the shrewd observation that if there is something to Zamboni's idea, persons with MS should get a red head after exercise more often than persons without MS and [4]is collecting data to see if this is true. There seems to be something to it.

Not only is this a wonderful discovery but it is wonderful how the National MS Society can simply be ignored. There are now much better sources of information.

Thanks to Anne Weiss, Charles Richardson, and James Andwartha.

1. <http://www.nationalmssociety.org/news/news-detail/index.aspx?nid=2206>
2. <http://www.mssociety.ca/en/default.htm>
3. <http://www.thisisms.com/ftopict-8542.html>
4. <http://www.thisisms.com/ftopict-8839.html>

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James (2009-11-23 05:10:44)

More things: MS is correlated with higher latitudes, and low Vitamin D has been correlated with vascular disease. Finally, here's a [1]1986 abstract titled "Multiple sclerosis, latitude and dietary fat: is pork the missing link?".

1. <http://www.ncbi.nlm.nih.gov/pubmed/3638477>

James (2009-11-23 06:12:03)

Also, a recent [1]genetic study linked MS and Vitamin D.

1. <http://www.msaustralia.org.au/msra/research/anzgene.php>

Andrew Gelman (2009-11-23 07:40:06)

Are you sure you "cared far more about finding a solution than any sleep researcher"? I imagine that many sleep researchers have sleep problems or have close friends or relatives who do. That might motivate some people to go into sleep research in the first place.

Alex Chernavsky (2009-11-23 08:18:50)

I don't know about the National MS Society, but NAMI (National Alliance for Mental Illness) is a lapdog of the pharmaceutical industry: <http://www.nytimes.com/2009/10/22/health/22nami.html> <http://psychcentral.com/blog/archives/2009/10/22/nami-nearly-75-percent-of-funding-from-pharma/>

seth (2009-11-23 14:27:05)

Andrew, yeah, that's a good question. Judging by everything I've read, I cared more than any sleep researcher. No expressions of concern about this. As you say at least a few of them had/have the same problem. Why no expressions of concern? Why no research program? Well, early awakening isn't life-threatening. Other sleep disorders are much worse. Maybe because to study early awakening would get in the way of more conventional research that would be more palatable to funding agencies and their colleagues – but I don't know. Aside from trying to read people's minds, I did experiments about the problem for 20 years. Nobody else has done experiments about it for one year. But you also have a good point and I've removed the "far" from "far more". The difference in motivation (between the person with the problem and the average researcher) is really important but I hope I can find a better way to put it.

John (2009-11-23 18:22:18)

The actions of the American MS society remind me of the American Heart Associations belief in the lipid hypothesis (and statin drugs), and the American Diabetes Association's support for low-fat high carb diets. I'm not sure these big organizations have justified their existences.

Hal (2009-11-24 17:53:03)

I'd suggest it's reasonable to wait for replication of these results before getting MS patients all worried and clamoring for vein surgery. I have ALS and last year there were encouraging reports (also out of Italy) that lithium had been very effective against that disease. Should the ALS Association have told everybody to rush to their doctors and get lithium? A larger trial was started to replicate the results and was recently stopped midway due to ineffectiveness. Lithium did nothing for ALS in that study. There are reasons why science does not turn on a dime and change all its recommendations based on the latest result by one scientist. Too many of these reports turn out to be inaccurate or at least incomplete. I hope very, very strongly that this treatment turns out to be as valuable as claimed and brings great relief to patients with MS. But we need to double check the results before performing this surgery on a large body of people.

seth (2009-11-24 20:18:14)

Hal, it's the fact that the National MS Society discourages testing that I find appalling. Treatment (such as lithium) and testing are really different. And the evidence here is far stronger than the ALS case. No one found that lithium levels in ALS patients were always lower than lithium levels in non-ALS patients, which is essentially what has been found here.

Tom in TX (2009-12-08 15:58:44)

@Seth or someone who knows: What was blocking the veins?

Willis Morse (2009-12-10 14:57:09)

I wonder if this ties in with the reputed gluten/schizophrenia connections. Peter (Hyperlipid) posted about gluten-induced hypoperfusion in the brain causing schizophrenia: <http://high-fat-nutrition.blogspot.com/2009/06/gluten-and-schizophrenia-spect-scan.html> The gluten connection has been around for a while, but this is the first I'd heard that it causes (or is associated with) blood flow problems in the brain.

Tamela Gockerell (2010-04-12 10:52:46)

Fantastic to see the views being spread on here! Try to smile, laugh and enjoy each and every day! CCSVI needs to be explored further

## **A Fourth Thing Elizabeth Kolbert Didn't Know (2009-11-24 07:21)**

Elizabeth Kolbert, the New Yorker staff writer, did not know that [1]Phil Jones, a climate-change scientist, maneuvered to keep hidden information that disagreed with his conclusions. Here is what one of [2]the damning emails gathered from the University of East Anglia's Climate Research Unit said:

From Phil Jones [head of the Climate Research Unit]. To: Michael Mann. Date: May 29, 2008  
"Can you delete any emails you may have had with Keith re AR4? Keith will do likewise."

To keep them from being exposed via a Freedom of Information law. [3]Robin Hanson and [4]Tyler Cowen think this is no big deal. I disagree. Yes, I said before this happened that [5]the consensus was likely to appear stronger than it is and that [6]bloggers were a powerful force toward truth – both of which this episode merely supports rather than reveals. And, yeah, it's just email; the really damning info is [7]the tree-ring data reanalyzed by Stephen McIntyre.

The reason I think this is important is two-fold. First, this is not a smoking gun. Global warming does not equal the honesty of Phil Jones. But it is a powerful piece of evidence that climate skeptics can use to convince anyone that the consensus isn't as consensus-y as it appears. Second, it exposes what Kevin Trenberth (a proponent of man-made global warming) really thinks. This is something that few knew until now. Here is what he really thinks:

The fact is that we can't account for the lack of warming at the moment and it is a travesty that we can't. The CERES data published in the August BAMS 09 supplement on 2008 shows there should be even more warming: but the data are surely wrong. Our observing system is inadequate.

The data are surely wrong. Trenberth, being human, is going to put the best possible spin on things, the spin most consistent with what he has said many times . . . and this is what he comes up with. Support for the idea of global warming is entirely based on climate models. No one has created a mini-Earth and done experiments. If the data and models don't agree, there is no reason to believe the models. And if you don't believe the models you have no reason to believe in global warming. Is Trenberth an ignoramus whose honest assessment of the situation (the models and the data profoundly disagree) should be ignored? Of course not. He doesn't draw the obvious conclusion (the models are wrong) but nothing prevents the rest of us from doing so.

Just to be clear: I completely agree with Robin's larger point that this sort of thing supports prediction markets. And I think reduced reliance on fossil fuel would be a very good thing.

[8]Three Things Elizabeth Kolbert Doesn't Know.

1. <http://online.wsj.com/article/SB125883405294859215.html>
2. <http://www.telegraph.co.uk/earth/environment/globalwarming/6636563/University-of-East-Anglia-emails-the-most-contentious-quotes.html>
3. <http://www.overcomingbias.com/2009/11/its-news-on-academia-not-climate.html>
4. <http://www.marginalrevolution.com/>
5. <http://www.blog.sethroberts.net/2009/11/11/three-things-elizabeth-kolbert-doesnt-know/>
6. <http://www.blog.sethroberts.net/2009/11/13/mistaken-consensus-in-physics/#comment-361276>
7. <http://pajamasmedia.com/richardfernandez/2009/10/01/the-man-who-broke-the-bank/#more-6192>
8. <http://www.blog.sethroberts.net/2009/11/11/three-things-elizabeth-kolbert-doesnt-know/>

Jonathan (2009-11-24 09:54:24)

You are absolutely right - Elizabeth Kolbert did not know that Phil Jones displayed a bias that is at variance with the ideal of open investigation and pursuit of truth. But that research is only one of many threads that support the idea of anthropogenic global warming. Are you suggesting that all scientists behaved that way? What about the mass of research not conducted at that small center in the UK?

seth (2009-11-24 12:13:45)

Jonathan, Phil Jones gets around. He knows about lots of data, not just his own. Based on everything he knows, the climate models and the data do not agree. The disagreement is so great that "the data must be wrong". The idea of global warming - the prediction that the earth will be a lot warmer in the near future - is entirely based on climate models. There is nothing else. No one has done experiments with other Earths. There is no animal model. Given a profound disagreement between those models and the data, any sensible person would believe the models are wrong. We don't know how much wrong, or why, we just know they are wrong. Support for the prediction of global warming completely collapses. That was my second point - until now, few people (certainly including Kolbert) knew what Jones really thought. In all accounts of this I have read, the writer has focused on the misconduct (hiding data that disagrees). Just as Tyler and Robin said, this is no surprise. But neither Tyler nor Robin nor me nor almost anyone else knew that Phil Jones believes the data and the climate models profoundly disagree. Of course the commentators enjoy finger-wagging and saying how awful someone or some group of people is. They are overlooking what really matters here. [I have revised the post to put more stress on the second point about what Phil Jones really thinks.]

Jonathan (2009-11-24 14:31:04)

» "No one has done experiments with other Earths." Hmm ... a bit tautological there, as there is only one Earth. But the early work on the macro-modeling of planetary temperatures was done by Lovelock, et al, and that did use information from other planets. Lovelock's work with NASA was to determine if there was life on other planets based on their atmospheres. Today's models are complex (and do not include all factors) - and there is uncertainty as to the rate of change. But it was long ago that relatively simple models were created to determine planetary temperature equilibrium based on the solar income, planet size, and composition of the atmosphere. We do know that certain gases will increase the retention of heat - these gasses are transparent to visible light, but reflect some of the wavelengths that are re-radiated. And we know that a huge amount of carbon that was sequestered over millions of years has been released in the past century ...

Hal (2009-11-24 17:41:20)

I have dipped a toe into the flood of challenges and explanations at [realclimate.org](http://realclimate.org). They explain Phil Jones' comment as referring to a narrow technical issue. CERES is the Clouds and the Earth Radiant Energy System satellite experiment. They are trying to accurately measure the energy radiated and absorbed by the earth, at the boundary of the upper atmosphere. Apparently it is not going too well, and that is what Jones is supposedly complaining about. He wants us to be at a point where our satellite observations are sufficiently complete and accurate that the amount of energy we see entering and leaving the earth matches up with temperature changes. He finds it a travesty that his scientific goals are not being met. The satellite measurements are wrong, they would seemingly indicate a temperature rise in the past few years but that is not happening. This is the data that must be wrong. He is not referring to the general program of climate modeling, or suggesting that the recent lack of global warming somehow invalidates the broad conclusions and predictions of climate models. He is not discussing that issue at all. His comments are specific to one satellite experiment, and relate to common problems in cutting edge science, of data accuracy. At least this is what the [realclimate](http://realclimate.org) folks claim.

Vince (2009-11-24 22:41:34)

Are you sure that's a Phil Jones quote? Other places have it attributed to Kevin Trenberth. And reading that paragraph doesn't tell me what he thinks - it needs a translation so that I can understand it. Your view, Seth, is that he's talking about Global Warming and the data and models that are the basis for our predictions of long-term temperature trends. Gavin Schmidt [1] says that "Trenberth is talking about our inability to be able to measure the net radiation balance at the top of the atmosphere to the requisite precision to be able to say on short time scales what the energy budget is doing. The observations are inadequate for that." He also provides a link ([2]pdf) to a recent paper by Trenberth that seems to express that same view (in milder terms). There have been several other examples like this in the reactions to the emails, which raise serious doubts

about the practice of reading snippets of scientists' emails and assuming that your interpretation of what they're talking about is correct.

1. <http://www.realclimate.org/index.php/archives/2009/11/the-cru-hack/comment-page-3/#comment-142191>

2. <http://www.cgd.ucar.edu/cas/Trenberth/trenberth.papers/EnergyDiagnostics09final.pdf>

David (2009-11-24 23:35:46)

Hal, thanks for the insightful comments. Seth, love your blog, but you are sometimes quick to jump to conclusions when there are things you don't know - for instance, that data in these types of experiments is often wrong due to measurement error arising from a variety of causes, such as faulty instrumentation.

seth (2009-11-25 00:56:26)

Thanks for the correction, Vince. You're right, it's Trenberth, not Jones. Hal, thanks for the further details. People rarely use the word "travesty" to describe minor stuff. It isn't a travesty that I got the wrong change when I went shopping. It's a travesty when something important goes wrong (e.g., "travesty of justice"). Of course the people at realclimate.org would love to minimize the meaning of this and say that Trenberth is just really excitable and that the data disagree with prediction because they are "inadequate" - whatever that means. But you are right that further information might change what I make of this. If the scientists at realclimate.org would like me to believe that the climate models they rely on so heavily are very plausible, there's an easy way to do it: just show me cases where their predictions have been tested. This is a case where the models failed to predict correctly. Fine. Show me all the cases where the models have been tested and I will give less weight to this case.

ChristianKI (2009-11-25 04:38:11)

Why should it support prediction markets? If whether we had a consensus on global warming would be decided by prediction markets, it would be easy target for lobbying money. It's easy to corrupt a prediction market. Let's say the oil industry puts down 5 million in the prediction market and internally bills it as marketing expense. Having money invested in the prediction market has to have a higher return than putting the money into other investments for investors who are looking to make money. If we talk about predictions for global warming there should probably a time window of 10 years or more between the making of the prediction and the payout of the money. Therefore there no reason to assume that investors will bet enough money to outway any influence of lobbying money. Than there the question about how much money the oil lobby has to pay per point of consensus. To reach a 20/80 split the oil lobby would only have to put up a fifth of the money that the people who believe in global warming put up. The industry has lobbying budgets that are big enough to remove consensus from any prediction bet. Again the "the data is wrong" statement is something that I brought up before in the comments of this blog. In areas where you need a complex procedure to measure your results some of your data is nearly always wrong. Hal describes above a perfectly reasonable explanation of why the CERES data might be wrong. Just because the CERES data doesn't match the models doesn't mean that there aren't other datasets that match the models.

Vince (2009-11-26 21:42:52)

Seth, are you saying that Trenberth's email and his article which I linked ("An imperative for climate change planning: tracking Earth's global energy") are not talking about the same thing? There are plenty of reasons to think that they are, including the fact that his email cites that article (have you seen the full email?). Why think that the email represents his true, secret view and that everything else is just for show? It sure looks like the email is talking about what he said in the paper. If you can't tell what he means in the email (e.g. "Our observing system is inadequate"), take a look at the paper - the introduction gives a sketch of what an "adequate system" would allow us to track. It also turns out that the one email was part of a string of emails and replies, as you can see [1]here. Someone disagrees with his "travesty" sentence, and Trenberth responds "How come you do not agree with a statement that says we are no where close to knowing where energy is going or whether clouds are changing to make the planet brighter. We are not close to balancing the energy budget. ..." Then someone else notes that our observations are within the range of what could be expected based on natural variability, and Trenberth replies "Saying it is natural variability is not an explanation. What are the physical processes? Where did the heat go?" and then continues in a way that sounds a lot like the introduction to his paper. It reads like scientists arguing over their research, not like they're sharing secrets.

1. <http://www.eastangliaemails.com/emails.php?eid=1052&filename=1255523796.txt>

seth (2009-11-27 00:09:16)

Vince, you have a good point. Trenberth's view isn't as hidden as I thought. And the model under discussion isn't exactly about climate prediction. But I still think there is a problem. To quote from Trenberth's paper: "An assessment is given of our ability to track changes in reservoirs and flows of energy within the climate system. Arguments are given that developing the ability to do this is important." That equals "the lack of agreement between model and data is a travesty"? I disagree. Vince, do you disagree with my big point? That Kolbert was fed a false sense of security? If not, where in her climate-change book does she point out that Jones was fond of suppressing dissent? Nowhere. Did she hide this unpleasant tendency? Or did Jones? My guess is Jones hid it. I keep thinking there was something important she didn't know. My big question remains: why should I believe climate models? I would love to read something that compares their predictions (not their fits) to what actually happened. In psychology, modelers have failed to grasp this point – the need to test their models by predictions, not fits – for more than 50 years.

### **A Disease of Wealth in Squirrels (2009-11-24 14:18)**

Most people look at my research and see self-experimentation. I see a new way to understand diseases of wealth (often called diseases of civilization). We get sick because we live differently than our long-ago ancestors. Self-experimentation is powerful enough to sort through the thousands of differences between modern life and long-ago life to find those that matter.

In [1]an experiment about the value of circadian rhythms to chipmunks, Patricia DeCoursey, a professor of biology at the University of South Carolina, found that their value was revealed by stress created by wealth:

In one experiment she discovered that chipmunks without an internal circadian clock appear quite normal at first. They can survive in optimal conditions; during the first year after their internal clocks were disabled, "predation by weasels was minimal," she says. But then the chipmunk population increased strikingly due to two successive years of abundant acorn crops in the forest. The weasel population also increased, following the growth of the chipmunk population. Under these more crowded conditions, the restless nighttime movements of the arrhythmic chipmunks in their burrows clued the weasels in to their locations, and predation increased dramatically. The weasels killed all but four of the 100 chipmunks in this population.

1. <http://www.scientificamerican.com/article.cfm?id=patricia-decoursey-biology-westinghouse>

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Aaron Blaisdell (2009-11-25 10:48:40)

Just goes to show that science won't always provide immediate conclusions for a simple manipulation. Sometimes what's important is the interaction between the manipulation and the diversity of environments in which the manipulation can be expressed (checked). Our causal models usually start out simple (Cause→Effect), but reality is often much more complex and therefore more subtle (Cause1+Cause2→Effect, or Cause1→Effect iff Cause2 is equal to or greater than some threshold value, etc.). Thanks for finding this!

Nansen (2009-11-25 17:14:48)

Even cancer may be linked to abnormal circadian rhythms: "A nationwide study in Denmark, for example, found that women who work mainly at night for at least six months are 1.5 times more likely to develop breast cancer than those who work regular hours (8). Researchers suggest that the raised cancer risk could be because these people's cells start to divide at the wrong time and run amok, an idea supported by some cell-culture studies." (for the reference, see

chronotherapeutics.org/docs/press/circ/Nature\_2009.pdf )

Aaron Blaisdell (2009-11-25 19:53:10)

Interesting. Or those working the graveyard shift get significantly less sunlight and therefore vitamin D which is also correlated (maybe causally related) to cancer. Though I don't know how much vitamin D sun exposure in Denmark will produce. If it is a good source, it will only be during the summer.

### **Benefits of Kefir: N=1 (2009-11-25 04:13)**

A year and a half ago, Charles Richardson was given antibiotics for an ulcer. He writes:

When they put me on the course of antibiotics for the ulcer, my digestion absolutely went south. Stools became runny and smelly and irregularly timed. Even though I took a lot of supposedly high-end probiotic capsules, that went on for months after the antibiotics.

Six months ago – a year after the antibiotics – he started drinking kefir because of this blog. "After about a month [of kefir], I was back to normal," he writes. He got the starter culture from [1]kefirlady.com (where they cost \$20 cash).

More recently he has seen further improvements:

I had a number of food allergies, particularly wheat. If I ate any wheat, I'd get hemorrhoids immediately, and sometimes what looked like a herpes outbreak.

I've had that for 30 years or so, but it appears to have gone away in the last month. I had to eat some pasta at a formal dinner, and was expecting a reaction, but had none. I was shocked. I also have a similar reaction to chicken, and had the some non-experience with some of that recently.

I don't know to what I can attribute that change. The kefir could have helped, and possibly the Vitamin D [about 4000 units/day]. I also started take an amino acid dipeptide of L-glutamine/L-alanine. [2]<http://www.kyowa-usa.com/brands/sustamine.html> [about 10 g/day]

This is informative for several reasons.

First, the bad effects of the antibiotics lasted a really long time (a year). This indicates how bacteria-poor a normal American diet is. Richardson probably ate healthier than normal given that he once owned a health-food store.

Second, expensive probiotics didn't help. This is why I make kombucha and yogurt, to have more quality control. And yogurt is surely closer to what our ancient ancestors ate to get bacteria than probiotic capsules.

Third, the kefir took about a month to solve the problem. This gives an idea of the time it takes to repopulate your intestine with bacteria. And thus how long you should try this or that solution before giving up.

1. <http://kefirlady.com/>

2. <http://www.kyowa-usa.com/brands/sustamine.html>

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Kevin Miller (2009-11-25 05:04:08)

I started making Kefir, bought from the same source, and have been surprised at how easy it is to make (easier than yogurt, which is saying something). I just mix a cup of powdered milk with two cups of water in a mason jar, add some of the kefir "grains" from the previous night, shake it up, and let it sit for 24 hours on a counter. Every week or so I have to harvest some of the kefir grains and eat them separately or else the milk turns to whey, but it's been remarkably easy to do. I think perhaps Kefir is actually "yogurt for dummies"

Darrin Thompson (2009-11-25 08:00:18)

I can't get my autism kids to drink kefir. I tried even. I'm actually getting to like it myself and I've seen that allergy reduction effect on myself. But for autism kids, the mouth is a temple for popcorn, green beans, and hot dogs, at least that's the case for mine. I can get them to take a slurry of pretty much any foul thing if I can fit it into a pharmacy oral syringe. Kefir isn't quite "dense" enough. A serving of Kefir that works for me is several ounces. The syringes we have only hold 2 tsp. However, with a 'scrip, you can get "vsl #3." And you can get your medical benefits to cover the cost. \$80- \$100 ish dollars for what might last the better part of a month. Most store probiotics contain 5 to 20 billion "units" of bacteria. I've seen one that was 50 billion. The pharmacist told me that VSL #3 has 450 (not a typo or marketing trick, really 450) billion units of bacteria per packet. Furthermore, that is the measurement for expiration time. It's higher when it's new. Suffice it to say, that stuff actually does work. We cleared up an annoying bowel problem in the kids, then ran out for a few days, and the problem came right back. The store stuff wouldn't work. So don't bash the off the shelf stuff too much. It can work, but you need a lot, and good stuff does exist. Also, props for Kefir. I have persistent annoying (not debilitating) pollen allergies. For a week or so I drank several ounces of the homemade stuff from made raw milk twice a day. I experienced a weird feeling of, I'm going to call it Not Congested(tm), that I could not recall ever feeling before. Also, it has a reputation of being really hard to ferment wrong. I'd guess milk is a less competitive environment, (good bacteria win over unwelcome easily) compared to the sugar water that kombucha starts in. You can poke around on internet boards for people making Kombucha and see that it's probably not your best first choice. One conversation went something like this: "I tried making a batch and it tasted a little strange. I drank it all anyway. [ok, problem there, but it was drinkable] After that I had this weird feeling of being outside my body for a while. I felt weird for awhile after it ended." "Dude, that's called getting high." "Oh." Which leads me to believe that Kefir is a better starting point. I screwed up a kefir batch once, and there was no way on earth I'd ever drink what was in that jar.

Walter (2009-11-25 09:56:49)

Seth, What happens when we get "flushed" for a colonoscopy? Any idea how long it takes to recover the bacteria? Walter

seth (2009-11-25 11:56:30)

Walter, in my experience the flushing doesn't involve antibiotics. So I imagine that bacteria in the appendix help repopulate the gut. Closer to a week than to a day or a month is my guess. It would surely depend on how much fermented food you eat. Darrin, that's all very interesting. If stuff with >450 billion units actually works, it becomes clearer why stuff with 10 billion units doesn't work. And in other cultures I'm pretty sure kids drink kefir so how do they do it?

Darrin Thompson (2009-11-30 11:00:39)

Beats me how they do it. I'd be curious too. I'd guess that early exposure to refined sugar etc. warps kids' taste buds away from stuff that's actually good for you. Just a guess though.

Gary (2009-12-05 18:57:22)

Hi, I made my first batch of kefir tonight with some grains given to me by a friend. Unfortunately, I misunderstood her instructions about how to do it. I poured the kefir into a bowl through a strainer and mashed all of the grains and now I have nothing left. My question is this, did I ruin the kefir by mashing all of the grains up? Is the kefir any good now and is it safe to drink? I'm kinda of slow at learning stuff like this but I saw a video demonstration \*after\* I made the kefir and re-



alized how I messed up. Too bad I didn't see it prior to making it. Anyway, is the kefir ruined now or is it still edible? Thanks, Gary

seth (2009-12-05 22:30:24)

The grains are safe to eat, if that is your question. So, yes, the kefir is still edible.

Slee (2010-01-20 01:05:07)

I've been doing kefir for about a month - I was given the grains from a woman who had been diagnosed with breast cancer that had metastasized to the bones in 1999 (most women with that diagnosis in '99 aren't around 10 years later) and this is the same diagnosis I got Oct 2008, when I when I went into the hospital severely dehydrated & with an inflamed stomach. I've had quite a struggle in the months since then. Two days after starting the kefir I noticed that I wasn't as cold as I've been most of the time since the hospital (last winter I kept my thermostat between 81 and 84 degrees, now it's between 72 & 75 degrees). It's also helping my stomach to reach another level of healing, and I'm weaning myself off the omeprazole. I generally let my kefir ferment for 24 hours, sometimes more depending on my schedule. So it's pretty tangy - adding some agave nectar balances the sourness enough without becoming too sweet. Try blending it up with honey & fruit for kids as a way to get them to try it. I've also started experimenting with making kefir cheese. Plus I strain it and use it instead of sour cream on potatoes. Given what I've read online, many of the commercial kefirs sold are not made by fermentation with the grains, but have developed shortcuts that result in not having all the same nutrients and health benefits as traditionally made kefir. However, it's so easy to make at home, that I've now decided to never buy yogurt or sour cream again.

### **More About What Causes MS (2009-11-25 18:02)**

In[1] an earlier post I linked to [2]a poll at This Is MS that asked if there is a correlation between getting red in the face after exercise and having multiple sclerosis. Such a correlation would support Paulo Zamboni's idea that MS is due to poor blood circulation in the brain.

A poll at This Is MS is likely to be answered by people who have MS. Nancy Lebovitz realized she could help get answers from people who don't have MS - crucial to learning if there is a correlation - by posting [3]the poll on her LiveJournal page.

The two polls taken together show a strong correlation. Out of 40 people with MS, 72 % get red-faced. Out of 27 people without MS, 22 % get red-faced. Thanks, Nancy.

1. <http://www.blog.sethroberts.net/2009/11/23/breakthrough-in-treating-ms/>

2. <http://www.thisisms.com/ftopicp-76356.html>

3. <http://nancylebov.livejournal.com/375645.html>

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Gian (2009-11-26 02:07:02)

People without MS are less likely to visit the site and answer the poll.

Nancy Lebovitz (2009-11-29 22:18:04)

Thanks very much for the credit, but my name is Lebovitz.

seth (2009-11-29 22:41:01)

Thanks for the correction. [1]Nancy's website sells buttons, many of them quite funny, such as "Any sufficiently advanced technology is indistinguishable from a rigged demo."

1. <http://www.nancybuttons.com/>

### **Assorted Links (2009-11-26 13:50)**

- [1]kombucha experiments
- [2]photos of restaurant food from all over
- [3]using one's own seizures to treat depression
- [4]narrow vehicles ("the economy and footprint of a motorcycle and the comfort and safety of a car")

1. <http://boards.sethroberts.net/index.php?topic=7191.0>

2. <http://www.photoeats.com/>

3. <http://neuro.psychiatryonline.org/cgi/content/full/21/3/355>

4. <http://www.gizmag.com/nissan-landglider/13368/>

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Carlos Harkema (2011-05-27 21:34:34)

Alexa is far more of a customer reporting type of software, not SEO sort device...many thanks for studying!

### **Senator Grassley Asks Med Schools Their Policies On Ghostwriting (2009-11-26 19:02)**

Medical ghostwriting is plagiarism with a bullet: not only do med-school profs get the benefits of a published article they didn't write, that published article – written by a drug-company hack – is inevitably misleading, causing doctors to prescribe a drug that is worse than they think. (Which is the whole point.) Patients who take the drug are the big losers.

This sort of thing is so patently awful – especially the harm done to millions of sick innocent people – that you'd think everyone finds it repulsive. Quite the opposite. Living breathing med school professors, such as [1]New York University professor Lila Nachtigall, have trouble seeing what's so bad about it. The practice appears so common that [2]Senator Grassley asked the ten top medical schools, such as Harvard, Johns Hopkins, and UCSF, to say their policies about it. He's asking them: Do you consider plagiarism wrong? Except it's much worse than plagiarism. Although several say on their websites that it's wrong, Duke University says that "Severe and/or repeated offenses will result in formal disciplinary action" – in other words, non-severe examples are okay! At least the first time. "Formal disciplinary action" can be as mild as a letter. At Duke, at least, they have trouble grasping how awful it is.

This might seem to have nothing in common with self-experimentation. Self-experimentation can be done by anyone, costs nothing, and is a way to figure out helpful truths; whereas almost no one can get a drug company to write a

paper for them (you need to be at a top medical school), drugs are a hundred-billion-dollar/year business, and this sort of ghost-writing is done to hide helpful truths. In a better world, they really would be worlds apart. But you are reading this not because I did self-experimentation but because I did self-experimentation that found out something useful and surprising – the Shangri-La Diet and [3]new ideas about sleep and mood. A big reason it did so was that the experts in those fields – such as the relevant med school professors – were utterly and completely asleep, so to speak. They were incapable of making significant progress. Extreme careerism – putting one’s career ahead of everything else – is no doubt one reason. They could have done what I did. Fat weight-control pros could have tested different diets on themselves, for example. But doing good research would be harmful to their career (e.g., not enough publications), so they don’t do it. Medical ghostwriting helps their career, so they take advantage of it. So what if millions of sick people are harmed by these decisions.

My surprisingly-productive self-experimentation and the staggeringly careerist decisions of med school pros are two sides of one coin: the profound stagnation in health care. The complete inability of those in charge to innovate effectively. Drug companies are businesses that make drugs. They are not going to explore non-drug low-cost solutions, such as those I explored. Nothing, however, prevents med school pros from doing so – at least, nothing except their extreme careerism. My self-experimentation shows what could have been done. It shows that the health questions we face (e.g., how to lose weight) have solutions much better than a new drug. The widespread practice of medical ghostwriting is one indication why those solutions haven’t been found. Failure to find new solutions means problems have stacked up unsolved, getting worse and worse (the obesity epidemic, the allergy epidemic, etc.). It’s usually called a healthcare crisis – but it’s really a health crisis.

1. <http://www.blog.sethroberts.net/2009/09/09/med-school-profs-as-drug-company-lackeys/>
2. <http://www.nytimes.com/2009/11/18/business/18ghost.html?scp=2&sq=grassley&st=cse>
3. <http://escholarship.org/uc/item/2xc2h866>

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Jake (2009-11-26 19:47:09)

Most preventative medical innovations today are done by successful doctors with practices. Lucky for us, the internet is available to them to disseminate their discoveries. Universities researchers are 10 years behind the successful doctors. The mainstream media is 5 years behind the researchers. And the government is 10 years behind the media. So our health care crisis is actually a health information crisis for those who don’t use the internet for their preventative health information.

seth (2009-11-27 00:23:57)

Jake, that’s very interesting. What are some examples of “preventative medical innovations by successful doctors with practices”? I can think of one: a dermatologist who figured out something about how acne is caused by diet.

Jake (2009-11-27 10:44:15)

These are the doctors I am talking about: Dr Michael Eades-low carb diets lower weight and prevent many diseases. Dr Mary Vernon and Dr Richard Bernstein treats diabetes 2 patients with low carb diet and exercise and makes most of them drug free Dr William Davis and Dr B.G. - treats heart patients with wheat and fuctose elimination, fish oil, niacin, exercise and Vitamin D and achieves plaque regression in most cases. Dr Larry McCleary treats dementia cases with low carb diets, fish oil and some supplements and achieves success much of the time. Dr. T treats kidney diseases with low carb diets, elimination of omega 6 fats, and Vitamin D and achieves success much of the time. Dr Barry Sears controls omega-6 to omega 3 ratio to eliminate heart disease, dementia, arthritis and cancer Dr Stephan Guyenet whose studies show that eliminating grains, fructose, omega-6 fats

from your diet will prevent heart disease, cancer, diabetes, arthritis, and dementia. Dr. Art Ayers studies showed that eliminating most carbs, trans fats, omega 6 fats from your diet. Plus exercise, Vitamin D and fish oil will cure most autoimmune diseases.

seth (2009-11-27 17:33:42)  
Thanks, Jake. Very helpful list.

#### **F.lux (2009-11-27 05:10)**

[1]This application lowers the color temperature of your computer screen after sundown. Lower temperature = less blue. I try to avoid fluorescent lights at night. This is along those lines.

Thanks to Peter McLeod.

1. <http://www.stereopsis.com/flux/>

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Nansen (2009-11-28 16:10:00)  
Have you considered wearing orange-tinted glasses? [psycheducation.org/depression/LightDark.htm](http://psycheducation.org/depression/LightDark.htm) #UVEX

seth (2009-11-29 02:06:17)  
No. great idea! thanks1

#### **Congratulations, Andrew Rivkin (2009-11-28 07:25)**

Andrew Rivkin writes about climate change for the New York Times. One of the stolen emails says:

At 17:07 27/10/2009, Michael Mann wrote:

Hi Phil,

...

p.s. be a bit careful about what information you send to Andy and what emails you copy him in on. He's not as predictable as we'd like

In other words: Most reporters are predictable. Meaning they repeat what they are told instead of thinking for themselves. Otherwise there would be no need to say this.

Think about it. Michael Mann, a respected climate scientist, thinks that whatever line he and Phil Jones, another respected climate scientist, are pushing is so poorly supported by the evidence that they worry about a New York Times reporter finding holes in it! Independent thinking, even by someone without technical training, worries them! Really, it's hard to avoid concluding that these guys are clowns, propped up by all sorts of people (journalists, Al Gore, 2200

many others) who benefit from a false certainty about this stuff.

Please, someone tell me: Why should I believe climate models? Have their predictions (not their fits) been compared to what actually happened?

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Mike Bowerman (2009-11-28 10:32:25)

I am agnostic about the proportion of human influence on climate change, and think it is plausible that much of what comes out of the IPCC is political and of dubious quality. It is true however, that we are having a significant influence on the composition of the atmosphere – CO<sub>2</sub> is at its highest level in over 600,000 years, and given China is adding one coal-fired power plant a week to their electricity generation as combustion engines are adopted by developing countries, we are going to massively overshoot changes in composition that would occur through other means. I share your concern about climate scientists' credibility, but do you think it is reasonable to apply the precautionary principle here, and act to limit actions whose outcomes are unknown, but potentially catastrophic, for future generations? How do you think we should we treat such unknowns? The decision-making tools we apply for prediction are horribly unreliable, as our financial markets, foreign policy and weather-predicting abilities show. Humans tend to systematically underestimate risk by excessively discounting the future relative to the present, and I think multiple speculative financial market collapses attest to that tendency. Climate change seems a similar example, but the environment may not rebound as quickly as a market. If it should prove to be the case that we cannot rely on climate models, do you have any thoughts on how we should proceed with policy? The consequences are almost all for future generations I think, so how we assess these issues depends on how we value their interests relative to our own and I would be interested to hear your take on that as well.

Vince (2009-11-28 10:35:49)

A lot of science reporting gets the science wrong, quotes scientists out of context & misrepresents their views, etc. What makes you think that they're worried about Rivkin finding holes in the science, rather than this kind of stuff? I tried to post this link in response to your previous climate post to a brief list of some ways in which climate models have been tested, but it didn't go through. If you google "climate models are unproven" then the first link (to grist) will give you the page.

seth (2009-11-28 12:38:12)

Why do I think they are worried about Rivkin finding holes rather than making mistakes? Because the term "error-prone" or "inaccurate" is used to describe people who make a lot of mistakes. "Not as predictable as we'd like" is used to describe people who think for themselves. Note the word "we". Thanks for the link about testing. Apparently [1]James Hansen had not tested any predictions of his model before he presented it to the world in 1988. If he had, he doesn't mention it in an essay about why we should believe his model.

1. [http://www.columbia.edu/~jeh1/2005/Crichton\\_20050927.pdf](http://www.columbia.edu/~jeh1/2005/Crichton_20050927.pdf)

seth (2009-11-28 18:13:44)

Mike, I think a desire to reduce air and water pollution, and a need to not run out of fuel, and a need to avoid economic stagnation are plenty of reasons to reduce our dependence on fossil fuels. By a lot. Scaring us inappropriately is just one more way that other people take power away from us. Stagnation in American transportation is much older than worries about catastrophic climate change. The first hybrid cars are from Japan! That says it all. Policy: I think government decision makers should grasp the concept of economic stagnation – lack of development of new ways of doing things. And fight it in all areas. All stagnation is a problem, in the sense that problems build up unsolved. The stagnation in health care is far more damaging to all of us than the stagnation in development of other sources of energy. As many have noted, the stagnation in health care is

so bad it was a big reason GM went broke. It is starting to cripple the rest of the American economy. Not to mention the huge burden of depression, obesity, diabetes, etc. They are big problems right now. It's always very hard to deal with economic stagnation because any solution involves taking power away from the powerful (those who benefit from the status quo) and giving it to the less powerful (those who benefit from innovation).

CCS (2009-11-28 22:49:08)

"Please, someone tell me: Why should I believe climate models? Have their predictions (not their fits) been compared to what actually happened?" James Hansen of Goddard Institute for Space Studies. I won't link to the Wikipedia article since it will throw my post into moderation. But if you go there, scroll down to "Climate model development and projections". I have a better article from Technology Review that I can send you if you are interested. Weather models are constantly compared to what has actually happened. Models are run with old observation data to see if their outputs correspond to what actually happened with the weather. You can attempt to validate climate models in the manner described in the Hansen article. I know you're skeptical and I value your fresh ideas, but really did it not occur to you that people are constantly looking for ways to validate and improve computer models (not just climate models). Weather and climate models are among the most advanced because modeling has been used in that field much longer than it has been in other fields, and because there is such a huge body of observational data to draw on in order to perform these experiments.

CCS (2009-11-28 22:54:32)

Sorry I skimmed over the previous response. I'll send you a copy of the TR article I mentioned.

seth (2009-11-29 02:02:45)

I'd like to see that article from Technology Review, thanks. "People are constantly looking for ways to validate and improve computer models." That's awfully vague. In psychology, modelers have spent the last 50 years pretending that fitting their model to data constituted testing it. All their work: worthless. I wonder if the same thing is happening in climate science. Sure, people like to improve stuff but they also like professional advancement, status, and attention. Sometimes the two types of goals (improvement and advancement) are in conflict.

Dennis Mangan (2009-11-29 06:36:15)

Seth asks why we should believe climate models, and that's a good question. In many areas, especially in science, a certain deference to authority is warranted unless we ourselves can take the time to truly understand something about the field. Climatology is one of those complex areas. But what Climategate shows, IMO, is that quite a few of the main climatologists were not doing disinterested science, but were political advocates, and thus they can't be trusted. They are no longer authorities that we can defer to.

seth (2009-11-29 06:58:13)

I found this email more revealing than the rest. Sure, the consensus is overstated. Sure, they try to stifle dissent. But who would have guessed that these guys are afraid of a newspaper reporter? Perhaps we will learn that when they give talks at high schools, they refuse to answer questions.

Mike Bowerman (2009-11-29 11:22:29)

I agree with your comments about economic stagnation and think you can add institutional structures with perverse incentives on top of that. Many of the problems in automobiles and health care for instance are because the corporations and other institutions driving these industries lack incentives to pursue the best solutions for health or transportation problems, and are instead pursuing personal rewards, often based on share price or career progression. Until the institutions are reformed we will predictably see these significantly sub-optimal outcomes. With health as an example, the patent system provides incentive to pursue pharmaceutical treatments for health problems, and to ignore preventive solutions or non-patentable treatments like nutrition. They then have an incentive to market these solutions, paying media companies who then have a disincentive to criticize them as it affects their own profitability, and the result is antidepressants and statins. ADs don't show clinically significant results for any but the most severely depressed yet are widely prescribed, and statins don't reduce all-cause

mortality yet are the biggest selling drugs in the world. I think this is a predictable outcome of the institutional structures. I share your doubts about climate science, but don't find the email you cited a convincing example of insecurity in the quality of research on behalf of a climate scientist. There are other plausible explanations for Michael Mann's caution to Phil Jones, such as concern that Rivkin was already partisan on the issue, or simply not a great science reporter who might misrepresent their findings due to incompetence. That doesn't mean they feel their work is of low quality, just that they want it to be represented accurately, as they see it. Similarly, I can imagine if a journalist didn't understand the Shangri-La diet and misrepresented it in their writing, you might be cautious dealing with them in the future. We don't know what Mann meant by "predictable" or what history he had with Rivkin that drove this comment.

Walter (2009-11-29 12:15:59)

Seth, Two quotes for climate change part of the topic: 1. "Do not disturb a complex system since we do not know the consequences of our actions owing to complicated causal webs. ... "leave the planet the way we got it"" Nassim Taleb 2. "Don't pee in the pool too much because soon we are going to notice" Old mentor of mine Walter

bgc (2009-11-30 04:36:39)

The most ridiculous aspect of the global warming, I mean climate change, scam has been the prescriptive one. That alone should have been enough to alert sceptics to what was going-on. I mean the idea that we humans know how to control the earth's climate. The idea, endorsed at the highest levels of international conferences, that we can choose a global temperature, and decide to hold the planet at that temperature by means of economic policy (think of those serious debates about whether 'we' should 'allow' the average temperature to rise by two degrees, maybe three? ). Add to it this that we have a narrow window of time in which strong action can - luckily! - 'save the planet'. Well, wasn't that fortunate! - that we discovered a climate process just in the nick of time, and that although the process has been supposedly going for some hundred plus years, our discovery allows that intervention can be effective in a political time frame of about five or ten years; just right for electing the next government, but not so long as to allow for any testing of computer simulations against observations... If - in the space of just a few years - governments can be so persuaded of their omnipotence that they openly claim to have precise control of the global temperature, then I fear that anything is possible. This puts King Canute into perspective. Stopping the tides by sitting in a throne with your hand raised is nothing compared with fixing the global climate at whatever temperature you desire by fiddling with economic policies.

Ted (2009-11-30 15:52:39)

Check out the actual programming comments in the code leak. This is bigger than watergate. I mean it. It's more than bullying, it's down right fraud and data manipulation. Pull up that old blog post you did on "Cargo Cult Science" and Biology you did a long time ago - YOU WERE RIGHT!

seth (2009-12-01 05:02:08)

Thanks, Ted. This is my post on Cargo Cult Science and Biology: <http://www.blog.sethroberts.net/2009/10/08/modern-biology-cargo-cult-science/> You mean I was right that the extent to which the public is deceived by scientists about scientific stuff is really large?

CCS (2009-12-01 12:10:12)

Seth, I e-mailed the article to your address on the website "contact" page. I had to straighten out something with my TR subscription before I could send it.

Steve G. (2009-12-03 06:11:26)

Mr. Bowerman's two comments seem most directly on point to my concerns. I, too, agree that we have other reasons for moving from carbon-based energy, as Seth suggests. But in the end, we can have no doubt, can we, that we're putting an incredible amount of carbon into our atmosphere. We (humanity) are like a kid with a chemistry set and no idea of what combination of chemicals may blow us to kingdom come. Climate is a complex system, and to think that we completely understand it or can control it amounts to folly. However, even in the face of ignorance, not to choose is to choose: and the safest choice remains significant reduction of carbon and other warming gases.

PhysicstDave (2009-12-06 18:40:35)

CCS wrote: >Weather models are constantly compared to what has actually happened. Models are run with old observation data to see if their outputs correspond to what actually happened with the weather. You can attempt to validate climate models in the manner described in the Hansen article. That is not science: that is curve fitting. There is a general theorem that *any* finite set of data can always be fit with *enough* free parameters. Indeed, this can be done in multiple ways (I like Lagrange interpolation myself – the future extrapolations are just so wildly insane!). To engage in real science, they need to make firm, unambiguous, statistically significant predictions of *future* data that they are willing to stand by. I.e., if the data does not meet their predictions, they have to admit their science was wrong, not just say that they will fiddle the free parameters a bit to get a better fit. Anyone – i.e., the dominant in-group in climate modeling – who does not understand this is simply ignorant of science. Dave Miller in Sacramento

PhysicstDave (2009-12-06 18:54:07)

Mike Bowerman wrote: > I share your concern about climate scientists’ credibility, but do you think it is reasonable to apply the precautionary principle here, and act to limit actions whose outcomes are unknown, but potentially catastrophic, for future generations? How do you think we should we treat such unknowns? We need to be careful with the word “catastrophic.” The extinction of the human race or the destruction of the biosphere would indeed be catastrophic, to be avoided at almost any cost. But, a slow rise in sea level, over a hundred years or more (and this is the sort of scenario even many of the warming alarmists foresee) is not necessarily a “catastrophe.” After all, this has in fact actually happened over the last ten thousand years due to the end of the Ice Age. The Little Ice Age from the 1600s to the 1800s also had a very real impact on human life, but it has not usually been viewed as a “catastrophe.” Nor has the quite substantial global warming from 1800 to the present (due largely to natural causes – i.e., the end of the Little Ice Age) been generally thought a “catastrophe.” I’m not suggesting that future global warming, if it occurs (based on current evidence, I think that the big global warming was in the last 200 years, not the next 200 years), will not be a major inconvenience. But the prospect needs to be evaluated rationally, based on standard probability techniques, standard cost-benefit analysis, etc. There is not and cannot be a rigid, iron-clad “precautionary principle” or we would all have to live fifty feet underground to avoid being hit by meteorites! Dave Miller in Sacramento

seth (2009-12-06 20:50:11)

Dave, yes, I agree the only way to test a model is to make predictions with it, not fit it to data. The climate modelers don’t seem to understand this.

PhysicstDave (2009-12-07 04:35:13)

After posting an earlier comment, I realized that my statement >There is a general theorem that *any* finite set of data can always be fit with *enough* free parameters. would probably be misinterpreted. A more accurate way of making the point would be to say that there are theorems that prove that it is possible to fit any amount of finite data by introducing enough free parameters of a very simple sort – for example, polynomial coefficients. In practice, the distinction between my more careful statement and my more careless initial statement does not actually matter: anyone with much experience in simulations knows that if you introduce enough free parameters, you can indeed fit pretty much any data, even data generated to be simply random noise. There are statistical techniques to guard against falling into this hole. There are also simple simulation techniques to avoid this: Feed randomly generated data into your parameter-fitting program. If the program can adjust the parameters to fit what is in fact random data, then it is not really modeling anything real at all: you just have a curve-fitting program of no scientific interest. Alas, the dominant group in the global-climate-modeling community, based on both their published results and the leaked CRU e-mails, seem rather unaware of all this. Indeed, whenever their predictions turn out wrong, they seem rather pleased with the ease with which they adjust their models to the “new” data. That is a profound problem. A model that can model anything really models nothing at all: no matter how wildly wrong its predictions turn out to be, the model can be adjusted to fit the new data that disagrees with the older predictions. Since it can be adjusted to any new data, no matter how wildly that data differs from earlier predictions, the predictive value of the model is nil. This is the fundamental problem with the global-warming work – CRU, the GCMs, etc. Unfortunately, it is very hard to get this point across to non-scientists: if a model can model *anything*, this actually seems to many non-scientists a positive feature! It isn’t. But how can



that be explained to scientific illiterates? Seth, you study how humans think, right? Any suggestions? Dave Miller in Sacramento

seth (2009-12-07 07:26:37)

Dave, no I don't study how humans think. My mainstream psychology work is with rats. Skeptics have reasonably focused on the data rather than on the models. If the data are scary enough you don't need a model; and if the data are unscary enough, you don't need a model then, either. I would like to first figure out what the data are before I worry a lot about models.

### **Kombucha Reduces Free Radicals (2009-11-29 15:26)**

Trichloroethylene (TCE) is a common industrial solvent for many years used as an anesthetic. It appears to cause liver damage. [1]A recent experiment with rats asked if kombucha could protect against TCE damage. For at least two measures, it did. TCE raised free radicals in the blood by a factor of 6; kombucha reduced the increase to a factor of 2. TCE also increased [2]gamma-glutamyl transferase (GGT) activity, a mark of liver damage; kombucha reduced GGT activity to normal levels.

The paper's bibliography includes a reference to a survey of kombucha's health effects:

Dufresne C, Farnworth E: Tea, kombucha health: a review. Food Res Int 2000, 336:409-421.

The researcher brewed the kombucha that was used (for about ten days). Weirdly the source of the kombucha is given under "Competing Interests" at the end of the paper.

This article will appear in the journal Chinese Medicine – but I have not found kombucha for sale in Beijing.

1. <http://www.cmjournal.org/content/pdf/1749-8546-4-23.pdf>

2. [http://en.wikipedia.org/wiki/Gamma-glutamyl\\_transpeptidase](http://en.wikipedia.org/wiki/Gamma-glutamyl_transpeptidase)

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### **A Clue About How To Sleep Better (2009-11-30 03:10)**

A few nights ago I slept surprisingly well: I woke up feeling more rested than usual. Each morning I judge how rested I feel on a scale from 0 to 100 where 0 = as if I hadn't slept and 100 = completely drained of tiredness. I got scores of 100 after standing 9 or 10 hours during the day. That showed what was possible but that much standing was unsustainable. Without extreme standing, 99 has seemed to be the maximum.

A few nights ago, I did better. The ratings for that night and the preceding four nights were: 98.9, 98.8, 99, 98.8, 99.2. Doesn't look like much, but actually the improvement was so clearly unusual I didn't need records to notice it. If I gave the scores for the preceding 100 nights you'd see it was rare to score above 99. Moreover, I was keeping the amount of animal fat I ate constant, unlike previous nights with scores above 99. The difference between 98.8 and 99.2 is easy to notice. Think of the difference between 12 and 8.

What had improved my sleep? I could think of four unusual things about the preceding day:

1. Several cloves of garlic in the pork-belly soup I ate for lunch. I'd never before added any garlic.
2. [1]I began using f.lux, which reduced the color temperature of my computer screen after sunset.
3. I'd played Dance Dance Revolution (on the Wii) for 10 minutes at 8 pm. Usually I do it in the morning (much longer, 30-50 minutes).
4. More bike riding than usual (including two long stretches that added up to 66 minutes).

All four seemed unlikely. 1. Who'd heard of garlic improving sleep? Not me. 2. Laptop screens are quite dim compared to sunlight. 3. The amount of exercise was small. I'd played Wii Tennis for longer periods in the evening without noticing any change. DDR in the morning hadn't made an obvious difference. 4. I'd ridden my bike for 50-odd minutes at a stretch without noticing better sleep. This was only slightly more.

Now I am testing these possibilities. If you have any idea which it is – perhaps it is none of them – please comment.

1. <http://www.blog.sethroberts.net/2009/11/27/flux/>

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jrf (2009-11-30 06:28:35)

My sleep gets much, much worse when using any kind of computer at night. Seems unlikely it's just the difference in color temperature, but who knows? Some speculations. \* Monitors can certainly blow your night vision, which is something that haven't been possible for human ancestors prior to being able to make fires. So having night vision activated, and not interrupted, for a time might be a pre-requisite for sound sleep. \* Monitors usually show vivid colors that are impossible to perceive at night time. Maybe colors are enough to trigger wakefulness. Vivid colors are also semi-universal signals of danger, so there might even be an evolutionary reason for staying alert in the presence of strong colors. There's seems to be a bunch of studies on the effect of different lighting by the US Navy, so there's probably data available to suggest one way or the other.

Bart (2009-11-30 06:59:55)

Surely it's the extra bike riding, right?

Caleb (2009-11-30 09:12:34)

Sleep researchers have found that it's specifically blue light, from wavelengths 465-480 nm, which activates wakefulness and interferes with sleep. It's probably because we evolved to respond to the blue sky as a sign it was time to be alert. Both fluorescent lights and computer screens give off a fair amount of blue light. Sleep centers have started making specific blue blocker clip-ons to block out light in the 465-480 wavelength range. About two hours before bed I clip on some cheap amber lenses to my glasses to help block out the offending light. It makes a noticeable difference, and I imagine I'd get even better results if I tracked down a prescription pair of blue blockers. Seth, does your 1-100 scale feel more logarithmic or incremental to you at the high end? I personally tend to think in a bell curve that is incremental in the middle and logarithmic at the tails when I rate stuff for myself, but most people don't think like this. To most scientists, trying to draw inferences from incremental differences of a few thousandths on highly subjective measurement is going to be considered skeptically. Not saying there's nothing to your data, just trying to get a clearer idea what your numbers mean to you.

Helen (2009-11-30 11:09:18)

I agree with the above commentators. It's probably the (reduction in) blue light from the computer screen. If I use a computer after 8pm, I get insomnia. It has a much stronger effect than the fluorescent light bulbs around my house. Garlic and onions

contain compounds that cause drowsiness in some people, but I haven't found that either improves my sleep.

Scott (2009-11-30 12:03:34)

I had a similar reaction as Caleb to your scale. To say that you can have an accurate subjective judgement on a 1-10 scale is one thing, staying accurate with 1-100 precision seems to already be pushing the boundaries of a reliable measurement and going to an effective 1-1000 scale as you are with your tenths of a unit scale seems like a lot of noise. How would you describe the difference between sleep quality of 98.9, 98.8, 99, 98.8, 99.2?

Vikram (2009-11-30 12:57:44)

Mr. Pla Cebo might have something to do with it? My problem is waking up in the middle of the night due to little kids sneaking into our beds late at night. I can be up for hours and some days I'm up at 3 or 4am for good. Getting by on 3-4hrs of sleep for several days is awful and terrible for our immune systems. I thought it was related to caffeine and cut back my coffee intake to zero. Problem went away and then came back. I eat a high fat diet, low in carbs (especially refined ones) and high in protein. I also supplement with vitamin E, D etc. I drink some bacteria rich yogurt but probably nothing as good as the stuff you're growing :-). Rather than tweaking my diet I tried breathing slowly in and out and just focusing on my breath and nothing else. Somewhat like meditation and I go back to sleep very easily ever since. And this is regardless of how I'm eating that night. So in my case - it was simply finding a better technique to go to sleep with. I think one of the gotchas with self-experimentation is the placebo effect. Making a change (switching from tea to coffee) can certainly plant the belief that something has changed - and that could be all that's really needed.

Timothy Beneke (2009-11-30 13:30:23)

I would not rule out the garlic, whatever else may be going on. I seem to have had a very relaxed feeling of bodily "earthy bliss" that is hard to describe as a result of eating several cloves of garlic. People in Berkeley in the 70s ate a lot of garlic because it seemed to mellow them out... I doubt that this was mere placebo or wishful thinking...

David (2009-11-30 13:47:12)

You might want to look at a longer period than a single day- is there a chance that diet, exercise, or sleep in the days preceding had an effect?

bennetta (2009-11-30 18:00:45)

“Sleep researchers have found that it’s specifically blue light, from wavelengths 465-480 nm, which activates wakefulness and interferes with sleep. It’s probably because we evolved to respond to the blue sky as a sign it was time to be alert. Both fluorescent lights and computer screens give off a fair amount of blue light. Sleep centers have started making specific blue blocker clip-ons to block out light in the 465-480 wavelength range.” Last year, my psychiatrist, who is one of the best in the state, suggested I keep an open window in my room and replace my alarm with a natural-spectrum light that would go off at the appropriate time. His reasoning? Folks with ADD (which I have) have circadian clocks that are out-of-whack and need to be reset more often than the average person. We’re generally pretty horrible at waking up. Natural light, taken in the morning, essentially resets your circadian clock. When your eyes take it in, it sends a signal to your brain to wake up, probably for the reasons you stated. My morning wakefulness improved substantially. According to him, however, this can only happen between the hours of 6 and 9am. Past that time and you’re out of luck. Perhaps it’s anecdotal, but his reasoning suggests the blue light spectrum doesn’t have much to do with Seth staying up at night. I don’t sleep well when I use the computer late at night, either, but I think it has more to do with what I’m doing, which is generally pretty active. I’m also staring at a light source 3 feet from my face as opposed to one across the room. I can sleep well after reading or even watching TV (which also has a lot of blue light), but it’s more difficult when the computer is involved.

Anthony (2009-12-01 00:19:20)

Vikram said "one of the gotchas with self-experimentation is the placebo effect" Right, and if it works, then it isn't 'just' a placebo effect, as some researchers are wont to say. Rather, the placebo effect is effective. No need to discount it or control for it, except in so far as to identify it.

Janet (2009-12-04 10:21:23)

1. Evening exercise may increase sleep length if the problem is waking up earlier. 2. I don't think you can rate accurately on a scale from 1 to 1000, as your scale effectively is with 3 sig figs, but I will trust your subjective impression.

q (2009-12-22 20:33:21)

too much garlic wrecks my sleep – i think the reason is that i think it increases circulation to limbs and peripheral stuff. but ymmv. perhaps you were fighting something off?

insomniac (2011-02-17 23:54:36)

Its obvious you have no problem sleeping or any sort of sleep disorder. Stop whining and get on with your life. The ability to be able to rate sleep between 98 and 99 with 0.1 "accuracy" is a dream (no pun) for many of us. For those of you who do, keep a dream journal and rate the pleasure of the dream. Then also compare that to the quality (enjoyment) of sleep you had. You may get a surprise. Even if you wake up to go take a pee, quickly jot your dream down. As for the few of us who dont sleep regularly, and i mean 2 or 3hours at a time if im lucky, and who dont dream, (ever cat-napped during the day, think only 10mins have passed but its really been 3 or 4 hours ? I do that every time, i dont dream anymore), do whatever you can to experiment. Try random beds, places, catch up on the books you want to (re)read, etc. ALso watch the movie "cash-back". An extra 8 hours per day can be some what liberating.

Seth Roberts (2011-02-18 18:47:09)

insomniac, you wrote: "It's obvious you have no problem sleeping or any sort of sleep disorder. " Not exactly. I've been studying my sleep for 30 years. I started studying it because I woke up too early in the morning (which is a sleep disorder – early awakening, a form of insomnia). Eventually I found four ways to improve my sleep so now I sleep fine. But it all started because I had trouble sleeping.

Greg (2011-03-10 19:10:02)

The idea behind your experiment is exactly what we hope to automate and uniformly quantify at WakeMate. If you use our app, we automatically upload a sleep quality score for that night based on how restful you sleep was. We use a clinically proven science called Actigraphy. You can tag anything you want and then compare your sleep score across the different metrics you are tracking! Check out [www.WakeMate.com](http://www.WakeMate.com) for more!

## **The Hygiene Hypothesis, Pro and Con (2009-11-30 04:56)**

According to BBC News, [1]recent research supports the hygiene hypothesis:

Normal bacteria living on the skin trigger a pathway that helps prevent inflammation when we get hurt, the US team discovered. The bugs dampen down overactive immune responses that can cause cuts and grazes to swell, they say.

And [2]other recent research says it's wrong:

The decades-old "hygiene hypothesis" holds that early exposure to microbes somehow challenges the immune system and strengthens it against allergies. Studies have shown children exposed to bugs by older siblings or attending nursery cut their future allergy risk.

But new work published by the American Thoracic Society casts doubt on this.

The study by Dutch investigators at the Erasmus University found although children in day care got more colds and other infections, they were just as likely as other children to go on to develop asthma or another allergy by the age of eight. The children who went to nursery and who had older siblings had more than quadruple the risk of frequent chest infections and double the risk of wheezing in early life, with no obvious pay off in terms of later protection from allergy.

The original hygiene hypothesis said that exposure to harmful germs (e.g., that cause colds) cuts down on allergy risk. But it's now clear it's the exposure to harmless germs (e.g., in dirt) that's helpful.

Allergies in the UK have tripled in the last 10 years. I believe this is due to greater consumption of food that is germ-free, such as factory food and restaurant food. Shelf-life considerations and food-safety laws, in other words.

Advice given by Allergy UK:

The best advice we can currently give to parents is not to smoke around their children and make sure they have a balanced diet and get plenty of exercise.

Not even close to what I think. My advice is: Feed your kids plenty of fermented food, such as yogurt. I'd bet a lot of money that my advice is better.

Thanks to Mark Griffith.

1. <http://news.bbc.co.uk/2/hi/health/8373690.stm>

2. <http://news.bbc.co.uk/2/hi/health/8241774.stm>

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Jaroslav (2009-11-30 07:47:35)

"My advice is: Feed your kids plenty of fermented food, such as yogurt." I think it's more than that. If you feed kids fermented foods that will probably help, but if you also continue to feed them with such a healthy junk like tons of grains and grain fibre, which will continue to damage their guts, it's like taking cure together with poison. In this case the poison may be stronger than the cure. In my case I was eating quite a lot of fermented foods, but it did nothing to my asthma and allergies. Only after I started to eat grain free (paleo style) they went away (after about 9 month since this change) and my digestion improved. My point: I believe your theory about bacterias is correct (because they protect guts by helping with digestion and by enriching the food), but too simplistic. In case of autoimmune diseases other factors may be stronger than the ingested bacteria - as was my case. Also, the increase of incidence of allergies may correlate more with current dietary recommendations (grains, fibre) than with bacteria consumption, but here the issue is little fuzzy, because less fermented foods also means more junk carbs and fibre.

Tom Moertel (2009-11-30 08:15:46)

It's an interesting hypothesis, that exposure to harmless bacteria helps the immune system. If it were true, what might explain it? The best I've come up with: (1) Exposure to harmless bacteria is how the immune system calibrates its sensitivity. When almost none are available, the immune system becomes overly sensitive. (2) Harmless bacteria aren't merely harmless but a functioning part of the body's immune system. When there aren't enough, the immune system breaks down. (3) Harmless bacteria are a proxy for the absence of pathogens. When harmless bacteria are lacking, the immune system thinks pathogens are abundant and prepares for battle. Any others? Cheers, Tom

Helen (2009-11-30 11:11:50)

Tom, those are great hypotheses. I find that full-fat yogurt really brings down my allergies, which have been severe all my life. I think it may be the combination of the cultures in the yogurt and anti-inflammatory properties of the butterfat in the yogurt.

Andrew Gelman (2009-11-30 11:42:15)

Seth: Why does your advice compete with the advice "not to smoke around their children and make sure they have a balanced diet and get plenty of exercise." Suppose people do follow your advice. Don't you think it's still a good idea for the parents not to smoke and to give the kids plenty of exercise?? (Also I assume a balanced diet is a good idea too, although maybe your definition of "balance" differs from theirs.)

Gian (2009-11-30 21:57:28)

Grains alone can hardly be the problem. People 100 years ago used to eat more more grains-often exceeding 1 kg of wheat per day. But the grains used to be properly prepared, with low-temperature grinding, fresh flour and sufficient soaking . I think that's the key

Jaroslav (2009-12-01 02:51:26)

Gian, I don't think it's that simple. I can tolerate soaked or fermented legumes, I do fine on moderate amount of rice, but all other grains are out of question (including some non-grains like buckwheat). Like Seth I like self-experimentation and I did quite a lot of it on myself with grains. Sourdough fermented (3 days) wheat or rye bread made from freshly ground flour will still give me rapid heartbeat for several hours, brainfog and headaches. After a week long experiment I ended with strong diarrhea and a fever. Before switching to paleo, I had the same symptoms all the time, but I was so used to them that it was not so insufferable. But as a one time experience they are intolerable. So I don't agree with simplistic theories like let's just soak them and everything will be fine. Does not work for me and many others.

## 4.12 December

### ClimateGate: An Inside Job? (2009-12-01 17:26)

As a commenter[1] pointed out, the real scandal is [2]the state of the data. University of East Anglia Climate Research Unit researchers were very reluctant to give anyone their raw data and now it is clear why: It would have been like opening a door and showing a giant mess. I wonder if the frustrated programmer who had to work with the data finally decided enough was enough. He was tired of his bosses (research scientists, such as Phil Jones) using his work to deceive the rest of world on a very important issue. Maybe he felt guilty. And decided to put an end to it. He could have easily told someone outside how to gain access. In the Ranjit Chandra case, one of his employees was the first whistleblower.

Professor Michael Mann of Penn State University, whose veracity has been called into question by the scandal, says [3]he's glad that he's being investigated.

"I would be disappointed if the university wasn't doing all [it] can to get as much information as possible" about the controversy, Mann tells the Daily Collegian.

1. <http://www.blog.sethroberts.net/2009/11/28/congratulations-andrew-rivkin/#comment-366797>

2. [http://www.torontosun.com/comment/columnists/lorrie\\_goldstein/2009/11/29/11967916-sun.html](http://www.torontosun.com/comment/columnists/lorrie_goldstein/2009/11/29/11967916-sun.html)

3. <http://www.usnews.com/blogs/paper-trail/2009/11/30/penn-state-will-investigate-climategate.html>

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Ted (2009-12-03 15:56:08)

It doesn't matter. It's the very definition of 'consensus' and 'science' that is at stake. They are already guilty of playing fast and loose with that without the email leak. The rest of us forgot to pay attention when they quietly changed the definitions on us, using a wink-wink-nod code to fool the public. The email is just the tipping point, when we all noticed. We want our words back, and things will never be the same.

### **Climategate: Its Educational Value (2009-12-02 05:32)**

Before the printing press, there were very few books. It was extremely hard to learn math; you had to pay a tutor. Of course literacy was very low – but all knowledge that could be transmitted through books (such as math) was very low.

Science cannot be taught through books. You can learn a lot about calculus by reading books. You can learn almost nothing important about science. Science is not a collection of facts, it is a method, a way of gathering knowledge. Almost always it is taught by doing – by working in a lab, for example. Just as, before printed books, almost no one could do any math, it is true today that almost no one can do any science. (Most doctors think the bigger the sample size, the better.)

If you look at a biology textbook, it is full of conclusions. It says practically nothing about the process by which those conclusions were reached. For some reason biologists have decided not to teach that – perhaps because it is difficult and messy to teach. And someone might be offended. Whatever the reason, the process goes undescribed. And it's all sciences, not just biology. (Until recently, economists avoided teaching data. At least in introductory economics, data was too messy for them.)

As long as you have to learn science by doing it practically no one will understand it – just as almost no one did math when you had to hire a tutor to learn it. But now we have the Internet. And blogs. Two new things have entered the picture: a great deal of emotion (blogs are full of emotion, unlike textbooks); and unlimited space. Now science can begin to be taught without actually doing an apprenticeship. [1]If you add enough emotion, anything becomes riveting. And there is now plenty of room for all the false starts and messy details. I suppose most scientists who blog are too worried about being dignified to say anything emotional or messy, but that doesn't matter because there are so many bloggers.

According to [2]Stephen Dubner, "if you are fan of science, this [Climategate] is a pretty grim day." I think it's a great day. As great as the day the first math text was printed. It's the first time a large number of people are getting a real lesson in science. [3]Mainstream media coverage is pathetic but there are so many bloggers it doesn't matter. [4]You can read about it endlessly. As you do, you will painlessly and unforgettably learn what [5]Leonard Syme taught his students for years, and [6]what I blogged about a few weeks ago: The apparent consensus on any difficult issue is more fragile than it looks. You are learning how conclusions are actually arrived at. It isn't pretty – which textbook writers and professors, seeking dignity above all else, fail to mention.

1. <http://www.blog.sethroberts.net/2009/06/26/the-story-of-hyundai-a-lesson-in-public-speaking/>

2. <http://freakonomics.blogs.nytimes.com/2009/11/23/climategate-the-very-ugly-side-of-climate-science/>

3. <http://blogs.telegraph.co.uk/news/jamesdelingpole/100017451/climategate-how-the-msm-reported-the-greatest>

-scandal-in-modern-science/

4. <http://www.climatedepot.com/>

5. <http://www.blog.sethroberts.net/2007/09/21/leonard-syme-on-teaching/>

6. <http://www.blog.sethroberts.net/2009/11/11/three-things-elizabeth-kolbert-doesnt-know/>

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Andrew Gelman (2009-12-02 06:45:22)

Seth: You write, "You can learn almost nothing important about science [by reading books]." I disagree. I think you can learn a lot about science from reading my books, also from reading the Feynman lectures. I've never read Origin of Species, but I've heard that you can learn a lot about science from reading that also. I'm sure there are many other examples.

Eugene (2009-12-02 09:26:45)

Speaking of the scientific process, I thought you'd appreciate [1]this: "Brotto did a bit of experimenting on herself. Not that she suffered from any disorder, but she talks of herself sometimes in a researcher's terms as 'an n of one,' a single subject on whom she likes to test her ideas."

1. <http://www.nytimes.com/2009/11/29/magazine/29sex-t.html>

Tom in TX (2009-12-02 11:24:41)

Seth wrote: "If you look at a biology textbook, it is full of conclusions. It says practically nothing about the process by which those conclusions were reached. For some reason biologists have decided not to teach that â€" perhaps because it is difficult and messy to teach." Or perhaps because they did not follow the right method to get to those conclusions. According to Dennis Prager, the purpose of graduate school in the social sciences is to destroy the student's ability to think for himself. Ouch.

milieu (2009-12-02 11:26:50)

Hi Seth, As a doctoral student expecting to learn science (albeit in an engineering department), I was dissappointed. My advisor (though I think he knows how to do science, wasnt interested in making things explicit, perhaps he doesnt care about me?). I think I learnt a lot about Science by reading blogs (especially radical and controversial blogs) which I never learnt by reading books. Maybe because most books (with rare exceptions) are interested in just the final result, while blogging is an interacting medium where a blogger might be questioned and he has to respond to comments. BTW you are also amongst those who helped me in 'learning' Science. So just a thank you!

Patrik (2009-12-02 11:41:11)

@Seth Fantastic post. The hidden and unappreciated gem in your post is as follows: "Science is not a collection of facts, it is a method, a way of gathering knowledge." 99.9999 % of people (high priests, er, I mean, "scientists", included) do not understand this differentiation. Science is a method, not a body of knowledge. When I hear people say "the science tells us X, Y and Z" — I ask myself, how does the method "tell" us anything? You could have one universe of data and facts interpreted an infinite number of ways, all potentially valid. The reason most people conflate science as a method with science as a body of knowledge is that the former is harder to control (being that the principle tenet of science as a methodology is skepticism), while the latter becomes a religion and a political tool of the elites.

JLD (2009-12-02 11:52:55)

*The reason most people conflate science as a method with science as a body of knowledge is that the former is harder to control* I would rather say the reason is that it is harder to **define**! May be you should read a little philosophy of science, *no consensus* here either.



Bruce G Charlton (2009-12-02 12:29:40)

Very interesting ideas. But as well as input, you need a feedback loop. The apprenticeship system provides for constant monitoring of the apprentice to check that the information really is being understood. Otherwise you could be endlessly misunderstanding.

seth (2009-12-02 12:37:05)

Andrew, I'm not sure what you are referring to when you say important stuff about science can be learned from reading the Feynman Lectures. I read Volume 1. I like it, but it taught me nothing about how to do experiments or analyze data, which is 99 % of the science I do. I can't imagine it affects your work. So what are you talking about? milieu, any blogs you would recommend to learn about science from? yeah, the fact that blogs deal in radical and controversial stuff makes them much easier to learn from. Patrik, thanks. I think people who do interesting research know perfectly well what I say is true, I just think it would make their lives more difficult to acknowledge it – how crappy the usual textbooks are, for example. So they don't. I wouldn't say the primary attitude of science is skepticism. I think it is to think for yourself, which is quite different. To think for yourself can mean being more skeptical than everyone else; it can also mean being less skeptical than everyone else. To think for yourself means reaching conclusions based on whatever evidence is available, as opposed to reaching conclusions based on what other people think. Perhaps that is the core reason science (the method) is rarely taught – because it would give whoever is teaching you less power over you.

Bruce G Charlton (2009-12-02 13:21:46)

"To think for yourself can mean being more skeptical than everyone else; it can also mean being less skeptical than everyone else." Excellent!

seth (2009-12-02 13:33:57)

thanks, Bruce. Medical Hypotheses embodies that idea much better than most other journals.

milieu (2009-12-02 14:26:37)

Well, I think my 'eyes opened' when I read blogs like gnxp [1]gnxp , [2]Eric Raymond's Blog , [3]Overcoming Bias . I do not agree with many of their ideas but I learnt that the established truths are not sacrosanct and have to be questioned. But I would admit that the starting point of all these might be the book "The Black Swan" by Nassim Taleb and his writings on the web including his [4]website .

1. <http://www.gnxp.com/>

2. <http://esr.ibiblio.org/>

3. <http://www.overcomingbias.com/>

4. <http://www.fooledbyrandomness.com/>

milieu (2009-12-02 14:28:46)

These are not per se Scientific but another one might be [1]Eric Drexler's blog , again with a heavy technology bias.

1. <http://metamodern.com/>

Andrew Gelman (2009-12-02 15:04:31)

Seth: "Doing experiments and analyzing data" is what you do, but it's not what Feynman did. He was a theoretical physicist. That's the sort of science that he teaches in the Feynman lectures. What did I learn from those books? The idea that you can study anything–anything–from first principles. I remember his ratchet-and-pawl discussion where he shows what happens if you try to build a Maxwell's Demon machine and why it still follows the second law of thermodynamics. In my methodological research, I follow similar principles, for example in my work on model checking. I go back to first principles and am as direct as possible. I learned some of that from Feynman. As to my other examples: I haven't read Origin of Species, but I imagine it's taught people a lot about observation and theory building, both of which are important aspects of science. And, of course, I think my own books have taught many people about data analysis. Reading is not as good as doing, but if you read carefully, you learn a lot, I think.

The Educational Value of Climategate « Daniel Joseph Smith (2009-12-02 16:32:03)

[...] The Educational Value of Climategate By Daniel J. Smith <http://www.blog.sethroberts.net/2009/12/02/climategate-its-educational-value/> [...]

seth (2009-12-02 17:55:54)

Andrew, thanks for explaining that. I've learned a little bit about data analysis from reading – from reading Exploratory Data Analysis by Tukey, in particular. But since that book didn't include examples of real-life data analysis, what could be learned only went so far. Sort of like what you could learn about cooking from a cookbook that used only two ingredients. To say that you learn science when you learn how to do a t-test (or any statistical method) is true, but I think it confuses many people. They confuse the detail with the big picture. The big picture is that doing science consists of deciding what data to collect (what experiment or survey to do), dealing with difficulties along the way, extracting the most info out of the data you've collected, and seeing how what you've learned fits with what people already knew. For some people it also consists of raising money and effectively working with students and/or employees. From Tukey I learned a little bit about value of transformations and graphics. Deciding what data to collect is by far the most important step and, in my experience, is never taught by books.

seth (2009-12-02 18:24:44)

milieu, yeah, I think Taleb does the best job among living writers of teaching that you shouldn't take established truths as so established. And he describes himself as a philosopher, not a scientist!

Mark (2009-12-03 18:25:18)

Is "On the Origin of Species" worth reading? Which edition? The 6th, as the final, most finished version? Or the 1st, as the edition that had the most historical impact?

Matt Goff (2009-12-03 20:09:03)

It has been a long time since I read it, but my recollection is "Chaos: Making a New Science" by James Gleick might qualify as a book that one can read to learn a bit about how science is done. One story I remember in particular was about Edward Lorenz studying atmospheric models and unexpectedly finding widely divergent results from simulations that started with nearly the same conditions (as I recall, it had to do with roundoff while re-starting simulations). His investigations into this led to the idea of the "butterfly effect" or a bit more formally, "sensitive dependence on initial conditions."

seth (2009-12-03 20:51:25)

Matt, a friend of mine said Chaos by Gleick is a good example of journalistic misunderstanding. Gleick thought the science was much more important than my friend thought it was. As far as I can tell my friend was right – that stuff has gone nowhere. The big decision for most scientists is what data to collect. What you describe is remote from data collection.

Matt Goff (2009-12-03 22:10:26)

I don't feel like I have enough of a comprehensive understanding of the field to know about the big-picture importance of what Gleick specifically wrote about in Chaos, but I certainly would not argue with the idea that "Chaos Theory" and fractals had their 15 minutes of fame in popular culture where they were "the next big thing" that was going to "revolutionize our understanding" and then they faded from public view. That said, it is also my understanding that the study of 'chaos theory' (by which I mean non-linear dynamics and complexity, going back to the late 1800s) has resulted in some important breakthroughs (though perhaps you would not consider them to be scientific). As I understand it, one significant idea to come out of these studies has been that for many even relatively simple systems it is not possible, even in theory, to directly calculate the system state at an arbitrary point in time. Even worse, it is often not even possible to accurately simulate future states of a given system. Another idea that I think came out of this field is the understanding that a given system (even one that is completely deterministic) may have some parts of its parameter space where it is 'well behaved' and others where it is 'chaotic'. This idea suggests investigations to understand where/how the transition between "nice" behavior and chaotic behavior occurs. My background is mostly mathematics with a healthy dose of statistics. I do not consider myself a scientist, so perhaps my understanding of what is included in science is faulty. However, I tend to think of Lorenz' work as being scientific in nature. I am curious about how you would define/describe science. For example,

what role, if any, does mathematical modeling play in science? Finally, for what it's worth, BBC did a program called [1]"High Anxieties - The Mathematics of Chaos" (available on youtube) which appears (I've not watched the whole thing yet) to get into some of the impacts of this field of study. Of course this doesn't necessarily mean that studies are scientific in nature.

1. <http://www.youtube.com/watch?v=gTDC2yWBSkY>

seth (2009-12-04 01:14:31)

Matt, my guess is that 99 % of published scientific articles involve data collection or summarizing (review articles). That is their emphasis. They may fit lines or other functions to the data, sure, but that has nothing to do with the stuff in Chaos. Mathematical modeling of other people's data (no original data collection) is among the 1 %. Articles about mathematical modeling of hypothetical data are very rare.

lance (2009-12-04 23:04:59)

"Mathematical modeling of other people's data (no original data collection) is among the 1 %." Isn't that what all the climate science is about, creating models based on data? Sure, most of the articles may be data collection, but the heart of the argument for AGW is based on models. Maybe the stuff in chaos has been a dead end because the lesson is "most systems are too complex to be modeled so as to generate useful predictions."

seth (2009-12-04 23:34:46)

Lance, data, not models, are at the center of Climategate. For example, failure to provide data after it's been asked for. The models can't be taken seriously because they haven't predicted anything correctly, as Bruce Charlton says. I think the heart of the argument for AGW was stuff like the hockey-stick graph. With that gone, I suppose people will shift to saying it is the models that matter.

lance (2009-12-05 06:28:13)

So you're saying the billions spent on climate science are primarily devoted to [1]collecting data and not to run models on expensive computers?

1. [http://gallery.surfacestations.org/main.php?g2\\_itemId=3396](http://gallery.surfacestations.org/main.php?g2_itemId=3396)

seth (2009-12-05 06:57:49)

Lance, no I am not saying that. What's your point?

lance (2009-12-05 07:50:47)

I'll answer with a story (you love stories, right?) In ninth grade, I did a science project on chaos models, the simple equation  $f(x)=x(1-x)$ , which can model the swings in rabbit populations, for instance. I spoke with one of the judges who told me something I haven't forgotten: non-linear systems are very hard to disturb – after some internal shock they will almost always revert to the original equilibrium. You slighted mathematical modeling, but the models are crucial for the case. Data is one thing, but the models tell a great story. And of the 21 models followed by the IPCC, all 21 assume that increasing CO2 will lead to changes that amplify warming. <http://www.drroyspencer.com/2009/07/how-do-climate-models-work/> But if one paid attention to non-linear systems and models, then you would be very sceptical of a) the ability to predict temperature based on models and b) models that assume a system as the earth's climate is unstable. That may be a negative conclusion, but negative conclusions are still conclusions.

seth (2009-12-05 15:35:04)

"Non-linear systems are hard to perturb." For non-linear systems with negative feedback that's true; for non-linear systems with positive feedback that's false. The climate modelers say the system has positive feedback ("amplify the warming").

Sammy Finkelman (2009-12-08 12:09:12)

» is true today that almost no one can do any science. (Most doctors think the bigger the sample size, the better. There are a number of things that are very hard to learn without personal teaching (usually involving building things) but this example isn't

onw of them./ Every book or article about polling will tell you this. I've read this many many times, and it is very logical. Once you get beyond about 1,000 increasing the size of the sample doesn't add much to the accuracy - the key thing is the quality of the sampling. If doctors don't know taht that;'s only because they never read anything about it. perhaps they had to take calculus, but not statistics - actually a statistics course might obscure this tye of thing - just read any old book about political polling. » If you look at a biology textbook, it is full of conclusions. It says practically nothing about the process by which those conclusions Textbooks are probably about the worst place from which to learn anything. Now to know something about how conclusions were reached you need to read Asimov and other wroters. \This is usually found at around Dewey Decimal number 500 or 504 or 508 in the library. You need collections f essays or any popularization. One problem: Books like "Microbe Hunters" can be misleading because since 1948 or so we've had the problem of "peer review" and "double blind studies" and grants. This is misleading as to how science works nowadays. A good science fiction story dealing with how science could be controlled is "The Dead Past" by Isaac Asimov. This aspect of the story might not be captured in the summary: [http://en.wikipedia.org/wiki/The\\_Dead\\_Past](http://en.wikipedia.org/wiki/The_Dead_Past) Asimov's belief wa sthat in the long run (which could mean decades) science couldn't be suppressed because one field impacts on another » The apparent consensus on any difficult issue is more fragile than it looks. You are learning how conclusions are actually arrived at. This is stuff everybody should know. And nobody will do good work without knowing it. And neitehr should policy be made by people who don't question the work. It's harder for people to realize because so much is developed now so it looks better than it is. Talking about chaos, if anybody thouyght a little bit about they would realize that IF it were true that there is a tipping point where a slught increase in CO2 could start a runaway greenhouse effect (which is actually what the alarmists are touting) it would most likely be a chaotic system so that whether it happened or not would depend n just where exactly the value was - it would be something wiotha starnger attarctor, so that ti would make very little sense to lower the level of CO2 slightly - you ciould actually start the runaway greenhouse effect that way - you;d be dealing with the probability of it happening, and it wouldnt be worth it to go to a lot of effor to reduce the probability slightly.

### **Climategate: Its Educational Value (continued) (2009-12-02 13:26)**

In a response to the comments on my previous post, I say that the primary attitude of science isn't to be skeptical, it is to think for yourself. (Which, in practice, means ignoring what fancy hot-shot scientists at prestigious universities tell you to think.) Funny that fancy hot-shot scientists at prestigious universities never teach that.

Or almost never. In another comment on that post, Andrew Gelman mentions the Feynman Lectures as books from which you can learn about science. Having read Volume 1, I have no idea what he means. I was a freshman at Caltech. Feynman was a professor there at the time. The Feynman Lectures had been published but they were judged too difficult for most of the freshmen! I am not kidding. The faculty had learned that they were too hard to understand. They didn't teach what the faculty called "problem-solving" - that is, deriving predictions from theories. So there were two tracks of Intro Physics at Caltech: the Feynman track (fewer students) and the non-Feynman track (more students). I was in the Feynman track. He wasn't the professor, but we used his book. That's how I came to read Volume 1. I liked it, but it didn't teach me anything important about science.

Yet - during the exact same time, freshman year - Feynman himself did teach me something important about how to be a scientist. He taught me (= encouraged me) to think for myself. Not in any obvious way. On Wednesdays at 11:00 am, Feynman would answer questions for an hour. Anything except textbook problem-solving questions. There were more than a thousand students at Tech but maybe 20-30 attended these little sessions. One day I asked: "I've read some philosophy. It doesn't make sense. Yet lots of people say it's important. Am I missing something, or does it have as little value as I think it has?" Feynman's answer: He agreed with me. There was one book of philosophy he liked, a survey by Bertrand Russell, but for the rest of it, it was people talking and talking and saying nothing.

Wow, he agrees with me, I thought. I had reached what I thought was a very minority opinion - an opinion I'd read nowhere else, had heard nowhere else - and this famous person who I respected agreed with me! It certainly taught me to think for myself.

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JLD (2009-12-02 14:26:10)

**HOW SILLY** An argument from authority (*Feynman agrees with me*) to support "think for yourself" !!! ... ([1]rotflmao)

1. <http://www.netlingo.com/word/rotflmao.php>

JLD (2009-12-02 14:27:35)

Let's see what happens to my previous comment...

Andrew Gelman (2009-12-02 15:08:07)

You write that "fancy hot-shot scientists at prestigious universities never [teach people to think for themselves]." I wouldn't say I have a perfect record on this, but this is one of my goals, and I think I succeed some of the time. Admittedly, my evidence for said success is pretty weak—I don't, for example, have pre-test and post-test data—but I think "never" is a pretty strong claim on your part. I think you're getting carried away with your rhetoric about fancy hot-shots etc. I'm a hot-shot scientist for about the same reason that Tyler Cowen is a hot-shot blogger: people want to read what we write.

Anthony (2009-12-02 17:11:42)

"One day I asked: 'I've read some philosophy. It doesn't make sense. Yet lots of people say it's important. Am I missing something, or does it have as little value as I think it has?' Feynman's answer: He agreed with me." That's interesting, Seth, because what you're doing in this and the previous post is what's known as Philosophy of Science.

seth (2009-12-02 17:28:46)

Andrew, by "fancy hot-shot scientists" I was thinking of people who have written famous textbooks (David Freedman, James Watson, Paul Samuelson, other authors of biology, chemistry, geology, economics, and physics textbooks) that are assigned in large numbers to undergraduates. Those books have their strengths, but teaching students to think for themselves isn't one of them. By a long shot. I was also thinking of undergraduate science lectures I've attended. What do you do to try to teach students to think for themselves? You actually teach students to ignore your opinion about stuff? That's impressive. Anthony, you will look in vain among books and articles labelled "philosophy of science" for anything that resembles this post and the previous post.

Bruce G Charlton (2009-12-03 02:51:39)

Actually, I don't believe that you can teach people to think for themselves: that comes naturally, or not. Another somewhat different thing that comes naturally, or not, is creativity. But you can train people to conform, and you can exclude (often coercively) people that do think for themselves and creative people - and these are both characteristic of mainstream modern 'science' - which is why I put-in the scare-quotes around science. Or, you could say that modern science has replaced a multitude of individual biases with massive blocs of group-think bias (a.k.a. peer review).

Alex C. (2009-12-04 07:47:11)

It's interesting, though, that when you talk to people who hold patently ridiculous ideas (that Uri Geller can bend metal with his mind, that TV psychics can communicate with one's dead relatives, etc.) what these people tell you, in essence, is that they are thinking for themselves and not allowing hot-shot scientists to tell them about the nature of reality.

PhysicstDave (2009-12-06 00:19:51)

Seth, You know, Feynman himself (I think he said this in the preface) admitted that the lectures were a pedagogical failure. In my frosh year (1972-1973) everyone used the Red Bible. My wife's frosh year (1973-1974), the other track used

the Berkeley physics series “much better textbooks, though not as poetic as Feynman. By the way, I had an oral final at the end of my senior year with Feynman in a graduate-level course. I was lost by the end of the year in that course, and seriously contemplating an “F.” It actually ended up being a good experience. He gave me an A-: I probably deserved a B-, but I think he bumped me up one grade for having the guts to hang in there even though I was clearly in over my head. I’m still glad I went to “Tech, though it is not for the faint of heart. And, yeah, what I learned from Feynman was not so much physics but more how to maintain integrity as a scientist and as a human being. Dave Miller Class of ~76

### Philip Greenspun on Universities (2009-12-03 04:38)

[1]This essay by Philip Greenspun, about the trouble with American college education, is most notable for its description of a class lecture by Robert Shiller at Yale:

- 0-4:30: name of course, name of professor, names of TAs, pictures of TAs [all stuff that could easily have been on a handout or Web site]
- 4:30-5:15: bragging about how many important people on Wall Street took his course, bragging about how great the course is even for people who aren’t going on to Wall Street
- 5:15-6:20: talking about how every human endeavor involves finance, e.g., if you’re a poet it will help you get published to know how finance works [my haiku: AIG bankrupt; your taxes gone to Greenwich; no one hears your screams]
- 6:20-7: talking about an unrelated course, Econ 251, and who taught it in previous years [big excitement at a university: some guy other than the usual lecturer taught it because Kahuna #1 was on leave]
- 7-10: history of why two intro finance courses exist, glorious biography of teacher of the other course, [after several minutes, we learn that the other course has a bit more math]
- 10-11:30: show of hands for who is interested in organic chemistry, discussion of how Robert Shiller is reading about this because he has such broad intellectual interests [implicit comparison to finance wizards, though Shiller is not able to cite an example of how organic chemists managed to bankrupt their shareholders and wreck the world economy]
- 11:30-15:00: writes authors of textbook on blackboard, says it is “very detailed”, discusses reactions of previous classes of students to this book, talks about his vacation in the Bahamas with some other important guy, reading textbook by the pool unlike the other stupid tourists who were reading novels. Discussion of what number the current edition is. “I met a really prominent person on Wall Street” who told him that his son had dropped out of the course because the textbook was too hard. Apparently Yale students are too stupid/lazy to read this book intended for undergrads at schools with more motivated students.
- 15-16: discussion of how library is obsolete in the Internet age, how Franco Modigliani is 2nd author of primary textbook, a Nobel Prize winner, and “my teacher at MIT”

Funny! Spy had a similar article about 24 hours of an all-sports-talk radio show. Okay, Robert Shiller is full of himself. The most telling criticism of the modern university is in a comment by Mike Lin:

The first day of Statistics 100 at the University of Michigan, the professor said our final grade was either the average score of our midterm and final, or the score of the final – whichever was greater. Our labs

and homework assignments did not impact our course grade. My roommate, also enrolled in the same course, didn't make the first class. I told him about the grading system. Neither of us attended another class, nor took the midterm.

Before the final, we spent two days straight, reading the material and doing problem sets. I got a B+. He got an A-. [Shades of [2]Tucker Max.]

I am ashamed to admit that I wasted all those lectures and labs that my family paid for. But what does it say about inadequacy and inefficiency of the lecture system when we arguably learned the practical application of our course material with 24 hours of self-study spread over two days and a \$100 textbook?

It says a lot.

Via [3]Aaron Swartz.

1. <http://philip.greenspun.com/teaching/universities-and-economic-growth>
2. <http://www.blog.sethroberts.net/2009/07/04/tucker-max-on-law-school/>
3. <http://www.aaronsw.com/weblog/>

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Bruce G Charlton (2009-12-03 05:16:02)

I was asked to review Robert Shiller's recent 'Animal Spirits' for an Israel based magazine called Azure. I spent a fair bit of time on the job, but Azure declined to print the piece - presumably because I thought it was a bad book: <http://charltonteaching.blogspot.com/2009/06/animal-spirits-akerlof-shiller-review.html> That aside, I think that psychometrics has shown that most educational claims are bogus since heritable intelligence and personality account for so much of the variation in educational outcomes. <http://medicalhypotheses.blogspot.com/2009/07/replacing-education-with-psychometrics.html> Therefore, coverage of specific valuable content by formal lectures plus training in specific skills via personal apprenticeship are probably what most education ought to be about (education for its own sake being a real but small minority activity).

CCS (2009-12-03 06:58:08)

Heh. Well I could have gone my entire life without knowing that Shiller is a d\*che. I have never been anywhere near Yale but his book has literally saved me hundreds of thousands of dollars. If enough people read "Irrational Exuberance" in high school (it's easy enough for a high schooler) the tremendous suffering of the housing crisis could have been averted. The act of simply identifying the cliches that people start to believe in a bubble could go a long way to helping people avoid losing their money. While I agree with the author that grades given by non-objective professors (human beings) are a complete joke, IT certifications are not the model you want to look at. They are just as un-objective because they are tests written by humans. The MCSE is the biggest joke in all of IT (I have one - years ago.) The purpose of the MCSE is for MS to be able to create a lot of admins by giving them a test that everyone cheats on so that they can say the TCO of their systems is low. Self-taught linux/unix admins make much more than an MCSE, but Linux is free and Unix is way better than Windows, so MS needs a reason for corporations to buy their products. Cheap admins are the answer. The MCSE asks arbitrary questions that reveal zero problem-solving skills, they are just canned, meaningless phrases from MS. If you want to know how IT certifications work, google "brain dump." IT certifications are worthless because you can't measure the skills of a good sysadmin in a test where a person answers multiple-choice questions. Redhat has slightly better tests but they still need a LOT of work. It may be the case that there aren't easy, efficient ways to sort out who has the right skills for various careers. Universities aren't the answer and superficial tests, even if graded by a computer, aren't the answer. BTW I'm in grad school at a supposedly good university

and I have found that cheating and plagiarism are tacitly tolerated. If I didn't like interacting with some of the other students and teachers I would quit. There are a few decent reasons for me being there but it certainly isn't what it's cracked up to be.

CCS (2009-12-03 07:42:49)

PS are you really criticizing Shiller for being a name-dropper \*cough\*Feynman\*cough\* Logic, as taught by your friendly neighborhood Philosophy department, in my opinion/experience, has a lot to do with problem-solving. But I am not sure who else agrees with me on that!

Kevin Miller (2009-12-03 07:57:26)

Great article. The current economic crisis is a real opportunity for big state universities to rethink what they do. I suspect that there are some "stages of grief" involved, but I'll be curious to see what Berkeley does to reshape how it educates its students. I came to Michigan when it was already well along in dealing with a similar crisis, but I have to say that I've never been anywhere that has been more thoughtful and experimental in dealing with these issues, although there's a lot of inertia. Yale has always been in a league of its own, and the Schiller lecture reminds me of a history lecture I sat in on when I was looking at schools that convinced me not to go there. I went instead to a small and intense college, although I ended up having one experience very similar to the stats story cited above. I took a cognitive psychology course and because my girlfriend lived at a different school some distance away ended up missing a very large proportion of the classes. So that meant that I really had to learn the material on my own and make my own judgments about what was important and how the instructor would assess it. I ended up doing very well in the course (the instructor, who was a terrific teacher, didn't hold a grudge), and it was a very useful experience. I've found that it's really hard to predict who will get what from an educational experience, and even hard to know what will resonate many years hence. The message I take from this is that our responsibility as faculty is to provide students with challenges and opportunities to think and learn about a broad range of important questions. In fields like psychology, that's pretty easy to do, but it's also pretty easy to forget that that's the point of the enterprise.

Timely Snow » Blog Archive » The university and economic growth (2009-12-03 08:03:02)

[...] Courtesy of Seth Roberts, this interesting article by Philip Greenspun on the future of universities. [...]

Tim Newsome (2009-12-03 09:47:01)

One interpretation of Mike Lin's anecdote is that the lectures are worthless. Another one is that the final just doesn't do a good job testing what students know. I think it's common knowledge that tests are an imperfect measurement of knowledge, so that's the explanation I would pick. Of course that doesn't change the fact that there are bad teachers out there, but at least my experience has been that most of them are good. Taking a university course is a great way to learn about a subject, especially if you take the time to ask questions. Tim

Peter (2009-12-03 10:12:22)

Criticizing the first lecture of the semester for being mostly administrivia and posturing seems a bit weak.

seth (2009-12-03 15:05:18)

CCS and Peter, I thought the report of Shiller's lecture was funny. That's why I quoted it. Peter, I agree it isn't exactly incisive criticism. CCS, it would be name-dropping if I said something like: "the other day, I was talking to Feynman . . . ". I don't think anything's wrong with telling a story about how he helped me learn to think for myself.

Alex Chernavsky (2009-12-03 18:48:45)

Shiller's entire course is available for download here: <http://oyc.yale.edu/economics/financial-markets/> My daily commute is about an hour long, and I recently finished listening to all of Shiller's lectures. I can say that Greenspun's criticism is unfair. Shiller may not be the most dynamic speaker, and it's true that the introductory lecture was particularly weak. However, I learned a lot from the course, and I also found Shiller himself to be an intelligent and prescient economist. Rumor has it that he's on the short-list for the Nobel prize in economics (for good reason, I think). Meanwhile, Greenspun is best known for heading up a dot-com company that crashed and burned in a most spectacular way. Last time I checked his blog, he seemed to



have some sort of obsession with helicopters.

Andrew Gelman (2009-12-03 23:36:39)

I've never flown in a helicopter myself, but, ya gotta admit, they're pretty impressive machines.

peter (2009-12-04 11:50:19)

I agree with Alex Chernavsky; the online course is first rate and provides long-lasting useful insights into investing. The guest speakers were especially useful, since with hindsight they sounded a little silly. Overall, the lectures provided a framework to structure a portfolio. There was so much useful information it's difficult to single out just one. But, for me, Shiller's bemusement relative to "magical thinking" that is pervasive in the retail investing public was especially insightful.

### **Nature Editorializes on Climategate (2009-12-03 06:57)**

[1]It reads like something from Shouts and Murmurs in The New Yorker:

If there are benefits to the e-mail theft, one is to highlight yet again the harassment that denialists inflict on some climate-change researchers, often in the form of endless, time-consuming demands for information under the US and UK Freedom of Information Acts.

If only all Nature editorials were this amusing. It ends with the same pompous reference to "science" as [2]Elizabeth Kolbert's review of Superfreakonomics:

The pressures the UEA e-mailers experienced may be nothing compared with what will emerge as the United States debates a climate bill next year, and denialists use every means at their disposal to undermine trust in scientists and science.

Thanks to Bruce Charlton.

More [3]Here's what James McCarthy, Alexander Agassiz Professor of Biological Oceanography at Harvard and President-elect of AAAS, has to say: "The content of a few personal emails has no impact whatsoever on our overall understanding that human activity is driving dangerous levels of global warming.â€ He is ignoring the fact that the data has been revealed to be a huge mess.

1. <http://www.nature.com/nature/journal/v462/n7273/full/462545a.html#top>

2. <http://www.blog.sethroberts.net/2009/11/11/three-things-elizabeth-kolbert-doesnt-know/>

3. [http://www.boston.com/lifestyle/green/greenblog/2009/12/harvard\\_professor\\_weighs\\_in\\_on.html](http://www.boston.com/lifestyle/green/greenblog/2009/12/harvard_professor_weighs_in_on.html)

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Jim (2009-12-03 08:38:38)

There is a VERY easy way to avoid the "endless, time-consuming demands for information under the US and UK Freedom of Information Acts," don't take government money that triggers the laws. As a government employee of a large organization that looks a lot like the Army Corps of Engineers, who is used to being sued under the National Environmental Policy Act, and has

had to produce emails for litigation, I have zero sympathy for this argument. It's a fact, the People, through their Congressional representatives have spoken, deal with it.

Ted (2009-12-03 14:09:27)

Try your hand at suggesting economists have a pet project in all this too: Carbon Credit trading. I can't seem to get any prominent economist blog to let my comments through. They get "moderated".

JLD (2009-12-04 01:03:09)

This isn't an "either or" question. I strongly suspect that there is both climate trouble **AND** juicy embezzlement prospects (Carbon taxes and trade) from govts and traders. We get the "best of both worlds", isn't that wonderful?

### **Foot Fungus Cured With Socks (2009-12-03 14:36)**

A friend writes:

I remember reading on your blog about [1]more socks as a cure for Athlete's Foot and I had a fungal infection on my foot from climbing around barefoot outside, I think. I tried using two different antifungal creams. They didn't work. To be honest I didn't use them for the recommended time cuz it's a huge fucking hassle. You have to put it on your feet, let it dry, rub it in blah blah blah. And it's kinda gross to use. So I went to [2]Uniqlo [a Japanese clothing store] and bought like 20 pairs of extra socks and forgot about it. But when I wash socks the washed ones get put in the back of the drawer so the effect is the socks I wear spend like 3-4 days away from my feet every time. Anyway, the infection COMPLETELY disappeared. There is a weird sense of satisfaction from this kind of cure. It feels like just by doing some small things 'right' all these health issues can be fixed.

I had foot fungus for years, I too tried antifungal creams without success, and the problem cleared up within days when I bought a lot more socks. It has remained cleared-up. You could call it the staging-area problem: Our things act as staging areas for harmful bugs. Another example is [3]getting an eye infection from pillowcases.

1. <http://www.blog.sethroberts.net/2009/10/11/how-to-eliminateprevent-a-skin-infection-and-what-it-means/>

2. <http://www.uniqlo.cn/>

3. <http://www.blog.sethroberts.net/2009/08/17/how-to-avoid-infection-something-i-didnt-know/>

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Ted (2009-12-03 15:27:53)

The cure for ringworm is too wash your clothes and bedding every night.

Jeff (2009-12-03 15:52:49)

"An extreme example is that Eskimos started dying of poison from fermented fish after they began using plastic containers. Which is why I use glass jars to make kombucha. " Can you explain this? I assume you are talking about the problem of creating botulism while fermenting the fish. This does not have anything to do with the material of the container, but whether the container is airtight (plastic) or not airtight (the ground). Plastic versus glass would not make a difference. Unless you are talking about something else.

seth (2009-12-03 16:55:56)

Jeff, yes, that's I was talking about. Thanks for the correction. I have removed those two sentences.

George (2009-12-04 11:44:59)

This reminds me of a story I read about a young man who had chronic acne problems; after trying a lot of different things, what finally worked for him was putting a fresh towel over his pillow every night before bed: [http://www.reddit.com/r/reddit.com/comments/9p2f8/i\\_am\\_a\\_seventeenyearold\\_who\\_had\\_terrible\\_and/](http://www.reddit.com/r/reddit.com/comments/9p2f8/i_am_a_seventeenyearold_who_had_terrible_and/)

voiceofreason (2009-12-04 12:04:38)

Even as important as lots of socks, is lots of shoes. If you own 5-6 pairs of shoes, and give them at least 3-4 days airing out before you wear a particular pair again, always with fresh socks, you will never get athlete's foot.

Dave (2009-12-04 12:27:18)

I had the same problem. When I switched to socks that were cotton instead of polyester/nylon the problem went away. After that I changed my underwear to cotton and had some nice results there too. Natural cellulosic fibre materials are better to put up against your skin than cheap synthetics.

Bruce G Charlton (2009-12-04 13:41:40)

My father has taken this a step further - he has 14 pairs of (leather) shoes which he wears in rotation...

G-Man (2009-12-04 13:53:19)

@Jeff, I can't really speak to the fermenting of fish and how various types of containers affect their poison content. However, I am a brewer, so I can speak to your statement about plastic being airtight, which is incorrect. Many types of plastic containers are actually porous and will let the things inside them breathe. This is why homebrew beer is only fermented in glass carboys, or very specialized plastic containers (PET3, I think, but I only use glass so I'm not really sure). So, with that out of the way, back to my foot fungus... More socks? Really? I have a pretty good amount of socks now, and I never wear an unwashed pair. Any idea how this actually is affecting the fungus? What is the 'cure'? Is it the fact that it takes longer to recycle a pair back onto the feet? Perhaps some fungus stays in the sock after washing but dies if it doesn't come into contact with the host for a certain period of time?

Mike (2009-12-04 18:40:57)

Seth, a very sure fire way to ride yourself of tenia pedis (latin for foot funk) is something almost no-one knows about, but I repeat, it's a sure fire way to remove it. Garlic!!! Take a two cloves of garlic through a garlic press, and massage the 'mush' into the effected area for at least 5 minutes. It sometimes requires 2 applications (the next day), but it works. I had the worst kind the funk for a long time, and I am no completely free of it for over 2 years now. Before it would stir itself back up every other month. NO MORE!!!

Mitch (2009-12-04 19:23:41)

I've been pretty lucky never to have had athlete's food. If I had it I think I would try raw garlic, olive oil infused with raw garlic, yogurt, or a solution of boric acid. I already have a lot of socks so I can last longer between doing laundry.

Dan (2009-12-04 22:07:24)

Okay, first off, your symptoms may have vanished, but the fungus is still there. I hate to break the bad news, but, like herpes, tinea pedis is forever. Once you have it, you will always have it. There is no cure, no matter what anyone says. But, with proper care, your outbreaks will become less frequent and milder. I contacted tinea pedis in my late teens. After the first few years, it's basically disappeared, because I learned the right way to take care of my condition. (I'm over fifty, now.) What you need to do is wear breathable, cotton un-dyed socks. White over-the-calf tube socks work great for me. Wear shoes as little as possible, and try to have at least two pair of shoes, to trade off each day. Let those smelly suckers dry out and breathe. When you get an outbreak, the best treatment is called a Burrow's solution. You can get Burrow's powder from your pharmacy. Mix

it according to the instructions, and apply cold (I mean ice-cold) compresses, soaked in the solution and worn for as long as you can stand it, several times per day. The cold will cut the inflammation, and the Burrow's solution will dry the pustules. Fungus thrive on warm, damp and dark places, like your feet in shoes. UV light from sunlight will help to kill many of them, and keeping your feet cool and dry will do more for your unpleasant condition than will any "home remedy." It goes without saying that a good diet and lessening stress will also help out your problem. Best of luck, and may your fungus bother you no longer.

Anonymous (2009-12-04 22:22:22)

Sounds similar to something I did. For years I had bad acne on my face, that just wouldn't disappear no matter what prescription medication I tried. Suddenly, it went away. What did I do? I just washed my face in the middle of the day when it felt oily, with nothing but plain water, and maybe a drop of soap.

Keane (2009-12-05 18:51:53)

When I had this problem and medicated creams didn't help enough, I applied vinegar and my problem disappeared.

eric (2009-12-06 06:01:23)

to dan: uhhh, before you use such bombastic language ("no matter what anyone says!") you might want to get your facts straight 1. herpes is a virus. it's DNA actually enters the nucleus and is kept latent there by an extremely complicated and delicate RNA repression scheme. 2. foot fungi are.. fungi. they live on the surface of your feet. if you bring their population down to a certain level, you can get rid of em forever. do you have some theory on how the fungus would magically persist in an asymptomatic fashion forever?

Stuartblog2 » Some stuff I read on December 5th (2009-12-06 11:02:56)

[...] Public Logicians Boing Boing – Share and Enjoy:December 6th, 2009 | Leave a comment | Email This Post Leave a ReplyCancel [...]

## **The Parable of the Children's Book (2009-12-03 17:27)**

In 2007, Laurie David, producer of An Inconvenient Truth, ex-wife of Larry David, and self-described "global warming activist," published The Down To Earth Guide to Global Warming, a book for children. It contained a graph showing the very strong correlation over time between carbon dioxide levels and global temperature. The point was that carbon dioxide controlled global temperature. But there was a problem: The graph was mislabeled. The function labeled "carbon dioxide" was actually the temperature function. Correctly labeled, the graph showed that carbon dioxide changes followed temperature changes. Which meant that the temperature changes had caused the carbon-dioxide changes, rather than the other way around – which was one of the book's main points.

[1]David's reaction to the mistake?

Thanks guys! We will correct the illustration in the next edition. We're happy to learn that that was the only question SPPI had about the entire fact-filled book!

As if it's trivial.

Moral: A sign of things to come.

More The fact that a producer of An Inconvenient Truth, the movie that arguably won Al Gore a Nobel Prize, could (a) make such a basic mistake and (b) dismiss it as trivial is the ladies-who-lunch equivalent of the fact that [2]Jones and other CRU scientists were scared of a New York Times reporter.

1. [http://www.huffingtonpost.com/laurie-david/the-childrens-book-that-h\\_b\\_64998.html](http://www.huffingtonpost.com/laurie-david/the-childrens-book-that-h_b_64998.html)

2. <http://www.blog.sethroberts.net/2009/11/28/congratulations-andrew-rivkin/>

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Nathan Myers (2009-12-03 22:57:34)

Seth, it's sad to see you descending into full-on crankhood. How is it that CO2 followed prehistorical temperature fluctuations by centuries, yet tracks the rise directly today? It's fortunate you and your new compatriots weren't able to involve yourselves in forestalling efforts to protect the ozone layer. That said, efforts to reduce CO2 emission sufficiently by regulation are doomed. We should be sluicing money into research and development of technologies that will come to produce energy more cheaply than burning fossil fuels. Taxing fossil fuel use would be a practical source of money to pay for it, and of (local, temporary) artificial competitiveness for the new products of such development. After fossil fuels have been rendered relatively more expensive, the nations that developed the practical alternatives will benefit from first-mover advantage. The furnaces will crumble of their own accord, unlamented.

seth (2009-12-03 23:39:11)

Why does CO2 now go up at the same time as global temperature? Because now a lot of carbon dioxide is man-made. Nathan, why are you sure that people who question man-made global warming are cranks?

Gian (2009-12-04 00:15:46)

The phenomena is well-known to climate scientists and they explain it (away?) as some currently unknown forcing that heats the planet for 800 years, and also causing increase in Co2. The increasing Co2 positively reinforces the previous small heating from the unknown cause. The Co2-caused heating is 80 % of the total heating and 20 % is the heating in first 800 years. This is from [realclimate.org](http://realclimate.org)

Bruce G Charlton (2009-12-04 02:22:42)

Scientists shouldn't be needing to add auxiliary hypotheses until their primary hypotheses is established as having some plausibility. First you state your hypothesis in explicit detail and state its predicted consequences (e.g. a specific mathematical model might be the 'hypothesis' - although in fact a mathematical model isn't really an hypothesis when it is derived post hoc from the data it is aiming to explain - an hypotheses really ought to be causal rather than merely statistical) - then you test the predicted observations against a new set of observations; naturally this must be done without changing the hypotheses to fit the new observations. Until a post hoc statistical model has been tested against new observations it has zero credibility. And until the post hoc model has been tested, it has zero predictive value, and we have zero idea about what will happen in the future. But all this is absolutely basic. The fact that so many people don't understand it simply means that they are not scientists at all, not even a little bit. They are merely technicians - whether good or bad technicians, whether honest or dishonest.

Bruce G Charlton (2009-12-04 02:59:55)

I should maybe spell out my point even more clearly. The debate is not about whether global warming has happened, the debate is about whether we \_understand \_ the causes of global climate to the extent that we can predict the future climate. My point is that - because the predictions of 'the' computer model was not tested against new observations (but instead was repeatedly adjusted to more closely describe already-existing past observations) - there is zero evidence that we understand the causes of global climate. Therefore we cannot make scientific predictions. Since we cannot even predict climate, it should not really be necessary to add that there is also (to put it as mildly as possible) zero evidence that humans can control the global climate. Anyone rational who \_really \_ believed the guesses (not scientific predictions) of significant future global warming would want to use our limited resources to \_prepare \_ for global warming; rather than engaging in the utterly ignorant, wasteful, distracting, dishonest nonsense of trying to prevent something we do not understand.

Sonic Charmer (2009-12-04 04:53:56)

Nathan, if CO2 used to follow temperature but now tracks it (which I'm not sure we know, or you know), then what is the point of looking at historical graphs? What hypothesis about CO2 and warming does it support? This is an especially puzzling question given that apparently to AGW believers you can interchange CO2 and temperature willy-nilly, show the interchanged graph, and still be (supposedly) proving the same point. It's as Bruce says, if you don't have or know a mechanism for what you think you're predicting, such graphs are useless.

Vince (2009-12-04 11:05:46)

[1]Here is a realclimate post on the topic. Briefly: - ice core data show that temperatures increased for a few thousands years at the end of glacial periods, and CO2 levels started increasing a few hundred years after temperatures started increasing (so both rose together after the first few hundred years) - climate scientists have recognized this at least since 1990 - climate scientists have concluded that CO2 acted as a positive feedback mechanism that kicked in after warming started for other reasons - their best guesses seem to be that orbital forcing caused the initial warming and that the feedback carbon mainly came from the oceans - when analyzing the data, it's not possible to account for the amount of warming unless you give a causal role to CO2 and other greenhouse gases - the data imply that greenhouse gases were responsible for about a third of the warming - climate models and predictions are based on other information, not on these historical records from ice ages, but these data do suggest fairly similar predictions of future warming due to rising greenhouse gases

1. <http://www.realclimate.org/index.php/archives/2007/04/the-lag-between-temp-and-co2/>

Vince (2009-12-04 11:17:14)

Looking through realclimate a bit more, it looks like ice cores provide another example of [1]accurate predictions by climate scientists. Climate scientists had data on atmospheric concentrations of greenhouse gases going back only a few hundred thousand years, and they were going to gather data on atmospheric GHGs going back farther (up to 650,000 years ago), so they made predictions of what they would find based on their knowledge of temperatures from that time period, their knowledge about other causes of temperature variation, and their model of how GHGs influence the temperature. The idea was that temperature variation that wasn't accounted for by the other factors was probably due to the unmeasured GHGs influencing temperature in accordance with their models. And apparently their predictions were pretty good.

1. <http://www.realclimate.org/index.php/archives/2005/11/650000-years-of-greenhouse-gas-concentrations/>

Nathan Myers (2009-12-05 14:22:07)

Seth: It would take just as much work to demonstrate that CO2 is not the main cause of global warming as has gone into proving that it is, but you're trying to do it with parlor tricks instead. Bruce: This use of "technician" as an insult is nothing better than bigotry. Your family doctor is a technician. Scientists who pay close attention to technicians become better scientists, because technicians have the most contact with the data and their sources.

seth (2009-12-06 12:45:01)

Nathan, I asked you: Why are you so sure that people who question AGW are cranks? Your answer is: "It would take just as much work to demonstrate that CO2 is not the main cause of global warming as has gone into proving that it is, but you're trying to do it with parlor tricks instead"? Huh? I suppose you're ignoring my question, but I'm not sure.

TCT (2009-12-06 16:22:28)

I think he thinks you are a crank because you didn't bother to do a basic Google search and figure out for your self why this isn't a big deal, and instead decided to make mountains out of moll hills.

TCT (2009-12-06 16:31:51)

Allso are you going to address Vince?

Nathan Myers (2009-12-06 21:09:55)

Seth, I'm not saying "people who question AGW" are cranks, although many are. I'm talking about your own behavior. It's

completely legitimate to question mainstream science and industry, but not to seize on trivialities. The Ares rocket is a positively idiotic design, obviously driven by the politics of patronage, to the exclusion of the most basic sense. Minor mistakes would be invisible or incomprehensible to me, but its are so gross even I can't miss them.

seth (2009-12-06 22:47:27)

Nathan, thanks for explaining that. It is my mission in life to hold Laurie David accountable.

Josh (2009-12-07 13:45:11)

I've looked at the graph in question, and at the annotation given by the authors, and at no point do they mention anything about leading or lagging of the two data sets, only that they are correlated – which of course is true independent of which is which. Furthermore there is only really a lag in temperature at two points, otherwise they're mostly in sync. So whereas this (corrected) graph admittedly shows only correlation and not causation, it certainly in no way disproves either. Therefore there is every reason to believe this was just a simple mistake, easily overlooked by even the most experienced climate scientist. And to flap your hands around and scream "Look here! They're lying!" because of it is intellectually dishonest at best.

Ted (2009-12-07 13:45:20)

Yeah, Seth don't seize on trivialities like the perihelion shift of Mercury. Ignore it. Newton was right.

## **What I've Learned From Climategate (So Far) (2009-12-04 21:47)**

Google "Climategate" you get 31 million hits. "Obama" returns 40 million. Yet mainstream media, such as the New York Times, have said little about it. The New Yorker has said nothing about it. Given so much interest, that will change.

Some of my prior beliefs – that empirical support for the view that man has caused global warming is weaker than we're told, that bloggers are a powerful force for truth – are stronger. But here are a few things I didn't think of until now:

1. The truth leaks out before it gushes out. [1]Laurie David's children's book – its egregious mistake, her blithe dismissal of that mistake – is an example of the truth leaking out. In the Ranjit Chandra case, little facts implied he was a fraud long before this became utterly clear. An example is the claim in one of his papers (published in The Lancet!) that everyone asked agreed to be in his experiment.
2. Teaching is even better done via scandals than via stories. The number of hits for Climategate is an indication of how much people are learning from it. As I blogged earlier,[2] they're learning a lot about science. A mere story about science would never attract so much attention. I should think more about how to use scandals to teach stuff. When Nassim Taleb is scathing about this or that, he has the right idea. Spy was the perfect example. It taught me a lot about New York City.
3. Jane Jacobs was wrong. Or at least missed something very important. In *Dark Age Ahead*, her last book, she pointed to a number of disturbing signs. One was the rise of crappy science. She was quite right about that – as scientists have become more professional they have become more status-oriented and less truth-oriented. She didn't foresee that the Internet would be an enormously powerful corrective force, as is happening now. Climategate is a (relatively) small example of even bigger force: the rise of the power of sophisticated amateurs/hobbyists. Who, unlike professionals, with jobs and status to protect, have complete freedom. The first big example was printed non-fiction books, [3]as I blogged earlier (which are written with great freedom, usually); but now the Internet provides another great outlet, much faster, cheaper, and more accessible than books, for independent thought.

1. <http://www.blog.sethroberts.net/2009/12/03/the-parable-of-the-childrens-book/>
2. <http://www.blog.sethroberts.net/2009/12/02/climategate-its-educational-value/>
3. <http://www.blog.sethroberts.net/2009/12/02/climategate-its-educational-value/>

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Bruce G Charlton (2009-12-04 23:35:53)

Another corrupt science scam which has already been discredited is the supposed epidemic of 'new variant' Creutzfeldt-Jakob disease (CJD) in the UK. This prion was supposed to be transferred to human from 'mad cow's with BSE (Bovine Spongiform Encephalopathy). This table described the supposed-epidemic - which dominated UK public consciousness for months, with predictions of hundreds of thousands of casualties, triggered regulations which cost a fortune, caused massive changes in food consumption, killed off UK beef farming etc. <http://www.cjd.ed.ac.uk/figures.htm> In retrospect the most parsimonious explanation is that 'new' variant CJD was not new, but had previously been undetected; and what the grant-beneficiaries were describing as the start of an epidemic, was merely due to ascertaining previously undetected cases. On the small piece of false evidence of a 'new' disease which obtained from cattle, a vast superstructure of heavily funded and government-promoted nonsense and irrelevance was then erected. But here is the sacry bit. Even though the epidemic never happened, the bogus science has not been discredited. Sources like Wikipdia still accept the bogus claims. Among the public BSE-nvCJD is either forgotten, or - in a peculiar way - remembered as if it was true, and as if (somehow) the epidemic really had happened. My take home message from this is much more pessimistic than Seth's. My interpretation is that zombie science can thrive almost indefinitely, and when bogus science is exposed, most people are not really interested, and apparently learn nothing from it. I hope that Climategate prevents Western societies from destroying the world economy and imposing authoritarian laws - but even if this happens I doubt whether anything will be learned, and the elites will simply find another bogus excuse to impose their brand of centralized state-socialism.

epistemocrat (2009-12-05 10:30:38)

Hi Seth, Here is what I have learned from TigerGate: It's like Climategate in that the truth leaked out and then started gushing out. This is a fracture in fractal math: there are a few small signs of snow drift, then all of the sudden, an avalanche ensues. Jime Rome, the sports commentator, likes to say this about these scandals in athletics: "Where there's smoke, there's fire." In the case of Tiger Woods, it turned out to be a roaring Forest Fire. The fire department has yet to contain it. Cheers, Brent

Mike Kenny (2009-12-05 12:25:24)

Climategate has made me consider that perhaps I really shouldn't think of anyone as especially worth listening to (I can listen to them, but not give them special privilege) unless they make public predictions that happen to be true at a useful rate. Does anyone happen to know how well climatologists do in making predictions?

Neil Baxter (2009-12-05 15:26:48)

What I found most interesting in regard to climategate, is that in my local paper, The Vancouver Province, the only reports on Climategate were Opinions on the editorial pages, whereas reports of imminent environmental collapse were news items spread liberally through all of the news sections of the paper, therefore presumably, factual. Now surely such speculative fiction as imminent environmental collapse is at best opinion, and reports on the contents of emails admitted by the sender to be genuine are 'news', ie factual - an odd perversion, indeed. As an aside. I think there is not a scientist alive who would not do well to read Socrates (the father of induction, according to Aristotle), then Aristotle (not for his particular assertions, but for his method), then Francis Bacon for his works on induction and the scientific method, which should be followed up by a good course on ethics on the virtues of honesty and integrity. What surely has failed here, is all of the above. What is being vindicated is capitalism - as is it applies to the market for ideas - through its proxy, the Internet.



Mark (2009-12-05 15:41:41)

There have been studies on the bias that occurs when corporations fund studies: [http://www.allacademic.com/meta/p\\_mla-apa-research-citation/1/8/4/9/7/p184976\\_index.html](http://www.allacademic.com/meta/p_mla-apa-research-citation/1/8/4/9/7/p184976_index.html) I wonder if anyone has looked into bias in research where there are no such backers, but where the result that the study reaches could affect one's status in one's group, one's chances for tenure, the number of parties one is invited to, the chance of group ostracization, and so on. It seems to me that if I were in a field connected to global warming, and I was doing research that seemed to be coming to results that were counter to the mainstream, I'd just try to find some other area to do research in that my skills qualified me for.

Alex Chernavsky (2009-12-05 19:15:55)

When I Google "climategate", I get 30.7 million hits. When I Google "climate", I get only 20.9 million. That doesn't quite make sense.

HPTNS (2009-12-05 19:22:48)

Look at the writings of Aynsley Kellow, a professor of politics, with a science background, at the University of Tasmania in Australia, for a discussion of how international scientific communities trade status amongst participants and how the rise of the internet has made peer review a reduced force for self correction. In particular his 2007 book discusses all of this in the context of AGW. This book was quite prescient.

seth (2009-12-05 23:17:16)

Thanks, HPTNS.

PhysicstDave (2009-12-07 15:30:29)

Bruce G. Charlton wrote: > I hope that Climategate prevents Western societies from destroying the world economy and imposing authoritarian laws - but even if this happens I doubt whether anything will be learned, and the elites will simply find another bogus excuse to impose their brand of centralized state-socialism. Thirty years ago, we would never have heard about Climategate at all. Times have changed â€" the "power elite" is losing its grip. Look â€" Seth is over in China (if his personal bio is up-to-date), and yet he is hosting this discussion! Revealing on multiple levels: he's in "Communist" (AKA "New Capitalist" China, and he's communicating with us from half-way around the world. (Even if he is currently back in the States, my general point stands about a radically-changed world.) Oh, the power elite will fight like a rabid dog, but I think its days are numbered. Dave

PhysicstDave (2009-12-07 15:36:03)

Mike Kenny wrote: >Climategate has made me consider that perhaps I really shouldn't think of anyone as especially worth listening to (I can listen to them, but not give them special privilege) unless they make public predictions that happen to be true at a useful rate. What you've described is the scientific method. And scientists, even climate "scientists" are supposed to follow it. The real scandal here isn't the snarky, infantile behavior of the CRU Team. The real scandal is "scientists," not just at CRU, who seem utterly ignorant of the scientific method. Dave Miller in Sacramento

The New Aristocracy « Anthny (2009-12-08 16:08:50)

[...] Seth Roberts says: [...]

Jim N. (2009-12-17 16:04:00)

Regarding Jane Jacobs, it seems a bit dramatic to lead your paragraph with "Jane Jacobs was wrong" when all you're really saying is that she failed to predict the trajectory of a technology that was still pretty new when she turned 80. Not trying to be overly-critical, but the woman was quite a force for good in the world.

## **Associative Memory Studied by Self-Experimentation (2009-12-05 02:51)**

Joel Voss, a postdoc at the University of Illinois, Champaign-Urbana, [1]studied himself to measure the capacity of associative memory:

No previous experiments on humans have investigated the capacity of associative memory. I describe the first relevant data, which I obtained by systematically probing my own capacity during 58,560 memory trials for picture–response associations (approximately 1 year of testing). Estimated capacity was on the order of several thousand associations.

A few thousand is the number of characters a well-educated Chinese person knows.

1. <http://pbr.psychonomic-journals.org/content/16/6/1076.abstract?etoc>

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Mike Kenny (2009-12-05 12:05:23)

That's quite fascinating. I'm reminded of the authors I like who tend to make use of ambiguity, like Nabokov or Pynchon. Having just one interpretation of their work is no fun. I also wonder if associative thinking is stronger in people who score high on the big five personality trait of openness, who Daniel Nettle thinks are better at divergent thinking than people lower on that scale. Assuming the student who did this study is an intellectual and so probably higher than average in openness, perhaps one might hypothesize lower numbers of associations made in people lower on openness.

## **Three Chinese Jokes (2009-12-05 08:08)**

QUESTION: When the green bean jumped off a tall building, what did it become?

ANSWER: Red bean.

QUESTION: When the banana jumped off a tall building, what did it become?

ANSWER: Eggplant.

QUESTIONER: For Spring Festival, a farmer wanted to kill a donkey or a pig. Which did he choose?

LISTENER: I don't know. The pig?

QUESTIONER: Congratulations, the donkey agrees with you.

Tom in TX (2009-12-05 11:21:05)  
Maybe some explanation is in order. 8-)

seth (2009-12-05 15:26:13)

1. Blood is red. 2. When a banana is bruised its skin becomes the color of eggplant. 3. Surely no explanation is needed.

### **Aynsley Kellow on Climategate (2009-12-06 03:30)**

Aynsley Kellow is a professor of political science at the University of Tasmania. In [1]an interview five years ago, he said, about global warming, "weâ€™ve got a much broader range of choice to respond to a problem that is much more uncertain than certain people who are pushing the issue would have us believe."

As in a protection racket, the people trying to scare you benefit from you being scared:

I did a study of electricity planning, including here in Tasmania, the good old Hydro Electric Commission in the old daysâ€”and the logic was much the same; they would produce forecasts of [hard-to-meet] future demand which were then taken as immutable, and then they would try and justify particular policy responses to those. In the case here it was with hydro dam construction.

I learned about Professor Kellow's work from [2]a comment about status-trading among scientists. I wrote to him to ask what work of his was being referred to. He replied:

I think the reference is just to my 2007 book (Science and Public Policy: The Virtuous Corruption of Virtual Environmental Science), where I write about the shrinking size of groups which possess expertise, the effect of the communications revolution in establishing close networks of cooperation, and the effect of this on quality-assurance processes like peer review. The prevailing paradigm then becomes a "club good" from the defense of which all members benefit (in status, grant success and career advancement).

The problem is exacerbated by some of the circumstances revealed by Climategate: not just pressure on editors, and influence in being IPCC lead authors, but peer review in climate journals where submitting authors nominate reviewers, the identity of authors is known to those approached to referee papers, and so on. I am so accustomed to double-blind peer review that I found it hard to believe that this was a common practice.

When we add this to the lack of disclosure of raw data and code, we have serious reliability problems underlying science upon which we are basing very costly policy. We know in social science research the potential for subjective factors to obtrude into data manipulation even when researchers do not consciously mean for this to happen, so we often see data preparation and analysis performed by independent teams, and emphasise transparency, disclosure of methods, double-blind peer review, and so on.

That's a good point about single-blind peer review. I agree, it should all be double-blind, no exceptions. In psychology authors don't know the name of reviewers but reviewers know the names of authors. You can request double-blind review but then your paper enters the review process with a "paranoid" label attached.

[3]Kellow interviewed about Climategate.

1. <http://www.abc.net.au/rn/talks/counterpoint/stories/s1334071.htm>
2. <http://www.blog.sethroberts.net/2009/12/04/what-ive-learned-from-climategate-so-far/#comment-368619>
3. <http://www.abc.net.au/rn/counterpoint/stories/2009/2757619.htm>

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Kevin Miller (2009-12-06 06:20:17)

"In psychology authors don't know the name of reviewers but reviewers know the names of authors." I don't think this is true WRT developmental journals and, I thought, APA journals in general. Of course, patterns of self-citations and/or citations of unpublished work often make it reasonably clear who the authors might be, but that's a different problem and harder to solve.

Bruce G Charlton (2009-12-06 07:29:55)

Seth - what do you personally think peer review actually does? Not what it ought to do in a perfect world, but what it actually does. This would refer to (something like) what the average peer review in the average journal does; or maybe to the minimal peer review in a low ranked but Thomson/ ISS listed journal. David L Hull (Science as a process, Chicago UP, 1988) - who probably knows more than anyone else about how science functioned up until a couple of decades ago (because he is so smart, knowledgeable, and well-connected - and also had done more empirical study and analysis than anyone else) - believed that peer review mostly functioned so that research groupings could prevent the publication of low quality/ dissident work from among their own research group; and this was why peer review needed to be anonymous: i.e. because by PR scientists were actually excluding their friends and colleagues from publications which might embarrass or discredit the research program - not because by PR they were excluding their enemies. What we call science nowadays isn't really science at all - so modern peer review doubtless has a different function from the golden age. The reaction to Climategate shows us this - there are two views: the cynical view that Climategate revelations are just normal behaviour for scientists - so that half of scientists are worse than the Climategate mob; and the other view (which is supposedly the moralizing view) that Climategate behaviour is about one standard deviation worse than average - which means that about 16 percent of scientists behave worse than that. Well, Climategate behaviour is at least two SDs worse than science was when I began working in it 30 years ago (ie only about 2 percent of scientists behaved as badly as the Climategate mob) - which is such a large change as to be qualitative. And the response to Climategate shows why. Since prestige in modern 'science' comes from funding, the mainstream view is that whatever highly funded scientists do is, by definition, OK. (The idea that science is tested by checking its predictions against the real world is left out.) For me, Climategate is a confirmation that science - mainstream science - is broken; it isn't really science at all; and if we want real science again, we will need to rebuild it almost from the ground up.

seth (2009-12-06 13:00:56)

Effects of peer review: 1. Helps editors decide what papers to reject. 2. Increases quality of what's published (relative to random choice). 3. Provides many suggestions for improvement. 4. Reduces unorthodoxy. 5. Used by reviewers to protect their own reputations. 6. Burdens authors with stupid comments they must answer. I believe it's a lot better than random selection in most cases but its effect on stuff that is extremely good may be negative. "Whatever heavily-funded scientists do is okay." There is truth to that but it isn't the whole truth. Heavily-funded scientists must get jobs for their grad students. If they fail to do this it isn't okay. If over a long time - say, 10-20 years - the heavy funding produces no good results then there is also a problem. That's what happened to cognitive science. The bloom that was once on cognitive science has shifted to cognitive neuroscience. In the short run, you need merely convince people with money. In the medium run, you must convince colleagues with hiring power. In the long run, you have to convince your whole profession.

Bruce G Charlton (2009-12-06 23:16:09)

That peer review is better than random selection is obvious, but the historically the alternative to peer review has been editorial review; in which the editor decides the content of the journal (using whatever advice from others he thinks appropriate). Until recently (I'm not sure about now) the top medical journals of which I had some inside knowledge were strongly influenced by the decisions of their editors, who did not use referees for all submissions - i.e. it was a mixed system of peer review (for the dull solid stuff) and editorial review - which was how the heterodox stuff got published (most of which, naturally, turned out

to be wrong; but some of which made the journal's reputation over the long term). My experience is that editorial review is superior to peer review (all else being equal); not just because it does a better job (more efficient etc.), but because peer review degrades science by destroying personal responsibility all round until we get... exactly what we now have - science by committees (i.e. not science at all). "In the short run, you need merely convince people with money. In the medium run, you must convince colleagues with hiring power. In the long run, you have to convince your whole profession." Yes, that is how it used to be. Is that what you have observed in science? It is not what I have observed. If the long term is a 'generation' i.e. about 25 years, then it is clear that things have not worked like that. You mention cognitive neuroscience. This has been dominated by the techniques of 'functional' brain imaging since the early/ mid 1980s - i.e. for a generation. Much of FBI was justified by the supposed medical benefits - these have been essentially zero. The \_scientific \_ yield of ?billions of dollars invested in FBI has also been approximately zero (ie. at best FBI has been confirmatory of established knowledge). But the neuroscience professoriate are now pretty much dominated by people involved in brain imaging - it seems. It does not take much to convince them that the way forward is ever-more functional brain imaging. So, from observation over the past 25 years - I would re-write your para: "In the short run, you need merely convince people with money to give you large capital grants. In the medium run, the extra productivity and higher prestige research outputs deriving from large capital grants will get your graduate students hired at the best institutions. In the long run, you will re-populate and thereby re-shape the whole profession."

seth (2009-12-06 23:45:55)

Bruce, I don't think it is working out as well as you think for the cognitive neuroscientists. I am told their graduate students have difficulty getting jobs. They have difficulty getting jobs because scanners are so expensive and research money so hard to get. As undergraduates learn this, the field will become less popular. It's a familiar story line. It happened in animal learning - after 20 or 30 years of overpromising (from the 1940s to the 1960s), the rest of the field (psychology) lost interest and became enthusiastic about something else. From the 1960s to the 1980s, it was cognitive psychology that overpromised. Jobs in that area dried up. Now it is cognitive neuroscience. It may not look like a bubble - but it's a bubble.

Ted (2009-12-07 13:37:43)

Seth, you ought to check this out. Climategate means nothing to the coterie! They're still at it - trying to bully and suppress dissent even publicly! <http://rogerpielkejr.blogspot.com/2009/12/climate-scientist-threatens-boycott-of.html>

Stephen M (Ethesis) (2009-12-08 20:45:56)

<http://volokh.com/2009/12/08/the-homogenized-data-is-false/> - an analysis of the data. The graph displays are amazing. **Figures 7 and 8 are indeed stunners: "homogenizing" in effect changes slight temperature declines into huge temperature increases.** Some good links too.

Ben Hyde (2009-12-09 08:11:44)

It is true that status is a benefit that many clubs use as a binding force to holding the club together. But it is lousy glue in most cases. It is the rare club that exists merely to create status for its members. Rather, their primary purpose is always (?) to generate public or club goods of some kind and member labor is directed principally to that end. Working on status will displace the primary work only if two things are true. First you need the members, most of them, to be isolated. E.g. they must lack a diversified portfolio of other clubs they draw status from. Secondly you need the exceptional situation that inside of the club there is no class structure, i.e. the members have high equality of status. Absent either of these the members can always call the membership back to the primary purpose of the club. The idea that the global warming science community is merely defending the status of the community is perverse and self congratulatory on the part of the deniers. The community feels they have won the argument; their concern is now the planet's survival not the status of their community. And it is projection, it is the deniers who at this point are on the verge of losing face.

Ted (2009-12-09 23:16:49)

Ben, no offense, but you're full of hot air.

## My Theory of Japanese Aesthetics (2009-12-07 03:07)



Japanese packages are beautiful. One after another. Old-fashioned Japanese buildings, Japanese posters, and so on, are also gorgeous. Even the Japanese flag is better-looking than other flags. The look of the IBM Thinkpad came from bento boxes. Why is Japanese visual design so great?

The usual answer is that Japan is an island, with scarce resources, therefore the Japanese learned to do much with little. This might explain a certain minimalism but there are plenty of island countries with undistinguished visual aesthetics.

My answer is different. It starts with the fact that Japan has a very large coastline/area ratio. It isn't just an island, it's a skinny island. That's why the Japanese eat so much seafood. Seafood has a mild flavor. To preserve variety, you cannot spice it much otherwise everything ends up tasting like the spice. The differences between different fish are lost. This is why Japanese cuisine is weakly-flavored.

This created a problem for cooks. If the main food is weakly-flavored, everything else must also be. You want to show you care but you cannot do it with time-consuming complex sauces (such as harisa or mole, which takes a whole afternoon to make) or complex spice mixtures (such as curries) or complex cooking methods (French, Chinese). You are basically serving raw or lightly-cooked food with almost no spices. The solution – the way to show you cared – was presentation. The emotional energy of Japanese cooks went into making their food beautiful. Japanese food isn't just the least-flavored of all major cuisines, it is also by quite a bit the best-looking. That's how it started. Japanese cooks figured out how to make food beautiful. The lessons they learned and taught (at every meal!) spread to other design. When you grow up surrounded by beautiful things, as Japanese designers do, it helps you make beautiful things.

A friend of mine is a Chinese design student. She has met Japanese design students. How do they explain it? I asked her. They didn't talk about it, she said. "We communicated in English. Their English is even worse than mine."

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david (2009-12-07 07:27:06)

You might enjoy the movie Tampopo (which is described as a "Japanese noodle western"): <http://www.imdb.com/title/tt0092048/> The main character's quest is to make the perfect noodle soup. It's actually a very funny movie.

KenF (2009-12-07 09:46:07)

The simplicity thing extends even to religion. Traditional Shinto shrines are extremely simple (see Ise Jingu, the Torii entrance-ways to shrines, the paper and rope adornment, etc.) Are you suggesting that the Japanese native religion (which is a form of nature worship) took this form because they eat fish?

Timothy Beneke (2009-12-07 11:19:41)

Fascinating! I'd want to see crude correlational data about coastlines and other variables along with possible confounds before I would necessarily "believe" it but it's a really imaginative smart hypothesis. I hope some creative geographer or anthropologist reads it... I used to know someone who was a Berkeley anthropology grad student living in Japan writing his dissertation on

Japanese culture... I'll try to track him down and run this past him...

Aaron Blaisdell (2009-12-07 14:52:51)

Does the Danish aesthetic as applied to furniture fit here?

seth (2009-12-07 18:03:36)

Aaron, no I cannot explain why Danish furniture is the way it is. Although there may be a Scandinavian tradition of wood carving – my Swedish cousin carved butter knives for his family. That might have given them an advantage in furniture making.

seth (2009-12-07 18:06:21)

KenF, did the minimalism come entirely from lessons learned about how to present raw fish? I don't know. I'm only trying to explain visual design.

Bruce G Charlton (2009-12-07 22:55:03)

I suspect the higher average visuo-spatial IQ of East Asians goes a long way towards explaining high visual appreciation and creativity in EA cultures. This would not fully explain a distinctively Japanese ability, if that exists. But the explanation of IQ subscale differences then pushes the question back to why EAs have a higher VS IQ - which is presumably some selection factor. Unless it is, as I tend to suspect, an accidental and contingent by-product of selection for higher general intelligence leading to different IQ profiles in different populations due to the contingencies of gene mutations. At any rate, Amerindians demonstrate the same East Asian differentially-higher VS IQ than Europeans (although with different general intelligence levels than modern East Asians), suggesting that this IQ subscale differential was probably established in Asia before 15000 years ago. Ashkenazi Jewish higher IQ, for example, is differentially in the verbal IQ subscale (not visuospatial) (which also fits the profile of Ashkenazim achievement - which is very high indeed for many intellectual activities but \_not\_ for those requiring exceptional visuospatial intelligence). However, at around population average IQs, smallish differences in subscale IQ probably make little difference to the performances under selection - and these differentials only become apparent as performance moves further away from the mean - performance levels which are (by definition) rarer, and also prone to regression to the mean.

David (2009-12-08 01:22:31)

For most of its history, Japan has been a rich country, but the one resource it can't import is space. Japanese design, at least as far as architecture and interior design go, seems heavily driven by the need to make cramped spaces functional and livable. Your theory about the aesthetic of food is interesting, though.

## **How the National Multiple Sclerosis Society Harms MS Patients (2009-12-08 05:57)**

[1]I blogged earlier about how Paulo Zamboni, an Italian surgeon, discovered that almost all MS patients have impaired blood flow from the brain. Surgery to improve the blood flow usually reduced MS symptoms. A very important discovery.

At the [2]National Multiple Sclerosis Society, in Denver, they are unconvinced. They want more studies. Yes, Zamboni's single study shouldn't be the final word but here is the astonishing part: They say patients shouldn't get tested to see if they have impaired blood flow. Impaired blood flow is very rare. When an MS patient gets tested, this tests Zamboni's theory. His theory predicts they are likely to have impaired blood flow. At the National MS Society, they are against gathering data that would help decide if Zamboni is right. And against individuals finding out if something is wrong with their blood flow. This isn't conservative, it's stupid. And harmful – if anyone listens to them.

I wrote them to ask about their astonishing recommendation. Here's the answer (from Kris Graham):

Our greatest concern at this point is the risk involved with the possible treatment, and we would like to see more clinical testing done before making a recommendation to the general public.

I wrote again to say it was the recommendation against testing (not treatment) that I was asking about. I got this reply:

We are not recommending that people get tested because there is not yet a treatment that has undergone comprehensive clinical testing.Â In other words, we do not encourage people to go through testing that can not “yet” lead to treatment.Â If clinical trials show that treatments, such as Dr. Zamboni’s, are clinically safe and effective, we will of course change our recommendations.Â Until we know from controlled trials that there is a treatment to offer, spending the money to get tested doesn’t seem very reasonable.

What nonsense. Dr. Zamboni did a clinical trial. Spending money to get tested is money spent in a way that helps every MS patient – not to mention yourself. It’s [3]gatekeeper syndrome – they can’t fathom why a MS patient would want to gather useful health-care info without waiting for “controlled trials,” whatever those are. I wrote back to ask what “controlled trials” meant. No reply. Thank god for self-experimentation, [4]PatientsLikeMe, and [5]CureTogether.

1. <http://www.blog.sethroberts.net/2009/11/23/breakthrough-in-treating-ms/>
2. <http://www.nationalmssociety.org/index.aspx>
3. <http://www.blog.sethroberts.net/2009/11/17/gatekeeper-syndrome/>
4. <http://www.patientslikeme.com/>
5. <http://www.curetogether.com/>

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Bruce G Charlton (2009-12-08 10:12:14)

Well said! Medical Science nowadays is about careers not cures. Patients need to seek cures for their own diseases, otherwise it won’t happen.

Aaron Blaisdell (2009-12-08 11:57:14)

The folk at the National MS Society sound like a bunch of ostriches to me. It makes no sense to not test for a possible cause merely because there’s no safe, effective treatment yet developed. If testing revealed support for the hypothesis, then the MS researchers (I’d hesitate to call them scholars) would be able to submit grants to fund work to develop treatments. But we need knowledge about the cause in order to know what to treat. They’re putting themselves in a Catch 22. Dummies!

Alexandra Carmichael (2009-12-08 12:05:18)

Interesting position - are they trying to not get patients’ hopes up, or save them the time and money of another test until they by whatever standard they have decide to promote it? Or protect themselves from potential liability? Science is still incredibly slow at integrating new information, worried about harming people with a new idea and reluctant to ask the question ‘how many people are harmed, or not helped, by doing nothing?’



richard (2009-12-08 12:43:50)

I was also interested to see that the National MS society outright "discourages" banking a cord blood stem cells. MS patients typically go into remission during pregnancy so it would be interesting if there is any medical value to the mother or conceivably the child derived from cord blood stem cells. Obviously this is all speculative, but I thought that was sort of the point of science, hypothesize, test, etc. Even so, it is one thing to stay silent on the issue, another entirely to discourage. I would certainly understand their silence on banking cord blood as there isn't any research as of yet showing therapeutic value of cord blood stem cells for MS patients. But unless it is harmful, discouraging banking seems like overkill at best, and if in fact beneficial applications for MS are thusly derived, disastrous to those whose interests they claim to represent. <http://www.nationalmssociety.org/research/researchers-need-you/donate-to-tissue-banks/umbilical-cord-blood-donation/index.aspx>

Cliff Styles (2009-12-08 15:28:00)

To refuse to gather evidence about a plausible cause because an acceptable (to the gatekeepers) treatment is not yet available seems to me to invert cause and effect. Surely the incentive to develop the acceptable treatment must follow from evidence that such a treatment is potentially valuable? It is utterly remarkable to me, a non-scientist, that supposed scientists can think like this. Of course, that's not the first instance of twisted thinking from supposed scientists that your blog has worked over, nor will it be the last. Thanks for your efforts, Seth.

Mike Kenny (2009-12-08 15:30:50)

Very interesting. I wonder if a less regulative FDA and less government involvement in health insurance would lead patients and doctors to be more experimental and engaged in their treatment. The FDA won't let you use drugs until they've been tested, which means you can't try some things out until they've gone through a certain process. I wonder if this process becomes a kind of ritual that blinds people to obvious reasonable experiments, particularly ones with low cost and low risk and give you a bit of information about whether there's something good or not about the approach. I believe I've heard of people being prevented from making use of treatments banned by the FDA while the treatments are being tested. If a patient is going to die anyway, he may feel comfortable with a great risk, and so preventing him from trying something seems blind to reasonable calculations about risk. More private healthcare might mean people would be more aware of costs, possibly would shop around for cheaper treatments, doctors might be incentivized to experiment with cheap effective treatments to beat their competition, and also insurance companies might have a variety of different plans, so some would pay for a certain treatment and others not, and which might help to avoid monoculture and reliance on one officially sanctioned approach. Perhaps even insurance companies would be more inclined to pay for cheaper treatments than more expensive ones, and this might incentivize self experiment, because self experimentation seems to be cheaper and smaller over big expensive ones. This is all very speculative, of course. I'm open to counterarguments.

rps (2009-12-08 22:20:40)

What's the point of testing if you're not going to do anything about it? What difference would it make, other than wasting money? Of course they shouldn't recommend a test if they don't recommend acting on the results of the test. Science would only be advanced if scientists are collecting the data, and even if they are the insurance companies and the patients aren't going to want to pay for it. What's wrong with doing it in the context of a trial? And if Zamboni's trial was enough, why are you arguing with their recommendation against getting tested instead of their recommendation not to have the procedure done? Having said that, if I had MS I provisionally think I would want the procedure (with the caveat that I'd read up on it more if I had to actually make this decision). I think medical guidelines should say "we're not sure, make your own decision," not "don't do this" when they're not sure.

Alexandra Carmichael (2009-12-08 23:24:14)

here's what the myelin repair foundation's position is: <http://ow.ly/K1Rx>

seth (2009-12-08 23:30:08)

"What's the point of testing if you're not going to do anything about it?" Who says you're not going to do anything about it? It

is useful info. People can make up their own minds about what to do – and with more info, they will make better decisions. This is what the National MS Society fails to grasp. Mike, I think the solution is simple: Do things that empower patients. That is, the public. Give them access to diagnostic tests without requiring a doctor's approval. Give them information about hospital efficacy. Give them more access to medical journals. Give them tools and info to help them make decisions without doctors. Help them ask their doctors tough questions, such as asking a surgeon: "how often have you done this operation?" "What were the outcomes?" "How often have there been adverse events due to anesthesia during your operations?" I am sure that the pending health care reform bill contains exactly zero things that do this.

Hal (2009-12-09 12:19:25)

Suppose you had a friend with MS, who asked you if you thought he should get himself tested. I assume you would advise him to do so. Suppose the test comes back positive. He comes to you and asks if he should have surgery done. What would you tell him?

AA (2009-12-09 14:18:42)

Seth - if every patient had access to diagnostic tests without doctor approval, every Tom, Dick and Harry would decide they need an MRI for every ache and pain. Insurance companies would never go for that - that's not the MS Society's problem. But the MS Society actually does promote clients advocating for themselves and asking their doctors the right and relevant questions: see below. <http://nationalmssociety.org/living-with-multiple-sclerosis/you-can/get-more-out-of-a-doctor-visit/index.aspx> There is no doubt why people with MS want timely answers and to be in control of their own treatment regimen. But even if a person knew that they had impaired blood flow, I don't know that most doctors would recommend surgery at this point in time without more testing. There is no way to confidently recommend a type of testing after one study conducted with 65 people. The NMSS has also stated that if it received a "proposal related to CCSVI that is found to be outstanding and relevant to MS, we would likely commit to fund such a study." So we all wait...

seth (2009-12-09 14:29:38)

AA, you write "f every patient had access to diagnostic tests without doctor approval, every Tom, Dick and Harry would decide they need an MRI for every ache and pain." I'm not saying they should be free. Perhaps they should cost market price. Whatever the market will bear. "Even if a person knew that they had impaired blood flow, I don't know that most doctors would recommend surgery at this point in time without more testing." Sure, that's reasonable. But patients can decide for themselves. The testing info – which would tell them whether they have impaired blood flow – would surely improve their decision making. Hal, I don't know what I would tell him. I would certainly want more info than you give in your hypothetical situation. The price of the surgery, the dangers of the surgery, the impairment caused by MS, the side-effects of the current treatment, the efficacy of the current treatment, etc. But I am sure that the probability I would recommend the surgery would go way up compared to before testing (when neither of us knew if he or she had impaired blood flow).

AA (2009-12-10 14:48:52)

As of today.... "The National MS Society is undertaking the funding of follow-up research in CCSVI in MS and has invited investigators to apply for grant funding that would explore this lead. These applications will undergo an accelerated review process. If this hypothesis is confirmed, it may open up new research avenues into the underlying pathology of MS and new treatment approaches to therapy."

Andrew K Fletcher (2010-01-01 06:16:19)

Have you been following the inclined therapy threads on thisisms forum? <http://www.thisisms.com/ftopic-6755-days0-orderasc-0.html> <http://www.thisisms.com/ftopic-8535-225.html> A growing number of people are using a simple modified sleeping posture to recover from multiple sclerosis.

Ali (2010-01-25 05:51:00)

More information about Multiple Sclerosis you can find in: [http://www.geneticsofpregnancy.com/Encyclopedia/Multiple\\_sclerosis.aspx?pid=62](http://www.geneticsofpregnancy.com/Encyclopedia/Multiple_sclerosis.aspx?pid=62) This site contains information On Pregnancy Diseases And Genetic Testing.

## Lightsinshop.Com Scam (2009-12-08 23:36)

This website is a scam. Search "scam" in this blog for lots and lots of evidence about why it is a scam. It used to have other names, such as gamesingate.com. Notice how new the website is – how recently it was registered.

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matt massaro (2009-12-09 08:30:22)

Dear friend, I placed a order with this very company on Dec 8th. for over \$500.89. I thouhgt that it was kinda strange that the email they sent me was in some sort of asian text. What did they do to you and how did you get ripped off? Please reply, Matt

seth (2009-12-09 14:34:49)

They take your money and don't send you the stuff.

Mark (2009-12-09 19:24:07)

They may very well be a scam, but have you tried complaining to them? We have a Web site that sells stuff, and (1) after you get more than about 10 orders per day, things get really confusing, even with decent e-commerce software, and you miss some orders and customer complaints, and (2) you would not believe how flaky the USPS is, losing stuff, delivering it to the wrong address, omitting tracking scans from the tracking record, and so on. Another possibility: a backorder where they neglected to inform you they didn't have it in stock, or they deliberately keep a thin stock and put up with a certain percentage of orders being sent late. Just as most conspiracy theories in fact usually are just incompetence, it's more likely that this is just a badly run business than some sort of deliberate master scam.

D. W. (2009-12-09 20:17:18)

I made the mistake of thinking I had everything researched on this site. Yet I see this 8 hours after I have made my purchase. I replied to the contact section and my funds have been returned. I now wonder if they may have sent me something or if they just don't want the trouble before the item is supposed to go through shipping. If they were legit I will just pass them by until I can verify someone actually used them, otherwise I'll have to pay full price for the Wii.

willie (2009-12-09 20:20:16)

made purchase 11 30 09. \$528. told items would arrive 5-7 days. i have recieved 2 emails stating items have shipped. they do not respond to my request for shipping method or tracking number. Praying all goes well this will be a hit for xmas. will update if recieve items.

seth (2009-12-09 20:39:25)

Mark, if you read the rest of my posts about the previous versions of this website and the many comments you will see beyond any doubt it is a scam.

MaryAnn (2009-12-10 07:39:40)

I have been trying to order something and I keep getting that paypal is not being honored anymore. I did not choose Paypal, I wanted to use my VISA account. I have sent them 2 emails regarding that I wanted to place an order. Nothing has come out of my bank account as of yet. But when you see prices like that, "if it's to good to be true, then it is to good to be true." I just hope they don't take my money out of my account.

willie (2009-12-10 19:19:07)

Stop! it's a scam! the sight shut down today 12/10/2009. I have paypal and visa working on getting my \$528 back. please list the other website related to these scammers. I pray my xmas is not ruined.

Shanika (2009-12-10 20:17:55)

I had a feeling this website was just unreal! I had been looking EVERYWHERE and all the prices were the same. Not on this website! Atleast \$90 to \$200 cheaper, I just knew it was too good to be true! Luckily, I was waiting to buy the items when I got paid. Went to check things out tonight and Paypal had shut them down, Wow! Then I read all these comments....Did ANYONE receive what they ordered??? I'm really sorry for the people who lost their money but thank you for the info, everybody!!! Merry Christmas!

D. W. (2009-12-11 00:31:14)

I thought this was lightsinthebox.com.....Whew Allah works in mysterious ways.

Cathy (2009-12-11 17:05:34)

I thought this was a scam, I had gotten to the point of putting in an order, but never confirmed it or hit the payment button. I called paypal right away trying to find out any information, and mentioned they might need to watch them. I am so glad that I didnt end up ordering anything.

Nacho (2009-12-11 21:31:55)

Well, the scammer had succeed in many times and this time he failed! Sooner or later, the bad guy would coming back, let's keep an eye on them.

Nacho (2009-12-11 21:41:47)

Do anyone still remember the PayPal email address these scammers using? I thought they got similar pattern, too. I only know the newest one. Would someone else could share? Gamesinwelt.com Gamesingate.com jiaweishop.com lightsinshop.com: myluye@126.com

## **Physicists Disagree about Climate Change (2009-12-09 00:02)**

Here is [1]a statement from Hal Lewis, a physics professor at UC Santa Barbara, in answer to a question from CBS News:

I know of nobody who denies that the Earth has been warming for thousands of years without our help (and specifically since the Little Ice Age a few hundred years ago), and is most likely to continue to do so in its own sweet time. The important question is how much warming does the future hold, is it good or bad, and if bad is it too much for normal adaptation to handle. The real answer to the first is that no one knows, the real answer to the second is more likely good than bad (people and plants die from cold, not warmth), and the answer to the third is almost certainly not. And nobody doubts that CO<sub>2</sub> in the atmosphere has been increasing for the better part of a century, but the disobedient temperature seems not to care very much. And nobody denies that CO<sub>2</sub> is a greenhouse gas, along with other gases like water vapor, but despite the claims of those who are profiting by this craze, no one knows whether the temperature affects the CO<sub>2</sub> or vice versa. The weight of the evidence [suggests] the former.

That's reasonable. Here is [2]a statement from another physicist, a friend of mine and Andrew Gelman's:

Like a lot of scientists – I'm a physicist – I assumed the "Climategate" flap would cause a minor stir but would not prompt any doubt about the threat of global warming, at least among educated, intelligent people. The evidence for anthropogenic (that is, human-caused) global warming is strong, comes from many sources, and has been subject to much scientific scrutiny. Plenty of data are freely available. The

basic principles can be understood by just about anyone, and first- and second-order calculations can be performed by any physics grad student. Given these facts, questioning the occurrence of anthropogenic global warming seems crazy. (Predicting the details is much, much more complicated). [He seems to miss the point here. The usual claim is that man-made warming is large relative to other global temperature changes. That's not predictable "by any physics grad student" and to call it a "detail" is misleading. – Seth] And yet, I have seen discussions, articles, and blog posts from smart, educated people who seem to think that anthropogenic climate change is somehow called into question by the facts that (1) some scientists really, deeply believe that global warming skeptics are wrong in their analyses and should be shut out of the scientific discussion of global warming, and (2) one scientist may have fiddled with some of the numbers in making one of his plots. This is enough to make you skeptical of the whole scientific basis of global warming? Really?

At risk of sounding v smug, my views have changed only a little. [3]I already thought the consensus was more fragile than it appeared. That's just a general truth about modern science. I was already skeptical of climate models because [4]I knew how easily modelers fool themselves. I began to believe the consensus was not just fragile but wrong when I heard [5]the story of the Yamal tree ring data – the long refusal to supply the raw data and, when the researcher's hand was forced and the data finally supplied, the way it contradicted the claims that had been made. Climategate didn't vastly change what I thought; it provided more evidence for ideas I already had.

Another friend of mine used to be a math professor. He has views similar to the views of my physicist friend. "Look," I said to him, "if you want to argue that humans are causing major global warming you should at least show it's warmer now than in the past. Even that isn't true. The Medieval Warm Period." "That was only in Europe," he replied. Actually, there is [6]evidence of the same thing in the Gulf of Mexico.

1. [http://www.cbsnews.com/blogs/2009/12/08/taking\\_liberties/entry5933353.shtml](http://www.cbsnews.com/blogs/2009/12/08/taking_liberties/entry5933353.shtml)
2. [http://www.stat.columbia.edu/~cook/movabletype/archives/2009/12/climategate\\_how.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2009/12/climategate_how.html)
3. <http://www.blog.sethroberts.net/2009/11/11/three-things-elizabeth-kolbert-doesnt-know/>
4. <http://escholarship.org/uc/item/5vt0z72k>
5. <http://bishophill.squarespace.com/blog/2009/9/29/the-yamal-implosion.html>
6. <http://www.co2science.org//articles/V10/N44/C2.php>

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Jonlongstrider (2009-12-09 04:16:52)

Seth: Nobody fiddled with the data. Part of the data, the tree ring data, has been funky since the early 60s. For unknown reasons, since 1961 the tree ring data has been diverging from temperature data at the same location. Rather than throw the baby out with the bathwater, they used the "trick" of decreasing the weight of the tree ring data over time since then. So tree ring data should trump direct temp measures, pollen distributions, stalagmite and stalagmite measures, annual ice deposition thickness, and isotope concentrations? We live in an age of Shibboleths. There is no such thing as artery clogging saturated fat, cholesterol tells us next to nothing about heart disease, and even with your work there isn't a fully sound theory about metabolism. But skepticism without measure leads to gullibility. AGW and Climate Breaking are the simplest hypothesis, are consistent with paleontological evidence of past warmings, and do not have the burden of proof you demand.

seth (2009-12-09 05:28:15)

You are sure the "temperature" (which means what?) data are right and the tree-ring data wrong because . . . ? As for the idea that "nobody fiddled with the data" – have you read [1]this?

1. <http://wattsupwiththat.com/2009/12/08/the-smoking-gun-at-darwin-zero/>

Ben Hyde (2009-12-09 07:50:23)

"my views have changed only a little" And it's wonderfully convenient that these views are consistent with your both your politics and attitudes about large institutions generally. It is fun, being a cynical contrarian sceptic.

Peter Smith (2009-12-09 08:06:40)

i agree. we did nothing. it's not our fault. let the poor people of the developing world suffer. they deserve it.

James (2009-12-09 09:01:01)

Peter: Wouldn't it be a better idea to use the billions (or trillions) to directly improve the lives of poor people?

Glen Raphael (2009-12-09 09:01:22)

Jonlongstrider: The point of the chart that got fiddled with was to show the long-term trend based on proxy data. If the proxy data "diverges" almost immediately after leaving the period it was calibrated against, what makes us think it didn't "diverge" in the past? Two perfectly plausible hypotheses about this include: (1) tree rings just aren't a good long-term proxy, and the apparent fit with temperature in the past was just a result of data-snooping (2) tree rings are a decent proxy but stop being so when the temperature exceeds X. If either of those are the case, tree rings *couldn't have shown us* if the MWP was warmer than today because the temps they show in the past are probably "diverging" just as recent ones are. No

Glen Raphael (2009-12-09 09:03:05)

(hit submit by accident there..) No argument has been made to exclude those hypotheses. Instead choices were made with respect to plotting the data that deliberately hide the otherwise obvious potential problem from those who read the resulting chart.

Hal (2009-12-09 11:46:34)

It's always a bad sign when new data only confirms what you already believe, especially on a controversial issue. A priori the chance that you are one of the small fraction of people in the world who are right on the issue, given incomplete and contradictory data, is very low. Yet of course you will think you are right, because if you didn't, you would change your opinion. So the great majority of people think they are right, but are at least slightly wrong. Hence new data should cause almost everyone to change their opinion. But it does not, because most people are biased and will interpret and adapt the new data to reinforce their pre-existing beliefs. If you, too, find the new data only confirming what you already believe, it is overwhelmingly more likely that you are committing this logical error than that you were in the lucky minority that happened to be right before. OTOH if you find your opinion changing in response to new data, that doesn't prove you are right or logical, but it is evidence in that direction.

Phil (2009-12-09 12:30:29)

That Hal Lewis quote is a really good one for the purpose of contrasting the two viewpoints. I just don't see any part of Lewis's quote as "reasonable". For instance, the statement that continued warming is more likely good than bad because "people die of cold, not warmth"...I've just typed and deleted four different responses because I am having trouble coming up with anything other than an insult. There may (or may not) be an abstract sense in which a warmer climate would be better. But the fact is that the manmade world (and the terrestrial ecosystem) is highly optimized to the current climate. Reservoirs are built where the rain falls. Coastal cities, towns, and houses are built at an appropriate location for the current ocean level. To suggest that the major effect of warming is that fewer people will die of cold isn't just wrong, it is obviously wrong. It's ridiculously wrong. And as for the claim that change is "almost certainly not" too big for "normal adaptation" to handle...well, that obviously depends on what "normal adaptation" means, and also on how much change we are talking about. Considering Levin doesn't think the temperature is changing much at all — he says so a few sentences later — well, if you believe that then I guess you can believe that "normal adaptation" is going to do OK. But that's arguing from a false premise: temperatures are going up, and going up fast. (And global warming isn't just about temperatures, it also affects rainfall patterns and storms and so on). It's not clear if Levin (or you, Seth) would agree that if climate change is very large and rapid, "normal adaptation" would suffice? I hope you would agree that there is some magnitude of climate change for which "normal adaptation" would not be enough. Lewis says increasing temperature causes an increase in CO2 rather than the other way around, and that "the

disobedient temperature seems not to care very much" about increasing levels of CO2. Confusingly, he also says that CO2 is a greenhouse gas. But it's hard to interpret these statements as anything other than a denial that increasing levels of CO2 lead to an increase in temperature. So, I think this entire Lewis quote is something very close to nonsense. The fact that you, Seth, say it is "reasonable"...I just hardly know what to say. Moving on through your post: you insert a comment in my quote, that I "seem to miss the point here. The usual claim is that man-made warming is large relative to other global temperature changes. That's not predictable — by any physics grad student" and to call it a "detail" is misleading." First, that is not the usual claim. The usual claim is that man-made warming is large enough that it may be catastrophic. I've never understood the importance of comparing it to historical variability, unless you are one of the people who believes anything natural is good. (Malaria? Smallpox?). Even if we had some philosophical agreement that anything natural is good, it wouldn't necessarily follow that something unnatural, but of the same magnitude as a natural effect, is good. If we agree that it's a good thing that people die of the flu — culls the herd, and all that — it doesn't necessarily mean that if I go out and kill 10,000 people, I've done a good thing. Second, it is not "missing the point," nor "misleading" to say that any grad student can do the first- and second-order calculations of the magnitude of a change. This is important because there are people out there who claim that the whole concept of any human-caused influence on the climate is a scam. Ironically, and seemingly contradicting my claim about any physics grad student, you just quoted a physicist who apparently believes the amount of CO2 in the atmosphere does not affect global temperatures! In your post, you have simultaneously proven the relevance of my point, while also apparently disproving my assertion. Actually, I'm sure Lewis is capable of performing the calculations; he presumably is sure (why?) that effects beyond the first orders are big enough to cancel out the leading terms. I'm just at a loss. You people are nuts!

Jonlongstrider (2009-12-09 12:55:10)

Seth, how about [1]Deltoid's take. Glen Raphael, I'll have to look at the memo again, I thought it was about current temps. Hal, I would wager everyone here thinks you're talking about the other guy.

1. [http://scienceblogs.com/deltoid/2009/12/willis\\_eschenbach\\_caught\\_lying.php](http://scienceblogs.com/deltoid/2009/12/willis_eschenbach_caught_lying.php)

seth (2009-12-09 14:16:27)

Phil, can you explain why Lewis — who surely understands physics at a better-than-grad-student level — has the views he has? Not the view that warmth is good for people but the other views. You don't see a problem when you argue based on what any physics grad student can do and I give an example of a physics professor who disagrees? Ben, my "politics"? what are you talking about? I'm a member of the Green Party. I fail to see the consistency.

Phil (2009-12-09 14:54:20)

Seth asks: Phil, can you explain why Lewis — who surely understands physics at a better-than-grad-student level — has the views he has? Not the view that warmth is good for people but the other views. I reply: No. To ask me to explain why someone else has the views that they have, based on a single paragraph of nonsense...you're asking too much of me. Seth asks: You don't see a problem when you argue based on what any physics grad student can do and I give an example of a physics professor who disagrees? I reply: First, I have to correct you on a minor point. What I'm claiming that any physics grad student can do is to calculate things like: what would the earth's temperature be if it had the same albedo that it actually has, but no atmosphere? What would the earth's temperature be if the amount of CO2 were doubled but nothing else changed? This latter question is what I meant by the "first-order" problem. I see no evidence that Lewis would have any problem solving those problems. I do not think Lewis would disagree with these calculations. Perhaps he would — maybe he lost his physics chops when he retired — but I doubt it. But I think you're intended point isn't to ask about those specific calculations, it's to say "do you think there's a problem when a presumably intelligent physicist who claims familiarity with the issue disputes anthropogenic global warming?" If that's your question, then yes, I do see a problem. Two problems. But I think the problems I see are different from the one that you see. The first problem I see is that this guy is just not thinking clearly about this subject. He says that even if global warming happens as expected it will be good because fewer people will die of cold, as if that's the main expected effect. He says global temperatures are not in fact increasing, which is simply false. He says CO2 is a greenhouse gas (meaning it absorbs and re-radiates infrared radiation) but that as for trebling or quadrupling its atmospheric concentration "no one knows" if that affects temperature. These are just not reasonable statements, whether they come from a physicist or someone else. The second problem I see is that some intelligent people think these unreasonable statements are

in fact reasonable!

seth (2009-12-09 16:04:00)

Thanks, Phil. I agree, he should have avoided the question of whether more people die of cold than of heat.

seth (2009-12-09 16:17:17)

posted for Bruce Charlton: The whole Climate Change business hinges upon computer modelling: This is John Wixted of UCSD : "To think about the relationship between CO2 emissions and global warming, the most important step to take is to imagine that scientists had never invented climate models that presume to predict the future. In the absence of those models, what would you think about CO2 emissions? That's the question. The reason to drop the climate models from consideration is that models of complex systems cannot predict the future in any area of science, so climate models should not be trusted until they are uniquely shown to be able to do that. So far, the models have not passed any serious test, and the excuse given is that, in the short term, unpredictable weather variations can mask predictable long-term climate trends. In the long-term, the argument goes, the models may be shown to be right after all. But get back to me in the long term because, for now, I have no reason at all to believe that the models are accurate (and neither do you). Scientists who are infatuated with their own climate models seem to have a different view, namely, that the models should be trusted until those models are proven wrong. By definition, this cannot happen in the short term (because of unpredictable weather), so the models are protected from disconfirmation until decades go by. That's not a reasonable view because, in light of the general predictive utility of complex-system modeling, the odds are very high that the climate models are incorrect." [http://engram-backtalk.blogspot.com/search/label/Global %20Warming](http://engram-backtalk.blogspot.com/search/label/Global%20Warming) But I must admit that probably the biggest influence on me was Freeman Dyson, whom I respect hugely. Just search his name and 'climate' to get a flavour of his views.

Phil (2009-12-09 19:14:32)

Seth, you could remove the statement about deaths from cold from Lewis's statement, and it would still be nonsense for reasons I have outlined. Bruce and John: The whole "Climate Change business" does not hinge on computer modeling. Bruce or John (I can't tell who said it): Freeman Dyson was an excellent mathematician and physicist, but has always been absolutely terrible as a futurist. His main stance on climate change is that the problems won't be nearly as bad as people think because technology will allow cheap and easy adaptation — we'll genetically engineer plants to take up the CO2, or else we'll adopt special planting methods over virtually the entire surface of the earth to recapture in biomass what we are putting out through burning fossil fuels...and this will be cheap and easy and won't have negative side effects (yep, seriously. He proposes that we increase the rate of plant growth by an average of 1/10 of an inch per year over the entire surface of the earth). Dyson is, and has always been, a technological optimist to an almost incredible degree. For instance, he thought in the 1950s that we would land people on Mars by the mid-60s (using nuclear-powered spacecraft), and that we would send people to the outer solar system by the 1970s. Please allow me to revel in the irony of someone who says not to trust predictions of complex systems, especially if they don't have a track record of success...but then cites the authority of a man with a 60-year track record of failure who predicts the progress of technology far into the future and, on that basis, claims that adapting to climate change is going to be a piece of cake.

Stephen M (Ethesis) (2009-12-09 20:05:23)

Ah, but the issue is that it turns out that the tree ring data and the raw (unmodified) temperature data are the same.

seth (2009-12-09 20:46:35)

Phil, you are misstating Dyson's position. A big reason for his skepticism is his distrust of climate models. (Which I share.) That has nothing to do with technological optimism. See this interview, for example: <http://www.e360.yale.edu/content/feature-.msp?id=2151>

Ted (2009-12-09 23:17:41)

Ben, put up or shut up. How about some facts, not vague attacks on the messenger.



Scot (2009-12-10 13:56:27)

First, the dialogue is tremendously useful. Second, I looked at the "fiddling with data reference" <http://wattsupwiththat.com/2009/12/08/the-smoking-gun-at-darwin-zero/> Seth referred to above and think wonder three things: 1) How much more time do I need to figure out what the author is doing? 2) What are the confidence intervals around the 1-2 degree anomalies? 3) If he had to work that hard to find an anomaly, what is the likelihood this represents the work of a conspiracy to fool the planet into believing the planet is heating when it isn't? Cui bono?

Phil (2009-12-10 16:06:45)

Seth, that Freeman Dyson article at <http://www.e360.yale.edu/content/feature .msp?id=2151> is a really good one, when it comes to seeing why people shouldn't put a whole lot of weight on Dyson's beliefs on this! He says himself, "it is definitely a tactical mistake to use somebody like me for that job, because I am so easily shot down. I'd much rather the job would be done by somebody who is young and a real expert. But unfortunately, those people don't come forward." I also don't think I've mischaracterized Dyson's views. That particular article doesn't emphasize his technological optimism. He doesn't say global warming isn't happening — indeed, he specifically says that it is: "No doubt that warming is happening. I don't think it is correct to say "œglobal," but certainly warming is happening. I have been to Greenland a year ago and saw it for myself. And that's where the warming is most extreme. And it's spectacular, no doubt about it. And glaciers are shrinking and so on." Dyson does say in that interview that he doesn't think most of this is due to anthropogenic effects, a claim I hadn't previously seen. It's an odd claim, not exactly contradicting other things he has said, but close: he has said "Everyone agrees that the increasing abundance of carbon dioxide in the atmosphere has two important consequences, first a change in the physics of radiation transport in the atmosphere, and second a change in the biology of plants on the ground and in the ocean." Check out the long article by Dyson at <http://www.nybooks.com/articles/21494> Among other things, he says "I consider it likely that we shall have "genetically engineered carbon-eating trees" within twenty years, and almost certainly within fifty years. Carbon-eating trees could convert most of the carbon that they absorb from the atmosphere into some chemically stable form and bury it underground. Or they could convert the carbon into liquid fuels and other useful chemicals. Biotechnology is enormously powerful, capable of burying or transforming any molecule of carbon dioxide that comes into its grasp." Or, check out the article he wrote at [http://www.edge.org/3rd \\_culture/dysonf07/dysonf07 \\_index.html](http://www.edge.org/3rd _culture/dysonf07/dysonf07 _index.html) in which he says "If we use genetic engineering to put more biomass into roots, we can probably achieve much more rapid growth of topsoil. I conclude from this calculation that the problem of carbon dioxide in the atmosphere is a problem of land management, not a problem of meteorology." In all of Dyson's publications, he emphasizes that (1) he is not an expert on climate change and does not intend to become one, (2) the climate is changing, and particularly the colder parts of the earth are warming, and (3) even major climate change will not be harmful. In the two that I cited, he also mentions using biotechnology to remove carbon dioxide from the air. I definitely agree with Dyson about item (1), above!

Sean Estey (2009-12-10 22:27:45)

Quick response to Scot on question (3): I would say the likelihood of conspiracy is close to 0 %. Cui bono? No one, because no one need benefit. Conspiracies are unnecessary to explain massive consensus based on questionable evidence. Exhibit A, I give you world religion.

Ben Hyde (2009-12-14 08:36:30)

Ted - I think you can find more productive ways to cheer on those in your tribe than trying to bait me. Seth - My impression from reading your work and postings is that you are an enthusiastic believer in the power of individuals to do good and you are deeply suspicious, concerned, and dismissive of the power of institutions to do good. I think that's a deep and fundamental part of your world view. Would you dispute that?

seth (2009-12-16 07:19:07)

Ben, yes, I dispute that. Some institutions work well, some don't. I have often praised Spy magazine, for example. That was an institution. I'm a member of Slow Food – another institution. I've praised printed books for their power to teach cheaply – although written by individuals, they are published by publishing companies, which are institutions. I've praised CureTogether.com – yet another institution.

Ben Hyde (2009-12-20 08:33:36)

Seth, embrace who you are. You have spent your entire life being a gadfly, a contrarian, and doubter. You've been marvelously successful at that. But to claim that you are not pro-institutional, be real! Your examples prove my point. Spy magazine, green party snort. But we are getting pulled away from the topic at hand. My point was and is that for you to join the consensus that we have sufficient confidence about the source and the likely consequences of global warming at this point to spin up a vast and coordinated response would demand not once by twice that you create some allegiance to really vast institutions. One the side of the consensus about sources you'd have to join assent to agree with institutional science in a way that you've spent most of your life being a contrarian about. And to support the vast response we need to spin up you'd have to work, or at least allow that it's possible, to make the institutions that coordinate those responses functional. Both these are deeply hard given where your political center of mass is. I am not, by choice, arguing about the merits of the contrarian arguments around the global warming consensus. Though I consider them broadly wrong. I am highlighting that like the majority of those who take them seriously your engagement with them runs true to your politics in ways that create what I consider an unfortunate synergy. You all have recently gotten all into trying to play the group think card, a move that suffers a tad from projection.

Ben Hyde (2009-12-20 08:34:43)

opps, "not pro institutional" -> "pro-institutional"

Links « Rhymes With Cars & Girls (2009-12-30 15:52:39)

[...] Seth Roberts points out that physicists disagree about climate change. [...]

## **The Most Promising Solutions to the Allergy Epidemic (2009-12-09 07:44)**

At a charity dinner in New York City to benefit the Food Allergy Institute, [1]the president of the Institute told the guests that

Several promising treatments [were] in the works, including a Chinese herbal therapy being developed by the prominent allergist Dr. Hugh Sampson of Mt. Sinai (ready as soon as 2011) and a parasite "similar to those found in the stomachs of most citizens in developing countries," which could someday be introduced into imperiled Upper East Side intestines, the theory being that "in the developed world, we live in too clean of an environment, so our immune system has nothing familiar to attack."

[2]Gatekeeper syndrome. How dare they not read this blog!

1. <http://www.observer.com/2009/culture/get-me-epi-pen-upper-crust-snuffs-out-food-allergies-big-ball>

2. <http://www.blog.sethroberts.net/2009/11/17/gatekeeper-syndrome/>

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Matt (2009-12-09 09:17:29)

Hey Seth, can you do a post on eczema? If you haven't done experiments on it, maybe your readers have? I've done some self experimentation, but the only thing that really clears it for a few days is swimming in the ocean. Supplementing with Omega 3 flaxseed oil helps a little, bit but not much. All the doctors tell me the same thing - apply steroid cream. Googling for info on this topic pulls up a lot of spam/snake oils. I'm hoping maybe there is an easy solution, like your foot fungus cure. Thanks!

Aaron Blaisdell (2009-12-09 10:59:14)

@Matt, Have you tried really upping your saturated fat intake? Coconut oil is an excellent source. Try increasing the fats in your diet to 50 %, most of that coming from saturated and omega-3 PUFA. Also try eliminating all grains for a month, in particular the ones with gluten, such as wheat. Check out <http://www.paleonu.com/get-started/>.

Jaroslav (2009-12-09 14:21:22)

Eliminating all grains (or at least all gluten grains) may require far more then just a month to get results. I went grain free 13 months ago and it took about 9 months (August this year) for my allergies and asthma to disappear. For people with damaged guts it may take even longer.

Anthony (2009-12-09 16:27:34)

OT, interested in any thoughts on this presentation on sugar: <http://www.youtube.com/watch?v=dBnniua6-oM>

seth (2009-12-09 20:54:42)

Matt, I've done about four posts on eczema. Search this blog (search box is in right side column) for "eczema". Anthony, sorry in China I can barely get YouTube.

Hatcher (2009-12-10 05:18:40)

I read in a book recently that they planted a harmless parasitic worm (I think they said that pig farmers often have it from working with pigs, so they knew it was harmless) in 30 or so patients with Crohn's disease, and about 20 of them saw their symptoms go away.

Paola Bressan (2009-12-10 10:55:31)

Just published online (free full text): "Early origins of inflammation: microbial exposures in infancy predict lower levels of C-reactive protein in adulthood" <http://rspb.royalsocietypublishing.org/content/early/2009/12/08/rspb.2009.1795.abstract>

Cyan (2009-12-15 14:20:49)

@Hatcher Parasites are harmful by definition. If the worm was truly harmless, then it should be termed "commensal".

## **Acidophilus Pearls versus Fermented Food (2009-12-09 20:56)**

I hear a voice: "Okay, you've convinced me, I need to eat more bacteria. How should I do it?" Well, Tim Beneke writes:

I want to revise [1]my comments of a few months ago on probiotics and breathing through my nose. The probiotic pills by themselves do not enable me to breath better though my nose, even if I take 2x the dose they recommend. However, if I eat a lot of miso, yogurt, tempeh etc., I can breathe better through my nose within a day or 2. Previously, when I ate a lot of yogurt etc. for a couple of weeks, and then just went on the probiotic pills, it seemed as if the pills were enough, but after a week or so of just doing the probiotic pills, the stuffed nose came back. Then just doing yogurt and miso, my stuffed nose went away.

The probiotic pills are called [2]Acidophilus Pearls, said to have one billion CFU [colony-forming units] of lactobacillus acidophilus and bifidobacterium longum per capsule; I got zero noticeable effect taking 2 of them a day while eating virtually no probiotic food.

Doing 16 oz of yogurt/day plus one 480 ml bottle/day of kombucha, while consuming none of the Pearls enabled me to breathe much better through my nose within a day or 2.

1. <http://www.blog.sethroberts.net/2009/09/04/this-blog-reduces-sinus-congestion-continued/>
2. <http://www.enzymatictherapy.com/pearlslife/>

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Mike Kenny (2009-12-09 22:26:07)

I haven't tried regularly eating fermented foods, but I did quit putting Splenda in my coffee after reading about how it seems to have been killing off bacteria in the guts of rats, so I can see if anything new happens to me off Splenda.

Nathan Myers (2009-12-09 23:03:31)

Just as another data point, when I eat more than 10 oz. of yogurt in a day, my nose gets substantially blocked, in typical allergic response. Cow yogurt, goat yogurt, makes no difference. (I've been using Trader Joe's's "European Style" and "Goat", plain, served with fruit.) The response is different from orange, which clogs my throat too, and from cranberry, which does neither but raises tiny blisters on the backs of my hands and neck, and also from onion, which raises large blisters in my nose and sinuses. I haven't found any medical doctor who knew a name for the latter symptoms.

Aaron Blaisdell (2009-12-10 11:16:48)

@Nathan, Too bad to hear about your extensive food allergies. Are you able to tolerate sauerkraut and other pickled vegetables like kimchi? If so, you should give those probiotics a try.

Pantagruel (2009-12-10 13:33:23)

I was wondering about the relative effects of pills vs the real stuff. I recently started having yogurt, kombucha, and kefir daily and have felt much better (due to this blog, thanks seth). I do have a question about pasteurized vs non- kombucha. If it's pasteurized does it lose the benefits? I'm also trying to figure out if Carpe Diem brand is pasteurized, as it is the easiest for me to get. I can't find the info definitively anywhere and they do not address the issue on the company's website (as well as not answering my query I submitted to them.)

Nathan Myers (2009-12-10 13:58:33)

So far I just eat less yogurt, and more cheese. Cheese doesn't cause me any difficulty. I mentioned it here because it's clearly not the dairy causing the allergic reaction, but the *Acidophilus*. Bacterial exposure is manifestly not anything approaching a panacea.

Socktopi (2009-12-13 15:22:39)

After starting a new prescription med about 2 years ago, one of the side effects was that my appetite was drastically reduced, and when I did eat, I would have a mild upset stomach and a general ill feeling like mild car sickness. I already often ate soy yogurt and kombucha, but not on a daily basis. Just reading your blog gave me an appetite for more and I started to consciously include lots of fermented foods in my diet. I tried milk kefir even though I'm vegan (didn't like the taste). I likewise bought a cup of icelandic cow yogurt and goat yogurt at Whole Foods (these tasted good). I bought a case of Kombucha on sale for \$1.50 per bottle, and I started loading up on soy yogurt at the grocery outlet. Heavy consumption of soy yogurt and kombucha showed some minor improvements in my digestion. But I like the way they tasted, anyway, so I wasn't too worried that they didn't cure me. A couple months ago I started using a fermented oat/juice drink called "Good Belly" - I think this improved my indigestion and appetite more than the yogurt/kombucha. After reading about Tim's perceived success with pills, (which I had considered purchasing before, but had always chickened out over the price) I decided to spend the money and bought the cheapest kind. These really worked the best, as far as I can tell. Since my condition was digestional, instead of nasal, it makes some sense that a delayed release pill to get past my stomach might succeed in repopulating my tract with good bacteria. I took the pills daily for 2 weeks and this seems to have finished my indigestion permanently. Now i take one of the remaining pills when I remember, but it seems that after 2 years on stomach ailments, the pills permanently cured it (with the help of all the other fermented foods) So while the pills may not contribute the allergy-symptom-fighting benefits of other probiotics, in my case I think they were an effective tool against my indigestion.

Socktopi (2009-12-13 15:35:01)

I should clarify: The intermittent use of Good Belly and the regimen of pills both started this summer, and that's when I noticed the most improvement, even after I stopped taking both.

Tom (2010-05-22 23:33:05)

Socktopi - thanks for your input. I'm coming from a background of digestion problems, and it is so inspiring to hear success stories like yours! Thank you so much, Best wishes!

## **Will Sea Levels Rise? (2009-12-11 07:27)**

This is from [1]The London Telegraph several months ago:

If one thing more than any other is used to justify proposals that the world must spend tens of trillions of dollars on combating global warming, it is the belief that we face a disastrous rise in sea levels. The Antarctic and Greenland ice caps will melt, we are told, warming oceans will expand, and the result will be catastrophe.

Although the UN's Intergovernmental Panel on Climate Change (IPCC) only predicts a sea level rise of 59cm (17 inches) by 2100, Al Gore in his Oscar-winning film *An Inconvenient Truth* went much further, talking of 20 feet, and showing computer graphics of cities such as Shanghai and San Francisco half under water.

But someone who actually measures sea levels thinks otherwise:

The reason why Dr Mårner, formerly a Stockholm professor, is so certain that these claims about sea level rise are 100 per cent wrong is that they are all based on computer model predictions, whereas his findings are based on "going into the field to observe what is actually happening in the real world".

When running the International Commission on Sea Level Change, he launched a special project on the Maldives, whose leaders have for 20 years been calling for vast sums of international aid to stave off disaster. Six times he and his expert team visited the islands, to confirm that the sea has not risen for half a century. Before announcing his findings, he offered to show the inhabitants a film explaining why they had nothing to worry about. The government refused to let it be shown.

Haha!

1. <http://www.telegraph.co.uk/comment/columnists/christopherbooker/5067351/Rise-of-sea-levels-is-the-greatest-lie-ever-told.html>

Vince (2009-12-11 11:17:05)

Do you think that Morner is the only person who measures sea levels, or that the IPCC didn't bother including anyone who measures sea levels? The commission that Morner served on was a commission of the International Union for Quaternary Research (INQUA), and according to the [1]President of INQUA most of its members disagree with Morner on climate change. [2]Here is a NASA map of recent sea level changes, which suggests that Morner is correct about the lack of recent sea level rise *in Maldives* (which is in the bluish-green area below India), but not about the broader pattern. You can click through to the NASA page or the Wikipedia article for more information about it.

1. [http://www.peoplesvoice.ca/articleprint36/10%29\\_SCIENCE\\_UNDER\\_FIRE\\_ON\\_EARTH\\_DAY\\_2009.html](http://www.peoplesvoice.ca/articleprint36/10%29_SCIENCE_UNDER_FIRE_ON_EARTH_DAY_2009.html)

2. [http://en.wikipedia.org/wiki/File:NASA\\_sea\\_level\\_change\\_trend.jpg](http://en.wikipedia.org/wiki/File:NASA_sea_level_change_trend.jpg)

Vince (2009-12-11 11:41:06)

My mistake - it looks like he's [1]wrong about Maldives too.

1. [http://scienceblogs.com/deltoid/2008/11/the\\_australians\\_war\\_on\\_science\\_24.php](http://scienceblogs.com/deltoid/2008/11/the_australians_war_on_science_24.php)

pat (2009-12-11 14:46:08)

this whole supposed "scandal" thing sounds like just so much swiftboating or the so-called Dan Rather ratfuck to me.

Jonathan (2009-12-11 18:35:14)

Gore was not speaking of the same time frame as the IPCC - he said that sea levels would rise 20 feet if a big portion of Greenland melted. The quote of him by the newspaper (and its republication here) are shoddy and irresponsible.

Alex Chernavsky (2009-12-11 20:36:32)

Psychologist Stanton Peele (an expert on addiction) has an interesting take on climategate and related issues: <http://www.psychologytoday.com/blog/addiction-in-society/200912/climate-gate-e-mails-science-and-psychology-usual>

Nathan Myers (2009-12-11 20:43:39)

*Alarmists* insist the sun will "go down", bringing "the dark", but the glare from my window has been overwhelming all afternoon. Everyone acknowledges that the IPCC report does not take into account increased lubrication under glaciers caused by melting, which has been observed to speed up their slide into the sea. It is therefore a strict lower bound on expected increased sea level. Here's a graph of reliable satellite data on sea levels: [http://scienceblogs.com/deltoid/2009/11/copenhagen\\_diagnosis.php](http://scienceblogs.com/deltoid/2009/11/copenhagen_diagnosis.php) Seth, you are really disappointing me.

Dennis Mangan (2009-12-11 21:26:41)

Al Gore as a whole is pretty shoddy and irresponsible.

Patrik (2009-12-13 22:59:09)

@Seth I am enjoying your take on ClimateGate. Have you seen this blog post? Very reasonable and provides some great perspective. I think the "zooming" out of the temp data make for a strong narrative. <http://www.foresight.org/nanodot/?p=3553>

Ted (2009-12-16 08:55:53)

Mass Psychosis of the empowered "elites". Why is Seth "disappointing" - he's never, ever follows the consensus (especially ones unbacked by data), he knows that academia is full of self-important defenders of a self-serving status quo.

## **Not Being Your Own Doctor Can Be Dangerous (2009-12-12 05:21)**

A friend of mine had a kidney stone. He got rid of it via Chinese herbs and yoga. After the kidney stone passed, a prostate infection went away. Here's what he saved himself from by solving the problem himself:

1) A CAT scan. This particular scan would have been the equivalent of 18 years worth of (background) radiation (according to the FDA web site), all in 45 min or an hour. Also, I would have had to take an iodine contrast material. This latter is (a) at least mildly nephrotoxic in healthy people (and I was already having kidney problems) and (b) accumulates in the thyroid and, being radio-opaque, causes deposition of larger amounts of x-radiation energy into the thyroid. This latter is being blamed in the medical literature for the explosion in thyroid cancer rates over the last few years. (Apparently they have had this problem before, prior to the advent of CT's, when iodine was used as contrast, and then multiple x-rays were taken.) I also learned that in Europe, there are controls with regard to how much x-ray a person can be exposed to. This means that they do not do these extensive CT's, but employ MRI's instead. The latter are not just less dangerous, but also much better diagnostic tools; but they are more expensive. As a result the US health insurance companies refuse to pay for them.

(2) Taking Cipro, which is what I had been given after the first round of antibiotics failed to work (leaving me a second positive urine test). Cipro was the antibiotic given to the postal workers as a prophylaxis, when the scare about anthrax in the mail was going on. Were it not for the fact that they were all given the same thing, all started having the same symptoms, and then all started talking to each other, we would probably have never had the massive class-action law suits that forced the FDA to put a "black box" warning on this drug. How bad could an antibiotic be? Well, it seems that some people are having their tendons release from the bone, often the Achilles tendon, sometimes within 24 hours of starting the drug. And that is only what the FDA is now admitting to. On the web, you find that the really serious problems are neurological. Lots of what were very high functioning people are reporting on the web very similar effects.

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Ralph (2009-12-12 08:00:54)

Not understanding the Post hoc ergo propter hoc fallacy is even more dangerous. I'll stick with the science for now.

Tom in TX (2009-12-12 10:13:51)

Do you know what herbs he used?

Alex C. (2009-12-12 13:15:00)

Yes, but being your own doctor can be dangerous, too. Here's an interesting article from the *Los Angeles Times* about people who erroneously think they've found a cure (or at least a treatment) for autism: <http://www.latimes.com/features/health/I-a-he-autism-parents7-2009dec07,0,7076900.story> Allergies, fungal infections, kidney stones – these things come and go, or fluctuate in severity. Given the noise in the signal, and an "N" of 1, how is one to know that changing socks, or eating kim chee, or what-have-you is the reason for any improvement that one sees? I'd like to hear Seth's thoughts about this.

seth (2009-12-12 13:24:49)

Ralph, my point isn't what he did to get rid of a kidney stone. As you say it's hard to tell. My point is that, at least in this case, the conventional medical treatments he was offered had big costs that many people don't know about. Tom, no I don't know what herbs he used. He believes it's more likely that the yoga was what did it.

Greg Conen (2009-12-13 07:45:29)

I agree that doing your own research and taking responsibility for your healthcare is important, but this is a particularly bad example. Kidney stones have significantly different courses depending on type and size, so comparing two cases is difficult. Avoiding unnecessary CT scans is good, but make the diagnostic alternatives clear. Using, e.g. an simple x-ray (about 1/50 the radiation) and/or ultrasound. Simply leaving it undiagnosed is bad, since it shares symptoms with other conditions (like

bladder cancer) which do need treatment. And the Chinese herbs need to be vetted, just like any other treatment medicine.

seth (2009-12-13 20:40:50)

Greg, yeah, avoiding unnecessary CT scans is pretty obvious. It's far less obvious how dangerous Cipro is. And the increase in thyroid cancer and the possibility it is caused by the iodine used in those scans is likewise an important new piece of info.

Stephen M (Ethesis) (2009-12-14 05:41:39)

Wow, I had no idea Cipro was so dangerous.

Greg Conen (2009-12-14 11:01:35)

My point is that owning your health care often means different conventional treatments, rather than none. X-ray, ultrasound, or MRI instead of CT. Using antibiotics other than (fluoro)quinolones where possible. (Actually, I'm confused why a kidney stone was treated with antibiotics at all. Even if it's associated with infection, usually getting it out is the key treatment) A healthy lifestyle is the first step, of course, but Chinese herbs and yoga is a poor summary of "being your own doctor".

seth (2009-12-14 14:39:12)

Why were antibiotics involved? Because of a prostate infection that wouldn't go away. It went away soon after he got rid of the kidney stone.

Cynthia (2009-12-16 07:06:09)

An FDA advisory panel just recommended that the warning for Covidien's Optimark and GE's Omniscan drugs in the family of medications known as gadolinium-based contrast agents (DBCAs) be updated to restrict their use in patients with severe kidney disease because of the potential for an increased risk of nephrogenic systemic fibrosis (NSF). NSF causes thickening of the skin and organs. DBCAs carry a strong "black box" warning. This site has good information on this issue: <http://www.gadolinium-mri.com/index.html>

naman (2009-12-21 05:42:41)

Agree with Greg - being your own advocate is not bad advice. But your claims on what was saved are exaggerated or false: 1) many stones will pass w/o treatment, some may not 2) you would do an ultrasound, not a CT first, for suspected kidney stones 3) tetracyclines or trimethoprim-sulfamethoxazole are also commonly prescribed in addition to cipro (which by and large has a good safety record).

## Two Types of Yogurt (2009-12-13 07:18)

After making yogurt a hundred times, and reading a lot about it, I finally realized there are two types. The mild sort (incubated maybe 12 hours) is good by itself, with fruit or nuts for texture and flavor. The strong sort (incubated maybe 24 hours) is a good condiment. Mild yogurt is a poor condiment, strong yogurt is poor by itself.

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Ben Hyde (2009-12-13 18:09:17)

My containers of yogurt spend about 3 hours in the water bath; which is close to 130F to begin. So: 14 cups of milk in double boiler to 190F, water bath to drop to 130F, add about a cup of cold yogurt to the hot milk, mix, pour into containers, into the 130F bath. 3 hrs later into the fridge. I guess you could say it's mild; my family says they like that. The bath often is as low as 110



when I start. I use a picnic cooler for the hot water bath.

### **Interview with Seth Roberts (2009-12-13 23:14)**

[1]Justin Wehr asked me some interview questions and decided not to publish my answers. I thought they were good questions. Here they are, reworded slightly, and my answers.

QUESTION Of the experimental treatments you have studied, which ones have the most positive effect on your life?

ANSWER From more to less effect:

- Effect of morning faces on mood
- Effect of fermented food on health
- (tie) Effect of animal fat on health
- (tie) Effect of omega-3 on health
- Weight-control experiments.

QUESTION What about everyone else?

ANSWERÂ It depends on how far in the future you look. The morning faces stuff is the most important, I'm sure, but it's also the hardest to implement. The fermented food stuff is easy to implement. It's easy to eat more yogurt. So I believe that in the short term, the fermented foods stuff will have the most effect on others, in the long term, the faces stuff.

QUESTION Much of your research is related to the idea that we get sick because we live differently now than long ago. Can you explain this? Are there exceptions?

ANSWER Our genes were shaped to work well in one environment. Now our environment is quite different. All sorts of things go wrong – we don't eat an optimal diet, for example – and our bodies malfunction in all sorts of ways. The exception is that once we know what an optimal diet (or environment) is we can assure it. For example, we can make sure we get the optimal amount of Vitamin C. The health problems caused by progress can be fixed, in other words, and we can emerge in better shape than ever before.

QUESTION How much time a day do you spend on self-experimentation?

ANSWER About ten minutes. Measuring various things, such as blood pressure and brain function.

QUESTION Why do few people self-experiment?

ANSWER Millions of people self-experiment. For example, millions of fat people try many different ways to lose weight. Professional scientists (e.g., med-school professors) do not self-experiment, at least publicly, because it is low-status,

because it is frowned upon (by their colleagues), because it might be hard to publish the results, and because it won't help them get grants.

QUESTION How do you determine an appropriate dosage for treatments that might have a good effect on what you measure but a bad effect on other things? For example, maybe animal fat is good for sleep but bad for other things.

ANSWER I don't worry about it. Just as all electric appliances are designed to use the same house current, I'm sure all parts of our body are designed to work best with the same diet.

QUESTION Could advances in medical technologies (such as regenerative medicine) replace the need to live healthily? For example, if we could easily replace livers, maybe people could drink more.

ANSWER Not likely. Except that the more we know about nutrition the more we can replace our ancestors' diet with a diet made up of the necessary nutrients. For example, I drink flaxseed oil to get omega-3. I'm sure our long-ago ancestors got omega-3 in other ways. So I no longer need to be like them. Basic nutrition isn't medical technology, but it is a way in which it is easier to be healthy.

QUESTION What don't you know, but wish you did?

ANSWER How to make book-writing as addictive as Wii Tennis.

1. <http://wehrintheworld.blogspot.com/>

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epistemocrat (2009-12-14 01:06:44)

Good questions and answers, indeed. The last answer made me laugh.

Andrew Gelman (2009-12-14 02:20:48)

Seth: I'm glad you posted this. I find it so irritating when people interview me and then don't use the interview or don't even thank me for my time. It makes perfect sense—I run lots of regressions but don't use most of them, so, similarly, an interview can gather lots of information and publish only some of it. Still, it's annoying.

Justin Wehr (2009-12-14 08:12:01)

Thanks, Seth. I like the re-phrasings, and glad you added some bulk to your answers. I will link to this later, but probably better on your blog anyway – your readers will appreciate this more than mine. I would still really like to see you develop the first two questions. \*How much\* do they improve your life and potentially other people's lives? Thanks again.

Caleb (2009-12-20 08:48:11)

We really need a website who's *raison d'être* is to organize and provide links to online videos appropriate for morning face viewing. I have a "Face Videos" folder on my desktop in which I try and keep a queue of such downloaded videos, but it's often in danger of running out. Seriously, someone with web skills should start this up; once the layout was up most of the linked content could be user submitted. Have you experimented using video with two faces? I've started using such videos, and have

noticed a much stronger effect than using a mirror or a video with a single speaker. Bloggingheads.tv contains a ton of these type of videos, with two bloggers recording an hour long dialogue they have with their webcams. On my 24 inch monitor, the heads seem to come out just about the right size when I put the video on full screen. My theory on why it works so much better is that it simulates rich social interaction much better, with a back and forth conversation to follow, and the monitoring of how facial expressions are changing in reaction to what's being said, engaging a lot more of the brain than when I view just one face.

seth (2009-12-20 09:01:22)

No I haven't tried videos with 2 faces. That's fascinating that you get a stronger effect. I think two faces is more likely to resemble the ancestral situation. I doubt people just talked to one person at a time. I imagine a few people got together and talked – about their dreams, for example.

q (2009-12-21 19:23:19)

have you tried laughter yoga?

### **How I Write Letters of Recommendation (2009-12-15 01:49)**

As all professors know, it is letter-of-recommendation-writing season. I write them differently than anyone else I know. I meet with the student and write the letter during our meeting. I ask questions, type, ask questions, type, etc. The student inevitably remembers details of the class and how well they did better than I do. I ask questions that try to elicit the strengths of their case – about relevant experience, for example. Anything I find convincing I put in the letter. Sure, maybe they described the same stuff in their statement of purpose but I'm sure I can do a better job – professor to professor – than they can. (Statements of purpose are usually badly written.) I speak professorese, they don't.

I like to think it's win-win-win. It's good for me because the letter is written quickly, easily, on time, and with good content. It's the strongest possible truthful letter I could write – so I feel I'm doing my job. It's good for the student because I make their case in the best possible way. It's good for whoever reads the letter because it's factual and well-argued. I don't just say the student is this or that; I give examples. Most letters of recommendation do not give examples. Without examples, I ignore them.

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Ethan Fosse (2009-12-15 06:52:17)

Wow, great idea. Much better than playing email tag or trying to read the tea leaves from a student's CV.

david (2009-12-15 12:43:15)

Yeah, your approach is much better in every way. I had well-meaning professors who misremembered details of my situation. I have to assume that if your letter of recommendation contains details that obviously don't apply to you, it does more harm than good.

Aaron Blaisdell (2009-12-15 16:14:01)

That's great, Seth. Have you encountered a situation where you thought the letter should showcase the student's weaknesses? That is, have you had a student in your office while writing a letter and realize that he or she did not do so well, was lacking in important skills or attributes, etc.? Or do you screen out those you wouldn't write a good letter for prior to the office visit?

And what if you don't know the student very well (e.g., in a class of 100 or 300) and all you have is what you see in your office, not anything about their prior performance in the course?

seth (2009-12-15 17:36:40)

Aaron, no, I haven't encountered a case where I thought the letter should showcase the student's weaknesses. If I don't think a positive letter would be appropriate, I decline to write one. There's always some prior performance in my class.

Sarosh Motivala (2009-12-17 00:53:13)

You described a great approach; what I like the most is how upfront it is. I will start doing this for my students as well! Thanks!

### **The Wisdom of Tsinghua Freshmen (2009-12-17 06:01)**

This semester at Tsinghua University – the most selective college in China – I taught a freshman seminar about recent psychology research. Three weeks ago I gave my students a choice of five articles from *Psychological Science*, all published in 2008. They were to read one of them and comment.

Mostly I try [1]to teach appreciation but three weeks ago we focused on how articles could be improved. I have never tried to teach this, yet the students made some very good points. Here are some of their comments:

1. [2]This article said that we believe women make better leaders when there is within-group conflict and that men make better leaders when there is between-group conflict. One student pointed out that Rwanda was a good example. After the genocide (within-group conflict), [3]far more women were elected to office.

2. [4]This article studied the effect of cleanliness on moral judgments. One experiment compared two groups: subjects in one group had recently washed their hands, subjects in the other group had not. Before the time when the handwashing happened, both groups saw unpleasant scenes from a movie. Students pointed out an important confounding not mentioned in the article: The two groups differed not only in handwashing but also in the time from movie to test (because handwashing took time). Perhaps subjects who washed their hands remembered the movie less well.

3. The name-letter effect is a tendency to favor outcomes (broadly defined) that involve the first letter of your name. [5]This study involved Belgium workers. The authors found that workers were more likely to be employed by a company whose first letter matched the first letter of their name. The correlation was small but reliable. Two students pointed out that this might reflect the company's choice of whom to hire rather than the employee's choice of where to work. One student pointed out that the correlation might be due to name-place correlations across Belgium. Perhaps certain regions favor certain names for both people and companies. As you move closer to the French border, perhaps French names become more common among both people and companies.

In all of these cases, had I been the editor, I would have required the authors to change their article appropriately.

James Surowiecki's *The Wisdom of Crowds* described cases where averages of estimates made by non-experts did very well, sometimes out-performing experts. These three examples don't involve numerical judgments nor averaging, but they do show non-experts (freshmen) doing better than experts (journal editors and reviewers) in certain ways. Each paper was read by about eight students.

More It isn't easy to convey how impressed I was. The comments about Rwanda and about name localization certainly deserve a letter to the editor (if *Psychological Science* published them).Â Both of them are sophisticated methodological comments. The Rwandan one says that after you write an experimental article, try to find out ifÂ real-world

events support your findings. That may be a helpful lesson in many cases. The name localization one suggests that psychologists who use survey data should be learning more about how to analyze survey data. Several other times my students surprised me with how good their comments were. One was during a discussion of possible reasons for the Holocaust, another was about why women in ancient China bound their feet, a third involved proposals for Mindless-Eating-type experiments.

1. <http://www.blog.sethroberts.net/2008/12/12/whats-appreciative-thinking/>
2. <http://www3.interscience.wiley.com/journal/121433735/abstract>
3. <http://www.womensenews.org/story/the-world/080920/rwanda-women-gain-seats-world-leaders-fall-short>
4. <http://www3.interscience.wiley.com/journal/121570651/abstract>
5. <http://www3.interscience.wiley.com/journal/121501578/abstract>

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Aaron Blaisdell (2009-12-17 07:53:56)

Seth, while your post is interesting, it seems to be based on the assumption that the "experts", that is journal editor and reviewers, would catch all of the major criticisms or flaws of the manuscript during the review phase. This is not a safe assumption. I've recognized from early in my career that if you give a draft of a manuscript to 12 people, you will get back 12 sets of partially overlapping sets of comments and criticisms. Sure there are a lot of common things picked up by the majority of reviewers, but each reviewer will invariably catch one or two flaws or see a potential confounding factor or account that all the others hadn't. It's like writing computer code. No matter how many programmers work on a piece of software, it will never be completely bug-free.

Andrew Gelman (2009-12-17 09:16:36)

Seth: Setting aside questions about expert reviewers, etc., I just want to say that you must be doing something right if you're getting these sorts of comments. I wonder if it helped that you had them do "appreciation" before you had them do "criticism." Perhaps it also helped that they are psychology students, so they're motivated to understand psychology literature. When I've assigned articles for undergraduates to read and comment on in statistics classes, I don't generally get such good comments.

Robin Barooah (2009-12-17 13:35:48)

Have you considered the possibility that the students were much more motivated to pay close attention than journal reviewers generally are? The students were doing this as a one time exercise, with the very immediate rewards of engagement with their peers, and with you, an encouraging professor whom they presumably respect. Furthermore, you were listening to and respecting them for their criticism of published papers, something I suspect is not a consistent experience. For journal reviewers, on the other hand, the task has presumably become 'work', and it seems likely that many individual papers simply won't be of engaging interest to them. There is little immediate social reward for playing 'the game' of catching faults, and indeed doing so may carry some costs in terms of increased administration. I don't mean to suggest that journal reviewers are not taking their role seriously or professionally. I am just pointing out that it may sometimes be the scientific equivalent of 'guard duty', and that to maintain a consistent level of attention to each paper could be very challenging compared to someone who is doing it for the first time.

seth (2009-12-17 14:01:11)

Aaron, I wouldn't say that I expect reviewers and editors to notice all ways an article could be improved – just that they didn't notice these particular ways. But you have a point: Perhaps the editors and reviewers picked up various problems that the students would have missed. Still, I was surprised how good their critiques were. That's what I was trying to say here. Andrew, thanks. You might be right about the subject-matter match (psychology students reading psychology articles). I never gave this assignment in Berkeley so I can't directly compare – but I would have been surprised if more than maybe 10 % of my Berkeley

students made comments like this. Robin, you're probably right. Although the articles were not in their native language, the students were quite motivated to understand them and make comments that would interest me. I am a tough grader. They couldn't get the highest possible grade unless they told me something I didn't know.

### **Review of Other Diets (2009-12-17 15:37)**

[1]This comment by goblyn on the Shangri-La Diet forums made me laugh:

When you're on Atkins it gets harder when you start wanting to sell your first born for a piece of bread.Â On Weight Watchers you'd kill for a pizza.Â On South Beach you'd sleep with Donald Trump for an order of buffalo wings.Â On the cabbage soup diet, you'd willingly chop off your hands if you could eat something...anything...other than cabbage soup.Â On SLD it gets harder when you are suddenly only losing 1 lb a week rather than 4.

So well written! The comment continues, in very gratifying way:

It's harder when you effortlessly eat 1400 calories a day and don't feel deprived.Â It's harder when you have to buy a whole new wardrobe.Â It's harder when you're out with friends and they all think you're anorexic because you get stuffed from the bread they served before the meal...Â But there's rarely a moment when it's actually HARD.Â SLD is easy.Â Yes the weight loss slows down, yes the AS [appetite suppression] gets less noticeable, but at no point does it stop working.Â You won't suddenly find your weight skyrocketing from eating a piece of celery.

1. <http://boards.sethroberts.net/index.php?topic=7404.msg94655#msg94655>

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### **The New Yorker Reading List (2009-12-17 17:51)**

For the first time, the New Yorker website contains comments by all of their contributors [1]about the best books they read last year. It's a great idea. I'll be studying it for a long time. I was most immediately persuaded to read *The Evolution of Calpurnia Tate* by Jacqueline Kelly (recommended by Margaret Talbot) and *The Gardner Heist* by Ulrich Boser (recommended by Jeffrey Toobin). I'm interested in anything Lauren Collins has to say because [2]she is a very talented writer. Her list was unusually long. Tad Friend misspelled the title of his own book.

Some of the writers didn't write very well. Paul Muldoon, the poetry editor, used the royal we:

Weâ€™re very pleased to report that the title-poem first appeared here in *The New Yorker*.

It should be called "the pompous we". He also wrote:

Among the poetry books that particularly recommended themselves this past year

Richard Brody wrote this:

The laser-like clarity and probity with which Lanzmann brings

I think he means "the laser-pointer-like clarity . . .".

1. <http://www.newyorker.com/online/blogs/books/2009/12/what-we-read-this-year.html>

2. <http://www.blog.sethroberts.net/2008/05/08/magazine-article-of-the-year/>

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Mike Gibson (2009-12-17 20:20:46)

I highly recommend The Gardner Heist. Not sure what the New Yorker says, but half the fun is that it's an open ended case. By the time you're done reading, you're convinced you can come up with a plausible theory for the whodunit. The answer seems so tantalizingly close.

Pat (2009-12-18 01:10:57)

The Guardian book section in the UK has done this kind of thing every year for years (I've seen it for at least 5). They ask famous writers (and other famous Brits) what they've read that they liked best in the past year. I suspect that the New Yorker borrowed this idea from them. It's a good one, I agree with you. Here's the URL from the Guardian for this year: [www.guardian.co.uk/books/2009/nov/22/books-of-the-year-2009](http://www.guardian.co.uk/books/2009/nov/22/books-of-the-year-2009) There's mostly poets on the interview list this year, but I seem to remember more of an assortment of professions in past years. Re the "royal we" - this is typical New Yorker style (which I have read for years) - a bit "twee" as the Brits like to say - i.e., the New Yorker's "voice" has always been a bit self-amused going back to the days of Robert Benchley and Dorothy Parker when they were staff writers. I Seth, I'm not sure why you think "laser-like clarity" is wrong - it's kind of a cliché in literary/film critical writing. But now I gotta go look at the list on their website - thanks for the heads up. Interesting about Tad Friend's typo - might not be his fault - they have underlings at magazines, y'know, who do the actually drudgery. What is interesting is that the New Yorker (of old, when edited by William Shawn - for 30 or 40 years or so) was notorious for its fact checking and attention to meticulous detail. This is of course before the internet and blogs when the magazine was actually typeset. There's a good book about the history of the New Yorker by the way, by Brendan Gill (can't remember the title - My Days at the New Yorker or something like that). To think I came to your blog to see if there was anything new about fermented food! This is the first time I've ever posted, but thanks for the Shangri-La Diet while I'm at. I have very high LDL numbers. Has your high dose of flax oil ever disturbed your LDLs? Cause flax oil sure does help me sleep the few times I've tried - almost too deeply in fact...

seth (2009-12-18 05:40:28)

"Laser-like clarity" is not only a cliché, it's nonsense. Lasers are not especially clear. I don't know what the flax oil I drink has done to my LDLs, sorry.

Javad (2010-05-20 10:21:59)

Brendan Gill, Here at the New Yorker. That is the book on the history of the magazine that is recommended by Pat. And "laser-like" refers to the fineness of a laser; nothing else can be as pointed (so far as we know currently). Well, that is how I read the cliché.

Javad (2010-05-20 10:24:04)

I would like to read your recommendations for a reading list of authors who best represent what I call the New Yorker style.

## Assorted Links (2009-12-18 17:25)

- [1]groupthink in academia
- [2]what time is it?
- [3]why you can't trust medical journals
- [4]how Antabuse (an anti-alcoholism drug) was discovered
- [5]Allergy Planet (a documentary)

Thanks to Denshil Yu.

1. [http://www.independent.org/pdf/tir/tir\\_13\\_04\\_7\\_klien\\_stern.pdf](http://www.independent.org/pdf/tir/tir_13_04_7_klien_stern.pdf)
2. <http://www.bijint.com/en/>
3. <http://www.washingtonmonthly.com/features/2004/0404.brownlee.html>
4. [http://www.pjonline.com/christmas/pj2009\\_702](http://www.pjonline.com/christmas/pj2009_702)
5. <http://www.documentary-log.com/d357-allergy-planet/>

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## MSG and Nightmares (2009-12-18 18:38)

At a dinner for foreign teachers at Tsinghua, I met a Canadian woman who teaches English literature. Soon after she moved to China, she started having nightmares every night. For dreams, they were unusually linear and realistic. They were nightmares in the sense that they felt "sinister". This hadn't happened to her before. It was especially puzzling because she was having a good time.

On a forum for foreigners in Beijing, she asked what might be causing the problem. MSG, she was told. All Chinese restaurants use MSG. She started cooking her own food. The problem went away. Whenever she ate a restaurant meal, the problem returned. The time between meal and sleep made a difference. The dreams would be more vivid if she slept soon after the meal.

[1]Here is a discussion of the MSG/nightmare link with many stories about it. I believe we like the taste of MSG because glutamate is created when proteins are digested by bacteria. We like glutamate because we need to eat bacteria to be healthy. Bacteria are too big and varied to detect directly; it's much easier to evolve a glutamate detector.Â The problem is that now you can have glutamate in your food without bacteria. Apparently cooked tomatoes and garlic are other sources.

With PubMed I found two relevant articles. [2]One reported an experiment where hyperactive boys got better when additives, including MSG, were removed from their food. [3]The other is a review article about the effects of MSG that mentions sleep.

I'm sure from the personal stories that MSG causes nightmares – and therefore probably also causes other problems. (That glutamate is a neurotransmitter makes the MSG-nightmare link even more likely.) Here are [4]researchers from



the Scripps Clinic in San Diego saying MSG is safe:

Since the first description of the 'Monosodium glutamate symptom complex', originally described in 1968 as the 'Chinese restaurant syndrome', a number of anecdotal reports and small clinical studies of variable quality have attributed a variety of symptoms to the dietary ingestion of MSG. . . . Despite concerns raised by early reports, decades of research [this review was published in 2009] have failed to demonstrate a clear and consistent relationship between MSG ingestion and the development of these conditions..

What the woman I met did in a week or so (establish that MSG has bad effects), medical researchers – at least, judging by this review – have failed to do in 41 years ("decades of research"). Just as dermatologists have been unable to figure out that [5]acne is caused by diet.

[6]More about the dangers of MSG.

1. <http://www.msgmyth.com/discus/messages/1/326.html?1222538916>
2. [http://www.ncbi.nlm.nih.gov/pubmed/2909977?itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum&ordinalpos=13](http://www.ncbi.nlm.nih.gov/pubmed/2909977?itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum&ordinalpos=13)
3. [http://www.ncbi.nlm.nih.gov/pubmed/724894?itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_RVDocSum&ordinalpos=20](http://www.ncbi.nlm.nih.gov/pubmed/724894?itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_RVDocSum&ordinalpos=20)
4. [http://www.ncbi.nlm.nih.gov/pubmed/19389112?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_DefaultReportPanel.Pubmed\\_RVDocSum](http://www.ncbi.nlm.nih.gov/pubmed/19389112?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_DefaultReportPanel.Pubmed_RVDocSum)
5. <http://www.blog.sethroberts.net/category/acne/>
6. <http://www.truthinlabeling.org/>

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Hap (2009-12-19 06:21:56)

Joseph Campbell, author of "The Hero With A Thousand Faces," as well as of the PBS television series on cross-cultural mythologies, gave us two now popular concepts, i.e. "The hero's journey" (which inspired George Lucas), and "Follow your bliss" (which could have inspired everyone). But what he said which has always stuck in my mind is this: "Dreams are the warring of the internal organs." Unfortunately, that's about all I recall him saying on this, and there's little online to amplify it. This appeals to me because it connects body and mind. One "concrete," the other "abstract." Personal experience suggests some examples: Dreams of fire as nothing more complicated than thirst. Dreams of searching for a functioning bathroom as an expression of that need. Spicy food seems to intensify dreaming. And I've watched enough police chases and gang documentaries on TV to have a greater appreciation for the effect of drugs on brain functioning, thus behavior. I wonder if traditional Chinese medicine, with its intimate, more global understanding of the relationship of organs, meridians, energy, etc. can make more sense of what Campbell was saying. In any case, I'd enjoy reflections from others here on the same subject. Maybe we can simplify the whole business of dream interpretation. Might it be nothing more complicated than the narrative, time-binding "left brain" transforming present bodily chemistry into a story?

Nancy Lebovitz (2009-12-19 07:50:47)

Patricia Garfield's [1]Pathways to Ecstasy is an account of long observation and thought about dreams, with the conclusion that dreams are reactions to bodily changes. Not related to your post, but more self-experimentation: Olivier Arneisen's [2]The

End of My Addiction by a cardiologist who became an alcoholic and eventually discovered that baclofen (a muscle relaxant) completely eliminated his craving for alcohol. Unfortunately, so far, no one has been willing to do the tests necessary to make sure that the relatively high dosages he needed have a reliable effect for other people.

1. [http://www.amazon.com/Pathway-Ecstasy-Way-Dream-Mandala/dp/0136531555/ref=sr\\_1\\_2?ie=UTF8&s=books&qid=1261233904&sr=8-2](http://www.amazon.com/Pathway-Ecstasy-Way-Dream-Mandala/dp/0136531555/ref=sr_1_2?ie=UTF8&s=books&qid=1261233904&sr=8-2)

2. [http://www.amazon.com/End-Addiction-Olivier-Ameisen-M-D/dp/0374140979/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1261234045&sr=8-1-spell](http://www.amazon.com/End-Addiction-Olivier-Ameisen-M-D/dp/0374140979/ref=sr_1_1?ie=UTF8&s=books&qid=1261234045&sr=8-1-spell)

Nancy Lebovitz (2009-12-19 21:49:53)

More self-experimentation: Bob Cooley's [1]The Genius of Flexibility. He discovered when trying to rehab after serious injuries that resisting while stretching (a sort of moving isometric) improves flexibility rapidly (I've had a little experience with this working) and strength, and has good effects on the personality. The comments at amazon show that this system works for a lot of people.

1. [http://www.amazon.com/Genius-Flexibility-Smart-Stretch-Strengthen/dp/0743270878/ref=cm\\_cr\\_pr\\_product\\_top](http://www.amazon.com/Genius-Flexibility-Smart-Stretch-Strengthen/dp/0743270878/ref=cm_cr_pr_product_top)  
eric (2009-12-20 22:41:28)

What the woman I met did in a week or so (establish that MSG has bad effects), medical researchers "at least, judging by this review" have failed to do in 41 years ("decades of research"). Just as dermatologists have been unable to figure out that acne is caused by diet. this is really bizarre phrasing. the medical researchers haven't 'failed' any more than your woman has succeeded, they have two different results, and there is seemingly no reason to prefer the woman's result over the researchers results--the other way around perhaps. in the future i guess i'll just tell anyone who disagrees with me that they are 'failing to be correct' lol

seth (2009-12-21 02:29:39)

Eric, the woman determined that MSG is dangerous, the researchers failed to figure this out. That was the broad goal of their research, to determine if MSG was safe or not.

eric (2009-12-22 07:39:35)

err no she didn't determine it was dangerous any more than they determined it was safe, i.e. she could be wrong about what's causing her nightmares, just like the researchers could be wrong that MSG is safe?

Phil (2009-12-22 12:24:18)

I avoid MSG, figuring better safe than sorry, though I've never noticed a problem on the occasions when I think I've eaten it. (At some restaurants I'm not sure). But, Seth, the abstract of that paper that you cite doesn't say anything about nightmares or about health impacts in general, it looks only at "asthmatic bronchospasm, urticaria, angio-oedema, and rhinitis." Maybe you read the whole article, but at least the abstract doesn't contradict the nightmare connection. If the woman said her nose ran if (and only if) she ate at a Chinese restaurant, then you'd have found a disagreement!

seth (2009-12-22 12:49:51)

Phil, yes, the abstract doesn't mention nightmares. But the whole point of the article is to say "as far as we know, MSG is safe." Suppose I wrote an article claiming that arsenic doesn't cause "asthmatic bronchospasm, urticaria, angio-oedema, and rhinitis." ("In spite of decades of research . . . ") It would be literally true but also a joke - because we know arsenic is dangerous. The articles in which dermatologists claim that diet doesn't cause acne (using phrases like "there is no strong evidence that...") are literally true but a joke since a lot of the rest of us have managed to figure out that diet does cause acne. Eric, she totally got rid of her nightmares. And she can predict when they will return (when she is forced to eat food with MSG). This is a lot better than those researchers can do. Based on their review, they haven't gotten rid of any real problem nor made any accurate predictions.

Laura (2010-05-03 05:37:09)

I just had the worst nightmare of my life. I was very scared when I woke up this morning. I remember I had Chinese food yesterday at a restaurant. I am never going to eat food that has msg. Good thing the link between nightmares and msg is in this blog. I also noticed that msg gives me anxiety, too. Yesterday I was anxious. I hardly ever am anymore, with all my coping skills, but yesterday I was scared.

Catherine (2010-05-06 11:08:24)

I have always found that I have headaches, flushing and severely vivid nightmares after consuming large amounts of MSG. In fact, even without the headache or flushing, I can always tell a food had too much MSG after a long night of nightmares. I think it has something to do with sensitivity to certain amino acids such as MSG. I once took an amino acid supplement and the after-effects were horrendous. I can't eat most chips, certain Chinese food nor the McD's sausage patties due to my reaction. Although I think there has to be a high level for me to have a reaction.

william storm (2011-09-22 04:03:00)

I have been suffering for years with benzodiazepene tolerance withdrawal including severe irrational phobias, terror and nightmares. Once I found out that the anxiety meds were CAUSING anxiety I switched over to Valium (longer half-life and active metabolites as opposed to ativan). I also quit drinking coffee. After a month off of coffee my problems were reduced almost to the point of being gone. Benzo withdrawal symptoms have something to do with inversion of the GABA receptors in the brain, but they also stimulate GLUTAMATE receptors. Apparently coffee stimulates glutamate production somehow. It was explained to me that the GABA receptors are like brakes on the brain and anxiety, while glutamate is like the gas pedal for staying awake and anxiety symptoms like nightmares. After two months away from coffee I was feeling pretty happy (although still using a small amount of valium daily) and starting to take lithium over the counter (which suppresses glutamates) I had one 25 cent cup of coffee after church with my pastry and suffered with horrible anxiety and nightmares for nearly a week. Being a coffee addict, I tried the post-church coffee and suffered again. Finally, this week on a fishing trip to the mountains and a nice bacon and eggs breakfast at my sister's cabin, I drank a large cup of coffee. Within 24 hours, SEVERE anxiety and two nights worth of nightmares so far. Which is why I am online researching glutamates and anxiety and found this discussion. There is a definite link between coffee, glutamates and nightmares/anxiety. I am typing this at 3:49 am after a terrible nightmare and I am afraid to go back to sleep. I do have schizoaffective bipolar disorder but the lithium was making the "vivid dreams" tolerable. I also take Ritalin for excessive daytime sleepiness due to severe sleep apnea. So the nightmares are more complicated than just coffee and ARE related to activity in the body. But after 3 strikes of glutamate-stimulating coffee, it's OUT. No more for me until I get fully tapered off the valium. Oh yeah, and for some reason eating chicken parmesan made me anxious until I read that cooked tomatoes are full of natural glutamates. Glutamates are a stimulating neurotransmitter. There is scientific evidence of that. Proof enough for me. I'm not sure I would try coffee even after I'm off the valium, the anxiety is that bad and the nightmares are intolerable. I will just be getting over this bout of anxiety on Sunday when I am going back to church after the fishing trip. I just have to avoid that lovely pot with the 25 cent sign on it and drink bottled water or Coke (Coke and hot tea don't seem to bother me as much, but diet soda definitely gives me anxiety attacks)

## **Appreciative Thinking and Buddhism (2009-12-19 15:20)**

After I mentioned [1]appreciative thinking in [2]a recent post, my friend [3]Carl Willat wrote me:

Part of Buddhism I think is that gratitude is the secret to happiness. Â It's always possible to want more, so you won't be happy by trying to get all the things you want. Instead, being grateful for what you have is where happiness lies.

That's a good way to put it. Not matter what article you read, no matter what study you do, there are always ways it could be better (what others call flaws). Be grateful for what the article or study tells you. That's how to learn

something from it.

1. <http://www.blog.sethroberts.net/2008/12/12/whats-appreciative-thinking/>
2. <http://www.blog.sethroberts.net/2009/12/17/the-wisdom-of-tsinghua-freshmen/>
3. <http://www.carlsfinefilms.com/>

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Bryan (2009-12-19 21:26:20)

Dennis Prager, a Jewish commentator, has also been preaching "gratitude is the secret to happiness" for years:  
<http://www.amazon.com/o/ASIN/0060987359>

epistemocrat (2009-12-19 22:21:26)

This reminds me of a rule for book reviews: Don't criticize the author for not accomplishing something that he/she did not set out to accomplish.

Alex Chernavsky (2009-12-20 07:02:56)

The new field of positive psychology emphasizes the beneficial effects of gratitude:  
[http://www.usatoday.com/news/health/2002-12-08-happy-main\\_x.htm](http://www.usatoday.com/news/health/2002-12-08-happy-main_x.htm)

JLD (2009-12-20 09:10:45)

*Not matter what article you read, no matter what study you do, there are always ways it could be better* That's not the problem I most often see, the problem I most often see is *fluff*, **one 5 lines worthwhile paragraph** in the middle of an 8 pages paper.

### **Tsinghua Student Life (2009-12-20 12:16)**

The Chinese government sets limits to the number of acceptable student suicides per year at every college. If the number is exceeded, the college is punished – perhaps by a reduction in administrator salaries. Although colleges conceal suicides from their own students, they dare not conceal them from the government. At Tsinghua (with about 12,000 students) the annual limit is six. (So far this year, there have apparently been none.) In the electrical engineering department recently, more than six students were thought to be considering suicide. Because of this, a psychology professor gave the EE majors a talk about looking at the bright side of things.

A newly-formed Tsinghua student club has a Chinese name that means Sing Your Heart. It is for students who want to volunteer to teach in poor rural areas. The club has a special song that they sing at every meeting. They are remarkably ambitious: They want to set up a training program to train students to teach in these areas.

The School of Humanities and Social Sciences has a debate competition every year. This year's topic is: Should [1]the Fuwa (the Beijing Olympic mascots) have genders?

1. <http://en.wikipedia.org/wiki/Fuwa>

Denshil (2009-12-22 01:53:05)

As I know, in our school (THU), there would be student suicides every year. In the beginning of 2009, one of my friend suicide, he is Tsinghua's student, and I cried every time when I thought about him...

Shi (2009-12-22 02:53:26)

I am amazed by how the absurdity of things in everyday life becomes so salient after being pointed out.

Willy (2009-12-22 16:51:24)

Are the suicides related to academic problems?. Thanks

Denshil (2009-12-22 20:47:07)

I believe that these suicides relate to a lot of things, such as, relationship which I think is the important reason, hunting jobs, academic problems...

### **Michael Perelman on the Purpose of College (2009-12-21 14:36)**

In [1]a talk, Michael Perelman, a professor of economics at CSU Chico, said this:

Each semester, I tell my class that each of them has the potential to be the best in the world at something.  
The most important thing they can do in school [= college] is find out what that something is.

That is a sane view of college. At Berkeley, I told undergrads: "Take as few classes as possible and do as many internships as possible."

Perelman's talk, an intellectual autobiography, has all sorts of interesting details, such as "As the economy faltered, economists would express doubts about how the economy functioned but once the economy recovered, challenges to market fundamentalism would become rare."

1. <http://michaelperelman.files.wordpress.com/2009/11/lecture.pdf>

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Jeff (2009-12-21 18:45:09)

Why wouldn't classes help people learn what they want to do?

Caleb (2009-12-21 22:11:59)

Four or more of the best years of your life and tens of thousands of dollars seems pretty steep to find out what you're suited for compared to good ol introspection and real world experience (at least it worked well in my case), especially if you're also getting such saccharine pie-in-the-sky nonsense as 'everyone has the potential to be the best in the world at something' dumped into your head. Education certainly has some value, and I expect it could have a lot more, but until it allows for a free market in hiring that value is very hard to determine, allowing the institution to become largely parasitic. Perhaps I'm biased, but it seems to me the way the system currently works, college has little true value added, and the main purpose of college is to make money for the colleges and the staff by fleecing the students and public. Typical rent seeking elite behavior. I'm being

a little unfair because I feel strongly about how messed up education is. I still want back all the time and \$70,000 dollars of public money wasted before I wised up that I was being played and promptly quit school in the tenth grade.

seth (2009-12-22 03:54:24)

Jeff, why don't classes help? Because at almost all colleges, including CSU Chico and UC Berkeley, only a tiny fraction of students want to be professors. A class tells you what it's like to be a professor and how good you will be at it. If you don't want to be a professor, it doesn't help. Perhaps the first few college classes you take help you decide if you want to be a professor. The rest do not. Caleb, I have written many posts agreeing with you – that colleges are run for the benefit of professors, not students. That they are exactly what you say – rent-seeking elite behavior. It's not so much "making money for the colleges and the staff" as providing jobs for the professors. I believe it is becoming easier to skip college and more students, including the most talented, will do so. You don't have to go to college to be an intern.

Alex Chernavsky (2009-12-22 05:51:02)

Regarding Caleb's comment: Here is an excellent article from *Forbes* magazine (Feb. 2, 2009), called "The Great College Hoax": <http://www.forbes.com/forbes/2009/0202/060.html>

Jeff (2009-12-22 14:53:25)

I don't think that's great advice to get students. You can take classes in three or four different areas in a semester but only have one internship. I didn't think of college classes being about whether the students would be a good professor or not, but we can agree to disagree. A class about econ is still going to teach the subject of econ, etc. Taking a variety of classes should allow a student to figure out which subjects are interesting to them.

Stephen M (ethesis) (2009-12-25 16:50:49)

Practice and a lot of time will make you very good. What you need to do is find something you can tolerate enough that you will find yourself willing to practice and do ...

## **Modern Biology = Cargo-Cult Science (continued) (2009-12-22 13:19)**

In [1]an earlier post I pointed out that modern molecular biology has one big feature in common with cargo-cult science (activities with the trappings but not the substance of science): relentless over-promising. David Horrobin, in [2]a 2003 essay, agreed with me:

Those familiar with medical research funding know the disgraceful campaigns waged in the 70s and 80s by scientists hunting the genes for such diseases as cystic fibrosis. Give us the money, we'll find the gene and then your problems will be solved was the message. The money was found, the genes were found - and then came nothing but a stunned contemplation of the complexity of the problem, which many clinicians had understood all along.

During the question period of a talk by [3]Laurie Garrett about science writing at the UC Berkeley School of Journalism, I said there was a kind of conspiracy between scientists and journalists to make research results (in biology/health) appear more important than they really were. Oh, no, said Garrett. If she's right, then journalists are completely credulous. They have no idea they're being scammed. If I wrote a book called *The Real Scientific Method*, there would be a whole chapter on better ways ([4]cool data) and worse ways (over-promising) to promote your work.

The discovery of [5]leptin, the hormone that tells the brain how much fat you have, was front-page news in 1994. Supposedly this discovery would help people lose weight. It is now abundantly clear that it hasn't and won't. The discoverer of leptin, Jeffrey Friedman, gave a talk at UC Berkeley several years ago and resembled a deer caught in the

headlights. All he knew – following the party line – was that genetics was important. That genetics was so obviously not the reason for the obesity epidemic . . . he didn't mention. [6]This interview gives a sampling of his views. He really does believe in the primacy of genes:

Over the years, Dr. Friedman says, he has watched the scientific data accumulate to show that body weight, in animals and humans, is not under conscious control. Body weight, he says, is genetically determined, as tightly regulated as height.

Never mind animal and human experiments that show adult body weight is controlled by recent diet. Adult height is not controlled by recent diet. What about the obesity epidemic? Well,

"Before calling it an epidemic, people really need to understand what the numbers do and don't say," he said.

This is what one molecular biologist – a professor at Rockefeller University – is reduced to: telling us what data collected by other people "do and don't say". Not to mention qualifying the obvious (Americans are much fatter now than 50 years ago). I'm sure his lab has all the trappings of modern science. But the planes don't land.

[7]A journalist named David Freedman has figured this out.

1. <http://www.blog.sethroberts.net/2009/10/08/modern-biology-cargo-cult-science/>
2. <http://www.guardian.co.uk/science/2003/feb/12/genetics.research>
3. [http://www.lauriegarrett.com/index\\_withintro.html](http://www.lauriegarrett.com/index_withintro.html)
4. <http://www.blog.sethroberts.net/2006/11/26/brian-wansink-on-research-design/>
5. <http://en.wikipedia.org/wiki/Leptin>
6. <http://www.nytimes.com/2004/06/08/health/08cont.html>
7. <http://www.fastcompany.com/node/1400883/print>

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intellectual\_yokel (2009-12-22 13:32:02)

<http://www.smbc-comics.com/index.php?db=comics &id=1623>

Tom in TX (2009-12-22 13:35:00)

I get the impression that an incorrect theory can be better than a correct one. You can keep getting research money to chase the ad hoc explanation of why the previous study didn't work as planned. Ptolemy could have gotten a government grant to study each of his epicycles. Copernicus would have been done right away and then he would have needed to find a new project. 8-(

Bryan (2009-12-22 13:54:44)

»If I wrote a book called The Real Scientific Method... What do I have to do to convince you to write that book?

Patrik (2009-12-22 14:46:55)

@Seth You are on a roll. Your posts on epistemology/science are excellent. Keep it up.

Alex Chernavsky (2009-12-22 14:47:46)

Man, if you think molecular biology is bad, you should see psychiatry. See, for example, Robert Whitaker's excellent book, *Mad in America: Bad Science, Bad Medicine, and the Enduring Mistreatment of the Mentally Ill*: <http://www.madinamerica.com/Mad%20In%20America/Home.html>

Jeff (2009-12-22 15:37:10)

Biology is pulling in a lot of strong minds from – \*ahem\* – more rigorous disciplines. Ex-physicists, ex-engineers, and ex-mathematicians are pouring into fields like computational biology, computational neuroscience, systems biology etc. Things will change.

Nathan Myers (2009-12-22 15:42:04)

Seth, your postings on the condition of Science are usually interesting, but your credibility is deeply compromised by your jeremiads on global warming and Nobel prizes. Yes, science in the U.S. is deeply compromised by the grants system, particularly in medical research. Yes, the PR for new results is frequently abjectly stupid. No, fundamental research into cellular processes is not money wasted, even if no therapies immediately result. No, credible reasons to doubt anthropocentric global climate change have not surfaced, despite trillions of dollars backing anybody who could come up with some. Also, no, language did not originate after large towns arose where people didn't all know one another. It would be hard to list how many ways that doesn't make sense.

Darrin Thompson (2009-12-22 20:09:04)

If there's a poster boy for calling out cargo cult research it's Gary Taubes. I'm surprised you don't have a link to his book from here.

seth (2009-12-23 05:58:30)

Nathan, two questions: 1. Tell me a single fact that's good support for the idea that humans have caused global warming. 2. If you have a problem with my theory that language evolved because it facilitated trading, I'd like to know why.

Nathan Myers (2009-12-23 16:36:19)

Seth, the mechanisms that link human activity to global warming are well known to everyone by now. The people denying their role these days are using transparently dishonest tactics. When somebody has to lie to make their case, you don't need to look at everything else they've said, and figure out what else is or isn't a lie, and see how what's not obviously untrue adds up. The lies tell you all you need to know. You will say that's what the global warming people are doing. I've looked carefully at the places where they are said to be lying, and the closer I look, the clearer it becomes that it is their accusers who are misrepresenting the facts. Everything you've posted has turned out, on further examination, to be at best trivially irrelevant. I don't know why you are so eager to credit deceptions, but your eagerness to pass them on is your least appealing quality. As for language evolution... We've had language for tens, maybe hundreds of thousands of years. During the overwhelming majority of that time, it was a major event to encounter another person one hadn't grown up near. Everyone knew exactly what everyone else nearby had. If someone wandered in, as still happens in tribal areas to today, he would be surrounded with spears and delivered to the headman to decide whether to kill him, escort him away, or take him in as a guest. You and he would have no useful vocabulary in common. If he had anything to trade it would suffice to show what he had, and look over what he was offered; it didn't need language. Traded items did move over hundreds of miles, but there's no need for it ever to have happened between strangers; valuable items could spread far by changing hands over and over, each time between neighboring groups, whether traded or robbed. Anonymity is an extremely recent phenomenon. The best current theory is that language developed first between mother and child.

seth (2009-12-23 18:00:53)

Nathan, the first language functioned as advertisements (both wanted and for sale) do today: It helped bring the two sides of a trade together. Try buying something unusual in a place where you don't speak the language and you'll see what I mean. In human prehistory, as the range of specialized skills increased, and trading networks grew, there came a time when everyone did not know what everyone in their trading network had to trade. It was much easier to spread that knowledge via words than



by physical contact. The same as today. As for global warming, I notice a complete absence of facts in your answer. Please, tell me a single fact that clearly supports man-made global warming. Just one! When you accuse all critics of being "transparently dishonest", I say get real. Stephen McIntyre and Freeman Dyson aren't using such tactics.

Nathan Myers (2009-12-23 20:42:51)

Seth: Please. Language use necessarily developed for tens of thousands of years within family groups before "specialized skills increased, and trading networks grew" – or, indeed, could exist at all. You might as well suggest that airplanes were invented to give us a place to spend all the air-miles we've accumulated. It should worry you to find yourself promoting such a trivially silly idea. Stephen McIntyre certainly is using dishonest tactics. Freeman Dyson isn't saying anything meaningful at all. (Magic trees? Spare me.) I'm not trying to engage you at that level because you've demonstrated again and again that you are really *not interested* in facts in this area. "*It is my mission in life to hold Laurie David accountable.*" That's what I'm taking you to task over. Your behavior has been egregious, and is starting to border on the risible. There is one area where you do well, and that's where you measure things personally. In climate science there's nothing for you to measure, and you're left floundering in a sea of others' statements you're not equipped to evaluate. On language origin, no direct measurements are possible even in principle, and you're off in cloud-cuckooland. Why not spend your time on things you're uniquely good at, instead of chasing around with Sancho Panza?

Mark (2009-12-23 22:40:22)

Are you saying that people's body weight to the pound (or to a reasonable range of pounds) is predetermined, or that where a person's body weight falls relative to others in the same environment is predetermined? In other words, how do you deal with the fact or claimed fact that average body weight or BMI or however you want to measure it is increasing? Is environment completely irrelevant? I certainly don't believe that.

seth (2009-12-23 23:56:46)

Mark, you are confusing me with Jeffrey Friedman. He believes that stuff, I don't.

david (2009-12-24 01:14:37)

Nathan, you should start a blog - I'd read it.

Tedderick (2009-12-24 01:43:59)

Seth, something was pointing out to me about Global Warming Idiots. It's remarkable I never noticed. They have a religious devotion to labeled and awarded authority. When they say 10 billion "scientist" signed a petition. It means the world to them. When a Nobel Laureate says something – that is the word of god. They don't understand science as a body of facts interpreted (though they claim too). They believe science is a priesthood with priest who words must be heeded, and us wee-folk need to get in line.

seth (2009-12-24 04:42:30)

Nathan, please, one fact, just one? Can you tell me one fact that supports man-made global warming? What's an example of Stephen McIntyre using dishonest tactics? What's an example of Freeman Dyson using dishonest tactics? My comment about holding Laurie David accountable was a joke.

Patri Friedman (2009-12-24 09:20:20)

Ditto what Bryan said. Some combination of "consistent failings of science as currently practiced" and "ideas for how science can be done better" would be a kick-ass book. Illustrated with examples of scientific consensus gone horribly wrong (like fat = bad).

Tom in TX (2009-12-24 09:45:37)

Seth, here are the facts that prove man-made global warming: 1. The hockey stick graph. 2. If you don't agree with man-made global warming, you can't publish your scientific papers.

Alex Chernavsky (2009-12-24 10:15:41)

Another example of scientific consensus gone horribly wrong is the idea that antidepressants are effective drugs. See, "Antidepressants Versus Placebos: Meaningful Advantages Are Lacking", by Irving Kirsch and David Antonuccio, *Psychiatric Times*, Sept. 1, 2002: <http://www.psychiatrictimes.com/display/article/10168/47701?verify=0>

seth (2009-12-24 14:37:40)

Thanks for the encouragement, Patri and Bryan. It seems sort of pompous to write such a book. On the other hand the subject really interests me, all the ways scientists actually learn things and all the problems they face. Such as premature consensus. I've also thought of writing a book called *How To Lie With Experimental Design*. I googled the title to see if anyone else had had the same idea – and found that I had, a year ago.

Tedderick (2009-12-24 15:19:33)

Seth, who cares if it's pompous, the fact that you're worried about it – seems to prove you are qualified to write it! It's not like pompousness disqualifies writing. If that were the case, there would only be a dozen books for sale at amazon. We're all waiting to buy another book from you.

Tedderick (2009-12-24 19:16:10)

I also like how Nathan talks down to Seth like he's a disobedient child.

Glen Raphael (2009-12-24 23:33:15)

Tom in TX: Imagine that you somehow became convinced the Hockey Stick graph was invalid and that a more accurate best-guess view of past temperatures is that reflected by the *prior* consensus - one that included a substantial MWP, one that seems to have been close enough to modern temperatures that we can't reasonably be sure that current temperatures are "the warmest in 2000 years". If that happened, would it change your mind about anything \*else\* related to Global Warming? Because the sad truth is this isn't a hypothetical. Given enough time and persistence on your part to evaluate the arguments on their merit (rather than on the basis of who holds them), that is the conclusion you would likely reach.

Glen Raphael (2009-12-24 23:36:22)

On a second read, I think I missed a [sarcasm] tag Tom meant to include...

seth (2009-12-24 23:36:54)

Tom, the more I examine this and try to find out the evidence, the more I tend to agree with you. Those are exactly the two facts that support man-made global warming. Tedderick, that's true, it's hard to avoid being pompous when you write a non-fiction book. Thanks for the encouragement.

Tom in TX (2009-12-25 07:31:29)

Glen, your second reading is the correct one. 8-)

Hal (2009-12-28 13:17:07)

The hypothesis of man-made global warming is a chain of evidence and reasoning, so I don't know how one could list a single fact. But I suppose a key fact is that atmospheric CO2 levels are substantially higher now than they were a couple of centuries ago. If you grant that higher CO2 levels increase temperatures (the greenhouse effect) and you grant that man is the cause of higher CO2 levels (due to burning of carbon containing fuels, and other industrial activities), then there you go.

seth (2009-12-28 13:31:34)

Thanks, Hal. Global temperature has been going up and down for quite a while. Viewed in the light of far more than a few hundred years, the last few hundred years don't stand out. For example, the Ice Age shows how much temperature can vary without human intervention.

Tom in TX (2009-12-30 09:46:03)

Not everyone grants Hal's claim that higher CO2 means higher temperatures: <http://www.climategate.com/german-physicists-trash-global-warming-theory>

Stephen M (Ethesis) (2010-06-18 12:16:35)

There has been some claim that the ice age was brought on by lowered methane levels associated with the extinction of megafauna.

## **William Penn Accidentally Signs Away Pennsylvania (2009-12-23 14:47)**

From [1]Wikipedia:

A more serious problem arose when fellow Quaker Philip Ford, his business manager, embezzled from Penn. He capitalized on Penn's habit of signing papers without reading them by including a deed transferring Pennsylvania to himself, and then demanded more rent than Penn could pay.

Why am I reading about William Penn? Because Penn was [2]an insider/outsider. Born to wealthy parents and educated at Oxford, he became a marginal religious leader, at one point imprisoned for eight months for writing a "blasphemous" pamphlet. Just as self-experimentation empowered me, cheap travel across the Atlantic empowered Penn. He took his followers to what became Pennsylvania.

I believe that cheap new ways of doing things empower insider/outsiders. A modern example is [3]Stephen McIntyre, empowered by blogs. (His blog is [4]Climate Audit.) The classic example is Martin Luther, empowered by the printing press. In contrast, expensive new ways of doing things empower insiders (the already powerful) because only they can afford them. I suppose the classic example is agriculture. Agriculture is expensive because it requires land. Lots of things start off expensive and become cheap, but many do not. The classic example is agriculture (land never becomes cheap); the big modern example is health care. It is very expensive to develop a new drug or new medical technology. This is at the heart of why the health care industry is extracting more and more money from the rest of us, just as government officials in rural China regularly ripoff farmers. I am unsurprised that [5]doctors resist cheap new improvements, the only way out of a terrible situation. In China, people in rural areas migrate to cities; that's how they escape. In Croatia, some friends of mine lived downhill from neighbors who were in the Communist Party. My friends were not Communists. One day they woke up to find that the property line between them and their uphill neighbors had shifted downhill about 10 feet. Unlike William Penn and rural Chinese, my friends could not move – and thus the powerful became more powerful.

1. [http://en.wikipedia.org/wiki/William\\_Penn](http://en.wikipedia.org/wiki/William_Penn)

2. <http://www.blog.sethroberts.net/2009/01/24/not-the-same-study-section-how-the-truth-comes-out/>

3. [http://en.wikipedia.org/wiki/Stephen\\_McIntyre](http://en.wikipedia.org/wiki/Stephen_McIntyre)

4. <http://climateaudit.org/>

5. [http://www.newyorker.com/reporting/2007/12/10/071210fa\\_fact\\_gawande](http://www.newyorker.com/reporting/2007/12/10/071210fa_fact_gawande)

Ben Hyde (2009-12-23 15:16:48)

You might enjoy Puritan Boston and Quaker Philadelphia by E. Digby Baltzell; (I just love the author's name).

seth (2009-12-23 15:56:56)

yeah, Penn wasn't the only religious leader to move to America. I've seen that book.

intellectual\_yokel (2009-12-23 16:01:38)

Whenever you write about climate science I get a little nervous for you, because eco-consciousness is the new piety and blasphemers get excommunicated from the church. You mentioned Feynman before, have you seen this? [http://www.youtube.com/watch?v=\\_EZcpTTjjXY](http://www.youtube.com/watch?v=_EZcpTTjjXY) &feature=related

david (2009-12-24 00:58:57)

that explains the popularity of fMRI research in psychology and economics

seth (2009-12-24 05:01:07)

David, that's a good point. I would put it a bit differently. It explains why rich psych and econ departments are hiring people who do fMRI research. Less well-off departments are not hiring such people because their research is too expensive. intellectual yokel, thanks for the Feynman link. I can't always get YouTube here in China but next time I can I'll look at it. As for climate science, Alexander Cockburn put it well: "the Copenhagen dogmata are a farce. In terms of distraction from cleaning up the pollutants that are actually killing people, they are a terrible tragedy." That's right. Trying to reduce CO2 emissions is a huge distraction from reducing industrial byproducts that kill people, heavy metals, carcinogens, and so on. <http://www.counterpunch.com/cockburn12182009.html>

Stephen M (ethesis) (2009-12-25 17:09:11)

**reducing industrial byproducts that kill people, heavy metals, carcinogens** That is the real tragedy. I was listening to people talk about climategate today. What has always bothered me is that the predictions indicate that it is already too late to avoid disaster (which is obviously not going to happen, given that the data was cooked). I couldn't understand the approaches, given that it was too late under the model promulgated. They should have been advocating how to cope with the disaster that was already unstoppable. One guy said that what they were doing was telling lies in order to get people to do something now before it was too late. Another said they were just looking for a way to corner the grant money and the attention. A third said they were malevolently trying to cause us to all starve to death in the dark after collapsing the international economy. Finally, someone said they were just in the pay of those causing the real problems and being paid off to distract everyone. I've been thinking ever since about that.

Hal (2009-12-28 13:10:34)

IMO the climate situation is pretty clear. Models show that it is too late to avoid disaster, as Stephen M says. However, the future is uncertain, and reality may be better or worse than this. If it is worse, too bad, but if it is better, then maybe it is not quite too late to avoid disaster. By acting now we decrease the probability of future disaster. This message is probably too complex and subtle to be easily communicated, but it seems to be a straightforward summary of the current scientific understanding. Some people say we shouldn't trust our models, but after all they represent our best efforts to apply the collective intelligence and reasoning power of humanity towards understand the likely course of future events. We shouldn't ignore our best forecasts just because we don't like them.

seth (2009-12-28 13:39:13)

Hal, those models haven't been tested, much less verified. By which I mean their predictions haven't been tested. In the absence of verified models, we have to rely on simpler reasoning, such as whether recent climate is unusual.

## Sometimes Black Really Is White (2009-12-24 14:26)

Jenny Holzer, the artist, says, "[1]I get up about four times a night and go back to sleep, or not." I suspect she's not [2]eating enough animal fat. At my local Beijing supermarket yesterday, I asked a butcher to cut the meat off a piece of pork fat. Reverse trimming. At the moment, I think about 180 g of animal fat/day is a good dose. I'm much less concerned about amount of meat. Another instance, I thought to myself, [3]where I want the opposite of everyone else. But that's far more true in America than here. In China but not America, I can buy pork belly at any supermarket; in China but not America, there is vast selection of pickles and yogurt at any supermarket.

1. [http://www.nytimes.com/2009/12/20/magazine/20fob-domains-t.html?\\_r=1&scp=1&sq=jenny%20holzer&st=cse](http://www.nytimes.com/2009/12/20/magazine/20fob-domains-t.html?_r=1&scp=1&sq=jenny%20holzer&st=cse)

2. <http://www.blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>

3. <http://www.blog.sethroberts.net/2009/04/22/trying-to-buy-expired-food/>

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david (2009-12-25 00:39:01)

well, much of the world seems to sleep just fine eating mostly carbs... so does dean ornish

CD (2009-12-25 06:34:05)

Seth, do you mean 180 grams in weight (6.3 ounces) or 180 grams of fat (1620 calories)? Thanks.

Nile (2009-12-25 19:30:09)

Sleep apnea could cause someone to wake several times a night. That was my experience and I believe it is common. I now use a cpap and sleep soundly all night long.

seth (2009-12-26 15:47:23)

David, if by "just fine" you mean "as well as possible" I am much less sure than you that that's the case. Sleep disorders are common in America. And I didn't have a sleep disorder. I slept through the night without waking up. Animal fat made me feel more rested when I awoke. CD, I don't grasp the difference between 180 grams in weight and 180 grams of fat. The fat weighs 180 grams. I weigh it.

Hal (2009-12-28 12:55:53)

Ever since I was diagnosed with ALS this past summer, I have lived in Oppositeland too. Turns out ALS survival is maximized with a high fat, high cholesterol, high calorie diet - exactly the opposite of what is (said to be) good for everyone else. So I'm putting butter on everything and having ice cream every day. I'm not a meat lover but I've been trying to eat bacon and sausage regularly, for my health. Unfortunately lately my appetite has been diminished, probably a side effect of the nerve damage, so the gluttony has not been quite as enjoyable as it was a few months ago.

Dexter (2010-01-08 17:23:46)

Hal, You have simply become ketone adapted because of your high calorie, high fat, high cholesterol diet...thus your desire to eat has diminished. You must try a burger that is 50 % saturated fat. Get the 75/25 at your supermarket/butcher and get some pure ground fat and mix the burger and the fat together. It has a most wonderful, delicious flavor when cooked by itself or cooked in coconut oil. And eating meat and fat and eggs fried in butter or coconut oil is not gluttonous. It is the most healthy diet you can eat. Eating carbs...especially wheat products...is like eating poison....as is eating anything with sugar in it. Sugar: The Bitter Truth. Dr Lustig, Obese pediatrician, UCSF <http://www.youtube.com/watch?v=dBnniua6-oM> Exception: salads with Olive oil & vinegar and green veggies with lots of melted butter.

## **Stupid Noodle Restaurant (2009-12-25 13:57)**

On Christmas, I had lunch in a factory town near Shanghai at a restaurant whose Chinese name means Stupid Noodle Restaurant. It's not a joke. Nor a mystery, if you're Chinese. The reason a restaurant would call itself stupid is because a stupid owner won't cheat you. Next to the restaurant are a small store that sells cables and a small store that sells car batteries. At the restaurant, the knife-cut noodles were very good.

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Kate (2009-12-29 09:02:01)

When I saw the subject of your post, I didn't think you had good noodles, but the noodles were good, not like the name as I imagined. The name of the restaurant did the same as your post name, but I was cheated by your post name:-)

Kate (2009-12-29 09:05:32)

Well, I am Chinese, if I first saw the restaurant, I might not come in it because of the name more or less, but would like to try if recommended.

Restaurant Lover (2010-03-08 18:55:12)

After having visited China the name makes sense to me. I found that you really have to negotiate with most family restaurants to get a fair price.

## **MSG and Nightmares (continued) (2009-12-26 16:12)**

I am staying in a nice hotel near Shanghai. Last night I dreamed that my stuff (suitcase, etc.) had been put in the hallway outside my room. As – in the dream – I was walking to the front desk to complain, I realized I must be dreaming. This couldn't possibly have happened, I thought. It was that realistic. Later that night I had another mild realistic nightmare – about missing the bus.

I rarely have dreams like that. During the day I'd had a lot more Chinese food than usual. Two big meals. (Lunch, at a restaurant, had included yogurt, incidentally.) Without [1]my friend's experience I would have never connected the Chinese food and the nightmares.

1. <http://www.blog.sethroberts.net/2009/12/18/msg-and-nightmares/>

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Jim (2009-12-27 05:06:15)

In your previous post, you mentioned "cooked tomatoes and garlic" as also being possible problems. I eat a very large quantity of fresh tomatoes in salads. Should that be safe?

Jason (2009-12-27 05:09:53)

Do they use vegetable oils in China in Chinese restaurants? Cuz I think it may be the overheated veggie oils, not MSG...

seth (2009-12-27 05:25:20)

Jason, yes, I will see if I get the same thing by adding MSG to food I have cooked myself. Jim, I'm not sure but I think the glutamate in tomatoes isn't much available unless they are cooked.

Andrew Gelman (2009-12-27 14:15:35)

Seth: It's cool how you and your commenters are living on such a different part of the ROC curve from most scientists. Most of us are so worried about making a mistake that we wouldn't want to make confident claims based on so little data. But, from your perspective, there's much more to be lost by not acting on these uncertain inferences. It's sort of like, while the rest of us are going around making 95 % intervals, you're making 5 % intervals. Seems like a good idea: you're putting these ideas out there and others can investigate further. Nothing would be gained by you keeping your speculations to yourself (out of fear for embarrassment or whatever reason). I think I'll still go with the expert consensus when it comes to sea level measurements etc., but it's great when you can filter your own experiences through your ideas about psychology and nutrition.

seth (2009-12-27 15:38:56)

Thanks, Andrew. I agree with your overall point, but I don't see any 5 % intervals in this post. I don't say, "wow, the food caused the dreams"; I say essentially that my observations support my friend's earlier claim. While her claim may sound speculative to you, 1. It was based on plenty of observations. 2. Other people found the same thing. 3. Glutamate is a neurotransmitter. 4. Actions based on her theory produced a benefit (her nightmares ceased). When experts (at Scripps) write a paper saying that, as far as they know, MSG is safe (discounting evidence they don't like that says otherwise), and I blog about evidence that MSG causes nightmares and given that evidence is dangerous, I wouldn't say they are the cautious ones. The "experts" have careers to protect. That biases what they say, I'm sure. And not in a good way. It makes them less likely to say or do something that would be perceived as unusual or that could damage their career. You say they "are afraid of making a mistake." It's not that simple. Their (understandable) careerism makes them less likely to make an "active" mistake (such as saying something wrong) but more likely to make a "passive" mistake (failing to point out that something is wrong). But maybe you are talking about my posts in general. My claims about animal fat and fermented food, for example. My comment is: Let's wait and see. You think I'm at a different point on the same ROC curve whereas I think I'm on a different ROC curve.

Tom (2009-12-27 22:43:23)

I think this depends on the field. In nutrition, Michael Eades and Stephan Guyenet have blogged extensively on how researchers actively twist their abstracts to give the impression that the standard low-fat/dietary cholesterol dogma has been reinforced by a study (while the underlying data shows it to have been refuted.)

Tom (2009-12-27 22:44:41)

Whoops, not sure why that post turned out so weird. It was referring to the idea that careerist researchers are likely to make passive – rather than active – errors.

Andrew Gelman (2009-12-28 13:53:03)

Seth: I think you're making a good point (in your reply to my comment) that what counts as "cautious" or "conservative" depends on what is your default. That's one problem I have with the whole Type 1 / Type 2 error thing; it privileges one sort of hypothesis above another.

seth (2009-12-28 19:20:27)

Andrew, thanks for the thought-provoking comment.

Kate (2009-12-29 09:15:39)

There must be too much MSG in your meals so that u made nightmares, according to the experiment in your previous post.

Anti Shoes (2010-01-09 01:00:16)

those problems turn largely on how much money is at stake. Telescopes and colliders don't Energy. Physics is second-oldest, and they're off chasing Strings. Probably

### **James Michener Anticipates Me (2009-12-27 15:12)**

In James Michener's *Poland* (1983), a Polish peasant in a concentration camp tries to survive by thinking about food (p. 532 of the paperback):

He then transferred his imagination to a supper served at the wedding of a well-to-do farmer, where huge platters of sauerkraut, sausage, boiled pork and pickles had been provided, one to each of six tables, and he had helped himself piggishly, moving from one to the other so as not to reveal his gluttony. He recalled this particular feast for two reasons: as a peasant, he knew that the acid bite of the pickled kraut was good for him, all peasants knew that and it was one reason why they survived so long; and he could see in the rich fat of the meats the strength that came from them.

Later he thinks about animal fat:

He imagined himself luxuriating with platters of butter, or grease, or pork drippings, or oil that rich people bought from Spain, or the golden globules at the edge of a roast, or plain lard.

[1]According to Wikipedia, *Poland* was based on "extensive study of Poland's history and culture." Thanks to Nadav Manham.

1. [http://en.wikipedia.org/wiki/Poland\\_%28novel%29](http://en.wikipedia.org/wiki/Poland_%28novel%29)

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Jim (2009-12-27 18:32:16)

Imaginary gluttony? Interesting. If I imagine that I'm eating lots of fattening foods, would I get fat(ter)? And would the reverse be true: If I imagine I'm on a very low calorie diet, would I lose weight? Seriously. If placebos work maybe 30 percent of the time, that would mean that a placebo diet just might be the world's most successful diet.

cremes (2009-12-27 22:17:10)

Jim, I think you are missing the point. The key element here is that "Poland" mentions the "acid bite" of pickled kraut is healthy and that animal fat will give them strength. I doubt the imaginings will change your biochemistry too much. It's just interesting to hear that pickled/kimchi flavors were known to be healthy to the Polish. What else do these folks know about health from food that we don't?



Jason (2009-12-27 23:35:43)

Great find with those quotes! I keep re-reading them. I'm about to eat fatty ham with home-made pickles and mustard. They remind me of a quote I like that was referenced as an old Dutch proverb: "Eat butter first, and eat it last, and live till a hundred years be past." Also, L Keith's *The Vegetarian Myth* (I think it was that book) has a reference to concentration camp survivors eating the fats first from the foods offered to them when they were freed. So that backs up the novel there too.

Patrik (2009-12-28 01:11:42)

*He imagined himself luxuriating with platters of butter, or grease, or pork drippings, or oil that rich people bought from Spain, or the golden globules at the edge of a roast, or plain lard.* This could also be taken from some turn-of-the-century Hungarian short stories. I think it was Zsigmond Moricz (or Mikszath?) who wrote of a Hungarian peasant invited to a wedding feast for the local noble's daughter's wedding. The peasant doesn't eat for a few days in preparation for the feast and dreams of fat/lard/butter. Ironically and tragically, the peasant dies of over-eating as his body is not used to such rich food. (BTW Moricz's point was the exploitation of the peasants by the nobility.)

Patrik (2009-12-28 01:19:40)

BTW this is off-topic for this post - but completely keeping with one of the themes of this blog. Seth, I think we'd all like your thoughts on this: <http://medicalhypotheses.blogspot.com/2009/02/why-are-modern-scientists-so-dull.html> "Why are modern scientists so dull? **Why are modern scientists so dull? How science selects for perseverance and sociability at the expense of intelligence and creativity** Medical Hypotheses. Volume 72, Issue 3, Pages 237-243 Bruce G. Charlton \*\*\* Summary Question: why are so many leading modern scientists so dull and lacking in scientific ambition? Answer: because the science selection process ruthlessly weeds-out interesting and imaginative people. At each level in education, training and career progression there is a tendency to exclude smart and creative people by preferring Conscientious and Agreeable people. The progressive lengthening of scientific training and the reduced independence of career scientists have tended to deter vocational "revolutionary" scientists in favour of industrious and socially adept individuals better suited to incremental "normal" science. High general intelligence (IQ) is required for revolutionary science. But educational attainment depends on a combination of intelligence and the personality trait of Conscientiousness; and these attributes do not correlate closely. Therefore elite scientific institutions seeking potential revolutionary scientists need to use IQ tests as well as examination results to pick-out high IQ "under-achievers". As well as high IQ, revolutionary science requires high creativity. Creativity is probably associated with moderately high levels of Eysenck's personality trait of "Psychoticism". Psychoticism combines qualities such as selfishness, independence from group norms, impulsivity and sensation-seeking; with a style of cognition that involves fluent, associative and rapid production of many ideas. But modern science selects for high Conscientiousness and high Agreeableness; therefore it enforces low Psychoticism and low creativity. Yet my counter-proposal to select elite revolutionary scientists on the basis of high IQ and moderately high Psychoticism may sound like a recipe for disaster, since resembles a formula for choosing gifted charlatans and confidence tricksters. A further vital ingredient is therefore necessary: devotion to the transcendental value of Truth. Elite revolutionary science should therefore be a place that welcomes brilliant, impulsive, inspired, antisocial oddballs "so long as they are also dedicated truth-seekers."

Aaron Blaisdell (2009-12-28 08:36:13)

Patrick, Thanks for your comment. The description of the ideal science student at the end of the abstract reminds me of the Dungeons and Dragons role-playing game crowd I used to hang out with, except that they were a bit too drawn towards anachronistic fantasy rather than the what-could-possibly-be-in-the-future science fiction type (like Asimov). Methinks we should raid some dungeons to scout talent.

seth (2009-12-28 13:52:02)

Thanks, Patrik. I can't get that link, being in China. I tend to blame our educational system, not the career selection process, for turning out boring people. But I agree there is selection for Agreeableness. As for crummy modern science, I tend to blame status seeking and careerism by scientists. As there was more status to be had (e.g., more money), the field attracted more people who cared a lot about status and more of their time was spent trying to increase their status. How status seeking fits with personality dimensions I don't know, but it certainly correlates with being boring. As for biology/health in particular, the

field has been taken over by a delusion (control of health by genes) which has brought progress to a halt. Perhaps lack of progress has also increased status-seeking and careerism. Lack of something interesting to say would make anyone boring.

Patrik (2009-12-29 14:19:02)

@Seth and Aaron I hold a master's degree in economics from a University of California. I found that the ideal graduate econ student is one who is: -Way over-qualified mathematically, so much that it is a handicap IMHO (Levitt of Freakonomics fame has also talked about this.) -Willing to spend inordinate amount of time running regressions without actually asking themselves about the underlying logic (or lack of) the relationships -Doesn't rock the boat and ask questions that have no answers -Lacks creativity — I am painting with a very broad brush, but in my mind, that these people are akin to human computing machines, not actual "thinkers". Give them input, they will process, and spit out. But having the ability to think/decide what the input should be, how and if it should be processed, and what the output might look like was not a desired trait.

Stephen (2009-12-30 19:52:07)

Hey Seth, I'm curious - do you get regular blood tests (e.g. renal, liver, lipid, urate) or blood pressure tests? I think it would be interesting to see if there's any relationship between your diet and those sort of results because "cholesterol lowering diets" for example, often advise cutting out animal fat completely and only eating specific types of lean white meat such as chicken and fish.

### **Chimamanda Adichie on Academia (2009-12-28 15:54)**

After a few years of being a writer, [1]Chimamanda Adichie – author of my [2]Short Story of the Year – wondered if she should be a professor. (Her father is a statistics professor.) And she wanted to learn more about Africa. So she enrolled in an African Studies program at Yale. In [3]an interview, she said:

I met very lovely people at Yale, so it wasn't an entire waste of time. . . . After two years of the program . . . academia I discovered – particularly political science as it is done in the US – is not about the real world. It's about academia. I would joke and say that what they do is they create straw men, and they beat them down.Â While all this is going on, the real world is going on in a parallel universe. It is completely disconnected from what happens in academia. I didn't understand most of what I read. It wasn't written in English, it was written in political-science jargonese.

This is the usual critique, but it is well-put. If you spend enough time in academia, as I have, you can see it becoming that way, disciplines turning inward, [4]becoming less and less interested in reality. Becoming more and more ivory-towerish. Statistics, for example, became less and less concerned with real-world problems; but I could say the same about every other area (engineering, English, etc.).

This is glaringly obvious, roughly as clear as the sun rising in the morning, but some Berkeley professors denied it. "English departments have really lost their way," I would say. No they haven't would be the reply.

1. <http://www.l3.ulg.ac.be/adichie/>

2. <http://www.blog.sethroberts.net/2008/07/06/short-story-of-the-year/>

3. <http://www.themonthly.com.au/chimamanda-ngozi-adichie-conversation-ramona-koval-1666>

4. <http://www.blog.sethroberts.net/2007/09/11/modern-veblen-flight-from-data/>

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Jeff (2009-12-28 20:24:58)

I'm in the natural sciences and this hasn't been my experience, though I can see how it would be the case with – particularly – economics and political science.

seth (2009-12-28 23:06:27)

Jeff, I think the older the science the less clear is the trend – because it has been going on longer. Psychology and statistics are much younger than physics and chemistry.

Nathan Myers (2009-12-28 23:45:02)

Astronomy is the oldest of all, and astronomers are off in cloud cuckoo land chasing "Dark Energy". Physics is second-oldest, and they're off chasing Strings. Probably those problems turn largely on how much money is at stake. Telescopes and colliders don't come cheap these days. Surprises are hazardous. In economics, it costs nothing to study practically anything, so it's probably the political consequences that mire them. According to Alan Greenspan, ironically, economists in the U.S.S.R. were free to study anything they liked, because no one paid them any attention, and they had no reliable domestic data, so they studied western finance. Paleontologists still seem admirably well connected to the data, although their poverty can make them touchy and moody. Engineering is about as stable as any department can be, because if their stuff doesn't work, *everybody* notices.

seth (2009-12-29 01:08:54)

Yes, paleontologists seem immune from this. Engineering however is a prime example. Engineering profs work on stuff that will – 95 % of it, one grad student said – never be used. One engineering asst prof complained to me how little her department cared about actual stuff. They liked theory.

ChristianKI (2009-12-29 03:23:05)

It's not a problem if 95 % of the stuff doesn't get used if they follow big ideas that have a chance of success of 5 % but a potential massive payoff. It only becomes a problem when you can say with near 100 % certainty of 95 % of the projects when those projects are started that they won't be successful. As a lot of fields grow with Moore's law and a good chunk of the patents come out of academia engineering works.

Jeff (2009-12-29 10:21:29)

Nathan, you clearly have only a layman's grasp of astronomy and physics. It's typical for laymen to get caught up in semantics – "dark matter", "the god particle", "superstrings", etc – without having the faintest grasp of what those words represent or their relevance and importance in human intellectual achievement.

Nathan Myers (2009-12-29 16:45:08)

Jeff: If you can point to a single prediction subsequently observed from either of the Dark Energy or String notions, I will concede utterly. I didn't mention dark matter, but that has also not produced testable predictions, except insofar as they have frequently been able to account for anomalous observations by assuming appropriate amounts of it sprinkled about. This might count for *something*, because it's easy to imagine cases that couldn't be accounted for by any such distribution, but I don't suppose we'd hear much about those cases. Talk of a "god particle" is unadulterated PR; the less said about it the better. Seth: To ask for "facts supporting" a notion isn't meaningful, but successful predictions can count for a lot if nothing else predicts the same. Engineering departments rise and fall, but people notice where actual advances come out of.

seth (2009-12-29 17:04:29)

Nathan, you called Stephen McIntyre and Freeman Dyson "dishonest", I asked for examples, you have failed to provide them. Duly noted.

Nathan Myers (2009-12-29 17:31:02)

Seth: I didn't say Dyson was dishonest, I said his comments were meaningless. He has been promoting magic tree-breeding for many decades. He has inspired nobody to work on it at all, but magic trees are all he offers. Detailed McIntyre takedowns are easy to google up. If you don't care what they say, they're even easier to ignore. Are you aware of the concept of selection bias?

Nansen (2009-12-30 16:53:43)

@ Nathan Myers Could you please clarify somewhat your comment, "Surprises are hazardous." ? From the context, you seem to be saying that experimental surprises would be hazardous to continued funding of gigantic equipment – which leads astronomers and physicists to avoid testable predictions. Have I got that right?

Nathan Myers (2009-12-30 20:46:09)

Nansen: That's the theory. Of course the reality is more interesting. Researchers know not being tested leaves them in limbo, but have little choice about what to work on.

Alex Chernavsky (2009-12-31 12:01:30)

See also this excellent article called, "Letter from Yale", by Helena Echlin: [http://web.archive.org/web/20040427073259/http://www.zmag.org/letter\\_from\\_yale.htm](http://web.archive.org/web/20040427073259/http://www.zmag.org/letter_from_yale.htm) (Give it a moment to load – the original seems to be unavailable, so I've posted a link to the Internet Archive.)

### **Science of Everyday Life: Why "Boys and Girls"? Why Not "Girls and Boys"? (2009-12-29 14:14)**

I try to connect my self-experimentation to other intellectual activity. One broader category is [1]the stunning single case – the single example that makes you think new thoughts. Another is [2]superhobbies (activities done with the freedom of hobbyists but the skills of professionals). Superhobbies lie between hobbies and skilled jobs. A third is my position as [3]an insider/outsider. I was close enough to sleep research to understand it but far enough away to ignore all their rules about what you can and cannot do. I had the knowledge of an insider but the freedom of an outsider.

A fourth broader category is the science of everyday life – meaning science that involves everyday life and can be done by most of us. My experiments cost almost nothing, required no special equipment or circumstances. They involved common concerns (e.g., how to sleep better) and tested treatments available to everyone (e.g., standing more, eating more animal fat). [4]A post by Mark Liberman at Language Log has a nice non-experimental example of this category. The question is about word order in gender pairs. Why do we say "boys and girls" more often than "girls and boys"? Or "husbands and wives" more often than "wives and husbands"? There are plenty of such pairs, not all with male first (e.g., "ladies and gentlemen"). The several possible explanations can be tested in lots of ways that require no fancy equipment or data. As Liberman says,

A smart high-school student could do a neat science-fair project along these general lines.

A great feature of what Liberman is proposing is that the answer isn't obvious. There isn't a "correct" answer as there is in so much of the way that science is taught (e.g., physics labs, demonstrations). If I searched for examples of "science of everyday life" i would merely find canned demos, which have little in common with the practice of science. Whereas Liberman's idea gets to the heart of it, at least the hypothesis-testing part.

Thanks to Stephen Marsh.

1. <http://www.blog.sethroberts.net/2007/02/17/two-ways-of-thinking-about-self-experimentation/>
2. <http://www.blog.sethroberts.net/2008/03/30/praying-with-lior-and-labors-of-love/>
3. <http://www.blog.sethroberts.net/2009/01/24/not-the-same-study-section-how-the-truth-comes-out/>
4. <http://languagelog.ldc.upenn.edu/nll/?p=1998>

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John (2009-12-29 20:42:33)

Actually, there is a simple and coherent (and testable...in this way) theory that explains this. Long ago, Roman Jakobson, the Slavic linguist who worked for years at MIT, discussed the notion of markedness in both phonological but also semantic/lexical relations. Briefly, the first term in such a pair is generally the "unmarked" term, whereas the second is the marked one. If one of them can be used as the generic, it will be the unmarked one. In Romance languages, for example, if you ask "do you have brothers?" the word for "brother" can be either "brother (m) or sibling(m/f)". The word for sister is restricted only to female siblings. The ways that noun-phrase marking languages do this (and transform over time) is at the boundary of culture and cognition—see the signal (and early) MA thesis by Deborah Spitulnik, a senior linguistic anthropologist at Emory, on the nominal class struggle in ChiBemba (nominal here relates to nouns, not to other senses of the word), and the now classic article by linguistic anthropologist Michael Silverstein (emeritus at Chicago) called "Language and the Culture of Gender..." as well as more recent work on language and gender in ling anth and sociolinguistics by scholars such as Penelope Eckert, Kira Hall, Mary Bucholtz and the like. For specific cites see Google Scholar but these are all worth reading.

ceva (2009-12-30 14:19:36)

'In Romance languages, for example, if you ask "do you have brothers?" the word for "brother" can be either "brother (m) or sibling(m/f)". I don't think that this is the case - certainly not in Romanian, almost certainly not in French or Italian.

John (2009-12-31 00:13:21)

I should have said "Western Romance," i.e. Spanish and Portuguese where this holds true as far as I was certain. Note that the generic term for "sibling" in French, "la fratrie" is derived from the Latin for brother (and it is used in academic writing, if not as often in conversation), but here the derivation still reveals the unmarked class subsuming (or -erasing-) the marked class, which is more specific in reference (cf. the illustration at [fr.wikipedia.org/wiki/freres \\_et \\_soeurs](http://fr.wikipedia.org/wiki/freres_et_soeurs) "Deux soeurs forment une fratrie.") I wonder if the fashion of using "freres et soeurs" (sorry no accentuation on this keyboard) is a later development in French, such as the recent innovation of using "he/she" and "his or her" in English. In Italian (according to the Italian wikipedia article on "fratello," it can be used for either males or males and females (fratelli) but "sorelle" must be used if referring to a group of only females (<http://it.wikipedia.org/wiki/Fratello>), as in Spanish. Not sure about the other Romance languages. Of course none of this impedes people from saying "brothers and sisters" (hermanos y hermanas) if they want to—but currently, that would be marked in discourse because you would be doing extra linguistic work to specify the females. In any case, the main point is still there. We more commonly say "men and women" in English (at least the Englishes I grew up with," but reverse this for the vocative "Ladies and Gentlemen," and in other such phrases "Meine Damen und Herren" perhaps a marked form to mark special occasions through reversal of order? Anyone who wishes might look up the work of Linda Waugh 1982 "Marked and Unmarked: A choice between unequals" and the interesting review and critique of the uses of markedness in Martin Haspelmath "Against Markedness." In social anthropology, Bourdieu's article on the Kabyle house brings in the notion of the inequality between marked and unmarked to understand the inequalities of norms of lived space.

ceva (2009-12-31 12:15:23)

I presume that one term of a m/f polar pair is used as a generic because the advantage gained from appealing to one gender more than makes up for the disadvantage of potentially alienating the other. This then allows for terms that are unmarked in one context to be marked in another - for instance, I would expect the relevant pairs of terms to switch their markedness

in a predominantly female setting ('girls and boys'). I think that this also applies to marked/unmarked cultural signifiers and their reception. In a formal social occasion, there is more power to be gained for a man by overt appeal to the women in company than to his fellow men (he is more likely to be courting the former). Perhaps women are less prone to say 'ladies and gentlemen', or do so with less enthusiasm.

John (2009-12-31 20:11:54)

It's not that anyone designated these linguistic patterns (i.e. "appeal to one gender") in order to bring in or alienate anyone. It's difficult not to read this in terms of discursive power but it's not a simple relationship (grammatical marking != social power)–for example, some languages such as Turkish, have no grammatical gender. Does that imply that there is less sexism in Turkey? Some languages (such as English) have very little overt morphological gender marking on nouns (ex: "doctor" and "nurse" are -not- gendered in their form as nouns (actor/actress are). But many people understand "doctor" as male and "nurse" as female despite real-world evidence to the contrary. And generally, the markedness relation is generally part of the understanding of the noun, not the momentary social situation in which it is used. Grammar is -not- about appealing or courting or other social functions, although of course it is the matrix through which we perform these actions. AnBut intentional praxis can change language, albeit often in unexpected directions. The general loss of "thou/thee" in English was hastened by the Quakers, who continued to use thou as singular and you as plural, refusing the shift where thou was understood as familiar and you as a term of distance. They seemed rude to the majority of English at the time, who then started moving en masse to use only you, reserving thou/thee for religious purposes.

ceva (2010-01-01 03:17:30)

Well, people generally understand 'doctor' as male as doctors are more likely to be male. I dare say that the opposite would be true in a society in which the majority of doctors are female. In a society in which there are equal numbers of male and female doctors, then I would expect the understanding of the term to be sexed following the sex of he who is doing the understanding. 'Mom and dad' is so ordered as women generally have more of a say in their children's upbringing, 'men and women' as men tend to be the power brokers outside of the home. Merely looking at 'who' is talking and 'to whom' they are talking provides satisfactory explanations for orderings of polar pairs. This also allows for reversals of markedness according to the context of the 'momentary social situation' (re what I mentioned about predominantly female workplaces). I suppose that the general grammatical make-up of a language provides certain hard-to-change parameters within which patterns of use develop, so Turkish sex generalisations would still exist, but be expressed within such parameters implicitly cf. "Gender in a genderless language: The case of Turkish", by Friederike Braun What might disconfirm my thesis would be to find a language which presents three possibilities: m/f or neuter, with its users choosing neuter forms (or the form that normally signifies the minority part of the group) to address unevenly mixed dual sex groups (ie. with one sex constituting a clear minority). I propose that this would only be the case if either a) there is something especially intractable about the language's grammar that prevents a direct-appeal-to-one-sex being expressed or b) the general social context has little or no sex differentiation, so appeal to one sex or another would go against habit or could backfire (change in social context might explain the rise in use of 'they' for he/she and would be the test of invented pronouns, such as ze/zir).

John (2010-01-01 23:17:08)

The only problem I have with your argument is the intentionalist fallacy–grammatical categories and noun class systems in themselves were not "designed" to appeal or not to anyone. It is really a historical accident that Romance noun classes are called "genders," as the way nouns are assigned to them is arbitrary–there is no real gender in the sun or moon although speakers may feel that the noun class assignment is not arbitrary, it is. Case in point–while sun is marked as masculine and moon marked as feminine in Romance langs. generally and many people feel this is natural and obvious, in German it is the other way around, and those speakers also feel it is natural and obvious. These are truly arbitrary assignments in the linguistic system (in German "girl" (das Maedchen) is neuter!), and go well beyond gender (do "leaf" or "root" or "ceiling" have any innate gender?). Where I think we really agree is that there are potentially reciprocal conditioning effects between cultural notions and "feelings" about the naturalness of the assignment of gender to noun classes and the subsuming of the mixed gender case into the masculine plural. But as these are explicitly marked surface level forms, they are easier to rise into consciousness and oppose through practice (unlike, say, count and non-count classes in English, which are not clearly morphologically

distinct). However, this doesn't appear to happen outside of an ideological program (change in the social context, as you point out)-which may have unintended effects. For example, it is surprisingly common for female US English speakers whether feminist or not to use "Hey guys" to address an all-female group instead of the all-female "Hey gals" (as reported by my female and feminist roommate). Again, "guys" while originally a term of address for men, becomes the preferred generic informal term of address, even in an all-female group. Why? While I also agree with you that the generic should not be masculine (vs. instead of *la fratrie* (combo of feminine noun class with masculine (*frater*) root, German uses "*das Geschwister*teil," neuter all the way through), the pattern of such noun class use is resistant, but not immutable-I think you would really like reading Spitulnik on ChiBemba and Bantu langs. more generally, as they have what is sometimes called "supergender" with many, many noun classes that do get reinterpreted and reassigned through practice-what she calls "nominal class struggle."

### **Why I Love the Internet (2009-12-30 13:31)**

Because it allows me to read stuff like the following, an anonymous comment on [1]a post by Washington Post reporter Andrew Freedman. Freedman complained that 2009 saw "erosion of clarity about climate":

Mr. Freedman, the expression you're struggling to avoid with regard to your propaganda in support of "mainstream climate scientists" is one devised by Nobel laureate Richard Feynman in 1974.

The words are "Cargo Cult Science," the advancement of scientific seeming without scientific integrity. Not just error but flagrant dishonesty. Fraud. Criminal conspiracy, too.

That's your "mainstream climate scientists" in a neat little bundle of filth.

The Climategate revelations - the obvious work of an insider, a whistle-blower, not an outside hacker - show how the CRU correspondents cooked their data, manipulated their crooked computer models, and generally schemed to defy the UK and US laws covering Freedom of Information, including indications that Prof. Jones of the University of East Anglia suborned not only the compliance officers of his University but also one or more officers of Her Majesty's government in the ICO.

Thirty wonderful years of duplicity, mendacity, "cork-screwing, back-stabbing, and dirty dealing."

And you, Mr. Freedman, are defending this. Tsk. But what the hell have we any right to expect - other than this act of accessory after the fact in a multiple-count felony investigation - from anyone associated with The Washington Post?

Courtesy of Climategate, we now have stunning "clarity on climate."

This isn't exactly brilliant but it is better (better-written, better-argued, more heartfelt) than 99 % of mainstream journalism, such as the Washington Post or New York Times. One big function of journalism is "to afflict the comfortable." That includes science journalism. When a journalist, [2]such as Elizabeth Kolbert, cannot form her own opinion but must accept what powerful people tell her, she cannot "afflict" them.

I think there is a psychological principle at work. It has different names. One is [3]belief in a just world. The rich and powerful think they deserve their good fortune. Another is [4]cognitive dissonance. If I did this crummy job for low pay, I must enjoy it. Yet another is [5]Stockholm Syndrome. The science journalist thinks: If I trust this scientist, he must be trustworthy. But he isn't. Outsiders, such as the anonymous commenter, are not subject to this effect and see things more clearly.

1. [http://voices.washingtonpost.com/capitalweathergang/2009/12/2009\\_saw\\_erosion\\_of\\_clarity\\_on.html](http://voices.washingtonpost.com/capitalweathergang/2009/12/2009_saw_erosion_of_clarity_on.html)
2. <http://www.blog.sethroberts.net/2009/11/11/three-things-elizabeth-kolbert-doesnt-know/>
3. [http://en.wikipedia.org/wiki/Just-world\\_phenomenon](http://en.wikipedia.org/wiki/Just-world_phenomenon)
4. [http://en.wikipedia.org/wiki/Cognitive\\_dissonance](http://en.wikipedia.org/wiki/Cognitive_dissonance)
5. [http://www.mental-health-matters.com/index.php?option=com\\_content&view=article&id=167](http://www.mental-health-matters.com/index.php?option=com_content&view=article&id=167)

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Andrew Gelman (2009-12-30 13:43:01)

I'll avoid the temptation to be sarcastic here and just say that, no, I don't trust the opinions of an anonymous letter-writer to the Washington Post over an actual expert such as [1]this guy. I'm not saying that an anonymous letter writer can't be correct; I just think I'll go with the experts on this one. Nor do I believe that that letter is better-argued than 99 % of what's in the newspaper. I do believe it's heartfelt ("bundle of filth," etc.) but I don't see that as such a virtue in this case!

1. <http://geosci.uchicago.edu/~rtp1/>

Pedro J. (2009-12-30 14:38:00)

Not getting your point. Freedman's main point is quite clear (apart from true) in this paragraph "Increasingly, individuals with backgrounds in a wide variety of fields, ranging from statistics to electrical engineering, are taking to the Internet to conduct their own climate science research (or to poke holes in someone else's work, which, in theory, can be a valuable service in science) and share it with the world. Their efforts are making an impact. For example, popular climate skeptic blogs such as Climate Audit and wattsupwiththat were instrumental in pushing climategate into the mainstream press, while mainstream researchers' sites, such as RealClimate, were put on the defensive." The best example of Cargo Cult Science is people doing parallel research outside the peer-review process.

seth (2009-12-30 14:49:13)

Andrew, I wasn't comparing the commenter to an expert, I was comparing him or her to a journalist. Pedro, my point is that the commenter's response to Climategate is better than Freedman's. Better in the sense that I'd rather read the comment than what Freedman wrote.

q (2009-12-30 14:53:06)

i've been having trouble making heads and tails out of climategate from a neutral fact point of view. clearly there is the appearance of poor decisions on the part of a few scientists. clearly a lot of people are making use of it to support their ideologically driven agendas. those two datapoints are not helpful in terms of creating my opinion on global warming; or rather only the latter is only helpful, and only insofar as it provide easy markers on which i can recognize an opinion that is ideologically driven from one side. without a lot of additional context i can't say whether what the scientists did rises to the level of fraud, and even if so, i can't judge how important these people were in the overall debate. i know you enjoy the internet, seth, but it's also clear that it – just as any communication media – is full of uninformed people pushing angry views in an attempt to stir up waves of angry people. it's a soapbox. it's very cheap to shout angrily on the internet, but as far as i am concerned i'd rather have a rational discussion. so here's my request: if the climategate emails are important, a couple things should exist, and maybe you can point me to them: – a resource that explains these emails rationally in context and which keeps the temperature low – some people who have materially changed their minds about global warming as a result of this new data

Pedro J. (2009-12-30 15:20:50)

"a resource that explains these emails rationally in context and which keeps the temperature low" Wikipedia is doing a good job. There are lost of references there [http://en.wikipedia.org/wiki/Climatic\\_Research\\_Unit\\_e-mail\\_hacking\\_incident](http://en.wikipedia.org/wiki/Climatic_Research_Unit_e-mail_hacking_incident)



Nathan Myers (2009-12-30 18:05:58)

The Washington Post is a remarkably low standard of comparison, these days. The letter really says nothing more than "Climategate makes me think of cargo-cult science", which the writer certainly thought before the e-mails came to light. I have had doubts about climate science, but the more I look at details, the more confidence I have in the results presented. (That's not to say I expect high water levels a century on; a global freeze seems an equally likely ultimate outcome, but not a more appealing one.) Looking into the supposed "smoking guns" in the e-mails, I find simply nothing there. I also find lie after lie about what they are supposed to mean, and the lies are all on one side. When you find that somebody feels they have to deceive you to make their case, you don't need to know much else about their case.

Ben Hyde (2009-12-31 14:54:45)

I believe this is well covered in <http://xkcd.com/239/> , but did Martian Luther wear a cape?

Hal (2009-12-31 16:30:45)

I suspect that the practice of science exposed in climategate is not an anomaly but is common. Tribalism, attempts to suppress the voice of opponents, vicious insider battles, hiding inconvenient facts, all are part of the scientific world. Science is not at all practiced as per the idealistic descriptions. And yet, science works. No one can deny the reality of scientific progress over the last several centuries. Even with all its flaws, even with every human error and bias as part and parcel of the process, science works. In fact I suspect that flawed, vicious, spiteful science is probably MORE effective than would be science by the book. Nothing motivates scientists like the chance to show their enemies are fools, and a virtuous, objective science would never have such devoted practitioners. Climategate gives us no reason to distrust the conclusions of climate science, because science works despite (or perhaps even because of) the kind of practices exposed in those emails.

## **The Unwisdom of John Mackey (2009-12-31 15:56)**

John Mackey is the founder of Whole Foods, a business I greatly respect. But he's not always right.

“You only love animal fat because you’re used to it,” he said. “You’re addicted.”

(From [1] a profile of Mackey in The New Yorker.) I discovered that [2] animal fat improved my sleep when I overcame my (learned) repulsion and ate a lot more than usual. I think it's obvious that fat tastes good for unlearned reasons. For reasons not based on experience. (Babies like fat. Animals similar to us, who have never eaten fast food, like fat.) Mackey's comment is an example of a larger disregard of this. Professional nutritionists, including nutrition professors, have ignored the general point that our food preferences must somehow be good for us. I'm not saying all fat must be good for us – just the fat we ate when our liking of fat evolved. The idea that evolution would shape us to like and eat a food component that's bad for us makes no sense.

1. [http://www.newyorker.com/reporting/2010/01/04/100104fa\\_fact\\_paumgarten?currentPage=all](http://www.newyorker.com/reporting/2010/01/04/100104fa_fact_paumgarten?currentPage=all)

2. <http://www.blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>

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Helen (2009-12-31 16:31:26)

I haven't read the whole article yet, but, to my satisfaction, he looks terrible. I do appreciate Whole Foods, though, for having some grass-fed animal products and other unadulterated food.

Bryan (2009-12-31 16:51:05)

That quote jumped out at me too. Gary Taubes would replace "animal fat" with "simple carbs" like rice, potatoes, bread, and pasta.

Anthony (2009-12-31 17:15:37)

Seth, how would you respond to the claim that certain food likings (as in fat) are good for us short term but not long term (say, they might take several years off our life) - and that the immediate benefits were large enough to outweigh the longer term detriments evolutionarily speaking?

AntiAntiCamper (2009-12-31 17:54:38)

Sorry mate but I think I gotta take this blog off my list. I respect your ability to go your own way. But recently you've been saying things that are counter-logical. Consider: quote: ...the general point that our food preferences must somehow be good for us. I'm not saying all fat must be good for us - just the fat we ate when our liking of fat evolved. The idea that evolution would shape us to like and eat a food component that's bad for us makes no sense. Our food preferences were the result of natural selection at a very different point in human evolutionary time. Food preferences that once served a useful purpose may very well be harmful at this time, in the present context. Perhaps animal fats help you sleep better. OK. Good. But the general argument simply does not hold. Also, you recently claimed to measure sleep quality, subjectively, to an accuracy of one part in one thousand. I don't believe this accuracy at all.

Joe (2009-12-31 19:24:39)

I think it's obvious that SUGAR tastes good for unlearned reasons. For reasons not based on experience. (Babies like SUGAR. Animals similar to us, who have never eaten fast food, like SUGAR.)

seth (2009-12-31 20:28:50)

Joe, there was no sugar 100,000 years ago. I'm sure that whatever tasted sweet back then was good for us, at least in the amounts that were available. Israel Ramirez thinks sweet things taste good so that we would eat more plants. Fruit, for example. AntiAntiCamper, food preferences that worked 100,000 years ago may now be harmful because we can fulfill them in ways that weren't available back then. My point is that our basic nutritional needs are unlikely to have changed. If we needed a certain kind of fat back then we probably need it today. Anthony, nothing I know about in nutrition supports the idea of short-term benefits but long-term costs. Vitamin C: short-term benefit, long-term benefit. Etc.

lance (2010-01-01 02:59:17)

I've noticed a surprising amount of resistance to the the caveman/paleo theories of nutrition, at least when I've proposed it to acquaintances and family members. I think people resist the implication that the most expensive diet is the healthiest . . . it goes against democratic sensibilities.

Rashad (2010-01-03 02:15:16)

I think the problem behind the assumption is that evolution didn't necessarily select for foods that contribute to longevity. The strongest effects of natural selection occur up to parenting age. While having older humans around could certainly help the survival of a community, anything that improved odds of surviving and reproducing in the first 20-40 years would have the highest favorability. Hence, it seems entirely conceivable that something like fat, which is the densest source of calories and very useful to those with inconsistent access to food, might have long-term consequences that evolution didn't care about. Now, I'm not saying that this is necessarily right, but it is certainly plausible. So I don't think you can say that anything that has a demonstrated positive effect and we evolved to like, is necessarily something that is good for overall health and long-life.

seth (2010-01-03 06:58:17)

Rashad, I'm pretty sure that grandparents help their grandkids more when they are alive than when they are dead. As for "necessarily" - we can't "necessarily" say anything about nutrition. If you know of data that cast doubt on my conclusions or assumptions that would be more convincing.

michael vassar (2010-01-04 09:16:34)

The conventional wisdom is that sugar other than honey and fat other than blubber weren't available in modern quantities and purities until agriculture.

Patrik (2010-01-05 01:01:55)

The anti-saturated fat misinformation cascade has done irreparable damage.

Vesna (2010-02-03 05:40:57)

Sugar \*including\* honey was not available in modern quantities and purities until recently. Agriculture was invented some 10,000 years ago. Sugar became cheap and plentiful with the advent of the European powers developing warm-weather colonies around the globe suitable for sugar plantations. Honey became cheap and plentiful much later. The 19th century saw the invention of human-made beehives with removable, replaceable square frames that bees spontaneously fill with honey. Until then, humans had to smash a beehive (and usually kill the bees) to get at the honey. Honey in any controllable, scalable quantity dates only from that time. Modern, large-scale, commercial beekeeping involves keeping a cheap syrup solution near the beehives for the bees to visit. Cheap honey comes from bees that never lit upon a flower. I suppose you could call the resulting product "pure" in that it is simpler, lacking the complexity of wild or artisanal honey, in content and in taste. As far as the "purity" of modern fat, I don't understand what is meant by this. True, olive oil has been available in large quantities since the dawn of the agriculture. (Only in its "extra-virgin" form, though.) But modern plant oils, like canola and cottonseed, are the result of complex, high-tech processes like bleaching and hydrogenation that result in substances that may appear "pure" to the naked eye, but they are so altered from any naturally occurring fats that our animal bodies cannot safely metabolize them. The problem with them does not inhere in their quantity, but in their quality: they are not fit to eat. Why marginalize blubber? The fat of many types of marine fauna supported the human race throughout our history. Arguably, it was eating all those high fat creatures so easily captured along shorelines that enabled our brains to grow big enough for us to figure out how to hunt down faster, stronger land creatures. Humans have long thrived on a lot more fat than many well-meaning people allow themselves today.

### Assorted Links (2009-12-31 19:23)

- [1]advocacy in the guise of journalism (climate science edition)
- [2]what if you stopped using soap?
- [3]climate change: model vs. reality
- [4]some of Malcolm Gladwell's best writing

1. <http://www.climatedepot.com/a/4681/-Wash-Times-trashes-APs-Seth-Borenstein-over-his-reporting-on-Climategate--Cites-Climate-Depot->
2. <http://freetheanimal.com/2009/12/paleo-i-dont-care-i-like-no-soap-no-shampoo.html>
3. <http://www.worldclimatereport.com/index.php/2009/11/13/us-record-temperatures-a-closer-look/#more-394>
4. <http://gladwell.typepad.com/gladwellcom/2009/11/pinker-on-what-the-dog-saw.html>

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Jim (2009-12-31 19:43:28)

Seth, your persistent questions about global warming are thought-provoking, but I think you may be overlooking many other issues related to manmade pollution. These include well-documented damage to our air, land, and water, and the resultant

extinction of many animal and plant species which are vital links in our food chain and bio-system. By all means, insist that global warming groups show their evidence, but don't trivialize the overwhelming evidence of related environmental destruction.

seth (2010-01-01 03:43:13)

Jim, as others have said, to focus on reducing carbon dioxide emissions when what really needs to be reduced are dangerous pollutants would be a terrible mistake. A terrible mistake that is currently being made by many people. As you say, it's obvious that pollution is a problem. I live in Beijing part of the year! My questions about global warming will help us put our resources, our power of innovation, where they will do the most good for the environment.

Hal (2010-01-01 12:23:14)

Seth do you intentionally pick and choose articles which support your current view of climate change? If so, are you worried that this could bias your opinion and prevent you from taking an objective view of the situation? In other words, do you see yourself as a partisan who has a side that he wants to see win, or as an impartial observer who wishes to know the truth and is open-minded about evidence from all directions?

seth (2010-01-01 15:39:38)

Hal, I pick articles that I think are revealing. It'd always possible that they reveal I'm wrong. (See the next post.) I'm not sure what it means to be "impartial" but yes I want to know the truth. I've been searching for evidence I'm wrong about this.

Dave (2010-01-04 20:42:07)

Re: the global warming article - It's a common fallacy to want to use "extreme" statistics (high/low records for example) to demonstrate trends, but the way you measure the standard error in the tail of a normal distribution is different than the way you measure standard error in changes in the mean. The error bars are much, much bigger when you look at extreme statistics, so what might appear to be a real statistically significant change will in reality not be statistically significant (and therefore, not real). Bottom line - don't even bother looking at studies that use extreme measurements. Dave

## 5. 2010

### 5.1 January

#### The Door-in-the-Face Effect (2010-01-01 05:08)

One of my Tsinghua students, a freshman, has been getting up early Saturday mornings to go to nearby Beijing University to attend a 4-hour intro psych class for graduate students. "What does the teacher talk about?" I asked. He showed me his notes. "The Door-in-the-Face Effect" was the heading of a little graph he'd drawn. "What's that?" I asked. "If you get someone to help you in a little way, they're more likely to help you in a big way later," he said. I knew that result. It's called the [1]foot-in-the-door effect. "Your teacher made a mistake," I said.

I was wrong. There is a [2]door-in-the-face effect very similar to the foot-in-the-door effect. The door-in-the-face effect is after you make a big request that is turned down, you are more likely to get agreement to a small request.

1. <http://psycnet.apa.org/index.cfm?fa=buy.optionToBuy&id=1989-27177-001&CFID=27027292&CFTOKEN=43085010>
2. [http://pdfserve.informaworld.com/986334\\_770849120\\_713690244.pdf](http://pdfserve.informaworld.com/986334_770849120_713690244.pdf)

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Mike Kenny (2010-01-01 08:29:51)

hm, that reminds me of the movie 'choke' i just saw, in which the main character induces choking in a restaurant in order to get someone to do the heimlich maneuver on him, and then these people tend to send him money, the idea being once someone saved your life, they'd want to help you further. to me the idea sounded implausible—it's slightly different than the above ideas in that it's about someone helping you in a big way wanting later to help you in smaller ways later.

Ä...se Innes-Ker (2010-01-02 05:39:44)

It is a fairly well established effect within the psychology of persuasion (nicely described in Cialdini's book Influence - or, rather one of the many variants of it). I teach it in a course on marketing psychology. On top of working (asking for a big thing and then backing down and asking for something smaller - which is then accepted), it makes the person that this is used against feel good about accepting the second request (after all, one has met the requestor half way). My 6 year old son intuitively understands this: Beginning by asking for something he will not get (chocolate), then backing down to ask for a cookie (and getting it)...

david (2010-01-03 19:30:30)

Mike, you should the book version of Choke. It's much much much better than the movie. That's often the case and especially so with Choke, however with Fight Club (book by the same author) I'd say the movie was slightly better than the book.

#### Academic Horror Story (Harvard University) (2010-01-01 15:21)

Are the heads of large companies worse than the rest of us? Aaron Swartz said as much when, in a discussion of Ken Auletta's Googled, he [1]called them "sociopaths". Nicholson Baker seemed to have had similar thoughts when

he [2]said about the same book that "what Auletta mainly does is talk shop with C.E.O.'s, and that is the great strength of the book."

Lawrence Summers, now in the Obama administration, was head of Harvard University, one of the world's most powerful companies, from 2001 to 2006. Everyone knows about Summers'[3] repeated tendency to do the incredibly inappropriate thing. A generous interpretation of those incidents is that Summers had lived a sheltered life. I believe they were signs of something much worse – signs of pathology – based on what he did to one of Harvard's best employees:

Back in 2002, a new employee of Harvard University's endowment manager named Iris Mack wrote a letter to the school's president, Lawrence Summers, that would ultimately get her fired.

In the letter, dated May 12 of that year, Mack told Summers that she was "deeply troubled and surprised" by things she had seen in her new job as a quantitative analyst at Harvard Management Co.

She would go on to say, in later e-mails and conversations, that she felt the endowment was taking on too much risk in derivatives investments, and that she suspected some of her colleagues were engaging in insider trading, according to a separate letter written by her lawyer that summarized the correspondence.

On July 2 Mack was fired. But six years later, the kinds of investments she allegedly warned about did blow up on Harvard. The endowment plunged 22 percent last summer, in part due to the collapse of the credit markets. . . .

Mack, who holds a doctorate in mathematics from Harvard, had been with Harvard Management for just four months when she approached Summers. She asked him to keep her communications confidential, or risk making her life "a living hell."

But on July 1, Mack was called into a meeting by her boss, Jack Meyer, then the head of Harvard Management.

The next day Meyer fired her, according to the letter from her attorney, Jonathan Margolis, a copy of which was obtained by the Globe. Meyer told Mack that she was fired for making "baseless allegations against HMC to individuals outside of HMC," according to the Margolis letter.

Mack writes to Summers, alerting him to behavior by her co-workers that she believed could (and eventually did) have a very bad effect on Harvard. Fearing loss of her job, she asks him to keep her warning confidential. Summers fails to honor her request. What distinguishes this particular horrible behavior from more conventional examples of horrible behavior by incredibly powerful people is that Summers' action did him no good. He didn't backstab Mack to get to the top. He was at the top. He didn't exploit Mack. He didn't cheat Mack. This is coming across a courageous decent far-seeing person, much less powerful than you, who is trying to help you and all the people in your care . . . and giving that person a good hard kick. For no reason. There is something very wrong with Lawrence Summers.

[5]Frontline's recent show The Warning tells how [6]Brooksley Born, when she was head of the Commodity Futures Trading Commission (1996-1999), did her best to protect the rest of us from exactly what Mack warned about. Summers told her, according to a third party, "you're going to cause the worst financial crisis since the end of World War II. I have 13 bankers in my office that have informed me of this. Stop. Right away."

1. <http://www.aaronsw.com/weblog/googled>
2. <http://www.nytimes.com/2009/11/29/books/review/Baker-t.html>
3. [http://en.wikipedia.org/wiki/Lawrence\\_Summers](http://en.wikipedia.org/wiki/Lawrence_Summers)
4. [http://www.boston.com/business/articles/2009/04/03/ex\\_employee\\_says\\_she\\_warned\\_harvard\\_of\\_risky\\_moves/](http://www.boston.com/business/articles/2009/04/03/ex_employee_says_she_warned_harvard_of_risky_moves/)
5. <http://www.pbs.org/wgbh/pages/frontline/warning/view/>
6. <http://www.washingtonpost.com/wp-dyn/content/article/2009/05/25/AR2009052502108.html>

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Harold Jarcho (2010-01-01 19:33:17)

Sounds like The Gervais Principle. The "Sociopaths" at the top are protecting the system from "Losers" like Meck, who don't realize that it's all rigged. A "Clueless" manager would never have raised the alarm and provoked the ire of the few at the top. <http://www.ribbonfarm.com/2009/10/07/the-gervais-principle-or-the-office-according-to-the-office/>

Siah (2010-01-01 20:00:02)

This story really freaked me out.

Michael Bishop (2010-01-01 20:51:34)

Seth, boston.com link is broken Are you so sure you understand what happened that you want to accuse Summers of being evil?

seth (2010-01-01 23:17:33)

Michael, "evil" is your word, not mine. Mine is "pathology". No one at Harvard nor Summers himself has denied what Mack has said. It has been more than half a year since she said it. They know a lot more about it than I do – and, as far as I can tell, they agree with her description of what happened. If you know something I don't know, or have a different interpretation, you are welcome to put it forward. I've fixed the boston.com link, thanks for letting me know about it.

Andrew Gelman (2010-01-02 00:58:08)

Seth: My impression is that it's pretty much universal in organizations that if you go over your immediate superior's head to talk to a higher-level figure in the organization, he or she will go right back and talk with your immediate superior. I agree this is a problem—it can be a huge problem—but it happens all over the place. Whether or not it's "pathological," it's hardly unusual for Summers to behave like just about every other higher-up. I think this attitude is horrible, horrible, horrible, but it happens all the time, and there's often a huge amount of secrecy about who's talked with whom in an organization. Higher-ups always like to follow the line of the hierarchy. More specifically, I disagree with your implied claim that there was no reason for Summers to talk to Mack's boss. (The basis of your claim of "pathology" is, I believe, that you're saying that Summers did something bad "for no reason." An obvious reason for Summers to talk with Mack's boss is for Summers to get to the bottom of things as quickly as possible. The president of an organization is a busy guy. Trying to handle this while protecting the confidentiality of someone he doesn't know . . . well, maybe that would be the moral thing (and, in this case, it would've been the smart thing too, retrospectively), but, short-term, it takes a lot less of Summers's time to call Mack's boss, or Mack's boss's boss, or whatever, and delegate the problem to them. It's amusing that Mack shares a name with the lowly turtle who quit his job and, as a result, toppled the mighty Yertle. I wonder what's happened in the 8 months since the story came out in the newspaper. It doesn't seem to have been enough (yet) to topple Summers. I'm of mixed feeling on this; on one hand, behavior such as Summers's is pretty horrible (here, I'm assuming the claims in the news report are accurate); on the other hand, maybe it doesn't make so much sense to slam Summers for the sort of behavior you see in just about every organization; on the third hand, setting an example with Summers might motivate upper-level managers elsewhere to think more carefully; etc.

seth (2010-01-02 06:05:18)

Andrew, thanks for your reaction. The "bad thing" that Summers did wasn't talking to Mack's boss – it was telling Mack's boss who complained. He could have easily talked to Mack's boss about the complaint and kept her identity confidential. A Harvard Crimson article about this says (based on email documentation) that Mack was promised confidentiality. I don't think you see

this sort of betrayal "in just about every organization". I can't think of a single example anywhere close to this. I am unfamiliar with many sorts of organizations but in the ones I know about I have not encountered anything like this. Until now. My guess, based on the Born story, is that Summers decided that Mack should be fired and accomplished that by telling her boss what she'd done. "May I fire her?" Mack's boss asked Summers. "She's your employee," he replied. I am quite familiar with the dangers of whistle-blowing. It's plenty dangerous, but not – in any other case I know of – because the person you are writing to might decide you should be fired.

Andrew Gelman (2010-01-02 09:48:31)

All the organizations I've ever seen, if person A complains about boss B to higher-up C, the most likely next step is C calling up B and saying, "Hey, A says you're doing something wrong. What's up?" I don't know about the Summers case, but in general I doubt that C gives a damn about A, one way or another; C's goal is to not have to think too hard in these situations and to rely on B to deal with it.

peter (2010-01-02 10:19:59)

[illegible]

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seth (2010-01-02 15:24:47)
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Andrew, Mack asked for confidentiality and was promised it. Peter, the two cases you mention (Born and Shinseki) are both very different. from the Mack case. Born wasn't fired. A promise of confidentiality wasn't broken. She was much much more powerful than Mack. She wasn't a whistle-blower in the usual sense; she was simply trying to do her job as best she could. Whereas Mack's job description didn't include "protect Harvard from your foolish superiors". As for Shinseki, of course if you publicly disagree with your boss, especially in the military, you risk being fired. Mack didn't publicly disagree with anyone. Moreover, the power difference was much greater in the Summers/Mack case than in either of those two cases.

Andrew Gelman (2010-01-03 07:55:32)

Seth: I don't know what "a whistleblower in the usual sense is," but someone going around saying that the people she's working for are thieves . . . that sounds like a whistleblower (in a very good way)! On the other point, I think it's standard operating procedure in almost any organization that when person A complains about immediate supervisor B to higher-up C, that C will immediately go and talk with B, whether or not confidentiality has been requested or promised.

peter (2010-01-03 13:38:00)

Seth, in the article i don't see that Summers made a promise; and even if he did promises are broken all the time. Mack does not have a cause of action (a legal claim) even if summers broke his promise (which i don't see from you excerpt). Also, Shinseki's comments that resulted in his dismissal were made to a Congressional Committee; whatever duty of loyalty one has to one's boss, it cannot supersede the duty to speak truthfully under oath. But why quibble; the larger point of the summers/mack episode and the examples i gave are same; there is an entrenched institutional mantra that is defended at all cost; the people at the top have an interest in the status quo and see themselves as indistinguishable from the institution, so that an attack of any sort on the institution is an attack on them and vice-versa. That's the problem. Summers is not any worse or better than anyone else. They are all the same, that's how they get to the top. They stay at the top (or in power) by letting everyone around them know that dissent(which might reflect badly on them) will not be tolerated. Anytime any of them speak you'll



notice that 80-90 % of the comments are self-aggrandizing or defending their department. This is especially true of Geitner and Bernanke.(just today Bernanke said Fed policy of easy credit played a small role in the housing bubble and that mostly it was caused by relaxed lending standards and exotic mortgages; of course, those 2 phenomena would not have been present without the easy credit provided by Fed policy; so his comments were just double speak designed to exonerate the Fed from its obvious responsibility; It is not a coincidence that there are legislative proposals to audit or otherwise supervise the Fed and his comments were an attempt to thwart that effort.) Finally whatever the result of the Mack/Harvard lawsuit, her career is likely irrevocably damaged in the way that an Army General's career would be damaged by being dismissed by the Sec. of Defense. Even if Mack is vindicated by the lawsuit, the message to every employee is that same, i.e., keep your mouth shut or we'll ruin you.

seth (2010-01-03 14:29:18)

Peter, the promise of confidentiality is described here: <http://www.thecrimson.com/article/2009/3/31/hmc-analyst-questions-dismissal-a-fter-a/> As far as I know there is no "lawsuit". There was a settlement between Mack and Harvard several years ago. I suppose Mack released the documents she did because she thought the rest of the world should know what happened to her. I agree, obviously. Promises of confidentiality to whistleblowers "are broken all the time"? I thought I knew a lot about what happens to whistleblowers; I haven't encountered this. Can you give an example? Andrew, yes, Mack was a whistleblower in the usual sense. My point was that Brooksley Born was not. Born thought OTC derivatives should be regulated. That was why she got in trouble. Born wasn't criticizing her co-workers or boss. I have the same question for you as for Peter. You seem to think that promises of confidentiality to whistleblowers are routinely violated ("standard operating procedure"). Could you tell me an example?

peter (2010-01-03 17:21:35)

i think we're speaking at cross purposes. your distinctions are correct, but in a big picture sense, in my opinion, not terribly relevant. if you google "fate of whistleblowers" several items are raised; i'm not going to review all of them to see if promised confidentiality was violated, but it hardly matters if one's career is derailed; it seems to me that this is the important issue. e.g., "The fate of whistleblowers is characteristically bleak in that if they have not already decided to resign they can expect to be dismissed from their employment."[http://findarticles.com/p/articles/mi\\_m4339/is\\_n2\\_v19/ai\\_20823856/](http://findarticles.com/p/articles/mi_m4339/is_n2_v19/ai_20823856/) "The conventional story-high-minded individual fights soulless organization, is persecuted, yet triumphs in the end-is seductive and pervasive. In speaking with whistleblowers and their families, lawyers, and therapists, Alford discovers that the reality of whistleblowing is grim. Few whistleblowers succeed in effecting change; even fewer are regarded as heroes or martyrs."[http://www.cornellpress.cornell.edu/cup\\_detail.taf?ti\\_id=3501](http://www.cornellpress.cornell.edu/cup_detail.taf?ti_id=3501) WHISTLEBLOWERS Broken Lives and Organizational Power C. Fred Alford

seth (2010-01-03 18:35:49)

Peter, yes, I knew about the average fate of whistleblowers. Harvard isn't your average company. It claims to be much better. (The average company hasn't received billions in charitable donations.) Nor Larry Summers the average CEO. He claims to be much better. (The average CEO isn't high in the Obama administration.) It wasn't naive of Iris Mack to expect that a promise of confidentiality from Summers, the CEO of Harvard, would be respected.

bc (2011-07-23 09:06:26)

I'm late to the discussion, sent here by today's Seth links. Andrew Gelman has it correct, although I might go further. It's the boss' job to make their organizations run smoothly without constantly digging in and micromanaging. They will always get requests that skip levels and they will nearly always send them back down to the sender's manager to go and deal with it without bugging them. To do anything else undermines the intermediary managers and swamps the CEO. Senior managers get a lot of 'my manager is screwing things up' email, usually from people who aren't very good at their job. You can't tell how good Mack was, but she was a newbie in the org. Did Iris Mack know Summers? Did she know that he'd want to listen to her comments? If not she's taking a huge risk and it didn't pay off. That was a painful way to learn a lesson. Ms Mack starts a new job and straight away goes behind her manager's back to mail really bad news to the CEO. No wonder she's no longer on the team. Now we don't and can't know the circumstances. Did she raise the problems with her team members and her

manager? Did she go up the chain with her manager's assistance? How well did she communicate with her coworkers? Did her manager already know the problem? How big was the org chain? But based on what little is in that quote she sounds like someone I wouldn't want on my team. Maybe that's what Summers thought, too. Seth, it looks like there was no promise of confidentiality from Summers. The article mentions a request from Mack, but no promise from Summers. He's got a new employee whining to him so he sends it to the line manager. Yeah it's kinda rough since she asked for privacy but he's got a big organization to run, and yeah it bit him in the arse a few years later but there's nothing out of the ordinary with his actions.

Seth Roberts (2011-07-23 09:51:50)

Was Mack naive? Yes. Of course new employees are naive. It is inevitable. Naivete should not produce such results. As for Summers, I don't find the "everyone does it" excuse ("there's nothing out of the ordinary with his [Summer's] actions") persuasive or exculpatory. Summers bears considerable responsibility for the financial crisis because he was one of the strongest opponents of bank regulation. Sure, his position was popular. That doesn't excuse it.

bc (2011-07-23 16:46:06)

There are two areas of concern here - investment and management. On the investment front I can't comment - I don't know that area - and my previous comment could be misread otherwise. My bad. My comments were only on Summers' management actions. Sending employee complaints about how the business runs back down the chain is good management. The boston.com article but it is behind a paywall and there are so many details missing that it is impossible to say anything more. Depending on those details the actions of Summers and his management staff could be anything from exemplary to illegal.

Paul Sherrard (2011-07-27 07:53:10)

"[N]ew employee whining to him"?? bc, this employee had good reason to suspect her peers of insider trading. Hello? Lawbreaking? Corruption? Playing havok with an esteemed institution's endowment and reputation? Her motives were plainly good and not at all self-serving. Yet you try to spin it like she went whining to the boss for a better stapler. Why?

Seth Roberts (2011-07-27 16:39:38)

"Sending employee complaints about how the business runs back down the chain is good management." Not when the complaint is that your immediate boss is doing criminal or near-criminal stuff. Obviously that will get the complaining employee fired. As happened here. As Paul Sherrard says, her motives were plainly good - noble, even. Why get her fired? That's a horrible way to treat employees who try to do the right thing.

## **The Accidental Influential (2010-01-03 15:32)**

Duncan Watts, a Yahoo! researcher who studies networks, has [1]some interesting things to say:

"If society is ready to embrace a trend, almost anyone can start one—and if it isn't, then almost no one can," Watts concludes. To succeed with a new product, it's less a matter of finding the perfect hipster to infect and more a matter of gauging the public's mood. Sure, there'll always be a first mover in a trend. But since she generally stumbles into that role by chance, she is, in Watts's terminology, an "accidental Influential."

Epidemics and many other contagion phenomena have a power-law distribution (large frequency of small number infected, small frequency of large number infected). [2]When my colleagues and I studied the distribution of rat bar-press durations, we found a power-law-like function where the "size" wasn't number but duration. Most bar-presses were quite short; a few were quite long. We also found that expectation of reward had a big effect on the slope of the power-law function. I think Watts is saying that more attention should be paid to what determines the slopes of these power-law functions.

[3]A recent article by Watts. Thanks to Hal Pashler.

1. <http://www.fastcompany.com/node/641124/print>
2. [http://www.sethroberts.net/about/2006\\_variation\\_of\\_bar\\_press\\_duration.pdf](http://www.sethroberts.net/about/2006_variation_of_bar_press_duration.pdf)
3. [http://www.boston.com/bostonglobe/ideas/articles/2009/06/14/too\\_complex\\_to\\_exist/?page=full](http://www.boston.com/bostonglobe/ideas/articles/2009/06/14/too_complex_to_exist/?page=full)

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Jim N. (2010-01-04 11:01:12)

When talking about trends, it seems like it's not the first person who is influential, so much as the first group. That is, first a group within a culture adopts a certain practice, then the larger culture adopts it or not. The first person within the group is not so important, maybe. I wonder if the same can be said of contagion.

Tedderick (2010-01-06 01:55:33)

Thanks so much for the link to this article. You didn't even mention, the root of the study is new mass experiments that don't confirm the folklore science of influence that spews from the mouths of experts without data or confirmation. So much of our science is data-free posturing. Are we on the cusp of a new scientific revolution? One that finally jettisons the pretenses of academic theory and demands only data?

## Psychophysics of Flavor Complexity (2010-01-04 14:44)

If I need evidence that we like complex flavors, I will quote [1]this passage from The New Yorker:

“This sauce is really good,” she said. “It’s so Jean-Georges. He does this French-and-Asian thing.” She warned me that she would need a few seconds to figure out its precise ingredients. (She refused to divulge them, on the ground that Vongerichten would consider the recipe “a trade secret.” I later learned from one of the waiters that the ingredients include powdered English mustard and soy sauce.) “It’s so complex,” she said. “It makes me smile.”

The soy sauce is fermented. As any regular reader of this blog knows, I believe we evolved to like complex flavors so that we would eat more bacteria-rich food. So we have something in our brain that measures complexity of smell/flavor and translates that into pleasure: the more complexity, the more pleasure.

My experience of cooking is that it isn't easy to produce a lot of complexity using spices and stuff like garlic and ginger. It's possible but not easy. Ordinary recipes, such as in *Saveur*, aim for a low level, with 5-8 spices. Chinese Five Spice has 5 spices; spice mixtures might have 8; curry powders might have 10. At Whole Foods, the ready-to-eat soups have twenty-odd ingredients. Apparently their soup designers don't find it easy, either.

Then [2]I discovered that miso by itself produced sufficient complexity. Miso soup doesn't feel "under-complex". Finally I understood why wine is such a powerful flavoring agent; wine, like miso, is fermented. It makes sense that foods that our complexity detector evolved to make us eat do a better job of setting off that detector than other foods.

Now consider how that detector works. Suppose you have two sources of sodium – two different salts, for example. You get the same saltiness from 2 g of Salt A as you do from 1 g of Salt A and 1 g of Salt B. I think complexity is quite different. I suspect that 2 g of Source A (e.g., miso) will produce a lot less complexity than 1 g of Source A and 1 g of Source B (e.g., wine).

I tried adding two fermented flavoring agents (miso and [3]tsukudani) to soup. It worked! The result tasted clearly better than miso alone. Now I do this routinely. It's very easy. The results have a level of deliciousness I can't remember encountering before. Everything else I can eat (such as restaurant food) now seems less delicious. I think that three sources works better than two; whether four is noticeably better than three I don't know.

The basic idea is there are strong sources of complexity (fermented foods) and weak ones (all other flavoring agents). One strong source = 10-20 weak sources. You get the best results by using several strong sources of complexity, perhaps three or more. Once you know this you no longer: 1. Obsess over recipe details (as in the New Yorker quote) because all complexity is alike and easily produced, just as no one worries about the source of saltiness. 2. Think traditional, time-honored recipes are better than what you can make yourself (e.g., Saveur). As far as I can tell food professionals ([4]with one big exception) don't understand this. I really enjoyed Top Chef Masters (a competition between 12 of the best chefs in America) but there was an almost total absence of fermented foods. Perhaps one chef used soy sauce. The winner, Rick Bayless, made a mole sauce. Mole sauces, which combine 20-odd weak sources of complexity, take hours. I think they produce less complexity than three fermented sources put together, which takes about a minute.

1. [http://www.newyorker.com/reporting/2009/11/23/091123fa\\_fact\\_colapinto?currentPage=all](http://www.newyorker.com/reporting/2009/11/23/091123fa_fact_colapinto?currentPage=all)
2. <http://www.blog.sethroberts.net/2009/03/29/the-nutrition-lesson-hidden-in-a-bowl-of-miso-soup/>
3. <http://en.wikipedia.org/wiki/Tsukudani>
4. <http://www.blog.sethroberts.net/2009/01/18/how-things-begin-sparkling-tea/>

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Luddite Solutions Inc. « Anthny (2010-01-04 20:10:00)

[...] I find that low-tech, typically low-cost, easy to implement solutions can often be the most elegant solutions, compared to ones where people typically like to throw tech and money at it. (This is one of the reasons I like Seth Roberts' blog, such as here.) [...]

eric (2010-01-05 03:36:32)

very interesting. tsukudani is delicious also. i'll have to try the combination. one question though, why when you write about this untested (untestable currently?) stuff do you write about it declaratively "So we have something in our brain... and not 'so we might have..' ?

Aaron Blaisdell (2010-01-05 10:27:54)

Seth, you should enter cooking contests as a way to test your hypothesis which would be supported by high marks in such contests. Why do you think fermented foods produce such complex flavors and why do you think people enjoy them? For the first question, I'm wondering what the fermentation process does that produces complex flavors. Is it the production of rare compounds (rare in the sense that they're not found in non-fermented foods)? If so, what is the nature of these compounds? And the second question then asks why do we enjoy these compounds (a question that should be addressed at both the functional level -why we are adapted to enjoy these flavors- as well as at the mechanistic level – what taste/odor receptors are being activated by the products of fermentation.).

Todd Fletcher (2010-01-05 11:03:42)

Another way to add complexity is with small amounts of smoked meats. For example, a couple of tablespoons of a strong sausage like spanish chorizo added to rice before cooking goes a long way towards making it a satisfying dish on it's own. And it's not because of the fat. Adding butter or olive oil only makes the flavor richer, not more complex. I don't know anything about the process of smoking meats. Maybe there's a bacterial component to it?

seth (2010-01-05 14:03:13)

Eric, if you find a way to get tsukudani in Beijing, let me know. The reason for such firm statements as "so we have something in our brain . . ." is because I can't think of a plausible alternative explanation. Todd, that's a good poing. Burning stuff generally produces a large number of chemicals (more than 20?) so when you add smoke to something you are adding a lot of different chemicals. Maybe that is the reason it adds complexity. But smoking takes place at bacteria-friendly temperatures so maybe some of the complexity comes from bacteria that grow and then die (killed by chemicals in the smoke). Aaron, bacteria produce many byproducts, in addition to the bacteria themselves, which probably fall apart when they die. And usually fermentation involves several different bacteria. So the chemical complexity of a food goes way up when it is fermented. As for why we enjoy these added compounds, see my posts on the umami hypothesis.

Tom Moertel (2010-01-05 18:21:30)

Most chorizo is [1]fermented, so it might not make the best evidence for smoke having sensory effects similar to those of fermentation. Cheers, Tom

1. <http://cat.inist.fr/?aModele=afficheN&cpsidt=2188112>

Kirk (2010-01-06 12:57:57)

I find this subject fascinating. In the past year, whenever I knew I'd be eating a boring supper, I would quickly stir together a sauce consisting of fermented foods, such as yogurt or sour cream, tamari, fermented pickle, and then flavor it with some combination of spices, herbs, garlic, tomato paste, or anchovy paste. (Besides making the food tastier, that kind of flavoring also satisfied some of the SLD tactics I use to lose weight.) When cooking a meat-based soup or stew, until now I have generally used a guideline of Three Meats (such as the one I made two days ago, which had bacon, beef, and chicken), with one of the meats having bone, and then add in some other glutamates, such as anchovy and tomato paste. I have also used red wine but I've been trending away from cooked wine because of the heartburn it gives me. Thinking about making a complex soup/stew using fermented foods gives me a new playground. As for miso, I have tried miso in various dishes, but the rest of the family objects to the taste. I probably need to pay more attention to the overall flavor and tweak before serving. As for your observation that professional cooks seem unaware of this subject, 'The Flavor Bible' has just a few entries for fermented foods, and for those fermented foods it does list, it rarely shows them combined with others (except for miso, which it says can combine with mirin, sake, and rice vinegar). I'd like to see a good list of tasty fermented food combinations. For example, I'm not a big fan of sauerkraut; I'd like to know if there is a way to combine it with other fermented foods to make it more palatable.

seth (2010-01-06 15:34:11)

Kirk, thanks for your comments. You might try putting sauerkraut in miso soup. In case you've been trying "dark" miso, you might also try "light" miso. A milder flavor. The way I use miso now (combined with substantial amounts of other fermented foods) it doesn't taste like miso soup.

Richard (2010-01-07 09:51:41)

Don't mislead by overusing the term "bacteria", I would suggest micro-organism is a better way to convey your meaning. Much fermentation is caused by yeasts and funghi. I made a vegetable soup today spiced by small amounts of vegetable stock, hoi sin sauce, angostura bitters, lea & perrins worcesteshire sauce, kikkomann soy sauce, maggi wÅ¼rze, marmite, maille mustard. I can honestly say it was the best tasting soup I, or any of my guests, can remember having been served.

seth (2010-01-07 15:29:28)

Thanks for the terminology correction. Yeah, maybe I should say "microbe". And thanks for trying out my flavoring idea. I hadn't heard of maggi wurze. And I now wonder why I keep worcestshire sauce in the refrigerator.

Cliff Styles (2010-01-07 15:46:37)

Todd: Spanish chorizo is actually fermented: [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6T7K-3VM6SX6-8&\\_user=10&\\_rdoc=1&\\_fmt=&\\_orig=search&\\_sort=d&\\_docanchor=&view=c&\\_searchStrId=1158132677&\\_rerunOrigin=google&\\_acct=C000050221&\\_version=1&\\_urlVersion=0&\\_userid=10&md5=7e63219f3862396dc763b3f565be7e23oy...what an url...](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6T7K-3VM6SX6-8&_user=10&_rdoc=1&_fmt=&_orig=search&_sort=d&_docanchor=&view=c&_searchStrId=1158132677&_rerunOrigin=google&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=7e63219f3862396dc763b3f565be7e23oy...what an url...)

Barb Stuckey (2010-01-12 10:55:48)

Hi Seth, Very interesting observations. The "deliciousness" that you're experiencing is called "umami." It is the Japanese word for the flavor of glutamate. The complex flavors you note that are the result of fermentation also occur during aging (think parmesan and steaks) and cooking (think tomatoes and mushrooms). What's happening is the breakdown of large protein molecules into smaller amino acid molecules. These amino acids have more flavor to us, and hence add to complexity. Keep tasting! Barb <http://www.umamiinfo.com/>

mike (2010-01-15 23:01:43)

Wow, you might have just solved a mystery for me. Recently, I had mentioned to my wife that I found the food at most of the restaurants – some we've been going to many years – suddenly to have a lot less flavor and to have a "cheaper" taste to them. I just didn't enjoy them anymore, but I didn't know why. And it wasn't just one or two restaurants, it was most of them, pretty much almost across the board. My only theory was that food quality was going down. But it was about 6 months ago I started eating yogurt daily. I wrote to you in an earlier comment that it cured my seasonal allergies. So now this seems like the most logical explanation. (I hadn't read your blog in several weeks before tonight, so my conclusion that restaurant food was less tasty could not have been subliminal.)

Dan (2010-01-17 21:05:48)

Hi Seth, I am trying to think of a logical / evolutionary reason for why we would like "complex foods." As Barb said, the complexity you refer to is Umami, and it's basically just free amino acids (glutamate is the main one, aka MSG). Upon digesting food, our body breaks down the complex proteins into to their individual amino acids anyway, so ingesting them in an already free state would not be advantageous to us. And most of the complex foods that are created via microbes (predigesting proteins and lipids for our sensory enjoyment) contain very few if any living microbes (and whether or not the microbes or their enzymes would even survive a trip through our stomachs is totally up for debate). The only reason I can think of is what I would call a boredom theory. It's the same reason we love music or paintings or philosophy or even food blogs for that matter. As humans, we are both blessed and cursed with a great deal of intelligence and a lot of time on our hands. We need a way to entertain ourselves and take our minds off the burden of being alive. So much of what we love is simply here to entertain us, push our sensory envelopes further than what we would need to simply survive. If not for that, the 80+ years some people live would become an eternity of monotony. Dan

seth (2010-01-17 22:06:44)

Dan and Barb, lots of complexity has nothing to do with umami. The complexity of wine, for example. In this case I have never heard anyone say miso or tsukudani tastes good because of umami (that is, glutamate). What makes you think that is what's going on here? Let's say miso has 1 unit of umami per tablespoon. Let's say tsukudani has 1 unit of umami per tablespoon. Then 2 tablespoons of miso should taste as delicious as 1 tablespoon of miso plus 1 tablespoon of tsukudani. That isn't true. This is why I doubt your explanation.

Tana (2010-02-28 11:38:34)

Hi Seth, Just wanted to say that your blog has inspired me to start making my own yogurt, which is so much tastier than store bought yogurt. I make it by letting it incubate on a heating pad set to medium for 10-12 hours. I have also been making miso soup with mirin, soy sauce, sauerkraut and bacon, and it's the most delicious soup ever. I agree with Mike that restaurant food

is less tasty than before I started eating lots of fermented food.

## Reflections on a Few Years of Blogging (2010-01-05 15:39)

[1]Andrew Gelman's blog has lasted longer than this blog (and [2]was responsible for this blog.) Recently [3]Andrew looked back. It seemed like a good idea so I will follow his lead.

The two big surprises have been how easy it is and how helpful it is. In the beginning it wasn't easy to find interesting things to say. Somehow it got easier and easier. Partly because I had more ideas – about omega-3, the umami hypothesis and fermented foods, the effect of animal fat on sleep. Partly because readers sent me interesting stuff. Partly because I started teaching at Tsinghua and moved to Beijing part of the year. Partly because the Shangri-La Diet produced results that I wanted to brag about. And – a very big part of it – because there are enough comments here and elsewhere to make me think people are reading it. I think everyone has an innate desire to be listened to. As our concerns and knowledge become more and more specialized, it becomes harder and harder to find an audience. When Spy magazine was around I read every issue three times. I was dying to talk about it with other fans. I couldn't. I couldn't find them.

Some of the stuff people have sent me has been incredibly helpful. Most of the examples involve trying my ideas. Taking omega-3 (via flaxseed oil or fish oil). [4]Tyler Cowen's experience, for example. [5]Tim Lundeen's results. [6]The effect on sports injuries. Or eating more fermented food. [7]Tucker Max's experience. Not only does it make the whole subject much easier to talk about, it convinces me I'm on the right track. Some of the examples involve telling me about other more conventional data related to my ideas. For example, I'm very glad to know about [8]hormesis, which supports my ideas about fermented food. Knowing about radiation hormesis makes me [9]stop worrying about the small dose of radiation I get from my cell phone. The [10]recent comment about two morning faces being better than one might turn out to be really helpful and important.

I haven't read [11]She Stoops to Conquer, an 18th century play, but the title is brilliant. My self-experimentation, I now think, had a dose of that because I was willing to do something as humble as study myself whereas most scientists wouldn't stoop to that. Too low-status. Blogging has a lot of that. How many Berkeley professors blog? Uh, [12]Brad DeLong? And someone else, rarely. Blogging is beneath them. Whereas half of Tsinghua students have blogs. They aren't worried about appearing undignified. The phrase [13]keeping up with the Joneses means your car has to be at least as expensive as your neighbor's car, and so on. A kind of arms race. Such an arms race goes on in science: What you must do to appear high status takes up more and more of your resources, leaving less and less to actually make progress. So less and less progress is made. Self-experimentation breaks out of that vicious cycle. Blogging is the same thing more generally. Supposedly professors, especially at a place like Berkeley, have interesting things to say. But the demands of status, as Veblen described in the last chapter of [14]The Theory of the Leisure Class, make it harder and harder for them to say them. Blogging breaks out of that vicious cycle.

When I taught introductory psychology I found I could often weave whatever I'd been thinking about into my next lecture. It's good to start a lecture by saying "Something interesting happened to me a few days ago . . ." Now I can just blog about it.

1. <http://www.stat.columbia.edu/~gelman/blog/>
2. [http://www.stat.columbia.edu/~cook/movabletype/archives/2005/03/learning\\_from\\_s.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2005/03/learning_from_s.html)
3. [http://www.stat.columbia.edu/~cook/movabletype/archives/2010/01/a\\_half-decade\\_o.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2010/01/a_half-decade_o.html)
4. <http://www.marginalrevolution.com/marginalrevolution/2007/07/todays-happines.html>
5. <http://www.blog.sethroberts.net/2007/02/16/omega-3-and-arithmetic/>

6. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>
7. <http://www.blog.sethroberts.net/2009/02/26/i-started-eating-more-fermented-food/>
8. <http://www.blog.sethroberts.net/2009/05/12/the-dose-response-revolution-and-fermented-food/>
9. <http://www.blog.sethroberts.net/2009/09/16/how-dangerous-are-cell-phones/>
10. <http://www.blog.sethroberts.net/2009/12/13/interview-with-seth-roberts/#comment-372948>
11. [http://en.wikipedia.org/wiki/She\\_Stoops\\_to\\_Conquer](http://en.wikipedia.org/wiki/She_Stoops_to_Conquer)
12. <http://delong.typepad.com/>
13. [http://en.wikipedia.org/wiki/Keeping\\_up\\_with\\_the\\_Joneses](http://en.wikipedia.org/wiki/Keeping_up_with_the_Joneses)
14. <http://xroads.virginia.edu/~Hyper/VEBLEN/veblenhp.html>

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Cliff Styles (2010-01-05 17:18:01)

This is a perfect place to send a note of appreciation, Seth. I came here initially from Tyler Cowen's blog, and since coming here my life is better. How? From fermented food added to my diet (especially kombucha!) , from the additional encouragement I found here to read Taubes' book last year, and from the inspiration of your example of self-experimentation. If changing others' lives for the better is an additional motivation for you to blog, I'm writing to offer your effect on mine as one datapoint. Thanks!

seth (2010-01-05 17:41:58)

Thanks, Cliff, that's nice to know. A year ago I wasn't even thinking about fermented food...

Alex Chernavsky (2010-01-05 18:31:50)

Seth, thanks for posting all the interesting info. I've lost about ten pounds on your Shangri La diet (and still losing weight). Not entirely convinced by your stance on climate change, but the information you post is always thought-provoking.

Nathan Myers (2010-01-05 19:34:23)

I really appreciate the self-experimentation articles. I eat flaxseed oil pretty regularly now, and my daughter takes fish-oil capsules. I have lost some girth – albeit probably more from avoiding bread than from The Diet – and now know a ready treatment for inflamed gums.

Dennis Mangan (2010-01-06 07:27:51)

Ditto on that note of appreciation. I started coming here also through Marginal Revolution, and since I was already interested in the sorts of things Seth writes about, I stuck around. Around that time, Seth was discussing Taubes and the lipid-heart hypothesis; I thought I knew something about that and argued for it, but Seth was responsible, at least indirectly, for completely changing my mind. So thanks, Seth. Also, that's an interesting observation about blogging and Berkeley professors. You'd think they'd want to have wide influence through blogging...

seth (2010-01-06 18:44:14)

Thanks, Alex, Nathan, and Dennis. What's the phrase? Something about "keeping [one] honest"?

Nathan Myers (2010-01-07 00:44:03)

Frankly, I cannot even imagine how Brad can find the time to do it, so it doesn't surprise me at all that the rest of the professors don't. I don't know how he is able even to read all the things he's posting excerpts of and links to, never mind also post and comment on them, and read the ten times more other stuff that he doesn't end up posting. No normal person could do all that and professorate besides.



Richard (2010-01-07 10:19:29)

Hello Seth, thanks for blogging. I have been following your blog for quite a while through the google reader. I think it is great to have such access to the thoughts and musings of a professor - someone who is at the forefront of expanding the body of knowledge in their field. Can you point to any other blogging professors? I'd like to start a category in my feed reader ;)

seth (2010-01-07 15:22:10)

To find blogging professors, look thru the blogroll of Marginal Revolution.

## **Influential Statisticians (2010-01-06 16:28)**

[1]This article ("Ten statisticians and their impacts for psychologists") impressed me. It's a lot more accessible and basic than the usual academic article. However, my list - of the statisticians who've had the biggest effect on how I analyze data - is much different than his. From more to less influential:

1. John Tukey. From Exploratory Data Analysis I learned to [2]plot my data and to [3]transform it. A Berkeley statistics professor once told me this book wasn't important!
2. John Chambers. Main person behind S. I use R (open-source S) all the time.
3. Ross Ihaka and Robert Gentleman. Originators of R. R is much better than S: Fewer bugs, more commands, better price.
4. William Cleveland. Inventor of [4]loess (local regression). I use loess all the time to summarize scatterplots.
5. Ronald Fisher. I do ANOVAs.
6. William Gosset. I do t tests.

My data analysis is 90 % graphs, 10 % numerical summaries (e.g., means) and statistical tests (e.g., ANOVA). Whereas most statistics texts are about 1 % graphs, 99 % numerical summaries and statistical tests.

1. <http://www.psy.jhu.edu/~yantispdf/Wright-PPS-2009-TEN-STATISTICIANS.pdf>
2. <http://sethroberts.net/articles/2009%20Plot%20your%20data.pdf>
3. <http://sethroberts.net/articles/2008%20Transform%20your%20data.pdf>
4. [http://en.wikipedia.org/wiki/Local\\_regression](http://en.wikipedia.org/wiki/Local_regression)

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Aaron Blaisdell (2010-01-06 18:30:56)

I agree with your list, Seth. Actually, because of you I bought a copy of Tukey's EDA and am working through it one chapter at a time. I finished chapter 4 last night. On to Chapter 5 tonight. It's great stuff! I've always been a fan of plotting data to understand it through visuals before even doing other summary stats and definitely before applying any inferential stats. You're right that psychology (maybe other science disciplines as well?) have really lost touch with this and overemphasize inferential stats. I'd add a purely graphing book to your list: Edward Tufte's The Visual Display of Quantitative Information.

seth (2010-01-06 18:41:21)

Thanks, Aaron, glad to hear it. I was told by an editor that Exploratory Data Analysis was published only so that the same company could publish another book (with Mosteller) that came out at the same time.

Alex Chernavsky (2010-01-07 06:08:25)

I have two of Edward Tufte's books. They're both excellent. He's also quite a good speaker.

Kevin Wright (2010-01-07 08:23:09)

I've used S-Plus and R for many years, but now work almost exclusively with R. I've filed many more bug reports for R than for S-Plus, so I find your suggestion that R has fewer bugs to be surprising. Also, from my own experience, almost every semi-annual release of R has major changes that break my existing code. S-Plus was much more stable. YMMV. Kevin

David (2010-01-08 04:28:27)

You might find this interesting if you haven't already read it: <http://www.amazon.com/Probability-Theory-Logic-Science-Vol/dp/0521592712>

Mike Cooke (2010-01-08 09:21:18)

BC Canada had a high school Probability & Statistics grade 12 course in the 80s. I used Tukey's EDA and Tufte's books with considerable success. At its peak the course attracted as many students (especially girls) as the standard pre-university Algebra 12 course. 20 years later we hired a former student as my vice-principal who says that course was the best in his high school career. Then came the qualitative literacy movement (good) and the BC Ministry of Education mysteriously dropped the course (bad) to minimal protest (sad). Now there's piddling disconnected tidbits of P & S in the K-12 curriculum. Bring back the good old days!

Siah (2010-01-08 13:29:59)

A friend on twitter recommended your post. and enjoyed it a lot. I'm going to get John Tukey's book. Thanks a lot and go bears :)

seth (2010-01-08 14:15:37)

David, thanks for the recommendation, the book sounds really interesting. Since a couple people have mentioned Tufte, I will say that I have learned nothing from his books. I find them annoying, starting with such titles as "Envisioning Information". Tufte is, however, a genius entrepreneur.

Sarosh Motivala (2010-01-13 12:06:32)

Great post Seth. To add to the mix, in my own work, I would add Peter Bentler for his contributions to structural equation modeling and Reuben Baron's and David Kenny's papers on mediation vs moderation very insightful. As far as statisticians-educators go, although thick and intimidating at first glance, Tabachnick and Fidell's Using Multivariate Statistics is superbly written. I wonder if there is a stats/methodology book on self-experimentation?

Influential Statisticians « Permutations (2010-01-17 15:39:32)

[...] I recommend Seth Roberts' comments here and Andrew Gelman's comments here. [...]

## **"Two or Three Sentences That Go Together" (2010-01-07 15:45)**

In [1]the latest episode of This American Life, devoted to 2010 predictions, a sixth-grade teacher says she would like one of her students to become a better writer. His essays are disorganized. "I would like Lewis to write two or three sentences that go together and make sense," she said.

In the latest issue of The New Yorker, [2]a profile of Supreme Court Justice Sonia Sotomayor by Lauren Collins contains

this paragraph:

Perhaps in an effort to absorb quickly the mores of the Court, Sotomayor has hired experienced clerks, including one who spent the past year clerking for Justice Stevens and another who clerked for Justice Ginsburg. Near her desk is a framed cartoon by the Mexican-American illustrator Lalo Alcaraz. Against a lavender background, a girl with a pink bow in her dark hair sits at a desk, banging a gavel. A nameplate in front of her reads “Judge Lopez.” To her right is a makeshift witness box, inhabited by a Teddy bear. The jury box is full of stuffed animals. Taped to the wall behind her is a photograph of Justice Sonia Sotomayor.

The first sentence (“Perhaps in an effort . . .”) and the rest of the paragraph (“Near her desk . . .”) don’t go together. I suppose Collins or her editor liked the cartoon detail but didn’t have a good place to put it. So they put it here, at the end of a section.

The whole profile is [3]more great work from Lauren Collins. The impressive thing about Sotomayor, someone tells Collins, isn’t that she’s the first Latina Justice, it’s that she’s the first Justice to grow up in a housing project. To good writing based on lots of work, Collins adds interesting observations:

In a profession that values the illusion of infallibility, Sotomayor has been unusually willing to acknowledge murky areas.

We want stories with heroes and villains. We want moralizing, in other words. In this sentence, Collins calls the legal profession bad and Sotomayor good.

1. [http://www.thisamericanlife.com/Radio\\_Episode.aspx?episode=397](http://www.thisamericanlife.com/Radio_Episode.aspx?episode=397)
2. [http://www.newyorker.com/reporting/2010/01/11/100111fa\\_fact\\_collins](http://www.newyorker.com/reporting/2010/01/11/100111fa_fact_collins)
3. <http://www.blog.sethroberts.net/2008/05/08/magazine-article-of-the-year/>

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## The Limits of Expert Trial and Error (2010-01-08 15:04)

Of course I loved [1]this comment on [2]a recent post of mine about how to flavor stuff:

I made a vegetable soup today spiced by small amounts of vegetable stock, hoi sin sauce, angostura bitters, lea & perrins worcestershire sauce, Kikkomann soy sauce, maggi wrze, marmite, maille mustard. I can honestly say it was the best tasting soup I, or any of my guests, can remember having been served.

I routinely make soups that taste clearly better than any of the thousands of soups I had before I figured out the secret. There is no failure (I’ve done it 20-odd times), no worry about over- or under-cooking. Something else odd: There seems to be a ceiling effect. The texture could be better, the appearance could be much better, the creaminess could be better, sometimes the temperature could be better, the sourness could be better, but I can’t imagine it could be more delicious.

Why wasn't this figured out earlier? I've looked at hundreds of cookbooks and thousands of recipes. I haven't seen one that combines three or more sources of great complexity, as I do and the commenter did. There may be more trial and error surrounding cooking than anything else in human life. Billions of meals, day after day.

I think it goes back to my old comment (derived from Jane Jacobs) that [3]farmers didn't invent tractors. Some people claimed they did but I think we can all agree farmers didn't invent the engine on which tractors are based. You can't get to tractors from trial and error around pre-tractor farming methods. Even though farmers are expert at farming. I think that's what happened here. I am not a food professional or even a skilled cook. My expertise is in psychology (especially psychology and food). Wondering why we like umami, sour, and complex flavors led me to a theory ([4]the umami hypothesis) that led me to a new idea about how to cook.

And this goes back to what many people, including Atul Gawande, [5]fail to understand about how to improve our healthcare system. The supposed experts, with their vast credentials, can't fix it – just as farmers couldn't invent tractors. Impossible. The experts (doctors, medical school professors, drug companies, alternative healers) have a serious case of [6]gatekeeper syndrome. The really big improvements will come from outsiders. Outsiders who benefit from change. To fix our healthcare system, empower them.

1. <http://www.blog.sethroberts.net/2010/01/04/psychophysics-of-complexity/#comment-379792>
2. <http://www.blog.sethroberts.net/2010/01/04/psychophysics-of-complexity/>
3. <http://www.blog.sethroberts.net/2009/05/02/how-could-they-know-the-case-of-healthy-gums/>
4. <http://www.blog.sethroberts.net/category/umami-hypothesis/>
5. <http://www.blog.sethroberts.net/2009/05/29/the-american-health-paradox-what-causes-it/>
6. <http://www.blog.sethroberts.net/2009/11/17/gatekeeper-syndrome/>

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Cliff Styles (2010-01-08 16:59:01)

Just getting out of their way would help: end government-sanctioned occupational licensing in medicine.

q (2010-01-08 18:56:29)

re fermented food, you might want to do some kind of survey of what various cultures do. i had some very good hot sauce from ghana once which i think had fermented fish. i don't remember the name but it had a name with a long sssssss sound in it. also you might want to look at david chang's momofuku cookbook.

Alex Chernavsky (2010-01-08 19:16:15)

Seth, can you post recipes – or at least ingredient lists – for the soups you make?

Tom Moertel (2010-01-08 21:01:32)

Tonight, I made cabbage braised in chicken stock with Mangalitsa bacon, onion, and a little raw apple-cider vinegar. I made this dish a few nights ago – my control – and it was good. Tonight, however, I also added a little miso, fish sauce, and caraway seed as seasonings. Tonight's version was much better.. I don't think the caraway seed explains the difference. I've used it before without noticing much effect. Nor do I think the salt in the miso explains it. I adjust my salt to taste while cooking and simply used less salt this time. Something else seems to be going on. On this evidence, Seth, my belief in your hypothesis has increased. Oh, yeah. I'm also going to be adding miso and fish sauce to everything from now on. This is an experiment that rewards repetition. ;-) I wonder how fish sauce would taste in butterscotch sauce... Cheers, Tom

Part of how to get improvements and how science progresses « Anthny (2010-01-09 00:39:00)  
[...] Seth Roberts has two important paragraphs here: [...]

Nansen (2010-01-09 13:44:38)

Many of the condiments in the quoted recipe have a high salt content. Does that fact ever concern you?

seth (2010-01-09 14:00:17)

Nansen, I once varied whether or not I ate cheese (high in salt). My blood pressure didn't noticeably change. So I don't worry much about salt intake, so long as my blood pressure is reasonable. But it's a good point and I would rather get my complexity from low-salt stuff. Alex, my soups contain fat (pork fat), protein (pork or beef, sometimes fish), vegetables (e.g., chinese greens, carrot, onion, mushrooms, tomato, cabbage, kimchi), and flavorings (ginger, sometimes garlic, mustard oil, Chinese-type aged vinegar, miso, Chinese fermented soy beans, Japanese BBQ sauce). The last three are the crucial ingredients, added at the very end, and vary according to what's available. Right now I've run out of Japanese pickles. I add yogurt just before eating.

Glen Raphael (2010-01-09 14:47:13)

I took my standard omelet recipe and added some miso, soy sauce, and vinegar. The result: the resulting omelet tasted (1) very strange, (2) too salty, (3) not particularly good. I took a cooking class series once and one of the big things I learned was the importance of salt. Adding salt at each cooking stage - and adding *enough* of it - brings out all the other flavors. The goal isn't for a dish to taste "salty" but for all the component flavors to be distinctly perceived. When balancing a soup recipe if you can't taste one ingredient, add more of that ingredient. If you can't taste many ingredients, add more salt. People are unreasonably afraid of salt and many homecooked meals are bland due to the lack of it; the idea that \*everybody\* should try to avoid salt is folk wisdom, not medical science. Seth: a good null hypothesis here is that it's the added saltiness rather than the added complexity that is making your soup taste good compared to how it tasted before. The good news is that unlike many of your experiments, this idea is something it would be trivial to test "scientifically". You say the crucial ingredients are added at the end. So you could make soup right up to the point where you'd add them, then ladle the soup into a few saucepans (if it needs more cooking) or bowls (if it doesn't). Modify each in different ways- more salt, more miso, nothing at all, etcetera - pour small amounts into numbered paper cups and do a blind taste test. You could even make it double blind!

seth (2010-01-09 17:34:57)

Glen, I've never gotten results like this by varying amount of salt, which I've done countless times. Variations in amount of miso - which varies the amount of salt at the same time, because miso is high in salt - never produce results like this. Only when I add a second source of complexity (and reduce the amount of miso) do I get big improvements.

Mike Kenny (2010-01-09 20:47:18)

Does the complexity need to come from a non-commercially produced source,(because of uniformity or weakness of fermentation)? I think of a cheeseburger-it has cheese, pickles and ketchup, which all fermented or made with an ingredient that are fermented. Cheeseburgers are great, but I think most pickles I have taste the same, and ditto for ketchup and American cheese. Maybe they are so uniformly produced that they don't really introduce my pallet to the novelty homemade fermented products would.

seth (2010-01-09 20:53:23)

Mike, the answer to your question is no. I use commercially-produced miso and Japanese pickles, for example. In the recipe I quote, all the ingredients are commercially-produced.

Mark (2010-01-10 10:58:56)

I'm skeptical of recipes that have a lot of (flavoring) ingredients. It's like a painter saying he mixed a great color by using 12 different base colors. Given, say, six equally spaced primary colors and black and white you can mix any color there is with four of the paints. If there are only four or five or six basic tastes, then after a while they just start to cancel themselves out and product the culinary equivalent of the muddy color you get when you mix too many paints together.

Nathan Myers (2010-01-11 01:28:17)

This is off-theme, but my favorite new soup ingredient is sweet potato. It improves both texture and flavor.

Glen Raphael (2010-01-11 17:27:24)

Like Mark, I'm suspicious of the lots-of-tastes hypothesis. I still haven't tried it in soup but I did try another omelet. After last time I noticed that I'm using a new brand of miso (a red-and-white type) which has salt as an ingredient so maybe the miso I was using before was just too salty. So I made a new omelet with \*no\* salt as a separate ingredient and added to the eggs a teaspoon rather than a heaping tablespoon of miso. Also added: a teaspoon of yogurt, a small amount of vinegar and a small amount of natto. I left off the soy sauce since that's almost pure saltiness - I didn't want to risk it with the miso. The mushroom-and-cheese omelet that resulted was strange and kind of interesting. It didn't taste bad but also didn't taste unusually delicious. So if this phenomenon is real perhaps it needs a longer cooking cycle, or perhaps it doesn't work in an egg omelet or wonderflavor doesn't mix well with cheese or only works in soup. Or, lots of experimentation is required to find a collection of relative amounts that results in "pure deliciousness"; Seth is getting consistent results due to things he's doing or amounts he's using automatically from long force of habit. Or it only produces ultimate deliciousness in the context of some other set of ingredients Seth is using. Or it's an acquired taste that I haven't yet acquired. In summary: applying the "multiple complex taste" theory to egg omelets I have thus far: two attempts, two failures.

Melissa (2010-01-12 07:38:38)

I have definitely made atrocious soups with this principle. I remember one that had fish sauce, miso, and soy sauce....I had to throw the whole thing away. You have to be careful, particularly with fish sauce.

seth (2010-01-13 12:51:30)

Melissa, I'd imagine it tasted atrocious because it was too salty. I don't use soy sauce to complexify anything because it seems to me more salty than anything else. Miso has a better balance. I don't know much about fish sauce.

Chris Burd (2010-01-14 13:12:23)

Seth, can you provide us a recipe? Amounts, cooking times, etc.?

Glen Raphael (2010-01-17 09:35:55)

I, too, would like to see an exact recipe. Two failures were enough; I've given up on this principle as applied to omelets. I might try it on soups but I suspect the result would be the same as it was for omelets. Note that if the hypothesis is correct as stated, one ought to be able to pre-mix a few "sources of great complexity" to get a big tub of "super-complexity" you just keep in the fridge and add a dollop to whatever you cook. If that works, somebody could then sell "complexity" in premixed tubs at the store. miso+yogurt+wine or whatever. Then you could dehydrate the super-complexity to sell it in powder form and use like MSG. Is there a reason to think this wouldn't work? Contrary theory: perhaps "crazy-spicing" for a while puts people in a different frame with regard to what they consider tasty. As might Shangri-La. Perhaps the need for "complex" flavor is enhanced after eating flavor-free calories for a while. Anyway, taste is subjective, but recipes don't need to be. If this theory is correct, you should probably be writing a cookbook.

seth (2010-01-17 09:55:24)

Glen, I've never compared dehydrated miso to regular miso but I imagine there's a good reason miso is usually not sold dehydrated. "The need for complex flavor is enhanced after eating flavor-free calories for a while." Techniques that produce complexity are found in a wide range of cuisines. As far as I can tell, almost everyone enjoys complexity. You're right, I should be seeing how this idea can be used elsewhere than soups.

Glen Raphael (2010-01-17 13:10:18)

"You're right, I should be seeing how this idea can be used elsewhere than soups." Sure, but at this point I'd settle for a precise soup recipe. Without a recipe, if I try it and it doesn't work I don't know whether to count my attempt as a fair test of your hypothesis. You could always say I didn't use \*enough\* complexity source or I used too much of some specific complexity

source or other. I assume miso is sold in tubs because it improves the texture. But your soup theory specifically is that the \*taste\* is optimized to best-soup-ever status. You make no claims for texture, appearance, creaminess. The taste effect ought to be substantially the same from complexity-bouillon cubes as it is from the tub; the other aspects would be whatever they already were. So if your theory is correct and you convince people of it, the logical outcome is that henceforth all restaurants will add complexity cubes to their soups. And the guy who sells those cubes will make a fortune. And then everyone will get fat due to the flavor-calorie association being stronger than ever before. (Unless complexity cubes deliberately vary the blend from one cube to the next.) Incidentally, the way you get better "creaminess" is by blending and then pushing soup through a fine strainer.

### **The Post-It Restaurant (2010-01-09 14:15)**

Two of my students took me [1]here, which one list said is the best fish restaurant in Beijing. (Based on our meal, that's plausible.) Its specialty is grilled fish "Wushan style". Wushan is a mountain, not a province (like Sichuan or Hunan), so the restaurant may have invented the term. The menu is short. There are a bunch of cold dishes and the grilled fish, which comes in seven different flavors (hot & spicy, chinese sauerkraut, etc.). Unlike any other Beijing restaurant I've been to, you need a reservation. (Call a week ahead.) The restaurant, which wasn't large, was packed. The walls were covered with Post-It notes. One said: "I wish I find my dream girl and me and my friend Bob have a safe life." Another said: "Very spicy, very tasty, makes me feel very good." A third said: "We had to wait a long time, so we ate a lot." I wrote one saying what one of my students suggested: "We didn't have to wait a long time but we ate a lot anyway."

1. <http://www.wskqy.com/>

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Mike Kenny (2010-01-09 21:26:00)

Good conversation piece while you're at the restaurant with someone. I wonder if people get favorite tables, and over time they create a story that unfolds through their post its from various times they sat in that area. I recall an ice cream parlor where I used to live that took photos of customers and put them on the wall. A conversation piece, and also social proof I guess!

### **"The 11 Best Foods You Aren't Eating" (2010-01-10 06:01)**

There isn't one fermented food on [1]a list of "the 11 best foods you aren't eating" compiled by Tara Parker-Pope, author of the world's most visible health blog. Nor do any of the listed foods contain animal fat. One of them (sardines) is high in omega-3, so the list gets a D instead of an F. Fermented foods and animal fat (in sufficient quantity) have easily-noticed benefits, in contrast to every food on the list. Parker-Pope and the nutritionist she consulted (Jenny Bowden) have large gaps in their understanding of nutrition.

1. <http://well.blogs.nytimes.com/2008/06/30/the-11-best-foods-you-arent-eating/?em>

Alex Chernavsky (2010-01-10 06:38:41)

Are there any plant-derived fats whose health benefits are comparable to those produced by animal fats? Perhaps tropical oils, cottonseed oil, or hydrogenated fats like Crisco-type vegetable shortening?

david (2010-01-10 06:50:14)

Alex, The benefit Seth speaks of is that he's observed that eating animal fat seems to make him sleep more soundly/longer. It seems quite a leap to go from that to 1) Eating fat has the same effect on people other than Seth, 2) The effect really is a substantial benefit, and 3) The benefit outweighs any other negative effects. So Tara Paker-Pope can be forgiven for not including it on her list. Fermented foods are more widely accepted as beneficial. I suppose she might argue that people already know about that and eat yogurt. David

seth (2010-01-10 06:50:15)

Alex, omega-3 is a plant-derived fat (e.g., in flaxseed oil), so the answer to your question is yes.

seth (2010-01-10 07:45:41)

David, there is plenty of evidence to support what you call "quite a leap". I have linked to someone else who had the same experience with animal fat as me: when he ate a lot more animal fat he slept much better. I know of no cases where a deficiency disease (e.g., scurvy) cured in two people by Substance X was not cured in everyone by Substance X. The nutrients we need to cure obvious deficiency diseases – vitamin C, all the other vitamins – have no negative effects at those doses. This is one reason I'm not worried about negative effects of enough animal fat to improve sleep.

Caleb (2010-01-10 09:12:03)

Alex, many people believe the medium chain fats in coconut oil have health benefits.

NE1 (2010-01-10 11:20:33)

It really depends on what they mean by healthy. Maybe Seth has really found something Re: sleep quality, but poor sleep isn't the number one killer of women (heart disease), and recommending things (pork fat) with a more dubious role in that cause probably isn't a great idea here. The original Men's Health list describes these things as "superfoods" which is an idea still rooted in vitamins, minerals and antioxidants. Maybe the appropriate criticism here is that this is not the problem with most Americans' diets.

John (2010-01-10 11:21:55)

Seth, let us know when you start drinking fermented cod liver oil. I'm afraid to try it.

Erika (2010-01-10 13:56:17)

The dogma of the dangers of fat have penetrated our society so deeply that it will take a lot for it to be changed. I bet it'll take years of small studies to pave the way for a large scale study. Even then, most people will probably refuse to believe any evidence that animal fat can be good.

seth (2010-01-10 14:54:00)

John, yeah, I should try fermented cod liver oil. Aaron Blaisdell drinks it. Erika, I wonder how people explain to themselves that fat tastes good. Why would evolution cause us to want to eat something that's bad for us? Obviously some forms of fat are bad but cavemen would have been eating animal fat, not olive oil or soybean oil.

q (2010-01-10 18:07:12)

why do you think that what this addresses is a deficiency disease? also, why do you think that what you term as 'good sleep' is a natural condition and not merely something that is convenient to you?



Spoter.com (2010-01-10 18:50:55)

Seth's blog » Blog Archive » The 11 Best Foods You Aren't Eating... Seth's blog » Blog Archive » The 11 Best Foods You Aren't Eating...

Nathan Myers (2010-01-11 01:36:29)

Really, a "D" grade for not promoting your hobby-horse? Each item in the list looks like a reasonable addition to anyone's diet, however much kim chee they also eat, or don't. Would you advise people eating any particular item on this list to give it up?

seth (2010-01-11 03:26:52)

why such a low grade? because, given the world's bulliest pulpit, she uses it to tell people what they already know. Her readers have heard a hundred times that fatty fish is good for you. And she tells them to eat sardines.

Andrew Gelman (2010-01-11 05:45:22)

Seth: You write, "I wonder how people explain to themselves that fat tastes good. Why would evolution cause us to want to eat something that's bad for us?" Do you really wonder that? I've always hear the commonplace explanation that some fat is good, but that it's not so great if you eat too much, triple bacon cheeseburgers and all the rest. For you, "animal fat" might be relatively small servings compared to what many Americans scarf down. Also, I think it's a bit of simplification to say "fat tastes good." I like some fatty food, but I don't actually enjoy the taste of a slab of fat by itself. I remember as a kid that our mom was always trying to get us to eat the fat that we would trim off our meat. If it had tasted good to us, we would've eaten it, that's for sure!

Darrin Thompson (2010-01-11 10:54:10)

Seth, On that fat bit... Have you taken any time to read Taubes' Good Calories Bad Calories? He's writing as an outsider like you but comes to some different conclusions based on some simple self experimentation and what appears to be a \_very \_ thorough analysis of the bulk of obesity research. He, like you, disagrees vehemently with the conventional wisdom, especially regarding animal fat but for different reasons. Where you see researchers ignoring cheaper routes to insight, he shows researchers systematically downplaying huge swaths of data to show their research conforms to a party line. He covers animal fat \_extensively\_. The only problem was I nearly died of boredom trying to read it all. I had to skip to the end where he covered obesity research that was actually good and have been using his index for the rest. For instance, I looked up salt in his index. He had a nice five page summary of salt vs. hypertension research where, again, researchers have deliberately downplayed data contradicting conventional wisdom. Salt was fine. I think you enjoy some time with it if you haven't yet. You'd have a lot of WTF moments and possibly a more testable hypothesis for why and how SLD works. In my opinion, appetite suppression has no real bearing on the weight loss brought on by SLD. Taubes makes powerful arguments based on existing conventional research which show that calorie cutting/eating less is an ineffective way to lose weight, practically a non factor in isolation. Controlling insulin is the only way the body will reduce it's fat store. Based on that model, SLD is working by either stabilizing blood glucose through more fat consumption, the oil way, or unscrewing a carbohydrate addicted reward mechanism in the brain, the sugar way. Appetite suppression is just another fancy way of saying satiety. Sane cycles of insulin == satiety. Not eating when you are satiated (something probably hard for some of your experimenters at first, due to refined carbohydrate addiction and insulin out of homeostasis) probably further results in people eating \_more \_ fat, since they think that they can get away with it now that they are eating less, furthering the benefits of the saturated fat. I did not see coverage of fermentation and I did not see coverage of omega 3 in his book. Perhaps I oversell. Perhaps you read it already and rejected it? If you haven't yet read it, you \_really \_ want to. It will save you some research time and fuel some really fun righteous indignation.

seth (2010-01-11 12:12:20)

Andrew, yes, I really wonder about that. I haven't heard the "little bit of animal fat is good" part. I agree, just knowing fat tastes good doesn't tell you how much is optimal. (Which is why I was surprised when a lot of animal fat made me sleep better-I thought the optimal was much less.) And your story about not wanting to eat fat as a kid is telling. I have a similar story, which is that I bought a lot of pork from a farmer and put off eating the fattiest part till last. Ugh, fat, I thought. I think the resolution of the paradox is that some parts of our diet have too little animal fat. Unnaturally low levels. For example, bread without

butter. So to get the optimal amount we need to eat more than we would choose in other parts of our diet. Darrin, yes, I like Taubes's book and I interviewed him at length on this blog. I don't agree with him, however, about how body fat is regulated. He ignores (or doesn't know about) a lot of research, such as the research of Michel Cabanac. q, why a deficiency disease? All disease interferes with functioning. So does poor sleep. So does poor immune function. Deficiency diseases are caused by too little of a food that our ancestors ate more of. There is plenty of reason to think our ancestors ate more animal fat than most of us do now. And plenty of reason to think that their food had more bacteria & fungi growing on it.

Darrin Thompson (2010-01-11 12:52:20)

Silly me! Google knew even. I'll read that. I don't see a layman's summary of Michel Cabanac's research available. If you have a link to that I'd most appreciate it. Or I'll just hunt around more.

Tom in TX (2010-01-11 16:26:14)

Darrin, here is a book that talks about it: [http://www.amazon.com/Shangri-Diet-Hunger-Anything-Weight-Loss/dp/B0014E92NC/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1263252321&sr=8-1;-](http://www.amazon.com/Shangri-Diet-Hunger-Anything-Weight-Loss/dp/B0014E92NC/ref=sr_1_1?ie=UTF8&s=books&qid=1263252321&sr=8-1;-))

Darrin Thompson (2010-01-11 18:39:03)

I meant \_besides\_ that. :-) @Tom in TX, I added a comment in part 12 or 13 of the Taubes interview that answers your question about measuring blood glucose response to sucrose vs. other sugars.

Helen (2010-01-13 06:16:14)

NE1 - Sleep deprivation is linked to inflammation, metabolic disorder, and increased risk of heart disease, especially in women. I'll take my chances with bacon fat.

Hal (2010-01-14 14:44:10)

Sugar tastes great but most people (even/especially Taubes) don't think it's good for you. Sugar and fat tastes the best but I've never found anyone who will tell me that chocolate cheesecake is health food. I'm still looking though.

seth (2010-01-14 21:42:00)

Hal, there was no sugar available back when our preference for sweetness evolved. Israel Ramirez has speculated that our liking of sweetness evolved so that we would eat more plants, which use sugars to transport energy. That makes sense. If you think plants are bad for you . . . then there would be a puzzle.

Jason (2010-01-19 12:43:45)

I take fermented cod liver oil from Green Pastures I think it is (you only need a tiny bit so I wouldn't say drink). I notice a difference and recommend it to all.

Lemmy Caution (2010-02-18 13:01:28)

*Hal, there was no sugar available back when our preference for sweetness evolved. Israel Ramirez has speculated that our liking of sweetness evolved so that we would eat more plants, which use sugars to transport energy. That makes sense. If you think plants are bad for you . . . then there would be a puzzle.* I eat a lot of meat, and don't eat much sugar. However, lots of hunter gatherers eat honey and I see no reason why paleolithic people wouldn't eat honey when it was available.

Mr F (2011-04-16 01:23:31)

Late comment (new to you site), what is it that makes you think that sleeping longer is a sign of better health? This is new to me and goes against my personal experience of people sleeping longer only when they are ill. Was quite enjoying your site until I read this post, which goes a bit too far against the mountains of data. :(

Seth Roberts (2011-04-16 02:09:00)

This post doesn't say that sleeping longer is healthier so I am puzzled by this comment. I believe that sleeping more deeply is healthier because after I found several ways of doing so, my health improved: I stopped getting colds. Sleep is closely connected with fighting off infection.

### Even More Room For Improvement at the NY Times (2010-01-10 06:21)

In [1] a widely-emailed article about depression, Judith Warner, a former columnist at the New York Times, writes:

This is the big picture of mental health care in America: not perfectly healthy people popping pills for no reason, but people with real illnesses lacking access to care; facing barriers like ignorance, stigma and high prices; or finding care that is ineffective.

When [2] Atul Gawande fails to mention prevention in a discussion of how to improve American health care . . . well, he's a surgeon. Of course he has [3] gatekeeper syndrome. What's Judith Warner's excuse? Judging from this article, the notion that depression might be prevented has not occurred to her.

1. <http://www.nytimes.com/2010/01/09/opinion/09warner.html?em>

2. <http://cspan.org/Watch/Media/2010/01/07/HP/A/28096/Dr+Atul+Gawande+Surgeon+Writer.aspx>

3. <http://www.blog.sethroberts.net/2009/11/17/gatekeeper-syndrome/>

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Alex Chernavsky (2010-01-10 21:43:09)

Judith Warner refers to a study which purportedly demonstrates that antidepressants work for severely depressed patients. I haven't seen the study, but I have my doubts about that conclusion. Based on the evidence I've seen, I don't think the drugs work for anyone (that is, they don't work any better than a placebo). See, for example: <http://www.spring.org.uk/2008/02/new-study-ssri-antidepressants-dont.php> For anyone who has an interest in psychopharmacology, I recommend a book called, *Blaming the Brain: The Truth About Drugs and Mental Health* by Elliot Valenstein: <http://www.amazon.com/Blaming-Brain-Truth-Mental-Health/dp/0743237870/> Valenstein is respected neuroscientist based at the University of Michigan (actually, he may be retired now). In this book, he debunks the fashionable but simplistic "chemical imbalance" theories that are so popular these days, especially among psychiatrists and pharmaceutical companies. (And, no, neither I nor Valenstein are Scientologists.)

Mike Bowerman (2010-01-11 13:36:54)

I was glad that she noted the lack of quality psychotherapy, rather than arguing for more prescriptions: "In 2008, a team of psychologists brought this point home in blunt terms in the journal *Psychological Science in the Public Interest*. "Despite the availability of highly effective interventions," they wrote, "relatively few psychologists learn or practice these interventions." I think it is worth reporting both the lack of efficacy of psychopharmaceuticals for much of what they are prescribed for, as well as the need for higher quality psychotherapeutic interventions.

### Value of Blood Glucose Self-Monitoring (2010-01-11 13:16)

In the 1960s, Richard Bernstein, an engineer and a Type 1 diabetic, pioneered the use of blood glucose self-monitoring. Using it, he was able to greatly improve his glucose control and thereby his health. No one doubts it helps Type 1 diabetics. With Type 2 diabetics, whose blood glucose is better controlled, the benefit is obviously less clear – but to

many Type 2 diabetics, unmistakable.

[1]A recent literature review, however, begged to differ:

Contrary to the widely-held belief, there is no proof that non-insulin-dependent patients with type 2 diabetes benefit from glucose self-monitoring. Moreover, it remains unclear whether an additional benefit is displayed by the blood test compared to the urine test or vice versa, in other words, whether one or other of the tests might offer an advantage to patients. The current data are quantitatively and qualitatively inadequate: the few trials that are suitable for investigating these questions have not included or have insufficiently reported many outcomes important to patients. Owing to their short duration, it is also not possible to draw any conclusions on the long-term benefit of glucose self-monitoring. This is the conclusion of the final report of the Institute for Quality and Efficiency in Health Care (IQWiG), [which is in Germany,] published on 14 December 2009.

Which is even more ridiculous than dermatologists concluding that acne isn't due to diet. At [2]a forum for diabetics, the report was roundly criticized:

Telling a Type 2 Diabetic not to measure his/her BG is like telling an overweight person not to weigh themselves....Ignorance is NOT bliss.

Totally agree! I was told by a nurse the other week not to measure my blood pressure at home as 'home testing can cause patients to get worried'!!!

I have recently been diagnosed with type 2, and without the regular testing i did whilst i was going though my diet change, I would have no idea which foods caused high or low readings. I definitely think regular testing gives you the ability to control your diabetes 100 % more than with no testing and using the 3 month HBA1c tests.

[impressive self-experimentation:] For my own edification, I discovered that chromium, zinc, and vitamin B1 added to my diet were beneficial. I discovered that cinnamon, selenium, Omega 3, and some other quack remedies being touted on the web did nothing for me except empty my pocket. I was about to start investigating CQ10 enzymes, but the doctor [who said "don't self-test"] stopped that trial in its tracks.

The most noticeable thing about this thread is how many people have either just joined or made a relatively "early" post after belonging for ages. Amazing! There is a depth of feeling aroused [by this report] that wasn't apparent before!

Why have dermatologists claimed we can't say acne is caused by diet ("there is insufficient evidence")? Why did these diabetes researchers claim we can't say home testing helps Type 2 diabetics? A big reason, I believe, is that these claims (if true, which they aren't) would preserve their gatekeeper function. You don't need to see a dermatologist to stop eating chocolate. Home testing will reveal all sorts of simple ways that you can control your blood sugar without medicine. The doctors who reach these ridiculous conclusions have a big conflict of interest that goes unstated. They are fine with the conclusion that home testing helps Type 1 diabetics because Type 1s will still need them. Because Type 1 diabetics inject insulin, they need doctors to prescribe it.

1. <http://www.iqwig.de/index.991.en.html?random=4b6198>

2. <http://www.diabetes.co.uk/diabetes-forum/viewtopic.php?f=1&t=12432&start=0>

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Hypatia (2010-01-11 14:27:51)

Seth, While I usually agree with you, I am finding myself less convinced by your gatekeeper theory. Type II diabetics, even if their blood sugar is well controlled, have to see their doctors on a regular basis to monitor their liver and kidney function. But I look forward to hearing your thoughts. Hypatia

Jim (2010-01-11 15:03:18)

Blood glucose testing, or urine testing? For me, either could work, and it just becomes a matter of convenience and personal preference. Of those two choices, I prefer blood glucose testing. However, I very much prefer an entirely different measurement: my pulse rate. A fingertip pulse oximeter shows how my body is responding to food, with results much quicker than either blood or urine tests. And as someone who has both Type 2 diabetes and frequent chest pains, I like to monitor both conditions. The pulse oximeter results vary from the blood or urine tests, because I get very rapid heartbeat (tachycardia) from bread and cereals (gluten?). Also, my pulse is affected is very strongly coffee and tea. Generally speaking, my blood glucose and my pulse rate move in the same directions, with some differences But those differences are important, and my pulse oximeter has helped me identify and avoid foods that cause me to have very unpleasant tachycardia and chest pains. A fingertip pulse oximeter is expensive, but no testing supplies are needed. A cheaper alternative for measuring pulse would be an ordinary blood pressure monitor.

seth (2010-01-11 17:11:57)

Hypatia, long before they resisted home testing for Type 2 diabetics, doctors resisted home testing for anyone. And it isn't just these two examples – acne and diabetes. Prevention is generally ignored. What's your explanation for why prevention is so ignored by American health care?

Alex Chernavsky (2010-01-11 20:56:17)

This essay argues that preventive medicine isn't cost-effective: <http://www.nytimes.com/2008/10/07/health-views/07essa.html>

Jim (2010-01-11 21:56:53)

Seth, you asked Hypatia why prevention is ignored, but I'll give my answer also. I think doctors neglect prevention for two reasons: 1. Doctors think that patients will be more likely to do something simple like taking pills, instead of making major lifestyle changes, even though lifestyle is much safer and effective than pills. 2. Doctors get reimbursed for doing something. And while prescriptions are a tangible action, just counseling patients about lifestyle may not be considered important or effective in the eyes of the insurers. Health care reform will be meaningless if the only changes are in who pays for drugs and surgeries. The real change will only occur when doctors are rewarded financially for teaching patients how to modify their lifestyles.

Cord (2010-01-12 16:23:54)

I don't think it's necessarily a Gatekeeper attitude that causes this. I do think that people who have finished several years of expensive specialized education often become a little cynical about the intelligence of the public, and are unable to view patients as individuals: all recommendations must be suitable for "the public" and "the public" is stupid, and if you make a recommendation for someone intelligent and curious, you are in danger of having your recommendation followed badly by this great theoretical dumb mass of "the public". So if it can't be used by a cow, it's not valid.

Nancy (2010-01-23 23:54:59)

Found this commentary rather interesting as a (probably) LADA diabetic, who was first diagnosed as Type 2 before the right docs looked at the tests and saw Type 1. I think home blood glucose testing (by the time the sugar's in your urine, you've been high for TOO long) can be equally as beneficial to Type 2s IF they are taught how to respond to the numbers on the

little gadget and how to log and look for patterns. The idea is to prevent as much long-term damage as possible and improve daily quality of life, right? Really, I think well-trained diabetes educators (or similar educators for other conditions) can be just as beneficial to ANY person with diabetes as doctors. And, in response to Jim above - tachycardia is not really going to tell you which direction your blood glucose is heading. Your pulse can accelerate if your sugar is crashing, too. Believe me - I have mistaken that sensation of increased heart rate for increasing BG levels as well, until I get out the meter and do a fingerstick.

### Assorted Links (2010-01-11 13:53)

- [1]data logging with iPhone
- [2]New York cavemen
- [3]paleo nutrition blogs & sites
- [4]Roger Ebert stops eating
- [5]Why Nassim Taleb walks a lot

Thanks to Ben Hyde, Dave Lull, Marian Lizzi, and Brody.

1. <http://apps.pachube.com/datalogger/>
2. <http://www.nytimes.com/2010/01/10/fashion/10caveman.html?pagewanted=all>
3. <http://www.marksdailyapple.com/stuff-that-i-read-or-watch-and-you-should-too/>
4. [http://blogs.suntimes.com/ebert/2010/01/nil\\_by\\_mouth.html](http://blogs.suntimes.com/ebert/2010/01/nil_by_mouth.html)
5. <http://www.fooledbyrandomness.com/whyIwalk.pdf>

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Ed (2010-01-12 11:21:28)

Regarding Data Logging, I have been using Google Docs to accomplish something similar. I created a Google Docs Form and emailed it to my iPhone, then save the link as a home screen button. This should work for any phone with a browser... Currently I am tracking weight, BP, exercise, coffee and nicotine consumption... all with different forms. I can enter on my phone or my laptop... Now if I could only find a use for the data, that would be something... -Ed

Walking | CST Free Weight Exercises By Scott Sonnon (2010-01-13 06:07:58)

[...] hat tip to Seth [...]

### Two Chinese Idioms (2010-01-12 10:02)

dao ye. dao means to buy in one place and sell in another (an example of how Chinese has far more verbs than English). The literal meaning of ye is grandpa but it is humorously used to praise someone. The dao ye are people who buy little stuff, such as clothes, in Southern China, where it's made, and sell it in Beijing. Probably on the sidewalk.

chao fang tuan. Chao means stir-fry (fast cooking), fang means houses or apartments, and tuan means group (of people). The chao fang tuan are those who speculate in real estate. They buy a house or apartment and sell it quickly.

"Everyone in China hates the chao fang tuan," said my friend.

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Socktopi (2010-01-12 21:38:24)

Although mainly applied to the buying and reselling of financial instruments, the verb you are looking for is 'arbitrage'.

Hal (2010-01-14 13:55:00)

The house people are called "flippers" in the U.S. Not super popular these days although most of them got badly burned in the end.

Chinese Idioms & Proverbs Everyday (13) | Tao in Shanghai (2010-01-18 02:55:12)

[...] Comment on Two Chinese Idioms by Hal [...]

Chinese Idioms & Proverbs Everyday (14) | Tao in Shanghai (2010-01-19 04:35:44)

[...] Comment on Two Chinese Idioms by Hal [...]

Chinese Idioms & Proverbs Everyday (15) | Tao in Shanghai (2010-01-20 05:27:15)

[...] Comment on Two Chinese Idioms by Hal [...]

Chinese Idioms & Proverbs Everyday (16) | Tao in Shanghai (2010-01-21 05:26:27)

[...] Comment on Two Chinese Idioms by Hal [...]

## **False Alarm (2010-01-13 19:59)**

Today I flew from Tokyo to San Francisco. Just before boarding there was a level of security I hadn't encountered before: Every passenger's carry-on luggage was searched and every passenger was wand-scanned. Then my name was called. "Please come to the check-in desk." I went to the check-in desk. "Are you Mr. Roberts?" Yes. The woman who had asked me that started typing. "Why did you call my name?" I asked. No answer. I asked again. No answer. Eventually I figured out I'd been summoned to the check-in desk to be offered a better seat, for which I hadn't asked and for which I was very grateful. The airline was ANA.

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Adam (2010-01-13 21:36:05)

Nice one! \*Flew ANA from Honolulu to Tokyo. They took great care of us...drove us from the front desk to the terminal, b/c time was short, escorted us through security, and made sure we got on the plane OK. \*Their service was much appreciated, given we were traveling with children and were being re-booked from a canceled United flight.

## Back to the (Recent) Past (2010-01-14 01:53)

My work is all about how the past was better for us. People stood more; so they slept better. They ate more animal fat; so they slept better. They saw more faces in the morning and fewer faces late at night, so their mood was better. Their food had more bacteria growing on it, so their immune and digestive systems worked better. And so on.

Past meaning 100,000 years ago. In Beijing, I am moving from one apartment (A) to another apartment (B). Apartment A is in a modern building, Apartment B is in a building maybe 40 years older. To my surprise, Apartment B is clearly better than Apartment A. The biggest improvement is that Apartment B has all-incandescent lighting. Apartment A was all-fluorescent. Exposure to fluorescent light in the evening can interfere with the faces-mood effect because it can resemble sunlight. Incandescent lamps are so much cooler than the sun that the light they emit is very different. Another improvement is that Apartment B, unlike Apartment A, has a sun deck. So it's easy to get lots of sunlight in the morning – important for sleep and for the faces-mood effect. The third improvement is that Apartment B, like Apartment A, is on the sixth floor – but Apartment B is a walk-up. Walking up six flights of stairs will tire out my legs so that when I do one-legged standing (to sleep better) I won't have to stand as long before getting exhausted. When I lived in Apartment A I could have taken the stairs, but I never did.

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Andrew Gelman (2010-01-14 08:37:27)

I much prefer fluorescent lights; I looove the bright light. But my situation is different from yours; I see my family every morning when I wake up, so the faces-mood thing isn't such an issue with me.

Chris Burd (2010-01-14 12:19:20)

I'm surprised to hear that the Chinese were building good apartment buildings in the 1960s. I thought everything had gone to hell back then.

seth (2010-01-14 13:13:25)

Chris, maybe the apartment building dates from the 1950s. Andrew, to get the full benefit of seeing your family in the morning, it might be necessary to avoid fluorescent light in the evening.

Andrew Gelman (2010-01-14 13:15:29)

For me, I don't think so. But maybe the effect is more dramatic for you because you live alone.

Nansen (2010-01-16 16:11:42)

It's unclear whether Andrew Gelman's comment, "For me, I don't think so", means that he tried a self-experiment, or, is giving his best guess.

seth (2010-01-16 22:59:56)

I think he is guessing.

## Insurance Group VP Questions Climate Science (2010-01-15 01:33)

Science journalists, like other journalists, have a built-in problem: What they write affects the careers of the scientists they talk to. So those scientists are unlikely to be honest. No doubt most science journalists realize this but cannot



say it, for fear of damaging their own careers. Dirty little secret is the phrase.

This is why, when Climategate happened, the many claims of climate scientists that the emails meant nothing themselves meant nothing. "The reason for the denial was the need for it," Thorstein Veblen was fond of saying. What the climate scientists really thought they were unlikely to make public. The faux-horrified reactions of the few who made a living on the other side of the debate also meant nothing.

And this is why [1]this reaction to Climategate, from Robert Detlefsen, an insurance industry group vice president, is meaningful: what he says will have no effect on his career. He is disinterested.Â And he makes some good points:

- "The CRU e-mails show that a close-knit group of the world's most influential climate scientists actively colluded to subvert the peer-review process [to prevent publication of disagreement]; manufactured pre-determined conclusions through the use of contrived analytic techniques; and discussed destroying data to avoid [FOIA] requests."
- He quotes from the Wegman report, which I hadn't heard of. The Wegman report is by a group of statisticians.Â It says: "' independent studies' may not be as independent as they might appear on the surface". It also says that when climate scientists were asked to explain their work, "the sharing of research material, data and results was haphazardly and grudgingly done."

He concludes that the science is less certain than has been claimed.

1. [http://www.eenews.net/public/25/13791/features/documents/2010/01/13/document\\_cw\\_02.pdf](http://www.eenews.net/public/25/13791/features/documents/2010/01/13/document_cw_02.pdf)

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Jeremy (2010-01-15 03:06:29)

What a shame Mr Detlefsen doesn't work for an actual insurance company. If he did, and if I had the money and temperament, I'd be shorting his company like mad.

Nile (2010-01-18 09:52:22)

One can download the Wegman report - just google it. The report is brutal to the climate scientists - they don't understand statistics and they are a self referential group. The report charts the relationships among the climate scientists. I don't know why the report hasn't gotten more publicity.

## **My Theory of Human Evolution (Beijing furniture shopping) (2010-01-16 00:16)**

I am moving to an unfurnished apartment in Beijing so I went furniture shopping at a huge "furnishings plaza" with hundreds of furniture showrooms. (Not to mention showrooms for mattresses, doors, stairs, security systems, curtains, light fixtures, and interior decorators.) It was more like a trade show than anything I've seen in America or Europe. I think it had more furniture choices than the whole Bay Area. I loved wandering around it, partly because it kept reminding me of [1]my theory of human evolution:

1. The huge choice included a big range of styles, including European, Chinese Traditional, modern, and "flat-plate" (meaning flat pieces of wood). At least 90 % of the stuff struck me as ugly. Garish, too ornate, too simple, clunky, chunky, bad colors, bad patterns, and so on. Of course there were buyers for all of it. That there is such diversity of taste ("no accounting for taste") supports a diversity of technological development. Exactly what a healthy economy needs.

2. Almost all the furniture was decorated. (If you don't want decoration, you shop at Ikea.) Decoration is unnecessary from a functional point of view – you can sleep on a bed whether it is decorated or not – but is obviously pleasant. (Which is why I wasn't at Ikea.) Decoration is difficult, so the demand for it supports technological innovation.

3. I write a lot sitting up in bed. After I saw a bed with a cushioned headboard, I realized I wanted a bed with a built-in cushion for sitting up. I found something better than I knew existed – the headboard cushion is detachable and cleanable. Having chosen the bed, there was pressure to buy matching furniture – the side table, the wardrobe, and so on. The furniture that matched my chosen bed was not especially attractive by itself but would become more attractive when near my bed. Because we like seeing things match. Our preference for matching stuff at first glance is paradoxical since it seems to push for less diversity rather than more. Why do we like seeing things match? The evolutionary reason, I believe, is so we will put similar things side by side to get that effect. Notice how clothing stores and many other stores are decorated. Why is that good? Because when we put things side by side it is much easier to see little differences and thus little ways one of them can be improved. When you start to notice these little differences, you become a connoisseur. Connoisseurs pay more for hard-to-make stuff than the rest of us and thus support technology that produces hard-to-see improvements.

4. Few Chinese bedrooms have closets. Clothes are hung in wardrobes. The wardrobe that matched my chosen bed wasn't the loveliest wardrobe I saw. But the loveliest wardrobe I saw didn't match the bed I wanted. The loveliest wardrobe I saw had something unusual: decoration of several sizes. We like a combination of large-, medium-, and small-scale decorative detail more than one size alone. This creates further challenges for artisans: There is pressure to be skilled at a wide range of sizes. So you don't just develop technology for making small decorative details, you also develop technology for making larger details. Again, human nature promoting diversity of technological development.

5. The more expensive stuff looked better than the cheaper stuff, yes. But a lot of the expensive stuff wasn't so much beautiful as expensive-looking. You might or might not like it – but no one would disagree it was expensive. Presumably people buy such stuff to show off, the way we do so many things to show our status. That we use difficult-to-make possessions to display status (thus creating demand for such things) is yet another way that human nature promotes technological innovation.

1. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>

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Jim (2010-01-16 23:50:36)

Diversity vs. conformity ... Several years ago, when I needed new eyeglasses, I found it almost impossible to buy the large-lens style that I had worn for decades. It wasn't that the frames were not available. The problem was that the sales ladies insisted that I should conform to the style of the season, with small lenses from French and British fashion designers with famous (and expensive) brands. After about 15 minutes of arguing with them, I finally walked out when one of the ladies asked if I wanted my sons to be ashamed of me because my glasses were unfashionable. It sounds like diversity may be more acceptable in

Beijing furniture shopping than in my local optical shops. Diversity vs. conformity.

seth (2010-01-17 09:46:24)

Jim, it's true that no one tried to argue with me when I went furniture shopping. They had a hard enough time telling me the most basic things. Your example is interesting since the force of "conformity" was the force of fashion – which keeps designers from endlessly repeating themselves. Fashion promotes diversity, but over time rather than space.

Darrin Thompson (2010-01-18 12:05:01)

Can you post pictures?

Graven Image (2010-01-24 20:57:48)

Diversity vs. conformity = balance,..

### **Berkeley Prices (2010-01-16 22:06)**

1 pound of pork belly..... \$3

1 pound of scrap animal fat... \$0.15

expired food.....none (can't buy)

better health.....priceless

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grace (2010-01-18 21:36:26)

haaa\* I told ya!

### **Lindemans Lambic Framboise (2010-01-17 01:49)**

At a Beijing "food and wine exhibition" (which was 95 % wine) my favorite drinks were the Lindemans fruity beers – a type of beer called lambic. The label of the raspberry (framboise) one says:

Lindemans Framboise is a lambic made from local barley, unmalted wheat, and wild [= air-borne] yeast.Â After spontaneous fermentation, raspberries are added, creating a secondary fermentation and yielding a beer of exceptional flavor and complexity.

Maybe the presence of two quite different fermentations (grain and fruit) [1]is why it tastes so good, just as this says. To me, the more important point is the linkage of fermentation and complexity – the idea that fermentation creates complexity.

1. <http://www.blog.sethroberts.net/2010/01/04/psychophysics-of-complexity/>

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Byron P (2010-01-17 20:50:41)

Seth, You are correct about Lambics and complexity. You may already know this, but "spontaneous fermentation" refers to the fact that the brewer does not use specially cultured yeasts to ferment the beer, as is the normal practice. Instead the large vat of malts (later infused with fruits) is literally left open to the air. Whatever free floating bacteria and yeasts happen to find their way in to the wort (i.e. unfermented malts) drive the fermentation. Often the brewers will stomp on the roof of the brewery above the vats to dislodge yeasts etc. from the rafters. P.S. In my experience, Belgian beers are full of complexity (Lambics are a type of Belgian Beer), I had always assumed due to unique strains of yeast.

megan (2010-01-20 14:28:42)

Seth, I love the Raspberry Lambic and am happily surprised to see that you wrote about it! I'd like to try the other flavors so I should get around to that =)

Patri Friedman (2010-02-01 10:48:39)

I love lambics! For me part of it is that they don't seem to use hops. I hate the bitter taste of hops.

### **How Bad is Animal Fat? (2010-01-17 22:14)**

After learning that [1]animal fat improved my sleep, I happily ate much more of it. [2]I wasn't worried that it made something else worse (e.g., heart disease). I believe that all parts of our bodies have been shaped by evolution to work well on the same diet, just as all electric appliances are designed to work well on the same house current.

[3]A to-be-published meta-analysis in the American Journal of Clinical Nutrition supports my view that animal fat is nowhere as bad as we've been told a thousand times. It says:

During 5â€“23 y of follow-up of 347,747 subjects, . . . intake of [more] saturated fat was not associated with an increased risk of CHD [coronary heart disease], stroke, or CVD [cardiovascular disease]. The pooled relative risk estimates that compared extreme quantiles of saturated fat intake were 1.07 (95 % CI: 0.96, 1.19; P = 0.22) for CHD, 0.81 (95 % CI: 0.62, 1.05; P = 0.11) for stroke, and 1.00 (95 % CI: 0.89, 1.11; P = 0.95) for CVD.

Emphasis added. One aspect of the results suggested that studies that found an positive association (more fat, more disease) were more likely to be published than those that didn't find an association or found a negative association. Which means these numbers may underestimate the good effects.

Thanks to Steve Hansen and Michael Pope.

1. <http://www.blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>
2. <http://www.blog.sethroberts.net/2009/12/13/interview-with-seth-roberts/>
3. <http://www.ajcn.org/cgi/content/abstract/ajcn.2009.27725v1>

Jim (2010-01-17 22:33:57)

I love my saturated fats, especially eggs fried in real butter. Which made me very unhappy with fake-food giant Unilever and their new global campaign to "Ban butter to save thousands of lives." Of course, a ban on butter would give a big boost to Unilever's chemical fake butters like Country Crock and I Can't Believe It's Not Butter! [1]Ban Butter? Ban Fake Foods instead!

1. <http://blogsthatmakemethink.blogspot.com/2010/01/manufactured-food-company-launches.html>

Carol (2010-01-17 23:29:53)

I think you underestimate the number of times we've been told it was bad. It's been way more than a thousand times. It's too bad that real lard is almost impossible to get unless you render it yourself from natural pork (not the "always tender" salt & phosphate treated stuff - it ends up tasting salty) , or buy it direct from a farmer or 'gourmet' butcher. That lard that is in the stores has been hydrogenated and treated to be 'shelf stable' with the usual fat preservatives.

q (2010-01-18 09:19:57)

Carol, you can often get lard from Mexican groceries.

Timothy Beneke (2010-01-18 12:03:35)

Gary Taubes is useful here; the summaries he gives of the Women's Health Initiative studies support the idea that animal fat is not so bad. The attempts at controlled long term studies where one group is coached to eat the "right" foods and the other is not finds that eating the "right" foods (assuming we can trust the data) had no better health outcomes over a 9 year period than eating supposedly less nutritious food. People who were coached were encouraged not to eat a lot of animal fat... When nutritionists attempt to actually demonstrate their knowledge claims about the best overall diet, they tend to fall flat on their faces... So far at least...

peter (2010-01-18 13:26:33)

<http://www.telegraph.co.uk/health/healthnews/7010677/Ban-butter-to-save-our-hearts-says-doctor.html> Ban butter to save our hearts, says doctor Butter should be banned in a bid to save thousands from heart disease, a leading heart surgeon claims. Dr Shyam Kolvekar said that he is "increasingly concerned" about the nation's eating habits as he is seeing patients as young as 30 in need of heart bypass surgery due to a diet "overloaded" with saturated fat. According to a national diet survey, nine out of 10 of children, 88 per cent of men and 83 per cent of women in Britain eat too much saturated fat, consuming a fifth too much each day.

John (2010-01-18 22:18:26)

Love this post, but is there a typo? p equals .22 for CHD, .11 for stroke, but a whopping .95 (not .095?) for CVD. At least CHD and stroke are highly reassuring.

seth (2010-01-19 00:10:14)

John, .95 is not a typo. Notice how well-centered on 1 the confidence interval is. Peter, someone should ask Dr. Kolvekar why the French, who eat so much animal fat, have such low rates of heart disease.

peter (2010-01-19 14:24:56)

Seth, FWIW, my understanding is that the French paradox is attributable to the red wine the French drink.

Nigel (2010-01-19 16:39:24)

There are three studies showing that there is no significant association between saturated fat consumption & CHD. See [1]**Ban Butter, Part 4,400?**

1. <http://nigeepoo.blogspot.com/2010/01/ban-butter-part-4400.html>

How bad is animal fat? | dv8-designs (2010-01-19 16:42:41)  
[...] How bad is animal fat? [...]

Afrop (2010-01-19 17:02:51)

I would just like to point out to Jim (the first commenter) that Qi Sun, a co-first author of the study, is supported by a fellowship from Unilever Corporate Research. I thought that was interesting in the context of your comment. I would also like to point out that the study makes no claims regarding fat origin, simply saturation. The study applies to coconut or palm oil as much or more than, say, lard.

How bad is animal fat? | The World Matters (2010-01-19 19:03:05)

[...] bad is animal fat? Published on Jan 20, 2010 at 3:00 am . Filled under: Society | No Comments From Seth Roberts blog: A to-be-published meta-analysis in the American Journal of Clinical Nutrition supports my view that animal fat is nowhere as bad as we've been told a thousand times. It says: During 23 y of follow-up of 347,747 subjects, . . . intake of [more] saturated fat was not associated with an increased risk of CHD [coronary heart disease], stroke, or CVD [cardiovascular disease]. The pooled relative risk estimates that compared extreme quantiles of saturated fat intake were 1.07 (95 % CI: 0.96, 1.19; P = 0.22) for CHD, 0.81 (95 % CI: 0.62, 1.05; P = 0.11) for stroke, and 1.00 (95 % CI: 0.89, 1.11; P = 0.95) for CVD. Emphasis added. One aspect of the results suggested that studies that found an positive association (more fat, more disease) were more likely to be published than those that didn't find an association or found a negative association. Which means these numbers may underestimate the good effects. I guess I'll keep frying my eggs in bacon grease! How bad is animal fat? Bookmark and Share: sociallist\_9b69ab81\_url = 'http://www.theworldmatters.org/2010/01/20/how-bad-is-animal-fat/'; sociallist\_9b69ab81\_title = 'How bad is animal fat?'; sociallist\_9b69ab81\_text = "; sociallist\_9b69ab81\_tags = "; « God hates shrimp Mary Kaye Trio: The Birth of the Las Vegas Lounge Scene » Hugo Mineiro - http://www.hugomineiro.com we ♥ luv - http://www.weluv.it\_uacct = "UA-1075237-3"; urchinTracker(); [...]

Salsa AI (2010-01-19 21:02:24)

You all know Julia Child don't you? She lived to 92, loved butter and animal fats. We humans evolved eating "food." Don't confuse chemicals for food.

Dr.N (2010-01-19 22:38:27)

Simple, good fat; raised with proper husbandry, provides ample amounts of co-Q 10. The only substance known to reduce arterial oxidadative stress and it's free; not like a pharma created monster that can't be put down because of fear. So - EAT YOUR GOOD FAT in moderation. Live. Dr.B

Pietro (2010-01-20 08:44:28)

When will someone acknowledge that heart disease is primarily due to genetic factors ? This does not mean that the "risk factors" are not important. They are but their relevance ( eventual heart attack) differs. Julia Child would have lived to 92 regardless of her diet.

Ashish (2010-01-21 00:51:21)

I've always loved bacon. Over the past couple of months, this blog has been my excuse to eat fatty bacon - with fried eggs, as an addition to miso soup, and elsewhere - and to cook with bacon drippings. Unfortunately, my personal correlation between eating bacon fat and getting heartburn is turning out to be close to 1. (I very rarely otherwise get heartburn.) So I have to discontinue my animal fat experiment.

Eva (2010-01-21 02:26:28)

Somewhere in the Bible it is mentioned that among good things is "oil to make one's face to shine" and I don't think it means to slather your face with the stuff. Butter is a gift of treasure from the goddess to the kitchen. Like all animal fats, it should be revered and honored and given thanks for. The kitchen is the true temple of humanity. You don't overeat in that place—that would be sacrilege—but you do give thanks for being a part of the Earth's natural cycle. All real food is holy. "Ban Fake Foods"

is a great, simple slogan and the key to our survival—thank you!

### **An Alphabet (2010-01-18 09:45)**

Apparently I'm [1]a mad scientist. "Peasants (with pitchforks)" refers to rebellion – peasants storming the capital, armed with pitchforks. The alphabet, with lovely illustrations, is on [2]a set of blocks available for purchase.

Via a post by Suzanne Lazear at [3]Steamed!: Writing Steampunk Fiction.

1. <http://www.xylocopa.com/files/alpha%20guide.pdf>
2. <http://www.xylocopa.com/product/mad-science-alphabet-blocks>
3. <http://ageofsteam.wordpress.com/>

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Timothy Beneke (2010-01-18 12:11:32)

Seth, in speaking with friends, I've affectionately referred to you as a "mad scientist," as someone who will fearlessly pursue any idea that might have some value, no matter how far out from the mainstream. It's a brilliant madness that leads to great things. I don't always know whether you are right or wrong about something, but if you suggest something is good for people, I take it very seriously and am usually willing to give it a shot... You have an excellent track record, which is more than I can say for whole institutions that are supposed to help people...

seth (2010-01-19 00:59:55)

Thanks, Tim. If I ever write my memoirs, that would be a good title: Mad Scientist.

Timothy Beneke (2010-01-20 19:42:25)

You could probably write a good book just about hypothesis generation. How many people notice a difference in their balance when they tie their shoes and then take it from there...?

### **Assorted Links (2010-01-19 01:03)**

- [1]caffeine self-experimentation. He fails to consider the possibility that he has become tolerant to caffeine –Â that the caffeine effect is negated by an effect in the opposite direction.
- [2]vote for anyone other than Martha Coakley

1. <http://williamsbswift.blogspot.com/2010/01/drugs-and-their-non-effects.html>
2. [http://online.wsj.com/article/SB10001424052748704281204575003341640657862.html?mod=WSJ\\_hp\\_mostpop\\_read](http://online.wsj.com/article/SB10001424052748704281204575003341640657862.html?mod=WSJ_hp_mostpop_read)

Stephen M (Ethesis) (2010-06-12 15:34:47)

Martha Coakley should have been disbarred and sentence to a maximum sentence.

## Morning Light Self-Experimentation (2010-01-19 06:27)

A 25-year-old Toronto accountant [1]blogs:

A few weeks ago my parents came downtown to take me out for dinner. Apart from leftovers, my dinosaur garbage can and a few pieces of mail, they also brought my Ikea lamp.Â Now my apartment is very small.Â Itâ€™s a bachelor with about 600 square feet.Â It faces south and gets a fair amount of light during the day, which is fine during the weekends.Â But during the week when Iâ€™m at home â€œ in the morning and at night â€œ it can get pretty dark.

Now enter my Ikea lamp.Â The first morning after receiving it I turned it on along with all my other lights, while getting ready for work.Â I noticed a few things that day.Â One, I wasnâ€™t angry during my commute via the subway.Â If youâ€™re not from Toronto you wonâ€™t get this.Â But if you are and you ride the rocket each morning, then youâ€™ll understand the general expression of, â€œangry defeatismâ€ on most commutersâ€™ faces.Â My lack of hate was personally noticeable.Â I also noticed that I didnâ€™t need my usual green tea when I got into work.Â Even crazier I was alert when I got in,Â the type of mental alertness that often doesnâ€™t show up until roughly 11 am.

I really thought about this for a while.Â I couldnâ€™t figure it out until I remembered [2]this post by Seth Roberts.Â Itâ€™s very short.Â I thought about it for a few days and made a little experiment.Â I went from turning on all my lights every morning to a few, to none.Â My â€œawakenessâ€ varied positively with the quantity and duration of morning light.Â Along with morning light, Iâ€™ve also found that having the TV on and taking Vitamin D amplifies this effect.

Itâ€™s not a small impact.Â Itâ€™s had a huge effect on my day-to-day.

I left a comment asking what the Ikea lamp was. One interesting thing about this was the exposure time. Judging from a comment (see below), it was about an hour. That's the minimum I try to get early every morning (from sitting outside).

After I bought the absolute necessities for my Beijing apartment (bed, water heater, washing machine, etc.), my first optional purchase was a chair for the balcony. So I can sit on the enclosed balcony in the morning.

1. <http://patheticallyawesome.wordpress.com/2010/01/18/random-thought-sunday/>

2. <http://www.blog.sethroberts.net/category/sleep/sunlight-sleep/>

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Brennan (2010-01-19 07:39:27)

I usually keep it on for closer to an hour - hour and 15min. I like to have a relaxed breakfast.



Jeff (2010-01-19 09:01:17)

One thing to consider is the positive effect of light exposure on dopamine and serotonin, both neurotransmitter stimulants associated with wakefulness and positive mood.

Radek Pilich (2010-01-19 09:22:22)

I have IKEA lamp as well ;) This one <http://www.ikea.com/us/en/catalog/products/20370383> Solid performance for the price. I have full spectrum lightbulb in there - some 5000K. I keep it on as much as I can during the day (it's energy saving bulb) and switch it off soon after transitioning to ceiling lighting that has some 2000K full-spectrum bulbs for the later part of the day. Before sleeping time, I switch even those off and use just 2 small halogen lamps to keep a bit ambient light in the room - just enough to prepare for next day or do a bit of reading. But that's not why I am writing this comment. I am writing it because I got an idea after reading this article. Next time I am in a DIY store, I will buy an electric socket timer, so I can program it to switch on my lamp automatically some time before my morning alarm. I hope this could make waking up more comfortable, especially in the winter.

ceva (2010-01-19 12:55:52)

I've begun to start each morning with lights fully on. Seth, you should investigate whether practising the dual-n-back task improves your mood the next day. I think that it does mine. This might be because it does some of the things that meditation might (I don't meditate).

bennetta (2010-01-19 13:46:45)

The light exposure trick is something that has been relatively well known and practiced by Psychiatrists treating ADHD for years. A specialist I saw recommended it 4-5 years ago and it's wonderfully effective at getting me going in the morning, as well as keeping my internal clock regular (which is a classic problem for people with AD(H)D) I do not remember the details, but according to him, certain wavelengths in the light trigger responses in your brain that resets your internal clock and helps wake you up. Unfortunately, this can only happen between around 6-9am due to what's going on in your brain at the time. This is why you can actually be more tired and less pleasant after you sleep in, but also why people nowadays can have problems waking up. It's especially important for folks with ADD to do it because our internal clocks are much more out of whack than average, but I'm sure it helps everyone. The best way to do it is to get a wake up light that gradually turns on with a timer. Couple it with a full spectrum bulb and you can have a miniature sunrise right in your own room! This, meditation, and Omega 3 are, by far, three of the most effective "home remedies" I've ever used.

lance (2010-01-19 14:24:05)

I use a light in the afternoon . . . There's conflicting info about whether it's the light or when you use the light that matters.

Patrik (2010-01-20 01:48:41)

*One, I wasn't angry during my commute via the subway. If you're not from Toronto you won't get this. But if you are and you ride the rocket each morning, then you'll understand the general expression of, "angry defeatism" on most commuters' faces. You have just described the Budapest metro/subway during winter. My guess, this is a function of latitude.*

npr (2010-01-20 11:00:44)

it would be interesting to do an activism campaign to get subways to install lighting that tries to match sunlight- I wonder if you could change the mood of a whole city.

donny (2010-02-27 19:35:51)

Last time I went on the subway in Toronto, I noticed how dim the lighting was. The stations were much more brightly lit when I was a kid. I found it strikingly oppressive.

## IvanView Contains Malware (2010-01-20 11:45)

A few days ago I needed to convert image files from one format to another. Searching for the software, I found Ivan-View, an apparently reputable company whose program once got 4 stars from CNET. I download and installed the converter. Right after that I started having trouble with my Firefox browser. After I did a Google Search, and tried to go to one of the results, I'd be directed elsewhere. Trying to use Avis.com in America put me on Avis's Australian website – and many relocations were much worse. Internet Explorer still worked okay.

I searched "Firefox virus." I found a post about a problem that was the same as mine, with the reassuring words that it will just mess with your web surfing. The outlined solution steps, however, were either very complicated or didn't solve the problem.

Later I started to have trouble with Internet Explorer. I used Norton Antivirus to scan my hard drive. It found nothing of importance. But it did tell me I had some sort of incoming malware. Then it told me to restart my computer. I did so – and was unable to log on! No one had reported this problem in what I'd read.

At this point I did a full system recovery (from a few weeks earlier). It took a few hours but then everything was fine. It's unfortunate, though, that Mozilla and Norton, not to mention Microsoft, haven't managed to protect against a virus that has been around for almost a year, as far as I could tell. You should be able to fix this by downloading a free antivirus program.

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Sean (2010-01-20 13:34:37)  
Try IrfanView. Very good program.

Cord (2010-01-20 13:54:53)  
The malwarebytes free software is excellent for most things of this nature. I also recommend the bleepingcomputer.com site. Twice, now, I have used my laptop, a thumb drive, and those tools to perform miraculous resuscitations on computers plagued by malware. My family now regards me as a computer whiz, even though I know absolutely nothing about programming. I do, however, know how to boot up in safe mode and follow a set of directions– and bleepingcomputer has got that covered.

ivan (2010-01-20 14:22:11)  
The reputed company and famous program is IrfanView, Ivan View sounds like a Russian's hacker version of the program!

Kevin Miller (2010-01-20 14:55:32)  
Sounds like you wanted "Irfanview," which is free and effective. "Ivanview" sounds suspicious on its face. Odd that CNet rated it highly, but the user reviewers were appropriately scathing.

JC (2010-01-20 17:05:42)  
Yep, it's Irfanview you need.

seth (2010-01-20 20:00:46)  
Thanks, I didn't know about Irfanview. Kevin, good point about the user reviews.

amber (2010-01-21 06:48:51)

Once again, system restore proves itself as the poor man's virus protection. I could make a long list of the folks who've downloaded doozies and I've walked through that process on the phone. I keep brand name antivirus software on the boxes at my office because it seems like a best-practices thing to do, but I've never had a virus/adware/whatever problem that system restore couldn't fix. BTW, system restore doesn't usually take me that long—you need some more ram?

seth (2010-01-21 07:28:21)

Amber, maybe it took two hours because I have many files? How long does it take you? I used Lenovo's recovery system.

Nathan Myers (2010-01-21 13:11:36)

I can't imagine why anyone would subject themselves to Microsoft Windows. Virus checker? System restore? Stars on CNET? What a strange way to run a computer.

amber (2010-01-21 18:33:24)

Hey Seth, I read back over your post and realized you never got it to boot back—yeah, full system restore from a backup is two hours. Next time – before you shut'r down – do start/programs/accessories/tools/system restore. It'll wipe whatever you just downloaded, just pick your most recent restore date (or one the week earlier if you're not sure when the rogue download occurred). Takes five minutes. If you can't boot normal, I'm pretty sure you can run it from a boot in safe mode. Normally if mine won't boot I'll let it sit a few hours and try later. Who knows why windows works when it does. Sometimes I hit F8 and play with the boot order to get a cleaner boot. Nathan is right though—for a brief second I wondered whether as an educator you might have a Mac and I didn't know if system restore existed on Macs, then it occurred to me, of course it's not a Mac, it's got a virus. But hey, PC is the world standard, what can you do. I told a college prof once long ago I needed to buy a PC because 'everyone' uses them and he said I was crazy. He was wrong.

Mark (2010-01-21 21:28:38)

Life is so much easier with a Macintosh. I end up having to support my wife's Vista machine. Windows is actually is pretty safe from viruses since Vista, but my wife bought Kaspersky's virus program, and it has so many false positives that it's driving me crazy. My wife just doesn't understand why everything's O.K. if the program has caught something. It takes me 30 minutes of wasted time to find the Kaspersky forum postings confirming that it's a false positive. I don't know why Macs don't have problems. In theory they're just Unix boxes susceptible to viruses and trojans. But in practice they have been completely safe.

seth (2010-01-21 23:34:37)

Thanks, Amber, I didn't know about that accessory.

Nathan Myers (2010-01-22 00:24:50)

Macs are a nuisance too, for the expense if nothing else. It's easy to try Ubuntu Linux these days, just run it in a VMWare session. (VMWare is a free download.) If you only ever connect to the internet – for e-mail, browsing, what-have-you – in the Ubuntu VM, you never have to worry about viruses at all, because they can't get through. All the apps on Ubuntu are free downloads from the Ubuntu servers, so there is no Ivan. Once you get used to it, maybe you just make it your main system, and then if you have to run a Windows program, run that in a VM. (I don't because everything I need is on Linux, but ymmv.) One advantage of switching around is that then you never have to download or install drivers again. Also, everything on the machine runs faster, because the Linux kernel operates the hardware much more efficiently than Windows or Mac does.

Alex Chernavsky (2010-01-22 05:31:07)

Amber wrote, "Next time – before you shut'r down – do start/programs/accessories/tools/system restore" That procedure may not work. Lots of viruses disable the system restore feature in Windows. I do tech support at work, and I've run into that problem a number of times. In extreme cases, you have to reinstall Windows (I've only had to do that once, though.)

amber (2010-01-22 06:29:02)

I think the default for system restore is for it to be "on" but Seth it might be worth checking your system just to make sure. The only time it didn't work for me, the laptop didn't have it "on" for some reason. I've never run against anything system restore wouldn't fix, but most of my virusy things are internet activex type exploiters. (My employees are pretty good about not opening weird emails and they're too overworked to surf the web much.) And it's worked for everyone in my family. My dad had a problem that sounded like Seth's with his box last month, took it to some store and paid money for it not to be fixed, and we had it fixed within five minutes of him finally calling me. The other thing I do, if I realize I've wandered onto a site that seems to be downloading something, I disconnect the internet cable or wifi card immediately, control-alt-delete out of explorer, and run the system restore right then. I've got some work applications that require me to use explorer so I'm stuck with the exploitability. I view the whole system restore thing like changing your carb intake to lower your cholesterol. It works, really well 90 % of the time or more, but ain't nobody gonna make a dime on antivirus if they publicize system restore.

Nathan Myers (2010-01-23 14:19:35)

It's appealing to imagine that "system restore" is the Holy Grail of virus recovery, but it's trivially easy for a virus writer to hide their virus in your personal files and re-infect the system after the restore. Having done so, it's equally easy to lay low for a while - maybe even until the next "system snapshot", corrupting it too - and then pick up again. The better ones won't affect your browsing much, they just deliver spam and attack extortion victims 24x7, or sit quietly watching for you to type the password to your bank account. You're much better off keeping the virus out in the first place. The first line of defense is not to use Internet Explorer, ever.

## **Does Prenatal Ultrasound Cause Autism? (2010-01-23 05:41)**

Caroline Rodgers, a science writer, has [1]noticed some very interesting correlations:

The new autism figures published in the CDC's 12-18-09 Morbidity and Mortality Weekly Report (MMWR) [2]<http://bit.ly/57XRca> reveal an apparent anomaly: While there was an overall average autism increase of 57 percent in children born between 2002 and 2006, Hispanics in Alabama showed a 67 percent decrease in autism.

The mothers of the first batch of children who were eight years old in 2002 would have been pregnant in 1993. Therefore, I looked at what changes might have occurred in Alabama's public health policy in 1993 that would explain a 67 percent drop in the autism rate of Hispanic children born between 2002 and 2006.

According to the 2002 PRAMS Surveillance Report: Multistate Exhibits Medicaid Coverage for Prenatal Care [3]<http://bit.ly/8godkv> .

During 1993-2002, the prevalence of Medicaid coverage for prenatal care . . . decreased in 3 states (Alabama, Florida and West Virginia).

This particular correlation is in addition to a broad correlation between wealth and autism (more wealth, more autism):

Also significant in last week's MMWR report were the ethnic differences in autism prevalence found among non-Hispanic whites, blacks and Hispanics. The autism rate in the monitored areas throughout

the United States of children of non-Hispanic white women was 102 per 10,000; among black children, 76 per 10,000; and among Hispanic children, 61 per 10,000 – roughly half of the non-Hispanic white rate. These results seem counter-intuitive, since the non-Hispanic white population could be expected to have more access to prenatal care than the black or Hispanic populations. Yet if autism risk is increased by exposure to prenatal ultrasound, these figures make perfect sense.

This isn't cherry-picking. Rodgers believed that we should take seriously the idea of a prenatal-ultrasound/autism link based on [4]entirely different data.

1. <http://carolinerodgers.wordpress.com/2009/12/22/does-prenatal-care-increase-autism-risk-new-cdc-numbers-indicate-it-does/>
2. <http://bit.ly/57XRca>
3. <http://bit.ly/8godkv>
4. <http://carolinerodgers.wordpress.com/questions-about-prenatal-ultrasound-and-the-alarming-increase-in-autism/>

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q (2010-01-23 07:06:46)

> While there was an overall average autism increase of 57 percent in children born between 2002 and 2006 i have trouble believing that ultrasound was used much more in 2006 compared to 2001. it's not a new technology.

Jeff (2010-01-23 07:32:52)

It's not about having trouble believing something. That's the type of cynicism that's blunted almost all intelligent discussion regarding autism, particularly its increased diagnosis, likely relating to its increased incidence.

Caroline Rodgers (2010-01-23 07:56:55)

Ultrasound use has changed rapidly in every possible respect over the last 20-plus years, whether in terms of scans per pregnancy, the gestational window of exposure or the type of scan. A study from Canada showed a 55 percent increase in scans per pregnancy for the 10-year period ending in 2006, with the highest percentage of increase among low-risk pregnancies, which the study authors pointed out were not medically indicated. A fairly new type of scan that should be of particular concern is the nuchal translucency scan, which must be performed between gestational weeks 10 and 14. The test measures the amount of nuchal fluid at the base of the neck. According to an expert on fetal ultrasound safety, this test has been standard in Europe for the last three or four years and has been recommended for all pregnancies since early 2009. At an ultrasound convention last year, I was told that this test was popular among U.S. doctors because it had a high reimbursement rate from the insurance companies. Every ultrasound scan has many variables, such as the amount of acoustic output, the dwell-time, type of equipment, etc. When the FDA approved an eightfold increase in power in the early 1990s, it required that thermal indicators be on every machine. Unfortunately, surveys within the industry reveal that most operators cannot even find the thermal indicators on their own machines; among those who can, very few know how to read them. Doctors and ultrasound technicians told me they were not concerned about the thermal indicators, pointing out that the machines and settings are both FDA approved for obstetrical use; unfortunately, these specs and settings are not based on safety – a fact that was confirmed for me by an FDA network leader.

Jim (2010-01-23 09:09:36)

Like all medical interventions, the possible benefits must be weighed against the possible risks. There appear to be many benefits from ultrasound, as I experienced when my terrible abdominal pains were diagnosed as gallstones. Her information is intriguing and certainly deserves more research. [1]the50besthealthblogs.blogspot.com

1. <http://the50besthealthblogs.blogspot.com/>

Nancy Lebovitz (2010-01-23 09:22:34)

*The Brain that Changes Itself* (a very interesting book about neuroplasticity) suggests that autism might be caused in vulnerable babies/toddlers by too much exposure to white noise. The idea is that developing the ability to perceive information is a crucial part of early development, and the brain is disrupted if there's too much input that doesn't have information. I don't know if ultrasound is white noise (probably not), but the connection to sound is interesting.

Cord (2010-01-23 11:16:11)

I've seen this hypothesis before, and I'm not sure what to make of it. Plausible, but unproven? The main thing I took away from reading this and other articles on the subject is that statistically, there's no improvement in pregnancy outcomes when ultrasound is used. So it's an unnecessary procedure, where you're spending money for no real benefit (and, possibly, harmful). That's all I need to know about it. I can wait till my babies are born to see what they look like.

wcw (2010-01-23 17:18:00)

Cf <http://www.ncbi.nlm.nih.gov/pubmed/19728066>

David (2010-01-23 22:10:59)

It does not seem like it would be difficult to do a survey of parents of five year old children, looking for a correlation of autism related symptoms to recollections of ultrasounds. It wouldn't be the last word, but it would be something a statistics class could do as a class project. It would be cool if someone put together a web site of useful studies suitable for class projects.

Helen (2010-01-24 17:13:52)

I had many ultrasounds (I lose count) because I was expecting twins and had gestational diabetes. I wonder if the increase in ultrasounds correlates with increased multiple pregnancies (which receive more ultrasounds) due to increased use of fertility drugs and reproductive technologies (IVF), as well as more pregnancies in older women, which also have a higher rate of twins. During my pregnancy, I read about the risk of autism from ultrasounds, and it sounds very plausible. I couldn't do much about it, though - in my case the benefits of regular screenings seemed to outweigh the risks of the ultrasounds. I was concerned, though, when the technicians would try to "give me a picture" by holding the wand over the fetus extra long - it was hard to say no because they seemed to perceive no risk in using more ultrasound than was necessary. One gave me a 3-D image without asking me, which pissed me off. (Is 3-D ultrasound good for anything but an early "baby picture"? Why does it exist?) Fortunately, my daughters, now age 2, seem far from autistic. I was glad I was carrying girls (lower risk of autism in general), considering all the ultrasounds they got. One does seem to be left-handed, which isn't in itself worrisome, but I wonder if it could have been caused by the ultrasound. I remember reading one study that, while finding no increase in autism in children who'd had multiple ultrasounds, found a higher rate of left-handedness among male children, indicating that the ultrasound did \*something\* to the brain.

Helen (2010-01-24 17:18:53)

BTW, @ Caroline Rogers - We had the nuchal fold ultrasound test at 11 weeks because it was safer than amniocentesis or chorionic villus sampling and was available earlier in pregnancy. Although we would have continued the pregnancy whatever the finding, the results gave us peace of mind and we felt no need for further tests. I didn't know at the time that there were particular concerns with this type of ultrasound, but I probably would have done it anyway.

3wheelerbuggy (2010-02-23 04:37:51)

You would not believe how long ive been searching for something like this. Scrolled through 7 pages of Google results without finding anything. One search on Bing. There was this... Gotta start using this more often

Heather (2010-02-26 01:12:14)

I have an ASD diagnosed seven year old daughter. I have been wondering since her regression at fifteen months and diagnosis shortly there after, if there was a link to her diagnosis and the many ultrasounds I had. I don't understand why this possible link

has not been researched more. I had a high risk pregnancy and got an ultrasound everytime I walked through the door, whether I liked it or not. I also had a chorionic villus sampling done at eleven weeks where the Doctor just seemed to rest the ultrasound device on my belly as my husband asked questions for the next thirty minutes, after the test. I hope that someone will finally run the numbers...so often ultrasounds are unnecessary. Wouldn't it be tragic, if such a simple unnecessary procedure, ends up being a major contributing factor? Isn't about time that someone reserched this seriously?

Gary Saffer (2010-11-07 19:44:28)

I have been looking into this for a number of years. I contacted several Medical research groups & none were interested in looking into this. I also Contacted Dr. Woo, "the athority" on prenatal ultrasound. He has yet to respond. Autism is increasing in the more affluent areas where prenatal ultrasound are more likly to be used . As we know ultresound is microwaves, as in ovens. Microwaves were expermented with to put out forest fires, which they did very well but also cooked anything alive in the area. I think there is a diffenite connection between Autism & Ultrasound.

Margaret Bailey CT(ASCP) (2010-11-13 12:51:02)

A few years ago I saw a brief item in a medical newsletter about a study done with pregnant rats. Offspring of rats who had ultrasound showed alteration in development of the brain. I wish I could cite the reference, but it could have been "Mood, Mind and Memory" or something like that, or one of the newsletters from a medical school, or even a pathology newsletter. I know it was since 2005. I thought of autism at the time and hoped someone in an appropriate field would follow up on it.

## **Animal Fat, Sleep, and the Ketogenic Diet (2010-01-24 08:00)**

Kathy Tucker draws my attention to [1]a recent article about the ketogenic diet, which is essentially a very-high-animal-fat diet, used to treat childhood epilepsy. I've blogged about the ketogenic diet ([2]here, [3]here, and [4]here) but that was before I was on a similar diet. Kids on the diet didn't develop high cholesterol ("very few children actually end up with cholesterol or lipid problems on the diet"). I slept better [5]when I ate more animal fat, which suggests that animal fat makes the brain work better overall. The success of the ketogenic diet supports that idea. My results suggest that it is the animal fat, not the other fat, that makes the diet effective.

That many kids with epilepsy get better when put on the ketogenic diet can be seen as a canary-in-the-coal-mine phenomenon. Canaries are more sensitive to bad air than miners; children with ketogenic-responsive epilepsy are more sensitive to lack of animal fat than the rest of us. That lesson was lost on me when I first learned about the diet and its success. The broader lesson is that almost any disease has something to teach us about what the best environment is.

1. <http://wcco.com/health/high.fat.diet.2.1436243.html>
2. <http://www.blog.sethroberts.net/2008/06/10/the-ketogenic-diet/>
3. <http://www.blog.sethroberts.net/2008/06/15/the-ketogenic-diet-and-evidence-snobs/>
4. <http://www.blog.sethroberts.net/2008/06/30/the-ketogenic-diet-continued/>
5. <http://www.blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>

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Jim (2010-01-24 09:35:43)

Seth, I eat a lot of avocados, which are mostly fat. I wonder if their fat would offer the same benefits as animal fat? (And they also have fiber, unlike animal products.) [1]The50BestHealthBlogs.blogspot.com

1. <http://the50besthealthblogs.blogspot.com/>

CD (2010-01-24 11:34:35)

Did you happen to catch the last sentence of the article? "Max's brain is thought to have recovered enough that he is being gradually transitioned to normal meals." Time to load poor Max up with sugar, corn, and wheat again! Maybe Max's doctor should instead rethink his definition of a "normal" meal.

Richard A. (2010-01-24 11:56:22)

The most ketogenic fats are the medium chain fatty acids. These fatty acids produce ketones even in the presence of carbohydrates. You can buy MCT oil over the internet. Coconut oil contains some medium chain fatty acids and to a lesser extent butter. This is anecdotal – I tend to begin getting sleepy in the evening. Lately for about the last several months, I have been consuming about 100 calories of coconut milk in the evening and that night time drowsiness has gone away.

Jeff (2010-01-24 11:56:59)

I've had this notion as well. The first evidence of epilepsy being treatable through a ketogenic diet is old (1920s?), and through the years the idea has only been verified. Yet it's still regarded as some anomaly, something that "probably benefits only a bizarre minority of epileptic patients." There's also evidence for ketosis being beneficial for people with Alzheimer's. Furthermore, no one wants to make the connection that, maybe – just maybe – the clear and obvious benefits of a ketogenic diet towards epilepsy and Alzheimer's has some – just SOME – relevance to normal brains. The brain is a peculiar organ in terms of metabolism, in that brain cells need glucose more so than other cells of the body (the heart famously prefers ketones to glucose). I imagine there is probably some relation between the brain's unique metabolism, and the benefits of ketogenic diets.

Alex Chernavsky (2010-01-24 19:41:15)

Seth, what do you think is the crucial difference between animal fats and plant oils/fats that accounts for the benefit of animal fats? Is it the degree of saturation? Or is it not the fat at all but rather some other (non-fat) substance that's present in animal fats?

Nathan Myers (2010-01-25 02:38:09)

I slept better when I ate more animal fat, which suggests that animal fat makes the brain work better overall. A more parsimonious conclusion would be that some component of the fat – and there are hundreds of chemicals dissolved in it – had a mild sedative effect.

James (2010-01-25 11:53:32)

Does this animal fat theory mean that vegetarians should sleep poorly compared to everyone else?

What is the new ketogenic diet? - QuestionBin::Answer (2010-01-31 08:38:02)

[...] First, the ketogenic diet isn't a diet to lose weight. The ketogenic diet is a high-fat, adequate-protein, low-carbohydrate diet primarily used to treat difficult-to-control (refractory) epilepsy in children (source). Other Articles: <http://www.blog.sethroberts.net/2010/01/24/animal-fat-sleep-and-the-ketogenic-diet/> <http://www.fitnessstipsforlife.com/is-the-ketogenic-diet-just-another-fad.html> Null's Sig: To err is human... To really foul up requires the root password. [...]

## Impressive Versus Effective (2010-01-25 06:47)

[1]A profile of James Patterson, the hyperprolific novelist, says this:

“I don’t believe in showing off,” Patterson says of his writing. “Showing off can get in the way of a good story.”



A few days ago, just before this profile appeared, I gave a talk about self-experimentation at [2]EG (= Entertainment Gathering), a TED-like conference in Monterey. One reason my self-experimentation was effective, I said, was that I wasn't trying to impress anyone. Whereas professional scientists doing professional science care a lot about impressing other people. I planned to say it like this but didn't have enough time:

Years ago, I went to a dance concert put on by students at Berkeley High School. I really enjoyed it. I thought to myself: I like dance concerts. So I went to a dance concert by UC Berkeley students " college students. I enjoyed it, but not as much as the high school concert. Then I went to a dance concert by a famous dance company that all of you have heard of. I didn't enjoy it at all. Why were the professionals much less enjoyable than the high school students? Because the professionals cared a whole lot about being impressive. That got in the way of being enjoyable. Scientists want to be impressive. They want to impress lots of people " granting agencies, journal editors, reviewers, their colleagues, and prospective graduate students. All this desire to be impressive gets in the way of finding things out.

In particular, it makes self-experimentation impossible:

They can't do self-experimentation because it isn't impressive. Self-experimentation is free. Anyone can do it. It's easy; it doesn't require any rare or difficult skills. If you want to impress someone with your fancy car, self-experimentation is like riding a bike.

Because my self-experimentation was private, I was free to do whatever worked.

My broader point was that my self-experimentation was effective partly because [3]I was an insider/outsider. I had the subject-matter knowledge of an insider, but the freedom of an outsider.

1. <http://www.nytimes.com/2010/01/24/magazine/24patterson-t.html?ref=magazine&pagewanted=all>
2. <http://www.the-eg.com/>
3. <http://www.blog.sethroberts.net/2009/01/24/not-the-same-study-section-how-the-truth-comes-out/>

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Jeff (2010-01-25 08:40:28)

Will the video of the talk be posted online?

seth (2010-01-25 12:20:12)

yes, the video of the talk will be posted online. I don't know when.

Andrew Gelman (2010-01-25 21:56:50)

Seth: I read the article about Patterson and it's fascinating. But I don't think he's a good example for your discussion. He's much more like the professional dancers you can't stand, than like the high school dancers you love. He has a factory and churns out 9 books a year, doesn't seem to be doing a lot of self-experimentation in your sense, rather is working entirely within conventional forms. And he definitely isn't doing it for himself, he's trying to impress someone-the mass audience, in this case. I don't completely disagree with your main point (although I suspect that expectations are involved too; one reason

the high school students are fun to watch is that you're expecting less from them in terms of raw talent), but I don't think that a mass-media figure such as Patterson who writes by formula, really works as an example for you here.

Adam (2010-01-25 21:57:42)

Some similarities to the point made in this piece by Mark Twight at Gym Jones. <http://fwd4.me/CmJ> Dressing to impress, training for a certain look, doing the right workout routine, etc. does nothing for making actual gains in performance..that is why there is a distinct difference between gyms. There is always an underground feel to the gyms that will train you for performance and embrace experimenting. Otherwise, you have to do it yourself in your garage, old barn, on the playground, or wherever...

seth (2010-01-26 05:41:29)

Andrew, that's very interesting because you are correct that I cannot stand Patterson's writing. In that sense, just as you say, he is more like the professional dancers I didn't enjoy than the high school dancers I enjoyed. This puzzles me (why does his formula work with others but not me?) but there it is. Adam, that's a good point – that there are probably lots of other examples besides novelists, dancers, and scientists.

Michael Kelly (2010-01-26 15:16:39)

Seth - I loved your talk at E.G 10! You were impressive! hmmm... Is there some kind of app on the web or iphone or whatever for assisting and informing self experimentation? Should we make one?

seth (2010-01-26 16:56:00)

Thanks, Michael. Someone told me about an iphone app for collecting data but he hasn't yet given me an example of actual usage. At a Quantified Self meeting I heard a presentation by a woman who was developing a website to help people self-monitor. I signed up for the website – but never heard anything. I guess she's still working on it. And I could tell you several other stories of potential applications for self-experimentation that went nowhere. I think the crucial thing is that the developer must have a problem that they themselves want to solve. So if you have a problem you'd like to solve via self-experimentation, I'd be happy to help you develop an appropriate iphone app or website.

Robin Hanson (2010-02-01 12:10:38)

Probably most folks in the dance audiences disagreed with you - they enjoyed the more professional dances more, because they wanted more to be impressed. Face it Seth, you and I are \*weird\*. :)

Science, Black Swans, and Insider-Outsiders | Anthony Burgoyne (2010-07-16 12:59:51)

[...] This reminds me of Seth Roberts' insider-outsider idea in science – the idea that insiders (people with expert knowledge in an area) who are also outsiders (have markedly different personal resources than most experts in the area\*) have an advantage. If a more-than-marginal breakthrough tends to come from “an idea that is not easily conceived of by the current population of” experts in a field, then it makes sense why an insider-outsider might have an advantage. [...]

## **Bacteria and Mood (2010-01-26 06:10)**

[1]Carl Willat pointed me to [2]this press release about some remarkable research:

Treatment of mice with a “friendly” bacteria, normally found in the soil, altered their behavior in a way similar to that produced by antidepressant drugs, reports research published in the latest issue of Neuroscience. . . .

Interest in the project arose after human cancer patients being treated with the bacteria *Mycobacterium vaccae* unexpectedly reported increases in their quality of life.

I believe [3]we need a substantial daily intake of microbes (in our food) to be healthy. The obvious microbe-produced improvements are in immune function and digestion. But this study and the research on which it's based suggest we also need microbes to make our nervous systems work properly.

When I started eating lots of fermented food I did notice an improvement in mood. Not dramatic, but clear. On a trip to Boston last year, I thought: I'll go without fermented foods to see what it's like. But after a day or so without them, I felt so bad I stopped the experiment. A friend of mine says something similar, that kombucha improves his mood in a way that doesn't seem to be due to caffeine.

I asked Carl how he learned about a three-year-old press release. (The research article - [4]gated version here - appeared in 2007.) "Neil Gaiman tweeted about it," he said.

1. <http://www.carlsfinefilms.com/>
2. <http://www.bristol.ac.uk/news/2007/5384.html>
3. <http://www.blog.sethroberts.net/category/umami-hypothesis/>
4. [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6T0F-4NC5T69-D&\\_user=4420&\\_coverDate=05%2F11%2F2007&\\_alid=1180771615&\\_rdoc=7&\\_fmt=high&\\_orig=search&\\_cdi=4861&\\_sort=r&\\_docanchor=&view=c&\\_ct=9&\\_acct=C000059607&\\_version=1&\\_urlVersion=0&\\_userid=4420&md5=54d3f714f991346c2dc5f456817b5f78](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6T0F-4NC5T69-D&_user=4420&_coverDate=05%2F11%2F2007&_alid=1180771615&_rdoc=7&_fmt=high&_orig=search&_cdi=4861&_sort=r&_docanchor=&view=c&_ct=9&_acct=C000059607&_version=1&_urlVersion=0&_userid=4420&md5=54d3f714f991346c2dc5f456817b5f78)

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solidmastery (2010-01-26 22:05:20)

Do you have a comprehensive list of fermented foods and drinks as well as complex flavourings that you have used in n=1 experimentation and observed to produced excellent effects in mood, satiation, and disease immunity? I looked all over you site to no avail.

seth (2010-01-27 03:24:07)

No I don't have such a list. The main fermented foods I eat are miso, kimchi, yogurt, natto, and kombucha. Smaller amounts of beer, wine, sauerkraut, pickles, strong cheeses. Wikipedia has a list of fermented foods: [http://en.wikipedia.org/wiki/Category:Fermented\\_foods](http://en.wikipedia.org/wiki/Category:Fermented_foods)

Claire (2010-01-27 21:37:51)

A NHMRC Australia Fellowship has just been awarded to Professor Charles Mackay from Monash University who is keenly interested in an intriguing link between diet, gut bacteria and immune responses. His Australia Fellowship will be used to gain new knowledge on immune responses, by exploring new ideas on inflammation and the role of diet and gastro-intestinal microflora.

## Self-Experimentation and Journalism (2010-01-27 03:47)

Journalism and science are both ways of finding out about the world, so maybe changes in journalism presage changes in science. In [1]a lecture about the future of journalism, Alan Rusbridge, editor of the Guardian, concluded:

There is an irreversible trend in society today . . . It's a trend about how people are expressing themselves, about how societies will choose to organize themselves, about a new democracy of ideas and information, about changing notions of authority, about the releasing of individual creativity, about an ability to hear previously unheard voices; about respecting, including and harnessing the views of others.

My self-experimentation had/has some of these elements. The fact that I reached useful conclusions about sleep, mood, and weight without being an expert in any of these fields changed my ideas about authorities (that is, experts). Self-experimentation is very much – perhaps above all – a "releasing of individual creativity" in the sense that I could try to understand sleep, mood, and weight. If I had an idea, I could test it. The problem was mine to solve. Self-experimentation releases scientific creativity just as any artistic tool releases artistic creativity. In the areas of sleep, mood, and weight, I was a "previously unheard voice". This blog connects my ideas with "the views of others".

If the parallels between science and journalism hold up, we should eventually see a big restructuring of science – especially health science – that resembles the changes in journalism now happening. Dennis Mangan, who works at a blood bank, has shown that [2]Restless Leg Syndrome can be due to niacin deficiency. No one ever found two causes of scurvy so it is likely that all cases of RLS are due to not enough niacin. So long, expensive drugs for RLS! The poor health of Americans pays for a lot of not-very-useful health science. When that health improves, that pool of money will shrink. Just as when people became better informed (by the Web), the pool of money available to pay journalists began to shrink.

1. <http://www.guardian.co.uk/media/2010/jan/25/cudlipp-lecture-alan-rusbridger>

2. <http://mangans.blogspot.com/2009/05/niacin-for-restless-legs.html>

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amber (2010-01-27 05:39:14)

Seth, I've forwarded this info on niacin to my stepfather who has RLS, perhaps it will help. Did some quick double-checking for others' experiences with niacin for RLS and came across this video that I don't know if you've seen but I suspect you would enjoy on several levels, off-topic as it is for the RLS issue: <http://psychdrugs.wordpress.com/2009/01/27/1098/> BTW, I take niacin & a smattering of other supps every day and have gone from HDL around 40 in August last year to last week (got a meter, check it myself) HDL of 85. Also modified diet etc., so probably not just the niacin.

epistemocrat (2010-01-27 08:07:27)

One primary goal of a science/journalism infusion restructuring movement in healthcare should be to empower individuals with ways to set their own physiologies free from disease, on their own terms. Self-experimentation does that. We are all Patients of One, so self-experimenting is fundamental to the human condition, whether we realize it or not. I suspect it's better to realize it.

donny (2010-01-27 08:20:15)

I started taking niacin after reading the HeartScan Blog. I took it for its effects on the silent inflammation that is supposed to help reduce, low hdl, high triglycerides etc. I wasn't aware at the time that it had any sort of an effect on louder inflammation like arthritis or this restless leg thing. I have a shoulder that acts up once in a while, it starts with slight discomfort and over the course of days becomes actual pain, eventually spreading to my neck, getting to the point where I can barely turn my head. Just going on a low carb diet seemed to decrease the spread; the pain would stay in my shoulder, then slowly go away again, more or less sparing my neck. I started taking niacin and fish oil, and the whole thing pretty much went away. After a while, I would start to think it was resolved, and stop taking the supplements. Big mistake. I thought it was the fish oil. Several times I ran out of niacin, but not fish oil. Turns out it was the niacin. My Dad takes niacin, and when he goes off of it, if he goes back on he has to slowly increase the dose from very small amounts or the flush he gets is very uncomfortable.

When I go off it and then back on, I don't have this problem. My mom is schizophrenic, and schizophrenics as a group are supposed to flush less than non-schizophrenic. I'm not schizophrenic, but do suffer from extreme social anxiety and did have a psychotic episode over a period of months when my maternal grandmother was dying in the hospital. I have one sister who is celiac, another gluten intolerant, whose two daughters are celiac. Celiac is supposed to be higher in schizophrenics, which would at least give a possible theory as to why more niacin might be needed to prevent deficiency in some people than in others.

david (2010-01-27 08:39:47)

Seth, I have an idea for your next book: write a book on HOW to do self-experimentation effectively. I don't have the scientific/research background to know how to collect data, how to control for various biases, how to analyze the data. The book could be aimed at a broad audience, from those that just want to do simple experiments to see if a change has an effect, to those that want to learn how to do more sophisticated statistical analyses on data they collect. For some stuff, you could defer to existing books, but your audience could benefit just from knowing what those books would be.

seth (2010-01-27 12:30:48)

David, my next paper will be about that – why my self-experimentation was effective. My EG talk, the powerpoint of which I will post in a few days, covers the same ground more briefly.

Melissa @Cellulite Investigation (2010-01-27 12:41:34)

Dear Seth, I just discovered your blog from Nina Planck on Twitter and this post is particularly timely for me. I suffered with cystic acne for years, consulting family physicians, ob-gyns, dermatologists, and many aestheticians in an attempt to get the problem under control. I knew the outbreaks were directly related to where I lived because my face would react to a new environment within days of a move. I never had a problem living overseas but certain US cities on the east coast were especially problematic. After several years, I finally figured out it was from the fluoride added to the public water supply. It took me another year to figure out how to limit my fluoride exposure enough to get rid of the acne problem (fluoride is in a lot of foods and other places you wouldn't expect – I learned this mostly through trial and error). I can't believe how many other people I've heard from who have this condition, fluoroderma, since I started blogging about it a few months ago. The reason your post is so timely is because my mom just went to the dentist and asked them about fluoroderma, and they had never heard of it. They asked her who my doctor was that made the diagnosis. As soon as she told them I figured it out on my own, they lost interest in the conversation. I was feeling a bit belittled when I clicked on Nina's link which led me to your blog. Now I am reminded of why I started blogging in the first place. Thank you! Off to buy your book...

david (2010-02-01 15:40:50)

Melissa, I have my own story about fluoride in the water. When my permanent teeth came out, the front two teeth were already badly stained and others somewhat stained. Apparently, some portion of the population is affected by the added fluoride in this way. I really have to wonder whether adding chemicals like this to the water supply is worth it. When you are older (assuming you have enough money) you can cover up your teeth with dental work, but the emotional scars from growing up with brown teeth take a long time to heal. David

Melissa @Cellulite Investigation (2010-02-01 15:58:21)

David, I have dental fluorosis, too, but it's mild. I've read that over 30 percent of American children now have some degree of dental fluorosis – a sign that they are ingesting too much fluoride during the formative years. My fluorosis isn't severe enough to try to cover with veneers, but I'm curious if remineralizing the teeth through a Weston Price inspired diet would help, a la Rami Nigel's advice in his book, *Cure Tooth Decay*. He was interviewed recently on Cheeseslave's blog: <http://www.cheeseslave.com/2010/01/27/how-to-cure-tooth-decay-with-rami-nagel/>

## The Billion-Dollar Hoax (2010-01-27 12:36)

[1]This reasonable article gives ten reasons why the Prime Minister of Australia has suddenly stopped talking about global warming.

1. <http://www.heraldsun.com.au/opinion/the-billion-dollar-hoax/story-e6frfhqf-1225823736564>

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Steve G. (2010-01-27 14:20:32)

Wow, this is a very thin argument. Does UC Berkley or Tsinghua adjudicate arguments in this way? Of course, yes, in some measure, because they're all humans, and human love arguments based on ethos and pathos more than we do logos (takes too much time & effort). That some climate scientists may have used foolish and even unethical means to forward their cause does not make the cause illegitimate nor does it negate the factual basis. In addition, to say that those who recognize climate change and push for changes in our behavior are perpetuating a "fraud" is a farce of an argument. Incorrect conclusions, perhaps; fraud? Come on! Next, we'll hear about a "conspiracy". I love that thought: a worldwide conspiracy among persons from all over the world. And as to the failure of Copenhagen: again, we see myopia among politicians, not evidence that a problem doesn't exist. This is a demonstration of the collective action problem, not any measure of proof that human activity has not affected global climate change. Finally, why has the Aussie PM stopped talking about global warming? IF he has, it probably has more to do with politics than with science. Given the complexity of the climate system, some predictions will prove dicey, and many wrong, but we have to go with the weight of the evidence, and I don't see that it has shifted.

bennetta (2010-01-27 15:21:07)

Seth, Isn't the bulk of this article an ad hominem? Let's say there was a particularly powerful group of frothing (and credentialed) advocates who hated smoking and wanted it banned. And let's say this group was willing to stretch the truth about smoking to advance their agenda. And maybe these folks like to cite a particular study that was done in the early days of smoking research that was later discovered to be tainted. Can we conclude, then, that smoking doesn't cause cancer? It seems to me that the article says more about the IPCC than it does about global warming. Perhaps the difference lies in that the anti-smoking organization was created with a cause in mind, while the IPCC is supposed to just look at the science. From my experience, however, climate change scientists (at least the ones I've met) are passionate about the issue with the same zeal as any advocate. Similarly, I'm also unsure how you can refute climate change by simply pointing at the fact that the Earth has not warmed for the past 10 or so odd years. So one chronic smoker doesn't develop cancer. Does that mean, then, that smoking doesn't cause cancer? What about if ten smokers don't get cancer? 100? Of course not. What matters is the overall body of evidence. Due to the nature of it, said body in regard to climate change is small and young, but the potential costs, if it turns out to be true, could be huge. Tremendous. Catastrophic, even. Large enough to outweigh the cost if we don't act. So we're stuck. If it's a hoax, it's a very elaborate one, probably the greatest ever made, perfectly tailored to prey on our poorly developed ability to identify causal relationships. Why are we so bad at that, anyway? So many of our problems seem to hinge on that. Please, correct me if I'm wrong, off the mark, or just plain missing the point, here, but this is how it seems.

Nathan Myers (2010-01-27 15:28:17)

It's very sad to see you going down this road. When you find yourself pointing to such a shoddy, thrown-together scandal-sheet article for support, it's time to do some soul-searching. It's obvious where all the money is, in climate change: it's not in climate research. It's in mineral extraction. It's also a matter of public record where the money is being spent: it's spent on muddying the water about the causes of climate change. Are you aware of the term "placement"? PR companies pay reporters a bonus for getting a story published that advances their clients' interests. Each place a story appears is a placement, and merits another bonus. Remember all those articles glorifying fructose? Those were placements. Similarly, pomegranate juice. There is nothing to be proud of about being taken in by placements. Nobody is paying for placements of articles warning about global

warming, but there is endless money for anyone playing up the manifestly phony "climategate".

seth (2010-01-27 15:36:52)

Steve G., the article to which I linked does several things that "negate the factual basis". For example, lack of warming in the last ten years, in contradiction of the models on which the predictions of catastrophe are based, is a considerable "negation" of the basis of the argument that if we don't do something big and soon we're doomed. bennetta, "scam" is a better description than "hoax". It is one of many scams where someone scares you in order to make you buy protection – from them. It's one-time, not on-going, so "protection racket" doesn't really cover it. In contrast to criminal scams, I'm sure many (most? all?) of the scientists involved really believe what they say – but one reason they believe what they say is that it doesn't help them to be skeptical about it. Lack of warming in the last 10 years is just one of many facts that cast doubt on the predictions of catastrophe.

pat (2010-01-28 14:01:15)

AAAACH. In the upper lefthand corner is a link to "FOXsports." Which presumably means that the article you published is part of Rupert Murdoch's Fox News Empire. It's one thing to say that there are reasonable things in that article, but don't ask me to waste my time to bother reading article from a company that employs Hannity, Bill Kristol, and Bill O'Reilly. My experiment with relying on them as a fair and balanced news source ended a long time ago.

bennetta (2010-01-28 15:56:49)

Pat, FYI, from Wikipedia: "The Herald Sun is a morning tabloid newspaper based in Melbourne, Australia. It is published by The Herald and Weekly Times Ltd, a subsidiary of News Limited, itself a subsidiary of News Corporation...."

Catherine (2010-01-28 23:28:17)

Who in there right mind would believe the Herald Sun on any intelligent issue?

Hal (2010-01-29 19:05:56)

Seth, with regard to your point that the lack of warming in the past 10 years contradicts the models: How literally do you mean this? Are you engaging in some playful iconoclasm, tweaking the establishment for fun, or does this represent your objective, rational understanding of the data? If the latter, can we infer that you believe that the models predict warming over the past 10 years with a high degree of probability, such that a ten year period with little or no warming would have been essentially ruled out? That would seem to be a straightforward translation of your claim into the language of model predictions and probability. If you agree, then could you say what your understanding is of the actual (approximate) probability that the models would have assigned to a lack of warming as extreme as what has been observed, such that it is fair to describe the observations as contradicting the models?

seth (2010-01-29 19:49:30)

"How literally do I mean this?" I am repeating the remark of a well-respected climate scientist in a Climategate email. The tone of the remark suggested it was a well-known fact (among climate scientists). The lack of agreement was distressing, so in that sense you could say, yes, the observation contradicted the model.

Stephen M (Ethesis) (2010-01-30 07:46:43)

What appears to be going on is that the solar system is cooling again, after warming a bit. There are cycles. Do greenhouse gas emissions have an impact on the cycles? Good chance, but do they create results independent of them? Ah, that is the rub.

## **Beijing Hot Pot (2010-01-28 08:34)**

Beijing has far more hot pot restaurants than you'd ever guess from Chinese restaurants in America. There are about ten restaurants on the Tsinghua campus; one of them is a hot pot restaurant. Judging from this passage in [1]an article about Beijing hot pot restaurants, some aspects of restaurant reviews ("don't forget", semi-humorous derogatory

comparisons) are universal:

And don't forget the wan or spheres of hashed protein, often how fish and seafood find their way to the table. Wise up in cheaper establishments and be warned that some meatballs [i.e., fishballs] can have a texture as if they bounced off the courts of Wimbledon, so avoid them unless you're in a reputable safe house.

1. <http://www.timeout.com/cn/en/beijing/restaurants/feature/9496/beijings-best-hot-pot.html>

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### **Green Metropolis by David Owen (2010-01-29 00:10)**

I liked David Owen's new book, *Green Metropolis* (free copy from publisher), [1]as much as I thought I would. Owen criticizes a large fraction of the environmental movement for missing the point that big cities like New York are the greenest communities in America. To make a community green you need two things: high density and great public transportation. They go together: high density makes great public transportation possible. In large chunks of New York, unlike most big American cities, it's easy to not have a car.

The book has plenty of villains. Bill McKibben has written many books: one about global warming, one about cutting back on consumerism, one about having only one child (to save the earth from overpopulation), one called *Hope, Human and Wild* about environmentalism – yet he lives in a small town in upstate New York, which requires him to use a lot of energy for heating and travel that he wouldn't have to use if he lived in New York City. (McKibben is my example, not Owen's.) A great many environmentalists, Owen says, have causes or goals that have little to do with reducing energy use. They tend to see themselves as preserving the past rather than shaping the future – an excellent point. That's something Jane Jacobs might have said and if the book has a hero, it's her. "Jacobs's focus was on the vibrancy of city life but the same urban qualities she identified as enhancing human interaction also greatly reduce energy consumption and waste," Owen writes.

Owen sees himself almost as deluded as the average environmentalist. He and his family moved from Manhattan to rural New England when their daughter was one year old. How she will love the country, thought Owen. She didn't. Walking through the country bored her far more than walking through the city. "And it [a country walk] usually has the same effect on me, although I hate to admit it," he writes.

Why did my self-experimentation discover a lot? Because a lot remained to be discovered. The discoveries I made weren't made by the experts who should have made them (e.g., sleep experts) because [2]they were too busy doing research whose main goal was to impress other people. Rather than do science that worked, they did science that looked good. It's the same with environmentalists. Rather than do projects that work (save energy), they do projects that feel good. "Sitting indoors playing video games is easier on the environment than any number of (formerly) popular outdoor recreational activities, including most of the ones that the most committed environmentalists tend to favor for themselves," says Owen, neatly summing up the problem.

1. <http://www.blog.sethroberts.net/2009/07/28/what-im-looking-forward-to-reading/>

2. <http://www.blog.sethroberts.net/2010/01/25/impressive-versus-effective/>



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Andrew Gelman (2010-01-29 06:25:52)

Seth: You write, "In large chunks of New York, unlike anywhere else in America, it's easy to not have a car." When we both lived in Berkeley, California, it was easy to not have a car. I didn't have one, and I don't think you did either! I get your general point, but I think you're a bit too quick to make judgments on what is easy. There are tradeoffs: a car gives you some conveniences, and it creates other costs and inconveniences. Regarding your last point, I think you're generalizing about "environmentalists," just as you'd similarly be making mistakes if you generalized about "conservatives" or "liberals" or "religious people" or whatever. I also don't understand how that Owen quote is "summing up the problem." I agree that it's an interesting thought, but what's the point: we all should be sitting inside playing video games (or blogging)? Or is the point that it's ok to do outdoor activities such as hiking, skiing, hunting, fishing, but only if you don't call yourself an "environmentalist"? Would Bill McKibbin be a better person if he'd written a book in favor of consumerism? I haven't actually read anything by Bill McKibbin, so maybe I'm missing something here, but I don't see your point here.

seth (2010-01-29 07:41:53)

"When we both lived in Berkeley it was easy to not have a car." Then why do most Berkeley non-student households have cars? If you have children in Berkeley, you must have a car. Re "environmentalists". Sure, statements that this or that correlation is perfect are wrong. No actual correlations are 1.0. Not all environmentalists fit my description. But Owen gave many examples of misguided environmentalism, so many that it painted the picture I describe: A large fraction of environmentalists work on projects that miss the point. Of course not all. Of course it is good to encourage bike riding and better public transit, for example. The video-game quote sums up the book in the sense that a lot of environmentalists have a pro-nature anti-city bias that gets in the way of them doing things that help. Bill McKibbin would be a more effective environmentalist if he lived in a big city. Then he would be exposed to the problems that need to be solved. And he could write about how to solve them. McKibbin is like an American academic who knows almost nothing about Africa but is quite sure he knows what should happen there for Africa to improve.

Andrew Gelman (2010-01-29 09:24:11)

If I lived in Berkeley with my family, I can assure you, I would not have a car. "Must have" is what you make of it.

Kaylee (2010-01-30 09:34:40)

I live in Chicago and, while I had a car for the first year that I lived here, it died two years ago and I never replaced it. Chicago covers a greater expanse of land than NYC, to be sure, and the further away from the lake, the less likely you'll have easy access to the quick transportation of trains, but there are always bus routes to get you where you need to be. While I haven't needed to sign up for the partnership between the CTA and ZipCar because I don't mind walking a few blocks to the grocery store, the option is easily accessible for those rare times I might need a car. Besides, knowing I can only walk out of any store with what I can carry really cuts down on the over- and unnecessary buying. Granted, I don't have children, nor do I plan to have children, but I have friends with children who don't have cars, either. NYC may have more train lines and a larger number of people who strive to be green, but Chicago isn't exactly lagging in this department.

seth (2010-01-30 11:04:17)

Thanks, Kaylee. I have fixed the post.

## Why We Travel (2010-01-29 10:20)

Jonah Lehrer [1]writes:

We travel . . . because distance and difference are the secret tonic of creativity. When we get home,

home is still the same. But something in our mind has been changed.

He's wrong about animal fat ("the taste for saturated fat, one of those instincts we should have left behind in the Pleistocene epoch") but he's right about that. A trip to Amsterdam is why I have a scooter. It's so much better than a bike or a car. Only after visiting Amsterdam did I figure this out. The Shangri-La Diet came out of a trip to Paris. Living in Beijing half the year is somewhere between emigration and travel but whatever you call it it has opened up a whole new world. (Whether this will make me more scientifically creative remains to be seen. It certainly makes blogging easier.) My study of the faces/mood effect showed that travel changes something in the brain in a bad way: The light-sensitive oscillator involved takes about three weeks to fully recover from a big change in time zones. The effect takes three weeks to regain full strength, which is longer than it takes sleep to appear normal.

1. [http://scienceblogs.com/cortex/2009/12/why\\_we\\_travel.php](http://scienceblogs.com/cortex/2009/12/why_we_travel.php)

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aaron blaisdell (2010-01-29 11:12:12)

Reading literature is like poor-man's travel. It changes you in interesting and unpredictable ways. RIP JD Salinger.

Andrew (2010-01-29 12:48:00)

I liked this passage on traveling I read in Catherynne M. Valente's *Orphan's Tale*: It is not the sea that calls us back. What calls is stronger and more inexorable than any current. I long for the sea, yes, my skin is always dry, and I am always thirsty, and I miss the crash and swell of the black waves, but more, I long for the leaving. I am restless, I am ready, and the leaving whispers to me at night. It says that I will breathe easier when the air is full of fog and seagulls, that I will breathe easier when I am at the start of a story, rather than at the end. Many of us just love the idea of a new adventure.

seth (2010-01-29 13:49:06)

Aaron, I would say that travel is the poor man's self-experimentation.

John (2010-01-30 11:28:52)

You don't have to go too far for some of the effects of travel--when I even just take local day trips to those places you never visit when you live here, I find my mood expands, I take in more sensory information--it's not the same as going to another culture for a period of time but nevertheless something is there--that's how I do it now that I'm a poor man.

Adam (2010-01-30 15:55:46)

Seth: \*Anecdotally, have to agree with a major time shift sapping strength and motivation. \*I can hang for the first two to three days in a new time zone with my workouts. Then, just when my sleep feels calibrated, I bonk on my workouts. \*Coming back to the original time zone starts the drain all over again. A recent trip from Seoul to SF had me not performing or performing badly in the gym, etc. for at least two weeks. Q: What do you think the recovery time is before you feel back to your normal strength/ability?

Nathan Myers (2010-01-30 20:04:35)

I suppose you long ago gave up on melatonin to help your sleep cycle, but have you tried it for adapting to time zone changes?

seth (2010-01-30 21:00:39)

Nathan, no. Adam, about 2-3 weeks. Although I haven't measured this.

## Homemade Kombucha Tips (2010-01-30 16:19)

1. You don't need a starter culture (often called a scoby). You can make one from store-bought kombucha. I let a cup of Rejuvenation kombucha sit in a wide-mouth jar at room temperature, covered with a paper towel. After two weeks, a thin film had formed on the surface, easily transferred to a tea-sugar mixture. More This didn't work! The culture grew poorly. It might have worked to just pour the Rejuvenation kombucha into the tea-sugar mixture.

2. My friend [1]Carl Willat has used empty Synergy kombucha bottles to bottle kombucha he makes himself. By bottling your kombucha, and leaving it at room temperature for a few days, you get carbonation.

1. <http://www.carlsfinefilms.com/>

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david (2010-02-01 15:33:39)

Adding a little lemon (e.g. 1/2 tsp/bottle) seems to help add fizz. I'm currently experimenting with boiling ginger slices in the water when I make the tea (i.e. before fermentation) to get the ginger flavor in the finished tea. I've added ginger slices when bottling and some ginger flavor does come out if you do a 10 day second fermentation in the bottle, but I'm hoping to get the ginger flavor without the long second fermentation.

david (2010-02-02 08:13:26)

Ok, here's my ginger kombucha recipe: When you boil the water to brew the tea, add some peeled, sliced pieces of ginger to the water. After brewing the tea (while letting the tea cool), spoon out these pieces of ginger and add them to the bottles in which you are bottling the previous batch of finished kombucha. I also add 1/2 tsp of lemon juice to each 12 oz bottle. The combination of the ginger that was released while boiling the water and the ginger that comes from the slices in the bottle gives it a nice gingery flavor even after just a day or two in the bottle (i.e. no need for a longer fermentation in the bottle). The longer the in bottle fermentation the more fizz. Personally, I like a little fizz, but not too much.

April (2010-02-27 14:55:31)

Have you tried any other flavors like blueberry or raspberry and when and what part of the process have you added the flavor?

Moon Maiden (2010-05-14 18:30:52)

Dear David, What is it about leaving the bottles at room temperature that helps add fizz? After the fermentation process I had some good fizz going on. But then I placed the bottled juice right into the fridge and since then I have had no fizz. I was wondering if it was because I did not have equipment to make the seal airtight? But after reading your post about leaving the bottles at room temperature I am beginning to wonder. Thanks for posting.

seth (2010-05-14 19:58:31)

April, I haven't tried other flavors. I don't like them. You add them at the end. Moon Maiden, the fizz (dissolved carbon dioxide) is produced by a second fermentation. The first fermentation is aerobic (needs oxygen); the second is not, which is why it continues when the bottle is sealed. But it only happens at room temperature.

Meg (2010-05-22 17:59:13)

When doing a second fermentation with a sealed bottle, don't let it sit too long! It can explode. I had a bottle with kombucha and apricot blow up on me in the middle of the night. I invested \$20 in a food-grade bucket with lid and an airlock (gizmo that

lets gasses out but no air in for the second, anaerobic, fermentation). Any home-brew store will be able to set you up. And they have glass options if you don't want to deal with plastic. Now I don't worry about cleaning up glass chards from the floor or cleaning kombucha splatter off the cabinets, counters and floor! Thanks for the recipe tips above!

Courtney (2010-06-25 07:37:53)

Hi! I have just bottled my first ever batch of kombucha. I'm really excited about it, but wary of drinking it. I left the bottles on the counter for the second round of fermentation, and when I opened them, there was a film on top. I'm assuming it's more culture growth from the mother scoby, and I've seen hunks of it in store-bought kombucha, though never a complete new film on the top. Is this ok? If my jars were not completely air-tight, would this be dangerous to drink? Thanks for any help you may have! Courtney

seth (2010-06-25 09:38:48)

yes, it's more culture growth. I don't worry about it.

Courtney (2010-06-27 11:08:08)

Oh thank you! I'm pumped about this first batch!

moreless (2010-08-07 09:04:34)

I spontaneously generated my Kombucha mushroom! I was keeping a sourdough starter in the pantry... just in case. I keep it in an old pint jar. When the old sourdough had crusted up. I added in enough water to make a batter, then added some fresh flour. After a week, I had a layer of alcohol on top. After another week, I had a rubbery mother on top! I transplanted the mother to a cool jar of : 1/2C sugar, 1/2gal steeped wtr, via 2 teabags, 1/2C vinegar. After 9-12 days later, i had an additional daughter membrane! Maybe after a few more cycles the taste will mature and stabalize, There is a variance in shades of cream, and hanging snots of darker yeast. Compared to others who have posted pictures... it appears to be normal. (Except for those who cleaned their scoby up for picture taking..... Geez, the vanity)

## **The Checklist Manifesto by Atul Gawande (2010-01-30 20:02)**

A few years ago, Gawande wrote two articles in The New Yorker about medical innovation: [1]The Score (about [2]Ap-gar scores) and [3]The Checklist. Since then, he has done actual research promoting the use of checklists and this book (which I got free from the publisher) is mostly the story of his contribution, with sidebars about the origin of checklists in aviation and their use in building construction. The word checklist suggests that it is all about making sure certain things get done but Gawande takes pains to say that is only half of it. The other half is helping people who don't know each other work together – by having them introduce themselves and by making sure everyone is heard.

Use of checklists, judging by the results, is a big advance and for that reason alone this would be a solid book – the story of one person's part in an important innovation. I am sorry he didn't tell parts of the story that reflect badly on others – such as [4]the Office of Human Research Protections decision that Johns Hopkins research must be stopped immediately because introducing checklists and tracking their effectiveness was dangerous. (Doctors might be embarrassed by the results!) I wouldn't expect a Harvard Med School prof to get nauseous with rage, the way Richard Harris, an earlier New Yorker writer, appropriately did in A Sacred Trust (how the AMA tried to block Medicare), but every story needs a villain. And there are plenty of villains in American medicine.

[5]The book's website, including Steve Levitt's review.

1. [http://www.newyorker.com/archive/2006/10/09/061009fa\\_fact?printable=true](http://www.newyorker.com/archive/2006/10/09/061009fa_fact?printable=true)
2. [http://en.wikipedia.org/wiki/Apgar\\_score](http://en.wikipedia.org/wiki/Apgar_score)
3. <http://www.blog.sethroberts.net/2007/12/09/the-twilight-of-expertise-part-11-icu-doctors/>
4. <http://www.blog.sethroberts.net/2007/12/31/academic-horror-story-johns-hopkins-edition/>
5. <http://gawande.com/the-checklist-manifesto>

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Patrik (2010-01-31 00:04:56)

@Seth You gotta get this book: Bad Medicine: Doctors Doing Harm Since Hippocrates [http://www.amazon.com/Bad-Medicine-Doctors-Doing-Hippocrates/dp/0199212791/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1264921360&sr=1-1](http://www.amazon.com/Bad-Medicine-Doctors-Doing-Hippocrates/dp/0199212791/ref=sr_1_1?ie=UTF8&s=books&qid=1264921360&sr=1-1) Taleb recommended it, and I have just started it and am totally blown away. Tremendous overlap with the mega-themes of this blog.

seth (2010-01-31 09:13:31)

Thanks, Patrik. Yeah, it looks really interesting. I'll get it.

Clyde Adams III (2010-02-02 08:25:25)

Seth, you say "...this book (free from publisher)..." As far as I can tell, it is not available for free from the publisher. Am I missing something? <http://us.macmillan.com/TheChecklistManifesto>

seth (2010-02-02 09:18:59)

by "free from publisher" I meant I got it free from the publisher. I have fixed the post to make it clearer.

rani (2010-02-18 16:50:13)

Hi Seth - I just recently read the Checklist Manifesto as well. I just wanted to add that in addition to checklists and introductions, the other key thing is the distribution of power on a team (key when nurses are reading the checklists to Doctors). Also the support from the higher ups to enforce said checklists is key. Great post. cheers.

vik (2010-09-24 13:52:53)

[www.expertchecklists.com/](http://www.expertchecklists.com/) Expert Checklists is a new web app for professionals working in difficult and complex environments. Users can work together to create and discuss very effective checklists for their fields. They can also customize checklists for their own needs and download in a convenient PDF format . Applications include medicine (for example WHO safe surgical checklist), aviation, adventure sports, and project management. The site was inspired by the book 'Checklist Manifesto' by Atul Gawande.

## 5.2 February

### Four Quantified-Self Talks (2010-02-01 13:25)

At the recent [1]Quantified Self Meetup in San Francisco, four talks especially interested me.

The first was by a woman who has been making scrapbooks about her life for a long time. She now has nineteen volumes. They contain the usual scrapbook stuff (photos, ticket stubs, drawings – she's a designer – newspaper clippings, receipts, and so on) plus her design work and her medical records. They help her remember her life. "I look at them so I won't make the same mistakes in relationships," she said. "How's that working?" someone asked. It's a lot of work and she's now three months behind. Her talk was about what sort of computer tool would make the

whole thing easier. It made me wonder why woman scrapbook so much more than men. [2]My earlier post about scrapbooking didn't answer that question. The whole thing reminded me of [3]Jill Price:

At the age of 10, Price began to keep almost daily diaries, which she then saved "thousands of pages filled with her impossibly tiny handwriting.

The curious thing about Price's diaries is that her memory is so astonishingly good that she can remember her past in great detail without them. Apparently she kept such detailed diaries because of her great memory or both have some common cause.

The second was by a man who had recorded his daily activities in detail for five years. A graph showed that he had a free-running sleep cycle: He went to sleep slightly later each day. At certain times he'd be awake at night and asleep during the day. He started keeping these records because he was washing his roommates' dishes a lot and wanted to see how much time it was taking. (Much less than he thought, it turned out.) I asked what he'd learned from his records. The sleep pattern, he said. Someone told me he must have meant the regularity of the pattern. His records had no obvious value so again I wondered: What's the evolutionary reason? He enjoys keeping these records. Why? In some ways it's a male version of scrapbooking: You can't easily show it to someone (in line with male lack of communicativeness), but, like a scrapbook, it's a long-term record of random stuff that helps you remember what happened.

The third was about a startup called [4]Skimble. Maria Ly and her partner have created a web app to keep track of your outdoor activities, such as climbing and kayaking. She does a lot of climbing and the app started as a way for her to keep track of it. She used to be an engineer at Google. This seems promising because she was trying to solve her own problem, not someone else's. Apps to help other people self-experiment don't get very far, in my experience.

The fourth was a kind of combination of the first three. [5]Robin Barooah wanted to meditate more. His bouts of meditation last a half-hour or more, so it wasn't easy. After a retreat, he started meditating more but the effect wore off within a month or so. His talk was about [6]an iphone app for tracking his meditation. After he started using it, about a month ago, he's been achieving his goal of regular daily meditation better than ever before. It reminds me of a University of Colorado engineering professor who stopped binging on ice cream as soon as he forced himself to keep track of what he ate.

1. <http://www.meetup.com/quantifiedself/>
2. <http://www.blog.sethroberts.net/2007/06/07/my-theory-of-human-evolution-scrapbook-edition/>
3. <http://abcnews.go.com/Health/story?id=4813052&page=2>
4. <http://www.skimble.com/>
5. <http://www.sublime.org/>
6. <http://www.meditate.mx/iphone>

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david (2010-02-01 15:27:27)

Hi seth, Do you remember the name of the iphone app? I googled, but there are so many meditation timers out there that it's hard to find. Speaking of meditation, and specifically Buddhist meditation, one of its goals is to free you from the illusion that there is a separate, permanent self. I wonder if the impulse to collect data that isn't used for anything comes from the need to prop up the illusion. The scrapbook (or unused data) is an attempt to preserve and make permanent the self that vanishes

with each passing day/hour/minute. Thanks, David

Robin Barooah (2010-02-01 16:16:33)

Hi Seth and David, The iPhone App is called "Equanimity" - there's a link to it here: <http://www.meditate.mx/iphone> Disclosure: I'm the author of the app. The idea that led to the app was the desire to create a 'mirror' in which I could see the reality of my practice. I had noticed that I tended to have thoughts like "It's too late today, I'll meditate tomorrow", or "I meditated yesterday, and I feel great today - which led to me not actually practicing, and so I wanted a record that would provide an antidote to such thoughts. I'd found the same approach (of having data to counteract false beliefs) to be effective in breaking my coffee habit (<http://www.kk.org/quantifiedself/2009/10/the-false-god-of-coffee.php>) earlier in the year, so I was fairly convinced that the same things would work for creating a positive habit.

MikeY (2010-02-01 22:25:10)

"pparently she kept such detailed diaries because of her great memory or both have some common cause." Seth, writing things down improves memory. Must've been some basic cog-psych stuff from the old days, maybe Tulving, or Craik, or somebody. I'm not being a nitpick about this, though. Maybe there's some other benefits of self-data collection besides analysis that help people. Do you have any thoughts on this? Perhaps people maintain more continuous self-images - the only studies I've seen with this concept examine the effects on intertemporal preferences, but I'm sure there's plenty of other interesting things. Or perhaps those who have such self-images are more likely to test data.

MikeY (2010-02-01 22:31:38)

Haha, actually I just had another thought - you know how there's been a trend in the last ten years of doing psych studies where people self-report on blackberries or whatever a few times a day? Kahneman's done them, my old advisor who does mind-wandering stuff did a few, among many others. Point is, I'd love to see a study correlating compliance with these blackberry quizzes and various personality measures. I can think of a few that might be pretty intuitive, and ran it with a big group (maybe not in the furloughed UC system, though) you could make a neat story out of it. I'm not an individual differences kind of guy, but still.

seth (2010-02-02 06:44:43)

Robin, thanks for the info. I have added it to the post. I didn't know you were the person behind the false-god-of-coffee experiment. That was great! MikeY, yes, writing stuff down improves memory. Price's diaries are unlikely to be the reason for her fantastic memory because she also had a great memory for stuff that wasn't likely to be in them - all sorts of world events. If you are saying that maybe the reason we have a desire to keep diaries, scrapbooks, and other records is so that we will remember, that's an interesting idea. Price found her great memory a huge burden but of course no memory at all is even worse. In evolutionary terms, widespread literacy is recent - so recent that I doubt evolution shaped us to write things down so that we will remember them. My guess is that scrapbooking and the computerized record-keeping project I described derive from the combination of a desire to tell stories and a desire to make art. The evolutionary reasons for those I think I understand. Scrapbooking is obviously an artistic kind of story-telling. The computerized record-keeping I mention (a log of daily activities) was in fact artistically done. Different activities were given different colors and the whole record was nicely displayed.

## **A Call From Dr. Eileen Consorti's Office (2010-02-02 06:28)**

Yesterday I was contacted by Dr. Eileen Consorti's office. (Dr. Consorti is a surgeon to whom I was referred a few years ago, after my primary-care doctor noticed I had a tiny hernia - so small I hadn't noticed it.)

"Can I ask a favor of you?" her assistant began. The favor was to remove her name from my blog. Why? I asked. Because when someone googles her, he said, what you have written comes up, and it isn't favorable. (When I googled her name yesterday [1]this was the first result. When I googled the same thing today, it was the seventh result.) He

said nothing about any inaccuracy. I said if she has anything to add, I would be happy to amend what I wrote. He asked if I had any "further" questions for Dr. Consorti. No, I said. The conversation ended.

Then I realized I did have a question. During my discussion with her of whether or not I should have surgery, I had said that surgery is dangerous. Dr. Consorti had replied that no one had died during any of her surgeries. She had said nothing about the likelihood of other bad outcomes. That struck me as incomplete. My question was: Why no mention of other bad outcomes? I phoned Dr. Consorti's office, reached the person I'd spoken to earlier, and told him my question. He tried to answer it. I said I wanted to know Dr. Consorti's answer. Wait a moment, he said. He came back to the phone. He had spoken to "the doctor", he said. She wasn't interested in "further dialog". She would contact a lawyer, he told me.

Dr. Consorti, if you are reading this, I am happy to publish verbatim anything you have to say about this.

Thanks to Tucker Max.

More On November 18, 2011, soon after I posted [2]this, Dr. Consorti asked me to post the following:

Dr. Fitzgibbons from Creighton published a prospective study comparing repair of inguinal hernias versus watchful waiting in men with asymptomatic inguinal hernias. At five years twenty percent of the patients in the observation group crossed over to have surgical repair. By the way, I only get reimbursed \$300.00 dollars to repair a hernia not thousands of dollars. I hope you asymptomatic always, thanks.

Even after [3]all this, Dr. Consorti has described [4]the Fitzgibbons study in a way that makes her recommendation seem more reasonable than it was. As I said, the results of that study do not support her recommendation. Its abstract says: "Watchful waiting is an acceptable option for men with minimally symptomatic inguinal hernias. Delaying surgical repair until symptoms increase is safe."

1. <http://www.blog.sethroberts.net/2008/08/29/suppose-you-write-the-times-to-fix-an-error-part-2/>
2. <http://blog.sethroberts.net/2011/11/16/dr-eileen-consorti-and-patient-power/>
3. <http://blog.sethroberts.net/2011/11/16/dr-eileen-consorti-and-patient-power/>
4. <http://www.ncbi.nlm.nih.gov/pubmed/16418463?dopt=Abstract>

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Alex Chernavsky (2010-02-02 07:40:51)

If there's one thing I've learned from dealing with the healthcare industry, it's this: you have to do your own research and take charge of your own situation. About ten years ago, I was diagnosed with a parathyroid adenoma (a non-cancerous growth of glandular origin). My endocrinologist referred me to a surgeon whose office was in the same building. The two doctors were buddies, as I found out later. When I went to my initial appointment with the surgeon, the first thing I noticed was that his waiting room was filled with posters, flyers, pamphlets, etc. all about breast cancer. I saw no information about any other type of cancer. This fact immediately made me suspicious. When I met the surgeon, he told me that his plan was to do an operation to take a biopsy sample, and then go back at a later date to excise the growth. This strategy made absolutely no sense to me. Surgery in the neck is complicated and risky, and there didn't seem to be any reason to do it twice, when you could remove the growth the first time. I went to my local medical school and looked up a bunch of articles and textbooks. I couldn't find anything that corroborated the surgeon's recommendation. I asked my endocrinologist to refer me to a surgeon who specializes in endocrine surgery. The second surgeon basically confirmed my suspicion that the first surgeon was nuts. I



had my surgery with no significant complications. *You need to do your own research.*

david (2010-02-02 07:50:38)

So the medical profession wants tort reform so they won't be sued (if the potential payout is low enough, it won't justify the expense of bringing the case to court), but if you put factual information about your experience with them and it happens to make them look bad, then they're happy to call a lawyer.

seth (2010-02-02 07:50:40)

Very interesting and important story, Alex. David, yes, I completely agree. As [1]Robin Hanson put it, what does "first do no harm" actually mean?

1. <http://www.blog.sethroberts.net/2008/03/21/robin-hanson-on-doctors/>

Patrik (2010-02-02 12:01:50)

The synchronicity of this blog post/comments with the book I am reading right now is spooky. I already mentioned it to Seth. [http://www.amazon.com/Bad-Medicine-Doctors-Doing-Hippocrates/dp/0199212791/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1264921360&sr=1-1](http://www.amazon.com/Bad-Medicine-Doctors-Doing-Hippocrates/dp/0199212791/ref=sr_1_1?ie=UTF8&s=books&qid=1264921360&sr=1-1) @Alex You're 100 % right about doing your own research.

Andrew Gelman (2010-02-02 12:02:23)

Seth: What do you mean by "Thanks to Tucker Max"? It looks like this is all something that happened directly to you.

Rachael (2010-02-02 13:47:07)

My son had repeated strep throat infections over the course of a year. We were referred to an ENT doctor who suggested tonsillectomy. I researched tonsillectomy for strep with no tonsillitis and found that on average in the year following a tonsillectomy patients like my son get one fewer strep infection. Surgery with it's risks, and ten day recovery, seems like a steep price to pay for one fewer infection. I brought my son to a naturopath who made some supplement and herb suggestions that we followed and my son has not had strep since.

seth (2010-02-02 15:38:57)

Andrew, by "thanks to" I meant "thank you to" rather than "due to". I asked Tucker for advice. He was in a similar situation: Someone threatened him with legal action if he didn't take down something he had posted.

Lotus (2010-02-02 16:32:45)

If you ask a surgeon if you should have surgery most of the time the answer is going to be "yes" because that is the solution they are trained to provide. Surgeons cut and sew and, if they spend time thinking about their profession, it is more likely to be about how to cut and sew better, not how not to cut and sew. So, in a case where you have doubts that surgery is necessary, it may be better to consult with a non-surgeon. This doctor apparently accepted the conventional thinking of her profession (i.e. cut out everything that could grow to be a problem) as fact, even though research may not exist to back up that thinking in this case. In reality, much of medicine is practiced this way. (As an example, check out this recent article: <http://www.nytimes.com/2010/01/26/health/26child.html?ref=health>) If medicine purely relied on scientific fact and not on cultural norms, one would expect to see less variance in the way things are done from city-city in the U.S. and between countries. Too bad the system isn't more objective and transparent when it comes to treatment outcomes and we are left to scour the internet to find some clues.

Nathan Myers (2010-02-03 02:11:54)

Alex: I suspect you would have been better off with the biopsy, and then maybe no excision. Why excise what doesn't need to be excised?

Alex Chernavsky (2010-02-03 05:35:30)

Nathan, the parathyroid adenoma was causing me to have high levels of calcium in the blood (this is how I was first diagnosed),

so it needed to be removed regardless. All the references I found recommended removal of the adenoma. The neck has many delicate structures, particularly nerves. A fairly common complication of neck surgery is damage to the laryngeal nerve, which can cause hoarseness (sometimes permanent). Doing neck surgery twice, when once is enough, doesn't make any sense. My first surgeon seemed to specialize in breast cancer, where taking a biopsy sample is more routine.

### Assorted Links (2010-02-02 19:09)

- [1]how Andrew Gelman chooses book titles
- [2]how to buy a car
- [3]horizontal evolution was very important
- [4]The rise of Chinese universities. [5]The world's top 100 universities. In 2004, Berkeley was #2 on this list. It is now #39.
- [6]The IPCC under siege

Thanks to Aaron Blaisdell, Tim Beneke, and Stephen Marsh.

1. [http://feedproxy.google.com/~r/StatisticalModelingCausalInferenceAndSocialScience/~3/\\_mIMcxbFUTM/book\\_titles.html](http://feedproxy.google.com/~r/StatisticalModelingCausalInferenceAndSocialScience/~3/_mIMcxbFUTM/book_titles.html)
2. <http://www.irishtimes.com/newspaper/motors/2009/1028/1224257549944.html>
3. <http://www.newscientist.com/article/mg20527441.500-horizontal-and-vertical-the-evolution-of-evolution.html?full=true>
4. <http://www.guardian.co.uk/education/2010/feb/02/chinese-universities-will-rival-oxbridge>
5. <http://www.guardian.co.uk/education/datablog/2009/oct/08/top-100-universities-world>
6. <http://volokh.com/2010/01/31/the-ipcc-under-siege/>

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Nathan Myers (2010-02-03 02:04:04)

About titles, I have a rule: Never buy a book with a whole sentence for a title. I've thought about why the rule works well, and I think it comes down to that the author doesn't think we'll read the book, and is trying to get the story into the part we can't avoid reading. But if so, then (1) the author didn't have much to say, and (2) I already read the important part. That rule wouldn't make a good title. About "The IPCC under Siege": The IPCC isn't the evidence. The IPCC doesn't do science; they just write summaries. What made an impression on me was the enormous number of contentless and actually false or deliberately misleading comments following the posting. All of the worst liars were arguing against acting on AGW. When so many, many people offer *nothing* but lies to persuade you to their side, it is much easier to pick which side is right. The IPCC reports are big and contain errors, but the errors are necessarily rare exceptions. It's hard to pick out a single reliable fact from the opposition.

frank petrillo (2010-02-03 10:04:06)

I bought a car this way in the fall. Check out fightingchance.com for a more eloquent way.

## Scholarly Research Exchange (2010-02-03 07:32)

Today I got an email inviting me to contribute to a journal called SRX Neuroscience. The journal is "peer-reviewed open-access". The email continued: "There are many reasons to submit your work to SRX Neuroscience, including an efficient online submission process, no page limits or restrictions on large data sets, immediate publication upon acceptance, and free accessibility of articles without any barriers to access, which increases their visibility."

I'd never heard of it. Its [1]web page didn't open. [2]The website for SRX (short for Scholarly Research Exchange) was extremely vague: [3]no names, no location. And no sign of how it was funded.

Finally I learned that SRX is run by Hindawi Publishing, in Egypt. From [4]this excellent overview I learned its money comes from author fees, \$500 or more per article. They are trying a new kind of editorship: 30 editors or more per journal. Each editor handles only two articles a year and receives a 50 % discount when they themselves submit an article. (I wonder what referees get.) Meanwhile, [5]BioMed Central, a better-known open-access publisher, is having trouble: They have been forced to raise their charges to libraries so high that Yale decided to cancel.

It seems very low-rent. But, as Clayton Christensen told in *The Innovator's Dilemma*, this is often how important new things begin. In the beginning hydraulic shovels were only good for digging a ditch in your backyard. The makers of cable-powered shovels, whose products made the giant holes for skyscrapers, turned up their noses at such a low-prestige task. But the hydraulic shovels got better and better. Companies that made cable-powered shovels eventually went bankrupt.

1. <http://www.syrex.com/neuroscience/>
2. <http://www.syrex.com/>
3. <http://www.syrex.com/about.html>
4. [http://www.ithaka.org/ithaka-s-r/strategy/ithaka-case-studies-in-sustainability/case-studies/SCA\\_BMS\\_Case\\_Study\\_Hindawi.pdf](http://www.ithaka.org/ithaka-s-r/strategy/ithaka-case-studies-in-sustainability/case-studies/SCA_BMS_Case_Study_Hindawi.pdf)
5. [http://en.wikipedia.org/wiki/BioMed\\_Central](http://en.wikipedia.org/wiki/BioMed_Central)

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Darrin Thompson (2010-02-03 08:39:59)

My hypothesis: People aged 33 and above have a rationally negative view of self published info on the internet. At 50 and above it's complete taboo. Below those ages people are more likely to filter self published material less stringently. Their mental filters will be equivalent to what I (age 35) would use to filter a radio commercial. There will be no more internet stigma. The result would be that in three decades it will be acceptable to self publish many results and cheaper for lay people to read primary sources. The scientific community's "immune system" will have been reinvented into something still very flawed but better than the journals used today. That's a falsifiable hypothesis and I'm sticking with it. Put another way, Journals have been dead for over a decade, except for the fact that other forms of self publishing have been unnaturally stigmatized. I think the stigma will clear and science will find a cheaper way of "blessing" important results.

david (2010-02-03 09:31:21)

Darin, I suspect you're right. Here's a more general formulation of your hypothesis: "1) everything that's already in the world when you're born is just normal; 2) anything that gets invented between then and before you turn thirty is incredibly

exciting and creative and with any luck you can make a career out of it; 3) anything that gets invented after you're thirty is against the natural order of things and the beginning of the end of civilisation as we know it until it's been around for about ten years when it gradually turns out to be alright really." – Douglas Adams David

rps (2010-02-03 09:40:11)

What does this publishing company really do to justify their income? I'm not a scientist, but my dad used to edit a journal and he told me how it worked. He worked for free since it was supposedly prestigious, the authors didn't get paid anything, and the publisher charged \$50 a copy to university libraries. This may have made sense in those pre-internet days when you had to publish it on dead trees and coordinate with university libraries, but now you could just put it on a website for essentially nothing.

Andrew Gelman (2010-02-03 10:14:24)

Seth: If authors are paying \$500 per article, I doubt this is the wave of the future or anything like it. It sounds more like a scam where people can buy publications in pseudojournals and put them as lines on their C.V.

seth (2010-02-03 10:41:25)

Andrew, there are "pseudo-journals," such as the SRX journals, and there are "real" journals with very low impact factors – such as many journals. I'm not sure drawing a sharp line between them makes sense. At least the SRX journals are trying something new. If I recall correctly, they reject about half of the submissions. rps, the company aggregates content (e.g., many neuroscience articles in one place) and organizes the review process. It has about 200 employees.

## **Schizophrenia Prevented By Fish Oil (2010-02-03 21:41)**

A new study in the Archives of General Psychiatry, [1]summarized in the Wall Street Journal:

Researchers in the new study identified 81 people, ages 13 to 25, with warning signs of psychosis, including sleeping much more or less than usual, growing suspicious of others, believing someone is putting thoughts in their head or believing they have magical powers. Forty-one were randomly assigned to take four fish oil pills a day for three months. The other patients took dummy pills.

After a year of monitoring, 2 of the 41 patients in the fish oil group, or about 5 %, had become psychotic, or completely out of touch with reality. In the placebo group, 11 of 40 became psychotic, about 28 %.

The study is impressive not only because it uses ordinary food (fish oil) rather than a dangerous drugs (such as Prozac) but also because it studies prevention. Just as [2]the ketogenic diet suggests a widespread animal-fat deficiency, so this study suggests a widespread omega-3 deficiency, which won't surprise any reader of this blog. Completing the picture – I believe most Americans eat far too little animal fat, omega-3, and fermented food – [3]baker's yeast is being studied as a cure for cancer.

Thanks to Oskar Pearson and Chris.

1. <http://online.wsj.com/article/SB10001424052748704107204575039590838522222.html>

2. <http://www.blog.sethroberts.net/2010/01/24/animal-fat-sleep-and-the-ketogenic-diet/>

3. <http://www.sciencedaily.com/releases/2010/02/100202201622.htm>

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Adam (2010-02-03 23:07:23)

And here I thought that Vitamin D was the superhero of the week... <http://fwd4.me/ELD> \*Perhaps they are the new dynamic duo...NIH wants to find out. <http://www.vitalstudy.org/>

Andrew Morrison (2010-02-04 00:08:16)

A few minutes ago I was sent to a yeast-cancer article by another blog. My mind immediately jumped to kombucha and then to Seth Roberts. Overcome by curiosity, I clicked over here just to see if you had beaten me to the scoop and to seeing the connection. I laughed to see that you had. I'm proud to sport you on my favorites list.

Fran (2010-02-04 08:46:32)

Hello, I have been following your blog for some months now...and have experienced a marked improvement with gum inflammation while using Flaxseed Oil. When I saw the article on Brewers Yeast, I did some googling that brought me to the Sloan Kettering/Integrative Medicine/Herb site and while I couldn't find Brewer's Yeast info, I did take a look at Flaxseed Oil. <http://www.mskcc.org/mskcc/html/69220.cfm> I was diagnosed with ER+ breast cancer in 2006 and darn- according to SKCC, flaxseed has phytoestrogenic effects and should be used with caution by ER+ individuals. Do you think Fish Oil is as effective for inflammation? I have tried searching your blog for a comparison of the two. I wonder if there is a comparable dose of Fish Oil to the very effective 2 TBS of Flaxseed Oil? Thanks for your help.

seth (2010-02-04 09:33:07)

yes, I suspect that fish oil reduces gum inflammation just as flaxseed oil does. But I haven't tested this.

1 (2010-02-04 11:31:43)

seth, how come you think psychiatric drugs are dangerous?

Alex Chernavsky (2010-02-04 12:54:27)

Newsweek magazine has a cover story this week about how antidepressants are nothing but glorified placebos: <http://www.newsweek.com/id/232781> Although they work no better than placebo at alleviating depression, they do have adverse physiological effects on the brain. Here is an excellent article about the dangerous effects of psychotropic drugs: <http://psychrights.org/articles/EHPPPsychDrugEpidemic%28Whitaker%29.pdf> (For the record, I am not a Scientologist.)

seth (2010-02-04 15:00:53)

I believe psychiatric drugs are dangerous because there are many examples of them causing harm. An early example is tardive dyskinesia. Prozac causes suicidal thinking. Lithium causes weight gain.

Kudzu Bob (2010-02-04 18:24:43)

I am surprised that the notion of using baker's yeast to fight cancer is being treated as new idea. My layman's understanding is that for more decades than most of the readers of this blog have been alive, beta glucan, derived from the cell wall of baker's yeast, has been studied for its apparent ability to boost immunity. I do not claim to know how effective beta glucan is for such a purpose, but I do gather that this substance is also present in a number of medicinal mushrooms, maitake among them. Also, health food stores have sold beta glucan pills and mushroom extracts for many years, although some brands are reportedly of much higher quality than others.

J (2010-05-29 10:14:45)

Hello seth. I was wondering if you can provide some suggestions regarding Omega 3 Fish oil pills? I have been delusional for years now but no hallucinations. I have not been diagnosed yet. Should I start consuming this natural supplement? I really don't want to get on anti-psychotic drugs as you too have claimed of them to have severe side-effects. Thank you.

seth (2010-05-31 00:50:49)

Sorry, I can't, I haven't used fish oil pills. I get my omega-3 from flaxseed oil. I recommend Spectrum and Barlean's.

### **Camp No (2010-02-04 08:12)**

It's nauseating that [1]John Yoo (a Berkeley law professor) is getting off with a slap on the wrist. The superficial and childish response to 9/11 was they killed us, let's kill them. The supposedly adult response was we need to make sure this never happens again – by getting rid of terrorists. The real lesson I've never heard or read: here's something inside all of us that is stronger than we realized. We must try even harder to suppress it. 9/11 meant that laws against torture should be strengthened.

The opposite happened – thanks in part to John Yoo. Now it's clear there was a lot of torture at Guantanamo. It happened at a place called Camp No (as in "I have no idea what you're talking about"). As I read [2]this excellent article about the torture, I wondered how such journalism will survive [3]as newspapers disappear. I was glad to see that [4]the author, Scott Horton, is a lawyer, not a professional journalist. Just as my self-experimentation was essentially a hobby that I did in addition to my regular job (a Berkeley professor).

1. [http://www.dailycal.org/article/108047/anticipated\\_report\\_to\\_clear\\_professor\\_yoo\\_of\\_misco](http://www.dailycal.org/article/108047/anticipated_report_to_clear_professor_yoo_of_misco)

2. <http://www.harpers.org/archive/2010/01/hbc-90006368>

3. <http://www.theawl.com/2009/10/a-graphic-history-of-newspaper-circulation-over-the-last-two-decades>

4. <http://www.harpers.org/subjects/ScottHorton>

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Christine (2010-02-04 17:09:33)

I completely agree with you on this Seth. What a disgrace that John Yoo is not in jail for crimes against humanity. And yes– an excellent article.

Cole (2010-02-04 18:50:52)

I also enjoyed the article that you posted, Seth. For yet another look at torture/PMCs/abuse, I found this law journal article to be very insightful: [http://74.125.155.132/search?q=cache:C5essvsFAnAJ:law.slu.edu/conf/slwa08/papers/Harvey\\_SYMP\\_08.doc+wrapping,+american+flag,+thomas+harvey&cd=1&hl=en&ct=clnk&gl=us&client=firefox-a](http://74.125.155.132/search?q=cache:C5essvsFAnAJ:law.slu.edu/conf/slwa08/papers/Harvey_SYMP_08.doc+wrapping,+american+flag,+thomas+harvey&cd=1&hl=en&ct=clnk&gl=us&client=firefox-a) - Cole

Vic (2010-02-04 23:06:06)

To torture or not to torture is a false dichotomy. I would argue that confinement (i.e., jail) and being separated from one's loved one's is torture, certainly solitary confinement can be viewed as torture. I don't favor pulling out finger nails, but count me in support of coercive interrogation for high level terrorists with "hot" intelligence. As for John Yoo, I find it a sad sign of the weakness of our civilization that we need legal cover at all to engage in coercive interrogation against terrorists captured in afghanistan. It should be done covertly with a wink and a nudge.

Nathan Myers (2010-02-05 01:59:37)

Solitary confinement has always been considered torture. Vic, I hope you'll look forward to your turn as torture becomes routine. Too many parking tickets? Electric shocks for you, my good man.

Stephen M (Ethesis) (2010-02-05 07:34:28)

Ghh. Torture is useless for obtaining intelligence. On the other hand, prosecuting Yoo because of his advocacy or beliefs is just one more slip into the abyss of McCarthy.

tom (2010-02-13 11:48:50)

Seth, your post seems ignorant and visceral. Why didn't you analyze these issues more critically before (or instead of) posting?

1. Harper's article: Jack Shafer of Slate has shown huge problems with Horton's claims about 'Camp No'. And Horton's claims require a conspiracy so large that it strains common sense. I'm guessing you don't believe Obama was born outside the US or that the US government blew up one of the WTC buildings or that LBJ killed JFK. Why would you believe Harpers on this? Original Shafer article: <http://www.slate.com/id/2242942/pagenum/all/#p2> Harpers answer and Shafer reply: <http://www.slate.com/id/2243294/pagenum/all/#p2>

2. Yoo: I'm a lawyer and I still don't know much, if anything, about the subject of Yoo's memos. I'm guessing that you have no US Constitutional law expertise and that you don't know much about legal interpretation. Do you know that Yoo's advice to his client was incorrect about the law? And even if you do somehow know that, do you know that it was sufficiently incorrect that he should be sanctioned under normal standards for lawyers? I think you have no idea. So are you consciously suspending your normal critical process on Yoo and Horton's article because you want to send a very clear signal that you are a good torture-hater? Or are you always leaping without looking? I was just about to put my aquatic ape on an all-fat diet, but maybe I should rethink my faith in your posts.

seth (2010-02-13 12:40:29)

Tom, perhaps you should be more critical of Shafer. In his response – thanks for the links – he says: I dispute that it was called Camp No. !!! As if that mattered. As if he could possibly know that no one called it that. As for your points, I'll just say that I don't consider these two assertions: 1. US government tortured Guantanamo prisoners 2. US government bombed World Trade Center to have the same level of plausibility.

## **Medical Ghostwriting: Every Cloud Has a Funny Lining (2010-02-04 22:51)**

Never let it be said that med-school professors are [1]afraid of appearing foolish:

The articles come in with doctors' names on them and we often find some of them have little or no idea about what they have written, [the BMJ editor] said.

1. <http://www.guardian.co.uk/society/2003/dec/07/health.businessofresearch>

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## **The Need for Animal Fat (2010-02-05 06:53)**

If you read Good Calories Bad Calories you may remember that the Arctic anthropologist Vilhjamur Steffanson spent a year on an all-meat diet, with no ill effects. (In [1]an earlier post about Steffanson, I stressed the fermented food that the Eskimos ate.) You may not know that animal fat was crucial for his health during that year, which began with [2]a brief attempt to eat lean meat (meaning meat without fat):

On February 26, 1968, [Stefansson] was admitted to the ward and on February 28, started on the meat diet. At our request he began eating lean meat only, although he had previously noted, in the North,

that very lean meat sometimes produced digestive disturbances. On the 3rd day nausea and diarrhea developed. When fat meat was added to the diet, a full recovery was made in 2 days.

During the year, he got about 80 % of his calories from fat.

Via [3]Inhuman Experiment.

1. <http://www.blog.sethroberts.net/2009/03/26/what-did-eskimos-eat/>
2. <http://www.jbc.org/content/87/3/651.full.pdf+html>
3. <http://inhumanexperiment.blogspot.com/2009/09/two-brave-men-who-ate-nothing-but-meat.html>

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david (2010-02-05 08:39:07)

What I take away from that is that if you eat meat, you should also eat a certain amount of fat with it. I don't know about a vegan diet, but switching to vegetarian has helped my digestion. When your SLD stuff first appeared on the freakonomics blog (was it 4 years ago already?) I did the SLD based on your original paper and was suddenly eating a lot fewer calories each day. I decided if I was eating fewer calories, I should make sure I get the most value from those that I did eat, so I started eating a lot more veggies and quickly stumbled into being a vegetarian. When stopped eating meat, my digestion improved greatly. Around the same time I added yogurt (which I suddenly craved), and then (after you blogged about it) Kombucha. They have improved things even more (in particular, reducing sensitivity to dairy I used to have). The only animal fat I get is from eggs (which I do eat frequently) and dairy (which I only get from yogurt and some cheese). David

Heather McD (Heather Eats Almond Butter) (2010-02-05 10:57:51)

Big fan of fat over here. I've tried low carb eating, but I kept gaining weight. Could not figure it out. Suddenly realized I was focusing on protein, and lean protein at that. Once I switched my focus to fats, I lost the weight I had gained, and I can't tell you how much better I feel after adding more animal fats into my diet. My dry skin totally disappeared. Bring on the butter, cream, and whole eggs!

Tristan (2010-02-06 04:03:15)

Two factors changed coincident to the digestive problem clearing up: 1) meat fat was introduced to the diet 2) more time had passed How can we find out which factor cured the digestive problem?

seth (2010-02-06 06:13:17)

Tristan, Steffanson's earlier experience – a very low fat diet caused digestive problems – suggests that the first factor (meat fat) is what caused digestion to improve.

Tristan (2010-02-06 08:19:05)

Perhaps I misunderstood the post "On the 3rd day nausea and diarrhea developed. When fat meat was added to the diet, a full recovery was made in 2 days" It sounds like this was just 3 days into a new diet that he got a common upset which then cleared up 5 days into the diet. Quite normal even without a new diet. Is this another case of far too little original data being published?

seth (2010-02-06 09:52:39)

Tristan, nausea and diarrhea are not common effects of a new diet that doesn't involve unfamiliar foods. I agree, if the nausea and diarrhea had been numerically measured, we might have been able to see if they were starting to clear up before fat was added.



## Assorted Links (2010-02-05 20:39)

- [1]Fire Larry Summers Now – a blog by "Thorstein Veblen". [2]An especially good post. [3]Greg Mankiw distances himself from reality when he calls Veblen "cowardly". [4]My view of Summers. Nassim Taleb says "[5]short US Treasury bonds as long as Summers is in charge."
- [6]Chinese museums. I fondly remember [7]the Tap Water Museum.
- The [8]Journal of Serendipitous and Unexpected Results is now accepting manuscripts. Better name: Journal of Unexpected Results.
- [9]Philip Weiss on web journalism: "You see someone's mind in action rather than through 100 corporate filters."

Thanks to Oskar Pearson and Dave Lull.

1. <http://firelarrysummersnow.blogspot.com/>
2. <http://firelarrysummersnow.blogspot.com/2010/01/what-i-taught-students-in-my-first-ta.html>
3. <http://www.tinyrevolution.com/mt/archives/003180.html>
4. <http://www.blog.sethroberts.net/2010/01/01/academic-horror-story-harvard-university/>
5. <http://www.bloomberg.com/avp/avp.htm?N=av&T=Taleb%2520Says%2520%2560Every%2520Human%2527%2520Should%2520Sho>  
[rt%2520U.S.%2520Treasuries&clipSRC=mms://media2.bloomberg.com/cache/vgzA3vd0IBm8.asf%23](http://www.bloomberg.com/avp/avp.htm?N=av&T=Taleb%2520Says%2520%2560Every%2520Human%2527%2520Should%2520Sho)
6. <http://www.newyorker.com/online/blogs/evanosnos/2010/02/q-and-a-china-under-glass.html#entry-more>
7. <http://www.blog.sethroberts.net/2008/12/28/the-museum-of-tap-water-part-2/>
8. <http://www.jsur.org/>
9. <http://mondoweiss.net/2010/02/its-happened-all-the-energy-in-journalism-has-now-moved-to-the-internet.html>

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Emily L. (2010-02-05 23:10:45)

Haha "Greg Mankiw distances himself from reality" - Great links I love it!

## Is Your \_\_\_\_ Telling You the Truth? (2010-02-06 20:05)

You may have heard that Madonna's attempt to adopt a Malawi child was rebuffed by the legal system. A judge [1]ruled against the adoption:

Madonna was devastated by the ruling, said witnesses, and shouted at her attorney, "What went wrong? How could this have happened?" when the judge announced her decision.

Yet the ruling doesn't appear mysterious. There are clear residency requirements, which Madonna didn't come close to meeting.

Did her lawyer tell her the truth? The outburst suggests no, but in any case the perverse incentives are obvious: The lawyer benefits from being hired. Painting a rosy scenario – saying "I can definitely get you what you want" – increases the chances of that.

What about doctors? Dermatologists seem to claim, [2]as a group at least, that acne is unrelated to diet. The fact that [3]certain groups of people with unusual diets don't have acne suggests that this is wrong. Again, the mistake is highly self-interested. If acne is due to diet, you need to try different diets to figure out the problem foods. You don't need to see a dermatologist to do that.

1. <http://www.newser.com/story/55345/let-madge-adopt-my-my-niece-uncle.html>

2. <http://www.blog.sethroberts.net/2007/12/20/diet-and-acne/>

3. <http://www.blog.sethroberts.net/2009/06/24/acne-self-experimentation-why-its-promising/>

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Jim (2010-02-06 20:30:27)

That's very interesting. In a couple weeks, I will be going to my first-ever dermatologist appointment to discuss my dry, flaky, itchy, red skin, which I think may be caused by harsh anti-bacterial soaps. I was fascinated recently by a blog post called "Paleo I Don't Care: I Like No Soap; No Shampoo." on Richard Nikoley's "Free The Animal" blog. I plan to tell the dermatologist that I want fewer chemicals on/in my body, not a bunch of prescription stuff. It'll be an interesting appointment.

LemmusLemmus (2010-02-07 00:04:45)

But what about reputational effects? Once you find out our doctor/lawyer is clueless or a liar, are you going to bring more business their way? The narrow self-interested strategy makes most sense if the expert expects a one-shot transaction or thinks the customer won't find out about his (the expert's) deception. Empirically, there are anecdotes to counter yours.

lance (2010-02-07 04:07:44)

When I was serving in Korea, I found a book in the base library (no new books since about the Vietnam War, as far as I could tell) by a dermatologist who had experimented with his patients and discovered that trans fats and polyunsaturated fats cause acne. It was only much later when I figured out the differences between the different kinds of fats that I realized he was right, that it's the prevalence of vegetable fats that causes certain kinds of acne. Now that I eat sardines in olive oil every day, and avoid all the vegetable fats, my acne has gone away after about twenty years. Couldn't have done it without the internet.

seth (2010-02-07 04:19:54)

LemmusLemmus, sure, there are forces pushing professionals to tell the truth, too. I am saying there are forces (well, one force, self-interest) pushing them to lie. The relative strength of the various forces, who knows? As for shopping around, if everyone in the profession agrees on the untruth – as dermatologists appear to have done – you can't easily find a better specialist. As far as I know, you can't easily find a dermatologist who will say that acne is due to diet. lance, do you have any idea what that "book in the base library" was called? I'd like to look at it. Jim, why haven't you tested your idea about harsh anti-bacterial soaps causing dry itchy skin by simply not using them?

Vic (2010-02-08 21:14:28)

Jim, why do you even bother going to a dermatologist if you don't want prescriptions and just want to stop using anti-bacterial soaps? The only thing a derm can do is give you prescriptions. Lance, are you sure olive oil isn't a vegetable oil?

Steve G. (2010-02-09 08:21:26)

Seth, Methinks you give Madonna too much credit. As an attorney (a lawyer representing clients), I find that clients want to be told "we'll win" and other comforting thoughts, and it's hard to find a path between Pollyannaism and defeatism (which one will be accused of quickly). In this case, I'm suspect that Madonna thought that all her money could buy her the outcome she wanted. It sure does help, but I have to tell my clients: "No guaranties!", no "slam dunks" (I don't want to be the local George Tenant). An honest appraisal of prospects? Yes. Certainties? No. I'm as quick to suspect the client in this case as the attorney as the source of faulty expectations. As to perverse incentives, the client, who must pay a significant sum, has the incentive to maintain a skeptical attitude and press for honest assessments. However, if you're rich enough (alas, not my class of clients), the money doesn't caution you since you have so much of it. Most people would prove more careful with their money.

## Experiments in Gift-Giving (2010-02-06 23:05)

Kathleen Hillers [1] posted this on a website called The Intention Experiment:

I just read a book called 29 Gifts: How a Month of Giving Can Change Your Life by Cami Walker. The author of the book has MS and was seeking natural healing. She was told by a "wise woman" from South Africa that if she gave a gift everyday for the next 29 days that it would have a healing effect in more ways than one. It's a great book, but if you don't want to read it, start giving a gift everyday and make a journal of every gift you give and the circumstances involved. If you miss a day, you have to start over because you have to keep the flow of giving constant. The gifts do not have to be materialistic. You can give someone a phone call, a ride, encouragement, whatever. I just started doing this on Feb 1st and my life is already getting better. The day before I started, I was in a panic. I couldn't sleep, and I was completely broke. The day I started, I actually started feeling much better, and things are already looking up.

Regression to the mean, maybe. But maybe not. The idea has some plausibility: The Chinese character that means "happy" is a combination of a character that means "owe" and a character that means "again".

1. <http://theintentionexperiment.ning.com/xn/detail/848178:Comment:194245>

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Bob (2010-02-07 02:05:05)

Are you sure about the character? Could you please write it here?

Hack (2010-02-07 05:14:15)

I think it was Marcus Aurelius in Meditations who talked about how the Stoics considered gifts to be curses because they believed Fate/Fortuna would eventually take it away, leaving the giftee unhappier than before having received the gift.

david (2010-02-07 07:13:40)

The word "generosity" comes from the Latin word meaning "of noble birth". I suppose the idea is that "well born" people are more giving than "low born" people, but then it's easier to give resources away if you have a monopoly on them to begin with. Then there's a Veblen aspect...people may give stuff away to prove that they have so much extra money that can afford to give the gifts.

Alexandra Carmichael (2010-02-07 08:38:04)

Even better if the gifts are free or otherwise un-purchased! :) I practice random acts of kindness, with a goal of helping at least 10 people a day (and at least 1 person I don't know). I find this helps my mood toward the end of the day, when it is most likely to fall - no matter what else has happened that day, at least I've helped 10 people.

Alex Chernavsky (2010-02-07 08:52:19)

The new field of positive psychology concerns itself with topics such as this. I don't have references handy, but there seems to be a fair amount of research which shows that doing charity work, or simply being nice to others, can boost your mood.

Kevin Miller (2010-02-07 08:59:17)

Not so much on the character. I assume you're referring to the simplified version of huan: 欢 if it comes through. The original character was: 鴈, which (according to Wenlin) comes from 鴈 as a phonetic (from a picture of a heron, but not a character any more), and 鴈 "breath", as in 哈 鴈 - 哈 "yawn" from a picture of a person with their mouth open (in the ancient version of it). So the idea that being short of breath might relate to owing makes a bit of sense. If anything, you might want to say that breathing again -> happiness (works for me), but in etymology and ornithology the "again" probably just has something to do with the sound of the name of a bird. But the experiment seems like a great idea.

seth (2010-02-07 11:03:42)

Kevin, yes, that's the character. Yeah, it's a little ridiculous to think that the phonetic part of a character has something to do with concepts of happiness. Thanks for the correction.

## **Visible Big vs. Invisible Small (2010-02-08 06:40)**

In the current New Yorker, [1]James Surowiecki writes:

The bailout of the auto industry, after all, was as unpopular as the bailout of the banks, even though it was much tougher on the companies (G.M. and Chrysler went bankrupt; shareholders were wiped out, and C.E.O.s pushed out), and even though the biggest beneficiaries of the deal were ordinary autoworkers. You might have expected a deal that helped workers keep their jobs to play well in a country spooked by ballooning unemployment. Yet most voters hated it.

Yes, rewarding failure doesn't play well. The voters were right. The same money that was used to give a few giant companies a second (or third) chance could have been used to give many thousands of very small companies a first chance. It could have been used to help many thousands of people start new small businesses (often one-person businesses) or keep their new small business afloat. All those small businesses would have provided plenty of jobs. and they would have had a far more promising future, far more room for growth, than the Big Three, being both far more diverse and having not already failed. The many thousands of people who wanted to start small businesses were unable to get together and make themselves visible, so the failure of government to help them went unnoticed. Their diversity was economic strength but political weakness.

It isn't surprising things happened as they did - the Big Three (not to mention Wall Street) were bailed out, small businesses were ignored - but it is an indication of how poorly our economy is managed in the most basic ways. I'm not even an economist and I understand this simple point. Bernanke and Summers do not.

It's easy for me to understand because the same thing happens in science. Government support of research is a good idea, but the money is misspent, in the same way. Grant support goes to a few large projects - generally to people who have already failed (to do anything useful) - rather than to a large number of small projects that haven't

yet failed. The way to support innovation is to place many small bets not a few big ones. That's one thing I learned from self-experimentation, which allowed me to place many small bets.

1. [http://www.newyorker.com/talk/financial/2010/02/15/100215ta\\_talk\\_surowiecki](http://www.newyorker.com/talk/financial/2010/02/15/100215ta_talk_surowiecki)

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Vic (2010-02-08 21:09:17)

There are a billion small businesses in india, and 100 million in Nigeria. What products are small businesses going to create that could compensate for the destruction of our industrial base?

seth (2010-02-08 21:56:34)

Vic, I don't think that propping up the Big Three for a few years or even ten years going to save American manufacturing. All manufacturing is much larger than those three companies. The book In Praise of Hard Industries lamented the loss of American manufacturing expertise long before GM went bankrupt. As for small businesses, all sorts of businesses that are now big (such as Google) were both small and hard to imagine 10 years ago. There's a reason that people move to Silicon Valley to start businesses rather than to India or Nigeria: the prospects for those new businesses are better here. If you mean that large businesses are the sign of a rich country, you're obviously right - but I'm sure that those large businesses were once small. The rich country is rich because it provided an environment that allowed small companies to flourish.

### **Alexandra Carmichael on Random Acts of Kindness (2010-02-09 06:06)**

Alexandra Carmichael is one of the founders of [1]CureTogether.com, whom I met at a Quantified Self meeting last year. A few days ago, she left [2]an interesting comment on one of my posts:

I practice random acts of kindness, with a goal of helping at least 10 people a day (and at least 1 person I don't know). I find this helps my mood toward the end of the day, when it is most likely to fall - no matter what else has happened that day, at least I've helped 10 people.

I asked her about it:

SETH Where did the idea come from?

ALEXANDRA It goes all the way back to my grandparents being Scout leaders - I was never in the Scouts myself but I observed how helpful and supportive they always were. Then during my university years when I was forming my life philosophy, I got to attend an incredible lecture by Jane Goodall. Her organization Roots & Shoots inspires people around the world to give back to the earth, animals, and people around them, with her amazing presence and the quote "Every individual can make a difference." Service learning is also one of the things we thread into homeschooling our two daughters, along with design, simple living, and non-violent communication.

The specific goal of helping 10 people a day started last summer during a goal-setting weekend. I was curious to see if formalizing and quantifying something I had been doing in a fuzzier way would make a difference in my life, if measuring acts of kindness would result in an increased number of acts, or more friends, or help me with my chronic depression - plus I love quantifying things! :) I don't find it necessary to actually record how many people I help in a day, but I keep a rough running tally in my head as I go through the day to make sure it's at least 10 - my kids

like to help with this count too.

SETH What are some examples of these acts?

ALEXANDRA I do a lot of different things. If I get extra free tickets to events or conferences, I will pass them along to people who I think would love to go; I will offer to take a picture of a tourist family where one person inevitably gets left out behind the camera; I will connect people who I think would benefit from knowing each other; I will take two hours to listen and hug and support a child who is having a hard time learning a new skill; I will answer a newbie entrepreneur's questions about how to get started in business or help them spread their message; I will help coordinate gatherings that I believe in (such as Quantified Self); I will hold the door for someone. It can be anything really, no matter how small.

SETH How have people reacted when you tell them about this?

ALEXANDRA The most frequent reaction is "That sounds too challenging to do every day - 10 people? Why not 1 or 2?" The second most frequent reaction is "You are inspiring me to make positive changes in my own life." My answer to both is "I love helping people!"

SETH What have you learned?

ALEXANDRA if you help people, without wanting anything in return, you get help when you need it - often surprising help, and often more than you gave. I learned that helping people seems to make them like you more, so my number of online friends has skyrocketed (1500 on Twitter, 800 on Facebook, 500 on LinkedIn) - but close "in person" friends I choose to limit to a handful because of my tendency to get overwhelmed by frequent or shallow social situations. I learned that helping people does help with depression, because (a) you have something else to focus on outside of yourself and (b) you go through the day with an expectant air of wonder at who will be the next person you can help. I also learned that helping 10 people a day is really not a lot, and I often wind up helping 20 or more people in a day. Of course, this is only from my perspective - I can't guarantee that all of these people actually feel helped, I just know that I tried to help.

SETH When you say "if you help people, without wanting anything in return, you get help when you need it - often surprising help, and often more than you gave" I'm not sure I understand. Can you give some examples?

ALEXANDRA It's not so much that the people I help help me in return, but more that by spreading goodwill and being tuned in to what others need, I also became more aware of my own needs and started to feel a greater sense of self-worth, like I deserved to have my needs met. This is not something I was taught growing up, and I went through two bouts of major postpartum depression without asking for or getting the support I needed. I feel much more open about my needs now, which perhaps makes it easier for others to help me. So the change was more in me than in others.

In terms of specific examples, when I learned that I have a Tourette's spectrum disorder, and tweeted that, I made an incredible new friend who has been through similar neurological issues, and who in our conversations of support and empathy has helped me more than I can ever thank him for. Also, when I decided to find some consulting work to support my family while we build CureTogether, a very welcoming door opened (soon to be made public), and offered me basically a dream position. I guess I needed to learn to ask for and accept help as well as to give it.

SETH Thanks, Alexandra. It's especially interesting that helping others raised your feeling of self-worth. I wouldn't have guessed it would have that effect.

1. <http://www.curetogether.com/>

2. <http://www.blog.sethroberts.net/2010/02/06/experiments-in-gift-giving/#comment-390054>

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NN4 (2010-02-09 10:58:41)

"SETH Thanks, Alexandra. It's especially interesting that helping others raised your feeling of self-worth. I wouldn't have guessed it would have that effect." Seth, you've written that much of your self-experimentation has pointed to the wisdom of returning to our more ancient lifestyles: morning sunlight, fewer ditto foods, stand more, etc. I speculate this may be another example of that: before the invention of money or the bartering of goods, the main currency of human societies was probably reciprocity. You simply couldn't get along in a tribe without contributing to the welfare of others, which in turn ensured they would contribute to your welfare. By that logic it wouldn't be surprising that helping others raises your own self-worth, as in a sense you are accumulating "assets."

seth (2010-02-09 12:26:29)

Nadav, yes, humans are cooperative – so something must push us to cooperate. Somehow it must feel good or produce pleasant results. But predicting what pleasant results it produces is hard. Does it improve happiness, reduce irritability, increase serenity, reduce sensitivity to stress, reduce anxiety, increase feelings of well-being, or what?

flyboy (2010-02-09 12:52:00)

Is it really being kind when we are, even subconsciously, hoping for something in return? Real kindness is not fancy. Just responding to someone's need with simplicity, without awe at your own charity, without expecting anything in return. In fact, without any sense of self at all. Kindness says, "I want you to be happy." "Life's most persistent and urgent question is, What are you doing for others?" – Martin Luther King, Jr.

NN4 (2010-02-09 12:54:39)

Thanks Seth. I suppose it's also possible for people to give different names to the same mood effect, based on the kind of frame through which they view the world. Someone who has a "loneliness" frame may interpret the good feelings that result from helping others as "I feel less lonely when I help others," while someone else who has a "low self-worth frame" might interpret those same good feelings as "I feel greater self-worth when I help others." That would make it even more difficult to predict the pleasant results that result from something like cooperation.

1 (2010-02-09 22:38:34)

Seth, you've helped thousands of people around the world with your discoveries!!!

seth (2010-02-10 12:46:30)

thanks, 1

## **A GAPS Testimonial (2010-02-10 12:45)**

Gut And Psychology Syndrome (GAPS) is a book by Natasha Campbell-McBride about how to treat allergies, autism, and similar conditions. In [1] this entry, Cheeseslave talks about her own son and then quotes another mother about the effects of the GAPS diet (plus other changes) on her autistic son.

Kevin lacked oxygen at birth, so in the first year of life, I already saw that he was not developing like my

other kids (he is our 5th). His motor skills lagged and he cried a lot, didn't sleep so well, etc. At two, his behavior was just not right. He never responded right to correction, would throw things in anger or frustration, cried all the time, especially when waking up, basically never happy. He didn't walk until two and then he would fall down constantly.

He also began to always be starving. When he was really hungry, his face would get distorted and frozen in a strange way. I now think he was having seizures of sorts.

We did not vaccinate at all and we figured out that if we fed him lots of protein type foods like meats, he would relax his body and face and be able to go play for a bit until it happened all over again in a short time.

I do think that because we didn't vaccinate and figured out to keep feeding him this way, we were able to "coast along" like this for years. He had learning disabilities, lacked social skills and continued to have autistic traits like sensory issues, hiding under blankets, reacting to sounds, not liking people around, rigid in routines, and spinning and going on his head along with head banging.

Long story shorter, we did get a diagnosis of Aspergers at one point. We took him to doctor after doctor, specialist after specialist to no avail. He also strangely was NEVER once sick (we later learned that his immune system was not working a bit).

At 9 years old, he got pneumonia, followed by asthma and allergies. His eating [problems] had escalated to the point of feeding him every 20-30 minutes or he would have gigantic meltdowns. We eventually could not even have people over.

He was given an inhaler for the asthma and suddenly, without us making the connection, he began to not respond when called, became extremely hyperactive and began to run away at all hours of the day and night requiring police to find him and being very dangerous. (we once lost him in the middle of downtown Chicago). He would also try to jump out of moving vehicles, out of windows and required constant restraining.

The seizures got bad, he would fall down the stairs and lose consciousness several times per day. They tried psych drugs and he almost died twice from his reaction to them (I am now grateful that we couldn't go that route).

We became so desperate that we brought him home from hospital and got deadbolts to keep him from running, did all our own restraining and called alternative docs to help us.

We began kefir and diet from nutritionist (basically a BED [Body Ecology Diet]/GAPS version), took him off inhaler. His allergies were totally out of control, he could barely open his eyes from swelling, and his chin was deformed and swollen, his belly too, his whole body. He would only eat junk food and fast foods and it was incredibly difficult to transition him to the diet.

The DAN (Defeat Autism Now) protocols we followed, made him worse in lots of ways b/c the chelation made him extremely violent, the B12 shots kept him awake for nights on end without any sleep, the antifungals and all those other interventions were nightmarish for him.

Eventually, I resolved to use only foods and do this without any kind of doctors. So for this past year, I researched and researched and was determined to bring him back from this state. We have done a combo of GAPS (and BED) very successfully along with lots of fermented foods and drinks.



The allergies and asthma are 100 % gone, the seizures we have had only one in 65 days and very mild (compared to 5-10 per day). He sings every morning and has cried once in the last 2.5 months (he used to cry for 1-3 hours at a time each day) and he can go outside again without running away. He is in martial arts, acting appropriately at church, having eye contact, no autistic traits of late and learning academics after two years of not being able to open a book. He reads before bed at an 8th grade level.

This story has many interesting elements. 1. Huge improvement. Very plausible that it's due to the dietary change. 2. Autism and allergies go away at the same time, suggesting same cause. 3. Treatment with fermented foods. 4. A different "radical" solution failed, meaning there is no reason to think this is a placebo effect. 5. The mystery of why an inhaler made things worse. 6. Autism not due to vaccination.

1. <http://www.cheeseslave.com/2008/08/22/gaps-diet-testimonial-aspergers-allergies-and-asthma/>

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Aaron Blaisdell (2010-02-10 13:57:34)

That is a VERY compelling account. Yet another example of how dietary intervention can have profound and positive health consequences. Add this to the list of dietary interventions that have 'cured' migraines and EPP (erythropoietic protoporphyria)-see here (<http://epistemocrat.blogspot.com/2010/02/ancestral-fitness-bricoleurs-two-e.html>), and here ([http://pigeonrat.psych.ucla.edu/systems/file\\_download.aspx?pg=277&ver=1](http://pigeonrat.psych.ucla.edu/systems/file_download.aspx?pg=277&ver=1)) for the poster.

(original) Jeff (2010-02-10 17:59:49)

Seth, How much do you worry about self-reporting accuracy in a story like this? With just one example do you worry about something being a coincidence and that correlation is not actually identifying causation? A lot of aspects of this account (by Millie) struck me as strange. Jeff

seth (2010-02-10 19:50:46)

Jeff, I worry less about the accuracy of this report than I worry about the accuracy of a scientific article reporting something similar. I don't worry at all about "something being a coincidence". I accept that the behavior changes were due to the dietary changes. There are many similar reports to this; nothing rests on the accuracy of just this one.

Timothy (2010-03-02 15:52:25)

If you haven't already found it, this article suggests a link between autism and gastrointestinal abnormalities. Essentially, the cause of the unusual development in the brain may also cause unusual development in the enteric nervous system in the gut. There is also a brief mention of the interaction between the immune system, the enteric nervous system, and bacteria in the gut. It's short on detail but full of hints to things you like to write about. <http://www.scientificamerican.com/article.cfm?id=gut-second-brain>

Sally O'Boyle (2010-03-27 10:05:46)

My 16yo son's asthma has also been almost 100 % cured by dietary changes and, oddly, gymnastics. We have cut out almost all sugar (that has been the most difficult part of the diet), eliminated dairy (except for kefir from goat's milk), only eat whole wheat flour, no white flour products at all, no processed foods, take a boatload of vitamins and have started chelation using the Cutler protocol. One of the biggest changes came when he started doing handstands at home. He watched a Damien Walters video on free running and yearned to do it. After a week of practicing handstands, he had a weekend of something like a cold: stuffed up, coughing (a productive cough which is what you want but rarely get with an asthmatic), tired, but no fever or any other symptoms. I'm a yoga person and happened to be reading the world's greatest

yoga book (<http://tinyurl.com/bestyogabook>) and noticed that upside down poses are great for the lungs. I concluded, not very scientifically, that he had dislodged some crap in his lungs... But after this sick weekend and his intense gymnastics workouts (see one here: <http://www.abroadincostarica.com/2009/11/ffa.html>), his asthma is 99 % gone. When I hug him, there is no wheeze. I hear nothing which is a miracle. I've been studying, reading, exploring alternative paths to health since we moved to Costa Rica 4 years ago. I started out looking for ways to help (healing wasn't even part of my vocabulary back then) Ryan's asthma. I knew there must be a better way. I also started out convinced that mercury poisoning from the few vaccinations my kids did was responsible for the asthma and some learning disabilities for my oldest boy. I do still feel there is a connection but maybe just in the gut. Mercury does stay in your body, getting it out is critical for good health, but maybe it does not cause the autism/allergies, etc. Maybe it just creates other problems that then create the a/a... then there is the aluminum, viruses, and other toxins injected with the vaccines. Today, after treating colds, asthma, cuts, even my dog's infections, preventing flu, a myriad of evidence piling up around here, I wouldn't go to a doctor unless I had a broken arm. My husband manages his high blood pressure with magnesium... well, the list is endless. We have not followed the GAPS diet strictly but basically adhere to it in spite of that! We are all happier and healthier because of our new eating habits. I found you because I'm starting your diet. I am a firm believer in self-experimentation. Thank you for being out there!

### **Written With A Straight Face? Dept. (2010-02-11 00:47)**

Jonathan Cole used to be provost of Colombia University. He has written a book called *The Great American University*, in which, according to [1]this review,

He lists their dazzling achievements, which in biology and medicine include findings on gene-splicing, recombinant DNA, retroviruses, cancer therapies, cochlear implants, the fetal ultrasound scanner, the hepatitis B vaccine, prions, [2]stem cells, organ transplantation and even a treatment for head lice. . . . In a chapter on the social sciences, he cites, among many others, such useful innovations as theories of human capital and social mobility, research in linguistics and even the use of prices to reduce traffic jams.

"Research in linguistics"? Yes, that sounds dazzling. I'm sure those "theories of human capital" have been v v "useful". And who would have thought that if you raise the price of something ("use of prices to reduce traffic jams") . . . people use less of it? Which was traffic engineering, not social science. Did the reviewer, an economics professor at Harvard named Claudia Goldin, write this with a straight face?

The "dazzling achievements" in biology and medicine are only slightly less unconvincing. "Gene splicing" and "recombinant DNA" research are [3]different names for the same thing. [4]Fetal ultrasound scanners may cause autism. Vaccines were not invented by an American university professor. The discovery of prions has had no obvious non-laboratory use – besides being questionable. Stem-cell research has yet to produce anything of use outside of labs. To be fair, gene splicing has been used to produce human insulin, which is better than the insulin previously available, but conspicuously absent from the list of accomplishments is prevention of diabetes – not to mention allergies, obesity, depression, arthritis, stroke, or any of the other lifestyle problems that a large fraction of Americans suffer from. Such achievements would be truly useful. Great American universities haven't given us any of those . . . but they have given us a treatment for head lice.

There's a reason for the term ivory tower. Apparently Cole, conscious of the term, is trying to argue against it – but merely shows why it exists. (I'm assuming the review is accurate.) It reminds me of the time that top Chinese students, visiting top American colleges such as Harvard and Yale, found the American students [5]ignorant and arrogant. The theme of Cole's book is that American universities are in trouble and need more support. What useful stuff they've accomplished is central to his argument. When I was an undergrad, I read Thorstein Veblen's bitter *The Higher Learning in America*, which said American universities were dysfunctional. He mentioned "committees for the

sifting of sawdust."

More [6]"Graduate school in the humanities is a trap" (via [7]Marginal Revolution).

1. <http://www.nytimes.com/2010/02/07/books/review/Goldin-t.html?ref=books>
2. <http://topics.nytimes.com/top/news/health/diseasesconditionsandhealthtopics/stemcells/index.html?inline=nyt-classifier>
3. [http://en.wikipedia.org/wiki/Genetic\\_engineering](http://en.wikipedia.org/wiki/Genetic_engineering)
4. <http://www.blog.sethroberts.net/2010/01/23/does-prenatal-ultrasound-cause-autism/>
5. <http://www.blog.sethroberts.net/2008/12/10/when-is-science-helpful/>
6. <http://chronicle.com/article/The-Big-Lie-About-the-Life-of/63937/>
7. <http://www.marginalrevolution.com/marginalrevolution/2010/02/assorted-links-8.html>

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Alex Chernavsky (2010-02-11 05:02:20)

"Gene-splicing, recombinant DNA, and stem-cell research have yet to produce anything of use outside research labs." Humulin (human insulin produced by bacteria) is the product of recombinant DNA technology, isn't it?

seth (2010-02-11 05:58:42)

Alex, you're right. Thanks for the correction.

ChristianKI (2010-02-11 09:27:52)

Prions give us a way to understand mad-cow disease and test whether a given cow is affected by the disease. As a result we can kill those cows that are effected and therefore prevent the spread of the disease. Mad cow disease could become a bigger crisis without the understanding of prions.

Nate (2010-02-11 10:16:20)

"By œcancer therapiesœ does the reviewer mean oncogenes œ" the discovery of which won a Nobel Prize but hasnœt saved a single life? " Umm, testing tumors for mutations in oncogenes is extremely important for a bunch of cancers (colon cancer tumors with KRAS mutations don't respond to anti-EGFR drugs, for the most basic example). It's now standard in many cancers to take a look at oncogenes in the tumor in order to see what treatments will work...

seth (2010-02-11 11:50:50)

Nate, thanks for the correction. ChristianKI, you don't need to look for prions to figure out if a cow has mad-cow disease. Such a test has never been used, as far as I know.

thehova (2010-02-11 12:41:15)

As a humanities major I enjoyed the, "Graduate school in the Humanities is a trap" article. I'm thankful for my history professor for explaining to me the grim journey a history professor must take to get a tenured position at any institution.

Tom in TX (2010-02-11 12:53:56)

Seth wrote: "Stem-cell research has yet to produce anything of use outside of labs." Adult stem cells have been used to treat patients for various conditions, such as leukemia.

Nathan Myers (2010-02-11 13:28:57)

I seem to recall stem cells being used to regrow the dead parts of people's hearts (not speaking figuratively). Anybody who doubts the liveliness of linguistics research should hie on over to Language Log, <http://languageblog.idc.upenn.edu/nll/> for an awakening. A very great deal of very important work is going on in universities. A much greater amount of pointless wankage is also going on in universities. These are not contradictions, and it would be hard to get the former without the latter. Even in physics departments, while the string theorists demand public attention, most physicists aren't string theorists, and many are doing important work in, e.g., materials science, which finds its way quickly into new products.

Sylvia (2010-02-11 13:48:29)

I feel obliged to put in a word for academia, which I am normally not inclined to do—I am an academic (a current PhD student) who is well aware of the dysfunctional nature of the American system. I am also a self-experimenter and know very well how much can be begun via non-peer-reviewed, non-double-blind type research. The medical "system" in this country is a business, with all business' concomitant issues, and that goes for academia too. All that said, I'm not sure we should be so quick to dismiss the benefits of seemingly "obvious" or un-dazzling research or achievements in the academic system. Your own research shows that something which might be patently obvious or unobvious to one person might be seen very differently by another. As a theoretical linguist, I can be fairly certain that none of my research is going to directly affect the health of my fellow man any time soon (though I certainly don't speak for other theoretical linguists). However, there is a great deal of linguistic research that focuses on far more practical matters (how best to help patients with aphasia regain their ability to talk, for instance). I would not have a hard time keeping a straight face while calling any of that research dazzling. The American academic machine is undoubtedly broken. People outside of academia have made some of the greatest advancements in our knowledge base, yes. But I would caution even those of us who agree on these points to avoid the trap of eschewing research that cannot be immediately shown to be useful in a socioeconomic sense—after all, it is from such research (whether by a university professor or a patent examiner) that so much of our real advances come. Academia in America needs major adjustments—but I don't believe that it's a completely lost cause.

seth (2010-02-11 21:20:53)

Sylvia, that was Veblen's critique. The subtitle of *The Higher Learning in America* was "A Memorandum On the Conduct of Universities By Business Men". For all I know some linguistics research is dazzling, but you don't convince me of that with the bland description "linguistics research". Tom, by "stem-cell research" I meant stem cells used as a research tool, not as a therapeutic tool. Having spent his entire professional career in academia, Cole should have noticed that professors, especially at elite schools, dislike doing research with obvious value. It strikes them as menial. "Practical" and "applied" are terms of disparagement, whereas "pure" research (research without obvious value) is good. Cole ignores this just as humanities professors ignore the horrible job prospects of their graduate students.

(original) Jeff (2010-02-12 09:32:39)

Seth, Normally you criticize biology and medicine for not having applications. When someone mentioned the application for stem cells, you said "Tom, by "stem-cell research" I meant stem cells used as a research tool, not as a therapeutic tool." What does this mean? Biologists haven't learned a single thing from using stem cells as a research tool? That doesn't seem true at all and it sounds like you made no effort to verify it. Thanks, Jeff

seth (2010-02-12 21:36:13)

Jeff, stem cells are a research tool. They are used in labs. In petri dishes. This is quite different than their use in hospitals. I don't mean nothing has been learned from stem-cell research, I mean nothing of practical value has been learned. Nothing that warrants being called a "dazzling achievement". Cole is trying to say that university research has benefited the public. So the public – the rest of us – should help the university in its hour of need. This is why I am focusing on the absence of practical value. Not scientific value. If you know of something of practical value that has come from stem-cell research, I'd love to know about it.

Jim (2010-02-12 21:37:53)

Sort of on topic Seth, have you seen Henk Tennekes resignation letter to the Royal Netherlands Academy of Arts and Sciences?

[1]Scientist Resigns I don't think "dysfunctional" is limited to the USA.

1. <http://pielkeclimatesci.wordpress.com/2010/02/12/henk-tennekes-resigns-from-dutch-academy/>

seth (2010-02-13 00:03:08)

No I hadn't seen it, thanks.

Noumenon (2010-02-15 23:51:39)

"If you know of something of practical value that has come from stem-cell research, I'd love to know about it. " I do not understand how Tom's post is not an example of this. He said they're using it to treat disease! They wouldn't be doing that without the research.

seth (2010-02-16 03:57:49)

By "stem cell research" I meant the research you learn about when you google "stem cell research". For example, NIH Announces First hESC Lines Eligible for Funding Dec. 2, 2009 The ISSCR is encouraged by the announcement by the National Institutes of Health (NIH) of 13 human embryonic stem cell lines now eligible for use in NIH-funded research under the guidelines adopted in July, 2009. More lines are expected to be named in the future. This represents a significant step forward in allowing researchers access to an increased range of lines which will accelerate efforts to understand and treat major public health problems. As far as I know, it was to such research that Jonathan Cole was referring. The term "stem cell research" doesn't include all research with stem cells, just as the term "experimental psychology" doesn't include all psychology research that uses experiments.

Ragout (2010-02-17 16:20:31)

Congestion pricing is economics, not traffic engineering. And there's more to it than "if you raise the price, people use less." From Bill Vickrey's Economics Nobel Prize citation (about subway fares, a closely related issue to congestion pricing): "Efficient pricing of public services permeates Vickrey's scientific production. He has not only made significant theoretical contributions, but - unlike most excellent theorists - he has also followed up on his proposals all the way to their practical application. An example is Vickrey's famous study of the New York subway fare system in the 1950s. His proposal was an early attempt at efficient pricing of public services, under the restriction that the authorities should receive full cost coverage. His study represents more than an improvement on the basic pricing principle (so-called Ramsey pricing); it is also fascinating in its wealth of detail."

seth (2010-05-23 02:51:36)

Ragout, after Bill Vickrey received the 1996 Nobel Prize in Economics, he told a journalist his prize-winning work was "at best . . . of minor significance in terms of human welfare" (quoted by John Cassidy in his recent book about economics). So I think this example supports my point.

### Assorted Links (2010-02-11 22:29)

- [1]lotta kefir info
- [2]xkcd on acne self-experimentation. Puzzled by the punchline, as I was? Explanation [3]here.
- [4]the Vioxx story

Thanks to David Cramer.

1. <http://users.sa.chariot.net.au/~dna/kefirpage.html#what-is-kefir>
2. <http://xkcd.com/700/>
3. <http://www.explainxkcd.com/2010/02/10/complexion/>
4. <http://www.aaronsw.com/weblog/vioxx>

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Alrenous (2010-02-12 09:50:28)

Regarding randomizing the trials, I don't think the placebo affect could work on only half your body at a time. Although, maybe it could. That would make a great trial of the placebo affect, actually, to see what makes it tick.

Ragout (2010-02-17 16:28:24)

The Vioxx link is fairly accurate, but pretty unfair to the FDA. Merck didn't just fool the FDA, they also published the study (the "VIGOR" trial) about "how incredibly effective Aleve was at reducing heart attacks" in the NEJM, probably the most prestigious medical journal.

### **Elizabeth Kolbert Confronts Climategate (2010-02-12 21:27)**

The New Yorker website has a weekly podcast called The Political Scene. I've listened to almost all of them. [1]This week's was unlike any other.

The brief description is "Elizabeth Kolbert and Peter J. Boyer discuss recent attacks on climate science." Never before have the discussants been so far apart. They should have replaced discuss with debate. Boyer hasn't written a word about climate science – or even science. He moved from the New York Times to The New Yorker after he wrote an (excellent) book about television. Recently he's covered politics. Kolbert has written dozens of articles and a book about climate science. In spite of this, the moderator (Dorothy Wickenden, executive editor of the magazine), asked Boyer to describe the Climategate emails and their significance. They showed, he said, "an intolerance [by the scientists] of skepticism of their narrative . . . this was a real shock to the system and a real shock to the global warming consensus." I think any unbiased observer would agree.

Then Wickenden asked Kolbert what she thought:

KOLBERT I don't agree with him [Boyer] . . . One of the things that comes out in these emails is the climate scientists' frustration with having to deal with people who use the data in all sorts of irresponsible ways. . . I'm not aware of any instances where people have had to go back and had to say "you're right and the conclusion we drew was wrong."

BOYER Perhaps we could say that language was used in these communications that would allow for an interpretation that perhaps there was fudging or something going on that needed to be obscured. There was a whole tone of intolerance of questioning of their data or – and this was what was so disturbing to hear from scientists – any questioning of what sounded an awful lot like their mission.

Boyer went on and on – as if he were the expert. (And he clearly knew what he was talking about.) Then Wickenden turned to the United Nations IPCC report and asked Kolbert what she thought of recent criticism (which Wickenden learned about from the NY Times).

KOLBERT . . . [The error was in Part 2.] In [Part 2 of] this report, which was literally 986 pages long, there were a couple of things inserted that weren't from the peer-reviewed literature. . . .

BOYER Well, Betsy, I'm sorry, these aren't just 986 pages of Scripture, and then a couple of little awkward errant notations on the side. The IPCC isn't an inconsequential body. Al Gore and Mr. Pachauri shared the Nobel Prize. They are granted a level of authority when they speak. These reports were certainly granted authority. . .

KOLBERT [interrupting] I guess I should ask you: What is your point? . . .

BOYER . . . The consensus about the consensus has begun to crack. That's just the political reality . . . There is a crack in the consensus.

Kolbert has published hundreds of thousands of words about global warming in the most prestigious magazine in the world. That she is unable to see or at least say this basic truth but must have someone else say it is another sign of [2]problems with her reporting.

Until now, all speakers on The Political Scene have sounded calm and confident. On rare occasions they disagree, but never like this. And the conversation always has a relaxed tone. Not this time. Boyer sounded calm and confident but I thought Kolbert sounded nervous and upset. With good reason: It struck me as a huge and public rebuke from her employer. She's been the expert. Now someone with no credentials has been allowed to say she's wrong – has been brought on the program, apparently, in order to disagree with her. As if it's no longer clear she's right. And her dismissal of the Climategate emails, as if they taught her nothing, didn't help her. The debate with Boyer was preceded and followed by softball questions by Wickenden to Kolbert. They struck me as attempts to soften the blow, as did a comment at the end by Boyer about a Super Bowl commercial.

1. [http://www.newyorker.com/online/2010/02/15/100215on\\_audio\\_politicalscene](http://www.newyorker.com/online/2010/02/15/100215on_audio_politicalscene)

2. <http://www.blog.sethroberts.net/2009/11/11/three-things-elizabeth-kolbert-doesnt-know/>

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Andrew Gelman (2010-02-13 08:02:42)

Seth: It makes sense to me that a political writer will focus on the politics (for example, Boyer's statement, "That's just the political reality . . . There is a crack in the consensus."), while a science writer will focus on the science.

seth (2010-02-13 10:36:03)

Andrew, that's an interesting point. Kolbert is not a science writer in the usual sense. The only science she writes about is climate science. Before writing about climate science, she wrote about politics. I suppose she got permission to write about global warming by telling her bosses that the science was settled, the news in the coming years will be about the translation of science into action, which is basically politics. Now that the science turns out not to be settled, she is in a difficult position.

Andrew Gelman (2010-02-13 13:09:25)

Seth: I think the science is [1]much more settled than you think it is. The politics is very relevant in any case.

1. [http://www.stat.columbia.edu/~cook/movabletype/archives/2009/12/say\\_a\\_little\\_pr.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2009/12/say_a_little_pr.html)

Mike Bowerman (2010-02-14 14:22:55)

Andrew, that's a great post you link to, but doesn't suggest anything is settled. The comments provide a number of interesting critiques of the post which aren't convincingly refuted. I'm an agnostic on the extent and significance of anthropogenic influence on the climate. Most interesting to me is how difficult it seems for people to remove their emotions from the debate. Informed, intelligent people take positions on either side and seem frustrated by, angry at, irritated with or hostile toward people who don't share their opinions.

seth (2010-02-14 14:42:25)

Andrew, yes, you and I differ greatly on how much we (the scientific community) actually know about this. Phil thinks the science is settled, so do you, but I think the science (e.g., Hansen) is far less certain than claimed. I also believe its overstatedness will eventually become clear. (This post is about one small example of that.) Phil says, "how could 90 % of the experts be wrong?" I say: Lots of people move into the "wrong" column when there is money, attention, and status to be made by such a move. Especially when the fact that you're wrong is hard for the general public to realize. (E.g., dermatologists claiming that acne isn't caused by diet. An example where >90 % of the experts are wrong.) I wish there was a prediction market where I could put money on my belief.

Will Hunting (2010-02-14 19:16:13)

Apropos the statement that "any unbiased observer would agree" that the Climategate emails ".. was a real shock to the system and a real shock to the global warming consensus." <http://www.rifters.com/crawl/?p=886>

seth (2010-02-14 19:47:36)

Thanks, Will. I suppose he was saying that he wasn't in the least shocked by the Climategate emails. If he didn't learn something from the emails, he's not too bright. If he thinks others didn't learn from them, he's wrong.

### **Climate Science Slowly Becomes Less Settled (2010-02-14 15:51)**

Andrew Gelman, in<sup>[1]</sup> a comment on the previous post, said that he believes the science of climate change is "much more settled" than I do. He's right – in the sense that I believe the state of the world is different (less certain) than claimed. Andrew sees correct certainty; I see false certainty. Because science slowly becomes more accurate, I think the science will slowly shift toward "less settled" – a prediction I don't think Andrew would make. Here's an example of such a shift. According to the <sup>[2]</sup>Mail on Sunday, Phil Jones

admit[s] that there is little difference between global warming rates in the Nineties and in two previous periods since 1860 and accept[s] that from 1995 to now there has been no statistically significant warming. He also leaves open the possibility, long resisted by climate change activists, that the "Medieval Warm Period" from 800 to 1300 AD, and thought by many experts to be warmer than the present period, could have encompassed the entire globe.

<sup>[3]</sup>Phil Jones slowly shifts.

1. <http://www.blog.sethroberts.net/2010/02/12/elizabeth-kolbert-confronts-climategate/#comment-391870>

2. <http://www.dailymail.co.uk/debate/article-1250813/MAIL-ON-SUNDAY-COMMENT-The-professors-amazing-climate-change-retreat.html>

3. <http://bishophill.squarespace.com/blog/2010/2/14/jones-on-the-medieval-warm-period.html>



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G. Pelkabo (2010-02-14 23:25:17)

Yes this was a stunning admission by Jones. Watch 90 % of experts start backpedaling now. I'm going to make some popcorn, this should be fun to watch.

Mike Bowerman (2010-02-15 01:07:49)

Other scientists questioning the data in the Times Online: <http://www.timesonline.co.uk/tol/news/environment/article7026317.ece>

Steve G. (2010-02-15 10:28:08)

1. Are CO2 levels not rising to levels not seen in millions of years? 2. Is the polar icecap not receding? 3. Can we afford to "wait and see", which will help decide whether we are now experiencing a period of global warming, and if so, how much of it (0-100) is caused by human activity? Sorry, I'm a pragmatist, I have to go with something, and the path we're now on still gives the overwhelming impression that we're slowing stewing ourselves. Are we acting on perfect knowledge? No. If science turns around and says "drill, baby, drill" and "burn, baby, burn", then so be it. But it ain't there now.

seth (2010-02-15 11:16:05)

Steve, the recent rate of warming is matched by the rate of warming during two previous periods before we started putting so much CO2 in the air. This suggests that CO2 doesn't make a big difference. (If it did, the current rate of temp increase should be greater than ever before.) If the current global temp was unprecedentedly high OR the rate of warming was unprecedentedly high, then I would get really worried. But neither are true, as far as I can tell. "Is the polar icecap not receding?" The South Pole is not shrinking, as far as I know. During most of the Earth's history and all of recent history, the polar ice cap has been shrinking half of the time. (It has been growing the other half.) That fact alone doesn't mean a lot. "Can we afford to wait and see"? I think so. Overreaction is costly too. There are plenty of good reasons to reduce carbon emissions and I believe they will go down.

Vince (2010-02-15 13:59:46)

Are Phil Jones's actual words available anywhere, or do we have to rely on this paraphrase from The Daily Mail? Both of the claims about recent temperatures sound like they could be meaningless. The claim that two previous periods had similar warming rates is hopelessly vague and it's not at all clear that it represents a shift in anything - temperature records have long shown a substantial increase from the 1910s to the mid 1940s, for instance. The claim about no statistically significant warming since 1995 could just be relying heavily on "statistical significance" and a small sample size. Googling around a bit... [1]yep, that's exactly what happened: Question: "Do you agree that from 1995 to the present there has been no statistically-significant global warming?" Jones: "Yes, but only just. I also calculated the trend for the period 1995 to 2009. This trend (0.12C per decade) is positive, but not significant at the 95 % significance level. The positive trend is quite close to the significance level. Achieving statistical significance in scientific terms is much more likely for longer periods, and much less likely for shorter periods."

1. <http://voices.kansascity.com/node/7593>

Dave Lull (2010-02-15 14:22:01)

"'Climategate' scientist speaks out "Climatologist Phil Jones answers his critics in an exclusive interview with Nature." <http://www.nature.com/news/2010/012345/full/news.2010.71.html>

seth (2010-02-15 16:27:16)

Vince, Jones's exact words are in the link called "Phil Jones slowly shifts" but they only apply to one issue. Sure, 15 years is a relatively short period and statistical significance is arbitrary. The two earlier periods with similar rates of warming are spelled out in various places. They are pre 1900, if I remember correctly. Take my prediction as a prediction about what will happen over the next five-ten years. Obviously any shift so far is tiny.

Vince (2010-02-15 18:16:30)

Those are his words for one of the three claims. I quoted his words for a second claim, and it's clear that the article is being misleading: he wasn't retreating at all. He was fed a leading question, and responded by noting that it was technically accurate and explaining why it's misleading: it's hard to make precise estimates of trends with data from a short period of time, so it's no surprise that the increase in temperatures since 1995 isn't quite statistically significant. I haven't seen his words on the third claim, but I'd guess that it's a lot like the second - he was fed a misleading question and agreed that it was technically accurate. He was probably relying on an updated version of [1]these data, and it looks like you could pick out a couple 10-15 year periods before 1900 with upward trends similar to the trend over the past 40 years (one starting in the mid 1850s and one starting around 1890), but it's not clear why anyone should care (it's just as easy to pick out a decade with a downward trend, like by starting in the late 1870s).

1. <http://www.cru.uea.ac.uk/cru/info/warming/>

Nathan Myers (2010-02-16 19:50:09)

Seth, please do look up "confirmation bias". You write very much as if you have never heard of it. You're convinced that AGW is a load of hooey; so, to be scrupulous, you should be seeking out evidence that it's real. If you could bring yourself to bother, you'd find plenty. Instead, you find yourself quoting from editorials and misquotes in the least scrupulous newspapers. That should worry you. Other warming periods not involving CO2 say nothing about the present trend. There are plenty of possible causes for warming, and if all of them were combined, then the rate would obviously be higher than it is; but they haven't been. All we know much about is the trend we're experiencing now where the temperature rise really is tracking CO2.

Steve G. (2010-02-17 11:01:04)

A more articulate writer than me and a widely recognized layman's voice on these issues from 2.17.10 NYT: <http://www.nytimes.com/2010/02/17/opinion/17friedman.html?ref=opinion>.

Hal (2010-02-18 14:14:01)

If Seth is guilty of confirmation bias then he is certainly not the only one. It is one of the most common of logical errors. Very few people can approach a controversial topic with a fully unbiased and open mind. Particularly with global warming, many people have ideological preferences which will interact strongly with their beliefs about the topic. Those who distrust big business and favor government regulation will be inclined to welcome evidence for global warming. Those who hold the opposite views will tend to be skeptical. I find that there is a very strong correlation on this issue between people's beliefs and their preferences.

Vince (2010-02-18 21:09:38)

The [1]full interview is now online. On the similar trends question, the interviewer picked out the time periods (1860-1880, 1910-1940 and 1975-1998) and he just ran some numbers that confirmed that they had similar temperature trends (around .16 degrees C per decade). This was a prelude to a few questions about how he can be so sure that the recent warming is human caused, then. He agreed with the IPCC report that it's very likely to be human caused, gestured towards all the research that directly addresses that question of what factors are influencing the temperature, and seemed to get annoyed when he kept getting asked versions of the same question.

1. <http://news.bbc.co.uk/2/hi/science/nature/8511670.stm>

## **Confirmation of Stunning MS Claim (2010-02-14 20:15)**

I [1]blogged earlier about an Italian med school professor named Paulo Zamboni who, studying his wife, came up with an entirely new theory about multiple sclerosis (MS): It's caused by restricted blood outflow from the brain. Almost all MS patients had this condition, Zamboni found. The great value of this theory is that blood outflow can often be improved with surgery. In at least some cases, this surgery has reduced MS symptoms.

Now, a study done in Buffalo has found [2]results that support Zamboni's idea. MS patients were twice as likely

as healthy people to have restricted blood flow. This is a weaker correlation than Zamboni found but I make nothing of it – there are lots of ways to mess things up, so that you get noisier results. (And there are lots of ways to push results in a preferred direction.)

Zamboni wasn't an MS expert. He made this breakthrough because his wife had MS and he had technical skills (including surgical skills – his specialty is surgery).

Thanks to Anne Weiss.

More [3]A more detailed description.

1. <http://www.blog.sethroberts.net/2009/11/23/breakthrough-in-treating-ms/>
2. [http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20100210/ccsvi\\_100210/20100210?hub=TopStoriesV2](http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20100210/ccsvi_100210/20100210?hub=TopStoriesV2)
3. [http://www.sciencedaily.com/releases/2010/02/100210110744.htm?sms\\_ss=email](http://www.sciencedaily.com/releases/2010/02/100210110744.htm?sms_ss=email)

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peter (2010-02-15 00:29:42)

ms patients have a high level of inflammation, so this would be expected, i.e., inflammation causes vein constriction or at least exacerbates it.

q (2010-02-15 10:44:41)

only double the incidence? if it were the cause, wouldn't you expect 100 % incidence?

seth (2010-02-15 11:49:35)

q, no you wouldn't because the dividing line used by researchers to classify is unlikely to be the same as the dividing line used by nature and life and diagnosticians to divide people into affected and non-affected. peter, it isn't the diameter of the blood vessels that's weird, it's their configuration.

Hal (2010-02-16 12:36:57)

Imagine if ten years from now MS is routinely cured by simple vein surgery. And people could be screened for being at risk of the disease and have it prevented as well. This would be a true medical miracle. Somehow I think it is too much to hope for, but there is a chance it could happen.

Hal (2010-02-17 10:53:34)

Just reading a little bit about MS. This is a disease of the myelin sheaths that surround and insulate nerve fibers. It is thought to be a form of autoimmune disease, and in particular results when a particular type of lymphocytes (white blood cells) called T cells escape into the brain and cause harm. Normally T cells are not supposed to be able to get into the brain due to the blood brain barrier. The endothelial cells that line blood vessels in the brain are supposed to be glued very tightly together, preventing anything escaping. In the rest of the body these connections are intentionally rather loose, but the brain environment is very controlled and nothing is supposed to get through. The brain has its own immune cells, separate from the lymphocytes. So having T cells in the brain is a prescription for havoc and this is thought to be one of the primary causes of MS. Somehow the BBB breaks down in MS and lets the T cells through. Given all this, maybe it is not so surprising that blood flow problems might contribute to at least some cases of MS. You could imagine that failure to drain blood freely could cause some backups and increase pressure on the BBB, potentially causing failures and leading to the whole chain of damage in MS. Freeing blood flow as a curative factor is not then as outlandish as it may seem. I was diagnosed last year with ALS, a different neurological disease but also pretty bad. Interestingly there are some hints that ALS could also be related to blood brain barrier problems. Traces of

hemoglobin have been found in ALS spinal cord tissue, another substance which should not be allowed to escape. Hemoglobin is iron rich and iron can be harmful in tissues where it is not designed to be present. A few therapies have been tried which are supposed to improve BBB integrity but so far nothing dramatic has resulted.

## Exploratory Versus Confirmatory Data Analysis? (2010-02-15 06:02)

In 1977, John Tukey published a book called *Exploratory Data Analysis*. It introduced many new ways of analyzing data, all relatively simple. Most of the new ways involved plotting your data. A few involved transforming your data. Tukey's broad point was that statisticians (taught by statistics professors) were missing a lot: Conventional statistics focussed too much on confirmatory data analysis (testing hypotheses) to the omission of exploratory data analysis – data analysis that might show you something new. Here are some tools to help you explore your data, Tukey was saying.

No question the new tools are useful. I have found great benefits from [1]plotting and [2]transforming my data. No question that conventional statistics textbooks place far too little emphasis on graphs and transformations. But I no longer agree with Tukey's exploratory versus confirmatory distinction. The distinction that matters – at least to historians, if not to data analysts – is between low-status and high-status. A more accurate title of Tukey's book would have been *Low-Status Data Analysis*. Exploratory data analysis already had a derogatory name: *Descriptive data analysis*. As in mere description. Graphs and transformations are low-status. They are low-status because graphs are common and transformations are easy. Anyone can make a graph or transform their data. I believe they were neglected for that reason. To show their high status, statistics professors focused their research and teaching on more difficult and esoteric stuff – like complicated regression. That the new stuff wasn't terribly useful (compared to graphs and transformations) mattered little. Like all academics – like everyone – they cared enormously about showing high status. It was far more important to be impressive than to be useful. As Veblen showed, it might have helped that the new stuff wasn't very useful. "Applied" science is lower status than "pure" science.

That most of what statistics professors have developed (and taught) is less useful than graphs and transformations strikes me as utterly clear. My explanation is that in statistics, just as in every other academic area I know about, desire to display status led to a lot of useless highly-visible work. (What Veblen called conspicuous waste.) Less visibly, it led to the best tools being neglected. Tukey saw the neglect – underdevelopment and underteaching of graphs, for example – but perhaps misdiagnosed the cause. Here's why Tukey's exploratory versus confirmatory distinction was misleading: Because the tools that Tukey promoted for exploration also improve confirmation. They are neglected everywhere. For example:

1. Graphs improve confirmatory data analysis. If you do a t test (or compute a p value in any way) but don't make an associated graph, there is room for improvement. A graph will show whether the assumptions of the computation are reasonable. Often they aren't.
2. Transformations improve confirmatory data analysis. That a good transformation will make the assumptions of the test more reasonable many people know. What few people seem to know is that [3]a good transformation will make the statistical test more sensitive. If a difference exists, the test will be more likely to detect it. This is like increasing your sample size at no extra cost.
3. Exploratory data analysis is sometimes thought of as going beyond the question you started with to find other structure in the data – to explore your data. (Tukey saw it this way.) But to answer the question you started with as well as possible you should find all the structure in the data. Suppose my question is whether X has an effect. I should care whether Y and Z have an effect in order to (a) make my test of X more sensitive (by removing the effects of Y and Z) and (b) assess the generality of the effect of X (does it interact with Y or Z?).

Most statistics professors and their textbooks have neglected all uses of graphs and transformations, not just their exploratory uses. I used to think exploratory data analysis (and exploratory science more generally) needed different tools than confirmatory data analysis and confirmatory science. Now I don't. A big simplification.

Exploration (generating new ideas) and confirmation (testing old ideas) are outputs of data analysis, not inputs. To explore your data and to test ideas you already have you should do exactly the same analysis. What's good for one is good for the other.

Likewise, Freakonomics could have been titled Low-status Economics. That's essentially what it was, the common theme. Levitt studied all sorts of things other economists thought were beneath them to study. That was Levitt's real innovation – showing that these questions were neglected. Unsurprisingly, the general public, uninterested in the status of economists, found the work more interesting than high-status economics. I'm sensitive to this because my self-experimentation was extremely low-status. It was useful (low-status), cheap (low-status), small (low-status), and anyone could do it (extremely low status).

More [4]Andrew Gelman comments. [5]Robin Hanson comments.

1. <http://sethroberts.net/articles/2009%20Plot%20your%20data.pdf>
2. <http://sethroberts.net/articles/2008%20Transform%20your%20data.pdf>
3. [http://sethroberts.net/about/2005\\_Three\\_Things\\_Statistics\\_Textbooks\\_Don%27t\\_Tell\\_You%20\\_Dec\\_2005.pdf](http://sethroberts.net/about/2005_Three_Things_Statistics_Textbooks_Don%27t_Tell_You%20_Dec_2005.pdf)
4. [http://www.stat.columbia.edu/~cook/movabletype/archives/2010/02/exploratory\\_and.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2010/02/exploratory_and.html)
5. <http://www.overcomingbias.com/2010/02/function-of-stat-academia.html>

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1 (2010-02-15 08:29:02)

I spoke with a statistics professor at Berkeley about this book. On her website, it says she studies "multilevel and latent variable modeling." She said Tukey's book is "not important" and she mentioned something funny about Tukey's life. She did say, "Are you interested in statistics?" Thanks, Seth, for making me seem smart to these Berkeley profs!! I always talk to them about something I learned from you and your blog!!

seth (2010-02-15 10:04:16)

what was the funny thing about Tukey's life? Tukey's book was really important to me because it stressed two things (graphs & transformations) that my other statistics textbooks did not. They turned out to be incredibly useful.

jay (2010-02-15 10:26:30)

Hey Seth, have you seen this? [http://thelastpsychiatrist.com/2009/02/the\\_bubble\\_in\\_academic\\_research.html](http://thelastpsychiatrist.com/2009/02/the_bubble_in_academic_research.html) Sounds similar to a lot of what you've been saying lately (which is good, because people independently arriving at similar conclusions... is good).

q (2010-02-15 10:43:43)

how do you draw a graph with more than two or three variables?

seth (2010-02-15 11:27:58)

[1]lattice plots allow more than three variables to be visualized. For example, one scatterplot shows X vs Y. And a 2 x 2 matrix of X-Y scatterplots shows how that relationship varies with W (rows) and Z (columns). So you get up to 4 dimensions easily enough. More than 4 dimensions is hard. Gotta use ANOVA to figure out what graphs to make.

1. <http://geography.uoregon.edu/geogr/topics/lattice.htm>

seth (2010-02-15 11:46:26)

jay, thanks for the link. Nice post. Although psychiatric research has done little for the general public, it has done wonders for the status of the psychiatrists who publish it (within their profession). That's why it's not a bubble. It really pays off – just not for the rest of us. Basically the same situation as most statistics research, I agree.

1 (2010-02-15 11:53:06)

Seth, she said Tukey had a strange life.

LemmusLemmus (2010-02-15 12:50:58)

I can't agree on the last paragraph. Much of the research that was popularized in *Freakonomics* was published in the most renowned journals economics has: Definitely high status.

1 (2010-02-15 12:54:38)

I believe for bipolar disorder, there hasn't been a lot of new medications out in the last ten years. Or at least, to my knowledge. Probably true for schizophrenia medication (antipsychotics), as well. In addition, some of them can be hard to tolerate, all have side effects, etc. It is too bad, but some people have no other choice and have to take these psychiatric medications. I think that's why there's therapists and psychologists who devote their careers to helping the mentally ill cope with these things. They've developed different ideas such as CBT and ACT. Together with the psych meds, these can be more powerful than psych meds alone.

seth (2010-02-15 12:57:03)

LemmusLemmus, my self-experimentation was published in a high-status journal. That didn't change the basic picture. I believe that most econ profs in high-rated depts believed that determining the income of drug dealers was low-status. The abortion stuff, not so low-status. Sumo wrestlers = low status.

Mike Bowerman (2010-02-15 17:31:07)

What is interesting to me about the low-status/high-status distinction when you extend it to academic work is that much of the low-status academic work could also offer more value to society than the high-status work that is instead undertaken – like more lessons from self-experimentation would be of value than expensive clinical trials, or research on prevention of disease might be of greater social value than high-status pharmaceutical or surgical interventions. Is much of the research in *Freakonomics* also of value to society, or simply popular in the way that other novelties are popular – e.g., information on Britney Spears' personal life is popular, but not valuable to society. I didn't read *Freakonomics* because in the multiple excerpts I read the only valuable insights I found were the relationship between abortion and later crime rates and the low-incomes of drug dealers on the street – both of which were fascinating and potentially valuable, but covered thoroughly in other sources. Was the 'sumo wrestlers' for instance useful? I don't recall reading about it.

Mike Bowerman (2010-02-15 17:36:18)

Veblen was also said to have a "strange life" – likely a good sign for Tukey.

seth (2010-02-15 17:37:03)

Michael, the broad point of *Freakonomics* – that data is useful, that it can change your mind – is quite useful. Whether this is a low-status point to make I'm not entirely sure but many famous economists have been far less interested in data collection than Levitt.

Socktopi (2010-02-16 03:50:33)

Steven Levitt is a Clark Medalist from the University of Chicago, easily the most influential Economics department in the world. The idea that he is some outsider doing low status work that the rest of the field disdains is nonsense. His prominence in the field is what allows him to study cheating in sumo wrestling and ghetto baby names, instead of unemployment and inflation. That is to say, exactly the kind of esoteric and impractical status signaling work you deplore in every other academic.

M (2010-02-16 04:59:03)

I think this post is great and agree in general. But I'll chime in and agree that Steven Levitt is about as "high status" as you can get within the academic economics community. The Clark Medal is only given out once every two years (as opposed to one Nobel a year). I think one of the reasons that he is high status is because he has used fairly conventional econometric techniques to "colonize" areas not traditionally the realm of economists. (Eg, what would have been considered the realm of sociology.)

seth (2010-02-16 05:25:22)

Socktopi & M, you make a good point that perhaps I should have made. (In an earlier draft, I did.) It's like Nixon and China. That his anti-communist credentials were secure made it easier for him to go to China. Long before Exploratory Data Analysis, John Tukey's very high status was assured. He was a co-inventor of the Fast Fourier Transform, for example. I'm sure he was utterly unconcerned how EDA would affect his perceived status. (As L says, it didn't help. It really did get a scornful reception from some high-status statistics professors.) Likewise with Levitt. Just as you say, Socktopi, Levitt's very high status made it easier for him to do low-status research. I wouldn't call the stuff Levitt studied "esoteric". For the field of economics, they are esoteric topics but for the general public they are common concerns: What to name our baby? for example. You could say that by doing such research, Levitt signaled his extremely high status – just as Tukey did, just as Nixon signalled his extreme anti-communism by going to China. In practice I don't think it works that way. I don't think the motive for the work is signaling. I don't think Nixon went to China to show how incredibly anti-communist he was. Nor did Tukey write EDA to show how incredibly high status he was.

LemmusLemmus (2010-02-16 11:02:28)

Seth, I'm not buying the revised version of the Levitt's-work-as-low-status view either. According to his CV, he got the John Bates Clark Medal in 2003. The papers that went into Freakonomics are (based on Wikipedia's chapter overview, plus memory - i.e., I may have overlooked stuff): Cheating teachers - 2002, QJE, Brookings-Wharton Papers on Urban Affairs Cheating sumo wrestlers - 2002, AER Drug-selling gang's finances - 2000, QJE Abortion and crime - 2001, QJE SES and names - 2004, QJE The established economists that vote for the Bates Clark Medal clearly liked the "low-status" stuff that went into Freakonomics.

seth (2010-02-16 11:16:34)

LemmusLemmus, I'm not saying all economists think alike. Lots of people were glad Nixon went to China. Enough prominent statisticians liked Tukey's emphasis on graphics that the whole area has become more popular. Nor am I saying that Levitt's work was simply low-status. It was also well-done – just as Tukey's work wasn't merely low-status. He also introduced important new ways of making graphs. Disdain for what Levitt has studied has been publically expressed by Heckman, one of his colleagues. But I agree with you to this extent: Levitt had technical skills that made his work on low-status questions more acceptable to his profession. People are far more concerned about their own status than other people's. Professor X, who would never study something low-status, might be quite happy that Levitt did so.

Alex Chernavsky (2010-02-16 12:09:56)

Seth, I'm glad you mentioned psychiatry. I may have posted this link in the past, but here is an excellent book about the psychiatric establishment and how it does more to harm patients than help them: [1]*Mad in America: : Bad Science, Bad Medicine, and the Enduring Mistreatment of the Mentally Ill*, by Robert Whitaker. Whitaker (the author) is also coming out with a new book soon: [2]*Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*. It should be out in April. I've pre-ordered it. If it's anything like the previous book, it should be excellent.

1. <http://www.amazon.com/Mad-America-Medicine-Enduring-Mistreatment/dp/0738203858>

2. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452417/>

seth (2010-02-16 15:39:57)

Alex, thanks for the links. The new book sounds very promising.

vic (2010-02-16 18:01:48)

Also agree with everything, except the last paragraph. I don't know if Levitt's work is high status or low status, but one thing it's not is economics, nor is it useful, correct, or insightful. It is cute though.

Patrik (2010-02-17 00:32:20)

Seth is 100 % right about the paradox of Levitt. Levitt himself is high-status and that high-status allowed him to low-status type data exploration e.g. baby names, the economics of drug dealers etc etc (I should mention before Levitt, Steven Landsberg and David Friedman were also writing economics books in a similar vein. However, I don't believe they did extensive research into some of these low-status subjects, generally only doing theoretical exploration of these e.g. why does popcorn cost so much in movie theaters? etc etc I know more than a few macro-economists who sniffed (jealously) at Levitt's massive mainstream success, commenting on how "un-serious" and "unimportant" his work was.

1 (2010-02-17 00:46:56)

If psychiatry is so harmful, then what would be helpful for the mentally ill?

M (2010-02-17 02:37:54)

Turning again to the economics profession, a good example of high/low status problem is the gap between economists who work on policy (say in think tanks or government) and academics. Relatively simple analysis of data is essential input for policymakers and top decision-makers. And government is an important part of our economy. So, in this sense, policy economists do very useful work. (I'm not saying they are all good – just that they have an important role.) The majority of the person-hours expended by academic economists has nothing to do with improving policy analysis. We also seem to have a system in the US (and other countries) where some of the very top economist positions in government are filled by those who first made their name as academics. In other words, they had to spend a long time demonstrating their high status to other academics (in not very useful ways) before getting the chance to employ relatively "simple" analysis in the public service.

seth (2010-02-17 09:03:20)

"What would be helpful for the mentally ill?" Helping people with a personal stake – they have the problem, or a loved one has the problem – do research. Helping them publish the results. Shift resources from those whose main goals are status and career advancement to those whose main goal is useful progress.

Michael Metcalf Bishop (2010-02-17 10:54:50)

Great posts by both you and Gelman!

Exploratory vs. Confirmatory Data Analysis « Permutations (2010-02-17 12:28:54)

[...] Exploratory vs. Confirmatory Data Analysis Seth Roberts vs. Andrew Gelman [...]

Overcoming Bias : Function of Stat Academia (2010-02-18 08:22:32)

[...] See the flaw in that argument?Â Right – being useful to other academics in trying to impress each other isn't at all the same as being useful to the wider world.Â Now consider a recent exchange between Seth Roberts and Andrew Gelman (who I debated on this topic in July.)Â Seth: [...]

1 (2010-02-18 22:09:09)

Seth, I've never heard you talk about this before. This idea is big. I was wondering if you could go into more detail on your blog, if you have time.

1 (2010-02-20 10:46:02)

Yesterday, I spoke with an economics professor at Cal about this blog entry and he agreed with Seth's view of Freakonomics.



seth (2010-02-20 18:32:57)

that's interesting, I, what did the economics professor say?

1 (2010-02-20 20:21:21)

Seth, the economics professor said that he agrees that Freakonomics is low- status research. He said, "But I would use the word 'popular [instead of low-status]' " and "it's not real economics research." I am in contact with a lot of professors at Cal everyday and I enjoy speaking with them about your blog entries!

1 (2010-02-20 20:39:01)

Seth, I just looked up the professor online, he is the chair of the department! I didn't know that when I was talking to him, now I know.

seth (2010-02-20 21:03:57)

yes, to many professors popular = not good. For example, "pop psychology".

### **Assorted Links (2010-02-16 04:15)**

- [1]Paleohacks. Crowd-sourced Q & A.
- [2]Cable cars are undervalued. No mention of elevators, which strengthen the case.
- Vancouver = world's most livable city? [3]Silly Economist!
- [4]blood glucose self-experimentation

1. <http://www.paleohacks.com/>

2. [http://www.newgeography.com/content/001405-the-compelling-case-for-the-cable-car?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+Newgeography+%28Newgeography.com+-+Economic%2C+demographic%2C+and+political+commentary+about+places%29](http://www.newgeography.com/content/001405-the-compelling-case-for-the-cable-car?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+Newgeography+%28Newgeography.com+-+Economic%2C+demographic%2C+and+political+commentary+about+places%29)

3. <http://www.newgeography.com/content/001415-unlivable-vancouver>

4. <http://boards.sethroberts.net/index.php?topic=7511.msg96502#msg96502>

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Patrik (2010-02-16 20:00:28)

Thanks for the mention, Seth. BTW/FYI wanted to point you to some Q &A on one of the regular themes on your blog. Acne and diet. <http://paleohacks.com/questions/501/does-the-paleo-diet-prevent-the-occurrence-of-acne>

Robert Reis (2010-02-24 21:00:54)

I am a retired, overweight, insulin dependant diabetic with severe peripheral neuropathy. I recently bought a preparation at a vitamin store that claimed to burn off body fat. It didn't. But it did produce an immediate and dramatic improvement in the feeling in my feet. It is called Lipo 6 by Nutrex.

### **North Korea and Penn State (2010-02-18 07:26)**

In an excellent talk last week about North Korea – linked to his book [1]The Cleanest Race – Brian Myers, a professor in South Korea, said that people don't fear dying, they fear dying without significance. Without their life having meant

something. Life in North Korea is far more attractive than Americans realize, he said. The border between North Korea and China is easy to cross, and about half of the North Koreans who go to China later return, in spite of North Korea's poverty. How does the North Korean government do such a good job under such difficult circumstances? Partly by playing up external threats (U.S. troops in South Korea), the obvious way politicians win support, but also by telling the North Korean people they are special. Maybe it plays this card because it has to – they can't afford a police state – but there is no denying how well it works. In contrast, Myers said, the South Korean government offers its citizens no more than consumerism. That doesn't work well, and South Korea, in spite of high per capita income, has high rates of depression and suicide.

I think the attractiveness of North Korean life has a lot to do with why Penn State students like Penn State so much. This American Life did [2]a show about Penn State a few months ago. Life at the nation's top party school said the description. Sounds boring, I thought, so I waited to listen to it until I'd run out of stuff to listen to. It turned out to be one of their best shows ever. Mostly it's about the large amount of drinking – this is why they did the show – but at the very end is a short segment about how much Penn State students love their school. Not much detail but I was convinced. The attractive school cheer ("We Are Penn State") comes up in conversation! A few people reading this won't know that Penn State has an extremely successful football team. A large fraction of the students attend its games. After graduation, a lot of them continue to attend the games.

Here is a powerful and neglected force in human life. The bland technical term is group identity.Â As the South Korea comparison indicates, governments don't routinely use it to govern. As Penn State exceptionalism indicates, colleges don't routinely use it either. Faculty routinely disparage football. [3]Beer and Circus: How Big-Time College Sports Has Crippled Undergraduate Education was written by a professor – of course. The Penn State chancellor seemed mystified that his students were so proud and supportive of their school. (They're just that way, he seemed to say.) A lot of my self-experimentation has been about discovering what we need to be healthy, such as morning faces. I can't self-experiment about this but I would if I could. It's yet another thing that people must have routinely gotten in Stone-Age life but don't get any more – unless you happen to be a rabid sports fan or an alumnus of a college with a sufficiently successful football team. Or live in North Korea.

1. <http://www.marginalrevolution.com/marginalrevolution/2010/01/the-cleanest-race.html>

2. [http://www.thisamericanlife.com/Radio\\_Episode.aspx?sched=1330](http://www.thisamericanlife.com/Radio_Episode.aspx?sched=1330)

3. <http://www.amazon.com/Beer-Circus-Big-Time-Undergraduate-Education/dp/0805038647>

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Anonymous (2010-02-18 08:08:43)

I found something similar in the reactions to the MTV show The Jersey Shore. Our country's "faculty" (i.e. the media, ivy league graduates that I know, Manhattan tastemakers) disparaged the guido subculture depicted on the show and continue to do so: on the talk show Ellen the show's stars were subjected to trivia questions they couldn't answer to show how stupid they are; on other shows they were "treated" to makeovers, etc. Somehow people seem to think guidos need to be rescued from being guidos. Meanwhile, the guidos themselves are (of course) proud to be guidos! I think a lot of people told themselves they watched that show in order to make fun of it, but I suspect many of them were jealous of the obvious pride and joy on display.

Eric Arias (2010-02-18 09:11:33)

My wife and I sometimes do a little cheer just for the 2 of us where we say "1, 2, 3, supercouple!" I started as goofiness and now when we do it we really do do it at moments where we feel great about who we are and have faith in our ability to contribute

something worthwhile. We do it irregularly, but after reading this I may try to do it more often. It's an easy way to get a lift. Even now I feel good just thinking about it.

seth (2010-02-18 09:26:55)

Anonymous, that's a good example. Eric Arias, I too feel I have something to learn from this. That I should spend a lot more time telling my students they are special. And not just saying it, but also encouraging it and giving persuasive reasons.

bjk (2010-02-18 09:59:51)

In some sales organizations the salespeople are measured by the team and not by individual production . . . which makes peer pressure a very valuable motivator. I would imagine that working for the team is also more rewarding than working for yourself. Or not, depending on the team.

peter (2010-02-18 11:34:01)

people have a tendency to adapt to all sorts of bizarre and harsh environments, which is exactly what the North Koreans apparently have done. It's difficult to imagine that period mass starvation is attractive; In fact it sounds nutty to me. Reaching for meaning in one's life usually follows satisfying basic and other needs, aka as survival and minimum comfort.

Hal (2010-02-18 12:00:22)

Maybe North Korea then is like a country-sized version of Penn State. Everyone feels special and unique, proud to be part of their collective. But at the same time, this does not translate into motivation to work hard and excel. At Penn State the students party; perhaps in North Korea the people avoid work as much as possible. That would explain the starvation. We need a social system which combines the group pride and solidarity of these examples with some way of motivating people to work hard so that there is plenty of production and people's needs are met. Sounds like neither western consumerism nor the Korean or communist models have managed to achieve that.

Paul (2010-02-18 13:29:02)

I'm surprised at the naivete of this post. Human beings have many moral emotions; Jonathan Haidt has classified them into two broad groups, which one might call individualist and collectivist. All people have these moral emotions or intuitions, but for some people collectivist moral instincts are stronger and for others the individualist ones are stronger. The individualist moral sentiments are a concern for justice and fairness, and a concern for the well being and suffering of others. The collectivist moral sentiments are a concern with purity/holiness/defilement, deference to authority and submission and support of hierarchy, and in-group loyalty. These same collectivist moral sentiments which give meaning to North Koreans are the same psychological underpinnings of false scientific consensus and the gatekeeper syndrome. I'm surprised that other commenters haven't pointed out the trade offs that come with such a meaningful life yet.

seth (2010-02-18 18:36:40)

Paul, thanks for the reference to Haidt's work, which I didn't know about. The correlations are interesting. The correlation with purity/cleanliness fits the North Korean case but not the Penn State case (or any football-loving-alumni case). Penn State students don't think they are unusually clean. Nor do they seem especially hierarchy-oriented or authoritarian. With all their drinking and partying, they seem less authority-obeying than the average student, not more. I don't see the trade-offs you do. What harm is done by how much Penn State students love their school?

Dennis Mangan (2010-02-18 19:00:36)

"The border between North Korea and China is easy to cross, and about half of the North Koreans who go to China later return, in spite of North Korea's poverty." On the other hand, half of them never come back.

Nathan Myers (2010-02-18 19:57:35)

"What harm is done by how much Penn State students love their school? " Maybe they could be getting them some education somewhere else.

Bryan (2010-02-18 20:32:22)

»And not just saying it, but also encouraging it and giving persuasive reasons. This seems to be the key. Going to California public schools in the 80s and early 90s, I was subject to my fair share of self-esteem programs, the essential message of which is "You are special". I can't say me or my classmates were positively impacted.

seth (2010-02-18 20:55:30)

Bryan, that's a good point. I think group membership is required for this special mechanism to kick in. You have to convince people they are part of a special group. Telling someone they are special (by themselves) doesn't work. Perhaps the more special you think you are the LESS this works because the less you feel like joining your inferiors in some big group.

1 (2010-02-18 22:35:46)

At UC Berkeley, I've always asked students why they didn't go to a different school they live near. So far, they have always said something like, "Because Berkeley is better." A professor at Cal told me that he works so hard on papers. I said, "Why?" He said, "That's why Berkeley is the best!" So people at Berkeley feel special, too! I guess because of the prestige of the school. I didn't realize it was prestigious around the world until foreign summer school students told me. Today, I asked a former Tsinghua student why Tsinghua accepts a small percentage of students. He said, "There's a lot of people in China!"

David (2010-02-19 06:46:11)

It's not just the students, it's the entire community. I grew up in the shadows of the University of Illinois, where people walk around in orange clothing as if it's normal. A few years ago the basketball team won thirty+ games in a row and my father basically said it was the best year of his life. Everyone around town was in a good mood, looking forward to the games, etc... Perhaps you can start going to Raider games?

Cyan (2010-02-19 07:38:32)

Is a rate of emigrant return of 50 % higher than expected? I think that before we can say what NK's rate of emigrant return is evidence for, it has to be compared to other rates of emigrant return in an analysis that takes important covariates into account.

seth (2010-02-19 07:54:01)

David, the dark side of what I'm saying is that perhaps this sort of group identity can develop only in situations where there are winners and losers – meaning that people who belong to the losing side aren't happy. I hope not. I'd like to think it can develop around excellence of any sort. Or even something less than excellence, such as competence. As for Raiders games, I used to be a 49ers fan. Watched every game (at home). I enjoyed the games a lot but it didn't give my life meaning.

prase (2010-02-19 09:33:25)

The rate of return may not be a good indicator of how well a government is doing its job. Imagine two countries A and K. 10 % of citizens of both these countries would prefer to live somewhere else. In country A, the government doesn't care a bit about emigration (if government exists in that country at all). The country is mainly producer of agricultural goods, with minimal international trade. Nearest country with substantially better living conditions, country X, is 3000 km away. In country K, the government is afraid of all its citizens emigrating, and tries to make it as difficult as possible, by issuing passports only to loyal people, for instance. Emigration is portrayed as treason. X is a neighbour country. Now, in country A (African type) there is no need for people to travel abroad, except emigration. Business travelers are rare, since there are almost no businesses owned by A's citizens, and to travel 3000 km for pleasure is out of reach for almost all of A's inhabitants. Therefore, meeting A's citizen in X, we can expect that he is an emigrant with 99 % probability, and the return rate would be in order of 1 %. In country K (Korean type) the people who can travel abroad are workers of government organisations sent on business trips, people from border areas coming to X to do some private business (if there are private businesses in K) and the K's elite on vacations. Now, meeting K's citizen in X, the probability that he is an emigrant is much lower. So we have expected high return rate for A and low for K, whereas the average desire to emigrate can be the same. If one compares North Korea to African

countries (which I assume you've done actually), one could be surprised that not all travellers are emigrants. If one compares it to East European communist regimes (which I have done implicitly when reading the post), one can conclude that if half of the travellers never return, certainly even much of the loyal supporters of the regime betray it when they have an opportunity - and there would be nothing to explain by group identity. To make sensible analysis, we should take into account rather the ratio of emigration to overall population. Of course, such analysis would be distorted due to different difficulty of emigration from different countries. The return rate seems to overcome this distortion, but it probably brings at least as big own problems. (this is an edited version of a comment I've made here: [http://lesswrong.com/lw/1s4/open\\_thread\\_february\\_2010\\_part\\_2/1n3q](http://lesswrong.com/lw/1s4/open_thread_february_2010_part_2/1n3q))

Tom in TX (2010-02-19 09:50:25)

How did Brian Myers find out how pleased the North Koreans are with their lives?

seth (2010-02-19 14:39:15)

Tom, that's a good question, which his talk didn't completely answer. But he showed a comparison of the Berlin Wall (heavily enforced) with the wall separating North Korea and China (practically nothing). I think his conclusion was also based on visits to North Korea.

Tom in TX (2010-02-19 19:14:33)

Seth, I would be suspicious about info based on visits to N Korea. If a foreigner visits, he is accompanied by a government escort. If you were a N Korean citizen, you would not want to be the person who said something negative about life in N Korea in front of that government official. I have read that China does not like N Koreans sneaking into their country. They send them back. So maybe the half who return are just the ones who got caught. 8-(

seth (2010-02-19 19:32:15)

Tom, of course government escorts reduce how much one can learn from a visit to North Korea. Sure, residents aren't negative in front of them. That doesn't mean there isn't plenty to be learned. Letters of recommendation are never negative but I learn lots from them. You'll have to look at his book to learn more about the basis of his conclusion. That North Koreans are happier than you'd think was only one of several points he made.

vic (2010-02-19 19:39:20)

I went to penn state. The amount of partying there is no different than at any other large state university. Many many students rarely party. And while many students love the school, many are indifferent or dislike it. I doubt it's much different than for most other schools. Don't believe everything you hear at NPR.

Eric Arias (2010-02-20 09:43:41)

Another thought: I just noticed this effect on Ben Casnocha's blog when he brought up Cal Newport referring to readers of his blog as freakishly intelligent. I know you read Ben so I won't go into it but after I read that bit I did feel more encouraged to think over the post's content more than I otherwise would have.

seth (2010-02-20 09:59:09)

Vic, have you been to any other colleges? The This American Life report made Penn State sound different than any of the colleges I've had experience with. And quite apart from whether Penn State is much different from other schools, the whole phenomenon of alumni attending football games for decades suggests something powerful is at work. The alumni are incredibly protective of this thing they do; it must mean a lot to them. I've been to some of those games. I don't think it's because college football is incredibly fun to watch; it surely has something to do with group identity.

Link Archipelago « Let A Thousand Nations Bloom (2010-02-20 12:00:32)

[...] North Korea vs. Penn State football-Seth Roberts on finding a moral equivalent of the tribe, "people don't fear dying, they fear dying without significance." [...]

Tom in TX (2010-02-20 18:32:07)

Seth wrote: "That North Koreans are happier than you™d think was only one of several points he made." Seth, how do you know how happy I think the N Koreans are? 8-)

Contemplationist (2010-02-21 21:31:59)

Sorry I've tried but failed to get beyond the words "The attractiveness of North Korean life.." Okay, trying again....nope, can't do it.

In Praise of Civil Societarianism « Let A Thousand Nations Bloom (2010-02-25 15:01:03)

[...] I'm not as certain as Kling that a stronger civil society will act as an effective check on government power. Maybe at the city and state level. But the Feds dwarf everyone. That's not to diminish the importance these institutions have for our well-being. Penn State football serves a very valuable social purpose. But the benefits of community will always seem picayune when compared to multiplying vices of national stagflation. [...]

Tom in TX (2010-03-12 18:44:11)

Someone who apparently did not appreciate the attractiveness of life in N Korea: The man who bought gadgets for Kim Jong-il <http://news.bbc.co.uk/2/hi/asia-pacific/8563896.stm>

## Dealing With Referee Reports: What I've Learned (2010-02-19 07:31)

[1]Alex Tabarrok discusses a proposal to make referee reports and associated material publicly available. I think it would be a good thing because it would make writing a self-serving review (e.g., a retaliatory review) more dangerous. If Reviewer X writes an unreasonable review, the author is likely to complain to the editor. If the paper gets published, the unreasonableness will be highlighted – and nominal anonymity may not be enough to hide who wrote it. On the other side, as a reader, it would be extremely educational. You could learn a lot from studying these reports and the replies they generated, especially if you're a grad student. I would like to know why some papers got accepted. For example, [2]my Tsinghua students pointed out serious flaws in published papers. Were the problems noted by reviewers and ignored, or what?

My experience is that about 80 % of reviews are reasonable. Many of those are ignorant, but that's no crime. (A lot of reviewers know more than me.) The remaining 20 % seem to go off the rails somehow. For example, Hal Pashler and I wrote [3]a paper criticizing the use of good fits to support quantitative models. The first two reviewers seemed to have been people who did just that. Their reviews were ridiculous. Apparently they thought the paper shouldn't be published because it might call their work into question. A few reviews have appeared to be retaliation. In the 1990s, I complained to the Office of Research Integrity that a certain set of papers appeared to contain made-up data. (ORI sent the case to the institution where the research was done. A committee to investigate did the shallowest possible review and decided I was wrong. I learned my lesson – don't trust ORI – which I applied to [4]the Chandra case.) After that allegation, I got stunningly unfair reviews from time to time, presumably from the people I accused. A small fraction of reviews (5 %?) are so lazy they're worthless. One reviewer of [5]my long self-experimentation paper said it shouldn't be published because it wasn't science. The author (me) should go do some real science.

The main things I've learned about how to respond are: 1. When resubmitting the paper (revised in light of the reviews), go over every objection and how it was dealt with or why it was ignored. Making such a list isn't very hard, it makes ignoring a criticism much easier (because you are explicit about it), and editors like it. This has become common. 2. When a review is unreasonable, complain. The theory-testing paper I wrote with Hal is one of my favorite papers and it wouldn't have been published where it was if we hadn't complained. [6]Another paper of mine said that some data failed a chi-square test many times – suggesting that something was wrong. One of the reviewers seemed to not understand what a chi-square test was. I complained and got a new reviewer.

I'm curious: What have you learned about responding to reviewers?

1. <http://www.marginalrevolution.com/marginalrevolution/2010/02/publish-referee-comments.html>
2. <http://www.blog.sethroberts.net/2009/12/17/the-wisdom-of-tsinghua-freshmen/>
3. <http://escholarship.org/uc/item/5vt0z72k>
4. <http://www.sethroberts.net/chandra/index.html>
5. <http://escholarship.org/uc/item/2xc2h866>
6. <http://www.ncbi.nlm.nih.gov/pubmed/3030356>

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epistemocrat (2010-02-19 08:25:34)

Hi Seth, When Aaron and I presented our clinical poster – "The Role of Nutrition in the Epigenetics of Health: a Patient-Driven Approach – at UCLA a few weeks back and listed our two individual e-patient self-experimentation cases as content, one academic looked over our poster and then told me, "This is not science. There's no real science here. This is just two cases." Clinical medicine is founded on the patient narrative, the study of individual patient cases. Somehow this spirit has not translated into the empirical side of medical inquiry. Clinicians engaged with patients in self-experimentation, I suspect, is one practical way to fill that gap. Best, Brent

Cyan (2010-02-19 08:59:22)

A discussion of some of your non-mainstream theories (e.g., fermented foods, Shangri-La diet) viewed through the lens of that paper might make a good blog post or series of posts.

seth (2010-02-19 09:03:57)

"Viewed through the lens of that paper"? I'm not sure what you mean. The Shangri-La Diet derives from Example 10 of that paper. My interest in fermented foods derives partly from Examples 1-5 of that paper, which suggested that modern life lacks lots of stuff we need to be healthy.

Cyan (2010-02-19 09:40:59)

Sorry, that was dumb: there's more than one paper linked in the post, and I didn't specify which one! Yeesh. I meant the paper criticizing the use of good fits to support quantitative models. As I recall, it doesn't just criticize, it sets out guidelines for what ought to count as good support. That's the lense I meant.

seth (2010-02-19 09:51:55)

Cyan, now I understand. Yeah, that's an intriguing idea, I'll think about it.

Jim N. (2010-02-19 15:12:46)

This kind of reminds me of how you often learn a lot about an issue from the Wikipedia "discuss" page that you don't get in the main article. I think bringing some of the approaches used in formal debate to academic squabbling could only benefit mankind.

Scot (2010-02-20 07:24:44)

A few years back, a retiring editor of a journal wrote in his goodbye letter that the most enjoyable thing to him while he was editor, and what he would miss the most, were the comments that the reviewers gave to him, the ones not to be shared with the authors. I once worked on a paper as a coauthor down on the list that took six rounds of revisions and objections by mainly one reviewer. The lead author on the paper, who had written a lot in the area, knew who the dissenting reviewer was, just by how s/he wrote. I often wondered what the editor thought about letting it go on that long.

Scot (2010-02-20 07:29:32)

One last story. I found a brief article on review etiquette and courtesy written by a famous psychologist a lot of years ago, read it, and found it very inspiring and helpful. I mentioned it to my advisor, describing to him how good an essay it was. He told me that 15 years prior to that he had received a review from that same individual that was the rudest one he'd ever received.

Barkley Rosser (2010-02-22 12:29:49)

Seth, In my comments on MR I noted that the most intense complaints about reports resemble yours, about bad reports that lead to a paper being rejected. These will not be revealed by publishing the reports of papers that are accepted. Your Xinhua students may have found errors in published papers (in which case there is an opportunity to write a publishable comment), but do not expect editors under such a system to publish papers with reports whose critical comments have not yet been responded to. I argued that such a setup will make it less likely that editors will do the brave thing and publish papers that have outstanding critical comments in any report. Some of the most cited papers I have published in JEBO have had exactly that sort of situation, reports from referees or even associate editors opposing publication. Maybe publishing these would be interesting, but most editors are chicken shits who would not publish such papers so as to avoid any embarrassment on their part. This proposal would only lead to more mediocrity than we already see in published journal articles.

Barkley Rosser (2010-02-22 12:51:45)

BTW, allow me to modify my remarks a bit. I do not think that "most" editors are "c.....n s....s." However, enough are that the system you support would on net tend to have the effect I warn of, that we would see more mediocrity and less innovation in published journal articles.

seth (2010-02-22 18:23:35)

Barkley, I see your point. That makes sense. But I wonder if it would be like cameras on reality shows: After a while the contestants forget about them. Or at least that is my impression, given how much the contestants embarrass themselves. And perhaps the possibility that their comments might become public would lead to better behavior by editors.

Barkley Rosser (2010-02-23 09:54:58)

Seth, Again, the worst behavior by referees is when they are recommending rejections or are simply sitting on papers. This stuff will not get revealed by publishing reports for accepted papers, generally speaking, unless the editor has overruled them or the author has kowtowed to ridiculous demands ("cite me, me, me, me...!"). Nobody is going to publish unpublished papers to show the comments on them, nobody.

## **Widespread Loneliness (2010-02-20 18:19)**

I'm fond of arguing that the Ten Commandments was a very political document. Notice it's aimed at men? Notice that women aren't protected, much less children? That's because men had all the power. No one has said they already knew this or that I was wrong.

I thought of the Ten Commandments when a friend from Amsterdam wrote me about a recent experience of hers:

A very old man asked me to come to his apartment, and he would donate a bike to the project.Â I went over to get it, and it was half a bike, and it was locked to a pole...had obviously been there for years.Â The temperature was well below zero. Â It became clear that he was in fact super-lonely, and torn between usual Dutch suspicion of strangers... and desperation for human contact. Â He finally pleaded with me to come up to his apartment (where he obviously lived alone) but not before we spent 15 minutes trying to saw that rusty old bike loose, with his World War II-vintage hacksaw with missing teeth.



You may know that Dutch people are the tallest in the world, reflecting a very high standard of living. But – if this old man is not unusual – alleviating the loneliness of old people isn't part of the Dutch social contract, admirable as it may be.

I recently watched the Frontline program [1]Sick Around the World. It suggested that that old man isn't unusual. In England, where doctor visits are free, a doctor said he has several patients who come weekly, purely because they're lonely. In Japan, some patients have their blood pressure measured very often – presumably for the same reason. In Taiwan, if you see a doctor 20 times in one month someone from the government will come to talk to you. Not about loneliness – about overuse of medical care. The Frontline program made nothing of any of these facts, which were included to show that access was easy. That's not all they show. What if the British doctor had said that several patients visit him often because they need water? Then we'd be shocked. Yet the idea that everyone needs human contact isn't mysterious or controversial.

My explanation is there's a double whammy: Not only do lonely old people have little power, it's also clear that their problem (loneliness) isn't caused by a "chemical imbalance". So no drugs can be sold to treat it. And there's no diagnostic category. It's another example of [2]gatekeeper syndrome. When these lonely old people exert what little power they have by visiting their doctor, the doctor – I'm assuming – doesn't do anything to get rid of the loneliness. Even if you visit 20 times in a month.

1. <http://www.pbs.org/wgbh/pages/frontline/sickaroundtheworld/>

2. <http://www.blog.sethroberts.net/2009/11/17/gatekeeper-syndrome/>

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KenF (2010-02-20 19:21:22)

Your point is that the ten commandments require us to honor our father and mother, and if people followed this commandment, most old people would not feel the loneliness you describe?

Sam (2010-02-20 21:18:32)

I'm fond of the Dutch, but when you say that "alleviating the loneliness of old people isn't part of the Dutch social contract, admirable as it may be," you're putting it mildly. Have you seen that the Dutch state (which now leads the world in the proportion of the elderly who die from some sort of euthanizing) is now considering the provision of medical euthanasia to anyone 70 years old or older who expresses the thought that he or she is tired of living? I guess that's at the very least a way of discouraging elderly Nederlanders from over-indulging in doctor's visits! I'm not sure what the connection is to the 10 commandments and the male sex - but surely the 10 commandments are directed at 10 commonly-committed faults, such as adultery and not entertaining one's parents. But in a world where the old are older than they've ever been, where everyone has some sort of old age pension, and where more people are childless by choice or by force (as in China), this is one of those sad "diseases of affluence" that is going to become more common. Except in the Netherlands, of course.

Comment\_Whatever (2010-02-20 21:22:58)

When the ten commandments said "Thou shalt not kill" that was sexist how? What about the commandment to not worship false gods? Sexist how? Keeping the Lord's day holy? Sexist how? "Thou shalt not covet thy neighbor's goods. " is DEFINITELY going to pose a problem for the chics, but then again. "Thou shalt not covet thy neighbor's wife. " is DEFINITELY going to be a problem for men. So really, I've just gone through five out of ten, and I'm failing to see your point. Maybe "Thou shalt not take the name of the Lord thy God in vain. "? Or "I am the Lord thy God and thou shalt not have any strange gods before me. "? No..... not really there either. Maybe you could explain where in the last three is the proof positive of sexism..... even by your standards.

seth (2010-02-20 23:17:40)

The Ten Commandments are all about protecting men from other men – e.g., "thou shalt not covet thy neighbor's wife." Men owned stuff. Men were killed by other men. (I'm assuming more men were killed than women or children. Revenge killings usually involve men being killed – I believe that's what this is about.) Note the absence of: Thou shall not beat your wife. Thou shall not rape. Thou shall not beat your children. The religious stuff is merely what Moses wants. The commandments contain some of what men want (protection against more powerful men), some of what Moses wants. As in any deal, both sides get something.

thehova (2010-02-21 00:56:44)

It's a really difficult situation. My grandmother was a widow and was extremely lonely. Most of her friends had either passed away or moved. My family encouraged her to move to a retirement home in Florida to be around more people. Reluctantly she did and she was miserable and moved back to her previous home. You can't just pressure senior citizens to live together and expect them to make deep friendships and overcome their loneliness. It has to be organic. Probably the best situation for a widow is for them to move into one of their children's homes. But in our modern society, there are many legitimate obstacles to making that work.

Jason (2010-02-21 06:00:27)

re: Comment \_Whatever, On sexism, remember the full wording: "You shall not covet your neighbor's house; you shall not covet your neighbor's wife, or male or female slave, or ox, or donkey, or anything that belongs to your neighbor." It is not about adultery per se! It lists the possessions in descending order of property value: don't covet anything belonging to your neighbor, like his wife. And so saying the commandment not to covet possessions is a problem for women is sexist on your part (an offensive stereotype about women) and misses the context of the commandment which is clearly directed at property-owning men. One can see the same things in the laws in the Bible on fines for crimes like rape—in which virgins and married women have steeper fines than women who are not "owned" by a man. The problem of rape is treated as a property-loss for the male-owner of the woman in the Bible!

david (2010-02-21 06:40:11)

Seth, This post reminded me of the section on age discrimination in the original Freakonomics (where the only kind of discrimination they find in "The Weakest Link" is age discrimination). David

seth (2010-02-21 07:21:22)

Kenf, I thought of the Ten Commandments because to me it is an example of how people without power are ignored. Lonely old people have very little power so their problem – loneliness – is ignored. That's the connection.

dilys (2010-02-21 09:13:18)

A troubling and increasingly relevant topic. I'm thinking of recent discussions of "power," distinguishing domination power and prestige power. Whereas young lonely people have at least fantasies of both, and of the future bringing improvement, old people have neither, unless they are wealthy, well-connected, surrounded by loyal clan. And of course people's willingness to associate with others seems inversely proportionate to the other's prestige. In a restaurant where I worked, the older PR person (me) had to be careful not to sit at a table with the waiters in meetings, because my 50+ age was a contact "Cool Killer." I think there has been a shift with television-and-internet saturation to an image-obsessed society (perceptually and emotionally). Whereas befriending or including an old person used to have some moral prestige, now in many circles it is image suicide. I think we need, quite practically, to self-experiment on loneliness, rather like Seth's work on faces in the morning to alleviate depression. Certainly forced contact like churches or retirement homes, well, just shoot me now (please don't). IMO, the Ten Commandments is about inner and outer order and the moral infrastructure for an ultimately happy and productive life. Of course it was directed to men, whose agency was much greater than women's at that time. Doesn't keep me from noticing I'm much happier when I don't envy/covet, though it's put in male terms in the text. Even though I wouldn't want a donkey, and servants, who can find servants anyhow?

seth (2010-02-21 09:35:21)

I think a blend of ChatRoulette and internet forums and chat rooms would do a lot to reduce loneliness – you could go online and chat (with audio & maybe visual) with people about common interests. I think hearing voices is important for reducing loneliness.

Alexandra Carmichael (2010-02-21 10:30:29)

This reminds me of the article I just read about loneliness as a "socially transmitted disease" - spreading in social circles like obesity and happiness. <http://expertvoices.ndsl.org/cornell-info204/2010/02/20/loneliness-a-socially-transmitted-disease/>

1 (2010-02-21 11:45:05)

Many MDs have told me that some of their schizophrenic patients enjoy hearing voices in their head so much that they (the patients) didn't want to increase their antipsychotic medication to reduce the voices.

Nile (2010-02-21 14:23:51)

So much to say on this - I once did an hour radio show on loneliness. Let me leave it at this. Loneliness is VERY simple to cure. How? Introduce your self to as many people as you can. As you introduce yourself ask their name. Remember their name. You may have to write it down if you see the other person infrequently. Next time you see them use their name and ask about them. In time, less than a year, you will have many acquaintances, quite a few casual friends, some friends and a few best friends and you won't be lonely any more. It really is that simple. Schools should teach this, doctors should teach this.

MC (2010-02-22 03:30:25)

Makes sense to me. This explains why many old people, like my grandmother (who is a widow and lives alone) typically try to engage in random interactions several times a day: she'll chat with the doctor, the people in the waiting room at the doctor's, random people on the bus, random people in the park, at the store, etc., much to my parent's amazement and anger ("you can't go chatting up strangers like that! they can't possibly be interested in what you have to say! And it's creepy!" etc etc.).

Edgar M. (2010-02-22 05:31:33)

Seth's post reminds me of a time in the mid-1990s when I became quite depressed. I went to a psychiatrist, who prescribed an antidepressant drug to treat my chemical imbalance. When that drug didn't work, we tried a series of other drugs, sometimes in combination, none of which really worked, either. (Incidentally, the drugs caused a rapid and quite dramatic weight gain, most of which has stayed with me to this day.) During that time, I was living alone in a new city and had few friends. I was working at a job that was quite inappropriate for me. My sleep habits were terrible (I'd stay up late at night watching sit-com reruns), I didn't exercise, my finances were a mess, and I ate a lot of junk food. The psychiatrist didn't address any of these issues, at least not in any substantial way. To do so would be to engage in low-status work, using Seth's paradigm. Looking at this situation in retrospect, I think what I *really* needed was some sort of life coach who would offer practical help instead of hokey "chemical imbalance" theories.

justin (2010-02-22 07:36:08)

I think there's another angle at play here, which is that living by yourself tends to afford an individual total control over their environment with zero feedback. This control can allow an individual to cater to neurotic behaviors without consequence. Allowed to continue for long periods of time, it becomes harder for individuals to interact with other people not only because doing so means losing control, but also because the behaviors they've been doing alone may be come off neurotic to others, and thus be off putting. Assuming I'm anywhere near the mark here, solitude can beget solitude in a sort of downward spiral. The cure is, of course, interacting with people, but it can be hard to do if someone's been alone for long enough. This is where having family can save the day – they have to put up with the loner. And if they stick to it, maybe they can help mitigate his/her neurotic behaviors. Spouses work in this regard, too. All of this is (in my view) tied into self-experimentation. We all make little experiments to try and control our environment – an environment typically populated by other individuals doing the same thing. When these experiments work, they are reinforced and we use them further. For a loner, it's a lot more likely that odd-ball experiments are conducted that work for lack of accurate feedback mechanisms (other people saying – NO you can't walk around with your hand constantly scratching your butt ... bad example, but you can think of more).

seth (2010-02-22 09:04:15)

yeah, I think there's something to your downward spiral idea. I've been thinking along similar lines and I'll blog about it soon.

sr2323 (2010-02-23 08:01:24)

The 10 commandments ultimately protect women. If a woman commits adultery, then the man doesn't know the paternity of her children, so he has no reason to protect or provide for her or her children. Not being murdered is nice too.

G (2010-07-15 19:02:36)

Old folk should be directed to voluntary programmes where they can help and be helped.

## The Hollywood Economist (2010-02-21 13:12)

Edward Jay Epstein, [1]a wonderful journalist, has just published [2]The Hollywood Economist. I asked the publisher for a free copy. About two-thirds I'd already seen, mostly in Slate. The back cover says "Freakonomics meets Hollywood saga" but I'd say "Spy meets The New Yorker" – not that many people would understand "Spy". It has a Spy-ish "here's how things really are" aspect but with fewer embarrassing stories. And it has a New-Yorker-ish broad and deep view. (Epstein has often written for The New Yorker.) Like both Spy and The New Yorker it is very well-written. Although I've visited [3]his website many times, I didn't know about The Assassination Chronicles: Inquest, Counterplot, and Legend (three books combined) nor Who Owns the Corporation: Management vs. Shareholders (69 pages). He's currently writing a book about the 9-11 commission. From his profile: "I taught political science at MIT and UCLA for three years but then decided that researching and writing books was a far more educational enterprise."

1. <http://www.blog.sethroberts.net/2009/08/03/edward-jay-epstein/>

2. <http://thehollywoodeconomist.blogspot.com/>

3. <http://www.edwardjayepstein.com/>

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El mundo del cine : Pons Asinorum (2010-02-23 14:07:17)

[...] Es por eso que este blog es muy recomendable (vÃa Seth Roberts). [...]

## Assorted Links (2010-02-22 10:05)

- [1]aphorisms from Nassim Taleb. " Edmund Phelps got the Nobel for writings no one reads, theories no one uses, and lectures no one understands. " [2]Daily Beast interview with Phelps. [3]Econtalk interview with Phelps.
- [4]Best journalism of 2009
- [5]What a father wishes his son's doctors had told him. "There was almost a physical chill when more than limited [questioning] occurred."
- Is sea level rising? Who do you trust – the IPCC or [6]this guy? "If they say that climate is not changing, they lose their research grants. And some people cannot afford that." Not to mention [7]this retraction.

Thanks to Dave Lull.

1. <http://twitter.com/nntaleb>
2. <http://www.thedailybeast.com/blogs-and-stories/2009-07-13/interview-with-edmund-phelps/>
3. [http://www.econtalk.org/archives/2010/02/phelps\\_on\\_unemp.html](http://www.econtalk.org/archives/2010/02/phelps_on_unemp.html)
4. <http://trueslant.com/conorfriedersdorf/2010/02/17/the-best-of-journalism-2009/>
5. [http://books.google.com/books?id=qxYt87KwKTwC&pg=PA303&lpg=PA303&dq=Things+I+Wish+They+Had+Told+Us:+A+Parent%27s+Perspective+on+Childhood+Epilepsy&source=bl&ots=LBXcUGMEEc&sig=5FRIHD-z0xXd77KRYA7U1boMNGk&hl=en&ei=HH6AS8DqN43QsgPUxYGUBA&sa=X&oi=book\\_result&ct=result&resnum=1&ved=0CAgQ6AEwAA#v=onepage&q=Things%20I%20Wish%20They%20Had%20Told%20Us%3A%20A%20Parent%27s%20Perspective%20on%20Childhood%20Epilepsy&f=false](http://books.google.com/books?id=qxYt87KwKTwC&pg=PA303&lpg=PA303&dq=Things+I+Wish+They+Had+Told+Us:+A+Parent%27s+Perspective+on+Childhood+Epilepsy&source=bl&ots=LBXcUGMEEc&sig=5FRIHD-z0xXd77KRYA7U1boMNGk&hl=en&ei=HH6AS8DqN43QsgPUxYGUBA&sa=X&oi=book_result&ct=result&resnum=1&ved=0CAgQ6AEwAA#v=onepage&q=Things%20I%20Wish%20They%20Had%20Told%20Us%3A%20A%20Parent%27s%20Perspective%20on%20Childhood%20Epilepsy&f=false)
6. <http://www.21stcenturysciencetech.com/Articles%202007/MornerInterview.pdf>
7. <http://www.guardian.co.uk/environment/2010/feb/21/sea-level-geoscience-retract-siddall>

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Long Straight Highway (redux) › Best Journalism of 2009 (2010-02-24 07:20:44)

[...] is here. I look forward to a bit of leisure to read some of these. Thanks to Seth Roberts, who is getting increasingly deranged, but still worth listening to with one ear. [...]

### **The Twilight of Expertise (by-the-book professors) (2010-02-22 10:54)**

Imagine if, to get the news, you had to go somewhere and have it read to you! What a joke. From [1]an article in the Washington Monthly about on-line education:

If Solvig needed any further proof that her online education was the real deal, she found it when her daughter came home from a local community college one day, complaining about her math course. When Solvig looked at the course materials, she realized that her daughter was using exactly the same learning modules that she was using at StraighterLine . . . The only difference was that her daughter was paying a lot more for them, and could only take them on the college's schedule. And while she had a professor, he wasn't doing much teaching. "He just stands there," Solvig's daughter said.

The excellent article misses something big, however:

A lot of silly, too-expensive things "vainglorious building projects, money-sucking sports programs, tenured professors who contribute little in the way of teaching or research" will fade from memory, and [2]won't be missed.

Via [3]Aretae.

1. [http://www.washingtonmonthly.com/college\\_guide/feature/college\\_for\\_99\\_a\\_month.php?page=1](http://www.washingtonmonthly.com/college_guide/feature/college_for_99_a_month.php?page=1)
2. <http://www.blog.sethroberts.net/2010/02/18/north-korea-and-penn-state/>
3. <http://aretae.blogspot.com/2010/02/talky-weekend-links.html>

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david (2010-02-22 11:55:28)

Don't forget Veblen though. The very expense and lack-of-added-value of an education at a traditional university is part of its utility as a class marker. With large lectures at big state schools, you already have the lack of interaction of distance learning with the inconvenience and expense of a traditional university.

Stewart Canby (2010-03-07 01:17:45)

Not to detract from your larger point, but StraighterLine (and several others like it) have a really weak set of course offerings. David's point (above) is spot on. We need (?) those class markers in order to establish those stratification layers that keep the unwashed where they belong. Our system of education and credentialing is one of the most powerful ways in which we determine these class markers.

seth (2010-03-07 07:34:33)

Stewart, I'm not sure who "we" is in your statement "we need those class markers." In certain situations I'm sure you're right. I'm told that certain employers use what school you attended as a big part of the hiring process. And lawyers, I'm told, use the law school you attended to determine your status.

### **Boring + Boring = Pleasant!?** (2010-02-23 07:42)

Fact 1: For the last few weeks, I've been studying Chinese using a flashcard program called [1]Anki. It's an excellent program but boring. I've never liked studying – maybe no one does. Fact 2: I've had a treadmill for a very long time. Walking on a treadmill is boring so I always combine it with something pleasant – like watching American Idol. That makes it bearable. I don't think listening to music would be enough.

Two days ago I discovered something that stunned me: Using Anki WHILE walking on my treadmill was enjoyable. I easily did it for an hour and the next day (yesterday) did it for an hour again. The time goes by quickly. Two boring activities, done together, became pleasant. Anki alone I can do maybe ten minutes. Treadmill alone I can do only a few minutes before I want to stop. In both cases I'd have to be pushed to do it at all. Yet the combination I want to do; 60 minutes feels like a good length of time.

I've noticed several related things: 1. I could easily study flashcards while walking. This was less mysterious because I coded walking as pleasant. 2. I can't bear to watch TV sitting down. Walking on a treadmill makes it bearable. This didn't puzzle me because I coded TV watching as pleasant and sitting as unpleasant (although I sit by choice while doing many other things). 3. I have Pimsler Chinese lessons (audio). I can painlessly listen to them while walking. While stationary (sitting or standing), it's hard to listen to them. 4. When writing (during which I sit), it's very effective to work for 40 minutes and then walk on my treadmill watching something enjoyable for 20 minutes. I can repeat that cycle many times. 5. [2]Allen Neuringer found he was better at memorization while moving than while stationary. 6. There's some sort of movement/thinking connection – we move our arms when we talk, we may like to walk while we talk, maybe walking makes it easier to think, and so on.

You could say that walking causes a "thirst" for learning or learning causes a "thirst" for walking. Except that the "thirst" is so hidden I discovered it only by accident. Whereas actual thirst is obvious. The usual idea is that what's pleasant shows what's good for us – e.g., water is pleasant when we are thirsty. Yet if walking is good for us – a common idea – why isn't it pleasant all by itself? And if Anki is good for us, why isn't it pleasant all by itself? The Anki/treadmill

symmetry is odd because lots of people think we need exercise to be healthy but I've never heard someone say we need to study to be healthy.

The evolutionary reason for this might be to push people to walk in new places (which provide something to learn) rather than old places (which don't). To push them to explore. [3]David Owen noticed it was much more fun for both him and his small daughter to walk in the city than in the country. He was surprised. When I drive somewhere, and am not listening to a book or something, I prefer a new route over a familiar one. If I am listening to a book I prefer the familiar route because it makes it easier to understand the book.

Maybe the practical lesson is that we enjoy learning dry stuff when walking but not when stationary. Pity the 99.9 % of students who study stationary. Ideally you'd listen to a lecture while walking somewhere, perhaps around a track. Now and then I've interviewed people while walking; it worked much better than the usual interview format (seated). The old reason was I disliked sitting. Now I have a better reason.

1. <http://ichi2.net/anki/>
2. <http://www.sethroberts.net/articles/1998%20Self-experimentation%20%28chapter%29.pdf>
3. <http://www.blog.sethroberts.net/2010/01/29/green-metropolis-by-david-owen/>

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q (2010-02-23 08:07:51)

i've always studied while walking. it's one of the reasons i studied math. i could memorize some stuff without a lot of understanding and then think about it while walking for a few hours until i understood it.

marmolillo (2010-02-23 08:20:20)

[http://en.wikipedia.org/wiki/Peripatetic\\_school](http://en.wikipedia.org/wiki/Peripatetic_school)

M (2010-02-23 08:56:01)

I've been using Anki for Chinese for about a year now. I sometimes do it standing up, which is good. I don't have the technology to use it walking - an iphone might help in that regard. One problem is that I often annotate the cards as I review them which would be hard when walking. One way to spice up your Chinese Anki decks is to use subs2srs - a program that allows you to chop up (Chinese) movies into flashcards!

bjk (2010-02-23 09:26:16)

When I'm reading on a bus or on a train, I have no problem zipping through my book. Sitting down and reading I want to get up and walk. When I was in grad school I thought about getting on the train in the morning and just riding to the end of the line and back to get some work done . . . never did it, though.

Douglas Clegg (2010-02-23 09:32:08)

Seth, I find that I read via my iPhone - novels, primarily, but some nonfiction - while on the elliptical trainer, bicycle or treadmill. I also have a set up at home with a treadmill and exercise bike where I can put my laptop in front of me and surf and write, as well. I am, in fact, writing this note while on the exercise bike. I do it primarily because - as you mention - it makes something enjoyable that I might avoid otherwise (for me, it's exercise. I have to fight being sedentary, and I'm a full-time novelist.) You might enjoy this - Dr. John Medina is a developmental molecular biologist focusing on genes related to human brain development. In this area of his website, he talks about exercise and learning: <http://www.brainrules.net/exercise> So

perhaps the combination of study and exercise together is enjoyable because, in fact, that's exactly how the brain is supposed to work. I love studying and I hate exercising. But I LOVE exercising when I'm learning something or actively writing at the same time.

seth (2010-02-23 09:46:55)

Using Anki on a treadmill is a little complicated. I put a board across the handlebars. On the board I put a stand on top of which I put my laptop, which is now at eye level.

Charles (2010-02-23 09:50:47)

Interesting that you would have this post the same day as another one, with different but interesting insights: <http://squatrix.blogspot.com/2010/01/boring.html> And this quote: Like anger and other emotions, boredom most often fools us into diverting our energies entirely to an external situation. Thus it keeps us from liberating ourselves by seeing our relationship to the emotion itself. We make a great mistake about boredom when we think that it comes because of a particular person or situation or activity. So much of the restlessness in our meditation practice and in our daily lives derives from this fundamental misunderstanding. How often do we try something new to recapture our interest, something more stimulating or more exciting? And how often does that too quickly become boring and dull, so that we range off again, looking for something "better"? To realize that boredom does not come from the object of our attention but rather from the quality of our attention is truly a transforming insight. Fritz Perls, one of those who brought Gestalt therapy to America, said, "Boredom is lack of attention." Understanding this reality brings profound changes in our lives. Then boredom becomes a tremendously useful feedback for us. It is telling us not that the situation or person or meditation object is somehow lacking, but rather that our attention at that time is halfhearted. Instead of wallowing in boredom or complaining about it, we can see it as a friend saying to us, "Pay more attention. Get closer. Listen more carefully." -Insight Meditation: The Practice of Freedom (pg. 80) My 80-year-old mother says that she likes to drive long distances in the country because "driving takes just enough of my attention to allow me to really think about important things." So maybe the walking is taking just enough attention to free your mind? And then the interesting question becomes what is that other mental/physical activity that we need to engage that allows higher functions to flower?

MikeY (2010-02-23 10:16:35)

Walking gets a little bit of blood moving, a little arousal, which probably keeps you focused compared to just sitting down and drifting off into a book. Also Michael Kane has some work on mind-wandering that suggests people have an optimal amount of mental busyness, and people try to match. So maybe the walking + learning chinese keeps your brain occupied enough to not wander off to other tasks.

jay (2010-02-23 12:12:20)

I am generally unable to force myself to do the dishes unless I have a podcast or audio book going on my mp3 player, it's just too mind numbing. The same is true for working out with heavy weights and taking a shower. What's weird is I can't focus on those auditory information sources by themselves without a mindless task to focus on. So, like your example, they go together. I guess that's why all cars have radios, but space shuttles, less so.

epistemocrat (2010-02-23 12:25:51)

Hi Seth, As an undergraduate, in the hours before a midterm or final, I would walk around quite parts of campus with my notes to prepare. It worked well. I also recorded lectures so I could listen to them while walking and doing yard work (and listen in the car). That was very efficient. Best, Brent

Boring + Boring = Pleasant?! | dv8-designs (2010-02-23 12:41:31)

[...] Boring + Boring = Pleasant?! [...]

Ben (2010-02-23 12:43:06)

I've found that the use of Anki is highly dependent on keeping the daily volume of cards low: this is an incentive to keep learning, and stops it becoming drudgery. This does mean learning more slowly (by adding cards less often), or doing a few



cards now and again throughout the day (using the web interface on my iphone). I did a little talk about my use of anki that you can watch: <http://vimeo.com/5129091> (I start at 36m)

aretae (2010-02-23 14:28:08)

Seth, This fits in with flow-type theory. Ideal functioning requires using lots of one's available resources. If one is not using all the resources, you have a concern. I also note that the examples you gave are both cases of mixing moderate physical activity with moderate mental activity. This may be relevant to your findings.

Riley (2010-02-23 16:44:05)

Seth, Nice discovery. You might check out this site: <http://www.treadmill-desk.com/> I have one myself. Currently attached to the handles, but this causes too much vibration. I'm going to make a free standing desk. They're also available from Steelcase, but fairly expensive, \$5K. Riley

jwcavanaugh (2010-02-23 17:06:27)

perjunkte fibers maybe? afterall, they take care of all the memorized processes (walking, writing, riding bike).

Flashcards and Fitness « Under the Hill (2010-02-23 18:24:21)

[...] leave a comment » "Two days ago I discovered something that stunned me: Using Anki WHILE walking on my treadmill was enjoyable. I easily did it for an hour and the next day (yesterday) did it for an hour again. The time goes by quickly. Two boring activities, done together, became pleasant. Anki alone I can do maybe ten minutes. Treadmill alone I can do only a few minutes before I want to stop. In both cases I'd have to be pushed to do it at all. Yet the combination I want to do; 60 minutes feels like a good length of time." -Seth Roberts [...]

fellaini (2010-02-24 03:30:28)

I think that this is a stimulation issue: only by combining two undemanding activities can one's attention be satisfied. The uber-polyglot Alexander Arguelles recommends doing language work whilst walking briskly and upright (he cites arousal): <http://www.youtube.com/watch?v=VdheWK7u11w> MikeY's reference to an optimum level of mental business is interesting: in social situations I risk becoming temporarily mute if the interactions are not intense enough (I disengage completely), so I try to keep the heat up by starting debates or bantering.

Dennis Mangan (2010-02-24 07:47:47)

"Never trust a thought that didn't come by walking." - Nietzsche

Chloe (2010-02-24 08:15:57)

I thought you might want to check out Skritter. It's this sweet site that helps you learn Chinese (and Japanese) characters by actually writing them and tracking your progress. You can sign up for a free trial using my referral link (<http://www.skritter.com/refer/Chloe>), and if after the two-week free trial you decide to buy a subscription, we'll each get a free two weeks of Skritter.

Linkzomania for February 24, 2010 | Primer (2010-02-24 10:29:30)

[...] As someone who just procured a laptop shelf for his elliptical trainer, I can also confirm that combining two relatively boring activities usually results in a pleasant experience (in my case, working on the computer and exercising). However, it is not a universal truth â€" watching a bad television show while vacuuming, for example, does not increase the enjoyability of either. [...]

Make a Boring Thing Fun by Adding More Boredom | Things Are Good (2010-02-24 11:12:21)

[...] Read more at Seth's blog [...]

Michael (2010-02-24 17:54:09)

Practicing a musical instrument is boring. What activity can be combined with it to make it more interesting?

Move It! at 10,000 Monkeys and a Camera (2010-02-25 09:56:48)

[...] Not only is it good to get up and move around, but if you're doing something boring, it might be far more enjoyable to do it while you're huffing away on the treadmill. And especially if you're trying to memorize stuff, it might go quicker if you're walking while learning. Maybe the practical lesson is that we enjoy learning dry stuff when walking but not when stationary. Pity the 99.9 % of students who study stationary. Ideally you'd listen to a lecture while walking somewhere, perhaps around a track. [...]

fellaini (2010-02-25 10:48:20)

Practise the instrument by playing along to your favourite music. Once you have a piece nailed, you can modify it to your taste and develop your improvisational skills as well as your musical ear. It's also cooler to have a repertoire drawn from the rich variety of modern popular music than to know a bunch of fusty old standards by those dead guys in wigs.

Kringes (2010-02-25 13:02:17)

I put a shelf on my treadmill so I can put my laptop there and edit academic texts while walking. It is the best thing to do while treadmilling because it takes so much concentration. Win-win!

Working It Out While Working Out « Undecided (2010-02-25 13:20:47)

[...] Here's the backstory. We came across a tiny little blurb on Slate the other day that referenced a blog by Seth Roberts, Ph.D., a professor of psychology at Tsinghua University in Beijing and a professor emeritus of psychology at the University of California at Berkeley. He discovered that when you add boring and boring, you end up with pleasant. In Roberts' case, task No. 1 was studying Chinese via a flashcard system called Anki. Stone bore. Task No. 2 was riding the treadmill. Another big yawn. But when he combined the two, he found that both became pleasurable. He walked, he learned, he enjoyed. All about the distraction? Diversion? Multi-tasking with a purpose? Nope, writes Roberts. More like evolution: The Anki/treadmill symmetry is odd because lots of people think we need exercise to be healthy but I've never heard someone say we need to study to be healthy. The evolutionary reason for this might be to push people to walk in new places (which provide something to learn) rather than old places (which don't). To push them to explore. [...]

Robyn (2010-02-25 23:26:27)

Seth, I remember learning in my M.Ed that people learn better while moving and that we should therefore incorporate kinesthetic activities into instructional design. I thought it was flaky until we had to read the research on it... amazing!

seth (2010-02-26 07:45:39)

Robyn, thanks, I didn't know there was a whole body of research about that. That's good to know.

Brian (2010-05-08 15:31:56)

I'm surprised it hasn't been obvious to most people that movement is good for thinking and learning. Perhaps what we really need is to overcome bias in perceptions about ourselves in order to better recognize these performance factors. I believe trying to improve performance at sports through training and diet helps us become more accurate evaluators of performance factors. It has made a difference for me but I think you have to push yourself to the limit. If you're winning every race without trying, you probably won't be striving for accurate evaluations. Your blog topic reminds me of one of Richard Feynman's anecdotes about walking in order to think about physics, but doing it in the middle of the night. He was stopped by police that wanted to know why he was out walking at an unusual hour.

Sugerencia para concentrarse | rudius.info (2011-06-14 12:22:34)

[...] leí un artículo muy coherente acerca de los beneficios para la memorización que son posibles al estudiar mientras se hace ejercicio en una caminadora, pero no he tenido la oportunidad de comprobarlo. This entry was posted in Escuela, Estrategia. [...]

## Assorted Links (2010-02-24 11:58)

- Does Robert Greenwald have a subtle sense of humor? [1]See for yourself. Ted Sorenson, one of the interviewees, is widely thought to have ghostwritten Profiles in Courage. He denied it, but later [2]told American Experience: "The author is the man who stands behind what is there on the printed page."
- [3]Researchers fail to grasp that a spoof is a spoof. For instance, a case report involving a cartoon character was taken seriously. A Science News writer made this sort of mistake several years ago. I wrote to the magazine pointing it out. The editor who replied didn't agree with me but said that the person who had written that piece was no longer working there.
- [4]"The mature product". The truth about expiration dates.
- [5]Participatory science: "He drew the line at eating stewed mole."

Thanks to Tyler Cowen and [6]Ben Casnocha

1. <http://stopkennedysmears.com/>
2. [http://www.yalealumnimagazine.com/issues/2007\\_11/arts.html](http://www.yalealumnimagazine.com/issues/2007_11/arts.html)
3. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2292767/>
4. <http://www.slate.com/toolbar.aspx?action=print&id=2244249>
5. <http://www.telegraph.co.uk/culture/7157209/Smoking-Ears-and-Screaming-Teeth-by-Trevor-Norton-review.html>
6. <http://ben.casnocha.com/>

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Alex Chernavsky (2010-02-24 14:14:51)

That's an interesting article about the expiration dates printed on food packages, but I think that this section needs to be explained better: "we should focus our efforts on what really matters to our health" not spoilage bacteria, which are fairly docile, but their malevolent counterparts: disease-causing pathogens like salmonella and Listeria, which infect the food we eat not because it's old but as a result of unsanitary conditions at factories or elsewhere along the supply chain." Are there no spoilage-associated bacteria which are harmful? Is it possible that very low levels of disease-causing pathogens can grow exponentially over time and rise to the level where they are dangerous?

seth (2010-02-24 17:12:08)

Alex, I'm not worried about spoilage-related bacteria because I believe that bacteria that prosper in one environment (old food) are going to die in a much different environment (inside my body). I throw away spoiled food, sure, but not because I'm afraid of it. I'm much more afraid of bacteria that have grown successfully in someone else's body.

Alex Chernavsky (2010-02-25 04:28:38)

Seth, Like you, I've never been one to worry about expiration dates, and I've been known to eat leftovers that I found in the back of the 'fridge and that were well past their prime. In fact, this is a frequent subject of conflict with my wife, who won't eat any leftovers that are more than a few days old and who is quite diligent about checking expiration dates. That having been said, a few months ago I had a pretty serious bout of gastrointestinal illness that I suspect was food poisoning and not

the flu. I never figured out where I got it. I'm not suggesting that I had botulism, but *Clostridium botulinum* doesn't grow in someone else's body and yet is quite dangerous if ingested (or, at least its toxin is dangerous). So I wonder if it's at least possible that under certain conditions, with certain foods, that spoilage in an of itself, can make the food harmful. Is there a clinical microbiologist in the house?

seth (2010-02-25 06:05:50)

Alex, yeah, that's a good point. The bacteria is dangerous not because it grows in your body but because of its byproducts. Perhaps that's why we seem to have a built-in aversion to spoiled food. As I said, I throw it away even though I'm not afraid of it. (I agree with you, I should be afraid of it.)

### **Robert Reich Lectures at Berkeley (2010-02-25 07:16)**

Yesterday I worked in a Berkeley cafe. The student sitting next to me said she was taking a course from Robert Reich called Wealth and Poverty. Most famous profs she'd found disappointing, she said, but not him. I was impressed that Reich was teaching undergraduates. Most profs in the Goldman School (UC Berkeley's public policy school) don't teach undergrads. The class is once/week for 1.5 hours (followed by a half-hour "salon" – meaning discussion) in a large lecture hall (Wheeler, 5 pm Wed). It met in a few hours. I went.

The topic was communities attracting large businesses, such as Boeing. Today's topic should make you feel bad, Reich said. That was one of his goals, clearly – to make students neither complacent nor despondent. And he wanted them to be sophisticated: He didn't want them to have a "bad-guy theory of the world". Fine. I liked the way he walked around the big room, instead of staying on stage, and he had a great conversational manner. I also liked the way he used the first ten minutes to sum up what he'd said earlier.

What I didn't like was the content. It was example-free – unless you count saying that Boeing moved to Chicago. As the lecture continued, my eyes widened: Is this what a good undergraduate lecture at Berkeley is like? There were no stories! Not one. He discussed, in purely hypothetical terms, how Boeing might decide where to move. They're considering a number of cities, Chicago, Long Beach . . . Los Angeles. What will Los Angeles offer them? Tax breaks and subsidies, said Reich.

STUDENT What about good weather?

Reich didn't answer. He went on to ask, rhetorically, were the tax breaks and subsidies a good thing? No, because they left less money for education. At this point I left. Except for being surprised by the low-quality content and amused by the student's comment, I'd been bored. As education, it was thin gruel. The disjunction between Reich's excellent intentions, great reviews (the room was packed), and great manner and his dreary content didn't remind me of the [1]name-dropping throat-clearing Yale prof but of the [2]Los Angeles graduation where none of the speakers told a story. Somehow this simple point about how to teach – tell a story – had been forgotten.

1. <http://www.blog.sethroberts.net/2009/12/03/philip-greenspun-on-universities/>

2. <http://www.blog.sethroberts.net/2008/05/30/high-school-graduation-confidential-lack-of-stories-speaks-volumes/>

Glen Raphael (2010-02-25 11:49:51)

John Searle still teaches Philosophy of Language, right? I recommend you go sit in on one of his lectures if you get the chance, while he's still around. When I took his class 20 years ago, he owned his stage like a Shakespearean actor. You could also try Anthro 160 - "Forms of Folklore". That's a class \*about\* stories so the lectures can't help but feature them...

seth (2010-02-25 12:26:24)

Glen, I heard Alan Dundes lecture about folklore. He gave plenty of examples, yes. I wouldn't say he taught by telling stories except in the obvious sense that he gave examples (which were stories or jokes). But maybe it didn't matter: The examples were interesting and that made the lecture interesting.

Tom in TX (2010-02-25 13:15:54)

"He went on to ask, rhetorically, were the tax breaks and subsidies a good thing? No, because they left less money for education." OTOH, if a thousand people move to the area to work at the place, then they are paying taxes. So did that leave more or less money for education? It is a tougher question than Reich makes it out to be. Thinking about such second-round effects is common in economics. In fact, according to Henry Hazlitt in *Economics in One Lesson*, it is *the* defining characteristic of economics.

seth (2010-02-25 13:34:00)

Tom, yes, what you say is one reason I left when I did.

Adam (2010-02-25 23:47:38)

What you say is such an obvious point, that I feel silly saying that I agree with you. \*I feel less silly sharing examples from a favorite professor at the University of Texas. <http://fwd4.me/HBr> \*During our American Literature courses, Professor Winship would include stories about the books and authors. His stories made the authors and books more real. But, his trump card, was taking us to the Harry Ransom Center and showing us proof that confirmed the story. \*For example, we got to see every edition of *Leaves of Grass* and found out that Whitman used a fake paper/cardboard butterfly for his famous photo. \*We saw order sheets for *Tom Sawyer* and *Huck Finn*...it was pre-sold door to door. We even got to see one of the rare copies of the first run of the first edition of *Huck Finn*, which made it through the publisher with a very proud print/illustration of Uncle Silas. \*We learned a lot about American Literature too, but the stories help orient me...even to this day, writing a comment on your blog. \*Cheers and thanks for the memories.

1 (2010-02-26 10:05:50)

I just spoke to a public health student here at cal about Reich and she said, "Oh my God!! He's amazing!!" Might go next Wed.

economist (2010-02-26 15:46:15)

What has Reich ever done to make anyone expect anything but "thin gruel" from him? Making 20-year-olds swoon is not a very good signal of quality. Neither is having politically powerful friends.

1 (2010-02-26 20:18:16)

Economist, after I go to Reich's lecture, I'll comment here about what I experience.

Stephen M (Ethesis) (2010-03-01 17:40:03)

Well, there is a great story about the Boeing move, with lots of documentation. The bottom line was that the CEO wanted to move to a place that offered him a large in-land lake for sailing, so Boeing moved to Chicago. The rest was mostly show, which came out eventually. There are all sorts of things that could have been developed in that case study. Too bad he did not. Why didn't he do the work to go into how Boeing approached the search, where they looked and what the parameters appeared to be and then what they turned out to be? That would have made a great lecture. My land use prof in law school used to do that, over and over again, in his lectures. I still pay attention to the topic, even though it has nothing to do with my professional practice, because of the interest his examples stirred in me.

seth (2010-03-01 18:27:52)

Wow, I didn't know that, Stephen. It reveals big problems with Reich's approach. As you say.

1 (2010-03-03 22:56:27)

I went to Reich's class tonight, because of what I read in Seth's blog. The class was: Wealth and Poverty, Wed, 5pm, 150 Wheeler. I stayed from 5pm-615pm. Reich started out with "By the way, Bill Clinton says 'hi' to you," because Clinton had dinner with him in San Francisco when Clinton visited Cal last Wed. Reich talked about how he called and left a message to Clinton, asking him to make a surprise visit to the class, but he couldn't get through to Clinton. Later, Clinton told him how he tried to respond back, "I couldn't get through to you!" So Reich said back, "I'm a busy guy!" Everyone laughed. The lecture was about labor unions and wage raises. Reich was really funny. The hall was PACKED. Students sat on the floor and stood up in the back. I've never seen so many students so excited to be in a professor's class. One student shouted out, "This class is so fun!!" Another student brought both of her parents to listen! Reich told stories about his experience in Washington, as Secretary of Labor under Clinton. He talked about how one of his jobs was to promote NAFTA among unions. He was booed in halls filled with 800+ people because they opposed NAFTA. He described a meeting between the national labor unions and Bill Clinton. To make a very long story short: Clinton didn't give them anything, but he was able to make them think, as one of the union leaders said, "It was a fabulous meeting!" Reich acted out on stage what Clinton was doing at the meeting, how he was able to make these extremely angry union leaders "melt." It was hilarious! In addition, Reich talked about the AFL-CIO. He showed graphs from Harvard Law School showing the decline in labor unions in America since 1967. Reich talked about labor law reform and how he tried to convince Clinton to set up such laws. However, Clinton chose to focus on NAFTA. I don't know anything about economics, but tonight I learned a lot!

Michael (2010-07-27 17:41:13)

At Berkeley, our lectures are usually theoretical. The "examples" are "learned" outside of class. The methods by which and the tools with which we analyze those examples are introduced in class. We're taught thinking strategies and methods (hence Reich's apparent socratic approach) but we're not taught what to think or exactly how to think.

## Assorted Links (2010-02-26 09:17)

- [1]kaleidoscope game
- [2]The Transfer Book. Helpful for college students thinking of transferring.
- [3]Some medical schools have trouble disclosing their disclosure policies! In the case of an NPR show The Infinite Mind, which I liked, the founder, Frederick Goodwin, whom I took seriously, "received over a million [undisclosed] dollars from pharmaceutical companies to give promotional talks." [4]Details. This is especially horrifying because Goodwin co-authored [5]the "bible" of bipolar disorder research. His influence is great. His co-author was Kay Jamison, who writes a lot about the subject for popular audiences. To me, she's now tainted by association.
- [6]Robert Woodward, the great chemist. A terrific biographical essay.

1. <http://patterngame.com/>

2. <http://thetransferbook.com/>

3. [http://grassley.senate.gov/news/Article.cfm?customel\\_dataPageID\\_1502=21465](http://grassley.senate.gov/news/Article.cfm?customel_dataPageID_1502=21465)

4. <http://industry.bnet.com/pharma/1000417/npr%E2%80%99s-fred-goodwin-loses-npr-job-over-glaxosmithkline-ties/?tag=content;selector=perfector>

5. <http://www.amazon.com/Manic-Depressive-Illness-Frederick-Goodwin-M-D/dp/0195039343>

6. <http://books.google.com/books?id=jMoiQSZUktoC&pg=PA13&lpg=PA13&dq=rb+woodward+186&source=bl&ots=W37ik-6Wd>

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1 (2010-02-26 23:14:00)

The kaleidoscope game was fun! Very colorful and entertaining! About the links on Goodwin- I know many bipolar patients, including those who tried Lamictal. If they did not take their medicine, they would be more likely to manifest harmful conduct, such as: attempting suicide, going on a spending spree, or quitting their job. Perhaps then their focus should be on quality, not quantity of life. Yes, psychiatric medications have deleterious side effects, such as weight gain, neuroleptic malignant syndrome, and tardive dyskinesia. Right now, what else could these patients do? I'm not advocating medicines for everyone, but I've seen how they could make someone's life productive.

Nansen (2010-03-01 17:14:34)

@ 1 re: "Perhaps then their focus should be on quality, not quantity of life." After the acute phase has been managed, does our quick-fix society have a primary concern in quality-of-life outcomes for the mentally ill? Probably not. Life-long medicating to the max is simple, standardized, and profitable.

1 (2010-03-02 02:26:34)

"...does our quick-fix society have a primary concern in quality-of-life outcomes for the mentally ill?" Nansen: There is a stigma against the mentally ill, yes. Support from family and friends, in addition to taking medications, is more helpful than medications alone. Psychiatrists try to keep medications doses low, unless one is in a psychiatric hospital, then psychiatric medications start out very high to stabilize the patient. Doctors know how to solve problems with medication, so that is how they're going to treat someone, not just the mentally ill. I agree, medications are expensive and people must work for their health care or get help from the government, etc. For the mentally ill who can be independent, doctors don't force them to take additional medication, they can choose what they want to take. I agree, medications are very profitable for the pharmaceutical companies, but if it improves life for the patient, it's profitable for them, too. Just because "the acute phase has been managed" doesn't always mean a patient should go off his or her medicine, or else the symptoms can come back to haunt the patient.

Nansen (2010-03-02 16:09:18)

"For the mentally ill who can be independent, doctors don't force them to take additional medication, they can choose what they want to take." True enough.

## **More Movement, More Learning (2010-02-27 06:51)**

[1]This comment on my [2]boring+boring=pleasant post persuaded me to look for research on how movement affects learning. I found [3]this comment by Anne Green Gilbert:

Movement is the key to learning. I first became aware of this as a third-grade student . . . Movement was central to my teacher's curriculum. . . . Everyone liked school that year, we all got along, and the knowledge imparted is still in my memory bank forty years later. . . .

When I became a third-grade teacher myself fifteen years later . . . I remembered this concept and used movement and dance to save myself from drowning in a classroom so heterogeneous I felt I was teaching in a one-room schoolhouse. Spelling words by forming the letters with bodies, forming punctuation marks and expressing the feeling of sentences through movement, learning multiplication by moving

in sets of threes and fours, discovering the difference between lunar and solar eclipses through planet dances, and choreographing our way across the Oregon Trail somehow made everyone equal. The gifted children discovered a new and exciting way to learn, the slower learners quickly became actively engaged and successful, the non-English speaking students could finally understand the curriculum through our new nonverbal approach. Instead of dreading the long school day, we eagerly awaited our next movement experience. Attendance went way up; test scores rose substantially: there was laughter; racial tension dissipated. . . .

Five years after my own experience as a third-grade teacher in Illinois, I was training teachers at the University of Washington and received a federally funded grant to conduct research in the Seattle Public Schools. During the 1977 school year, 250 students from four elementary schools studied language arts concepts through movement and dance activities for twenty weeks. The third grade students involved in the study increased their MAT [?] scores by 13 percent from fall to spring, while the district wide average showed a decrease of 2 percent! The primary grade project [?] students also showed a great improvement in test scores. Most significant was the direct relationship the research showed between the amount of movement the classroom teacher used and the percentage increase of students' test scores.

I find this very convincing: three situations, many measures. The way the movement lessons attracted diverse students is especially interesting; IQ tests were invented to reduce diversity in classrooms.

Partly I'm struck how this idea seems to have been ignored . "Everyone liked school that year." Which seems to imply less liking of school other years. So the third-grade teacher used lots of movement, her kids loved it, but somehow second- and fourth-grade teachers didn't imitate her. (Perhaps they did later.) "When I became a third-grade teacher myself . . . I remembered this concept." Implying it wasn't taught in her teacher-training program. On the other hand, it was emphasized in the teacher-training course that the commenter took ("I remember learning in my M.Ed that people learn better while moving and that we should therefore incorporate kinesthetic activities into instructional design").

I've read many studies about learning by experimental psychologists and never encountered any study of the hedonics – what makes learning more or less pleasant. Learning is one topic, motivation (e.g., thirst, hunger) is another. There are a few studies of curiosity (in animals, not people) but they don't show how to vary it. A professor of psychology might pooh-pooh the Gilbert stories: Sure, third-graders don't like to sit all day. But my treadmill/language-learning story suggests it's not that simple.

1. <http://www.blog.sethroberts.net/2010/02/23/boring-boring-pleasant/#comment-397220>
2. <http://www.blog.sethroberts.net/2010/02/23/boring-boring-pleasant/>
3. <http://www.newhorizons.org/strategies/arts/gilbert.htm#author>

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grace (2010-02-27 09:48:36)

I was struck by this somewhat related post (not spam Seth \*haa\*): <http://blog.exuberantanimal.com/the-biggest-sensory-organ-in-the-body/>



q (2010-02-27 11:41:12)

this seems completely different from what's in your walking post. the fact that kids learn better from play acting is distinct from learning better while walking.

seth (2010-02-27 11:54:18)

"completely different"? No, in both cases adding plenty of movement to a learning task was really helpful. Sure, there are big differences, mainly in the nature of the activity. But it isn't obvious why walking should be so different than moving around a room. Nor is it obvious why language learning should be so different than the vocabulary and simple-concept learning which is a big part of what third-graders do. My work sheds a new light on the work that Gilbert describes. It suggests a new explanation: Movement makes kids more curious. In terms of their effect on the average reader, I suppose, yeah, they are completely different. The subjects (me versus third-graders) are worlds apart and the effects differ greatly in how surprising they are. At least those are the differences that strike me. But I believe the underlying mechanism may be the same.

Matt Goff (2010-02-27 12:24:43)

There's a book I was recommended (though haven't read yet) called "Smart Moves: Why Learning is not all in your Head" by Carla Hannaford. The product description on Amazon says: "Neurophysiologist and educator Dr. Carla Hannaford brings the latest insights from scientific research to questions that affect learners of all ages. Examining the body's role in learning, from infancy through adulthood she presents the mounting scientific evidence that movement is crucial to learning." (and more, but I figure this is enough to establish a connection with what you are talking about). The second (revised, expanded) edition was published in 2005.

seth (2010-02-27 13:33:00)

Thanks, Matt, that should help me learn more about the connection.

q (2010-02-27 14:56:42)

sure, i overstated when i said 'completely different'. in your case you changed one thing and you got an effect, so the effect was probably due to that change. in the kids' case they changed probably hundreds of things and so we could discuss whether one or another of those things was important. my first assertion / strawman would be that play-acting aids child learning a lot. it might be difficult to tease this out from movement. i think it would be difficult to get kids to pay attention to something like math or reading while walking around and if they aren't paying attention there's no point. i suppose my base assertion is that if kids pay attention they will learn. desk learning is partially about removing distractions in order to encourage focusing on something. you have to ask yourself how well this works. i wouldn't think it would work that well, but i prefer and have always preferred chaotic environments. there are other things besides walking that you could think of too. you could test 'i learn better when i talk to myself out loud' or 'i learn better when i sing.' you could do isometric abdominal exercises while sitting at a lecture and see if that helps or hinders learning. (it would probably help your balance if nothing else.) on another subject, have you heard of any experiments with eating with your hands and weight loss?

Adam (2010-02-27 15:50:33)

The military trains people while moving all of the time. Memorization of basic lists occurs while running and doing other physical training, while transiting between classrooms and mess halls, etc. \*During classroom instruction, if you feel drowsy, it is expected that you will stand up and move to the back of the classroom and stand for the lecture. \*Wrong answer = push ups.

seth (2010-02-27 16:55:15)

q, I haven't heard of any experiments about eating with your hands and weight loss. In Gilbert's article, there's plenty of reason to think that the change in curriculum caused the change in results. Which aspect(s) of the new curriculum made the difference is a different question.

wcw (2010-02-28 00:33:56)

Please see "Arbeit und rhythmus". The 1899 version has been digitized at <http://books.google.com/books?id=yHezvFAV4sQC>

seth (2010-02-28 05:58:14)

wcw, unfortunately I don't read German. What does the book say?

vic (2010-02-28 18:05:49)

you don't read German? what a boorish rube...

Stephen M (Ethesis) (2010-03-01 19:09:12)

One of the more overwrought parts of the book Nurtureshock (which I enjoyed, all in all) had to do with the positive impact of role-playing activities on the learning in the young. On the other hand, the classic lecture in the Agora occurred as the lecturer led people about on a walk. Makes a lot of sense, both ways.

1 (2010-03-01 21:07:59)

Seth, You do a brilliant job of generating new ideas. You are very successful at it. I am so proud of you!

Movement Learning | Certification Map (2010-03-02 08:02:23)

[...] A new blog post by Seth Roberts discusses the theory of movement learning: Five years after my own experience as a third-grade teacher in Illinois, I was training teachers at the University of Washington and received a federally funded grant to conduct research in the Seattle Public Schools. During the 1977 school year, 250 students from four elementary schools studied language arts concepts through movement and dance activities for twenty weeks. The third grade students involved in the study increased their MAT [?] scores by 13 percent from fall to spring, while the district wide average showed a decrease of 2 percent! The primary grade project [?] students also showed a great improvement in test scores. Most significant was the direct relationship the research showed between the amount of movement the classroom teacher used and the percentage increase of students' test scores. [...]

## **Mood and Attentiveness (2010-02-28 22:26)**

In [1]Jonah Lehrer's article about the benefits of depression, nothing seemed solid until I came across this:

[Joe] Forgas [an Australian psychology professor] placed a variety of trinkets, like toy soldiers, plastic animals and miniature cars, near the checkout counter. As shoppers exited, Forgas tested their memory, asking them to list as many of the items as possible. To [vary] mood, Forgas conducted the survey on gray, rainy days " he accentuated the weather by playing Verdi's "Requiem" and on sunny days, using a soundtrack of Gilbert and Sullivan. The results were clear: shoppers in the "low mood" condition remembered nearly four times as many of the trinkets. The wet weather made them sad, and their sadness made them more aware and attentive.

I found the scientific article that reports this experiment, in Journal of Experimental Social Psychology. Memory for the trinkets was measured two ways – recall and recognition – and both ways the "sad" shoppers did much better. I didn't know about this; the size of the effect suggests it's important. Calling it variation in "memory" is odd, since the remembered event was only a minute ago. Variation in attentiveness is a better summary.

Whatever you call it, I like the general point made in the scientific article. When you are in a good mood, you pay less attention to your surroundings than when you are in a bad mood. When you're in a good mood, the model of the world in your head is working well. No need to change it. When you're in a bad mood, the model of the world in your head isn't working well. Time to gather more data and revise it.

My colleagues and I have studied a different effect along these lines (in rats): [2]When things aren't going well, you

vary your actions more. You try new things more. That's another way to update your model of the world.

1. <http://www.nytimes.com/2010/02/28/magazine/28depression-t.html?em=&pagewanted=all>
2. [http://sethroberts.net/about/2006\\_variation\\_of\\_bar\\_press\\_duration.pdf](http://sethroberts.net/about/2006_variation_of_bar_press_duration.pdf)

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Eric (2010-02-28 22:55:28)

Sometime ago I practiced Tibetan Buddhism and read Chogyam Trungpa "an interesting monk by any measure. I could be off since I'm working with memory, but I recall in one of his books I read he was stressing not only attentiveness"no surprise there"but also how important it was to feel melancholy as a way of life. As if melancholy were the only emotion underlying a present and attentive life.

Alex Chernavsky (2010-03-01 05:25:07)

The results that Seth discusses seem to be somewhat inconsistent with other research which shows that happy people are better at problem-solving. See also Barbara Fredrickson's "broaden-and-build" theory of positive emotions: [http://bit.ly/broaden\\_build](http://bit.ly/broaden_build)

seth (2010-03-01 06:19:40)

Good point, Alex.

karky (2010-03-01 08:27:08)

The question that came to my mind was this- Did the happier, more upbeat people focus more on the other people (cashier) than the items around the checkout, and did the melancholy shoppers focus more on the items and less on the cashier?

seth (2010-03-01 09:40:57)

yes, karky, that's a good question. This is the sort of result that I'd like to see repeated under lab conditions where the two conditions (sad and happy) are more equal. I looked around for such evidence but couldn't find it.

mark tyrrell (2010-03-01 15:46:17)

Depressed people certainly are better at some things than non depressed (never depressed) people-such as processing negatively weighted words <http://tinyurl.com/yj8kc5s> The trouble is the things they tend to be better at may not help them. Better recall for negative events but worse recall for positive ones and less accurate and exaggerated recall for their own physical ailments <http://tinyurl.com/yzzhgb> Interesting post thanks, Mark

donny (2010-03-01 21:24:17)

"This line of research led Andrews to conduct his own experiment, as he sought to better understand the link between negative mood and improved analytical abilities. He gave 115 undergraduates an abstract-reasoning test known as Raven's Progressive Matrices, which requires subjects to identify a missing segment in a larger pattern. (Performance on the task strongly predicts general intelligence.) The first thing Andrews found was that nondepressed students showed an increase in "depressed affect" after taking the test. In other words, the mere presence of a challenging problem "even an abstract puzzle" induced a kind of attentive trance, which led to feelings of sadness. It doesn't matter if we're working on a mathematical equation or working through a broken heart: the anatomy of focus is inseparable from the anatomy of melancholy. This suggests that depressive disorder is an extreme form of an ordinary thought process, part of the dismal machinery that draws us toward our problems, like a magnet to metal." Obvious implications for the benefit of meditation, here. Putting aside a little bit of time to very pointedly not solve any problems. If concentrating on a problem is depressing, the drive to concentrate on solving problems might be implicated in depression. Or the depression itself might only be coincidental,

happiness might compete with problem-solving for resources. Happy people might be better at problem solving because they have more of these competed-for resources.

Timothy Beneke (2010-03-02 10:38:15)

One general finding of emotion researchers is that inducing positive mood, by having the experimenter tap the subject on the shoulder and smile, or offer cookies, or various other manipulations, results in a greater range of more creative associations to words, so at least the imagination is opened up. I don't know how the "trinket" finding fits into the overall research. I'm a writer who is very depressive – the one word people use repeatedly to describe my published writing is "thoughtful," for whatever that is worth... Depression can make you question the point of doing anything; it can paralyze motivation, which in turn may free your attention...

mood and attentiveness « aquamap (2010-03-04 00:29:49)

[...] <http://www.blog.sethroberts.net/2010/02/28/mood-and-attentiveness/> [...]

## 5.3 March

### China Fact of the Day (2010-03-02 19:48)

In some parts of China, a wedding is followed by a car procession: A bunch of cars drive around the village or town. The wealthier you are, the more similar the cars in the procession.

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### Assorted Links (2010-03-03 07:59)

- [1]the I Practice My Own Methods Developed From Self-Experimentation group. Which, when this was written, had one member. She has Parkinson's Disease and found that yoga helps. "I started watching yoga on tv because [my husband] had the tv on and he likes to watch attractive women expressing themselves physically."
- [2]umami basics. "Maturation increases the content of umami."
- [3]reasonable talk about addiction by [4]Gabor Mate, a Vancouver doctor. "The first time I took heroin, it felt like a warm soft hug." Mate says his addiction to classical CDs was like a heroin addiction. Sure, you laugh, he says, and goes on to say that one weekend he spent \$8,000 on classical CDs, that his wife could tell when he'd been classical-CD shopping, and he once neglected a woman in labor (he was an obstetrician) because he was buying classical CDs. "In effect, our system punishes and prosecutes people for having been abused in the first place."

Thanks to Bob Levinson.

1. <http://www.experienceproject.com/groups/Practice-My-Own-Methods-Developed-From-Self-Experimentation/312007>

2. [http://www.umamiinfo.com/images/stories/news/2010\\_UET/umami\\_english\\_translation.pdf](http://www.umamiinfo.com/images/stories/news/2010_UET/umami_english_translation.pdf)

3. <http://www.booktv.org/Watch/11314/In+the+Realm+of+Hungry+Ghosts+Close+Encounters+with+Addiction.aspx>  
4. <http://www.drgabormate.com/>

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Dennis Mangan (2010-03-03 09:38:37)

Interesting about addiction to classical CDs. I like 'em myself, but I probably haven't spent \$8000 in my entire life on them. Anyway, apparently the vast majority of classical CD collectors are men, though why that should be I don't know. Women collect certain things, dolls or whatever, plus classical music in today's culture is not considered the most masculine of areas. I have a theory about stamp and coin collecting, namely that their appeal lies in the fact that these items are "official", that is they are products of governments and thus might appear to a certain mindset as being somehow more real, in perhaps a Platonic sense. Notice how so many collectible items are "official", easily identifiable products of corporate entities. Maybe classical CDs are similar in that classical is considered the summit of music, therefore "official", and collecting classical CDs gives a kind of security to those with a certain mindset. Sorry, way out in left field, and not totally relevant.

1 (2010-03-06 05:44:20)

I like the yoga quote. At my work, we participated in a program where a personal trainer would come and lead an exercise group. This took place every week. Almost every time, there would be all us ladies exercising and only some men, but every time, there were a lot of my male coworkers there and they would just watch and make comments. These guys wouldn't even exercise, even if the trainer would try to motivate them! At the time I didn't understand why they would do this, but now I know!! Very funny!!

### **One Man Vs. All Education Professors (2010-03-04 12:10)**

According to [1] a recent New York article about Rupert Murdoch, Robert Thomson, one of Murdoch's top editors,

thinks most [journalists] are liberals overly concerned with writing stories that will impress other liberal journalists and win prizes in journalism competitions.

Well, yes. Not everyone is a liberal, of course, but basically everyone wants to impress their colleagues. Scientists have an amusing spin on this: They call it "peer review." The amusing part is that somehow no one else's opinion should matter. (E.g., all journals must be peer-reviewed.) Scientists get away with this bizarre view of economics (thinking someone should pay you and get nothing in return) perhaps because it is indeed difficult to assess the quality of this or that bit of science if you're not in the field and because science has produced huge benefits for the rest of us in the past.

As I said, this is just human nature. As far as I can tell, professors act this way – try to impress colleagues – in every academic department. In schools of education, [2] the result is this:

Amy Treadwell . . . received her master's degree in education from DePaul University, a small private university in Chicago. . . . But when she walked into her first job, teaching first graders on the city's South Side, she discovered a major shortcoming: She had no idea how to teach children to read. "I was certified and stamped with a mark of approval, and I couldn't teach them the one thing they most needed to know how to do," she told me.

It's no secret that many schools of education do a poor job of training their students to teach – which is nominally one of their main goals. I am just repeating what Veblen said long ago.

What's new is this: One man, Doug Lemov, working mostly alone, [3]has figured out how to make people better teachers. One man. Not a professor. Did he build on the work of others? No, he started from scratch. He's made a list of about 50 techniques. They are teachable. He gives workshops about them. As far as I can tell from [4]this magazine article, Lemov has done a better job of figuring out how to train teachers than all the education professors in the world put together. If you arrived on earth from outer space, and didn't understand human nature, you'd think this couldn't possibly be true, but apparently it is. It's like something out of a comic book.

1. <http://nymag.com/news/media/64305/index2.html>
2. <http://www.nytimes.com/2010/03/07/magazine/07Teachers-t.html?em=&pagewanted=all>
3. <http://www.nytimes.com/2010/03/07/magazine/07Teachers-t.html?em=&pagewanted=all>
4. <http://www.nytimes.com/2010/03/07/magazine/07Teachers-t.html?em=&pagewanted=all>

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Alex Chernavsky (2010-03-04 12:26:54)

Yes, education programs don't teach people how to teach, and English programs don't teach people basic writing skills, like grammar, organization, and clarity. I think Stanley Fish said as much in a recent *NY Times* column: ===== A few years ago, when I was grading papers for a graduate literature course, I became alarmed at the inability of my students to write a clean English sentence. They could manage for about six words and then, almost invariably, the syntax (and everything else) fell apart. I became even more alarmed when I remembered that these same students were instructors in the college's composition program. What, I wondered, could possibly be going on in their courses? ===== <http://opinionator.blogs.nytimes.com/2009/08/24/what-should-colleges-teach/>

seth (2010-03-04 12:33:45)

Until now, education professors could say that what makes a good teacher was very difficult to figure out. "Great teachers are born, not made." Whether they actually said this I don't know.

Nathan Myers (2010-03-04 13:53:51)

Your mistake, Seth, is in believing "educators" have any interest in teaching, or in children learning. Their whole focus is on driving out any initiative that might lead them to disrupt class or, later, society. They'll mostly pick up reading, eventually, but that's no great shakes. What matters is a supply of docile proles, and that 1848 never, ever happens again.

Eric (2010-03-04 15:26:52)

It is disappointing. The Cold Call technique listed in the article reminded me of a moment where my Communications professor had wondered (more to himself but in front of the class) better ways to teach us. He was doing pop quizzes with us and most of us didn't care enough to do well. I approached him the next class asking him to cold call us instead of asking us to raise hands and he regarded it apathetically and didn't implement it in the class. I felt bummed out about it. Got an A in his class but privately have thought of him as one of the worst teachers at my university. In spite of this, he remained popular because of his charisma. Generally, I'm incredibly skeptical whenever people say you either have it or you don't. I think growing up in a culture filled with data has made me wonder about specific techniques which people may unconsciously use to be successful in an activity. Given such mediocre products and processes coming from universities I wonder how a better university would work and how to finance and start one. But I digress. I've got Lemov's book marked to get from the library whenever it comes out. Thanks for pointing it out.

Fred (2010-03-04 21:03:42)

+1 for Nathan Myers' comment. There was a study published in the late 90s (can't find the ref right now) that indicated that Education students had the lowest collective SAT scores of all undergrad demographics in the US.

fellaini (2010-03-05 02:33:22)

In the UK at least, teacher trainer/lecturers tend to be highly politically motivated, and almost always on the left. They can be reluctant to subject teaching approaches to fine-grained empirical analysis or value quantitative study (they prefer qualitative studies, as they highlight the experiences of valued social outliers). On my post-grad teacher training course, I was taught plenty about working class disengagement and its relation to the teaching of reading, but received little or no indication of the comparative success of different methods. Bear in mind that not only education students but also their professors tend to be less able than their peers in other departments.

Michael Metcalf Bishop (2010-03-05 07:49:00)  
hyperbole

Phil (2010-03-05 10:39:24)

I share your disdain for trying to impress one's colleagues by doing respected work. That's why I make sure all of my work has obvious mistakes. Makes it hard to get published in peer-reviewed journals, of course, but every now and then I sneak one through.

seth (2010-03-05 10:48:37)

Phil, there's nothing wrong with trying to impress one's colleagues – among other goals. It's when that's your only goal, or almost your only goal, that there's a problem. The reason that one person could do a better job of training teachers than all education professors put together, I submit, is that they cared far too much about impressing their colleagues and not nearly enough about other goals.

Shane (2010-03-05 12:02:40)

There was an article in the Atlantic on this topic the other month, whose thesis was that Teach For America had been collecting crazy amounts of data to figure out what works, and coming up with actionable guidelines. A bit confusing as the article you linked would seem to indicate otherwise. I don't want to be flagged as spam, so I won't include a link, but you can find the Atlantic article by googling "what makes a great teacher." I'd also like to add that I find the sort of comment made by Nathan Myers tiresome in the extreme. I know a great many teachers, and while they vary in their effectiveness, they don't vary in their lack of membership in the far-reaching conspiracy to crank out mindless drones that he describes. A pretty pedestrian set of incentives is all that is required for the generally poor educational outcomes in this country. Tinfoil hats and Illuminati can be left out of the analysis, I think.

More on the uselessness of university « Anthny (2010-03-05 15:10:54)  
[...] More here. (Also see here.) [...]

Phil (2010-03-05 17:37:48)

Seth, I was trying to point out — by yanking your chain a little — that peer review serves an important purpose of making it harder for people to publish work with obvious mistakes in it. I've had my own struggles with peer review — twice in my career, I've had journals reject a paper not because they found something wrong with it, but because one or two reviewers thought it didn't advance the field in an interesting way; my response has been to publish in other (less respected! But still peer-reviewed) journals. I don't want to sound like I'm entirely satisfied with the normal peer review process. But I don't have an alternative to propose, either. I certainly would have no interest in reading a journal that published whatever anyone chose to submit, because most submissions would be garbage. \_Somebody\_ has to serve as gatekeeper.

seth (2010-03-05 18:51:11)

Phil, thanks for explaining that. You're right that I misunderstood. I agree, some sort of filter is needed. I think a diversity

of filters is a good idea. I'd prefer a system in which, rather than every journal peer-reviewed, some journals were merely editor-reviewed (less democratic than peer review) and other journals published almost everything but had rankings based on reader response – e.g., rankings by number of times downloaded (more democratic than peer review).

1 (2010-03-06 05:04:14)

I remember a few years ago, Seth's long self-experimentation paper was the most downloaded out of all University of California published papers. Not only that, but there was a shorter paper he wrote that ranked high in downloads, at the same time. I think the rank these papers occupied were #1 and #4. Way to go! I just found out recently!

Albert (2010-03-06 10:48:49)

Interesting article about Lemov. Sounds like he has a promising approach. One thing that I didn't like about the NY Times article is that I had to get to the bottom of the entire gushing article to find out that they really don't have any real studies showing whether or not his results are replicable. It would be nice if the next steps were someone funding studies to find out whether or not his work could be reproduced on a wide scale using average teachers and administrators (and are not simply the product of an extremely gifted individual being able to lift those around him to great heights). Albert

Nathan Myers (2010-03-08 17:32:29)

Shane: I have also known teachers dedicated to their craft, and (unfortunately not redundantly) to seeing their charges learn. My mother in law was one. But that says nothing about *educators*, a nearly disjoint population. The origins and aims of the education establishment were published openly and without shame in the 19th century, under names such as Mann and Carnegie, and it has remained true to its traditions. There are great teachers, but they never, ever become educators. At my university, the School of Education was where people washed out into when they failed everything else. It was closed a few years after my graduation, for reasons that probably had nothing to do with that fact.

Nathan Myers (2010-03-08 18:09:12)

I will add (and this is true in general): *it's only a conspiracy if it's against the law*. Sabotaging American education for commercial or political gain is manifestly not against the law.

Adam @ College (2010-04-29 13:00:18)

"basically everyone wants to impress their colleagues" This happens in every profession. A lot of musicians love Jazz because it allows the artist to show off their talents better than other music genres.

## Why Do We Dislike Short-Range Repetition? (2010-03-05 22:14)

Here's something I wrote a few days ago:

In graduate school, I studied experimental psychology. I wanted to learn how to do experiments. The best way to learn is to do, I thought, so I started doing self-experiments in addition to my regular research (with rats). One thing I studied was my acne. My dermatologist had prescribed tetracycline and benzoyl peroxide. In a few months, my self-experiments showed that tetracycline didn't work and benzoyl peroxide did work – the opposite of what I originally believed.

Emphasis added. I wanted to write "the opposite of what I originally thought" but the earlier use of thought made me use believed instead. Avoidance of this sort of repetition is standard practice. It's even important scientifically. The linguist David Stuart [1] made a big advance in understanding ancient Mayan when he realized that different symbols mean the same thing. The different symbols appeared in the same block of text, like my thought and believed.



My question is: Why? What's the evolutionary reason? Maybe it's part of a push toward novelty, so that nobody says, "Today I went to the store. Today I went to the store." Or maybe it's a way of pushing us to make distinctions, invent new words, and learn new words. It pushes us to make distinctions because it pushed me away from lazily writing " . . . thought . . . thought".

One reason this interests me is [2]my interpretation of why we like repeated decorative elements. Many sorts of decoration involved repeated elements – identical things or pictures placed side by side. I believe we like this sort of thing so that we will place similar things side by side. When we place them side by side it's easy to notice small differences that would otherwise be hard to see. Noticing small differences makes us connoisseurs. Connoisseurs are important economically because they are willing to pay more for finely-made stuff. They support cutting-edge artisans.

The invent-new-words explanation strikes me as the most plausible. First we do what the Mayans did: invent new words that mean exactly the same thing as the old words, purely to avoid short-range repetition. As the words get older, their meanings drift independently and they start to mean slightly different things (such as job and profession). Thereby the language does a better job of keeping up with technical/economic progress, which keeps generating new things that need new names.

1. [http://www.pbs.org/wgbh/nova/transcripts/3506\\_mayacode.html](http://www.pbs.org/wgbh/nova/transcripts/3506_mayacode.html)

2. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>

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1 (2010-03-06 05:07:33)

I like the part about connoisseurs! That's exactly what I do, too! I think it makes my job worth working at because I can do something with the money. It helps to make my life worth living, too.

ChristianKI (2010-03-06 11:12:40)

It's about signaling status. Signaling that we have a large vocabulary.

seth (2010-03-06 20:46:08)

If I wanted to signal status, I'd write convoluted sentences and use obscure words. Signalling that I didn't care if other people understood me. That's how Veblen saw it, anyway.

Nancy Lebovitz (2010-03-06 20:55:19)

Repeated words can be a pleasure if they're used for emphasis.

jt (2010-03-07 01:55:16)

In your excerpt, using 'thought' a second time would be more confusing than using 'believed', as the reader may refer to the previous instance of the word and take that you are contradicting 'the best way to learn is to do' rather than your beliefs on the comparative uses of acne treatments. Looking at the derivation of 'job' and 'profession', they meant different things to start off with: the former a discrete piece of work - 1557 'jobbe of work'; the latter suggesting a long-term commitment, the taking of a vow or declaration of intent ('professio').

Alrenous (2010-03-07 16:31:40)

To add to jt, repeating words has a purpose, which is to create a link. This means if you don't want to create a link, you have to come up with different words. Compare: "To add to jt, repeating vocabulary has a purpose, to create a link. This means if you don't want to tie your prose together, you have to come up with different words."

## Teaching: What I Learned Last Semester (2010-03-06 22:10)

[1]Andrew Gelman's thoughts about teaching led me to mull over what I learned last semester from teaching at Tsinghua. I taught two classes: a freshman seminar that covered a wide range of psychology research; and a class for graduate students about R.

Some things worked well:

1. In the freshman seminar, one of the assignments was to design a Mindless-Eating-type experiment. (Mindless Eating by Brian Wansink was one of the reading assignments.) One of the students designed a really good experiment in which people on different buses get different treatments. She happened to be a senior applying for graduate school and her work on that assignment helped me write a really strong letter of recommendation for her.
2. I graded the students on their comments on the reading and set the bar very high to get a full score (3 out of 3): they had to say something that interested me. A fair number managed to do this. The bar wasn't too high.
3. I had lunch with all the students in the seminar (about 5 per week). The students seemed to like it. I certainly did.
4. There were classroom debates about which paper was the best (one week) or the worst (another week). They got everyone involved, was far less passive than listening to me talk, and gave them practice speaking English.

But there was plenty of room for improvement:

1. Students in the seminar were frustrated by the vague criterion ("interest me"). Toward the end I posted the comments that got the full score and that seemed to help.
2. In the seminar it was hard to get feedback about how well I was being understood. The best I could do was pass out slips of paper and have the students write down what percentage of what I said they understood. More immediate feedback (e.g., when I used a too-difficult word) would have been better.
3. In the R class I hoped the students would analyze their own data. This was too hard for quite a few of them. In the future I'll give them a data set.
4. One student dropped the R class because my English was hard to understand.
5. In the seminar, some students (freshmen) complained that other (older) students, whose English was better, talked too much. They had a point and I should try calling on people randomly. I also should try to get general feedback after each class (e.g., "tell me one thing you liked and one thing you didn't like about today's class").
6. In spite of my constant complaint that professors treat all of their students alike (e.g., all students get the same assignment) when they aren't all alike – they differ substantially in what they're good at, for example – I pretty much did the same thing.
7. I should have at least tried to learn my students' Chinese names.

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1 (2010-03-09 02:12:37)

When you were teaching your last classes at Berkeley: weight loss and bipolar/depression, I wanted to ask if I could sit in and listen, but I was afraid. Then you retired! I've regretted that ever since. I was just too scared to ask... Your talk at Stacey's bookstore (a few years ago on June 15) was memorable for me. I believe everyone in the audience had bought your book! You were great! I really like the "interest me" part of your class. If I were in your class, I would have used my creativity and thought of ways to impress you. If that phrase were on your syllabus, I would have crossed out "interest" and replace it with "impress" just to motivate myself as a student.

### **Top and Bottom Versus Middle (2010-03-08 05:02)**

I liked many things about [1]this talk by Jacqueline Edelberg, a Chicago artist and political science Ph.D., about how she and other moms transformed their local school. Edelberg has written a book about it called *How to Walk to School: Blueprint for a Neighborhood Renaissance*. The man who introduced her told a story: In a classroom, he noticed a girl drawing a picture. What are you drawing? he asked. I'm drawing God, she said. You can't do that. No one knows what God looks like, he said. They will soon, she said.

Edelberg's story did sound miraculous: Her crummy neighborhood public school, within a year, became an acceptable place for her children. The change had many elements, including an after-school program, a farmer's market, and painted doors, but I think the most important piece – which Edelberg said little about – was this: Parents were allowed to attend every class. Within two years, said Edelberg, all the bad teachers left.

I call this way of governing top and bottom versus middle. In this case the top was the school's principal (Susan Kurland, Edelberg's co-author), the bottom was the parents, and the middle was the teachers. Acting alone, the principal couldn't control the teachers – she couldn't fire the bad ones, for example. With the parents' help, she could control them.

It's as old as Moses:

1. [2]As I've blogged, the Ten Commandments was an agreement between Moses (top) and the preyed-upon men in his community (bottom) against the men who were preying upon them (middle) – stealing from them, for example.

There are other examples:

2. One reason [3]surgical checklists – implemented by hospital administration (top) – work so well, I believe, is that they give nurses (bottom) power over doctors (middle). A nurse can tell a doctor to follow the checklist. The details of implementation also empower the lower-ranking members of the surgical team.

3. In China, what are called (in Chinese) [4]human-flesh searches – a kind of cyber-vigilante-ism – go on with the approval of the central government (top). These searches, which are actually mini-crusades, allow ordinary citizens (bottom) to punish corrupt or otherwise misbehaving local government officials (middle).

I predict that someday someone in the American government (top) will realize that a way to greatly improve health care is to empower patients (bottom) against doctors (middle).

1. <http://www.booktv.org/Program/11257/How+to+Walk+to+School+Blueprint+for+a+Neighborhood+Renaissance.aspx>
2. <http://www.blog.sethroberts.net/2010/02/20/widespread-loneliness/>
3. <http://www.blog.sethroberts.net/2010/01/30/the-checklist-manifesto-by-atul-gawande/>
4. <http://www.nytimes.com/2010/03/07/magazine/07Human-t.html?ref=magazine>

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doctorsh (2010-03-08 05:31:32)

I take umbrage at your statement about empowering patients against doctors. In today's system it is not the docs with all the power, but the insurers and the government regulators. If obamacare becomes law it will give more power to the insurers and govt and even less to patients.

seth (2010-03-08 09:43:48)

doctorsh, that's an interesting point you make. However, I'm not sure I completely understand, much less agree, without examples. For example, I don't know what you mean when you say obamacare will reduce patient power. Could you expand on what you mean? I've had plenty of experiences where patient empowerment would help. One involved a surgeon to whom I was referred: <http://www.blog.sethroberts.net/2010/02/02/a-call-from-dr-eileen-consortis-of-fice/> Another involved my dermatologist: He wasn't terribly interested in whether the drugs he prescribed actually worked. Which hurt me, of course. A third involved the mother of a friend of mine. She was given so many drugs they were actually killing her - her doctors didn't notice. It was only discovered by accident.

bjk (2010-03-08 10:03:11)

This is the idea behind "if you didn't get a receipt, the bill is on us" policies. It makes the customers the policers of the cashiers.

seth (2010-03-08 10:16:11)

bjk, yes, and the system in China where restaurant receipts have scratch-off areas. A small fraction of scratch-off areas provide money. Taiwan has a slightly different system.

david (2010-03-08 11:45:36)

Another top/middle/bottom example is described in Gladwell's *Outliers*, the part about the airline crashes due to co-pilots not feeling empowered enough to be forceful when notifying about a dangerous situation.

pat (2010-03-08 13:23:01)

I really enjoyed that about the "How to Walk to School." As an aside, I've always found it notable that God delivered Israel from Egypt by parting the Red Sea, and THEN the 10 commandments came. Kind of like if you love and are grateful for what your neighbor, business partner, wife has given you, you do not even need to be told not to kill, lie, steal, etc. . . . Anyway, I digress, as a Chicagoan, really interesting idea to help prevent the exodus of young vibrant families to the 'burbs.

seth (2010-03-08 15:51:10)

david, yeah, that's another good example. And the more examples I know of, the harder it becomes for me to believe (as doctorsh seems to say) that patient empowerment would not be a good thing.

jt (2010-03-09 14:20:44)

This is probably why being in middle management is supposed to be especially stressful.

doctorsh (2010-03-10 07:33:24)

Seth Empowerment in a workable system would be shared between patients and doctors. Presently all the POWER is held by the payers and rule makers who happen to be government regulators and insurers. Doctors have let the system be taken over by these entities. This has changed the way docs are able to care for their patients. Try going to a private solo doc who does not participate with the third parties and you may find a truly free and empowering system that works.

seth (2010-03-10 09:36:03)

Thanks, doctorsh.

Justine (2010-03-10 13:47:47)

Seth, Really interesting idea. Do you think this could also be applied to the medical research system? I work for a nonprofit organization (the Myelin Repair Foundation) which recently launched Where Are The Cures? (<http://wherearethecures.org>) to give patients (and friends/family) a voice and knowledge on how the medical research system is broken. As a nonprofit organization, the Myelin Repair Foundation (<http://myelinrepair.org>) is trying to speed up that process by bridging the gap between academic scientific discoveries and pharmaceutical companies. There are so many players in the process (NIH, FDA, other nonprofit disease research orgs, clinicians, patients, etc.) How could you create a Top & Bottom vs. Middle in this system? /Justine

Top Bottom Middle Smart « Rhymes With Cars & Girls (2010-03-27 06:59:47)

[...] Seth Roberts on top and bottom versus middle. I predict that someday someone in the American government (top) will realize that a way to greatly improve health care is to empower patients (bottom) against doctors (middle). [...]

## **Optimal Daily Experience (2010-03-09 14:45)**

Everyone knows about RDAs (Recommended Daily Allowances) of various nutrients. In [1]a speech to new University of Washington students, [2]David Salesin, a computer scientist, advised them to "maintain balance" by getting certain experiences daily:

- something intellectual [such as a computer science class] (not so hard in college);
- something physical (like running, biking, a team sport);
- something creative (like music, art, or writing); and
- something social (like lunch with a friend).

This served him well in college, he said, and he continued it after college.

I think he's right – we need certain experiences to be healthy just as we need certain nutrients. My rough draft of such a list would be this: 1. Social. 2. Physical. [3]Nassim Taleb's ideas about exercise seem as good as anyone's. This is really several requirements, for different sorts of exercise. 3. Travel. About an hour per day. 4. Hunger. T[4]he data behind the up-day-down-day diet suggest we should experience a substantial amount of hunger every week. 5. [5]Face-to-face contact in the morning. About an hour. 6. [6]Morning sunlight. An hour? 7. Being listened to. I suspect the therapeutic value of psychotherapy derives from this. I believe this is one reason blogging is popular – it provides a sense of being listened to. 8. Being helpful. 9. Being recognized as having value. Blogging helps here, too. 10. [7]Being part of a group effort, something larger. Of course #1 (social) and #5 (morning faces) can come from the same experience, and so can #2 (physical) and #3 (travel). I wouldn't say we need #7- #10 every day but perhaps several times per week.

I might add two more things: 11. Learning. After I started studying Chinese [8]via Anki/treadmill, I started to sleep better. It wasn't the treadmill; that wasn't new. Several studies have found that people sleep more when they are learning intensely. After I became a professor, instances of concentrated learning – such as learning to use R – became rare. I remember how good they felt. How intense learning could go on throughout your life during the Stone Age isn't obvious, however. Presumably all the experiences we need to be healthy were easily available then. 12. Foot stimulation. In a Beijing park, I came across a cobblestone track about a hundred yards long. Walking on it is supposed to be beneficial. I took off my shoes and socks and tried it. I was astonished how painful it felt – but day by day I could stand on it longer. This is a topic for another post but of course in the Stone Age people got a lot more foot stimulation than anyone reading this. [9]Commercial cobblestone track. Thanks to Tim Lundeen for reawakening my interest in this.

1. <http://salesin.cs.washington.edu/ConvocationAddress.htm>
2. <http://salesin.cs.washington.edu/>
3. <http://www.fooledbyrandomness.com/whyIwalk.pdf>
4. <http://www.johnsonupdaydowndaydiet.com/html/diet-science.html#alternate-day-calorie-restriction>
5. <http://escholarship.org/uc/item/2xc2h866>
6. <http://escholarship.org/uc/item/2xc2h866>
7. <http://www.blog.sethroberts.net/2010/02/18/north-korea-and-penn-state/>
8. <http://www.blog.sethroberts.net/2010/02/23/boring-boring-pleasant/>
9. <http://www.lifestylesport.com/p-1982-fitter1-cobblestone-walkway.aspx?gclid=CJXm7NHQrKACFRgsawodrn1TVA>

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Anthony (2010-03-09 15:56:30)

"How intense learning could go on throughout your life during the Stone Age isn't obvious, however." Have you ever tried to survive in the wild? I'm guessing there's lots of learning involved ...

Alex Chernavsky (2010-03-09 19:04:02)

I would add: 13. Working on a project (i.e., an on-going activity that is directed toward a specific, meaningful goal).

seth (2010-03-09 23:27:41)

that's an interesting idea, Alex. Would working on an assembly line count? what about teaching kindergarten? What about garbage collecting? What about being a reference librarian?

Vic (2010-03-10 00:24:47)

Seth, how many more interventions can make your sleeping better? I thought you were already at around a 99.99 in terms of restedness after adding more animal fat to your diet...

seth (2010-03-10 05:12:42)

Vic, if I stand for 9 or 10 hours, there's no discernible room for improvement. But it's really hard to stand that much so I don't. And I probably do less than the optimal amount of one-legged standing. The Anki produced an increase in how long I slept, without a big increase in how rested I felt when I awoke – which, as you say, was already really high.

Alex Chernavsky (2010-03-10 05:55:04)

Seth, I wasn't thinking of a job. I was thinking more of writing a book, restoring an old car, losing weight, creating a family scrapbook, or planting (and maintaining) a vegetable garden.

seth (2010-03-10 06:39:11)  
Thanks, Alex.

Alexandra Carmichael (2010-03-11 06:45:45)

Fascinating as always, Seth!! Having come to rely perhaps too much on tracking devices to homogenize my life, I'm cautiously warming up to a life of extremes... I'm especially curious about the daily travel though - what's the reasoning behind that? For my own list I would add a good laugh and a long hug each day (tied in to social connection), and a monthly meta-layer of re-evaluating my life goals and my optimal daily experience list. :)

bjk (2010-03-15 06:33:59)

Stories are important, telling or hearing stories. An enormous amount of caveman entertainment must have been in the form of stories, maybe at dinner or right after, perhaps in the form of "we chased this animal and then hit him over the head like this and then" stories. This might go under social or creative, but they're not the same.

seth (2010-03-15 08:34:29)

Alexandra, long ago (the 1970s?) someone found that commuters tend to travel about an hour per day – regardless of the length of their trip! so people who had short distance trips made them longer duration than necessary. And I've come across lots of personal stories that back this up. For example, a friend who worked at home would travel about an hour outside her house every day. Purely by choice.

mark larson | Connecting some threads: a well-balanced life (2010-05-04 16:47:49)

[...] And I went on to remind myself: "Gotta be constantly tweaking the recipe, right? I kinda know the ingredients but the ratios get out of whack". I say all this because it reminded me of something that I bookmarked a couple months ago and forgot to share, which is Seth Roberts on Optimal Daily Experience (via Justin Wehr): Everyone knows about RDAs (Recommended Daily Allowances) of various nutrients. In a speech to new University of Washington students, David Salesin, a computer scientist, advised them to "maintain balance" by getting certain experiences daily: [...]

Tamaranth (2010-06-01 11:12:39)

Hi! I've been doing something similar for a year or so now, with the acronym SPINACH (Social, Physical, Intellectual, New, Artistic, Cultural, Helpful). My categories mostly seem to overlap with yours – and with each other: learning something can count as both Intellectual and New! However, I've found it useful to include Artistic (which is really 'Creative', but the acronym got confusing: encompasses writing, craft activities, baking) and Cultural, which might be anything from reading a novel to listening to (new) music to watching a movie. Or maybe that's the way I make myself part of something greater ...

How to Have an Optimal Daily Experience « Tape Noise Diary (2010-06-01 17:10:15)

[...] How to Have an Optimal Daily Experience by jaycruz on June 1, 2010 Seth's blog » Blog Archive » Optimal Daily Experience [...]

The unreasonable effectiveness of self-experimentation « 720 hours (2010-06-01 22:18:13)

[...] Seth Robert's blog [...]

Ram Robuck (2010-06-03 06:28:04)

Insofar as I can see it, the optimum daily experience is one which leads to high productivity and can only be determined in retrospect. Some people's most productive days are borne in solitude.

Self-experimentation, unusually effective « Artificial Intelligence Church (2010-06-04 22:08:11)

[...] A paper by Seth Roberts on how/why self experiments are so effective (PDF) via Quantified Self. Over 12 years, my self-experimentation found new and useful ways to improve sleep, mood, health, and weight. Why did it work so well? First, my position was unusual. I had the subject-matter knowledge of an insider, the freedom of an outsider, and the motivation of

a person with the problem. I didn't need to publish regularly. I didn't want to display status via my research. Second, I used a powerful tool. Self-experimentation about the brain can test ideas much more easily (by a factor of about 500,000) than conventional research about other parts of the body. When you gather data, you sample from a power-law-like distribution of progress. Most data helps a little; a tiny fraction of data helps a lot. My subject-matter knowledge and methodological skills (e.g., in data analysis) improved the distribution from which I sampled (i.e., increased the average amount of progress per sample). Self-experimentation allowed me to sample from it much more often than conventional research. Another reason my self-experimentation was unusually effective is that, unlike professional science, it resembled the exploration of our ancestors, including foragers, hobbyists, and artisans. Some of the most prolific makers I know seem to enjoy improving themselves as well as the things around them - they're like little laboratories of optimization. Pictured above, a photo from my recent visit to Instructables. Christy and Eric who run the show there found they work better if they walk all day slowly at the computer - a challenge, so they built treadmill computer desks. [Read more](#) | [Permalink](#) | [Comments](#) | [Read more articles in hacks](#) | [Digg this!](#) [...]

Daniel (2010-06-05 03:47:19)

@Ram Robuck. I don't think its necessarily about productivity, just about living a fulfilling life. Although I've got to say, if I do physical activity every day I am more productive.

Self-experimentation, unusually effective | Daring Minds.Com (2010-06-05 03:49:45)

[...] A paper by Seth Roberts on how/why self experiments are so effective (PDF) via Quantified Self. Over 12 years, my self-experimentation found new and useful ways to improve sleep, mood, health, and weight. Why did it work so well? First, my position was unusual. I had the subject-matter knowledge of an insider, the freedom of an outsider, and the motivation of a person with the problem. I didn't need to publish regularly. I didn't want to display status via my research. Second, I used a powerful tool. Self-experimentation about the brain can test ideas much more easily (by a factor of about 500,000) than conventional research about other parts of the body. When you gather data, you sample from a power-law-like distribution of progress. Most data helps a little; a tiny fraction of data helps a lot. My subject-matter knowledge and methodological skills (e.g., in data analysis) improved the distribution from which I sampled (i.e., increased the average amount of progress per sample). Self-experimentation allowed me to sample from it much more often than conventional research. Another reason my self-experimentation was unusually effective is that, unlike professional science, it resembled the exploration of our ancestors, including foragers, hobbyists, and artisans. [...]

Self-experimentation, unusually effective - machine quotidienne (2010-06-05 21:08:49)

[...] A paper by Seth Roberts on how/why self experiments are so effective (PDF) via Quantified Self. Over 12 years, my self-experimentation found new and useful ways to improve sleep, mood, health, and weight. Why did it work so well? First, my position was unusual. I had the subject-matter knowledge of an insider, the freedom of an outsider, and the motivation of a person with the problem. I didn't need to publish regularly. I didn't want to display status via my research. Second, I used a powerful tool. Self-experimentation about the brain can test ideas much more easily (by a factor of about 500,000) than conventional research about other parts of the body. When you gather data, you sample from a power-law-like distribution of progress. Most data helps a little; a tiny fraction of data helps a lot. My subject-matter knowledge and methodological skills (e.g., in data analysis) improved the distribution from which I sampled (i.e., increased the average amount of progress per sample). Self-experimentation allowed me to sample from it much more often than conventional research. Another reason my self-experimentation was unusually effective is that, unlike professional science, it resembled the exploration of our ancestors, including foragers, hobbyists, and artisans. [...]

Elba Davis (2010-07-22 04:26:15)

my God, i assumed you were going to chip in with some decisive insght on the finish there, not leave it with "we go away it to you to determine"™.

Apollo Lemmon » The Experiment and The Practice (2010-07-27 08:09:51)

[...] In the blog entry "Optimal Daily Experience", Roberts also commented on essential experiences to have each day, giving a valuable template for building a rewarding life. In brief and slightly clarified, here is his set of optimal experiences. [...]



Dan (2011-06-01 16:58:45)

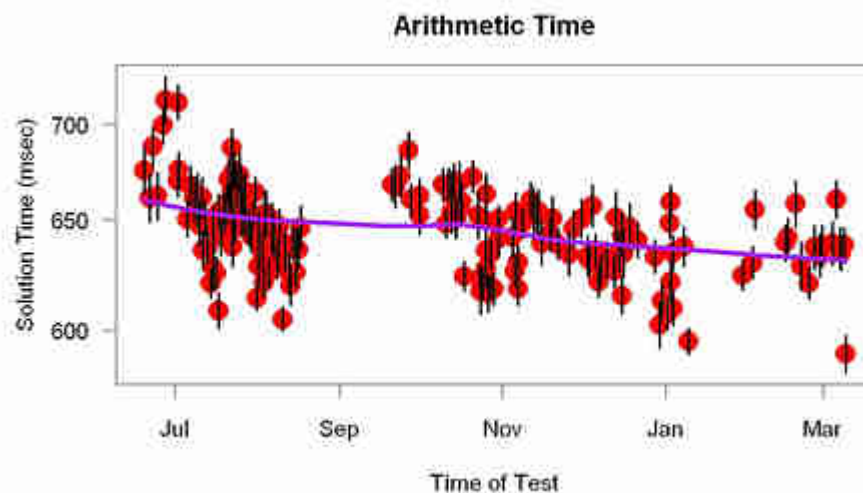
Hey Seth, I like your post it really speaks some truth in the matter of physical needs. The body needs to be constantly releasing certain chemicals like endorphins and adrenaline which are commonly produced by exercise. It also needs to get into the habit of breaking down fat cells and fatty acids, and of course burning calories. I agree with the other stuff but mainly support the point of physical activity as I'm a professional fitness blogger myself. Cool blog by the way! Feel free to drop by mine anytime. Take care

### Science in Action: Mysterious Mental Improvement (2010-03-10 09:15)

For a few years, I've been making daily measurements of how well my brain works. I got the idea after I found that omega-3 (from flaxseed oil) improves my balance. It improved other mental functions as well. Tim Lundeen, using an arithmetic test, [1]found similar results. These results suggested to me there might be a lot we don't know about how our environment affects our brain.

If so, tracking myself might turn up interesting anomalies – clues to big environmental effects. [2]The first one I found involved flaxseed oil. There turned out to be a short burst of improvement after I took it. [3]The second anomaly I found also involved flaxseed oil. When I switched from Chinese flaxseed oil to American flaxseed oil (Spectrum Organic), a few days later my arithmetic scores suddenly improved. Something was wrong with the Chinese flaxseed oil. The third revealing anomaly – which doesn't involve flaxseed oil – happened yesterday (see below). Each point on the graph is one testing session. Each session consists of 32 simple arithmetic problems (e.g., 3+5, 7-6) and takes about 3 minutes. I use R on my laptop to collect the data. I type the answer or the last digit of the answer (e.g., if the answer is 13 I type "3") as fast as possible. Here are the results from almost a year of this task:

[4]



The Y axis is the time it took to do one problem. Yesterday, the graph shows, I suddenly got much faster. My score dropped about 50 msec – far more than normal variation.

What caused the drop? I can think of four possibilities:

1. The test was standing. Usually I test myself sitting.
2. The test happened after I'd been walking on my treadmill for 10 minutes. That too was very rare.

3. I'd had about 30 g of butter 2 hours earlier.

4. I'd stood on my cobblestone mat 2 hours earlier.

My guess is that it's #2 (10 min walking). The previous record low score, in January, might have come after I did Dance Dance Revolution for 30 minutes or so.

1. <http://www.blog.sethroberts.net/2007/02/16/omega-3-and-arithmetic/>
2. <http://www.blog.sethroberts.net/2007/06/30/science-in-action-omega-3-a-surprise/>
3. <http://www.blog.sethroberts.net/2009/03/09/hey-what-happened-to-my-brain-part-2/>
4. <http://www.flickr.com/photos/sethroberts/4421757727/>

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q (2010-03-10 09:40:47)

laptop clocks are not always good for calculating time intervals. they sometimes 'jump'. (the reason for this is that it's potentially very bad for computer clocks to ever go backwards - software almost never covers that possibility) so manufacturers calibrate clocks to go slowly and then jump forward discontinuously. one laptop i worked with jumped 7.2 seconds once or twice an hour. if you get more than one such outlier in a row you can probably rule out a clock anomaly though.

Timothy Beneke (2010-03-10 10:23:57)

What strikes me about the flaxseed oil is how emotionally and physically soothed I feel for about half an hour after I take it. It has a calming effect; I'm tempted to say that it induces a state of serenity, or near-serenity. It certainly assuages hunger far more than an equivalent number of carbohydrate or protein calories does. I'd be very curious to see ANS physiology measures or other measures of things associated with calmness and soothing - oxytocin or vagus nerve activation. Also, does anyone else find flaxseed oil soothing?

seth (2010-03-10 12:29:41)

q, the faster-than-usual performance I saw on the latest day came from many individual trials, not one. And of course the problem you describe would make performance slower than usual, not faster.

tetsuwanatom (2010-03-10 12:58:02)

that's interesting! i suppose the average of the scores is probably more to do with repetition of the task => being able to complete the task faster. it would be interesting to see if the average for a month would change if you only take the tests after an exercise.

Michael (2010-03-10 21:29:08)

You should consider varying the math problems so you don't get used to them. To help my arithmetic skills when I was a trader, I set up an excel worksheet which made random two digit numbers and added or subtracted them (also randomized) to a second two digit number. I hide the solutions column when I printed off the worksheet.

Scot (2010-03-10 21:44:38)

Arousal facilitating a dominant/well-learned response?

Alex Chernavsky (2010-03-11 09:01:23)

Seth, do you have a suggested list of computer-based tests (memory, arithmetic, reaction time, etc.) that self-experimenters can download to assess mental acuity?

Nancy Lebovitz (2010-03-11 12:15:51)

Have you tried [1]Dual N Back- it's supposed to improve fluid intelligence. I haven't been keeping records, but I think it's been doing my mood and mental focus some good.

1. <http://brainworkshop.sourceforge.net/>

seth (2010-03-11 13:27:34)

No, Alex, sorry, this is in the home-brew phase. Nancy, I've heard of the task but haven't tried it. Thanks for the link.

vimal (2010-03-11 14:00:59)

What brand of flax seed oil do you use? I use <http://www.barleans.com/flaxoil.asp> Also is the math test here comparable to your homebrewed test? <http://www.brainmetrix.com/math.htm>

seth (2010-03-11 14:51:28)

I've used Spectrum Organic and Barlean's flaxseed oil. I never found a difference. The math test I do is simpler than the math test on that page. I only use addition, subtraction, and multiplication - no division. And the two numbers being combined are always single digits (0-9). My test doesn't have the awkward interface of the web test-you keep your hands on the number keys and type a single digit. And each trial is separated from previous trials by a few seconds at least. I go at my own pace.

q (2010-03-12 19:45:50)

you're right about the problem i described making it slower. guess i failed the math test.

Dan (2010-03-16 10:56:07)

Timothy, Yes, very soothing. I started taking flaxseed oil a month ago, and noticed the calming effect pretty much immediately. I'm not a particularly anxious person, so I'm curious to see if people with anxiety problems respond the same way.

ben lipkowitz (2010-04-28 22:55:53)

it seems like you are measuring response time more than anything, with times in the sub-second range. perhaps you should do less trials of larger digit additions, so that you'd have to do multiple operations and juggle numbers. I think long pauses for "duh" moments ought to be included in the data. could you post your R code?

seth (2010-04-29 05:21:21)

ben, the reason for using very simple arithmetic problems is so that little learning will be involved - I already know really well that  $3 + 1 = 4$ . Use of larger numbers will allow more learning. I don't know really well that  $17 + 39 = 56$ . I have posted most of the R code - see the R code category.

peter (2010-05-04 12:21:26)

interesting results. now to turn it into a real self-experiment, you might need a few more controls to turn it into a significant trial. placebo, dose-dependent use, time of day (stress v. relaxed times), some positive control (e.g. ritalin), etc...

Physiological Computing : Better living through affective computing (2010-07-08 15:17:22)

[...] In my opinion, both arguments are sound. I would add another strand to the same debate - it seems to me that interest in self-tracking systems, such as those lifelogging experiments described regularly on the excellent Quantified Self blog, is on the rise. The technology to self-monitor is used principally for sports training, see this range of apparatus described recently in Wired. Ambulatory systems to monitor physiology are generally used for fitness training but their mere existence opens

the door for self-experimentation, outside the laboratory (to borrow from Prof. Picard's title), for the people by the people.Â As one example, see this blog posting by Seth Roberts on the effects on omega-3 on physical and mental ability: if you're really interested in self-tracking and self-experimentation, I'd recommend his paper published recently in Medical Hypotheses – full text is linked from this QS post. [...]

**Science in Action: Mysterious Mental Improvement (part 2) (2010-03-11 23:02)**

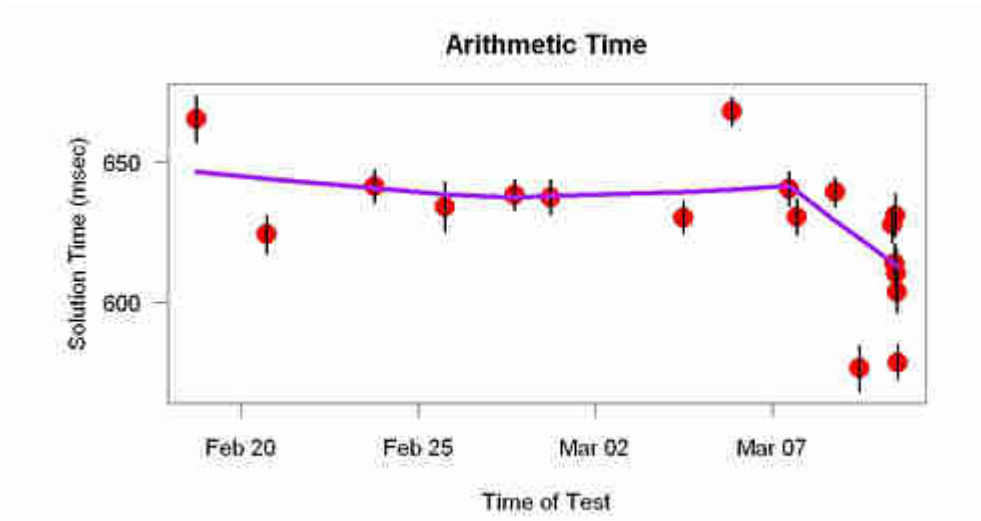
[1]Yesterday I blogged about a sudden improvement in how fast I could do arithmetic. The improvement was much larger than normal variation and happened after I did four things that I rarely did. In chronological order:

- 1. Ate about 30 g of butter.
- 2. Stood on a cobblestone mat (for 5 minutes, which was all I could bear).
- 3. Stood during the test.
- 4. Walked for 10 minutes just before the test.

To find out which mattered, I did them again in the same order and at the same times of day, but with tests before and after each one.Â If performance suddenly improved after one of them, then I'd know.

Here's what actually happened.

[2]



The last six points are the relevant results. The first of the six points (627 msec) was before everything. The second (613 msec) was after butter but before the cobblestones. The third (630 msec) was after the cobblestones but before standing. The fourth (610 msec) and fifth (603 msec) were while standing but before walking. The final one (581 msec) was while standing after walking.

I was surprised and pleased how closely the first and last scores repeated the earlier difference. The first score was close to the previous baseline; the last score was close to the previous outlier. A big improvement seems to be under my control.

Before doing these tests, my best guess about what caused the improvement was the walking. But the scores were improving before the walking so that's unlikely. Perhaps the walking was one of several factors that helped. The data suggest, if anything, a shocking conclusion: butter made my brain work better. An alternative, less consistent with [3]Occam's razor, is that butter, standing, and walking all produced smaller improvements, which together added up to the big improvement. The cobblestones produced a short-lived decrement.

That [4]pork fat improved my sleep obviously supports the butter interpretation. I should be less surprised than anyone else, but still . . . Last week I noticed something else that supports the butter explanation. At a restaurant with a friend, the waiter brought bread and olive oil. I asked for butter. I spread all of it on a piece of bread, then asked for more butter, and spread all of that on another piece of bread. (About 30 g butter total.) It was the first time I'd eaten a large amount of butter at a meal. An hour or so later, I felt unusually good, some combination of calm and warmth. I never noticed this after eating pork fat, but butter may be to pork fat as hamburger is to steak: Easier to digest. The pork fat is within cell walls; the butter fat isn't.

1. <http://www.blog.sethroberts.net/2010/03/10/science-in-action-mysterious-mental-improvement/>
2. <http://www.flickr.com/photos/sethroberts/4425897663/>
3. [http://en.wikipedia.org/wiki/Occam%27s\\_razor](http://en.wikipedia.org/wiki/Occam%27s_razor)
4. <http://www.blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>

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David (2010-03-12 00:58:12)

You're catching on, Seth...despite all the demonizing it gets from the mainstream media, animal fat is the stuff of life. I suggest looking up the Paleo movement (this guy, a well-written, levelheaded MD, is a good place to start: <http://www.paleonu.com/what-is-panu/>); most of us eat diets primarily composed of animal fat, and credit it with improved fitness, sleep, mental functioning, and general health. As for the difference between pork and butter, the difference isn't whether the fat is trapped in cell walls, but whether it's saturated or unsaturated. Butter is 51 % saturated fat by weight; pork belly is only 19 % (calculated from [nutritiondata.com](http://nutritiondata.com)). Repeat your comparison with other foods high in saturated fat (such as coconut), and I suspect you'll find the same results.

Alex Chernavsky (2010-03-12 05:55:28)

Seth, how does your testing program account for mistakes in arithmetic? Do those data points just get dropped? Just curious.

seth (2010-03-12 07:09:30)

David, thanks for the link. As for pork fat vs. butter, I divided my pork belly into meat and fat – physically divided it – and made sure I got plenty of fat. For example, 100 g in one meal. Pork fat is about 40 % saturated fat. So I got more saturated fat from my pork fat than I got from my butter. I'm not sure I'm catching on: butter is not a paleolithic food. Pork fat is much closer. Standing and walking and walking on rocks are very paleo. Butter was the least paleo thing I did, yet it appeared to be the most effective. Alex, trials with errors are dropped from the numbers used to compute average reaction times. I do an analysis that adjusts for overall error rate.

Eric (2010-03-12 10:24:58)

I'm curious if coconut oil or palm oil(the stuff which is called organic vegetable shortening at my store) would have a similar effect? It should by your theory. But I have no idea how available those things are in Beijing.

Aaron Blaisdell (2010-03-12 11:35:04)

Great self-experimenting! I think it would be very useful to redo your experiment with the four manipulations delivered in various orders to really isolate the individual factors by balancing out order effects. If you replicate the butter effect (which is not surprising to any one who knows of the work of Weston A. Price), then it would be interesting to do direct comparisons among various dietary lipids, such as coconut oil ( 90 % medium chain saturated fats), lard, tallow, butter, olive oil, and fish liver oil. I'd love to see a comparative analysis of the effects of fatty acids on cognition.

Ed M. (2010-03-12 19:16:37)

I would second David's suggestion of Panu and add Peter over at hyperlipid... <http://high-fat-nutrition.blogspot.com> I've been on a ketogenic diet for almost a year and have never felt better.... Lost quite a bit of weight too... -Ed

Isa Test (2010-03-12 23:51:44)

Will this help to raise my metabolism as well?

Jaroslav (2010-03-13 13:07:27)

"Pork fat is about 40 % saturated fat. So I got more saturated fat from my pork fat than I got from my butter." Actually pork fat reflects what the pig ate because of how it's digestive system works. If you feed pig corn and soy, it's fat is going to be a lot more unsaturated then the nutritional tables are telling you. On the other side cow has bacterias in rumen that will saturate the polyunsaturated oils she eats. Rest assured that you ate a lot more saturated fats with butter then with lard. "I'm not sure I'm catching on: butter is not a paleolithic food. Pork fat is much closer." I would not fall for this paleo dogma. We are mammals. It's paleo only in the mythological thinking of the "let's do every stupid thing hunter-gatherers did" kind, but metabolically speaking it's a nonsense. Butter is easier to absorb because it's higher ratio of short and middle chain fatty acids mean that it needs less action from your digestive system, and for the same reason it's also better fuel. Same for coconut oil.

CTB (2010-03-13 14:42:26)

As an addendum to Jaroslav's comment: I remember hearing a story in nutrition class about how farmers in Great Britain tried to up the ratio of unsaturated:saturated fat in pigs by modifying their feed. They were so successful that when the slaughtered carcasses were hung up on the meat hooks, the fat just dripped off like oil.

Dean (2010-03-14 11:16:45)

Hand activity prior to solving equations could count as another parameter. Since buttering the bread could be counted as hand activity, it might be more accurate experimenting to butter the bread before the baseline is measured, or solve equations after buttering but before eating the butter. Also how long after eating the butter do you solve the equations? Maybe there is an optimal time to wait to obtain the best results.

seth (2010-03-14 13:16:22)

Dean, why do you think that hand activity might matter? In the case of the anomalous results, I ate the butter a few hours before the test. And the effect - the improvement caused by the butter - seemed to grow during those hours, which is what you'd expect as a nutrient is gradually absorbed.

Marly Harris (2010-10-03 10:13:43)

I'm a bit late to the party (your entry was dated March, 2010) but as a sexy old woman (77), my mantra is butter is a reason to wake up in the morning. I've gone through every type of butter available, hoping that the organic grass-fed type (truly deep yellow in color) would be the best but Jana Valley (Czech butter) is number one for me. People are always asking how, at my advanced age, I am wrinkle free and when I say that I eat lots of good saturated fat, they shudder.

## Assorted Links (2010-03-12 17:05)

- [1]A skeptical look at Karl Popper by Martin Gardner
- [2]Effects of food on the brain
- [3]fat sensitivity correlates with BMI (less sensitive, greater BMI)
- [4]Bill McKibben on Climategate: "If you managed to hack 3,000 emails from some scientist's account, you might well find a few that showed them behaving badly, or at least talking about doing so." This gives new meaning to the term denialist.
- if [5]someone steals \$2 million do you still trust their research?

Thanks to Vic Sarjoo, Anne Weiss, and Marian Lizzi.

1. [http://web.archive.org/web/20040212023313/http://www.stephenjaygould.org/ctrl/gardner\\_popper.html](http://web.archive.org/web/20040212023313/http://www.stephenjaygould.org/ctrl/gardner_popper.html)
2. <http://www.nature.com/nrn/journal/v9/n7/abs/nrn2421.html>
3. <http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=7311680>
4. [http://www.tomdispatch.com/blog/175211/tomgram%3A\\_bill\\_mckibben%2C\\_climate\\_change%27s\\_o.j.\\_simpson\\_moment/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+tomdispatch%2FesUU+%28TomDispatch%3A+The+latest+Tomgram%29](http://www.tomdispatch.com/blog/175211/tomgram%3A_bill_mckibben%2C_climate_change%27s_o.j._simpson_moment/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+tomdispatch%2FesUU+%28TomDispatch%3A+The+latest+Tomgram%29)
5. [http://www.huffingtonpost.com/robert-f-kennedy-jr/central-figure-in-cdc-vac\\_b\\_494303.html?ref=email\\_share](http://www.huffingtonpost.com/robert-f-kennedy-jr/central-figure-in-cdc-vac_b_494303.html?ref=email_share)

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q (2010-03-12 19:44:58)

Wish I could read more of the food on brain link without spending \$32. Library, maybe.

Dave Lull (2010-03-13 06:41:13)

'A Sceptical Look at "A Skeptical Look at Karl Popper' by J.C. Lester: <http://www.la-articles.org.uk/popper.htm>

Dennis Mangan (2010-03-13 06:54:56)

You can read it for free, here: <http://www.physci.ucla.edu/research/Gomez-Pinilla/publications/nrn2421.pdf> Quite often, searching for the paper at Google Scholar will turn up some site that has posted the paper, in this case it looks like Physical Sciences at UCLA.

Dan (2010-03-13 10:41:54)

What do you think of the evidence in your second link? They say "diets that are high in saturated fat are becoming notorious for reducing molecular substrates that support cognitive processing and increasing the risk of neurological dysfunction in both humans [3] and animals [4].", which seems to be evidence against your animal fat hypothesis. [3] Greenwood, C. E. & Winocur, G. High-fat diets, insulin resistance and declining cognitive function. *Neurobiol. Aging* 26 (Suppl. 1), 42â€“45 (2005). [4] Molteni, R., Barnard, J. R., Ying, Z., Roberts, C. K. & Gomez-Pinilla, F. A high-fat, refined sugar diet reduces hippocampal brain-derived neurotrophic factor, neuronal plasticity, and learning. *Neuroscience* 112, 803â€“814 (2002).

Andrew Gelman (2010-03-13 16:04:28)

Hi, Seth. Martin Gardner is a good writer and a serious person but I don't think he knows what he's talking about on this topic.

thehova (2010-03-13 19:50:06)

I've always been a big fan of Karl Popper for his support of experimentation and his skepticism of Freud and psychology of his time (that, by itself, makes him important....Popper was an early proponent of Cognitive Behavioral Therapy).

seth (2010-03-14 13:24:58)

thehova and Andrew, I included that link because I've always been anti-Karl Popper. His ideas seemed to point in the wrong direction if you wanted to do good science. For example, his emphasis on falsification. In practice, quite often, I don't "test" theories, I assess their value – their value in finding solutions to problems, for example. When I use evolutionary ideas to suggest treatments to try, I'm not testing evolutionary theory. Nothing I know of Popper's work shows any sign he understood this basic point. As someone has said, all theories are wrong but some are useful.

Andrew Gelman (2010-03-15 02:12:34)

Seth: What's relevant to me is not what Popper "understood." Based on my readings, I think Lakatos understood things much better, and in fact when I speak of Popperian ideas I'm generally thinking of Lakatos's interpretation. (Lakatos himself did this, referring to constructs such as Popper \_1 and Popper \_2 to correspond to different, increasingly sophisticated versions of Popperianism.) What's relevant to me is not what Popper "understood" but what he contributed. I think his ideas, including his emphasis on falsification, have contributed a huge amount to our understanding of the scientific process and have also served as a foundation for more sophisticated ideas such as those of Lakatos. When considering contributors to human knowledge, I think it's best to take an Earl Weaver-esque approach, focus on their strengths rather than their weaknesses, and put them in the lineup when appropriate. (As the publisher of two theorems, one of which is true, I have a natural sympathy for this attitude.) Regarding the specific question of how Popper's ideas of falsification relate to applied statistics (including the quote at the end of Seth's comment), you can take a look at my [1]2003 and [2]2004 papers and my recent [3]talk. The basic idea is that, yes, we know our models are wrong before we start. The point of falsification is not to discover that which we already know, but rather to reveal the directions in which our models have problems.

1. <http://www.stat.columbia.edu/~gelman/research/published/isr.pdf>

2. <http://www.stat.columbia.edu/~gelman/research/published/p755.pdf>

3. <http://www.stat.columbia.edu/~gelman/presentations/philosophytalk.pdf>

Nathan Myers (2010-03-15 23:32:01)

Thank you for pointing us to Bill McKibben. We need more like him.

seth (2010-03-16 07:19:01)

Andrew, I agree with you about Lakatos. And if Lakatos's work built on Popper's, I stand corrected.

Scot (2010-03-17 15:52:53)

ASAs comment on Climate gate: <http://magazine.amstat.org/2010/03/climate10/> Note the emphasis on assessing uncertainty.

## **QuietComfort 15 Headphones (2010-03-14 19:07)**

The [1]QuietComfort 15 headphones ( \$300) are Bose's newest noise-cancelling headphones. I had two of an earlier model, the QC 2, because when they broke I couldn't bear to be without one for two weeks. I used them while walking on my treadmill and riding the subway. BART is noisy.

The model numbers went 1, 2, 3, 15. And, yeah, the QC 15 is much better than the QC 2 and QC 3, which were about the same. The first time I wore them on BART, when I got out of the subway I noticed I didn't feel exhausted, the way I usually did after a subway ride. I felt normal. The noise had been exhausting.



1. [http://www.bose.com/controller?url=/shop\\_online/headphones/noise\\_cancelling\\_headphones/quietcomfort\\_15/index.jsp](http://www.bose.com/controller?url=/shop_online/headphones/noise_cancelling_headphones/quietcomfort_15/index.jsp)

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Robin Barooah (2010-03-14 19:23:08)

I did the same experiment on BART after noticing how much less exhausted I felt after flying with QC2s. I've ended up using Apple's in ear ( \$80) earbuds which block out a lot of sound as a regular compromise. They aren't as good as the QCs, but they are a lot easier to wear in public. I find that the noise of busy streets is similarly exhausting, and these have made a huge difference to my general sense of well-being.

Timothy Beneke (2010-03-14 23:03:55)

My days typically involve a total of 24 minutes walking to and from BART stations along a big noisy street, about 10 minutes of waiting on BART platforms and 16 minutes of BART rides – I now always wear Mack earplugs, have been for 3 or more years – life is much calmer. I can relax and "hear myself think". It seems to accentuate my vision – I notice more visually. I would predict that it lowers my blood pressure a little... It took a few days of adjustment before I became comfortable wearing them, but now, they are essential....

wcw (2010-03-15 00:28:29)

I agree, steady noise causes fatigue. Airplanes are the worst for this. I very strongly recommend '[1]musicians earplugs' instead of noise-canceling headphones.

1. <http://www.etymotic.com/ehp/erme.aspx>

Ben Casnocha (2010-03-15 14:26:01)

This finally pushed me over the edge. Just bought them.

griff (2010-03-15 15:12:42)

I prefer the in-ear headphones that suppress external noise due to their flanged plugs (like earplugs). They are very small and require no power source. They are great for yardwork when using the lawnmower or leaf blower which is also a great opportunity to listen to a good book.

Nansen (2010-03-16 15:29:48)

@ Timothy Beneke, you might want to try Flents "Quiet! Please" Ear Plugs. The NRR 29 gives you 7 extra decibels of noise reduction over Mac's. 25 pair cost \$8.00. Downsides: a little time-consuming and solipsistic.

Stephen M (Ethesis) (2010-03-16 17:30:21)

I used to buy foam ear plugs by the industrial case for my wife when she was in nursing school and then working on her CRNA – she would use them and give them to friends. They work very well. You can clean them by tossing them in the laundry, just put them in a button down pocket on a pair of pants or a shirt. They really worked well. Flents is a brand of foam ear plugs. Of course you can't listen to music or podcasts with the earplugs the way you can with noise cancellation ear phones.

seth (2010-03-16 22:40:58)

the new headphones make possible something that wasn't possible before: Watching a film on BART on the way home from San Francisco. The below-bay portion of BART is very noisy.

### **Scary Kombucha (2010-03-15 06:04)**

[1]During a 2009 FBI/NYPD raid of a house in Queens

A hazmat team in full protective gear was brought in to investigate a jar of kombucha tea fermenting in the basement.

The police seized a Mao Zedong refrigerator magnet, among other things.

1. <http://www.commondreams.org/view/2010/03/11-6>

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### **Sandy Tesch on Fund-Raising (2010-03-15 15:01)**

At Berkeley, one of my most unusual students was a psychology major named Sandy Tesch, who by then had risen through Red Cross volunteer ranks to be on their national youth council. A few years later she was head of the youth council. During college, she assumed that after she graduated, she would work for a non-profit. Now, however, she does fund-raising for the UC Berkeley library.

She won a post-graduate fellowship and during her fellowship year she met a woman who worked in fund-raising. She realized she liked it. Why? I asked. Because when you do fund-raising, you're working with a lot of caring people, she said. They're like the volunteers she worked with during her Red Cross years. Instead of giving time, they're giving money.

[1]Peter Hessler on Peace Corps volunteers.

1. <http://www.newyorker.com/online/blogs/newsdesk/2010/03/peace-corps.html>

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Melissa (2010-03-15 17:38:30)

People sure are different. When I did fundraising I thought it was absolute hell- boring, beggingly, and not actually producing anything real. I always thought the people who solicit strangers in the street for Greenpeace and other assorted causes had a hellish job too...but recently I met someone who loved doing that too! I guess people think my job, web development, is boring, but I love creating things and solving difficult technical problems.

Andrew Gelman (2010-03-16 02:29:01)

Seth: Why do you say "however"? The university library is non-profit, no?

seth (2010-03-16 07:15:05)

Andrew, UC Berkeley is not called a "non-profit", no. The noun and the adjective have different meanings. The "however" is essentially hers, not mine. She said, "I thought I would work for a non-profit".

## Learning Chinese (update) (2010-03-17 03:53)

I've spent seven months living in Beijing. Since that started (October 2008) I've wanted to learn Chinese. I've tried many things. Now, finally, I think I've found a method that works for part of it (written vocabulary).

There are four aspects:

Content. I'm learning the basic 800-odd words covered in [1]Learning Chinese Characters by Alison and Laurence Mathews, which are those required by a certain standard Chinese Language test (HSK Level A). I use their make-a-story method for each character.

Study Method. I use [2]Anki. It's like flashcards, but with a near-optimal mix of old and new cards. [3]Comparison of Anki with similar software. When I used actual flashcards, I didn't do a good job of mixing old and new cards. I found a Anki deck already made for the Mathews book. The Mathews will be glad to know that the (free) Anki deck plus (free) Anki software make their book more valuable. I constantly consult it for help.

Catalyst. [4]I walk on a treadmill to make studying pleasant.

Minimalism. When I told a Chinese friend I was just learning the meaning of each character, not the pronunciation, she frowned. After that I tried to learn the pronunciation, too. But now, trying to learn the pronunciation at the same time, the whole thing goes too slowly. The pronunciation is much harder than the meaning and less useful. Learning just the meaning is much faster and makes the whole thing seem more doable.

More [5]The origin of Anki-like programs. [6]An approach similar to the Mathews's.

1. <http://www.blog.sethroberts.net/2009/05/21/learning-to-read-chinese/>
2. <http://ichi2.net/anki/>
3. <http://nihongoperapera.com/mnemosyne-anki-review.html>
4. <http://www.blog.sethroberts.net/2010/02/23/boring-boring-pleasant/>
5. [http://www.wired.com/medtech/health/magazine/16-05/ff\\_wozniak?currentPage=all](http://www.wired.com/medtech/health/magazine/16-05/ff_wozniak?currentPage=all)
6. <http://www.nanzan-u.ac.jp/SHUBUNKEN/publications/miscPublications/pdf/RH/RH%20Simplified-sample.pdf>

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Sam (2010-03-17 06:46:43)

The best language-learning experience I ever had was a summer course at age 20 at the U of C (the good one, in Illinois, called French for Reading Knowledge. We paid no attention at all to pronunciation, conversation - we just ground through the grammar as we read more and more. I was left with the memory of many sentences that worked which I picked up from Gide and Giono, and can still read it easily. When I met a Frenchman in the next few years, I would amuse him with my pronunciation but amaze him with the complex ideas I could express - had I continued or lived in France for a few months, I would have been fluent. Alas, I didn't. On the other hand, in German classes from 3rd grade to Freshman in college, I learned it all - and now have very little (although I can sort of answer questions put to me in German in English). My "sense" of French after 6 weeks of study remains better than my sense of German after 10 years of study - 35 years later. Let your Chinese friends frown. Pronunciation excellence avails you naught if you can't find the words, or can only bore your hearers.

M (2010-03-17 08:08:54)

It seems you have independently discovered the philosophy of [www.alljapaneseallthetime.com](http://www.alljapaneseallthetime.com) (Which is also a very useful

approach to learning Chinese!)

Kevin Miller (2010-03-17 08:23:17)

I would echo the advice to learn pronunciation as well as meaning, for two reasons. First, because as you learn more characters they become more regular, with useful keys to both pronunciation and meaning. The more cues you have to a character the less like you are to have retrieval failures. Second, since you spend time in Beijing, it makes to learn as much spoken Chinese as possible, and to do that it is important to integrate spoken and written language (particularly because Chinese has so many homophones at the level of characters, given that there are an order of magnitude fewer syllables than English has). A really fascinating book, now out of print, that touches on these issues is David Kelley's "Deciphering the Maya script." It describes two attempts to decipher non-alphabetic scripts (Mayan and hieroglyphics) that only succeeded when they were able to connect them to the closest remaining spoken languages. I believe he also says that students at Harvard in the mid 1900s would try to learn classical Chinese using a meaning-based method (since we don't really know how classical Chinese was pronounced) without great success. I think you're right that if you had to pick one thing to focus on, meaning over pronunciation would be the right thing to do with characters. We published a study a few years ago in JEP:LMC looking at how readers of English and Chinese responded to errors that are either visually similar to or phonologically similar to what should have been there (e.g., "Paul Revere rode/robe/road his white horse"). The basic finding was that Chinese readers used visual and phonological similarity as about equal cues, but English adult readers just used phonology beyond the very first fixation, so "road his white horse" is usually fine and "robe his white horse" never is. (Feng, G., Miller, K., Shu, H., & Zhang, H. (2001). Rowed to recovery: The use of phonological and orthographic information in reading Chinese and English. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 27, 1079-1100.) But the neat thing about the trek you're on is that you can try different strategies and go back and relearn what you missed. Really a perfect field for self-experimentation, which has certainly been my experience.

Eugene (2010-03-17 08:31:21)

This sounds familiar to James Heisig's approach, where he also separates the meaning from the reading (pronunciation) of Chinese characters, and focuses on creating mnemonic clues based on the radicals. Scroll down to the bottom of this Wikipedia entry for links to free sample PDFs. [http://en.wikipedia.org/wiki/Remembering\\_the\\_Kanji](http://en.wikipedia.org/wiki/Remembering_the_Kanji)

Aaron Blaisdell (2010-03-17 10:09:51)

Seth, don't be scared off by the shallow learning curve at first when trying to learn pronunciation along with meaning. The learning curve is non-linear and will accelerate as you continue, for the reasons put forward above by Kevin.

Lucky (2010-03-18 07:49:58)

I once had to learn enough Chinese to get by thanks to a quick unexpected trip (for a funeral of all things) to China. I heard from a military intelligence friend of mine that in his unit, he learned that when you need to learn a new language, if you engage in cross-dominant physical activities (crossing your legs and arms, doing things with both hands at the same time, etc, there is actually an exercise program called Brain Gym that they used), then you will learn at a significantly faster rate. It worked for me, it worked so well, that I now use those Brain Gym exercises when I need to learn anything at all!

Patrik (2010-03-18 17:46:32)

Funny how little we actually know about the best way to teach/learn/acquire a language in adulthood. Bottom line: for the vast majority of us, learning to speak another language fluently, after the age of 13 or so, is really effin' hard.

## **Journalists and Scientists (2010-03-17 16:48)**

[1]A few days ago I quoted an editor who works for Rupert Murdoch as saying that journalists care too much about impressing their colleagues and winning prizes and not enough about helping readers. [2]Here is Walter Pincus, a

Washington Post reporter, saying the same thing:

Editors have paid more attention to what gains them prestige among their journalistic peers than on subjects more related to the everyday lives of readers. For example, education affects everyone, yet I cannot name an outstanding American journalist on this subject.

I quote this to support the Veblenian view I've expressed many times on this blog – that scientists would rather do what gains them prestige among their peers than what helps the rest of us, who support most science. I think it's hard to understand the success of [3]my self-experimentation (e.g., new ways of losing weight) until you understand this aspect of science. I was successful partly because my motivation was different.

1. <http://www.blog.sethroberts.net/2010/03/04/one-man-vs-all-education-professors/>
2. [http://www.cjr.org/essay/newspaper\\_narcissism\\_1.php](http://www.cjr.org/essay/newspaper_narcissism_1.php)
3. <http://escholarship.org/uc/item/2xc2h866>

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Nathan Myers (2010-03-17 22:17:34)

This isn't a statement about scientists. It's a statement about all identifiable groups everywhere. It arises from the Iron Law of Institutions, which notes that people will almost always act to raise their standing within their immediate organization even where such action interferes with the goals of the organization.

tom (2010-03-18 15:05:45)

I'm not sure journalism is a good example of peer prestige driving decisions, and I'm really not sure that education is a good example of it: 1. Most papers are very customer-driven and less peer-driven. They don't include big sports sections, or comics, or offer Sudoku, for their peers. They include them because readers like them. They also do a lot to try to keep their advertisers happy. Scientists may be different because their customers and peers are often the same, or at least in the same group. (I'm guessing this about scientists.) 2. Papers probably don't do more education reporting for very good reasons. First, few readers care enough to buy a paper based on education reporting, whether local or national. Second, big papers are deeply constrained by what it is publicly permissible to discuss about education. My own view is that 90 % of the education debate today is about pretending that the biggest difference between good and bad schools is NOT the qualities of the students who go there. A big city newspaper cannot ever come out and agree with that, so it must always report some version of "x students are doing poorly; therefore we must not be doing/spending enough to support x students." I'm probably happy that they don't do more of that than they already do. 3. The journalists and editors who are peer-centered are probably looking for Pulitzer bait stories. But I'd bet that's a small part of budgets and focus.

Anthony (2010-03-18 15:30:59)

"Second, big papers are deeply constrained by what it is publicly permissible to discuss about education. My own view is that 90 % of the education debate today is about pretending that the biggest difference between good and bad schools is NOT the qualities of the students who go there." This is a good point. Also, because the US is multiracial, there is also the large Black-White (and Black-Asian, and to a lesser extent White-Asian) average IQ score differences lurking in the background. I.e., the reason Black inner-city schools do so poorly is partly because the Blacks at them have low average IQs. But you can't say that. Rather, the whole debate is about how to remove differences in educational outcomes, but those are of course largely correlated with differences in IQs.

seth (2010-03-18 15:58:10)

"Scientists may be different because their customers and peers are the same." Only if you don't think science should benefit those who pay for it. Tom and Anthony, Pincus had other examples.

Patrik (2010-03-18 17:43:13)

This desire for peer-praise is a very human condition. I work with web designers on large, e-commerce projects and often see them design such that their peers would approve, when they should designing for conversion from visitors into buyers.

Alex Chernavsky (2010-03-18 18:34:08)

"People everywhere enjoy making their messages sound more complicated than necessary. In all professions, people enjoy using language to convey the feeling, 'my field is so complex ordinary mortals could never understand it.' Children establish superiority over peers with pig Latin. Lawyers do it with gobbledygook, truck drivers with citizens' band jargon, and scientists (and educators) with the language of grantsmanship. [...] Many perfectly honorable people write in heavy language because it is an ego trip; they are writing to impress, not to express." –Albert Joseph, *Quarterly Review of Doublespeak*, July, 1981

tom (2010-03-19 18:00:59)

Seth, I meant that you are more likely to be right about scientists than Pincus is to be right about journalists. Complaints like Pincus' have been made for years, but journalism has always gotten much more independent feedback from large numbers of non-journalist users (readers and advertisers) than scientists do from large numbers of non-scientist users. Pincus' complaints and his examples in the ungated excerpt (education, food, subprime mortgages) are weak. Each of these subject could be customer/reader focused. But I think Pincus is thinking of something different. He wants the paper to push for social change at the government level with exposes of bad systems in need of better and bigger regulation. If you were an editor, you would probably commission articles on what individual readers should do differently with their own food, education, and finances. If Pincus was an editor, he would want stories that would encourage Congress to review/fund government programs, etc.... So I think you're misreading Pincus' complaint as being similar to yours. If anyone found a non-gated link, please post it.

Michael Metcalf Bishop (2010-03-23 17:04:34)

A washington post reporter can't name an education reporter? Jay Matthews is probably the best in the business <http://voices.washingtonpost.com/class-s-truggle/>

## Best Use of Smiley Face (2010-03-17 17:21)

:) :> :) – I'm bad at emoticons. But I appreciate other people's work. From [1]an article about the Lehman report:

“So it's legally doable but doesn't look good when we actually do it? Does the rest of the street do it?” one Lehman employee asks another in emails included in the report. The answers, respectively, are yes and no, followed by a smiley face.

1. <http://www.observer.com/2010/wall-street/repo-men%E2%80%99s-new-lehman-shrug>

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## Michael Lewis Echoes Veblen (2010-03-17 21:16)

Describing those who made money in the subprime mortgage market, [1]Michael Lewis said this:

They were outsiders to the market that they were betting on. And in addition, they were, in many cases, personally curious people, not clubbable members of the group. And I think that was a key to the success. I think that the fact that they didn't feel compelled in any way, on any level, to think like other people gave them an advantage.

This is what Thorstein Veblen said about Jews in a 1917 essay titled "[2]The intellectual pre-eminence of Jews in modern Europe." Being outsiders gave them freedom of thought. Lewis may have read that essay. A few years ago, he compiled [3]an anthology of economic classics, one of which was Veblen's Theory of the Leisure Class. I mentioned this essay [4]earlier.

1. <http://www.businessweek.com/news/2010-03-15/lewis-faults-short-term-greedy-cites-goldman-interview.html>
2. [http://books.google.com/books?id=TVaqsAF3toYC&pg=PA219&lpg=PA219&dq=the+intellectual+pre+eminence+of+jews+in+modern+europe&source=bl&ots=wr80tf\\_V3f&sig=aaq9Cue2XbXNeKfQTIVLLk-iIU0&hl=en&ei=yaahS\\_L0M5HUtG0zwpYLBA&sa=X&oi=book\\_result&ct=result&resnum=4&ved=0CBcQ6AEwAw#v=onepage&q=the%20intellectual%20pre%20eminence%20of%20jews%20in%20modern%20europe&f=false](http://books.google.com/books?id=TVaqsAF3toYC&pg=PA219&lpg=PA219&dq=the+intellectual+pre+eminence+of+jews+in+modern+europe&source=bl&ots=wr80tf_V3f&sig=aaq9Cue2XbXNeKfQTIVLLk-iIU0&hl=en&ei=yaahS_L0M5HUtG0zwpYLBA&sa=X&oi=book_result&ct=result&resnum=4&ved=0CBcQ6AEwAw#v=onepage&q=the%20intellectual%20pre%20eminence%20of%20jews%20in%20modern%20europe&f=false)
3. [http://www.amazon.com/Real-Price-Everything-Rediscovering-Economics/dp/140274790X/ref=sr\\_1\\_9?ie=UTF8&s=books&qid=1268885528&sr=8-9](http://www.amazon.com/Real-Price-Everything-Rediscovering-Economics/dp/140274790X/ref=sr_1_9?ie=UTF8&s=books&qid=1268885528&sr=8-9)
4. <http://www.blog.sethroberts.net/2009/01/24/not-the-same-study-section-how-the-truth-comes-out/>

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Nile (2010-03-18 19:39:24)

The man who did more than anyone else in the 20th century to prevent nuclear war [Herman Kahn] has a few illuminating paragraphs on educated incapacity. I have observed it is very difficult for the average American, raised in a protective cocooning environment to engage in "reality testing" [http://www.hudson.org/index.cfm?fuseaction=publication\\_details&id=2219](http://www.hudson.org/index.cfm?fuseaction=publication_details&id=2219)

seth (2010-03-18 19:49:36)

Thanks, Nile. Kahn attributes the term "trained incapacity" to Veblen. An example: "If a new cure happens to be developed that is at variance with accepted concepts, the medical profession is often the last to accept it. This problem has always existed in all professions, but it tends to be accentuated under modern conditions."

## **Eczema, Nighttime Cough, Antibiotics, and Fermented Food (more) (2010-03-18 19:24)**

This comment was made recently on [1]an earlier post:

I am so glad I found this blog.

My daughter has had coughing fits for 24 months (she's 5 1/2 yo).

Inhalers, several doctors, nothing helped. She routinely coughed until vomiting. After one 10 hour coughing fit I reached my limit and scoured the web.

After putting in her whole medical history as search qualifiers I found this [post]. The prior eczema and antibiotics were key indicators.

After 3 days of drinking 1 probiotic shake a day, she showed very marked improvement. After 1 week, no symptoms. This is a girl who's been unable to run and play for 2 years. Who woke up coughing and gagging most nights.

After 6 weeks of the same regimen, she still shows no symptoms and is running and playing full blast.

The pulmonary specialist discounts the results we've seen as a fluke . . . we'll see. Previously my daughter's lung capacity was measured at 47 % of expected.

"Unable to run and play for 2 years"! I'm impressed. Not only (a) the improvement is huge, but also (b) it resembles verification of a prediction, not just something a theory can explain, (c) it wasn't obvious to "several doctors" or (d) the rest of the Internet, and (e) after it happened it was dismissed by an expert, even though the evidence for causality is excellent. The verification aspect reminds me of [2]Pale Fire:

If on some nameless island Captain Schmidt  
Sees a new animal and captures it,  
And if, a little later, Captain Smith  
Brings back a skin, that island is no myth.

1. <http://www.blog.sethroberts.net/2009/04/29/eczema-nighttime-cough-antibiotics-and-fermented-food/>
2. <http://www.tundrasquid.com/canto3.htm>

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Sam (2010-03-19 14:44:10)

I introduced my daughterinlaw to kombucha. Both her and my granddaughter have suffered horrible skin rashes all there lives. After drinking a glass per day for a week there was a marked improvement and shortly after that the rashes were completely gone. Many "cures" had been tried previously including subsription medicines with no improvement at all.

John (2010-03-26 21:12:02)

I have been stunned at how my sinuses have improved over the last four months after ingesting larger quantities of probiotics. After reading Huffnagle's book The Probiotics Revolution and your writing on the umami hypothesis (which led to an attempt to make the most umami-infused high-fat burger ever), I'm now eating 1-2 c yogurt day, taking Culturelle Lactobacillus (1/day) and several other bacteria-laden products. While I still have allergies, I have only had stuffed sinuses twice (for one day each time) for the last four months! I had been known at work as the guy who sneezed coming in and had suffered from extreme sinus closure (neti pots didn't help, decongestant rebound was a problem). I still sneeze from allergies at times but they seem to have gone down as well. Also, 4 caps of flaxseed oil per day--still helping my gums. Fish oil seems to work better for my mood and thought process, though. Am now trying the Shangri-La diet (appetite suppression strategy)....you're a star, Seth!

Top Bottom Middle Smart « Rhymes With Cars & Girls (2010-03-27 07:06:44)

[...] You need to read this post from (again) Seth Roberts. If I'm reading correctly, he (a blogger) basically cured a 5 year old girl of coughing fits that were ruining her childhood. By blogging. [...]

## Assorted Links (2010-03-20 17:45)

- [1]Julian Simon replies to his critics



- [2]self-experimentation with pig saliva. "'I was at first told that self-experimentation was not allowed any more,' says Varki. . . . He slyly asked if any members of the committee wanted to be the volunteers."
- [3]omega-3 helps healthy boys. Background [4]here.
- In Seoul, [5]a week without Internet. "An unnerving sense of isolation."

Thanks to Dave Lull.

1. <http://www.juliansimon.org/reply-critics.html>
2. <http://www.sciencemag.org/cgi/content/full/322/5902/659?ck=nck>
3. [http://www.ncbi.nlm.nih.gov/pubmed?term=%22The+American+journal+of+clinical+nutrition%22\[Jour\]+AND+2010\[pd at\]+AND+McNamara\[author\]&cmd=detailssearch](http://www.ncbi.nlm.nih.gov/pubmed?term=%22The+American+journal+of+clinical+nutrition%22[Jour]+AND+2010[pd at]+AND+McNamara[author]&cmd=detailssearch)
4. <http://articles.mercola.com/sites/articles/archive/2010/03/16/omega3-boosts-brain-function-in-boys.aspx>
5. <http://news.bbc.co.uk/2/hi/asia-pacific/8551398.stm>

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## Natto is Nothing . . . Try Funazushi (2010-03-21 10:46)

From [1]a travel guide to Hikone, a town near Osaka:

But natto is nothing. The real test of gastronomic mettle in [Japan] is funazushi.



A challenging plate of funazushi.

This forerunner of all sushi comprises fish that have first been salted and then had the salt soaked out before being packed into large crocks between layers of cooked rice and left to "mature" for two or three years. The resulting utterly ungodly stench from this finny fare is enough to make a grown man practically keel over.

But, reflecting that some fine-tasting cheeses have a rancidity not unlike that of diaper contents, I tried it. And of course the stuff tastes exactly like it stinks. The official guide to Hikone cheerfully observes that funazushi is often referred to as the "king of delicacies."

1. <http://search.japantimes.co.jp/cgi-bin/fv20100321a1.html>

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Aaron Blaisdell (2010-03-21 11:48:56)

I'll try anything twice. Although it took more than 2x to come to enjoy durien--the king of fruits. I wonder how long it would take me to come to enjoy funazushi? If it's anything like the fermented high-vitamin cod liver oil I drink daily, then perhaps not long at all. ;-)

marmolillo (2010-03-21 13:02:19)

Sound like the Roman Garum: <http://en.wikipedia.org/wiki/Garum> For them it was a delicatessen, but not for everybody even in those days. According to experts the taste of fermented garum would be challenging for standards gourmets.

Melissa (2010-03-21 20:30:54)

Sound like the Swedish Surströmming

### **Noseclipping Success (2010-03-21 18:42)**

If you read [1]Andrew Gelman's blog, [2]this will be old news:

The other day I was talking with someone and, out of nowhere, he mentioned that he'd lost 20 kilos [44 pounds] using Seth's nose-clipping strategy.

1. <http://www.stat.columbia.edu/~gelman/blog/>

2. [http://www.stat.columbia.edu/~cook/movabletype/archives/2010/03/clippin\\_it.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2010/03/clippin_it.html)

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### **Millennium Village Evaluation (2010-03-22 07:17)**

When I started college, I started reading harder books. I noticed something no one had told me about: Only some of them made sense. In some cases (e.g., Theory of the Leisure Class), there was a general statement I could understand and examples that clearly supported it. In other cases (e.g., Freud), I had difficulty understanding what was being said. I stopped reading the puzzling stuff.

I thought of this experience when, thanks to [1]Marginal Revolution, I read [2]Michael Clemens's comments on how the Millennium Village project should be evaluated. This makes sense, I thought. His points are clear and he has evidence for them. (I wish he hadn't used the words scientific and scientifically, which confuse me, but that's minor.)  
In contrast, when Jeffrey Sachs [3]explains the absence of comparison villages like this:

he [Sachs] does not like the idea of going into a village, subjecting poor people to a battery of questions and then leaving them empty-handed.

I'm confused. In grad school I learned that a good way to test for causality in an experiment is to test different dosages of the treatment; if the treatment has an effect, different dosages should have different effects. (And the two groups will be more alike than a treated group and an untreated group.) Other villages could have been given small amounts of aid in return for cooperation.

The whole Millennium Village Project reminds me of a 7th-grade science-class demonstration I [4]mentioned earlier. Our teacher, Mr. Tanguay, put a bunch of ingredients (water, sodium, calcium, etc.) mimicking the composition of the human body into a big graduated cylinder. This is what the human body is made of, he said. When we put them all together let's see if we get life. The final ingredient he added caused the whole thing to swirl around for a little while but needless to say there was no life.

The easy way to create life is to connect new ingredients with existing life. (As I do when I make kombucha and kefir.) Likewise, the easy way to create new economic life is to connect dead economies with existing economic life. It can be as simple as people in poor villages moving to cities, as is happening in China. No one is paying them to move. To pump money into this or that poor Chinese village could easily delay the migration – which is why the long-term effects of the Millennium Village Project could easily be negative.

1. <http://www.marginalrevolution.com/marginalrevolution/2010/03/michael-clemens-on-the-millennium-village-project-1.html>
2. [http://blogs.cgdev.org/globaldevelopment/2010/03/why-a-careful-evaluation-of-the-millennium-villages-is-not-optional.php?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+cgdev%2Fglobaldevelopment+%28Global+Development%3A+Views+from+the+Center%29](http://blogs.cgdev.org/globaldevelopment/2010/03/why-a-careful-evaluation-of-the-millennium-villages-is-not-optional.php?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+cgdev%2Fglobaldevelopment+%28Global+Development%3A+Views+from+the+Center%29)
3. <http://www.nytimes.com/2010/03/09/world/africa/09kenya.html>
4. <http://www.blog.sethroberts.net/2006/06/02/will-it-live/>

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Alex Chernavsky (2010-03-23 06:34:23)

And speaking of books that make no sense, I once had a girlfriend whose favorite book was [1]*Memories, Dreams, Reflections* by Carl Jung. I tried reading it, but I never made it past the half-way point. It seemed like the most unbelievable collection of pretentious, pseudo-profound codswallop. But a small part of me had some doubt – perhaps I was just too stupid to understand the depths of Jung's thinking. Thus, many years later, it was gratifying for me to read the following book [2]review of a biography of Jung: ===== Jung was a preternaturally unclear writer and thinker: he would never say anything clearly when obfuscation would do. Whether this was from lack of talent or an unconscious appreciation that clarity led to the possibility of contradiction and even refutation, no one can say... What was Jung's lasting legacy? He founded a small and on the whole harmless esoteric psychotherapeutic cult. His doctrines will never attract large numbers of people because his writings and teachings are diffuse, contradictory, and overloaded with erudition that partakes more of pedantry than of scholarship. [...] To read Jung is to enter a world more of connotation than of denotation, of meanings hinted at rather than expressed forthrightly. To extract a definite opinion from Jung is like trying to catch an eel with soapy hands, or trap steam with a butterfly net. His esoteric erudition is formidable: it is difficult to refute a man who will not say what he means, but backs whatever he means up with a plethora of references to fourteenth-century texts. Actually, Jung was grossly superstitious, had no idea what a logical argument was, and was capable of believing the purest nonsense. =====

1. <http://www.amazon.com/Memories-Dreams-Reflections-C-G-Jung/dp/0679723951>
2. [http://findarticles.com/p/articles/mi\\_hb3345/is\\_3\\_22/ai\\_n29044108/](http://findarticles.com/p/articles/mi_hb3345/is_3_22/ai_n29044108/)

Andrew Gelman (2010-03-23 13:02:52)

Seth: I'm not saying you're wrong, but . . . you're awfully sure of yourself here. Remember how the other day on my blog you criticized an author for "taking 10 minutes to call" a person mentioned in her book . . . and it turned out that she \_had \_ tried to call him? No big deal, just a point to illustrate that sometimes you go a bit over the top.

### **Chairman Mao's Brain Food (2010-03-22 20:28)**

Hoping to learn why Chairman Mao, like me, considered pork belly "brain food", I found [1]just this:

The local government in Hunan [where Mao was from] has sought to standardize the cooking of the dish [Mao's favorite pork belly dish], in order to stem the tide of imitations that crowd Chinese restaurants.

According to stringent instructions from the government's food quality supervision and testing institute, true hong shao rou [red braised pork] can only be made with the meat of rare pigs from Ningxiang county. Officials have designated the pig, which has been bred for nearly 1,000 years, as an "agricultural treasure".

I tried pork belly from different sorts of pigs (e.g., black pigs) but never noticed a difference.

Hunan Province is also the location of West Lake restaurant, one of the largest restaurants in the world. I've been watching [2]"The Biggest Chinese Restaurant in the World," a wonderful BBC documentary about it. The owner attributes her success to her first husband, who made her furious.

1. <http://www.telegraph.co.uk/news/worldnews/asia/china/7102740/China-sets-standard-for-Chairman-Maos-favourite-dish.html>

2. <http://www.youtube.com/watch?v=VOVXQQrvEAY>

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Marko (2010-03-23 09:07:43)

So is this restaurant bigger than Damascus Gate? <http://calorielab.com/news/2008/09/08/damascus-gate-worlds-largest-restaurant/>

seth (2010-03-24 16:21:57)

Nope, not larger than Damascus Gate. Thanks for the correction.

Andr   (2010-04-26 19:21:36)

Chairman Mao also decided to rub his teeth with green tea leaves instead of brushing them ... giving them a jade tinge.   A tiger,    he reasoned,   never brushes his teeth.    He followed his own path, but he was definitely a man with brown stained teeth!

## Science in Action: Mysterious Mental Improvement (part 3) (2010-03-23 04:31)

Previously on Seth's Blog: A few weeks ago, during a brief test, [1]I did simple arithmetic (e.g.,  $3+8$ ,  $4*0$ ) substantially faster than usual. The next day, under the same conditions, [2]it happened again. I thought of four possible reasons for the improvement:

- 30 g of butter I'd eaten a few hours earlier.
- A[3] cobblestone mat I'd stood on earlier for 5 minutes.
- Walking for 10 minutes before the test.
- Standing (rather than sitting) during the test.

I guessed it was the walking.

Since then I've been gathering data to choose between these possibilities. I've been eating butter regularly to see if there's a chronic speed-up. And I've been doing pairs of tests 20 minutes apart. The first test provides a baseline against which to judge the results of the second test. To measure the effects of the cobblestone mat I stood on the mat between the tests. To measure the effect of walking, I walked during the time between the tests. To measure the effect of standing, I stood during the second test but not the first.

The results so far suggest, to my surprise, that two of the four factors helped: butter and standing. How wrong I was!

At Berkeley, one of my students did a self-experiment that compared different ways of studying. She measured how long she stayed awake while studying foreign vocabulary. Worst turned out to be the conventional way: sitting at her desk in silence. Best was lying on her bed listening to hard rock. My new results are sort of a bigger version of the same thing: conventionally we avoid butter and sit while doing intellectual work.

1. <http://www.blog.sethroberts.net/2010/03/10/science-in-action-mysterious-mental-improvement/>
2. <http://www.blog.sethroberts.net/2010/03/11/science-in-action-mysterious-mental-improvement-part-2/>
3. <http://www.lifestylesport.com/p-1982-fitter1-cobblestone-walkway.aspx?gclid=CJXm7NHQrKACFRgsawodrn1TVA>

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Walter (2010-03-23 07:46:23)

Seth, Could it be related to the fact that butter produces a rapid rise in insulin? <http://heartscanblog.blogspot.com/2010/0-3/butter-and-insulin.html> Did you have any other food along with the butter? Walter

Original Jeff (2010-03-23 10:21:42)

Can you explain the cobblestone mat reference? Thanks, Jeff

Aaron Blaisdell (2010-03-24 07:54:15)

@Walter: After you read the Heart Scan blog, read Peter at Hyperlipid's blog: <http://high-fat-nutrition.blogspot.com/2-010/03/butter-insulin-and-dr-davis.ht ml>

Walter (2010-03-24 20:14:17)

@Aaron, Many thanks for the link. Walter

seth (2010-03-24 23:51:00)

"the cobblestone mat reference": the link shows what a cobblestone mat looks like. Chinese medicine says walking on them is good for you. I can't yet walk on mine, I just stand.

q (2010-03-26 07:13:11)

one question. i bet you've covered this before, but are you doing data entry during this test or just simple arithmetic? do you see the arithmetic questions sequentially (ie do you have to finish one before starting the next) or do you see many of them at once? are you set up to do this test without glancing up or down – without having to, say, refocus your eyes? (i'm just wondering what factors besides doing arithmetic are at play.)

### **Kombucha Popularity (2010-03-25 07:35)**

[1]A New York Times article all about kombucha! I didn't know about [2]Kombucha Exchange, where you may be able to find someone to give you a starter culture. [3]Here's a recipe that's close to what I ended up with after trying several alternatives.

Thanks to Dave Lull.

1. <http://www.nytimes.com/2010/03/25/fashion/25Tea.html?emc=eta1>

2. <http://www.kombu.de/suche2.htm>

3. <http://www.instructables.com/id/How-to-Make-a-Big-Batch-of-Kombucha/>

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LemmusLemmus (2010-03-25 10:41:30)

OT: I thought this might interest you: <http://kottke.org/10/03/high-fructose-corn-syrup-linked-to-obesity>

Nathan Myers (2010-03-25 12:27:45)

There's no need to "find someone to give you a starter culture". You just pour in a bottle of whatever kombucha you've found you like from the grocery store. Likewise for yogurt.

Raw Food » Blog Archive » Kombucha in New York Times (2010-03-26 05:55:45)

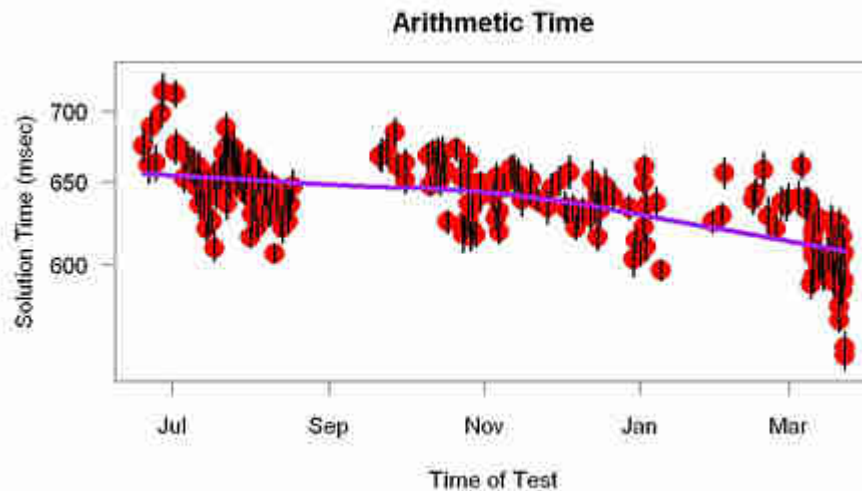
[...] (Via Seth Roberts) Previously: [...]

### **Science in Action: Mysterious Mental Improvement (part 4) (2010-03-25 14:17)**

I [1]blogged earlier how I suddenly got better at an arithmetic task. The apparent causes of the improvement were butter and standing. I'm not sure this is right; I will do more tests.

While I was trying to figure out the cause something even more extreme happened:

[2]



Notice the last two points. The previous anomaly was slightly below 600 msec. The new one is close to 550 msec. After observing it, I repeated the test 20 minutes later and got essentially the same result.

I'm blown away. I've been doing tests like this – simple measures of mental function – for about two years. Nothing like this happened during those two years.

My scores on this particular test averaged about 640 msec. Sometimes they'd be lower (as low as 610) but I had no idea why. The average stayed around 640. Now, within days, the average goes down to about 600 (presumably because I was eating butter regularly) and then down to almost 550. In other words, that 640 could be improved almost 20 %! The improvement has nothing to do with practice; I was extremely well-practiced on this task. (And practice doesn't produce such a sudden improvement.)

This is something we care deeply about – how well our brains work. Unless I'm a lot worse at arithmetic than everyone else, this suggests that for many people great improvement is possible. In an astonishingly small way. (I didn't make any big changes during this time.) In a week.

1. <http://www.blog.sethroberts.net/2010/03/23/science-in-action-mysterious-mental-improvement-part-3/>

2. <http://www.flickr.com/photos/sethroberts/4462588807/>

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Margaret (2010-03-25 15:38:32)

I've been following this series and am curious about a couple things that I don't think you've explained (I could have missed it somewhere). How do you decide when to take the test? Is it at least somewhat at random? When you take the test do you also record covariates of interest (like in this case, animal fat consumption, exercise or the mat thingy)?

seth (2010-03-25 17:20:47)

Thanks for your questions, Margaret. When do I take the test? Usually once per day, whenever I want. I don't do the test if I'd obviously do badly. There's a small effect of time of day, for which I can correct. Do I record covariates? I record

a few covariates of interest, but the current results of interest (this anomaly and the one last week) don't make use of those recordings. I can remember what was unusual recently – perhaps 4 things – and then test one by one those unusual things to see which made a difference. If I get an unusual result at Monday 3 pm and my results the previous day at 7 pm were normal, it's easy to remember, without writing anything down, what was unusual between 7 pm Sunday and 3 pm Monday.

1 (2010-03-25 20:10:33)

This is groundbreaking work! Seth is really great at being aware of himself and his ideas are all original. This blog has changed my life. I have read it since its beginning. I will share more of these ideas I read here with my customers at UC Berkeley! I have finally decided to give the book, SHANGRI LA DIET to the chair of the nutrition dept at Berkeley, who is a friendly customer of mine. I think now is a good time.

Alex Chernavsky (2010-03-26 08:17:58)

Seth, can you give any pointers to people who want to try similar experiments themselves? In particular, where can we get the software that does things like tests your memory, reaction time, arithmetic ability, etc.? I could probably write it myself, but no sense in re-inventing the wheel.

seth (2010-03-26 09:20:27)

Alex, thanks for your interest. I will post a description of the task I used. My functions are written in R. You would need to know R to use them.

q (2010-03-26 12:51:51)

yes, that would be informative. a video would be informative.

John (2010-03-27 06:57:10)

I'm as fond of animal fat and standing as much as the next guy, but how do you make sure you just aren't getting better at math from doing it over time? That's not a judgement, just an honest question...

seth (2010-04-29 21:38:45)

John, improvement due to practice long ago levelled off.

The Data Driven Life « John Suhar (2010-04-30 07:52:19)

[...] Roberts told me about his own method of measuring mental changes, a quick test he programmed on his computer that involves 32 easy arithmetic problems. The test takes about three minutes, and he has found that it can detect small changes in cognitive performance. He has used his self-tracking system to adjust his diet, learning that three tablespoons daily of flaxseed oil reliably decreases the amount of time it takes him to do math. Consuming a lot of butter also seems to have a good effect. [...]

dylan (2010-05-01 18:38:25)

hey seth, i'm an R user. can you send me your functions please? thanks!

seth (2010-05-01 23:25:23)

dylan, I have posted the functions under the category "R code".

Tommy Schmitz (2010-05-02 14:00:41)

Seth, Interesting observation about butter, and it got me perusing some of your other posts. At one point a pop-up question (an ad, perhaps) appeared asking if I were aware of Lank o Lakes spreadable butter with canola oil. Well, a few days ago we had our own weird (and off-topic) observation about butter. My girlfriend was cooking with both margarine and butter. Two spoonfuls of each were on the kitchen counter, inches apart, when a line of ants approached the spoons. Hundreds. They all went for the margarine. Not a single one approached the butter. Not to monkey with the Land o Lakes marketing strategy, but math-test mileage may vary for the ants. - Tommy.



Dan (2010-05-03 12:00:50)

Seth, my family is a strong believer in the benefits of butter. Glad to see your experiments confirm that. @TommySchmitz got me thinking about the effects of different kinds of butter. Seth, have you worked on anything like that? I was specifically thinking about organic butter and butter from cows who have no antibiotics and are grass fed ... things like that. I just found your writings today but am going to look more closely into your thoughts. Thanks.

Mike P (2010-05-03 22:24:08)

Hi Seth, It is interesting to me that you so quickly dismiss the effects of practice and time. My experience as a juggler (as well as the admittedly anecdotal experience of my juggling friends) does not bear out what seem to be the underlying assumptions[1]. In particular there is the phenomenon of the "click", a sudden increase in the ability to perform a certain trick or maintain a pattern, usually accompanied by a sense of increased understanding or an improved ability to feel what is going on or even a sense of time slowing down. These clicks sometimes happen after long, regular periods of practice and sometimes even when returning to a skill after taking a break of a month or two. Often progress is marked by several clicks, and while steady progress does occur sometimes (typically when improvement is a matter of increased endurance or speed), this seems to be the exception rather than the rule. Following a click, there is rarely complete regression to a previous level of competency, even after a prolonged lapse, a little rustiness notwithstanding. Now I'll admit, I was not paying close attention to my diet or habits when I experienced my most recent clicks (nor indeed the less recent ones), so it is possible that they were more likely to happen when I consumed a greater than usual amount of butter or fish oil. And that would indeed be interesting. I would suggest, though, that one has to be extremely careful when drawing conclusions from such a limited set of data, especially when we have so little knowledge about how the brain's abilities change over time absent the effects of dietary changes. - [1] To wit, that skill in a given area improves with practice in a more or less continuous way and tends to asymptotically approach a ceiling. Please correct me if I'm misinterpreting.

seth (2010-05-04 03:00:53)

Mike P, you write: "we have so little knowledge about how the brain's abilities change over time absent the effects of dietary changes." Take a look at the experimental psychology literature. You will find thousands of studies that measured "how the brain's abilities change over time absent the effect of dietary changes."

Lisa (2010-05-04 09:07:14)

It would be wonderful if someone could create a simple Windows application for your test. Those of us who aren't programmers could definitely benefit from this kind of cognitive check-up! It would be especially helpful for determining how well certain medications are working, and if they're throwing us off.

RJB Boston (2010-05-04 11:37:01)

Why do you suppose butter improves your arithmetic abilities? Are the French, who typically eat a lot more butter than most, better on average at arithmetic? or is this simply a case of your personal physiology and the way your biochemistry is altered with butter?

seth (2010-05-05 01:20:02)

RJB Boston, I think butter helps because our brains need certain fats to work their best. And my diet wasn't supplying enough of them. Butter has the missing fat or fats. I believe this effect isn't restricted to me, for four reasons. 1. the brain is more than half fat. 2. As far as I know, everyone thinks fat tastes good - and this reflects an underlying need, I'm sure, just the way we like salt reflects an underlying need. 3. Long ago, people ate lots of animal fat. 4. There are cultural traditions that animal fat is "brain food".

Phil E (2010-05-06 19:52:13)

Wow, you may be the only person in western society not getting enough dairy fat!

Self-Tracking is the Future « The Floating Library (2010-05-09 16:41:34)

[...] Roberts told me about his own method of measuring mental changes, a quick test he programmed on his computer that involves 32 easy arithmetic problems. The test takes about three minutes, and he has found that it can detect small changes in cognitive performance. He has used his self-tracking system to adjust his diet, learning that three tablespoons daily of flaxseed oil reliably decreases the amount of time it takes him to do math. Consuming a lot of butter also seems to have a good effect. [...]

Yet another self tracker (2010-12-12 23:52:18)

Inspired by your example, I've started tracking myself in a similar way. I've decided to blog the experiment over at [yast.posterous.com](http://yast.posterous.com), and just posted the first five days worth of data.

Ernestine (2011-06-16 01:22:18)

<http://chiotsrun.com/2009/01/26/cinderella-pumpkin-rouge-vif-detampes/comment-page-1/#comment-20838>

Seth Roberts (2011-06-16 14:47:40)

how is this relevant?

### **Terrible Dreamhost Support (2010-03-25 21:27)**

Don't ever use [1]Dreamhost to host your website. I've had trouble with them in the past but the current problem is way over the top.

The Shangri-La Diet forums were hacked. A file was replaced and caused the forums to malfunction. It was easy to figure out what happened. To fix it, I merely needed to replace the two bad files with the correct ones.

And I had a recent backup. No problem, right?

Yet I have now exchanged six emails with Dreamhost Customer Support and have yet to figure out how to use the backup they automatically made for me and which I downloaded. I suggested that I send them the backup so they could figure out how to use it and in response they said I should make another backup! They would work with that one! They're willing to work with a backup I don't want but not with one I do! Ridiculous.

More No wonder I couldn't extract the file I wanted. [2]It wasn't there! And the tech support people had - judging from their emails to me - no idea this was possible!

1. <http://dreamhost.com/>

2. <http://www.blog.sethroberts.net/2010/03/26/even-more-astonishingly-bad-dreamhost-support/>

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david (2010-03-26 06:07:49)

Next time they say the word "backup", say "You keep using that word. I do not think it means what you think it means."

Alex Chernavsky (2010-03-26 08:14:47)

Seth, when I Google the words "seth roberts blog" (minus the quotes), the third link on the results page has this heading: "BUY CIALIS 40 MG ONLINE | BUY CIALIS® Without Prescription | #1 ." Strangely, though, it takes me to your site, which seems to

be OK.

seth (2010-03-26 20:26:46)

Thanks, Alex. I fixed it so eventually that should go away. If you notice any other problems please let me know.

Todd (2010-03-27 22:30:34)

Seth, I also use an SMF forum for my "Getting Stronger" blog, but it is hosted by SiteGround. By coincidence, I also had my forum hacked on Thursday, and it crashed! It was being overrun by spambots (computer generated spam) from Russia and China, posting Viagra ads and the like. I thought I was getting good traffic this weeks, but it was the spambots. I contacted SiteGround and they fixed the problem immediately. I found their service is terrific. You don't get to talk to humans (except their sales department), but they have you post tickets on their site, and I got immediate response, within 15 minutes. They rebuilt my site completely from backups. I'm very satisfied. (Incidentally, I've altered my registration procedure to require reading of more difficult letter patterns, and confirmation by e-mail. So far, no more spambots.

seth (2010-03-28 04:00:02)

Thanks, Todd. I'm glad to hear that Dreamhost is much worse than other hosting services.

### **Even More Astonishingly Bad Dreamhost Support (2010-03-26 06:56)**

Dreamhost supplies a way to backup your website. You click a button, a few hours later you get an email telling you to go to a certain place to download a set of files. Those files are supposed to be the backup. That's what I did. I got a message that said:

Ta da! Â Your ENTIRE DreamHost account has been backed up now here: . . .

Note the emphasis: ENTIRE. Now it appears those files don't work. They aren't a complete backup of my website!!!

In spite of this astonishing fact, someone in Dreamhost Customer Support told me " We havent had any users report issues with the backups that we create." Amazing. No users ever!

I want to hire someone to fix the problem. If you have the technical skills to (a) repair the SMF forums (which will require upgrading) and (b) help me transfer to a new hosting service, please contact me. You can reach me at twoutopias ..[at].... gmail.com.

More Someone kindly offered to help me and the problem has been fixed. I still hate Dreamhost. When I complained bitterly about their bad backup, in reply they sent me an email that implied it was my fault! If you send me your stories about bad experiences with Dreamhost, I would be happy to post them.

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### **Assorted Links (2010-03-26 21:55)**

- [1]scientific misconduct in China

- [2]Pee-Wee Herman returns. "In seventh grade, I remember meeting these art kids who were, like, "Hey, you got a minute? Sit down! Have you ever heard of nonconformity? Listen, this is what it is!" And, meanwhile, I'm, like, "You're kidding. You mean there are people who want to be different?"
- [3]The Natto Project. "Eating natto became ordinary and sometimes enjoyable."
- [4]larger and larger Last Suppers
- [5]subtle comments by Peter Hessler about Google and China. I think Hessler is right.

Thanks to Carl Hattery.

1. <http://www.nature.com/news/2010/100112/full/463142a.html>
2. [http://www.newyorker.com/talk/2010/01/18/100118ta\\_talk\\_schulman#ixzz0iwiDibdj](http://www.newyorker.com/talk/2010/01/18/100118ta_talk_schulman#ixzz0iwiDibdj)
3. <http://thenattoproject.com/>
4. <http://www.mindlesseating.org/lastsupper/>
5. <http://www.newyorker.com/online/blogs/newsdesk/2010/03/the-great-whatnot-of-china.html>

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Nathan Myers (2010-03-30 15:59:58)

The Last Supper story is bunk. <http://gotmedieval.blogspot.com/2010/03/whats-all-this-about-super-sized-last.html>

### **Success with the GAPS Diet (2010-03-27 05:24)**

[1]Darrin Thompson writes:

Thanks for [2]the pointer awhile back to the GAPS diet. It caught my eye and my wife and I implemented it for us and our autism kids. After about a month we are experiencing marked reductions in psoriasis and allergy symptoms. Our 3 autism kids are [now] doing well with no huge barrages of expensive vitamin supplements. We're keeping up only with Vitamin E, DHA and eventually selenium. We're noticing improvements in their communication skills.

1. <http://willowbend.cx/>
2. <http://www.blog.sethroberts.net/2010/02/10/a-gaps-testimonial/>

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Christine (2010-07-20 16:54:06)

I have had severe digestive problems with food ever since I had a breakdown 3 years ago. I was also suffering from TMJ which had not been diagnosed & was taking aspirin every 2 hours from months for the pain. Before this I had celiac disease, was lactose intolerant, and also stayed away from corn, but I was doing quite well. After this, many of the things I could eat before, including a little tomato began to really upset my stomach. I started the Intro diet with 1 tsp of sauerkraut juice (and have been taking a probiotic before I started) for 3 days & now my stomach feels on fire. I haven't done any of the rest of the diet (the bone broth). Also I have quite a rash. Should I cut the sauerkraut juice to 1/4 tsp. or stop for a bit?

Sarah Schatz (2010-08-16 12:15:11)

I would slow down on the sauerkraut and do the broth instead.

## **Why I Use Arithmetic to Measure Brain Function (2010-03-27 20:14)**

At the latest Quantified Self Meetup, I described [1]my recent arithmetic results. Gary Wolf asked why I used arithmetic to measure brain function.

The simplest answer is that it won a competition. I tried eight or so different ways of measuring brain function and it was the best. I had high hopes for all of the tests and spent a lot of time on most of them. I hoped to find a test that was as fun as playing a game yet provided the detailed and controlled info of a typical cognitive psychology task. I didn't quite get there.

The other tasks had several problems:

1. Long learning curve. My belief that our environments might be having big and unnoticed effects on how well our brains work began when I noticed that my balance was better the morning after taking 6 flaxseed oil capsules. A small amount of flaxseed oil substantially improved how well my brain worked – at least on one dimension. [2]The test I devised to measure this effect confirmed its existence but after doing it for a year my score was still improving. Obvious learning during testing makes it harder to interpret the results – you need to correct for the learning. I wanted a task where there was less room for learning. I already know arithmetic well so an arithmetic test took less practice until learning stopped.
2. Not so portable. Some of the tasks required props (e.g., a printed sheet of paper for a paper-and-pencil test).
3. Trial-to-trial interference. Wanting to cram as many trials as possible into a short time, I started with an arithmetic task with 5 blocks of 20 trials each. There were pauses between blocks. During a block, however, as soon as I finished one question (e.g.,  $3+4$ ), the next one would appear. At first, this was fine. As I got faster, though, I started to make a large number of mistakes quite often. I required 85 % accuracy and it started to take longer and longer to do 5 blocks with acceptable accuracy. The arithmetic task I use now has separated trials. Instead of 100 trials in 3 minutes I do about 32 trials in 3 minutes, but there has been no increase in the amount of time they take. (I found that 3 minutes was as long as I would comfortably do the test; 32 is simply the number of trials I can do in 3 minutes.)
4. Carpal Tunnel Syndrome. After doing a lot of an earlier task that involved just two fingers, my wrists started to hurt. The arithmetic task uses eight fingers (excluding the thumbs) equally. 1, 2, 3, 4, 7, 8, 9, and 0 are possible answers; 5 and 6 are never answers.
5. Subjective. One of the tasks I tried involved making a single motion on the touch pad. It wasn't easy to be sure I'd made one motion rather than two.
6. Small number of measures. One task I tried only generated five scores in four minutes. The arithmetic task I use generates 32 scores in three minutes. Each of the 32 scores can be corrected for the difficulty of the problem (e.g.,  $0+0$  is faster than  $6*7$ ).
7. Unpleasant outcomes. Some of the tasks were frustrating. When I didn't do well it was irritating. For some reason that doesn't happen with the arithmetic task.

A more game-like task would be better but for that I may need a new input device, like a joystick. R – the language I use to collect the data – is great for data analysis but poor for data collection. It is unlikely to work with joysticks anytime soon. My arithmetic task needs an R function that only works with Windows, which shows how bad the problem is. It's a miracle that R function exists. Maybe it was written by an experimental psychologist.

1. <http://www.blog.sethroberts.net/2010/03/25/science-in-action-mysterious-mental-improvement-part-4/>

2. <http://www.blog.sethroberts.net/2006/07/26/brain-food-part-4-measuring-balance/>

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mike packard (2010-03-27 23:49:04)

Any chance you would be willing to post the source to your R program(s)?

Justin Wehr (2010-03-28 08:50:21)

I was wondering the same thing as Mike ... step-by-step instructions would be much appreciated.

Ming-Chih Kao (2010-03-28 10:46:21)

I really enjoyed your talk at the QS meetup Professor Roberts. Reaction time with simple mental tasks measure peak performance. Whereas arguably one may find average performance more directly relevant for day-to-day work. And statistically it may enjoy smaller measurement variations for making inferences. It was the first QS event I have been to. Hope to hear more of your findings in the future. Thanks!

seth (2010-03-28 11:34:42)

Justin & Mike, thanks for your interest. Okay, I will post the R code. Ming-Chi, I would think that peak performance is less variable than average performance. In peak performance, everything is pushed up against a ceiling, not so in average performance. I also don't understand how average performance could be measured.

Darrin Thompson (2010-03-29 07:28:40)

What were some of the other tasks you rejected? I had a friend who played a great deal of blitz chess on ICC. They give you a quantified rating. He had a lot of variation between 2100 and 1600. Thinking back, I wonder if that wasn't a good measure of his brain function. He had a lot of late nights. On a particularly late (early?) morning even I beat him once. I think the only factor I would control for is how much chess I played recently. I noticed that my rating would go up if I played a lot and go down quickly if I quit. Maybe that's just too big of an effect. Anyway... what did you reject?

seth (2010-03-29 07:37:34)

I rejected: 1. a two finger classification task. 2. a balance task. 3. a short-term memory task (digit span). 4. a paper-and-pencil classification task. 5. an arithmetic task where the problems are blocked rather than separated. 6. a one-finger typing task with preview (the string to be typed is shown before the signal to start typing). 7. a one-finger typing task without preview. 8. A time-discrimination task (the interval between clicks). 9. A task requiring me to move the pointer a precise distance using the touchpad. 10. A task where I move the pointer from place to place on the screen as quickly as possible. Task 9 was the most fun and I'm sorry I couldn't use it.

Patrick (2010-03-30 02:24:56)

I'd also be interested in seeing the source code for this. Pretty please :-)

jimmy (2010-04-20 22:05:59)  
i see. sounds interesting. keep us posted.

### **A Chinese Farmer Fights Back (2010-03-28 06:58)**

This is from [1]China Daily:

Every day before sunrise, Zhang Zhengxiang leaves home to walk along Dianchi Lake, one of the major attractions in Yunnan province.

The 62-year-old retired farmer carries a camera, tripod and telescope to record the pollution encroaching on the country's sixth-largest freshwater lake.

During weekends, Zhang collates his observations and sends letters to the local government, informing them of the growing pollution.

He has been doing this for 30 years.

Sounds good to me. Like my self-experimentation, he is (a) trying to change something he cares a lot about and knows a lot about and (b) slowly collecting data. In contrast to a great deal of American good works, such as [2]Jeffrey Sachs's.

In this case, unlike a lot of philanthropy, we know how the story ends:

His efforts slowly began to pay off.

In 1998, the local government shut down six mines near Dianchi because of his warnings.

In 2003, 56 large and medium-sized mines, chemical factories, and fertilizer and lime plants were closed.

Since 2008, the local government has invested about 12 billion yuan ( \$1.7 billion) to clean up the lake. .  
. .

[In 2005], Zhang was selected as one of 10 outstanding grassroots environmental activists. In 2007, he became a member of the Chinese Society for Environmental Sciences.

Last year, he was selected as one of the 20 people who have warmed Chinese hearts.

This supports what Jane Jacobs told an interviewer: "It's a funny thing. [3]You can only change something if you love it."

1. [http://www.chinadaily.com.cn/china/2010-03/05/content\\_9539996.htm](http://www.chinadaily.com.cn/china/2010-03/05/content_9539996.htm)

2. <http://www.blog.sethroberts.net/2010/03/22/millennium-village-evaluation/>

3. <http://www.blog.sethroberts.net/2008/06/21/can-you-change-something-if-you-dont-love-it/>

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Michael (2010-03-30 15:43:35)

"one of the 20 people who have warmed Chinese hearts" What a wonderful expression. I wonder who US citizens would choose for that honor.

## How Long To Build a Subway? (2010-03-29 07:00)

From [1]New York:

**1972:** Workers use cut-and-cover to break ground on the Second Avenue subway line; only a mile of tunnel is completed before the seventies financial crisis halts construction. . . .

**2007:** Ground breaks once again on the Second Avenue subway, to be called the T line.

Slow, yes, but not [2]off-the-charts slow:

Between 1965, when construction of the Beijing subway began, and 2001, workers laid only 42 km of track.

Faster is [3]possible:

By next year, Beijing aims to have another 100 km of track up and running.

As I searched for Beijing subway info, I came across [4]this surprising blog on the [5]Beijing City Government English website. It reminds me of something that happened to me in Alaska. I went to visit a glacier. Near the glacier was a visitor's building, which had a small room with a slide show. The taped narration told how the glacier shrank during the summer and grew during the winter and described the animals that lived nearby. It was all very bland but you could tell the narrator really cared about the glacier. I was struck how rare that was: To see that someone really cared about something other than themselves and their family. I suppose this is why I was impressed [6]how much Penn State students love Penn State. This blog gave me the same feeling. The writer likes (or rather liked) living in Beijing and, much more impressively, manages to convey that. I nominate it for best blog on a government website. Unfortunately it has stopped. It's so much easier to learn when the person you are learning from really cares about the material. There's a lot I can learn from that blog.

A nice video about building Beijing's subway.



1. <http://nymag.com/news/intelligencer/topic/65131/>
2. <http://www.ebeijing.gov.cn/BeijingInfo/NewsUpdate/BeijingNews/t1057343.htm>
3. <http://www.ebeijing.gov.cn/BeijingInfo/NewsUpdate/BeijingNews/t1057343.htm>
4. [http://www.ebeijing.gov.cn/feature\\_2/Blog\\_Betty/2009Oct/](http://www.ebeijing.gov.cn/feature_2/Blog_Betty/2009Oct/)
5. <http://www.ebeijing.gov.cn/>
6. <http://www.blog.sethroberts.net/2010/02/18/north-korea-and-penn-state/>

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Kevin Miller (2010-03-29 07:39:32)

I assume the increasing progress in Beijing (at least in the underground part of the system) is due in large part to a big change in digging technology. I don't know if this link will come through, but here's a fascinating article on the Swiss company that developed the new machines: [http://www.newyorker.com/reporting/2008/09/15/080915fa\\_fact\\_bilger](http://www.newyorker.com/reporting/2008/09/15/080915fa_fact_bilger)

seth (2010-03-29 10:59:35)

Kevin, the video I link to discusses the role of these machines in Beijing subway building. There's only one in Beijing.

Nathan Myers (2010-03-30 02:15:43)

You can find lots of people who really care about all the species that will go extinct as isolated islands of habitat heat up, driving them out but offering no places left to move to.

Marko (2010-04-04 21:15:11)

I wonder how Tokyo compares. It seems there is a new subway line or extension every year that I had never even known was under construction. You can go anywhere within the Yamanote Line circle of central Tokyo and easily walk to one station or another in a few minutes. They have some lines now that are really, really deep, many escalators segments down, because they have to tunnel under other subway lines. There was a book by an ex Japanese TV journalist about "underground Tokyo" that I started to read (before I figured out it was an insane conspiracy theory book about secret underground bases and institutions) that had some interesting subway construction data, including that the cost doubles with every X meters of depth. Among other things, the amount of water seepage gets worse and worse the deeper you go.

## **Andrew Gelman's Top Statistical Tip (2010-03-30 06:04)**

Andrew Gelman [1]writes:

If I had to come up with one statistical tip that would be most useful to you—that is, good advice that's easy to apply and which you might not already know—it would be to use transformations. Log, square-root, etc.—yes, all that, but more! I'm talking about transforming a continuous variable into several discrete variables (to model nonlinear patterns such as voting by age) and combining several discrete variables to make something [more] continuous (those "total scores" that we all love). And not doing dumb transformations such as the use of a threshold to break up a perfectly useful continuous variable into something binary. I don't care if the threshold is "clinically relevant" or whatever—just don't do it. If you gotta discretize, for Christ's sake break the variable into [2]3 categories.

I agree (and wrote [3]an article about it). Transforming data is so important that intro stats texts should have a whole chapter on it – but instead barely mention it. A good discussion of transformation would also include use of principal components to boil down many variables into a much smaller number. (You should do this twice – once with your

independent variables, once with your dependent variables.) Many researchers measure many things (e.g., a questionnaire with 50 questions, a blood test that measures 10 components) and then foolishly correlate all independent variables with all dependent variables. They end up testing dozens of likely-to-be-zero correlations for significance. Thereby effectively throwing all their data away – when you do dozens of such tests, none can be trusted.

My explanation why this isn't taught differs from Andrew's. I think it's pure Veblen: professors dislike appearing useful and like showing off. Statistics professors, like engineering professors, do less useful research than you might expect, so they are less aware than you might expect of how useful transformations are. And because most transformations don't involve esoteric math, writing about them doesn't allow you to show off.

In my experience, not transforming your data is at least as bad as throwing half of it away, in the sense that your tests will be that much less sensitive.

1. [http://www.stat.columbia.edu/~cook/movabletype/archives/2010/03/the\\_single\\_most.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2010/03/the_single_most.html)

2. <http://www.stat.columbia.edu/%7Eegelman/research/published/thirds5.pdf>

3. <http://sethroberts.net/articles/2008%20Transform%20your%20data.pdf>

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Alex Chernavsky (2010-03-30 06:40:57)

And speaking of statistics, here's an interesting debunking of John Gottman's research into marriage & divorce: <http://www.slate.com/id/2246732/>

Matt Weber (2010-03-30 09:44:09)

Thanks for the links to the articles. I'm about to run a fairly large test battery using a number of different types of measure (accuracy, RT, differences in RT) and different tests of related abilities, so I'll be needing to think hard about both transformations and principal components in the weeks to come. In your experience, does using transformations and PCs make reviewers skittish? I could easily imagine people wondering why you transformed the data (cf. "less aware than you might expect of how useful transformations are"), or being disinclined to believe the results of a statistical test that wasn't significant on the raw data.

seth (2010-03-31 18:01:53)

Matt, About 10-20 % of reviewers in my experience are bothered by transformations. I simply explain to the editor the importance and acceptedness of transformations. I haven't had a problem.

jay (2010-04-01 07:05:19)

<http://www.theonion.com/articles/report-14-trillion-spent-annually-on-trying-to-lose-weight,17125/>

## **My Favorite Japanese Pickle: Narazuke (2010-03-31 05:24)**

I think the Japanese have the most sophisticated fermented food culture in the world. The French have cheese and grape wine; the Japanese have miso, natto, rice wine (sake), and a wide range of pickles. It's no coincidence, I believe, that the Japanese and French have two of the lowest rates of heart disease in the world, in spite of high smoking rates. Perhaps fermented food gives you a taste for smoking, which provides complex flavor.

My favorite Japanese pickle is called [1]Narazuke. It is melon or vegetables such as cucumber and eggplant pickled in sake lees (the rice left over from making sake) for 1 to 3 years. Two days ago I had a pickle from [2]Guss' Pickles

(a "New York barrel-cured sour pickle") and a piece of narazuke. After eating the narazuke, the Guss pickle, no disrespect, tasted like it was made by a 10-year-old. The complexity of the narazuke is so much greater. Which is hardly surprising because it is aged so much longer. A Guss pickle might be aged two weeks.

1. <http://en.wikipedia.org/wiki/Kasuzuke>

2. <http://www.gusspickle.com/>

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david (2010-03-31 07:33:32)

Or maybe smokers' sense of taste is so dulled that they need strong, complex flavors. But I suspect that these fermented food traditions predate the introduction of tobacco from the Americas.

Sean Brown (2010-03-31 15:03:57)

Korean fermented-food culture is also very sophisticated. <http://en.wikipedia.org/wiki/Cheonggukjang> (my personal favorite) <http://en.wikipedia.org/wiki/Doenjang> (used in a wide variety of foods including a the Korean staples of [http://en.wikipedia.org/wiki/Doenjang\\_jjigae](http://en.wikipedia.org/wiki/Doenjang_jjigae) and [http://en.wikipedia.org/wiki/Doenjang\\_jjigae](http://en.wikipedia.org/wiki/Doenjang_jjigae) also known as "Korean miso") <http://en.wikipedia.org/wiki/Kimchi> [http://en.wikipedia.org/wiki/White\\_kimchi](http://en.wikipedia.org/wiki/White_kimchi)

Nathan Myers (2010-04-01 02:10:50)

Tobacco is also heavily fermented – it's hung in a humid barn for weeks. Smokers have many more and graver lung infections than nonsmokers, likely because they inhale so much bacteria. "Silly smokers! Bacteria belong in the guts."

Andrey Shpak (2010-04-02 08:38:55)

Russian traditional food culture also has lots of fermented food - primarily centered around cabbage, cucumbers and mushrooms (and apples in older times) - this, however, does not translate in the benefits you mention ...

## 5.4 April

### The Chinese Military and the Umami Hypothesis (2010-04-01 07:29)

In [1]an article about China's military, James Fallows says American forces are much stronger, partly because:

In modern times, American forces are continually in combat somewhere in the world. This has its drawbacks, but it means that U.S. leaders, tactics, and doctrine are constantly refined by the realities of warfare. In contrast, vanishingly few members of the People's Liberation Army have any combat experience whatsoever.

He could have used the word readiness. One reason I believe my Umami Hypothesis – that we require a steady stream of bacteria in our diet to be healthy – is the underlying logic: That a steady stream of bacteria continuously activate the immune system, keeping it in working order. Without low-level activation, the immune system will (a) react too slowly, causing noticeable colds, and (b) overreact, which causes allergies and other immune system disorders, such as arthritis.

I wonder if the same logic applies in other situations – if a constant low-level threat improves performance. Is Chinese

governance better because Chinese leadership feels threatened?

1. <http://www.theatlantic.com/magazine/archive/2010/03/cyber-warriors/7917/>

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Darrin Thompson (2010-04-01 08:12:28)

That's why I like Arch Linux. It's a rolling release. Instead of 1 to 2 very risky upgrades per year, you do a 365 little upgrades per year. You amortize your upgrade risk.

Nathan Myers (2010-04-01 11:35:39)

Is Chinese governance better? No.

bennetta (2010-04-01 15:13:24)

"One reason I believe my Umami Hypothesis â€” that we require a steady stream of bacteria in our diet to be healthy â€” is the underlying logic: That a steady stream of bacteria continuously activate the immune system, keeping it in working order." I'll never forget the last few words of my professor in the "History of Infectious Diseases" course I took at UC Davis: "OK guys, so the moral of this story?" He chuckles, "The next time you drop a sandwich on the ground, wait five minutes, then pick it up." If you were to ask a few microbiologists, I'm pretty sure they'd agree with you.

Sheila Buff (2010-04-01 17:36:43)

For an interesting take on why it's important to keep your immune system on its toes by constant exposure to germs, see *Why Dirt Is Good* by Mary Ruebush, Ph.D. (Kaplan Publishing, 2009). Dr. Ruebush would agree wholeheartedly with the professor from UC Davis.

Laura (2010-04-01 21:31:26)

I was feeling really, extremely depressed this week because I just moved to a new place. Then, I bought Straus butter at Berkeley Bowl, since I was there. I instantly felt really happy after I ate the butter!! That's great because I have to work tomorrow morning. I bought it at Berkeley Bowl for about \$7. I will continue it to see its effects.

Larry (2010-04-05 16:06:45)

Something totally off subject. I went to see a movie a couple of months ago. When I walked in there was no one around to take my ticket so I just walked into the theater. After the movie was over I decided that I enjoyed it so much that since I still had my ticket I would leave the theater and come back and watch it again in fifteen minutes. When I returned and started watching the movie again it felt like I had seen the movie numerous times. After the movie was over and since then I can remember every single scene from the beginning of the movie to the end. I can't do this with movies I have seen dozens of times. I only recently realized the amazing recall I have of this movie so I haven't tried it again to see if it works with another movie or with anything else for that matter.

## **Health Benefits of Miso, According to the Marukome Company (2010-04-02 07:05)**

The Marukome company calls itself "the leading miso manufacturing company in Japan." As a corporate brochure says, "world-renowned Japanese longevity is deeply related to the traditional food of Japan." Miso is probably the most traditional food of Japan, in the sense that the Japanese eat a lot of it per capita, far more per capita than people in any other country. They eat lots of fish, too, but that's not unusual.

A corporate brochure for the Marukome company that I got at the recent Fancy Food Show makes many health claims for miso. Some involve the whole product. Two are interesting. 1. "Miso soup also helps prevent heart disease and diabetes." This is vague, unfortunately. 2. "In 1981, researchers at Japan's Cancer Center announced that miso soup lowers the risk of stomach cancer when consumed every day. Miso soup also lowers the risk of other cancers including liver cancer." This sounds like a survey result: daily consumption of miso was associated with lower risk of various cancers. At least it is specific enough to check.

The brochure also makes health claims based on components: Vitamin B2, Vitamin B12, Vitamin E, "Enzyme", Sabonin, etc. Each somehow improves health – for example, Vitamin B12 "reduces mental fatigue." What interests me is that "improves immune function" isn't on the list, nor does the list mention the microorganisms that grow in miso. Improves immune function I believe to be the main benefit of miso and the reason it reduces cancer. Judging by this brochure, you'd think this is a new idea in Japan, where lots of fermented foods are eaten. In Japan I met someone (a nurse) who said that perhaps a third of Japanese think that to be healthy you should eat fermented foods regularly. Perhaps the usual belief is that they improve digestion and better digestion somehow wards off cancer.

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### **QuietComfort 15 Headphones (more) (2010-04-03 05:48)**

I wrote [1]earlier – sounding like an ad – that my new Bose QuietComfort 15 noise-cancelling headphones made me feel much better after a subway ride. The usual exhaustion was gone. Along the same lines, I recently wore the headphones during a one-hour flight. When it was over, I felt like I hadn't flown at all – I'd been sitting in a chair for an hour. This had never happened before.

1. <http://www.blog.sethroberts.net/2010/03/14/quietcomfort-15-headphones/>

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Kyle Cordes (2010-04-03 07:51:59)

When I posted about the QC15: <http://kylecordes.com/2009/11/08/bose-qc/> ...it also sounded like an ad. I swear, it is not. As a maker of products, you know when you have done well people your customers spontaneously write things like this.

david (2010-04-03 14:58:23)

Here's the problem I've had with the (admittedly inexpensive) noise canceling headphones I've had: I leave the switch on and drain the battery. The feature I would like to see is that the headphones automatically switch off the noise canceling after, say, 3 hours. That way if you leave them on and put them away for a few days, you won't pull them out and find your batteries dead. The other feature I'd like to see is a very durable cord. I've had headphones go bad because a wire in the cord (usually where it goes into the plastic) eventually shorts out. I'd be bummed if that happened to \$300 headphones. How do QC15's rate on these points? Thanks, David

Patrik (2010-04-05 18:34:47)

I too have used noise-canceling headphones, albeit cheap ones, and they are amazing.

Brian (2010-04-29 19:03:46)

I bought cheaper noise cancellers (Panasonic) and found they didn't cancel much. They also give me a headache from the pressure. This makes me wonder if my head is wider than what the designers expected. I'm still fairly happy with earplugs for reducing fatigue when traveling.

### Assorted Links (2010-04-04 15:01)

- [1]Matt Ridley reviews The Hockey Stick Illusion. "One of the best science books in years. It exposes in delicious detail . . . how a great scientific mistake of immense political weight was perpetrated, defended and camouflaged by a scientific establishment that should now be red with shame." Of the response to Stephen McIntyre's damning critique: "I find the reaction of the scientific establishment more shocking than anything. . . Shut-eyed denial."
- [2]Answer to medical mystery is food allergies. If doctors can't recognize food allergies, they are even further from understanding their cause.
- Der Spiegel [3]looks skeptically at man-made global warming. Will Elizabeth Kolbert (the New Yorker writer) ever realize she's been credulous?
- [4]Low cholesterol bad? "Cholesterol levels in men with dementia and, in particular, those with Alzheimer disease had declined at least 15 years before the diagnosis and remained lower than cholesterol levels in men without dementia throughout that period." [5]Body weight also declines before the diagnosis.

Thanks to Peter Spero.

1. <http://www.prospectmagazine.co.uk/2010/03/the-case-against-the-hockey-stick/>
2. <http://www.latimes.com/features/health/la-he-my-turn-20100405,0,3396341.story>
3. <http://www.spiegel.de/international/world/0,1518,686697,00.html>
4. <http://www.ncbi.nlm.nih.gov/pubmed/17210816>
5. [http://www.ncbi.nlm.nih.gov/pubmed/15642850?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed\\_ResultsPanel.Pubmed\\_SingleItemSuppl.Pubmed\\_Discovery\\_RA&linkpos=1&log\\$=relatedarticles&logdbfrom=pubmed](http://www.ncbi.nlm.nih.gov/pubmed/15642850?ordinalpos=1&itool=EntrezSystem2.PEntrez.Pubmed.Pubmed_ResultsPanel.Pubmed_SingleItemSuppl.Pubmed_Discovery_RA&linkpos=1&log$=relatedarticles&logdbfrom=pubmed)

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Charles (2010-04-04 16:05:34)

Of course low cholesterol can be bad. Many studies show that. In fact, after age 50 or so, low cholesterol is associated with higher mortality risk. Lowering your cholesterol for the sake of lowering it is simply a bad idea. There are a lot of other health markers you need to look at and deal with that will affect your health in more positive and wholistic ways. Cholesterol count is just the simplest way to generate profits from pharmaceuticals.

Alex Chernavsky (2010-04-04 18:15:54)

Regarding cholesterol levels as a health marker - see also this interesting article by Gary Taubes: <http://www.nytimes.com/2008/01/27/opinion/27taubes.html>

NNM (2010-04-05 10:39:44)

It's interesting that the author of the allergy essay is a professor of applied behavioral science. That seems like a very relevant

area of expertise when navigating the medical system.

Pedro J. (2010-04-05 13:24:18)

"One of the best science books in years". I love this. There is 36 reviews on Amazon and all of them give five stars. What is the probability of that?. Just look at a very popular book [http://www.amazon.com/Surely-Feynman-Adventures-Curious-Character/dp/0393316041/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1270498753&sr=8-1](http://www.amazon.com/Surely-Feynman-Adventures-Curious-Character/dp/0393316041/ref=sr_1_1?ie=UTF8&s=books&qid=1270498753&sr=8-1) and make your own statistical analysis. I guess that is probably saying something more interesting about the book than any review. :-)

seth (2010-04-05 14:15:42)

well, Pedro, I'm inclined to think it is one of the best science books in years – and I haven't seen it yet. The story of how one person put a big dent in a view held by "thousands of scientists at hundreds of universities in dozens of countries" as Elizabeth Kolbert puts it (<http://www.newyorker.com/talk/#ixzz0kGLWuGii>), sounds pretty great right away.

Nathan Myers (2010-04-06 02:00:04)

Seth, can you think of any sort of evidence that could possibly change your mind about this global conspiracy of unscrupulous climate scientists, bent on depriving Exxon of its just profits? Or does every conceivable bit of evidence lead you to the same conclusion?

Dennis Mangan (2010-04-06 05:37:38)

Nathan, you mention Exxon and "its just profits", and most AGW believers often mention Big Oil and the money it throws around. Yet climate scientists and hangers on get millions, maybe billions if you count NGOs, in grants etc. Their very livelihoods depend on adhering to the consensus and keeping the money flowing. And there wouldn't be any money for saying everything's normal, go home and take a nap. Not evidence of anything, but it calls their objectivity into question. "It's difficult for a man to believe something when his livelihood depends on him not believing it."

Nathan Myers (2010-04-07 01:37:22)

Dennis Mangan: Do you have any idea what an *order of magnitude* is? Do you think a million and a trillion are about the same, more or less? Climate scientists get paid the same whether species go extinct *en masse* or not – until civilization collapses from loss of whole ecosystems, famine, and consequent global war. They, like I, and like anybody not entirely blinkered, have an interest in that not happening. The cockroaches will survive regardless. Some humans, too, probably, but certainly not you.

Dennis Mangan (2010-04-07 06:45:17)

Nothing like an *ad hominem* when you don't have an answer.

Pedro J. (2010-04-07 11:03:28)

"Their very livelihoods depend on adhering to the consensus and keeping the money flowing" That is true in any scientific discipline. In almost any sense, being in the mainstream science is incentivized, but that does not mean mainstream science is necessary wrong (in fact, it is mainstream science because it reached some threshold where an important part of the community of experts thought there was strong evidence to support it). To judge a theory just look the peer reviewed literature... Yes, I know your next comment will be about peer review process. So to save a few words from you, everybody knows it is far from perfect. Maybe 50 per cent papers are wrong, but one thing you can be sure of is that outside the peer-review literature the wrong claims are 100-epsilon percent.

Nathan Myers (2010-04-07 11:59:23)

Dennis: Do you have any idea what *ad hominem* means? It's easy to look up. Hint: it's not just a magic spell to recite when you don't want to address substance.

Dennis Mangan (2010-04-07 12:27:34)

"Dennis: Do you have any idea what ad hominem means?" There's another one.

Nathan Myers (2010-04-07 17:22:19)

No, it wasn't. So, you can't even be bothered to look it up.

### **"My Porphyria Went Away" (2010-04-05 13:12)**

I asked Aaron Blaisdell what was most surprising about his experience with "[1]ancestral health" – adopting a evolutionarily reasonable diet. "That my porphyria went away," he said. Aaron's porphyria is/was a form of sun sensitivity. "My mother has it. Her father had it," he said. It was obviously genetic. Scientists had located the genes involved. Aaron assumed that someday, not soon, it might be possible to fix the genes involved. Until then, he didn't think anything would change. It was a rare and not particularly damaging disease – it wouldn't attract a lot of research.

How reasonable the gene-fix idea sounds, in spite of being wrong. I've heard dozens of scientists, including Bruce Ames and James Watson, say that we are entering a new age where we will figure out the causes of diseases (their genetic causes) and fix them. A new age of rational medicine. To fix a car or dishwasher, you figure out the part at fault and repair or replace it. The metaphor is so convincing that nobody points out another possible metaphor: Your washing machine isn't working because you haven't plugged it in. [2]You need to read the owner's manual. Most health-care researchers, especially at medical schools, are studying the parts diagram of the washing machine, trying to figure out what part is at fault, when the problem is elsewhere: Not plugged in. Much easier to fix.

1. <http://ancestryfoundation.org/>

2. [http://www.sethroberts.net/about/2002\\_medical\\_research--a\\_bettor%27s\\_guide.pdf](http://www.sethroberts.net/about/2002_medical_research--a_bettor%27s_guide.pdf)

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Aaron Blaisdell (2010-04-05 15:57:59)

Thanks for featuring my experience on your blog. One small quibble, however. I wouldn't say that the "fixing the gene" approach is necessarily wrong. Rather, I think it is often a much less viable, and much more expensive option than fixing the environmental cause (e.g., removing wheat gluten and omega-6 laden vegetable oils from my diet in my case). This environmental-change approach did not, however, clear up my red-green colorblindness. A group of researchers that recently created a red-green colorblind squirrel monkey were subsequently able to correct the deficit with gene therapy and return the afflicted individuals to full trichromatic vision (<http://www.wired.com/wiredscience/2009/09/colorthrapy/>). My point is that all of our phenotypic effects reflect the interactions of genetic and environmental factors. In some cases, the environmental contribution is easy to manipulate to fix the problem, but in other cases it may be necessary to intervene at the genetic level (if possible). But your point is very well taken that the overemphasis on modern, highly technical approaches used in modern medicine, stemming from the dominant body-is-machine metaphor, blinds medical science and the lay public (and government and funding agencies) to the body-as-natural-system framework that we are advocating with our Ancestral Health Symposium and Ancestral Health Society. Parkour!

seth (2010-04-05 18:01:20)

Thanks for the comments, Aaron. I don't think it's a mistake to think of the body as a machine – but let's read the owner's manual.



Usually when the dishwasher doesn't work, you just need to clean out the trap. We don't get an owner's manual for our own bodies. At issue, anyway, is often to a large degree that they can't patent your typical "owner's manual" solution. They certainly don't get a Nobel for it. (Barry Marshall and Robin Warren did, but they couldn't patent it either.) This story seems apropos: <http://blogs.discovermagazine.com/notrocketscience/2010/04/01/scientists-disc-over-gene-and-part-of-brain-that-make-people-gullible/>

@Nathan Thanks for linking that story. That made my morning! Especially the WTF1 gene responsible for the supra-credulous, LOL!

[Below is some of the R code that runs the arithmetic test that I use to measure my brain function. This function (newmath2.add) is the top-level function – the function I actually call when I run the test. Later posts will give the subroutine code. The variable newmath2 is the database – the variable (a data frame) that holds the data.]

2461

```

tr=1
pr=1
while(tr<=trials) {
t=newmath2.trial(trial=tr, total.trials = trials, wait.range=wait.range, num.possible = num.possible, problem = problems[pr,], condition=condition, note=note)
if(t[1]=="end session") break
if(t$status!="okay") {
if(t$status=="abort trial") this.trial.note="trial aborted"
if(t$status=="abort session") this.trial.note="session aborted"
t$include=FALSE
}
else this.trial.note=note
new.line1=c(current(),condition,tr,t$wait.msec, problems[pr,1])
new.line2=c(t$answer.msec,t$actual.answer,t$correct,t$include,this.trial.note)
newmath2<-rbind(newmath2,c(new.line1,new.line2))
newmath2.set.types()
pr=pr+1
if(t$status=="abort session") break
if(t$status=="abort trial") next
if(!t$correct) next
tr=tr+1
}
msg=paste("total time",round(difftime(Sys.time(),start.time, unit="mins"),1),"minutes\n")
paint(above = "all done", below=msg, duration = 3)
save.ws()
newmath2.plot()
}

```

---

Andrew Gelman (2010-04-06 08:24:21)

Wow-this looks more like Fortran than any R code I've ever seen!

seth (2010-04-07 08:12:47)

And I thought these posts would receive no comments...

Evelyn (2010-04-07 09:09:21)

There are quite a few formatting changes in the code, because of the blog publishing software. Could you publish it to a pastebin? <http://pastebin.org/> And Andrew's comment made me laugh out loud.

seth (2010-04-07 19:54:31)

Evelyn, I cut-and-pasted the code from my blog into R without any problem. The formatting changes in the blog (differences between how it looks in R and how it looks in my blog) disappeared when it was back in R. Before I cut-and-pasted it, I made the type on my blog relatively small to make sure that there were no inserted line breaks.

Bryce (2010-04-10 19:52:53)

Seth, it may have worked for you, but because of character encoding weirdness there are some issues when pasting the code in some environments (for me pasting from chrome on OS X into my item emacs -nw session). R sees some of the quotes as \342, as well as some additional significant white space. I've cleaned it up a little bit and pasted it here: <http://pastebin.org/146455>

jimmy (2010-04-19 14:20:23)

hi seth, can you give some context? why are you running these tests to measure your brain function? like do you want to make sure you are at your sharpest before operating heavy machinery?

seth (2010-04-19 17:56:35)

Jimmy, I want to understand what makes my brain work better and worse – so I can make it work better. See my earlier posts about "mysterious mental improvement" for details.

Peter (2010-05-15 10:17:37)

Like others I'm intrigued by this code. I couldn't get it to run without knowing the code for the paint function. Any chance you could share that with us?

Seth Roberts and Citizen Science « My Year of Data (2011-12-10 20:55:40)

[...] on a standardized test of simple arithmetic questions that he takes every day. (He has made R code available for his daily math [...])

## Arithmetic Test R Code (part 2) (2010-04-07 06:07)

```
new.condition
function (conditions.so.far = newmath $condition)
{ # get new condition name
#
#Â Â Â Â Â Â Â Â Â Â conditions.so.farÂ Â Â Â Â Â vector of conditions so far
#
cat("current time",as.character(Sys.time()),"\n")
t=as.character(tail(conditions.so.far,1)) #malfunctions without as.character
cat("most recent condition",t,"\nthis condition")
condition=scan(nlines=1,what="character",quiet=TRUE, sep="!")
condition
}
```

```
> newmath2.problems
```

```
problem answer
```

```
[1,] "2*7"Â Â "4"
[2,] "1*7"Â Â "7"
[3,] "4+4"Â Â "8"
[4,] "8+5"Â Â "3"
[5,] "11-2"Â Â "9"
[6,] "4+6"Â Â "0"
[7,] "0*8"Â Â "0"
[8,] "0+4"Â Â "4"
[9,] "9*3"Â Â "7"
[10,] "16-9"Â Â "7"
```

[11,] "6\*8"Â Â "8"  
[12,] "7\*6"Â Â "2"  
[13,] "0+0"Â Â "0"  
[14,] "10-9"Â Â "1"  
[15,] "1\*1"Â Â "1"  
[16,] "8\*8"Â Â "4"  
[17,] "14-7"Â Â "7"  
[18,] "5+5"Â Â "0"  
[19,] "7-3"Â Â "4"  
[20,] "3+5"Â Â "8"  
[21,] "0+7"Â Â "7"  
[22,] "4-4"Â Â "0"  
[23,] "1+8"Â Â "9"  
[24,] "4\*1"Â Â "4"  
[25,] "3\*1"Â Â "3"  
[26,] "3-2"Â Â "1"  
[27,] "7\*9"Â Â "3"  
[28,] "0+8"Â Â "8"  
[29,] "1\*2"Â Â "2"  
[30,] "9\*1"Â Â "9"  
[31,] "0\*0"Â Â "0"  
[32,] "7+1"Â Â "8"  
[33,] "2-2"Â Â "0"  
[34,] "4+5"Â Â "9"  
[35,] "11-4"Â Â "7"  
[36,] "4+3"Â Â "7"  
[37,] "1\*0"Â Â "0"  
[38,] "1\*4"Â Â "4"  
[39,] "12-8"Â Â "4"  
[40,] "7\*1"Â Â "7"  
[41,] "2-1"Â Â "1"  
[42,] "4\*6"Â Â "4"  
[43,] "9-6"Â Â "3"  
[44,] "12-3"Â Â "9"  
[45,] "4+9"Â Â "3"  
[46,] "9+4"Â Â "3"  
[47,] "9\*7"Â Â "3"  
[48,] "15-7"Â Â "8"  
[49,] "3\*3"Â Â "9"  
[50,] "8-0"Â Â "8"  
[51,] "8\*9"Â Â "2"  
[52,] "11-8"Â Â "3"  
[53,] "2\*2"Â Â "4"  
[54,] "10-2"Â Â "8"  
[55,] "9+8"Â Â "7"  
[56,] "8-4"Â Â "4"  
[57,] "2+1"Â Â "3"  
[58,] "8+3"Â Â "1"  
[59,] "7-6"Â Â "1"  
[60,] "3-3"Â Â "0"

[61,] "9\*9"Â Â "1"  
 [62,] "8+1"Â Â "9"  
 [63,] "6\*4"Â Â "4"  
 [64,] "9+9"Â Â "8"  
 [65,] "4\*2"Â Â "8"  
 [66,] "6-5"Â Â "1"  
 [67,] "7+5"Â Â "2"  
 [68,] "9\*0"Â Â "0"  
 [69,] "3\*7"Â Â "1"  
 [70,] "8\*1"Â Â "8"  
 [71,] "2+8"Â Â "0"  
 [72,] "0+2"Â Â "2"  
 [73,] "8+0"Â Â "8"  
 [74,] "5-4"Â Â "1"  
 [75,] "6-3"Â Â "3"  
 [76,] "2\*0"Â Â "0"  
 [77,] "15-6"Â "9"  
 [78,] "1\*9"Â Â "9"  
 [79,] "7-0"Â Â "7"  
 [80,] "12-9"Â "3"  
 [81,] "9+3"Â Â "2"  
 [82,] "4+7"Â Â "1"  
 [83,] "1+7"Â Â "8"  
 [84,] "6-4"Â Â "2"  
 [85,] "6+7"Â Â "3"  
 [86,] "0+3"Â Â "3"  
 [87,] "6+3"Â Â "9"  
 [88,] "13-5"Â "8"  
 [89,] "6+1"Â Â "7"  
 [90,] "16-8"Â "8"  
 [91,] "6+5"Â Â "1"  
 [92,] "8\*6"Â Â "8"  
 [93,] "4\*0"Â Â "0"  
 [94,] "5+4"Â Â "9"  
 [95,] "6+4"Â Â "0"  
 [96,] "3\*9"Â Â "7"  
 [97,] "4+8"Â Â "2"  
 [98,] "5-3"Â Â "2"  
 [99,] "7+0"Â Â "7"  
 [100,] "15-8"Â "7"  
 [101,] "7\*3"Â Â "1"  
 [102,] "3+7"Â Â "0"  
 [103,] "6+2"Â Â "8"  
 [104,] "4-3"Â Â "1"  
 [105,] "11-3"Â "8"  
 [106,] "9+2"Â Â "1"  
 [107,] "5-5"Â Â "0"  
 [108,] "7+6"Â Â "3"  
 [109,] "9+1"Â Â "0"  
 [110,] "1\*3"Â Â "3"

[111,] "1+2"Â Â "3"  
 [112,] "2+0"Â Â "2"  
 [113,] "6-2"Â Â "4"  
 [114,] "13-9"Â "4"  
 [115,] "2\*1"Â Â "2"  
 [116,] "9+0"Â Â "9"  
 [117,] "9-1"Â Â "8"  
 [118,] "3-0"Â Â "3"  
 [119,] "12-4"Â "8"  
 [120,] "2+9"Â Â "1"  
 [121,] "10-6"Â "4"  
 [122,] "1+0"Â Â "1"  
 [123,] "4-0"Â Â "4"  
 [124,] "0\*2"Â Â "0"  
 [125,] "9\*2"Â Â "8"  
 [126,] "14-5"Â "9"  
 [127,] "5-1"Â Â "4"  
 [128,] "9-5"Â Â "4"  
 [129,] "3+0"Â Â "3"  
 [130,] "17-8"Â "9"  
 [131,] "2+7"Â Â "9"  
 [132,] "5+6"Â Â "1"  
 [133,] "8-1"Â Â "7"  
 [134,] "7-5"Â Â "2"  
 [135,] "3+6"Â Â "9"  
 [136,] "6\*0"Â Â "0"  
 [137,] "0\*4"Â Â "0"  
 [138,] "1\*8"Â Â "8"  
 [139,] "7-4"Â Â "3"  
 [140,] "7+2"Â Â "9"  
 [141,] "6-6"Â Â "0"  
 [142,] "9-9"Â Â "0"  
 [143,] "10-7"Â "3"  
 [144,] "3+1"Â Â "4"  
 [145,] "2+5"Â Â "7"  
 [146,] "5+9"Â Â "4"  
 [147,] "5+3"Â Â "8"  
 [148,] "8+6"Â Â "4"  
 [149,] "0\*5"Â Â "0"  
 [150,] "0+9"Â Â "9"  
 [151,] "1-1"Â Â "0"  
 [152,] "3-1"Â Â "2"  
 [153,] "7\*2"Â Â "4"  
 [154,] "7+4"Â Â "1"  
 [155,] "7+3"Â Â "0"  
 [156,] "1+1"Â Â "2"  
 [157,] "6+6"Â Â "2"  
 [158,] "9-7"Â Â "2"  
 [159,] "9-8"Â Â "1"  
 [160,] "9\*8"Â Â "2"

[161,] "2\*4"Â Â "8"  
 [162,] "8-5"Â Â "3"  
 [163,] "14-6"Â Â "8"  
 [164,] "9-2"Â Â "7"  
 [165,] "7\*4"Â Â "8"  
 [166,] "6+8"Â Â "4"  
 [167,] "16-7"Â Â "9"  
 [168,] "4\*3"Â Â "2"  
 [169,] "8+4"Â Â "2"  
 [170,] "8+2"Â Â "0"  
 [171,] "0\*9"Â Â "0"  
 [172,] "6\*2"Â Â "2"  
 [173,] "10-1"Â Â "9"  
 [174,] "4-2"Â Â "2"  
 [175,] "3\*8"Â Â "4"  
 [176,] "4-1"Â Â "3"  
 [177,] "7-7"Â Â "0"  
 [178,] "9-0"Â Â "9"  
 [179,] "2\*6"Â Â "2"  
 [180,] "12-5"Â Â "7"  
 [181,] "0-0"Â Â "0"  
 [182,] "0\*7"Â Â "0"  
 [183,] "2+6"Â Â "8"  
 [184,] "0\*6"Â Â "0"  
 [185,] "11-7"Â Â "4"  
 [186,] "0\*3"Â Â "0"  
 [187,] "18-9"Â Â "9"  
 [188,] "5+2"Â Â "7"  
 [189,] "4+0"Â Â "4"  
 [190,] "8\*4"Â Â "2"  
 [191,] "8\*3"Â Â "4"  
 [192,] "8-8"Â Â "0"  
 [193,] "0\*1"Â Â "0"  
 [194,] "7+7"Â Â "4"  
 [195,] "2+2"Â Â "4"  
 [196,] "13-6"Â Â "7"  
 [197,] "8\*0"Â Â "0"  
 [198,] "5\*0"Â Â "0"  
 [199,] "8+9"Â Â "7"  
 [200,] "3+8"Â Â "1"  
 [201,] "1+3"Â Â "4"  
 [202,] "2\*9"Â Â "8"  
 [203,] "5-2"Â Â "3"  
 [204,] "10-3"Â Â "7"  
 [205,] "4\*7"Â Â "8"  
 [206,] "8-6"Â Â "2"  
 [207,] "11-9"Â Â "2"  
 [208,] "1-0"Â Â "1"  
 [209,] "9+5"Â Â "4"  
 [210,] "6\*7"Â Â "2"

```
[211,] "3*0"Â Â "0"
[212,] "10-8"Â "2"
[213,] "3*4"Â Â "2"
[214,] "1+6"Â Â "7"
[215,] "13-4"Â "9"
[216,] "3+9"Â Â "2"
[217,] "5+8"Â Â "3"
[218,] "17-9"Â "8"
[219,] "0+1"Â Â "1"
[220,] "8-7"Â Â "1"
[221,] "7*0"Â Â "0"
[222,] "5+7"Â Â "2"
[223,] "2-0"Â Â "2"
[224,] "4*8"Â Â "2"
[225,] "3+4"Â Â "7"
[226,] "1+9"Â Â "0"
```

```
> newmath2.trial
```

```
function (trial = 1, total.trials = 5, problem=newmath2.problems[1,],condition= "testing", wait.range=c(1500,2500),
num.possible=9, note = "")
{ #give one trial. returns list with components wait, answer.msec, etc.
#("okay" or "aborted") and results.
#
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â trialÂ Â Â Â Â Â Â Â Â Â trial number
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â total.trialsÂ Â Â Â Â trials per session
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â problemÂ Â Â Â Â Â Â Â Â Â problem, answer (characters)
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â condition
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â wait.rangeÂ Â Â Â Â range of wait times (msec)
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â num.possibleÂ Â Â Â Â number of possible wait times
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â note
#
tn=paste("trial",trial,"of",total.trials)
msg=press.space.to.start(below=tn, col = "brown")
if(msg=="end session") return("end session")
wait.msec=newmath2.foreperiod(wait.range=wait.range, num.possible = num.possible)
t=newmath2.problem(problem=problem)
newmath2.feedback(problem=problem[1],answer.msec=t $answer.msec,correct=t $correct,status=t $status)
list(wait.msec=wait.msec, answer.msec=t $answer.msec,actual.answer=t $actual.answer, correct=t
$correct,include=t $include,status=t $status)
}
```



Brian (2010-04-29 18:57:03)

Seth, Why do you have these 226 hardcoded arithmetic problems and answers? Is there something special about how you've selected these problems? I know you did not want answers to be 5 or 6, but are there other criteria? Regards, Brian

seth (2010-04-29 20:37:41)

Brian, the main constraint is that each answer be equally likely. (Except that no answer is repeated – e.g., if the answer on trial 5 was 7, the answer on trial 6 will not be 7).

### Arithmetic Test R Code (part 3) (2010-04-07 06:13)

```
> newmath2.set.types
```

```
function ()
```

```
{ # set variables in newmath2 to proper types
```

```
#
```

```
newmath2 $year< <-as.integer(newmath2 $year)
```

```
newmath2 $month< <-as.integer(newmath2 $month)
```

```
newmath2 $day< <-as.integer(newmath2 $day)
```

```
newmath2 $hour< <-as.integer(newmath2 $hour)
```

```
newmath2 $minute< <-as.integer(newmath2 $minute)
```

```
newmath2 $second< <-as.integer(newmath2 $second)
```

```
newmath2 $condition< <-as.character(newmath2 $condition)
```

```
newmath2 $trial< <-as.integer(newmath2 $trial)
```

```
newmath2 $wait.msec< <-as.integer(as.character(newmath2 $wait.msec))
```

```
newmath2 $problem< <-as.character(newmath2 $problem)
```

```
newmath2 $answer.msec< <-as.integer(newmath2 $answer.msec)
```

```
newmath2 $actual.answer< <-as.integer(newmath2 $actual.answer)
```

```
newmath2 $correct< <-as.logical(newmath2 $correct)
```

```
newmath2 $include< <-as.logical(newmath2 $include)
```

```
newmath2 $note< <-as.character(newmath2 $note)
```

```
}
```

```
> save.ws  
  
function ()  
{  
  
invisible()  
  
save.image("C:/Documents and Settings/Seth/My Documents/omega-3/tracking.RData")  
  
cat("tracking workspace saved",as.character(Sys.time()),"\n")  
  
}
```

---

Alex Chernavsky (2010-04-07 09:39:39)

Seth, I plan on installing R and playing with this stuff in about two weeks (I won't have time until then). I'm fairly tech-savvy, but is there anything else that is non-obvious that I will need to know in order to avoid potential headaches and cursing when I go to implement this stuff? I have a Windows XP machine. Thanks for posting the code.

Seth Roberts (2010-04-07 10:27:07)

Alex, the crucial function runs on Windows but not other operating systems. So at the most basic level you are okay. However, to solve problems that come up I think you will need a basic knowledge of R. And the data analysis requires a bunch of data (e.g., 100 trials) to work properly. In other words: this will be difficult for a non-R user to use. You will need to have basic R proficiency AND study the code carefully to get things to work.

Karen (2010-05-02 11:39:52)

Seth, Thanks for posting thigs. I have most of this working in R, but I get the error message could not find function "newmath2.problem". It seems like there should be functions defined for newmath2.problem() and newmath2.feedback(). If so, could you post them? Thanks,

Karen (2010-05-02 11:43:41)

Found the code. A link to the part 4 of the code from this page would help. I thought this was then end of the code postings.

seth (2010-05-02 16:33:38)

Karen, to find all the R code, go to the "R code" category under "Categories".

## **Your Gut Bacteria Are What You Eat (2010-04-08 04:28)**

[1]A new study found that Japanese people, but not Americans, have gut bacteria that help them digest seaweed. The Japanese eat a lot more seaweed than Americans, of course. Presumably they acquired the gut bacteria from

eating seaweed that wasn't hyper-sterile. It's more evidence that we are not designed to eat hyper-sterile food.

Thanks to Aaron Blaisdell and Deborah Estrin.

1. <http://news.sciencemag.org/sciencenow/2010/04/japanese-guts-are-made-for-sushi.html>

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Kevin Miller (2010-04-16 05:33:57)

This is one of your most important posts, I think, because it suggests both the mechanism and the use of fermented foods. Fermented versions of the foods we regularly eat will give us bacteria that will help digest the (unfermented versions of) the foods we regularly eat. Sounds like Americans should try to find ways to eat fermented corn. Perhaps like the Andean drink chicha - <http://beverages.suite101.com/article.cfm/chicha> This reminds me of the idea that some of the selection process that helped plants evolve into more useful forms was a function of people eating the "best" plants and then shitting the seeds out near where they lived. Rinse and repeat over a long time, and you end up with a proliferation of plants suited to human consumption.

Tim McCormack (2010-07-21 07:57:40)

How do you think raw vs. cooked factors into the fermented foods issue? The live cultures in yogurt and kombucha clearly make it to your stomach alive, but when I make miso soup or cook tempeh, I can't imagine the high heat is great for the bacteria and/or fungi. Do you know of any research on whether they can make it through the cooking process? (Some bacteria can encyst, for instance.) I'm also curious about some claims that the fermentation process (for some substrates) ends with the death of the microbial community, via high acidity or alcohol content. Any pointers?

seth (2010-07-21 10:12:38)

Tim, my understanding is that Japanese cooks add miso to soup at the very end to avoid exactly the problem you mention: killing the bacteria. I haven't read about how fermentation, if it lasts long enough, ultimately kills the bacteria but I'm sure it's true. They run out of food, are poisoned by their own waste. So wine may be less healthy than other fermented foods where the bacteria are alive (or more alive).

## Arithmetic Test R Code (part 4) (2010-04-08 04:55)

```
>newmath2.trial
function (trial = 1, total.trials = 5, problem=newmath2.problems[1,],condition= "testing", wait.range=c(1500,2500),
num.possible=9, note = "")
{ #give one trial. returns list with components wait, answer.msec, etc.
#("okay" or "aborted") and results.
#
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â trialÂ Â Â Â Â Â Â Â Â Â trial number
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â total.trialsÂ Â Â Â Â trials per session
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â problemÂ Â Â Â Â Â Â Â Â Â problem, answer (characters)
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â condition
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â wait.rangeÂ Â Â Â Â range of wait times (msec)
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â num.possibleÂ Â Â Â Â number of possible wait times
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â note
#
tn=paste("trial",trial,"of",total.trials)
```

```

msg=press.space.to.start(below=tn, col = "brown")
if(msg=="end session") return("end session")
wait.msec=newmath2.foreperiod(wait.range=wait.range, num.possible = num.possible)
t=newmath2.problem(problem=problem)
newmath2.feedback(problem=problem[1],answer.msec=t $answer.msec,correct=t $correct,status=t $status)
list(wait.msec=wait.msec, answer.msec=t $answer.msec,actual.answer=t $actual.answer, correct=t
$correct,include=t $include,status=t $status)
}

```

```

> press.space.to.start
function (msg = "press space", prompt = "to start", below="", beepf=FALSE, bottom = "press letter to end session", col
= "red", text.size=5)
{ #wait for Enter to start data collection with getGraphicsEvent
#
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â beepfÂ Â Â Â beep after input?
#
paint(center=prompt, above = msg, below=below, bottom = bottom, text.size=text.size, col = col)
msg="get answer"
while(msg=="get answer") {
t=getGraphicsEvent(prompt="",onKeybd=get.key)
if(beepf) beep()
if (t==" ") msg="okay"
if (t %in % strsplit(alphabet,split="")[[1]]) {
msg = "end session"
paint("ending session")
}
}
msg
}
> newmath2.foreperiod
function (wait.range=c(1000,2000), num.possible = 9)
{ #delay for interval randomly selected within given range. Returns
#wait in msec
#
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â wait.rangeÂ Â Â Â Â lower and upper possible delays (msec)
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â num.possibleÂ Â Â Â Â number of possible waits (which are equally spaced)
#
#
possible.waits=seq(from = wait.range[1],to = wait.range[2], length.out = num.possible)
wait.msec=sample(possible.waits,1)
paint("|",duration = wait.msec/1000)
wait.msec
}
> newmath2.problem
function (problem = c("3+4","7"),status = "okay")
{ #show new arithmetic problem. Returns list of latency,
#answer, right/wrong, and note.
#
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Ü-?Â Â Â Â Â problemÂ Â Â Â Â vector of problem and answer (both characters)
#Â Â Â Â Â Â Â Â Â Â Â Â Â Â Â Ü-?Â Â Â Â Â statusÂ Â Â Â Â status

```

```

#
newmath2.show(problem[1])
see.time = Sys.time()
actual.answer=getGraphicsEvent(prompt="",onKeybd = get.key)
resp.time<-Sys.time()
answer.msec=as.integer(1000*difftime(resp.time,see.time,unit="sec"))
if(!actual.answer %in % as.character(c(0:9))) {
  actual.answer=""
  answer.msec=NA
  correct=NA
  include=FALSE
  if (an=="q") status = "abort session" else status="abort trial"
}
else {
  correct=actual.answer==problem[2]
  include=TRUE
  status="okay"
}
list(answer.msec=answer.msec,actual.answer=actual.answer,correct=correct, include=include, status = status)
}
> newmath2.feedback
function (trial = 5, problem = "3+4", actual.answer=7, status= "", answer.msec = 639, correct = TRUE, number.back=15)
{ #give feedback on trial
#
#Â Â Â Â Â Â Â Â Â Â trialÂ Â Â Â Â Â Â trial number
#Â Â Â Â Â Â Â Â Â Â problemÂ Â Â Â Â Â Â problem shown
#Â Â Â Â Â Â Â Â Â Â actual.answer actual answer (numeric)
#Â Â Â Â Â Â Â Â Â Â correctÂ Â Â Â Â Â Â correct?
#Â Â Â Â Â Â Â Â Â Â statusÂ Â Â Â Â Â Â anything unusual?
#Â Â Â Â Â Â Â Â Â Â answer.msecÂ Â latency of answer (msec)
#Â Â Â Â Â Â Â Â Â Â number.backÂ Â compare this rt with how many back?
#
if(status=="abort block") {
  paint("block aborted",duration = 1.5)
  return()
}
if(status=="abort session") {
  paint("session aborted",duration = 1.5)
  return()
}
if(!correct) {
  paint("wrong",duration = 1.5)
  return()
}
previous.answer.msec=newmath2 $answer.msec[(problem==newmath2 $problem) &newmath2 $correct &new-
math2 $include]
ptile=newmath2.ptile(answer.msec,previous.answer.msec)
ptile.msg=paste(round(ptile)," %ile",sep="")
whole.msg=paste(answer.msec,"ms",ptile.msg)
paint(whole.msg, text.size = 4, col = "blue", duration = 1)

```



Evelyn (2011-03-26 10:57:16)

<http://www.inside-r.org/pretty-r/tool> A tool for formatting R code for publishing on the web.

Dafydd (2011-04-03 09:13:51)

I've just spent the day learning R and trying to get this code to work. Final hurdle (I think) is that the function `newmath2.plot()` is missing. Any chance Seth can share?

Seth Roberts (2011-04-03 22:13:09)

I have sent you an R workspace by email that should work.

## Grass-Fed vs. Grain-Fed Beef (2010-04-08 05:31)

[1]A new review article compares them. Here is most important info, as far as I'm concerned:

A healthy diet should consist of roughly one to four times more omega-6 fatty acids than omega-3 fatty acids. The typical American diet tends to contain 11 to 30 times more omega -6 fatty acids than omega -3, a phenomenon that has been hypothesized as a significant factor in the rising rate of inflammatory disorders in the United States[[2]40]. Table [3]2 shows significant differences in n-6:n-3 ratios between grass-fed and grain-fed beef, with and overall average of 1.53 and 7.65 for grass-fed and grain-fed, respectively, for all studies reported in this review.

Grass-fed really is better.

1. <http://www.nutritionj.com/content/9/1/10>

2. <http://www.nutritionj.com/content/9/1/10#B40>

3. <http://www.nutritionj.com/content/9/1/10/table/T2>

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Aaron Blaisdell (2010-04-08 07:03:52)

And tastes better, too! But you have to remember to cook it at lower temps than grain fed beef. I've made some remarkable grass-fed beef in my Sous Vide Supreme.

Michael Pope (2010-04-08 11:07:17)

Wow, feeding cattle original developmental fuel yields a superior food. Who wudda thunk. Sorry, I just couldn't help myself. I agree with Aaron the taste is superior. I can't even eat the grain fed stuff anymore.

Jake (2010-04-09 09:14:56)

No doubt that grass fed beef is better. In fact, I try to eat grass fed buffalo whenever possible rather than beef. But to put the omega 6 question on beef in perspective: 6 oz of grain fed beef hamburger contains 600 mg of omega 6. One tablespoon of salad dressing made with soybean oil contains 14,000 mg of omega 6. So the omega 6 problem is not meat, it is the industrial vegetable oils.

griff (2010-04-09 15:44:15)

Not only are grass fed cattle better for you, they can reduce gases attributed to the supposed global warming: <http://www.telegraph.co.uk/earth/environment/climatechange/7564682/Cows-absolved-of-causing-global-warming-with-nitrous-oxide.html>

tut (2010-04-14 09:29:03)

So the omega 6 problem is not meat, it is the industrial vegetable oils.

You generalize too much. If you are talking about soy or corn oil you are right, they are no good. But rapeseed oil and olive oil have a healthy omega 3/6 quotient. And if you look at something like linseed or sunflower seed oil they look more like omega 3 supplements than like corn oil.

Ashish (2010-04-20 22:44:08)

Where does one find this "grass fed beef"? Both Trader Joe's and Whole Foods, at least in Palo Alto, will certify only that their best cuts of beef were fed a "vegetarian diet."

seth (2010-04-21 05:27:48)

At the Berkeley Whole Foods, I can get buffalo, which they tell me is grass-fed. I also buy grass-fed beef at farmer's markets.

Randi Miller (2010-04-24 05:35:40)

Vegetarian diet would also include corn (stating the obvious here). I don't know you "guys'" situations, but you may look for a local ranch for your beef needs. There has been a trend toward smaller cattle, so smaller ranchers are raising beef. It is much less expensive to buy beef by 1/4, 1/2 or whole and you don't have to go to the store as often; although you do need a freezer. Email me if you would like some help or more information :)

Bruce (2010-04-25 18:39:23)

Anyone aware of a similar study in poultry? I'm not a beef-eater, but I do like my chicken and turkey.

Tom Grabovsky (2010-06-04 23:40:12)

We've all got to start requesting (demanding) grass fed beef or the companies that produce the meat will take the quickest, cheapest option to get meat ready for slaughter. Currently that cheap option is the force feeding of a cocktail of corn, protein and antibiotics ... No wonder outbreaks of E-Coli are on the rise when the prevalence of the E-Coli bacteria in cattle is increased by feeding them corn - newflash - cattle are grass eaters - and then we wonder why E-Coli is on the rise in things like spinach ... It doesn't take a rocket-scientist to work out that the run-off from cattle farms makes its way to other farms in many different ways. Wake up America! Do something ... Write a letter to your congressman/woman. Get the lobbyists out of congress. Vote with your wallet. Spread the word to your friends.

## **Why Cory Doctorow Won't Buy an iPad (2010-04-09 08:25)**

I loved [1]this Boing Boing post by Cory Doctorow about why he won't buy an iPad. One of his points:

Relying on incumbents to produce your revolutions is not a good strategy. They're apt to take all the stuff that makes their products great and try to use technology to charge you extra for it, or prohibit it altogether.



Just as I believe that relying on the medical establishment to improve health care is not a good strategy. Those in power (incumbents) will resist change, especially revolutionary change. Science – connecting beliefs with reality – is surely the most revolutionary activity invented yet professional health researchers, simply because they have something to lose, now resist change.

One of Doctorow's complaints:

Then there's the device itself: clearly there's a lot of thoughtfulness and smarts that went into the design. But there's also a palpable contempt for the owner. I believe – really believe – in the stirring words of the [2]Maker Manifesto: if you can't open it, you don't own it. Screws not glue.

Likewise, I believe it's possible to do health research where everything is understandable. Where you can understand the data. Where you can understand the connection between the data and better health. The simple situations, treatments and measurements I use in my self-experimentation I judge to be an improvement over obscure health research, whereas I suspect most professional scientists instinctively think something must be wrong with it. Real science, they think, cannot be done by amateurs.

1. [http://www.boingboing.net/2010/04/02/why-i-wont-buy-an-ipad-and-think-you-shouldnt-either.html?utm\\_source=twitterfeed&utm\\_medium=twitter](http://www.boingboing.net/2010/04/02/why-i-wont-buy-an-ipad-and-think-you-shouldnt-either.html?utm_source=twitterfeed&utm_medium=twitter)
2. <http://makezine.com/04/ownyourown/>

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Ed M. (2010-04-09 11:03:24)

Interesting point, but most people don't want to open up their gadgets and tinker... The Open Source ethos is great at an individual level, you get freedom, but you pay for it in time and frustration. A friend of mine spent over 40 hours making a MythTV box as a replacement for his Tivo. Sure his customized box has more capabilities, and he saved a couple bucks, but his wife can't figure out how to use it... Typical Consumers want an experience, not a hobby. The Apple platform, while it may cater to incumbents, provides a platform for all comers. –Ed

Nathan Myers (2010-04-09 13:04:56)

"Most people". "Typical Consumers". "All comers". Each is an insult, applied to any individual. Of course "most people" are well indoctrinated not to stray from their appointed place, and consume what has been homogenized for "all comers". Each who strays makes it easier it is for the next to break loose.

Jake (2010-04-10 09:44:06)

Cory Doctorow has a quaintly old fashioned view of computers and it is a hacker's view. Computers are a tool. Who cares how it was put together as long as it works and is fast. All the innovation, all the excitement is in the software. And there are very few limitations on the creative energies of software designers. I don't have an Ipad but all reports are that this tool works and is fast. That's all I care about. I am waiting for genius developers to create apps that will better my life in new and unique ways. Cory Doctorow will ignore all the magical apps to come because he will be too busy trying to pry open the Ipad case with a pocket knife.

Philip Kilner (2010-04-11 05:08:21)

I'm with Seth on this. @ Ed M. This stuff is a self-fulfilling prophecy. As long as tech is manufactured in a way that makes it hard to tinker, it /will/ be hard to tinker. If we create a demand for openness, we may nudge things the other way. I'd like to think most people aspire to be more than /just/ consumers. @ Jake You say "there are very few limitations on the creative energies of software designers" and you are right - but your argument falls here because one of those limitations is the control Apple impose on iPad apps. Cory Doctorow's peice was as much about that as the hardware.

Bryan (2010-04-11 08:30:03)

This NYT piece by Steven Johnson is directly on point: <http://www.nytimes.com/2010/04/11/technology/internet/11every.html>

Five Reasons Against the iPad = Five Reasons For Competitive Governance « Let A Thousand Nations Bloom (2010-04-19 12:06:40)

[...] HT to Seth Roberts, who makes analogies to improving health care. [...]

Seth's blog » Blog Archive » Why Cory Doctorow Won't Buy an iPad | Ipad fans (2011-04-01 08:47:56)

[...] Seth's blog » Blog Archive » Why Cory Doctorow Won't Buy an iPad Share this: Posted in Buy Ipad Tags: buy ipad 2 « Free Ipad You can leave a response, or trackback from your own site. [...]

## The Man Who Would Be Queen (2010-04-10 09:23)

[1]The Man Who Would Be Queen by [2]Michael Bailey, about male homosexuality, is easily the best book about psychology ever written. It is emotional, persuasive, non-obvious, important, and well-written. Few books manage three of these adjectives. One sign of its emotion, persuasiveness, importance, and non-obviousness is [3]the vilification Bailey underwent for writing it - led by people as smart as Deirdre McCloskey and [4]Lynn Conway. Their campaign against it risked drawing more attention to it, of course. Now you can [5]read it for free.

[6]Can professors say the truth?. My correspondence with Deirdre McCloskey: [7]part 1, [8]part 2, [9]part 3, [10]part 4, [11]part 5, [12]part 6. [13]Alice Dreger's article about the controversy, including a short version of my correspondence with McCloskey.

1. <http://faculty.wcas.northwestern.edu/JMichael-Bailey/TMWQBQ.pdf>

2. <http://faculty.wcas.northwestern.edu/JMichael-Bailey/>

3. [http://www.nytimes.com/2007/08/21/health/psychology/21gender.html?\\_r=1&scp=5&sq=alice%20dreger&st=cse](http://www.nytimes.com/2007/08/21/health/psychology/21gender.html?_r=1&scp=5&sq=alice%20dreger&st=cse)

4. <http://ai.eecs.umich.edu/people/conway/TS/LynnsReviewOfBaileysBook.html>

5. <http://faculty.wcas.northwestern.edu/JMichael-Bailey/TMWQBQ.pdf>

6. <http://www.blog.sethroberts.net/2007/08/16/can-professors-say-the-truth-part-4/>

7. <http://www.blog.sethroberts.net/2007/08/25/can-professors-say-the-truth-letter-from-mccloskey/>

8. <http://www.blog.sethroberts.net/2007/08/26/can-professors-say-the-truth-another-letter-from-deirdre-mccloskey/>

9. <http://www.blog.sethroberts.net/2007/08/26/can-professors-say-the-truth-my-reply-to-deirdre-mccloskeys-2nd-letter/>

10. <http://www.blog.sethroberts.net/2007/08/29/can-professors-say-the-truth-deirdre-mccloskeys-3rd-letter/>

11. <http://www.blog.sethroberts.net/2007/08/29/can-professors-say-the-truth-deirdre-mccloskeys-4th-letter/>

12. <http://www.blog.sethroberts.net/2007/09/01/can-professors-say-the-truth-more-from-deirdre-mccloskey-and-t>

he-email-she-doesnt-want-you-to-see/

13. <http://sethroberts.net/articles/2008%20Dreger.pdf>

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"Mark Rutherford" (2010-04-10 20:46:29)

Prof, thanks for re-opening this - you are a brave man. It's interesting that what really drives the passion on this book, in the case of Deirdre McCloskey and at least one other commenter in your 2007 threads is - if I may generalize - the desire to shift the blame from a) close family members - parents or children - who (b) had a violently negative reaction to the "transition" to another sex (there's a (c) coming - to a third party - that is, poor Professor Bailey. The (c) is that the violently negative reaction on the part of parents or children, while deplorable, while to my knowledge by no means universal - though I have no idea of its frequency in such cases - is entirely predictable and almost inevitable - at least in a non-violent, repressed, perhaps never mentioned way. And while the naive young person who thinks that her mother was changed by Bailey's book may be naive, surely McCloskey is enough of a grown-up to realize that her children might well react that way - not to forgive them, not to wish that they didn't - but on some level to understand that they would have such a reaction. The sheer unfeelingness on the part of someone like McCloskey in refusing to acknowledge that Bailey, his opinions, your opinions, etc., have nothing to do with the private tragedy that is being enacted within the McCloskey family (according to her own account) and many others. It's ironic: from the accounts of the transgendered that one reads, and even in McCloskey's emails, it is clear that transgendered people experience more than their share of misunderstanding at the hands of others. It's a pity that they can't pity and at least inwardly forgive others - their parents or children particularly - for feeling the same way. And it's a particular kind of blindness to blame one poor shnook for the very human kind of fallibility and unintentional cruelty that they experience at the hands of people who, wrongly, feel themselves betrayed. Bailey, if wrong, surely has something to teach them about how others might feel - if they cared to. Instead, McCloskey and that other, much more dreadful woman, tried to turn what they might have seen as an intellectual sin into a family romance. Refuting him would not be enough - they immediately embarked on the enterprise of trying to get "the authorities" to turn Bailey out of an imagined family. People don't need to read Bailey or to find him persuasive to be loathsome. They do quite well on their own, as the amazing behavior of McCloskey demonstrates.

seth (2010-04-11 10:35:43)

Mark, yes, I agree it's loathsome to file a human-subjects complaint against someone because you dislike something they said.

Alex Chernavsky (2010-04-11 12:35:57)

I don't know anything about this book, but Seth's post reminds me of the controversies (and vilification) surrounding Elizabeth Loftus and her work debunking recovered-memories. And I remember the big brouhaha that erupted when *A Natural History of Rape* was published in 2000. And then there's also Susan Clancy's recent book, *The Trauma Myth*. Lots of psychology research seems to touch a raw nerve with people.

Erik (2010-04-11 19:51:33)

Thank you so much for posting a link to the .pdf file of Bailey's book. It's nice to have it available since the book itself is out of print.

Nathan Myers (2010-04-12 16:49:58)

I haven't read the book. Is he saying all trans women fall into those two categories? 'Cause I know of ones who don't. I did find his explanation I read here, of Michael Jackson - as someone who fetishized imagining himself pre-pubescent - as illuminating as I can conceive of anything on the subject being. It seemed to make sense of many other cases. Seth: "All" trans women? No. Just most of them.

Deirdre McCloskey (2010-04-27 17:45:32)

Dears: The blogosphere, which has enriched conversation so splendidly, has the one flaw that people tend to stay in it, and accept as an unquestioned basis for the conversation the accounts given there-as Mark Rutherford does in his sensible remark.

I do not blame Professor Bailey for my troubles, small as they are (the only bad news in my transition was the attitude of my marriage family: otherwise I lived as Donald and now live as Deirdre a very happy life). My complaint about Bailey is that his book adds a little to the burden that gender variant people have, especially poor and ignorant ones who cannot defend themselves against power (thankfully I can, and have). Bailey is no big deal in the larger scheme, and his writings will result in the deaths of only a few additional transgendered people. My only point is that adding to the burden is not the direction a liberal society should want to be going. We should be increasing tolerance, not reducing it by introducing a locker-room theory of queers. That's Professor Bailey's theory: male to female gender crossers are homosexuals; and homosexuals are all girly. (About born women he and his group have nothing to say.) I do not understand the unreasoning passion that our good host Seth has about all this. He fell early on for the Bailey-camp claim that complaining about Bailey's "research" was some sort of out-of-line "censorship." Now he won't modify his views, regardless of new evidence. If you ever get to see his exchange with me ("What Exchange Seth Doesn't Want You To See," to borrow his amazing courtroom tactic in attacking me) you'll see that he is uninterested in quiet, serious exchange. That's worrisome in a scientist. The power is all on the other side, yet Lynn Conway and I in Seth's fevered account are the toughs. Bailey was the chair of Psychology at Northwestern. Bailey's mentor in Toronto (from whom he got his ideas) is the current chair of the American Psychiatric Association's subcommittee on gender dysphoria for rewriting the Diagnostic and Statistical Manual of Mental Disorders, version five (according to which, btw, most of the people listening to this blog, if a random sample of humans, are in urgent need of mental health attention). The DSM-V will therefore regress from a liberal position, such as the one the Association took in 1973 when it banished homosexuality from the list of disorders. I didn't file a human subjects complaint against Professor Bailey because I didn't like his work—alho I freely admit to not liking it. I filed it because he violated elementary standards in the treatment of human subjects, one of whom was a personal friend. He got away with it, as far as an outsider can judge, because he agreed to resign from being Department Chair and because the women he abused were frightened and strange. He got away with practicing psychology without a state license (he used as bait for getting material for his book a signature on a letter for gender reassignment surgery) because by the time people savvy in such matters found out about it the statute of limitations (written you will not be surprised to hear by the psychologists themselves) had run out. Nice guy: powerful but irresponsible. But I don't expect much from trying to be reasonable. It hasn't worked very often about this subject in the past, and never on Seth's Blog. Regards, Deirdre McCloskey

seth (2010-04-27 18:01:36)

Again, Professor McCloskey, I am glad to hear from you. Seriously. "[Bailey's] writings will result in the deaths of only a few additional transgendered people." As you say, nothing like "quiet serious exchange" to help us find the truth of things. "The power is all on the other side." If Lynn Conway sees herself as powerless, why did she do so much? For example, her massive website. As for the "Exchange [between us] Seth Doesn't Want You to See" I've done everything I could to publicize it, including putting the published version [http://sethroberts.net/articles/2008 %20Dreger.pdf](http://sethroberts.net/articles/2008%20Dreger.pdf) on my website and linking to it (in this post). If there's more I can do to publicize it, let me know.

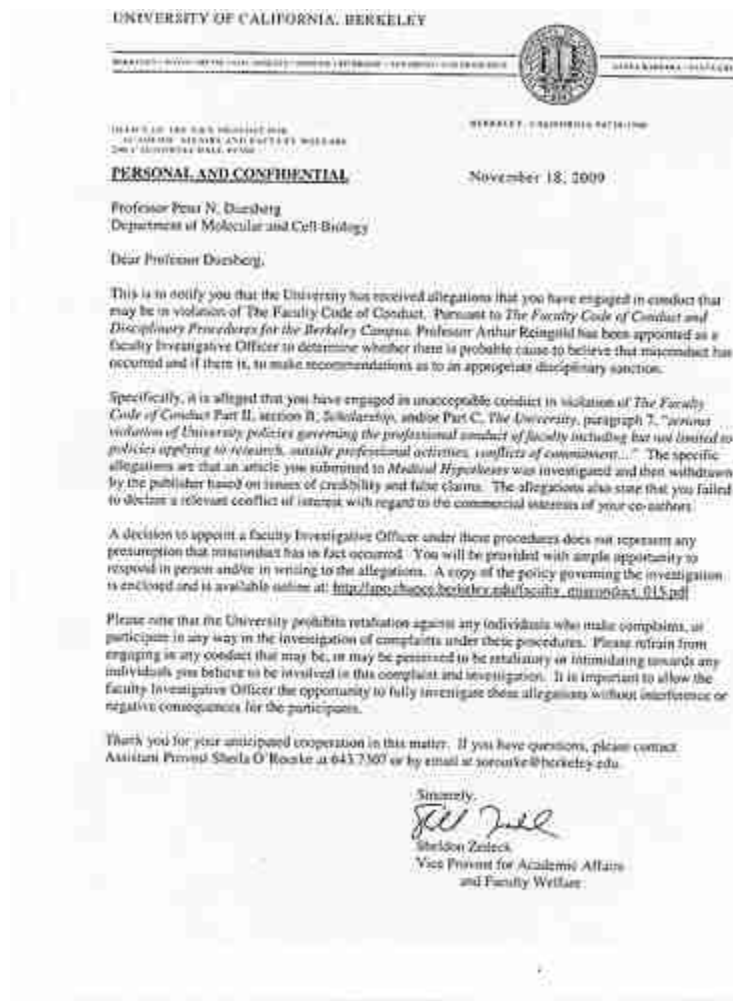
The Man Who Would Be Queen « A Fistful of Science (2010-07-21 19:30:41)

[...] The Man Who Would Be Queen July 21, 2010 On the recommendation of Seth Roberts, I picked up a book from the library called *The Man Who Would Be Queen: The Science of Gender-Bending and Transsexualism* by J. Michael Bailey (full pdf [here](#)). You might have heard of it, as it caused some controversy a few years back. One of the book's major premises is that gay men tend to behave in feminine ways and probably do so from a young age. [...]

## Academic Horror Story (UC Berkeley - 2) (2010-04-11 10:25)

Peter Duesberg, a professor at UC Berkeley, has been accused of misconduct for writing a paper espousing an unpopular idea (that HIV doesn't cause AIDS) – and the university administration is taking this seriously! Here is the letter Duesberg received.

[1]



This is major-league harassment, similar to [2]the human-subjects complaint against Michael Bailey. And it's Berkeley's second [3]Academic Horror Story. Previously, [4]Berkeley administrators carefully delayed an experimental subject from learning she had a big lump in her brain.

More "[5]You can be as nasty as you like" (John Cleese on extremism, via [6]Marginal Revolution).

1. <http://www.flickr.com/photos/sethroberts/4511515586/>
2. <http://sethroberts.net/articles/2008%20Dreger.pdf>
3. <http://www.blog.sethroberts.net/category/education/academic-horror-story/>
4. <http://www.blog.sethroberts.net/2008/01/31/academic-horror-story-uc-berkeley/>
5. [http://www.youtube.com/watch?v=HLNhPMQnWu4&feature=player\\_embedded](http://www.youtube.com/watch?v=HLNhPMQnWu4&feature=player_embedded)
6. <http://www.marginalrevolution.com/>

Andrew Gelman (2010-04-11 14:56:34)

Seth: Setting aside the details of the complaint, the criticism of Duesberg was not that his ideas are unpopular, it's that his ideas are false and unsupported by scientific evidence and are dangerous. Neither you nor i is an expert on Aids research (although

you did publish an article on the topic once in Spy). But I think you're trivializing the opposition to Duesberg by characterizing it is an opposition to an "unpopular" idea. I don't know what's the best way for universities to deal with people like this, but it's a bit embarrassing to the university when it's always "UC Berkeley scientist Duesberg" this and "UC Berkeley scientist Duesberg" that. He's trading off the university's reputation. Maybe nothing can or should be done about it, but I can understand the administration's frustration.

Hal (2010-04-11 17:20:06)

"The specific allegations are that an article you submitted to Medical Hypotheses was investigated and then withdrawn by the publisher based on issues of credibility and false claims. The allegations also state that you failed to declare a relevant conflict of interest with regard to the commercial interests of your co-authors." Not clear how you get from this that he "has been accused of misconduct for writing a paper espousing an unpopular idea".

vic (2010-04-11 21:41:50)

Gotta agree with Seth here - what's "science" is determined by social consensus, and the very reason tenure exists as an institution.

kevin denny (2010-04-12 04:10:16)

There are two allegations: that he wrote an article that was withdrawn by the publisher [over credibility and false claims] and the failure to declare a vested interest. I'm unclear about the first allegation. If I submit an article claiming the moon is made of cheese should I be disciplined? I am not trivializing the issue. Won't the peer review process sort this out? This is complicated by the fact that Medical Hypotheses was not a conventional peer review journal although the publishers were changing this. Credibility is capricious and many scientific claims, now believed to be true, were considered crazy in their time. Even if I suspect that Duesberg's main claim is crazy [though not an AIDS expert either], it's not a hanging offence. By "false claim" are they saying he's wrong or that he lied? It can't be an offence to be just wrong. The conflict of interest allegation seems a valid concern. In any event, however embarrassing this guy is to Berkeley this is no reason to take a pop at him if that is what they are doing.

seth (2010-04-12 07:08:40)

Andrew & Hal, it's like Driving While Black (except the punishment is much worse than a traffic ticket). Duesberg is being investigated for stuff that is ordinarily never a matter of investigation. In recent times, I suspect no other professor has been investigated because a co-author was accused of having a conflict of interest or because of something as vague as "false claims" or insufficient "credibility". Kevin, undeclared conflicts of interest have been a massive problem for American medical schools. Senator Grassley has spent a lot of time on this. As far as I know no professor has ever been investigated by his university for the problem - much less the fact that a co-author had the problem.

Andrew Gelman (2010-04-12 08:30:52)

Seth: It sounds more like Driving While Speeding than Driving While Black.

Alex Chernavsky (2010-04-12 08:48:11)

Seth, you wrote, "As far as I know no professor has ever been investigated by his university for [undeclared conflicts of interest]". Psychiatrist Charles Nemeroff was investigated by Emory University and forced to resign his chairmanship of the department: [http://shared.web.emory.edu/emory/news/releases/2008/12/conflict\\_of\\_interest\\_action.html](http://shared.web.emory.edu/emory/news/releases/2008/12/conflict_of_interest_action.html) Nemeroff is a real piece of work. If you're interested, do some Google searches on him.

Patrik (2010-04-12 16:00:12)

@Peter Duesberg [in case, you are reading this] As Rush noted in 1982, "Conform or be cast out!" @Andrew Gelman Speeding is illegal. Being Black isn't. So, what was it that Duesberg did that was illegal?

peter duesberg (2010-04-12 16:28:53)

To Andrew Gelmanâ€“ Several points: 1) Yes, the allegations are that "the ideas are false, ... un-supported by evidence, and dangerous". Yes. But, to this day I have not received evidence from UCB or elsewhere to support these allegations. The evidence for unpopularity is, however, overwhelming - rejection by the Journal of AIDS, censorship after publication in Medical Hypotheses by Elsevier, and now a "misconduct" investigation by UC Berkeley â€“ the cradle of free speech! Would you read the paper that has been censored, if I send you a copy? Please send your email request to duesberg@berkeley.edu Don't say you are not an expert please, until you had a look at it. 2) Yes, I am "trading on my university's reputation". For a long time this was, however, quite mutual - when I was elected California Scientist of the Year, elected in the National Academy, and received \$ million grants on retroviruses, the same ones that are said to cause AIDS. Only an impartial review of my current evidence against HIV-AIDS or history can tell, whether some day it won't be the other way around - when UCB might derive reputation from now mis-conduct suspect professors like me - and perhaps even the torture-advocate professor Yoo.

Nathan Myers (2010-04-12 16:37:17)

Cal hired and tenured John Yoo in full knowledge of his war crimes, and he is actually teaching undergraduate constitutional law just as if he were qualified. Does that leave Cal with any reputation left to protect? Maybe each college is now on its own, with the Law school's reputation thoroughly flushed. Duesberg has revealed himself as a full-scale crank. Is that a crime? No. Is Cal Med obliged to let him use their name to endorse his fantasy life? Surely not. Seth runs on about the statistical offenses he perceives in climate researchers, but he doesn't drag Cal into it.

seth (2010-04-12 17:56:52)

Alex, you have misquoted me. Here's what I wrote: I suspect no other professor has been investigated because a co-author was accused of having a conflict of interest. Here's what you wrote: Seth, you wrote, "As far as I know no professor has ever been investigated by his university for [undeclared conflicts of interest]â€“". See the difference? I've blogged about Nemeroff several times, e.g.,

Patrik (2010-04-12 18:53:23)

@Peter Duesberg and @Seth Perhaps you could send the paper to Seth, who may be inclined to update this blog post with a link to it? @Andrew Gelman Seriously, you gotta back up your "his ideas [are false and unsupported by scientific evidence] and are **dangerous**". Sounds a lot like what they said about Semmelweis.....

Robert Reis (2010-04-12 19:31:56)

When a vote decided whether or not homosexuality was an illness, academia revealed it was a fraud.

Nanonymouse (2010-04-12 21:39:30)

@Peter Duesberg: Clearly you did nothing to warrant investigation. This is another PC witch hunt, yes.

Andrew Gelman (2010-04-12 22:32:24)

Sorry, I should've said allegedly driving while speeding.

Nathan Myers (2010-04-12 22:39:00)

As far as I can tell, the charge is not about having a paper withdrawn: it's about the false claims made in the paper that were the reason for the withdrawal. The wording in the letter is unfortunate, but there's no need for us to be confused by it - unless, of course, we choose to be confused, or to pretend to be confused. Does it matter whether anyone had been investigated before, about keeping his co-authors' commercial interests secret? If it's part of his responsibility to reveal all conflicts of interest in his submission, then why does it matter whether it's him or his co-authors who have the conflict? It would only matter if they had concealed the conflicts from him, and I don't think anybody suggests that. By analogy to criminal law, conspiracy to commit a crime is itself a crime.

Alex Chernavsky (2010-04-13 03:09:52)

Seth, I didn't misquote you. I quoted a different part of your post than the one you THINK I quoted. All I did was replace your words "the problem" with "[undeclared conflicts of interest]". Here is the full paragraph, part of which I quoted and responded to in my comment: "Kevin, undeclared conflicts of interest have been a massive problem for American medical schools. Senator Grassley has spent a lot of time on this. As far as I know no professor has ever been investigated by his university for the problem" much less the fact that a co-author had the problem."

seth (2010-04-13 06:09:28)

Alex, sorry, I'm in a third-world city with terrible internet access (Chicago). As I was writing my comment I lost access. I had coded the Nemeroff case as one where the accused (Nemeroff) had misstated to his university how much drug companies had given him. But, yeah, you could call that a conflict-of-interest problem. That Nemeroff understated those payments by hundreds of thousands of dollars and was investigated only after a US Senator complained and the case received national attention just goes to show how bizarre the charge against Duesberg is. It really is Driving While Black. A black person might get pulled over for going 1 mph over the speed limit. No one else is.

Dennis Mangan (2010-04-13 07:41:40)

Linda Gottfredson: "Lessons in academic freedom as lived experience" <http://www.udel.edu/educ/gottfredson/reprints/2009academicfreedom.pdf> Gottfredson is a well-known IQ researcher and was harassed repeatedly for several years.

Tommy (2010-04-13 12:49:59)

What?! I don't think there is any conflict of interest, just because one of the author's former employers is a vitamin re-seller... I don't get it. If you want to call this a conflict of interest, then what do you call Essex, Gallo and all the other AIDS scientists, many of whom literally make millions out of patents and pharma connections... That's what I call a conflict of interest!

vic (2010-04-13 22:37:53)

That Nathan Myers talks about war crimes, yet has the mentality of a Gestapo Agent, advocating selective enforcement of vague conflict of interest declaration policies (as if declaring them makes them go away) in order to suppress the views of those he disagrees with. Typical hand-wringing, moralizing liberal.

seth (2010-04-14 03:54:07)

yes, Tommy, the idea that there is a conflict of interest because a co-author used to be employed by a company that would benefit from the paper makes no sense.

Christian Fiala (2010-04-14 10:58:24)

I am one of the authors of the paper in Medical Hypotheses you are discussing here. In the paper we collected official data from South Africa and Uganda and compared them with previous predictions. Surprisingly, a close examination of the current data (as opposed to public health and media driven beliefs) showed a dramatically increasing population growth due to constant fertility combined with stable or declining mortality. In summary current public data do not provide the slightest evidence for a deadly (HIV/Aids) epidemic in Africa. In violation of all scientific principles, and lacking a shred of evidence to support the charge, our paper was withdrawn under the pretext that our 5-page article (citing public data) 'could potentially be damaging to global public health.' We were never invited to engage in any factual, scientific exchange about these accusations--instead, after it was accepted and published, the paper was suddenly withdrawn. The Times Higher Education [Jan.14, 2010] reported that "prominent AIDS researchers" had contacted Elsevier and demanded the paper's withdrawal. To this day we don't know who they are, nor what their monetary and professional conflicts of interest are. In short stand accused of very grave charges, and censored, by an anonymous tribunal with its own conflicts of interest. This case is currently pending in the courts in The Netherlands, the headquarter of the publisher of Medical Hypotheses. We are looking forward to our day in court, when the true roots of this shameful witch-hunt and attack on academic liberty will be brought to light. Sincerely, Christian Fiala MD, PhD Vienna, Austria



Nathan Myers (2010-04-14 13:38:38)  
vic: Godwin FAIL.

Michael Ellner (2010-04-15 08:13:45)

If people actually read the withdrawn papers, they might realize that they have been intentionally duped and the HIV/AIDS gang can't have that. I believe that the serious crimes like sexual terrorism, scientific fraud and medical murder that were committed in the name of HIV/AIDS will become common knowledge and as soon as it does, there will be no place to hide for the "public health" officials, "science" editors and journalists who were/are responsible for the fraud or the medical professionals who have mindlessly murdered their patients in the name of science and medical care. It's no wonder the AIDS mafia strives to silence their critics. Waiting for the day...

Tom (2010-04-16 05:49:06)

Duesberg was attacked by pharma lobbyists such as M. Essex and his friends. They publicly blamed him for millions of deaths in Africa, which is not only absurd, but unbelievable, because they forget and forget to mention their own, REAL responsibilities for the many AZT victims. (btw, Duesberg warned early and clearly about the AZT problems, but was already ignored) Now they've denied Duesberg to defend himself against their outrageous allegations, by putting pressure on Elsevier. They've also claimed a co-author would have a conflict of interest, which isn't true, because his employment was years before.... and they again forget to mention their own REAL conflicts of interest, like patents for the medicals that were supposed to be sold in Africa... Did I miss the point?

Lisa (2010-04-24 03:28:25)

Hi - so what can we do about this? How can we support Mr. Duesberg? Who to contact at Berkeley to complain?

seth (2010-04-24 16:55:44)

Lisa, I suggest you ask Peter Duesberg this question. He can be reached at [duesberg ..at... berkeley.edu](mailto:duesberg@berkeley.edu). Feel free to post here his answer.

Frank (2010-04-25 08:01:58)

Having a paper withdrawn by Elsevier should be worn like a badge of pride and vindication of truth in this matter. It was Elsevier who commissioned no fewer than 6 bogus journals in Australia alone that were nothing but advertisements for pharmaceutical companies. Elsevier makes millions on advertisements in its mainstream journals from pharmaceutical companies. To think that the sticky hand of BIG PHARMA is not at work here is simply naive. One of the main protagonists in the withdrawal of the offending paper was one Seth Kalichman of denying AIDS infamy. Seth has stated that a part of his duties at UConn involve the running of his vitriolic blog that regularly slanders Duesberg and Bauer. UConn receive millions in grants from the NIH and BIG PHARMA to pay the salaries of the ilk of Kalichman. The main complainant to Duesberg's university is Nathan Geffen, who is a member of AIDSTRUTH and the South African Treatment Action Campaign. TAC is funded indirectly by Anglo Gold and various Pharmaceutical Companies. Kalichman regularly quotes and praises Geffen on his blog. They can scream hysterically all they want, but talk about conflicts of interest? Give me a break these guys are up to their armpits in conflicts of interest, they have all the moral fortitude of crack whores. Shortly we should see the entry of J Todd Deshong and Poodle Stomper et al posting here with their own version of AIDS Dogma, vomiting back argumentoid comments and generally muddying the waters. The Emails will have already been sent out from AIDSTRUTH HQ rallying the forces to attack. I too am no expert on the topic of HIV/AIDS but I definitely know the smell of RAT. Whether Duesberg is right or wrong, he does not deserve a concerted attack driven by financial greed dressed up as public health concern. They talk about Denialists, this lot still state AZT did not kill anyone, now that is DENIALISM, and has all the hallmarks of the tobacco companies saying smoking did not cause cancer when they were facing billion dollar damages payouts. And that surely gives the best indicator of their true masters, as none of the lawyers representing the pharmaceutical companies will permit any admission of wrongdoing from anyone on the payroll. I think Clark Baker has coined the best term for these people, "Pharmasluts". Apt.

Jonathan Swift (2010-05-06 03:38:53)

Dr. Duesberg has proven that HIV does not cause AIDS, and is instead caused by lifestyle, drug consumption, and malnutrition. I've accepted Duesberg's view. But that leaves me uncertain as to how to explain why HIV-positive, non-malnourished, non-drug-affected infants develop AIDS. I'm also saddened that, given that recreational drug use causes AIDS, Duesberg hasn't done any research into which specific drugs cause AIDS, what dosages are required to produce it, and why the vast majority of recreational drug users never develop AIDS. In a bizarre coincidence, only those who are HIV-positive do.

Pam Quinn (2010-05-22 07:38:55)

Infants develop AIDS mostly because they are given cell-killing drugs. If a child is unlucky enough to have an HIV test, they may test positive for HIV particularly if they've been unlucky enough to have any number of vaccinations, typically initiated at 2-3 months of age. This has been proven with the polio vaccine.

nck (2010-08-25 20:46:23)

Im no where as smart as all of you guys posting here. But, I DO have a good sense of who SOUNDS like a conman and who doesn't. Why are the "wacko denial guys" posting simple statements and what they consider facts, and the "truthers" go with name calling and character assassinations? Every single time I read ANY thing from PD or Dr. Fiala, I find them calm and to the point. Now, this Seth Kalishman or whatever, its an insult a line. Guess who sounds more believable? Dr. Duesberg, if you really believe what you are saying, and all this hideous backlash is the OUTCOME of your beliefs, God bless you. A man who stands by his convictions, regardless the outcome. Oh, and that Africa thing.....COMMON SENSE tells you its one big con.

Shawn (2010-09-04 22:59:29)

The idea that AIDS is a result of vaccines is ludicrous. This is far too easy to prove wrong and is readily apparant when one looks at the HIV testing results. Poor, drug user families are 100X more likely to have an HIV positive child than a middle class family. Yet the vaccination numbers are the exact opposite. The evidence is so overwhleming for this, that it's embarassing to argue or debate. If AIDS was a pharma drug issue, the western world - especially the white middle class and their pill popping obsession - would dominate the AIDS statistics. Yet, there is no AIDS epidemic in suburbia. Sadly, the only epidemic is seen in those who somehow come into contact with another person's blood. Whether through birth, transfusion, sex, needles, or transplants. Isn't it weird how that works. If anyone comes out with some new data, I'm all ears. Until then - all I have is the present research and it sure does look like a blood pathogen (virus) is the cause.

jaime (2010-09-23 13:00:21)

Couple of notes.... Johnathon Swift... When Duesberg first started disputing hiv=aids, he was effectively stripped of any credibility, thus rendering his ability to receive research grants gone. Hiv testing... it's NOT reliable. Tests to not look for HIV. They look for antibodies that are not specific to anything. Which is why when children get vaccinated their blood is full of antibodies, they sometimes test positive. Also, if you get tested and test positive and go back, you can go back even a week later or a day later and test negative. Antiretrovirals (which still include AZT) have very, very serious side effects. to prescribe these to a people that have immune systems already comprised doesn't make any sense. Secondly, in Africa, all you have to do is be sick and depending where you are, they won't even test you. They'll claim you had HIV that has progressed to AIDS. btw... AZT was a chemotherapy drug intended for cancer patients in the 70s, but was shelved because of its toxicity. I could go on, but if you look for it, the information is out there.

Steve (2011-05-07 13:09:16)

LOL!!! I think it's an absolute jOkE that people can't figure out why professor Duesburg looks so damn ignorant in the eyes of so many, even though he's far from it. Gallo said himself that "NOBODY KNOWS MORE ABOUT RETROVIRUSES THAN PETER (DUESBERG)." That quickly changed when Duesberg started ripping on Gallo, of course. Who didn't see the studies that Duesberg along with so very many others have personally done (BECAUSE I WILL SHOW THEM TO ANYONE WHO MISSED THE BOAT ON THE SUBJECT.) that explain why the professor says what he says, Duesberg's far from stupid. I'm a virologist, H.I.V. viruses didn't come from monkeys either, regardless of the color, green, blue or TuTi-FruitY. Whats "Idiopathic CD-4 T-Lymphocyteopenia" (ICL) What do you think the reason is that Anthony Fauci (NIH) or the NCI hasn't mentioned anything regarding Dr. Yamamoto & GcMAF ? Because Yamamoto is correct maybe ? Who knows what I'm talking about in regards to

any of this & that ?

### City Air Makes Free (2010-04-12 07:35)

"City air makes free" is a medieval saying quoted by Jane Jacobs. I thought of it a few months ago when I visited an experimental private school near Shanghai. The founder of the school wanted to encourage creativity among students, in contrast to the main Chinese educational system with its overwhelming emphasis on memorization. His school was itself an example of city air makes free. There are many factories around Shanghai, filled with migrants from rural areas. These workers moved without official permission, which made their children ineligible for public school. This created a market for private schools, such as the one I visited. The school's founder was previously a school teacher. The rural-urban migration had made him free to start his own school.

By growing up in a city instead of a village, regardless of what school she attends, regardless of overall economic growth, a Chinese student will have more access to the Internet, much bigger libraries, better teachers, far more students of different backgrounds, far more occupations in action, and a much wider range of culture. Her parents' increased income may allow her to have a computer. Her family will suffer less from corrupt government officials. The increase in freedom – in opportunity – is profound. Her creativity and productivity will increase because she will better match her talents and her job. This is why Chinese creativity will increase enormously in the coming years whether the education system changes or not.

That such thinkers as Bill McKibben (who doesn't understand [1]the importance of cities for saving energy) and Jeffrey Sachs (who doesn't understand the importance of cities for economic development) fail to understand this point shows how non-obvious it is. One more reason Jane Jacobs was a great economist.

"[2]She and other Chinese I met on my trip had a much broader sense of what was possible, or what they were missing out on, than previous generations."

1. <http://www.blog.sethroberts.net/2010/01/29/green-metropolis-by-david-owen/>

2. <http://www.nytimes.com/2010/04/11/magazine/11lives-t.html?ref=magazine>

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Joyce Hilkevitch (2010-04-13 22:53:40)

Very interesting info about Chinese schools and how they may be changing.

Chris Burd (2010-04-14 13:24:40)

It's sounds better in the original German: Stadtluft macht frei, although there's a nasty echo of the infamous Nazi slogan "Arbeit macht frei" (a case of false advertising if ever there was one).

Nathan Myers (2010-04-14 13:35:04)

"Arbeit macht frei" was, rather, a nasty echo of the medieval original. The original referred to a legal effect: a serf who managed to stay in a city for a year was free of claims by his former landlord. That out was abolished in 1231, for the case of royal cities and princely landlords. Network effects of city life were rather tertiary to the popularity of the saying.

Nansen (2010-04-14 16:22:53)

Which economist would you say is most influenced by Jacobs?

vic (2010-04-14 19:35:57)

no economist is influenced by Jacobs - economists are only influenced by mathematical proofs, not by logic or economic arguments.

seth (2010-04-14 20:10:06)

Most influenced by Jacobs: Ed Gaebler, of Harvard. He told someone that he's going to spend the rest of his career bringing Jacobs into the economic mainstream. I heard that a few years ago and it is a fair description of his work since then.

Joyce Hilkevitch (2011-01-24 21:15:35)

Hi Seth Roberts: in a January New Yorker, I read an article about the growth of psychoanalysis in China. Fascinating! Would like to hear your views. When are you returning for a visit? Regards, Joyce

Crowd Funding Notes « Efficacy and Activism (2011-06-11 03:28:15)

[...] Most people see Jacobs as someone who wrote about cities. She saw herself as someone with new ideas about economic development – especially innovation. Cities are important above all because city people are more innovative than rural people. Tractors, for example, grew out of city inventions (the internal combustion engine, etc.). The same person (same IQ, same wealth) will be more innovative in a city than outside of one. [...]

### Assorted Links (2010-04-13 06:17)

- [1]Acupuncture taken seriously. Via [2]Shack Attack.
- [3]"Could it be that what the movie industry fears most is not more manipulation, but less?" by Robin Hanson
- [4]the miso business
- [5]Robitussin-assisted fertility.

Thanks to Anne Weiss.

1. <http://thehealthyskeptic.org/chinese-medicine-demystified-part-i-a-case-of-mistaken-identity>

2. <http://www.dshack.net/>

3. <http://www.overcomingbias.com/2010/03/masking-movie-manipulation.html>

4. <http://search.japantimes.co.jp/cgi-bin/fl20100403a1.html>

5. <http://www.theglobeandmail.com/life/health/robitussin-pregnancy-in-a-5-bottle-of-hope/article1529730/>

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Allen K. (2010-04-13 07:03:33)

That link that should be <http://www.overcomingbias.com/2010/03/masking-movie-manipulation.html> is broken.

seth (2010-04-13 09:25:14)  
Allen, thanks, I've fixed it.

Tara (2010-04-13 10:42:59)  
The Robitussin/fertility connection is fascinating. I had heard cold medicines could affect cervical mucus, but for some reason I thought it negatively impacted fertility. I'm not trying for kids yet, but this is great info to keep in mind for the future.

Nathan Myers (2010-04-13 13:18:43)  
If guaifenesin helps fertility, I'll bet going off dairy does too.

Sheila Buff (2010-04-13 15:55:01)  
Very surprised to see this reported as news. My niece, now 25, was conceived after my sister's doctor recommended Robitussin.

James (2010-04-14 23:09:50)  
Sheila: That's why it is news - something that was cheap and commonly recommended 25 years ago has been pushed out by expensive IVF therapies.

### **Venous Multiple Sclerosis: A Website (2010-04-14 08:27)**

I've blogged several times about [1]Paulo Zamboni's discovery that his wife's multiple sclerosis was due to poor blood drainage from the brain and the wonderful implications of this discovery for many persons with MS. Here's [2]an excellent website about the topic. It's of great interest to me because it suggests the power of people with (a) the subject-matter knowledge of insiders, (b) the freedom of outsiders and (c) the motivation of someone with the problem. Medical researchers, who get the billions of dollars spent on health research, don't have the freedom of outsiders nor (almost always) the motivation of someone with the problem. My self-experimentation had those characteristics: I had the subject-matter knowledge of an insider, the freedom of an outsider, and the motivation of someone with the problem. For example, I knew a lot about sleep, I didn't care what sleep researchers thought of me, and I had a sleep problem.

1. <http://www.blog.sethroberts.net/2009/11/23/breakthrough-in-treating-ms/>
2. <http://csvi-ms.net/en>

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Laura (2010-04-14 15:48:06)  
I just spoke with Marc Hellerstein about SLD!

### **Memristors (2010-04-15 06:14)**

If you're like me, you failed to grasp the importance of [1]this recent report in the New York Times. Much like the prediction of new elements using the periodic table, in the 1970s an engineer named Leon Chua predicted the existence of a fourth circuit element (the first three are resistors, capacitors, and inductors) that he called [2]memristors - resistors with a memory. Their resistance varies depending on their history.

A few years ago Hewlett-Packard researchers studying titanium oxide found puzzling results that turned out to be due to memristors. Only at very small sizes, they found, does memristance become large relative to other effects. How easily you can walk through a room depends on where the furniture is. Memristors involve moving the furniture (atoms). If these new devices can be made practical (e.g., fast enough), they will provide memory much smaller and more power-efficient than current devices. But it's hard to predict the impact of this discovery – it's like discovering a new dimension.

1. <http://www.nytimes.com/2010/04/08/science/08chips.html?hpw>
2. <http://en.wikipedia.org/wiki/Memristor>

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Nile (2010-04-15 12:32:36)

I think HP plans on introducing memory devices based on memristors within a couple years. If successful would replace flash devices - faster, much higher capacities

Nile (2010-04-15 12:38:26)

Found the reference from a cheeky Brit site called the Register. A good read if you are interested in technology. Here is the memristor link [http://www.theregister.co.uk/2010/04/08/hp\\_memristor/](http://www.theregister.co.uk/2010/04/08/hp_memristor/)

Nathan Myers (2010-04-15 15:09:54)

Flash replacement is a sadly limited use of memristor properties, akin to using train cars as abacus beads. It's what will happen, though. If memristors don't succeed in displacing flash that way, that might be the end of memristors. If they do succeed, we might eventually see much better uses that depend on fundamentally different models of computation. The first such uses will probably be in specialized real-time image or signal processing, and others only decades later.

Duncan (2010-04-16 06:57:16)

New Scientist's recent article about this mentions Wei Lu of UMass, who's working on a memristor neural computer made from more traditional semiconductors. There's also a previous (gated) article about the potential of memristors in this field. <http://www.newscientist.com/article/mg20527515.900-electronic-marvel-brings-neural-computing-a-step-closer.html>  
<http://www.newscientist.com/article/mg20327151.600-memristor-minds-the-future-of-artificial-intelligence.html>

## **Animals Like Fermented Food? (2010-04-16 02:50)**

I've blogged a zillion times about the value of fermented food. [1]Animals seem to agree with me:

At least twice in the past ten years [1998-2008], [elephant] herds in India have stumbled upon barrels of rice beer, drained them with their trunks, and gone on drunken rampages. (The first time, they trampled four villagers; the second time they uprooted a pylon and electrocuted themselves.) Howler monkeys, too, have a taste for things fermented. In Panama, they've been seen consuming overripe palm fruit at the rate of ten stiff drinks in twenty minutes. Even flies have a nose for alcohol. They home in on its scent to lay their eggs in ripening fruit, insuring their larvae a pleasant buzz.

It's possible that the elephants were thirsty, of course, but these stories support the idea that our liking for fermented foods goes back a long way and has a genetic basis. I heard a story about horses preferring rotting apples to fresh

ones, which shows how to improve the evidence: give animals a choice between fresh and older food.

1. [http://www.newyorker.com/reporting/2008/11/24/081124fa\\_fact\\_bilger](http://www.newyorker.com/reporting/2008/11/24/081124fa_fact_bilger)

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karky (2010-04-16 06:02:14)  
or maybe they just like getting drunk. LOL

SB (2010-04-16 10:28:38)

On Polyface farm: "He (Salatin) puts the cows in a 3-sided, roofed barn, and as they poop and the level rises, he puts straw and corn on top of it, then repeats until the end of winter. The heat of anaerobic decomposition keeps the cows warm. Then in spring, he lets the pigs in, where they root through it to dig out the fermented corn."

### **Why UC Berkeley is Investigating Peter Duesberg (2010-04-17 06:05)**

In November, [1]UC Berkeley launched an investigation of Professor Peter Duesberg for misconduct associated with a paper of his retracted from Medical Hypotheses. According to [2]the letter sent Duesberg informing him of the investigation, there were two allegations. One was that his paper had been withdrawn by the publisher due to "issues of credibility and false claims." The other was that "you failed to declare a relevant conflict of interest with regard to the commercial interests of your co-authors." Duesberg tried to learn more about what he was accused of, without success. Finally the university sent him the letters of complaint that led to the investigation. Here they are.

[3]

President Mark Yudof, Office of the President  
University of California  
1155 Franklin Street  
Oakland, CA 94607-0200

Mary Croghan Chair, Universitywide Academic Sen.  
University of California  
1155 Franklin Street  
Oakland, CA

August 25, 2020

Regarding Professor Peter H. Duesberg

An article recently submitted by Professor Peter H. Duesberg to *Medical Hypotheses* was investigated by the publisher and subsequently withdrawn by the publisher based on issues of credibility and false claims. The article sought to deny HIV as the cause of AIDS and as the cause of extensive HIV related mortality in South Africa – a number estimated at over 300,000. The damage produced by Professor Duesberg and his attempts to discredit the scientific community are inconsistent with the ethical and academic standards of the University of California. In addition, one of the co-authors, David Kasnick failed to declare his conflict of interest.

This event should be of great concern to the University of California at a time when President Yudof has been assisting us, "groups around the state about the need to protect and enhance UC's role in producing the innovative ideas and human capital that can lead the state out of very difficult times." It is still history not a tale to have the credibility of the University questioned.

Retraction of a manuscript is a serious event reflecting on all of us as faculty members of the University of California. If the University of California is to maintain a reputation as one of the most outstanding academic institutions in the world, it cannot support the use of the University of California or an academic position as platforms to disseminate dangerous opinions and deny principles which are the very foundation of science.

I need to emphasize that this incident is not a remote event but is once again reminding world wide attention questioning the role of the University of California in its academic oversight.

Sincerely,



28 August 2009

President Mark Yudof  
Office of the President University of California  
1111 Franklin Street Oakland, CA 94607-5200  
[president@uocc.edu](mailto:president@uocc.edu)

Mary Croughan  
Chair Universitywide Academic Senate University of California  
1111 Franklin Street Oakland CA  
[Mary.Croughan@uocc.edu](mailto:Mary.Croughan@uocc.edu)

Dear President Yudof and Chairperson Croughan

**REQUEST FOR INVESTIGATION INTO PROFESSOR PETER DUESBERG**

I am writing to request an investigation into the conduct of Professor Peter Duesberg. I am concerned that he has possibly breached the ethics and practices of scientific publishing in relation to a paper that recently appeared in the journal 'Medical Hypotheses', of which he is the first and corresponding author. [1]

Since publication the paper has been withdrawn by the publisher, Elsevier, states, "... we have received serious expressions of concern about the quality of this article, which contains highly controversial opinions about the causes of AIDS, opinions that could potentially be damaging to global public health. Concern has also been expressed that the article contains potentially libelous material." [2] Since the paper is withdrawn, I have attached the article as it was originally published before withdrawal.

My concern however regards Professor Duesberg's failure to declare a relevant conflict of interest. In the paper, he states, "I and my co-authors have no commercial or other non-scientific conflicts of interest with our AIDS paper for Med. Hypotheses."

This statement appears inaccurate to me. One of the central themes of the paper is an attack on the use of antiretroviral drugs to treat HIV infection. As an example, the abstract states, "We call into

question the claim that HIV antibody-positives would benefit from anti-HIV drugs, because these drugs are inevitably toxic and because there is as yet no proof that HIV causes AIDS."

Dr. David Rasnick is a co-author of the paper by Duesberg et al. Until recently, he worked as a researcher for a company, the Dr. Rath Health Foundation Africa. This organization promoted and distributed (and in terms of South African law, sold) micronutrient products as alternatives to the use of antiretroviral drugs to treat HIV infection in South Africa. The organization, with Dr. Rasnick's direct involvement, also conducted an unauthorized clinical trial to evaluate its products as alternatives to antiretroviral drugs for treatment of people with HIV infection. The company has never published the results of this trial in a peer-reviewed medical journal, but has instead published paid advertisements purporting to report the trial's results, a practice that is considered unethical in medical research. Dr. Rasnick is described in these advertisements as one of the researchers who conducted the trial.

A case was brought by the Treatment Action Campaign and the South African Medical Association against the company's owner, Matthias Rath, the Rath Health Foundation Africa, Dr. Rasnick and others in the Cape High Court. The court was requested to interdict the unauthorized trial from continuing. The court found in favour of the plaintiffs and ruled that the defendants, including Dr. Rasnick, had indeed conducted an unauthorized clinical trial [3]. Several deaths occurred on the trial [4]. Also of note is that Dr. Rasnick has previously misrepresented his affiliation with the University of California, Berkeley [5].

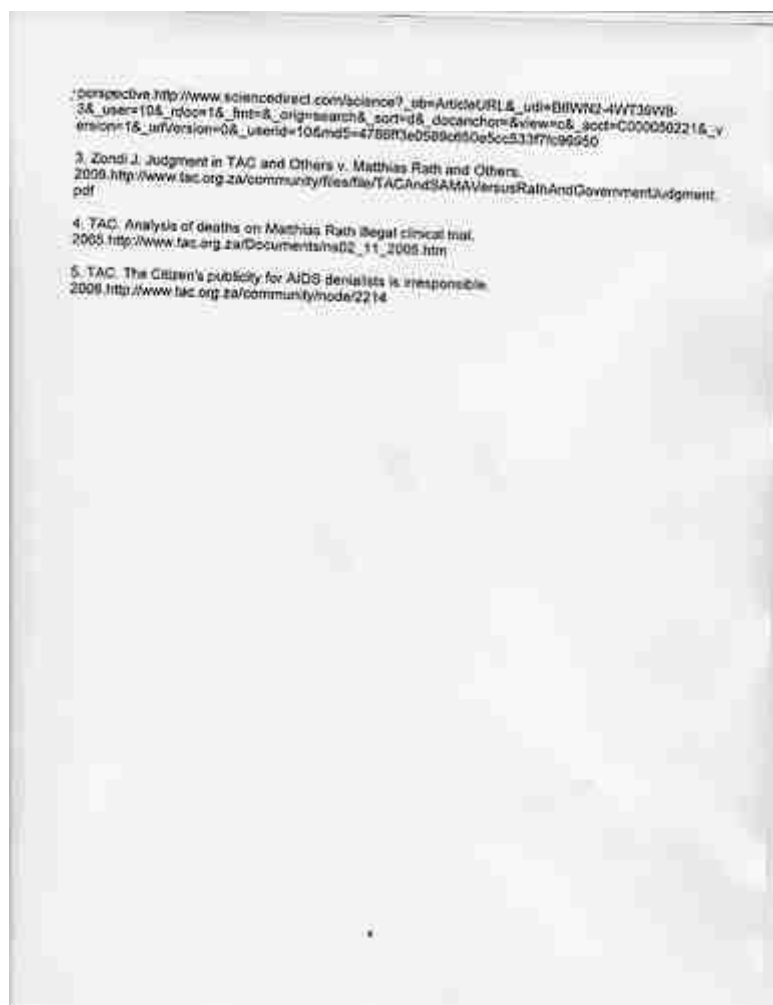
In summary, the facts are that Dr. Rasnick, a co-author of the paper by Duesberg et al., has worked to boost the sales of an alternative (but ineffective) way to treat HIV infection. His employer, the Dr. Rath Health Foundation Africa, has actively attacked the use of antiretrovirals (a proven, effective way to treat HIV infection) as part of its marketing campaign for its products. Dr. Rasnick has helped to promote these products in paid advertisements. A paper co-authored by Dr. Rasnick that attacks the use of antiretroviral drugs is therefore of commercial value to his former (and possibly current) employer, Matthias Rath.

The affiliation between Dr. Rasnick and Matthias Rath is therefore a material and relevant fact that should have been disclosed in the paper by Duesberg et al. As the responsibility for making such a disclosure is the corresponding author's, it appears to me that Professor Duesberg has likely committed an ethical breach that should be investigated by the University of California, Berkeley.

Regards

#### References:

1. Duesberg, P.H., Nicholson, J.M., Rasnick, D., Fiala, C. & Bauer, H.H. HIV-AIDS hypothesis out of touch with South African AIDS - A new perspective. *Med. Hypotheses* (2009) doi:10.1016/j.mehy.2009.05.024 <http://www.ncbi.nlm.nih.gov/pubmed/19618953>
2. Duesberg, P.H., Nicholson, J.M., Rasnick, D., Fiala, C. & Bauer, H.H. WITHDRAWN. HIV-AIDS hypothesis out of touch with South African AIDS - A new



The first letter is incredibly vague. The "issues of credibility and false claims" aren't spelled out and it is unclear why the University of California should care that "Bruce Rasnick failed to declare his conflict of interest." The idea that publishing a dissenting paper about AIDS is an "attempt to discredit the academic community" is worthy of Orwell.

The second letter has several strange features. First, it contradicts itself. It says:

[Statement 1] Until recently, he [Rasnick] worked as a researcher for a company, the Dr Rath Health Foundation Canada [owned by Matthias Rath]

[Statement 2] [Rasnick's] former (and possibly current) employer, Matthias Rath.

Statement 1 says Rasnick no longer works for Rath. Statement 2 says he might still work for Rath.

Second, its logic is outside the way conflict of interest is normally understood. Because you used to work for someone that might benefit from your paper, you now have a conflict of interest? This makes no sense.

Finally, there is the weird idea that because something is "possible" – Matthias Rath is "possibly" Rasnick's current employer – it deserves a misconduct investigation. It's possible that a flying saucer will land on the White House lawn tomorrow.

In spite of all this, UC Berkeley administrators allowed themselves to be used to punish dissent.

1. <http://www.blog.sethroberts.net/2010/04/11/academic-horror-story-uc-berkeley-2/>
2. <http://www.flickr.com/photos/sethroberts/4511515586/>
3. <http://www.flickr.com/photos/sethroberts/4526703555/>
4. <http://www.flickr.com/photos/sethroberts/4526703557/>
5. <http://www.flickr.com/photos/sethroberts/4526703559/>
6. <http://www.flickr.com/photos/sethroberts/4526703577/>

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Kevin Miller (2010-04-17 07:39:42)

It does seem prudent to investigate when a paper is withdrawn by a journal, and I think I would have that policy if I were UC Berkeley. Wouldn't you? (And speaking of Yoo, there are others I'd personally want to investigate first). The particular journal is an odd duck as scientific journals go, because falsifying results is obviously not at issue, and I don't know why the article was withdrawn. But it seems to me that whether or not this is punishing dissent depends more on how the investigation is conducted and its outcome than on the fact that there is an investigation, annoying as it will be for the target of the investigation in either case.

seth (2010-04-17 08:34:52)

Kevin, UC Berkeley does not have a policy of investigating when a paper is withdrawn by a journal, as shown by the fact that this investigation was triggered by these letters, not by the withdrawal. To answer your question, I don't think such a policy would be a good idea. This case illustrates why such a policy is a poor idea – because one giant publisher (Elsevier) is too susceptible to outside pressure and because UC Berkeley administrators seem to have trouble understanding basic concepts (here, conflict of interest). This investigation is punishment, no doubt about it. If your investigators take seriously the notion that a conflict of interest exists because a co-author was previously employed by a company that might benefit from your paper, who knows what they might do?

spacenookie (2010-04-17 10:38:34)

Yeah, the Duesberg paper is basically a rebuttal to Chigwedere P, Seage GR, Gruskin S, Lee TH, Essex M (October 2008). "Estimating the Lost Benefits of Antiretroviral Drug Use in South Africa". Journal of acquired immune deficiency syndromes. I don't have access to this paper, but according to wikipedia, it implicates Duesberg in over 300,000 AIDS deaths in South Africa. Incidentally, you should look at Duesberg's wikipedia page, they actually have a section titled "Consequences of AIDS Denialism". Humorously, they cite a newspaper article on the Chigwedere paper as a "independent study", one study + a newspaper article on the study make 2 independent studies.

Kevin Miller (2010-04-17 18:56:21)

Seth - I'm not going to assert that Berkeley is well-run, because I don't know, and I'm happy to concede that the people who instigated the complaint aren't disinterested. Still, if you were an administrator and this came to you, with an article that was withdrawn by the journal that published, you really wouldn't get a committee together to investigate it? Investigations and audits are a pain, but it's a pretty mild sanction when compared with, say, the freedom that the tenure system gives faculty to publish unpopular views.

ChristianKI (2010-04-18 03:07:53)

According to popular understanding Cheney had a conflict of interest when the US administration gave billions of dollars to Halliburton because Cheney previously worked in that company. Working with a company means that you become friends with other people at the company and feel certain loyalty to them. In politics much more harm is created by that sort of conflict of interest than by direct corruption where the politician profits directly. It similar to your allegation that ghost writing

is plagiarism. You can have a very strict definition of plagiarism which doesn't include plagiarism or you can have a broad definition. Here they have a broad definition of conflict of interests.

seth (2010-04-18 04:24:03)

ChristianKI, to find an example to convince me that "conflict of interest" applies to someone who employed you three years ago you'll have to find a less unusual case. There are thousands of conflict of interest statements published every week in scientific journals; I have never seen one that mentioned someone who employed the author three years ago. And even with your broad definition of conflict of interest, it is still harassment/punishment for the simple reason that no one is ever ever investigated for it. Just as no one – unless you happen to be black – is ever pulled over for driving one mile over the speed limit. I don't follow your point about ghost-writing. Call it plagiarism or not, it still reflects very badly on those med school profs who publish ghost-written articles without acknowledging the assistance. Those articles are supposed to be unbiased reviews of treatment options; they aren't. They seriously mislead readers by making some drugs sound better than they are. That's the crux of the problem, not "plagiarism". The reliance of med school profs on drug money is a huge problem. People's co-authors having been employed three years ago by a company that might benefit from their paper is not a huge problem. Kevin, administrators should read letters of complaint they receive, yes. But these two letters aren't convincing. They are too vague about what's wrong with the paper and far outside normal usage when it comes to conflict of interest. As an administrator I would think three things: (a) The pair of letters reflects an organized campaign. The purpose of the campaign is to punish someone they disagree with. It has nothing to do with public health–the paper has already been withdrawn. (b) The complaints about "credibility" and the like are incredibly vague because there is nothing there. If there was something serious, it would have been made clear. (c) The conflict of interest complaint is not just absurd, it's clearly harassment. The whole thing reeks of harassment for an unpopular view.

Kevin Miller (2010-04-18 08:42:06)

Seth, I suspect we just come to different conclusions from the same facts. I don't think that investigation necessarily equals harassment; it all depends on how the investigation is done. The easy call is always to say that "where there's smoke, there might be fire" and do an investigation. I don't think it's warranted to conclude that either because the accusers have their own axes to grind or because they don't lay out convincing evidence, that such evidence doesn't exist. Often people who take small shortcuts also take larger ones (think "third-rate burglary"). I'm not accusing Duesberg of this, or anything else. But I think that I would have a strong bias toward putting together an investigation but trying to make sure the committee consisted of people who had both relevant expertise and no animus in either direction. Coincidentally, I listened to a sad sermon last weekend in my local Catholic church presenting a very defensive attitude to the pedophile scandals, including calling attention to the anti-Catholic biases of many of the people who are making much of them. My reaction to that as well as this is, "so what?" You still need to investigate and respond to what you learn. It's a cost of doing business in any field that presumes a high level of trust in what people say or write. If academics and researchers are relied on to police themselves (and we are, to a large extent), we need to show that we investigate claims of abuse. In this case, the withdrawal of the paper, for whatever reasons, is a concrete piece of evidence that's pretty hard to ignore. I think investigating remains the responsible decision, even if the person who makes that decision thinks it's likely to lead to no action. I think that, if you were an administrator, you probably would go through the steps you list but then also say, "what if I'm wrong?" If the administrator is right in thinking there's nothing to this, then Duesberg has to endure the unpleasantness of an investigation but can then say he was cleared by the University. If he's wrong, then it's *\*really\** important that people can't look back in the future and say that Berkeley swept this under the carpet despite multiple complaints and a withdrawn paper. Or so it seems to me.

seth (2010-04-18 11:05:00)

Kevin, you write "I don't think investigation equals harassment." I gather from this you have never been investigated – much less investigated by idiots who are capable of anything. If UC Berkeley administrators wanted to be "cautious" they could have written back to the authors of these two letters and asked them to spell out exactly what was bad about the paper. The conflict of interest complaint is obviously ridiculous. I'll say it again: the reason the "credibility" etc. accusation was so vague was because actual examples would have been unconvincing – would have appeared trivial. "It's a cost of doing business in any field that presumes a high level of trust." Nobody is accusing Duesberg of making up data – that's where trust comes in.

You really do have to trust scientists to report accurately their data and not make up data. Theories, on the other hand, are inherently UNtrustworthy – and the withdrawn paper was about a theory. You don't judge a theory by the institution from which it came, you judge it by evidence. There is no need to "trust" UC Berkeley professors when they propose a new theory, either it is supported by the evidence or it isn't. I am not overly concerned that UC Berkeley profs will come up with theories that turn out to be wrong. I am much more concerned that they will take refuge in careerism and fail to work on problems that the rest of us care about. There's a reason for the term "ivory tower". There's a reason "pure" research is higher status than "applied" research. Because scientists tend to dislike being useful. Duesberg was the opposite of careerist and put forth a new idea on a question that the rest of us care about. I happen to disagree with him, but I am glad for the absence of careerism.

Patrik (2010-04-19 01:58:56)

***I am not overly concerned that UC Berkeley profs will come up with theories that turn out to be wrong.*** Exactly! The question is not whether Duesberg is right or wrong (I have no idea) – but if he is to be allowed the academic freedom to question the conventional wisdom.

eh (2010-04-19 13:34:52)

Read the third paragraph of the first letter. I have not read Duesberg's paper, and don't know enough about the topic to give an informed opinion even if I had, but reading that paragraph should tell you all you need to know about the motivations of the person or people behind this.

The Berkeley Inquisition Exposed at Semmelweis Society International (2010-04-19 17:38:10)

[...] Geffen also alleges that co-author David Rasnick PhD should have reported his brief association with health advocate Matthias Rath MD. To assert that a co-author's relationship (that ended in 2006) represents a punishable conflict of interest against Duesberg is absurd – especially when considering the breathtaking conflicts of his accusers and employer. [...]

Semmelweis (2010-04-21 12:20:21)

The Semmelweis society fully supports the investigation into Duesberg's misconduct. Furthermore, a vote has been taken to sign on any petition to have Duesberg's conduct sanctioned. The entire membership has voted to strip Duesberg of any award previously given. Semmelweis has launched its own investigation of Duesberg's misconduct, and we find that his misconduct is real. Clark Baker has used under-handed tactics to steal our website. However, do not be fooled by Baker's identity theft. We fully support the best care possible for AIDS patients.

ggh (2010-05-21 11:05:07)

Duesberg - "conflict of interest" - Some of the above writers may have a conflict of interest but if Duesberg has a conflict of interest it is for a lot less money than his attackers. Who is this Semelweis - "we find his misconduct is real" - take it easy buddy, finish the investigation first. The best care for AIDS patients may just be to not load them up with something too dangerous to give to cancer patients ( the intended patients of AZT).

whereistheproof (2010-06-21 21:45:30)

well - looks like duesberg is in the clear. the university concluded the investigation and found duesberg at no fault. :)

## Assorted Links (2010-04-17 17:28)

- "Your body's resistance to an activity isn't an obstacle to be overcome, it's a message that you're being an idiot, just like when your hand hurts after you punch a wall. The right solution isn't to start punching the wall harder, it's to look around for a tool to help you do the job . . . With losing weight, the key is things like the Shangri-La Diet." [1]Aaron Swartz argues that if something needs a lot of will-power to do, it's a mistake. I agree.

- [2]Reed Hundt on "Bandwidth, Jobs, and the Future of Internet Freedom".
- [3]Art DeVany interviewed on Econtalk. Agrees with Aaron.
- In China, [4]"what censored actually means". "One day last summer, an anonymous member posted something on a Baidu forum devoted to the online game World of Warcraft, and it became an Internet meme: Jia Junpeng, your mother wants you to go home to eat. The cheeky, mysterious sentence received seven million hits and 300,000 comments on the first day. . . . Around the time the post originally appeared, a famous blogger named Guo Baofeng was arrested [by the Mawei police] for posting allegations of an official cover-up in the brutal rape of a 25-year-old woman named Yan Xiaoling in Mawei, a district in the city of Fuzhou. She later died of her injuries. . . . Bloggers began calling on people to send postcards to the Mawei police: Guo Baofeng, your mother wants you to go home to eat. Similar messages sprouted on bulletin-board sites. A few days later, Guo was released."

Thanks to Evelyn Mitchell.

1. <http://www.aaronsw.com/weblog/easywayout>
2. <http://bwrc.eecs.berkeley.edu/php/webcasts/?id=6&pubid=1295>
3. [http://www.econtalk.org/archives/2010/03/de\\_vany\\_on\\_ster.html](http://www.econtalk.org/archives/2010/03/de_vany_on_ster.html)
4. [http://www.technologyreview.com/prINTER\\_friendly\\_article.aspx?id=25032&channel=Briefings&section=Media](http://www.technologyreview.com/prINTER_friendly_article.aspx?id=25032&channel=Briefings&section=Media)

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### **Tsinghua Student Clubs (2010-04-18 04:41)**

[1]Here is a list of Tsinghua student clubs. Some are puzzling or intriguing:

- Student Anti-Cult Association
- Student Collection Association
- Student Du Xing Association
- Student Edge Landscape Studies Association
- Student Informatized Service and Consultation Enthusiasts Association
- Student Insurance Association
- Student Project Management Association
- Student Web Surfing Enthusiasts Association
- Student Xi Lu Association

No restaurant club. Neighboring Peking University has such a club. I wonder what the Student Social Interaction Development Association does. The Student Redology Association is devoted to study of the book Dream of a Red Chamber. I mentioned [2]earlier a student club whose name means "sing your heart". Here that club is called Student

Education Aid-the-Poor Service Association.

1. <http://www.tsinghua.edu.cn/eng/campuslife.jsp?boardid=42&bid2=4201&pageno=1>
2. <http://www.blog.sethroberts.net/2009/12/20/tsinghua-student-life/>

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## The Silver Lining of a Cloud of Volcanic Ash (2010-04-18 09:58)

A [1]New York Times article on the volcanic ash preventing air travel ended like this:

Leo Liao, a Hong Kong businessman who was stranded at the Frankfurt airport, was cheerful and philosophical. "It's a natural issue," he said. "Never complain. You can't change this."

Not cheerful enough. I once heard Edward Teller, the physicist, give a talk. In the middle, he said if we managed to control the weather we would take away the last topic of civilized conversation. Several years ago Berkeley had the rainiest winter in memory. It was never so easy to talk to strangers – you could commiserate about the rain. The stranded travelers have an unparalleled opportunity to meet people different from themselves, people they would ordinarily never be able to meet.

[2]How to Talk to Strangers. [3]Paris Syndrome.

1. <http://www.nytimes.com/2010/04/18/world/europe/18ash.html?pagewanted=2&hp>
2. <http://www.blog.sethroberts.net/2009/09/20/how-to-talk-to-strangers/>
3. [http://en.wikipedia.org/wiki/Paris\\_syndrome](http://en.wikipedia.org/wiki/Paris_syndrome)

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q (2010-04-18 14:28:18)

> The stranded travelers have an unparalleled opportunity to meet people different from themselves, people they would ordinarily never be able to meet. Yes, but people like me, who were supposed to fly to Europe during the window but who are at home instead, have fewer chances to step outside their habitual mold.

seth (2010-04-18 17:45:22)

q, you can go to Europe later.

Nathan Myers (2010-04-19 17:49:32)

Funny, I would have described Teller as "the H-bomb promoter". The U.S. probably wouldn't have made and detonated them without his insistent promotion. He's also known for publishing papers that sneakily exposed classified methods to improve yields of nuclear weapons, for the benefit of those still working on their designs.



## Oprah Meets Veblen (2010-04-18 18:41)

An assistant manager at Marshall Fields, the Chicago department store, told [1]Gawker the following story:

I was walking through the floor, and I hear a voice call my name. . . . Once she started speaking to me, I realized it was Oprah. Honestly, she is unrecognizable without the spackle/wig. Anyway, she was very nice, and asked me if I would offer my opinion on a china pattern she was looking at for her house. It was Villeroy and Boch (German, middle-range) "Petite Fleur." Very cute, kind of French-country, with a small, scattered floral design. I said, "What's not to like?" Oprah responded, "Well, it's not that expensive, and I don't want people who come to my house to think I'm cheap."

1. <http://gawker.com/5518263/gawker-readers-give-back-more-oprah-sightings-and-horror-stories?skyline=true&si>

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## Where to Find Umami (2010-04-19 05:00)

[1]Here is a list of umami-rich foods. As regular readers of this blog know, I believe we like umami flavor so that we will eat more bacteria-rich foods. In this list, notice that fresh foods tend to have much less umami than older foods. Cured ham (337 units) is much higher than pork (2.5). Cheese (182-1680) is much higher than milk (1-4). Soy sauce (412-1264) is aged; so is fish sauce (621-1383).Â Seaweed (kombu) is high (241-3190) but since seaweed is sold dried, I suspect the drying process is at least partly responsible for the high umami content. [2]Marmite (1960) is not aged – but its main ingredient is yeast.

As far as I know, all meat sold commercially in America is aged: it doesn't taste right until it's aged. Umami is sometimes described as a "meaty" taste.

1. <http://www.starchefs.com/features/rediscovering-umami/html/umami-chart.shtml>
2. <http://en.wikipedia.org/wiki/Marmite>

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q (2010-04-19 06:32:18)

a few weeks ago i made miso soup with blue cheese and it was really tasty. it's very simple as all the ingredients dissolve in hot water. i made it in a cup.

Nancy Lebovitz (2010-04-19 06:49:20)

You can get fresh seaweed in some Asian grocery stores. I don't know whether the seaweed in the chart was fresh or dried.

Alex Chernavsky (2010-04-19 19:39:02)

And speaking of fermented foods, here's an article about coffee beans that ferment in the stomachs of cat-like creatures called civets: <http://www.nytimes.com/2010/04/18/world/asia/18civetcoffee.html> These beans are very expensive and are said to "produce a brew described as smooth, chocolaty and devoid of any bitter aftertaste."

MT (2010-04-20 21:05:16)  
What are the units, and how are they derived?

seth (2010-04-20 21:42:56)  
unit = milligrams of glutamate per 100 g

### Two Months on the Shangri-La Diet (2010-04-19 09:59)

Good results.

In 2 months I’ve lost 13 pounds . . . I have even skipped days due to a hectic work schedule. . . .



I was stopped outside church on Sunday by someone who had noticed the weight loss and wanted to know how I did it. I have still yet to convince my fiercest critic – my loving wife, but at least she’s stopped calling it a placebo!

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Andrew Gelman (2010-04-20 10:34:15)  
Good job, Seth! This sort of thing should make you feel very happy.

seth (2010-04-20 18:50:38)  
Thanks, Andrew. You have reminded me that I forgot to categorize this under self-congratulation.

q (2010-04-20 19:24:36)

me: three and a half months, down 13 pounds or so. i don't have a snazzy graph like the above, but it would look similar albeit with a less pronounced slope. people are starting to ask questions. is there a good starting point online where i can send people for information?

seth (2010-04-20 21:44:31)

send them to [boards.shangriladiet.com](http://boards.shangriladiet.com)

fbnops (2010-04-21 10:03:43)

Wait a minute, I thought you were the Shangri-La guy. Didn't you develop and have great success with the Shangri-La diet several years ago? Didn't I read somewhere you attained your ideal weight, but still took a maintenance dose of flaxseed oil?

Hal (2010-04-23 12:27:25)

I believe Seth is quoting someone else's success on the diet. I joined Weight Watchers a few years ago and lost 10-15 pounds the first two months, eventually taking off 45 pounds or so. Kept it off too for a couple years. I'm not sure many Shangri-La-ers have such good results. But my case was exceptional for WW. I had tried Shangri-La the year before (even bought the book) but it didn't do much for me, and I felt nauseous drinking the oil. Personally I suspect that's how it works, for the people it works for.

Sam (2010-04-28 11:57:43)

Good job! Your ability to get results puts you in a rare class. However, I feel that your data is undercut by the quality of the graph you use. The lowest point your graph can represent is 210; it's impossible to represent zero. For anyone familiar with graphs, it seems like you are adjusting your scale to dramatize the change. This wouldn't be fair to you, and I'm sure you didn't intend it. It's a problem common enough for Edward Tufte to discuss it. Here's a brief explanation: <http://20bits.com/articles/politics-and-tuftes-lie-factor/> You also see this whenever financial news programs swoosh a new chart onto the screen; it drives me crazy!

Anthony (2010-04-28 14:02:33)

@Sam, I think you're misapplying that idea. The point of the graph is to clearly show the changes occurring. At the very least, using 0 lbs as a base line would be odd - no one is going to go to 0 lbs. Maybe 175 lbs or something (or whatever the desired weight is for the person).

### Assorted Links (2010-04-20 06:26)

- [1]Why Strict Churches Are Strong by Laurence Iannaccone, an economist. I liked the data but not the theory. (Increased strictness must have dozens of effects. To say reduces free-riding is the crucial one is a leap of faith.) Unusually well-written. Related to my post [2]North Korea and Penn State.
- [3]JK Rowlings is bad-ass, says a friend
- [4]Are celebrities more narcissistic than MBAs?

Thanks to Eric Meltzer and Ryan Holiday.

1. <http://www.religionomics.com/iannaccone/papers/Iannaccone%20-%20Strict%20Churches.pdf>

2. <http://www.blog.sethroberts.net/2010/02/18/north-korea-and-penn-state/>

3. [http://www.timesonline.co.uk/tol/comment/columnists/guest\\_contributors/article7096786.ece?print=yes&randnum=1271353395815](http://www.timesonline.co.uk/tol/comment/columnists/guest_contributors/article7096786.ece?print=yes&randnum=1271353395815)

4. [http://www.sciencedirect.com/science?\\_ob=ArticleURL&\\_udi=B6WM0-4K9C558-2&\\_user=10&\\_coverDate=10%2F31%2F2006&\\_rdoc=1&\\_fmt=high&\\_orig=search&\\_sort=d&\\_docanchor=&view=c&\\_acct=C000050221&\\_version=1&\\_urlVersion=0&\\_userid=10&md5=051dd14f7847f0d461cdb93027eaae13](http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6WM0-4K9C558-2&_user=10&_coverDate=10%2F31%2F2006&_rdoc=1&_fmt=high&_orig=search&_sort=d&_docanchor=&view=c&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=051dd14f7847f0d461cdb93027eaae13)

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## Why Are Volcano Jokes So Bad? (2010-04-20 07:18)

You may remember What does NASA stand for? Need Additional Six Astronauts. This circulated after the Challenger blew up. In contrast, [1]the volcano jokes I've heard are curiously bad:

6. Dear

Iceland

, We said send cash, not ash.

7. Woke this morning to find every surface in the house covered in a layer of dust and a foul stench of sulphur in the air.... Yes, I've been married to that bone-idle slob for 20 years.

8.

It was the last wish of the Icelandic economy that its ashes were spread all over

Europe

.

9.

There's no pleasing the English. The last time they got the Ashes they were over the moon.

10.Â

Went outside today and got hit by a bag of frozen sausages, a chocolate gateau and some fish fingers.

Someone said it's a fallout from

Iceland

.

1. <http://www.mirror.co.uk/news/top-stories/2010/04/20/iceland-volcano-jokes-top-10-gags-to-help-you-on-your-journey-home-115875-22198852/>

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Igor Carron (2010-04-20 08:59:09)

I'd rather see bad jokes and no death. The NASA joke got some revival when K.C, Rick, Dave, Will, Laurel passed away in '03. It's funny nobody made a reference to the fact that the ashes might be a by-product of the fake money the Icelandic banks generated in the last crisis. Igor.

pat (2010-04-20 14:22:26)

you don't even need a joke, just get your friends to pronounce Eyjafjallajökull three times fast.

Chris (2010-04-20 15:14:13)

For number 10, you need to understand that Iceland is the name of a supermarket in the UK which specialises in frozen food.

Bob (2010-04-22 16:11:50)

Because there are few Jews in Iceland?

Roger Sweeny (2010-04-23 11:41:34)

Given how deeply Icelanders were involved in the speculative excess of the 2000s and given how badly the collapse has hit them, I find 8 hauntingly hilarious.

Alasdair (2010-04-24 18:18:06)

Wait - first they declare bankruptcy. Then, they set fire to their own island. Insurance scam? (from the same place I saw the other ones first...)

## Is English My Native Language? (2010-04-21 05:33)

Here's the last paragraph of [1] a New York Times book review by Janet Maslin:

“The Publisher” [a biography of Henry Luce] has its parched passages, most notably when it ventures into the thickets of Luce’s “big” ideas. It works best when the man is well within sight. But Mr. Brinkley is dauntless in assessing Luce’s most important accomplishments, like his “American Century” essay and other efforts to tell Americans what American life was like. Life magazine had no temerity about devoting a major series in the 1950s to “Man’s New World: How He Lives in It.” Now that Man’s New World is so different from anything Henry Luce could imagine, his life and times are more poignant than they once seemed.

As I read this, I wondered if English was my native language. It was so hard to understand. Then I wondered if New York Times writers are paid by the big word. “Parched”? “Thickets”? At least I know what that sentence means. I don’t know what she means by “Mr. Brinkley is dauntless in assessing...” – dauntless means fearless. Nor do I understand what “Life magazine had no temerity about” means. Temerity means recklessness or boldness. The logic of the last sentence (“Now that . . .”) with its big word poignant also escapes me.

Perhaps Maslin has found that if she writes like this her editors will edit her less, not being quite sure what those words mean. I attended many talks at UC Berkeley in which the speaker left out crucial information, such as the meaning of the y axis of a graph. And, virtually every time, no one asked about it – not even the four or five professors present. Gradually I realized why: They were insecure.

1. <http://www.nytimes.com/2010/04/20/books/20book.html?hpw>

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Byran (2010-04-21 06:31:09)

This "insecurity hypothesis" explains what I have observed: Graduate students are less likely to ask questions in a class than a professor who might be sitting in. In this case, the professor is much more secure in his/her knowledge; the grad students are afraid of looking foolish. Which flies a bit in the face of your assertion that professors are insecure as well; I'm sure they are but probably not, on average, as insecure in their knowledge as grad students.

Alex Chernavsky (2010-04-21 08:23:16)

Having been to my share of god-awful boring seminars, I can say that people may not be asking questions because they're not really paying attention, or they don't really care. If the whole talk is pointless, why worry about the Y-axis?

Alex Chernavsky (2010-04-21 10:34:01)

And speaking of poor writing found in the *New York Times*, check out the first paragraph of this book review (the review was written by one Walter Kirn): ===== According to the perverse aesthetics of artistic guilty pleasure, certain books and movies are so bad "so crudely conceived, despicably motivated and atrociously executed" that they're actually rather good. "Solar," the new novel by Ian McEwan, is just the opposite: a book so good "so ingeniously designed, irreproachably high-minded and skillfully brought off" that it's actually quite bad. Instead of being awful yet absorbing, it's impeccable yet numbing, achieving the sort of superbly wrought inertia of a Romanesque cathedral. There's so little wrong with it that there's nothing particularly right about it, either. It's impressive to behold but something of a virtuous pain to read. ===== <http://www.nytimes.com/2010/04/18/books/review/Kirn-t.html>

Wayne (2010-04-21 10:36:22)

To be honest, the Maslin paragraph sounds like it's been computer generated from a corpus, using statistical methods. The thesaurus-sounding big words are the least of its problems. Back on topic, I have to agree with Alex: if you're interested enough in a topic/presentation, questions will naturally come up. Strong curiosity pushes back against fears of appearing to be the fool.

seth (2010-04-21 11:55:19)

Alex, I was at these talks because I chose to be. So were the other professors, in most cases.

Alex Chernavsky (2010-04-21 12:02:50)

Choosing to go does help motivate you to pay attention, but sometimes the speaker turns out to be quite horrible, or the subject is different from what you expected it to be. Seminars are like a box of chocolates...

Nathan Myers (2010-04-21 12:13:37)

Do you suppose she meant "timidity", for "temerity"? This really is all nonsense, and all because the words don't mean what Maslin appears to be trying to say. Shame on her, and shame on her editors.

Jeff Thomas (2010-04-21 14:58:30)

I agree with Nathan - she meant "timidity". Other than that error I don't find the writing that bad and the overall meaning is pretty clear. I found the use of "parched" instead of "dry," the term commonly used to refer to uninteresting passages of writing, amusing, but I can see how someone could find it overblown. I agree with the use of "poignant" in the last sentence. That is not an overly fancy word.

Christopher Burd (2010-04-21 15:01:17)

"Do you suppose she meant 'timidity', for 'temerity'? " I think so, probably via "timorous".

seth (2010-04-21 16:23:23)

Ordinary usage would be "Life magazine had the temerity to devote . . ."

Timothy Beneke (2010-04-21 23:33:06)

Some tangential comments about intellectual posturing. John Searle says he asked Michel Foucault why he wrote so badly. Foucault told him that if he wrote as clearly as Searle, no one in Paris would read him or take him seriously. Foucault said that in Paris, at least 10 % of what you write must be utterly incomprehensible for you to be taken seriously. Later, Searle asked the sociologist Pierre Bordieu if what Foucault said was true. Bordieu said it was more like 20 %. Noam Chomsky was once asked about dialectical materialism. Chomsky said that he had no idea what it meant; that it had something vaguely to do with recursive processes, he guessed. He said that when something important happens in physics, he can meet with his physicist friends and they will explain it to him and he can grasp it at his own level, with a little bit of work. But with some ideas, especially in social theory, he feels that if he worked for a million years he would never understand it because it's simply not coherent. I'm in a social theory group, with a lot of people who have taught social theory. Much of what we read and some of what is said strikes me as incoherent. But there is a pretense in the field that very abstract generalizations that have the rhetorical flavor of science are revealing some deep truth. I think it's mostly intellectual fraudulence... Psychologists are mostly trying to be scientists, even if they are unclear. Some of the stuff that passes for thought in social theory and the humanities seems like pure bluff...

Alex Chernavsky (2010-04-22 04:30:19)

The best essay I've ever read about intellectual posturing is this one, by Richard Dawkins: <http://richarddawkins.net/articleComments,824,Postmodernism-Disrobed,Richard-Dawkins-Nature,page6> Here's a sample: ===== Suppose you are an intellectual impostor with nothing to say, but with strong ambitions to succeed in academic life, collect a coterie of reverent disciples and have students around the world anoint your pages with respectful yellow highlighter. What kind of literary style would you cultivate? Not a lucid one, surely, for clarity would expose your lack of content. The chances are that you would produce something like the following: "We can clearly see that there is no bi-univocal correspondence between linear signifying links or archi-writing, depending on the author, and this multireferential, multi-dimensional machinic catalysis. The symmetry of scale, the transversality, the pathic non-discursive character of their expansion: all these dimensions remove us from the logic of the excluded middle and reinforce us in our dismissal of the ontological binarism we criticised previously." This is a quotation from the psychoanalyst F lix Guattari, one of many fashionable French 'intellectuals'... =====

seth (2010-04-22 06:05:04)

Tim and Alex, in an earlier draft of this post I wrote: "Veblen pointed out that professors use big words to show off, but I don't think that's what's going on here." I don't think Maslin is trying to sound smart, or impress the general public, or be taken seriously. It's just a book review. She churns them out. She isn't a professor, who might write three articles per year. As a journalist who wrote for Newsweek put it to me, "Then it goes to editing, where every editor feels the need to piss on it." It's not just Newsweek. My guess is Maslin is reacting to that treatment.

Taylor (2010-04-22 08:31:31)

There was an interesting discussion of this in the book 'The Economic Naturalist'. Unfortunately I can't remember offhand what the explanation was. Something like an arms race of obscure vocabulary.

griff (2010-04-22 12:26:02)

Reading this reminded me of the Sokal Affair ([http://en.wikipedia.org/wiki/Sokal\\_affair](http://en.wikipedia.org/wiki/Sokal_affair)). Essentially, a bunch of nonsense was written and submitted to peer review, and it made it through.

Kirk (2010-04-22 15:00:30)

Rewriting can yield useful insights. I took a run at the paragraph, and in so doing discovered three unclear areas. (1) The third sentence begins with a "but", however, that sentence appears to support the previous sentence. The "but" forces the reader to

stop and wonder, "what's she objecting to?" (2) I was forced to interpret the "temerity" sentence as admiration. She may have actually meant something else, in which case the sentence would wander into a different thicket. (3) The "poignant" word has multiple meanings. Choose your favorite: (a) his life and times are more physically painful than they once seemed (b) his life and times appear more keenly distressing to the mind than they once seemed (c) his life and times appear more profoundly moving than they once seemed (d) his life and times appear more incisive than they once seemed (e) his life and times appear more neat and skillful than they once seemed (f) his life and times appear more astute and pertinent than they once seemed (g) his life and times appear more agreeably, intensely stimulating than they once seemed My version follows. "The Publisher" can be dry at times, especially when it explores the thickets of Luce's "big" ideas. It works best when it concentrates on the man himself, and especially excels when it assesses Luce's most important accomplishments, like his "American Century" essay, as well as other efforts to tell Americans what American life was like. For example, Life magazine devoted a major series in the 1950s to "Man's New World: How He Lives in It." Now that the life of an American looks nothing like Henry Luce could imagine, his life and times appear more astute and pertinent than they once seemed.

Vic (2010-04-23 00:24:42)

Suppose you are an intellectual impostor with nothing to say, but with strong ambitions to succeed in academic life, collect a coterie of reverent disciples and have students around the world anoint your pages with respectful yellow highlighter. What kind of literary style would you cultivate? Not a lucid one, surely, for clarity would expose your lack of content. The chances are that you would produce something like the following: — — — This is a fairly apt description of the whole academic field of economics

Kirk (2010-04-23 11:12:01)

In retrospect, given the importance of the final paragraph in any essay, I conclude that her form implies her meaning. She intends to warn off the reader but could not, politically, state it clearly, something along the lines of, "This book is a bore. You'd have better fun, and learn more, by watching reruns of I Love Lucy."

Sign Language for Kids | Learn Sign Language Online (2010-04-25 03:06:08)

[...] Seth's blog » Blog Archive » Is English My Native Language? [...]

## The Hockey Stick Illusion (2010-04-22 05:40)

Recently [1]a WSJ columnist told this story:

I was chatting with a friend who, over the years, has helped her kids slog through the obligatory science-fair projects.

"The experiments never turned out the way they were supposed to, and so we were always having to fudge the results so that the projects wouldn't be screwy. I always felt guilty about that dishonesty," she said, "but now I feel like we were doing real science."

Yes, science with a human touch. The Hockey Stick Illusion by [2]Andrew Montford (sent to me by the publisher) is a great book because it tells a great story. That story has a hero (Stephen McIntyre) and a villain (Michael Mann) and illustrates a basic truth about the world: A consensus of the "best people" can be wrong. This point was first made, as far as I know, by [3]The Emperor's New Clothes. It was later made by the [4]Asch experiment (about line-length judgments). It's not obvious; Elizabeth Kolbert and her editors at The New Yorker, not to mention Bill McKibben, have yet to understand it. ("No one has ever offered a plausible account of why thousands of scientists at hundreds of universities in dozens of countries would bother to engineer a climate hoax," [5]Kolbert recently wrote, with the permission of her editors.)Â It's a sad comment on our education system that I first learned it via self-experimentation. My results showed that an acne medicine that my dermatologist prescribed didn't work – a possibility for which my



dermatologist (in consensus with other dermatologists) hadn't allowed. As truths go, this one is scary: It means you have to think for yourself. But it is also the most liberating truth I know.

The Hockey Stick Illusion tells how McIntyre, skeptical of Mann's hockey-stick result (a sharp increase in global temperature to unprecedented levels during the 20th century), tried to get the data and computer code that Mann used. Mann put him off. He still hasn't released the computer code he used. Mann found a hockey stick where none existed because (a) he used principal-components analysis to summarize a lot of temperature series (bad idea), (b) he used that method in an unusual way, making a bad idea worse, and (c) one of his time series had a serious problem. After McIntyre noticed this problem and pointed it out, the story really begins: How did everyone react? Much as a reader of The Emperor's New Clothes would expect. Nature denied it. The Washington Post denied it. Most climate scientists denied it (and continue to). Montford started writing the book before Climategate, whose overall message was the same – that climate scientists have been distorting the truth, that the case for man-made global warming is far weaker than they say, that a consensus of experts can be wrong. As Montford puts it,

None of the corruption and bias and flouting of rules we have seen in this story [and in the Climategate emails] would have been necessary if there is, as we are led to believe, a watertight case that mankind is having a potentially catastrophic effect on the climate.

Climategate and the story within The Hockey Stick Illusion are bad news for some very powerful people, such as Al Gore and those who gave him a Nobel Prize, but are helpful to the rest of us. When Big Shot X says "This is incredibly clear, everyone knows this" . . . maybe they're wrong.

1. <http://online.wsj.com/article/SB10001424052748704041504575045334195791838.html>
2. <http://bishophill.squarespace.com/>
3. <http://deoxy.org/emperors.htm>
4. [http://en.wikipedia.org/wiki/Asch\\_conformity\\_experiments](http://en.wikipedia.org/wiki/Asch_conformity_experiments)
5. [http://www.newyorker.com/talk/comment/2010/04/12/100412taco\\_talk\\_kolbert](http://www.newyorker.com/talk/comment/2010/04/12/100412taco_talk_kolbert)

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Jake (2010-04-22 08:31:35)

Contrary to what you read, only a small minority of scientists believe in global warming. Al Gore wrote that global warming is supported by 2,500 scientists. Since he exaggerates, I would take his number as the absolute maximum. Yet, in 2008, President Bush received a petition signed by 30,000 scientists expressed grave doubts about the global warming theory. So how did so few gain such great power? The emails from climategate outline how they accomplished that. Plus they had help from powerful politicians who saw global warming as a way to greatly increase their political power. So why did these scientists pervert science? The global warming industry is a \$2.5 billion industry in America alone. That means that every person or organization that promotes GW(whether it be political or educational) receives a flood of grants, subsidies or contributions.

seth (2010-04-22 08:38:46)

Jake, I have no idea why you say "only a small minority of [climate] scientists believe in global warming". (I'm less concerned what non-climate scientists think.) Can you explain why you believe this?

Jeff Thomas (2010-04-22 09:37:21)

Seth, while I don't know exactly where Jake is coming from, I would say that metaphorically it could be described as an underground bunker that is shielded with a special type of tinfoil to prevent the government's fleet of black helicopters from locating it. You can expect to make many more new friends like Jake as you continue to deny the overwhelming scientific consensus on global warming.

Nathan Myers (2010-04-22 12:56:24)

It's easier to understand why stories like *The Hockey Stick Illusion* are made so appealing. The authors are lying. It's so much easier to make a compelling story when you have no commitment to truth. This is the deep lesson hammered out by the Bards, codified by Edward Bernays in the '20s, refined by J. Goebbels in the '30s, and industrialized wholesale in the modern world by the Ad Council. The Big Lie technique really works. Climate scientists, constrained to mere facts, will always be at a disadvantage. The fact remains that we have just experienced the hottest twelve-month period in at least a thousand years. Spin as you like, even Exxon doesn't pretend any more; they only pretend now that it's *not their fault*, and spend more persuading lying liars to blow smoke about it than the entire population of climate scientists are paid for honest work.

Brandon (2010-04-22 13:46:31)

I have no opinion regarding the merits of climate change (on either side of the argument) but it would be naive to think a group of people could promote incorrect ideas about something very important to a lot of people for a long time. The high carbohydrate, low fat diet dogma for decades is a great example. I should have known when I was taking a nutrition class in college (circa 1987) taught by my 300+ pound instructor.

Tim (2010-04-22 14:06:30)

I am little confused, Seth used the hockey stick to question global warming Nathan says people who used the hockey stick are lying, but man made global warming is true ??????????

Peter Tuckey (2010-04-23 00:20:07)

For Nathan Myers: Follow the moneyâ€¦as always. This man, Dr Richard North (and others of course), has helped reveal what is behind it all. <http://eureferendum.blogspot.com/2010/01/new-american.html>

John A (2010-04-23 01:03:30)

It's easier to understand why stories like *The Hockey Stick Illusion* are made so appealing. The authors are lying. It's so much easier to make a compelling story when you have no commitment to truth.

Yes of course, that must be it.

This is the deep lesson hammered out by the Bards, codified by Edward Bernays in the '20s, refined by J. Goebbels in the '30s, and industrialized wholesale in the modern world by the Ad Council. The Big Lie technique really works.

Wow, argumentum ad hitlerium. It must be true.

Climate scientists, constrained to mere facts, will always be at a disadvantage.

Yes they're constrained by mere facts. Here come those mere facts.

The fact remains that we have just experienced the hottest twelve-month period in at least a thousand years.

And how do you know this? Because the statistical techniques used to produce such a result are invalid. This was confirmed by the NAS Panel and the Wegman Report. The NAS Panel chairmen gave evidence to Congress backing Wegman's report, and what he said was that the mathematics is simply wrong and the conclusion that the earth was the warmest it has been in a

thousands years "cannot be sustained by his [Mann's] analysis. All of the other "independent" reconstructions bar a couple, use the same key proxies, and many of them use the MBH PC1 as a proxy to give that HockeyStickness they required. The couple that did not use Mann's bad proxies or their derivatives showed the Medieval Warm Period as warmer than today. I'd say you had swallowed a very Big Lie and only "shut-eyed denial" is your refuge.

Latimer Alder (2010-04-23 01:48:40)

@Nathan Myers Another correspondent who comments on the book without having bothered to read it! You have clearly just taken the title, assumed what you think it about and then written your review. And accused the noble Bishop of lying along the way. Whether we have experienced the hottest decade in a thousand years or not is completely irrelevant to the argument in this book. Though having read it you may conclude that the evidence for that is a bit thinner than you think. But read the bloody book first before reviewing it! Your views will be taken with more conviction if you do.

John Hewitt (2010-04-23 02:08:59)

A couple of comments. Jake you comment on Al Gore saying that 2,500 scientists believe in global warming. That number comes from the 2,500 who contributed to the last IPCC report. If you look at Ross McKittrick's site you will see that they were not asked if they were "believers". The conclusions were written by a small cadre of absolute "believers" and we have no idea how many of the 2,500 agreed with the conclusions. Many probably did but many did not. Actually the number of scientists in other disciplines who are "sceptical" about AGW is growing. This is for two reasons. First their own research findings which contradict parts of the AGW hypothesis and secondly their disbelief at the methodology used by virtually all climate scientists. The models can be used to predict almost any climate scenario, the data is weak and finally the tightly knit of climate scientists involved are impervious to any criticism. Nathan you clearly show you have not even opened the cover of the Hockey Stick Illusion. Its a book that you find hard to put down once you start. - I'm reading it for the third time and it changed my mind totally!

Peter Risdon (2010-04-23 02:11:54)

What a disgraceful comment from Nathan Myers, untruthful and libellous. Not one alleged "lie" from the book is identified, for the simple reason there are none. Some sceptics received some tens of millions in funding, mainly a decade or more ago, from energy companies. Alarmist climate science has received *billions* in funding. Individual climate researchers, like Professor Wang of Albany ( \$7M+), have received close to ten million *each*. We do not know for sure how the most recent decade compares with warm periods in the past - that's the problem. In the northern hemisphere, temperatures were clearly warmer in the past - crops were grown in Greenland, vines in northern Britain, in the middle ages, within the last thousand years. It's less clear what conditions were like in the southern hemisphere, but increasingly, evidence suggests they were the same.

Marko (2010-04-23 02:30:32)

So I take it you read the book? I follow Joe Romm's website [climateprogress.com](http://climateprogress.com) for the hard non-denialist viewpoint, so when I heard of this book I went to see what he thought of it. Apparently he's never mentioned the book or its author. I searched using his own site search engine, plus Google in the form ... [site:climateprogress.com "montford"](http://site:climateprogress.com/montford) ... and so on. Absolutely nothing, and this from a guy who loves to lay it on the skeptics. He went nuts over the second Freakonomics book. He posts several lengthy posts daily, including entire post criticizing things like innocently tendentious words used in New York Times article headlines on global warming. His headlines are longer than most blog posts. Every sentence has a link in it to one of his previous posts. Is Montford's book just too minor to warrant a mention? Is it a needle in a haystack of denialist rants such that it's under Romm's radar? I wouldn't think so, since it's getting press like this: <http://www.prospectmagazine.co.uk/2010/0-3/the-case-against-the-hockey-stick/> So I'm really intrigued. Is this book the first recipient of a new strategy among global warming activists of "Tachy Goes to Coventry," of "I don't hear you la la la"?

Watchman (2010-04-23 02:32:18)

Interesting that the last two commentators react with two non-scientific lines of attack, one of which accuses someone who doubts there is a consensus (however well informed this criticism is) by accusing him of denying the consensus, and therefore has clearly failed to understand the point of the original post, that consensus can be wrong... The second asserts that Mr Mountford is lying, which is peculiar considering that the errors in Dr Mann's codes are in the public domain and proven, which

would suggest the conclusions are erroneous, and that attempts to defend these conclusions are therefore duplicitous. But then again, he then refers to Exxon, apparently the villain funding the deniers (despite the fact there is no evidence of this and that other oil companies have been funding e.g. the Climate Research Unit at UEA). So to expose a perceived lie, Nathan asserts that the people using the evidence are lying, and that those defending the flawed conclusions are therefore truthful, and then backs this up with what appears to be a lie, even if Nathan is unaware of this. As to the hottest twelve-month period, where was this experienced? This is not a temperature, but an anomaly calculated by an decreasingly small number of thermometers and a complex system of gridding and averaging. It is not accurate. There may be global warming, but trotting out the hackneyed 'consensus' and 'lies' answers does not actually prove it. Science allows criticism, and where it is valid, it should be recognised as such.

Peter Wilson (2010-04-23 02:49:48)

Nathan Myers Says: "It's easier to understand why stories like The Hockey Stick Illusion are made so appealing. The authors are lying." Really Nathan? Perhaps you would be so good as to explain this rather libellous assertion. Having followed the Hockey Stick saga for years, I think Montford has summed it up very well indeed. I wonder if you have even read the book? "The fact remains that we have just experienced the hottest twelve-month period in at least a thousand years." This is not a fact at all, but a product of your imagination. Even CRU don't say 2009 was hotter than 1998! And as comprehensively demonstrated in the book under review, there is no basis at all for believing the current period to be warmer, or even as warm, as the middle age warm period. You just made both your claims up. Don't talk to us about "the Big Lie" - you seem pretty practised yourself!

Scott (2010-04-23 03:49:23)

Nathan, do you really imagine that this sort of overblown undergraduate rhetoric is going to convince anyone, even those who have not bothered to look into the state of climate science?

John (2010-04-23 05:50:11)

"The authors are lying." Care to provide evidence of this? Quote page number and explanation will suffice. "The fact remains that we have just experienced the hottest twelve-month period in at least a thousand years." No we have not.

John Carter (2010-04-23 06:12:02)

Nathan Myers. To suggest, as you do, that Andrew Montford is a liar says more about you than you know, particularly in the light of the other parts of your post. What Andrew has written is the truth. The truth about the lies and deception of climate science. You adopt the usual alarmist stance of attacking the man and ignoring the facts, something you continue to do with your claims about the climate. Evidence is abundant and overwhelming that the MWP was warmer than present and was not a local phenomenon, so your claim that the current temperatures are the highest in 1,000 years is not just incorrect, it is a blatant lie. You also confuse yourself about what most sceptics believe. The climate varies. It always has and it always will. The temperature rises and falls but anthropogenic CO2 emissions are but a tiny factor in that variability. Your myopic stance, and that of much of climate science, will continue to cause injustice and misery to millions, whilst real and pressing issues are ignored in order to line the pockets of the carbon cheats.

Humphrey (2010-04-23 06:40:59)

Nathan Myers, obviously you haven't read the book "The Hockey Stick Illusion". After reading it, could you please detail in which part the author is lying? Climatology is a very challenging science because the investigators must be high experts in - the very least - meteorology, physics, biology, geology, oceanography, astrology, and God knows what more. What helps is that they never have to release their data and methods because everybody knows they are right. Although there actually is no formula or real life observations and data to be agreed on. But it does not matter, as long as the politicians, big corporations, private financing sector/bubble creators, public money, and the green movement are with them. If a climatologists happens to discover that there really is no problem here - that it is overwhelmingly about natural cycles - 95 % of them will be out of job.

Dean Cairns (2010-04-23 06:58:00)

Nathan, As a fairly impartial observer (I am ex researcher in the field and surface physics and polymer chemistry and now a science teacher) I have read 'The Hockey Stick Illusion' and found it to be very convincing. All claims, anecdotes and analyses

are well documented and verifiable, as far as I can see. The questions that arise in the book do not appear to have been convincingly answered by any of the climate research groups involved. If you believe the contents of the book to be a lie, could you be more specific about which parts? I would like to check them out.

HROwen (2010-04-23 07:31:20)

Nathan Please feel free to elaborate on what "lies" are contained in The Hockey Stick Illusion. The central arguments of the book are correct, they may be inconvenient for people who are concerned about AGW but they remain correct. Without relying on Mann's Hockey Stick it is impossible to assert that we have just experienced the hottest twelve month period in a thousand years because reliable research on the MWP suggests that this is not true, or is at least debatable. The Hockey Stick only received such world wide attention because it was convenient to those trying to convince the public of imminent climatic disaster. Hence its startling conclusion that the MWP and the little Ice Age did not exist or were dwarfed by the scale of recent temperature rises were not sufficiently rigorously critiqued by the climate science establishment. In addition the statistical methods used by Mann do not appear to have been understood by the majority of climate scientists or there would have been no need for a trained mathematician such as Steve McIntyre to take an interest in the subject.

MDAdams (2010-04-23 09:00:45)

@Nathan Myers - You claim that "The authors are lying." As we are discussing The Hockey Stick Illusion, please give us a specific example where the author (Montford) is lying. I suspect you can't. Further, I suspect you haven't seen or read the contents of the book. I have read it, and it provides a very well documented chronology of events, writings and analyses. You might disagree with some conclusions, but the evidence is factual. If I disagree with you, is it logical that you are therefore a liar? That seems to be your argument. I guess you are a true believer.

Shibui (2010-04-23 09:07:36)

Nathan writes, "It's easier to understand why stories like The Hockey Stick Illusion are made so appealing. The authors are lying." Obviously he hasn't read the book ... however if this kind of assertion is representative of the mooted "fight back" campaign by advocates of global warming, sceptics have little to be concerned about. Nathan also claims, "The fact remains that we have just experienced the hottest twelve-month period in at least a thousand years."... Perhaps Nathan might like to substantiate that ...

YFNWG (2010-04-23 09:41:55)

Nathan Myers, apparently you haven't read The Hockey Stick Illusion because 99.9 % of the information in it is verifiable in the public domain. Are you asking to be sued?

Pascal (2010-04-23 09:58:16)

Uh... The 30 000 petition Jake is referring is a hoax. As for Stephen McIntyre, he is very good to talk about himself, but has never added any convincing data to the corpus. What he does since 10 years is pointing things he feels are wrong, which is very good, but in the long term, not very productive. And as for the hockey stick controversy, it has been demonstrated over and over that it was not a mistake, neither than an illusion

Tom Gray (2010-04-23 10:41:18)

Nathan Myers wrote

The fact remains that we have just experienced the hottest twelve-month period in at least a thousand years

There exists no valid temperature reconstruction for the last 1000 years. Depending on which proxies are chosen the relationship between modern and medieval temperatures will vary. So the above statement has no scientific basis.

Hal (2010-04-23 12:20:01)

I enjoy your blog but I am afraid your methodology for getting at the truth is completely flawed. Your global warming

contrarianism is just a symptom of a larger failure. You rely far too heavily on your own personal experiences and discount those of others who disagree with you. Of course this is a nearly universal flaw, but you have made it the very foundation of your intellectual endeavors. Society benefits from having people like you around, because occasionally you will be right about something and it is good to have advocates for many points of view. But it is to your detriment because you end up believing so many false things. Fortunately being wrong about global warming is not too harmful, unless you intend to bequeath to your descendants a beautiful piece of property that happens to be only six inches above sea level, or some such.

Turning Tide (2010-04-23 13:04:27)

@Nathan Myers It's much easier to CALL someone a liar than to prove them so. Please list the deliberate factual inaccuracies in Andrew Montford's book (which of course you MUST have read), otherwise your post is nothing but unsubstantiated assertion.

vic (2010-04-23 14:49:25)

Nathan Myers: Godwin Fail

seth (2010-04-23 20:12:55)

Hal, you know I'm wrong about global warming because . . .

vic (2010-04-23 22:53:57)

where did all these comments supporting the book come from? I posted my above comment this afternoon and it was only the 6th comment on the blog entry (Hal's war 5th and right above mine).... very odd.

ray (2010-04-23 23:16:03)

wow, some emotional outbursts here when belief systems are challenged! Many of the alarmist claims in the latest IPCC report have had to be retracted as based on advocacy, not science. The climate models are not validated and rest on shaky foundations (the key issue is assumptions made regarding feedbacks and climate sensitivity). No empirical evidence exists to support their conclusions. The past temperature record is uncertain and some mainstream climate scientists admit it probably needs reworking (the raw data are adjusted by processes which are not divulged and cannot be scientifically checked, Phil Jones of Climategate's CRU says he has "lost" the original data on which trillion dollar decisions are based). The infamous hockey stick, whose story Andrew Mountford so ably describes, is recognized as an artifact of the invalid statistical methods used. Cap and Trade is being pushed by big banks and politicians, real environmental and social problems are being sidelined.

Peter Wilson (2010-04-24 00:48:55)

Pascal Says: "Uhâ€¦ The 30 000 petition Jake is referring is a hoax." A hoax? That's interesting, Pascal, so you have evidence that all 31,000 signatures on the Oregon Petition are fraudulent? Please be more forthcoming, we are dying to hear more. But of course you don't, the petition is exactly what it claims to be - nothing more nor less than a large number of people holding scientific degrees who, when asked, signed a statement opposing AGW alarmism. It has never been claimed to prove anything, merely to DISPROVE the phony claim of a scientific "consensus" (whatever that could possibly mean) on this eminently debatable subject.

harold (2010-04-24 10:36:34)

I feel a bit sorry for Nathan, the moderation queue played a big part in this clobbering I think. Montford/Bishop Hill is an entertaining and lucid writer, buy the book or start here: <http://bishophill.squarespace.com/blog/2008/8/11/caspar-and-the-jesus-paper.html>

Marko (2010-04-24 19:44:24)

I think first-time commenters are put in the moderation queue, causing an apparent reordering of comments when Seth approves comments.

Blockquotes « Rhymes With Cars & Girls (2010-04-25 08:06:17)

[...] Seth Roberts on The Hockey Stick Illusion: That story has a hero (Stephen McIntyre) and a villain (Michael Mann) and illustrates a basic truth about the world: A consensus of the "best people" can be wrong. [...]

Ed Snack (2010-04-25 15:54:05)

Nathan, I believe that you are incorrect to state that Mann's code has never been released, a copy was released as a consequence of the Wegman inquiry and the Senate hearings. The code as released (a spaghetti like mess of Fortran) does not run, and a number of people have struggled to make it work without complete success, so it is unlikely to be the version finally used despite Mann's claim at the time. However the code makes at least one item quite clear; as presented the code calculates both the RE and R2 statistics for each step in the reconstruction, thus the authors must have been aware that the reconstruction lacked statistical significance in the early steps contrary to the claims in the paper. The paper even quotes the R2 statistic for a later step (the 1815 step as I recall) where it is supportive, but omits it for the early steps where it is not. That is, prima facie, scientific fraud. The excuse (as endlessly repeated at propaganda sites like Realclimate) that RE alone is sufficient is obviously false, RE has been known to be inadequate with correlated data since the 1920's at least, and Mann was well aware of the significantly auto-correlated nature of the residuals from his reconstruction. It is possible that the errors are simply the result of incompetence, but the failure to correct them is dishonest and fraudulent, and it is a great pity that commentators such as Nathan, Hal, and others above cannot recognize and acknowledge such errors and deliberate falsification of the scientific record.

Pascal (2010-04-25 19:57:47)

@Peter: before concluding anything about the "seriousness" of the Oregon petition, you should read this: <http://greenfyre.wordpress.com/2009/07/12/what-if-the-oregon-petition-names-were-real/> and this: <http://www.skeptic.com/eskeptic/08-11-12/> And for those who didn't follow the last news (last 10 years) about the hockey stick, you should read this: <http://www.skepticalscience.com/broken-hockey-stick.htm>

Hal (2010-04-25 22:23:56)

Wow that is a lot of first time posters, weird how my comment got moved down. I wonder if some AGW skeptic site decided to come over here and pile on. Seth, I don't \*know\* you are wrong. I think you are very probably wrong because the scientific consensus is usually right; further, it is unlikely that they would be so far wrong that a non-expert in the field could immediately see through their mistakes.

Anthony (2010-04-25 22:56:51)

"I think you are very probably wrong because the scientific consensus is usually right" Really - in what sense? Most of what we believe today is wrong, or at best incomplete. There is a pretty straightforward inductive argument to this effect.

seth (2010-04-26 00:45:55)

Hal, thanks for explaining that. Judith Curry, a mainstream climate scientist, [1]wrote this recently:

No one really believes that the "science is settled" or that "the debate is over." Scientists and others that say this seem to want to advance a particular agenda. There is nothing more detrimental to public trust than such statements.

As for the speed involved, it took McIntyre years to reach his conclusions. A professional couldn't have done what he did. You can't take years to reach an unpopular conclusion that makes someone powerful look bad. That's a career killer.

1. <http://www.earthzine.org/2010/03/22/judith-curry-on-the-credibility-of-climate-research/>

Nathan Myers (2010-04-26 14:02:03)

Climate scientists aren't powerful. Exxon is powerful. Exxon spends more on lobbying alone, *every year*, than the entire population of climate scientists has ever been paid, cumulatively, since there were any.

The Emperor's New Science | Les Jones (2010-04-27 04:55:58)  
[...] Seth Roberts reviews The Hockey Stick Illusion. [...]

Alex Chernavsky (2010-04-27 13:32:31)

Hal wrote, "I think you are very probably wrong because the scientific consensus is usually right." I think that there are many recent (or relatively recent) cases where the scientific consensus was wrong. For example, Portuguese neurologist Ant3nio Caetano de Abreu Freire Egas Moniz received the Nobel Prize in 1949. He pioneered the use of lobotomy as a "treatment" for mental illness.

Hector M. (2010-04-28 11:04:46)

Many comments confuse two separate issues. The Hockey Stick Illusion (and the hockey stick issue in general) is not the same as the question of global warming. The climate might be warming because of GHG emissions, even if the hockey stick is wrong. Discuss, please, one thing at a time. Both Montford and McIntyre have denied been "deniers" or "denialists". They simply pose technical question, with indefatigable patience and unfailing courtesy and politeness. Besides, many dismissal's of Montford's book (exemplified by several in this thread) are just sweeping assertions (as those of many "deniers") whereas the book is a very detailed and precise description of a host of technical problems, and of various manoeuvres by Mann and others during several years to avoid releasing data, code, and information about how they had proceeded to construct the Hockey Stick chart, and the temperature records and reconstructions on which it is based. The Climategate mails show they were very well aware of the problems, as mentioned (briefly) by Montford and (in more extensive form) by his Bishop Hill blog and McIntire ClimateAudit blog. One should expect a serious discussion of the specific issues more than sweeping anathemas.

### **Books I'm Looking Forward to Reading (2010-04-23 20:19)**

- Made by Hand: Searching For Meaning in a Throwaway World by Mark Frauenfelder
- The Big Short: Inside the Doomsday Machine by Michael Lewis
- Fat: An Appreciation of a Misunderstood Ingredient, with Recipes by Jennifer McLagan. By fat she means animal fat.
- No One Would Listen: A True Financial Thriller by Harry Markopolos
- Wide Awake: A Memoir of Insomnia by Patricia Morrisroe
- Malignant Medical Myths: Why Medical Treatment Causes 200,000 Deaths in the USA Each Year, and How to Protect Yourself by Joel Kauffman
- The Strangest Man: The Hidden Life of Paul Dirac by Graham Farmelo
- Country Driving: A Journey Through China From Farm to Factory by Peter Hessler
- China's Megatrends: The 8 Pillars of a New Society by John & Doris Naisbitt. Just a teensy bit more persuasive than The Coming Collapse of China (2001) by Gordon Chang.
- The Thing Around Your Neck by Chimanda Adichie



Kirk (2010-04-24 10:36:54)

I liked Malignant Medical Myths. I plan to revisit it every year, just before my annual physical, to refresh what he writes about blood pressure. And statins. The man obviously has no holdings of Big Pharma stock.

Aaron (2010-04-26 08:28:50)

I am curious, how many books do you read per year?

seth (2010-04-26 15:36:13)

Not many. In China, a few per month if I'm lucky. In Berkeley, I leaf through 20-30 books/month and read cover to cover maybe 3.

griff (2010-04-27 14:14:46)

The Strangest Man was excellent. You should really enjoy it. Also good and along the same subject was American Prometheus. Having listed to these as well as Einstein, it is interesting to listen to biographies with overlapping characters (e.g. Oppenheimer and Einstein to Dirac, Dirac and Einstein to Oppenheimer, etc).

### **Harry Markopolos, Meet Stephen McIntyre (2010-04-24 16:40)**

After The Hockey Stick Illusion by Andrew Montford (about Stephen McIntyre's criticisms of Michael Mann's hockey-stick graph), I read No One Would Listen by Harry Markopolos (sent to me by the publisher), about the Madoff case. They have plenty in common.

Size. [1]According to Elizabeth Kolbert and New Yorker fact checkers, "thousands of scientists at hundreds of universities in dozens of countries" are sure that humans are disastrously warming the Earth. Madoff stole about \$60 billion from thousands of investors. Helped by dozens of hedge-fund managers.

Hans Christian Andersen. The lesson of The Hockey Stick Illusion was that of The Emperor's New Clothes, [2]as I said. Markopolos mentions that story at least twice.

Failure at the top. In The Hockey Stick Illusion, Nature magazine and the National Academy of Sciences dismiss McIntyre's criticisms. In No One Would Listen, the Wall Street Journal was given the story and, for three years, failed to do anything with it. They covered it only after Madoff confessed.

Regulatory failure. Science is said to be "self-regulating," meaning that mistakes will be noticed and fixed by other scientists. Unfortunately for that homily, McIntyre wasn't a scientist. In No One Would Listen, the no one of the title means no one at the SEC (Securities and Exchange Commission). After hearing Markopolos's story, a congressman says the SEC "couldn't find steak at an Outback".

"It cannot be". Just as Kolbert believes that a "hoax" of such size isn't possible, many people told Markopolos that what he was claiming wasn't possible. One of the best stories in No One Would Listen is about a colleague of Markopolos's named Frank Casey, who helped Markopolos investigate Madoff. Casey's job is selling financial products. After a sales call at an insurance company, the prospective customer, after declining to buy anything, asks Casey about Madoff. Casey is stunned. It felt like a random sales call. Casey tells him what he knows. It takes a half hour. Then the insurance executive explains his question. He recently married into "an extremely wealth Jewish family." Madoff was at his wedding. After the wedding, Madoff took him aside and said he'd get him "set up" (meaning invested in Madoff). The insurance executive, after studying Madoff's claimed returns, thought something was fishy and refused to invest. This got him in trouble with his father-in-law. "It's your job as my son-in-law to take care of my daughter, and you should be putting your money with Bernie," the father-in-law said over and over. His refusal to invest with Madoff is causing serious friction, he tells Casey, andÂ begs Casey to put what he said in writing so that he can convince his

father-in-law to withdraw his money.Â Casey writes a long email. The insurance exec brings it to his father-in-law and reads it out loud. "It can't be," says his father-in-law. "Bernie wouldn't do this to me." The father-in-law does nothing. They lose everything.

1. [http://www.newyorker.com/talk/comment/2010/04/12/100412taco\\_talk\\_kolbert](http://www.newyorker.com/talk/comment/2010/04/12/100412taco_talk_kolbert)

2. <http://www.blog.sethroberts.net/2010/04/22/the-hockey-stick-illusion/>

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Vic (2010-04-25 00:38:38)

Seth, I am more than willing to believe that global warming might be a hoax, but a far bigger hoax is the entire academic discipline of economics (as related by Nassim Taleb among others). To a greater degree than climate science, economic "science" rely on mathematical models to model that which cannot be modeled. And the economic hoax is costing us far more than any possible climate hoax, as bogus, but scientific sounding, economic theories underlie everything from fiscal and monetary policy to individual and pension plan investment decisions, from the structure of markets and financial instruments, to policies on immigration, free trade, taxation, and welfare and to social norms about executive compensation, etc. etc.

John Blake (2010-04-25 09:29:14)

This bears on society's "clean hands" preference for abstract, disembodied theory rather than any resort to grubby fact-checking of "reality", if you will. Empirical scientific method stands wholly opposed to such elitist privilege, which partially explains why mere verbalizers gravitate to model-making disciplines such as "climatology" (sic), economics, even law. For some decades now, deconstructionists and feminists in particular have explicitly rejected reliance on objective, rational argument in favor of contentious attitudinal assertions lacking any basis in socio-cultural reality whatever. So long as this unreasoning prejudice against hands-on, non-ideological integrity persists, so long will politics remain in thrall to incompetent, corrupt insiders of all persuasions. Perhaps the worst offenders are those high achievers, men of wealth, who gravitate to politics with the object of suppressing free markets not only in competitive products but ideas. Delusions of grandeur foster the endemic societal disease which celebrates such as Bernie Madoff until all is lost.

Robert E. Phelan (2010-04-25 09:52:41)

Interesting parallel - but the claim of "thousands of scientists at hundreds of universities" is a bit disingenuous. The overwhelming majority of those thousands have not the time, interest or expertise to evaluate the claims of climate scientists on their own. Most would not dream of lying about their science and do not expect to be lied to. Much like the father-in-law of Casey's insurance executive, they take the word of people they believe can be trusted. When that word also supports other elements in a person's world view (man is greedy, corporations crush human freedom, capitalism serves the interests of elites) that word is more readily accepted. The conspiracy of thousands is simply a straw-man. Vic's complaint above deserves a far more nuanced response than I can supply here. I'd just like to make a few points: 1. Science is nothing more than the systematic and careful observation of events in the real world followed by the development of explanations (theories) for their occurrence. 2. All theories are models. Mathematical/computer models are simply dynamic extensions of those models to generate predictions of future events (i.e. if what we know is true, and all other things remain equal, changing this should result in that...) 3. Theories will always be used to justify a course of action. Any theory can be used to justify diametrically opposed courses of action. Economic Theory does not mandate bloated executive compensation, but bloatedly compensated executives will use theory as their justification. 4. Science is not TRUTH. It is a way of "knowing".... but there are other ways of "knowing", much like the words from a duet in "The Woman In White": "...I believe my heart. It believes in you. It's telling me that what I see is completely true..." 5. You don't submit your emotional life to scientific scrutiny, you don't base public policy on the yearnings of your heart.

GregO (2010-04-25 10:48:21)

Vic - I with you on this...but I'd like you to consider your use of the word hoax in a slightly different context. To me, both the economic modelers and the AGW modelers perhaps weren't attempting a deliberate fraud as much as simply falling in love with their ideas; falling in love with their Frankenstein creations; all of it a fantasy built on a firm bedrock of unquestioned assumptions and false beliefs and a willful ignorance of and contempt for real-world measurement. That Madoff was perpetrating a fraud is clear and he's in prison - is the intent of the AGW crowd to perpetrate a similar fraud? Maybe not...But the objective result ends up equally harmful if not more so (COP15 alone had 45,000 of the world best talkers talking about and agreeing on nothing - that couldn't have cost much...hmm....so much for good intent).

Duncan (2010-04-26 10:22:59)

"Bernie wouldn't do this to me." I've heard it suggested that plenty of the fund managers who gave their and their clients money to Madoff were pretty sure he was up to something. They just thought he was doing something cleverer and playing someone else, or "the system", not them.

Nathan Myers (2010-04-26 13:49:13)

I have cousins who would have been Madoff victims. I asked, and was told they avoided him because the word had gone around to stay clear. The untold story of Madoff is likely to involve pervasive bribes, kickbacks, and cooked audits. Normally a guy like Madoff never gets to jail, because he's too valuable as a stoolie. In this case, evidently, nobody was interested in who he could finger.

### Assorted Links (2010-04-25 15:13)

- [1]Vision therapy
- [2]Omega-3 and brain health. "Participants were 280 community volunteers between 35 and 54 y of age, free of major neuropsychiatric disorders, and not taking fish oil supplements. . . Five major dimensions of cognitive functioning were assessed . . . Among the 3 key (n-3) [poly-unsaturated fatty acids], only DHA [was] associated with major aspects of cognitive performance."
- [3]The rise and fall of Beijing restaurants

Thanks to Steve Hansen, Tim Lundeen, and Eric Meltzer.

1. <http://www.nytimes.com/2010/03/14/magazine/14vision-t.html?partner=rss&emc=rss&pagewanted=all>
2. <http://jn.nutrition.org/cgi/content/abstract/jn.109.119578v1>
3. [http://www.eileeneats.com/eileeneats/Blog/Entries/2009/8/26\\_The\\_Rise\\_and\\_Fall\\_of\\_the\\_Chinese\\_Culinary\\_Empire.html](http://www.eileeneats.com/eileeneats/Blog/Entries/2009/8/26_The_Rise_and_Fall_of_the_Chinese_Culinary_Empire.html)

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MC (2010-04-26 08:08:05)

Hi Seth, I was curious what you might think about this article ([http://www.boston.com/news/globe/ideas/-articles/2007/10/07/some\\_like\\_it\\_hot/](http://www.boston.com/news/globe/ideas/-articles/2007/10/07/some_like_it_hot/)) which argues that the American appetite is becoming spicier as the large, aging Boomer generation "are losing their ability to taste" and turning to spicier, higher-flavor foods to overcome their dulled senses. Are people mistaking spiciness for complexity, or are complex flavors like umami also affected by an aging person's gradual loss of tastebuds? Cheers! Mara

seth (2010-04-26 15:50:40)

Mara, the article sounds reasonable. But the whole fancy food industry is booming, not just the spicy portion of it. Sushi, for example, is far more popular now than 20 years ago. Making a new spicy food is much easier than making a new bland food.

### **The Big Short (2010-04-26 15:29)**

The Big Short (sent to me by the publisher) is Michael Lewis's best book, and that's saying a lot. Moneyball was excellent. The Blind Side was excellent. All three are stories of underdog triumph but The Big Short is about a far more important subject, a far more complicated subject, and has a tremendously dark side. You know the saying: Fool me once, shame on you; fool me twice, shame on me. Well, shame on Wall Street for creating the worst financial disaster ever. But then, as Nassim Taleb puts it, the school-bus driver who crashed a bus full of children were given a new bus. Those who created the disaster were put in charge of fixing it. As Steve Eisman, one of Lewis's main characters, puts it, "I can understand why Goldman Sachs would want to be included in the conversation about what to do about Wall Street. What I can't understand is why anyone would listen to them." (Not just listen. They were allowed to dominate the conversation.) Showing that the foolishness of people at the top in American society has no clear limit.

I could hardly stop reading. Endless fascinating detail. Michael Burry, another main character, discovers he has Asperger's after his son is turned down by several kindergartens and he tries to understand why. I've been talking and reading about data analysis my whole professional life, yet Lewis's story about how means can be terribly misleading is the best I've heard. An average credit score of 600 can be due to two scores of 600 or to scores of 500 and 700, with vastly different consequences. (This escaped the averagers.) Sure, I knew about [1]the conflict of interest of bond rating agencies, such as Moody's, but Lewis describes it so well I loved reading about it again.

Long ago, I [2]blogged about the importance of insider/outsiders – close enough to understand what's going on yet far enough away to see the truth. Lewis's heros, who saw that a tremendous crash was coming, are exactly that. Like [3]Harry Markopolos, they were on the fringes of the financial industry. One of them (Eisman) had a gift for tactlessness, another (Burry) had Asperger's, and a third group ran their fund from a Berkeley garage. Without them, the people at the top (e.g., the head of Goldman Sachs), who run and crashed our financial system, could plausibly say Nobody could have predicted this. Because of Lewis's heros, they can't.

1. <http://www.nytimes.com/2010/04/26/opinion/26krugman.html?hp>

2. <http://www.blog.sethroberts.net/2009/01/24/not-the-same-study-section-how-the-truth-comes-out/>

3. <http://www.blog.sethroberts.net/2010/04/24/harry-markopolos-meet-stephen-mcintyre/>

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Zach (2010-04-26 20:50:16)

Isn't it a little disingenuous to talk about this as confirmation of the importance of insider/outsiders when Michael Lewis has explicitly mentioned that he chose the people profiled in large part for their outsider status? You refer to them as his heroes, and that is precisely because they fit an appealing narrative. At the same time, more and more insiders (or at least a certain contingent thereof) are being exposed as having prior knowledge of the coming collapse and exploiting it. Are you saying that the difference lies in their response to that recognition?

Adam (2010-04-27 00:40:24)

I so wish our library would get this book...I requested that they order it about a month ago...your review is not helping me to

be patient!

seth (2010-04-27 02:58:34)

Zach, that's a good point ("isn't it a little...") if I'd seen the comment you mention. But I haven't. Where did you see it? I heard Lewis say he thinks his main characters were able to see the coming collapse because they were outsiders. Just what I'm saying. See this: <http://www.blog.sethroberts.net/2010/03/17/michael-lewis-echoes-veblen/>

Zach (2010-04-27 14:44:28)

I reread the article you linked to, which was my main source for the complaint. On second reading, I see that I misinterpreted a couple of passages. However, I still think it would instead be correct to assert that he failed to profile the folks at Goldman in greater depth because they are insiders, and therefore denied him access. As we are seeing more and more, many of these people did have a sense of what was to come and chose to profit (much like the outsiders). However, because they are complicit, they have an incentive to cover up, whereas the outsiders had no reason not to scream bloody murder. I suppose this expedited the exposure of their wrong doing, which plays further into your portrayal of evens. Thanks for pushing me to re-examine this post. I hope sometime in the future you will explore further the notion of insider-outsider, above just pointing it out where it appears. For me the notion still has the unsettling air of the anecdotal, though we see it praised quite a bit.

Nathan Myers (2010-04-27 15:01:51)

Seth: I'm not getting a clear picture of what importance you are attaching to narrative. I can understand that a compelling narrative is important, maybe essential, to maintaining reader/viewer/student interest while absorbing complex information. But you seem to be saying, also, that the presence or absence of a compelling narrative helps to indicate whether the information itself is correct and worthy of attention. Are you saying that incorrect information is inherently difficult to construct a compelling narrative around?

seth (2010-04-27 16:22:36)

Zach, yeah it is incredibly hard if not impossible to quantify this stuff. Mendel, an insider/outsider, discovered genes. There were maybe 100 biology professors at the time whose research was about the same topic. They were the insiders. But how many people were in Mendel's position, with both scientific knowledge and outsider freedom? That's really hard to know. Nathan, no I'm not saying that. If you make enough stuff up, you can come up with a compelling story. The Hockey Stick Illusion contains a vast number of references. Its assertions can be checked.

Alex Chernavsky (2010-04-28 09:45:58)

Seth, check out this interesting story about an outsider who understood the financial meltdown: <http://blogs.wsj.com/deals/2010/03/15/michael-lewiss-the-big-short-read-the-harvard-thesis-instead/>

## **The Emperor's New Clothes Trilogy (2010-04-27 16:12)**

In The Emperor's New Clothes, the king is naked but only a little girl says so. The king's advisers don't tell him. I suppose the intended lesson was that powerful people have trouble getting frank answers. That's pretty obvious. For a CEO, it's said, the scarcest commodity is truth. Bosses learn this all the time. I learned it the first time I asked one of my students what he thought of the class.

Andersen's story can be taken differently, partly conveyed by the phrase elephant in the room: Something big and important is overlooked by the supposed experts (in the story, the king's advisers). It should be obvious – but it isn't. Or at least no one says anything. This is how Harry Markopolos used the term emperor's new clothes in [1]No One Would Listen: Madoff was a gigantic fraud, his returns were (to Markopolos) clearly too good to be true, he was enormously visible (in certain circles), but no one said anything. It was as astonishing as a king parading naked. How come no one sees this? Markopolos thought. If you looked at Madoff the right way, he was naked.

That this sort of thing happens isn't obvious at all. Yet three books – which I've just blogged about – have recently appeared with examples. One is the Markopolos book. Another is [2]The Hockey Stick Illusion. Surely there's overwhelming evidence that humans are causing global warming, right? Well, no. The only clear evidence was that hockey stick – and that's a statistical artifact. (It looks like an artifact.) The third is [3]The Big Short. It wasn't easy to find the right sight line from which it was clear that Goldman Sachs et al. were taking on far more risk than they realized but such views existed. I call these books The Emperor's New Clothes Trilogy. Their broad lesson: Sometimes the "best people" aren't right. Sometimes there's a point of view from which they're glaringly wrong. The Hockey Stick Illusion is about how Stephen McIntyre found this point of view. In No One Would Listen Markopolos found this point of view. In The Big Short several people found this point of view.

This relates to my self-experimentation in two ways. First, the "best people" say self-experimentation is bad. No weight-control researcher does self-experimentation. No sleep researcher does self-experimentation. Surely they know how to do research. It's their job. Whereas to me it's glaringly obvious that self-experimentation is an excellent research tool, not just because of [4]my results but also because it makes it so much easier to try new things. The best way to learn is to do, IÂ believe; self-experimentation makes doing much easier. Second, my self-experimentation uncovered all sorts of results that implied that the expert consensus on this or that was glaringly wrong. The Shangri-La Diet is just one example. Breakfast is good, right? Well, no, breakfast may wake you up too early. And so on. At first, I didn't grasp the broad lesson I stated earlier ("Sometimes the "best people" aren't right. . . ") and was amazed by what I was finding. To me, The Emperor's New Clothes Trilogy is support.

1. <http://www.blog.sethroberts.net/2010/04/24/harry-markopolos-meet-stephen-mcintyre/>
2. <http://www.blog.sethroberts.net/2010/04/22/the-hockey-stick-illusion/>
3. <http://www.blog.sethroberts.net/2010/04/26/the-big-short/>
4. <http://escholarship.org/uc/item/2xc2h866>

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q (2010-04-27 19:01:12)

my uncle, a neuroscientist, told me a story recently when i asked him if, within my son's lifetime, sleep would be obsolete. he told me about a colleague of his, a sleep researcher. one day after twenty years or so of study he concluded that there was no reason he could think of that sleep was necessary, and so he decided to cut back on sleep, one minute per day. he started at 8 hours per day and was fine. six hours per day – fine. four hours per day – fine. around the time he reached two hours per day, he was diagnosed with leukemia.

seth (2010-04-27 19:36:04)

yeah, sleep is certainly important for immune function. If he didn't know that...

epistemocrat (2010-04-27 19:56:40)

Hi Seth, One of my favorite personal paradoxes is Searching versus Acting: I like to think of my self-experimenting as operationalizing this paradoxical form of inquiry and learning. Best, Brent

Anthony (2010-04-27 20:03:13)

^ What?

Thon Brocket (2010-04-28 03:32:54)

Data point: Barry Marshall, the Bacteria-and-stomach-ulcers Nobel laureate self-experimented by infecting himself with H pylori.

Gian (2010-04-28 03:46:52)

Science progresses via framing of falsifiable hypotheses, I hope you would agree. Now has your self-experimentation has led to frame falsifiable hypotheses and have you actually falsified any hypotheses suggested from or leading from self-experiments (That is, if your procedure confirmation or falsification). Though I am aware that falsification procedure has been criticized (by philosopher Stowe) but I myself unable to judge the criticism.

James P (2010-04-28 05:10:03)

Sometimes self-experimenting is the only way to do it. I'm thinking of Barry Marshall, who has only recently received a Nobel prize for work he did in the 80's on helicobacter pylori, the bacterium responsible for stomach ulcers. The well entrenched view was that bacteria couldn't survive in stomach acid, and since no-one would believe otherwise, he drank the stuff and proved them wrong. It still took 20 years for the medical establishment to accept this, though, so the Emperor's New Clothes were much in evidence, too.

On thinking for yourself | The Rational Optimist (2010-04-28 09:15:05)

[...] Seth Roberts has read three new books about how emperors are often more naked than people tell them they are. I've read two of those books and had much the same reaction. The trust-the-experts inertia of the financial markets described by Michael Lewis in The Big Short is much like that in the climate debate described by Andrew Montford in The Hockey Stick Illusion. Roberts's third book is about Bernie Madoff. [...]

Nathan Myers (2010-04-28 14:01:58)

Infecting himself with *H. pylori* would much more accurately be described as a stunt than as an experiment. As a stunt, though, it worked: hint to those seeking a Nobel.

dr deb (2010-04-28 23:00:36)

Through experience(experimentation) we gain the most valuable knowledge, its better than reading it in a book,or a lecture. interesting that you should blog on this as I blogged about my personal experience and experiments on attaining bliss( as opposed to trying to understand it by reading about it). love drdeb

Duncan (2010-04-29 06:29:36)

I tried the one-minute-less-sleep per day regimen. After six months, I realized I was spending most of my new-found time screaming at inanimate objects, so I gave it up.

### Assorted Links (2010-04-27 17:44)

- [1]LA Times article about omega-3 health effects
- [2]Sanity about CO2 emissions. "When and where did the climate alarmists tell you about CO2 levels that were up to 20 times current levels when dinosaurs roamed the earth? When and where did alarmists tell you that the conditions they openly worry about have repeatedly happened without turning the earth into an oven?"

Thanks to Dave Lull.

1. <http://www.latimes.com/features/health/la-he-omega-3s-20100426,0,2169660,full.story>

2. <http://climaterealist.com/index.php?id=5609>

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Vince (2010-04-27 21:38:01)

Do you know what the Earth was like when dinosaurs roamed the planet? To give you an idea, [1]here's a map of what we think the Earth looked like during the Cretaceous period, about 90 million years ago. Replicating those conditions would be far worse than what climate "alarmists" have warned about.

1. <http://en.wikipedia.org/wiki/File:LateCretaceousGlobal.jpg>

Nathan Myers (2010-04-27 22:04:04)

"When dinosaurs roamed the earth", the earth had no ice caps, and the sea level was such that today it would drown more than half the world population's homes. We don't want to go there. Conditions on earth have changed – you could say evolved – since then. Why not look at real evidence being collected in the *present*? There's lots, and adding it up, it points unambiguously in one direction. [www.skepticalscience.com/broken-hockey-stick.htm](http://www.skepticalscience.com/broken-hockey-stick.htm)

thehova (2010-04-27 22:35:09)

I always thought that omega 3 consumption elevated my mood because it helped me sleep. But according to this NYtimes blog, maybe I was wrong: <http://opinionator.blogs.nytimes.com/2010/04/07/in-sleepless-nights-a-hope-for-treating-depression/> It goes counter to my thinking that regular sleep elevates mood (and I thought the deeper the sleep, through sunlight exposure, omega 3 consumption, exercise, etc., the better ). It is true that when I'm in a bad mood, I tend to not be able to fall asleep. Maybe it's my body trying to elevate my mood through sleep deprivation. Who knows. One thing is certain. There's definitely a strong link between sleep and mood.

Stephen M (Ethesis) (2010-04-28 20:21:11)

<http://www.foresight.org/nanodot/?p=3553> was very interesting for long term analysis.

Barnaby (2010-05-23 17:14:31)

Low levels of Omega-3 is possibly the largest health epidemic to hit Western society for years. Resulting in obesity, heart disease, depression, ADHD, behavioural and learning difficulties, restricting brain and CNS development, impairing focus and cognitive function, increasing chance of tumors, cancers, stroke and diabetes. The list is endless. Some sites for further information on the epidemic and the need for Omega-3s: [www.nutriska.com](http://www.nutriska.com), [www.omega-3centre.com](http://www.omega-3centre.com)

## Jane Jacobs on Several Types of Bad Behavior (2010-04-28 15:55)

What do the following have in common?

1. Doctors who view patients as "profit centers".
2. Chinese universities that open art departments because art students pay much higher tuition than other students. The classes in these departments have high student/teacher ratios and are taught by inexperienced teachers.
3. Corrupt government officials.
4. Katherine Weymouth, publisher of the Washington Post, [1]organizing salons where, for a hefty price, important people would meet Post reporters.

All can be seen as cases where guardians abuse the trust they've been given by trying to profit from it. Jane Jacobs wrote about guardian/commercial ethical differences in [2]Systems of Survival. Jacobs's answer to why two ethical systems? why not twenty? was that there are two different ways to make a living: taking and trading.



Jacobs wasn't trying to tell people how to act. She was trying to describe and explain differences in behavior she'd seen. As a one-pass view of how people make a living, taking and trading is a good division. Looked at more closely, teaching (education) and learning (science) are also central. They underlie both taking and trading. Following Jacobs's logic, maybe they need different ethical codes to function well. Yesterday I spoke to a Tsinghua professor who complained that other Tsinghua professors simply taught what they wanted to teach, as opposed to what would help their students. I said, yeah, I'd blogged about it ("[3]For whom do colleges exist?", "[4]For whom do law schools exist?").

1. <http://www.vanityfair.com/business/features/2009/10/wolff200910?printable=true>
2. [http://en.wikipedia.org/wiki/Systems\\_of\\_Survival](http://en.wikipedia.org/wiki/Systems_of_Survival)
3. <http://www.blog.sethroberts.net/2007/03/31/for-whom-do-colleges-exist/>
4. <http://www.blog.sethroberts.net/2008/05/13/for-whom-do-law-schools-exist/>

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aretae (2010-04-28 19:56:48)

This was the direction of my [1]first response to reading Jane Jacobs (on your recommendation). Since then, I've drifted back in the direction of the belief that she was right, and I was over-thinking it.

1. <http://aretae.blogspot.com/2009/08/master-merchant-monk.html>

### **Jane Jacobs on Bad Behavior (continued) (2010-04-29 07:26)**

I was pleased that Matt Ridley [1]quoted me in his blog about [2]the Emperor's New Clothes Trilogy and out of curiosity I read his previous post ("[3]Chiefs, priests and thieves"). Strangely enough it's closely related to [4]the post of mine that followed The Emperor's New Clothes Trilogy: about Jane Jacobs's view of two moral systems, guardian and commercial.

In "Chiefs, priests and thieves", Ridley wrote about what he'd learned from what sounds like a truly fascinating book: [5]Empires of the Sea by Roger Crowley.

As always, ordinary people wanted to carry on with commerce, but chiefs, priests and thieves – sultans, emperors, popes, pashas, holy knights and corsairs – just kept plundering the fruits of that commerce for their own enrichment and their own glory. Little wonder that, as the historian Meir Kohn concludes, preindustrial government was[6] predominantly predatory in nature. Not that it is entirely free of that suspicion today.

This is exactly what Jacobs was talking about – the close connection between government and predation, in contrast to trading (commerce). And it's what Russ Roberts is talking about in [7]his terrific essay about the cause of the financial crisis. When large financial firms become close to government ("In the week before the AIG bailout that put \$14.9 billion into the coffers of Goldman Sachs, Treasury Secretary and former Goldman Sachs CEO Henry Paulson called Goldman Sachs CEO Lloyd Blankfein [8]at least 24 times"), they become predatory rather than commercial. Was Goldman Sachs providing useful innovation when it provided and sold the bonds that the SEC is now complaining about? No, it was basically predatory, under the guise of being commercial.

I think the rest of us let this sort of predation happen because of apocalyptic stories spun (always in future tense)

by leaders: The infidels will . . . The terrorists will . . . The financial system will . . . Under cover of these stories, leaders do stuff that strengthens them and weakens the rest of us. But recently a countervailing story has gathered strength:Â Guardians as idiots. These stories are past tense: Harry Markopolos went to the SEC five times with incredibly persuasive evidence of Madoff's Ponzi scheme, and the SEC did nothing. I think the hearings about this were incredibly embarrassing to SEC officials and a big reason they're now doing something about Goldman. Another example of the genre is [9]...First Do No Harm, wherein doctors nearly prevented an epileptic child from getting life-saving therapy. And, of course, Al Gore is looking more and more foolish as it becomes clear he trusted research (that hockey-stick graph) he had no clue about.

More More future tense: [10]"To the Indios they said, "If you don't work, this God will kill you."

1. <http://www.rationaloptimist.com/blog/thinking-yourself>
2. <http://www.blog.sethroberts.net/2010/04/27/the-emperors-new-clothes-trilogy/>
3. <http://www.rationaloptimist.com/blog/chiefs-priests-and-thieves>
4. <http://www.blog.sethroberts.net/2010/04/28/jane-jacobs-on-several-types-of-bad-behavior/>
5. [http://www.amazon.com/Empires-Sea-Battle-Lepanto-Contest/dp/0812977645/ref=sr\\_1\\_1?ie=UTF8&s=books&qid=1272367665&sr=1-1](http://www.amazon.com/Empires-Sea-Battle-Lepanto-Contest/dp/0812977645/ref=sr_1_1?ie=UTF8&s=books&qid=1272367665&sr=1-1)
6. <http://www.dartmouth.edu/%7Emkohn/orgins.html>
7. <http://mercatus.org/publication/gambling-other-peoples-money>
8. [http://www.nytimes.com/2009/08/09/business/09paulson.html?\\_r=4&hpw](http://www.nytimes.com/2009/08/09/business/09paulson.html?_r=4&hpw)
9. [http://en.wikipedia.org/wiki/...First\\_Do\\_No\\_Harm](http://en.wikipedia.org/wiki/...First_Do_No_Harm)
10. <http://www.tinyrevolution.com/mt/archives/003255.html>

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Nathan Myers (2010-04-29 14:24:19)

When businesses are in a position to exploit people, they are just as happy to do it as any government, or any church. When a government represents the interests of the people a business or other government seeks to exploit, it's generally all they have to protect them. It's absurd to suggest that businesses become predatory only when a government is involved. In any group of people enabled to exploit others, some will happily step up. [blogs.discovermagazine.com/notrocketscience/2010/04/27/power-breed-hypocrisy- %e2 %80 %93-the-powerful-judge-others-more-harshly-but-cheat-more-themselves/](http://blogs.discovermagazine.com/notrocketscience/2010/04/27/power-breed-hypocrisy-%e2%80%93-the-powerful-judge-others-more-harshly-but-cheat-more-themselves/)

Hal (2010-04-29 16:22:25)

I'm surprised you are joining the criticism of Goldman Sachs. You say they were being predatory in selling the bonds. But the bonds were known to be from spotty mortgages. They were basically a way for people to bet on whether those mortgages would be paid off. Investors got high interest rates in return for accepting the risk of default. But they took that risk voluntarily. Goldman is accused of not telling investors everything about how the mortgages were chosen. But apparently the basic facts about the deal were available. It's going to be something of a judgment call as to whether Goldman was obligated to share everything they knew. Many observers are skeptical about whether the SEC will prevail in court (if it gets that far). Given the legal ambiguities, it's a stretch to call this predatory behavior. In finance people take opposing positions all the time. Long vs short, buyer vs seller. Differences of opinion are what make markets possible. It's good because it means that voluntary trades make both sides happier. Plus these transactions benefit bystanders by providing information about fair prices and future trends which are crucial to allocating resources. Goldman was an important part of this picture, and from what I read the Abacus bonds fit pretty well into this model.

vic (2010-04-29 22:37:35)

The problem is the idiotic pension fund managers, cities, and other institutional investors that bought these bonds because

they were so easily deluded by financial charlatans carrying pie charts, credentialed investment experts and theories, and ratings agencies. All those morons kept their jobs, the taxpayer gets screwed.

vic (2010-04-29 22:37:51)  
sorry, not bonds... derivatives

seth (2010-04-30 14:40:39)  
vic, you think institutional investors should ignore ratings? that seems like asking a lot.

## The Data-Driven Life (2010-04-29 22:05)

Gary Wolf's article about self-measurement in the New York Times Magazine is [1]here. I am quoted in it. The story I identified with most is Bo Adler's. He has sleep apnea:

“Here’s what they told me was the normal surgical course of treatment,” Adler explained. “First they were going to cut out my tonsils, and if that didn’t work, they would break my jaw and reset it to reposition my tongue, and finally they would cut out the roof of my mouth. I had one question: What if my case is different? They said, “Let’s try the standard course of treatment first, and if that doesn’t work, then we’ll know your case is different.”

I started long-term self-experimentation because I woke up too early in the morning. The notion of taking drugs for it – what a doctor would prescribe – was too horrible to take seriously, just as Adler resists the idea of surgery before less harmful solutions have been ruled out. Adler hopes he can learn something about sleep apnea his doctors don’t know, just as I hoped I could learn something about early awakening nobody knew. Eventually – ten years later – I managed to.

1. <http://www.nytimes.com/2010/05/02/magazine/02self-measurement-t.html?ref=magazine&pagewanted=all>

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Melissa (2010-04-30 04:27:40)

Bo Adler’s on to something. The technology for tracking at home is becoming more readily available / affordable - and research indicates that there are some new ideas that might prove useful for self-experimenters, e.g. tongue exercises (available on youtube - link below) and anti-inflammatory agents (Gozal uses medication on children - Adler might use turmeric / aspirin / diet, etc.). <http://www.webmd.com/sleep-disorders/sleep-apnea/news/20090507/tongue-exercises-may-ease-sleep-apnea> tongue exercises: <http://www.youtube.com/watch?v=RB3nCDA1uic> <https://louisville.edu/medschool/pediatrics/research/kchri/Faculty/Igozal>

Laura (2010-04-30 05:03:12)

Seth, this is a really wonderful blog. I’ve learned a lot about how to solve my problems without relying too much on doctors. I don’t depend on them as much as I used to, and that has really changed my life. Your ideas have helped me do better and I enjoy sharing your ideas with other people. I like the reactions they get and I have made so many friends just by talking with others about your self experimentation. I have even told other professors about your website. They were excited to know about it. Thank you so much.

vic (2010-04-30 19:29:15)

Hey Seth, are you going to comment on the "chilling effect" of the Harvard dean's attack on her own student for the student's private reflections on race: <http://abovethelaw.com/2010/04/the-harvard-law-school-racist-email-controversy-dean-minow-weighs-in/>

seth (2010-05-01 05:09:35)

vic, the Dean's statement is horrible, yes. Free speech is supposed to be accompanied by "responsibility," the Dean says, but doesn't make clear what "responsibility" means. It's always awful when someone with great power (in this case the Dean) picks on someone with much less power (the student). Not only was the Dean's statement unnecessary, it amounts to name-calling: She is calling the student "irresponsible". It's barely different from calling the student a jerk. For expressing an opinion the Dean dislikes. A reasonable statement by the Dean would have been to condemn the student who leaked a private email.

Rachael (2010-05-03 15:47:31)

I have very much reduced my UARS/sleep apnea through a variety of lifestyle changes and self experimentation. You might peek at CPAPtalk.com where there are many patients taking control of their therapy and solving problems together. Some solutions that worked for me: writing my own sleep quality questionnaire and adjusting my cpap levels based on my own assessment of my sleep quality. Learning to sleep with my mouth shut and my tongue on the roof of my mouth, learning to sleep only on my stomach, and using anti-inflammatory herbs and an ancestral diet to reduce the swelling in my airway that caused my problem. I have been off CPAP for a year now and am doing very well. I would never have guessed how much reducing inflammation improved my sleep disorder, I was told it was a purely structural result of my narrow airway. But the reduced inflammation gives my airway enough space to breathe easily. If I drink too much, or eat grains I immediately swell back up and have to use my CPAP or suffer a headache and fatigue the next day.

Matthew Cornell (2010-07-26 15:43:53)

I think this work is important, and Gary's piece was seminal. These ideas generalize into a wider life-as-experiment perspective, and I'd like to link to my response and outline of how it all might fit together here: The Experiment-Driven Life (<http://www.matthewcornell.org/2010/06/the-experiment-driven-life.html>). Also, we're working on a tool for self-experimenters, called Edison (<http://edison.thinktrylearn.com/>). Great stuff!

## 5.5 May

### New Way to Quit Smoking? (2010-05-01 06:50)

A woman named Melissa Francis recently thanked me for helping her quit smoking. I was surprised. She said she had applied the ideas behind the Shangri-La Diet to smoking. At the center of SLD is the idea that we learn to associate the flavors (smells) of foods with the calories they contain. If you reduce your exposure to those associations, you lose weight.

Francis took this to suggest that the reason people smoke has a lot to do with the association between the flavors (smells) of smoking and nicotine. If she could reduce her exposure to those associations, it should be much easier to quit. So she did two things: 1. Smoked nicotine-free cigarettes (brand name Quest). 2. Used a nicotine patch. The second thing corresponds to ingestion of smell-free calories, such as sugar water or extra-light olive oil or any food nose-clipped (classic SLD). The first corresponds to exposing yourself to the flavors of foods without swallowing them, an experience whose effects you can read about on the SLD forums [1]here and [2]here. Learning researchers know that uncorrelating the CS (e.g., smell) and US (e.g., nicotine), as Francis did, is a great way to reduce the association between them.

Francis had previously tried to quit using nicotine-free cigarettes alone. She had failed. She had previously tried to quit using nicotine patches alone. She had failed. With the combination (Quest 3 and 21 mg patch), however, she was successful. "I stopped smoking the cigarettes pretty much altogether within a week or so. From that point, I just stepped down on the patch over the course of five or six weeks," she wrote. How easy that sounds! My college advisor told me that quitting smoking was the hardest thing she'd ever done. Francis had been smoking twenty years and smoked about a pack a day. She'd quite for two years about fifteen years ago.

Francis had the idea herself and hadn't heard of anyone else doing this. The closest precedent seems to be the work of a Duke researcher named Jed Rose, for example [3]this study.

1. <http://boards.sethroberts.net/index.php?topic=5932.0>
2. <http://boards.sethroberts.net/index.php?topic=7603.0>
3. <http://ntr.oxfordjournals.org/cgi/content/abstract/10/7/1139?maxtoshow=&hits=10&RESULTFORMAT=&fulltext=rose%2C+j.e.&searchid=1&FIRSTINDEX=0&resourcetype=HWCIT>

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q (2010-05-01 09:16:01)

wouldn't that kind of logic imply that eating calorie-free food with a lot of flavor would help you lose weight or help SLD along? i'm not saying it does or doesn't, but i haven't heard anyone say they had this experience.

seth (2010-05-01 15:22:27)

q, no, it doesn't imply that. The flavor-calorie associations I'm talking about are not between flavor in general and calories (e.g., "a lot of flavor" -> calories), they are between specific flavors and calories (e.g., basil -> calories). You need to eat calorie-free food with the same flavor as your calorie-containing food to weaken the flavor-calorie association that your calorie-containing food has created. When people do that, as the links I gave show, they do lose weight.

Tom in TX (2010-05-01 20:24:46)

Seth, something does not seem right about that. If it were true, wouldn't people lose weight by drinking diet soft drinks?

Aaron Blaisdell (2010-05-01 22:18:27)

Tom, they might, if they drank their diet sodas at least an hour or two from having consumed any calories. I doubt most people try this, and likely often the diet soft drinks accompany a meal. Thus, the calories (from the meal) and flavor (from the soft drink) are paired, not unpaired as required by the theory and empirically validated.

q (2010-05-04 03:33:28)

i see seth's point here. i don't think that diet sodas taste exactly like non-diet sodas so they aren't a good example, and anyway the aspartame in diet sodas is a drug anyway so it is going to have effects of its own. one of the things i'm happy about with SLD is that i almost completely stopped drinking diet sodas. i didn't set out to do it, but i stopped wanting them. i used to drink a can or two per weekday (they are free in my office) and now i open maybe two cans a month and drink half. they are an interesting case maybe. the less you drink, the worse they taste. i can't think of any other 'food' that has that property.

Frank (2010-05-06 04:29:15)

I think nobody ever has, or ever will lose weight because of sugar-free, but artificially sweetened, soft drinks. For christ's sake, how could anyone ever seriously think that artificial sweeteners, which for decades have been successfully used to \_fatten \_ up livestock, could make you thin, of all things?

## Why Do Inmates Hide Butter? (2010-05-02 01:05)

When Marion Jones, the Olympic athlete, was in prison, "[1]several inmates befriended her and showed her . . . how to hide sticks of butter." Just as others carry water bottles so they can drink throughout the day, I carry butter in my backpack in a jar so I can eat small amounts throughout the day. As far as I know, no one else does this. I value butter so much because [2]it makes my brain work better. If anyone reading this knows why inmates value butter so much, please let me know.

1. <http://www.nytimes.com/2010/05/02/magazine/02jones-t.html?src=smt3&pagewanted=all>

2. <http://www.blog.sethroberts.net/2010/03/25/science-in-action-mysterious-mental-improvement-part-4/>

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adeeplust (2010-05-02 01:56:04)

Last Tango in Paris? <http://www.youtube.com/watch?v=8rpgjTNCEJI> On a more serious note, I went to a military school and carried around a tube of toothpaste because we couldn't have candy and the mint would hit the spot. I wonder if snacks are available in US prisons - I guess not - and so this may just have been a simple hunger / pleasure thing, rather than anything more. Also, I'd be curious if butter sticks were easy to snag during meals - easier than (say) bread, sausages and so on.

Laura (2010-05-02 07:10:07)

I know some people who work at the prison in Vacaville and San Quentin. I can ask them for you.

David (2010-05-02 09:39:14)

About butter and the brain: I've been making ghee (clarified butter) recently, and find I crave it. It has some practical advantages over plain butter—it tastes especially good, doesn't scorch when being used for frying, and it doesn't spoil at room temperature. I do seem to function better mentally when I eat it daily. In any case, it turns out that ayurvedic medicine already has an account of ghee being good for the brain. For example, see: [http://www.mapi.com/ayurveda\\_health\\_care/newsletters/ghee\\_clarified\\_butter.html](http://www.mapi.com/ayurveda_health_care/newsletters/ghee_clarified_butter.html) I don't know whether there's any significant difference in the fats themselves, between plain butter and ghee. I learned about making ghee from a friend who grew up Sikh. It's my favorite cooking fat, these days.

SM (2010-05-02 16:17:25)

In "A Handmaid's Tail" Margaret Atwood has the main character stealing butter to use as moisturizing lotion. I doubt Seth is using it as moisturizer, even indirectly. Suppose you had just two snack choices, butter or saltines. Having carbohydrates, saltines raise leptin (a hormone that suppresses appetite) and insulin levels and make you hungry later. Butter will not do this. Seth: I'm curious to see if omega 3 might play a role in your arithmetic gains. If so, butter in the US might not help since it's from grain-fed cow. Butter in China might be from grass-fed cows.

Alex Chernavsky (2010-05-03 08:47:30)

Does anyone know if a plant-based fat – like coconut oil – would have comparable beneficial effects? I don't eat dairy products. I already take flax oil daily.

Mark L (2010-05-03 18:57:39)

Maybe they use the butter in "prison gourmet cooking" like this recipe from <http://www.squidoo.com/prisongourmetcooking>: Cracker Toffee Steal some butter from the chow hall. Layer crackers on the bottom with sugar and butter on top. Microwave on something other than plastic which melts. Microwave with a glass of water so you don't kill the microwave. Sucks when your down to 1 microwave for a 100 people, or worse when the sadistic guards take them away to satisfy their anger. After microwaving a few minutes, take a crumbled hershey bar with almonds, and put that over the top. The chocolate will melt.

Wait 30 minutes and you will have the finest inmate toffee.

David (2010-05-04 00:30:06)

You might consider getting Pastureland Butter from Minnesota, made from grass-fed cow milk, if you don't already have a preferred grass fed butter source. They are still not shipping because they ran out of last year's butter, but should start any time now. It isn't expensive to buy locally, I'm not sure what they charge on over the web.

Tom Moertel (2010-05-04 22:45:15)

In Julie Sahni's *Classic Indian Cooking* (1980), I came across this fascinating passage on clarified butter as a "brain food": "In the last decade in India, just as in Western countries, there has been a growing awareness of the possible harm in consuming excessive quantities of highly saturated fats... As a result, many Indians today ... have substituted unsaturated oils for saturated fats in much of their cooking. There still exists a segment of the population that feels otherwise. The vegetarians, which include Hindu Brahmins, Jains, and Buddhists, and the people from Kashmir, ... do not like the substitutes. For vegetarians, usli ghee [clarified butter] is the primary source of nutrition. The Brahmins consider it brain food with supernatural powers, and attribute the development of one's intelligence to it. Even today, young Hindu children, particularly males, are given a spoonful of usli gee every day to sharpen their intelligence. The old Brahmin ritual of feeding a newborn infant a spoonful of usli ghee within minutes of his birth is still followed by all Indians." (pages 41-42)

seth (2010-05-04 23:46:36)

SM, I'm getting lots of omega-3 from flaxseed oil. So I doubt a little more from butter would make such a big difference. The butter I'm using, by the way, is from grass-fed cows. It's Straus Dairy butter. Tom, thanks, that's very interesting. It's definitely support for my findings.

m. t. (2010-06-17 16:49:45)

I understand the reasoning for self-experimentation when the effect in question is neurological (fast response time, reliable data, reversible effects, etc.), but have you thought about and/or tested yourself for the non-neurological effects of the high butter consumption? I am not asking this question to be confrontational, and I'm aware of the potentially shaky evidence connecting saturated fat intake to heart disease. But have you done any simple tests, like measuring blood pressure before/after starting a high-butter diet? Or had cholesterol or circulatory measurements? Also, what about long-term effects that you cannot possibly predict (e.g. atherosclerosis) based on neurological feedback? Perhaps this has been addressed elsewhere in the blog, so forgive me for resurrecting an old thread without reading the entire contents of the site first.

seth (2010-06-17 19:27:27)

The butter has replaced pork fat. The pork fat clearly improved my sleep, and I'm sure the butter does too. I'm sure that better sleep improves health. Neither the pork fat or butter has had any clear effect on my blood pressure, which I measure. Probably has improved my blood sugar, to the extent that it has replaced carbohydrates. I haven't yet had a circulatory system scan but I will. Because the whole body must be optimized to work best with the same diet, I believe that the diet that is best for the brain will turn out to be best for the rest of the body, including the heart. I don't think that all the evidence is in, but from what I know so far I believe the butter is healthy - with clear benefits on the brain and sleep and no clear costs.

## **Brent Pottenger and the Benefits of an Ancestral Diet (2010-05-03 01:38)**

I read somewhere that [1]Brent Pottenger (blog [2]here) had benefited from adopting an ancestral diet. (Brent, Aaron Blaisdell and I are organizing [3]the Ancestral Health Symposium.) I asked him for details. His answer:

I had debilitating migraines and chronic sinus infections for years, despite being a top-performing multi-sport athlete and following Conventional Wisdom (Food Pyramid, etc.) nutritional recommendations

diligently. I've always been interested in living as healthy as possible, so I had made sure to do things like eat lots of whole grains. Essentially, components of my diet were causing chronic inflammation, but I did not know it. As a result, I had to take antibiotics (Z packs, erythromycin, amoxicillin, etc.) repeatedly for many years (a scary thing in light of the importance of gut flora), usually about 5 to 10 times per year for infections. My migraines got so bad that I had to go to the emergency room four times during a 1.5 year span to get pain medications because my prescription migraine drugs and painkillers (like Vicodin) did not work. The migraines were so painful that I would shut down and could not even take a nap to let them pass.

I talked about it in part at BIL:PIL:

[4]<http://www.youtube.com/watch?v=QzdmwLO17-Q>

[5]<http://www.youtube.com/watch?v=utNGhwIDV4U> &feature=related

[6][http://www.youtube.com/watch?v=\\_4BFZ1uHJgU](http://www.youtube.com/watch?v=_4BFZ1uHJgU) &feature=related

I did not set out to cure myself, but that's what happened. I started down what turned out to be the right health path because I read Nassim Taleb's *The Black Swan*. In that book, Nassim referenced Art DeVany. I read Art's work on Evolutionary Fitness. Nassim and Art dovetail nicely, and the idea that evolution could inform health decisions made sense to me. That nudged me to cut grains (and other things) out of my diet. Art also tipped me to Mark Sisson, and I related really well to Mark's personal story as an athlete with a passion for health, and I enjoyed the logic behind his Primal Blueprint framework. From there, I got actively involved in what I call the Ancestral Health epistemocracy—that has emerged in the blogosphere—Mark, Art, Robb Wolf, Matt Metzgar, Tim Penn, and I actually co-authored an unpublished book together in 2007. At this point, though, I still did not know that I had resolved my health problems for good; I just knew that these ideas were working—I gained lean muscle mass, had more energy, felt great, etc.—as I tested them on my own body. Through this involvement as both an e-patient and a hobbyist blogger/essayist, I realized that a few years had passed and I had not experienced a migraine or a sinus infection. Now, after over three years without a migraine and having only been ill one time, I realize that I cured myself nutritionally, as a side-effect of tinkering with the aforementioned ideas. During this process, I also found out about your work from Nassim. For lots of reasons, your work on self-experimentation seemed really valuable to me. For example, my neurologist examined me and prescribed some drugs that were, looking back, quite dangerous to take for a problem that was caused by things like grains, legumes, processed vegetable oils, and Conventional Wisdom nutritional guidelines. My self-experimentation was, ironically, much safer and ultimately more sophisticated from a philosophy of science perspective because I could react to local feedback that my neurologist did not have access to: my own body. From there, I realized that we are all experts in our own body and that physicians must partner with us respectfully if they want to act as agents who help us find cures for health problems. I've written about my experiences in bits and pieces elsewhere, but this is a brief synopsis that captures most of the highlights in one place.

Basically, thanks to an inquiring mind and persistence that I owe to my mom's mentorship, I transformed my physiology remarkably thanks to trial-and-error solution searching with things I learned from Nassim, Art, Mark, and you. From there, I've added more "maps" into my portfolio of health practices from Doug McGuff, Keith Norris, Kurt Harris, and many others (many are listed on the Symposium presenter list). As a result, I no longer consume health-care resources and these resources can go to treat real medical problems. How remarkable were the improvements? One way to capture that besides the disappearance of my health problems is to look at my weight changes: at the same waist size, I've gone from 135 lbs. in 2002 to 145 lbs. in 2004 to 170 in 2010. That says something.



He later added:

Things I did to relieve my migraines that didn't work:

- prescription glasses (theory = eye strain)
- cutting out caffeine (theory = ? stress)
- napping more (theory = better sleep)

None of those experiments cured my health challenges. Only nutrition worked. Very few environmental factors have fluctuated much over the past ten years: I've lived in the same house, slept in the same bed, been a student, played the same sports in the same places around town, etc.

His old diet and his new diet:

Pre-Ancestral Health diet: I followed the Food Pyramid and associated concepts closely, so I consumed lots of whole grains (breads, pastas, granola, bagels, etc.), fruits (whole and juiced), vegetables, non-fat milk, non-fat yogurt, some meat (all kinds), coffee, tea, beans (black, pinto, others), and some cheese (pasteurized) and nuts. I ate things like Cliff Bars, drank Odwalla smoothies, etc.

Ancestral Health diet: I follow a very carnivorous paradigm, so I consume lots of meats (from pork bellies to raw Ahi tuna) and eggs, lots of cultured butter, coconut butter & oil, full-lipid Greek Yogurt (highest saturated fat content of any yogurt on the market), some vegetables (onions, avocados, greens) and mushrooms (sauteed in butter with onions and meats), essentially no fruit (I'm in a 'Fructose Detox' self-experiment), a little raw cheese, coffee, tea, essentially no alcohol. I also supplement with some Vitamin D, which is anabolic I think as well. I take fish oil when I have not had fish for awhile. I've eaten fish my entire life, though.

I attribute my health improvements directly (and completely) to diet. As my diet evolved, I also altered how I train, transitioning a bit from 'some long-distance running and sports playing' to 'mainly high-intensity, short-duration training (more weights and sprinting) and still sports playing as my exercise approaches. This energy expenditure evolution has, in my opinion, contributed to my stark body composition changes (lean muscle mass gain), but I think that my health improvements are due to diet and that my body composition would be much worse off if my diet had not changed like it has.

I will comment on this in my next post.

1. <http://www.brentpottenger.com/>
2. <http://epistemocrat.blogspot.com/>
3. <http://www.ancestryfoundation.org/>
4. <http://www.youtube.com/watch?v=QzdmwL017-Q>
5. <http://www.youtube.com/watch?v=utNGhw1DV4U&feature=related>
6. [http://www.youtube.com/watch?v=\\_4BFZ1uHJgU&feature=related](http://www.youtube.com/watch?v=_4BFZ1uHJgU&feature=related)

Nathan Myers (2010-05-03 17:14:52)

A bit off-topic, I keep hearing about people's migraines cured with heart surgery to close septal defects. Apparently heart surgeons are doing this procedure in great numbers, without benefit of studies that demonstrate their effectiveness, and some doctors are decrying surgeons' opportunism for preying on patients' desperation. I don't know how the patients are paying for such unrecognized treatment, but insurance coverage seems unlikely. Could it be that migraine pain motivates seeking effective treatment? I know someone who had heart surgery for some other reason, and her migraines did vanish. It seems like just the sort of side effect that would be noticed and commented on (although experience suggests it would take a very long time for anyone to write about it). Similarly, the heart surgeon who noticed that most of his patients, but not colleagues, had a crease in their ear lobes, which did turn out to be strongly correlated with blocked arteries. I wonder if surgeons can be persuaded to perform work to improve cranial venal flow in MS patients, despite the lack of studies demonstrating its effectiveness.

epistemocrat (2010-05-04 01:34:54)

Thanks to Dave Lull Need to add that into this thread as well: He's taught me as much about nutrition as anyone. And he's a librarian.

Stephen C (2010-05-04 14:36:19)

Great post. That's a nice summary showing what didn't work and what worked. Also found it interesting that you've gained all that muscle mass without gaining inches in your waist. I agree that physicians need to work with their patients and patients should be more doubtful, think critically and don't follow the blind faith of their physician...just because "they're the doctor". Regarding Nathan's post...that reminds me of an article showing that diabetes can be "cured" with bariatric surgery. They don't know the mechanism but it seems to cure it instantaneously, before a change in diet can take effect. <http://www.parade.com/health/2010/05/can-this-surgery-cure-diabetes.html>

Alex Chernavsky (2010-05-05 09:07:52)

My wife and I are heavily involved with animal rescue, so we travel in vegan circles. I've heard many stories told by people who claim that their health problems went away after they stopped eating animal products and switched to whole grains, vegetables, fruits, etc. It's hard to know what to make of impassioned but utterly contradictory testimonials.

Anthony (2010-05-05 10:40:05)

@Alex, Aye, there's the rub. My guess is: 1. Often when people change their diets, they change a whole slew of things (including extra-diet factors). 2. Different people probably respond to food differently. This is most obvious with things like lactose intolerance, or people who metabolize alcohol differently, or gluten allergies. My guess is it's also true for other things. If 2. is right, then self-experimentation becomes more important, as typical studies will bring up (surprise) conflicting results.

epistemocrat (2010-05-05 12:57:02)

Thanks, Stephen. I agree with @Anthony. @Alex: The goal isn't to share impassioned testimonials; the goal is to share experiences and all the unexpected turns that those experiences take. We are all limited to some extent by our own experience, so we can look at other people's experiences as sources of conjectures to test on our own bodies. I never set out to cure myself; I just assessed the logic of some other people's self-experiments and ideas on health and then decided to test them on myself. I did not falsify these conjectures (and I experienced positive benefits), so I kept tinkering with them. My  $n=1$  may be helpful to others who can relate to my tale. However, the problem of induction and biochemical individuality make it such that your own personal experience trumps everything else. See my recent essays: "Black Swan Logic for  $n=1$  Health": <http://epistemocrat.blogspot.com/2010/02/black-swan-logic-for-n1-health.html> & "Self-Experimentation with Meta-Rules: Quality of Knowledge & Overcoming the Justificationist Addiction": <http://epistemocrat.blogspot.com/2010/04/self-experimentation-with-meta-rules.html> Meta-Rules say nothing about whether or not you should eat meat; they say, "Listen to your body, then iterate." I like to say, "Self-experimentation rises to the surface as the most effective *modus operandi* in the face of nutritional opacity." That's German for: Test things on your body and just see what happens. But, when it comes to testing potentially dangerous things, I also like to say, "Outsource your body to Aaron Blaisdell and let him be your lab rat for a few days. It's safer to live vicariously anyways." lol Cheers! Brent

seth (2010-05-05 19:46:16)

Alex, your story about vegans doesn't strike me as contradictory as it might strike you, for three reasons: 1. I don't see meat protein as special. Beyond being good for building muscle, I don't think it has special benefits. It's animal fat that makes a huge & surprising difference. Your vegans probably went from one diet low in animal fat to another. 2. I'm sure vegetables are healthy. I believe we like sweetness so that we would eat more vegetables – vegetables have far more sugar than meat does. Changing from a diet of meat & potatoes (and few vegetables) to all vegetable could be an improvement. At least you would be getting a decent amount of vegetables. 3. As Anthony says, any big change of diet (e.g., from high meat to meatless) will involve dozens of changes at the micro- and macro-nutrient level. As far as I can tell, the average American diet is so terrible that randomly picking another diet could easily be an improvement – I'd say the odds are about 50 %. Even better (regression to the mean) if you have a health problem caused by diet.

Aaron Blaisdell (2010-05-06 07:32:53)

@Alex and @Seth, One more reason why going vegan might result in at least short-term improvements in health is by getting away from animal products from factory-raised animals. These have a very different fatty-acid profile than their ancestral brethren that our hunter-gatherer ancestors hunted and fished for. The omega 6:omega 3 ratio is very skewed in factory meat, closer to 15:1 than in wild animals and pastured animals (e.g., grass fed cattle, chickens, etc.) which have ratios in the realm of 1:1 to 3:1 O6:O3. The imbalanced ratio found in factory farmed animals is a likely contributor to chronic systemic inflammation, which seems to be a source of many of the diseases of civilization, in particular metabolic disorders and cancer. The hormones factory farmed animals are pumped with are also likely contributing to modern health woes. Like humans, cows were not meant to consume the seed grains from annual grasses (wheat, corn, etc.). The evidence is incredibly strong for just how damaging this is to both humans and our farm animals, especially when the grains are not properly treated (see <http://wholehealthsource.blogspot.com/2010/05/traditional-preparation-methods-improve.html>). Unfortunately, grains do not come with a "handle with care!" warning label, and it took humans millennia to figure this out. We seemed to have lost our ancestral wisdom over the last few hundred years, however.

Elenor (2011-05-14 20:19:50)

The question that comes up for me is, sure, vegans get healthier when they chuck the standard (rotten) diet for a cleaner, non-processed diet. How much of that is merely the recovery from years of eating crap – and what happens to long-term vegans? It seems to me – from those I know and those whose blogs or experiences I read on the web – very many of them get better for a while, and then, as their body continues to get insufficient nutrition, they get sicker, or weaker, or reproductively damaged, or more and more allergic to more and more of the few things they WILL eat. Sure, some vegans do just fine – but is it most? (And how many of those "vegans" who do fine turn out to be eating some meat some of the time?) hard to count, hard to tell. But it seems less than optimal to ignore the human \*animal\* in nutrition decisions.

## Positive Side Effects (2010-05-04 02:44)

[1]What happened to Brent Pottenger – when he improved his diet along ancestral lines, a serious health problem unexpectedly went away – also happened to Aaron Blaisdell. He improved his diet along ancestral lines and [2]his sun sensitivity went away. A non-nutritional version happened to me: By adopting elements of Stone-Age life, I slept much better. And, [3]at the same time, I stopped getting colds. Another example involves flaxseed oil. My discovery that [4]flaxseed oil made my brain work much better implied that prehistoric diets contained more omega-3. A dosage that produced brain improvement also [5]greatly improved gum health and [6]recovery from injury.

This is the opposite of conventional medicine. As far as I know, every major drug has serious bad side effects. The drugs often help the problem for which they are prescribed, but your health has a good chance of becoming worse – sometimes much worse – in other ways. Against Medical Advice (2008) by James Patterson and Hal Friedman is the true story of a boy (Friedman's son) with severe Tourette's. (Recommended by Alexandra Carmichael.) In an epilogue,

Friedman says, "Our family is convinced that his most extreme symptoms were caused by medicines prescribed but with unhappy results, almost without exception." The cure was worse than the disease.

The phenomenon of positive side effects isn't mysterious. Our bodies need certain inputs to work well. The whole body evolved with the same inputs. When something crucial is missing, several things break down. And when the missing thing is supplied, several things get better. We write all our words using the same 26 letters. If one letter is missing, many words will be misspelled. When the missing letter is supplied, many words will be spelled correctly. Fixing one word fixes many words. For example, suppose you lack "k". Blink will be spelled "blin", mark will be spelled "mar", and so on. When you realize you need "k" to spell blink, at the same time you will improve the spelling of many other words.

The implication of positive side effects is profound. Finding the right inputs isn't a new wrinkle on current health care, it's a whole new way of being healthy. Public health officials haven't had much luck selling prevention but maybe that was because their ideas about prevention have been poor – telling people to eat according to the Food Pyramid, for example. And if you are sick (as Brent was), you are highly motivated to do something about it. The old saying an ounce of prevention is worth a pound of cure should be revised: a ounce of the right cure is worth a pound of prevention. The dietary improvements that cured Brent's migraines will prevent many other problems. Going from the old saying to the new saying is like going from thinking the sun revolves around the earth to realizing the earth revolves around the sun.

A great change is coming.

[7]The Ancestral Health Symposium.

1. <http://www.blog.sethroberts.net/2010/05/03/brent-pottenger-and-the-benefits-of-an-ancestral-diet/>
2. <http://www.blog.sethroberts.net/2009/07/14/genes-or-environment-or-environment/>
3. <http://escholarship.org/uc/item/2xc2h866>
4. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>
5. <http://www.blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>
6. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>
7. <http://www.ancestryfoundation.org/>

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Aaron Blaisdell (2010-05-04 07:01:40)

Hey Seth, thanks for the great pair of articles! They sound like the synopsis of your talk for the Ancestral Health Symposium next year. Cheers to bringing theory to health care, and to our modern-day Copernicuses!

epistemocrat (2010-05-04 12:36:24)

Hi Seth, Today, in parallel, Mark Sisson posted a nice essay too on the importance of inputs and their remarkably interrelated effects: <http://www.marksdailyapple.com/gut-flora-inflammation/> One input he highlights is prebiotics, for instance. Best, Brent

NNM (2010-05-04 15:38:18)

"A great change is coming" Seth, Why do you think this great change is coming now, rather than 10 years ago or whatever? Is it mainly the internet, which disintermediated the medical profession and made it much cheaper to disseminate the results of self-experimentation?

epistemocrat (2010-05-05 00:02:32)

I suspect that the Internet is linking up patients (as e-patients) in powerful ways that we have never experienced before in human history. Health information flows so rapidly now that ideas can be tested and results can be captured quickly and widely. Many people are tinkering in the "fat tails" of health inquiry, and we are able to falsify more conjectures in less time, creating conditions for rapid evolution of health understanding. The challenge is structuring these interactions strategically to "Cure Together" efficiently and effectively.

seth (2010-05-05 00:28:46)

Aaron, thanks, maybe you're right, maybe I should talk about this broad stuff at the Symposium. NNM and epistemocrat, yes, I agree – the Internet, in particular blogs. Not only do blogs spread the results of self-experimentation, they also help like-minded people find each other. And I believe blogs will also empower those people. The Ancestral Health Symposium can be advertised entirely through blogs. If there is enough interest (and attendance) that makes possible a second symposium and other related activities, such as publications. All this without needing the blessing/approval of anyone in power.

### **Better Thinking By Standing (2010-05-04 23:21)**

Dan Wich, a faithful reader of this blog, told me that my work had helped him. I asked for details. He wrote:

I have a desk job and began to experience back pain that was aggravated while sitting. So I bought a desk designed for both sitting and standing, and spent most of my time standing.

I was on the lookout for improved sleep patterns because of your experiments, and I noticed similar results. But the biggest benefits I observed were unexpected. First, my ability to focus and prioritize improved while standing; sitting for long periods made me more likely to avoid challenging tasks. Second, I felt more creative while standing, avoiding the problem-solving tunnel vision I'd often get after sitting for a while.

Being able to switch between standing and sitting without changing anything else has led me to dismiss other causes for those mental benefits. And I wasn't expecting to receive them, making me doubt the placebo effect is at work. So, I think I can corroborate your results of improved mental function while standing.

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epistemocrat (2010-05-04 23:51:51)

I stand while working at the computer too; I like to "think on my feet." Mark does too: <http://www.marksdailyapple.com/standing-at-work/> There are a few other pieces that have covered this as well: <http://opinionator.blogs.nytimes.com/2010/02/23/stand-up-while-you-read-this/> <http://www.nytimes.com/2010/04/22/technology/personaltech/22basics.html> I stand (and walk) as much as possible while working too. Seth was on the cutting-edge of this transitional movement. Walking and standing make us human. Best, Brent

Edwyn Chan (2010-05-05 22:27:11)

Seth, Read this recently that also claims that but standing helps produce enzymes that deal with fat in the blood better "If you're standing around and puttering, you recruit specialized muscles designed for postural support that never tire," he says.

"They're unique in that the nervous system recruits them for low-intensity activity and they're very rich in enzymes." One enzyme, lipoprotein lipase, grabs fat and cholesterol from the blood, burning the fat into energy while shifting the cholesterol from LDL (the bad kind) to HDL (the healthy kind). When you sit, the muscles are relaxed, and enzyme activity drops by 90 % to 95 %, leaving fat to camp out in the bloodstream. Within a couple hours of sitting, healthy cholesterol plummets by 20 %." [http://www.businessweek.com/print/magazine/content/10\\_19/b4177071221162.htm](http://www.businessweek.com/print/magazine/content/10_19/b4177071221162.htm)

vic (2010-05-06 19:16:47)

When I first read Seth's musings on the benefits of standing, I searched google scholar, and a few studies have found that people in similar occupations that stand versus sit tend to have greater carotid atherosclerosis.

seth (2010-05-07 13:35:53)

vic, yes, I know about those studies. I don't think it is a good idea to stand in one place for a long time, as the standing jobs in those studies required. I can get the benefits of standing on sleep from one-legged standing for a much shorter period of time.

Patrik (2010-05-12 01:12:11)

@Dan Wich or @Seth Which desk did Dan buy?

Dan Wich (2010-05-16 16:21:40)

Patrick, I bought it custom-made from BenchDepot.com. They were about 40 % cheaper than any other vendor, and the desk is well-built. I recommend them.

Chris (2012-03-08 12:39:30)

Seth, what did you mean by "I can get the benefits of standing on sleep from..."? I can either sit at a desk and work on a computer, or stand at a tall table and work on a computer. Which is better? Seth: When I stood 8 hours/day or more, I slept better than when I stood less. I can sleep better just by standing on one leg to exhaustion several times. That's what I meant. As for sitting versus standing when using computer, I personally stand (30-60 min/day?) more than I sit (0 min/day) when I have a choice but I lounge while using a computer (6 hr/day?) far more than either one.

## **Brent Pottenger Comments (2010-05-05 19:54)**

I asked Brent if he had any comments on [1]his experience (after he adopted an ancestral diet, his migraines and sinus infections stopped). He wrote:

The quality of my life (mental + physical health) improved even further when I started eating slices of butter throughout the day awhile back. For awhile, I was using spoonfuls of coconut butter/coconut oil and/or Greek yogurt for this satiation role, but once I added butter slices to the mix, I beefed up my nutritional 'bag of tricks' quite a bit. Of course, I had cooked in butter for a few years, but I never made the link to simply eat it in slices, despite enjoying its taste so much. And, a little bit goes a long way. I eat cultured butter from a few different brands and a few different locations of the world (hoping this diversification may carry extra beneficial side-effects: different strains of micro-organisms, etc.). I try to find brands that are pastured too (more naturally-occurring Omega-3's, evidently). I usually suck on/chew on the butter slowly because I've found this has improved my oral health too: animal lipids (plus coconut oil) are good for epithelial tissue health (that's why I rub coconut oil on my face and skin and rub butter, coconut oil, and yogurt on my hands). Pairing butter and coffee (I eat the butter; I don't put it in my coffee; I drink my coffee black) has become a nice start to my day (Dave Lull even found a study speculating on the benefits of coupling hyperlipidity and anti-oxidants together in this way; I think it's also a useful approach to detoxifying the liver), particularly when I know I am going to workout that morning—this little hyperlipidity kick seems to help in the gym too (when I am not fasting). Using butter slices in this

manner is a nice compliment to fasting intermittently—these two practices allow me to enjoy low-caloric intake periods pleasantly. They set up my "feasts" nicely. Whenever I have a "grumbling" stomach, or I feel a "biting" sensation in my stomach, I eat a small piece of butter, and my mood and body tend to stabilize. And, like bacon and yogurt and eggs, it's cheap. Butter has certainly been an excellent 'cheap health option' for me.

He later added:

Now I am working intently on Meta-Rules. Meta-Rules are simply 'rules for making rules' to live by. Three dynamics concern me deeply: (1) The problem of induction; (2) biochemical individuality; and, (3) factoring for the unseen. For instance, one of my nutritional Meta-Rules is: "Don't consume anything that causes a negative physiological reaction." From this Meta-Rule, I have deduced the following rule to live by (as one example): "Don't consume high-fructose corn syrup." A marker for monitoring this rule could be facial inflammation and 'puffiness' post-consumption, as one possibility. That's an example of a higher-level precept empowering an individual to deduce for him or herself how that concept applies (or does not apply) in his/her own specific case (I like the term: Patient of One). Over time, I suspect that something like William Baines' Biomedical Mutual Organization (BMO) could emerge if enough people were self-experimenting with Meta-Rules and interacting about their experiences and results. Amongst this cohort of parallel  $n=1$  clinical trials, some convergence of Meta-Rules may occur, indicating ways that our bodies are the same, and also showing how our bodies differ individually when it comes to things like diet, exercise, and lifestyle design.

To explain why headaches can be due to inflammation, he pointed me to [2]this.

1. <http://www.blog.sethroberts.net/2010/05/03/brent-pottenger-and-the-benefits-of-an-ancestral-diet/>
2. <http://coolinginflammation.blogspot.com/2009/10/migraine-headache-diet.html>

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epistemocrat (2010-05-06 14:59:30)

Thanks to my friend, Will Eberhardt: He tipped me to cultured butter (and FAGE Greek yogurt and lots of other great nutrition things). And he's a vegetarian golfer (among other things). Nutrition is the ultimate non-expert expertise: we are all engaging in its science and discovery each and every day. Also, my ancestor, Dr. Francis. M. Pottenger, Jr. (see Price-Pottenger Nutrition Foundation), did fascinating research on the beneficial effects of animal fats and saturated lipids on skin and hair (epithelial tissue generally) health. Good hyperlipidity is a protective against skin cancer, for instance, most likely.

Stephen C (2010-05-07 15:00:00)

Very interesting, never thought of a stick of butter as biscotti before! My question is how would you, and other non-traditional lifestyle people educate and gain acceptance from the "mainstream" audience. I am imagining Brent working out at the gym, then pulling out a stick of butter, instead of sugar filled power bars or gatorade. That won't fly with even "health conscious" workout nazis. Yes, health conscious is a relative term, as many of them follow conventional beliefs when it comes to dieting. How do you make it stick with people? Also, I'm partial to the idea of MetaRules. Sounds like there are a lot of "don'ts" and absolutes and it sounds discouraging to me. Probably a necessity and some are humorous, but still not very positive sounding. I tried my own  $n=2...2$  because my girlfriend and I both experimented with a 90/10 mix of protein/veggies/fruits to 10 % carbs and in about 4 weeks, we both lost a combined 8 lbs... A positive side effect was that I ate more variety of veggies and meat, and more often because we weren't filled up with "empty" carbs, like all the refined

grains we were eating before. So instead of a side of carbs, we would replace that with more greens and a larger portion of meat.

How to Sprout Nuts & Seeds – Vegetarian Diet Tips (2010-05-08 05:08:42)

[...] Seth's blog » Blog Archive » Brent Pottenger Comments [...]

MT (2010-05-08 10:56:03)

Pottenger's cats are fascinating nutritional research. Amazing that there's a connection! Would also be interesting to see the research replicated.

seth (2010-05-08 15:39:44)

Stephen C, how will these ideas spread? you ask. I think the main thing that spreads ideas is repetition.

My n=1 Quest to Live Headache-Free | Quantified Self (2011-08-29 06:58:19)

[...] one day and then none the next day. I consciously tested this hypothesis after reading a post on Seth Roberts' blog about butter – I ate 1/4 stick of butter, and sure enough, got a splitting [...]

### **One Million Chinese in Mexico (2010-05-07 02:36)**

Contradicting the notion that you can find anything on the Internet, I cannot find any info about what I was told in a Beijing Starbucks: A few years, a city was started in Mexico where a million Chinese workers will manufacture stuff. Because of NAFTA, the stuff they make will have tariff-free access to the American market. And shipping from Mexico will be cheaper than shipping from China. The Chinese workers will come over for a limited time, such as one year.

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Toli Galanis (2010-05-07 08:31:19)

I have contacts in Mexico. Let me look into this for you.

John (2010-05-07 09:21:16)

Well, Seth, welcome to the world of the "rumor" as we call it out here, one of the sometimes more fun aspects of culture. Reminds me of the one I was told in South America where a Taiwanese factory was supposedly bottling up their clean air and shipping it to Asia. Given people's health anxieties, maybe they were thinking about it but there is no factory there. Told with anxiety and a straight face. Do you really think Mexico has a labor shortage? When you are in another country, rumors seem to be more real than they might in another context. Do Chinese people fear "fan death"?

Toli Galanis (2010-05-07 10:54:17)

Okay, here is something referring to the benefits of NAFTA for China: [http://www.thefreelibrary.com/CHINESE+AU-TOMOBILE+COMPANY+ANNOUNCES+PLANS+TO+C+OMPETE+IN+MEXICO %27S...-a0167668617](http://www.thefreelibrary.com/CHINESE+AU-TOMOBILE+COMPANY+ANNOUNCES+PLANS+TO+C+OMPETE+IN+MEXICO+%27S...-a0167668617) "Zhongxing's medium-range plans include constructing a plant in Tijuana through its Chamco subsidiary, which would allow the Chinese company to enjoy tariff benefits available through the North American Free Trade Agreement North American Free Trade Agreement (NAFTA), accord establishing a free-trade zone in North America" It doesn't say however if the Chinese people will be brought for that, which is highly unlikely. However, Tijuana is where the biggest Mexican Chinatown is located, with over 100,000 people of Chinese descent in the area.



Adam (2010-05-10 00:14:44)  
@John Hey - Fan Death is real...Just ask anyone in Korea!

seth (2010-05-10 03:14:05)  
John, you ask, "Do you really think that Mexico has a labor shortage?" China has been far more successful than Mexico at turning low-cost labor into a trade surplus. This is why it makes sense to try to reproduce as much of the winning formula as possible.

max wilde (2010-05-29 22:22:53)  
Dear all, It seems that some clarification to the discussion I had with Seth at Starbucks is needed. I mentioned that a long standing idea for a project was to move a million Chinese to an industrial park in Sweden. The concept is "made in China", but actually Sweden (the European Union). The amount "one million" was meant only to illustrate a large number. My comment to Seth at Starbucks was that I had pretty much laid the idea on ice since it had already been realized by entrepreneurs in Mexico with a little less regard to the business ethics involved. (Please see the attached link for more information <http://www.cimacnoticias.com/site/06110610-Mujeres-chinas-trab.15464.0.html> ) There are a host of reasons why Chinese guest workers in Mexico makes sense from a business perspective. First, a recent survey conducted by Judith Bannister in China on behalf of the U.S. Bureau of Labor Statistics show that Chinese labor cost approximately one fifth of Mexican labor. (Please see the attached link for more information [http://www.businessweek.com/magazine/content/04\\_50/b3912051\\_mz011.htm](http://www.businessweek.com/magazine/content/04_50/b3912051_mz011.htm) ). Second, some sources have mentioned that the Mexican maquiladoras have suffered as it is due to the low labor wages in competing Chinese industrial parks. Third, other sources yet point out a problem that has limited the growth potential of maquiladoras, this is the fact that Mexicans apparently have been unwilling to relocate. This has created a labor shortage in the areas surrounding maquiladoras. Given this picture, perhaps it now makes more sense why someone instead would try their hand at importing Chinese labor to Mexico rather than moving business to China.

Fred (2010-08-26 13:10:08)  
I was looking up the same thing! I was told, during a recent trip to Zac. Mexico, that hundreds of Chinese workers (apparently to build cars?), had up until recently occupied a small town. Rumor has it that they had been there for a few years. I didn't ask for details.. as I thought I could just look it up... guess not.

max wilde (2010-09-12 20:46:25)  
here's the latest from ny times on this issue. this time regarding garment industry in Italy.  
<http://www.nytimes.com/2010/09/13/world/europe/13prato.html?hpw> cheers, max

## **What We See: Advancing the Observations of Jane Jacobs (2010-05-07 03:38)**

[1]What We See: Advancing the Observations of Jane Jacobs, a collection of essays, has just been published by [2]New Village Press (who sent me a copy). Several of the essays are very good, such as those by Pierre Desrochers, Janette Sadik-Khan (in charge of improving New York City's streets), Daniel Kemmis, Robert Sirman, and Mary Rowe, but my favorite was the one by Janine Benyus. Benyus came in contact with Jacobs when Jacobs phoned her to ask her to speak at the 1997 Toronto conference Jane Jacobs: Ideas That Matter. Benyus was thrilled to be speaking to the person whose writing she'd studied to learn how to write. Benyus wrote about increasing appreciation of the value of [3]biomimicry, learning how nature has solved this or that problem to help us solve the same problem.

[On the Galapagos Islands] I watched a quiet engineer named Paul stand motionless before a mangrove as if in deep conversation. He finally called me over and pointed: "This mangrove needs fresh water but its roots are in saltwater, which means it somehow desalinates using only the sun's energy. No fossil fuels, no pumps. Do you know how we do it? We force water through a membrane at 900 pounds of pressure

per square inch, trapping salt on one side. When it clogs, we apply more pressure, more energy.”

Then Paul asked the question I’ve been working to solve ever since: “How is it that I, as a desalination engineer with a five-year degree and twenty-year experience, never once learned how nature strips salt from water?”

1. <http://www.whatweseesee.org/home>
2. <http://www.newvillagepress.net/>
3. <http://www.biomimicryinstitute.org/>

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epistemocrat (2010-05-07 06:47:52)

Hi Seth, Mimicry is the foundation of Ancestry: [http://ancestryfoundation.org/Foundation\\_Home.html](http://ancestryfoundation.org/Foundation_Home.html) "Ancestry is a human development foundation that respects human beings' innate capacity to learn and grow via mimicry." It sounds like Benyus attended Ancestry. I learned how to write by mimicry too. I mimic folks like Nassim and you. "Myth as mentor," I say. Cheers, Brent

A new book about Jane Jacobs | Undercover Economist | FT.com (2010-06-07 01:04:11)

[...] I've been sent a book titled "What We See: Advancing the Observations of Jane Jacobs". Interesting. The book is a series of essays; contributors include Saskia Sassen. There are some economists involved but not names I had yet encountered. It looks essential reading for serious scholars of Jacobs. Here is Seth Roberts on the book. [...]

## More About Treadmills and Learning (2010-05-08 06:30)

In Beijing, a friend and I were talking about how to improve high-school teaching. I said two things would help: more personalization, and more movement. Movement really helps learning, I said. I read something about that recently, my friend said. She meant [1]this post of mine (treadmill walking made it pleasant to study Chinese)!

Paul Sas has drawn my attention to [2]a man with a remarkable memory:

JB is an active, articulate septuagenarian who began memorizing Paradise Lost at the age of 58 in 1993 as a form of mental activity to accompany his physical exercise at the gym. Although he had memorized various poems in earlier years, he never attempted anything of this magnitude. JB stated that he wanted to do something special to commemorate the then-upcoming millennium. “Why not something really challenging like, oh, 'Paradise Lost'?” he said. He began by walking on a treadmill one day while trying to memorize the opening lines of the poem.

He eventually memorized the whole poem, about 11,000 lines. [3]Apparently the scientists who studied him ignored the treadmill.

A learning psychologist might say that walking provides mental activation, we learn better when we're stimulated. (For example, we learn better when we're scared.) My point is treadmill walking produced an hedonic change: I found learning more enjoyable when I was walking.

1. <http://www.blog.sethroberts.net/2010/02/23/boring-boring-pleasant/>
2. [http://www.mindhacks.com/blog/2010/05/paradise\\_learnt.html](http://www.mindhacks.com/blog/2010/05/paradise_learnt.html)
3. <http://www.ncbi.nlm.nih.gov/pubmed/20419555>

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Steve G. (2010-05-08 12:35:10)

Seth, You might find this interesting. Polyglot Alexander Arguelles recommends learning to speak a language while walking briskly. The description is here: [http://foreignlanguageexpertise.com/foreign\\_language\\_study.html](http://foreignlanguageexpertise.com/foreign_language_study.html) #svd, and a video demonstration here: <http://www.youtube.com/watch?v=VdheWK7u11w>. I think that he claims to have discovered the value of this on his own, although I can't say for sure (it's been a while since I read his site). It seems to track your conjectures on learning while moving. Thanks,

Tedderick (2010-05-16 20:01:50)

I love walking and thinking. But my wife hates when I pace! I try to think of excuses to walk around the warehouse to figure out problems at work!

Matt Weber (2010-06-09 11:27:50)

Just saw this article in J. Neurosci and thought of this post: <http://www.jneurosci.org/cgi/content/abstract/30/23/7845> I'm not that familiar with all the biochemistry stuff, but even I can spell "LTP."

Greg (2011-02-16 03:19:30)

Here's what neuroscientist (and educator) John Medina has to say about exercise and learning: The brain appears to have been designed to solve problems related to surviving in an outdoor setting in unstable meteorological conditions and to do so in near constant motion. As I was writing Brain Rules, it hit me [that] if you wanted to design a learning environment that was directly opposed to what the brain is naturally good at doing, you would design something like a classroom. We know from our evolutionary history that [our ancestors] probably were walking anywhere between 10 to 20 kilometers per day. We grew up and made our really fancy, really big fat brains based on the single idea that we were constantly in motion, aerobic motion. If you were to sit still for as little as 15 minutes in the Serengeti, from which we evolved, you'd probably become someone's lunch. Well, if we were moving 10 to 20 kilometers per day and the brain is used to getting that experience, yet we don't allow a lot of exercise in the classroom, you might hypothesize that we are sub-optimizing the performance ability of the organ. And that's exactly what you see: The first research literature that came out of this actually came from asking questions about aging populations. It was shown that in aging populations, people who lead a sedentary lifestyle were not able to mobilize their IQ as effectively. That's particularly true of something we call "executive function," which is the ability to problem solve and plan. The people who had a sedentary lifestyle did not have as good executive function and could not mobilize their IQ in the same way that somebody who had an active lifestyle could.

### **Distinguished Scientists Fail to Think for Themselves (2010-05-09 03:15)**

A long list of National Academy of Science members, including several Nobel Prize winners, have published [1] a letter in Science supporting the idea that humans have caused/will cause serious global warming. The letter is striking in several ways – how preachy it is, how it overstates its case, how it fails to provide evidence, and how it ignores the main arguments of skeptics (at least, intelligent skeptics).

It begins:

All citizens should understand some basic scientific facts. There is always some uncertainty associated with scientific conclusions; science never absolutely proves anything. When someone says that society should wait until scientists are absolutely certain before taking any action, it is the same as saying society should never take action.

"Citizens", huh? This might interest third-graders; if they think that the brighter skeptics or most readers of Science don't know these "basic scientific facts" they are mistaken.

The letter goes on to claim that the idea that humans are seriously warming the planet is as well established – at least, in the same category of firmly-established theories – as the conclusion that "today's organisms evolved from ones living in the past". That is an overstatement.

And the letter ends with hand-waving. In place of evidence that supports what they claim, they simply repeat the claims in detail (e.g., "Natural causes always play a role in changing Earth's climate, but are now being overwhelmed by human-induced changes").

The letter is unintentionally revealing. Here's what I would consider reasonable evidence for serious human-generated global warming:

1. Temperature higher now than in the past.
2. Temperature increasing at a higher rate now than in the past.
3. Good (= verified) model shows serious human-generated warming.

No. 1 isn't clearly true; the Medieval Warm Period appears to be as warm as now. (Mann et al. understood this point; they tried to diminish the Medieval Warm Period.) No. 2 isn't clearly true. For example, the 1930s may have been as warm as recent decades. No. 3 isn't true. Models such as Hansen's haven't been shown to predict correctly. There's no reason to take them seriously.

So No. 3 is off the table (current models are untrustworthy). That leaves Nos. 1 and 2, the failure of which to be clearly true points in the direction of no serious human-generated warming. If a theory makes two predictions, both of which appear wrong, it would be wise to start doubting the theory rather than lecture the rest of us on "basic scientific facts".

This line of reasoning (ask whether the humans-have-caused-serious-warming idea makes correct predictions) isn't complicated or obscure but does require you think for yourself rather than accept what you're told. Apparently no one in this long list of distinguished scientists has done so.

If a letter from 100 United States Senators was full of spelling and grammar errors, would you trust it? Well, no . . . and you might wonder about a world with such a poorly-educated ruling class.

1. [http://www.pacinst.org/climate/climate\\_statement.pdf](http://www.pacinst.org/climate/climate_statement.pdf)

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Alrenous (2010-05-09 07:21:18)

So...were the prize winners actually responsible for the writing, or did they just sign off on it? It doesn't seem to scan like the stuff these people write to each other. I would be interested in knowing which one of the signed names is actually responsible for the initiative. It certainly looks bad, but there are a lot of reasons to suspect it has little or nothing to do with what the signatories actually care about. To bring it near a blog theme, an unmotivated gatekeeper is just about the last person to go to if you really need frank advice on a fraught subject.

Andrew Gelman (2010-05-09 12:53:28)

Seth: See [1]here. Phil is a physicist and knows much more about climate change than either of us do. More generally, you're an experimental psychologist, and I'd trust your word on many issues relating to rat learning (and to self-experimentation). When it comes to physics, I'll trust the experts. Even if they produce preachy reports with spelling and grammar errors. You can feel free to be skeptical but it seems laughable to me that you think you know more about this than the actual experts in the field do. This is not like your weight-loss study, where you were able to leverage your extensive knowledge of experimental psychology, along with years of data on yourself. On a question of physics you're about as much of an expert as I would be if asked to, say, adjudicate a question about a translation of the Koran.

1. [http://www.stat.columbia.edu/~cook/movabletype/archives/2009/12/say\\_a\\_little\\_pr.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2009/12/say_a_little_pr.html)

seth (2010-05-09 14:03:33)

Andrew, my expertise is more relevant than you seem to realize. Hal Pashler and I wrote a paper about modeling that said that a 50-year tradition (within psychology) was absurd. I submit that how much to trust models is relevant in the climate-change debate. In the post you link to (by Phil), Phil appears unaware of a long literature in psychology about overconfidence in confidence intervals. On a wide range of topics, people's estimated confidence intervals are too narrow. Here again my expertise (in psychology) is relevant. Feel free to punch holes in my easy-to-understand argument. I don't think it's "laughable" to disagree with expert opinion because the experts can be glaringly wrong, as the books I call the Emperor's New Clothes Trilogy illustrated. Don't you have a copy of The Experts Speak?

Shane (2010-05-09 14:13:10)

Bravo, Andrew. Well said. What bugs me about posts in this vein, which seem to be appearing with increasing frequency, is that what started out as a sentiment that expressed something like: "just because someone's an expert doesn't mean you should cede to them all responsibility to think and reason" has become something much closer to: "he's an expert, so he must be some combination of a buffoon and a criminal." Like that string of posts about how what motivates academics is to be purposefully useless and obscure. Probably there is, somewhere, an academic with such a bizarre and twisted motivation, but in any substantial number? Really? This is the atmosphere at Berkeley, then, is it? Well, not among the people that I know. And not at my institution, either – not a single person that I've met believes this, or acts like it. Every so often there are real gems on this blog. But mostly I find myself reading it because it infuriates me; and I have this idea that it's good to be infuriated by stuff to keep you honest.

seth (2010-05-09 14:30:21)

Shane, thanks for reading and commenting. You write: "Probably there is, somewhere, an academic with such a bizarre and twisted motivation, but in any substantial number?" And outsiders call academia an "ivory tower" because . . . ? Surely academics don't do research that is useless by mistake. It's Veblen's idea, not mine, that academics try to be useless and obscure. In The Theory of the Leisure Class, he gave plenty of evidence for such motivations inside and outside of academia. Alrenous, Peter Gleick is responsible for the letter. See <http://dotearth.blogs.nytimes.com/2010/05/09/sweating-the-details-in-climate-discourse/> for more details.

ChristianKI (2010-05-09 16:02:48)

@Shane: I actually have heard a scientist say in response to the question: "How will your research in neuroscience help people make better decisions?": "My goal isn't to produce theories that help people to make better decisions. If they do that's fine but

I'm rather interested in doing basic research." Sure no academic would admit that they want to be useless but they want to do pure basic research instead of solving real problems. Just like artists paint for the sake of art there are scientists who want to do science for the sake of science. Just like art loses it's purity when it's done for money science can lose it's purity when it's done to solve practical problems.

Alrenous (2010-05-09 17:44:52)

Thanks Seth. So the actual author of the letter is the co-founder of the Pacific Institute, with the mission, "We envision a world where the basic needs of all people are met, where resources are managed sustainably..." and I need not read more. If global warming gets dethroned, such an institute can expect to lose substantial amounts of both leverage and funding. Conflict of interest? What's that? Hmm, I clearly should have checked the hosting url of the letter...but on the other hand I got you to do the work for me. Never underestimate a human's ability to ensnare others to their goals. Ironically, I have to agree with Gleick's water policy suggestions. (E.g. he thinks you should charge for use where water is scarce.) But then, that's where his actual expertise is. What he actually cares about.

Hal (2010-05-09 18:52:38)

Seth what do you think about the post by "Phil" linked to above, specifically in terms of climate sensitivity? The question is, how many degrees C will the temperature increase, given a doubling of CO<sub>2</sub>? Would you be willing to share your ideas in what this value should be? As far as your 3 points, ISTM that we could still face serious human caused warming even if 1 and 2 were false. Even if there were warm and warming periods in the past worse than today, eventually those past warming periods were followed by cooling. But today with our high CO<sub>2</sub> load, we have grounds to be much more concerned that current warming trends will not be reversed, due to the aforementioned climate sensitivity.

Marc (2010-05-09 21:36:40)

thanks Seth, The so called "experts on global warming" need a grade school refresher course in the basics of life of the majority of plants and animals and combustion on this planet. Most plants require CO<sub>2</sub> ( carbon dioxide) to live ... and give off O<sub>2</sub> (oxygen). Most animals require O<sub>2</sub> to live ... and give off CO<sub>2</sub>. combustion requires O<sub>2</sub> to occur ... and gives off CO<sub>2</sub>. More CO<sub>2</sub> = more plants = more O<sub>2</sub> for the planet. This is our plant's major natural balancing mechanism between plants and animals and combustion, which keeps CO<sub>2</sub> and O<sub>2</sub> in dynamic equilibrium.

seth (2010-05-09 22:00:48)

What do I think of Phil's analysis? I think it ignores two facts that argue against big sensitivity of global temperature to CO<sub>2</sub>. One is the way carbon dioxide concentration lagged – not preceded – global temperature changes for a long time. Presumably as the temperature changed, the oceans changed how much CO<sub>2</sub> they dissolved. If CO<sub>2</sub> sensitivity was great, as the CO<sub>2</sub> concentration increased, the CO<sub>2</sub>/temperature relationship should have changed somehow. It didn't. The other is the fact that global temp is not now increasing at an unprecedented rate, in spite of the fact that CO<sub>2</sub> is now increasing at unprecedented rate.

Kim Åyhus (2010-05-10 04:34:48)

Absence of evidence is evidence of absence. It is precisely this absence of evidence of global warming that makes me suspicious about it. However, each time I tried to make this point, in real life or in web forums, lots of people protested by claiming that absence of evidence is NOT evidence of absence, and of course providing no evidence that their claim was true, and also claiming I was an idiot for believing something so stupid. So I proved my claim to be true, as a way to shut them up. The proof is in conditional probability, is quite simple, and can be found here: <http://kim.oyhus.no/AbsenceOfEvidence.html> Their reaction to it, was interestingly, to ignore it, misunderstand it, and lie about it. Kim0+

seth (2010-05-10 05:18:43)

yes, Kim, I agree: absence of evidence is evidence of absence – and it is sort of amazing that people claim otherwise. Likewise, correlation really is evidence for causation, even if there are other explanations. There are always other explanations.

Kim Å~yhus (2010-05-10 05:49:44)

Perhaps I should make a similar proof that correlation is evidence for causation. Kim0+

seth (2010-05-10 06:51:07)

Kim, your web page about evidence of absence is very clear and convincing. If you do a proof for correlation/causation I will link to it.

Andrew Gelman (2010-05-10 07:53:48)

Seth: Yes, Phil is indeed well aware of the long literature in psychology about overconfidence in confidence intervals. He and I have discussed this topic extensively. You and Phil both are aware that famous people have made mistakes in the past. Where you and Phil differ is that Phil (and the physicists who signed that letter) know about physics and you do not. I'll go with the consensus of the physicists on this one.

Shane (2010-05-10 09:44:39)

@seth: the 'ivory tower' thing is real, for sure, in the sense that people are suspicious and contemptful of academics. My tendency, based on extensive personal experience with humans, is to think that says a lot more about the people than about the academics. @ChristianKI, there's a huge, HUGE difference between 1) not worrying too much about how the things you do will be used by other people, and 2) trying, on purpose, to do things that are purposefully useless to other people. You have given anecdotal evidence for the former, which I would never contest. As to the latter, though, like I said, I've never seen hide nor hair of it, except when uttered by number theorists in a fit of pique. I think I'll read Veblen this summer, though. I know Seth is smart, and at this point I'd like to see what he finds so compelling.

seth (2010-05-10 15:23:16)

Andrew, you mention "the physicists who signed that letter." The NAS has about 2000 members. The letter was signed by an eighth of them. Making it likely that most NAS physicists didn't sign that letter. If physicists are divided on this issue, your reliance on Phil because he knows more physics than me doesn't make sense. If Phil is in the minority in his profession, it makes even less sense. Shane, I don't know if you are a professor or not but really among many professors there is a disdain for useful work. "Basic research" (sometimes called "pure research") is higher status than "applied research", for example. Even in departments that you might think have to be useful. In engineering, an assistant professor complained to me that all her colleagues valued was theory, actually-useful stuff was nothing. The attitude goes beyond "not worrying too much about how the things you do will be used by other people." Again, professors are just part of a much larger pattern, which Veblen was the first to describe.

Nathan Myers (2010-05-10 16:43:16)

Of course research scientists aren't interested in solving problems. Solving problems is called engineering. People who are interested in solving problems, and can and care to develop the skills to do it, become engineers. The rest do other things. Research scientists do research. That's good, because not many people have the peculiar sort of patience needed to do research. I wouldn't want research scientists wasting their time being bad engineers, when there's so many questions of basic research going begging. People who want to understand things become scientists. They don't always remain scientists, though, because real science is frustrating, rarely yielding up the answer you wanted. Many become, instead, believers in whatever they were taught, or in whatever feels more comfortable. The less they know about something, the less scientific feel they need to be about it.

seth (2010-05-10 18:58:26)

"Of course research scientists aren't interested in solving problems." Of course? Physics began with problem solving – aiming artillery. Chemistry began with alchemy. Statistics began with practical problems, such as improving agricultural yields. Because being useful is low-status and difficult, scientists moved away from practical applications as soon as possible.

Stephen M (Ethesis) (2010-05-10 19:52:51)  
Nathan Myers – he was talking about engineering.

Hal (2010-05-10 21:37:05)

I agree that if there were substantial disagreement among the members of the NAS, that would be evidence against global warming. But if that were the case, I'd expect the dissenters to vocally object to this much publicized letter which was released in their name. What do you think are the chances that we will see a counter-letter from the NAS?

Nathan Myers (2010-05-10 21:42:31)

Of course engineering is a low-status activity among scientists. When you're a scientist, being useful is *somebody else's job*. Your job as a scientist is to understand and explain what is mysterious. If you want applause for engineering, look to other engineers, or to people with problems they need a solution invented for. That's what engineers do. Similarly, making stuff work right is low-status among engineers, for the same reason: that's what technicians do. An engineer doing technical work is probably procrastinating. Technicians you're likely to encounter include auto mechanics, airline pilots, cooks, and clinical physicians. Other technicians, and people who need things done right, appreciate technicians. Physics (really, dynamics) started with artillery and developed into a science. That is always how it happens: practice, followed by systematic refinement, followed by theory. Scientists pretend it happens the other way, to pump up their status. People are often fooled. I should mention that professors of engineering are far from the same as engineers. It's rare to find engineering being done by the faculty at an engineering school. (Likewise, it's rare to find the faculty at a hairdressing school cutting hair.) The students do it. Real engineering is done out of sight by professional engineers at Boeing, at Intel, at Bechtel, and at a million other companies.

seth (2010-05-10 22:40:15)

Hal, this letter wasn't supposed to represent the official NAS view or anything like that – just the views of those who signed it.

Hal (2010-05-11 12:19:31)

Seth, OK, well it will be interesting nevertheless if a contrarian letter appears from others in the NAS. My real interest in this topic is as an example of applied rationality and the methodologies we use to get at the truth. Along these lines I thought I might mention a perhaps little appreciated requirement of rationality and honesty. Basically, you have to expect to be surprised by the future. That is, whatever percentage estimate you give to the likelihood (in this case) that anthropogenic global warming theory is true, you have to expect that future data is equally likely to make you either more or less confident in your belief. Your percentage estimate is equally likely to move in either direction. The reason is simply that if you think it is much more likely to move in a certain direction, then you are really misstating your belief today. As a simple example, a person can't say he is 50-50 on an issue but believes that he is very likely to be 60-40 in the future. That belief means that he is more than 50 % believing in it today. The upshot is that you have to expect to be equally likely to have to say "maybe I was wrong" as "see, I told you so", as future data comes in. It is a simple requirement of rational and honest, evidence-based belief. Unfortunately our human psychology doesn't give nearly as much credit and prestige to people who say "maybe I was wrong" as those who say "see, I told you so". This causes people to overstate their beliefs, and leads to polarized and hostile discourse, as we so often see.

Phil (2010-05-11 12:26:56)

Seth, as you might imagine I disagree with almost everything you say here. But let me give just one example. You say: "Here's what I would consider reasonable evidence for serious human-generated global warming: 1. Temperature higher now than in the past. 2. Temperature increasing at a higher rate now than in the past. 3. Good (= verified) model shows serious human-generated warming." But in fact, neither of the first two would be reasonable evidence of serious human-generated global warming if they are true, and the absence of them does not indicate absence of serious human-generated global warming if they are in fact absent. Here's the key fact that you seem to be unaware of (but that scientists who study this know very well): MORE THAN ONE PARAMETER AFFECTS THE TEMPERATURE OF THE EARTH. It's not all about carbon dioxide concentrations. If high temperatures in the Medieval Warm Period were due in part to higher solar activity, then those temperatures don't tell us much about climate sensitivity to CO2. So your point 1 doesn't really make sense. The issue with point 2 is pretty much the same, except with regard to the derivative of temperature rather than temperature. And for the models...you assert that the



models aren't good enough to estimate temperature sensitivity, but you're wrong. Yes, I know that scientists, like everybody else, tend to be overcertain. But I don't think that means that nobody knows nuthin'. I asked you before, more than once, to give YOUR estimate of climate sensitivity (defined as the steady-state change in global average over preindustrial levels in response to a doubling of CO<sub>2</sub> over preindustrial levels). You still haven't answered that question. But it seems that for some reason you put very little of your probability in the range that almost all climate researchers think is most likely. So who is being overcertain?

seth (2010-05-11 15:24:30)

Phil, you write "you assert that the models aren't good enough to estimate temperature sensitivity, but you're wrong." What's an example of a good-enough model? I predict that the model you put forward as good enough will turn out to not have been verified, "verified" meaning "found to make accurate predictions about global temperature".

q (2010-05-11 16:13:32)

i'm the only one here who can sign a letter. all the rest of you can't, because your signatures are longer than a letter.

Phil (2010-05-12 08:50:13)

Seth, the Intergovernmental Panel on Climate Change has an uncertainty window about 6 C wide, for their estimate of "climate sensitivity." That's very wide. You refuse to say what your interval is, but it seems that it is narrower than 6C. It also seems that you put far more probability near very low values of climate sensitivity. So, the implicit "Seth Model," or perhaps it is a family of models, has a narrower confidence interval and a much lower central estimate than the experts do. Since you are the one making the extreme claim here, I think YOU are the one who should justify what you are saying. What is YOUR "good-enough" model of global temperatures, that predicts the temperature rise of the past century and especially the past decades, is consistent with solar intensity measurements, is consistent with the physical laws governing energy transfer, but does NOT have a climate sensitivity of at least 2C per doubling of CO<sub>2</sub>?

seth (2010-05-12 14:47:11)

Phil, you wrote "but you're wrong" without any explanation of why I was wrong. I requested an example to try to understand what you wrote. I'll provide you my confidence interval in a few days.

Phil (2010-05-12 14:55:46)

Check the IPCC report, chapter 8: <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-chapter8.pdf> there is an extensive discussion of climate modeling and why it is good enough to be sure that anthropogenic climate change is real and why the key parameters are likely to be not extremely far from the (admittedly wide) range of estimates. But what I am taking issue is with much larger than your three assertions, though I think they are all incorrect. You are criticizing people for being "overcertain" because their estimate of climate sensitivity has an uncertainty of "only" 6C, but your own estimate has less uncertainty than that, in addition to being centered much lower than the experts think is reasonable. I do not think you have any basis for having a narrower confidence interval than the experts do, and I do not think you have any basis for having a much lower central estimate than the experts do.

Michael Tobis (2010-05-13 12:10:04)

To your first two points, there is nothing that says that warming has to be simultaneous with greenhouse forcing. Under present circumstances we in fact expect the contrary: the thermal inertia of the oceans and the masking of industrial dust mask the committed warming. So your proposed tests simply aren't valid. Also, climate models make effective predictions of many things, not limited to global mean surface temperature. As a particular point, they show and have shown since the 1980s that greenhouse forced warming is a near-surface phenomenon, accompanied by stratospheric (upper atmosphere) cooling. They also show a pattern of warming that concentrates on land areas in continental interiors. These long standing predictions did in fact emerge. So your claim that climate models are without skill are without foundation. All of this is silly; it treats "global warming" as a falsifiable theory, a claim of a causation that is either true or false. This is foolishness. The underlying phenomena, (thermal radiation, absorption and reradiation in gases) is two hundred year old physics that is as well established as anything in science. What's at issue is not "whether" but "how much". As Phil correctly points out, those who call themselves

"skeptics" are not making an argument from ignorance, they are making an argument from certainty. If we really had no idea what the sensitivity was, we should be more concerned than ever. The attitude suggested by people who claim to be "skeptics" is utterly inconsistent with a lack of confidence in the underlying science. It is a claim that the the sensitivity is certain to be much less than all prevailing evidence indicates. (Phil's a bit pessimistic; I'd say the consensus range is 2 C to 4.5 C per CO2 doubling. <http://www.nature.com/ngeo/journal/v1/n11/abs/ngeo337.html> ) And what if it were zero? Would we be out of the woods? No, even with a global sensitivity of zero we could have huge forced climate change, say, warming the poles and cooling the tropics. There is no doubt that the amounts of CO2 and other gases we are adding to the atmosphere change the way energy flows through the system, a system which at heart is fluid and easy to change. Even in the absence of knowledge and a low global sensitivity there are huge risks. And then there is ocean acidification. [http://en.wikipedia.org/wiki/Ocean\\_acidification](http://en.wikipedia.org/wiki/Ocean_acidification) Sorry. We have to deal with this.

ChristianKI (2010-05-14 00:04:01)

@Phil: If you claim as the scientists did that global warming is a fact that has the same certainty as evolution than your confidence interval is very small. The members of the academy probably all agree that p(Evolution is wrong)

Robert (2010-05-14 00:33:56)

To add to what Phil said (that the physics of thermal radiation, absorbtion and reradiation in gases is well established), we have in the rock record repeated examples of global climate having been warmed and cooled by alterations in CO2 sinks and flows. We even have record of a methane induced warming event. Is it so hard to believe that injecting a significant percentage of the world's fossil carbon into the atmosphere at an – and this truly is novel, in the history of the planet – unprecedented rate will have profound, global effects?

Mac (2010-05-14 03:07:41)

" the Medieval Warm Period appears to be as warm as now." Are you sure of that? Here's a good graph of the various reconstructions: <http://www.ncdc.noaa.gov/paleo/pubs/ipcc2007/ipcc2007.html> Yes - there was a Medieval Warm Period in the reconstructions - but even if ignore most reconstructions and cherry pick the ones that give the warmest results they are still lower than the average current temperatures. Obviously these temperatures are averaged - there of course can be a day in that period which is higher than a day now !

Jason Olshefsky (2010-05-14 06:02:12)

I think the broad question is, "are humans ruining the planet". From there, we get the compound, "humans are causing an increase in CO2 that is causing an unusual increase in global temperature that is ruining the planet." Four parts there: 1. Humans are causing an increase in CO2. 3. Global temperature is increasing. 2. CO2 causes global temperature increase. 4. Increased global temperatures of that scale are bad. I think we all can agree on #1. Perhaps not, but I'll not bother addressing it. I find that #2 and #3 are often presented side-by-side ... I have to rely on my intuition and faith in what constitutes bias, and what I think is an "unbiased source". I have seen models and data that I largely don't understand, but if I rely on the conclusions of the presenters, the consensus appears to be that CO2 affects global temperature and increases it in a measurable (but not huge manner compared to other forces like solar output). Nobody is saying that CO2 decreases global temperature, so those who disagree claim that CO2 either has no effect, too little an effect, or that the effect of CO2 cannot be measured. I believe it's possible to isolate factors in muddled data like global temperature just as I believe it's possible to divine a sum of sine waves from a complex waveform without understanding how Fourier transforms work, so I favor those who can come to a conclusion. But is #4 true? Is it really that bad? I don't think it is possible to answer that question without running the experiment. My gut tells me that expending effort to reduce CO2 to avoid further affecting global temperature seems to be the wisest course of action. I strongly believe that #2 is true, but even if #3 is false, I feel the effort gambled is relatively small. What it comes down to is a gambling problem. The potentially devastating outcome (i.e. massive bad global changes) has some probability P(bad). You are to select an action that may change P(bad). If you find an action that will significantly reduce P(bad), then you'd clearly take it. The trouble is, will acting to suddenly reverse CO2 output actually increase P(bad)? I am under the belief that taking action will not increase P(bad) and may reduce it, so I lean toward taking action. I am frustrated that there is not a better way to isolate P(bad) and how it is affected by changes in behavior.

seth (2010-05-14 06:16:36)

Jason, the answer to your broad question is surely yes – and the narrow focus on CO2 is a big mistake that wastes a lot of effort. No one has to wonder if pollution is a problem – it is right now. No one has to wonder if we've had profound stagnation in development of new forms of transportation. We have, no doubt about it. No one has to wonder whether we should reduce energy costs and improve long-term supply by developing new sources of energy – of course we should. Let's start by solving the obvious problems.

Robert (2010-05-14 11:53:04)

We have in the geologic record many changes to global climate that had a variety of causes, change in atmospheric chemistry having been one such cause. Local and mass extinctions were sometimes caused by these changes. The change we're witnessing now in global climate is on the order of the larger of these events – for example, the amount of CO2 we've injected and are likely to inject is will probably put us in a climate state similar to the Miocene/Pliocene warm period. The current rate of warming far exceeds anything seen in the Pleistocene, let alone anything in the current interglacial period, including the medieval warm period. The current extinction rate matches that of the 5 global mass extinctions that have occurred in earth's history, and the unique imprint of humans is the likely cause: humans have fragmented gene pools, and humans are causing a change in climate that is occurring at an unprecedented rate. To reiterate: the rate of change is as significant as the change itself. Remember, within Pleistocene glacial periods there were changes in sea levels of up to 50 meters (there were five such sea level maximums during the Wisconsinan, and they mark interstadials). Despite these radical fluctuations, mass extinction did not result. Our period is unique in that we've already exceeded some of the variations that were typical of the last few million years.

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Robert (2010-05-14 11:56:01)

oops,this phrase: "weâ€™ve injected and are likely to inject is will..." should just read "weâ€™ve injected and are likely to inject will..."

## **Colony Collapse Disorder and My Self-Experimentation (2010-05-10 13:52)**

At the risk of being extremely self-centered, my self-experimentation is related to [1]this depressing news:

The decline of [America's] estimated 2.4 million beehives began in 2006, when a phenomenon dubbed colony collapse disorder (CCD) led to the disappearance of hundreds of thousands of colonies. Since then more than three million colonies in the US and billions of honeybees worldwide have died and scientists are no nearer to knowing what is causing the catastrophic fall in numbers.

The number of managed honeybee colonies in the US fell by 33.8 % last winter.

The bees vanish from the hives. What has surely happened is that their navigational systems have malfunctioned. Bees have dozens of things that must work for them to live, all of which need a certain environment. The bees live in a degraded environment. Which system will fail first? A neural system turns out to be the most sensitive to environmental degradation.

No one predicted this, nor did I predict that my self-experimentation would find many ways in which our environment, like the bees's environment, has come to lack crucial stuff. But one reason for the two outcomes (colony collapse disorder, discoveries of my self-experimentation) is the same: The nervous system is especially sensitive to the environment. I've studied stuff controlled by the brain: sleep, weight, mood, arithmetic. Just as bee brains are the first part of bees to be crippled by a bad environment, our brains are the first part of us to improve when given a better environment.

1. <http://www.guardian.co.uk/environment/2010/may/02/food-fear-mystery-beehives-collapse>

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Laura (2010-05-11 09:01:14)  
I love this!

Jeff R (2010-05-11 10:45:48)  
Seth, What could possibly justify this level of certainty about what happened to bees, when the quoted section says the cause is unknown? "What has surely happened is that their navigational systems have malfunctioned." Jeff

seth (2010-05-11 17:32:22)  
Jeff, the quoted section means that the environmental cause is unknown. I know of no plausible alternative to the navigational explanation. It explains why the dead bees are never found in their hives.

(original) Jeff (2010-05-11 19:02:32)  
Seth, Possible causes on wikipedia include mites, infectious disease, environmental changes, pesticides, or malnutrition. Only some of these causes are the environmental reason you are so sure about. There are many examples of an infectious disease decimating a population absent any change in environmental factors. You refer to a "degraded environment" with no indication of what this refers to or how it would affect the bees. I think you would do a service to your non-scientist readers if you emphasize the amount of evidence that is necessary to believe a hypothesis to be true. There has already been some study of colony collapse disorder and there will be much more in the coming years. You give no indication you have read any of this literature and you give no indication of why any particular reason should be favored based on this literature. That you have discovered deficient aspects of the human diet says very little about the cause of a disease in bees. People shouldn't believe things because "they seem right." (not quoting you there) That is absolutely not science. I think your blog is excellent in general and I have made changes to my diet because of your writing. But, I think you write much too casually at times for a blog that is about the scientific method, among other things. You preach being a skeptic somewhat selectively, depending on what the subject is. Jeff

Jeff R (2010-05-11 19:03:31)  
above is me, the log-in was saved on this computer

Kit Carson (2010-06-13 13:21:20)  
I used to have a few bees, at one time I had 17 hives. Then most of my bees just vanished also. I live in South Carolina in a somewhat rural setting away from any extensive farms and pesticide areas. Thing is pesticide and those ideas simply does not seem to be very intelligent reasoning, I have read many reasons and viewpoints on the reason why. No one takes the following

into consideration. When you find a hive with no bees it is as if they have just all swarmed. All of them. However the whole hive does not swarm. There are simply no bees. None on the ground None away from the hive that I could find dead The queen never leaves the hive and some workers do not either, so that kinda blows the they got lost idea. Actually I think they do just leave, I noticed that with the use of some of the comb base I had purchased, the bees simply did not like it, would not build on it, and then they just were gone. So maybe they did all swarm at once, I do know each and every one of them were gone. That alone to me does not lend itself to disease, or pesticide as I used to check them weekly and it was always the entire colony gone, with not a bee to be found. Kit

Kit Carson (2010-06-13 13:29:30)

Also my reasoning is quite simple, I meant to include it above. If pesticide or sickness then some bees would still be in the hive. If not alive, they would be dead on the bottom of the hive. Thing is there is not one single bee to be found. Not one. Kit

Kit Carson (2010-06-13 13:37:03)

Another thing, been awhile since I thought of this. If one or two colonies of bees were gone, for one thing normally the honey stores and brood would be a bit slack, but the other bees in other hives would not raid the empty colony. Seems they know something is in there that is harmful. Normally they would raid the hive and steal all the honey. They do not do that. So I think for whatever reason, something in the hive is known to the bees and they just leave. They always clean the hive and toss out a dead bee, so maybe they clean house and then just go.

seth (2010-06-13 15:42:46)

that's very interesting. I agree, if the queen never leaves the hive under normal conditions and is found to have left the hive, it's hard to explain that with the lost explanation. Jeff is right, I was too certain.

### **Life Imitates Art: Climate-Change Edition (2010-05-10 15:33)**

In [1]a previous post I wrote about one of the silliest letters ever signed by a group of very smart people. At the end of my comment, I wrote:

If a letter from 100 United States Senators was full of spelling and grammar errors, would you trust it?

The letter was written by Peter Gleick, a MacArthur Prize winner. In [2]a follow-up essay in the Huffington Post, he twice called ice floes "ice flows" ("there really are polar bears on ice flows"). Who says life doesn't imitate art?

1. <http://www.blog.sethroberts.net/2010/05/09/distinguished-scientists-fail-to-think-for-themselves/>

2. [http://www.huffingtonpost.com/peter-h-gleick/remarkable-insight-into-t\\_b\\_569076.html](http://www.huffingtonpost.com/peter-h-gleick/remarkable-insight-into-t_b_569076.html)

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Anthony (2010-05-10 15:50:23)

You're just trying to divert public attention once again from the facts of climate change, and grasping at spelling-error straws to muddy the waters and confuse the public!!! Admit it, Seth, you are part of the evil climate change denial machine.

David (2010-05-11 07:50:12)

Clearly, these bears need to relax and just go with the flow.

Hal (2010-05-13 12:04:37)

I see they've fixed the spelling, perhaps thanks to you. No editorial note records the correction. Another item for your Orwell file.

### **"Psychology is the bridge between art and science" (2010-05-11 14:15)**

Yesterday I attended interviews of Tsinghua students who want to transfer from another major to psychology. Almost all of it was in Chinese, but at one point, as part of an explanation of her interest in psychology, a student said (in English), "Psychology is the bridge between art and science."

Well put. Maybe she read that somewhere, but I doubt it. I'd never heard it before. Notice how we think art can be done by anyone yet science can only be done by scientists (in extreme cases, only by physicists). Psychology, especially self-experimentation, may lead us out of that desert.

[1]The wisdom of Tsinghua freshmen.

1. <http://www.blog.sethroberts.net/2009/12/17/the-wisdom-of-tsinghua-freshmen/>

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Alex Chernavsky (2010-05-11 18:13:51)

When I was taking introductory neurobiology with Professor Timothy Goldsmith at Yale, he told us in the first lecture that neurobiology is the interface between the sciences and the humanities.

James (2010-05-11 19:38:46)

At my university, you can major in psychology in both arts and science degrees.

Rachael (2010-05-13 13:49:53)

I (an art teacher) would argue that most people believe that art can only be done by "artists." The biggest part of my job is either convincing my students that any one can be an artist, or if that fails convincing them that they are artists. I certainly held that belief about science and math as a young woman, and have only begun to realize how much the keen observation required in the arts is often a great path to scientific understanding.

Scott (2010-05-14 01:27:35)

I believe that art requires such a subtle, unconscious input that it is easy to see how psychology could be 'a' bridge between it and science. Psychology may not be a pseudo-science per se, (I'm a behavioral science major by hobby) but there are certainly large segments of it that even the most experienced psychologists don't understand - yet there certainly is a deep connection between what can be garnered from analyzing art as it pertains to the science of people. Just as much, there is definitely a provable science behind most of today's psychology. Art is a wonderful breath of life to subconscious thinking. As such, used correctly (whatever that means), art can be a doorway into the thinking of people in order to understand the underlying science of what is going on, making it a perfect intermediary just as psychology could explain the science behind art.

## Is Sony Back? (2010-05-11 18:55)

A girl sitting near me in this Beijing cafe is using a [1]Sony Vaio Series X notebook. I'm blown away how thin and light it is. It cost about \$1100 and has a 60G hard drive. Another girl near me is using an iPad, big and clunky by comparison.

1. <http://www.sonystyle.com/webapp/wcs/stores/servlet/CategoryDisplay?catalogId=10551&storeId=10151&langId=-1&categoryId=8198552921644667494&N=4294954366>

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Laura (2010-05-11 20:18:48)

This reminds me of a time last week at the haas business building. A student had forgot his laptop and left it on a desk near me for many hours. It looked just like the Sony! Very thin and flashy. This week is finals week at cal. I used to go to cafes, but I can get free internet in the buildings on campus. Now, I am listening to a student practice piano in the music department. I just don't want to pay for the expensive drinks anymore. Plus, the doe library is open 24 hours for this week. Very exciting!

Robin Barooah (2010-05-11 20:23:54)

That's a really impressive laptop. It's reasonably comparable with the MacBook Air on most specifications apart from thickness - where the Sony wins hands down. It's also cheaper, and it's very elegant looking - the monochrome keyboard is, in my opinion, cleaner looking than the Apple product (although clearly modelled on it). It's weak points are battery life, and weight. It gets around 3 hours compared to 5 on the MacBook, and is 17 % heavier. The iPad 3G on the other hand - which is an almost identical volume is only 45 % of the weight of the Vaio, and has a 10 hour battery life. You have to try very hard to use up the battery on an iPad in a single day unless you spend all your time playing 3d games. This is very important for a more 'personal' mobile device that people will be using as an e-reader. So - although the Sony does \*look\* think and light, and is a truly great Windows laptop, it's qualitatively totally different from the iPad. Note - on Sony's site they quote a 14 hour battery life. If you look carefully, you'll notice that that only achieved if you attach a giant external battery which pushes the thickness and weight up dramatically. Having said that, the external battery is included in the price which makes this thing into a great deal, though one with a number of compromises.

seth (2010-05-11 21:32:58)

The iPad weighs much less than the VAIO? The Vaio Series X weighs almost nothing. Looking up stats I find Vaio < 700 g, iPad = 1.5 lb = 680 g, that is, the same. But I agree, the two products have much different uses and the iPad is more portable due to the longer battery life.

Glen Raphael (2010-05-12 10:28:21)

The iPad battery life is actually *too good* for comparison with general-purpose laptops. Had they been willing to settle for the usual 5 hours the product could indeed have been a lot thinner and lighter. But Apple wanted iPad to be an excellent e-book reader, which means the Kindle is part of the comparison set. Sony makes great super-thin laptops and has been doing so for more than a decade. The two minor nits I've had with the line in the past were: (1) those perfectly-flat perfectly-rectangular screens and bases can be a little fragile - prone to flex or break. (The Air's curviness probably makes it better in that regard) (2) one cost of all the sleekness tends to be a frequent need to plug in a mass of dongles or an extra battery to get Real Work done. Still, these are all great machines. And iPad is in many ways an odd compromise that might not be right for you yet.

Robin Barooah (2010-05-12 10:28:47)

Seth - you're absolutely right. I must have misread the figures for the Vaio. That makes it extremely impressive. It's worth saying though that the battery life isn't just 'more' - the reason why I used the word qualitative is that the effect of battery life doesn't just increase linearly - there are important thresholds that change the nature of the device. The iPad is in a different

category as far as this is concerned - you can safely rely on not having to charge it during the day, which means you never have to think about carrying a charger or planning your usage of it. That's one of the things that makes it interesting, because it enables different behavior. Sony realize this too - which is why they include the giant external battery. Given that there was clearly no way for them to get close to this in an ultralight laptop, this seems like a really good decision.

Anthony (2010-05-12 10:50:46)

@Robin, "the effect of battery life doesn't just increase linearly - there are important thresholds that change the nature of the device" Good point.

Vic (2010-05-12 15:38:05)

I bought a Vaio a few months ago, the top of the line f-series that just came out. The performance has been great, but I'm otherwise disappointed. The screen sucks (too dim), the battery life is listed at 3 hours, but often runs out after just over an hour of not that heavy use, the hdmi and vga cable are adjacent to each other so I can't plug both in at the same time, the fan is extremely noisy (which message boards indicate is a problem on all the recent Vaio's of my model type), and to get it repaired I have to deal with Sony's horrible customer support and ship in, meaning losing access to my computer for possibly weeks (simply not a viable option). Apple tends to get all the little things right.

Robin Barooah (2010-05-13 00:40:11)

I had a chance to handle one of those vaio x's tonight at the QS show and tell. It's pretty amazing and it does feel noticeably lighter than the iPad even though the difference is very slight. It's also very expensive for the spec - it has a single core atom processor and integrated graphics, so it's basically a netbook.

Stephen M (Ethesis) (2010-05-14 20:52:20)

I'll note that you can run dragon dictate on an iPad. I'm really curious how the next generation of iPads turns out, though it is, in many ways, a more functional itouch for people with old eyes.

Wayne (2010-05-18 14:51:13)

What posture were the two users adopting to interface with their devices? The problem with a laptop is that it's essentially a desktop with a convenient hinge joining screen and keyboard: you interface with it in the same way and with the same posture (and attitude) as a desktop. The iPad, by comparison, is addressed as you would a pad of paper, a book, a stack of photos, and that makes it much less "clunky" than mere size might indicate. I think that's the hidden feature of the iPad that many techie critics miss.

seth (2010-05-18 16:09:40)

Both users were sitting at cafe tables. The iPad is hunt and peck, a laptop touch typing. So if you're doing a lot of pointer movement stuff the iPad is much better, if you're doing a lot of typing a laptop is much better.

## **Preventive Stupidity Exists (2010-05-12 14:26)**

In [1]the world of Orwell's 1984,

To the end of suppressing any unorthodoxy, the [ruling] Party inculcates self-deceptive habits of mind to the inner and outer members, thus crimestop ("preventive stupidity") halts thinking at the threshold of politically-dangerous thought.

Three sayings popular in scientific discussions show that in our world, preventive stupidity exists – and works. In [2]a comment, Kim Ayhus has brought my attention to this.



1. Absence of evidence is not evidence of absence. [3]Ayhus explains why this is wrong. That such an Orwellian saying is popular in discussions of data suggests there are many ways we push away inconvenient data.
2. Correlation does not equal causation. In practice, this is used to mean that correlation is not evidence for causation. At UC Berkeley, a job candidate for a faculty position in psychology said this to me. I said, "Isn't zero correlation evidence against causation?" She looked puzzled.
3. The plural of anecdote is not data. How dare you try to learn from stories you are told or what you yourself observe!

Orwell was right. People use these sayings – especially #1 and #3 – to push away data that contradicts this or that approved view of the world. Without any data at all, the world would be simpler: We would simply believe what authorities tell us. Data complicates things. These sayings help those who say them ignore data, thus restoring comforting certainty.

Maybe there should be a term (antiscientific method?) to describe the many ways people push away data. Or maybe preventive stupidity will do.

1. [http://en.wikipedia.org/wiki/The\\_Theory\\_and\\_Practice\\_of\\_Oligarchical\\_Collectivism](http://en.wikipedia.org/wiki/The_Theory_and_Practice_of_Oligarchical_Collectivism)
2. <http://www.blog.sethroberts.net/2010/05/09/distinguished-scientists-fail-to-think-for-themselves/#comment-432095>
3. <http://kim.oyhus.no/AbsenceOfEvidence.html>

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Jlonsdale (2010-05-12 15:51:26)

While these sayings are used incorrectly many times, there are good reasons these types of arguments are mentioned in public discourse. Rhetorical strategies in the public space often make use of really bad arguments that are countered by those sayings. Your annoyance is how much of a crutch these arguments are among people who should be arguing in good faith and at a higher level than average. 1. "Absence of evidence is not evidence of absence." This was a very useful concept to point out to those people who believed that because nominal national US housing prices had never dropped before that they wouldn't drop in the future. 2. Correlations are assumed to be causation in many cases where it is incorrect. People make arguments all the time that point out correlations, think up some mechanic that explains why the correlation is causation but fail to even consider whether the correlation is actually coming from an underlying factor driving both conditions. 3. Politicians always like to bring out a few people who would be really helped or harmed by the policies. Obvious examples include the widow in need of medical care for her sick kids or Joe the Plumber who would be caught in the higher tax bracket. Obviously there are places where arguments 1 through 3 work. So the main problem isn't about the arguments themselves, but that people use these responses when they assume the person is either arguing in bad faith or is relatively ignorant when that isn't the case. Furthermore, they often feel like 1 through 3 are enough to settle the question entirely when more argumentation is needed to make their point.

seth (2010-05-12 16:07:47)

"This was a very useful concept..." Sure, and  $1 + 1 = 3$  can also be a useful concept, "useful" in the sense of supporting a conclusion you want to reach. It's still misleading. If someone thinks housing prices will always go up, don't reply with a slogan, find some evidence that contradicts that belief. Reply with evidence. If you think Data X is misleading, fine. You might be right. If you're right, you should be able to present Data Y that points more conclusively somewhere else. In other words, misleading

data is best answered with more data – not sloganized away. Here's my anti-slogan: Data, not slogans.

jld (2010-05-12 23:24:31)

Shhhh, Shhhh, do NOT contradict the believers it makes them [1]dumber.

1. <http://www3.interscience.wiley.com/journal/123328312/abstract>

Alex Chernavsky (2010-05-13 04:13:24)

How about this one? "You can't prove a negative". That aphorism is false, as long as you assume that to prove something means to establish it to such a high degree of certainty that it would be perverse to withhold at least provisional acceptance.

Kim Å~yhus (2010-05-13 05:25:28)

Wow. I am honored. Still pondering that correlation-causation proof.

seth (2010-05-13 05:31:21)

Kim, thank you for pointing this out. Maybe I will be mentioning it for years to come. Orwell's book has lasted a long time and this was one of its main points. Alex, yes, "you can't prove a negative" is another example. I haven't heard it in a long time, though.

Alrenous (2010-05-13 10:33:19)

Can't you often convert an absence of evidence into positive contradictory evidence? For a hypothesis to have meaning, it must impart some prediction. Using miracle healings as an example, I would expect at least one properly documented departure from general clinical experience. Say, a cancer remitting faster than cancer cells can be absorbed by the body. That there is no such document (that I know of) contradicts the hypothesis. Am I missing anything?

Hal (2010-05-13 11:59:49)

But if we invert these we get even wronger maxims: 1. If something has never happened, it probably never will happen. 2. When two things happen together, one usually causes the other. 3. A few examples of something mean it usually happens. I can't help wondering if you are following these principles when you reach conclusions that seem incorrect.

Antongarou (2010-05-13 14:21:59)

No. 2 is actually true- correlation does not equal causation, but is a necessary(and insufficient) requirement for it- i.e. having only correlation or lack thereof you can disprove causation but not prove it. thus it isn't equal to causation although it is linked to it. no.1 and no.3 depend on the definition of "evidence" and the number of said anecdotes as well as the amount of data they contain(most anecdotes contain next to none).

Tom (2010-05-13 15:11:31)

When the general public hears or reads correlation, they are thinking it means a correlation near 1.0. Rightly or wrongly, to them a correlation of 0.0 is just random stuff happening. #2 is correctly used when you have two types of events that can, in fact, both occur because of an underlying cause, but do not directly cause each other. It may be that every time it gets hot I drink a beer and my dog drinks water, but in general, I don't have a beer every time my dog drinks water (it might be fun, but unproductive), and my dog does not feel the need to drink water whenever I have a beer. I use #3 whenever someone tries to tell me the equivalent of "the cousin of this guy that my friend's sister met on a bus" makes an assertion that is untestable / unimaginable / unmeasured. Anecdotes are stories, not measurements and yes, "How dare you try to learn from stories you are told or what you yourself observe" is a reasonable response in many cases. For example, hallucinations that are told to me or that I, myself, observe are no basis for the existence of ghosts or gods.

Charles (2010-05-13 15:15:20)

Hal, The claim is that the maxims are false, which means that their negation is true. So to properly "invert", simply negate the sentences and remove double negatives: 1. Absence of evidence is evidence of absence. 2. Correlation equals causation. 3.

The plural of anecdote is data. #1 is amenable to logical proof as shown. #2 is false on its face, but the obvious implication from the discussion is not that the statement is false per se, but deployed as code for something that is in fact false. If #3 is false I'm not sure why people continue to do case studies.

Nate Stearns (2010-05-13 15:30:18)

You know, I really appreciate the post because it's made me think. I have said all 3 of those and I want to rethink why I do. Now, you suggest I'm doing this in order to push away data I don't like. I don't think I am (of course, cognitive bias being what is I wouldn't, would I?). In Saying 1, I'm trying to make the point that not having any good data or examples doesn't necessarily mean it's so. But, at least, I should say that it's not PROOF of absence. Except now I have to sortof believe in elves. In saying 2, I'm talking about how post hoc logical fallacy which can at least be suggestive if not proof. In the last, I think we're really trying to make the point that just because you had an experience and someone else did too, that doesn't mean that you're done. Is that slogan too vague to mean that an n of 2 or 3 ain't enough?

ShaneS (2010-05-13 15:39:30)

As a general rule, I like your posts, but this one bothers me. There are many excuses and tricks people use to alleviate cognitive dissonance. These three are no worse than any other, and are in fact actually useful logical tools - unlike many of the the other ways. I REALLY don't like the criticism of 'plural of anecdote' - because it is painfully true, and it points out a MAJOR weakness in human cognition. We ALL tend to over estimate the prevalence of opinions and ideas that we hear often - whether we agree with them or not. We have the same problem in risk assessment. Ask most people whether they are more likely to be struck by lightning or die in a terrorist attack. We hear more about child abductions so they must be on the rise - also not true. It has \*nothing\* to do with learning or not learning from your experiences. It has everything to do with making sure what you do learn is both useful and true. It is a defense against over-generalization, and a reminder that 'most of the time' needs only happen 50.1 % of the time to be true.

Scatterbrane (2010-05-13 15:48:17)

Alrenous, I believe that applying the saying to controlled experiments would rather strain its heuristic value. All of these pearls of wisdom would likely have the word "necessarily" in there if not for simplicity's sake. Even the more universally accepted heuristics produce absurd conclusions when taken to their logical extreme, that applies doubly to these rules of thumb.

Ryan (2010-05-13 16:33:02)

A few comments on each point: 1. This can be usefully deployed in discussion when evidence is lacking and there hasn't been much (or any) effort to find evidence. If you have evidence of everything, then sure an absence of evidence is evidence of absence. We don't live in that world. This also really hinges on your ontology and on what kinds of physical traces you expect to find from the thing that you argue exists. 2. This is true. A correlation between two variables does not necessitate a causal link between them. The fact that causation requires correlation is irrelevant to the previous point. I am shocked that the candidate didn't realize this. To make this more concrete, umbrellas opening do not cause barometers to dip and low barometer readings do not open umbrellas, even though the correlation between them is close to 1. 3. The plural of anecdote isn't data because data assume some standardized way of gathering or collecting the individual datums. If your anecdotes are all comparable, then the plural of those anecdotes is data. In most cases this isn't true. This, however, does not diminish the role of case studies (as someone above mentioned). They can excel in areas where large-n studies fail, such as handling complex causal processes. Case studies can also use process tracing to get at causality, which is often hard to do in large-n work. I agree that everyone should be open to information that contradicts their worldview or their theories, but in making that point you radically misinterpret some very good advice.

C. Scyphers (2010-05-13 17:08:40)

Actually, I have to quibble just a little bit on number 3: "3. The plural of anecdote is not data. How dare you try to learn from stories you are told or what you yourself observe!" This reminds me of comment attributed to Pauline Kael (erroneously, but the point still stands) when Nixon was elected; "I don't know how Nixon won. No one I know voted for him." Just because the stories you are told (else how would racism ever end when dealing with racist communities) or what you yourself observe (pick

your favorite bigotry here) all say one thing does not necessarily make it true. At the same time, if the standard of truth is to be an empirical measurement of all possible data points, nothing will ever be decided. I suppose that's the failure of aphorism...

aaa (2010-05-13 17:15:11)

Then if (or rather, since) #1 is not true, Orwell is twice right, or rather his evil alter-ego, the character O'Brien & his Inner Party of Ingsoc. I can destroy the evidence, and CREATE the absence. "Collective Solipsism, if you like...."

seth (2010-05-13 18:10:19)

Ryan, you write that these three slogans are "very good advice." The underlying message of all three is "shut up". I believe that is almost never good advice. Perhaps you can supply an actual example – not a made up one – where one of these three slogans was said and was "very good advice"?

WHITE DRAGON (2010-05-13 18:19:45)

Comment on Seth observations 1) It is..... 2) It is not..... 3) It is..... 'Preventive Stupidity' is a real thing and can be found in all Red states.

fmwoodward (2010-05-13 19:20:57)

correlation is a necessary but not sufficient condition to indicate a causal relationship. Lack of correlation is pretty good evidence of the null hypothesis. Multiple anecdotes do not equal data. Data are the result of experimental observation under carefully controlled, repeatable conditions. Unless you are a social scientist where data consists of careful observation of multiple anecdotes.

pjcamp (2010-05-13 19:21:29)

It is true that zero correlation is evidence against causation. However, it does not follow from this premise that nonzero correlation is evidence for causation. A implies B does not mean that not A implies not B. The plural of anecdote is NOT data. Data is rigorous. Anecdote is random. But in between lies observation, semistructured and containing hints about how to obtain data. Kim Åyhus is wrong as he assumes that absence of evidence is the same nonexistence of evidence. This ignores the possibility that evidence may not have been looked for yet, or may not have been looked for in the proper way. When one is trying to prevent stupidity, one should avoid being stupid oneself.

chuko (2010-05-13 19:51:32)

Seth, it doesn't sound like you're listening to what people are saying. The first commentator is absolutely right. At least numbers two and three are simple admonitions against poor reasoning. I'm sure that some people are saying 'shut up' when they say these things, but certainly some people are saying 'maybe you should be a little more careful in your thinking.'

Seth Roberts on Orwell's "preventive stupidity" – Boing Boing « Firesaw (2010-05-13 20:01:40)

[...] Preventive Stupidity Exists via boingboing.net [...]

RevWubby (2010-05-13 20:28:18)

I can understand what you're trying to say with #1 and #2, but your objection to #3 has a serious problem. It's that there are 2 huge things stacked against our ability to know the truth through simple personal experience: Flawed perceptions and selection bias. Before you dismiss flawed perception, go research the reliability of eye-witness testimony and the malleability of memory. We absolutely SUCK at understanding and processing what we experience and constructing accurate models based on them. Really. It's more likely that any memory you have is more wrong than it is right, no matter how accurate you THINK it is. Selection bias forces us to think that what happens to us is somehow common, even if we know it isn't. Our brains are in no way required to get things right, only just right enough to not die (poison plant, man-eating beast, location of cliff etc.). That includes an enormous amount of false information. We just aren't adapted to create correct assumptions. These glib (and occasionally inaccurate) sayings are just shorthand ways of pointing out common errors in the ways we judge evidence. They are only useful if the people using them actually understand what they expand to mean. They only being to sound Orwellian if

repeated like a mantra or a magic spell, devoid of meaning and thought.

Vic (2010-05-13 21:12:49)

Say what you will about some of Seth's posts, he does attract interesting commentators...

Ben (2010-05-13 21:16:54)

Sorry Seth, I disagree. These are useful heuristics, along with Hume's and Occam's razors. I think of them as a primary level BS filter. For example: so you've invented a perpetual motion machine, Seth? Interesting. Sounds like complete BS but I'm prepared to entertain the very slight possibility that you have actually discovered something unusual. Knock yourself out - show me the data. Get your results replicated. Mix, repeat, collect your Nobel. But until you do, don't expect me to believe you just because the fact that nobody else has managed to do it somehow implies that your solution must be correct one. The underlying message of these things is not about 'shutting up', it's about not fooling oneself - with yourself being the easiest person to fool, to paraphrase Mr Feynman. Humans are fallible, unreliable and biased. This is why scientific method is used and why science is superior to 'other ways of knowing' in trying to understand how the universe works.

Ryan (2010-05-13 21:49:13)

Seth, I've never really interpreted these slogans as saying "shut up." They just seem like things that you should keep in mind when you are working. Sometimes people run a regression (to find a correlation), see the result they expect, and then make a leap to assume that they have found a causal relationship. I can't think of a specific example right now, but this kind of mistake shows up frequently in undergrad and grad student work and I know I have noticed instances of it in major journals. If you truly find that hard to believe I can dig up a specific example. I can't help but notice that you didn't actually respond to any of my three critiques. If your claim is that people can use these slogans to silence other people, or reduce the prestige of competing work, or block out information that doesn't fit their worldview, then I agree. These slogans can be used poorly and their effect can be negative. Maybe I am just young, but I haven't had these phrases used against me (yet) and when I have heard them I really have found them useful. I have learned from having people point out if I jump from correlation to causation. I have also learned from people challenging me on the generalizability of my findings ( #3). I think that, like so many things, in the right hands these slogans can be used positively and in the wrong hands they can be used negatively. However, logically, I think that they are far more neutral than you are letting on.

seth (2010-05-13 22:09:56)

Ryan, you write: "Sometimes people run a regression (to find a correlation), see the result they expect, and then make a leap to assume that they have found a causal relationship. . . . I know I have noticed instances of it in major journals. If you truly find that hard to believe I can dig up a specific example." Yes, please dig up a specific example. I'm guessing that when you look closely at your example, you will see that the researchers did not "assume they have found a causal relationship" but rather "assumed [usually reasonably] they have found evidence that makes more plausible a causal relationship." There's a big difference. Ben, you say these are "useful heuristics". Could you give an actual example? I gave two examples that supported my points. One was Kim's experience, where "absence of evidence . . . " was used to ignore a perfectly good point. The other was the case of the job candidate, where "correlation does not equal causation" had led a very smart and accomplished person into misunderstanding how correlation and causality relate. To other critical commentators: let me repeat, I gave examples. Not hypothetical ones, stuff that actually happened. None of you has done so. Of course I might be wrong but data-free arguments aren't going to convince me of that, nor should they. Where's the data? That's another problem with these slogans: They encourage data-free argumentation.

Ryan (2010-05-13 22:46:03)

Okay, here is one quick example of how someone could have used a reminder that correlation is not causation (I just googled "example of correlation and causation mixup" and then started reading). In 1999, Nature published an article by Quinn, Shin, Maguire, and Stone entitled "Myopia and ambient lighting at night". The general claim was that children that have lights on at night are more likely to develop myopia. Other later studies found that what was actually happening was that parents who were nearsighted were passing that on to their children. By coincidence, parents who were nearsighted also were more

likely increase the light in rooms at night”because they have poor eyesight. You can read about the later studies here: <http://researchnews.osu.edu/archive/nitelite.htm> This is an excellent example of how, while ambient light and myopia in children correlate, it is wrong to assume causation. The original result was published in Nature. You do seem rather aggressive on this, so I can't help but push back and ask you to respond to my original points. Do you really think that, given the world of imperfect information that we live in, absence of evidence is consistently evidence of absence? Do you actually think that your rebuttal to the job candidate said anything about the logically necessary relationship between correlation and causation? Do you really think that data is nothing more than a collection of (unsystematically gathered) anecdotes? Again, I understand how these slogans can be used negatively, but I think you are very wrong to call them "preventative stupidity" and I feel bad that you have obviously spent a lot of time dealing with closed-minded researchers. These slogans contain important lessons and they can be used well.

Ryan (2010-05-13 22:53:26)

Another weird point that I noticed as I skimmed the comments, is that you are demanding data as evidence for arguments that are often based on pure logic. I would like to see you give me a data-based proof for  $1+1=2$ . It isn't going to happen. I'm starting to worry that you are intentionally misrepresenting people's comments in your responses.

Ben (2010-05-13 23:08:24)

Seth the utility of each one of those heuristics is demonstrated by counter-examples: The anti-vaxers who are convinced that autism is caused by vaccinations. The AIDS denialists who believe that HIV does not cause AIDS. The 911-truthers who think the US government blew up the twin towers as part of some arcane conspiracy. AGW contrarians who think that blog science trumps 150 years of physics.

Tim (2010-05-13 23:24:02)

Hi Seth, I do really like the general argument you make here but I have to chime in with some more support for 'correlation does not equal causation' being not only good advice with a proper understanding of its true meaning, but also logically true. In your example the main problem seems to be that the person has an educational level which should allow them to differentiate between "absence of correlation IS absence of causation" and "correlation does not (always) equal causation". The implied 'always' is the big clue here. She should have known better. By contrast a young child could draw the conclusion that birdsong brings the newspaper which is a clear example of causation and correlation being different. By pointing out that the same cause (the sun rising) brings both effects you encourage them to think more deeply about problems. In fact 'correlation is not causation' should be used to encourage greater data gathering rather than a cessation. If there is a correlation it is a great idea to determine if it's causal or resulting from an additional extra cause. The third paragraph of the relevant [1]wikipedia article gives a very good clinical example of why correlation should be further examined to discover if it is or is not causation. Tim PS. I'm also forced to point out that your 'example' is an anecdote and not data. By your own third point it is merely a chance to go explore new data ;)

1. [http://en.wikipedia.org/wiki/Correlation\\_does\\_not\\_imply\\_causation](http://en.wikipedia.org/wiki/Correlation_does_not_imply_causation)

Tim (2010-05-14 00:22:23)

PS. I just realised that I misread your third point so my PS up above is wrong. Whoops. Sorry!

Kim Å~yhus (2010-05-14 00:28:30)

Pjcamp, you have misunderstood my proof a little. Even though absence of evidence and nonexistence of evidence are different, they look the same, and give the same conclusion in my proof. This is good, because it is more general. Since it is a proof, it is true. There are only 2 things to do to get knowledge: 1. Gather more data. 2. Get better explanations, models, theories. (These are fundamentally the same) When people do neither, I take this absence as evidence they have nothing to contribute. This may be the sanest discussion I have seen involving my proof. The usual reaction is to arrogantly misunderstand it, claim faith is better than proof, etc.

[citation needed]» Blog Archive » in defense of three of my favorite sayings (2010-05-14 01:25:09)

[...] Seth Roberts takes issue with three popular maxims that (he argues) people use "to push away data that contradicts this or that approved view of the world". He terms this preventive stupidity. I'm a frequent user of all three sayings, so I suppose that might make me preventively stupid; but I do feel like I have good reasons for using these sayings, and I confess to not really seeing Roberts' point. [...]

Buster (2010-05-14 01:46:49)

I have used #2 on multiple occasions and always as a response to conclusion-jumping. Mostly in response to arguments such as (and I do not quote directly ) "People of specified ethnic group(s) are overrepresented in the statistics of criminal act X; therefore persons of said ethnic group(s) are more by nature prone to commit said act." Persons using this line of argument almost always have a political agenda attached to it that is fundamentally not based in fact but in emotion. They focus on one factor that suits that agenda and ignores all other data. They are not interested in other correlations that disproves the importance of the ones that support their agenda. And because they already know what results they wish to find, their logic will always be corrupt. One augmentation one could propose is "Correlation does not equal causation but is a cause for further open minded inquiry." To use a completely different example where correlation = causation leads to faulty conclusions I would like to mention the phenomenon of the Cargo Cult. [http://en.wikipedia.org/wiki/Cargo\\_cult](http://en.wikipedia.org/wiki/Cargo_cult)

Scott (2010-05-14 01:47:49)

I believe all three of these statements can be valid as arguments in themselves. They are absolutely not proofs of one thought, nor do they read as such: 1. Absence of evidence is not evidence of absence. Just because you haven't seen evidence of something doesn't mean it doesn't exist - it still might. This is a valid argument. 2. Correlation does not equal causation. Just because a particular scenario exists in some circumstances along side another scenario does not mean that the one caused the other - although this is possible, it's mere correlation does not warrant proof of causality. This is a valid argument. 3. The plural of anecdote is not data. By definition, anecdotal evidence cannot be used as data, at least as far as any scientific study is concerned because by the very definitions (which may vary slightly by source, this set gathered from wikipedia for expedience although more traditional sources will still support my argument): - (1) Evidence in the form of an anecdote or hearsay is called anecdotal if there is doubt about its veracity; the evidence itself is considered untrustworthy. - (2) Evidence, which may itself be true and verifiable, used to deduce a conclusion which does not follow from it, usually by generalizing from an insufficient amount of evidence. If your argument is that anecdotal evidence is just evidence that has not been set in a laboratory environment then perhaps enough of it could be used as data but the term data means groups of information that represent the qualitative or quantitative attributes of a variable or set of variables. Being 'anecdotal' means colloquially that the data has no compensated or measured qualitative or quantitative measurements to put with other 'data' in order to reach a conclusion. I believe you have a very valid argument that these three errors in logic are misused to dismiss data that could very well prove valid. I also believe that your argument against them swung the pendulum too far in the other direction by basically stating (unless I misread your intentions) that anyone who uses these as fallacies of logic has missed the point and is incorrect.

Dan Kaminsky (2010-05-14 02:39:10)

I've been thinking about this all night, and I've finally come to a recognition of what you're experiencing: The missing negative. Suppose, if you will, that you have a thousand hypothesis' guided by absence of evidence. When you stop to collect data, will you see evidence of absence at a statistically significant rate? Suppose, if you will, that you recognize a thousand correlations. Upon further analysis, will you see that a statistically significant number of them are causations? Finally, listen to a thousand n=3 unstructured and uncontrolled stories. Upon actually generating solid experimental data behind all one thousand, how many of the stories will be significantly shown to have reflected reality? You'll note that I'm not telling you the answers to these questions. But this is the path you should be considering. The problem with following absence of evidence, correlation, and anecdote is that when you actually do get data, the agreement rates are simply not high enough. Prediction rates are too low. I may be the first person ever to tell you you just weren't sufficiently meta :) (That being said, all three are very good tools for forming questions and hypothesi.)

C Solberg (2010-05-14 04:36:20)

On the "correlation is not causation". As many others have noted correlation CAN be a necessary, but insufficient condition of causality. However correlation only reliably detects linear relationships, so there are good reasons to deny that correlation = causation. Over on Boing Boing someone brought up the example of the relationship between "human ability to live" and "levels of oxygen". At low levels of oxygen the ability to live is low, at medium levels it is high, and at high levels it is again low. There is a perfectly causal relationship between levels of oxygen and ability to live, but no linear relationship. And the same goes for every non-linear relationship you can care to think about.

Jason Olshefsky (2010-05-14 04:57:51)

It took me a while to untangle the negatives to make sense of this post (i.e. "'correlation does not equal causation' is not true".) What I found was that by spinning them into simpler truisms made more sense (although my logic terminology is very very rusty): 1. Absence of evidence is evidence of absence. 2. Causation implies correlation. (That is, causation -> correlation; therefore (no correlation) -> (no causation) but correlation does not imply causation.) 3. Data (deliberately collected information) is stronger evidence than anecdotes (arbitrary information). They are all intertwined as well, which I think confuses the lay person. Anecdotes can refute causation but not correlation: causation requires stronger evidence than correlation. Thus, anecdotal evidence does not refute evidence of absence. Because data is stronger evidence than anecdotes, absence of anecdotes alone is poor evidence of absence.

A handful of things to ponder – Orrill Reports (2010-05-14 05:32:26)

[...] Preventive Stupidity Exists, which linked to a page titled "Absence of Evidence" (containing a proof that I can't follow) and the inevitable comic that all this reminds me of. [...]

seth (2010-05-14 06:26:16)

Kim, very well put about the two ways to increase knowledge. I completely agree. Ryan, I looked up your example – the paper where you say the authors "could have used reminding" that correlation does not equal causation. Here's what that paper concluded:

Although it does not establish a causal link, the statistical strength of the association of night-time light exposure and childhood myopia does suggest that the absence of a daily period of darkness during early childhood is a potential precipitating factor in the development of myopia.

The authors didn't need reminding.

Sam Fent (2010-05-14 07:00:28)

Seth:

"Ryan, I looked up your example – the paper where you say the authors "could have used reminding" that correlation does not equal causation. Here's what that paper concluded: [...] Perfectly good conclusion."

But this is still an example where correlation did not imply causation, and the author's conclusions, however hedged, turned out to be wrong. A more scientific approach would have been to publish the paper saying that there was a correlation, nothing else, and then start a study to find out whether the link was actually causal, or whether there was a separate underlying cause. Your "gotcha" question to the job candidate still isn't remotely valid. What the job candidate \*should\* have said, if she had been on her toes, was "No correlation may imply no causation, but that doesn't prove that correlation implies causation. Correlation may be a necessary feature of causation, but it is not a sufficient feature. Since it's necessary, we can say that the absence of correlation implies the absence of causation, but since it's not sufficient we can't say that correlation implies causation." To put it another way, being able to read does not imply that one is a tenured professor. "But," you say, "doesn't \*not\* being able to read imply that one must \*not\* be a tenured professor?" Yes... but that still doesn't suggest that being able to read implies one is a tenured professor.



seth (2010-05-14 07:44:17)

Sam, the authors didn't need reminding that "correlation does not equal causation". Contradicting what Ryan said.

Jen (2010-05-14 08:40:39)

I like the term "data deniers"

Michael Bishop (2010-05-14 08:51:22)

[http://lesswrong.com/lw/ih/absence\\_of\\_evidence\\_is\\_evidence\\_of\\_absence/](http://lesswrong.com/lw/ih/absence_of_evidence_is_evidence_of_absence/)

Ryan (2010-05-14 10:14:29)

I fear the post I just typed was lost in the aether. I'll try again. Dambisa Moyo's book *Dead Aid* is another good example of mixing up correlation and causation. Here are two reviews from across the political spectrum that mention the issue: <http://www.opendemocracy.net/article/dead-aid-review> [http://www.prospect.org/cs/articles?article=is\\_foreign\\_aid\\_a\\_bad\\_thing](http://www.prospect.org/cs/articles?article=is_foreign_aid_a_bad_thing) Her basic problem is that aid can cause poverty (or low savings, or low economic growth) or respond to poverty. An OLS regression won't tell you what is going on, and she make a very forceful argument for causation from this correlation. It is interesting to note that in the introduction Niall Ferguson distances himself from Moyo, "The correlation is certainly suggestive, even if the causation may be debated." Moyo should have been reminded that correlation  $\neq$  causation. For a contrasting take, here is a responsible scholar reviewing the state of the literature: <http://www.cgdev.org/content/publications/detail/2745>

seth (2010-05-14 15:15:43)

Ryan, I believe Moyo knows quite well that "correlation does not equal causation". To convince me that the saying is helpful, please give an example – a case where it was used and seemed helpful. In my experience, someone makes a good point, well aware that a correlation doesn't prove causation but does increase its plausibility (e.g., the ambient lighting paper), and then someone makes this data-denying comment. No help at all. If I say " $1 + 1 = 2$ " and you say " $1 + 1$  doesn't equal 3" it isn't helpful.

bennetta (2010-05-14 20:39:47)

"Absence of evidence is evidence of absence." Reading the proof involving this has had me going for the past few hours. Let me provide two personal academic experiences that go both ways in favor and against the claim. When I was in law school, absence of evidence was evidence of absence. This is also true for legal practice. If you do not have evidence to back up your accusation, then your accusation is false. The reasoning behind it is obvious. But when I was an undergrad in Philosophy, we were taught to think that absence of evidence was, well, (usually) absence of evidence. Take the question of evolution vs. creation. The last class I took as an undergrad dealt with ethics, religion, and the human experience in general as evolutionary constructs. We read David Sloan Wilson (*Darwin's Cathedral*), Kim Sterelny (*Thought in a Hostile World/The Evolution of Human Cognition*), that sort of thing. The instructor was absolutely clear that lack of evidence did not exclude possibility. Yes, it is technically possible that we were created in seven days by a divine being. Similarly, it is technically possible that giant, purple monkeys are floating around the dark side of Pluto. But is either probable? Probably not, when you look at the body of evidence, so we will assume, for the sake of the class, that evolution is correct. We were taught not to exclude either the as bona fide fact, but to "place our chips" on probability, not possibility. This was especially true for Epistemology. Perhaps the instructor was just making a PC move to make the class sound more palatable to creationists. I am not an instructor, but I am sure there was also some conditioning going on in both cases. Law school professors condition their students to think one way, because it's how the profession works. Same thing with Philosophy professors. I can also see the benefits of the practical approach of the law vs. the speculative approach of Philosophy within each discipline. The former approach efficiently cuts out all the junk in a no-nonsense fashion, while the latter opens the gate for all sorts of wild speculation, much of which could be false. The former approach also distills the most "useful stuff" out of the "information sludge." So if one of the goals of science is to provide useful, applicable information, it is preferable to scientists to think like a lawyer, rather than a philosopher. I can also see the truth to the law school approach. If someone says there is a cat in my room, and I search my room thoroughly and find no cat, then there is no cat in my room. But conversely, there are also these things called externally unverifiable truths, questions that can't, by their very definition, be currently proven outside of any individual, questions like life on other planets,

God, etc. All externally unverifiable claims are false under the law school approach, even if they aren't false, regardless of how rational they may be. So, doesn't the truth of "Absence of evidence is evidence of absence," or "Absence of evidence is not evidence of absence," boil down to the goals of the actor? Don't you adopt one stance or the other depending on what you are trying to accomplish? Isn't it just a matter of functionality?

James (2010-05-14 20:47:28)

Buster above gives real world examples of how mistakenly thinking that correlation implies causation leads to real human misery. People usually use statement #1 to justify their belief in God, people may sometimes use statement three to ignore useful data (though it seems more like a snarky response to someone pointing out that their grandparents all smoked and never got cancer), but honestly statement #2 is the proper response to a logical mistake that people make all the time and is very literally true. Examples in real life abound, watch FOX News for five minutes. You say that it is important not to apply these statements liberally because we use them to ignore data that does not fit our world view. Statement #2, however, does not say anything about data, it says something about the conclusions being drawn from data. The comments here contain multiple anecdotes of real life mistakes being made and harm being done by believing that a correlation was a causation. If these multiple anecdotes are data (not #3) then should this be evidence that the statement is a useful reminder? Or is this data too inconvenient for your world view?

seth (2010-05-14 22:14:59)

"Buster above gives real world examples." Buster's second example – about Cargo Cults – is irrelevant. Of course people sometimes draw conclusions from correlations (doing X might help) that turn out to be wrong (doing X doesn't help). It would be unwise not to test our imperfect conclusions. By testing them, we learn. In the first case (racial differences) I have no idea what happened after Buster said what he said. So it's hard to tell if what Buster said was helpful. (I claim these three sayings aren't helpful.) Did Buster use the saying to push away data he didn't like? Possibly. Another problem with these examples is that neither of them involve "scientific discussion" which is what I'm talking about here. bennetta, I think it's unfortunate that your philosophy professor didn't teach you that absence of evidence for X reduces the plausibility of X, in the sense that the greater the absence, the lower the plausibility. Your belief in X can start off anywhere – high, medium, low. But as absence of evidence increases – as more time passes, for example, without evidence for X showing up – your belief in X should go down. This is one of the points made on Kim's webpage. I haven't seen it made elsewhere.

Mr. Topp and the Big Bad Blog » Links, with more Star Wars than usual (2010-05-15 03:13:38)

[...] Orwell's preventative stupidity does exist. [...]

Cedar Riener (2010-05-15 10:34:10)

I think the problem is that these sayings are used in different ways by different people. For a working scientist, each of these is a request for more data, or more information about the current data. It often reflects considerable background knowledge about the particular things being measured. In the myopia example above, a discussion about correlation and causation does involve the logical implication of a correlation between night light and myopia, but this is also in the context of what these scientists know about the mechanisms of lens and corneal distortion, and genetic mechanisms in eye development. The same goes for "the plural of anecdote is not data" – scientists certainly use anecdotes in reasoning as any other human does, but they use these as inspirations for controlled experiments. Much of psychology begins with a skepticism of common sense (I know Seth knows this, but others might be interested in Stanovich's *How to Think Straight about Psychology*, or Lilienfeld et al's recent *50 Great Myths of Popular Psych*). So, I think each of these aphorisms can be deployed as requesting more data (or more information and context about the current data), reflecting the skepticism of science. But the danger is when moves from a skeptic, who is dubious, but able to be convinced, to a cynic, who uses these sayings to dismiss all correlations, anecdotes, or absences of evidence as equally meaningless. When these sayings are wielded by a cynical layman (or sometimes even a cynical scientist) they can lead to preventive stupidity. The way I try to handle this in the psychology classes that I teach is to first try to get students to be skeptical (using at least the second two of these sayings). But then (and this usually has to wait until senior year, both for knowledge, and for maturity) try to get them to see that all correlations are not equally lacking in causative indication. For example, comparing the correlations between IQ on identical and fraternal twins raised together and

apart, does let you know a bit about how complex the nature and nurture question is when it comes to (at least this particular kind of) intelligence. But to evaluate these correlation is not a purely logical exercise, but one which needs a fair amount of background knowledge.

Tom in TX (2010-05-15 13:31:48)

Regarding 2: If A and B are correlated, then there are several possibilities: a. A causes B. b. B causes A. c. There is some C that causes both A and B. d. There is no causation. It is just a coincidence. If, for the sake of argument, the correlation looks good enough to exclude d, then, yes, you can say that you have reason to think there is causation. But the mischief enters when you decide what causes what. Some cases might not be too hard. Does the rain cause the umbrellas to appear? Or do the umbrellas cause the rain? Or do weathermen cause both the rain and the umbrellas? Even experts can have trouble in harder cases. Gary Taubes discusses one in Good Calories, Bad Calories in the chapter on the Conservation of Energy:  $\text{Energy stored} = \text{EnergyIn} - \text{EnergyOut}$ . The left side of the equation correlates with the right side (and correlates *\_very\_* well, since they are always equal). But everyone jumps to the conclusion that the right side *\_causes\_* the left side. And thereby we get a whole bunch of diet-and-exercise advice that doesn't seem to work very well. We could think of a bunch more examples involving global warming and economics and so forth - some silly, some serious. Just knowing that there is *\_some\_* causation doesn't settle much. Thomas Aquinas said almost a millennium ago that every event is caused by another event. The correlation seems very good - events seem to always happen right after other events happen.

seth (2010-05-15 14:57:07)

Cedar, I agree that teaching students that correlations vary in persuasiveness is a good idea. If everyone who said "correlation does not equal causation" could name 10 important research projects that began with the observation of a correlation . . . the world would be a better place.

Dan Kaminsky (2010-05-15 18:32:39)

Seth, If your slogan is data, not slogans, why are you proclaiming the value of an absence of data? Burdens of proof matter. The problem is that there are a tremendously large set of things for which we lack data. It is tempting to convert that into an information source - well, we don't know that the core of the earth isn't, in fact, made of giant radioactive turtles - but down that path comes insufficient predictive powers. Your problem is you see the world through too clear a lens. Bear with me a for a moment. You're a really smart guy (and I enjoyed your diet, btw). Your experience of absent evidence comes only after a presumption that, were certain things to be true, there would be specific things present. So you're seeing violated predictions, which is not actually the same thing as absent evidence. It's similar for your experience of correlations and anecdotes. These things are preconditions for your entire processing framework. You've *\_already filtered out\_* the useless correlations and anecdotes, a massive number of which could simply be dumped into this comment thread. And that's OK. Without course grain loose data to guide us, we'd never be able to form a useful hypothesis to test. Exceedingly noisy data has its uses. What you're missing is the alternate universe, where the burden of proof is shifted, where correlations guide policy, where one person's story is enough to guide the reality we operate in. That world sucks, Seth. Consider the situation of alternative medicine. Some of it works. Damned if we have any idea what - there is so much noise pretending to be signal. What you're missing about the alternate universe, specifically, is that not everybody is you, and there's an infinite set of unevidenced correlated anecdotes that *\*you'd\* filter* and *\*they\* wouldn't* that *\*the truth\* would have to compete with*.

Ryan (2010-05-15 22:30:23)

Seth, I am glad that I pursued this because I think I have found at least one core point of disagreement between us. Let me see if I state your views clearly: You think that correlation says something about causation because causation requires correlation. You think that finding a correlation between X and Y can make us more confident that X causes Y (than we were before finding the correlation). On this particular issue, what bothers me is that finding a correlation between X and Y might make us more confident that X and Y are related, but it says absolutely nothing about causal order (or spuriousness). Moyo uses a correlation (poverty/low savings & foreign aid) to argue for causation. You could just as easily use the same regressions to argue that poverty causes aid to increase, because aid is intentionally directed at poor countries. So, while finding a correlation should increase our confidence that something is linking X and Y together, it should not increase our confidence that X causes

Y, because it adds an exactly equal amount of evidence to the argument that Y causes X. This is why we can't move from correlation to causation. Obviously, pointing this out is useful a starting point instead of an ending.

seth (2010-05-16 00:13:00)

Ryan, I'm afraid this is beside the point – I was writing about whether sayings such as "correlation doesn't equal causation" are helpful. Not about what can be inferred from correlations. But you're right, we do disagree here. Let's say X causes Y. Then usually we would expect them to be correlated. We start with four possibilities: X causes Y, Y causes X, both are caused by something else, and X and Y are unlinked. When we observe lack of correlation it reduces the plausibility of X and Y are unlinked. The plausibilities of all 4 events must add to 1. Reducing one of the four must increase the sum of the other three. Thus unless we're sure of an alternative explanation for the correlation, observation of the correlation should increase the plausibility that X causes Y.

Dan Kaminsky (2010-05-16 03:18:39)

seth– If I may distill your argument, "Since lack of correlation makes causation less likely, correlation must make causation more likely." Here is another logical statement in this family: "Since I am not drowning, it is more likely that I am flying." Yep. That is entirely true. It is more likely. Very, very, microscopically more likely. And there's your problem right there: You are allowing any increase in confidence to imply plausibility, no matter how small. And that, unfortunately, is untrue. Consider, for a moment, the number of metrics in the universe right now that have increased in the last year. They are all correlated, Seth. They are not all causative. In fact, the odds that any two randomly selected correlative metrics have even a remote chance of being reflective of a causative relationship is infinitesimal. Now, you can filter your correlative sets, looking for those where a relationship is plausible. But – and here's the key – the plausibility doesn't come from the correlation. The plausibility comes from the fact that you're a really smart guy, with a theory of the world, against which you can compare sets of relationships. It is your theory that allows you to know where to look, to design your experiments. Mere correlations are rough filters. It is in fact the case that there are more metrics overall than there are correlative metrics. But it is a very, very, \*very\* low quality information source – good for exclusion, but wayyyyyyyyy too conflated for inclusion.

David (2010-05-16 13:58:04)

And "preventive stupidity" is data, and not a slogan, right? :-)

seth (2010-05-16 14:13:55)

"preventive stupidity" is an anti-slogan. A slogan antidote. Fight fire with fire.

Good Sunday Night Listening « Theory to Practice (2010-05-16 18:59:48)

[...] Along that line of thinking, check out Seth Roberts' recent, relevant, and most excellent posts here and here. [...]

Sam Fent (2010-05-17 13:50:54)

Seth: The problem seems to be that you think that "Correlation does not imply causation" is a useless slogan because scientists already know that correlation does not imply causation. However, the fact is that many non-scientists also read studies, see correlations and then leap to "causations." Such non-scientists may be people in decision-making positions, such as legislators and educators. When faced with arguments assuming causation when there is only evidence for correlation, I think that reminding people of the slogan is useful. For instance: there are numerous statistics that show a correlation between increased helmet usage and increased bicycle accidents. This has lead many people to assume that wearing bicycle helmets causes accidents. An example can be seen at <http://www.ctcyorkshirehumber.org.uk/campaigns/velo.htm>. The authors cite the statistics showing the correlations, mention in passing that there could be other causes for the increase in bike accidents (such as increases in ridership), yet still go on to state multiple times that "evidence shows helmet use increases the accident rate." No, the evidence cited does *not* show that helmet use increases the accident rate, and yet this is a serious legislative campaign that may seriously affect bike helmet laws. (Whether one agrees with bike helmet laws is irrelevant with respect to the science involved.) In a similar vein (this time from Freakonomics): after studies showed that there was a strong correlation between children's test scores and the number of books in a child's home, then-Governor Blagojevich announced a plan to

send every child in the state one book a month until they reached kindergarten, apparently under the assumption that the physical presence of books in the home would actually cause the children to become smarter. Again, a time when the mistaken assumption that correlation implies causation almost had large legislative effects. (Again, one might agree with sending books to children's homes, but one should not conclude from the correlation studies that the books might make the kids smarter.

seth (2010-05-17 14:32:37)

Sam, when Person Y says "correlation does not equal causation" to Person X, it's above all Person Y who is made stupider. Person Y is made stupider because he responds with a slogan rather than something substantial. I believe butter is good for us. If you eat margarine, it's bad because it prevents you from eating butter. In your two examples, let me suggest that in the first case the writers knew perfectly well that correlation doesn't prove causation and in the second case the Governor's idea had a lot to do with using those books as campaign literature. I'm sure you act on imperfect inferences every day – do you KNOW the supermarket will be open before you go there to buy something? So it isn't clear why others shouldn't do so.

bibliolept (2010-05-17 15:29:20)

There is a simple phrase for these sayings: Rules of Thumb. Not always true, but most often worth remembering and considering. These "principles" – I consider "principle" an apt word because they provide a reasonable starting point for analysis – do not cease being exceedingly useful simply because they are occasionally wrong. After all, "there's an exception to every rule," right?

Dan Kaminsky (2010-05-18 01:46:23)

Seth – Now hang on a second. Sam just brought up two perfectly legitimate instances where correlation/causation confusion led directly to bad public policy, in bike helmets, and in early childhood education. Your reply, unless I'm totally misreading it, was that neither action was the result of science, just politics: The bike helmet study authors knew they were being misleading, the the governor knew he was doing something worthless but it looked good for the voters. On the one hand, sure, that's the real world, we don't necessarily have policy based on science. On the other hand, you're not exactly being a neutral advocate here. In fact, you seem to be advocating this baldly unscientific behavior. But maybe I'm being presumptuous. So let me put it to you very plainly: From your perspective as an apolitical scientist, should raw correlation be used as a guide to public policy, as in the two instances Sam Fent described?

colin (2010-05-18 08:09:07)

I'm sorry, Seth, but you would fail a logic class. 2 is correct. Your counter claim is wrong, you're committing the classic logical fallacy of confusing predicate and proposition: Zero is a predicate not a proposition. That is, you cannot talk of the 'zero' of something, because, if it's zero then there is no 'something' there. So zero correlation does not equal zero causation - because zero correlation means that there is no correlation at all! Zero correlation equals zero. So it does not exist, so it cannot even enter into a argument. If there is zero correlation then the right hand side of this equation is simply blank! If there is no correlation then there is nothing to be said about correlation. If two things aren't correlated, then the question does not even arise as to whether or not they are caused. Consider another example: if i have two non-existent apples, and i polish them what do i have? Two non-existent shiny apples? No - you never had any apples to begin with, coz , they dont exist! Thus if there is 'zero correlation', which is another way of saying there is a 'non-existent correlation'. Then an 'non-existent correlation' is the same as 'non-existent causation'. Well duh! 'Non-existent correlation' is also exactly the same as 'non-existent magic elves', and the same as 'non-existent santa clause'. Ofcourse two things that are dont exist are are going to be equal. All you've proved is that zero equals zero. Look let me spell it out in an argument form example: Argument A: Correlation is not the same as causation But no correlation is the same as no causation Therefore, correlation is exactly the same as causation is the same as: Argument B: Marriage is not the same as Happy Marriage But not being Married is the same as not being Happy Married Therefore, being married is exactly the same as being happily married. The Argument B is clearly wrong and loopy, and your Argument A is loopy because it commits the same logical fallacy. To use a more common analogy: it's like you divided by zero. As for 3, "The plural of anecdote is not data." Depends, the word data could have two different meanings here. Both of which you confused. By data you might mean information, in which case 3 is right. But really data is different from information. But when you recognise the distinction, then your criticism is true but irrelevant. The word 'Data' comes latin, and means 'to give'. It is what is 'given' for free. Data, or what is given, has to be worked on and refined into 'Facts'. Fact from the latin 'Fac' meaning 'to make' (as in factory and manufacture). In computer science Data is just a

collection of meaningless points, then it has to be refined and processed into Information (or facts). BUT only information (or facts) can form the evidence for an argument. Where as, data is meaningless and valueless it should never be used as evidence for an argument. So when you claim that people can learn things by reasoning from the data, this is flatly wrong... The data 'the given' stuff first needs to be examined to discover if it is of any worth or value, and to say what that worth or value is. Data is value neutral, it can be either good or bad, useful or worthless; it is all still data. When you have discounted the data that is rubbish, and analysed the remaining data according to it's worth, then it has become Information. INFORMATION CAN be used as evidence in an argument to reach conclusion. DATA should NEVER be used as evidence for anything.

seth (2010-05-18 10:32:19)

Dan, you ask, "should raw correlation be used as a guide to public policy, as in the two instances Sam Fent described?" Sure, in some cases. For example, the idea that smoking causes lung cancer is/was mostly based on "raw correlations" (if I understand what you mean by that). It would have been a bad idea to wait for better evidence of causation. When making public policy, I think it's a poor idea to ignore data – which means not ignoring correlations. Should a single correlation of 0.10 be used to guide the spending of a billion dollars? Of course not.

Jasper (2010-05-19 16:20:40)

The proof isn't incorrect, but the definitions are unreasonable. [http://ojasper.nl/essays/recent %20incorrect %20argument.html #recent %20incorrect %20argument](http://ojasper.nl/essays/recent%20incorrect%20argument.html#recent%20incorrect%20argument)

seth (2010-05-19 18:19:03)

definitions "unreasonable"? I'm afraid I don't know what that means.

Alan Crowe (2010-06-23 08:46:35)

Privileging zero correlation as a reliable indicator of the absence of a causal connection is dangerous because we are often interested in systems with feedback. Think about a room with a thermostat. Perhaps there is broken cloud and the room is intermittently warmed by direct sunshine. If the heating is on, the thermostat turns it down when the sun comes out. It zeros out the correlation between room temperature and direct sunshine by creating a cancelling inverse correlation between direct sunshine and heat from the heating system. One might argue that the thermostat can only weaken the correlation, there must be some change there to drive the operation of the thermostat. Not so fast. If the sunshine is hitting the thermostat we may well find the room cools down when the sun comes out and shuts down the heating. Feedback can drive the correlation down, down, down, right through zero and into confusingly negative. Now think about the kinds of things we argue about. Consider, for example, a mature social democracy with taxes that have, for many years, wobbled about the Laffer Curve tipping point. The political system provides feedback that tends to null out the correlation between tax rates and tax revenue. Does zero correlation provide evidence that they are not causally connected?

SkepticalCynical (2011-03-20 17:55:53)

Seth, I find it a little bit bizarre that you regard "correlation is not causation" as a slogan intended to make you go away, rather than a core lesson from epistemology encouraging you to think more carefully. If I may restate your views, you correctly state that there are four possibilities for the relationship between variables A & B: (1) A causes B, (2) B causes A, (3) A & B are caused by C, and (4) A & B are not related. If we discover that A & B are correlated, you view this as reducing the likelihood of (4), and therefore necessarily increasing the likelihood of (1)-(3). This is false. A & B are just as likely to be unlinked as they were before and you've improperly updated your priors. There are plenty of robust correlations (think super bowl winners and election results, cyclical & counter-cyclical stocks, etc.) between variables that are, in fact, unrelated. Modern social science tools like GSS make it almost trivially easy to hunt for such correlations. Suppose someone told you there is a very robust correlation between holding a college degree and adult income level (this is a true statement). Do you therefore conclude that awarding twice the number of college degrees next year will substantially increase the lifetime wealth of the recipients? I would hope not, and anyone who so argued would indeed need to be reminded that "correlation is not causation". The bottom line is that if you want to show causation, you need to show it (c.f. Mill's Methods). The fact that no correlation is evidence for no causation does not imply the converse.

Seth Roberts (2011-03-20 21:31:19)

SkepticalCynic, you write: "If we discover that A & B are correlated. . . A & B are just as likely to be unlinked as they were before." I disagree. I can think of hundreds of cases where the correlation between A and B reflected a linkage between them (linkage = A causes B, B causes A, or both have a common cause). That you can cite a few examples where you claim that A and B are correlated but none of these three cases is true doesn't make my hundreds of examples go away. Throughout scientific history, people have observed correlations and used them to suggest ideas that were then tested in various ways, such as experiments. Many of these ideas turned out to be true. One example is the idea that smoking causes lung cancer. It began with a correlation. Another example is the idea that maternal lack of folate causes neural tube defects in the fetus. It began with a correlation. A third example is the theory of continental drift. It began with a correlation.

Steamy the Punk (2012-05-02 11:51:24)

In regards to the Absence of Evidence is Evidence of Absence. I ran into this earlier and nearly fell out of my chair. While the logic is right the interpretation is false The logical conclusion is Probability of existence given evidence is greater than the probability of existence given absence of evidence. which of course is TRUE.. but this doesn't suggest that Probability of existence given absence of evidence is equal to ZERO. So ultimately this proof just says that absence of evidence is evidence of probable absence. Which is like saying "I haven't seen one, so maybe it doesn't exist" which is an unremarkable conclusion

### **More Anti-Science (2010-05-13 19:25)**

Professional scientists mostly ignore the slogans (e.g., "absence of evidence isn't evidence of absence") I discussed in [1]my previous post. For example, the professional-scientific conclusion that smoking causes lung cancer came mostly from correlations. This conclusion was criticized, sure, but not by saying "correlation does not equal causation".

Professional scientists have a much worse problem, which is that they criticize much more easily and fluently than they praise. ([2]Marginal Revolution is an excellent blog partly because it doesn't suffer from this.) This can be depressing (lots of work is underappreciated), exciting (anyone who sees this has a big advantage), or merely amusing, as in [3]this example to which Stephen Marsh drew my attention:

I just returned from the [4]MS4 conference. It is the fourth year that a group of philosophers of science have gathered to try to tease apart the implications of computer simulation in science. . . .Several presentations gave harsh criticism of climate science models. Bayesian tools (a statistical technique) were given some especially harsh criticisms. Everyone agreed the models were problematic in some sense or another. That the results were subject to all kinds of errors and suspicions, and there were substantially difficult difficulties to sort out. . . . Despite this, everyone concurs the models are robust . . . No one disagreed that the planet was warming.

The poor ability of professional scientists to praise means that comparison of A and B (two theories, say, or two experiments) mainly consists of comparing how much A and B have been criticized. How much A and B would have been praised, had scientists been better at praise, is unknown. This is a very poor way to compare stuff. Inability to praise also means that there is too much criticism. In my experience, scientists have trouble separating serious criticisms from trivial ones. For example, that climate-change models haven't been shown to predict correctly is a serious criticism not emphasized enough (e.g., at the MS4 conference).

1. <http://www.blog.sethroberts.net/2010/05/12/preventive-stupidity-exists/>

2. <http://www.marginalrevolution.com/>

3. <http://sciencebysteve.net/?p=1848>
4. <http://www.hps.utoronto.ca/ms4/index.htm>

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Nathan Myers (2010-05-13 20:26:51)

How about praising climate models for, conservatively, underpredicting the worldwide temperature rise? Every time we get a new data point, it's right at the top of the confidence interval. In other words, the climate trend is not only worse than we hoped, it's worse than we expected, and exactly as bad as our worst-case fears.

Mac (2010-05-14 02:35:51)

"For example, that climate-change models haven't been shown to predict correctly is a serious criticism not emphasized enough (e.g., at the MS4 conference)" Is that really true? When this started becoming a political issue, Hansen produced the basic projections back in 1988, with 'B' being the expected outcome, and 'A' & 'C' bracketing it. Back in 2007 (about a decade later) we looked to see how those projections went. Sure enough, the next decade had been predicted well by the climate model. Scenario B Prediction : 0.21 to 0.31 oC/decade GISTEMP real data: 0.14 to 0.24 oC/decade HadCRUT3 real data: 0.14 to 0.24 oC/decade So the Scenario B Prediction (1988) looks marginally high - although it was within error bars. However, the model was simple - it didn't include some things that are included in the 2004 model. Despite this, however, the main problem is simple - short term data can't be used to test a long-term model. It's getting up to a couple of decades since we started doing this seriously so we are only now being able to test the early predictions with 'REAL' data (rather than running the model forwards and comparing against historical data). The good news is that it looks like the models are working.

Mac (2010-05-14 02:42:34)

BTW - There are plenty other examples of the models being shown to predict correctly too. For example, this diagram shows the mapping of future ocean temperatures against the 1990 model. The filtered trend is well inside the modeled range. [http://www.realclimate.org/images/IPCC\\_Fig\\_1\\_1.jpg](http://www.realclimate.org/images/IPCC_Fig_1_1.jpg) So, again, it simply isn't true that the models aren't predicting correctly. The hard part is remembering that you need to smooth the data because it is so 'noisy' due to short term uncertainties. The models are working well, though.

seth (2010-05-14 05:11:45)

Mac, when I said "predict correctly" it was shorthand for the idea that a model is useful if it tells us (correctly) something we didn't already know. I didn't literally mean "predict correctly". Consider a model that predicts that a not-yet-measured correlation will be between 0.99 and -0.99. Even if this prediction turns out to be correct, it doesn't increase your confidence in the model. When Hansen produced three widely-varying "predictions", I assume all three were predictions (outcomes consistent with the model). Since it was very likely a priori that the actual temperature would be somewhere between the three, this is not a success for the model. Perhaps someday Hansen will tell us what the model actually predicted given the events during the decade on which the model depends (e.g., number of volcanic eruptions). Then we will be able to see how well the Hansen model predicted - asking whether it did better than a naive predictor would have done. If temperature has been rising for 100 years it is no great success to predict it keeps rising at the same rate.

Darrin Thompson (2010-05-14 06:14:27)

Can you demonstrate what good praise looks like? Maybe you have...

dearieme (2010-05-14 06:39:23)

"Despite this, everyone concurs the models are robust . . .": then they are chumps. I've spent more than 40 years working with mathematical models, and without good data from controlled experiments I wouldn't make such a claim - and my physico-chemical systems had many fewer variables than the climate has. "No one disagreed that the planet was warming": I can neither agree or disagree since the quality of the observations is dubious, and the data-manipulations used are kept secret or, according to Phil Jones, simply were never recorded. I suspect that there has been warming - consistent with the ex-



pression "little ice age" - but I see too few data that have been sceptically scrutinised with intelligence, competence and honesty.

seth (2010-05-14 22:37:56)

Darrin, see my post on appreciative thinking: <http://www.blog.sethroberts.net/2008/12/12/whats-appreciative-thinking/>

### **Assorted Links (2010-05-14 14:36)**

- [1]Jane's [Jacobs] Walks
- [2]9 years of sleep data
- [3]overview of Jane Jacobs's work
- [4]God is in every leaf of every tree. A great summing up of what science is about - taking seriously little things (such as leaves) and drawing inferences from the very small ("leaf") to the very large ("God"). Someday I am going to use this saying . . . I would have used it already, had I known of it.

Thanks to Anne Weiss, Tom George, and JR Minkel

1. <http://www.janeswalk.net/>

2. <http://www.phoboslab.org/log/2010/05/9-years-of-sleep>

3. <http://www.lewrockwell.com/schmidt/schmidt22.1.html>

4. [http://www.stat.columbia.edu/~cook/movabletype/archives/2005/10/god\\_is\\_in\\_every.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2005/10/god_is_in_every.html)

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Laura (2010-05-15 13:01:08)

I like the website on Jane's Walks. When I first learned about Jane Jacobs from this blog, I started asking the architecture professors and students what they knew about her. We had very memorable conversations. Today, students are at graduation ceremonies around the university. I always miss the students when they leave Cal, because some are so memorable and I will never see them again. An ESPM professor had to tell me how to cope with this. It is very hard.

### **Preventive Stupidity: A Nuanced View (2010-05-15 22:15)**

I learned something from the comments on [1]my preventive stupidity post (also [2]here). [3]The best comment was from Kim Oyhus, whose earlier comment had started it all. Were I to discuss the subject from scratch, here's what I'd add (mostly elaborating what Kim said):

Scientific discussions are usually about data and theory. From Data A, someone has "concluded" - more precisely, raised the plausibility of - Theory X. At this point, preventive stupidity often begins: Someone says "correlation doesn't equal causation" or "the plural of anecdote is not data" or something similar.

Here's what I think. More data are better. Two data sets are better than one. To go from one data set (A) to two (A and B) is a step forward. Less data are worse. To go from one data set (A) to none is a step backward. If you respond to the assertion that A supports X by mentioning more data that bears on the truth of X, that's a step forward.

The more convincing the new data (in either direction, pro or con), the bigger the improvement.

Likewise, more ideas are better. Two plausible explanations of A are better than one. To go from one idea (X) to two (X and Y) is a step forward. Fewer ideas are worse. To go from one explanation (X) to none is a step backward. If you respond to the assertion that A supports X by mentioning another plausible explanation of A, that's a step forward. The more plausible the new explanation, the bigger the step forward.

The sayings I wrote about (e.g., "absence of evidence doesn't equal evidence of absence") make their users stupider because they push them from thinking about one data set to thinking about none (they dismiss Data A) or from considering one idea to considering none (they dismiss Theory X). They make the rest of us stupider because they prevent their users from making useful contributions. They really are preventive stupidity, as Orwell said.

If these sayings were used as transitions, as throat-clearing, fine. If somebody wrote, "Look, correlation doesn't equal causation. Here's another plausible explanation for what you observed . . ." that would be okay. In my experience, that's not what happens. They're used to support an overall dismissiveness. Several months ago I [4]wrote about my observations that connected socks with foot fungus. [5]Some of the comments provided new relevant data – steps forward. A few comments, however, made this or that preventive-stupidity point ("[6]Sample size of 1, no control . . . you can't seriously think you've proved anything here", "[7]your post is post hoc ergo propter hoc reasoning"). The comments didn't go on to make a step forward. They were steps backward.

1. <http://www.blog.sethroberts.net/2010/05/12/preventive-stupidity-exists/>
2. <http://www.boingboing.net/2010/05/13/seth-roberts-on-orwe.html>
3. <http://www.blog.sethroberts.net/2010/05/12/preventive-stupidity-exists/#comment-433708>
4. <http://www.blog.sethroberts.net/2009/10/11/how-to-eliminateprevent-a-skin-infection-and-what-it-means/>
5. <http://www.blog.sethroberts.net/2009/10/11/how-to-eliminateprevent-a-skin-infection-and-what-it-means/#comment-351999>
6. <http://www.blog.sethroberts.net/2009/10/11/how-to-eliminateprevent-a-skin-infection-and-what-it-means/#comment-353237>
7. <http://www.blog.sethroberts.net/2009/10/11/how-to-eliminateprevent-a-skin-infection-and-what-it-means/#comment-368230>

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Kim Åyhus (2010-05-16 03:37:32)

I almost blush with all this praise. Seths simple rules of what is better, are surprisingly identical to my own. They are the hart of science. It is a pity they are not taught in school. 1 hour of this was all I got in my first 12 years of school, and that was about Popperian falsification, and I was lucky to get that much. Here is my current "Correlation is Evidence of Causation" proof, which became quite simple: <http://kim.oyhus.no/CorrelationAndCausation.html>

Laura (2010-05-16 05:24:24)

I've always enjoyed sharing your ideas with other people. I do like to try your ideas. I bought some Straus butter again. I don't know if the other light affected my sleep, because my moods were strange when I used it. My sleeping was erratic, so I added fluorescent lights again.

Patrik (2010-05-16 20:17:30)

@Seth Came across this essay regarding anthropogenic global warming. I thought you might find it interesting. <http://wuphys.wustl.edu/katz/climate.html>

Nathan Myers (2010-05-17 01:46:26)

To get some idea of how destructive this campaign is, consider a short history. Back in the '80s and '90s, some people noticed that their children were being injected with increasing amounts of a mercury-based toxin, thiomersal ("Thimerosal"). Vaccination defenders *correctly* pointed out that there was no evidence of any harmful effects from injecting any amount of thiomersal into children. This was *correct* because, in fact, there was *no evidence of any kind*: no tests had been done with thiomersal. It was grandfathered in at the FDA's inception. All that was known was that if thiomersal did have an effect, it wasn't especially obvious, because it had been used for a long time, although never in amounts nearly as large as was lately being done. These assurances, being transparent deceptions, only increased suspicion. Later, as limited studies were finally completed, the results were routinely inflated far beyond the authors' conclusions, further inflaming suspicions. Today, having run the experiment to completion directly on the public, we can say with fair confidence now that thiomersal was not, by itself, causing autism. We don't know if it caused other problems; each possible effect would need to be checked individually, but most haven't. It's all considered moot now, since as of about 2002 children's vaccines in the U.S. haven't had it. (This is, by the way, a few years later than had been misleadingly announced.) The damage, though, is done. A big swath of the population has become irredeemably distrustful of the vaccine industry administration, and vaccination rates have declined dangerously. The only answer those parents had, when being so hamhandedly misled by denials, was "absence of evidence of harm is not the same as evidence of absence of harm". To have evidence, you must collect evidence, and none had been collected. The administration fought such collection tooth and nail. Without evidence, there was no bad news; with evidence, who knew? There might be lawsuits; there was heavy litigation over asbestos. Bad news would lead to declines in vaccination rates, which would certainly be harmful too. You might be tempted to say the administration turned out to be right, and the parents wrong, but that would be dishonest. The parents were right to be suspicious under the circumstances, because absence of evidence really *isn't* evidence of absence. Real evidence of absence of harm is what parents reasonably expect before allowing you to inject toxins into their children. It didn't exist. Lack of evidence is no substitute. We're still living with the tragic consequences, in reduced vaccination rates and increased incidence of preventable illnesses, of public officials trying to pass off lack of evidence as if it were itself evidence.

Darrin Thompson (2010-05-17 07:19:00)

Nathan, We as autism parents were not only suspicious in the past, we will continue to be suspicious in the future. We're suspicious of nearly anything we hear coming out of the culture that bred what you described as the vaccination administration. I include in that culture general health advice, and global warming advocacy smells the same to me. I don't know of any evidence that the dysfunctional groups in the science community that are setting public policy and media narratives have changed any. Your comment summarized my feelings on the subject articulately.

Nathan Myers (2010-05-17 12:14:06)

Darrin: I am an autism parent myself, and quite aware of structural impediments to sound public health policy. Still, everything I have studied carefully indicates that climate scientists are both careful and sincere, and that global-warming denialists are not. I don't doubt that some are sincere, but that's not enough for me.

Glen Raphael (2010-05-17 14:12:03)

> *Still, everything I have studied carefully indicates that climate scientists are both careful and sincere, and that global-warming denialists are not.* For me, that was one of the big revelations of the climategate emails - that people like Michael Mann *really believe* the goofy things they say - they aren't being *deliberate* propagandists. I'm now pretty sure everybody in this debate is sincere. The real question is whether people on one side or the other or both are *deluded* to believe the things they sincerely do believe. It seems to me there's a lot of carelessness on both sides. On both sides the people who are the most careful aren't the ones who do the most talking or get the most press.

Nathan Myers (2010-05-17 14:39:47)

I'm perfectly certain that many in the debate are not sincere. However, that is far from saying everyone on the one side is insincere, or that everyone on the other side is as careful as I would like. Unsound reasoning is so pervasive in our culture that it's often hard to tell outright lying from expressions of self-deception. People who fear change will use unsound reasoning to

conjure up reasons to justify resisting change, in the face of any amount of evidence.

Glen Raphael (2010-05-17 20:35:18)

> *People who fear change will use unsound reasoning to conjure up reasons to justify resisting change, in the face of any amount of evidence.* That framing might be more ambiguous than you intended. I don't think I agree that that's the true nature of the primary dynamic in this debate but if it were, it might make sense to apply that idea to "people who fear change" *in the average world temperature*, people who fear change *in the atmospheric CO2 level*, people who fear change *in the average sea level*, people who fear change *in glacier coverage*, and so on. Having done that - having described one side as applying unsound reasoning because they fear the possibility of environmental change and are going to great lengths to justify resisting said change, you could then describe the opposing side as simply "those who don't fear change". Or at least don't fear it enough to justify extreme measures resisting it. Or perhaps just fear change less than the other guys.

Nathan Myers (2010-05-17 20:43:59)

The word you're looking for there isn't "change", but "worldwide famine, mass extinction, hundreds of millions displaced". It's rational to do what you can to avoid those, but it would involve some changes in economic flows.

Glen Raphael (2010-05-17 22:08:02)

No, using your framing it would be the fact that people fear environmental *change* - and possibly technological progress in general - that *leads them to invent* and preach ridiculous apocalyptic scenarios like those you list. The doomsday scenarios are part of what you called "unsound reasoning" above. You just "conjured up" three alleged reasons to keep doing what you're doing - to keep the same worldview and fight for the same policies and demonize the same people as before, rather than accept the world as it is. Because I don't intensely fear environmental change - don't regard the environment as particularly *fragile*, I don't feel the need to invent disaster scenarios that I can then claim to rescue the world from, if only people everywhere will join my faith, fear the same things I do, and follow all the policies advocated by the priest class of my chosen religion. BTW, the earlier-linked Jonathan Katz essay is pretty good.

Nathan Myers (2010-05-19 05:17:41)

Not even Exxon still denies that all of the above will occur in this century. Their story now is that it's not their fault, and that switching to other energy sources won't make any difference. Their motivation for saying so is obvious. The dishonesty and sloppiness is overwhelmingly on one side.

Glen Raphael (2010-05-22 10:37:36)

Okay, I guess I'll bite: What combination of assumptions leads to the joint conclusion that: (a) we'll have "worldwide famine" due to AGW in this century, and (b) ...but this is preventable by switching to other energy sources? My guess is that you might be able to get there by assuming a "steady state" with regard to farm locations, crops, and farming technologies - assuming that those somehow can't or won't gradually change over time in response to changing climate as they always have in past centuries, also assuming a "steady state" with regard to economic activity - meaning that it won't hurt productivity at all to switch to less polluting technologies, yet NOT assuming a "steady state" with regard to energy technologies or political policies so we can hypothesize changing those willy-nilly to whatever The Regulators think is best. But I'd like to see it spelled out: what assumptions are being made and what is the evidence for those assumptions actually being true? Is there actual science behind this? Or are you just talking about the IPCC's speculations on drought and famine in Africa such as discussed here: <http://www.telegraph.co.uk/comment/columnists/christopherbooker/7231386/Africa-crops-yield-another-catastrophe-for-the-IPCC.html> <http://www.heliogenic.net/2010/01/27/more-ipcc-advocacy-not-science-africa/>

## **Preventive Stupidity: An Example (2010-05-17 05:43)**

[1]The very first comment on my preventive stupidity post said this:

“Absence of evidence is not evidence of absence.” This was a very useful concept to point out to those people who believed that because nominal national US housing prices had never dropped before that they wouldn’t drop in the future.

At 39:59 in [2] this excellent podcast, Barry Ritholtz says, “It’s just not true [that US housing prices have never declined]. Obviously in the post-Depression era home prices really collapsed.” The saying absence of evidence is not evidence of absence kept those who said it from looking into the facts of the matter.

1. <http://www.blog.sethroberts.net/2010/05/12/preventive-stupidity-exists/#comment-433011>
2. [http://www.econtalk.org/archives/2010/03/ritholtz\\_on\\_bai.html](http://www.econtalk.org/archives/2010/03/ritholtz_on_bai.html)

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Nathan Myers (2010-05-17 14:21:43)

But in fact it didn’t matter whether prices had dropped: the (correct) point was that they could drop in the future, regardless. That poster’s ignorance of pricing history, coupled with sound reasoning that discounted any conclusions from that ignorance, led to the correct conclusion. If in fact people were actually misled about house pricing history (which seems to be the case), sound reasoning would have protected them. Reasoning promoted here would lead one to look at a period in which prices had not (or were said not to have) dropped, and take it as evidence that they would not drop.

jlonisdale (2010-05-17 14:52:11)

It is weird that you think this is an example of preventative stupidity rather than that of an incomplete argument. Side note, the phrase “evidence of absence” in the context of the phrase you think of as “preventive stupidity” seems to have a more specific meaning than your more literal interpretation: [http://en.wikipedia.org/wiki/Evidence\\_of\\_absence](http://en.wikipedia.org/wiki/Evidence_of_absence) I didn’t make the other good arguments against housing price movements never going down because it seemed off topic - but there is a whole lot of other data driven analysis that could have been made about the likely path of housing prices such as price to rent or income ratios, affordability indices, real prices historically dropping, rising interest rates, unsound lending and the financial condition of the average borrower, the prevalence of ARMs and the future path of interest rates, other regions in the US with falling housing prices such as Texas in the 80’s and CA in the 90’s and other countries with falling housing prices. The key here is that even the above arguments are just surface arguments. I can’t just make an argument about price to income ratios without addressing whether or not there is something truly significant about that ratio. If we are having an in-depth discussion, I also have to address the counter arguments that try to give a justification for why those higher ratios are sustainable in today’s environment. The question is whether or not the other arguments on your list of “preventive stupidity” are good in the same way as the price to income ratio is useful for learning about housing markets - they make a point but are otherwise incomplete. I still stand by my statement in the original comment - In the case of housing markets, knowing that something can still be possible or even likely despite it not happening in recent history can be very useful. It is actually more useful than knowing that housing prices went down in the Great Depression, because while many people believed that the future path of the economy was tied to the housing market, the point that housing markets fell in the Great Depression is just not that interesting unless people thought another Great Depression was likely independent of the housing market. Now, when discussing ideas with other people we do not always give them the benefit of doubt and dig down into the data with them. The salesman/huckster and politician are two groups of people where we know they are biased so if we do engage them we might not engage them fully. It is insulting to explain that I am not weighting their ideas very much because I think their anecdotes or correlations are just convenient coincidences or carefully cherry-picked data. In these cases it is often easier to tell them that the plural of anecdote is not data and correlation is not causation rather than go into the details and accuse them of dishonest data manipulation. It is very annoying to be on the other side of this style of confrontation because the person making the “preventive stupidity” arguments, when not followed up with the below arguments is being a little (or if it is about your own research, very) disrespectful

to the person who sees themselves as trying to learn the truth in an unbiased manner. 1. The underlying cause for the correlation. 2. When the absence of evidence would be significant or what evidence would disprove the view (The housing market hasn't fallen in recent history, but if the market is still rising when the mortgage credit to GDP ratio falls I'll take that as evidence that the market has moved for fundamental rather than speculative reasons) 3. The reasons why the anecdotes were collected in a biased manner and how this bias skews the results From this point in a conversation, you can either label their actions preventive stupidity and halt discourse entirely, or you can ask for more depth about what they think the underlying causal factor is, what would qualify as evidence of absence or why the anecdotes are significantly biased/unrepresentative.

seth (2010-05-17 15:57:26)

yeah, I agree. To respond to "correlation doesn't equal causation" by saying "that's preventive stupidity" is little help. It's much better to do the various things you list (e.g., ask "the reasons why [the person speaking believes that] the anecdotes were collected in a biased manner and how this bias skews the results.")

Stephen M (Ethesis) (2010-05-17 19:29:35)

**example of preventative stupidity rather than that of an incomplete argument** so that an incomplete argument is preventative stupidity. Black swan events are an interesting study because in complex systems they happen so often.

### Restless Legs Syndrome, Niacin, and Web Search (2010-05-17 16:50)

Gary Wolf and I have [1]a post on Boing Boing today about how [2]Dennis Mangan cured his mom's Restless Legs Syndrome. I mentioned this accomplishment [3]earlier. Mangan's story is an example of what I call personal science – doing science yourself about something you care about.

More One comment on Boing Boing is that niacin is also known as Vitamin B3 and if we searched "restless legs syndrome AND Vitamin B3" we'd get lots of hits. I tried that search and got zero hits.

1. <http://www.boingboing.net/2010/05/17/restless-legs-syndro.html>

2. <http://mangans.blogspot.com/2009/05/niacin-for-restless-legs.html>

3. <http://www.blog.sethroberts.net/2009/06/19/acne-cured-thanks-to-self-experimentation/>

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Mike Kenny (2010-05-17 20:28:45)

I used to have a hard time with restless feelings in my legs. I found cutting out caffeine after 4pm and stretching when the feeling kicked in (touching toes with straight legs, more or less) helped a lot for me. My dad has trouble with restless legs, and I don't think he's found leg stretches help much for him.

Charles (2010-05-17 21:47:12)

I read through the comments, and as usual you had the vitamin-scaremongers out in force. Almost no one dies from vitamin toxicity. Wikipedia: "In 2008 there were no deaths reported from vitamin overdose,[7] as has been the case for 17 of the last 25 reporting-years.[8]. Deaths from eating laundry products typically produce more deaths than vitamin poisoning." I have been telling people for 30 years that some supplements work for some people for some things; some supplements do nothing for some people with some conditions; and some supplements are harmful to some people with some conditions. The only way to find out is to try them, self-experiment, and learn to distinguish placebo effects. Speaking of self-experimentation, I just got a blood sugar monitor, which seems to be kind of a fad among low-carb people these days. But it's really fascinating

to see how your blood sugar reacts to certain foods. If you're into self-experimentation, I highly recommend it. It's not only interesting, blood sugar is one of the more important things to monitor for your long-term health.

Laura (2010-05-18 05:55:23)

If a psychiatric patient is restless because of a medicine (like Abilify), a psychiatrist might prescribe propranolol (Inderal). Propranolol (generic name) is also used for other things, such as performance anxiety.

Dennis Mangan (2010-05-18 06:49:39)

Hi Seth, thanks for writing about it; hopefully this will help some people. When I wrote a short piece on my blog about my mother having success with niacin, it was noticed by Bruce Charlton, a regular reader of my blog and then the editor of the Medical Hypotheses. The journal will be familiar to most of your readers as you've discussed it here, and is (or was) dedicated to publishing "radical ideas". Dr. Charlton invited me to write a letter for his journal about my and my mother's experience, so I did. So he deserves a lot of credit for recognizing that this had some significance. Unfortunately, Bruce's penchant for publishing radical ideas proved too much for certain sectors of the scientific/medical establishment, and he was sacked from his job one week ago, on May 11. And you, Seth, of course, have been pretty enthusiastic about it since you learned of it; kudos for your article.

Brody (2010-05-18 14:55:19)

Interesting post! I found out that taking promethazine hydrochloride (an anti-nausea drug under the name of Phenergan) for migraine-induced nausea or airsickness gives me a bad case of something that sounds very similar to RLS while it's in my system. (Found this out the hard way after taking Phenergan on a cross-country flight). Next time I have to take it (thankfully only once every month or two) I'll supplement with some niacin and see if it helps. Who knows?

### **Gouda Cheese Did Not Stimulate Immune System (2010-05-18 10:42)**

[1]A recent study in Finland found that cheese with added lactic acid bacteria (sold commercially) stimulated the immune systems of elderly subjects. Earlier studies had found similar effects when the bacteria were put in milk or yogurt. To me, the most interesting result was that the cheese alone (Gouda, a fermented cheese) had no detectable effect. I take that to mean that some fermented foods contain too little bacteria to make a difference. I'm going to have to stop using my umami hypothesis as an excuse to eat cheese – although cheese may also be good for the fat it contains.

Thanks to Anne Weiss.

1. [http://www.sciencedaily.com/releases/2010/05/100513071957.htm?sms\\_ss=email](http://www.sciencedaily.com/releases/2010/05/100513071957.htm?sms_ss=email)

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Laura (2010-05-18 22:00:18)

There is a lot of cheese in the San Francisco Ferry Building! I went there today and there was a lot of people!!

dearieme (2010-05-19 10:01:28)

But who, given the choice of all the cheeses of France, Italy and Britain, would opt for Gouda?

## Harvard Student Almost Gets Away With It (2010-05-18 12:06)

If [1]Adam Wheeler, a former Harvard student, hadn't applied for a Rhodes Fellowship, it appears he would have gotten away with four years of academic dishonesty. While at Harvard, he won several prizes. On his Rhodes application, he listed "numerous books he had co-authored, lectures he had given, and courses he had taught". "Numerous books"? Yet this is how he was caught:

A Harvard professor first became suspicious of Wheeler while reviewing his application for the Rhodes scholarship. He discovered that Wheeler had plagiarized his piece almost completely from the work of another professor.

His "piece"? What's that? When you apply for a Rhodes fellowship you don't submit an academic article as part of your application. Why didn't the reviewer check if the "numerous books" that a college senior claimed to have written actually existed? What's next, a sixth-grader says she's won a Nobel Prize and a Harvard prof doesn't notice a problem?

Like Wheeler, [2]Ranjit Chandra was caught toward the very end of his academic career. My impression with Chandra is that, as he repeatedly escaped detection, the falsifications became more extreme.

1. [http://www.huffingtonpost.com/2010/05/17/adam-wheeler-harvard-stud\\_n\\_579177.html](http://www.huffingtonpost.com/2010/05/17/adam-wheeler-harvard-stud_n_579177.html)

2. <http://www.sethroberts.net/chandra/index.html>

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Alex Chernavsky (2010-05-18 20:31:55)

And speaking of falsifications: I bought [1]*A Million Little Pieces* not long after it was published. However, I stopped reading it after the first couple of chapters, because I became convinced that the author (James Frey) was making it up, or at least greatly exaggerating. To this day I can't understand why it took so long for him to be exposed as a fraud.

1. [http://en.wikipedia.org/wiki/A\\_Million\\_Little\\_Pieces](http://en.wikipedia.org/wiki/A_Million_Little_Pieces)

## Resveratrol Revisited: The Plural of Data is Not Data (2010-05-19 14:25)

In 2007 I got an email from Preston Estep, a gerontologist and former Chief Scientific Officer of Longevity, Inc., offering me a place in an informal trial of the benefits of resveratrol that he was organizing. Recently I wrote him to find out what happened. Here's his reply:

We got a few people to volunteer but not enough for an organized trial to be worth the effort, partly because initial reported benefits evaporated under scrutiny and we couldn't decide what variables/biomarkers to test. There are a couple of efforts that have taken off since then to try to collect data on therapeutic modalities, including resveratrol. The largest-scale effort I know of is [1]CureTogether but it isn't very useful because the vast majority of reports appear to be subjective and unreliable (e.g. "I feel that resveratrol has slowed my aging ..." and so forth). Such a web-based approach would be much more useful if objective tests like those you have done could be implemented but I'm skeptical you could get many people to produce and report data in an unbiased fashion. I have found that the desire to believe



whatever you're doing is good is incredibly strong and can be rationalized ad infinitum.

Interestingly, it looks like professional scientists and even big pharma might have gotten caught up in that mindset. Many of the reported benefits of resveratrol have been controversial from the beginning and recent reports suggest that neither scientists nor pharma can reproduce key results. Matt Kaeberlen, one of the first discoverers that sirtuin overexpression extends lifespan and co-founder of a biotech company with me in the early 2000s, returned to academia and has raised some red flags about the resveratrol research. He showed that the key assay used to discover resveratrol in a drug screen seems to depend on a biochemical artifact. Sirtris, a biotech company specializing in sirtuin research and that was bought by Glaxo for \$720M, developed some resveratrol analogs that were reported to have multiple benefits, including control of type 2 diabetes. But recently Pfizer and Amgen have published studies saying they cannot reproduce Sirtris's results. You can read many reports of this mess on the web but here are good, recent accounts of the controversy:

[2][http://www.boston.com/business/healthcare/articles/2010/05/17/cambridge\\_biotechs\\_work\\_on\\_resveratrol\\_cuts\\_to\\_basics\\_of\\_biology/](http://www.boston.com/business/healthcare/articles/2010/05/17/cambridge_biotechs_work_on_resveratrol_cuts_to_basics_of_biology/)

[3]<http://www.nature.com/nbt/journal/v28/n3/full/nbt0310-185.html>

[4]<http://www.newscientist.com/article/dn18396-stay-young-on-red-wine-drugs-think-again.html>

[5]<http://seekingalpha.com/article/182123-what-did-glaxosmithkline-get-in-return-for-buying-sirtris>

[6][http://pipeline.corante.com/archives/2010/03/09/a\\_gksirtris\\_wrapup.php](http://pipeline.corante.com/archives/2010/03/09/a_gksirtris_wrapup.php)

In [7] a recent New Yorker article about cancer chemotherapy Malcolm Gladwell told a similar story: High hopes for a cancer drug disappeared when more data came in. I am more positive than Estrup about the CureTogether study of resveratrol. If the collected data suggest benefits, it supports more work; if the data do not suggest benefits, it argues against more work. Above all, the CureTogether data will others decide whether to try resveratrol.

1. <http://curetogether.com/>

2. [http://www.boston.com/business/healthcare/articles/2010/05/17/cambridge\\_biotechs\\_work\\_on\\_resveratrol\\_cuts\\_to\\_basics\\_of\\_biology/](http://www.boston.com/business/healthcare/articles/2010/05/17/cambridge_biotechs_work_on_resveratrol_cuts_to_basics_of_biology/)

3. <http://www.nature.com/nbt/journal/v28/n3/full/nbt0310-185.html>

4. <http://www.newscientist.com/article/dn18396-stay-young-on-red-wine-drugs-think-again.html>

5. <http://seekingalpha.com/article/182123-what-did-glaxosmithkline-get-in-return-for-buying-sirtris>

6. [http://pipeline.corante.com/archives/2010/03/09/a\\_gksirtris\\_wrapup.php](http://pipeline.corante.com/archives/2010/03/09/a_gksirtris_wrapup.php)

7. <http://www.gladwell.com/pdf/treatment.pdf>

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Vic (2010-05-19 16:01:12)

Well, as they say, the plural of anecdote isn't data

seth (2010-05-19 16:05:55)

yes, apparently the plural of data isn't data.

thehova (2010-05-19 19:51:13)

yes, the New Yorker was a quite a downer last week.

Hal (2010-05-21 11:40:06)

I have a rare, fatal and incurable disease myself, and just this week a major trial finished with a negative result. No benefit found, despite promising preliminary results. Earlier this year another major trial failed, similar story. So far there have been dozens of treatments tried after earlier positive results, and only one has showed any benefit - and that only extends survival by two months. I am a member of an online site called PatientsLikeMe which lets everyone record what treatments they are trying - supplements, experimental drugs and therapies, etc. You also record your rate of deterioration. Everyone can see everyone else's data and the goal is to try to find common elements among people doing better than average. Unfortunately it doesn't seem like anything works consistently. It relates to the distinction between anecdotes and data. If one person said they felt a little better after trying, say, fish oil, that's an anecdote. But you can go to PLM and see dozens of people who have tried it, when they started, what dose they used, and whether their progression changed. That starts to look like data. I think the difference is that PLM is not a fish oil forum. That is just one of literally hundreds of different things people have tried. There is no reason to think there is a selection effect in reporting results, positive or negative. Anecdotes are more likely to be biased. Someone who gets benefit from fish oil is more likely to talk about it than someone who noticed no change. This is why we are cautioned not to accept even multiple anecdotes as objective data. You need to get away from selection effects.

seth (2010-05-22 05:00:21)

yeah, PatientsLikeMe is a great thing.

Dennis Mangan (2010-05-22 10:44:11)

As I understand it, the non-reproducibility of results concerns the mechanism of action of resveratrol analogues, not the reported benefits of resveratrol itself.

Marko (2010-05-23 00:53:45)

Is there a global warming connection here?

Mark (2010-05-23 01:00:59)

The general pattern for new or fringe theories is that initially they are supported, and then many fall apart. I think this is partly because initial studies are done by true believers, who may not be qualified researchers and who work in an undisciplined way on a small scale. Nevertheless, their results are published in the media and, nowadays, become conversation fodder on the internet. Serious researchers avoid the topic at this stage. They don't want to be stigmatized as cranks, and for controversial theories they don't want the internet anonymous attack machine to come after them. But as evidence seems to be building up, they finally break down and start to look at things. This is when problems are found, and the initial theory starts to look flakey. This process cycles over and over as the initial theory is modified. Because theories never, ever die, no matter how much evidence there is against them.

seth (2010-05-23 01:42:27)

Marko, yeah, as stuff gets looked at more closely, the initial conclusions may not hold up. I guess that's the connection with global warming.

Nathan Myers (2010-05-23 21:59:43)

Curious, too, is the assumption that all fish oil is the same. How about trying bug oil? There are only a million or two species of bugs to try, but surely they're all more or less alike. Next we can try bacteria. Bacteria must be good for us.

Stephan (2010-06-02 22:16:14)

I think the resveratrol thing is mostly hype. I worked with Brian Kennedy and Matt Kaeberlein until just recently and they had been predicting for some time that the sirtuin assay was bunk- it was finally demonstrated in a recent study that Dr. Estep alluded to above. We used to crack jokes about resveratrol all the time in the lab because we thought the whole thing was ridiculous. It does seem to activate SIRT1 in vivo, but it's not a direct effect as claimed. Resveratrol is certainly not a "calorie restriction mimetic". Any time high-impact publications, high-power labs, the media and private money are involved, you

have to take results with a big grain of salt. Once the hysteria sets in, you get labs that pump out crappy studies that get published in Nature or Science without proper scrutiny. Then people can't replicate the results, but they don't publish that because who wants to contradict a Nature paper that everyone has already taken as fact? Either that or it gets published but it's low-impact. So the grumblings usually remain in the dark corners of scientific meetings. This kind of intellectual pollution seems to travel along with hot topics like nutrition and aging. It was shocking to me when I first began reading diet-health papers.

### Assorted Links (2010-05-19 22:30)

- [1]fermented shark, an Icelandic delicacy
- [2]Attention-Deficit/Hyperactivity Disorder and Urinary Metabolites of Organophosphate Pesticides (may be gated). Found a correlation between ADHD scores and pesticide exposure. "The present study adds to the accumulating evidence linking higher levels of pesticide exposure to adverse developmental outcomes."
- [3]Does God see everything? (see comments). "The pent-up pain and frustration of current and former ABC News employees has finally boiled over." [4]Follow-up.

1. <http://en.wikipedia.org/wiki/H%C3%A1karl>

2. <http://pediatrics.aappublications.org/cgi/reprint/peds.2009-3058v1.pdf>

3. <http://www.observer.com/2010/media/top-abc-news-producer-leaving-network-become-high-school-guidance-counselor-0>

4. <http://www.observer.com/2010/opinion/deck-was-stacked-against-her-defense-mimi-gurbst>

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Laura (2010-05-20 00:57:06)

I wonder what it's like being around the fermented sharks. It is hard enough for me to be around the cheese at Whole Foods! It smells really weird!!

Allen K. (2010-05-20 03:42:03)

Is there some connection between the ABC links here and your other usual topics? (This is not a critique; I'm genuinely curious.) It's rather notable how well-written that vicious comment section is, and I thank you for pointing it out.

Mara (2010-05-20 04:23:25)

If I understood it correctly, the ABC issue is the equivalent of a Corporate Horror Story...

seth (2010-05-20 05:19:07)

yes, the ABC issue is a Corporate Horror Story – that is one connection. But the main connection is the leveling (loss of monopoly power) produced by the internet. Self-experimentation is a kind of leveling: you should have to have a grant to do science, self-experimentation makes it possible for anyone. Blogs are a kind of leveling; anyone can have a blog. And the ABC comments are a kind of leveling: They don't fix the problem because the source of the problem has left but at least they allow the victims to speak up. I also thought the ABC comments were a great picture of what one workplace was really like. Self-experimentation doesn't just allow anyone to do science, it also allows a more thorough sort of science to be done – for example, sleep can be studied for much longer periods of time. I can easily test 10 different ways to lose weight via self-experimentation; doing conventional research it's hard to test even one way. The ABC comments were probably more detailed than any one writer could ever assemble.

## Losing Weight By Eating New Food (2010-05-20 10:33)

The theory behind the Shangri-La Diet predicts that new food is less fattening than familiar food. At the center of the theory is the idea that smell-calorie associations raise the set point. New food is less fattening because its smell is less associated with calories. This prediction explained why I often lost weight after visiting foreign countries, but not after visiting other places in America.

A few days ago, I got an email from a 40-year-old man who has taken this a step further:

I've developed a variant of your diet which works really well for me, and which I haven't read about so much on your blog, so I thought you might be interested. I live in NYC, and I'm obsessed about different foods. I'm constantly on the hunt for new restaurants, novel ethnic cuisines I've never had, etc, and NYC is a great place to indulge this hobby. A couple of years ago I was about 210 lbs, which on my 6'0 frame is at least 30 lbs overweight. I read your book, and tried the oil, etc, and it worked well for me, but it felt like a lot of trouble, and I was actually dropping weight faster than would normally be considered healthy. So I changed the strategy, and simply made up a rule, never to eat the same thing twice.

If I want to lose weight, I follow the rule religiously. I go to different restaurants, order radically different things off the menu, choose unfamiliar beers, wines, cocktails etc when I'm out at bars and clubs. If I follow the rule 100 % of the time, I drop about 1 lb per week consistently. If I "cheat" one or two meals a week, I maintain my weight. Any more than that and I slowly gain weight. I'm currently 179 lbs, and have been between 175 and 185 for about two years. Although I'm active, I'm no gym rat, and this "system" is the only nod towards a healthy lifestyle I've made during that time. Apart from never repeating a meal, I eat and drink whatever I feel like.

The dose-response relationship (the more he does it, the bigger the effect) makes other explanations less plausible. He later added:

One thing I forgot, which is important, is I absolutely don't eat when I'm not hungry, and I've never had a problem walking away from food if I'm full. Some people might have problems with that, I guess. Also it requires more discipline than I made it sound. Especially when you're busy, it's very tempting to hit the same lunch spot every day.

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q (2010-05-20 12:24:25)

interesting idea. but i really wonder where he finds menus with 'radically' different things in new york city. restaurants – even ethnic ones – are pretty homogeneous these days. restaurant kitchens are simple and tend to use the same ingredients. for instance, if you are talking about thai food, how many different brands of fish sauce are there, and how many dishes can you get that don't have it as a major element of the taste? is taste/calorie association really that specific that a piece of beef or pork seasoned one way or another would trigger or not trigger it?

the man in question (2010-05-21 03:44:14)

There are literally thousands of restaurants in new york, and almost every one of them has something on the menu which is quite different. in a given week, I might eat fish tacos, a meatball sandwich, pho, chicken and rice from a street cart, a hamburger from five guys, an australian meat pie, linguine with clams, a sesame pancake with sliced beef in the middle, chicken

vindaloo, a banh mi, etc. All of these things, and many many more, are available within about half a mile of my office. If I'm really stumped, it's usually a failure of imagination rather than actual availability. I read numerous new york food blogs, and I'll dig through those for inspiration. Check out <http://www.eatingintranslation.com/> for an idea of what's available.

bennetta (2010-05-21 13:57:34)

How different are we talking, here? Is not one ingredient the same for two days in a row, or will it work to say, eat sweet and sour pork one day, and then a carnitas burrito the next? The reason I ask is because this would be very interesting (and fun!) to test, but is just not feasible where I live. If I could eat somewhere different for every meal, I could see myself losing weight just by virtue of the amount of running around I'd have to do, but I can't. And buying so many single portions just isn't practical or cost-effective. I could, however, change it up by cooking the same thing multiple ways. My spice rack is pretty extensive. For instance, instead of just making one big bowl of brown rice, I could do simple brown rice one night and curried brown rice with cayenne the next. This sort of thing is completely feasible for your average person.

the man in question (2010-06-01 05:53:34)

Well, I mostly just try and keep it as different as possible. Certainly I'll eat carnitas tacos one day, and schnitzel or something the next. Obviously it's no good to just change the shape of the pasta and leave the sauce the same :-). If you can cook for yourself (I rarely do, you should see the size of my new york kitchen), then you can easily do this technique exactly as you describe. The biggest problem I have on the rare occasions that I do cook, is what to do with the leftovers, which are by definition, the same thing twice. If they're freezable, I freeze them, and put off eating them as long as possible (at least 6-8 weeks), if they're repurposeable in some manner (roast chicken -> chicken soup, etc), then I'll do that.

### **College in Other Countries (2010-05-21 13:41)**

At the Chinese University of Hong Kong, students have real power over teachers because of the importance of teaching evaluations. If your teaching ratings are low, you can be fired.

A friend of mine works there.Â Recently he taught a two-hour class. One student tended to be extremely late, often arriving only 10 minutes before the end of class. One day,

MY FRIEND (friendly) You come so late, why do you bother to come at all?

STUDENT I have another class after this one.

She was serious.

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thehova (2010-05-21 19:45:15)

My undergraduate school also took evaluations seriously. They directly linked them to pay. The problem is that challenging professors tended to get bad evaluations (especially those who are stingy graders).

John S. (2010-05-22 02:44:05)

I have a lot of stories like that from my time as a TA at an American university. One young woman, who had already been absent three or four times in the first month of class, stopped coming altogether. She missed a lot of homework and an hourly exam. After three weeks she came to my office and asked if she could make up all the work. I asked her where she had been.

She said she had decided to drop the course, but then changed her mind.

### **Butter: New Antidepressant? (2010-05-22 16:57)**

Ever since I found that [1]pork fat improved my sleep, I've tried to eat a substantial amount every day. A few months ago, I knew I couldn't eat any that day so I had a lot of butter at lunch (about 30 g). About 1-2 hours later, I felt in an unusually good mood – in particular, unusually calm. I hadn't noticed such an effect with pork fat, perhaps because it is digested more slowly. (It's easy to see that pork fat melts more slowly than butter.)

Now a friend has reported a similar effect:

My mood is better with the Straus butter, but I am concerned about my cholesterol, so maybe I'll just use it when I feel depressed.Â But it does work.

I'd guess that [2]Straus Family Creamery butter, which is from grass-fed cows, has more omega-3 than other butter but I haven't noticed mood elevation from flaxseed oil, so I doubt that's involved. Moreover, I've always been drinking plenty of flaxseed oil so I doubt I'm omega-3 deficient.

Maybe this has something to do with why certain food is "comfort food".

[3]A new study found that consumption of unprocessed meat was not associated with more risk of heart disease but that consumption of processed meat (such as bacon) was associated with greater risk of heart disease. The whole American fear of animal fat (including butter) may be due to an unrecognized confounding: those who ate more animal fat also ate more bacon.

1. <http://www.blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>

2. <http://www.strausfamilycreamery.com/>

3. <http://circ.ahajournals.org/cgi/content/abstract/CIRCULATIONAHA.109.924977v1>

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Jim (2010-05-22 17:47:10)

I use lots of unsalted butter with my pan-fried wild salmon, with my fried omega-3 eggs, and drizzled all over my steamed veggies.

Laura (2010-05-22 20:02:13)

Seth: Your new idea about butter is innovative! You didn't note that your friend has schizoaffective disorder, which is a combination of bipolar disorder and schizophrenia. So the butter is not just dealing with normal sadness, in this case. I believe the butter can save suicidal, depressed people from going to the psychiatric hospitals, which cost way more than Straus butter. I will tell my friends in the depression group about it. I am interested to know about their experience eating it. I will bring my Straus butter to them, so they don't have to buy it. Straus butter is cheaper at Whole Foods than at Berkeley Bowl.

seth (2010-05-22 20:58:50)

Laura, thanks for the additional info. I would like to know what your friends in the depression group say about this.

Laura (2010-05-22 21:07:12)

Seth: okay, I will tell you.

John H (2010-05-23 00:18:47)

About that new study linking bacon and other processed meat to heart disease, Gary Taubes's comment about earlier epidemiological studies seems relevant: . . . in observational studies, such as the ones used to indict processed meat, the statistical significance is not nearly as meaningful as the confounders â€” those other factors that might explained the statistically-significant effect observed. With cigarettes and cancer, itâ€™s virtually impossible to imagine anything that could explain the 20-fold increase in lung cancer among heavy smokers (not that the tobacco industry didnâ€™t try). With these smaller relative risks, even those considerably larger than 2, itâ€™s all too easy to imagine confounding variables that the researchers either didnâ€™t measure or didnâ€™t properly assess . . . Imagine for instance all the possible ways that the highest quintile of processed-meat eaters in the 1990s or 2000s might differ from the lowest quintile, particularly considering the fact that processed meats have been generally perceived as carcinogenic for thirty years or more. What youâ€™re comparing are people who donâ€™t seem to give a damn whether something is healthy or not (or people on the Atkins diet who are predisposed to gain weight easily) to health-conscious, quasi-vegetarians. The latter are probably better educated â€” a typical finding in all these studies â€” of a higher socioeconomic class; they go to better doctors, get better medical care, eat generally healthier diets (whatever that means), etc. etc. The reason to do randomized trials is to render irrelevant all these possible confounders â€” disseminate them equally among all the arms of the study. Without randomization, that an effect is statistically significant says virtually nothing at all about whether or not the cause of that effect is what you set out to study. The fact that RCTs are effectively impossible to do in these kinds of situations . . . doesnâ€™t negate the fact that theyâ€™re necessary to learn anything meaningful. Meta-analysis can be meaningless in this context because itâ€™s quite easy for every study done, in every population, to have the same confounders. The only way to learn anything meaningful â€” short of getting an effect as large as the lung-cancer/cigarette association â€” is to do a randomized trial. One of the lessons I learned from my early life reporting on high energy physics is known in that field as Panofskyâ€™s law (after Pief Panofsky, founder of the Stanford Linear Accelerator Laboratory): If you throw money at an effect, and it doesnâ€™t get bigger, it means itâ€™s not really there. In nutritional epidemiology, if you throw money at an effect and it doesnâ€™t get bigger, you do a meta-analysis. It always struck me that the very fact of having to do a meta-analysis is pretty compelling evidence that the effect youâ€™re trying to nail down isnâ€™t real. I may be wrong, but Iâ€™ve yet to meet the epidemiologist who could explain why. from "Diet and health. What can you believe: or does bacon kill you?" [#p=1435](http://www.dcsience.net/?p=1435) #\_jmp0 \_

seth (2010-05-23 00:25:51)

Thanks for posting that, John. Taubes's argument cuts both ways. Surely people who eat a lot of (unprocessed) meat are different from those who eat much less, such as vegetarians. Yet in spite of all those differences, no difference in heart attack risk. That means something – which is what I was trying to say. This contradicts Taubes's claim that RCTs are "necessary to learn anything meaningful."

bill (2010-05-23 03:51:58)

Seth, The authors of the study write that lumping red meat and processed meats together is a mistake. I think it may also be a mistake to lump together luncheon meats and bacon. An article of a study by Shawkat Razzaque, M.D., Ph.D., from the Department of Medicine, Infection and Immunity at the Harvard School of Dental Medicine published on the Science Daily web site (<http://www.sciencedaily.com/releases/2010/04/100426151636.htm>) finds that phosphates found un processed meats and sodas shorten the lives of mice by as much as 25 %. I have not found phosphates in bacon. Bill

Chris Robbins (2010-05-23 06:25:13)

I think it should also be noted that the cow's stomach has already done the work for you and changed the grass into beneficial Omega-3, DHA/EPA. Whereas, the ALA in flaxseeds & its oils is not as easily converted in our bodies to the more desirable Omega-3.

Jscott (2010-05-23 09:10:21)

Flaxseed oil (if I am not mistaken) has a lower bioavailability than omega 3 from fish oil. So, it would be interesting to test that.

Perhaps with Krill oil as opposed from fish that tend to give you the headaches?

Chris (2010-05-23 23:52:26)

I don't think your friend should worry about cholesterol....

Michael (2010-05-24 01:23:45)

I suspect that pork in China is different than pork in the USA. The Chinese frequently feed their pigs sweet potatoes (but sometimes wheat or corn). The Americans feed pigs corn. Feeding pigs sweet potatoes will result in the pork having lower omega 6 and higher saturated fat compared to corn feeding.

bennetta (2010-05-24 10:37:55)

Strauss is unique in that it is barely pasteurized and not homogenized. Pasteurization is a process which slows microbial growth, while homogenization keeps fat globules from separating out from the rest of the milk. Maybe these are also factors?

Rachael (2010-05-24 14:08:47)

I have found a huge personal correlation between my mood and my fat intake. I experienced severe depression after dieting and losing 60 pounds. It wasn't the weight loss, even after I regained most of the weight, but maintained my low fat diet I was still depressed. I started a high fat low carb meat based diet, and my mood improved greatly. Now, there are plenty of confounding issues, higher fat, lower carb, resumption of meat eating, etc. But it really seems to me that there is a great improvement in my mood with fat consumption. (My sleep disorder has improved as well.) I am experimenting with different kinds of fat, coconut vs. grass fed butter, etc.

Alex Chernavsky (2010-05-25 07:09:36)

Rachael, I'd be very interested in your self-experimentation on the effects of coconut fat as compared to butter. I don't eat butter, but I'm looking for some plant-based substitute that has comparable beneficial effects. Can you e-mail me at alexc@aya.yale.edu? Thanks!

seth (2010-05-25 07:53:17)

Rachael, I'm also interested.

Viorel (2010-05-26 10:53:31)

I'll second Seth on the butter ... I've felt positive results (calm and happy state) after having several meals with large (a quarter stick) amounts of butter.

JC (2010-08-04 22:11:05)

Hi Seth After reading about using butter to "feel better" in your forums somewhere that mentioned this blog post, I decided to look into it. I read that butter is actually pretty good for you, assuming of course it's "actual" butter (not a veggie spread) and organic, raw is best if one can get it. Aside from it including vitamins A, E, K and D(!) it is apparently also rich in Selenium and Iodine (another !), not to mention the Omega 3's and 6's you already brought up. So, coupled with what you stated and what I found, I was convinced enough to give it a go. For the past couple of days (not much time - I know), I used a couple of straight teaspoons and noted that I am much happier and accepting than before - I laugh more too. Also, I seem to be sleeping better, but not if I take it right before bed time, which simply had me awake after roughly a 40 minute nap. I "feel" like I have a more energy, but want to wait a little longer to see how all this works out in the long run. I did find an interesting way of taking it though. The Tibetans apparently make a butter-tea in large quantities and are said to drink upwards of 40 cups a day as it provides them with a large amount of energy, esp. during the winter months. I gave it a go in regular black tea, by melting a tablespoon into it and adding just a smidge of creamer for colour. To my surprise it's actually really good! It's a rich, creamier texture and I will have no problems drinking this on a regular basis. I did use salted, non-organic pasteurized butter for this as it was the only type I could find on short notice - but will check out our local natural food place soon. I have also wondered if using butter, in a non-tasting way (somehow), could be a different way of taking in non-flavoured calories? I may have read



this somewhere though. The thinking is that, esp. with the Iodine, butter may be a decent way of bringing the weight down with your method. Any thoughts? Anyway, thought I would share and thank you so very much for everything you do! JC

will (2012-01-07 18:58:03)

Bacon is just smoked pork belly. Are saying the smoking makes it unhealthy. Because pork belly is what you used to improve your sleep, right?

Seth Roberts (2012-01-07 19:19:36)

Does smoking make pork belly unhealthy? I think there are other differences between bacon (the stuff you buy in stores) and unprocessed pork belly. Processed meat contains other preservatives, namely nitrites and nitrates.

### **Foot Fungus Revisited (2010-05-23 14:01)**

I [1]described earlier my theory about foot fungus – that mine, at least, has been caused by socks. It recently got worse. Consistent with my theory, I had just gotten a dozen new pairs of socks of a new material. My theory suggested I buy new socks of a different material (I did), change socks more often (I did), and go sockless more often (I did). As soon as I made these changes, the fungus went away. More support for the theory. A few other people (see the comments to [2]my earlier post) and [3]a friend have had experiences that also support the theory.

My Berkeley doctor didn't know this theory. He looked at my foot fungus and repeatedly suggested certain non-prescription medicines. I haven't seen this point made elsewhere, although you can find a list of 20 things to do that includes "change your socks often".

Sometimes doctors (and medical schools) are criticized for lack of emphasis on nutrition. Sometimes they are criticized for lack of emphasis on prevention. This was neither: it was cure and non-nutritional. Curing infection is one of the main things doctors try to do, which is why antibiotics are heavily-prescribed.

Suppose you bring a task to Programmer A. He has done a long education in programming followed by a long internship, and then passed a difficult screening test to become "board-certified". To maintain his certification he takes "continuing education" classes. He returns with a 100-line program that fails to work. (The medicines my doctor recommended failed to work. He thought the failure was due to my not following the directions closely enough.) Then a 10-year-old boy gives you a 3-line program that works perfectly. You would realize your society is fond of make-believe – in particular, making believe that those who teach programmers understand their subject.

1. <http://www.blog.sethroberts.net/2009/10/11/how-to-eliminateprevent-a-skin-infection-and-what-it-means/>
2. <http://www.blog.sethroberts.net/2009/10/11/how-to-eliminateprevent-a-skin-infection-and-what-it-means/>
3. <http://www.blog.sethroberts.net/2009/12/03/foot-fungus-cured-with-socks/>

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Laura (2010-05-23 14:18:25)

I agree with you, Seth. I find that I learn more from you and my therapists, not my psychiatrist. My psychiatrist really tries to push medication as a coping skill, but he gives me a choice. In the past, if I am not doing well, though, psychiatrists have to give me a medication forcefully, but when I am doing well, I can make a choice. If I need a doctor's letter, my psychiatrist can help me get a lot of stuff in this society!! That's my advantage. From my experience, I don't think it's necessary to depend on your doctor for everything. Your blog really helped me to be more independent. I actually didn't learn to think this way until I read

your blog. I've been reading it for years.

Nancy Lebovitz (2010-05-23 15:31:17)

I don't think your foot fungus is currently caused by socks. You've got a background fungus which gets really active when you aren't meticulous about your socks. I don't know what would really cure it so that you don't have to care about your socks any more than most people do, but it might be worth thinking about.

seth (2010-05-23 15:36:42)

Yes, it's true that one foot is sensitive to what socks I wear and the other isn't. But if I wear the right socks the problem disappears – whether a background fungus remains or not. Perhaps wearing the right socks long enough will make the background fungus disappear.

Kerry (2010-05-24 07:59:26)

Could the fungus be candida-related, from eating too much sugar or yeast?

Aaron (halotek) (2010-05-24 12:39:06)

Honestly, I've personally noticed that the "TYPE" of sock matters the most. Certain socks — even the ones that say they wick the most moisture, were some of the socks that made my foot fungus the worst (because they fit so tight on the foot). Now that I wear thin socks made out of mostly bamboo – I have never had a problem, even if I rewear socks the second day. Also, I notice that the type of shoe matters too. You have to have shoes that are not too constrictive and let air in – which is why I pick shoes with a lot of holes. I know I've solved the problem because I had the problem from age 15 to 2 years ago which then I was 28. Now I walk barefoot in gyms in the bathing area – so i know I figured out the problem. Bamboo socks or very very thin material that breathe='s NO FOOT FUNGUS. Shoes that breathe ='s NO FOOT FUNGUS.

Aaron (halotek) (2010-05-24 12:42:46)

Also, I'd consider switching shoes once your problem goes away – the fungus seems to take root in the shoes when you have an active infection.

seth (2010-05-24 13:19:20)

Aaron, thanks, that's very interesting. Where did you get your bamboo socks? I see online they are \$8/pair. Whereas socks in China are 30 cents/pair. And what observations are behind your idea about getting new shoes? It isn't so easy to see that point of that, since I've managed to get rid of the visible problem without doing so.

Coconut Oil Cures Foot Fungus | Coconut Oil (2012-04-15 17:21:33)

[...] later I discovered that socks matter. With a much larger number of socks, my foot fungus got much better. Apparently the fungus died if it didn't come in contact with my foot within a week or so. (I had [...])

## **Dangerous Fish Oil (2010-05-23 19:42)**

Many people take fish oil to get omega-3. (I get mine from flaxseed oil.) Fish contain PCBs, therefore fish oil does. How much? More than we're told. [1]A lawsuit has been filed about this:

Mateel Justice Foundation, in conjunction with two individual plaintiffs, brought a lawsuit against six fish oil manufacturers and two retailers for labeling violations of the California Safe Drinking Water and Toxic Enforcement Act, also known as Proposition 65. Filed March 2 in Superior Court of San Francisco, the suit alleges several fish oil products sold in California failed to include label warnings for levels of PCBs (polychlorinated biphenyl compounds) found in the products by testing initiated by the plaintiffs . . . Named

as defendants in the suit were two retailers—“CVS Pharmacy Inc. and Rite Aid Corp.”—and six manufacturers—“General Nutrition Corp. (GNC); NOW Health Group Inc.; Omega Protein Inc.; Pharmavite LLC (Nature Made brand); Solgar Inc.; and Twinlab Corp. . . . The plaintiffs conducted testing on 10 products produced or sold by the defendants, looking at all 209 known PCB compounds . . . Many fish oil companies test for as few as seven such compounds.” [emphasis added]

The plaintiffs plan to post testing results [2]here (I have been unable to reach this site).

1. <http://www.naturalproductsinsider.com/news/2010/03/major-fish-oil-products-face-prop-65-suit.aspx>

2. <http://www.fishoilsafety.com/>

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M (2010-05-24 04:45:39)

I looked at the “natural products insider” link. It seems that most of the “fish oil” supplements they’ve tested so far have been brands that claim to be from shark and cod liver. I’ve long heard that these are types to avoid because of contamination. Instead, I tend to go for fish oil that is “molecularly distilled” and from sources like sardines. I would be interested to see their testing results from these types. I hope it will be better! I know you have found evidence to contradict the claim that flaxseed oil is less effective than fish oil. My personal experience (though I have not collected data) is that fish oil seems to be better for me than ground flaxseed. Have you considered doing any comparative analysis using fish oil?

Chris Robbins (2010-05-24 06:38:08)

Yeah, I think the general consensus is that the conversion of ALA is not efficient and is inhibited further if the diet is rich in the omega-6 fatty acids, which are found in most vegetable oils and processed food. Add to that the possible link of flaxseed oil to increased prostate cancer in men which is most likely due to the lignans being removed from the flaxseed. Seems like the best idea is to eat real fish most days of the week.

Alrenous (2010-05-24 07:41:28)

Eat fish that often and you’ll get a substantial dose of mercury. With fish it’s basically pick your poison, though now I have to look into a couple things. Apparently it’s not impossible to make good fish oil, if you believe this review. <http://www.healthy-oil-planet.com/carlson-cod-liver-oil.html> You can also go for krill oil, which is a bit pricier but has lots of pros over fish oil. <http://ca.news.finance.yahoo.com/s/04032010/29/link-f-prime-zone-neptune-krill-oil-tests-below-strictest-detection-limits.html> <http://www.proteinpower.com/drmike/uncategorized/why-krill-oil/> (I don’t supplement oil at all...yet.)

Richard A. (2010-05-24 08:44:07)

PCB exposure from common foods – <http://www.omegavia.com/fish-oil-supplements-and-pcbs-should-you-worry-part-2/>

Richard A. (2010-05-24 09:50:15)

Ultra Refined Omega-3 Product Reports – <http://www.ifosprogram.com/IFOS/ConsumerReport.aspx> The above site gives the PCB content along with other pollutants by specific brand.

Sam (2010-05-24 12:23:32)

As long as you’ve brought up the subject, Seth, shouldn’t you also mention high degree of uncertainty regarding the harmfulness of PCBs and dioxin at these dosages? Even if it were undoubtedly harmful, the harm must be measured against the harm that is caused by refraining from being dosed with omega 3 from marine sources. Which is not to say that one shouldn’t purchase

the purer brands of oil if you can afford the difference in price.

Chris Robbins (2010-05-24 14:40:49)

Alrenous, Depending on which fish you eat will you get a substantial dose of mercury. Stick to wild alaskan salmon & smaller fish like sardines you should be fine. It has also been shown that the selenium & vitamin E that you get from fish reduces mercury toxicity. <http://www.nutraingredients.com/Research/Vitamin-E-and-selenium-could-reduce-mercury-toxicity>

James (2010-05-24 19:54:52)

Are PCBs found in fish worldwide, or just in the US/Europe? Although I guess supplements could be manufactured where fish oil is cheapest and shipped everywhere.

Alrenous (2010-05-25 07:18:43)

Interesting Chris, thanks.

Robert Reis (2010-05-25 08:20:49)

Hemp oil (not hemp seed oil), does it cure cancer? <http://www.cannabisculture.com/articles/5169.html>

Nemod Kedem (2010-06-17 00:39:14)

I absolutely agree! However, there is a better source for Omega 3 than flaxseeds. This is the Clary sage seeds oil, which contains 50 % ALA, just like flaxseeds oil, but it is highly stable, up to two years in room temperature, and contains over 100 other components that work together for our health. Check out my blog for more info, or contact me directly. Stay healthy!

DamnDirtyApe (2010-07-11 15:12:13)

Omega 3 supplementation is only one side of the equation - lowering O-6 intake in the first place is the other. From what I've read, the overall 3-6 ratio is more important than pure O-3 intake. Thus, the less PUFAs you consume the less one needs to bolster O-3 from the start. Grass fed meat and avoiding most seed oils in the diet are the best way I am aware of to do that.

gwern (2011-01-15 10:57:14)

The site seems to be up now, eg. [http://org2.democracyinaction.org/o/6491/p/salsa/web/press\\_release/public/?press\\_release\\_KEY=36#test\\_results](http://org2.democracyinaction.org/o/6491/p/salsa/web/press_release/public/?press_release_KEY=36#test_results) worked for me just now to get the 10 tested brands and the graphs of test results. Unfortunately for me, my brand (Nature's Answer) isn't up there. It of course says it's been tested for PCBs, but I suspect the tested brands' labels also say that...

ToniRoberts (2011-06-17 01:39:26)

I've read that fish is a good source of omega-3, but the problem was that in eating fish, you can get a dose of mercury. Then along came krill oil and fish oil. fish oil is okay, except that it has less antioxidant content that makes it more prone to oxidation and becomes easily rancid.

## **Autism and Prenatal Ultrasound (more) (2010-05-24 11:58)**

I [1]blogged earlier about Caroline Rodgers's idea that prenatal ultrasound may cause autism. She believes this idea isn't getting the attention it deserves.

Recently she wrote to the head of Health and Human Services:

The latest autism prevalence figures released in December showed that while the overall autism rate increased more than 50 % in the four years ending in 2006, there were significant differences across eth-

nic groups. White women had a much higher incidence of autism among their children than Black or Hispanic women. White mothers had 9.9 autistic children per 1,000, versus Black mothers who had 7.2 and Hispanic mothers who had 5.9.

There were also geographic differences. Among the 10 states with monitored sites, Alabama and Florida had the lowest autism rates, with averages of 4.2 and 4.6 per 1,000, respectively – far lower than the two states with the highest autism rates, Arizona and Missouri, which tied at 12.1 per 1,000. One interesting apparent statistical anomaly occurred among Alabama’s Hispanic population, which had a 68 % decrease in autism while the overall national increase was 57 %. In trying to understand why Alabama Hispanics had such a decrease in autism, I searched for evidence of public health policy changes. What I found was a surprise: according to a CDC multi-state surveillance report, Alabama and Florida were two of three states that had cutbacks in Medicaid funding for prenatal care during the time mothers in the study were pregnant. (The third state, West Virginia, was not among those monitored for autism in the latest study.)

Digging deeper, I turned up a CDC report on the timing of entry into prenatal care. The report showed that although most women started prenatal care in the first trimester, the percentages of both Black and Hispanic women who lacked early (first trimester) prenatal care were nearly twice that of White women . . . Over the span of the 10-year study, more women [in] all ethnic groups received early prenatal care, but the 2-to-1 ratio remained the same. . . .

Taken together, these three CDC reports tell a disturbing story: as more women . . . received more early prenatal care, the autism rate among their children increased, with those women receiving the most early prenatal care having the highest percentage of autistic children. . . .

A rigorous UC Davis study, published in January, of California children born between 1996 and 2000 identified 10 autism clusters . . . Highly educated women were much more likely to have children diagnosed with autism than parents who did not finish high school. In six of the clusters, the rate was as high as 4 to 1. Returning to the CDC Entry into Prenatal Care report, it is striking to note that in 1997 only 8.5 % of pregnant women with some college education had delayed prenatal care, versus 29.9 % of women who were not high school graduates – further [linking] early prenatal care [and] autism.

A study published in November on prenatal ultrasound trends from 1995-2006 found that the odds of a woman receiving an ultrasound during a prenatal visit nearly doubled over [those] 10 years. . . . The geographical and ethnic differences . . . dovetail with many of the geographical and ethnic differences found in the latest autism prevalence report. For instance, Southern women were 40 % less likely to receive an ultrasound during a prenatal visit than Northeastern women, which could help explain why Florida and Alabama had the lowest autism rates among the states monitored. Also, Hispanics, who had the lowest overall autism prevalence rates in both the 2004 and 2006 CDC reports, were 20 % less likely to receive an ultrasound during a prenatal than White women.

Not all the statistics available in these reports support the idea that prenatal ultrasound is causing autism. For instance, Southern states such as Georgia and North Carolina did not have low autism rates, but [perhaps this is because] the ultrasound trends study did not take into account “keepsake” ultrasound . . .

She also notes that a study by Yale neuroscientist Pasko Rakic “found that prenatal ultrasound disturbed neuronal migration in mice.”

Here is the broad argument. 1. Autism is correlated with wealth. It is absurd that autism causes wealth; it is unlikely that both are caused by something else. Thus this correlation makes it plausible that autism is caused by something

that rich people have more of than poor people. Obviously rich people have more prenatal ultrasound. 2. A localized decrease in autism happened at the same time autism almost everywhere was increasing. At the same place and time prenatal ultrasound screening surely declined. This correlation is very difficult to explain with other ideas about what causes autism. Dozens of things (e.g., genes, diagnostic criteria) previously proposed as explanations of autism remained roughly constant at the same time as the decrease. 3. The mice data make the linkage considerably more plausible, assuming (a) the ultrasound dosage was reasonable and (b) humans with autism have unusual neural wiring that resembles the changes seen in the mice.

The full letter is on [2]her blog. [3]An article by Rodgers about this

1. <http://www.blog.sethroberts.net/2010/01/23/does-prenatal-ultrasound-cause-autism/>

2. <http://carolinerodgers.wordpress.com/>

3. <http://midwiferytoday.com/articles/ultrasoundrodgers.asp>

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LemmusLemmus (2010-05-24 12:31:30)

Not the definitive study, but here's a quick idea: What about countries in which ultrasound is paid for by universal healthcare systems? I'm thinking specifically of my native Germany where, it seems to me, pretty much every pregnant woman gets a few ultrasounds - the number of ultrasounds mothers get seems to not be related to socioeconomic status. (I'm basing this solely on anecdotal evidence.) This suggests that the social gradient in autism should be less extreme or nonexistent in Germany and similar countries - if there is truth to the theory.

david (2010-05-24 13:04:28)

This reminds me of the story of Ignatz Semmelweis in Superfreakonomics...

seth (2010-05-24 13:26:41)

Good point, David. That was another disease of wealth. Cured by studying correlations.

Rachael (2010-05-24 14:00:00)

I wonder what the Autism rates are in communities that decline medical care like Christian Scientists and Amish? Also, I have always been curious to see the accidental death adjusted life expectancy rates for those groups, I suspect that they have as much if not longer life spans as people with the full benefit of western medical care. How to explain the high rates of Autism in recent African immigrants? I suspect they do not get ultrasound at a high rate. Many attribute the difference to vitamin D status. I also think that there are in fact a range of physical syndromes that are lumped together as autism spectrum. I can't imagine the cause will be a single environmental stressor, but rather a variety of stressors added to particular genetic traits.

MT (2010-05-24 14:02:17)

Thanks for blogging about this. I remember your original post, and this is still the only place I've heard anything about it. Any idea how to get the NYTimes or Washington Post or the like to pick it up? It seems incredibly important and I have the feeling linking this post to my FaceBook account won't be enough to get people's attention. Obama isn't on my friends list. Perhaps a tangential thought, but in a competitive information environment, what are the ways to help things that are both important and reasonable enough to deserve wider audiences go viral? Obviously, you're doing your part by blogging about it, but what else could launch this idea to another level of attention? Rodgers needs a PR agency to help her get her important message out.

Alasdair (2010-05-25 01:08:52)

Seth, you say "[i]t is absurd that autism causes wealth" – but I thought there was at least one psychology study that suggested Fortune-500 CEO's were more likely than most to have at borderline autistic tendencies? And isn't the wealth factor potentially part of the "worried well" syndrome? To have a child diagnosed autistic, isn't it an advantage to be white, middle class, to have appropriate health insurance, with enough free time to worry about the possibility and to take the child round the specialists? I don't mean to rain on anyone's parade – I love your work on personal observations – I just wonder whether this correlation has rather more possible common contributing factors than most ideas that reach your blog.

seth (2010-05-25 06:19:16)

Alasdair, it is absurd that having an autistic child makes the parents or their neighbors wealthier. You are raising the "both X and Y caused by something else" possibility, which I do not say is absurd for the reason you say. But that possibility and your worried well idea only explain one of Rodgers's three lines of argument, which I list at the end. This is why her case is so persuasive (compared to other theories of autism): It is supported by three disparate kinds of evidence. MT, I suppose the NY Times would write about this if something relevant was published in a good scientific journal.

jay (2010-05-25 08:47:48)

Of all the speculation as to the causes of autism, I believe this theory: [http://seedmagazine.com/content/article/when\\_two\\_minds\\_think\\_alike/](http://seedmagazine.com/content/article/when_two_minds_think_alike/) I highly recommend his book "The Essential Difference" if you have not read it. It changed the way I look at everyone by giving me a new framework of understanding, even if you don't agree with everything laid out.

MT (2010-05-25 19:41:13)

What if Stephen Levitt got interested and did a back of the envelope analysis for his blog? Seems like the data would be readily accessible. Maybe you could put Rodgers in touch with him :)

seth (2010-05-26 00:17:40)

jay, I don't like the theory you mention because, in my experience, genetics has never been shown to cause any common problem, in spite of many claims to the contrary. To bet on that theory is to bet on a horse that has never won a race. Autism runs in families, the author says – yes, and so did pellagra.

jay (2010-05-26 06:57:29)

If you don't think genetics plays a part in brain function or personal tendency, I invite you to do a little anecdotal research on hoarding in families – and not just parent to child, but with uncles and grandparents that have little contact with offspring and so on, when it skips a generation and so forth. I've seen it with my own eyes on several occasions. Certainly not the foundation for a theory, but, perhaps a hypothesis for an experiment... I'd still suggest reading Simon Baron-Cohen's book, even if you think it's wrong, because you never know.

Links « Rhymes With Cars & Girls (2010-05-26 18:43:22)

[...] Does prenatal ultrasound cause autism? [...]

questioneverything (2010-05-28 20:44:26)

Interesting [beginning] look at data...however extrapolating that ultrasound is the cause of such a problem is pretty far fetched. there are a lot of other factors that most likely are playing into such a phenomenon. more education quite often means older maternal age, which is linked with a higher rate of birth defects, for women as well as men for many types of diseases. while none of these studies specifically point to this it may play a role. access to prenatal care can often be similar to access to consistent/frequent pediatric care. if children with subtle behavioral differences do not receive frequent care, their chance of being diagnosed with such a disorder is less likely. this is a fact. autism is a disease with a wide spectrum of presentations. these studies are also incapable of closely examining the myriad of variables such as the intricacies of diet, exposure to cell phones and other radiation, as well as any other thing to could be added to this potentially endless list. the truth is...autism is a vague umbrella of a diagnosis. it encompasses what we will probably list as a hundred variations of behavioral disorders

once the technology and true understanding of the pathophysiology is there. until then blogs like this poke vague assumptions using series of unrelated data.

seth (2010-05-28 23:52:01)

question everything, of course there are plausible alternatives. Who said otherwise? But you have failed to give a reason that prenatal ultrasound – which unlike more prenatal care, has been shown to cause neuronal abnormalities (in mice) – is NOT plausible. Autism has greatly increased over the last 20 years – maternal age has not. Nor has prenatal care. Prenatal ultrasound has greatly increased over the same period. jay, my claim is that genetics hasn't been shown to be important in any common health problem (e.g., diabetes, obesity, heart disease). Hoarding isn't a common health problem. Sure, there are gene by environment interactions for common health problems. But in the right environment, nobody would have the problem – at least that is what the data seem to say. A theory that ignores environmental causation is a hard sell, given that data. But I agree I should read Baron-Cohen's book.

Alex Chernavsky (2010-05-29 13:02:11)

Regarding genetics and its role (or lack thereof) in common health problems: Seth, [1]this paper claims that BMI has a heritability of about 33 %. Is that figure an over-estimate in your opinion, or is 33 % below the threshold at which you would consider it to be important?

1. <http://www.bvsde.paho.org/bvsacd/cd65/Stunkard.pdf>

Mark (2010-05-31 20:01:32)

The classic "Mere coincidence?" story. A couple of my favorites are that the obesity epidemic was caused by the metric system (kilojoules harder to keep track of than calories), and by electric blankets (nighttime energy use decreased). Make a timeline of changes in society and correlate them with whatever bad trend and see what aligns. It's especially easy with autism since there is no real hard start date for the epidemic, to the point that many informed researchers think the whole epidemic may very well be fake. This is similar to the data mining for correlation research that 95 percent of "science" is these days. Dump 1,000 characteristics each for 1,000,000 people into a computer and discover that cancer correlates highly with people who wear blue paisley neckties.

nyxpooka (2010-06-30 03:09:02)

I can say from personal experience that having an autistic child has definitely not improved my economic condition! It is very expensive to get all the treatments my son needs and the little bit of SSI he gets really isn't cutting it at all...

A link between ultrasound and autism? « A Fistful of Science (2010-07-15 19:48:26)

[...] So naturally I perked up when Seth Roberts blogged about a possible link between autism, which has defied easy genetic explanation, and fetal ultrasound. Science writer Caroline Rodgers has done the leg work.Â From her 2006 article in Midwifery Today (an old favorite from my days at the NYU interlibrary loan department): Early studies showed that subtle effects of neurological damage linked to ultrasound were implicated by an increased incidence in left-handedness in boys (a marker for brain problems when not hereditary) and speech delays.(5) Then in August 2006, Pasko Rakic, chair of Yale School of Medicine's Department of Neurobiology, announced the results of a study in which pregnant mice underwent various durations of ultrasound.(6) The brains of the offspring showed damage consistent with that found in the brains of people with autism. The research, funded by the National Institute of Neurological Disorders and Stroke, also implicated ultrasound in neurodevelopmental problems in children, such as dyslexia, epilepsy, mental retardation and schizophrenia, and showed that damage to brain cells increased with longer exposures.(7) [...]

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Dorothy (2010-07-26 15:48:29)

In this particular study they are showing that women typically White and well educated receive health care earlier and more often. So perhaps the link isn't accurate that educated white women have autistic children more often, but rather well educated white women know what the signs are, and know that something may be wrong and can afford to get tests and seek further health care for their child. Where women of other ethnicities or lower education levels don't know what they are looking for/do not have the financial means to get their child properly treated/diagnosed. This shows nothing more than faulty statistics and lacks scientific evidence. What about a study showing the actual effects of sound waves on a fetus.

AB (2010-08-02 02:00:15)

Back in 1987 when I was pregnant with my last child I researched ultrasound which was not around for the first two. Not only was there a book out about the dangers but the head of radiology for a New England hospital said it was dangerous for the fetus and he would never have his wife use it. I was convinced. I would not use it for fear of harming my child. I am white and educated (if you overlook the fact I didn't finish my dissertation at Stanford). I chose a birth center over a hospital. I was in at 4 am and home by 9 am. The less intervention the happier I was. I was an outlier and didn't give a damn. I fail to understand why educated women bow down to the medical mafia instead of researching. I think the poor know better - danger lurks in the white coats. (My father was a board certified MD who taught at a med school, had a private practice and published many articles. Maybe this is why I know white coats can hide danger.) @Dorothy - all that has long ago been taken into consideration and found to be of no consequence

Drew (2010-08-05 23:14:40)

As the expecting father of twins currently in the care of a high-risk OB practice that uses frequent ultrasounds, I read Rodgers' Midwifery Today article with great interest. (And, before continuing, I want to disclose that my wife and I originally began our care with midwives and wanted desperately to deliver naturally, preferably in water, with little-to-no modern-medicine micromanaging.) In fact, I've spent the last 4.5 hours reading the full text of every linked reference (and then some) and found it to be little more than a fear-mongering propaganda piece full of logical fallacies, irresponsible generalizations and academic dishonesty (most notably in the distortion of quotations and scientific data from the original sources, as well as the selective ignoring of authorial conclusions that contradicted her own argumentative goals). I could produce a publishable response to Rodgers' disinformation at least equivalent in length. Most notable, however is that: -The mice study has no scientific bearing on an argument re: human fetuses. Read the full text (I could quote a dozen or more passages discrediting Rodgers' use of this data); then read the peer-reviewed commentary/response to the study's findings, also published in the Proceedings of the National Academy of Sciences, found here: <http://www.pnas.org/content/103/34/12661.full> -Pay special attention to the way Rodgers equates the actual FDA language of the way ultrasound "heats the tissue slightly" to hyperthermia (a gross exaggeration) and then goes on to equate the negative effects of hyperthermia (true) to fetal development. -Note that her direct quotation (from the Cochrane Database) about Doppler ultrasound was pulled from the headline of the summary/abstract without reading the full text of the findings (lazy would be a compliment here). Even the Main Results portion of the summary states, "there were unexpected findings suggesting possible harmful effects, but the explanation for this is not clear." <http://www2.cochrane.org/reviews/en/ab001450.html> I could seriously go on and on (sources since pulled from publication for being outdated, 28 year-old WHO data, the lack of a single reputable source cited in the article that uses both the terms "ultrasound" and "autism"...). As a faculty member in a university composition program, I'm tempted to use Rodgers' article in my courses as an analytic example of how writers use fallacy and manipulation to obscure truth in research-driven argumentative writing. I'm not claiming that ultrasound technology is 100 percent safe in all circumstances. (In fact, during my wife's next ultrasound, I plan to hover over the technician and not only inquire as to whether she can

accurately read the thermal monitor on the machine (doubtful, so the literature implies), but implore her to remove the transducer from my wife's stomach at the exact moment that it's no longer medically necessary.) No, I'm writing simply to say Rodgers's hasty (another compliment) correlative conclusions about ultrasounds and autism are little more than the unfounded autism explanation du jour. Please: Read some of the cited sources, carefully, and compare them against Rodgers' version of the facts. I think you'll be as astounded as I am. <http://www.fda.gov/downloads/ForConsumers/ConsumerUpdates/ucm095602.pdf> <http://www.medpagetoday.com/Radiology/GeneralRadiology/3882> <http://www.truth-out.org/article/ultrasound-can-affect-brain-development> [#corresp-1](http://www.pnas.org/content/103/34/12903-abstract?maxtoshow) <http://www.pnas.org/content/103/34/12661> <http://mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD001450/frame.html> <http://www.newscientist.com/article/dn1639-fetuses-can-hear-ultrasound-examinations-.html>

Seth Roberts (2010-08-06 05:56:40)

Drew, I looked at the first two links you gave. I saw nothing reassuring in them. Then I looked at the PNAS link. It referenced an Australian experiment I didn't know about. The experiment found no clear differences between children given five ultrasounds and children given only one. That is reassuring, yes. But it also referenced three studies I hadn't known about that did find clear differences. In one, children exposed to ultrasound had lower birthweights. The other two studies were with animals and found damage due to ultrasound. (You can find details [1]here.) So I ended up more concerned than I began. I don't understand why the following quotation – "there were unexpected findings suggesting possible harmful effects, but the explanation for this is not clear." – supports your case. Just as puzzling, you complain that Rodgers quoted a headline "without reading the full text". You seem to be saying that the full text makes the headline misleading or wrong but I have no idea why. You don't provide a good explanation of why autism is more common among rich parents than poor ones, or a good explanation of the anomaly in autism rates Rodgers noticed (in a certain place autism went down rather than up). I thought the anomaly in autism rates was her strongest point. In summary, I'm unable to understand the force of any of your criticisms. And you seem to have ignored the epidemiological evidence for what Rodgers says. I'm sorry we can't communicate privately about this because I think you have something valuable to say – I just can't figure out what it is.

1. [http://ucelinks.cdlib.org:8888/sfx\\_local?rft.jtitle=Lancet&rft.stitle=Lancet&rft.aualast=Newnham&rft.auinit1=J.%20P.&rft.volume=364&rft.issue=9450&rft.spage=2038&rft.epage=2044&rft.atitle=Effects%20of%20repeated%20prenatal%20ultrasound%20examinations%20on%20childhood%20outcome%20up%20to%208%20years%20of%20age%20follow-up%20of%20a%20randomised%20controlled%20trial.&rft\\_id=info:doi/10.1016/S0140-6736\(2804\)2917516-8&rft\\_id=info:pmid/15582061&rft.genre=article&rft\\_val\\_fmt=info:ofi/fmt:kev:mtx:journal&ctx\\_ver=Z39.88-2004&url\\_ver=Z39.88-2004&url\\_ctx\\_fmt=info:ofi/fmt:kev:mtx:ctx&rft\\_id=info:sid/www.pnas.org&ctx\\_tim=2010-08-06T04:59:45.393-07:00](http://ucelinks.cdlib.org:8888/sfx_local?rft.jtitle=Lancet&rft.stitle=Lancet&rft.aualast=Newnham&rft.auinit1=J.%20P.&rft.volume=364&rft.issue=9450&rft.spage=2038&rft.epage=2044&rft.atitle=Effects%20of%20repeated%20prenatal%20ultrasound%20examinations%20on%20childhood%20outcome%20up%20to%208%20years%20of%20age%20follow-up%20of%20a%20randomised%20controlled%20trial.&rft_id=info:doi/10.1016/S0140-6736(2804)2917516-8&rft_id=info:pmid/15582061&rft.genre=article&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&ctx_ver=Z39.88-2004&url_ver=Z39.88-2004&url_ctx_fmt=info:ofi/fmt:kev:mtx:ctx&rft_id=info:sid/www.pnas.org&ctx_tim=2010-08-06T04:59:45.393-07:00)

Drew (2010-08-06 07:55:57)

Hi Seth. Thanks for responding to my thoughts. I wonder if our links are shooting to different places. <http://www.pnas.org/content/103/34/12661.full> sends me to "Our Unborn Children at Risk?," the aforementioned commentary critique of the mouse study. The first paragraph under the "How Well Matched..." subsection clearly explains the scientific invalidity of the mouse study for human understanding (bone density, brain size, concentrated wave length, duration of waves, etc.). The second paragraph of this subsection would nicely sum up my own conclusions about ultrasound on human fetuses – let's be careful with this technology, use it prudently, but not assume it's causing harm, because we have no reason to believe such. Do you not link to the information I'm referencing? I clicked to your link, which is also quite interesting, and I noticed the bit about lower birth weights, but you had to have noticed the follow-up sentence stating that none of the children remained underweight or at risk. Quite the contrary, that, "There were no significant differences indicating deleterious effects of multiple ultrasound studies at any age as measured by standard tests of childhood speech, language, behaviour, and neurological development." Compounded with the other two animal studies you alluded to – which, if they were anything like the mouse study, have little-to-no bearing on humans because of the way they're conducted – I don't understand how you're more concerned than you began. You chose not to acknowledge the fact that Rodgers equated the slight thermal effect of ultrasound waves on humans with hyperthermia, then equated hyperthermia with autism. This would be like saying that every time I'm in the frozen-foods section of the grocery store my body temperature drops a degree (F) or two, and that hypothermia can cause the loss of extremities, so there's as good a chance as any that the frozen-foods section is causing the loss of extremities. I will admit that I may have wrongly assumed that Rodgers did not actually read the Cochrane study

because A) she quoted verbatim from the overly generalized headline/abstract (poor form at even the freshman undergraduate level) and the Cochrane study is the one that was removed from publication for being outdated. Considering Rodgers wrote her original article in 2006, it's possible she clicked through and paid the fee to read the entire article. Possible. I'll leave it at that. I cannot explain the correlations between socioeconomic status and autism rates because I'm neither social nor medical scientist. Neither is Rodgers. Besides evidentiary problems, I took great issue with the manner in which Rodgers' original article was written. Before I get to the host of logical fallacies present in her argumentative assertions, consider the 6th paragraph of her article, which (referring to the mouse study) claims that, "The research also implicated ultrasound in neurodevelopmental problems in children, such as dyslexia, epilepsy, mental retardation and schizophrenia." Yet, the wording of the mouse paper actually states, "Furthermore, there are numerous human neuropsychiatric disorders that are thought to be the result of misplacement of cells as a consequence of abnormal neuronal migration." Thought to be. In a study/paper about how ultrasound can cause abnormal neuronal migration in mice, the inference to connect the previous statement with ultrasound is there. I'll admit that. But what Rodgers claimed and what the researchers claimed are two different things. It's an irresponsible inference, in my opinion, to drop the buzzword "ultrasound" into the Midwifery Today article when it didn't appear in the original context "just because most readers won't notice. Finally, as for logical fallacies, I spotted all of the following: -Hasty Generalizations (not enough examples or untypical examples) -Post Hoc, Ergo Proper Hoc, which translates to "After this, therefore because of this." The example here is, "Wealthy babies have better health care (and probably receive more ultrasounds) and have higher rates of autism, so wealthy babies have autism BECAUSE they have better health care (and probably receive more ultrasounds). -Non Sequitur ("it does not follow"). An example from Rodgers' article might be, "Therefore, if repeated experiments show that elevated heat caused by ultrasound damages fetal brains in rats and other mammals, one can logically assume that it can harm human brains, too." No, one can't, for a number of reasons. -Ignoring the Question (Instead of dealing with the topic under discussion, the writer deliberately creates a diversion). See the sections on Hot Tubs/Saunas and the flashback to the vaccination debate, the former autism explanation du jour championed by Jenny McCarthy and taken seriously by no one except the socioeconomically privileged suburban housewives these fear tactics are meant to scare. -Question Begging (assuming the truth of a debatable point and basing the rest of the argument on that shaky assumption). I don't think I need to even explain here. My problem with Rodgers' article, you see, is about both scientific validity and presentation, though mostly with the latter. The bottom line for me is that Dr. Rakic (from the mouse study) clarified, "Our study in mice does not mean that use of ultrasound on human fetuses for appropriate diagnostic and medical purposes should be abandoned. Instead, our study warns against its non-medical use." Yes. Okay. No more boutique, keepsake ultrasounds. Great. But for Rodgers to skew this data (along with the FDA's and others') into claiming that ultrasounds under the care of an Obstetrics professional (and for medical use) are causing autism is disingenuous at best, unethical propaganda for the Midwifery Way at worst.

Seth Roberts (2010-08-06 08:52:57)

Drew, thanks for the clarification. I now understand your position much better. There's no way to deal with your comments briefly so I hope at a later date to write about them in a blog post. If/when I do I will notify you by email.

Seth Roberts (2010-08-06 11:53:13)

see reply: <http://www.blog.sethroberts.net/2010/08/06/unnoticed-conflicts-of-interest/>

dana (2010-10-23 00:14:23)

Go to you tube: type in "Behaviorally Fragile Autistics" on you tube. This is a most interesting case of autism, self injurious behavior and seizures. Very complex, but not without hope. There are some very important points seen in videos that would help professionals and anyone working with this unique population.

## Restaurant With No Menu (2010-05-25 08:13)

Today I had lunch at a Beijing restaurant with no menu. You choose dishes in discussion with your waiter. The restaurant's theme is kung fu. Somehow having no menu is kung-fu-like. A sword hung on the wall and there were other

martial-arts decorations. As we left, the wait staff said an ancient Chinese good-bye loudly in unison. It meant "the mountain and river will still be here [a metaphor for enduring friendship], let's make a concrete date to meet again." Only one of our two dishes was really good but I'll go back.

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### **Prenatal Ultrasound and Autism: Lack of Study (2010-05-25 13:53)**

Caroline Rodgers, whose ideas [1]I blogged about yesterday, wrote to me about lack of research on the possibility that prenatal ultrasound causes autism:

I have heardÂ confidentially that applications for funding of prenatal ultrasound studies (not specifically investigating autism) have been repeatedly denied over the years – whichÂ helps explain the great paucity ofÂ safety studies, especially since the early '90s, when the FDA approved anÂ allowable eightfold increase in acoustic output.Â As recentlyÂ as this year, funding was denied an ambitious, multi-site study that would have investigated if there was a relationship between ultrasound and autism.

In 2006 when Yale neuroscientist Pasko Rakic announced the results of his study that found prenatal ultrasound interrupted neuronal migration in mice in a way that was consistent with the brains of autopsied autistics, I was surprised that several scientists, including Rakic, did their best to downplay the results. At the time, Rakic was one of many of Autism Speaks's scientific advisors.

I have spoken with various people throughout the NIH about my concerns [about ultrasound]. They all pointed to various large studies they believe are investigating ultrasound as a possible environmental cause of autism – most recently, the National Children's Study and EARLI, but when I tracked down the study designs, it turned out that ultrasound is not being studied.

In [2]a report at the time Rakic's study was published, he indeed downplayed the results:

Dr. Pasko Rakic, chairman of the Yale department of neurobiology and leader of the study, was quick to offer parents reassurance about the safety of ultrasound – done for the proper reasons – in human pregnancies.

"If I had a daughter and she was pregnant, I would recommend she had it for medical reasons," Rakic said.

Another researcher agreed:

"I couldn't agree with him more," said Dr. Joshua Copel, a professor of obstetrics, gynecology and reproductive sciences at Yale and spokesman for the American College of Obstetrics and Gynecology (ACOG).

He was not involved in the study. . .

The researchers noted that mice are very different from humans, so the results of their study must be interpreted with caution.

"The forms of migration [of brain cells] and the timing of migration differ in primates like humans than in mice," Copel said. "In humans, there is a much longer period in which neurons [nerve cells] are migrating."

Does that sound "very different"?

1. <http://www.blog.sethroberts.net/2010/05/24/autism-and-prenatal-ultrasound-more/>

2. <http://www.dentalplans.com/articles/15759/ultrasound-might-affect-baby-s-brain-development.html>

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Steve (2010-05-26 15:41:23)

Well, if someone "20 years experience as an editor in daily and weekly journalism" (her [1]bio from Midwifery Today) disagrees with some prominent researchers in neurobiology and obstetrics from a backwards school like Yale ... our instinct should be to trust the editor over the two people who have spent their life studying the subject. Obviously. (Rodgers also [2]compares herself to Einstein. Seriously.) And if it doesn't sound "very different", it means that Copel is having a hard time dumbing it down for us. Ask him to provide the information like he would to one of his grad students. Sure, it might take you eight years before you can figure out how to digest it properly, but at least you won't think that he's BS-ing you. Two experts believe the correlation is noise in the data. One complete non-expert thinks that there's something there. The math is simple.

1. <http://midwiferytoday.com/bio/biopop.asp?name=rodgers>

2. <http://carolinerodgers.wordpress.com/about-me/>

seth (2010-05-26 16:27:38)

"If it doesn't sound "very different" it means that Copel is having a hard time dumbing it down for us." Sure about that? I have no idea what you mean about a "correlation" (what correlation?) being noise. Have you heard the term "praise with faint damn"? If all you can say against Rodgers's case is that she compared herself to Einstein and has less credentials than a Yale professor, you make her case sound very good.

Steve (2010-05-27 07:55:58)

Sorry - but the Yale professors are pointing out that mouse brains develop very differently from human brains. Given the end result - most of us are smarter than the average mouse - that seems quite fair. Can mice even be autistic? Rodgers is using the difference in Autism rates amongst black, white and hispanic populations to claim that Autism is caused by *ultrasounds*. She does not attempt to control for any factors, whatsoever. Using her arguments, I can compare black and white populations and conclude that sickle cell anemia can be prevented by increased exposure to ultrasounds. The difference between these populations is more than just a difference in access to medical care. Medical care amounts to more than just ultrasounds. The link is so tenuous to be laughable. And people who understand how a fetus develops, how a brain develops, and how an ultrasound works find the theory too laughable to investigate. The cause for autism is unknown. Hard to think that a neurobiologist would not be interested in discovering it. And yet, despite having already done work on ultrasound and brain development, he laughs off the idea instead. The bottom line is that Rodgers has identified that different ethnic groups within the United States have different rates of autism. That suggests that there are genetic factors involved. Instead, she made some sort of leap to ultrasounds; but that's most certainly not what the evidence appears to suggest. Then add in a few easily found facts: 1. A healthy pregnant woman with a normal pregnancy should receive 2-4 ultrasounds, depending on how early she began her care, and where she is. 2. Ultrasounds have been standard for pregnant women (in the Industrialized world) since

the late 1960s. So why the recent spike in autism diagnoses?

seth (2010-05-27 14:11:46)

"The Yale professors are pointing out that mouse brains develop very differently than human brains." I would use the verb "claiming" rather than "pointing out" but since you seem to agree with them, please tell me: what are the similarities and differences in development? Your distortion of Rodgers's argument is extreme. The notion that ultrasound may be dangerous is far from "laughable". Rakic did his study to investigate that very possibility. "She does not attempt to control any factors" – please read my post and you will see that I say that the localized correlation she noticed controlled many factors. Her argument has a lot more to it than comparison of different ethnic groups. Why the recent increase in autism? Prenatal ultrasound has been increasing and the dose has been increasing – that's one possible answer. If you think prenatal ultrasound exposure for pregnant women in the industrialized world has been constant "since the late 1960s" you are wrong.

Joseph Paysse (2011-05-09 17:28:38)

"THEY" made fun of Semmelweis also and denied any connection between unwashed hands and childbed fever (post partum sepsis). I think I read that he (Semmelweis) eventually committed suicide because of the ridicule about his theory. I think demographic studies would be the easiest line to pursue to establish a connection, e.g. the incidence of autism in primitive peoples, those whose prenatal care was done by midwives and who received no prenatal ultrasound scans etc. vs. those who had multiple scans for whatever reason especially when done in the first trimester.

Learn About Babies in the Womb | Babies Site (2011-05-11 11:59:50)

[...] Seth's blog » Blog Archive » Prenatal Ultrasound and Autism: Lack ... [...]

## Columbia University Valedictorian Plagiarizes Comedian (2010-05-25 19:27)

Columbia, you have a problem. First, [1]President Lee Bollinger. Then [2]former provost Jonathan Cole. Then [3]several business school professors. Now [4]this.

A fish rots from the head, as they say. I disliked [5]The Sociopath Next Door (repetitive, preachy) but it may be relevant here.

Thanks to Bryan Castañeda.

1. <http://www.blog.sethroberts.net/2007/09/27/columbia-university-president-lee-bollingers-surprising-view-of-freedom-of-speech/>
2. <http://www.blog.sethroberts.net/2010/02/11/written-with-a-straight-face-dept/>
3. [http://www.stat.columbia.edu/~cook/movabletype/archives/2010/05/63000\\_worth\\_of.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2010/05/63000_worth_of.html)
4. <http://trueslant.com/level/2010/05/25/columbia-valedictorian-apes-patton-oswalts-physics-for-poets-jokes/>
5. [http://books.google.com.hk/books?id=EJLSnbvDD9sC&dq=%22the+sociopath+next+door%22&printsec=frontcover&source=bn&hl=zh-CN&ei=VcX8S8HXJs2Gcezf7MoJ&sa=X&oi=book\\_result&ct=result&resnum=4&ved=0CDIQ6AEwAw](http://books.google.com.hk/books?id=EJLSnbvDD9sC&dq=%22the+sociopath+next+door%22&printsec=frontcover&source=bn&hl=zh-CN&ei=VcX8S8HXJs2Gcezf7MoJ&sa=X&oi=book_result&ct=result&resnum=4&ved=0CDIQ6AEwAw)

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Vic (2010-05-26 12:22:39)

I fail to see what harm was done. He retold a story that was appropriate for the occasion. The value of ideas is that they can be recycled. Seems like it would have encumbered the speech to include a citation in the midst of it.

seth (2010-05-26 14:30:53)

"I fail to see what harm is done." The harm to Columbia University's reputation is considerable – this guy was supposedly the best in his class. One comment was "Stupidest valedictorian EVER." Damage to Columbia is why a Columbia administrator got involved and publicized the speaker's apology. Moreover, people like to get credit for their ideas. [1]This paper was based on [2]my work. Notice the great similarities and how poorly it credits my work. The lack of attribution bothered me then and bothers me now. See also [3]this perfectly appropriate rant by Patton Oswalt (whose joke the valedictorian stole) complaining that Nick Madson, another comedian, stole his work (via [4]Andrew Gelman). At the time my work was used with poor attribution I consoled myself that intellectual theft was the sincerest form of flattery; now I can console myself that it also happened to Oswalt, whom I admire.

1. <http://dx.doi.org/10.1037/0097-7403.8.3.226>

2. <http://www.ncbi.nlm.nih.gov/pubmed/7057141>

3. <http://blogs.myspace.com/index.cfm?fuseaction=blog.view&friendId=67077201&blogId=533681759>

4. <http://blogs.myspace.com/index.cfm?fuseaction=blog.view&friendId=67077201&blogId=533681759>

Bryan (2010-05-26 15:26:29)

It "encumbers" the speech to say, "The comedian Patton Oswalt said..."?

Sam (2010-05-26 17:55:18)

Seth, not everyone endorsed Bollinger's performance in front of Ahmadinejad - I pointed out at the time that his performance was cowardly, narcissistic and hypocritical - which makes him the perfect leader for the Columbia you describe: <http://politicalmavens.com/index.php/2007/09/25/bollinger-the-coward/>

seth (2010-05-26 17:58:25)

Sam, thanks for pointing that out. I am glad that someone agrees with me.

Vic (2010-05-27 15:44:09)

There's a difference between a scholarly article and a feel-good speech. And, yes, the anecdote is much more enjoyable to the audience when told as a first-person account rather than through citing a source as one might do in the case of a scholarly article.

Tom (2010-05-28 20:41:44)

Vic, I think the audience's enjoyment might have been tempered when they later heard that they'd been lied to – and their expensive education devalued – by the fraudulent Brian Corman.

seth (2010-05-29 20:10:38)

The very last bit of the Columbia education of the Class of 2010 includes some high-profile plagiarism in which they were taken in . . . it will be interesting to see how their later charitable contributions to Columbia compare to earlier and later classes.

jack (2010-06-09 23:21:19)

This post neglects to mention that the plagiarized joke was delivered by the Valedictorian of the School of General Studies, not Columbia College, which is the undergraduate program most people assume is being referred to when Columbia University is mentioned. [http://en.wikipedia.org/wiki/Columbia\\_University\\_School\\_of\\_General\\_Studies](http://en.wikipedia.org/wiki/Columbia_University_School_of_General_Studies)

## **Excellent Jonathan Franzen Story (2010-05-26 16:42)**

The current issue of The New Yorker has [1]an excellent story by Jonathan Franzen. I enjoyed reading it (unlike most recent New Yorker fiction, unfortunately) and it's closely related to stuff I blog about.

It tells what happens after a girl is raped by a boy with powerful parents. Her coach wants her to report it but her

parents dissuade her. They are afraid of what the boy's parents would do to them. The mother is active in the local Democratic Party and says "I wish it had been anyone else." They have three other children – this one, they seem to decide, is disposable.

The story is so wrenching because the parent-child bond is usually so strong. But smaller abandonments happen all the time. When I was a graduate student at Brown, I was a teaching assistant. One of the papers I graded turned out to be plagiarized. I told the professor about it; he did nothing. I'm sure I know why: It would have been costly for him. Time-consuming, for example. He abandoned the student. Teachers, like parents, should teach right and wrong.

I [2]posted yesterday about a Columbia University valedictorian named Brian Corman who plagiarized part of his speech. Was this the first time he's plagiarized? Of course not. It's merely the first time he's been punished for it. I believe he's plagiarized many times and in some cases the teacher noticed. The teacher did nothing – thereby abandoning the student – because to do something would have been costly for the teacher. Had Corman been punished earlier, he would (a) not have been valedictorian (it would have gone to someone more deserving) and (b) not face ridicule for the rest of his life, since this episode will be preserved by Google. Likewise, [3]Adam Wheeler – a flagrant liar who almost graduated from Harvard without being caught – will be ridiculed the rest of his life. He too was abandoned by his professors, who surely noticed before now that he plagiarized.

That Brown, Columbia, and Harvard professors put their own comfort ahead of doing right by their students is unsurprising, given the examples set by countless university presidents and underlings. (Examples [4]here.) Why did Columbia University President Lee Bollinger [5]show a shocking lack of understanding of the purpose of free speech? (He's a law professor whose specialty is freedom of speech.) Because he thought it would be crowd-pleasing – and it was.

1. [http://www.newyorker.com/fiction/features/2010/05/31/100531fi\\_fiction\\_franzen](http://www.newyorker.com/fiction/features/2010/05/31/100531fi_fiction_franzen)

2. <http://www.blog.sethroberts.net/2010/05/25/columbia-university-valedictorian-plagiarizes-comedian/>

3. <http://www.blog.sethroberts.net/2010/05/18/harvard-student-almost-gets-away-with-it/>

4. <http://www.blog.sethroberts.net/2007/09/27/columbia-university-president-lee-bollingers-surprising-view-of-freedom-of-speech/>

5. <http://www.blog.sethroberts.net/2007/09/27/columbia-university-president-lee-bollingers-surprising-view-of-freedom-of-speech/>

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Nancy Lebovitz (2010-05-27 05:21:01)

There's an emotional difference between not punishing people when you owe it to them, and not defending them when you owe it to them. There are plenty of parents who will punish but not defend, and plenty who will defend but not punish.

Alex Chernavsky (2010-05-27 07:14:10)

Adam Wheeler *should* be ridiculed for the rest of his life, but he probably won't be. Jayson Blair (disgraced former *New York Times* reporter), Stephen Glass (disgraced former *New Republic* reporter), Elliot Spitzer ("Client #9"), and James Frey (author of *A Million Little Pieces*) all made come-backs to one extent or another. One wonders what you actually have to do in order to disappear from the public sphere altogether.

Kirk (2010-05-27 07:49:03)

I worked at a Fortune 50 firm for 25 years and saw many cases of managers failing to address problem employees. Sometimes it was due to conflict aversion; many people just don't like to get in the midst of conflicts, and improving (or firing) an incompetent



employee is definitely full of conflict. It didn't help that the rules and regulations about firing, which probably came from a few justified lawsuits, made it near impossible to remove someone for just incompetence. My father saw the same thing in the firm he worked for. Eventually, though, bad economic times came, and management ordered a percentage of employees to be dropped, and these people were fired during a recession. These people were mistreated two times; they had 'jobs' without producing real work or real results for too many years, and then were dumped into a poor job market without real skills. And the shareholders were ripped off all those years because these people not only didn't work, they were negative producers; they caused other people to cover for them. Productivity went up after the cullings. In summary, it's not just academia.

lance (2010-05-27 12:22:35)

"Was this the first time heâ€™s plagiarized? Of course not." Not "probably not" or "in most cases like this, there is a pattern of behavior" but "of course not." Sometimes Seth just goes over the deep end . . . he has no idea what this guy's past is. Of course not.

dilys (2010-05-27 12:24:59)

Over a good many years, I have run across a number of women who had been "interfered with" (as the saying used to be) by neighbors, family friends, more distant relatives. In about 90 % of the cases, parents, especially mothers, made it clear that family unity or social hierarchy meant that either the girl was blamed, or at least it was hushed up and the complaint ignored. This is a subset of the defining moment, particularly for females and particularly in more traditional & authoritarian societies (and I think Franzen is picking up on tribalism in the Progressive environment), when the child realizes that the don't-make-waves business-as-usual of the collective trumps individual happiness and welfare in the eyes of the parents. So frequent it is difficult to consider it cowardice. Likewise in business. Exceptional heroic myths to the contrary.

Vic (2010-05-27 15:55:03)

The whole notion of date-rape prosecution bothers me. I don't condone rape, but how can you build a case on one person's word? I know guys (or I should say, I believe their side of the story) who have had their lives upended by false accusations of rape. We also have the prominent example of the Duke Lacrosse case. On Adam Wheeler, I don't particularly condone what he did either, but you could also view it as acting out against an unfair system that rewards all sorts of unworthy people on the basis of arbitrary or shallow criteria, like accomplishment in sports or "leadership" in the case of a Rhodes or affirmative action (i.e., racism) in the case of admission to Harvard. I'm always astounded when people have such a black/white view of morality.

Mathew Ferguson (2010-06-03 00:49:52)

In my first year of uni we had a bunch of fellow computer science students steal programs from other students and pass them off as their own. The action taken over this blatant theft? An extension of four days was given (on an original 7-day project) for the thieves to resubmit their own work. No punishment, no consequences. End of the year and most of the thieves drop out of university entirely. This article makes me wonder if they had been plagiarising their way through high-school, consequence free, until it finally catches up with them where it means a hell of a lot. Are kids who are punished strongly but fairly when they are young less likely to commit bigger crimes when they get older?

#### **Four Transitions: Population, Forests, Obesity, and Fast Food (2010-05-27 14:37)**

Long ago Paul Ehrlich, a Stanford professor, wrote The Population Bomb. Yet you probably know about the demographic transition: A sharp decrease in family size when countries reach a certain level of wealth. Which implies a big problem with Ehrlich's forecasts. You probably don't know about three related transitions:

1. Forests. For a long time humans destroyed forests and forest area decreased. More recently, however, [1]forests have been regrowing as people leave rural areas for cities.
2. Obesity. In poor countries, rich people are fatter than poor people. In rich countries, the opposite is true: the

poor are fatter than the rich, presumably because the rich eat less factory food.

3. Fast food. On a recent visit to Tokyo, I was told that the number of fast food restaurants in Tokyo is declining.

1. [http://books.google.com.hk/books?id=\\_GgQ9poHECwC&pg=PA51&lpg=PA51&dq=reforesting+of+the+amazon+due+to+migration+to+cities&source=bl&ots=9p59U0aAtQ&sig=WRo0LwI5oTgPurv0KUg16r\\_5808&hl=zh-CN&ei=G7\\_3S5TzPIHY7AP3iLX6BQ&sa=X&oi=book\\_result&ct=result&resnum=4&ved=0CC4Q6AEwAw#v=onepage&q&f=false](http://books.google.com.hk/books?id=_GgQ9poHECwC&pg=PA51&lpg=PA51&dq=reforesting+of+the+amazon+due+to+migration+to+cities&source=bl&ots=9p59U0aAtQ&sig=WRo0LwI5oTgPurv0KUg16r_5808&hl=zh-CN&ei=G7_3S5TzPIHY7AP3iLX6BQ&sa=X&oi=book_result&ct=result&resnum=4&ved=0CC4Q6AEwAw#v=onepage&q&f=false)

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Jim (2010-05-27 15:29:10)

QUOTE: "... More recently, however, forests have been regrowing" With the decline of print media, fewer trees are needed to produce those quaint 20th Century relics known as newspapers and books.

Alrenous (2010-05-28 01:46:06)

Paper use has been rising. <http://www.businessedge.ca/archives/article.cfm/paper-consumption-on-rise-study-14161>  
<http://chrislang.files.wordpress.com/2008/02/paper.png> Most pulp is from reforested places anyway, making up a whopping 75 % of pulp, with a further 16 % from wood farms.

Dirk (2010-05-28 04:58:42)

Dear Seth, I usually enjoy your blog, but today you got something seriously wrong. Please allow me a comments regarding "1. Forests:" There are huge problems with the so-called "Environmental Kuznets Curve" (EKC, referred to in your link). People start to understand now that all systems on Earth are interacting constantly. What the EKC actually shows is not a decline in pollution in wealthy countries, but an EXPORT of polluting practices to poor countries.

seth (2010-05-28 06:23:18)

Dirk, I wasn't referring to the Environmental Kuznets Curve in Point 1. I was referring to a graph (plus supporting data) showing that in many countries forests are in fact regrowing - a much more specific point than Kuznets was predicting.

Dirk (2010-05-29 02:04:28)

Seth, the link you provide directs to page 51 of the book - and there is no graph on this page. The point with forest regrowth is the same as with the EKC: the resources of rich countries get protected by importing wood (products) from poorer countries - which globally leads to continued deforestation, while it allows some countries to report regrowth of forests. But country statistics are calculations limited to artificially drawn areas, they are usually insufficient to show what is going on in nature...

seth (2010-05-29 11:08:23)

Dirk, the graph is on a different page. I think the interpretation you raise (export of pollution, export of deforestation) is plausible but less certain than you seem to say ("actually shows"). People in poor countries really are moving to cities in great numbers, as the more beneficent explanation implies. When rich people stopped getting fat, did they "export" the consumption of factory food to poor people? I think these transitions are important to know about no matter what the explanation turns out to be.

Dirk (2010-05-30 02:52:00)

FAO statistics show that global forest cover is still decreasing - and that is what counts in globally connected ecosystems, in my opinion. National statistics always only show one frame of the picture. Regarding the factory food I would not say it was 'exported' to poor people, as this usually happens within the same country. Middle class and rich people eat less factory food, but they are getting fewer. At the same time, the increasing number of poor lower class people within many industrialized countries continually increases their consumption of factory food, leading to the success of McDonald's and Starbucks - and to

the "obesity epidemic" of the masses, as we can see in many rich countries today. By the way, thank you for your time, the interesting discussion and the objective tone - it really is much appreciated!

seth (2010-05-31 01:01:42)

You're welcome, Dirk. Re the FAO statistics: I think it's important whether the rate of deforestation is increasing or decreasing. If the rate is decreasing, I think it suggests the transition I describe may be playing an important role. If not I would agree with you the deforestation is merely being exported. World population is still increasing, as far as I know, but I think the rate of increase is decreasing. I've never heard a demographer doubt the huge importance of the demographic transition.

## **The Unreasonable Effectiveness of My Self-Experimentation (2010-05-28 07:28)**

A good way to have new ideas, it's said, is to talk about the ideas you already have. After I [1] posted about advantages of self-experimentation, Bruce Charlton, the editor of Medical Hypotheses, invited me to write an editorial about it. Wondering what I thought gave me some new ideas and the editorial turned into a full-length article called "[2] The unreasonable effectiveness of my self-experimentation." For 20 years I'd been mystified by this. I'm not exaggerating, I had no idea what I was doing right. I wanted to know - so I could do more of, or at least continue to do, whatever it was - but I just couldn't figure it out.

1. <http://www.blog.sethroberts.net/2009/11/05/nassim-taleb-on-incompetent-experts/>

2. <http://sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

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epistemocrat (2010-05-28 10:53:18)

Hi Seth, I alerted Bruce to our Ancestral Health Symposium, which is, in part, an event that will bring ancestrally-minded self-experimenters together to share stories, socialize, and form a Biomedical Mutual Organization (according to Baines). Best, Brent

Mike Kenny (2010-05-28 19:14:28)

this was a great article, thoroughly enjoyed it, going to have to reread it i'm sure.

Dennis Mangan (2010-05-29 05:26:25)

Great, Seth. I'm printing out your article as I write. But do you think I should actually read it? It hasn't been peer-reviewed.

Dennis Mangan (2010-05-29 08:19:40)

Seth, your article is very good. I particularly thought that your invocation of Veblen and high vs. low status science was insightful. You mentioned the progress made in obstetrics by the relatively low status obstetricians, and I recently came across another example. Until the 1960s, many women who had Rh negative blood type gave birth to stillborn babies, the babies' condition being known as erythroblastosis fetalis (today, hemolytic disease of the newborn). In 1941, an M.D. named Philip Levine noticed that a woman who had a stillborn baby then proceeded to have a transfusion reaction from blood donated by the baby's father, and Levine connected the two incidents as related. As a result of his discovery of the Rh blood group, probably millions of lives have been saved. A chance observation by a prepared mind in a field of immediate practicality.

seth (2010-05-29 11:29:38)

Thanks, Dennis. The Rh negative story is a good example. In the 1940s, it was higher status to study that stuff than it is today. In the 1940s, UC Berkeley had a Human Nutrition Unit – a floor devoted to isolation experiments. Now such (relatively practical) studies are "old-fashioned" (that is, low status), such experiments are much less common, and the floor is used for other things. The ketogenic diet used to treat childhood epilepsy was developed in the 1920s but such treatments became low-status with the growth of the drug industry and more "scientific" treatments.

Hal (2010-06-01 13:17:22)

The Medical Hypotheses journal has unfortunately been involved in a major scandal recently which will essentially destroy it. The editor accepted an article by Peter Duesberg advancing his theory that AIDS is not caused by HIV. This led to a backlash and the publisher ordered the editor to switch to peer review to choose articles, which would probably force the journal closer to the mainstream. The editor refused, and was fired. It is unclear whether or in what form the journal will continue.

Cooking as science | Anthony Burgoyne (2010-06-29 15:22:09)

[...] Cooking is a particularly good science, because a) it can be done on a personal scale (no big bureaucracies required), b) experiments can be repeated and modified relatively easily (lots of trial and error rapidly and with little cost), and c) there is an immediate practical benefit to it (see Seth Roberts' concept of exploitation-exploration in his paper linked to here for one reason why this is important). [...]

The Incredible Success of the Amateur Scientist Model | Anthony Burgoyne (2010-07-04 11:46:03)

[...] 1. There is more flexibility in research and exploration, and in particular a scientist can work on a personally motivated problem. (See Seth Roberts' paper linked here for a discussion of some of these sorts of considerations.) [...]

Jianshe Liu (2010-07-27 03:56:51)

Hi, I'm very glad to read yr article, because I'm same like, have done some experiments on myself like a lab mice. I will publish my manuscript soon. Wish to talk with you sometime. Regards, J.S.Liu

## **The Foxconn Suicides (2010-05-29 11:39)**

Foxconn, located on the coast of China, is the largest electronics manufacturer in the world. They make iPhones, Wiis, and many other famous products. You may have read about [1]the epidemic of suicide that has broken out among its employees. There were two in the last few days, for example. The count now stands at something like a dozen suicides in about a month. The factory complex involved is gigantic, with perhaps 300,000 workers, but no question this is a terrible thing. The victims are all or mostly men in their early twenties. The median length of employment at Foxconn might be about a year.

Foxconn has appealed to my university (Tsinghua) and in particular my department (Psychology) for help. I'm told their assembly line was designed at Tsinghua. In any case, several people from my department (faculty and graduate students) have gone to the factory and tried to do something.

At a department meeting we discussed our department's involvement. I said it's really hard to make progress on such problems for reasons that might not be obvious. When I had trouble waking up too early, I started to study the problem via self-experimentation. All I cared about was solving the problem. Any answer was acceptable. I would spend as long as it took to find it. It took me 10 years to make visible progress. The first thing I figured out was that [2]the problem was partly due to eating breakfast – which sleep researchers had failed to discover.

Consider the Foxconn suicides. It would be incredibly helpful to figure out what's causing them. But few professors want to study a problem that they have no idea if they can solve nor how long it will take. They don't want to wait ten years to write a paper. By then their funding will have run out. If funding is assured regardless of progress, then

how does the funder ensure they are actually doing something? And few professors have total academic freedom. Their graduate school advisor, their academic friends, the people who control their career have certain beliefs. About which theories are good and which are bad. About which methods are "correct". If their results contradict these beliefs, if they use a "wrong" method, they will suffer, just as all heretics suffer. So there is pressure to come up with an acceptable answer using proper methods. This gets in the way of coming up with the actual answer.

This doesn't mean academic research is useless, but it does mean that professors work in shackles that outsiders are, in my experience, unaware of. I wrote about this in [3]my Medical Hypotheses paper. It is a big reason my self-experimentation found new and surprising answers to old questions: I had total freedom. All I cared about was finding the answer. I didn't care about publications. I didn't worry about funding. I had as much time as it took.

1. <http://www.nytimes.com/2010/05/22/technology/22suicide.html?scp=1&sq=foxconn&st=cse>

2. <http://escholarship.org/uc/item/2xc2h866>

3. <http://sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

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Adam (2010-05-29 17:03:02)

Seth, this story is getting coverage here in Korea. I hope that there are changes that can be made. Awareness of the problem and not trying to cover up the issue may be a good start. Note, the US military faced similar concerns with suicides by members returning from the early deployments to Iraq and Afghanistan. A program designed to raise awareness of the issue was the response...not sure of its effectiveness. Also, there was/is a concern that the suicide rate may be higher than reported, as some may be reported as motorcycle and auto accidents. Q: Is there a higher than expected accidental death rate at Foxconn?

thehova (2010-05-29 21:00:31)

I've read about the incidents. A lot of people of the far east are frustrated by the entire economic model. Indeed, they produce the entire product but make little money compared to Apple, Microsoft, Dell, etc... Marketing and design is where the vast majority of the profit is made. Still, that doesn't really explain the higher suicide rate.

Vic (2010-05-29 21:21:31)

Considering that thousands of Chinese coal miners die each year and that tens, if not hundreds, of millions of Chinese have their lives shortened by lack of safety and environmental regulations, 13 suicides among a population of 300,000 of mostly young males suggests that preventing suicide is more high-status than preventing other forms of morbidity and mortality.

seth (2010-05-30 01:01:36)

Vic, my guess is that the owner of Foxconn feels embarrassed by what has happened. Due to the publicity of course. Whether journalists think it is higher status to cover Foxconn than a coal mine I don't know. Manufacturing is a much larger business in China than mining, so in some sense manufacturing is a bigger story.

thehova (2010-05-30 02:40:03)

Doesn't America have a startlingly high suicide rate for students who move off to college and live in a dorm (like Foxconn, where most workers live in dorms)? Dorm life (moving away from family, friends, and community) can initially be brutal.

John (2010-05-30 13:28:15)

Seth I'm on my final year, hopefully, of my phd. I learned the hard way why you don't take on a problem like the one you describe. I hate to say it, but it's really hurt my career. I love to take chances and try to push science in new directions but you

can't as a student or even as an academic unless you have such a reputation and huge research program that it won't cripple you. I'm really down on science right now as a result of these sorts of issues

Mark (2010-05-31 19:51:24)

This is not a problem. 12 out of 330,000 in 5 months. See the Wikipedia page on national suicide rates. Do the math. Half of these are probably copycat suicides which will fade out when the publicity dies. One thing Foxconn could do is not pay 6-10 years of "suicide compensation" to families. Foxconn has no obligation to them.

Linx « Rhymes With Cars & Girls (2010-06-12 06:31:28)

[...] Seth Roberts in talking about the Foxconn suicides has a critique of academia: It would be incredibly helpful to figure out what's causing them. But few professors want to study a problem that they have no idea if they can solve nor how long it will take. They don't want to wait ten years to write a paper. By then their funding will have run out. If funding is assured regardless of progress, then how does the funder ensure they are actually doing something? And few professors have total academic freedom. Their graduate school advisor, their academic friends, the people who control their career have certain beliefs. About which theories are good and which are bad. About which methods are "correct". If their results contradict these beliefs, if they use a "wrong" method, they will suffer, just as all heretics suffer. So there is pressure to come up with an acceptable answer using proper methods. This gets in the way of coming up with the actual answer. [...]

### Assorted Links (2010-05-30 16:20)

- "[1]Playing in the dirt could make you smarter," study says. Playing in the dirt could make you happier, [2]another study says.
- [3]Why does Steve Ballmer still have a job? especially [4]this comment.
- [5]Less tooth-brushing, more heart disease. Those who brushed their teeth less than daily – a small fraction of the sample – had more heart disease. Less-than-daily tooth-brushing may reflect depression or isolation, neither of which was controlled for. The data is [6]openly available.
- [7]Black-and-white thinking strikes again.
- OMG, "[8]polar bear population very very healthy"!

Thanks to Mark Griffiths.

1. <http://www.foxnews.com/story/0,2933,593517,00.html>
2. <http://discovermagazine.com/2007/jul/raw-data-is-dirt-the-new-prozac>
3. <http://baselinescenario.com/2010/05/24/microsoft-mobile-phones-steve-ballmer/>
4. <http://baselinescenario.com/2010/05/24/microsoft-mobile-phones-steve-ballmer/#comment-57144>
5. [http://www.bmj.com/cgi/content/full/340/may27\\_1/c2451](http://www.bmj.com/cgi/content/full/340/may27_1/c2451)
6. <http://www.data-archive.ac.uk/>
7. <http://www.nytimes.com/2010/05/27/opinion/27kristof.html?src=me&ref=homepage>
8. <http://www.cbc.ca/canada/north/story/2010/05/28/nunavut-polar-bear-status.html?ref=rss>

Patrik (2010-05-31 12:02:25)

Hi Seth, A bit off-topic but FYI with regard to one of your (and my) favorite themes, animal fat and sleep, one of my PaleoHackers reports similar effects: *"OK, so I know this isn't exactly rigorous clinical research, but I swear I need less sleep during the weeks in which I consume a lot of eggs (approx. 6-8 eggs/day). I can't think of any other factor off the top of my head. Anybody notice this?"* <http://paleohacks.com/questions/5411/more-eggsneed-less-sleep>

### **Ernst Wynder on the Nurses' Health Study (2010-05-31 15:42)**

It says a lot about the Nobel Prize in Medicine that Ernst Wynder, co-discoverer that smoking causes cancer, never got one. Wynder was also one of the founders of modern epidemiology. [1]Here's what he believed about the Nurses' Health Study:

He had a strong skepticism about methods of dietary assessment, and always felt that the failure of analytic studies such as the Nurses' Health Study to report associations between cancer and diet were due to a combination of random misclassification related to the imprecision of food frequency questionnaires and the narrow range of nutrient intake within a given population. I feel certain that he would have criticized the recent negative findings from the Women's Health Study on dietary fat and breast and colon cancer on similar grounds. This was one area where he felt that international comparisons at the ecological [country-by-country] level provided better etiologic support than [more] analytic studies, and he published many studies over a period of decades to make just that point.

For example,

He developed a friendship with Kunio Aoki at the Aichi Cancer Research Institute in Nagoya, Japan, which resulted in our study which found that Japanese men with smoking habits similar to American men had considerably lower lung cancer risks.

I didn't know that. It suggests that either Americans eat something that promotes cancer or the Japanese eat something that protects against it. I suspect it's the latter – specifically, the big consumption of fermented food in Japan and not in America. I'm sure the food-frequency questionnaires Wynder criticizes, written by Americans, are tone-deaf to fermented food. I doubt they ask about kimchi or kefir or miso consumption, or distinguish between pickles aged for a day and pickles aged for a year. In Japan, people eat fermented food in many forms: vinegar drinks, yogurt, other fermented milk drinks, and alcoholic beverages. Above all, they eat miso and long-fermented pickles daily. They also have [2]the longest life expectancy in the world.

1. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1670164/>

2. [http://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_life\\_expectancy](http://en.wikipedia.org/wiki/List_of_countries_by_life_expectancy)

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peter (2010-05-31 17:34:54)

i've heard that standing bare feet in ground (i.e., grass over ground not cement, sand) drains one of electromagnetic frequency that accumulates in one's body, thereby eliminating the adverse health consequences of EMF's. I'm starting to do this now and may report back to you.

Robert Reis (2010-05-31 19:47:38)

Perhaps he did not deserve the Nobel Prize. The Scientific Scandal of Antismoking By J. R. Johnstone, PhD (Monash) and P.D.Finch, Emeritus Professor of Mathematical Statistics (Monash) <http://members.iinet.com.au/ray/TSSOASb.html>

The 50 Best Health Blogs (2010-05-31 19:50:32)

QUOTE: "It suggests that either Americans eat something that promotes cancer or the Japanese eat something that protects against it." Interesting. I was just reading the WeeksMD blog, which said there is a very strong connection between sugar and cancer. I would guess that Americans eat much more sugar than the Japanese do ... but I could be wrong. [1]Cancer and sugar  
Jim

1. <http://weeksmid.com/?p=3917>

Aaron Blaisdell (2010-05-31 20:09:46)

"It suggests that either Americans eat something that promotes cancer or the Japanese eat something that protects against it. I suspect it's the latter" I suspect both. I think the high consumption of fructose, in sugar and high-fructose corn syrup, for example, coupled with the high intake of rancid omega-6 dominant fatty acids, such as in industrially processed vegetable oils, in the American diet both contribute to cancer and other diseases of civilization such as metabolic syndrome and autoimmune diseases.

Jake (2010-05-31 21:08:49)

The typical Japanese male has at omega 6 to omega 3 ratio in their blood of 2 to 1 or less. The typical American male has a ratio of 20 to 1 or more.

Sam (2010-06-01 02:45:43)

One additional thing I'd look into: do they smoke the same tobacco? Tobacco in US might be spiced a lot different than in Japan, which might have a big effect on health.

dearieme (2010-06-01 04:00:24)

Why shouldn't it be a genetic difference? By the way, the cancer-smoking link was discovered by German workers in the Third Reich. I gather that it was ignored because people assumed they'd lied to please the virulently anti-smoking Fuhrer.

Darrin Thompson (2010-06-01 06:58:17)

The Nurses' Health Study was discussed extensively by Taubes in Good Calories Bad Calories. IIRC it came out with the "wrong" answer. Dietary fat was not showing up as linked to heart disease. That led to ideas like "we live in a toxic environment." That became a justification for ignoring previous study results and promotion of forms of study that could only confound results. The Seven Countries study which ultimately became the foundation for the belief that dietary fat is bad was the result of this kind of thinking. If it is indeed true that smoking is not linked to lung cancer, (using the Taubes "bad scientist, bad result" hypothesis) my head is going to hurt. I've got a lot of anecdotal evidence in my head that says smoking -> cancer... Although I wonder about dose and other forms of tobacco... Woof. I'm still not going to take up smoking.

seth (2010-06-01 06:59:26)

Robert Reis, thanks, very interesting article about problems in the case against smoking. Wynder had experimental evidence (from mice) that cigarettes were carcinogenic - evidence not mentioned in that essay. And all that rating of evidence ("second-rate") is misleading because the "second-rate" evidence is dismissed rather than examined to see what you can learn from it. I think the answer to the mysteries and paradoxes the article describes is that smoking does have beneficial effects. It's another example of hormesis.

Sheila Buff (2010-06-01 07:57:00)

In the US, about 90 % of people with lung cancer are smokers or former smokers, but of all smokers, only about 10 % get lung cancer. Assuming most smokers eat and are exposed to more or less the same things, this suggests that those who get lung



cancer have a genetic predisposition to it. That might or might not somehow be triggered by one or more dietary factors, one or more environmental factors, something else entirely, or some combination of factors. Interestingly, the monoclonal antibody drug bevacizumab (Avastin), which treats cancer by blocking vascular endothelial growth factor, is significantly more effective in people of Asian descent. It's possible that Japanese smokers have a genetic difference that makes them less susceptible to lung cancer. Cancer is extremely complex and highly variable and to think that single element can be responsible for causing or preventing it is simplistic. For example, mesothelioma is associated with asbestos exposure. However, most people who have extensive asbestos exposure from say a lifetime working in a shipyard never get this disease, and of those who do get it, probably less than half have any traceable asbestos exposure.

Alex Chernavsky (2010-06-01 09:07:30)

Regarding the Nurses' Health Study: Gary Taubes had a great article in the *New York Times Magazine* a few years ago: <http://www.nytimes.com/2007/09/16/magazine/16epidemiology-t.html>

Vic (2010-06-01 09:13:00)

Japanese differ from Americans in lots of habits, customs, genes, etc. If fermented food is making a difference to the health of the Japanese population though, there is likely sufficient variation in its consumption to examine whether it is associated with health among Japanese.

Wilhelm (2010-06-01 09:31:52)

This question (If Americans eat something that promotes cancer) has already been answered: It's in the milk. Casein is a powerful cancer promoter. The effect is very strong. How relevant the potential protective effect of fermented foods is, I don't know, but the negative effect of cows-milk is proven to be very strong.

PowerSource » Blog Archive » Medical researcher's skepticism about self-reported medical surveys (2010-06-01 10:08:44)  
[...] Ernest Wynder, co-discoverer of the link between smoking and cancer, was skeptical about the accuracy of dietary assessment surveys because, in part, of their "random misclassification related to the imprecision of food frequency questionnaires" [Via Seth's Blog\*\*.] [...]

Bret (2010-06-01 12:05:16)

I read something quite interesting the other week; while Japan has the longest life span, Asian-Americans in New Jersey live longer. This needs to tie into our overall understanding.

Mike (2010-06-01 17:23:29)

Sorry Wilhelm, but you're stretching when you say that "the negative effect of cows-milk is proven to be very strong." The negative effects of isolated casein have been proven to be strong but that doesn't tell us anything about milk itself. Whey, present in real milk but absent from the casein damning studies, has been shown to offer a pre-protective effect against cancer. On an observational level, where are the large amounts of cancer that we should be seeing amongst the Massai and other traditional dairy based cultures?

Vic (2010-06-01 19:52:09)

do you have any links for the effects of casein in people? In association studies, I've seen people drinking whole milk tend to have less heart disease and mortality than people who don't. Also, the timing of this is fitting: [http://news.yahoo.com/s/nm/20100601/us\\_nm/us\\_cancer\\_cigarettes](http://news.yahoo.com/s/nm/20100601/us_nm/us_cancer_cigarettes)

Nicole (2010-06-05 03:53:56)

The Japanese also eat a lot more sodium and LOT more iodine containing foods (seaweed and seafoods) than we do. It's hard to compare their diet to America, I think. There's just too many differences to pull out one variable.

seth (2010-06-05 04:20:29)

Nicole, I can't think of any reason that eating lots of sodium or iodine will add 5 years to your life. On the other hand, there are plenty of reasons to think that fermented food is tremendously healthy.

Tom (2010-06-05 08:36:39)

Not gain-saying you on fermented foods, but Dr. Davis writes a lot about how rampant iodine deficiency in the US has contributed to thyroid dysfunction (and a resultant susceptibility to heart disease and breast cancer.) [http://www.lef.org/magazine/mag2009/oct2009\\_Halt-on-Salt-Sparks-Iodine-Deficiency\\_01.htm](http://www.lef.org/magazine/mag2009/oct2009_Halt-on-Salt-Sparks-Iodine-Deficiency_01.htm)  
<http://heartscanblog.blogspot.com/2009/08/iodine-deficiency-is-real.html>

bob dobbs (2010-07-23 23:56:02)

Japan has Marlboro and Camel. They're all cigarettes. Given that seaweed is known to get rid of "hard to get rid of" toxins as well as nourish the lungs and throat (anything soft and slimy in the body), I'd say it's a safe bet that part of the Japanese connection involves mass amounts of seaweeds. Call it a hunch...

bob dobbs (2010-07-23 23:59:05)

The basic statistic is... Japanese are a nation of heavy smokers and yet have very low rates of lung and heart disease. Japanese also consume more seaweed than most. so... smoking + no lung cancer + seaweed = Japanese smoking + lots of lung cancer + no seaweed = American

George (2010-10-10 08:40:17)

I've been told that the genetic makeup of Japanese people precludes them from developing cancer from smoking. If your mother and father both smoked all of their lives lived into their 80's and had no lung problems, chances are you too can safely puff away.

## 5.6 June

### Butterfat Good? (2010-06-02 20:10)

I eat a lot of butter because I believe it makes my brain work better. [1]A new paper says it may help me in other ways. From the abstract:

Compared with those with the lowest intake of full-fat dairy [= "whole milk, cream, ice cream, yogurt, full-fat cheese and custard"], participants with the highest intake (median intake 339 g/day) had reduced death due to CVD (HR: 0.31; 95 % confidence interval (CI): 0.12–0.79; P for trend = 0.04) after adjustment for calcium intake and other confounders.

70 % reduction is huge – so large it makes the idea of direct causation (butterfat lowers CVD risk) more plausible. (However, there is a lot of uncertainty in the estimate.) The alternative is that butterfat intake is correlated with the true cause – a behavior difference, say. But that correlation would have to be very high, which isn't terribly plausible. Measured differences between the high-fat group and the low-fat group were small.

[2]Stephan Guyenet reviews other evidence that supports the idea that this reduction is no fluke. Other studies have found similar effects.

Thanks to Paul Sas.

1. <http://wholehealthsource.blogspot.com/2010/04/full-fat-dairy-for-cardiovascular.html>

2. <http://wholehealthsource.blogspot.com/2010/04/full-fat-dairy-for-cardiovascular.html>

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Aaron Blaisdell (2010-06-02 20:56:56)

I eat cultured butter from pastured cows every day. It's one of my so-called "super foods" along with fermented cod liver oil (from Green Pastures). I discovered the virtues of butter after reading Weston A. Price's book, and have made it a staple of my diet ever since. Stephan does provide an amazing review of the evidence for its health benefits.

vic (2010-06-02 22:58:59)

the p for the trend is barely significant

Alex Chernavsky (2010-06-03 04:55:55)

Aaron, since you've researched the effects of butter, do you have an opinion as to whether it's the fat *itself* that has the beneficial effects, or some other substance (or substances) that co-occur with the fat?

Aaron Blaisdell (2010-06-03 06:55:56)

Alex, from my reading, I've gathered that a large part of the health benefits of butter come from the fat-soluble vitamins it contains, such as carotenes, D3, E, and K2. But it also contains a good fatty acid profile, with a significant amount of omega-3. And it contains conjugated linoleic acid (CLA) which -that appear to be very important in many physiological functions and possibly anti-cancer effects (in some animal studies). Then there's the self-reported anecdotal evidence of softer skin with fewer blemishes made by people who switch to using a lot of butter in their cooking. Here's a nice blog post about a study comparing butter to margarine: <http://wholehealthsource.blogspot.com/2009/10/butter-vs-margarine-showdown.html>.

CTB (2010-06-03 11:12:39)

About 9 % of the fatty acid in milkfat is butyrate (where the name butter comes from I would think). This fatty acid is unique to milkfat...other fat sources in the cow don't have it. Butyrate is known to support the colon (both differentiation and maintenance of colonocytes, as well as support of neurons which control the muscles that propel stuff through the lower gut). Usually it comes from fermentation of soluble fiber by enteric bacteria...one of the reasons to eat an apple a day...and/or to take probiotics. Don't know if butyrate that you eat makes it to the colon without being digested by the small intestine...but even then it would get dumped into the circulation in chylomicrons and presumably make its way to the blood supply in the colon. It would make sense that having butyrate in the food supply for baby calves would help their guts develop until their fecal flora increase enough to take over the job. Human babies take a few months to develop fecal flora; not sure about calves.

Hal (2010-06-03 13:03:15)

That study was in Australia, where I think most cows are grass fed. Worth keeping in mind, in other parts of the world. I do use grass fed butter (we always call it that, brings to mind huge sticks of butter grazing in the fields) but I'll have to start looking for GF milk, yogurt, cottage cheese etc.

Nile (2010-06-03 21:43:09)

I would like to suggest another explanation. But first the back story. Despite my name I am of Scandinavian heritage. My grandparents on my mother's side came from Denmark and my father didn't learn to speak English until he went to grade school. He spoke Norwegian at home. As some of you may know the north central Midwest was heavily settled by Scandinavians. My father had a joke about some Norwegian community in North Dakota that laid out a cemetery. They finally had to shoot somebody to get it started. ( Norwegian-American humor I guess ) Most of the world is lactose intolerant. From Wikipedia

“The frequency of decreased lactase activity ranges from as little as 5 % in northern Europe, up to 71 % for Sicily, to more than 90 % in some African and Asian countries.” So... perhaps high consumption of dairy fat leads to long life but I think that it is simply genetic. My sub theory is that exposure to cold winters helps “the cold stresses the body in a good way. Both my parents lived to 93 despite having “unhealthy” lifestyles. One Grandmother lived to be 96 after having 5 children and the other Grandmother lived to be 86 after having 17 children. So... dairy fat? I love it but I doubt it. Simply a coincident indicator.

Mara (2010-06-04 01:54:48)

Hi Seth, I am experimenting with butter consumption while trying to learn how to play the guitar, and so far I can really see a positive effect: on days when I eat lots of butter I feel my dexterity improves quite a lot. This got me thinking about the numerical test that you designed for your computer. Could the speed improvement in solving simple math problems be partly due to the brain working better, and partly to better dexterity? (speed of typing in the result). In my case, it seems to be doing both. I can read music faster (I have no formal training so basically I'm just learning how to read guitar tabs by myself), I learn new chords faster, and I can keep up my concentration for longer periods of time. The only problem is that my guitar doesn't have a strap, so I can't (yet) test whether standing up helps me learn better than sitting down.

seth (2010-06-05 03:29:30)

Mara, better dexterity is due to the brain. On the days that you “eat lots of butter” how much butter do you eat? Nile, you write “I would like to propose another explanation.” Another explanation of what? And what's your alternative explanation? The amount of lactase in the body depends on the amount of lactose in the diet. When you eat more lactose, your body starts making more lactase. When you eat less lactose, your body makes less lactase. That may be the reason for the differences from place to place in lactase activity.

Mara (2010-06-05 03:44:41)

About 75g (in multiple sittings). Not sure whether that qualifies as “a lot” in your experiments, but I find it difficult to eat more without getting nauseous (though eating small amounts many times during the day certainly helps, when feasible).

seth (2010-06-05 04:17:19)

Thanks, Mara. I've been eating 60 g/day, which is half a stick/day. I eat it in small amounts throughout the day.

Mara (2010-06-05 06:23:50)

Well, I live in France so I buy the 250g sticks of butter (made in Normandie) which are the standard here - not always easy to measure how much you eat, I guess 60-75g is the average amount. I try to keep this up 3/4 days per week, and eat no butter, or less than 15-20g on other days.

Glen Raphael (2010-06-07 11:16:20)

Did the study find any “overall mortality” improvement with full-fat dairy? (The abstract doesn't make this clear.) If not, you're just trading off one cause of death (CVD) for some other causes of death. Meaning the other way to say “butterfat makes you “less likely to die” from CVD” would be “butterfat makes you “more likely to die” from all causes other than CVD”. Do you just eat the butter plain, not on anything? That sounds really nauseating. Then again, so did/does drinking straight vegetable oil, I suppose...

q (2010-06-22 20:56:50)

just for kicks i tried butter instead of canola oil for my SLD oil two out of the last three days – that's about 2 1/2 tbsp per day. i plug my nose and rinse for about two minutes after eating the butter – i don't taste anything. i haven't noticed any brain effects – should i notice them without a test? as far as mood goes, i've been crabby the past few days, more than usual, but i got some bad (financial) news this week, and maybe that's why. appetite suppression is very strong. dunno if it's the butter per se or if it's just that i changed something.

seth (2010-06-22 21:01:22)

q, thanks for reporting results. You can notice the mood changes without a test. You can't notice the mental quickening without a test.

pozycjonowanie (2011-04-05 17:36:24)

I haven't looked in here for a long time for the reason that I thought it was becoming boring, however the last several blogposts are beneficial high-quality so I guess I'll add you back to my regular bloglist. You are worthy of it my friend :)

## **"A Great Change is Coming" (part 1 of 2) (2010-06-04 01:29)**

In [1]an earlier post, I wrote "A great change is coming" – meaning a great improvement in health. It will be due to better ideas. Let's call the new ideas evolutionary thinking. They will replace [2]gatekeeper thinking. With gatekeeper thinking, which began with shamans,Â you need to extract payment from sick people. Remedies and associated ideas that don't allow this are ignored. Gatekeeper thinking pervades not only mainstream medicine but also clinical psychology, alternative medicine, and a zillion advertisements. Everyone in those fields, like the rest of us, needs to make a living. The possibility that they are doing so at the expense of the rest of us – by suppressing innovation – is impolite to bring up. Perhaps the person you are speaking to has a brother who's a doctor. And for an enormously long time there was no alternative. A sick person doesn't have time to do research, even if that were possible. They are forced to rely on gatekeepers, who are interested only in certain types of remedies.

Now there is an alternative – now just a glimmer, but surely growing. It has several dimensions. One is the sort of research involved. At one extreme of that dimension is original research – for example, [3]my discovery that breakfast caused my early awakening. Gatekeeper thinking had no interest in such ideas. You could not charge for something that simple.Â I wrote about my discovery, with plenty of data. Anyone with web access can read it. At the other extreme of that dimension is "library research" – usually web search. An example is [4]Dennis Mangan searching for possible cures for his mom's Restless Leg Syndrome (RLS) and discovering persuasive stories about niacin. Again, there was no mainstream research about niacin for RLS. Anyone with web access can read what Dennis found. So for these two disorders – early awakening and restless leg syndrome – there is now a practical alternative to consulting (and paying) an expert. This isn't repackaged folk wisdom or home remedies or someone opining. There is clear-cut data and theory involved. In the case of breakfast and sleep, it makes evolutionary sense that food would cause anticipatory activity. Likewise, the case for megadose vitamins makes biochemical sense, as [5]Bruce Ames and his colleagues explained. You can judge for yourself.

Another dimension of this emerging space is the simplicity of the treatment. In my breakfast example, I established cause and effect with just one change: stopping breakfast. Dennis's example also involved a simple change: megadose niacin. In contrast, [6]Aaron Blaisdell found his sun sensitivity went away after he made many dietary changes. If you have sun sensitivity you will find it harder to duplicate what Aaron did than what Dennis or I did, but you can still come close and in any case it is a big improvement over the previous best treatment, which was to avoid the sun.

In all three cases – early awakening, RLS, and sun sensitivity – there was no gatekeeper approval. (My article with my breakfast discovery was peer-reviewed but appeared in a psychology journal rather than a medical one). In all three cases, the solution was excellent – cheap, fast, highly effective, no side effects – compared to prescription drugs (e.g., for depression). The sort of solutions that gatekeeper thinking doesn't find. In all three cases, you don't need to go through a gatekeeper to learn about them.

In a later post I'll describe why I think this emerging solution space will soon become far more important.

1. <http://www.blog.sethroberts.net/2010/05/04/positive-side-effects/>
2. <http://www.blog.sethroberts.net/2009/11/17/gatekeeper-syndrome/>
3. <http://escholarship.org/uc/item/2xc2h866>
4. <http://www.boingboing.net/2010/05/17/restless-legs-syndro.html>
5. <http://www.ajcn.org/cgi/content/abstract/75/4/616>
6. <http://www.blog.sethroberts.net/2009/07/14/genes-or-environment-or-environment/>

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epistemocrat (2010-06-04 06:51:06)

One reason why this space may emerge is that the workforce shortages in the healthcare sector make access to primary care increasingly difficult and discontinuous.

Mike (2010-06-04 11:44:58)

Immediately thought of Seth Roberts when I read this. I have zero idea if it's accurate, but if so, not good: [http://reason.com/blog/2010/06/04/one-step-closer-toward-an-all?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed %3A+reason %2FHitandRun+ %28Reason+Online+-+Hit+ %26+Run+Blog %29 &utm\\_content=Google+Feedfetcher](http://reason.com/blog/2010/06/04/one-step-closer-toward-an-all?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+reason%2FHitandRun+%28Reason+Online+-+Hit+%26+Run+Blog%29&utm_content=Google+Feedfetcher)

David (2010-06-04 14:49:10)

Seth - Here is a guy who started a blog as a plea for help with his deteriorating health: <http://savemylyfe.blogspot.com/>  
On an unrelated note, here is a fascinating story on how the cure for scurvy (fresh lemon juice) was "lost" by the British: [http://idlewords.com/2010/03/scott\\_and\\_scurvy.htm](http://idlewords.com/2010/03/scott_and_scurvy.htm)

Barbarians at the Epistemic Gates | Anthony Burgoyne (2010-06-05 08:55:37)

[...] Seth Roberts, Professor Emeritus of Psychology at U.C. Berkeley, now teaching at Tsinghua University in Beijing, talks about a change in medical science away from "gatekeeper thinking" here: "A Great Change is Coming." [...]

## Assorted Links (2010-06-04 15:28)

- [1]submarine tunnel and giant terrain model, discovered via Google Earth. More [2]here.
- [3]Nassim Taleb interview podcast.
- Shades of Jane Jacobs: [4]How the cure for scurvy was lost. "From the fifteenth century on, it was the rare doctor who acknowledged ignorance about the cause and treatment of the disease."

Thanks to Dave Lull.

1. <http://www.commondreams.org/headlines06/0913-08.htm>
2. [http://www.theregister.co.uk/2006/07/19/huangyangtan\\_mystery/](http://www.theregister.co.uk/2006/07/19/huangyangtan_mystery/)
3. <http://www.radioopensource.org/nassim-nicholas-taleb-the-fragility-crisis-is-just-begun/>
4. <http://idlewords.com/2010/03/>

## Cigarettes are Bad, Right? (2010-06-05 12:55)

My mom says her friends knew that smoking was harmful long before the Surgeon General's report in 1962; they smoked anyway. The evidence that smoking causes lung cancer began to be accumulated in the 1950s. At first it was a radical idea. The boss of one of the scientists involved, Ernst Wynder, [1]cut his research budget for continuing to study such a far-fetched notion.

Some of the details, indeed, did not make sense, as [2]this fascinating essay ("The Scientific Scandal of Antismoking", thanks to [3]Robert Reis) points out. Were I to teach a course in scientific method, I might make this essay the first assignment: "Tell me its strengths and weaknesses." Its strength is that it brings up new data that challenge a well-known idea (smoking causes lung cancer) that most people don't give a second thought to. The conventional view that smoking is simply bad [4]is surely wrong. The essay's weaknesses are a dismissive attitude ("second-rate") and a failure to learn from facts that don't fit the authors's ideas. For example, the big correlation between smoking and lung cancer that Wynder was the first to notice. What causes it? A more subtle lesson is that the big randomized controlled clinical trials are not the wonderful thing that most writers, including the authors of this essay, make them out to be ("the gold standard"). MRFIT was a hugely-expensive controlled clinical trial that produced no difference between the groups. It isn't clear why. What can we learn from this? I'd ask my students. One lesson is the value of doing the smallest possible study – if they'd figured out the problems with a small study (and designed a better study that avoided them) they would have had a better chance of learning something from their massive study.

1. [http://books.google.com/books?id=PD2-gpsoh8kC&pg=PA308&lpg=PA308&dq=discoverers+that+smoking+causes+lung+cancer&source=bl&ots=GqpZNRfKF8&sig=60SniaPqXixiGfA1hMs3mNbRrGk&hl=en&ei=9iNWStONPIyQsgPjvp30AQ&sa=X&oi=book\\_result&ct=result&resnum=7](http://books.google.com/books?id=PD2-gpsoh8kC&pg=PA308&lpg=PA308&dq=discoverers+that+smoking+causes+lung+cancer&source=bl&ots=GqpZNRfKF8&sig=60SniaPqXixiGfA1hMs3mNbRrGk&hl=en&ei=9iNWStONPIyQsgPjvp30AQ&sa=X&oi=book_result&ct=result&resnum=7)
2. <http://members.iinet.com.au/~ray/TSSOASb.html>
3. <http://www.blog.sethroberts.net/2010/05/31/ernst-wynder-on-the-nurses-health-study/#comment-441468>
4. <http://www.forces.org/evidence/evid/therap.htm>

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Mike Kenny (2010-06-05 19:06:50)

i noticed when reading about some of the world's oldest people, that a couple of them were smokers late into life, though moderately so. a couple people i read about, first jeanne calment: "She smoked until the age of 117, only five years before her death.[14][1] Calment smoked from the age of 21 (1896), though according to an unspecified source, Calment smoked no more than two cigarettes per day.[15] She ascribed her longevity and relatively youthful appearance for her age to olive oil, which she said she poured on all her food and rubbed onto her skin, as well as a diet of port wine, and ate nearly one kilo of chocolate every week.[10]" that quote is from [http://en.wikipedia.org/wiki/Jeanne\\_Calment](http://en.wikipedia.org/wiki/Jeanne_Calment) the oil and chocolate consumption also catch my eyes as seth-robertsian themes–could chocolate consumption be like butter consumption, with its fattiness? then christian mortensen: "Mortensen enjoyed an occasional cigar and insisted that smoking in moderation was not unhealthy." that quote is from [http://en.wikipedia.org/wiki/Christian\\_Mortensen](http://en.wikipedia.org/wiki/Christian_Mortensen) certainly not strong evidence for smoking, but it caught my eye. their self restraint could signal high conscientiousness perhaps, which i think correlates with good health. i've wondered in the past why people are usually unable to smoke only a couple cigarettes, why they usually seem to do a pack or so a day if at all.

dearieme (2010-06-06 06:56:00)

"that Wynder was the first to notice": no he wasn't; the discoverers were in Nazi Germany.

Dirk (2010-06-06 16:09:26)

"The conventional view that smoking is simply bad is surely wrong." Following this style of argumentation I could easily point out

that putting a bullet into someones head isn't bad either - at least it will ultimately and totally prevent suffering from any and all diseases, be it Alzheimers, any cancer, diabetes, HIV etc etc. We have come a long way to expose all the lies of the tobacco companies and break free from hidden influences and paid pseudo-science (at least in the US, see <http://legacy.library.ucsf.edu/> - most other parts of the world are still struggling to break free). I can't think of any good reason to help those irresponsible criminals out...

seth (2010-06-06 17:19:42)

Dirk, you write: "Following this style of argumentation..." I linked to a long list of studies that show benefits of smoking. Whereas you are unable to link to a long list of studies that show benefits of "putting a bullet into someone's head." I think the benefits of smoking are really important to know because they support a claim I've made many times: our immune systems are badly understimulated. With huge health consequences (allergies, etc.) and an easy solution (eat more fermented foods). That's the "good reason" you can't think of. I agree that tobacco companies have horribly lied to and misled the public.

Stephen M (Ethesis) (2010-06-10 04:37:11)

In some settings there are dramatic correlations. Asbestos related health problems are extremely rare outside of two pack a day or more smokers, though they do definitely occur outside of that group. Black lung disease follows a similar pattern. Consider the overall incidence of lung cancer in America over the past twenty years. It has a definite shift. What is interesting is that you've pointed out that people who smoke one or two cigarettes a day may net an overall risk reduction. That is a thought that points to some interesting places, which you have noted, as well as alternatives (fermented foods) which have even fewer risk factors. But it takes true scientific inquiry rather than emotion driven response to think about things like this.

q (2010-06-10 19:53:44)

complete contrast with alcohol. there are plenty of studies and newspaper articles showing that a little bit of wine is good for you, yet everyone agrees that alcohol is addictive and too much alcohol will destroy your body. there is even a contrast with marijuana i suppose - people are willing to look somewhat at its beneficial effects, to a smaller extent. so why is tobacco the third rail? (disclaimer: i don't smoke at all and my father, a long-time smoker, died young of lung cancer.)

Roger (2010-07-30 16:29:05)

One problem is that there are so many "known" causes of lung cancers: arsenic (primarily in our water), radon gas, #1 diesel fuel (others are suspect), asbestos, and so on. Another problem is that the statistical report generators seem to inquire whether the patient is or was a smoker. If so, that's the cause! Science requires that every possible cause in each case be eliminated as the cause - pretty hard to do with diesel and auto exhaust fumes! Reports from at least three long-gone M.D.s (all my grandparents) had two of them heavy smokers and one of them with life-long exposure to second-hand smoke (she also had anginas from age 15). The two smokers died at 64 and 71 neither from any smoking related disease. The older one had a clear chest x-ray three months before his death - he chain-smoked unfiltered Luckies. The third, the non-smoker, died at 96 with no lung related disorders - her heart finally gave out. So let's put Sir Francis Bacon's scientific method to use on the problem and stop fooling the public. Big Oil is Big Campaign Contributor! It wasn't until the '50s that lung cancers became an issue - this ties in nicely with the rise of our trucks, cars and diesel fueled ships. That would be a start!

## **The Oneness of Fermentation (2010-06-05 16:37)**

[1]A New York article about the suicide of a Dalton student contains this [2]interesting observation. The dead boy

left filthy socks (which smelled, a cousin said, like kimchi) on his pillow

From which I conclude not only that kimchi is a good source of bacteria ("fermented foods" is a vague category - fermented for how long? - that might contain poor sources of bacteria) but also that our olfactory systems are good at



detecting bacteria or more precisely bacterial byproducts. (Kimchi and used socks involve vastly different bacteria but are lumped together.) We don't use smell to avoid predators or find food. We use vision and hearing for that. Maybe we use smell mainly to decide what to eat – to decide what contains calories (by learning smell-calorie associations, the basis of the Shangri-La Diet) and, as this observation suggests, what contains bacteria.

[3]Mark Frauenfelder says that fermenting foods (yogurt, sauerkraut, kombucha) makes him happy.

1. <http://nymag.com/news/features/66285/>

2. <http://nymag.com/news/features/66285/index2.html>

3. [http://www.happiness-project.com/happiness\\_project/2010/06/people-who-knit-are-usually-in-a-good-mood-people-who-stare-into-their-iphones-and-demand-your-attte.html](http://www.happiness-project.com/happiness_project/2010/06/people-who-knit-are-usually-in-a-good-mood-people-who-stare-into-their-iphones-and-demand-your-attte.html)

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Jeff R (2010-06-06 11:08:11)

Mark refers to fermentation as making him happy in the context of making things. This is different from your discussion about possible mental effects of fermented food due to a dietary effect. He also says that painting makes him happy. This isn't really evidence for anything other than Mark thinking home projects are fun, which is not surprising or uncommon.

seth (2010-06-06 17:35:16)

Jeff R, you write: "possible mental effects of fermentation . . . due to a dietary effect"? I don't know what you're talking about. You can take Mark Frauenfelder's comments about fermentation to just be "thinking home projects are fun." Maybe that's all he meant. But I think the health benefits of fermented foods put making them in an entirely different class from building a bird feeder. Making fermented foods is also much easier than conventional home projects.

Alex Chernavsky (2010-06-06 18:48:23)

Seth, I'm glad that you linked to Gretchen Rubin's [1]blog ("The Happiness Project"). Although she doesn't explicitly use the term "self experimentation", that's exactly the approach that she used to determine ways to boost her own happiness. See also her book, which I enjoyed very much. She describes her book this way: "My book, [2]THE HAPPINESS PROJECT, is a memoir of the year I spent test-driving the wisdom of the ages, the current scientific studies, and the lessons from popular culture about how to be happy—from Aristotle to Martin Seligman to Thoreau to Oprah."

1. <http://www.happiness-project.com/>

2. <http://www.amazon.com/gp/product/B002VJ9HRK/>

Tom (2010-06-12 10:54:02)

Seth, you've talked a lot about the health benefits of fermentation, but I don't think you've discussed the role that vitamin K-2 may play. (The only mention of K-2 on your blog appears to be here: <http://www.blog.sethroberts.net/2008/08/12/weston-price-and-the-olympics/>) (The mk-7 form of K-2 is created by fermentation, particularly in stinky cheeses and in Japanese natto. And other forms of K-2, particularly mk-4, may be as important.) K-2 is crucial in the human body, because it activates a compound which the body uses to move calcium where the body needs it (the skeleton and teeth) and away from where it is a health hazard (the organs and the lining of the arteries.) The additional K-2 Europeans get by eating more (esp. stinky) cheese may account for part or all of the "European paradox." some links: In mice, high-dose K-2 \_regresses\_ arterial calcium deposits by 50 % in six weeks (!) : <http://wholehealthsource.blogspot.com/2008/11/can-vitamin-k2-reverse-arterial.html> <http://www.ncbi.nlm.nih.gov/pubmed/17138823> Damaged teeth can heal themselves with K-2 (with D3) [in the absence of the standard Western diet]: <http://wholehealthsource.blogspot.com/2009/03/reversing-tooth-decay.html> More on K-2: <http://wholehealthsource.blogspot.com/2008/06/vitamin-k2-menatetrenone-mk-4.html>

## Can John Gottman Predict Divorce With Great Accuracy? (2010-06-06 15:29)

[1]Andrew Gelman blogged about the research of John Gottman, an emeritus professor at the University of Washington, who claimed to be able to predict whether newlyweds would divorce within 5 years with greater than 90 % accuracy. These predictions were based on brief interviews near the time of marriage. Andrew agreed with another critic who said these claims were overstated. He modified Gottman's Wikipedia page to reflect those criticisms. Andrew's modifications were removed by someone who works for the Gottman Institute.

Were the criticisms right or wrong? The person who removed reference to them in Wikipedia referred to [2]a FAQ page on the Gottman Institute site. Supposedly they'd been answered there. The criticism is that the "predictions" weren't predictions: they were descriptions of how closely a model fitted after the data were collected could fit the data. If the model were complicated enough (had enough adjustable parameters), it could fit the data perfectly, but that would be no support for the model – and not "100 % accurate prediction" as most people understand it.

The FAQ page says this:

Six of the seven studies have been predictive—each began with a hypothesis about factors leading to divorce. [I think the meaning is this: The first study figured out how to predict. The later six tested that method.] Based on these factors, Dr. Gottman predicted who would divorce, then followed the couples for a pre-determined length of time. Finally, he drew conclusions about the accuracy of his predictions. . . . This is true prediction.

This is changing the subject. The question is not whether Gottman's research is any help at all, which is the question answered here; the question is whether he can predict at extremely high levels (> 90 % accuracy), as claimed. Do the later six studies provide reasonable estimates of prediction accuracy? Presumably the latest ones are better than the earlier ones. The latest one (2002) was obviously not about accurate prediction estimates (its title used the term "exploratory") so I looked at the next newest, published in 2000. Here's what [3]its abstract says:

A longitudinal study with 95 newlywed couples examined the power of the Oral History Interview to predict stable marital relationships and divorce. A principal components analysis of the interview with the couples (Time 1) identified a latent variable, perceived marital bond, that was significant in predicting which couples would remain married or divorce within the first 5 years of their marriage. A discriminant function analysis of the newlywed oral history data predicted, with 87.4 % accuracy, those couples whose marriages remained intact or broke up at the Time 2 data collection point.

The critics were right. To say a discriminant function "predicted" something is to mislead those who don't know what a discriminant function is. They don't predict, they fit a model to data, after the fact. To call this "true prediction" is false.

To me, the "87.4 %" suggests something seriously off. It is too precise; I would have written "about 90 %". It is as if you asked someone their age and they said they were "24.37 years old."

Speaking of overstating your results, [4]reporting bias in medical research. Thanks to Anne Weiss.

1. [http://www.stat.columbia.edu/~cook/movabletype/archives/2010/06/a\\_wikipedia\\_whi.html?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+StatisticalModelingCausalInferenceAndSocialScience+%28Statistical+Modeling%2C+Causal+Inference%2C+and+Social+Science%29](http://www.stat.columbia.edu/~cook/movabletype/archives/2010/06/a_wikipedia_whi.html?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+StatisticalModelingCausalInferenceAndSocialScience+%28Statistical+Modeling%2C+Causal+Inference%2C+and+Social+Science%29)
2. <http://www.gottman.com/49853/Research-FAQs.html>
3. <http://psycnet.apa.org/journals/fam/14/1/42/>
4. <http://www.trialsjournal.com/content/11/1/37>

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### **Probiotics Help Preterm Infants (2010-06-07 07:38)**

It has just come to my attention that [1] a systematic review published two years ago found that probiotics help preterm infants ward off necrotizing enterocolitis. Here is a summary of the review:

Necrotizing Enterocolitis (NEC) is a serious disease that affects the bowel of premature infants in the first few weeks of life. Although the cause of NEC is not entirely known, milk feeding and bacterial growth play a role. Probiotics (dietary supplements containing potentially beneficial bacteria or yeast) have been used to prevent NEC. Our review of studies found that the use of probiotics reduces the occurrence of NEC and death in premature infants born less than 1500 grams.

The reductions in the likelihood of this disease and of death (presumably from this disease) were both greater than 50 %.

1. <http://mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD005496/frame.html>

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smilinggreenmom (2010-06-12 10:14:00)

That is such great information! Probiotics really are truly amazing. I think we are going to see that much more research will start to show just how many ways they can help us. Our son takes his chewable Belly Boost everyday because it has been the one and only thing to greatly help his skin with eczema flares. They have been life-changing for us!

### **Show-Off Professors (2010-06-07 15:30)**

A new [1] Jeffrey Eugenides short story quotes Derrida. Quote 1:

In that sense it is the *Aufhebung* of other writings, particularly of hieroglyphic script and of the Leibnizian characteristic that had been criticized previously through one and the same gesture.

Quote 2:

What writing itself, in its nonphonetic moment, betrays, is life. It menaces at once the breath, the spirit, and history as the spirit's relationship with itself. It is their end, their finitude, their paralysis.

"A little Derrida goes a long way and a lot of Derrida goes a little way," said a friend of mine who was a graduate student in English. These quotes show why. In [2]Theory of the Leisure Class, Veblen argued that professors write like this (and assign such stuff to their students) to show status. I have yet to hear a convincing refutation of this explanation nor a plausible alternative. Is there a plausible alternative?

Veblen was saying that professors are like everyone else. Think of English professors as a model system. Their showing-off is especially clear. It's pretty harmless, too, but when a biology professor (say) pursues a high-status line of research about some disease rather than a low-status but more effective one, it does – if it happens a lot – hurt the rest of us. Sleep researchers, for example, could do lots of self-experimentation but don't, presumably because it's low-status. And poor sleep is a real problem. Throughout medical school labs, researchers are studying the biochemical mechanism and genetic basis of this or that disorder. I'm sure this is likely to be less effective in helping people avoid that disorder than studying its environmental roots, but such lines of research allow the researchers to request expensive equipment and work in clean isolated laboratories – higher status than cheap equipment and [3]getting your hands dirty. I don't mean high-status research shouldn't happen; we need diversity of research. But, like the thinking illustrated by the Derrida quotes, there's too much of it. A little biochemical-mechanism research goes a long way and lot of biochemical-mechanism research goes a little way.

1. [http://www.newyorker.com/fiction/features/2010/06/07/100607fi\\_fiction\\_eugenides?currentPage=all](http://www.newyorker.com/fiction/features/2010/06/07/100607fi_fiction_eugenides?currentPage=all)

2. <http://www.gutenberg.org/etext/833>

3. <http://www.blog.sethroberts.net/2007/09/11/modern-veblen-flight-from-data/>

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Daniel Lemire (2010-06-07 18:31:34)

This may have several causes, beside vanity. (1) People tend to emulate the best researchers... and, unfortunately, they pick up both their qualities and defects. So, these English professors may simply write this way because they have trained themselves to look like other professors in order to become one. In effect, these bad habits become "social viruses". (2) It is well known that departments tend to hire new professors who look like them. It is likely that the candidates who do not write such nonsense appear different, even rebellious, and they are less likely to be hired.

Todd Hargrove (2010-06-07 18:36:51)

Another explanation is simply to obfuscate real meaning in a way that will prevent criticism and/or hide the fact that nothing new or interesting is being said. I notice this especially in papers that can be expected to receive critical review, or in papers where the conclusions are rather obvious and already known by common sense.

seth (2010-06-07 18:58:42)

I agree, sheer copying is a plausible explanation. It can't explain why it started, but it can be part of why it continues.

Alex Chernavsky (2010-06-07 19:14:43)

See also an excellent article called, "[1]Letter From Yale", by Helena Echlin. I've reproduced the first two paragraphs below.  
===== I am sitting in a windowless conference room. The walls are lined with sets of leather-bound books with gold-lettered spines. "The ode must traverse the problem of solipsism," a young man is saying. He pauses for a long time. Underneath the table, one leg is twisted around the other. A stretch of gaunt white ankle shows between trouser and sock. "In order to approach participating in." He pauses again, his body knotted like a balloon creature made by a children's entertainer. Finally, in one rush: "The unity which is no longer accessible." My fellow

students utter a long soft gasp, as if at a particularly beautiful firework. "Brilliant," says the professor. "Very finely put. But I didn't quite understand it. Could you repeat it?" I write the sentence down in my notebook, like everyone else in the seminar. *The ode must traverse the problem of solipsism before it can approach participating in the unity which is no longer accessible.* When I have pieced it together, I realise he is talking nonsense. I am struck by the thought that literary criticism "at least as it is practised here" is a hoax. =====

1. <http://www.aretemagazine.co.uk/read/03-autumn-2000/letter-from-yale/>

Eric (2010-06-07 19:19:30)

The alternate explanation is that they genuinely are able to find meaning (decode?) these fragments of Derrida/other theory guys and it isn't the bullshit you think it is. I definitely don't endorse this hypothesis, but it is there.

Sam (2010-06-07 21:18:54)

Seth, Seth - anyone who had the privilege, as I had, when as a Yale graduate student in English in the 70s, I watched Derrida, visiting for a summer or a term, spend a long lunch "fascinating" an attractive young woman at the Old Heidelberg, would not be casting about for a plausible alternative. For one golden moment - which stretched from the 60s to the early 80s - humanities professors of reputation had access to the pleasures that only poets were reputed to have had in the 19th and early 20th centuries - but with regular meals and TIAA-CREF to look forward to. And it wasn't only the male professors: an untold tale is the liberties that prominent women deconstructionists took with handsome, glowering young critics who burned with a gemlike flame. However I am too much of a gentleman to name names. When, with my Ph.D. from the greatest English department the world had ever or would ever know in hand, I arrived at my first (and last) teaching job at BU, an English professor in his late 40s put his arm around my shoulder and said, "Sam, let me give you some serious advice about your career. You're 27 now? The first thing to go is your stomach, and we [we intellectuals? we scholars?] can't afford that. Sit-ups, my boy. Sit-ups. You'll thank me in 20 years." He waved me into a seat in his office, next to the day-bed covered with an Indian cotton print I hadn't seen since the late 60s. The life of the mind.

Aaron Blaisdell (2010-06-07 21:31:32)

Look at a roschach image long enough, and you're bound to see something that is not there. The brilliance of the humanities profession was to write about it and then sell their writings to the collegiate masses.

Nathan Myers (2010-06-07 22:38:52)

I wish somebody had given me the advice Sam got. But I didn't study English. See?

david (2010-06-08 08:34:46)

Remember that humanities professors are under pressure to publish lots of original research but the research they do doesn't lend itself to any kind of qualitative measurement, so they're only evaluated based on quantity. This creates a "signal to noise" problem: there are too many articles and books published and they're all longer than they need to be. If you have a 1/2 way clever idea that merits a short article, you turn it into a book, etc. I'm sure there are some worthwhile ideas in there somewhere, but it's not worth sorting through all the crap to get to it.

ChristianKI (2010-06-08 15:19:15)

Microbiology isn't useless in the same sense that literary criticism is. DNA sequencing gets better much faster than Moore's law and DNA synthesis gets cheaper as well. While they are basic technology that don't cure illnesses by themselves, they are tools that allow us to better understand our bodies and to build proteins and RNA ourselves. <http://genome.fieldofscience.com/2010/05/breakthrough-cure-for-ebola.html> is an example of how research into siRNA's with were discovered through high status research can cure Ebola. It's cured monkey and they still have to do human trials but if we have an effective new way to combat viruses than it's worth a lot. It's not a cure that got created through researching Ebola itself. Without doing basic biochemical research we probably wouldn't even know about siRNA's. It's also not possible to do stuff like that without having the basic microbiology toolkit that high status folk created.

seth (2010-06-08 15:57:17)

ChristianK, I partly agree. Showing off isn't the only thing going on. Some sorts of work are inherently more useful than others and the desire to display status doesn't change that, it just reduces the usefulness. For example, perhaps 95 % of research done by Berkeley engineering profs is useless – I've heard that estimate. Well, 5 % useful is a lot more useful than is coming out of the English department. On the other hand, your example is telling because Ebola is incredibly minor compared to diabetes, cancer, heart disease, depression, and so on. The stuff that most people suffer and die from. Somehow the high-status researchers never get around to shedding useful light on those problems – look at what's won the Nobel Prize in Medicine in the last 10 years. And even in your example, the research has yet to demonstrate actual practical value. And I assume you're trying to find an example of practical value of high-status research.

Nick (2010-06-09 04:30:17)

It's odd that this subject consistently evokes such rancor from educated people ostensibly interested in common-sensical analysis. I'm an English PhD student at Cambridge, and about the most self-deprecating / self-loathing one you'll find. I don't think particularly highly of the field and I don't intend to make a career of it. But this critique takes a completely wrong-headed approach. You ask: '...is there a plausible alternative?' Well, of course there is: namely that, despite being an exclusionary discourse that uses difficult and seemingly unnecessary terms and concepts, literary criticism is a system of intellectual exchange that does in fact make sense to many who read it, and progressively develops relevant ideas. A little Derrida goes a long way because, as in physics e.g., a lot of thinking stands behind each little aphorism. The fact that most people not immersed in the lingo find this stuff superficially perplexing doesn't differentiate it from microbiology, economics, analytic philosophy, math, psychology ... or any academic discipline. You might as well ask why mathematicians, or better economists, communicate via equations rather than simple language. There are internal benefits to conducting closed dialogues using jargon, and it's downright naive to think that at least some of these literary critics aren't using this 'abstruse' language responsibly to help them think through difficult questions. Obviously there are plenty of "bad" professors who whip out \$5 words to bowl over the opposition, just as there are sloppy economists who use jargon of their own (or equally meaningless equations and models) to give the impression of surety. Pick up a difficult book in any field (and Derrida, by the way, is considered difficult even by the most pretentious literary critics) and you'll likely find the language almost incomprehensible. The difference is that in economics or philosophy, the chosen idiom is selected to give the impression of straightforward facticity and self-evident truths. Continental philosophy and the lit crit it inspires uses a language that appeals not to pseudo-scientific reason, but to emotive, poetic, and theological understanding. As such it's an easy target – and often rightly so – for outside criticism. But is it any different to 'demonstrate' the non-existence of God via axiomatic principles or to 'guarantee' future growth in a market using a variable-laden equation than to make a point about the metaphysics of language using saccharine poetics? Plenty of literary theory is bollocks – indeed, it's probably the case that a greater percentage of it is showy, flimsy, and superficial than is the case in economics or microbiology (I'll reserve judgment about philosophy and mathematics). What's funny is that no one has trouble accepting that they don't understand economic theory or microbiology (or even philosophy and math), but just a hint of the ridiculous in this kind of humanities work sets people on the war path and spurs an overarching critique of academia. In truth, academics are probably much less likely to bluster and pose in order to further their careers than are consultants or bankers – most have their heads too far up their own, um, Aufhebungs to act so pragmatically! In this sense academics of all stripes, microbiologists included, deserve critique. But the suspicion that they're a bunch of peacocking con men is a red herring.

seth (2010-06-09 21:46:26)

Nick, I'm not making fun of English professors. I'm saying their behavior reveals something important about professors in general. This particular trait, harmless in English professors, does plenty of harm when shown by those professors who are supposed to find solutions to our health problems.

Nick (2010-06-10 06:37:57)

Sorry, I think my longwindedness obscured my point (ironically). I understand that you're not making fun of English professors (though you can and should). My point was simply that the behavioral trait you've identified may be somewhat mis-observed, and as a result may say something different about the other professors you're interested in. i.e. Contra Veblen, English professors are for the most part not showing off for career purposes (or other nefarious ends), rather this kind of language

demonstrates a different kind of closed dialogue—one which professors in other fields may well mirror. There is definitely a cynical market force at work in academia. However I think the kind of professors we're talking about here represent a different vector: the power of believing in your own bullshit.

Alex Chernavsky (2010-06-10 07:13:12)

See this excellent [1]essay by Richard Dawkins. I've reproduced the first couple of paragraphs below.  
===== Published as "Postmodernism Disrobed", *Nature* 394, pp 141-143, 9th July 1998 and, in abbreviated form, in *A Devil's Chaplain*. Suppose you are an intellectual impostor with nothing to say, but with strong ambitions to succeed in academic life, collect a coterie of reverent disciples and have students around the world anoint your pages with respectful yellow highlighter. What kind of literary style would you cultivate? Not a lucid one, surely, for clarity would expose your lack of content. The chances are that you would produce something like the following: "We can clearly see that there is no bi-univocal correspondence between linear signifying links or archi-writing, depending on the author, and this multireferential, multi-dimensional machinic catalysis. The symmetry of scale, the transversality, the pathetic non-discursive character of their expansion: all these dimensions remove us from the logic of the excluded middle and reinforce us in our dismissal of the ontological binarism we criticised previously." This is a quotation from the psychoanalyst Félix Guattari, one of many fashionable French 'intellectuals'... =====

1. <http://richarddawkins.net/articles/824>

seth (2010-06-10 15:25:06)

Nick, Veblen didn't say – and I'm not saying – that people show off like this "for career purposes". He didn't give an explanation, nor do I. If I had to guess, I suppose it goes back to something ancient, much older than careers, whatever the reason for chicken's pecking order. When someone buys a very expensive watch, it's obviously for showing off, but not for career advancement. I'm afraid I don't understand what you mean by "the power of believing in your own bullshit."

Nansen (2010-06-10 16:45:27)

Re "the power of believing in your own bullshit", here's a quote from the artist Paul Chan in *The New Yorker* (May 23, 2008): "Part of the pleasure of reading Derrida is precisely that I do not have to understand him. Comprehension is not the game. I don't care what he thinks he's saying—I want to read word for word, and pay attention so much that I begin to hallucinate. Which I think is a very reckless way of reading, but for me a productive one."

### Assorted Links (2010-06-08 08:40)

- [1]Quotation bias in reviews of the diet-heart idea. "Criticism of the diet-heart idea is often met with the argument that consensus committees have settled the issue unanimously." Uh, where have I heard that?
- [2]Kefir for sale in Beijing. Eating plenty of fermented food for the first time, "for whatever reason this is first trip where I didn't have any real bout with food poisoning or turista."
- [3]Cheese and tooth decay
- [4]Tim Harford on Jane Jacobs
- [5]Fermented grain recipes from around the world
- [6]Triumph over HMO. "His lack of action protected his status and his organization, but put [my daughter's] safety and well-being at risk."
- [7]Never bet against New Yorker writer Susan Orlean

Thanks to Steve Hansen and Gary Wolf.

1. <http://www.jclinepi.com/article/0895-4356%2894%2900222-C/abstract>
2. <http://www.timelysnow.com/2010/06/06/keffir-in-beijing/>
3. <http://davidarcher.blogspot.com/2010/06/cheese-helps-prevent-tooth-decay.html>
4. <http://blogs.ft.com/undercover/2010/06/a-new-book-about-jane-jacobs/>
5. <http://wholehealthsource.blogspot.com/2010/06/fermented-grain-recipes-from-around.html>
6. <http://e-patients.net/archives/2010/05/through-the-land-of-smoke-and-mirrors-an-e-patients-odyssey.html>
7. <http://www.newyorker.com/online/blogs/susanorlean/2010/06/art-for-anybody.html>

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Mark (2010-06-08 19:33:03)

What is the "diet-heart idea"? I don't want to pay for the (probably publicly subsidized) research paper.

seth (2010-06-08 20:17:38)

The idea that certain diets cause heart disease. Those "atherogenic" diets are "rich in cholesterol and saturated fatty acids and poor in polyunsaturated fatty acids".

dilys (2010-06-09 12:50:03)

off-thread: pickle juice and leg cramps. <http://well.blogs.nytimes.com/2010/06/09/phys-ed-can-pickle-juice-stop-muscle-cramps/>

### **Beijing Street Vendors: What Color Market? (2010-06-09 14:07)**

Black market = illegal. [1]Grey market = "the trade of a commodity through distribution channels . . . unofficial, unauthorized, or unintended."

In the evening, near the Wudaokou subway station in Beijing (where lots of students live), dozens of street vendors sell paperbacks ( \$1 each), jewelry, dresses, socks, scarves, electronic accessories, fruit, toys, shoes, cooked food, stuffed animals, and many other things. No doubt it's illegal. When a police car approaches, they pick up and leave. Once I saw a group of policemen confiscate a woman's goods.

What's curious is how far vendors move when police approach. Once I saw the vendors on a corner, all 12 of them, each with a cart, move to the middle of the intersection – the middle of traffic – where they clustered. At the time I thought the traffic somehow protected them. Now I think they wanted to move back fast when the police car went away. Tonight, like last night, there's a police car at that corner, the northeast corner of the intersection. No vendors there. The vendors who'd usually be there were now at the northwest corner. In other words, if a policeman got out of his car and walked across the street, he'd encounter all the vendors that he'd displaced.

1. [http://en.wikipedia.org/wiki/Grey\\_market](http://en.wikipedia.org/wiki/Grey_market)



Alex Chernavsky (2010-06-09 19:38:19)

Hah, that's funny. It reminds me of [1]Ralph and Sam, the wolf and sheepdog of Looney Tunes fame.

1. [http://en.wikipedia.org/wiki/Wolf\\_and\\_Sheepdog](http://en.wikipedia.org/wiki/Wolf_and_Sheepdog)

### **Ocean Science High School (2010-06-10 18:40)**

There is a high school in Osaka called (in Japanese) Ocean Science High School. It specializes in training students for fish industry jobs. During my visits to Japan, what's most impressed me hasn't been high-end restaurant food, as great as it is, but the way everyone seems to take pride in their job and doing it well. At one point a friend's car got a flat tire. We limped to a service station. The attendant fixed the flat in 3 minutes, running around as if we were in a race. Typical for Japan, but unlike anywhere else I've been. I hope someday I can learn how this attitude is taught. Surely it has something to do with schools like Ocean Science - not Fish Industry - High School.

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Alex Chernavsky (2010-06-10 19:27:16)

Seth, I know exactly what you mean. I had the same impression when I visited Japan some years ago. I tried to get a cash advance off my Visa card at a bank in a small town. The employees seemed genuinely upset that they were not able to help me. See also this funny Dave Barry [1]essay about his stay in a Japanese hotel.

1. <http://books.google.com/books?id=Mmd9cE9Y0rcC&lpg=PA50&ots=kLQZAJiL0K&dq=%22dave%20barry%20does%20japan%22%20%22vice%20president%22&pg=PA49#v=onepage&q&f=false>

q (2010-06-10 19:46:23)

i noticed that too when i was in japan. so much cheap high quality stuff. yesterday someone suggested that i try a pen made by muji for drawing and it was truly wonderful, and it was only \$1.25.

Sam (2010-06-10 19:53:06)

There is a high school in Brooklyn which used to be called Transit High School - which specializes in training students for jobs in the NYC subway. It has changed its name to TRANSIT TECH CAREER AND TECHNICAL EDUCATION HIGH SCHOOL. And yet . . . NYC subway employees still don't seem to take pride in their jobs.

david (2010-06-10 19:53:55)

Have you read Gladwell's *Outliers* ? Nothing in there about Japanese culture, but lots about how culture matters and also about Chinese culture.

Darrin Thompson (2010-06-10 20:05:56)

Deming's principles still hold maybe?

Aaron Blaisdell (2010-06-10 21:06:28)

I noticed the same exceptional pride in work among the custodial staff at a mall food court in Buenos Aires. They were cleaning tables after customers had left and bussing trays and the like. They circled the food court tables like vultures circling dying prey and as soon as a customer left a table vacant, one or more of them would swoop in, clean it fastidiously and rapidly, and then

move on in search of the next table to clean. They were quiet, unobtrusive, and seemed to genuinely take pride in what they did. They didn't put on an air as if it were beneath them, as I so often see among custodial staff in the US (particularly among certain sub cultures in the US, though not others).

seth (2010-06-11 01:04:26)

david, funny you should ask about Gladwell's Outliers. Yesterday I bought two copies ( \$1 each from a street vendor). To help a student with her English. I have read it, yes.

dilys (2010-06-11 05:07:01)

We just had a new roof put on in Texas, and the team of journeyman roofers, all from what may have been the same family or village in rural Mexico, swarmed onto the roof with exceptional focus and speed, and did a very good job. The dynamic seemed to be the esprit de corps, the rapid pace / specialization, and the physiological high of focus and "flow" in a demanding (and dangerous) environment.

lance (2010-06-11 08:33:20)

Japan vs. China, in pictures <http://www.theatlantic.com/science/archives/2007/11/-quot-the-quot-way-vs-quot-a-quot-way-japan-v-china-dept/7835/>

vic (2010-06-11 10:43:36)

it's good when the little people are contented with their lot in life, serving the better half.

seth (2010-06-11 15:44:26)

vic, you seem to have a different opinion about this subject. What is it?

vic (2010-06-11 22:56:40)

I don't have a black or white opinion. Certainly there are positive aspects to people taking pride in their jobs, but some slaves likely took pride in their work too. A lot of people in society are performing menial service jobs for minimal remuneration, while others work much less hard and are serviced by the former - so one might understand how the former might be discontent.

Duncan (2010-06-12 11:19:36)

Nick Currie calls this state of mind among many (most?) Japanese 'superlegitimacy': The ecstasy of my train driver seemed to confirm something very important, a secret of happiness known to Collectivist societies like Japan and lost to increasingly, mistakenly Individualist ones like ours. Namely, that happiness does not lie in evading, avoiding, denying or escaping your social role, but in embracing it completely and joyfully. I've never been to Japan, so I don't know how good whether he's barking up the wrong tree or not, but I found his article extremely interesting: <http://imomus.livejournal.com/36990.html>

judith (2010-06-14 03:38:47)

My daughter went to a school like this and they had lots of strange lessons, one I noticed was a lesson in walking?????????

## **Naked Marriage (2010-06-11 08:37)**

In Beijing, sky-high housing prices have left many couples who want to get married without the traditional requirement: an apartment they own. There's a term for those who get married anyway: naked marriage. They are literally unprotected against rent increases. More abstractly, they are less comfortable than a couple rich enough to buy housing.

[1]Two Chinese Idioms.

1. <http://www.blog.sethroberts.net/2010/01/12/two-chinese-idioms/>

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### **"Goes Against Everything I was Taught in Med School" (2010-06-12 16:40)**

A reader of this blog reported the following conversation with his doctor:

us: We want to put our autistic daughter on a gluten-free, casein-free diet. We have heard that some autistic kids have gotten some benefit from it.

Dr: It's not something I know about, but there is no harm in it so feel free to give it a try. You know, I had a patient whose parents put her on a ketogenic diet to treat her seizures, and it seemed to help. That goes against everything I was taught in med school, but if it works, I think that's great.

What's telling here is the word everything. In medical school, the doctor seems to say, he was taught in a dozen ways that the sun revolves around the earth (or its health-science equivalent). If the alternative – the earth revolves around the sun – explains more of the data, well, "that's great." [1] Again, it sounds like 1984: Part of the doctor's brain has been turned off by repetition of something that supports the status quo.

1. <http://www.blog.sethroberts.net/2010/05/12/preventive-stupidity-exists/>

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The 50 Best Health Blogs (2010-06-12 20:31:43)

QUOTE: "Part of the doctor's brain has been turned off by repetition of something that supports the status quo." That's very interesting. My impression is that MDs are trained to think in a narrow, focused manner, and to reject as "anecdotal" any patient statements that don't match the Big Pharma orthodoxy. And conversely, I think that PhDs are more likely to be question-oriented, and to be on a lifelong quest for new information. But, heck, what do I know about higher education? I flunked out of pre-school. Jim

Ronald Pottol (2010-06-12 20:47:26)

The last part is just wacked, ketogenic diets have been a standard treatment for epilepsy for decades, not so popular now since no drug company makes \$ by pushing them, but our pediatric neurologist brought them up as a treatment option for our sons seizures once he is weaned. Might want an MD who at least knows what the medical establishment considers normal.

Michael R Roberts (2010-06-13 01:56:17)

It's a little bit of both, doctors are actually trained to think in a narrow, focused manner, because of so many knowledge they have to comprehend, and they are also under enormous influence by drug companies.

dustmouse (2010-06-13 21:48:30)

Hunh. There seems to be a parallel with lawyers, judging from an on-again off-again blogosphere feud that started a year or two ago. The bloggers and commenters who have studied law seem to have specific blocks when it comes to analyzing what people's words mean, as if law school overrides this particular application of logic and common sense and replaces it with a stylized formula – one which appears nonsensical to non-lawyers. Now that I think about it, I can see other professions that seem to have similar induced blind spots. Maybe it's even the rule, rather than the exception?

seth (2010-06-13 23:21:20)

dustmouse, that's very interesting. What's the "on-again off-again blogosphere feud" about? I agree that "turning off common sense" is a good way to describe what happens. Clark Hoyt, the Public Editor of the New York Times, recently claimed, seriously, that the sentence "he walked into the room and started shooting" does not mean that the two actions – (a) walking into the room and (b) started shooting – happened at the same time. See: [1]<http://www.tinyrevolution.com/mt/archives/003228.html>

1. <http://www.tinyrevolution.com/mt/archives/003228.html>

### Assorted Links (2010-06-13 03:52)

- [1]What's the umami fad all about?
- [2]Tests of new MS idea funded. "A sweeping new set of studies is aiming to determine whether there's any merit to a controversial theory that blocked blood veins cause multiple sclerosis."
- "[3]The science around climate change is not as settled as it's presented as being. . . . There are top-level atmospheric physicists, oceanographers and solar scientists who do not agree that the case is proven for global warming."

Thanks to Michael Bowerman.

1. [http://www.alternet.org/food/147181/do\\_we\\_really\\_have\\_a\\_5th\\_taste\\_what\\_is\\_the\\_umami\\_fad\\_all\\_about\\_/](http://www.alternet.org/food/147181/do_we_really_have_a_5th_taste_what_is_the_umami_fad_all_about/)

2. <http://www.theglobeandmail.com/life/health/ms-societies-to-fund-research-into-controversial-theory/article1601709/>

3. [http://www.spiked-online.com/index.php/debates/copenhagen\\_article/8979](http://www.spiked-online.com/index.php/debates/copenhagen_article/8979)

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The 50 Best Health Blogs (2010-06-13 05:11:25)

I have to admit that I know very little about climate change and global warming, and my opinions are influenced by a sense of guilt-by-association. What I mean is that the "climate change deniers" often seem to be similar to other conspiracy theory groups that I find very wrong-headed, like evolution deniers and holocaust deniers and tea partiers. Show me a climate change skeptic who is otherwise accepting of evolution, and I will pay attention; show me a Faux News viewer who is a tea partier and a climate change denier, and I tend to tune them out. Okay, I admit that my logic is pretty sloppy, but that's the way I look at these conspiracy theorist clusters. Besides, would a good family man like Al Gore lead us astray? Jim

## The Dreams of Geneticists (2010-06-13 23:53)

In a wiser world, we would see genetics research as we see astronomy: worth supporting, but without expecting practical benefit. In this world, however, genetics research is far better funded than astronomy and is expected to have practical benefits.

Unfortunately, the benefits have been slight. [1]A New York Times article by Nicholas Wade makes this clear:

The primary goal of the \$3 billion Human Genome Project “to ferret out the genetic roots of common diseases like cancer and Alzheimer’s and then generate treatments” remains largely elusive. Indeed, after 10 years of effort, geneticists are almost back to square one in knowing where to look for the roots of common disease.

“Largely” elusive? Completely elusive is more accurate, as far as I know. Not one treatment has come from this work.

In spite of ten years of failure, geneticists appear no wiser than before:

With most diseases, the common variants have turned out to explain just a fraction of the genetic risk. It now seems more likely [to prominent geneticists] that each common disease is mostly caused by large numbers of rare variants.

I know of no examples where a common (or any) disease has been shown to be caused by “large numbers of rare variants.” Perhaps these estimates of “genetic risk” are as misleading as asking what percentage of the area of a rectangle is determined by its width.

History repeats. Ten years ago, geneticists had zero examples of how mapping the human genome would help anyone with a common disease. Absence of any examples didn’t prevent such vast claims as human genome mapping will “revolutionize the diagnosis, prevention and treatment of most, if not all, human diseases”. From zero, they extrapolated to “most”.

It’s a sad comment on science journalism that, at the time, no one pointed out the absence of examples, as far as I know, and a sad comment on Wade, holder of a powerful and prestigious job, that he has not pointed it out now. He simply repeats a claim. At least he has noticed a gigantic failure after it happens, even if he inaccurately describes it (“largely” rather than “completely”).

Lack of examples of the practical value of genetic mapping didn’t keep a huge amount of money from being spent.

With the catalog [of common genetic variants] in hand, the second stage was to see if any of the variants were more common in the patients with a given disease than in healthy people. These studies required large numbers of patients and cost several million dollars apiece. Nearly 400 of them had been completed by 2009.

Ten failures would have been plenty; 400 failures shows the resistant-to-evidence nature of the whole enterprise. It’s an example of how [2]a little biochemical-mechanism research goes a long way; a lot of biochemical-mechanism research goes a little way.

For geneticists, to acknowledge the lack of examples is scary. Their funding might be cut! So they don’t. But nothing

prevents journalists from thinking for themselves and asking a supposedly "tough" question ("what's an example?")  
– although asking for examples is the most basic question there is.

Thanks to Alex Chernavsky. [3]More about the cargo-cult nature of modern biology. If you don't believe me, read [4]this: "Of the roughly 50 companies at the conference, not one is focused on approaches related to tracking down new genes. . . . The one corner of the genome-focused biotech industry that's thriving is the one churning out equipment and services to support researchers in their endless hunt for gene links."

1. <http://www.nytimes.com/2010/06/13/health/research/13genome.html?hp=&pagewanted=all>
2. <http://www.blog.sethroberts.net/2010/06/07/show-off-professors/>
3. <http://www.blog.sethroberts.net/2009/12/22/modern-biology-cargo-cult-science-continued/>
4. <http://www.fastcompany.com/node/1400883/print>

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Kevin Miller (2010-06-14 03:47:30)

I agree that this is a fascinating development, but I don't think it's one that would have been predictable (I certainly thought the Francis Collins' party line made perfect sense). Furthermore, I suspect that 1) the people who espoused it really believed it. (Funding is nice, but they all spent decades of their lives on this that they're \*never\* getting back); 2) the tools that they developed will prove to be critical in the kinds of approaches that are likely to be more powerful, such as understanding the genes of invasive organisms. This isn't my area of work by a long shot, but I'm old enough that the article reminded me a bit of all the stories in the 1990s about how the microcomputer revolution hadn't had any demonstrable beneficial effect on business productivity. I suspect that there will be really powerful effects of this technology as it proliferates, and I hope that most of them will be positive.

seth (2010-06-14 04:38:54)

Kevin, you write this "wasn't predictable." I have been saying what I say here for more than ten years – that all common diseases will turn out to have big environmental causes that we can figure out and use to our advantage. Genetics won't matter. And I had many examples, such as lung cancer, tuberculosis, etc., plus lots of other data. The geneticists had nothing to back up their big confident predictions. Not one example. They were reduced to saying stuff like breast cancer runs in families! So did pellagra. Their case has been weaker than weak for a long time.

Dennis Mangan (2010-06-14 05:06:01)

The fundamental reason for the lack of results: our genes didn't evolve to kill us.

sadie (2010-06-14 06:31:12)

Cancer treatments that target a specific tumor genotype definitely exist. I don't know how many are mainstream yet, but a relative with medulloblastoma just participated in a clinical trial that targeted the "hedgehog" gene. From the link below: "In 2004, a St. Jude team reported that an experimental drug called HhAntag, which inhibits Sonic hedgehog signaling, led to the deaths of medulloblastoma cells and the elimination of these tumors in treated mice." <http://www.stjude.org/stjude/v/index.jsp?vgnextoid=00ef921b911e8110VgnVCM1000001e0215acRCRD&vgnextchannel=3c9213c016118010VgnVCM1000000e2015acRCRD> Our genes didn't evolve to kill us, but every once in a while one of them mutates and makes a whole hell of a mess.

Nathan Myers (2010-06-14 18:46:09)

I seem to recall a Quantified Self presentation where someone got a gene workup. From the particular markers found, it predicted his risk of heart failure in twenty years would be enormously greater (as I recall, 1.5 % vs. 50 %) if he continued

gaining a pound a year. This was enough to get him focused on keeping his weight stable. That seems like a useful result, even if it didn't cure an existing illness. To me quantifiable prevention seems just as valuable as a cure.

Brice (2010-06-14 21:19:51)

Regarding "largely elusive" vs "completely elusive" - the second article in the NY Times series published today does give some examples - 1 drug just approved for treatment (supposedly based on genomics) and others in trials and potentially close to approval. They quote 1 company as saying 1/3 of their drugs in trials are based on genomics. So "largely elusive" seems about right. In 1975 or so, monoclonal antibodies were discovered. There was a lot of hype about them, magic bullets to cure cancer, etc. At one point and after many failures sentiment swung the other way - it was thought by many that monoclonal antibodies could not and would not work in humans. In 1998 (23 years later) the monoclonal antibody drug Rituxan was approved for treatment of cancer. It has grown to be the drug of choice for non-hodgkins lymphoma. So will genomics lead to many new successful treatments for many diseases? Or exactly zero treatments? I suspect somewhere in-between.

seth (2010-06-15 01:48:24)

Brice, thanks for the update. Drugs are approved if better than placebo. They may be worse than other treatments. So drug approval doesn't mean the new drug provides any benefit. It's too soon to say. Drugs can be approved and priced too high. This is why I think it's fair to say it's still impossible to point to even one clear benefit of the human genome project. In case my point isn't blindingly obvious, I think research funding should be spread more widely. Less spent on genomics, more spent on other approaches.

ChristianKI (2010-06-15 08:24:20)

I don't see something wrong with the measuring equipment branch of the industry growing. They make impressive progress by being much faster at cheaping DNA sequencing than Moore's law. Maybe there a way to give that branch money more directly to develop better tools but in a few years we will actually be able to give everyone their genomic data. Monoclonal antibody aren't only useful as drugs, they are also in the core toolkit of microbiologists to measure the concentration of a given protein or other molecule. I would think that most drugs that get developed today benefited from monoclonal antibodies somewhere in their development cycle. I think it makes a lot of sense to develop a better core toolkit instead of just evaluating the usefulness of a discovery by the fact whether it cured a specific illness. Hopefully someday the core techniques get cheap enough that the can be used for self experimentation. We even cured some children's blindness with Gene therapy: [http://www.nytimes.com/2009/11/03/health/03eye.html?\\_r=1](http://www.nytimes.com/2009/11/03/health/03eye.html?_r=1)

Cameron (2010-06-16 21:41:33)

Implying that understanding the human genome has been a waste of time and resources is irresponsible at best. So is assuming that all disease is purely environmentally derived with nothing to do with genetics. That's a really big assumption and scientists shouldn't be in the business of assumption. Anyone, including geneticists, who assumed that once the genome was mapped, that we would enter a utopia of disease-free life, was clearly mistaken. Understanding the genome is just the first step. The next step is the cataloging of all of the products of those genes. Then attempting to build a network of how those products/genes interact with each other as well as how they interact with the environment is the larger goal. We are still a long way away from that but it is not only a valid goal, but a necessary one. I don't assume that all disease is genetically based. I understand that our current understanding is limited and we simply need more information. We also need new and better tools for understanding complex interactions and complex networks. But to say that since genetics hasn't yet cured the common cold, or cured cancer, that it did not deserve to have had all the money allocated to it as well as it being undeserving of it's current and future funding, I believe, only demonstrates a lack of understanding of what genetics is and where it's going. It's already been demonstrated with epigenetics that the environment is capable of altering how genes are expressed and that those changes are heritable. Understanding how the environment interacts with our bodies necessitates a complete understanding of our genome, its products and their interactions. I would argue that you can't assume what causes a disease (and therefor, what a disease even IS) until you understand the system which the "disease" exists in. Devaluing genetics is just as myopic as devaluing investigating environmental causes for diseases. We should seek to understand all possibilities. I don't disagree that some scientists might oversell their gene to get funding. But that doesn't and shouldn't undermine the science as

a whole. Overselling is an unfortunate side effect of the competition for funding. <http://www.nytimes.com/2009/11/06/health/06gene.html>

seth (2010-06-17 07:53:31)

Cameron, you say my position is "since genetics hasn't yet cured the common cold, or cured cancer, it did not deserve to have had all the money allocated to it as well as it being undeserving of its current and future funding". I'm not just thinking of the common cold and cancer, I'm thinking of any common disease. But you're right - I think that lack of promised results should reduce funding and that the money freed up should go to support other approaches. What would it take to convince you that genetics has been overfunded?

Cameron (2010-06-17 13:47:51)

I would have to be convinced that the completion of genome was the end of the story and that all successes and failures should have been hinged upon its' completion. I would have to be convinced that understanding how genes and the products of genes interact with each other and the environment is not a worthy funding prospect. I would have to see an argument detailing the specifics of what money was spent on what and exactly why that should be considered a case of "overfunding". Furthermore, why those specific cases should be extrapolated to define the endeavor as a whole. You say that genetics has been overfunded because it hasn't immediately produced what it was promised to. I think you have to convince me that the majority of science was convinced and so promoted that once the genome was completed, again, that would be the end of the story and we all could go home. And you would have to convince me that it was precisely that promise led to what can be easily defined as "overfunding". I think anyone can make an argument that certain aspects of genetics (or certain genes) were and may have been oversold. But I think anyone can make that argument about any branch or endeavor of science if you try hard enough. You state in another response that "all common diseases will turn out to have big environmental causes that we can figure out and use to our advantage. Genetics won't matter." Well, even if it is determined that all disease ultimately exists due to outside causality, you still have to understand how the disease acts upon/within the body. It won't even be possible to make that determination until you understand how our genes/gene products work and interact. So I would say that if you are convinced that outward forces are the ultimate cause for all disease, you should be lauding the efforts of science to understand the genome and its products to so prove your assertion. Since you are your genes, understanding how your genes work on their own, interact with each other and with the environment (for instance if some environmental agent acts to shut a gene on or off epi-genetically) is vital to understanding exactly what a "disease" even is. Once you understand that neither the body nor the environment is a closed system, ultimate causality begins to become more difficult to pin down and you realize how much more we really need to understand. Making grand statements like the one I quoted above is exactly the type of statement that you contend that genetics did prior to the completion of the genome. I am not convinced that science as a whole contended that the completion would by itself cure all disease. You seem likewise convinced that genetics will have nothing to do with disease with the same combination of promise and lack of evidence that you decry geneticists had prior to the completion of the genome.

seth (2010-06-17 15:36:32)

Cameron, here's some evidence for my claim that studying environmental causes will lead to useful progress on common diseases: 1. The discovery that dirty water can spread disease led to cleaner water and less water-borne disease. 2. The discovery that folate deficiency increases the rate of birth defects led to folate-fortified foods, which led to a reduction in birth defects. 3. The discovery that smoking causes lung cancer led to less smoking and less lung cancer. 4. The discovery that scurvy is caused by lack of Vitamin C led to less scurvy. 5. The discovery that pellagra is due to lack of niacin led to less pellagra.

Cameron (2010-06-17 16:58:50)

Those are all fine examples. Not once have I said that there are not environmental causes of certain diseases and that studying that is a waste of time. I just don't understand how you go from these examples to "genetics won't matter" and that it is "overfunded". Nor is any of this a reason to lessen the funding for things like gene therapy or the study of gene networks. Again, understanding the genome and its' products will only enhance our knowledge of exactly how and when environmental agents are responsible for what we call "disease". Understanding that smoking causes cancer is only a part of the story. But what



do you do when someone has lung cancer that didn't smoke? That's a reason to understand the mechanism for why cancer is so hard to "cure". Telling people to stop smoking isn't going to "cure" cancer either. It's just going to significantly reduce the problem... which is good obviously. But that doesn't mean we stop there and don't try and understand the molecular mechanisms of cancer. Any outside agent that would cause a disease still has to act upon a system to disrupt. If you don't understand the system by which the agent acts upon, then you don't understand the disease. To only focus on any one aspect (genetics or environment) is not good science.

seth (2010-06-17 17:09:27)

"Nor is any of this a reason to lessen funding for things like gene therapy . . . " Funding is limited. Less funding for genetics research means more money for other research, in particular study of the environmental determinants of disease. So when one area of study (how environment causes disease) turns out to be fruitful, and another area (genetics) turns out to be less fruitful than the predictions made to get the funding, it is a reason to change how much money the two areas get. I'm not saying genetics research should be eliminated or is worthless, just that it should be less well-funded and the freed-up money should go to study of how the environment causes disease.

Cameron (2010-06-17 23:14:45)

That's a much different statement than "genetics won't matter." It's fine to have that opinion, but it's the type of argument that can't really leave the realm of opinion. I've already said why I think that the general realm of genetic science is vital to our understanding of disease.

seth (2010-06-18 06:00:17)

It would be interesting to know why you think further study of genetics will help us 1. prevent common diseases and 2. cure common diseases – along with any evidence that exists to support your ideas. I can't find any evidence in your comments about this. That's the point of my post – the lack of evidence for all the claims.

Cameron (2010-06-18 09:50:00)

I don't know what you define as "common diseases" but that seems an arbitrary designation. Presumably, once the mechanism of the genome and its' products is better understood, yes it will lead to better medicine. We've got the genome, but as I've explained, there is still much to do. Once we understand exactly what a disease is, it will give us the best chance to combat it. You say you want more money to understand environmental causes for disease, but without understanding the mechanism, without understanding how any environmental agent acts on the body, all you are doing is establishing correlations. It's a start, but it's not the whole story, and correlations are certainly not going to cure anything. What you fail to understand is that annotating the genome takes a long time. Computers can annotate genes but annotation algorithms are inexact. So it takes a human to clean it all up. Science, especially genetics, is a slow, deliberative process. It's not a reality TV show, it's science, and it takes a while to get it right.

alan (2010-06-18 15:16:56)

There are all sorts of diseases that have been linked to genetics The APOE-4 allele on chromosome 19 in particular has been linked to a lot of conditions such as alzhiemers as well recovery from traumatic brain injury. There are tons of other disorders and "diseases" which have genetic components that we can identify. The interesting, and I suppose you could say unfortunate, thing about the mapping is that it taught us about alleles which are basically like little switches that control the gene expression. These actually are largely influenced by the environment and the affects can be seen as far as 3 generations later (there were a lot of studies about how famines affected the grandchildren of the people who were food deprived on a genetic level). The point being genetics is just like the rest of science. We answered a very important question and it gave us more questions. How is that surprising? Science is always like that. Whether it's physics, biology, psychology, etc. As long as it is breaking new ground, why would you really expect that to be the end. Last I checked we aren't anywhere near knowing all there is to know in any of these fields. It is regrettable the answer wasn't so easy (and yes a lot of very smart people thought it was) but they couldn't see the whole picture because they didn't know what they do now obviously. Point is, we have learned a ton from mapping the genomes, you are over-simplifying.

seth (2010-06-18 15:48:20)

Cameron and Alan, your comments suggest evidence that more genetics research will help us prevent and cure common diseases is hard to find. Nothing wrong with "learning a ton" – just as there's nothing wrong with astronomy research – but preventing and curing common diseases is even more important. I think the loud claims of geneticists have drawn attention away from actual progress made by other approaches.

Cameron (2010-06-18 18:46:58)

No offense. But I think that just sounds like whining. Biology only started getting a disproportionate amount of money in the 70's. Before that it was the physicists. Things go in cycles. It won't be in biology forever. As the amount of data all this biology generates gets to a certain point, the processing of this information will become vital and then all of the biologists will complain that all of the computer scientists get all the money. The genome was only finished 10 years ago and the average FDA patent takes 15 years. So what does that tell you? Again, I think your expectations that once the genome was done that we would automatically start curing diseases vastly misunderstands the process of science. Isn't that ultimately what your blog is about? If you want to being attention to other methods then write a book and start a blog... wait. You still haven't answered the charge that even if you lock down environmental causality, you still have to understand the system that this environmental agent acts upon. External causality is not the end of the story. You are not a closed system!

alan (2010-06-18 21:03:55)

It's hard to find because using the genetic expressions to cure diseases is completely different from understanding that they are an underlying cause in pathology of the disease. Just like we understand cancer is caused by uncontrollable cell growth, it is one thing to know what is causing it and another to actually find a cure. But just for a second think about what you are expecting. That as soon as we mapped out the genes, you thought we would be able to change the expression of the genes in a living person/animal to treat someone. It turns out RNA and epigenetics are actually much more responsible for the physical expression of your genes. RNA is extremely more complicated due to the large number of types, mRNA, tRNA, rRNA, tmRNA, etc. The point is even when we understand what all these things do we still have to figure out how to actually affect single alleles on single genes which then get sent throughout the body to all the nuclei via RNA without messing up everything else. I can't really imagine anything more complicated to be honest. But that doesn't mean we are going in the wrong direction. It does seem to be extremely important. At least equally important as environment. I think environment plays a big, big role don't get me wrong. But as complicated as changing the gene expression in a human being can be, I think changing the environment is even harder. There are just too many factors. I just think you are being too impatient. What other methods would you suggest that focus on environment?

alan (2010-06-18 21:26:03)

or what other approaches are you talking about that biology has taken attention away from? I am trying hard to think of any and I think therapy and the attitude that people have play a big role. But just because people with cancer who have more positive attitudes are more likely to go into remission doesn't make it a cure. In fact it needs to be coupled with actual medical treatment or else they most likely just die. Anyways I'm trying to see it from your side but I guess I just need to know more specifically what you are saying. The main problem I had with this article is just the giant sweeping generalized statement that genetics hasn't made any progress in the last 10 years. You seem like an intelligent person. You even got your news from a reputable source, But that was still just that authors opinion, not fact. And you are allowed to have your opinion as well. But I'm trying to tell you that it has in fact made progress and just because you aren't hearing about it doesn't mean it isn't happening. Scientists almost by necessity aren't the type to step out in front of the world and make huge announcements. They are extremely dedicated to their work and about the only place they show it to other people is at science symposiums. The only way it makes it into popular culture is when we finally see the tail end of it being marketed to us as some new product or invention. They aren't going to say 'hey guess what we made a little progress' and then get asked 'what does that mean?' and then answer 'more research' every time a new development occurs because they would have to spend all their time doing stupid interviews for newspapers, radios, television and internet bloggers instead of actually conducting research. Look up some scientific articles. They are out there I assure you. If you don't see them you're not looking in the right place. There are scientific journals solely dedicated to genetic research. In the those journals are published experiments some successes, some

failures, and with each of those comes progress.

seth (2010-06-19 04:51:27)

"Changing the environment is even harder." I have changed my environment in six or seven ways due to the results of my experiments (about environmental effects). Lots of people have quit smoking. The emphasis on genetics has taken away from studying environmental effects.

Cameron (2010-06-19 16:16:39)

"The emphasis on genetics has taken away from studying environmental effects." If you say so.

alan (2010-06-19 21:03:38)

[http://en.wikipedia.org/wiki/List\\_of\\_genetic\\_disorders](http://en.wikipedia.org/wiki/List_of_genetic_disorders) These are all genetic disorders that we've learned about since mapping the genome. There is also all sorts of other crazy stuff they can tell as well. Even trivial things like if you are a person who has wet or dry ear wax. No lie. It's ridiculous but true. I just don't understand how in the face of all this evidence you refuse to change your opinion. I won't and I'm sure cameron wouldn't hold it against you if you revise your opinion. But Sadie, Brice, Christian, Cameron, and I have ALL given examples as evidence that your opinion is based on faulty information and you are in fact wrong. There's really nothing else we can do to change your mind. If you are a scientist who works on alternative treatment methods I could see how you would be bitter about not having funding. But the way you are so ill informed about the current research in genetics makes me sincerely doubt you are in any way at all involved in a related scientific field. And I am out. Good luck in the future. I hope someday you will be happy with amazing developments that come out of genetic research.

seth (2010-06-20 04:47:37)

I don't see how providing a list of genetic disorders (all rare) helps prevent or cure any common disease. "You are so ill informed about the current state of genetics research . . ." Let's put it this way: I knew of no examples where recent genetics research has helped cure or prevent a common disease. I asked for examples but none were given by defenders of that research.

Cameron (2010-06-25 11:10:44)

You also fail to listen to anything that doesn't support your view. You ignore the reality that the genome is only 10 years old. You ignore the reality that getting a patent in the US takes 15 years. You ignore the fact that no one ever said that mapping the genome would, by itself and without any follow-up research, cure disease. That's why we are saying you are ill-informed and don't understand genetics. Genes-protein-networks-environment. All of those components are required to understand disease. You only talk about one while you accuse "the other side" about talking about one of those. The problem is, "the other side" is not ignoring proteins and networks (OR environment)... you are. Not only are you ill-informed about genetics, you are ill-informed as to the scientific process.

Cameron (2010-06-25 11:21:06)

<http://www.npr.org/templates/story/story.php?storyId=126396839> <http://www.hhmi.org/genetictrail/g100.html>  
[http://www.npr.org/blogs/health/2010/04/francis\\_collins\\_dna\\_may\\_be\\_a\\_d.html?ps=rs](http://www.npr.org/blogs/health/2010/04/francis_collins_dna_may_be_a_d.html?ps=rs) Decent articles that give a basic view of the state of the science. We haven't "cured" disease yet because the genome is really really really complicated. All we have right now is some strings of correlation. But that isn't enough. And that's why we need to know a lot more.

Cameron (2010-06-25 12:07:52)

[http://seedmagazine.com/content/article/the\\_once\\_and\\_future\\_genome/](http://seedmagazine.com/content/article/the_once_and_future_genome/)

Cameron (2010-06-25 12:12:58)

[http://www.economist.com/node/16349358?story\\_id=16349358](http://www.economist.com/node/16349358?story_id=16349358)

Cameron (2010-06-25 13:20:47)

The above articles are pretty good perspectives (especially the last two) and I'm going to try and express my opinion in a less confrontational way. It's understandable that people expected a lot more from the genome project immediately. There was a misunderstanding on all sides about what was expected. But as the I am learning more about this history all the time, science was and still is, in fact, surprised by the incredible complexity of the genome. This complexity has really let us know how much we still don't know and how much promises of utopia (or dystopia) were naive. Our knowledge is still nascent. If you think about it, believing that we would understand the complexity of disease once the genome was mapped is roughly equivalent to thinking that once a child is able to understand the alphabet and maybe a few basic words, that child can go immediately to reading and comprehending James Joyce.

seth (2010-06-25 16:36:32)

"Science was surprised by the incredible complexity of the genome." Perhaps it would have been better to wait a while – until after that complexity was grasped – before making promises? The main alternative to studying how genes cause disease is to study how the environment causes disease. If the first route (genes) turns out to be more difficult than expected, it argues for paying more attention to the second route (environment). Thanks for the links.

Other Things You Should Be Reading « Rhymes With Cars & Girls (2010-06-28 17:12:32)

[...] Seth Roberts is not impressed with the results of genetics research. You mean it was supposed to produce results, and not merely \$100k+ jobs and nice suburbs houses for PhDs? Guess I was misinformed. [...]

Genetic Alliance Entry Level Jobs | One Day, One Job (2010-07-17 05:53:46)

[...] As humans we must have some innate level of genetics knowledge. We know to look for favorable traits when we search for a reproductive partner, and once we make that choice, we know that our children are supposed to look at least a little bit like us and share some of our traits. That's why genetic research is so mystifying. It offers the opportunity to know why we are the way we are. Yet, some think that genetic research hasn't lived up to its billing. I have to agree that it's extremely disappointing that with all of the genetic knowledge that we've gained in the past 20 or so years, it hasn't helped us cure any major diseases like Alzheimer's, Parkinson's, or any form of cancer. However, it still seems that plenty of good has come out of genetics research, and there is reason to hope that a lot more is on the way. Genetic Alliance would agree. They're based in Washington, DC, and they're "the world's leading nonprofit health advocacy organization committed to transforming health through genetics and promoting an environment of openness centered on the health of individuals, families, and communities." [...]

Genetic Alliance Internships | One Day, One Internship (2010-07-17 06:01:44)

[...] As humans we must have some innate level of genetics knowledge. We know to look for favorable traits when we search for a reproductive partner, and once we make that choice, we know that our children are supposed to look at least a little bit like us and share some of our traits. That's why genetic research is so mystifying. It offers the opportunity to know why we are the way we are. Yet, some think that genetic research hasn't lived up to its billing. I have to agree that it's extremely disappointing that with all of the genetic knowledge that we've gained in the past 20 or so years, it hasn't helped us cure any major diseases like Alzheimer's, Parkinson's, or any form of cancer. However, it still seems that plenty of good has come out of genetics research, and there is reason to hope that a lot more is on the way. Genetic Alliance would agree. They're based in Washington, DC, and they're "the world's leading nonprofit health advocacy organization committed to transforming health through genetics and promoting an environment of openness centered on the health of individuals, families, and communities." [...]

## **More Fermentation, More Anti-Cancer Effect (2010-06-14 20:10)**

[1]Doenjang is a fermented soybean paste often served in Korean restaurants – as a vegetable dip, for example. [2]This study found that the longer it's fermented, the more powerful its anti-cancer action:

Doenjang fermented for 24 mo exhibited a two- to three-fold increase in antitumor effects on sarcoma-180-injected mice and antimetastatic effects in colon 26-M 3.1 cells in mice compared with the 3- or 6-mo fermented doenjang. The 24-mo fermentation was the most effective in preventing cancer by decreasing tumor formation and increasing natural killer cell activity in spleens and glutathione S-transferase activity in livers of mice.

Many things about doenjang stay roughly the same during fermentation. This study shows that what's increasing (bacteria, etc.) is responsible for the anti-cancer effect, which supports my umami hypothesis (that we need fermented foods or something similar to be healthy).

I make yogurt rather than buy it so that I can ferment it a long time (e.g., 24 hours in a yogurt machine). The yogurt I make is much sourer than commercial yogurt.

1. <http://en.wikipedia.org/wiki/Doenjang>
2. <http://www.ncbi.nlm.nih.gov/pubmed/16504476>

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Christina (2010-06-15 06:14:04)

Hey Seth, Great post. Quick question - is there a way to make yogurt without a yogurt machine? I'd love to start making this. Thanks! Christina

seth (2010-06-15 07:55:33)

Christina, you can find many yogurt recipes on the internet. I've made yogurt without a yogurt machine many times. It's a lot harder and the resulting yogurt less creamy than when I've used a yogurt machine.

Peter Carr (2010-06-15 08:27:22)

re fermented foods: Sandor Ellix Katz, Wild Fermentation: The Flavor, Nutrition, and Craft of Live-Culture Foods

## **The Trouble With RCTs (2010-06-15 16:33)**

In an email to a friend, I compared the obsession of med school professors with methodological purity (e.g., efficacy must be demonstrated with an RCT, randomized controlled trial) to religious ritual. More concern with appearances (ritual), I said, is linked to less understanding of substance. My friend replied:

I am actually a believer in this particular religion (The Cult of RCT)! Seriously: I think the medical world is quite right to put a huge premium on RCTs, because RCTs so often prove that things they are doing don't work. While sometimes the RCT may provide a negative verdict on something that does work, this seems to me an unusual case, and generally avoidable if one considers statistical power, possible subgroup responses, etc and avoids overgeneralizing the conclusions.

I replied:

Are RCTs better than what prevailed before? Probably. But I would say the same about religion, which has its benefits.

I think the medical world has turned off a large fraction of its brain via insistence on RCTs and failure to understand their weaknesses and the strengths of alternatives. It isn't just that "RCTs may return a negative verdict on something that works," it's also that such a requirement for very expensive research suppresses innovation – testing things via cheaper ways.Â Atul Gawande wrote about how obstetricians made a lot of progress by ignoring this requirement:

[1][http://www.newyorker.com/archive/2006/10/09/061009fa\\_fact](http://www.newyorker.com/archive/2006/10/09/061009fa_fact)

Other areas of medicine, which followed the RCT requirement, made less progress during the same period, it can be argued.

Let's say I told you that the only way you can travel to work is via an armed escort – you would be appalled, even though it's true you would be safer. An insistence on RCTs is overreaction. Given the lack of innovation in medicine/health care, for which I believe they (or at least the lack of understanding they embody) are partly responsible, very expensive overreaction.

The best way to learn is to do. The best way to learn about health is to do as many experiments as possible. Not slow, expensive RCTs. Not slow, expensive surveys, which don't involving "doing" to the extent that an experiment does. This is [2]a big reason my self-experiments taught me a lot – because I could do so many of them.

1. [http://www.newyorker.com/archive/2006/10/09/061009fa\\_fact](http://www.newyorker.com/archive/2006/10/09/061009fa_fact)

2. <http://sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

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Robin Hanson (2010-06-15 17:39:42)

Why not do a randomized experiment to test the value of non-randomized methods? For example, randomly assign patients to docs who either just do what randomized experiments advise, or to docs who use their judgment based on other inputs. See which group does better.

seth (2010-06-15 17:56:31)

Robin, yes, that would make the point. Just to be clear, the comparison I'm talking about is: group A: randomized trials evidence only. All other evidence is ignored. group B: all available evidence. Randomized trial evidence plus everything else. I'm saying the purists ignore valuable information (in addition to suppressing innovation).

Jeff R (2010-06-15 19:42:01)

Seth, The focus on RCT's is to "know" things for sure. Anecdotes, self-experimentation, cohort studies are all good for generating hypothesis. But, you wouldn't want to say "x causes y/ x prevents y" without an RCT, or at least a lot more evidence than a few people doing self experimentation. You may be right that self experimentation isn't done enough, but there also needs to be a second layer of double checking. We can't have doctors treating people based on anecdotes. People think all sorts of crazy things about health. Like, their friend's cancer was cured by copper bracelets, or magnets, or gold, or a million other things. Sometimes a correlation isn't causation, sometimes it's a placebo effect, etc..

Anthony (2010-06-15 22:21:47)

@Jeff, "We can't have doctors treating people based on anecdotes." People conclude lots of things (correctly, in a warranted way, and tentatively) based on "anecdotes". If we called them "case studies" would that make it better? Better questions - and more difficult ones - than a blanket statement about anecdotes or case studies: what kind of evidence is there in the case study? How strong is the evidence? What problems with it? What can we conclude with warrant based on this evidence? How can we fruitfully test it further? And so on. If one can conduct an RCT, then sure, go ahead. How many doctors can just whip off one of these? Instead, they should prescribe based on the evidence base available, which should include careful evaluation of case studies and even anecdotes. To ignore them would be ... willful ignorance.

seth (2010-06-15 22:53:29)

Jeff, RCTs have their place, just as armed escorts have their place. At the moment they have too much place. They loom too large in the thinking of health professionals. It's not so much that RCTs are bad or worthless, I'm not saying that at all. As you say, it's often good to do a better study. Sometimes that better study is an RCT. The huge mistake is ignoring non-RCT evidence. Claiming it isn't "real" or something.

The 50 Best Health Blogs (2010-06-15 23:24:40)

Randomized controlled trial = often self-serving research funded by a big corporation, with the results screened by the corporation, but accepted blindly by many health professionals. Reports from patients about adverse effects = too often ignored as "anecdotal." Jim

seth (2010-06-16 04:45:07)

Yes, big food companies love regulations. Because they can afford their cost and small new companies cannot. The regulations suppress innovation and therefore suppress competition. This is exactly what the emphasis on RCTs does - suppresses competition to Big Pharma.

Alex Chernavsky (2010-06-16 07:09:58)

Big Pharma certainly has a way of "influencing" the results of RCTs. If the science is incompatible with the business plan, well... so much the worse for science. See this excellent article about how Bristol-Myers Squibb managed to obtain FDA approval for Serzone (an antidepressant drug): <http://web.archive.org/web/20060212173429/http://www.washingtonian.com/health/hardtoswallow.html> The relevant part of the article starts around the middle of the second page.

lance (2010-06-16 08:28:32)

<http://robertpaulwolff.blogspot.com/2010/04/memoirs-volume-two-fifth-installment.html> Even more fascinating was Bakan's study of the roots of Behaviorism in American Psychology. He discovered that the men who developed and shaped the Behaviorist school had all come from Protestant families in small mid-Western towns and had then moved to big cities [typically, Chicago], where the culture shock of the extremely heterogeneous population mix drove them to maintain some sort of control over their shattered moral framework by seizing on Behaviorism. Bakan did a careful analysis of the experimental reports published in the leading Behaviorist journals, and also of the papers that were turned down on the grounds that the authors had not done enough experiments to make their results statistically significant. He reanalyzed the data to show that the editors and reviewers routinely overestimated the number of experiments required for statistical significance, in effect treating experiments as a place holder for Protestant good works.

Motorcycle guy (2010-06-18 14:58:56)

You have a way with words, but remember by and large, language is a tool for concealing the truth Sent via Blackberry

Sampo Syreeni (2010-06-19 07:04:57)

I think everybody can agree that small scale experimentation is good, as are large scale RCTs. And that putting emphasis on the rituals of method at the cost of genuine insight is a bad idea. And that it's all about opportunity cost as usual. So what's the problem? I think it's that the ritual has been elevated into law, and that stops small scale experimentation from proceeding at

its equilibrium, laissez-faire pace. If I'm right, then what we're talking about here is not an epistemological question at all, but a political one. Those then turn on quite different considerations from what has been said so far, e.g. on the right to consent to experimental treatment, medical ethics and the like.

### **Bruce Charlton on the Trouble With RCTs (2010-06-16 13:36)**

In response to [1]my post about the trouble with randomized controlled trials (RCTs), Bruce Charlton, the editor of Medical Hypotheses, wrote me:

The golden age of medical discovery came before the widespread usage of RCTs. This golden age was all but over by the end of the 1960s; since then the rate of progress has declined (see refs such as Horrobin, Le Fanu and Wurtman in [2]<http://www.hedweb.com/bgcharlton/funding.html>).

The earliest big and influential RCT in psychiatry was in the mid 1960s, and it was - in retrospect - misleading wrt MAOIs due to too low a dosage. Now that RCTs are regarded as indispensable, medical research is captive to Big Pharma

[3]<http://www.guardian.co.uk/commentisfree/2009/aug/08/seroxat-pharmaceutical-birth-defect>

Another area of medicine [in addition to obstetrics] that has made big progress without being RCT-led is anesthetics. Dentistry is a third. These specialties are instead technology-led.

He also pointed me to an article by David Horrobin, the founder of Medical Hypotheses, titled [4]"Are large clinical trials in rapidly lethal diseases usually unethical?" His answer was that some of their aspects are unethical: Prospective subjects (sick persons) are not told the low chance of benefit, the high chance of bad side effects, and the great financial benefit of such trials to the institutions that run them.

Horrobin's article also made the point I made: The emphasis on RCTs suppresses innovation because only big well-established companies can afford them:

50 years ago, good scientific evidence of a potential therapeutic effect would quickly have generated a small clinical trial in one or two centers with perhaps 30 or 40 patients. Such a trial would have cost almost nothing. It would certainly have missed small or marginal effects, but it would not have missed the sort of large effect that most patients want. Unfortunately, now, such an approach has become impossible. . . . The escalation of costs has therefore drastically reduced the range of compounds from which new treatments can be drawn.

My reading of history is that suppression of innovation can last a long time but eventually change comes from the outside and the system collapses. Detroit, for example, has collapsed. General Motors was once as dominant as big drug companies are now.

1. <http://www.blog.sethroberts.net/2010/06/15/the-trouble-with-rcts/>

2. <http://www.hedweb.com/bgcharlton/funding.html>

3. <http://www.guardian.co.uk/commentisfree/2009/aug/08/seroxat-pharmaceutical-birth-defect>

4. [http://dx.doi.org/10.1016/S0140-6736\(03\)12571-8](http://dx.doi.org/10.1016/S0140-6736(03)12571-8)



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q (2010-06-16 13:52:33)

so the japanese and german car companies aren't part of "the inside"?

Nathan Myers (2010-06-16 21:43:17)

The insistence on RCTs (as opposed to trials with dosages that vary between groups, or other more ethical methods) looks a lot like fetishism.

Mike (2010-06-16 22:25:30)

Nathan, why wouldn't an RCT be able to have multiple groups at different dosages?

Nathan Myers (2010-06-17 01:24:39)

Mike: The "C" in RCT means "controls", implying they get placebos. One of the ways trials fail is when they shovel together a load of people with what seem to have the same symptoms, and assume their problems all have the same cause. The fraction who actually respond to treatment, because the treatment helps with their actual problem, might be too small a fraction to be "significant".

dearieme (2010-06-17 02:44:52)

Le Fanu's book is very fine. But if I remember correctly, he makes a case that it's not just drug innovation that has slowed, so RCTs can't carry all of the blame.

Jaroslav (2010-06-17 03:35:43)

Nathan, "controls" do not always get placebo (meaning inert substance or treatment). For example most omega -3 studies are done with control group on omega -6 oils to guarantee "positive" effects of intervention. Were they given placebo (some inert gum, for example), results would be most likely quite different (as small effects seen in such interventions, and also studies of PUFA deficient diets, suggest). So correctly choosing the "control group" is another way to add bias to the study to prove what you want to prove, and then trumpet the results as being "scientific".

q (2010-06-17 19:30:20)

controls generally don't get placebo. often it's not ethical to do so. for instance if i were designing a trial for a pain reliever for people with painful bone cancer, i'd have to use the "standard" pain therapy as the control, as it would be cruel to intentionally give someone an ineffective treatment.

seth (2010-06-17 19:44:57)

q, lack of innovation by Detroit car companies was one reason outside forces - foreign car companies - took over much of their market. Of course, labor costs were another reason, so Detroit isn't the best example. Clayton Christensen has written a whole book about the way big successful companies stop innovating and often collapse (The Innovator's Dilemma). Heard of Digital Equipment Corporation?

Charlton, a New Pragmatism, and the Philosophy of Investigation | Anthony Burgoyne (2010-06-30 11:37:43)

[...] (Also see here for a specific discussion of Random Controlled Trials.) [...]

## Assorted Links (2010-06-17 15:54)

- In 2001, [1]Bruce Charlton criticized the Human Genome Project. "The hype that surrounds the human genome project is essentially a form of advertising."
- [2]“Patients feel the single greatest impediment that stands between them and [CCSVI] is the [Canadian] MS Society,” [a woman said] . . . . Days after [her son’s] CCSVI procedure [in another country], she added, he was out sight-seeing with his father.”
- [3]devil or angel? A long list of common things

Thanks to JR Minkel.

1. [http://www.open2.net/sciencetechnologynature/worldaroundus/two\\_genome4.html](http://www.open2.net/sciencetechnologynature/worldaroundus/two_genome4.html)
2. <http://www2.macleans.ca/2010/06/14/ms-society-of-canada-a-house-divided-ceo-says/>
3. <http://kill-or-cure.herokuapp.com/>

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## Nassim Taleb Interview (2010-06-18 06:09)

Nassim Taleb has honed [1]his replies to common questions:

Why did economists get the crisis so wrong?

That’s like asking why fortune-tellers don’t get things right. Their tools don’t work, but they continue to use them. And the Nobel committee gives prizes to people who aren’t scientists.

Which is what I’m saying about geneticists – [2]their tools don’t work (also [3]here) and [4]the Nobel committee fails to notice (e.g., the recent award for telomere research, which hasn’t yet had practical value).

You have a great phrase in The Black Swan: "Don’t drive a school bus blindfolded." Is that still happening? Worse. I was talking about Bernanke - they’ve given him a bigger bus.

Thanks to Dave Lull.

1. <http://www.newstatesman.com/ideas/2010/06/god-cameron-detractors>
2. <http://www.blog.sethroberts.net/2009/12/22/modern-biology-cargo-cult-science-continued/>
3. <http://www.blog.sethroberts.net/2010/06/13/the-dreams-of-geneticists/>
4. <http://www.blog.sethroberts.net/2009/10/28/too-big-to-fail/>

Stephen M (Ethesis) (2010-06-18 12:01:59)

The micro-econ and the time and motion guys have such tight math and their tools work so well that it seduces macro-economists into thinking that surely they should be able to duplicate the same effect of theory to practice. But micro, in a way, is measurement that just happens to predict.

thehova (2010-06-18 20:08:12)

There's a fierce skepticism in Taleb's thinking. He loves to tear down systems of thought That's fine. There's a role for him. But ultimately we do need to make tough policy decisions and to do that, we have to build systems of thought. As William James argued, it's important to believe in something instead of being frozen by skepticism.

seth (2010-06-19 05:08:53)

Taleb's ideas are useful, unlike those of most skeptics. He used them to choose investments. I was influenced by them in my ideas about how science progresses (see my medical hypotheses paper). My theory of scientific progress has consequences. However his useful ideas can't be expressed as funny one-liners.

Dave (2010-06-24 19:55:55)

The human propensity to ridicule new ideas is not a new idea; i.e. Kuhn. What is surprising is a human being in the 21st century daring to challenge out-dated thinking. The financial disaster of 2008 and the war in Afghanistan prove that events have overtaken our ability to be responsible. It is now only our ability to react to events that has overtaken our ability to see what lies before us. And that puts us all in danger.

Tom in TX (2010-06-27 17:18:28)

As I read in some book, the opposition to any great idea comes in 3 stages: 1. It will never work. 2. It is trivial. 3. That is what we have been doing all along anyway.

### **Omega-3 Correlations in Eskimos Support Anti-Inflammation Effect (2010-06-18 17:46)**

A problem with much nutritional epidemiology, [1]as I blogged earlier, is "the narrow range of intakes within a given population". For this reason Ernst Wynder thought it better to make between-country comparisons. Of course different countries differ in many ways other than the ones you care about. A solution to both problems is to study an unusual country – a country with a wide range of intakes of the nutrient you care about – in depth.

This is what [2]a new paper about omega-3 has done. The researchers measured the blood of about 400 Eskimos, who had a much larger range of omega-3 levels in their blood than Americans or Europeans. The results aren't easy to sum up because there were plenty of non-linear associations. Here's what I think is their most interesting result:

Associations of EPA and DHA with C-reactive protein were inverse and nonlinear: for EPA, the association appeared stronger at concentrations >3 % of total fatty acids; for DHA, it was observed only at concentrations >7 % of total fatty acids.

[3]C-reactive protein is a marker of inflammation. Notice that, due to the details, the combination of (a) high intakes and (b) a wide range of intakes makes this correlation much easier to see. This result suggests that EPA and DHA (or something correlated with them) indeed reduce inflammation, as is often proposed. Perfectly consistent with my dentist's observation that [4]my gums looked a lot better (less inflamed) right after I started drinking 4 T/day flaxseed oil. Plus a reader's observation that [5]his sports injuries healed much faster after he started drinking 4 T/day flaxseed oil. (And [6]here.)

Previous epidemiology had had a hard time detecting the anti-inflammatory correlation of omega-3s. My self-experimentation plus other people's observations made it obvious there was something to it (and provided experimental evidence for causality: more omega-3, less inflammation). Better epidemiology has now supported this.

Thanks to Dave Lull.

1. <http://www.blog.sethroberts.net/2010/05/31/ernst-wynder-on-the-nurses-health-study/>
2. <http://www.ajcn.org/cgi/content/abstract/ajcn.2009.28820v1>
3. [http://en.wikipedia.org/wiki/C-reactive\\_protein](http://en.wikipedia.org/wiki/C-reactive_protein)
4. <http://www.blog.sethroberts.net/2007/03/28/omega-3-and-dental-health/>
5. <http://www.blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>
6. <http://www.blog.sethroberts.net/2008/02/26/omega-3-and-sports-injuries-part-3/>

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Alex Chernavsky (2010-06-18 19:05:45)

I drink about three large cups of coffee per day. My dental hygienist has always remarked about the large amount of staining that she finds on my teeth (hence, I get my teeth cleaned four times per year, instead of the more-usual two). Since I started taking 3 1/2 tablespoons of flax oil every day, my teeth have become much less stained than usual. I haven't made any other changes in my oral hygiene. The last time I went to the dentist, the hygienist was amazed at the difference. I wonder if the staining is related to some sort of inflammatory response?

Alex Chernavsky (2010-06-18 19:22:00)

By the way, Seth – what's your view on taking DHA supplements (in addition to the flax oil)?

seth (2010-06-19 05:14:11)

I don't have an opinion about DHA supplements. Haven't tried them. Your story about teeth staining is very interesting. Recently I noticed my teeth stained, which surprised me. I assumed it was due to drinking ice tea, but this doesn't make much sense since I had drunken lots of ice tea in the past without teeth staining. I had been continuing to take 3 T flaxseed oil every day – but the flaxseed oil is old (I was in China) and possibly degraded. I had other reasons to suspect degradation and now you've given me another one.

Chris Robbins (2010-06-19 06:41:50)

Seth, Do you take lignan added Flaxseed oil? As I've heard (from Dr. Weil) that without the lignan it could be problematic for men in particular and could increase likelihood of prostate cancer.

lance (2010-06-19 07:16:57)

I've found there to be a high correlation between omega3 intake and my acne. First thing I did was stop eating omega6 foods, which reduced the acne significantly. Eating lots of sardines in olive oil helped, olive oil alone was inflammatory. Using flax was OK, but I don't want to take tablespoons of flax per day. Ordinary cod liver oil didn't help at all, not that I could tell. The fermented cod liver oil, using gummi fish, was the most effective of all.

vic (2010-06-19 07:38:15)

I don't consume much omega-3 because I hate the smell and taste of fish (and fish oil), but I do consume tons of nuts and seeds (some walnuts that have ALA omega-3, but also lots of omega-6, and no flax) that are rich in omega-6 and my most recent CRP

was .18 mg/L. The reference range is less than 3 mg/L.

seth (2010-06-19 13:56:32)

Chris, no I don't take the version with lignans. Thanks for alerting me. vic, everyone else says omega-6 is proinflammatory. You seem to be saying the opposite. Am I misunderstanding?

vic (2010-06-19 15:36:49)

I've never seen good evidence that omega-6 are pro-inflammatory in people. Almost every epidemiologic study I've seen that looks at nuts and linoleic acid (the primary omega-6 fatty acid in vegetable oil) finds a robust inverse association between consumption of nuts (and/or linoleic acid) and coronary disease, cancer, and mortality.

Cats Only Blog - Nordic Naturals Pet, Cod Liver Oil 8 fl oz (237 ml) - Cat Supplies & Cat Accessories Reviews and Videos (2010-06-21 15:47:05)

[...] Seth's blog » Blog Archive » Omega-3 Correlations in Eskimos Support Anti-Inflammation Effect [...]

## The Future of Dentistry and Experimental Psychology? (2010-06-19 13:02)

Rereading [1]an old post, I found this:

Today I had my teeth cleaned and was told my gums were in excellent shape, better than ever before [due to flaxseed oil]. They were less inflamed than usual. "What causes inflammation?" I asked. "Tartar," I was told.

I believe that reddish gums are a great sign (so easy to see) that overall your body has too much inflammation, putting you at higher risk for many common diseases. (Perhaps due to too little omega-3, which the body uses to make an anti-inflammation hormone.) Every day my dentist measured, or at least saw, a great correlate of health (the redness of his patients' gums) and failed to notice. It's like failing to notice an oil field under your property. If dentists became experts in measuring gum redness and helped their patients lower overall inflammation, the public health contribution would be great. (Writing this makes me wonder why I haven't become skilled at measuring the redness of my gums.)

Experimental psychologists are in a similar position. I believe brain health is closely correlated with health of the rest of the body. In other words, the foods that make the brain work better make the rest of the body work better. I discovered the anti-inflammatory effects of flaxseed oil because it improved my balance. The brain is much easier to study (via behavior) than the rest of the body – it's a model system for the rest of the body. Experimental psychologists are as unaware of their good fortune as dentists. By using their skills to figure out how to have the healthiest possible brain, they could make a great contribution to human welfare.

1. <http://www.blog.sethroberts.net/2007/03/28/omega-3-and-dental-health/>

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epistemocrat (2010-06-19 15:33:29)

I see a Meta-Rule: "Don't consume anything that increases the redness of your gums." Here is a simple rule that some may deduce from that: "Don't eat red popsicles." Just kidding. My brother is applying to dental school soon, and maybe he will

be able to tap into this good fortune sometime in the near future. Weston Price did a nice job using snapshots of people's faces and of their smiles (teeth) to provide a "window" into overall systemic health. I agree that oral health is a great proxy for the state of the machine overall. Personally, increasing my animal lipid intake has improved my oral health (epithelial health, generally) and gave me a practical feedback loop to tap into for my own self-experimenting. However, I can't think of a good way to measure redness of gums, aside from high-quality photographs. I'll keep thinking, though.

Indrek (2010-06-20 06:05:58)

There seem to be mixed reactions to flaxseed oil, as much as I've read about it online. And one needs also consider that flax basically only has ALA and no EPA or DHA, which should be the two types most identified for their anti-inflammatory effect. Have you tried any fish based omega-3 oils to see what kind of effect they have compared to flax?

G (2010-06-23 19:45:56)

The healthy baseline redness is bound to vary from person to person. Anemic persons may give a false impression of health. Is bleeding directly related to inflammation-levels? Can I just feel more or less alright so long as there's no blood on my toothbrush? I am mindful to eat omega-3 and the dentist never has the least reservation about my clean bill of dental health.

seth (2010-06-23 22:41:12)

G, I don't know the answer to your question about bleeding. About individual differences: It's not obvious that they're large enough to matter.

### **Ad Hominem Attack on The Rational Optimist (2010-06-19 15:46)**

I have yet to see Matt Ridley's new book *The Rational Optimist*, which is related to [1]stuff I've said about human evolution. But [2]George Monbiot seems to consider it damning that Ridley was chairman of the bank Northern Rock when it failed. Bailout of Northern Rock was an example of government intervention – which *The Rational Optimist* is against, Monbiot says. Hey, why not attack Ridley for drinking government-supplied water from the tap in his kitchen? What a hypocrite!

1. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>
2. <http://www.guardian.co.uk/commentisfree/cif-green/2010/jun/18/matt-ridley-rational-optimist-errors>

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Allison (2010-06-20 03:50:56)

If Matt Ridley had written a book saying the government should not be supplying everyone with water then attacking him for drinking that water would be fair. If he writes a book that says the free market has all the answers and government intervention is always a bad thing, I think it's pretty reasonable to point out when Ridley put his ideas into practice the result was catastrophic and he needed a government bailout. Ridley is the hypocrite, not Monbiot. This is obvious to any reasonable person.

seth (2010-06-20 04:43:05)

"When Ridley put his ideas into practice" – his running a bank wasn't "putting his ideas into practice." Running a bank is more complicated than that. Other people and other people's ideas were involved, I'm sure.

MT (2010-06-20 14:24:01)

Monbiot's assertion is fair – if one is going to take a public stand defending a principle, it is reasonable to ask whether they live by that principle. Ad Hominem arguments are not always fallacious. A fallacious Ad Hominem attack might have been saying Ridley was an Eton-educated son of a nobleman who owed his chairmanship to crony-capitalism and connections rather than the merit of his experience in business and banking, and that his ideas on finance and economics are divorced from reality because he was raised in a gilded cage and breathes only the rarified air of the ivory tower. It might be a fallacious Ad Hominem attack – or it might be a valid Ad Hominem attack. Ridley is a proponent of the free market and a critic of government subsidy, but when his personal interests were at stake as chairman of a company floundering due to his leadership, he sought a government bailout for himself, the friends he ran the company (into the ground) with, and the shareholders. Why shouldn't the market have determined the fate of Northern Rock? It would have cost Ridley a fortune to put his principles into practise. If that wasn't exactly the type of stand he was looking to take, he shouldn't have taken the chairmanship to begin with. He's a hypocrite. Would he have advocated bailing out any of the other thousands of companies that go bankrupt every year? The one's he has no vested interest in? The ones that don't have connections to government leaders through family connections? Northern Rock was massively leveraged and so felt the credit crunch far earlier than others. Basically, they took a huge gamble on something they didn't understand. A bigger, stupider gamble than all of the other big, stupid gambles made at the time (made by deluded bankers instead of deluded science writers). I think Ridley is the worst of the type of decision-maker Taleb is warning us against – the arrogant fool-King in experts clothing spun from his own rhetoric and leaving him distinctly naked to those more concerned with the strength of his arguments than the conviction with which he makes them. I notice that Monbiot made specific criticisms of Ridley's climate change position as well, and am wondering how accurate those criticisms are.

seth (2010-06-20 15:01:15)

MT, you are mistaken about the nature of the bailout. Shareholders got nothing. The value of Ridley's shares went to zero and he lost his job. In that sense the market did determine what happened to Ridley. See: <http://business.timesonline.co.uk/tol/business/law/article5515655.ece> See also his Freakonomics Q & A: <http://freakonomics.blogs.nytimes.com/2010/06/15/matt-ridley-the-rational-optimist-answers-your-questions/>

MT (2010-06-20 21:23:53)

My characterization was accurate – I said he "sought a bailout" and that it would have "cost him a fortune to put his principles into practise." He did seek a bailout, and the alternative would have cost him a fortune so he scrambled to avoid it. He simply failed, and I'm calling him a hypocrite for trying. If I said someone was behaving immorally for trying to extort money from pensioners, it wouldn't contradict my point to observe that they failed in their attempt. On a side-note, I love the Orwellian explanation of the situation offered by Lord Pannick in the article from the Times that Northern Rock simply had "short-term liquidity problems." What bankrupt business couldn't make the same claim? If these assets were so valuable, why wouldn't anyone else buy them? The value of financial assets is contingent on the market for them. Nobody wanted them, so they had no value. If there was a higher bidder, they would have sold to that bidder and there wouldn't have been a problem to begin with.

Jeremy (2010-06-21 01:40:22)

"[Why not attack Ridley for drinking government-supplied water from the tap in his kitchen?" Because the UK government no longer supplies water to households in the UK, since water was privatized in the late 1980s.

seth (2010-06-21 06:43:05)

Jeremy, thanks for the correction. MT, I'm unsurprised he sought a bailout – for the sake of his depositors, at least. But how he thereby saved a fortune – as you seem to think when you write it "would have cost him a fortune" not to be bailed out – I fail to see, since he lost his whole investment and his job.

Nathan Myers (2010-06-21 17:44:26)

Seth, MT already explained that. Ridley did not save a fortune by betraying his principles, but he *tried to*. He betrayed his principles without foreknowledge that he would get nothing for it. The betrayal stands on its own, and is in no way mitigated by its ultimate futility. If, in fact, he had succeeded, would that make the betrayal more or less meritorious?

Tim (2010-06-22 03:45:28)

Seth seems like most of us, he tries real hard to find parts of a story that validate his own beliefs.

JRF (2010-06-27 16:54:09)

Imo, any commenters claiming hypocrisy on Ridley's part for his these actions should be IP-blocked from commenting further as they have proven themselves to not be able to think clearly about even simple issues.

lemmy caution (2010-07-07 16:35:45)

*But it's not just Ridley who doesn't mention the inconvenient disjunction between theory and practice: hardly anyone does. His book has now been reviewed dozens of times, and almost all the reviewers have either been unaware of his demonstration of what happens when his philosophy is applied or too polite to mention it. The reason, as far as I can see, is that Ridley is telling people "especially rich, powerful people" what they want to hear.* Ridley's biology books are excellent, but it is odd that hardly anyone was mentioning his problems at Northern Rock. Especially since bank failures are so much in the news these days. He was obviously in over his head.

### **The Costs and Benefits of Overtreatment (2010-06-20 16:40)**

[1]This excellent NY Times Magazine article by Katy Butler describes the awful price paid by the Butler family when her father was given a pacemaker that kept him alive too long. The hospital, surgeon, and pacemaker manufacturer benefited by thousands of dollars. Her father was too out-of-it to make decisions about his health. His wife, who made the decision, was given too little information (not told of a much better alternative, not warned of the eventual outcome, which was likely) and, Butler seems to say, decided too fast. The pacemaker was implanted so that he could have a hernia operation – the hernia surgeon wouldn't operate without it.

Butler's article is excellent because it is personal, moving, and sheds light on a big issue that I rarely read about: the way "informed consent," in practice, favors overtreatment. The patient or their representative makes the final decision, yes, but in most cases their decision is based mainly on information they've been given by their doctor or hospital, who benefit from one decision (yes, do something) but not the other (no).

The incentives for overtreatment continue, said Dr. Ted Epperly, the board chairman of the American Academy of Family Physicians, because those who profit from them "specialists, hospitals, drug companies and the medical-device manufacturers" spend money lobbying Congress and the public to keep it that way. . . . The profit margins that manufacturers earn on cardiac devices is close to 30 percent. Cardiac procedures and diagnostics generate about 20 percent of hospital revenues and 30 percent of profits.

I liked Butler's article partly because I'd had a similar, much smaller experience. I'm still pissed that during a discussion with Dr. Eileen Consorti, a Berkeley surgeon, of the costs and benefits of surgery to fix a nearly-undetectable hernia, she said nothing about side effects other than death. There are other possible bad effects of general anesthesia, which the operation would have involved. [2]I complained to her assistant about her incomplete description of the risks. She didn't respond, other than to threaten legal action (for not removing [3]criticism of her for something else, I suppose).

Of course doctors, hospitals, and so on benefit from treatment. For me, the problem arises when (a) the benefits to patients are slight (compared to the benefits to the doctor, etc.), zero, or unknown or (b) the costs to patients are not well described. In both of these cases – the Butler family's and mine – both (a) and (b) were true. Condition (a) is



overtreatment, but Condition (b) makes things worse. If you propose to do something to me that could have an awful outcome, and from which you benefit, I would like to be warned of the awful outcome.

Dept. of Amplification. [4]My original mention of Consorti was about how I couldn't find any studies supporting her recommendation of surgery. She had said such studies existed. When I couldn't find them, she promised to find them for me, but, several years later, has yet to. In the meantime, a reader of this blog found [5]a relevant study (thanks, Kirk). Its results support my decision not to have the surgery that Consorti recommended.

[6]Robin Hanson on doctors. [7]How could we be this wrong about medicine? Thanks to Peter Spero.

1. <http://www.nytimes.com/2010/06/20/magazine/20pacemaker-t.html?ref=magazine>
2. <http://www.blog.sethroberts.net/2010/02/02/a-call-from-dr-eileen-consortis-office/>
3. <http://www.blog.sethroberts.net/2008/08/29/suppose-you-write-the-times-to-fix-an-error-part-2/>
4. <http://www.blog.sethroberts.net/2008/08/29/suppose-you-write-the-times-to-fix-an-error-part-2/>
5. <http://www.ncbi.nlm.nih.gov/pubmed/16418463?dopt=Abstract>
6. <http://www.blog.sethroberts.net/2008/03/21/robin-hanson-on-doctors/>
7. <http://www.blog.sethroberts.net/2007/09/11/how-could-we-be-this-wrong-about-medicine/>

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Alex Chernavsky (2010-06-20 18:42:25)

As I tell everyone who will listen: Medical textbooks and journal articles are surprisingly accessible. You might need to look up some terms in a medical dictionary (or search for them on Google), but with a moderate amount of effort, an educated layman can grasp the literature. If you have any concerns about your treatment, go to the library at your nearest medical school. The reference librarians are usually very helpful, even if you don't have any affiliation with the university. You can also search PubMed (also called Medline) from home: <http://www.ncbi.nlm.nih.gov/pubmed/> When I was diagnosed with a parathyroid adenoma some years ago, I found out information that persuaded me to fire my first surgeon and change the course of treatment.

peter (2010-06-20 20:04:45)

what i found noteworthy about the article was that 58 of the positive recommendations "were based on no studies at all, only a 'consensus of expert opinion.'" and most of those received financing from cardiac-device makers or worked at institutions receiving it. "This pattern â€" a paucity of scientific support and a plethora of industry connections â€" holds across almost all cardiac treatments, according to the cardiologist Pierluigi Tricoci of Duke Universityâ€™s Clinical Research Institute. Last year in The Journal of the American Medical Association, Tricoci and his co-authors wrote that only 11 percent of 2,700 widely used cardiac-treatment guidelines were based on that gold standard. Most were based only on expert opinion. " i can't believe that this is an isolated phenomenon. it has to be duplicated relative to many medicines/procedures.

Mellors (2010-06-20 20:39:03)

Seth, I think you are incurious about incuriosity (other readers may have to be curious enough to follow almost all of Seth's links to prior posts and other comments in this post to see what I am talking about). The incuriosity you notice and deplore among physicians and other professionals is for you simply a betrayal of humanity - you note that all babies and young children are curious, and something happens to them - in school (as you like to cite Robin saying) or in med school. But surely this is too simple. First of all, there are huge differences in the kind of curiosity that babies and children are born with (I have seen a wide range of curiosity even among the five babies that my personal magnetism has caused to bring into being - if I were inventing a language I'm not sure I would have used a single word to describe the curiosity of each one of these people). Secondly, even if curiosity in the very young is a useful adaptation, isn't it also the case for our species - which has existed

in such widely different environments with such widely differing sets of competitors - that curiosity would be replaced with expertise - expertise which can, for most people, become adequate only by shutting down one's other talents and interests? (If you have never come across the New Zealand anthropologist Peter Wilson's book "Man, the Promising Primate" (1979, I think), you can see an interesting theory about the unspecialized nature of our species and how it has shaped us.) If Wilson is right, our species is good at nothing in particular, but through intense practice, individuals can become good through hard work at one thing, and relative neglect of others. Wilson's insight was that the speech-act of "promising" - I'm going now, but will be back on the 6:45 - was the originating communication that established us as human, because it recognized that most of us must do two things badly - be a husband and be a salesman, say - rather than one thing well, enabling us to perform 2 or 3 roles at once. There was a grain of truth in Aldous Huxley's early account of the experience of what became known as "psychedelics," that these drugs worked by destroying the filter between us and the assault of stimuli - and thus produced wonder and inutility (to put it mildly) at the same time. One needs incuriosity fully to realize one's potential, as well as curiosity. I have noticed that at a certain point in professional careers, for most people, it's only possible to maintain excellence and expertise by shuttering oneself from external stimuli and shuttering oneself in. (Of course, I'm sure that in professional schools, this notion is promoted far too early to people who are far too young. And there are of course a few who need not do so.) Let me give a counter-example. Myself. I am far more curious about more things than most people - I too noticed this about myself when I was a university professor in my late 20s and early 30s, teaching students who became less and less widely interested. But when one has an essentially mediocre gift - as I seem to have - curiosity can lead one to fail or thrash about in many fields, rather than succeed in one. Fortunately for humanity, I can say that one thing at which I have never failed, because I never attempted, is surgery. But it seems churlish to complain that one's physicians tend to be incurious when - according to the commentators on this blog - the best experiences as a patient with surgeons comes from docs who superspecialize in one sort of operation, and see one sort of patient. I think that there is a kind of Hegelian *Aufhebung* of which people like, say, you are capable of - moving from wide curiosity, to special knowledge and expertise, to a higher curiosity. Whereas between, say, a lawyer friend who declared to me (to my shock and disapproval) at the age of 45 that his ambition as a lawyer was never to have to learn any new law - and who remains an expert in his field - and me, who has tried his hand at so much and achieved so little that is lasting (with the exception of my children) - the world ought to prefer consulting my incurious but expert friend when it finds itself in the particular kind of jam he is good at fixing, rather than me, most anytime. In any case, I think you fix on villains rather than heroes. Overtreatment is bad, but it's a luxurious kind of evil. Undertreatment or neglect is far worse. Whereas the perfect match between necessity and solution is a miracle.

seth (2010-06-21 06:34:02)

Mellors, you're right I complain about lack of curiosity in other posts - thanks for reading them. In this case, however, what the Butler family went through was to some extent caused by the mom's lack of curiosity. Had she been more curious about other treatment options or about the costs of pacemaker implantation, she might have been saved a lot of grief. Here I'm defending the incurious.

Mark (2010-06-21 08:13:06)

It would be relatively easy to knock your blog off the first page of Google results for "eileen consorti." She needs to hire a good online reputation management consultant. She needs to set up her own Web site, maybe at [consortisurgery.com](http://consortisurgery.com), and register it in various directories like Yahoo! Directory, Business.com, PR.com, and a few others. She also needs to register [eileenconsorti.com](http://eileenconsorti.com), .org, and .net, and put some sort of genuine content on them. Having a domain name that is the same as a search phrase (minus spaces, no hyphens) will make ranking that website on the first page of Google's search results easy, especially for a rare search term like "eileen consorti." Maybe .com can be a secondary business site, .org can be an information site about various medical topics, and .net can be a personal site. Then she needs to set up Twitter, Flickr, MySpace, LinkedIn, Facebook, and other pages in her name. She needs to join every professional organization out there that offers outbound links to their members' websites. The BBB often does this, but it depends on the locality. She could start a blog or write guest blog posts for others' blogs. She could release press releases. She can write articles. She can give interviews to various media. For some of these sites she needs to register them in directories, and there should be a certain amount of cross-linking among them (but not too much). The page titles need to be "Eileen Consorti" or that plus a few other words. There are other things that she could do. It takes about 3 months to see the results. Once there is enough stuff online that outranks your site, it'll fall

to page two, and hopefully to page three. Few people look beyond page one of Google.

### **My Theory of Human Evolution (good-luck charms) (2010-06-21 06:59)**

In [1]a museum about the history of Tokyo, I saw an exhibit that showed a typical Tokyo home from hundreds of years ago. It contained an elaborate good-luck charm next to the shrine. I realized that good-luck charms can be explained by [2]my theory of human evolution as another example of behavior – along with art, ceremonies, and [3]gift-giving norms - that long ago supported technical progress. This particular good-luck charm was hard to make. Because people wanted them, they bought them. This helped support skilled craftsmen, who were the ones who made technical progress. Along the same lines, ceremonies usually involve lots of high-end hard-to-make stuff, such as fine clothes.

Visiting distant big cities has taught me a lot about human nature. The big examples are the Shangri-La Diet (Paris) and the umami hypothesis (a earlier Tokyo visit led me to make a lot of miso soup, which had surprising effects). Trips to Antigua (single words make it easy to trade), Toronto (gifts support technical progress), and now Tokyo (again) helped me think about human evolution.

1. <http://www.edo-tokyo-museum.or.jp/english/>

2. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>

3. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>

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### **Assorted Links (2010-06-21 13:11)**

- Success is fickle: [1]The case of Megan Fox. Is Big Pharma in the same situation? Lacking profound understanding of disease (just as Fox can't act) . . .
- [2]Excellent anonymous obituary of Norman Macrae, deputy editor of The Economist. "Give power to the state and you end up with self-serving interest groups [he believed]." Via [3]The Browser.
- [4]David Healy on Big & Little Pharma (100 words). "Posted parcels are tracked far more accurately than adverse treatment effects on patients."
- [5]Beijing Ikea. I shop there often. The cafeteria, with heavy silverware and live music, feels opulent. An industrial design student I know admired one of their chairs for three years and finally bought it as a prop for her final project. During exhibition of her work, unfortunately, visitors said, "What a beautiful chair."

Thanks to Bruce Charlton and Paul Sas.

1. [http://nymag.com/daily/entertainment/2010/06/the\\_star\\_market\\_vultures\\_defin.html](http://nymag.com/daily/entertainment/2010/06/the_star_market_vultures_defin.html)

2. [http://www.economist.com/node/16374404?story\\_id=16374404](http://www.economist.com/node/16374404?story_id=16374404)

3. <http://twitter.com/TheBrowser>

4. <http://bjp.rcpsych.org/cgi/content/full/194/1/85>

5. <http://articles.latimes.com/2009/aug/25/business/fi-china-ikea25>

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Duncan (2010-06-23 15:39:11)

You may be interested in a new Wired article about Sergey Brin's attempts to discover treatments for Parkinson's disease (and other ailments). It could be complementary to self-experimentation, if enough people quantify themselves online. "Generally the pace of medical research is glacial compared to what I'm used to in the Internet," Brin says. "We could be looking lots of places and collecting lots of information. And if we see a pattern, that could lead somewhere." [http://www.wired.com/magazine/2010/06/ff\\_sergeys\\_search/](http://www.wired.com/magazine/2010/06/ff_sergeys_search/)

### Good Sleep on Long Flight (2010-06-22 19:58)

Today I flew from Beijing to San Francisco, an 11-hour flight. For the first time ever on a long flight, I slept well even though I had to sleep in my seat. (When I've been able to stretch out on several seats or on the floor, I've slept okay.) I slept so much the flight felt short – like it was four hours long. When we landed in San Francisco, I felt great. As if I hadn't traveled at all. This has never happened before. Instead of going straight home, I did some errands.

Why did I sleep so well? It surely helped that the flight started at 4 pm Beijing time, to which I was well-adjusted. But I've never before slept well sitting up, no matter what the flight time. I think this time was different because I did two things I've never done together before:

1. Lots of one-legged standing. Around 2 pm I stood on one leg to exhaustion 3 times (right leg, left leg, right leg). Around 7 pm I did it again: left leg, right leg, left leg. Six times is a really large dose, too large to be used every day because my legs would get too strong. Usually I do two or four times. I think that the two bouts (in this case, 2 pm and 7 pm) need to be widely spaced so that signaling molecules released into the blood by the exertion can be replenished.

2. Lots of cheese. Around 7 pm, I ate about a quarter-pound of Stilton. With a milder cheese I might have eaten more. It isn't just [1]the animal fat, I think something in milk makes me sleepy.

Around 8 pm I started trying to fall asleep. It didn't seem promising, I only felt a little tired and not completely comfortable, but after maybe 4 minutes with my eyes shut, I fell asleep for most of the rest of the flight.

1. <http://www.blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>

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q (2010-06-22 21:03:17)

when i flew to japan (the long leg was SF -> tokyo) i was sitting in the front row, and right in front of me was a large video screen. i thought this would make for absolute havoc; i didn't think i would sleep at all. i slept fitfully, but i felt well rested when i arrived and didn't have jet lag despite a 12 hour time change. my theory is that the randomly pulsing light from the video screen, still visible through my closed eyes, simulated REM. i wonder if anyone has done experiments with sleeping with randomly pulsing light on.

Sam (2010-06-22 21:03:52)

Did you use your Bose NC Headphones during the flight?

hong lei (2010-06-22 21:52:51)

It's really smart to eat lots of cheese instead of milk which also make you sleepy but urinate frequently.

Laura (2010-06-22 22:50:42)

I'm glad you had a great flight!!!

seth (2010-06-22 22:55:25)

I only used my Bose NC headphones when watching video – maybe an hour. It happens that I was sitting in the front row right next to the movie screen but on the aisle. The screen wasn't bright and was easy to ignore.

Mara (2010-06-23 01:17:51)

Hi Seth, This is off-topic but I just thought you might be interested by Marginal Revolution's post today on radiation hormesis: <http://www.marginalrevolution.com/marginalrevolution/2010/06/scientific-hypotheses-from-196.html> Best, Mara

G (2010-06-23 04:58:53)

Re. #1: "...too large to be used every day because my legs would get too strong." ...Huh!? Please explain. Re. #2: I guess you'll have already heard this, but hot milk is a popular old sleep-aid; I think it actually works. You reckon there's anything in the caution that cheese provokes nightmares? I haven't found this, and often gravitate to cheese as a bedtime snack. Malt drinks made with hot milk, like Horlicks or Ovaltine, seem to be a good choice.

seth (2010-06-23 05:53:29)

What did I mean by "too large [an amount of one-legged standing] to be used every day because my legs would get too strong"? If I did six one-legged stands to exhaustion every day, it would take longer and longer to reach exhaustion. 5 minutes per leg at the beginning, 20 minutes per leg a month later. I don't want to spend 20 minutes per leg – that would be a total of 120 minutes per day. I haven't noticed any nightmares after eating cheese.

Allen K. (2010-06-23 05:55:03)

1/4 pound counts as a "lot" of cheese? Uh-oh...

dr. cosa (2010-06-23 07:10:20)

the magnesium in milk and dairy might be part of the reason for sleep inducing effects,

peter (2010-06-23 07:30:38)

i practice qigong. one of the forms/postures is playing pi pa (the third form in a series of 10), which involves a kind of stressful standing on one foot. You might learn that to avoid just ordinary standing on one foot because it will reduce the time required to fully stress the leg. You'd have to find an instructor, which shouldn't be a problem in either Berkeley or China.

seth (2010-06-23 08:53:48)

Allen K., I wish I knew the exact amount of cheese but I don't, not even close. I'm not sure what you are trying to say.

Wilhelm (2010-06-23 09:10:03)

Wasn't there something like opiod in the milk. That could explain the sleep-inducing effect of the cheese.

G (2010-06-23 15:02:33)

Uh Seth, why not just squat down a bit more on the leg? You can hang onto something for balance. Just a few degrees more of knee and hip-flexion should make a big difference if you're standing for five minutes. Heh, or you could wear a backpack of heavy weights... This seems like kind of an eccentric way to encourage sleep, but hey, maybe one day everyone will do it. :-)

G (2010-06-23 15:03:44)

Also, I'm sure Allen K. was just joking about his own cheese-intake, not asking a question.

seth (2010-06-23 16:04:51)

G, yeah, that interpretation of Allen K's remark makes sense. And, yeah, I could bend my leg more. Yet it feels like there is a natural amount to bend it, and it's hard to go away from that. I worry that more bend would (more) isolate one muscle, yet the effect depends on lots of muscle being stressed. (So lifting weights with your arms won't do it because the arm muscles are much smaller than the leg muscles.) The way I do it now I move my leg up and down small amounts while bending it, so both sets of muscles are being used.

G (2010-06-23 19:41:53)

You're doing a low-intensity endurance squat; as you get stronger, deepen the squat to keep the intensity at the right level. If you have a feeling of sitting back as you stand on the leg then you will be stressing your glute as well - feel or imagine how it acts to maintain the angle between your upper leg and the floor - so your two biggest muscle-groups will be tensed. If you instead sink forwards as you stand, with your knee and head extending beyond your toes, you will over-emphasise the quadriceps and stress the knee. Some knees are more resilient than others, but it's a common problem area. Muscle-balance is a legitimate concern here, and shallow squats are less likely than deep squats to engage and strengthen the hamstrings in roughly desirable proportion - they are very much secondary to the movement; I think they're mainly stabilizers rather than pushers. If your only leg exercise is deep squats, and over time you work up to a very heavy squat, then you pretty much must have strong hamstrings, because heavier weights will make their secondary-but-significant role more demanding, but shallow squats will leave the hamstrings seriously lagging, which can have undesirable consequences. If you are already doing some form of general strength-training, with good technique, then your standing periods are unlikely to much of a difference for better or worse. If you are not strength-training your legs already, you might want to maintain muscular balance by doing something that works your hamstrings. This needn't be anything time-consuming; simple isometrics would do. Oh, and a little movement in the joints probably would be more effective than a purely static hold - just don't jerk or bounce at all; knees are precious; take it from one who found out the hard way. :-)

Allen K. (2010-07-05 10:20:54)

(Indeed, I was just joking; I can certainly put away more cheese than that without noticing.)

## **My March 2010 Quantified-Self Talk (2010-06-23 07:27)**

[1]Here it is. A 12-minute talk about what I'd learned recently from daily tests of mental function. Most of all, the value of butter.

1. <http://vimeo.com/10592092>

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jay (2010-06-30 08:05:05)

I bet all this butter can probably make you a better liar: <http://www.bakadesuyo.com/what-can-you-do-to-someone-to-make-their-lies>

Alexandra Carmichael (2010-07-11 03:38:54)

Well, I tried challenging my body with 2 tbsp of butter yesterday after being dairy-free for a month. Half an hour after eating the butter (Strauss), I got a splitting headache, though not quite a migraine, that lasted for 9 hours. And I woke up in the middle of the night with a sore throat, stuffy nose, and wheezing. Both of these symptoms (headache/migraine and allergy-like symptoms) had been regular while I was eating cheese, and disappeared when I went dairy-free, but I wanted to do the butter test to see if it was the milk protein or something else. It's something else, but what??

### Assorted Links (2010-06-24 09:36)

- [1]Probiotic cuts probability of pneumonia in half for high-risk patients. In related news, [2]yogurt confiscated.
- Medical ghostwriting is research misconduct, argues [3]this article. Think what this means: A common practice among medical school professors can reasonably be considered research misconduct. Via [4]the Carlat Psychiatry Blog.
- [5]Parking-space maximums by Tom Vanderbilt

Thanks to Anne Weiss and Mark Griffith.

1. <http://ajrccm.atsjournals.org/cgi/content/abstract/200912-18530Cv1>
2. [http://www.ekathimerini.com/4dcgi/\\_w\\_articles\\_politics\\_100012\\_24/06/2010\\_117955](http://www.ekathimerini.com/4dcgi/_w_articles_politics_100012_24/06/2010_117955)
3. <http://www3.interscience.wiley.com/cgi-bin/fulltext/122204938/PDFSTART>
4. <http://carlatpsychiatry.blogspot.com/2010/06/latest-issue-of-bioethics-journal.html>
5. <http://www.slate.com/id/2257814/>

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Glen Raphael (2010-06-24 22:33:26)

"Parking-space maximums" reminds me that as a libertarian, I seek the staid, sensible middle ground between prohibition and compulsion. Do we really have to jump straight from banning too little parking to banning too much? Is the idea of simply letting the market decide how much parking is appropriate entirely out of the question?

### Law Guardians and Self-Experimentation (2010-06-25 04:07)

In [1]my recent Medical Hypotheses paper, I argue that scientists care a lot about status display and this interferes with good science. Failure to self-experiment is an example. I think the main reason self-experimentation is unpopular is that it looks low-status. [2]Here I explain how sleep researchers would benefit from the self-experimentation they don't do.

In [3]a May New Yorker article, Janet Malcolm gives another example of status display getting in the way of doing a good job:

Not speaking to their clients [children] is almost a badge of honor among law guardians [lawyers assigned to look after the interests of children in the legal system, such as the child of divorcing parents]. In a 1982

study by the New York State Bar Association, this practice was found to be ubiquitous. . . . Judges continue to turn a blind eye to what the Bar Association called the "phantom" attorney.

1. <http://www.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>
2. [http://www.stat.columbia.edu/~cook/movabletype/archives/2010/06/what\\_people\\_do.html#comment-965886](http://www.stat.columbia.edu/~cook/movabletype/archives/2010/06/what_people_do.html#comment-965886)
3. [http://www.newyorker.com/reporting/2010/05/03/100503fa\\_fact\\_malcolm](http://www.newyorker.com/reporting/2010/05/03/100503fa_fact_malcolm)

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Dena Shunra (2010-06-25 10:46:54)

The article itself - while quite long - is very worth reading. The particular law guardian at the focus of the story not only did not meet the child he was supposed to be representing, but also met up with the journalist (Ms. Malcolm) and spent several hours explaining to her his theory of widespread conspiracy. This fact, while brought to the attention of the court, did not inspire any less confidence in the law guardian. There is so much more context than in the piece you pulled out.

Bryan (2010-06-25 13:16:11)

Seth, the New Yorker link goes to a report on Tourette's.

seth (2010-06-25 16:49:27)

Bryan, thanks for pointing that out, I've fixed it Dena, yeah, the whole article is good. I'm glad someone is pointing out horrifying features of the justice system. However, Malcolm didn't convince me there was a miscarriage of justice. There were 91 phone calls between the mom and the murderer that weren't given another convincing explanation, other than that the mom and the murderer were working together to kill her husband.

Alex Chernavsky (2010-06-25 19:45:00)

Here's another excellent (if depressing) article about how children get screwed-over by the system: <http://www.villagevoice.com/2000-06-13/news/inside-new-york-s-foster-care-system/>

Stephen M (Ethesis) (2010-06-26 10:44:35)

Err, we would crucify an ad litem (what they call them here) who acted like that.

## **Lucky Charms Can Work (2010-06-25 23:52)**

Speaking of [1]good-luck charms, [2]a study at the University of Cologne found in four different experiments with four different tasks that people did better when they believed that they somehow had Lady Luck on their side. For example, they did better when they had their lucky charm with them than when they didn't.

If lucky charms work then it's reasonable to buy them. [3]I explained why it's helpful in an evolutionary (i.e., long-term) sense to buy them: long ago, the resources paid for them supported technological innovation. Via [4]Bad Science.

1. <http://www.blog.sethroberts.net/2010/06/21/my-theory-of-human-evolution-good-luck-charms/>
2. <http://pss.sagepub.com/content/early/2010/05/27/0956797610372631.abstract>
3. <http://www.blog.sethroberts.net/2010/06/21/my-theory-of-human-evolution-good-luck-charms/>
4. <http://pss.sagepub.com/content/early/2010/05/27/0956797610372631.abstract>



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The 50 Best Health Blogs (2010-06-26 17:54:34)

Isn't this just a placebo effect, or is there a subtle difference? Jim

Nancy Lebovitz (2010-06-26 23:56:12)

[1]The Luck Factor claims there's research showing that people who think of themselves as lucky are more likely to notice opportunities.

1. <http://www.amazon.com/Luck-Factor-Richard-Wiseman/dp/0786869143>

## Chinese Mystery Explained: Humorous Names (2010-06-26 15:36)

Describing my first day of teaching at Tsinghua, [1]I wrote:

The students did brief introductions. Many students appeared to think that one student's Chinese name was humorous. This was briefly explained to me but I still have trouble believing it.

I don't remember the brief explanation. At the time I didn't know that my Chinese name sounds exactly like the word for eggplant, which has different characters. As the Tsinghua story suggests, this isn't rare. I met a girl whose name sounds the same as China's ruler. (Different characters, of course.) Anyway, it seems a blessing that my name has a humorous side and perhaps that's what the parents in this case were thinking.

1. <http://www.blog.sethroberts.net/2009/09/22/tsinghua-curiosities-first-day-of-class/>

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## Assorted Links (2010-06-26 17:19)

- [1]A Chinese medicine huckster. "Zhang asserts that different body organs have their own color preferences: lungs like white food, the liver likes green food, kidneys like black food, the heart likes red food and the spleen likes yellow food."
- According to Gawker, [2]"kombucha tastes terrible". Some store-bought kombuchas [3]contain too much alcohol.

1. [http://www.danwei.org/health\\_care\\_diseases\\_and\\_pharmaceuticals/from\\_laid-off\\_worker\\_to\\_tcm\\_ma.php#comments](http://www.danwei.org/health_care_diseases_and_pharmaceuticals/from_laid-off_worker_to_tcm_ma.php#comments)  
2. <http://gawker.com/5566684/the-non+kombucha-drinkers-guide-to-kombucha-tea>  
3. <http://dinersjournal.blogs.nytimes.com/2010/06/25/kombucha-may-be-treated-like-alcohol-government-says/?src=twr>

Alex Chernavsky (2010-06-27 08:15:19)

Heh, this is my favorite comment from that "Gawker" article: "I was having lunch outside, and some girl asked if I could watch her bike while she went inside a store. When she came out, I asked how she knew I wouldn't steal her bike. She replied, 'You're drinking Kombucha, I knew it would be safe.' " I'm not sure why so many people in that Gawker thread think that kombucha tastes terrible. I'd drink it even if I didn't think it had health benefits. I suppose it's a bit like beer, green olives, or hot peppers – you may not like it the very first time you try it, but it grows on you.

Oli M (2010-07-07 02:13:01)

I have the Asian Flush thing where I turn red when I consume ethanol. Store-bought Kombucha turns me slightly red. My own brew does not.

### **Unhinged by Daniel Carlat (2010-06-27 03:41)**

Daniel Carlat, a Massachusetts psychiatrist, is the author of the excellent blog [1]The Carlat Psychiatry Blog. He also wrote [2]an excellent article in the New York Times Magazine about working on the side as a drug rep: He told other psychiatrists about new drugs. He quit (or was fired) because telling the truth wasn't compatible with the job.

Unhinged, his new book (sent to me by the publisher after I asked for it twice – that's how much I wanted to read it), covers the same ground. Its subtitle (or two subtitles) is/are The Trouble With Psychiatry – A Doctor's Revelations about a Profession in Crisis. The contents were well-written, but none of it was new to me: the "chemical imbalance" theory of depression is a convenient myth, how drug reps work, how drug companies influence doctors, diagnosis difficulties, the cases of Charles Nemeroff and the like. (I did learn that Nemeroff was called "the boss of bosses" because of his prominence and power.) If any of his criticisms are new to you, this book is a great introduction. He uses many stories of patients to make his points.

Overall, I found the book too calm. What Nemeroff and others like him did I find outrageous but Carlat doesn't sound outraged. Maybe he is, I have no idea, but his book is more reasonable-sounding than scornful and I would have preferred scornful. At one point he says he wrote [3]an "angry" op-ed for the New York Times about something and I thought: good, some emotion!

The crisis of the subtitle ("A profession in crisis") is enticing but is not borne out by the contents. Carlat dislikes aspects X, Y, and Z of his profession, but one person's dissatisfaction does not equal crisis. I saw no signs he is part of a growing movement. My take on the trouble with psychiatry is that psychiatrists don't understand what is wrong in almost every case they see and, due to lack of understanding, do a poor job of fixing the problem. Lack of understanding by doctors is nothing new and, until someone has a better understanding, doesn't pose a professional problem. This basic truth goes unmentioned in Unhinged.

1. <http://carlatpsychiatry.blogspot.com/>

2. <http://www.nytimes.com/2007/11/25/magazine/25memoir-t.html?scp=1&sq=daneil%20carlat&st=cse>

3. [http://www.nytimes.com/2006/05/09/opinion/09carlat.html?\\_r=1&scp=1&sq=%22makers%20of%20sleeping%20pills%20are%20now%20paying%22&st=cse](http://www.nytimes.com/2006/05/09/opinion/09carlat.html?_r=1&scp=1&sq=%22makers%20of%20sleeping%20pills%20are%20now%20paying%22&st=cse)

Alex Chernavsky (2010-06-27 09:31:49)

I haven't read the book, but I'm not a big fan of Daniel Carlat. He seems to specialize in mild, relatively uncontroversial criticism of psychiatry, as in this disappointing *NY Times* article: <http://www.nytimes.com/2010/04/25/magazine/25Memoir-t.html> Seth writes that psychiatrists "...do a poor job of fixing the problem." I agree, but I would go further and say that psychiatrists often create long-term harm to the very patients they are ostensibly helping. (Psychiatry has a long history of this sort of thing: lobotomies, insulin comas, unnecessary tooth extractions, etc.)

David (2010-06-27 11:19:27)

Louis Menand has an interesting piece in the *New Yorker* a few weeks back on psychiatry, and is interviewed about it on Econ Talk. A lot of it has to do with whether perfectly reasonable people are down in the dumps and whether they have a disease. In many respects, it confirms what most people probably suspect already in terms of diagnosing it. This is sort of the first-order problem before, what this post seems to address, which is the problems of attempting to treat it given extant market incentives. Here's the interview link if anyone's interested: [http://www.econtalk.org/archives/2010/05/menand\\_on\\_psych.html](http://www.econtalk.org/archives/2010/05/menand_on_psych.html)

seth (2010-06-27 12:25:44)

Alex, yeah, the article you link to is a good example of the problem with Carlat. In that article he writes:

Clearly, mental illness is a brain disease, though we are still far from working out the details. But just as clearly, these problems in neurobiology can respond to what have traditionally been considered "nonbiological" treatments, like psychotherapy. The split between mind and body may be a fallacy, but the split between those who practice psychopharmacology and those specializing in therapy remains all too real.

That there might be something deeply wrong with therapy doesn't occur to him.

Matt Weber (2010-06-28 13:32:47)

[www.thelastpsychiatrist.com](http://www.thelastpsychiatrist.com) is not always coherent, but if "calm" is what you don't want, he's worth a shot. And he's usually pretty entertaining.

nancy rappaport (2010-06-28 16:33:52)

I with trepidation would love to send you my memoir to comment on as a child psychiatrist who is trying to humanize the psychiatric profession by showing how patients/therapists share the same kind of sorrow and often that the work to heal can be life saving. Dr. Carlat even if you think is less militant, has taken many steps to bring psychiatrists into being self reflective about how we practice. Sincerely, Nancy

seth (2010-06-28 17:44:34)

Thanks for the offer, Nancy, but no. As for Carlat, I think his influence has been wonderful, as I tried to say at the beginning of my post. But, for this particular reader, his book was not wonderful.

marla miller (2010-07-13 12:33:35)

How interesting that I only recently connected to your blog and now I find another common interest: psychiatry. I just heard him on NPR. My interest goes back to my work in psychiatry as a psychiatric nurse practitioner. Though I continued my love of health care through my writing, I quit medicine when MD's decided to be bought off and nurses were powerless to do anything. In hospitals, money speaks the loudest. If you wonder why health care is in the shape it's in, look in the garages of Docs practicing during the heyday of moneyed medicine-80's, 90's and 2000s until the collapse. They love pretty cars.... They also don't-or can't- speak out too loudly about each other because most of them were in collusion actively or passively. Money's a hard drug to refuse. Most MD's I know didn't include this MD whose blog I will now check out. Best Marla Miller, RN, MSN

## **The David Healy Affair (2010-06-27 14:17)**

Bruce Charlton pointed me to [1]this website full of information about how the University of Toronto rescinded a job offer to David Healy, a British psychiatrist, after he made negative comments about Prozac. Psychiatrists at the University of Toronto got a lot of money from Lilly, the maker of Prozac. Here's something from [2]a CBC documentary about it:

Although he refuses to interviewed, Dr. Nemeroff said through his lawyer that the [University of Toronto psychiatry] center asked for his opinion of Dr. Healy that day and he gave it. . . . Later that day he flew to New York where we do know he told a meeting of the American Foundation for Suicide Prevention exactly what he thought about Healy. One scientist who was there said Nemeroff's attack was furious, angry, exercised, that the thrust was Healy was a nut.

If Charles Nemeroff calls you a nut . . .

1. <http://www.pharmapolitics.com/index.html>
2. <http://www.pharmapolitics.com/cbcnational.html>

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Alex Chernavsky (2010-06-27 19:45:05)

See also the very disturbing case of Joseph Biederman, a child psychiatrist from Harvard University who placed his own financial interests above the interests of the children he was allegedly trying to help. I scarcely know which links to post. Google his name for more information. <http://www.digitaljournal.com/article/276135> [http://www.boston.com/news/local/massachusetts/articles/2009/03/21/senator\\_broadens\\_inquiry\\_into\\_psychiatrist/](http://www.boston.com/news/local/massachusetts/articles/2009/03/21/senator_broadens_inquiry_into_psychiatrist/) <http://www.nytimes.com/2009/03/28/health/policy/28subpoena.html>

Alex Chernavsky (2010-06-27 19:55:42)

PS I see that Seth has already blogged about Biederman: <http://www.google.com/search?q=biederman+site:http://www.blog.sethroberts.net/&hl=en&safe=off&prmd=lnb&filter=0>

Tricia R (2011-05-04 18:45:37)

I recently participated in a documentary with Dr. Healy on the use of SSRIs in young children. It was done by Denmark National Radio 5/2011. He is spot on! I lost my 12 year old son to what I believe is fraudulent pharmaceutical marketing practice. I hope more will listen to Dr. Healy. Remember what they say about money and what some will do for it!

## **Prenatal Ultrasound and Autism: Multiple Voices (2010-06-27 22:27)**

I [1]previously blogged (also [2]here) about Carolyn Rodgers's idea that prenatal ultrasound may cause autism. It turns out that she isn't the only person with this idea; researchers at the University of Louisville [3]recently published the same idea.

I learned about the Louisville study from Anne Weiss, who said the connection has been plausible for a long time.

Ultrasound was introduced into obstetrics in the 1970's and was generally restricted to high-risk pregnancies. By the 1980's policy statements were issued by ACOG, the NIH and equivalent bodies in Europe and Canada stating that its use should remain limited to high-risk cases. Despite these recommendations, ultrasound technology became common in hospitals and doctors' offices and routinely applied to low-risk populations. Within a short time the majority of pregnant women were being exposed at prenatal visits, during multiple scans in hospitals, and during continuous monitoring during labour (which could mean 12 to 14 hours during childbirth alone). Skills and techniques used to monitor the fetus prior to the introduction of ultrasound (in utero and during the birth process) were slowly undermined by the technology and often underutilized. Iatrogenic effects from false positive readings, - unnecessary C-sections, inductions, instrumental deliveries etc. caused harm to moms and babies, especially in the early 1980's.

Three important names in the 1980s were (1) Robin Mole, who presented a paper "Possible Hazards of Imaging and Doppler Ultrasound in Obstetrics" to the Royal Society of Medicine Forum on Maternity and the Newborn: Ultrasonography in Obstetrics, April 1985. She was former director of the Medical Research Council Radiobiology Unit, England. Also the work of (2) M.E. Stratmeyer - Research in ultrasound. A public health view. Birth and Family Journal 1980 and (3) Doreen Liebeskind - still at Albert Einstein and a prof of radiology- presented at a symposium at Columbia in 1983. She was concerned that ultrasound may be producing subtle changes in the fetal brain perhaps affecting behavioral mechanisms, possible changes in reflexes, IQ, attention span or some of the more subtle psychological, psychiatric or neurological phenomena. Referred to animal and lab studies that showed ultrasound may cause chromosomal damage, breakdown of DNA, etc. There are others who sounded the warning that this was not a benign technology but these voices were crowded out for varied reasons like threats of litigation, loss of the traditions skills of birthing etc.

There were also Japanese studies that raised concerns about ultrasound. Weiss continued:

Unfortunately the use of ultrasound in obstetrics has not declined, despite safety concerns and the lack of research to rule out serious neurological effects. It's so entrenched in modern obstetrical practice. Doctors use the machines to protect themselves from litigation - in the case of fetal abnormalities, undetected multiples, placenta previa, neurological or physical damage to the fetus during childbirth, stillbirth etc. It has almost become a form of entertainment - you can get photos and videos of baby's ultrasound. It's disturbing how benign it appears.

Within the context of the work I do, ultrasound is just one of many concerns I have with the over-management and medicalization of childbirth. My clients come to me to find ways to subvert this within the hospital setting or to prepare for a home birth with a midwife. I also get referrals from doctors whose patients are dealing with difficult issues while pregnant.

1. <http://www.blog.sethroberts.net/2010/01/23/does-prenatal-ultrasound-cause-autism/>
2. <http://www.blog.sethroberts.net/2010/05/24/autism-and-prenatal-ultrasound-more/>
3. <http://www.medical-hypotheses.com/article/S0306-9877%2810%2900031-9/abstract>

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kevin denny (2010-06-29 09:50:12)

There are a bunch of papers reporting an effect of ultra-sound on the incidence of left handedness.

Ultrasound Assisted Liposuction â€“ Liposuction London Alternative to Surgery with Ultrasound (2010-07-09 21:48:21)  
[...] Seth's blog » Blog Archive » Prenatal Ultrasound and Autism: Multiple Voices [...]

Evelyn (2010-07-28 16:43:24)

When I was recently in Canada, I saw a storefront advertising "Your Baby in 3D" from ultrasound imaging. Recreational ultrasound.

??????? (2011-12-12 04:16:53)

Hello, there is research conducted with children Aotustim Israel Hospital "Assaf Harofeh" pressure infuse oxygen in brain cells by a special cell, do you know what the conclusions from the study? And is that really helps kids Aotustim? Thank you Mickey

mirav shivok (2011-12-16 01:24:30)

Reply to Mickey I know this experiment was conducted in children with autism by Dr. Shimoni I can tell you that some children improved Porter that his children were in light condition PDD spectrum

### What Antidepressants Do (2010-06-29 00:16)

After [1]I complained about lack of outrage in Daniel Carlat's Unhinged, Bruce Charlton pointed me to [2]this essay (registration required) by [3]Simon Sobo, a psychiatrist. Sobo says something I may end up repeating every time the subject of antidepressants comes up:

Rat pups that are isolated from their mother and littermates produce ultrasonic sounds that are indicative of stress. SSRIs [the most popular type of antidepressants] reduce these sounds (Oliver, 1994). Is a chemical imbalance being corrected? I doubt it.

That's a nice summing-up. Prozac (an SSRI) really does something, but the notion that it returns to normal something broken is absurd. Sobo also gives an example of how the anti-anxiety effect of such drugs works in practice:

Mrs. L. had originally required 40 mg of Paxil (paroxetine) per day to recover from a postpartum depression. After 12 months on the medication, an incident happened that disturbed her. During her lunchtime, she was visiting her 1-year-old son at his day care center when one of the workers began screaming at another infant instead of picking her up. The next day Mrs. L. went shopping during her lunch break. Later that week a co-worker became tearful during the course of a conversation with Mrs. L. regarding her own child's day care center. Only then did Mrs. L. wonder about her decision to go shopping the day after she had witnessed the day care worker's inappropriate reaction. She wondered if her Paxil had made her indifferent when ordinarily she would have reacted and worried about such a thing.

[4]My research about mood suggests that depression is due to defective entrainment of a mood oscillator. It's caused by something missing from the environment. "Chemical imbalance" has nothing to do with it.

1. <http://www.blog.sethroberts.net/2010/06/27/unhinged-by-daniel-carlat/>
2. <http://www.psychiatristimes.com/display/article/10168/50241>
3. <http://www.simonsobo.com/>
4. <http://escholarship.org/uc/item/2xc2h866>

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Dennis Mangan (2010-06-29 05:54:39)

“*Chemical imbalance*” has nothing to do with it. Well, yes and no. There are definite biochemical markers in depression, markers of inflammation and oxidative stress for instance, which antidepressants appear to act upon (at least in part). Also, the co-morbidity of, e.g. heart disease and depression would seem to mean that in at least some cases, physical illness causes depression.

Willy (2010-06-29 05:56:38)

I am reading the article by Simon Sobro and Mrs. L.'s case. She did not quit the SSRI but adjusted the dose, so there is still place for its use. I liked this part: "viewing the patient's needs and her clinical presentation in terms of a psychological narrative"

Joe (2010-06-29 06:49:36)

I have been taking antidepressants for 10 years now , with a great deal of success and minimal side effects. I was reluctant to take one since I believed that there should be a natural alternative to treat the symptoms I was having. Prior to taking antidepressants I was increasingly irritable , fatigued and unable to concentrate. Most mornings I had a hard time getting out of bed. I suffered from panic attacks and overwhelming anxiety. Each month was getting worse and worse for two or three years. This was NOT a case of the blues. My doctor called this depression and treated it with antidepressants. Whatever you call these feelings they failed to respond to numerous earlier treatments of healthy eating, exercising, meditation and psychotherapy. As far as the placebo effect goes it seems incredibly unlikely since I tried numerous over-the-counter herbal , vitamin and prescription medications - some with strongly negative effects-, and each greeted by me with a great deal of hope that it would be the pill to make me feel better. They all failed until I found celexa. The only other pill that helped the anxiety at all was ativan, which did nothing for the fatigue and lack of focus . So I have a problem with studies that show placebos being as effective as SSRIS, since I tried dozens of "placebos" and junk remedies to no avail until I found the one that worked for me. It changed my life. There is a major difference between serious depression and the "blues". I don't doubt that antidepressants are way over-prescribed , much like ritalin. But that doesn't mean that everyone on them would be just as well without them.

Jorgen (2010-06-29 07:49:28)

"Also, the co-morbidity of, e.g. heart disease and depression would seem to mean that in at least some cases, physical illness causes depression." Let's say it together: "correlation does not imply causation". A more likely scenario is that both heart disease and depression have a common cause: life stress. Stress has been linked to both heart disease and depression. I have never seen or heard any argument by which heart disease acts as a causative agent for depression. However I'm always happy to learn, should you have any reference.

Anthony (2010-06-29 08:18:49)

To the extent a chemical balance is being corrected, I think it's a symptom, not a root cause. I'm with Joe Griffin and Ivan Tyrrell on this: usually "depression" is proximately caused by excessive worry, and more properly is caused by basic human emotional needs being unmet. See for example: [http://en.wikipedia.org/wiki/Human\\_Givens](http://en.wikipedia.org/wiki/Human_Givens)

Dennis Mangan (2010-06-29 08:32:57)

Am J Med. 2008 Nov;121(11 Suppl 2):S20-7. Depression in patients with coronary heart disease. Carney RM, Freedland KE. Behavioral Medicine Center, Department of Psychiatry, Washington University School of Medicine, St. Louis, Missouri 63108, USA. carneyr@bmc.wustl.edu Abstract Approximately 20 % of patients with coronary heart disease (CHD) have major depression and 20 % have minor depression at any given point in the course of their illness. Depression causes significant psychological and social morbidity, and **is a risk factor for further cardiac morbidity and mortality**. Although there are many possible biological and behavioral mechanisms, the causal pathways through which **depression increases the risk for cardiac events and death** are not well understood. Despite **the morbidity associated with depression**, and the devastating impact it has on the quality of life of patients with CHD, it is underdiagnosed and often left untreated. This article describes screening

techniques for use in primary care and cardiology settings, and discusses the safety and efficacy of available treatments for depression in patients with CHD. PMID: 18954589 [PubMed - indexed for MEDLINE] [My emphases.] "2. Correlation does not equal causation. In practice, this is used to mean that correlation is not evidence for causation. At UC Berkeley, a job candidate for a faculty position in psychology said this to me. I said, "Isn't zero correlation evidence against causation?" She looked puzzled." - Seth Roberts

rob hoffman, md (2010-06-29 09:39:46)

As the writer who finally got relief from antidepressant medication indicates, clinical depression is a serious, sometimes life threatening condition, which does respond to treatment with antidepressant medications. While excessive SSRI dosage can lead to emotional numbing, appropriate doses are a chemical short cut to "don't sweat the small stuff," and definitely help patients to manage stress more adequately with less impairment of function and better quality of life.

Laura (2010-06-29 09:50:35)

I am on psychiatric medications and have been for 12 years. I have succeeded at always being by myself and alone, without much loneliness or a feeling that I need others. I am currently taking a class at UC Berkeley and I noticed the students react differently from me. Also, I see my coworkers acting differently from me, too. I am very indifferent to many things. I see the Berkeley students worrying about their classes and saying "this class is really difficult," when I am thinking "how come I didn't see it as difficult, but everyone else did." I am not doing badly, and I am not the best in the class. I just wanted to show that my reaction is different from a lot of people's reaction. I did notice that my medication was doing this to me, and I always thought this was a way that my medicine helped me: that I didn't feel as affected as others. Also there are some "human" feelings that I don't have, that people who are not on psychiatric medications, have. Thanks, Seth, for putting these up. It really helps me. I hope you continue to post things like this.

Glen Raphael (2010-06-29 11:16:05)

Joe writes: >...so I have a problem with studies that show placebos being as effective as SSRIS The experience you describe isn't actually inconsistent with the placebo hypothesis. You say that you tried numerous "herbal , vitamin and prescription medications" before you found one that worked for you. Let us suppose for the sake of argument that depression left untreated gets worse for a while but eventually gets better on its own. Either because your brain adjusts somehow, or events in your life change - different job, different relationships, etcetera - in ways that make you happier. While depressed, you try an herb. No change. Try a different herb. No change. Try drug A. No change. Change the dosage. No change. Switch to drug B. No change. Switch to drug C, and...start to get better. As long as your depression motivated you to keep experimenting with different drugs it is absolutely guaranteed that you'd be taking \*some\* drug when you eventually got better. And you would naturally have the impression that this drug worked better than all those "weaker" drugs you tried first. One interesting question is if it had gone the other way - if you had tried the "strong" stuff first and then switched to the herbals when it doesn't work, especially if you had been told the herbal stuff \*was\* the strong medicine - would you have had the same experience? The placebo studies suggest you would have.

G (2010-06-29 14:01:57)

Close friend of mine got depressed after a relationship she'd committed to went really, really bad over a long drawn-out period of time. This environmental problem seemed to leave a mid-term dent in her emotions. She was eventually put on antidepressants. Over the phone, I could tell whether she'd taken her pills or not within about one sentence. She did not seem cold and distant; her mood was just very low, bordering on tears, all the time, unless she took the pills. She gradually weaned herself off the pills as whatever was awry recalibrated itself. A new relationship probably helped, but the pills undoubtedly helped her to hang on in there until things reset. Eventually, I could no longer tell the difference between her with and without pills. I would not say this unless I felt quite sure of my observations. I can pick up on very, very small changes and inner disturbances in this person, and although I generally have a bias in favour of drug-free solutions, it is impossible for me to harbour any regrets about this course of treatment in my friend's case. There may have been a drug-free way, but we didn't know it. She was able to keep earning a living and whatnot, and now she seems good as new. The drugs don't cure problems - they support recovery. If your problem is that you fundamentally hate yourself, or you have no good niche in



society, and you never solve these problems, you're supporting life-with-the-problem instead of the recovery. My friend's problem was not purely one innate to her personality; it was circumstantial, so it healed itself in time as circumstances changed.

Alex Chernavsky (2010-06-29 16:57:15)

G: The anecdote about your friend is consistent with the hypothesis that antidepressants are glorified placebos. See, for example, the story that's presented at the beginning of this article in *Mother Jones* magazine: [1]"Is it Prozac? Or Placebo?" The story concerns a woman whose life was transformed by taking an antidepressant during a clinic trial – except that she found out at the end of the trial that she had actually been in the placebo group, not the drug group. The "chemical imbalance" myth persists for at least two reasons: It provides drug companies with a simple (simplistic?) message to use in marketing campaigns. Also, the medical establishment apparently think that patients are less stigmatized when they're told that their depression stems from a brain disease. It's interesting to note that, in reality, it's not at all clear that the chemical imbalance myth leads to less stigmatization. Psychologists who studied this question found that the brain-disease explanation leads to *more* stigma than the theory that mental illness is the product of traumatic experiences. For more information about that last point, see this truly outstanding article that appeared a few months ago in the *New York Times Magazine*: [2]The Americanization of Mental Illness

1. <http://motherjones.com/politics/2003/11/it-prozac-or-placebo>

2. <http://www.nytimes.com/2010/01/10/magazine/10psyche-t.html>

James (2010-06-29 19:25:07)

Laura: that sounds like Alexithymia, which can occur on or off psychiatric medication. +1 to what G said, with the addition that good therapy (ideally CBT) will help change the situation. Seth, what's the current research on the reactive/endogenous depression divide, does it actually exist?

MT (2010-06-29 19:54:20)

The FDA does not require all of the studies undertaken on efficacy of antidepressants to be submitted for analysis when considering approving these drugs – it only requires two successful studies be shown, even if another eight were unsuccessful. Were the results of all the studies to be submitted together, these drugs would not be approved – they do not produce results that can be distinguished from placebo. The psychologist Irving Kirsch conducted a meta analysis of available research on SSRIs that showed 75 % of the 'effects' the cause are from placebo, and he proposes the remainder of that effect is because the strong side-effects of ADs make their placebo effect stronger. It would be great if ADs were tested against "active placebos" (placebos which also produce side-effects). Kirsch discusses his results in this opinion piece in the Huffington Post: [http://www.huffingtonpost.com/irving-kirsch-phd/antidepressants-the-emper\\_b\\_442205.html](http://www.huffingtonpost.com/irving-kirsch-phd/antidepressants-the-emper_b_442205.html) I'm sympathetic to experiences like Joe and the other commenters describe, but it seems unlikely the benefits they describe are actually from the ADs being prescribed.

peter (2010-06-29 22:21:09)

"depression is due to defective entrainment of a mood oscillator. It's caused by something missing from the environment." can you expand on this. specifically is the "defect" of entrainment genetic? Are you suggesting that some people are susceptible to depression due to their genes? It seems to me that altho morning light (which i assume is what's missing from the environment) may make it less likely to succumb to depression, that most depression arises when people simply don't get what they want/expect, i.e., it is a form of extreme unhappiness. [also, i googled "defective entrainment of a mood oscillator" and was unable to find the phrase. is it a phrase that is commonly used in psychology? ]

seth (2010-06-29 22:36:56)

Peter, please see the linked paper ("Self-experimentation as a source..."), in particular Example 2, for details of my ideas about depression. It's morning faces and morning light that are missing from modern life but were present during Stone Age life. In an environment with plenty of both, the genes that now cause the "sticky switch" behind many cases of bipolar disorder would have been neutral or even beneficial, since persons with those genes would have had more predictable moods, less dependent on the entraining events of a single day.

G (2010-06-30 01:44:43)

@ Alex - I feel a stigma about being helped by placebos! :-) It feels like kind of an insult to human dignity and all that, but maybe, maybe. Heh. @ James - She did receive talking therapy (counselling I think; don't think there was any CBT) and she felt sure it helped. I think she was lucky to have several close friends who were available round the clock most days; I live nearby and others work with her. Really, you met her now you'd never guess what a state she was in.

Vic (2010-06-30 02:12:52)

what happened to the taubes post

seth (2010-06-30 04:33:31)

Vic, turns out it was a mistake to post it. Perhaps I will post it later, perhaps the person to whom it was sent will post it.

Timothy Beneke (2010-06-30 10:47:46)

I was a night person starting at the age of 18 when I went to college; before that starting in the summers at around 10 or so I would stay up late and sleep in, and was rather sleep deprived during the school year... As an adult I suffered from a lot of dysthymia and clinical depression - I had a lot of suicidal ideation; I did a lot of therapy - I suffered a very stressful and traumatic childhood and therapists encouraged me "to uncover the emotions I was repressing that were at the root of my depression". I was even intellectually attached to psychoanalytic thought and published some theory; it was tied to a quest to save my self. At the age of 41 I started trying anti-depressants; between then and age 51 I tried 4 of them to no avail. Meanwhile I was going to bed at 3:30 in the morning and getting up around noon or later. I had also become obese. Seth told me that my biggest problem was going to bed at 3:30 in the morning, when I was 47. None of the therapists I saw ever told me this was a problem. At the age of 53, in early December of 2003, I finally started going to bed earlier, around midnight on average. Within a week or so I noticed a difference - the sensation of getting sleepy at night began to feel bodily pleasurable. My mood got better. I was in the habit of getting quite depressed on Christmas day. On December 25 of 2003, I was stunned by the fact that I felt fine - it was as if I had some magic protection. Soon after that, my love of music, which had been strong in my youth, returned in full force... I'd say on a scale of 100 my baseline mood went up 20 points at least. I was not on any anti-depressants. Then in 2006, I decided to try another anti-depressant. My baseline mood stayed much better but I wanted to see if one might now work; it did (Effexor). I think altering my circadian rhythms lifted me up substantially; from their the anti-depressant worked... I've mostly stayed out of depression since, though I am vulnerable to stress. I am happier. But the turning point was clear: finally following Seth's advice to get up earlier. I repeat: No one of the 3 psychiatrists and 3 clinical psychologists ever suggested to me that getting up earlier would help my depression... So depressed night owls might consider changing their ways....

Alex Chernavsky (2010-06-30 11:59:49)

Timothy, I've often thought that many (perhaps most) depressed patients could benefit enormously by adopting common-sense measures, such as the following: \* Engaging in regular exercise, preferably exercise that is reasonably intense \* Going to bed earlier / getting enough sleep \* Adopting one or more pets \* Managing their finances better \* Learning how to get along better with their relatives \* Re-engaging in activities that they found enjoyable at one time \* De-cluttering their home environment and work environment \* Managing their time better (for example, spending less time on activities such as watching old sit-com re-runs) \* Improving their nutrition \* Taking care of long-neglected "to do" items \* If necessary, getting couples therapy (or perhaps breaking up) \* Starting some rewarding, long-term projects, like gardening or learning a musical instrument Most mental-health practitioners would pooh-poo such advice, though, as it doesn't involve high-status interventions, such as altering neurotransmitter systems.

Nansen (2010-06-30 13:25:17)

@ Timothy Beneke, I'm surprised that you do not mention Seth's discovery about faces in the morning. Did you try that?

Simon Sobo M.D. (2010-06-30 13:37:51)

Since my articles are being quoted, I thought I'd clarify some of the issues being raised by those leaving comments. I find

SSRIs extremely helpful when used properly. My objection is to the notion that there is something wrong with serotonin in a particular diagnosis. While it is true that some people may be genetically predisposed to depression and a number of other troubles because of their serotonin utilization, so far the genetic contribution is relatively minor. (At least what we can show so far.) We do know that all kinds of environmental stressors can set off depression including experiences early in life. And as many pointed out above, we know that depression has physical effects that can be harmful in all kinds of diseases and may lead to some of them. But that aside my article is objecting to over emphasis on biology, and the idea that a particular diagnosis, presumably "biological", should be treated with a given medication because it is "evidence based" (ie when you group people by diagnosis and compare treatment with a medication to treatment with placebo it can be shown to be better than the placebo) This is not useless information but it leads to a cookbook mentality to treatment that ignores the particulars of each patient. It leads to 15 minute once a month treatments since the patient's problems reduce to symptoms of the "illness" and side effects. My argument is that SSRIs and other meds have a particular PSYCHOLOGICAL effect which accounts for their usefulness. Increasing serotonin (whether or not the patient started with a deficit) seems to lessen the intensity of emotions. I call them the "well whatever drugs" Clearly when helplessness, or sadness, or panic, or anger, or doubt, or guilt, or any emotion is tearing you apart it is a great help to be able to get these emotions under control. And SSRIs can then be a god send. But I also have found them helpful in, for instance a thin skinned teenager who is getting picked on a lot. SSRIs can supply the needed "cool". And so it goes for shyness ("social phobias" ) and other phobias. But as noted in the blog, the downside is illustrated in the patient who was disturbed by her lack of reaction to her baby being in a not great environment. (see my articles using the links above to find many other examples) The point is how is it helpful and how is it not helpful to decrease emotional intensity. Psychiatry tries very hard to create an illusion of scientific treatment (by having readily cited statistics about various diagnoses) but the real facts are that we do not know enough about these diagnoses to pass off what we are doing as scientifically based. Most psychiatric illnesses are not analogous to say, strep throat, where we fully understand the etiology and have a treatment which will work 99.9 % of the time. We are simply not there. More to the point, we are so uncertain about the value of various diagnostic categories that the DSM committee insisted on calling them "disorders" rather than actual diagnoses. The value of the various diagnosis are very controversial. Indeed, as the head of the DSM IV committee has recently written, DSM IV caused a pseudo epidemic of bipolar disorder, ADHD and autism (for more, link to my articles above) Anyway, the point is not to be all for or against meds, it is trying to figure out what is going on and try to be as sensible as we can be given our limited hard knowledge

Willy (2010-07-01 21:41:46)

Timothy Beneke, thanks for telling your story. Could you explain how you managed to get to sleep earlier? Was it sunlight in the morning as you mention in your guest post? Anything else?. I am sure quality of sleep has an effect on mood. Many times I have nightmares or vivid dreams and I do not wake up refreshed. Thanks.

thehova (2010-07-01 22:47:56)

@Alex Chernavsky, I'd imagine that most people who complete the tasks on your list aren't depressed. And perhaps healthy minded people can keep such a list in mind to help guard against the potential of depression. But once you fall into depression it's hard to get out. Many depressed people have trouble accomplishing the simplest tasks (my roommate in college struggled to get out of bed). They need some force outside of them to help them (whether it's Seth theory of watching faces in the morning, or anti-depressants, or cognitive behavioral therapy, or hiring a life coach, etc...).

Alex Chernavsky (2010-07-02 06:30:28)

@thehova, people recovered spontaneously from depression long before antidepressants (or therapy, for that matter) were invented. In any case, I wasn't necessarily suggesting that people simply pull themselves up by their bootstraps. Certainly, outside help may be beneficial. Perhaps what we need is some kind of para-professional that would be a cross between a life coach, a friend, and a parent.

Has anyone ever overcome panic attacks and depression? If so how and how long did it take? (2010-07-03 19:19:38)  
[...] Seth's blog » Blog Archive » What Antidepressants Do [...]

OpenUri's (2010-07-04 05:44:57)

There was probably not much wrong with Melissa Huckaby mentally until the community mental health system got a hold of her from her shoplifting conviction. She was diagnosed with depression (probably b/c her husband abandoned her and their child and never paid support.) She should have been diagnosed with poverty. At the time of the crime she had in her possession prescriptions that were prescribed to her for paroxetine, aprazolam, benzodiazapine, Xanax, Adderall, and others, in addition, she was using her grandmother's oxycodin. Even one of these drugs alone may cause insanity, and per her comments, it doesn't seem like she actually remembered what she did, at least she didn't know why. For examples of other manufactured lunatics, there is Kevin Underwood, who, on taking Lexapro killed a neighbor girl with the intention of eating her, Alyssa Bustamante, a 15 year old girl who killed her 9 year old neighbor after being on Prozac for 2 years, the VA Tech shooter withdrawing from antidepressants, and the Columbine shooters on court ordered antidepressants. Doctors see you for about 15 minutes before prescribing these mind altering drugs, they operate like people who have had numerous and substantial head injuries. But it is unknown whether these were all prescribed to Melissa legitimately or if she went around to numerous doctors not telling them about the other drugs. (Like Michael Jackson.)

Kevin (2010-07-06 10:32:20)

I somehow stumbled on this website and am enjoying it. On the point of ssri's and placebo, I'm a veterinarian and prescribe prozac often for separation anxiety in dogs and cats. In fact my own dog takes it. Without prozac she chews through a chain link fence trying to find her master. With it, she stays in the yard. Like acupuncture, there's no placebo effect in animals. If the canine patient stops limping, it's from the acupuncture treatment, not a placebo effect. kevin

Anthony (2010-07-07 13:03:02)

@Kevin, The question in the relevant medical literature isn't whether Prozac does something to one's brain - of course it does something, which is why it has so many detractors. The point here \*isn't\* that placebos \*aren't\* effective, it's that they \*are\* effective at treating depression. That is, anti-depressant drugs are statistically effective, but not much more than a placebo, which in turn is also effective, with humans. This isn't to deny that anti-depressants can also change one's biochemistry without a belief mechanism, as presumably it would do with dogs.

B (2010-07-08 05:36:23)

@OpenUri, while all of the incidents you are mentioning are compelling anecdotal evidence, again once cannot assume causation from correlation. Clearly there were extreme underlying struggles in all of the cases that you mentioned, which perhaps the anti-depressants failed to help, for whatever reason, but your post seems to imply that the anti-depressants caused the unconscionable behavior, an implication that I find difficult to support. For a slight paradigm shift, there has been some mention to the possibility of "recovery over time" and recovery throughout history from depression, history that existed before the invention of SSRIs or any other mood stabilizing drug. I question the assertion that "people recovered spontaneously from depression long before antidepressants," because it assumes an analogous relationship between experiences in the modern world, and experiences of some unstated time in the past. We do not live in a world (though I should say country) in which people are outdoors, active, maintaining strong familial bonds (both emotional and physical), living in non-toxic environments, interacting regularly, face to face with other human beings. I will not claim that these things are necessary to living mentally healthy lives (though they are necessary for ME to be healthy as an individual), all I am noting is that the world we are living in today is distinct from much of human history, even from that of our parents. Thus comparing peoples experience of and recovery from depression 50, 100, 500 years ago etc is not comparing like scenarios. What if we are living in a society and culture that while productive in many ways, does not conform with the psychological needs of human beings? In such an instance, short of changing our overall environment, the only treatment for depression would be treating the symptoms (medication being one route), and attempting to help the patient learn to cope in these psychologically unfavorable conditions. The other idea I would posit is that we do not know how people recovered from depression, since there was no "clinical" diagnosis and treatment of depression specifically, no advocacy for the people suffering from it, and a strong possibility that a lot of long-term self medication occurred (alcohol consumption, reckless behavior etc). Furthermore, in a more survival oriented world, are our emotions put to better use (fight or flight) and thus not as prone to become problematic? On a more personal note, I am diagnosed bipolar, and being put on Lamictal (anticonvulsant, not an SSRI) saved my life, and has helped

when diet modulation, exercise, strict sleeping regimens and talk therapy failed—not so much failed, but couldn't achieve functional stability. This being said, my ultimate goal is not to be on medication, a goal I am working towards cautiously but steadily.

OpenUri's (2010-07-18 15:37:48)

@B, Thank you for your well thought and fair comment. I don't jump to conclusions usually, but in these cases, if you think in a logical sequence about these crimes, you would have to admit that the facts are: 1.) A medication was administered, in Melissa's Huckaby's case, many medications, and then 2.) The bizarre act or crime occurred. The crime did not occur previously in the individual's life in the absence of the medication. This would favor a causal relationship at a higher rate than not, since what you're implying, that these things would have been done anyhow due to the individuals' underlying problems that the medication could not help. (I'll give you Underwood, his situation is much sketchier b/c supposedly he planned this prior to being on Lexapro, but it seems as though he was quite unstable and insane and Lexapro was not the appropriate treatment, probably indefinite commitment would have been better.) It would be impossible at this time to know if they would have committed these crimes in the absence of treatment with drugs. Only if we could go back in time and not give the drugs would we know that answer. That makes the likelihood of that theory much less than the causal relationship between the drug and the bizarre behavior. Especially in the case of Melissa Huckaby. I can't imagine why someone in her immediate area, like relatives or counselors wouldn't have seen how drugged she was with that many drugs. I would not be able to function on those, I can't see a person who could. I am not saying that these drugs are all bad, it's just the way they are handed out and then with no follow up. Everyone reacts differently to them because everyone has a different mix of chemicals in their brain and is sensitive in a different way. Most people do not turn into criminals from SSRI's. Case in point, my own trauma with Lexapro. Supposedly, it takes weeks to work, I however noticed it's effects within minutes and developed full blown mania after only a few weeks which over months turned into delusional thinking. However, it's quite possible that they have a more subtle effect on some people than once thought and that other factors that can't even be removed for the purposes of a trial, like the fact that someone is receiving a new "treatment" for their depression may be at work as well as a subtle effect of a drug. These drugs have other effects than just increasing serotonin. They also have the effect of causing cell growth in the hippocampus. A long-thought culprit of depression caused by PTSD and alcoholism is a shrunken hippocampus and this is actually supported by imaging of the brain. As far as alcoholism, and depression hundreds of years ago, I agree, people had different expectations for life. They weren't as spoiled as we are, easily frustrated, they knew they had to work hard and things may not always go like they planned. It's a known fact in countries where the gap between the rich and the poor is larger, the violent crime rate is higher. This has to do with expectations, they see the high class with a lifestyle that they can never attain, and thereby, the frustration of the impossible is born. If everyone is in the same boat, there is no need to take from my neighbor what I already have.

### **Fermented Food in Japan (2010-06-29 22:05)**

If you know anything about heart disease epidemiology, you know that Japan has the lowest rate of heart disease in the world. [1]The usual explanation is high fish consumption. But other countries, such as Norway, also eat a lot of fish but don't have low heart disease rates.

My visits to Japan suggest to me that Japanese eat far more fermented foods than people in other countries, including Norwegians. If heart disease is due to infection, then it's clear that the immune stimulation provided by fermented foods helps fight infection. My umami hypothesis – that we like umami, sour, and complex flavors to encourage bacteria consumption, which we need to be healthy – began with a trip to Japan in 2008, when I noticed, in a food court, many types of miso for sale. Back in Berkeley, I started making miso soup. I was stunned how well it worked. All you needed was miso. No other flavorings. It was so easy and good I ate it every day. It was my first bit of evidence that fermented foods are different and better than other foods.

Here are some fermented foods that are easy to get in Japan:

1. Miso soup. Most Japanese eat this daily. In a few countries, such as France, many people eat yogurt daily. Koreans eat kimchi daily. In most countries, as far as I know, it's hard to find a fermented food (apart from cheese and alcoholic drinks) that's eaten daily by most people. Miso is also used to flavor fish.
2. Japanese pickles. The best pickles in the world. Some are pickled as long as as two years, developing noticeable alcohol. Other countries have pickles, of course, but as far as I know the only pickle restaurants are in Japan. Moreover there are pickle shops in big Japanese cities. The only other pickle shops I've seen are in New York City.
3. Pickled apricots ([2]umeboshi). At a food court you have a choice of acidity, anywhere from 5 % (slightly sour) to 25 % (extremely sour).
4. Vinegar drinks. Tokyo 7-Elevens sell a black vinegar drink. Vinegar and water. In food courts you can buy special vinegars for this purpose. I've never seen vinegar drinks for sale anywhere else.
5. Natto.
6. Yogurt. The Japanese yogurts I've tried were sweetened but weren't as sweet as the yogurts sold in Beijing.
7. Yakult. The fermented milk drink. It's sold in [3]such small packages it's pretty clear it must appeal to people who think it improves their health. It doesn't boost energy, quench thirst, or taste especially good. The manufacturer says it is good for health and that one bottle per day is all you need.
8. Beer and wine.

Because soy sauce is used in small amounts, it doesn't count. At a Tokyo restaurant I met a nurse who said she thought you should eat fermented foods every day to be healthy. She said perhaps a third of Japanese believe this.

I've never seen high Japanese consumption of fermented foods noticed by epidemiologists. Individual fermented foods (such as miso), yes; the whole category, no. You can see how hard it would be to combine across foods: how much miso equals how much Yakult? Yet I'm sure fermented food consumption is extremely healthy.

1. [http://www.nutritio.net/FMPro?-db=NEWS.fp5&-format=/linkdediet/news\\_detail.htm&-lay=contents&KibanID=20455&-find](http://www.nutritio.net/FMPro?-db=NEWS.fp5&-format=/linkdediet/news_detail.htm&-lay=contents&KibanID=20455&-find)
2. <http://en.wikipedia.org/wiki/Umeboshi>
3. <http://www.abs-cbnnews.com/lifestyle/03/12/10/just-curious-why-yakult-bottle-so-small>

Vic (2010-06-30 01:50:27)

I don't think sake or vinegar contain live bacteria, do they?

seth (2010-06-30 04:53:29)

Unless vinegar has been pasteurized (and as far as I know this is rare) it contains live bacteria. Sake, on the other hand, is usually pasteurized. I can't see why bacteria need to be alive to stimulate the immune system; bacterial fragments should have the same effect.

q (2010-06-30 07:57:26)

when i visited japan i found a lot of pickle shops and tofu shops in kyoto – a lot more than in tokyo or osaka. the pickle shops you've seen in nyc are places like gus's and pickle guys, right?

Caleb (2010-06-30 08:01:06)

I'm a big proponent of fermented foods and encourage my patients to get more of them, but it's worth keeping in mind there are likely trade offs. When over-consumed fermented foods probably irritating the lining of the digestive tract. East Asians have notably higher rates of stomach and intestinal cancer. My gut feeling is that this comes from having acidic vinegary food so frequently that the digestive tract doesn't get a chance to recover. I've had to go off vinegar when I found my body had an allergic inflammatory reaction to it. It would be very interesting to see if people only need fermented foods several times a week to get the immune stimulating benefits, while not being as hard on the lining of the digestive tract (though now that I've focused my thoughts, I suspect this may specifically be a vinegar thing; that stuff is strong, stronger than anything our tribal ancestors would have evolved to handle daily)

pam meier (2010-06-30 10:06:48)

In Gary Taube's book "Good Calories, Bad Calories" I remember that one possible explanation for the low rate of heart attacks is the fact Japanese doctors will rather diagnose a stroke, as it is believed to be a more honorable death.

mongolian (2010-06-30 10:54:34)

If fermented foods are critically important for health, wouldn't more societies have evolved to include it in their traditional diets? If the umami hypothesis is correct and humans are predisposed toward complex flavors due to the bacteria in them, then don't we see more fermented foods in diets around the world? Why is it concentrated only in Japan?

seth (2010-06-30 11:10:18)

Pam Meier, by a "strike" you mean a stroke? mongolian, traditional diets include plenty of fermented foods, in many different cultures. Fermented foods aren't only in Japan, they are just eaten there more than elsewhere. I can think of several possible reasons: 1. Modern foods, such as mcdonald's hamburgers and Coke, are less compatible with the Japanese diet than other diets. So they have been slower to displace the traditional diet. 2. Japanese food, being relatively mild, left a big desire for complex flavors that fermented foods fill. Other cuisines, with more complex flavors in their main foods, don't have that problem. 3. The Japanese are more food-conscious than other cultures, so they value complex flavors more. Certainly the French are relatively food conscious and also have a lot of fermented food.

thehova (2010-06-30 16:17:57)

"My gut feeling is that this comes from having acidic vinegary food so frequently that the digestive tract doesn't get a chance to recover." heh, I love the pun.

thehova (2010-06-30 16:21:50)

Seth is definitely correct when it comes to the Japanese and French passion for food. Most Americans take a much more pragmatic approach. I do think a lot of it comes from the fact that the French and Japanese generally eat less. When you eat less, your more selective about what you eat.

Tom Moertel (2010-06-30 18:21:14)

mongolian, I think we can safely assume that fermented foods were part of almost any primitive society's diet. Lacking refrigeration and modern chemical preservatives, most stored foods would have been subject to fermentation. And, back when food was scarce, almost any surplus would have been stored for later consumption. (Back in the day, discarding the leftovers wasn't a good survival strategy.)

pam meier (2010-07-01 12:55:30)

Seth, yes, I meant "stroke" ...

Nice "Diets" photos | Diets That Work With Easy Diet Plans (2010-07-08 16:06:16)

[...] Seth's blog » Blog Archive » Fermented Food in Japan [...]

### Assorted Links (2010-06-30 22:22)

- [1]"ant tribes" near Beijing
- [2]What exactly is umami?
- [3]Is omega-3 an antidepressant? "Initial analyses failed to clearly demonstrate the effectiveness of Omega-3 for all patients taking part in the study. Other analyses, however, revealed that Omega-3 improved depression symptoms in patients diagnosed with depression unaccompanied by an anxiety disorder." Are they fooling themselves? Maybe not. My research suggests that morning faces can reduce only depression but also anxiety disorders. So if you have depression without an anxiety disorder it may indeed have a different cause.

Thanks to Anne Weiss.

1. [http://www.huffingtonpost.com/2010/06/27/china-ant-tribes\\_n\\_627271.html](http://www.huffingtonpost.com/2010/06/27/china-ant-tribes_n_627271.html)

2. [http://www.umamiinfo.com/what\\_exactly\\_is\\_umami?/](http://www.umamiinfo.com/what_exactly_is_umami?/)

3. <http://www.sciencedaily.com/releases/2010/06/100621111238.htm>

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Steve (2010-07-01 05:44:17)

Huh? Are we talking about the fatty acids here? And what on earth is a morning face?

seth (2010-07-01 06:21:27)

Yes, omega-3 fatty acids. The beginning of my research on morning faces is described [1]here, see Example 2. Later not-yet-published research suggested that morning faces reduce anxiety disorders.

1. <http://escholarship.org/uc/item/2xc2h866%22>

lance (2010-07-01 07:31:06)

So do people with children and spouses or roommates they see every morning get anxiety disorders?

seth (2010-07-01 08:01:08)

lance, to get the benefits of morning faces you need to have a conversation, on the order of 30 minutes. Not everyone with a spouse or roommate or child talks to them that much in the morning.



Nansen (2010-07-01 13:07:16)

"... morning faces cure not only depression ..." I think "greatly reduce" would be more accurate than "cure", with all due respect.

seth (2010-07-01 18:28:56)

yes, by "cure" I meant greatly reduce. I have changed it.

Laura (2010-07-02 02:00:08)

I decided not to change my work schedule, since I start at 630 am, so I can continue to try this "morning faces" idea. I was going to change my schedule to work late nights, but these last posts convinced me not to do it. I also think behavior activation works, too!! And also being aware.

q (2010-07-03 05:55:56)

why not write a 'morning faces' app for the iPad?

## 5.7 July

### Homemade Yogurt Tip (2010-07-01 23:02)

[1]Mark Frauenfelder describes how he makes yogurt with a yogurt machine. [2]Made by Hand, his new book, has a chapter about fermented foods.

Let me add my two cents. After several years of making yogurt, I finally figured out there are two crucial steps: 1. Denaturing (expanding) the milk proteins. 2. Growing the bacteria. They require different temperatures. The milk proteins, as far as I can tell, denature at temperatures starting around 130 degrees F. You want the milk to be in that range for an hour or so. Below that temperature, the milk proteins curl up again unless bacteria get in the way. The best temperature for growing the bacteria is said to be around 110 degrees F., although I've found that incubation at 92 degrees F. also works.

So the ideal process for making yogurt is something like this: 1. Keep the milk at 140 degrees for a few hours. 2. Add the starter bacteria. 3. Keep the milk at 110 degrees for a long time, say 12 hours. I have a yogurt maker that approximates the initial higher-temperature phase by having you add boiling water around the container. The first time I tried it I was surprised how well it worked (how creamy the yogurt was) because it was much simpler than the usual recipes where you boil the milk, let it cool, and so on – and which after all that produced mediocre results. It took me a long time to realize I'd get even better results with my yogurt maker if the milk was warmer when I started.

1. <http://www.creditbloggers.com/2010/06/how-i-save-6750-a-month-by-making-my-own-yogurt.html>

2. <http://boingboing.net/2010/05/27/marks-new-book-made.html>

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david (2010-07-02 06:58:32)

Even on a stovetop, I think it would be easier to raise the temp to 130 F and keep it there for an hour, then let it cool back to 110 F than it is to bring it up to 180 F and then let it cool back to 110. The problem with boiling is if you get distracted (say by attending to a child) the temp goes too high. Using low heat and a timer would be much easier and less risky IMO. Anyway, I'll give this a try for my next batch.

sadie (2010-07-02 12:08:55)

Just to clarify, you are saying that your yogurt maker heats the milk to 110, but you add boiling water to get it up around 140 for a few hours? I've never heard of keeping the milk at the higher temperature for a few hours to denature the proteins. I thought the initial heat was just to kill off competing bacteria. However, that explains why I get much creamier yogurt when making it in my crock-pot than on the stove. It takes much longer to heat and cool the milk when using the crock. It would be nice if slow cookers had more temperature settings. If I could get my crock to stay as low as 110, it would further simplify the process. As it is, I pour the milk into a jar and stick it in a cooler, wrapped in a blanket with a hot water bottle.

David (2010-07-02 12:19:02)

Just to clarify, you put the starter in while the milk is at 140F, cool to 110F and incubate for 12 hours or so? And adding the bacteria while the milk is above 130F results in a creamier texture to the final yogurt? Is 140F anywhere near the temperature that will kill the starter?

seth (2010-07-02 17:39:41)

Sadie, yes, your impression is correct, except that it reaches the higher temperature (around 130) for less than two hours. David, I put the starter in when the milk is about 130 F. What produces the creamier texture is more denaturing of the proteins simultaneous with bacteria growth. It's not the temperature at which I add the starter that causes the improvement, it's that there is a substantial length of time at the temperature that denatures the proteins. So the proteins become more denatured than if I heated the milk to boiling and let it quickly cool. This is what conventional yogurt recipes miss – the value of long denaturing. I don't know what temperature will kill the starter. Apparently 130 F. is safe.

SM (2010-07-10 13:52:37)

I thought yogurt makers were too expensive and too low capacity. I use a cooler ( \$25) and an aquarium heater ( \$30). First, I denature by bringing the milk to 180 on the stove at low heat (I set the stove's dial to 2). I cool it to 115 or 120 before adding starter. All this is easy with a digital kitchen thermometer ( \$15). The milk is above 130 for about two hours, and far above 130 for much of that time. If you try this and the milk burns just heat it more slowly. Put some warm water in the cooler. Use the heater and thermometer to maintain the water temperature at 110. The first time, it takes some a few tries to set the heater's power output knob correctly. After that it rarely needs adjusting or monitoring. Put the container(s) of the yogurt and starter mixture into the cooler. I use the handy half gallon glass jars that my kimchee comes in. I ferment it for 36 hours or so. Usually I make one gallon but the cooler has a 2.5 gallon capacity. This makes thick and tangy yogurt. I'll try adding the starter at a higher temperature to see if it's thicker, but really it's thick enough as is. The elapsed prep time is two or three hours but the total work time is certainly under 5 minutes.

TalkingRat (2010-07-12 14:12:45)

This was a great tip, I'd never seen anything about 'heat and hold' before. But when I googled, and ran into excerpts from a reference book, Development & Manufacture of Yogurt. The link is an authorized sample, and gives quite a bit of information about yogurt culture. The heat treatment section starts on page 73. [http://books.google.com/books?id=zMCDLlC-RaQkC&pg=PA92&dq=development+manufacture+yogurt&hl=en&ei=oXM7TleFNYfWtQOLqanaCg&sa=X&oi=book\\_result&ct=result&resnum=2&ved=0CDYQ6AEwAQ#v=onepage&q&f=false](http://books.google.com/books?id=zMCDLlC-RaQkC&pg=PA92&dq=development+manufacture+yogurt&hl=en&ei=oXM7TleFNYfWtQOLqanaCg&sa=X&oi=book_result&ct=result&resnum=2&ved=0CDYQ6AEwAQ#v=onepage&q&f=false) I found one other link that mentioned heat and hold. It suggests heating to 185F and holding for 10 minutes, or 20 minutes for thick yogurt. The commercial guideline (first link) was 30 minutes at that temperature. I tried 15 mins. and 30 mins., and both were thick. <http://www.uga.edu/nchfp/publications/nchfp/factsheets/yogurt.html> The recommended amount of culture has increased over the years, not necessarily a good thing. Sandor Katz (Wild Fermentation) uses 1T. fresh live culture per quart of milk, quoting Joy of Cooking (1964 edition) explanation why more culture is not better – Lebensraum. That 1T per quart was how I made yogurt for years. My 1976 Joy edition still has the Lebensraum explanation, but they quadrupled (!) the culture quantity. My hesitation about 130F inoculation is that I have 6 different cultures in my yogurt, and not all may be hardy at 130F. Nice to know, though, that culture can survive at higher temperatures than commonly thought. And it was especially nice to learn about denaturation.

diana henretty (2010-07-13 19:26:06)

This is the best I've tried. Bring your milk to 180. Let set till the temp goes down to 110, about an hour or so. Add your starter. (I use 1 cup of my latest batch of yogurt for 2 quarts of milk). Let set in machine till thick, about 3-4 hours. I make fresh yogurt every 3-4 days to keep the good bacteria live and fresh. I bought yogurt machines made in the '70's, they sell them at thrift stores and flea mrkts. very cheap. For thicker, creamier yogurt add 1 cup of powdered milk before heating.

sadie (2010-07-21 06:31:16)

I think maintaining a fairly warm temperature during culturation also helps make better yogurt. After reading this post I made a batch with a 3.5-hour preheat up to 180 degrees, a short cool-down to 110, and then I put three quart jars of yogurt into a cooler lined with a wool blanket. I also added two quart jars of boiling water to the cooler. I used whole milk and no powdered milk, which is my normal procedure. The culturation time was 8 hours, and it was still almost hot in the morning when I took it out. This produced the thickest, creamiest yogurt I've ever made, tangier than store-bought, but (to me) perfect. There was no visible whey separation at first, but after I took some out of the jar, whey appeared on top. I think this means the proteins were unwound enough to bind up most of the whey.

Shankar (2010-07-30 21:14:38)

Hey, Thanks for all the tips. Can someone say how much time it takes to bring the milk from boiling to 110F for say 2 Quarts. Is 45 mts the time (I dont have a thermometer).

wcw (2010-08-17 14:26:22)

Nice little discussion, especially the book link, thanks. My notes, going entirely for taste (health, schmealth: - yogurt makers are cheap. The Yogourmet is under \$50, includes a decent thermometer and makes half a gallon. It's less-than-no-frills, so test and fiddle (e.g., in a warmer kitchen I'd probably put it on a dimmer for bath temp). - starter matters. I use my favorite brand (Brown Cow), which is a pretty standard yogurt (*Bulgaricus/Thermophilus*)-and-probiotic (*acidophilus/bifidus*) mix. Experiment. - milk matters. Again, my favorite milk (whole from Clover) is also my favorite for yogurt. Use what you like best, not any stale old half gallon. - cleanliness matters. I killed one batch, maybe with phages (it didn't smell 'bad', but was watery and not right). Wash your hands. Transfer a starter-size amount to a clean, tightly capped container in the fridge. - culturing time affects live mix a lot. Too short or too long gives a one-note symphony where just one or two strains dominate. This naturally gets propagated into any subsequent run. In my case, 10 hours seems ideal. This probably varies a lot by temperature, strain mix and taste. Now if only I knew where my cheesecloth bag had gone..

Darlene (2010-10-08 15:56:54)

I'm so glad I found this blog. I think I made yogurt this way by accident yesterday and have been trying to figure out why it was so good. I brought the milk to 180+ and held it there for about 10 minutes. But, then I let it cool naturally in a small microwave that holds in heat for almost 2 hours. Had to heat it up a little before adding the starter. Then I let it sit in the microwave overnight, having zapped it a few times before I went to sleep. It was the best I've made. I used whole organic milk with 2 tblsp. of yogurt made from a bulgarian starter I ordered off the internet. When I took it out the next morning it had a custard texture which I love. I strained the whey for about an hour or so. I did not use my donvian yogurt maker because I didn't want to bother with the small containers. I made it this way because it was almost no work and I wasn't being that precise about anything. In fact, I was being lazy and took a chance that I didn't ruin anything. I believe that using at least two quarts of milk was important because it took the milk longer to cool down before I added the starter thus creating the "time at a high heat" which apparently made it thicker. Here's my only problem. I ate almost the whole thing myself. (with blueberry, all fruit, no sugar added preserves) Hopefully, when the newness wears off, I'll be more normal in how much I eat! LOL

Agnes (2012-02-15 09:47:14)

Thanks for this advice, I find it's true that holding at the higher initial temp produces thicker yoghurt (I do it for an hour, after experimenting with both shorter and longer times and finding that 1 hour is the sweet spot. 2-3 hours also works, but it doesn't make the yoghurt noticeably thicker). My question is this: does the effect of the denaturing get 'undone' if you add the bacteria in at 110 degrees or 120 degrees? That is, do the milk proteins curl back up if you let the milk cool? Also: is

heating to 140 and holding there any different/better/worse than heating to 180 and holding there? Finally: I usually incubate the yoghurt at 120 degrees, but I see a lot of people use lower temperatures (even as low as 92, you mention)-what are the advantages and disadvantages here? I am lucky enough to have an oven that can produce consistent low heat, so I am free to set my oven to whichever of these temps is best, for either the denaturing or the incubating-I'm just wondering about pros and cons.

Nick M (2012-03-05 07:21:11)

I use a crock pot modified into a sous vide machine. It allows controlling the crock pot at exact and constant temperatures. My next MOD is to use an air lock type contraption on the lip similar to a picklemeister.

### **Crazy Spicing Ice Cream (2010-07-02 22:55)**

Unfamiliar foods cause weight loss, says [1]the theory behind the Shangri-La Diet. If you add enough spices to a food, it will become unfamiliar. An ice cream store in San Francisco called [2]Humphrey Slocombe has some of the world's strangest flavors, likely to be unfamiliar until you eat them many times.

[3]Their flavors include Eight Ball Stout, Pink Grapefruit Tarragon, Carrot Mango, Russian Imperial Stout, White Chocolate Lavender. Here's [4]what happened when the owners ate a lot of them:

In the store's first few months, Godby and his business partner, Sean Vahey, scooped from noon to 9 each night, ate nothing but ice cream, traded the leftover brownies for cocktails at a dive bar called Dirty Thieves and still lost weight. Since then they've hired eight employees and "hazard of the job" each gained back the 10 pounds they'd lost.

Thanks to Alex Chernavsky.

1. <http://www.sethroberts.net/about/whatmakesfoodfattening.pdf>
2. [http://www.humphryslocombe.com/\\_Home\\_.html](http://www.humphryslocombe.com/_Home_.html)
3. [http://www.humphryslocombe.com/\\_Flavors\\_.html](http://www.humphryslocombe.com/_Flavors_.html)
4. <http://www.nytimes.com/2010/07/04/magazine/04icecream-t.html>

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q (2010-07-03 05:54:43)

that's great. now wouldn't it be nice if they had a weekly special - something new and completely unfamiliar every week?

Alexandra Carmichael (2010-07-03 09:21:32)

My favorite flavor there is Peanut Butter Curry. I find it incredible how they blend flavors so you get one predominant taste at the beginning and then it morphs into the other taste that you finish with. Genius!

Nancy Lebovitz (2010-07-04 08:05:36)

One of my friends found that adding ice cream (ordinary flavors) to his diet caused him to lose weight. His theory was that the extra calories convinced his body that the food supply was so secure that he didn't need to store fat. However, his cholesterol

went up so much that he stopped the extra ice cream.

Contemplationist (2010-07-06 20:14:14)

How exactly do we reconcile the shangri-la theory with Paleolithic nutrition? A head-scratcher that one

James A. Donald (2010-07-07 23:32:22)

"How exactly do we reconcile the shangri-la theory with Paleolithic nutrition?" I eat a fair bit of wild food, and it is far less uniform than farmed food, partly because you eat a wider variety of animals and plants, partly because the animals and plants are themselves less uniform.

seth (2010-07-08 05:05:39)

I agree with Donald. The theory behind the Shangri-La Diet says that obesity is due to eating foods whose flavor is too uniform. Too little variation from one instance to the next. Quality control is making us fat, in other words.

### **The Oncogene Theory of Cancer (2010-07-03 18:41)**

I am looking forward to reading *Wrong: Why Experts Keep Failing Us* and *How to Know When Not to Trust Them* by David Freedman because of this sentence in [1] an excerpt:

Cancer experts shake their heads today over the ways in which generations of predecessors wasted decades hunting down the mythical environmental or viral roots of most cancers, before pronouncing as a sure thing the more recent theory [that] cancer is caused by mutations in a small number of genes — a theory that, as we™ll see, has yielded almost no benefits to patients after two decades.

He's referring to the oncogene theory of cancer, for which Michael Bishop and Harold Varmus won a Nobel Prize in 1989. I made [2] a similar comment at a dinner:

Several years ago, at a big Thanksgiving dinner in an Oakland loft, I told the woman sitting next to me, a genetic counselor, what a travesty the Biology [Nobel] prizes were. The discovery that smoking causes lung cancer had improved the lives of millions of people, I said [yet the discoverers hadn't gotten a Nobel Prize]; the discovery of so-called oncogenes hadn't improved the life of even one person. She replied that she was the sister of [Harold Varmus]. The next day I learned she complained I had been rude!

I'm glad Freedman agrees with me. My low opinion of oncogene theory didn't prevent Varmus from becoming head of the National Institutes of Health, whose recent budget was about \$30 billion/year.

Thanks to Kathy Tucker.

1. <http://www.nytimes.com/2010/06/11/books/excerpt-wrong.html?pagewanted=3&r=1>

2. <http://www.blog.sethroberts.net/2007/10/25/should-mark-twain-have-won-a-nobel-prize/>

kevin denny (2010-07-03 20:39:51)

A number of people have questioned the link between lung cancer and smoking including R A Fisher, who knew a thing or two about statistics.

seth (2010-07-03 22:05:44)

Kevin, I blogged about smoking and cancer recently. <http://www.blog.sethroberts.net/2010/06/05/cigarettes-are-bad-right/> The results had certain puzzling aspects. I think the likely reason is that small amounts of smoking are protective against cancer because they activate the immune system. Because it's incredibly hard to determine the dose of tobacco smoke each person has gotten, the results get confusing.

Rashad (2010-07-03 22:23:05)

I wouldn't say that they haven't helped anyone. There are a few genes that we know do have a strong impact on cancer incidence, like the BRCA1 breast cancer gene. So my relatives that have it know they need extra mammograms and to keep an eye out for it. Is it as potent the smoking-cancer link? Obviously not, but still not nothing. Rashad

Mikael (2010-07-04 02:22:11)

Just a quibble - there is no Nobel prize for biology. You're thinking of the medicine one.

seth (2010-07-04 08:58:38)

Rashad, yeah, Freedman's summary ("almost no benefits") is more accurate than mine.

Alex Chernavsky (2010-07-04 09:11:06)

To see an analogous example in another field, read just about any paper published in the journal, [1]*Molecular Psychiatry*. We have not gained anything by attempting to understand mental illness at the molecular level. What we *did* get is a bunch of drugs that are [2]ineffective at best and [3]harmful at worst. We also wasted billions of research dollars that could have been better spent on other projects.

1. <http://www.nature.com/mp/journal/v15/n7/index.html>

2. <http://motherjones.com/politics/2003/11/it-prozac-or-placebo>

3. <http://www.thestreetspirit.org/August2005/interview.htm>

indah (2010-07-05 23:09:02)

I asked myself why cancer nowadays so often and very easy to come to us. What went wrong? Did our lifestyle? Do diet? Did descent? or What??. I read medical text book a lot, do searching, browsing.. according to u Mr.Seth what is the major cause? gene? or lifestyle?

Pancham (2011-06-04 10:20:25)

Here is one more idea about cancer, this time it is 'information homeostasis' but seems that this idea has the promise to combine various prevailing hypotheses and theories under one theme <http://theoryofcancer.blogspot.com/2011/05/information-homeostasis-based-theory-of.html>

## More Flight From Data (2010-07-04 12:11)

I've blogged [1]many times about the desire of professors to show off and how it interferes with being useful. It doesn't just make them bad teachers, it makes them bad scientists. Here's [2]an example from economics (via [3]Marginal Revolution):

“The mainstream of academic research in macroeconomics puts theoretical coherence and elegance

first, and investigating the data second," says Mr. Rogoff. For that reason, he says, much of the profession's celebrated work "was not terribly useful in either predicting the financial crisis, or in assessing how it would play out once it happened."

"[Academic economists] almost pride themselves on not paying attention to current events," he says.

Pure Veblen, who in *Theory of the Leisure Class* provided many examples of people, including professors, priding themselves on being useless. Men wear ties, he said, to show they don't do manual labor (which is clearly useful).

My research is closer to biology, where you can say the same thing: much of the profession's celebrated work has not been terribly useful. [4]Yesterday I gave an example (the oncogene theory of cancer).

[5]Modern Veblen: Flight From Data.

1. <http://www.blog.sethroberts.net/category/modern-veblen/>
2. <http://www.nytimes.com/2010/07/04/business/economy/04econ.html?partner=rss&emc=rss&pagewanted=all>
3. <http://www.marginalrevolution.com/marginalrevolution/2010/07/assorted-links-2.html>
4. <http://www.blog.sethroberts.net/2010/07/03/the-oncogene-theory-of-cancer/>
5. <http://www.blog.sethroberts.net/2007/09/11/modern-veblen-flight-from-data/>

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vic (2010-07-04 12:16:34)

The difference between useless economics (i.e., all economic research that comes out of academia) and useless biology is that useless biology is practically useless, but it at least reveals some underlying truth about biology; conversely useless economics is completely disconnected from anything to do with economics: it's pure mathematical games.

thehova (2010-07-04 14:51:56)

"conversely useless economics is completely disconnected from anything to do with economics: it's pure mathematical games." I don't know about that. Microeconomics is, IMHO, a very important subject that should be required in high school and college. It's ridiculous how little most Americans know about finance. I think part of that comes from not being taught microeconomics.

thehova (2010-07-04 14:54:48)

Just to add, the lessons behind most microeconomics is the type of stuff which Seth supports (decentralization is preferable to centralization, people act on their own self-interest, transparency is important, etc...). It's an important subject that doesn't get enough attention from educators.

vic (2010-07-04 15:06:30)

thehova, the type of microeconomics you refer to are ideas that have been around since at least Adam Smith. You clearly haven't been exposed to any academic research in microeconomics of the last 50+ odd years.

thehova (2010-07-04 15:30:56)

yep, there's no doubt that the law of diminishing returns applies to economics. Early economics was a lot more groundbreaking than the stuff now.

vic (2010-07-04 20:37:53)

If by diminishing returns, you mean zero (or negative) returns, then you might paint a fairly accurate picture of academic research in economics of the last 50+ years.

MT (2010-07-05 10:44:46)

I hope that Rogoff is as critical of the IMF during his tenure – at the time, to work there you needed to have a PhD in economics by the age of 32, plus related work experience. So basically, people who prioritized academics and also excelled at them. Did the resulting homogeneity in thinking produce good policy? Would it create rich debate and dialogue in the institution? Or did it allow delusion to persist indefinitely? I don't know what their hiring policies are like now, but fear massive, ossified bureaucracies like the IMF lack incentives to improve. The people in the institution who could make the decision to change hiring policy were hired for their supposed superiority based on their academic history. For them to change the hiring policy would be like admitting the emperor had no clothes – academic success is not equivalent to being able to provide real-world value.

dearieme (2010-07-05 11:29:04)

All economics is either (1) footnotes to Smith or Ricardo, or (2) wrong.

## **TV Recommendations (2010-07-04 21:39)**

TV is getting better and better.

1. [1] Temple Grandin (HBO). I'd read Oliver Sacks's story about her and seen a BBC documentary about her. This was far more moving.
2. [2] Work of Art: The Next Great Artist (Bravo). A competition. Each week the contestants are given a task (make a portrait, make art from junk). The person who does the worst job is eliminated. Bravo's great The It Factor followed actors in New York and Los Angeles and made you feel the constant rejection. This has the same vibe in the sense that much of what the contestants make is heavily criticized ("a middle-school art project").
3. [3] Undercover Boss (CBS). A head of a big company works at a low-level job in his company. Week after week, it has some of the most touching moments I've ever seen. When this or that employee learns that someone noticed their hard work or talent, they start crying. Because it relied on deception ("we're making a documentary about entry-level jobs"), I wonder if there will be another season.

1. <http://www.hbo.com/movies/temple-grandin/index.html>

2. <http://www.bravotv.com/work-of-art>

3. [http://www.cbs.com/primetime/undercover\\_boss/](http://www.cbs.com/primetime/undercover_boss/)



Robin Barooah (2010-07-04 22:53:21)

Hi Seth, I'm curious - have you ever done any experiments to see how TV watching affects your mood, sleep, or cognitive performance?

seth (2010-07-04 23:09:59)

ordinary TV watching, no. In the 1960s a survey suggested that Americans stay up an hour later than people in other countries because they watch TV an hour later. After I read that I stopped watching the late night news. It's an interesting question what effect it has on my mental performance but I don't know the answer. Mainly I watch TV to make exercise more bearable.

Robin Barooah (2010-07-04 23:18:31)

Interesting - I use audiobooks and music when I exercise. Anecdotally, I've found TV watching to make me feel less motivated, and I know others who find the same - and I'm talking about carefully selected advert-free TV - not just random channel surfing. I've personally considered experimenting, but don't yet have the tools - and now, I don't want to sacrifice my motivation to the experiment!

Alex Chernavsky (2010-07-05 07:12:19)

Psychologist Martin Seligman [1]claims, "The mood state that Americans are in, on average, when watching television is mildly depressed".

1. <http://books.google.com/books?id=3L0BCCoFMRgC&lpg=PP1&dq=authentic%20happiness&pg=PA176#v=onepage&q&f=false>

thehova (2010-07-08 00:24:16)

I saw a self-reported happiness study that showed that most people are very happy when they watch TV. And unlike the newspaper industry, the TV networks, cable companies, and satellite services are raking in the money. So watching TV must provide some sort of psychological benefit to a lot of people.

## Two Faces Better Than One? (2010-07-07 13:16)

[1]Here I describe my discovery that seeing faces on TV in the morning improved my mood the next day. The details of the effect suggested that the ideal stimulus is what you'd see during a conversation. For a long time I used the C-Span show [2]Booknotes as the main source of the faces. I watched it on a 25-inch TV. More recently I used my own face in a mirror. It was readily available and perfectly life-size. I listened to a podcast or book at the same time.

A few months ago, Caleb Cooper commented saying that he'd found that looking at two faces every morning seemed to work better than looking at one face. He found that [3]Bloggingheads.tv expanded to full screen on a 24-inch monitor (measured diagonally) produced close-to-life-size faces, which is what he wanted.

This interested me for several reasons: 1. It might make the effect stronger. 2. Bloggingheads.tv has a big selection, offering control over size. 3. I disliked looking at my face for long times. 4. It seems more naturalistic than looking at my own face.

I've been trying this with a 22-inch monitor (which I already had). Perhaps 24-inch would be better. The effect does seem stronger, as Caleb said.

I asked Caleb several questions about his experience.

How did you get started doing this?

I think it started when I read your posts about standing and sleeping.Â This led me to read your paper on self experimentation and sleep.Â Like you, I often suffered from early awakenings where I would wake up around 2-3 hours early, still feeling tired but having a hard time going back to sleep.

Based on what I learned from you and other sources, I tried out the following; got a pair of blue blocker clip-ons for my glasses which I put on about two hours before bed; ordered an Apollo goLite blue light emitter that I use for about an hour in the morning, I would sometimes take 1/3 mg of melatonin nine hours after waking up, and 3mg half hour before bed, and I started standing on a high difficulty Thera-Band balance pad on one leg while looking into a mirror for 30 minutes in the morning.

What made you think it was worth a try?

Well, why not:)Â Most self experimentation can be easily done for practically no cost, while the potential upside is significant.Â There's also satisfying curiosity, expanding self knowledge, gaining mastery over your mind and body...Â You had a plausible theory, had collected suggestive data, and I'd already found the appetite suppression effect of the Shagnri-La was very real, so you had a track record of introducing ideas worth paying attention to.

What happened at first?

It felt to me like my sleep modestly improved, sleeping through the night longer and having the energy to get up and go much sooner after waking.Â This was awhile ago though, I didn't keep any data, and I was adding and dropping different things, so my experience doesn't have a high enough confidence interval for drawing any general inferences.

When did you make those changes?

I'd guess around sixteen months ago.

After you made those changes ("got a pair of BlueBlocker glasses...") did your mood change?

It improved in as much as waking up feeling rested makes you feel a lot better than trying to get up while still tired.

Tell me something about yourself (job, age, etc.).

I got into medicine through Clinical Massage Therapy.Â Being a high school dropout I wanted something I could get into quickly, then sink or swim on my own.Â Massage is one of the few fields the university-accreditation complex hasn't sunk its tentacles deeply into (a mixed blessing; for an autodidact it lets you quickly start a great career, but the field really needs a bifurcated certification track to separate medical massage from relaxational spa massage). I live in the Pacific Northwest, near the site where they developed the atomic bomb dropped on Nagasaki.Â Despite all the lingering nuclear waste, it's a nice, mid sized metro area. I'm in my mid twenties.

1. <http://escholarship.org/uc/item/2xc2h866>
2. <http://www.booknotes.org/home/index.asp>
3. <http://bloggingheads.tv/>

Nansen (2010-07-10 16:13:07)

No comments? Jeez. Oh well. Could you please quantify a bit your statement, "The effect does seem stronger..."? Also, it would help to know whether the improvement holds up for more than 3 days, as opposed to it being some transient spike effect. Thank you.

Elizabeth Molin (2010-07-11 11:26:27)

I have discovered another way to get a good night's sleep. A while ago, I heard about a book called AUTOCONDITIONING: THE NEW WAY TO A SUCCESSFUL LIFE, by Hornell Hart. It is long out of print (over fifty years), but I managed to find a used copy on line and ordered it. If one can get past the very retro cover, typeface, illustrations, and design, and the very dated vocabulary and way of writing (â€œgrapple courageously?â€ oh, please), it's actually worth the trouble. It basically teaches what I would call self-hypnosis, or a way to get in touch with, â€œtalk to,â€ and program your unconscious, subconscious, idâ€the part of your brain you don't usually have access to. I'm still working on it, but I have learned to do what I call â€œtalking to the Monkeyâ€ and can sometimes get effective results. It's very good for those little chores that often take too much motivation and so never get done: writing a thank-you or condolence letter, cleaning out a drawer. It's good for remembering things: if you tend to think of all the things you have to do/buy or people you have to email just as you're falling asleep, you can give the Monkey a list and tell it to feed it back to you in the morning, when you have a pencil and paper. And I have found that it's very effective for getting a good night's sleep: I tell the Monkey it's time to go to sleep now, and that we are going to sleep right through the night and wake at X o'clock, feeling fine. And I no longer even get up to use the bathroomâ€if I wake up in the night, I remind the Monkey that this is not what we agreed on, and I generally go right back to sleep. I've also explained to the Monkey that my husband's snoring, or the funny noises the house makes when my husband is out of town, are simply â€œbackground musicâ€ that has no significance and will not disturb or wake me. And now my husband's snoring doesn't rouse me and I don't need earplugs anymore. It also works on minor painâ€I can tell the Monkey that the pain is peripheral and unimportant and doesn't affect me, and although I still feel it, it doesn't really seem painful. I haven't been confronted with any major pain, except migraines, which so far it isn't very effective against. It helps sometimes, a little bit, for appetite control. And it's pretty good for coping with worry and anxiety. As I said, I'm still working on it.

## Unlikely Data (2010-07-08 05:58)

Connoisseurs of scientific fraud may enjoy [1]David Grann's terrific article about an art authenticator in the current New Yorker and [2]this post about polling irregularities. What are the odds that two such articles would appear at almost the same time?

I suppose I'm an expert, having published several papers about data that was too unlikely. With Saul Sternberg and Kenneth Carpenter, I've written about [3]problems with Ranjit Chandra's work. I also wrote about [4]problems with some learning experiments.

1. [http://www.newyorker.com/reporting/2010/07/12/100712fa\\_fact\\_grann](http://www.newyorker.com/reporting/2010/07/12/100712fa_fact_grann)

2. <http://www.dailykos.com/story/2010/6/29/169/32552>

3. <http://www.sethroberts.net/chandra/index.html>

4. [http://sethroberts.net/about/1987\\_Less\\_Than\\_Expected\\_Variability\\_in\\_Evidence.pdf](http://sethroberts.net/about/1987_Less_Than_Expected_Variability_in_Evidence.pdf)

Tom (2010-07-08 23:13:28)

Seth, speaking of unlikely data, you will love this post by an web designer-cum-statistics buff. She spent two months crunching the raw data behind the China Study, and there is not much left of T. Colin Campbell: <http://rawfoodsos.com/2010/07/07/the-china-study-fact-or-fallac/>

Alex Chernavsky (2010-07-10 10:19:10)

Tom, that's a very interesting blog post that you referenced. The author is largely self-taught when it comes to statistics. I'd like to see a second opinion from a professional. Seth? Andrew Gelman? Any interest in examining this?

### Assorted Links (2010-07-08 10:24)

- During the Foxconn suicide epidemic, several [1]media outlets said the suicide rate was lower than expected. "Members of the media have been killing off their own credibility at an alarming rate."
- Fascinating [2]blog about quality control in China. "Factory workers are paid by the number of pieces they make. Sometimes they see they are working on defective goods, but they keep working instead of sending the bad pieces back to the previous operation."
- [3]The unsustainability of higher education.
- [4]the Dear Abby of math problems. "The next bubble to burst is higher education. . . . It's too much one-size-fits-all." And that one size [5]fits the professor.
- [6]BBC radio documentaries
- [7]Raw food leaders no longer raw or vegan

Thanks to Alex Chernavsky.

1. <http://www.fakesteve.net/2010/05/media-suicide-watch-its-working.html>
2. <http://www.qualityinspection.org/>
3. <http://suburbdad.blogspot.com/2010/06/youre-not-helping.html>
4. [http://www.mercurynews.com/ci\\_15339889?source=most\\_viewed&nclick\\_check=1](http://www.mercurynews.com/ci_15339889?source=most_viewed&nclick_check=1)
5. <http://www.blog.sethroberts.net/2007/03/31/for-whom-do-colleges-exist/>
6. <http://downloads.bbc.co.uk/podcasts/worldservice/docarchive/rss.xml>
7. <http://rawfoodsos.com/2010/02/24/raw-food-leaders-no-longer-raw-or-vegan-whats-up-with-that/>

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Alex Chernavsky (2010-07-09 06:53:38)

Here's more about problems in higher education (from today's *New York Times*): [1]"Share of College Spending for Recreation Is Rising"

1. <http://www.nytimes.com/2010/07/10/education/10education.html>

Mark (2010-07-09 07:35:52)

You realize that The Secret Diary of Steve Jobs is a prank site, don't you? The suicide article is a satire, written as though by Steve Jobs. I crunched the suicide numbers myself (using the unerring Wikipedia article on national suicide rates), and

convinced myself that the Foxconn suicides were within normal range.

## **Does Lithium Slow ALS? (2010-07-09 23:57)**

In 2008, an article in Proceedings of the National Academy of Sciences (PNAS) reported that lithium had slowed the progression of amyotrophic lateral sclerosis (ALS), which is always fatal. [1]This article describes several attempts to confirm that effect of lithium. Three studies were launched by med school professors. In addition, patients at [2]PatientsLikeMe also organized a test.

One of Nassim Taleb's complaints about finance professors is their use of VAR (value at risk) to measure the riskiness of investments. It's still being taught at business schools, he says. VAR assumes that fluctuations have a certain distribution. The distributions actually assumed turned out to grossly underestimate risk. VAR has helped many finance professionals take risks they shouldn't have taken. It would have been wise for finance professors to wonder how well VAR does in practice, thereby to judge the plausibility of the assumed distribution. This might seem obvious. Likewise, the response to the PNAS paper revealed two problems that might seem obvious:

1. Unthinking focus on placebo controls. It would have been progress to find anything that slows ALS. Anything includes placebos. Placebos vary. From the standpoint of those with ALS, it would have been better to compare lithium to nothing than to some sort of placebo. As far as I can tell from the article, no med school professor realized this. No doubt someone has said that the world can be divided into people focused on process (on doing things a certain "right" way) and those focused on results (on outcomes). It should horrify all of us that med school professors appear focused on process.
2. Use of standard statistics (e.g., mean) to measure drug effects. I have not seen the ALS studies, but if they are like all other clinical trials I've seen, they tested for an effect by comparing means using a parametric test (e.g., a t test). However, effects of treatment are unlikely to have normal distributions nor are likely to be the same for each person. The usual tests are most sensitive when each member of the treatment group improves the same amount and the underlying variation is normally distributed. If 95 % of the treatment group is unaffected and 5 % show improvement, for example, the usual tests wouldn't do the best job of noticing this. If medicine A helps 5 % of patients, that's an important improvement over 0 %, especially with a fatal disease. And if you take it and it doesn't help, you stop taking it and look elsewhere. So it would be a good idea to find drugs that only help a fraction of patients, perhaps a small fraction. The usual analyses may have caused drugs that help a small fraction of patients to be considered worthless when they could have been detected.

All the tests of lithium, including the PatientsLikeMe test, turned out negative. The PatientsLikeMe trial didn't worry about placebo effects, so my point #1 isn't a problem. However, my point #2 probably applies to all four trials.

Thanks to JR Minkel and Melissa Francis.

1. <http://www.scientificamerican.com/article.cfm?id=control-group-patients-ta>
2. <http://www.patientslikeme.com/>

Sonic Charmer (2010-07-10 05:56:10)

VaR doesn't assume fluctuations have a normal distribution. It is of course possible to set up a VaR calculation with that assumption, or any other, and maybe a certain laziness leads people to too often assume normality when other choices aren't obvious, but normality is not an intrinsic assumption of the model by any means. In practice normality is not how I see it being done (rather, the distribution is imputed from historical time-series - which is also a problematic approach, because until 2007 none of those time-series included a subprime/credit crisis, then suddenly in 2007 they did, then as we roll long enough past 2007 the subprime/credit crisis will drop back out of the time-series again...etc. Though there is an attempt to fix that by forcing time-series to include some really bad shocks whenever they occurred...). It is true of course that VaR is a misleading guide to risk and that this is partially because of the arbitrariness in how fluctuations are assumed to be distributed (normal or not) and the fact that whatever distribution they choose is likely to fail to capture whatever shock is coming. But it's also because VaR simply depends on too many variables and inputs to ever be able to calculate correctly. If VaR were as advertised the way it would work would be the risk/control group saying 'hey you're over your VaR limit', and this would genuinely mean the desk had too much risk, and the desk would then proceed to get back under their VaR limit by genuinely reducing their risk. In practice the way it often works is 1. 'hey you're over your VaR limit!', 2. the desk sifts through the VaR calculation and points out an error in it (there is always an error somewhere, and the desk is of course more likely to point out an error whose cure will reduce not increase their VaR), it turns out that if fixed they aren't over their limit after all, and 3. the risk group says 'oh yeah' and goes back to the drawing board. Or, the desk can actually attempt to identify nonsense/spurious trades they can put on (by essentially reverse-engineering VaR) which won't necessarily generate any profit but which will predictably reduce their "VaR" as calculated by the risk group simply because of whatever quirks in the model. In either case the method/approach of VaR is only tangentially related to genuine risk limits/controls, its more immediate effect is to divert the desk's resources from revenue generating activity and towards this sort of VaR deconstruction. So sorry to hijack from your main point. To try to get back to it: you are correct indeed that VaR is a good example of a mentality that focuses on process over results. The risk group is dependent on VaR being accepted as meaningful for their jobs, which are essentially nothing but following Correct process, which if they do, they're 'doing a good job' regardless of results. Upper management likes/uses VaR because they can throw it on charts/graphs showing that they reduced VaR or are keeping their VaR down, and this is meant to be equated with results. Nobody in his right mind who cared about results would actually managing their risk to VaR literally (and small comfort, in practice no one does)...

q (2010-07-10 06:02:41)

i don't know anything about ALS, but i know a bit about VaR. first, of course finance pros teach VaR, because businesses use VaR. it's a useful but flawed measure. (any single measure that applies to a portfolio is going to be flawed, but it's necessary to have some such measures when institutions have large portfolios. think of other economic measures like GDP and unemployment rate - they are heavily flawed but policymakers and economists use them all the time.) second, VaR does not assume any distribution. you can do VaR with any distribution you like, and people use all kinds of distributions with VaR. if there is an issue with this, it's that ALL the distributions are potentially wrong because, in finance, there is no guarantee that the past will resemble the future.

q (2010-07-10 06:04:47)

sorry, crossposted with Sonic Charmer

seth (2010-07-10 06:25:13)

q & sonic charmer, thank you for your comments. You are right, VAR doesn't assume any particular distribution. That is added by the practitioner. I should have said that VAR was used with distributions that turned out to vastly underestimate actual risks. I have changed the post to reflect this. q, I also think you make a reasonable point that finance pros taught VAR because it was used. I agree that is a good reason to teach something. But, also, finance professors are supposed to think for themselves.

vic (2010-07-10 09:43:13)

I don't think your point #2 is of much use unless it's possible to isolate the group that benefits. If 5 % of people with ALS benefit and 5 % are harmed (and 90 % unaffected), it wouldn't make sense to treat 100 % of that population.

seth (2010-07-10 12:22:01)

vic, little would change. Everyone would take the drug. After a reasonable length of time, those whom the drug doesn't help would stop taking it.

q (2010-07-10 19:18:03)

seth – finance teachers are supposed to think for themselves, yes, but there are a couple things to remember. finance programs are usually run by business schools even though they masquerade as mathematics, so intellectual rigor goes out the window. (if they were run by math departments, you would expect any connection to reality to be thrown out – and i suppose you have somewhat of a combination between the two.) in any case, saying that "finance teachers should think for themselves" would indicate that they should still teach VaR but talk about its many limitations and weaknesses. in the one class i took that covered VaR, the professor did this. if people go through these programs and don't know a lot about VaR they are not going to get jobs and if they do, they are not going to be effective in them.

q (2010-07-10 19:20:32)

oh, and while we are on the subject of taleb, the problem i have with him is that, mathematician he is, he criticizes the quants' mathematics much more than the sociology of the business. sure, the math has holes, but finance isn't engineering. the fact that people believe things they shouldn't believe isn't the fault of the math, and fighting the math with math is besides the point.

seth (2010-07-11 02:17:32)

q, your criticism of Taleb isn't clear to me. He's a philosopher more than a mathematician (in the sense that the issues he discusses are closer to what philosophers have cared about than what mathematicians have cared about) but to me that's beside the point. I would say that he's a realist and the people he criticizes have not just made unrealistic assumptions but also claimed their unrealistic assumptions were a big improvement.

Hal (2010-07-11 22:33:35)

I don't know anything about VaR, but I have learned a bit about ALS since I was diagnosed with it last year. As far as placebo trials, this is a sore point with the ALS community due to the small number of subjects. Diverting 1/2 or 1/3 of patients to the placebo arm of a trial reduces the number of trials that can be held. Partly for this reason I know some trials have been done without placebos. They either use a statistical technique called "futility" (don't know what that means), or they compare against placebo statistics from an earlier trial. I would think it would still be necessary to periodically perform a placebo-like measurement of disease progression, to have an up to date baseline to compare with. Still I would worry that bias could creep in. Even with a disease like ALS, with a well documented process of neural damage, a placebo effect can occur. It is difficult to objectively measure ALS progression due to the variable nature of the disease, so researchers often rely on patient reports of difficulty performing everyday tasks like eating or dressing. Desire to please researchers, among other effects, could lead patients to unconsciously color their reports. Different research setups and patient relationships could make this kind of placebo effect vary from trial to trial. You'd hate to put resources into an apparently successful treatment when the real effect was just that they had cute coeds doing patient interviews. Waiting for an objective end point like death can eliminate this problem but even with ALS that means waiting 3-5 years. There is a lot of pressure in the patient community to speed up trials. Nobody wants to wait that long for results.

## **Ancestral Health Symposium (2010-07-10 10:26)**

The dates of the [1]Ancestral Health Symposium have been set:ã€€August 5-6, 2011 at UCLA.

1. [http://ancestryfoundation.org/Ancestry/Ancestral\\_Health.html](http://ancestryfoundation.org/Ancestry/Ancestral_Health.html)

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Tom (2010-07-10 11:34:31)

What an amazing event that will be. That said...I hope they have good security.

## **The Problem with Evidence-Based Medicine (2010-07-11 01:58)**

In [1]a recent post I said that med school professors cared about process (doing things a "correct" way) rather than result (doing things in a way that produces the best possible outcomes). Feynman called this sort of thing "[2]cargo-cult science". The problem is that there is little reason to think the med-school profs' "correct" way (evidence-based medicine) works better than the "wrong" way it replaced (reliance on clinical experience) and considerable reason to think it isn't obvious which way is better.

After I wrote the previous post, I came across an example of the thinking I criticized. On [bloggingheads.tv](#), during [3]a conversation between Peter Lipson (a practicing doctor) and Isis The Scientist (a "physiologist at a major research university" who [4]blogs at [ScienceBlogs](#)), Isis said this:

I had an experience a couple days ago with a clinician that was very valuable. He said to me, "In my experience this is the phenomenon that we see after this happens." And I said, "Really? I never thought of that as a possibility but that totally fits in the scheme of my model." On the one hand I've accepted his experience as evidence. On the other hand I've totally written it off as bullshit because there isn't a p value attached to it.

Isis doesn't understand that this "p value" she wants so much comes with a sensitivity filter attached. It is not neutral. To get it you do extensive calculations. The end result (the p value) is more sensitive to some treatment effects than others in the sense that some treatment effects will generate smaller (better) p values than other treatment effects of the same strength, just as our ears are more sensitive to some frequencies than others.

Our ears are most sensitive around the frequency of voices. They do a good job of detecting what we want to detect. What neither Isis nor any other evidence-based-medicine proponent knows is whether the particular filter they endorse is sensitive to the treatment effects that actually exist. It's entirely possible and even plausible that the filter that they believe in is insensitive to actual treatment effects. They may be listening at the wrong frequency, in other words. The useful information may be at a different frequency.

The usual statistics (mean, etc.) are most sensitive to treatment effects that change each person in the population by the same amount. They are much less sensitive to treatment effects that change only a small fraction of the population. In contrast, the "clinical judgment" that Isis and other evidence-based-medicine advocates deride is highly sensitive to treatments that change only a small fraction of the population – what some call anecdotal evidence. Evidence-based medicine is presented as science replacing nonsense but in fact it is one filter replacing another.

I suspect that actual treatment effects have a power-law distribution (a few helped a lot, a large fraction helped little or not at all) and that a filter resembling "clinical judgment" does a better job with such distributions. But that remains to be seen. My point here is just that it is an empirical question which filter works best. An empirical question that hasn't been answered.



1. <http://www.blog.sethroberts.net/2010/07/09/does-lithium-slow-als/>
2. <http://www.lhup.edu/~DSIMANEK/cargocul.htm>
3. <http://bloggingheads.tv/diavlogs/23344>
4. <http://scienceblogs.com/isisthescientist/>

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kevin denny (2010-07-11 06:09:59)

I think this post is terrible. Firstly, you try to bring Feynman in on your side because Feynman was a genius & everyone cashing in on his name (like the "Feynman's Rainbow" book advertised on your blog. But the connection with cargo-cult science is far from clear. Secondly the statement about means being more sensitive when the treatment change each person by the same amount as opposed to a fraction of the population etc is hilariously wrong. Means DON'T CARE who is changed. Example: Pre-treatment distribution 1,2,3,4 Post-treatment (A): 101,2,3,4 Post-treatment (B): 26,27,28,29 In one case I added 100 to just one subject in the second I added 25 to all 4. So the mean changes by the same amount. D'oh. If you are talking about Medians, thats different but treatment effect models seldom look at this parameter. Or are you talking about heterogenous treatment effects? It seems to me that you are trying to provide some sort of veneer of respectability to anecdotal evidence relative to those who do things the correct i.e. the scientific way. Its not about using different "filters". I really doubt if Feynman would have derided those who followed proper scientific methods as you appear to suggest.

Stuart Buck (2010-07-11 07:28:58)

But you're skewing the point by pre-choosing an overall mean (100) and then dividing it up different ways. Then it's merely tautological that the overall mean is changed by the same amount. The real issue is if the treatment helps 10 % of people by X vs. helping 100 % of people by X. In the former situation, it won't change the overall mean nearly as much, even if it's a real effect for those 10 % of people.

seth (2010-07-11 10:14:20)

Kevin, Feynman was complaining about the same thing as me – a focus on process rather than results among people who claim to be scientists. To point out other people who had similar ideas is reviewing the literature. I'm talking about how best to detect heterogeneous treatment effects, yes. I am saying that what you call the "scientific" method is likely to be better at detecting certain treatment effects and worse at detecting others than the method it replaced. Of course it is better to base medicine on evidence than on no evidence. But there is more than one way of evaluating evidence and the current way has a certain disadvantage (greatest sensitivity to homogenous treatment effects) not shared by the method it replaced (reliance on clinical experience).

vic (2010-07-11 10:37:55)

Seth, off topic, but would be interesting to get your views on this: [http://www.mercurynews.com/bay-area-news/ci\\_15480908?source=rss](http://www.mercurynews.com/bay-area-news/ci_15480908?source=rss)

Maria Droujkova (2010-07-11 13:27:59)

Do you have a way to generate graphs to illustrate the distributions you are talking about? This is an excellent example of statistical literacy, and I want to send it around to math people (parents and educators). We just need pictures.

Alex Chernavsky (2010-07-11 13:37:16)

When I worked for a pharmaceutical company, I used to conduct interviews and focus groups with doctors. I have some reservations about the quality of their clinical judgment. Doctors are susceptible to the same sorts of [1]cognitive biases that afflict everyone else. (Example: If your first three patients on Prozac all did very well, you'll be a Prozac loyalist for years.) With doctors, though, the cognitive biases might be even worse than average, though, because doctors are typically overconfident in their own abilities.

1. [http://en.wikipedia.org/wiki/List\\_of\\_cognitive\\_biases](http://en.wikipedia.org/wiki/List_of_cognitive_biases)

Ragout (2010-07-12 15:37:43)

In Kevin Denny's example, post-treatment distribution A (with 100 added to 1 person) has a much larger variance than distribution B (with 25 added to 4 people). So, any statistical test is going to be more sensitive to B: they will be a smaller p-value and it will be more statistically significant. Just as Seth initially claimed.

seth (2010-07-12 16:49:59)

Maria, Thanks for your interest. The statistical point I am making here is pretty simple, yes, but the people who run clinical trials hire statisticians to analyze the data. To say those statisticians are not statistically literate is a little complicated. The point I make here has not appeared in the statistical literature (or biomedical literature) as far as I know.

Maria Droujkova (2010-07-13 12:39:13)

Seth, I did not mean to imply that clinical statisticians are illiterate, but only that, say, a beginner statistics course would do very well to include your example as a way to promote literacy in working with data. It is simple, but interesting because it's real. A pretty good combination for an educational topic. I will ask a couple of my math ed colleagues to look at the topic and see what comes of it. Also, I would like to thank you for a few very simple changes I made after reading your blog, which had unexpectedly large result/effort ratios.

Dennis (2010-07-15 09:00:13)

Seth, The key insight here is the following, and it answers a question I posed to you some time back: "I suspect that actual treatment effects have a power-law distribution.."

seth (2010-07-15 15:50:27)

Dennis, yes, that is the key insight. And, yes, it answers the question you asked me a while ago. The broader point is that it's possible to find out what the distribution of treatment effects has been (in similar experiments) and then tune the test to be most sensitive to that distribution. The current assumption that everyone changes the same amount is probably the least plausible assumption that could be made.

## **The Zamboni MS Procedure in Canada (2010-07-12 05:08)**

Because his wife had multiple sclerosis (MS), the Italian surgeon Paolo Zamboni discovered that a simple surgical procedure helped a large fraction of patients with MS. The Canadian MS society and some Canadian neurologists [1] have not reacted well to this discovery:

In November 2009, an elated Jamie Chalmers went to his neurologist and handed him a stack of print-outs on the new findings. Without so much as a glance, the neurologist tossed the papers in the garbage. He told Chalmers it was nothing but junk science.

In fact, cause and effect are utterly clear:

The vein-opening procedure involves snaking a balloon through the groin up to the neck and then inflating it where the veins are believed to be narrow. It didn't hurt, says Stock. "I could feel it . . . it was like plugging your nose and blowing."

Almost immediately afterward, says Stock, he felt a change: his compromised sense of balance had improved. By the time he touched down in Canada [the operation was in India], he was convinced he had

done the right thing. Before the procedure, he couldn't read a full paragraph. Now, he is reading whole chapters again. Before, he couldn't stand without support for long and was always hunched over his cane. Now, he can stand and walk for as long as an hour.

Doctors have believed that MS is an autoimmune disease. For example, the Mayo Clinic's website [2] says:

Multiple sclerosis (MS) is a potentially debilitating disease in which your body's immune system eats away at the protective sheath that covers your nerves.

Thanks to Anne Weiss.

1. <http://www.healthzone.ca/health/newsfeatures/article/834303--ms-patients-fight-for-access-to-new-zamboni-treatment>
2. <http://www.mayoclinic.com/health/multiple-sclerosis/DS00188>

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Jeff (2010-07-12 08:11:17)

I got the impression that most people who undergo this procedure end up relapsing, so that it's not a permanent cure. (sorry, these points have probably been discussed to death... I haven't been following this story that much.) So I guess the idea is that this is a good starting point to work on better treatment, and a better understanding of the disease – i.e. not quite the panacea yet?

seth (2010-07-12 13:47:58)

Jeff, I have not gotten the impression that most people who undergo this procedure relapse. And I have been following the story. What has given you that impression?

Contemplationist (2010-07-12 14:57:38)

Wow such arrogance! Of course I see this as definitive evidence that we need to junk medical professional licensing and move to a certification regime. These organizational cartels have been wrecking havoc.

Lauren Rosenthal (2010-07-13 19:27:22)

This reminds of my dad. Back in the late 70's, before he was diagnosed with MS, we thought his difficulties with walking were due to a back injury. He had surgery to take pressure off some nerves in his neck. He experienced temporary relief of his symptoms but they returned within the year. If people are experiencing some relief from the Zamboni treatment it could be the procedure or it could be the sedatives or it could be placebo effect or it could be the body's response to an invasive procedure. Hard to say.....

Jeff (2010-07-14 11:23:22)

Hi Seth, I recall it was the NYTimes article published recently that mentioned some relapse cases. I also read a few cases from message boards reporting relapses (I apologize, it's unfair of me to not go re-find those links). Either way, I'm hopeful. My mom has MS.

seth (2010-07-14 13:25:53)

Lauren, you are leaving out of consideration that a large fraction of MS sufferers are found to have abnormal blood drainage from the brain. Which is a prediction of the theory that improving the drainage will reduce MS. It isn't a prediction of your other explanations of improvement (e.g., placebo).

Hal (2010-07-15 11:47:07)

This is certainly an exciting development to follow! And I agree it is an interesting case study on the way the scientific/medical establishment responds to a promising new treatment that flies in the face of conventional theories about the disease. If it does turn out to work, there have been speculations that similar effects could be at work in the spinal cords of ALS patients, making it of personal interest. Nevertheless my money is on science in this matter. That is, I suspect that venous insufficiency will not turn out to be a significant cause of MS. It's hard to believe that medical researchers could be so far wrong for so long. And I've seen claims that true venous insufficiency causes obvious symptoms in the brain, which are not seen in MS. Now I understand that the claim of high incidence of this vein problem among MS patients is significant - if true. That is what the first round of studies is for, to verify this claim. Maybe it's true, maybe not. We'll see. And it's also possible that a blood problem could cause blood cells to leak into brain tissue, triggering some kind of immune reaction. So perhaps this discovery could be reconciled with existing theories. But the patient stories remain anecdotal IMO. We have all the usual problems of selection effects where the patients who are helped the most are most vocal in demanding access to the procedure for others. And MS is often intermittent in its effects, making it peculiarly subject to placebo effects.

seth (2010-07-15 16:42:30)

Hal, I know of no evidence that placebos can produce the sort of improvement described in my post. Placebos have been studied extensively. "It's hard to believe that medical researchers could be so wrong for so long." Well, doctors used to dismiss the idea that smoking caused lung cancer. You can read 100 randomly selected nutrition books without finding one that recommends fermented foods. According to any weight control expert, sugar causes weight gain - but I lost weight drinking sugar water. I'll believe that medical researchers have a clue when they start finding safe practical solutions to common health problems.

jaygol (2010-07-17 11:50:22)

there is some promising research being done to study the effects of vein widening and stent placement for MS. what's interesting is how people seem to associate the risks endemic to surgery itself with this procedure as if it invalidates any of the recorded success stories. anytime people enter a hospital for a surgery there is always a chance of infection, or of a less than successful outcome. yet i read one scaremonger story after another questioning the efficacy of these procedures for MS on the basis of single person accounts like "one woman suffered a stroke in hospital, or one person had a severe reaction to the stent bringing to light questions of the safety of the procedure"... this type of procedure is done with such regularity for stroke/cardiac patients w/ all its risks, success and failure yet somehow anything less than %100 success for its use in MS seems to invalidate the theory. show me any sort of vascular surgical treatment that is close to %100 let alone %70, without relapse or side effects. the nature of any surgery that involves neurological functioning can be so tricky and a perfect cure elusive. back surgery, the severing of cranial nerves for neuralgia's, carpal tunnel release surgery, tenosynovitis treatments, deviated septum surgery, enlarging of the throat for relief of snoring, all of these procedures enjoy moderate success rates at best, come with a host of awful side effects or risks at times yet are routinely ordered and administered. thus far MS trials using the Zamboni conclusions are enjoying mixed but moderately good success. part of the reason this treatment approach has gone viral is precisely because the procedure itself is relatively non-invasive and safe and can be done in a host of clinics around the world. if it turns out to work only part of the time then it opens another chapter in MS research, one in which the dominant model of immune system malfunction is only a part of the picture. funny how few people mention the host of side effects, risks and fatal outcomes of the current host of MS treatment which is pharma-based and vaguely successful at best in slow progression of this disease. good luck to all who are investigating this new treatment option.

wcw (2010-07-20 06:29:36)

Mazmanian et al at Caltech find bacteria can induce MS in sterile lab mice. Viz [http://media.caltech.edu/press\\_releases/13362](http://media.caltech.edu/press_releases/13362)

johnson (2010-08-07 11:49:53)

Let's turn a phrase around : " I find it hard to believe that 'the doctors' could be RIGHT about the causes of MS and not have anything that looks like a promising solution. " I suspect the medical conservatives have put their eggs in a few favourite research baskets, which approach the disease from a wrong point of view.... so that every solution they produce is complicated, expensive and - in the end - not very successful. They will continue to do endless statistical studies to show a 5-cent improvement . Zamboni's research doesn't look like junk science; he was trying to cure someone, tried out a procedure, and it looks like he may have done something - at least in some cases/ MS patients should demand a chance to try the procedure and allow themselves to HOPE . They may be disappointed, but there's no point in playing 'neutral observer' when YOU are the patient . Leave that nonsense to the medical professionals, while you focus on getting better.

### **Kombucha Eliminated Heartburn (2010-07-13 11:35)**

In a comment on [1]an old post – in which I described how a friend's acid reflux was greatly alleviated by kombucha – Dave Schulz says he had a similar experience:

My heartburn occurs daily unless a) I stick to a strict diet with no carbs, dairy, or greasy/fatty food, like the Paleo Diet or b) I drink kombucha daily. It's not always possible to do a), so kombucha has literally been a life saver for me.

Daily kombucha eliminates his heartburn for long periods of time, not just for a few hours after drinking it. Due to the current ban he can no longer get it and his heartburn came back. He got the idea from a friend. Before kombucha, he'd tried many remedies that didn't work. The three doctors he saw were no help.

[2]On the Mayo Clinic website a doctor says that "until definitive studies quantify the risks and benefits of Kombucha tea, it's prudent to avoid it." This is what the Protestant Reformation was about: Speaking directly to God rather than waiting for "definitive studies" by experts that "quantify the risks and benefits".

1. <http://www.blog.sethroberts.net/2009/07/24/acid-reflux-cured-by-kombucha/>

2. <http://www.mayoclinic.com/health/kombucha-tea/AN01658>

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MT (2010-07-13 15:07:42)

Where is the ban on kombucha? Might be worth a post! Sounds ridiculous.

Will Hunting (2010-07-14 06:50:21)

Well, in the case of the Protestant Reformation both parties were essentially speaking into the void, so it made no difference if the experts were right or the reformers. In medicine there is a quantifiable difference between the effects of various treatments. For example, I assume you would agree about the inefficacy of something like homeopathy, which is essentially a belief-based treatment.

Alex Chernavsky (2010-07-14 07:44:29)

About three years ago, my wife developed upper-GI problems, including GERD and sporadic nausea. I started brewing my own kombucha a few months ago because of information I read on this blog. My wife has found that drinking kombucha significantly alleviates (but doesn't quite eliminate) her GI disturbances. Tums, Prilosec, and other drugs had no effect. Eating soy yogurt

also had no effect. Sucking on candied ginger has a moderate effect on reducing nausea.

sadie (2010-07-14 08:09:06)

Alex, sporadic nausea and upper-GI symptoms are often related to gallbladder scarring. Kombucha appears to have some liver effects (from the small amount of alcohol and maybe other things we don't know about). Brewing kombucha is very simple if you can get a live scoby, requiring about the same amount of time as making sweet tea, and avoids the ban. I'm brewing some as part of self-experiment. I have autoimmune thyroid disease and I want to see if eating lots (lots!) of fermented foods offers any symptom relief.

Sir Francis Galton's Scientific Priesthood | Anthony Burgoyne (2010-07-14 13:20:14)

[...] Seth Roberts writes that: [...]

David (2010-07-14 15:33:52)

Can anyone speculate how kombucha might have this effect on heartburn?

steven black (2010-07-14 18:13:16)

I used to have acid reflux and it ended about a week after starting to drink kombucha. Can't find GT's any where in New York so I have started drinking BAO a local brew from the Westerly Market

Alex Chernavsky (2010-07-15 17:06:23)

Steven, you should brew your own. It's fun and allows you to experiment with various flavors and techniques.

G (2010-07-15 18:38:35)

I had a few months of extremely serious heartburn - the acid would migrate upward during the night, which induced throat-spasms that almost suffocated me to death a few times. A year and a half after curing it, I still cough more than I used to. The doctors didn't have a clue what to do about the spasms, but they prescribed omeprazole for the heartburn. This eventually stopped the spasms. I didn't want to take medication long-term, so I experimented with diet and discovered that wheat was primarily responsible, and stopped eating it. Once the problem was 90 % gone and I no longer needed medication, I tried eating wheat again and found that it's seemingly a lottery whether I suffer any acid and how severe the acid is. It doesn't depend on the amount of wheat consumed. Eating ice cream or drinking milk seems to reduce the symptoms a great deal, but it's not perfect. Other things trigger occasional heartburn but nothing so much as wheat. Oats come second. I will try to get my hands on some of this kombucha stuff and see whether it gives me a bit more dietary leeway. I grew up eating wheat every day... To get this problem just out of the blue - it's annoying, and I was disappointed to learn how little this sort of thing is understood or treatable.

G (2010-07-17 21:35:23)

Seth - something I don't understand is, how does promoting healthy bacteria in the intestine reduce acid-production prior to that stage, in the stomach?

Robbi (2010-08-08 12:11:57)

I have several members in my friends and family circle who have suffered from acid reflux/heartburn. They've collectively tried a few different brands and LOVE the BAO tea, hands down above the rest. Unfortunately it's only available in NYC right now. We buy it by the case to bring back to CT whenever we can make it down there.

## **The Journalistic Response to Climategate (2010-07-14 12:34)**

When the Climategate emails came out, people like Bill McKibben and Elizabeth Kolbert were in enormously difficult positions. McKibben, an extremely talented writer, had centered his entire professional life around stopping climate change. Kolbert, also a very talented writer, hadn't become an activist, like McKibben, but she had made the dangers

of climate change her journalistic specialty. She wrote a book about it, for example. For them to say that the Climategate emails revealed something important – namely, that the case for man-made climate change is much weaker than the public realizes – would have been like the Pope saying God might not exist. It wasn't going to happen. And it hasn't happened.

But other journalists are not so committed to one side. They are free to react honestly and intelligently. One sign of what an honest and intelligent reaction would be came during [1]a New Yorker podcast about Climategate. On one side was Colbert, on the other – saying that Climategate mattered – was Peter Boyer. Colbert came off as nervous and defensive; Boyer came off as reasonable.

Another sign of what an honest and intelligent reaction would be is [2]this column by Clive Crook, an Atlantic editor. Crook ridicules the inquiries that followed for reasoning such as this:

Had Dr. [Michael "Hockey Stick"] Mann's conduct of his research been outside the range of accepted practices, it would have been impossible for him to receive so many awards and recognitions . . .

Crook is right to ridicule this. [3]Ranjit Chandra, a nutrition professor, received the Order of Canada, an extremely prestigious award, yet some of his research appears fabricated.

1. <http://www.blog.sethroberts.net/2010/02/12/elizabeth-kolbert-confronts-climategate/>
2. <http://www.theatlantic.com/politics/archive/2010/07/climategate-and-the-big-green-lie/59709>
3. <http://www.sethroberts.net/chandra/index.html>

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Nathan Myers (2010-07-15 03:50:36)

Yet it turns out "Climategate" really was all a lot of noise about nothing. The results were solid, the criticisms were hollow, the accused were [1]multiply vindicated. Everybody who took it to mean anything about the climate embarrassed themselves. The confusion lasted long enough to sabotage treaty negotiations, so its instigators achieved their aim. The only conduct questioned, in the end, was rudeness toward people ultimately working for Exxon, resulting in expensive-for-everyone overuse of freedom of information laws.

1. [http://scienceblogs.com/deltoid/2010/07/climate\\_scientists\\_vindicated.php](http://scienceblogs.com/deltoid/2010/07/climate_scientists_vindicated.php)

seth (2010-07-15 10:19:49)

[1]Stephen McIntyre and [2]Marc Morano will be sorry to hear that, Nathan.

1. <http://climateaudit.org/>
2. <http://www.climatedepot.com/>

Nathan Myers (2010-07-15 11:48:14)

If McIntyre and Morano are still clinging to that phony scandal, too bad for them. The Clinton impeachment is still the high point of Ken Starr's life too. In current news, the first half of 2010 was the [1]hottest ever recorded.

1. <http://www.thedailybeast.com/cheat-sheet/item/the-hottest-first-six-months-ever/climate-change/?cid=cs:headline4>

G (2010-07-15 18:53:14)

This narrow focus on CO2 is like a cosmic joke. We've got a runaway high-consumption culture that flies in the face of thermodynamics; no hi-tech energy solution guaranteed to be just around the corner; we can't countenance any measure that impacts economic 'growth' unless it's the growth of some other country; we aren't recycling or taking proper care with how we dispose of toxic waste - I mean, you have to mind how much fish you eat cos of the mercury for god's sake; we aren't about to go extract minerals from space anytime soon, etc, etc... All this, and we are stopping the presses for CO2. Which, I gather, was present in several times the concentration during the Jurassic era, when Earth supported lush rainforests and massive dinosaurs. Why don't we just take robust measures and leave a smaller footprint *in general* instead of prioritizing carbon to the near-exclusion of other environmental issues? I'll tell you why: because it requires bigger sacrifice, more thought, and it pisses off more powerful people with a big stake in how things are done just now. You can maybe convince China to make token reductions in CO2 but you can't convince them not to want to live in tower-blocks and drive everywhere in hummers. This CO2 stuff is a distraction *even if* it's good science. A distraction like, a fat person drinks Diet Coke with their Big Mac, invests heavily in Diet Coke, tells his friends to drink Diet Coke. (Also, carbon trading has 'racket' written all over it; to think that system won't be played to breaking-point requires... some naivety, I think.)

Nathan Myers (2010-07-15 21:31:37)

Please try to understand the distinction between absolute level of CO2 and the rate of change of CO2. Life can adapt to any level of CO2 if it gets there slowly enough. Too fast, and you get mass extinctions, ecological disruptions, agricultural crises, pervasive changes in rainfall patterns, famine, and world war (in that order). Previous large changes in CO2 level that did not result in mass extinctions happened over thousands of years. Those that happened fast show up as mass extinctions in the fossil record, and serve as boundaries between named geological periods.

Dennis Mangan (2010-07-16 06:08:44)

In other news, Los Angeles has had record low temperatures in July. <http://latimesblogs.latimes.com/lanow/2010/07/record-cold-at-lax-airport-as-july-gloom-continues-in-southern-california.html>

G (2010-07-16 11:21:42)

But Nathan, the changes we're looking at now are small changes over a short period of time - we don't have reliable enough data to know whether such changes happened hundreds or thousands of years ago, and if so, exactly what impact they had. The main measurements used all differ from each other hugely, so we can't comment on the impact of micro-changes in prehistory.

G (2010-07-16 11:29:35)

"The main measurements used all differ from each other hugely" - though they can be said to very broadly mirror each other as far as overall trends are concerned. Also: Yes, sudden changes can overwhelm a system; I see that - not that that relatively nuanced point is what generally comes across in the media (more carbon = bad). But still, even if this is right, why only focus on CO2? It's not a robust strategy. Way we're going, we avert one catastrophe and stumble into another. It's not good enough. We're like a dysfunctional family trying to solve our problems with a trip to Disneyland. It won't do any harm, but it's not going to address the root of the problem. The root of the problem is that we are idiots almost to a man. Our culture is selfish and venal. People don't want to leave a light footprint because they are greedy. They'd rather believe that somebody else can redesign hummers to run on clean fuels and go on driving to the recycling place to make a token gesture once a week. Things need re-thought from the ground up. Superficial measures help to defer that junkie's rock-bottom realisation. You need to know how wrong you are to get right. But the climate-change people think they have all the answers - they are so self-righteous. Even if they're right about the science, they're really wrong.

seth (2010-07-16 12:13:42)

"This narrow focus on CO2 is like a cosmic joke." I agree. Overdependence on a single resource has been a recipe for disaster for a long time. In the past, it's been manufacturers who've made that mistake - e.g., Manchester textile factories. Now thinkers have managed to make the same mistake, saying that we can solve overdependence on one thing (fossil fuels) by . . . doing



one thing (reducing CO2). It's like this: "Yur litter to me cantained meny mispillings".

Nathan Myers (2010-07-16 23:23:45)

G: You seem to be saying that because we have lots of potential sources of worldwide disaster (and I can list many of them: overfishing, over-fertilizing, oversubscription to fresh water sources, pollution, peak oil, peak phosphates, deforestation, antibiotic-resistant disease bacteria, mono-cropping... I could go on) we should ignore the biggest one. The same argument applies to each of the others, with the result being that we must ignore them all. This argument is appealing to people who are doing well now at the expense of those already affected, but it's ultimately both selfish and disastrous.

G (2010-07-17 07:21:59)

No Nathan, you've set up a straw man there. I wasn't saying anything like that.

Nathan Myers (2010-07-17 13:51:17)

When anyone writes "strawman" in place of a reasoned response, I know they're not interested in a serious discussion. Good day, sir.

G (2010-07-17 16:31:02)

This is laughable - you should bring a better class of debate around here. You made up a lot of crap that had nothing to do with my point - does that phrasing suit you better than 'straw man'? Cos either way, it's what you did buddy. If you disagree, make a real point and demonstrate it.

G (2010-07-17 16:41:55)

...I mean, did I *really* say "that because we have lots of potential sources of worldwide disaster we should ignore the biggest one." ? Did I? Go back and read what I wrote - did you really represent it fairly? Really? Ha ha.

## **Do Fermented Foods Improve Brain Function? (2010-07-16 11:12)**

I'm sure we need to ingest plenty of bacteria for our digestion and immune systems to work properly. What about the brain? When I started eating lots of fermented foods, I didn't notice any brain-related changes, such as changes in mood or sleep. Suggesting that fermented foods have little effect on the brain. But [1]a new study in the American Journal of Psychiatry suggests I reexamine the question. The researchers followed 160,000 high-school students in Taiwan for eleven years.

The incidence rate of suicide mortality in participants with current asthma at [the start of the study] was more than twice that of those without asthma (11.0 compared with 4.3 per 100,000 person-years), but there was no significant difference in the incidence of natural deaths.

Linking immune-system dysfunction (asthma) with brain dysfunction (suicide). I believe [2]fermented foods will substantially reduce asthma. This finding makes it more plausible they'd also improve brain function.

1. <http://ajp.psychiatryonline.org/cgi/content/abstract/appi.ajp.2010.09101455v1?roi=echo3-6602452087-4414127-d56cdc211e5951bf4e31d199e1f7166c&papetoc>

2. <http://www.blog.sethroberts.net/2009/04/29/eczema-nighttime-cough-antibiotics-and-fermented-food/>

## Learning From Mulan (2010-07-17 10:43)

You may have seen [1]the lovely Disney movie based on the story of Mulan, the girl who dresses as a boy to take her father's place in the army. Even better is [2]the original story, which is only 300-odd ancient Chinese characters. It begins like this:

Mulan was weaving. She was having trouble concentrating on her work. The previous night she had learned that her elderly father had been called to military service.

What a great beginning! Instantly you care. You could read every short story The New Yorker has published and not find a beginning as great as that. The essence of how a story should begin is so strong it reminds me of something that happened when I was a grad student. My roommates had cooked something with a lot of ginger. So that's what ginger tastes like, I thought. I understood for the first time why ginger ale was called ginger ale.

1. [http://en.wikipedia.org/wiki/Mulan\\_%281998\\_film%29](http://en.wikipedia.org/wiki/Mulan_%281998_film%29)

2. <http://www.yellowbridge.com/onlinelit/mulan.php>

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Andrew Gelman (2010-07-17 13:16:26)

Seth: I think that by "you" you mean "I" (that is, "Seth").

vic (2010-07-17 13:28:00)

yeah, agree with Andrew, that opening grips me not at all.

Alex Chernavsky (2010-07-17 14:18:39)

I'm fond of this opening paragraph from *Fear and Loathing in Las Vegas*:

We were somewhere around Barstow on the edge of the desert when the drugs began to take hold. I remember saying something like "I feel a bit lightheaded; maybe you should drive...." And suddenly there was a terrible roar all around us and the sky was full of what looked like huge bats, all swooping and screeching and diving around the car, which was going about a hundred miles an hour with the top down to Las Vegas. And a voice was screaming: "Holy Jesus! What are these goddamn animals?"

seth (2010-07-17 17:41:16)

Andrew, I take it you don't like Pauline Kael.

Mike (2010-07-18 03:57:03)

Seth, the original story that you link to does not begin with "Mulan was weaving. She was having trouble concentrating on her work. The previous night she had learned that her elderly father had been called to military service." Where did you get that phrase? The poem that you link to begins "Ji-ji, again ji-ji, Mulan faces the door, weaving. You can't hear the sound of the loom's shuttle, You only hear Daughter's sighs. They ask Daughter who's in her thought, They ask Daughter who's on her memory. "No one is on Daughter's thought, No one is on Daughter's memory." Which beginning are describing as the fantastic beginning? Which beginning are the other responders reading or responding to ?

Mike (2010-07-18 03:58:00)

Which beginning are \*you describing as the fantastic beginning?

seth (2010-07-18 12:16:52)

Mike, I was summing up the beginning to emphasize the important elements. They don't depend on the exact words.

Andrew Gelman (2010-07-18 13:36:41)

Seth: As a statistician I prefer precision. I try to use "I" when I mean "I" and "you" when I mean "you." I don't always succeed, but I try. If you read your very own blog above, I think you might agree with me that the parts that are strongest are the "I" sentences and the parts that are the weakest are the "you" statements. The statement about "every short story The New Yorker has published" seems a bit silly to me too. I understand that you're engaging in hyperbole, but it still seems silly.

seth (2010-07-18 16:08:06)

Andrew, Pauline Kael wrote like this: using "you" to describe visceral reactions ("you can't look away"). She had a reason for writing this way, and so do I: because I am trying to say that I believe others will have similar reactions. To use "I" would not convey this. In other words I didn't mean exactly "I" so I didn't use "I". My comment about New Yorker stories was meant to say that among the several hundred New Yorker stories I've read, I can't think of even one whose opening had even close to the same effect. Maybe I should have put like that, you might be right.

### Assorted Links (2010-07-18 11:55)

- [1]Edward Jay Epstein's blog (curiously called "web log")
- [2]Immoderation in all things, says Nassim Taleb
- [3]Evidence that the autism-income correlation (rich parents have more autistic children than poor parents) is not entirely due to diagnostic differences

Thanks to JR Minkel and Dave Lull.

1. <http://edjayepstein.blogspot.com/>

2. <http://www.fooledbyrandomness.com/notebook.htm>

3. <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0011551>

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Birdie (2010-07-18 14:06:58)

Isn't "blog" a diminutive of "web log?" At least, I always thought it was. (I think I'm missing the humor here, sorry!)

seth (2010-07-19 07:51:12)

Long ago "blog" replaced "web log". To say "web log" is like speaking Olde English.

Nansen (2010-07-21 13:39:26)

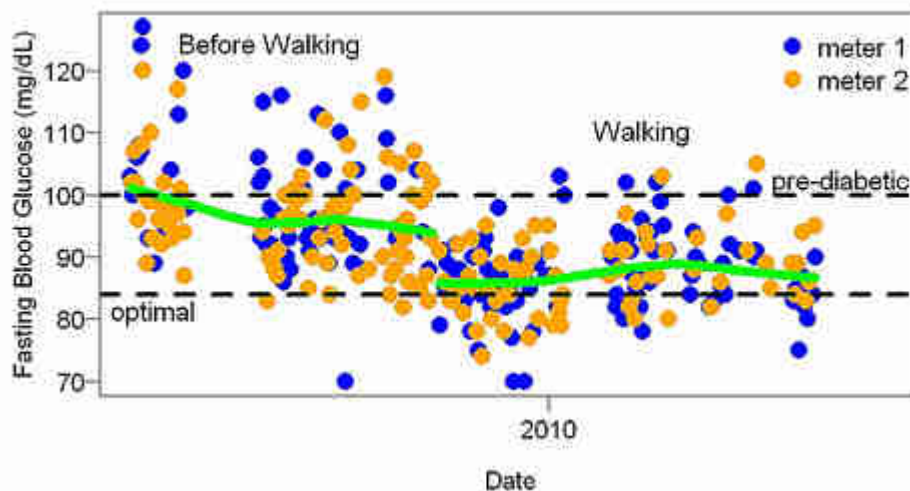
another technicality: your link for Nassim Taleb's "Immoderation in all things" will not be permanent, because his notebook entry "132 - Life's Barbells" will be pushed downward. Probably best to just copy the text.

## Fasting Blood Sugar Reduced by Walking (2010-07-18 17:07)

Richard Bernstein, an engineer with diabetes, invented home blood glucose monitoring. To learn more about this invention, about two years ago I started doing it myself. Mostly I measured my fasting blood sugar level – the level you measure in the morning before eating anything. My numbers were okay – averaging about 90 mg/dL. Optimal is 84, readings above 100 are considered pre-diabetic. I stopped for a while. Then I resumed, and was shocked to see that the numbers were considerably worse – the average was in the high 90s.

I tried to lower them. The obvious thing to do was to eat less carbs, but I already ate few carbs. I cut my carb intake still further but the problem didn't go away. The graph below shows a solution I found by accident: to walk 30-60 minutes/day (closer to 60 than 30).

[1]



After months of trying this and that, and nothing working, one morning the reading was good. I realized I'd done something unusual the previous evening: Taken a 30-minute walk home in the evening rather than ride my bike. After that I deliberately walked 50-60 minutes almost every day and found that my readings were much better, as the graph shows. It wasn't always walking steadily for 60 minutes – stopping now & then was okay. However, wandering through stores for 60 minutes (or any length of time) didn't seem to work. My walks were in the afternoon or evening.

I have not read elsewhere that non-diabetics should do this sort of monitoring, but it helped me. I have seen [2]"exercise" recommended as a way to improve blood sugar control but what I found is much more specific. [3]This article recommends walking about 3 miles/day, which is what I did. [4]This research found big effects of substantial aerobic exercise. My walking was just ordinary continuous walking. But the details of my exercise aren't the point: The point is you can find out for yourself what works.

This sort of thing looks even better when you learn that [5]GlaxoSmithKline, the giant drug company, hid evidence that its diabetes drug caused heart attacks. The drug has generated billions in revenue for the company.

1. <http://www.flickr.com/photos/sethroberts/4806729804/>
2. <http://exercise.about.com/cs/exercisehealth/a/diabetes.htm>
3. <http://care.diabetesjournals.org/content/28/6/1524.full>
4. [http://walking.about.com/gi/o.htm?zi=1/XJ&zTi=1&sdn=walking&cdn=health&tm=91&f=10&su=p284.9.336.ip\\_p674.7.336.ip\\_&tt=2&bt=0&bts=1&zu=http%3A//care.diabetesjournals.org/cgi/content/abstract/28/6/1295](http://walking.about.com/gi/o.htm?zi=1/XJ&zTi=1&sdn=walking&cdn=health&tm=91&f=10&su=p284.9.336.ip_p674.7.336.ip_&tt=2&bt=0&bts=1&zu=http%3A//care.diabetesjournals.org/cgi/content/abstract/28/6/1295)
5. <http://abcnews.go.com/Health/Diabetes/glaxosmithkline-hid-unflattering-data-avandia/story?id=11154496>

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Alex Chernavsky (2010-07-18 19:25:15)

Hiding evidence is business-as-usual for Glaxo (as well as Big Pharma in general). GlaxoSmithKline tried to bury evidence that their antidepressant Paxil (called Seroxat in the UK and in some other countries) was associated with suicidality. Investigative reporter Alison Bass wrote a book about this scandal. The book is called, [1]*Side Effects: A Prosecutor, a Whistleblower, and a Bestselling Antidepressant on Trial*. Glaxo deliberately suppressed studies which revealed the dangerous effects of their drug.

1. <http://www.amazon.com/Side-Effects-Alison-Bass/dp/1565125533?ie=UTF8&s=books&qid=1194099575&sr=8-1>

dearieme (2010-07-19 03:38:10)

My GP told me to get off my bike and walk a lot. I got plantar fasciitis, and the consequent limping caused further injuries to both knees and both feet. Beware!!

jim (2010-07-19 04:50:15)

I am just starting this to bring my glucose level down. I just got some walking poles (walkingpoles.com) to try to involve the upper body muscles. A half-hour does not have much effect so I am going to increase it to 1 hour. Sort of off topic. I am reading "Becoming a Successful Scientist" by Craig Loehle and he recommends long walks as an effective technique for deeper rumination and contemplation. Walking may be a toofer! Jim

Todd (2010-07-19 06:53:54)

I have found the same thing as you, Seth: that long walks not only bring down BG levels. I also found that walking causes BG levels to drop more rapidly than normal after eating. So the usual 2-3 hours that it takes to return to baseline is cut in half or shorter. Paradoxically, I found that intense exercise, like running or strenuous weight workouts actually cause a brief rise of 10-40 points in BG, but then a return to a level lower than starting. So I think the difference vs. walking is that strenuous exercise causes release of glucose from glycogen or stored fat & muscle (gluconeogenesis), followed by a drop to a lower baseline. I summarized these and a range of other findings (such as the BG-lowering effect of coconut oil) a few months ago and posted on your forum: <http://boards.sethroberts.net/index.php?topic=7511.0>

Aaron Blaisdell (2010-07-19 07:17:21)

I agree with Jim that walking seems to help a lot of people think, just as a lot of people think better on their feet. Stands to reason. Nassim Taleb has written about the benefits he's seen from incorporating lots of walking into his daily life.

seth (2010-07-19 08:14:26)

Aaron, yeah, [1]positive side effects. Whereas if I took a drug to control my blood sugar there would probably be negative side effects, as the GlaxoSmithKline story shows.

1. <http://www.blog.sethroberts.net/2010/05/04/positive-side-effects/>

Cracked, Angry Pundits and the 'AIDS Myth' Theory « The Daily G (2010-07-19 20:56:23)

[...] Today I read a new article about Nobel winners who were supposedly crazy. Actually, the wording was 'clearly insane'. Now, Cracked is a humour site; it's not supposed to be serious, okay – but it does have pretensions of being informative. And I have indeed learned many a thing there – it's actually one of the site's principal pleasures – the writers cobble their

articles together from research that most of us can't be bothered to do ourselves. So you sometimes gets this sugared pill of knowledge, usually about something 'awesome' or 'batshit insane'. [...]

jlonsdale (2010-07-20 14:40:59)

At UCSD in 2006, I attended a bioengineering seminar given by an old man (I think he was a famous old chemical engineering professor, but I could be wrong) who was a diabetic. He explained his self experimentation to control his blood sugar levels. He found that he only needed light exercise for about 15 minutes after each meal to keep his blood sugar levels at a reasonable level. Maybe the focus could be on stopping the blood sugar from rising in the first place?

Phil (2010-07-20 17:28:49)

This is a good example of self-experimentation leading to a successful intervention. But you could also have consulted a doctor, or a diabetes website, and probably found out about the benefits of walking for controlling blood glucose a lot sooner. And dearie me, your doctor should probably poke around online too. For instance, an [1]about.com entry says "Walking is one of the most popular and widely recommended forms of physical activity for people with diabetes", but warns "Foot health is particularly important for anyone with diabetes, so the input of a podiatrist may be especially useful if you're considering a walking program."

1. <http://diabetes.about.com/od/benefitsofexercise/a/walking.htm>

Don't miss these great links! (2010-08-19 06:18:32)

[...] Seth Roberts has found a study that shows the significant benefits of exercise to diabetics (and non-diabetics) for their blood-sugar levels.Â He also monitored his blood-sugar at home while exercising and while not exercising and found a significant impact. [...]

Great links for the weekend! (2010-08-27 13:04:19)

[...] Seth Roberts did an interesting experiment recently and found that he could significantly impact his fasting blood sugar levels (eg. blood sugar levels first thing in the morning) by taking a walk the evening before.Â Is there any coincidence that Chris has been getting us out doing a walk at the end of the day more often since we read this post? [...]

John W (2011-05-10 11:40:52)

Peter at the Hyperlipid blog describes why a low-carb diet may raise fasting blood sugar, and why it may not be a problem. Search for physiologic insulin resistance at the Hyperlipid blog and you will find it. Have you measured your A1C? This might be a better measure of your overall blood sugar control. What happens if you add a few carbs, say 100g/day for a few days?

Seth Roberts (2011-05-10 14:42:39)

Before I started this, my A1C was poor. Although I did plenty of aerobic exercise and had good aerobic fitness, it was also true that I mostly sat all day. So these results make sense from that point of view – the idea that we generally need plenty of walking for good blood glucose control.

## **Interview for a Press Release (2010-07-19 08:04)**

A writer for UC Berkeley media relations wanted to interview me for [1]this press release about the Tsinghua Psychology department. I said I'd blogged a lot about Tsinghua but she said she wanted "fresh quotes". So I wrote this:

Why did you decide to take this opportunity [become a professor at Tsinghua]?

Partly because I wanted to write more books – in addition to The Shangri-La Diet – and this job would let me, because I only teach one semester per year. Partly because I thought the undergraduates would be

brilliant. Partly because I thought living in Beijing would be fascinating.

What have you learned/discovered?

How talented the students are. To get into Tsinghua as an undergraduate, you have to score extremely well on a nationwide test. Oh, so they're bookish? Not quite. A month ago I went to a talent show put on by biomedical-engineering majors. One act was five girls dancing. After a few minutes someone told me that three of the girls were boys. I hadn't noticed. It was really hard to tell.

Influenced by [2]Mulan, perhaps.

1. [http://www.berkeley.edu/news/media/releases/2010/07/15\\_happiness.shtml](http://www.berkeley.edu/news/media/releases/2010/07/15_happiness.shtml)
2. <http://www.blog.sethroberts.net/2010/07/17/learning-from-mulan/>

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### **Chinese View of Chinese Restaurant (2010-07-19 12:45)**

Some of my Tsinghua students are in Berkeley. I took three of them to Great China, the closest Chinese restaurant. They didn't like the Kung Pao Chicken. The sauce was wrong. It's supposed to be a little bit sour and a little bit sweet but wasn't. They liked an eggplant dish but complained the eggplant wasn't infused with the flavor of the sauce.

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John S. (2010-07-19 15:29:56)

Once, in a country whose name I won't mention, I was taken to an "American" restaurant. One of the items on the menu was horse. That's what all us cowboys eat, right? I didn't try it.

### **Fasting Blood Sugar Reduced by Walking (cont.) (2010-07-20 18:14)**

In [1]an earlier post I described how I discovered that walking normalized my fasting blood sugar. In [2]a comment on that post, Phil wrote:

You could also have consulted a doctor, or a diabetes website, and probably found out about the benefits of walking for controlling blood glucose a lot sooner.

My initial reaction was that this was wrong—that a search on the web would find hundreds of suggestions for managing diabetes and walking would be just one of them. Diabetes, after all, is a huge problem. A doctor would probably prescribe something. But what if Phil were right?

What would I find if I looked? I didn't actually know. So I looked. Under "diabetes", the Mayo Clinic website has two sections about treatment. Under "[3]treatment and drugs" are six suggestions, such as "healthy eating". The suggestion called "physical exercise" recommends aerobic exercise. "Get your doctor's OK to exercise," it says. "Aim for at least 30 minutes of aerobic exercise most days of the week," it continues. My walking was not aerobic. Obviously one does not need a doctor's approval to walk at a normal pace. In a second section called "[4]lifestyle and home remedies" were ten suggestions, such as "make a commitment to manage your diabetes". No mention of walking.

What about the American Diabetes Association website? Their "[5]Treatment & Care" page says nothing about exercise. It mentions drugs and transplants (e.g., kidney transplants). There's also a "[6]Food & Fitness" page. There are dozens of comments about what foods to eat. The "Fitness" section begins like this:

Exercise is part of a healthy lifestyle for everyone, and it's especially important for people with diabetes. But exercise doesn't necessarily mean running a marathon orÂ bench-pressing 300 pounds.Â The goal isÂ to get active and stay active by doingÂ things you enjoy,Â from gardening to playing tennis to walking with friends.Â Here are someÂ ideas for getting moving and making exercise part of your daily life.

The fitness section goes on and on about such topics as "What is Exercise?" and "Top 10 Benefits of Being Active". Surely the ADA hired some hack to write it. It's useless.

I conclude that if you already know that walking helps you can find evidence to support this. But searching the web will not lead you to try walking any time soon. You will be too busy changing your diet and trying all possible aerobic exercises. (And I did aerobic exercise several times a week and still had too-high blood sugar.) My initial reaction was wrong, it turned out: I found a large number of suggestions and my actual activity (walking 30-60 min/day) wasn't one of them. No way could I "walk with friends" every day. (I've tried and failed miserably.) The next time I see my doctor I will find out what he would have recommended.

1. <http://www.blog.sethroberts.net/2010/07/18/fasting-blood-sugar-reduced-by-walking/>
2. <http://www.blog.sethroberts.net/2010/07/18/fasting-blood-sugar-reduced-by-walking/#comment-469396>
3. <http://www.mayoclinic.com/health/diabetes/DS01121/DSECTION=treatments-and-drugs>
4. <http://www.mayoclinic.com/health/diabetes/DS01121/DSECTION=lifestyle-and-home-remedies>
5. <http://www.diabetes.org/living-with-diabetes/treatment-and-care/>
6. [http://www.diabetes.org/food-and-fitness/?utm\\_source=WWW&utm\\_medium=GlobalNavFF&utm\\_campaign=CON](http://www.diabetes.org/food-and-fitness/?utm_source=WWW&utm_medium=GlobalNavFF&utm_campaign=CON)

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TalkingRat (2010-07-20 20:29:54)

Agreed, basic exercise information was buried and took too many clicks to find on the ADA site, but eventually they defined "brisk walking" as aerobic exercise. Then you had to go somewhere else to read how much you should walk. Not well done, although I'm sure they expected doctor involvement due to the health risks and potentially, insulin adjustment. When I had gestational diabetes, my nutritionist told me to walk briskly for at least 20 minutes, twice a day. That was over 20 years ago, so the glucose benefit was known, and quantified. My pedometer defines aerobic steps as 10 minutes of continuous walking. That seems to be a common definition for exercise – brisk walking counts, but only if you do it at least 10 minutes. Unless you walk really slowly, there should be a change in breathing by then. On a long walk, my heartrate is about the same as for



mowing the lawn, which isn't vigorous exercise, but it is aerobic. Aerobic (Sally Edwards) defines the aerobic zone as 70-80 % of maximum heartrate.

vee (2010-07-20 20:41:08)

There's one short (but not easy when done with proper form) T-Tapp move called Hoe Downs that lowers blood sugar. The move has been featured in books – Dr. Carolyn Dean (MD and ND) in "IBS for Dummies" and Dr. Nicholas Perricone's "The 7 Secrets to Beauty, Health and Longevity - The Miracle of Cellular Rejuvenation." From the article linked below, "Preliminary testing has also shown that Hoe Downs can effectively drop glucose levels quickly. Test results verified an average drop in glucose from 62 to 85 points upon completion and an average rate up to 100 points at 10 minutes post completion." <http://www.t-tapp.com/articles/hoedowns/default.html> [http://www.youtube.com/watch?v=IsURickB\\_G8](http://www.youtube.com/watch?v=IsURickB_G8)

seth (2010-07-20 21:17:41)

Talking Rat, I found that ordinary walking – not brisk – worked fine. No mental effort required. In other words, my solution can be found nowhere on the ADA site, as far as I can tell. Judging by my experience, the "aerobic" restriction is just wrong.

Jolly (2010-07-20 21:27:59)

Thats great! I'll have to try your walking solution and see where it gets me. I'm in a similar boat to you (non diabetic, I track my fasting bg, and it's been high lately (95+) even though I eat paleo/primal with a low carb emphasis. I'll report back later :)

Phil (2010-07-21 07:49:00)

But Seth, you don't have diabetes, you have symptoms that arguably match "pre-diabetes". When I look up "pre-diabetes treatment" on Google, the first website it recommends is WebMD, which has four recommendations. In order: (1) watch your weight, (2) make healthy food choices, (3) get active, (4) take medicine if you need to. They elaborate on "Get active" : "Try to do moderate activity at least 2½ hours a week. Or try to do vigorous activity at least 1¼ hours a week. It's fine to be active in blocks of 10 minutes or more throughout your day and week." The first item they suggest if you click on "moderate activity" is "brisk walking." You might say that you don't walk briskly, you just walk, but I think that's splitting hairs. You mentioned that ambling through stores while shopping doesn't seem to do it, after all. The second site Google lists is the American Diabetes Association. I found this site even worse than you suggest, it's really horrible. This association is, I suspect, essentially a front for the big drug companies. Absolutely appalling. Let's go to the third Google suggestion for "pre-diabetes treatment". It's something called "suite101.com", which I've never heard of. Immediately below the headline ("Pre-diabetes treatment helps prevent diabetes") is a photo of a couple strolling down a dirt road. The site lists diet, exercise, and medication as ways of controlling pre-diabetes, and says diet and exercise are most effective but some people need medication. As for exercise, the site says "Exercise plans do not need to be elaborate or expensive. Taking a walk for ten minutes each day can decrease your chances of developing diabetes, although experts advise being active for 30 minutes each day..." So...two out of the top 3 sites recommended by Google recommend "brisk walking" or "walking" among their top few strategies for controlling pre-diabetes. I also checked the Mayo Clinic site, since it's one that you mentioned and since it is such a trusted brand. They list four treatments under "treatment and drugs": (1) eat healthy foods, (2) get more physical activity, (3) lose excess pounds, (4) take medication as needed. (I'm guessing the webMD page borrowed from here, or vice versa). As for "get more physical activity", "take a brisk daily walk" is the first of their examples. So I think that although you have a valid point about walking not being adequately promoted by some sites, I think you are greatly exaggerating the difficulty of identifying moderate exercise in general, and walking in particular, as a treatment for pre-diabetes.

seth (2010-07-21 10:41:37)

Phil, thanks for looking into this further. The WebMD advice is an example of what I'm talking about. I did standard amounts of aerobic exercise (walking fast uphill on a treadmill) about 1.5 hrs/week. It didn't solve the problem. In China, I did lots of brief exercise, riding my bike here and there – maybe 5 min at a time. That didn't solve the problem. To say that distinguishing between "brisk walking" and "walking" is splitting hairs ignores the history of exercise physiology, where the term "aerobics" was invented to make just that distinction. Brisk walking is aerobic, non-brisk walking is not. The "aerobic exercise" concept was taken to explain a lot – to help distinguish helpful from unhelpful exercise. Years ago, to my dismay, I found that when

I simply walked several hours/day (non-aerobic) my resting heart rate and blood pressure got worse. They got better when I resumed aerobic exercise. This supported what the exercise experts had concluded. Aerobic exercise is also a lot more difficult than non-aerobic exercise. It is hard to do every day. Whereas non-aerobic walking is easy to do every day. This is another reason the suggestion of "brisk" (= aerobic) walking wouldn't have led me to try non-aerobic (= ordinary) walking. The solution I found requires it be done every day. I agree with you that the web advice is useful. It's obviously better than nothing. But it wouldn't have led me any time soon to the solution I found, which is a lot easier than "brisk walking". Brisk walking requires mental effort, walking doesn't.

Phil (2010-07-21 13:59:58)

Seth, I agree with some aspects of what you're saying, but not all of them. Many sites do recommend walking — either just "walking" or "brisk walking" — to treat pre-diabetes. The Mayo Clinic is one of them. What you seem to be saying is that that doesn't count, because being told that brisk walking will help you would not lead you to think that normal walking would help you. For one thing, I don't think that's true for most people. For another, some sites do just recommend "walking," without the "brisk." It's funny that you say you "simply walked several hours/day" in order to improve, so such an activity level should be recommended instead of "brisk walking" for a shorter period because brisk walking takes more effort. Yeah, but Seth, there's no way most people are going to walk "several hours per day!" I'm guessing you meant "several miles per day"? Even so, that takes a substantial amount of time, unless you walk briskly. More time than most people are willing to spend, I think. (And for what it's worth, like most people I would consider a 4mph walk to be "brisk", but I wouldn't consider it "aerobic", so to me a recommendation to walk briskly is not the same as a recommendation to get aerobic exercise). I believe you when you say that you had to discover the benefits of walking (vis-a-vis pre-diabetes) on your own. All I'm saying is that walking is in fact widely recommended for pre-diabetics, so self-experimentation isn't needed to come up with this. I also agree with you that self-experimentation is good in many contexts, including things like improving blood sugar.

Nathan Myers (2010-07-21 14:33:09)

I'm curious whether consuming small amounts of cinnamon makes any difference in your blood sugar level.

Jim Purdy (2010-07-22 01:38:07)

In 1998, I walked on a treadmill without shoes. As a result, I got blisters on the bottoms of my big toes. and they wouldn't heal. I went to my primary care doctor, and I was diagnosed with diabetes. I was told to protect my feet and to take oral pills for my diabetes. In 2005, I had my right big toe amputated because of a diabetic ulcer that got an infection in the bone. I was told to protect my feet by not walking, and to take more diabetic pills. IN 2009, I had my left big toe amputated because of another infected diabetic ulcer. Again, I was told to protect my feet by not walking, and to take more diabetic pills. In March 2010, I developed really bad diabetic ulcers on my right foot, and surgeons said my right leg had to be amputated. I refused amputation, and I went home. I was told to be completely sedentary, and to let my feet heal by staying in a recliner all day with my legs elevated. I was told to not walk or stand, and to put no weight on my feet. In June 2010, after years of being told to protect my feet by not walking, I was told that the blood vessels in my legs were badly blocked.. Even worse, I was told this month, July 2010, that my coronary arteries were severely blocked. I then was told that the blockages were too severe for stents, and later a planned quadruple bypass was cancelled because the surgeon didn't want to create bypasses with a vein from one of my legs, because I might then need a leg amputation. So, now, after years of being told to not walk, to stay off my feet, and after developing life-threatening heart disease, I have a new team of health care providers, including cardiologists, and I have some new and different advice, The new advice? Walk. Walk as much as a possible.

seth (2010-07-22 08:28:04)

Nathan, I haven't tried small amounts of cinnamon but I will look into it. Jim Purdy, did your doctors explain why the great change in their advice?

jallen (2010-07-22 10:51:56)

<http://www.ncbi.nlm.nih.gov/pubmed/20029518> Appl Physiol Nutr Metab. 2009 Dec;34(6):1087-92. Slow postmeal walking reduces postprandial glycemia in middle-aged women. Nygaard H, Tomten SE, HÅstmark AT. Lillehammer University College,

PB 952 2604 Lillehammer, Norway. havard.nygaard@hil.no

Seth Roberts (2010-07-22 12:03:28)

Jallen, thanks for bringing that paper to our attention. That sort of makes my point: the way the authors emphasize "slow" walking. Because it is so different than "brisk" walking. Given that a research paper has just been published about this, it is highly unlikely that this is something everybody in the field of diabetes knows and had I merely searched the web or asked my doctor it would have been obvious.

Jim Purdy (2010-07-22 13:26:03)

Seth, the doctors didn't change their advice. I changed doctors.

Seth's blog » Blog Archive » Fasting Blood Sugar Reduced by Walking (cont.) | Why Fasting, Detoxing and Cleansing for Health (2010-07-27 13:20:27)

[...] blog » Blog Archive » Fasting Blood Sugar Reduced by Walking (cont.) Posted on July 27, 2010 by shschrir Seth's blog » Blog Archive » Fasting Blood Sugar Reduced by Walking(cont.). [...]

Batencourt D.C., M.D. (2011-10-01 23:38:53)

I think you should ask your doctor about this and please let us all know what you find out. Walking does improve blood sugar levels because it is exercise. When a patient asks me what they should do to help their blood sugar I reply, "anything". Simply do anything you want three times per week: run, walk, swim, hike, ride a horse, play rugby anything. Just start making time to do something that is active and you will see your blood sugar come down. Then and only then we can talk about diet, nutrition and other alternative treatments that can help you deal with this disease. Take charge of your health as doctors we work for you!

Seth Roberts (2011-10-02 02:53:20)

My findings do not agree with your advice. "Do anything you want three times per week" - I found that I need to walk every day, which is seven times per week. 3 vs 7: big difference.

## **What's the "Natural" Pattern of Sleep? (2010-07-21 16:34)**

According to [1]this influential article by the historian [2]A. Roger Ekirch,

Until the close of the early modern era, Western Europeans on most evenings experienced two major intervals of sleep bridged by up to an hour or more of quiet wakefulness.

This is called [3]segmented sleep. Supposedly [4]this is "natural":

In a natural state, humans do not sleep a long consecutive bout throughout the night. The natural condition is bimodal - two bouts of sleep interrupted by a short episode of waking in the middle of the night.

And if you don't like sleeping this way [5]you are ignorant:

The modern assumption that consolidated sleep with no awakenings is the normal and correct way for human adults to sleep leads many to approach their doctors with complaints of maintenance [6]insomnia or other sleep disorders. Their concerns might best be addressed by assurance that their sleep conforms to historically natural sleep patterns.

[7]

An amusing therapeutic approach. Whatever the problem, simply say "your problem conforms to historically natural patterns".

I found that [8]if I ate more animal fat I slept better. It is entirely possible that if all those Western Europeans walking up in the middle of the night had eaten more animal fat – as their ancestors may have several hundred thousand years ago before big fat-laden game animals were hunted to extinction – they would have slept through the night.

I found several ways to improve my sleep. After my sleep got a lot better – in particular, I stopped waking up in the middle of the night – [9]I stopped getting colds, surely because my immune system was working better. The connection between sleep and immune function is obvious. Given a choice between (a) my immune system had returned to ancient levels of efficacy or (b) my immune system was working better than ever before in the history of the species, I'd bet on (a). Those Western Europeans with segmented sleep were in poor health, I'm sure. Perhaps their sleep was one sign of this.

1. <http://www.historycooperative.org/journals/ahr/106.2/ah000343.html>
2. <http://www.history.vt.edu/Ekirch/>
3. [http://en.wikipedia.org/wiki/Segmented\\_sleep](http://en.wikipedia.org/wiki/Segmented_sleep)
4. [http://scienceblogs.com/clock/2006/10/what\\_is\\_a\\_natural\\_sleep\\_patter.php](http://scienceblogs.com/clock/2006/10/what_is_a_natural_sleep_patter.php)
5. [http://en.wikipedia.org/wiki/Segmented\\_sleep](http://en.wikipedia.org/wiki/Segmented_sleep)
6. <http://en.wikipedia.org/wiki/Insomnia>
7. [http://en.wikipedia.org/wiki/Segmented\\_sleep#cite\\_note-6](http://en.wikipedia.org/wiki/Segmented_sleep#cite_note-6)
8. <http://www.blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>
9. <http://escholarship.org/uc/item/2xc2h866#page-1>

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Nathan Myers (2010-07-21 18:39:22)

When people went to bed at sundown and got up at sunrise, a winter's night was awfully long time to spend asleep the whole way through. Summer's, not so much.

David (2010-07-22 02:38:44)

Makes me think of how many "normal" states are taken as the measured average of the U.S. population, for example. If the population is messed up in the same way, the "normal" may be a long way from the optimal.

david (2010-07-22 03:58:38)

I'm willing to believe that segmented sleep with a period of quiet wakefulness is beneficial. Meditation (which could be described as quite wakefulness) has many documented benefits, so meditation could just be adding back in the period of quiet wakefulness we used to get and have evolved to take advantage of. Btw., Seth, I've never been persuaded that your metric of length and depth of sleep is the perfect measure for sleep quality, but then I've never had a problem with waking up too early :-). The crazy experiment I've been doing for the last year is sleeping on the floor. This has helped my lower back (I started doing it because of some lower back pain) and when it's time to get up, there's less temptation to keep hitting the snooze button for a few more minutes.

G (2010-07-22 05:45:11)

I'd want to be pretty sure of myself before I go and take such a dismissive attitude to another perspective. "An amusing therapeutic approach. Whatever the problem, simply say "your problem conforms to historically natural patterns". That seems unjustified. There are Mediterraneans who take a siesta every day. There's no reason to think this practice doesn't go

way back into distant ancestry. Why can't there be more than one 'right' way? Maybe the truth about sleep incorporates both your own findings and these other possibilities. *Contradiction at first sight* doesn't oblige you to disagree. Given the variation in diets all over the world, it seems wrong to counter Ekirch's essay with the solution 'eat more animal fat' - seems like pushing a favoured idea too far. Is the body so specialised and fragile that everything goes to hell unless we eat like Eskimos? I would like to say at this point that I have no foreknowledge of nor bias in favour of Ekirch, nor do I have strong views on sleep. :-) I would only like to reassert 'epistemic humility' where I perceive an academic being attacked unfairly just for having a view that does not *at first sight* fit with your paradigm.

seth (2010-07-22 08:24:24)

G, Ekirch didn't say segmented sleep was natural, at least in what I read; others did that, using his work as part of their argument. My point isn't that people should eat more animal fat; it's that taking what people did 500 years ago to support conclusions about what is "natural" is unwise. Perhaps malnourishment explains their behavior. I think this is a more productive line of thought than telling someone your problem isn't really a problem. Which goes nowhere.

Phil (2010-07-22 09:40:17)

Seth, I often wake up in the middle of the night, go to the bathroom, and lie in a sort of stupor for a while before falling asleep again. This has been normal for me for pretty much my whole life. Are you saying I have a problem? If I were to mention this to my doctor — I never have, because I've never considered it to be a problem — are you saying that he should tell me that there is a problem with my sleeping pattern and that I should try to correct it? Phil

Seth Roberts (2010-07-22 10:42:51)

Phil, to answer your questions, no I am not saying either of those things (you have a problem, your doctor should tell you you have a problem). I suspect you don't "lie in a stupor" for 2 hours before you fall back asleep. And I suspect that people who do complain to their doctor about waking up in the middle of the night lie awake for a few hours before being able to fall back asleep. That's why they complain. I am not saying either of those things but I am saying something related. The more useful question is not whether you have "a problem" but whether your sleep could be better – "better" in the sense of doing a better job of helping your immune system fight off infection. I don't know the answer but I think that considering that possibility is more likely to be helpful than not considering it.

Phil (2010-07-22 12:05:13)

I haven't read anything about this other than the three quotes that you selected so I really can't judge this issue on its merits at all. But based on what I know (which might be a lot less than you know) I don't think it is ridiculous to suggest that "segmented sleep" could be just fine. I'm not talking about situations in which I wake up and can't get back to sleep — I don't like that — but about what has always been normal for me, which is sleeping for several hours, then waking for perhaps half an hour or an hour, then sleeping for several more hours. You're sarcastic of the idea that that is OK, and you seem sure that my immune system is suffering for it. Like I said, you probably know a lot more about this stuff than I do, so it's obvious to you that "segmented sleep" is bad, but it's not obvious to me.

Seth Roberts (2010-07-22 12:28:42)

Phil, thanks for the clarification. I agree, segmented sleep may be just fine. That's why I said "perhaps" in "perhaps" the segmented sleep of those Western Europeans was a sign of poor health. Maybe I should have emphasized my uncertainty more. Likewise, I'm not "sure that [your] immune system is suffering for it." I just thought/think it's worth considering. Nor was I sarcastic anywhere, as far as I can tell. I don't know what led you to say that. When I said a therapy that consists of saying "it's ok" is "amusing" I meant just that – I find it amusing. Sarcasm would be to say that such therapy was brilliant and insightful.

G (2010-07-22 13:23:28)

Ah Seth, I see what you mean now about the trouble being more with the way Ekirch's ideas were appropriated by others - I missed that first time around... because I was badly underslept, ha ha ha... Brent made some recommendations here that I plan to follow as an experiment: <http://epistemocrat.blogspot.com/2010/07/circadian-rhythms-m1n1-thinkering.html> I have also

been trying the 'morning faces' thing; can't say yet whether I've had results yet but truthfully I've not been all that consistent.

Phil (2010-07-22 16:51:31)

"Sarcasm" means a sharp comment designed to indicate disdain or disagreement. I suppose you could say that your comment ("Whatever the problem, simply say "your problem conforms to historically natural patterns"), though disdainful, is not especially "sharp" and is there for not literally sarcastic. Fine, OK. As is often the case with your blog entries, I agree with some of your point but not all of it. In this case, I agree with your point that just because something is or was common, and some people call it 'natural', does not mean that it's good. After all, malaria is "natural" but we don't go around recommending it.

MT (2010-07-22 18:51:09)

The linguist Dan Everett lived with a hunter-gatherer tribe in the Amazon basin called the Piraha, and describes them as sleeping very intermittently throughout the night, waking and socializing for long periods, and then sleeping regularly through the day as well. Perhaps this is something closer to what our paleolithic ancestors would have experienced. The Piraha's sleep patterns are dictated by the dangers in the jungle, and their heightened vulnerability at night, and when asleep. This is so central to their lives that their version of "goodnight" translates as "Don't sleep, there are snakes" – also the title of the book, which tells many fascinating stories of their culture. Visiting psychologists speculated the Piraha may be the happiest culture they had ever seen based on the amount of time they spent smiling and laughing – characteristics not shared by other Amazonian tribes or Western civilisation.

tim (2010-07-23 01:24:37)

Remember that without electric light, the night is loooong in europe in the winter. Tired after a day of physical labor, the house dark, one goes to sleep. You don't have to get up and work again until its light again, too much time to sleep all the way through. Most people aren't sleeping in private bedrooms, so the break in the night is a social time. I like this theory of interrupted sleep, and see in it the prototype of performance arts, bars, night clubs, concerts, theatre, poetry; that is, the arts and amusements that are associated with the night and come from a shared dreamlike state.

Wayne (2010-07-23 05:27:21)

I'd echo what Nathan said about long winter nights being a bit too long to sleep entirely through – especially considering that you might have relatively activity during the day. Also, I've always interpreted Psalms that talk about "meditating on God in the watches of the night" to refer to awakening during the night. If so, "segmented sleep" may also have been common in the Middle East.

q (2010-07-24 19:00:25)

are people generally sleepier on rainy days? because i bet that neolithic humans slept a lot more when it rained.

Blog-watch: sleep (2010-09-02 13:03:16)

[...] Seth Roberts wrote up some fascinating stuff about historical sleep patterns " apparently some people were trying to persuade us all that it is natural to sleep in two batches with a period of quiet wakefulness in the middle, based on historical information about Western European humans. Seth reckons this is more to do with the poor diets of people in the last few hundred years than a sign of our true ancestral heritage (eg. looking back to our Paleolithic ancestors) since he's found that he sleeps better than ever since he increased his animal fat intake. My take-home point? If you're sleeping poorly, in addition to the usual "get some non-screen relaxation in before bedtime and get rid of the lights and noises in your sleeping room" also try eating more fatty meats. Sometimes it can be difficult to get comfortable of course [...]

## My Theory of Human Evolution (aniline dye) (2010-07-22 07:59)

From [1]The Story of Science, a great new BBC TV series, I learned that in 1856 William Perkin, a British chemist, while trying to synthesize quinine (to cure malaria), created the first aniline dye, called mauveine. It could be used to dye

cloth mauve.

Mauveine was [2]the first synthetic chemical dye. It led to the first chemical factories. Hundreds of tons were made. Other aniline dyes were developed and manufactured in large amounts.

Why does this shed light on human evolution? Because humans, unlike other animals, make art and decoration. We enjoy art and decoration, including color. To dye a dress mauve didn't make it last longer or smell better or fit better – it just made it prettier. Our enjoyment of decoration created demand for mauveine, which began the growth of the chemistry industry. Lessons learned from the manufacture of aniline dyes helped begin the manufacture non-decorative chemicals. These included ammonia, which led to chemical fertilizers. Mauveine wasn't useful in a simple-minded way but it was useful in a subtle way.

This is an example of art/decoration as stepping stone.Â Because we enjoy art and decoration, we pay for it (long ago we traded for it). The payment allows people to spend more time creating art and decoration. While doing this, they learn. What they learn later helps everyone make conventionally useful stuff. I believe this stepping-stone function is why art and decoration came to be.

[3]An alternative view: Art evolved because it gave us "the ability to shape and thereby exert some measure of control over the untidy material of everyday life."

1. <http://topdocumentaryfilms.com/story-of-science/>
2. <http://www.straw.com/sig/dyehist.html>
3. <http://www.washington.edu/alumni/columns/march09/art.html>

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G (2010-07-22 13:29:17)

There's a line in The Book of Five Rings that goes, "do nothing that is of no use." This line always confounded me more than any other.

Nathan Myers (2010-07-22 13:49:29)

I'm trying to understand this in natural-selection terms, where the vocabulary is restricted corresponding to the mechanisms available. You seem to be saying that an inclination to decoration and superfluous luxuries was selected for as a consequence of the incidental benefits that tended to come to people who so indulged. It's a subtle argument, and (therefore) hard to test. Just-so stories help to explain the idea, but don't constitute evidence. I wonder what could serve as evidence. Of course it's easiest to understand it in terms of Darwinian sexual selection; that is, the inclination to decoration could be reinforced simply by mating success, without its conferring any survival advantage. In that case any benefit really would be truly incidental, as would (mild) harm. I also wonder on what time scale this process would have operated. Of course during all of recorded history those in a position to record history had surpluses and didn't have to choose between luxuries and necessities, but by then the tendency must already have been well established. Almost everything in our evolution perforce happened before any referenceable history.

Seth Roberts (2010-07-22 17:28:13)

Nathan, I think decorative stuff first appears around 50,000 years ago, although I haven't looked into it. Humans do lots of signaling, especially of status, so decoration surely served that function as well. But signals can (and do) take many forms; to say something evolved because it served as a signal doesn't explain much.

G (2010-07-22 18:08:12)

I don't know what's so difficult about this. Art is an expression of subjectivity. Humans have a true, developed subjectivity. They have gone beyond the proto-self of the more complex social animals; humans are and know that they are. Knowing that one 'is' involves defining *what* one is, which includes things like 'purpose' and 'value'. This is the beginning of peculiarly human forms of suffering, but also of all ideation. There cannot be ideation without a subject who has the idea. The subject is as much construct as the object, but always in the background; object, obviously, is whatever's in the foreground of attention. As the self develops in complexity it produces more complex thoughts and can do more complex things with nature. Because nature is all of one piece, learning to manipulate it even for 'trivial' reasons will always lead to learning to manipulate it for 'serious' reasons. (Oscar Wilde might have a word or two to say about this distinction) I think it would be impossible for evolution to create self-aware creatures with genuine intelligence that were on a short mental leash of pragmatism. Doesn't the notion sound like an oxymoron? A self-aware being that merely labours for pure survival, like an ant, in total austerity, devoid of philosophy or spirituality? Something obvious is being overlooked through excessive abstraction and mechanistic approaches. I just read the Dissanayake article - she's definitely onto something with her ideas about special transitional moments, and the ability to shape and thereby exert some measure of control over the untidy material of everyday life. - yeah, that sounds good enough, but I think it would be reductive to say "this is the *point* of it and why it evolved." I just think it's innate to selfhood and will opportunistically serve whatever function it can as we go along. Now it's a major way to make money and attract mates. I say, think of art as something with the same roots as other forms of mentation, rather than some oddball phenomenon. I think it only stands out from, say, conversation because we don't display conversations in galleries. Except when they're in the letters of historical VIPs.

### Assorted Links (2010-07-22 11:50)

- [1]ScienceBlogs diaspora
- [2]Replacement for Medical Hypotheses.
- [3]The Climate Skeptic From Hell

1. <http://afludiary.blogspot.com/2010/07/solidarity-for-science-bloggers.html>

2. <http://www.the-scientist.com/blog/display/57554/>

3. <http://climateaudit.org/2010/07/20/stephen-schneider/#more-11490>

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Alrenous (2010-07-23 08:14:15)

I'm shocked and impressed the Medical Hypotheses crew didn't just roll over. This is exactly what should always happen when their corporate overlords start letting pleasure get into their business - they should find all the affected employees just up and vanish.

### The Shangri-La-Diet Effect (2010-07-22 21:35)

A friend wrote:

Took 3 tbsp of flaxseed oil this morning and held my nose and drank the oil w/water. ^ It worked! ^ I had brought food for work, I didn't eat hardly any of it. ^ And I didn't think about losing weight all day, first time in all my life....



As far as I'm concerned, it never gets old.

[1]Alex Chernavsky: Eight months on the Shangri-La Diet.

1. <http://www.astrocyte-design.com/shangri-la-diet/>

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Laura (2010-07-23 10:07:15)  
The Shangri-la Diet is AWESOME!!!!

q (2010-07-27 07:43:54)  
i've had good results too, not far from alex C. (6 months, adherence to the 'diet' is very easy, down from 205 to 186, goal 175, rate of change slowing, but so is my desire to reach my goal because i've got most of the benefits already.) what i've been wondering though is why it hasn't taken off more than it has.

### **Logarithmically Right (2010-07-23 12:53)**

In Kathryn Schulz's new book about being wrong (Being Wrong), she makes [1]an interesting mistake:

In the instant of uttering ["I told you so"], I become right squared, maybe even right factorial, logarithmically right "at any rate, really, extremely right.

Schulz doesn't know that the logarithm of a number 1 or more is much less than the number itself. For example,  $\log 100 = 4.6$ .

What's interesting is that logarithmically right is a good way of describing how one's beliefs should be transformed to be a fair approximation of the truth. When you think you are right, you probably are – but logarithmically. Much less than you think.

When faced with a scientific paper – the sort that press releases are written about, for example – the naive reader takes it at face value. The little-knowledge-is-a-dangerous-thing reader finds many shortcomings and dismisses it ("how did this get through peer review?"). The more likely interpretation, in my experience, is that the paper, in spite of its imperfection, moves us a little bit forward. Much less than appearances, but more than zero.

1. <http://www.nytimes.com/2010/07/25/books/review/Gilbert-t.html?nl=books&emc=booksupdateema3>

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Aaron Blaisdell (2010-07-23 21:50:04)  
Hah! Seth, I think I'm logarithmically right 100 % of the time. But it feels good to think I'm right in an untransformed manner. If I knew the truth, I'd probably just shut up.

G (2010-07-24 07:29:32)

Advice works for me. But I'd change the wording: 'little-knowledge-is-a-dangerous-thing reader' - it seems unclear whether you mean someone who is hyper-skeptical of knowledge or someone who exemplifies what the aphorism warns against.

Jeremy (2010-07-28 12:28:32)

You don't suppose she simply meant "exponentially right"?

## **The Economics of Medical Hypotheses and Its Successor (part 1 of 2) (2010-07-23 16:15)**

A successor to Medical Hypotheses, titled Hypotheses in the Life Sciences, will soon be published. I asked Bruce Charlton and William Bains, the founder of the new journal, about the economics of the situation.

ROBERTS Did Medical Hypotheses make money for Elsevier? How much did it cost to run per year (leaving aside time contributed by you and the editorial board)? How much of that did Elsevier pay?

BRUCE CHARLTONÂ Medical Hypotheses did for sure make money for Elsevier - but I was never allowed to see the accounts.

I was told circa April 2009 that that the journal still made a profit even after page charges were abolished in early 2009 (income from things like subscriptions, sales of reprints including paid downloads, but mainly from its share of internet access 'bundles' via ScienceDirect - which is purchased mainly via library subscriptions from colleges etc).

Costs were my salary plus a share of the Elsevier editorial team - the journal secretary, the person who put together the issues and the manager - i.e., three main people at Elsevier each of whom worked on a group of journals.

Before 2009, when Medical Hypotheses still had page charges, the journal will have been very profitable since it had the above sources of income plus about page charges at about 60 dollars per thousand words, for a journal of between 160-240 pages, with about 500 words per page - that's roughly 50 thousand dollars extra income per issue - with 12 issues per year that is roughly half a million dollars p.a. in page charges alone. Over seven years as editor I must have generated a few million dollars income for Elsevier.

So - in my opinion Elsevier's behavior with Medical Hypotheses does not make business sense, since it lost them a lot of income and risked even more. Also hounding a successful editor, and sacking him before the contract was finished and with issues for 2010 un-compiled (and with nobody lined up to replace me) did not make business sense, nor did the mass of bad publicity all this generated for Elsevier.

My inference is that an individual or group in Elsevier senior management - perhaps Senior Vice President (USA) Glen P Campbell, who began the whole business and who has remained personally active in it (including the appointment of the new editor) - I guess that Campbell took a personal interest in Medical Hypotheses and in my editorship for reasons unknown to me - and drove the whole process.

The most sinister aspect of the whole thing for me is that senior Elsevier managers are now exerting personal influence on the content of the scientific literature and the conduct of science (overseeing appointment of editors, new restrictions on editorial conduct etc) - and they are doing this not for business reasons, but presumably to pursue

their own private agendas.

The strict legalistic definition of academic freedom

(for what it is worth – see [1]writings by Louis Menand)

is that academics be autonomous in the conduct of academic work (conduct, appointments, promotions, reviewing etc). The Medical Hypotheses Affair shows Elsevier very clearly in breach of academic freedom, and every competent editor will immediately recognize this fact.

In addition, in the later stages of the journal, Elsevier managers were also involved in covertly selecting (i.e. rejecting) what they considered 'controversial' Medical Hypotheses papers - the papers were intercepted after I had formally accepted them and held back, some were later rejected.

Elsevier also employed the Lancet (which they own) to choose 'peer reviewers' for the Duesberg and Ruggiero papers and arrange to have them rejected (using criteria quite different from those of Medical Hypotheses).

So that we know for sure that the Elsevier owned Lancet (one of the most prestigious medical journals in the world - perhaps the most prestigious?) is nowadays in the pocket of Elsevier management, and willing to do dirty jobs for them.

Yet there has been no outcry against Elsevier's breach of academic autonomy from senior journal editors (nothing from the editors of Nature, Science, Lancet (understandably, since they are Elsevier employees), NEJM, JAMA, BMJ etc.). This silence means, I take it, that these senior editors are not any longer autonomous journals, but are nowadays in the pocket of their own publishers and live in fear of their own jobs.

The Medical Hypotheses affair is therefore a straw in the wind: an indicator on a small scale of what is happening at the larger scale: i.e. the thoroughly dishonest and hypocritical state of modern science and academia, and the domination of the content and conduct of science by outside interests.

But the unusual point that is not well understood is that key aspects of these outside interests are not always operating in profit maximizing ways. My understanding is that senior managers (in the private and public sector) are 'using' - even exploiting - their organization's resources in pursuing personal goals - engaging in a kind of moral grandstanding, in making large gestures which show how 'ethical' they are in their views - at everyone else's expense.

This can be most clearly seen in the 'Green' 'ethical' behaviours linked to the Global Warming scam - senior managers have shown themselves willing to sacrifice efficiency in pursuit of large moralistic policy gestures of 'caring about the planet' with which they become personally associated (recycling schemes, fair trade, campaigns of 'save energy' or promote public transportation among staff etc - none of which are actually effective in terms of real world effects, but which are effective in expressing 'concern').

Such moral gestures are invariably designed to appeal to elite PC opinion - it is a major form of status competition among the elites. My guess is that something of this sort is behind what happened at Medical Hypotheses: a senior manager or group of managers at Elsevier probably wanted to show themselves and their peers that they were taking a strong 'moral' stance against people who published AIDS-denialist papers.

1. [http://books.google.co.uk/books?id=r3nLzFaK454C&printsec=frontcover&dq=Louis+Menand+academic+freedom&source=bl&ots=G690Y500r6&sig=0bScrfPCx7gAevelNG-jceG\\_k5M&hl=en&ei=NiNJTPKxHaH20gS07fCECw&sa=X&oi=book\\_result&ct=result&resnum=2&ved=0CBwQ6AEwAQ#v=onepage&q&f=false](http://books.google.co.uk/books?id=r3nLzFaK454C&printsec=frontcover&dq=Louis+Menand+academic+freedom&source=bl&ots=G690Y500r6&sig=0bScrfPCx7gAevelNG-jceG_k5M&hl=en&ei=NiNJTPKxHaH20gS07fCECw&sa=X&oi=book_result&ct=result&resnum=2&ved=0CBwQ6AEwAQ#v=onepage&q&f=false)

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dearieme (2010-07-24 03:47:08)

The heart on the sleeve outweighs the brain in the skull.

G (2010-07-24 07:43:16)

"My understanding is that senior managers (in the private and public sector) are 'using' - even exploiting - their organization's resources in pursuing personal goals - engaging in a kind of moral grandstanding, in making large gestures which show how 'ethical' they are in their views - at everyone else's expense." I'm far from anti-union, but I do see this type of behaviour among militant union leaders (even low-level leaders) who just want to be seen to be championing a cause, usually at the expense of union members. It is another case of moral vanity trumping profit or even careerism. Happens that I posted recently about anger towards AIDS denialists. I read Kary Mullis's account and it seemed like there were questions to be asked, to say the least. It is funny/maddening to see 'liberal' people try to suppress debate, because these same people condemn censorship in virtually every other context. I suppose I say this because AIDS, like climate-change, is a perennial concern of educated liberals. You ever read cracked.com? They ran an article that listed Mullis as one of a number of 'clearly insane' Nobel winners, along with Brian Josephson, who studies ESP. I couldn't believe my eyes! You become a *household-name* nutcase for holding an unorthodox scientific opinion? It's not like he said AIDS was created by the Masons or anything...

Seth Roberts (2010-07-24 09:32:52)

I saw that cracked.com list. As one New Yorker editor would tell writers, "don't get it right, get it written."

Stephen M (Ethesis) (2010-07-25 15:01:25)

BRUCE CHARLTON ought to open up a competing journal, starting with the papers they excluded.

Stephen M (Ethesis) (2010-07-25 15:06:12)

What this reminds me of is a book I read in the late 70s about young millionaires. The profiles had a very large number of people who had been working on masters in business or economics and had stumbled on the fact that many business had parts there were worth more than the total value of the business itself. You could thus buy the business, break it up and sell the parts and make a substantial profit. All of this occurs because the people running the business and the owners (stockholders) have divergent interests. Most of them were flunked for writing thesis with this as the topic - their professors were certain that such a condition could never occur. What the profs missed was that these guys were the market forces that created a correction. Then, in the 90s, the trend began of people who sucked the revenue out of businesses, not in diversions (such as the ones evident here) but in excess CEO, etc. pay. Again, capture at work. In many of those cases you can make a business substantially more profitable by taking it over, firing the management team and replacing them with one that costs millions of dollars less. But capture, in all of its forms, is fascinating to watch. Sad in Charlton's case as well.

G (2010-07-25 17:45:27)

Stephen, what you wrote reminds me of Adam Curtis's excellent documentary series *The Mayfair Set*. I am forever trying to get people to watch his work; I think it's important. It happens that I pasted all of episode two into the following blog-post, but I would rather you watched it from the beginning; episode one is easy to find with a Google video-search. <http://thedailyg.wordpress.com/2010/05/26/some-painfully-pertinent-history-of-stock-market-speculation/>

Stephen M (Ethesis) (2010-07-25 18:39:21)

**And if Duesberg may be even partially correct, it is extremely dangerous that the proper scientific process has been so ruthlessly distorted and subverted simply to exclude his ideas from the official scientific literature.** <http://medicalhypotheses.blogspot.com/2010/05/medical-hypotheses-affair-times-higher.html> The real value in examining theories, especially ones that are wrong, is that refuting them is much more powerful than denying them. In addition, in refuting things, one learns. In denial, one avoids learning.

johannes borgstein (2010-07-30 06:33:26)

elseviers has now built a digital network that controls over 800 of the most important medical journals, both at the submission end and at the online access end. we should be asking ourselves who is elseviers? and what are their interests i suspect it is not a moral issue but a commercial issue curiously, the previous ceo of elseviers was also a paid director of GSK

lemmy caution (2010-07-30 18:15:18)

I am not sure. If "Medical Hypotheses" had the possibility of hurting the reputation of other Elsevier publications, it may make financial sense to drop "Medical Hypotheses" even if it is making money. Especially if they can find some less controversial magazine to put into its "bundles"™.

Laura Fisher (2010-10-04 14:52:59)

In response to the sacking of Dr. Charlton I have decided not to renew my subscription to Medical Hypotheses or its successor. I would hope others would do likewise. AIDS and its "cause" are not the only important medical topics to be willfully distorted for the sake of political gain. About 46 % of physicians in the US now are employees, rather than being self-employed. I believe this makes them bureaucrats and as such their first loyalty is to their employer, the bureau. Any loyalty or commitment they may have to their patient takes a second seat to their alliance with their employer. I have found Paul Berman, Shelby Steele and Thomas Sowell most helpful in my attempt to understand these very bad behaviors on the parts of intellectuals and bureaucrats. Insofar as one's best effort to sort out what is good science-based medical treatment clashes with that of the bureau, one tends to keep quiet lest one become its next target.

## **What's "Natural" Sleep? (more) (2010-07-24 09:29)**

This morning I woke up feeling very refreshed and in a good mood. I'd slept about six hours. I'd fallen asleep within seconds of turning off my bedside light. This is what usually happens. I almost always sleep this well. Yet I don't avoid caffeine during the day (I drink a lot of tea) nor artificial light at night (I do avoid fluorescent light at night). For a large chunk of my life my sleep was much worse. I never woke up feeling well-rested. I often woke up quite tired but unable to fall back asleep. A few hours later I'd fall back asleep and sleep a few more hours, much like the biphasic sleep called segmented sleep. Which is more natural – my current sleep or segmented sleep? [1]As I blogged, several scientists have said that segmented sleep is more natural.

I'm returning to this topic and sort of repeating myself because sleep is so important, "[2]almost everyone I [a NY Times writer] know complains about sleep," and the common cold so common. (When I improved my sleep I stopped getting colds.) Here, in chronological order of discovery, is [3]what I've learned improves my sleep:

1. Aerobic exercise. When I started swimming, I noticed that I fell asleep much faster – within a minute rather than within several minutes. Aerobic exercise didn't solve the bigger problem of waking up tired, however.
2. Skipping breakfast. This reduced early awakening. If you have any doubts about this, read about anticipatory activity in lab animals.

3. Seeing faces in the morning. Perhaps this deepens my sleep. It certainly makes it easier to go to bed in the evening (I stop wanting to do anything) and makes me wake up optimistic and looking forward to the day. The difference in how I feel when I wake up is like the difference between black and white and color. These days I watch about an hour of bloggingheads on a 22" monitor starting around 6 am.

4. Standing. I stand on one bent leg to exhaustion at least twice. Before that I got a similar effect by standing 8 hours or more, which was too hard to do every day.

5. Morning light. Every morning I go outside about 8 am. I try to stay outside at least 1 hour and ideally more.

6. Animal fat. I eat half a stick of butter (60 g) per day.

Maybe the 3 tablespoons of flaxseed oil I drink every day also helps.

Each one of these six factors probably reproduces Stone Age life, when people got a lot more exercise, didn't eat breakfast, chatted with their neighbors in the morning, etc. Were all six factors set at Stone Age levels for the Western Europeans that [4]Ekirch writes about or [5]Thomas Wehr's subjects (both of whom had segmented sleep)? Of course not. Had all six been at Stone Age levels, the segmented sleep seen by Ekirch and Wehr might have disappeared. As my segmented sleep disappeared.

My sleep still has room for improvement. When I stood for 9 or 10 hours I woke up astonishingly well-rested. I felt scrubbed free of tiredness. In the middle of the day, eight hours later, I would marvel how rested I felt. The problem with standing more now is that if I stand on one bent leg more than twice per day my legs get stronger and stronger and it starts to take a long time (e.g., 20 minutes) to reach exhaustion. I'm also unsure about the best amount of animal fat. More might be better.

Comments that [6]the night is long and sleep is short ignore that we can see by moonlight and starlight and that people chat after dark. In contrast to [7]this experiment with no artificial light, by J. D. Moyer, the things I do to improve my sleep produce no bad effects. And I sleep only six hours per night, which Moyer found isn't nearly enough.

Thanks to Heidi for the Moyer and NY Times links.

1. <http://www.blog.sethroberts.net/2010/07/21/whats-the-natural-pattern-of-sleep/>
2. <http://www.nytimes.com/1997/01/05/magazine/awakening-to-sleep.html?pagewanted=all>
3. <http://escholarship.org/uc/item/2xc2h866>
4. <http://www.historycooperative.org/journals/ahr/106.2/ah000343.html>
5. <http://www.nytimes.com/1997/01/05/magazine/awakening-to-sleep.html?pagewanted=all>
6. <http://www.blog.sethroberts.net/2010/07/21/whats-the-natural-pattern-of-sleep/#comment-470644>
7. <http://jdmoyer.com/2010/03/04/sleep-experiment-a-month-with-no-artificial-light/>

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G (2010-07-24 10:37:49)

Did you try my suggestion of bending your leg more? I assure you, you can easily make this exercise more difficult and keep the time down without losing relevant verisimilitude in the kind of stimulus. At the extreme strength-level imaginable, you could do ten or twenty minutes of continuous pistol-squats. I'm not sure any human is capable of this. Indian pelwanhi

wrestlers do oodles of this particular type of squat every day: <http://www.youtube.com/watch?v=jPSVpo4mzNI> You're just doing a low-intensity one-legged squat, mate - you can optimize this without losing any of the effects you're after; I'd almost lay money on it. After all, you know that walking and standing does as well, so you can probably safely narrow the required type of stimulus down to 'long-duration lower-body exercise'. Who specifically doesn't want strong legs? If you do them with good form they won't necessitate your doing a load of other exercises to balance out - I guess you would end up resembling a cyclist rather than a typical bodybuilder.

Laura (2010-07-24 10:39:57)

I've been doing more of these things, over time. Because of the posts I've read here, I started standing 8 hours a day at work for two semesters. I also started skipping breakfast because of the shangri-la diet (i take the oil in the mornings). I am very active throughout the day and I go to the RSF gym at night, though. A coworker calls me a vampire, since I am up most of the night. I don't need to sleep a lot. I see faces in the mornings, since I work at about 6 am. I don't get much morning light, though, because I am indoors at a cafe, where I work. I started eating 1/4 stick of butter every night. It actually also makes food taste very good, too! This has helped me be more productive and sleep a lot less. Also, since I am taking 3 tbsp of flaxseed oil everyday, I don't have to worry about eating food. I could eat very little in a day, so this helps me put my energy into doing things that have value to me, instead of thinking of what I will eat when I get hungry. Incorporating these ideas into my life has allowed me to save my job, which I was about to lose due to anxiety, and to move out of my parent's house. Also, it has kept me out of the hospital. Thank you, Seth and all the people who contribute/comment on this blog!! I love all of your ideas!!!

Seth Roberts (2010-07-24 12:56:13)

"Did you try my suggestion of bending your leg more?" No. To make it more about how long one muscle can hold out is to make it more about stressing only one muscle. Which will produce less muscle-stress signal than stressing several muscles. But perhaps there are more rounded (involving many muscles) ways to make it more difficult, as you say.

MT (2010-07-24 13:24:23)

I previously mentioned pistol squats and variations as well and still think they make sense. They would enlist a similar, if not identical, number of muscles and it would be simple to test with little downside and a potentially large upside - if it worked you could perhaps get the total-refreshment feeling you got from longer periods of standing. If more challenge didn't work, it would be clear within a few nights. Consistent with the general principles of self-experimentation you outline Seth. I'd do it, but I tried the 9 hr standing experiment and it did not improve my sleep, nor did the one-leg to exhaustion technique.

Jeff (2010-07-24 13:48:01)

I've experienced a bizarre shift in sleep habits. For my whole life I was a 10-hour sleeper. If I didn't get 10 hours, I'd fall asleep in class. I could never stay awake in meetings or lectures. About 30 % of every movie I saw in a theater I accidentally slept through. Then came a slew of intense anxiety episodes, which were probably exacerbated by malnutrition. At some point I experienced a severe shift in how I slept. Since then, my body is never drowsy and I can only get 5 hours of sleep per night. I wake up in the middle of the night often, sometimes taking 1-2 hours to fall back asleep. I never feel rested. I mention this because I find it interesting that before this occurred, I broke every "rule" in the book of sleep (drank caffeine at night, kept inconsistent sleep schedules, lots of artificial light, etc). Now I follow every rule in the book, yet it has no effect. I suspect something permanently changed in my hypothalamus (which can be damaged from stress and malnutrition), or my HPA-axis at large - permanent in the same way a type 1 diabetic undergoes a permanent biological change. This has been going on for about 2 years. The only relief I get is from trazodone. I will start trying some of these ideas to see how they affect my sleep. Aerobic exercise is something that had no subjective impact on sleep quality prior to my change; after, however, it does have an impact - I do sleep better if I exercise during the day. I find this interesting.

Patrik (2010-07-24 18:05:50)

@Seth Excellent post. Riffing on your thoughts here: 1. *Aerobic exercise. When I started swimming, I noticed that I fell asleep much faster - within a minute rather than within several minutes. Aerobic exercise didn't solve the bigger problem of waking up tired, however.* I think the benefits you received from swimming have to do with being in water at some temperature

that was considerably less than your own body temperature. Reason I think this is that I used to sleep quite well after swimming practice, playing water polo, surfing or swimming in the ocean. Also, Tim Ferris talks about hacking his sleep with ice baths. <http://www.fourhourworkweek.com/blog/2008/01/27/relax-like-a-pro-5-steps-to-hacking-your-sleep/> Last thing, when I do CrossFit too late in the afternoon, say 5pm, I have a very hard time falling asleep.

Robin Barooah (2010-07-24 19:46:40)

I find it interesting that standing was so significant in your results. Apparently studies have shown that standing more is significant for one's general health: <http://www.kurzweilai.net/study-links-more-time-spent-sitting-to-higher-risk-of-death> Had you seen this?

Seth Roberts (2010-07-24 21:15:45)

Patrik, you might be right but I continued to fall asleep quickly when I switched from swimming to aerobic classes and then racketball. Robin, I hadn't seen that study, thanks.

andrew (2010-07-25 05:48:53)

According to a study from the John Hopkins Bloomberg School of Public Health: "skipping breakfast was associated with increased prevalence of obesity (odds ratio = 4.5, 95 % confidence interval: 1.57, 12.90)" <http://aje.oxfordjournals.org/cgi/content/full/158/1/85>. So, while skipping breakfast may help you sleep better, it will (statistically at least), make you more likely to become obese.

Tom Moertel (2010-07-25 15:52:56)

Even though some studies [1] [2] found that skipping breakfast is associated with weight gain, the association does not mean that the first causes the second. One plausible explanation for the association, for example, is that heavier people are more likely to skip breakfast, hoping to keep their weight down. [1] [1]Association between Eating Patterns and Obesity in a Free-living US Adult Population [2][2]Energy Intake at Breakfast and Weight Change: Prospective Study of 6,764 Middle-aged Men and Women

1. <http://aje.oxfordjournals.org/cgi/content/full/158/1/85?maxtoshow=&hits=10&RESULTFORMAT=1&andorexacttitle=&and&titleabstract=breakfast&andorexacttitleabs=&and&andorexactfulltext=&and&searchid=1&FIRSTINDEX=0&sortspec=relevance&resourcetype=HWCIT>

2. <http://aje.oxfordjournals.org/cgi/content/full/167/2/188?maxtoshow=&hits=10&RESULTFORMAT=1&andorexacttitle=&and&titleabstract=breakfast&andorexacttitleabs=&and&andorexactfulltext=&and&searchid=1&FIRSTINDEX=0&sortspec=relevance&resourcetype=HWCIT>

Tom Moertel (2010-07-25 16:08:55)

Quick clarification: I should have written "One plausible explanation for the association, for example, is that people prone to gaining weight are more likely to skip breakfast, hoping to keep their weight down." Cheers, Tom

Kirsten M (2010-07-26 09:52:55)

Seth, have you tried standing on a BOSU or wobble board? I have a inflatable blue pancake type thing called a J Fit that I got off of Amazon for about \$15. I first got it to sit on at work, on the theory that maybe strengthening my core would help my back problems. (At first I could use it for only 20 minutes at a time, but now I sit on it most of the day. As a bonus, I have excellent posture. Also, my back problems are gone, but I think some other things—such as switching to flat shoes—made more of a difference.) Anyway, you can also stand on the JFit, or do sit ups on it, and it's designed to put you a little bit off balance and make your muscles work harder. One legged standing would definitely be more difficult, even using the same exact stance.

Lisa Wilcox (2010-08-31 13:53:12)

I am trying to figure out my sleep problems too. I live in the northwest (rainy gray Washington). I made an observation. On a sunny day, I laid out in the sun, with maximum exposure on my body, for about an hour and I DID sleep better that night. We don't get many days that I can do that. I just recently came back from California where I got lots of sun exposure so I assume that my Vit D is up there (also take supplements and eat nutrient dense foods) but my sleep is still poor. Waking many times



throughout the night and feeling less rested in the morning. So, I really think that the "sun" exposure has more effects/affects than providing the Vitamin D for me. It might be the "light" itself. Wondering if I got one of the those lights for people with Seasonal Affective Syndrome would help my sleep? I would like to try the standing on one leg. I will let you know how that goes.

elise (2011-10-28 07:42:09)

I have insomnia where I can fall asleep very easily but awaken two hours later and cant fall back asleep until dawn, it which case its time to get up. I have done quite a few experiments on my self with food and have found that oils or foods high in omega 3 will wake me up early. Worst offenders are flax, fish oil, chia seed. I also discovered inadvertently that omega 3 oils in lotions and other topicals are absorbed and will wake me up early even in the tiniest amounts (Im talking a few drops of flax or fish oil!). I should note that my insomnia began about 8 months after starting a program for acne which included 1-3 tablespoons per day of fish oil. Im pretty sure I messed up my omega 3 to omega 6 balance. I had symptoms of omega 6 deficiency that went away after I quit taking fish oil, but the insomnia persists. Supplementing with omega 6 oils helps somewhat but is not a cure. I fall asleep very easily but awaken two hours later and cant fall back asleep until dawn, it which case its time to get up. Any ideas?

### **Learning From "Pseudoscience" (2010-07-25 10:39)**

The second episode of BBC's [1]The Story of Science is about chemistry. It shows unusual sophistication by emphasizing that early chemists built on the alchemists. The alchemists invented techniques and equipment later used by "real" chemists such as Joseph Priestly – the ones who reached conclusions we still believe. Not everyone understands that some "pseudoscience", such as alchemy, is valuable.

A few years after I became an assistant professor, I realized the key thing a scientist needs is an excuse. Not a prediction. Not a theory. Not a concept. Not a hunch. Not a method. Just an excuse – an excuse to do something, which in my case meant an excuse to do a rat experiment. If you do something, you are likely to learn something, even if your reason for action was silly. The alchemists wanted gold so they did something. Fine. Gold was their excuse. Their activities produced useful knowledge, even though those activities were motivated by beliefs we now think silly. I'd like to think none of my self-experimentation was based on silly ideas but, silly or not, it often paid off in unexpected ways. At one point I tested the idea that standing more would cause weight loss. Even as I was doing it I thought the premise highly unlikely. Yet this led me to discover that standing a lot improved my sleep.

Richard Feynman, in [2]his famous "cargo-cult science" speech, failed to understand that "real" science can build on "pseudoscience":

Another example is how to treat criminals. We obviously have made no progress–lots of theory, but no progress–in decreasing the amount of crime by the method that we use to handle criminals. Yet these things are said to be scientific. We study them. And I think ordinary people with commonsense ideas are intimidated by this pseudoscience.

Absence of obvious progress (such as no decrease in crime) doesn't mean something is worthless. Bizarre ideas or unsupported ideas ("lots of theory but no progress") doesn't mean something is worthless. What's worthless, in terms of science, is not paying attention to reality. Not caring about how the world actually is. The cargo cults Feynman mentioned weren't worthless. They tested their beliefs. They found out the planes didn't land. Fine. It wasn't pseudoscience, it was just early science, where the reasons for doing stuff now appear ridiculous. Of course the alchemists had beliefs we now think ridiculous. How could they not have?

Science is fundamentally on the side of the weak, since it offers hope of improvement. The powerful not only can afford to ignore reality they would like to, because it might be inconvenient. So they do so as much as possible. When

I've heard "the debate is over" (= it's now time to ignore reality) it's always turned out that the person saying this (e.g., Al Gore, mainstream journalists) was powerful or credulous.

It's not bad that some people ignore reality. We need people like that. I think of the body: parts of it (e.g., sensory systems) are very sensitive to reality, parts of it (e.g., bones) are not. We need both. When leaders ignore reality is when trouble begins.

1. <http://www.bbc.co.uk/programmes/b00s9mms>

2. <http://www.lhup.edu/~DSIMANEK/cargocul.htm>

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G (2010-07-25 20:49:18)

Heh, I was totally with you until the last paragraph. I disagree on two counts: first, bones are very sensitive: they use a piezoelectric sense to continually redistribute mineral deposits according to the direction and magnitude of stresses. Second, you can't argue that some people 'should' be insensitive for the benefit of society - it's like saying we need a race of Morlocks toiling underground. We don't. Besides, folly doesn't help anywhere, at any level of society, whether you're a policy-maker or a fisherman. Blindness to reality is folly. The occasional accidental benefits of folly don't make it indispensable. Foolish people aren't so much like eyeless, insensitive people as people whose eyes can only see their own projections. When Al Gore looks at climate science data, he is projecting his own conclusions onto it. I can say this safely because to this day it is clear that we do not know what the truth is, so any overconfident conclusion - on either side - must be a case of projection. "The wish is father of the thought." Some people will always be more thoughtful or perceptive, but no one should be living in their own hall of mirrors, out of touch with reality. I love that you nailed that Feynman argument: I've heard that used so loosely all over the place, as an automatic trump-card, so it's good to see it downgraded from Scripture-status. You're right, if the Cargo-cultists gave up their method after seeing it didn't work, who can criticise them? Toddlers try out all sorts of things that seem stupid to adults just because they know more due to having already gone through the same experiments. If adults weren't so judgmental (and afraid of being judged) they would learn a lot more.

Nathan Myers (2010-07-26 14:52:13)

Congratulations, Seth, on discovering the value of research into the mechanisms of DNA replication, and sequencing genomes, and a million other things scientists do that don't seem to result directly in immediately useful therapies.

Seth Roberts (2010-07-26 16:52:09)

G, I didn't know that about bones. That's really interesting. I should have said that some parts of the body are much more sensitive to reality than other parts. Bones reflect reality more slowly than our eyes and ears reflect reality.

thehova (2010-07-26 22:23:16)

A bit off topic, but I wish that I could actually watch the BBC here in the USA. BBC America is pretty awful. I simply want a feed of BBC One.

Phil (2010-07-27 09:30:49)

You say "Whenever I've heard "the debate is over" (= it's now time to ignore reality) it's always turned out that the person saying this (e.g., Al Gore, mainstream journalists) was powerful or credulous." I don't think the claim that "the debate is over" is the same as saying it's now time to ignore reality. I also think that when the debate is over, it's OK to say the debate is over. Suppose someone asks me about, say, whether nicotine is addictive. That's not something I have any firsthand knowledge of — I've never done an experiment that would answer this, nor even read a paper about such an experiment. But

it's my impression that, well, the debate is over. If I say so, am I ignoring reality?

Seth Roberts (2010-07-27 10:35:29)

Someone asks you about nicotine. You say, "As far as I know, the debate is over." That's quite different than saying "The debate is over. Period." Which has, as far as I can tell, the underlying additional meaning that I (the speaker) know more about it than you (the listener) and can't be bothered to tell you why. But in any case I'm just describing my experience – cases where the speaker was uninterested in looking closely at the evidence behind the claim.

Nathan Myers (2010-07-27 14:26:18)

When we've seen case after case of "evidence" – the best that can be mustered – turn out to be cooked or outright fabricated, it becomes entirely reasonable to lose interest in the next one. I went along, following up denialism claims to see what might be there, for longer than I should have. Here's a time-saver: when you find somebody is trying to deceive you as part of making his case, you can stop looking at evidence, because you have already been notified that there is no case. Only an illegitimate claim stands to benefit from deception.

G (2010-07-27 16:40:28)

This book is available to download for free - somewhere, dammit - but I can't find it just now. Worth a read. Among many other very interesting things, it gives a great explanation of how bones work - they are surprisingly active. [http://en.wikipedia.org/wiki/The\\_Body\\_Electric](http://en.wikipedia.org/wiki/The_Body_Electric)

Phil (2010-07-28 14:13:08)

Seth, I still don't think that saying "the debate is over" is the same as saying "it's now time to ignore reality." Nathan, you can't stop looking at the evidence when you find that someone is trying to deceive you. Piltdown Man was a hoax, but that doesn't disprove the theory of evolution.

Nathan Myers (2010-07-31 18:01:57)

Phil: It means whoever cobbled up Piltdown Man has nothing to offer me. And it means that Seth's poster boys don't either; I will continue looking at evidence about global climate change, but not from them. Fortunately there are plenty of other people who have no desire to deceive. It happens that all the other evidence shows incipient disaster, at least for thousands of other species. It's just opinion that when thousands of other species go extinct, that's will be bad for humans too, but it is prudent to expect so until it's demonstrated otherwise.

## **The Economics of Medical Hypotheses and Its Successor (part 2 of 2) (2010-07-26 11:48)**

A successor to Medical Hypotheses, called Hypotheses in the Life Sciences, will be edited by William Bains and published by Buckingham University Press (BUP).

ROBERTS Does BUP hope to eventually make money from the successor journal? Or do they merely hope the subsidy required will decrease with time?

WILLIAM BAINS BUP is a small operation, and does not have the resources to subsidize Hypotheses in the Life Sciences beyond its start-up stage, so we hope to make enough money to break even fairly soon. Ultimately the aim is to be profitable. I for one am determined to put scientific quality first, and I have emphasized to BUP that I only want the journal to grow (and hence generate more revenue) when the quality of submissions allows it.

ROBERTS What led BUP to decide to publish the new journal?

BAINS I think a combination of similarity in philosophy and being in the right place at the right time. They thought it was an exciting project which would both raise their profile (in a good way) and make them money. Buckingham University is the UK's only private university, and as such takes a heterodox, even iconoclastic view towards what the academic establishment says is writ in stone. The Chancellor has a robust approach to academic and individual freedom. So a journal trying to do something rather new, enabling those with good ideas but little power to be heard, fitted with their approach. For me, an added advantage is that I deal directly with the man at the top. There are no intermediate layers of management to take decisions about the journal, and we discuss everything from philosophy to web page design. This is the sort of immediacy you do not get with a big publisher.

[1]Part 1 (Bruce Charlton). [2]Bioscience Hypotheses, a similar journal founded by Bains.

1. <http://www.blog.sethroberts.net/2010/07/23/the-economics-of-medical-hypotheses-and-its-successor-part-1-of-2/>
2. <http://www.biosciencehypotheses.co.uk/>

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Robin Clarke (2010-07-28 03:17:34)

I applaud William Baines's initiative with this new journal. My main reservation about it is that it explicitly disowns "peer review". The problem with "peer review" is not the peer-review system per se, of referring to reviewers (actually PREviewers). It would work fine if employed in a positive mode rather than a nitpicking closedminded mode. But by saying "we don't use peer review", this unnecessarily opens a wide door of opportunity for the deceitful Forces of Darkness to pretend that the journal lacks legitimacy. Also I dislike the word "Hypotheses" in the title. All my own published theories are developed structures that are far beyond mere hypotheses and attachment of such a word would demean them. I myself put forward a new title of "Biomed Ideas" but was too ill to develop it. I fervently hope the new journal will change to that far superior name as soon as possible; please consider any copyright I have on it transferred to yourselves!

Robin Clarke (2010-07-28 03:28:25)

In the previous I should have mentioned the case of my own autism theory publication. It was accepted by editor HJ Eysenck (most cited scientist ever) via a process of peer-review. Just his use of peer-review was an honest, open-minded one rather than the hostile sloppy bigotry that I had encountered from other journals (as explained in my letter in Nature <http://www.ncbi.nlm.nih.gov/pubmed/9121540> ). There's a link to the paper at top of <http://www.autismcauses.info> , which also has some indications of the update review I'm preparing.

### **Omega-3 and Dental Health (revisited) (2010-07-27 17:49)**

A few years ago I learned that flaxseed oil improved [1]my gums and [2]other [3]people's – especially [4]Tyler Cowen's. A few months ago I went to Beijing for two months. Toward the end of the visit my gums would bleed when I'd use a toothpick. Yet I was drinking 3 tablespoons of flaxseed oil every day, just like in Berkeley.

Well, my Beijing flaxseed oil was old. Stored in a freezer, yes, but about 9 months old. When I returned to Berkeley, I bought fresh flaxseed oil. In a week, my gums were much better. The bleeding stopped.

Last week I went to the dentist. He measured my "pockets" – the distance a probe can be inserted between the gum and the tooth. The readings were almost all 2's (mm), with a few 3's and one 1. Years ago, before flaxseed oil, the rear teeth were 4s and 5s. Now I floss and brush my teeth less than back then. Because of living in China, I haven't had my teeth cleaned in more than a year (unprecedented) so I have the most plaque ever in my life. Yet my gums are the healthiest they've been, after just a few weeks of good flaxseed oil. ("Your gums are in good shape," said the dentist.) This suggests that plaque doesn't matter, the opposite of [5]what one dentist told me and [6]what Wikipedia appears to say ("The focus of treatment for gingivitis is removal of the [usual] etiologic (causative) agent, plaque."). Nothing is said about too-little omega-3.

All this suggests that gingivitis, a disease of inflammation, is due to too-little omega-3. This is even more plausible because omega-3 is a precursor of an anti-inflammation signaling molecule. Here's the sequence of events that led to this conclusion: 1. Several people wondered if they could do the Shangri-La Diet with flaxseed oil, so I tried some. It seemed to improve my balance. 2. Careful measurements of my balance confirmed this. 3. Further measurements showed that more flaxseed oil continued to improve my balance until I reached 3 tablespoons/day, which is far more than any recommended dose I've seen. 4. Readers of this blog and friends tried taking flaxseed oil in similar amounts. Everyone who did so, as far as I know, found their gums greatly improved. 5. [7]One person stopped taking the flaxseed oil. His gums got worse. He resumed. They got better again. 6. The story I tell here.

Notice how important blogs (this blog) are in this story. It's a kind of microscience – I learn something via self-experimentation, I post it, people write in with their experience – that has turned out to be surprisingly informative, given the many ways it differs from professional science (no long training, no lab, no grants, no peer review).

1. <http://www.blog.sethroberts.net/2007/03/28/omega-3-and-dental-health/>
2. <http://www.blog.sethroberts.net/2007/10/03/joyce-cohen-gets-her-teeth-cleaned/>
3. <http://www.blog.sethroberts.net/2007/11/16/omega-3-what-happens-when-you-stop/>
4. <http://www.blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>
5. <http://www.blog.sethroberts.net/2007/03/28/omega-3-and-dental-health/>
6. <http://en.wikipedia.org/wiki/Gingivitis#Causes>
7. <http://www.blog.sethroberts.net/2007/11/16/omega-3-what-happens-when-you-stop/>

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stefan (2010-07-27 19:41:52)

Hi Seth, Could you please let me know if your practice is to "mouth wash" with the flax seed oil and then swallow it, or is it simply to swallow the flax seed oil? Thanks, Stefan

Seth Roberts (2010-07-27 21:41:26)

I just gulp it down (very fast), with my nose clipped shut. I leave the noseclip on for a few minutes to let the smell disappear.

Mike (2010-07-27 21:46:14)

Hey Seth, Thanks for posting. Any idea why Flaxseed Oil in China was not helping your gums?

Nathan Myers (2010-07-27 22:16:58)

I buy the Barlean brand that comes in a squeeze bottle, and squirt it in directly. When my gums are tender, I slosh it about before swallowing, and the tenderness clears up in a day or two.

Robin Clarke (2010-07-28 03:41:11)

Any reason to believe that fish oil would not have the same effect? Could it be something else in the flaxseed oil? (And I wasn't aware it was particularly obnoxious anyway.)

Jen (2010-07-28 04:49:16)

Do you think fish oil would have the same benefits, given that it's high in Omega 3s?

john (2010-07-28 05:49:25)

Tom Levy MD in his book about heart disease recommended using an irrigator with some hydrogen peroxide in it. It's easier than flossing. And lots of vitamin c.

Brian (2010-07-28 07:25:11)

Seth, why the nose clip in conjunction with the flax seed oil? I don't remember clipping even mentioned in the SLD but I guess here you're trying to avoid weight gain from flax seed oil or perhaps you're trying to improve your gums (and brain) while also losing weight.

Annie (2010-07-28 07:30:38)

Seth - I've been following your experiments with flax, both for dental health and appetite suppression. Do you suppose hemp seed oil would produce the same benefits? I'm inclined to use hemp seed oil because it's supposed to be a better balance of omega 6s and 3s. In doing so, I wonder if I'd be foregoing a benefit that is exclusive to flax?

ChrisF (2010-07-28 08:51:26)

Speaking for myself, I find the taste of flaxseed oil quite noxious. I assume that's why Seth uses a noseclip. Best consumption method for me is two tablespoons in a glass, a blast of faucet water and a fast chug. My gums have not noticeably improved, despite morning and evening consumption. I ordered my oil from Amazon but have left it sitting on the counter. Should it be refrigerated? Is there noticeable quality variation across brands?

Seth Roberts (2010-07-28 09:22:59)

Mike, why was Chinese flaxseed oil not helping? Because it was poorly processed. Probably was at room temperature too long. ChrisF, flaxseed oil needs to be refrigerated to slow down deterioration. I wouldn't buy it from Amazon because it is mailed without refrigeration. I haven't noticed quality differences across brands. Annie, hemp seed oil has much less omega-3 per ml than flaxseed oil. So it won't work as well. Even with flaxseed oil, I had to drink a lot to get the best effect. I am unaware of a benefit specific to flax. Since we get lots of omega-6 in our diet, e.g., from nuts, I never try to get more in one particular food. You are more likely to be getting too much omega-6 than too little, in my opinion. Jen, yes, I think fish oil would have the same effect.

ab (2010-07-28 09:45:45)

I have talked to 'older' people, who say that when they were growing up they would have a teaspoon of cod liver oil every morning (and that it tasted terrible - I can confirm that part). So it seems like we had the implicit information in significant parts of our society that omega-3's (cod liver oil is high in omega-3's) were important.

bjk (2010-07-28 14:53:52)

I've found the fermented cod liver oil the best delivery vehicle for omega3s. It's also important to consume the paste (chocolate and FCLO) more than once a day. Once a day usually didn't do the trick. Using the FCLO, I've reduced the acne on my face by about 75 % (this is in conjunction with reducing my vegetable oil/omega6 consumption by about 90 %). Significantly, my face doesn't feel irritated to the touch anymore, and it has a nice soft feel . . . I can shave without wincing. The FCLO was better than ordinary CLO, flaxseed oil, and sardines, all of which I tried, in order of increasing effectiveness. The dermatologist I visited recently said he'd never heard the vegetable oil -> acne theory before. It makes sense, though.

Dustin Mattison (2010-07-28 15:05:22)

Clary sage is a unique omega 3 source that is the most stable! Clary sage is the world's most stable natural source of Omega-3. In comparison, flax oil is oxidized in 20 minutes at room temperature, while clary sage oil remains intact under similar conditions for 2 years. <http://ecochicagoland.com/2010/07/clary-sage-seeds-as-a-unique-omega3-source/>

Susie (2010-07-28 16:35:07)

It does make sense that, as an anti-inflammatory, omega-3s might help with gingivitis. Try consuming Gudernoobs made by WooHoo Foods. The walnuts and flax are what make it high in omega-3s. They are tasty treats - you'd never guess you are eating health food! No additives or preservatives either.

Nathan Myers (2010-07-28 20:29:37)

I can't tell if the last posting is a joke, and that by itself makes it funny. The copious "oo" sounds help too.

Kirsten (2010-07-29 08:01:50)

@bjk: I've found something similar just from regular cod liver oil. I started taking that, combined with Vitamin D, after reading on the Cooling Inflammation blog that flushing associated with rosacea is caused by inflammation similar to Alzheimers (he called it Alzheimers of the face) and can be treated with increased amounts of D. (Summary written quickly and maybe not totally accurate.) With chewable Carlson's D, and then D + Carlson's CL oil (which also has D) My flushing disappeared almost overnight. Also, while previous attention to gut bacteria (though diet and supplementation) had mostly taken care of my acne, the oil took it the rest of the way-and helped to get rid of that irritated feeling you mention. For a while, it felt like anything on my face-fingers, the ends of my hair, moisturizer-would irritate my skin and cause a breakout. Now, nothing seems to. And on the rare occasions when I do break out, it clears up right away. And Seth: My gums got pinker and pinker (as opposed to red) with this supplementation, which worried me (I thought maybe I was making myself anemic or something) until I read-I think on your blog-that red gums signal inflammation while pink gums are nice and cooled down.

TalkingRat (2010-07-30 16:30:21)

From The Omega Diet (Artemis Simopolous, M.D.) has a chapter on omega-3 and the immune system, including a paragraph on its use to reduce gingivitis. She cites a French study where half the subjects got 1.8g EPA plus DHA supplements or olive oil supplements, the other half got olive oil supplements. They were told to practice "intensive" oral hygiene for two weeks and then were told not to brush or floss for 3 weeks. The omega-3 showed less sign of gingivitis. The citation: Campan, P., P. O. Planchand, and D. Duran. Polyunsaturated omega-3 fatty acids in the treatment of experimental human gingivitis. Bull Group Int Rech Sci Stomatol Odontol, 1996; 29(1-2):25-31. Both this book and Dr. Andrew Stoll's (The Omega-3 Connection) mention that omega-3's benefits for the immune system came from a study of the Greenland Eskimos in the 1970s. The first book is mostly a food book, the second is more about fishoil in improving brain health, esp. depression (Stoll does research in Psychopharmacology). My note: high quality extra virgin olive oil has also been shown to have anti-inflammatory properties.

Sarah Schatz - Allergy-Free & GAPS Menu Planners (2010-07-31 17:56:44)

This is very interesting. Thanks for posting this. I take flax seed oil along with fish oils and cod liver oil, but didn't know it was helping my gums. However at my last dentist visit, it was much less painful for the dentist to probe my gums, so I think that says a lot right there.

Debra (2010-08-06 09:34:01)

I've just started looking into the SLD and the oil thing. Can't you take the flaxseed oil in capsule format?

Dentist in Los Angeles (2010-08-09 15:10:24)

I have been using borage oil, for omega3s, does it work the same as flaxseed oil improving you gums?

Terrence Tormey (2012-01-27 13:48:27)

This makes sense. About half of all Americans suffer from inflammatory gum disease. Omega-3s in sufficient dose have an anti-inflammatory response. But note a couple of points here, flax-seed oil is a poor source of omega-3, especially when compared to omega-3 from fish oil. Note too, most store bought fish oil capsules actually contain little omega-3! Only 25 -30 % of the contents of the fish oil capsule is actually omega-3. Most of the content is filler, like saturated fats, or omega-6, which is pro-inflammatory. There is also evidence that the ratio of EPA to DHA has an effect on the anti-inflammatory activity. I have seen research done at a major teaching hospital that shows that there is an optimal ratio of EPA to DHA that shows a true anti-inflammatory response. It is only found in a product called OMAX3.

Mrs Wagtails (2012-03-28 11:57:47)

I have read all your comments with interest. I have today started taking Golden Flaxseed Oil. Help! It's making me feel like I want to throw up. Any suggestions? I tried a grape straight after which helped a bit.

### Assorted Links (2010-07-28 07:20)

- [1]A well-done study about the July spike in medication deaths. From [2]The Browser.
- [3]How microbes protect us
- [4]Correlation between sitting and mortality, equated for physical activity.
- [5]Exercise and weight loss. I had a similar experience: After an extremely intense racquetball session, I lost 6-8 pounds over the next two weeks.

Thanks to Peter Couvares and Casey Manion.

1. <http://www.springerlink.com/content/n502614282p9266t/fulltext.html>

2. <http://twitter.com/TheBrowser>

3. [http://www.nytimes.com/2010/07/13/science/13micro.html?\\_r=1](http://www.nytimes.com/2010/07/13/science/13micro.html?_r=1)

4. <http://aje.oxfordjournals.org/cgi/content/abstract/kwq155v1?maxtoshow=&hits=10&RESULTFORMAT=&fulltext=sitting&searchid=1&FIRSTINDEX=0&resourcetype=HWCIT>

5. [http://www.stat.columbia.edu/~cook/movabletype/archives/2010/02/exercise\\_and\\_we.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2010/02/exercise_and_we.html)

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Zubon (2010-07-28 21:03:25)

Point of clarification: you had ONE intense racquetball session, followed by 6-8 pounds of weight loss, rather than taking up intense racquetball regularly?

Seth Roberts (2010-07-28 21:52:49)

Zubon, I played racquetball regularly. I didn't lose weight. Then I had ONE extremely intense session and did lose weight.

Wyman Brantley (2010-07-29 12:23:37)

From the second link: "Dr. Khoruts mixed a small sample of her husband's stool with saline solution and delivered it into her colon[...]Her Clostridium difficile infection disappeared[...]and has not returned since." Apparently Miranda July was on to something! <http://www.thechurning.com/2005/10/25/poop-back-and-forth/>



## **"No One's Going to Care About You Like You Do" (2010-07-28 09:12)**

At the end of [1]a BookTV interview of Harry Markopolos, the guy who discovered Madoff's Ponzi scheme, Markopolos says

No one's going to care about you like [= as much as] you do.

He meant this as financial advice: Make up your own mind about how to invest your money. Don't assume someone else has done the necessary thinking.

My self-experimentation led me to the same conclusion, [2]as I wrote here. My self-experimentation uncovered helpful treatments (e.g., how to sleep better) that the experts (in this case, sleep researchers) had missed. I theorized that this was partly because I cared more than they did about the quality of my sleep. I had "the motivation of a person with the problem"; they didn't.

1. [http://www.c-span.org/content/XML/podcast/MP3/arc\\_btv041710\\_markopolos.mp3](http://www.c-span.org/content/XML/podcast/MP3/arc_btv041710_markopolos.mp3)

2. <http://www.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

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Janet (2010-07-28 12:30:13)

Or, as Hillel said, "If I am not for myself, who is for me?"

Bob (2010-07-29 07:29:53)

Tell this to our ruling class who seem convinced that those of us in the great unwashed masses cannot be trusted to make our own choices. They will enact policies that nudge, and force, us in directions that are in our best interests.

## **Premier of Canadian Province Gets Involved in MS Research (2010-07-29 04:28)**

[1]How strange:

In a striking departure from his political counterparts across the country, Saskatchewan Premier Brad Wall says his government will finance clinical trials of liberation therapy, a contentious experimental procedure for multiple sclerosis patients.

Of course, the heads of provinces don't usually get involved in research at this level of detail. However, "Saskatchewan has the highest rate of MS in the country," says the article.

In Part 5 of The Story of Science (BBC), Michael Mosley, the presenter, said that for hundreds of years medical students were shown a human liver and told it had three lobes. They were told that because that's what Galen had said. However, human livers do not have three lobes. As the students could see. Mosely is a doctor. "When I was a medical student," said Mosley, "there was tremendous pressure to conform." MS researchers have said for a long time that MS is an autoimmune disease. Could this have been as misleading as Galen's description of the liver?

Thanks to Anne Weiss.

1. <http://www.theglobeandmail.com/news/politics/saskatchewan-wall-vows-to-fund-contentious-ms-treatment/article1653519/>

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## A Month of Omega-6 (2010-07-30 03:57)

[1]Susan Allport, having written *The Queen of Fats*, unsurprisingly eats a diet high in omega-3 and low in omega-6. For one month, however, she ate a diet with more omega-6 and less omega-3 and wrote about it- like *Supersize Me*, except far more realistic.

O magazine commissioned a story about it but didn't run it. "My weight gain was only 0.5 pounds and they thought their readers wouldn't see the importance of that," says Allport. Her draft is [2]here. There were three striking changes over the month: the omega-6/omega-3 ratio in her blood doubled (implying that this ratio is controlled by diet rather than by stored fat); her belly fat noticeably increased; and the elasticity of her arteries decreased by 20 %. This supports Allport's belief (and mine) that omega-6 is dangerous when consumed in large amounts, as it is if you eat a lot of food cooked in vegetable oil.

The American Heart Association [3]recommends that Americans eat more omega-6. The justification of this recommendation says nothing about [4]the Israeli Paradox, which to me is the best reason to avoid a diet high in omega-6. Allport's experience is another reason.

Allport is also the author of [5]*Explorers of the Black Box*, about neuroscience research.

1. <http://www.susanallport.com/>

2. [http://www.susanallport.com/files/Omega-6\\_Me.doc](http://www.susanallport.com/files/Omega-6_Me.doc)

3. <http://circ.ahajournals.org/cgi/reprint/CIRCULATIONAHA.108.191627>

4. <http://www.blog.sethroberts.net/2007/02/02/the-israeli-paradox/>

5. <http://www.blog.sethroberts.net/2007/10/25/should-mark-twain-have-won-a-nobel-prize/>

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Annie (2010-07-30 06:12:27)

Seth - What are foods that are typically high in Omega 6? I'm a vegan and have a feeling that this diet naturally keeps Omega 6 levels low anyways. Put differently, what are foods that are high in Omega 3s, but not high in Omega 6s? Flax oil is one, I'm assuming.

q (2010-07-30 07:12:26)

interesting. how do they measure the the elasticity of arteries? (i can look that up myself, and i will.)

Melissa (2010-07-30 18:05:46)

Annie, you should read the article :P It appears Allport keeps her omegas balanced by using - flax, walnuts and canola and NOT

using - peanut butter, soy oil, corn oil There are other ways to balance, but for a vegan her approach is perfect...except it relies on ALA for omega-3. Now that they have vegan supplements of DHA, which is the form immediately usable by the human body...I suggest those.

M (2010-07-31 23:29:55)

Seth- How do you avoid lots of food cooked in vegetable oil in Beijing? It seems it's very hard to do here!

DamnDirtyApe (2010-08-01 00:57:49)

The "Israeli Paradox" is no paradox at all - it's simply more evidence that a low-fat diet high in vegetable derived PUFAs is unhealthy. To those of us who generally follow the opposite of the food pyramid and who consume plenty of natural saturated fat from grass-fed beef and fish with excellent O3-O6 ratios, recommendations from the American Heart Association or the USDA are irrelevant.

Seth Roberts (2010-08-01 09:41:21)

"How do you avoid lots of food cooked in vegetable oil in Beijing?" Because I eat lots of butter, flaxseed oil, and yogurt, I eat only one normal meal per day. Sometimes I cook that meal myself (using no vegetable oil). Sometimes I have grilled meat or boiled fish at that meal.

Tom (2010-08-01 21:35:16)

"Because I eat lots of butter, flaxseed oil, and yogurt, I eat only one normal meal per day." Interesting. I'm going to try amping up my butter + omega 3 oil consumption and similarly try 1 meal/day. (When I don't eat enough butter or fish/coconut oil, I get hungry for extra meals and/or get carb cravings.) Seth, one question...are you finding that taking that much oil is resulting in 'intestinal difficulties'? (If I take more than 1 T fish oil I am likely to need to race to the bathroom at some point the following day.)

carroll (2010-08-04 00:57:17)

Joel Kauffman only rated Susan Allport's book with 2 stars because it had so many errors of science (see amazon customer review forum for his main issues). For a list of 67 more errors email him at kauffman@bee.net

Great links for the weekend! (2010-08-27 13:04:34)

[...] I'm interested in the omega 3/6 ratio. If you still aren't convinced by all the fuss then it's interesting to read about Susan Allport's experiment, summarised and linked to on Seth Robert's blog. Shame on O magazine for not publishing the final article. If you want to learn more about omega 3 testing then Mike T Nelson interviewed Dr Doug Bibus about the subject: [...]

## **"Without Great Teachers, Nothing Else Matters" (2010-07-31 10:08)**

I could watch [1]these video clips (also [2]here) all day. You may have learned about Doug Lemov from [3]this NY Times Magazine article. The quote "without great teachers, nothing else matters" is from [4]the website of the organization (Uncommon Schools) that Lemov founded. The clips show techniques he has isolated that great teachers use in elementary school.

My research is fundamentally about deficiency diseases. I find things present in Stone Age life but absent now whose absence causes problems. Sometimes I work backwards (from present to past): why am I not sleeping well? This turned out to have a Stone-Age-related answer. Sometimes I work forwards: I study something present in Stone-Age life but not now and learn it makes things better: standing (better sleep), morning faces (better mood).

So I know a lot about deficiency diseases. One curious thing about them is the opportunity they present. Without scurvy, we wouldn't have discovered Vitamin C. Once we've discovered Vitamin C, we can figure out the optimal amount, possibly leaving us better off than before scurvy became a problem.

This is what I thought as I watched these clips. Formal education is unnatural. No wonder it's so hard. These clips, however, show that with considerable understanding of psychology you can solve the problems it presents. And perhaps leave us better off than before formal schooling began.

1. <http://www.uncommonschools.org/usi/aboutUs/taxonomy.php>
2. <http://www.nytimes.com/interactive/2010/03/07/magazine/20100307-teacher-videos.html?ref=magazine#/correcting>
3. <http://www.nytimes.com/2010/03/07/magazine/07Teachers-t.html?ref=magazine>
4. <http://www.uncommonschools.org/usi/aboutUs/taxonomy.php>

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Maria Droujkova (2010-07-31 18:27:35)

While the techniques themselves are neutral, people often use them to manipulate students and rob them of choices. Consider views by Alfie Kohn about the techniques of praise and reward, for example.

MT (2010-07-31 21:46:32)

I think Lemov and Kohn are compatible – the danger Kohn and others identify with praise is related to its extrinsic focus, but Lemov's techniques are respectful and promote intrinsic sources of motivation. They focus on behaviours rather than on global characteristics of the child for instance. Alfie Kohn's work is fantastic. So is Lemov's. The more widely read they are the better the world will be.

eoA (2011-07-18 11:23:42)

Teacher and educators aspiring to becoming great teachers and educators may find this useful:  
<http://www.geocities.ws/greatteachersari/index.html>

## 5.8 August

### Is It Obvious to Walk to Control Blood Sugar? (2010-08-01 08:01)

[1]I discovered via self-tracking that I could get my fasting blood sugar much closer to optimal by walking an hour per day. This took me a year to figure out and I discovered it by accident. [2]Phil commented that I could have learned the same thing more quickly by searching websites or asking my doctor.

Whether I was rediscovering the fairly obvious [3]is important to me. [4]This website by [5]Janet Ruhl, who has diabetes, is named "How to get your blood sugar under control". Its advice says nothing about exercise, much less walking. Here's one reason why:

I [Ruhl] currently control my own diabetes using a fairly low carbohydrate diet and very low doses of fast acting insulin at meal time. . . . At one point I exercised daily for a year and got my body fat down to 24 %, which put me into the "Fitness" category for a woman my age. Despite what my doctors had told me, weight loss and intense fitness didn't do a thing for my blood sugars, which got worse.

Emphasis added. I too did recommended amounts of aerobic exercise. I too found my blood sugar was nevertheless unpleasantly high. The usual recommendation of aerobic exercise may make it less likely you will do the long low-intensity exercise (ordinary walking) that my results suggest works. You may think: I've already exercised. I'm tired.

[6]"Be very paranoid about any new drug."

1. <http://www.blog.sethroberts.net/2010/07/18/fasting-blood-sugar-reduced-by-walking/>
2. <http://www.blog.sethroberts.net/2010/07/18/fasting-blood-sugar-reduced-by-walking/#comment-469396>
3. <http://www.blog.sethroberts.net/2010/07/20/fasting-blood-sugar-reduced-by-walking-cont/>
4. <http://www.phlaunt.com/diabetes/14045524.php>
5. <http://www.blog.sethroberts.net/2007/10/27/why-blog-interview-with-janet-ruhl/>
6. <http://diabetesupdate.blogspot.com/2010/07/no-i-am-not-paranoid-about-drug-company.html>

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Phil (2010-08-01 13:55:05)

I think we both agree that some people (and some websites) recommend moderate exercise, others don't. It's just a matter of degree. If I type [reduce blood sugar] into Google, the first site that comes up is [1]which says "An easy way to lower blood sugar levels is to stay fit and healthy....This exercise does not need to be a grueling workout. Thirty minutes of exercise a day, even walking, will help to lower blood sugar levels. Walking to the store instead of taking the car is all that may be necessary to provide you with some much needed exercise." Of course, that may not be bad advice for most people: just because you (Seth) seem to get more blood-sugar benefit more from moderate exercise than from vigorous exercise doesn't mean that's common. The second site I find is [2]wisebread.com, which gives a list of "8 cheap ways to lower your blood sugar." The very first one is "Exercise", where it says "...Now, the results of this can depend on the medication that you take, but many diabetics find that if they have high blood sugar, a brisk 20 minute walk can lower their sugar. I've lowered mine by up to 40 points with just a half hour of walking." The third site, though, squidoo.com, does only recommend "vigorous" exercise. And, as I mentioned in a comment a week or two ago, when I did a more specific search for "pre-diabetes," most of the top hits recommended either "walking" or "brisk walking." I'm not sure why it's so important to you, whether or not the advice to walk or get other moderate exercise in order to reduce blood sugar is already widely know. It clearly is widely know, but it is not universally known. Does it matter, really, whether this advice is given by 30 %, 50 %, or 70 % of the most popular websites, or the extent to which the number varies whether you search for [reduce blood sugar], [control blood sugar], [treat diabetes], [treat pre-diabetes], etc.? You discovered something that is useful to you, that is already widely known...that's great! What's the problem? If you think that moderate exercise is good but intense exercise isn't, that's a stronger claim — lots of these places say any exercise is good, including moderate exercise, but few of them say that only moderate exercise is beneficial. So if that claim is true, then you might be onto something more important. But I think you're doing an awful lot of generalizing from a very small sample if that is your claim.

1. <http://www.wisageek.com/how-can-i-lower-my-blood-sugar.htm>
2. <http://www.wisebread.com/8-cheap-ways-to-lower-your-blood-sugar>

Phil (2010-08-02 10:46:27)

Sorry about the mistake in the first link in my previous post, but I have no way to edit and fix it.

TalkingRat (2010-08-02 16:21:44)

It's possible that healthcare professionals know that ordinary walking improves glucose, but they advise patients to do aerobic exercise because of the secondary benefit of fitness. They may also assume that people will be reluctant to commit to a longer exercise time. But if they know, they really ought to give patients the choice of time vs. activity level. There seem to be a lot of people who find it painful to move vigorously, and it may be easier to get started with moderate exercise, even though they need to walk longer. The 10,000 steps pedometer campaign comes to mind as a recognized alternative to aerobic exercise.

Nathan Myers (2010-08-02 21:31:53)

I'm still curious to see whether small amounts of cinnamon make any difference in your blood sugar level. Every mention I find of the effects of cinnamon intake on type-2 diabetic blood sugar level carries on at length about the terrifying toxicity of certain components of cinnamon. We know from the way the effect was discovered – test subjects trying to raise their blood sugar by eating apple pie – that the useful dose is so small that any such toxicity is negligible. It must gall them that they can't outlaw cinnamon.

Gian (2010-08-04 02:16:17)

The normal fasting sugar of 84 is typical of healthy people not on low-carb diet. The healthy low-carb eater may have fasting sugar of 100 and still have HbA1c of 4.4 % since his sugars don't increase much after eating. See HyperLipid blog for details. The thing is whether walking improves the HbA1c or equivalently postprandial sugar level. Fasting level per se is not much indicative of subtle problems. People may have abnormal postprandial sugars but still have normal (even 84) fasting.

The 50 Best Health Blogs (2010-08-09 20:38:50)

Jenny's Diabetes Update blog is excellent, and she does a great job of exposing bad science.

Josh (2010-11-28 00:30:25)

In my experience with high blood sugar (some cases of blurry vision last winter), aerobic exercise like jogging and walking was the most effective way for me to lower my blood sugar, eating less sugar simply didn't do the trick. I imagine it was still swimming around my bloodstream, and blood sugar is such a sensitive thing that once you're used to high blood sugar you forget what feels right and what feels bad. I'd say stopping it before it gets to that point is the best way to prevent developing more severe form of diabetes. But I'm no doctor or anything and that's just my opinion

Johno (2011-04-02 07:16:07)

interesting.. I usually control my high blood sugar by avoiding white carbs and exercising regularly.

## **Quantity Versus Quality of Research (2010-08-02 06:51)**

In [1] this interviewer Craig Venter says that sequencing the human genome has had "close to zero" medical benefits so far. I thought this comment was even more interesting:

The human genome project was . . . supposed to be the biggest thing in the history of biological sciences. Billions in government funding for a single project – we had never seen anything like that before in biology. And then a single person comes along and beats scientists who have been working on it for years.

The government-funded people used inferior methods, said Venter:

Initially, Francis Collins and the other people on the Human Genome Project claimed that my methods would never work. When they started to realize that they were wrong, they began personal attacks against me.

The government-funded research was high in quantity ("billions") but low in quality.

A similar story emerged from the Netflix Prize competition. Netflix had in-house researchers who had tried to do the same thing as the competitors for the prize: predict ratings. The algorithm they'd developed took two weeks to run. According to my friend David Purdy, one of the competitors for the prize managed to compute the same thing

in an hour, the same sort of speed-up that Venter is talking about. The in-house research was high in quantity (it had been going on for years) but low in quality.

From my point of view, a similar story comes from my self-experimentation. Working alone, with no funding, I found several ways to improve my sleep – avoiding breakfast, standing a lot, standing on one foot, eating pork fat, etc. In contrast, professional sleep researchers have found nothing that has helped me improve my sleep. There are hundreds of sleep researchers and they've received hundreds of millions of dollars in funding.

Why such big differences in outcome? I think it has to do with the price of failure. When the government-funded genome researchers used inferior methods, nothing happened. They'd already gotten the grant. In contrast, Venter's group got nothing until they succeeded. In the case of the Netflix in-house researchers, use of inferior methods cost them nothing; they still got paid. Whereas the prize competitors didn't get paid unless they won. Use of inferior methods would cause them to lose. In the case of the sleep researchers, lack of practical results cost them nothing. They could still have a successful career. Whereas to me, without practical results I had nothing.

Thanks to Paul Sas.

1. <http://www.spiegel.de/international/world/0,1518,druck-709174,00.html>

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q (2010-08-02 08:46:37)

as far as the netflix prize goes, i'm sure if you counted the quantity of research from the losing teams, you'd far, far exceed the amount that a single in-house group could produce.

bgc (2010-08-02 09:46:33)

'Medical' researchers aren't even \*trying\* to make people better; they are trying to get funding. Most know nothing about medicine, even from their personal experience (because they are young and healthy) - and, BS aside, couldn't care less about medicine, only 'models' of disease. They want to, need to, impress the big names in their field - the people who decide who gets published, gets grants, gets jobs, promotions and prizes; but why should they want to impress sick people, or make their lives better? Where's the career advancement in that? Indeed medical researchers typically have no involvement with sick people in any way (except, maybe, to use them as experimental animals).

G (2010-08-02 09:51:20)

Teams with a grant or contract may feel that there is a stinging price of failure out of sheer professionalism if nothing else, but most workplaces are demoralizing enough to dull those kind of ethics and sensitivities. Especially in large companies.

ab (2010-08-02 10:10:23)

Some other possible reasons for Venter's success might come from relatively unique attributes vis a vis other contemporary scientists (from his autobiography): "Of all my memories, the most vivid is my total and absolute freedom. [...] During my childhood in California, my parents simply told me to "go play." Given this heady license, I discovered that I loved taking risks and facing challenges - a side of me that I have not yet outgrown." (p.5) "Every day of my childhood was a day of play and exploration that had a bigger impact on my development than anything I was taught in school [...] I think that one reason I was able to become a successful scientist was that my natural curiosity was not driven out of me by the education system." (p.7 - Venter says he was not very engaged in schooling, and often received poor grades) "I can also recall only too well how my folks constantly rewarded my better-behaved older brother, a mathematical prodigy. I, on the other hand, was threatened with

visits to the juvenile detention home to scare me into better behavior.” (p.9) Venter likes taking risks and isn’t too interested in what other scientists think. He also had an unconventional education (when he graduated from high-school, he didn’t go to university, he went surfing, and so on).

Phil (2010-08-02 16:55:11)

q makes a good point. The quantity of work in the netflix contest was enormous.

Phil (2010-08-02 17:03:10)

I just read the Venter interview...everyone should read it, it’s terrifically entertaining. Venter is a piece of work.

Dennis Mangan (2010-08-03 06:11:19)

Ever notice how in the discussion section of most scientific papers, you almost always read ”further research is warranted”? If it weren’t, the scientists who wrote the paper would be out of work.

LemmusLemmus (2010-08-03 07:06:38)

That’s right, Dennis. The usual paper published in a scientific journal answers all the questions in its field of study, but its authors routinely denigrate their own work by dishonestly suggesting that the field needs further study. They do that because suggesting your work is lower quality than it actually is happens to be a brilliant career strategy.

bjk (2010-08-03 07:18:51)

Does a dermatologist/oncologist/etc. who does research at a university ever see patients? It would seem like an easy side business. Just an outsider wondering aloud.

Aaron Blaisdell (2010-08-03 09:43:02)

The ”further research is needed” phrase irks me, too. I try to avoid it in my scientific publications, though sometimes a statement like it is needed to convey how preliminary a conclusion may be given a limited data set. It is probably more accurate and genuine to point out when an important, perhaps fundamental issue has so far received scant (inappropriately insufficient) attention. Seth and I have said something to this effect in our publications on behavioral variability.

Aaron Blaisdell (2010-08-03 09:45:02)

@bjk. I believe clinical faculty for the most part do see clients in a professional applied manner. I know the clinical psychology faculty in the psychology department at UCLA do have clients in addition to their own research programs. I think the faculty in the medical school do as well, though I don’t know if this is the case for all clinical faculty or only some.

Nathan Myers (2010-08-03 19:35:10)

bjk: Sorry, what planet are you writing from? Read Atul Gawande’s ”The Checklist Manifesto” to get a real sense of many of the systemic problems in American medicine, and the challenges real physicians face. The problems are not that physicians don’t know or care much, it’s that knowing and caring way more than you do are nowhere near enough to overcome the problems, which are many, varied, deep and, frankly, terrifying.

## **The FBI Gets It Backwards (2010-08-03 04:24)**

The FBI [1]recently sent a letter to the Wikipedia Foundation saying it should take down an image of the FBI shield – that is, a picture of an FBI badge – and threatened legal action. Supposedly the Wikipedia Foundation was breaking a law by posting it.

The Wikipedia Foundation responded that



[2]The law cited in the F.B.I.'s letter is largely about keeping people from flashing fake badges or profiting from the use of the seal

If nobody knows what an authentic badge looks like it becomes easier to fool people with a fake badge.

1. [http://www.nytimes.com/2010/08/03/us/03fbi.html?\\_r=1&hpw](http://www.nytimes.com/2010/08/03/us/03fbi.html?_r=1&hpw)

2. <http://www.law.cornell.edu/uscode/18/701.shtml>

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laurie (2010-08-03 09:26:15)

Generally love your posts, but..... If counterfeiters learn how to make more authentic badges, even more people will be fooled..... IJS

Seth Roberts (2010-08-03 12:07:48)

IJS, the sensible way to deter counterfeits is to make the design hard to copy.

Vic (2010-08-04 01:41:06)

federal bureaucracy of investigation

### **High-End Kombucha (2010-08-03 11:44)**

I'm in Vancouver for the Joint Statistical Meetings. The local Whole Foods sells a small bottle of kombucha for \$22. It's in a refrigerator in the health section, next to flaxseed oil. I asked an employee how this kombucha was different than the kombucha sold in the drinks section. More potent, she said. The next time I give someone homemade kombucha I'll say that it sells for \$22 in Canada.

Kombucha, let me repeat, is extremely easy to make. Tea + sugar + store-bought kombucha + three weeks.

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Aaron Blaisdell (2010-08-03 12:14:27)

Thanks for the reminder that I've got to get my next batch of kombucha going.

Alex Chernavsky (2010-08-03 14:17:30)

Making kombucha is fun, because you get to experiment with various permutations. I've made kombucha with raspberry leaf tea and with yerba mate tea. I've done second-fermentations with fruit juice (this makes it more carbonated, if you seal it in air-tight bottles). Not all experiments turn out well - the version with brown sugar didn't taste so good.

David (2010-08-03 17:25:22)

I'm really glad I make my own. You can't find it in the stores now (around Austin TX anyway). Apparently the alcohol content can go above .5 % when it ferments in the bottle.

## Assorted Links (2010-08-03 20:06)

- [1]Should you use a night guard (which covers your teeth) and if so which type?
- [2]For whom do university websites exist?
- [3]Why is 20 % of mother's milk indigestible?
- [4]The growth of Steve Martin's "oblique" comedy

Thanks to Paul Sas, Ryan Holiday, and Casey Manion.

1. <http://parents.berkeley.edu/recommend/medical/Dentists/mouthguard.html>
2. <http://xkcd.com/773/>
3. [http://www.nytimes.com/2010/08/03/science/03milk.html?\\_r=1](http://www.nytimes.com/2010/08/03/science/03milk.html?_r=1)
4. <http://www.smithsonianmag.com/arts-culture/funny-martin-200802.html>

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q (2010-08-04 09:02:24)

Night guards don't prevent grinding, and they only barely protect your teeth. In addition, my experience says that wearing a night guard encourages stronger grinding (because it's less uncomfortable to grind), which would be even more true of the drug store variety (which are softer). For a lot more information on the frustratingly bad state of understanding of bruxism, see here: <http://www.is.wayne.edu/mnissani/bruxnet/advice.htm> Unfortunately, there's not a good community now for people with the problem, and that page is old, so nobody (at least, nobody I know of) is pushing forward our understanding.

dearieme (2010-08-05 01:37:18)

American life expectancy is notably lower than British: I've often wondered if Americans are paying for their obsession with dentistry.

Dean (2010-08-05 19:40:15)

The NTI device is a type of night guard that is worn on the front teeth only. It was approved by the FDA in 2001 for migraine prevention. I never had migraines but I purchased it because I wanted a hard plastic night guard that would leach less toxins. I have used it every night for over three years and don't even notice it. [www.headacheprevention.com](http://www.headacheprevention.com)

## "Give Us Our Dammed Data" (2010-08-05 09:57)

[1]A large painting by Regina Holliday called "Give Us Our Dammed Data" shows 17 book authors, each holding the book they'd written about struggle with the health care system. For example, Lisa Lindell, who wrote [2]108 Days, which describes

her successful campaign to keep her husband alive. She was astounded when she read her husband's medical record. The nurse's notes specified that she had an "unreasonable" belief that her husband should live.

1. <http://e-patients.net/archives/2010/08/give-us-our-dammed-data-regina-holliday.html>
2. <http://www.108days.com/home.html>

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Regina Holliday (2010-08-18 05:56:05)

Thank you Seth for re-posting the piece "Give Us Our Dammed Data." Especially, thank you for high-lighting Lisa Lindell. She is a wonderful woman who has had a very hard journey.

Don't miss these great links! (2010-08-26 06:08:21)

[...] Seth Roberts reports on the troubles that the developed world is still having with its purportedly advanced and sophisticated health system. I won't get into detail as I find it too depressing. [...]

### **The Potti Scandal (2010-08-05 12:54)**

A Duke University associate professor named [1]Anil Potti who does cancer research turns out to have fabricated numerous details on applications for research money. The first fabrication to be noticed was that he had received a Rhodes Fellowship.

[2]This is interesting because Duke had previously investigated him:

Late last year [2009], there was a crescendo that caused Duke to stop clinical trials on three of his research programs, two involving lung cancer and one involving breast cancer. In each program, Potti was giving patients chemotherapy – determining what drugs might work best and in what dosage – based upon his genome research.

In January Duke let these programs resume after an internal review. [emphasis added] And these are the precise programs where Duke – for the second time – has now suspended new [emphasis added] enrollments. . . . In an official statement on the winter review, Duke said it had determined Potti's approaches were "viable and likely to succeed."â€?

Someone who appears to be a total fraud is called to Duke's attention – and [3]they find him innocent! This is what happened with the SEC and Madoff and [4]Memorial University and Ranjit Chandra. Chandra's research assistant, a nurse, told Memorial something was wrong and Memorial did nothing, or very little. Chandra then sued the nurse. He went on to write the paper that Saul Sternberg and I investigated.

Someone lies on his resume – it happens. That a prestigious institution like Duke let him continue to get away with it, possibly endangering patients and surely wasting vast resources, after it's brought to their attention – not so well-known. So far, [5]the New York Times has only covered the false-resume side of the story. You may recall [6]how poorly Duke responded to charges against its lacrosse team.

As this unfolded, [7]Duke had the following headline on its website: "Crisis management 101: What can BP CEO Hayward's mistakes teach us". From a CNN story in which a Duke expert was quoted.

[8]Duke.Fact.Checker notes that Potti's papers have at least 26 co-authors! Many with M.D.'s, who have or will tell thousands of trusting patients "you should take Drug X". The patient endangerment is not trivial.

[9]The Cancer Letter on Potti. [10]Another issue of The Cancer Letter about it.

1. <http://www.genome.duke.edu/people/faculty/potti/>
2. <http://dukefactchecker.blogspot.com/2010/07/potti-this-is-second-time-duke-has.html>
3. <http://dukechronicle.com/article/administrators-commission-internal-external-investigations-potti>
4. <http://www.sethroberts.net/chandra/index.html>
5. <http://prescriptions.blogs.nytimes.com/2010/07/20/duke-suspends-researcher-halts-cancer-studies/?scp=1&sq=potti%20duke&st=cse>
6. [http://www.newyorker.com/archive/2006/09/04/060904fa\\_fact](http://www.newyorker.com/archive/2006/09/04/060904fa_fact)
7. <http://dukefactchecker.blogspot.com/2010/07/guess-what-buffoons-put-on-dukes.html>
8. <http://dukefactchecker.blogspot.com/2010/08/duke-turning-to-national-academy-of.html>
9. [http://cancerletter.com/tcl-blog/copy148\\_of\\_whats-going-on-with-nih/CL36-27.pdf](http://cancerletter.com/tcl-blog/copy148_of_whats-going-on-with-nih/CL36-27.pdf)
10. [http://cancerletter.com/tcl-blog/copy150\\_of\\_whats-going-on-with-nih/CL36-28.pdf](http://cancerletter.com/tcl-blog/copy150_of_whats-going-on-with-nih/CL36-28.pdf)

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Tom in TX (2010-08-05 16:44:54)

I read this one years ago: [http://www.amazon.com/BETRAYERS-TRUTH-FRAUD-DECEIT-SCIENCE/dp/0712602437/ref=sr\\_1\\_2?ie=UTF8&s=books&qid=1281051671&s=8-2](http://www.amazon.com/BETRAYERS-TRUTH-FRAUD-DECEIT-SCIENCE/dp/0712602437/ref=sr_1_2?ie=UTF8&s=books&qid=1281051671&s=8-2) It told how some scientists had faked credentials and research to advance their careers and earn \$ \$ \$ \$.

G (2010-08-05 17:57:02)

â€œCrisis management 101: What can BP CEO Haywardâ€™s mistakes teach us...â€? ...About Covering Our own Butts more Effectively? Step 1: don't admit any failure unless it's absolutely unavoidable. Seems like primate social behaviour to me...

Jack (2010-08-21 15:20:36)

Duke's response to its lacrosse case was just the opposite. The craven administration fell to radical faculty pressure and essentially judged the entire team, guilty until proven innocent.

### **The Joan Evans Scandal (2010-08-05 18:40)**

I came across [1]the Potti scandal while trying to find out about the trouble faced by a woman named Joan Evans because a statistical analysis couldn't be reproduced. Robert Gentleman had mentioned this in a talk at the Joint Statistical Meetings in Vancouver. Look for The Cancer Letter, Gentleman said.

I now realize that Joan Evans is Joe Nevins, who co-authored a major paper with Potti.

Speaking of Potti, members of the Duke administration [2]are said to "have warned people not to even Google the name â€˜Anil Potti,â€™â€?

1. <http://www.blog.sethroberts.net/2010/08/05/the-potti-scandal/>
2. [http://cancerletter.com/tcl-blog/copy150\\_of\\_whats-going-on-with-nih/CL36-28.pdf](http://cancerletter.com/tcl-blog/copy150_of_whats-going-on-with-nih/CL36-28.pdf)

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### Unnoticed Conflicts of Interest (2010-08-06 11:52)

Gary Taubes pointed to [1]this PNAS paper about climate change and noted that one of the authors, Stephen Schneider, had a big non-financial conflict of interest: If it turns out the whole argument is wrong, he looks like a fool. The accompanying statement ("The authors declare no conflict of interest") is, if taken to mean the authors have no conflict of interest, wildly inaccurate. Readers unaware of Schneider's history wouldn't know this.

I came across a similar example today. A reader of this blog wrote extensive criticisms ([2]here and [3]here) of the idea that [4]prenatal ultrasound may cause autism. He believed Caroline Rodgers, my source for that idea, misrepresented the evidence. In particular, Rodgers pointed to a study that found ultrasound disturbed neuronal migration in mouse fetuses. She said it supported her idea. The reader disagreed, saying,

The bottom line for me is that Dr. Rakic (from the mouse study) clarified, "Our study in mice does not mean that use of ultrasound on human fetuses for appropriate diagnostic and medical purposes should be abandoned. Instead, our study warns against its non-medical use." Yes. Okay. No more boutique, keepsake ultrasounds. Great. But for Rodgers to skew this data (along with the FDA's and others') into claiming that ultrasounds under the care of an Obstetrics professional (and for medical use) are causing autism is disingenuous at best, unethical propaganda for the Midwifery Way at worst.

The reader is a professor who teaches composition. Maybe an English professor. He or she takes Rakic seriously, where I completely ignore his statement because of a conflict of interest. If Rakic questions "appropriate" ultrasound, he will be attacked in many ways, making his life unpleasant. I have no idea whether this swayed Rakic, but he would be only human if it did.

Of course developing neurons are unable to distinguish appropriate and inappropriate ultrasound. Rakic's statement is ridiculous as Rakic and all insiders (neuroscientists) know, I believe. All insiders know that there are dozens of examples where findings from mouse brains have turned out to be true for human brains, in spite of the many differences between them, and that there are thousands of grant proposals in which mouse brains are claimed to be a worthwhile model for human brains. All insiders know this, realize the pressure on Rakic to say what he said, and, like me, just ignore it. As far as I can tell, Rakic pays no price for misleading outsiders because the outsiders don't know they are being misled. (Just as with political lobbying: the public doesn't understand what's happening.) The composition professor doesn't know this, as far as I can tell.

Rodgers is not claiming that ultrasounds "are causing autism". She is saying they might cause autism, that there are several reasons to think so, and therefore (a) the ultrasound-autism idea deserves further scrutiny and (b) ultrasounds should be avoided as much as possible until more is known.

1. <http://www.pnas.org/content/early/2010/06/04/1003187107.short?rss=1&ssource=mfc>
2. <http://www.blog.sethroberts.net/2010/05/24/autism-and-prenatal-ultrasound-more/#comment-479976>

3. <http://www.blog.sethroberts.net/2010/05/24/autism-and-prenatal-ultrasound-more/#comment-480247>
4. <http://www.blog.sethroberts.net/2010/05/24/autism-and-prenatal-ultrasound-more/>

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Alex Chernavsky (2010-08-06 12:33:17)

Is Gary Taubes's analysis available on-line somewhere? I couldn't find it through Google.

Stephen M (Ethesis) (2010-08-06 21:00:09)

What is interesting is the paper I saw comparing ultrasounds and the loss of diagnosis quality with them vs. patients who were not receiving them. At present ultrasounds are performed for entertainment value, not diagnostic value, and as a revenue source. Interesting discussion, all in all, especially in context.

David (2010-08-06 23:27:04)

Perhaps Rakic changed the wording based on a referee's request. I'm not sure why some people think the only possible effect of ultrasound is thermal. It is well known that ultrasound can produce light (sonoluminescence), which is surprising in the same way it would be if a light breeze would occasionally ignite a fire. In controlled studies of this phenomena, the spectra of the light generated in a single ultrasonically driven collapsing bubble was measured, and the spectra appeared to be the tail of a black body spectra suggesting a transient temperature in the tens of thousands of degrees K. In any case, if the sound waves can produce light it isn't unreasonable to expect chemical changes too, and in fact books (Cavitation Reaction Engineering) have been written about its use chemical processes. Why anyone should think it is 100 % safe for a fetus and no further study is needed is mystery to me. This 1988 paper considers the safety issue of ultrasound induced cavitation: <http://iopscience.iop.org/0031-9155/33/11/003/pdf/pbv33i11p1249.pdf>

Seth Roberts (2010-08-07 15:36:19)

Alex, Taubes conveyed this to me by email. David, that's a good point about transient temperature. Rather than produce uniform heating, ultrasound may produce a power-law distribution of heating with a tiny fraction of places getting very hot. Only if one of those very hot places is important is any damage done. So a given dose of ultrasound might do no harm at all for 99 usages (with 99 fetuses) but then badly damage the 100th fetus. Conventional statistics are bad at picking up such effects; they are more sensitive to treatments that change each individual the same amount.

David (2010-08-08 12:00:31)

I suspected the imaging ultrasound was probably done at power levels significantly lower than the levels mentioned in that 1988 paper where light was generated during tests, but I was curious to check. It appears to be the case, at least 10 to 20 times less than the .5 to 1 W/cm<sup>2</sup> threshold for sonoluminescence mentioned: "At the opposite end of the ultrasound-intensity spectrum, much lower magnitudes of 1 to 50 mW/cm<sup>2</sup> are used to drive diagnostic devices that noninvasively image vital organs, fetal development, peripheral blood flow, and metabolic bone diseases such as osteoporosis<sup>7</sup> and, coincidentally, to evaluate fracture callus during healing<sup>8,9</sup>. The intensity level used for imaging, which is five orders of magnitude below that used for surgery, is regarded as nonthermal and nondestructive<sup>10</sup>. Nevertheless, low-intensity ultrasound is still a mechanical force, and it therefore holds the potential to influence bone mass and morphology through bone tissue's strong sensitivity to physical stimuli."

Hal (2010-08-09 17:30:02)

Every time a scientist publishes, if the argument turns out to be all wrong, he risks looking like a fool; but we don't consider that a conflict of interest. So I'm sure Taubes means something more. This paper claimed that the most actively publishing researchers in the field believe in anthropogenic climate change; also true of the most respected. I guess the criticism is that Schneider believes in ACC, hence if the paper is all wrong then that would mean he doesn't publish very much and is not respected in his field. But those propositions are objectively false. What is Taubes' angle that makes Schneider a fool if wrong?

Seth Roberts (2010-08-09 17:43:30)

Hal, by "wrong" Taubes meant wrong about global warming, not wrong about the thesis of the paper.

Patrik (2010-08-11 20:49:55)

Great post, Seth. My wife and I just had our first child and I brought up the question of ultrasounds with our obstetrician. Our obstetrician's response: "They are just sound waves. How could that hurt?" I was stunned by her obvious ignorance, obtuseness and lack of any introspection – as I discussed this with my wife afterwards, I too noticed an "Unnoticed Conflict of Interest" – namely, this obstetrician will never even consider the hypothesis that ultrasounds could be damaging or injurious because if she were to and recommend against ultrasounds in case where they are not medically needed, she might open herself up to litigation as hitherto she has been doing just that. She is simply stuck in this intellectual trajectory - where she is aware of it or not. We passed on all ultrasound that were not medically indicated, as well as the keep sake-y 4D type, which I would have loved to have seen, but wasn't worth the unknown uncertainty.

Mark (2010-08-23 16:20:11)

How can you advocate avoiding ultrasounds "as much as possible until more is known" without any data on what the harm caused by that alternative might be? Are ultrasounds never used for a legitimate diagnostic/harm-preventing purpose? By "as much as possible" do you mean in any case where the harm of giving the ultrasound is less than the harm of not giving it? But the very thesis of this post is that the former is unknown. I am very confused by your recommendation; it's vague, and to the extent it can be quantified doesn't appear to be very reasonable.

Paul liberti PhD (2010-11-21 21:06:46)

I was searching rates of autism increase and use of ultrasound in pregnancy. I did that because I have been working with a Chinese women who was pregnant and I was surprised to learn no use of ultrasound. (she is economically upper class). Based on that (plus my interest - grand son with autism) it occurred to do some searching i see there is a body on literature on concept. If they are not using ultrasound in China or other countries has anyone looked for correlations?

## **Too Much Murder in The New Yorker (2010-08-06 13:00)**

The title of [1]Nicholson Baker's chat about his New Yorker video-game article is "My Son is Killing Me". Which is a far better title than the print title of the article: "Painkiller Deathstreak". Why not give the article the much better title? Because another article in the same issue, a profile of Gil Scott-Heron, is called "New York is Killing Me." Too late.

1. [http://www.newyorker.com/online/2010/08/09/100809on\\_audio\\_baker](http://www.newyorker.com/online/2010/08/09/100809on_audio_baker)

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Mark (2010-08-08 21:06:36)

Both those titles are terrible. A decent title would be "Violent video games can help parents bond with their children." The title of anything on the web should be completely, utterly, boringly descriptive of the content, using the most ordinary language possible ("children," not "kids," for instance). On the web nobody wants to have cleverness or mystery meat up front. There's no time for that. If the title of the Google result or Google News result is not crystal clear and accurate, then bye-bye. It doesn't matter how clever you are if nobody reads you. With video and audio it's even more important, because you cannot skim the content. If you have your own blog and it's not a money-making venture, you can do whatever you want, I suppose. But if you're being paid for content, then the editor needs to see to it that interested readers can find your piece and recognize that

it would be of interest to them.

Seth Roberts (2010-08-08 23:40:39)

Mark, I don't think Nicholson Baker is worried about attracting readers via Google.

### **Vitamin K2 and Fermented Foods (2010-08-07 15:29)**

We evolved to like sour foods, foods with complex flavors, and umami foods, I believe, so that we would eat more bacteria-laden food. Why do we need to eat such food? Perhaps to get enough Vitamin K2. Vitamin K1 and Vitamin K2 are quite different. [1]A brief introduction:

The term vitamin K refers to a group of compounds that have a 2-methyl-1,4-naphthoquinone ring in common but differ in the length and structure of their isoprenoid side chain at the 3-position. The 2 forms of vitamin K that occur naturally in foods are phyloquinone (vitamin K<sub>1</sub>) and the group of menaquinones (vitamin K<sub>2</sub>, MK-n), which vary in the number of prenyl units. Whereas phyloquinone is abundant in green leafy vegetables and some vegetable oils, menaquinones are synthesized by bacteria; therefore, they mainly occur in fermented products such as cheese.

[2]A 2004 study found a huge protective effect of K2:

The scientists at Osaka City University gave 21 women with viral liver cirrhosis [which greatly increases your chances of liver cancer] a daily supplement of 45mg vitamin K2 (menaquinone) for a period of two years. A group of 19 women with the disease received a placebo for the same time. Liver cancer was detected in only two of the 21 women given vitamin K2 but nine of the 19 women in the control group, reports the team in today's issue of [3]JAMA (292:358-361). After adjustment for age, severity of disease and treatment, the researchers found the women receiving vitamin K supplementation were nearly 90 per cent less likely to develop liver cancer.

A huge effect, suggesting that K2 is necessary for a repair system to work properly. [4]This recent article is more support for the idea that K2 protects against cancer. The effect is weaker, perhaps because there was less damage needing repair.

1. <http://www.ajcn.org/cgi/content/full/87/4/985>

2. <http://www.nutraingredients.com/Research/Vitamin-K-found-to-protect-against-liver-cancer>

3. <http://jama.ama-assn.org/cgi/content/full/292/3/358>

4. <http://www.ajcn.org/cgi/content/full/91/5/1348>

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vic (2010-08-07 18:19:06)

you should include the caveat that spurious huge effects are easy to get with small samples



Seth Roberts (2010-08-08 06:23:42)

Vic, the one-tailed p value for the liver-cancer result is 0.02. From which I conclude that the reduction is unlikely to be bogus (it's unlikely that the two groups were the same) but could easily be a lot less than 90 %.

allan (2010-08-08 17:34:38)

Seth, You realize that bacteria fermented K2 (natto, sauerkraut, cheese) is generally of the MK-7 variety, while K2 found in animal products such as liver and butter is of the MK-4 variety. <http://www.westonaprice.org/abcs-of-nutrition/175-x-factor-is-vitamin-k2.html> #fig4 The effects are probably similar, but studies done on MK-4 don't necessarily provide evidence for consumption of fermented food.

Seth Roberts (2010-08-08 18:01:11)

I didn't know that. Thanks for pointing that out. I found the following in the article you linked to:

Future research will have to clarify whether the vitamin K2 synthesized by animal tissues and by bacteria are interchangeable, whether one is superior to the other, or whether each presents its own unique value to our health."

The Japanese liver-cancer study I describe doesn't make clear what sort of K2 they used. The article says: "The treatment group received 45 mg/d of vitamin K<sub>2</sub> (Glakay, Eisai Co, Tokyo, Japan)."

allan (2010-08-09 10:32:20)

Seth, I couldn't figure out what sort of K2 the Japanese study used either. I assume that it is MK-4.

Jen (2010-08-09 11:09:35)

The vitamin K2 used in the Japanese liver cancer study was Glakay. This product sheet [http://www.eisai.jp/medical/products/di/-EPI/GLA\\_SC\\_EPI.pdf](http://www.eisai.jp/medical/products/di/-EPI/GLA_SC_EPI.pdf) says that Glakay contains menatetrenone, which is the same thing as menaquinone-4, ie, the form of K2 used was MK-4.

Seth Roberts (2010-08-09 11:42:28)

thanks, Jen, that's very helpful.

Don't miss these great links! (2010-09-02 06:06:45)

[...] Seth Roberts notes that "we evolved to like sour foods, foods with complex flavors, and umami foods" so that we would eat more bacteria-laden food. Seth asks "why do we need to eat such food?" And he answers "perhaps to get enough Vitamin K2." Find out more here. [...]

John (2010-09-19 11:21:01)

<http://www.technologyreview.com/biomedicine/26178/page1/> Thought this article on transplanting gut flora might be interesting ;-)

## Journal of Participatory Medicine (2010-08-08 08:06)

The Journal of Participatory Medicine has released two issues ([1]first, [2]second). They help explain what participatory medicine means. The best article I have found among them is called [3]"What It Will Take to Embrace Participatory Medicine: One Patient's View" by Kate Lorig. Here is one bit:

In one of my regular clinics, I am met with a sign that tells me that if I am a half hour late, my appointment will have to be rescheduled. I once asked what would happen if I were not seen in a half hour and was

told to sit down and wait. Last year while waiting for scheduled appointments I read five full-length books (five hours each).

But overall the articles, even this one, are long on generalizations and short on specifics.

1. <http://www.jopm.org/category/vol-1-issue-1-fall-2009/>

2. <http://www.jopm.org/category/vol-2-issue-1-2010/>

3. <http://www.jopm.org/opinion/commentary/2009/10/21/what-it-will-take-to-embrace-participatory-medicine-one-patients-view/>

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### **The Power of Hobbyists and the Impotence of Professionals (2010-08-08 23:58)**

One theme of this blog (I hope) is that [1]it's insider/outside – people with the knowledge of insiders but the freedom of outsiders – who can produce real progress. Ordinary insiders have the necessary knowledge but not the necessary freedom; ordinary outsiders have the freedom but not the knowledge. [2]This article of mine makes this point in detail.

A similar point was made in a comment on [3]a blog post by George Packer, the New Yorker writer. Packer had written an article about the U.S. Senate and his post was about how he'd written it. Someone commented:

I think Packer covered Washington with the refreshing take of a short-timer, one who didn't have to make his living or sustain his career there. The disservice inherent in careerism connects with the Senate's paralysis à la Tom Harkin's quote about senators spending more than half their time fund-raising, one of the most troubling realities of the story. (Years ago, Bill Clinton said the House was ineffective because the members were "sleep deprived" from having to attend fundraisers every night. If a six-year term requires half-time fund-raising, imagine what a two-year term requires.)

I think the subtext is that journalistic long-timers, unlike short-timers like Packer, must spend a lot of time nurturing relationships, and this makes it harder to write unpleasant and unflattering truths.

Professional scientists spend a lot of time fund-raising, which in their case means applying for grants. A typical grant lasts three years. During those three years, because they need another grant when the current one runs out, they must publish several papers, recruit several grad students or post-docs (to do the heavy lifting), and avoid pissing off anyone in their field (because they might review your papers or grant proposals). Just as members of the House of Representatives never ever want to talk about how the constant need for money cripples them – it would make their job seem irrelevant and them appear impotent – neither do professional scientists.

1. <http://www.blog.sethroberts.net/2009/01/24/not-the-same-study-section-how-the-truth-comes-out/>

2. <http://www.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

3. <http://www.newyorker.com/online/blogs/georgepacker/2010/08/reporting-the-senate.html>

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disgruntledphd (2010-08-09 02:59:55)

Hey man, like the blog and the major theme of your post. However, scientists complain constantly about the grant treadmill, read any blog over at science blogs or scientopia and you'll find at least three per day. That being said, its normally people who are new to a field who come up with the revolutionary theories, so i do see where you are coming from there. Keep up the good work.

Seth Roberts (2010-08-09 06:34:58)

thanks, disgruntledphd. I've heard lots of complaints from scientists about the need for constant grant writing – as you say, three per day on ScienceBlogs – but I've never heard any of the complainants say how much it had inhibited their work. Maybe I'm not reading ScienceBlogs carefully enough. If you know of any examples, I'd be grateful if you'd point me to one because it's highly relevant to my work.

Elizabeth Molin (2010-08-09 06:56:09)

This <http://www.boingboing.net/2010/08/08/nope-high-fructose-c.html> #more is only peripherally related to your theme, but I have been wondering whether you were familiar with boingboing and wanting to bring it to your attention if you're not.

### **Vitamin Absorption With and Without Accompanying Meal (2010-08-09 11:56)**

[1]This pharmaceutical-company handout (thanks, Jen!) about their Vitamin K2 includes a description of an experiment where subjects took the tablets on an empty stomach or with a meal. The variation in stomach contents made a huge difference: absorption, measured by blood concentration, was 7 times higher when the K2 was taken with a meal.

This is going to change how I take supplements, such as selenium, for the rest of my life. I've often taken them on empty stomach. I never realized the effect of doing so could be so large.

1. [http://www.eisai.jp/medical/products/di/EPI/GLA\\_SC\\_EPI.pdf](http://www.eisai.jp/medical/products/di/EPI/GLA_SC_EPI.pdf)

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Alex Chernavsky (2010-08-09 14:03:44)

Yes, but perhaps the effect is reversed for other nutrients besides K2.

Jen (2010-08-09 20:34:23)

Fat-soluble micronutrients such as vitamin K are absorbed to a much greater extent when they are consumed with fat. Most meals contain some fat. This may explain the result. Nature conveniently packages its K2 MK-4 along with plenty of fat. Foods rich in MK-4 include grass-fed butter, egg yolks, liver, other organ meats, etc.

Christina (2010-08-10 03:15:57)

Do you routinely take Vitamin K2, or any vitamin supplements? I agree with Jen - vitamins naturally come packaged with necessary things to absorb them (ie fat). Seems to me the focus should be on eating whole foods that contain the vitamins we need, rather than isolating vitamins individually (an unnatural state) and trying to find ways for the body to absorb them.

tom (2010-08-13 11:07:54)

So would it work as well to take fat-soluble vitamins with fish oil etc..?

The Listless Lawyer » Closing Tabs: Weight Loss Edition (2011-06-18 04:48:27)

[...] Vitamins should always be taken with a meal. [...]

### **A Smug Professor (2010-08-09 19:35)**

The Chronicle of Higher Education website has a blog about "ideas, culture, and the arts [that] features some of the best minds in academic and policy circles". One of the bloggers - Gina Barreca, a professor of English and Feminist Theory at the University of Connecticut and [1]a humorist - [2]wrote about being older than her students:

I think about the fact that my students and I no longer listen to same music or revere the same actors; I wonder about the implications of the fact that even some of the smart ones like I Hope They Serve Beer in Hell.

I pointed this out to Tucker Max (author of I Hope . . . ). He replied:

I like how she implies that some of her students are stupid. Great prof.

I thought that was a great point. I asked if I could use it on this blog. He agreed, and added:

The other thing about her statement is that she implicitly scoffs at the notion that someone smart could-gasp-DISAGREE with her. It doesn't even occur to her that she might be wrong, that her worldview might be the one that needs examining. To her, nothing legitimate can exist outside of her prejudices and opinions. Even the idea that it could is rejected out of hand.

I replied:

Yeah, she hasn't read your book but it must be ridiculous. Of course. I praised the film Gladiator (pre-Oscar) to someone I knew and she said, to a friend, that this made me an inferior person. Because Gladiator was popular, it must be bad. If I liked it, there was something wrong with me.

Tucker replied:

Exactly-the idea that THEY might be wrong doesn't even occur to them. Like it's not even in the realm of possibility.

These are the same people that Nassim Taleb rails against, and the same people who read Socrates, and completely miss the point, but still praise it because they think they're supposed to. And these are the people that the internet/the age of connectivity is destroying. Because you can't hide behind status anymore. Results are measurable, and everyone is on the playing field now.

I agree.

1. <http://www.ginabarreca.com/>

2. <http://chronicle.com/blogPost/Why-College-Professors-Dont/8765/>

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Paul (2010-08-09 20:57:10)

Wait, did I read that correctly- Seth Roberts corresponds with Tucker Max? Seth, if that is true, you really need to let more people know. It could drive a whole new demographic to your site, one that is ready to hear about the virtues and possibilities opened up by self experimenting. I mean, any one who is a fan of Tucker Max, being suspicious of the received wisdom concerning men, women, sex, romance, and love, would also be likely to be suspicious of the received wisdom in other areas. Some of those, having already been conducting experiments of sorts in the Venusian arts, might readily take to self experimentation in other areas as well. You should correspond with Roissy.

Tom (2010-08-09 23:08:29)

Um...huh? In any event, Seth, your point is perfectly illustrated at <http://rawfoodsos.com> where a web designer named Denise Minger has completely destroyed T. Colin Campbell (of *China Study* fame.) Seriously...after just a few blog posts, there is nothing left of him but a smoking crater.

MT (2010-08-09 23:18:51)

You two read like bitter old ladies – taking an essay intended to humorously lampoon the generation gap, labelling it smug, then invoking Socrates as a defense. It's like an awkward satire. What are the measurable results Tucker is referring to that prevent this prof from "hiding behind status" while he has been liberated by internet connectivity (assuming, ridiculously, that we take her humorous essay as seriously as you have)? If there are measurable results why don't you cite them instead of posting yourselves agreeing with each other? This post is like two people in a political party griping about how the people in another political party can't consider the possibility they are wrong – while not discussing that they themselves might be wrong, or providing anything other than subjective statements of opinion to support their view. Why not supply some sort of substantive insight into how it is that Tucker's book is "right" (whatever that would mean), or how it represents progress, or whatever else you think it does that would back up the perspective you are supposedly defending as "right" in contrast to this humourist's "wrong."

LemmusLemmus (2010-08-09 23:42:49)

Seconding MT.

Mark (2010-08-10 02:31:10)

At least one thing she's definitely "wrong" about: her website is truly hideous and does not make me want to spend any time at all learning anything about her. But maybe that's a side effect of her ageism, purposely having a website that looks ten years younger than it is.

Nancy Lebovitz (2010-08-10 03:34:09)

Your blog has mysteriously turned medium green with an olive green stripe at the top– this makes the main page harder to read. The comments are still at the pleasant old format of white with a green border– the main page seems to have lost the

white overlay, since I note that it's got an olive green stripe at the top which doesn't interfere with the text.

john (2010-08-10 06:04:17)

Is there a theory about why white men are magic and white women pedestrian - along with the rest of mankind. What's going on there? Why such an incalculable distance between what white men do and have done and white women. Some people expect women and others to do something useful - but it's just not happening, is it?

B Riley (2010-08-10 06:25:07)

You two jump to conclusions as quickly as the prof you criticize! She clearly has an initial dislike of Max's book, but there are multiple implications of her students liking it even though she doesn't. These range from her students being stupid, her students being unexposed to better material though smart, or that she is passing up something good because of a knee-jerk reaction. If that sentence can plausibly be read as her pondering whether she is wrong, you can't say that thought isn't "even in the realm of possibility".

Seth Roberts (2010-08-10 08:12:33)

MT, one measurable result is book sales. Another is name recognition. Nancy, thanks for pointing that out. B Riley, yes, that is a fair criticism. She does muse about the popularity rather than take it as an example of the world going to hell. As you say, one of several possible explanations is that she is considering the possibility that she is wrong. I think it's far more likely that she has made up her mind about the book (which she hasn't read) and now is deciding what it means that "even" "smart" students like it. It is a harsh judgment on X to wonder why "even some smart people" like X. And if X is a book you haven't read, there is a lot of "I must be right" involved, even if it doesn't rise to absolute certainty.

G (2010-08-10 08:29:26)

I think I agree with this except... what was good about *Gladiator*? I thought it was boring; like a long episode of Xena Warrior Princess.

Seth Roberts (2010-08-10 08:42:09)

G, I liked the raw emotion Crowe displayed in many scenes. An attractive gloominess permeated the picture.

LemmusLemmus (2010-08-10 10:34:26)

Seth, criticizing A for criticizing B when A has not read B's books seems self-defeating when "A has not read B's books" is a mere assumption.

Seth Roberts (2010-08-10 11:44:24)

LemmusLemmus, if she's read more than 1 % of the book I am happy to apologize.

Phil (2010-08-10 15:08:16)

I agree with MT on this. Did you not understand that Barecca was joking? Hey, and you know what? I didn't like the movie Dumb and Dumber...I guess that makes me a bad person, right? Obviously I'm a snob, only an elitist snob would dislike Dumb and Dumber; after all, it was a very popular movie. Any time a well-educated person expresses dislike or disdain for something popular, it's because they're a snob. What other reason could there possibly be?

Seth Roberts (2010-08-10 17:51:07)

Phil, joking about what?

John (2010-08-11 00:02:25)

Have you asked Barreca if she has actually read 1 %+ of Tucker's book? Have you asked for a comment or clarification? Publicly labelling her as obstinate and stubborn in her worldview without finding out her point-of-view seems like quite a jump and one hell of an assumption. Given that she is a 'humourist', there's also the chance that she was making light of the age gap with a facetious remarkâ€”exactly how I did yesterday when I said that I cannot possibly be a mentor to someone who reads and

enjoys Dan Brown novels.

Phil (2010-08-11 09:11:46)

By the way, I'm not entirely sure Bareca was referring to the book, rather than the movie, for which you can watch the trailer [1]here.

1. <http://www.youtube.com/watch?v=FXTmNApNrxM>

Phil (2010-08-11 09:12:33)

Seth, joking about judging her students' intelligence by the fact that they like the book or movie "I hope they serve beer in hell." That was a joke.

Seth Roberts (2010-08-11 09:37:38)

Phil, thanks for explaining that. I read it differently: she really does wonder what it means that even the smart ones like a book she considers stupid. It vaguely resembles a Polish joke, I suppose, with I Hope They . . . in the place of the Polish people. John, to say "I cannot possibly be a mentor to someone who reads and enjoys Dan Brown novels" strikes me as humorous. You seem to be making fun of your dislike of Dan Brown. Whereas to say "I'm amazed that even some of our smart employees like Dan Brown" doesn't strike me as humorous at all. If she had used a smiley face after her sentence I would agree you, however. For example, "I'm amazed that even some of our smart employees like Dan Brown :)" comes across much differently than the sentence with no smiley face.

MT (2010-08-11 23:12:28)

Book sales and name recognition tell us nothing about the relative merits of the positions taken by the prof and Tucker. They tell us something about the relative popularity. Which is about as meaningless as it is possible to get. Or should we assume The China Study is right and Denise Minger's criticisms are inaccurate because she isn't as well known as Campbell? And Gary Taubes should shut up because Dean Ornish has sold more books? Perhaps you could add that Tucker has a law degree as a measurable result – and he went to Duke too. All of which is beside the real point – the author was making casual fun of the generation gap, and the critique is misplaced.

Alex Chernavsky (2010-08-12 03:48:26)

And speaking of Denise Minger, I'd be interested hearing in Seth's professional opinion about Denises's re-evaluation of Campbell's China data. <http://rawfoodsos.com/2010/08/06/final-china-study-response-html/> It seems impressive to me, but I don't know correlations from coriander.

Seth Roberts (2010-08-12 07:30:43)

Alex, I haven't looked closely at Minger's analyses. So I can't give an informed opinion.

Alex Chernavsky (2010-08-12 10:58:49)

Seth, I didn't assume that you had read her analysis – I was suggesting that you might be interested in it, given your past posts about Gary Taubes and about non-professionals doing significant work.

## **Animal Cognition Paper Retracted (2010-08-10 09:08)**

A paper in Cognition by Harvard professor Marc Hauser and others [1]has been retracted:

The paper tested cotton-top tamarin monkeys'™ ability to learn generalized patterns, an ability that human infants had been found to have, and that may be critical for learning language. The paper found

that the monkeys were able to learn patterns, suggesting that this was not the critical cognitive building block that explains humans'™ ability to learn language.

The note to be published about the retraction says almost nothing about why: "An internal examination at Harvard University . . . found that the data do not support the reported findings."

Several other papers from Hauser's lab have also been questioned.

The usual explanation would be that someone in Hauser's lab made the results better than they actually were. A co-author of the paper said Hauser had told him "there were problems with the videotape record of the study".Â That's consistent with the usual explanation: Someone edited the tapes (via deletions) to make the results appear better than they were. But it's also possible that many tapes are missing, which might be an accident. When The New Yorker archives were moved from Building A to Building B several years ago, much of the archives was lost.

Thanks to Aaron Blaisdell.

1. [http://www.boston.com/news/education/higher/articles/2010/08/10/author\\_on\\_leave\\_after\\_harvard\\_inquiry/?page=full](http://www.boston.com/news/education/higher/articles/2010/08/10/author_on_leave_after_harvard_inquiry/?page=full)

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### Assorted Links (2010-08-10 13:05)

- [1]the regulator franchise by Nassim Taleb
- [2]lupus cured by diet and exercise
- [3]librarian leads North American revolt

Thanks to Dave Lull, Dennis Mangan and Anne Weiss.

1. [http://www.huffingtonpost.com/nassim-nicholas-taleb/the-regulator-franchise-o\\_b\\_667967.html](http://www.huffingtonpost.com/nassim-nicholas-taleb/the-regulator-franchise-o_b_667967.html)

2. <http://vimeo.com/13441566>

3. <http://www.thestar.com/living/article/846033--canadian-librarian-leads-worldwide-digital-revolt-for-free-knowledge>

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VS (2010-08-11 09:24:45)

This is an interesting article. A PhD student, studying the effects of microwaves on human health, improved his sleep by moving his computer router away from his bed: <http://www.thestar.com/news/gta/article/841732-fiorito-our-heads-in-a-microwave-oven>



G (2010-08-11 12:57:06)

That little Taleb article - that's one of those utterly obvious things that are widely overlooked. There was a documentary in the UK about how all the outgoing Labour Party MPs are all cleaning up as lobbyists, circumventing the very democracy, the checks and balances that they helped shape.

Radek Pilich (2010-08-12 11:36:29)

Who is this Dave Lull guy? Why is everybody referencing him and why I am not able to find anything about him?

G (2010-08-14 11:27:30)

@Radek: [http://petrona.typepad.com/petrona/2008/11/happy-birthday-to-our-favourite-li brarian.html](http://petrona.typepad.com/petrona/2008/11/happy-birthday-to-our-favourite-li-brarian.html)

### **Jane Jacobs and Traffic (2010-08-11 08:42)**

This [1]excellent post by Alex Tabarrok about the effect of removing traffic lights – traffic improves – reminds me of how I discovered the work of Jane Jacobs. Browsing in the Transportation Library at UC Berkeley, I came across The Economy of Cities.

That order arising from below (from individual drivers and pedestrians) can be much better than order imposed from above (by traffic engineers) was a point Jacobs made often. The details in Alex's post and the video he embeds don't just suggest that traffic lights in thousands of places could be profitably removed, they also support more radical thinking:

- Traffic engineers were completely wrong in all these cases. Trying to improve something, they made it worse. How did we get to a world where this is possible? Surely it isn't just traffic engineers.
- What would happen if students were given more power to control their own education? Perhaps we would need far few professors. [2]I gave my students much more control and found (a) my job got easier and (b) my students learned much more.
- What would happen if all of us were given more power to control our own health, rather than rely on gatekeepers, such as doctors? Perhaps we would need far fewer doctors.

The essence of my self-experimentation is that I took control of my health. Rather than seeing a doctor about my early awakening, or waiting for sleep researchers to find a solution, I found a solution.

1. <http://www.marginalrevolution.com/marginalrevolution/2010/08/spontaneous-order-on-the-road.html>

2. <http://graphics8.nytimes.com/images/blogs/freakonomics/pdf/whatdostudentswant.pdf>

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### **The 50 Best Health Blogs (2010-08-11 12:00:51)**

If law and order would follow spontaneously from less regulation, how would that work in a community of Bernie Madoffs? And regarding our society's experts on law and order – attorneys – how many law students could be trusted to take the LSAT exams or the bar exams on an honor system, without proctors watching them? There is a good reason for regulations and enforcement.

Alex Chernavsky (2010-08-11 12:20:52)

I particularly don't like the fact that doctors are the gatekeepers for prescription drugs. When I get a cat bite, I ought to be able to go to the drugstore and buy some Augmentin myself, without first jumping through hoops (and possibly waiting for a few days while I can get an appointment).

G (2010-08-11 13:07:48)

Ever read the Tao Te Ching?

Seth Roberts (2010-08-11 15:18:36)

Re Bernie Madoff: perhaps the existence of the SEC made investors less careful. G, no I haven't read the Tao Te Ching. Why do you ask?

Links: Leher mentions Jacobs, Economics for the layman. « Riley Jones (2010-08-12 00:54:01)

[...] Nice little interview with ultra-hip neuro-journalist Jonah Leher. Besides talking about consciousness, his career, and the process of science, it's interesting that he mentions the late Jane Jacobs, a skeptic of urban planning, and her view of sidewalks. Seth Roberts also seems to love Jacobs and so it's interesting how her ideas have seemed to gathered steam posthumously. [...]

G (2010-08-12 18:47:40)

@ Seth: From chapter 60: "Ruling the country is like cooking a small fish." i.e. you ruin it with too much prodding. I think the Gia-fu Feng translation is the best one; you can read it all here: <http://thedailyg.wordpress.com/2010/05/24/tao-te-ching-complete-text/> A lot of these ideas floating around just now about self-organisation, not trusting experts on faith, and doubting models of reality, etc have been around for thousands of years. The problem is that the writings are in an ancient language and nothing like the kind of scientific exposition that nonhistorical scholars can take seriously as a source of good method or theory. But they dig much deeper than the faddy meme-mongers we tend to esteem these days, I think. I like a lot of what Nassim Taleb and Richard Dawkins have to say, but I take Lao Tzu or Chuang Tzu over them any day. They didn't stop once they were onto something powerful that could sell books - they wanted a complete philosophy of life. They were sort of reticent and doubted whether anything of worth could be transmitted as easily as just reading a book. It's like that James lyric, "I saw the crescent, you saw the whole of the moon." Ancient philosophers were aiming for some kind of ideal life; I get this general sense that thinking has left that behind for the time being; we think that's romantic and that life is sterner stuff. But the weird thing is, those ancient idealists were living in much sterner circumstances than us. We think they were prescientific crackpots with some good ideas, but in many cases they had a more urgent eye on empirical reality than most intelligent modern people. Yeah, maybe they went on pilgrimages to go hallucinate in a cave, but they had to survive bandits, nature and who knows what trials along the way. This is why Buddhist monasteries emphasise physical work so much - as well as preventing physical torpor, it stops the monks from becoming the classic absentminded professor.

G (2010-08-12 20:12:28)

James Carse is a contemporary thinker who might be more like the kind of *deeply* aspirational philosopher I'm waxing on here.

Alex Chernavsky (2010-08-13 04:24:06)

G, have you read [1]*The Happiness Hypothesis: Finding Modern Truth in Ancient Wisdom*, by Jonathan Haidt? It's a truly excellent book, and Haidt covers some of the same topics that you mentioned in your comments above.

1. <http://www.amazon.com/Happiness-Hypothesis-Finding-Modern-Ancient/dp/0465028020/>

Seth's blog » Blog Archive » Jane Jacobs and Traffic « Beware of Roaming (2010-08-13 06:02:05)

[...] The essence of my self-experimentation is that I took control of my health. Rather than seeing a doctor about my early awakening, or waiting for sleep researchers to find a solution, I found a solution. via [blog.sethroberts.net](http://blog.sethroberts.net) [...]

G (2010-08-13 07:36:32)

Alex, thank you for the reference, but it looks to me like a 'positive psychology' scholar mining ancient wisdom for nuggets that will improve mood as evidenced statistically. The ancients had something different in mind, and so do I. Not that I think people

should blunder into misery and high blood-pressure! :-) I am not like those Scientologists who think psychology is evil because it conflicts with some religious paradigm. My beef with PS's 'mining' of ancient wisdom is that they are trying to achieve mundane goals by using sacred materials\*. That is not a dogmatic distinction - it has substance. The spiritual geniuses were aiming at a core of life and value. They were prepared to weather misery and high blood-pressure if necessary. Everyone knows that the various saints of note often practiced austerities or had misery thrust upon them. They weren't looking for hacks to improve mood. It just happens that a deep understanding of life bestows a deep joy, serenity and fortitude. But when you look at portraits of Bodhidharma when focused on his quest for enlightenment, he is not pictured as an optimistic sensualist enjoying the good life with good friends - he is pictured as someone who sat grimly facing a wall for nine years, like he was having a staring-contest with the universe. When you read the biographies of saints and sages, what you find is never some sanguine tinkerer looking for the path of least resistance: you find people who were very conscious of their own egotism and limitation, yet intuitively aware of their half-obscured divinity, and desperate to destroy or tame all that is base in them. \* In case this needs made clear, I aim for mundane goals every day, like trying to get a ketchup-stain out of a t-shirt - this is obviously fine in its time and place. :-)

Stephen M (Ethesis) (2010-08-14 18:48:44)

<http://the50besthealthblogs.blogspot.com/> came up as not found. Hmm. Actually, it depends on the kind of regulation. In traffic, the whole thing models well in fluid dynamics and some things create more turbulence than others.

anonymous (2010-08-14 21:51:40)

In the case of Bernie Madoff, the SEC had been notified of his malfeasance. Several times. They did nothing. Not such a resounding success for regulation. P.S. The economic double speak is "regulatory capture."

### **"A World Suppressing the Uniqueness Inside Each of Us" (2010-08-12 08:37)**

I liked [1]Erica Goldson's graduation speech very much partly because she says the same things I say here. To me, the core of her message is that her high school was

a world suppressing the uniqueness that lies inside each of us

That's what I tried to say [2]here. Goldson summed it up better than I did. One of the things that pushed me toward that conclusion happened in an undergraduate seminar about depression that I taught at Berkeley. For a final project, the students could do almost anything related to depression, so long as it was off campus and did not involve library research. One student chose to give a talk to a high school class. Not a rare choice - several other students did the same thing. But her final paper blew me away. She wrote about how hard it had been. She had/has severe stage fright. Every step of the project was very hard for her. But she did it. "I learned I can conquer my fears," she wrote.

Her performance on the week-to-week assignments (writing comments on the reading) had been mediocre. But now I saw another side of her: She was courageous. My assignments, like practically all college assignments, required no courage. So I never noticed how courageous any of my students were. I remember sitting at my desk after reading her paper and thinking how badly I had undervalued her. I had noticed this only because I'd given a highly unusual assignment. I could see that there was a gigantic amount of undervaluing going on. And undervaluation leads to suppression. Students have unique or unusual strengths that fail to develop because their high school or college teachers don't value them.

Thanks to Tucker Max.

1. <http://www.sott.net/articles/show/212383-V...aduation-Speech>
2. <http://graphics8.nytimes.com/images/blogs/freakonomics/pdf/whatdostudentswant.pdf>

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Alex Chernavsky (2010-08-12 12:41:17)

Erica's speech is interesting, but I think she considerably overstates her case. There has to be some kind of middle ground between the strict regimentation that happens now and the more free-wheeling system that Erica seems to favor.

G (2010-08-12 18:24:55)

In way Cormack McCarthy's *The Road* is one of the best statements on learning: the two protagonists are shown constantly learning; constantly attuned to each other and to their environment. With no room for anything redundant, no directives from outside, and an ever-present real-world survival context that naturally brings about full engagement, there's not really the same kind of division between what one ought to do and what one wants to do - one wants to survive and the reasons for learning are never abstract or received on faith. The way we can move towards this 'natural engagement' in civilised life is to encourage intellectual curiosity (inherently rewarding when things cohere and work) and to reward origination, intellectual integrity, virtue in general. This could all be done culturally, without any government flagship programme, though things being as they are the government would probably have to play some kind of part, even if only to clear the way for such developments, i.e. alternative schools.

G (2010-08-12 18:26:43)

Oops: "e.g. alternative schools"

G (2010-08-12 18:53:46)

Also, we keep forgetting that many if not most famous achievers were/are weirdos in one way or another - to become even a minor talent/knowledge outlier probably involves some form of eccentricity? School life does *not* generally have much tolerance for eccentricity. Even athletes - and I think many of them are quite boring, hyperfocused people - there's a certain Olympic gold-winning British athlete; I got talking to a psychologist one time who told me that she had treated her for OCD and that her training was a productive 'outlet'.

latte island (2010-08-12 23:15:34)

She made a few good points, but after I'd been reading for a while, I realized they weren't her own ideas. She's obviously the pet of the charismatic, leftist teacher she mentioned. Too bad the teacher shamed an accomplished student into denigrating her own accomplishments in order to further the teacher's agenda of preferring creativity to academics. Maybe the valedictorian wanted to do exactly what she did. Maybe she's good at learning academic subjects, instead of changing the world or whatever Teacher wanted her to do. Again, I partly agree with her speech, but it's obvious that there's some personal stuff going on here. It's not clean. Hopefully, when Erica goes to college, she'll find other teachers who appreciate what she's good at-academics-and forget the creepy teacher she's trying to impress.

Bryan (2010-08-14 14:21:40)

My brother just sent me a video of the speech: <http://www.youtube.com/watch?v=qwRTTp19Xnk> &playnext=1 &videos=x0ZSkIPazRo &feature=sub

Stephen M (Ethesis) (2010-08-15 04:11:49)

Alex Chernavsky and latte island - I very much agree. However, I really liked where Seth took the observation and the starting point. Sometimes it is very much a mix. The ironic thing is that the "secretive government agencies" actually value critical

thinking a great deal.

A Post-Ride Paleo Meal, a Workout, and a Couple of Thoughts « Theory to Practice (2010-08-17 06:53:33)

[...] Seth Roberts recently posted this piece, “A World Suppressing the Uniqueness Inside Each of Us” in which he references this fabulous Valedictorian address purportedly given by Erica Goldson during the graduation ceremony at Cocksackie-Athens High School, on June 25, 2010. Now whether this was truly a Valedictorian address or not, I can’t be sure of. What I am sure of, though, is that the message is “spot-friggin’-on”. And not only is this the case in “education”, writ large, but the same can be said of diet, health, and fitness writ large — the totality of what I term “Physical Culture”. Take an n=1 approach toward achieving your own ultimate phenotypical expression. Keep both eyes on the path; the destination will take care of itself. [...]

Gunnar (2010-08-17 13:28:29)

Isn’t that what schools are for? Demoralizing kids and filling them with “knowledge” of the suppressor’s liking? That’s how I understand public school as of today. Be well.

Zach (2010-08-20 05:35:56)

When someone in the same speech speaks out against compulsory government mandated education AND quotes Mencken to then assume that person is the pet of a charismatic, leftist teacher? With all due respect, I think it would be worth the time to read up on just who is Mencken, how incredible it is that this 18-year-old is quoting him!, and examine just who among the left and/or right supports compulsory education and who does not. It is possible in the same speech to string ideas from various people’s philosophies with whom you don’t 100 % agree on everything. I simply don’t find any political ideological dogma in this student’s speech for the left or right... I think the whole point of the talk both regarding schooling and thought is to not standardize and pigeonhole other people. If she is a leftist, it’s strange that someone from the “right” is speaking out against her because she’s speaking out against compulsory standardized education? What an interesting non-traditional position for someone from the right to take! And she uses the word “Corporatism”! Holy moly! No leftist I know (and very few “rightests”) even knows what that word means. Kudos to her again for using it. To be against corporatism by the way is not to be against capitalism... unless you approve of the government bailouts carried out by both the current and previous administrations... that’s not capitalism folks, that’s corporatism and that’s going down the road further and further away from a free market and toward socialism. We may thank both the left and right politicians for that.

## **How Well Do Authors of Scientific Papers Respond to Criticism? (2010-08-12 21:59)**

[1]This BMJ research asked how well authors responded to criticism in emailed letters to the editor. A highly original subject, but the researchers, one of whom (Fiona Godlee) is the top BMJ editor, appear lost. They summarize the results but appear to have no idea what to learn from them, ending their paper with this:

Editors should ensure that authors take relevant criticism seriously and respond adequately to it.

Which was perfectly reasonable before any data was collected. So that’s not a good conclusion.

The real conclusion is this: The letters to the editor were far better than nothing because authors responded to their criticisms about half the time.

1. [http://www.bmj.com/cgi/content/short/341/aug10\\_2/c3926?etoc](http://www.bmj.com/cgi/content/short/341/aug10_2/c3926?etoc)

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G (2010-08-13 13:32:02)

One time the editor of *The Guardian* came to my university to give a talk on the unhealthy relationship/symbiosis between politicians and the press. At the end he concluded that the press shouldn't suck up to politicians just so they get the stories first, and that politicians shouldn't manipulate the press so cynically; then the floor was opened for questions. I asked him what *systemic* changes would he recommend, rather than just telling people to 'be good' at the end of a long cause-effect explanation of exactly why people aren't being good. He irritably restated his conclusion then tried to turn the question around, asking what I would do (though I was able to give an opinion, *he* was the expert, not me). Yes, the letters to the editor are better than nothing, just like the faltering professional-ethics-culture of journalists and politicians is better than nothing, but a better conclusion would have been: we should create a culture of *expectation* that every convincing-sounding criticism should be answered satisfactorily. Doesn't have to be 100 % - people have lives to live; fall and break their ankle, feel to hungover to answer letters, etc - but there should be some stigma attached to ducking hard questions.

Seth Roberts (2010-08-14 07:52:53)

G, that's a great story. As if the editor had had brain surgery that kept him from thinking useful thoughts. Since he ran an important paper, that's not trivial. Perhaps some criticisms were not answered satisfactorily because there was no satisfactory answer. Or because the criticisms were unclear. To have a sensible idea on how to improve things I'd want to look closely at what the problems were.

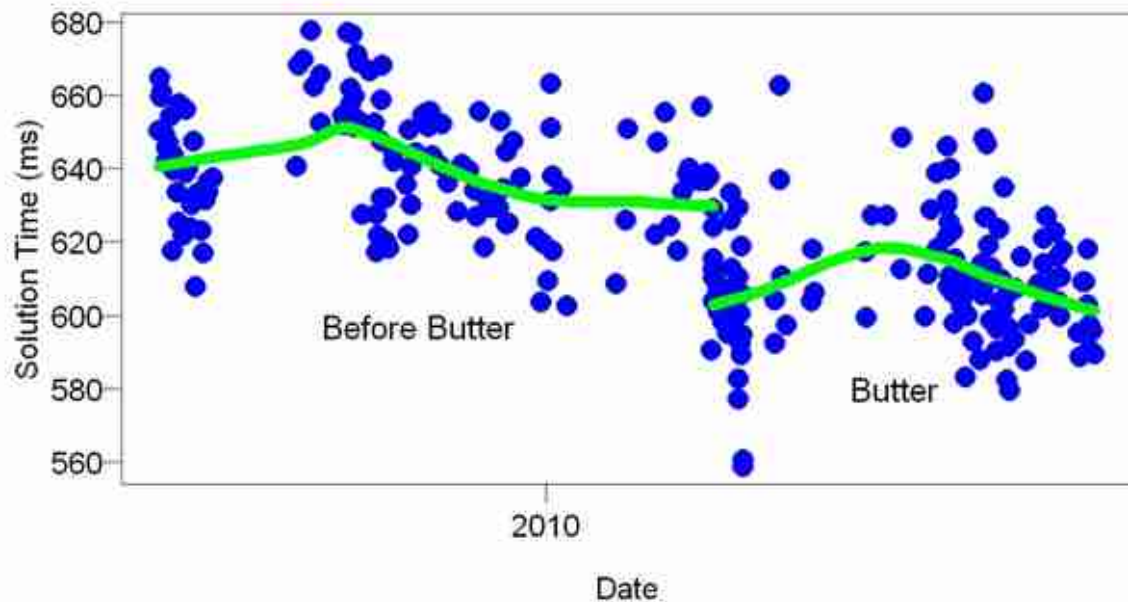
Stephen M (Ethesis) (2010-08-15 04:13:20)

It is interesting how often people think in terms of conclusions they want to see result instead of methods to get to the conclusion. Dieting and weight loss is generally like that.

## **Arithmetic and Butter (2010-08-13 20:35)**

On Tuesday I gave a talk called "Arithmetic and Butter" at the Quantified Self meeting in Sunnyvale. I had about 10 slides but this one mattered most:

[1]



It shows how fast I did simple arithmetic problems (e.g.,  $2 \times 0$ ,  $9 - 6$ ,  $7 \times 9$ ) before and after I started eating 1/2 stick (60 g) of butter every day. The x axis covers about a year. The butter produced a long-lasting improvement of about 30 msec.

I think the hill shape of the butter function is due to running out of omega-3 in Beijing – my several-months-old flaxseed oil had gone bad, even though it had been frozen. When I returned to Berkeley and got fresh flaxseed oil, my scores improved.

This isn't animal fat versus no animal fat. Before I was eating lots of butter, I was eating lots of pork fat. It's one type of animal fat versus another type. Nor is it another example of modern processing = unhealthy. Compared to pork fat, butter is recent.

Most scientists think philosophy of science is irrelevant. Yet this line of research (measuring my arithmetic speed day after day, in hopes of accidental discovery) derived from a philosophy of science, which has two parts. First, scientific progress has a power-law distribution. Each time we collect data, we sample from a power-law-like distribution. Almost all samples produce tiny progress; a very tiny fraction produce great progress. Each time you collect data, in other words, it's like buying a lottery ticket. I realized that a short easy brain-function test allowed me to buy a large number of lottery tickets at low cost. Second, we underestimate the likelihood of extreme events. Nassim Taleb has argued this about the likelihood of extreme negative events (which presumably have a power-law distribution); I'm assuming the same thing about extreme positive events (with a power-law distribution). We undervalue these lottery tickets, in other words. Perhaps all scientists hope for accidental discoveries. I seem to be the first to use a research strategy that relies on accidental discoveries.

In the graph, note that one point (actually, two) is down at 560 msec. This suggests there's room for improvement.

1. <http://blog.sethroberts.net/wp-content/uploads/2010/08/2010-08-12-butter-effect.jpeg>

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Caleb (2010-08-13 22:55:28)

What type of butter is it? My first guess would be that you were vitamin K2(MK4) deficient, and the butter's correcting it.

Tom (2010-08-14 01:58:39)

Seth, have you considered alternating between pastured and grain-fed butter? (I'm not sure what the cows in China might be fed, though.)

Riz Din (2010-08-14 03:24:58)

An ideas for taking this experiment to the next stage could include switching back to no butter and seeing if the improvements are not just due to a learning effect. Have you already looked at this Seth?

Seth Roberts (2010-08-14 08:12:12)

Caleb, it's Straus Creamery unsalted butter. That's an interesting idea about K2. I did not notice an improvement when I started eating natto, which is very high in K2. But I wasn't looking for one. Tom, so far I've only tried one brand of butter other than Straus. I didn't notice any big difference. However, it was a small test. Riz Din, I haven't yet gone back to no butter, no. I'm sure it's not a learning effect. I've seen thousands of learning curves. Not one showed a sudden improvement like this.

John (2010-08-14 08:52:07)

Supposedly, butter from grass-fed cows has more vitamins, like K2, in it. Maybe you can try with Kerry Gold Irish Butter. That stuff is pretty good. :-)

G (2010-08-14 11:19:52)

Placebo?

Seth's blog » Blog Archive » Arithmetic and Butter « Beware of Roaming (2010-08-14 12:59:12)

[...] Seth's blog » Blog Archive » Arithmetic and Butter It shows how fast I did simple arithmetic problems (e.g.,  $2^{*}0$ ,  $9-6$ ,  $7^{*}9$ ) before and after I started eating 1/2 stick (60 g) of butter every day. The x axis covers about a year. The butter produced a long-lasting improvement of about 30 msec. via [blog.sethroberts.net](http://blog.sethroberts.net) [...]

allan (2010-08-14 14:26:09)

I heard that in Chinese medicine, if you have a problem with one organ, to eat that same organ from animals. So, the obvious food for better brain function is animal brains. Cow brains provide DHA at 851 mg/ 100g and EPA at 374 mg/ 100g. <http://nutritiondata.self.com/facts/beef-products/3461/2> (btw, Vitamin K2 is found in rat brains, and will likely be also found in cow brains if someone looks for it) The problem with eating cow brains is that the FDA prohibits it because of the belief that it can transmit mad cow disease. (There is a secondary problem in harvesting cow brains because the most humane method of slaughter is to shoot cows in the head, thus destroying the brain). Mark Purdey, an example of an insider-outsider, believed that mad cow disease resulted from the UK's decide to order pesticides to be sprayed on cattle. [http://en.wikipedia.org/wiki/Mark\\_Purdey](http://en.wikipedia.org/wiki/Mark_Purdey) So, if Purdey is correct, then the consumption of a healthy source of long chain omega 3 is prohibited by a false scientific theory. One hypothesis why butter might be helpful is that short chain saturated fats might be the cause. Not many foods have butyric acid (4 carbon saturated fat) or valeric (6 carbon saturated fat) acid. Wikipedia says valeric acid has a similar structure to neurotransmitter GABA. You can test coconut oil to see if the cause is 8 to 12 carbon saturated fats because coconut oil and butter have them, while lard does not. If coconut oil is unhelpful, then look at the 4 or 6 carbon fatty acids. <http://nutritiondata.self.com/facts/fats-and-oils/508/2> <http://nutritiondata.self.com/facts/fats-and-oils/483/2> <http://nutritiondata.self.com/facts/dairy-and-egg-products/133/2>

links for 2010-08-14 | Grant Watson (2010-08-14 15:01:20)

[...] Arithmetic and Butter Perhaps all scientists hope for accidental discoveries. I seem to be the first to use a research strategy that relies on accidental discoveries. (tags: science research methodology philosophy) [...]



Seth Roberts (2010-08-14 16:22:05)

G, placebos cannot generate surprising results. My exploration of the drop in RT began when 4 things were unusual. Things 1-3, when tested separately, had little effect. Thing 4 (butter) seemed to have an effect.

vic (2010-08-14 22:17:17)

have you considered that butter isn't helping, but that pork fat was harming your performance?

Stephen M (Ethesis) (2010-08-15 04:31:45)

G, if it was placebo, Seth would be rocketing off the charts :) – he routinely tries things which should trigger the placebo effect. If it was kicking in, given the number of times he tries things, if everything gave him a jolt ...

Seth Roberts (2010-08-15 05:59:38)

vic, pork fat made me sleep better. that's the short answer.

peter (2010-08-15 08:27:22)

mad cow disease arose when sh\*t kicking stupid cheap farmers fed cows to cows; the carcass of one diseased animal spread the disease to all the cows that ate it and so on. it had nothing to do with pesticides.

CTB (2010-08-15 08:44:44)

Any chance you have fasting blood glucose levels for this period? You posted recently about having levels in the prediabetic range that came down after starting daily walks...where does that experiment fit within this time frame? The brain uses glucose rather exclusively for energy needs (unless you're starving then I think it can also use ketone bodies)...and glucose use goes up when the brain is working on problems. So if more glucose was available, it would seem logical that your brain would think better. And if your fasting glucose levels were up, your post-meal levels might have been alot higher as well...lots of potential computing power for the old noggin. It would be interesting to see your math times for 4 conditions: pork fat and old exercise regime; pork fat and walking; butter and old exercise regime; butter and walking. And have glucose levels for the whole thing. I'm very insulin sensitive, and can run glucose levels in the low 40's. I don't even try to do my taxes or balance my checkbook unless I've eaten something. I also participated in a diet study once where we had to decrease our daily total fat intake to 20 % per day. I couldn't do it. I couldn't sleep; felt miserable and wired...plus ended up binging like crazy. Then went to the weekly meeting and found out there were several others who had the same experiences. Yet some people did it with no problem at all.

Caleb (2010-08-15 09:57:25)

The version of K2 in natto is M7. M4 is the type animals produce when converting K1 to K2, meaning it's the type we seem to have evolved to optimally run on. M7 in natto probably isn't equivalent to animal sourced M4. That said, Allan's idea that it's the Valeric acid (6 carbon sat fat) sounds like a more promising theory.

Seth Roberts (2010-08-15 12:42:30)

CTB, that's an interesting idea. However, my fasting blood sugar levels dropped substantially, as I described in an earlier post, long before the drop in arithmetic speed. There was no obvious change in arithmetic speed at the time of the blood sugar drop. And there was no obvious change in the blood sugar levels at the time of the arithmetic drop.

G (2010-08-15 16:55:08)

Yeah, I see what you mean Seth. @ Alan: Braaains are delicious curried, though not so much on their own; too fatty; sop it up with bread, something like that; mix it with rice maybe. Can have a metallic background taste that you might find offputting. They could probably use the bolt-headshot method while preserving most of the brain if they made sure to aim for the brain-stem - that's the quickest and surest kill anyway.

Kit (2010-09-03 07:34:10)

Excuse the tangent, but I have a question that seems simple, but finding an answer is not. I bought refrigerated flax oil about a year ago, and have kept it refrigerated since then. I've been lax about consuming it, but have lately started to eat it everyday. I can understand how old oil would be less effective, but is it a total waste or harmful?

Seth Roberts (2010-09-03 12:56:40)

Kit, I kept flaxseed oil frozen for a year. When I used it it wasn't very effective. Not harmful, except that I didn't realize its low effectiveness so it kept me from drinking better flaxseed oil

Great links for the weekend! (2010-09-03 13:01:52)

[...] Butter. I love it, but don't tend to have it often anymore since it doesn't work so well with broccoli and curry. Or beef stews. However, for all the butter fans out there, Mark Sisson did a great summary of the different types of butter you can get and the pros of each. Taking this a step further, Seth Roberts (who seems to spend his life self-experimenting) did an arithmetic-related butter consumption experiment. Fascinating how much better his arithmetic results got when he started eating butter, though eating 60g of butter a day sounds like it could be both expensive and a little sickening over time... [...]

Don't miss these great links! (2010-09-09 06:08:50)

[...] And following straight on from Mike's self-experimentation is some self-experimentation that Seth Roberts has been doing. Seth tested how quickly he performed simple arithmetic tests before and after he started eating 60g of butter each day. Post butter consumption, he performed statistically, significantly better. Why? Who knows. [...]

Butter and Arithmetic: How Much Butter? | Quantified Self (2011-12-02 08:15:52)

[...] Two years ago I discovered that butter — more precisely, substitution of butter for pork fat — made me faster. This raised the question: how much is best? For a long time I ate 60 g of butter (= 4 tablespoons = half a stick) per day. Was that optimal? I couldn't easily eat more but I could easily eat less. [...]

## Arithmetic and Butter (continued) (2010-08-15 08:52)

At [1]my Quantified Self talk I described data that suggested butter improved my mental function. During the question period, a cardiologist in the audience said something about me killing myself – butter is unhealthy. The usual view.

I said I thought the evidence for the usual view was weak. He said, "The Framingham studies." That was epidemiology, I said. It is notoriously hard to understand. My data was from something like an experiment. Much easier to understand. (And the Framingham study is a terrible example of the supposed evidence. To [2]quote from it: "In the period between the taking of the diet interviews and the end of the 16-year follow-up, 47 cases of de novo CHD developed in the Diet Study group. The means for all the diet variables measured were practically the same for these cases as for the original cohort at risk.") He replied that the reduction in heart disease in recent years was more support for the usual view. I said the recent decline in heart disease could have many explanations other than a reduction in animal fat intake. Many things have changed over the last 20 years.

There is epidemiological evidence that saturated fat is bad, yes, but it is not the Framingham study nor the recent decline in heart disease. And it really is difficult to interpret. The butter-is-bad interpretation could easily be wrong. The obvious problem is that, after people are told butter is bad, people who try hard to be healthy avoid butter. And they do a lot of other things, too, to be healthy. So butter consumption ends up confounded with a dozen other variables believed to affect your health. When I was growing up, my parents avoided butter because margarine was much cheaper. So butter consumption is confounded with income, another problem.

My tiny experiment, whatever its problems, was much easier to interpret.

1. <http://www.blog.sethroberts.net/2010/08/13/arithmetic-and-butter/>
2. <http://www.proteinpower.com/drmike/cardiovascular-disease/framingham-follies/>

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Kudzu Bob (2010-08-15 12:29:18)

If doctors ate more butter, then maybe they'd be smart enough to know what the hell they're talking about.

G (2010-08-15 16:49:16)

Aren't stomach-contents broken down into little molecular lego-bricks anyway? It's like, cholesterol is something your body *makes* when it thinks it needs more; it doesn't pass directly from the stomach into the blood. I think many people imagine butter clogging up their arteries like it just flows right in there, from sandwich to heart, directly.

Darrin Thompson (2010-08-16 05:46:47)

I wonder if this is part of the reason Weston Price was ignored. Not only was he an outsider, a dentist, his evidence was clear enough for anyone to understand.

CTB (2010-08-16 07:01:33)

It may be relevant to note again that lard-type fat and butter both come from animal sources, but lard is the fat storage depot of the animal, while butterfat is custom made by the mammary gland for the nourishment of infants. And the brains of infants are developing like crazy during those early months. Older cultures nursed for years. The composition of depot fat directly reflects the kind of fat you eat, and can vary a lot between individuals eating different diets. Butter fat in milk is pretty consistent in composition...and it has a lot of short-chained fatty acids which aren't found elsewhere in the diet in such quantity. Obviously evolution has selected for the best possible composition for infant development, because those were the infants who survived and went on to continue the race. Quick and dirty: When fat goes through the digestive system, the components get disassembled, absorbed and reassembled in the gut cells (but not metabolized)...then dumped into the lymph...which is then dumped into the veins. It then circulates in the blood and cells/organs take what they need, while excess is taken up by the fat stores. The idea is to clear the blood of excess and maintain homeostasis. When you're healthy and active, you can handle a high-fat meal. The problems come when the body can no longer quickly clear out the excess...whether because of age, illness, genetics, lack of exercise that would utilize it...whatever. I worked in a hospital lab years ago. Tubes of coagulated blood have red cells on the bottom, and a clear yellow layer of serum on top. Occasionally there would be tubes with milky white gunky serum due to the high lipid content. Either these people had their blood drawn shortly after a high fat meal...or they had lipid metabolism problems. You don't forget this image...and I'm sure the cardiologists have seen it. The thought of this gunk flowing through your veins is scary. Half a stick of butter is 4 tablespoons or eight pats; roughly 400 calories. Not really that much for a male who is walking at least an hour a day. It would depend on whatever else you are eating along with it. Just make sure to cover your butt and get regular blood tests as you age. Maybe don't eat it all at one time.

Aaron Blaisdell (2010-08-16 08:23:04)

@ CTB, At what temperature was the drawn blood in the tubes kept? Saturated fat does not congeal or thicken until it drops to at or below about 74 degrees F. The human body is typically around 98.6 F so saturated fat would be completely liquid (and not sticky or gunky). Also, a high carbohydrate meal becomes a high fat meal from the point of view of vasculature. Most of the carbs cannot be burned off at the time of ingestion, so most of them are repackaged by the liver as palmitic acid (i.e., a saturated fat). So looking at the fat content of cooled blood will not differentiate a recent high-fat meal from a recent or chronic high-carbohydrate meal/eater.

G (2010-08-16 08:29:01)

An arresting image CTB, thanks for the explanation.

CTB (2010-08-17 08:41:53)

The lab was room temp. I did not mean to imply that the milky serum was solid like butter. These sera had visible fatty films which would cling to the side of the tubes, and when you poured the milky serum off the clot, it was more viscous. The fat from a meal is released into the lymph in chylomicrons...along with proteins to make it more soluble as it travels in the blood. Same for the saturated fats you mentioned that are released from the liver...they're packaged with lipoproteins and are more soluble. Most of those tubes had clear serum, but some people, for whatever reason, had such overwhelming amounts of lipid in their blood that it was visibly present in their serum. How do you know if you have a problem like this? And if you're healthy now, how do you know if you're developing a problem? All I'm saying is that this is the world that cardiologists live in...and it's easy for me to see why some of them quickly say 'fat is bad.' BTW, all of us in the lab tried eating cheeseburgers and fries and donuts (probably at least a decade before Morgan Spurlock was born)...then practiced taking blood from each other to see if our serum looked like this. It didn't. We were young and apparently not showing any problems yet. My family's ethnic background is Polish...lots of butter and pork fatback in our cooking. No cardiac problems...no diabetes...folks live into their 90's...but everyone stores fat in their thighs and butts and have relatively small waistlines. That's our genetics. Other folks are not so lucky.

Aaron Blaisdell (2010-08-17 09:39:24)

Yes, that sounds like a fat metabolism dysregulation. Still, I think the notion that eating a high-fat meal will "clog the arteries" is a misconception based on how saturated fats are observed to congeal or thicken at room temperature (and thus clog a sink pipe, for example). I cook with coconut oil that I let sit out on my countertop near the stove. For most of the year it is a solid, but during the hot days of summer it becomes a liquid. My kitchen has never been close to 98.6 deg. F (more like a high in the low 80s) and so I am not worried about consuming high amounts of saturated fat. In fact, I take a couple of tablespoons of coconut oil, which is close to 90 % saturated, every day.

Alex Chernavsky (2010-08-17 12:53:21)

Aaron, I'm curious if you noticed any positive effects from the daily coconut oil.

Aaron Blaisdell (2010-08-17 13:01:53)

Alex, I think so, but a caveat is that I started taking coconut oil after making many dietary changes, such as following a primal lifestyle (as detailed on Mark's Daily Apple). The spoonfuls of coconut oil have, I think, reduced my overall appetite (and I don't take it following the SLD protocol). Also, my skin looks and feels like that of a younger person (I'm 41). Very supple and smooth. My gums are in the best condition ever in my life, too, but I have been taking high-vitamin fermented cod liver oil and high-vitamin butter oil (both from Green Pastures) almost daily for the past two years.

CTB (2010-08-18 05:46:20)

OMG Aaron, you sound like an Adonis! Not to beat this horse to death, but coconut oil in a jar...or a stick of butter in the refrigerator are relatively pure fat...whereas once in the bloodstream, these fats need to travel in an aqueous environment. So they're packaged with lipoproteins to aid in transportation to the tissues, just like the steroid hormones (nonwater soluble) all have protein carriers, etc. Liquid oil agitated with water forms a mushy emulsion. If your body is not clearing fats from the blood fast enough, and the levels build up, what's going to happen...especially when the blood needs to travel through arteries which have constricted openings due to plaque buildup. In this condition, if you eat a high-fat meal, you're just adding to the mess. the problem is how do you know when you pass the point where your body is no longer clearing the fats out because you're less active or whatever.

Aaron Blaisdell (2010-08-18 07:37:44)

CTB, I've heard that if one eats a high-fat, moderate protein, low carbohydrate diet, their body shifts to a ketogenic mode of fuel use in which they burn fat as the main fuel source rather than glucose. (I got this information from sources like Robb Wolf's blog, Hyperlipid blog, Mark's Daily Apple, Protein Power by Drs. Mike and Mary Dan Eades, etc.) I've been eating a ketogenic diet for over a year now (closer to two on or off). So, isn't it probable that after a high fat meal my body is clearing

the protein-packaged lipids out of the blood relatively quickly to burn for fuel? I haven't come across evidence in the literature or on blogs that heart attacks or strokes are more likely following a single high-fat meal (or repeated ones, for that matter). Do you have references to suggest otherwise? I would love to get at the truth. I'm not wedded to the theory that the ancestral human (especially before the agricultural revolution) was generally running in ketosis (with some exceptions, e.g., the Kitavans), but it is a very compelling theory with a lot of supporting evidence. I would value very much any evidence that fails to support this theory. Thanks, Adonis

### **Power Makes You More Dismissive (2010-08-15 09:38)**

[1]An excellent essay by Jonah Lehrer describes a pair of studies I didn't know about:

In a recent study led by Richard Petty, a psychologist at Ohio State, undergraduates role-played a scenario between a boss and an underling. Then the students were exposed to a fake advertisement for a mobile phone. Some of the ads featured strong arguments for buying the phone, such as its long-lasting battery, while other ads featured weak or nonsensical arguments. Interestingly, students that pretended to be the boss were far less sensitive to the quality of the argument. It's as if it didn't even matter what the ad said—their minds had already been made up.

. . . Instead of analyzing the strength of the argument, those with authority focus on whether or not the argument confirms what they already believe. If it doesn't, then the facts are conveniently ignored.

Deborah Gruenfeld, a psychologist at the Stanford Business School, demonstrated a similar principle by analyzing more than 1,000 decisions handed down by the United States Supreme Court between 1953 and 1993. She found that, as justices gained power on the court, or became part of a majority coalition, their written opinions tended to become less complex and nuanced. They considered fewer perspectives and possible outcomes.

Scary. Thomas Paine [2]wrote about this: "The state of a king shuts him from the world, yet the business of a king requires him to know it thoroughly."

1. <http://online.wsj.com/article/SB10001424052748704407804575425561952689390.html>

2. <http://www.earlyamerica.com/earlyamerica/milestones/commonsense/text.html>

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Robin Barooah (2010-08-15 14:34:28)

I wonder whether this is the very definition of what 'power' is - rather than being a consequence. People generally seek power because they think it will make their lives easier - i.e. because its very nature is that they won't have to deal with as much complexity in order to get results. They don't seek it in order to make their lives more challenging or difficult. I also think this is generally understood. My guess is that if you ask 1000 people the question: "Which of these statements more accurately reflects the effect of power on people:" a) Power Corrupts b) Power Enlightens I think you'd see significantly more people choosing answer a. My suspicion is that the reasons you don't hear people expressing outrage about it unless they are actually threatened is the sense that it's an immutable fact of life and that most people have to pay respect to someone in power over them. I personally question the immutability, but have little doubt about the second issue.

Allen K. (2010-08-15 15:39:04)

Another reason to end lifetime Supreme Court appointments.

Seth Roberts (2010-08-15 21:05:47)

Robin, I think more accurate than Power Corrupts is Power Isolates. That's what Paine was saying.

dearieme (2010-08-16 03:20:03)

Acton said that power tends to corrupt.

Darrin Thompson (2010-08-16 05:50:54)

Historically, industry improvements have happened in times of crisis. I wonder if the threat of losing power due to a crisis event tempers this dismissive attitude. The Lean quality people are quick to point out that most of their poster quality success stories happened at companies that were near death.

G (2010-08-16 09:08:42)

People tend to get power because (among other factors) they consistently and intensely desire power. People who work in large companies or bureaucracies know that there is work you do to do a good job, and 'work' you do to become a candidate for promotion. I don't know whose saying this is but, 'power transforms a person into a thing; love transforms a thing into a person'. I think it's D.T. Suzuki's.

Robin Barooah (2010-08-16 11:45:58)

Seth: I agree - isolate is a much less loaded term - in practice I'm not sure there's a difference since what we're really talking about is quality of decision making. It would certainly be more interesting to use the word 'isolate' when questioning people about their beliefs though.

## **Drug Company Corruption (2010-08-16 05:43)**

This [1]Al Jazeera documentary, called "Drug Money", emphasizes three things.

1. Doctors get vast amounts of money from drug companies, which influences which drugs they prescribe. One influential doctor, Tom Stossel of Harvard, who has received "millions" from drug companies, [2]sees no problem with that!
2. Drug companies encourage the prescription of drugs for unapproved uses. For this and other crimes, more than half of the major drug companies have been found guilty and fined billions of dollars. Several of the not-yet-guilty ones are under investigation. The problem is industry-wide, not due to a "bad apple".
3. The harm done by deceptive practices isn't trivial. One example is Risperdal. It isn't approved to treat ADHD in children, but it is prescribed for that. Given to boys, it can cause them to grow breasts, which is extremely embarrassing. When the boys were given the drugs, their parents were unaware of this possibility. Joseph Biederman, another Harvard professor who has received millions from drug companies and an advocate of giving Risperdal to children, told a Congressional committee he had no idea that a large fraction of all Risperdal is given to children ("I have no idea how much Risperdal is used in children").

Thanks to Anne Weiss.

1. <http://www.wimp.com/pharmaceuticalindustry>

2. <http://brodyhooked.blogspot.com/2010/04/encounters-with-dr-tom-stossel.html>

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PeterW (2010-08-16 07:24:48)

The sheer amount of money on the upper end is troubling. But I'm surprised at your disapproval of off-label uses. Isn't one of your bugaboos the fact that large institutions like the FDA are too slow at recognizing new data, and have outdated recommendations that clever researchers should question? To be consistent, you should approve of the study and employment of off-label uses for drugs as a good innovative thing.

G (2010-08-16 09:19:39)

Imagine the anger and harsh penalties if a non-professional individual were to directly cause just one boy to grow breasts. Whether motivated by greed or neglect, it would be a mass media horror-story and there'd be an expectation of a prison-sentence. A doctor who was irrefutably found to do this for knowingly dishonest motives would be struck off; drug-companies have no analogous punishment: they are never dissolved, taken over by the state; the bosses are not personally punished - they are not prevented from doing similar things again.

bill (2010-08-16 12:33:59)

Should a law require doctors to inform patients of conflicts of interest?

vic (2010-08-16 12:49:11)

that tom stossel is the brother of the reporter jon stossel, kind of ironic

Seth Roberts (2010-08-16 18:20:19)

"Isn't one of your bugaboos the fact that large institutions like the FDA are too slow at recognizing new data"? I'm afraid I'm unable to figure out why you say that. Giving thousands of children dangerous untested drugs in order to boost profits is obscene - that's what I think.

Tom in TX (2010-08-16 20:25:33)

Using a drug for an unapproved use is not always a bad thing.

Alex Chernavsky (2010-08-17 04:57:08)

For an excellent (if infuriating) treatment of corruption and pseudoscience in the field of psychiatric drugs, see [1]*Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*, by Robert Whitaker. See also Whitaker's recent op-ed piece, [2]"It's time to end this grand experiment with psychiatric drugs". (And no, I'm not a Scientologist.)

1. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452417>

2. <http://www.registerguard.com/csp/cms/sites/web/opinion/25126557-47/bipolar-illness-medical-medications-mental.csp>

Jim Ellison (2010-08-25 20:16:00)

I have been in practice for 27 years but I have never received any payment to prescribe a drug.

Seth Roberts (2010-08-26 03:55:21)

Jim Ellison, money flows from drug companies to doctors in a dozen ways. Conferences, speakers fees, meals, samples, and so on. I don't think it's ever as crass as "you prescribe X, I'll give you \$ \$ \$". If you have never received anything valuable from a

drug company, I would like to hear about it.

### Pork Belly News (2010-08-16 18:04)

I am [1]a big fan of pork belly. Whenever I see it on a menu I order it. The mayor of Chongqing (population 32 million) recently made headlines with [2]a speech whose main point was

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Which means: Better living standards is not just eating hong shao rou wearing beautiful clothes. [3]Hong shao rou is pork belly braised in a red sauce. Maybe my favorite Chinese dish. Supposedly Chairman Mao's favorite dish. I'm glad he said "not just" rather than "not".

1. <http://www.blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>

2. <http://www.blog.sethroberts.net/%20%E6%94%B9%E5%96%84%E6%B0%91%E7%94%9F%E4%B8%8D%E5%8F%AA%E6%98%AF%E5%90%83%E7%BA%A2%E7%83%A7%E8%82%89%E7%A9%BF%E6%BC%82%E4%BA%AE%E8%A1%A3%E6%9C%8D>

3. <http://www.saveur.com/article/Recipes/Red-Cooked-Pork-Belly-Hong-Shao-Rou>

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G (2010-08-16 21:09:28)

Char siu = candidate for 'best and easiest meal ever'.

vic (2010-08-16 22:28:12)

Seth, you've often said pork belly fat improved your sleep. Does it also affect your dreaming? In general, do you find your quality of sleep is related to dreaming? just curious...

dearieme (2010-08-17 02:07:54)

Roast pork and crackling is a British favourite - do you eat it in the USA?

Pieter (2010-08-25 19:35:33)

Population Chongqing more than twice the population of Shanghai? Sure. That said, hong shao rou is sooo good, albeit a heart attack waiting to happen.

Seth Roberts (2010-08-26 03:51:09)

dearieme, roast pork, yes, crackling, no. I suppose the popular american food with the most animal fat is hamburger. Or spareribs. vic, I haven't noticed an effect on dreaming, no.

j (2010-08-28 20:07:45)

Chongqing, while a "city", is the size of South Carolina.

### "That's Why You're So Easy to Hate" (2010-08-17 05:42)

This is what [1]one bloggingheads commentator said to the other. Was the speaker-listener combo (a) man to man, (b) man to woman, (c) woman to man, or (d) woman to woman?



As you can guess, woman to woman. After I wrote this post, I listened to the rest of the dialog. The phrase was repeated several times.

It's a standard compliment, yes. Sure, women compliment each other like this and men don't. But I think it is an example of another underlying rule that I can't figure out.

More I hadn't noticed that the title of the conversation is "We're All So Easy to Hate".

1. <http://bloggingheads.tv/diavlogs/29445>

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sadie (2010-08-17 06:13:18)

If the context is "you're so easy to hate because you are so wonderful," I think I can take a stab at explaining this. I'm a strongly introverted woman in a culture that expects women to be strongly extroverted, so figuring this kind of thing out has been the work of a lifetime for me. Women learn (and some people say are hardwired, although this doesn't seem to apply to me) that belonging to a group is the most important function they fulfill. We are supposed to fear separation from the group and love unity of purpose with the group. If you want to do something that the group doesn't want, you can bring it up, but you should apologize and feel bad for that. If you excel at something, you probably worry that this alienates you from the group, and so you will have to do a lot of sucking up and making amends for being so great. The group, in turn, behaves like a group and enforces consensus, conformity (to varying degrees. When put in terms like these, it often sounds more malicious than it is), and so "hating" a group member who is doing something different (but better) is a group-bonding activity. Basically, this is competitive behavior, but with a strong set of social-bonding rules guiding how you can compete. An easy example of this is weight loss. If you're a woman who loses weight, your friends will be happy for you, but if you go too far outside their norm, they will "hate" you for it. BUT- by telling you playfully, "I hate you," they are reinforcing your mutual bond while still pointing out that you have violated the group rule. If you are very apologetic about it, you can still pull off this kind of group rule-violation (and change group norms), but do too much and the group will resist and you will lose status. I feel like the Jane Goodall of human female behavior after writing this.

vimal (2010-08-17 09:24:25)

Can you provide the link of the blogginghead post?

Seth Roberts (2010-08-17 09:51:52)

<http://bloggingheads.tv/diavlogs/29445>

Nathan Myers (2010-08-17 17:05:28)

Thank you, Sadie, I have learned more from your few short paragraphs than from decades of outside observation. Any further explication of your insights will be most welcome.

Aaron Blaisdell (2010-08-17 19:28:53)

I'm in the middle of watching "Snow White and the Seven Dwarfs" with the kids and it suddenly dawned on me how appropriate this blog post is to the movie. But the Queen went to great lengths to show how much she hated Snow White for surpassing her in beauty.

yoginprogress (2010-09-02 15:44:05)

Though I agree with some of what you say, Sadie, there are some chemical explanations for social bonding that aren't necessarily societal. That is, it's not always a nurture situation - "damn those cultural standards" - but a nature, biological

situation. Women social-bond because historically the children of the pack are less likely to be killed by the saber tooth tiger if more adults are around. Over time, women have evolved to release chemicals like oxytocin and serotonin from early adolescence but especially when pregnant, which reinforce both pair-bonding and a desire for community. And, frankly, as a woman who is considered by the world to be extroverted, I would disagree that that's what our culture expects us to be - even in New York City I've often found both men and women uncomfortable and/or intimidated by my level of extroversion. I think it's proof that ultimately what our culture is, is confused. I think the biggest problem in regards to the "you're so easy to hate," comment is a general disregard for sympathetic joy in our culture. We are not taught to celebrate one another's achievements or differences, but fear them - as if joy and success are in constant quantities and the success of one means the failure of another.

### **The Irony of What Works (2010-08-18 05:40)**

After [1]posting about Doug Lemov, I ordered [2]Teach Like a Champion. It arrived yesterday. Leafing through it, I came across a section titled "The Irony of What Works," which begins:

One of the biggest ironies I hope you will take away from reading this book is that many of the tools likely to yield the strongest classroom results remain essentially beneath the notice of our theories and theorists of education.

Lemov continues with an example: Teaching students how to distribute classroom materials, such as handouts. This can save a lot of time. Then he adds:

Unfortunately this dizzyingly efficient technique - so efficient it is all but a moral imperative for teachers to use it - remains beneath the notice of our avatars of educational theory. There isn't a school of education that would stoop to teach its aspiring teachers how to train their students to pass out papers.

The last chapter of Veblen'sÂ Theory of the Leisure Class is about just this - the importance that professors (like everyone else) place on status display and how this interferes with their effectiveness. The connection with self-experimentation is that no matter how effective it is, no psychology department would stoop to teach it. Or, at least, that's the current state of affairs.

The book's index doesn't include Veblen, although it does include Richard Thaler.

1. <http://www.blog.sethroberts.net/2010/07/31/without-great-teachers-nothing-else-matters/>
2. [http://books.google.com/books?id=W4CnY1VC\\_HcC&dq=%22teach+like+a+champion%22&source=gbs\\_navlinks\\_s](http://books.google.com/books?id=W4CnY1VC_HcC&dq=%22teach+like+a+champion%22&source=gbs_navlinks_s)

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Mary O'Keeffe (2010-08-18 10:23:28)

That's not true. I recall reading Susan Ohanian (a great teacher and writer) writing in one of her wonderful books that the only thing of actual usefulness that she learned in the teacher-ed classes she was required to take for certification was a technique for handing out papers efficiently! <http://www.susanohanian.org/index.php>

Maria Droujkova (2010-08-18 12:18:36)

There are a lot of classes on "how to pass papers around." They are called Classroom Management and taught by Curriculum and Instruction departments. People who study education theory are in Education departments. The two departments (or, in smaller institutions, parts of the same department by whatever name) typically don't talk to one another much, nor do they communicate with the corresponding Subject Area departments. So, for example, a future math teacher may learn classroom management from one professor, education theory from another, and math from the third - with the three professors belonging to three different departments. This makes little practical sense, because in real classroom, these "parts" aren't separable at all.

Eric Meltzer (2010-08-18 21:54:54)

I love specific and concrete (low status?) advice like what is in this book. I am considering ordering it even though I don't do any in-classroom teaching just because I love reading about techniques like this. I find it is MUCH easier for me to think up or understand general principles when given a set of great concrete tips than it is for me to generate great concrete tips from a set of abstract principles. I suspect this is the same for everyone, which makes me think that concrete tips should be valued MUCH higher than anything abstract!

Seth Roberts (2010-08-19 07:21:26)

Eric, yeah, I agree. Maybe knowing it is low-status protects you from the derogatory effects of that. So you are better able to take advantage of it. So people who understand Veblen are more free than people who don't.

disgruntledphd (2010-08-20 07:53:19)

I am a psychologist who teaches, and I have encouraged almost all my students to experiment on themselves, given that its the easiest way to get data. That being said, i dont know if its part of the formal curriculum anywhere.

Stephen M (Ethesis) (2010-08-21 07:04:21)

Seth, thanks for the pointer. There is a real issue in many disciplines that emphasize that teaching really is not as important as other things - even though, in theory, the teachers/professors are being hired to teach (from the public perspective) ;)

## **Beijing Students at Berkeley (2010-08-18 21:33)**

In downtown Berkeley I met a group of Chinese students from Beijing. They were entering freshmen at UC Berkeley.

They said there were 40 students like them - from Beijing, entering UC Berkeley. (At Tsinghua, there will be 400 entering freshmen from Beijing.) In all of China, 13 students were admitted to Harvard, about the same number to Yale and Princeton. One of them said she'd wanted to go to Northwestern but hadn't gotten in. Had she gone to college in China, she might have gone to Renmin University, perhaps the #3 university in China.

Surely their parents were wealthy, yes. But they preferred an American college to a Chinese one for two main reasons: 1. They can choose whatever major they want. At Chinese universities students are often forced into a major they don't want if their scores are high enough to get into a prestigious university but not high enough to get into the major they want at that university. 2. They believe that if they graduate from an American university they will have more opportunities. Where did they get the idea of coming to Berkeley? I asked. Online, they said. Their English was really good.

The "more opportunities" may not be as simple as they think. In Beijing I know a Chinese businesswoman who hired a recent college graduate. She'd gone to college in England, indicating that her parents were wealthy. The new worker turned out to be irresponsible and had to be fired. Perhaps her parents had spoiled her. In this businesswoman's eyes, an overseas education may now be a negative.

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thehova (2010-08-19 04:13:01)

But I bet on the whole, it works the other way around. Well, at least in America I think that's true. Lots of parents send their kids to top private high schools to signal to colleges, "we've spent a lot of money and energy on our kid" (same might be true why people go to more expensive private colleges).

dearieme (2010-08-19 06:05:35)

It's also possible that in the west they learn not always to do as they are bloody well told.

### **Assorted Links (2010-08-19 21:54)**

- [1]A new paper debunks Michael Mann's Hockey Stick global temperature graph. "Climate scientists have greatly underestimated the uncertainty of proxy-based reconstructions and hence have been overconfident in their models." Very well written.
- "Obscure, contemporary ethics books . . . were actually about 50 % more likely to be missing than non-ethics books." [2]Paper. The study was done entirely online and covered 32 large university libraries.
- [3]Gladys Reid, Australian discoverer of benefits of feeding zinc to farm animals. "Reid was reluctant to make direct dose recommendations after claiming the Director General of Agriculture had told her she would be taken to court for misleading practices if she did. However she won followers from farming wives in particular. Many would call asking for zinc advice after tiring of seeing suffering livestock and husbands on the brink of suicide from crippling stock and production losses."
- [4]Using a treadmill while working
- [5]The Potti Scandal continues
- [6]How loud are Sunchips?

Thanks to Don Sheridan and Melissa Francis.

1. <http://www.e-publications.org/ims/submission/index.php/AOAS/user/submissionFile/6695?confirm=63ebfddf>
2. <http://www.faculty.ucr.edu/~eschwitz/SchwitzPapers/EthicsBooks.pdf>
3. <http://www.healthwiseenergycentre.co.nz/file/Gladys-Reid.pdf>
4. <http://officewalkers.ning.com/forum/topics/noticed-any-increases-in-brain?id=2015808%3ATopic%3A10770&page=1#comments>
5. <http://dukefactchecker.blogspot.com/2010/08/secret-no-more-report-duke-would-not.html>
6. <http://heathaplexvision.com/2010/02/22/potato-chip-techonology-that-destroys-your-hearing/>

bob (2010-08-20 08:30:32)

Yes, it seems well written. However, I would not describe it as "debunking". From the paper: "Natural climate variability is not well understood and is probably quite large. It is not clear that the proxies currently used to predict temperature are even predictive of it at the scale of several decades let alone over many centuries. Nonetheless, paleoclimatological reconstructions constitute only one source of evidence in the AGW debate. Our work stands entirely on the shoulders of those environmental scientists who labored untold years to assemble the vast network of natural proxies. Although we assume the reliability of their data for our purposes here, there still remains a considerable number of outstanding questions that can only be answered with a free and open inquiry and a great deal of replication."

G (2010-08-21 08:40:31)

Have always liked to pace up and down when thinking - I think this is a more natural, varied way to body-think (sometimes, when no one is looking, I sort of dance), but I suppose an office environment has to be more controlled and one has to be near one's working materials, keyboard etc. In 'The Grapes of Wrath' the farmers always squat down together and doodle in the dust with sticks when having a confab. I think if you are forced to think while stock still and suppressing the body you might get more rigid and dumb over time.

### **The Marc Hauser Case (2010-08-21 07:43)**

It would have been harsh to title this post "Marc Hauser, RIP". However, unless [1]the following is shown to be in error, I'll never believe anything he writes or has written:

According to the document that was provided to The Chronicle, the experiment in question was coded by Mr. Hauser and a research assistant in his laboratory. A second research assistant was asked by Mr. Hauser to analyze the results. When the second research assistant analyzed the first research assistant's codes, he found that the monkeys didn't seem to notice the change in pattern. In fact, they looked at the speaker more often when the pattern was the same. In other words, the experiment was a bust.

But Mr. Hauser's coding showed something else entirely: He found that the monkeys did notice the change in pattern—and, according to his numbers, the results were statistically significant. If his coding was right, the experiment was a big success.

The second research assistant was bothered by the discrepancy. How could two researchers watching the same videotapes arrive at such different conclusions? He suggested to Mr. Hauser that a third researcher should code the results. In an e-mail message to Mr. Hauser, a copy of which was provided to The Chronicle, the research assistant who analyzed the numbers explained his concern. "I don't feel comfortable analyzing results/publishing data with that kind of skew until we can verify that with a third coder," he wrote.

A graduate student agreed with the research assistant and joined him in pressing Mr. Hauser to allow the results to be checked, the document given to The Chronicle indicates. But Mr. Hauser resisted, repeatedly arguing against having a third researcher code the videotapes and writing that they should simply go with the data as he had already coded it. After several back-and-forths, it became plain that the professor was annoyed.

"i am getting a bit pissed here," Mr. Hauser wrote in an e-mail to one research assistant. "there were no inconsistencies! let me repeat what happened. i coded everything. then [a research assistant] coded all the trials highlighted in yellow. we only had one trial that didn't agree. i then mistakenly told [another

research assistant] to look at column B when he should have looked at column D. ... we need to resolve this because i am not sure why we are going in circles."

The research assistant who analyzed the data and the graduate student decided to review the tapes themselves, without Mr. Hauser's permission, the document says. They each coded the results independently. Their findings concurred with the conclusion that the experiment had failed: The monkeys didn't appear to react to the change in patterns.

They then reviewed Mr. Hauser's coding and, according to the research assistant's statement, discovered that what he had written down bore little relation to what they had actually observed on the videotapes. He would, for instance, mark that a monkey had turned its head when the monkey didn't so much as flinch. It wasn't simply a case of differing interpretations, they believed: His data were just completely wrong.

As word of the problem with the experiment spread, several other lab members revealed they had had similar run-ins with Mr. Hauser, the former research assistant says. This wasn't the first time something like this had happened. There was, several researchers in the lab believed, a pattern in which Mr. Hauser reported false data and then insisted that it be used.

If taken literally, this description seems to imply that Hauser was making up data – writing down results much more favorable to his career than the actual results – and not realizing it! As if someone else was marking the data sheet. Since the videotapes are being coded by more than one person the fabrication/delusion/whatever would come to light, you might think, but he does it anyway! And then gets "a bit pissed" when things don't work out perfectly.

I would love to hear Hauser's side of this story, and see the videotapes being coded. So far Hauser has said nothing to make me doubt the straightforward interpretation: He made up data. After Saul Sternberg and I published a paper implying that [2]Ranjit Chandra had made up data, Chandra retired.

[3]Derek Bickerton says Hauser "fell victim to a soon-to-be-outdated view of evolution". I am more interested in what this says about Harvard and Hauser's co-authors. In particular, I wonder what Noam Chomsky, one of Hauser's co-authors, will say. The incident makes Chomsky look bad. Hauser appears to be a person who pushes aside the truth of things. That Chomsky wrote a major paper with him suggests that Chomsky failed to notice this.

Thanks to Dave Lull and [4]Language Log.

1. <http://chronicle.com/article/Document-Sheds-Light-on/123988/>
2. <http://www.sethroberts.net/chandra/index.html>
3. <http://chronicle.com/article/Document-Sheds-Light-on/123988/>
4. <http://languagelog.ldc.upenn.edu/n11/?p=2565>

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dearieme (2010-08-21 10:08:09)

"Scientific dogma, not Hauser is to blame for misconduct": geeze, we need to ignore Godwin here. "Anti-semitism, not Hitler, is to blame for Holocaust." Never blame a crook when you can hold an abstraction responsible.

CF (2010-08-21 14:49:01)

"The incident makes Chomsky look bad. Hauser appears to be a person who pushes aside the truth of things. That Chomsky wrote a major paper with him suggests that Chomsky failed to notice this." It's this kind of guilt-by-association that worries me the most, given that I have friends and colleagues who either passed through Hauser's lab at some point or were associated with him loosely, as co-authors. Please recognize that a lot of the work with his name on it was conducted entirely out of his hands, and thus the integrity of that research rests on those authors. Unfortunately, it's difficult to sort out which papers he had his fingers on the data collection/coding/analysis, and which he was a passive participant in or only helped in designing experiments and/or writing the results up. Note that he was apparently exposed BY HIS STUDENTS, which to me says a lot for those who took those measures, since they placed themselves at risk both personally and professionally. You want to roll them up in the guilt-by-association mess, also? Finally, wasn't the Chomsky paper purely theory? So how would Chomsky "notice" Hauser's tendency to distort or outright fake data? If it's just an ideas paper, then I don't see what it has to do with all of this. I'm not defending that paper, which I personally found opaque and muddled, I'm just saying I don't see Chomsky as having any guilt-by-association whatsoever, and I think it is extremely unfair to characterize him that way. I'm not defending Hauser one iota, he deserves to be fired in my frank opinion. For the sake of avoiding a witch-hunt that punishes the innocent, Harvard should be transparent on this matter, and also force Hauser and his colleagues to clarify their respective roles in the authorship of each paper to the extent possible, regardless of whether their authenticity has been formally called into question.

Seth Roberts (2010-08-21 17:05:42)

CF, it doesn't matter because Chomsky wrote a "theory" paper with Hauser? I don't follow this argument. Theories are supposed to be based on facts – on evidence. That evidence should be fairly described, not slanted (e.g., by omission, by overstatement) toward a favored point of view. Which is exactly what Hauser seems to have done – grossly slant stuff to help his career. If Chomsky writes theory papers unrelated to, unconcerned about, or unaffected by available evidence, that REALLY makes him look bad. The students who exposed Hauser did not co-author papers based on faked data, we can be sure. They are cases of esteem-by-lack-of-association. In [1]this article, Michael Ruse, a philosopher further from Hauser than Chomsky is, is angry. "I feel a bit as though I have got egg all over my face," he writes.

1. <http://chronicle.com/blogPost/HauserHarvard/26308/>

SJ (2010-08-21 19:24:33)

If Hauser walked around with a badge that said "FAKER" and his coauthors ignored this, you might have reason to blame them. But it wasn't like that. Hauser is an outstanding experimentalist, a sharp thinker, astonishingly erudite, and on top of about six different fields. That stuff doesn't become false just because it turns out he was also faking his data. OK, say you're Chomsky, and Hauser has a bunch of cool ideas that sync with what you're doing and you sit down to write a paper together (and with Fitch). What now? you're supposed to ask to see the lab notebooks and inspect his hard drives for the data from his already published papers before trusting him enough to write a paper together? Don't be silly. Or maybe you think if you're any good at all you're just supposed to see directly into Hauser's soul and know you're dealing with a criminal mastermind? And you're just a loser if you don't have those particular superpowers? I don't think so. Is that what you really think? Remember, Hauser and Chomsky didn't do any experiments together. They thought some thoughts together, which is a very different thing.

John (2010-08-21 19:27:44)

You can't seriously expect Chomsky to review this sort of data. He's obviously a theory guy, and wouldn't have the lab training anyway. Hauser claimed to have discovered that tamarins can grasp the rules of a regular grammar while failing to grasp analogous rules in a phrase-structure grammar. Since these concepts come straight from the Chomsky hierarchy, it is only natural that Chomsky would have been interested. Hauser claimed to have evidence that made it look like differences in monkey-vs.-human competence could be mapped onto part of the Chomsky hierarchy. Very cool, if true. But if tamarins can't even pick up the rules of a regular grammar, then it just shows that Hauser failed to establish a connection. I don't see how Chomsky's syntax is discredited or his speculations on language evolution.

G (2010-08-21 19:31:43)

Uh, I dunno Seth, it's not like Chomsky married and lived with a serial-killer for ten years without twigging, and you don't know that this kind of seediness has blighted everything Hauser's ever done. It seems like innuendo to try to tar him with this. Do

you have something else against him? I have always found his ideas about politics interesting; I think he is useful. I like that he stresses the relationship between thought and language, though I vaguely recall feeling unconvinced by his ideas about animals. Humans probably do have unique hard-wiring for language, but if apes can use sign-language, there's no point in denying that that is language-aquisition - that strikes me as goalpost-shifting.

CF (2010-08-21 21:28:04)

Seth, it's pretty difficult to detect that someone is faking this sort of data unless you see the raw data - i.e., the tapes. How the heck is Chomsky (and similarly placed individuals) supposed to guess Hauser is up to no good on papers he has NOTHING to do with except as a reader, can't replicate on his own, and that no one has publicly challenged the integrity of? Of course I'm sure Chomsky is disappointed and feels like he has "egg on his face" to some degree as well, but it's hardly surprising that a human was successfully able to deceive other humans. I don't think we should think less of the deceived unless they personally saw two sets of tape codings (or Hauser's coding plus the tape), noticed the fact that they disagreed, and thought or said nothing. We have evolved with a lot of social machinery, and deception is one technology that often succeeds. Unless you've developed some foolproof B.S. detector you'd like to sell us? I'd love to have one of those...

Seth Roberts (2010-08-22 00:14:14)

CF, I agree. I didn't mean my comment as a judgment, I was just predicting the future. I should have made that clear. I don't think less of Chomsky because of this. It's like predicting that X will win the election even though you didn't vote for him.

dearieme (2010-08-22 03:36:06)

The first case of crookedness that I was told about involved a distinguished researcher who invented some data to supplement real measurements. His postdoc co-author later realised what had happened and opined, in private, that the invented data were probably pretty good - the so-and-so had had a fine intuition for the problem in question. Later in his career the wrongdoer was eased out from his post in an ancient university, the charge sheet including bullying, blackmail and theft, in addition to mere academic crimes like plagiarism. Experience teaches that once someone decides that he's too grand for the rules to apply to him, and once he gets off with it, problems get worse.

Alex Chernavsky (2010-08-22 07:52:35)

Reminds me of the story of Samuel Waksal, former CEO of ImClone and friend of Martha Stewart. (He spent seven years in federal prison for insider trading and related crimes.) Before he became a businessman, he spent time in academia, doing biology research. He resigned from (or was forced out of) four different institutions - all under highly suspicious circumstances. [http://online.wsj.com/article/NA\\_WSJ\\_PUB:SB1033076483640238993.html](http://online.wsj.com/article/NA_WSJ_PUB:SB1033076483640238993.html)

John (2010-11-15 18:51:23)

"The incident makes Chomsky look bad" - especially because Chomsky has been Hauser's mentor for more than 15 years: <http://www.thecrimson.com/article/2010/9/14/hauser-lab-research-professor/>

### **Open-Access Publication Fees at the BMJ (2010-08-21 14:11)**

Open-access is why you're reading this. Because [1]my long self-experimentation paper was in an open-access journal, many people could easily read it. I'm sure this is why I managed to get a contract to write The Shangri-La Diet.

The BMJ is experimenting with [2]a way to support open access: Ask for publication fees from authors with grants that include the appropriate support.

We are introducing this policy as the next step in our efforts to ensure the sustainability of open access publication of research in the BMJ, and we are doing so in the spirit of experimentation. Many research



funding organisations, sponsors, and universities now provide grants that cover journals' fees for open access publication.

Wise. While I was writing The Shangri-La Diet, I visited Alice Water's [3]Edible Schoolyard. I learned that it cost hundreds of thousands of dollars a year, provided by foundations. As far as I could tell, the people in charge were doing nothing to reduce the subsidy required. Yet they wanted the idea to spread.

1. <http://escholarship.org/uc/item/2xc2h866>
2. [http://www.bmj.com/cgi/content/full/341/aug17\\_3/c4494](http://www.bmj.com/cgi/content/full/341/aug17_3/c4494)
3. <http://www.edibleschoolyard.org/>

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### More Saturated Fat, Less Stroke (2010-08-23 07:59)

[1]This recent study from Japan found that middle-aged men and women who ate more saturated fat had a lower risk of stroke. The rate of strokes was 30 % lower in the highest intake quintile compared to the lowest quintile. There was a non-significant reduction in heart disease.

Other big differences were correlated with saturated fat intake. For example, those in the highest quintile had more college education than those in the lowest quintile and were more likely to do sports >1 hr/week. These data by themselves won't convince anyone that saturated fats are beneficial. But they should push you in that direction. Contrary to what you've heard a million times.

As far as I can tell, eating lots of butter has lowered my blood pressure. High blood pressure is associated with greater risk of stroke.

Although pig fat certainly helped me (I slept better), I've found butter is even better. [2]Butter has considerably more saturated fat than pig fat. The fat in butter is 60 % saturated fat, whereas pig fat is 40 % saturated fat. My consumption of 60 g/day of butter gives me 36 g/day saturated fat. In this study, persons in the highest quintile of intake averaged 20 g/day. The highest intake in the whole study (60,000 people) was 40 g/day. In addition to butter, I eat cheese, whole-fat yogurt, and meat, so I'm surely higher than that.

Via [3]Whole Health Source.

1. <http://www.ajcn.org/cgi/rapidpdf/ajcn.2009.29146v1>
2. <http://en.wikipedia.org/wiki/Butter>
3. <http://wholehealthsource.blogspot.com/2010/08/saturated-fat-consumption-still-isnt.html>

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JM (2010-08-23 10:00:21)

I had a pretty severe health disaster recently. Malnutrition + anxiety -> negative feedback loop that ended up causing serious

damage. Overnight I went from being a lifelong near-narcoleptic to an insomniac. At one point I thought I was developing schizophrenia due to mild hallucinations (there's a correlation between malnutrition and the onset of psychopathology). It's been several months and I feel like my brain is slowly improving. I can't sleep as well as I used to, but I can't complain either. One thing I'm consciously doing is eating massive amounts of butter and high fat dairy products. Based on my day-to-day experience (e.g. some days of eating no butter, and having somewhat worse sleep the following night) I can't help but believe that saturated fat is playing a key role in short-term and long-term brain function.

CTB (2010-08-23 11:42:56)

A couple of things. The USDA recommends limiting sat fat to 10 % of calories. If you eat 2000 total calories per day, that would be 200 calories of sat fat. there's 9 calories per gram of fat, so that would be  $200/9 = 22$  grams of sat fat. So on average, the highest quintile was eating the USDA recommendation for sat fat. Which then makes you wonder how little fat the lowest quintile was eating. Usually, foods with high saturated fat come from animal sources...which means they also contain significant cholesterol. So the people in the lowest quintile were possibly eating no animal fat...maybe traditional lowfat Japanese food? with highly salted (preserved) fish? and low amounts of cholesterol? When Japanese switch from traditional diets to more Westernized food (in moderation), a lower risk of stroke has been noted in the past. This has been attributed to the protective effect of adding a little more cholesterol to the diet and reducing salt. Cholesterol is crucial to the membrane stability of every cell in your body. Increased salt intake is associated with increased blood pressure. Increased pressure against weakened membranes on vascular cells can lead to rupture. There's also concern that reducing cholesterol too low with statins can lead to increased stroke risk. So perhaps the take home message from this study is that if you're eating a traditional Japanese diet, you can go ahead and add a cheeseburger every day for lunch.

John (2010-08-23 11:43:03)

Seth, why don't you try culturing your butter, if you haven't already. Take some heavy cream, throw a dollop of yogurt in it and stir, wait overnight. Then whisk the cream until it butters up. Drain off the buttermilk (and drink!), then wash the butter in water to get rid of the excess buttermilk (or the butter will apparently go sour in a less than tasty way, but who knows). It is very buttery, more so than uncultured sweet cream butter, and gives you saturated fat and more delicious lactobacilli.

q (2010-08-23 11:46:16)

do you eat the butter so that you taste it? is it possible that some effects have to do with tasting it? i've been alternating between butter and canola and flax oil for a couple weeks for my SLD routine and find that butter is pretty effective and easier on my stomach than canola or flax. but i haven't noticed any mood or intelligence effects, and my sleep is so variable (and has remained so) that i'd have to chart it to be sure of anything. flax oil has the problem that i can kinda sorta taste it even half an hour later, so i'll have to figure out how to do it right.

Hap (2010-08-23 13:15:56)

All I can say is that the butter sold by Spring Hill at the Berkeley Farmers' Markets is from pasture-fed cows in Petaluma – and it is VERY TASTY. Spring Hill claims it does contain Weston Price's "X-Factor," i.e. Vitamin K2. I get myself in trouble (?) by leaving it on the kitchen counter to soften, right next to a container of crackers. No knife needed. Talk about instant gratification!

Seth Roberts (2010-08-23 14:07:08)

q, I started by tasting it. Lost 10 pounds. Then started gaining it back. Then switched to eating it noseclipped. Then started losing again. You won't notice the intelligence effects unless you carefully measure it, as I did. I wasn't terribly good at predicting how well I'd do on the arithmetic test. CTB, that's very interesting. The very low rate of Japanese heart disease has usually been attributed to lots of fish and low saturated fat. This study makes that explanation unlikely – and therefore makes more likely an alternative explanation I like: the low rate of heart disease is due to all the fermented foods they eat (e.g., miso). The high rate of Japanese stroke has usually been attributed to a salty diet. This study suggests it's due to too-little saturated fat.

vic (2010-08-24 00:33:20)

I'll up my consumption of saturated fat after you report an improvement in your follow-up heart scan

Alex Chernavsky (2010-08-24 04:32:51)

Seth, there are a lot of little nuggets of nutrition-related information scattered throughout your blog posts and comments. I think it would be useful for your readers if you could organize and condense them into some kind of longer document.

G (2010-08-24 08:02:56)

I tend to stay away from cheap sausages knowing that they are mostly fat, skin and unappealing low-value cuts. But sometimes I wonder whether any of this is truly unhealthy in moderation. People often joke that haggis is junk-food, but it's not in the least.

Seth Roberts (2010-08-24 16:10:10)

Alex, thanks for the suggestion. But there are not enough hours in the day.

Nansen (2010-08-26 13:18:17)

"As far as I can tell, eating lots of butter has lowered my blood pressure." At what time(s) of day do you take your blood pressure?

Seth Roberts (2010-08-26 18:17:42)

I take my blood pressure early in the morning. Such as 6 am.

## **Asthma and Probiotics (2010-08-24 05:46)**

In [1]a long comment on [2]an earlier post, JohnG tells how he failed and succeeded to get rid of disabling exercise-induced asthma. Lots of things didn't work:

I tried Vitamin D; it didn't work, but it did help my nasal allergies somewhat. I tried low carb dieting, and just like Dr. Lutz of "Life Without Bread" said, it made asthma worse while it practically cured my nasal allergies. I also tried the Dr. Sears approach of taking as much as 7.5g of EPA/DHA a day; no change at all in the exercise induced asthma.

The idea that asthma is due to lack of microbes made sense to him and he started trying fermented foods and probiotics. At first, nothing:

I re-reviewed the probiotic slant and found the Helminth story and all the trials that were going on in PubMed for them. With that logic in hand, I set about to find a probiotic that worked. I tried yogurt, kefir, fermented cabbage, and buttermilk to no avail. I then tried store bought probiotics one by one. I tried The Maker's Diet probiotic and it didn't help; but I do think it helped make a 20 year long wart go away. I also tried all forms of probiotics on the market; even LGG. Nothing.

Finally, success:

I bought this super high dose probiotic and took it along with a L. Sporogenes/[3]bacillus coagulans. Voila, three days later I could really feel the difference during exercise. I continued that for 10 days. By the 10th day, I didn't have to hit my inhaler at all during exercise. Wow!

First, I had to decide which probiotic did the trick. I didn't want to spend a ton on that high dose probiotic, so I stuck with the Bacillus Coagulans and it continued working normally. So, I found my probiotic. Now, I needed to verify it wasn't placebo. A close cousin to exercise induced asthma is the

phenomenon of waking up sneezing and then promptly getting an asthma attack/or closure after that.

I went off my bacillus coagulans that I had been on for 14 days. By the second day, I noticed a little difference. By the third day, I had to hit my inhaler during the workout. By the 10th day (bacillus coagulans supposedly lives in your intestines 7 days), I was full-blown back to having to use 4 inhaler puffs and it wasn't doing the trick. This was test phase one.

I then went back on the bacillus coagulans for 10 days. The same process repeated itself. The nightly asthma attacks abated after about 4 days and the same no-puff needed during exercise continued as well.

I then went back off the bacillus coagulans for 10 days. I got the asthma back at day 3.

I've now been back on 5 billion CFU's of bacillus coagulans (duraflora) for 18 days. I don't have to use my inhaler for exercise. I can feel the asthma come on very slightly and then go away.

Very impressive. Shows what can happen if (a) you think for yourself, (b) persist, and (c) have access to a lot of helpful information. I think he needed all three.

1. <http://www.blog.sethroberts.net/2009/04/29/eczema-nighttime-cough-antibiotics-and-fermented-food/#comment-493596>

2. <http://www.blog.sethroberts.net/2009/04/29/eczema-nighttime-cough-antibiotics-and-fermented-food/>

3. [http://en.wikipedia.org/wiki/Bacillus\\_coagulans](http://en.wikipedia.org/wiki/Bacillus_coagulans)

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Aaron Blaisdell (2010-08-24 07:47:51)

Very well done self experimentation! The ABABA design really strengthens conclusion about the causal relationship between probiotics (of a particular type) and his asthma.

Aaron (2010-08-24 11:03:55)

This is probably the wrong forum for this, but I wonder why he had to keep supplementing with the bacteria. Don't they continue to feed and multiply once implanted? If I were him, I would start to look at factors of my diet and lifestyle that were killing this helpful bacteria in my gut.

JohnG (2010-08-25 09:16:43)

Good point Aaron. I've considered the same thing. I'm hoping that, over time, on a paleo-like diet while taking the bacillus coagulans my body will heal itself, but I'm just not sure that's how it works. Here's two points that oppose that thought which I've considered thus far. One, because of my diet, other environmental exposures, or just something genetically fouled up in my system, I may never get better and need a probiotic of some kind for the rest of my life; ala prescription medicines. Two, perhaps we were meant to have some level of exposure (load) to these agents (soil organisms, etc), and maybe some people require more because of genetics. I'm currently leaning to believe it is some combination of the two. As a side note, I also had mild colitis for about 15 years which has not returned since I've begun the treatment.

John (2010-08-25 22:10:14)

Well, it appears from the probiotics books that I have read that you will need supplementation in the long term if you want a particular, commercial probiotic as non-native bacteria don't permanently colonize the gut. You get the mix early in life from

family and early environmental exposure. Another point is that in a more bacteria-rich environment, you wouldn't need to seek out commercial bacteria to ingest—they would be present in larger numbers in your food.

Alex Chernavsky (2010-08-26 11:22:28)

My wife had various gastrointestinal problems that all went away (or at least improved a lot) after she started drinking kombucha. However, she has to drink it about three times a day to maintain the beneficial effect. She's been doing this for about three or four months, I think, with no cumulative effect. If she misses a dose, the symptoms return.

David (2010-08-26 13:19:03)

The detailed ecology of the gastrointestinal tract is poorly known, to say the least. Maybe 1 % of the intestinal organisms have even been identified. Seeing results where a single probiotic addition improves a symptom in an obvious way may give the false idea the system is simpler than it actually is. It should not be surprising that the positive effect does not last without continuing intake because of the unlimited complexity of the internal ecology and unknown players involved.

Tom (2010-08-27 07:59:57)

There's a lot of great information on the 'cooling information' blog. He recommends eating apples and onions (for pectin & inulin, I believe?) a form of fiber that supports intestinal bacterial growth. He also recommends eating a broad array of vegetables that have *not* been cleaned too well.

JohnG (2010-08-27 08:29:49)

I've tried the apples, jicama root, fennel, etc to no success. I do juice carrots twice a week and don't wash them. We have a garden and don't wash the vegetables well either for the same reason. I agree with David's complexity idea. The bacillus coagulans is clearly a band aid of sorts; performing a needed function somehow missing in me currently. What really throws a wrench in the works is the fact that my Dad and one of my sons both have the same problem; and my other son has atopic dermatitis. So, clearly, there's a genetic component. Now, is that a genetic component that manifests itself via an incorrect diet or just a different environment than we were adapted for. Or, what if the genetic problem is just that; a malfunction which persists with the aid of antibiotics to keep us alive long enough each generation to pass it along. Lots of variables to bewilder the mind. That's why I really get excited when something works like this.

Seth Roberts (2010-08-27 10:07:16)

JohnG, it's a genetic problem that only becomes visible in a bad environment. Like Aaron Blaisdell's sun sensitivity. We were designed to live in an environment where we ate lots of bacteria-laden food. Lack of such food makes us sick. Some of us get more sick than others, partly for genetic reasons.

Aleksandar Totic (2010-08-30 16:14:58)

Seth, I stumbled upon your blog earlier this year. It held my interest, I've always been attracted to alternatives. This is the first post where I'd like to try out your suggestion, but I could not find "bacillus coagulans" at Whole Foods. Any suggestions on where can I order it from?

JohnG (2010-08-31 08:22:53)

Aleksandar, I'm currently using Source Naturals Dura Flora. Thorne Research's Lacto bacillus Sporogenes (the old name for this probiotic which is now called Bacillus Coagulans) also has it. And, there are a few others which have Bacillus Coagulans/Lactobacillus Sporogenes as well. Seth, yeah, that's what I figured. I'm excited that this probiotic has done so much for me, but I'll be even more excited if my body can heal to the point where I don't need as much of it. I'm currently taking 10 Billion CFU's of the Bacillus Coagulans because the Autumn is my worst time of year. So far, I only have to hit the rescue inhaler about one out of every three workouts (and only one time). I'm still on my nightly steroid inhaler which I used to take twice a day. I did go off the steroid inhaler for one of my three 14 day tests, and I did notice some difference being completely off of it. I'll see how I progress this Fall. I might go off it before the Fall ends depending on how this treatment progresses.

Anon (2010-10-26 21:12:16)

>Thereâ€™s a lot of great information on the â€˜cooling informationâ€™ blog. That's cooling *inflammation*, not information  
And yes it is a great resource

Richard Friedel (2010-12-20 06:31:33)

A relevant but strangely ignored or not generally known fact about asthma and breathing troubles is that the change between weak (asthmatic) and strong (healthy) breathing is dependent on abdominal muscle tension. Slackening the muscles here causes abysmally weak and asthmatic breathing. Training the muscles, for example by â€œabdominal hollowingâ€ (see Web articles) produces an antiasthmatic effect. Abdominal muscle tension plays a prominent part in Asian martial arts. I tend to breathe asthmatically after an evening meal or in pollen-laden air. So it is fair to assume that there is a natural breathing spectrum with an asthmatic tendency at one end and Ku Fu or Karate breathing at the other end. For a few words on the Japanese version of Asian breathing see <http://www.lrz.de/~s3e0101/webserver/webdata/OBT.pdf> Breathing powerfully into my lower abdomen with tensed muscles provides an effective cure for me. But then Iâ€™ve always been sceptical about medical wisdom on asthma: such a paradoxical and doctor-baffling increase in the last 40 years with modern, merely symptomatic inhalers. Respectfully, Richard Friedel

JohnG (2011-01-27 09:47:18)

Richard, That's interesting, but definitely does not apply to me. I have some allergic asthma along with exercise induced asthma. I can crank out 50 sit ups or 15 toe to bars without breaking a sweat. My abdominal muscles are strong yet I still have asthma. I do have some success damping down asthma if I try to keep my lungs empty until I have to breath. At that point, I breath in from the bottom of my lungs up (i.e. using the abdomen to pull the air in). This helps when sitting idle, but is of no help during Crossfit-type strenuous activity. John

Sinisa Janicijevic (2011-05-19 12:52:41)

Great information. It's always good to know that there is some new alternative remedy for asthma. Is there any web site where we can purchase "bacillus coagulans". I would also suggest you to try Buteyko Breathing Technique. The approach takes its name from the past Ukrainian doctor Konstantin Pavlovich Buteyko. Many of the studies showed patients who used the Buteyko method experienced a reduction in the symptoms of their asthma and many of the patients also were able to reduce their use of inhalers by two uses a day after using the method for six months.

## Web Alternative to Peer Review (2010-08-24 22:22)

Mixing traditional and new methods, the journal ["the prestigious Shakespeare Quarterly"] posted online four essays not yet accepted for publication, and a core group of experts . . . were invited to post their signed comments on the Web site MediaCommons, a scholarly digital network. Others could add their thoughts as well, after registering with their own names. In the end 41 people made more than 350 comments, many of which elicited responses from the authors. The revised essays were then reviewed by the quarterlyâ€™s editors, who made the final decision to include them in the printed journal, due out Sept. 17.

[1]The NY Times article never says how many of the four posted essays were published. If all of them made the cut, then perhaps the web stuff was just for show. And if any of them didn't make the cut, the public embarrassment would be great. Perhaps too great. I suspect that all of them made the cut and the whole thing was closer to a publicity stunt than something that you could plausibly do again and again. If the probability of acceptance given that your essay is posted is 100 %, what matters is getting posted. Peer review wasn't replaced by web review; it was replaced by behind-closed-doors review.

Another instance of academics outwitting this particular journalist:

To Mr. Cohen, the most pressing intellectual issue in the next decade is this tension between the insular, specialized world of expert scholarship and the open and free-wheeling exchange of information on the Web. “And academia,” he said, “is caught in the middle.”

Haha! Poor poor professors! Caught in the middle! I was under the impression that professors = expert scholarship. Anything to distract attention from the real change: The more education you can get from the Web, the less you need to get from professors. The more evaluation you can get from the Web (e.g., by reading someone's blog), the less you need to get from professors. The less professors are needed, the fewer of them there will be.

Thanks to Dave Lull.

1. <http://www.nytimes.com/2010/08/24/arts/24peer.html?emc=eta1>

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LemmusLemmus (2010-08-24 23:18:39)

"The revised essays were then reviewed by the quarterly's editors, who made the final decision to include them in the printed journal" Doesn't that mean ". . . to include all of them?"

Seth Roberts (2010-08-25 08:31:21)

Maybe. It might also mean the editors were the ones who made the final decision.

Gunnar (2010-08-26 19:23:40)

The web alternative requires that people think for themselves and not just accept what's on the menu. That's good imho ;-)  
And a reason why I like this blog. So Thank you Seth for your blog! Gunnar

Eric Meltzer (2010-08-29 08:43:37)

Wouldn't posting them anonymously solve the embarrassment problem?

### Assorted Links (2010-08-25 19:20)

- [1]papers about the efficacy of Vitamin C in treating a wide range of illnesses
- [2]the so-called Medical Revolution – stem cells, etc. Good description of how the hype – this or that "revolution" – has been misleading time after time.
- [3]how to make prosciutto. Prosciutto is high in umami. The umami flavor gets stronger over time as the protein breaks down.

1. <http://seanet.com/~alexs/ascorbate/index.htm>

2. <http://www.slate.com/id/2264401/pagenum/all/#p2>

3. <http://www.umamiinfo.com/2011/03/umami-in-dry-cured-hams.php>

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Caleb (2010-08-25 20:43:01)

Great, now I'm slaving for some prosciutto, and I don't think it's even available out here in the boondocks

Caleb (2010-09-10 09:34:30)

Wai! Thanks for sharing about prosciutto! I finally found some and it was even more delicious than I imagined

### **New Heart Scan Results: Good News (2010-08-28 06:04)**

One and a half years ago, in February 2009, I got a [1]heart scan. It's an X-ray measurement of how calcified your arteries are. Persons with high scores are much more likely to have a heart attack than persons with low scores. Scores in the hundreds are dangerous. Tim Russert, who died at age 58 of a heart attack, [2]had a score of about 200 ten years before his death. Above age 40, the scores typically increase about 25 % per year. That puts Russert's score when he died at around 2000.

A few weeks ago I got another scan, at the same place with the same machine. Here are my scores. February 2009: 38 (about 50th percentile for my age). August 2010: 29 (between 25th & 50th percentile). In other words: 47 % lower than expected. The earlier scan detected 3 "lesions"; the recent scan detected 2. The woman who runs the scanning center - [3]HeartScan, in Walnut Creek, California - told me that decreases in this score are very rare. About 1 in 100, she said.

The only big lifestyle change I made between the two scans is to eat much more animal fat. After I found that pork fat improved my sleep, I started to eat a large serving of pork belly (with 80-100 g of fat) almost every day. Later I switched to 60 g of butter every day. The usual view, of course, is that to eat so much animal fat is v v bad and will "clog" my arteries. In fact, the reverse happened. Judging from this, the change was v v good.

1. <http://www.mayoclinic.com/health/heart-scan/MY00327>

2. <http://heartscanblog.blogspot.com/2008/06/tim-russert-had-heart-scan.html>

3. <http://www.heartscan.com/>

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q (2010-08-28 06:38:02)

great news! where do you get the 47 % from?

Chris Sturdy (2010-08-28 06:41:11)

Excellent news! I'll have eggs fried in lots of butter to toast your success!

Allen K. (2010-08-28 07:45:10)

I'm selfishly very glad - I want to keep reading you for a long time! (And eating animal fat.)



John (2010-08-28 08:41:08)

Keep on driving a steak thru the heart of conventional wisdom!

Seth Roberts (2010-08-28 08:46:20)

how I got 47 %: At 25 % increase/year, 1.5 years should produce a 40 % increase. With a 40 % increase, 39 becomes 54. My actual score, 29, is 53 % of 54.  $100 - 53 = 47$ .

Gaspard (2010-08-28 10:50:49)

Did you simply add this fat to your diet or eat less of something else? An extra 60g fat would be 540 extra calories a day, no?

K (2010-08-28 11:08:17)

Good for you! I am unsurprised by your result. If you hang out in the paleo/low carb forums, you see this kind of thing a lot. And let's not forget that the greatest (and most vilified) proponent of animal fat, the late Dr. Atkins, was a cardiologist. By the way, I am curious. Do you eat low(ish) carb?

Alex Chernavsky (2010-08-28 12:28:16)

Seth, have you ever heard of the brachial artery tourniquet test? It's supposed to test the health of your arteries. I once heard a lecture by [1]Dr. Caldwell Esselstyn, a cardiologist who advocates an extremely low-fat diet as a means to prevent or treat heart disease. Esselstyn uses the results of the tourniquet test as evidence that ingesting even modest amounts of lipids can make your arteries "stiffer" (i.e., less able to dilate after being constricted). I remember that Esselstyn made a big deal out of it during his lecture.

1. <http://www.heartattackproof.com/>

Timothy Beneke (2010-08-28 14:26:31)

Question: Had you lost weight between the 2 scans? And is that a relevant variables in bringing down your numbers? And what is the retest validity if you take the test twice in a row after waiting a week or so?

Vic (2010-08-28 15:38:14)

Good news Seth! Besides the animal fat, what's the rest of your diet like? and how often do you eat? Besides your walking and biking, do you do any other exercise? Do you think your improved sleep helped to improve your score?

Seth Roberts (2010-08-28 17:14:50)

Did I simply add the fat to my diet or eat less of something else? I ate less of everything else. Butter is not all fat; 60 g of butter is about 500 calories. I already ate low-carb. The rest of my diet is meat, vegetables, and fermented foods, such as kombucha and yogurt. I eat one normal meal per day. I walk hard uphill on a treadmill a few times/week. Perhaps I lost 7 pounds between the two scans. I'm not sure, but weight loss alone can't produce such a change, in the sense that I can't imagine a plausible connection. I don't know the test-retest correlation but the fact that a decrease is so rare shows that this cannot be due to chance. My sleep has been good for a long time. I doubt sleep changes had anything to do with it. I haven't heard of the brachial artery tourniquet test. Butter seems to have reduced my blood pressure, which argues against increasing stiffness. K, can you point me to an example of this in the paleo forums? My impression is that people sometimes improve, but inevitably they have made many changes. To make just one change as I did is very rare, as far as I can tell.

Hans S (2010-08-29 04:45:02)

A frequented blog in the paleo sphere is the <http://heartscanblog.blogspot.com/> from cardiologist Dr. William Davis. Infact, you'll both be presenting at the upcoming Ancestral Health Symposium. He advocates, as so many in the paleo crowd, the total avoidance of the 'three horsemen of the apocalyps' : sugar (fructose), wheat (gluten) and industrial plantoils (broken/excess omega6). Ask him yourself but Dr. William Davis is used to seeing his type of heartscan improvements.

Vic (2010-08-29 11:09:11)

he doesn't advocate much against omega 6, he advocates for eating plenty of nuts, which have fair amounts of omega 6

Hans S (2010-08-29 12:20:01)

Nuts are not broken industrial plantoils (also, nuts are difficult to fully digest so overloading yourself with excess omega6 is nearly impossible). Better examples of broken industrial plantoils are margarine, mayonaise, any hydrolized oil filling, ...

JohnN (2010-08-30 12:33:37)

Seth, Congrats on your calcium score improvements. There's good reason to expect more than just the correlation between animal fats and lower calcification of the artery. They have one thing in common - vitamin K.

Ed M. (2010-08-31 08:56:39)

Seth, What is commonly tested as LDL is not the whole story. Have a look at "cholesterol subfractions" Not all LDL is the same. There is small and dense, and large and fluffy. One "good" one "bad"... Admittedly I have a layman's (caveman's?) understanding of all this but you might be able to better digest it... There are enough studies out there to seriously doubt the medical establishment's fascination with Statins... Just to put my biases out there, I have been following a LowCarb-> Paleo-> EvFit lifestyle for over two years now and have lost weight (320->240 lbs) as well as improving my overall fitness... PaNu Blog is excellent on this: <http://www.paleonu.com/panu-weblog/2010/7/21/statins-and-the-cholesterol-hypo-thesis-part-i.html> -Ed

Willy (2010-09-06 15:49:28)

Have you read this? "Our hypothesis is that fats themselves play a role in regulating sleep," Shaw said. They are, after all, signaling molecules, he said, and it's possible "that lipids themselves are somehow signaling to the brain that you should be sleepy or are initiating cascades that either result in impairment or can protect you from impairment." <http://www.the-scientist.com/blog/display/57664/>

Perfect Health Diet » How to Raise HDL (2011-04-20 16:28:54)

[...] Roberts cut his coronary artery calcification score by 24 % by eating a half-stick of butter per day; perhaps butter's HDL-raising property deserves the credit. High dairy fat consumption is [...]

CH Parker (2012-01-24 13:37:40)

I hope you do not equate one diagnostic with predictability for heart attacks, strokes, embolisms, stenosis, etc...! The Mayo Clinic suggests caution with regard to walk-in "clinical/diagnostic analyses"

## **New Heart Scan Results: Good News (context) (2010-08-29 04:19)**

I [1]posted yesterday that a recent heart scan found my arteries about 50 % less calcified than a previous scan predicted. Apparently the improvement was due to eating much more animal fat (pork fat and butter).

In 2004, [2]an American Journal of Clinical Nutrition article found something similar: heart disease progressed less in women who ate more saturated fat. "In postmenopausal women with relatively low total fat intake, a greater saturated fat intake is associated with less progression of coronary atherosclerosis," the authors wrote. Here's how they saw this finding:

The inverse association between saturated fat intake and atherosclerotic progression was unexpected. However, this finding should perhaps be less surprising. Ecologic and animal experimental studies showed positive relations between saturated fat intake and CHD risk (8). However, cohort studies and clinical trials in humans have been far less consistent (9 –12). Furthermore, most studies of dietary fat and

CHD risk have been performed in men (15, 16). The relations in women“particularly postmenopausal women”are much less well-established, and evidence from dietary intervention trials suggests that diets low in saturated fat may have different effects on CHD risk factors in women (15, 17“22).

In their study, women with the highest intake of saturated fat did not get worse during the study period, whereas women with lower intakes did get worse.

An editorial about this study described some of the evidence that supports the “article of faith” that “saturated fat . . . accelerates coronary artery disease”:

One of the earliest and most convincing studies of the better efficacy of unsaturated than of saturated fat in reducing cholesterol and heart disease is the Finnish Mental Hospital Study conducted in the 12 y between 1959 and 1971. In this study, the usual high-saturated-fat institutional diet was compared with an equally high-fat diet in which the saturated fat in dairy products was replaced with soybean oil and soft margarine and polyunsaturated fats were used in cooking. Each diet was provided for 6 y and then the alternate diet was provided for the next 6 y. After a comparison of the effects of the 2 diets in both men and women, the incidence of coronary artery disease was lower by 50 % and 65 % after the consumption of polyunsaturated fat in the 2 hospitals.

My results make the results of that earlier study exceedingly puzzling. I found a large change in one direction; the Finnish study found a large effect in the opposite direction. Given the huge effect (50 % or 65 % reduction) observed in the Finnish study, it is hard to understand why “cohort studies and clinical trials in humans have been far less consistent”.

1. <http://www.blog.sethroberts.net/2010/08/28/new-heart-scan-results-good-news/>
2. <http://www.ajcn.org/cgi/reprint/80/5/1175>

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SB (2010-08-29 05:10:15)

Stephan on the Finnish trial: <http://wholehealthsource.blogspot.com/2009/07/finnish-mental-hospital-trial.html>

Steve\_P (2010-08-29 07:33:26)

Here's a critical view of the finnish trial that points out some serious flaws: <http://wholehealthsource.blogspot.com/2009/07/finnish-mental-hospital-trial.html>

Jake (2010-08-29 09:13:00)

Stephan has blown Finnish Mental Hospital Study out of the water. The study was poorly designed, variable controls were none existent and compliance was low. Any information from this study should be ignored.

Seth Roberts (2010-08-29 10:06:05)

After I read Stephan's critique, I still found the Finnish results puzzling. For example, “compliance was low”. This will make the observed differences underestimate (not overestimate) the beneficial effects of lowering saturated fat. Stephan believes the study overestimated them.

Vic (2010-08-29 11:12:16)

Lots of epidemiological trials also show highly significant benefits of polyunsaturated fat consumption on heart disease. Seth, curious what your cholesterol (ldl/hdl) is like?

Aaron (2010-08-29 17:33:33)

Wouldn't low compliance mean that you could not tell what diet the participants were actually eating, and so no be able to tell what was causing the changes in CHD levels?

Seth Roberts (2010-08-30 00:17:37)

No, low compliance means the treatment difference between the two groups is less than what it would be if there were high compliance.

Aaron Blaisdell (2010-08-30 06:44:01)

If the finish study was low compliance, but they yielded large results in favor of polyunsaturated fats, then perhaps the data had been "hausered."

### **New Heart Scan Results: Good News (explanation) (2010-08-30 07:21)**

My recent heart scan score was [1]about 50 % less than you'd expect from an earlier score. Why the improvement?

During the year between the two tests, I'd made one big change: eat much more animal fat. That's the obvious explanation. Three things support it:

1. Mozaffarian et al., [2]as I blogged, found a similar result.
2. The animal fat (pork fat and butter) had both produced large immediate improvements when I began to eat them. The pork fat had improved my sleep; the butter, my arithmetic scores. This sort of large immediate effect we associate with the supply of a missing necessary nutrient – giving Vitamin C to someone with scurvy, for example. My brain, at least, needed much more animal fat than I'd been eating. Different parts of the body need different nutrients, sure, but they all must work well with the same set of nutrients. If Nutrient X helps one part of the body, it is more likely to help another part.
3. My initial score put me at the 50th percentile for my age. I'd had an unusual diet for a long time. I stopped eating bread, potatoes, rice, pasta, and dessert 13 years ago. I'd started consuming lots of omega-3 and fermented foods a few years earlier. It was possible that those other changes produced improvement but if so it was a strange coincidence that, as my score got better and better over the years, I happened to measure it for the first time just when it crossed the 50th percentile.

This explanation makes a prediction: If you greatly increase your animal-fat intake, your heart scan score should improve. [3]A commenter said what he'd read on paleo-diet forums supported this prediction: "If you hang out in the paleo/low carb forums, you see this kind of thing a lot."

1. <http://www.blog.sethroberts.net/2010/08/28/new-heart-scan-results-good-news/>

2. <http://www.blog.sethroberts.net/2010/08/29/new-heart-scan-results-good-news-context/>

3. <http://www.blog.sethroberts.net/2010/08/28/new-heart-scan-results-good-news/#comment-497537>

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Nathan Myers (2010-08-30 14:19:49)

I'm finding this 25 % per year figure increasingly implausible. By the magic of compound interest, if this had any validity, we would expect a patient measured with 100 at age 40 to reach 8673 at age 60, and 80779 by age 70.

DALE MCNULTY (2010-08-31 00:22:21)

Most expensive study of diet ever conducted. <http://www.hsph.harvard.edu/nutritionsource/nutrition-news/low-fat/>

Kris Cannon (2010-08-31 16:18:35)

I have tripped over your blog while researching flaxseed. At the expense of sounding COMPLETELY stupid... I admit, I have no idea what I am reading, as the science is all greek to me. BUT, I am seeing key words that resonate with the path I am on. I am seeing a Dr. in Mesquite, TX who did some pretty unorthodox testing but was able to get to the bottom of my symptoms. Too many to go into, and too many diagnosis to list here as well, but I originally saw him for RA symptoms and reflux like symptoms. He requested blood work. The results you are so painfully stumbling upon seem to jive with what he rambled in scientific terms. I have only seen him once and I am on heavy duty regimen of vitamins and plan on talking to him more specifically as I slowly digest what my body is experiencing. I am writing because I wanted to recommend 2 books, Nourishing Traditions and The Maker's Diet. Both have VERY controversial and interesting information about our food sources and the testimony in Maker's Diet was amazing. Dr.'s CLEARLY are only in the business of masking symptoms. The doctor I am seeing was able to give me REAL answers. While he is an MD and a PhD, all his schooling was done out of the country and he has received amnesty to treat in the states (not clear about that process), but I know he is highly controversial as the last person he tried to train in his methods was shot in the back of the head. How's that for modern medicine!!! One thing I do see is that every "new theory" is touted as the end all be all, and for real, we are all individuals with very complex bodies and very different combining systems. Just because something is a "natural" supplement, doesn't mean it is good for you and certainly not in mega doses! I am getting quite an education and I am just beginning. I may start a blog of my own, people need to feel that there is hope amidst the wolves of medicine. Basics, raw, raw, raw as often as you can from a reputable source/dairy. No white flour or sugar. Some may not even be able to tolerate honey etc. or wheat. Pork fat and butter, brilliant!! Nourishing Traditions does a whole thing on fats and you are SPOT on. I've written so much, but I just wanted to put it out there to the stratosphere that what you are doing is commendable and I encourage you to cross reference your sources with other sources and don't ever believe everything you read from a medical journal, find out who is funding them, it just may be a corn oil manufacturer!!!

### **Funny Coincidence (2010-08-30 19:05)**

In The New Yorker (25 January 2010), David Owen wrote about his father's mother:

Gaga lived to be ninety-two, despite never having had much conventional health care. . . . She made foul-smelling yogurt . . .

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Alex Chernavsky (2010-08-31 04:09:06)

See also this vintage commercial for Dannon yogurt: [http://www.youtube.com/watch?v=HYng\\_oCaL3w](http://www.youtube.com/watch?v=HYng_oCaL3w) I remember when this series of commercials ran in the 1970s. I can't believe I was able to find this one on YouTube. I love the Internet.

G (2010-09-02 11:31:34)

Seth, I tried to make cultured butter and it turned out really pale and buttermilky even though I whisked and rinsed like crazy and did manage to extract some. I wanted it to be deep yellow and very buttery. Do you know what I might be doing wrong?

### **New Heart Scan Results: Good News (lipid scores) (2010-08-31 07:11)**

[1]My recent heart scan results were 50 % lower (= better) than predicted. Apparently I am doing something right. You might think that my lipid values would reflect that. Not quite. They were measured twice in the last two weeks, first with a Cholestech LDX machine (instant results); second, ordinary lab tests.

Here are the scores (first test, second test). Total Cholesterol: 210, 214, which is "borderline high" (borderline bad) according to the Cholestech LDX quick reference sheet. HDL = 17, 36, which is "low" (bad). TRG = 62, 75, which is "normal". LDL = 180, 163, which is "high" (bad).

There is no hint in these numbers that I am doing the right thing! If anything, they imply the opposite, that I'm doing the wrong thing. This supports all those people, such as [2]Uffe Ravnskov, who say the connection between cholesterol and heart disease is badly overstated.

1. <http://www.blog.sethroberts.net/2010/08/28/new-heart-scan-results-good-news/>

2. <http://www.ravnskov.nu/cholesterol.htm>

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Chris (2010-08-31 08:40:06)

Your results are interesting because while animal fat will raise LDL it will (typically) raise HDL to protective levels. Ever think about getting your Omega-3s from fish oil as opposed to flaxseed or maybe try a combination of both to see if that might have the effect of raising your HDL?

speno (2010-08-31 09:07:01)

Yes, and you didn't get the LDL sub particle type measured. You'll probably find that the majority of LDL particles are the larger ones (the "good" "bad" cholesterol - ha!) And the formula used for calculating LDL doesn't work well when TRG is that low. How's it look with the Iranian formula? [http://homepages.slingshot.co.nz/geoff36/LDL\\_mg.htm](http://homepages.slingshot.co.nz/geoff36/LDL_mg.htm)

vic (2010-08-31 09:50:15)

wow, your HDL is incredibly low for someone on a high animal fat diet. There are some people with low HDL though that are particularly protected from coronary disease: [http://en.wikipedia.org/wiki/ApoA-1\\_Milano](http://en.wikipedia.org/wiki/ApoA-1_Milano) A question also is did your lipids change appreciable in the time since your last heart scan?

David (2010-08-31 11:08:26)

Might there be a problem due to the unnaturally high omega-3 consumption, because it is an easily oxidized fat?

Charles (2010-08-31 16:04:58)

You might want to get a test to determine the makeup of the LDL. You'll find out if it is the large, fluffy kind (good), or the small, dense kind (bad). I would guess that with your diet, you would have a higher percentage of the large fluffy LDL. And that would be fine. The number itself, without knowing the different fractions, is meaningless if not misleading.

Seth Roberts (2010-08-31 19:46:42)

My lipids didn't change appreciably from what would have been predicted from previous years, except that the low HDL (18) is an aberration.

### In Tokyo - Wanna Meet? (2010-08-31 08:29)

From Thursday Sept 2 through Sunday Sept 6 I will be in Tokyo. If you'd like to meet, let me know.

[1]One Tokyo restaurant:

Please enjoy the dinner of the chef recommendation adhering to a "place of production", "freshness", a "season", "health", and "beauty" as a menu of a season.

Exactly. Words such as freshness, season, and so on in restaurant descriptions are indeed quotations but usually the quotation marks are missing.

1. [http://www.t-i-forum.co.jp/english/shop/shop\\_21.html](http://www.t-i-forum.co.jp/english/shop/shop_21.html)

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Laura (2010-08-31 20:16:36)

Interesting! I was given a new idea today that tied in to this post. Strange how life is. I'm gonna try to get a second job at SFO or OAK, since I live so close to them. Maybe I can get good benefits for discounts on flights someday!! EXCITING!!!

### New Heart Scan Results: Good News (raw data) (2010-08-31 20:46)

Here are the details of my two heart scan scores, one recent, the other one and a half years ago.

February 2009:

[1]

Coronary Artery	Number of Lesions	[Agatston] Calcium Score	Calcium Volume Score
Left Main	2	32.95	25.02
LAD	0	0.00	0.00
LCX	0	0.00	0.00
RCA	1	4.81	5.86
(Other)	0	0.00	0.00
Total [plaque burden]	3	37.76	30.88

August 2010:

[2]

Coronary Artery	Number of Lesions	[Agatston] Calcium Score	Calcium Volume Score
Left Main	1	27.46	19.29
LAD	0	0.00	0.00
LCX	0	0.00	0.00
RCA	1	1.72	1.29
(Other)	0	0.00	0.01
Total [plaque burden]	2	29.18	20.59

To give some context, [3]this group of patients given a whole bunch of treatments ("statin therapy, niacin, the American Heart Association Therapeutic Lifestyle Changes (TLC) diet, omega-3 fatty acids and vitamin D-3 supplementation") meant to improve these scores managed, on average, about a 0 % change in scores after 1-2 years of the treatments. Which is better than the usual 25 %/year increase, but not as good as what happened to me.

1. <http://www.flickr.com/photos/sethroberts/4944329500/>
2. <http://www.flickr.com/photos/sethroberts/4943745007/>
3. [http://www.trackyourplaque.com/library/fl\\_06-027faseb.asp](http://www.trackyourplaque.com/library/fl_06-027faseb.asp)

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Ed (2010-09-05 12:43:35)

I recently had a second CT scan for calcium scoring. The results were inconclusive but the research I performed indicated that the measurement error is significant enough to make serial CT useless unless there is a large difference in measurement, especially with scores as low as yours.

bill (2010-09-05 14:37:28)

Another possible explanation for the reduced calcium in arteries is vitamin K2. An article in the September issue of Life Extension Magazine vitamin K2 keeps calcium out of arteries. Some vitamin K2 is created in the gut by fermentation of vitamin K1 in green vegetables. Some fermented foods such as cheese and a Japanese dish called natto are high in K2. The fermented foods you eat may explain the calcium reduction. bill

Seth Roberts (2010-09-05 17:07:23)

Ed, what is "the research [you] performed that indicated that the measurement error is significant enough to make serial CT useless"? The head of the center where I got my scans said she almost never sees decreases ("1 in 100"). This implies that measurement error is small compared to whatever is increasing the scores. If measurement error was large you'd see decreases half the time or even more (due to people with high scores being more likely to get a second measurement than people with low scores). Bill, I ate a lot of fermented foods before my first score. It is possible that they lowered it to an average score – that my calcium score was on a downward trajectory that merely continued – but then it would be a coincidence that my first calcium score was so average. Still, I agree with you that that's another good reason to eat fermented foods.



## 5.9 September

### My Theory of Human Evolution (baseball park collector) (2010-09-02 05:07)

Waiting in line at Tokyo immigration control, I met a woman from North Carolina who'd come to Japan for an organized tour of Japanese baseball parks (17 of them). She learned about the tour from a friend. In America, she's visited 117.

I told her I was a psychology professor and had [1]a theory of evolution in which connoisseurship played a big role. She was a baseball-park connoisseur, I said.

The evolutionary role of connoisseurs and collectors was to provide demand for finely-made stuff – things made by state-of-the-art artisans. Connoisseurs and collectors would pay more for features that had no clear value otherwise. By trading for these things, the connoisseurs and collectors helped the artisans make a living and thereby push their technology further.

1. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>

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D (2010-09-02 08:15:04)

It would be helpful if the following quote, or part of it, was linked to your theory for new readers like me: "...had a theory of evolution in which connoisseurship played a big role." Wonderful blog.

Gaspard (2010-09-02 09:33:57)

I was thinking of this theory today reading the Classical Heritage and its Beneficiaries by RR Bolgar today. He provides a complementary (and certainly similar) description of how a certain kind of connoisseurship developed: [http://books.google.com/books?id=5HtUx2D1VYgC&lpg=PP1&ots=UmisyoMeDG&dq=classical %20heritage %20beneficiaries&pg=PA137#v=onepage&q=burgher %20class&f=false](http://books.google.com/books?id=5HtUx2D1VYgC&lpg=PP1&ots=UmisyoMeDG&dq=classical%20heritage%20beneficiaries&pg=PA137#v=onepage&q=burgher%20class&f=false)

Gaspard (2010-09-02 09:35:36)

sorry, link didn't quite work, it's the passage on 137 I mean.

Nathan Myers (2010-09-02 20:37:51)

Any theory of human evolution that depends on specialization can only apply to the last few thousand years – perhaps as few as four thousand, perhaps as many as twenty. Certainly some evolutionary adaptation has occurred in that time, such as Tibetans' and Peruvians' to high altitude, or Europeans' to dairy in the diet, and perhaps widespread increased tolerance for crowding. Nothing fundamental can have had anything to do with connoisseurship or specialization, because they began far too recently. You could make a much better case that agriculture is fundamental to who we are. A related argument, that extravagance is selected for in mating competition, applies throughout the animal kingdom, so there's enough time to develop endless variations, but there's nothing uniquely human about it.

G (2010-09-03 02:37:43)

Nathan - From the caveman has a thing about rocks. He stares at them, weighs them in his hands, and bangs them together. Others think this is merely eccentric until he develops a new cutting-tool. The impact of the new technology influences evolution. If I am right about Seth's idea, it's not connoisseurship just in the culturally fully-formed sense of joining a club and discussing it on the Internet - I think he means just the mental predisposition to focus on a favourite thing or a few favourite things. Many people who grow up to be excellent at something can trace this back to early childhood - they were honing

the skill or thinking about the topic just for the thing itself rather than to make a career or survive. It's specialisation by temperament and talent, not specialisation in the Marxist sense of 'division of labour'. Do I have this right?

Seth Roberts (2010-09-05 05:07:02)

By connoisseurs I mean people who get more pleasure from X than the rest of us and are more sensitive to differences between X1 and X2 (different versions of X) than the rest of us. For example, wine connoisseurs. It's not "being excellent at something".

G (2010-09-06 13:56:59)

Yeah Seth, but you just expressed a similar thing really but with algebra - Crom is fascinated by rocks and obsesses over small differences that interest no one else, hence they find him odd. I didn't say it is being excellent at something, just that it can lead to that, even if the 'excellence' is just in perception and not in any bold outward action. The baseball park connoisseur had some, possibly a bit inscrutable, excellence at looking at parks, but did not go on to be a park designer, for whatever reason.

### **A University President Defends Research Universities (2010-09-03 15:05)**

Steven Knapp is president of George Washington University in Washington, D. C. It was inevitable he wouldn't like a book attacking the current structure of higher education but it wasn't inevitable that [1]he would write this:

A similar point could be made about the educational value of working at the frontier of discovery in one of the research centers that Mr. Hacker and Ms. Dreifus [the book authors] decry. Have they spoken with undergraduates who have enjoyed the privilege of assisting a top investigator in an active, federally financed laboratory? In my own anecdotal experience, the best of those students, far from shutting themselves away in a narrow specialization, are very likely spending their time outside the lab in life-expanding service activities that, again, were quite beyond the ken of undergraduates in earlier generations.

At UC Berkeley, I spoke to many undergraduates like that. Most of them, perhaps 90 %, were working in a lab because they thought it would help them get into medical school. Almost none were interested in a research career. All of them were being supervised by graduate students and had little or no contact with the "top investigator".Â Because of the mismatch between what working in the lab could teach (what research was actually like) and what the students wanted to do (which wasn't research) the "educational value" was slight. Knapp fails to understand this basic point about education: It matters what the student wants. Almost none of them, even at UC Berkeley, want to be scientists.

Yes, outside the lab they did do "life-expanding service activities" – volunteer for the Red Cross, work on a suicide hotline, and so on. By making them take lots of classes in which they were assigned lots of homework, the university made such outside activities more difficult.

Before he became university president, Knapp was an English professor – where he no doubt claimed he taught his students how to think. His thinking, in this review, consists of banalities that don't bear examination. At least this is merely an unwittingly revealing book review instead of [2]an entire delusional book.

1. <http://www.nytimes.com/2010/08/19/books/19book.html?ref=review>

2. <http://www.nytimes.com/2010/08/19/books/19book.html?ref=review>

A University President Defends Research Universities « Beware of Roaming (2010-09-04 12:21:32)

[...] A University President Defends Research Universities At UC Berkeley, I spoke to many undergraduates like that. Most of them, perhaps 90 %, were working in a lab because they thought it would help them get into medical school. Almost none were interested in a research career. All of them were being supervised by graduate students and had little or no contact with the "top investigator". Because of the mismatch between what working in the lab could teach (what research was actually like) and what the students wanted to do (which wasn't research) the "educational value" was slight. Knapp fails to understand this basic point about education: It matters what the student wants. Almost none of them, even at UC Berkeley, want to be scientists. via [blog.sethroberts.net](http://blog.sethroberts.net) [...]

Maria Droujkova (2010-09-06 16:51:33)

Is the second link supposed to lead to the same book?

### Self-Experimentation and Infomercials (2010-09-04 16:31)

When I was a grad student I was inspired to self-experiment by something I read about teaching math: The best way to learn is to do, said Paul Halmos, a math professor. A more recent version is fail early fail often fail cheap.

A maker of infomercials [1] put it like this:

We were fortunate at American Telecast, in that most of our learning days were in our first 12 years, when we were in the 2-minute business. Learning was a lot cheaper. Failure was a lot cheaper than what failure is today in a 30-minute commercial. When you fail with a 30-minute commercial you can lose half a million or a million or a million and a half dollars. When we failed with a 2-minute commercial back then, we were failing with \$15 or \$20 thousand.

Self-experimentation made failure so cheap, so much cheaper than conventional research, that I was able to learn much more.

All this seems so obvious – yet self-experimentation by professional scientists is very rare. Psychology and nutrition professors, for example, could easily do self-experimentation, but don't. And the infomercial maker describes himself as "fortunate" rather than as deliberately creating the situation.

1. [http://www.itreallyworks.tv/book\\_ad.html](http://www.itreallyworks.tv/book_ad.html)

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q (2010-09-04 20:39:04)

halmos had at least half the right idea. sure, you can learn by doing, but you also have to have objective evaluation. that's hard to do in teaching as it's hard to get good information about what people are learning.

Gunnar (2010-09-05 06:31:16)

Such a way requires to leave the trodden paths. Once you do that, all hell or heaven can break loose. So most people stay in the herd. I found out the herd is victim to plenty false dogma, so I left it regarding information consumption and thinking. Maybe you are interested in today's Disclosure Day: <http://sbeckow.wordpress.com> Be well.

## Plastic Fantastic by E. S. Reich (2010-09-05 11:44)



Plastic Fantastic: How the Biggest Fraud in Physics Shook the Scientific World by Eugenie Samuel Reich, a science writer, tells how a young physicist named Jan Hendrik Schoen, working at Bell Labs on making electronic devices from organic materials, managed to fool the physics community for several years, publishing many papers with made-up data in Science and Nature. [1]This podcast summarizes the story, with the new detail that after his disgrace – even his Ph.D. was revoked – Schoen managed to get a job as an air-conditioning engineer in Germany.

I enjoyed the book, partly for the drama, partly for the physics, and partly for the light it sheds on the culture of physics and Bell Labs. When anyone says "science is self-correcting" I'm amused because, as the speaker must know, the amount of fraud that goes uncorrected is unknown. It may be far larger than the amount that is detected.

[2]The author's website.

1. <http://setiradio.blogspot.com/2010/05/are-we-alone-fraudcast-news-eugenie.html>

2. <http://www.nasw.org/users/essreich/>

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Brian (2010-09-05 16:12:12)

So Seth, the basic point is that scientific peer review is the same as in the liberal arts: garbage in, garbage out. Scientific peer review consists of reviewers performing a reasonableness check: assume the underlying data and data collection methods are correct and the paper will be good if the scientific method is applied appropriately? Since we know that science is largely about signaling, why wouldn't up and coming institutions invest heavily in institutionally mandated internal controls on research and data collection methods? Hire young, promising researchers, wait a few years for everything to ferment, and then climb the rankings.

vic (2010-09-06 00:29:41)

so is the conclusion that individual scientists are immoral and corrupt or is the system corrupt?

dearieme (2010-09-06 01:00:14)

Bell Labs is famous for inventing the transistor. But according to Wikipedia, it wasn't invented there at all. It was developed there, building on publications and a patent by an earlier worker, all reference to his achievements being suppressed from the Bell Lab publications and patent applications. I first read this fairly recently and confess to being Shocked about Shockley. And the buggers bagged a Nobel for it!

Duncan (2010-09-06 06:23:18)

OT, I see your pal Leonard Mlodinow has collaborated with Stephen Hawking on his new book, out this week. <http://www.amazon.com/Grand-Design-Stephen-Hawking/dp/0553805371>

How reliable is science? (2010-09-06 11:18:42)

[...] Source: Seth Roberts. [...]

Nathan Myers (2010-09-07 13:46:59)

vic: Couldn't it be both? But scientific crooks are made, not born. Nobody becomes a scientist intending a career based on deception; deceptiveness is much more richly rewarded in other fields. The institution defines an environment in which deception is rewarded more than it should be, and where scruples are valued less than they should be. Each person responds to this differently. Some thrive despite it, some thrive because of it, others languish or move on.

Matthew Cornell (2010-09-08 18:14:55)

Just a random thought: This reminds me of the notion of always including a professional magician as part of any scientific team investigating claims, esp. those that are fringe. The thought is not only will they notice intentional misdirection, they also >think tricky

### Assorted Links (2010-09-06 08:07)

- [1]"When you are good [at your work], you must apologize." Italian academia.
- [2]no effect of omega-3
- [3]clinical trials of new MS therapy go ahead in spite of MS society disapproval. Canadian MS society leaders have managed to convince themselves it could be bad to learn more about a plausible and possibly revolutionary therapy for MS. "A true clinical trial must be conducted at more than one institution and in more than one province" with "well over 1000 participants," said Yves Savoie, the president of the Canadian MS society. If a study had only 999 participants, he would disapprove of it!

Thanks to Casey Manion and Anne Weiss

1. <http://www.sociology.ox.ac.uk/documents/working-papers/2009/2009-08.pdf>

2. [http://m.apnews.com/ap/db\\_16052/contentdetail.htm?contentguid=SWfgUcEL](http://m.apnews.com/ap/db_16052/contentdetail.htm?contentguid=SWfgUcEL)

3. <http://www.theglobeandmail.com/news/politics/defiant-saskatchewan-refuses-to-bend-on-clinical-trials-for-ms-treatment/article1693372/>

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Caleb (2010-09-06 12:07:04)

The study used \_margarine \_ with a little added omega-3. Considering how unhealthy and full of omega-6 most margarines are, this sounds like trying to put out a fire by dumping oil with a little added water on it.

Sean Estey (2010-09-06 13:01:01)

Yes this seems like a poorly designed study. Only 4 teaspoons a day of omega-3? If there were no other dietary changes, that little O-3 would seem to have little effect on the patients overall O-3/O-6 ratios. It doesn't even seem that this ratio was measured in this study.

Alex Chernavsky (2010-09-06 17:47:26)

Here's another interesting article, from today's *New York Times*: "[1]Forget What You Know About Good Study Habits" Here's a sample:

Take the notion that children have specific learning styles, that some are "visual learners" and others are auditory; some are "left-brain" students, others "right-brain." In a recent review of the relevant research, published in the journal *Psychological Science in the Public Interest*, a team of psychologists found almost

zero support for such ideas. “The contrast between the enormous popularity of the learning-styles approach within education and the lack of credible evidence for its utility is, in our opinion, striking and disturbing,” the researchers concluded. Ditto for teaching styles, researchers say. Some excellent instructors caper in front of the blackboard like summer-theater Falstaffs; others are reserved to the point of shyness. “We have yet to identify the common threads between teachers who create a constructive learning atmosphere,” said Daniel T. Willingham, a psychologist at the University of Virginia and author of the book “Why Don’t Students Like School?”

1. <http://www.nytimes.com/2010/09/07/health/views/07mind.html>

Å...se (2010-09-07 03:57:09)

The L-world paper reminded me of a paper that came out this year in JPSP: The desire to expel unselfish members from the group, by Cragi Parks and Asako Stone. They set out to study how one tolerates freeriders, and discovered to their surprise that group members were also willing to punish someone that gave more and took less. from what they can see people either thought that the unselfish people set too high standards, or, alternatively that they broke the rules. Also reminds me of the discussions I have with my 7 year old son, when he wants to give his friends the really big and wonderful lego boxes as a birthday present, and I say no. The consideration that it costs too much is fairly easy to explain, but the half implicit, not quite pronounced idea that it would be wrong to come with a very expensive birthday gift (especially in the eyes of parents that may feel a pressure to reciprocate) is just not that easy to convey.

Nathan Myers (2010-09-08 13:04:47)

That LL-world paper by Gambetta and Origgi is outstanding. It explains so much, including just about the whole blogging world. The omega3-in-the-margarine study is an excellent example of how to cook a trial.

### Is Science Self-Correcting? (2010-09-06 15:53)

Lots of scientists say science is self-correcting. In a way this is surely true: a non-scientist wouldn’t understand the issues. If anyone corrects scientific fraud, it will be a scientist. In another way, this is [1]preventive stupidity: it reassures and reduces the intelligence of those who say it, helping them ignore the fact that they have no idea how much fraud goes undetected. If only 1 % of fraud is corrected, it is misleading to say science is self-correcting. A realistic view of scientific self-correction is that there is no reward for discovering fraud and plenty of grief involved: the possibility of retaliation, the loss of time (it won’t help you get another grant), and the dislike of bearing bad news. So whenever fraud is uncovered it’s a bit surprising and bears examination.

What I notice is that science is often corrected by [2]insider/outside – people with enough (insider) knowledge and (outsider) freedom to correct things. As I’ve said before, Saul Sternberg and I were free [3]to severely criticize Ranjit Chandra. Because we were psychologists and he was a nutritionist, he couldn’t retaliate against us. Leon Kamin, an outsider to personality psychology, was free [4]to point out that Cyril Burt faked data. (To his credit, Arthur Jensen, an insider, also pointed in this direction, although not as clearly.) The Marc Hauser case provides another example: Undergraduates in Hauser’s lab uncovered the deception. They knew a lot about the research yet had nothing invested in it and little to lose from loss of Hauser’s support. This is another reason insider/outside are important.

1. <http://www.blog.sethroberts.net/2010/05/12/preventive-stupidity-exists/>

2. <http://www.blog.sethroberts.net/2009/01/24/not-the-same-study-section-how-the-truth-comes-out/>

3. <http://www.sethroberts.net/chandra/index.html>

4. <http://www.indiana.edu/~intell/kamin.shtml>

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LemmusLemmus (2010-09-06 23:46:49)

As far as I can see, when people say that science is self-correcting, they typically don't mean that specific instances of fraud are detected, but that additional research will not confirm incorrect findings.

Seth Roberts (2010-09-07 02:35:36)

True, they mean that a broad range of wrong answers are corrected, not just fraud. When a published result turns out to be wrong, it doesn't mean it was fraudulent, of course. People who say science is self-correcting have a mental image of science wherein important experiments are repeated by others in attempts to extend the initial results. In these attempts, the veracity of the initial results is confirmed (or not). This view of science isn't terribly accurate – in some areas of science experiments are so difficult or expensive or diffuse (it's unclear what's central and what isn't) that replication is rare. Anyone who seriously believes science is self-correcting should study the career of Ranjit Chandra.

Nancy Lebovitz (2010-09-07 05:13:00)

Still, a lot of useful work comes out of science– maybe the takeaway is that science is more self-correcting than most human institutions. Scary, isn't it?

Seth Roberts (2010-09-07 06:05:31)

Perhaps the takeaway is that science is self-correcting when it matters. For example, med students were told, following Aristotle, that the human liver has a certain shape. Actually it had a different shape. That error took more than a thousand years to correct. But it didn't matter.

milieu (2010-09-07 06:05:37)

It is scary indeed. Also, for a young scientist starting out, he/she would definitely want to become an insider rather than an outsider. The incentive to ignore rather than correct the mistakes of an established insider is very great. And I guess most of the real science is done by those trying to make a name are quite young.

Dennis Mangan (2010-09-07 06:40:03)

The example of Cyril Burt is an unfortunate one, as he was almost certainly framed. Arthur Jensen and W.D. Hamilton came to his support. Leon Kamin is an IQ demagogue staunchly opposed to the idea of the heritability of IQ.

Kris (2010-09-07 08:45:47)

Maybe this explains why you can not see many journal articles w/o a subscription. The outsiders who have nothing to lose would be more apt to shred their arguments.

Robbo (2010-09-07 09:34:28)

"Perhaps the takeaway is that science is self-correcting when it matters." Yes. I think you have to take into account your 'modern Veblen' thesis that most of what passes for science in universities has neither value nor importance. Errors in those areas will stand for a long time without correction. Errors in the valuable/useful fields will tend to be corrected because there are reputations to be made doing so. However, it still may require the old-generation gatekeepers to retire before it is career-positive to correct their errors.

Seth Roberts (2010-09-07 12:27:25)

Dennis, Jensen wrote a paper saying that Burt's data was unreliable. Kamin was the first to point out that some of Burt's correlations stayed the same to 3 decimal places (e.g., 0.771) as the sample size went from 20 to 50. See <http://www.hum.utah.edu/~bhenham/Phil%207570%20Website/csSir%20Cyril%20Burt.pdf>

Hal (2010-09-07 12:35:49)

Gary Taubes accuses nutrition science of clinging to the false notion that fat is bad for you for over 50 years! He claims that evidence disconfirming that hypothesis has been plainly available for many decades, yet generations of scientists go along with obviously false beliefs because... well, he doesn't really say why. Apparently nutrition scientists are so dishonest and mendacious that they would rather propagate obvious falsehoods than upset the apple cart that is delivering them their grants. Could science really be this bad?

Alex Chernavsky (2010-09-07 18:41:00)

Hal, I think that science really *can* be that bad. I'll give you another example. [1]Robert Whitaker is sort-of the "Gary Taubes" of psychiatry. Whitaker recently wrote a book called, [2]*Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*. The book details the devastating effects of psychiatric drugs (antidepressants, antipsychotics, antianxiety agents, etc.). The book is meticulously documented and is quite an impressive piece of scholarship. The psychiatric establishment has had a love affair with psychotropic drugs since 1952, when chlorpromazine was introduced. So we're going on 60 years here. It's interesting to note that Whitaker used to be an insider, of sorts. He worked as director of publications at Harvard Medical School. He also founded a publishing company that covered pharmaceutical clinical trials. He also worked as a science journalist for the *Boston Globe*. Because of his insider/outsider status, he was able to publish a scathing and cogent critique of psychopharmacology.

1. <http://www.madinamerica.com/madinamerica.com/Home/Home.html>

2. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452417>

Marc Maxson (2010-09-10 13:29:56)

I think you're right that "science is self correcting when it matters." All your examples are from social science. I'm a molecular neuroscientist who works in international development now, and I have seen both extremes. Frauds thrive in a non-peer reviewed "foreign aid" world, and succumb to their schemes in neuroscience much faster than do social scientists. Maybe it's because people do repeat their experiments, because it at least matters in order to publish the next result.

## **A Unified Theory of Japanese Food (2010-09-07 12:54)**

I used to like Japanese food because it was less fattening than other foods – I lost weight eating sushi. Now I like it because the Japanese eat so much fermented food: miso, pickles, yogurt, Yakult, [1]umeboshi (pickled plums), natto, vinegar drinks, and alcoholic beverages. A Tokyo food court might have 20 types of pickles, 15 types of miso, and 10 types of umeboshi.

Abundance of fermented food isn't the only way Japanese food is unusual. I see Japanese food as an outlier on three dimensions:

- Use of fish. More fish-centered than any other major cuisine.
- Beauty. More beautiful than any other cuisine.
- Fermented food. More fermented food than any other cuisine.

[2]As I've said, lightning doesn't strike twice in one place for different reasons. If two rare events could have a common explanation, they probably do. I've discussed before [3]why a fish-centered cuisine could lead to better visual design: Because cooks can't use complex flavorings to show how much they care (it would make all fish taste the same), they take pains with appearance to convey this.

What about fermented foods? Here's an idea: In the development of Japanese cooking, lack of complex flavoring



of main dishes increased desire that other parts of the meal provide complexity, which is what fermented foods do so well. For example, Japanese meals often include pickles. We want a certain amount of complexity in our food, in other words. Most cuisines provide complexity via complex spice mixtures (mole sauce, harissa, curry powder); Japanese cuisine provides it with fermented foods. (I love Japanese curry, but it isn't common.)

This explanation predicts that desire for complexity is like thirst: It grows over time and can be satisfied. Prediction 1: Eating one complex food will make a second one will taste less pleasant, just as drinking one bottle of water will make a second bottle of water taste less pleasant. Prediction 2: Over time, the pleasure provided by complexity grows. The same complex-flavored food will taste better at Time 2 than Time 1 if you haven't eaten anything with a complex flavor between the two times.

1. <http://en.wikipedia.org/wiki/Umeboshi>

2. <http://www.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

3. <http://www.blog.sethroberts.net/2009/12/07/my-theory-of-japanese-aesthetics/>

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G (2010-09-08 09:20:36)

An ex-girlfirend always used to prefer the simple things I made over the complex. It was nothing to do with competence; even the complex things I did particularly well were not appreciated as much as what many would call 'comfort-food'. I am the opposite. I always wondered what this was about. Now I think of it, the TV chef Jamie Oliver made the same complaint about his wife. Japanese curry comes via the British - it's somewhat like the curry we used to eat in the 1970s before we began to discover more authentically Indian/Pakistani curry. That sort of breaded pork and carrot curry is the bee's knees.

Jeff (2010-09-11 04:49:25)

Prediction 2 makes sense from my experience. Salt and vinegar potato chips(which I ate pre-Paleo...) and Indian food were good examples. Very complex and I didn't like it the first time. I week later I wanted it again. Strange but true.

Elizabeth Molin (2010-09-13 13:35:51)

For mention of a book called "Wild Fermentation" (which you may already be familiar with), see <http://www.boingboing.net/2010/09/13/exploding-sauerkraut.html>

## **Dry Eye and Fish Consumption (2010-09-08 12:37)**

Let's say that dry eye is caused by lack of omega-3. If you eat enough omega-3, you'll never get it. [1]Here is a recently-discovered association with tuna consumption:

Tuna consumption [1 serving was 113 g (4 oz)] was inversely associated with DES [Dry Eye Syndrome] (OR: 0.81; 95 % CI: 0.66, 0.99 for 2â€“4 servings/wk; OR: 0.32; 95 % CI: 0.13, 0.79 for 5â€“6 servings/wk versus  $\leq 1$ /wk P for trend = 0.005).

If tuna were a good source of omega-3, eating 5-6 servings per week would completely prevent dry eye. But it doesn't. Which supports what I have come to believe for other reasons: oily fish, in the quantities most people eat it, is a mediocre source of omega-3. Even if you eat tuna almost once/day, you don't get enough. To get enough omega-3,

look elsewhere.

Thanks to Brent Pottenger.

1. <http://www.ajcn.org/cgi/content/abstract/82/4/887>

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Brian (2010-09-08 13:59:57)

Seth, just to make it clearer for me, please, the italicized text under the indented quotation are your words. Correct?

Caleb (2010-09-08 14:40:08)

Omega-3 and Omega-6 compete for the same receptors in the body and thus displace each other. So your Omega-3 needs are related to how much Omega-6 you need to offset, a rather confounding variable.

John (2010-09-08 16:57:35)

Yeah, what Caleb says.

Aaron Blaisdell (2010-09-08 21:04:47)

I've never been a big tuna fish fan. But I love sardines. I eat a few cans of them per week, interspersed with cans of smoked oysters in olive oil.

Caleb (2010-09-08 22:57:48)

It might be more meaningful to compare the fish that is always recommended; salmon. There's a reason it's so popular; a 154g serving of chinook has 3301 mg of omega-3 to only 433 mg for an equivalent serving of tuna. So a person eating one serving of salmon would be getting more omega-3 from fish than the highest six servings of tuna a week.

Seth Roberts (2010-09-09 06:44:13)

Caleb, I agree. But they didn't report results for salmon specifically. Other categories of fish were not correlated with DES.

G (2010-09-09 11:38:26)

If this is an evolved human dietary need we're talking about and not a cross-species universal elixir of life, what the hell way of life did cavemen have where they could eat all this salmon every week? Are humans actually river-fishing/shellfish-harvesting specialists rather than the generalists we're usually assumed to be? I do usually keep a tub of cod liver oil around, but I still have doubts. I mean, cows live on grass - they are large complex mammals like us. There was a guy in the UK, Dave Nunley, who had an extreme food-phobia and could only eat mild cheddar cheese. That was all he ate until the age of 29. He led an active life and seemed healthy. I've heard tantalising study results about this and that food-item over the years, but from the wide-angle view it doesn't make sense to me that we have such finicky, specific needs. Hunter-gatherers eat special items once in a blue moon, 'medicinally'; they don't on a weekly basis consume kilos of what we now think of as 'superfoods'. I'm generalising but you get my drift.

Hal (2010-09-09 15:08:29)

G, cows unfortunately do not eat grass. They are fed corn, which has little omega-3. Grass fed beef has much more omega-3.

G (2010-09-09 16:52:56)

Hal, my point about cows eating nothing but grass was more general than the question of how much omega-3 they get. Dogs live on low-grade meat and here we are saying that tuna doesn't have enough omega-3 for our purposes. Why do we need so much? I am suggesting that maybe we are making insignificant tweaks to a system that is normally broadly robust. I suppose I would like to believe that I would live an extra ten or twenty years in good health by eating berries and salmon more than

normal, but I'm not sure it's an efficient cause. I don't believe or disbelieve. I feel like an absurd picture builds up once someone delves further and further into a narrow interest - they come to think their specialism is all-important - the people who think ascorbate is the Elixir of Life say we should eat oranges every day and the omega-3 people worry about where their yellowfin tuna comes from and whether their beef is grass-fed. It seems like fussy micromanagement in a broadly uncertain world, to me. Either humans have evolved with this crazy dietary requirement (that, by the way, if you're at all concerned, is not ecologically sustainable at current population-levels) or omega-3 really is some kind of cross-species universal elixir.

James A. Donald (2010-09-09 19:10:31)

Flax oil is the best source of omega three. Unfortunately, like fish, it deteriorates rapidly. All sources of omega three deteriorate rapidly, and the better they are, the faster they deteriorate. So fish oil tablets are not necessarily doing you any good. So the solution is to take flax seeds, since seeds will preserve their oil as long as the seed remains alive - but does anyone have any satisfactory method of preparing flax seeds into something edible and digestible?

James A. Donald (2010-09-09 19:14:14)

If this is an evolved human dietary need we're talking about and not a cross-species universal elixir of life, what the hell way of life did cavemen have where they could eat all this salmon every week?

Cavemen lived largely on deer and suchlike - which have a lot more omega three than cows and suchlike.

G (2010-09-10 05:22:26)

@James: same as I said to Hal.

Hal (2010-09-10 12:34:58)

G, as I understand the theory, if you eat animals that graze on grass (as humans did in the past), you get a rough balance of omega-3 and 6. However corn is almost all omega-6 (as far as poly fats). I'm not sure if this is specific to corn or if it's because corn is all seeds. Anyway, our diet today is very much biased towards omega-6, we eat 10 or even 20 times as much 6 as 3. Now omega-6 is pro-inflammatory and omega-3 is anti. Many of the modern diseases are associated with excess inflammation, such as atherosclerosis. Again the theory is that this may be linked to excess consumption of pro-inflammatory omega-6 and not enough omega-3. It's not that omega-3 is an elixir, it's that we evolved with a certain balance in our diet, and with factory farming, this balance has changed very drastically. Theoretically, if you switched your diet to eat 10 times as much omega-3 as omega-6, that would be just as unhealthy, because you'd have too little inflammatory response and might be vulnerable to infection or other failures of the body to repair itself. The point of omega-3 supplementation (and reducing omega-6 consumption) is to get back to the historical balance and hopefully help the body achieve a healthy level of inflammatory response. However I doubt you would extend lifespan by 20 years because most of these diseases hit late in life, and we have medical treatments for them anyway. Still I'd think you could hope for a few years more of health.

G (2010-09-10 21:33:10)

So Hal, how definitive is the proof for this? I haven't a clue. It just sounds too simple and elegant - the whole 3/6 fat-balance balance thing. Maybe it is!

Willy (2010-09-11 21:45:30)

Last time I went to the supermarket I compared the Omega 3 content of a can of tuna and sardines. I was surprised to see tuna contains much less than sardines (in % to weight). I bought sardines.

John (2010-09-11 22:41:28)

Although flawed (as in imperfect, not unacceptable), read The Queen of Fats for a rather well-researched account of the discovery of n-3 fats (by Susan Allport). If someone knows of a better account (in one place, not in scattered articles), please post it. I wonder if one issue with self-experimentation is when people don't try enough. I have greatly reduced my allergies

through high probiotic/bacteria intake (yogurt, kimchi, doenjang), but one of my friends who wanted to try it balked at eating 2c of yogurt/day and making these changes. Adding one dollop of yogurt likely would not be enough to see changes. Likewise, eating small amounts of fish and thinking you have changed your n-3 consumption (or the overall n-3/n-6 balance) may not be enough, but may be all some people are willing to try.

Sanjeev Sabhlok (2011-05-23 06:17:55)

Just for info. After eight months of great suffering I've experienced very significant relief from computer-related eye strain and dry eyes by using - guess what! honey! Please check out details at: <http://sabhlokcite.com/2011/05/announcing-a-candidate-solution-to-eye-strain-and-dry-eye/> should you be interested.

### **Jane Jacobs and Food Trucks (2010-09-09 15:50)**

In [1]this article about food trucks, Ed Glaeser doesn't mention their educational value: They allow people with a new idea to test it relatively cheaply. If it works they can expand. I saw this happen in Berkeley. A food truck that sold stuffed potatoes eventually became a store that sold the same thing. Food trucks don't merely create jobs, they can create the best kind of jobs: Those that provide new goods and services. Unlike jobs created by building dams or highways.

Any advanced economy needs a constant stream of new goods and services to replace the ones that are inevitably lost. It goes against the survival instincts of people in power (government officials) to help those at the bottom (e.g., potential food truck owners) because they seem so much less powerful than those at the top (e.g., restaurant owners) who are threatened by those at the bottom.

All this should be utterly obvious - as it is to anyone who has read Jane Jacobs on economics. But it isn't. In science, too, every field needs a constant stream of new empirical effects (in experimental psychology, new cause-effect relationships) to replace the ones that have been studied to death. So every field needs a cheap way of searching for those effects, but no field, as far as I know, has such a way. In science, editors and reviewers are like government officials. They can discourage new ideas (food trucks) by enforcing "high standards" (regulations) whose costs they fail to understand.

Via [2]Marginal Revolution. [3]"[David] Westin's biggest weakness [as head of ABC News] was that he lacked the entrepreneurial spirit to launch innovative and creative ventures."

1. [http://www.boston.com/bostonglobe/editorial\\_opinion/oped/articles/2010/09/09/free\\_the\\_food\\_truck/?rss\\_id=Boston+Globe+--+Editorial%2F0p-ed+pages](http://www.boston.com/bostonglobe/editorial_opinion/oped/articles/2010/09/09/free_the_food_truck/?rss_id=Boston+Globe+--+Editorial%2F0p-ed+pages)

2. <http://www.marginalrevolution.com/marginalrevolution/2010/09/assorted-links-6.html>

3. <http://www.humanevents.com/article.php?id=38915&page=1#c1>

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Cliff Styles (2010-09-09 16:52:07)

There's more economic wisdom (and other wisdom,too) in those two paragraphs than many economics students get in a year of study. Perhaps If more economists would try to make working food trucks, or some equivalent, they might learn this, and then be able to teach it? By the way, here's another economist commenting on economic education: <http://aidwatchers.com/2010/09/welcome-to-economics-all-you-students-and-aid-workers/> That link came via Marginal

Revolution, too...

G (2010-09-09 17:01:08)

Similar thing happens with patents - it costs money to take out a patent so the ideas of the poor are squandered and powerful companies can take out patents in their thousands just to prevent others from actually using the ideas. This obviously causes technological, social and economic stagnation.

Ryan Holiday (2010-09-09 17:09:03)

I'd actually disagree. In many ways, food trucks are the anti-thesis of Jacobs ideas about what makes a good cities. Food trucks pay no rent, don't renovate spaces, operate mostly cash businesses, and have no vested interest in the neighborhood. In fact, in many cases they operate on incentives as big box retailers which is to identify lively, robust communities, and siphon out money from it. For instance, you're a restaurant who has worked hard to draw people/attention/other businesses to your surrounding area and navigated through the various regulations that the government forces business owners to jump over. Then a food truck - which is subject to none of those rules - parks outside your attractive location and takes away customers. (meanwhile, adding none of the benefits that you do - taxes, employees, etc) How would that be something Jacobs would support? Food truckers aren't less powerful, they are less meaningful and valuable to communities. Rarely is this true, but I think governments are mostly correct in their reactions against them.

Ryan Holiday (2010-09-09 17:10:22)

Btw, I'd make a distinct difference between taco trucks and ice cream trucks which have always existed and benefited underserved communities and the new generation of gourmet food trucks which nerds can't seem to stop blowing.

Seth Roberts (2010-09-09 19:16:30)

Ryan, in her later books on economics, such as *The Economy of Cities*, Jacobs tacitly recognized that her first book (about city planning) was actually a small part of a bigger picture. You can have all the old buildings, infill and short blocks you want but still do badly if other things are unfavorable. Food trucks are a way of helping small things (e.g., one person who wants to enter the food business) become bigger - become someone who can afford to open a restaurant and has the necessary business skills.

Ryan Holiday (2010-09-09 22:45:46)

I think your generalizing from a relatively rare occurrence. Most food truck owners don't go from truck to brick and mortar. They go from truck to more trucks because the economics are better - they don't have any of those pesky commitments to anyone but themselves. We, as a people, decided the regulations we enforce on restaurant owners are important. Things like health standards, minimum wages, zoning ordinances and so on. It's misguided to hold up food truck owners as examples of innovation or whatever, because the reality is they flout the very constraints we decided were necessary in the food industry and punish the real community builders by pocketing the better margins and stealing their business.

M (2010-09-10 02:00:29)

"Food trucks don't merely create jobs, they can create the best kind of jobs: Those that provide new goods and services. Unlike jobs created by building dams or highways." Why do you say that dams and highways don't provide goods and services? They may not provide buttered potatoes, but they provide electricity and transportation.

Seth Roberts (2010-09-11 05:38:27)

Dams and highways are unlikely to provide NEW goods and services. Too much is at stake for innovation.

Tom (2010-09-11 08:20:58)

*We, as a people, decided the regulations we enforce on restaurant owners are important. Things like health standards, minimum wages, zoning ordinances and so on. It's misguided to hold up food truck owners as examples of innovation or whatever, because the reality is they flout the very constraints we decided were necessary in the food industry and punish the real community builders by pocketing the better margins and stealing their business.* Some sloppy thinking here. Who's

"we"? What's "flouting the constraints 'we' decided were necessary"? Do you know for a fact that they are violating "health standards, minimum wages, zoning ordinances"? You don't, because the trucks are not breaking the law; they're offending your sensibilities. There are windfall profits to the first-mover, and the fact that one business takes traffic from another is just life. Two years ago, I was one of the thousands checking Twitter and racing off at 1am to check out a nearby Koji fusion Korean truck. But once I got there, the food was no biggie, and standing on a sidewalk in an industrial area with meat juice running down my arms wasn't exactly magical. I never went again. It was not quite as silly as the Tamagotchi craze – sometimes you get hungry, but you never really *need* a Tamagotchi – but it was still a little lame. And now there's a stampede into the niche. Eventually there will be more regulations as the bricks and mortar businesses complain. I think the alternative food truck thing is already overplayed, at least in LA (where it seems to have started.) A clear signal is the fact that Sizzler is right now building a fleet of them. Once people start to equate food trucks with Sizzler, they will no longer think of food trucks as interesting and kinky....they will be right back to the "roach coach" perception, and there will be a crapload of money lost on now-useless trucks. And most of the new trucks are being built by companies with bricks and mortar outlets. IE, Border Grill, an expensive downtown LA restaurant, has at least one truck. But I wonder if people will be willing to pay the premium at the restaurant for something the truck dishes out for cheap, without even needing to schlep downtown? (Koji's trucks can't damage their B & M outlets; they don't have any physical outlets.) I would be pretty fricking furious if I were a bricks & mortar Sizzler franchisee, though.

Harry (2011-04-12 14:02:21)

I'm way late to the party. I think (Ryan) you're taking the point and running away with it. What we're working with here is the idea that food trucks provide an avenue for innovation for culinary workers. They can enter the marketplace with a new idea – a new baked potato – and test it out with the relative ease of food trucks. Roberts is arguing that any economy that hopes to thrive shouldn't constrain these measures, you're saying the government should regulate food trucks heavily because they're a burden to employers and taxpayers. But that goes a little too far. After all, it's just a food truck – in most every case, it hits a pretty low ceiling. If the demand for their menu grows high, this food truck won't satisfy that demand with more food trucks. Nor is he likely to satisfy that demand by parking outside the premium real estate of other restaurants, eschewing property taxes and proper health codes. If the consumer is left to decide, most people usually prefer eating inside, on a table, in the confines of a restaurant. That's why restaurants are more profitable, and why they're taxed more heavily. All we're dealing with here is giving good ideas a chance to reach the marketplace. You can do that with food trucks, but if the consumer is left to decide what he wants, the food truck will only survive so long before it gets passed over for a restaurant.

## reCAPTCHA and Self-Experimentation (2010-09-10 18:39)

reCAPTCHA is the use of CAPTCHA security to read words that optical character recognition has failed to read. You see two words rather than one. The second word is the hard one. [1]This 2008 article by its inventors (computer-science professors) says reCAPTCHA is a way that

"wasted" human processing power can be used to solve problems that computers cannot yet solve.

Self-experimentation like mine is similar. I did it in my spare ("wasted") time. I was going to sleep anyway, I just recorded my sleep. And I found new answers to old questions, such as how to sleep better, that professional scientists had not yet found. You could say I solved problems that professional scientists aren't yet capable of solving.

I believe that reCAPTCHA and self-experimentation like mine are two ends of what will be a power-law distribution of the use of "spare" human processing power. reCAPTCHA: many people, tiny amount of time per contribution. Self-experimentation like mine: Tiny number of people, large amount of time per contribution. Halfway (in log units) between reCAPTCHA and self-experimentation like mine is Wikipedia: middling number of people, middling time per contribution. Writing open-source software, to the extent that it's unpaid, lies somewhere between Wikipedia and

my self-experimentation.

Volunteer work is nothing new. Intellectual volunteer work is nothing new – most books are written essentially for free. What is new is cheap distribution of intellectual volunteer work. Which greatly increases the diversity of what can be done and the extent to which it can be cooperative.

1. [http://www.cs.cmu.edu/~biglou/reCAPTCHA\\_Science.pdf](http://www.cs.cmu.edu/~biglou/reCAPTCHA_Science.pdf)

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Bil Herron (2010-09-10 19:15:39)

Clay Shirky just wrote a book about this phenomenon, which he calls cognitive surplus (also the title of the book). Might be worth checking out.

Kerry (2010-09-12 09:20:43)

All that wonderful wasted intellectual property made ReCaptcha's inventor a millionaire 20 times over. It's not a public benefit project, it's a for-profit enterprise.

Seth Roberts (2010-09-12 11:32:24)

Kerry, you have a point. I think degree of public benefit and how much money someone makes are two separate dimensions; an enterprise can be high on both or low on both. However you are right that I was too narrow in my thinking about this. The product reviews left on amazon.com surely help Jeff Bozos and are examples of the use of spare time – maybe they lie between reCAPTCHA and Wikipedia.

### Assorted Links (2010-09-11 13:12)

- [1]is college worth it?
- [2]pooling data to help find migraine triggers. If you have migraines this site is for you. Created by my friend [3]Hal Pashler and Ed Vul. [4]The underlying statistics.

Thanks to Marian Lizzi.

1. <http://www.washingtonpost.com/wp-dyn/content/article/2010/09/09/AR2010090903350.html?hpid=topnews>

2. <http://mymigrainejournal.com/>

3. <http://www.blog.sethroberts.net/2008/12/28/voodoo-correlations-in-social-neuroscience/>

4. [http://www.stat.columbia.edu/~cook/movabletype/archives/2010/09/a\\_platform\\_for.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2010/09/a_platform_for.html)

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Alex Chernavsky (2010-09-11 14:32:49)

Here's another article that's skeptical about the value of college: "[1]The Great College Hoax", from *Forbes* magazine, January 14, 2009. The same argument can be made about graduate school. I'll be paying-off my grad school loans for a total of 25 years

(I refinanced my original loan five years ago). I doubt that I'll get a positive return on investment.

1. <http://www.forbes.com/forbes/2009/0202/060.html>

q (2010-09-12 07:12:12)

you could ask the same thing about any investment and the answer will be "sometimes". individual circumstances matter a lot, and so does luck after the draw.

Laura (2010-09-12 07:33:42)

Thank you for the links! I especially liked the idea of putting college money in a Treasury bill. I learned that it is possible doctors won't be making as much anymore. The health care reform will affect them. <http://www.studentdoctor.net/2009/07/healthcare-reform-what-can-we-really-expect/> [http://www.huffingtonpost.com/jan-herman/a-doctor-speaks-outbremenhe\\_b\\_269406.html?show\\_comment\\_id=29771719](http://www.huffingtonpost.com/jan-herman/a-doctor-speaks-outbremenhe_b_269406.html?show_comment_id=29771719)

## Unschooling (2010-09-11 21:30)

Home schooling has a new name, or at least a new variety: [1]unschooling, notable for the absence of textbooks.

When the conference [about unschooling] is over, Ms. Laricchia will return to collaborating on building an online business with her son, Michael, 13. Her daughter, Lissy, 16, is a photographer who was recently invited to participate in a show in New York. The oldest child, Joseph, has turned 18 and is no longer being actively unschooled. His mom happily admits that the change has had almost no effect on his day-to-day life.

Thanks to Anne Weiss.

1. <http://www.theglobeandmail.com/life/family-and-relationships/back-to-school/more-families-are-deciding-that-schools-out-forever/article1703185/>

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aretae (2010-09-11 22:38:57)

It started with John Holt, Summerhill, and the Sudbury schools. I've been in the unschooling community for near 20 years now, and my 14yo has been unschooled his whole life. It's not news...and it's good....and there's quite a bit of room to do it badly.

Gunnar (2010-09-12 03:48:38)

This sounds great to me. I wish I had been deschooled. I'm still working on getting rid of school's effects on me ;-)

Mary (2010-09-12 11:33:24)

I agree with aretae. The "unschooling" movement is older than the modern "homeschooling" movement. I first heard about "unschooling" in the mid-1980s, when the hugely influential leader of the unschooling movement, John Holt, was still living and publishing the magazine he founded, "Growing without schooling." The Colfax family that put "homeschooling" on the national radar screen when three of their sons were admitted to Harvard in the mid 1980s were actually "unschoolers" and followers of John Holt.



aretae (2010-09-12 17:49:37)

To elaborate a bit on the doing things badly portion... Unschooling, as originally conceived, relies on the natural curiosity of kids along with relatively supportive parents, in order to allow kids to learn what/when/how they want, rather than being force-fed mounds and mounds of junk that they will use precisely never, while being taught that learning is a chore, obedience is good, and whatever propaganda is in season this year. Advantages for time available to live: HUGE. Advantages for avoiding horrid school social world: HUGE. Advantages for learning to be self-directed: HUGE. However, there's also a trap hidden in there. Unschooling success relies on an environment wherein the social group finds learning interesting, useful, and common. I'm increasingly (Never 20 years ago, sometimes now) seeing folks who are "unschoolers" but not active in giving their kids opportunities to learn. Our unschooled kids know every museum in the city of Chicago...every animal at the zoo, and most of the trees in the arboretum. They do photography, read regularly, and count butterflies for the botanical society. They cook, they enter robotics competitions and learn to program them, and they play sports. They play online games (Shidonna, this week for the young ones, WoW and Modern Warfare 2 for the older one), they garden, they do puzzles. They visit the other unschoolers in the area frequently. They have, in short, been exposed to A LOT of options, and then largely left to pursue them. If you're an unschooler, this is your job...especially while the kids are young. Make stuff available to them...so they can choose things they like. While it might not be the thing you like, it will almost certainly be something that they are into. On the other hand, I've also seen families who call themselves "radical unschoolers" (not all radical unschoolers fit this model, but some clearly do) who don't aggressively pursue additional opportunities for the kids. Their kids don't sign up for classes...the parents don't spend an hour a day looking for interesting/new things for the kids to do...they operate in what they conceive of as the "natural" state of being. Parents work, kids play however they like. But it doesn't match natural mostly. Mostly, natural is that kids see how the parents work, not that parents leave to work and come back at night. Kids can participate when they're ready, and the social unit and the work unit are highly interrelated. Might it work? It might. In my experience, most of the time I see kids who have never found something they REALLY wanted to learn to do, and so they are highly angsty, unhappy kids who grow up not really knowing how to start learning something new...kids who want entertainment...and are almost as low on self-directed activity as the schooled kids are. They've had too much time alone (or with JUST family) and not enough with other kids...they've had too much time with TV and video games...systems designed to play on your brain-addictions. And they've not DONE enough. Is it worse than schooling? Perhaps they haven't learned the bad things school teach...but they haven't learned the self-reliance and self-directedness that most unschooling teaches either. Unschooling takes lots of work on the parents' part to prime the kids to learn. Without that recognition, there's a lot of room for failure.

Alexandra Carmichael (2010-09-13 08:48:29)

Hey Seth, We've been unschooling for the past 8 years now. John Holt was a great inspiration to us, as well as Sandra Dodd and John Taylor Gatto (read "The Underground History of American Education"). It works well most of the time. Happy to chat more about it sometime :) Alex

Heather Madrone (2010-09-13 10:04:00)

Unschooling is way more than an absence of textbooks. To Holt, unschooling was synonymous with homeschooling (and predated it and the Christian homeschooling movement by at least 10 years). People who apply certain of Holt's educational principles - like the importance of child-led learning and direct experience - have attempted to narrow unschooling to all child-led learning all the time, but unschooling is a lot more than that. I've unschooled my four kids (22, 18, 15, and 11) all their lives. Sometimes they use textbooks and take classes. Other times, they take a more direct, hands-on approach. My two daughters are in college; the eldest works as a math and physics tutor in the learning centers at the college she attends.

Alex Chernavsky (2010-09-14 05:18:11)

I'm the product of a conventional education - public schools from kindergarten through my BS degree (and private schools thereafter for graduate work). Yeah, it was regimented, and some of the classes/teachers weren't very good. But, overall, I liked it, and I don't share the disdain that some people have towards conventional education. I don't think that I would have done better in an unschooling program.

Maria Droujkova (2010-09-14 12:57:01)

I agree with Aretae's analysis. In the original unschooling literature there is too much stress on "innate" curiosity and not nearly enough emphasis on experience-rich environment and learning communities. People who doubt the importance of the social environment should re-read the (real) story of Mowgli kids. A fellow unschooler and I recently wrote an essay about family educator commons: <http://blog.p2pfoundation.net/family-educator-commons/2010/08/09> Unschooling does take a village! Off to help my unschooling 12yo to prepare her SparkCon presentation on children's right to work...

JohnG (2010-09-20 08:32:57)

We've been home schooling for 8 years. But, we do not believe unschooling is particularly beneficial for the child nor our nation. In fact, we believe too many home schoolers put too much emphasis on the arts and not enough on math and science. For us, math comes first, English second, science third, and the rest a distant fourth.

Stephen Bronstein (2010-10-10 23:16:50)

I highly recommend watching (or at least listening to) Jesse Schell's Long Now talk from July. [http://fora.tv/2010/07/27/Jesse\\_Schell\\_Visions\\_of\\_the\\_Gamepocalypse](http://fora.tv/2010/07/27/Jesse_Schell_Visions_of_the_Gamepocalypse) One of his points is that the future will belong to the curious and he suggests there will be a 'curiosity gap' between those who are curious and those who are not. But he says the problem is that we really have very little idea how to foster curiosity. Which isn't totally true as things like unschooling are obviously all about it.

### **The Treatment Trap by Rosemary Gibson (2010-09-12 11:27)**

[1]The Treatment Trap, a new book by Rosemary Gibson, is about the overuse of medical care – too much medicine. In [2]this talk, Gibson tells how a woman getting a heart check-up overheard a conversation: "We're only doing 9 bypasses a day, we need 14 a day to keep this place running." The result of her check-up: She needed a bypass!

[3]My encounter with too much surgery (and [4]here). [5]The Safe Patient Project is gathering stories of overtreatment, although it is unclear what they will do with them.

1. <http://www.treatmenttrap.org/>
2. <http://c-spanvideo.org/program/id/230396>
3. <http://www.blog.sethroberts.net/2008/09/13/the-case-of-the-missing-evidence/>
4. <http://www.blog.sethroberts.net/2010/02/02/a-call-from-dr-eileen-consortis-office/>
5. [http://cu.convio.net/site/PageServer?pagename=spp\\_unnecessary\\_care](http://cu.convio.net/site/PageServer?pagename=spp_unnecessary_care)

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Kim Å~yhus (2010-09-13 00:57:23)

I actually ran away from my hand surgery while sedated, as I did not trust the doctor. Turned out I was right, and got a competent doctor later. This experience is not exactly overtreatment, as I barely avoided it, but it is similar, and shows that running away can help.

Alex Chernavsky (2010-09-13 07:38:54)

See also this excellent editorial from the *New York Times*: "[1]Is Newer Better? Not Always" (Sept. 12, 2010).

1. <http://www.nytimes.com/2010/09/12/opinion/12sun1.html>

John (2010-09-14 06:56:11)

I'm fairly sure I was forced to get a root canal while being treated at a dental school clinic in Boston. My student dentist needed to do one, so her supervisor came over and banged -hard- on my tooth until, lo and behold, I needed a root canal. Since it was for her exam, she paid for it, but still....

### **First Day of Class (2010-09-13 05:06)**

Today was my first day of class at Tsinghua. I am teaching a seminar called Frontiers of Psychology. There was only time for about half of the 40-odd students to identify themselves, which included saying their favorite book. Three girls said their favorite book is Pride and Prejudice. Two said The Little Prince. One said Harry Potter. One said Rebecca by Daphne Du Marier (published 1938). One boy said he didn't have a favorite book - reading books was a waste of time. One boy said his favorite book is Ulysses.

Most of them, perhaps 80 %, chose a non-Chinese book as their favorite. One French, two German, the rest English (which they may have read in Chinese translation). At first I was surprised but then I realized it made sense. Chinese civilization was more advanced than European civilization for a long time but when Gutenberg invented the Western version of the printing press everything changed. In Europe, unlike China, books became cheap and literacy spread. With literacy came a book industry. A large number of Europeans have been reading books for 500 years. In contrast, the Chinese language, with thousands of characters (in contrast to 26 lower-case and 26 upper-case letters) made printing difficult. With reading material rare, so was literacy.

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Chris Sturdy (2010-09-13 08:46:00)

I considered having students identify themselves on the first day of class but with a class range from 60-180 I thought it would be too cumbersome. Do you do this each time you start a new term? What's the reaction? I do think that it is a great idea, and would (hopefully) get them involved and more invested in the course, or at least, in learning in general.

Alex Chernavsky (2010-09-13 09:17:14)

This seems like a lot of information to absorb in real-time, as students introduce themselves verbally in class. I wonder if it might be more efficient to set up something like a Facebook site, where each student can post their name, photograph, interests, favorite book, etc.

Chris Sturdy (2010-09-13 15:37:25)

I have a facebook site for my class. It doesn't get as much use as I would like.

Laura (2010-09-13 22:26:33)

I wish I could have been in your class! I would have said my favorite book of all time is: The Shangri-La Diet!

milieu (2010-09-14 05:35:52)

Hi Seth, I just came across this wonderful pedagogical approach and thought i should share it with you. I didnt know where to put it so i put it in the comments. Feel free to delete this comment later. <http://www.inference.phy.cam.ac.uk/mackay/exams.pdf> Milieu

Thu (2010-09-19 01:56:44)

Dear Professor Roberts, When and where does your class meet at Tsinghua?’

Seth Roberts (2010-09-19 23:27:18)

This class meets Monday 3:20 pm in Teaching Building 6, room 6B108.

### **The Thick-Fingered Surgeon (2010-09-14 05:25)**

Kim Å~yhus, who has [1]a proof that correlation is evidence of causation, told me this story of [2]medical overtreatment:

At 16 I got glass splinters and sand inside my hand when a test tube broke because it was handled too hard. The small local clinic sewed the wound shut without close examination, so a glass splinter and sand remained deep inside. About 5 years later the glass splinter cut itself loose because of bowling, and for about 10 years made the hand problematic to use. It became swollen and partly numb each time I used it with force.

So, 5 years into this I decided to do something about it. My mother contacted the local clinic again. "Come back tomorrow, and we will look at it," the doctor said to me at the first examination. The next day I arrived to a ready operation table of the simplest kind, and just the doctor.

"I thought we should look at it today, not operate it," I said.

"You know perfectly well that that means operating," he said.

I took that answer as a hint that he might not be an honest person.

In addition he had nervous tics in his shoulders and arms, as well as big thick sausage fingers, as if he plowed hard soil every day.

So, there I lay on the hard mattress, arm outstretched while he plunged the local anesthetic needle hither and dither inside my hand, while my unease continued to grow. So when he took the scalpel and pointed it at my hand, I said "No. There is not going to be an operation today." and rose from the guernsey.

"You can't just leave like that!" he said.

"It is my hand, so I decide what is to be done with it," I answered, and left the room with my mother.

Having seen the entire ordeal silently, which is very atypical of her, she was visibly relieved, and agreed entirely with my decision. She thought he was extremely nervous.

As we drove away, I saw the doctor sitting smoking on some wooden stacks outside, looking somewhat forlorn. I waved, and he waved back.

Fortunately, the needle had moved the glass splinter to a better place, so the hand was useful again for a few years after that.

When it started getting really bad again, I asked other doctors how stuff like that could be fixed, and they told me that hand operations are exceedingly difficult due to the delicate nature and lots of nerves, tendons, muscles, and so on everywhere tight together, so it requires a surgical team with a very good and experienced surgeon, long operating time, and often unconscious anesthesia. And so it was. They found sand inside nerves. I can tell you that is uncomfortable to have. The glass splinter I knew was there because I could feel it by poking hard with my fingers before the hand got swollen, was nowhere to be found.

The recovery took many years. It's OK now. And eating omega-3s and dropping carbohydrates this last year significantly improved it. It became softer, more bendable, and more sensitive, less numb, even though it is decades old now.

1. <http://kim.oyhus.no/CorrelationAndCausation.html>

2. <http://www.blog.sethroberts.net/2010/09/12/the-treatment-trap-by-rosemary-gibson/>

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G (2010-09-14 11:03:33)

Had a very similar experience when I had an ingrown toenail out. Sat through the operation; was very painful and ineffective. I kept wondering what was wrong with him; he seemed like he'd just been divorced or worse.

john (2010-09-16 05:43:40)

Smart guy, there are other correlations that could be used, as shown by news reports about alien doctors in the U.K.

Stephen M (Ethesis) (2010-09-19 15:18:46)

You might find this interesting: <http://erinoconnor.org/2010/09/so-what-happens-now/>

### **Academic Horror Story (Duke University) (2010-09-15 05:20)**

Duke University officials have known since 2009 that there were [1]serious problems with Anil Potti's research – serious enough to believe it is fraudulent. Here is how [2]one researcher put it:

The Duke investigators said their data showed that expression of a particular gene, ERCC1, correlated with response to some agents. However, the commercial microarray chip the Duke investigators said they used in their experiments does not include that gene. "I admit this is one for which I do not have a simple, charitable explanation," [said] Dr. Baggerly.

Potti, you may remember, lied about having a Rhodes Fellowship. Duke's first investigation found him innocent.

Later events caused Duke officials to reconsider. They are [3]still making up their minds. This is a horror story because a clinical trial based on Potti's research is in progress. A hundred cancer patients are getting treated according to Potti's research – that is, according to research that is probably fraudulent. Duke has done nothing to warn the patients or stop the trial.

The whole thing reminds me of [4]UC Berkeley researchers taking weeks to tell a woman she had a large lump in her brain. As if their legal liability were more important than her life.

1. <http://www.blog.sethroberts.net/2010/08/05/the-potti-scandal/>
2. <http://journals.lww.com/oncology-times/blog/newestnews/pages/post.aspx?PostID=34>
3. <http://dukefactchecker.blogspot.com/2010/09/chronicle-reveals-two-health-care.html>
4. <http://www.blog.sethroberts.net/2008/01/31/academic-horror-story-uc-berkeley/>

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Gunnar (2010-09-15 06:27:52)

Sounds like Dr. Baggerly might be used to giving simple, charitable explanations.

Seth Roberts (2010-09-15 07:45:54)

Haha!

Kevin Miller (2010-09-15 10:51:45)

Odd, and I'm not sure if it's your problem or mine, but the RSS feed of this story has "Viagra online" interspersed throughout. It is fine on the website, though.

Laura (2010-09-15 13:41:20)

Sorry that this is OT, but I thought it would be right up your alley and couldn't find an email link. Professor experiments on self with junk food diet... [http://www.youtube.com/watch?v=il14X\\_zKvbA](http://www.youtube.com/watch?v=il14X_zKvbA) &feature=youtube\_gdata

dearieme (2010-09-16 03:05:14)

Wasn't Duke the home of the scandal over the Lacrosse Team, the scandal being what a bunch of sh1ts many of the faculty were?

### **Assorted Links (2010-09-16 07:25)**

- [1]Toads predict an earthquake. The clueless comments are amusing.
- The prize for lifetime achievement in public relations goes to . . . [2]the Bank of Sweden
- [3]Plagiarism Today (a website)
- "There are indeed significant regional variations in expenditures on medical services, unexplained by differences in medical need or health outcomes, but correlated with the numbers of specialist physicians and the availability of hospital beds in each area." Skip Part 1 of [4]this review.

1. [http://blogs.nature.com/news/thegreatbeyond/2010/03/toads\\_predict\\_earthquakes.html](http://blogs.nature.com/news/thegreatbeyond/2010/03/toads_predict_earthquakes.html)
2. <http://www.paecon.net/PAERReview/issue17/Gingras17.htm>
3. <http://www.plagiarismtoday.com/>
4. <http://www.nybooks.com/articles/archives/2010/sep/30/health-care-disquieting-truth/?pagination=false>

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dearieme (2010-09-16 08:41:53)

The Bank of Sweden's nonNobel Prize is just a fiat currency among prizes.

Matt Weber (2010-09-16 11:41:27)

This post looked very different in Google Reader: <http://www.sas.upenn.edu/~mweb/img/cialis.jpg>

Sam (2010-09-16 12:02:42)

In my feedreader (google reader) your posts has a lot of cialis keywords and spam links inside it. Either your feed has been hacked, or google reader (or someone in between). You might want to check your site for intrusion.

Gunnar (2010-09-16 12:16:16)

On topic of the financial services industry: <http://csper.wordpress.com/> It's dogma in the disguise of a science.

Phil (2010-09-16 13:05:45)

Seth, your RSS feed appears to be hijacked somehow. When I subscribe to it either with Google Reader or as a Google widget, all the article titles are changed to "Cialis" or "Viagra", with links to Viagra added at the bottom of each article.

John S. (2010-09-16 15:26:53)

Have you been hacked somehow, or have I? I read your blog through Google Reader, and the title of this post (on Google Reader at least) has been replaced with the name of a certain drug used to treat erectile disfunction. The name of said drug is also scattered four times in bold throughout the text. In fact, looking at your feed I now see that the titles of the last ten posts or so have been replaced with the names of different erectile disfunction drugs.

Jo (2010-09-16 16:34:48)

Yes, I've noticed what John S. is talking about too, for a few days now. I used a firefox add-on to create a fake email address for this comment because I don't trust that my real email wouldn't wind up in the hands of spammers. Yesterday I searched for an older post on different yogurt incubation times and your Google search results are full of the same words too.

Seth Roberts (2010-09-16 17:36:47)

Sorry about the problem with the RSS feed. I'll look into it.

G (2010-09-17 06:37:13)

On the toad article, I can see that Karl's suggestion about inducing earthquakes is stupid but I don't see what's stupid or 'clueless' about Friedemann Freund's comment - can you clue me in?

## **Yale President Defends Liberal Education (2010-09-17 07:10)**

The President of Yale, Richard C. Levin, spoke in support of a Singapore branch of Yale College [1]like this:

There has never been a greater need for undergraduate education that cultivates critical inquiry. In a world that is increasingly interconnected, the qualities of mind developed through liberal education are perhaps more indispensable than ever in preparing students to understand and appreciate differences across cultures and boundaries, and to address problems for which there are no easy solutions.

I suppose President Levin uses a speechwriter but still . . . It reads like something a college student would write in answer to an essay question when they hadn't done the reading. What does "critical inquiry" have to do with understanding cultural differences? The first and second sentences could have been written by two different people. What

possessed Levin to imply that people without a liberal education – such as MIT and Caltech graduates – can only solve problems for which there are easy answers? Or did he fail to understand what he was reading?

Couldn't he, like, hire a better speechwriter? Or is "liberal education" [2]so hard to defend that no one can coherently defend it?

1. <http://www.nytimes.com/2010/09/14/education/14yale.html?hpw>

2. <http://www.blog.sethroberts.net/2007/03/31/for-whom-do-colleges-exist/>

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Gunnar (2010-09-17 10:51:13)

He's the product of the education he proposes ;-)

NE1 (2010-09-17 11:10:23)

I have been insanely horny all week, so I admit when I read your post in my feed, I had to blink a lot before I clicked through to see what the hell was happening. Basically, your last 10 posts seem to have been hijacked by internet pharmaceutical vendors emphasizing male enhancement products. Are you using a different posting software, or just doing something crazy to stop blog scrapers?

waltzingmonkey (2010-09-17 11:26:24)

Looks like your server has been infected. Your posts are not affected when viewed from a browser, but when the Googlebot comes visiting, this virus alters what gets passed to it, so those who read your posts in Google Reader get the impression that you have suddenly become obsessed with medicines for male enhancement.

Thomas Seay (2010-09-17 12:51:46)

I agree that his statement about cross-cultural understanding doesn't make a lot of sense. However, I don't understand your criticism of "liberal education". By "liberal education" I understand an education that includes a broad range of disciplines. Now, I live and work (as a Computer Programmer) in Silicon Valley. A great number of "technical types" become very confused when the subject of conversation strays from their field of specialization (say, Computer Science) to politics, philosophy or any other subject (save, maybe the stock market). The same could be said of "business types". Given the power such people exercise in our society, don't you think it might be beneficial for them to have a wider perspective on the world? And yes, I do believe they might benefit from a "liberal education".

Seth Roberts (2010-09-17 15:21:32)

Thomas, now there's a coherent argument (I mean yours). I agree with your assumption – it would be a good if technical types had a wider perspective on the world. But I don't think it's obvious that such a wider perspective can be force-fed – that is, by making them take Class X and Class Y to fulfill a breadth requirement. Nor can I easily see why teaching "critical inquiry" (whatever that is) would make anyone more interested in new subjects, such as politics or philosophy. Perhaps MIT & Caltech's approach is better: Have speaker series that explore non-technical topics.

Bill (2010-09-17 19:24:31)

Your criticism seems strange to me. Surely what's bizarre about Levin's speech is the claim that Yale delivers a liberal education. Are undergraduates required to develop an even slightly deep understanding of (or even a superficial exposure to) Latin? Logic? Calculus? Classical history? Rhetoric? Theology? the Western Cannon? Any thing at all which might be recognizable



as a liberal education? He is like a zombie, shambling along, clutching at his briefcase though he has long ago passed into a shadow state of existence where the briefcase and its contents are entirely meaningless.

john (2010-09-18 03:54:41)

Didn't Alan Bloom state, and I agree with him, that there can be no cross cultural communication, the most there can be is inter cultural negotiation. U.S.A. has been quite good at high level negotiations for the past fifty years. Maybe that's what Levin means.

Ronald Pottol (2010-09-19 11:57:16)

I'm seeing it too, your rss feed (via google reader) is full of viagra spam, links inserted all over the posts.

ice hole (2010-09-21 07:15:24)

If, at Yale or any other major university, "differences across cultures and boundaries" were truly examined in a spirit of "critical inquiry," President Levin's worst administrative nightmare would be realized.

Mike Schwab (2010-09-21 10:53:29)

I think Levin's point is both coherent and important. As I understood it, what he is saying is that these days many people refer to things they read online as an authority that doesn't particularly need to be questioned. The same goes for articles in journals, books, lectures, what have you. Often the language is obscure enough that people don't have the tools to pick it apart; other times there is a tacit assumption that if it got edited and published it is probably correct. Yet, the reality is that we are still capable of making mistakes, and the climate of unscrupulous attribution only means that they will go further and potentially inhibit more people. A liberal education, where you learn about some various ancient shit before getting down to business, helps you get into the habit of embedding considerations of context and perspective into your answer for "what does this really mean?" Another facet of Levin's statement is the ability to comprehend the differences between cultures. It almost goes without saying that most of us oversimplify the thought processes that take place in foreign lands that we don't know that well. This has always been a tremendous problem for humans, and now that we have such a connected world, we have even more of a reason to learn how to respect each other. I doubt that Levin uses a speechwriter, although perhaps someone helps him out after he has drafted his remarks. He's an excellent speaker, besides being a fantastic president, and he is just as eloquent when he's responding to questions and other spontaneous stimuli.

Seth Roberts (2010-09-21 23:15:15)

President Levin's understanding of diversity appears to be roughly the same as the understanding of UC Berkeley administrators – to whom diversity meant the percentage of under-represented minority groups! The notion that people vary in other ways – such as how they think and what they are good at – didn't cross their minds, judging by the fact that efforts to increase "diversity" never involved that. By promoting a college environment that tends to reward one sort of thinking – the kind of thinking that does well in liberal education classes – more than others, Levin is discouraging diversity of thought.

MH (2010-09-23 13:59:21)

"What does 'critical inquiry' have to do with understanding cultural differences?" There is a long literature in the scholarship of teaching and learning which links critical inquiry and multiculturalism. In short, critical inquiry serves as a method of discovering and analyzing cultural assumptions that contribute to conflict, misunderstanding, and bias. President Levin may have been speaking in a way that was too specialized for a broad audience (and can surely be faulted for that if he was speaking to such an audience). However, you and your commenters are wrong to say he's intellectually incoherent—you are merely unfamiliar with this area of scholarship. (I wouldn't talk trash about psych theory before studying up on it.) Also, the quote clearly does not imply that MIT students can only solve easy problems. That's ridiculous. "By promoting a college environment that tends to reward one sort of thinking – the kind of thinking that does well in liberal education classes – more than others, Levin is discouraging diversity of thought." It seems you have a personal beef with this guy, which is justified for all I know. I can say, however, that liberal education opens up a lot space for diversity of thought—that is why many accuse it (with some justification) of promoting pure cultural relativism.

Seth Roberts (2010-09-23 20:10:19)

MH, you wrote: "You have a personal beef with this guy." Not true. I'd never heard of him until now. You also wrote: "The quote clearly does not imply that MIT students can only solve easy problems." Here's what Levin said: "the qualities of mind developed through liberal education are perhaps more indispensable than ever . . . to address problems for which there are no easy solutions." You seem to have a different interpretation of "indispensable" than I do. MIT students do not get a liberal education.

### **How Things Begin (Time Out) (2010-09-19 23:21)**

Time Out magazine was started in 1968 in London by Tony Elliot, who was 22 at the time. The original title was Where It's At. There were all sorts of new cultural stuff, such as a concert by the Who, that the mainstream media didn't notice. The fringe-y alternative media weren't interested in the attention to detail required to put out a list of events. That was the gap Time Out filled. Elliot borrowed a small amount of money (70 pounds) to start it. He and his co-workers worked without pay for the first three or four months. It was hard to get distribution, so they went around to parks passing it out. At a Beijing talk, Elliot said he didn't remember the first paid advertiser (maybe a music store) but he did remember when he got an unsolicited advertising order from the prestigious [1]London Film Museum. They understand what we're trying to do, he thought.

I asked what some of his biggest mistakes had been. Both involved not saying no when he should have said no.

1. <http://www.londonfilmmuseum.com/>

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Aaron Blaisdell (2010-09-20 07:53:48)

Did he elaborate on the specific examples of not saying no when he should have?

### **Avocado Raises Blood Sugar (2010-09-21 07:39)**

Tim Lundeen writes:

We [Tim and his partner, Alexandra] first noticed that eating avocados raised our blood glucose when we were on a low-protein/low-fat/high-fruit nutrition plan. After 1/4 avocado each, we would both have fasting glucose of 95-99 instead of 80-85, with the effect lasting for about 4 days. It was quite repeatable, so we stopped eating avocados. We speculated at the time that it was due to the omega-6 content of the avocado fat.

We just tried avocado again with more typical nutrition, with about 25 % protein, 25 % fat, 50 % carbohydrate with very low fructose, thinking that because we were eating more fat the effect might not be so pronounced, but saw the same elevated fasting blood glucose as before.

After some more research, we found out it is because avocados contain a sugar called mannoheptulose, which causes temporary dysregulation of blood sugar.

Mannoheptulose was first isolated in 1917. Mannoheptulose has been proven to be present in many foods, but is found most abundantly in the avocado (La Forge 1916-1917). In 1957, the first research was published in the Archives of Biochemistry and Biophysics (Volume 69, page 592), suggesting that avocado extract blocked normal insulin secretion. In 1963, it was demonstrated that avocado extract blocks glucose-stimulated release of insulin (Nature, Volume 197, page 1264). By 1967, low doses of avocado extract were found to inhibit both pancreatic secretion and synthesis of insulin without eliciting measurable hyperglycemia (high blood sugar) (Nature, Volume 214, page 276). This finding was significant because it demonstrated that a controlled dose of avocado extract could suppress pancreatic production of insulin without inducing a diabetic state. [[1]<http://www.health-marketplace.com/p-Obesity-3.htm>]

The problem with this is that your cells don't absorb nutrition because insulin is reduced, so we have strong cravings for food, feel extra hungry all the time, and have been eating about 50 % more calories to feel full. The net effect is not a good feeling...

This makes sense. And it is methodologically interesting. Spending zero research dollars, Tim and Alexandra learned something important about blood sugar control that the rest of the world seems not to know. (Except perhaps the researchers who did the avocado extract research.) None of the research articles they mention make clear the practical significance of the effect. To say that avocado extract does X doesn't tell you how much avocado you need to get the effect.

When I google "avocado" and "blood sugar" (together), the first page of links all claim, at least at first glance, that avocado lowers blood sugar. But that's just the internet. (Although Google is supposed to put the most reliable links at the top.) Then I went to the most authoritative possible source on what we should eat: the American Journal of Clinical Nutrition. I found only three articles that mention avocados in their title or abstract. None was about this effect. I also looked in Eat Drink and Be Healthy by Walter Willett and the Harvard School of Public Health. Nothing about this effect of avocado.

1. <http://www.health-marketplace.com/p-Obesity-3.htm>

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Mike (2010-09-21 08:15:20)

While the implications of mannoheptulose are interesting, the results from this n=2 trial are fairly worthless, seeing as how the couple utilized high carb diets both times. "The problem with this is that your cells don't absorb nutrition because insulin is reduced, so we have strong cravings for food, feel extra hungry all the time, and have been eating about 50 % more calories to feel full. The net effect is not a good feeling" this statement reflects the results of their diet, and subsequent chronically elevated insulin, not the avocado, accurately. I regularly consume up to two whole avocados daily in conjunction with a high fat, moderate protein, low carb diet; fasting triglycerides are extremely low, and when I've tested my BGL, it has always been within normal range (5.0mmol/L). Satiety is extremely high with no strong cravings, ever. Perhaps Tim & co. need to analyze the whole picture, and not just a piece.

Alex Chernavsky (2010-09-21 08:16:54)

So, if Gary Taubes is right that insulin is the primary regulator of fat storage, and if avocados lower insulin levels, then it makes sense to eat avocados if you're trying to lose weight? (Or would doing so make you more hungry than normal, which

might make you eat something that would then counteract the insulin-suppressing effect)? I'm trying to parse the practical significance here, in terms of weight loss.

Vic (2010-09-21 09:14:05)

Interesting, from wikipedia: Roth and his team (from P &G Pet Care, Wayne State University, Southern Illinois University and the Pennington Biomedical Research Institute) have been mining avocados for an alternative "MH (for mannoheptulose). It's a fairly simple sugar with a 7-carbon backbone. When fed to mice in fairly concentrated doses (roughly 300 milligrams per kilogram of an animal's body weight), it improved insulin sensitivity and the clearance of glucose from the blood. Meaning it helped overcome diabetes-like impairments to blood-sugar control. MH supplementation also improved the ability of insulin, a hormone, to get cells throughout the body to do its bidding (and that's a good thing). MH revved up the burning of fats in muscle. That's the opposite of fat deposition and something that these scientists note "would be an expected effect of a calorie restriction mimetic." Treated mice also lived longer "some 30 percent longer than untreated animals. And they were happier, I'm guessing, because they didn't have to give up most of their chow to achieve this life extension. Indeed, their food intake and weight matched that of untreated mice. Roth, G., et al. 2009. Mannoheptulose Glycolytic Inhibitor and Novel Caloric Restriction Mimetic (Abst. 553.1). Experimental Biology 2009, New Orleans (April 19).

peter (2010-09-21 09:59:20)

i started eating avocado (1/4) in a salad and found that it satisfied my hunger to the extent that eat less over all; also, the effect seems to last a long time, i.e., i can postpone when i next eat. i haven't measured by glucose, but i'll try. I think this points out the problem of trying to extrapolate from the experience on one person. the body is complex and reactions to food etc.. will likely vary; it is unlikely that any underpowered "study" (in this case really an anecdote) is very meaningful.

Caleb (2010-09-21 22:28:26)

So, they ate an evolutionary excessive amount of carbs, and then found that down-regulating the hormone that absorbs carbs caused problems. That's... not surprising. Learning that avocado down-regulates insulin is very useful though. i'll be sure to eat it more often, as producing less insulin is very healthy as long as you aren't consuming a ridiculous excess of sugars that need to be mopped up (i'd say anything in excess of 25 % carbs is suboptimal, let alone twice that)

Seth Roberts (2010-09-21 23:04:59)

Mike, perhaps your fasting blood sugar would be lower – closer to 84 – if you ate fewer avocados. Closer to 84 is better. I eat the same diet as you (high fat, med protein, low carb) and agree with you about its benefits. I agree that if you eat such a diet avocados should make less difference. Caleb, that's a good point. But a large fraction of the world eats an evolutionary excessive amount of carbs. So this has practical value.

Nancy Lebovitz (2010-09-22 01:59:35)

Also, just having information that avocados raise the blood sugar for some people is worth knowing. It isn't that hard to check, and it's better than thinking avocados must be good for everyone.

Aaron Blaisdell (2010-09-22 09:32:43)

So an emerging consensus appears to be that if you are asked "Is Food X good to eat?" (X=avocados in this case), a proper response would be "That depends. What else do you eat?"

Tim Lundeen (2010-09-22 09:50:25)

If you eat avocados on a regular basis, your body will adjust to the reduced levels of insulin: your cells will increase the number of insulin receptors they express, and you'll stop being hungry. When we noticed this effect, our elevated blood sugar went away after 4 days, which is exactly how long it takes your cells to rebuild these receptors and calibrate their needs to changes in their environment. However, it seems likely that reducing insulin levels this way is not healthy. If our bodies are designed to produce a certain level of insulin in response to a particular glucose/protein load, then reducing it is likely to have side effects even though the overt hunger and elevated blood glucose goes away in 4 days. With regard to the level of carbohydrates

in the diet, the pancreas has sensors for both glucose and glutamine, so produces insulin in response to both carbohydrate and protein intake until both are back to baseline. If the effect of mannoheptulose was only on glucose sensing, then it is possible that you wouldn't see a blood sugar increase resulting from combined protein/carb intake. My prediction is that mannoheptulose acts directly on insulin output, not just on pancreatic glucose sensing, because we do see glucose increase with combined intake. Very hard to say what the balance is without doing the experiment and measuring insulin levels with all protein vs all carb intakes, but would be interesting to try it. Also, re the "correct" level of carbohydrates in paleolithic diets, there is a lot of debate and these numbers are constantly revised. There is a good paper in the European Journal of Clinical Nutrition by Eaton et al, "Paleolithic nutrition revisited: A twelve-year retrospective on its nature and implications". They retrodict paleolithic macronutrient intake as 37 % protein, 22 % fat, 41 % carbohydrate, which is consistent with studies of modern-day hunter-gatherers. Further, there are cultures today that eat very high carbs (the Okinawans traditionally ate 10 % protein, 10 % fat, 80 % carbs) who have excellent blood sugar control and live long healthy lives (the Okinawans have one of the highest percentages of centenarians of any culture). Our own requirements for any nutrition plan we adopt is that we have fasting blood sugar of 83 and peak blood sugar after meals of no more than 120, ideally less. Our current diet does this, except for 4 days after we eat avocado :-)

Paul (2010-09-22 12:16:03)

I both want to criticize and defend Mr. Roberts here. The criticism is this; the sample size is too small to take it as Gospel. The results must be replicated. On the other hand, new hypothesis/avenues of research must come from somewhere. In regards to diet/exercise/sleep or any other endeavor where it is easy for people to play around with marginal changes and record data, amateur self-experimentation is likely to prove very fertile ground for new ideas. The proper response of a scientifically inclined skeptic would be to ask if the results are repeatable, not to discount them because the bearers don't wear the priestly vestments of a white lab coat. Also, Seth, one of the values of a liberal education, if it is an education that includes an emphasis on the history of math, science, literature, and philosophy, is to free the mind from prejudices and dogma and to recognize dogma and prejudice when one sees it. A liberal education, unlike some other forms of education, attempts to inculcate the habit of using reason as the ultimate arbiter of truth, as opposed to authority, mysticism, or emotions.

Vic (2010-09-22 22:40:40)

Hi Tim, Thanks for sharing... so what do you eat to achieve those levels? and how often? where does exercise come in? Vic

Caleb (2010-09-23 10:45:56)

Tim, thanks for your data rich and nuanced response. We both agree that there is a wide variety of macro nutrient consumption that can be healthy. It's more the type of carbs and fats that are important at the proximal level. I'm a little skeptical of using modern hunter gathers to extrapolate the evolutionary environment, as those who have survived usually have done so because they live on marginal land that others didn't feel was worth driving them off of, so the type of food such land supports may not be representative of the past. I do consider these diets great baselines, though once again, I'm not convinced they're optimal. My personal philosophy is to only get enough carbs to fuel the brain and muscles with glycogen (i.e. avoiding ketosis most of the time), only get enough protein for body maintenance, and use fats to meet all other energy needs. The main reason is that protein and insulin restriction seem to be the key mechanism in all the longevity studies. Insulin seems to activate the pathways that result in aging, and most of the interventions that increase lifespan, such as curcumin, avocado, rapamycin, all seem to share the common factor of down regulating insulin pathways. I don't agree with the second paragraph, as hunter gather diets vary through the seasons and food availability, and I believe we're well evolved to handle such variations. Hormesis suggests it's even good for the body to have to respond to such intermittent stressors.

peter (2010-09-23 15:30:20)

i just got my glucose reading back; it's 83 (taken at 3:00 pm, probably 3 hours after eating); my reading before this (when i wasn't eating avocado every day) was 100 (it was fasting). i guess i'm going to continue eating avocado (altho i also take cinnamon in the a.m.).

Nansen (2010-09-23 16:44:20)

@ Aaron Blaisdell: and perhaps also, "what is your exercise regimen"? I wonder about this when I read that Seth eats 60 grams of butter a day.

Seth Roberts (2010-09-24 02:02:57)

Nansen, I usually take a one-hour walk every day. Sometimes more. The butter greatly reduces my appetite, I find. Paul, I think all education tends to "free the mind from dogma" in the sense that the more you know, the more beliefs you have to choose between. I don't understand how the history of math is relevant here. Sure, learning the history of science shows how cherished beliefs (such as the earth is the center of the cosmos) have been wrong. But science isn't the focus of liberal education. I suspect MIT students know more about the history of science than Harvard students. Liberal education, in practice, means a large dose of humanities. How studying this or that novel or listening to an art-history professor's obscurities tends to free one from dogma I fail to see. I think Veblen was right about higher education: Professors try to show off their uselessness. In all areas they try hard but in the humanities it's easier.

SB (2010-10-02 06:48:14)

From this site: [http://www.newhope.com/nutritionsciencenews/NSN\\_backs/Apr\\_00/cancer.cfm](http://www.newhope.com/nutritionsciencenews/NSN_backs/Apr_00/cancer.cfm) "... avocado extract to inhibit glucose uptake in cancer cells; ..."

Paul (2012-04-08 10:43:49)

Is it possible for avocado to temporarily give you symptoms of diabetes? I have frequent hunger and urination regularly but it seems after a couple of days of eating avocado both are exacerbated, especially the urination. I went to the doctor and had a fasting blood glucose of 99. I am very fit and eat a super clean diet yet it appears I am knocking on the door of diabetes. I should also mention I have chronic insomnia and that might play a part.

### **Shamelessness in Chinese Academia (2010-09-22 06:20)**

Professor Wang Hui, a Tsinghua faculty member in the Chinese Language Department, was accused of plagiarism several months ago. You can read about it [1]here. Professor Wang is no stranger to controversy:

Wang Hui was involved in controversy following the results of the Cheung Kong Dushu Prize in 2000. The prize was set up by Sir Li Ka-shing, which awards one million RMB in total to be shared by the winners. The 3 recipients of the prize in 2000 were Wang Hui, who served as the coordinator of the academic selection committee of the prize, Fei Xiaotong, the Honorary Chairman of the committee, and Qian Liquan, another committee member. Wang Hui was then the editor-in-chief of Dushu magazine, which was the administrative body of the prize.

He awarded the prize to himself! And his fellow committee members. Wang was editor in chief of Dushu for ten years. During that time, he published many hard-to-understand articles by his friends. The influence of the magazine shrank considerably.

1. [http://en.wikipedia.org/wiki/Wang\\_Hui\\_%28intellectual%29](http://en.wikipedia.org/wiki/Wang_Hui_%28intellectual%29)

Gunnar (2010-09-22 07:07:14)

Because he was worth it ;-) His "friends" think so, too!

Timothy Beneke (2010-09-22 09:04:11)

I wonder how social reality is so constructed for these people so that they can give themselves prizes worth lots of money with a straight face. Or are they smirking? In the West there is some recognition that one is not in a position to objectively evaluate one's own work compared with others; that biases intrude. Is it cynicism? As Gunnar suggests, do they in good conscience believe that they were deserving of the award? I'm curious as to how they would rationalize it... It is said that corruption is widespread in China... Wow...

Thomas Seay (2010-09-22 09:09:18)

Let's face it. Bribery and corruption are built into the Chinese system. Sure, there is bribery and corruption in the West, too. However, I dare say that even those who engage in it here, know deep down it's wrong. I am not certain that is the case in China. It just seems part of life that teachers, for example, are given "gifts" in order to boost a child's grade. Money is given to judges in order to ensure that a prisoner either doesn't go to jail or his sentence is reduced. Managers in charge of money for a corporation "borrow" some in order to start a business of their own on the side. The list could go on and on. Wang Hui was just doing what anybody (in China) would do. Remember the Chinese attitude of disbelief at the downfall of Nixon. How could Americans have got rid of their President over such a simple infraction?!

Alex Chernavsky (2010-09-22 10:45:42)

Shamelessness in the town of Bell, California: [http://news.yahoo.com/s/ap/us\\_bell\\_salaries](http://news.yahoo.com/s/ap/us_bell_salaries)

**8 Bell officials to face judge in corruption case** LOS ANGELES — The mayor, the ex-city manager and six current and former officials of Bell were headed from jail to court Wednesday as residents of the modest, working-class suburb celebrated their arrest on charges of bilking taxpayers out of \$5.5 million. As former City Manager Robert Rizzo, Mayor Oscar Hernandez and the others were rounded up during Tuesday morning raids on their homes, residents across the city honked their car horns, burst into cheers and staged impromptu celebrations. The eight were scheduled to be arraigned in court Wednesday on charges of misappropriating more than \$5.5 million in public funds. "They used the tax dollars collected from the hardworking citizens of Bell as their own piggy bank, which they then looted at will," District Attorney Steve Cooley told a news conference in Los Angeles soon after all eight were taken from their homes in handcuffs.

Darius Bacon (2010-09-22 11:37:18)

Reminds me of Dick Cheney heading Bush's vice-president search. <http://www.harpers.org/archive/2008/09/hbc-90003554>

Seth Roberts (2010-09-22 15:29:43)

"Wang Hui was just doing what anyone (in China) would do." The overseers of Dushu didn't agree, apparently. This seems to be why he was removed from his post as editor-in-chief of Dushu.

Thomas Seay (2010-09-28 12:49:50)

“Wang Hui was just doing what anyone (in China) would do.” The overseers of Dushu didn't agree, apparently. This seems to be why he was removed from his post as editor-in-chief of Dushu.” Yes, if you get caught you MAY suffer the consequences; however, that doesn't diminish my point. Bribery, etc. is, relatively speaking, socially accepted in China. If an American mother were to advise another mother to give a teacher \$50 as a gift to enhance a child's grade, more likely than not, the American mother would be outraged. If you were to do that in China, it would just be considered smart, sound advice.

## Why Psychologists Don't Imitate Economists (2010-09-23 07:43)

Justin Wolfers, an economist, via [1]Marginal Revolution:

When I watch and speak with my friends in psychology, very little of their work is about analyzing observational data. It's about experiments, real experiments, with very interesting interventions. So they have a different method of trying to isolate causation. I am certain that we have an enormous amount to learn from them. But I am curious why we have not been able to convince them of the importance of careful analysis of observational data.

By "careful analysis of observational data" I think Wolfers means the way economists search within observational data for comparisons in which the factor of interest is the only thing that changes (which is why he says "isolate" rather than "infer"). He's right – it really is a methodological innovation that psychologists are unfamiliar with. It lies between ordinary survey data and experiments.

Here's why I think this innovation has had (and will have) little effect on psychology:

1. Most psychology professors are bad at math. They still use SPSS! Which is terrible but they think R is too difficult. Economics papers are full of math. That is part of the problem. Math difficulty also means they have trouble with basic statistical ideas. When analyzing data, they're afraid they'll do the wrong thing. For example, most psychology professors don't transform their data. It wasn't in some crummy textbook so they are afraid of it. Lack of confidence about math makes them resistant to new methods of analysis. Experimental data is much easier to analyze than observational data. You don't need to be good at math to do a good job. So they not only cling to SPSS, they cling to experimental data.
2. Psychology studies smaller entities than economics. Study of the parts often influences study of the whole; the influence rarely goes the other way. This is why, when it comes to theory, physics will always have a much bigger effect on chemistry than vice-versa, chemistry a much bigger effect on biology than vice-versa. Method is different than theory but if you aren't reading the papers – and physicists don't read a lot of chemistry – you won't pick up the methods.
3. There is a long history of longitudinal research in psychology. Studying one or more groups of children year after year into adulthood. The Terman Genius project is the most famous example. I find these studies unimpressive. They haven't found anything I would teach in an introductory psychology class. I think most psychologists would agree. This makes observational data less attractive by association.
4. Like everyone else, psychologists have been brainwashed with "correlation does not equal causation". I have heard many psychology professors repeat this; I have never heard one say how misleading it is. To the extent they believe it, it pushes them away from observational data.
5. Psychologists rarely use observational data at all. To get them to appreciate sophisticated analysis of observational data is like getting someone who has never drunk any wine to appreciate the difference between a \$20 wine and a \$40 wine.

1. <http://www.marginalrevolution.com/marginalrevolution/2010/09/justin-wolfers-on-trade-across-the-disciplines.html>

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Matt Weber (2010-09-23 10:20:03)

Working from nearly zero information, I wonder if it's not harder to get good observational data that's of interest to psychologists. I gather economists do a lot of work with big, publicly available datasets collected by agencies whose job it is to collect



them. If I knew about a large dataset that included variables of psychological interest, I'd be interested. There are exceptions – my ex-officemate Gary Lupyan has a recent PLoS ONE paper analyzing how morphology relates to number of speakers in a big database of languages. And it's obviously possible that many of these datasets exist, and I'm unaware of them because of this very methodological bias. (Unrelated, I have a bachelor's in computer science and don't touch SPSS if I can avoid it – but R is gross in its own way, and I'm getting more and more frustrated with how much effort it takes to do simple things. I'm starting to think that Python with numpy and matplotlib may be the open source data analysis and visualization solution, not that I've tested this hypothesis.)

UhhhNo (2010-09-23 12:00:42)

I know quite a few psychologists who absolutely love SAS. I work with SAS exclusively, both for my psychological and economic analyses.

Alex Chernavsky (2010-09-23 14:28:53)

Seth, I'm curious why you think longitudinal studies haven't produced any really interesting results. What about the Harvard Study of Adult Development, which has been running for about 73 years? I don't actually know much about it, aside from what I read in this article: <http://www.theatlantic.com/magazine/archive/2009/06/what-makes-us-happy/7439/> The article wasn't very well written, but the study itself seems interesting.

Seth Roberts (2010-09-23 15:11:59)

Alex, I read the article but didn't find any impressive results in it. Maybe you noticed how no small number of results were emphasized. Instead, 20-odd conclusions were described briefly. Matt, the big databases you refer to often measure things that depend on behavior, which psychologists study. For example, income reflects behavior. Sometimes these big databases include something very close to behavior, such as highest degree achieved. But a psychologist would think that income and highest degree achieved are poor measures of behavior because they are likely to depend on dozens of things, including many a psychologist wouldn't care about (e.g., where you live). When you can't measure all the things that might affect your dependent variable, and it's observational (non-experimental) data, you get very nervous about concluding cause and effect.

Sam Gershman (2010-09-23 21:15:57)

There is a long history of working with observational data in personality psychology, as well as intelligence research. For example, researchers have been interested in understanding the relationship between working memory capacity and IQ: [http://www.interactivemetronome.com/IMPublic/Research/Temporal %20Processing/Intelligence/Research \\_Intelligence \\_Engle1999.pdf](http://www.interactivemetronome.com/IMPublic/Research/Temporal%20Processing/Intelligence/Research_Intelligence_Engle1999.pdf) More generally, studies of "individual differences" are widespread throughout psychology. In any case, I completely agree that software and mathematical knowledge is a major limiting factor. I remember having a conversation with social psychologists where they wanted to use graphical models to analyze their data; they kept asking me, "Can your model do this? Can your model do that?" I told them that we can build a graphical model encoding any type of assumptions they want, which completely amazed them. Psychologists have put themselves in a very constraining analytical box, and I hope that we can revise the statistics curriculum (and force them to learn programming) in the future to enable more flexible thinking.

Seth Roberts (2010-09-24 01:37:49)

Sam, yeah, you're right. And some of the personality work does impress me – Frank Sulloway's, for example. That would be one way that these economic methods could begin to influence psychology.

jeanlouisefinch (2010-09-25 12:09:14)

6. Psychologists who do this sort of analysis get re-branded as economists.

Marcus (2010-09-25 12:29:30)

This fixation of economists doing comparative analysis of their discipline with others invariably proves the superiority of economics over all things. "We're the awesome realists" they say. And yet the gulf ignored is analysis of what is past with useful observations for the future. And the disciplines ignored ethics and philosophy.

Alan Gunn (2010-09-25 12:35:54)

Practicing psychologists are people who work with one (or sometimes a few, as in group therapy) person at a time. This is so much taken for granted that the idea that one ought to look at large numbers of people seems foreign to them. I suppose this outlook tends to infect academics as well, especially as many of them do therapy too. I do some work with abused children. I constantly run across therapists who are willing to offer firm opinions about someone's character or intentions based solely on discussions with that one person. Whenever I point out that several other people tell very different stories from what they've heard, they mostly just look at me funny. It's sort of the same thing as if one were to conduct a trial by asking questions only of the defendant. This mindset doesn't encourage the sort of thinking that economists do. It also doesn't tend to lead to accurate predictions: studies of how accurate therapists are at prediction things like dangerousness show them about on a par with coin flips.

Tom Leahey (2010-09-25 12:43:17)

What's going here is that by and large economists and psychologists have different objectives. When psychology began as a science in the 19th century it defined itself as the science that studied – experimentally – conscious experience. It asked questions such as "How many simple ideas can be held in consciousness at the same time?" (answer 3-4 clearly and distinctly). Observational data sets aren't useful here. Even though psychology is now the science of behavior, we're still interested in elucidating internal mechanisms that cause behavior, whether conscious, nonconscious, or physiological. As an example, let me take Friedman's famous billiards player. He was happy to explain the player's behavior from the outside as if the player were a master of physics. A psychologist would want to look inside: What thoughts does he have as he lines up a shot? What sensory cues does he need to integrate to make an effective shot: light reflectance off the billiard balls? kinesthetic cues from the position of his body and hand as he holds the pool cue? kinesthetic feedback from the movement of his hand as he strikes the ball? sensory integration of the visually perceived movement of the ball with the feedback from striking the ball? Also: How does one move from being a novice billiard ball player to an expert one? Is there explicit instruction? Does one learn by observation? If the latter, how does the learner figure out what aspects of an expert's movements are relevant and which are not? What's happening at the neural level as the player contemplates and executes a shot? Because these are questions about internal mechanisms, observational data sets are not helpful. One needs careful experimental studies in which one might vary things such as light reflectance off the balls. In this connection, let me note that one can find very sophisticated mathematical work in psychology, it will just be in areas that economists are unlikely to encounter, such as psychophysics (Fechner's law looks a lot like a utility curve, by the way) or in work in neural network theory or dynamical systems. Finally, I'd like to mention that the very first work I know of in behavioral economics never seems to come up in economists' discussions of it, which tend to start with Simon and Kahnemann/Tversky. It was work back in the 1970s by Skinnerian radical behaviorists on choice behavior in animals, pioneered by Richard Herrnstein (of the Bell Curve). Skinnerians don't care about internal mechanisms, either. If we were all social scientists from Mars studying the movements of "automobiles" on Earth's highways, you would collect large observational data sets about traffic flows. Psychologists would want to capture several vehicles and look inside to see how they work.

buzz (2010-09-25 15:02:40)

Why Psychologists Don't Imitate Economists ... ..

Michael Bishop (2010-09-25 15:15:51)

Psychology studies smaller entities than economics. Study of the parts often influences study of the whole; the influence rarely goes the other way. This is why, when it comes to theory, physics will always have a much bigger effect on chemistry than vice-versa, chemistry a much bigger effect on biology than vice-versa. Method is different than theory but if you aren't reading the papers – and physicists don't read a lot of chemistry – you won't pick up the methods.

I share the intuition... has anybody fleshed out the implications?

Mario Rizzo (2010-09-25 15:32:55)

I wonder if there are studies that have been redone using the more sophisticated data techniques of economists. My question is: Does it make a difference, not for one of two studies, but for the thrust of the basic conclusions in an area? This would be an excellent opportunity to examine the various ways smart researchers can overcome the limitations of their respective empirical methods. It won't be done, of course – so economists can continue to feel superior.

blink (2010-09-25 15:40:06)

I think we have nearly reached a point where the difference between psychology and economics is the methodology, particularly since the content often overlaps. That is, if you are using sophisticated statistics on observational data, you are doing economics; if you are running experiments, you are doing psychology. A fair bit of training is required to do either well – witness the number of graduate-level courses devoted to econometrics or psychological methods – so specialization according to comparative advantage makes sense.

John Bullock (2010-09-25 16:11:55)

Psychologists rarely use observational data at all.

Social psychologists use observational data – of a particular sort – all the time. They do it when they analyze mediation (or "causal mechanisms") in the style of Baron and Kenny (1986). Their data on mediators are almost always observational: the mediators are measured but not manipulated. The analyses of mediation in these cases should be thought of as observational studies, with all of the difficulties that observational studies entail.

Andy (2010-09-25 16:35:55)

Hmmmm. What bits of psychology were you looking at? Plenty of psychologists use R. Plenty of psychologists use observational data.

John Bullock (2010-09-26 12:47:55)

I wonder if there are studies that have been redone using the more sophisticated data techniques of economists. My question is: Does it make a difference, not for one of two studies, but for the thrust of the basic conclusions in an area?

Sometimes it does: [1]How Choice Affects and Reflects Preferences: Revisiting the Free-Choice Paradigm M. Keith Chen and Jane L. Risen JPSP 2010 Excerpts from the abstract:

After making a choice between two objects, people evaluate their chosen item higher and their rejected item lower (i.e., they "spread" the alternatives). Since Brehm's (1956) initial free-choice experiment, psychologists have interpreted the spreading of alternatives as evidence for choice-induced attitude change. It is widely assumed to occur because choosing creates cognitive dissonance [... but] the free-choice paradigm (FCP) will produce spreading, even if people's attitudes remain unchanged [...] We show this, first, by proving a mathematical theorem that identifies a set of conditions under which the FCP will measure spreading, even absent attitude change. We then experimentally demonstrate that these conditions appear to hold [...] The results suggest a reassessment of the free-choice paradigm, and perhaps, the conclusions that have been drawn from it.

1. <http://www.som.yale.edu/faculty/keith.chen/papers/CogDisPaper.pdf>

Phil (2010-09-26 16:48:19)

Seth, out of curiosity, can you list a few important points that have come to be generally accepted as a result of the "innovation" you extol in the beginning, which psychologists have foolishly ignored. I'm in neither field, but it strikes me that there are papers showing "evidence from this" and "evidence from that" supporting various hypotheses, but on how many important

questions has a general consensus been reached as a result of these studies? Many? More than longitudinal studies employed by psychologists?

Keivn H (2010-09-26 17:51:16)

I think you have it a bit backwards. Psychologists won't start using large amounts of observational data because experiments are fundamentally better at answering questions. Imagine trying to do observational chemistry or observational physics! While economics has historically had to rely on imperfect observational data, I think more and more economists will start embracing experimental approaches. I think some of your own points actually are pretty good arguments for this line of thinking. "Experimental data is much easier to analyze than observational data." This is pretty much the point. For any given effect, you will have more power to detect the effect in a well controlled experiment than in observation data with uncontrolled variables. Sometimes you can correct for those uncontrolled variables, but almost always it is an approximation. "Study of the parts often influences study of the whole; the influence rarely goes the other way." With experiments, it is much easier to get at multiple levels of analysis, with observational data, there is a lower limit on how small you can go (usually related to privacy laws and the inability to record all decisions/environments). Some of the really large scale stuff will probably have to remain observational for similar technical limits, but experiments of groups of up to a few hundred people are feasible. Also, correlation isn't causation. I agree it can sometimes be used dismissively, but it comes back to a basic point. In order to determine the direction of relationship unambiguously, you need to externally perturb one of the variables and measure the influence on the other variable. That is an experiment. There are sometimes natural experiments, but they can never be as well controlled as a deliberate experiment. I will agree on one point however. Psychologists are chronically bad at math, and this holds the field back. Economists can add a lot to psychology if they bring mathematical rigor to the field, and learn how to design good experiments. I think the biggest road block for most economists in designing good experiments is know what tools they have at their disposal. Psychological methods have a long history and there is a lot of great paradigms to use in there. One field that jumps out to me is the study of working memory. There are a lot of interesting findings there that economists could use to start predicting individual and maybe even group behavior. Other topic to learn about would probably be cognitive control/executive function (which desperately needs some better models and rigor), and attention, which relates to literally everything humans do.

Kevin H (2010-09-26 17:54:02)

Oh, and an interesting set of longitudinal data related to psych? I'd say there's lot in child development. Probably most likely to make it into a psych 101 course would be maternal diet and it's effect upon psychological outcome of the child.

### Assorted Links (2010-09-24 16:11)

- [1]The Climategate Inquiries by Andrew Montford (author of The Hockey Stick Illusion).
- [2]history of umami. I didn't know shitake mushrooms have more umami than other mushrooms.
- [3]Japanese cherry blossoms imply Medieval Warming Period warmer than now.
- [4]Does electricity use cause extreme weather?
- [5]Vitamin C improves mood.

Thanks to Dave Lull and Anne Weiss.

1. <http://www.thegwpf.org/images/stories/gwpf-reports/Climategate-Inquiries.pdf>

2. <http://hilobrow.com/2010/09/18/de-condimentis-2/>

3. <http://www.c3headlines.com/2010/09/peer-reviewed-cherry-blossom-reseach-confirms-japans-medieval-climate->

warmer-than-current-one.html

4. <http://stevengoddard.wordpress.com/2010/09/22/what-if-they-blamed-electricity-2/>

5. [http://www.sciencedaily.com/releases/2010/09/100923125123.htm?sms\\_ss=email](http://www.sciencedaily.com/releases/2010/09/100923125123.htm?sms_ss=email)

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Dennis Mangan (2010-09-25 05:49:07)

In that vitamin C study, I notice that the lead researcher quoted is a Canadian named John Hoffer; I wonder whether he's the son of Abraham Hoffer, the Canadian physician who pioneered the use of niacin in schizophrenia as well as the use of other megadose vitamins for other conditions.

Tom (2010-09-25 07:44:51)

off-topic, Seth, but thought you'd be interested in the following: <http://www.nytimes.com/2010/09/25/health-policy/25avandia.html?hp> The article is ostensibly about Avandia & the FDA...but it's really about blogging.

Anne Weiss (2010-09-25 08:02:59)

On his website he mentions a son, John, born in 1947. At McGill John is studying the use of intravenous vitamin C for various cancers. Strange coincidence if he's not Hoffer's son since his research interests are consistent with Hoffer Sr.'s work.

Dave Lull (2010-09-25 08:34:07)

"He is the son of Abram Hoffer, an early advocate of vitamin therapies for mental illness and cancer."  
<http://www.canada.com/montrealgazette/news/weekendlife/story.html?id=f3e3cc7f-d23f-4514-9cd2-1d0017ff6e3c>

## **The Corruption of Drug Trials (2010-09-25 22:51)**

In [1] a clinical trial of a new antipsychotic drug done at the University of Minnesota, a man named Dan Weiss was given a choice: be hospitalized in a psych ward or, shockingly, "take part in an industry-funded study of antipsychotic drugs". The usual choice is between hospitalization or conventional treatment. Weiss chose to be in the clinical trial. During the trial he killed himself.

An FDA investigator named Sharon Matson decided that Weiss had not been coerced into participating! During a trial, Moira Keane, the head of the University of Minnesota Institutional Review Board, which of course is meant to protect human subjects, claimed the purpose of the board was not to protect human subjects. The purpose of the board, Keane said, was "to make sure that Olson and the trial sponsor had a plan to protect subjects." This is false. IRBs sometimes measure compliance, not just plans.

After Weiss's mom sued the University of Minnesota and lost,

The university filed a legal action against Mary, demanding that she pay the university \$57,000 to cover its legal expenses. Gale Pearson, one of Mary's attorneys, says that while such suits are technically permissible, she had never seen one filed in her previous 14 years of legal practice. The university agreed to drop the lawsuit against Mary only when she agreed not to appeal the judge's decision.

[2] The article by Carl Elliott about this case also contains excellent discussion of how drug companies shape clinical trials to get the results they want – and when that fails, hide the results. The effect is that new drugs are approved that are worse than the drugs they replace.

Thanks to James Andrewartha.

1. <http://motherjones.com/environment/2010/09/dan-markingson-drug-trial-astrazeneca>
2. <http://motherjones.com/environment/2010/09/dan-markingson-drug-trial-astrazeneca>

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Gunnar (2010-09-26 05:09:54)

If the drugs are worse or better depends on the goal. Some people have opposite goals to common folks. I'm a rather common guy, and I want to be healthy. That's not in the interest of drug companies and the FDA, as I understand it today. Better not be a (human) subject or resource!

David (2010-09-27 12:59:44)

Very sad to see where things are going, if the U of M feels it can do this without a massive public outcry.

### **The Stupidity of Crowds (2010-09-27 07:33)**

At Tsinghua I am teaching a class called Frontiers of Psychology. The students are reading [1]The Man Who Would Be Queen by Michael Bailey. At one point Bailey mentions what is sometimes called [2]the older brother effect: If a man has one older brother, he is more likely to be gay than if he has no older brothers, controlling for several things. This has been seen many times. In 1962 it was reported that gay men have more older siblings than other men but not until 1996 was it determined that this was due to more older brothers.

Bailey doesn't mention the strength of the effect. [3]The Wisdom of Crowds by James Surowiecki is about research that found that non-experts can do an excellent job of estimating this or that number (such as the weight of a particular cow) even when they know little about it. Their answers are excellent in the sense that the average of their answers is very accurate. Perhaps my students, who had read two-thirds of Bailey's book, could accurately estimate the strength of the effect.

I posed the question like this. Suppose that when a man has no older brothers, his chance of being gay is 2.0 %. What is his chance of being gay if he has one older brother? I gathered an estimate from every student. The median of their estimates was 8 %. The correct answer is 2.7 %.

1. <http://faculty.wcas.northwestern.edu/JMichael-Bailey/TMWQBQ.pdf>
2. [http://en.wikipedia.org/wiki/Fraternal\\_birth\\_order\\_and\\_male\\_sexual\\_orientation](http://en.wikipedia.org/wiki/Fraternal_birth_order_and_male_sexual_orientation)
3. [http://en.wikipedia.org/wiki/The\\_Wisdom\\_of\\_Crowds](http://en.wikipedia.org/wiki/The_Wisdom_of_Crowds)

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Caleb (2010-09-27 08:38:35)

Did the studies control for the mother's age at time of conception? I suspect there is a small social specialization effect, but if they didn't control for the mother's age, they might just be picking up that by definition of having an older brother, a younger

brother is conceived later. The older an egg is the more degraded its DNA, leading to a greater chance of a tuning error in sexual targeting.

Darrin Thompson (2010-09-27 09:05:13)

Or if they aren't stupid, you've managed to quantify a crowd response to narrative, which is kinda cool. Maybe PR companies beat us you to that research though...

JRF (2010-09-27 10:16:21)

It's not clear to me that this is a bad estimate, given the knowledge of the individual students.

Robin Barooah (2010-09-27 11:47:31)

What was the mean value of their estimates?

dearieme (2010-09-27 15:25:33)

In the land of the One Child policy, questions about brothers must be hard to cope with.

Anthony (2010-09-27 15:48:12)

So countries with larger families should have more male homosexuals per capita?

Seth Roberts (2010-09-27 22:12:40)

I didn't compute the mean, but it was probably more than 8. yes, countries with larger families will have more male homosexuals per capita. yes, at least one of the analyses controlled for both mom's age and dad's age.

Michael Bishop (2010-09-28 06:21:39)

Fascinating. That said, i bet their answers would have been far closer if the question had been framed differently. Imagine asking: "How much more likely, in percentage terms (i.e. 100 % equals twice as likely), is it that a boy will become a gay man if he has older brothers?"

Jlonsdale (2010-10-01 10:07:33)

It isn't clear that this is a bad estimate if you asked them in this manner - giving them 2 % instead of X %. Given the number of 2 %, the number of gay men in the other population needs to be at least 8 % in order to meet the intuition that at least 1/20 people are gay (I've heard numbers ranging from 1/20 to 1/10). They may have accidentally used this heuristic of trying to get the overall number correct while trying to answer your question.

Wyman Brantley (2010-10-04 15:07:45)

This does not seem to be a very telling result. Surowiecki does not claim that crowds are good at baseless, or nearly baseless guesses, does he? On what basis would these students have been expected to have any idea that the actual number would turn out to be 2.7 %? That example seems less like Surowiecki's go-to cases where you estimate the number of something like gumballs in a big glass jar, and more like asking a crowd for the exact sequence of cards in a deck of playing cards. This isn't "The ESP of Crowds."

Seth Roberts (2010-10-04 15:27:53)

Wyman, there are examples in Surowiecki's book where you'd think it would be impossible for the crowd to do well. But it does. I haven't seen anything where someone correctly predicts where this sort of crowd-sourcing will do well and where it won't do well. It was more informative to find out what the answer was - how well the students would do - than be sure I knew what would happen.

Tomasz (2011-02-18 09:55:21)

I wonder whether the measurement was validated. But it is interesting that someone can write an entire book about a phenomenon without an adequate measurement. Its like measuring the speed of a high-tech train with a thermometer.

## Malcolm Gladwell on Twitter (2010-09-28 04:06)

In the latest New Yorker [1]Malcolm Gladwell says Twitter and the like are less revolutionary than claimed.

A month ago a friend and I discussed Gladwell. The friend said that after [2]Steven Pinker's review of What the Dog Saw, he couldn't look at Gladwell the same way.

I said that was a silly review. Sure, Gladwell has faults, but he also has strengths. He chooses interesting research to write about and writes about it in an accessible attractive way. An example is the Korean Airlines chapter in Outliers. It had little to do with the rest of the book but it was excellent journalism. Pinker barely mentioned these strengths but did point out spelling mistakes. It is silly to judge something by dwelling on what's wrong with it. (Exhibit A: correlation does not equal causation.)

Gladwell's latest piece is one of his best. It makes four points:

1. The strong-tie/weak-tie distinction in social networks. An old idea, but worth being reminded of.
2. Strong ties were behind the civil-rights lunch counter sit-ins. The movement they helped start was long and dangerous. Strong ties helped.
3. Twitter and other social media create weak ties. It isn't clear they create strong ties. Donations based on weak ties were in several cases a few cents/person. Much less than the cost of participation in the civil-rights movement.
4. If you're going to claim something is "revolutionary", as Clay Shirky did about Twitter and the like, you should start your book with a better example than a rich guy getting his Sidekick back.

Perfectly good points, especially the last.

[3]Tyler Cowen's reaction.

1. [http://www.newyorker.com/reporting/2010/10/04/101004fa\\_fact\\_gladwell?currentPage=all](http://www.newyorker.com/reporting/2010/10/04/101004fa_fact_gladwell?currentPage=all)

2. <http://www.nytimes.com/2009/11/15/books/review/Pinker-t.html?ref=review>

3. <http://www.marginalrevolution.com/marginalrevolution/2010/09/will-social-networks-boost-social-change.html>

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thehova (2010-09-28 09:31:35)

Gladwell claimed on a popular sports show that he strongly believed that football would end in the future due to the fear of concussion related injuries. It's a major issue. But to say the sport will end is beyond ridiculous. There are other better



examples of how Gladwell doesn't take empirical evidence very seriously. It hurts his credibility. I find it difficult to take him seriously (I think that's a growing trend. His popularity is diminishing).

Seth Roberts (2010-09-28 12:39:29)

thehova, popular sports have ended. See [http://www.cracked.com/article/180\\_6-ancient-sports-too-awesome-modern-world](http://www.cracked.com/article/180_6-ancient-sports-too-awesome-modern-world) for examples. Do you have a better example?

thehova (2010-09-28 17:01:51)

That's a really interesting article. Gladwell cites boxing as a sport which witnessed a dramatic decline in popularity due to serious head injuries. He sees it as a precursor to football. But I don't think that's right. Boxing has been horribly managed. MMA, which is in many ways more violent, is better managed and extremely popular despite serious concerns about safety (indeed, it's illegal for MMA events to be held in many states). I'm sure many parents refuse to allow their kids to play football due to injury concerns. The number of parents who do that will probably increase. But when there is such a large demand for the sport, there will be players. Football teams might have to compensate players more for the risks they endure. But I find it highly unlikely the sport will disappear. Part of me really doubts that Gladwell fully believes that claim. It often seems like he tries to be more interesting than accurate.

Nathan Myers (2010-09-28 20:06:17)

Your choice of the KAL chapter is interesting. My brother, a professional pilot, says he got the story entirely wrong, and that the important change to flight deck procedures was to hire American pilots. The supposedly all-important English lessons for existing crew were just so they could talk to the new pilots.

Adam (2010-09-28 21:41:17)

I have to agree with @thehova. Gladwell has been called out too many times. Many sports, but particularly football, are also rites of passage. As such, risk of injury is a necessary component and likely adds to the allure. On the other hand, although I agree that boxing has been mismanaged, I disagree with @thehova on MMA being more violent. MMA is more bloody. Because of the different types of strikes allowed (e.g. elbows), cuts are more frequent. Also cuts to the head tend to bleed a lot, as does damage to the nose. The big difference is that an MMA fighter can close the distance and clinch (nullifying much of the force that can be generated with a strike) and the referee will not force a break to maintain striking distance. In boxing, striking distance must be maintained and striking must continue. Repeated strikes to the head by a professional fighter are going to do permanent damage and can lead to death (not unheard of in boxing, but so far not a factor in MMA w/ only 2 deaths resulting from sanctioned bouts...I suspect these numbers could get worse as MMA gains popularity). @Nathan I fly in and out of Korea. More often than not, when the Captain addresses the cabin, he has an American accent. Less frequently, I hear an Australian accent. Only once have I heard what appeared to be a Korean captain address the cabin. @Seth My problem with Gladwell's article was that it left me with the impression that he was elevating the importance of long and violent struggle and discounting the possibility that less dramatic means, that take advantage of weak bonds, could facilitate change, perhaps without so much violence.

James (2010-09-29 01:44:53)

[1]The revolution will not be published in the New Yorker points out some things he missed.

1. <http://sqbr.dreamwidth.org/293453.html>

## **The Nobel Prize: Not Helping (2010-09-28 22:20)**

Nassim Taleb [1]recently criticized the Nobel Prize in Economics:

According to Taleb, there are a number of mistaken ideas about forecasting and measuring risk, which

all contribute to events like the 2008 global crisis. The Nobel prize, he says, has given them a stamp of approval, allowing them to propagate.

It isn't just economics. As I've said before, the Nobel Prize in medicine was not given for the discovery that smoking causes lung cancer. It was not given for the discovery that lack of folate causes birth defects. Both enormously useful. It has been given for several discoveries, such as the connection between telomeres and aging, with (so far) little or no practical value.

This is no mystery. The Nobel Prize must be prestigious, therefore must honor high-prestige research. Veblen argued long ago that in academia high prestige correlates with low practical value. Just today I told a friend Veblen's idea that professors use jargon for the same reason men wear ties – to show off how useless they are. The economics research ("Harry Markowitz, William Sharpe, Robert Merton, Myron Scholes, Robert Engle, Franco Modigliani and Merton Miller") that Taleb is criticizing was high prestige. The so-far-useless biology that has received a Nobel Prize was high prestige; the highly-useful epidemiology that didn't receive the prize was low prestige.

Thanks to Dave Lull.

1. <http://www.reuters.com/article/idUSTRE68R2SK20100928>

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Vic (2010-09-29 00:55:50)

There's a difference between work that provides insight into processes of no practical relevance (perhaps the biological research that you cite) and total nonsense (the work taleb cites)

dearieme (2010-09-29 01:09:45)

Epidemiology has produced so little of value that it's a shame that the smoking result wasn't honoured. It would have meant honouring Third Reich men, though. So be it, say I.

Seth Roberts (2010-09-29 04:38:24)

"Epidemiology has produced so little of value" – compared to what? Vic, yeah, there's a difference. But are Nobel Prizes in Economics ("total nonsense") actually more harmful than the Nobel Prizes in Biology ("no practical relevance")? I don't know. The Nobel Prizes in Biology, with their emphasis on studies of mechanism, have in certain ways validated the drug-company assumption that the way to solve health problems is to give people a powerful drug. I think that's been very damaging compared to an alternative research strategy that studied lifestyle changes.

CTB (2010-09-29 07:44:35)

Warren and Marshall got the Nobel for discovering that bacteria cause ulcers...leading to a cure and not just endless treatment of symptoms...that was a good one, no?

Gunnar (2010-09-29 08:54:37)

Money is numbers on paper and in computers. The national deficit exists because the money printers (the Federal Reserve Banking system) are private entities that lend the money they printed to the USA (which is also a corporation). Just look up "debt based money creation". The whole system exists to deceive people. Did the winners tell that? No, because then the system would stop to work. Anyways, it's just days until it hits the wall, so I'm relaxed and joyfully excited :-)

James (2010-09-29 09:05:47)

The financial economists that Taleb criticizes did the most practical work of the econ Nobelists; it translated directly into new financial strategies and companies, which many would say is exactly the problem. So your criticism contradicts Taleb's.

vic (2010-09-29 12:54:40)

Fair point Seth, I agree

Seth Roberts (2010-09-30 01:15:14)

CTB, I suspect ulcers are a sign of a poorly-functioning immune system, perhaps compounded with poor nutrition. Almost everyone who has the bug that Marshall and Warren say "causes" ulcers doesn't have ulcers. So, no, that wasn't a good one. It is another example of using drugs to treat a problem caused by lifestyle.

CTB (2010-09-30 08:03:52)

I agree with you that ulcers probably have multiple factors contributing to their severity. And having a well-functioning immunesystem and good nutrition, whatever that is, is an ideal to strive for. But the reality is that if I'm acutely ill with an ulcer attack and I have those bugs, I'd go for the antibiotics in a heartbeat and be very glad that those guys made the connection. Especially if it lets me get back to work so I can pay the mortgage and put food on the table.

Seth Roberts (2010-09-30 14:01:28)

CTB, yes, antibiotics have helped people with ulcers just as you describe. But it's plausible the Nobel-Prize-winning work by Marshall and Warren has discouraged research into lifestyle causes of ulcers. A poorly-functioning immune system does more than cause ulcers. It probably increases heart disease, for example. You could say that Marshall and Warren did duct-tape science - science that failed to study fundamental causes.

CTB (2010-09-30 18:08:26)

By shining a light on the bacteria, Marshall and Warren put an end to duct-tape treatment of ulcer symptoms (with everything from acid-controllers to stomach resection surgery). They also stimulated a wave of research to figure out how this bacteria evades the immune system and causes stomach pathology. Check out this review from 2006: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1592695/?tool=pubmed> It has over 250 references describing the known factors by which this bacteria escapes detection and is able to colonize half the world's population. It's freaking complicated. But I doubt most of this work would have been done without M & W's discovery. That's why they got and deserved the prize, (not to mention that they really bucked the system along the way, bless 'em). Lifestyle research is tricky since the human population is so genetically diverse, and multiple genetic factors play a part in immune response. But let's say there is just one immune factor which is primarily responsible for keeping the bacteria in check...and that eating butter promotes optimal levels of this factor. It might also turn out that 30 % of the population carries a mutation in which butter promotes still another factor which actually makes the bacteria more virulent...but no one knows about this second factor yet. So you do your study (butter and ulcers) and get a result. And another group does a similar study and gets different result because the genetic makeup of their group relative to the second factor is different. It's just not known yet. We're still in the dark ages, in a way. Meanwhile, the best we can do is keep on doing the experiments and generating the molecular data, waiting for someone to make the next connection.

Seth Roberts (2010-09-30 18:48:08)

"We're still in the dark ages . . . the best we can do is keep . . . generating the molecular data," you write. I disagree. I don't think more molecular data will show us what lifestyle factors make a big difference. Why does half the world have h. pylori in their stomachs but only a tiny fraction have ulcers? I am sure that the tiny fraction with ulcers will have a higher than average risk of many other problems. If we figure out the lifestyle causes of ulcers, we may be able to not only lower risk of ulcers; I think the associated elevated risks (e.g., heart disease) will also come down. If you take antibiotics those other elevated risks won't come down, I'm also sure. And I wonder how likely it is if you take antibiotics to get rid of h. pylori that you will become reinfected within a year after you stop the antibiotics? It really is a duct-tape solution. Not the only one, to be sure. I don't

agree about people being so different ("the genetic makeup of their group . . . is different"). There are plenty of broad truths about how to be healthy. See any nutrition textbook. For another example, I'm quite sure everyone needs regular ingestion of bacteria to be healthy (to have a well-functioning immune system). Maybe you've heard that chimps and humans share 96 % of their genes. This implies that two randomly chosen humans must share much more than 96 % of their genes. Because two randomly-chosen humans diverged genetically much more recently than chimps and humans.

Wayne (2010-10-01 06:49:45)

First, I agree that we are rewarding the wrong research in many cases: "sexy" or "prestigious" and not necessarily fundamental. (Though in the case of *H. pylori*, I am happy because of how hard they had to fight the voodoo consensus that had preceded their research.) But the fact that humans share more than 96 % of their DNA doesn't impress me. There are how many inherited diseases that I don't have, even though I only differ from millions of sufferers by less than 4 %? (Not to mention the two other alternatives: inherited benefits, and inherited "doesn't make enough difference in function that anybody has bothered to look into it".) And what about the tens of thousands of people who suffer severe side effects from the dozens of medications I've taken in my lifetime, from which I've never suffered any of those side effects? My suspicion would be that the DNA argument is like saying that, in the grand scheme of machines, automobiles share 96 % of their designs. And sure, they share a lot of common characteristics, like they don't do well if submerged in salt water. But even though they all have fuse boxes, I wouldn't assume that the fuse box is in the same location, nor that I could replace the third fuse from the top in all cars and get the same results. I am allergic to milk, my wife is not. But she is lactose intolerant, while I am not. I've learned over the years that chemicals (including medicines) affect me much more rapidly than most people. Obviously, my neurons work like yours, but my brain is wired differently than yours, both in the sense of wiring due to learning and I would suspect how it was originally laid out. And my immune system has also learned differently from yours, and we haven't even gotten into mental attitude and health. (I've heard, and believe, that many people in mental institutions are there because of the effects of bitterness, for example.) So I would agree with CTB that there are a lot of meaningful differences within the overall human population. And I think that current medicine is in an awkward gap: lured away from general healthy principles, but not yet able to be specific enough (in terms of both the mechanisms by which medicines work and in terms of a particular person's needs/reactions) to be well-targeted. I agree with some of your observations about things like butter, but when you then justify them as being sensible in light of historical human life, I am skeptical that your vision of historic human life is accurate. And perhaps the real explanation is that it works for a subset of people who share a particular gene or two, a particular environment, etc. That's a major point of self-experimentation, isn't it: what works for others may not work for you? I'm an avid reader of your blog - learned about it from Andrew Gelman's site, I believe - and I hope that this doesn't come across as harsh.

CTB (2010-10-01 09:12:47)

"I don't think more molecular data will show us what lifestyle factors make a big difference." Transcription factors are small pieces of DNA which bind to gene promoters and can regulate the activity of multiple genes. PPAR is a group of these factors, some of which can promote insulin sensitivity by increasing uptake of glucose and fatty acids by adipose tissue (thus lowering blood sugar and bettering lipid profiles). The glitazone drugs which were developed to treat diabetes, work, in part, by activating PPAR. When this factor was discovered, investigators looked for 'natural' ligands and found that polyunsaturated fatty acids also stimulated PPAR. Saturated and monounsaturated fatty acids do not. "I don't agree about people being so different" The cytochrome P450 oxidases are a huge family of enzymes which metabolize 'foreign' compounds to make them more soluble so that they can be eliminated by the body. These enzymes are the bane of pharmaceutical companies because multiple variations of each enzyme occurs in the population, so that the population runs the gamut from slow- to fast-oxidizers in each category. Still others carry mutations that result in no oxidation. Most medicines are metabolized by these enzymes, which helps explain in part why some people need a much larger dose of drug than the next person, or why some have side-effects that others do not. In other cases the medicines will only work if the patient has the needed oxidizing enzyme to actually activate the drug, so patients are genotyped before treatment. For example, I've read that tamoxifen will not work in women who are negative for CYP2D6 activity. I agree with Wayne that the reason for self-experimentation is to find out what works for you. At the clinical level, this is what 'personalized medicine' is all about. We're just not there yet. Yes, there are broad truths...e.g., eating more fruits and vegetables seems to help...but look what happens when they give people supplements of known nutrients. Sometimes there are good results...sometimes the results are contradictory. Other times

you get things like beta-carotene actually being harmful in smokers with lung cancer, or calcium supplements without vitamin D causing increased heart attacks in women. But these harmful effects are not in all the subjects...just some...and we don't know why yet. But the effect will be because of some interaction at the molecular level...and we need to keep plugging at the research which illuminates it.

### Assorted Links (2010-09-29 14:40)

- [1]butter tea. A easy way to consume butter
- [2]teaching medical students concern for patients
- [3]Why Amish businesses do well (book). I enjoyed the first pages.
- [4]The diet to end all diets
- [5]Chinese internet slang

Thanks to Robin Barooah, Paul Sas, and Brent Pottenger.

1. [http://en.wikipedia.org/wiki/Butter\\_tea](http://en.wikipedia.org/wiki/Butter_tea)
2. <http://www.theatlantic.com/national/archive/2010/09/reprogramming-the-ethics-of-med-students/63531/>
3. <http://www.amazon.com/dp/0470442379/?tag=brazecaree-20>
4. <http://veggiesyarnsandtails.wordpress.com/2010/09/29/the-diet-to-end-all-diets/>
5. [http://www.wired.com/beyond\\_the\\_beyond/2010/09/web-semantics-popular-chinese-internet-slang-expressions-and-acronyms/](http://www.wired.com/beyond_the_beyond/2010/09/web-semantics-popular-chinese-internet-slang-expressions-and-acronyms/)

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John (2010-09-29 16:37:04)

Butter tea? I prefer a butter spoon myself.

Jake (2010-09-29 20:22:15)

I have been in Tibet and they use fermented yak butter in their tea. It is the worst smelling substance known to man. The only thing worse is the taste. However, I do put a tablespoon of coconut oil in my tea and coffee instead of eating a snack. Coconut oil kills your appetite dead.

Thomas Seay (2010-09-30 10:57:34)

That's an EASY way to consume butter? I am still trying to figure out the recipe. Here's an easier way: put thick slabs of butter on a piece of bread and eat it. If you don't eat bread, put lots of butter on your veggies. Of course, not all butter is created equally. I have found most commercial American butters to be insipid, if eaten alone. However, I could eat grass-fed raw butter with a spoon, like ice-cream. Unfortunately, it's very expensive. Butters like KerryWood, imported from Ireland are good enough and not too expensive. Anybody else here have a fav butter?

Stephen M (Ethesis) (2010-10-01 05:07:23)

"You're an idiot if you avoid anecdotal data, pure and simple. And I will not be associated with idiots," says Rip." [http://www.t-nation.com/free\\_online\\_article/most\\_recent/most\\_lifters\\_are\\_still\\_beginners](http://www.t-nation.com/free_online_article/most_recent/most_lifters_are_still_beginners)

CTB (2010-10-01 14:17:59)

The Nutrition & Metabolism Society, which advocates lowcarb diets for control of diabetes, has just published an open-access article in the journal Nutrition. They claim that the article is a rebuttal of the USDA dietary guidelines. Their website has the press release and links to the article: <http://www.nmsociety.org/>

### **New Idea About Learning Chinese (2010-09-30 19:44)**

[1]



I never considered taking a class to learn Chinese. Too boring, too time-consuming. I've tried hiring tutors and going through a textbook. Better but too close to taking a class. That didn't last.

For maybe half a year I've used [2]Anki (a flashcard program) to learn characters. This is better – at least it's lasted half a year – but I don't study it often enough.

A friend suggested labeling things in my apartment – put a card with the character for chair on a chair, for example. Another friend pointed out that there are children's books with big characters (one per page). That suggested my latest idea: Put these pages on the walls of my apartment. So whenever I look at the wall it will be a kind of test. If I don't remember the character, I can look on the underside of the card for the answer.

I'm excited about this: it might actually work, I now think. It doesn't require being still, [3]which I think reduces learning. It spaces learning (you learn in little bits throughout the day), which is surely better than massing it. It allows great amounts of repetition. And it takes advantage of natural curiosity (whenever I see Chinese – in a sign, for example – I wonder what it means) rather than requiring discipline. As far as I can tell it requires no discipline at all. If it doesn't work I'll learn something about education.

1. <http://www.flickr.com/photos/woodsbarack/5036379552/>
2. <http://ichi2.net/anki/>
3. <http://www.blog.sethroberts.net/2010/02/23/boring-boring-pleasant/>

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Matt Goff (2010-09-30 21:45:27)

This is only tangentially related, but there's a language game called "Where are your Keys?" with the goal of gaining fluency in a fun/quick way. [1]Where are your keys? website. The people behind it are focused on helping to revive endangered languages, but it seems to be adaptable towards a lot of different things (they've done a workshop or two about agile programming, for example).

1. <http://whereareyourkeys.org/>

Aaron Blaisdell (2010-09-30 21:58:41)

I hope it works for you. Taking a year-long class worked extremely well for me.

Seth Roberts (2010-09-30 22:44:44)

Aaron, that's good to know. Matt, I tried the where are your keys? ideas. They didn't work. It was too hard to learn the hand signs, for one thing. Maybe it works better in a group than when you are trying to learn with a tutor. It surely works better with experienced instructors.

G (2010-10-01 04:56:23)

Man, I tried to learn out of a book-CD but it was torture. I enjoyed parroting phrases; I found the tonality an absolute hoot, but once I got into vocab it was like eating a crate of crackers. Have you already covered speaking and speech comprehension? That would be easier surrounded by Chinese people. I don't see how I can accomplish this at home by myself. I read the previous article you linked to - the one on thinking while walking. I've always been a pacer and like you I want to get up a lot during TV programmes, even movies - I'll pause them and go on some invented errand like making a cup of tea even if I like the movie. An interesting exception is video-games. I don't know if you're a gamer at all but I've noticed that I will sit quite still until some natural break in the action; in fact, I may only think to move when I get stiff and sore. So simulated movement does as well?

elizabeth molin (2010-10-01 07:13:03)

I think I would tend to learn the meaning by the location of the card on the wall, rather than by the character shown on the card.

David (2010-10-01 07:18:30)

Have you tried the Rosetta Stone software? I've been impressed with it for other languages (I've never tried Chinese but it uses the same approach for all languages). I've also been interested in what you said about exercising while learning. There's a game-like aspect to Rosetta Stone. I'd like to try a tablet computer + Rosetta Stone + walking on a treadmill someday. David

Thomas Seay (2010-10-01 10:27:29)

I've been studying Chinese for a number of years. Your idea MIGHT work for passive recognition, but you aren't going to learn how to write the characters this way. One recommendation I would make would be to find a subject that REALLY interests you, find a simple text on the subject (in this case, in Chinese) then read short passages from it, learning the characters. I am not

sure if you already know Chinese and know pinyin. Another way to learn is to take a book that you really know extremely well and read the same book in Chinese. It used to be that people who had read the Bible all their life and knew it by heart would assist their language learning by reading the Bible in their target language. I believe Thomas Jefferson was a big proponent of this method. I am not suggesting the Bible in your case. I have a friend who speaks 10 languages well (I speak 4 by the way). He is a big fan of the Indian spiritual teacher Yogananda and know some of this latter's writings almost by heart. Whenever he studies a language, he reads a Yogananda book he knows by heart in the target language. Of course the best way to learn a language (though this lends itself better to verbal language than written) is to find a lover who is a native speaker. I have an entertaining anecdote in this regard. I knew a girl in college (let's call her Jane) who liked to learn various languages. She learned them well. Jane's secret was that she always had a boyfriend who was a native speaker of the language she was studying. One semester Jane announced that she was going to begin study of Italian. I knew then and there that her French boyfriend would soon be getting his "Pink Slip" from Jane. Sure enough, two weeks later, Olivier was out, soon to be replaced by Roberto, an Italian :)

Kurt (2010-10-01 14:45:13)

I encountered some browser extension a couple weeks ago that you configure to replace certain types/frequency of words on the web sites you're visiting with words in another language (colored, so you know, and mouse-over for translation.) I thought this was a brilliant way to at least slowly absorb new vocabulary. It was both fun and fascinating for a little while, but became a bit frustrating for me after a while (probably because I'm not trying to learn a new language right now :).) But the idea is cool. I've been thinking about how this might be paralleled 'off the grid' too, in everyday life, and your idea about the signs on the walls reminded me of it. Sounds like a good approach... just slowly surrounding yourself with these mini-tests that you can absorb. Good stuff...

stefan (2010-10-01 16:04:22)

I am an extremely obtuse language-learner. To learn a little bit requires a major - a huge - effort on my part, and my retention and understanding is minimal. I have friends who can learn languages and accents very quickly, and the difference between us is remarkable - i.e., this is not just me being 'critical' of myself. I'm interested in learning a language of course, but am daunted right at the beginning. So, I had a couple thoughts: - Focus on accent first, not words or grammar. I had a friend (able to learn languages quickly), who could fake a German accent so well - not knowing a word of German - that her German friends would say "Slow down! We can't understand you!" She would simply babble nonsense, and they thought she was speaking their language. My thought is that by learning some key elements of the accent (like, how the French 'r' is nothing like what Americans think it is), and practice \*sounding\* French (for example). Don't worry about words or syntax - just get the lilt and pace and \*feel\* of the language. My theory is that, to a certain degree, 'babbling' in an accent IS the language... I think this would be invaluable in providing a 'bucket' in the brain for the rules and words to fall in to, like it does with babies. - Speak in English but use the target languages syntax. In German the verbs are often at the end of the sentence. So practice stuff like "would you with me to the zoo and the animals feed go?" Practice the target sentence structure but ignore the vocabulary. My ear makes it \*very\* difficult to 'babble' in anything but English, and I've had a difficult time finding useful syntax rules for other languages. But perhaps there might find something useful here...

curious (2010-10-01 20:22:06)

when you say you want "to learn Chinese", what exactly do you mean by that? Do you want to be able to talk? Read (and write)? For the spoken language, the only hurdle is the tone, and you can use pinyin for your notes. Reading (and writing)... do you really want to invest that much effort? Ask yourself how much you are ready to invest.

k (2010-10-01 21:43:18)

A quick and rough estimate of the things that have helped me learn Mandarin (and by 'learn,' I mean able to speak very well, read a little, and not really write at all, though I can type pretty well using pinyin input): 1. lived in Taiwan for a few years 2. married a native speaker (and actually speak Chinese at home) 3. took classes in Taiwan for a few months to get me started, then continued learning on my own. Like you I don't like classes, but I found that they provided a boost at key moments. 4. studied full time for a year in Taiwan (about 1.5 years into learning Chinese). The classes were pretty lame, so maybe it was just



the time investment? But I clearly made a big improvement from basic ability to something like advanced intermediate. 5. (I would rate this higher, but I was already speaking fluently by this time) Supermemo for palm. I now prefer Anki. Having it on a mobile device makes it much more enjoyable and likely that you'll keep up. If you're bored with learning characters, maybe try downloading the shared deck of HSK sentences. I read an article online somewhere about sentence mining, the idea being to read materials that are mostly within your grasp and enter the individual sentences in your spaced repetition software for practice. I don't know how effective it is, but I do find it more enjoyable than most other methods of study for Chinese. 6. Reading children's books, novels, studying textbooks on my own, etc. I also enjoyed Chinesepod when it was free, but stopped using it when they made it a subscription service.

Seth Roberts (2010-10-01 22:57:46)

Kurt, that is a brilliant idea. I once heard that a thirteen year old learns a dozen words per day. Not by looking them up, by context. Which is what that browser extension supplies. I think he's referring to the Firefox extension [1]ming-a-ling. what do I want to learn? in this case, to read the Chinese I'm surrounded by. Signs, posters, and so on.

1. <https://addons.mozilla.org/en-US/firefox/addon/9635/>

## 5.10 October

### Punishment of Difference (2010-10-01 14:13)

When I was a boy, my family didn't have a TV. (Which I now make up for by watching a lot of TV.) The strangeness of this was made clear one day at school. It was second grade. The teacher wanted to talk about something on TV. "Who doesn't have a TV?" she asked the class. I raised my hand and a girl raised her hand. She didn't have a TV because it was being fixed.

So I was especially disturbed by [1]this video in which a few schoolchildren who differ from the rest of their class are blown up. Their fatal mistake is not cutting carbon emissions. The organization that made it took it down and issued [2]a lukewarm apology ("live and learn") that said nothing about ridiculing minorities. If I were teaching 10-year-olds, I think I'd show them the video, tell them how disturbing I found it, and ask them about times in their lives that they felt different from everyone else. It is a curiously teachable moment.

1. <http://motls.blogspot.com/2010/10/1010-movement-all-skeptical-kids-and.html>

2. <http://www.1010global.org/no-pressure>

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PeterW (2010-10-01 15:08:37)

They would not recognize it as discrimination. We never seem to outgrow our tendency towards discrimination; we merely recognize old forms of discrimination as outdated. Thus we move on to discriminating against new types of minorities, while congratulating ourselves for being so much more open minded than our fathers.

John S. (2010-10-01 17:40:25)

This video marks a turning point in the global warming debate. The fascists have let the mask slip.

G (2010-10-02 02:49:31)

Seth, I watched that video preparing to tell you you're overreacting but I didn't expect it to be so blatantly judgmental and coercive. I was expecting a metaphor that we will be 'blown up' by climate-change if we don't act, not summary capital punishment for unbelievers. The campaign makes it seem like there is no such thing as a good skeptic - they're all just selfish and apathetic. But I am a skeptic (as in, undecided) and I consider the ecological effects of my everyday actions out of a genuine sense of moral duty. And my main - and anytime I have an audience, loudly prosecuted - objection to consumerism, even above its shallowness, is that it is unsustainable. But because I don't believe in this particular theory I am just a slack-jawed zombie unworthy of tolerance and life!? I don't want to go to Hell - save me, Jeeesus! Give me a sign, haha. I agree with John S. - when they can put this ad out without picking up on the Holocaust-style brutal extremism, that's a watershed moment. Richard Curtis is a big-name director (whose work I happen to despise; 'Love, Actually' is like being force-fed one's bodyweight in aspartame). If he is promoting this Final Solution mentality it reflects the general mindset in some powerful circles.

Nancy Lebovitz (2010-10-02 17:02:07)

G, that ad wasn't about belief, it was about compliance.

G (2010-10-02 19:15:38)

Nancy, you're right - the ads make no attempt to persuade nor do they clearly define the antagonists as skeptics. I assumed that they were targeted against skeptics but they probably do have multiple targets in mind; I think they were deliberately painting with broad strokes. Watching the ads I just saw myself, the well-meaning skeptic, and not the uncritically indifferent whom they were also condemning.

Seth Roberts (2010-10-03 03:34:44)

I too agree with Nancy. It is about compliance. Even blind compliance, since how are schoolchildren supposed to seriously consider both sides? It makes the brainwashing described in 1984 look crude.

Nathan Myers (2010-10-03 15:24:51)

It might have shown the Bangladeshi and Pacific Islanders being flooded out of their homes by the rising sea. Of course, that will happen regardless of what children do, because we would have had to start acting on what we knew ten years ago. It might have shown one animal after another that will be extinct in thirty years because we aren't acting on it now. Or it might have shown some of the millions of people who will starve as the monsoons fail. Ten years ago one could still honestly object that the data didn't conclusively demonstrate that we were heading for disaster. Not any more.

Glen Raphael (2010-10-03 22:21:07)

Nathan, even the IPCC models project that agricultural productivity and forest growth will increase on net for the next 50 years or so due to climate change. Some places will need to shift from growing crops to growing trees, but other places will have a longer growing season. The short-to-medium-term effect is that food is going to be cheaper in the world; fewer people will starve than might otherwise had we "started acting on what we knew ten years ago" and that's not even including the cost of raising taxes or whatever you would have had us do. The simple cost of \*not warming so much\* would have been: more people die of hunger. According to satellite analysis, Bangladesh has been [1]gaining land for the last few decades, about 20 square km/year. The anecdotes about islands disappearing weren't really islands at all, they were sandbars. People who live in floodplains and marshes will still (always) have problems, but helping them is a relatively straightforward engineering problem; in the areas that \*have\* lost land they've lost it as much due to erosion and subsidence as sea level changes. The country is already building dams and other engineering projects designed to do what the Dutch do about having chosen to live near or below sea level. The data \*still\* doesn't conclusively demonstrate that we are heading for disaster. A significant subset of the data says even if warming continues, the next few degrees of warming (IPCC says 1-3 degrees; I'm rounding up) is on-net good for human life and plant life and tree life and more warming is better than less for much of the foreseeable future. 50 years of things getting better is a heck of a long time for us to improve the models, figure out whether it really is a problem at all, improve our mitigation tech, and eventually start doing something about whatever problems actually crop up in practice when and as we so choose.

1. <http://news.bbc.co.uk/2/hi/7532949.stm>

## Science Journalism Cliches (2010-10-01 17:49)

I enjoyed this [1]funny article about science-journalism cliches. Via [2]Andrew Gelman. At the moment it has 643 comments. The five posts that preceded it (none of which Andrew linked to) have 19, 7, 6, 11, and 20 comments. Correlation or causation?

Last night someone asked me if it was hard to write scientific articles. I said no. As a friend said to me about her copy-editing job at The New Yorker, a trained monkey could do it. My articles are just as formulaic as everyone else's. I hope the content isn't formulaic, but the structure is.

1. <http://www.guardian.co.uk/science/the-lay-scientist/2010/sep/24/1>

2. [http://feedproxy.google.com/~r/StatisticalModelingCausalInferenceAndSocialScience/~3/DzTzSP51DPg/this\\_is\\_a\\_link.html](http://feedproxy.google.com/~r/StatisticalModelingCausalInferenceAndSocialScience/~3/DzTzSP51DPg/this_is_a_link.html)

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G (2010-10-02 09:39:41)

How about TV science doucheumentaries? Scientist-as-sleuth, like it's *The Da Vinci Code*. So pompous, blegh. I watched a Stephen Hawking documentary a few days ago; it was an utter waste of time - full of pointless whizz-bang graphics and patronising exposition that could have been condensed into a single simple diagram. And cliché-a-go-go: "is AMAZING possibility X really possible? [30 mins of ponderous, self-important investigations] No. It is not. But this other much less amazing possibility is possible." And you know they knew this from the bloody get-go and did not have to fly over the pyramids in a helicopter to find out.

G (2010-10-02 11:46:03)

The author may have been inspired by this: [http://www.youtube.com/watch?v=6Z4b\\_KMNpfs](http://www.youtube.com/watch?v=6Z4b_KMNpfs) &feature=related :-)

## Gelatin and Sleep (2010-10-02 22:18)

I found that [1]pork belly improved my sleep. Pork belly is mainly fat, but is it as simple as that (pork fat improves sleep)? Thomas Seay brought to my attention [2]claims about gelatin by Ray Peat. One was that it improved his sleep:

For years I hadn't slept through a whole night without waking, and I was in the habit of having some juice or a little thyroid to help me go back to sleep. The first time I had several grams of [commercial] gelatin just before bedtime, I slept without interruption for about 9 hours.

Seay tried gelatin himself and found it improved his sleep. I asked him about this.

What do you do?

I take Great Lakes Unflavored Gelatin. I take about 5 or 6 tablespoons a day (2 tablespoons per meal) usually in hot water. So, that amounts to about 35-42 grams/day. You can also put it in juice or make an aspic with it. Another person I know who takes it only needs to take two tablespoons a day, just prior to sleep.

What effect has it had?

It helps me to sleep more hours uninterrupted. This did not require a build-up over weeks. It happened the first time I took it.

You sound like you've stopped taking it. How long did you take it? Why did you stop?

I have taken it off and on. (Usually I would take it one week on, one week off). I have noticed that after a few days it causes constipation FOR ME.Â Another person I know who has tried it has not noticed this effect. Presently I am experimenting with segmented sleep (getting up for an hour or two in the night and then returning to sleep), so I have stopped taking any sort of supplement, including the gelatin.Â Prior to this, I had done the gelatin for about 4 months.

1. <http://www.blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>
2. <http://raypeat.com/articles/articles/gelatin.shtml>

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Aaron Blaisdell (2010-10-03 10:09:33)

When I make bone stocks, I always add extra articular joints (e.g., chicken feet for chicken stock, beef knuckle for beef stock, etc.). Adding these dramatically increases the gelatin content of the resulting stock, which I think greatly improves its quality. Along with cod-liver oil and vitamin D3, bone stock is my go-to food when my kids have colds, though I use it all the time in my cooking.

q (2010-10-03 15:24:21)

i was thinking that cow-foot soup was probably common in china as it is in many parts of the world. i can't stand the stuff, but i see it in various places.

### **Out-of-Control Drug Companies and Their Consorts (2010-10-03 02:47)**

The increase in pediatric bipolar diagnosis, [Dr. Joseph Biederman's] lawyer said, "cannot be attributed solely to Dr. Biederman's work."

[1]This article is a long list of drug-company abuses, such as

Lilly produced a video called "The Myth of Diabetes" to sell Zyprexa, which became its all-time best-selling drug, even though evidence showed that Zyprexa could cause diabetes.

And

Pfizer paid more than 250 child psychiatrists to promote its antipsychotic, Geodon, at a time when it was approved only for adults, according to a government filing with the Pfizer settlement last year. High-prescribing doctors pocketed extra money in the form of research payments, speaking fees, gifts, meals and junkets.

[2]Pharma Gossip. Thanks to Ken Feinstein.

1. <http://www.nytimes.com/2010/10/03/business/03psych.html?hp=&pagewanted=all>
2. <http://pharmagossip.blogspot.com/>

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Alex Chernavsky (2010-10-03 11:11:21)

The pharmaceutical industry is the second-most corrupt industry in America. And *within* pharmaceuticals, psychiatric drugs are by far the most problematic category. I'm glad that the article mentions Robert Whitaker, who has been like a lone voice in the wilderness. His recent book is a brilliant, well-researched, well-documented exposé of corruption and pseudoscience in psychopharmacology. The book is called, [1]*Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*. See also his earlier book, [2]*Mad in America: Bad Science, Bad Medicine, and the Enduring Mistreatment of the Mentally Ill*. Whitaker's website is <http://www.madinamerica.com/>.

1. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452417>
2. <http://www.amazon.com/Mad-America-Medicine-Enduring-Mistreatment/dp/0465020143/>

CTB (2010-10-03 17:51:07)

I have a friend with schizophrenia who took prolixin (injection) for many years with no problems. He'd get a shot once a month or so...we'd know when he was due. Then all of a sudden prolixin became unavailable and he had to switch to Zyprexa. He's had problems ever since, including three hospitalizations. And it's so much more expensive. That's another thing these companies do: they phase out the older drugs so you can't get them even if they're working fine.

### The Seminar Rule (2010-10-03 06:23)

"The first third is for everyone, the second third is for experts, and the final third is for the lecturer." Haha! From the excellent BBC documentary [1]The Story of Maths.

1. <http://www.open2.net/storyofmaths/>

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q (2010-10-03 15:23:01)

that's an in-joke. i heard it when i was a math grad student. a variant was to split the time in fourths and have the fourth one be for no one, not even the lecturer.

### Quantified Self in National Post (2010-10-04 01:11)

The National Post, a large Canadian newspaper, has [1]a long article about quantitative self-tracking. Overall I like it. It looks at the subject in five or six ways, it focuses on examples of self-tracking rather than people generalizing about it, and, best of all, it [2]includes actual data.

I wasn't so pleased with the treatment of my work. First, the graph showing my butter data was wrongly labeled and the dividing line between before butter and during butter put in the wrong place. (These mistakes have been fixed.)Â Second, the description of my acne experiments – my dermatologist prescribed Medicines A and B, I found that only B worked – misses the point. True, I found that B worked better than A but far more interesting is that Medicine A (an antibiotic) didn't work at all. Contrary to what I believed. Antibiotics are dangerous. How many people are taking dangerous drugs with no benefit? Third, the written description of my butter research doesn't say the main point: butter improved my brain function in the sense that I did arithmetic faster. Instead it says I found butter was better than "standing on something painful". A billion people would like better-functioning brains. None of them care whether butter is better than standing on something painful.

I pointed out the last two problems to Kathryn Carlson, the author of the article. She replied that in the future she would call me to go over the accuracy of the relevant parts of the article. I had considered asking the people who made the graph to show it to me but had thought because they had [3]my graph of the same data in front of them, they couldn't go wrong.

A good lesson for me.

1. <http://curetogether.com/blog/about/what-people-are-saying/national-post/>
2. <http://news.nationalpost.com/2010/10/02/the-quantified-self-supplemental-data/>
3. <http://www.flickr.com/photos/sethroberts/4889342089/>

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Joseph Dantes (2010-10-04 01:50:33)

Those Canadians are none too clever, eh? Butter luck next time.

Joseph Dantes (2010-10-04 01:51:24)

By the way, ads by Google is showing: Gonorrhea Treatment Today 20min Test, result, Treat all Today Take home Treatment to your partner CaliforniaSTD.com

Aaron Blaisdell (2010-10-04 08:55:26)

This reaffirms my decision not to trust any secondary or tertiary source. Even textbooks often get things wrong, or at least not quite right.

Alex Chernavsky (2010-10-04 12:45:53)

"Everything you read in the newspapers is absolutely true, except for that rare story of which you happen to have first-hand knowledge." – Erwin Knoll (journalist)

Seth Roberts (2010-10-04 14:30:12)

Alex, yeah, that's certainly true and why it is NOT a big deal when a journalist makes errors like this. Because other journalists would have made similar errors.

Deborah Boyer (2010-10-05 07:50:40)

I find it odd, that we all expect news articles to be wrong, as indeed every article about me or anyone I am close to has been - yet newspapers and politcos claim that we must make sure that newspapers continue since we know we can't trust bloggers to vet news!

Nathan Myers (2010-10-05 10:44:45)

A reporter who doesn't mess up the story feels like the job has been left without any personal stamp.

### **This Year's Nobel Prize in Medicine (2010-10-04 19:40)**

I applaud it. [1]The winner developed in vitro fertilization, which has helped millions of parents. In contrast to last year's prize for telomere research, which has helped no one. Notice what in vitro fertilization is not: It is not taking a powerful poorly-tested drug for the rest of your life – the drug industry's preferred answer to all problems. It is not expensive (given the benefits). Unlike health care in general. It is not dangerous, unlike many drugs and surgeries. It is not molecular biology. It is barely science (uncovering cause and effect). If the prize were given for research like this year after year, many biologists who now dream of winning a Nobel Prize would stop dreaming. It is not a typical Nobel Prize. They waited so long to award it that the winner became demented. Above all, the prize-winning work was not mainstream medical research. The winner and his collaborator endured "an unremitting barrage of criticism", unlike almost any other medical researcher.

The award is unflattering to medical ethicists, who did a lot to try to prevent the prize-winning work.

1. <http://www.nytimes.com/2010/10/05/health/research/05nobel.html?hp>

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John (2010-10-05 16:02:29)

There's no better sign that a technological advance has been useful than the fact that it was opposed for decades by those who dedicated their lives to telling others how they ought to feel.

Vic (2010-10-05 16:18:26)

Sounds like your complaints about the past winners were heard in Stockholm

Seth Roberts (2010-10-05 23:29:42)

John, that's a good point. And it raises an interesting question: how did those medical ethicists manage to convince other people to pay them – to give them a full-time job! – to tell the rest of us how to feel? In particular, when to feel bad. Quite an achievement. Other academic jobs have at least a vague connection with improving people's lives.

milieu (2010-10-06 08:31:03)

I don't think the Noble prize should be held in such reverence any longer. It results in stupid competition amongst scientists. Nassim Taleb has rightly criticized the "Nobel" prize in economics. It is perhaps time to evaluate whether the Nobel prize should be held in such high regards due to it is clearly a subjective and flawed way of selecting. Though it does bring attention to science amongst the general public.

CTB (2010-10-06 10:14:32)

Can't say it isn't dangerous. In vitro paves the way for: Octomoms, 70-year old moms who die from cancer after being exposed to all the hormones needed to maintain pregnancy, ...eugenics. There's pluses and minuses with everything.

## How to Eat a Lot of Butter (2010-10-05 23:22)

Since I discovered that [1]butter makes my brain work better, I have been eating half a stick (60 g) per day. Usually half in the morning and half in the evening. It is hard to eat by itself but easy to eat with other foods. I've tried a dozen ways of doing this. My top three additions:

1. Pu'er tea. The most convenient. As convenient as drinking tea. Put the butter in hot tea, wait till it melts. I can eat at least 20 g of butter in one cup of tea. [2]Butter tea is common in Tibet. Thanks again to Robin Barooah.
2. Cherry tomatoes. The healthiest and fastest. Slice the tomatoes in half lengthwise, eat each half with a similar-sized piece of butter. It is like that classic Italian combination, mozzarella and tomatoes.
3. Thin-sliced roast beef. The most delicious. Wrap a piece of butter with the roast beef. However, I already eat plenty of meat, it is hard to get thin-sliced roast beef in Beijing, and it is so delicious I end up buying a lot of thin-sliced roast beef.

None of these additions affects brain function (measured by arithmetic score), as far as I can tell, although I suppose the tea wakes me up.

1. <http://www.kk.org/quantifiedself/2010/09/seth-roberts-on-arithmetic-and.php>

2. [http://en.wikipedia.org/wiki/Butter\\_tea](http://en.wikipedia.org/wiki/Butter_tea)

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Gunnar (2010-10-06 04:41:15)

I eat plenty butter, too. Only what's called "organic" in America, from cows living as free/natural as possible. The dentist that traveled the world, to find out why actually his patients had bad teeth - turned out because of wrong food: <http://www.westonaprice.org/>

Tom Moertel (2010-10-06 07:03:38)

Seth, have you tried eating more (or less) butter each day? Have you learned anything interesting about the dose response? Cheers, Tom

Cliff Styles (2010-10-06 07:57:37)

I tried the butter in tea, and did not like it, but I tried butter in coffee and loved it (I love heavy cream in coffee anyway, the butter just intensifies that). I also love a thin slice of sharp cheddar matched with a slice of cold butter. And this may amuse you: when I was a boy, I loved cold butter wrapped around a pickle...umami and butter. Haven't tried that in years.

Seth Roberts (2010-10-06 08:35:42)

Tom, not yet. Eventually.

G (2010-10-06 09:26:59)

Butter is very pleasant to eat by itself if you take miniscule bites and let it melt a little - it's not all that pleasant to eat fast in big mouthfuls. I recommend eating very buttery scrambled eggs in the morning. There's hardly such a thing as 'too' buttery scrambled eggs.



G (2010-10-06 09:28:49)

Oh yeah, I also meant to point out that Indians use butter to cook with; a practice I adopted a few years ago. Many things like butter better than veg, sunflower or olive oil. I would be interested to know whether Indians show a traceable tendency to get heart-attacks due to all the butter/ghee - somehow I doubt it.

Aaron Blaisdell (2010-10-06 09:47:35)

@G, I agree with how delicious letting a small pat of grass-fed butter melt in the mouth! Very sensual. And I've been cooking with Ghee and coconut oil exclusively for the past year or so. It's as if these fats were meant to be used for cooking.

CTB (2010-10-06 10:31:14)

Some people can't handle high lipid meals without going through a period where their blood becomes overloaded with fat, as illustrated at this web site from a clinical lab: <http://www.cdha.nshealth.ca/default.aspx?page=SubPage &centerContent.Id.0=21654 &category.Categories.1=411> Just to play it safe, no matter how you eat your fat, it might be wise to have someone draw your blood after a meal to see if your body can handle the load....but especially those who eat butter with lots of carbs.

Jolly (2010-10-06 12:35:02)

Seth: Have you tried experimenting with Ghee vs butter? Aaron: My cooking fat list is lard, tallow, coconut oil, ghee, and butter :)

sydney jane (2010-10-06 15:26:10)

I had a cholesterol problem a while ago. So, I started eating oatmeal. Only thing is I can't eat it without gobs of butter. People used to tell me I was defeating the purpose by putting butter on the oatmeal. Still, after a month or so, my cholesterol went down to about 149, the bad cholesterol went down and the good went up. I agree about not eating a lot of carbs, though, because they tend to be loaded with the bad fats. My grandparents ate lots of butter and they both lived to their 80s, with no heart problems.

Seth Roberts (2010-10-06 21:23:44)

I haven't tried Ghee. I have barely tried other brands.

Aaron Blaisdell (2010-10-07 08:11:20)

Ghee isn't a brand, per se. It is the Indian term for the type of clarified butter made and used in India.

Aaron Blaisdell (2010-10-07 08:14:18)

@CTB, I checked out the website to which you linked. Here's what it had to say: "What is lipemia? Lipemia is defined as excess lipids or fats in the blood. Lipemic serum will appear turbid or milky. What causes lipemia? Lipemia is caused by a rise in chylomicrons following a meal containing fat. How does lipemia interfere? The large particles causing lipemia will interfere with instrument methods that are based on light detection or scatter. Again, it is the responsibility of the Medical Laboratory Technologist to report any findings of lipemia so that results can be interpreted with this in mind. How can lipemia be avoided? In some cases Lipemia can be avoided simply by having the patient fast for 8 hours prior to the sample being drawn. In disease processes where the liver is unable to remove the chylomicrons from the blood, the appearance of lipemic serum may be unavoidable." So it looks to me that this is not a health problem but a measurement problem that the site is discussing. I've not come across any medical literature showing adverse health outcomes with consuming a high-fat meal. Can you provide any such references if you know of them? Thanks, Aaron

CTB (2010-10-07 08:59:50)

Aaron, I purposely used the lab website because it showed the difference between normal and fatty (lipemic) sera while remaining 'neutral.' The lab is only interested in getting samples that can be accurately tested; i.e., there is no one trying to convert you to eat a particular diet (as for instance at this site): <http://www.newveg.av.org/optimum.htm> where the doctor is trying to find converts for vegetarianism. I was trying to avoid sensationalism, while providing a verbal illustration of what

happens physiologically after a fatty meal, as well as a picture. Heart attacks happen for many reasons. Sometimes arterial plaques rupture and pieces travel in the blood until they reach an area of the heart vasculature with a smaller diameter that they can then block. Many times heart attacks occur in people without known risk factors. In many of these cases a blood clot formed somewhere in the body and then traveled to one of the coronary arteries and blocked it. It's known that high blood fat triggers increases in clotting factors. In this study, people (normals and heart patients) were fed high fat meals...and then were studied in the hours afterward: <http://www.ncbi.nlm.nih.gov/pubmed/16730815> The conclusion: "Fat-rich meals may cause procoagulant episodes, which may promote vascular complications such as myocardial infarction, transient ischemia attacks in susceptible persons." My concern is whether or not I'm a susceptible person. Studies like this one were prompted by stories of when and where cardiac events occurred. Heart attacks often occur in the hours after a large meal...ditto for attacks of angina/ischemia (chest pain). If fatty meals can raise pro-coagulant levels, maybe it's best to spread it out over the day rather than eating large amounts in one sitting. Perhaps it's like those old math problems with the bath tubs...water going in at a certain rate...water draining out at another rate. If your ability to drain the tub is compromised by age, illness, whatever, then adjust the rate by which you're filling the tub.

G (2010-10-07 10:55:28)

Ghee is what results when you melt butter and skim the surface. It is more neutral-tasting than butter so better for things that don't like to be buttery. And I think it may have a higher smoke-point. I would cook certain curries in ghee rather than butter; I would not cook an omelette in ghee rather than butter. I haven't tried ghee on nontypical things like stir-fries because I easily use up any ghee I buy on curries - I tend to the principle that there are oils best suited to different dishes and I wouldn't avoid sunflower oil where it's the best culinary option; I would just avoid eating sunflower oil meals on a daily basis. Maybe once a week, I don't expect to die of that.

Aaron Blaisdell (2010-10-07 16:47:45)

@CTB, I read the meal they fed their participants in that study to which you linked, and while it does indeed seem to contain a lot of fat, it also contains a lot of sugar (mousse au chocolate) and starch (potato dumplings, rye bread, for example). Thus, the meal was confounding multiple macronutrients and so there is no way to disentangle the effects of dietary lipids per se from the other macronutrients. I'd really like to see the diet/health medical or scientific studies move away from lumping fat and sugar in their "fast food" or "fatty food" meals experiments/epidemiologies. You should read some of the posts at hyperlipid blog (<http://high-fat-nutrition.blogspot.com/>). He presents a lot of good evidence against the notion that fat, even saturated fat contributes to atherosclerosis or MIs/strokes.

CTB (2010-10-08 08:23:19)

Aaron, Thanks for the high-fat blog link. I agree with you about the diet in the study...but most people eat a mix of fat/sugar/starch/protein, so that's where they're focused for now. Even so, that diet might be OK if the total energy consumed equals the daily energy output. For example, people/animals who are hyperthyroid convert increased amounts of sugar to fat in the liver (and dump it into the blood)...but they have reduced body stores of fat because their metabolism is causing the tissues to suck up the fat and burn it for fuel instead of storing it (and their cholesterol stays quite low). Digested protein and starch/sugar goes from the intestine to the liver after a meal, but fat goes from the intestine to lymph vessels and directly into the large veins leading to the heart...then to the lungs...then back to the heart for circulation to the whole body (including the liver). The tissues suck up what they need for storage or fuel. If there's insulin around from eating sugars, fat burning is decreased and more is stored. And in addition, sugars are converted to fats and dumped into the blood as well. But in either case, what's at issue here, for me, is how fast can you clear your blood of the fat that gets dumped into it after a meal? Here's an analogy: Near where I live, there's a flood-prone area that took a big hit two years in a row (two 'storms of the century'). Then last week, the area got hit with two back-to-back tropical storms...8-12+ inches in 48 hours. Usually the rivers rise...then crest 1-2 days later as the runoff continues to feed them. But this time, the rivers immediately receded when the rain stopped and major flooding didn't occur. It was because we've had a drought all summer, the water tables were low, and rain that fell on the dry ground was absorbed instead of running off. If you're clearing your blood of the fat load after a meal quickly enough, no problem. As you age, metabolism slows as muscle mass declines; demand for fuel is less, blah, blah. Other people have genetic factors which might subject them to added stress after a fatty meal. For example, the Framingham study showed

increased cardiac events in men with above normal hemoglobin. This usually means they have increased red blood cell counts, so their blood is more viscous (they are encouraged to donate blood often). Adding a big fat dump to already 'thickened' blood could interfere with oxygen gas diffusion from the lungs to the red cells and from the red cells to the tissues. Decreased oxygen tension...ischemia...can trigger cardiac events. In a way, it's like 'no sex' vs. 'safe sex.' One of the biggest mistakes this country ever made, IMHO, was promoting the use of margarine over butter...the other mistake was the low fat diet fad which spawned the low-fat/high carb food industry. But that doesn't mean we can go to the other extreme and eat the old no-no foods as if there were no precautions needed.

Anthony (2010-10-08 08:42:29)

"In a way, it's like 'no sex' vs. 'safe sex.'" IMAO, this isn't the best analogy. The "safe sex" idea has led to an epidemic of sexually transmitted disease, abortions, and out-of-wedlock births.

Rhonda (2010-10-08 18:57:55)

Seth - Does the butter need to be any particular kind? Will margarine work?

Seth Roberts (2010-10-08 20:45:38)

I have only used Straus Creamery Unsalted Butter. I doubt very much that margarine will work.

Gunnar (2010-10-09 03:09:37)

Margarine is something completely different and not related to butter in its essence. If you are interested in your health, avoid margarine at all cost. <http://en.wikipedia.org/wiki/Margarine>

Aaron Blaisdell (2010-10-09 09:46:26)

@CTB, I see. It seems you are suggestion that a high-fat meal can be a problem in the context of eating a SAD (Standard American Diet) which is heavily skewed towards grains (especially refined), sugar, and industrially-processed oils. I don't doubt that this type of diet may increase the problem of eating a meal with a large amount of even healthy fats as the person's system will likely already be compromised by metabolic syndrome. For those of us who follow a more ancestral diet (e.g., paleo, primal, even Weston Price) do not seem to be negatively affected by high-fat meals.

Ashish (2010-10-10 00:12:09)

> I would be interested to know whether Indians show a traceable tendency to > get heart-attacks due to all the butter/ghee - somehow I doubt it. Far be it from me to talk anyone here out of your daily butter-stick, but let me assure you that heart disease is widespread among middle-class Indians. In fact, it's pretty much the rule. A quick google search tells me that India, with a fifth of the world's population, accounts for more than half of the world's heart disease. Pretty impressive for a poor country where many people don't get enough to eat (let alone "excess" fat) and have a hundred other life threatening diseases to worry about.

autilicious (2010-10-13 14:52:24)

Why are we all trying to eat sticks of butter?

Jody W (2011-10-05 17:35:10)

Heated butter provides the same benefit as chilled butter, I assume?

## Research Fraud in China (2010-10-06 20:38)

[1]From the New York Times:

Last December, a British journal that specializes in crystal formations announced that it was withdrawing

more than 70 papers by Chinese authors whose research was of questionable originality or rigor. . . .  
“Even fake papers count because nobody actually reads them,” said Mr. Fang, who is more widely known by his pen name, Fang Zhouzi, and whose Web site, [2]New Threads, has exposed more than 900 instances of fakery, some involving university presidents and nationally lionized researchers.

Recently a Tsinghua colleague asked me to fix the English in his paper. Most paragraphs required a few changes every sentence but here and there were whole paragraphs with no mistakes. Presumably he copied them from somewhere else. The material in them was boring – it was like copying from the phone book – so it was hard to care (he wasn’t taking credit for anyone else’s ideas) but I wonder if he realized how obvious it was. I don’t mean this is typical. I have looked at several other papers by Chinese authors and found no patches of perfect English.

The article begins with a false claim by a Chinese doctor – and of course these are truly damaging. In my experience, false claims by American doctors are common. An example is my surgeon recommending an operation that, she said, evidence showed would benefit me. [3]There was no such evidence. One value of self-experimentation is that you can find out if a medicine works, rather than take your doctor’s word for it. I became impressed with self-experimentation when it showed me that an acne medicine (tetracycline, an antibiotic) my dermatologist had prescribed didn’t work. Not at all. He didn’t express any doubts when he prescribed it. Call it forensic DNA testing (e.g., [4]The Innocence Project) for the rest of us.

Perhaps the Chinese people, faced with even more false claims than Americans, can benefit even more from self-experimentation.

Thanks to Tim Beneke.

1. <http://www.nytimes.com/2010/10/07/world/asia/07fraud.html?pagewanted=all>
2. <http://www.xys.org/>
3. <http://www.blog.sethroberts.net/2008/09/13/the-case-of-the-missing-evidence/>
4. <http://www.innocenceproject.org/>

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Gunnar (2010-10-07 04:38:36)

Since people in the west are mostly fed lies, too, I doubt the Chinese can be faced with more false claims. It’s just that you are probably not yet aware of how bad it really is. Even though you are more aware than regular people. Here is just one resource to show how bad it is, don’t fall off your chair: <http://www.wanttoknow.info/> Don’t despair. It’s getting better already.

Anonymous (2010-10-07 05:42:35)

I’m embarrassed to say it, but in the Computer Science field, I’ve started skipping papers I find in online searches if all of the authors have Chinese names. It’s sad, but so many papers that come out of China seem to simply restate the obvious, or combine two techniques in an unoriginal manner, without any real purpose or benefit. It’s as if every undergraduate had to be published four times before they graduated.

Elizabeth Molin (2010-10-07 09:22:30)

Tangentially related: <http://www.boingboing.net/2010/10/07/most-autism-treatmen.html>

Thomas Seay (2010-10-07 09:49:05)

Shouldn't we distinguish between false claims that are intentionally perpetrated and ones that are not? A doctor may pass on a meme or act on it, because that is what he was taught and he is too busy, too lazy or lacks the aptitude to research the issue in question. Of course, nowadays that meme would issue directly or indirectly from pharmaceutical companies or maybe received dogma from med school. Then there are people who knowingly perpetrate lies for personal gain. Perhaps you will argue that no matter the intention or reason, the consequences are the same. That may be true. In any case, it leaves us with the distressing realization that there is very little information, even from so-called scientific sources, that we can count on as true. We are truly on our own, in many respects.

nile (2010-10-07 10:25:54)

Sorry Gunner, any website that promotes 911 "truthers" has no credibility.

Thomas Seay (2010-10-07 10:49:44)

Nile, I started to write something like that, but that's not right. Even if 90 percent of the web site is "wrong" (and I'm not saying that's the case here), it doesn't mean that we should conclude that it is entirely wrong. If you follow the link given for the BBC story about the US military using the Internet as a propaganda tool, then I think you will agree that that is something to be concerned with. Also, I must admit that until I read some of the posts up here, I put anybody who challenged Global Warming in the same boat as you (and for that matter, me) put 9/11 truthers. That is to say that I thought they were Right-Wing Nuts with the IQ and sophistication of Sarah Palin. Now I am very skeptical of the 9/11 stuff, but the truth is I haven't really carried out any in-depth investigation of it. Have you? (Maybe you have)

John (2010-10-07 20:15:30)

Does anyone have any information about what happens to these researchers once they're caught further humiliating China's already disreputable academic system? I mean, it seems the State is in the habit of severely punishing and even executing Party members whose actions vis-a-vis, say, tainted milk or toxic childrens' toys. While clearly there is state impetus to up China's academic output in foreign journals, what happens when it comes out that these guys are making China look bad? Anybody know?

Seth Roberts (2010-10-08 06:05:51)

John, my impression is that little happens to them. I haven't looked into it. After a Tsinghua professor was accused of plagiarizing his doctoral dissertation, so far Tsinghua has done nothing.

Gunnar (2010-10-08 15:07:21)

Well, this year I have investigated plenty topics I had formerly believed to be absurd. And I found out that we are constantly lied to. I also found out that most people don't think for themselves, they mostly use what people they believe to be trustworthy tell them and build that into their mind structure. If you take the 9/11 topic alone and watch pictures and original TV footage with an open mind, you can see for yourself that what the government said cannot be true. Well, OK, not everybody can. The stuff on wanttoknow.info is real, but it's too overwhelming for most so they falsely conclude it to be wrong. The insanity is the reality and that's tough! But don't despair, as I said, it's getting better already. Here's a usable primer on the UFO deception: <http://www.thedaybeforedisclosure.com> Just part 3 of it is unsound. Be well.

## **Dairy Consumption and Health (2010-10-08 05:54)**

Two studies of the effect of dairy consumption on health have recently appeared. Both suggest it is healthy. [1]One of them- a prospective study where about 1500 people were followed for 16 years - found no association of dairy

intake with overall mortality but did find a protective effect of full-fat dairy against heart disease. The study considered lots of possibilities and the authors write " it is important to take into account the large number of comparisons considered in this study and thus we cannot rule out the possibility that the protective association between full-fat dairy intake and cardiovascular mortality was due to chance."

I mentioned this study [2]earlier. It gains more credence because of the [3]other study, which is a meta-analysis. The second study found protective effects of dairy products on several outcomes, including overall mortality:

Meta-analyses suggest a reduction in risk in the subjects with the highest dairy consumption relative to those with the lowest intake: 0.87 (0.77, 0.98) for all-cause deaths, 0.92 (0.80, 0.99) for ischaemic heart disease, 0.79 (0.68, 0.91) for stroke and 0.85 (0.75, 0.96) for incident diabetes.

This is good news for me since I eat yogurt and butter every day.

Thanks to Peter Spero.

1. <http://www.nature.com/ejcn/journal/v64/n6/abs/ejcn201045a.html>
2. <http://www.blog.sethroberts.net/2010/06/02/butterfat-good/>
3. <http://www.springerlink.com/content/k2475344067821um/fulltext.html>

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Thomas Seay (2010-10-08 11:14:14)

Strangely enough, butter and cream are the only two dairy items that don't cause me some discomfort. It must be the higher fat content. Even yogurt/kefir, if I eat more than just a very small portion (and I mean a couple of tablespoons) has this effect on me. Those touting raw dairy products claim that these don't cause similar lactose intolerance as pasteurized products. That \*MAY\* be true for some people but not for me. Anyway, like I said, I am able to digest butter just fine and have plenty of other sources of good saturated fats. Ditto for probiotics. In general I eat mostly saturated fats. I do sometimes use olive oil and macadamia nut oil for cooking, as these are primarily monounsaturated fats.

Alex Chernavsky (2010-10-08 13:52:19)

I once went to a lecture by a nutritionist who extolled the virtues of this book: [1]*The No-Dairy Breast Cancer Prevention Program: How One Scientist's Discovery Helped Her Defeat Her Cancer*. The author, who is a prominent geologist in Britain, claims that dairy products contain growth factors that stimulate cancer growth. I never read the book, but it sounded interesting at the time I attended the lecture a few years ago.

1. <http://www.amazon.com/No-Dairy-Breast-Cancer-Prevention-Program/dp/0312291671>

Hap (2010-10-08 13:59:23)

Andronico's on Shattuck Ave. in No. Berkeley now carries raw milk and raw cream.

Sifter (2010-10-09 19:14:01)

Richard Cohen takes a dramatically different position, [www.no-milk.com](http://www.no-milk.com) He cites study after study implicating dairy in cancer, heart disease, degenerative diseases, etc. The 'milk letter' by a physician at the top of his site is a bit long, but proposes that dairy can be the cause of everything from bovine leukemia in humans to arthritis, allergies and aneurisms. I'd be curious to see how the info and references with these two studies lines up above with the referenced material on [www.nomilk.com](http://www.nomilk.com)

Hal (2010-10-10 16:39:53)

For every nutritional belief on the net there is an equal and opposite belief to be found - The Third Law of Nutrition

G (2010-10-12 06:51:47)

There was a guy in the UK who ate nothing but mild cheddar cheese and had no major complications, just bouts of tiredness. He started this diet (due to food-phobia) as a toddler and ended it aged 29, a strapping physically active guy. <http://thedailyg.wordpress.com/2010/08/27/are-nutritionists-phonies/>

### **Chinese Text-Message Censorship (2010-10-09 04:06)**

An American friend wondered about Chinese reaction to Liu Xiaobo winning the Nobel Peace Prize. So I sent a text message to four Chinese friends: "Did u know chinese dissident won nobel peace prize?"

Six hours later I hadn't received any replies. I phoned one of them. She hadn't received my message. I saw it hadn't gone through: "Unable to send message". I tried again. Failed again. Then I tried to send "did u know chinese dissident won prize?" Success. I tried the earlier message, with "nobel peace prize". Fail. Tried the shorter message. Success.

Messages almost never fail, so it was clearly censorship. One of my friends said the same about messages in Chinese: "We can't send email or text messages" about it. She had heard about the prize from her classmates. She didn't know how they had learned about it. Another Chinese friend read it on a website. Later it was gone.

I thought of the boy who cried wolf. One day there was a wolf. But no one believed him.

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thehova (2010-10-09 04:32:31)

I've always wondered about the relationship of your blog with censorship (do you have trouble accessing your site, do you go through a 3rd party, do you feel hesitant about blogging on certain subjects in fear of obstruction, is it all overblown).

Seth Roberts (2010-10-09 06:31:36)

No I don't have trouble accessing this site, although I would if it were hosted by blogspot. I use a VPN to get to other people's blogs in some cases. I use a VPN if I want to use Flickr or YouTube. I don't worry about being censored. I can get any site, but it is hard to watch videos. They come through so slowly.

thehova (2010-10-11 23:50:23)

Thanks for the response. Although I'm for open, transparent societies, I certainly have sympathy for Chinese government officials who feel cautious about enacting such liberalizations too quickly. It's too easy for Americans to criticize such policies thousands of miles away without being fully knowledgeable about the situation.

Willy (2010-10-12 06:51:49)

Have you tried sending the message in an image if both phones are capable? or using simple scrambling like writing backwards? Just curious. Anyway, I don't think it is good to draw attention.

### **Strong Light and Cancer (2010-10-10 07:58)**

From an excellent article about light pollution (not online) by David Owen in the 20 Aug 2007 issue of The New Yorker:

Richard Stevens, a cancer epidemiologist at the University of Connecticut Health Center, in Farmington, has suggested a link between cancer and the "circadian disruption" of hormones caused by artificial lighting. Early in his career, Stevens was one of many researchers struck by the markedly high incidence of breast cancer among women in the industrial world, in comparison with those in developing countries, and he at first supported the most common early hypothesis, which was that the cause must be dietary. Yet repeated studies found no clear link to food. In the early eighties, Stevens told me recently, "I literally woke up in the middle of the night – there was a street lamp outside the window, and it was so bright that I could almost read in my bedroom – and I thought, Could it be that? A few years later, he persuaded the [directors] of the Nurses' Health Study . . . to add questions about nighttime employment, and [1]the study subsequently revealed a strong association between working the night shift and an increased risk of breast cancer. [The researchers] wrote, "We hypothesize that the potential primary culprit for this observed association is the lack of melatonin, a cancer-protective agent whose production is severely diminished in people exposed to light at night."

Exposure to strong light at night reduces the amplitude of your circadian rhythms. That causes a thousand changes. To decide that one of them ("lack of melatonin") is the one that matters is highly premature. If reducing circadian amplitude increases cancer, it follows that getting more light during the day – which surely increases circadian amplitude – will reduce cancer.

The article also says:

Growing numbers of us pass most of our waking hours "in a box, looking at a box," as Dave Crawford put it . . . Fewer and fewer of us spend much time outside at all, except in automobiles.

I have measured the light inside cars (front seats) several times and found it is quite strong (you are close to a big window). If the article is arguing that night light is bad and causes cancer, I am unconvinced. Night light exposure and daylight exposure are confounded – people who work night shifts get more night light and less daylight.

The Nurses Study paper: E Schernhammer, K Schulmeister. Light at night and cancer risk. Photochemistry and Photobiology, 2004, Vol 79, Iss 4, pp 316-318.

1. <http://www.ncbi.nlm.nih.gov/pubmed/15137506>



Nate Rosenberg (2010-10-10 12:43:46)

Seth, The article can be found online here: [http://www.newyorker.com/reporting/2007/08/20/070820fa\\_fact\\_owen?currentPage=all](http://www.newyorker.com/reporting/2007/08/20/070820fa_fact_owen?currentPage=all)

Eric Arias (2010-10-10 17:40:04)

People who work night shift are less likely to get much Vitamin D from sun exposure during the day as well.

pond (2010-10-11 04:47:14)

Studying night workers is looking at people who get light during the night and presumably sleep, presumably in darkened rooms, during the day. The study also is only looking at one kind of cancer. The conclusions and tentative hypotheses of any study need to be restricted and as narrow as the study itself.

Nansen (2010-10-13 14:29:01)

for what it's worth, this study (full-text online) seems to show that simulated chronic jet lag increases liver cancer in rats: "Circadian disruption accelerates liver carcinogenesis in mice", Mutation Research/Genetic Toxicology and Environmental Mutagenesis, Volume 680, Issues 1-2, November-December 2009, Pages 95-105

Andrew Durham (2012-02-18 21:29:27)

Hi, Seth, This is my first post. Thanks for your lively discussions. You wrote: "If reducing circadian amplitude increases cancer, it follows that getting more light during the day — which surely increases circadian amplitude — will reduce cancer." I disagree. Getting more light during the day cannot solve a problem caused by too much light at night, or even significantly mitigate it. From the New Yorker article: "...melatonin...production is severely diminished in people exposed to light at night." "Severely" is right. We are diurnal creatures. Even a tiny amount of light at night interrupts the pineal gland's secretion of melatonin. Melatonin is the main hormonal cause of sleep, dreams, loss of appetite loss during sleep, etc. It is a huge factor in circadian amplitude: restoring the waking half of it by a couple percentage points does not compare to continuing to lose tens of points on the sleeping half. The study of melatonin and its primary role in sleep and rest goes back decades. There is nothing premature about it. Here is the website of a long-time self-experimenter whose rigorous elimination of nightlight helped him with his particular illness, Ehlers-Danlos Syndrome, a collagen disorder: [http://photoperiodeffect.com/diabetes\\_hypertension\\_and\\_other\\_chronic\\_illnesses/ehlers\\_danlos\\_syndrome\\_chronobiology\\_and\\_the\\_photoperiod.html](http://photoperiodeffect.com/diabetes_hypertension_and_other_chronic_illnesses/ehlers_danlos_syndrome_chronobiology_and_the_photoperiod.html)

## Where Does Oil Come From? (2010-10-10 14:10)

This [1]fascinating article describes two ideas about oil production that were new to me: 1. It is made by microbes a long way down inside the Earth. 2. It is made by nuclear reactions going on in the middle of the earth.

The first idea came from a Cornell geologist named Thomas Gold. According to the article, "some geologists were so incensed by Gold's ideas they petitioned to have the government remove all mention of it from the nation's libraries." That is so strange (and no source cited) you might think the whole article is made-up but Gold explained his ideas [2]here (short) and [3]here (long).

Thanks to Carl Willat.

1. [http://www.americanthinker.com/2010/10/sustainable\\_oil\\_production.html](http://www.americanthinker.com/2010/10/sustainable_oil_production.html)

2. <http://www.ncbi.nlm.nih.gov/pmc/articles/instance/49434/>

3. [http://books.google.com/books?id=PEyYSU06hgYC&dq=gold+deep+hot+biosphere&printsec=frontcover&source=bn&hl=en&ei=VbSjTIfIFojSsAPvyej6Bg&sa=X&oi=book\\_result&ct=result&resnum=4&ved=0CCKQ6AEwAw#v=onepage&q&f=false](http://books.google.com/books?id=PEyYSU06hgYC&dq=gold+deep+hot+biosphere&printsec=frontcover&source=bn&hl=en&ei=VbSjTIfIFojSsAPvyej6Bg&sa=X&oi=book_result&ct=result&resnum=4&ved=0CCKQ6AEwAw#v=onepage&q&f=false)

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Alrenous (2010-10-10 15:17:18)

See something wrong. Present the arguments that show it's wrong, or get angry and censorious? All true scientists know which to pick. More seriously, even if oil is generated continuously, by geology or biology, there's still a limited supply. We'll still effectively run out if it is generated slower than some threshold - say 10 % of demand at current prices, just for the sake of argument. Above that the economy can adjust with higher prices, below that cars, loud lawnmowers and so on effectively disappear.

marmolillo (2010-10-11 02:24:16)

There are a few theories about oil treated like heretic science. Most famous: [http://en.wikipedia.org/wiki/Abiogenic\\_petroleum\\_origin](http://en.wikipedia.org/wiki/Abiogenic_petroleum_origin) Communist science is a fascinating study area, most of their discoveries are not accepted by mainstream science unless they have clear and practical applications. It is crazy a theory about oil is quite reasonable in Russia's eyes and completely dismissed by USA & Europe scientific society. I have a friend who studied in psychology in communist Romania and told me their studies are not accepted in western Europe because they learn "the Russian psychology" who is somehow not accepted as valid.

pond (2010-10-11 04:45:08)

Abiotic oil is fairly well documented. However, it is not the primary source of oil – the vast majority of oil discovered and extracted comes from shallow basins that were filled in, sunk, and pressurized. Your post title assumes that oil has one unique source of origin. This is beginning from unproven premises. Oil can have more than one source. It does not seem so far that abiotic oil is going to help us go on heating up the planet, either – not enough of it.

Robbo (2010-10-11 12:48:55)

There is also the "Russian-Ukrainian theory of deep, abiotic petroleum origins" - I wonder if Gold was aware of that ? I would have thought it relatively easy to test the fossil-origin hypothesis, by measuring the levels of life elements such as K, P, N in crude oil, and comparing with levels in vegetation, and between oil samples from different locations. It is also worth remembering that when astronomers find evidence of methane on Titan, for example, they don't conclude that Titan used to be covered with forests. So why could not methane deposits on Earth have the same origin as those on Titan ?

G (2010-10-12 06:46:36)

Why would the geologists be so angry about it?

Alex Chernavsky (2010-10-12 11:30:23)

I imagine that geologists get angry for much the same reason that psychiatrists get [1]livid if you start to question the usefulness of psychiatric drugs – it challenges their worldview and throws doubt on many of the important decisions they've made in their professional life.

1. <http://www.psychologytoday.com/blog/mad-in-america/201010/samhsa-the-alternatives-conference-and-the-story-opportunity-lost>

## How to Lie with Meta-Analysis (2010-10-11 17:35)

Michael Constans drew my attention to [1]a Consumer Reports article about spinal surgery. According to the article, a popular type of spinal surgery called vertebroplasty (involving cementing vertebrae together) doesn't work and should be stopped:

Despite the popularity of the procedure, the [2]American Academy of Orthopedic Surgeons has just released a [3]guideline [actually a meta-analysis of available data] saying it doesn't work, and shouldn't be

used.

They reviewed all the literature about the procedure, and found two good-quality studies (randomized controlled trials) that show vertebroplasty works no better than a fake (placebo) procedure. There were no clinically significant differences in pain or disability, they say.

No significant difference means it "doesn't work"? At best, it's absence of evidence. And it's not even that because we don't know what the rest of the research suggests. The meta-analysis might have ignored thirty studies; it doesn't say how many studies were ignored. Nor does it say what "placebo" means. Patients are interested in pain relief. Whether the pain relief is "all in their head" or whatever hardly matters. From a patient's view, and a clinician's view, a better comparison is a group that gets another plausible treatment or no treatment. The meta-analysis reports one study that compared vertebroplasty to "conservative" treatment, which makes more sense.

So how come vertebroplasty has been used so often? Other experts have recommended the treatment in the past, including the United Kingdom's [4]National Institute for Health and Clinical Excellence, which said most people got some pain relief from the procedure.

This suggests that ignoring of evidence and poor choice of comparison group made a difference.

In this case, it probably comes down to what you mean by significant pain relief. The US surgeons set a strict definition – they said a difference in pain relief of less than 2 points on a 10-point scale was not meaningful for patients. Smaller differences in pain relief were recorded in the studies, but, say the surgeons, they were not big enough to make a real difference.

I think patients would prefer to decide for themselves what degree of pain relief is meaningful.

The surgeons say the evidence against vertebroplasty is strong, and they don't expect future studies to overturn their recommendations.

Haha! Two studies with inferior comparison groups that failed to find a difference – and ignoring an unknown number of studies and arbitrarily raising the bar – adds up "strong evidence against"!

Still the Guideline and Evidence Report is useful. It reviews a range of treatments, provides citations (so you can look much further), and isn't wedded to the placebo-comparison group. It includes studies with other comparison groups; the article just doesn't mention them.

And I completely agree with the article's conclusion:

If you're considering any type of surgery, ask your surgeon to show you data about how likely it is to solve your problem.

And [5]don't take your surgeon's word for it that such data exists.

1. <http://blogs.consumerreports.org/health/2010/10/vertebroplasty-popular-spinal-surgery-doesnt-work-say-surgeons-treating-compression-fractures.html>

2. <http://www.aaos.org/>
3. <http://www.aaos.org/Research/guidelines/SCFguideline.pdf>
4. <http://www.nice.org.uk/guidance/IPG12>
5. <http://www.blog.sethroberts.net/2008/09/13/the-case-of-the-missing-evidence/>

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Jake (2010-10-12 03:56:08)

Here are the results of my survey of people I know that have had the vertebrae fusion surgery. It has not relieved pain for anyone but did mean 6 months of additional suffering recovering from the surgery. I will never have such surgery. I will go the back muscle strengthening route instead.

Alex Chernavsky (2010-10-12 04:30:55)

When a medical trade group issues guidelines that run contrary to their own financial interests, my inclination is to take them seriously.

Jim Breed (2010-10-12 08:42:07)

I had back pain so bad I could barely walk. I got Healing Back Pain by Dr. Robert Sarno. I read it. Pain went away. I gave it to my Brother. He was going to have surgery. After he read it, he feels so good, he is not having surgery. I was at a motorcycle rally in 2009. I met a guy from Texas who was miserable with back pain. I told him about Dr. Sarno. I ran into him again in 2010. He was raving about how the book worked. Look, it may not be for you, but I know how my back feels and I know how it helped people who were going to get surgery and then felt good enough that it was no longer an option.

Gunnar (2010-10-12 10:23:06)

Don't ask a surgeon if or why you would need surgery.

Bruce G Charlton (2010-10-14 11:06:03)

Often, perhaps usually, a treatment will make some people better, do nothing for others, and make some people worse. When a treatment makes about as many people worse as it makes better, then meta-analysts say it doesn't work. But often it *\*does\** work - for *\*some\** people. Indeed, it might work very well indeed for them. The other people - for whom it makes no difference, or makes work - just need to stop using it - then everyone benefits. (It is just a matter of using patient response as a feedback loop.) Is that really so difficult to understand? - yet I can never get this point across to bio-statisticians/ epidemiologists, meta-analysts and the like...

TOM ATKINS (2011-07-14 03:04:51)

MY WIFE, CLARA, HAD UPPER AND LOWER BACK PAIN THAT WAS UNBEARABLE EVEN WITH STRONG PAIN MEDICATION.....SHE HAD SURGERY FOR A VERTEBROPLASTY PROCEDURE IN 4 PLACES AND HER PAIN VANISHED OVERNIGHT.....SHE UNDERSTANDS THAT HER SPINE WILL NEVER BE AS GOOD AS IT WAS BEFORE HER SPINAL FRACTURE AND SURGERY BUT SHE IS WITHOUT THAT UNBEARABLE PAIN.....IN HER CASE WE AGREE THAT THE PROCEDURE WORKED FOR HER.....

## Chinese Reaction to Liu Xiaobo's Nobel Prize (2010-10-12 05:45)

I asked several Tsinghua students what they thought about Liu Xiaobo, the imprisoned Chinese dissident, winning the Nobel Peace Prize. There was a wide range of answers:

1. "It's a sensitive subject," said one student. And said no more.

2. "The Nobel Prize always seems to involve China," said another student. Maybe she meant the Peace Prize in 1989 to the Dalai Lama and the more recent Literature prize to Gao Xingjian, but I'm not sure. Politely changing the subject.
3. "I don't know much about what he stands for," said another student (a freshman).
4. "Now is not the right time for his ideas. They would interfere with economic progress," said a student who is a member of the Communist Party.
5. "Many people say because the European economy is bad, they gave the prize to someone who will never collect the money [because he's imprisoned]," said another student. She added that receiving the prize will be bad for Liu. Because it was "a great shame for China" (meaning the government), they will increase his prison sentence.

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G (2010-10-12 06:42:59)

If they want to stick to a centrally-planned authoritarian system they might try letting people discuss, critique and have some input into decision-making without introducing democratic elections. Most workplaces are dictatorships but the good ones have a light touch and consult staff at all levels. It doesn't lead to disorder and revolution; it increases productivity and job-satisfaction. But people who are authoritarian, I guess, prefer to objectify and control others. It's not necessarily rational or self-serving.

Genius (2010-10-12 14:10:37)

Thanks for posting this. I know, living in Israel, that the word on the street / local reality is often so different from what's reported abroad / foreign perceptions as to be unrecognizable, and that people just don't have a clear conception at all of what Israelis think about anything. So it's pretty interesting to see a sampling/snapshot of Chinese opinions.

NNM (2010-10-12 15:49:32)

Seth, did you ask each of them privately for their opinions, or in front of a group?

Alrenous (2010-10-12 16:57:28)

"It's not necessarily rational or self-serving. " It's very rational if they value control more than wealth-from-productivity. Less rational in that it looks fear-dominated to me. It's not, "Wow, telling people what to do is fun! Dance, minions, dance!" It's more, "Oh crap if they don't do what I tell them WE'RE ALL GOING TO DIE." Or; the Chinese don't come down hard on dissidents because they're cruel jackasses. They come down hard on dissidents because they're terrified of what will happen if they don't. (Rightly or mistakenly.) The holders of fear-dominated values tend to spend all their time warding off fearful situations, at the expense of looking for actual positive situations, and thus get stuck at suck no matter how skilled or powerful they are. But it's still the rational decision if the holder doesn't know any better.

Gunnar (2010-10-13 06:05:20)

To add to Alrenous' post - instead of "anti war" one acts "pro peace" for example for positive outcome. Even if it does not seem important at first sight, it makes a world of a difference, or better yet, a different world.

ali (2010-10-19 11:40:11)

Rev. Terry Jones [http://news.yahoo.com/s/ap/20100907/ap\\_on\\_re\\_us/quran\\_burning\\_deserve\\_the\\_peace\\_nobel\\_prize\\_more\\_because\\_he\\_gave\\_up\\_his\\_right\\_in\\_order\\_to\\_maintain\\_peace](http://news.yahoo.com/s/ap/20100907/ap_on_re_us/quran_burning_deserve_the_peace_nobel_prize_more_because_he_gave_up_his_right_in_order_to_maintain_peace) !

## The Contribution of John Ioannidis (2010-10-13 05:08)

From [1]an excellent Atlantic article about John Ioannidis, who has published several papers saying that medical research is far less reliable than you might think:

A different oak tree at the site provides visitors with a chance to try their own hands at extracting a prophecy. "I [bring] all the researchers who visit me here, and almost every single one of them asks the tree the same question," Ioannidis tells me . . . "Will my research grant be approved?"

A good point. I'd say his main contribution, based on this article, is pointing out the low rate of repeatability of major medical findings. Until someone actually calculated that rate, it was hard to know what it was, unless you had inside experience. The rate turned out to be lower than a naive person might think. It was not lower than an insider might think, which explains lack of disagreement:

David Gorski . . . noted in his prominent medical blog that when he presented Ioannidis's paper on [lack of repeatability of] highly cited research at a professional meeting, "not a single one of my surgical colleagues was the least bit surprised or disturbed by its findings."

I also like the way Ioannidis has emphasized the funding pressure that researchers face, as in that story about the oak tree. Obviously it translates into pressure to get positive results, which translates into overstatement.

I also think his critique of medical research has room for improvement:

1. Black/white thinking. He talks in terms of right and wrong. ("We could solve much of the wrongness problem, Ioannidis says, if the world simply stopped expecting scientists to be right. That's because being wrong in science is fine.") This is misleading. There is signal in all that medical research he criticizes; it's just not as strong a signal as the researchers claimed. In other words the research he says is "wrong" has value. He's doing the same thing as all those meta-analyses that ignore all research that isn't of "high quality".

2. Nihilism (which is a type of black/white thinking). For example,

How should we choose among these dueling, high-profile nutritional findings? Ioannidis suggests a simple approach: ignore them all.

I've paid a lot of attention to health-related research and benefited greatly. Many of the treatments I've studied through self-experimentation were based on health-related research. An example is omega-3. There is plenty of research suggesting its value and this encouraged me to try it. Likewise, there is plenty of evidence supporting the value of fermented foods. That evidence and many other studies (e.g., of hormesis) paint a large consistent picture.

3. Bias isn't the only problem, but, in this article, he talks as if it is. Bias is a relatively minor problem: you can allow for it. Other problems you can't allow for. One is the Veblenian tendency to show off. Thus big labs are better

than small ones, regardless of which would make more progress. Big studies better than small, expensive equipment better than cheap, etc. And, above all, useless is better than useful. The other is a fundamental misunderstanding about what causes disease and how to fix it. A large fraction of health research money goes to researchers who think that studying this or that biochemical pathway or genetic mechanism will make a difference – for a disease that has an environmental cause. They are simply looking in the wrong place. I think the reason is at least partly Veblenian: To study genes is more "scientific" (= high-tech = expensive) than studying environments.

Thanks to Gary Wolf.

1. <http://www.theatlantic.com/magazine/archive/2010/11/lies-damned-lies-and-medical-science/8269/2/>

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Alex Chernavsky (2010-10-14 07:15:45)

I haven't read the article about Ionnidis, but your blog post reminds me of this excellent paper on the placebo effect: Roberts, Alan H., Kewman, Donald G., Mercier, Lisa, Hovell, Mel (1993). "[1]The power of nonspecific effects in healing: Implications for psychosocial and biological treatments." *Clinical Psychology Review* 13(5): 375-391. **Abstract:**

We evaluate the hypothesis that the power of nonspecific effects may account for as much as two thirds of successful treatment outcomes when both the healer and the patient believe in the efficacy of a treatment. Five medical and surgical treatments, once considered to be efficacious by their proponents but no longer considered effective based upon later controlled trials, were selected according to strict inclusion criteria. A search of the English literature was conducted for all studies published for each treatment area. The results of these studies were categorized, where possible, into excellent, good, and poor outcomes. For these five treatments combined, 40 % excellent, 30 % good, and 30 % poor results were reported by proponents. We conclude that, under conditions of heightened expectations, the power of nonspecific effects far exceeds that commonly reported in the literature. The implications of these results in evaluating the relative efficacy of biological and psychosocial treatments is discussed.

1. <http://deepblue.lib.umich.edu/bitstream/2027.42/31080/1/0000757.pdf>

G (2010-10-14 10:33:58)

You can allow for bias!? Allowing for bias is non-bias. I think it is a huge problem. You might have your own (right or wrong) sense that you can surf the nutritional data and get your best result but I think that 'ignore it all' might be good advice for most people. The stuff you say people should eat (butter, pork fat...) has been shunned for years by people who paid attention to studies. They would have been better served by tradition and *instinct* than by attempting to grapple with masses of data and conflicting opinion *even if* they had the time and educational means.

Seth Roberts (2010-10-14 23:17:06)

"They would have been better served by tradition and instinct." I agree, if the right tradition is chosen. There are plenty of harmful traditions. The Chinese have a tradition of eating rice. Bad idea. They eat little animal fat (can't afford it). Bad idea. And instinct, too, is a good guide to something but it isn't always clear what. Why do we like sweet things? So we will eat more candy? No. perhaps bias is a "huge" problem. I meant it strikes me as a smaller problem than the two others I name.

G (2010-10-22 11:49:09)

Seth, instincts can be clouded by habit. There's a signal that tells you 'enough chocolate, time to eat some lettuce', but people binge on chocolate for dysfunctional reasons and dietary advice has very, very limited power to override these compulsions. I know someone who eats an incredible amount of sugar and is slim and healthy-looking. She is also a vegetarian. For all we know, she's suited to that.

Margaret Wilde (2010-11-05 03:59:18)

I think there's a common reluctance to find environmental cause for degenerative conditions because drug companies fund so much research. You can't 'cure' environmental causes by selling a pharmaceutical drug for the environment to take. Better to blame the victim/patient for the ill-health and then treat them with profitable drugs or other profitable procedures.

fredafal (2010-12-09 13:24:23)

Another important contribution to bias not mentioned is the fact the once there is an accepted hypothesis, people look for confirmation, rather than refutation, which is required for truly critical scientific method. One huge institutional impediment to a healthy balance of refutation is the peer review process employed by almost all journals. If there is not even any place to publish, and in turn debate, negative results and possible alternate hypotheses, how can our existing hypotheses be anything but biased? One of the last places unbiased debate was fostered was Medical Hypotheses, which did not practice standard peer review. However Elsevier, the huge publishing house that publishes Medical Hypotheses, sacked the editor-in-chief and installed peer review, because of the publication of a controversial scientific hypothesis about AIDS. Rather than let a scientific debate of the merits, or lack thereof, of the hypothesis proceed, this important forum for unbiased scientific debate was stifled for good.

### **How She Adjusted to Living in China (2010-10-13 23:13)**

I asked an American friend who's been in China for a year how the year had changed her. She told a story:

I was in a restaurant in Inner Mongolia. This guy was going around smashing things, throwing glasses. He was drunk. I was shocked. I expected a strong reaction: Get out of my restaurant! That's not what happened. There was no strong reaction. The guy finally left and the staff cleaned up the mess he made. I've learned not to react strongly to unusual behavior.

I love this story. That travel changes your assumptions is hardly a new idea but this says it vividly and briefly.

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Gunnar (2010-10-14 04:04:47)

Gene Sterling allegedly said: "You are not responsible for the stimulus, only how you respond to the stimulus." So if you want peace, be peaceful. A la Gandhi - be the change you want to see in the world. Btw, what do people around there think about incarnation, Seth? Westerners are taught they are a body, die, and that's it for their existence, as you probably know ;-)

Alex Chernavsky (2010-10-14 06:12:13)

I find this story surprising. Are Inner Mongolians typically very tolerant of out-of-control drunks? If so, why?

Seth Roberts (2010-10-14 06:14:35)

Alex, I don't know the answer to your question.

Bruce G Charlton (2010-10-14 11:08:34)

It shows this must be a society in which violence is rare and a temporary aberration. And also where drunken-ness is rare. In a high violence/ frequent intoxication society - such as the British Isles - the restaurant would not last a week.



Alex Chernavsky (2010-10-15 06:35:10)

Bruce, apparently drunkenness is a huge problem in Mongolia: "[1]Mongolia's drinking epidemic"

Heavy drinking in Mongolia is nothing new. Genghis Khan was reputed to have consumed huge quantities of alcohol after vanquishing his enemies. But today, alcoholism is reaching epidemic proportions, driven by cheap liquor and wrenching social and economic change. I visited a young man lying on an old iron bedstead in a bare white room inside an Ulan Bator hospital. The man was an alcoholic and this desolate room was his last resort. [...] This young man's story is far from unique. Mongolia is today in the midst of an epidemic of alcoholism. On the streets of Ulan Bator you do not have to go far to see its effects. Ulan Bator railway station, even at 10am in the morning, was already crawling with drunks, many of them already so intoxicated they could hardly stand.

1. <http://news.bbc.co.uk/2/hi/asia-pacific/3138806.stm>

Nancy Lebovitz (2010-10-15 11:43:44)

Another possible factor is trust that a drunk who's breaking glasses won't escalate to attacking people.

Ragout (2010-10-15 17:19:44)

Maybe the drunk was the Mayor (or some other important person).

### **Will Eating Half a Stick of Butter a Day Make You Smarter? (2010-10-14 22:19)**

To my pleasant surprise, Mark Frauenfelder posted [1]this call for volunteers. Will eating half a stick of butter per day or a similar amount of coconut fat improve your performance on arithmetic problems? Eri Gentry is organizing a simple trial to find out. The trial is inspired by [2]my recent Quantified Self talk. [3]Study details.

During the question period of my talk, I responded to a question about a trial with 100 volunteers by saying I would suggest starting with 2 volunteers. A reader has written to ask why.

What's your reasoning behind suggesting only 2 volunteers to test the eating more butter results? You seem highly convinced earlier in the video, but if you were so convinced why not have a larger trial?

Because the trial will be harder than the people running it expect. If you're going to make mistakes, make small ones.

This is my first rule of science: Do less. A grad student in English once told me that a little Derrida goes a long way and a lot of Derrida goes a little way. Same with data collection. A little goes a long way and a lot goes a little way. A tiny amount of data collection will teach you more than you expect. A large amount will teach you less.

My entire history of self-experimentation started with a small amount of data collection: An experiment about the effectiveness of an acne medicine. It was far more informative than I expected. My doctor was wrong, I was wrong – and it had been so easy to find out.

This may sound like I am criticizing Eri's study. I'm not. What's important is to do something, however flawed, that can tell you something you didn't know. Maybe that should be the first rule, or the zeroth rule. It has the pleasant and unusual property of being easier than you might think.

Thanks to Carl Willat.

1. <http://www.boingboing.net/2010/10/14/will-eating-a-half-a.html>
2. <http://www.kk.org/quantifiedself/2010/09/seth-roberts-on-arithmetic-and.php>
3. <http://www.kk.org/quantifiedself/2010/10/will-butter-make-you-smarter-i.php>

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Eric (2010-10-15 05:33:05)

I like rule zero :-) Thanks for replying to my email. Your comment makes great sense in context. Making the mistakes up front with less effort gets results more quickly and may illuminate ways of improving future studies. There will always be the possibility of doing more rigorous studies later.

Gunnar (2010-10-15 07:02:31)

Seth, how do you rule out the so called placebo effect? Human attitude/intention influences the outcome. IMHO such trials tell the one human that observes himself if his approach worked or if he should try different. And different can start with different attitude. Btw antibiotics reduced acne for me; at that time I believed doctors and in medicine ;- ) I will probably never use anything like that again, though, now that I am less clueless. I haven't thought this through, it just came into my mind while reading your blog post. Be well.

Mike Kenny (2010-10-15 08:30:35)

Venkat from [rinnonfarm.com](http://rinnonfarm.com) had an interesting post apropos a little data versus a lot of data: <http://www.ribbonfarm.com/2010/09/28/learning-from-one-data-point/> The gist IIRC is that when you collect a lot of data, you may stop thinking deeply about a problem, whereas one piece of data tends to force you to think deeply, I think mainly about how cause and effect might act in this particular case.

Eri (2010-10-16 21:38:30)

Do less. I love it. Really, I do. But, at least this once, I want to have the experience of running a study with as many participants as are willing. It's going to be a data mess at first. But I hope that, soon enough, online platforms will be capable of automating this type of study. However, I'll probalby still spend the majority of my test time on myself. :) Thanks so much for your curiosity and testing, Seth. It is quite the inspiration. Eri

Seth Roberts (2010-10-17 03:40:48)

Eri, thanks! Yes, better software could certainly help. R is not designed for data collection but I use it anyway.

Forrest (2010-10-22 16:33:22)

Does anyone have any data, arguments, or guesses about what it is in the butter that has this effect, and what the mechanism might be? (Really enjoyed the talk btw.)

Gunnar (2010-10-23 05:30:18)

Forrester, here is general information: <http://www.westonaprice.org/> And here is one great blog out of many about how the conventional lipid theory is total bullshit: <http://high-fat-nutrition.blogspot.com/> It's proven!

majamin (2010-11-04 20:39:59)

"This is my first rule of science: Do less." "Same with data collection. A little goes a long way and a lot goes a little way." "A tiny amount of data collection will teach you more than you expect." "A large amount will teach you less." No. Absolutely

not. Science hinges on good sampling methods, and the more data, the better. You will eventually exhaust resources in order to obtain this data, this data may be difficult to collect, but a good statistician / scientist would never say "no" to more data. Especially if it is collected in a manner that sheds light on interesting relationships and phenomena, and especially if we want meaningful outcomes. A small amount of data can suggest further study, but these can never be relied upon to make confident and accurate decisions.

Seth Roberts (2010-11-04 20:48:26)

majamin, where do these beliefs of yours come from? Science requires a lot more than "good sampling methods". Every experiment requires assumptions and the bigger the experiment the more assumptions – which have a higher chance of being wrong than you appreciate. A single wrong assumption may cause the whole project to fail. If you're a scientist and haven't managed to learn this, I'm surprised.

majamin (2010-11-04 21:55:40)

Hi Seth, Of course assumptions are counter-productive, and can render any data collection to be fruitless. There are many other things that need to be considered (bias, blinding, etc.). With these in place, you have the beginning of a robust study. "the bigger the experiment the more assumptions" No. Every data point that is collected does not mean one more assumption. Bias in sampling can creep in, of course, but that does not mean that less data should be used. It just means that the data if you are collecting data, you need to ensure that it is collected with a good dose of randomness. The claim made above was "less data is better". Let's focus on that. That's like saying that, in sampling a product line for an estimated number of defected products, the less amount of data you collect, the better. Like I said in my first post, at one point the collection of data would become difficult (i.e. the resources required to test for defects), but how could less data teach you more? Why would you chose to sample less number of products? Can you give a good reason why doing this would result in a better understanding of the situation? The same with any other observation of our world ... how would less observation give us the ability to understand it better? Please point me to a (mathematical, if possible,) analysis that would show that less data you have, the better. Sincerely, majamin

Seth Roberts (2010-11-05 04:20:11)

majamin, I'm still curious: where do your beliefs come from? They strike me as highly incomplete. Your puzzlement ("how would less observation give us the ability to understand it better?") is why I wrote what I did: because it wasn't obvious. You're just describing the conventional point of view. I'm well aware of that view. But why do you believe it? To be even a little bit convincing you have to explain that.

Alex Chernavsky (2010-11-05 07:21:40)

Jay Cohen of UCSD Medical School has written a [1]whole book about the idiosyncratic ways in which different patients can react to the same medication. (This is a problem that drug companies would rather sweep under the rug.) With regard to the butter/reaction-time experiments, for example – is it not possible that your (Seth's) results are an outlier? In order to generalize the results to the population-at-large, would we not need to replicate the experiment with a larger group of people? Not sure if that's what Majamin is getting at here, but it's something that occurred to me.

1. <http://www.amazon.com/Over-Dose-Jay-S-Cohen/dp/158542370X>

majamin (2010-11-05 09:11:08)

Seth: I can see how my response may seem rhetorical, since I am actually echoing the established viewpoint. The reason why I adopt it, is given by the above example of a product line, where one is checking for defects. Logically, I cannot see how one can learn more from a smaller sample. This example illustrates why we should not opt out of collecting more data points. In fact, it can be shown that no useful information can be gained from doing so. We will not be able to tell whether the items in the sample are a fluke, or not, etc. So, I've explained my position. It's time to back up your claim by applying it to the situation that I posed. Your argument to "less is more", is that we are susceptible to making more mistakes. What mistakes? Bias? We have techniques to lessen the amount of bias attributed to every sampling method. Do you disagree with these methods? If so, why?

Seth Roberts (2010-11-05 14:12:21)

"What mistakes?" Here's an example. A professor at a famous university got a large grant to do a big study of how cleaning your apartment affects your chances of asthma. Most of the grant money was wasted because his research group couldn't get enough people to volunteer for the experiment. Alex, you ask if my results "could be an outlier". The history of nutrition is a good guide. There are no examples in the history of nutrition where one person, apparently normal, needed a nutrient that no one else needed. There are countless examples where the results from one person turned out to generalize to everyone else.

majamin (2010-11-05 19:26:58)

Seth: You still haven't spoken to the example I gave, and how a smaller sample ("less data") would be more beneficial. Again, product line defects: how would checking a smaller amount lead to less mistakes?

majamin (2010-11-05 19:35:57)

Seth: In the large grant case, all this shows is that the study's funds were used ineffectively, it says nothing about the efficacy of having smaller sample sizes. All we can say is that (1) a bunch of money was wasted, and (2) there wasn't enough data to perform a meaningful analysis. If you are arguing this particular university did not issue funding in an efficient manner, I wholeheartedly agree with you. But, what does this have to do with the efficacy of small sample sizes?

Seth Roberts (2010-11-06 05:29:07)

If they had tried to do less – smaller sample size – they would have wasted far less money learning that one of their assumptions was wrong.

majamin (2010-11-06 09:56:28)

Seth: I'm not sure if you keep missing the question I posed above, or are ignoring it. There's no point in this conversation if you won't even bother to apply your approach to that scenario.

Seth Roberts (2010-11-06 15:30:18)

I am ignoring it. I'm not interested in hypothetical examples. I was trying to find out if you had real-world experience that contradicted what I wrote. The answer seems to be no.

majamin (2010-11-06 22:19:10)

Seth: That's fine. I'm not interested in hypothetical theories.

## Assorted Links (2010-10-14 23:51)

- [1]meaning-based computing
- [2]academic plagiarism. "One of my own students turned in a paper on "Great Expectations" which was an exact copy of Dorothy Van Ghent's essay - an essay so celebrated that I recognized it right off and, at the first opportunity, raised the issue with my student. "Shit!" she said. "I paid seventy-five dollars for that." "
- [3]The dark side of fermentation. I am very pleased to see that Edward Jay Epstein is writing a book about the 9-11 Commission.

1. <http://www.computing.co.uk/itweek/analysis/2162661/interview-meaning-computing>

2. <http://www.tnellen.com/cybereng/ethics/purloined.html>

3. <http://edjayepstein.blogspot.com/2009/12/anthrax-case-falls-apart.html>

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vic (2010-10-15 01:50:11)

It's clear you love conspiracy theories, but this guy has devoted his life to following the anthrax case, and makes a pretty compelling case that Ivins WAS the anthrax mailer: <http://anthraxinvestigation.com/>

Aaron Blossom (2010-10-24 17:44:14)

You might look at Ellen Langer's work. It seems to correspond to yours. I did a search for Langer on this site, no results found.

Seth Roberts (2010-10-24 19:18:21)

How does Langer's work correspond to mine? I'm afraid I don't see the connection. Nor do I see any connection with this post.

### **Fermentation Not Sexy (2010-10-16 06:31)**

From an [1]NY Times article about the high price of kimchi (in Korea):

Michel Troisgros, the renowned French chef from Roanne, listened to a Korean official hold forth on the wonders of fermentation and an ambitious project to export Korean foods like kimchi.

“I think you have to stop talking about fermentation,” Mr. Troisgros told the man. “It’s not sexy.”

Via [2]Marginal Revolution. I love that remark (“not sexy”). Good epigraph for book or article about fermented foods.

I considered making kimchi until I was in a Korean market buying some. The Korean woman next to me thought it was too hard.

1. <http://www.nytimes.com/2010/10/15/world/asia/15kimchi.html?hp>

2. <http://www.marginalrevolution.com/marginalrevolution/2010/10/assorted-links-12.html>

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Caleb (2010-10-16 08:23:41)

“Aged” seems to work over here as the distinguished sounding euphemism for “deliberately cultivated bacterial growth”

David (2010-10-16 08:53:14)

Ah, but not sexy is the new sexy...

Alex Chernavsky (2010-10-16 10:43:56)

Seth, I tried making kim chee a couple of months ago. It didn't taste nearly as good as the stuff I can buy at the store, though I think I might know why my attempt didn't work. I made it during the heat of summer, in a non-air-conditioned space. An acquaintance later told me that kim chee does best when it ferments at a cooler temperature. I will try again. In the meantime, I buy kim chee made by Hawthorne Valley Farm. It's made without fish or shrimp.

John (2010-10-16 17:30:59)

Kimchee is not too hard to make on your own. If you have Sandor Katz's book Wild Fermentation, there is a simple, authentic and easy recipe and it takes about a week to ferment. I did it last winter (made a quart) and it was good. There's also a fruit kimchee recipe that I'm hankering to try soon.

Russ (2010-10-19 12:03:40)

I made sauerkraut this Spring - it was actually quite easy, and the results were much better than store-bought.

Oli M (2010-10-22 19:44:04)

As opposed to Alex, I like my Kimchi stinky. The stuff from the store is just not stinky or flavorful enough. Kimchi's not as easy to make as kombucha, but it's still pretty easy. It is easier than most traditional asian dishes; perhaps the woman meant it is hard if you consume a lot of it. (e.g are feeding a family.) I can make it much more regularly than kombucha, since a little cabbage goes a long way. [1]Here is the recipe I use. (Also first hit on a Google search "how to make kimchi", I believe.) It's turned out great for me. I've experimented with vegetables other than nappa and also using various fruits as sugar sources. My two month old (non-spicy) watermelon yu-choy kimchi was the best one so far.

1. <http://www.drbenkim.com/how-make-kim-chi.htm>

### **Breakfast Not All Bad (2010-10-17 03:53)**

I stopped eating breakfast when I discovered it made me wake up too early. My Tsinghua students are reading [1]the paper in which I describe my breakfast research. One of them, a freshman, wrote:

When we [entered] Tsinghua University, the first task we should finish was the military training. [New students have a few weeks of military training.] We were asked to be gathered at 8 o'clock, and then we would do a lot of trainings. As the training was hard and tiring, we all had to eat breakfast in the morning. And I remembered in those days, we all slept well and were early-awakening. When the trainings were over, we began our classes. The time was also 8 o'clock, but many times we didn't have breakfast in order to save time. Gradually, our awakening time become later and later. Even we set an alarm clock, we felt really reluctant to get up. For a long time, we wondered about that but no idea appeared. Now I got the answer, it has something to do with the breakfast. When I told my roommates, they were indeed surprise. Everyone was curious about why, and I was also interested in that. Maybe if the last day you had breakfast, the next morning your body will still have the motivation to call you up to eat breakfast.

Yes, if you eat at a certain time of day, you will tend to be awake that time of day. The effect has been heavily studied in animals, where it is called anticipatory activity.

1. <http://escholarship.org/uc/item/2xc2h866>

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Eric Vlemmix (2010-10-19 07:09:29)

I really don't like to eat (breakfast) in the morning. I'm not hungry at all, and usually I take have, or take, the time to make breakfast. What will trigger the effect of waking up in the morning? The intake of fat, the intake of protein, the intake of carbs, a combination, or any of the before mentioned? I have troubles getting up in the morning and would like to get a kickstart. Let's see the responses, and if no clear answer: I'll start another n=1 experiment!

Gunnar (2010-10-19 08:59:15)

Eric, imho the best way to get up, is to sleep as long as you need to, not until a clock alarms you to get up. I do it that way as of now, and it works great for me ;-)

Stan (2010-10-20 01:29:49)

I stopped eating breakfast 5 years ago (some fruit from time to time) and feel lively and full of energy the whole morning. I wake up at the time I am used to wake up for work the last 14 years. So it is matter of getting used for me. And I am never really hungry until noon.

How the Other Person Sleeps: Seth Roberts on Christine Peterson's Zeo Research (2011-06-21 08:36:11)

[...] eat breakfast until at least three hours after you wake [...]

19Grumpah42 (2011-06-21 17:23:26)

According to my Zeo data I am a poor sleeper, and I'm sure that is a correct assessment. I always eat a significant vegetarian breakfast within an hour of arising. For the last two months, Zeo says: ZQ=48, TotalZ=5.2 hours, REM= 108 min, Wake= 92 min, Times woken=8, Deep Sleep=28min. I have great difficulty getting off to sleep, it may take 45 to 190 minutes. I sleep very restlessly, motion IR camera recordings indicate 80-200 limb movements per session. [limb movements often occur during periods flagged by Zeo as REM !]. I am not very good at the Zeo subjective estimates, but I reckon my "sleep stealer" score must be pretty low because I do not do anything obviously wrong. I am fascinated by the "no breakfast for 3 hours after waking" recommendation. How is that thought to work? -Grahame

Seth Roberts (2011-06-21 21:10:59)

Breakfast causes what's called "anticipatory activity" - which includes waking up. If you eat breakfast at a certain time you will tend to wake up 3 hours earlier. Anticipatory activity is easy to see in pets, which become active about 3 hours before the time of day they are fed.

19Grumpah42 (2011-06-22 09:08:35)

Thanks for the explanation! I wonder if this underlies the German tradition of the "zweiter Fruehstueck" whereby you have an almost nothing breakfast when you arise, then a full-blown 'breakfast' with lots of animal protein around 10.00 am? -G

## Health Care As Seen by a Psychiatrist (2010-10-20 21:17)

A reader of this blog named Laura Fisher left a comment about "doctors as bureaucrats" - meaning they care more what their employer thinks of them than what their patients do. A scary and plausible idea. I asked for details. She replied:

I live [and practice psychiatry] in a small [Utah] college town that is 80 % Mormon. Almost all the docs in town are employed by an outfit called Intermountain Healthcare which owns most of the hospital beds in this and a few surrounding states. Once you get the doctors on the payroll, they really must take instruction from the employer-and they sure as hell do. The doctors who refuse to take instruction that is ethically or morally conflicted or repugnant are typically subjected to "peer review" as a means of punishment, either by hospital medical staffs or by state licensing boards. If you want details on the abuses of "peer review", you should find plenty of information on [1]the website of the Association of American Physicians and Surgeons.

The typical patient I see has been jollied along for years [by IHC doctors], sometimes decades, without any of his physicians taking the time to review his/her medications effectively. There isn't a billing code

for actually taking the time required to deliver good care, so the patients do not get good care. Some of them get good surgeries. Some get bad surgeries. Often a patient has had a surgery or procedure that he or she did not need. Often the surgery creates new needs for expensive pharmaceuticals. Most often he or she is on a pharmaceutical which is causing psychiatric effects. Either no one has thought of this, including psychiatrists, or no one other than the patient has thought of this and the patient is afraid to discontinue medications for fear of alienating the doctors he needs to stay on good terms with and for fear of unanticipated withdrawal syndromes. The docs who are seeing these salt of the earth working-class patients are young physicians who are not familiar with the old-fashioned notion of the doctor-patient alliance as being somewhat sacred, private and full to the brim of ethical obligations on the part of the physician. These docs check out at quitting time. I have seen them fail to save a sick person at risk of death when one of their colleagues is responsible for putting the patient in that predicament. They refuse to answer questions from patients about whether or not a given treatment change would help that patient, apparently because that doctors employers' treatment guidelines don't include answering such questions or choosing different treatment and because that doctor's professional society leaders are reading from the same page where treatment is conveniently canned such that even nurses can dole it out pretty successfully.

I have seen depressed patients whose depression completely resolved when he or she stopped taking the statin they were on. I have also been interested in the statin users apparently having a higher risk for infections and therefore cancers. Duayne Graveline wrote a very short book (Lipitor, Thief of Memory) on his personal experience with transient global amnesia. This short book is great introduction into the statin subject. The best book I have found on the statins is [2]Fat and Cholesterol are Good For You by Uffe Ravnskov. There is [3]an International Network of Cholesterol Skeptics and their website is marvelous. If you look at this material you are going to learn that it is a poor idea to interfere with cholesterol because we have to have it for brain function.

Don't forget to read *The Trouble With Medical Journals* by Richard Smith and *The Emperor's New Drugs* by Irving Kirsch.

[4]Statins and memory loss. Thanks to JR Minkel.

1. <http://www.aapsonline.org/>
2. <http://livinlavidalowcarb.com/blog/review-fat-and-cholesterol-are-good-for-you-by-uffe-ravnskov/9214>
3. <http://www.thincs.org/members.htm>
4. <http://www.scientificamerican.com/article.cfm?id=its-not-dementia-its-your-heart-medication>

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Alex Chernavsky (2010-10-21 04:40:10)

I have not read *The Emperor's New Drugs* (yet), but I'm familiar with Kirsch's other published work. The trouble with Kirsch is that he doesn't go nearly far enough. His hypothesis is that antidepressant drugs are essentially glorified placebos. That view is correct, as far as it goes, but Kirsch doesn't realize (or, at least, doesn't emphasize) the harmful effects of antidepressants, particularly when they are taken over the long term. For a more-comprehensive look at antidepressants (and other psychiatric drugs), see, [1]*Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*, by Robert Whitaker.

1. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452417>



Seth Roberts (2010-10-21 08:22:08)

Alex, I am happy that Kirsch has taken the time to compare antidepressants with placebos and non-treated controls. I would say the main problem with his work is that the studies he examines do a poor job of matching clinical practice, where non-working antidepressants are stopped and a new one tried. A comparison of placebo and the usual clinical practice hasn't been done. Such a trial is likely to show a larger effect of anti-depressants.

Laura Fisher (2010-10-21 09:24:37)

For those interested in the adverse effects of the SSRI drugs, see Joseph Glenmullen's Prozac Backlash (especially focused on involuntary tics caused by these drugs and the importance of withholding such drugs from patients with Parkinson's) and Let Them Eat Prozac by David Healy (all about suicide and bizarre homicides in people who became suicidal or homicidal only on an SSRI drugs, and of course this comes to mind whenever a normal person shoots up a shopping mall or a classroom or an induction center. Healy is not exactly easy to read by has written extensively on the history of psychiatric drug development. As to "long-term" use, the suicides and homicides happen quite early on. I find Whitaker very helpful in sorting out what is actually involved in assigning drug efficacy or lack of such. Physician critics of non-discriminant anti-psychotic and anti-depressant use, such as Peter Breggin, M.D., emphasize that the anti-psychotic drugs offer no efficacy advantage over simple sedatives but as associated with a myriad of adverse effects not caused by sedatives. Perhaps Dr. Roberts is familiar with the STAR-D trials.

David (2010-10-21 09:31:09)

I find it interesting that Ms. Fisher is specifically calling out Intermountain Healthcare—they are the poster child for health care reform. The New York Times did a big article on them almost a year ago: [http://www.nytimes.com/2009/11/08/magazine/08Healthcare-t.html?\\_r=1&pagewanted=all](http://www.nytimes.com/2009/11/08/magazine/08Healthcare-t.html?_r=1&pagewanted=all) Atul Gawande is also a big fan of theirs. He likes to hold them up as a counter example to wasteful medical practice. He mentions them in passing in this New Yorker article: [http://www.newyorker.com/reporting/2009/06/01/090601fa\\_fact\\_gawande?currentPage=all&](http://www.newyorker.com/reporting/2009/06/01/090601fa_fact_gawande?currentPage=all&) David

Duncan (2010-10-21 10:37:47)

Gary Greenberg did a podcast with Russ Roberts a few weeks ago. He made the same point about Kirsch as Alex, but went further. (From the transcript): "Basic point: efficacy of these pharmaceutical treatments of depression is that they are very unclear on depression, help some people but so do placebos; but they have this powerful effect that has nothing to do with depression that makes people like taking them. People [specifically, Kirsch] claim the studies showing the drugs don't really work means that the drugs don't do anything. The drugs do plenty, but there's no financial interest in figuring out what it actually is. In fact, there may be an anti-interest. If it only makes you feel more powerful then it's like Scotch; can't get your Medicare to cover it, or your employer. Argument for making Prozac over the counter, or making it illegal and let there be a black market for them." He didn't address your point, though, Seth. [http://www.econtalk.org/archives/2010/09/greenberg\\_on\\_de.html](http://www.econtalk.org/archives/2010/09/greenberg_on_de.html) (The section starting at 47:58).

Seth Roberts (2010-10-21 13:25:10)

Thanks for mentioning the STAR-D Trials, which I knew only a little about. They tried to resemble clinical practice and measured the effect of switching treatments if the first treatment (antidepressant) doesn't work. Here is an overview: <http://www.nimh.nih.gov/trials/practical/stard/allmedicationlevels.shtml> Here is a critique: <http://ebmh.bmj.com/content/11/4/97.full> (which fails to make clear what was learned, unfortunately)

Alex Chernavsky (2010-10-21 14:02:08)

Seth, here is a more-recent critique of STAR\*D: "[1]The STAR\*D Scandal: A New Paper Sums It All Up"

Allan Leventhal and David Antonuccio were able to make sense of that mysterious graphic on page 1319, and they reported that only 108 patients – out of the initial cohort of 3,671 – had a "sustained remission." In other words, only 3 % of the patients who entered the trial remitted, and then stayed well and in the trial during the year-long followup. But, as Pigott and his collaborators explain, even this number may be a bit high.

1. <http://www.psychologytoday.com/blog/mad-in-america/201008/the-stard-scandal-new-paper-sums-it-all>

Thomas Seay (2010-10-22 09:48:37)

Does anybody know of a good book that deals with the sociological prejudices regarding diagnosis? Perhaps that unclear, so I will give examples. A woman with whom I worked has a son who was diagnosed with ADHD. The boy did indeed have a hard time studying in the usual sense of the word. He just couldn't sit down and read books. However, here's the thing. The kid was a mechanical genius of sorts. He's now 19 (and apparently having a brilliant career in the Navy as an airplane mechanic), however, even as a child, the neighbors would ask him to their house whenever they needed something put together. You see where I am going with this. Different strokes for different folks. We have one model of how people are supposed to be nowadays and, if you don't fit that model, well, you are labelled as "faulty". How many of these people on psychiatric drugs are just people who have been prodded out of their proper niche or haven't found it yet? How much of this is chemical and how much of it is sociological?

Nansen (2010-10-22 15:59:43)

Kirsch's view of the STAR\*D trial is described by Louis Menand in The New Yorker:

One objection to Kirsch's argument is that response to antidepressants is extremely variable. It can take several different prescriptions to find a medication that works. Measuring a single antidepressant against a placebo is not a test of the effectiveness of antidepressants as a category. And there is a well-known study, called the Sequenced Treatment Alternatives to Relieve Depression, or STAR\*D trial, in which patients were given a series of different antidepressants. Though only thirty-seven per cent recovered on the first drug, another nineteen per cent recovered on the second drug, six per cent on the third, and five per cent after the fourth – a sixty-seven-per-cent effectiveness rate for antidepressant medication, far better than the rate achieved by a placebo. Kirsch suggests that the result in STAR\*D may be one big placebo effect. He cites a 1957 study at the University of Oklahoma in which subjects were given a drug that induced nausea and vomiting, and then another drug, which they were told prevents nausea and vomiting. After the first anti-nausea drug, the subjects were switched to a different anti-nausea drug, then a third, and so on. By the sixth switch, a hundred per cent of the subjects reported that they no longer felt nauseous – even though every one of the anti-nausea drugs was a placebo.

Source: [http://www.newyorker.com/arts/critics/atlarge/2010/03/01/100301crat\\_atlarge\\_menand?currentPage=2](http://www.newyorker.com/arts/critics/atlarge/2010/03/01/100301crat_atlarge_menand?currentPage=2) Note: Menand has been criticized for his sobriety and lack of extreme opinions; this article is no exception. However, it does contain several cogent observations, and at least a hint of a coming "train wreck":

So the antidepressant business looks like a demolition derby – a collision of negative research results, questionable research and regulatory practices, and popular disenchantment with the whole pharmacological regime. And it may soon turn into something bigger, something more like a train wreck. If it does, it's worth remembering that we have seen this movie before.

Daron (2010-10-25 16:14:13)

Several aspects of Laura Fisher's comments are factually incorrect in regards to Intermountain Healthcare. First, Intermountain Healthcare does not own most of the hospital beds in Utah in surrounding states. Intermountain owns 21 of Utah's 59 hospitals and operates only about 40 percent the 6,258 hospital beds in the state. Intermountain owns only one hospital outside of Utah, a small 25-bed hospital in Idaho. Intermountain does not have any facilities in other states besides Utah and Idaho (as noted, a minor presence in Idaho). Lastly, only about 900 physicians in Utah are employed by Intermountain, out of nearly 5,000 licensed doctors in the state. The University of Utah Medical Center is actually the largest employer of doctors in Utah. I think those 900 physicians employed by Intermountain would likely have an opinion different than Ms. Fisher. Given the way she plays loose with the facts I have to wonder about her objectivity and motivations.

## Learning Chinese Characters (2010-10-21 01:38)

I have 80 Chinese characters (flashcards for children) taped to a wall of my Beijing apartment. I add about five per day. [1]I wrote about this earlier, before starting. So far it's working. With almost no effort, no discipline, I know what almost all of them mean. I test myself a little whenever I'm in that room. This is a vast improvement over several previous attempts to learn the characters, such as studying flashcards the usual way or using [2]Anki, a flashcard

program.

I ruefully realize this is an application of something I thought of many years ago: the forces we can turn on and off are much weaker than pre-existing forces we can only take advantage of. Burning coal is a force we can turn on and off. Solar power is a pre-existing force we can take advantage of (and which almost everyone in Beijing uses to dry clothes). The sun shines no matter what we do. Deliberate studying we can turn on and off. We can study or not. In contrast, I am inevitably going to be in that room. Taping characters to the wall takes advantage of that.

1. <http://www.blog.sethroberts.net/2010/09/30/new-idea-about-learning-chinese/>

2. <http://ichi2.net/anki/>

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Mikael (2010-10-21 05:15:58)

My strategy used to be to carry a pocket dictionary with me at all times in Beijing and to look up as many characters as possible from those that I encountered on street signs, in shops etc. It worked pretty well.

Seth Roberts (2010-10-21 07:20:13)

Mikael, yes, that's a standard thing to do – have some way of identifying the characters I see in public. Such as an electronic dictionary. The problem is that I know so few characters there's little payoff to being able to decipher one character in a 10-character message. And to do all 10 characters would take too long. After I learn a lot of characters, your strategy will make more sense, I think.

Mary (2010-10-21 12:28:12)

This sounds like a good idea. This reminds me of a family story. When my great-grandmother died, my grandmother and her siblings were still very young, ranging in age from 4 to 9, I think. The oldest of the three, my great-aunt, had to stop attending school in order to do all the housework and farmwork her mother had previously done. My great-grandfather felt very bad about that, because he valued education, but he couldn't see how to else to meke out an existence without his daughter's help. To mitigate the problem, he used to cut out newspaper articles that he thought were interesting and post them up on the wall inside the outhouse! My great-aunt grew up to be a voracious reader, one of the best read and well-informed adults I knew.

Laura (2010-11-03 18:49:50)

It's fun to read about your experience with learning Chinese. One psychology professor at my school told me: Learning Chinese is like learning Klingon!! A helpful way for me to learn a new language is to be with people who are supportive. A lot of people at my workplace speak a second language and they always support me in my learning. They encourage me and they correct me when I am wrong and talk to me in the foreign language I am learning. Also, another thing that helps me is to speak to people who know that language and to discuss with them my questions and thoughts on learning it. Berkeley students know different languages and they help me a lot. They're very nice to me, even when I make mistakes. I enjoy using language books and I like to teach myself things, but I also ask other people for help at the same time. Perhaps there is something in the App Store, as well. Apps are fun!!! Some apps are free.

mamacita (2010-12-01 16:26:51)

What I've been thinking about lately – and possibly someone else has thought it, too – is that obesity rates in the United States are much higher in the flatlands than the highlands (Gulf Coast vs. Rockies, let's say). I assume it's because you can't help but get more exercise when you live among rolling hills, but you burn far fewer calories getting around town when you don't.

## Why Small Change = Big Deal (2010-10-22 11:05)

Eating a half-stick of butter (60 g) every day [1]apparently improved how fast I can do simple arithmetic problems (e.g., 7-5, 3+1). I improved about 5 % – from 630 to 600 msec per problem. My scores had been at 630 msec for months. They suddenly dropped.

A reporter said to me that a 5 % improvement isn't much. You couldn't notice it. Why did this matter?

I did not reply "[2]what good is a newborn baby?" I said it mattered for three reasons:

1. You cannot easily produce such an improvement. I was already doing very well. For example, I had already lowered my scores a lot via omega-3. Imagine the world record for the 100 meter dash suddenly dropping 5 % due to eating something you can find in a supermarket.
2. A 5 % improvement is just the beginning. There is room for optimization – better dosage, better timing of taking the butter, and so on.
3. The brain is a mirror of the rest of the body. Learning the best diet for the brain, at least in terms of fat, will help us learn the best diet for the rest of the body, just as learning what house current is best for one electrical appliance is a guide to what other electrical appliances are designed for. They're all designed to work with the same house current.

Alas, this is not just a poor answer, it's what I actually said. I give myself a C+. Reason 1 is almost gibberish. Reason 2 is technocratic. A good answer is more emotional. Reason 3 is okay, if not very clear.

At Berkeley I knew a student who had transferred from a junior college. He is/was black. He had probably gotten into Berkeley because Berkeley administrators wanted to admit more black students. He complained one day that he got C's on his essays even though "all the words were spelled correctly." It was frustrating, he said. I am in a similar situation here. My answer is poor but I cannot easily do better.

1. <http://www.kk.org/quantifiedself/2010/09/seth-roberts-on-arithmetic-and.php>

2. <http://www.jstor.org/stable/986790>

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G (2010-10-22 11:37:25)

An alternative: It will come to matter to the degree it reveals more about the wider workings and maintenance of the human body. Whether it will indeed help to usher in a new and useful dietary paradigm of 'lipidity' etc remains to be seen.

jimrandomh (2010-10-22 12:44:52)

Your thinking speed is actually increasing by significantly more than 5 %, when you consider that some fraction of those 630ms represent irrelevant things like the time the signal takes to travel from your brain to your hand and for your fingers to move. Possibly a large fraction, though I don't know how much exactly. Though, come to think of it - could the butter affecting your muscle twitch speed, rather than your thinking speed? If so, the benefit might be illusory. You could find out with a simple reaction speed test, where you react to a stimulus without any mental calculation first. Perhaps this should be added to that study Mark Frauenfelder is doing.

David (2010-10-22 14:43:20)

One only needs to look at the state of things in the US to realize as a whole we don't eat enough butter. What is more important than having your brain function well?

David Gilman (2010-10-22 15:55:27)

Mr Roberts - I'm a big fan of your writings and your work. However, I do find it mildly disturbing that your anecdote about your student pointed out that he is black and you thought he got in via affirmative action. I'm sure, regardless of how rigorous the standards are at UCB, that often times there are students there that are not top notch. Making your story about a black student who you assumed (perhaps incorrectly) was an affirmative action pick helps perpetuate stereotypes and places an unfortunate burden on all minority students. Just my point of view. David

Willy (2010-10-22 16:08:43)

It seems butter is not so good: > And minimize or avoid butter use, if we are to believe the data that suggest that it contains the highest exogenous AGE content of any known food. <http://heartscanblog.blogspot.com/2010/10/anti-ageing-diet.html>

Seth Roberts (2010-10-22 17:08:53)

David, thank you for your comment. I think diversity among college students – among Berkeley students, for example – benefits students. They can learn from those who are different. But lack of diversity also benefits students, as my story implies. They can be taught at an appropriate (non-frustrating) level. I think it is important to weigh both costs and benefits. The benefits are mentioned often, the costs practically never. It's worth emphasizing the costs because administrators benefit from diversity ("look how diverse we are!") but pay none of the costs. The costs, which can be great, are paid only by the students, such as the student I mentioned. Eventually he dropped out. Willy, it isn't clear what happened in the study that produced the result you describe (high AGEs in butter). I can't tell if the butter was heated (e.g., broiled, boiled) after purchase. I am trying to find out. The butter I eat is not heated after purchase.

Zach (2010-10-22 18:45:12)

Have you considered that marginal returns on common actions often induce massive gains? For example, a small improvement in the computation speed of basic arithmetic operations in computing would yield a significant reduction in algorithm run times. This could also open up opportunities to new algorithms which were previously too slow. One could infer that if these quicker arithmetic operations generalize to other thought processes, you ought to be compounding your gains which would lead to a larger than 5 % improvement in overall capacity. Also, I agree with jimrandomh's suggestions as additional things to consider when interpreting your 5 % figure.

Seth Roberts (2010-10-22 20:50:17)

Zach, what's an example of "marginal [improvements in] return on common actions [causing] massive gains"? I'm not saying they don't exist, I just can't think of any. Arthur Jensen found a correlation between IQ and reaction time. In his measurements, I'd guess that a 30-msec decrease in reaction time corresponds to 10-15 IQ points. (I haven't looked at his data recently.)

jeff borsato (2010-10-23 07:55:06)

regarding the post noted about the AGE content of butter: <http://heartscanblog.blogspot.com/2010/10/anti-ageing-diet.html> consider the comments section in that blog post to find out details of the study and the lack of consideration for how AGE's pass through the digestive tract, most are altered or fail to make their way far enough to cause damage. the effects of AGE's were determined by feeding mass amounts extracted from foods to see their effects, there is no indication that consumption of butter sets off a chain reaction of damage in the body, a good grass fed cow's milk and pastured butter is healthy. i wonder how much of an effect removing vegetable oils and excess omega 6 fats from your diet affects your brain rates, was it the addition of butter or the exchange of omega 6 fats for better saturated fats that was key. i guess if you added butter on top of your usual meals then we could conclusively state that butter affects brain function in that way.

Chris (2010-10-23 09:37:43)

Seth, I'm not sure reason 1 is gibberish. With your test, I would measure the improvement as a % of the difference between your previous best and the limits of human performance. If an optimally functioning person can do the test in, say, 530 msec, your butter intervention brought you 30 % closer to optimal. Personally, I have been eating 1/2 stick of butter per day for the past several months. If you include the heavy whipping cream in my coffee, which I believe has a similar fatty acid profile, I'm close to the equivalent of 3/4 stick per day. My energy level is much higher during the day, and I'm quicker mentally. No afternoon lulls either. Part of the reason may be an improvement in sleep. It's actually a little bizarre. I'll be wide awake one moment, then out cold the next minute. I'll sleep 9 hours without waking, then open my eyes in the morning wide awake and ready to go. A couple weeks ago, I had my best report ever at the dentist, by a long shot. I could go on all day.

Seth Roberts (2010-10-23 23:04:39)

Chris, I'm glad to hear about those change. Perhaps I should try 3/4 stick of butter. Jeff, you ask whether it was the increase in butter or the decrease in bad fats that caused the improvement. When I started eating a lot of butter I stopped eating a lot of pork fat. There isn't much omega-6 or vegetable fats in pork fat.

P. Winter (2010-10-24 18:05:32)

"there isn't much omega-6 or vegetable fats in pork fat.' It depends whether you your lard is factory or pasture raised, if it's factory ( 99 % ) then it's grains feed, is your butter pastured? Also see the current practice of feeding NZ dairy cows palm :- <http://paleozonenutrition.wordpress.com/2010/10/02/new-zealand-cows-fed-palm-kernel-expeller-producing-a-new-type-of-trans-fat-is-it-safe/>

jeff borsato (2010-10-25 11:54:09)

Seth, thx for the comment, your lard consumption decreased while butter increased. both fats have a great lipid profile, i would be suspect of any attempts to implicate pork fat in cognitive decline, perhaps butter helps while lard is neutral and omega 6 laden veg oils are negative. in addition to this i would want to consider if your total fat intake increased, especially if we are considering amounts as small as %5, i eat a fat heavy diet and can attest to the ways 200 extra calories a day can slip in from a few extra spoons of heavy cream in my coffee, which likely doesnt produce an equivalent drop in consumption the rest of the day. so many factors, so little time!

Jimmy (2010-11-02 09:29:41)

jimrandomh, I think this is not the case. Butter improves my ability to play guitar, but it does it by speeding up the rate at which I can play songs that I'm not comfortable with while leaving my maximum speed the same. 'racetams speed up both. Guitar is actually a pretty good test, because performance is sensitive to brain performance in a few different ways, and since its something I do for reasons other than brain testing, there's less placebo effect to worry about. Don't do it with a test on your mind, just play until you start doing surprisingly well, then think back and see what you could have changed.

### **30 Rock: East versus West Live Shows (2010-10-22 21:56)**

I suppose I'm one of the few people who know there are many differences between the audiobook version of On Beauty and the printed version. Maybe two per page. The audiobook version was prepared before the printed version was finalized. The printed version is better, of course. Long before that comparison, I was fond of comparing books drawn from New Yorker articles with the articles themselves. The New Yorker versions were better-written (= better-edited). It was a painless way to learn how to write.

Last week the TV show 30 Rock did two live shows: one for the East Coast, one for the West. I noticed many differences. The writing was better in the West version (jokes were improved) but the acting was better in the East version (the comic timing was better, for example). New York magazine has [1]listed the biggest differences. For example:

East Coast: In a flashback, Julia Louis-Dreyfus calls to Jonathan, "Yeah, Chai Boy, get in here. You'll never be a millionaire" – Slumdog Millionaire ref. Blammo!"

West Coast: Instead, Louis-Dreyfus says, "Hurry up, Aladdin, before Jasmine is forced to marry Jafar! Similarities – Lemon out." It gets way more applause.

East Coast: In the final scene, Liz is happy with how her birthday went. After all, she even "got to eat the cake off the floor."

West Coast: This time, she "ate the Fonz's face."

I wish there was a whole website about this: Differences between Things that are Supposed to Be The Same. I wrote [2] a Spy article about Similarities Between Things that are Supposed to Be Different. I noticed similar jokes in Jay Leno's and David Letterman's monologues.

1. [http://nymag.com/daily/entertainment/2010/10/the\\_17\\_differences\\_between\\_30.html](http://nymag.com/daily/entertainment/2010/10/the_17_differences_between_30.html)

2. <http://sethroberts.net/spy/whatareyouacomedian.pdf>

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Alex Chernavsky (2010-10-23 06:51:28)

I speak Russian. In certain movies (example: [1] *White Nights*), English subtitles appear on the screen when some of the characters are speaking Russian. I've noticed an odd tendency for the subtitles to be different from what's actually being said. The differences are not critical to the plot, but still... I wonder why that happens? It's been a while since I saw *White Nights*, but as I recall, there is one scene where a Soviet KGB agent – speaking Russian – says something like, "I've seen enough. Let's go back to headquarters". The subtitles said something like, "Turn the car around. We're not needed here."

1. <http://www.imdb.com/title/tt0090319/>

Allen K. (2010-10-25 10:36:14)

The book, record, radio show, TV show, computer game, and presumably the play, of the Hitchhiker's Guide to the Galaxy are all substantially different. (The play exists; I haven't seen it. Time was I could have expounded on the deep dissimilarities of the others.)

Errata-sleuthing for fun and knowledge (2011-03-24 21:20:14)

[...] By studying these diffs, you can learn something about the way their creators think. Similarly, Seth Roberts wrote on his blog that he learned something about writing and editing by comparing New Yorker articles to the slightly different versions published elsewhere; the New Yorker versions were better, and the differences between the versions explained why they were better: free writing lessons. [...]

## Assorted Links (2010-10-23 20:35)

- [1] New York City hospitals in crisis. What happens when health problems pile up unsolved.
- [2] Frederic Mishkin (economist) versus [3] Charles Ferguson (filmmaker)

- [4]computer-generated music comes of age. "Many were angry."
- [5]What lies beneath sweetness
- [6]Nassim Taleb on Benoit Mandelbrot

Thanks to Peter Spero, Dave Lull, and David Kramer.

1. <http://nymag.com/news/features/68991>
2. <http://blogs.ft.com/economistsforum/2010/10/the-economists-reply-to-the-inside-job/>
3. <http://blogs.ft.com/economistsforum/2010/10/the-director-of-inside-job-replies/>
4. <http://www.miller-mccune.com/culture-society/triumph-of-the-cyborg-composer-8507/>
5. [http://www.salon.com/food/francis\\_lam/2010/10/19/gymnema\\_sugar\\_destroyer/index.html](http://www.salon.com/food/francis_lam/2010/10/19/gymnema_sugar_destroyer/index.html)
6. <http://www.fooledbyrandomness.com/TIMEBenoitM.pdf>

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Alex Chernavsky (2010-10-24 08:00:33)

For a less-flattering piece on Benoit Mandelbrot, see John Horgan's blog entry on the *Scientific American* website: "[1]Benoit Mandelbrot (RIP) and the quest for a theory of *really* everything"

1. <http://www.scientificamerican.com/blog/post.cfm?id=benoit-mandelbrot-rip-and-the-quest-2010-10-18>

01 (2010-10-24 11:59:20)

<http://www.theatlantic.com/magazine/archive/2010/11/lies-damned-lies-and-medical-science/8269/1/> - the results of some research on medical science.

Darrin Thompson (2010-10-25 06:23:45)

Regarding computer generated music, watch this... <http://www.youtube.com/watch?v=u8mi8SjGKMY> Payoff at 30 seconds. Best part is the straight face. They want \$300 bucks, which I'm hoping pay next year.

## A Chinese Physicist Resigns (2010-10-24 04:23)

A Chinese physicist recently resigned from his job (pure research) at a Beijing research institute. His salary was too low. The base salary is something like \$200/month, with something like \$1200 for each paper you publish. He explained his decision in a letter to his bosses, which he posted on the Internet. From Google Translate:

Dear leaders:

Hello!

August 2006, I single-handedly carried the mat, one hand holding the quilt to the school to report to work. Slept on the floor in the office 3 nights later, Frank and others XX XXX Street, shares a house, 800 yuan per month. Themselves feel better. However, when my wife came to see me when to Shanghai, but a cry. She did not expect this to write beautiful prose, in English is superb, the monthly salary of ten years ago, men who have three thousand



dollars so come down: the room to work without a decent table, there is no place to sit, could only sit bed; office also can take place without her. Yes, until now, my office is a chair, a common HP laser printer or the wife gave me a birthday present. His wife's insistence, in March 2007, after six months sharing with others, I moved to Village X XX X, X round room (Reference: College on XXXX XXX), monthly rent of 1,600 yuan.

I come to school only task is to do research. Not in class, not with the students. I do specialty is theoretical physics. In my opinion, the current basic problems of theoretical physics can be divided into three areas, but also three levels: the top and most shallow, which is the quality of particle physics, neutrino problem, particle state mixing problem ; Secondly, the harder is self-consistent description of the gravitational field and unify quantum field; final, most difficult, is the true cosmology, the concept of the universe all things are included, the true cosmological should a TOE (Theory of Everything). Cosmology is now called, should be called observational cosmology, from a theoretical point of view, can only be called up to fit the observational cosmology. Three aspects of the course, or interrelated, each is at stake.

Second half of 2006, I understand the unified description of the main energy to the gravitational field and quantum field theory and mathematical tools needed which, in an arbitrary manifold reflects the quantum characteristics of the mathematical tools may be harmonic analysis. But I do not master any of harmonic analysis on manifolds.

Time to flash the first half of 2007, the annual meeting of gravity, I consider the possible use of Finsler geometry to try to do quantum gravity, began to self-Finsler geometry, the same year by the end of September, I made use of Finsler geometry re-expressed in general relativity. However, re-expressed with the Finsler geometry of general relativity does not make me to the direction of quantum gravity there is any progress, Finsler geometry is very strict rigid mathematical structure, the introduction of any features of the quantum structure itself will be incompatible with the geometry. Of course, you can put Finsler space-time structure of dark energy as an inevitable result, however, computability theory, the ability to compare theory and observations are not good.

July 2007, I bought a house in Shanghai, the total price of 96 million, 30-year loans to 66 million. After that, our economic pressure to the limit: my wife rented a house in Beijing, XXX XX Garden Park Unit X X X Building, Room (Reference: Beijing XXX Company XX), monthly rent of 2,500 yuan; my house in Shanghai, monthly rent of 1,600 yuan; also close to 6,000 yuan per month mortgage. All of my salary: two accounts, one CCB, more than 2,000 points (up once already, I am now in January 2669.27 yuan (March 2010)); another investment line, 1,800 yuan per month. Do not say that I run in Beijing and Shanghai both transport costs, my salary to feed my already running out. So we got married in 2005 had never to children.

Under the pressure of the huge costs climb in 2007, first half of 2008, I intend to do some simple problems, the observation of neutrino cosmology application, or vice versa, according to some astronomical observations to discuss the micro- Mass of sub-limits. However, read the literature, in-depth period of time to do that: this work is not a person with a PC machine can be done, at least a group of some value to make it possible to do the work. So, do I still have to go back I am a person with a PC, will be able to do mathematical physics. At this time, there have been two things: First, my wife is pregnant, should be joyous, married 4 years, she has XX years of age. Second, in June 2008, my body feels discomfort, severe cough began after the end of August, the end of September to do CT, in the chest, heart on top, between the lungs lymphatic tumor, a copy of the specific report, see CT.

08 expiration of the contract work my wife returned to Shanghai from Beijing. August 30, we arrived in Shanghai, after living for a month in a hotel (of course, is my wife's company out of accommodation), I X, X, Room XXX Village renters (references, XXX), 3,300 yuan monthly rent. Our own new home in the June 30 submitted to, because my physical problems, and his wife was pregnant, there is no way to decoration. Only in November 2008 leased to our

new home workers rough (references XXXX), monthly rent of 1,800 yuan.

My CT report came out, there are three doctors that the disease: sarcoidosis best results, followed by lymphoma or lung cancer. Six City Hospital, Zhongshan Hospital and the City Chest Hospital's doctors agree that: To do mediastinal thoracic endoscopy to confirm the diagnosis. However, my child is born in November 2, and before that in October, I can not do chest examination. October 21, 2008, in my guarantee, Chest Hospital, XXXX decided in accordance with sarcoidosis, I began to hormone (prednisone) therapy. In fact, I know, if it is worse than the result of sarcoidosis, I have only the choice of suicide: I can not let my white mother in the cold begging to others: "Save my son... "; or my wife holding an infant child:" save my husband... "

Thank bliss, I am still alive and well. But, my friends were not so lucky: Mao XXXX, 2005 in High Energy suicide; von XXX, one of my best friends, in January 2007 committed suicide at Tokyo University. Their death, and they chose Theoretical Physics, chose to do research are closely related. Von XXX, 28 years old when he died less, 8 years old his father died, take pains to support his mother and younger siblings. In the Babaoshan, watching Von XXX's mother, that Ganchangcunduan, piercing woman, I was deeply sad but misery. To von XXX, I think I should continue to do theoretical physics.

2009, I went back to quality issues, problems and mixed particle state mixing matrix. An elegant theory that all the observed phenomena should be explained with the natural, but the existing weak unified theory, have failed. After several months of effort, I think, rest mass operator should be introduced to the rest mass of the quantum field operator as is the rest mass of the intrinsic value, so that uniform interpretation of quantum states can be mixed and mixed matrix. Done in July, found the problem difficult to overcome, and because of physical reasons, was closed. After the October, and XXX, XXX discussions and continue to do for some time. I found a little forward, but there are fundamental problems from a distance, need to be more profound thoughts.

In 2009, my body slowly getting better. Done 4 CT, 4 after March, the condition improved slowly. And then to Shanghai Pulmonary Hospital treatment is the same method. September 2, to Nantong XXXX hospital medicine treatment, medication in January, costs over 3,500 yuan (can not be reimbursed, easy to find the invoice.) To October 2009, my medical insurance card, no money already. At this time, CT showed that half of the tumor has disappeared, the results see the copy. Since then I have to give up treatment, on the one hand do not want to spend more money on the one hand I believe I can beat the rest of the half.

2008 year-end assessment, I did not write. Do write to me to do research, but failed; or I was sick; or I just add a small baby at home? Write my difficulties, I do not want to let others sympathetic to buckle my money? For a limb still, physical and mental health of man, which is a shame.

Thus, starting from March 2009, my investment line of Cary, 900 yuan less per month, only 900 yuan.

Finally, I deeply know that I am the circle around me, most people are not doing scientific research. Doing scientific research is false, is an issue, published an article to change some money, to live. (Above paragraph, is not directed against any person or thing, I seriously do research and those who pay tribute to the depths of his heart. Even if someone is writing papers for money, as long as there is no plagiarism, is beyond reproach, and now the rule is like that. I can not do, but my poor ability to adapt.) von XXX, XXXX Mao may also, like me, are the idealists, does not fit in this circle there to do, so they died.

Yes, I suddenly realized: I do not fit inside the circle to do the research now. Otherwise, I will and Feng XX, XXX Mao same fate. In the November 25, 2009 made a report terms of rest mass operator, I decided to leave. November 30, in the center of the meeting, I proposed to my research was no longer suitable.

All see, I know, the year-end 2009, has not filled out the necessary assessment: whether what I was made or

not made anything, I knew.

So, I Merchants Bank of Cary, from the beginning in January 2010, a month is 0. I can start another kind of living law.

Determined from the high school to study physics to me, from the self to the Thermodynamics of Newtonian mechanics, to quantum mechanics; from the self-study calculus to linear algebra; learn from differential geometry, group theory, and then learn topology. Into his own youth, twenty years into his effort, and now had to give up, is a frustration.

Dreamed last night: spring, towards the sea, I lingered under the weeping willow, think about the physics, think of the beauty of the universe!

I know, only to leave, I can live. When people have forgotten that the earth is the soul of the physical sacrifice, I still worried about soul.

Must live with dignity, I can only leave. In the vast universe, the short life of individuals, such as fireworks, energy and all the leaders met, life is fate. Besides, I also get more help and the central leadership to take care, keep in mind when I hope to have the opportunity to return.

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Gunnar (2010-10-24 07:02:01)

Thou shalt trust the human heart to be the divine representative of the soul. Or as Albert Einstein allegedly said: The intuitive mind is a sacred gift and the rational mind is a faithful servant. We have created a society that honours the servant and has forgotten the gift. I'm rather clueless regarding physics, but I found Nassim Hameiri's ideas interesting. <http://theresonanceproject.org/>

02 (2010-10-24 12:03:28)

Could you post the original source please? I'd like to read the Chinese.

### **Walnuts: Brain Food? (2010-10-25 06:56)**

At a Mr. Lee's restaurant (a Chinese chain), I started chatting with a girl sitting near me. I told her I was a psychology professor. "You know what people are thinking," she said. I lamely said, no, I study what foods make the brain work best.

"I don't know the English word for it," she said. She drew a walnut.Â Good for your brain, her parents had told her. I was astonished. When I got to China, my arithmetic scores mysteriously improved. I had expected them to get worse, if anything. I tried to duplicate my American diet in Beijing but it is hard to duplicate the flaxseed oil. (Chinese flaxseed oil is worthless. I can bring it from America but not easily, and it's impossible to keep it cold the whole way.) I had tested various explanations of the improvement but none held up.

I was starting to believe the reason for the improvement was walnuts. I have two servings/day of yogurt, each time with walnuts. I ate a lot of yogurt with walnuts in Berkeley, too; this was not a dramatic change. But maybe I eat more

walnuts in China, and maybe the walnuts have more omega-3.Â Maybe the walnuts are fresher. In Berkeley I put ground flaxseed in my yogurt (in addition to walnuts), without obvious improvement. Walnuts are lower in omega-3 than flaxseeds.

A Chinese friend of mine had told me the same thing – that her parents had said that walnuts are good for the brain. This is a common Chinese belief, mingled with the curious idea that they are good for the brain because they look like a brain. [1]The Wikipedia entry for walnut, which includes its use in Chinese medicine, says nothing about improving brain function. [2]This long article about the benefits of walnuts doesn't connect them directly with better brain function. It does say they are considered "brain food" because of high omega-3 content and links to [3]a page that says 1/4 cup of walnuts (25 g) has 2.3 g of omega-3. I am now consuming 2 tablespoons/day of flaxseed oil, which contains 14 g of omega-3. I have sometimes consumed 3 or 4 tablespoons/day (with 21 or 28 g omega-3). You can see why 2 g doesn't impress me, especially when added to 14 g. I thought I was getting the optimal amount of omega-3 from flaxseed oil. Adding a small amount to the optimal amount shouldn't have a noticeable effect. [4]This article says walnuts are brain food because of their lecithin content. Lecithin is used to make acetylcholine, a neurotransmitter.

Miraculously I can gather better evidence by myself, in a month, than all the evidence I've found. I simply vary how much walnuts I eat and see what happens to my arithmetic score. The experiment is worth doing because of the common Chinese belief and my puzzlingly good scores. Maybe walnuts help a brain that is already getting plenty of omega-3. Maybe not.

1. <http://en.wikipedia.org/wiki/Walnut>
2. <http://www.whfoods.com/genpage.php?tname=foodspice&dbid=99>
3. <http://www.whfoods.com/genpage.php?tname=foodspice&dbid=99#nutritionalprofile>
4. <http://guide2herbalremedies.com/11-foods-for-brain/>

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SB (2010-10-25 07:24:21)

Indians believe walnut is good for the brain, because it looks like a brain.

Aaron Blaisdell (2010-10-25 07:42:25)

Many culture, such as the Chinese and Indian (see SB's comment above) view form and function as connected in terms of their effects on human health and well being. In some cases this makes sense. If you have a problem with fertility, take tiger penis (or some reproductive organ) and it should help you. The reproductive organs of other animals likely have many of the same compounds that our endocrine system uses and so you're basically taking a drug. In other cases, like walnuts, the link between form and function is likely just coincidental. Are there other things that look like brains (brain coral?) that won't help with brain function when consumed? Are there other things that don't look like brains (sardines) that will? It would be fascinating to see how systematically these principles are applied in the societies that practice them.

Thomas Seay (2010-10-25 09:44:04)

Here is an interesting anecdote that my Indian colleague related. It turns out that people used to sprinkle turmeric on the threshold of the front door of their house in India. As it turns out, due to the anti-bacterial action of the turmeric, this may have produced some benefits, as the bacteria on the bottom of people's feet would have been destroyed/diminished as they entered the house. However, at some point, this turned into a superstition. People thought it was THE COLOR that was

beneficial and so they started painting the house entrance with the color of turmeric.

Gunnar (2010-10-25 10:43:49)

Maybe they don't put fluoride into the tap water, like they do in some US cities. You can check that with the water supplier. They say they add it because it allegedly reduces suicide and criminal rates. And maybe you leave out artificial sweetener and other excitotoxins, possibly unknowingly. <http://web.me.com/rblaylock/> And maybe they don't have the chemtrails there that you may have been victim to in the past. [http://en.wikipedia.org/wiki/Chemtrail\\_conspiracy\\_theory](http://en.wikipedia.org/wiki/Chemtrail_conspiracy_theory) People with a still usable brain can see that some of the trails slowly descend and widen. Well, I can. You get the idea ;-)

Alex Chernavsky (2010-10-25 12:09:36)

Since the putative brain-enhancing effect of the walnuts is probably subtle, can we reasonably expect the Chinese to have discovered it in the absence of careful, quantitative testing? I've experimented with making a type of walnut butter by using a blender to combine shelled walnuts and coconut oil. It tastes better than coconut oil alone, though it's still not exactly tasty. I've been eating it in addition to flaxseed oil. Now that I think about it, though, I wonder if grinding-up the walnuts makes the omega-3 degrade any faster.

Willy (2010-10-25 12:41:17)

Could it be the L-arginine (a precursor to nitric oxide) content in walnuts? The use of similarities can be seen also in herbal remedies (maybe first they use the plant because a similarity in shape with the organ and then discard if useless) and Bach Flower Remedies (e.g. the flower that opens early is good to be more alert). Sorry for the oversimplification.

q (2010-10-25 17:05:18)

interesting that she would have been able to draw a walnut. most americans couldn't. is realistic drawing something that many or most chinese learn as part of their education?

Seth Roberts (2010-10-25 17:19:13)

q, she couldn't really draw a walnut but since I had an idea I was able to figure it out. Alex, yes, that is what I find most interesting: if it turns out the Chinese belief is right, how did they notice? Gunnar, you are right the water is different. In America I drink filtered tap water. In China, I drink bottled water with minerals added. In both countries I eat a lot of Splenda.

Stephen M (Ethesis) (2010-10-25 19:33:09)

[http://books.google.com/books?id=yuaSjvZr3ikC&pg=PA71&lpg=PA71&dq=walnut+oil+Lecithin&source=bl&ots=qf2uWLAJWJZ&sig=nRpesXgE4PyCwo8xJ2vDOdAJtO8&hl=en&ei=Yj3GTKGaNcO78gaS260p&sa=X&oi=book\\_result&ct=result&resnum=9&sqi=2&ved=0CEkQ6AEwCA#v=onepage&q=walnut%20oil%20Lecithin&f=false](http://books.google.com/books?id=yuaSjvZr3ikC&pg=PA71&lpg=PA71&dq=walnut+oil+Lecithin&source=bl&ots=qf2uWLAJWJZ&sig=nRpesXgE4PyCwo8xJ2vDOdAJtO8&hl=en&ei=Yj3GTKGaNcO78gaS260p&sa=X&oi=book_result&ct=result&resnum=9&sqi=2&ved=0CEkQ6AEwCA#v=onepage&q=walnut%20oil%20Lecithin&f=false) I was hoping that walnut oil had Lecithin, but it appears it doesn't.

Stephen M (Ethesis) (2010-10-25 19:37:43)

Also: <http://www.bbaby.us/that-kind-of-walnut-oil-product-effect-good-child-clever-walnut-oil-soft-capsule.html>

Alex Chernavsky (2010-10-25 19:42:50)

Seth, I'm surprised that you eat a lot of Splenda. I used to eat it, but I gave it up after reading your blog post titled, "Splenda Reduces Gut Bacteria in Rats" (from Nov. 22, 2009). Do you now have reason to believe that Splenda is less harmful than other sweeteners?

Seth Roberts (2010-10-25 21:45:57)

Alex, no I don't have reason to believe it is less harmful. You make a good point, I should try giving it up and see what happens. Stephen, thanks for the references. The book makes a good point, that walnuts have far more omega-6 than omega-3. They have more omega-3 than other nuts but, if omega-6 is bad, you could easily argue that walnuts should have a bad effect on brain function.

Kirk (2010-10-26 04:44:23)

I replaced Splenda with Now Stevia Balance, which contains 900 mg inulin per packet. Inulin is a prebiotic; as you are probably aware, prebiotics stimulate the growth of helpful gut bacteria. I have migrated to the belief that prebiotics are as important as probiotics. Now that I ingest more prebiotics daily, I have fewer issues with dairy foods. As for walnuts, I wonder if a Traditional Chinese Medicine practitioner would recommend walnuts for brain function? There may be a difference between folklore and what TCM recommends. Another thing about walnuts . . . the Omega 6 to 3 ratio of English walnuts is 4:1 (or 5:1, depending on source), which is a decent ratio for a food which is typically added to a meal. If one's meal consists of rice, soy sauce, vegetables, fish, and a few walnuts, the overall ratio probably calculates close to a desirable Omega 6:3 ratio.

Thomas Seay (2010-10-26 09:31:57)

I think you are going to be hard pressed to find any chemical component to support the walnut-brain theory. It is based on a sort of doctrine of correspondence and it will defy any rational investigation. Let's take another example of this. According to the Chinese, beans will help the kidneys (because most beans look something like a kidney). I dare you to find a chemical component of beans that are particularly good for the kidneys. What we are dealing with here is human projection. The same logic that gave the planet Mars its name and said that it ruled anger, aggression and war on Earth (most certainly in part because of its red color). Now, if you want to consider whether or not such a thing is true, you may want to look at statistics (as Gauqelin did with Mars), but I don't think if you went up and took a soil sample (or measured any other physical parameters) of Mars that you would find anything that would suggest that it could influence aggression on Earth. Same goes for walnuts, beans, or tiger testicles, etc, vis a vis human health.

G (2010-10-26 10:09:13)

Seth, Alex - people have instincts for what is good for them. Babies self-select a balanced diet when given a variety of foods to choose from freely. This implies that there is a nutrition 'sense'. This sense may be strong enough to communicate with the conscious mind. If only a few 'sensitives' develop the idea that walnuts enhance the brain, they may disseminate the idea into their culture even if most people are not nutritionally sensitive.

I Trust My Body (2010-10-26 16:32:41)

Some facts about walnuts and cleverness: 1. FACT: There are lots of articles in scientific and medical journals about studies supposedly showing the health benefits of walnuts. 2. FACT: Many of those studies were funded by the California Walnut Commission. 3. CONCLUSION: Walnut lobbyists are very clever people.

Seth Roberts (2010-10-26 23:23:56)

They are especially clever in their ability to influence Chinese folklore.

Z (2010-10-26 23:44:00)

[1]Paleo Diet Basics: Why I Eat Walnuts.Contains a number of links to possible benefits of eating walnuts: Cancer Prevention Cardiovascular Health Cognitive Health

1. <http://donmatesz.blogspot.com/2010/03/paleo-diet-basics-why-i-eat-walnuts.html>

Gunnar (2011-02-25 06:42:07)

Simplified this could be summed up as "walnuts are good for the brain": Alzheimer's breakthrough - scientists discover omega-3s override the bad gene causing Alzheimer's [http://www.NaturalNews.com/031499\\_omega-3s\\_Alzheimers.html](http://www.NaturalNews.com/031499_omega-3s_Alzheimers.html)

Seth Roberts (2011-02-25 14:34:24)

Gunnar, Since I wrote this post I've learned more. I don't think walnuts are good for the brain.

## Assorted Links (2010-10-25 15:42)

- [1]talk by Harold McGee about science and cooking. Starts at Minute 20.
- [2]Doreen Kimura's life in science. Kimura is an excellent neuropsychologist.
- [3]Folly in British government re climate change.
- [4]The Hockey Stick in a nutshell

Thanks to Paul Sas.

1. <http://www.youtube.com/watch?v=odIegtceB4M>
2. <http://www.sfu.ca/~dkimura/articles/CJEP.htm>
3. <http://bishophill.squarespace.com/blog/2010/10/21/lord-marland-shames-parliament.html>
4. <http://bishophill.squarespace.com/blog/2010/10/23/mckitrick-on-the-hockey-stick.html>

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Chris Sturdy (2010-10-25 21:13:56)

Hi Seth, I was at the CSBBCS conference in Montreal and attended Doreen's acceptance speech for the Hebb award that is the basis for the text on the web pages. It was very cool to see just how much she contributed. Cheers, Chris

John (2010-10-26 15:24:07)

The youtube video on cooking is labeled "private."

Vic (2010-10-26 23:39:19)

Has something happened to Nathan Meyers? He has yet to retort to Seth's post on the hockey stick... very atypical and somewhat worrying.

## Periodontitis and Omega-3 (2010-10-27 06:15)

A few years ago, [1]after I started taking about 3 tablespoons/day of flaxseed oil, my dentist told me my gums were much healthier. They were less red, more pink. Friends and blog readers who took flaxseed oil in similar amounts [2]noticed the same thing. Tyler Cowen's gums improved so much [3]he no longer needed gum surgery.

[4]An epidemiological study in the November Journal of the American Dietetic Association reports correlations between omega-3 intake and periodontitis (an extreme form of inflamed gums). The more omega-3, the less periodontitis. I'm sure that sufficient omega-3 intake cures periodontitis so this study has methodological interest for me. One interesting point is that the study reached a correct conclusion – contrary to [5]the nihilism of John Ioannidis. Another is that the correlations were weak. The risk of periodontitis was only 20 % lower in the group (quintile?) with the highest omega-3 intake. Although there were 9000 subjects, there was no significant correlation with linolenic acid, the form of omega-3 found in flaxseed oil.

Thanks to Sean Curley.

1. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>
2. <http://www.blog.sethroberts.net/2007/11/06/omega-3-and-dental-health-even-more/>
3. <http://www.blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>
4. [http://www.sciencedaily.com/releases/2010/10/101026090655.htm?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+sciencedaily+%28ScienceDaily%3A+Latest+Science+News%29](http://www.sciencedaily.com/releases/2010/10/101026090655.htm?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+sciencedaily+%28ScienceDaily%3A+Latest+Science+News%29)
5. <http://www.blog.sethroberts.net/2010/10/13/the-contribution-of-john-ioannidis/>

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Alex Chernavsky (2010-10-27 06:26:42)

Seth, do you have a theory as to why the correlations were weak, and why no effect from linoleic acid?

jeff borsato (2010-10-27 13:04:10)

this issue has been brought up before, its difficult to refer to fish oil or any sort of "omega 3" oil in general terms. general label "fish oil" cod liver oil fermented cod liver oil cod liver with K2 wild salmon oil flax flax/fish blends all could react differently in tests and could deliver different results depending more on the existing diet (ie: noticeable effects when omega 6 ratio is brought back to balance vs. none if diet remains) we would really need to see a differnt approach to these omega 3 studies.

Robert (2010-10-27 13:12:17)

Seth, I would be interested to know what you eat over the course of the day to put this in context. Still one meal plus 2 fruits and oil? What does your meal consist of usually?

Seth Roberts (2010-10-28 05:55:40)

Alex, the correlations were weak and no effect was found for linolenic acid because (a) there are many sources of error (such as dietary recall, measurement of omega-3 in foods, etc.) and (b) the range was small. People in the highest group didn't consume that much, compared to what I consumed. Robert, I eat one ordinary low-carb meal (no rice, no potatoes, no bread, no noodles) plus 2 servings of yogurt with walnuts plus 1/2 stick of butter plus 2 tablespoons flaxseed oil. Jeff, my finding that flaxseed oil quickly improved how well my brain worked can be a bioassay for omega-3: a way to compare different sources by seeing how effective they are inside the body. I intend to compare flaxseed oil with ground flaxseed, for example.

Erik (2010-10-28 19:09:31)

I had a similar experience. I had badly bleeding gums - even just brushing (not flossing) would cause bleeding. It would be red when I spit out, not just pink. I started taking cod liver oil (Carlson's) - 1 teaspoon per day. Originally I started taking it for general health, not thinking there would be any relation to the health of my gums. What I subsequently noticed was that the bleeding gums almost completely disappeared. That plus flossing regularly (every other day) seems to have eliminated the problem completely for me.

Brendan (2010-11-02 12:08:36)

Seth, why do you take flaxseed instead of cod liver oil. Just a pointer to a previous post or short answer if you have time. Thanks for the great blog. BC

## **The C.I.A. and Self-Experimentation (2010-10-28 06:04)**

I learned of [1]The Human Factor: Inside the CIA's Dysfunctional Intelligence Culture by [2]Ishmael Jones (a pseudonym) from [3]an interview on the New Yorker website. This comment by the author interested me:



Once the C.I.A. became a place to get rich, effective operations ended. Today, more than ninety per cent of C.I.A. employees live and work entirely within the United States, in violation of the C.I.A.'s founding charter [to supply only foreign intelligence].

I could say much the same about science: Once it became a place to get rich (or at least get large grants), effective science became a lot less common. A great deal of science is done by drug companies. They pay a lot. Some of their scientists are surely brilliant but their talents are wasted by the need to find solutions that will be highly profitable. My self-experimentation found solutions that cost nothing and make far more intellectual sense. I was able to do something that didn't produce a lot of publications because it wasn't my job.

Many skills make good full-time jobs. Science doesn't. There is too much pressure for short-term results. Without short-term results, you may lose your job or your grant. (Or, in China, most of your income.) Nor is science a good source of status. If you want your science to provide your status, you will be under great pressure to conform. Yet for practically all scientists, it's their full-time job and their main source of status. This may not make it impossible for them to do good work but I suspect it comes close to doing so. My self-experimentation was effective not only because it was fast and cheap (per experiment) but also because I could be slow (per publication) and do something low-status.

1. <http://www.amazon.com/gp/product/159403382X/ref=>

2. <http://www.ishmaeljones.com/>

3. <http://www.newyorker.com/online/blogs/books/2010/10/interview-with-an-ex-spy-ishmael-jones-on-his-book-the-cia-and-the-lawsuit.html>

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Gunnar (2010-10-28 16:18:04)

Officially there are 16 "Intelligence" Agencies established for the USA [http://en.wikipedia.org/wiki/United\\_States\\_Intelligence\\_Community](http://en.wikipedia.org/wiki/United_States_Intelligence_Community) Does that seem excessive to anyone besides me? I find it odd there's need for one at all, but actually 16? I read somewhere that the CIA is permitted to keep its profit, which goes in line with the "get rich" part. And I concur with your science statements, Seth. Simplicity rules, especially with so much disinformation around; self verifiably insight is needed. And self experimentation actually gives results that are relevant to you, the one experimenting ;-) I'm at a point where I'm sure science is heavily used to dumb society down.

### **Madame Bovary and Self-Experimentation (2010-10-28 14:16)**

Someone asked Lydia Davis: Why another translation of Madame Bovary? [1]She replied:

In the case of a book that appeared more than 150 years ago, like Madame Bovary, and that is an important landmark in the history of the novel, there is room for plenty of different English versions. For example, 1) the first editions of the original text may have been faulty, and over the years one or more corrected editions have been published, so that the earliest English translations no longer match the most accurate original; 2) the earliest translators (as was the case with the Muirs rendering Kafka) may have felt they needed to inflict subtle or not so subtle alterations on the style and even the content of the original so as to make it more acceptable to the Anglophone audience; with the passing of time, we come to deem this something of a betrayal and ask for a more faithful version. 3) Earlier versions may simply not be as good in other respects as they could be—let another translator have a try.

This reminds me of [2]my three-part answer to the question a journalist asked me: why it mattered that butter improved my arithmetic speed by 5 %.

Just as I disliked my answer, I disliked Davis's answer. It's hypothetical ("may have been faulty", "may have felt", "may not be as good as they could be"). It's flat and obvious (earlier versions may have room for improvement). It's irrelevant (bad translation of Kafka does not justify new translation of Flaubert).

I had trouble figuring out a better answer to what I was asked, but I could instantly say what Davis should have written: The story of how she decided to do a new translation. ("I began to think about doing a new translation when . . . ") That would have been a lot more emotion-laden and not hypothetical, obvious, or irrelevant.

As soon as I thought what Davis should have said, I could see what I should have said. I should have answered the journalist's question like this: Why does 5 % matter? Let me tell you why I was so excited by this. . . .

Via [3]Marginal Revolution.

1. <http://www.theparisreview.org/blog/2010/09/15/why-a-new-madame-bovary/>

2. <http://www.blog.sethroberts.net/2010/10/22/why-small-improvement-big-deal/>

3. <http://www.marginalrevolution.com/marginalrevolution/2010/10/lydia-daviss-translation-of-madame-bovary.html>

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Steve G. (2010-10-29 07:06:05)

Seth, You have discovered the power of narrative. Ms. Davis answered like a (typical) lawyer, listing reasons and couching her answer with qualifications. You're suggesting that she (and you) should have answered like a smart trial lawyer, with narrative to bring the issues to life.

Seth Roberts (2010-10-30 00:10:02)

Steve, yeah, that's good advice.

Alex Chernavsky (2010-10-30 13:51:41)

Seth wrote, "Why does 5 % matter? Let me tell you why I was so excited by this..." How would a continuation of this explanation differ from what you [Seth] actually told the journalist?

Seth Roberts (2010-10-31 08:01:44)

It would be more emotional and less list-like. More focus on one reason.

## **Placebo Non-Disclosure (2010-10-30 16:14)**

[1]A new study in the Annals of Internal Medicine asked how often placebo-controlled medical studies made clear what the placebo was. [2]The abstract says:

Most studies did not disclose the composition of the study placebo.

Which may give the wrong impression. About 90 % of the studies they looked at did not say what the placebo was.

The paper illustrates the problem with an example:

In one of these studies [where the placebo was not described], the authors commented that “The lack of any overall effect in patients with myocardial infarction might be related to the unexpectedly low mortality rate in the placebo group.” The possibility that the placebo composition may have influenced this “unexpectedly low mortality” was apparently not considered.

Thanks to Gunnar Schr der.

1. <http://www.annals.org/content/153/8/532.full.pdf+html>
2. <http://www.annals.org/content/153/8/532.abstract>

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### **My Experience of Sickness (2010-10-30 18:28)**

I am at a hotel. Yesterday I decided to take a walk. A short distance from the hotel I started to walk uphill. It was surprisingly hard. I realized I was sick.

I think this is what happens when your immune system is working properly: Sickness stops being obvious. I think my immune system is working well [1] because I sleep well and eat plenty of fermented foods.

I have never heard sickness described like this by anyone else. I have heard it described in terms of obvious suffering thousands of times. Which suggests a lot of room for improvement.

1. <http://escholarship.org/uc/item/2xc2h866>

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tim perkis (2010-10-30 21:58:55)

I remember thinking the exact opposite of this. When I was younger, getting sick was obvious: an intense experience of coughing, running nose, etc., which passes in a day or two. Now, in my 50's, it seems there is some doubt, a general feeling of malaise that may last a week or two. Aren't the symptoms we identify as sickness mostly the reactions of the immune system? Might not their clear-cut appearance the sign of an immune system that is working well, and the absence of clear-cut symptoms a sign of a weaker immune system?

JBB (2010-10-31 04:27:41)

No, it's not unheard of. When I was spending a goodly amount of time cycling, I was measuring my basal heart rate every morning. It was a good way to tell if my system had recovered from the extra strain I had put it through after a day of training – if the basal heart rate was still elevated, I knew to take it easy to let my system settle down a little more. An unexpectedly high basal heart rate, such as the morning after a non-training day, had to mean something else. It usually turned out to mean I was coming down with a cold or some similar illness. Other than that I was symptom-free for at least another day before I started getting snuffly.

Nancy Lebovitz (2010-10-31 07:35:12)

I think malaise and obvious symptoms are different things– it's possible to have either or both. The only explanation of malaise I've heard is that it's the liver sequestering iron to keep it away from bacteria, but I don't know if it's sound.

jeff borsato (2010-10-31 08:52:49)

I view the immune system like a muscle that can be trained and strengthened, the longer one goes without getting sick doesn't mean your immune system is resting, it simply means it's busy doing its job and doing it well. I wonder if the longer you go without getting sick the stronger your immune system becomes, hence why the image of those 70 year old men who have never been sick in their entire lives are the product of a sort of self-propagating cycle of progressively stronger immune systems.

Aaron Blaisdell (2010-10-31 09:26:44)

Seth, that's an astute observation, but it does have precedent. Tom Minor, a psychologist at UCLA is involved in research on the role of sickness-induced depression. He says the cytokines play a role in regulating this behavior and that its function is to make sure you don't exert yourself so that you can recover. He also said the neural circuit responsible for sickness-induced depression develops rather late in childhood which is why when little kids are obviously sick (fever, runny nose, respiratory symptoms, etc.) they still try to run around and play and act like they aren't sick. They actually don't have this neural mechanism yet and so they don't feel "run down" like adults do when they have a cold/flu etc.

Seth Roberts (2010-10-31 14:32:53)

JBB, I made similar observations with doing the treadmill. If I could come close to my previous best I must be sick. In my case it didn't progress to obvious sickness, it was the only clear sign. Tim, you write "Might not [the] clear-cut appearance [of the symptoms we identify as sickness] be the sign of an immune system that is working well, and the absence of clear-cut symptoms a sign of a weaker immune system?" I read this idea in the New York Times a month or so ago. In my case, the shift from clear-cut symptoms to nearly-invisible symptoms coincided with much improved sleep. I think everyone would agree that better sleep should make your immune system work better (if anything) rather than worse. I believe the easily-visible signs of illness show that your immune system was slow to react or reacted too weakly at first. Because it was slow to react/weak at first, it had to ultimately do more. With a fast/strong initial reaction, it doesn't have to do as much.

G (2010-10-31 19:28:59)

I haven't had any obvious sickness in the last two years and your observations are the same as my own: brief, barely-there sickness; rare colds with hardly any nasal wetness but a sense of slight depletion, etc.

Nancy Lebovitz (2010-10-31 19:37:24)

I think some of it is a matter of which diseases you happen to get. A couple or three times, I've had bad malaise going on for weeks with barely perceptible cold symptoms– and iirc, other people in my social circle had the same combination. Other times, I get noticeable symptoms without much malaise, and there's no obvious correlation with my general state of health.

thehova (2010-11-01 10:32:23)

This NYTimes article sort of concurs with you: <http://www.nytimes.com/2010/10/05/opinion/05ackerman.html>

Seth Roberts (2010-11-02 00:29:21)

thehova, you write: "This NYtimes article sort of concurs with you". I wonder who you mean by "you". I disagree with the main point of that article, which is that having a stronger immune system causes more cold symptoms. As I said, I believe if your immune system is working better it will jump on the invading viruses before they replicate a lot and suppress them with little fuss and few visible symptoms. It's when the immune system is weak (= slow to respond) that you end up with massive symptoms. Because by then you need a massive response to get rid of the virus.

thehova (2010-11-03 21:32:12)

ok, yeah. But you both agree that symptoms from a cold stem from the immune system and not the cold itself.....right? I'm guess most people don't understand that.

Seth Roberts (2010-11-04 02:31:26)

Well, as a result of evolution, virus fragments in our blood make us tired. So if we get sick and then feel tired (because our immune system has destroyed some of the viruses), is that from "the cold itself" or "the immune system"? But yeah, our immune system is big and well-connected with the rest of the body. The viruses are tiny and unconnected. It follows that visible changes are much more likely to be due to the huge thing (the immune system) than the very tiny thing (the viruses).

## 5.11 November

### Dangers of Supplements (2010-11-02 00:58)

Via [1]Robin Hanson I found [2]this study of the effects of antioxidant supplements. It studied five (e.g., Vitamins A and C). Overall they were slightly harmful, except selenium.

This isn't intuitive – why should they differ? – but fits well with previous work:

1. Evidence for benefits of selenium is overwhelming. You can look at a county-by-county map of US cancer rates and see a sharp drop along a certain line in the northeast. The line separates different geology. There is much more selenium in the soil on the low-cancer side of the line. Yet another case where correlation is powerful evidence for causation. An experiment with selenium supplementation found a reduction in cancer.
2. Several years ago, [3]two experiments found Vitamin A supplements increased lung cancer. ([4]Another study.) [5]Later experiments cast doubt on Vitamins C and E. As one of Robin's readers put it: "two of which were previously well known to be bad for you."

Given this previous research, which is far more persuasive than the current study, the interesting contribution of the new study is methodological: will a meta-analysis of epidemiological studies reach the right conclusions? Will the signal outweigh the many sources of bias and error? In fact, it did. [6]Again suggesting that severe critics of epidemiology, [7]such as John Ioannidis, go too far.

1. <http://www.overcomingbias.com/2010/10/supplements-kill.html>

2. <http://jama.ama-assn.org/cgi/content/abstract/297/8/842>

3. <http://www.cancer.gov/clinicaltrials/results/summary/2004/final-care1204>

4. <http://www.nejm.org/doi/full/10.1056/NEJM199404143301501>

5. <http://www.telegraph.co.uk/science/7706860/Too-many-vitamin-tablets-could-be-bad-for-your-health.html>

6. <http://www.blog.sethroberts.net/2010/10/27/periodontitis-and-omega-3/>
7. <http://www.blog.sethroberts.net/2010/10/13/the-contribution-of-john-ioannidis/>

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jimrandomh (2010-11-02 04:59:17)

Serious questions have been raised about the methodology of this meta-study. See [http://lesswrong.com/lw/20i/even\\_if\\_you\\_have\\_a\\_nail\\_not\\_all\\_hammers\\_are\\_the/](http://lesswrong.com/lw/20i/even_if_you_have_a_nail_not_all_hammers_are_the/) for the details. While Robin Hanson brushed them off, he did so because of motivated cognition, and he has not actually looked at the data.

G (2010-11-02 09:37:05)

If someone ate nothing but cheese, do you think that a multivitamin supplement would do them more harm or good?

### **Shallows Net (2010-11-02 03:59)**

When I told my Chinese friend I read The New Yorker, she said she knew it was a very good magazine. A famous writer she knew of had written for it for 50 years. He was dead now. She didn't remember his name. One of his books was Shallows Net.

She meant Charlotte's Web by E. B. White.

A well-read and influential writer, she said.

Well-read, yes, influential, no, I said.

The Elements of Style might have been influential had its advice been good. Alas, it wasn't. "Omit needless words." "Be clear." How to form the possessive. Please. I once took a short-story-writing class. When typing your story, the teacher said, put two spaces after a period.

Criticism of The Elements of Style [1]here, [2]here, and [3]here.

1. <http://chronicle.com/article/50-Years-of-Stupid-Grammar/25497>
2. <http://grammar.quickanddirtytips.com/strunk-and-white.aspx>
3. <http://dgmeyers.blogspot.com/2009/11/elements-of-style.html>

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G (2010-11-02 09:39:47)

These days I keep reading people who think that Hemmingway is the benchmark - not just economical, but self-consciously minimalist. Still like Cormac McCarthy though.

pond (2010-11-03 05:03:59)

Not influential? A book that has been required reading for just about every single college student for 50 years, and a lot of high-school students too. A book that is top of the sales charts on 'Writers' Toolkit' must-have shelves. A book that darn near

every writer in English in North America has read. I guess what you're saying is, 'nobody ever followed its advice.' I wonder though if even that supposition, assuming it could possibly be true, might not be evidence of 'influence' since saying that every working writer has read the book and done the opposite, has actively rejected its 'bad' counsel, would be influential in a negative sense. Even the controversy over the book indicates how influential it has been. You don't go out of your way to take time and effort to write a 'this book is garbage' tract unless you have read the book in question, felt oppressed by it somehow, feel that it somehow represents the Official Voice of the Establishment that crushes your creative free spirits, and felt the utter need to speak out against it. Saying 'it can't be influential because its advice is bad' is like saying 'Hitler was insignificant in German history because his policies were wacky.' Stick to eating butter and telling us all how, contrary to scientific studies, you KNOW that it makes people smarter...

Seth Roberts (2010-11-03 08:14:42)

pond, a book that tells people to put two spaces after a period is not influential, no matter how many people read it. That was my point. A book that tells people how to form the possessive of a noun (and similar anodyne stuff) is not and can never be influential, no matter how many people read it. That such a book is "required reading for almost every college student" tells you something about the professors who assign it. I really did have a writing teacher who told us to put two spaces after a period, which shows how divorced from reality some writing teachers are. you say my claim about butter is "contrary to scientific studies" – such as?

Alex Chernavsky (2010-11-03 10:15:58)

Seth – do you have suggestions for style guides that are better than Strunk & White? @pond – for what it's worth, the book was never assigned to me in either high school or college.

Seth Roberts (2010-11-03 15:50:57)

From Tim Harford I learned of Style: Towards Clarity and Grace by Joseph Williams: <http://www.amazon.co.uk/Style-Clarity-Chicago-Writing-Publishing/dp/0226899152> Which does have good advice.

Laura (2010-11-03 18:16:01)

I just had an interesting conversation with someone at my school, too. Me: Are you teaching "Hormones and Behavior" next semester? I was going to take that class, but I can't because it conflicts with my work schedule. Psychology professor: I'm sorry, what did you say?...Oh, I thought you said "abnormal behavior." I was going to say that I teach that everyday!

thehova (2010-11-03 21:40:45)

I guess it might not technically be "influential", but the book is definitely a success. I think the key to the book's success lies in how short it is. Other style and grammar books are often hundreds of pages long.

thehova (2010-11-03 21:43:03)

I really like economist Greg Mankiw's recommendations: <http://gregmankiw.blogspot.com/2006/10/how-to-write-well.html>

Nathan Myers (2010-11-04 01:41:33)

A better assessment of EoS would be "unfortunately influential". But E. B. White wrote way more than EoS, and while his other writings (aside from CW) are not individually as well known, in aggregate they were read by millions of people over many decades. Most people could only wish to be so influential.

Seth Roberts (2010-11-04 02:40:34)

Mankiw makes some good points. "Don't use very" is something I learned pretty late.

## In-Flight Fermented Foods? (2010-11-02 23:42)

I've tried taking fermented foods on airplane flights. Here's what I've learned:

1. The rules speak of "medicinal" exceptions to the no-liquid policy. In practice, this means: (a) You need a doctor's note and (b) you must need the medicine during the flight .
2. The rules say no gels. It turns out that yogurt is a gel.
3. What about Japanese pickles in sake dregs? When they were in a glass jar, with a lot of dregs (50 % dregs, 50 % pickle), the answer was no: Dregs are like gels. When they were in a plastic package (98 % pickle, 2 % dregs), they were okay.

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CD (2010-11-03 09:06:49)

A couple years ago, I found out peanut butter was also a gel.

Mike G (2010-11-03 18:09:34)

I have always been able to get hummus on the plan. Possibly because the agents do not know what hummus is.

Aaron Blaisdell (2010-11-04 17:14:59)

If the food "gel" would survive being frozen, try freezing the food into a solid to take with you on the plane. You just have to find some way to quickly bring it to a comfortable temperature for consumption.

G (2010-11-04 20:31:22)

Now printer cartridges will be banned. Because of course terrorists take about a year to conceive of packaging explosives in a new object... When they start disguising bombs *as* planes we're screwed.

## Art Majors & UC Berkeley (2010-11-03 08:36)

In [1]a fascinating bit of intellectual history, Andrew Gelman says he started off in math but came to doubt he was good enough at pure math. This reminds me of something one of my Tsinghua students told me a few days ago. An art major at his high school (the top high school in Beijing) was accepted at UC Berkeley with a big scholarship on the condition that the art student compete for Berkeley in a college math competition.

1. [http://www.stat.columbia.edu/~cook/movabletype/archives/2010/11/fragment\\_of\\_sta.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2010/11/fragment_of_sta.html)

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laura (2011-04-26 20:50:19)

i think professor gelman has cool comments on this blog. he is visiting ucb now



## Why Small Change = Big Deal (revised) (2010-11-04 02:33)

Last week a journalist asked me why the 5 % improvement in arithmetic speed produced by butter was important. In [1]an earlier post I said I'd given a poor answer.[2]A few days later I figured out what I should have said. The article was delayed, it turned out, so there was time to use my new strategy. I answered the question like this:

I was excited by this discovery because it was so big and unexpected. Someone once found a correlation between IQ and reaction time. The higher your IQ, the faster your reaction time. I don't know what the exact function was but a decrease of 30 milliseconds might correspond to 10 more IQ points. I felt a little bit smarter. It was so unexpected because hardly anyone was going around saying butter is good for you – and thousands of people were saying it is bad for you. The only ones saying butter is good for you were the followers of Weston Price, and they had almost no evidence for what they were saying. Compared to their evidence, my evidence was crystal clear. Among mainstream nutritionists, butter is universally scorned. Yet my data suggested exactly the opposite – that it had a large amount of an important nutrient I wasn't getting enough of. If mainstream nutrition advice could be so wrong, it would have big implications for what we eat. Maybe other things we are constantly told about what to eat are also wrong.

I discovered this big effect of butter by substituting butter for pork fat. So the reason butter was so helpful wasn't anything as simple as animal fat is food for us. I ate plenty of animal fat before I started eating lots of butter. The reason was something more specific.

1. <http://www.blog.sethroberts.net/2010/10/22/why-small-improvement-big-deal/>

2. <http://www.blog.sethroberts.net/2010/10/28/madame-bovary-and-self-experimentation/>

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peter (2010-11-04 04:47:15)

did you ever get an answer to the AGE issue? (i.e., hi Advanced Glycation End-products generated by consuming butter)

weightmaven (2010-11-04 06:20:25)

Curious that you didn't think to mention that the WAPF folks believe that this important nutrient in butter is vitamin K2 (see <http://www.westonaprice.org/abcs-of-nutrition/175-x-factor-is-vitamin-k2.html> ). In terms of your testing, have you considered trying high vitamin butter oil instead of the copious amounts of butter?

Seth Roberts (2010-11-04 06:35:00)

yes, I think the answer is that ordinary butter – not heated after purchase – is high in AGEs.

jeff borsato (2010-11-04 06:47:35)

Butter is high in Vitamin K (K2) which is being studied in greater detail as of late and could be involved in a host of processes that contribute to greater health overall. Stephan's blog has some of the soundest Vitamin K related posts around, if it can reverse arterial calcification and improve the pathways for absorption of other critical nutrients, perhaps it can results in a slightly sharper and better functioning brain: <http://wholehealthsource.blogspot.com/2009/03/latest-study-on-vitamin-k-and-c> oronary.html

Seth Roberts (2010-11-04 07:01:03)

The effect of butter is so large and fast I find it hard to believe it is due to a micronutrient, such as Vitamin K2. But time will tell. Have I considered high vitamin butter oil? thanks for the suggestion. to answer your question: not explicitly. So far I haven't

tried even one variation. I'm trying to figure out why my reaction time became much lower soon after I returned to China.

G (2010-11-04 08:39:12)

Mistake? - "the reason butter was so helpful wasn't anything as simple as animal fat is food for us" You meant "good for us"?

Charles (2010-11-04 12:56:51)

Just FYI, I have a very high IQ (not bragging-high IQ and \$2.00 gets you a latte), but very mediocre reaction time. In that respect, I guess I'm an outlier.

G (2010-11-04 20:28:38)

Heh, maybe Advanced Glycation End-products *are* what's speeding the brain in this case. Maybe it's a reaction to damage.

tom (2010-11-05 08:01:46)

One reason it matters so much: passing a threshold for all-or-nothing activities. If I could jump 5 % higher, I might be able to dunk a basketball (ok, this is not true of me but it is of somebody). Dunking is an activity that is yes/no. If my kid had 5 % quicker reaction times, he might be a striker instead of a defender. I bet there are things like this in non-sports life all the time. If I could think 5 % more quickly, that might make me comfortable enough with my speaking that I would be willing to challenge someone smart in a group with me who says something I disagree with.

Dustin Andrews (2010-11-05 16:56:07)

After reading both answers, I am not convinced the quality of the answers is that striking. I sort of prefer the three part answer. I am partial to lists.

## **GRE = God Read English (2010-11-04 06:56)**

Chinese students say GRE stands for God Read English. The reading passages in GRE prep books are so difficult only God could read them.

More Maybe God will comment on your blog, said a Chinese friend. "I haven't passed the GRE."

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Mark Mo (2010-11-06 02:14:50)

Some people study a second language for the fun of it, but for many Chinese students, they have to study English in order to pass exams. As there are so many Chinese students, the competition is very fierce. In order to select the "best" student, the exams are usually very difficult but not practically. Sometimes Chinese students complain that they will never have chance to use some GRE words when they study in US because the words are seldom used by US local people. There is no doubt that there are some problems in the Chinese education system, but sometimes we have no choice because of the population, limited educational resources and so on. But I think things will get better as China moves forward.

## **Assorted Links (2010-11-04 21:20)**

- [1] Fermented salsa

- [2]Vitamin D and schizophrenia
- [3]Gut bacteria control fruit fly sex. "Imagine taking a course of antibiotics and finding your sexual preferences have changed."
- [4]The New York Times misdescribes Japan. Eamonn Fingleton is an excellent writer.

Thanks to Paul Sas, Anne Weiss, and JR Minkel.

1. <https://tryingtraditional.wordpress.com/2008/08/03/lacto-fermented-salsa/>
2. <http://www.scientificamerican.com/article.cfm?id=more-vitamin-d-could-prevent-some-psychosis>
3. <http://blogs.discovermagazine.com/notrocketscience/2010/11/01/gut-bacteria-change-the-sexual-preferences-of-fruit-flies/>
4. <http://www.unsustainable.org/index.asp?type=article&contentID=62>

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Thomas Seay (2010-11-05 09:11:50)

With the mania for sun-block and sun avoidance, I guess we can expect an increase of schizophrenia, if, indeed, diminished levels of Vitamin D is a culprit.

Alex Chernavsky (2010-11-22 21:26:54)

I made the fermented salsa. It's pretty good, though not quite as good as the fresh salsa that you might get at a decent Mexican restaurant.

## **Plagiarism by British Drug Tsar (2010-11-06 15:18)**

[1]Leslie Iversen, a retired Oxford professor of pharmacology, is Chair of the British government's Advisory Council on the Misuse of Drugs. He is also a Fellow of the Royal Society, a foreign associate of the National Academy of Sciences, and chairman of the board and director of Acadia Pharmaceuticals, San Diego.

In 2008, Oxford University Press published a book by Iversen called [2]Speed, Ecstasy, Ritalin: The Science of Amphetamines. Four passages in it are very close to [3]a website about MDMA (Ecstasy). The duplicated material was on the website [4]in 2002.

Iversen (p. 151): MDMA was profiled by the San Francisco Chronicle as 'The Yuppie Psychedelic' (10 June 1984). In Newsweek, J Adler ('High on "Ecstasy"', 15 April 1985) likened his MDMA experience to 'a year of therapy in two hours'. Harpers Bazaar described MDMA as 'the hottest thing in the continuing search for happiness through chemistry'. Unsurprisingly, MDMA use soon spread beyond the couch and clinic to the wider world. MDMA's now universal brand-name, "ecstasy", was coined in 1981 by a member of a Los Angeles distribution network. The unnamed distributor apparently chose the name "ecstasy" because 'it would sell better than calling it "Empathy". "Empathy" would be more appropriate, but how many people know what it means?' (Eisner 1989). Condemned by purists as a cynical marketing ploy, the brand-name 'ecstasy' isn't wholly misleading (ecstasy: "an overpowering emotion or exaltation;

a state of sudden intense feeling. Rapturous delight. The frenzy of poetic inspiration. Mental transport or rapture from the contemplation of divine things' (Oxford English Dictionary)). Many first-time MDMA users do indeed become ecstatic. Some people report feeling truly well for the first time in their lives.

Website: MDMA was profiled by the San Francisco Chronicle as "The Yuppie Psychedelic" (10 June 1984). In Newsweek, J Adler ["High on 'Ecstasy", April 15 1985] likened his MDMA experience to "a year of therapy in two hours". Harpers Bazaar described MDMA as "the hottest thing in the continuing search for happiness through chemistry". Unsurprisingly, MDMA use soon spread beyond the couch and clinic to the wider world. MDMA's now universal brand-name, "Ecstasy", was coined in 1981 by a member of a Los Angeles distribution network. The unnamed distributor, quoted in Bruce Eisner's Ecstasy: The MDMA Story (1989), apparently chose the name "Ecstasy" because "it would sell better than calling it 'Empathy'. 'Empathy' would be more appropriate, but how many people know what it means?" Condemned by purists as a cynical marketing ploy, the brand-name "Ecstasy" isn't wholly misleading [ecstasy: "an overpowering emotion or exaltation; a state of sudden intense feeling. Rapturous delight. The frenzy of poetic inspiration. Mental transport or rapture from the contemplation of divine things"]. Many first-time MDMA users do indeed become ecstatic. Some people report feeling truly well for the first time in their lives.

Iversen (p. 157-158): Pure MDMA salt is a white crystalline solid. It looks white and tastes bitter. The optimal adult dose of racemic MDMA is about 120-130 mg (around 2 mg/kg body weight). Pills sold in clubs often contain less. There are gender differences in response; proportionately to body weight, women are more sensitive than men to the effects of MDMA and so their optimal dosage may be lower. The preferentially metabolised (+)-enantiomer ('mirror image') of MDMA is more active, more stimulating, and more neurotoxic than the (-)-enantiomer. MDMA is usually taken orally as a tablet, capsule, or powder.

Website: Pure MDMA salt is a white crystalline solid. It looks white and tastes bitter. The compound is chemically stable. MDMA does not readily decompose in heat, air or light. The optimal adult dose of racemic MDMA is probably around 120-130 mg [around 2 mg/kg of body weight i.e. about 125mg] but optimal dose ranges from perhaps 75mg to as much as 250mg. Pills sold in clubs often contain less. There are gender differences in response; proportionately to body-weight, women are normally more sensitive than men to the sub-acute and longer-term effects of MDMA, so their optimal dosage may be lower. The preferentially metabolised (+)-enantiomer ("mirror image") of MDMA is more active, more stimulating, more dopaminergic, more subjectively rewarding, and more neurotoxic than the (-)-enantiomer. MDMA is usually taken orally as a tablet, a capsule, or a powder.

Iversen (p. 158): ... can promote an extraordinary clarity of introspective self-insight, together with a deep love of self and a no less emotionally intense empathetic love of others. MDMA also acts as a euphoriant. The euphoria is usually gentle and subtle; but is sometimes profound.

Website: ... can promote an extraordinary clarity of introspective self-insight, together with a deep love of self and a no less emotionally intense empathetic love of others. MDMA also acts as a euphoriant. The euphoria is usually gentle and subtle; but sometimes profound.

Iversen (p. 159): MDMA is sensuous in its effects without being distinctively pro-sexual; it is more of a hug-drug than a love-drug. However, MDMA's capacity to dissolve a lifetime's social inhibitions, prudery, and sexual hang-ups means that lovemaking while under its spell is not uncommon. In men, orgasm is more intense than normal but is delayed: MDMA retains a residual sympathomimetic activity, triggering a detumescence of the male organ. To ease MDMA-induced performance difficulties, flagging Romeos increasingly combine Ecstasy with Viagra.

Website: MDMA is sensuous and sensual in its effects without being distinctively pro-sexual. Although once dubbed "lover's speed", MDMA is proverbially more of a hugdrug than a lovedrug: "I kissed someone I was in love with and

almost felt as if I was going to pass out from the intensity”, recalls one American clubber. However, MDMA’s capacity to dissolve a lifetime’s social inhibitions, prudery and sexual hang-ups means that lovemaking while under its spell is not uncommon. Superfluous clothes tend to get shed. In men, orgasm is more intense than normal but delayed: MDMA retains a residual sympathomimetic activity, triggering a detumescence of the male organ. To ease MDMA-induced performance difficulties, flagging Romeos increasingly combine Ecstasy with Viagra.

Bold type indicates differences between the book and the website. [5]University of Oxford policy on plagiarism. [6]Plagiarism by Harvard professors.

1. <http://www.homeoffice.gov.uk/drugs/acmd/about-us/committees-and-members/>
2. [http://books.google.com.hk/books?id=CkAaAZRLf0cC&printsec=frontcover&dq=peed,+Ecstasy,+Ritalin:+The+Science+of+Amphetamines&hl=zh-CN&ei=Zc3VTMKdFpCgvgPR45mBCg&sa=X&oi=book\\_result&ct=book-thumbnail&resnum=1&ved=0CC4Q6wEwAA#v=onepage&q&f=false](http://books.google.com.hk/books?id=CkAaAZRLf0cC&printsec=frontcover&dq=peed,+Ecstasy,+Ritalin:+The+Science+of+Amphetamines&hl=zh-CN&ei=Zc3VTMKdFpCgvgPR45mBCg&sa=X&oi=book_result&ct=book-thumbnail&resnum=1&ved=0CC4Q6wEwAA#v=onepage&q&f=false)
3. <http://www.mdma.net/>
4. <http://web.archive.org/web/20021203021703/http://www.mdma.net/index.html>
5. <http://www.admin.ox.ac.uk/epsc/plagiarism/>
6. <http://authorskeptics.blogspot.com/>

Alex Chernavsky (2010-11-06 16:45:03)

Good catch. How did you notice this? Someone at Google could probably write a script to ferret-out many instances of this kind of stuff.

Seth Roberts (2010-11-06 19:07:24)

Alex, the person who told me about this would prefer not to be identified.

LemmusLemmus (2010-11-07 00:58:51)

Have you or the anonymous person notified his employers about this?

Seth Roberts (2010-11-07 02:01:31)

LemmusLemmus, no.

dearieme (2010-11-07 05:59:05)

Oh dear, he'll have to go and work at Harvard.

x'(x[?]x<sup>TM</sup>x<sup>TM</sup>x<sup>a</sup> x[?]x<sup>a</sup>x<sup>\*\*</sup>x<sup>TM</sup>x[?] (2010-11-07 07:00:31)

Damn! trully a good catch!  $[1] \times' \times \times^{\text{TM}} \times^{\text{TM}} \times^a \times [?] \times^a \times'' \times^{\text{TM}} \times [?]$

1. <http://www.daronet.com/campaign/campaign.asp>

dcgent (2010-11-07 12:44:20)

Anyone check whether the website stole from Iversen? He has a 2001 book *Drugs: a short introduction*, also published by OUP, which might contain this same material in theory.

CTB (2010-11-07 14:15:47)

Just curious, anyone know who authored the 2002 MDMA website? McGraw Hill has a text called Taking Sides which offers a pro/con analysis of several drug topics, and in it, Iversen argues that Ecstasy isn't as bad as some people make it out to be. That 2002 MDMA website had to have been written by someone very very knowledgeable in pharma, as well as sympathetic to the cause...could it have been Iversen? He's been around since the 60's, at least.... <http://www.mcgrawhill.ca/highereducation-/product/9780078127564/taking+sides:+clashing+views+in+drugs+and+society/> "Issue 4. Are the Dangers of Ecstasy (MDMA) Overstated? YES: Leslie Iversen, from Speed, ecstasy, Ritalin: The Science of Amphetamines (Oxford University Press, 2006) NO: National Institute on Drug Abuse, from "MDMA (ecstasy) Abuse," National Institute on Drug Abuse Research Report (March 2006) Author Leslie Iversen contends that ecstasy can result in adverse effects but that the drug has been unfairly demonized. Moreover, Iversen states that its negative consequences on the brain have not been proven conclusively. Iversen acknowledges that ecstasy may produce profound effects, although those effects are subject to an individual's perception. Club drugs such as ecstasy allow partygoers to dance and remain active for long periods of time according to the National Institute on Drug Abuse (NIDA). However, ecstasy may produce a number of adverse effects such as high blood pressure, panic attacks, loss of consciousness, seizures, and death. Moreover, ecstasy can produce negative effects on the brain, resulting in confusion, depression, memory impairment, and attention difficulties."

Gunnar (2010-11-07 16:35:12)

Quite an accumulation of titles and positions over the range of education, policy making and actual drug commercialisation. I sure hope he did it in the interest of humanity.

Seth Roberts (2010-11-08 03:24:54)

David Pearce is author of the website. His name is at the bottom of the current version.

amsale (2011-05-06 23:51:30)

i also think its Good catch. How did you notice this? Someone at Google could probably write a script to ferret-out many instances of this kind of stuff.

2all (2011-08-03 06:44:34)

i think its Good catch. How did you notice this??

## **The Size of Restaurant Tips (2010-11-07 19:10)**

The size of tips left in restaurants has been the focus of considerable study. [1]An early study found that brief contact increases tips. [2]This study reviews the literature. [3]Here is a study in a French bar.

1. <http://sppsp.highwire.org/content/10/4/512.refs>

2. <http://onlinelibrary.wiley.com/doi/10.1111/j.1559-1816.1999.tb01378.x/pdf>

3. <http://nicolas.gueguen.free.fr/Articles/IJHM2005.pdf>

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## **A Theory of Human Evolution and Application to Education (2010-11-08 04:29)**

A week ago I went to a cognitive science conference in Chongqing, where I gave a talk called "A Theory of Human Evolution and Application to Education" (a theme of the conference was education). A sponsor of the conference, a

magazine called Scientific Chinese, will publish short versions of the talks. Here is the short version of my talk, only a little different than [1] what I've said before but far more compact.

Humans specialize. We make a living thousands of ways. A dentist makes a living one way, a carpenter another, and so on. No other species does this. In every other species, all members of the species make a living in one or two ways. All sparrows search for and eat the same food, for example. I propose that human nature changed in several ways to make possible our extreme within-species specialization.

It started with hobbies. Hands, evolved to swing through trees, could also make tools. Tools saved time. They made it easier to hunt and prepare food. Hobbies were a good use of the spare time. It was better to do one thing repeatedly during your spare time (and become skilled at it) rather than do many different things. Because of this advantage, an across-day tendency to repeat (to do today what you did yesterday) evolved. This tendency not only caused hobbies, it also caused diversity of hobbies. It was hard to change hobbies, so choice of hobby became less sensitive to feedback (the payoff from doing the hobby). Today, this tendency to repeat across days causes procrastination. It is hard to start a job-like activity. Procrastination is so common and hard to avoid because the underlying tendency was so important.

Diverse hobbies led to trade. I give you what I make, you give me what you make.

Language began because it increased trade. It helped the two sides of a trade find each other. It started with single words. Single words made it easier to convey what you wanted: You said the word for it. They also made it easier to indicate what you made: You said the word for it. Someone else could say the word for what you made and point at you. The first conversation: Person 1: X? Person 2: X (pointing). English family names reflect this usage; many come from occupations. For example, smith means metal worker.

A healthy economy has three features: 1. Many goods and services. Diverse hobbies provided this. 2. Easy trade. Language provided this. 3. Innovation. A healthy economy creates new goods and services. This was encouraged by the evolution of desires for (a) current tools made better than necessary and (b) useless "tools".

Demand for current tools made better than necessary came from the evolution of several tendencies. These tendencies produced behavior that is still common. First, gift-giving. Gifts are better-made versions of ordinary things. The "improvements" – the differences between the gift version and the ordinary version, such as a nicer package – are useless in the sense that neither giver nor recipient would buy the gift version for themselves. Second, holidays, festivals, and ceremonies. Holidays, festivals, and ceremonies create demand for fancy versions of ordinary things, such as special clothes, tools, and foods. For example, Japanese tea ceremonies use special tools and require special clothes. Third, connoisseurs, collectors, and souvenirs. Connoisseurs notice small improvements that most people don't notice and pay for them. Collectors buy things that non-collectors would not buy or at least pay more for them. A collector of frog-related things might buy an eraser in the shape of a frog. Making an eraser look like a frog does not make it erase better. Souvenirs are usually ordinary objects (ashtray, pen, key chain) made more desirable. Souvenirs make anyone a collector.

The existence of gift-giving, holidays, and so on increased demand for finely-made things – better versions of ordinary things. Finely-made things were harder to make than ordinary things, so this demand pushed artisans to become more skilled. The more skilled an artisan, the more easily he could innovate. A skilled baker is more likely to invent a useful new bread than an unskilled baker.

The useless "tools" that promoted innovation are art, decoration, and music. Desire for art and decoration supported the development of new techniques and materials – new paints, for example. Music encouraged technical advances because better control of materials allowed you to make better-sounding musical instruments. The

tendency behind fashion (year-to-year changes in preferences, and a desire for novelty) pushed artists and artisans to continue to innovate, to continue to develop new techniques and materials. They could benefit from innovating, but only for a limited time.

Art, decoration, and music allowed the development of revolutionary technologies – technologies that weren't refined versions of old technologies. Can you invent metal by refining stone tools? No, you can't. Endless trial-and-error while making stone tools will teach you how to make stone tools that are suitable for gifts, but it will never lead to metals. To produce something as different from its predecessors as a metal tool, you need to reward small steps on the way to getting there. This is what art does. Metal looks good. Long before our ancestors could make useful tools with metal (tools that could outperform existing tools), they could make art with metal.

The application to education is that this tendency to specialize in terms of job must be strong within us. The members of a group lived in the same place and had similar genes, yet there must have been powerful forces pushing them toward different jobs. Today these forces push students in different directions. The closer they get to being old enough to work, the more powerful these forces probably become, the more diversity they create. One reason I developed this theory is the diversity I saw in my own students. Within one undergraduate class, all psychology majors, I realized there were big differences between students. After graduation, they would choose different jobs.

Most teachers ignore these differences. They treat all students alike. It is like trying to put shoes of different shapes and sizes into identical boxes. Most shoes won't fit, no matter what box you use. Teachers who treat all students alike are fighting human nature. I learned to take advantage of the diversity of my students by giving them great choice. When I gave them enough choice, they found activities they really wanted to do. They did them enthusiastically and learned a lot. With human nature on my side, teaching became much easier.

1. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>

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tom (2010-11-08 09:57:51)

Interesting to use shoes fitting into boxes instead of shoes fitting on feet. But aren't shoes too great an example of your thesis to throw them in at the end as something that comes in different shapes and sizes for putting into containers?

Seth Roberts (2010-11-08 11:25:46)

Tom, at the Shoe Museum in Toronto I took pictures of the shoes as examples of my thesis – so I agree about them being good examples. Because the word limit of this article was low, I had room for very few examples.

Pip (2010-11-08 16:03:26)

Interesting theory. One question - you reference a desire for novelty as an incentive to innovate, but did not talk about where the desire for novelty came from. Is it possible that the desire for novelty also had a hand in the development of hobbies and is was not just the practical considerations that drove the beginning of hobbies? My theory is that the desire for novelty (and risk taking) in at least part of a population helped survival because it drove migration into new environments. The need to adapt quickly to new environments plus the desire for novelty led to tool-making and hobbies. Those of us who inherited the strongest desire for novelty and have the hardest time staying in one place are now diagnosed as ADHD. :-)

Seth Roberts (2010-11-08 18:11:58)

Pip, as someone who incessantly plays with his tableware, I have to say you may have something there. Animals have plenty of desire for novelty – they need to explore to find new food sources. That by itself doesn't lead to tool making or else the entire



animal kingdom would make tools. Whether people added some sort of desire to manipulate stuff to that I don't know.

Alexandra Carmichael (2010-11-09 09:28:48)

"When I gave them enough choice, they found activities they really wanted to do." This sounds exactly like how we homeschool. I remember learning in a Taoist philosophy class in university that people are stripped down into finely honed copies of productive human tools through education/training - and the decision for which tool to become is often made earlier in life than perhaps necessary. My partner and I try to expose our kids to as diverse a range of possible human activities as we can, and it's very interesting to see their different preferences, given the same external input. Great post!

Evolutionary Diet (2010-11-16 00:41:35)

QUOTE: "Language began because it increased trade." Since many animal species have very sophisticated languages, then what goods are being traded when birds sing, lions roar, fireflies flash, and insects click? Isn't it more likely that language evolved because it had a direct role in survival and reproduction?

Seth Roberts (2010-11-16 14:06:15)

The languages used when birds sing, lions roar, and so on are far less complex than human language.

Alex (2010-11-28 08:40:59)

Being as the division of human labour (excluding male/female differences) only really becomes prominent with sedentism in the neolithic around 10,000 years ago, and 10,000 years would generally be considered far too short a time for significant evolutionary change, it would be unlikely that division of labour would have had any effect on "human nature". Do we really need this whole "theory" just to tell us that people have different personalities?

## **How to Choose A Research Topic (2010-11-10 08:17)**

A few weeks ago, a female biology professor from Berkeley gave a talk at Tsinghua as part of a women-in-science series. During the question period, a student asked how to choose a research topic. You have a choice of labs; which should you choose? You have a choice of research questions; which should you choose? An excellent question: Every young scientist wonders about this.

The speaker's answer: Believe in yourself. Huh? This came from her personal history. When she was a grad student (at Berkeley) she proposed a certain line of research to her advisor. Her advisor said it was a bad idea. She switched to Harvard and pursued her idea there. It paid off. A sign of her success is that her lab gets \$1 million/year in grants.

I wasn't there. The friend who told me the professor's unhelpful answer asked how I would answer the same question. During graduate school, I thought a lot about it - about how to do research that anyone will care about in fifty years. I can answer it only for experimental psychology.

First, invent a new method or study a large puzzling experimental effect. With either one you can generate a steady stream of publications. Inventing a new method means inventing a better way - usually, a faster way - of measuring something important. You can then apply your new method all over the place. With a large experimental effect you can vary all sorts of things and narrow in on an explanation. As a grad student, I took the first route: I used a new way of studying animal time discrimination. I didn't invent it but its inventor hadn't seen its value. An example of the second route is the career of John Garcia. In graduate school, he discovered that making rats sick after eating a new flavor caused them to dislike the flavor. The sickness could come hours after the flavor. Garcia made a whole career out of doing variations on this.

Second, take advantage of whatever is unusual about you. If you are unusually interested in X, study X. I differed in two ways from most experimental psychologists: I was better at math, and I cared more about writing. Taking advantage of this, I spent a lot of time on data analysis and writing. Both paid off. I suppose my paper were better written than necessary but the time spent on writing paid off because I got good ideas while writing.

Third, collect a rich data set. New experimental effects are enormously important – if you manage to find one you can spend the rest of your career studying it – but are also very difficult to find. You can't do experiments whose main purpose is to look for them. The chances of success are too low. To find them, you set up your research so that a conventional experiment has the possibility of finding them. For that you need a rich data set – a data set with many factors and many levels of each factor, ideally. The new way of studying timing that I used provided a rich data set. Quite soon this led to discovering a new effect when some of the data changed in a surprising way.

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dearieme (2010-11-10 13:04:17)

"Read a bit of Medawar" would have been more helpful than "Believe in yourself".

Bruce G Charlton (2010-11-11 04:36:38)

I'm afraid that my first response would be to try to dissuade them from a \*career\* in science (which hardly exists now, and will be even rarer by the time that they are advanced in their research program) - and instead to do real science as an amateur hobby, instead of becoming a manager or technician merely pretending to do science as a paid job.

Alex Chernavsky (2010-11-11 05:25:34)

I agree with Bruce. But if someone *insists* on going into science anyway, my advice would be to find a mentor who has a reputation of being good to his or her graduate students (i.e., paying attention to them and ensuring that they finish their PhDs in a reasonable amount of time). Finding an interesting research topic is all very well and good, but if you can't get out of grad school, the point becomes moot.

## Why I Am A Biological Psychologist (2010-11-11 00:37)

Sheena Iyengar, a professor at Columbia Business School, is best-known for a study she did in graduate school. When shoppers in a Menlo Park food store were offered much more choice of jams (24 rather than 6), they were less likely to buy one. In [1]The Art of Choosing (2010), Iyengar wrote (p. 190):

Since publication of the jam study, I and other researchers have conducted more experiments on the effect of assortment size. These studies, many of which were designed to replicate real-world choosing contexts, have found fairly consistently that when people are given a moderate number of options (4 to 6) rather than a large number (20 to 30), they are more likely to make a choice, are more confident in their decisions, and are happier in what they choose.

In contrast, [2]Benjamin Scheibehenne, a research scientist at the University of Basel, and two co-authors, who surveyed the literature, [3]found the effect was hard to replicate:

The choice overload hypothesis states that an increase in the number of options to choose from may lead to adverse consequences such as a decrease in the motivation to choose or the satisfaction with the finally chosen option. A number of studies found strong instances of choice overload in the lab and in the field, but others found no such effects or found that more choices may instead facilitate choice and increase satisfaction. In a meta-analysis of 63 conditions from 50 published and unpublished experiments (N = 5,036), we found a mean effect size of virtually zero but considerable variance between studies

This reminds me of the learned-helplessness effect. When Martin Seligman, a psychology professor at Penn and recent president of the American Psychological Association, was a graduate student, he and his advisor reported that when you give dogs inescapable shock, they stop trying to escape or avoid the shock: learned helplessness. The effect turned out to be extremely hard to replicate, but this did not stop Seligman from having a brilliant career.

1. <http://www.amazon.com/Art-Choosing-Sheena-Iyengar/dp/0446504106>
2. <http://www.scheibehenne.de/>
3. <http://www.scheibehenne.de/ScheibehenneGreifenederTodd2010.pdf>

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Bruce G Charlton (2010-11-11 04:26:14)

This reminds me of a friend who wasted several years of a PhD meticulously trying and failing to replicate an effect upon which a famous Professor had built their reputation - he concluded that the whole thing was probably due to a small but significant sloppiness or dishonesty in the conduct of the experiments - a matter of recording observations about a second later than was supposed to be the case according to the stated methodology - and this delay meant that a different (old-hat, mundane, obvious, uninteresting) psychological mechanism would explain everything without recourse to the new reputation-building theory. Examples of this are still happening - I have seen with my own eyes a rapid build-up of an international research program and hasty public policy implementation based upon a really simple error in matching control with stimulus.

Nancy Lebovitz (2010-11-11 04:42:48)

I don't know about choice overload in general, but I've found it harder to make choices at the Strand (a humongous used bookstore in New York) than in smaller bookstores. Has learned helplessness been replicated at all?

Alex Chernavsky (2010-11-11 05:20:14)

I feel sorry for all those dogs that Martin Seligman tortured. And speaking of torture, Seligman has been criticized for his role in the US government's interrogation programs: " [1]'War on terror' psychologist gets giant no-bid contract " Having said that, I do admire Seligman for his role in promoting [2]positive psychology. Regarding the choice studies: I find Iyengar's results to be plausible. When I eat in a restaurant that has a huge menu, I find myself overwhelmed with the number of choices and start to worry that I won't order the optimal dish. With regard to prominent authorities being wrong, I'm about two-thirds of the way through an excellent and entertaining book called, [3]*Wrong: Why Experts Keep Failing Us* " And How to Know When Not to Trust Them, by David H. Freedman. The book reiterates what I more or less knew already, but I enjoy learning about the many examples that Freedman uses to back up his points.

1. [http://www.salon.com/news/politics/war\\_room/2010/10/14/army\\_contract\\_seligman](http://www.salon.com/news/politics/war_room/2010/10/14/army_contract_seligman)
2. [http://www.usatoday.com/news/health/2002-12-08-happy-main\\_x.htm](http://www.usatoday.com/news/health/2002-12-08-happy-main_x.htm)
3. <http://www.amazon.com/Wrong-us-Scientists-relationship-consultants/dp/0316023787>

vic (2010-11-11 11:18:27)

and a response to that meta-analysis: [http://www.chernev.com/research/articles /ChoiceOverload \\_JCR \\_2010.pdf](http://www.chernev.com/research/articles /ChoiceOverload _JCR _2010.pdf)

Timothy Beneke (2010-11-11 12:21:48)

Wow! I'd assumed that both the Seligman and Iyengar were robust findings. I think one reason they have become "important" apparently despite replicability is that they have the feel of "insight" that we can relate to. I find it easy to feel overwhelmed by too many options and to thus lose any subjective sense that I am making a choice. And it's easy to relate to the idea that after being in situations where one is objectively helpless, one can carry over the assumption of helplessness to contexts where one is no longer helpless, and get depressed. It's all very accessible. We can have an "aha!" experience when we learn about the findings. I wonder if when something feels intuitive and has resonance in one's experience, it is likely to have staying power in psychology, even when there is little scientific basis for it. Someone should study this more systematically. You've got me wondering what other famous findings in psychology are weakly founded....

Seth Roberts (2010-11-11 14:37:13)

I'll be surprised if anyone figures out why Iyengar's finding is hard to repeat. It's hard enough to repeat the stuff that is repeatable. After it turned out that learned helplessness was difficult to repeat, the subject was dropped. Learned helplessness was not important for central ideas about learning; nobody would build a theory upon it.

Justin (2010-11-11 14:44:52)

Sorry if I am missing something obvious, but why is it that are you a biological psychologist? I am not seeing it from the post. Maybe the problem is that I don't know what it means to be a biological psychologist.

vic (2010-11-11 20:12:15)

I've heard stereotype threat also fails to replicate, same with locus of control studies (including versions of the famous one conducted by Judith Rodin, who then became president of Penn).

Seth Roberts (2010-11-11 21:10:43)

Justin, by the title (Why I am a Biological Psychologist) I meant that this sort of failure to replicate is a nightmare but is not easily avoidable outside biological psychology. (At least, I don't know how to avoid it. The cost of doing widely-varying replications before you publish is too high.) Apparently the choice overload effect depends on details of the experimental procedure that researchers in that field have no idea about. Whereas if I study the effect of omega-3 and other nutrients on brain function (an example of biological psychology) the results are more likely to be easy to replicate. For example, when I found that breakfast caused me to wake up too early I was repeating an effect that had been found in several other species, where it was called anticipatory activity. Another example is that my ideas about weight control are supported by rat research. If they are true for some humans and some rats, they are likely to be true for all humans.

Lisa (2010-11-13 16:18:31)

What studies tried to replicate learned helplessness and failed? And, from my understanding, Seligman's work into learned helplessness fueled his subsequent research into optimism as a cure/prevention to learned helplessness (effectively a proxy for depression...)

Seth Roberts (2010-11-13 20:38:50)

Lisa, the experiments that failed to replicate learned helplessness weren't published. Steve Maier published a paper showing how hard it was to repeat in rats.

MT (2010-11-20 23:53:11)

I thought the model built off LH related to depression was significant (as opposed to using the findings in learning) - and wouldn't Harry Harlow's prior work with helplessness in monkeys (the notorious "pit of despair") be supportive of the model?

## **The Climate Change Bubble Has Burst? (2010-11-11 13:55)**

How many climate change scientists does it take to change a light bulb? None. They all agree it will change.

Judging by [1]these nine comments, a large fraction of Mother Jones readers think they've been had.

1. [http://motherjones.com/blue-marble/2010/11/kate-sheppard-podcast-need-to-know#disqus\\_thread](http://motherjones.com/blue-marble/2010/11/kate-sheppard-podcast-need-to-know#disqus_thread)

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## **Dangerous Acne Medicine (2010-11-11 21:12)**

Treatment of acne with isotretinoin is associated with suicide attempts, according to [1]a new study. A puzzle is that suicide attempts started to rise before the treatment started. They sharply declined to baseline after treatment stopped.

Acne is an good target for self-experimentation because it is easy to measure and [2]is surely related to diet. My discovery of the value of self-experimentation happened with acne: I discovered that of the two drugs my dermatologist had prescribed, one (benzoyl peroxide) worked, the other (tetracycline) didn't. I had believed the opposite, that tetracycline worked and benzoyl peroxide didn't work.

1. <http://www.bmj.com/content/341/bmj.c5812.full.pdf+html>

2. <http://www.blog.sethroberts.net/2009/06/24/acne-self-experimentation-why-its-promising/>

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Michael (2010-11-12 07:33:27)

Why are drugs still prescribed for acne? Loren Cordain has already nailed the cure with the paleo diet. This is like the guy in Australia discovering that bacteria cause ulcers and the drug companies continuing to invest billions in making medicine to treat the symptoms of ulcers.

Gunnar (2010-11-12 15:19:31)

Seth, thanks for stating what you had believed/anticipated to work prior to your experiment. Michael, how about you think about that some longer. I could tell you what I found out, but it's better to find out for oneself. Cheers!

CTB (2010-11-12 16:14:16)

There's garden variety acne (zits and whiteheads)...and then there's cystic acne where the lesions look like someone put peas under your skin. A friend of mine had cystic acne. She was miserable both because the lesions hurt and because of the social effects of having your face look deformed. She took Accutane when it first came out in the 80's. The doctors were very cautious back then and would only prescribe it for serious acne. I can understand why someone with cystic acne might consider suicide...and maybe that might then convince the doctors that they needed the stronger treatment. I think if I looked the way she did at 25, and felt so depressed that I wanted to kill myself, I just might do it if my dermatologist told me to go home and experiment with my diet.

Mark (2010-12-22 10:00:51)

I have an aunt whose face would become acne ridden whenever she ate sunflower seeds. May it has to do with the fact that sunflower oil is almost devoid of omega-3s.

robert (2011-03-18 21:56:35)

what a load of irresponsible crap. food is responsible for a vanishing minority of acne, and people looking for an acne fix by adjusting their diet are in for a long wait-as in, until the process burns out. accutane (13 cis retinoic acid, or 13cra) does not cause depression, rather, severe acne is associated with a near doubling of suicide risk. this is clear from the medical literature. it is great to self-experiment, but only a fool would ignore what has been already learned by previous investigators. furthermore, generalizing from your experience and presuming it applies to others is foolish.

Seth Roberts (2011-03-18 22:40:28)

"Food is responsible for a vanishing minority of acne" – what is this conclusion based on? I know of no evidence that supports that idea. "Generalizing from your experience and presuming it applies to others is foolish." Years after I discovered that tetracycline did not help my acne, articles started appearing in dermatology journals saying the same thing. In this case, at least, generalizing from my experience would have been a good idea.

Mr F (2011-04-16 03:03:10)

> Why are drugs still prescribed for acne? Loren Cordain has already nailed the cure with the paleo diet. AHAHAHAHHHAHA... oh, you were being serious :/

Marina Witsky (2011-08-12 08:30:57)

It never fails to amaze me how the cosmetics & pharmaceutical industries continue to rip acne sufferers off providing them with useless products in order to fuel cyclical consumption. Think how many billions are made from selling rubbish like Benzoyl Peroxide or using Tetracycline antibiotics. They can never cure the acne just provide temporary relief if it can even be called that. Moderate/ Severe acne needs to be treated seriously with Accutane which has been used to treat 13 million people worldwide for over 25 years.

Seth Roberts (2011-08-12 10:07:12)

Marina, I have removed the spammy links in your comment. You cannot be serious. First, benzoyl peroxide actually works. I tested it. Second, Accutane is dangerous. It has bad side effects. It is expensive. It doesn't "cure" the acne nor provide more than "temporary relief". It's just another drug. Using Accutane is a distraction from figuring out what has caused the acne. Probably something about the diet. Not lack of Accutane. I suppose the problem with Accutane is partly revealed by comments such as yours. If Accutane were so great, it wouldn't need to be marketed in misleading ways.

## **Two Gmail Features I Want (2010-11-12 01:46)**

Now that Gmail is out of beta, here are two suggestions for improvement:

1. Oldest first. I want to be able to sort my email so that the oldest is first on the list. That will make it harder to ignore or forget about. I can use the reward of seeing my latest email as inducement to deal with the oldest email. (I often bundle unpleasant and pleasant tasks: taking vitamins and drinking kombucha, doing pushups and listening to music, standing on one foot and watching Survivor.)

2. Delayed send (also called second thoughts). I want to be able to send email after a delay – say, one day. This has two advantages: it slows down the correspondence, and it gives me a chance to reconsider. An earlier email program

I used had something like this and I was often glad I could revise what I'd written before it was sent.

More The Gmail Undo Send feature (available in Labs) gives you about 20 seconds to change your mind. Better than nothing but not nearly long enough.

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Mike Carey (2010-11-12 02:23:06)

Seth Try Boomerang for Gmail. <http://www.baydin.com/boomerang4gmail/> It's a Gmail plugin that lets you schedule when you send emails. Somewhat bizarrely, it also lets you schedule when to receive emails, or at least when to have them reappear having been already received.

Mike Carey (2010-11-12 02:50:24)

Thinking about it, a (less than optimal) solution to your first problem is to also pick up your Gmail in an actual email client, e.g. Thunderbird, using Gmail's POP download facility. That way, when you need to view your emails in chronological order, you could do it in Thunderbird. Not great but better than nothing.

Alex Chernavsky (2010-11-12 05:39:00)

Mike, Gmail also supports IMAP, which has advantages over POP. For a discussion, see: <http://mail.google.com/support/bin/answer.py?hl=en&answer=75725>

Andy (2010-11-12 13:44:30)

I used to use a 10-minute delay on all outgoing emails. Not as long as the day you suggest, but long enough to realise if I've made a major boo-boo and retrieve it. The closest GMail has is the "Undo Send" lab, which gives you up to 30s to reconsider. I still often un-send and edit emails within that time. Unfortunately as soon as you navigate anywhere else you lose the undo option, but it's better than nothing.

Nansen (2010-11-12 14:34:00)

In case you missed it, here's a funny piece about email: [http://www.newyorker.com/humor/2010/10/25/101025sh\\_shouts\\_marks](http://www.newyorker.com/humor/2010/10/25/101025sh_shouts_marks)

Matthew Cornell (2010-11-12 14:38:42)

I agree, Seth re: delay. When I'm in a bad mood I sometimes later regret some messages. Right now the 10 second delay is pretty useless. It's usually after some pondering that I realize I should have edited. A programmable time is good, as is a day. You'd need a list of "pending" messages. All in all, Gmail's pretty good, esp. for free.

Ed M. (2010-11-12 20:50:33)

Seth, Gmail already has these features, almost. Look into the Labs add-on called "Undo Send", it it will allow you to delay an outbound message up to 30 seconds. Unfortunately no longer than that. Also, you can sort by oldest but the option is only available after a certain number of messages. Go to All Mail then look at the top right. You should see: "1 - 100 of 49833 Older &° Oldest &»". -Ed

dee (2010-11-14 22:47:50)

You can change the settings for the undo send in gmail. You can have up to 30 seconds to undo the send. Just look in the settings portion and change the option. 30 seconds is not much, but it is better than 10.

### Stroke and Saturated Fat (2010-11-13 01:38)

A [1]1997 epidemiological study, which I just learned about, found that increases in saturated fat intake were associated with a lower risk of stroke. Sampling from among the papers that cited it, [2]this study found a non-significant change in the same direction. [3]This study found a significant change in the same direction in Japanese, who eat a low amount of saturated fat. This is especially interesting because many people assumed that the high rate of stroke among Japanese was due to high salt intake. This finding suggests it is due to low saturated fat intake.

As I said in [4]a recent post, this sort of consistency across studies on a question of enormous interest argues against the severest critics of epidemiology, such as [5]John Ioannidis.

1. <http://jama.ama-assn.org/cgi/content/abstract/278/24/2145>
2. <http://www.bmj.com/content/327/7418/777.full>
3. <http://www.ajcn.org/cgi/content/abstract/92/4/759>
4. <http://www.blog.sethroberts.net/2010/10/27/periodontitis-and-omega-3/>
5. <http://www.blog.sethroberts.net/2010/10/13/the-contribution-of-john-ioannidis/>

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### Assorted Links (2010-11-13 02:07)

- [1]aftermath of the Marc Hauser case (via [2]Andrew Gelman)
- [3]career advice in mathematics
- [4]seeing meat calms men down. This research, which has been covered by many newspapers, was done by an undergraduate.

Thanks to Vic Sarjoo.

1. <http://harvardmagazine.com/2010/11/scientific-misconduct-and-its-aftermath>
2. [http://feedproxy.google.com/~r/StatisticalModelingCausalInferenceAndSocialScience/~3/RG34CWBFFAI/poli\\_sci\\_plagia.html](http://feedproxy.google.com/~r/StatisticalModelingCausalInferenceAndSocialScience/~3/RG34CWBFFAI/poli_sci_plagia.html)
3. <http://terrytao.wordpress.com/career-advice/>
4. [http://www.mcgill.ca/newsroom/news/item/?item\\_id=169419](http://www.mcgill.ca/newsroom/news/item/?item_id=169419)



Tom (2010-11-13 16:04:10)

It's interesting how disappointed the researcher was that the meat images didn't make people aggressive. So he's off to craft another study where he can try to cure the defect. What a pathetic excuse for a 'scientist.' Confirmation bias, anyone?

Seth Roberts (2010-11-13 20:43:01)

If there was confirmation bias, it makes the results – which were opposite to the direction in which confirmation bias would push them – more impressive. "what a pathetic excuse for a scientist": well, I'm impressed that an undergraduate did such interesting research. I don't care if he had preexisting ideas about what the results would be. That's the usual state of affairs.

anonymous (2010-11-14 15:34:53)

Seeing boobies also calms men down. Can I get a grant?

anonymous (2010-11-15 14:02:56)

Should you be searching out or talking about pasture butter, which is high in omega-3 fatty acids? Or cultured butter, which is normal in Europe but unusual in the US, which is filled with living cultures? Culture butter is easy to make – take cream, add a dollop of yogurt and leave on the counter for a day or two or three, then churn. Then you get real buttermilk, too, a lovely thing.

Seth Roberts (2010-11-15 16:46:17)

thanks for the suggestion about pasture butter, which is a good one. I am currently in Beijing where it is hard to get any butter. when I get back to the US I will try different kinds of butter.

G (2010-11-16 19:33:19)

Might there be an obvious error in the meat study? It is supposed to find an innate effect of meat on mood, but meat – especially cooked meat as in the study – has acquired, positive associations.

## **For Whom Do English Departments Exist? (2010-11-14 11:32)**

In [1]an account of ghostwriting for students (i.e., term-paper factory) the following story stood out:

Although my university experience did not live up to its vaunted reputation, it did lead me to where I am today. . . . I was determined to write for a living, and, moreover, to spend these extremely expensive years learning how to do so. When I completed my first novel, in the summer between sophomore and junior years, I contacted the English department about creating an independent study around editing and publishing it. I was received like a mental patient. I was told, "There's nothing like that here." I was told that I could go back to my classes, sit in my lectures, and fill out Scantron tests until I graduated.

Inconvenient human nature. He wanted to learn something the school didn't formally teach. The school controlled something precious that he needed – time. The rest of his life was at stake, but it wouldn't give it to him.

His college was like a diet without necessary nutrients. It stunted growth.

[2]For whom do colleges exist?

1. <http://chronicle.com/article/article-content/125329/>

2. <http://www.blog.sethroberts.net/2007/03/31/for-whom-do-colleges-exist/>

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David (2010-11-14 14:34:03)

For whom do ponzi schemes exist?

John (2010-11-14 14:50:11)

Seth, there are lots of questions here—not all English departments are alike, not all professors would have treated him “like a mental patient,” and some institutions are more flexible in response to students’ requests. At my alma mater, a small liberal arts college, I had student directed tutorials with professors from the first year, including both theoretical and practical projects (designing and implementing a social survey, ethnography, communication theory). Most universities now offer various kinds of classes—one of my former students is now screenwriting and wants to incorporate ideas he developed in my class into his screenplays and filmmaking (this at the University of Michigan).

q (2010-11-14 20:00:39)

at the school i went to (huge midwest state school) i’m sure he would have got either answer depending on who he asked, how he asked, and what mood (or how busy) the person he asked was in. i asked a lot of profs for independent study (including in the english dept, and i wasn’t a major) and got both kinds of answers depending on differing factors. and unsurprisingly, it’s been the same story after university – sometimes people say yes, sometimes people say no.

Alex Chernavsky (2010-11-14 21:01:01)

”I contacted the English department about creating an independent study...” Well there’s your mistake, right there. You need to contact a professor (preferably someone who already knows & likes you) to get tentative approval. Only *then* do you approach the bureaucrats.

Aaron Blaisdell (2010-11-14 22:20:30)

Yep, as Edward Thorndike said, the problem with anecdotes is that you don’t know the back story leading up to the observation. I concur with q and Alex on this one. It’s very bad form to draw general statements from an anecdote. Anecdotes can be incredibly helpful in suggesting what to look for but not for confirming what you found.

Seth Roberts (2010-11-14 23:46:09)

Alex, I don’t know who the writer contacted. The article is unclear. Perhaps by “the English department” he or she meant a professor in the English department. Perhaps he or she contacted the chairman of the department. Who knows? Sure, it would be better to contact a professor than a bureaucrat. But to complain the writer didn’t know the best possible procedures is like Malcolm Gladwell in *Outliers* blaming the guy who got kicked out of Reed because his mom didn’t return a form. Someone else would have known what to do, said Gladwell.

Lauriejane (2010-11-17 09:40:37)

I graduated from PSU in June of 1976, so maybe my anecdote is way out of date. But I remember being repeatedly laughed at by my English professors when I said I wanted to write for a living. They said it was simply impossible and I should give up the idea. (I got the idea from my father who was a professional writer). They told me I would have to be a teacher because that was the only profession open to young women who were literate + college grads. The pressure was so great that even when I went to the CA State employment office, they said they would only send me to teacher interviews even though I had experience as an executive secretary to a TV star and had worked on a newspaper. Under pressure to support my elderly parents, I caved in and became a teacher, hated it, then became an adult education instructor which I like better, but not much. Now I am planning to retire. I have written a book for college students telling about all of the things that neither parents nor colleges like to tell them about college. I am saving my money to self-publish it. It is called: *College Crazy And How Not To Be*. It includes a chapter on how to drop out. And another chapter called, “They’ll Call It Credit; You’ll Call It Debt.”

## **My Theory of Human Evolution (letterpress printing) (2010-11-15 16:51)**

According to [1]my theory of human evolution, a liking for ceremonies evolved because ceremonies increased innovation. Ceremonies increase demand for hard-to-make stuff, which helps the most skilled artisans make a living.

[2]Stephanie Laursen, a letterpress printer, is an example. Letterpress printing is difficult. Larsen is a skilled artisan. She makes a living from wedding invitations. Without wedding ceremonies, she would probably be doing something else.

1. <http://www.blog.sethroberts.net/2010/11/08/a-theory-of-human-evolution-and-application-to-education/>
2. <http://www.boingboing.net/2010/11/12/the-modern-face-of-l.html>

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Ben (2010-11-23 21:31:48)

She could be making high-quality posters or other printed material for marketing campaigns. I don't think marketing campaigns are ceremonies.

## **Secrets of Chinese Retail (2010-11-16 06:25)**

In Chinese supermarkets now and then you see a large and a small version of something taped together – for the price of the large version! For example, a quart of milk and a pint of milk taped together, sold at the price of one quart. Wow, you think, for the same price I get 50 % more.

Today I looked closely at one of these deals. The milk was several days older than the rest of the milk for sale. I realized it was the Chinese equivalent of putting a day-old sticker on something and selling it at half-price. Day-old stickers have negative connotations ("stale") but the taped packages have positive ones ("your lucky day").

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David (2010-11-16 08:21:42)

Sounds like a bad deal. Twice as much of a perishable item and less time in which to consume it.

humble reader (2010-11-22 11:32:58)

Well at least you get the extra melamine and that won't degrade as fast as those other pesky milk proteins.

## **Guan Er Dai (2010-11-16 20:51)**

A few years ago the Chinese people invented a new noun: guan er dai (官二代), meaning the children of government officials. There was already fu er dai, meaning the children of rich people.

The reason for the new term is that guan er dai act badly. A few weeks ago at Hebei University, a guan er dai, driving

a car on campus, hit and killed a girl. Angry bystanders gathered around the car. "My father is Li Gang!" shouted the guan er dai. Li Gang is a mid-level police official. Not especially powerful, but powerful enough. Hubei University covered up the incident.

Government officials have always been very powerful, said the friend who told me this. But only recently have people become aware of this. This is why guan er dai is a new term.

A few years ago a Tsinghua sociology professor and a graduate student wrote a book about the hierarchy within Chinese society. Government officials on top, below them business people, and so on. Perhaps farmers at the bottom. The government did not allow this book to be published – "we are not on top of society, we are the servants!" said a government official. All that work, down the drain.

More The reckless driver was sentenced to three years in prison. The New York Times has [1]a long article about this.

1. <http://www.nytimes.com/2010/11/18/world/asia/18li.html?hp>

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windstorm (2010-11-17 00:30:53)  
It's guan er dai, not guan er di

Seth Roberts (2010-11-17 04:34:31)  
thanks for the correction.

dearieme (2010-11-17 13:57:36)  
Quite reminiscent of Chappaquidick, eh?

Seth Roberts (2010-11-17 16:44:08)  
yes, reminiscent of Chappaquidick but the implications – that there are hundreds of thousands of guan er dai that can get away with killing someone with their car – are worse.

Mark Mo (2010-11-18 21:55:24)

We Chinese also create some Chinese-Style English which maybe only Chinese can fully understand: gelivable ç»™åš» very exciting smilenceç-‘è€Ĉä,žè~ smile without words togaytherç»^æ^žœ.å±ž "gay" together democrazyç— ‘âžfâ|,,æf³ the idea of acheiving democracy is crazy shitizenå±žæ° citizen is shit innernetä, - å½ă°èž"ç½“-žChinese Internet departymentĩ¼^æ”žå°œĩ¼%œš-Ŧ0å...³éf“é—” related department of the Party chinsumer åœ”å½åœ-ç-~çç,é’- ç%œçš,,ä,å½ă° Chinese who crazyly consume when they are abroad emotionormal æf...ç”^ç”å°š usually seen on newspapers,people are in normal emotion but actually they aren’t sexretary å³çš~ä¹| employ a secretary for "sex" hal-fyuanä°æ” people who support the party by their words on the Internet canclensor å°;æŸŸ "censor" implies "candle" wallÂ-e é~²çž«å¢™ firewall circusee å°èš, onlookers vegeteal åž-èžœ steal "vegetables" on the Internet yakshit ä°šå...èŸ; animale ç”-ä°åœ©æš nature of male corpsspend æžžå°,è¹ spend for salvaging corpse suihide è°²çœ«çœ« hide and seek niubility ç%œé€¼ powerful antizenèšžæ° citizen who live as ant gunvernmentæž°æž†åžæ”žæžf propoortyæžåœ°ä°š real estate stuck market è,žå,, stock market livelihardç”Ÿæ’ life stupidç-~çœª stupid pig Z-turn æš~è...¼ toss don’ttrain åš~è½| EMU fousball ä,å½æŸ³çžf Chinese Football gambller å¹²éf” cadre goveruption æ”žå°œ government harmany æ²³èŸ¹ eliminate sth they think bad for the government’s reputation,such as the Nobel Peace Prize owner Liu Xiaobo,We can’t find any information about him on the Internet,regardless of whether or not what he did is proper. profartssor åž«å...½ professor who fart(say bullshit) freedamnä,å½ç%°¹è%²èžž-fÆ± Chinese-Style freedom In fact,Things are not as good as we imagine,but also not as

bad as we think.

Hang (2010-12-24 08:51:48)

I don't think the driver was sentenced, the plaintiff withdrew his accusation.

### **The New Yorker on Fermentation (2010-11-17 19:37)**

Which is it, New Yorker editors?

Page 66 of the food issue:

Pickled cabbage is not romantic or fashionable.

Page 107 of the food issue:

"This [interest in fermented foods] is a revolution of the everyday," says [Sandor] Katz, "and it is already happening."

After zero recipes for sauerkraut in all previous issues of the magazine, this issue of The New Yorker contains two.

Thanks to Tyler Cowen and Dave Lull.

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### **DHA Did Not Slow Alzheimer's (2010-11-17 23:43)**

[1]A large just-published study found that giving people who already have Alzheimer's 2 g/day of DHA (present in fish oil) did not reduce their cognitive decline compared to placebo (corn or soy oil). Fish consumption had been found many times to be associated with a reduced risk of Alzheimer's.

Thanks to Saul Sternberg.

1. <http://jama.ama-assn.org/cgi/content/abstract/304/17/1903>

Jeremy (2010-11-18 12:56:04)

There is a difference between slowing the course of existing Alzheimer's disease (the subject of this study) and reducing the risk of the disease for the currently unaffected - a question not addressed in this research.

Seth Roberts (2010-11-18 14:49:36)

Jeremy, there are lots of nutritional disorders where something that prevents the problem also slows or reverses its course. For example, Vitamin C prevents and cures scurvy. [1]Here is another example (thanks to Anne Weiss). I can't think of any cases where something that prevents a disease does NOT slow down the disease once it starts.

1. [http://www.sciencedaily.com/releases/2010/11/101117184457.htm?sms\\_ss=email&at\\_xt=4ce5e3ce762af480,0](http://www.sciencedaily.com/releases/2010/11/101117184457.htm?sms_ss=email&at_xt=4ce5e3ce762af480,0)

### Assorted Links (2010-11-18 12:42)

- [1]Plagiarism by Dr. Shervert Frazier, a Harvard psychiatrist and at one point director of the National Institute of Mental Health
- [2]David Shenk on talent & genius: why rely on homilies when we have data?
- Should practice tests have warning labels? [3]Apparently. A University of Central Florida business professor creates a test using a test bank, tells students he wrote the test, and says students who studied questions from the test bank are cheaters!

1. <http://www.nytimes.com/1989/05/14/magazine/did-the-penalty-fit-the-crime.html>

2. <http://www.theatlantic.com/national/archive/2010/11/what-is-talent/66684/>

3. <http://www.insidehighered.com/news/2010/11/17/cheating>

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dearieme (2010-11-18 15:47:16)

"As anyone who has worked with him knows, he is ...not a detail person": then he's not a scientist. P.S. Is that really the same Harvard that's been giving an easy ride to the monkey chap?

q (2010-11-18 17:25:33)

hard to say with frazier. clearly bad to plagiarize, but when i look at the actual examples cited in the article, it looks like he plagiarized what is essentially stock text and put it forward as his own. he's taking credit for other people's words, but is he taking credit for their ideas? i know that happens too, and it's not called plagiarism. what exactly is it called? it seems like that should be regarded as worse, but is it? i know that when i did research and wrote papers in mathematics i would often need to reiterate a standard argument - often i couldn't rely on the audience the paper was geared toward knowing it. i wouldn't always cite a reference if the reference was, say, "any graduate-level algebra text". and i wouldn't have been surprised if i did it in the same way as a text i had read before. there's only so much eloquence to go around. also, i bet that \_a lot\_ of people stole little bits of text here and there before it became easy to find out about it.

Kris (2010-11-19 15:39:19)

Here is another link about Dr. Anil Potti: [http://hosted.ap.org/dynamic/stories/N/NC\\_RESEARCHER\\_ALLEGATIONS\\_NCOL-SITE=NCWIN &SECTION=HOME &TEMPLATE=DEFAULT](http://hosted.ap.org/dynamic/stories/N/NC_RESEARCHER_ALLEGATIONS_NCOL-SITE=NCWIN &SECTION=HOME &TEMPLATE=DEFAULT)

## Jane Jacobs on C-Span (2010-11-18 14:32)

C-Span has [1]nicely archived their shows since 1987. Jane Jacobs was on twice. Her appearances are listed [2]here.

1. <http://www.c-spanvideo.org/>

2. <http://www.c-spanvideo.org/janejacobs>

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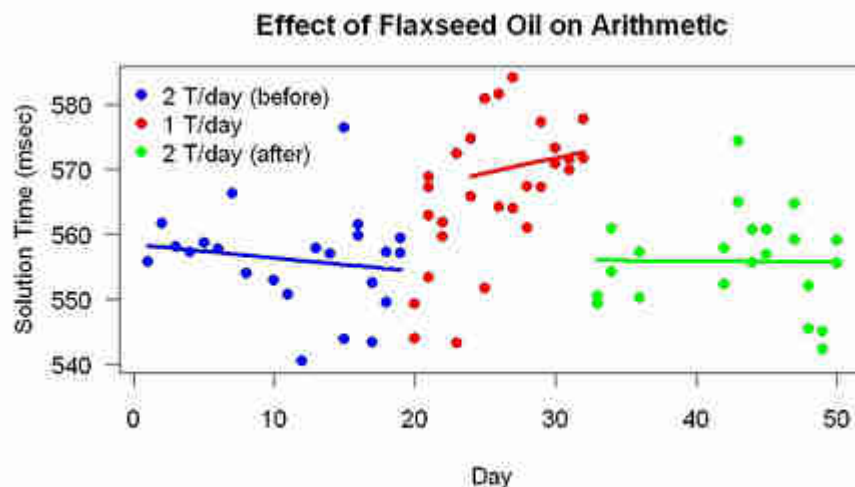
## Effect of Flaxseed Oil on Arithmetic (2010-11-19 01:01)

After I moved to China in September, I was surprised that my arithmetic speed went down. (That is, I got faster.) I had lowered it from about 630 msec/problem to 600 msec/problem [1]by eating lots of butter. I had no idea how to lower it further. I didn't deliberately change my diet in China but it was quite different. I kept some things the same: the amount and brand of butter/day, the amount and brand of flaxseed oil/day.

I failed to figure out why I had gotten faster. I reduced the amount of flaxseed oil from 3 T (tablespoons) per day to 2 T per day. It made no difference. (In the beginning of my interest in flaxseed oil, change from 2 T/day to 3 T/day had made a difference.) Perhaps because of the butter.

Surprised that the change from 3 T/day to 2 T/day hadn't made a difference, I went down to 1 T/day for two weeks, then back to 2 T/day. Both changes made a difference:

[2]



Each point is a separate test. Each test had 32 arithmetic problems (e.g., 3+4, 11-3). In the beginning of the data shown in the figure I tested myself once per day. After 12 days I started doing two tests/day, one right after the other. I was curious about the repeatability of the numbers; it wasn't hard; it was a way to get better measurements. Averaging over the tests for each day to get one value per day, combining the 19 2-T/day (before) days and the 11 2-T/day (after) days, and comparing the combination to the final 7 1-T/day days,  $t(38) = 6.5$ . If you're not familiar with t values,

t = 2 is a barely reliable difference, t = 4 is a very clear difference.

This is [3]more evidence that flaxseed oil improves brain function. It interests me because it implies the optimum dose is close to 2 T/day. It cost about \$20 and took 1 person-month. In contrast, [4]the DHA-Alzheimer's study I mentioned two days ago cost about \$1 million and took about 7000 person-months. And used (a) a cruder something-versus-nothing comparison, b) a less-sensitive between-subjects comparison, and (c) a more ethically-problematic placebo-controlled design.

1. <http://quantifiedself.com/2010/08/arithmetic-and-butter.php>
2. <http://www.flickr.com/photos/sethroberts/5187998149/>
3. <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>
4. <http://www.blog.sethroberts.net/2010/11/17/dha-did-not-slow-alzheimers/>

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G (2010-11-19 14:18:10)

I would be super-cautious about drawing wide conclusions from this kind of research because you're not performing the task for its own sake: in your brain there are connections between the task and the experimental context. Maybe you produce the link because you want there to be a link, even though you may think you're making the same degree of effort each time.

Seth Roberts (2010-11-19 19:22:52)

G, I wasn't clear. I did this research to find the best dose of flaxseed oil. That flaxseed oil improved my brain function I had established to my satisfaction long ago. I would have preferred the opposite result (no difference) because it would have meant I needed less flaxseed oil. I live in Beijing, where good flaxseed oil is hard to get. Almost no human psychological research has been done using tasks done for their own sake. Subjects are paid or doing it to satisfy a course requirement.

G (2010-11-20 09:18:52)

Of course, but the subject should not have a vested interest in a particular outcome. If you give subjects either a real drug or a placebo they cannot jinx the result by *wanting* the effect to arise because if the sample-size is large enough then that corrupting motive will be equally represented in both the drug and placebo samples. I think it also helps if the subjects aren't the experimenters. But in blazingly clear-cut cases, like that guy who uncovered the true cause of ulcers, the results are too compelling to write off as bias and are easily repeatable/falsifiable. How did you eliminate the problem of bias in your original studies?

Seth Roberts (2010-11-20 13:25:03)

You can learn more about my original studies, and whether to trust them, by reading these entries: <http://www.blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/> If you think that stomach ulcer case is "blazingly clear" and Barry Marshall found "the true cause of ulcers" you should read this: <http://www.blog.sethroberts.net/2009/04/03/nobel-prize-cluelessness-stomach-ulcers/> Marshall did not get an ulcer from his ingestion of the bacteria he says cause ulcers. And almost everyone who is infected with those bacteria doesn't get an ulcer.

G (2010-11-20 16:16:59)

Bloody hell, I did not know that! Do you think the Nobel Committee could do better than this? They don't seem to have a great hit-rate overall; it would be interesting to look into just how many awards look dubious in hindsight.



Jazi yechezkel zilber (2011-06-19 04:11:06)

Possibly there are omega 3 reseviors in the body, making the 2/3 T difference less marked. (as opposite tk wen starting).  
Reseviors can also work by different routes (like improvements in stability of other systems etc.)

### **The New Yorker Stories by Ann Beattie (2010-11-19 16:15)**

Ann Beattie, a great writer, has a new book out called [1]The New Yorker Stories. I loved her early stories. Her first story in The New Yorker (1974) was "[2]A Platonic Relationship". I still remember this:

When he did have a beer he would take one bottle from the case and put it in the refrigerator and wait for it to get cold, and then drink it. . . . One night Sam asked her if she would like a beer. . . . He went to his room and took out a bottle and put it in the refrigerator. "It will be cold in a while," he said quietly.

Last night I put a Diet Coke in the freezer. It will be cold in a while, I thought, remembering this passage.

Alas, I haven't liked her work over the last 20 years as much, although I am looking forward to reading Walks With Men, her latest novel.

1. <http://www.nytimes.com/2010/11/21/books/review/Shulevitz-t.html?pagewanted=2&r=1&nl=books&emc=booksupdatema3>

2. [http://www.newyorker.com/archive/1974/04/08/1974\\_04\\_08\\_042\\_TNY\\_CARDS\\_000311683](http://www.newyorker.com/archive/1974/04/08/1974_04_08_042_TNY_CARDS_000311683)

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### **Potti: The Final Act (2010-11-19 22:53)**

Dr. Amil Potti has [1]resigned from Duke. The clinical trials based on his (faked) research have been stopped. Duke has not exactly covered itself with glory. [2]The two statisticians who first noticed a problem:

In November 2009, we identified and reported the exact problems now cited for retracting the paper....  
Given that Duke knew of these problems, why were (Potti's) clinical trials reopened in January 2010?"

[3]And:

Experts say that Nevins ["who supported his collaborator Potti through four years of controversy over reliability of their findings"] has admitted that the clinical trials that followed the laboratory research – more accurately described as experiments with human beings – harmed patients. Up until this moment, Duke has steadfastly denied this; and in a Halloween statement, Duke affirmed "we do not believe that patients were endangered."

Recall that the case against Potti attracted notice only when it was discovered he wrongly said he had won a Rhodes Fellowship. Giving new meaning to the devil is in the details.Â

1. <http://dukefactchecker.blogspot.com/2010/11/potti-resigns-continued.html>
2. <http://www.stanford.edu/~vcs/Press/CL36-39.pdf>
3. <http://dukefactchecker.blogspot.com/2010/11/potti-mess-update-medical-journal.html>

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dearieme (2010-11-20 09:15:48)

Think of all the economists who wrongly claim to have won a Nobel Prize.

### **Flaxseed Oil vs. Fish Oil (2010-11-21 15:52)**

You can find statements like the following in a hundred places:

Both fish and flax are good sources of omega-3. Flaxseed oil is less expensive, which can be an important consideration. The main difference is that flaxseed oil contains only alpha-linoleic acid (ALA), which is the parent compound from which other omega-3 fatty acids are derived. This leaves it to your body to do the conversion to the other forms it needs, eicosapentaenoic acid (EPA) and docosahexaenoic acid (DHA). The problem is that the conversion is not always that efficient, and the body often uses the ALA for extra energy, leaving less for conversion to the other types. The body uses various enzymes to convert ALA to other omega-3s, and the process is not very efficient, especially as one gets older. Estimates of the rate of conversion range from 5 % to 25 %. In order to make sufficient amounts of EPA and DHA, one needs to consume 5-6 times more ALA than if one relies on fish oil alone. Fish oil, on the other hand, contains the other forms and delivers them directly to your body with no conversion necessary.

It isn't that simple. Here are three things I rarely see mentioned:

1. The conversion rate is not fixed. It depends on the amount of the conversion enzyme, which increases with ALA exposure. The body makes the enzymes it needs and doesn't make the enzymes it doesn't need. You don't have enzymes to digest food you don't eat – but if you start to eat them you will build up the enzymes. The measurements of ALA conversion rate I have seen measured the conversion rate without giving the subjects extensive exposure to ALA before the test. (Measurements of glycemic index have the same problem.) They should be considered lower bounds of what would happen with long exposure.

2. Time release is good not bad. When you take a dose of flax oil, its ALA is converted to DHA and EPA, which takes time, thus smoothing out the supply versus time function. If you take a dose of fish oil, the brain receives a sudden burst of DHA and EPA. It is likely that a smoother supply is better.

3. ALA (omega-3) conversion blocks AA (omega-6) conversion. Omega-3 fatty acids and omega-6 fatty acids are almost identical. The enzyme that converts short-chain omega-3 to long-chain omega-3 also converts short-chain omega-6 to long-chain omega-6. Long-chain omega-6 probably has bad effects in your brain, at least in large amounts, because it displaces long-chain omega-3. For industrial reasons, our diets are high in short-chain omega-6. Having ALA in your

system, which flax oil provides but fish oil does not, slows down the conversion of short-chain omega-6 to long-chain omega-6 by occupying the conversion enzymes.

Thanks to Gary Skaleski.

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Jake (2010-11-21 17:39:29)

No reason to debate this. Take a omega 6/omega 3 ratio blood test and you will know what works for you. I take such a test every six months. My last test was 2.85 to 1. 2 to 1 is ideal so I am close enough. I take fish oil and I eat omega 3 eggs. Omega 3 eggs are made by feeding chickens flax seed. A chicken body is better at converting ALA than mine is. Your experience may differ.

Seth Roberts (2010-11-21 19:10:36)

Jake, that's very interesting. I don't understand, however, how this test shows that you are getting the right amount of omega-3. You could be low in both.

Jon (2010-11-21 21:12:12)

Two tablespoons of flaxseed oil a day has completely eliminated my dandruff. Two tablespoons of cod liver oil did not (nor did two tablespoons of olive oil or of butter). I have no idea why this might be the case, but for me, at least, flaxseed oil provides something the others do not.

Darrin Thompson (2010-11-22 09:18:27)

Interesting. Conventional wisdom out here in fix-autism-with-nutrition-land is to go with fish oil and evaluate based on DHA count and processing method. (Yay Kirkman!) The story behind it is roughly the same except that kids with Autism are bad at converting ALA to DHA/EPA. I'd like to know where the notion came from that you "build up" enzymes by requiring them over time. I hadn't that before. Is it common knowledge?

CTB (2010-11-22 15:21:49)

@Darrin Enzymes are proteins...(DNA makes RNA makes protein). Some enzymes are constitutive (made all the time in fairly stable amounts because they are needed for routine, house-keeping functions), while others are inducible (the amount that is made depends on how much is needed for special functions). If all the proteins a cell could make were made all the time, the cell would run out of space and/or not be very efficient. This is pretty easy to demonstrate in bacteria. They prefer to use glucose, but when there is no glucose left in their medium, but there's some lactose, they will turn on the genes that make the enzyme that breaks down lactose. If you add glucose back to their diet, they turn off the lactose-digesting genes and return to glucose fermentation. We do this too. If you feed a diet high in protein, there is an increase in enzymes that degrade amino acids in the liver, as long as the influx of amino acids continues.

Indrek (2010-11-23 07:49:29)

Considering that the enzyme for ALA conversion would be upregulated with continuous intake, it could explain why your optimal dose went from 4 T to 2 T, Seth, don't you think?

Eugene (2010-11-30 22:55:26)

Professor Roberts: After reading your blog for some time, last year I started flaxseed oil (2TBSP). After one year, my total blood cholesterol went down (206 to 194), HDL increased and triglycerides decreased (110 to 55). Exercise and diet remained

constant year over year, except that 6 months ago I began large amounts of butter and one Greek yogurt a day. Thanks.

g (2011-01-15 20:20:28)

Hi My name is Gonçalo and I'm from Portugal. I really like your blog so that's why I thought about asking you a question. I have struggled with strong chronic anxiety and some depression for a long time. I'm 23. I would like to ask you if you have any suggestion about what I can do to try to understand if these symptoms have roots in nutritional deficiencies, infections, inflammation, etc. I have some history of trauma but maybe some of this is aggravating the problem? Are there some probable causes? Any tests I should do? cost-effective Solutions? Thanks so much Warmest wishes Gonçalo

Seth Roberts (2011-01-16 17:00:07)

Gonçalo, I believe that a common cause of depression and anxiety is a messed-up mood rhythm This rhythm is generated by an internal oscillator with a 24-hour cycle that controls our mood. To work properly this oscillator needs: 1. exposure to sunlight in the early morning 2. no fluorescent light late at night. 3. exposure to faces in the early morning, 4. no exposure to faces late at night. If any of the four is missing it doesn't work. And when it doesn't work you are at greater risk of depression. You can read more about this in Example 2 of my long self-experimentation paper: <http://escholarship.org/uc/item/2xc2h866>

### How Wonderful is Lipitor? (2010-11-22 06:53)

John Cassidy, a staff writer at The New Yorker, understands clearly the poor judgment of economics professors. In How Markets Fail he said the Nobel Prize in Economics has made things worse, because it has often been given for worthless work. Outside of economics, however, he can write [1]this:

during a period in which American companies have created iPhones, Home Depot, and Lipitor, the best place to work has been in an industry [the financial industry] that doesn't design, build, or sell a single tangible thing.

That such a smart well-informed non-party-liner can believe Lipitor is wonderful shows Orwell was right: with enough repetition, people can be convinced war = peace. [2]Here is the truth about Lipitor:

Statin therapy is extremely efficient in lowering cholesterol numbers, but unfortunately not without adverse effects on the body. To prevent a first heart attack, for every life that is saved - 1 % over 10 years of use - statins cause an equal number of adverse deaths due to accidents, infection, suicide and cancer - 1 % over 10 years' use and significantly greater levels of serious side effects and suffering. . . . In a study to see the effects of raising the Lipitor levels from 10 to 80 mg (more sales) on patients, those taking 80 mg had increased liver problems, that is the rate of raised liver enzymes was six times higher than those given 10 mg of Lipitor. Even though the total deaths due to CVD in the 80 mg group was fewer (126) than in the 10 mg group (155), the total deaths due to other causes was higher in the 80 mg (158) than the 10 mg (127) group. There was no difference in the overall mortality rate.

Lipitor, the miracle drug. Taken by millions at a cost of billions. This is what happens when you - such as those in charge of health care - have little understanding of a problem: You aren't good at solving it.

Cardiologists believe that high cholesterol causes heart attacks. Their depth of understanding was illustrated by the cardiologist at [3]my Quantified Self talk about butter who said that the Framingham study showed that diet caused heart attacks (no,[4] it found new correlations between heart disease and "risk factors" such as cholesterol - see also

[5]this) and that the recent reduction in heart attacks is evidence of our improved understanding (e.g., the science behind Lipitor). That a thousand other things changed over the same time period he apparently hadn't considered. He simply couldn't defend – at least then – his core belief that butter was bad. A cardiologist! How many thousands of people has he told to eat less butter?

Cassidy's article about the harm done by the financial industry, from which that quote was taken, is excellent.

1. [http://www.newyorker.com/reporting/2010/11/29/101129fa\\_fact\\_cassidy?currentPage=all](http://www.newyorker.com/reporting/2010/11/29/101129fa_fact_cassidy?currentPage=all)
2. [http://www.novamagazine.com.au/article\\_archive/2009/2009-12-cholesterol\\_lowering\\_drugs\\_statins\\_deception.htm](http://www.novamagazine.com.au/article_archive/2009/2009-12-cholesterol_lowering_drugs_statins_deception.htm)
3. <http://quantifiedself.com/2010/09/seth-roberts-on-arithmetic-and.php>
4. <http://www.proteinpower.com/drmike/cardiovascular-disease/framingham-follies/>
5. <http://www.framingham.com/heart/profile.htm>

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Brian (2010-11-22 11:16:07)

Seth- I recently stopped taking Zocor [a statin, like Lipitor]. I started taking it at the same time I started using a CPAP machine to treat sleep apnea. While my sleep was more restful, I remained fatigued. After a year of Zocor, I was diagnosed with ADHD. Following this diagnosis, I tried a string of medications - adderall, stratera, and ritalin. I even became depressed and was put on an SSRI. My memory and mental prowess faded and became extremely spotty at best. I would use IQ apps on my iPhone to measure my mental prowess – and usually scored in the 75-100 range! (Prior to Zocor, similar, computerized IQ tests would yield answers from the 130s to the 170s.) Even moderate exercise would wipe me out for days - unless I was taking the maximum dosage of adderall. So I quit taking Zocor. (Initially, I tried using COQ10 to moderate the effects, but it proved ineffective.) Even though I am obese, I can now exercise in moderation with no ill effects. My mind is back, as are my computerized IQ scores. I no longer arbitrarily stop talking in the middle of sentences after losing my train of thought.

Wayne (2010-11-22 18:38:50)

I'm not sure I buy either side of the statin argument (am currently on statins myself). An interesting article which is vaguely related: <http://www.washingtonpost.com/wp-dyn/content/article/2010/11/22/AR2010112203503.html>

Seth Roberts (2010-11-22 19:45:53)

Wayne, do you know if the statins you take are lowering your IQ? See the previous comment. Cholesterol lowering has been associated with more death from suicide and accidents. If this association is due to cause and effect, it implies that cholesterol lowering makes your brain function worse. Suicide rate and accidental death rate are very insensitive measures of brain function, more sensitive measures of brain function might show a strong association.

Stephen M (Ethesis) (2010-11-27 19:05:05)

Hmm. On a related topic, <http://www.thejuliagroup.com/blog/?m=201010> is about failures of statistics (among other things).

Robin Hanson (2010-11-27 21:55:44)

I didn't think the finance article was excellent. It raised a bunch of standard well-known issues, but offered no insight into how to weigh those factors.

Seth Roberts (2010-11-28 03:56:06)

I thought it was excellent because it was a well-written description of those well-known issues. I agree it did no more than neatly package them.

## How Wonderful is Lipitor? (continued) (2010-11-23 07:08)

In response to [1]my previous post about Lipitor, someone named Brian commented:

I recently stopped taking Zocor [a statin, like Lipitor, and the most prescribed anti-cholesterol drug]. I started taking it at the same time I started using a CPAP machine to treat sleep apnea. While my sleep was more restful, I remained fatigued. After a year of Zocor, I was diagnosed with ADHD. Following this diagnosis, I tried a string of medications – adderall, stratera, and ritalin. I even became depressed and was put on an SSRI. My memory and mental prowess faded and became extremely spotty at best. I would use IQ apps on my iPhone to measure my mental prowess “ and usually scored in the 75-100 range! (Prior to Zocor, similar computerized IQ tests would yield answers from the 130s to the 170s.) . . .

So I quit taking Zocor. (Initially, I tried using COQ10 to moderate the effects, but it proved ineffective.) . . . My mind is back, as are my computerized IQ scores. I no longer arbitrarily stop talking in the middle of sentences after losing my train of thought.

Apparently Zocor caused serious mental problems. Is this rare or common? Common. [2]Here is an article about it. The idea that statins have bad mental effects is old. At first it was dismissed. [3]Here is one dismissal:

The issue of low serum cholesterol and depression was directly examined in three randomized, placebo controlled trials of statins in which indices of depression were measured in all the participants“a total of 7400 people taking active treatment and 2400 taking placebo. Depression was no more common among those taking active treatment.

Apparently these three large randomized placebo-controlled trials got the wrong answer. Curious.

Perhaps statins cause mental impairment in everyone. Everyone’s brain uses cholesterol. If you are going to start or stop taking a statin (such as Zocor or Lipitor) and would like to learn how the drug affects/affected your mental function, please contact me. I am interested in helping you do that.

In [4]the top 15 most prescribed drugs, Lipitor ( #7) was the only non-generic. The profits are large, the benefits small and plausibly outweighed by the costs. There is great room for improvement in determination of how much Lipitor and other statins impair mental function.

1. <http://www.blog.sethroberts.net/2010/11/22/how-wonderful-is-lipitor/>

2. <http://www.dailymail.co.uk/health/article-1160796/Statins-new-NHS-wonder-drug-cutting-cholesterol-But-sinister-effects.html#ixzz0i1cPHRMI>

3. <http://www.bmj.com/content/313/7058/651.full>

4. <http://www.forbes.com/2010/05/11/narcotic-painkiller-vicodin-business-healthcare-popular-drugs.html>

Alex Chernavsky (2010-11-23 07:41:49)

I think it's also possible that Bruce's cognitive impairment was caused – or exacerbated – by the psychiatric drugs (Adderall, Strattera, Ritalin, and an SSRI) that he was taking. See, [1]*Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*.

1. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452417/>

Nancy Lebovitz (2010-11-23 13:08:12)

[1]An account of dealing with the more difficult drugs, by someone who can't just walk out on convention medicine.

1. <http://shadesong.livejournal.com/4214956.html?nc=18>

G (2010-11-24 04:46:31)

My mum was prescribed statins as a precautionary measure due to cholesterol levels only slightly above the official acceptable threshold. She was hesitant to take the medication and asked me to look up the side-effects online. She did this because she knew two people who had specifically warned her off ever taking statins because of the major side-effects they had endured; among other things, hair-loss. One of them, a woman who had had a full head of hair and no history of alopecia, now had barely a wisp left. This is not a medication that should be given out on the basis of statistics because there are too many unknowns and danger-signs. It should be given out like ECT: when there is short-term danger to the patient and other methods have failed.

Arlene (2010-11-24 16:10:32)

Apparently these three large randomized placebo-controlled trials got the wrong answer. Curious. I don't know if it's curious or predictable. I'm currently reading "White Coats and Black Hats" an expose of pharmaceutical company marketing practices. It's very common to publish studies supporting their product while ignoring or denying any ill effects. These companies manage to publish in many "respected" journals as well as their own, in house, journals and hide the conflict of interest

Brian (2010-11-27 11:24:07)

My problems were exacerbated by the psychiatric drugs. But I was on a statin for a year-and-a-half before taking any of the other drugs. All of the mental problems showed up prior to taking any of the psychiatric drugs. None of the problems went away until after discontinuing the statin, even though I had discontinued taking the psychiatric drugs weeks, months, or years earlier. If I have time, I'll blog my experiences in a linear fashion.

## **Epilepsy's Big, Fat Miracle ... (2010-11-26 20:49)**

... is the title of [1]a New York Times Magazine article about the ketogenic diet, a treatment for childhood epilepsy, which I've blogged about several times ([2]here, [3]here, [4]here, [5]here, [6]here). It's a very-high-fat diet. It interests me for two reasons: (a) It connects a high-fat diet with proper brain function, as my self-experiments have done. A curious feature of the ketogenic diet is that it isn't permanent. After several years the child can go off it. My self-experimentation suggests that Americans eat far too little of certain fats. Perhaps eating enough of these fats would prevent childhood epilepsy. (b) It shows how someone who cares enough – in this case, Jim Abrahams, whose son had epilepsy – can be more effective than professional researchers and doctors. Abrahams rediscovered the diet. He saw its value, the professionals didn't. I've argued that this is part of why my self-experimentation found new solutions to common problems: because I had those problems. I cared more about finding a workable solution than researchers in those areas, who had several other concerns (publication, funding, acceptance, etc.).

The details of the article reminded me of something I learned in the BBC series The Story of Science. For hundreds of years, medical students were told, following Aristotle, that the liver has three lobes. It doesn't. You might think that examination of thousands of actual livers would have dispelled the wrong idea, but it didn't. The article contains many examples of doctors ignoring perfectly good evidence in favor of nonsense they read in a book or heard in a

lecture. Epilepsy is easy to measure. If a child has 100 seizures per day, and has been having them at this rate for years, and this goes down to 5 shortly after he starts the ketogenic diet, and goes up again when the child goes off the diet, there is no doubt the diet works. As early as the 1930s, this had been observed hundreds of times. This was overwhelming evidence of effectiveness. Doctors ignored it, probably based on the modern equivalent of the three-lobed liver. They complained, according to the article, that there was "no evidence it worked" or that the evidence wasn't "controlled" or "scientific" (whatever that means). A study published in 2008 "answered doubts about keto's clinical effectiveness" – as if doctors needed the equivalent of a very-large-type book to be able to read what most of us can read with normal-sized type.

According to the article, "by 2000, more people were asking about keto, but most pediatric neurologists still would not prescribe it" – as if the parents needed the approval of their doctor to try it. You don't need a prescription to buy food.

Thanks to Tim Beneke, Michael Bowerman, Alex Chernavsky, David Cramer, and Peter Couvares.

1. <http://www.nytimes.com/2010/11/21/magazine/21Epilepsy-t.html>
2. <http://www.blog.sethroberts.net/2008/06/10/the-ketogenic-diet/>
3. <http://www.blog.sethroberts.net/2008/06/15/the-ketogenic-diet-and-evidence-snobs/>
4. <http://www.blog.sethroberts.net/2008/06/30/the-ketogenic-diet-continued/>
5. <http://www.blog.sethroberts.net/2010/01/24/animal-fat-sleep-and-the-ketogenic-diet/>
6. <http://www.blog.sethroberts.net/2010/06/12/goes-against-everything-i-was-taught-in-med-school/>

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Dennis Mangan (2010-11-27 07:17:47)

The ketogenic diet for epilepsy was known to the ancients: Hippocrates prescribed fasting as treatment for epilepsy. If doctors wanted to use a text, they could have gone to the original.

Caleb (2010-11-27 09:19:48)

Occasional fasting can be good medicine for adults, but I'd hesitate to recommend it for kids who are still growing.

Seth Roberts (2010-11-27 14:34:32)

Dennis, that's a good point. First doctors rely too much on the ancients (three-lobed liver); later, not enough.

### **Examples of MS Liberation Therapy (2010-11-27 02:33)**

[1]This story from the Globe and Mail describes what happened to ten Canadians who left the country to get liberation therapy for their multiple sclerosis (MS). The therapy consists of widening veins that drain blood from the brain. The therapy does not always work, but it usually does. The improvement is so fast and large – comparable to giving someone with scurvy Vitamin C – that the thing being changed must be the source of the problem.

Mainstream MS researchers missed this completely. The mainstream view is that MS is an auto-immune disease (e.g., [2]according to Mayo Clinic staff). This view would never lead you to the liberation surgery. Doctors not only have the wrong idea, they are unwilling to defend it. A woman in the Globe and Mail story tried to get the anti-liberation argument from neurologists. She couldn't:



Unfortunately the neurologists are all hysterical. You can't talk to them.

Remember this the next time someone tells you that ulcers are not caused by stress but are actually caused by bacteria – as several contributors to [3]this EDGE symposium claim.

The vast improvement in understanding of MS came about because someone with the necessary expertise (a professor of surgery) cared more than most MS researchers because his wife had MS. I think this is why my self-experimentation found such different solutions than mainstream science: because (a) I cared more than the professional researchers who studied the subject (e.g., sleep) and (b) I had the necessary expertise to do research. I discuss this [4]here.

Thanks to Anne Weiss.

1. <http://www.theglobeandmail.com/news/national/hope-of-liberation-portraits-of-ms-therapy-patients/article1815108/>
2. <http://www.mayoclinic.com/health/multiple-sclerosis/DS00188/DSECTION=causes>
3. [http://www.edge.org/3rd\\_culture/thaler10/thaler10\\_index.html](http://www.edge.org/3rd_culture/thaler10/thaler10_index.html)
4. <http://www.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

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vic (2010-11-27 16:42:48)

Wow, Seth, you and I interpret things really differently. I am completely convinced, like you, that most of the time doctors don't know what they are talking about and that most pharmacological interventions are useless or worse - still, the results of these MS patients are not remotely in the same ballpark as results from Vitamin C in scurvy patients. Many symptoms of MS are both subjective and influenced by mental states, and their are natural improvements and deteriorations in the patient's MS without treatment. When I read about the improvements these patients describe they seem well within the normal bounds of MS, without any evidence for an effect of treatment beyond the psychological/placebo.

Seth Roberts (2010-11-28 06:31:04)

vic, to take just the first story:

Before the procedure, Mr. Garvie used a wheelchair, had no control over his bladder and his left side was completely numb. . . Seven months after the surgery, he stopped taking his bladder pills and the colour had returned to his left foot. He now walks with a cane,

Why do you think such improvement could be normal variation or a placebo effect? I don't know of any studies of MS – or any studies of anything – that have found placebo effects like these.

James (2010-11-28 08:09:05)

Another important aspect is how the improvements go away if clots develop in the veins.

Seth Roberts (2010-11-28 15:32:16)

That's a good point.

vic (2010-11-28 15:33:40)

Seth, I think you grossly underestimate the power of the mind over the body. The boundary between needing a wheelchair and a cane is often very fuzzy, and certainly depends on one's mental state. I've seen people walk out of wheelchairs on

televangelist shows. I've often encountered medical case reports that seem similarly 'remarkable,' such as a woman confining herself to bed for over 30 years because of unremittant pain, whose pain suddenly went away completely after a placebo. There is work by Ramachandran showing that unbearable phantom limb pain can be made to go away using a mirror. When people are told that a device drives an electric current through their brain they develop a headache. Lots of studies have documented little connection between chronic pain (back, neck, shoulder, head, knee) and physical abnormalities (except in arthritis or extreme cases). If you showed me a placebo controlled study and the liberation group did much better than the placebo group then I might believe something is happening. If you don't have a placebo group, which I am aware you are not a fan of, then the evidence needs to be much stronger - show me that 7 out of 10 people go from needing a wheelchair to being almost fully functional for a period of a year or more and it \*starts\* approaching the level of evidence that shows that vitamin C cures scurvy.

Michael M (2010-11-28 20:49:04)

You do know that MS often occurs in a relapsing/remitting form? Changes like this don't have to be attributed to either interventions or placebo effects: they can be an inherent feature of the natural history of the disease. MS can't be viewed as a typical degenerative disease, with a continuous decline in functioning for all patients. So no, a single case report like this in MS cannot be convincing evidence.

Seth Roberts (2010-11-29 15:50:28)

Michael, I am unaware of remissions in MS as large and long-lasting as the one described in my quote from the first case ("Before the procedure..."). Are you? If so is there a description you could point me to? All diseases go up and down, just as all measurements do. It's the size and duration of the up/down variation that's interesting, not its existence. Vic, I'd be very surprised if liberation therapy was the first treatment these patients had tried. A placebo explanation of these results doesn't explain why the previous treatments these patients tried didn't work. Nor does a placebo explanation explain why blockage in the opened vein is associated with the improvement disappearing. And I am unaware of any placebo that produces MS results as good as those described in the article. They've been tested and don't work this well. For example, [1]this study.

1. <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2896%2909377-4/abstract>

vic (2010-11-30 21:16:30)

Finding a miraculous 'cure,' being disappointed, and then repeating the cycle is the norm for most chronic medical conditions. And this treatment is no ordinary placebo - these patients spent many thousands of dollars, left the country, and had invasive surgery on their neck veins \*against\* the advice of their doctors and neurologists. Talk about cognitive dissonance effects!

SB (2011-05-08 16:19:26)

An article on Liberation Therapy that you might find interesting <http://www.significancemagazine.org/details/magazine/1036499/Multiple-sclerosis-is-a-cure-or-a-contradiction-.html>

Seth Roberts (2011-05-08 18:34:23)

thanks, very interesting article.

## **Cold Showers Raise Mood (2010-11-27 22:32)**

[1]Todd Becker pointed me to [2]this post which is negative about the notion that cold showers raise mood ("empty science") but you can ignore the negativity and go to the comment that gives a long list of studies that support the idea. Todd has blogged about [3]his use of cold showers.

Todd calls this hormesis. About the mood-raising aspect of cold showers, I'm not so sure. There is a broad correlation between being sleepy and being in a bad mood. So anything that wakes us up is likely to improve our mood. But if cold showers improve one's response to stress of all sorts - which is less clear - it does seem like hormesis in other contexts. When I think of hormesis I think of two sorts: intra-cellular (e.g., x-ray-like radiation breaks stuff, activating

repair systems – [4]radiation hormesis) and extra-cellular (microbes in fermented food activate the immune system). But there are other examples of similar stuff: exercise breaks muscle fibers (which is why you shouldn't exercise the same muscles two days in a row) and longer-term increases them; bones when broken grow back stronger. If we need a certain amount of thermal or other stress to properly respond to stress that would be another example.

1. <http://gettingstronger.org/>
2. <http://experimentalchimp.wordpress.com/2008/04/14/how-empty-science-becomes-wisdom/>
3. <http://gettingstronger.org/2010/03/cold-showers/>
4. <http://www.angelfire.com/mo/radioadaptive/inthorm.html>

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Greg (2010-11-28 05:15:46)

Interesting. I started having only cold showers a couple of weeks ago to see if I would still get the hives I usually got from hot showers. I no longer got the hives and I also noticed an improved mood. I don't know if the heat caused the hives, or if it was prolonged exposure to fluoridated water. Cold showers are usually of short duration, so I might try some short hot showers.

Jonathan (2010-11-29 11:35:39)

I'm a big fan of cold water swimming, and I surf without a wetsuit. I'm out there as many mornings as I can fit in. I never get a cold or flu, and I'm usually pretty upbeat. I never put 2 and 2 together, but it very well could be a result of all that time in the cold surf. I take lukewarm showers, but I'll try going without any hot water to see if it kicks things up a notch.

Gary Wolf (2010-11-29 16:19:03)

The mood elevating effect of cold immersion is a common topic among cold water swimmers. I was first exposed to this idea in 2007 by Piotr Wozniak, a sleep and memory researcher. My first experience produced an elevated mood that lasted for about 2 days; but I associated this elation with the rush of doing something that I felt to be risky and coming through it unharmed. (January; Baltic Sea) However, once I'd broken the ice, I started swimming in cold water regularly, and it always elevated my mood. Swimming is fun in general, but swimming in warm water, or swimming in cold water with a wet suit on, does not produce the same after effect of elation. I have never experienced as extended a period of elation as after my first swim; normally, the most noticeable effect lasts about 4 hours, with a lingering effect for the rest of the day.

d-day (2010-11-29 16:53:16)

I have always loved the feeling of absolute refreshment from cold showers and cold-water swimming ever since I was a little kid. Glad to know I'm not a freak.

Alex Chernavsky (2010-11-29 21:05:37)

This is intriguing. What are some other non-obvious ways to improve your mood? Is there a summary somewhere?

Nansen (2010-12-01 15:01:57)

In her book "Treating Bipolar Disorder: A Clinician's Guide to Interpersonal and Social Rhythm Therapy", Ellen Frank makes the interesting point that behavioral activation alone (i.e. just doing something) was equally efficacious to a complete cognitive therapy treatment in bringing about a resolution of unipolar depression. (page 102). Perhaps a cold shower is a good way to get someone to just do something.

cap (2011-03-03 11:34:55)

Hi Seth, sorry this is a little off topic, I'm commenting here since it's the most recent entry about self-experimentation and mood disorders. My question is, in your self-experimentation, have you found any tricks that help to get over a broken heart? Thanks.

Seth Roberts (2011-03-04 02:43:46)

cap, yes I found that seeing faces in the morning (Example 2 of my 2004 self-experimentation paper) was a huge help in getting over bad news.

## Feeling the Future: Room For Improvement (2010-11-29 21:56)

My Frontiers of Psychology class read Daryl Bem's new paper [1]Feeling the Future that reports nine experiments that show an effect of the future on the present. I have a different take than anything I've read: I think there are several good reasons to take it seriously. But in this post let's start with how it could have been better:

1. Lack of background. There have been lots of experiments along these lines. What did they show? This question is not clearly answered. The prior probability of these claims is enormously important. As I told my students, if seeing the future was common and easy for even a small fraction of people, we wouldn't have businesses, such as casinos, making money on gambling. But the existence of such businesses doesn't rule out weak effects.
2. Lack of exact repetition. An obvious criticism is that Bem slanted the data analysis to favor the results he wanted. In any data analysis of unfamiliar data, you must choose – how to transform the data, what test to use, and so on. You must also choose how many subjects to run and how many trials to give them. There are rules for these choices (Bem doesn't seem to know how to choose a transformation) but nevertheless they allow favoritism to creep in. Drug trials have big problems along these lines – severe slanting of the analysis to make the results more favorable – which is why when you register a clinical trial you must specify the endpoints. The answer to the criticism that your data-analysis choices made your favored result more likely is to do a data analysis with no choices at all. This cannot be done from scratch. You need to do the experiment once, make all the necessary choices, and then do the same experiment again (same everything as much as possible) and analyze the data exactly the way you analyzed the data from the first experiment. Bem never does this. Instead each experiment is different from all the rest. This is what experimental psychologists traditionally do but here it is a bad idea. Better to have taken the two simplest and clearest effects (priming and word learning) and repeated them several times exactly.
3. Were experiments left out? Let's say you observe a weakly-significant result,  $p = 0.03$ . Now you do the same experiment eight more times. How likely is it that each of the eight replications will also find a significant difference? Quite low. Yet Bem finds a weakly significant difference in each of his nine experiments. This is highly unlikely. Bem appears unaware of the problem. Mendel had the same problem (data too good to be true). Ultimately Mendel was proved right. But again it stresses that Bem should do exact repetitions and report the results no matter what if he wants to be more persuasive.

1. <http://dbem.ws/FeelingFuture.pdf>

Bruce G Charlton (2010-11-30 07:25:14)

As I tried to argue in the related case of Alternative/ Complementary healing - <http://qjmed.oxfordjournals.org/content/95/10/643.full> - I believe that the problem for this kind of study, of a phenomenon whose nature is unknown, is that 'controlled trials' are strictly impossible/ nonsensical. In this instance, since the nature of hypothetical psi is unknown, and the features that influence it, it is not possible to 'control' the trial. When a causal phenomenon is understood, then a trial can be controlled - and the better controlled the experiment, the clearer will be the result. The level of significance in frequentist statistical testing is merely a distraction - a mere arbitrary convention applied to a no-causal hypotheses (the 'null hypothesis' has nothing to do with causation). And significance testing has nothing to do with (is orthogonal to) causality: <http://charltonteaching.blogspot.com/2010/10/scope-and-nature-of-epidemiology.html>.

Alex Chernavsky (2010-11-30 21:43:29)

I used to subscribe to the *Skeptical Inquirer*, and I read a lot of stuff by James Randi and Martin Gardner. There's usually some plausible, mundane explanation for these types of PSI effects. Extraordinary claims require extraordinary evidence.

Anthony (2010-12-01 00:26:15)

@Alex, Is an 'extraordinary claim' relative to a given agent's belief system? (for example, telepathy might be extraordinary for person a, but not for b)

Vermiculture: Indoor Kompostierung und organische Bodenverbesserung | Gartentipps (2011-03-30 12:12:00)

[...] Seth's blog » Blog Archive » Feeling the Future: Room For Improvement [...]

## Assorted Links (2010-11-30 23:37)

- [1]Hormesis: A Revolution in Biology, Toxicology and Medicine (2010 book)
- [2]How common is plagiarism in anesthesia papers? "Approximately 1 in 10 submissions"
- [3]Bitterness receptors in the lungs. Bitter substances cause the lungs to open.

Thanks to Oskar Pearson.

1. [http://books.google.com.hk/books?id=w1udrdbv9T0C&printsec=frontcover&dq=hormesis&hl=zh-CN&ei=sw\\_yTP7xJoukvg0b7eigDg&sa=X&oi=book\\_result&ct=book-thumbnail&resnum=2&ved=0CC8Q6wEwAQ#v=onepage&q&f=false](http://books.google.com.hk/books?id=w1udrdbv9T0C&printsec=frontcover&dq=hormesis&hl=zh-CN&ei=sw_yTP7xJoukvg0b7eigDg&sa=X&oi=book_result&ct=book-thumbnail&resnum=2&ved=0CC8Q6wEwAQ#v=onepage&q&f=false)
2. <https://retractionwatch.wordpress.com/2010/11/24/plagiarists-plagiarized-a-daisy-chain-of-retractions-at-a-nesthesia-analgesia/>
3. [http://www.umm.edu/news/releases/taste\\_receptors.htm](http://www.umm.edu/news/releases/taste_receptors.htm)

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Thomas Seay (2010-12-02 11:53:17)

Interesting because something like Ku Gua (Bitter Melon), besides being part of Chinese Cuisine, is actually recommended by Chinese medicine for numerous pulmonary afflictions, including asthma.

## 5.12 December

### Food For Thought (2010-12-01 07:08)

A perfectly good [1]Economist article about food and brain function includes the following:

Many studies suggest that diets which are rich in trans- and saturated fatty acids, such as those containing a lot of deep-fried foods and butter, have bad effects on cognition. Rodents put on such diets show declines in cognitive performance within weeks.

Whereas I found butter improved my cognitive performance within a day. And pork fat improved my sleep within a day. On the other hand, I wouldn't be surprised if foods deep-fried in plant oils, such as corn oil, are bad for the brain.

1. <http://www.economist.com/node/11745528>

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John (2010-12-01 07:37:58)

clearly they aren't differentiating between kinds of oils, at least in that part of the report-the category "bad oil" is enough for them.

john (2010-12-01 08:13:22)

Ahh, the typical great control of variables...I did an experiment where I fed butter and mercury to rats, and they died. So now I avoid both.

jeff borsato (2010-12-01 08:25:39)

feeding rats diets high in substances they normally don't eat (saturated fats and industrial vegetable oils) surely is a poor predictor of their effects on humans, even more so when "fat" is far too general of a term, testing "fats" effect on any animal is like testing "liquids" effects, the variance between natural saturated fats and omega-6 rich vegetable oils or even coconut oil demand separate streams of data. which likely would yield vastly different results.

Jake (2010-12-01 09:18:05)

American nutrition researchers were stupid enough in the old days to think that trans fats and saturated fats were the same thing. Thus when they wanted to test the effects of saturated fats they substituted trans fats as they were cheaper. Then they reported that saturated fats will kill you. The difference is that trans fats will kill you, saturated fats are necessary for life. Most American nutrition researchers remain just as stupid today. Journalists come from the same dead brain pool as nutrition researchers. Thus you saw the report that you did. However, you did arrive at a rule that will serve mankind forever. That is: Never, ever believe any nutrition information that you read in the mainstream media.

Glen Raphael (2010-12-01 14:01:08)

Did you follow the butter-mind study? If so, do you have any comments about the findings? <http://genomera.com/studies/butter-mind> (charts here <https://sites.google.com/site/buttermind/>) The genomera blog says their study "came to a conclusion" but doesn't say what the conclusion \*was\* and the charts are a little ambiguous on their own.

PJ (2010-12-02 16:30:52)

They do that on purpose, you know. It's so common at this point it's eye-rolling. "We fed rats bacon and twinkies and they were less healthy. So don't eat meat!" Much research is little more than an attempt to 'buy' free advertising – mass media, worldwide, with the heft of authority – by deliberately designing things to make your friend (or enemy) substance look good (or bad) and then sending out press releases about the paper. If the study doesn't support that, you can mess with numbers until you find \*something\* the study can say. If you still can't, you can just write an abstract that appears to say nearly the opposite so it still looks like what you want it to say. The more I appreciate science, the less I appreciate most of what I read.

## **Feeling the Future: More Likely Than You Think (2010-12-01 20:37)**

A few posts ago [1]I pointed out how Daryl Bem's [2]Feeling the Future paper (experiments that seem to show the future changing the present) could have been more persuasive. This post is the other side of my critique. I'll explain why the results are more persuasive than Bem and commentators have said.

If this research is correct, I told my students, you can study for a test not only before but also after you take it. Studying after isÂ better than studying before because you would only need to study what was on the test. And there are reasons to believe the research that Bem didn't mention:

First, the history of electricity. Electricity, now incredibly important, was once nearly invisible. Remember [3]Galvani? During a frog dissection, an assistant touched an exposed leg-muscle nerve with a static-electricity-charged scalpel. The leg twitched. This tiny accident made all the difference. Galvani studied what had happened. He soon discovered that two different metals in contact generated electricity. This led to the first batteries. With a steady source of electricity, we could learn about it.

The methodological lesson is that the nervous system is (a) unusually sensitive to the environment and (b) easy to "read". You could touch a static-charged knife to many things: a plant, cloth, a piece of metal, a piece of wood. No doubt this had happened countless times before Galvani. The static electricity changed all of them (plant, etc.) but these changes led nowhere because they were too small to see. In contrast, the effect of static electricity on the nervous system was easy to see. It was amplified by the neuro-muscular junction and the muscle. Measuring the effect of electricity on nerves turned out to be the best way to study it, at first.

My self-experimentation takes advantage of the sensitivity of the brain to the environment. Mostly I study stuff controlled by the brain, such as sleep, weight, and arithmetic speed. Because the brain changes quickly and the changes are easy to detect (via behavior), I can do short convincing experiments. People who study health in other ways have to do much slower and more difficult experiments. For example, bones change slowly in response to dietary changes. Other parts of our body, such as the liver, are much harder to measure than behavior.

The story of how electricity began to be understood suggests that if the future does affect the present, there will be a period when the best way to study this is by studying behavior. This is what Bem did. We don't normally think of the brain as good for physics experiments but Galvani showed the truth of this. The brain acts as an enormously sensitive amplifier. For example, Barbara Sakitt did [4]an experiment suggesting that the eye can detect single photons. Bem's experiments cost essentially nothing. He needed no grant. For a physicist to build a detector that detects future effects on the present without involving the brain will surely be more expensive and more difficult, just as it was so much easier for Galvani to use frog legs than build a electricity detector not involving the nervous system.

Second, the history of psi research. Unfortunately Bem omitted even a brief summary from his article. Experiments similar to Bem's have been going on for decades. In the 1980s, I visited a lab near Princeton doing such

experiments. I haven't studied this research but as far as I know they have repeatedly reported small effects. This is what has kept them going – or at least I cannot rule out this explanation for why it has lasted so long. The alchemists pursued fruitless research a long time but I am unaware they reported small successes. Bem used his knowledge of mainstream psychology (e.g., priming) to design much more sensitive experiments. So it makes sense that these weak effects would become more detectable.

Third, gravity/time symmetry. Bem says we see no signs of the future affecting the present in everyday life. I am less sure. The effects of gravity and time reversal (time going backwards) are remarkably similar. If you watch the same video played forwards and backwards you can tell which is forward (correct) and which is time-reversed: In the time-reversed version, impossible things happen. A man slowly drinks coffee. Correct version: the level of coffee in his cup slowly gets lower, as the coffee goes into his mouth. Time-reversed version: the level of coffee in his cup slowly gets higher, as the coffee comes out of his mouth into the cup. That's impossible! You can spit again and again into a cup, sure, but you can't spit pure coffee into a cup. You can't unmix the coffee from the rest of the liquid in your mouth.

Imagine two billiard balls on a frictionless perfectly flat pool table. They are together in the center. Touching, but not held together. A video of the balls would show them slowly moving apart in response to random disturbances. They move down a probability gradient: Further apart is more likely than close together. This is why a sodium pump is needed to keep enough sodium in cells: because the difference in concentration (more sodium within a cell) makes diffusion out of the cell more likely than diffusion into the cell.

Now we do something different: we randomly and independently place both balls on the table. The placement of one has no effect on the placement of the other. Almost surely they will not be touching. Then we start filming. And a funny thing happens: the balls move closer and closer together! The opposite of the first film, where they slowly drifted apart. They are drifting closer and closer together because they are so heavy that the gravitational attraction is larger than the random forces (e.g., air molecules) in the situation. The second film run backwards looks exactly like the first film run forward! In this way the force of gravity causes time to go backwards. It causes seemingly less-probable events to be more probable than seemingly more-probable events. Rather than have two concepts (force of gravity, passage of time) perhaps we only need one.

I will write more about this later. The simple point is that the effects of gravity are very similar, perhaps identical, to time moving backwards. The force of gravity is obvious and the similarity to backwards time unexplained. Given this failure to explain something easy to see, we shouldn't be sure we know if the future can visibly affect the present. If time goes backwards to some extent (measured by the force of gravity) then to some extent the future has happened and we know something about it. The more we know about it, the better we can choose to study for a test by studying just the items that will appear on it.

1. <http://www.blog.sethroberts.net/2010/11/29/feeling-the-future-room-for-improvement/>
2. <http://dbem.ws/FeelingFuture.pdf>
3. [http://en.wikipedia.org/wiki/Luigi\\_Galvani](http://en.wikipedia.org/wiki/Luigi_Galvani)
4. <http://lib.semi.ac.cn:8080/tsh/dzzy/wsqq/SPIE/vol5866/5866-332.pdf>

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Anon (2010-12-02 04:13:11)

I always say that love at first sight is a result of memories of the future. That line has got me laid a few times!



PeterW (2010-12-02 06:26:55)

The Princeton lab shut down a few years ago.

Henrico Otto (2010-12-02 12:27:45)

If you start with a random distribution of particles, running the laws of physics forward or backwards will both look "normal". It is only after the simulation has run for a period that reversing the time direction makes it look funny. But that effect holds for both (i) starting with +t, and reversing so the equations use -t, and (ii) the opposite, starting with -t, and reversing so the equations use +t. In both cases, the reversed simulation starts to look normal again when you pass the point of the initial distribution. This is due to the fact that running the simulation (with +t or -t) creates information that is not random (but reflecting physical law). The issue is not time direction, but information. The separation of balls due to random fluctuations is not the mirror image of gravity, and so I'm not following what you are saying, but look forward to your posts on this.

Seth Roberts (2010-12-02 15:26:05)

Henrico, that's a nice way of looking at it. Suppose there are just two particles in an enclosed space and the only important force is the force of gravity. When you run time forward, the two particles move closer, due to attraction. When you run time backward, they move further apart, due to repulsion (gravity in reverse). In the second case, however, the increase in information (predictability of location) is very slight because the particles are already far apart and are at random locations. Those locations become only slightly less random if the enclosure is large enough. More concretely if you have a bunch of randomly-placed particles in an enclosed space and you run time backwards with just gravity as a repulsive force they will appear to be moving randomly, as far as I can tell. The build up of information is far clearer when time goes forward. Then gravity will cause them to clump together. Their locations will become perfectly correlated. In other words, I am not so sure the operation of gravity causes information (predictability of location) to increase when time runs backward. If information is defined as correlation of location, then with two particles, yes, they become negatively correlated due to repulsion. But as the number of particles increases the effect – increase in negative correlation due to repulsion – becomes weaker and weaker.

CTB (2010-12-02 15:30:18)

Entropy is the tendency for a system to move from order to disorder due to the random disturbances you mentioned in the ball example. The force of gravity can counteract entropy...otherwise, for example, the planets in our solar system would not be orbiting around the sun, they'd be moving off into the cosmos. If the balls were heavy enough to exert gravitational pull on each other and move together, they would be using the force of gravity to overcome the force of entropy. If you filmed this happening, then played it in reverse, it would look like 'time in reverse' but the reverse film would be an impossibility in reality unless you put in some sort of energy to make it happen. I.e., only one of the directions happens spontaneously (depending on which force is bigger), and that is the direction which corresponds with time moving forward. Also looking forward to the point of all this....

Joe (2010-12-02 15:41:10)

I tend to agree with Henrico on the gravity/time symmetry... The example of the billiard balls is not actually one case being run back and forth in time; it's two non-equivalent cases. Case 1 involved the air molecules being more powerful than gravity, and pushing the balls apart as time moves forward. Case 2 involved gravity being more powerful than air molecules and pulling the balls together as time moves forward. If you run Case 1 "backward" (start the balls apart and run time backwards) the air molecules will not push the balls together, they will continue to move the balls around randomly. If you run Case 2 backward (start the balls together and run time backwards) gravity will hold the balls together. In Case 1 gravity is explicitly weaker than the air molecules, in Case 2 gravity is explicitly stronger. In either case there is no gravity/time symmetry, only the special situation where you have "Case 1 rules" (gravity weaker than air) as time moves forward and "Case 2 rules" (gravity stronger than air) as time moves backward. I think it's more helpful to think of time as a dimension (length, width, depth, time) and gravity as a force (gravity, electromagnetism, lift, drag). Events are caused by forces and measured relative to dimensions. Some events are conservative in time and space, tossing a ball in the air for example, and there is force-force symmetry IN time with those events (gravity is symmetrical, in time, with the projectile force sending the ball into the air). Some events are non-conservative in time, like the "drinking coffee" example, and so in those instances there is

no force-force symmetry in time. This is a very interesting line of thought and I'm looking forward to the rest of the posts, but I think there is a lot more work to do to establish the validity of a time/gravity symmetry. Or maybe I'm missing a subtler point that someone can point outâ€¦!

Seth Roberts (2010-12-02 15:43:29)

"The point of all this" . . . just non-obvious reasons to believe the Bem results, which are basically well-done creative experimental psychology. Not the beginning of coverage of psi experiments.

CTB (2010-12-03 08:04:18)

Sorry...by 'the point of all this' I meant I don't see the connection between the billiard ball thought experiment (requires untrue assumption that the balls exert enough gravitational force on each other to pull them together, overcoming the opposing air movements) and the Bem experiments which produced real effects without any untrue assumptions being made. But I think you're trying to say: the Bem experiments produced real effects, and these results might be demonstrating that precognition is possible...so, let's think about some other reasons to believe that precognition is possible. While my way of looking at it is: the Bem experiments produced real effects, what real conditions caused these effects to happen.

Seth Roberts (2010-12-04 20:19:42)

CTB, yes, that's true. I'm trying to say why Bem's experiments should not be quickly dismissed. Galvani's experiments showed how psychology (or at least study of the nervous system) could be helpful to physics. If the future can affect the present that is new physics. Before Galvani, people knew about static electricity. They just couldn't study it well. It was just a strange thing. I think everyone knows that gravity has an ordering effect (things in different places are drawn to the same place) and the passage of time has a disordering effect, but what to make of that opposition, if anything, hasn't been clear. It is just a strange thing. Perhaps there is some relation to Bem's results, just as static electricity and other easily-noticed phenomena (such as lightning) turned out to be related to Galvani's results. Joe and Henrico, thank you for your comments. You make good points. I hope to discuss this with a physicist....

## **Ancestral Health Symposium Tickets (2010-12-01 22:50)**

The first Ancestral Health Symposium will be August 5th and 6th at UCLA. Tickets for sale [1]here.

1. <http://mim.io/78fb7>

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## **Cold Shower Report (2010-12-03 16:05)**

Blogging about [1]the effect of cold showers on mood made me want to try them. I've taken cold showers before. They had no obvious effect beyond mild invigoration. But I learned that the showers need to last at least 5 minutes to get the mood benefits. My earlier showers were much shorter than that.

So far I've taken 4 cold showers, one per day, each 5-7 minutes long. Water temperature 56-60 degrees F. The first was unpleasant for maybe a minute. For hours afterward I felt warm inside – that was obvious. Maybe a slight rise in mood, but not an obvious one. With subsequent showers the unpleasant part at the start grew shorter. Now it's maybe 20 seconds. The warm feeling inside is less obvious but maybe that's because it's constant. My apartment started to feel too warm. I opened windows to cool it off. Outside I was more comfortable (it's close to freezing here

in Beijing). I wear fewer layers of clothing.

I like the warming effect and will continue. Maybe colder water would produce more of an effect. I live on the sixth floor. Even if outside a minute ago it has traveled through warm pipes. Perhaps I can get greater effects walking outside loosely clothed.

1. <http://www.blog.sethroberts.net/2010/11/27/cold-showers-raise-mood/>

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jimrandomh (2010-12-03 18:09:24)

There's one more option to try, besides hot and cold showers, and that's a hot shower with about 5 seconds of cold water at the end - just enough to undo the increase in body temperature from the hot water. I've found this leaves me feeling more energetic than regular hot showers, at least for the 30 minutes or so immediately after.

Sam Schulman (2010-12-03 19:03:08)

Seth, there must be thousands of middle-aged men who were, like me, seventh-graders when Ian Fleming's Bond novels came out in paperback in 1962, driven by President Kennedy's enthusiasm for them. Since we could neither shake nor stir Martinis, nor even touch girls, or drive Aston Martins, the only thing Bond did that we could do, we did; take a cold shower every day. There were no discernible effects. Yet.

Josh M (2010-12-04 11:54:01)

A monk at a temple in Japan told me they do a cold water meditation. They douse themselves in cold water then sit for hours. He said the experienced monks knew to get the bucket of water ice cold if possible because the body would warm strongly and dry out their robes. The novices tried to use warmer water and ended up shivering in wet robes. This was 20 years ago so I don't remember the details. Google says I might have heard of shinto misogi or been at the Kamakura temple.

Evelyn (2010-12-04 19:17:11)

Tummo meditation <http://www.cognitionandculture.net/Brian-s-blog/g-tum-mo-heat-meditation.html> That blog entry has a couple of references to papers. The blog looks interesting.

Maria Droujkova (2010-12-05 07:47:12)

Submerging in snow is a part of the traditional Russian steam bath routine. First, you gradually raise the temperature and humidity inside (this part is somewhat similar to Native American ceremonies) while drinking kvass or beer to sustain electrolytes. You use specially aged and soaked birch branches with leaves to gently beat yourself all over - this opens up pores and does some complex things to circulation. When you are VERY hot, you go out and roll in the snow, or just splash yourself with a tub of cold water in the next room. Amazingly, the sensation is extremely pleasant. The cooling is welcome and it does not feel like a shock. Then you can go back to the steam room for more, repeating the cycle a few times. Needless to say, every step can go pretty wrong if you don't know what you are doing. For example, raising the temperature or humidity too abruptly will most definitely cause cardiovascular problems. Applying too much strength with branches will not feel painful, but you will get scars. I would strongly advise learning from someone experienced before trying any of this.

Tom (2010-12-05 19:22:24)

I wonder if the increased thermogenesis would be conducive to weight loss. I also wonder if doing this repeatedly would cause you to grow (metabolically active brown fat. <http://www.time.com/time/health/article/0,8599,1890175,00.html>  
[http://www.vivo.colostate.edu/hbooks/pathphys/misc\\_topics/brownfat.html](http://www.vivo.colostate.edu/hbooks/pathphys/misc_topics/brownfat.html)

## Leslie Iversen Plagiarism Update (2010-12-04 04:16)

I contacted Julie Maxton, the Registrar of Oxford University, about the plagiarism of Professor Leslie Iversen that [1] pointed out in a previous post. (Four passages in [2]Speed, Ecstasy, Ritalin: The Science of Amphetamines, a book by Iversen, were copied without attribution from a website.) Maxton's first reply was this:

This matter was drawn to the attention of the Oxford University Press in 2009, when the OUP and Professor Iversen agreed with the author of the online text that a reference would be included in any reprint or future editions of the publication.

I thought it strange that Oxford University governance was outsourced to Oxford University Press. Maxton then told me that she had made up her own mind:

Having looked at the texts and discussed the matter with Professor Iversen and with Oxford University Press, both of whom had previously been alerted to your complaint, I was satisfied that the error related to a small section of text of the book in question, that it was an honest error rather than a deliberate attempt to plagiarise the results of research, and that appropriate remedial action had been taken as far as the author of the text was concerned. I therefore concluded that no further investigation was required, and I regard the matter as closed.

Maxton did not respond to three emails asking why she concluded the plagiarism was "honest error".

[3]Oxford University's plagiarism policy says "You have come to university to learn to know and speak your own mind, not merely to parrot the opinions of others. Still less to do so deceitfully, without attribution." Apparently undergraduate plagiarism is a big problem at Oxford. [4]According to an Oxford professor (not Iversen),

Hard though it may be to believe, students type word-for-word and increasingly copy and paste from the internet, and submit essays containing whole pages of this verbatim material.

1. <http://www.blog.sethroberts.net/2010/11/06/plagiarism-by-british-drug-tsar/>

2. [http://books.google.com.hk/books?id=CkAaAZRLf0cC&printsec=frontcover&dq=peed,+Ecstasy,+Ritalin:+The+Science+of+Amphetamines&hl=zh-CN&ei=Zc3VTMKdFpCgvgPR45mBCg&sa=X&oi=book\\_result&ct=book-thumbnail&resnum=1&ved=OCC4Q6wEwAA#v=onepage&q&f=false](http://books.google.com.hk/books?id=CkAaAZRLf0cC&printsec=frontcover&dq=peed,+Ecstasy,+Ritalin:+The+Science+of+Amphetamines&hl=zh-CN&ei=Zc3VTMKdFpCgvgPR45mBCg&sa=X&oi=book_result&ct=book-thumbnail&resnum=1&ved=OCC4Q6wEwAA#v=onepage&q&f=false)

3. [http://www.admin.ox.ac.uk/epsc/plagiarism/plagfaqs.shtml#\\_1119](http://www.admin.ox.ac.uk/epsc/plagiarism/plagfaqs.shtml#_1119)

4. <http://www.guardian.co.uk/education/2006/mar/15/highereducation.news>

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dearieme (2010-12-04 17:47:23)

Dr Maxton's appointment was rather controversial. She is on her way out, leaving at the end of January to take a post at what I think of as The Disgraced Royal Society.

q (2010-12-04 21:04:56)

students type word-for-word and increasingly copy and paste from the internet, and submit essays containing whole pages of this verbatim material?

Maria Droujkova (2010-12-05 07:36:42)

Here is one honest mistake scenario I am afraid will sometime happen to me. When I research for longer works, I usually paste longish quotes (with references or links next to them) right into the draft. When it's a Google Document being edited together by many people, or simply a long and complex document, things get moved around a lot. I can easily see how a piece may land somewhere separate from its reference. What I don't understand is the lack of communication and transparency. If an honest mistake is made, why not tell the world what it was, why it happened, and what you are doing to prevent it?

Nathan Myers (2010-12-05 13:47:56)

There's an interesting discussion of the ethics of plagiarism and ghostwriting over at Language Log: <http://languagelog.ldc.upenn.edu/nll/?p=2829>

Neuroskeptic (2010-12-07 08:16:00)

Mmm. This is concerning. Someone ought to start googling sentences from other parts of the book, to see if this really is an isolated incident.

William Bains (2011-10-24 22:57:03)

This could reasonably be an honest mistake, although if so it points to carelessness. But the claim that "Apparently undergraduate plagiarism is a big problem at Oxford" implies that plagiarism is a bigger problem in Oxford than elsewhere. This I doubt. One lecturer at another university has said to me that she routinely gets essays blatantly copied from internet sources, complete with embedded HTML codes clearly identifying the source - students do not even bother to paste-as-text. This is because we ask students to produce, not think. In my own teaching I ask for short essays on non-standard topics, and have yet to detect any evidence of plagiarism. The students seem to prefer those tasks as well.

Seth Roberts (2011-10-25 12:46:45)

William, I think people who regard plagiarism as a big problem at Oxford are comparing present to past.

## **Sanity in Education (2010-12-04 15:19)**

The head of the Baltimore school system, Andres Alonso, [1] is fond of saying this:

Kids come as is and it's our job to engage them.

I couldn't agree more. In [2] Totto-Chan, Tetsuko Kuroyanagi described meeting the headmaster of her new school. They had a conversation lasting hours. She remembered it as the most anyone had ever listened to her. The full English title of Totto-Chan is Totto-Chan: The Little Girl at the Window. "At the window" is a Japanese term for failure - businessmen judged incompetent were seated near the window. At her previous school, Kuroyanagi had been a misfit and expelled - for, among other things, opening and closing her desk too often.

1. <http://www.nytimes.com/2010/12/02/education/02baltimore.html?pagewanted=1&hp>

2. [http://en.wikipedia.org/wiki/Totto-Chan:\\_The\\_Little\\_Girl\\_at\\_the\\_Window](http://en.wikipedia.org/wiki/Totto-Chan:_The_Little_Girl_at_the_Window)

Alex Chernavsky (2010-12-05 08:54:32)

I agree that, to the extent that it's possible, schools should try to engage their students. However, kids vary in which subjects they find inherently engaging, and they also vary with regard to the degree that they can find ANYTHING engaging. I've taken many classes that were less-than-enthraling at the time, but which ended up being valuable to me anyway.

### Assorted Links (2010-12-05 07:09)

- [1]animals that live with us are getting fat
- [2]Drug trials in poor countries. "The F.D.A. does so little monitoring [in these countries] that the [drug] companies can pretty much do and say what they want."
- [3]New York obesity researcher re-invents numerical integration

Thanks to Gary Wolf and Bruce Charlton.

1. <http://rspb.royalsocietypublishing.org/content/early/2010/11/19/rspb.2010.1890>
2. <http://www.vanityfair.com/politics/features/2011/01/deadly-medicine-201101?currentPage=all>
3. <http://fliptomato.wordpress.com/2007/03/19/medical-researcher-discovers-integration-gets-75-citations/>

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### WikiLeaks (2010-12-05 22:11)

I have liked [1]the New Yorker coverage of Wikileaks but my favorite bit was [2]this comment:

The world is divided in many "twos" and I would add another one. Those who are for and those who are against Wikileaks. I will try to describe each group. AGAINST: If a part or the full of your daily life deals with corruption, war crimes, extortion, blackmailing, malfeasance, bribery cover-up, then Assange is definitely a nightmare for you. You surely would like to get rid of him so that you can carry on with your evil. FOR: If you are an honest person, with high principles and impeccable conduct, a person who believes in true justice for each and every single one of the citizens, a person who supports education of the masses so that they can take informed decisions instead of being daily brainwashed and lied to by the Mainstream Media, then you are not afraid of the truth, you love the truth and you want to protect the innocent.

This is the modern version of The Emperor Has No Clothes in which it took a child to point out the obvious. No serious journalist could say this. As far as I can tell, no serious journalist has. It is too simple. Too disrespectful. Too sentimental. But it is surely true.

1. <http://www.newyorker.com/online/blogs/newsdesk/2010/11/wikileaks-diplomatic-cables.html>
2. <http://www.newyorker.com/online/blogs/newsdesk/2010/12/wikileaks-evolves.html>

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Dennis Mangan (2010-12-06 06:36:20)

Or consider: "If you are an honest person, with high principles and impeccable conduct, a person who believes in true justice for each and every single one of the citizens," etc., then you won't mind if we search your house. You've got nothing to hide, right?

Olga (2010-12-06 06:51:25)

Well, and if you such an honest person, you would not mind if your emails would be published... but not all of it! Not! Just a selection. And neither you nor you reader will ever know whether this partial and selected release is biased in any way. Come on! Partial truth is worse than lie.

Shane (2010-12-06 09:28:36)

@Dennis: agreed, wholeheartedly. Or how about: "You won't mind if all of your phone conversations are made available as podcasts." Or: "You won't mind IP video cameras in your bedroom." Is it so mad to maintain that WikiLeaks, like everything else, offers some good things and some bad things? Outing corruption is good in most cases I can think of. Outing the news of the US's discovery of Bin Laden's secret lair before they get there to seize him is pretty clearly bad. Most everything else is somewhere in between. That this non-digital attitude seems to be the minority view, with most people rushing to line up against one wall and start hollering at the guys lining up against the other, is just another thing to be depressed about.

Sean Estey (2010-12-06 14:15:30)

I disagree with the first comment. I don't think the metaphor fits at all. What you do in the privacy of your home is your business and yours alone. You are not accountable to disclose or report your private behavior to government. Government, however is accountable to the citizens, and the failure to live up to this basic duty is the gap that Wikileaks bridges.

Seth Roberts (2010-12-06 15:53:38)

I think that the comment I quoted is stating something resembling a fact: An extremely tiny fraction of people in the world – who happen to be very powerful – have something to fear from the continued existence of WikiLeaks. An extremely large fraction of people in the world, such as 99.999 % or even higher, have nothing to fear. I would argue the opposite of what Dennis says: the more powerful the government, the more likely that ordinary citizens (part of the 99.999 %) will have their houses searched. WikiLeaks is a force against powerful government. It makes it more difficult for governments to become extremely powerful.

Vince (2010-12-06 17:21:19)

There are some cases where it is good for a government to be able to keep secrets; for instance, [1]during peace talks.

1. <http://www.samefacts.com/2010/11/secrecy-in-government/how-secret-diplomatic-communication-laid-the-groundwork-for-peace-in-ireland/>

Seth Roberts (2010-12-06 18:04:11)

"During peace talks." That's a curious example because governments benefit from wars. During a war, the citizens need their government more (for protection) than during peace. They pay for this protection – resources flow from all citizens to everyone in government. This creates incentive for governments to start wars.

CF (2010-12-06 18:31:04)

This whole affair has caused me to wonder about whether it is ever clearly good or bad to have backroom discussions in politics. Take your average politician who makes strong public pronouncements on an issue, but who cannot possibly believe all of the absurd crap that he or she says, but makes their most extreme statements in order to play to their base constituency.

Indeed, they will (behind closed doors, to other politicians), admit that they are doing as much, and even show willingness to act against their more egregious stances in legislation (perhaps in trade for something more important to them). There is some merit to this – at least they can be convinced to govern by trading. Now, what happens if you take away the backroom in these cases? Does the politician moderate himself, or is he forced to become even more extreme or otherwise lose out to someone who plays to base in both word and deed? If the electorate sees that issue X is just a trading card, can effective governance actually take place in the environment we've created? Obviously, the analogy is – can effective diplomacy (in the world as-it-is, not as we'd like-it-to-be) take place without private interactions? Will the leaders of the Arab world ever admit that they are afraid of Iran if you don't give them a private forum to do so in? Honestly I don't know, I'm curious what you think. I don't find the issue as clear cut as implied here, but I might be wrong.

G (2010-12-06 20:52:06)

Hahaha, couldn't agree more! Governments are just another class of powerful fools who think that good ends can come via evil means. The character of the means determine the character of the ends.

Seth Roberts (2010-12-06 23:32:00)

"Will the leaders of the Arab world ever admit that they are afraid of Iran if you don't give them a private forum to do so in?" Leaking documents, such as diplomatic cables, doesn't mean people can't talk privately. I don't think the various branches of the State Department are going to stop sending emails or cables to each other. They are just going to be a lot more careful what they say in them. In particular, they will stop proposing this or that repulsive-to-the-public Action X (such as collecting the credit-card numbers of UN delegates). Which means it will become a lot harder to do Action X.

Nik (2010-12-07 05:05:28)

During peace talks. That's a curious example because governments benefit from wars. This is insane logic, based on the idea that governments are monolithic entities with a single interest and a single will determining their actions. In fact, governments are made up of individuals, the vast majority of whom do not benefit from wars - resources spent on defence are taken from the budgets of other departments, including money that would otherwise have been spent on diplomacy and international development. Furthermore, those individuals participating in peace talks pretty clearly do benefit if those talks are successful, because they can put this success on their resume. But even at a governmental level, in what sense, exactly, did the British or Irish governments benefit from the war in Northern Ireland continuing? And if that is the case, why did they expend so much political capital on getting it resolved, successfully? This automatic mistrust of governments is just ridiculous. Even if you think that freedom of information is in principle a good thing, there are clear cases where some information should remain secret. In general, I would rather the democratic process work out where those boundaries are than an organisation like Wikileaks (although the extra-judicial persecution of them since the revelations is a disgrace).

Nik (2010-12-07 05:11:10)

"I don't think the various branches of the State Department are going to stop sending emails or cables to each other. They are just going to be a lot more careful what they say in them. In particular, they will stop proposing this or that repulsive-to-the-public Action X (such as collecting the credit-card numbers of UN delegates). Which means it will become a lot harder to do Action X." If they are forced to be careful what they say in internal communications, then this is the same as not being able to talk privately. There are many discussions that need to be had that might even involve options that are repulsive to public opinion. For example, bailing out banks, pardoning someone on death row, nationalising health care... particularly in a polarised political environment, any number of issues can become politically sensitive, even if they are not downright evil. Again, the question is which organisation do we want drawing the line? Wikileaks is not the answer, because they do not believe in a line at all. Discussing options freely and frankly should be possible, even if that sometimes means that officials say stuff in private that they would not in public. If you are constantly editing yourself, you become a less effective operator, to everyone's detriment.

Alex Chernavsky (2010-12-07 09:27:41)

Seth's comment about governments profiting from wars reminded me of a wonderful book called, *Travels with Lizbeth*, by Lars



Eighner (for an insightful review, see [1]here). Eighner spent a few years being homeless, and then wrote a book about his experiences. Here's an excerpt:

"The purpose of welfare systems is not to help poor people. If the object were to help poor people, then that would be most surely done by giving money to poor people. But that is not the idea, as our tax code proves. If you give twenty dollars to someone on the street, there is not a way in the world you can deduct that donation from your taxes. To claim a deduction you must give the money to an organization that employs clerks and administrators and social workers and that, more than likely, puts nothing material into the hands of the poor... When the agency makes an accounting of the good it has done the poor, it will count the money it spent on paying social workers to hold the hands of the poor the same as money, if any, spent on bread. The purpose of welfare systems is to provide jobs for social workers and bureaucrats. I told Billy he should be grateful to have a job in the poverty industry, but to ask that such a job be meaningful is to ask too much."

1. <http://photo.net/travel/travels-with-lizbeth>

Gunnar (2010-12-07 12:35:48)  
I'm pro WikiLeaks :-)

anonymous (2010-12-07 14:22:36)  
"War is the health of the state." – Randolph Bourne

vic (2010-12-07 21:34:12)  
Seth, in a way I envy your naive idealism... i'm glad you're not involved in foreign policy or national security though...

Sean Estey (2010-12-07 23:15:08)  
I find the problem with this debate is that both sides are arguing philosophy rather than facts. It is like politics vs economics in that sense. One side argues intention, the other actually looks at matters empirically. Why don't we put aside the philosophy and hypotheticals for one second and actually look at this empirically: how many people have been harmed or killed as a result of any information Wikileaks has released up to this point? Simple question. If these leaks are as dangerous and damaging as people claim, let's see the evidence. Otherwise, this debate simply becomes clouded with empty rhetoric.

Mark (2010-12-09 02:32:42)  
I'm withholding judgment until I see if they really release every single cable for a 3-year period. Somehow I doubt that all of them deal with "corruption, war crimes, extortion, blackmailing, malfeasance, and bribery cover-up." If they release everything, it does seem like rape (metaphorical rape, sort of like the kind Assange is accused of in Sweden).

G (2010-12-09 07:39:59)  
I don't think the 'pragmatism' arguments stand up. The Cold War was conjured up by 'pragmatism' and was nearly the end of us. These politicians who believe themselves pragmatists have a reductive, simplified view of human nature (Game Theory), and the only people who really conform to it are economists and psychopaths. Idealism is not necessarily naive - it's our only real weapon against self-destruction. [See: Rome]

Seth's blog » Blog Archive » WikiLeaks | 6d (2011-03-31 08:44:12)  
[...] of. Outing the news of the US's discovery of Bin Laden's secret lair before ... wikileaks – Google Blog Search Craig Murray » Blog Archive » Raise A Glass to WikileaksIndex on Censorship » Blog Archive » [...]

## **Slate Covers Self-Tracking (2010-12-06 16:43)**

Slate has recently published several articles on self-tracking. [1]"How should we use data to improve our lives?" is a nice way to frame it. By data, the author, Michael Egger, means data we collect ourselves – leaving the traditional

collectors of data, such as government and scientists, out of the loop (act → collect data → act). The first person to close the loop like that was Richard Bernstein, who measured his own blood sugar levels several times/day – omitting his doctor, who had measured Bernstein's blood sugar level once/month, out of the feedback loop. The consequences were huge. Bernstein's health got much better. And the treatment of diabetes changed forever when what Bernstein did became common. Hanna Rosin wrote about tracking her blood sugar levels in [2]an article with a completely misleading subtitle ("Diabetes has forced me to become a self-tracker, and I can't stand it").

[3]Another article – titled "Living the Quantified Life: Some of the most inspiring self-tracking projects" but promoted as "The guy who eats a half-stick of butter a day and other strange 'self-trackers' " – is about three examples of self-tracking: [4]my butter research, [5]the benefits of categorizing one's possessions, and Jon Cousins's discovery that [6]telling other people his mood greatly improved it.

Slate is running [7]a contest about this:

We are looking for great ways that we can collect and analyze data to improve our lives. You can submit your idea by clicking the button below. The deadline for submitting ideas has been extended until Wednesday, Dec. 8. We'll be tracking your most interesting ideas throughout the month. And don't forget to vote on the proposals you like best. We'll take a closer look at the three top-vote-getting ideas and write about them.

1. <http://www.slate.com/id/2274809/>
2. <http://www.slate.com/id/2276015/pagenum/all/#p2>
3. <http://www.slate.com/id/2276719/>
4. <http://vimeo.com/groups/17842/videos/14281896>
5. <http://vimeo.com/groups/17842/videos/5031263>
6. <http://vimeo.com/groups/17842/videos/16691352>
7. <http://www.slate.com/id/2276719/>

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## The Decline Effect (2010-12-09 20:01)

[1]A new article in The New Yorker by Jonah Lehrer is about declines in the size of experimental or quasi-experimental effects over time. For example, Jonathan Schooler, an experimental psychologist, found that if subjects are asked to describe a face soon after seeing it their later memory for the face is worse. As Schooler continued to study the effect, it appeared to get weaker. The article also describes examples from drug trials (a anti-psychotic drug appeared to become weaker over 15 years) and ecology (the effect of male symmetry on mating success got weaker over years).

It's nice to see an ambitious unconventional article. I blogged a few weeks ago about [2]difficulties replicating the too-many-choices effect. Difficulty of replication and the decline effect are the same thing. I could do what Jared Diamond does in Collapse: give a list of five or six reasons why this happens. (Judging by [3]this paper, the effect, although real, is much weaker than you'd guess from Lehrer's article.) For example, the initial report has much more flexibility of data analysis than later reports. Flexibility of analysis allows researchers to increase the size of effects.

A long list of reasons would miss a larger point ([4]as Diamond does). A larger point is this: Science (search for truth) and profession (making a living) are not a good fit. In a dozen ways, the demands of a scientist's job get in the way of

finding and reporting truth. You need to publish, get a grant, please your colleagues, and so on. Nobody pays you for finding the truth. If that is a goal, it is several goals from the top of the list. Most jobs have customers. If a wheelwright made a bad wheel, it broke. Perhaps he had to replace it or got a bad reputation. There was fast powerful feedback. In science, feedback is long-delayed or absent. Only long after you have been promoted may it become clear anything was wrong with the papers behind your promotion. The main customers for science are other scientists. The pressure to have low standards – and thus appear better to promotion committees and non-scientists – is irresistible. Whereas if Wheelwright Y makes better wheels than Wheelwright X, customers may notice and Wheelwright Y may benefit.

There are things about making science a job that push scientists toward the truth as well, such as more money and time. When science is a job, a lot more research gets done. Fine. But how strong are the forces against finding truth? I was never surprised by the replication difficulties Lehrer writes about. I had heard plenty of examples, knew there were many reasons it happened. But I was stunned by the results of my self-experimentation. I kept finding stuff (e.g., breakfast disturbs sleep, butter improves brain function) that contradicted the official line (breakfast is the most important meal of the day, butter is dangerous). Obviously I had a better tool (self-experimentation) for finding things out. The shock was how many things that had supposedly been found out were wrong. Slowly I realized how much pressure career demands place on scientists. It is no coincidence that the person most responsible for debunking man-made global warming, Stephen McIntyre, is not a professional climatologist (or a professional scientist in any other area). Unlike them, he can say whatever he wants.

Thanks to Peter Couvares.

More In his blog, failing to see the forest for the trees, [5]Lehrer says we must still believe in climate change (presumably man-made): climate change and evolution by natural selection "have been verified in thousands of different ways by thousands of different scientists working in many different fields." Charles Darwin, like McIntyre, was an amateur, and therefore could say whatever he wanted.

1. [http://www.newyorker.com/reporting/2010/12/13/101213fa\\_fact\\_lehrer](http://www.newyorker.com/reporting/2010/12/13/101213fa_fact_lehrer)
2. <http://www.blog.sethroberts.net/2010/11/11/more-choice-less-satisfaction/>
3. <http://www.anu.edu.au/BoZo/jennions/publications/Paper33.pdf>
4. <http://www.blog.sethroberts.net/2009/04/25/jane-jacobs-and-collapse-continued/>
5. <http://www.wired.com/wiredscience/2010/12/the-mysterious-decline-effect/>

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PeterW (2010-12-09 21:04:08)

Would there be a way to structure a research organization to produce extremely transparent and truth-oriented research? If so, would the quality of their aggregate conclusions be novel and high-quality enough to demonstrate the superiority of this way of doing science?

Alex Chernavsky (2010-12-09 21:35:34)

There's also this article on a somewhat related topic: "[1]Placebos Are Getting More Effective. Drugmakers Are Desperate to Know Why."

1. [http://www.wired.com/medtech/drugs/magazine/17-09/ff\\_placebo\\_effect?currentPage=all](http://www.wired.com/medtech/drugs/magazine/17-09/ff_placebo_effect?currentPage=all)

M (2010-12-10 01:45:07)

You write about the incentives faced by scientists and the ways in which you believe that distorts research on various subjects, such as climate change. You make good points. However, when you talk about climate change I'm a bit surprised that you

neglect to talk about the incentives faced by the climate change "skeptics" – namely, the large amounts of money that special interests (energy companies, etc) have pumped into the debate in the interest of calling into question anthropogenic climate change and thus heading off policy changes. This is a distortion that I would guess to be at least as large as the ones that you identify.

dearieme (2010-12-10 03:07:36)

A colleague once explained a second colleague's professional success by saying "He's careful not to be familiar with the literature, and never to scrutinise his own data critically".

Seth Roberts (2010-12-10 03:24:58)

M, I don't believe that Stephen McIntyre is a tool of the energy companies. His skepticism about the hockey stick graph, it has turned out, was fully justified. It is unsurprising that it took an amateur to do what for a professional would have been career suicide – make numerous Freedom of Information Act requests from someone who might review your next grant.

LemmusLemmus (2010-12-10 09:01:18)

More specifically, in many cases there is what I call "the car mechanic problem". The people most qualified to judge how big a problem X is are also the people who benefit most from describing X as a huge problem, whether X is your motor, climate change, youth crime or passive smoking.

Seth Roberts (2010-12-10 12:35:19)

LemmusLemmus, "the car mechanic effect" is a nice name for it. In practice it describes only half of the problem – assessments of how bad something is. The other half of the problem is assessments of how good something is – professors of engineering judging the work of professors of engineering, professors of English judging the work of professors of English, and so on. It's curious there is no name for this.

vic (2010-12-10 15:46:23)

Seth, as much as I enjoy reading about your self-experimentation research and think it has real value for generating hypotheses, I doubt much of it is replicable in well-controlled studies (I've tried a few of the interventions and they haven't done anything for me as far as I can tell). Unless your work is replicated more robustly than the research you disparage, it seems premature to conclude that it is in any way better.

Alrenous (2010-12-10 15:58:42)

Misunderstanding of placebo continues. "The main objections to more widespread placebo use in clinical practice are ethical" The placebo works by the belief that it works. Therefore, just teach the patient that they can get much better due to a chemically inert placebo. Then, give them the placebo. The barrier to this is that you can't patent the sugar pill - and placebos don't have to be pills, but basically any ritual. Fully generalized, if you believe that you can activate the placebo effect at will, you can, because of that very belief. (Though it's nice to have things to reinforce the belief.)

M (2010-12-10 20:12:44)

Seth, I don't know much about McIntyre so I can't comment on him specifically. I like your point about how amateurs (or insider/outside, as I think you sometimes say) can question in areas where "professionals" blind themselves to the truth. When it comes to climate change, yes, professionals would have to be brave to question their peers. Call this the first set of incentives. But there is another set of incentives, operating in the other direction: a climate skeptic wouldn't have to be as fearful as skeptics in other more obscure scientific areas. This is because special interests (energy companies, etc) provide plenty of financing to media (that heap praise on skeptics), jobs at "think tanks", contracts through publishing houses, etc. In other words, to be a climate skeptic can have substantial financial, social, and political rewards. I'm surprised that, when it comes to climate change, you focus on the first set of incentives, but not the second.

Seth Roberts (2010-12-11 04:38:02)

M, you write "to be a climate skeptic can have substantial financial, social, and political rewards." I am talking about academia. Professors of climatology, professional scientists. I cannot think of a single professor who has reaped those rewards. Whereas the grant money given to Michael Mann, for example, is in the millions. vic, what "interventions" do you doubt are replicable?

vic (2010-12-11 11:21:53)

Seth, I don't know if they are replicable or not, the point is I'd remain skeptical till I saw the effects replicated in some sort of systematic study in more than one person – or at least until they worked for me. A few of the ones I tried: standing on one leg and eating more animal fat didn't seem to improve my sleep; faces in the morning didn't seem to improve my mood; on the other hand, morning light did seem to improve my sleep.

Seth Roberts (2010-12-12 17:14:12)

Vic, the morning faces effect depends on several things you may not have realized. For example, fluorescent light exposure at night may cause the effect to go away. With animal fat, you may have not used a large enough dose. Other people have observed both effects. I don't know anyone who has repeated the standing on one leg effect but I have observed and tested it in several ways. Perhaps it didn't work for you because something else is causing you sleep trouble. For example you have too much X or too little Y – and standing on one leg affects neither.

Darius Bacon (2010-12-13 20:35:21)

I've found one-legged standing to work for me, surprisingly well and reliably, though I haven't tried to measure it.

## **Chinese Censorship (2010-12-09 20:43)**

A Chinese friend of mine thought I had removed [1]this post.

1. <http://www.blog.sethroberts.net/2010/11/16/guan-er-di/>

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Gunnar (2010-12-10 12:58:20)

Innernet ;- ) Assange sees something positive in Chinese censorship - that words still have power over there.

## **Dr. Charles Nemeroff "Writes" A Textbook (2010-12-10 23:36)**

The stench was too great. I learned from [1]this article that Charles "Disgraced" Nemeroff, once one of the most respected psychiatry professors in America, has moved from Emory University ([2]where he badly deceived university officials) to the University of Miami. The article tells of more Nemeroff dishonesty: He put his name on a textbook he didn't write. [3]This letter shows how the book was written. The words in the book came from a company named Scientific Therapeutics Information, whose fee was paid by GlaxoSmithKline. Scientific Therapeutics won't answer questions about what it did. Nemeroff says he and his co-author "conceptualized this book, wrote the original outline and worked on all of the content." Worked on, huh? Leslie Iversen, an Oxford professor of pharmacology, may have "worked on" [4]the passages he plagiarized (a few words were changed) harder than Nemeroff and his co-author "worked on" their book. The New York Times added a correction to the article worthy of Wittgenstein: "While documents show that SmithKline (now known as GlaxoSmithKline) hired a writing company for the book, they do not

indicate that the [writing] company wrote the book.”

In twenty years perhaps Nemeroff will forget that he “wrote” this book, just as [5]the first President Bush forgot about a book he “wrote”.

Thanks to Alex Chernavsky.

1. [http://www.nytimes.com/2010/11/30/business/30drug.html?\\_r=1](http://www.nytimes.com/2010/11/30/business/30drug.html?_r=1)
2. <http://www.blog.sethroberts.net/2008/10/05/academic-horror-story-emory-university/>
3. <http://graphics8.nytimes.com/packages/pdf/business/20101130drug.pdf>
4. <http://www.blog.sethroberts.net/2010/11/06/plagiarism-by-british-drug-tsar/>
5. <http://www.theamericanscholar.org/unauthorized-but-not-untrue/>

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Anonymous (2010-12-11 04:00:18)

In my department there was a massive “intro” text they made all the freshmen undergrads buy. Its authors were the current department head and the previous two. Whenever they got a new department head, they would make some minor revisions and issue a new edition with the new guy’s name as lead author, and the two previous heads below that.

Seth Roberts (2010-12-11 05:59:21)

anyone know what department Anonymous is talking about?

## **The Decline Effect and Kitty Kelley (2010-12-12 14:23)**

[1]A few posts ago I commented on [2]Jonah Lehrer’s article about replication difficulties, which Lehrer called the decline effect. I concluded it was an indication how poorly science (truth-seeking) and profession (making a living) fit together. Scientists are always under pressure to do what’s good for their career rather than find and report the truth.

Journalism is another kind of truth-seeking. It has the same problem. Journalists are always under pressure to do what’s good for their career rather than find and report the truth. In [3]an essay about unauthorized biographies, Kitty Kelley makes this point:

[Michael] Hastings said that reporters like [Lara] Logan do not report negative stories about their subjects in order to assure continued access. No reporter would admit to tilting a story toward favorable coverage to keep entrÃ©e, but they do, and that is one of the dirty little secrets of journalism today.

Just as no reporter admits this, I have never heard a scientist admit it, with two exceptions: 1. The inventor of [4]the aquatic ape theory of human evolution (Alister Hardy) said he stopped talking about it to avoid hurting his career. It fell to a non-scientist (Elaine Morgan) to develop it. 2. In [5]that famous graduation speech, Richard Feynman pointed out how the first determination of the charge on an electron used the wrong value for the viscosity of air and later

determinations, which did not involve that viscosity, tended to confirm the mistaken value. Unfortunately, Feynman went on to say: "We've learned those tricks nowadays, and now we don't have that kind of a disease." As if human nature had changed.

I conclude that both science and journalism will work best with systems where amateurs and professionals both have substantial power. Kelley doesn't mention that authorized biographers have important truth-seeking advantages over non-authorized ones (e.g., access to old letters).

1. <http://www.blog.sethroberts.net/2010/12/09/the-decline-effect/>
2. [http://www.newyorker.com/reporting/2010/12/13/101213fa\\_fact\\_lehrer](http://www.newyorker.com/reporting/2010/12/13/101213fa_fact_lehrer)
3. <http://www.theamericanscholar.org/unauthorized-but-not-untrue/>
4. [http://en.wikipedia.org/wiki/Aquatic\\_ape\\_hypothesis](http://en.wikipedia.org/wiki/Aquatic_ape_hypothesis)
5. <http://www.lhup.edu/~DSIMANEK/cargocul.htm>

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Daniel Lemire (2010-12-12 17:08:25)

I conclude that both science and journalism will work best with systems where amateurs and professionals both have substantial power. I think that an amateur can be subject to pressure, just like any professional. More so, actually. No conventional journalist would have gotten the kind of heat Assange has gotten: other journalists would have stepped in. You may have the cause and effect backward. People who refuse to "fit in" are less likely to become fully recognized professionals. Could Assange have gotten a job at the New York Times?

Tom Moertel (2010-12-12 19:17:02)

The decline effect is another good reason to push for open-data requirements. These requirements not only hold professional scientists to a higher standard of accountability but also allow outsiders to use existing experimental data to develop unorthodox hypotheses and, sometimes, to challenge orthodox beliefs.

Nathan Myers (2010-12-12 22:23:34)

If the "aquatic ape" meme (not a theory) had not been picked up and promoted, we would all be better off. So, not a good example. Perhaps a better example: plasma fluid dynamics is mathematically intractable, so astrophysicists go out of their way to avoid any hypothesis that might require doing any. Every observation has to be explained by gravitation alone, or it becomes unfashionable to mention at all.

Kevembuangga (2010-12-13 12:33:46)

The decline effect may not be such a big deal, just [1]regression to the mean.

1. <http://blogs.discovermagazine.com/gnxp/2010/12/the-cultural-construction-of-truth/>

Alex Chernavsky (2010-12-15 09:43:27)

Jonah Lehrer's article about the decline effect is one of the most interesting articles I've read in a long time. Using a Google search, I found a full-text version here: <http://crazy.org/science.pdf>. This may be an unauthorized (bootleg) copy, so let your conscience be your guide.

## Different Effects of Omega-3 and Omega-6 on Heart Disease (2010-12-13 16:01)

You have probably read hundreds of recommendations to eat more polyunsaturated fatty acids (PUFAs), which in practice means omega-6 and omega-3. If you shop at Whole Foods, you may see Udo's Blend, a blend of PUFAs which includes both omega-3 and omega-6, as if someone isn't getting enough omega-6. It is unquestionable that omega-3 is beneficial but there is plenty of evidence that omega-6 is harmful, starting with [1]the Israeli Paradox. Why are they lumped together?

[2]A just-published paper in the British Journal of Nutrition makes several new points about the relation of PUFAs and heart disease. Its main point is a new look at experiments in which one group was given more PUFAs than another group. Those experiments – there are only about eight – can be divided into two groups: (a) experiments in which the treated group was given both omega-3 and omega-6 and (b) experiments in which the treated group was given only omega-6.

The two groups of experiments seem to have different results. In the "both" experiments the treated group seems to benefit; in the "only omega-6" experiments, the treated group seems to be worse off. Suggesting that omega-3 and omega-6 have different effects on heart disease. They have been lumped together because experiments have lumped them together (varied both at the same time).

Experiments that try to measure the effect of PUFAs usually say they are replacing saturated fats. More PUFAs, less butter. The paper points out that studies of the effect of PUFAs have at least sometimes confounded reduction in saturated fats with reduction in trans fats. Benefits of the change may be due to the reduction in trans fats, not the reduction in saturate fats.

The paper also makes several good points about the Finnish study, a classic in the fat/heart disease literature. Supposedly the Finnish study showed that PUFAs (replacing saturated fats) reduce heart disease. It had hundreds of subjects but they were not randomized separately. The subjects were divided by hospital. Everyone in one hospital got one diet, everyone in a second hospital got a different diet. This meant it was easy for there to be confoundings (i.e., the treatment wasn't the only difference between the groups). Indeed, there were big differences in consumption of a certain dangerous medication and margarine between hospitals. (Margarine is high in trans fats.)

Perhaps the first author, Christopher Ramsden, who works at NIH, is responsible for the high quality of this paper. Thanks to Susan Allport.

1. <http://www.blog.sethroberts.net/2007/02/02/the-israeli-paradox/>

2. <http://journals.cambridge.org/action/displayAbstract?fromPage=online&aid=7930322&fulltextType=RV&fileId=S0007114510004010>

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vic (2010-12-13 16:58:23)

The "Israeli Paradox" is an ecologic study without much ability to separate the effect of omega-6. In fact, Israeli arabs who consume tons of olive oil and little omega-6 have higher rates of heart disease than Jewish Israelis who consume omega-6. Other studies have shown that countries that have shifted their cooking oil to omega-6 rich unsaturated fats tend to witness decreases in heart disease relative to countries that have not (e.g., in eastern europe). Also, rigorous epidemiologic studies show a robust inverse association between omega-6 consumption and heart disease, which is evident no matter how you slice the data, and is particular strong among the young (see the work from Willett's lab at Harvard). Obviously, there may still be residual confounding, but this data certainly doesn't support that omega-6 is particularly harmful.



Seth Roberts (2010-12-13 20:49:10)  
Thanks, Vic, that's good to know.

Susan Allport (2010-12-14 06:55:10)

The group at Harvard has been confounding the effects of omega-3s and omega-6s for decades. We absolutely require omega-6s in our diet (on that we all agree) but that robust inverse association b/n omega-6s and heart disease would disappear if omega-3s and omega-6s were properly controlled for (as it is in the current study by Ramsden et al.)

Seth Roberts (2010-12-14 16:02:45)

Susan, thanks for your comment. I don't know what you mean by confounding ("confounding the effects of omega-3s and omega-6s"). In experiments (such as the data analyzed by Ramsden et al.) confounding is changing two things at once. In surveys (such as what Willett et al. do), the only use of "confounding" I know about is the idea of unrecognized confounders – meaning something that wasn't measured is correlated with something that was measured. But Willett et al. measured both omega-3 and omega-6 consumption so that didn't happen.

Alex Chernavsky (2010-12-14 18:49:37)

How good is the evidence for the harmful effects of trans fats? I seem to remember an article (or interview) where Gary Taubes said that the evidence is pretty weak. But I just spent a few minutes Googling it, and I can't find the Taubes reference.

### Assorted Links (2010-12-14 13:55)

- [1]The town that gave up medicine (proposed TV show)
- [2]weirdexperiments.com
- [3]A physicist looks at drug-efficacy data
- [4]microbial self-observation

Thanks to Brian Lim.

1. [http://blogs.bmj.com/bmj/2010/12/09/richard-smith-the-town-that-gave-up-medicine/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+bmj%2Fblogs+%28Latest+BMJ+blogs%29&q=w\\_bmj\\_podblog](http://blogs.bmj.com/bmj/2010/12/09/richard-smith-the-town-that-gave-up-medicine/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+bmj%2Fblogs+%28Latest+BMJ+blogs%29&q=w_bmj_podblog)
2. <http://www.weirdexperiments.com/>
3. <http://www.physics.upenn.edu/people/frankel/medres/propcrap3.htm>
4. [http://www.eliedolgin.com/pdfs/Scientist\\_Jul09\\_NBshitome.pdf](http://www.eliedolgin.com/pdfs/Scientist_Jul09_NBshitome.pdf)

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### Walking Creates A Thirst For Dry Knowledge (2010-12-15 15:52)

A few weeks ago I got a treadmill for my Beijing apartment. Two days ago I was walking on it ([1]I try to walk 1 hr/day) while watching *Leverage* to make the activity more palatable. But *Leverage* bored me. It was too simple. So I took out some Chinese flashcards (character on one side, English and pinyin on the other) and started studying them. I was astonished how pleasant it was. An hour of walking and studying went by . . . uh, in a flash. In my entire life I have never had such a pleasant hour studying. The next day it happened again! The experience appears infinitely

repeatable. I've [2]previously mentioned [3]the man who memorized Paradise Lost while walking on a treadmill.

I've noticed before that [4]treadmill walking (by itself boring) and Chinese-character learning (by itself boring) become pleasant when combined. So why was I astonished? Because the increase in enjoyment was larger. The whole activity was really pleasant, like drinking water when thirsty. When an hour was up, I could have kept going. I wanted to do it again. When I noticed it earlier, I was using Anki to learn Chinese characters. Now I am using flashcards in blocks of ten (study 10 until learned, get a new set of 10, study them until learned . . . ). The flashcards provide much more sense of accomplishment and completion, which I think makes the activity more pleasant.

My progress with Chinese characters has been so slow that during the latest attempt (putting them on my wall) I didn't even try to learn both the pinyin and the meaning at the same time; I had retreated to just trying to learn the meaning. That was hard enough. I have had about 100 character cards on the walls of my apartment for a month but I've only learned the meaning of about half of them. No pinyin at all. In contrast, in two one-hour treadmill sessions I've gotten through 60 cards . . . including pinyin. For me, learning pinyin is much harder than learning meaning.

It's like drinking water when you're thirsty versus when you're not thirsty. The walking turns a kind of switch that makes it pleasant to learn dry knowledge, just as lack of water creates thirst. Not only did studying dry materials become much more pleasant I suspect I also became more efficient – more retentive. I was surprised how fast I managed to reach a criterion of zero mistakes.

I had previously studied flashcards while walking around Tsinghua. This did not produce an oh-my-god experience. I can think of three reasons why the effect is now much stronger: 1. Ordinary walking is distracting. You have to watch where you're going, there are other people, cars, trees, and so on. Distraction reduces learning. If the distractions are boring – and they usually are – the experience becomes less pleasant. 2. Ordinary walking provides more information than treadmill walking (which provides no information at all – you're staring at a wall). The non-flashcard info reduces desire to learn what's on the flashcards. 3. On these Tsinghua walks I had about 100 flashcards which I cycled through. Using sets of 10, as I said, provides more sense of accomplishment. I've also had about 20 Chinese-speaking lessons while walking around. The walking made the lessons more pleasant, yes, but it wasn't nearly as enjoyable as the treadmill/flashcard combination. And because lessons with a tutor are intrinsically more enjoyable than studying flashcards, the increase in enjoyment was less dramatic.

As I [5]said earlier I think there's an evolutionary reason for this effect: The thirst for knowledge (= novelty) created by walking pushed us to explore and learn about our surroundings. One interesting feature of my discovery about treadmill and flashcards is that it may take better advantage of this mechanism than did ordinary Stone-Age life – better in the sense that more pleasure/minute can be derived. In the Stone Age, novelty, new dry knowledge, was hard to come by. You could only walk so fast. After a while, it was hard to walk far enough away to be in a new place. Whereas I can easily switch from flashcards I've learned to new ones. An example of a [6]supranormal stimulus.

1. <http://www.blog.sethroberts.net/2010/07/18/fasting-blood-sugar-reduced-by-walking/>
2. <http://www.blog.sethroberts.net/2010/05/08/more-about-treadmills-and-learning/>
3. [http://www.mindhacks.com/blog/2010/05/paradise\\_learnt.html](http://www.mindhacks.com/blog/2010/05/paradise_learnt.html)
4. <http://www.blog.sethroberts.net/2010/02/23/boring-boring-pleasant/>
5. <http://www.blog.sethroberts.net/2010/02/23/boring-boring-pleasant/>
6. [http://en.wikipedia.org/wiki/Supernormal\\_Stimuli](http://en.wikipedia.org/wiki/Supernormal_Stimuli)

David (2010-12-15 20:03:11)

How fast do you go while doing the flash cards? Have you ever tried the Rosetta Stone software? I find it much more useful than simple flash cards since it involves more of the senses and is well done. It would be hard to pull off with a laptop, but treadmill + rosetta stone would be interesting. A well executed ipad app would probably work better.

Seth Roberts (2010-12-15 22:17:54)

I walk about 2.5 miles per hour. I haven't tried Rosetta Stone. Because the whole thing has become enjoyable there's no need (yet) for things that make it more pleasant, such as picture and sound. Flashcards allow a really clear sense of accomplishment plus later testing and recording (I can mark on the flashcard itself how well I did). I thought Anki would be an improvement over flashcards but now I think the ease of use of flashcards compensates for the several advantages of Anki. An ipad app with continuous high-quality feedback would be good. I haven't come across a language-learning program with good feedback. Anki has terrible feedback.

Steve G. (2010-12-16 08:40:37)

Perhaps you've seen or posted on this before (<http://www.youtube.com/watch?v=VdheWK7u11w>), but your description of how you learn you characters reminded me of this clip that I'd seen in the past from Alexander Arguelles about one of this language learning techniques. Similar mechanisms at work here? Thanks for the interesting post.

Tom Moertel (2010-12-16 12:55:00)

I suspect that there's a strong natural-selection benefit to being aware of your surroundings, to quickly taking in new territory " threats? food sources? " and to detecting changes in familiar territory. Since walking is what would have exposed early humans to their surroundings, we can predict that walking would have, over time, evolved to engage the brain's capacity to observe, store, recall, and compare. To continue this line of thinking, when walking outside, this capacity would be put to its intended use. We wouldn't notice it because, operating as evolved, it would feel completely normal. But when walking on a treadmill, this capacity would be engaged but unused and, we might predict, foster a sense of boredom. This hypothesis explains why flash cards " something to observe, store, recall, and compare " would seem so fulfilling on the treadmill: this engaged but previously unused capacity is finally given an outlet. One interesting experiment would be to control for exercise effects by comparing walking to, say, low-intensity bicycling for flash-card memorization. Since bicycling is something we would not expect to have been part of human evolution, we would expect it to be less effective than treadmill-walking for this purpose.

jewel (2010-12-19 17:54:36)

Great book that references how our bodies (and activity) help us learn <http://marciaconner.com/learnmorenow/toc.html>

James Hayton (2010-12-19 18:35:59)

I think there's something about the rhythm of movement that helps to cut out distraction and set the right frame of mind for learning. I've found reading on an exercise bike is fantastic, but never tried it with language learning (I memorised most of the Japanese katakana, but it was so boring!). Will definitely try this one

Justin Cancino (2010-12-19 18:59:18)

This is a great motivational read for me. I'm moving to Beijing in 4 months and I've been trying to stick with a program whether it be Rosetta Stone, Live Mocha or the many Mandarin books I have, but it gets old for me really quickly. This is something I can do while on the bike at the gym to help the time go by and hopefully help me pick up my Chinese a bit faster. Thank you!

Justin Cancino (2010-12-19 19:00:16)

Oh, I forgot to ask, where are you getting your characters on the flashcards from? I have a few good sources online but I'm always looking for new ones.

Dave Hamel (2010-12-20 09:09:27)

I don't know if it is true or not, but I heard once that Mao Zedong taught his soldiers to read by pinning characters to the back of each soldier. Each soldier know the meaning for their word and tell it to the soldier behind them. While marching each soldier would be reading the symbol in front of them over and over. Rote learning at it's finest.

steelweaver (2010-12-20 12:41:51)

This reminds me of the rocking motion you see Jewish and Islamic students adopting whilst reciting/memorising scripture - always appeared to me to be a adaptive response to the unnaturally static mental and physical intellectual experience. If you want to go down that route, of course, there's also a possible link to the kind of rocking / repetitive movements you see in traumatised children / animals kept in cages. Walking sounds like a much less maladaptive response to me! I'm gonna give it a try.

Henk Poley (2010-12-26 16:05:51)

Interesting. Personally I would relate it to walking meditation. Our long running forefathers would need to get and remain focussed when running. So the pacemaker rhythms used during walking probably calm some distracting brain centres.

Kolja (2010-12-27 09:32:13)

I noticed a similar thing. Before exams I now always wander through the woods (many paths, not many people, so distractions are not too numerous). I started off with flashcards and quickly discovered the "few at a time"-rule. By now I use the Mental Case iPhone App (no affiliation). It does a similar thing and repeats only a few cards until you get them right, although it switches them out one by one. I think it has to do with giving the moving parts of my body something to do while my brain can concentrate on information. I get really restless after a few minutes of dry learning while sitting, but a three-hour walk per day does wonders to my marks and is still pleasant. I can't compare it to a treadmill though, as I don't have one and don't want to learn in a gym.

## **Walking and Learning in Rats (2010-12-16 21:55)**

[1]Yesterday I blogged that walking on a treadmill made studying flashcards enjoyable. I also felt my retention was noticeably better than when I studied sitting or standing in one place.

Thanks to Matt Weber I learned of a rat experiment that supports the idea I was more retentive. Long-term potentiation (LTP) is a long-lasting (hours) change in synapse properties caused by a certain type of electrical stimulation from electrodes. [2]Leung et al. measured the amount of LTP produced by the electrodes when rats were in one of four states: (a) walking, (b) immobilized, (c) short-wave sleep, (d) rapid-eye-movement sleep. They found clear LTP in all four states, but the LTP was much larger (50 % larger?) when the rats were walking during the stimulation. During the other three states the LTP was about the same.

The walking and immobilization conditions must have differed in many ways. Perhaps immobilization was uncomfortable. Perhaps it required more handling. And so on. Comparing just those two states, you might wonder if (a) walking produces changes that cause things to be remembered better or (b) any of the other walking/immobilization differences made things worse (e.g., the shock of handling reduces learning). The fact that immobilization and the two sleep states produced similar results argues against the second sort of explanation.

1. <http://www.blog.sethroberts.net/2010/12/15/walking-creates-a-thirst-for-dry-knowledge/>

2. <http://www.jneurosci.org/cgi/content/short/23/28/9297>

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jeff borsato (2010-12-17 08:12:31)

Seth, Recent story about a man who ate nothing but potatoes for 2 months and lost weight, good interview over at Stephan's blog, this seems to correlate with the idea you have espoused before about bland foods, in this instance taken to an extreme: <http://wholehealthsource.blogspot.com/2010/12/interview-with-chris-voigt-of-20.html>

brian (2010-12-18 04:32:57)

This is obvious to me so it is nice to see others thinking and researching this phenomenon. People pace when they think because it increases the effectiveness. I have been doing it my whole life. I speculate this accomplishes two things. One, greater blood flow which probably helps the brain. Two, if the brain and body are occupied in motion, the brain may be less distracted than otherwise.

Yuri (2010-12-19 22:23:10)

I believe walking improves brain function because of, well, danger. Think of our ancestors walking in the forest full of hostile creatures: they had to be super-alert all the time, and after the trek for food find their way back. Thanks for the insight, it will be useful (I'm into improving memory).

### **Quips From A Mall (2010-12-17 15:49)**

I downloaded this week's [1]This American Life (Scenes From a Mall) just to hear one little snippet again. Ira Glass asked three eighth-graders about the economy.

GLASS Has the recession affected the three of you?

GIRL 1 What!? "Recession"? What does recession mean?

GIRL 2 That's a big word.

GIRL 1 We're not the smartest people here.

1. <http://www.thisamericanlife.org/>

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Alex Chernavsky (2010-12-17 22:02:36)

Reminds me of Jay Leno's excellent "Jaywalking" segments.

### **Self-Experimentation as Legal Gambling (2010-12-19 03:13)**

Listening to [1]Freakonomics Radio on lottery-like savings accounts reminded me of a big reason I self-experiment: it resembles buying a lottery ticket. Whenever you collect data I believe there is [2]a power-law distribution of benefit: large chance of little benefit, small chance of large benefit. (Your sophistication and other things affect the slope.)

Almost all data confirms what you already knew – small benefit. A very small fraction of data gives you a new idea – large benefit. Because self-experimentation is about oneself, new ideas can have tangible benefits, just as winning the lottery provides tangible benefit (money)

Basically I hope for outliers – a sudden jump up or down in something I'm tracking, such as arithmetic speed or sleep duration. This may give me a new idea about what controls that measure. Self-experiments are also valuable because something I'm not deliberately measuring may change. When I started watching faces on TV in the morning to see if it would affect my sleep, my mood, which I wasn't deliberately measuring, suddenly improved.

It really does feel like playing the lottery for free. To not make a measurement I could easily make feels like walking by a perfectly good lottery ticket lying in the street. Loss aversion sets in.

1. <http://freakonomicsradio.com/>

2. <http://www.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

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Mark (2010-12-19 21:55:45)

Hi Seth, I love your approach of self-experimentation and I'm a big advocate for it. I don't know if the relationship between male testosterone levels and abstinence has been brought to your attention. People who abstain report improved brain function, strength, mood, overall energy and focus. A Chinese study found that men's T peaked after 7 days post-ejaculation [the study seems to have stopped soon after, there is no data it seems regarding abstaining for longer periods]. Similar to your SLD forums, there is this massive forum thread in which hundreds of guys testify to these effects: <http://www.sosuave.net/forum/showthread.php?s=060780d57fe8bcad7e90e782d797c32c&t=20053> It would be great if you could give this topic attention. Many people dismiss it since it doesn't go well with popular belief, but in my opinion the experimental evidence of all of these forum posters is too much to ignore.

Darrin Thompson (2010-12-20 07:51:31)

Data collection always seems like such a lot of work to me. You explained very well why people do it. It reminds me of my own twisted relationship with Google Reader. Except there's a large chance I read mostly mundane stuff. There's always those times where I learn something really interesting or useful. Not too often but enough to keep me, what, addicted? I'll never admit to that. I expect that the random timing of the big benefits strengthens the motivation.

Seth Roberts (2010-12-20 08:07:53)

Mark, thanks, I didn't know about that. "the random timing of the big benefits strengthens the motivation." Good point. Learning psychologists such as me know very well that partial reinforcement (e.g., rewarding only 25 % of bar presses) produces great resistance to extinction than 100 % reinforcement.

Alex Chernavsky (2010-12-20 14:28:22)

Seth, what do you see as the path from your (or anyone's) initial self-experimentation all the way to acceptance by the larger scientific community? In previous comments, you seem to have down-played the importance of replicating your results – or, at least, of scaling-up studies to use larger sample sizes. So... where is one to go after discovering something new in oneself?

Seth Roberts (2010-12-20 18:07:40)

Alex, the path to wider acceptance is to find out if it is true in other people. I believe that is best done by starting small, the smaller the better. It is a poor idea to do big studies before you have done small studies. That doesn't mean big studies are bad

or unimportant; it means small studies should be done first. Maybe my preference for starting small is why you interpreted earlier comments by me as "downplaying the importance of replicating [my] results" which is not true at all. I think it is very important to learn to what extent the results can be repeated.

### Three Observations About Walking and Learning (2010-12-21 00:47)

1. Studying Chinese-character flashcards while walking on a treadmill is [1]as pleasant as drinking something when thirsty. Unlike actual thirst and drinking, the pleasure lasts a long time and the desire is under your control (to turn it on, you start walking; to turn it off, you stop).

2. What is the opposite of betrayal? There is no antonym. The opposite is so rare it isn't even obvious what it is. Betrayal is when your friend becomes your enemy; the opposite is when your enemy becomes your friend. Living in China and not knowing Chinese was not exactly my enemy but it was certainly negative. This treadmill discovery turns it into a positive: Chinese becomes an inexhaustible source of dry knowledge that I can enjoy learning.

3. Learning is the central theme of experimental psychology and perhaps all academic psychology. Psychology professors have done more experiments about learning than anything else. Practically all of those experiments have been about efficiency of learning: The amount of learning (e.g., percent correct) in Condition A is compared with the amount of learning in Condition B, where A and B "cost" about the same. As a result, we know a great deal about what controls efficiency of learning, at least in laboratory tasks. I think many psychologists are surprised and disappointed that this research has had little effect outside academia. I have never heard a good answer to the question of why. If you'd asked me a month ago I would have said it's because they haven't discovered large non-obvious effects. That's true, but says nothing about how to discover them.

My treadmill experience suggests a more helpful answer: Hedonics matter. Learning exactly the same material can be more or less pleasant. When Learning X is pleasant, it is learned easily; when Learning X is unpleasant, it is learned with difficulty or not at all. In the real world, hedonic differences matter more than efficiency differences. If they want to improve real-world learning, psychologists have been measuring the wrong thing. It is a hundred times easier and ten times more "objective" (= "scientific") to study how much has been learned than to study how pleasant was the experience. But that doesn't mean it is better to study.

[2]Michel Cabanac, a physiologist, strikes me as someone on the right path. Cabanac has studied how the pleasantness of this or that experience goes up or down to help us properly self-regulate. A simple example is that cold water feels more pleasant when we feel hot than when we feel cold. A common example is that exactly the same food becomes less pleasant during a meal. The food doesn't change; we change.

1. <http://www.blog.sethroberts.net/2010/12/15/walking-creates-a-thirst-for-dry-knowledge/>

2. [http://www.fmed.ulaval.ca/ap/francais/chercheur/chercheurs/CABANAC\\_Michel.htm](http://www.fmed.ulaval.ca/ap/francais/chercheur/chercheurs/CABANAC_Michel.htm)

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ET (2010-12-21 16:10:48)

Why wouldn't you say that faithfulness or loyalty are the antonyms of betrayal?

Seth Roberts (2010-12-21 16:26:01)

loyalty isn't the opposite of betrayal because loyalty is a state (like being warm), betrayal is an action. The opposite of Action X

is another action.

ET (2010-12-22 02:17:41)

You can actively loyal.

Hal (2010-12-22 09:28:40)

Seth, you say that "large non-obvious effects" for enhancing learning/memory just haven't been discovered. This in-press paper that I just ran across today presents some of the first serious data I have seen about what learning-method recommendations are and are not obvious. The paper concludes that a number of effective interventions are not obvious at all to the average person (or at least to the average Goucher College student) : <http://www.springerlink.com/content/h5lk98203r440713/> Effect size is another issue—I think the effect sizes are often pretty large, but that's a more complicated discussion...

Seth Roberts (2010-12-22 14:54:41)

Hal, I can't get access to the whole Goucher College article. But I wonder if it assumes that interventions effective in the lab also work outside the lab. In lab experiments, of course, the subjects (students) have to study the to-be-learned material. An unpleasant method of study may be more effective than a pleasant method of study in the lab but outside the lab pleasantness matters and a student may be less likely to do an unpleasant method. When the student predicts "wrongly" the effectiveness of Method X, it may be that the student, unlike the author of that article, is taking pleasantness into account.

## **Cold Shower Report (2) (2010-12-21 16:28)**

After learning that [1]cold showers can raise mood, I started taking cold showers. [2]The mood improvement was hard to notice but it was easy to notice that I became more comfortable in the cold. My apartment seemed warmer.

To increase the effect, I increased the water flow (by unplugging shower-head holes that were clogged) and lowered the water temperature (running the water several minutes before starting the shower). The water was obviously colder and its effects larger. Now the showers did raise my mood, for maybe an hour. It was curious how they were unpleasant for only a second.

After a week or so of the colder showers, it became clear, alas, that my weight was increasing. I gained about 2 pounds. There was no obvious explanation for this other than the cold showers. I hadn't changed my diet in a big way. I hadn't changed my activities. And there is plenty of evidence that skin temperature controls body fat. For example, a study of three types of exercise (stationary bike, walking, and swimming) in women found that the women who biked and walked lost weight but the women who swam did not, in spite of equal fitness improvement. So I have stopped the cold showers.

1. <http://www.blog.sethroberts.net/2010/11/27/cold-showers-raise-mood/>

2. <http://www.blog.sethroberts.net/2010/12/03/cold-shower-report/>

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vic (2010-12-21 16:46:37)

wow, 2 lbs.? for me, any change less than 5 lbs. is experimental noise...



Nancy Lebovitz (2010-12-21 17:01:48)

Why did the mood improvement seem clearly less valuable than the weight gain?

nathan (2010-12-21 17:05:02)

I wonder if you can reduce the weight-increasing effects of a morning cold shower with an evening hot soak or steam?

troy (2010-12-21 17:07:10)

I started taking cold showers during a period where I was getting very little sleep. I found them to be kind of addictive, refreshing and a nice surrogate for a cup of coffee before leaving the house. I've always been a believer that taking a splash in a body of cold water is one of the most invigorating and natural human enterprises. A short swim in cold water also happens to erase a hangover. Never noticed any weight gain. In the coldest months of winter I usually find they don't have the same appeal. But from May-September I probably could count on one hand the number of hot showers I take.

Petra (2010-12-21 19:13:29)

It is disturbing news for me. As I just got into terms with Tim Ferriss (4hourbody) experiments that cold water makes the body loose fat more quickly. Did I get it wrong? Warm regards, Petra

Greg (2010-12-21 19:33:01)

Having authored a chapter in it, presumably you read The Four Hour Body. What did you think of Tim coming to the opposite conclusion and recommending cold exposure for fat loss?

Alex Chernavsky (2010-12-21 19:35:04)

This is one intervention that I think I won't even try. I've taken a few cold showers in my life (not by choice) – and, unlike Seth ("they were unpleasant for only a second"), I found them to be miserable the whole time.

David (2010-12-21 19:51:56)

Seth, Since you have a masochistic streak, you might try sleeping on the floor (i.e. with only a yoga mat or carpet for padding). I started that a while back to address some lower back pain and kept it up even after the back pain went away. I'd be interested to if you find any measurable effects. All I can say is that I ended up kind of liking it (and in fact I should start doing it again). Unlike you, I'm too lazy and disorganized to collect the necessary data (mood is too hard for me to quantify, for example). David

Wyman Brantley (2010-12-21 19:53:50)

Paul McGlothlin, author of "The CR Way," mentioned yesterday on the Calorie Restriction discussion list that he tried cold showers "but stopped the practice immediately when I found that they play havoc with glucose control when eating afterwards. Measuring subsequent meals with my trusty glucometer told the tale." He didn't explain exactly what the phenomenon entailed, but the potential for a connection with weight gain is intriguing in the present context.

Nathan Myers (2010-12-21 23:01:53)

If the weight gain is a one-time event, so it stabilizes after the initial increase, what's the harm? If you feel warmer, and therefore turn down your thermostat, you're burning more calories just being there.

SDG (2010-12-21 23:15:11)

Tim Ferriss, in his recently released book The Four Hour Body, actually recommends taking cold showers as a way to increase weight loss- [http://www.nypost.com/p/news/opinion/books/the\\_4hour\\_body\\_DO5FDjwAeNFVrFfMvEnvoJ](http://www.nypost.com/p/news/opinion/books/the_4hour_body_DO5FDjwAeNFVrFfMvEnvoJ)

Ahrand (2010-12-22 02:12:33)

David, maybe it was a residual effect from being more connected to the earth's electrical potential ? You could test this by walking barefoot over wet grass (morning dew) and see if you have the same effects.

D (2010-12-22 08:51:49)

I'm working my way through Ferriss' book and have taken two ice cold showers. This news (from Seth) is disturbing!

Kenton A Hoover (2010-12-23 23:30:48)

While you might not have noticed a change in your diet, you probably were eating more. Cold water exposure does that, and it's one reason for the swimmer effect.

Alex (2010-12-25 15:13:13)

I'm sure Seth is aware of the 4 hour body book, since he's actually in the book :)

Seth Roberts (2010-12-25 22:07:37)

In the Four Hour Body, Tim recommends a regimen quite different than what I did. Cronise, from whom Tim got the idea, started like this:

He drank a gallon of ice water between waking and 11 A.M.; he slept with no covers; he took midwinter "shiver walks" of 20-30 minutes with nothing but a T-shirt, earmuffs, and gloves on his upper body. He later found less painful options, but the results were undeniable. He lost almost six pounds in the first week.

I took a 4 or 5 minute cold shower daily – that's all. I am not sure they caused weight gain but my weight started going up shortly after I started them and started going down soon after I stopped them. Tim's milder recommendation is to use an ice-pack on the back of the neck for 30 minutes. Perhaps cooling the blood going to the brain (ice pack) is quite different than cooling all of your skin (what I did).

Ahrand (2010-12-30 14:03:21)

Another easy cold exposure is to wash your hair (just holding your head under the water, not your body) with ice cold water. Much better for your hair than warm/hot water by the way...

Edward (2010-12-31 09:52:27)

Are you sure that the 2lbs was fat gain? I agree with Vic that, for me, 2lbs seems like just normal variation. And for me any weight change would have to be a lot more than 2lbs to have any idea whether the weight change is from increased fat vs muscle vs water retention.

Seth Roberts (2010-12-31 17:35:41)

Edward, it looked nothing like normal variation. It looked like a steady increase. It certainly wasn't increased muscle. I wasn't doing anything to cause increased water retention but I can't easily rule that out.

Josefina (2012-02-16 20:08:35)

I feel your body did not have enough fat to be exposed to cold shower so it added fat to balance it out. Right?

### **Chinese Economics Joke (2010-12-22 07:16)**

Person A to Person B: "See that piece of shit? If you eat it I'll give you 100 million yuan."

Person B eats the shit.

But Person A doesn't want to give him 100 million yuan. He says to Person B: "How about I eat shit too? Then we'll be even."

Person B agrees.

Person A eats some shit. "Now we're even," he says.

They have just increased GDP by 200 million yuan.

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Paul (2010-12-22 08:16:09)

So, is China really much poorer than GDP figures would lead one to believe?

Michael (2010-12-22 09:19:59)

Ho Ho! Shanghai now has some of the most overvalued real estate in the world. Just wait until the Chinese real estate market goes pop.

Seth Roberts (2010-12-22 15:09:50)

Paul, this joke reflects the common belief that the government cares too much about GDP and too little about living standards. For example, a lot of Chinese GDP involves infrastructure – building roads for example. A little-used road contributes little to living standards. So it is complicated. A well-used road contributes a lot to living standards in the future.

Organism as a Whole (2010-12-22 20:12:04)

Yeah, China cares too much about GDP. Whenever I watch the Chinese news, they constantly talk about how the GDP is improving. GDP is a flawed measure. I wrote an article in 2008 about the flaws of GDP: <http://anarcho-mercantilist.blogspot.com-/2008/11/economics-of-state.html>

BK (2010-12-23 10:59:14)

You could make the same argument for the US re: GDP. I think it also illustrates the confusion of cause and effect in economics. It seems the current administration and many before it, believe that consumption drives economic growth ("go out and spend and help the economy"). It's economic growth, through savings and production that drives consumption.

TomGinTX (2010-12-24 13:10:06)

The joke is wrong, even in joke terms. They increased GDP by zero. If both had eaten, and each paid the other 100M yuan, \_then \_ GDP would have increased by 200M yuan.

Roger Sweeny (2010-12-24 18:54:56)

Person B gave person A an IOU with a face value of 100 million yuan. Person A later used it to pay his new debt. Hey, it works for Social Security. Oh, wait...

Nathan Myers (2010-12-24 19:46:19)

This like my favorite Polish joke. — Stan and Lev are walking home from an evening out, a bit unsteadily. Stan spots a little frog by the side of the road, and says, "Lev, I'll bet you five zlotys you won't swallow that frog." Lev is thinking how he has spent too much, and how an extra five zlotys in his pocket would make for an easier morning at home. He snatches the frog and gulps it down. Stan hands over the money, and they walk on. As they walk, Lev imagines he feels the frog jumping in his stomach. He starts to resent having been tricked into swallowing a frog. After a few minutes, he spots another frog, just a little bigger, and says, "Stan, I'll bet you five zlotys you won't swallow that frog." Stan is thinking that he really hadn't expected Lev to swallow the frog, and that he really couldn't spare the money. He swallows the frog. Lev hands back the five zlotys, and they walk on,

each lost in his own thoughts. A few minutes later, Lev turns to his friend and says, "Stan, why did we swallow those frogs?" — I gather that "swallow a frog" sounds really funny in Polish.

Six Ounces (2010-12-26 02:25:38)

Chinese reports of their GDP are about as credible as the reported age of their female Olympic gymnasts. Find evidence to the contrary of any reported figure, and it will magically begin disappearing on official government websites.

Sunshine (2011-07-02 22:46:16)

At last! Someone who understands! Thanks for posting!

### **Rich and Poor Students: How to Distinguish (2010-12-24 07:17)**

At Tsinghua University, there is a great range of wealth among students. Some are from very rich families, some from very poor. I asked a friend how to distinguish rich students and poor ones.

"At the student store, rich students buy things that cost more than 15 yuan [2 dollars]," she said.

I asked another student the same question.

"By their shoes," he said, "especially sports shoes." Poor students wear Chinese brands you've never heard of. Rich students wear American brands.

Like my friend's answer, this surprised me. At [1]the Beijing Zoo, I paid \$10 for Nike shoes that cost \$100 in America. Yet when visiting America, Chinese people I know have bought Nike shoes, because genuine Nike cost less in America than in China. So the American shoes of the rich students are probably genuine (> \$100) and the Chinese-brand shoes of the poor students cost less than \$10 (< \$5?).

1. <http://www.blog.sethroberts.net/2009/01/10/beijing-shopping-clothes-at-beijing-zoo/>

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Nacho (2010-12-24 12:02:20)

Well that makes sense... I love Converse All Star, there are imitations anywhere you look around, you can buy fair enough well done converse alike shoes in Zara (one of many brands). I still buy converse, because Converse All Star represents not only a pair of shoes, but a piece of history, a philosophy of the brand and because they keep the same level of quality in their products and you now they will keep doing so, and selling converse all stars in different formats, colors, etc. But you don't know what goes on with the imitators, will they continue doing the imitation if converse goes out of business, will they keep the quality, etc? That is why if I am able to buy the original, I will go for the original... Obviously it's different with really expensive brands as I don't have that much money, so then if I want something really expensive that I like I would go for something similar much cheaper (one has his/her own limitations), but not an exact imitation of the brand because I feel as a creative person than doing so I would damage the original brand somehow. I don't know if for you this makes any sense at all, but is the best I can explain these ideas right now... By the way I am from Spain and I buy my converse all star from UK as they are much cheaper over there, they are even cheaper in US but with the costs of sending them from US to Spain is not so cheap. And Zara is a brand from Spain, so is much cheaper here than US. I'm saying all this because you might find in US that there is such not that big difference in price between Shoes in Zara and Converse or that Zara shoes are much expensive than Converse (I don't know

as I never bought anything from Zara in US meanwhile I was around US at some point).

denshil (2010-12-30 02:08:40)

I don't agree with them on how to distinguish. I think that rich students sometimes have better education, some of them can play music like piano, or can draw. In art school, many students are rich, they use iPhone, LV... Nike is not special item in Tsinghua, I am not rich, but I have Nike and Adidas.

## **Unexpected Christmas Presents (2010-12-24 20:53)**

This year I got two:

1. I taught a class about R and data analysis. On Christmas, one of my students wrote, "Thanks for what you taught us on the class. I love your class. I learnt a lot!" I hadn't taught it before. A few weeks ago I had been abashed to discover [1]a midterm exam from Phil Spector's R class at Berkeley. I know Phil and like and respect him. His students had learned a lot more than mine, it seemed. I had consoled myself by thinking that I couldn't answer some of the questions.

2. Cleaning a cupboard, also on Christmas, I found a "gift" derived from buying a water heater in March. (Buy the water heater, get the "gift".) It looked like an ordinary glass teapot, which is why I had put it in semi-storage. When I opened the box I discovered it wasn't. [2]It has a basket where you put the tea and hot water; when the tea is ready you press a button that releases the water into the bottom of the teapot, stopping the brewing. I drink a lot of tea. A month ago I barely knew these things existed. Then I bought one and thought it was wonderful – but small. The uncovered one is the perfect size.

1. <http://www.stat.berkeley.edu/users/spector/s133/midterm-anno.pdf>

2. <http://frshgrnd.com/2010/07/sama-tea-pot/>

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Gunnar (2010-12-25 10:39:46)

Happy holy days to you Seth and the readers! Hopefully Mr. Spector's students have fewer other stuff to learn to reduce their burden ;-)

Laura (2010-12-25 18:21:06)

GO BEARS!!

## **My Theory of Human Evolution (Caganers) (2010-12-25 16:18)**

[1]A nativity scene in Barcelona:

He is known in Catalan as the caganer. That translates most politely as 'the defecator' - and there he is, squatting under a tree with his trousers down.

At the nearby Christmas market amid the sprigs of holly and Santa hats rows of miniature, crouching country boys are lined up for sale.

Innocuous-looking from the front, their buttocks are bare and each one has a small, brown deposit beneath.

"It's typical of Catalonia. Each house buys one for Christmas," explains Natxo with a smile and a shrug as he shops. "I don't know why (we do it), it's just a tradition."

Without Christmas, there would be much less demand for these intricate items. I believe the evolutionary reason for festivals and ceremonies is that they create demand for hard-to-make goods. This helps the most skilled artisans (good sources of innovation) make a living and hone their skills.

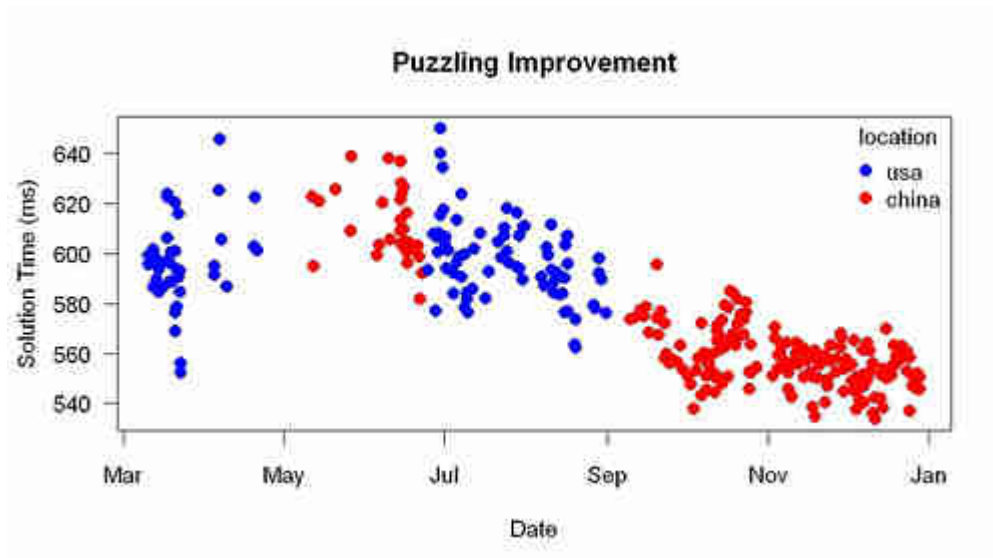
Via [2]Marginal Revolution. [3]Christmas: an evolutionary explanation.

1. <http://www.bbc.co.uk/news/world-europe-12059969>
2. <http://www.marginalrevolution.com/marginalrevolution/2010/12/assorted-links-22.html>
3. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>

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## Another Mysterious Mental Improvement (2010-12-28 07:35)

[1]



This graph shows results from a test of simple arithmetic (e.g.,  $7-3$ ,  $4*8$ ) that I did once or twice most days. Starting in August, I improved about 9 % (from 600 to 550 msec/problem).

I don't know why I got faster. In early September I moved from Berkeley to Beijing. After the move there was an especially sharp decrease. The increase in October was due to [2]an experiment in which I reduced flaxseed oil/day.

I noticed the decrease after I got to China. At first, I thought it was due to a dietary change – [3]perhaps more walnuts. I stopped eating walnuts and the improvement didn't go away. So it's not walnuts. It's not butter; for the first few months in China, I ate the same butter as in Berkeley.

I can't think of any plausible conventional explanation (e.g., [4]blueberries). Here are the most plausible explanations I can think of:

1. Less aerobic exercise. In China I get much less aerobic exercise than in Berkeley.
2. Less vitamins. In China I consume less vitamins than in Berkeley.
3. Warmer. My Beijing apartment is warmer than my Berkeley apartment. Showers in Beijing are warmer than baths in Berkeley.

In each case the change (e.g., less exercise) could have started in Berkeley. The last one (warmer) is not just the strangest, it's also the most plausible. Unlike the other two, evidence supports it. Fact 1: When I started heavy-duty cold showers my scores started to get worse. Fact 2: When I stopped cold showers, the scores returned to their pre-cold-shower level. Fact 3: When I moved to China it was very hot, which would explain the sharp decline at that time.

1. <http://www.flickr.com/photos/sethroberts/5299659261/>
2. <http://www.blog.sethroberts.net/2010/11/19/effect-of-flaxseed-oil-on-arithmetic/>
3. <http://www.blog.sethroberts.net/2010/10/25/walnuts-brain-food/>
4. <http://www.sciencedaily.com/releases/2007/11/071106122843.htm>

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neuroscan (2010-12-28 09:11:27)

Seth, just a note to say that as a fellow cognitive psychologist, I really appreciate all the info on your site! However, looking at the figure above, I am unable to see the pattern that you describe. If you were to add a trend line to the data, I bet you would see it pretty much describing a straight line which declines from around 620ms in June to perhaps 550ms in January. This would imply that your improvement is independent of geographical location, so perhaps you are simply getting better at these types of tasks. Am I missing something? Regards, neuroscan

Joseph Dantes (2010-12-28 09:23:44)

Bravo. I too notice that winter productivity really takes off, when I can wear warm clothes and work in a cold room. I recently replaced fruit and much of my carb intake with lots of boiled eggs to maximize testosterone production. The extra fat calories successfully killed most carb cravings. The eggs seem to allow a much higher mental labor endurance. I'm collecting data at the moment but not processing it, but anyway the change is dramatic enough to notice unaided.

Seth Roberts (2010-12-28 13:01:35)

neuroscan, the usual line I use to summarize this data (lowess in R, using the default parameters) is flat from March to July, then declines. I thought that was misleading because the months-long decline doesn't start until August. So I omitted it. As you say there might be a small increase and decline in June (in China). Maybe due to too-old flaxseed oil. The August-September decline isn't due to practice because before the decline the scores were roughly flat for about a year (August 2009 to July 2010),

except for a sudden improvement apparently due to butter. For example, compare March and July.

Zans (2010-12-28 20:39:11)

Seth, would you be interested in testing the effects of hotter-than-normal showers?

Seth Roberts (2010-12-28 20:43:09)

Zans, yes. I am curious about the effect of showers. Hotter than normal showers would be unpleasant so I may try (a) varying how often I shower (twice/day instead of once/day), (b) varying the length of showers (e.g., 2 minutes versus 10 minutes), and (c) very cold showers (again).

Zans (2010-12-29 00:42:45)

Those would be some worthwhile experiments. I've tried looking up information on how showers affect one's health last year but there was very little literature on the subject. Have you tried varying the time of day when you take the shower as well? Speaking of cold showers, do you still think there might be some benefit to them, or are you mainly checking if the new results are consistent with the old ones?

Seth Roberts (2010-12-29 04:39:40)

I haven't tried varying the time of day I take the shower. Since the effect appears slowly (over days) it's hard to see why time of day would matter. I want to try cold showers again to see if I get the same results. That such a thing could affect mental speed is a new and intriguing idea.

Kirk (2010-12-29 09:09:15)

I tried cold showers for a week but abandoned them after realizing they made me extremely sleepy about 2 hours afterwards. It was the oddest thing. Cold shower at 7am, which was stimulating for about an hour, a big cup of coffee at 8am, as usual, and then by 9am it was time for a nap.

q (2010-12-30 21:20:41)

if your brain were really working well, it would be able to figure out why.

David (2011-01-04 02:54:07)

What rules out a long term or cumulative benefit from higher butter consumption?

Seth Roberts (2011-01-04 06:53:59)

David, the effect of butter was immediate. It did not get larger over the following months.

jsh (2011-01-22 11:40:39)

My first assumption would be that moving to a totally different living environment causes your mind to sharpen up. You get a lot of brain-gym even at the grocery store trying to figure out what thing are edible. And the performance gain on august before moving, increased overall alertness due anticipation. Another thing that comes to my mind is that if you've been learning chinese writing(even subconsciously) perhaps you've got totally another strategy to "solve" the arithmetics, precisely, you now use your language skills and see "4\*8" as one symbol that can be translated to 24 and don't really do math anymore, or something. One is a bit too small sample to rule out these.

Seth Roberts (2011-01-22 17:19:10)

jsh, according to your brain-gym explanation, my scores should get worse when I move back to Berkeley. We'll see.



## Do Fermented Foods Shorten Colds? (2010-12-29 15:11)

Alex Chernavsky writes:

I had an interesting experience recently. On Thursday afternoon, I started feeling a little run-down. Then I began to sneeze a lot, and my nose really started to run. I thought I was coming down with a cold. I took an antihistamine and felt a little better. I woke up Friday morning with a mild sore throat (the sneezing/runny nose had stopped). Within a couple of hours, my throat wasn't sore anymore – and I haven't felt sick since then. In summary, I believe I had a cold that lasted less than 24 hours. This almost never happens to me. Typically, my colds last at least a week, and usually more (and I usually get two or three colds per year). There is only one other time in my adult life [he's in his forties] when I can remember having a very short-duration cold.

Maybe it's the fermented foods I'm eating. After I started reading your blog, I began to brew my own kombucha, and I drink it every day. I also sometimes eat kim chee, fermented dilly beans, fermented salsa, umeboshi plums, and coconut kefir.

This was the first cold he's gotten since he started eating lots of fermented foods in June. I believe the correlation reflects causation – the fermented foods improve his immune function. The microbes in the food keep the immune system "awake". I also believe that Alex's colds would become even less noticeable [1]if he improved his sleep.

1. <http://escholarship.org/uc/item/2xc2h866>

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Alex Chernavsky (2010-12-29 15:43:18)

Yeah, I confess that I'm chronically sleep-deprived. I also forgot to mention in my e-mail to Seth that I eat miso soup, as well. Actually, most of this stuff tastes so good that I'd eat it even if I didn't believe that it had positive effects on my health.

Seth Roberts (2010-12-29 19:49:10)

I knew nothing about Alex's sleep when I made that comment.

Nathan Myers (2010-12-29 22:53:08)

I have been told that, usually, a cold that lasts only one day is really food poisoning. I don't understand where the sore throat would come from in that case.

Wyman Brantley (2010-12-30 07:56:08)

The short cold/sore throat thing seems to be a strain that is going around. My spouse and I both had it, and while I eat a fair number of things fermented (thanks from me, too, to Seth) my spouse eats close to none, yet the effect of the "cold" on both of us was comparably mild.

## Assorted Links (2010-12-30 03:12)

- [1]farm moms and allergies in their children

- [2]10 characteristics of a healthy city
- [3]Long magazine articles from all over. Even better than [4]The Browser.
- more medical ghostwriting: [5]letters to the editor.

1. <http://www.physorg.com/news130482643.html>
2. <http://www.newcolonist.com/topten2.html>
3. <http://longform.org/>
4. <http://thebrowser.com/>
5. <http://www.bmj.com/content/340/bmj.c1514.full>

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### Which Should You Trust: Scientific Literature or Anecdote? (2010-12-30 19:36)

In a comment on [1]a BMJ paper critical of alternative medicine (the author submitted a fictional abstract to a conference then criticized the program committee for not rejecting it), [2]a retired chemist named Joe Magrath said:

The scientific literature tells us that acupuncture, cupping and reflexology are all nonsense.

I haven't looked into it but I'll take his word for it.

Around the time Magrath said that, [3]James Fallows said this:

During our years in Malaysia in the 1980s, and more recently in China, my wife and I became unlikely converts to a lot of Asian medical practices. I had serious back pain cured by an acupuncturist (who used needles the size of aluminum baseball bats) in Kuala Lumpur. In [4]her book, my wife describes how the gruesome-seeming therapy of [5]fire-cupping, applied in an all-night massage parlor in the city of Yueyang, snapped her out of a serious bout of the flu. Sure, she had big red welts on her back for the next ten days, but her fever was gone!

Which do you believe?

1. <http://www.bmj.com/content/341/bmj.c6979.full>
2. [http://www.bmj.com/content/341/bmj.c6979.full/reply#bmj\\_el\\_246263](http://www.bmj.com/content/341/bmj.c6979.full/reply#bmj_el_246263)
3. <http://www.theatlantic.com/personal/archive/2010/12/what-could-possibly-go-wrong/68618/>
4. <http://www.amazon.co.uk/Dreaming-Chinese-Discovering-Billion-People/dp/1906021554>
5. [http://en.wikipedia.org/wiki/Fire\\_cupping](http://en.wikipedia.org/wiki/Fire_cupping)

Joseph Dantes (2010-12-30 20:51:54)

I believe I know little, and that placebo effects are large, and that our physiologies are depressed compared to their paleo potential.

sinophile (2010-12-30 21:52:46)

My understanding: Chinese wouldn't waste money on this stuff for thousands of years. The benefits of these treatments must outweigh the costs.

Michael Meadon (2010-12-31 01:06:12)

That's... really easy. <http://ionian-enchancement.blogspot.com/2010/06/anecdotes-as-evidence.html>

Jake (2010-12-31 03:16:31)

After reading your blog for the past months, I have learned the only true science is the science that works for you. Research papers are only suggestions for you to try.

Tom Moertel (2010-12-31 15:57:05)

I'm with Jake, especially when it comes to medical science. Because of the way most medical research is done, with an emphasis on group studies, individual differences and their consequences are not well understood. Doctors don't seem equipped to take advantage of evidence that doesn't fit an established pattern, especially if it's weak evidence. That's one of the reasons I think self-measurement and -experimentation seem to be so effective at improving health outcomes: medical science has a big hole in it, and if you fall into it, there's a good chance it's because of how you don't fit established patterns. Studying your differences from the norm, then, is likely to be profitable.

Michael Meadon (2011-01-01 08:42:32)

This stuff about 'deciding for yourself' is downright silly. In case you haven't noticed, you (yes, YOU) suffer from innumerable [1]cognitive biases and illusions. More importantly - as I point out in the post I linked to above - determining causality when  $n=1$  (as it is in 'your own case') is basically *impossible*. 'What works for me' is usually 'what I think works for me' which often simply doesn't.

1. [http://en.wikipedia.org/wiki/List\\_of\\_cognitive\\_biases](http://en.wikipedia.org/wiki/List_of_cognitive_biases)

Seth Roberts (2011-01-01 16:28:03)

Michael, almost all experiments are  $n=1$  in several ways (e.g., one classroom, one strain of rats), as John Tukey pointed out long ago. Yet science progresses. So there is a problem with your idea that "determining causality when  $n=1$  is basically impossible".

Anthony (2011-01-01 18:26:44)

@Michael, "determining causality when  $n=1$  (as it is in "your own case") is basically impossible" How do detectives determine causality? How do computer programmers? Cooks?

Kenneth Turner (2011-01-01 19:56:48)

Folks frequently complain that "it's merely anecdotal evidence." Actually all evidence is anecdotal. When you write a journal article, you are basically saying "I did this, and I observed that, and this is what I think it means." Publication in an 'official' journal only says that an editor has decided to publish it, sometimes after consulting with one or more other people. If I hear a story from someone I have no reason to believe is lying to me, that can be as convincing (frequently more so) than a published account, by someone whose competence I must infer from the journal and institutional reputation. In fact, I am the most competent observer of my own experiences. Aren't you of yours?

Michael Meadon (2011-01-01 21:45:24)

@Seth: Well, no. Actually, yes but only *in the short run*. Science is a deeply social and collaborative enterprise that takes time. Scientist 1 investigates some topic by doing experiment A. Scientist 2 thinks this is dodgy, so does experiments B-C. Scientist 1

responds with experiments D-F, etc. etc. Over time, the same topic (if it's important enough to warrant sustained attention) gets investigated from all sorts of different angles, disagreements are sorted out and (ideally) a consensus is reached. This is how we got consensus on evolution by natural selection, the efficacy of vaccines, general and special relativity, cold fusion, etc. This process takes time, is difficult and is almost invisible to non-specialists because it's either conducted in recondite spaces (journals, etc.) or in private (conferences, bars, seminars, etc.). [Luckily, blogs are changing this somewhat. Now post-publication peer-review happens rapidly, in public, online]. *That* is why science progresses. If scientists forever focused on only one line of evidence, we'd never make much progress.

Michael Meadon (2011-01-01 22:03:20)

@Anthony: re detectives, programmers and cooks. Well... As far as I'm aware, cooks make many dishes, and the same dish repeatedly, so  $n=1$  for them. (Besides, they often have false beliefs). Similarly, it's not as if programmers can't do the equivalent of experiments on their programs. If I'm coding program X, I can change a bunch of code experimentally, and see what happens. Functionally,  $n=1$  even when working on only one program. As for detectives, they (1) are notoriously bad at their jobs, but, anyway, (2) are not concerned with subtle effects, unlike medicine. But can't a self-experimenter do the same? Like a programmer? Well, no. A programmer has exact control over his program. He can start with v. 0.0.123 of the program, make changes, see what happens; then go back to v.0.0.123 and make different changes. No person, however committed, has anything close to as much control as this. Similarly, medical effects are often subtle: that is, effect sizes are small. No one person could ever have discovered, say, that taking aspirin (slightly) reduces the risk of developing heart disease. Exactly because  $n=1$ .

Bob (2011-01-02 10:58:19)

@Michael, Interesting comments and interesting piece you linked to above. An issue that has received short shrift in the scientific methodology world is that "n" frequently equals one on the object or task side of the ledger in behavioral science experiments. Experimental psychologists, for instance, never seem to tire of taking a large subject sample size, testing these subjects on one task, and then concluding that their results generalize beyond that single task. No such generalization is justified. I think it is possible to learn from single subject experiments if done well, for instance by taking one person and testing this one person across a variety of tasks. Egon Brunswik did an interesting perceptual experiment (1944, I think) of this "n=1" kind when he followed a single subject around Berkeley for several days and randomly asked the subject to estimate the size of objects in her environment. Did Brunswik's results generalize beyond the single person? Yes, to the degree that other people shared the relevant perceptual framework – two eyes, good vision, not color-blind, an environment offering the same cues that the subject encountered in her environment, etc. Brunswik had a theory (constancy) that he was able to test using a subject "n" of one.

Anthony (2011-01-02 16:50:12)

@Michael, "when  $n=1$  (as it is in "your own case") "cooks make many dishes, and the same dish repeatedly, so  $n=1$  for them" Perhaps I am not understanding what you mean by  $n = 1$  here, then. If I'm doing an experiment involving myself, I can do the same thing many days in a row. If I get the same result every day, is  $n > 1$  according to how you are using this concept? "Besides, they often have false beliefs" Everyone has mostly false beliefs. The question is how to improve on our beliefs.

Seth Roberts (2011-01-03 04:32:39)

Bob, you write "no such generalization [to other tests] is justified." It is justified by the history of psychology, which shows that the results with one task turn out to predict the results with other tasks.

Nathan Myers (2011-01-04 23:11:38)

About cupping curing the flu, I will only note that food poisoning symptoms mimic flu, but often pass in a day.

Mike (2011-05-27 19:43:33)

Fairly insightful post. Never believed that it was simple after all. I had spent a beneficial deal of my time looking for someone to explain this subject clearly and you're the only one that ever did that. Keep it up.

## Dissent Over DSM-5 (2010-12-31 14:00)

I liked [1]this article by Gary Greenberg about one psychiatrist's criticism of the upcoming DSM (Diagnostic and Statistical Manual) revision. The DSM is the diagnostic manual of the American Psychiatric Association.

This paragraph stood out for me:

This new disease reminded Frances of one of his keenest regrets about the DSM-IV: its role, as he perceives it, in the epidemic of bipolar diagnoses in children over the past decade. Shortly after the book came out, doctors began to declare children bipolar even if they had never had a manic episode and were too young to have shown the pattern of mood change associated with the disease. Within a dozen years, bipolar diagnoses among children had increased 40-fold. Many of these kids were put on antipsychotic drugs, whose effects on the developing brain are poorly understood but which are known to cause obesity and diabetes. In 2007, a series of investigative reports revealed that an influential advocate for diagnosing bipolar disorder in kids, the Harvard psychiatrist Joseph Biederman, failed to disclose money he'd received from Johnson & Johnson, makers of the bipolar drug [2]Risperdal, or risperidone. (The New York Times reported that Biederman told the company his proposed trial of Risperdal in young children "will support the safety and effectiveness of risperidone in this age group.") Frances believes this bipolar "fad" would not have occurred had the DSM-IV committee not rejected a move to limit the diagnosis to adults.

Emphasis added. Hundreds of thousands of children given brain-damaging drugs because . . . well, one big reason is that Harvard allows its faculty to do what Biederman did. Forced to choose between Harvard and drug company money, Biederman would choose Harvard. I am glad Professor Ross Anderson, a Cambridge computer science professor, [3]turned down an industry request to censor a student, but I am sorry he said the person making the request had "a deep misconception of what universities are and how we work."

[4]American Psychiatric Association incompetence.

Via [5]The Browser.

1. [http://www.wired.com/magazine/2010/12/ff\\_dsmv/all/1](http://www.wired.com/magazine/2010/12/ff_dsmv/all/1)
2. <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0000944>
3. <http://www.cl.cam.ac.uk/~rja14/Papers/ukca.pdf>
4. <http://www.garygreenbergonline.com/>
5. <http://thebrowser.com/>

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brian (2010-12-31 22:42:01)

Biederman should recognize that the trial should not be conducted because the trial "will support the safety and effectiveness". He already knows the result so it would be better not to spend the resources on the trial.

Seth Roberts (2011-01-01 04:22:42)

The notion of a drug safety and efficacy trial being conducted by someone who says he knows what the results will be is obscene. That the drug will be given to children makes it doubly obscene. That Biederman got millions for this sort of thing and failed to report it merely confirms what a horrible person he is. That Harvard lets him do this speaks volumes about Harvard. This is far worse than plagiarism and making up data (both of which Harvard tolerates, at least with its faculty).

brian (2011-01-01 21:11:21)

This reminds me of that turn of phrase "I like to think that...". Why do people talk that way?

# 6. 2011

## 6.1 January

### Shangri-La Diet Uptick (2011-01-02 07:14)

During the last half of 2010, I noticed today, hits at the [1]Shangri-La Diet forums steadily increased. The number of hits went from about 300,000 in July to about 500,000 in December.

Before that the number of hits had steadily declined from a high of about 900,000 in August 2009. The number of hits had tended to be higher in the summer so the recent increase is counter-seasonal.

1. <http://boards.sethroberts.net/>

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q (2011-01-02 07:43:47)

i think that's great. seth, i have always had a really hard time navigating those forums. it's also been hard to find a clear, succinct HOW TO / WHY description of the diet that i can tell people about. even sorting by date doesn't work well - it seems to sort by alphabetical month for example. you might try invision boards as a better alternative? (it worked for me - i lost 20 pounds in the first half of last year with virtually no effort on the diet after losing 10 the previous year with huge effort, and i have kept it off - i may try for another 10 at some point, but i'm pretty happy with where i am.)

Laura (2011-01-02 17:03:39)  
SUPER AWESOMENESS!!!

Seth Roberts (2011-01-03 00:06:09)  
q, thanks for the feedback, What is "invision boards"? when I look it up on google I get a skateboard maker.

Arlene (2011-01-03 08:24:53)  
NYT had an article having to do with weight loss a month or two ago. One of the commentors mentioned the Shangra-La diet. I imagine a lot of people googled and found out about it-I know I did. And my goodness, it does work!

Seth Roberts (2011-01-03 15:26:36)  
Thanks, Arlene, I didn't see that.

q (2011-01-04 08:53:33)  
I meant invision forums. One link is here: <http://invisionfree.com/> but there are other hossts.

Seth Roberts (2011-01-05 02:36:23)  
thanks, q

Sharon (2011-02-28 18:14:07)

Probably thanks to the release of "The 4 Hour Body". That's how I found my way to Shangri-La! Really glad I did - I think it will complement the Slow Carb diet very well.

Seth Roberts (2011-03-01 06:48:30)

Sharon, the increase began months before The 4-Hour Body came out. Thanks for your comment.

Alex Chernavsky (2011-03-01 10:30:09)

I second q's request for a easier-to-navigate boards and a concise, on-line "how to" guide (though perhaps such a guide would hurt book sales).

A Aman (2011-06-30 17:53:56)

Just one day on the diet but am amazed how my hunger was diminished. I'm going to use Shangri La in conjunction with Dukan since I've been eating way too much at night on Dukan (even though I'm eating low -carb). For those days on Dukan where I can restrict my calories somewhat, my results have definitely been better. So I have great hopes if things continue to work as they have on this first day. I've got an order in for the Shangri La book. Least I can do for what seems like a great idea. Think it is unfair for some to ask you to put your book online (ie. more specific info and details about the diet) when you aren't even charging for web access. What do some expect you to do, give everything away for free? Is that what they do with their businesses?

Seth Roberts (2011-06-30 18:43:07)

Thanks for letting me know - and buying the book.

### **Chinese Joke (2011-01-03 04:45)**

A few days ago I got the following message (in Chinese) on my cell phone (part of a service):

A monkey, goat, and tortoise were playing together. After a while they got thirsty. They sent the tortoise to get water. Half a day later, the tortoise still hadn't returned. "That \*)?! % idiot is too slow!" said the monkey. From outside came the voice of the tortoise: "If you call me more bad words I won't get water for you."

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Darrin Thompson (2011-01-03 07:14:58)

Sooooo..... does it roll off the tongue better in Chinese? A friend told me that in Spanish they have a saying similar to our "pot calling the kettle black." They say, "burro telling the rabbit he has long ears," or maybe vice versa.

Laura (2011-01-03 10:30:37)

I enjoy reading jokes! Thanks for posting them!!! They're funny!

### **"Sour" in Chinese (2011-01-03 20:59)**

The Chinese character for sour (pinyin suan) contains a bottle-like element that is sometimes translated wine, sometimes whiskey bottle, and sometimes "the tenth of the twelve earthly branches," whatever that means. The bottle-like



element appears in the character for alcoholic beverage, the character for vinegar, and several other characters with no obvious connection to fermentation. But the connection between sour and fermentation is clear.

My belief that we need to eat lots of fermented food to be healthy began when I realized that would explain why we like sour foods, foods high in umami, and foods with complex flavors – preferences I'd never heard explained. We like those foods, I theorized, so that we will eat foods high in bacteria. Bacteria tend to make sugar-containing foods sour, protein-containing foods high in umami, and all foods high in flavor complexity. I had not previously connected sourness and bacteria – but the Chinese had. I don't yet know the Chinese characters for umami or flavor complexity.

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Joseph Dantes (2011-01-04 00:20:29)

Good insight. I wonder if this means I should add a fermented animal meat in addition to kimchi. Would aged beef jerky qualify? I hope so!

David (2011-01-04 07:32:22)

Well, "vinegar" literally means "sour wine" from vinum, the Latin word for and source for the English word "wine". Vinum itself is cognate to "vinea", vine or vinyard. <http://www.etymonline.com/index.php?term=vinegar> <http://www.etymonline.com/index.php?term=wine> <http://www.etymonline.com/index.php?term=vine> Ferment itself is from a root meaning to boil: <http://www.etymonline.com/index.php?term=ferment> David

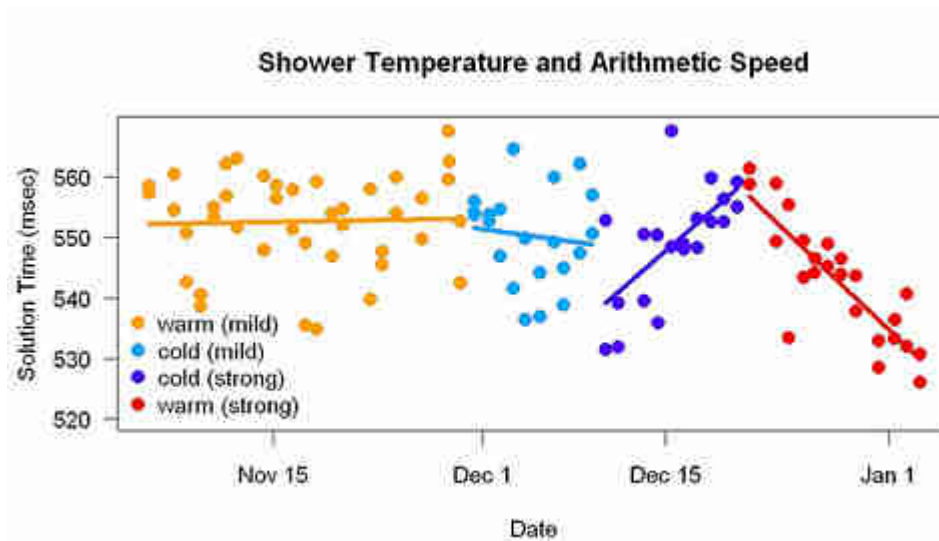
## **Does Shower Temperature Affect Brain Speed? (2011-01-05 05:56)**

In November I learned about [1]benefits of cold showers. So I tried them. I took cold showers that lasted about 5 minutes. I liked the most obvious effect (less sensitivity to cold).

Maybe a bigger "dose" would produce a bigger effect. Maybe the mood improvement cold showers were said to cause would be clearer. So I increased the "dose" in two ways: (a) more water flow (I stopped holes in the shower head) and (b) lower water temperature. After a week or so with the stronger dose, I saw I was gaining weight. It could be the cold showers, I thought. Fat acts as insulation and I couldn't think of another plausible explanation. So I went from cold showers back to warm showers (48 degrees C.) – this time with greater water flow. My warm showers were 5-10 minutes long.

I began to lose weight, suggesting that the cold water did cause weight gain. More surprising was that my arithmetic speed (time to do simple arithmetic, such as  $7-3$ ,  $8*4$ ) began to decrease. Here is a graph of the results.

[2]



Before the cold showers started my arithmetic speed was roughly constant. The mild cold showers had no clear effect. I had noticed the increase during the strong cold shower phase but hadn't paid it much attention – I suppose because it seemed implausible. These results, however, are excellent evidence for cause and effect: cold showers made me slower, warm showers made me faster. The arithmetic tests weren't done soon after the shower. There seems to be some sort of brain-speed adjustment that takes place over ten days or more.

I've never heard of anything like this, whereas I've heard many times is that cold showers are good. There is one complication, which is that December 3rd I stopped eating walnuts. I believe walnuts are bad for the brain, in contrast to [3] the usual belief. I came to believe that because of results from two students of mine who had tried eating them. Improvement due to no longer eating walnuts would explain why line fitted to the strong cold data starts below where the weak cold line ends. The final days of the strong warm phase may be the same as the weak warm phase when adjusted for the walnut difference.

What explains this? Maybe the weight change. When gaining weight, maybe fat was taken from the blood to be deposited in fat cells, thus lowering the fat content of the blood reaching the brain and thus degrading brain performance. Losing weight, the opposite happens. Eventually the weight loss will stop; this explanation predicts when that happens the warm-water effect will go away.

In [4] a previous post I wondered why I had gotten faster at arithmetic over the previous six months. These data suggest that warm showers may be at least part of the reason. In Berkeley I take baths, not showers.

1. <http://www.blog.sethroberts.net/2010/11/27/cold-showers-raise-mood/>
2. <http://www.flickr.com/photos/sethroberts/5323367790/>
3. <http://www.seriousseats.com/2010/06/walnuts-the-ultimate-brain-food.html>
4. <http://www.blog.sethroberts.net/2010/12/28/another-mysterious-mental-improvement/>

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Maxwell (2011-01-05 06:22:23)

Hi Seth, If I may, what time did you take the cold showers? Tim Ferris argues that taking a very cold shower an hour before bedtime improves sleep. This timing might also reduce the effect on weight, provided you can resist eating til bedtime.

Seth Roberts (2011-01-05 06:29:18)

I took them in the morning and afternoon usually, but no fixed time. The slowness of the temperature effects I observed on arithmetic speed (they took at least 10 days or so to level off) suggests that the time of day doesn't matter, at least for the arithmetic effects.

troy (2011-01-05 07:01:47)

looks like a series of two-handed regressions to me

Seth Roberts (2011-01-05 07:21:27)

troy, I fit the lines using lm, an R function.

troy (2011-01-05 07:57:23)

I believe the lines were fit using a model but, it just looks like there is a lot of noise, and it'd be my hunch that there is room for error in a 40ms range in the recorded data itself. I can imagine a lot of other things might be getting stuffed into the error term over a 3-month period.

Nancy Lebovitz (2011-01-05 12:39:32)

Off-topic: [1]Varieties of digestive experience- a lot about how important it is to find out what's healthy for one's own particular- sometimes veryparticular- gut. Fruits and veggies aren't good for everybody.

1. <http://fatfu.wordpress.com/2011/01/05/2011-resolutions-part-2-the-fodmap-not-taken/>

Nathan Myers (2011-01-05 12:54:46)

You're assuming that temperature was the important controlled variable. But a hot shower exposes you to a lot more chlorine gas, via the lungs, than a cold shower. Depending on how well ventilated your shower is, you might be varying your chlorine exposure substantially, with unknown effect. Teasing apart effects of temperature and chlorine exposure might be difficult, but seems possible. Some water systems don't have dissolved chlorine gas, but instead chloramines. Chloramines would not be released as a gas in hotter water, but any reactions would be speeded up. Many animals are sensitive to chloramines; a subtle effect on humans would not be surprising, although one would expect more effect from ingestion than immersion.

Seth Roberts (2011-01-05 13:34:23)

troy, you write "it looks like there is a lot of noise". To me it looks just the opposite. In statistical terms, I believe the p value associated with the changes is very low (i.e., the probability that the observed changes would happen by chances is very low). In other words, the signal is high relative to the amount of noise. Since you seem to disagree, care to estimate the p value for the difference in slope between the last two phases (which I haven't yet computed)?

CTB (2011-01-05 18:09:38)

Sounds thyroid-related to me. I need to take thyroid hormone replacement because my own gland doesn't work anymore. Occasionally the blood test indicates that I need to up the dose, and when I do, I don't feel the effect for 10-12 days. Others have told me that they've had the same experience. Once I tried stopping the medication totally to see what would happen. After about 10-12 days, I noticed significant memory problems (along with weight gain and constipation). I would walk into a room and initially forget why I was there...but each time I would remember again after about 7 or 8 seconds. So the memory was there, just 'delayed.' One of the things that causes thyroxine to be used up more quickly is cold exposure. And if I remember correctly, iodine deficiency is a problem in China and adequate iodine intake is critical for thyroid hormone synthesis. So perhaps the cold showers are causing you to use up thyroxine at a higher rate and your thyroid gland isn't able to quickly keep up with the demand? That would also explain the weight gain (usually it's due more to excess fluid from decreased metabolism, rather than to fat buildup). Then when you warmed up the showers, your hormone levels were able to catch up.

Mark L (2011-01-05 21:15:33)

Starting with a hot shower and ending with a cold shower is possibly a way to improve benefit; I think some health spas alternate exposure to hot and cold temperatures. I often end my showers with 1-2 minutes of cold (well) water which is about

51 degrees fahrenheit. When I have time, I alternate between hot and cold water a few times; I find it easier experiencing the cold water on the 2nd repetition. Part of the benefit/exhilaration may come from the feeling of accomplishment after having the discipline to take a cold shower. Another important variable is how long to expose yourself to the cold; my hunch is that a brief exposure avoids a cortisol stress response which would come with a longer exposure.

Seth Roberts (2011-01-05 22:04:17)

CTB, your explanation sounds plausible. How can I test it? In other words, what does it predict?

troy (2011-01-06 08:24:41)

Seth sure, if you email me the dataset I'll run it.

CTB (2011-01-06 10:16:15)

There's no direct answer to your question because thyroid is a complicated, multifaceted issue. Some things to consider: Before starting any discussion, you would need to know if your baseline thyroid hormone levels (no cold stress) were normal. Then look at your diet to make sure it contained adequate iodine. If the area's water supply is deficient, iodine can be supplied by iodized salt, marine fish, sea weed, etc. However, the situation is thorny because too much iodine can cause the thyroid to shut down temporarily...and in some individuals it can result in autoimmune destruction of the gland. If thyroid hormone levels decrease, metabolic functions slow down in all tissues of the body, including the adrenal gland. The adrenals are responsible for producing hormones that increase levels of glucose and fatty acids in the blood so that your brain, heart and muscles can react to stress. If you stress the body with a long, cold shower, and your adrenal reserves are lower (secondary to lower thyroid levels), overall response will be slower. Normally, the brain uses glucose for almost 100 % of its energy needs. If a person is starving, the liver can produce ketone bodies from fat...and the brain can use these for energy...but only to a limited degree. To maintain blood sugar levels, the body will then break down proteins and convert them to glucose for the brain. But every one of these processes is slowed by decreased thyroid and/or adrenal hormones. The hormone circulates primarily bound to protein carriers...only the free fraction is active. When a person is given a dose of radio-labelled thyroid hormone, it takes almost a week for the level to decrease by 50 %...so it's probably binding to the carrier proteins instead of being used up right away, which probably has something to do with that 10-12 day period. Presumably that bound portion is 'reserve.' the amount of carrier protein is upped by estrogens, so women have more (especially if pregnant or on the pill). Increased androgens lower the carrier protein levels. Low normal levels of thyroid or adrenal hormones from any cause could mean that you're naturally susceptible to being subpar after stressful activities, while people with higher reserves would bounce back without skipping a beat. Some patients with adrenal insufficiency are only diagnosed after a high stress experience lands them in the ER with hypoglycemia. Interestingly, a high carb diet also uses up a lot of thyroid hormone. You've written about avoiding bread, rice, pasta in your diet. On the thyroid boards, a lot of folks post about being carb-intolerant.

Seth Roberts (2011-01-07 03:27:31)

CTB, my thyroid levels are normal. Now it doesn't sound plausible. What you describe might explain why a cold shower made me slower, but not why a hot shower made me faster. Whereas I suspect the two effects have the same explanation. And I don't think either effect is caused by poor health or malnutrition.

troy (2011-01-09 16:18:23)

So, if you do a two-sample t-test on the strong-cold versus the strong-warm group you get a p-value of .037, so there is strong evidence at least that the samples have different means. The linear model explains about 35 % of the variation for the cold-showers and 69 % for the warm. But, my problem with treating it as very good evidence is that essentially you're using time to explain the difference in  $t_r$ , and assuming that the groups are different at the point you switched from very cold to very warm showers, and that the only inconstant variable is the shower temp. You could easily replace the very cold with "shortening days" and very warm with "lengthening days" (the solstice was Dec 21st) and you'd have just as plausible a relationship. Actually, now that I think about it, that would better account for the appearance of the cold-shower effect being cumulative while applied, and fading-out when not. I'm only skeptical because I always take cold-showers outside of Dec-Feb, and can't say I've ever noted any differences weight, cognitive or other after about 20 minutes of stepping outside the shower.

Thanks for sending the data. Sorry for being annoying. I enjoy the blog. R output on pastebin (t1 is the warm group and t2 is the cold): <http://pastebin.com/DdVmP5UA>

Seth Roberts (2011-01-10 02:15:28)

troy, a t-test is not appropriate. I want to compare the slopes, not the means.

troy (2011-01-10 03:12:52)

why is a t-test not appropriate? It seems obvious the slopes are significantly different, but the sample is small, so a difference of means test seems more robust. asking out ignorance, not disagreement.

Seth Roberts (2011-01-10 08:18:13)

a t test ignores the obvious changes over time. I calculate the p value for the difference in slopes as  $1 \cdot 10^{-8}$ .

How To Self-Experiment | Quantified Self (2011-04-06 06:56:11)

[...] I measure my weight I look at a plot of my weight over the last year or so. Recently I found that cold showers caused me to gain weight, which I hadn't expected. If I hadn't looked at a year of data every time I weighed [...]

Bryan-Sweat (2011-05-23 11:33:45)

Seth can you give me some suggestions about how to design an experiment on becoming more tolerant to hot weather? I don't know if anyone has done this before and I don't know the proper place for me to post this question. Please email me back if you can at [bigbry2k3@gmail.com](mailto:bigbry2k3@gmail.com) I'd love to know where I can start experimenting on this idea as I'm going to go to Thailand in September where the heat and humidity is very bad. However, the thais are quite able to tolerate the heat and I would like to design an experiment to see if a 4NR can adapt to the heat faster.

Seth Roberts (2011-05-23 17:42:52)

If you can figure out a way to measure heat tolerance, you might get somewhere. I don't know how to do that. That is the first step: find a way to measure your tolerance to heat.

Michael (2011-07-25 04:25:54)

I like the fact you carried out the experiment but the conclusion is quite simple in my eyes. When cold water hits the skin vasoconstriction is the body's way of reducing heat loss which in turn reduces blood flow. This will cause a reduced blood flow to the brain meaning less glucose and oxygen which in turn lowers brain speed. When your body gets used to this response in regular cold showers the body will eventually use this response at the hands of a stressor. With hot showers vasodilation occurs meaning a higher glucose and oxygen level available for the brain.

## **I Paid A Bribe (2011-01-05 23:31)**

The website [1]I Paid A Bribe is a great great idea. It is enormously promising as a way of reducing corruption. India and China, the two biggest countries in the world, both have immense corruption problems.

I Paid A Bribe is so promising because it takes small bits of anger (mental energy) and aggregates them. Anger causes people to take the time necessary to complain. The aggregated results can be used to: 1. Focus correction. Anti-corruption efforts can start with the biggest offenders. 2. Embarrass offenders. 3. Help measure the effect of anti-corruption measures. Without long term records, those initiatives have great difficulty measuring effectiveness.

It is hard for most people to grasp the corruption of medical science, which connects I Paid a Bribe to what I usually write about. The corruption isn't exactly on the surface: Only medical school professors take something close to bribes. (The pervasiveness of the problem is shown by the fact that all med schools let them do this or [2]don't

enforce rules against it) The corruption consists of this: Some lines of research are more profitable (e.g., more grant money, more prestige) than other lines of research. That is inevitable. What isn't inevitable is that this is allowed to obscure honest investigation of which lines of research are the most beneficial. The most visible sign of the corruption is that the Nobel Prize in Medicine is usually given for research that hasn't helped anyone. The 2009 award for telomere research was an egregious example. Even in China and India, you can find government officials who have helped people.

The anger or fear felt by someone asked to pay a bribe is mental energy. In the case of medical science, the corresponding mental energy is much greater – it is the suffering caused by a condition for which medical science has no cure or a poor cure. Depression, acne, autism, poor sleep, diabetes, obesity . . . the daily suffering caused by these and other health problems is staggering. I believe that self-experimentation is a way of doing something useful with that suffering. When aggregated via the internet, it is a way around the failure of mainstream medicine to deal with these problems.

Via [3]Aleks Jakulin.

1. <http://www.ipaidabribe.com/>
2. <http://www.bmj.com/content/341/bmj.c7435.full>
3. [http://www.stat.columbia.edu/~cook/movabletype/archives/2011/01/bribing\\_statist.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2011/01/bribing_statist.html)

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Matthew Cornell (2011-01-25 13:45:51)

Excellent points, Seth. The propensity to report is related to the idea that few people who are satisfied with service they receive report it, but many who get poor service make a stink. I'm the same way! My motivation is more a function of my anger (as you point out), rather than the egregiousness of the infraction. Of course I realize it's a waste of my energy staying angry (and it \*likes\* to be fed), so I wonder if the site helps cut that energy down (release) or not.

## **Preposterous Health Claims of 2010 (2011-01-06 21:26)**

Katy Steinmetz, a writer for Time, made a list called "Nutty Health Claims of 2010" and "2010: The Year in Preposterous Health Claims." The list of 12 includes:

- [1]omega-3 makes kids smarter
- [2]probiotics that prevent colds and flu
- [3]Dannon's probiotics as wellness elixir

Preposterous!

Marion Nestle, the New York University nutrition expert, has often said she thinks the health claims made for yogurt are bogus – at least when big companies make them. [4]She recently called Dannon's claims "a case study of successful marketing".

1. <http://healthland.time.com/2010/12/29/2010-the-year-in-preposterous-health-claims/slideshow/3/>
2. <http://healthland.time.com/2010/12/29/2010-the-year-in-preposterous-health-claims/slideshow/8/>
3. <http://healthland.time.com/2010/12/29/2010-the-year-in-preposterous-health-claims/slideshow/12/>
4. <http://www.foodpolitics.com/2008/01/dannon-sued-over-activia-claims/>

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Kim Å~yhus (2011-01-07 03:27:23)

LIGHTWATER It is water without deuterium. It seems to be exceedingly healthy. But why?  
[http://www.ncbi.nlm.nih.gov/pubmed/18815148?dopt=Abstract %22 %20target= %22 \\_blank](http://www.ncbi.nlm.nih.gov/pubmed/18815148?dopt=Abstract%22%20target=%22_blank)

Seth Roberts (2011-01-07 17:51:32)

Kim, I agree, that's a fascinating finding.

### Assorted Links (2011-01-07 06:15)

- Nassim Taleb, in [1]this interview, sounds quite a bit like Jane Jacobs
- [2]a fascinating prisoner puzzle
- [3]behind the MMR/vaccine fraud
- [4]a great Book TV program about Lockheed Martin – a parable of American governance

1. <http://www.corporatecrimereporter.com/taleb010311.htm>
2. <http://www.r-bloggers.com/100-prisoners-100-lines-of-code/>
3. <http://www.bmj.com/content/342/bmj.c5347.full>
4. <http://www.booktv.org/Program/12175/After+Words+William+Hartung+quotProphets+of+Warquot+hosted+by+Pierre+Sp>  
rey.aspx

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### Inside the Chinese Government (2011-01-07 19:31)

A Chinese friend of mine said that if you are at a high level in the Chinese government, you have a great deal of freedom. Below that level, however, you have very little freedom: You spend all your time doing exactly what your bosses want. And you have no idea how long the slavery will last. American government is different, she said. High American officials have less freedom than those outside government. I agree.

My friend disliked Obama because he constantly spoke about big ideals ("liberty" and so on) that my friend thought were very difficult to achieve. In other words, he constantly made promises that he was not going to be able to keep. She noted Obama's inexperience and said that people in other areas of government are very smart and would outmaneuver him. (Exhibit 1: Goldman Sachs.) This doesn't happen in the Chinese government because the people at the

top are very old and have come up through the ranks, all the way from the bottom. Because of that long experience, they better understand how to get the rest of the government to do what they want.

In China, rich people fear the government. They must do what the government wants or they will be squashed. In America, she said, rich people do not fear the government. If anything, they tell the government what to do. [1]I agree. Many people, such as Hayek and Milton Friedman, want less government. But I have yet to hear one of them answer the point that if government becomes too weak, rich people will control it.

1. <http://sociology.ucsc.edu/whorulesamerica/>

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Glen Raphael (2011-01-07 21:07:57)

I don't see how your claim relates to those of Hayek and Friedman. Maybe the point of difference is this: a \*small\* government does not necessarily entail a \*weak\* one. Indeed, being smaller is a sign of strength. Small, nimble, flexible versus big, bloated, stodgy. Small startups can get things done in a way IBM can't. Small companies can't get into as much trouble as big ones and can "pivot" more easily when their current strategies aren't working. So a counterargument to your position is that a government which tries to do too many things is unlikely to do any of them particularly well, whereas a government that tries to do just a few things might be able to do those few things much more competently. A small government is easier to watch, easier to check up on and measure how it's doing. A small government wouldn't have such vast resources to give away in the form of secret contracts for TSA scanners or Blackwater security groups or what-have-you so it's less \*worth\* controlling than the current one. So: why do you think "smaller" implies "weaker" when it comes to governments? Weaker in what sense?

Joseph Dantes (2011-01-07 21:39:56)

A trenchant analysis from the Chinese! Not really surprising. Those who are intellectuals and internet savvy approach events with a historical jadedness and lack of western shibboleths that more than makes up for the brainwashing. As for less government versus strong government, the two are not mutually exclusive. The ideal government, in my opinion, is rule by a wealthy, heavily armed middle class, with the aristocracy, villeins, and king playing a secondary role. More on this here: <http://jim.com/rights.html>

Magnus (2011-01-07 22:17:12)

Hey Seth There is two things that must be seperated when talking of the government as weak or small. Hayek and Friedman talk about a society with a small government, not nescessarily a weak one. However the weak/strong-distinction could apply to the government as well as the administration. If the administration is weak people in generel (amongst them rich people) will try to game it if they can get away with it. If government itself is weak (as in it can't enforce its laws) rich people (and people in generel) will generally fare better just paying a bribe and not be affected by it. When Hayek and Friedman talk about a small government they are in a way also talking about a strong cabinet (and parliament) that don't just give out perks to every interest group around. However I think this will rarely be the case â€" being strong might be a good image when campaigning but utterly bad staying in power. The problem is it will always be of value to some group to "install one of the boys" to be in charge espacially if the government is big. In the end the question might be if it is a problem if we are happy with the way government runs. Many fans of free markets look to Hong Kong and Singapore where the governments are small and strong for a examples of good governments that aren't overrun by special interests. I hope it makes sense :) Magnus

thehova (2011-01-08 00:21:59)

"American government is different, she said. High American officials have less freedom than those outside government. I agree." Ultimately I think it's a feature of an English structured democratic government like in America. There are lots of checks and balances. I know that some American's (most notably Tom Friedman) admire the Chinese government's ability to move



quickly on projects. But restricting government also has its features, like protecting human rights.

Seth Roberts (2011-01-08 06:02:40)

Glen, by "bigger government" I meant a government that is involved in more activities. The bigger the government, the more ways it can harm you if you don't do what it wants. This makes it stronger – harder to oppose. I think of strong/weak and competent/incompetent as separate dimensions. A weak government can be competent or incompetent. If fans of free markets have to use Hong Kong or Singapore as examples, I would say that proves my point – that in practice, as a country gets wealthy, you really do have to choose between rich people running things (America, to a large extent) or the government running things (China). thehova, yes, I think great constraints on high government officials also exist in England, as shown by the many scandals that cause people to lose power.

Jake (2011-01-08 06:12:18)

Seth, you have it backwards. If the government has no power than rich people will not try to control it as there is no point. Power corrupts. Remove the power and the corruption disappears.

Jeff (2011-01-08 06:55:57)

Jake has it right, a weak central authority is not worth exploiting. But Seth, you too miss the point. Hayek and Friedman should not be the posts by which you judge the field. Our nation is founded upon Lockean ideals and there is no higher calling in all of governance than to honor those ideals. Hayek and Friedman, as interesting as they may be, convolute the simple. Man deserves to be free and the role of government is to protect his person and his property. From that simple view, governments role is clear.

Zubon (2011-01-08 07:48:45)

But I have yet to hear one of them answer the point that if government becomes too weak, rich people will control it. And they do, so your hypothesis is that the current American government is too weak?

Sonic Charmer (2011-01-08 09:40:44)

What Jake said. The incentive for rich people to influence/control the government, or even to take any interest in it at all, is in proportion to how big and powerful the government is. A small(er), limited government cannot and will not be as easily harnessed or captured by rent-seekers simply because it doesn't spin off that much 'rent' to be seeking in the first place.

Nathan Myers (2011-01-08 13:05:30)

It's way, way too late for that. Rich people already control government. If not, what was that last tax cut extension "compromise" about? Or the no-strings bank bailouts? It's not the first time. It happened before, in the 1890s, and again in the 1920s. Each time it was wrested back, partway. What's different today is that now the Koch brothers have Edward Bernays's successors.

Seth Roberts (2011-01-08 13:18:14)

Zubon, yes, my hypothesis is that the realistic choice is between a government like the one we have now (in the US) or a stronger government (as in China). An example is financial regulation. Brooksley Born argued for stronger regulation; she was dismissed by people, such as Larry Summers, who gave free-market arguments. Summers pointed out the number of wealthy bankers that agreed with him ("there are thirteen bankers in my office..."). That is a specific example where a stronger government would have been less controllable by rich people. On the other hand, the reason I raise this issue at all is not to preach about it – I don't have strong opinions – but to ask . . . I really do wonder what people who believe in smaller government say to the problem of control by rich people. "A weak central authority is not worth exploiting." What did Hammurabi and Moses have in common? Both offered protection. This is why people supported them, I surmise. The weaker the central authority, the less it can protect people. The financial crisis is one sign of how much protection we need. Another is the obesity epidemic, if it is due to the growth of the processed food industry. Perhaps China will have both – a financial crisis and an obesity epidemic – in which case it will be clear that a strong government is not the answer. Perhaps China can avoid a financial crisis but it is less clear it can avoid an obesity epidemic, a diabetes epidemic, a lung-cancer epidemic, and so on.

Paul (2011-01-08 13:36:35)

The comparison seems to me to be a strange one. While there are rich people in China who aren't officially members of the CCCP, aren't almost all high ranking members of the CCCP rich? As well, didn't most of the non party wealthy in China obtain their wealth through their guanxin? I thought that the story of China was more or the less the same as the story of Russia. The state privatizes the assets of public companies, but sells them at a favorable price to those who are politically well connected, who in turn funnel large amounts of cash and other resources to party member. The same thing happens in real estate development, and basically with anything that needs approval from the government, which, from what I understand, is most anything that would stand to make you wealthy. So, I don't really see how this is preferable to the way the U.S. does things. I think that it is correct to infer from Hong Kong and Singapore that governments must be actively involved in an economy if it is to be productive. However, Hong Kong and Singapore have not been governed in the same manner that China has, and hence they are notably much less corrupt. Lee Kwan Yeu may want to believe that leaders of the CCCP wish to emulate him, and some may want that, but I have a suspicion that even more want to emulate Putin.

Seth Roberts (2011-01-08 14:53:37)

Paul, I'm not saying China's way is preferable to America's way. I am saying it is different. Both countries have government enterprises (a minority of people) and non-government enterprises (most people). In both countries, people outside government are wealthy. In America, wealthy people outside government do not fear government officials. In China, they do. The financial crisis – in which a large number of wealthy Americans gambled using taxpayer money and caused great unemployment – suggests that there is a problem with American governance. Obviously there is a problem with Chinese governance – the vast corruption, for example.

American Tax Slave (2011-01-08 15:46:14)

I don't understand: If government is weak, how do rich people control me? Government has a monopoly on force and thereby can tell me what to do, or else. Without that they can't. So how do rich people exercise control over me without co-opting government? I can only see how the rich exercise control over me via government. Perhaps there are other ways I don't see?

Seth Roberts (2011-01-08 18:00:58)

How the rich can control you without government: By degrading your education (e.g., bribing teachers). By ruining your local economy (so you must move away to get a job). By threatening to fire you if you don't do X or Y. By making your workplace less safe. By lowering your salary. By selling crummy products. By cheating you in a business transaction. By lending you so much money at such bad terms that you spend the rest of your life doing payback. By polluting a river from which you drink. By polluting air you breathe. To give just a few examples.

Gunnar (2011-01-09 01:28:00)

Since you people compare governments, you may want to learn that the current (de facto) federal US government is a corporation, and not the de jure government most expect it to be: [http://www.serendipity.li/jsmill/us\\_corporation.htm](http://www.serendipity.li/jsmill/us_corporation.htm) It needs time to let that sink in if it is new for you. I suggest you take that time and maybe research some more yourself.

Stephen M (Ethesis) (2011-01-09 05:40:25)

Actually, when governments are weak, the powerful tend to control them to use them to exploit the processes governments have. That only ceases when the governments cease all together.

Stephen M (Ethesis) (2011-01-09 05:42:39)

Gunnar – the essay is skewed because the author doesn't understand the concept of entities and that of function. /Sigh

Jeff (2011-01-09 07:20:20)

The first thing missing from this discussion is a definition of strong central government. If you agree that a central government can be small but effective, then its court system is what must be strong. With a monopoly on force and an effective judicial system, then you have an ideal scenario. Moreover, the debate between strong and weak central authorities overlooks many

important factors such as state and local governments which provide regional protections of property. Beyond the system of organization, there is the human population and population genetics. There can be little doubt that people of British descent possess a positive combination of behaviors that leads to greater individuality and acceptance of freedom while also respecting the property rights of others. Taken together, it makes any comparison far more difficult. In any case, your suggestions that big corporations can degrade education through bribes or cheating other people are behaviors that were long ago forbidden in the English system. Having a government serve as protector of life and property is not new and does not mean that it has to be large. The remainder of the methods you suggest corporations could control the rest of us, are specious. If a firm sells bad products, then people won't buy. There is nothing for which there is not a realistic substitute, so if a firm invents something and achieves 20 year monopoly control, the public can likely just buy something else. Moreover, people are not going to buy the item if it is not good, when they have unlimited alternatives for spending their cash. The issues of pollution and libertarianism are more difficult to solve, no doubt.

James Oswald (2011-01-09 09:45:02)

If the government becomes weak enough, the rich will have no reason to control it. Why would they control a government that did not subsidize them, regulate them or grant them extra favors? The powers of government that Hayek and Friedman advocated would not have lent themselves for being targets of the rich.

Oli M (2011-01-09 16:48:04)

Seth, Taleb's recent conversation with Ralph Nader is somewhat relevant to what you're considering here: <http://www.corporatecrimereporter.com/taleb010311.htm>

Thomas (2011-01-09 21:33:17)

I dunno - there are just wrong assumptions in every line of this post. First off: I'll never get why people believe in what their politicians say. Shouldn't history taught us by now? Well I guess the Chinese don't - they know the system is rigged. But why on earth believe Obama's words? Look at his actions: He has done nothing he promised. But he is not weak (just look at what Bush did with less political power) - he just never intended to. That shouldn't be surprising to anyone. Rich people in China do pretty well. I doubt most of them fear the government - because ... I mean, I'm no expert, but I bet that the most of the rich ARE the government. And about the idea that "if government becomes too weak, rich people will control it" ... well: then it wouldn't matter, right? The problem is that companies in the US love big government - and want big government (despite saying otherwise). Just not for the people - only for themselves. So they get constant subsidies and bails if in trouble.

Krystal (2011-01-10 07:54:15)

I am with Thomas. it is very true. I mean "THE RICH" would so be the government plus if you see pictures of china they don't maintain it like cuba but cuba is much worse. because in china the place that the tourist see is very nice but behind it it is very messy. Like cuba. Thanks for reading! Krystal :D

Thomas Seay (2011-01-10 11:35:34)

> For the most part, rich people DO control it. Who has the money to pay lobbyists? Not Jimmy, the Factory Worker or Seth, the Berkeley Professor! The rich in China are just as much in bed with the Chinese government as their American counterparts. The Chinese government combines the worst features of Laissez-Faire capitalism with (some) of the worst features of Stalinism. True that at least now there is some freedom of information and travel.

Steve Roberts (2011-01-12 02:39:46)

Hi Seth If you think that a Strong Government is one that can do what the hell it pleases, and conversely a Weak Government is one which cannot necessarily do so, you have comingled as weak both the government which is constrained by constitutional checks and balances, within which it can indeed get done what it pleases (Hayek, Friedman); and the government which may be less constrained in principle, but due to corruption or special-interest-group influence or exaggerated ambition, fails to enforce the law, fails to put its policies into effect, and / or cannot sequester the resources to fulfill its plans. Of course special interests (including 'the rich') will try to overthrow the constraints on the first type, bringing about the second type.

The answer is to defend the principle and actuality of constitutional constraints on government. In terms of how 'the rich' can control you without government, it simply comes down to they can offer you money to do something you wouldn't otherwise do. They can't make you do it, not in the way the government can, with its legislation, policemen, judges, jails and executioners. Actually your list applies pretty well to government too: Bribe teachers - don't need to, just control what they teach and how Ruin your local economy - actually with misguided policy they can ruin the whole economy, not just the local one Threaten to fire if you don't do X or Y - Yes for government employees and through extensive regulation for many many others Cheating you in business - No need to cheat, just take your money in taxes Pollution - Does the government police its own pollution as rigorously as everyone else's?

M (2011-01-13 08:23:56)

Seth, I'm with you here. You say: "The financial crisis â€" in which a large number of wealthy Americans gambled using taxpayer money and caused great unemployment â€" suggests that there is a problem with American governance." That's absolutely correct.

revelo (2011-01-14 18:39:39)

Absent a strong democratic government, the rich mutate into feudal lords. That is, they set up their own non-democratic government, and they oppress their subjects far worse than under our current society. The subjects can't leave because there is always a hierarchy of slaves, guards and boss at the top, such that the boss treats the guards well in exchange for controlling the slaves. This is how things were in Latin America or the American south for that matter back in the good old days that the libertarians pine for. These libertarians better make sure they've arranged to fall into the guard or boss group before exchanging our current flawed democracy for feudalism.

Contemplationist (2011-01-24 22:33:51)

Many people, such as Hayek and Milton Friedman, want less government. But I have yet to hear one of them answer the point that if government becomes too weak, rich people will control it.

Seth, you need to get out more. The field is called "Public Choice Economics" and is now 40 years old. Its dedicated to answering precisely how BIG government is controlled by "rich people." Whatever happened to criticizing the nexus between Wall St and the government? Or Big Agriculture n Govt? Or Big Pharma and FDA? I mean, are you kidding or this argument for real? Unless you are claiming that we currently have laissez-faire, all these instances are strikes AGAINST big government. The libertarian argument is that regulation does not control "rich people" or corporations but gives them more levers to loot the common man. The most effective controller or regulator of corporations is OTHER corporations that compete with them. The key thing to focus on is keeping dynamic, open markets with as low cost-of-entry as possible.

Seth Roberts (2011-01-25 03:32:55)

revelo, I agree completely. Contemplationist, yes, expensive regulation is a wonderfully effective tool that benefits large corporations at the expense of small ones. Food safety laws, for example, require an office for a food safety inspector in certain cases. Small companies cannot afford this, big companies can. But that does not change the overall point that, as the examples given by revelo suggest, governments really do make it harder for the strong to exploit the weak. You may not have heard of the Wallenbergs. [http://en.wikipedia.org/wiki/Wallenberg\\_family](http://en.wikipedia.org/wiki/Wallenberg_family) They are an incredibly wealthy and powerful Swedish family. I asked my Swedish uncle how they compare to the Swedish government. "They act as a brake on each other," he said.

Ren (2011-09-04 21:04:27)

i think chinese government is like a family(the family is not the one in western)the father or mother is the government,and the people are the childrens

### **Design Farmer (2011-01-10 16:08)**

A friend of mine majored in design at Tsinghua and is now working as a designer. Her opinion of her education has gone down. Designers from other schools are better trained than she is, she sees.

At Tsinghua, her teachers denigrated learning to use this or that software program. To design something using a computer program was to be a design farmer, they said. They preferred to talk about big ideas. "I hate big ideas," said my friend.

Her comments reminded me of law professors who would rather teach philosophy than how to be a lawyer (and are [1]surprised when students play solitaire during class) and education professors who [2]don't teach their students how to teach.

1. <http://www.blog.sethroberts.net/2008/05/13/for-whom-do-law-schools-exist/>

2. <http://www.blog.sethroberts.net/2010/03/04/one-man-vs-all-education-professors/>

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### **Christian Schlatter (2011-01-11 14:43:46)**

Wow. I'm studying design in Switzerland and the situation is very comparable to your friend's experience. What's central to design is to be able to build things. It's a craft despite the fact that designers produce increasingly intangible things such as services and systems. It's the craft skill I consider essential to design that's neglected the most in favor of sluggish ideas. It turns out most other students in my batch are frustrated and confused as well. We'll be leaving school and won't have much to add to the portfolios we used to apply to the program to begin with. Students hardly improve their craft or deepen their knowledge. Why does the school exist? And what's the difference between self-study at home and actually attending school? There are great resources on the Internet that I'm already using for lack of anything better. If you're determined and diligent you can learn a lot either way. And that's what I'm hoping for. If I'm going to be a success it's because I worked my ass off, guided myself, and made a distinction between relevant and irrelevant information. It's hard but I learn self-reliance, persistence, and how to coach myself. That's not a bad deal, either.

### **Patrik (2011-01-13 02:07:58)**

Seth, I have a friend who is doing an MBA — he is learning tons of "strategy" that has little bearing in the real world or in any future job prospects — his school has no classes in sales, which is very, very real-world. See "strategy" is unspoiled, pure and full of Big Ideas — and sales is hard and uncool.

### **Jill (2011-01-26 13:13:15)**

So true. I wish schools did more training and less "education" — I have a BS (how appropriate!) in engineering and management, an MBA, and completed the coursework for an ME and most of the coursework for a PhD — and yet feel that all those years in school have left me without any useful skills.

### **What Global Warming Science Really Says (2011-01-12 19:30)**

To see the usual arguments for global warming, look no further than [1]this list, which gives the most popular "skeptical arguments" with rebuttals. The person who made this list presumably read lots of stuff and tried to select the best rebuttal in every case.

That reading led to this:

Skeptic argument: Models are unreliable.

Rebuttal: Models successfully reproduce temperatures since 1900 globally, by land, in the air and the ocean.

Notice what it doesn't say. It doesn't say Models have successfully predicted temperatures . . .

These models have many adjustable parameters. With enough adjustable parameters, you can reproduce anything. The only reasonable test of a model with many adjustable parameters is how well it predicts.

[2]Hal Pashler and I wrote a paper pointing out that psychologists had been doing something similar for 50 years – passing off models with many adjustable parameters as reliable when in fact they hadn't been tested – when their ability to predict hadn't been measured. One explanation of the current global warming scare is that there is something to be afraid of. A more plausible explanation, I believe, is that – again – one group of scientists is passing off complex models with many adjustable parameters as reliable when in fact they haven't been tested.

1. <http://www.skepticalscience.com/argument.php>

2. <http://escholarship.org/uc/item/5vt0z72k>

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Joseph Dantes (2011-01-12 20:35:18)

An intelligent and rare insight, coupled with a brave topic. I salute you, sir.

M (2011-01-12 21:44:59)

I believe you that complex models are often unreliable. But suppose mainstream scientists' complex models were instead predicting a stable climate – would you then be writing skeptical blog posts suggesting we should be afraid of climate change?

Seth Roberts (2011-01-13 00:20:52)

M, in the absence of reliable models I fall back on data that bears on the question without needing a model. In the case of climate change, current temperatures are not unprecedented – the Medieval Warm Period, for example. That makes it harder to believe that humans are causing unprecedented warming. So the answer to your question is no, I would not be saying we should be worried about climate change.

Kim Åyhus (2011-01-13 01:56:45)

I experienced the same unnecessary complexity while working in the industry of oil field simulations. The argument for it was always "The customer wants features." I doubled the accuracy of the simulations just by inventing a simpler and more accurate venturi model, with fewer variables and more realistic behavior. The reactions to this was a brutally hard lesson in practical psychology for me. The customer demanded endless amounts of new documentation instead of just asking why it worked better and paying for that information. The new boss tried to fire me for producing too little code. The supposed expert on the original code claimed my job should have taken a few hours, while never achieving anything like it himself. Eventually most employees there quit. According to the anthropic principle, and my other job experiences, these events are typical. So I guess similar stuff happens in climate modeling, pharmaceutical research, economics, psychology research, whatever. I do not quite understand why this stuff happens, but I find it damn stupid. As for following Ockhams advice of decreasing the number of entities, such as variables: There is another similar trick, which you obviously know, used a lot by J rgen Schmidhuber,

that of making the model more robust as measured by sensitivity to variations in the variables. The entities that are decreased in both cases are the amount of data needed to describe the model, as the number of variables, or accuracy of variables.

M (2011-01-13 08:03:51)

Your approach sounds reasonable (ie, "falling back on data that bears on the question without needing a model"). You point to the Medieval Warm Period. The skepticscience list that you linked to says: "Globally temperatures are warmer than they have been during the last 2000 years." <http://www.skepticscience.com/medieval-warm-period.htm>

Eugene (2011-01-13 11:54:20)

The ability of really, really smart economists (with a pair of Nobel Prizes between them) to create highly accurate models based on past economic performance is why Long-Term Capital Management runs such a successful hedge fund today. Oh, wait, maybe not.

Seth Roberts (2011-01-13 13:46:09)

M, a few years during the 1930s were also really hot. If you leave aside the models, the rest of the data doesn't make a good case that it is so much hotter than ever before we should be concerned. If that website had started by realizing the models are worthless, I might trust it. Since that website takes the models seriously, I don't trust it.

Nathan Myers (2011-01-13 19:40:12)

I seem to recall that climate modelers predicted in the '90s that it would be noticeably warmer today than it was then. Sure enough, it is, and by the amount they predicted (i.e., their worst-case scenario, which is what the data really indicated). Lately, every year is, or matches, the warmest on record. What makes that not a successful prediction?

Seth Roberts (2011-01-14 04:50:44)

Nathan, if we're going to base gazillion-dollar decisions on these models, we might want something a little more extensive and precise than the assessment you've just given ("I seem to recall . . .").

## **Inside the Chinese Government (2) (2011-01-13 04:31)**

I showed a Chinese friend of mine the famous [1]Chinese Professor commercial. In Beijing, 2030, a Chinese professor tells his students about the fallen American empire. It is a commercial against "government waste".

My friend said that in China you would be put in jail for making such a commercial. There is lots of waste in the Chinese government, she said. I asked her for examples. One is restaurant meals. Government officials go out for extremely expensive meals and eat just a few bites. I have heard that one quarter of restaurant spending in China comes from the government. There is a restaurant near my apartment with absurdly high prices; one of my students said that only government officials would eat there. Another example of government waste is cars. Government officials have big expensive cars.

[2]Inside the Chinese Government.

1. <http://www.youtube.com/watch?v=0TSQozWP-rM>

2. <http://www.blog.sethroberts.net/2011/01/07/inside-the-chinese-government/>

Jake (2011-01-13 08:18:47)

If you spent time in D.C. you would come to the same conclusion about our government.

### **Law Schools Deceiving Students (2011-01-13 07:46)**

In [1]an article about how law schools deceive prospective students, one way astonished me. Thomas Jefferson School of Law in San Diego reported that 92 % of their graduates are employed 9 months after graduation. That 92 % included the 25 % of the students they couldn't locate. Which is in accord with the guidelines, said the associate dean of student affairs.

1. [http://www.nytimes.com/2011/01/09/business/09law.html?\\_r=2&ref=business&pagewanted=all](http://www.nytimes.com/2011/01/09/business/09law.html?_r=2&ref=business&pagewanted=all)

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Allen K. (2011-01-13 08:09:01)

That didn't shock me as much as the "since employment is going to be measured on Feb 15, let's offer them temp jobs for the month of February" gambit. What a scummy pyramid scheme.

dearieme (2011-01-13 10:40:45)

"92 % of their graduates are employed " might also means that 8 % of their graduates, when tracked down and offered six week jobs to cover the period of the study, declined them.

Mike (2011-01-13 20:19:54)

I love how one of the Google ad links on the right is for.... Thomas Jefferson School of Law. Automation at its finest

### **Assorted Links (2011-01-17 04:03)**

- [1]misleading genetic tests
- [2]Interview with Jane Jacobs about how the residents of Greenwich Village defeated Robert Moses. One of the most amazing uprisings in America in the last 100 years.
- [3]introduction to umami

1. <http://www.bmj.com/content/342/bmj.c7233.full>

2. [http://khup.com/download/1\\_keyword-jane-jacobs/jane-jacobs.pdf](http://khup.com/download/1_keyword-jane-jacobs/jane-jacobs.pdf)

3. <http://www.foxnews.com/leisure/2010/01/05/oh-mama-whats-umami/>

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Alberta (2011-01-17 05:08:10)

Horrors! A Fox New link. If your global warming skepticism didn't get you drummed out of polite society, this surely will. :)



Ray Sawhill (2011-01-17 21:51:11)

A better link for your Jane Jacobs interview: [http://www.gvshp.org/\\_gvshp/resources/doc/jacobs\\_transcript.pdf](http://www.gvshp.org/_gvshp/resources/doc/jacobs_transcript.pdf)

### **Economic Police (2011-01-17 21:15)**

There exists in China a branch of law enforcement called economic police (I don't know the Chinese name) whose job is to make sure government officials aren't getting rich – that is, corrupt. Only government officials, no one else. The brother of a friend of mine is one of them. He has been doing it for six years. In college he double-majored in police work and economics. He carries a gun but has only used it once – to stop a government official trying to flee from Shenzhen to Hong Kong.

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Jim (2011-01-18 16:06:29)

This is a great idea whose time has come here in America. Anyone know a member of congress that might be open to this?

### **Thinking Like a Doctor (2011-01-18 14:45)**

Atul Gawande's [1]latest article in The New Yorker (gated) is one of his best. It is about attempts to reduce health care costs by focusing on the most expensive patients. A tiny fraction of people produce something like 30 % of the total cost. You can save a lot of money, it turns out, if you try hard to help them.

To help them, it turns out, you need to do things that aren't obvious, such as hire someone whose last job was at Dunkin Donuts (as a "health coach"). It turns out that not everyone is happy with what you're doing.

[One high-cost patient] had seen a cardiologist for chest pains two decades ago, when she was in her twenties. It was the result of a temporary inflammatory condition but [the cardiologist] continued to have her see him for an examination and electrocardiogram every three months, and a cardiac ultrasound every year. The results were always normal. After the clinic doctors advised her to stop [having the tests], he called her at home to say her health was at risk if she didn't keep seeing him. She went back.

To me, the most revealing part of the article was about a young woman with persistent migraines. During the last 10 months she had required \$52,000 of medical care ("twenty-nine E.R. visits, fifty-one doctor's office visits, and a hospital admission"). Yes, dealing with a persistent migraine by going to the E.R. over and over isn't getting anywhere. But here is what Gawande (a doctor at Harvard, who writes for The New Yorker) recommends:

She wasn't getting what she needed for adequate migraine care—a primary physician taking her in hand, trying different medications in a systematic way, and figuring out how to better keep her migraines at bay.

During those fifty-one doctor's office visits, the woman wasn't prescribed all possible medicines? And, if she was, she needs a doctor's help to figure out if they work – which they obviously don't? How stupid does Gawande think that she and her doctors are?

I don't think Gawande thinks they are stupid; I think he is unable to stop thinking like a doctor, which means thinking that every serious problem has a solution that includes prescription drugs or other medical care. (Unless it's obesity, in which case the solution is the ancient advice to "eat less, move more".) This woman needs to explore lifestyle solutions to her problem. She doesn't need a doctor for that. But most doctors, judging by their actions, cannot imagine such a thing.

1. [http://www.newyorker.com/reporting/2011/01/24/110124fa\\_fact\\_gawande](http://www.newyorker.com/reporting/2011/01/24/110124fa_fact_gawande)

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vic (2011-01-18 17:30:47)

And if she wants to experiment with different drugs that might help her, why does she have to go through the hassle, expensive, and bureaucracy of seeing a doctor??

Red (2011-01-18 19:02:19)

Vic's hit something there. The solution to medical problems is to have people treat themselves instead of doctors for most common issues. We used to do this and with the internet it should be easy to fix most common problems.

thehova (2011-01-19 01:52:30)

I filed for a primary care physician during a summer in college. I was shocked and disturbed by the prevalence of mental health issues with the doctor's frequent visit patients. I guess it sort of makes sense. It's difficult for people suffering depression to make changes in their life and that leads to other medical issues. I'm not sure what the answer is. But it does seem like mental health drugs do not work as well as we once thought and that cognitive behavioral therapy is fairly effective.

John (2011-01-20 06:25:35)

People, especially the elderly, often go to doctors for a bit of human contact when they feel isolated—drugs can't relieve social isolation on their own. Some researchers are now looking at the placebo effect not only of drugs themselves but of the medical rituals of examining patients, prescribing, etc. For some depression, CBT is effective, and so is psychodynamic therapy—apparently roughly equivalent. The human connection with the therapist is an important factor in healing. For an interesting take on placebos: <http://www.radiolab.org/2007/may/17/>

dearieme (2011-01-20 06:52:57)

Would you like to comment on the recent Statins story? <http://www.telegraph.co.uk/health/healthnews/8267570/Millions-taking-statins-needlessly.html>

Seth Roberts (2011-01-20 08:07:22)

John, Jon Stewart commented on Sarah Palin's talent for turning criticism into victimization. It's the same with placebo effects. If something that should not have an effect does have an effect, it implies the experimenter doesn't understand what's going on. Exactly that, no more, no less. All that talk about placebo effects being due to "expectations" goes beyond the evidence. Yet somehow placebo effects are taken to mean the experimental subject is credulous. Medical researchers, in other words, are showing a talent for turning indications of their ignorance into indications of their sophistication ("we controlled for placebo effects"). dearieme, thanks for bringing that article to my attention. My interpretation is that the skepticism of doctors (dismissing acupuncture, for example) isn't really skepticism, it's self-interest. When being credulous is in their self-interest

(e.g., thinking statins are wonder drugs, without serious side effects), they're credulous.

Nathan Myers (2011-01-20 18:34:39)

I heard Gawande on NPR. He said she was using a weak migraine treatment, and nobody had thought to prescribe a better one, e.g. one that would actually work for her.

Seth Roberts (2011-01-22 07:52:58)

Nathan, that's a good point. Apparently thinking like a doctor means not thinking at all.

Chuck (2011-01-28 15:18:54)

When you say "(Unless it's obesity, in which case the solution is the ancient advice to 'eat less, move more'.)" you go from criticizing doctor think to thinking like a doctor. What about the ancient advice to "go for a walk and work up an appetite." In other words, move more, eat more.

Seth Roberts (2011-01-29 04:52:03)

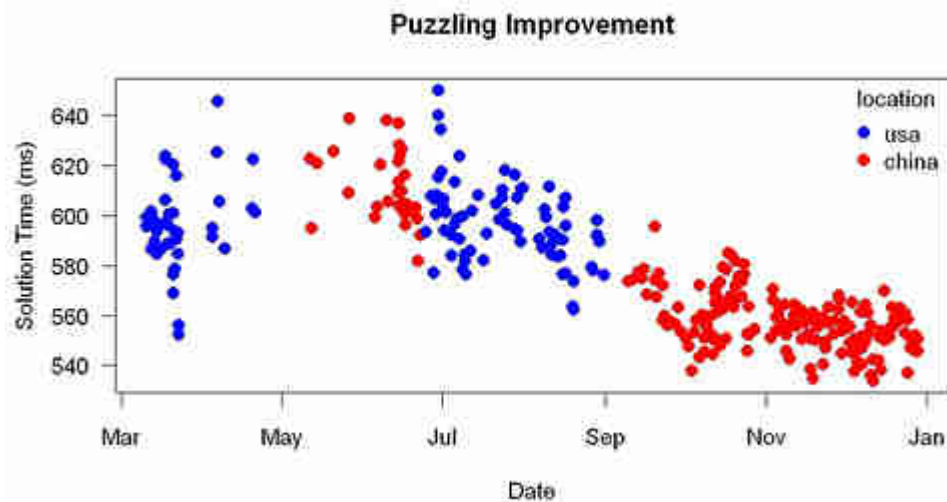
Chuck, I have a low opinion of the ancient advice.

Chuck (2011-01-29 09:04:46)

Seth, my apologies. I totally miss-read the preceding sentence.

## Another Mysterious Mental Improvement (2) (2011-01-22 07:42)

[1]



[2]A month ago [3]I posted this graph, which shows how long I needed to type the answer to simple arithmetic problems (7-5, 4\*1, 9+0). I tested myself with about 40 problems once or twice per day. Because I'd been doing this for a long time, I no longer improved due to practice. Then, at the end of July 2010, I started improving again.

In September I moved from Berkeley to Beijing. I was worried that in Beijing my scores would get worse. Perhaps I couldn't get good flaxseed oil or butter. Maybe I would suffer from the air pollution. Maybe I would eat contaminated food. But my scores got better in Beijing.

When I eventually noticed the improvement, I wondered what I was doing differently. Obviously my diet and my

life were a lot different in Beijing than Berkeley. Was I [4]eating more walnuts in Beijing? I stopped eating walnuts and my scores didn't get worse. So it wasn't walnuts. The most plausible differences I could think of were: 1. Less aerobic exercise in Beijing. 2. Less vitamins in Beijing. 3. Warmer in Beijing. I collected [5]data that implied that shower temperature matters – and I can take warmer showers in Beijing than in Berkeley.

All of these proposed explanations implied that the crucial difference was Berkeley versus Beijing. But the improvement started in Berkeley – around the end of July. That was a problem. Recently I realized there was another possible explanation. In Berkeley I had had an amalgam mercury-containing filling replaced with a non-metallic filling. Not because I had symptoms of mercury poisoning, but because it seemed prudent.

I checked my records to see when I had the filling replaced. It was July 28 – right when the improvement started. To my shock, reduction in mercury exposure is now the most plausible explanation of the improvement. Two tests of this explanation are coming up: 1. When I return to Berkeley, will my reaction times go up? 2. When I have more amalgam fillings replaced, will my reaction times go down?

If it turns out that reduction in mercury exposure is the correct explanation, this will be important. I have an average number of fillings. I'd guess that half of Americans have as many amalgam fillings as I did. And – if the mercury explanation is correct – this arithmetic test is a sensitive measure of mercury poisoning. Over the last few years, before the filling was removed, I'd had six hair tests done, all from the same reputable lab. They showed that my mercury level was moderately high, perhaps 75th percentile. Not very worrisome.

I changed dentists because my old dentist made a terrible mistake: he put a gold filling next to an amalgam one. Putting one metal next to a different one is an elementary mistake. Contact of different metals creates an electric current (as Galvani discovered) and releases mercury. (So although I have a normal number of fillings perhaps I have more mercury exposure.) I stopped going to him for any dental work. The last time I went there for a cleaning, I was given [6]a booklet ("we must give you this") about the many sorts of dental materials – mercury amalgams plus several new ones. The purpose seems to be to tell people mercury amalgams aren't dangerous (this was stressed) yet get them to choose other materials in the future – mercury amalgams are just one of several possible choices. The controversy about the safety of mercury amalgams is covered [7]here. Sweden, Denmark, and Norway [8]have banned mercury amalgams. The ban began 2008.

1. <http://www.flickr.com/photos/sethroberts/5299659261/>
2. <http://www.blog.sethroberts.net/2010/12/28/another-mysterious-mental-improvement/>
3. <http://www.blog.sethroberts.net/2010/12/28/another-mysterious-mental-improvement/>
4. <http://www.blog.sethroberts.net/2010/10/25/walnuts-brain-food/>
5. <http://www.blog.sethroberts.net/2011/01/05/does-shower-temperature-affect-brain-speed/>
6. <http://www.villaggiodontal.com/DentalMaterials.pdf>
7. [http://en.wikipedia.org/wiki/Dental\\_amalgam\\_controversy](http://en.wikipedia.org/wiki/Dental_amalgam_controversy)
8. <http://www.reuters.com/article/pressRelease/idUS108558+03-Jan-2008+PRN20080103>

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Joseph Dantes (2011-01-22 08:54:00)

Very impressive, and a strong argument that mercury's effects are linear rather than threshold based.

Anonymous (2011-01-22 10:01:51)

What lab did you use for hair analysis?

Tyler (2011-01-22 11:21:57)

I'm interested to see where this goes. Both my parents have mercury fillings without apparent problems, but perhaps there's room for improvement? Over the last couple years I've lost a lot of respect for the dental profession. Many of the practices seem rash- Mercury fillings, Fluoride applications, Bisphenol-A in all the resins/sealants... It strikes me as incredibly naive, to think that adding new substances such as these that have never been present for the last 2.5 million years of human evolutionary history in these quantities (or at all - BPA), won't have any unintended side effects. What do you think? TS

Alex Chernavsky (2011-01-22 12:10:10)

Seth, I've heard that the process of extracting a mercury filling itself results in a fairly large exposure to mercury. Any thoughts about this?

Pip (2011-01-22 12:43:04)

What about fluoride in the water and toothpaste? I would bet that there is less exposure to fluoride in China.

vic (2011-01-22 13:21:37)

I've read the non-metallic composite fillings have bisphenol-a and other chemicals that can leach... not particularly appealing either

Gunnar (2011-01-22 14:09:10)

What material have you chosen as replacement? Be well.

dearieme (2011-01-22 15:00:38)

I have long argued that the slightly reduced life expectancy of Americans relative to comparable nationalities is caused by their devotion to excessive dental work. You may have hit of the detailed mechanism.

vic (2011-01-22 15:13:54)

also, has your sleep changed in association with your improved mental performance?

Seth Roberts (2011-01-22 21:00:28)

Anonymous, the hair test lab is Doctor's Data. Alex, the doctor took precautions but of course I had no idea at the time how adequate they were. These results suggest they were adequate, in the sense that the removal seems to have done more good than harm. Gunnar, good question but I don't know what the replacement material is. The dentist did a weird chiropractic procedure in which he put various materials in my hand and pushed down. That is silly and next time I should figure out what I want. pip, since the change started in Berkeley the Berkeley/Beijing differences are not especially plausible. Tyler, unlike doctors, who do not themselves take the drugs they prescribe, dentists are exposed to the materials they use. Mercury poisoning is a serious risk among dentists. I don't think anybody has claimed that the new substances wouldn't have any unintended side effects; they just thought the new substances were likely to be an improvement over doing nothing. For example, ether anesthesia. Our houses are full of new substances, such as plastics and metals. They aren't perfectly safe but they are on the whole improvements. vic, that's a good question. I will look into it.

Kim Å~yhus (2011-01-23 02:03:28)

I was told by a dentist that Mercury amalgam is quite safe because it is an alloy with another metal, so the atoms are bound together, so there is no direct contact with Mercury itself. As a solid state physicist I know that is totally false. An amalgam is NOT an alloy. It is instead very thin layers of alternating pure metal, somewhat similar to the ridges in a finger print. This is what gives amalgams their flexibility and crack resistance. So there is indeed direct contact by tongue, spit, and food to pure poisonous Mercury, making even worse chemical products.

Seth Roberts (2011-01-23 02:36:20)

Kim, good point. What I've read about dental amalgams did not make that clear.

KillaCam (2011-01-24 12:37:33)

Seth, What "simple arithmetic problems " test are you using? I'd like to start collecting data on myself! Thanks in advance,

Seth Roberts (2011-01-26 07:17:34)

KillaCam, I use a set of problems generated in R (the programming language). I run the test using R.

Stone Glasgow (2012-03-08 17:17:50)

What type of problems does the program ask you to solve? Seth:  $3 + 8$ ,  $8 * 9$ , problems like that.

### Assorted Links (2011-01-22 21:22)

- [1]According to Dani Rodrik, a Harvard economics prof, in November 2010 Tunisia was an "unsung development miracle." [2]According to a Tunisian, "for years, [President] Ben Ali and his cronies have literally stolen from his people and businesses i.e. stealing money from banks, government reserves, gold, etc."
- [3]Amazingly stupid legal threat against BoingBoing. Maybe a paralegal bet a co-worker that her boss will sign anything.
- [4]No more new computers.

1. [http://rodrik.typepad.com/dani\\_rodriks\\_weblog/2010/11/the-unsung-development-miracles-of-our-time.html](http://rodrik.typepad.com/dani_rodriks_weblog/2010/11/the-unsung-development-miracles-of-our-time.html)

2. <http://wrongingrights.blogspot.com/2011/01/ask-tunisian.html>

3. <http://www.boingboing.net/2011/01/17/stupid-legal-threat.html>

4. <http://www.observer.com/2011/tech/neverware-means-never-buying-new-computer-again>

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Roger Sweeny (2011-01-23 07:18:12)

"Early on in Neverware's history, Hefter contacted Dell and Intel, eager to share with them his approach. It was the equivalent of calling the major oil companies to show them a design for a solar powered car. 'I also don't know that we'd be interested in "radically extending the life...of desktop PCs,' was the reply Hefter got from a higher up at Intel." Kind of like going to a school system (or--my God!--a School of Education) and saying you have a way of teaching the same amount in half the time.

Tom (2011-01-23 10:45:39)

Seth, I'm curious if you've every experimented with "high meat" (which I just heard of today.) It's 'ultra-aged' meat that's been allowed to turn. People are reporting reduced susceptibility to colds, improved moods and energy, etc. Here is one post, but if you search that forum for the phrase "high meat" (including the quotes) in the forum's Google Custom Search box you'll find a lot more. <http://www.rawpaleoforum.com/display-your-culinary-creations/high-meat-recipe-preparation-for-more-advanced-rafers/msg37877/#msg37877>

Seth Roberts (2011-01-23 20:27:01)

Roger, yeah, it is. If you went to an education professor with a radical idea about how to teach, you would be ignored because it did not fit with the professor's research agenda.

## Episodes (2011-01-24 02:36)

I love [1]this show! It is to comedy what Mad Men is to drama.

1. <http://www.sho.com/site/episodes/home.do>

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Aaron Blaisdell (2011-01-24 23:54:21)

Good tip. I'll have to put that in my Netflix que.

## Monocultures of Evidence (2011-01-25 02:34)

After referring to Jane Jacobs ("successful city neighborhoods need a mixture of old and new buildings"), which I liked, [1]Tim Harford wrote this, which I didn't like:

Many medical treatments (and a few social policies) have been tested by randomized trials. It is hard to imagine a more clear-cut practice of denying treatment to some and giving it to others. Yet such lotteries – proper lotteries, too – are the foundation of much medical progress.

The notion of evidence-based medicine was a step forward in that it recognized that evidence mattered. It was only a small step forward, however, because its valuation of evidence – on a single dimension, with double-blind randomized trials at the top – was naive. Different sorts of decisions need different sorts of evidence, just as Jacobs said different sorts of businesses need different sorts of buildings. In particular, new ideas need cheap tests, just as new businesses need cheap rent. As an idea becomes more plausible, it makes sense to test it in more expensive ways. That is one reason a monoculture of evidence is a poor idea.

Another is that you should learn from the past. Sometimes a placebo effect is plausible; sometimes it isn't. To ignore this and insist everything should be placebo-controlled is to fail to learn a lot you could have learned.

A third reason a monoculture of evidence is a poor idea is that it ignores mechanistic understandings – understanding of what causes this or that problem. In some cases, you may think that the disorder you are studying has a single cause (e.g., scurvy). In other cases, you may think the problem probably has several causes (e.g., depression, often divided into endogenous and exogenous). In the latter case, it is plausible that a treatment will help only some of those with the problem. So you should design your study and analyze your data taking into account that possibility. You may want to decide for each subject whether or not the treatment helped rather than lump all subjects together. And the "best" designs will be those that best allow you to do this.

1. <http://www.ft.com/cms/s/0/c5698552-aa31-11df-9367-00144feabdc0.html>

## Learning How to Learn (2011-01-26 08:08)

The New York Times [1]reported [2]a study in Science that found that testing yourself on material you have learned is a good way to improve retention. Then they published [3]a set of letters about it.

John Taylor Gatto, whose books I like, wrote:

Real learning is measured only by utility, by application. In the case of this research, the success claimed for practice testing is being measured by further testing – not by any real-world application. So what? Nobody should care whether memorization is enhanced by practice testing or not.

I disagree. Every day I study Chinese. A lot of that study is memorization, such as what characters mean. Learning what the characters mean while studying in my apartment really does help me understand what they mean out in the world. I care a lot how to memorize better.

A Pace University professor and "director of learning assessment" wrote:

Studying, not test taking, is the key to learning. . . . Testing, particularly standardized testing, does nothing to enhance knowledge and hinders the development of an appreciation for learning that should begin in school and last a lifetime.

I couldn't disagree more. After I have studied Chinese, frequently testing myself on what I've learned turns out to be essential to long-term retention. Without those tests – say, daily for a week, and less often after that – I forget what I've learned.

Standardized testing is especially helpful because it helps me see what works and what doesn't work. It makes it easier to compare various conditions, in other words.

"Development of an appreciation for learning that should begin in school . . . " Should? I enjoyed learning long before I started school.

It has taken me a few years to figure out how to learn Chinese. Now I think I am on the right track but these letters illustrate what my self-experimentation also taught me: Experts say the darndest things.

1. <http://www.nytimes.com/2011/01/21/science/21memory.html?scp=1&sq=test%20research&st=cse>
2. <http://www.sciencemag.org/content/early/2011/01/19/science.1199327.abstract>
3. <http://www.nytimes.com/2011/01/26/opinion/126test.html?hpw>

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ChristianKI (2011-01-26 09:48:59)

"an appreciation for learning that should begin in school and last a lifetime." That sentence is so wrong that it could nearly only come from someone who's blinded by thinking academically. All young children have a appreciation for learning. It's school that kills the appreciation instead of school that creates the appreciation.



David (2011-01-26 10:49:35)

I don't understand the distinction they make between studying and testing. When you take a vocabulary test, you're presented with some words and attempt to define/translate them. When you study vocabulary using flash cards, you look at a vocabulary word and attempt to define/translate it. So studying is often already a kind of testing.

Seth Roberts (2011-01-26 14:34:42)

David, in a classroom the difference is pretty obvious: students are taking a test or they aren't. With flash cards, I agree, you can hardly study them without testing yourself. But there are many other ways to study Chinese besides flash cards. When it comes to Chinese, the learn-by-testing advice isn't trivial. Should I spend 20 minutes staring at lists of English words and their Chinese counterparts, should I spend 20 minutes copying characters, should I spend 20 minutes listening to a tape, or should I spend 20 minutes testing myself?

Justin Wehr (2011-01-26 19:15:57)

I started using free software this month (<http://www.mnemosyne-proj.org/>) to test you at gradually longer increments to help you get things in long-term memory. I don't have a firm ruling on its utility yet, but the potential seems strong enough that I am going to keep using it for at least a year.

Aaron Blaisdell (2011-01-26 19:36:07)

Lots of recent work on the generation effect and what Bob Bjork calls desirable difficulties has shown the benefits of testing on future retention.

Seth Roberts (2011-01-27 17:01:55)

Thanks for mentioning that, Justin. I was curious who runs the Mnemosyne Project but couldn't figure it out from the website. That they are collecting memory data makes it seem like an academic project – something done by a professor somewhere.

## **First Quantified Self Conference! (2011-01-26 13:24)**

The first [1]Quantified Self conference will be held in San Jose May 28-29! Robin Barooah and I plan to lead a break-out session about self-experimentation.

1. <http://quantifiedself.com/conference>

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## **Probiotic Helps Children with IBS (2011-01-27 18:02)**

Irritable bowel syndrome (IBS) – basically, recurrent pain during digestion – is common. [1]A new study by Italian pediatricians asked if a probiotic would help. They randomized children into two groups: active and placebo. Children in the active group were given pills with a lot of lactobacillus bacteria, which they took twice per day. The placebo was made by the same manufacturer, so it looked identical. During the study, the researchers did not know who was in each group.

There was a big difference between the groups, which took about four weeks to emerge. The active group had painful episodes less than half as often as the placebo group, and the episodes they did have were less painful.

Overall this supports my broad point that we need to eat plenty of fermented foods to be healthy. That's not what the authors of the study concluded. They concluded:

Demonstration of the efficacy of a given probiotic for a specific therapeutic target will help clinicians choose which probiotic to use when dealing with a specific disease. We are entering the era of targeted probiotic use.

Which reveals a bad case of [2]gatekeeper syndrome. I wouldn't expect them to say their results support the idea that everyone should eat fermented foods – that's an "alternative" (and therefore "crazy") idea. But they could have said their results imply that kids with IBS should eat yogurt.

1. <http://pediatrics.aappublications.org/cgi/content/abstract/126/6/e1445>
2. <http://www.blog.sethroberts.net/2009/11/17/gatekeeper-syndrome/>

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Joseph Dantes (2011-01-27 21:06:21)

My dad has a theory regarding this. Let me tell you his theory and add a bit from my own knowledge base. Known fact: I and many others can't absorb much fructose or other sugars in my upper intestine. It therefore passes into the lower, creating a bacterial feeding frenzy. This is called fructose malabsorption. It may also apply to other classes of food. Known fact: Gut bacterial flora balance is hugely important in overall health. Some chronic patients have been cured by the radical procedure known as "fecal transplant," to restore proper gut flora. Hypothetical causal mechanism: Eating the wrong kinds of food causes the wrong kinds of bacteria to flourish in the lower intestine, leading to myriad problems. Actionable treatment and prediction: Taking probiotics and fermented food is good for you, and can mitigate but not wholly eliminate the detrimental effects of eating the wrong kinds of food.

Seth Roberts (2011-01-27 23:19:20)

Joseph, "fermented food" is such a big and vague category that I agree with you that eating fermented foods is unlikely to solve all digestive problems – simply because the range of bacteria in what you eat may be too narrow. A few months ago, I had something edging toward diarrhea. Daily yogurt didn't cure it but kombucha (which has many more types of bacteria than yogurt) quickly did. Here is what I suggest someone with IBS should try: 1. daily yogurt and 1 glass of kombucha. 2. If any foods you eat regularly still cause trouble, do this: Put the food at room temperature, open to air, as long as you can with it still remaining edible. Then put it in the refrigerator and eat it daily in small pieces for a week. This should populate your gut with bacteria that digest it.

Joseph Dantes (2011-01-28 08:41:02)

That is a very interesting potential solution for overcoming things like fructose intolerance. Offhand, I don't know how it would solve the problem of inability to absorb sufficient quantities of fructose in the small intestine, causing it to pass into the large intestine and create problems there. However, theoretical causal mechanisms pale in comparison to hard experimentation. I haven't heard of your experiment being tried. Right now branching out isn't a priority for me... I try to minimize what little carbs (potatoes) I eat, because they slow me down compared to meat. The diet I'm on gives me zero IBS and provide optimal mood and energy and personality effects. However, I will certainly file away this intriguing idea. There may come a time when I want to travel the world and sample cuisines worry-free. It would be nice to be able to digest fruit, alcohol, grains, etc without a problem.

CTB (2011-01-28 08:59:32)

"But they could have said their results imply that kids with IBS should eat yogurt." In the discussion, they could have referenced actual studies showing instances where people eating yogurt experienced IBS relief (or talked about the anecdotal evidence)...and then used their own results with lactobacillus pills as a possible explanation. But they couldn't jump from their results to the implied claim that yogurt should be eaten by IBS kids. Many people with inflamed guts have problems with food intolerance...so the added dairy proteins and acid in yogurt might not be tolerated, despite the potential good effects of the bacteria. Maybe when the gut is healed of the inflammation, yogurt can be eaten prophylactically...but maybe not. I made my own yogurt and ate it as a staple for many years...then had a nasty case of IBS after using antibiotics during dental procedures. I had to go on a very strict elimination diet to figure out what foods were aggravating the condition. Then followed a personalized, restricted diet until the IBS went away. Afterwards, I was able to add back many of the eliminated foods, but, sadly, not the yogurt.

Common Sources Of Anxiety In Children | Keith (2011-03-30 18:29:27)

[...] Seth's blog » Blog Archive » Probiotic Helps Children with IBS [...]

### **For Example? (2011-01-27 21:30)**

My friends know I like examples. My mother has complained I like them too much. Here, [1]via Jonathan Schwarz, is a good example of why I like examples. From [2]a long article by Bill Keller, executive editor of the New York Times:

I'm the first to admit that news organizations, including this one, sometimes get things wrong. We can be overly credulous (as in some of the prewar reporting about Iraq's supposed weapons of mass destruction) or overly cynical about official claims and motives.

Emphasis added. The lack of an example of being "overly cynical about official claims and motives" speaks volumes about the New York Times' relationship to those in power.

1. <http://www.tinyrevolution.com/mt/archives/003429.html>

2. <http://www.nytimes.com/2011/01/30/magazine/30Wikileaks-t.html>

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Joseph Dantes (2011-01-27 22:46:55)

It would be easy enough to find examples of this for the Republican leadership, Iraq War notwithstanding. Real enlightenment comes when you realize that the Republicans, or rather the conservatives and reactionaries, are never in power even when they appear to be. But rather, it is one uninterrupted march of the bifactional Progressive party. Then your statement becomes true... those in power are never criticized. For details, read Mencius Moldbug. It's called "the Cathedral."

Nathan Myers (2011-01-28 15:53:01)

I just hope it's pleasant to be delusional. But anyway, still no examples. Hm.

### **The Buttermind Experiment (2011-01-29 05:20)**

In August, at a Quantified Self meeting in San Jose, [1]I told how butter apparently improved my brain function. When I started eating a half-stick of butter every day, I suddenly got faster at arithmetic. During the question period, Greg

Biggers of [2]genomera.com proposed a study to see if what I'd found was true for other people.

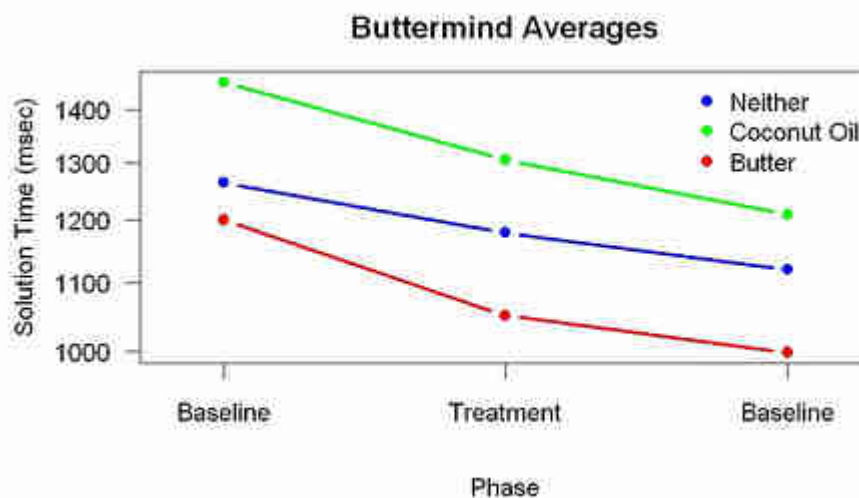
Eri Gentry, also of genomera.com, organized an experiment to measure the effect of butter and coconut oil on arithmetic speed. Forty-five people signed up. The experiment lasted three weeks (October 23-November 12). On each day of the experiment, the participants took an online arithmetic test that resembled mine.

The participants were randomly assigned to one of three groups: Butter, Coconut Oil, or Neither. The three weeks were divided into three one-week phases. During Phase 1 (baseline), the participants ate normally. During Phase 2 (treatment), the Butter participants added 4 tablespoons of butter (half a stick of butter) each day to their usual diet. The Coconut-Oil participants added 4 tablespoons of coconut oil each day to their usual diet. The Neither participants continued to eat normally. During Phase 3 (baseline), all participants ate normally.

After the experiment was finished. Eri reduced the data set to participants who had done at least 10 days of testing. Then she made the data available. I wanted to compute difference scores (Phase 2 MINUS average of Phases 1 and 3) so I eliminated someone who had no Phase 3 data. I also eliminated four days where the treatment was wrong (e.g., in the sequence N N N N N B B N N B, where N = Neither and B = Butter, I eliminated the final Butter day). That left 27 participants and a total of 443 days of data.

Because the scores on individual problems were close to symmetric on a log scale, I worked with log solution times. I computed a mean for each day for each participant and then a mean for each phase for each participant.

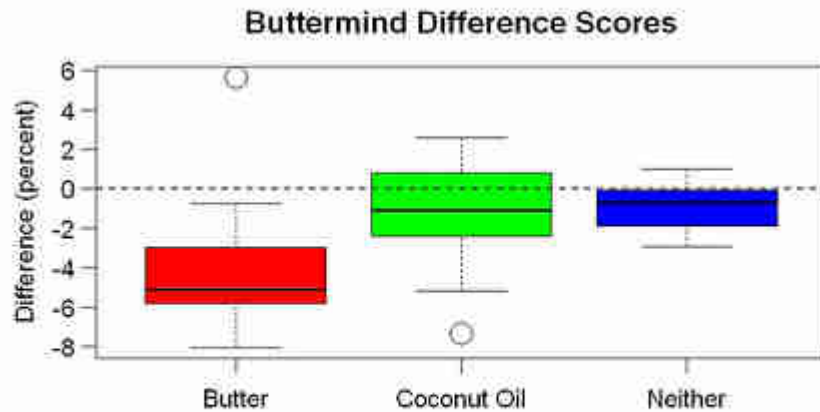
[3]



This figure shows the means for each phase and group. The downward slopes show the effect of practice. The separation between the lines shows that individual differences are large. (There was no reliable difference between the three groups during Phase 1.)

The point of the baseline/treatment/baseline design is allow for a large practice effect and large individual differences. It allows a treatment effect to be computed for each participant by computing a difference score: Phase 2 MINUS average of Phases 1 and 3. The average of Phases 1 and 3 estimates what the results would be if the treatment made no difference.

[4]



This graph shows the difference scores. There are clear differences by group. A Wilcoxon test comparing the Butter and Neither groups gives one-tailed  $p = 0.006$ .

The results support my idea that butter improves brain function. They also suggest that coconut oil does not. In the next post I'll discuss what else I learned from this experiment.

1. <http://quantifiedself.com/2010/09/seth-roberts-on-arithmetic-and/>
2. <http://genomera.com/>
3. <http://www.flickr.com/photos/sethroberts/5397720324/>
4. <http://www.flickr.com/photos/sethroberts/5398521717/>

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Andrew (2011-01-29 07:13:37)

You're handling the data incorrectly. The normal line shows the diminishing returns to practice - the second line segment has a slightly flatter slope than the first line segment. To the extent the 'kink' in the butter curve is larger than the normal curve, that shows the effect of butter. Your 'difference score' is meaningless due to the effect of practice, and the separation between the lines certainly does not reflect the effect of treatment - it reflects the large pre-experiment differences between the groups, which we need an explanation for before we can trust any conclusions drawn.

PeterW (2011-01-29 08:48:01)

Do you know the website of the arithmetic test? I'd like to use it for my own experiments.

Igor Carron (2011-01-29 09:46:07)

Seth, I don't understand something. Why is the green line so high at the beginning ? should we expect the error bar to go all the way down to the the blue and red starting point ? The blue line seems to show how people get accustomed to the test. and the slope is downward, i.e people are getting better and better. The green slope (coconut) seems larger than the red (butter) clearly showing that on average, it is better to go for the coconut than for butter, wouldn't you say ? It definitely seems to show that it has a lasting effect since the second baseline doesn't go back up as in the case of the butter.

Aaron Blaisdell (2011-01-29 10:26:01)

I agree with Igor. A look at the slopes indicates steeper slopes from Baseline 1 to Treatment and from Treatment to Baseline 2, they look steeper for the two oil conditions than for the Neither condition. Could you compare the slopes statistically to see if this observation is supported?

Kirk (2011-01-29 11:02:14)

Is the raw data available?

Eri Gentry (2011-01-29 11:14:30)

PeterW - the math test is available online at <http://genomera.com/instruments/brain-test-simple-math> Kirk - raw data is available at [https://spreadsheets.google.com/ccc?key=0Agb5ur28ZlcNdGJzVHJDdFo4NVBVNGdzS05w\\_Yk9meXc\\_&hl=en&authkey=CJfV9-EB](https://spreadsheets.google.com/ccc?key=0Agb5ur28ZlcNdGJzVHJDdFo4NVBVNGdzS05w_Yk9meXc_&hl=en&authkey=CJfV9-EB)

Seth Roberts (2011-01-29 14:07:18)

Andrew, using difference scores is a way of estimating the effect of practice and removing it. Removing effects you can easily see to better see what you can't easily see is standard statistical practice. Check out Exploratory Data Analysis by John Tukey for examples. Although you say the pre-treatment differences are "large", they aren't reliable. If you believe that floor and ceiling effects exist, the pre-treatment differences are in the wrong order to explain the difference scores. The Butter group has the least room for improvement but showed the most improvement (as measured by the difference scores). Igor, you ask "why is the green line so high?" Answer: There are individual differences between subjects. It was inevitable that the three lines would not start in the same place. Likewise, it was inevitable that they would have different slopes. I agree that if the effect of coconut oil takes a long time to wear off then a longer washout period would have been better. Aaron, an exploratory analysis of this data would do more tests, yes, and there is room for more analysis, of course. Here I wanted to keep the tests to a minimum (one) because I wanted to test the hypothesis that butter improves arithmetic scores with as much strength as possible. If your goal is to test an idea you already have, as soon as you do more tests, the power of the tests you have already done is reduced. If your goal is to get new ideas, it's a different story. I plan to do an exploratory analysis of the data later.

vic (2011-01-29 15:51:15)

What do you make of this study that shows negative effects on brain (and heart) function of a high-fat diet: <http://www.ajcn.org/content/early/2011/01/26/ajcn.110.002758.abstract>

Stephan (2011-01-29 15:51:36)

Very interesting. Thanks for posting this. Were the participants aware that you were testing the hypothesis that butter improves arithmetic solution time?

Seth Roberts (2011-01-29 17:18:52)

vic, the study you mention, which compared two diets (high-fat/low-carb and standard) does not say what fats composed the two diets. I think some fats make the brain work better, some make it work worse. The study has the peculiar feature that the abstract says that the high-fat diet reduced mood but the results (Table 4) show no difference between the diets. So the abstract is misleading. The study has a small number of subjects (n = 16) and to that extent supports what the buttermind study and my butter and flaxseed oil results suggest: that the fat in your diet has a powerful effect on how well your brain works. Perhaps they injected a lot of bad fat. Bad fat (e.g., corn oil) is much cheaper and more available than good fat. Stephan, yes, the participants were aware of the hypothesis. You write "the hypothesis you were testing". The study was done by Eri Gentry, not me.

Twitter Trackbacks for Seth's blog » Blog Archive » The Buttermind Experiment [sethroberts.net] on Topsy.com (2011-01-30 10:26:22)

[...] Seth's blog » Blog Archive » The Buttermind Experiment [blog.sethroberts.net/2011/01/29/the-buttermind-experiment/](http://blog.sethroberts.net/2011/01/29/the-buttermind-experiment/) #comment-812660 - view page - cached In August, at a Quantified Self meeting in San Jose, I told how butter

apparently improved my brain function. When I started eating a half-stick of butter every day, I suddenly got faster at arithmetic. During the question period, Greg Biggers of genomera.com proposed a study to see if what I™d found was true for other people. [...]

Kirk (2011-01-30 18:39:09)

Several things puzzle me about this data and hope you can explain. 1) Rows 518-521 have no Mean in column AJ. Did your calculations use that value (and if so, would R default to a value of 0?) 2) Many of the Q01 numbers, which I conclude is the first test of any particular day, have a number almost double the value of other daily tests for that participant. Any speculation to the reason? Could it be some kind of time delay due to the initial load of computer resources (since this was an online test)? Or perhaps it is that sometimes people neglected to drink their coffee before the first test? (Examples: rows 18, 19, 28, 32, 33 ). 3) Is there an explanation for the occasional huge value? (Examples: 38 Q03, 44 Q09, 45 Q08, 180 Q18, to choose a few at random). I suspicion the large value for that particular test due to a coworker at the cubby entrance asking a question, or an urgent chat message, or a glance at the email inbox. Or a slow network. (Have to admit, I'm not thrilled about the 'online' portion of the test. I've seen way too many stutters in network traffic over the years. Or the remote system logs the transactions and has to wait occasionally for I/O on the disk.) 4) Some of the data looks inconsistent within one day. For example, row 396, where the numbers bounce back and forth. Q07 = 1641 yet Q09 = 876. Q16 = 611 yet Q17 = 1975. Thanks in advance for your time.

Seth Roberts (2011-01-30 23:40:45)

Kirk, to answer your questions: 1. I computed means of logs. That is, I computed an average for each subject myself after log transforming the data. I did not use the averages in the table. 2. Practice effects are often large. 3. I cannot explain unusually large values, but the log transformed values have few if any clear outliers. Eri Gentry collected the data, not I. 4. Easy question, hard question? I think it is really hard to know what is inconsistent and what isn't. If you want to find data generated by a different process you should at least start by looking at log values.

Kirk (2011-01-31 12:39:13)

Several more questions: 5. Do you often find large values in your own testing? 6. If I remember correctly, you use the R statistic package. Is your R system local or is it being accessed across the network? I suspect it to be local, on a laptop running Windows. Local applications are more likely to produce valid data. Although it's possible there would be competition from some higher-priority process (for example, I see some degradation on my desktop when the antivirus scanner kicks in, and also when Flux starts), generally, laptops and desktops, when serving local applications, have generous resources for handling simple tasks. On the other hand, a timing test being run across networks not only has those two issues to worry about, but also network delays, as well as issues on the remote server (queue depth, process priority, i/o, and others). I think it would be illuminating if some of the participants who had large values could comment if he or she noticed anything unusual happening during those large values. As of now, until it can be proven that the test design is reliable, I don't trust this data. It may reflect more a measure of the occasional bottlenecked computer resource than it reflects a measure of human capability as influenced by a biological agent.

Seth Roberts (2011-01-31 18:12:15)

Kirk, to answer your further questions: 5. I don't know what you mean by "large values". 6. I run R on a laptop. In my experience all data collection has flaws, usually many. How could "the occasional bottlenecked computer resource" have caused the pattern in the data I identified? There is a simple test of your idea. First, make clear what "large values" are - the values you seem to think are due to bottlenecks. You might be right about that. Second, make sure you can repeat the analysis I did and get the same answer. Third, see what happens when those large values are removed. If you explain to me what "large values" are and the definition isn't arbitrary, I will do the new analysis.

Kirk (2011-01-31 20:35:36)

I haven't taken the analysis in the same direction you took it, because I find the data looks odd, and because it's odd, it produces strange graphs, as also noticed by Andrew, Igor, and Aaron. I come from the software world where we look at the abnormal

data to determine if something is wrong. For example, one often wants transactions to complete in a consistent timeframe, because users can accept a long-running transaction that logically should take a long time because it's cruising through gigabytes data, but users hate it when a transaction which typically takes 3 seconds sometimes takes three times longer. The test, per the text at the Genomera website, consists of 32 simple math questions, and then the overall score is calculated. Let's look at line 21 on the spreadsheet. This person, on that day, had a low value of 996, or an average of 31.1 per simple math question. (I assume that's 3.1 seconds per simple math question.) And yet there was a high value of 3268, an average of 102.1. The largest is more than 3 times the average of the lowest. That, to me, is an extraordinary difference for what should be a relatively uniform unit of work. This could be the result of a computer bottleneck, or it could be the result of an interruption (coworker asking a question, phone call, urgent text, interesting email). Or maybe it's really that people sometimes have the occasional brain freeze which results in taking 3 times as long to answer simple math questions. During your sessions on your laptop when you solve simple math questions, do you find yourself occasionally taking 3 times as long to answer the questions as you normally do? Would any of the participants in the study, the ones who have the occasional large value, care to comment?

Vince (2011-01-31 20:44:26)

You should exclude the first trial for each test, since the timer for the first trial starts as soon as they click "Go", which is often before they are ready to type in their responses. Responses were a quarter of a second slower on trial 1 than on trial 2, on average, and twice as likely to be over 2 seconds (20 % vs. 10 %).

Seth Roberts (2011-02-01 01:57:43)

Kirk, the data do not look odd when converted to logarithms, in the sense that the data are unimodal, roughly symmetric, and not heavy-tailed. This is common - lots of data make more sense when converted to logarithms. I don't find myself taking 3 times as long as normal but I am very well practiced. Practice reduces variability on a log scale, I suspect. If there were computer bottlenecks now and then that makes finding a significant difference more impressive. Vince, thanks for the suggestion. It is the sort of thing that it makes sense to examine in an exploratory analysis. To improve future confirmatory analyses.

Alex Chernavsky (2011-02-01 05:50:30)

Seth wrote: "I computed means of logs. That is, I computed an average for each subject myself after log transforming the data." Seth, for those of us who don't have a background in statistics, can you elaborate a bit on why you analyzed the data in this way?

Eri Gentry (2011-02-01 13:59:28)

Perhaps not everyone is on the same page as to what is represented in the spreadsheet. It wasn't clear to me at first sight. Each row contains a single participant's (1) name, (2) time the test was begun, (3) reaction times in milliseconds for each correct answer (total=32), and (4) average of that test's reaction time in milliseconds. We typically see greater reaction times for the first question "Q01," which I believe is due to adjustment of starting a test. In my own experience taking the test, I was able to mentally prepare myself for the test's start after practice. This was a little like psyching myself up before some sort of physical exercise. Again, in my own experience, my reaction times varied between questions because some answers came to me more quickly than others. This is fairly common. Some people are brilliant at addition and multiplication, but not so much at division. I usually took a moment longer to answer division questions than addition or subtraction. And, when the questions shift from, say addition ( $1+7=?$ ) to division ( $6/2=?$ ), it can increase the time it takes to answer because we mentally shift gears.

Kirk (2011-02-01 18:20:10)

Thank you for the explanation, Eri, yes, I was confused about the specifics. Eri, do you have an explanation for why your data looks extraordinarily different compared to that of other participants? Most people seemed to struggle to get into the 900s, yet your data mostly sits in the 700s and 600s, and you even generated some astonishing low values (in the 200s and 300s). There was only one major 'burp', a value of 1464 (when the other row values averaged in the 700s). My speculation is that you tested on a local system connected via a local network, just as Seth tests on a local system (his laptop). A second question would be about the design itself: does each simple math question require a request/response from the Genomera server to the client, or were all the questions packaged together in one blob, such as a lengthy Javascript, which was shipped to the client, where the questions were answered locally, and the entire summary shipped back to the server?



Seth Roberts (2011-02-01 19:32:27)

Alex, I used a log transform on the data – that is, analyzed  $\log(x)$  rather than  $x$  – because the data were far more symmetric on a log scale than on the original scale. Here is a paper by me about transforming data: <http://www.sethroberts.net/articles/2008%20Transform%20your%20data.pdf> if you want to read more about data transformation, see Exploratory Data Analysis by John Tukey.

Alex Chernavsky (2011-02-01 19:34:40)

I have a question for Eri (and/or Greg Biggers) about how the reaction-time application actually works. Is the timing done locally (i.e., on the user's computer) with the results simply reported back to the server – or is the timing done on the server? And if it's done locally, is the timing independent of the hardware and independent of other processes that might be running on the user's machine?

Eri Gentry (2011-02-01 23:12:28)

@Kirk, I have no certain technical or metaphysical explanation for why my response times were any different. However, I've been typing for years and worked in my parents' grocery store as a kid, where I added prices together in my head every day. I'm sure both of those skills together gave me a slightly natural advantage. During the study, I simply tried to respond correctly as quickly as possible. For all but one of the testing days, I was using a laptop tethered to the internet via an android phone, as I had neither wireless nor hard-wired internet. So, I was by no means connected locally. I remember the 'burp.' I typed the wrong answer, deleted, and retyped the right answer. I remember because that aggravated me. =/ Btw, great eye to attention for catching that!!! Kirk, if you haven't already, I definitely recommend trying the math test for yourself (link above). The experience will likely inform some of your previous questions. @Alex, below is a response by our lead developer to a question similar to yours. Hope it helps! "" I can't speak to Seth's R program. For ours, I altered the jQuizMe plug-in by adding responseStartTime and responseEndTime variables. I bookended them on the tightest path I could find within the plugin. Certainly there is a bit of intervening plug-in plumbing, but I don't believe it's adding any sort of interesting lag. (The modified JS is at <http://s3.amazonaws.com/genomera/instruments/math/scripts/jquery.quiz.js> if anyone wants to have a read through particularly poorly crafted javascript. You can search for anything I added by "[jtz]").) If we feel like there's a problem, I can construct a static HTML test harness that measures millisecond response time within the context of a single function. This would get the jquery plug-in stuff out of the way. We can each take it and see if there is some kind of meaningful change. At the very least, I'm going to state that our instrument is consistent. So, even if it's 'slow', it's not going to skew the data. "" I want to point you all to our feedback page at <http://getsatisfaction.com/genomera> We have used this as place to host questions and answers about Butter Mind and the math test used for it.

Kirk (2011-02-02 21:19:33)

@Eri, thank you for the explanation of the large value. My conclusion is that the larger values, say, any of those which are double the value of the mean for that participant, are probably the result of a miscalculation (or miskeying) which resulted in a correction. The explanation of the use of the Javascript package seems appropriate. It is not a language I know so I can't review it, but since Javascript was chosen, it proves to me that good design minds understood how to solve this kind of problem space, and thus network latency is probably not an issue. I agree the data shows that people improve at this task over time. I find myself reluctant to draw further conclusions, given the limited amount of data, the continued improvement with practice, and the high penalty for mistakes. Would the results be different if those who made the most mistakes have been assigned to another group? Yet here I must bow out, having exhausted my meager capabilities at data analysis. One final learning: never challenge Eri to a quick-draw gunfight.

Eri Gentry (2011-02-05 10:58:06)

@Kirk, I should be clearer about the large values. The one I mentioned above was due to a "bug," if you will, in the system: when two keys were hit at once, no answer was submitted. However, two numbers would remain in the answer field - which was ALWAYS a wrong answer in our test - so, the one taking the test would have to delete both numbers and re-answer. Other large values could be due to things you suggested: various distractions or thoughtful hesitation. A few more things of note about the test design and how data was collected: - Only correct answers were submitted. Reaction times were collected

for all correct answers and the test continued until the user achieved 32 correct answers. There is technically no penalty for wrong answers (data is thrown out); however some users mentioned this had the effect of "psyching them out," bringing their confidence levels down for the remainder of the test. I believe this effect decreases over time, though I have nothing to back it up but observations of myself. - Questions were designed to have only single-digit answers [0-9], and - Questions automatically advanced after a single keystroke, whether number, letter, or symbol. Any incorrect stroke was called wrong and tossed out. The only bug I saw here was the one I mentioned - when, if two keys are hit simultaneously, the question does not advance (even though the answer is clearly wrong), but must be corrected by manual deletion then entry of a single item. Kirk, I appreciate the time you've spent thinking about the data. Certainly, there is room for improvement in group experiment study design, and even in building the tools to complement different studies. My hope is that more people like you will engage to help create resources on both sides. Generally, being at the beginning of an age that has "room for improvement," AKA one the will keep getting better (with this one, perhaps, the participatory health age... unless some better name sticks :P) is a really exciting place to be. I'll keep doing studies like this and plan to directly integrate user feedback as I move forward. So, everyone, please keep ideas flowing, and thanks for sharing! Lastly, re: the gunfight... hehe. Thanks, I'm strangely flattered :)

Celeste (2011-02-05 17:15:19)

Hi Seth, I never met you, but I'm Mel's sister. I followed a link to your blog from an email she sent me. This is very funny that you did an experiment like this. I actually do a lot of experimenting myself with nutrition since I was a kid...although never a "real" one like this. Raw grassfed butter or sometimes other animal fats has been a big part of my diet for years (10). I sometimes go through 2-3 lbs a week. I have noticed clarity of mind to be a factor of my fat intake. I also found other neurological symptoms like anxiety, neuralgia, MS like symptoms, that have come and gone depending on the source of fat I am using. Fun to look through your blog.

Chris Hogg (2011-02-05 20:23:51)

I really enjoyed reading this discussion. I think discussions like these are helpful, and will push us citizen scientists to create well designed studies and generate meaningful results. I definitely enjoyed all of the really good technical discussion about the instrument, potential bias due to latency, internet connection speed, etc. It is interesting how we all have such different perspectives, as i would not have immediately thought of this as an issue. On the issue of data integrity and validity of results, i think a lot of things that happened in this study are pretty common in any clinical study: significant data outliers, potential technical errors in data capture, etc. In any study (even \$100M pharma-sponsored trials) you will have these issues. Even simple blood tests get messed up, have variability in the measurement, etc. This is just part of the intrinsic variability you will see in any study, and you will try to compensate for it by studying a large enough population. I agree with Seth and Eri that this does not harm the study at all. As long as you assume that these 'errors' are equally balanced between the arms (meaning there is no reason why Butter should have more errors than Coconut oil), this should not adversely impact, or skew, the result. The worst thing you could do here is start to throw out 'outliers' because you think there must be something wrong with their results. Then you have really biased the data and damaged the study. There are a couple of ways to proactively try to address some of the challenges with these potential 'errors'. Most commonly, is simply randomization. When a subject enters the study you assign them to Arm X or Arm Y of the study. You pre-specify things you think could influence the result (age, gender, other baseline characteristics, co-morbid diseases, fast typing in this case, etc) and you make sure all of these parameters are equally balanced between the arms. The other is to set up a priori some data analysis rules (ie. you could specify before the study that results 3 standard deviations away from the mean are 'bad' and exclude them from the analysis). This poses all sorts of problems usually, and will open the study to controversy. Eri, one thing that would be really interesting in a next wave is to see if you could employ some form of randomization. one thing that strikes me from the study that i would like to fix is the different average baseline values for the 3 arms. In this case, i agree with Seth that Butter started out with the least room to improve, yet improved the most. If Coconut Oil had improved the most, i would not have believed the result and assumed it was regression to the mean. I wonder if you could tell people what intervention to use after they did a run-in test without butter or coconut oil. then you could 'balance' the coconut oil and butter arms so that they started from the same average baseline number. this would make the result a lot easier to interpret, and would just be cool if you could pull it off. just for another random thought you could also have them do a typing speed test if you think this is a source of bias, and try to randomize on that as well. The only real question i had is on using a Log transform of the data to do the analysis. i know this

is common in other fields (mathematics, physics, etc), i am just not sure if this is commonly done in biostatistics and analysis of clinical data. i will ask a biostats friend of mine if this is a common practice or is specifically not done for some particular reason. Thanks again for a good discussion.

Seth Roberts (2011-02-06 03:46:19)

Celeste, how does your fat intake affect your mental clarity? Chris Hogg, I hope you will tell me what your biostatistician friend says about data transformation. It isn't controversial; you can see for example Exploratory Data Analysis by John Tukey for a discussion of the reasons for transformation. However, many biostatisticians seem to be living in a statistical dark age, the most obvious signs of which are they don't plot data, they don't transform data, and they do too many tests.

Seth Roberts (2011-02-06 20:01:00)

If you would like to learn more about data transformation, here's a paper by me about it: [http://www.sethroberts.net/articles/2008 %20Transform %20your %20data.pdf](http://www.sethroberts.net/articles/2008%20Transform%20your%20data.pdf) Failing to transform your data is often like throwing away a large fraction of it.

EdwinBoyette (2011-02-06 21:56:10)

Seth, I'm now two weeks into fish oil supplementation, and a week into adding sardines and butter (1/2 to 1 stick a day). Today during my workout I noticed the weights moved faster than last workout even though I increased the weight since last time. I'm 38 years old, 175 pounds and 6'1. Today's workout was all conventional deadlifts without a belt or straps: 135 x 10 135 x 10 205 x 5 Work sets: 275x 4 x 4 (73ish % of 1 Repetition Max) 315 x 1 x 2 (86ish % of 1RM) 345 x 1 x 2 (94ish % of 1RM) I'm not taking any anabolic or androgenic compounds. Since some of the higher weights seems to be dependent on the CNS, I wonder if I have gotten a bit of a boost from the additional oils in the diet. My pace was very fast tonight with short rest times between sets so I was really suprised how quickly the bar moved tonight.

Alex Chernavsky (2011-02-06 22:07:07)

I'd like to see some kind of testing done to verify that these reaction-time applications (Seth's R code and Genomera's web-based app) give accurate and precise measurements that are independent of hardware, operating system, network traffic, and other processes running on the machine. Not sure exactly how to do this - maybe by writing code that is able to simulate pressing keystrokes? Or, perhaps less practically, some kind of hardware device that is able to press keys? In any case, because the interpretation hinges on fairly small changes in reaction time, I think it makes sense to invest some time to ensure the validity of the data-gathering tools.

Seth Roberts (2011-02-07 01:37:47)

Alex, there is error in all measurements. It would be a staggering coincidence if the error in my measurements changed at exactly the time I changed to eating lots of butter. Likewise, it would be a staggering coincidence if the error in the Genomera measurements strongly correlated with the butter/no butter treatment. Try randomly sorting the butter/no butter subjects into two groups and see how often you observe a difference as large as the difference actually observed. This is the purpose of p values - to estimate the chances of the difference you observed being due to something other than what you varied.

Alex Chernavsky (2011-02-07 21:23:59)

Seth, yes, but if you wanted to know the value of the absolute improvement in reaction time, you'd have to know whether the tool was giving you results that were true. Also - and I'm far from an expert on statistics - if it turned out that the reaction-time application gave noisy readings that fluctuated +/- 20 % from the true value, would this fact not make it more difficult to separate the signal from the noise in these types of "Buttermind" experiments? In any case, perhaps I'm being irrational, but when I weigh myself every morning, I like to know that I'm tracking not only changes in weight but also the real weight itself. That's why I always check my bathroom scale against the higher-end scales in two different doctors' offices, whenever I have an appointment.

Jazi yechezkel zilber (2011-11-29 02:40:06)

Seth, I see that with that much participants we got a significant but not earth shaking p-value. While in your own data, you usually show very strong p-values. Why is there such relative weakness in the data here of other people relative to you? Do you think you have more stability in other changes so that there is less noise in your data? Better calibrations? Whatever? Training effect? Or because this group just had a very short time and three conditions? I am wondering because I am contemplating to group people for self experimentation, and these data are somewhat of an indication that maybe it is harder to get significant results than I initially thought

Phil Goetz (2011-12-12 14:39:55)

The results may be significant, but it looks like the initial difference between the groups is even more significant. Why?

### **Fear of Retaliation: Global Warming and Nutrition (2011-01-31 14:01)**

I've [1]said it before but it is worth repeating: Science and job don't mix very well. Career demands can make it hard to tell the truth as you see it. [2]A scientist named Norman Rogers put it like this in relation to global warming:

Mainstream climate scientists are asking for trouble if they become skeptics [about man-made global warming]. They may lose their jobs, their papers may not be published and they may lose their grants. That's why most skeptics are older or retired or from outside of the mainstream - they are less vulnerable to retaliation.

He could have added that global-warming skeptics will have difficulty recruiting others, such as graduate students, to work with them and will face disdain from their colleagues.

I saw this in relation to [3]the work of Ranjit Chandra. At Berkeley, when I told other professors about my doubts, one of them replied: Talk to X. He's had doubts about Chandra for 30 years. I spoke to X. This was correct. I didn't ask X why he'd never said anything publicly about it because the reason was obvious: He feared retaliation.

1. <http://www.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

2. [http://www.climateviews.com/Climate\\_Views/Download\\_Articles\\_files/CookRebuttalb.pdf](http://www.climateviews.com/Climate_Views/Download_Articles_files/CookRebuttalb.pdf)

3. <http://www.sethroberts.net/chandra/index.html>

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Gunnar (2011-01-31 14:37:46)

An article by NASA about Einstein is of similar opinion: It's a question of authority. [http://www.nasa.gov/vision/universe/stargalaxies/23mar\\_spacealien.html](http://www.nasa.gov/vision/universe/stargalaxies/23mar_spacealien.html) I usually don't trust what NASA publishes, but I can relate to this statement. If you want to know why I don't trust them look up Richard C. Hoagland.

Nathan Myers (2011-02-01 01:23:41)

Maybe he didn't have any hard evidence. Natural Selection skeptics are looked at oddly, too. I wouldn't hire one for department head, even for a Chemistry department. Now, Lynn Margulis has been fond of saying Darwin was entirely wrong about everything, but that's not what I mean. It's one thing to fit another theory to the evidence, and something else to deny

the evidence because it doesn't square with what you would have liked to fit to it.

Gunnar (2011-02-02 10:49:13)

One example for economists: Priceless: How The Federal Reserve Bought The Economics Profession [http://www.huffingtonpost.com/2009/09/07/priceless-how-the-federal\\_n\\_278805.html](http://www.huffingtonpost.com/2009/09/07/priceless-how-the-federal_n_278805.html) The article makes good points regarding the asserted influence/pressure that you talk about, Seth. If you read that article, I think that it's wrong in assuming that the people at the fed are clueless and the disasters happen by accident. If you understand that the fed first and foremostly just prints "money" and that the fed has private owners, you understand that there really is an agenda behind it. But as long as you think they want to "do the right thing", the assumption of cluelessness arises. That some or even many professionals got blinded by their "science" I assume to be the case. Decades of school and university can achieve that.

Jenna (2011-02-03 19:39:41)

Speaking of global warming, I would really like to understand the lengths the monetary-market system i.e. its main beneficiaries/representatives, go to achieving ends through ideological manipulation and inadvertent control. Got any ideas about peak oil? Here in Britain there are 'transition' town movements organizing themselves ready for 'the crash' because they insert, we are so ill equipped for self sufficiency should things 'go wrong, all-of-a-sudden'. I'm really not one for conspiracy theories, at least I try to maintain some degree of skepticism. However when it comes to peak oil, I really struggle to decide what to believe in. It would be great to see a discussion on these issues. I am a young student, and I just am not sure what to believe at a point in my life that I think it is quite important to understand what's actually going on. There are so many people my age (early twenties) giving up their university educations, for farm work etc, because they think that a crash is imminent and the lifestyles we're leading are simply unsustainable and destructive. How am I meant to know what to do, when there are so many blurry lines when trying to determine fact from fiction? Any thoughts on this subject would be much appreciated! Particularly with regards to Peak Oil! Are oil company's/political/economic/corporative think tanks creating fear through scarcity as a means to gain in more profits and to implement more control structurally? Fear a means to socially stratify increasingly to gain in control? Perhaps I do sound like a conspiracy theorist, but for me they are real concerns, I don't know whether I am deluded to consider these possibilities; as how could they be 'proved' any how. I mean everyone clearly has AN opinion. I do realize that our behavior is influenced ideologically in part and so I would like some ideas on what directions to take when considering such a reality. Any ideas, please, would be great! Thanks.

Seth Roberts (2011-02-03 22:27:16)

I'd guess that situations like Peak Oil have been faced thousands of times during human history: A key resource is running out. Until oil was discovered that key resource was whale fat, used for lamps. Sometimes it really does run out before an alternative is found and the society disappears. The book Collapse describes several examples. Much more common, however, is that disaster is averted because innovation allows the society to move to overexploitation of something else. Without plastics for example, a great deal of modern society wouldn't be possible. Yet you don't hear about Peak Metal or Peak Wood - the innovation happened before the catastrophists could start scaring people. On the other hand, I believe that overexploitation is really common and the main reason humans migrated all over the globe - to find places where the food supply hadn't yet been overexploited. Now there is nowhere else to go. Perhaps rising food prices will eventually cause people to start growing food in cities.

Jenna (2011-02-04 05:23:41)

Thanks very much for your response Seth. You have given me a useful perspective.

Gunnar (2011-02-04 09:34:17)

Jenny, good questions. Keep on asking them and research yourself. There is plenty good evidence to be found to answer them. I give you just one superb link to further your research: <http://www.WantToKnow.info/>

Jenna (2011-02-07 05:40:01)

Hi Gunnar, thanks for the link. You have probably viewed this already, but I found Bob Altemeyer's book, amongst other's,

highly thought provoking; <http://home.cc.umanitoba.ca/~altemey/> - If you have more links please do send them on! My blog is; <http://thecontagiousbit.blogspot.com/>

## 6.2 February

### "Reading Seth Roberts Puts Me to Sleep" (2011-02-01 02:25)

... is the charming title of [1]this post by Adam Stoffa. Actually, reading me keeps him asleep. Adam read [2]my long self-experimentation paper and came across my discovery that skipping breakfast reduced early awakening. He had early awakening:

I would wake up sometime between 0400 and 0430. Six hours of sleep was not good. This was a problem that needed my attention.

Like me, he was eating breakfast around 7 am and waking up three hours earlier. He ate a big breakfast. He decided to make breakfast later rather than skip it.

I started experimenting with a late breakfast in August. I was traveling through multiple time zones at the time. So I had no idea whether it was working. But by the time I got back to Korea, eating a late breakfast was becoming a habit.

After recovering from my jet lag, I noticed that the experiment was working. Now, I wake up and get out of bed between 0600 and 0615. Sometimes, I still wake up in the middle of the night, but after a quick bathroom break, I'm right back to sleep. I get to work at 0800. After working for an hour, I take a break and eat (e.g. 3 hard boiled eggs, +/- a cup of cashews or macadamia nuts, and a smoothie). This regiment has been working well for eight weeks and shows no signs of weakening.

Yay!

1. <http://seeadamtrain.wordpress.com/2010/10/30/reading-seth-roberts-puts-me-to-sleep/>
2. <http://escholarship.org/uc/item/2xc2h866#page-1>

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Nathan Myers (2011-02-01 23:22:55)  
Sorry, which post?

Seth Roberts (2011-02-02 01:14:44)  
well, at least one person is paying attention. Thanks for the correction, Nathan.

Elizabeth Molin (2011-05-10 05:58:01)  
See <http://www.nowforthesciencebit.com/in-the-news/pocket-science-2-8-may-2011> for a marginally related study on sleeping late and weight gain.

## Chinese New Year in Beijing (2011-02-02 04:45)

Sounds like we're under attack. Bombs going off, gunfire. A few fireworks.

More At midnight I was awakened by the densest loudest fireworks I have ever seen. About two per second for ten minutes or even longer. One launch pad was on the street near my apartment; I could see two other sources further away – geysers of glittery light. This proves the Chinese invented fireworks, I kept thinking. They were so pretty and varied I didn't mind being woken up. And it was so nice to be able to watch them from my warm apartment.

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## Personal Science (2011-02-02 05:16)

In [1]the IEEE Spectrum, Paul McFedries, the author of [2]Word Spy, writes about new words generated by new kinds of science made possible by cheap computing.

Perhaps the biggest data set of all is the collection of actions, choices, and preferences that each person performs throughout the day, which is called his or her data exhaust. Using such data for scientific purposes is called citizen science. This is noisy data in that most of it is irrelevant or even misleading, but there are ways to cull signal.

That's not my understanding of what citizen science means. I've seen it used when non-scientists ("citizens") help professional scientists. The [3]Wikipedia definition is

projects or ongoing program of scientific work in which individual volunteers or networks of volunteers, many of whom may have no specific scientific training, perform or manage research-related tasks such as observation, measurement or computation

Bird-watching, for example.

My self-experimentation is not citizen science. I am not doing it to help a professional scientist nor as part of a project. I do it to help myself – in contrast to professional science, which is a job. Almost all self-experimentation by professional scientists and doctors has been done as part of their job. So let me coin a term that describes what I do: personal science. Science done to help the person doing it.

I believe personal science will grow enormously, for several reasons: 1. Lower cost. The necessary equipment, such as software, costs less and less. I use R, which is free. 2. Greater income. People can afford more stuff. 3. More leisure time. 4. More is known. The more you know, the more effective your research will be. The more you know the better your choice of treatment, experimental design, and measurement and the better your data analysis. 5. More access to what is known. For example, [4]Dennis Mangan discovered via the internet that niacin had cured restless leg syndrome. 6. [5]Professional scientists unable to solve problems. They are crippled by career considerations, [6]poor training, the need to get another grant, desire to show off (projects are too large and too expensive), and a Veblenian dislike of being useful. As a result, problems that professionals can't solve are solved by amateurs. The

best-known example is the invention of blood-glucose self-monitoring by Richard Bernstein, who was not a doctor when he invented it.

1. <http://spectrum.ieee.org/at-work/innovation/the-coming-data-deluge>
2. <http://www.wordspy.com/>
3. [http://en.wikipedia.org/wiki/Citizen\\_science](http://en.wikipedia.org/wiki/Citizen_science)
4. <http://www.blog.sethroberts.net/2010/05/17/restless-legs-syndrome-niacin-and-web-search/>
5. <http://www.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>
6. <http://www.blog.sethroberts.net/2006/09/22/seymour-benzer-crippling-med-school-research/>

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Joseph Dantes (2011-02-02 09:17:05)

Brilliant summary of the reasons personal science beats professionals.

Gunnar (2011-02-02 11:10:21)

How about "individual science"? The word person is highly influenced by legal fictions. And we are not persons, we are human beings.

Nancy Lebovitz (2011-02-03 01:42:18)

Would you include non-quantitative work like the invention of the Alexander Technique? About a century ago, F.M. Alexander had problems with losing his voice, and found that rest didn't help. He concluded that there was something he was doing when he spoke, and eventually found (with the help of three-way mirrors) that he was tightening his muscles as part of preparation to speak. Then he found ways to break such a strong unconscious habit. This is close observation and testing hypotheses, but no statistics.

Seth Roberts (2011-02-03 02:36:26)

Nancy, yes I include non-quantitative work. Sometimes effects are so clear you don't need numerical measurement to study them. The effect of pork fat on my sleep was/is so clear I didn't need numerical measurement of my sleep to notice or confirm it. Gunnar, the term individual science doesn't clearly exclude professional self-experimentation (by professional scientists, for their careers) which is what I am trying to exclude. Personal is about goals, whereas individual is about methods.

Matthew Cornell (2011-02-09 10:09:26)

> personal science The term is accurate; I like it. > Personal is about goals, whereas individual is about methods. I think you're splitting hairs; both definitions are valid. Plus, how can you do personal science without the scientific method? Or at least the spirit of it. > My self-experimentation is not citizen science. I agree, and I also think we need to move that conversation to that of individuals doing science, i.e., to making citizen scientists. I sketched some ideas here: <http://quantifiedself.com/2011/02/making-citizen-scientists/>

My Personal Development Strategy: Life Is An Experimental Game « Become Unrestricted (2011-05-20 12:31:23)

[...] the last step to see what you need to do. Feel like a scientist, if it helps you. In fact, you do personal science. Read the article Personal Development, Self-Experiments, and the Future of Search on Quantified [...]

Prion Indigo (2011-11-06 04:52:53)

As someone who plans to major in neuroscience, I believe what you are saying about personal science. Science is very personal. It allows one to connect with the universe in the deepest ways. The ability to apply logic and reason can, for some, help to appreciate what is. With modern fields in quantum physics, neuroscientists cannot afford to be strictly materialist any more.



Sheldon Greaves (2012-02-12 19:14:08)

I'm uncomfortable with the evolving definition of "citizen scientist" as a helper or assistant or collector of data. While these are important to scientific research, it's not clear to me that it leads to the kind of personal science you're talking about, or to a greater understanding of science for the citizen scientist. But all that being said, the definition of "personal science" here strikes me as the end goal for any science education that does not take one to a professional scientific career. Science as it is taught should focus on using it in daily life, rather than as a sifting process to identify likely career scientists.

Citizen Science Musings: Personal Science | Citizen Scientists League (2012-02-13 08:02:36)

[...] a thought-provoking post Seth Roberts explores a motive for doing non-professional science that is obvious in one sense, yet [...]

### **Effect of Oscar on Marriage (2011-02-02 16:23)**

[1]This study found that women who win a Best Actress Oscar have a much higher rate of divorce in the following years than the losing Best Actress nominees and the Best Actor nominees, both winning and losing. A Chinese joke I heard recently says essentially the same thing:

There are four kinds of people: 1. Man. 2. Woman. 3. Woman with a Ph.D. 4. Someone who will marry a woman with a Ph.D.

Via [2]Marginal Revolution.

1. [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=1749612](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1749612)

2. <http://www.marginalrevolution.com/marginalrevolution/2011/02/assorted-links-32.html>

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Darrin Thompson (2011-02-03 06:59:17)

Keep 'em coming. Eventually you'll have 60 minutes of the weirdest comedy act ever.

Alex Chernavsky (2011-02-03 17:11:50)

Reminds me of this saying, alleged to be an Italian proverb: There are three ways to make money. You can inherit it. You can marry it. You can steal it.

Seth Roberts (2011-02-03 22:13:02)

Alex, I don't see the connection. I mean, beyond the similarity of "three ways" and "four types". Am I missing something?

Alex Chernavsky (2011-02-04 05:40:40)

Seth, the similarity of "three ways" and "four types" is the only connection. I've always thought that the (alleged) Italian proverb is humorous, and so I remembered it when I read your post.

Geraldine (2011-02-05 13:53:10)

I think it's a funny but telling comparison Seth. It's a wonder that any celebrity marriages stick, all things considered. PS: I now

have my review blog up and running, have featured your book there at: <http://www.myreallifereviews.com/2011/02/shangri-la-diet-by-seth-roberts.html> Cheers, Geraldine

### **Email From Egypt (2011-02-03 16:17)**

One of my students is in Egypt. She writes:

I may be leaving here soon. Two of the foreigners here that I know that were in the protests have been arrested by the army and taken to a military academy- they were able to contact the German embassy as they are German and the embassy came to take them and keep them safe in a hostel until they are able to leave the country. People are beginning not to trust any foreigners here, not only journalists, and have begun to say that foreigners are spies stirring up trouble on behalf of foreign governments. The German girl that I went to the demonstrations with saw her own Egyptian neighbor talking to the army officers about her and her landlord and her roommates while she was being detained. Of course all journalists are being attacked right now. And the mood has just become very hostile towards foreigners. We are getting reports on a mailing list called Cairo Scholars (for foreigners living in Cairo) of all different types of incidents directed at foreigners here.

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### **Humor as Catalyst (2011-02-04 03:14)**

In [1]this TED video Lisa Donnelly, a cartoonist, says

women + humor = change

I'm not sure what changes she means. But I think she is saying something important. Humor has a way of making change easier.

In the 1980s a friend of mine named Melody McLaren worked as a personal assistant in a London advertising agency. One of her co-workers was a woman named Denise Taylor. Denise was the personal assistant of the managing director, Chris Ogilvie-Taylor. Normally personal assistants get a nameplate on the appropriate door but Denise did not because her boss, Ogilvy-Taylor, was worried about the appearance of nepotism.

Everybody – except perhaps Ogilvie-Taylor – thought this was unfair. But Ogilvie-Taylor's boss was on a different floor. It would have been dangerous and strange to appeal to him.

My friend conceived a brilliant and surprising solution. She wrote a long poem, maybe 60 lines long, with rhyming couplets, about an imaginary town of Taylors (a play on "tailor"). The point of the poem was that Denise deserved her name on the door. Then, with the help of the art department, my friend wrote the poem on a giant card, about six feet high. The card was passed around the office. Everyone signed it. Then it was put in Mr. Johnson's office. Soon Denise got a nameplate.

This was not exactly humor – more like whimsy, with humorous elements. It facilitated change.

Another example comes from [2]a Chinese blogger:

On Oct. 20, a female blogger in northern China nicknamed Piggy Feet Beta announced a contest to incorporate the phrase “Li Gang is my father” into classical Chinese poetry. Six thousand applicants replied, one modifying a famous poem by Mao to read “It’s all in the past, talk about heroes, my father is Li Gang.”

Here too we have the three elements: woman, humor, change.

A friend of mine from Poland was surprised we had jokes in America. He thought the sole purpose of humor was to criticize the government. And our government was pretty good.

Sure, jokes are a way of saying the unsayable (e.g., dirty jokes). Sure, they can empower the weak, not just the strong (e.g., racist jokes). What’s interesting here is (a) Donnelly felt her equation was interesting (she’s right), meaning most of her audience didn’t know it; (b) she didn’t illustrate it well (why not?); (c) humor can be useful in everyday life (as my friend’s example shows), not just to criticize the government. I think this point should be incredibly obvious, like the sky is blue, but it isn’t.

1. <http://ted.us1.list-manage1.com/track/click?u=07487d1456302a286cf9c4ccc&id=d0f7ffa903&e=0e83937122>

2. <http://www.nytimes.com/2010/11/18/world/asia/18li.html?pagewanted=2&sq=chinese%20blogger%20li%20gang&st=Search&scp=1>

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Justin (2011-02-04 13:27:46)

I read this quote from an old counseling textbook and it has stuck with me: “Humor makes it easier to explore difficult, awkward, or nonsensical aspects of life. It can be used to challenge beliefs or magnify irrational beliefs to absurdity.”

Amanda (2011-03-30 12:36:38)

Interesting examples Seth, thank you for sharing! It’s worth noting on here that, while humor can be used as a catalyst for positive change, there are also subtle implications if used incorrectly. I work in innovation and the term my company coined, “humorous bazooka”, is a funny, witty comment that, intentionally or unintentionally, shoots down another person’s idea (read: innovation killer). You can read more about our thoughts on it here: <http://bit.ly/gnobzb> Just good to talk about the good, bad, and the ugly of humor!

## More Email From Egypt (2011-02-04 07:21)

My former student writes:

A lot of people here now are calling for a return to normalcy and peace! A fair number of people are beginning to blame the protestors for all the chaos and the fact that we can’t go out and we can’t go to work and Egypt is burning and we can’t order food from restaurants anymore! I think they are the same people who didn’t really support the protestors in the first place though- so we’re still safe- they’re not growing. Unfortunately many of my family members are among those- they just want to go back to work and they’re worried about money and they think we have gained enough concessions. They think the sacrifice is too big.

At the same time, there are maybe a hundred thousand or more protestors in the square right now, peacefully standing and holding signs for the president to step down. And more keep pouring in. My cousin Akram is getting ready to go meet my cousin Khaled and about 20 of his friends to go to the square. Aunt Magda is angry with Akram and telling him that he won't set foot out of the house but actually he is tying his shoelaces now..... The Friday prayer ended about an hour ago so now is the time when most people will be arriving there or on their way. My cousin Karim actually went back to work at Vodafone today after 4 or so days off because of the revolt.

I have promised everyone that I wouldn't go out today because of all the anti-foreign sentiment. There have been steady streams of emails about foreigners being detained, politely, and spoken to and then released after some time. But there are people calling the news stations in angry about Obama's order for the president to step down. One woman asked, "Can any country accept an order for their president to step down?" There is a lot of hostility towards America right now and I don't think the US can win no matter what they do. People criticizing the states for not making a strong enough statement requiring Mubarak's departure, others angry that America would order the president of another country to step down, some angry about all of the past support, and others angry that America would meddle at all...

We haven't seen any violence in the square so far today as there was on Wednesday and Thursday, just a massive sea of anti-mubarak protestors. We haven't seen much of the pro-mubarak supporters today- it seems that they have been hugely overtaken. I really hope it stays peaceful but a lot of people are going out angry today because of the attacks on the peaceful anti-mubarak supporters of the last two days. Many see it as an obligation to go out now and defend those who have been attacked. I am really proud of all those people brave enough to go out...

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Thomas Seay (2011-02-07 13:23:52)

My feeling is that the protestors need to take action. I mean, aggressive action. They need to win over the army to their cause and forcefully run Mubarak out of the country. I know that's not going to please mealy-mouthed journalists who can only support them as long as they join hands and sing kumbaya; however, this is a war of attrition. People will start to get tired of being in the streets and that is what Mubarak is hoping for. He can stay holed up in his palatial digs, eating caviar for a long time.

### **Humor as Catalyst (another example) (2011-02-06 05:05)**

Melody McLaren, whose giant greeting card [1]I described a few days ago, told me another example of using humor to change behavior:

I was working at LA Incentives, a small promotional merchandise company in Barnes (southwest London). We (Liz Amies, the MD and I) were running a very small company in the midst of a recession (1987-1990). We were having difficulty getting our clients to pay us on time. Money was tight for everyone and the big companies were notoriously late at paying small suppliers, who had no resources to hire people to chase their debts.

So, being desperate, I tried the humor route once again (this was a couple of years after the ad agency incident). I drew cartoons that illustrated why clients might not be paying us - e.g. "You're probably

just trapped under something heavy” under a crude illustration of a guy pinned to the floor by a filing cabinet.Â Weir, whimsical stuff.Â I faxed the cartoons to the companies’ purchase ledger departments.Â Although this didn’t work with everyone, quite a few people paid up immediately. It was the power of surprise, I guess.Â No wars were stopped by this approach - but it did help us keep the company afloat for a while longer.

So effective you might think it would be obvious, but it isn’t. Although economists have a hard time using anything but incentives to explain economic behavior, notice that no incentives were changed.

1. <http://www.blog.sethroberts.net/2011/02/04/humor-as-catalyst/>

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Justin Wehr (2011-02-06 06:32:58)

”Iâ€™ve never seen anyone change his mind because of the power of a superior argument or the acquisition of new facts. But Iâ€™ve seen plenty of people change behavior to avoid being mocked.” -Scott Adams

Stephen M (Ethesis) (2011-02-06 07:33:27)

Which might be a better approach than these articles: <http://www.wheatandtares.org/2011/02/05/climate-science-after-climategate/> and <http://climateaudit.org/2009/12/12/daily-mail-special-investigation/>

Alex Chernavsky (2011-02-06 21:58:47)

I vaguely remember hearing something about a cop who was particularly good at defusing tense situations via an expert use of empathy and humor. Or maybe that was a movie I saw. Anyway, it seems like a better idea than shooting people (or threatening to do so).

Video gag (2011-09-08 02:25:01)

Dear Blog, Maybe a little off topic, however, Why are there so many white people creating fake profiles proclaiming to be black, then posting dumb stereotypical questions? and Why don’t we see the opposite? how telling is that? and more importantly why do people respond? you only ignite their ignorance or bad humor, whichever is the catalyst BTW great blogpost

## **Growth of Quantified Self (2011-02-07 05:04)**

The first Quantified Self (QS) Meetup group met in Kevin Kelly’s house near San Francisco in 2008. I was there; so was [1]Tim Ferriss. Now [2]there are 19 QS groups, as distant as Sydney and Cape Town.

I believe this is the beginning of a movement that will greatly improve human health. I think QS participants will discover, as I did, that simple experiments can shed light on how to be healthy – experiments that mainstream researchers are unwilling or unable to do. Echoing Jane Jacobs, I’ve said [3]farmers didn’t invent tractors. That’s not what farmers do, nor could they do it. Likewise, mainstream health researchers, such as medical school professors, are unable to greatly improve their research methods. That’s not what they do, nor could they do it. They have certain methodological skills; they apply them over and over. To understand the limitations of those methods would require a broad understanding of science that few health researchers seem to have. (For example, many health researchers dismiss correlations because “correlation does not equal causation.” In fact, correlations have been extremely important clues to causality.) Big improvements in health research will never come from people who make their living doing health research, just as big improvements in farming have never come from farmers. That’s where QS comes in.

The first QS conference is May 28-29. [4]Tickets are still available.

1. <http://www.fourhourworkweek.com/>
2. <http://quantifiedself.com/>
3. <http://www.blog.sethroberts.net/2009/05/02/how-could-they-know-the-case-of-healthy-gums/>
4. <http://quantifiedself.com/conference/>

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SR (2011-02-07 09:30:23)

I think it is ironic that somebody who knows about Veblen, could say something like "Echoing Jane Jacobs, I've said farmers didn't invent tractors. That's not what farmers do, nor could they do it." About Thorstein Veblen's father. "Thomas understood the science of his day. He crossbred Merino sheep to produce a hardier version capable of surviving Wisconsin winters yet produce high-quality wool. He built Kari a loom—an endeavor that required precision far above that necessary for homebuilding. He invented a portable threshing machine powered by two horses that allowed neighbors with small crops to avoid threshing with a flail." My guess is that you don't know any north European farmers, and thus pedal myths that is common in intellectual circles.

Seth Roberts (2011-02-07 16:50:18)

SR, I can't tell what your example is meant to show. Sure, farmers could produce small improvements. Genetics wasn't invented by farmers so I am not sure what your cross-breeding example is meant to illustrate. Likewise, farmers were never metallurgists, so the many metal components involved in a portable threshing machine wouldn't have been possible without innovation that took place far from farms. To the best of my knowledge, the innovations that have led to big improvements in farming – such as tractors – all started and gathered momentum far from farms. If you disagree, please give an example.

WR (2011-02-07 22:30:14)

Hi Seth, new reader, new to QS. Really like the blog. That said, the second to last sentence is a really silly if you didn't intend it to be tongue in cheek – which it now appears you did not. Don't squander your credibility. If your claim is that eg. geneticists (paid researchers very much like those in the health industry) are driving modern farming, you undermine your own argument in the other case. And while genetics may be propelling 21st century farming advances, that is very different from a claim about \*the entire history of farming\*. No need to dismiss the contributions of an entire history of labor in a profession. And many of the so called modern "advances" imported into agriculture since WW2 – and not invented by farmers – I could rather do without. And when I can, I do. Best, WR

WR (2011-02-07 22:35:09)

Came off a bit more rude than intended. Obviously you can do whatever you like on your own blog! Thanks for you work, WR

Seth Roberts (2011-02-08 01:39:36)

WR, you're welcome. And your comment doesn't come off as rude. Let me give two examples. The biggest advance in the treatment of diabetes since the discovery of insulin was home blood glucose monitoring, invented by Richard Bernstein, an engineer. It permitted far better insulin dosing. Bernstein was not a professional health researcher nor, at the time, a doctor. The discovery that smoking causes lung cancer was not made by cancer doctors – it was made by a med student and epidemiologists. I don't mean to imply that conventional health research is useless. But it is often, as in these two discoveries, only half the story. The other half of the story came from elsewhere.

SR (2011-02-08 19:25:44)

"SR, I can't tell what your example is meant to show. Sure, farmers could produce small improvements." I really like your theories about experts being experts in what is known knowledge, and don't really want to check things for themselves, and was kind of disappointed that you did not apply that theory about the US academic myth about the "fly over country" where only uncultured, unschooled mid westerners live. We have this myth about rural people in academia here in Europe as well, where most have visited a third world farm, but not been to their own countryside and gotten to know the farmers there. (I have gone to 4 universities, so I know it is common) A farmer does not need to be a poor peasant, and he does not work with farming all the time. It is also very common in north-European history that people who became rich in the city, bought a farm for the money, just like rich farmers bought education for their children. Just like Veblen's father was a carpenter in addition to a farmer, it was and still is common in Scandinavia that most had some other kind of work, like being a priest, blacksmith, weaver, carpenter, fisher, boat-builder, musician, soldiers etc. Same went for the women, that were midwives, bakers, cooks, spinners, herb-growers. Just like in a "shitty", people specialize to get more money, the main difference being that everybody needed to do their share in harvest or planting and plowing. What this means for a child growing up, is that you get to play with real mechanical objects from a young age if you showed the talent, and thus get a head start, instead of reading about it, or for that matter first become an apprentice, then a journeyman, before you could start doing something by your own design when you became a master. Also a phenomena worth mentioning, is that the smaller the place where you live are, the easier it becomes to become the local expert, where you need to come up with a solution yourself, since there is nobody that can tell you how it is done. "To the best of my knowledge, the innovations that have led to big improvements in farming – such as tractors – all started and gathered momentum far from farms. If you disagree, please give an example." When I saw how sure you were, I became unsure, so I started to read more about tractors, and funny enough, the first "official" tractor was made by farmer who was the son of a farmer. There is no good wikipedia page on him, but a google search for "john froelich tractor" will give a lot of hits. Also since I became unsure, I wanted to check most of the predecessors of the tractor, and it seems that most of them were made of sons of farmers or sons of rural blacksmiths who made or repaired farm equipment. [http://en.wikipedia.org/wiki/John\\_Fowler\\_\(agricultural\\_engineer\)](http://en.wikipedia.org/wiki/John_Fowler_(agricultural_engineer)) [http://en.wikipedia.org/wiki/Richard\\_Garrett\\_\(1755-1839\)](http://en.wikipedia.org/wiki/Richard_Garrett_(1755-1839)) [http://en.wikipedia.org/wiki/Aveling\\_and\\_Porter](http://en.wikipedia.org/wiki/Aveling_and_Porter) [http://en.wikipedia.org/wiki/Portable\\_engine](http://en.wikipedia.org/wiki/Portable_engine) [http://en.wikipedia.org/wiki/Nikolaus\\_Otto](http://en.wikipedia.org/wiki/Nikolaus_Otto) [http://en.wikipedia.org/wiki/Traction\\_engine](http://en.wikipedia.org/wiki/Traction_engine) Some Tractor makers I know today, who were started by sons of farmers, and grew up on a farm. [http://en.wikipedia.org/wiki/Giovanni\\_Agnelli\\_\(FIAT\)](http://en.wikipedia.org/wiki/Giovanni_Agnelli_(FIAT)) [http://en.wikipedia.org/wiki/New\\_Holland\\_Machine\\_Company](http://en.wikipedia.org/wiki/New_Holland_Machine_Company) [http://en.wikipedia.org/wiki/Jerome\\_Increase\\_Case\\_\(CASE\)](http://en.wikipedia.org/wiki/Jerome_Increase_Case_(CASE)) [http://en.wikipedia.org/wiki/Henry\\_ford#Early\\_years](http://en.wikipedia.org/wiki/Henry_ford#Early_years) [http://en.wikipedia.org/wiki/Harry\\_Ferguson](http://en.wikipedia.org/wiki/Harry_Ferguson) You also have these people who grew up on a farm, Borlaug, Mendel, Carl von Linne, and this quote is also quite funny. Darwin began to speculate on how new species could arise by natural observable causes. His idiosyncratic eclecticism led him to investigate some unconventional evidence. He made countless inquiries of animal breeders, both farmers and hobbyists like pigeon fanciers, trying to understand how they made distinct breeds of plants and animals. Gradually Darwin concluded that organisms were infinitely variable, and that the supposed limits or barriers to species was a belief without foundation. In modern terms we would say that Darwin came to accept that life evolves. One conventional view of the time was that species had been created where they are now found, in accordance with the environment. Few men of science then held to the view that there had been only a single species creation event. The fossil evidence seemed to show very many creations had occurred in different geological eras. <http://darwin-online.org.uk/darwin.html>

## The Twilight of Scientology (2011-02-07 21:51)

Soon after I moved to Berkeley, someone I met on the street invited me to a dinner in the Berkeley Hills. I thought it was a religious group; it turned out to be more cult-like. The cult wasn't named. Maybe it was Moonies, maybe Scientology. At the dinner, after the guitar-playing leader learned I was a psychology professor, she ignored me.

The New Yorker has just published [1] a long fascinating piece about Paul Haggis's defection from Scientology. It reminds me of [2] a piece in Spy – an exchange of faxes between the screenwriter Joe Eszterhas and Michael Ovitz, who at the time was the head of CAA (Creative Artists Agency) and considered the most powerful person in Hollywood.

Eszterhas called Ovitz a bully. It seemed to mark the beginning of the end of Ovitz's career.

My interpretation of the piece and associated material is that Scientology is dying. Just as Eszterhas wasn't afraid of Ovitz, quite a few people, the New Yorker piece reveals, are not afraid of what Scientologists might do to them. The New Yorker website has a great deal of [3]fun-to-read source material, which provides a vivid picture of what you can expect if you decide to join. The famous people associated with the movement, such as Cruise and Travolta (and [4]Greta Van Susteren) are getting old. Simple-minded celebrities will always be with us, sure. But any aspiring actor who considers joining Scientology now faces two hurdles not faced by Cruise and Travolta: (1) Fear of ridicule. The [5]Xenu stuff, for example. They tried to keep that stuff secret for a reason. Anyone can now read endless damaging stuff about Scientology. (2) Fear of professional damage. After South Park ridiculed Scientology, Isaac Hayes, a Scientologist, quit the show. Was he forced to quit by his Scientology superiors? Well, [6]one of his South Park bosses said, "He said he was under great pressure from Scientology, and if we didn't stop poking at them, he'd have to leave." Loss of that job must have [7]really hurt him.

1. [http://www.newyorker.com/reporting/2011/02/14/110214fa\\_fact\\_wright?currentPage=all](http://www.newyorker.com/reporting/2011/02/14/110214fa_fact_wright?currentPage=all)
2. <http://www.anecdotage.com/index.php?aid=18232>
3. <http://documents.newyorker.com/2011/02/scientology-legal/>
4. <http://documents.newyorker.com/2011/02/scientology-legal/>
5. <http://en.wikipedia.org/wiki/Xenu>
6. <http://www.foxnews.com/story/0,2933,401321,00.html>
7. <http://www.foxnews.com/story/0,2933,401321,00.html>

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Geraldine (2011-02-08 13:11:31)

Someone I loved many years ago was a member of this cult. That's what it is. It broke my heart to see how this group manipulated it's members, including this dear friend. I'm amazed that anyone is still "sucked in" by this gibberish (I read the L. Ron Hubbard "bible" Dianetics at the time) but it still seems to appeal to many people, searching for some answers to life's tougher questions. My advice: Keep looking, you won't find them at the Church of Scientology.

Brett\_McS (2011-02-08 18:17:33)

We also seem to be witnessing the end of Masonry. It used to be that one had to be a Mason to get ahead in certain industries/companies. Now those people have all retired or died. Scientology was created by the SF author Ron Hubbard to prove some people will believe anything, wasn't it?

Alex Chernavsky (2011-02-08 18:59:04)

I don't like the Church of Scientology (for reasons that I'll explain below), but I consider them to be mere pikers, Johnny-come-lately dilettantes when it comes to the business of evil cults. By contrast, consider the Catholic Church, which has a long, rich history of abominations (think indulgences, Inquisition, *castrati*, Galileo, birth control, etc.). However, far fewer people seem to get upset by Catholicism than by Scientology. But I digress from the point I wanted to make. I certainly hope that the Scientologists are on their way out. They, unfortunately, adopted anti-psychiatry as one of their pet causes (also one of *my* [1]pet causes), and thereby besmirched the whole movement. In my more cynical moments, I can imagine Big Pharma making under-the-table payments to the Church of Scientology, in exchange for the Church's staunch opposition to psychotropic drugs. "Look!", cries Eli Lilly. "The enemies of Prozac are whacked-out loonies who believe in UFOs and galactic overlords!".

1. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452417>



dub (2011-02-08 21:09:47)

Anonymous has done great work protesting Scientology also...

UncleLongHair (2011-02-09 01:30:15)

Thank you for the mention, that was a very interesting article in the New Yorker. I have read a fair amount about Scientology just out of a twisted curiosity, and have even had a Scientologist try to sign me up in a bar once. The science and mythology behind it are so obviously ridiculous that I can't believe anyone would take it seriously, but obviously some do. The New Yorker article did seem to make the point that some useful techniques for resolving interpersonal conflicts, focusing one's energies, and getting ahead in your career might be taught, which I think would be interesting to learn about, if that could be separated from the cult aspects. I have to admit though that "Battlefield Earth" (written by L. Ron Hubbard) is one of my favorite sci-fi books, I've read it about 5 times (all 1000+ pages). The movie was a total failure but the book is pretty good.

### Assorted Links (2011-02-09 01:19)

- the work of [1]Uffe Ravnskov, author of [2]Ignore the Awkward! How Cholesterol Myths are Kept Alive
- [3]Megaprojects and Risk, a book about how giant construction projects, such as bridges, tunnels, and rail lines, almost always involve great overprediction of benefits (e.g., ridership) and underprediction of costs.
- [4]Scientists who believe as I do about climate change write to Congress
- Due to a father's persistence, [5]intestinal worms cure his son's autism

1. <http://www.ravnskov.nu/uffe.htm>

2. [http://www.amazon.com/Ignore-Awkward-Cholesterol-Myths-Alive/dp/1453759409#reader\\_1453759409](http://www.amazon.com/Ignore-Awkward-Cholesterol-Myths-Alive/dp/1453759409#reader_1453759409)

3. [http://books.google.com.hk/books?id=RAV5P-50UjEC&printsec=frontcover&dq=%22megaprojects+and+risk%22&source=bl&ots=RWCoZ7c19\\_&sig=qeWz9WqZ\\_PZD8gCiORSVOCt4lrE&hl=zh-CN&ei=TNZRTc24CIP8vQO\\_1NzaCQ&sa=X&oi=book\\_result&ct=result&resnum=6&ved=0CFYQ6AEwBQ#v=onepage&q&f=false](http://books.google.com.hk/books?id=RAV5P-50UjEC&printsec=frontcover&dq=%22megaprojects+and+risk%22&source=bl&ots=RWCoZ7c19_&sig=qeWz9WqZ_PZD8gCiORSVOCt4lrE&hl=zh-CN&ei=TNZRTc24CIP8vQO_1NzaCQ&sa=X&oi=book_result&ct=result&resnum=6&ved=0CFYQ6AEwBQ#v=onepage&q&f=false)

4. <http://wattsupwiththat.com/2011/02/08/rebuttal-to-the-climate-rapid-response-team/>

5. <http://strongmail.the-scientist.com/track?type=click&mailingid=5247&messageid=5107&databaseid=306&serial=1250007910&emailid=twoutopias@gmail.com&userid=76074&extra=2012&&&http://www.the-scientist.com/2011/2/1/42/1/>

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TomGinTX (2011-02-09 07:24:26)

Re MegaProjects: You can add stadiums and arenas to that list.

Thomas (2011-02-09 17:30:05)

And here is a rebuttal of the climate change rebuttal: <http://ourchangingclimate.wordpress.com/2009/06/13/the-nipcc-report/>  
I really don't get this fight - at the end only to save the economy (speak: big corporations that save money when polluting the environment). And if the deniers are wrong, they simply wreck the only planet we have. What a gamble - just to make some bucks. This caricature really hits the nail on the head: [http://4.bp.blogspot.com/\\_rdbTUzF1SIU/TI6Whn2Fj\\_I/AAAAAAAAADE/BVmuqdOU5yQ/s640/What+if+we+create+a+better+world+for+nothing.jpg](http://4.bp.blogspot.com/_rdbTUzF1SIU/TI6Whn2Fj_I/AAAAAAAAADE/BVmuqdOU5yQ/s640/What+if+we+create+a+better+world+for+nothing.jpg)

Nathan Myers (2011-02-09 22:48:16)

*Scientists who believe as I do about climate change write to Congress* This is so sad. They only found two NAS members willing to sign on (out of 2000!), and almost half the rest of the signers are retired. Surely tenure is protection enough for the timid?

Perhaps the explanation for the measly turnout lies elsewhere.

Seth Roberts (2011-02-10 03:05:27)

Nathan, tenure does not guarantee many things professors want, including grant renewal, promotion through the ranks, the respect of your colleagues, this or that award, and competent graduate students. Thomas, if the deniers are right objecting to the current hysteria will help focus attention on the real problems.

vic (2011-02-10 23:07:39)

That's a great argument Seth (in your reply to Thomas)

Thomas (2011-02-11 10:39:35)

"Thomas, if the deniers are right objecting to the current hysteria will help focus attention on the real problems. " Which real problems don't get solved because we try to care about the environment? My main point is about the gamble you're doing. You might be correct - and the majority of the scientists might be wrong. But the probability is low, and if you're wrong you basically support the extinction of humanity (in favor of earning oil companies a couple of more bucks).

Seth Roberts (2011-02-11 14:56:02)

Thomas, among the real problems that don't get solved because of too much emphasis on reducing carbon emissions are problems of pollution, especially industrial pollution – for example, groundwater poisoning (see the documentary Gaslands) and heavy metal pollution. Lots of industrial pollutants are poisons beyond any doubt.

## **Chairs: The Carbohydrate of Furniture (2011-02-11 07:42)**

In the excellent BBC series about the history of design ([1]The Genius of Design), chairs played a large role.Â Perhaps a fifth of the show is about them, far more than any other product. Yet I rarely use them and own only a few. I sit while socializing but otherwise usually work reclining (on a bed or in a rocking chair) or standing up. Long ago I discovered that [2]if I stand a lot I sleep better. Since then I've spent a lot of time on my feet for someone whose job doesn't require it.

My self-experimental discoveries led me to avoid about 99 % of the food sold in a typical store – granola, cake mixes, flour, rice, breakfast cereals, and so on. Most of what I avoid is carbohydrate. Just as we are pushed to sit in chairs, we are pushed to eat carbohydrate. I don't think carbs cause obesity – it's more complicated than that – but they raise blood sugar (making diabetes more likely) and rarely supply essential fats. They are also poor source of microbes, which I'm sure you need to eat.

Over the last 30 years, designers have focused more and more on sustainability, "green design", and so on. I think of this as the second half of the industrial revolution – cleaning up the mess. As far as I can tell, designers have not yet started to understand that we need certain things from our environment just as we need certain things from our food. Here are some things I think we need from our environment: 1. Sunlight in the morning. Some buildings have daylighting to save energy. 2. Faces in the morning. 3. Absence of fluorescent lights at night. 4. Movement throughout the day. 5. An hour of walking per day.

1. <http://www.guardian.co.uk/artanddesign/2010/jun/02/the-genius-of-design-tv>

2. <http://escholarship.org/uc/item/2xc2h866>

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Twitter Trackbacks for Seth's blog » Blog Archive » Chairs: The Carbohydrate of Furniture [sethroberts.net] on Topsy.com (2011-02-11 13:52:24)

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Dennis Mangan (2011-02-12 10:28:42)

Great heading for your post, Seth. The following may be of interest: Sedentary Physiology Part 2 "Can Sitting Too Much Kill You?" <http://blogs.plos.org/obesitypanacea/2010/12/07/sedentary-physiology-part-2-can-sitting-too-much-kill-you/>

Jeff (2011-02-13 17:12:03)

Seth - I'm familiar with your learned calorie association theory and have lost a significant amount of weight as a result, but am curious your take on why so many others have been successful through only eating a low carb diet? Why do you recommend daily movement and an hour of walking? Also why walking as opposed to other aerobic exercises? TIA

Seth Roberts (2011-02-14 06:40:37)

I think low carb diets work because they push people away from foods that have (a) the same flavor each time and (b) lots of quickly-digested calories. Foods that have the same flavor each time are usually food in packages or fast food. And those foods are usually high in carbs: soft drinks, candy, french fries. I have avoided such foods for a long time. When I went from medium carb to low carb I lost no weight. When I stopped eating foods that taste the same each time, not worrying about carbs, I quickly lost weight. I recommend an hour of walking daily because only that caused my fasting blood sugar to be normal. (I posted maybe a year ago about this.) Aerobic exercise every few days did not. Movement throughout the day because it's pretty clear our bodies are not meant to sit all day. Nor stand in one place all day.

q (2011-02-14 07:17:22)

what was interesting to me after going to SLD (lost 20 pounds in half a year after 10 in a year with a willpower diet, stopped gradually six months ago and have gained

q (2011-02-14 07:17:56)

funny, my last content was truncated. i'll try again what was interesting to me after going to SLD (lost 20 pounds in half a year after 10 in a year with a willpower diet, stopped gradually six months ago and have gained

q (2011-02-14 07:18:37)

i think my last content was truncated because i used a less than sign. trying again. if this works, please delete the above? what was interesting to me after going to SLD (lost 20 pounds in half a year after 10 in a year with a willpower diet, stopped gradually six months ago and have gained less than 1 pound since then) was that when i went on there was an immediate change in how my body felt after eating carbs. prior to starting, i felt kind of wishy-washy after carbs - couldn't tell whether i was hungry, felt a craving for more, so hard to stop. after just a short time on SLD - maybe it was immediate - carbs made me feel full. ambiguity about being hungry or not hungry was gone, and cravings were much, much lower. that's persisted more or less until now. and it's PLEASANT not having so many cravings.

## Walking and Learning (2011-02-11 22:50)

[1]A new study supports [2]my idea that walking and learning are connected. Normally I found it boring to study Chinese flash cards. While walking, I found it pleasant. You could say walking made me more curious. Just standing on the treadmill didn't have this effect.

The study divided men and women in their 60's into two groups: (a) walking for 40 minutes/day and (b) stretching. At the end of the study, for persons in the walking group, part of the hippocampus – which is associated with learning – had grown. For persons in the other group, that part of the hippocampus got smaller. Several other parts of the brain, not associated with learning, did not differ between the groups.

1. <http://www.pnas.org/content/early/2011/01/25/1015950108.full.pdf>

2. <http://www.blog.sethroberts.net/2010/12/15/walking-creates-a-thirst-for-dry-knowledge/>

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Arlene (2011-02-12 07:01:37)

I wonder if growth of the hippocampus also occurs when walking is routine/mandatory-as in getting to a workplace-rather than for fun or even as part of an experiment when one might take a variety of routes.

Anthony (2011-02-12 15:29:20)

Seth, in your other post you mention trying flashcards while walking around Tsinghua. Did you try this walking new routes, or walking routes you were familiar with? Similarly, have you tried walking routes you were familiar with and that had few people?

Seth Roberts (2011-02-13 04:50:14)

Anthony, I walked around routes I was familiar with. Mostly I walked in a nearby park, which was flat and nearly empty of people. This allowed me to pay more attention to the flashcards. A treadmill is far better for this sort of learning because I don't have to pay attention to anything else. I think I'm the first person to report such an effect – that learning dry facts, usually unpleasant, becomes pleasant while walking. I think the simplicity of the treadmill is why it was clear. My treadmill faces a blank wall. Surely I am not the first person to study while walking. I think ordinary walking is pleasant. I think it is much harder to notice a change from pleasant to more pleasant than a change from unpleasant to pleasant. Because treadmill walking (by itself, facing a blank wall) is slightly unpleasant, it made an increase in pleasantness easier to detect.

## AI at IBM (2011-02-12 07:58)

1. [1]playing chess
2. [2]playing Jeopardy!
3. [3]writing New Yorker cartoon captions

1. [http://en.wikipedia.org/wiki/Deep\\_Blue\\_%28chess\\_computer%29](http://en.wikipedia.org/wiki/Deep_Blue_%28chess_computer%29)

2. <http://www-03.ibm.com/press/us/en/pressrelease/33233.wss>

3. <http://www.sethroberts.net/spy/iftthereisonething.pdf>

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Nansen (2011-02-12 16:40:11)

item 3 seems unrelated to either AI or IBM...

TomGinTX (2011-02-12 19:51:53)

That will be the next challenge for computers, after chess and Jeopardy: understanding the cartoons in the New Yorker. 8-)

Seth Roberts (2011-02-12 19:55:12)

item 1 = past AI at IBM = showing that a computer can play better chess than any human. item 2 = present AI at IBM = showing that a computer can play better Jeopardy than any human. item 3 = future AI at IBM = teaching a computer to write better captions to New Yorker cartoons than any human. My Spy article, to which item 3 is linked, hints there is a formula because there is so much repetition. I wrote another Spy article that showed Jay Leno and David Letterman several times told the same joke. Indicating there is a formula for their jokes.

### **Our Niche in Life (2011-02-13 05:56)**

A Chinese teacher in Los Angeles named Yang Yang, whom you can see in [1]this video, wrote this on [2]her website:

I believe that we all have our own niche - something so unique and innate to us that we enjoy every second of it and can naturally do better than others. Teaching Chinese is my niche.

I think this is the beginning of wisdom about human diversity - a big improvement over judging people by how "smart" they are, as so often happens. (To a college professor, smart = able to imitate a college professor.) [3]My theory of human evolution emphasizes the need for diversity of occupations. In ancient times, occupational diversity arose because different people enjoyed doing different things.

But I also think Yang Yang is wrong in two ways. First, I don't think your niche is innate. I think it can be changed. I think we can come to enjoy and excel at many jobs that we do not enjoy at first. This is the other side of procrastination. Just as we dislike doing things simply because we haven't done them in a long time, we like doing things simply because we did them yesterday. Habits are pleasant.

I also think that where you fall on a pro-status-quo/anti-status-quo (conformist/rebel) dimension is not innate. I think it has a lot to do with your birth order (first-borns are more pro-status-quo), as Frank Sulloway says in Born to Rebel. I didn't read Amy Chua's Battle Hymn of the Tiger Mother expecting to think about birth order and rebelliousness but that's what I ended up thinking about.

1. [http://v.youku.com/v\\_show/id\\_XMTEzNjk1NDg=.html](http://v.youku.com/v_show/id_XMTEzNjk1NDg=.html)

2. <http://www.yoyochinese.com/>

3. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>

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Alrenous (2011-02-13 07:16:25)

"Just as we dislike doing things simply because we haven't done them in a long time, we like doing things simply because we did them yesterday. Habits are pleasant." I'm exactly the opposite. Am I just that far down the 'novelty seeking' slider?

Seth Roberts (2011-02-13 13:52:27)

Alrenous, you don't procrastinate? Because the prospect of doing something new and different is so enticing? You don't have habits? I've never heard of anyone like this.

D (2011-02-13 14:07:47)

I thought Sulloway's work had been totally discredited (outside the family environment, where it is correct)? At least that's the (very strong) impression I got from reading Judith Rich Harris when she summarizes the conclusions of those who have critiqued his work - both his methodology and looking at other data to see if his hypothesis is borne out. No doubt was meant to be left in the reader's mind.

Seth Roberts (2011-02-13 15:06:21)

D, I'm not sure I understand what you mean by "totally discredited (outside the family environment, where it is correct)". I have read what Judith Rich Harris said on the subject; I found it one-sided. I believe Sulloway could have done a better job of defending himself from the criticism Harris describes. His legal threats took the air out of the room. A great distraction. In any case, I think the extent to which one does what one's parents want - which Sulloway says is controlled by birth order - really matters. The smaller the world, the more your parents are the status quo.

Alrenous (2011-02-13 21:30:09)

I do have habits. And I do procrastinate. I procrastinate on my habits.

Kevin R. Bridges (2011-02-16 03:38:23)

My personal observation on talents is that people tend to grow a talent where they enjoy things. For instance, I was a crummy writer, but an enthusiastic one, for about six years (fifth grade to eleventh) before I had a breakthrough and, literally overnight, "got" writing. In the autobiographical book by physicist Richard Feynmann, "Surely You're Joking, Mr. Feynmann!", he tells a story of an artist he befriends. They make a deal, that his friend will teach him to be an artist, and he will teach his friend to be a scientist. Starting this well into adulthood, Feynmann develops into a very accomplished artist, with seemingly no innate knack. So, in short, I agree with you, that our specialized skills are not innate. At the same time, though, the interests that drive us toward certain activities do have an innate root in our personality. As in, my girlfriend could possibly learn to do programming, but she could not learn to do it for the same reason that I do it. Or, a crude metaphor, a straight woman could successfully have sex with another woman, but she won't be doing it with the innate excitement with which a straight man would do it.

Jazi yechezkel zilber (2011-02-17 18:44:26)

In "the nurture assumption" Judith Harris Reviews the evidence to her conclusion that there is no convincing basis for birth order effects (maybe only a few effects) and that the data has many holes etc.

## **Walking and Learning Update (2011-02-13 23:47)**

I discovered a year ago that walking makes it pleasant to study boring stuff - as I put it then, [1]boring + boring = pleasant. I am still a little amazed.

Like any scientific discovery, I suppose, I had to do serious engineering to make good use of it. In particular:

1. Make walking easier. I use a treadmill in my apartment, which eliminates travel time (to where I do it), elimi-

nates distractions, provides climate control, and allows me to walk barefoot.

2. Steady stream of study materials. Now I am using an Anki deck of Chinese characters put together by someone else. This saves a lot of time. ([2]Anki is an open-source version of SuperMemo, a flashcard program that tries to optimize repetition.)

3. Figure out how much new stuff to study each day. Without plenty of repetition, you are wasting your time – you will forget what you’ve learned. Most of a study session is repetition. This means it’s not obvious how much new material to introduce each day. I found that 10 new Chinese characters is about right.

4. Put laptop on treadmill. To use Anki while on my treadmill, I need to use my laptop on my treadmill. At the [3]Beijing Wal-mart, I found a piece of [4]Sunor metal shelving that works perfectly. I put the shelf (about 90 cm long) across the arms of the treadmill, put the laptop on the shelf.

5. Minimize complications. I first noticed the effect using Anki. But Anki had several features I disliked, so I switched to ordinary flashcards. But they were too complicated – hard to schedule appropriately (you need to slowly expand the time between tests), time-consuming to keep track of progress. I had to keep stopping to make marks on the cards. So I am back to using Anki. Anki lacks a graph of progress – a graph that shows amount of learning versus date. But it is better than flashcards.

Each improvement made things better. With all of them, I lose track of time. Study, study, study, walk, walk, walk. Then it’s over. Not just painless, pleasant – different than any pleasure I have felt before. It feels a little like a new energy source (I imagine it can be used to learn many things), a little like teleportation.

The science aspect of it also interests me. Learning is the core topic of experimental psychology. Thousands of experiments have been done about human learning, thousands more about animal learning. Experimental psychologists are good methodologists; the average experimental psychology experiment makes the average medical-school experiment look retarded. But the walking/learning effect (walking makes learning pleasant) is outside anything anyone has ever reported. Only Michel Cabanac (not an experimental psychologist) has studied how variation in pleasantness regulates action (e.g., eating). Experimental psychologists lack good ways to find new effects. By missing this effect, they are missing a bigger idea:Â learning is regulated, just as a thousand other things inside our bodies are regulated.

1. <http://www.blog.sethroberts.net/2010/02/23/boring-boring-pleasant/>

2. <http://ankisrs.net/>

3. <http://www.blog.sethroberts.net/2009/09/15/beijing-wal-mart/>

4. <http://www.meizhigao.com/en/product-detail-545.html>

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Joshua Conner (2011-02-14 01:48:10)

I'd love to see a picture of your laptop "desk" set up. Is the metro shelving (with your laptop on it) just resting on the arms of the treadmill?

Seth Roberts (2011-02-14 02:52:39)

Joshua, that's a good request, I will post a picture. Yes, the shelving just rests on the arms of the treadmill.

M (2011-02-14 06:12:26)

Great post. What brand/model of treadmill are you using? Where did you buy it in Beijing? You might try the "Hanzi stats" plugin for anki. I don't believe it has graphs - but it gives you more statistics about how many characters you have "seen", which you can follow over time.

Darrin Thompson (2011-02-14 06:53:49)

ooohhh snap! The arrrrr word!

bjk (2011-02-14 07:37:18)

I've always found riding on a bus/train and reading is very pleasant (not so much cars or planes). I thought it was that it gave the illusion of progress while doing something sedentary. Or maybe it was the moving scenery, which provided a break from the reading.

gwern (2011-02-14 07:45:10)

> Anki lacks a graph of progress â€” a graph that shows amount of learning versus date. But it is better than flashcards. I use Mnemosyne, but that would surprise me. Leaving aside the issue that 'learning' isn't a clear metric ( # of cards ranked 4? Average ranking? # of cards with intervals longer than a month? A week?), I had understood that Anki had tons of statistics. Even Mnemosyne can display basic statistics like # of cards ranked 4, or 5.

Thomas Johnson (2011-02-14 07:49:40)

Anki definitely has progress graphs. I forget the exact menu to go to, but you can see how many reviews you've done, how many "mature" (i.e., hard-to-forget) cards you have, etc

vic (2011-02-14 12:05:56)

Any idea how one can make writing grant proposals pleasant?

Tom (2011-02-14 12:55:13)

Fascinating. I wonder if the synergy between walking and learning has been selected for? Literature is a recent development, and our brains were huge long before it. Perhaps this gift is in part to map the resources and dangers of large amounts of terrain while walking through it.

Seth Roberts (2011-02-14 13:36:15)

Darrin, by the "arrrr word" you mean "regulate"? Yeah, I think there is some sort of bigger case to be made for regulation of learning - more evidence that points in the same direction - but I cannot figure out what it is. Thomas, you say "Anki definitely has progress graphs." My version (the latest) has eight graphs. Four show something (y axis) versus day in the past (x axis). The four graphs are reps, review time, number added, and first seen.Â None of those four is how much you have learned (which is the progress I care about). One of them shows reviews of mature cards. The total number of mature cards would be a measure of learning but they don't show that as a function of day. The Pinyin Plugin includes a graph of progress, which is one sign that plain Anki lacks such a thing. M, my treadmill goes under two names. In America it is the AFG 5.0 treadmill; in China, it is the Elite T5000. (They are slightly different - the American version, with the 3.0 HP motor, is better.) I bought from a store in Beijing with the website [www.93bill.com](http://www.93bill.com).

Oli M (2011-02-15 22:11:20)

Damien Elmes, the developer of Anki, is pretty friendly and very responsive to user input about Anki. I'm sure he would be happy to hear the observations of an experimental psychologist on how to improve his learning tool, if you were to [1]post on the forum. He seems to respond to just about every thread personally.

1. <http://groups.google.com/group/ankisrs>



Seth Roberts (2011-02-16 01:50:05)

Oli M, thanks for the suggestion. Tom, yeah, the evolutionary reason you give ("to map the resources and dangers of large amounts of terrain while walking through it") is close to what I suggested earlier ("to push people to walk in new places (which provide something to learn) rather than old places (which don't)"). vic, to make writing grant proposals pleasant I suggest you divide the task into tiny pieces and after finishing each tiny piece give yourself a reward.

Evelyn Majidi (2011-02-23 07:49:54)

In the middle east it is common to see young people walking up and down streets or in public parks studying for final exams. They repeat the material to themselves in a sing-song manner until it has been memorized.

Kevin Page (2011-02-23 08:26:51)

Aristotle, the "paripatetic" philosopher, allegedly taught in the Lyceum as he walked around... Presumably, his students followed him about... He may have been onto something... I would rather walk and discuss than sit and discuss like old Socrates - although the Socratic maieutic is a superior way of learning philosophy... Ah well, good insight Seth...

Seth Roberts (2011-02-23 15:54:13)

Evelyn, that's very interesting about seeing people walking while studying. You saw this yourself? Kevin, that's a good reference. I prefer to talk with students while walking rather than sitting in my office.

Evelyn Majidi (2011-03-02 23:00:13)

I lived in Tehran most of the time between 1963 and 1980. Seeing high school and college students studying while walking in public parks and narrow streets was a very ordinary sight during final-exam season. A vital part of the process was repeating the material out loud, over and over, usually to the rhythm of the steps. It reminded me of how easily children learn nursery rhymes, even when they do not understand the meaning of the words, especially when they accompany them with specific gestures or movements. My mother always said that the more senses are involved, the better one learns.

### Assorted Links (2011-02-14 17:10)

- [1]"As reprehensible as many [drug] industry practices are, I [Marcia Angell] believe the behavior of much of the medical profession is even more culpable."
- Richard Posner, judge and erstwhile economist, [2]reveals he is unfamiliar with Thorstein Veblen.
- [3]Notes on nonviolence by Gene Sharp. "They struggled against slavery, achieved voting rights for the disenfranchised, seceded from empires, undermined dictatorships, broke down racial segregation, strengthened exploited workers with the tools of the strike and economic boycott, restored independence to colonized nations, freed intended victims of the Holocaust, spread and defended civil liberties, achieved higher standards of living, ended discrimination, paralyzed an empire, and even defeated totalitarian systems."
- [4]Careerism in the military. Many similarities with careerism in health science. Careerism in health science is one reason many health problems, such as obesity and autism, are getting worse.

1. <http://www.nybooks.com/articles/archives/2009/jan/15/drug-companies-doctors-a-story-of-corruption/?pagination=false>

2. <http://www.yalelawjournal.org/images/pdfs/940.pdf>

3. [http://www.aeinstein.org/lectures\\_papers/FLETCHER\\_LECTURE.pdf](http://www.aeinstein.org/lectures_papers/FLETCHER_LECTURE.pdf)

4. [http://www.cdi.org/pdfs/TPL\\_Essay5\\_2.9.11.pdf](http://www.cdi.org/pdfs/TPL_Essay5_2.9.11.pdf)

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Dan Brown (2011-02-15 10:08:13)

wow! I didn't realize who Marcia Angell is until reading this paragraph, toward the end: "The problems I've discussed are not limited to psychiatry, although they reach their most florid form there. Similar conflicts of interest and biases exist in virtually every field of medicine, particularly those that rely heavily on drugs or devices. It is simply no longer possible to believe much of the clinical research that is published, or to rely on the judgment of trusted physicians or authoritative medical guidelines. I take no pleasure in this conclusion, which I reached slowly and reluctantly over my two decades as an editor of The New England Journal of Medicine."

dearieme (2011-02-16 04:05:46)

My feelings exactly, Dan. Her remarks carry weight.

David (2011-02-17 17:32:45)

Here's a useful link. Any more greatest hits for us to see? [http://books.google.com/books?id=24tXv1nFv40C &source=gbbs\\_all\\_issues\\_r &cad=1](http://books.google.com/books?id=24tXv1nFv40C&source=gbbs_all_issues_r&cad=1)

### **"Do a Small Thing": Good Advice For Revolutionaries and Scientists (2011-02-18 00:15)**

[1] This is the best magazine article I have read in a long time. The subtitle is "What Egypt Learned from the Students Who Overthrew Milosevic", a good description. The Serbian students who overthrew Milosevic had several lessons for budding revolutionaries in other countries, such as Egypt and Burma. One was/is:

Do a small thing and if it is successful, you have the confidence to do another one and another one.

Much like [2] my advice about science: Do the smallest easiest thing that will tell you something. You will learn more from it than you expect. If someone criticizes a study for being "small" they are saying " $1 + 1 = 3$ ". If someone does a large study that fails, they are saying the same thing.

Via [3] Long Form. I knew little about the author, [4] Tina Rosenberg, before this. I am looking forward to reading [5] the book about peer pressure from which this article was taken.

1. [http://www.foreignpolicy.com/articles/2011/02/16/revolution\\_u?page=full](http://www.foreignpolicy.com/articles/2011/02/16/revolution_u?page=full)

2. <http://escholarship.org/uc/item/5bv8c7p3>

3. <http://longform.org/>

4. [http://en.wikipedia.org/wiki/Tina\\_Rosenberg](http://en.wikipedia.org/wiki/Tina_Rosenberg)

5. <http://books.wwnorton.com/books/Join-the-Club/>

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Tom (2011-02-18 13:28:31)

Pardon the off-topic comment, Seth, but the NY Times has an article today that seems to support your memory+walking research: <http://www.nytimes.com/interactive/2011/02/20/magazine/mind-secrets.html?hpw>

john (2011-02-19 02:00:31)

Interesting - but it's democratic governments that need to be overthrown and replaced with anything - because they are worse than dictatorships in that they race replace the natives while making them to pay for it.

Mike Kenny (2011-02-20 12:13:41)

In a similar vein, I wrote about focusing on the easy stuff in an editing task to make it more tolerable to do: [http://michaelkenny.blogspot.com/2009/08/keep-doing-easiest-stuff-until-you-done\\_03.html](http://michaelkenny.blogspot.com/2009/08/keep-doing-easiest-stuff-until-you-done_03.html) There's the snowball method of debt reduction, Sun Tzu's advocacy of attacking weakness with strength and avoiding attacking strength, and similarly, military theorist Liddell Hart's indirect approach, advocating in part attacking the weaker of two allies first, and following the line of least resistance.

Timothy Beneke (2011-02-21 00:08:45)

Tina Rosenberg won a Macarthur years ago and is an unusually thoughtful journalist. Her brother Paul used to be in social theory and is equally so...

### **Educational Testing Service: Stupid or Smart? (2011-02-19 09:21)**

Since the Educational Testing Service is responsible for measuring intelligence, it is disturbing when they appear . . . not intelligent. A Chinese student of mine sent me the following question, which appears in a set of study questions. You are supposed to identify the "flaw" in the argument.

The article entitled 'Eating Iron' in last month's issue of Eating for Health reported that a recent study found a correlation between high levels of iron in the diet and an increased risk of heart disease. Further, it is well established that there is a link between large amounts of red meat in the diet and heart disease, and red meat is high in iron. On the basis of the study and the well-established link between red meat and heart disease, we can conclude that the correlation between high iron levels and heart disease, then, is most probably a function of the correlation between red meat and heart disease.

By "is a function of" I suppose means "is due to". Sure, there are several imperfections, unstated assumptions, in every argument, including this one, just as every piece of research has several imperfections. But are there obvious important flaws in this argument? I think it is reasonable to assume that red meat is the main source of iron.

Since many scientists have trouble interpreting correlations (they think "correlation does not equal causation" is not misleading) presumably an ETS question writer has even more trouble. And this question reflects that. But maybe not.

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ChristianKI (2011-02-19 15:47:10)

"Most probably" is a bit strong. It would be worth to investigate the issue further.

vic (2011-02-19 18:53:04)

The flaw they are looking for is that dietary iron could be a proxy for red meat intake and that something else in red meat could be the source of the association with heart disease, not dietary iron per se. Come on, Seth!

Alex Chernavsky (2011-02-20 05:17:15)

Vic, my take on it is different. I think the flaw in the argument is that something else in the diet (besides red meat) may be the source of the high iron that's referenced in the first sentence. In any case, the passage is difficult to analyze because it's ambiguous and poorly worded.

Seth Roberts (2011-02-20 06:39:40)

Vic, the conclusion isn't that the reason for X (correlation between heart disease and red meat intake) is Y (correlation between heart disease and iron intake). It is that the reason for Y is X. I take "Y is a function of X" to mean "Y is caused by X."

dearieme (2011-02-20 06:57:26)

To write a so-called intelligence test question where you have to guess the meaning of an ill-worded passage of English seems pretty stupid. So there's the answer to your headline question: "stupid". mIn fact, there's probably a general point here: I suspect that IQ tests aren't very reliable when used on subjects who are markedly more intelligent than the setters of the tests. Has this been investigated?

TomGinTX (2011-02-20 12:58:42)

FWIW, the SAT and other ETS exams are intended to measure "scholastic aptitude", not intelligence. Sadly, they are not the same thing. 8-(

SR (2011-02-20 16:52:19)

I gave up university when I found out that not even my economics professors understood the maths behind their own articles, but sent them to a math professor so that he could do it for them. This math professor OTOH did not know how to program a computer, to say nothing about stochastic simulations. If you tried to ask them for instance if the model was stable, you just got an empty stare, and some non-answer that that it was statistically significant or that it was a well known economic model. My conclusion was that nobody in economics (academia?) really understood what they were doing, since the models and the statistics they were using were so complicated, that they used their whole brainpower just to learn to use them, leaving little time to understand what they really was doing. This is probably even worse in other faculties, such as psychology or medicine, where I suppose that statistical models are something one just use, without really understanding them at all. If we take correlation as an example, few understand that given enough variables, and a limited sample space, you would get significant correlations just from the randomness-variable alone, without there really being any underlying correlation representing the real world. The implication of this, is that significant correlation alone is basically worthless. The correlation needs to be BIG, if one is to conclude that something is good or bad for everybody. If one goes back to the example of high iron, undiagnosed Hemochromatosis alone would give you a significant higher mortality for the high iron eaters, rendering the correlation worthless for us from say Scandinavia, who have been eating fish, meat and dairy for the last 4000? years, and before that mostly read meat. (A lot of us can't eat gluten though) "Some researchers believe that hemochromatosis originated more than 40,000 years ago in the area we now know as Ireland with a single person whose genes mutated so that he or she could over-absorb iron to compensate for an iron-poor diet. Today, with iron-enriched foods, iron supplements and plenty of red meat, thereâ€™s no need to pull in extra iron, yet many still carry the ancient mutated genes that cause their bodies to do so, at toxic levels. Left untreated, hemochromatosis can lead to everything from early menopause and infertility to diabetes, heart failure, cirrhosis, primary liver cancer and even death. But if caught before damage is done, hemochromatosis patients can be saved, and their health restored through a process called bloodletting, or phlebotomies." <http://www.americanhs.org/Irish%20in%20the%20blood.htm>

SB (2011-02-20 18:05:56)

<http://www.time.com/time/magazine/article/0,9171,2050030,00.html> Has quotes by you.

dearieme (2011-02-21 03:55:04)

"more than 40,000 years ago in the area we now know as Ireland": golly, are you sure? [http://en.wikipedia.org/wiki/Irish\\_Sea\\_Glacier](http://en.wikipedia.org/wiki/Irish_Sea_Glacier)

SR (2011-02-21 12:16:40)

From the hemoc "Some researchers believe that hemochromatosis originated more than 40,000 years ago in the area we now know as Ireland with a single person whose genes mutated so that he or she could over-absorb iron to compensate for an iron-poor diet." dearie me "â€œmore than 40,000 years ago in the area we now know as Irelandâ€: golly, are you sure?" Not at all, and it was not really important here. The reason I mentioned Hemochromatosis is that you would get exactly this result if your sample space consisted of people with partly Irish decent, like in the UK, or the USA, since it is known that undiagnosed Hemochromatosis is a riskfactor for heart disease. To make my point clearer, if I have subpopulations with different levels for what amounts to dangerous or beneficial, then it would be wrong to assume a model where you treat the subpopulations as one population, IF you want to say what is dangerous to the average person. To go back to the Hemochromatosis example, the level they would find Iron was beginning to become dangerous in their model, would not be relevant for the majority of the population, since what would be too high would be the triggering of the ones with undiagnosed Hemochromatosis. From the same article: "In 1997, a year after researchers isolated the mutated genes that cause hemochromatosis, a genetic mail-order test was developed that allows people to be screened for the disease. Those who test positive for the gene can keep their iron levels in check, and prevent iron from ever invading their organs and destroying their lives. Thomas is on a mission to make people aware of the \$125 test, as well as simple blood tests (serum iron, total iron binding capacity and serum ferritin) that doctors seem so reluctant to give. Itâ€™s not that thereâ€™s a conspiracy against patients with iron overload. Itâ€™s just that many doctors havenâ€™t been educated about the latest facts regarding the disease. And since people arenâ€™t routinely tested for iron overload, doctors must be able to recognize warning signs. Unfortunately, the symptoms of hemochromatosis are often serious diseases themselves, and doctors wind up treating the heart trouble, the diabetes or the liver cancer without looking for an underlying cause." Last about the 40.000 years among the Irish, I think it is correct that they present it so, based on their own models, even if geology say that it impossible. If scientists started tweaking their models to make them fit the wanted result, it would be a lot harder to recalibrate the results afterwards when we find out a better model.

### **Meat-Only Diet: Crave Carbs. Meat + Egg: No Craving (2011-02-20 21:15)**

Joseph Buchignani, a businessman in Shenzhen, has suffered from irritable bowel syndrome (IBS) since he was a teenager. He is now in his 20s. By trial and error, he discovered that a meat-only diet eliminated his IBS. However, it also caused craving for carbs. Because carbs caused IBS, he couldn't simply eat carbs. He tried many ways of getting rid of the craving for carbs: eating more animal fat, eating less animal fat, eating oil, eating lard, and eating different kinds of animals and cuts of meat. He varied how he cooked the meat, eating especially fresh meat, and eating fresh whole fish. All of these attempts failed. He did not try taking a multivitamin pill.

Finally he tried adding egg to the meat. That eliminated his craving for carbs. It made his diet much more sustainable.

This is fascinating for four reasons.

1. Sure, some cravings reflect nutrient deficiencies. (Not all cravings: An alcoholic craves alcohol.) But in the cases I know about, there is an obvious or semi-obvious connection between the craving and the deficiency. For example, people who chew too much ice ([1]pagophagia) crave ice to chew. They are iron-deficient. Eating iron eliminates the pagophagia. Long ago, a craving to eat something crunchy would have led you to eat bones. Bone marrow is high in iron. So the craving makes sense. In contrast, there is no obvious or semi-obvious connection between carbs and eggs.

2. It suggests that a paleo diet is a good place to start looking for the ideal diet. Paleo ideas suggest a high-meat diet. But no matter how long you study what Stone-Age people ate, you will not figure out that eggs will eliminate carb cravings.

3. Like many people, especially those doing paleo, I eat mostly meat and vegetables (a conventional low-carb diet). Unlike most low-carbers, I also eat lots of fermented foods. I don't crave carbs, perhaps because of the lactose in yogurt or the sucrose in kombucha. It hadn't occurred to me to start eating eggs regularly but Joseph's discovery suggests I should try it.

4. Joseph's personal science led him to discover something highly useful and completely non-obvious.

1. <http://www.brighthub.com/mental-health/eating-disorders/articles/92909.aspx>

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john (2011-02-21 07:20:05)

I too have found that eggs decrease carb cravings. I think that they are simply a very satisfying food per calorie amount. Fermented dairy and unsweetened chocolate has this effect with me too. With certain foods, I keep eating until my stomach is too full to continue; with others, I feel satisfied without the physical fullness—I think taste is an important factor, because when I use hot sauce on eggs, or eat meat in a curry-type sauce, I eat much more.

UncleLongHair (2011-02-21 10:02:40)

I sometimes get cravings after a workout (usually 30-45 min intense cardio and some weights). I have tried different things to satisfy them. I have tried carbs, proteins, or a mix, and they don't really do it on their own. I don't feel as hungry, but I still feel like something is "missing". The feeling goes away after an hour or two, but is annoying in the interim, and I feel that I should try to figure out what my body needs for best health. The best thing I have found is whole milk, particularly raw milk, about 3/4 to 1 cup about 20 minutes after the workout. This completely satisfies my cravings for hours and allows me to wait until my next meal for some food. I suspect that this is due to a good combination of fat, carb, and protein, as well as vitamin D. I think a lot of people are "low" (maybe not technically "deficient") in vitamin D without realizing it. I think cravings are interesting and should be studied. I think a craving can be your body telling you what it needs, but only in terms that your body has been "taught". For example pregnant women might crave pickles or pickle juice, when what they need might be salt/sodium or other minerals, and the thing they're most familiar with that is very high in sodium is pickles. I wonder if a woman who was familiar with Japanese cuisine would crave umeboshi instead? A person may be craving ice cream but maybe what they need is fat and vitamin D, and there are better ways to get that than ice cream (i.e. w/o the sugar), but they are not familiar with any foods that have fat and vitamin D but no sugar, so they crave ice cream. I often crave dark chocolate when I am a bit depleted (a long stretch with too little sleep or too much partying, etc), but from experience I know that what my body needs is vitamin B (i.e. taking a B vitamin tablet makes the feeling go away within about a half hour). This doesn't make sense but my body must have some association between dark chocolate and vitamin B.

Nancy Lebovitz (2011-02-21 13:05:47)

I think paleo is an interesting starting point, but not a reliable source of answers for individuals. I don't think bird eggs would have been available through the whole year. On the other hand, it's conceivable that insect eggs would be available more of the time in ancestral environments, and have similar nutritional value.

stuart (2011-06-23 21:59:25)

It has been proven that you can live on a meat/fish only fish diet, and stay healthy the original inuits lived like that and had no cancer, cardiac, diabetes or other civilised diseases, however they aged quickly and had a shorter lifespan, possibly because of a lack of anti-oxidant foods. It is also noticeable that 75 % percent of their calories came from fat, and that they would become sick just eating lean meat.

Anna (2011-07-16 20:21:59)

Um, I don't think there's any evidence of the Inuit aging quickly or having short life spans while eating their traditional diets. At the time studies were done, Inuit were living to 50, while Englishmen and women were dying at 40. So Inuit were outliving Anglo-Saxons by at least 10 years (circa 1900). Many Inuit eat Western diets today and have all the problems associated with Western diets.

### **Beijing Smog: Good or Bad? (2011-02-21 17:18)**

I am in Beijing. The smog is bad. It is more humid than usual and the air is dirtier than usual. At his blog, James Fallows, who is also in Beijing, has [1]posted pictures and pollution measurements. (Incidentally, Eamonn Fingleton, an excellent writer, will be guest-blogging there. [2]In Praise of Hard Industries is one of the best business/economics books I've read.)

The effect of smog on health isn't obvious. Maybe you know about [3]hormesis – the finding that a small dose of a poison, such as [4]radioactivity, is beneficial. It has been observed in hundreds of experiments. It makes sense: the poisons activate repair systems. Even if you know about hormesis, you probably don't know that one of the first studies of smoking and cancer found that inhaling cigarette smoke appeared beneficial: inhalers had less cancer than non-inhalers. R. A. Fisher, the great statistician, [5]emphasized this (pp. 160-161):

There were fewer inhalers among the cancer patients than among the non-cancer patients. That, I think, is an exceedingly important finding.

This difference (a negative correlation) appeared in spite of two positive correlations: Heavy smokers get more cancer than light smokers; and heavy smokers are more likely to inhale than light smokers. It is far from the only fact suggesting [6]the connection between smoking and health isn't simple.

So I am not worried about Beijing smog. The real danger, I think, is [7]not eating fermented foods. Which, thankfully, is infinitely more under my control.

1. <http://www.theatlantic.com/national/archive/2011/02/please-welcome-dougherty-and-klapmeier-fingleton-fisher-and-jenne/71488/>
2. <http://www.nytimes.com/books/first/f/fingleton-hard.html>
3. <http://www.usnews.com/usnews/culture/articles/041018/18calabrese.htm>
4. <http://www.angelfire.com/mo/radioadaptive/inthorm.html>
5. <http://www.york.ac.uk/depts/maths/histstat/fisher274.pdf>
6. <http://members.iinet.net.au/~ray/TSSOASb.html>
7. <http://www.blog.sethroberts.net/category/umami-hypothesis/>

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Sean Estey (2011-02-21 17:59:51)

One of the most fascinating anecdotes regarding stress and recovery is in this excerpt from the book *Spark: The Revolutionary New Science of Exercise and The Brain*: "In the 1980's the U.S. Department of Energy commissioned a study on the impacts of sustained radiation exposure. They compared two groups of nuclear shipyard workers from Baltimore who had similar jobs

except for a single key difference: one group was exposed to very low levels of radiation from the materials they handled, and the other was not. The DOE tracked workers between 1990-1988, and what they found shocked everyone involved. Radiation made them healthier. The 28,000 workers exposed to radiation had a 24 % lower mortality rate than their 32,000 counterparts who were not exposed to radiation. Somehow, the toxins that everyone assumed and feared were ruining the workers were doing just the opposite. Radiation is a stress in that it damages cells, and at high levels it kills them and can lead to the development of diseases such as cancer. In this case, the radiation dose was apparently low enough that instead of killing the cells of the exposed workers, it made them stronger. Neuroscientists call this phenomenon stress inoculation." I often wondered how this phenomenon transferred to vices like light smoking and drinking, and as you pointed out, exposure to air pollution. It's a fascinating discussion, but when I've ever brought it up in conversation, people look at me like I've lost my mind. Definitely not a politically correct topic, especially for anyone who's lost a friend or family member to cancer (most people).

Seth Roberts (2011-02-21 19:51:11)

Thanks, Sean. I didn't know about that study, which is an especially good one. It is newly relevant in light of concern about the health effects of airport screening. I think the explanation the author gives is a bit off (the radiation "made cells stronger"). The usual explanation of radiation hormesis is that the damage caused by radiation activates repair systems. This is temporary. When the activation wears off, so does the protective effect. "Made cells more vigilant" you could say.

noahpoah (2011-02-21 23:33:23)

You have the Fisher quote wrong. It's "And the result came out that there were fewer inhalers among the cancer patients than among the non-cancer patients." Which fits a little better with your point.

Seth Roberts (2011-02-22 04:36:34)

thanks for the correction, noahpoah.

Joseph Dantes (2011-02-22 05:15:36)

Yes, the anti-smoking science is very weak. However, anecdotally I believe that the new chemically processed cigarettes are very bad... I develop a cough whenever I use them, and start feeling crappy. When I was in Beijing, my lungs burned. You see a lot of people there with bad coughs. I smoke handrolled cigs of pure, reasonably moist tobacco and it's quite smooth, no lung troubles. There's no animal science supporting the link between cancer and smoking; the studies instead all showed major health benefits.

Alrenous (2011-02-22 11:07:25)

Reminds me of a study of people living in a radioactive apartment building I read about once. I even found a link: (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2477708/> ) Basically the structural steel got mixed with some radioactive cobalt, and when it was discovered they ran the numbers but found a similarly large reduction in mortality.

Thomas Seay (2011-02-22 12:02:29)

Can anybody here suggest a good book or article on hormesis (I am guessing that the book Sean suggests deals mostly with exercise recovery)? This is fascinating stuff.

Thomas Seay (2011-02-22 15:39:37)

To answer my own question, this is what I have found so far: <http://www.belleonline.com/newsletters.htm> <http://books.google.com/booksid=w1udrdvb9TOC> &pg=PA10 &lpg=PA10 &dq=hormesis+and+homeopathy &source=bl &ots=Qvv3YUrBAv &sig=PdIikQrLuH4Hsb9VTcyKL1z [http://books.google.com/books?id=XRsdXyY\\_5kBYC](http://books.google.com/books?id=XRsdXyY_5kBYC) &dq=calabrese,+edward &printsec=frontcover &source=in &hl=en &ei=2i1kTYusC4a0sAOYnKCPBA &sa=X &oi=book\_result &ct=result &resnum=12 &ved=0CF0Q6AEwCw #v=onepage &q &f=false

Thomas Seay (2011-02-22 18:23:53)

And here is a blog devoted to hormesis. Looks like something people here would be interested in: <http://gettingstronger.org/category/hormesis/>



Sean Estey (2011-02-23 15:08:22)

Thanks for the link, Thomas, this guy seems like he has a lot of great insight.

Todd Becker (2011-02-24 13:36:51)

Great discussion, Seth. I think it is clear that the research on the health effects of smoking is more complex than the simplistic "smoking is bad for your health". From your references, it is reasonable to surmise a low dose hormetic benefit from light smoking. One other confounding variable is the type of tobacco; I've seen some claims that certain additives (including sugar) dramatically increase the carcinogenicity of tobacco and that unadulterated "organic" tobacco is more benign – perhaps even beneficial at low dosages. Other complicating variables besides the tobacco dose and type include: frequency of smoking and individual differences (genetic, environmental, diet) that make individuals more or less susceptible to tobacco's effects. And I really wonder about all the extreme linear extrapolations that have led to a global campaign against "second hand smoke". You've raised great questions about the effects of smog as well. Based on what we see with other hormetic effects, however, I would think that constant, chronic smog would be deleterious, whereas occasional smog days alternating with clear days would be better. Perhaps a study could be done comparing health effects in cities with different smog patterns – you can't just look at the average. All that said, I don't smoke or spend much time in smoggy cities. And I don't work for a tobacco company or polluting industry. I'm just interested in getting to the bottom of the science. That's hard to do when virtually every "health" study is done within a politicized culture where the conclusions and recommendations are more important than the truth. And where we spend more effort banning smoking from bars than addressing serious health issues. Todd BTW, I'm the "guy" that Thomas and Sean mentioned in their posts. I'm glad to see all the interest in hormesis!

Bjarne (2011-03-01 11:00:10)

On Radiation hormesis look at Charles Sanders: Radiation Hormesis and the Linear-No-Threshold Assumption, Springer 2010, ISBN: 978-3-642-03719-1 Up to date book that summes up "all" science on the subject. Also see the video-talk by Dr. Bob Bury on Royal Society of Medicine: <http://www.rsmvideos.com/videoPlayer/?vid=115 &class=videoThumb> Enjoy

Jazi yechezkel zilber (2011-03-12 20:10:00)

The smoking link seems to more yell at bad research than to truly convince that smoking is not bad. I have not reviewed the literature, but the author admits his main point is to show misconduct rather than saying smoking not bad. Would be happy if someone here truly studied the literature. The mixed data on passive smoking is another hint that smoking is not simply bad bad bad linearly. I always wondered at this passive findings. Now I have a clue

## **Memory Palaces and the Walking/Learning Connection (2011-02-23 20:14)**

In [1]this excellent article, Joshua Foer describes how he got really good at competitive memory tests, such as remembering the order of a deck of cards. He competed in the national championships.

Foer writes a lot about using "memory palaces" to remember stuff. You take a familiar building or neighborhood and vividly imagine what you want to remember at different places within it. To retrieve the memories, you mentally visit each place.

This is [2]an ancient and famous method. I knew about it but had not realized until I read the article that it sheds light on [3]my discovery that treadmill walking makes learning Chinese pleasant. (A commenter named Tom also [4]noticed the connection.) Foer gives the obvious evolutionary explanation for why the memory palace method works so well: long ago, we needed to remember where to find important stuff (water, food, special plants, useful materials). So we evolved a memory system well-suited for doing so.

Less obvious is another evolutionary idea: why stop there? It's a system. When you design a car for a certain sort of

driving, you don't stop with the engine. You adjust the drive train, the tires, and so on. If evolution shaped our brains for a certain sort of data (things in places), surely it also shaped our brains to collect that data. Pointless to design a car no one drives.

Two more changes would help make use of the system:

1. Hedonic. Make it pleasant to fill the system with data. This is what I noticed – dry knowledge (such as the order of cards in a deck) became pleasant to learn. Long ago, the hedonic change I noticed would have pushed people to walk in new places rather than old ones.

2. Efficiency. Make learning more efficient (= more learning per unit time). Several confounded comparisons point in this direction. For example, I found that 15 minutes studying flashcards while riding the subway was a lot less help than spending 15 minutes while walking on my treadmill. Of course there are many differences between the two situations. Likewise, using Anki is working much better now than in the past, when I used it sitting down. I will try to study this more carefully.

Years ago, evolutionary explanations such as these were mocked as "just so stories" by prominent scientists, such as [5]Stephen Jay Gould, [6]Noam Chomsky, and [7]Richard Lewontin. It's now clear they were wrong.

1. <http://www.nytimes.com/interactive/2011/02/20/magazine/mind-secrets.html?hpw>
2. [http://en.wikipedia.org/wiki/Method\\_of\\_loci](http://en.wikipedia.org/wiki/Method_of_loci)
3. <http://www.blog.sethroberts.net/category/walking-and-learning/>
4. <http://www.blog.sethroberts.net/2011/02/18/do-a-small-thing-good-advice-for-revolutionaries-and-scientists/#comment-868126>
5. [http://www.stephenjaygould.org/library/gould\\_functionalshift.html](http://www.stephenjaygould.org/library/gould_functionalshift.html)
6. [http://en.wikipedia.org/wiki/Evolutionary\\_psychology\\_controversy](http://en.wikipedia.org/wiki/Evolutionary_psychology_controversy)
7. [http://en.wikipedia.org/wiki/Richard\\_Lewontin#Sociobiology\\_and\\_evolutionary\\_psychology](http://en.wikipedia.org/wiki/Richard_Lewontin#Sociobiology_and_evolutionary_psychology)

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Nick (2012-03-04 11:07:03)

Filling your life with memorable experiences gives you reference points to compare and contrast just like walking through a memory palace. If you do the same thing every day with little variation than you might get better at it to some degree but will have an un-memorable existence. In the animal kingdom however this seems to be stronger selected for.

## **The Creation of Umami Burger (2011-02-24 07:29)**

He studied umami tastes, most of them having to do with aging or fermentation . . .

From [1]this article. As regular readers of this blog know, I believe [2]we like umami flavors – and sour flavors and complex flavors – so that we will eat microbe-laden food, which is essential for health.

Thanks to Tom George.

1. <http://shine.yahoo.com/channel/food/is-this-the-best-burger-in-america-2452461/>
2. <http://www.blog.sethroberts.net/category/umami-hypothesis/>

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JRF (2011-02-24 08:07:12)

I do not remember seeing you mentioning dosage in relation to microbe-containing food. Do you have any opinions on how much, say, kim chi or sauerkraut is a good quantity to aim for in a week?

Alrenous (2011-02-24 08:13:50)

Unintentional...? Comedy. "Umami, [...] is voodoo science to me. Others are convinced of its authenticity" "It's clear that he has looked into the heart of the burger and seen what others have not."

Seth Roberts (2011-02-24 15:42:50)

JRF, I have yet to figure out a good way to study the dosage question. My guess is that several servings per day is a good idea. I eat 2 servings of yogurt/day plus 1 glass of kombucha. Plus kimchi, pickles, etc., when available. Alrenous, re "looking into the heart of the burger and seeing what others have not." Umami Burger isn't terribly mysterious (umami makes food taste better) but it's quite true that many others haven't seen this simple truth about what makes food taste good. Last night a friend told me she had gotten a yogurt machine. We discussed how to eat yogurt. I said I put whiskey in mine – a way to add complexity. She said she hadn't heard of such a thing.

Alrenous (2011-02-24 18:21:00)

Whiskey yogurt sounds pretty good.

Walter (2011-02-26 11:42:15)

Seth, How much whiskey in the yogurt? Won't the alcohol kill the microbes? Or at least get them way drunk? Walter

Seth Roberts (2011-02-27 13:26:56)

Walter, I have never measured it but I'd guess 1-2 tablespoons (in 1 cup of yogurt). That's an interesting question about the alcohol killing the microbes. Maybe I will do a test to find out.

### **Automatic Translation of Email (2011-02-24 18:36)**

Yesterday I learned that you can get your gmail email automatically translated. As a professor at a Chinese university, I get a lot of email in Chinese. This gmail feature – which you can find under Labs – is wonderful!

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THUstudent (2011-02-25 08:23:23)

Dear Professor, Are you offering any classes this semester? If so, what time does it meet? Thank you

Seth Roberts (2011-02-25 14:28:03)  
THU student, I am not offering any classes this semester.

### **The Baltimore Shipyard Study (2011-02-25 15:34)**

In [1]a comment on my last post, Sean Estey described a study of Baltimore shipyard workers, some of whom handled radioactive materials. The ones exposed to more radiation were healthier than those exposed to less. The difference in death rate was huge: 25 %. This is so large and consistent with other data I doubt it is due to a confounding.

You can read more about this study [2]here and [3]here. If one quarter of all deaths are due to suboptimal stimulation of repair systems, that's extraordinary news. The study was finished around 1990. The plausibility of such a large benefit should have led to experiments. The observation that people in mountain states (such as Colorado) have less cancer than those in gulf states (such as Alabama) as well as greater radiation exposure suggested to John Cameron, a professor of toxicology, an experiment in which some gulf state residents are exposed to enough radiation to bring their total exposure up to what mountain state residents receive. This has yet to be done.

In [4]a paper about the effects of low-dose radiation, the authors say we should ignore the Baltimore study because of "the healthy worker" effect – the possibility that persons in one exposure group were healthier than those in another exposure group because workers are healthier than non-workers (and fitness for work may have differed between the exposure groups in the Baltimore study). They give three examples to illustrate the healthy worker effect. In these examples, a group in which everyone has a particular job were healthier than the general public, which includes many people without a job. In their examples, the median effect of being in the full-employment group (in which everyone has a job) is a 10 % decrease in mortality compared to the general-public group (in which some people don't have a job because of disability). That should give a good idea of the maximum size of the healthy worker effect – when something is explicitly varied, that's what happens. The Baltimore study compares person with job to person with job, not person with job to person without job. This suggests that in the Baltimore study, the healthy worker effect was smaller than the effect in the examples, meaning smaller than a 10 % reduction. Such an effect cannot explain a 25 % reduction.

[5]A comment by Alrenous on my earlier post linked to [6]a 2007 study of people in Taiwan whose apartment building was accidentally contaminated with radioactive materials. By the time of data collection, they had gotten far less cancer (3 % of what would have been expected) than the general Taiwan population. A healthy worker effect cannot explain this. Again, the reduction is so great it is unlikely to be due to confounding.

If I could buy something to put under my bed that would expose me to the level of radiation received by people in Colorado, I would.

1. <http://www.blog.sethroberts.net/2011/02/21/beijing-smog-good-or-bad/#comment-871600>
2. <http://www.aps.org/units/fps/newsletters/2001/october/a5oct01.html>
3. <http://ebookbrowse.com/low-dose-nsws-shipyard-pdf-d26500>
4. <http://bjr.birjournals.org/cgi/content/full/79/940/285>
5. <http://www.blog.sethroberts.net/2011/02/21/beijing-smog-good-or-bad/#comment-872141>
6. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2477708/>

PeterW (2011-02-25 16:02:21)

Maybe all those trans-Pacific flights are doing you some good. Actually, stewardesses and pilots would be two more groups worth looking at.

Robbo (2011-02-26 07:55:32)

"If I could buy something to put under my bed that would expose me to the level of radiation received by people in Colorado, I would." Granite chippings ?

Anonymous (2011-02-26 08:56:03)

I hate to say this, but maybe the new full body scanners at US airports are actually improving the public's health?

PeterW (2011-02-26 09:40:28)

<http://informahealthcare.com/doi/abs/10.1080/095533000601085980> This study criticized the Taiwan study you cite for neglecting the age distribution of people living in the apartment buildings. They found that once you adjust for age and demographics the cancer incidence went up.

Stego (2011-02-26 22:14:06)

In a place called Bad Gastein in Austria and about a hundredfifty years back a bright doctor realised that the miners working the saltmines were a lot healthier than the general populace. Knowing he was unto a good thing he bought the mines - they were on the point of running dry - and starting selling time in the mines by the hour to the - wealthy - unhealthy. The company he founded is still in business today. Back then they thought it must be the highly mineralised air, today it is assumed that the slightly elevated radioactivity in there is the key. The good doctor lived to the age of ninety by the way - quite a feat in those times.

Alrenous (2011-02-27 05:09:55)

"They found that once you adjust for age and demographics the cancer incidence went up." Well, yeah. 97 % reduction in morbidity is way too high to be fully believable. But with separate studies with a similar effect, the question is one of magnitude, not sign. From the study: "increase risks of developing certain cancers in specific subgroups" Shockingly, making your body work harder is not risk-free. Hence Seth's, "The plausibility of such a large benefit should have led to experiments." However, I would also caution against dosing yourself on rads just based on these studies. I symbolize it this way: should those dockworkers expose themselves to even more radiation? So: how do you measure the ideal exposure for yourself as an individual, rather than a population mortality statistic?

PeterW (2011-02-27 07:59:47)

@Alrenous Yes, the magnitude is different, but so is the \*sign\*: "All cancers combined, all solid cancers combined were shown to exhibit significant exposure-dependent increased risks in individuals with the initial exposure before the age of 30, but not beyond this age."

Leonardo (2011-02-27 11:09:29)

I my lazyness I haven't read the linked articles of the studies. What kind of radiation do they refer to? I would assume that not all radiation are equal. Thanks, L

Seth Roberts (2011-02-27 14:18:22)

Leonardo, they refer to (a) radiation from radioactive materials (e.g., uranium) and (b) cosmic radiation (as a possible reason that people in mountain states get less cancer than people who live by the sea).

Thomas Seay (2011-03-01 11:02:42)

Here is a study done on the effects of radon on rheumatoid arthritis from people who visited Radon Spas (places that have relatively high levels of radon): <http://www.radonmine.com/pdf/longterm.pdf> Here is a link for an actual Radon Health spa in

Montana: <http://www.radonmine.com/>

Thomas Seay (2011-03-01 11:07:46)

That said, this question of hormetics is very complex. A good case in point is the hormetic effects of resveratrol. At a lower dose, for example, it may be good for heart protection but also conducive to tumor formation. In other words, the biomedical endpoint determines whether some of these substances are "good" or not. They may be "good" for one biomedical endpoint and "bad" for another. Please see this interesting article by one of the leading researchers in hormetics, Calabrese: <http://www.belleonline.com/newsletters/volume16/vol16-2.pdf> "The current assessment indicates that low concentrations of resveratrol can be potentially beneficial or harmful, depending on the endpoint of interest. The data suggest that low doses of resveratrol would have the capacity to increase the risk of tumor development of a number of organs based on its capacity to enhance cell proliferation in multiple human tumor cell lines. In contrast, a strong case can be made that low doses of resveratrol can be significantly cardio-protective. "

Chris (2011-03-23 03:45:57)

As a Tokyo resident, I'm encouraged by your post...I really hope it's true. I'm curious though, would you choose to live in a place like Tokyo where there's higher than normal radiation in the food/water and possibly the air for the possible benefits?

### **The Best Argument Against Man-Made Global Warming (2011-02-27 05:52)**

The best argument I have ever seen against the idea that humans are dangerously warming the earth – that is, against the view of Al Gore, Elizabeth Kolbert, and thousands of other people who claim to understand what they are talking about – comes, strangely enough, from a supporter of this view.

Steve Connor is the Science Editor of The Independent, a highbrow London newspaper. He [1]interviewed Freeman Dyson – who, [2]like me, thinks the conventional certainty on this issue is far too strong – on the subject. The headline of the interview labels Dyson a "heretic". Connor wants to know how Dyson reacts to what seems to Connor to be overwhelming evidence.

The interview is by email. Dyson says he has no faith in the models. Connor writes:

I was only trying to find out where your problem lies with respect to the scientific consensus on global warming. As you know these models [that Dyson doesn't believe] are used by large, prestigious science organizations such as NASA, NOAA and the Met Office, which use them to make pretty accurate predictions about the weather every day. The scientists who handle these models point out that they can accurately match up the computer predictions to real climatic trends in the past, and that it is only when they add CO2 influences to the models that they can explain recent global warming.

There it is. The scientists who use the weather models every day, who know them better than anyone else say that we should believe them because 1. They can fit "real climatic trends in the past". This is meaningless. [3]The models have lots of adjustable parameters. Perhaps they could have fit any plausible past trends. 2. They "make pretty accurate predictions about the weather every day" – that is, predictions of the weather of the next week or so.

This is admission of defeat. It's as if you say you can throw a ball a mile and, when someone asks how you know this, you say, "I've thrown a ball 10 yards quite often." If you had thrown a ball more than 10 yards you would have said so. If the models had predicted accurately more than a week in advance their boosters would have said so.

It isn't just Steve Connor who unintentionally makes a really good case for the opposite of what he believes. Sir

Paul Nurse, a Nobel Prize winner in Biology and President of the Royal Society, hosted a recent BBC show called [4]Science Under Attack in which we were supposed to believe predictions of global catastrophe because weather models can predict the weather for the next few days. A NASA weather expert said that! Nurse took him seriously.

My goodness. If the President of the Royal Society is this credulous, what are the ordinary members like?

1. <http://www.independent.co.uk/environment/climate-change/letters-to-a-heretic-an-email-conversation-with-climate-change-sceptic-professor-freeman-dyson-2224912.html>
2. <http://www.blog.sethroberts.net/2011/01/12/what-global-warming-science-really-says/>
3. <http://escholarship.org/uc/item/5vt0z72k>
4. <http://royalsociety.org/news/paul-nurse-presents-horizon/>

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Jake (2011-02-27 07:06:25)

There is always a huge disconnect between science and the "scientists" who have access to the mainstream media.

Joseph Dantes (2011-02-27 09:13:47)

Bravo Seth, a great use of your BS-detector and also very insightful about modeling in general. And ballsy to skewer ad sacred cow.

Steve G. (2011-02-27 09:27:14)

Questions from an American pragmatist: Please unpack your sentence "who, like me, thinks the conventional certainty on this issue is far too strong": 1. What level of confidence do you hold that those who argue that humans are affecting climate change are correct in some significant measure? 2. Are you saying those who contend that human action currently influences our weather and climate have the balance of evidence in their favor but you want to take no response? You want to wait and see? What is the potential risk of waiting? (Of course, there are real costs in acting, too.) 3. Given that Al Gore, among others, is only a layman who serves to raise this issue, do legitimate scientists as a whole back the Dyson-Roberts skeptical position? How should a layman, like me, respond? 4. Newton had some very odd beliefs (by modern standards) that seem at odds with his revolutionary physics, so is this a similar case with the otherwise incredibly intelligent Dyson? Can one who produces diamonds also produce dung? 5. Pragmatism uses skepticism, but it does not enshrine it upon an alter, lest it become cynicism or mere contrariness.

Calvin (2011-02-27 09:38:09)

Hi Seth, This is an honest question, not a snarky remark. The main reason that I believe in human-driven global warming is that, after two hundred years of increased burning of hydrocarbons, putting lots and lots of CO<sub>2</sub> into the air, wouldn't you expect global warming? Or, how would you avoid this? I assume that the cause-and-effect looks different from your end, and I'm curious how. Thanks.

Clint (2011-02-27 10:14:48)

If this is the best argument against man made global warming then it declaring it a certainty. That someone that does not work in climatology or weather, and does not know the difference between climate models and weather models doesn't believe their accuracy is the best counter argument is great news for actual scientists working in the field. And stating that weather models cannot predict climate does not change any of the measurable facts of CO<sub>2</sub> increases or warming, or that CO<sub>2</sub> has green house affects.

Tim Newsome (2011-02-27 10:26:31)

I think you raise a good point in that you can't say a model is valid because it predicts the weather. But what would you have to see in a model to convince you that it is valid? Your throwing the ball analogy doesn't really hold up because we don't have the option of throwing the ball a mile. We just have to wait 100 or 1000 years and see if we were right. I think the best scientists can do is create a model incorporating as much as we know about climate, and hope that it is correct. If that is true, then unfortunately the only people who are in a position to evaluate the model are those who have studied it in great detail. Which brings you right back to trusting the scientists because they are scientists. It's a conundrum. Tim

Gunnar (2011-02-27 10:53:39)

I read the other planets in our solar system change drastically for decades. I suggest David Wilcock and his research. No cars on Mars as far as we know. I'm in favor of not using cars and treating the earth well, btw. So that is not at issue. It's about understanding the real cause, which seems to involve at least our whole solar system.

Sean Estey (2011-02-27 13:40:00)

Well, if there's one thing humans are notoriously bad at, it's making predictions about future events. The more complex and chaotic the system, like the stock market, the harder to make predictions. Climate is a very complex, chaotic system, involving a wide variety of fields spanning from geophysics, meteorology, astronomy, and "climatology". And the climatologists don't really have any insight into the other fields. They are looking at a narrow set of variables rather than the true cross-discipline approach that we need to fully understand longterm climate variability. Roy Spencer is a meteorologist who makes a strong claim that Pacific Decadal Oscillations—Pacific ocean temperature fluctuations which operate on 30 year cycles—can explain about 75 % of the climate shift in the 20th century. He speculates that the PDO causes a change in cloud cover which causes radiative imbalance, causing longterm temperature shifts. This is a much more plausible explanation than blaming it all on CO2. The IPCC models don't even take into account the possibility that clouds can be primary drivers of climate change, since studying clouds is more of a meteorology discipline. So there's a lot we don't know about climate, and until we can take a truly cross-discipline approach, we will remain in the dark.

Seth Roberts (2011-02-27 13:42:14)

Clint, someone who works at NASA told Paul Nurse we can trust climate/weather models because they can predict the weather a few days later. I am not making this up. The person at NASA works in the field. Tim Newsome, what I want to see to convince me a model is valid is accurate prediction. The models used by Jim Hansen et al. to predict catastrophe could easily have been used to predict the weather/climate 1 year in advance. Or 2 years in advance. They are what, 20 years old? If that had happened, now we would have a decent set of predictions to compare against what actually happened. But, as you may have noticed, this hasn't been done or at least the results haven't been made public. So people like Steve Connor are reduced to talking about predicting Thursday's weather on Monday. Calvin, adding more carbon dioxide to the air has lots of effects. I don't know which ones matter the most nor how they are related. As the planet gets warmer for other reasons, carbon dioxide is released from the ocean. There is nothing new about big increases in atmospheric carbon dioxide. It hasn't led to catastrophe in the past. Models that say large increases in atmospheric carbon dioxide must cause catastrophic warming are wrong. Sean, good points. I agree. Steve G., I believe that the Cassandras, such as Hansen, are placing too much weight on models that have never been shown to predict accurately. There is no good reason to believe those models. In psychology, the same thing happened: People took seriously models that had never been shown to accurately predict. Perhaps they confused fitting with prediction, I don't know. Maybe Hansen and other climatologists confuse the two – I don't know. But I do know that it is far harder to test a model's predictions than to test whether it can fit past data. Have humans significantly affected the climate? I don't know. I support research to find out. Which means testing climate models, among other things.

Kirk (2011-02-27 14:15:13)

One scientist who has wavered in his views about anthropogenic global warming is Matt Ridley. I highly recommend his book 'The Rational Optimist' where he explains his current (skeptical) views. I consider this a situation where the 'alarmist' crowd has sabotaged their own goals. It just feels so good and righteous to be against Big Oil and the Rich and to be one of those in-the-know as to the next looming catastrophe. And yet they haven't thought this through. How could their imagined dystopia



be prevented? By replacing fossil fuels with renewables. How does one generate political enthusiasm for renewables? The liberal crowd is already there, it's the conservative crowd which needs to throw their weight behind the effort. Which could be done by appeals to patriotism, nationalism, self-reliance, and refusal to fund radical Islam (indirectly) through petro-dollars. Structure it not as an unlimited federal spending spree on research, but structure it to appeal to the capitalists, something along the lines of: The United States Government will buy \$20 billion dollars of renewable energy technology each year for the next ten years (spread amongst the top ten most efficient American-created alternative-energy products). A guaranteed market which opens the funding for the building of factories. State governments could be encouraged to make similar pledges. The airwaves could be filled with slogans about 'Self-Reliance in Ten Years' and various others jingoistic ones having to do with camel racing. Not that the conservatives have been bright enough to figure this one out either. It's just been too satisfying on their side to whine about welfare queens or birth certificates or huge debts (which they conveniently forget were run up by their own leaders). Read Matt Ridley. His optimism sometimes almost overwhelms my disgust with American politics.

Sean Estey (2011-02-27 15:55:45)

Matt Ridley is a smart guy, and the Rational Optimist is a great book, and his arguments are probably on point, but the fact is that alarmism sells and optimism doesn't. Alarmists can claim to be "informed" and "conscious" whereas people like Ridley are written off as naive, or "free market ideologues". They don't even need to argue against his points to write him off, they can just draw an unrelated comparison like how unrestrained capitalism created the recent financial crisis, and just like that, 99 % of people would buy that argument. People like Ridley don't have any influence in this debate, because he's not telling people what they want to hear, whereas people like Al Gore are.

icr (2011-02-27 16:41:42)

For Bruce M Cattanach BSc PhD DSc FRS rose-colored glasses triumph over alleged alarmism: <http://www.astraeon.com/borderwars/2011/02/inbred-mistakes-vi.html> #comments Domestic animal breeding apparently being an animal quite different from climate change.

Clint (2011-02-27 18:24:06)

I believe that you are not making up any of this. However, I think the point of such a statement is not "we can use the weather model to predict future climate" but more along the lines of "we used to be really bad at modeling weather and we have learned new and better ways of modeling and therefore we are fairly confident in our ability to create climate models". If anyone is seriously making the previous claim then they do not know what they are speaking about. And climate history has a bad history of people who are massively qualified in fields other than climatology making ignorant claims about climate science.

Tom Myers (2011-02-28 08:04:15)

You say "They can fit cereal climatic trends in the past". This is meaningless. The models have lots of adjustable parameters. Perhaps they could have fit any plausible past trends" but what you're criticizing includes the specific claim that "that it is only when they add CO2 influences to the models that they can explain recent global warming". Do you mean to say that you consider this to be a lie? If so, it's an odd one, where they (Gavin Schmidt in particular) seem to be working hard to make it easy for you to expose the problem: you can download the Goddard model from <http://www.giss.nasa.gov/tools/modelE/> and the documentation is careful to explain how you can play with the parameters yourself. If you (or a group you can put together, perhaps?) can get the model to match past trends without CO2 influences, or even with a substantially reduced CO2 sensitivity, then you'll really have something interesting. And surprising, at least to me. :-)

Alex Chernavsky (2011-02-28 10:24:45)

I don't know climate models from calamari, but I do think that scientific consensus is over-rated. There is fairly widespread consensus that mental illness responds well to treatment with psychotropic drugs (antidepressants, antipsychotics, etc.). However, I think the truth is that these drugs are [1]dangerous and ineffective.

1. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452417/>

Calvin (2011-02-28 10:29:45)

Seth, and everyone, I think that my main point isn't necessarily CO2. I'm not a scientist, and if I was, I don't think I would be a climate scientist, just because that's not my interest. In fact, I think that most of the comments in this thread are just a lot of lay people talking about what they've read in books and online. Me included. That being said, I don't think that the impact humanity has made on the world, the atmosphere included, is a small thing. There are a lot of things added, and a lot of things taken away. A lot more plastic in the ocean, a lot less uncovered soil on the ground, etc. I think that it's so easy to get behind an idea like global warming (whether it's true or not, I honestly can't say I'm certain) because we know, intuitively, that when something is driven more and more off-balance, it generally will hit a tipping point, and then change relatively quickly to a new balance. Avalanches, Jenga-towers, storms, the straw that broke the camel's back, etc. So my core belief is that we have changed the world a lot, and that changes in nature are prone to the domino effect. I also believe that, at some point, one of these changes, or a consequential change, won't be tolerable to humanity, and that will be that. Whether or not global warming is involved, I guess, will not really be important when we get to that point.

Seth Roberts (2011-02-28 11:26:33)

Tom, no I don't consider that "the only way they can fit recent warming..." to be a lie. Perhaps the models are missing X, and X causes both (a) carbon dioxide increases and (b) warming.

Alrenous (2011-02-28 12:30:22)

It's extremely easy to make that mistake. Models can be useful, and do have to be calibrated. But the calibrations are necessarily ambiguous - as you tune the model to play well with past measurements, various judgment calls have to be made, and if they're made by someone who already believes in carbonic warming, those judgments are going to implicitly assume carbonic warming is occurring. Essentially the models are circular arguments (well, probably) even setting aside all their other shortcomings. My issue is that it appears that the model authors are aware of the problem, and for it is for this reason among others that they refuse to share the model. You can't and shouldn't jail someone for pleading the fifth, but it should make you very very suspicious.

Tom Myers (2011-02-28 12:38:28)

Seth, certainly it's a possibility that all of the GCM models are missing something important; I don't understand how what they're missing could be an X that causes carbon dioxide increases. A GCM model isn't really for predicting carbon dioxide increases anyway; the basic carbon dioxide level in the models is an input. For the postdictions (matching to past data) you were criticizing, that input is what was measured as being in the atmosphere (and sometimes what was measured as being in the ocean, as well.) We know, pretty closely, where the CO2 has been coming from ( [http://en.wikipedia.org/wiki/List\\_of\\_countries\\_by\\_carbon\\_dioxide\\_emissions](http://en.wikipedia.org/wiki/List_of_countries_by_carbon_dioxide_emissions) ), with a little less than 1 % addition by volcanoes, on average. There's plenty of uncertainty left in the modeling, especially (as I understand it) about cloud formation, heat transfers within the ocean, and such. Because of that, you need to use parameters to put in assumptions, as well as parameter that simply represent inputs. But the modelers have been claiming, as you quoted, that they can make it work (postdiction, matching not only global averages but rough spatial distribution) if they assume the overall CO2 sensitivity that they do assume, somewhere in the range of 2-4.5C per doubling of CO2 (see, e.g. <http://www.skepticalscience.com/Hansen-1988-prediction-advanced.htm> ), and they can't make it work without that. A lot of people have criticized their work, but apparently without being able to construct successful postdictions that didn't assume roughly the same CO2 sensitivity. So we have a phenomenon for which we have successful models, but only on that assumption (or range of assumptions, if you prefer.) To me, that's a pretty good test; it doesn't make the President of the Royal Society look credulous. Personally I made fun of global warming models in the early 80s, when as an asst prof of computer science I learned a bit about them; they deserved it then. (I followed Roy Spencer's satellite-data adventures for some years thereafter, since which I've been inclined to ignore him or at least wait for refereed publications and criticisms thereof.) The models are certainly not perfect, but it has been a while since I made fun of them. (But I'm still not worried about global warming in the long run; five years ago I wrote <http://mistakesbytjm.blogspot.com/2005/11/long-run-global-warming-and-other.html> and I'm inclined to stick with a surprisingly large fraction of it.)

Tom Myers (2011-02-28 12:57:50)

alrenous, I'm surprised that you think "the model authors are aware of the problem, and for it is for this reason among others that they refuse to share the model." As I said above, you can download the Goddard (NASA) model from <http://www.giss.nasa.gov/tools/modelE/> and play with it yourself. I'm not sure how many years that's been true, but it's not new: I remember recommending it to a computer science student a couple of years ago (I'm not a prof any more, just a grant-funded programmer who sometimes works on projects that comp-sci students are also working on.) There used to be complaints that it was hard to get the model going, but there now seems to be a community of people doing it. There are other models you can play with as well; see the last question on <http://www.realclimate.org/index.php/archives/2008/11/faq-on-climate-models/>. Enjoy!

Nathan Myers (2011-02-28 23:53:24)

1. Kirk: Matt Ridley isn't a scientist. He's a journalist and hereditary plutocrat. His doctorate in zoology, and marriage to a neuroscientist, do not bolster his opinions on climate. Prophetically, in 2007 he was forced out of chairmanship of the Northern Rock bank – the first of UK's banks to collapse since 1878! – for failing to heed warnings about its unwise policies. Come 2008, he had lots of company in ignominy, which in no way reduces his own culpability or theirs. His sociobiological fancies haven't fared better than his bank. He does not appear to have taken any lesson from his failures. 2. It's curious that Seth refers to climate scientists as "Cassandras". **Cassandra is best remembered for having been right**, but ignored. It was, precisely, ignoring the original Cassandra that brought down disaster on her kin. 3. By the same logic Seth presents, his posting demonstrates the weakness of the denialist argument. The strongest, most persuasive bit of evidence you can muster is an offhand remark, in an interview question, that, examined, turns out to be completely neutral on the topic? 4. For Alrenous, re: "*they refuse to share the model*": as Tom (no relation) points out, the model is readily available; go wild. This, by the way, completely refutes your assertion. 5. For Alex: I was off work for 10 weeks last year with a short-term-memory disability. (Thanks be to our recent ancestors for establishing state Disability Insurance; without, my family would be in penury.) Once the right *dangerous and ineffective* psychotropic drug was identified, I was back at work within days. To convince me they never work, you'll need much stronger evidence than you can muster. 6. Finally: [http://scienceblogs.com/startswithabang/2011/02/weekend\\_diversion\\_jewels\\_of\\_th.php](http://scienceblogs.com/startswithabang/2011/02/weekend_diversion_jewels_of_th.php)

Alrenous (2011-03-01 08:14:54)

"As I said above, you can download the Goddard (NASA) " Yeah, embarrassed myself pretty good there. I even saw your comment - after it was too late. Learn not to post when sleepy, I guess...?"

Alex Chernavsky (2011-03-01 09:49:09)

Nathan, I wouldn't say that psychotropic drugs *never* work. Even a bullet to the head works sometimes, as evidenced by [1]this case report of a man who successfully treated his OCD by shooting himself. Also, I wouldn't consider memory deficits to be a mental illness per se. Sounds more like a neurological problem. In any case, the only drugs that are typically prescribed for treating memory deficits (at least in the US) are the drugs used for dementia – and even many doctors view those drugs as [2]useless (they're essentially placebos-by-proxy – they are designed to make the caregivers feel better).

1. <http://bjp.rcpsych.org/cgi/content/abstract/151/6/855>

2. <http://www.nytimes.com/2004/06/25/us/british-study-sees-scant-value-in-alzheimer-s-drug-aricept.html>

Seth Roberts (2011-03-01 13:08:26)

Nathan, okay Matt Ridley's Ph.D. is in zoology. Here's what I'd like to know: You seem to take climate models seriously. Why?

Nathan Myers (2011-03-01 15:49:03)

Alex: I was allowed to visit a neurologist, too, who explained (among other things) that my problem was certainly not neurological, seeing as it responded in the expected way to this *dangerous and ineffective* psychotropic drug. Despite your no-doubt frequently-reliable instincts, mental health professionals nowadays *do* often cure memory deficits using drugs that are *not* normally prescribed for dementia. Many illnesses still are not usefully treatable, but that's no reason to avoid treating those that are. It is our misfortune that we have no objective way, yet, to distinguish between those than to see which respond

well to attempted treatments. Seth: Because the models have been working well – i.e., predicting subsequent events accurately – for the past few years. In 2000, it was still possible to claim that the evidence didn't demonstrate anything conclusively. Today there is enormously more evidence, and more kinds of evidence, and it overwhelmingly supports one side. You're left grasping at straws, and it's getting embarrassing. Since the models neither incorporate nor predict cloud cover, the planet might leave the models behind if the atmosphere switches to a mode in which cloud cover is radically different. Chaotic systems are commonly near-stable only within a narrow range of conditions, and tend to lurch suddenly and dramatically to new modes in response to what seem like minor changes. The planet could equally as well plunge into a global ice age after a mode change triggered by initial warming. Such an outcome does not strike me as better. If we really trusted the models, we could drive the planet toward some preferred future condition. If you don't trust the models, the only sane action is to *avoid* pushing the system out of its present, precarious balance. In any case, the ongoing obliteration of reefs by carbonic acid poisoning is reason enough, *all by itself*, for heroic efforts to restrict carbon output. Consider the alternatives: (1) status quo, continued poisoning (mercury, sulfur, NO<sub>x</sub>, fouled fisheries, what-have-you), military extremism, and dependence on foreign political stability and largesse, or (2) clean wind and solar energy, with none of the above. What if global warming fizzles, and we got off our coal-and-oil habit "for nothing"? I'd rather live in world (2) either way. Avoiding global climatic catastrophe is a bonus.

Alex Chernavsky (2011-03-01 17:20:05)

"...mental health professionals nowadays do often cure memory deficits using drugs..." And not just *nowadays* – they've been doing it [1]for years. Only the marketing is better today.

1. [http://commons.wikimedia.org/wiki/File:Nerve\\_and\\_Brain\\_Tablets.png](http://commons.wikimedia.org/wiki/File:Nerve_and_Brain_Tablets.png)

Sean Estey (2011-03-01 17:41:52)

Nathan, I don't see how we can get off our coal-and-oil habit "for nothing". Every decision has a cost. There are no free lunches. In this case, imposing carbon emission limitations is likely to have a very heavy economic cost in developing countries, by severely limiting their economic growth. By limiting economic growth, we are prolonging the time they are shackled in poverty, which I would say is a very heavy cost. You might say that we (the developed world) should do all the R & D for renewable energy technology, then pass the benefits along to the developing world, but I doubt this can be done a) anytime soon, and b) without still imposing a high economic and therefore social cost to them. Of course the cost of doing nothing at all is that we do wreak havoc to the climate system, but there is still much uncertainty there, whereas the economic/social cost of reducing carbon is much more certain. On balance, it seems that the most prudent course of action is to wait a little longer for the science to solidify before acting one way or another.

Seth Roberts (2011-03-01 19:24:54)

Nathan, you believe the models "because the models have been working well â€" i.e., predicting subsequent events accurately â€" for the past few years." I am unaware of this correct prediction. Could you tell me where I can learn about it?

Tom Myers (2011-03-02 13:06:05)

I wouldn't have put it the way that Nathan-no-relation did, hence my emphasis on postdiction, but quite a number of counterintuitive predictions have been borne out by the data. Consider <http://bartonpaullevenson.com/ModelsReliable.html> which claims, with references, that Global Climate Models have successfully predicted: \* That the globe would warm, and about how fast, and about how much. \* That the troposphere would warm and the stratosphere would cool. \* That nighttime temperatures would increase more than daytime temperatures. \* That winter temperatures would increase more than summer temperatures. \* Polar amplification (greater temperature increase as you move toward the poles). \* That the Arctic would warm faster than the Antarctic. \* The magnitude (0.3 K) and duration (two years) of the cooling from the Mt. Pinatubo eruption. \* They made a retrodiction for Last Glacial Maximum sea surface temperatures which was inconsistent with the paleo evidence, and better paleo evidence showed the models were right. \* They predicted a trend significantly different and differently signed from UAH satellite temperatures, and then a bug was found in the satellite data. ... .. And so on. Now, it's q

Nathan Myers (2011-03-02 13:06:44)

Sean: By "for nothing", I meant "to avert a catastrophe which later information indicated was not imminent". Such an outcome might, for example, result from an (evidently delayed!) adjustment to changing conditions that increases the biosphere's ability to sequester carbon. We might imagine marine plankton evolving (mystifyingly slowly) to grow thicker shells, which sink to the ocean bottom and remove carbon from circulation. I don't know of any reason why that would occur. All the evidence we have indicates it's not. Remaining on coal and oil has imposed, and imposes, ruinous costs on the world not directly borne by extractors or purchasers. *Only one* of these is the ecological-network collapse and mass extinction that we see following global warming. Another is the ongoing obliteration of coral reefs by carbonic acid, and the fisheries that depend on them. Another is the pervasive distribution of mercury that had been safely sequestered underground. Another is the widespread tyranny and military oppression that ensures the elites' exclusive access to carbon found under poor peoples' land. (I could go on.) A carbon tax, applied scrupulously, would direct a tiny fraction of those costs back to users, and fund an efflorescence of new industries that have long been suppressed by the artificially low prices of oil and coal, soon eliminating such dependence and all of the costs. We have already "waited a little longer", again, and again, and again. All but 2 of some 2000 NAS members consider it solid already. Can you identify any condition that you would interpret to demonstrate the science has solidified? Are you holding out for unanimity? Alex: Disingenuousness should be beneath us here. I'd like to take the opportunity to explore why the double-blind trials always touted as the "gold standard" of drug effectiveness testing fail. It comes down to diagnostic categories. If symptom A has underlying causes M, N, O, P, ..., of which N is seen, clinically, to be effectively treated with drug D, then the success of a trial depends entirely on how well you can distinguish N from M and O *without* resorting to D. If you cannot distinguish them with lab tests, then a trial must include a full population of sufferers of M, N, O, P, ... It will only prove that D is ineffective for most of them, a fact you already knew all too well. This difficulty with trials does not, in practice, cripple effective treatment, except insofar as it keeps useful compounds out of the pharmacopoeia. Psychiatrists and oncologists try D, E, F, ... in succession, and when one is found to work, stop there. It's a stone-age approach that reflects stone-age diagnostic capabilities, but the primitiveness of our present diagnostic capabilities should not keep patients from receiving treatments that are very often very effective. Seth, all you need to do is step out of the echo chamber of the denialists, and you will find yourself deluged with compelling evidence. Bring a kayak.

Tom Myers (2011-03-02 13:14:46)

sorry, not sure how that last was pre-submitted. Anyway I was going to say that: Now, it's quite true that this doesn't give us a usefully testable prediction of the temperature of 2015, it gives us a range. So climate scientists do offer to place bets, but it's not like betting that the Moon will be in its predicted position as of the year 2,000,000AD. But if you're talking, as Nathan is and as I believe you are, about predictions used to validate a model – well, as I said, it's been quite a while since I felt able to laugh at the climate models. (And as Nathan suggests, and as I think Tyler Cowen has said, "uncertainty is not your friend" in this issue; if I were confident that the models were correct, and that the real problem is the long-run problem, then I'd worry less about climate change than I do.) (sorry for split comment.)

Seth Roberts (2011-03-02 13:55:35)

Nathan, you remind me of a surgeon I consulted who said there was plenty of evidence that the operation she recommended was a good idea. I could easily find the evidence using Google, she said. I could not find it. My mom, a medical librarian, could not find it. Confronted with these failures, the surgeon said she would find it. She never did. Let me make a prediction: You are never going to supply an example of the "successful prediction" you claim exists. Tom, I looked at the page you linked to. The main prediction of the models is that there will be excessive warming, so I was especially curious about "global warming" predictions. The latest paper (of evidence) should be the best. Here is the latest paper that page gives: Mann, M.E., Z. Zhang, M.K. Hughes, R.S. Bradley, S.K. Miller, S. Rutherford, and F. Ni 2008. "Proxy-based reconstructions of hemispheric and global surface temperature variations over the past two millennia." *Proceedings of the National Academies of Science* 105, 13252-13257. The title shows this isn't about predictions, it is about fitting past data. Failing to understand the difference between prediction and fitting past data is so naive it seemed pointless to continue. At any time – right now, 5 years ago, 10 years, 15 years ago – the people who work with those models and claim we should pay attention to their predictions could make/have made a set of predictions: next year, the year after that, and so on. Then, as time passed, we would have found out if the models predict correctly. The modelers haven't done that. The more time that passes, the more glaring this failure becomes.

Nathan Myers (2011-03-02 16:34:55)

*You are never going to supply an example of the "successful prediction" you claim exists* And my prediction: you will never look at any example without finding some way to ignore most of it, and re-interpret some detail in just such a way as to make you right all along. Will you wait until after the Amazonian basin is a desert, and insist that at no point was the evidence ever strong enough to act on? My question for you is the same as for Alex: what can you think of, that could happen within a year or three, that would oblige you to change your mind? Is any such thing even conceivable? Ten years ago you could point to Mann's statistical irregularities to proclaim his data too weak to demonstrate, alone, what is now well-supported. Today you're reduced to promoting random offhand remarks as the "Best Argument Against Man-Made Global Warming". Before, said warming was illusory. Now, it's just not caused by CO2. Next will it be the fault of the ocean microfauna for failing to step up and absorb our excess? Where are we going from here?

Tom Myers (2011-03-02 18:21:22)

Two points, I guess. (1) Seth, you say The title shows this isn't about predictions, it is about fitting past data. Failing to understand the difference between prediction and fitting past data is so naive it seemed pointless to continue. I do indeed wonder if it's pointless to continue. If, say, Seth Roberts in his work on diet comes up with an appetite-model which implies a claim about the Paleolithic, and then somebody finds a cave in Iran with traces of ancient campfires which tests that claim, then I'm gonna list it as a "prediction"; the fires themselves were not in your future, but the connection of your model to that data was in your future, and that's what counts epistemologically for evolutionary theory, for geology, for astrophysics or for climate change. These millenia-old datasets, reported in the 2008 article you're rejecting by title, were in the future for Arrhenius in 1896, for Broecker in 1975, and for the guys in between; those are the names in the "Models" column as having originated the general greenhouse-gas global warming prediction for which the 2008 article is among the "Evidence." The compatibility of their models with that data strikes me as a genuine prediction-based test. (Of course the models are compatible with the rise in temperature with rising CO2 since the models were made, and that's another.) And no, I don't know that Levenson's correct about this 2008 reference; I know about some of his references, but not this one. I'm just saying I don't believe you can tell from the title that he's using "prediction" improperly. (2) Seth, you say that At any time "right now, 5 years ago, 10 years, 15 years ago" the people who work with those models and claim we should pay attention to their predictions could make/have made a set of predictions: next year, the year after that, and so on. Then, as time passed, we would have found out if the models predict correctly. The modelers haven't done that. So far as I can tell, that's, well, that's not quite right. The people who work with these models have said what the models predict, which is a little like predicting the water level as the tide comes in during a storm: things go up and down a lot, and there's probably a storm surge adding a bias to your readings, so you cannot predict the exact level at any given time; prediction is rougher than that. It sounds like you're demanding that they predict the waves; if that's what you're demanding, there's not much point talking about it. I'm interested in knowing if the models (which make lots of predictions by which to be tested) are basically correct, because if so things will get gradually hotter and many people think that will be a disaster but I just think it will be a problem – if it gets hotter slowly, a solvable problem. So what predictions do they make? Well, the ones Levenson's page lists... and others. Most famously I'm sure you're aware of Hansen's 1988 Scenarios A, B, and C with B being, he said, the most likely, and we now find, the closest to reality. I already linked to a discussion of that one, which has been dishonestly called a "failure" based on a false description (as described in the page I linked, and many other places) – but was it, honestly, a "success"? That depends on how you score it. From a prediction-evaluation point of view on the page I linked, I'd personally take most seriously Hansen's model correctly projected amplified warming in the Arctic, as well as hot spots in northern and southern Africa, west Antarctica, more pronounced warming over the land masses of the northern hemisphere, etc. The spatial distribution of the warming is very close to his projections. That seems to me to speak to the underlying mechanism of the model. The exact amount is off, but not by much; the best description, as per that web page and other discussions I've seen, is simply that the climate sensitivity number Hansen used (that's one parameter, one number) was within the currently-accepted range, but at the high end, while the number that would have made his curve come out "right" is slightly lower, near the middle of that currently-accepted range. So, looking at that, I look at what the critics (besides the dishonest ones) say about it, and I look for somebody who finds a way to justify an extremely low climate sensitivity number with some other model – something that will also produce amplified warming in the Arctic, etc. And so far, I don't find it. So far, I'm left with the simplest description being "Hansen's climate sensitivity number was a bit high, but it looks like he got things pretty much right." That, to me, is a fairly reassuring

description, because it suggests that we may not have real climate disasters before we can develop the technology to warm or cool the Earth as much as we want. I'm a Moore's-Law sort of geek. But it's not completely reassuring, because all models are wrong, and I do not feel that uncertainty in this matter is my friend.

Seth Roberts (2011-03-02 19:50:50)

Tom, as the term Little Ice Age implies, global temperatures have been rising for a while. When Hansen predicts they will continue to rise at roughly the same rate – and they do – I hope you can see that that is no success for the model. You have to improve on common sense to be taken seriously. My weight-control theory led me to find that drinking sugar water can cause weight loss. That's wasn't common sense – it was the opposite of what everyone believed. That's an example of what should increase belief in a theory.

Nathan Myers (2011-03-03 01:19:55)

I didn't expect my prediction to be borne out so soon and so thoroughly,

Alex Chernavsky (2011-03-03 05:52:37)

Nathan Myers wrote: "My question for... Alex [is]: what can you think of, that could happen within a year or three, that would oblige you to change your mind? Is any such thing even conceivable?" I already changed my mind, Nathan. When I worked on the antidepressant team at a pharmaceutical company (in the 1990s), I had a largely positive view of antidepressants and other psychotropic drugs. But I also learned some troubling things, and I maintained my interest in the subject long after I moved into a different line of work. After reading [1]books [2]like [3]these, and articles like [4]this one, I changed my mind. Incidentally, Robert Whitaker, who is currently the leading skeptic of psychotropic drugs, was recently invited to [5]present at Grand Rounds at Massachusetts General Hospital (Harvard's teaching hospital). He probably didn't change many minds, but his very presence there is a hopeful sign to me that maybe the tide is turning.

1. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452417>

2. <http://www.amazon.com/Mad-America-Medicine-Enduring-Mistreatment/dp/0465020143/>

3. <http://www.amazon.com/Blaming-Brain-Truth-Mental-Health/dp/0743237870/>

4. <http://motherjones.com/politics/2003/11/it-prozac-or-placebo>

5. <http://commonhealth.wbur.org/2011/01/whitaker-psychiatry-epidemic/>

Tom Myers (2011-03-03 09:10:42)

Well, Seth, you have done very valuable work in collecting surprises and turning them into theories. I was intrigued when I read Gelman's blog about your work, tried the diet myself a few months later, wrote about it more than a year after that at <http://mistakesbytjm.blogspot.com/2007/02/exercise-diet-self-experimentation.html> and I'm sure that you have an important piece of the puzzle. What impressed me in the end about your model, the "flavor-calorie theory", was the incidental predictions: you could lose weight with sugar water, but your model of that phenomenon then predicted that you could lose weight with unflavored oil, nose-clipping, crazy-spicing, etc, and they all worked – at least for a lot of people, to some extent, with unpredictable individual variations as noted at the forum and random places on the internet. It's clear that the overall picture is complicated (and includes some Taubes-style stuff), but this belongs in it. If I Were In Charge, the main federal involvement in medicine would not be regulation but data-collection, and Roberts' flavor-calorie theory would be one of the initial targets. As I said at [http://mistakesbytjm.blogspot.com/2007/10/self-experimentation-dental-care-he\\_alth.html](http://mistakesbytjm.blogspot.com/2007/10/self-experimentation-dental-care-he_alth.html) "I'm very glad there are people like Seth Roberts in the universe." Besides those items, I started this morning with 45 minutes, just short of five miles, on an elliptical machine with flash cards. Modern Greek flash cards, 45 elliptical minutes every morning – I can't do it on a treadmill because my ankles start hurting after a few days. When I go back to Greece this summer (for a 2nd granddaughter's christening, my daughter-in-law being now Greek-American) I will do better than I did before, and you've made it much easier. So – thanks. But as I said, what made me take the flavor-calorie model seriously was the collection of incidental predictions; it wasn't just saying that you'd made an observation about sugar water and more sugar water was better. Most useful models touch the world in many places. Your comment that we're coming out of an ice age, warming is common sense, is what I heard in the 80s from at least one of the scientists in my family (we run to PhDs, dunno why). He changed his mind when the trend (see [http://en.wikipedia.org/wiki/Global\\_warming](http://en.wikipedia.org/wiki/Global_warming)) went further faster than he was expecting, more than ten years ago. I've heard "global warming has stopped, we're going to be cooling now" claims since about that same

time. Hansen published his curves in 1988, and that was controversial; do you have a comparable prediction from the same time-period, from "common sense" or geophysical modeling? I didn't have a strong sense of how much of a trend to expect, overall, but at about the same time I changed my own mind because there were a lot of incidental predictions, such as those I commented on and then quoted above (Arctic, etc). We're not talking about a single number-sequence; we're talking about a model, one which touches the world in many places. It sounds as if you are saying that you don't intend to check climate models by their incidental predictions because those aren't central, and you don't intend to check climate models by the central warming prediction because you were sort of expecting some warming anyway. And that sounds as if you simply don't want to think about it; you'll wait until...well, you'll wait, never mind the "until". After all, it was below zero here in upstate NY this morning; surely the world's not warming. And that's okay; I'm still glad there are people like Seth Roberts in the universe. :-)

Seth Roberts (2011-03-03 13:41:07)

Tom, I'm pleased you've been able to use my treadmill/learning discovery. It's made a big difference to me, too. About testing climate models: I wrote a paper with Hal Pashler about how to test complex models. That paper was about complex models in psychology but of course the same ideas apply in other areas. I'm saying here what I said there. In psychology, many professors (modelers) at respected universities were essentially cheating by exploiting a gap in understanding. They passed off a test that was easy to pass as a test that was hard to pass and thereby got their models published. The gap in understanding was that the reviewers of their papers didn't understand how to test a theory; they didn't understand what is and isn't a useful test. Proponents of the climate models we are talking about constantly do the same thing: treat an easy test as if it were a hard test. Their models have passed easy tests but not hard tests, as far as I can tell. It's as if they hand me Monopoly money and expect me to treat it like real money. When I say "this money hasn't been tested" they say: Look, it's the right size!

Tom Myers (2011-03-03 14:37:51)

I guess we're back where we started, which is not a bad place to be: you started with a quote including "it is only when they add CO2 influences to the models that they can explain recent global warming" and now you say the tests they pass are easy. Presumably you mean that it is easy to come up with a model that passes the same tests but doesn't depend on the CO2 sensitivity. A model, as Levenson was noting, that generates the temperature distributions across different regions and different layers of the atmospheres and different day/night and winter/summer times, a model that may not be fully precise but was precise enough to show up the errors in Roy Spencer's satellite data and the paleo evidence Levenson notes and ... ? I wouldn't know how to do it, but I'm just a programmer and ex-computer science prof. The tests they've passed have looked pretty hard to me. Of course there are many tests they haven't passed yet, and may never pass (weather is fundamentally unpredictable unless it is someday actually controlled, in the sense that initial-measurement errors necessarily exist and necessarily grow exponentially; I have not seen anything to give me a strong opinion one way or the other on whether or not climate, i.e. average weather, has strange-attractor problems of the same sort. My feeble opinion is no.) If somebody has come up with such a model, let them put it online as open source, like the GISS climate model, and let Hansen, Schmidt et al have a whack at it: I'll buy popcorn. Meanwhile, I am facing the fact that after more than 20 years I haven't seen such a model, and I've been waiting for one. I predict that one won't be forthcoming. Will I bet my life on that? Am I absolutely positively sure there isn't one? Of course not. It may exist. I think the climate models are pretty good; I'm pretty sure they're the best guess we've got; but it's not a perfect world, and being models they are certainly somewhat wrong, and they might be seriously wrong. That's not reassuring. As Tyler Cowen said in a post called "My views on global warming": I do not much trust climate models. Perhaps I have spent too much time doing macro, and the experience carries over. Nonetheless uncertainty about final effects gives us more to worry about, not less. It is the worst-case scenarios for global warming which worry me, not the middling scenarios. Variance is our enemy in this matter. So it goes. (It occurs to me that I really ought to have been writing code all this time, even if I got through the last deadline fine and the next one is a ways off. Anyway, thanks for lots of things.)

Nathan Myers (2011-03-03 15:05:01)

I would like to know Seth's thoughts on the subject of confirmation bias. Alex: You seem to be saying that as a welcome consequence of this turned tide, my psychiatrist would not be allowed to prescribe the medicine that restored my ability to do work and remember phone numbers.



Alex Chernavsky (2011-03-03 19:02:35)

Nathan: I'm in favor of legalizing all drugs (whether I happen to like them or not). So under my system, you'd be able to prescribe the drug for yourself.

Nathan Myers (2011-03-04 02:30:25)

Alex: I would never, ever have thought of using that particular compound for that purpose. Chalk one up for the pros.

sabril (2011-03-05 05:50:27)

"You are never going to supply an example of the 'successful prediction' you claim exists." I agree. I have had the "successful prediction" argument many times with warmists. Very frequently, their example of a successful prediction is actually a back-casting. A post-diction, if you will. And usually these back-casts are a beautiful fit to past data. Which actually makes them even more suspicious.

readmuch (2011-04-11 19:58:52)

apparently u haven't heard many arguments against man made global warming...you bad.

Anthony (2012-04-16 01:12:13)

Are we kidding here? Ok Co2 levels are at levels never recorded before. Co2 IS a greenhouse gas, but not the biggest one. That's Methane. Guess what Methane is also at levels NEVER SEEN BEFORE! Your right, we cant accurately predict whats going to happen exactly. That should scare the crap out of you. The planet will respond. It always has, it always will. The response WILL move the climate out of our comfort zone. There is no argument against Man Made Climate Change. There is scientific conceses, it is happening. We did it. The question is not will it happen, but just how bad it will get. If we stop now, perhaps not as bad as we can fear, if we keep giving out misinformation like this blog then it will get very bad indeed. The Cretaceous was not a time human would like to live in. That was a natural climate. We have pushed the balance past that and into UNKNOWN territory. If that fact alone does not scare the pants off you then you are not paying attention.

## 6.3 March

### Inside Job Wins Oscar (2011-03-01 05:17)

I remember the first time I encountered Spy magazine. It was at Cody's Bookstore in Berkeley. One of the articles attacked Bill Cosby. Wow! I thought. You don't see that every day.

Which is why Inside Job, which just won the Oscar for long documentary of the year, is so important: It attacks prestigious professors at Harvard and Columbia and to some extent the institutions themselves. You don't see that every day. Larry Summers, former Harvard president, is one of the main villains of the piece. Few intellectuals have combined poor understanding and power as much as Summers has. (With bonus points for [1]nauseating treatment of staff.) Perhaps none has done so much harm. Had Summers not blocked Brooksley Born from regulating derivatives, the world would be a different place. And it isn't just Summers. The movie shows that John Campbell, chairman of the Harvard economics department, has trouble understanding the concept of conflict of interest. What this says about Harvard, the most prestigious academic institution in the world, is not something Harvard professors are going to want to think about. Harvard, of course, is the home of [2]Joseph Biederman, the most ethically-challenged professor I know of.

Michael Moore's [3]Sicko did a great job of provoking outrage. At the same time, however, it was empty of interesting thought. It was not a new idea that American health care might benefit from imitating other countries. So

the outrage boils away unused. In contrast, Inside Job contains the beginning of a thoughtful critique: It says that economics professors were corrupted by all the money they could make praising and doing the bidding of Wall Street (e.g., resisting regulation). Summers made out especially well. You won't find this critique in The Big Short, All The Devils Are Here, Too Big to Fail, or How Markets Fail. A viewer of Inside Job might stop giving money to Harvard until Harvard enacts conflict of interest rules for economics professors.

I don't think conflict of interest is the whole problem with Summers et al. Poor understanding is a big part of it. A friend of mine at Berkeley took introductory economics. What about data? I asked her. Where's the data for all these assertions? She went to her professor. Where's the data? she asked. Don't worry about data, he said. Economics professors have started paying more attention to data (Steve Levitt, John List), but they have a long way to go.

1. <http://www.blog.sethroberts.net/2010/01/01/academic-horror-story-harvard-university/>

2. <http://www.nytimes.com/2008/06/08/us/08conflict.html>

3. <http://www.blog.sethroberts.net/2007/06/29/michael-moore-and-jane-jacobs/>

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Glen Raphael (2011-03-01 12:33:58)

I'm confused by that last paragraph. Can you be more specific as to what kind of claims constituted *all these assertions* that needed data to support?

Seth Roberts (2011-03-01 13:01:10)

Glen, claims such as "if this happens, people will do such and such". For example, microeconomic theory. The course was big on "laws" (cause-effect statements), short on data supporting those laws.

Glen Raphael (2011-03-01 15:01:27)

Much of micro is practically self-evident if correctly explained, but doing so includes keeping a lot of nuance that it sounds like was lost in translation here. It's more like "if this happens, people will *tend to* do such and such, on average, all else being equal, assuming simple motives". The underlying principles that lead to those rules get tested a little every time a store has a "sale" and sells more than they did at the old price. Every time the government sets a price control and causes shortages or subsidizes something and causes surpluses. Every time somebody prices something too high and it doesn't sell. Sometimes simplifying abstraction is appropriate. If your student took introductory physics, would you ask "where's the data?" when working out assertions about what would happen when a perfectly spherical billiard ball on a perfectly frictionless table hits another with twice the mass in a perfectly elastic collision? Econ 101 is mostly about the *\*predictable\** components of human action, just as Physics 101 is mostly about the *\*predictable\** components of physical action.

Seth Roberts (2011-03-01 18:43:10)

Glen, my friend's class was before the rise of behavioral economics, the whole premise of which is that ideas about "what people will do" should be tested, not assumed. The rise of that field supports my view (that economists didn't care enough about data), I think. From my point of view, behavioral economists are mediocre data collectors. This is no surprise, since they are just starting, whereas experimental psychologists have a hundred years of practice. Behavioral economic experiments are usually just one step better than demonstrations – they are pretty good for showing whatever idea they started with is right (which is a lot better than not collecting any data), but poorly designed for uncovering new ideas. John List's work on the ultimatum experiment reveals the low average level of experimental technique. That's what I mean when I say economists have a long way to go. An intro physics class that didn't spend at least half the time discussing data would be pretty bad. It should cover how data is collected, how data leads to theory, how data tests theory.

TomGinTX (2011-03-01 19:33:30)

A lot economic theory concerns things that are hard, if not impossible, to measure. How would you measure a demand schedule for Coldplay CDs, for example? Mine is ZERO at ANY price, but I am a special case. 8-)

Nathan Myers (2011-03-02 13:27:06)

People measure demand schedules for Coldplay CDs continuously. Wal-mart fiddles with prices at different stores, and measures with frightening precision empirical demand schedules for thousands of commodities. No, they don't exactly follow the curves microeconomists use to simplify their theories, and the demand for each commodity is far from independent of the prices of various others, but it doesn't matter very much, except, of course, to retailers.

## How to Be Less Efficient (2011-03-01 12:25)

[1]Andrew Gelman links to [2]this post about intellectual working conditions. It reminds me of something I do every day that still amuses me. I keep track of whether I am working or not – and I count making tea as working. This helps me get started: I start by making tea. The opportunity to mislead myself (appear more efficient than I am, get something for nothing) makes me want to start working.

1. [http://www.stat.columbia.edu/~cook/movabletype/archives/2011/02/do\\_you\\_need\\_ide.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2011/02/do_you_need_ide.html)

2. <http://jbdeaton.com/2011/02/03/do-you-need-ideal-conditions-to-do-great-work/>

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Alrenous (2011-03-01 16:17:22)

I'm attempting to debunk something. I work when I feel like it. As a child, my authorities told me that this would result in no work. I doubted - it seemed to me it only resulted in no pointless work. I'm winning so far. Some hurdles still to study, I don't yet know what all of them actually require to overcome. But - if we're measuring intellectual output one of the hurdles is for me to figure out how to reliably stop working once I've started. I keep staying up way too late. Also my body starts to complain at thirteen hours straight...for some reason... In a sense, it's less efficient. For example, right now I'm commenting on your blog. In another sense, it's infinitely more efficient. I never work in the sense of using self-discipline, but am productive anyway. The main hurdle for me is an HBD issue. So...I don't require self-discipline to do 'chores.' Either a great deal of suffering is entirely unnecessary, or I'm one special snowflake. I think I like these options.

Justin Wehr (2011-03-01 21:40:08)

Seth, I am curious if you have made any discoveries (or have any hypotheses) related to your working or not data. In the spreadsheet I fill out every night, I estimate how much time I spent across 13 categories. One of the categories is "totally useless time" and from that I have a "% time not unproductive" variable. I have found that since I started measuring these timing categories, I have looked for areas of "productive" overlap to get that percentage lower, such as reading outside, or working out while I listen to a podcast.

Seth Roberts (2011-03-02 00:29:16)

Justin, no I have made no discoveries. I've been collecting the data for about a month but have yet to start to analyze it. I've tried this in the past; this time I hope I have a better system. I think it takes a long time just to start to be consistent in the data collection.

Jill (2011-03-04 11:26:21)

I often get started doing actual work by trying to put up the appearance of work - i.e., my boss comes in the room, so I open a few development apps on my PC, and one thing leads to another... Suddenly, I find myself having actually completed an assignment I was going to put off until next week.

## Root Planing Cancelled (2011-03-03 05:45)

My friend Carl Willat writes:

Last June I went to the dentist for a checkup and cleaning, fully expecting my gums to be in great shape since I had been diligently using my Braun Oral B electric toothbrush. Â To my surprise and disappointment the hygienist told me the pockets had actually become deeper and that she was seeing bleeding in many places, to the point where she was recommending I have my roots planed, a painful and expensive procedure I had undergone once before many years ago. So of course I went home and started taking the flax seed oil and ground flax seed ["a couple of tablespoons a day of oil, plus random amounts of ground flax seed"] as you had recommended. Â I also started using a Sonicare toothbrush at that point so it's hard to figure out the degree to which either variable might be responsible, but today she said my gums were much better, and had hardly bled at all during the measurement of the pockets. All talk of root planing was forgotten.

According to [1]this, root planing costs \$400- \$1600. After Tyler Cowen started drinking flaxseed oil (2 T/day), [2]he no longer needed gum surgery.

It is hard to get well-preserved flaxseed oil in Beijing (it goes bad at room temperature) so I now take 66 g/day ground flaxseed instead of 2 T/day flaxseed oil. I add it to yogurt twice/day. I don't know if ground flaxseed is healthier or less healthy than flaxseed oil but it is much less trouble. Preservation is no problem (flaxseeds can be stored at room temperature) and ground flaxseed requires zero willpower to eat with yogurt. I had to push myself a little to drink the oil.

1. <http://www.costhelper.com/cost/health/teeth-cleaning.html>

2. <http://www.marginalrevolution.com/marginalrevolution/2007/07/todays-happines.html>

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Paul Cooper (2011-03-03 07:01:25)

What about flaxseed tablets? Time will tell I guess as I've been taking them and am due a check up at the dentist soon.

dearieme (2011-03-03 07:10:17)

I put flaxseed (we call it linseed in the UK) in my breakfast cereal. Is there any disadvantage in not grinding it?

Evelyn Majidi (2011-03-03 10:50:42)

I am delighted to hear further about people's experiences with flaxseed oil and other products made from flax. After reading the initial story on this website about flaxseed oil's affect on gums, I began to take two tablespoons a day of the product to see if it would provide relief from a severe attack of lichen planus in my mouth. (By the way, I am convinced that lichen planus is

just another name for psoriasis - of which I am also a victim - when it affects tissue other than the skin). After three months of using the oil my mouth is in much better shape, and I am very grateful. As lichen planus, like psoriasis in general, waxes and wanes for reasons unknown to medical science, I cannot say that the flaxseed oil caused this wonderful change - but I certainly intend to keep on taking the stuff.

Seth Roberts (2011-03-03 13:15:56)

dearime, I believe that grinding flaxseeds makes their ingredients more easily digested. More bioavailable. Paul, the optimum amount of flaxseed seems to be 2 tablespoons or more. It isn't easy to get that much per day from capsules. I'm not sure what tablets are but I suppose they are the same as capsules.

David (2011-03-03 14:13:13)

I had a very similar experience to Carl Willat's. Last May my hygienist performed a perio chart and informed me that I had many 3mm and several 4mm pockets. My x-rays showed that I "have the bone structure of a 55 year old man" (I was 36 at the time). Given that my hygiene was good - I have always flossed and brushed fastidiously - and my gums neither appeared inflamed nor bled as a result of the hygienist's prodding, I was told that my condition was probably the result of genetics. There was no discussion of underlying systemic inflammation. At the time I was using a Sonicare toothbrush which I believed was responsible for the painful sensitivity I was experiencing along my gum line. Against my hygienist's advice - she told me that the Sonicare was particularly important to someone with my condition - I decided to revert to a manual toothbrush. In addition, based upon what I'd read on this blog, I decided to bombard myself with omega-3. For the following six months I drank flax oil (3 T/day) and I took 1g/day of fish oil. Last November I had my regular biannual cleaning and my hygienist performed another perio chart. The result? 1-2mm pockets across the board. I should also mention that the sensitivity along my gum line vanished after discontinuing the Sonicare. Sadly, neither my hygienist nor my dentist showed any curiosity in what may have caused my condition to improve between visits. I have decided to quit taking fish oil, but I continue to drink flax oil. It's my belief that flax oil by itself is enough to fight my inflammation because it cleared up and continues to prevent eczema - something I had suffered with for years. Many thanks to Seth and everyone else here who helped lead me down this path.

Seth Roberts (2011-03-03 14:29:42)

David, I'm very glad to hear that. Thanks for commenting. It's interesting the way your hygienist (a) claimed your condition was genetic and (b) failed to be curious about the improvement. Why did you decide to stop taking fish oil?

David (2011-03-03 15:45:00)

Partially because of cost and partially because I took large doses of fish oil in previous years and never achieved the same effects that I did once I started drinking flax oil simultaneously. I lived with eczema and, apparently, gum disease for years while taking fish oil alone (in a larger dose - 2g/day).

Seth Roberts (2011-03-03 18:20:27)

Huh. Thanks, David. Those are revealing comparisons. I have tried fish oil only once. It gave me a headache so I stopped. Flaxseed oil has never given me a headache.

e.h. (2011-03-03 18:57:56)

Another flaxseed and skin story: I have not read your book or know what your method is exactly - other than it gave me the hint to think of my diet in terms of classical conditioning. I started feeding the 'insulin pig' the wrong reward (flaxseed oil) whenever I felt hungry outside meal times. Amount varied between 3 and 12 teaspoons a day, has stabilised around 4 or 5 and appears to be self governing as I don't like the smell or taste and get nauseous if I eat too much. My desire for food plummeted and right now I am content on one meal a day. I've lost 6 kg in as many weeks: Lose another 4 and I will need to re-jig it. My dry, dry skin (eczema as a kid) is 'almost normal' and usually only this good when I am on a small boat far from civilisation and refrigerators eating lots of oil, fish and 'hardware food'. I had never thought of separating oil consumption from meal time. Life changer.

Sam (2011-03-03 22:32:23)

Seth, have you ever tried to replace flaxseed oil with (freshly?) ground flaxseed? These would be way easier to come by and keep fresh, so this should be a big improvement in handling, but of course this would be for naught if they don't have the same effect.

Seth Roberts (2011-03-03 23:12:25)

Sam, yes, I used to use flaxseed oil. Now I use ground flaxseed. That is what I was saying in the last paragraph of my post, which begins "It is hard to get well-preserved flaxseed oil in Beijing (it goes bad at room temperature) so I now take 66 g/day ground flaxseed instead of 2 T/day flaxseed oil." As far as I can tell they have the same effect.

Sam (2011-03-04 08:51:48)

Whoops. Sorry! I remember reading that part and somehow did not realize you replaced the oil completely. One more question: do you grind them fresh, or buy already ground seeds?

UncleLongHair (2011-03-04 14:57:37)

This is interesting. I just went to the dentist a couple of days ago. In my prior 2 visits I was warned by the hygienist that my gum pockets were getting to the point that I might have to consider surgery if they didn't get better. She gave me little toothpick type things intended to stimulate the gums, which I didn't use because I hated them. In this visit I got no such warning. In the interim I took about 2 Tbsp of flax seed oil almost every day. I happened to be lax in my flossing too. I did not take the flax seed oil for the gum condition (I didn't know about the connection until reading this post), rather for general anti-inflammatory health. I should say that I can't definitely establish a cause-and-effect relationship here because I'm not certain the hygienist did the same test this time as last time. However I still find this interesting. So I have a question. This anecdotal evidence is interesting, but I would love to see a more comprehensive study. Why hasn't this idea been explored in a study? It would not have to be enormous or expensive to address the issue. I don't suppose the dental industry would fund such a study, because it would gore their ox if patients could just take oil instead of signing up for expensive surgery. The flax seed industry might fund it, but of course it would be difficult to accept their results as unbiased. Is there any organization that could fund it and produce reliable results?

Seth Roberts (2011-03-04 20:12:14)

Sam, I grind them fresh. Uncle Long Hair, why hasn't this idea been explored in a study? I don't think funding is the problem. Flaxseed oil is cheap. Dental exams cost very little, at least if you are dentist. A study would do an enormous amount of good, I believe. But several factors are against it: 1. Novelty. This idea is really new. 2. Illegitimate origin. Ideas are not supposed to come from blogs. 3. Dentists, who could easily do such a study, don't do research, by and large. That's not their job. 4. Dental school professors, who do research, don't do prevention research. Nor do they read this blog. If you are a dentist and would like to do a study, please contact me.

Tom (2011-03-06 21:17:40)

Seth, I bet if you created an account on a Dentists' Forum (or even commented on a few blogs), you'd get a number of Dentists to participate.

Two Successful Dietary Experiments | I Have Never Done This Before (2011-07-21 15:02:42)

[...] need a gum graph, my husband encouraged me to start taking flax seed oil. A few people online have reported that flax seed oil dramatically improved their gum health, and we figured it was worth a [...]

## German Plagiarism Scandal (2011-03-03 06:16)

[1]The defense minister of Germany resigned after it was discovered that his doctoral dissertation (on constitutional law) was full of plagiarism.

In other news, the Canadian government has yet to revoke Ranjit Chandra's Order of Canada. Oxford University has yet to say that [2]Professor Leslie Iversen's plagiarism violated their norms.

1. <http://online.wsj.com/article/SB10001424052748704506004576173970765020528.html>

2. <http://www.blog.sethroberts.net/2010/11/06/plagiarism-by-british-drug-tsar/>

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dearieme (2011-03-03 14:15:14)

here's another resignation in the academic world. <http://www.guardian.co.uk/education/2011/mar/03/lse-director-resigns-gaddafi-scandal>

dearieme (2011-03-04 02:16:29)

One that's more up your street. <http://www.telegraph.co.uk/health/8360667/Millions-of-surgery-patients-at-risk-in-drug-research-fraud-scandal.html>

## **Climate Model Predictions and What Happened (2011-03-04 03:39)**

In [1]a comment on [2]a previous post about lack of convincing evidence for climate models – the ones that predict catastrophe – I wrote:

At any time – right now, 5 years ago, 10 years, 15 years ago –” the people who work with those models and claim we should pay attention to their predictions could make/have made a set of predictions: next year, the year after that, and so on. Then, as time passed, we would have found out if the models predict correctly. The modelers haven't done that.

From [3]this talk by Richard Muller, a Berkeley physicist, I learned of two instances where the modelers did what I said they haven't done.

1. In 2009, James Hansen predicted, based on his model, that 2010 would be the hottest year on record. Since temperatures had been roughly constant – not rising – for the previous 12 years, this was an interesting prediction. When 2010 ended, Hansen's own data (analyzed in an unusual way, according to Muller) found this to be true, but two other datasets found it to be false.

2. In 2001, several scientists, based on nine climate models, predicted that Antarctic ice would increase over the next ten years. In fact, it decreased ("exactly the opposite of the prediction"). In response, John Holdren, President Obama's science advisor, said, according to Muller (at 26:22):

Well, those models were really wrong. But now we've changed those models. And now if we run them again they show that the ice will decrease. And therefore this is evidence in favor of global warming.

The audience tittered.

If you think Climategate was not important, and that the scientists whose email was revealed did nothing seriously

wrong – as several official investigations, [4]Bill McKibben ("if you managed to hack 3,000 emails from some scientist's account, you might well find a few that showed them behaving badly") and New Yorker staff writer Elizabeth Kolbert have concluded – you should see what Muller says about it (starting about 30:00).

I liked the talk. Muller makes several points with which I agree and presents helpful data. However, there were several things I didn't like. There is one big gap. Muller thinks current climate models are probably right, but doesn't explain why. I would have liked to know. And he says two things with which I deeply disagree. First, he says scientists shouldn't say what the data will show – that is, make predictions. I believe that making and testing predictions is by far the best way to learn how much we know. Second, Muller says that buying a Prius does nothing. The improvement is too small, the cost of a Prius too great. People in China can't afford a Prius, says Muller. This misses a really important point. When you buy a Prius you are supporting innovation. To solve the big problems that arise in any society, innovators need support. [5]My theory of human evolution goes on and on about this. Long ago, connoisseurs supported innovation. [6]Festivals such as Christmas supported innovation. Art lovers supported innovation. Fashion supported innovation. The great achievement of Tyler Cowen's new book [7]The Great Stagnation, which I will discuss tomorrow, is its focus on rate of innovation. What controls rate of innovation is a supremely important question usually ignored by economists – as Muller ignores it.

In any case, here are two actual predictions and how they fared.

1. <http://www.blog.sethroberts.net/2011/02/27/the-best-argument-against-man-made-global-warming/#comment-879181>
2. <http://www.blog.sethroberts.net/2011/02/27/the-best-argument-against-man-made-global-warming/>
3. <http://www.youtube.com/watch?v=VbROEPWgkEI>
4. [http://www.tomdispatch.com/post/175211/tomgram%3A\\_bill\\_mckibben%2C\\_climate\\_change%27s\\_o.j.\\_simpson\\_moment/](http://www.tomdispatch.com/post/175211/tomgram%3A_bill_mckibben%2C_climate_change%27s_o.j._simpson_moment/)
5. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>
6. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>
7. <http://www.amazon.com/Great-Stagnation-Low-Hanging-Eventually-ebook/dp/B004H0M8QS>

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bjk (2011-03-04 06:24:51)  
Tittered.

Dave Lull (2011-03-04 06:41:40)  
OED: twitter "4. intr. To laugh in a suppressed way, titter, giggle." Also: " b. transf. [ . . . ] also (esp. of a woman), to talk or chatter rapidly in a small or tremulous voice." Or perhaps a portmanteau word: to tweet a titter.

Seth Roberts (2011-03-04 06:58:27)  
Thanks, Dave. I have fixed it – twitter is ambiguous.

D (2011-03-04 22:00:50)  
I recommend Muller's book "Physics for Future Presidents". His chapter in climate change is very reasonable, as are his chapters on other controversial topics. The man seemed very honest and perfectly willing to slay a few sacred cows. It's also a good read. I learned a lot.

Vince (2011-03-05 01:08:35)  
"temperatures had been roughly constant" not rising "for the previous 12 years" What is this claim based on? If you take the annual [1]global temperatures from 1998-2009 and plot a best-fit line through them, it has a slope of +.12C per decade.



That's only slightly less than  $+0.16^{\circ}\text{C}$  per decade that you get if you fit a line to the 1970-1998 data. And you picked the endpoint of 1998, which was unusually hot and well above the trend line.

1. <http://data.giss.nasa.gov/gistemp/taledata/GLB.Ts+dSST.txt>

sabril (2011-03-05 05:30:18)

There is another instance where it was done; Jim Hansen presented the predictions of his climate model in his congressional testimony in 1988. His forecast did pretty well for the first 15 years or so, then it started getting off track. See here: <http://wattsupwiththat.com/2009/10/22/a-little-known-but-failed-20-year-old-climate-change-prediction-by-dr-james-hansen/> When I argue models with warmists, the usual defense is to assert that climate is easier to predict over a 20 or 30 year time frame than it is over a 2 or 3 year time frame. But there really is no evidence or reason to believe this is so. Also, the UK met office has been making year-by-year predictions for 10 years or so now. However, any layman can see that this model fails the persistence test. i.e. if you just take each year's temperature and use it as the prediction for the next year, you would have gotten a more accurate prediction than that of the met office model. What's interesting is that the warmist community does not seem to understand or accept that the UK met office model has failed this most basic statistical test of validity.

Seth Roberts (2011-03-05 05:56:43)

Vince, my claim of constant temperatures is based on what Muller said. I am just repeating what he said. sabril, in James Hansen's 1988 predictions there was no comparison to a simple linear extrapolation. Perhaps temperature was already rising at the predicted rate of increase. If so, it was no great success for the model to correctly predict a continuation of that trend. The model should be able to do better than a high school student. The accurate prediction of the first 15 years means nothing until it is clear that the model did better than common sense. Your UK met office example is the same point.

Duncan (2011-03-05 06:10:22)

There's a Scott Adams cartoon that runs as follows. (Enter Dilbert, clutching a box): I got it! I'm the first person in city to own a videophone! (Opening box by the TV): Now all I have to do is set it up and wait for someone to call me. (Videophone is set up on top of TV, all TV displays is static) (TV still displays static, Dilbert sits there vacantly) Dogbert: The funny thing is, we need people like you to move technology along.

Seth Roberts (2011-03-05 08:53:51)

Duncan, yeah, good thing people like to show off their wealth and be holier-than-thou. Dilbert understands what Veblen missed.

Nathan Myers (2011-03-05 17:16:13)

The "climategate" e-mails didn't reveal anything more than pique toward petroleum industry shills. I don't need to *hear* what Muller says; I *read* all the "incriminating" e-mails myself, and their context. *There is really nothing there.* Echoing Seth's comment last week, those were the best they could come up with, and they weren't anything. I don't need to dig deeper and read all the "less incriminating" e-mails – they're even less than not-anything. The whole fake controversy was ginned up by those same shills. The shills are just doing the job they're paid for; what's shameful is in being taken in. (Likewise, the Koch brothers and their teabaggers, respectively.) Seth, people are always pointing you to compelling predictions and proofs. You're having to work harder and harder not to see them, and to make any tiny hint of ambiguity you can eke out into a smoking gun. People who have sent tens of thousands of dollars to Nigerian 419 scams maintain, on their way to prison, that the millions really bare there waiting for them, and they'd have got them already if not for corruption at all levels of government. Psychology must have a name for that.

withrow (2011-03-05 19:49:26)

I think there are three parts of the Global Warming argument to contend with. 1) Are there more greenhouse gases in the atmosphere than in centuries past? I'm not an expert in the field, but the experts seem to be saying that's true and I haven't seen any disagreement on that point to speak of. Maybe there is some controversy on this point, but I haven't seen it. 2) Assuming you except #1, we can ask: are human behaviors contributing to the increase in greenhouse gases? Again, the link between our collective carbon footprint and the evidence of more greenhouse gases seems to be fairly well-accepted. Ok, if

you sign on to those two points, I think you basically have to acknowledge that humans are changing the world in a way that could be dangerous. In other words, we're polluting Earth to the detriment of future generations. It would be nice to believe that the climate models (argument #3 in the Global Warming debate) are going to be accurate so that we could quantify how much in resources we should spend to reduce our carbon footprint. But, like Seth, I'm skeptical of their accuracy. I've spent a fair amount of time watching the models of how we might expect baseball players to perform from one year to the next and that took some time to get right- and it seems much, much easier to predict baseball players' correctly than to shape an accurate climate model. So, I'm skeptical about these models' accuracy. Here's the thing, though. If you're skeptical about their accuracy and you basically accept #1 and #2, I think you pretty much have to admit that the climate models could be underestimating the change. That is, our best scientists, for all we know, could be wildly underpredicting the impact of our carbon footprint. It makes sense to me to use the best science we have to estimate the resources we should spend to correct this situation before future generations suffer from our polluting ways.

Sean Estey (2011-03-05 21:49:11)

This debate is interesting in that the climate change side is firmly convinced that anthropogenic warming is a threat, the denialists side is adamant it's not, and both sides accuse the other of bias. Very few people rest in the middle, which makes this issue almost a matter of politics rather than science, much like Republicans vs Liberals. If you're an environmentalist you're probably going to be on the anthropogenic warming side, and if you're a free market advocate, probably a denier. Has anybody else noticed this?

sabril (2011-03-06 04:47:54)

"The 'climategate' e-mails didn't reveal anything more than pique toward petroleum industry shills." Well would you agree that at a minimum, the e-mails show that (1) one or more of the researchers in question are advocates for a certain point of view? i.e. they wish to put the best possible spin on things in order to persuade the public that their position is correct; (2) one or more of the researchers attempted to prevent the publication of articles which disagreed with their position; (3) one or more of the researchers attempted to game the system to prevent their perceived adversaries from obtaining documents through freedom of information requests.

sabril (2011-03-06 04:50:58)

"Seth, people are always pointing you to compelling predictions and proofs. " I realize that this comment is not addressed to me, but I really would like to see an example where these climate simulations were tested by successfully making bona fide interesting predictions. Let's do it this way: In your view, what is the most compelling example of climate simulations making accurate, bona fide, interesting predictions?

Steve G. (2011-03-06 13:29:55)

I like Withrow's point, at least it describes how I come to this issue. We have a strong reason to believe points 1 & 2, so what do we do now? I agree that models are likely imperfect, and that future testing would be ideal, but we have to decide whether to cross the Rubicon now. And not to choose is to choose. (Sorry, it seems like a stream of cliches, but I hope it gets across my point.) In other words, we can't wait for perfection, we can't wait 20, 50, or 100 years to check out "who was right". Indeed, scientifically, isn't looking into the future much like looking into the past to judge, for instance, evolution? We can't test evolution by its predictive power, we can't replicate it in a lab, but we believe it. (I do.) Isn't the theory of evolution explanatory but not predictive?

Tierney (2011-03-07 15:39:50)

The really damning thing about Climategate was not the emails, but the code that was released. The comments are amazing. Most people have only seen the emails, which are easy to dismiss- the code not so much.

Seth Roberts (2011-03-07 16:31:51)

Tierney, Muller's talk makes clear what a big difference it makes to "hide the decline", also known as "Mike's trick". I had not seen that pointed out before. When you "hide the decline" (which is shorthand for several changes) the graph that you get

(which is what was published) becomes far more favorable to the case that Mann and his colleagues were pushing. And this is entirely separate from the weird data analysis that produced the Hockey Stick. The emails are easy to dismiss, I agree – until you know what "hide the decline" actually means.,

Nathan Myers (2011-03-07 21:59:06)

Sean: Your observation is painfully obvious, but backwards: The sole reason for the "controversy" over global warming is that the honestly expressed implications of the research results demand public policy changes that would ("inconveniently") interrupt extraction of rent on long-held properties. Sabril: Seth has expressed, again and again, that he's *really not interested* in looking at evidence. The dance is a two-step. The first step is that the only evidence worth looking at is global temperature predicted *after* the present. The second step is that the only prediction to take seriously is one that does *not* forecast a temperature rise. The first means that there will never be a time to examine results of predictions. The second means that having predicted *correctly* automatically disqualifies a model as trivial. In response to your three points: (1) All researchers are advocates of a point of view. Some lie and say they aren't. If they express a foolish point of view, legions of other researchers are eager to jump down their throats. When many scientists expose their point of view, it means no serious criticism remains to be demolished. (2) Nobody can prevent publication. The shills in question were handicapped mainly by *never having done any research of their own*. (3) All productive researchers use every imaginable trick (oops! there's that word) to keep [censored] from wasting their time. For each minute of each day, a whole crowd of [censored] lies in wait to make off with it. Scientists not harassed by [censored] are often doing nothing interesting. (Scott Adams's first book was about this, titled, "Always Postpone Meetings with Time-wasting Morons".) Steve G: Natural selection has recently been made predictive, and has been replicated in labs all over the world. As pointed out earlier, "prediction" needn't refer to linear time. Paleontologists routinely make predictions about what a complete specimen (that died millions of years before their birth) will be found to reveal, and are roundly ridiculed when they predict wrong – just as in other disciplines.

Nathan Myers (2011-03-07 22:16:26)

I read the e-mails. I also read the code, and the comments in the code. The "hide the decline" and "Mike's trick" comments have been examined thoroughly by several independent commissions, and have been found to have absolutely innocuous implications. Everyone who cares has seen detailed demonstrations of this. Paraphrasing Seth, again, when the very smokingest gun they can come up with turns out to be a trick cigarette lighter, there's no point in looking further. This is not only because other offerings will be even weaker. It is also because it reveals that they are trying to deceive you, so all further efforts will be to that end.

sabril (2011-03-07 22:29:54)

"All researchers are advocates of a point of view" I basically agree, which is why it is troubling when people like Gavin Schmidt pretend that they are not advocates. "Nobody can prevent publication." Does this mean yes or no? Are claiming that none of the researchers in question attempted to prevent publication of any article? "All productive researchers use every imaginable trick (oops! there's that word) to keep [censored] from wasting their time." So it sounds like you are saying that (1) yes, one or more of the researchers in question attempted to game the system to prevent their perceived adversaries from getting information through freedom of information requests; (2) they did it primarily to save time and not to prevent scrutiny of their work; and (3) all researchers engage in this sort of behavior. Do I understand you correctly? Oh, and in your view, what is the most compelling example of climate simulations making accurate, bona fide, interesting predictions?

Seth Roberts (2011-03-07 22:57:39)

Nathan, according to you "the only prediction [I, Seth] take seriously is one that does not forecast a temperature rise." See Prediction #1 in this post for a counter example.

Nathan Myers (2011-03-07 23:23:43)

(1) There are honest and dishonest ways to advocate a point of view. The former is what Gavin Schmidt is doing. Promoting transparently phony "climategate" scandals is the latter. Being seen to engage in the latter reveals true intentions. (2) It doesn't matter who, if anybody, tried to prevent publication. My opinion about what they meant to do matters even less. If

they had tried to prevent publication of real work, they would fail. If the skills did real work, they wouldn't be skills. Much of the apparatus of science is geared to preventing publication of substandard and deliberately misleading works (although it often fails), and it's part of every scientist's job to help. (3) They did not "attempt to game the system"; they discussed possible actions that they decided against. All *productive* researchers are obliged to engage in variations of "this sort of behavior", if by that you mean putting off time-wasting [censored] whenever and as long as possible. I applaud all such efforts, because I want scientists to do science. I *understand* that not everybody wants that. (4) You can't fool me, it's turtles all the way down.

sabril (2011-03-08 05:04:41)

"There are honest and dishonest ways to advocate a point of view. The former is what Gavin Schmidt is doing" That's simply not true. Here's an (apparent) quote from him: \_\_\_\_\_ "Climate scientists are paid to do climate science," said Gavin A. Schmidt, a senior climatologist with the National Aeronautics and Space Administration's Goddard Institute of Space Studies. "Their job is not persuading the public." \_\_\_\_\_ A reasonable person reading this would understand that Gavin Schmidt is attempting to pass himself off as being disinterested; neutral; NOT an advocate with a position. "It doesn't matter who, if anybody, tried to prevent publication." Why are you evading my question? It's not a trick question. It doesn't have any hidden assumptions in it. Yes or no, please. "They did not 'attempt to game the system'; they discussed possible actions that they decided against." Again, this is simply not true. Here is one of the Climategate e-mails: "I had some emails with him [McIntyre] a few years ago when he wanted to get all the station temperature data we use here in Climatic Research Unit. At that time, I hid behind the fact that some of the data had been received from individuals and not directly from Met(eorological) Services through the Global Tele-communications Service (GTS) or through the Global Climate Observing System" Clearly the e-mail author (Phil Jones) was attempting to invent excuses to avoid disclosing information to a perceived adversary. "All productive researchers are obliged to engage in variations of 'this sort of behavior'" Researchers are obliged to invent excuses to avoid complying with freedom of information requests? Anyway, it's not a waste of time for a researcher to turn his data over to a hostile adversary. The adversary might find something wrong with the researcher's data, methods, or results. This is a valuable and productive result. Besides, if it was really about saving time, the climategate folks would not have objected to the release of the climategate e-mails. Instead, they would have said something like this: "We want to thank whoever leaked this information. We really wanted to do it ourselves, but we did not have the 3 or 4 minutes required to burn all the e-mails to a DVD and drop them in the mail. Thank you for saving us 3 or 4 minutes!!" And again: In your view, what is the most compelling example of climate simulations making accurate, bona fide, interesting predictions?

sabril (2011-03-08 05:50:47)

And by the way, if there were any doubt that a significant part of Jones' motivation was simply to shield his work from scrutiny, he kinda spilled the beans with this little gem: "Why should I make the data available to you, when your aim is to try and find something wrong with it"

Nathan Myers (2011-03-08 13:48:13)

Climate scientists really *are* paid to do climate science. They are also citizens who have a civic responsibility to speak out about public policy that is at odds with reality. There is no contradiction, but they do make conflicting demands on one's time – along with family and other needs. Each of us is obliged to sort out those demands as well as we can. Most of your questions are already answered in my previous posting, typically in the *very next* sentence or clause after the bit you quoted. Do please read. The response to the e-mail release has been profoundly distracting. No one who wanted to actually do, you know, climate science, welcomes such distractions.

sabril (2011-03-08 15:13:19)

"There is no contradiction" The question is not whether it's a contradiction. The question is whether it is dishonest for people like Gavin Schmidt to pretend that they are not advocates when in reality they are. If these warmist researchers came right out and admitted that they are advocates; that they will do their best to put the best possible spin on things in order to support their position; that they will attempt to prevent dissenters from having their work published; that they feel justified in inventing excuses to dodge freedom of information requests in order to shield their work from scrutiny; etc.; then I would have much less of a problem with them. (Of course, I would oppose public funding for such individuals.) "Most of your

questions are already answered in my previous posting” Nonsense, and the fact that you are unable to concede points which are clear to any reasonable person underscores the whole problem with the warmist side of the debate. These are people who (apparently) feel perfectly justified in attempting to silence dissent; withholding data; and in general spinning things to put their pre-determined view of reality in the best possible light. Meanwhile, they have not offered hard objective evidence that their climate simulations are correct, such as bona fide, interesting, accurate predictions. Instead, we are simply supposed to trust them. But their behavior shows that they cannot be trusted.

Daublin (2011-03-08 16:43:52)

withrow and Steve G., it is a fair question, but it's saddening that you aren't even aware of the counter-arguments. A good read would be [climate-skeptic.com](http://climate-skeptic.com). The root of the issue is the magnitudes involved. If the effect of more CO2 is small, then there's no reason to worry. If the effect of emissions control is weak, then it's a pointless strategy to attempt, and we should look for a better answer. The expected effect of more CO2 is where there has been especially shoddy science being published. Occam's Razor suggests that the effect will be small, because the effect is due to the greenhouse effect of CO2 in the atmosphere. We are already past 50 % of the maximum possible greenhouse effect due to CO2, so why would we expect having any more than that effect once more, no matter how much CO2 we put out? There are efforts to argue that we approach some sort of tipping point that would cause the a larger effect from later amounts of CO2 than earlier amounts. There's not much evidence for any such effect that is also consistent with the Earth's history as we know it. In particular, we've had high CO2 in the past without seeing any sort of tipping point, so why should it be different in the modern era? The expected effect of emissions control, meanwhile, is small. To really stop CO2 levels from growing, cutting emissions by half is not enough. The cuts have to be more like 80-90 % world-wide. Such cuts would have severe negative impact on human quality of life, so no such proposals are being floated. However, if the cuts are anything less – or if, like Kyoto, they don't even reduce emissions at all – then CO2 levels will keep rising. In that case, the emissions control just delays our doom instead of preventing it, and we still need an alternate solution eventually.

sabril (2011-03-08 19:36:36)

"A good read would be [climate-skeptic.com](http://climate-skeptic.com)." I agree 100 %. "The root of the issue is the magnitudes involved" I agree with this too. It's amazing how many people there are who think they understand the science but who don't know that the critical issue is water vapor feedback. "The expected effect of emissions control, meanwhile, is small." I agree with this too, and I would add that the proposals on the table are probably even less effective than they seem, since they are likely to result in some amounts of CO2 emissions simply being shifted from places like the US to places like China.

## **The Great Stagnation (Part 1) (2011-03-05 14:21)**

Tyler Cowen has written a short Kindle book called [1]The Great Stagnation. I have a lot to say about it. This post is about the context, how it fits into a bigger picture. In a later post I'll discuss its ideas.

At the end of *The Economy of Cities* (her favorite among her books), Jane Jacobs said if a flying saucer came to Earth she'd want to know how they avoided stagnation. The main battle in any society, said Jacobs, is not between rich and poor or owners and labor but between those who benefit from the status quo and those who benefit from new ways of doing things. The status quo usually wins, no surprise. And the status quo tends to become more powerful over time, which is why Jacobs didn't know if profound stagnation could be avoided as a kind of terminal state. When she wrote *The Economy of Cities* (published 1969), she saw stagnation mounting in the American economy – in transportation, for example. By stagnation she didn't mean lack of growth; she meant lack of useful innovation, causing problems to stack up unsolved. If you keep doing the same things, but more intensely, you will grow in conventional economic terms (e.g., GDP) but you aren't solving your problems. Doing more of the wrong thing (e.g., treating all diseases with pills) counts as growth but such growth makes things worse, not better, because bad ways of doing things become more entrenched.

Most people see Jacobs as [2]someone who wrote about cities. She saw herself as someone with new ideas about

economic development – especially innovation. Cities are important above all because city people are more innovative than rural people. Tractors, for example, grew out of city inventions (the internal combustion engine, etc.). The same person (same IQ, same wealth) will be [3]more innovative in a city than outside of one.

Stagnation is a major problem at all levels of the economy. A few years ago, a friend of mine who worked at the Chicago Tribune said it was clear newspapers were in trouble long before craigslist. As early as the 1980s, he said, there were bad signs. They were ignored. The people in charge kept doing the same things. Had they started trying new things at the first signs of trouble, they might have found a way out. But they were complacent. By the time they stopped being complacent, it was (apparently) too late. *Gone* (1999) by Renata Adler, a great book, is about the disastrous consequences of stagnation at *The New Yorker*. *The Innovator's Dilemma* by Clayton Christensen is about stagnation at industry-leading companies, such as DEC, GM, and Microsoft. Failure to innovate enough was what Christensen found when he tried to understand why industry-leading companies frequently lost their lead. Not only do these companies lose their lead, they often go out of business.

How to avoid or recover from stagnation, Jacobs was saying, is the central question of economic life, with no clear answer. Yet it is roundly ignored. In the Berkeley Public Library a few years ago, I picked up an introductory economics textbook for junior colleges, 700 pages long. It had one page – fact-free, poorly-written – about where new goods and services come from. This is typical of the introductory economics textbooks I've seen. It reflects the profession as a whole: I estimate about 1 % of mainstream economic research is about innovation. It should be half the field.

To study innovation is to study what controls it, what makes the rate of innovation go up or down. Thorstein Veblen (not a mainstream economist) wrote [4]one essay and [5]two [6]books about it. Adam Smith wrote nothing interesting about it, as far as I know, nor did Keynes. I remember nothing interesting about it in *The Worldly Philosophers* by Heilbroner, including the chapters on [7]Schumpeter and Veblen. There have been no Nobel Prizes about it. (Among the Economics prize-winners, Robert Fogel has done the best work about it, whereas Samuelson's textbook is a monument to lack of understanding of innovation and its importance.) Ed Glaeser's new book *The Triumph of the City* emphasizes that cities boost innovation but Jacobs said this 40 years ago. Because cities tend to grow (increasing innovation as they grow), why do whole societies stagnate? Apparently a countervailing force overcomes the innovative power of cities. I have never heard an economist make this point nor say what the countervailing force might be.

In *Collapse*, Jared Diamond showed how whole societies collapsed (ran out of food and disappeared) when they failed to innovate enough. Instead of blaming lack of innovation, Diamond blames overfishing, overhunting, soil problems, and so on. His list of "different" causes of collapse is like a list of "different" kinds of paranoia: persecution by the FBI, persecution by the CIA, persecution by the police, and so on. If a society does the same thing over and over, at increasing intensity, eventually it will collapse. The collapse may have many proximate causes.

Tyler does not assume that all growth is good. Perhaps influenced by Robin Hanson, he points out that vast health care spending has done little for American health. Much poorer countries get the same results. When you spend four times as much but get the same results, it implies stagnation. Presumably the 20 % we share with poor countries is spent on the oldest stuff. If so, the most recent 80 % of growth was worthless and a great deal of it has been a kind of churning, useless research passed off as useful. It entered the health care system, people paid for it, but it didn't help them. It is entirely possible that some of the expensive health care found in America but not poor countries is beneficial and some of it is [8]harmful.

Tyler sees the forest – a society-wide failure to solve important problems. The tremendous accomplishment of his book is to bring the puzzle of stagnation to mainstream economic attention ("the most talked-about economics book of the year so far" according to [9]this review). I am too far from economics to guess what influence it will have on research, but if mainstream economics becomes even 2 % about innovation and stagnation (= lack of useful innovation), that will be great intellectual progress.

1. <http://www.amazon.com/Great-Stagnation-Low-Hanging-Eventually-ebook/dp/B004H0M8QS>
2. <http://www.guardian.co.uk/commentisfree/2006/may/05/comment.communities>
3. <http://www.blog.sethroberts.net/2010/04/12/city-air-makes-free/>
4. <https://sites.google.com/site/thorsteinveblenmurillocruzdsc/artigos-selecionados-de-veblen/jew>
5. <https://sites.google.com/site/thorsteinveblenmurillocruzdsc/livros-de-veblen/veblen>
6. <https://sites.google.com/site/thorsteinveblenmurillocruzdsc/livros-de-veblen/vested>
7. [http://economistsview.typepad.com/economistsview/2007/05/robert\\_solow\\_on.html](http://economistsview.typepad.com/economistsview/2007/05/robert_solow_on.html)
8. <http://www.blog.sethroberts.net/2010/05/24/autism-and-prenatal-ultrasound-more/>
9. [http://www.economist.com/node/18276872?story\\_id=18276872&fsrc=rss](http://www.economist.com/node/18276872?story_id=18276872&fsrc=rss)

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Mark Cancellieri (2011-03-05 15:08:55)

Seth, I haven't read The Great Stagnation, but Russ Roberts had some interesting insights into one aspect of it: The Great Distortion <http://cafehayek.com/2011/03/the-great-distortion.html> I thought it was interesting. I have found that statistics can mislead us about as easily as they can enlighten us.

Kevin Miller (2011-03-05 15:21:15)

Very interesting post. A couple of points, though: 1. I think that even successful organizations can look as though they're stagnating. One of my favorite books in understanding my adopted state of Michigan, David Halberstam's "The Reckoning" is in part interesting because it shows how completely screwed up Nissan was during the period of its greatest growth in the U.S. As he tells it, only the fact that Japan was so far from the U.S. and the leaders of the company never came here, coupled with the presence of one maverick employee who was later brought back to Japan and punished for his independence, allowed them to be successful here. It was still a much better-run company than Ford was in those days, which is also noteworthy. 2. I read "The Innovator's Dilemma" recently and don't recognize your summary of it. What I found fascinating was his idea that it's exactly well-run, customer-focused companies that have trouble dealing with innovation. The case of hard disk drives was fascinating, where the regular move from larger to small drives seems pretty predictable, yet no company that was the leader in one size was able to maintain that for the next smaller size. Each of the smaller sizes was relatively more expensive and slower, so their customers didn't have a use for it (but other customers did). Then when HP tried to get ahead of the cycle they failed because they assumed people would put the drives in portable devices that might be dropped and needed expensive disk-parking, when the market that developed was for big stationary videogames (where their product was too expensive). I think I agree with the overall thrust of your argument, as well as what it implies about the danger of the "too big to fail" concept. But I suspect from my own experience that the distinction between "innovation" and "stagnation" is only clear in retrospect.

aretae (2011-03-05 16:06:46)

Seth, The stagnation problem was attacked head-on by Mancur Olsen in [1]The Rise and Decline of Nations. I think he has largely explained it, if not solved it. Furthermore, while there are lots of detractors from the significance of his specific contribution, Paul Romer's work on new Growth Theory is pretty good. The popular treatment of the idea comes from David Warsh's book [2]Knowledge and The Wealth of Nations.

1. <http://www.amazon.com/Rise-Decline-Nations-Stagflation-Rigidities>
2. <http://www.amazon.com/Knowledge-Wealth-Nations-Economic-Discovery>

Igor Carron (2011-03-05 17:14:33)

Tiny nitpick, it is Clayton Christensen.

Seth Roberts (2011-03-05 17:37:44)

thanks, Igor, I've fixed it. aretae, Olson's work is certainly important, but from what little I know of it he says nothing about

how new goods and services arise and become widespread. It rarely involves what Olson calls "collective action". For example, tractors were a new good that greatly increased farm productivity. Many people became better nourished. This had nothing to do with what Olson writes about, as far as I know. Paul Romer's work is relevant, I agree.

withrow (2011-03-05 19:54:38)

I have one nitpick about the description of innovation by rural vs. urban people. I think it's important to make this clear in order not to insult rural people. They're just as innovative as urban people, just as clever, etc. The difference is that cities give innovation a better chance to stick as part of our culture. It's the environment, not the individuals, that leads to people making innovation a part of their lives.

Seth Roberts (2011-03-05 23:53:19)

yes, my point is that exactly the same person becomes more innovative when placed in a city than when placed in a rural area.

UncleLongHair (2011-03-06 05:02:10)

There are examples of companies that fail to innovate and then get into trouble (i.e. GM, others mentioned here) but there also examples of companies that don't innovate but remain successful, such as Coca-Cola. They sell essentially the same product that they did nearly 100 years ago, in fact trying to innovate nearly led to disaster ("new Coke"). My view is that economies are like ecosystems, with companies playing the part of species within it. In some areas of the ecosystem, constant innovation (evolution) is required for survival (i.e. birds and bugs in the rain forest). In others, the status quo is required (i.e. sharks, which have not evolved for millinea).

john (2011-03-06 05:03:32)

Doesn't IQ and the Wealth of Nations explain creativity. I like mentioning this kind of book because it's all about race. So if almost all creativity is by smart white men I guess what's needed for creativity is white men. An absence of state funded dysgenics would be good and also an absence of religion.

Seth Roberts (2011-03-06 05:51:18)

UncleLongHair, I think Coke executives would beg to differ with you that their company hasn't innovated. Coke is sold in far more countries now than 50 years ago and the company itself has a much bigger product line. I also hear that a Coke in New York tastes quite different than a Coke in Beijing. The company used to make a big deal of "same taste worldwide". Which brings up another big set of Coke changes: in advertising.

Robbo (2011-03-06 10:10:27)

Seth, I think you would be interested by the work of Genrich Altshuller on technical innovation (known by its Russian acronym TRIZ) eg at [http://aboundsound.blogspot.com/2007\\_07\\_01\\_archive.html](http://aboundsound.blogspot.com/2007_07_01_archive.html) and at [aitriz.org](http://aitriz.org). Altshuller knew his work was important when the KBG arrested him and threw him in a prison camp for it.

Andy McKenzie (2011-03-06 11:22:05)

Seth, love the post! Intrigued by the great divide you mention between those who benefit from the status quo and those who benefit from the way things are. Robin Hanson has listed questions that one should try to answer about a great divide: <http://www.overcomingbias.com/2010/08/questions-for-great-divides.html>. In particular, 1. How is this division a key division, underlying many others? 2. How do people acquire their sides in this conflict? 3. How has this conflict lasted so long, without one side winning? 4. How could one side finally win such an old conflict? 5. Why is one side better than the other in an absolute sense? 6. Why can't those folks be persuaded that their side is bad? 7. Why can't peaceful compromise replace conflict? For 1, I'd cite how this leads to gov inefficiency, which leads to \_lots\_ of issues. For 2, I'd say people take sides based on local incentives, and can have different stances on status quo vs new thing on different issues (although peoples' stances across issues appear to tend to be correlated, perhaps for the sake of cognitive dissonance?). For 3, I'd say it's because once a group gets power they always have the incentive to keep it. For 4, I guess we're not sure whether side can win. For 5, innovation is not better absolute of course, but better in terms of more likely to lead to survival and benefit of humans. For 6,



they don't want to be persuaded because that would mean they'd have to admit their relative selfishness. For 7, it certainly could if you had the right incentive structure in place, but right now it can't. Do you agree with these and/or where do you stand? (sorry for long comment, I got carried away)

Nile (2011-03-06 11:59:48)

I think the innovation solution is known. For years and years, while Dave and Bill were alive, HP was an innovation fire hose. Even today, under leadership which does not value innovation the way the founders did, HP continues to bring significant technology to the world. In 2012, next year, HP will bring its memristor memory to market. A background note - few people are aware of this but it will change the computing world because memristor memory in combination with the crossbar latch can 1) act as a CPU 2) emulate a neuron 3) is incredibly dense - one terabyte per cm<sup>2</sup> or one petabyte per cm<sup>3</sup>! Watch the Stan Williams You Tube videos for more info.

Seth Roberts (2011-03-06 13:33:32)

Andy, my answers to those questions are different from yours and for better or worse are long and complicated. The conflict arises people are always inventing new stuff and new ways of doing things - that's human nature. I think personality differences ("rebel" vs. "conservative") have a lot to do with what side you take and that these personality differences, as Frank Sulloway says, are partly determined by birth order. It's crucial to the health of a society that both sides of the conflict have plenty of supporters. If there aren't enough rebels, innovations will never be adopted. That produces collapse. If there are too many rebels, innovations are adopted too quickly, before they have been shown to be safe. I think there is a "divide" (a bimodal distribution) because the conflict is beneficial - active resistance to innovation pushes innovators to do better. To have someone attacking this or that innovation is better than not having such a person ("peaceful resolution").

Steve G. (2011-03-06 13:46:06)

I enjoyed Cowen's book, and I appreciate you post. As often proves the case, you show that Jane Jacobs was a prescient thinker. As a very interesting complimentary perspective on these issues (including climate change), I highly recommend two works by Canadian political scientist Thomas Homer-Dixon: 1. The Ingenuity Gap: Facing the Economic, Environmental, and other Challenges of our Increasingly Complex and Unpredictable World (2000); and 2. The Upside of Down: Catastrophe, Creativity, and the Renewal of Civilization (2006). Homer-Dixon questions, somewhat like Cowen, although on a larger scale, whether we can continue to innovate our way of jams. In the second book, following the leads of Diamond and Joseph Tainter, among others, he catalogs the perils we face from a variety of challenges, especially concerning energy. Many think that parts of our education are a shambles, yet despite one program after another, we're still "waiting for superman". Likewise with energy sources, we still waiting for an energy regime that minimizes our strategic vulnerability, not to mention minimizing risks associated with carbon emissions. Finally, Ian Morris in Why the West Rules, among others, reminds us that we've lived through an extraordinary 200+ years that are unlike any before and that changed the world more than any since the advent of agriculture, cities, etc. Can this continue? We should do all we can to make it so, but can we plan on it?

John C. (2011-03-06 17:44:33)

I'll have to download this book to my Kindle. My company is really pushing innovation.

### **Spy Magazine Available Online (2011-03-06 16:56)**

Thanks to [1]this article, I learned that many issues of Spy magazine have become available at Google Books ([2]here). I loved Spy. In the last few years it got much worse but before that I would often read each issue three times. Now you can judge for yourself.

1. <http://www.theatlantic.com/culture/archive/2011/03/spy-magazines-digital-afterlife/72049/>

2. [http://books.google.com/books/serial/ISSN:08901759?rview=1&source=gb\\_s\\_navlinks\\_s](http://books.google.com/books/serial/ISSN:08901759?rview=1&source=gb_s_navlinks_s)

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vic (2011-03-06 17:23:35)

a commenter to your blog posted this a few weeks ago

Seth Roberts (2011-03-06 18:55:18)

OMG. I thought I read all the comments....Now that I have looked through the comments, I cannot find it.

Alex Chernavsky (2011-03-06 20:53:15)

"Spy" was one of only two magazines that I would habitually read from cover to cover on the day it arrived in the mail (the other one was the "Skeptical Inquirer").

David (2011-03-07 17:18:05)

yes, I left it in an Assorted Links dump when you posted your cartoon taxonomy. Valentine's Day. I read Spy pretty fervently. It was great, and then it wasn't, and then it was gone. I see things in McSweenys that target the approximate demographic and mentality, though Spy seemed to be more Gawkeresque, perhaps?

David (2011-03-14 06:46:37)

More Spy nostalgia here <http://www.slate.com/id/2287767/>

## **Personal Science and Graphic Design (2011-03-07 07:21)**

I will always remember the day (today) my work [1]appeared in a graphic-design magazine.

1. <http://blog.eyemagazine.com/?p=2631>

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Rashad (2011-03-07 07:47:26)

Seth, this reminded me of a question I've had for a while. Have you done some other experiments to see what about the butter is having the effect? Have you tried heavy cream instead, since butter is made from cream? What about clarified butter (ghee)? How about other types of fats? I know you were on the pork belly kick for a while, but what about comparing beef fat, or chicken fat? Just curious.

Seth Roberts (2011-03-07 12:16:24)

Rashad, no, I haven't yet done experiments to study this further. The next experiment I want to do with this is figure out the best dose. The butter replaced pork belly, roughly the same amount. So active ingredient or ingredients must be present more in butter than in pork fat.

## **"My Body, My Laboratory" (TIME article) (2011-03-07 13:30)**

Last week Time published [1]an article about self-experimentation called "My Body, My Laboratory" by Eben Harrell that is now fully available on-line. I am quoted a few times.

I distinguish between two kinds of self-experimentation – part of your job (the usual kind) or self-help (what I do) – and it's easy to put each of the examples in the article into one pile or the other. However, I think that if you go far enough into the future and look back, you will see three varieties:

1. Professional. Self-experimentation done as part of your job (e.g., doctor). A dentist testing a new anesthetic, for example. All famous examples are in this category.
2. Self-help. Self-experimentation done to improve your own life. Done by non-professionals. I call this personal science.
3. Combination of the two. A professional combines job skills and self-help. This is what I did. My job (experimental psychologist) gave my self-experimentation (about weight loss, sleep, mood, and health, all common self-help topics) a considerable boost.

Professionals (Category 1) have skills and resources. The self-helpers, the non-professionals (Category 2) have freedom and (greater) motivation. People in Category 3 have all four. To summarize [2]this paper in three words, that really helps. Please imagine the Venn diagram – one circle ("Professional"), another circle ("Self-Help"), and area of overlap ("Me").

1. <http://www.time.com/time/magazine/article/0,9171,2050030,00.html>

2. <http://sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

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anony (2011-03-07 17:36:36)

Who made YOU the expert on this Seth? I will be correcting this mistaken perception.

Seth Roberts (2011-03-07 18:33:58)

Why am I considered an expert on self-experimentation? Because I wrote a book about a diet based on self-experimentation and a long paper about many self-experimental discoveries.

### Assorted Links (2011-03-08 12:12)

- [1]“But I’m undocumented,” she said, and the room went silent.
- [2]The dog that didn’t bark. Gates Foundation annual letter doesn’t mention global warming.
- [3]Climategate computer code. A reader of this blog named Tierney told me, “The state of their data and databases are AWFUL. I’m not sure how anyone could look at it and still feel highly confident in the climate models!”

1. [http://www.nytimes.com/2011/02/21/education/21winerip.html?\\_r=1&hpw=&pagewanted=all](http://www.nytimes.com/2011/02/21/education/21winerip.html?_r=1&hpw=&pagewanted=all)

2. <http://www.gatesfoundation.org/annual-letter/2011/Pages/home.aspx>

3. <http://wattsupwiththat.com/2009/11/25/climategate-hide-the-decline-codified/>

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Ancorehraq sis (2011-03-08 13:26:35)

It's fascinating how the NY Times article studiously avoids mentioning Ms Castillo's area of study.

Glen Raphael (2011-03-08 14:10:26)

Obama's State of the Union address didn't mention global warming either.

Seth Roberts (2011-03-08 14:31:15)

Ancorehraq, the article says she studied social work ("Ms. Castillo told the governor that she had graduated from college in three and a half years with a degree in social work").

Alex Chernavsky (2011-03-08 20:40:28)

Seth, what's your opinion of chronic fatigue syndrome? This article was interesting - I wasn't aware of the Lyndonville cases. I'm still leaning toward a psychosomatic explanation (think of the epidemic of hysteria in 19th century Vienna). <http://online.wsj.com/article/SB10001424052748704005404576176823580854478.htm>

Seth Roberts (2011-03-08 21:39:08)

Alex, I know very little about chronic fatigue syndrome, sorry. Thanks for the link.

### **Michael Bailey's Defense of Academic Freedom (2011-03-08 13:42)**

I have no problem with Holocaust deniers. They are probably a good thing - a mild irritant keeping the rest of us on our toes (like fermented food). Being forced to look at evidence will do most people good. The people who scare me, who do real damage, are the ones who want to silence Holocaust deniers. They don't meet enough resistance. That Holocaust actually happened is exactly why we should be so afraid of intolerance in any direction (e.g., pro- or anti-Semitic). But Holocaust deniers are too intellectually feeble to do a good job of defending freedom of thought. So, by and large, it is poorly defended. Sure, most "unthinkable" views (such as Holocaust denial) are nonsense. But not all.

The paragraph you just read ("I have no problem...") is a terrible defense of academic freedom. It's vague, argumentative, unemotional, impersonal, and abstract. I think the best defense of a belief is to practice it, which is why, in my lifetime, the best defense of academic freedom has been [1]The Man Who Would Be Queen (about male homosexuals) by Michael Bailey, a professor at Northwestern. The book led to [2]a campaign of vilification against Bailey led by Lynn Conway and Deidre McCloskey. [3]I blogged and corresponded with McCloskey about it.

Bailey has again defended academic freedom by practicing it. Last week [4]Bailey's Human Sexuality class caused controversy because of an after-class demonstration in which a woman was brought to orgasm on stage using an unusual device. Again we are learning the actual consequences of academic freedom, as opposed to simplistic arguments (like mine) or homilies about how good it is.

The Human Sexuality controversy led to publication of [5]this story (which I have shortened):

As an undergraduate at Northwestern University, I only saw one professor argue with his students. It happened several times in the same class, Human Sexuality. [The first time was in 2005.] The professor, J. Michael Bailey, had been leading us through some provocative research, which suggested that if you

control for a whole variety of factors, adults who were sexually abused as children are not much more likely to have psychological pathologies than adults who were not.

[During the question period] a dark-haired young woman in the back of the class stood up right away. Hundreds of heads turned to look at her.

“You’re talking about sexually abusing children,” she said. “No matter what the research says, that is morally wrong.”

Bailey said that his moral judgment had nothing to do with the matter, that he was presenting research and that was all.

The student said, “What would you say if one of your daughters was molested?”

“If one of my daughters was molested, I would be devastated,” he said. “But I would take comfort in knowing that the molestation would not necessarily ruin her life.”

The young woman sat down. Bailey got back to his lecture.

What have I learned from this? At the simplest level, here are two stories – two pieces of evidence, two things to think about. Something more subtle is that a blunt argument (e.g., my first paragraph) is a kind of intolerance all by itself. The opposite of blunt argument is telling a story.

1. <http://faculty.wcas.northwestern.edu/JMichael-Bailey/TMWQBQ.pdf>
2. <http://sethroberts.net/articles/2008%20Dreger.pdf>
3. <http://www.blog.sethroberts.net/2010/04/10/the-man-who-would-be-queen/>
4. <http://nymag.com/arts/all/approvalmatrix/approval-matrix-2011-3-14/>
5. <http://www.theawl.com/2011/03/that-northwestern-human-sexuality-class-was-the-best-course-i-ever-took>

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Thomas Seay (2011-03-09 10:48:42)

Seth, I am not entirely sure I understand why you say that your first paragraph is an instance of “intolerance”. Could you elucidate that and perhaps rewrite how you would have written the paragraph in a more “tolerant” fashion?

Seth Roberts (2011-03-09 11:08:45)

Thomas, the rest of the post is a “tolerant” version of the first paragraph. If that strikes you as too long, then just take the story about Bailey’s class. I could have stated my disapproval of those who suppress Holocaust deniers by telling that story. When the subject of Holocaust denial came up, I could say, “I heard about something that strikes me as relevant...”

anony (2011-03-09 15:24:08)

I think you were trying to make a point here but it didn’t quite come off perhaps as you expected. A little editing would fit the bill.

john (2011-03-10 16:29:14)

This reminds me of Bradley Smith’s comment about “The irrational vocabulary of the American professorial class” and that when the chips are down they always support the state. There are a few notable exceptions, Butz, Rushdon, Ellis, Brand, MacDonald, all of them persecuted to some degree, but generally speaking most professors are spineless kids who’ll join in

the persecution at the drop of a hat.. Academic freedom means the state has the professors by the balls, and it doesn't take much squeezing to get them to fall in line.

### **Independent German Journalism Students (2011-03-09 10:58)**

At Berkeley, I found that the more I let my students decide for themselves what to learn, [1]the more they learned. What they chose to learn was more valuable to them than what I might have taught. A student with severe fear of public speaking decided to give a talk to a high-school class. Every step was a struggle, but she did it. "I have learned I can conquer my fears," she wrote.

I told a friend of mine, a German professor of journalism named Lorenz Lorenz-Mayer, about this. He told me about some independent students in his department:

They were students in the class of 2007 in our online-journalism program at Hochschule Darmstadt University of Applied Sciences. [They had just graduated from the German equivalent of high school.]

During their very first term as freshmen, instead of focusing on new-media projects as we expected, they started producing a kind of city magazine for students, called Darmspiegel. The name is a pun on the unsavory name of the city we work in (Darmstadt = Bowel City), and Germany's most important news-magazine, Der Spiegel. Darmspiegel literally means colonoscope. Another idea we couldn't talk them out of. ;-)

Because they couldn't afford to print their magazine they started with a pdf version. After some experience with it, they started a marketing department, acquired advertising, and successfully printed something like four more issues.

[2][http://shop.darmspiegel.de/product.php?id\\_product=13](http://shop.darmspiegel.de/product.php?id_product=13)

After having done this for a year and learned their lessons, they chose their next project, which was to be . . . a book. This was when the group, something like 60 % of the 40 students in the class, together with some two dozen friends from other departments, asked us to make them media partners for a term project, voicing the unforgettable threat: "You can of course coerce us to do some other project, but you should reckon with the possibility that our heart will not be completely in it. If, on the other hand, we do this thing together..."

So two of our professors negotiated a compromise: It would have to be a book on Darmstadt. The outcome:

[3]<http://nachtsindarmstadt.de/>

"nachts in darmstadt" turned out to be wonderful book, full of moving stories, beautiful pictures, even an oil painting on the night the bombs fell on the city at the end of WW II was painted, dedicated to become one of the illustrations. A delegation went to far north of Norway to see the midsummer sun in Trondheim, a partner city of Darmstadt. They used a Wiki to coordinate their efforts and a weblog to promote the ongoing project:

[4]<http://nachtsindarmstadt.de/2009/>

They tried several old and new forms of marketing (like nightly "guerrilla gardening", illegally planting flowers in Darmstadt city). The book was published and – predictably – soon sold out.

Some minor projects followed, then the class had to do their obligatory 6 months of internship in different media companies. After returning, some of them majored in Public Relations, others continued Journalism, never quite reaching the prior level of productivity, as a team. Three of the group have burnt the midnight oil again (while still finishing their studies) and together with friends started a bookazine publishing house:

[5]<http://herznote.com/en/team/>

They've already published one multi-lingual magazine issue, on fashion topics (each issue is going to have a different topic), collecting and curating texts and pictures from fashion blogs:

[6]<http://circus-bookazine.com/en>

A second issue on travel is ready for print, they have started taking preorders.

Wow! They did so much. I get the same impression I got with my students: Something powerful inside of them had been freed.

1. [http://www.sethroberts.net/about/2005\\_diversityinlearning.pdf](http://www.sethroberts.net/about/2005_diversityinlearning.pdf)
2. [http://shop.darmspiegel.de/product.php?id\\_product=13](http://shop.darmspiegel.de/product.php?id_product=13)
3. <http://nachtsindarmstadt.de/>
4. <http://nachtsindarmstadt.de/2009/>
5. <http://herznote.com/en/team/>
6. <http://circus-bookazine.com/en>

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Eric (2011-03-09 11:46:48)

This is the main idea behind the experimental liberal arts college I attended, New College of Florida. Control over coursework leads to flourishing. Three main features facilitate this. 1. There are no grades; classes are pass/fail and students receive narrative evaluations from their professors. This lets students decide for themselves when to put forth their best efforts (no bad grades for bad or uninteresting classes). 2. Students can design their own classes if a professor agrees to sponsor. 3. Passing criteria is determined by a contract each semester that students agree to after designing it with their sponsor. E.g., passing 3/3 hard classes, passing 4/4 or 5 moderately hard classes, or passing 4/7 if the student wants breadth that semester. The format can be taken advantage of. When it works, however, there is nothing like it. And, like me, many of my fellow alumni report being better prepared for graduate work than many of their grad school peers.

Alex Chernavsky (2011-03-11 08:27:46)

The system described in the blog post seems like it would work well for highly motivated, inquisitive students. But what about students who perhaps lack a strong work ethic and a sense of curiosity? And what about subjects that may be important to know but may not appeal to otherwise-inspired students?

Seth Roberts (2011-03-11 16:09:30)

Alex, I did not encounter these problems (lack of work ethic, lack of curiosity). Every one of my students had something they wanted to learn about. As for subjects "important to know" but not appealing, in psychology statistics is one of those subjects. I think the problem is professors wanting to appear scientific. At Berkeley, at least, few psychology majors want to do research. They go on to law school, become high school teachers, and so on. Statistics isn't actually important for them to know.

## **Does Blood Pressure Medicine Always Work? (2011-03-09 22:15)**

[1]Apparently not:

I was a very naughty patient and, after taking Atacand for 135/75 blood pressure (benign essential hypertension was the description) for a number of years on my doctor's prescription, decided to do a little experiment. That is, I cut back on it gradually, monitoring my BP every day. No change.

I eventually got to no Atacand at all and have been there for the past four years, during which time the BP has remained the same as when taking the drug. Now, whether the BP is going to kill me is perhaps a separate question (I seem to be in excellent health at 65) but the Atacand doesn't appear to have made much difference at all — except for the \$600/year it cost me, even after insurance had picked up on some of the expense.

I began to grasp how helpful self-experimentation could be when I discovered that tetracycline, an antibiotic that my dermatologist had prescribed, did not reduce my acne. When I told my dermatologist about the research that revealed this, he said, "Why did you do that?"

Had this person's doctor told him that Atacand might not work? Clearly not. Did the doctor even know that Atacand might not work? Apparently not, since there was no doctor-guided attempt to find out. Perhaps the doctor who prescribed Atacand would defend himself by saying, lamely, that all he knew is what the drug company told him. I wonder what the drug company knew.

How much money could be saved by stopping the prescription of drugs that turn out not to work? Should all drugs come with a label that says the fraction of patients for whom this drug doesn't work? It is a warning that is truly needed.

Thanks to Rajiv Mehta.

1. <http://well.blogs.nytimes.com/2011/03/09/rethinking-normal-blood-pressure/?hp#comment-657310>

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dearieme (2011-03-10 06:02:34)

Why would one worry about 135/75? [http://www.spacedoc.net/does\\_treating\\_high\\_blood\\_pressure\\_do\\_any\\_good](http://www.spacedoc.net/does_treating_high_blood_pressure_do_any_good)

Seth Roberts (2011-03-10 06:28:14)

dearieme, that's a good point. so there were three things wrong here. 1. no medicine needed. 2. medicine didn't work. 3. doctor didn't care whether medicine worked. Perhaps four: 4. drug company didn't reveal that medicine often failed. What a



system.

sabril (2011-03-10 15:12:10)

I wonder if part of the problem is that most people are not sophisticated and disciplined enough to accurately measure their own blood pressure once or twice a day in order to really nail down the effects the medication is having on them. If a doctor instructs all of his patients to self-evaluate in this way, he can be sure that a large percentage will not do it properly. If somebody screws up and is hurt as a result, would the doctor be open to charges of malpractice? If the doctor tries to pick out who is likely to comply, will he be open to charges of racism or classism? Perhaps there is a kind of rule utilitarianism at work; the simplest and most effective course of action for the doctor is to just prescribe the medication to all patients who are above age X and blood pressure Y.

### **Kiviaq, the Fermented Food of Greenland (2011-03-11 00:17)**

From the new BBC series [1]Human Planet, which I like even more than Planet Earth, I learned that Greenlanders store birds they catch in summer – during a migration over the island – in a sealskin bag. Stuff 300-500 little auk birds into the bag, press all air out, sew up the opening, cover with heavy rocks, and wait three months.

The fermented birds are called [2]kiviaq.Â Kiviaq is valued highly, served on special occasions such as weddings. The aroma should "sting the nostrils. . . The flavor should resemble extremely intense Gorgonzola cheese."

The kiviaq segment ends with this voiceover:

And it's nutritious, full of vitamins and minerals that will sustain people over the winter months ahead.

Reflecting the mainstream view that microbes (made abundant by fermentation) don't matter.

1. <http://www.bbc.co.uk/nature/humanplanetexplorer/>

2. <http://www.bbc.co.uk/blogs/food/2011/01/rotten-seabirds-for-supper.shtml>

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Kevin R. Bridges (2011-03-11 09:02:36)

The microbes definitely matter. I've been eating sauerkraut after dinner every day for a couple of months now, and I no longer underestimate it.

Thomas W (2011-03-11 15:59:30)

Bad kiviaq also killed Knud Rasmussen, the famous Greenlandic explorer.

tom (2011-03-15 14:08:19)

This is a self-experimenter plus (and he ate only meat): <http://www.nytimes.com/2011/03/15/us/15stanley.html?hp>

Nick (2011-10-13 08:29:42)

I just wrote an article about Kiviaq and other bizarre cooking methods! Check it out <http://bit.ly/pOiJbX>

### Lack of Evidence For Climate Models Intensifies (2011-03-11 16:40)

[1]A few weeks ago I pointed out the lack of a good reason to believe the scary predictions of climate models. Al Gore, Bill McKibben, and a million other public figures say we should believe what the models predict about global temperature ten years from now. Yet, as far as I know, the models have never made accurate and surprising predictions of global temperature. They are claimed to do what they have never been shown to do. In contrast to the absence of accurate predictions of global temperature is the presence of [2]wrong predictions.

The lack of persuasive predictions is clearest when experts who believe climate models fail to supply them. This is why [3]I linked to a warmist web page with a wealth of "supporting" information. Surely its creator had studied the issue deeply. This is why I noted that the Science Editor of The Independent, a major English newspaper, [4]failed to supply such evidence. Surely he had read a lot about the issue.

And this is why I note that [5]a graduate student in atmospheric science has failed to supply such evidence. On my Psychology Today blog I reposted one of my earlier posts about this.Â The graduate student said I was "misinformed about the nature of climate models" and that he "could go on for pages" about why. But he too failed to supply an example of an accurate surprising global-temperature prediction. (For an inaccurate prediction of a 1986 model, see [6]here.)

1. <http://www.blog.sethroberts.net/2011/02/27/the-best-argument-against-man-made-global-warming/>
2. <http://www.blog.sethroberts.net/2011/03/04/climate-model-predictions-and-what-happened/>
3. <http://www.blog.sethroberts.net/2011/01/12/what-global-warming-science-really-says/>
4. <http://www.blog.sethroberts.net/2011/02/27/the-best-argument-against-man-made-global-warming/>
5. <http://www.psychologytoday.com/blog/personal-science/201103/climate-change-confidential-what-doomsayers-dont-tell-you/comments>
6. <http://stevengoddard.wordpress.com/2011/03/09/hansen-1986-2-to-4-degrees-warming-from-2001-2010/>

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Alex Chernavsky (2011-03-11 18:37:36)

I didn't even know that Seth had a *Psychology Today* blog. It's here: <http://www.psychologytoday.com/blog/personal-science>

sabril (2011-03-12 06:56:30)

I agree 100 %, but I would add two points: First, you don't even have to note the lack of accurate predictions to be skeptical of these climate simulations. Because climatologists don't understand things like what caused the Little Ice Age or what caused global surface temperatures to rise from 1890 to 1950. If there are important mechanisms which (1) are capable of significantly changing global surface temperatures; and (2) are not understood, then it's obviously an extremely difficult task to model and predict global surface temperatures. Second, your example illustrates the warmist mentality. The fact that most warmist researchers have not condemned Hansen is further evidence that they have a war mentality about this controversy. That they cannot be trusted to play fair.

Nile (2011-03-12 09:41:47)

I live in Minnesota, USA. 12,000 years ago the land where my house stands was under a half mile thick ice sheet. There must have been extreme global warming to melt that much ice. Did/do the models predict that outcome? Can the climate change believers explain what cause the last ice age to end?

Seth Roberts (2011-03-12 12:50:48)

Nile, I don't think the models go back that far. Sabril, you make a good point about Hansen. The saying is: lie down with dogs, wake up with fleas. I wouldn't/don't expect any climate researcher to "condemn" Hansen because it would be a terrible career move. But I wonder if letting his extremism (absurd faith in his models) go unpunished encouraged other extremism, such as Michael Mann's. The whole profession wakes up with fleas.

Brad (2011-03-12 14:29:44)

How do other disciplines (eg psychology, economics, political science) compare to climate science in supplying models that can predict the long-term future accurately?

Seth Roberts (2011-03-12 16:50:11)

Brad, a book called The Predictioneer's Game <http://www.amazon.com/Predictioneers-Game-Brzen-Self-Interest-Future/dp/081297977X/> is about social science predictions.

sabril (2011-03-13 07:09:54)

"I wouldn't/don't expect any climate researcher to 'condemn' Hansen because it would be a terrible career move" Probably so, but the fact that even tenured professors are reluctant to publicly call out Hansen for his shenanigans doesn't say much for climate science as a field. It's really a shame that Richard Feynman isn't around anymore. He would have had no problem calling BS.

Brad (2011-03-13 14:35:54)

Thanks Seth. I really enjoy the blog by the way - it's been a big help with understanding issues in statistics and data analysis.

Seth Roberts (2011-03-13 15:28:23)

"It's a shame Richard Feynman isn't around any more." Yeah, that is a strange aspect of this - that more top scientists don't join Freeman Dyson.

sabril (2011-03-13 17:43:22)

Well 99 % of people will go along with the dominant view. Richard Feynman was a unique man - brilliant and absolutely unafraid to disagree with anyone. If God himself had spoken to Feynman, Feynman would not have been afraid to contradict Him. They say that during the Manhattan project, Oppenheimer preferred to discuss ideas with Feynman because Feynman was not afraid to contradict his superiors. Anyway, part of the problem is the way that people become scientists. I suppose you would know more about this than me, but I think that to make it through graduate school, post-docs, the tenure process, get funding, get published, etc., arguably the most important thing is to please the people above you. Particularly if you are not brilliant.

drewski (2011-03-16 07:27:29)

"Yet, AS FAR AS I KNOW, the models have never made accurate and surprising predictions of global temperature." You either are too lazy to avail yourself of the mountain of evidence and the increasingly accurate predictions made by climate scientists or you simply like lying to yourself.

Seth Roberts (2011-03-16 15:52:43)

drewski, thanks for a new example of my point - that the supporters of the models make the best arguments against them (unwittingly). You mention "the mountain of evidence" and "increasingly accurate predictions". The only evidence that matters

is accurate predictions (not "increasingly accurate"). Your statement implies that as far as you know, accurate predictions are rare or non-existent. Because you seem to know more about this than I do, coming from you such a statement is more persuasive than when it comes from me.

Sam (2011-03-17 06:45:11)

Maybe drewski can put some facts behind his words and provide some evidence? Should be easy enough for him if there really are mountains of it. But probably it's just hot air with not a single fact behind them. Sadly.

## **Climatology Light Bulb Joke (2011-03-12 14:02)**

Q: How many climate scientists does it take to change a light bulb?

A: None. No need to change it. Because it's been changed in the past, they say, it will be changed in the future.

A tiny fraction of climate scientists publish papers showing how their model can fit past data – say, global temperatures from 1600 to now. The authors of these papers claim that this sort of thing shows their model can predict accurately. In fact, [1]it means roughly nothing – perhaps the model was flexible enough to fit any plausible past data.

[2]Outsiders take fitting past data seriously, but what do they know? However, when [3]a graduate student in atmospheric science takes fitting past data seriously ("it is perfectly reasonable to treat reproductions of the past climate as [successful] predictions"), the whole field has a problem.

1. [http://laplab.ucsd.edu/articles/Roberts\\_Pashler2000.pdf](http://laplab.ucsd.edu/articles/Roberts_Pashler2000.pdf)

2. <http://www.independent.co.uk/environment/climate-change/letters-to-a-heretic-an-email-conversation-with-climate-change-sceptic-professor-freeman-dyson-2224912.html>

3. <http://www.psychologytoday.com/blog/personal-science/201103/climate-change-confidential-what-doomsayers-dont-tell-you/comments>

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sabril (2011-03-12 14:50:10)

There is an interesting cognitive process at work here, it seems to me, which I can demonstrate with a thought experiment. Suppose I create a stock market simulation which I claim can accurately predict the stock market. If my claim is correct, the simulation is worth millions and millions of dollars. I claim that the simulation is valid on the ground that it accurately matches stock market history for the last 20 years. I offer to sell the simulation to Gavin Schmidt and James Hansen for \$10,000. Surely these men would refuse to pay even \$100 for my simulation. They would instantly see that the correspondence between my simulation and history is not even strong evidence that the simulation is valid, let alone proof. So it seems to me that any educated person, including warmist researchers, has the ability to see the worthlessness of these climate simulations. Indeed, it's reasonably obvious to any educated layman who looks at the issue with an open mind. My conclusion is that there is a massive amount of self-deception and motivated reasoning going on here.

John S. (2011-03-12 15:16:58)

As someone once said (and I've seen the saying attributed to everyone from Yogi Berra to Niels Bohr) it's difficult to make predictions, especially about the future

sabril (2011-03-12 15:29:23)

Another interesting thing about climate simulation models is that if you compare them to temperature histories, it's usually a very nice fit, even looking at history year by year. So if the climate simulation models are not BS, they should be able to predict future temperatures on a yearly basis. And do so very nicely. Yet they cannot. The only reasonable inference is that these simulation models match history only because they have been tweaked and tuned to do so. Thus the fact that they match history is meaningless.

LemmusLemmus (2011-03-12 15:40:24)

In fairness to the graduate student, he was talking about fitting the model on one set of data and then "predicting" another set of data (different years) with it. I don't know whether that's what climate scientists actually do, but I think you're misrepresenting his argument here.

Sean Estey (2011-03-12 16:17:18)

There are so many sources of bias within the climate change debate, at all levels, that it's hard to disentangle them all. First you have the media/environmental NGO alarmism bias, which is going to overstate any threat risk to make for higher ratings/funding. This filters down to the general public who become scared and feel the need for political action. The widespread anti-capitalism bias helps, of course (confirmation bias). Now the politicians can look like heroes by funding more climate research, as well as using the issue as a political tool to enact more legislation (for which they can claim credit). Of course, the funding bias will ensure that most of it goes to studies attempting to confirm anthropogenic warming theory, rather than falsifying it. Suddenly a lot of new climatologist jobs are created, as well as entire arms of the UN like the IPCC, the continued existence of which all rely on confirmation of anthropogenic warming, creating heavy researcher bias to justify their jobs. This is the same thing that happened with the diet-heart and lipid hypothesis, and almost 5 decades later, were still mired in thick of it. Seems rather hopeless.

Seth Roberts (2011-03-12 16:18:49)

LemmusLemmus, if climate scientists tested their models using data that had absolutely nothing to do with the development of those models, I would agree with you. There's no sign that's what happens. Here's what the grad student wrote: "Once the climate model simulates the current climate well enough, then they run the simulation of the past 150 years or so to see whether it accurately reproduces the climate." Well, what happens if it doesn't accurately reproduce the climate? I have a funny feeling they change the model. Eventually the model reproduces the past and they publish it. It makes sense to use reproduction of the past as a filter. To completely ignore the past until you are satisfied with your model seems impossible and would require special care. You would have to ignore all previous research that used the past as a guide. I have never heard of anyone doing model-building this way ("don't show me that paper, it might contaminate my work!"). sabril, that is a good point. If those models are so wonderful, why don't they just predict the next 10 years, everyone will see how well they predict, and the debate will subside? When skeptics come along, they will be easy to answer. Yet that hasn't happened. And we are 25 years into this. If the predictions turned out to be wrong, that would be good too – at least for mankind – because it could be used to improve the models. Yet somehow we never hear about the predictive record from the warmists.

Mike W (2011-03-12 17:24:21)

sabril's analogy strikes home for me - I used to write stock market simulation software. I was just the programmer, not the modeler, and I thought most (but not all) of the models were hoey. But believe me, we got plenty of investors to buy our software, for a lot more than \$100. These investors were no dummies, they knew the models weren't going to predict the future with any precision. The idea was they would be right often enough to improve the investors' odds of timing the market correctly. Every model had "tunable parameters", since each stock or commodity has its own unique volatility and behavior patterns. The way I would tell if a model was any good was I'd optimize those parameters to best fit price movements for a given year (say, 2009), then apply that same tuned model to the next year's data to see how good the predictions were. I

would hope the climate modelers did the same thing (I don't know if they did). That is, they should pretend the year is, say, 1900, and create their model and tweak its parameters to best match the previous 100 years' observed data. Then, they should come back to the 21st century and apply their 1900-tuned model to the 1900-2000 interval. If the model was truly developed without any post-1900 data, but accurately predicted 1900-2000 climate observations, then they've got a good model, and, yes, the world should take it seriously.

Seth Roberts (2011-03-12 17:38:12)

Mike W, there's more to the flexibility of the models than the tunable parameters. There are a thousand things (all sorts of approximations) that they can include or leave out. How closely the earth is approximated, for example. John S., here's my version of the Neils Bohr saying: It's easy to predict the past if you don't mention your failures.

sabril (2011-03-12 17:54:56)

"If the model was truly developed without any post-1900 data, but accurately predicted 1900-2000 climate observations, then they've got a good model, and, yes, the world should take it seriously." I would say it depends. What if you create a model, run it, and it doesn't match the post-1900 data? What do you do then? Do you quietly discard it and put together a new improved model? Or do you give up on modeling forever after your first attempt fails? (Those are the only two possibilities.) Common sense says that researchers do the first, and that they repeat until they have a "good model." But for all practical purposes, that iterative process is essentially the same as using all available data to construct the model. Here's an analogy: A claimed psychic predicts that there will be a revolution in Egypt in 2011 followed by a massive earthquake in Japan. It sounds impressive, but to really evaluate it you need to know what other predictions the psychic made. If he has been predicting revolutions in every Arab country every year since 1970 and has been predicting massive earthquakes every year in every Pacific rim country since 1970, then he is not so impressive after all. It's the same with climate models. The fact that they have been tested by back-casting on fresh data is not impressive unless you know how many versions of the model ended up on the cutting room floor, so to speak. As Roberts points out, researchers don't report this kind of information. And even if they did, I would be skeptical of their claims. That's why the acid test is making bona fide, interesting, accurate predictions. And making them publicly.

sabril (2011-03-12 18:01:20)

"Well, what happens if it doesn't accurately reproduce the climate? I have a funny feeling they change the model. Eventually the model reproduces the past and they publish it. It makes sense to use reproduction of the past as a filter." Exactly. If you discard every model which doesn't match history, it's the same as if you tuned your model to fit history from the very beginning.

sabril (2011-03-12 18:04:50)

"There are so many sources of bias within the climate change debate, at all levels, that it's hard to disentangle them all." There's a simple way to cut through the Gordian Knot, which is prediction. If a scientist makes interesting, accurate, bona fide predictions, I will listen to him whether he is funded by Exxon-Mobil or Greenpeace.

John S. (2011-03-12 18:54:57)

I keep an open mind about global warming, but this discussion brings to mind the prophecies of Nostradamus. They're great at predicting past events, but have a bit of trouble with the future. James Randi calls this "retroactive clairvoyance".

sabril (2011-03-13 02:40:12)

By the way, Warren Meyer had a very insightful point about all this. Check out this IPCC graph: [http://www.coyoteblog.com/global\\_warming\\_climate\\_graphs/image039.jpg](http://www.coyoteblog.com/global_warming_climate_graphs/image039.jpg) The pink line represents the average model output; the black line represents historical temperatures. The blue line represents model output once you remove anthropogenic factors from the models, such as CO2. (The IPCC uses graphs like this as "proof" that recent warming must have been caused by CO2.) Anyway, if you look at the blue line, it rises until 1950, peaks, and then descends. In essence, the IPCC is saying that without anthropogenic influences, global surface temperatures would have declined after 1950. Says Warren Meyer: "With the peaked shape . . . they are saying there is some natural effect that is warming things until 1950 and then turns off

and starts cooling, coincidentally in the exact same year that anthropogenic effects start taking off. I challenge you to read the IPCC assessment, all thousand or so pages, and find anywhere in that paper where someone dares to say exactly what this natural effect was, or why it turned off exactly in 1950. " I agree with Warren Meyer 100 %. This unidentified natural forcing is obviously an artifact of aggressive tweaking of climate models; smoking gun evidence that warmist climate modelers tune their models to fit history.

Eugene (2011-03-13 08:23:14)

Nassim Taleb suggests (around 17:00) that when people make forecasts about the future, go back five or ten years and see how accurate their predictions were about what supposed to happen right now. It is better, he says, to create systems robust enough to tolerate the prophets being inevitably wrong. <http://www.charlierose.com/view/interview/11516>

Adam (2011-03-18 07:02:45)

Hey Seth, have you seen [www.climate-skeptic.com](http://www.climate-skeptic.com) ? If so, what is your opinion of the material presented there? The author also did an interview that I found very interesting: [http://www.freedomainradio.com/Traffic/\\_Jams/FDR\\_1556\\_global\\_warming\\_interview\\_meyer.mp3](http://www.freedomainradio.com/Traffic/_Jams/FDR_1556_global_warming_interview_meyer.mp3) If you have time, maybe you can have a listen and share your thoughts.

Seth Roberts (2011-03-18 15:15:53)

Adam, I listened to the whole interview, thanks for the link. I learned a few things. However, the guy being interviewed, the guy who runs [climate-skeptic.com](http://www.climate-skeptic.com), failed to make the one point that matters: no accurate predictions. If it had been shown that climate models can predict the temperature 10 years in the future, I would put faith in their predictions of temperature 10 years from now. Because that hasn't been shown, I don't believe their predictions. Period. The many things discussed in the interview, although interesting, are trivial compared to that.

## **PFCs, Ultrasound, and Autism (2011-03-13 17:54)**

Robert Delaney is a geologist who does environmental cleanup in Michigan. While cleaning up an abandoned military base, he found remarkably high contamination by a chemical called PFOS. He had been wondering what causes autism. He came across [1]a rodent study that found that the combination of PFOS and ultrasound was much more damaging to the nervous system than either alone. (See also [2]this study.) He remembered that study when he read [3]my posts about ultrasound and autism. He wrote to me:

You will know the chemical PFOS (perfluorooctane sulfonate) from spray-on fabric treatments that protect clothes from stains and water. I want to tell you about the possible connection between PFCs (perfluoroalkyl chemicals, especially long chain PFCs) and autism. I learned that mice and rats contaminated with PFOS, a PFC, when exposed to ultrasound convulsed and died. I was reminded of that finding when I read your blog about Caroline Rodger's idea that prenatal ultrasound causes autism. I have thought that PFCs were causing autism for some time. I wondered if lower levels of PFOS would cause some type of brain injury, short of convulsions and death, when the mice were exposed to ultrasound.

I work on cleaning up military sites and attend a lot of related conferences and meetings. I am working on a focus group with the Association of State and Territorial Waste Managers Organization that is looking at emerging contaminants (contaminants that are not regulated or so recently regulated they are still a problem). Because of that, I was recently made aware of the PFCs because the military had identified these contaminants in firefighting foams. I was doing a cleanup at the former Wurtsmith Air Force Base in Michigan. I decided we should check for PFOS and PFOA at the site. There were high levels of both PFOS and PFOA even though it was 20 years since the based had been used. When we checked groundwater, we found it in every well at every depth. In my 25 years in the environmental business I have never seen anything like it.

I started researching the chemicals as it was apparent that I would have to deal with them. I discovered that at least 98 % of Americans have them in their blood. That isn't surprising because they are in everyday products such as food wrappers and popcorn bags, shampoos, cleaning supplies, carpeting, furniture materials, clothing, and dental floss. They are used in firefighting foams, pesticides, automotive parts, computers, electronics, and lubricants. They have ended up in our food supply and drinking water.

I had been researching the occurrence of autism for other reasons. It had occurred to me that whatever was causing the dramatic rise in autism around much of the world, it had to be ubiquitous in the environment, of recent origin, with increasing use, and found in at least the US, Canada, Europe, Japan and Australia where the autism rates were exploding.

PFCs fit these characteristics. They are found around the world in mammals, birds, fish, shellfish, etc. In fact, the Canadian government reported that the blood levels of PFCs in polar bear above the Arctic Circle were higher than the levels of any pesticides they had ever measured.

Research in the Great Lakes Region is showing high levels of PFOS in the lakes. In some places in the Lakes the contamination exceeds preliminary drinking water standards. Because these are huge bodies of water, to have so much contamination is amazing. High concentrations have been found in mink, fish, gull eggs, eagles, etc. around the Great Lakes. Fish and drinking water in Minnesota have been impacted over large areas. Europe has now banned PFCs for most applications.

What got me wondering about autism and PFCs was that in lab animals and in test tube experiments with human brain cells they are developmental neurotoxins. Many chemicals are neurotoxins, such as chlorinated pesticides and other chlorinated compounds (such as PCBs), organic mercury, and lead. However, we in the western world have been aware of these facts and for the last thirty years have been reducing use and exposure to these chemicals. But while we have been reducing our exposure to mercury, lead, and so on, neurologic diseases have been on the rise. No one suspected PFCs were harmful to humans. Their use has continued to increase.

The half life of the chemicals in our body is around 5 years, so in 5 years, if you have not gotten any more exposure to PFCs, half of them would still be in your body.

There are a lot of reasons to think PFCs may cause autism. Here are a few. First, the company that invented PFCs (3M) is located in Minnesota. There is widespread PFC contamination in Minnesota. As I was preparing a talk last week, I googled..."autism state rates." The first site to pop up listed Minnesota as having the highest levels of autism of any state. New Jersey has unusually high PFO contamination of drinking water; they also have a very high level of autism. The military, which has used a great deal of fire-fighting foam, has double the rate of autism of the general U.S. population.

In laboratory experiments PFCs influence brain wiring. The impact of PFCs in some mammals is sex-dependent with males being more affected; autism is 4 times more common in boys than in girls. PFCs are associated with repressed immune systems in animals which has been associated with autism as well. Deranged behavior/ADHD behavior has been reported in PFOS-exposed mice. ADHD in children has been associated with prenatal exposure to PFCs.

Unfortunately, the EPA did not include PFCs in their list of chemicals that might be causing autism. My colleague and I have put together a web page if people want more information: [4]<http://www.autism-pfos.net/>

Yes, why does Minnesota have such high autism rates? It is not an industrial state. It is not a rich state. Yet it is where PFCs were invented and manufactured in large amounts (e.g., ScotchGuard). I can't think of a plausible alternative explanation. The lab results (ultrasound plus PFOS far more damaging than either alone) makes perfect sense: If there is a bad molecule in neural tissue, it is going to do a lot more damage if you start shaking it, which is



what ultrasound does.

1. <http://www.ncbi.nlm.nih.gov/pubmed/21297341>
2. <http://www.ncbi.nlm.nih.gov/pubmed/19797866>
3. <http://www.blog.sethroberts.net/category/autism/>
4. <http://www.autism-pfos.net/>

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sabril (2011-03-14 05:21:32)

I did a google search for "autism rates by state" and found this chart: <http://www.stellamarie.com/index.php/201-0/06/24/autism-rates-per-state> Just eyeballing it, it looks like there is a strong correlation between autism rates and percentage of votes for democratic candidates in recent presidential elections. Put another way, there are a lot of blue states at the top of the list and a lot of red states at the bottom. So my hypothesis is that there is something political at work. For example, perhaps liberal states are more aggressive about diagnosing autistic children and putting them in special education. Just from general observation of adults, it is clear that there are a good number of borderline autistic people. Is there a clear, objective definition for autism which is universally applied?

Seth Roberts (2011-03-14 05:55:13)

Sabril, if you make a scatterplot of autism rates (log) vs percent vote for Obama (or some other measure of "percentage of votes for democratic candidates in recent presidential elections") I would be happy to post it. Your idea doesn't easily explain why autism is higher among military families than in the general public nor does it explain the huge changes over time. I think plausible explanations for autism must be able, above all, to explain the huge increase over time; there is no precedent for such a giant change being due to diagnostic vagueness.

UncleLongHair (2011-03-14 11:30:33)

Correlation is not causation...

dearieme (2011-03-14 12:58:00)

"there is no precedent for such a giant change being due to diagnostic vagueness": except in psychiatry?

Seth Roberts (2011-03-14 15:51:33)

"except in psychiatry"? I know of no psychiatric examples. The occurrence of depression has increased by a large factor over the last 100 years. This is accepted as real, in spite of diagnostic vagueness.

sabril (2011-03-14 20:25:39)

I tried to post this before but it got swallowed. I don't have the time and skills to create a scatter plot, but I did create a map: <http://monarch.tamu.edu/smrs/16162627.gif> The blue states represent the 25 states with the highest levels of autism; red the lowest.

Robert Delaney (2011-03-14 20:53:50)

In response to UncleLongHair, I totally agree that correlation and coincidence do not prove causation. For example, if one looks at a long list of facts concerning the assassination of President Lincoln and President Kennedy, one can find lots of correlations. All that proves is that if you look at enough random facts about any two events, you will find interesting coincidences. I am not claiming that there is definitive proof that PFCs cause autism. In science, we view a phenomenon and then postulate about possible causes. We then determine ways to test our hypotheses. The "proof" of any hypothesis comes when we can use that hypothesis to make predictions and those predictions prove to be true. As for Sabri's comment, there are many

autism "clusters" that have nothing to do with political boundaries, but might be explained by different types of PFC exposure scenarios. As Seth points out, the rise in autism rates over time must be explained. I appreciate Seth's patience to explain things. For myself, I am just looking for a few highly qualified, careful and objective individuals that can tackle the difficult job of studying the toxicology of PFCs, and who can do the epidemiologic studies. I hope no one "knows" that PFCs cause autism because some geologist thinks so. I understand contaminant fate, transport and human exposure. I leave the real toxicology and epidemiology to the experts. Fortunately, I have already run across some experts since I wrote to Seth that are interested in the subject, and one epidemiologist who was actually beginning to look at the possible link between PFCs and Aspergers. A public debate at this time is folly without hard science. However, the stakes are incredibly high and we need to find the cause or causes of these diseases as fast as possible. Pointing in one possible direction of a cause is not the same as faking data as happened in the case of the vaccination hypothesis. Sabril's comment, although not taking into account multiple lines of evidence, is still useful as it points out the need for care with correlations and allows me to explain why people should not jump to the conclusion that PFCs and ultrasound cause autism. Researchers that are qualified have to look at the data, determine if they think this might be an idea to examine, design the tests, and then communicate the results to other qualified scientists for them to test and examine. Unfortunately, that is a slow process while we are facing a very urgent problem.

sabril (2011-03-15 05:24:31)

To follow up on my previous comment, the map could easily be an electoral map. (Ok, with a few exceptions like Texas and Illinois, but still.)

sabril (2011-03-15 05:28:01)

Oh, and check out the map here: [http://voices.washingtonpost.com/ezra-kl-ein/2010/04/the\\_red\\_state\\_ripoff.html](http://voices.washingtonpost.com/ezra-kl-ein/2010/04/the_red_state_ripoff.html) It allegedly divides the states up based on the flow of tax revenue and is very very similar to the autism map.

Peter Andrews (2011-03-28 13:55:30)

"why does Minnesota have such high autism rates?" Perhaps because of its latitude and corresponding low average levels of vitamin D. [1]ncbi autism vitamin d search

1. <http://www.ncbi.nlm.nih.gov/pubmed?term=vitamin%20d%20autism>

### **Chinese News (2011-03-16 03:10)**

The media in China are government-controlled. There is a 30-minute newscast every day at 7:00 pm. A friend described it to me like this:

First 10 minutes: Government officials doing their jobs.

Middle 10 minutes: Chinese people being happy. Sports, food, achievements.

Final 10 minutes: People in other countries suffering.

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Joseph Dantes (2011-03-16 03:54:12)

I lol'ed

blinded1 (2011-03-16 07:51:56)

Why am I not surprised? I guess anyone can become a China expert and begin to write about that country after heard someone saying something, or read a article. Actually, this is exactly many reporters, commentators are doing.

UncleLongHair (2011-03-16 10:18:57)

This is in contrast to the US media news reports: First 10 minutes: murders, rapes, fires, political scandals, regional weather that could turn dangerous, schools losing their funding, increasing homeless populations, teens doing too many drugs. Next 10 minutes: unsolved and unsolvable political problems, graphic coverage of overseas wars, stock market declines, high oil prices, a little old lady who was kicked out of her house due to foreclosure. Final: a few football and basketball scores. It's no surprise that hypertension and depression are on the rise in the US.

Gunnar (2011-03-16 13:30:06)

People still watch mainstream news? Here in Germany it's similar to how UncleLongHair describes it. Pretty much for the same reasons. To frighten the people is one of them.

Seth Roberts (2011-03-16 16:46:07)

It is like what I say about climate models: the supporters (unwittingly) make the best arguments against. This newscast could contain whatever the government wants.

## **Is Medical Research a Veblen Good? (2011-03-16 17:24)**

[1]Felix Salomon argues that fancy restaurants often manage to make their food a [2]Veblen good – something that becomes more desirable when the price goes up. Restaurant food is a way to show off your wealth, in other words.

Veblen and I differ on the long-term value of Veblen goods. Veblen saw them as sort of ridiculous – which is why he coined the amusing term conspicuous waste. Whereas [3]I see them as a way of promoting innovation: Long ago, desire for luxury goods, goods with "wasteful" features, helped the most skilled artisans make a living. These artisans were the best source of innovation within a society.

Unfortunately everyone likes to show off, not just fancy-restaurant-goers. Throughout the medical research community, there is an obvious preference for expensive research over cheaper research. (I'm not saying experimental psychologists such as me are any better: We're not.) Few medical researchers understand that expensive studies are a last resort and the larger your sample size, the less you understand what you are studying. (Experimental psychologists do understand this.) When people doing research related to health are too concerned with showing off (e.g., doing studies that require expensive equipment) to do effective research, the benefit-cost ratio of Veblenian behavior goes below one. Desire to show off gets in the way of solving health problems. This is why personal science – using science to solve your own problems – is so important: The personal scientist will do whatever works, regardless of how impressive it is.

1. <http://newyork.grubstreet.com/2011/03/gastronomics.html>

2. [http://en.wikipedia.org/wiki/Veblen\\_good](http://en.wikipedia.org/wiki/Veblen_good)

3. <http://www.blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>

Jake (2011-03-16 22:15:04)

Thanks to you I am no longer retired, I am now a personal scientist.

Michael (2011-03-17 12:02:16)

On the idea of fancy restaurants being Veblen goods, I've thought this may also partly explain why so many expensive foods/drinks are acquired tastes. Very few people enjoy the taste of fine scotch, or moldy cheeses on the first try - most people I've seen trying straight whiskey for the first time make a face of disgust. The ability to consume such products without grimacing shows that you can afford to routinely indulge in such expensive pleasures. Of course, anyone could learn to enjoy scotch by drinking cheap whiskey, but such a person wouldn't learn the language used to describe scotch, and could still be readily identified. Were these goods cheaper so that anyone could afford to acquire the taste, perhaps many less would bother.

Jazi yechezkel zilber (2011-03-18 23:54:34)

You need a big sample only when the effect is small, which already means the meaning is low

### **Terrific Essay by Cory Doctorow (2011-03-16 19:58)**

I highly recommend [1]this editorial by Cory Doctorow about the dangers of allowing a small number of people – such as big companies – to control how everyone's computer, smart phone, etc., operates. I especially like his conclusion, modeled on Isaac Asimov's T[2]hree Laws of Robotics:

But we'll only arrive at those solutions once we stop reflexively demanding limits on the general functionality of a PC and a network “and the sooner we do, the sooner we'll legitimize a technology world whose first rule is “Obey your owner” and whose second rule is “Protect your owner's interests”.

In case it isn't obvious, self-experimentation and personal science increase your control of your body, just as Doctorow wants each person to control the technology they own. Without self-experimentation and personal science – and their ability to solve health problems in a way best for you – you give control over your body to doctors, drug companies, medical school professors, nutritionists, alternative-medicine advocates, and many others whose interests differ from yours. Often the difference is large – drug companies prefer expensive dangerous solutions to cheap safe ones.

1. <http://www.guardian.co.uk/technology/2011/mar/15/computers-incorporate-spyware-dangers>

2. <http://www.auburn.edu/~vestmon/robotics.html>

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### **Asthma and Farm Life (2011-03-17 19:33)**

For a long time it's been clear that living on a farm protects children against asthma (compared to city life). [1]A new study, done in Germany, tried to go a little further than that: to ask if it was microbial exposure that made the difference. Non-American scientists have been far more interested in the environmental causes of disease than American scientists.

They measured microbial exposure by studying mattress dust. One branch of the study used DNA techniques to measure microbial diversity of the dust; the other branch measured microbial diversity by seeing how many microbes could be cultured from the dust.

They found the usual farm/city difference in asthma: The city kids had roughly twice as much. They found the expected farm/city difference in microbial diversity of mattress dust: For a given species of bacteria or fungi, there was roughly twice as much chance of finding it in the farm dust.

Did the microbial difference explain the asthma difference? To find out they corrected for the farm difference. I think this means they looked within the farm kids to see if in this restricted group there was a microbial diversity/asthma risk correlation. In one branch of the study, there was a significant correlation. In the other branch, the correlation was nearly significant.

In all, the results support the idea that differences in microbial exposure explain the farm/city asthma difference. The biggest strength of this study is that they gathered useful evidence related to a major problem (asthma). The biggest weakness is how difficult it was. It involved about 15,000 kids and probably cost more than a million dollars.

Thanks to Aaron Blaisdell.

1. <http://www.nejm.org/doi/full/10.1056/NEJMoa1007302#Top>

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Pat McGee (2011-03-18 05:18:38)

I can't find the reference now, so take this with appropriate grains of salt. I recall reading a couple of years ago that a team of researchers had discovered a gene that coded for something that gave people substantial protection against asthma. Almost all humans had this gene, but it was not active. What activated it was exposure to hepatitis. (I'm pretty sure it was Hep-A, but might have been B. Certain it wasn't C.) (Please note carefully: 'exposure to', which is not the same as 'having active disease'.) The epidemiology is plausible because most human populations in the past had substantial exposure to Hep-A, as demonstrated by presence of antibodies. Currently, several populations do not - and those have high incidences of asthma. I would guess that this fits quite well with the data points cited here. I would expect higher exposure rates on farms.

dearieme (2011-03-18 10:50:17)

<http://www.cambridge-news.co.uk/Home/Peanut-allergy-cracked-according-to-new-research.htm>

### **Miso Bar (2011-03-19 06:38)**

At a hotel buffet restaurant near Tsinghua I had fermented food in a form new to me: a miso-soup "bar". You serve yourself from a tureen of miso soup and have a wide choice of add-ons: carrot, turnip, tofu, pickled ginger, green onion, Japanese pickle. Adding color, visual diversity, crunch, and DIY to the soup makes it taste much better - and it already tastes really good.

If I made a scatterplot of all the foods I can make, with difficulty on one axis and deliciousness on the other, this would be a bivariate outlier: very easy and very delicious.

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AC (2011-03-19 13:41:51)

Re: radiation: <http://xkcd.com/radiation/> Seems like you can get a comparable amount of radiation from living in a stone, brick, or concrete building vs. living in high-altitude areas with high background radiation.

Seth Roberts (2011-03-19 23:22:47)

AC, thanks, I didn't know that. In Beijing I live in a brick building.

Tin (2011-03-20 06:29:04)

hi. Can I use Extra Virgin Olive Oil? I don't see anything in the market about ELOO...what portion do you suggest should I ingest? Can I do the whole tablespoon too? Thanks

Seth Roberts (2011-03-20 21:18:36)

Tin, yes you can use Extra Virgin Olive Oil but you must keep your nose closed while you drink it (e.g., with swimmer's nose clips). You can find out much more about how to do the diet at the Shangri-La Diet forums ([boards.sethroberts.net](http://boards.sethroberts.net)).

Thomas Seay (2011-03-21 09:56:28)

Doesn't high-degree cooking destroy the beneficial organisms in miso? For health benefits I \*believe\* you should add the miso at the end when you take the soup off of the stove. For that reason, I would think eating soup from a buffet or restaurant where the miso is kept hot all the time would not be beneficial. A lot of the miso here in the United States is pasteurized which, I would think, would destroy many of the benefits. I am not sure about the above, so if anybody would like to correct me, please do so.

Elizabeth Molin (2011-04-05 06:00:50)

Peripherally related and, I thought, very interesting: <http://www.nowforthesciencebit.com/in-the-news/dirty-filthy-health>

## **My Talk at EG (2011-03-20 16:35)**

Last year I gave [1] a 20-minute talk at EG (EG is short for Entertainment Gathering) titled "You Had Me at Bacon" about my self-experimentation. I described some of the things I've discovered by self-experimentation. Then I tried to say why it had been successful – why I had managed to discover such useful stuff. My conclusion is that my success came from the combination of four things: 1. Self-experimentation. Much faster, more flexible than ordinary research. 2. The Stone Age = good idea. I used the idea that our bodies were shaped to work well under Stone-Age conditions to choose what experiments to do. 3. Subject-matter knowledge. My knowledge of psychology, experimental design, and data analysis helped a lot. My weight-control theory, for example, was based on ideas from animal learning. 4. Freedom. I could do and say what I wanted. Most scientists cannot. They fear career damage. The combination of these four things is why my work was effective.

After my talk, a few people asked: Were you serious? No doubt you've heard Arthur Clarke's maxim that "any sufficiently advanced technology is indistinguishable from magic." Let me propose a related idea: Any sufficiently advanced science is indistinguishable from a joke.

1. <http://www.youtube.com/watch?v=2oPEeddjEP8>

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Alex Chernavsky (2011-03-20 17:49:37)

Seth, you should write-up some kind of "how to" guide for other people who want pursue this type of self-experimentation. I know that much of the pertinent information is already on your blog, but it's scattered among many different posts. I think that for most people, statistical analysis will prove to be the most-difficult part of the process. I wonder what kind of concise guidelines can be created for people who don't have time for a full-blown education in data analysis.

Craig Fratrik (2011-03-20 18:03:45)

I agree with Alex. I kind of have the question, "how does one start self experimentation?" But I feel the answer is, "start recording data." Still, overcoming the initial inertia is challenging, and perhaps guidance would be helpful.

Sean Estey (2011-03-20 20:34:44)

Good talk. I think the "were you serious" reactions were from the cognitive dissonance people experienced when they thought you were advocating animal fat as a healthful endeavor. I mean you may as well have been in a church telling people that God doesn't exist. It's easy to see why they would have a hard time reconciling the dogma that fat is bad with the concept that animal fat might be good. And the next slide showing the saturated fat vs country comparison would have served to only create more cognitive dissonance. The concept that self-experimentation can actually be a legitimate source of empirical study already goes against the grain—we're led to believe that more is better when it comes to experiments—so the animal fat thing seems like it complicates the message. Maybe a little disclaimer like "I'm not your medical doctor, I'm not advocating that you change your diet, I'm just saying what worked for me" might help ease things. Even though the animal fat part wasn't even the core message, I still think that explains some of the strange reactions (including the awkward crowd response when you bring up the pork fat slide).

cremes (2011-03-20 20:38:02)

Very interesting overview of your experiments from the last several years. I noted that you did not discuss the effect of butter on your cognitive abilities which you have been posting about for a long time. There was only so much time in that 20m talk; I will still be impressed by the amount of information you were able to convey. I wasn't in the room, but from watching the video the laughter sounded "off." My take was that it was derisive like, "This guy is crazy." I'm not at all surprised to read that a few people asked if you were serious about this. In particular, there was a large and sustained reaction from the audience when you displayed the slide about animal (pork) fat and sleep. You followed it up with another slide showing that more animal fat consumption is correlated with lower incidence of heart disease, but clearly they weren't buying it. It goes against "settled" science as explained by the Lipid Hypothesis. Between the work you are doing, Taubes, Eades, Kock (HealthCorrelator.blogspot), and several others, all of this settled science is becoming quite unsettled. Keep it up, please.

Seth Roberts (2011-03-21 00:59:21)

Alex, plotting your data is 95 % of a good data analysis – that's my concise guideline about this. And it's easy to plot your data using R. I think statistics textbooks are misleading about this. They emphasize the hard parts of data analysis, which are much less useful than the easy parts.

Robbo (2011-03-21 03:53:19)

I have a maths degree, and I've done a fair amount of statistics in business. I absolutely endorse Seth's point to start by plotting your data. You can do this with graph paper and a pencil. If the eye can see an effect, you have an interesting result, something to build on. If the eye can't see one, chances are that any effect is too small to be interesting. If I was going to take the next step and do some mathematical analysis, I would use the sign test - simple, obvious, and requiring few assumptions about the data. I think this leads to another point about self-experimentation. If you are experimenting on other people, and with the aim of benefitting other people, you have ethical duties towards both populations, especially to be very certain that your findings are valid and not artifacts of the experiment design or data processing. Experimenting on yourself, you do not need

such a high level of certainty, since the issue is 'How does this work for me?'

ChristianKI (2011-03-23 06:36:49)

I think that a lot of people would fail if you told them to take a .csv file and plot it in R. There might be a much of people who could benefit from a step-by-step instruction to record their data on a piece of paper, enter their data into the computer and then plot it in R.

## **Growth of Quantified Self (more) (2011-03-21 01:09)**

At the Quantified Self blog, Alexandra Carmichael has posted [1]several graphs showing how much the Quantified Self movement has grown during the past year. The number of QS meetup members has grown by a factor of 3; the number of groups has grown by a factor of 6.

Measuring yourself is a step toward controlling yourself – especially, controlling your health and well-being. Almost everyone wants more control of these things. I believe that the idea, which the Quantified Self movement encourages, that ordinary people can do useful science is a shift with implications on the order of the shift from religion (the Sun revolves around the Earth) to science (the Earth revolves around the Sun). When ordinary people begin to do science, I predict we will learn a lot more about how to control our bodies.

Before science became powerful, people knew lots of correct useful stuff (e.g., metallurgy). But there were limits on what could be learned (e.g., Galileo was imprisoned). Now religion is much less powerful but most people believe that science can only be done by certain people (e.g., professors). This too places serious limits on what can be learned. For control of the outside world (e.g., material science, physics), I don't think these limits matter (although[2] the case of Starlight suggests that even here amateurs can make important discoveries). But for control of the inner world (our bodies), the message of my work is that these limits matter a lot. By studying myself I managed to learn a bunch of useful things that professional scientists could learn only with great difficulty. For example, I could learn from accidents how to sleep better; I could easily test ideas about how to sleep better. Few if any professional sleep researchers measure sleep night after night for long periods of time; nor do they do cheap fast experiments.

1. <http://quantifiedself.com/2011/03/the-state-of-quantified-self-a-year-of-growth/>

2. <http://www.youtube.com/watch?v=EDJNCIr2-JM&NR=1>

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Wachstum von Ihre Pflanzen erhalten | Gartentipps (2011-03-30 12:03:20)

[...] Seth's blog » Blog Archive » Growth of Quantified Self (more) [...]

## **Effect of One-Legged Standing on Sleep (2011-03-22 06:05)**

In 1996, I accidentally discovered that [1]if I stood a lot I slept better. If I stood 9 hours or more, I woke up feeling incredibly rested. Yet to get any improvement I had to stand at least 8 hours. That wasn't easy, and after about 9 hours of standing my feet would start to hurt. I stopped standing that much. It was fascinating but not practical.

In 2008, I accidentally discovered that one-legged standing could produce the same effect. If I stood on one leg



"to exhaustion" – until it hurt too much to continue – a few times, I woke up feeling more rested, just as had happened when I stood eight hours or more. At first I stood with my leg straight but after a while my legs got so strong it took too long. When I started standing on one bent leg, I could get exhausted in a reasonable length of time (say, 8 minutes), even after many days of doing it.

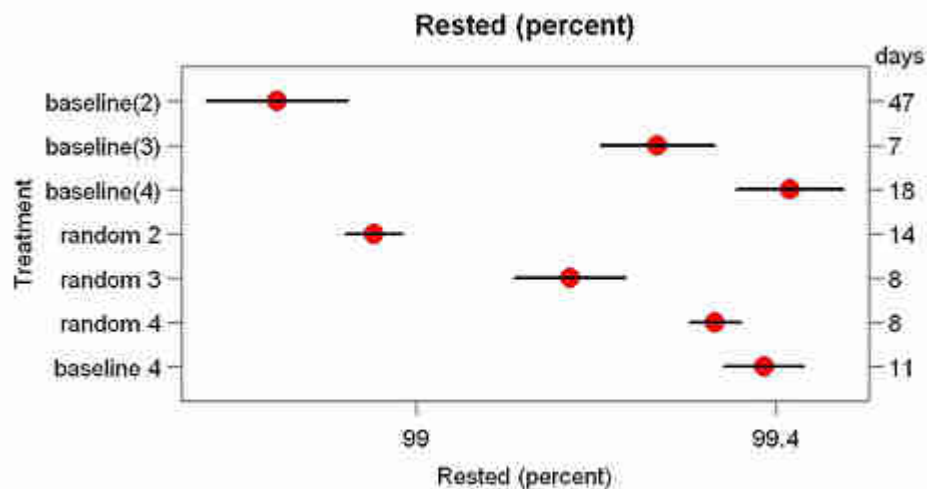
This was practical. I've been doing it ever since I discovered it. A few months ago I decided to try to learn more about the details. I was doing it every day – why not vary what I did and learn more?

One thing I wanted to learn was: how much was best? I would usually do two (one left leg, one right leg) or four (two left leg, two right leg). Was four better than two? What about three?

I decided to do something relatively sophisticated (for me): a randomized experiment. Every morning I would do two stands (one left, one right). In the evening I would randomly choose between zero, one, and two additional one-legged stands. Sometimes I forgot to choose. Here are the results for three sets of days: (a) "baseline" days (baseline(2), baseline(3), baseline(4)) before the randomized experiment and during the experiment when I forgot and (b) the "random" days (random 2, random 3, random 4) when I randomly choose and (c) a later set of days ("baseline 4") when I did four one-legged stands every day.

Each morning, when I woke up I rated how rested I felt on a scale where 0 = not rested at all (as tired as when I went to sleep), and 100 = completely rested, not tired at all.

[2]

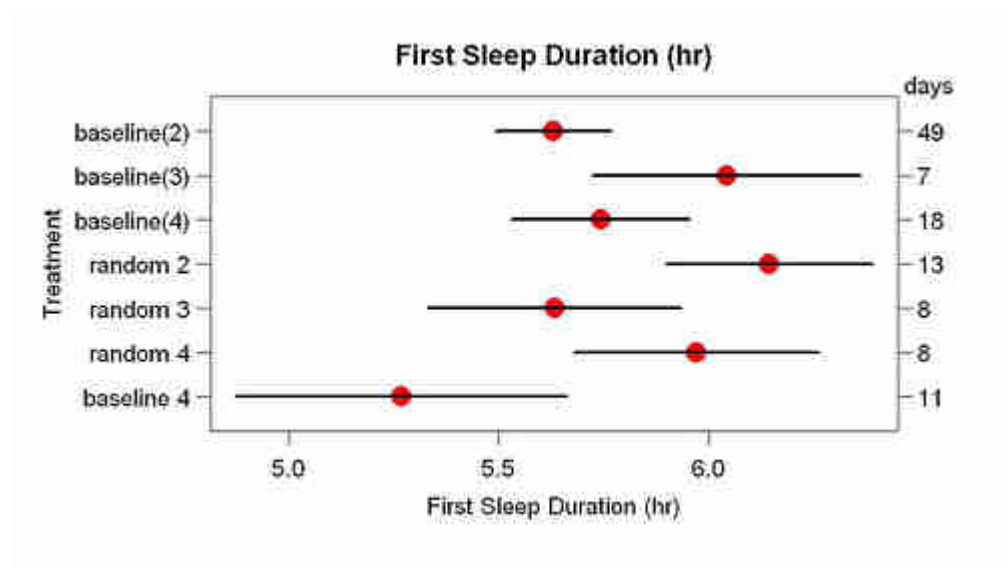


This shows means and standard errors. The number of days in each condition are on the right.

The main results are that three was better than two and four was better than three. The three/four difference was large enough compared to the two/four difference to suggest that five might be better than four. The similarity between random 4 and baseline 4 means that the amount of one-legged standing on previous days doesn't matter much. For example, on Monday night it doesn't matter how much I stood on Sunday.

These differences were not reflected in how long I slept. Below are the results for "first" sleep duration, meaning the time from when I went to sleep to when I woke up for the first time – which is when I measured how rested I was (the graph above). On a small fraction of days, I went back to sleep a few hours later.

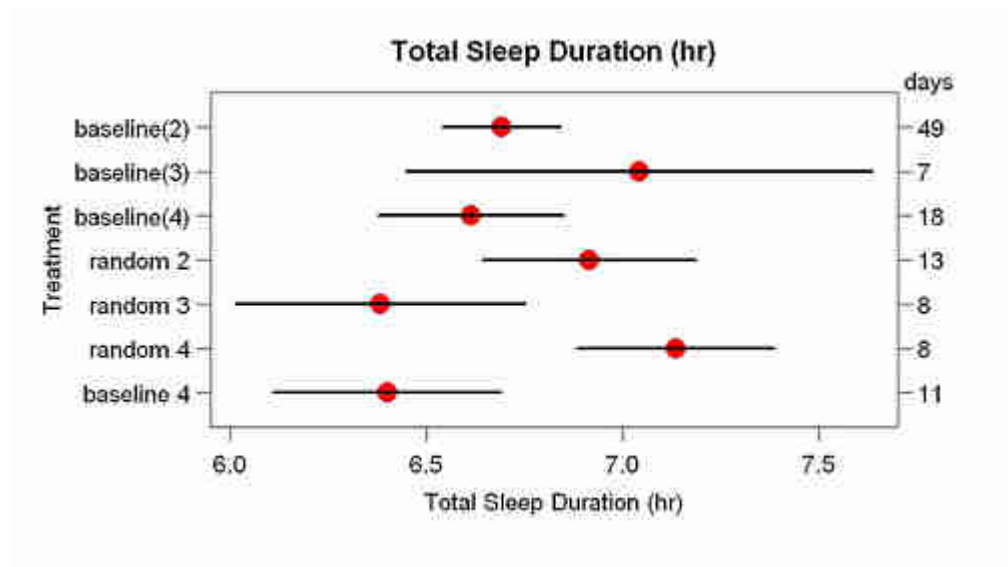
[3]



These results mean that one-legged standing increased how deeply I slept, what you could call sleep "efficiency".

I also computed "total" sleep duration, which included first sleep duration, second sleep duration, and nap time the previous day (e.g., nap time on Monday plus sleep Monday night). If I took a long nap, I slept less that evening. Here are the results for total sleep duration.

[4]



The results also support the idea that one-legged standing made me sleep more deeply.

The randomized experiment had pluses and minuses compared to a simpler design (such as an ABA design, where you do each treatment for several days in a row). The two big pluses were that the conditions being compared were more equal and you could simply continue until the answer was clear. The two big minuses were that I often forgot to do the randomization and lack of realism. If I decided that four was the best choice, I'd do four every day, not in midst of two's and three's.

Overall, it was clear beyond any doubt that four was better than two, and clear enough that four was better than three (one-tailed  $p = 0.02$ ). The results suggest trying larger doses, such as five and six. I've only done six once: be-

fore a flight from Beijing to San Francisco. It was one of the few long flights where I slept most of the way.

If you try this and you do more than one right and one left, leave plenty of time (two hours?) before the second pair, to allow the signaling molecules to be regenerated.

1. <http://escholarship.org/uc/item/2xc2h866>
2. <http://www.flickr.com/photos/sethroberts/5549397111/>
3. <http://www.flickr.com/photos/sethroberts/5549397183/>
4. <http://www.flickr.com/photos/sethroberts/5549980880/>

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Wayne (2011-03-22 13:51:20)

This is brilliant work, and informatively presented. I intend now to utilize one-legged standing more methodically on myself. A couple of questions: 1. How you rate restedness: Can you tell about how you anchor your 0-100 scale, because it looks like your range of responses there is very slim (99 % - 99.4 %). 2. You mention waiting for signalling molecules to regenerate. Can you elaborate on this further or is it just a really good guess (makes sense to me). Thanks! Wayne

Seth Roberts (2011-03-22 15:54:55)

Thanks, Wayne. I hope that you can use one-legged standing to give yourself permission to surf the Web – you surf while standing on one leg. To answer your questions: 1. My range of rested ratings is small only because I wake up really rested every day. (I do other things that help, such as no food until 3 hours after waking up and plenty of sunlight in the morning). For a long time the average was lower, around 95, and 99 was rare. Somehow I can judge the "size" of how tired I feel when I wake up and compare that size to the size of feeling really tired. A psychologist named S. S. Stevens and others have done many studies of what is called "magnitude estimation" of such dimensions as loudness and brightness with rating scales similar to mine. They found great regularities. 2. I'm just guessing about the signaling molecules. They make more sense than an electrical signal because it doesn't seem to matter when during the day I do the standing. As if the molecules sit in the blood waiting for sleep.

Yechezkel Zilber (2011-03-22 18:38:22)

Exercising extreme (cross fit etc.) leads to exhaustion and sleeping well. Source, "the great fitness experiment" I tried last week to do very short "all out" sprints on a sprint cycler (gym) found myself falling very easily asleep. Even falling asleep by mistake midday

Chris (2011-03-22 19:02:33)

Have you seen the Zeo? Might be a way to quantify more than "how rested you felt" <http://www.myzeo.com/>

Seth Roberts (2011-03-22 19:14:43)

Yechezkel, like you I have found that exercise makes me fall asleep much faster. But I have also found that does not make me sleep more deeply. It had no obvious effect on my probability of waking up too early. It was one of the first things I tried to reduce early awakening. Chris, yeah, I would certainly like to try the Zeo.

Cliff Styles (2011-03-22 22:09:57)

FYI, when I started standing while working a couple of years ago (partly inspired by your comments), I also experienced some foot pain, but discovered that I could fix that by taking my shoes off. I also added some of those gel mats that some chefs and others use, and now I regularly stand about 10 or 11 hours a day (I'm 64). My sleep has definitely improved, and my wife noticed the difference in the quietness of my sleep, too. The improvement in my sleep could be conflated with other changes though, since I noticed a dramatic improvement in apnea when I stopped eating wheat some years ago. Also, I end up standing

on one leg for some time each day, with one leg up on the desk, just because it feels good. I started the standing up while working as an experiment, and continued because I noticed a pretty dramatic alertness improvement. Now, I simply do not like to work sitting down.

Kevin (2011-03-22 22:57:11)

Have you checked if squats has a similar effect?

Seth Roberts (2011-03-23 00:31:37)

Kevin, the answer to your question is no. That's a good idea.

vic (2011-03-23 01:31:48)

Seth, do you also watch how close to bedtime you eat? I've seen recommendations to avoid food 3 hours before bedtime...

Chris (2011-03-23 03:53:35)

I tried one leg standing for a while and found that I definitely was a lot more alert when I woke up...I also woke up earlier than my usual alarm clock by half an hour or so. I gave it up, however, because I found that I'd get a lot more fatigued late in the day on days where I woke up alert. For me at least it felt like a zero sum game, alert in the morning but then cranky and irritable at night on days after one legged standing.

Seth Roberts (2011-03-23 05:16:09)

Chris, when I first started standing a lot (like 8 hr/day) I was enormously tired the first few evenings. But after a week or so that went away and the benefits persisted. By the time I started one-legged standing I already stood a lot. The one-legged standing caused no fatigue in the evenings. I think there is just an introductory period you need to get through. vic, I rarely eat after 8 pm. I agree, bad idea to eat near bedtime.

JBB (2011-03-24 04:00:25)

Perhaps I'm just being foggy brained (not rested enough this morning?), but I'm not sure I understand your counting. When you say "two", "three", "four" - is that two times standing on one leg to exhaustion, or two times on each leg. That is, left leg to exhaustion followed by right leg to exhaustion - is that one, or two?

Seth Roberts (2011-03-24 04:21:20)

that's two. I am counting per leg. two = one right leg, one left leg. four = two right legs, two left legs.

bokbadok (2011-03-29 18:51:21)

If the Zeo pricetag is too high - there's this app: <http://itunes.apple.com/us/app/sleep-cycle-alarm-clock/id320606217?mt=8>

16 Tips for Desk Jockeys: What to Do About Sitting All Day | CrossFit Fever | Fuel Your Addiction! (2011-03-30 07:55:50)

[...] or try something else entirely.2. Standing on one leg, a la Seth Roberts. Seth was getting huge benefits from standing while working, but doing so for eight hours a day wasn't feasible. He found that standing on each leg until [...]

Have a desk job? | Walk A Mile In My Boots (2011-03-30 11:38:05)

[...] Standing on one leg, a la Seth Roberts. Seth was getting huge benefits from standing while working, but doing so for eight hours a day wasn't feasible. He found that standing on each leg until [...]

What To Do About Sitting All Day - 042811 | CrossFit Truckee (2011-05-02 08:02:25)

[...] on one leg, a la Seth Roberts. Seth was getting huge benefits from standing while working, but doing so for eight hours a day wasn't feasible. He found that standing on each leg until [...]

5-10 WOD « CrossFit 208 (2011-05-09 20:14:38)

[...] Standing on one leg, a la Seth Roberts. Seth was getting huge benefits from standing while working, but doing so for eight hours a day wasn't feasible. He found that standing on each leg until [...]

How to Wake Up Refreshed | Mark's Daily Apple (2011-06-07 09:59:24)

[...] on one leg instead of two would condense the effect and require less time to enact it. It did. Standing on a leg to exhaustion once or twice a day led to more restfulness upon waking the next day. Three times a day was better than one or two, and [...]

lisa (2011-06-07 16:06:20)

hmmmm, interesting. Considering I work two jobs...one as a receiving associate where I offload and process trucks for 4-8 hour shifts and work at a Grocery store as a cashier and bagger for another 4-8 hours shifts... work 7 days a week, I still do not find I get better sleep at night. I'm lucky if I get 5 hours a night...

How to Wake Up and Feel Alert | CrossFit Fever | Fuel Your Addiction! (2011-06-08 09:46:21)

[...] on one leg instead of two would condense the effect and require less time to enact it. It did. Standing on a leg to exhaustion once or twice a day led to more restfulness upon waking the next day. Three times a day was better than one or two, and [...]

Delayed Sleep Phase Syndrome. An experiment (2011-06-08 15:46:21)

[...] Seth Roberts, self-experimenter. At EG. or just read his blog: Seth's blog Blog Archive Effect of One-Legged Standing on Sleep I started today with standing on one leg (in the afternoon 10 minutes left one, 10 minutes right [...])

Bryan (2011-06-16 15:43:31)

A really interesting device you might want to try to find is called a Sleep Timer made by the author of "No More Sleepless Nights" Murray Jarman. It's basically a little timer that you have to squeeze to keep it from starting itself. Once the person falls asleep they no longer squeeze the trigger on the Sleep Timer. The idea is to measure "sleep latency" or the amount of time it takes to fall asleep. The author presents a scientific approach to finding the best way for the individual to fall asleep fast. However, this may or may not be the best way to judge sleep quality. Maybe neither is the "first sleep" idea. What do you think is the best way to measure sleep quality? Perhaps number of times awoken in the night? REM cycles?

Seth Roberts (2011-06-16 22:07:47)

Time awake during the night is a good measure of sleep quality (more time = worse).

How the Other Person Sleeps: Seth Roberts on Christine Peterson's Zeo Research (2011-06-21 07:24:51)

[...] Stand on one leg to exhaustion four or more times per day. (I do it six times/day.) You can do this while reading — it should not reduce your free time. [...]

How to wake up and feel alert | bodybarn.com (2012-03-08 09:12:07)

[...] on one leg instead of two would condense the effect and require less time to enact it. It did. Standing on a leg to exhaustion once or twice a day led to more restfulness upon waking the next day. Three times a day was better than one or two, [...]

Andy Fallows (2012-03-21 17:37:39)

Interesting article, thanks. But do I understand your first chart correctly? It appears to display that how rested you felt on awakening varied over a VERY VERY narrow range of between approximately 98.7 % and 99.5 % ?!! This suggests you were rating how rested you felt on your 0 %-100 % scale to small fractions of 1 percent. Surely the numbers along the x-axis of the chart must be wrong? Thanks! Seth: The x axis is correct. The ratings are very close to the edge of the scale (100 %). Thus the precision. If this is hard to understand, think of me as rating the amount of a substance that makes me feel tired. When there is none of it, the restedness rating is 100 %.

Andy Fallows (2012-03-22 12:19:49)

Thanks for your reply Seth. It is hard for me to understand: I don't know what you mean by "think of me as rating the amount of a substance that makes me feel tired." Substance? My current expectation/belief is that most people would probably struggle to rate their perception of their own restedness on a 1-20 scale to the nearest whole number (ie., to within approx 5 %) with much confidence, let alone to within fractions of 1 percent. Regards. Seth: Suppose someone asked you to estimate how many grains of flaxseed were on a plate. Suppose the number could range from 0-1000. You can look at the plate for only a few seconds. For convenience, you decide to give your estimates as percentages 0-100 %. When the number of flaxseeds is very small (e.g., 6), you will be able to make remarkably precise estimates (e.g., 0.6 %). With larger numbers, your estimates will be less precise. The point: when you are at the edge of a scale, estimates can be more precise than at the middle of the scale.

Andy Fallows (2012-03-23 07:41:39)

I understand now Seth, thanks.

Jarno Virtanen (2012-04-04 02:17:34)

"If I stood 9 hours or more, I woke up feeling incredibly rested. Yet to get any improvement I had to stand at least 8 hours. That wasn't easy, and after about 9 hours of standing my feet would start to hurt. I stopped standing that much. It was fascinating but not practical." In the light of recent news [1], it seems one has to actually stand (or at least not sit) for at least 8 hours a day, preferably even more. :-) [1] <http://healthland.time.com/2012/03/28/standing-up-on-the-job-one-way-to-improve-your-health/?xid=huffpo-direct>

### **Danger of Low-Carb Diet: Not Enough Vitamin C (2011-03-23 00:28)**

I eat a low-carb diet for reasons that have nothing to do with weight loss: To keep my blood sugar down. I am sure high blood sugar is bad. A few months ago, I noticed that my lips were chapped, which was unusual. I suspected it was due to lack of Vitamin C. About two months before that, I had stopped doing two things that I usually did: taking a multi-vitamin pill (which had Vitamin C) and eating fruit. I don't know if the Vitamin C in the pill is absorbed but I'm sure the Vitamin C in fruit is. I started eating kumquats – the skins of four kumquats/day. (One kumquat contains about [1]15 % of the recommended daily allowance of Vitamin C). My lips returned to normal.

Paul Jaminet, author of Perfect Health Diet, had [2]a similar experience, which I knew nothing about when I noticed my chapped lips. While eating "a lot of vegetables but no starches and hardly any fruit," he developed outright scurvy, including wounds that wouldn't heal.Â This happened while he was taking a multi-vitamin pill with 90 mg Vitamin C (my four kumquats contain only 35 mg Vitamin C). "Four grams a day of vitamin C for two months cured all the scurvy symptoms," he found.

Why do we like sweet foods? The usual answer ([3]so that we will eat more calories) is nonsense (except for children). The striking thing about our liking for sweetness is that it disappears when we are really hungry, which is the opposite of what the calorie-seeking explanation predicts. Desserts are served at the end of a meal because they taste much better then. But our liking for sweetness (when we're not hungry) is so strong and obvious it must mean something important. I think it is pushing us to eat more fruit so that we will get enough Vitamin C. Fruits are much sweeter than other food groups and they are much higher in Vitamin C. We don't like sweet things when we are hungry because a high-fruit diet is terrible (it is low in omega-3, other necessary fats, several minerals, and microbes, for example). But a small amount of fruit may be a big help. Paul and my experiences suggest it may be hard to get enough Vitamin C in other ways.

More Paul has [4]a different idea about why we like sweetness.

1. <http://nutritiondata.self.com/facts/fruits-and-fruit-juices/1935/2>
2. <http://perfecthealthdiet.com/?p=1139>
3. <http://www.suite101.com/content/an-explanation-of-taste-a94569>
4. <http://perfecthealthdiet.com/?p=2842>

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vic (2011-03-23 01:17:50)

Not sure why that would be - lots of vegetables are loaded with vitamin c, more so than most fruits - bell peppers, broccoli, cabbage, garlic, etc.

Gian (2011-03-23 01:35:11)

Green chillies are rich in Vitamin-C and are very low-carb. Far superior to fruit in this respect in my opinion. And one can easily eat 3-4 whole green chillies in a meal. That should provide more than sufficient Vitamin-C.

Joseph Dantes (2011-03-23 02:29:33)

Given that arctic explorers used fresh meat to avoid scurvy with great effectiveness, I find this odd. I have not eaten fruit in many months and show no signs of vitamin C deficiency. I've been eating only meat. How do you square Stefansson's all-meat 1 year trial with this idea that low carb creates vitamin C deficiency? Perhaps in your case the problem was something other than lack of vitamin C, and in that other guy's case, he wasn't eating enough fresh meat.

Richard Gay (2011-03-23 04:03:30)

It's true that fruits are sweeter than other foods (but keep in mind sugar cane, sugar beets, honey, stevia, etc.), but one perspective I've read is that modern man has bred fruits for sweetness, and 'twas not always so. I'm not sure I agree with this; breeding for sweetness doesn't necessarily lead back to the idea that fruits were sour before that. I'm sure there is a bit more personal science you might do to test the theory that you were lacking vitamin C, v. something else that showed up in the kumquat skins. 130mg isn't much, after all.

jimrandomh (2011-03-23 04:54:28)

Paul Jaminet developed outright scurvy while taking a multivitamin pill that contained 90 mg Vitamin C? That can't be right. It seems much more likely that they were mislabeled or defective. Did he have a lab test done to confirm that they contained what they're supposed to?

Paul Jaminet (2011-03-23 05:12:36)

Thanks for the link, Seth! Jim, vitamin C needs are highly variable - they rise from mg to grams per day during infections, cancer, or other severe stresses. The point of bowel intolerance of vitamin C can be as low as 2 g/day or as high as hundreds of grams/day depending on C needs. C needs also depend on the presence of other antioxidants (glutathione/zinc/copper/selenium) which are needed to recycle C. Oxidized C is degraded and excreted, reduced C is conserved. I had severe chronic infections at the time and was probably deficient in selenium and copper as well. Seth, fascinating point about the craving for sweets following rather than preceding dinner. Very true but I hadn't thought of it before. Best, Paul

damaged justice (2011-03-23 05:18:49)

Others have questioned Jaminet's "zero carb" experience. Personally, I can only say that I was plant-free for one year, didn't get scurvy or any other deficiencies, and had no problems whatsoever. The only organs I ate were beef liver once or twice a month and heart and tongue less frequently.

Paul Jaminet (2011-03-23 05:25:00)

Another n=1 experience on the appetite - vitamin C association: When I had scurvy I was always ravenously hungry. I ate 5,000

calories a day but was losing weight. As soon as I started supplementing vitamin C, my appetite dropped back to normal. I didn't notice a specific craving for sweets, but it's clear that vitamin C deficiency can induce hunger.

Seth Roberts (2011-03-23 05:37:12)

Joseph, I ate/eat a lot of butter and roast pork. The roast pork is a few days old, at least. So I suspect it is low in Vitamin C. Vitamin C in meat may degrade much faster than Vitamin C in fruit – especially when the meat is cooked. Vitamin C is water-soluble, whereas I eat a great deal of fat. Because I eat so much fat relative to other foods and almost never eat fresh meat cooked rare, I suspect it is harder for me to get enough Vitamin C without eating fruit.

Scot Colford (2011-03-23 05:42:08)

As a type II diabetic, I also eat a low-carb diet, but certainly make sure to eat plenty of fruit and vegetables with vitamin C. I'm curious about your reasons for eating low-carb, though. You say "I am sure high blood sugar is bad" but what makes you think your glucose level is high? Do you monitor it with a meter? Just as dangerous – and \*more\* dangerous in the immediate sense – is allowing your blood sugar to drop too low. Don't mess around with it unless you're under the supervision of a doctor. And I'm also confused by your statement that fruit is sweet because it contains vitamin C. That's just not true. Fruit is \*tart\* because it contains vitamin C. It's \*sweet\* because it contains fructose and other sugars, of course!

Seth Roberts (2011-03-23 05:47:00)

Richard, I think fruit trees have a different strategy than other plants. Fruit wants to be eaten; this is why it is colorful, not just sweet. Being eaten causes the seeds to move further from the tree, reducing competition and increasing diversity of habitat. Perhaps high Vitamin C content made them more attractive.

Paul Jaminet (2011-03-23 05:47:03)

Those wondering about the variability of vitamin C needs may be interested in reading about Dr. Cathcart's experiments with vitamin C supplementation during different infectious conditions: [1]<http://perfecthealthdiet.com/?p=636> In some infections, such as mononucleosis and pneumonia, the rate of vitamin C loss can go as high as 200 g/day. The normal whole-body vitamin C pool is only a few grams. It doesn't take long to create a deficiency during infection!

1. <http://perfecthealthdiet.com/?p=636>

Seth Roberts (2011-03-23 05:59:11)

Scot, I believed my blood glucose was high because I measured it every morning. I fail to understand why eating a low-carb diet might cause my blood sugar to become too low. In any case, that has never happened, according to my measurements. I didn't say fruit is sweet because it contains Vitamin C – I said that perhaps people like sweetness because a liking for sweetness would have pushed us to eat more fruit. Which contains Vitamin C, which we need. Our food preferences are obviously a guide to what we need to be healthy; I am trying to fill in the details. vic, when I said fruit is "almost necessary" to get enough Vitamin C I should have emphasized I meant under Stone-Age conditions. Nowadays of course fruit isn't necessary. You can take a Vitamin C pill, for example. If you don't want to eat green peppers. If you are simply following your natural preferences, eating what tastes good, I think you are unlikely to swallow a Vitamin C pill or eat green peppers or green chilis or other high Vitamin C vegetables. Whereas you are likely to eat fruit.

MAS (2011-03-23 07:09:52)

Beef liver has Vitamin C. Did you eat organ meat during this period? <http://thehealthyskeptic.org/natures-most-potent-superfood>

Seth Roberts (2011-03-23 07:14:12)

I sometimes eat chicken livers. But of course they are cooked, which may destroy the Vitamin C.



Kevin Bridges (2011-03-23 07:52:00)

I've been on a low-carb diet for a while now, but haven't had any issues with this. Looking back at what I've been eating, though, I've been snacking on a lot of carrots, and the water I'm drinking has a bit of lime juice in it, so I think I have my bases covered. Unless I start seeing symptoms of deficiency, then I'd re-evaluate my diet.

Scot Colford (2011-03-23 09:04:12)

Oh, yes. Sorry for misquoting you about the sweetness of fruit. Still, I think it's a likely a mistake to attribute preference for sweets to vitamin C requirements. People do need glucose as fuel for the brain. It uses no other compound for this purpose. Well, for that matter, neither do the rest of the cells in your body, but you'll notice it pretty damn quickly if your brain fails to receive enough glucose. And yes, you can experience low blood sugar levels by eating insufficient levels of carbohydrates. You can't rely on your stored glycogen as your sole source of glucose. Now, of course, you say you're on a low-carb diet, not a no-carb diet. And you're using an objective measure of your blood glucose level. Just would hate for someone without your commitment to scientific principles to attempt otherwise.

Tomas (2011-03-23 09:36:17)

Seth, I have read several books on the Traditional Chinese Medicine and they attributed that increased craving for sweets is in fact signalling some serious nutritious deficiencies. They said that it's in fact meat or starches or other nutritionally dense foods that will soothe the craving, but sweets are more readily available. The taste of meat is in fact sweet as well. In my experience this seems (the TCM view) to be true. I always have been very skinny, but eating enormous amounts of sweets. After I switched to a proper, paleo-like diet, the situation changed in many aspects and I no longer have such strong cravings and slowly I am gaining some weight. So to sum it up, I think that taste for sweetness might mean more than taste for vitamin C

Thomas Seay (2011-03-23 11:22:50)

Can someone here explain to me why humans, unlike a lot of animals, don't create their own vitamin C endogenously? > I don't agree with this. It doesn't fit with my experience, and I suspect it is a cultural phenomenon. Most of us were told as youngsters that we had to eat our dinner first if we wanted a sweet. The idea was that we WOULD eat the sweet first, if we could, and that might destroy our appetite so that we wouldn't eat the other nutritious food.

Thomas Seay (2011-03-23 11:24:39)

Sorry, what I don't agree with in the above is that we naturally won't eat sweets when we are hungry, as Seth suggests.

Seth Roberts (2011-03-23 14:16:57)

Thomas, you disagree that "we naturally won't eat sweets when we are hungry." There have been a bunch of studies showing that hunger reduces preferences for sweets, done I think by Elizabeth Capaldi. An article about this phenomenon mentioned among other things that in the Nazi concentration camps, where people were starving, a candy bar had zero barter value. Perhaps children are different than adults, I don't know. Tomas, that's an interesting point. Greater-than-usual desire for this or that food generally signals a nutritional deficiency, yes, as far as I know. Do you know what deficiencies causes greater-than-usual desire for sweetness?

Kevin Bridges (2011-03-23 14:53:30)

I've been trying to think of this all day, and I just remembered. Some peppers have a lot lot (lot) more vitamin C than oranges. Hot green chillis have about more than three times the vitamin C of navel oranges, per weight. <http://nutritiondata.self.com/facts/fruits-and-fruit-juices/1968/2> <http://nutritiondata.self.com/facts/vegetables-and-vegetable-products/2767/2>

Seth Roberts (2011-03-23 16:41:23)

Kevin and others who have brought up the point that certain non-fruits are high in Vitamin C, I am wondering what you conclude from that about the evolutionary reason for our preference for sweetness. How would you explain our preference for sweetness? Look at the same thing in a different domain: our preference for sour foods. It's strong and obvious,

just like our preference for sweet foods. Lemons are sour. Does that mean we like sour things so that we will eat more lemons? Probably not because there is a bigger picture to consider. A much wider range of facts supports the idea that we like sour foods (such as yogurt) because we require plenty of microbes in our diet to be healthy. Microbes often make food sour.

thehova (2011-03-23 17:09:09)

Interesting stuff. I'm on a low carb diet. But I take an Emergen-C every 2 days. A big part of me doubts if it's improving my health. But it is a cheap and more healthy alternative to Coke. And after reading this, perhaps it is beneficial.

Alex Chernavsky (2011-03-23 18:49:12)

Seth, since you eat a lot of animal fat, have you ever looked into the theory that animal fats are sources of lipid-soluble toxins? And China is rumored to have a serious problem with industrial pollutants.

Seth Roberts (2011-03-23 23:03:09)

Alex, no I haven't looked into that theory. The animal fat I eat the most of (butter) is from America.

Kevin Bridges (2011-03-24 09:35:32)

Well, I also wonder how a human living here (in the Pacific Northwest) would get his or her vitamin c before agriculture and the advent of shipping foods around the country. Like Native Americans. We can't grow citrus fruits up here, and I don't thing peppers grow naturally, either. I've heard that pine needles have a lot of vitamin c, but I can't imagine they're very agreeable? So what flavors would a tribe living here in Washington have to be attracted to in order to get their vitamin C? As for the evolutionary preference for sweetness, do you know for sure that there is a universal human preference for sweetness? Are there always sweet dishes in the pre-westernized cultures of the world? I'm not saying there aren't, and you may know more about it than I do.

Sam (2011-03-24 12:30:15)

I thought vitamins are stored in animal bodies, too. Mainly in some glands, but live might contain some, too. So if you eat the right parts of the animal you'll get your vitamins.

Nathan Myers (2011-03-24 14:35:47)

But don't eat the wobbly bits. It seems to me this is really jumping to conclusions. Yes, we need vitamin C, but we need lots of other things too. Maybe the chapped lips were the result of some other deficiency, and the actual fruit countered the other deficiency. Fruits are made of a lot of compounds other than vitamin C.

Seth Roberts (2011-03-24 14:52:16)

Nathan, do you have any specific nutrient in mind? Lack of Vitamin C unquestionably causes connective-tissue problems. Paul had bad gums, for example. With other necessary nutrients, such as magnesium, sodium, and many others, a connection with connective-tissue problems isn't clear. Is there a universal human preference for sweetness? Well, very young babies like sweet things. Long before they could have been taught to like them. In children, the conventional explanation for sweetness preference (sweet foods are a source of calories) makes sense. They haven't yet learned flavor-calorie associations that make food (containing calories) taste better than non-food (without calories), so a preference for sweetness helps them (because sweet things do usually have calories-extractable energy).

Tomas (2011-03-25 01:52:43)

Seth, sorry, I don't remember and I am not even sure the books went deeper than just covering this general concept. I'll try to find the corresponding passages, but first I need to find the book...

Nathan Myers (2011-03-25 02:42:26)

Preference for sweetness is equivalent to preference for ripeness, in fruit. The learned association between sweetness and color makes this a very adaptive trait, because climbing a tree after fruit must be worth the risk. Plants convert starches to

sugar in ripe fruit when the seed is viable and, perhaps, some environmental condition favoring germination is satisfied. This also is very adaptive, within the environment of animals that have been trained to recognize the ripeness they are encouraged, by the sweetness, to prefer. Co-evolution. I don't know of any specific nutrient that may be in fruit that counters chapped lips. But then, I don't believe we have identified every important substance we get from food. It certainly seems plausible that people who indulge in unusual diets (as defined by American custom of the mid 20th century), "unusual" activities (e.g. smoking, pregnancy, childhood, grave injuries, infections, starvation), or (particularly!) normal genetic variation seem likely to require substances not readily noted in lab testing, or much larger amounts of certain familiar substances. It has been suggested that autism, schizophrenia, and epilepsy are sometimes examples of such cases. I understand that some (of the terrifying variety of) mitochondrial genetic illnesses are known examples. Any drug that must be consumed daily to maintain normal health may be counted as such a substance. Just as several drugs may treat one condition, a variety of carotenes satisfy our need for vitamin A. The only difference, really, is how widespread the need is. Our need for vitamin C started as an example of normal genetic variation, and is now universal among primates, making it a proper vitamin. Including the rest of Mammalia in the population preserves its status as "needed for certain genetic variations".

Joseph Dantes (2011-03-26 02:39:59)

Seth, are you buying the roast pork already cooked or cooking it yourself? Plus you're in Beijing... which is a pretty tough environment on the lips anyway. It's pretty much an article of faith for me at this point that eating the meat of any animal sufficiently large & fatty monotonically supplies all nutrients necessary for life, if not the optimal balance. I tried butter in a tiny quantity by the way, and it obliterated me.

Joseph Dantes (2011-03-26 02:50:22)

Anyway I'm almost always eating meat packed the same day. I don't exactly cook it rare, as in still pink, but I don't char it either... just quit when the ground beef changes color or the fish gets soft. So there's no overcooking. So I'm probably getting a lot of Vit C... If you can trust the Chinese on meat freshness at MNC supermarkets. Which I think you can, ironically enough... meat freshness is something they're culturally very particular about, and as far as I know they don't employ the chemical treatment techniques designed to make meat look fresher longer used in the US.

Seth Roberts (2011-03-26 04:57:22)

Joseph, the roast pork I eat is roasted by others. About your idea that eating enough of a sufficiently fatty animal supplies all necessary nutrients: That doesn't explain why we like sweet things so much (except when we're hungry). In spite of what Tomas says, meat isn't significantly sweet. (One indication of this: Koreans marinate meat in a sauce that contains sugar.) And I'm sure we need plenty of microbes, which fresh meat doesn't supply.

Julietta (2011-03-30 18:54:19)

I've always believed that we like sweets at the end of the meal (along with a nice cup of coffee) to counter-act the sluggish feeling we get from a big dinner. The sugar and caffeine perk us up a bit, so we can drag ourselves from the table....

Paleo Pepper » Blog Archive » Why did we evolve a taste for sweetness? (2011-05-23 02:31:21)

[...] the sweetest of any animal. Other hypotheses are that a) we need fruit for a variety of reasons, particularly vitamin C, b) that we need glucose and therefore evolved craving carbohydrate in general, or c) that benefit [...]

Kelly (2012-01-06 13:54:42)

If sweet foods are craved after a 'regular' meal, it's possibly because too much protein was eaten at that meal. That's at least the theory in TCM.

## The Shangri-La Diet: Why No Revolution? (2011-03-24 03:07)

David Mandel, CEO of Alliance United Insurance Company, asks a very reasonable question:

Despite all the success stories [on the Internet] regarding the Shangri-La Diet, and the mainstream media stories in 2006 after the book publication, the diet never picked up and seems almost unknown today.

Whether this is right or wrong depends on expectations. In December, SLD got a great push from being on the web-site of Tim Ferriss's Four Hour Body [1] under the attractive title "Alternative to Dieting". Tim's book was published in December and registrations to the SLD forums jumped dramatically. Yet even before that, [2] forum traffic was growing. Traffic of course grew when the SLD book came out, later shrank, and now – surprisingly – is growing again. My interpretation is that the initial growth was caused by mainstream publicity and blogs. The current growth is caused by word of mouth.

If I google "Shangri-La Diet" I get about 800,000 hits, a decent amount. "Sonoma Diet" – the book came out the same time as mine – gets 200,000 hits. "Eat Right For Your [Blood] Type" and "Eat Right 4 Your Type" get a combined 150,000 hits. That book was a huge hit when it came out in 1997. The usual pattern is Google hits go down, but SLD hits have gone up over the years.

On the other hand, given that my book contained a new theory of weight control that made about 100 times more sense than the usual ideas and led to counter-intuitive new ways to lose weight that actually worked and that obesity is often considered the world's #1 health problem – yeah, it is "almost unknown" compared to what one might have expected.

I was wondering if you had any insight as to why it did not go viral, if nothing more from word of mouth from success stories sharing with everyone who will listen to their excitement. It seems all but impossible to me that something this simple, and universally successful which can benefit the masses has managed to not go mainstream in all these years. I am utterly baffled, and assumed there must be a big downside, but all my searching online has revealed nothing but the success stories and initial feedback, mostly from 2006 and 2007, and little since. I am just overwhelmed with curiosity as to how this did not become the norm for everyone.

When my agent circulated the proposal for the book, one editor regretfully declined to bid on it because she said the book was "15 years ahead of its time." Perhaps she was just being nice, but when people tried the diet, and it worked, they wouldn't tell other people because the diet sounded crazy. Which means it really was far ahead of its time. Good Morning America filmed me for a short Freakonomics-related segment and they played it for laughs: crazy professor.

So that's my explanation for why it has spread more slowly than one might have expected: fear of ridicule.

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1. <http://www.fourhourworkweek.com/blog/wp-content/uploads/2011/01/Alternative-to-Dieting.pdf>

2. <http://www.blog.sethroberts.net/2011/01/02/shangri-la-diet-uptick/>

q (2011-03-24 04:01:20)

fear of ridicule from whom? the media? or people won't try it because they are afraid someone will make fun of them for doing it? i can think of one reason it hasn't taken off. from anecdotal evidence (i did it, lost 25+ pounds and am no longer overweight, now sometimes on and sometimes off) a lot of people are disgusted by the idea of drinking oil. the idea of this turns off a lot of people, and still others try it and give up quickly because they don't like the feeling. (if someone asks me i can say "well you can do this with sugar or any other food if you noseclip" - but that's not the primary message out there.) in fact it's difficult to find a concise and clear description on the web of how to do shangri-la. it's so simple, but it's hard to find the rules anywhere.

Seth Roberts (2011-03-24 04:04:48)

Fear of ridicule from the person you are telling about your success ("you did what?"). Were I to write the book again I would say you can do the diet three ways: 1. drink sugar water with no smell. 2. drink an oil, such as extra light olive oil, with no smell. 3. eat any food nose-clipped. I've done all three and I vastly prefer eating butter with a bit of meat nose-clipped. Butter alone is not so pleasant but butter with a bit of meat is fine.

disgruntledphd (2011-03-24 04:41:37)

Personally, i reckon it has more to do with the lack of support networks than the nature of the diet itself. Take weightwatchers, for instance. They have a weel-known brand and meetings everywhere, and these meetings are probably a major factor in helping people to lose weight. Conversely, the shangri-la diet does not have this kind of group around it, so people may feel isolated on it and thus not stick to it as much (or at least not talk about it). With wieghtwatchers, its respectable and people feel free to attribute their success to it. Just my two cents anyway.

Thomas (2011-03-24 05:06:27)

Hm, self reflection without any self critique? I mean, really... its just not successful because its "too far ahead of its time"? Can it get more self congratulating? I love your blog. I find much of what you write very interesting. But many other things are seriously odd - and cant be true when thinking 5 minutes about it. I can imagine it's this dichotomy that turns people away from the good parts of your ideas. Oh, and disgruntledphd's point is very good.

Seth Roberts (2011-03-24 05:42:26)

"Can't be true when thinking 5 minutes about it" - such as?

David (2011-03-24 07:07:37)

Hi Seth, One thing that appeals to me about the way you made SLD public is that you didn't try to monetize it by gimmicking it up. A less scrupulous, intellectually honest, and curious person might have tried to create a whole "lose weight now, ask me how" type pyramid scheme from it. You might have sold flavor free but calorie-laden products to sell to people with a lot of other paraphernalia and a marketing machine to push it on people. Instead you took a more open source approach. As a result, you learned a lot from the crowd. I agree that it takes some courage to explain it to people in a peer-to-peer kind of way. When I first did it, I patiently explained it to many people and got a lot of sh\*t for it. Finally I gave up. It wasn't worth the trouble. It seemed that most people weren't willing to try it with an open mind anyway. If I explain it to anyone now, it's only if they seem open minded and intellectually curious enough to give it a shot. David

john (2011-03-24 07:11:06)

I think almost any diet that challenges the "calories in, calories out" chant has a low shot at becoming a "revolution." In mainstream world, the only thing that helps (other than simply "reducing gluttony and sloth") is fiber, because it "fills you up." Very few people care or "absorb" why/how certain diets work: they just want an authoritative figure to give them a list\* of rules to follow. And because there are so many authoritative figures that use the above chant(s), other diets will be dismissed as quackery or unscientific [in the sense that they somehow imply defying the laws of thermodynamics]. To me, the main problem with low carb, or at least high [animal] fat, is that the marketing is geared toward eating foods that are popularly considered terrible like butter and bacon and steak. While this catches a lot of peoples' eyes, most will still "know" it's complete crap. I think a better angle to take is a long term traditional diet route, but, as I said above, very few will be swayed, even when

confronted with good evidence. Maybe "paleo" has potential to reverse popular animal fat beliefs, as it seems to have an attractive veganism-like mystique. \*For example, directing someone to Kurt Harris' site (as he does have a list and is a medical doctor) is the only way I've ever seemed to affect someone's diet (obviously I choose Kurt because his advice is good). Sorry, this wasn't that specific to Shangri-La.

David Mandel (2011-03-24 08:05:48)

I believe the answer may be to team up with a capable company who can produce and market a "healthy" flavorless shake, which can be marketed as a miracle diet and possible meal (lunch or breakfast) replacement with simple instructions to "consume one per day with no other food or beverage for at least an hour before or after", while leaving the concept as a new breakthrough, and the theory a mystery. With proper marketing, enough will try it, and then with the success, the product would go viral, reduce obesity, and make the marketing company a fortune in the process.

August (2011-03-24 08:21:00)

There's an intelligence level, or maybe just an ability to be consistent level, required for SLD. The bar seems low, just take in unflavored calories; how hard could that be? And yet, just think about what contraception is likely doing to the human race. Those who are 'smart' enough to take the pill everyday pro-create less than those who aren't, so we've got to hope there are enough smart people who won't take the pill for moral reasons. Otherwise there will be a generation upon this earth incapable of managing the simple daily task of taking a freaking pill! Anyway, the thing is, those who are smart enough to apply SLD tend to be those who've been indoctrinated with the mainstream message. These people are looking at me, seeing a very obvious success, and just deciding I'm crazy- or perhaps more politely, that I am too extreme (especially since I follow a low-carb paleo diet and don't want to eat the sweets that appear at practically every social event). One of the troubles with being smart is that you can rationalize the crap out of things, especially if you feel emotionally invested in something, and there are multi-billion dollar industries out there 'helping' you rationalize. Meanwhile, SLD is really something you have to try; you don't really get the theory until you experience its effects. Naturally, those who are willing to try SLD tend to be those least invested, and subsequently not very authoritative in the modern social structure. Now, if you manage to convince someone to try it and they succeed, well, that actually makes a sort of social structure, and the idea begins to look a lot more inviting to more people because they now have an alternative (however small) to whatever social structure it is that's feeding them the bad info. Also, for many people, this alternative social structure has to appear in their world, not just on-line.

Kevin Bridges (2011-03-24 09:21:57)

I did the oil-drinking for a couple of weeks, and it made me feel a bit nauseous during the day, and then my liver (I think it was my liver) started to feel sore. I started munching a lot of carrots and apples and stuff, and it went away. I can't prove the correlation, but I was playing on the safe side. I still use the principle, though, noseclipping my protien shakes in the morning.

Richard Gay (2011-03-24 10:11:39)

I think the oil drinking meets some resistance for a basic "eww" factor and the persistence of the lipid hypothesis in the public mind.

Alex Chernavsky (2011-03-24 10:28:58)

I have a few thoughts on this subject. When I first set out to try the diet about a year-and-a-half ago, I couldn't find any single source of information that described the diet in a concise, "user friendly" format. (Yes, I suppose I could have bought the book, but I was impatient - I didn't want to wait for the book to arrive in the mail.) Some sites had fairly impractical variations, such as the guy who advocated getting up in the middle of the night to drink oil. The forum is hard to find and is difficult to navigate. Some of the featured promotional blurbs are over the top and inconsistent with my own experience (for example, someone named Kathy Sierra wrote, "Within three days I was actually forgetting to eat"). About 20 % of the reviews on Amazon.com are negative (one or two stars). Having said that, I think Seth is onto something. Most people think I'm nuts when I describe the diet to them (despite the fact that I've lost approx. 28 pounds on it). One of my friends did say that he was going to try it, but that was about six months ago, and he hasn't mentioned the subject again. Here's the summary of my experience with the diet: <http://www.astrocyte-design.com/shangri-la-diet/index.html> I haven't updated the page since last July (July, 2010). I'm

currently hovering around 195 pounds, though my weight oscillates by about 3 pounds, depending on how strictly I adhere to the diet.

Kainin (2011-03-24 11:16:20)

Actually, I think Seth is right about the fear of sounding crazy. I started the diet with the oil in September. I've lost 52 pounds as of this past Saturday, almost all of it without even trying. (301 lbs. - 249 lbs.) I learned about the diet from reading a comment on a blog that openly wondered if Seth's theory might be correct when the poster noticed their weight drop slightly after eating tasteless nuts for a daily snack. I tracked down the book and decided, in a very skeptical mode, to give it a shot. To say I've been pleased with the results would be an understatement. Who have I mentioned it to? Surely, I should be writing a Gospel of Seth where like a lion's voice crying out in the desert I begin with Seth buying a flavored French soda in a cafe. But I am not. Only my wife really knows and I told her because you can't hide anything from wives, especially gulping Extra Light Olive Oil ever morning. I've been asked a few times what I was doing, but I just answer with watching calories (which is true) and walking more (which is also true). The only other person I told was my doctor. It went like this: Doctor: You're doing a hell of a job. What are you doing to lose all this weight? Me: Well, nothing really. Just watching what I eat. Trying to avoid snacks. Doctor: Don't tell me that's all you are doing. (His face grows concerned that my weight-loss might be a sign of a health problem) Me: There is one thing I'm doing differently. I've added more fat to my diet. Doctor: More fat?! Me: Yes, I've been taking two tablespoons of olive oil in the morning. (Doctor looks confused.) It helps suppress the appetite. Doctor: So you've been eating less. Me: And I've been walking. Doctor: Ah ha!! That's what's been doing it. Walking is great exercise..... (digression into the best way to use walking for exercise.) I didn't have the heart to tell him that I'd only walked in October and had just started up again the week of my appointment in February. So, no, the walking didn't lead to the weight-loss, but what was I going to do, argue with him? There is one more thing I should admit that stands in the way of my preaching the glories of Shangri-La, and that is a part of me that is worried that it will stop working. Every dieter knows about the rebound. The losing of the weight and the putting it back on. So in the back of my mind there is this thought that its going to loose its effectiveness and my current success will be temporary. I don't want to go around telling everyone about my amazing success and how they can follow in my footsteps only to find that it turned out to be fool's gold and I started the rush. In addition, I think Q is also right, my wife knows about the diet, she sees the success, she needs to lose weight - she can't bring herself to start drinking the oil with me. She is more open to it right now than she was, but she isn't read to start yet. But I suspect she'll eventually jump on the wagon as well.

Glen Raphael (2011-03-24 12:23:42)

The obvious conclusion is that the diet isn't, as claimed, "universally successful". The success stories in your forum are a self-selected sample - the people for whom it seems to work stick around and post to the forums, the people for whom it doesn't might post to one of your many "it's not working" threads but then eventually fade away. Some discuss it elsewhere. For instance: [http://lesswrong.com/lw/a6/the\\_unfinished\\_mystery\\_of\\_the\\_shangrila\\_diet/](http://lesswrong.com/lw/a6/the_unfinished_mystery_of_the_shangrila_diet/) <http://ask.metafilter.com/90366/Shangrila-diet-have-you-tried-it> There are oodles of celebrities/actors/bodybuilders who are \*hugely motivated\* to try anything that might help, no matter how goofy the idea. If SLD were the panacea portrayed, it would have caught on with these people and we'd be hearing about it via Enquirer headlines. So maybe the problem is one of these: (1) it doesn't work for everybody, (2) it works for a while, then people hit a plateau short of their goals, so although it works it only solves \*some\* of their problem (3) it works for a while, but usually the effect wears off (4) it works for most people \*if\* they keep at it, but many/most people find it too difficult to keep doing for the rest of their lives. In short, it could ultimately be a [1]fad diet. FWIW, I tried SLD a few times, told lots of people about it, blogged about it, tried to fix the parts that weren't working for me, but ultimately gave up and stopped using it. I never lost more than about 10 lbs while on SLD. To make it a true panacea worthy of the name, you'd need to do a real scientific study, \*verify\* your hypotheses about how it works, and figure out what factors there are in common among the people for whom it works/doesn't work so those can be addressed.

1. [http://rationalwiki.org/wiki/Fad\\_diet#Where\\_fad\\_diets\\_come\\_from](http://rationalwiki.org/wiki/Fad_diet#Where_fad_diets_come_from)

David #2 (2011-03-24 18:41:23)

I've had very good success with the diet when I had the patience to stick with it and have been pretty evangelical about it as well. (I actually quit when I went overseas for eight weeks and dropped 15 pounds without blinking an eye; was it all the mutton?) I can't speak generally, but when I was introduced it was via the ELOO and it worked like a champ and I was astonished. The sugar hasn't had the same anti-appetite effect, so I've never pushed it. Most of my friends who have tried it

tried with the oil and found it disgusting and these aren't the type of people that "diet" in any serious sense, so that they tried it at all, I think, is something of a triumph.

James A Donald (2011-03-24 19:17:05)

I concealed the fact that I was doing the SLD diet from everyone. It is heresy, and a somewhat sinful heresy.

Glen Raphael (2011-03-24 21:23:05)

The [1]chart Alex Chernavsky linked above brings up an excellent point. Here's somebody who lost 25 pounds on SLD...but whose goal was to lose 45. This person has been taking oil instead of lunch for a year and a half, making no \*new\* progress after the first 6 months. So did SLD "work" in this case? So maybe that's the question to ask people in the forums: "have you achieved your goal weight?" Not "have you lost weight" but "have you been able to lose \*all\* the weight you wanted to?" If the answer to that question were yes, they would be telling the world about it. But if the answer is no then people who are on SLD are merely \*less\* overweight than they might be without it. But they're still overweight, still in search of a more complete solution, still inclined to drop SLD if something better-sounding comes along.

1. <http://www.astrocyte-design.com/shangri-la-diet/index.html>

Seth Roberts (2011-03-25 01:01:23)

Glen, I don't think a comparison with perfection is going to tell you much. It is obvious from the incidence of obesity that no diet is anywhere close to perfect. A more helpful comparison is with what already exists, with other diets. I never thought that SLD was perfect, I wrote the book because I thought it was better than what already existed, at least in its conceptual basis. I believed that writing a book about something imperfect would help everyone find better ways of losing weight. That's what happened: because of the book, the noseclipping idea came along, which is a big improvement. You can eat an unlimited number of calories noseclipped and they can be as healthy as you want them to be. For example, I eat a lot of butter noseclipped. I suspect Alex could lose more weight if he started noseclipping.

Jill (2011-03-25 06:47:54)

My two cents: I've never tried the diet, because the idea of eating/drinking something tasteless turns me off. It makes the whole diet sound bland and unappetizing. Also, I think someone else had said somewhere that it took some effort to change up his diet frequently enough to keep the food "unfamiliar".

Alex Chernavsky (2011-03-25 06:48:42)

I eat a fairly high-carbohydrate diet (bread, pasta, potatoes, and particularly chocolate & other sweets) – so I think I'd probably lose more weight if I ate a higher proportion of protein and fat. I may start to add macadamia nuts and coconut oil to my diet.

q (2011-03-25 08:54:25)

i can pose another answer based on anecdote. people i know who have tried fad diets or atkins are usually obnoxiously vocal about it. not just that, it's part of their personality to be annoyingly vocal about personal matters. people i know who have tried SLD are generally loners and introverts. i have no idea why this is, or if it is something general or just confined to my circle.

Seth Roberts (2011-03-25 12:35:55)

Jill, I once wondered if white fish cooked plain would cause weight loss. I couldn't eat it for more than a day or two so I share your view that bland food is unappealing. However, I have no trouble at all eating butter & meat noseclipped. Because of the nose-clipping, it has no flavor; but I enjoy eating it because of the protein and fat. We have protein and fat receptors in our mouths. Food without smell can also be pleasant to eat due to crunchiness.

Anna (2011-03-25 14:05:07)

I was planning to tell lots of people about this diet when it worked, but it isn't. I bought the book at the beginning of March, got really excited and started doing about 3 tbs of canola a day. I've fiddled with the amounts (2 or 3 1/2 tbs) and the times I'm taking it. I am a bit less hungry, I guess, but my weight has been mostly stuck in one spot all month and today am up a pound



and a half. I suppose I'll try it for another week or so... Any tips? I am finding it impossible to look up specific advice on the forums. I need to lose about 40 pounds, but at this point I think I'd be thrilled with five.

Nancy Lebovitz (2011-03-25 14:29:34)

I wonder if part of the problem is that the usual ideas about weight loss involve the drama of resisting temptation. While it isn't easy for a lot of people to get around to nose-clipping and consuming tasteless calories, those don't seem to have the visceral intensity of not eating food that one really wants and/or is generally considered very tempting, or of exercising when not exercising would be much more comfortable. Admittedly, this is an ad hoc theory- Atkins has the alternate drama of eating food one isn't supposed to, and getting at least some of the rewards which are supposed to go to low fat/deliberate calorie restriction. At the same time, SLD is more work than the dream of effortless weight loss.

Mark L (2011-03-25 16:38:04)

I am a regular reader of the blog. Months ago, I tried holding my nose for a few days, but I didn't like not being able to breathe through my nose and my nose clips were slightly painful. Today I tried a way of eating which minimizes the sensation of taste by consciously closing off the connection between mouth and nose. As Seth mentioned above, food can be pleasant even without the full use of the nose.

Seth Roberts (2011-03-25 18:57:51)

Anna, canola oil often doesn't work well, for unknown reasons. I suggest you replace it with butter eaten noseclipped. I do 1/2 stick of butter per day (1/4 stick twice per day). I cut the 1/4 stick into 6 pieces and eat each piece of butter with a small piece of meat. Mark L, some of the noseclips I've seen allow you to adjust them so that they are comfortable. You just bend the metal.

Anna (2011-03-25 21:29:21)

Thanks Seth. That's kind of awesome - hopefully one day I'll be able to respond to questions of, "How have you lost so much weight?" with, "Oh, I eat a half a stick of butter a day. With a fork." I have noticed my balance is better, by the way. I don't have a scale - I weigh myself on the wii fit. I used to have to concentrate to stay balanced during the balance test or I would lean to the right. Lately, I'm always almost dead center. I also want less coffee and diet coke.

TMS (2011-03-25 23:06:32)

Also a lot of people don't get the concept even after you've explained it to them. To me it made intuitive sense. Your body learns what has calories and when that food is around. Some people just don't get it and if they don't get it then it really seems weird and like a gimmick.

Seth Roberts (2011-03-25 23:24:26)

Anna, I too noticed my balance was better when I tried using flaxseed oil (high in omega-3). Then I did a heap of experiments confirming the balance effect and showing there were other mental benefits, no doubt due to the omega-3. Canola oil, for all its problems, is high in omega-3. Butter is not. To continue the omega-3 benefits and get even more SLD calories, you might want to take 2 tablespoons/day of flaxseed oil, nose-clipped. Your gums should greatly improve as a result. I have posted about the visible benefits of omega-3 many times.

M (2011-03-26 04:26:48)

I've always been thin and my weight varies very little. I also have a fairly poor sense of smell. I can smell things - but it seems to me not as keenly as other people. I wonder if these things are related. Perhaps there is some test of sense of smell out there that could be correlated with body weight?

Sadie (2011-03-26 13:08:26)

If I may say so, your book often seemed condescending and angry. Those are not traits that make people want to take your advice. I also felt that the mechanism (flavor-calorie learning) you described in your book seems incomplete. It is at best one of many forces making SLD work. For example, we know that eating carbohydrate without protein triggers the selective

uptake of tryptophan into the brain, leading to an increased production of serotonin (see "The Serotonin Power Diet has an easy-to-follow explanation of this, plus experimental verification). Increased serotonin lowers appetite. We also know that fats trigger a hormone response that suppresses appetite and causes the sphincter at the end of the stomach to close (YOU On a Diet has a tedious lay explanation, plus cartoons and lame jokes), causing you to feel full faster. It seems more likely to me that this is how appetite suppression occurs on SLD.

Seth Roberts (2011-03-26 17:19:33)

Sadie, I found that 300 calories/day of sugar water produced roughly the same effect as 300 calories/day of extra-light olive oil. This equivalence is hard to explain if the sugar water and olive oil suppressed appetite in two different ways. Nor would your two different mechanisms explain why a third way of applying the theory behind SLD – namely, noseclipping – also appears to work.

Linda (2011-03-27 11:48:19)

I bought the book on my Kindle and got up at 5 AM to finish reading it because I just know it will work. My husband who is naturally thin has always had a sugared drink between meals and he only eats two meals a day because of it. I who struggle have always avoided sugar and I am hungry all day long. Today I had one tablespoon sugar in hot water like it was tea. Wonderful. I have no urge to snack. I also take flax oil seed capsules as well. I am calm and free of my usual nagging hunger. Let's see what happens. I would be happy to lose ten pounds. Could it be this easy?

Geraldine (2011-03-28 20:30:40)

I think whenever something seems too easy or too good to be true, it turns off many people from taking a diet (for one example) seriously or even giving it a try. I've always tried to have an open mind when it comes to matters of health and wellness in particular. So many so called "fads" ended up being the answer over the years. It wasn't so long ago that anyone who thought that diet had anything to do with cancer was considered uninformed or worse. I always thought it was the other way around, how could anyone NOT think that diet and cancer were linked? As far as your diet is concerned, it works no matter what anyone thinks. The thousands of people who have been successful with your plan are proof of that. The lucky ones with open minds, willing to give yet another diet plan another try. This one's different though, because it's not really a diet and it does really work. What I have found personally is that I am able to control how much I eat without using the sugar water or oil every day. The carry over is significant. And although the weight loss is slow, it's been significant about 25 lbs and I wasn't really overweight to begin with. Thanks again Seth! Geraldine, BC Canada

Jazi yechezkel zilber (2011-03-30 22:40:24)

There is a psychological problem with tricks. The idea of conditioning etc. Is not directly about nutrition (eat less eat differently) but a way around. And it does not register very well. This is clearly a cognitive distortion. As tricks can be as useful or more than "straight" corrections. I think that the very question in the headline assumes rationality and following logic. It is not how human mind and public psyche works. The question builds in logic. Here is problem. Here is highly doable solution. Do it. But the sequence does not work in most humans.

Rakhi P (2011-04-05 00:01:50)

Just started the SLD a week back, I am using sugar water .....so far the results are not showing but yes my appetite has become less.....I am having around 4 tbs of sugar in half ltr water.....hope I am going in right direction in terms of following the diet....

Seth Roberts (2011-04-15 17:23:44)

I think there is a lot to the "loners and introverts" comment. Yeah, those who have less invested in the standard belief system (e.g., "calories in calories out") have less to lose by challenging it – by trying something that violates that system. But because they are outsiders, they are less influential than people firmly in the mainstream. So they don't make good evangelists. This is related to another claim in this line of comments – that I say things here that "5 minutes thought" would show to be untrue. This means I too am not a good evangelist.

beth bobbins (2011-11-08 16:44:56)

Can you replace the olive oil with coconut oil?

Seth Roberts (2011-11-08 17:47:53)

You can replace olive oil with coconut oil if you hold your nose shut when you drink it.

## **Methodological Lessons From My One-Legged-Standing Experiment (2011-03-25 13:59)**

A few days ago I described an experiment that found [1]standing on one leg improved my sleep. Four/day (= right leg twice, left leg twice) was better than three/day or two/day. I didn't know that. For a long time I'd done two/day. I think the results also contain more subtle lessons. At the level of raw methodology, I found that context didn't matter. The effect of four/day was nearly the same when (a) I measured that effect using four days in a randomized design (where the dose for each day is randomly chosen from two, three, and four) and when (b) I measured that effect using a dose of four day after day. Suppose I want to compare three and four. Which design should I use: (a) 3333344444, (b) 3434343434, or (c) 4433343434 (randomized)? The results suggest it doesn't matter.

The experiment didn't take long (a few months) but it took me a long time to begin. I noticed the effect behind it (one-legged standing improves sleep) two years ago. Why did I wait so long to do an experiment about details?

I was already collecting the data (on paper) – writing down how long I slept, rating how rested I felt, etc. But I wasn't entering that data in my laptop. To transfer months of data into my laptop required motivation. Most of my self-experimentation has been motivated by the possibility of big improvements – much less acne, much better mood, and so on. That wasn't possible here. I slept well, night after night.

What broke the equilibrium of doing nothing? A growing sense of loss. I knew I was throwing away something by not doing experiments (= doing roughly the same thing day after day). The longer I did nothing, the more I lost. To say this in an extreme way: I had discovered a way to improve sleep that was unconnected to previous work – sleep experts haven't heard of anything like it. It was real progress. To fail to figure out details was like finding a whole new place and not looking around. Moreover, the experiments wouldn't even be difficult. The treatment takes less than a day and you measure its effect the next morning. This is much easier than lots of research. Suppose you know that radioactivity is bad and you discover something radioactive in your house. A sane person would move that radioactive thing as far away as possible – minimizing the harm it does. I had discovered something beneficial yet wasn't trying to maximize the benefits. Crazy!

An early lesson I learned about experimentation is to run each condition much longer than might seem necessary. If you think a condition should last a week, do it for a month. Things will turn out to be more complicated than you think, having more data will help you deal with the additional complexity that turns up. Now it was clear I had gone too far in the direction of passivity. I did the experiment, it was helpful, I could have done it a year ago.

1. <http://www.blog.sethroberts.net/2011/03/22/effect-of-one-legged-standing-on-sleep/>

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Elizabeth Molin (2011-03-26 08:40:47)

This might interest you: <http://www.nowforthesciencebit.com/opinion/how-to-tell-if-something-is-true-part-xii>

Jazi yechezkel zilber (2011-03-26 20:15:47)

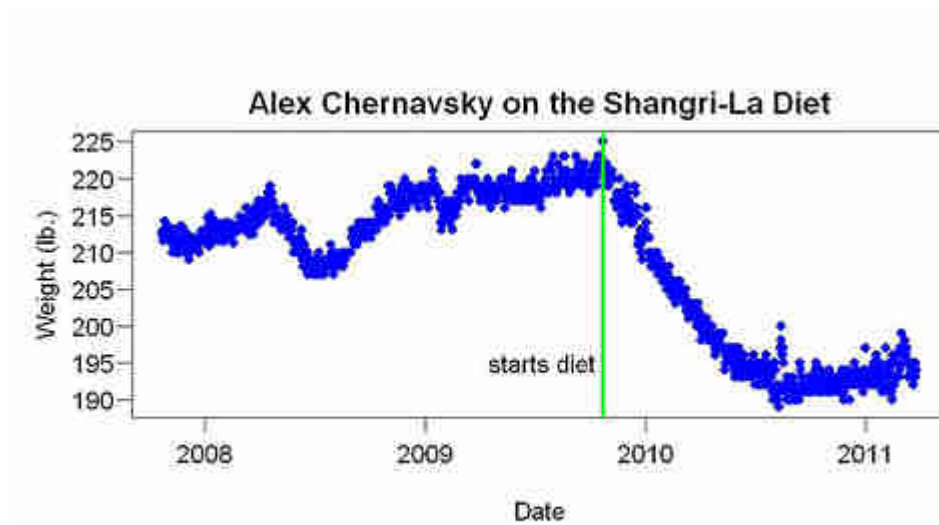
I think a public website for executing experiments, automatically handling data and room for comments will be great. Benefits.  
1) a database of experiments will allow others to use the information. And provide a wide range of ideas for those who want to start  
2) experimental convenience. If the tools are good it can be very helpful (a software can even suggest variations and so on)  
3) motivation. The public attention and use can motivate very much

Jazi yechezkel zilber (2011-03-26 20:28:02)

Think how useful would it be just to have all your self-experimental results tabulated in lines with links to longer discussions. In one look one can figure what can be relevant for him and also get an impression how strong the idea is. Double this with an assortment of dozens of such, (not to talk about interaction effects)

### 1.5 Years on the Shangri-La Diet (2011-03-27 20:24)

[1]



Alex Chernavsky has kindly given me several years of weight data he collected by weighing himself daily. He read about the Shangri-La Diet in 2005 and several years later decided to try it. The graph above shows what happened: Starting at 222 pounds (BMI = 32), over 11 months he lost 31 pounds, reaching a BMI of 27. Since then – while continuing the diet – his weight has increased at roughly the same rate it was increasing before he started the diet.

He started by drinking olive oil and sugar water, switched to olive oil alone, and then, finally, to flaxseed oil alone of which he drinks 3.5 tablespoons/day (= 420 calories/day). He does not clip his nose shut when he drinks it but he washes his mouth with water afterwards. More about his method [2]here.

Almost all weight-control experts would say these results are impossible: 1. Alex lost weight because he ate more fat. Fat is fattening say most nutrition experts. 2. Atkins dieters, who don't say that, think the secret of weight loss is to reduce carbohydrate. Alex didn't do that (and eats plenty of carbohydrate). 3. He didn't restrict what he ate in any way. 4. He didn't change how much he exercised.

Quite apart from how it contradicts mainstream beliefs, including Atkins, the data are remarkable because the change was so simple, small, and sustainable, the weight loss so large, the rebound so minimal, and data period so long.

An ordinary clinical trial has obvious advantages over such one-person data, such as more subjects and more data per subject. Less obvious are the advantages of this sort of data over clinical trials:

1. Long pre-diet baseline. Clinical trials never have this. It allows one to judge if weight increase post-diet, often called "regain", is due to the weight loss or other factors. In this case the rising pre-diet baseline shows that other factors are causing slow weight gain over time.
2. Motivation. In a clinical trial, the motivations of the researchers and the subjects are different. The researchers want to measure the effect of an intervention; the subjects want to lose weight. If paid, they may want to make money. The difference in motivations causes problems. How closely the subjects obey the researchers and how truthful they are is usually hard to know. This data does not have that clash of motivations and incentive to lie.
3. Realism – what methodologists call ecological validity. These data, unlike clinical trial data, come from the situation to which everyone wants to generalize: people trying a diet by themselves at home without professional support or guidance.
4. Level of detail available. You (the reader) have access to something resembling raw data. In clinical trial reports, the data available is heavily filtered (e.g., shortened, simplified) and the nature of the filtering rarely described. For example, you rarely learn in any detail what the subjects ate. With this sort of data, but not clinical trial data, you can get a better sense of whether the results are likely to apply to you.

1. <http://www.flickr.com/photos/sethroberts/5563785698/>

2. <http://www.astrocyte-design.com/shangri-la-diet/index.html>

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Alex Chernavsky (2011-03-27 20:56:25)

That slow upward trend is a little worrisome to me. I think it might be caused (or exacerbated) by the fact that about eight months ago, I started eating breakfast two or three times per week (I still almost never eat lunch). I enjoy eating a home-cooked breakfast with my wife on weekends.

Seth Roberts (2011-03-27 22:02:07)

Alex, such slow upward trends are very common – and yours seems to have started at least as early as 2008. I think they are due to strengthening of food-calorie associations – what most people think of as "food becoming more familiar". I came across a study that found that the thinner people are at age 20, the slower the weight gain in their 30s and 40s (comparing one culture to another).

Robert (2011-03-28 02:22:08)

It occurs to me that the obvious confounding factor is that by taking on this ritual of dosing with oil and waiting to eat, a person may start to pay more attention to food intake and subsequently lose weight. In any event - good work, Alex!

Alex Chernavsky (2011-03-28 06:34:56)

Seth – you've mentioned nose-clipping. Anything else you might recommend to flatten or reverse that upward trend?

Kevin R. Bridges (2011-03-28 07:58:36)

I was going to mention to you, and I guess this is as good of a place as any, that I've been noseclipping protein shakes in the morning (and rinsing as well. The flavor is very strong and sticks around without rinsing). I wasn't sure about what kind of results I was getting, hunger-wise, until I, while lying in bed, realized that I could easily list everything I'd eaten that day. I got up, added up the calories, and it was about 1200. This is an unbelievable reduction, compared to before I started using your advice. I'm very pleased and impressed.

Seth Roberts (2011-03-28 12:17:44)

Thanks, Kevin. How long have you been doing this Alex, no, no other suggestions. About noseclipping: I find it much easier to noseclip butter (with a little piece of meat) than ordinary food. I think that is because with ordinary food, noseclipping reduces how enjoyable it is. For example, a noseclipped sandwich is less pleasant than a sandwich eaten normally. Whereas with the butter, all of the pleasure is in the texture (which isn't just fat, the protein helps). Noseclipping has no effect on that, so the nose-clipped butter is just as pleasant as the butter eaten normally. To be vegan about it, I'd eat the butter on a snap pea or a cracker.

Carl Willat (2011-03-28 17:39:51)

I really enjoy my spelt toast with flax seed oil and ground flax on top (to absorb excess oil) in the morning, though I do it nose-clipped.

Seth Roberts (2011-03-28 19:04:13)

I found that toast with flaxseed oil eaten noseclipped tasted the same as toast with lots of butter.

Nathan Myers (2011-03-28 21:50:24)

I don't noseclip, but I use a squirt bottle to bounce the oil off the back of my throat. In Berkeley, the ordinary Barlean's brand comes in a squirt bottle, which I imagine has the extra advantage of minimizing oxygen exchange, so maintaining freshness. Of course any brand of oil can be put in a squirt bottle.

Jarno Virtanen (2011-03-29 00:27:48)

I wonder if the reason why Atkins works (for a while) is that meat without carbohydrates does not create as strong calorie-flavor association as it does with carbs. I personally do like meat, but a meal of only vegetables and meat does not create a genuine craving for me. Whereas high-calorie dinner with a good amount of carbohydrates does. People say it's great that you can eat all the meat you want with Atkins diet, but I wonder if it is just not as satisfying. This could explain why people find that even Atkins diet takes some self-discipline. They still crave for foods that have a lot of carbohydrates. Atkins is still to adhere to than the normal calorie-restriction diet, but it's not automatic like Shangri-La diet is (when it works). This could also perhaps explain why many people can't keep with their Atkins diet. (I don't know the actual numbers, but I've understood that lapsing is somewhat of a problem with Atkins too.)

Stephen M (Ethesis) (2011-03-31 19:09:11)

I found that my diet really switched around, but that at some point the food I was eating seems to have become too regularized. I'm now working on changing that. Though if I go back to rigid eating, my weight drops again. I'm working out how to get away from rigidly eating a basically flavorless diet and how to deal with eating at restaurants and such on a regular basis. I'm starting to consider just skipping lunch every day.

paul hardcastle (2011-04-01 09:58:02)

I start my SLD today Over a year ago I weighed 85 kilos today I weigh 108 ks a cool 238 lbs. 9 months ago i gave up smoking (40 aday habit) and stopped working from Aid work: 18 warzones and more. When I worked in Greece many greeks took 2 tbs of olive oil a day as laxative. One question light olive boil is labelled 'light and mild' I assume its the same as in the US? Thanks Paul

kevin (2011-04-02 11:01:46)

I've been doing it for a couple of weeks in combination with a slow carb diet

## **Evolutionary Health Journal to Start (2011-03-29 16:49)**

Building on the success of the [1]Ancestral Health Symposium – it will be in August, but it's already a success – Aaron Blaisdell is planning to start a scientific journal on the subject.

It will be an historic thing. The notion that ancient lifestyles are especially healthy has been around, and taken seriously, for at least a few hundred years. Serious data began to be gathered in the early 1900s. Weston Price is an example. For a very long time this idea seemed to go nowhere, or at least the mainstream ignored it. In the 1970s there began a small irregular stream of publications (e.g., a book called [2]Western Diseases edited by my friend Norman Temple) but again the mainstream ignored it.

But mainstream medicine doesn't work very well. The notion that when you get sick you should take a dangerous expensive drug doesn't make a lot of sense. You didn't get sick because you lacked the drug. More plausible is that when you get sick you should reverse the environmental conditions that caused the sickness and find out if your body can heal itself. Even more, you should prevent disease from starting. Along with mainstream medicine's implausible intellectual foundation has come pathetic results. Robin Hanson has [3]emphasized the RAND experiment that found that a large fraction of medical spending produced little benefit. Tyler Cowen [4]has pointed out that Americans spend far more than other countries on health care with no better results. A doctor at a county hospital once told me, "The truth is that we can't help most people that come in." They come in with diabetes, obesity, and so on. Why don't you do something that does help? I asked. Because when you do prevention research, she said, you don't get people thanking you. She was describing a protection racket: make people sick – if only by failing to tell them how to be healthy – so that they will come to you for help.

An academic journal with a steady stream of articles and supporting evidence is a big step toward getting the paleo alternative taken seriously. It will help researchers who take paleo ideas seriously publish their work, of course, but it will also help them get feedback. Because it will help them publish, it will help them get research support. Because the journal (like any new journal) will be open access, it will help those who want to learn about those ideas. When ideas about health are forced to compete on their merits (such as cost, safety, effectiveness, and quality of the supporting evidence) and becoming an M.D. confers less of a monopoly (on information and treatment), a great change will come. Richard Nikoley recently posted [5]an example of what a difference this can make.

1. <http://ancestryfoundation.org/>

2. <http://www.amazon.de/Western-Diseases-Dietary-Prevention-Reversibility/dp/product-description/0896032647>

3. [http://www.overcomingbias.com/2007/05/rand\\_health\\_ins.html](http://www.overcomingbias.com/2007/05/rand_health_ins.html)

4. [http://voices.washingtonpost.com/ezra-klein/2011/01/things\\_that\\_are\\_more\\_important.html](http://voices.washingtonpost.com/ezra-klein/2011/01/things_that_are_more_important.html)

5. <http://freetheanimal.com/2011/03/phd-med-school-biology-researcher-goes-paleo-racks-up-70-pound-weight-loss-gets-hot.html>

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Tyler (2011-03-29 20:10:15)

This is great! I've been hoping something like this would come along for a while. Cheers to Evolutionary Health.

Darrin Thompson (2011-03-30 08:01:16)

Please let it be open. Please let it be open. Please let it be open.

Tom Moertel (2011-03-30 11:32:46)

Yes, please let it be open. Given the [1]the citation-rate and influence advantages of open-access journals, when a journal is offered, in part, to make headway against an unyielding flow of entrenched beliefs, that journal probably ought to be open access to have any hope of success. The ideas in such a journal must be seen and spread, and both are more likely with open access.

1. <http://opcit.eprints.org/oacitation-biblio.html>

Aaron Blaisdell (2011-03-30 20:42:47)

But of course the journal will be open access.

Erik Cisler (2011-03-30 23:28:57)

Excellent!

## **The Growth of Paleo: Patrick Vlaskovits Interview (2011-03-31 08:23)**

I wondered if [1]Patrick Vlaskovits, who runs the question-answer site[2] PaleoHacks, could shed some light on the recent growth of interest in a Paleo approach to health. So I asked him a few questions.

SETH What have you learned from PaleoHacks about the growth of the Paleo movement during the last year?

PATRICK Well, one thing is certain ... the Paleo movement IS growing. One can look at various proxies for this - Google Trends - for example - [3]<http://www.google.com/trends?q=paleo+diet> - or more frequent mentions in the mainstream media. But your question is about what I have learned from PaleoHacks.com with regard to growth. PaleoHacks.com's traffic is definitely growing and my sense is that Paleo (by that I mean eating in an evolutionarily appropriate manner) is about to cross the chasm into the mainstream.

A few interesting measures of growth vis-a-vis PaleoHacks are:

1) The increasing frequency of meta-discussions on PaleoHacks - people who have been eating Paleo for some time are now looking to the future about what it means to be "Paleo" and how long-time Paleo eaters are changing their Paleo diets. This is, IMO, is a good thing as Keynes said: "When the facts change, I change my mind - what do you do, sir?" We are learning more about how our health changes after some time eating Paleo - and what needs to be fine-tuned when it comes to things like bacterial/gut health (probably the most important thing to worry about) and hormonal changes relative to our environment, e.g. cortisol levels increasing due to lack of sleep which can result in unwanted/unhealthy weight gain or weight loss.

2) More people are blogging about Paleo and also more people are trying to monetize Paleo and I see them on PaleoHacks. (For the record, I have no problem with anyone trying to monetize Paleo as long as they are responsible about it as I feel that anyone monetizing Paleo should also be a good steward of Paleo.)

SETH How much has PaleoHacks traffic grown over the last year?

PATRICK Short answer: A lot. Longer answer: Depends on which metric you use — but still a lot. Ranges from 6x to 8x YOY increase in visits, uniques and page-views. Currently, PaleoHacks gets +500k page-views a month. [I double-checked my internal stats with public information on Compete.com & Quantcast - and it looks like they undercount (BTW this is a well-known and hotly debated topic).]



SETH What do you think is causing such fast growth? The broad idea is really old. Even the details are old – Weston Price wrote in the 1930s, for example. The Weston Price Foundation, which was started many years ago, is growing much more slowly.

PATRICK Cutting to the chase: no idea. Some thoughts:

Paleo's growth appears highly correlated with CrossFit – but what has caused CrossFit's growth? Not sure. It too has been around a while.

Social media have certainly accelerated/lubricated Paleo's growth but I don't if social media actually \*caused\* Paleo's growth. What causes memes like Paleo to spark, and then die out or go dormant and then spark again to grow into a raging wildfire? I wish I knew.

Getting a little meta and perhaps off-topic – my assumption is that is true for most "Big Ideas". We rarely recognize or know of their true "discovery" because for-whatever-reason the implications are not fully, if at all, appreciated at the time of discovery. For example, I believe this was the case with penicillin. A French medical student discovered it 1896, Fleming re-discovered it in 1928 and then it lay around until 1939 when Florey fully appreciated it.

I certainly didn't put two and two together when I read [4]Why We Get Sick back in 2000-ish. I thought it a fantastic book (and still do)– but I didn't think of applying the evolutionary lens to diet/nutrition, even though in retrospect, it seems obvious.

1. <http://about.me/vlaskovits>
2. <http://PaleoHacks.com/>
3. <http://www.google.com/trends?q=paleo+diet>
4. <http://www.amazon.com/Why-We-Get-Sick-Darwinian/dp/0679746749>

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David (2011-03-31 08:36:54)  
I just checked out PaleoHacks. Patrick seems a bit of an asshat.

Patrik (2011-03-31 09:41:52)  
LOL. Yes, I am an utter & total "asshat".

AJ Chillin with VJ (2011-03-31 10:04:02)  
He is - I can vouch for that!

Aaron Blaisdell (2011-03-31 10:08:31)  
Great interview Seth. Thanks for doing it Patrick! I never heard of an asshat, but it sounds sexy. Where can I get one for myself?

Robin (2011-03-31 11:50:59)  
I wonder how much of the growth is due to Gary Taubes, in a roundabout way? That's how I got to PaleoHacks, at any rate. Gary Taubes convinced me that eating fat was good, I started reading more about nutrition, then I started eating less carb and more fat, which led me to a number of paleo blogs (PaNu & the like) and not-really-paleo-but-close blogs (Whole Health Source & the like), eventually I found PaleoHacks. I don't eat a true paleo diet, BTW, but find the PaleoHacks site very helpful for a

whole range of food-related issues from sourcing healthy food to nutrition to cooking. And I love the way the site is set up.

Darrin Thompson (2011-03-31 12:09:34)

I will have to spend more time there. That's a nice use of stack exchange.

Patrik (2011-03-31 14:20:49)

@Robin Gary Taubes is most definitely influential and his ideas have tremendous overlap with Paleo. @AJ This is true. You can vouch for my alleged ass-hat-edness.

Thomas Seay (2011-04-01 12:59:41)

Do you think it is very Paleo to wear an ass hat? I was under the impression that they just bared their ass to the world.

Joe (2011-04-01 21:21:40)

You can stick a feather in your ass-hat, as it's paleo. Just don't call it Macaroni.

anonymous (2011-04-02 16:35:44)

"Asshat n. One who has their head up their ass. Thus wearing their ass as a hat. Asshat." sethroberts.net is also good for my vocabulary! Thanks!

## 6.4 April

### Assorted Links (2011-04-01 15:39)

- [1]Interview with Peter Pronovost. "The pilot who neglects a checklist before take-off would not be allowed to fly, and most safe industries have transgressions that are firing offenses. ... There hasn't been that kind of accountability in health care. ... Hospitals don't pressure physicians about teamwork for fear of jeopardizing the business they bring to the hospital."
- [2]Doctors taking kickbacks. Dr. William H. Resh, one of the accused doctors, defended himself like this: "I believe that it goes without saying that a doctor who agrees to consult with a company does so because of the confidence level they have in the company and the quality of its products."
- [3]Advanced navel-gazing – nice article in Forbes about self-tracking.

Thanks to Brent Pottenger.

1. [http://online.wsj.com/article\\_email/SB10001424052748704364004576131963185893084-1MyQjAxMTAxMDIwOTEyNDkyWj.html](http://online.wsj.com/article_email/SB10001424052748704364004576131963185893084-1MyQjAxMTAxMDIwOTEyNDkyWj.html)
2. [http://www.nytimes.com/2011/04/03/health/03implant.html?\\_r=1&hp=&pagewanted=all](http://www.nytimes.com/2011/04/03/health/03implant.html?_r=1&hp=&pagewanted=all)
3. <http://blogs.forbes.com/kashmirhill/2011/04/07/adventures-in-self-surveillance-aka-the-quantified-self-aka-extreme-navel-gazing/>

Richard Gay (2011-04-09 05:36:09)

Good catch on the central-line infections. Our local hospital system has an apparently strong position on the issue: [www.austincc.edu/health/documents/CLABSItraining.ppt](http://www.austincc.edu/health/documents/CLABSItraining.ppt)

### Effect of Graphical Feedback on Productivity (2011-04-02 03:41)

After talking to [1]Matthew Cornell a few months ago, I decided to try to measure how much time I worked. Measuring it might help me control it. I'd done this before but hadn't gotten anywhere. Maybe this time . . .

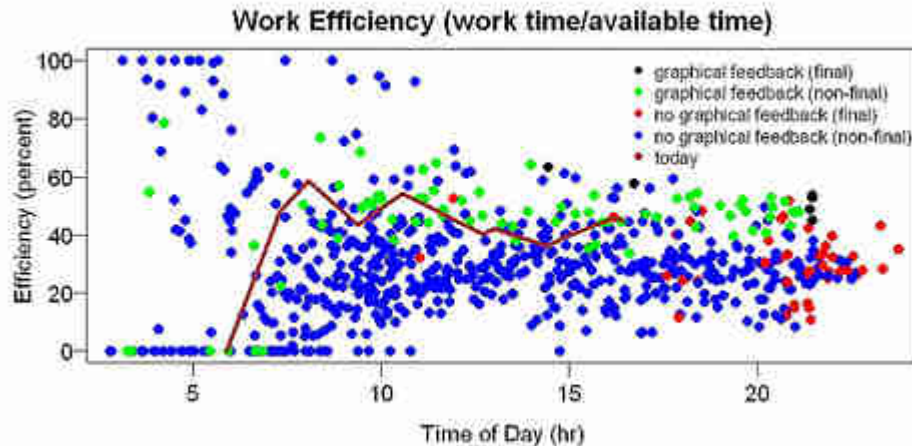
I used R. It was easy to record when I worked. I work a while (e.g., 60 minutes), take a break (e.g., 30 minutes), go back to work, take another break, go back to work, take another break, and so on. The R programs I wrote recorded when each bout of work started and stopped. A typical day might have six bouts of work, interspersed with breaks. It was harder to write a program to show the data so I collected data for about eight weeks before I looked at it.

The display program I eventually wrote showed "efficiency" (total time spent working that day/available time that day) as a function of time of day. Each bout of work generated two points on the graph: one when it started, one when it ended. For each point, the efficiency of the whole day up to that point was computed. For example, if a bout of work started at 10 am, the efficiency for that time was how much work I had done before 10 am divided by how much time I had available before 10 am. Time available was computed from 3 am or when I woke up, whichever was later – as amusing/horrifying as that might sound. Suppose I woke up at 5 am. At 10 am, then, I had had 5 hours available to work. Suppose I had only worked between 8 am and 9 am. Then total work up to that point = 1 hour and efficiency = 20 % (= 1/5). So I plot a point at (10 am, 20 %). Suppose I work for an hour. End point: 11 am. Total work up to that point: 2 hours. Efficiency: 33 % (= 2/6). That's a point at (11 am, 33 %).

Although I had collected the data to test an idea, I also thought it would be interesting to see how the current day compares to previous days. Was I doing better than usual? Worse than usual? To make this comparison I plotted the data from the current day as a line rather than as points, to make it stand out. I also made it a different color. I often ran the display program while working. It showed the results up to that moment.

All this had a surprising result: I became considerably more efficient. Here is an example of the graphs I looked at many times per day:

[2]



The brown line is the current day. The line goes up when I work, down during a break, up again when I resume working. Blue and green points are previous days. Blue points are from the days before I started looking at graphs like this, green points from the days after I started looking at graphs like this. In other words, the difference between the green and blue points shows the effect of looking at graphs like this. The red and black points are the final points of the day – red from the days before feedback, black from the days after feedback began. They summarize the day. The higher they are, the more efficient I was.

The green points are mostly above the blue points – and, especially, the black points are above the red points. This suggests that the graphical feedback made me more efficient. Before it began, I was about 25 % efficient throughout the day. After this feedback began, I was about 40 % efficient. The only change was addition of this feedback.

I was shocked by these results – the improvement was sudden and large. Had I an inkling that such a thing was possible, I would have tried it long ago. The comparison isn't feedback vs. no feedback. Before the graphical feedback started I got printed feedback ("120 minutes [work] so far") as often as I wanted and whenever I started or stopped work. And I've kept records of how much I work in other ways for a long time. My professional research area is animal learning – not far from studying the effect of feedback.

If the improvement persists, I will try to explain it. I once spoke to an engineering professor who started measuring his calorie intake, hoping to lose weight. As soon as he started keeping track, his once-a-week binges of eating a whole carton of ice cream in a sitting stopped. That's the closest result I can think of and it isn't that close.

anagement-recap/

2. <http://www.flickr.com/photos/sethroberts/5581283747/>

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SB (2011-04-02 04:47:07)

Can this not be explained by the Hawthorne effect? "The Hawthorne effect is a form of reactivity whereby subjects improve or modify an aspect of their behavior being experimentally measured simply in response to the fact that they are being studied, not in response to any particular experimental manipulation."

Joseph Dantes (2011-04-02 05:03:42)

Now THIS is why I read you. I REALLY want that program. I think the program is the big breakthrough, not the insight that continual graphical tracking increases productivity. Although the fact that you quantified it is impressive. I've been doing this on a cludgy basis, on and off. PLEASE share the program. I will learn R. I don't care.

Joseph Dantes (2011-04-02 05:04:42)

Read it again SB, no it can't. This is about Continuous Graphical Feedback. All 3 elements. Non reducible.

Seth Roberts (2011-04-02 05:15:44)

SB, I was already measuring my behavior when I started this graphical feedback. The measurement started two months earlier. So the improvement cannot be due to the measurement. The improvement must be due to some details of the feedback, and I cannot easily say what those details are.

Mike (2011-04-02 09:44:44)

For a behavioral econ take on this.... <http://faculty.chicagobooth.edu/christopherherhsee/vita/papers/mediummaximization.pdf>

Richard Gay (2011-04-02 10:41:36)

I saw a response on a blog from someone who simply began weighing themselves every morning. They wanted to see if simple observation caused them to lose weight. They lost a substantial amount of weight in a reasonable period of time. Obviously it wasn't watching that did the trick, it was some unmonitored path between that and their eating and activity choices (which they did not consciously change). But in any case, just knowing the state and trend made a difference.

wr (2011-04-02 17:17:03)

this is \*fantastic\*

Shane (2011-04-02 19:18:04)

Love this post. Agree w/ Joseph Dantes. Some additional questions: 1) How did the program "know" whether you were working or not? Did you have some kind of "clock in/clock out" thing? Just hit return when you started working, return again when you stop, or start to goof off? 2) What counts as 'work?' This is my damn problem. Start out doing something that is absolutely, positively work (I had decided that x needs to be built, so if I am actually building x then that's work). Get into a grey area (doing background reading on something that's keeping me from making progress on x). Drift into something that's probably not work (researching something peripheral to x, that might be important later, or important for something that comes after I finish x) to something that's definitely not-work. Seems like you might have some of these same issues - how did you deal with them?

Alrenous (2011-04-02 19:25:20)

Not that surprising. More intense feedback is better feedback. I would guess the actual causal path is that a printed word form limits the computation to rational consciousness (highly abstract) but a graphical form can be understood by the subconscious,

which would allow you to rope more of your brain into understanding and pursuing the goal of working more efficiently. In me the transition is marked by the issue changing from an airy feeling to a solid and broad gut-level response. If I can get this gut response to a goal, it can mean the difference between being impossible and being unavoidable.

Seth Roberts (2011-04-02 20:00:29)

Thanks, wr. How did the program know I was working? When I started working I ran a program called work.start that recorded a few things. When I stopped working I ran a program called work.stop. Since R is always open this was easy. What counted as work? I have a broad definition: Making tea while working is work. When answering email (which is work), reading links people send me counts, even though I enjoy that. Although I enjoy writing my blog, that too is work. Also included is standard work: writing scientific papers, for example. You can think of my definition like this: ordinary work plus stuff I have to do and want to spend more time doing (e.g., email). "More intense feedback is better feedback." I doubt that intensity is the only important thing I changed. Perhaps the feedback was effective because progress was easy to see. It was easy to see because of the detailed comparison to previous days. I didn't just show the average of previous days. From looking at the data I could see my percentile compared to previous days. Was I better than 60 % of previous days? 80 %? 99 %? Right/wrong feedback isn't like that.

Wayne (2011-04-03 09:59:59)

If I'm reading you correctly, I see two differences: 1. Motivation: you basically turned it into a contest with yourself by phrasing it as "today compared to previous days". That probably draws on various emotional reserves and helps push through tedium. 2. Concreteness. I'm finding it hard to put it into words, but it seems to me that you were originally working with data in abstraction: what does "good" or "better" really mean, in realistic terms? A rough eyeball of your blue data says 40 % efficiency was probably average, so does that make 50 % good? Is 90 % sustainable? Once you focused your comparison to "how am I doing compared to yesterday?" the actual scale (50 %, 40 %, 90 %) and "what is good?" don't really matter anymore since you can focus on the much more concrete: "am I doing better than in the past?" Does that make sense? I would also guess that the reframing of your data and what it means probably affected what you called "work". Before, it was abstract data: points in a cloud. Now it was an attempt to do better than you had before, so perhaps you were subconsciously more generous with what you tagged as work. You were competing with "them" (you, actually), and perhaps became a bit more of a "rules lawyer" who was more likely to call something work.

Darrin Thompson (2011-04-04 18:31:23)

The lean quality people hold the use of simple visual feedback mechanisms as a fundamental principle of quality and efficiency. I've seen some of them recommend use of a simple magnetic whiteboard in place of an ERP computer system for some surprisingly large organizations, for reasons like the one you are describing. "Agile" software development also rejects complex project management software in favor of post it notes, whiteboards, and poster sized hand drawn graphs. Possibly part of the effect is due to you having chosen and created the visual feedback yourself? For instance, if you mandated my the use of your R program and graph at work, would it work as well? Also, you defined efficiency as sitting at your computer? That probably wouldn't work in all cases, for instance, like me. Look what I'm doing right now..... :-)

Seth Roberts (2011-04-04 18:50:28)

Darrin, I agree with the point about visual feedback but not about the "simple". This feedback isn't so simple: see all the points. Nor is my attempted improvement (see today's post) where I compute a percentile. I think part of the reason this works is that there is comparison of the current score against the whole distribution of past scores, not against some simple summary. Does it work because I created it myself? Yeah, to the extent that it is tailored for just my situation. Do I "cheat" on what I call working? No more now than before the graphical feedback started. I learned long ago that it was a good idea to count making tea as work.

macondo (2011-04-04 19:19:20)

Interesting. Off-and-on I use an application called "Time Rescue" to monitor my activities / efficiency on-line.. to try to manage how I balance content consumption with production and also other wasteful activities (messenger apps, etc.). If you have any suggestions on better applications I'd love to hear them! Thanks, Eugenio

sdz (2011-04-05 05:55:44)

I fully support Joseph Dantes idea: I guess many people would appreciate advice on how to build something like this for themselves. Probably not that interesting for the author but such practical postings could have a big impact on ordinary readers' lives. Some hints for the reader with basic knowledge of statistical software would probably suffice.

Aaron Blaisdell (2011-04-05 07:09:55)

Hey Seth, this was a fascinating post. It strikes me that what you found is kind of like the opposite of the Shangri La diet! In the SLD, you claim it is the explicit pairing of calories with flavors that contributes to increases in weight set point (or some correlate thereof). To reverse that you unpair calories from flavor. In the current experiment, work and visual feedback of productivity are typically unpaired, but you found a way to pair them and therefore allow visual feedback to reinforce productivity! Cool. As an aside, I wouldn't characterize my activities as work versus non work (or play or rest or whatever other term for "non work" you may wish to use). Instead, I categorize my activities into productivity and inductivity. I'm being inductive when I'm not actually being productive. I think this is not merely a means of making myself feel better about time spent in non-productive activities, but actually acknowledges the value of these non-productive times as contributors to the eventual results of my productive times. I tend to think Nassim Taleb would agree, and just as eating and exercise follow power law functions, so does productivity. One can think of pounding away at the keyboard writing a paper or other productive efforts as being like chronic cardio (to lift Mark Sisson's term). I'd rather intersperse long periods of inductivity with brief and intense bouts of productivity. Just like I prefer long periods of restful or slow activity (walking, lounging, etc.) punctuated by brief and intense bursts of activity (sprinting, lifting heavy things, etc.).

Seth Roberts (2011-04-06 16:08:24)

Aaron, yes, I agree, it is something like using ideas about associative learning for practical purposes. Perhaps the feedback, by rewarding work, made it more likely. Or perhaps it punished not working. If work is like exercise, what is the equivalent of walking? of sprinting? Perhaps sprinting = work that requires a lot of concentration, but then walking = work that doesn't require much concentration. The analogy suggests people should spend plenty of time doing work that doesn't require much concentration, just as they should spend hours/day walking. But where work is concerned I think the power-law idea leaves out something important: we like doing stuff we have done the day before. So repetition is crucial. It is important to do stuff day after day. Then it will keep being easy and pleasant to do. Stop doing it for several days and it will become difficult to do. The best feature of this productivity graph is that it encourages me to do stuff day after day.

Seth Roberts (2011-04-06 16:10:20)

sdz, that is a good point. After I've been using it long enough to fix problems, be sure it works, and so on, I'll consider writing a version that people can download. So if you are willing to install R you can try it.

## **Dangers of Antibiotics: Case Study (2011-04-03 04:01)**

[1]A column in [2]The Telegraph by a doctor named James Le Fanu describes the following case:

It started eight years ago when he was laid low, while on holiday in Sri Lanka, by diarrhea. His symptoms cleared with antibiotics but he was left with a churning gut and frequent loud belching. This carried on for a couple of years until, listening to Farming Today, he heard an Australian vet talking about his belching sheep. "I got in touch and explained that I seemed to be behaving like one of his flock," he writes. The vet suggested his bowel infection might have interfered with the gut enzymes for metabolising sugars, causing him to be intolerant of fructose. A test dose of orange juice immediately brought on his symptoms, and his gut problems settled on reducing his sugar intake.

In other words, no one consulted about this case, including the Australian vet and Dr. Le Fanu, seems to have understood that (a) a large fraction of our digestion is done by bacteria and (b) antibiotics kill bacteria. If you take antibiotics you risk digestive problems. I predict the belching would have gone away had he started eating fermented foods with

bacteria that digest sugar. It was certainly worth a try.

1. <http://www.telegraph.co.uk/health/healthadvice/jameslefanu/7869006/Doctors-Diary-James-Le-Fanu.html>

2. <http://www.telegraph.co.uk/health/healthadvice/jameslefanu/7869006/Doctors-Diary-James-Le-Fanu.html>

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vimspot (2011-04-03 07:21:48)

It strikes me as a massive violation of the Hippocratic Oath that doctors routinely prescribe anti-biotics without prescribing probiotics. My girlfriend once prescribed acidophilus to a patient and the pharmacist refused to fill it, feeling it was inappropriate.

Alex Chernavsky (2011-04-03 08:34:53)

So he had these symptoms for several years? It seemed strange to me that his gut flora wouldn't return to normal during that time - but then I found this article via Google: <http://steadyeddie.posterous.com/antibiotics-play-hell-with-gut-flora>

Joe (2011-04-03 09:38:48)

Seth, you'll find these articles on fecal transplantation interesting: (expand the 'transcript' link in this one): <http://freakonomicsradio.com/the-power-of-poop.html> This one has a self-experimentation twist: <http://www.slate.com/id/2282768/>

Duncan (2011-04-04 01:00:13)

More on gut bacteria and fecal transplants here. Did I mishear or do they say that probiotic starter cultures - i.e. for probiotic yogurts, etc. - come from healthy human bowels? <http://www.bbc.co.uk/programmes/b00z6dvv>

Anne Weiss (2011-04-04 09:31:17)

More on fecal transplants. Toronto researchers doing major study later this month. Some useful do-it-yourself info included.

Anne Weiss (2011-04-04 09:34:22)

Sorry. Here's the link. <http://www.healthzone.ca/health/newsfeatures/research/article/968384-hospital-to-try-fecal-transplant-as-cure-for-superbug?bn=1>

Thomas Seay (2011-04-04 14:37:00)

By the way, reading a great book, "Bacteria for Breakfast" by a Professor of Pharmacology (!) at Penn State (author's name is Kelly Karpa). It cites a lot of studies but is also a good popular read on the important role of bacteria in our body.

## **Why Did Graphical Feedback Improve My Work Habits? (2011-04-04 18:40)**

[1]A few days ago I posted about the effect of efficiency graphs - graphs of time spent working/available time vs time of day (see below for an example). I used these graphs as feedback. They made it easy to see how my current efficiency compared to past days. As soon as I started looking at them (many times/day), my efficiency increased from about 25 % to about 40 %. I was surprised, you could even say shocked. Sure, I wanted to be more efficient but I had collected the data to test a quite different idea. In this post I will speculate about why the efficiency graphs helped.



[2]Commenting on my post, a reader named Wayne suggested they helped for two reasons:

1. Motivation: You basically turned it into a contest with yourself by phrasing it as “today compared to previous days”.  
..

2. Concreteness. . . . You were originally working with data in abstraction: what does “good” or “better” really mean, in realistic terms? . . . [Now] you can focus on the much more concrete: “am I doing better than in the past?”  
This is a good guess. Before the graphical feedback, I had gotten plenty of non-graphical feedback: (a) how many minutes worked so far that day and (b) how many minutes during the current bout of work. Naturally I compared these numbers to previous days – certain total minutes per day and certain bout lengths were good, others were bad (e.g., working only 20 minutes before taking a break was bad, working 50 minutes before a break was good) – but I barely corrected for time of day. I vaguely knew that a certain amount by noon was good, for example. In other words, I did compare present to past, but vaguely.

Why were the efficiency graphs better than the text feedback? In addition to Wayne’s suggestions, I can think of other possible reasons:

1. Small improvements rewarded. When I was working, the line went up. Seeing this I thought good! – that is, I was rewarded. A good thing about this scheme is that it rewarded small improvements. A reward system that dispenses plenty of rewards (at the right times) will work better than a system that dispenses few of them.

2. Realistic goals. The goal – doing better than in the past – wasn’t hard to reach because the feedback was based on the whole previous distribution. I felt good if I was doing better than the median and even better the further from the median I was. This is more realistic than, say, dispensing reward only if I do better than ever before.

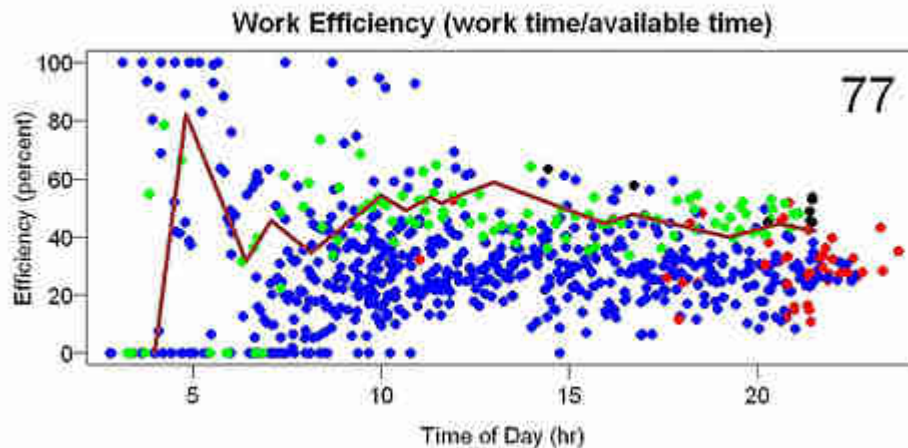
3. Pretty. The graphs are more attractive than a line of print (“40 minutes worked so far, 120 minutes so far today”) so I looked at them more often. Any feedback mechanism will work better if you pay more attention to it.

4. Loss aversion. Looking at the graphs caused a low-level pressure to work when I wasn’t working because I imagined the line going down. With previous feedback, loss was less obvious. With the previous feedback, if I didn’t work, minutes worked just didn’t increase; it did not go down.

5. Gentle pressure. When I didn’t work, my efficiency score went down slowly because it was based on the whole previous day, not just the last 10 minutes. This made the whole thing more sustainable.

In hope of rewarding even smaller improvements, I added a number to the graph: the percentile of the current efficiency score to efficiency scores near the same time of day. Here is an example.

[3]



Each point is the start or end of a bout of work. Blue points = before graphical feedback, green points afterwards. The red and black points are the final points of the days. The brown line is the current day.

The large 77 in the upper right corner means 77th percentile, which means that the current efficiency score (shown by the end of the brown line) is in the 77th percentile compared to efficiencies measured within an hour of the same time of day. Let's say the time was 9 pm. Then this percentile was computed using all scores (all the dots) between 8 and 10 pm. 77th percentile means that about 23 % of the surrounding scores were higher, 77 % lower.

The reason for this change is to make the feedback even more graded and realistic – even more sensitive to small improvements that are possible to make. [4]My theory of human evolution says that art and decoration evolved because tools did a poor job of rewarding improvement. Until you could make the most primitive example of a tool, there was no reward for increased knowledge. The reward-vs.-knowledge function was close to a step function. Desire for art and decoration provided a more gradual reward-vs.-knowledge function. (I just finished a new write-up of that theory, which I will post soon.) . That's what I am trying to do here.

1. <http://blog.sethroberts.net/2011/04/02/effect-of-graphical-feedback-on-productivity/>
2. <http://blog.sethroberts.net/2011/04/02/effect-of-graphical-feedback-on-productivity/#comment-912526>
3. <http://www.flickr.com/photos/sethroberts/5590115313/>
4. <http://blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>

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Frank (2011-04-04 20:46:22)

Hi Seth, I've been a huge fan and reader for a while after seeing your work on the Quantified Self then 4HB. One angle to look at the productivity increase is your recognition and reinforcement of your intentionality through visual feedback. You mention the difference before and after seeing feedback when a previous reader mentioned the Hawthorne effect, and I kind of dig the experimental set-up. It isn't the information that changed your work efficiency. but a subconscious change in your behavior that indicates an increase in self-efficacy. In this post you name a gentle pressure and realistic goals from already establishing a baseline for comparison. Mindfulness practitioners would call this a non-judgmental attitude combined with an acceptance of your previous efficiency. By visually feeding this back, you could explain the benefit to your efficiency through behavior change that arose from the awareness aspect. I generally liked your definition of work (actual work + related tasks), though email is

such a tricky THING to categorize. It definitely is difficult to thread the needle between doing work and being busy with "work". :)

Mike Kenny (2011-04-06 14:53:06)

There's that Drucker line, something like, 'If it gets measured, it gets managed.'

Seth Roberts (2011-04-06 15:57:04)

Thanks, Mike. The Drucker line does not explain what is interesting here: one form of feedback was more powerful than other form. In both cases, work was being measured.

Mike Kenny (2011-04-06 17:27:03)

Oh, I see what you mean.

ryan (2011-05-25 04:35:12)

all these are pretty useless if we don't have the software you use....

Seth Roberts (2011-05-25 09:12:39)

I posted the R workspace on my website: [http://www.sethroberts.net/about/2011-05-20\\_percentile\\_feedback.RData](http://www.sethroberts.net/about/2011-05-20_percentile_feedback.RData)

## **How to Self-Experiment (2011-04-06 14:53)**

At the upcoming QS Conference (May 28-9, San Jose), Robin Barooah and I will run a session about self-experimentation. Alexandra Carmichael asked me to write a post about how to do self-experimentation as a kind of advertisement for the session. Robin and I will be giving examples of what we have done and what we learned from them. Here's some of what I've learned.

1. Easier to learn useful stuff than I expected. In contrast to the rest of life, where things turn out harder than expected, learning useful stuff by self-experimentation was always easier than I expected, in the sense that the benefit/cost ratio was unexpectedly high. I learned useful things I never expected to learn. An example is acne. When I was a grad student I had acne. My dermatologist had prescribed two drugs, tetracycline and benzoyl peroxide. I believed that the tetracycline worked and the benzoyl peroxide did not work. My results showed the opposite. It hadn't occurred to me that I could be so wrong, nor that my dermatologist could be wrong (he believed both worked), nor that the establishment view (treat acne with tetracycline) could so easily be shown to be wrong.
2. Don't be afraid of subjective measurements. By subjective measurements I mean non-physical measurements, such as ratings of mood or how rested I felt – what professional researchers call "self-report". They routinely say [1]self-report is misleading. At first, I wondered if my expectations and hopes would distort the measurements. As far as I can tell, that didn't happen. Instead, I found [2]such measurements helped me learn plenty of useful stuff I couldn't have learned without it. For example, I learned how to improve my mood and how to wake up more rested.
3. Complex experimental designs were rarely worth the extra effort. Now and then I tried relatively complex experimental designs (e.g., randomization, a factorial experiment). Usually they were too hard.
4. Run conditions until you get 5-40 days of flat results (flat = what you are measuring is not going up or down). Ideal is 10-20 days. Suppose I want to compare Treatments A and B (e.g., different amounts of butter). I decide to make one measurement/day. The first step would be to do A for several days. I keep doing A until whatever I am measuring (e.g., sleep) stops steadily increasing or decreasing and then run several more days – ideally, 10-20. Then I do B for several days. I keep doing B until my measurement stops changing, then I do 10-20 more days of B. If the B measurements looked different from the A measurements, I would then return to Treatment A. It's always a good idea to run a

treatment until your central measurement stops changing, and then run it longer. How much longer? I've found that less than 5 days makes me nervous. Whereas running a condition for more than 40 days of flat results is a wasted opportunity to learn more by trying a different treatment.

5. Data analysis is easy. The most important thing is to plot measurement versus day. It will tell you most of what you want to know. For example, most of the graphs in [3]this paper show whatever I was measuring (sleep, weight, etc.) as a function of day.

6. When you add data, look again at all the data. Each time I collect new data, I plot all of the data, or at least a large chunk of it. This helps spot unexpected changes. For example, each time I measure my weight I look at a plot of my weight over the last year or so. Recently I found that [4]cold showers caused me to gain weight, which I hadn't expected. If I hadn't looked at a year of data every time I weighed myself, it would have taken longer to notice this.

7. Don't adjust your set. My conclusions often contradicted expert opinion. Again and again, however, other data suggested my self-experimental conclusions were correct. Acne is one example. Later research supported my conclusion that tetracycline didn't work. Another example is breakfast. Experts say breakfast is "the most important meal of the day." I found it caused me to wake up too early. When I stopped eating it, my sleep got better. Other data supported my conclusion. The Shangri-La Diet is a third example. According to experts, it should never work. [5]Hundreds of stories show it works at least some of time.

The most useful lesson I learned was the most basic. You will be tempted to do something complicated. Don't. Do the simplest easiest thing that will tell you something. The world was always more complicated than I realized. Eventually it sank in: Complicated (experiment) plus complicated (world) = confusion. Simple (experiment) plus complicated (world) = progress.

1. <http://quantifiedself.com/2011/04/quantified-self-boston-meetup-5-the-science-of-sleep-recap/>

2. <http://escholarship.org/uc/item/2xc2h866>

3. <http://escholarship.org/uc/item/2xc2h866>

4. <http://blog.sethroberts.net/2011/01/05/does-shower-temperature-affect-brain-speed/>

5. <http://boards.sethroberts.net/>

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Hugh (2011-04-06 15:41:15)

Do you have a preferred method of storing your data, like perhaps a plain ol' spreadsheet? I've been tracking my weight in a free calorie counting program (cron-o-meter) that creates the pretty graph for me without any additional work - I know creating a graph in excel is easy once you've done it a few times but might be a pretty big barrier to entry for a lot of people. I don't have a fancy smart phone yet but there exists a great opportunity for someone to build a powerful self-experimentation app..if there isn't already one.

Seth Roberts (2011-04-06 15:55:11)

I use R to store my data. It stores it in a structure that R calls a "data frame" - like a matrix, except that the columns can be different data types. For example, one column can be text, another numbers. I like R because it gives me great flexibility of data analysis.

Alex Chernavsky (2011-04-06 16:48:24)

Sorry if this double-posts. My first attempt at posting didn't seem to work. Seth, the "Buttermind" study didn't seem to reveal anything interesting, until you log-transformed the data (a straight linear plot didn't reveal much). Is transforming data a technique that you would recommend to people who don't have formal training in statistics? If so, what kind of concise guidelines can you provide?

Seth Roberts (2011-04-06 21:37:21)

to learn about transformation, I suggest you read the relevant chapter in John Tukey's Exploratory Data Analysis. Transformation is not quite as important as 1. plotting your data. 2. averaging your data but it is #3 in a list of the most important statistical techniques.

Lumberton (2011-04-14 19:34:57)

My own advice would be never to think about general equilibrium effects.

Seth Roberts (2011-04-14 22:46:36)

"never think about general equilibrium effects" – what do you mean?

Elisa (2011-04-18 18:55:20)

Self-reporting isn't unreliable because it's subjective, it's unreliable because people lie/signal. For example people tend to underreport the number of calories they eat. Calories in isn't "subjective" (compared to, say, "Do you eat well?"), but people lie to both themselves and whoever they're reporting to because they want to be seen as someone who eats less. But even if you lie to yourself, as long as you do it in a consistent fashion, you could still see progress over time. :)

Seth Roberts (2011-04-18 20:30:26)

This strikes me as a too-theoretical critique. Sure, people lie, and scales break. In my experience, all forms of measurement have weaknesses and limitations. The comparison with perfection ("people lie") doesn't interest me for that reason. Self-report is used with success very often in social psychology, clinical psychology, and psychophysics. If the critics of self-report would point to examples where self-report was misleading, that would interest me.

## **My Theory of Human Evolution: New Version (2011-04-07 18:00)**

After [1]a casual article, [2]a talk, and [3]many blog posts about my theory of human evolution, I managed to write [4]a book chapter about it. Blogging helped. You may remember the ideas that language began because it increased trade and art began because it increased innovation. However, the center of the theory isn't language and art, but procrastination. Above all, humans are the animals that specialize and trade. That's obvious. Not obvious is that specialization begins with repetition – doing something over and over makes you an expert. The tendency to repeat had to be attachable to all sorts of activities, so that our ancient ancestors become expert at a wide range of things and could trade with each other. The mechanism behind this arbitrary repetition made it easy to repeat what you did yesterday and hard to do something new. Nowadays it does the same thing and thereby causes procrastination – difficulty starting something new.

The arbitrary day-after-day repetition began before trade. I believe it began when our ancestors were still hunting and gathering, like chimps. At some point there was a long-lasting surplus of food. The surplus lasted so long that it became beneficial to specialize while foraging. I suspect the great surplus was the discovery and exploitation of seafood, just as Elaine Morgan says, but what caused the abundance doesn't matter for my theory. Specialization during foraging led to specialization during free time (hobbies). Trade began, part-time jobs (trading your specialty for necessities) began, and, when the pile of knowledge grew big enough, full-time jobs began.

The notion that repetition is behind expertise is supported by the idea that people who are really good at something have practiced a lot – say, 10,000 hours. I am saying two new things here: 1. Repetition is increased by hedonic changes: We want to repeat what we did yesterday. Doing something today makes it more pleasant to do tomorrow. 2. It's not just superstars, such as the Beatles and Wayne Gretzky (Malcolm Gladwell's examples), it's everybody. Arbitrary repetition is behind Adam Smith's "division of labour". Our whole economy grew from a tendency to repeat today what you did yesterday.

1. [http://sethroberts.net/about/2005\\_diversityinlearning.pdf](http://sethroberts.net/about/2005_diversityinlearning.pdf)
2. [http://sethroberts.net/archives/How\\_Economics\\_Shaped\\_Human\\_Nature.ppt](http://sethroberts.net/archives/How_Economics_Shaped_Human_Nature.ppt)
3. <http://blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>
4. <http://sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

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Joe (2011-04-08 16:10:42)

I think it's part of why we hate tax time so much. It's not that prepping your taxes is *intrinsicly* that hard or stressful; it's hard and stressful because a year passes between repetitions.

Thomas Seay (2011-04-08 17:35:43)

See Paul Lafargue (who married Karl Marx' daughter Jenny). He wrote "La Sagesse de la Paresse". (The wisdom of laziness). The idea being that human civilization evolved paradoxically because of laziness.

Digby (2011-04-09 08:41:10)

Repetition and/or laziness might also explain why oppressed peoples around the world, down through the ages, have been so reluctant to rise up against their oppressors which would seem the logical thing to do.

joe (2011-04-09 15:28:52)

More likely it's hopelessness. "Peoples" is a theoretical construct, and theoretical constructs cannot reason. Only individuals have logic, and those individuals have to have some reason to believe that their *personal* rising up will be met with something other than immediate torture.

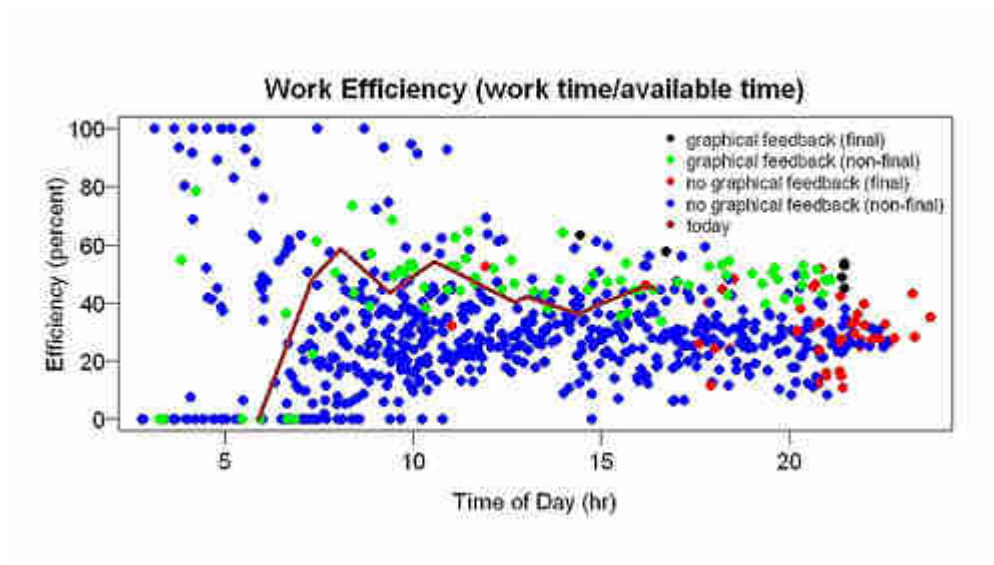
Gary Wolf (2011-04-10 17:42:53)

The "exposure effect" is different from what you are talking about here (doing rather than perceiving) but I wonder if some of this research is relevant: [http://en.wikipedia.org/wiki/Exposure\\_effect](http://en.wikipedia.org/wiki/Exposure_effect)

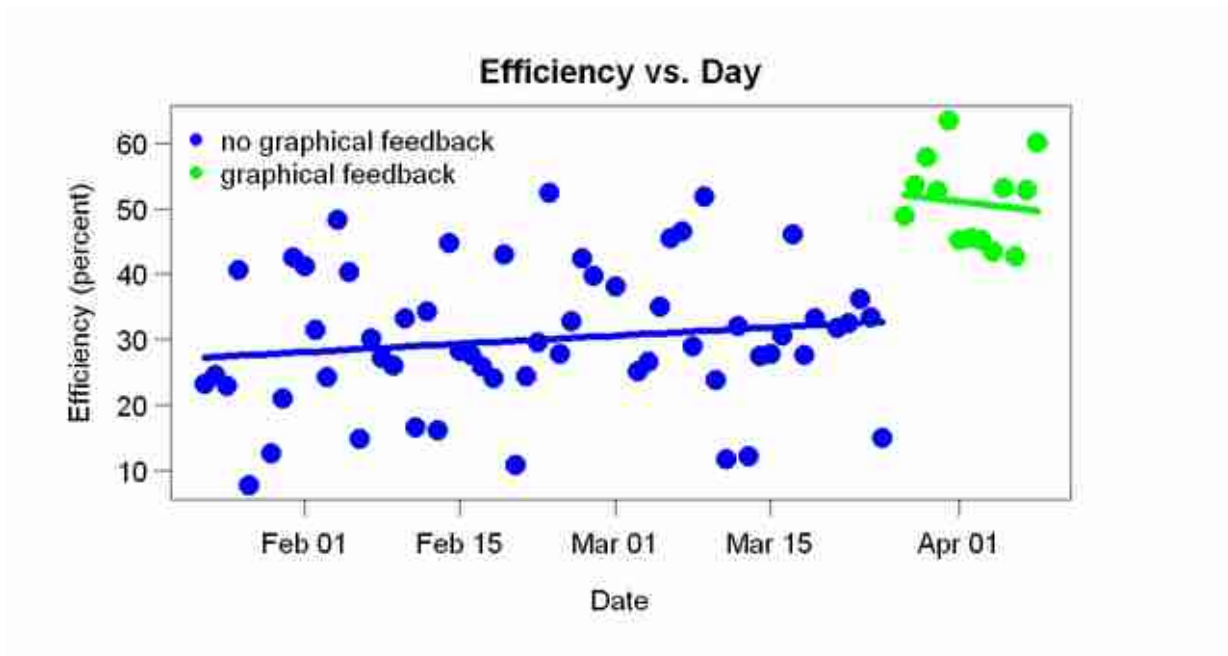
## **Effect of Graphical Feedback on Productivity: Another Look (2011-04-10 05:00)**

A few months ago, inspired by talking to [1]Matthew Cornell, I started tracking when I was working. After a while I [2]added graphical feedback like this:

[3]



The graph shows efficiency (time spent working/time available to work) versus time of day. The line shows the current day (not today, the current day when I made this graph). The higher the line, the better. When I work it goes up; when I take a break it goes down. The points are previous days. When the line is higher than the points, I am doing better than previous days. As I said in [4] my first post, this seemed to help a lot: compare the green points (after graphical feedback) to the blue points (before graphical feedback). I [5] blogged about possible explanations.



Here is more analysis. This graph shows efficiency versus day. Each point is the final efficiency (the efficiency after my last bout of work that day) for one day (the black and red points on the previous graph). These results suggest that the graphical feedback caused a sudden improvement, supporting the impression given by the blue/green (before/after) comparison of the earlier graph.

Before graphical feedback, the graph shows, efficiency was slowly increasing. Perhaps that was due to measuring when I was working, but I suspect it was due to the text feedback I got. I often used my tracking system to find out

how long my current bout of work had lasted and how much I had worked so far that day. (For example, right now the text feedback is "15 minutes of blog, 73 minutes today", which means I've spent 15 minutes writing this blog and before that worked 58 minutes on something else.)

Let me repeat what I said in another post: This was a big surprise. I collected this data for other reasons, which had nothing to do with graphical feedback. Before this project, I had made many thousands measurements of work time, but they were (a) tied to writing, not all work and (b) recorded inside the program I use for writing (Action Outline). Using R would have been slightly harder – that's why I used Action Outline. I never studied the data, but I had the impression it helped.

You may know about the brain-damage patient H.M. His brain damage caused loss of long-term memory formation. He could remember something for a few minutes but not longer. The researcher working with him had to keep introducing herself. A pleasant side effect was that he could read the same thing again and again – a magazine article, for example – and enjoy it each time. This is like that. I am stupid enough that the results of my self-experimentation continue to surprise me (which I enjoy). You might think after many surprises I would stop being surprised – I would adjust my expectations – but somehow that doesn't happen.

1. <http://www.matthewcornell.org/>
2. <http://blog.sethroberts.net/2011/04/02/effect-of-graphical-feedback-on-productivity/>
3. <http://www.flickr.com/photos/sethroberts/5581283747/>
4. <http://blog.sethroberts.net/2011/04/02/effect-of-graphical-feedback-on-productivity/>
5. <http://blog.sethroberts.net/2011/04/04/why-did-graphical-feedback-help/>

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AZ (2011-04-10 08:19:01)

Do you manually record how much time you spend working? Is there a way to automate it? I don't think I could do what you did if manually recording is required because I would forget to do it. But if there was a way to automate it (like a computer program in the background), then it could be set up once and ignored until it was time to collect the data.

Seth Roberts (2011-04-10 13:05:55)

When I start a task I go to the R window and type something; when I stop doing a task, I go to the R window and type something. In that sense it is not fully automated.

joe (2011-04-10 22:14:12)

This is tremendously important. On top of that, it's way bitchin'. :-)

Brandon Thomson (2011-04-13 00:01:48)

Interesting. I wonder if a more interactive or animated type of visual feedback could increase efficiency further or would reduce it by being too distracting.

Seth Roberts (2011-04-13 02:16:05)

If it were always present on my screen, that might make a difference. I don't see what can be animated.



## Shangri-La Diet Success Story (2011-04-11 05:00)

On the [1]Shangri-La Diet forums I found a link to this:



[2]A middle-aged man named Kainin has lost about 60 pounds since September (7 months) and described his experience in great detail. On Weight Watchers, he lost 40 pounds in 6 months before gaining it all back (plus 10 pounds more) – he started at 290, went down to 250, and back up to 300. On Nutrisystems, he lost 20 pounds in 6 weeks before gaining it all back. So the Shangri-La Diet has already helped him more than those two methods, not to mention being easier.

At the end of February, his BMI went below 35, the level indicating Morbid Obesity.

To celebrate I went to the local party store to look for a mylar balloon saying something like "Congratulations on being just Obese!" but found – NOTHING! The closest I found was a bereavement balloon that read "Sorry for your Loss". Not exactly what I was looking for.

The roughly 100,000 posts on the SLD forums make the case for the diet far better than I ever could. Now, if I could just get rid of spammers ...

1. <http://boards.sethroberts.net/>

2. <http://boards.sethroberts.net/index.php?topic=7713.0>

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PONYTALE (2011-06-04 08:17:20)

I am so happy for you Kainin. I've been on SLD for 1 week and lost 8 lbs. I started at 350 and weighed in today at 342. I only half did it and got great results. I do 3 tbs. ELOO in the morning before work and get in SW during the day. I still have some hungry periods and that's when I start to drink the SW. I don't quite have the 2 hr window together yet but I'm working on it. This is a diet (I mean a way of living) that I can use the rest of my life.

## Statins Reduce Cholesterol But Not Heart Disease Progression (2011-04-12 05:00)

The notion that high cholesterol (more specifically, high "bad" – LDL – cholesterol) causes heart disease may be as widely accepted as the notion that humans have caused dangerous global warming. It is much easier to test, however. [1]An excellent study published in 2006 compared two groups of people at risk for heart disease: those given a high dose of statins and those given a low dose. The high dose reduced LDL cholesterol levels; as it was meant to; the low dose did not. But there was no effect on coronary heart disease progression. After a year of statins, persons in both groups had increased their coronary artery calcification score by the same amount – about 25 %. Totally contradicting the cholesterol hypothesis.

Regular readers of this blog may remember that after a year of eating butter (half a stick per day), [2]my coronary artery calcification score decreased 24 %. Because increases of about 25 % are the norm, my score was about 50 % less than expected. Decreases are very rare, I was told.

Thanks to [3]Hyperlipid. [4]Statin side effects.

1. <http://circ.ahajournals.org/cgi/content/full/113/3/427>
2. <http://blog.sethroberts.net/2010/08/28/new-heart-scan-results-good-news/>
3. <http://high-fat-nutrition.blogspot.com/search/label/Best%20ever%20statin%20study%3F>
4. <http://www.dailymail.co.uk/health/article-1262130/Statins-Doctors-fear-effects-devastating.html>

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Ragout (2011-04-12 07:50:30)

Saying that the study "compared two groups of people at risk for heart disease" leaves out a crucial fact. The study compared two groups of people \*who responded well to low doses of Lipitor\*. That is, patients with high bad cholesterol (<160) were recruited and treated with 10mg Lipitor. If their bad cholesterol fell below 130, they were kept in the study, and only then were they split into the low-dose (10mg) and high-dose (80mg) groups. About half the patients were excluded from the study due to their inadequate response to low-dose Lipitor. So we can conclude that \*among people who responded well to low-dose Lipitor\*, high-dose Lipitor provides no additional benefits (at least according to the measure used in this study). To me, it seems foolish to draw more sweeping conclusions than that from this one study. And of course, none of this changes the fact that other studies have found that Lipitor and other statins reduce the incidence of stroke and heart attack.

UncleLongHair (2011-04-12 12:06:46)

I find that the conclusions from these studies are always highly qualified, for example: "Using high doses of cholesterol-lowering drugs called statins appears to reduce the risk of heart attack, stroke or the need for additional cardiac procedures more than regular doses of statins in people who have had a stroke or suffer from heart disease, two new studies find." This applies only to certain high-risk individuals, which doesn't include Seth, me, or most of the population. So while this is interesting to a small subset of the population, it isn't accurate to say that "Lipitor and other statins reduce the incidence of stroke and heart attack" without lots of qualification, at least say "in certain people under certain circumstances." I agree with what Seth and many "statin skeptics" state or imply, which is that nobody should rush to put themselves on an extremely strong drug for the rest of their lives if they are healthy to begin with. This is just common sense. Where are the studies that compare a sedentary lifestyle and high-carbohydrate diet to the opposite, and then measure the health effects? I don't think we'll see any, because there is no money in it.

Sean Estey (2011-04-12 18:53:14)

The best part is the last sentence of the abstract for this study: "The possibility remains that the time window was too short to demonstrate an effect." Yes, more testing is definitely needed. Never mind the 6 decades of repeated failures to confirm the Lipid Hypothesis. Never mind that the results of the Framingham study in 1960 should have been enough to falsify the theory. Let's just keep spending more money and misapply more research resources and beat this dead horse some more.

Seth Roberts (2011-04-12 23:02:35)

The benefits of statins – in studies done sparing no expense to maximize those benefits – are small. Here is a reference about this: <http://pharmamkting.blogspot.com/2008/01/statin-lottery-number-needed-to-treat.html> which doesn't even factor in the cost of the bad effects of statins. It is interesting, to say the least, that one of the most prescribed drugs in the world is barely (if at all) beneficial. The study I describe here suggests why: It is based on wrong ideas.

Ragout (2011-04-13 05:40:06)

Statins are "barely (if at all) beneficial?" I think you mean that randomized clinical trials haven't demonstrated large long-term benefits. For someone who's so skeptical of clinical trials, it's odd that you're implicitly demanding a 20-year randomized trial

when the trials already conducted suggest major benefits. That is, according to the business week table at your link, statins are awesomely effective in preventing a second heart attack (in people who've already had a first). Just that, plus the fact that statins seem to work by preventing plaque build-up in the arteries suggests that long-term use by those at moderate risk is likely to be highly beneficial. Add that to the fact that such use by those at moderate risk has some benefits even in the short term (reducing risk of a cardiac event from 1.5 % per 3 years to 1.0 %) seems like a very strong argument for long-term use to me. Against that very strong evidence, you cite (unspecified) "wrong ideas," (implicitly) cite the lack of a very long term clinical trial, and (reasonably) point to side effects. I think I'll keep taking statins, thank you very much, and stop if side effects develop.

Seth Roberts (2011-04-13 07:28:56)

I meant my critical remarks to apply to the use of statins for primary prevention – that is, given to people who haven't yet had a heart attack. That's how most statins are used. Here is a paper about the overselling of statins: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1079612/> for primary prevention. Here is a quote from that article:

Does the doctor say: 'Mr Smith, if you take statins this will reduce your risk of dying from heart disease by 30 %'? Or does she say: 'Mr Smith, if you take statins, then in seven years' time there is a one chance in about 120 that your death will have been prevented'? We argue that the latter is a much more honest version of the clinical reality.

UncleLongHair (2011-04-13 08:47:27)

>> ...statins are awesomely effective in preventing a second heart attack (in people who've already had a first). Just that, plus the fact that statins seem to work by preventing plaque build-up in the arteries suggests that long-term use by those at moderate risk is likely to be highly beneficial. << I think it's the leap from your first sentence to your second one that many find objectionable. There are studies that show benefit for certain high-risk individuals. But none that show benefit for healthy people, and many that show harm. Assuming that something that makes sense for high-risk people also makes sense for low-risk people just doesn't logically follow. Some studies have found that moderate smoking can help prevent Alzheimer's in certain groups of people. Should we extrapolate from this that the general population should begin to smoke moderately in order to prevent Alzheimer's? Obviously not.

Ragout (2011-04-13 10:04:30)

*in seven years' time there is a one chance in about 120 that your death will have been prevented* Yes, if you only examine \*direct evidence from randomized clinical trials\*, you can only show that statins have this (pretty important) benefit for those with some cardiovascular risk factors. But why do we have to limit ourselves to this tiny slice of the evidence? In fact, there is every reason to believe that statins are even more beneficial when taken for decades. Many heart attacks and strokes are caused when blood clots lodge in arteries that have been narrowed by plaque buildup. Many studies have shown that statins reduce this plaque buildup ([1]for example). Applying the slightest bit of deduction to these facts, we can conclude that statins, taken over many decades by those moderately at risk, are likely to reduce the incidence of heart attack and strokes.

1. <http://www.ncbi.nlm.nih.gov/pubmed/9264419>

Seth Roberts (2011-04-13 14:27:36)

Thanks for the reference. You write: "many studies have shown that statins reduce this plaque buildup". If it's so clear and repeatable, why did the study I discuss fail to find a difference in plaque build up between a high dose and a low dose? As far as I can tell, the authors expected a difference – agreeing with you – but they didn't find one.

Ragout (2011-04-13 14:30:37)

*Some studies have found that moderate smoking can help prevent Alzheimer's in certain groups of people.* We know little about the causes of Alzheimer's and I doubt we have much idea about how smoking might prevent it, so of course we shouldn't be convinced by one study. But we know tons about the causes of heart attacks (e.g., blood clots lodging in plaque-narrowed arteries), and we know tons about how statins suppress one cause of heart attacks (statins suppress plaque build-up). That really ought to be enough to convince us of the benefits: studies that show that statins actually do prevent heart attacks are just icing on the cake.

Ragout (2011-04-13 15:40:26)

*why did the study I discuss fail to find a difference in plaque build up between a high dose and a low dose?* I could explain why I think their power analysis was incorrect, and hence the sample size was much too small to detect the expected effects. But I doubt you mean this as a serious question, so I'll just give a general answer. The main reason is that they were testing high-dose vs. low-dose statins, rather than statins vs. a placebo, so one can expect smaller effects that are harder to detect with a small sample. Of course, they designed the study that way because the benefits of statins have become so widely accepted in the medical community that it would now be unethical to test statins vs. placebo.

Seth Roberts (2011-04-13 15:46:52)

I did mean it as a serious question. What's the answer? "The sample size was much too small to detect the expected effects." The sample size was about 500 people. You seem to be saying that the effect was so small that an experiment – not a survey, an experiment – of thousands of subjects would have been necessary to detect it. Experimental psychologists routinely find reliable effects with  $n = 8$ . The beneficial effect of lime juice on scurvy was noticed with  $n =$  about 10. The idea that such an effect – one that requires a year-long experiment with thousands of subjects to detect – is large is new to me. "The main reason is they were testing high-dose versus low-dose statins". The amount of progression they measured was what you'd expect from people taking no statins. Suggesting that neither the high nor the low dose had an effect.

Ragout (2011-04-13 16:06:36)

*The amount of progression they measured was what you'd expect from people taking no statins.* I think you're wrong to suggest that a 25 % progression per year is some kind of universal law. For example, in the study the researchers cited in their power analysis (Callister et al), untreated patients experienced a 50 % progression per year. Anyway, here's the mistake the authors make in their power analysis (used to determine the needed sample size). The authors write: "With regard to the sample size, a reduction of LDL cholesterol levels by 20 % was expected in the 80-mg atorvastatin group compared with the 10-mg atorvastatin group. On the basis of results presented by Callister et al<sup>16</sup> with a regression coefficient of 0.6, a difference of 10 % between treatment groups was expected for progression of the CAC volume score." Unfortunately for the authors, if you look at the regression in Callister et al, it's a regression of the change in plaque on the \*level\* of LDL cholesterol. But what the authors need for their power analysis is a regression on the \*change\* in LDL, a very different thing, so their power analysis is wrong and they used too small a sample size.

Timothy Beneke (2011-04-13 23:23:45)

I take statins, various blood pressure medications, and now a drug for diabetes, plus baby aspirin, plus an antidepressant. When I asked my doctor, who I respect, whether we really know that these are helping prolong my life, he was honest. He said we don't know, but that something is helping at-risk people like myself to live longer with fewer heart attacks and strokes; it could be reducing stress or better aerobic exercise, or people changing their diets, more than the medications. There is simply no way to disentangle what is causing the positive effects, but no one is denying that people at risk who take these drugs are living longer, with less morbidity... Correlational data is dubious and you can't do studies where you deprive people of exercise and rest and take it from there. And longitudinal follow-up studies have serious problems as well... So I take them... My intuition is that getting plenty of rest and plenty of exercise are probably the 2 most important factors, but it's only an intuition, probably biased by the fact that I get plenty of both...

Ragout (2011-04-14 04:07:14)

*The beneficial effect of lime juice on scurvy was noticed with  $n =$  about 10.* Presumably – unlike the study you cited – they compared lime juice to placebo! Imagine if ethical considerations forced them to compare 1 oz. to 2 ozs. lime juice, or lime juice to lemon juice!

Seth Roberts (2011-04-14 07:05:35)

A graph that shows plaque change per year as a function of LDL concentration certainly allows one to estimate how much plaque change per year will go down (or up) if LDL concentration is altered. So I am afraid I don't follow your criticism of the power analysis.

Ragout (2011-04-14 09:55:43)

*So I am afraid I don't follow your criticism of the power analysis.* It's wise of you to focus on this distinctly secondary question. I'll answer it, but first, let me ask you about the main question: how you can possibly rely on this study to back up your original claim about statins? To recap: numerous studies of statins against placebo have shown that statins reduce plaque build-up and reduce the incidence of heart attacks and stroke. Now scientists can no longer ethically or legally conduct such studies, since it would be immoral to withhold drugs the medical community has determined are beneficial, so scientists have moved on to secondary questions. In the study you cite, the secondary question is whether high-dose statins have additional benefits in patients already responding well to low-dose statins. Even if the answer to this secondary question is no, how can you possibly conclude that statins have no benefit? On the question of what precisely is wrong with the power analysis of the particular study you cite: surely you don't deny that using change in LDL would be better for the analysis than the level of LDL, since changing LDL is exactly what the authors plan to do in their experiment. More generally, I see no special reason to think that these two regressions will have the same coefficient  $b$ : (1)  $d \text{ Plaque} = a + b \text{ LDL}$  and (2)  $d \text{ Plaque} = a + b d \text{ LDL}$ , where  $d$  is the 1-year change. In fact, there's every reason to think that the  $b$  coefficients will be different. I think that LDL in regression 1 is a proxy for the previous lifetime path of LDL, which is what really matters. By contrast, in regression 2, past values of LDL have been differenced out. In short, what you're really missing is that atherosclerosis (plaque buildup) is a cumulative process that occurs over many years.

Ragout (2011-04-14 11:12:31)

*A graph that shows plaque change per year as a function of LDL concentration certainly allows one to estimate how much plaque change per year will go down (or up) if LDL concentration is altered.* It occurs to me that a simpler answer is: no it doesn't. A graph that shows the level of plaque as a function of the level of LDL might arguably allow one to estimate the change in plaque as function of the change in LDL. However, the graph you mention (changes vs. levels) simply doesn't.

Seth Roberts (2011-04-14 13:27:09)

How can I say statins have no benefit? I don't. I say the benefit is surprisingly small, given how much money is spent on them. Re the power analysis. Your two regressions are: (1)  $d \text{ Plaque} = a + b \text{ LDL}$  and (2)  $d \text{ Plaque} = a + b d \text{ LDL}$ , where  $d$  is the 1-year change. With regression 1 you would look at the graph and compute a difference:  $d \text{ Plaque}$  at one level of LDL minus  $d \text{ Plaque}$  at another level of LDL. That would give you the difference to expect between groups in your experiment. The scatterplot behind the second regression is mysterious (how could it be made? what does it mean?) and could not tell you what difference in  $d \text{ Plaque}$  to expect between groups. One way to make a plot with  $d \text{ LDL}$  on the x axis would be to compute differences between groups. But then the y axis would be  $d d \text{ Plaque}$ , not  $d \text{ Plaque}$ .

Ragout (2011-04-15 05:28:43)

*[Regression 1] would give you the difference to expect between groups in your experiment.* Regression 1 gives you the difference to expect between people with initially low LDL and initially higher LDL, but these aren't analogous to the treatment and control groups in the experiment. In fact, because the experiment is a randomized trial, both groups will have the \_same\_ initial level of LDL, on average. So regression 1, used by the authors of the paper you cited, tells you nothing relevant to the power analysis. More properly, the treatment group consists of people whose LDL will go down more during the course of the experiment compared to the control group. So you make regression 2 by looking at an earlier experiment. For each person in the earlier experiment, you know (a) how much their plaque changed over the course of the experiment and (b) how much their cholesterol changed. You plot a against b. What's so hard about that? (aside: you might want to use only the treatment group in your plot). So Regression 2 would have been the relevant calculation to perform for the power analysis. *I say the benefit is surprisingly small, given how much money is spent on them.* Then you should look at experiments that examine the benefits of statins (vs. placebo), not whether more statins are better than less statins!

Seth Roberts (2011-04-15 16:57:44)

You bring up a good point. I am indeed assuming that the statin changed LDL quickly – in a week, say. If the statin changed LDL more slowly – say, took 1 year to have its full effect – then your comments make sense. I think the statins change LDL quickly – so a person who starts taking a statin January 1 will have much lower LDL (if the statin dose is large enough) for

almost the whole year. But I did not make that assumption clear. I think it is correct, however. Now I understand your Regression 2, thanks. It makes an assumption of linearity that the power analysis done by the authors does not. (For example, it assumes that a change from 80 to 40 will produce the same effect as a change from 60 to 20.) Their power analysis however assumes fast-acting effects of statins, as I said. I don't agree with you that your assumption (linearity) is plainly more plausible than theirs (fast-acting effects), but at least I now understand what you are saying. I prefer dosage-variation experiments to placebo-vs.-treatment experiments because they are far less confounded. I'm afraid that's the last comment I am going to make about this. Thank you, Ragout, for your comments, which have helped me understand this better.

Ragout (2011-04-15 19:28:28)

Prof. Roberts, Your last comment does not accurately describe my position (I think statins are fast-acting \*on LDL\* and I never said or implied otherwise) nor do I think it accurately describe the study authors' (entirely linear) calculations but I certainly agree that I've learned something from the discussion and that we've beaten this topic to death.

Bryan (2011-04-19 08:49:09)

A friend of mine is an ER nurse with over 10 years experience. When I introduced her to your blog and ideas, this was one of the first posts she read. She was appalled. She pointed out that the machines measuring your cholesterol were calibrated a year apart by 2 different techs and wondered if one of the readings might be an outlier.

Seth Roberts (2011-04-19 21:08:14)

Bryan, I'm afraid I don't understand your friend's comments. Why was she "appalled"? I would have thought someone in health care would be happy that I managed to reduce my heart disease risk. By "the machines measuring your cholesterol" I assume you mean the machine measuring my heart disease progression. My two heart disease progression measurements were done on the same machine. I strongly doubt your friend knows details of the machine's calibration, such as who calibrated it ("two different techs"), when it was calibrated ("a year apart"), and the accuracy of the calibration. Neither of my measurements is unusual, that is, neither is an "outlier". It is when they are compared that the results are unusual.

Bryan (2011-04-20 11:37:09)

My fault for not being more specific: she was appalled that you were eating so much butter b/c it totally contradicts everything she knows about nutrition.

Lumberton (2011-04-20 15:35:03)

Let me just offer some appreciation to Ragout for his critical analysis, insights, and responses here. His comments suggest how difficult some of these phenomena are, and how important it is to be wary of cut and dry inferences from complex studies.

## **Another Reason the Shangri-La Diet is Not More Popular (2011-04-13 05:00)**

On [1]my Psychology Today blog someone left a surprising comment about why the Shangri-La Diet isn't more popular:

Seth, I'll tell you why. Because we are majorly competitive bitches, we women who care about our appearance. I'm 41, I have three children and I am a size 6. I fit into my wedding dress and the jeans I wore in college. How? Shangri-La. And there is no way in hell I am going to share my secret with anyone.

Went to the movies this weekend with a group of friends. They had the usual movie fare, I ordered a cup of tea (bag on the side), added two tablespoons of sugar (put the teabag in my purse for later), sipped it slowly throughout the movie, had not ONE craving for the popcorn or nachos or M & M's everyone else was scarfing. I went home and had a light dinner and felt terrific!

Sounds more like an ad than an actual comment, but it could hardly be more vivid and I believe it.

1. <http://www.psychologytoday.com/blog/personal-science/201104/the-shangri-la-diet-why-no-revolution>

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john (2011-04-13 06:18:25)

That's pretty funny. Whenever I come up with a nice idea (not necessarily nutrition), I always go back and forth about whether to share it or not. In the end I usually do share because it's exciting and fun to talk about, but it's easy to understand why some may not.

UncleLongHair (2011-04-13 12:01:56)

I think the reasons why the diet is not more popular is because it flies in the face of conventional thinking, and it isn't continuously promoted. The unconventional nature would appeal to a certain small subset of the population that likes to try offbeat things or believes that solutions are to be found in unusual places. This will gain traction with certain people but in order for the idea to attain a broader appeal, it has to be packaged in a way that it can be easily consumed (the idea, not the diet). The Atkins diet was unconventional, but was also heavily promoted, not just with a single book but an orchestrated marketing campaign. For example Wikipedia says that the Atkins Center had 87 employees in the mid-90's. People with a scientific / engineering bent often think that a great idea will market itself. This is the downfall of many a nascent software company for example. Unfortunately, this isn't true. An idea needs to be effectively and continuously promoted in order to take hold.

Brian (2011-04-13 17:00:40)

In my experience, women generally do not discuss diets unless they're selling something, e.g. if they work for Weight Watchers. Men discuss successful diets with anyone who will listen.

Seth Roberts (2011-04-13 17:25:43)

Brian, last night I told a female friend of mine about the competitive-women comment. She thought it was very funny and said she wouldn't be like that - she would tell her friends. So I guess in a year - if it works for her - I can ask her how many friends she has told.

Denshil (2011-04-14 00:26:09)

U can use the comment as an ad on your cover " A method that girls never share" or something When will this good method have Chinese translation

Jenny (2011-04-14 04:46:16)

Makes me chuckle. I think the comment says more about the commenter than about the commenter's diet. When I find something that works in some way, I want to scream it from the rooftops so that all my friends and family could reap the benefits, (but I put a lid on it for the most part not to be a nag, unless they ask). Why wouldn't I want people I love to lose weight and feel better?

Nansen (2011-04-14 12:39:07)

Too much nobility is required to bear the frustrations of trying to overcome people's resistance-to-the-weird.

Jon (2011-04-15 10:07:33)

Brian is right on the money. In addition trying to share something even with relatives is tough. Everyone has their own way of thinking, mine just happens to have become so calculative that I take in ALL DATA and FACTORS and form a very comprehensive world view that incorporates all perspectives and facts. Other people only siphon what is of interest to them and refuse to step outside of their comfort zone, and effectively restrict themselves to strict parameters that do not vary. Sharing may be caring

but not many people are receptive to care these days :)

Steph (2011-04-15 13:59:16)

Jenny, I'm with you. I loved the SL book, and have been using the oil (not consistently - need to get back on track), and I love how it helps suppress appetite, and I did a post about the SL diet to spread the word, and told some family members who confided that they want to lose weight, and gave the book away to one of them... And there have been no takers, just polite, "Oh! Interesting. Well, I just need to make better food choices and get moving..." Which is great, but not at all incompatible with SL. I don't know why anyone would NOT try something that is 1. safe, 2. painless, 3. healthy, and 4. potentially very effective for weight loss. I'm stumped.

Alex Chernavsky (2011-04-15 20:49:37)

Steph, I think it might be a psychological effect whereby you're more likely to explore some interesting, off-the-wall idea if you've discovered it through your own research vs. having someone (particularly a relative) recommend it to you.

Steph (2011-04-16 03:44:18)

"Particularly a relative"...I'm sure you're right, Alex. And it's true, I also like to be the "first" (in my circle) to figure something out. Then I'm happy to have everyone on board. (Again, so long as I got there first...gah, such an ego.)

#### Downward Spiral of Whole Foods House Brand (2011-04-14 05:00)



My friend Carl Willat sent me this photo with the comment "noticeably worse" – meaning that the new version (on the right) is noticeably worse than the old version (on the left). 365 is the Whole Foods house brand. Years ago, the



label of 365 balsamic vinegar said "aged 5 years". Then one day it didn't. The younger vinegar (aged 1 year?) tasted noticeably worse. In a side-by-side comparison, it was obvious.

Side-by-side comparisons, I discovered thanks to Carl, are powerful – and I could use that power to improve my life. A long time ago at his apartment I tasted five versions of limoncello (Italian lemon liqueur) side by side. Of course the differences became clearer—that's obvious. The surprise was that all of a sudden I cared about the differences. Before that tasting, I had had plenty of limoncello. But only at the side-by-side tasting did I develop a liking for the good stuff (more complex flavor) and a dislike for the cheaper stuff (simpler flavor). I stopped buying cheap limoncello and started buying expensive limoncello. I got a lot of pleasure out of it. I still do this. A few weeks ago I bought some rum to flavor my yogurt. I started with the cheapest brand. A week later, to compare, I got a more expensive brand. Side-by-side tasting showed it was clearly better. Now I sort of relish it – the side-by-side comparison made rum drinking more enjoyable. Soon I will get an even more expensive rum, to see how it stacks up.

I'm pretty sure such side-by-side comparisons are how connoisseurs are made. The evolutionary reason for this effect, I believe, is that [1]connoisseurs will pay more than other people for well-made stuff, thus helping skilled artisans – during the Stone Age, the main source of innovation – make a living.

In Carl's picture the new vinegar looks much cheaper than the old vinegar. The previous change (from aged 5 years to not aged 5 years) wasn't accompanied by a cheaper-looking label. Maybe Whole Food headquarters had received complaints from manufacturers of other balsamic vinegars: Your house brand is too good. And they replied: Okay, we'll cheapen it.

1. <http://sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

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Mike Kenny (2011-04-14 06:46:40)

That reminds me of something I read about McDonald's in a book called "Decision Traps". McDonald's had a rule that guided their decision making—if customers couldn't tell the difference between a cheaper version of a product and the currently used product, replace the currently used product with the cheaper one. But customers started noticing the overall drop in quality. Product A was indistinguishable from cheaper Product B, so Product B was used. Product B was indistinguishable from cheaper Product C, so Product C was used, but Product C when compared with Product A was obviously worse. So went the logic, I guess.

vimspot (2011-04-14 07:06:25)

Do you do a blind taste test, or do you do it knowing the brand and cost of different items? Not sure what's better, blind has the appeal of "rationality" though we never actually drink anything blind. Hence the "pepsi paradox" (in blind taste tests people prefer pepsi to coke, but in real life they choose coke, and even legitimately enjoy coke more when they see that it's a coke) <http://seekingalpha.com/article/198629-pepsi-paradox-or-why-the-iphone-is-poi sed-to-outsell-blackberry>

gwern (2011-04-14 07:43:03)

> I'm pretty sure such side-by-side comparisons are how connoisseurs are made. The evolutionary reason for this effect, I believe, is that connoisseurs will pay more than other people for well-made stuff, thus helping skilled artisans — during the Stone Age, the main source of innovation — make a living. That sounds like group selection... What's in it for the would-be connoisseur? Also, in your paper, you missed a great example - better than buying stuff in China - of how language isn't necessary for barter; the African [http://en.wikipedia.org/wiki/Silent\\_trade](http://en.wikipedia.org/wiki/Silent_trade)

Alex Chernavsky (2011-04-14 11:19:01)

It wouldn't have surprised me if the cheap vinegar tasted as good as or better than the more-expensive vinegar. See: <http://www.bbc.co.uk/news/uk-13072745>

Seth Roberts (2011-04-14 13:37:27)

I've noticed the connoisseur effect (an increase in both (a) the hedonic range produced by a product – more pleasure from the best, less pleasure from the worst – and (b) discriminability) in both blind taste tests and non-blind taste tests.

Seth Roberts (2011-04-14 13:47:03)

"That sounds like group selection." I suppose. I disagree with the Williams et al. arguments against group selection. There is plenty of shared fate in a community (whether your neighbor survives affects whether you survive) – for one reason, if all the fertile and younger females go extinct all the males will also go extinct. Shared fate also comes about if one member of a group can follow another member of the group to a food source. This shared fate, which does not depend on degree of kinship and which the critics of group selection didn't notice (at least in what I've read), is why I believe cooperation between unrelated members of a community evolved. By helping (unrelated) others survive, you were helping yourself survive. In the particular example you mention, communities with connoisseurs outinnovated communities without connoisseurs. Thanks for reading my paper and thanks for the Wikipedia reference.

Carl Willat (2011-04-14 15:55:52)

The 365 vinegar originally came to my attention many years ago when the Chronicle ran a blind taste test on several balsamic vinegars and the Whole Foods house brand won, surprising the local food experts who had acted as judges, because back then it only cost \$4. The quality really did decline when they stopped aging it as long, but recently when they stopped aging it in wooden barrels it got a lot worse. When the bottles with the new label first appeared I immediately bought what was left of the old stock on the shelf at my local store, so I still have about ten bottles left that have been aged in wood. I go through that stuff pretty fast, though, so I need to find a new brand.

Lumberton (2011-04-14 19:24:10)

Has anyone thought to ask for a comment from whole foods?

Seth Roberts (2011-04-14 22:53:46)

"so I need to find a new brand" – yeah, the outside brands were right to complain. Or maybe this is just an example of making stuff worse and worse until people complain loudly enough.

UncleLongHair (2011-04-15 07:21:24)

The publication Cook's Illustrated and the associated TV show America's Test Kitchen does legitimate side-by-side comparisons of various food products, and the results are often surprising (sort of, unless you're somewhat cynical of consumer marketing). Often the cheaper products rate better, and those that are more expensive, "organic", or endorsed don't rate as well. Not always though, sometimes the more expensive products rate better. In the case of both rum and balsamic vinegar, I can say with some experience that there is a radical difference in flavor between cheap and not-cheap products, and both are products where you almost always get a better experience the more that you spend. The same is not true of other products such as say supermarket chicken stock.

Carl Willat (2011-04-15 10:00:22)

I once did some commercials for one of the big brands of instant coffee. Before we got started I was talking to the brand manager for the product, and I asked him if it were any good, if I would like drinking it. He said I would probably prefer one of their more expensive brands. "But what about the one we're selling, does it taste good?" He explained that the idea wasn't to make it good, but to make it as bad as possible but where people would still buy it. That way they knew their profit margins were maximized. "So can you honestly say anything good about this coffee we're advertising?" I asked him. "It has a low twig count."

Seth Roberts (2011-04-16 07:28:11)

Low twig count...I wonder why that's good. I like Japanese twig tea.

Kevin Burton (2011-04-16 12:16:57)

There's also the fact that Whole Foods sells homeopathic remedies which is no fun...

Robot Zorro (2011-04-16 14:59:16)

whitewhine.com

Seth Roberts (2011-04-16 17:50:59)

haha!

Joe (2011-04-19 22:44:51)

Reminds me of a story I heard over twenty years ago about the Xacto company. They had a solid business, but revenues and profits were basically flat for many years. So they brought in an expert to make suggestions. The expert told them that their problem was that they were using too good an alloy in their blades. As a result, the blades never went dull, so were only replaced when they broke (a rare event.) They took his advice and went to a softer steel. Since there aren't any Xacto blade sharpeners, sales (and profits) exploded.

### **Assorted Links (2011-04-15 05:00)**

- [1]Scott Adams on realistic education
- [2]Joshua Foer talks about memory tricks, memory competition, and his new book
- [3]Awful side effect of drug does not remain hidden
- [4]Testing the "10,000 hours of practice makes you an expert" idea literally
- [5]another butter advocate: Julia Childs
- [6]where are the climate refugees? How one climate-change prediction turned out

Thanks to Craig Fratrik, Tom George and Sean Curley.

1. [http://dilbert.com/blog/entry/the\\_education\\_complexity\\_shift/](http://dilbert.com/blog/entry/the_education_complexity_shift/)
2. [http://richmedia.lse.ac.uk/publicLecturesAndEvents/20110405\\_1830\\_theEndOfRemembering.mp3](http://richmedia.lse.ac.uk/publicLecturesAndEvents/20110405_1830_theEndOfRemembering.mp3)
3. <http://pharmamktng.blogspot.com/2010/03/disgruntled-patient-shuts-down-sanofi.html>
4. <http://www.tampabay.com/features/can-a-complete-novice-become-a-golf-pro-with-10000-hours-of-practice/1159357>
5. <http://www.observer.com/2011/daily-transom/great-game>
6. <http://asiancorrespondent.com/52189/what-happened-to-the-climate-refugees/>

vs (2011-04-15 08:54:00)

Another interesting link: Gary Taubes, author of Good Calories Bad Calories, has a new article on sugar and obesity in this Sunday's New York Times Magazine: [http://www.nytimes.com/2011/04/17/magazine/mag-17Sugar-t.html?\\_r=3 &ref=magazine &pagewanted=all](http://www.nytimes.com/2011/04/17/magazine/mag-17Sugar-t.html?_r=3&ref=magazine&pagewanted=all)

### **Beijing Talk by Me: The Value of Personal Science (2011-04-15 23:43)**

If you live in Beijing, it may interest you that on April 23 (Saturday) I will give a 30-minute talk at Tsinghua University (Weiqing Building, Room 507) titled "The Value of Personal Science". The talk will start at 1:30 pm.

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Thussy (2011-04-17 11:24:23)

Professor Roberts, What time will the 30-minute talk begin? Thanks

Seth Roberts (2011-04-17 12:53:42)

oops! The talk will start at 1:30 pm.

### **Dear Gmail: Publish Break-in Stats (2011-04-16 05:00)**

A year ago my gmail account was hacked. I recovered it in an hour or so, not before a friend of mine had [1]an amusing conversation. Recently, judging by [2]James Fallows's experiences, there has been a rise in these attacks. My mistake, I believe, was using the same password on my gmail account and another account. I suspect the recent outbreak of gmail break-ins is happening because there was recently a large exposure of passwords elsewhere.

But I can't be sure because I cannot compare break-ins over time. What does a graph of break-ins-versus-time look like? Is what Fallows has noticed a recent spike? (It probably is.) If so, that supports my explanation of its cause (passwords lost elsewhere). Or has there been a steady increase over time? That would contradict my explanation. It is revealing that Fallows provides two security suggestions, one of them really time-consuming (two-stage verification) in the long haul. He says nothing about making sure your gmail password is not used anywhere else. If he could have seen that break-ins-versus-time graph, he could better judge whether the gmail hacks are due to duplicated passwords. If I am right about the cause of these hacks, Suggestion #3 should have been [3]don't use your gmail password anywhere else – and would have been the most effective.

Gmail developers can help all of us be safe at reasonable cost by publishing graphs that show break-ins (and probability of break-in) per day. I think that is estimated by the number of account recovery requests they receive per day. After my gmail account was hacked, I contacted Google to recover it and soon did. Perhaps those account recovery requests could involve the person making the request giving a reason (e.g., "account hijacked"). Then Google could simply tell us (with a graph?) the number of hijacked accounts reported per day.

Security departments and others don't like to provide this sort of information. Persons at the top of companies worry it will scare customers! Those in security departments worry people will be less scared – thus reducing their power. From a user point of view these are horrible reasons not to make this information public. With accurate knowledge of the likelihood of break-ins, gmail users can make reasonable estimates of the costs and benefits of various security

options. Without knowing the likelihood of break-ins, they can't.

1. <http://blog.sethroberts.net/2009/11/18/chatting-with-a-hacker/>
2. <http://www.theatlantic.com/technology/archive/2011/04/hacking-epidemic-no-joke-lock-down-your-gmail-now/237375/>
3. [http://voices.washingtonpost.com/fasterforward/2010/05/postpoints\\_tip\\_dont\\_recycle\\_pa.html](http://voices.washingtonpost.com/fasterforward/2010/05/postpoints_tip_dont_recycle_pa.html)

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### Yogurt Accident/Discovery (2011-04-17 05:00)

I've made yogurt a few hundred times, mostly with a yogurt maker (picture below). The usual recipe is 1 quart milk, 1/4 teaspoon whey (from previous batch), incubate 24 hours. Yesterday, after incubation finished, I opened the machine to find this:

[1]



The milk (now yogurt) had squeezed together to form a perfectly round disc a few inches thick. It had squeezed out all the whey. The only unusual feature of this batch – besides the fact that it is getting warm and relatively humid here in Beijing – is that I used maybe 10 % less milk than usual. This difference means the pulling inward force was less resisted by sticking to the sides, so this outcome indeed was more likely than usual.

This is my yogurt maker.

[2]



I bought it because it came with a glass bowl. Most yogurt makers have only a plastic bowl. You simply pour the milk in the glass bowl, add the starter (whey), add hot (boiling) water around the glass bowl, and wait a day – infinitely easier than the [3]insanely complicated yogurt recipes I find on the Web. And I am beginning to think the hot water is unnecessary.

1. <http://www.flickr.com/photos/sethroberts/5623982414/>
2. <http://www.flickr.com/photos/sethroberts/5623395561/>
3. <http://www.makeyourownyogurt.com/print/how-to-make-your-own-yogurt.pdf>

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Richard Gay (2011-04-17 06:01:54)  
Does this require raw milk?

Seth Roberts (2011-04-17 12:54:37)  
no. I used regular milk – an expensive Chinese brand.

Margaret (2011-04-17 19:11:23)  
Did the yogurt disk taste okay?

Seth Roberts (2011-04-17 22:19:48)  
yeah, the yogurt disk tasted fine. Texture of crumbly cheese cake.

Mike (2011-04-19 17:28:30)  
Cute yogurt maker Seth.

Cakeb Cooper (2011-04-21 15:29:54)

You probably already saw Paul Jaminet's post on how things that threaten potential pathogen infections upregulate HDL, and how HDL plays a key role in the immune system. It made me immediately think of your theories about fermented foods improving the immune response. Do you think the mechanism might be fermented foods signaling the body to make more HDL?

Seth Roberts (2011-04-21 16:47:38)

Caleb, I doubt it's that simple. I believe fermented foods – more specifically, the bacteria they contain – cause the immune system to become more active. When it becomes more active lots of things happen. I now eat far more fermented foods than I ate several years ago but my HDL isn't much different.

seagull (2011-04-22 12:02:22)

1/4 teaspoon of whey seems like a tiny amount for a quart of milk - I use much more than that, but maybe I'm using an unnecessarily large amount.

Seth Roberts (2011-04-22 15:39:43)

Seagull, I tested smaller and smaller amounts and got better and better results. Better in the sense that the final product was more uniform. Smooth, not lumpy. With less starter, I suppose you need a longer incubation time.

## My Treadmill Desk (2011-04-18 05:00)

[1]



[2]In 1996 I put a treadmill in my office so that I could work standing up. My goal was better sleep ([3]the more I stood, the better I slept), not weight loss ([4]the usual reason for a treadmill desk). It was hard to walk a lot. Mostly I stood still. It was noisy, too – my neighbors complained. When the treadmill broke I didn't replace it.

Now I walk on a treadmill for different reasons: to [5]lower blood sugar and [6]learn Chinese. Above is my current setup. I use the laptop to study Chinese (using Anki) or watch TV or movies. Studying Chinese while walking is much easier than studying Chinese while standing still or sitting. I have used flashcards but Anki (shown on the computer screen) helps space repetitions optimally. The headphones (Bose noise-reduction) are for TV and movies. I don't need them for Anki.

1. [http://blog.sethroberts.net/wp-content/uploads/2011/04/IMG\\_0090\\_edited-11.jpg](http://blog.sethroberts.net/wp-content/uploads/2011/04/IMG_0090_edited-11.jpg)
2. [http://berkeley.edu/news/media/releases/2000/08/29\\_work.html](http://berkeley.edu/news/media/releases/2000/08/29_work.html)
3. <http://escholarship.org/uc/item/2xc2h866>
4. <http://www.treadmill-desk.com/>
5. <http://blog.sethroberts.net/2010/07/18/fasting-blood-sugar-reduced-by-walking/>
6. [http://blog.sethroberts.net/wp-admin/edit.php?post\\_type=post&category\\_name=walking-and-learning](http://blog.sethroberts.net/wp-admin/edit.php?post_type=post&category_name=walking-and-learning)

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Tobias (2011-04-18 10:54:13)

Now that more people view you as some sort of guru of quantification, and lest you want to become like the pompous academics you constantly make fun of, I'd suggest you start qualifying your statements for your broader audience ("Studying Chinese while walking is much easier than studying Chinese while standing still or sitting.") This is not true for me.

Seth Roberts (2011-04-18 22:33:40)

Thank you for your advice about over-broad statements – I agree. I should have said I find it much more pleasant to study Chinese while walking than while sitting. That's not true for you? How long have you studied it?

Marcus Yogaman (2011-05-02 07:34:56)

Great idea Seth! Does it not get a bit off putting? ie. is it really easy to concentrate whilst walking on it?

Seth Roberts (2011-05-02 21:22:48)

It is easy to study Chinese, if that is what you mean by "concentrate".

Daniel (2011-08-31 10:42:46)

Haha, this looks like a great setup. I've also heard of people using stationary bikes or something similar. I agree that I am able to think a lot more when I'm walking, in fact going to take a walk is one of the best ways for me to clear my head or sort something out that I'm thinking about.

## **What I'm Watching (2011-04-19 05:00)**

1. The Killing (the American version on AMC). The best TV is getting smarter and smarter and this is an example. It seems formulaic (combine good acting, good writing, good visuals, suspense . . . ) but the formula is so effective and well-executed I am drawn in.
2. The Good Wife. The last drama standing.
3. The Spice Trails. The global and historical origins of pepper, cinnamon, nutmeg, cloves, saffron and vanilla.
4. Civilization: Is the West History? Pleasantly conceptual. Why did China decline, while Europe rose? Why did democracy do so much better in North America than South America?
5. A History of Ancient Britain. Through the eyes of an archeologist.



## The Global Warming Test (2011-04-20 05:00)

One episode of [1]A History of Ancient Britain, the recent BBC series, is about the Ice Age. If you know there was an Ice Age, you should grasp that the Earth varies in temperature a lot for reasons that have nothing to do with human activity. To measure the effect of recent human activity on global temperatures, you need to know what the Earth's temperature would have been in the absence of human activity. Then you find the effect of humans by subtraction (actual temperature - predicted temperature assuming no human activity).

That's hard to do. Because the non-human effects are so large, you need a really accurate model to "control" for them. No such model is available. No current climate model has been shown to accurately predict global temperatures - [2]the IPCC chapter called "Climate Models and Their Evaluation" (informal title: "Why You Should Believe Them") is the most humorous evidence of that. Lack of accurate predictions means there is no good reason to trust them. (That the models can fit past data means little because they have [3]many adjustable parameters. "With four parameters I can fit an elephant," [4]said John von Neumann.) The case against the view that humans have dangerously warmed the climate (sometimes called AGW, anthropogenic global warming) is that simple.

Because it is so simple, "the other side" consists of saying why 2+2 really does equal 20 or whatever. Sure, many people say it, so what? When I was an undergrad, I gave a talk called "The Scientific \_\_\_\_". I said usage of the term scientific without explaining what it meant was a sign of incompetence and a reader could safely stop reading right there. That isn't terribly helpful, because few people use scientific that way. My grown-up version of this test is that when someone claims AGW is true, I stop taking them seriously as a thinker. I don't mean they can't do good work - Bill McKibben is an excellent journalist, for example. Just not original thought.

1. <http://www.bbc.co.uk/programmes/b00xchyf>
2. <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-chapter8.pdf>
3. [http://www.pashler.com/Articles/Roberts\\_Pashler2000.pdf](http://www.pashler.com/Articles/Roberts_Pashler2000.pdf)
4. [http://en.wikiquote.org/wiki/John\\_von\\_Neumann](http://en.wikiquote.org/wiki/John_von_Neumann)

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Timothy Beneke (2011-04-20 16:53:02)

I've followed your global warming comments for some time now and, while I'm relatively ignorant, I'm intrigued. I assume that since we have no adequate models to "control" for non-human causes of global warming we don't know what part of global warming can or cannot be attributed to human activity. So one can neither claim nor deny that AGW is true; all we can say with confidence is that it's getting warmer for reasons we cannot confidently assert. Would you also dismiss as a thinker anyone who claims with authority that AGW is false? Or am I misreading your logic? Or are you claiming that the burden of proof in these matters falls completely on the shoulders of those who support AGW, since it is well established that non-human causes frequently alter climate? Could you tease this out more precisely for me?

Nathan Myers (2011-04-21 00:53:20)

I've asked this before: What evidence could be presented that would change your mind? Famously, J.B.S. Haldane (might have) said a pre-Cambrian rabbit fossil would refute evolution. Slightly less famously, Peter Duesburg says AIDS is not caused by

HIV, and that anti-retroviral drugs are of no value in treating it. He persuaded the S. African govt to withhold them from AIDS patients, with imaginable consequences. I wonder how many people he would need to see pulled back from death's door by such treatments before he would change his mind. What is your rabbit? And what should we conclude if there is none?

dearieme (2011-04-21 02:54:13)

There are two lines of argument advanced in favour of AGW. (i) The present warming is unprecedented. I have three counterarguments to that. (a) Your present day figures are faked: whatever the increase may be, you have exaggerated it with bogus "adjustments" to the data, and by failure to adjust properly for such effects as UHI, airport sitings of instruments, decline in the number of instruments, relocation of instruments, changes in instruments and improperly operated instruments. (b) You have resorted to lies about earlier warm spells to allow you to claim that presently reported warming is unprecedented. (c) Your low levels of competence - for example your woeful grasp of statistics - lets me dismiss that part of your work that isn't dishonest as largely dud. (ii) Our models require CO2 induced warming to allow them to model observed warming. I have three counterarguments (a) you are comparing your models with rubbish (see (a) above). (b) I have written, or supervised the writing of, mathematical models of physico-chemical systems since 1967. Consequently I am aware of the difficulty of modelling such systems, even when results from controlled experiments are available to guide the modeller in his task. Your task is orders of magnitude more demanding than any I have undertaken, and your guidance is from haphazard and incomplete sets of observations of dubious validity (see (a)). I find your hubris about your ability usefully to model the climate just risible. Or, as we say in Britain, "Oh Bollocks!". (c) Not only do I find you hubristic, I am also struck by your generally low intellectual calibre (by the standards of the physical sciences), and inability to think critically. You are, in general, not fit for purpose. Another question, potentially important, is "Suppose that AGW is real - small, perhaps, but real. Then what?" To which I'd reply "Then let's do intelligent economic analyses of the likely consequences rather than just assume that such a change must be a wicked and disastrous thing, to be avoided whatever the cost."

Cam (2011-04-22 19:02:38)

You're not quite as clever as you think you are. AGW and "dangerously warmed the climate" are two separate propositions. Throwing in the "dangerous" is a common trick of climate skeptics. Even John Christie now accepts the AGW part but argues against the dangerous part. Have you stopped taking John Christie seriously as a thinker?

sabril (2011-04-22 19:47:00)

"I've asked this before: What evidence could be presented that would change your mind? " I realize this question is not addressed to me, but I will answer it anyway. (1) If somebody presented a climate simulation which consistently made interesting, accurate, and bona fide predictions, and that same model, when run with pre-1950 CO2 levels predicted a much cooler world than what we got over the last 50 years. In that case, I would accept that recent warming is largely due to increased levels of CO2. (2) If somebody demonstrated that recent temperatures (or rates of increase) are well outside the range of natural variation, I would accept that mankind's activities are likely the cause. (3) If somebody developed a theory of climate which explained past temperatures and was sufficiently simple and elegant that it was highly unlikely to be just a coincidence, and that theory predicted significant (amplified) warming due to CO2.

Seth Roberts (2011-04-22 20:25:18)

"Trick"? I use "dangerous" because that's what I mean. Whether humans have had tiny effects on the climate is a question that doesn't interest me. I don't know who John Christie is.

Seth Roberts (2011-04-23 00:19:29)

Thanks, sabril. I come close to agreeing with that. Basically my answer is your #1: (a) someone creates a climate model that makes accurate predictions and (b) that model - run with and without the effects of humans - shows that humans have dangerously warmed the planet. As for #2, I think it is clear that current temperatures and rates of temperature change are not unprecedented. As for #3, I think too many parameters need to be estimated from the data relative to the amount of data. Fitting past data will not convince me of anything.

Seth Roberts (2011-04-23 00:30:45)

We don't know if AGW is true. That's what I believe. To claim AGW is false is less egregious, because there is no clear AGW "signal" (e.g., unprecedented rates of warming). But, yeah, to be sure it is false is also going beyond the evidence, in my opinion. As a practical matter, I think we should spend our attention on things that are undeniable problems. There are plenty of those. Perhaps AGW will someday be an undeniable problem, or maybe not. Quite apart from AGW, it's important to develop new sources of energy and (what amounts to the same thing) conserve energy.

sabril (2011-04-23 05:52:11)

"As for #2, I think it is clear that current temperatures and rates of temperature change are not unprecedented" I agree 100 %. You don't even have to look back far or do anything sophisticated to find precedent. For example, melting glaciers in the Alps have revealed mountain passes used by humans during the Medieval Warm Period. The reasonable inference is that temperatures now are roughly the same as they were then. "As for #3, I think too many parameters need to be estimated from the data relative to the amount of data. Fitting past data will not convince me of anything." Well I'm talking about a model without this problem of parameters. For example, suppose somebody came up with the hypothesis that global surface temperature change is the result of cosmic radiation. Suppose we let T represent global surface temperature anomaly (in degrees Celcius) and C represent cosmic ray intensity anomaly in watts per square meter. And suppose we knew T and C pretty accurately for the last 2000 years. What if it turns out that  $T = aC$  holds true from Year 1 to 1950, where a is a constant, the only parameter in use in the model. In that case, I would be reasonably convinced that global surface temperature anomaly really is caused by cosmic rays. Further, if temperatures after 1950 were significantly and increasingly higher than  $aC$ , I would agree that they are probably the result of man's activities. Of course, the difference between this model and the simulations being pushed on us today is that my hypothetical model has one and only one parameter. Further, there are a priori reasons to believe that cosmic ray intensity might affect global surface temperatures. So the chances that the relationship is a coincidence are pretty low. By contrast, and as you point out, the situation where a model or simulation has dozens of parameters is very different. There's actually a very good chance that the fit with history is just a coincidence.

sabril (2011-04-23 06:41:29)

"We don't know if AGW is true. That's what I believe. To claim AGW is false is less egregious, because there is no clear AGW 'signal'" I would actually go further than this and say it's possible to be reasonably confident that AGW is false. The key point is that AGW is actually two completely independent hypotheses, which are as follows: (1) Increased levels of CO2 in the atmosphere will result in mild increases in global surface temperatures; and (2) Any such mild increase will be amplified to dangerous levels through the mechanism of water vapor feedback. i.e. temperature increases will cause more water to evaporate and since water vapor is itself a greenhouse gas, surface temperatures will increase further, and so on. If (2) is not true, then mankind does not need to worry about AGW since any temperature increases will be too small to make a big difference. Anyway, there is good reason to believe that (2) is false. For one thing, it posits positive feedback which would be unusual in a system which has been around for a long time. If you push on a system which has been around for a while, you would normally expect it to push back in the opposite direction. (It's the same thing with your theory about diet and set points. If you start eating less in an effort to lose weight, your body system will push back by reducing its metabolism and increasing your appetite. Negative feedback. Which makes sense – systems which have been around for a while tend not to go into death spirals when they are stressed. Because if they did, they would have disappeared long ago.) So one would naturally expect that warming due to CO2 will be dampened by the climate system and not amplified. The second piece of evidence is that there is no "hot spot." i.e. The theory of CO2 induced global warming enhanced by water vapor feedback predicts enhanced warming in the air 10km above the surface in the tropics. The actual measurements don't seem to bear this prediction out. See here: <http://joannenova.com.au/2008/10/the-missing-hotspot/> Based on these two points, I'm pretty confident that AGW (as the term is popularly understood) is false, although I do agree that mankind's CO2 emissions are likely to cause some increase in global surface temperatures.

Seth Roberts (2011-04-23 14:52:47)

I agree, it is comforting that the system has been around a long time. On the other hand, the human race has been around a long time and just recently (around 1980) the obesity epidemic – a massive failure of a feedback system – began. Feedback

systems can work fine for an extremely long time and then fail. In the case of climate, it is obvious, as you say, that the negative feedback has overwhelmed the positive feedback for a very long time (the entire history of the Earth). But that could change – e.g., due to changes in land cover. But I have had the same experience as you. The more I have looked at this, the more I encounter evidence suggesting that AGW is wrong.

sabril (2011-04-23 16:56:42)

"On the other hand, the human race has been around a long time and just recently (around 1980) the obesity epidemic — a massive failure of a feedback system — began. " That's true, and it's logically possible that CO2 is a stimulus which can overwhelm the system like large amounts of unhealthy foods can foul up a person's health. However, there have been lengthy periods in the past when CO2 levels were far higher than current levels now and temperatures were not very different.

Seth Roberts (2011-04-23 18:55:32)

I believe changes in ground cover (e.g., more asphalt, fewer trees, etc.) may affect the feedback system, causing it to work worse (= reduce negative feedback, increase positive feedback) than in the past. I'm not saying this is true, just that it is a possibility. It is a source of uncertainty that causes me to back away from strong statements either way about AGW.

M (2011-04-23 22:33:55)

It strikes me that you may be applying a higher standard to the AGW question than to other issues. For example, what if your first sentence above was rewritten this way: To measure the effect of [diet change] on [weight], you need to know what the [person's weight] would have been in the absence of [diet change]. Then you find the effect of [diet change] by subtraction (actual [weight] – predicted [weight] assuming no [diet change]). My understanding is that you would say this is wrong and that we don't need a good model of weight in order to make at least preliminary conclusions. So help me out - why the different approach to climate questions? Why your emphasis on models? I agree that there may have been some (or even a lot) of bad climate modeling done. But there are also other approaches to studying climate questions.

Seth Roberts (2011-04-23 23:20:07)

In the absence of exercise or diet changes, most people's body weight is close to constant or increases linearly. So it is easy to see what the weight would have been in the absence of the diet. The diet has a sharp onset and large effect relative to noise (unexplained variation). With human activity and climate there is no sharp onset and no large effect.

Nathan Myers (2011-04-24 04:52:07)

You responded to an apparent one-time 1 % weight gain by dropping all experimentation with cold showers. Yet, increasing CO2 content of the entire planet's atmosphere by 40 %, with half of it occurring during your own lifetime, doesn't count as sharp onset? Remind me not to ask you to call the fire department when I spot a house on fire.

Seth Roberts (2011-04-24 05:49:46)

The existence of a sharp onset for CO2 weakens your case, Nathan. It makes the absence of clear evidence for AGW even more embarrassing to AGW advocates.

Nathan Myers (2011-04-25 22:25:11)

You seem to be saying that both presence of, and absence of, a sharp onset would weaken the case for AGW. What course of events would you *not* take as weakening the case for AGW? Do you disbelieve in global warming, or do you disbelieve in an industrial cause for observed global warming? Statements of one undermine those of the other, but I see both here. Is this an even-day/odd-day thing?

Seth Roberts (2011-04-27 14:50:26)

Nathan, perhaps you could provide me with an example of Stephen McIntyre being dishonest?

Links « Rhymes With Cars & Girls (2011-05-22 13:17:38)

[...] Roberts makes an important point so many people seem to struggle getting through their thick skulls: If you know there was an Ice [...]

### **Google Uses My Credit Card Without Telling Me (2011-04-21 05:00)**

Last week, while looking at Google Voice I noticed a button that said "Get \$10". I thought it meant "get \$10 credit for trying it" so I pushed the button. Ten dollars credit showed up. Since Google Voice is free for the calls I make I had no use for \$10 credit but maybe someday....

A few days later I happened to look at my credit card bill. Google had billed me \$10! I didn't even know they knew my credit card number! It hadn't been required for the \$10 transaction. I haven't consciously used Google Checkout. I haven't given it to them in any other connection. Talk about data mining...

When I go to Account Settings listed under my Gmail address, one of the sections is My Products, meaning My Google Products. Under that is listed Google Checkout, although I've never signed up for it and (I thought) never used it. So why is it there? I looked in Google Checkout. The Google Voice \$10 transaction is the only transaction listed. As far as I can tell, this proves I didn't use Google Checkout in the past (say, 4 months ago) and forget about it. Google really did get and use my credit card number without telling me, much less asking me.

My credit card company quickly gave me a refund.

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Paul (2011-04-21 11:54:09)

What happened to don't be evil? If more stories like this pop up, Google will lose a lot of customers from bad publicity. This story actually has me thinking of switching to Bing and IE. And doing something about my gmail account.

laura (2011-04-21 12:46:18)

uc berkeley gave me a refund too. although i had to go through hell to get it. not even the manager of the psychology department would give me the refund! i even talked to all these people in person! what worked: my writing. and the fact that i have an ipad2 + 3G. i can write anywhere! refund amount: almost \$1500

Dawn (2011-04-21 15:02:34)

Google knows everything! I took a look under my own Account Settings and I don't have a My Products listed. I guess this means that something you have used seems to have opted you in for the My Products and - I guess - added your credit card in too. Scary. Big Google is watching you!

Sean Estey (2011-04-21 15:21:25)

A similar thing happened to me where I received a receipt for a pair of sunglasses purchased through Google Checkout. I investigated, but the charge had reversed itself. I have never given my credit card to Checkout now used it in my life. Google is really screwing up in the privacy area lately, but at least now that Schmidt has taken a back seat from CEO, the public face of

Google won't be as creepy. The man just radiates creepiness.

Jim (2011-04-23 09:09:44)

if you have an android phone that syncs with your google account that's probably what did it. when you buy an app through your android phone the purchases show up through google checkout.

Seth Roberts (2011-04-23 14:44:59)

Thanks for the suggestion. However, I don't have an android phone. After several days of thinking about this, I am still completely clueless about how Google got my credit card info.

Cordie (2011-04-24 16:32:22)

I was recently forced by Google to cancel my YouTube and Blogspot accounts, even though I had had both accounts since before Google took over those sites. Why? Because Google wanted my phone number in order to let me log in to MY OWN Blogspot site that I'd had for like 2 years already. I don't give my phone number to drunks in bars, creepy guys who hit on me in the library, or anyone else who has no business calling me. The only reasonable response to a dick move like that was to cancel my Google account (which I NEVER signed up for, but apparently got by default when they took over my youtube and blogspot accounts). Cancelling the Google account that I did not sign up for also cancelled (I had no choice about it) my Blogspot, and my Youtube accounts. A few weeks ago, I thought Google was a pretty great search engine, and had no negative feelings about it. Now, I find Google creepy in the extreme, just like the smelly 50-year-old men who hit on me in the library when I was 16 (gross!). I don't use the search engine any more. Other search engines turn out to be completely sufficient for my needs.

Bryan (2011-04-24 19:58:59)

Nothing to complain about here Seth. You were given the money back, no hassel. Besides, GV is a free, but I'm almost 100 % sure that when you first sign up for GV you have to provide a credit card # as ID.

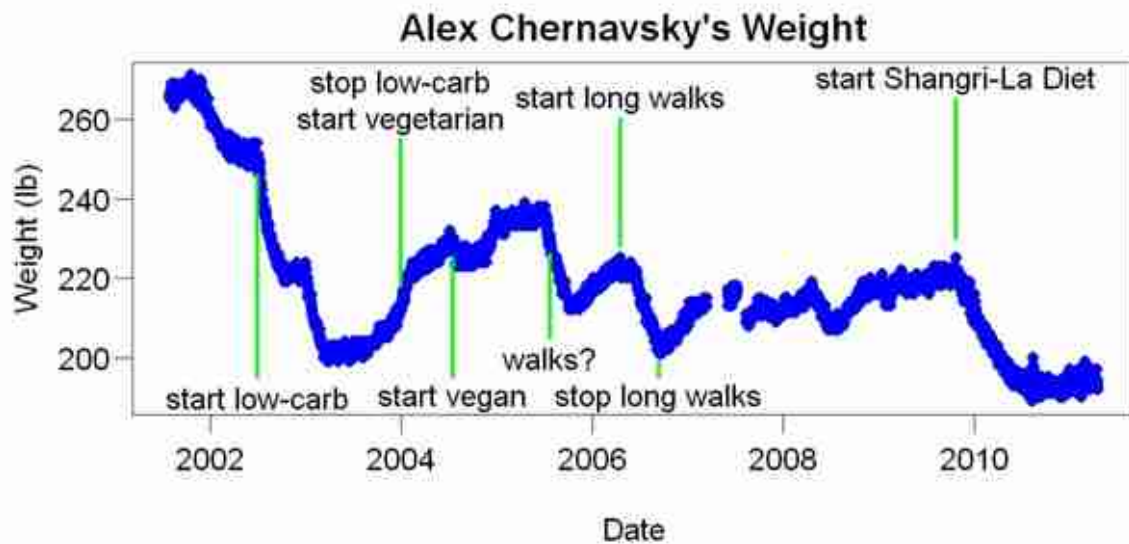
Seth Roberts (2011-04-24 20:29:11)

that's interesting. but I don't have Google Voice, just a cell phone icon with my email. So I never signed up for Google Voice or the cell phone icon among my gmail contacts.

Ben (2012-04-06 20:05:07)

Same thing just happened to me about 5 minutes ago.. I'll be calling my bank first thing in the morning to get this straightened out. I'm not sure where I clicked that Google can randomly charge my check card \$10 but I'm not happy about it.

## **Ten Years of Weight Measurements (2011-04-22 05:00)**



Alex Chernavsky, whose Shangri-La Diet experience [2] I described recently, has recorded his weight for almost ten years, with the results shown in this graph. During that period, he's changed his diet and exercise several times.

The first change was to a low-carb diet (Atkins-like, with lots of meat and fat). He made this change after reading Gary Taubes's New York Times article "What If It's Been A Big Fat Lie?". As advertised, the low-carb diet caused him to lose a lot of weight but – not as advertised – after about a year he started to regain the lost weight. For other reasons, he changed to a vegetarian and later a vegan diet. They slowed down the weight regain but did not stop it. In 2005 and 2006 he managed by walking a lot – in 2006, 90 minutes/day or more 5 or 6 days every week – to lose almost 30 pounds, but then his weight resumed creeping upward. Then he lost about 30 pounds due to the Shangri-La Diet. He did the diet by drinking 3.5 tablespoons of flaxseed oil instead of lunch. He drank a glass of water afterwards to get rid of the flavor.

I have never seen a weight record this long. It suggests several interesting points:

1. A low-carb diet, as advertised, quickly produces substantial weight loss.
2. Not as advertised, the weight loss is followed by regain after a year or so. This implies that studies of low-carb diets and weight loss need to last several years to give a clear picture of how much weight loss to expect.
3. Low-intensity long-duration exercise (walking for 90 minutes almost daily) causes substantial weight loss. This isn't surprising.
4. ... but it is surprising the effects of the exercise appeared to last at least a few years after the exercise was stopped. I have never seen this reported.
5. The Shangri-La Diet worked well. Alex did the diet somewhat differently than other people so it was not obvious this would be true.
6. After he stopped losing weight on SLD, his rate of weight gain was roughly the same as his rate of gain before he started the diet.

1. <http://blog.sethroberts.net/wp-content/uploads/2011/04/2011-04-20-more-Alex-Chernavsky-weight3.jpg>
2. <http://blog.sethroberts.net/2011/03/27/15-years-on-the-shangri-la-diet/>

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Justin (2011-04-22 14:53:14)

Love it. I am about 7.5 years behind Alex, but here is my weight data through January: [http://s3.amazonaws.com/data.tumblr.com/tumblr\\_lf2yhowHFg1qb27qzo1\\_1280.png?AWSAccessKeyId=AKIAJ6IHWSU3BX3X-7X3Q&Expires=1303595476&Signature=nufah1VKJwmYkxE4p47Z%2FNxvhr0%3D](http://s3.amazonaws.com/data.tumblr.com/tumblr_lf2yhowHFg1qb27qzo1_1280.png?AWSAccessKeyId=AKIAJ6IHWSU3BX3X-7X3Q&Expires=1303595476&Signature=nufah1VKJwmYkxE4p47Z%2FNxvhr0%3D)

Stephen M (Ethesis) (2011-04-23 08:21:55)

I've a friend who went to no flour, no sugar, lost 190 lbs in about twelve months and has kept it off for four years, tomorrow (he was a day short this morning when we talked). But his Taubes style diet is rigorous. He is part of a group using it and they've noted that any deviation and the weight starts to come back. Interesting, my weight has gone up and down (my rest point is 189 +/- 10 lbs, though it went up to 205 over Christmas, is down to 197 this morning). I've been paying attention to various inputs that seem to make a difference and find the whole very interesting. If I switch to a noseclipped meal in addition to my normal regimen, I drop weight. If I increase ditto food I can push weight up. I'm not sure how far I can push weight up with ditto food, I bailed out at 205. I lack the willingness to embrace weight gain for scientific study, at least past a certain point where my comfort zone ends ;)

Perfect Health Diet » Around the Web, Easter Vigil Edition (2011-04-23 14:13:29)

[...] 10 Years of Weight Loss: My favorite post this week was from Seth Roberts, reporting 10 years of weight measurements from one of his [...]

Jeff (2011-04-24 07:49:56)

Seth - Why does daily low intensity long duration exercise such as walking reduce weight vs. other forms of aerobic exercise? Does it have anything to do with keeping blood sugar stable?

Seth Roberts (2011-04-24 20:31:51)

I've never heard a good answer to why exercise causes weight loss. Obviously it lowers the set point (which will come as news to 99 % of doctors) but I've never heard anything convincing that goes deeper than that.

Mike (2011-04-25 08:01:56)

I thought I was the only low-carb vegan who does the Shangri-La Diet. Congrats on your weight loss, Alex!

laura (2011-04-26 20:45:21)

i fit in a size 6 dress today because of sld. wow!! yay!!

Alex C. (2011-04-30 07:10:35)

Mike, if you're still reading this thread, please contact me at [alexc@aya.yale.edu](mailto:alexc@aya.yale.edu). It would be nice to compare notes. Thanks.

Jolly (2011-05-06 12:12:27)

I have rough data for weight/bf since 2003 <http://physicsdiet.com/Chart.ashx?t=WeightLoss&s=0001-01-01&e=2011-05-06&u=Jolly> and <http://physicsdiet.com/Chart.ashx?t=BodyFat&s=0001-01-01&e=2011-05-06&u=Jolly> The 2005-2009 weight drop was caused by me being on ADHD medication. The early 09/11 weight spikes were caused by massive amounts of dairy intake. In 2005 I changed my weight scale body fat analyzer measurement from "athlete" to "regular" which is why the bf % shot up. Otherwise my bf % is highly correlated with my total weight. I've been eating paleo/primalessq/lc since around



September 2009.

Seth Roberts (2011-05-07 16:07:15)

Thanks. How tall are you? On the weight chart, what's the difference between red and green? On the percent body fat chart, shouldn't the percent change abruptly when you changed the setting on your body fat analyser? Instead, it changed gradually.

Thoughts on Obesity Inspired by Stephan | Perfect Health Diet (2011-06-03 07:33:35)

[...] I've previously shown this plot from Seth Roberts: [...]

**Natto Idol (2011-04-23 05:00)**

[1]



Notice the glasses, fingerless gloves, and detached sleeves. According to [2]this website,

Japanese idols are beautiful female Japanese celebrities. Normally singers, actresses and models.

1. <http://blog.sethroberts.net/wp-content/uploads/2011/04/nattoidol.jpg>
2. <http://www.japanese-idols.info/>

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## Personal Science and Lyme Disease (2011-04-24 05:00)

[1]Here is a website devoted to a new way to cure Lyme disease: ingesting large amounts of Vitamin C and salt. The website is vague about who made it but it certainly isn't a for-profit enterprise. It begins:

After 13 years of suffering with Lyme disease, a possible cure has been stumbled upon. A cumulative effect of much research has produced the possibility that salt and vitamin C may be all that is needed to beat this elusive illness. Without going into a lot of detail, our theory is that Lyme is not just a bacterial disease, but also an infestation of microfilarial worms. . . From experimenting with the treatment of salt and vitamin C, we settled on a dosage of 3 grams of salt and 3,000 mg of vitamin C, each dose taken 4 times per day. . . . The Treatment can be grueling; taking it with food may aid in digestion. The results [= the improvement] should be almost instantaneous.

Unsurprisingly, people a naive person might think would be interested turned out to be not be interested:

We have tried on three occasions to get help [= interest in our findings] through the CDC to no avail. The responses were things such as: thanks, we'll forward to a lyme researcher; or, we don't accept contributions or downloads from individuals; or, these pictures are obviously fakes. . . . We tried the university routine. A public health researcher put us onto a microbiology chair, who sent us to a CDC parasitologist, who said he wasn't a clinician and suggested a pathologist. . . . We tried the most noted lyme sites on the web. We were disappointed that most of them seem more concerned with fundraising than disease.

Which sounds like "we" is one person – a man. In any case, I hope "they" will allow outsiders to contribute experiences, perhaps by adding forums to the site. This is terrific work.

1. <http://www.lymephotos.com/>

dearieme (2011-04-24 14:24:34)

"We were disappointed that most of them seem more concerned with fundraising than disease." I've heard that complaint about charities in Britain.

goldman (2011-04-25 11:04:40)

One of the big problems with the personal science movement you espouse is that idiots on the internet can suggest really harmful things. This is one of them. Nowhere on that website does it say that you should monitor your blood pressure, and if you're eating that much salt 4 times a day, you really should be monitoring your blood pressure. Another example: all over the internet people talk about the few papers which link iron deficiency with RLS. The problem is, that's only for \_some\_ class of RLS patients, and it's not easy to get iron levels tested on your own. Taking supplemental iron pills, which I've seen recommended on RLS fora all over the place, can cause long term heart damage. If you don't publicly talk about this kind of thing, and suggest or discuss ideas to remediate it, you are part of the problem, since you are strongly recommending to people that they try things like this. One reason doctors are so cautious is liability. I think this post is pretty close to something that should be considered liable if people read it, go and eat salt until they have strokes.

Seth Roberts (2011-04-25 14:34:14)

Coming up with and publicizing a new way to cure Lyme disease is a "really harmful thing" because it didn't say you should measure your blood pressure? Perhaps the author of that website felt it was obvious. Or perhaps he himself did not get high blood pressure from the salt he was eating. Both of those would call your outrage ("idiots") into question. However, I agree with you to a certain extent. As I said, the author of that website should make it easy for others to share their experiences. Whether that often includes high blood pressure remains to be seen. In the case of RLS, you seem to fail to understand that if your RLS is cured by taking iron supplements, it is likely you had an iron deficiency to start with. People who have iron deficiencies and then take iron are unlikely to get heart damage from doing so.

Ans (2011-04-25 15:42:20)

Thanks for the link, Seth. I will give this a go and report how I feel in a few days.

Thomas Seay (2011-04-26 13:18:53)

I have hear different view on "Chronic" Lyme. A lot of people say that it doesn't exist. That is the mainstream position that may or may not be right. IA few years ago, I was diagnosed with Lyme and even got Lab results from Igenex lab that indicate I have Lyme and Babesia. I was sent to a "Lyme specialist" who put me on an expensive protocol. I became frustrated because of a severe reaction to the antibiotics prescribed and because I was confused as to whether or not "Chronic Lyme" even exists. I am tempted to try this protocol (aafter all, it's cheap) except for one thing. Wouldn't it cause just as much gut dysbiosis as a course of antibiotics? What do you think?

JeffR (2011-04-26 13:30:47)

There's a lot that seems wacky about that website.

Eric (2011-04-26 14:45:03)

Ans, I'm interested how you feel in a few days. Make sure you drink enough water!

Seth Roberts (2011-04-26 14:54:22)

Yes. But the underlying idea makes sense.

Seth Roberts (2011-04-27 14:43:38)

Yes, it might cause gut dysbiosis. But I believe you can easily recover from that: eat plenty of fermented foods.

Thomas Seay (2011-04-27 15:21:56)

How many species of "good" bacteria are in our gut? I think I read at least 150 different species. Do fermented foods, or even

the best probiotics, normally come near supplying that many species? I don't think so. On this protocol, you are killing bacteria every few hours (take the Vitamin C and salt with meals). Can you really repopulate your gut with such an aggressive protocol? Don't get me wrong...if you KNOW that you've got Lymes, it would be worth the risk. I have some of the symptoms that the Chronic Lyme people suggest indicates Lyme disease (including some lab results), but it's such a long laundry list that just about anybody could have Lymes, based upon that. According to the website, it might be necessary to persist with this protocol for up to 3 years. What kind of havoc could that play on your gut bacteria?

Seth Roberts (2011-04-28 05:43:44)

yes, exactly how to use fermented foods to preserve or restore healthy gut flora is an open question but I'm sure it involves eating quite a few fermented foods.

Thomas Seay (2011-05-06 10:23:33)

I wonder if Ans tried this protocol and, if so, how it is working out.

Eric (2011-05-08 12:57:10)

Also still curious, as a know someone that struggles with Lyme...

### **Roche is Deceptive and Evasive (2011-04-25 05:00)**

In [1]an article about Tamiflu, an anti-flu drug developed by Roche, Helen Epstein writes:

[Non-Roche researchers] noticed yet more discrepancies between the articles that had appeared in scientific journals and Roche's internal documents, many concerning the drug's safety. According to published articles, no potentially drug-related serious side effects—or "serious adverse events" as they are called—were reported in the papers describing two Roche-sponsored clinical trials in which 908 people took Tamiflu; but according to Roche's unpublished documents, three "serious adverse events" that were possibly related to Tamiflu occurred in these trials.

In 2008, an article in the journal Drug Safety, signed by a group of Roche authors, claimed that rats and mice, both given a very high dose of Tamiflu, showed no ill effect. But according to documents submitted to the Japanese Ministry of Health, Labor, and Welfare by Chugai, the Japanese Roche subsidiary, the exact same dose of Tamiflu killed more than half of the animals. As they died, the rats exhibited many of the same central nervous system symptoms that Hama had described in his case series on the Japanese children.

That's deceptive. Here's evasive:

"Do the 'full study reports'" containing all five modules exist?" I asked my correspondent at Roche. "A simple 'yes' or 'no' answer will do." In reply, she did not say "yes" or "no," but repeated her claim that the Cochrane group had all the information it needed to analyze the Tamika studies.

This sort of thing is why I don't trust drug companies. They're dishonest again and again, with trivial consequences. Epstein's article would have been even better had she given the names of the Roche employees she criticizes (the authors of the deceptive studies, the evasive correspondent).

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Alrenous (2011-04-25 12:20:34)

I have a policy of mistrusting all official communication unless I have specific evidence to the contrary. Do I know for certain they're usually punished for misleading statements? Have they been reliable in the past? Do I have independent corroborating evidence? Need I say how very never this is the case?

Seth Roberts (2011-04-25 14:21:16)

Alrenous, I'm curious how this works in practice. If I go to the DMV (Department of Motor Vehicules) and start questioning everything I'm told I would be quite rightly treated as a nut. I think there are forces that push public officials to tell the truth; there are also forces that push them to lie. Whether your ideas about this, which strike me as too black and white, actually help I would like to know. What do you actually do as a result of this approach?

Dawn (2011-04-26 00:02:50)

Anyone who remembers history would distrust the major drug companies. They have an appalling track record and have been caught lying numerous times. But I sort of expect that - after all, they're in business to make money. What scares me more is that we can't trust our government officials to tell the truth either.

Alrenous (2011-04-26 21:58:15)

"and start questioning everything I'm told I would be quite rightly treated as a nut. I think there are forces that push public officials to tell the truth;" So there's two possibilities here. Either you have specific evidence (forces for truth?) that your DMV is generally truthful, or else you're just taking it on faith. Either you already follow this technique, or what makes you a nut is failing to question them - just don't do it out loud to DMV officials. Are we talking about renewing your licence, or are we talking about motor vehicle policy? I actually would distrust everything a DMV official told me. I would, however, intentionally look for evidence if it was important - say there is a threat of jail. Sometimes I even investigate if I'm told something I originally thought was true, and these things have turned out wrong frequently enough to be worthwhile. Even the simplest official communications are often misleading. The only time I default to acceptance is where the lie has no possible benefit and the odds of incompetence are nearly zero. Again, just about never. If we're talking licence renewal, then lies would have no benefit and it's completely obvious for most of them. "You're next in line." Yes, yes I am, good work. Though come to think I would even doubt and check "The line starts over there," - been burned by that lie before. "You need to fill in this form." Usually not true. Some bureaucrats will get more tetchy about it than is worth the hassle, but if you manage to pass back a mostly-empty form, you'll get your licence anyway. If we're talking motor vehicle policy...Hmm, does "Rolling stops are illegal," count as an example? I suppose it is illegal, but nobody ever gets prosecuted for them. Regardless, you stop at stop signs because you'll get hit if you don't, not because it's the law - if it stopped being illegal today the change in driving would be hardly noticeable. Indeed, judging by the improvements in those townships that removed all signs and lights, mortality would likely go down. Whereas if we invented inertial dampeners and negated all crashes, running stop signs and such would drastically increase. (I'd personally try to drift through mine. Bumper cars at 40 sounds like fun to me.) Have you heard the one about how it's illegal to go over OR under the speed limit? That one's good too. Even some of the things cops routinely say when they pull you over can be ignored, and though I'd have to double check which ones. When an official in any capacity says something about X, it's a hint that you should investigate X, not evidence about X either way.

Seth Roberts (2011-04-27 14:36:18)

We're talking about license renewal. I have specific evidence that when they tell me to wait in line X, that is actually the right line to wait in. An example of the evidence is that the place looks orderly - it is not full of angry people who have waited in the wrong line for 1 hour. I don't investigate whether they are truthful. "The lie has no possible benefit." Well, yes, now you are coming close to what I mean by "pressure to be truthful" - certain lies would have big bad consequences and smaller (or no) good consequences. For those statements there is pressure to be truthful. It varies from statement to statement whether the

bad consequences outweigh the good consequences.

Seth Roberts (2011-04-27 14:47:30)

I agree about the terrible record of drug companies ("caught lying numerous times"). "I sort of expect that – after all, they're in business to make money." Every day I deal with a dozen businesses that are in business to make money. A newstand, a grocery store, my Internet provider, and so on. They don't lie to me, by and large, and certainly not in the extraordinarily dangerous way that drug companies lie. I think it is their power that lets drug companies lie like this, not their motivation. Too Big to Tell the Truth.

### Assorted Links (2011-04-26 05:00)

- [1]Shangri-La Diet story. "The day before last I had an in n out burger, fries and cream pie. It was my B-day!"
- [2]radiation hormesis and Japan
- speaking of Japan, [3]beauty nose: lose weight and make your nose more attractive
- Andrew Gelman illustrates [4]how to plot data. Incidentally, time-use data like what Andrew plots led me to discover that [5]seeing faces in the morning improved my mood the next day.
- California State [6]proposed bill to restrict nutritional advice. Registered Dieticians want to put people with ideas different from theirs out of business.
- [7]Bill McKibben calls the science of climate change "the easy part. . . . The scientific method has worked splendidly to outline our dilemma".
- [8]Steve McIntyre on Climategate
- [9]fermented food in Beijing

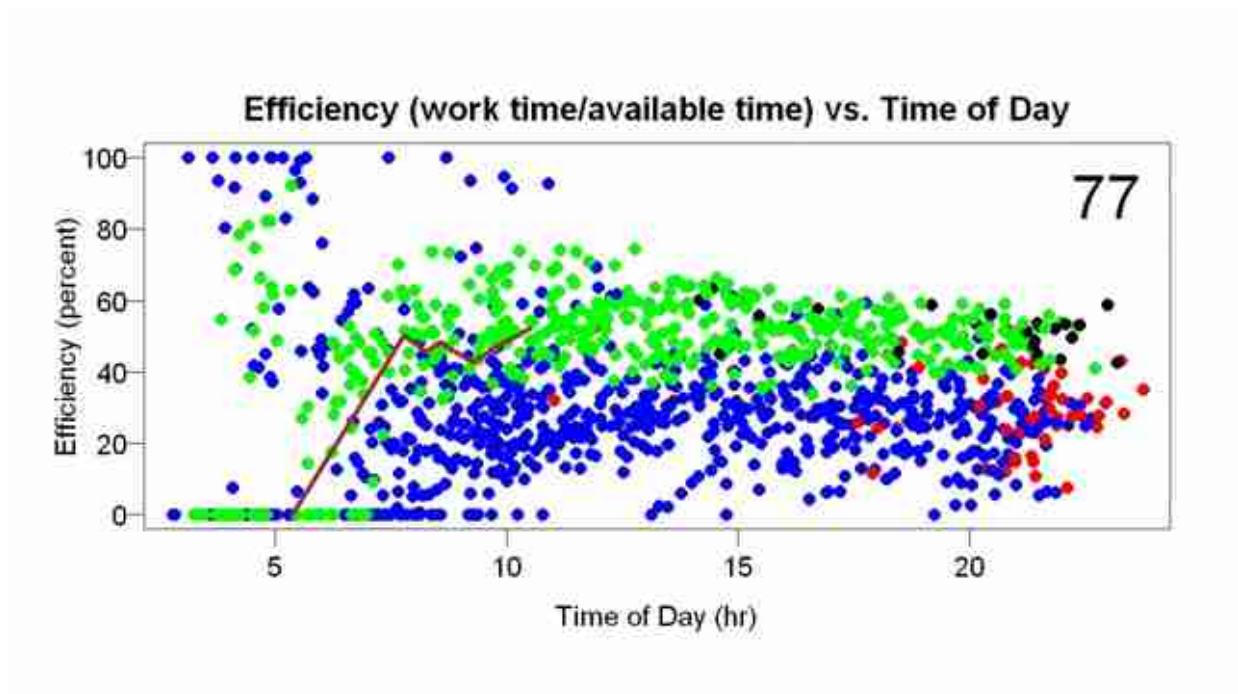
Thanks to Peter Spero and [10]VeganKitten.

1. <http://shangri-la-diet-stats.blogspot.com/>
2. <http://opinion.financialpost.com/2011/03/21/lawrence-solomon-reactor-victims-will-benefit-studies-show/>
3. <http://www.japantrendshop.com/beauty-nose-p-1032.html>
4. [http://www.stat.columbia.edu/~cook/movabletype/archives/2011/04/attractive\\_but.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2011/04/attractive_but.html)
5. <http://escholarship.org/uc/item/2xc2h866>
6. <https://secure3.convio.net/aahf/site/Advocacy?cmd=display&page=UserAction&id=705>
7. <http://climateprogress.org/2011/04/18/bill-mckibbens-must-watch-speech-at-power-shift/>
8. <http://climateaudit.org/2011/04/23/comments-on-mother-jones/>
9. <http://drbganimalpharm.blogspot.com/2011/04/fermented-asian-food-and-gut-dysbiosis.html>
10. <http://boards.sethroberts.net/index.php?topic=7963.msg103159#msg103159>

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laura (2011-04-26 20:53:27)  
cream pie!! omg!!

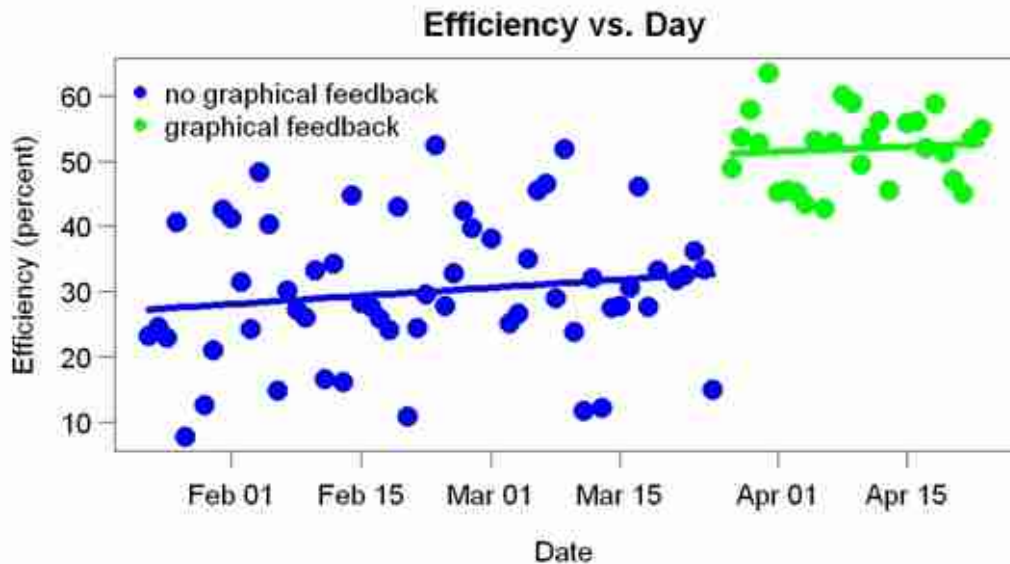
[1]



Here is another example of the efficiency graphs I've blogged about ([2]here, [3]here and [4]here). The line is the current day; it shows how well I'm doing compared to previous days. It goes up when I work, down during breaks. The number in the right corner ("77") is the percentile of my current efficiency (at the time the graph is made) compared to measurements within one hour (e.g., a measurement at 2 pm is compared to previous measurements between 1 pm and 3 pm).

The blue points come from before I started the feedback; the green points, afterwards. The red and black points are the final points of a day (that is, at quitting time). That the green points are above the blue points suggests that the graphical feedback helped. Here is a better way of seeing the effect of the feedback.

[5]



I didn't expect this, as I've said. It is not "the effect of feedback"; before the graphical feedback, I'd gotten non-graphical feedback. It is a comparison of two kinds of feedback.

Why was the new feedback better? Here's my best guess. It helped a little that it was pretty (compared to text). It helped a lot that it was in percentile form (today's score compared to previous scores). This meant the score was almost never bad (from the beginning the percentile was usually more than 50) and yet could always be detectably improved (e.g., from 68 to 70) with a little effort. I wish I could get such continuous percentile feedback in other areas of life - e.g., while treadmill running. I think feedback works poorly when it is discouraging or unpleasant and when it is too hard to improve. When I taught a freshman seminar at Berkeley, I got feedback (designed by a psychology professor) that was so unpleasant I stopped teaching freshman seminars. Because it came only at the end of the term, it was hard to improve - you'd have to teach the class again to get a better score. Moreover, it compared your score to everyone else's. I think I was in the lower 50 %, which I found really unpleasant. There was no easy way to give feedback about the feedback; maybe it is still in use.

In contrast, I love the feedback shown in the upper graph. Not only does it really help, as the lower graph shows, it leaves me at the end of the day with a feeling of accomplishment.

1. <http://blog.sethroberts.net/wp-content/uploads/2011/04/2011-04-23-efficiency-vs.-time-of-day.jpg>
2. <http://blog.sethroberts.net/2011/04/02/effect-of-graphical-feedback-on-productivity/>
3. <http://blog.sethroberts.net/2011/04/04/why-did-graphical-feedback-help/>
4. <http://blog.sethroberts.net/2011/04/10/effect-of-graphical-feedback-on-productivity-another-look/>
5. <http://blog.sethroberts.net/wp-content/uploads/2011/04/2011-04-24-efficiency-vs.-day.jpg>

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Keri (2011-04-27 09:39:44)

We all know that it works incredibly well, that's why we're all so desperate to have it! Could you please release the program that you're using? It doesn't matter how crude it may be, you'd have lots of grateful readers.



michmill (2011-04-27 10:51:00)

I'm not sure if this has been mentioned in the comments to previous entries, but Rescuetime does this automatically. It tracks what program you're in, or even what website you visit, and allows you to say what you were doing when not on the computer. <http://www.rescuetime.com/> When I was having trouble focusing at work, I downloaded it, and it greatly increased my productivity. Just knowing that I was 20 % more productive than the average user was a strong motivator to keep it up. It also immediately showed me where I was wasting time and what days were the most productive, so I could tweak my work schedule to optimize this (I was best right when I got into the office and the few hours before I left, so I tried to get meetings in the middle of the day).

Seth Roberts (2011-04-28 05:37:21)

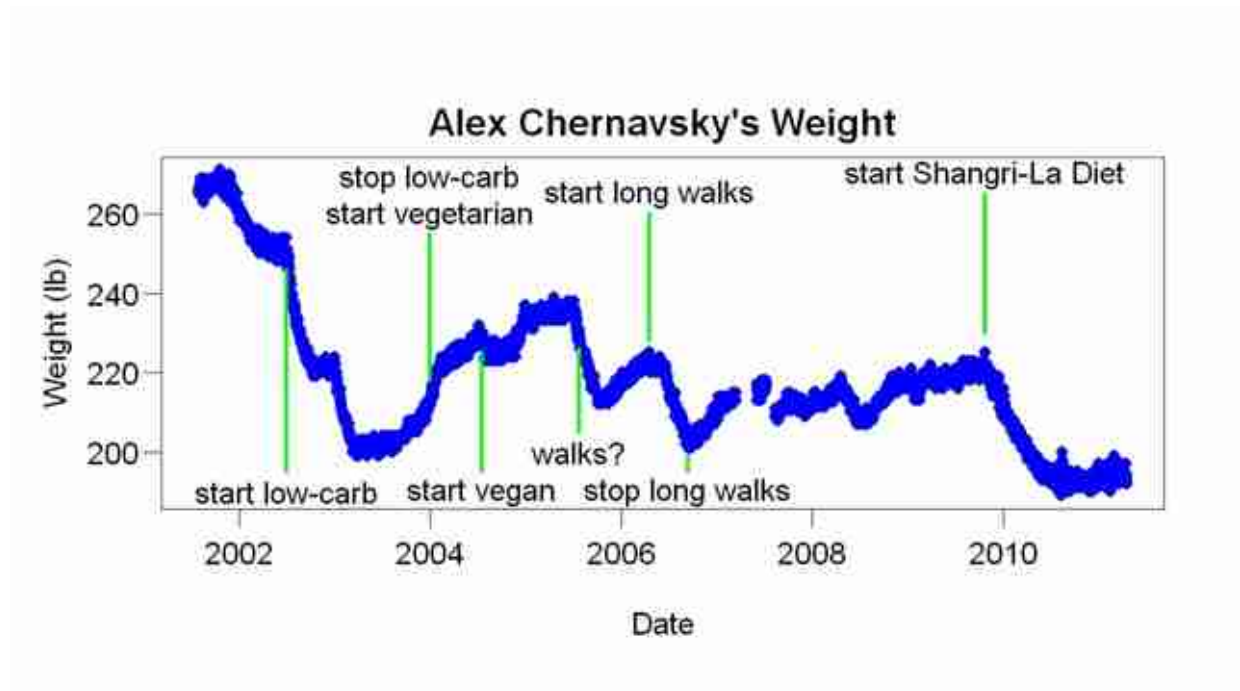
Keri, thanks for your interest. I am mulling over some sort of very crude release.

Keri (2011-04-30 09:52:49)

Ah, that's brilliant. Thanks a lot, the both of you.

## 10 Years of Weight Measurements: What Was Learned (2011-04-28 05:00)

[1]



For ten years Alex Chernavsky has measured and recorded his weight (above). I asked what he learned from this. Here's what he said:

I started the tracking because I thought that the very act of measuring (and recording) my weight every day would inspire me to lose weight. I don't think it really worked that way, though. In order to lose weight, I had to take active measures.

What did I learn? I learned that low-carb diets work well in the short-run (as you said), and I also learned that eating low-carb is far, far easier than eating a calorie-restricted diet (which I've tried in the past, before I began recording my weight daily). I learned that regular exercise does lead to weight loss, although I can't rule out a possible confounding factor: I wouldn't be surprised if it turned out that I changed my eating habits at the same time that I started an exercise regime. That's probably what Gary Taubes would claim.

I also learned that the Shangr-La diet works well for me. I think that the current upward trend is caused (at least in part) by the fact that I'm eating breakfast more and more often. I didn't start eating breakfast until sometime last autumn. I will try eliminating breakfast again to see if it reverses the trend. I must say, though, that it's a little difficult to watch my wife eating some scrumptious morning meal while I just drink coffee. The temptation is hard to resist.

I also learned that my weight fluctuates for no apparent reason at all. If you look at the period of roughly April 20, 2008 through mid-July 2008, you'll see a drop of about ten pounds. I remember being surprised and puzzled during this time, because I could not think of any plausible reason why this weight loss would occur. I still don't know. In any case, it was short-lived.

I also learned that I should have kept much better notes about what was going on during those ten years. I'm kicking myself now. I plan on continuing to collect data, and I will try to annotate the data better in the future.

My comments [2]here.

1. <http://blog.sethroberts.net/wp-content/uploads/2011/04/2011-04-20-more-Alex-Chernavsky-weight3.jpg>
2. <http://blog.sethroberts.net/2011/04/22/ten-years-of-weight-measurements/>

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Joe McCue (2011-04-28 11:16:54)

I'd be interested to see this data expanded horizontally, with smaller units on the x axis, particularly in light of the "no reason at all" weight drops. It's possible that the "random" weight drops are related to changes in long-cycle circadian rhythms (on the order of seasons, not days). There are other well-established long-cycle circadian rhythms, and it wouldn't surprise me if increased amounts of daylight slightly altered metabolism in such a way as to reduce energy stores, whereas decreased total daylight levels might be associated with small anabolic basal metabolic changes.

K (2011-04-29 03:29:28)

Hi Seth, I just read this article by Stephan Guyenet in which he talks about body fat set point as a function of flavor. He references a rat study which showed that rats overate if given a chocolate drink but not with strawberry-flavored or vanilla-flavored drinks. <http://wholehealthsource.blogspot.com/2011/04/food-reward-dominant-factor-in-obesity.html>

Seth Roberts (2011-04-29 05:13:19)

Yes, that finding supports my theory. I explain it by assuming the chocolate flavor produced stronger flavor-calorie associations than the strawberry and vanilla flavors. Many theories cannot easily explain it.

## **The Kennedys (TV mini-series) (2011-04-28 17:00)**

[1]This reviewer hated it, [2]this reviewer panned it ("trivializes history"), but I loved it. Never has "behind every great

fortune lies a great crime" (here, a great criminal, Joe Kennedy) been so well dramatized. Yet I came away from this series executive-produced by a Republican with a higher opinion of JFK and Bobby.

When I was in sixth grade, I did a survey in which I phoned random strangers and asked them history questions. To my chagrin, one of my "correct" answers (to the question "what year was the Bay of Pigs?") was wrong. Until I watched this series, I didn't really know what the Bay of Pigs was. Until I watched this series, I didn't know important details of several other big events of the time, such as the struggle to admit James Meredith to the University of Mississippi. Supposedly JFK threatened the Governor of Mississippi with loss of all future NCAA Bowl invitations. "You can't do that!" said the Governor. Surely fictional, but a nice touch.

1. <http://www.hollywoodreporter.com/review/kennedys-miniseries-review-dull-unwatchable-172357>

2. [http://www.newyorker.com/arts/critics/television/2011/04/04/110404crte\\_television\\_franklin?currentPage=1](http://www.newyorker.com/arts/critics/television/2011/04/04/110404crte_television_franklin?currentPage=1)

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lisa (2011-06-18 12:00:17)

I enjoying the first double bill series last night already, it shows the dynasty of the kennedy family as a political determined family unit and yes with good connections and not to forget the kennedy money, the shows great i have empathy for mother Rose with her husbands joe's mistress but then again this was a different time, and tolerating his behaviour for the family, i hope the next series is as good,

### Assorted Links (2011-04-29 05:00)

- [1]This study suggests calcium supplements are dangerous. They can raise your risk of heart attacks. There are probably better ways to reduce osteoporosis.
- Conventional clinical trials overstate the value of drugs, says [2]this paper. One reason is that they compare drug to placebo. In clinical practice, the choice is never drug or placebo; it is drug or other treatment (usually a different drug). "We need to put an end to this kind of gaming of the system" – a system in which standards of evidence grossly favor drug companies at the expense of everyone else.
- [3]Doctors use patient's need for help to remove bad reviews. "The doctors simply make their patients sign a contract handing over the copyright of any review they might publish online afterwards. So, if the patients post any bad review, the company is able to send a DMCA notice demanding that the content be removed immediately."
- [4]The end of mercury amalgam in dentistry.
- [5]paleolithicdiet.com, a new site from the founder of Paleo hacks

1. <http://www.bmj.com/content/342/bmj.d2040.abstract?etoc>

2. <http://www.bmj.com/content/342/bmj.d2175.full>

3. <http://extratorrent.com/article/1240/doctors+started+using+dmca+to+filter+bad+reviews.html>

4. [http://www.youtube.com/watch?v=kRPX1Cbbo\\_c&feature=channel\\_video\\_title](http://www.youtube.com/watch?v=kRPX1Cbbo_c&feature=channel_video_title)

5. <http://paleolithicdiet.com/>

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Glen Raphael (2011-04-29 09:18:12)

I'm sure it's true that clinical studies overstate drug effectiveness, but the conclusion that the FDA ought to be \*more\* restrictive in approving drugs "for wider use" doesn't follow. Maybe the government should be more restrictive in deciding what to reimburse, but banning the use of a drug entirely is a truly terrible way to accomplish cost savings. If we allow more drugs to get approved, (a) there will be some competition between vendors that could drive down prices or improve quality, (b) people for whom the most popular drug doesn't work well will have other options. The idea that nothing should be allowed on the market unless the FDA is well and truly satisfied that it's an unambiguous improvement over what was available before is one of the many reasons drugs are so expensive. (Imagine if anyone who wanted to sell a new breakfast cereal had to prove it wasn't just reasonably safe and nutritious but also was \*better\* than existing cereals that it resembled, as judged by a panel of cereal experts reviewing years of test results. How many cereals would you expect to find on shelves and how good a value would they be to consumers?)

jay cobal (2011-04-29 11:50:43)

Prof. Roberts, you may find this familiar: <http://wholehealthsource.blogspot.com/2011/04/food-reward-dominant-factor-in-obesity.html>

Seth Roberts (2011-04-29 16:13:44)

I don't say improvement should be required for approval. I do think that large comparative studies – experiments that compare the proposed drug to the best existing drugs for the same problem – should be required for approval. And the results of those comparative experiments should be widely-publicized and easy to find – in the packaging, for example.

Jonathan Graehl (2011-05-02 19:26:58)

The 'rapid responses' to the calcium heart attack/stroke risk meta-analysis leave me hesitant to update much. For example, [http://www.bmj.com/content/342/bmj.d2040.abstract/reply#bmj\\_el\\_259724](http://www.bmj.com/content/342/bmj.d2040.abstract/reply#bmj_el_259724) points out that (most of) the studied individuals weren't randomly assigned to supplement vs. placebo groups - they chose their own supplementation regime. It doesn't look like a high quality piece of evidence after 2 minutes' evaluation.

Jonathan Graehl (2011-05-02 19:39:26)

Re: mercury amalgam, what's the evidence of harm? This mainstream (status quo is fine) view is pretty good at tarring the anti-amalgam movement by its association with some quacks - <http://www.quackwatch.com/01QuackeryRelatedTopics/mercury.html> If there are good alternatives that leak \*NO\* mercury (as opposed to "totally healthy small amounts") then of course those should be used for new fillings.

Seth Roberts (2011-05-02 20:47:43)

Quackwatch has zero credibility with me. The amalgam filling essay you link to is typical. He simply leaves out the best evidence of harm. There is a reason mercury fillings are banned in several countries but Quackwatch says nothing about that. Using one of those mercury-vapor measurement devices, I found I had surprisingly high levels of mercury vapor in my mouth – without chewing on anything beforehand. This is one reason I decided to have an amalgam filling taken out. At exactly the same time as the extraction happened, my arithmetic scores (how fast I could do simple arithmetic) started to improve after being stable for months. There were no other obvious changes in my life at the time. There's evidence of harm for you.

Seth Roberts (2011-05-02 21:07:32)

"They chose their own supplementation regime." You have misunderstood the experiment. Subjects were allowed to supplement in addition to the experimental assignment. The data were then analyzed taking the self-chosen level of supplementation into account.

## Scientific Illiteracy at The New Yorker (2011-04-30 05:00)

A week ago, this passage appeared in [1]an article about timing and the brain:

If you're hiking through a jungle and a tiger growls in the underbrush, your brain will instantly home in on the sound by comparing when it reached each of your ears, and triangulating between the three points. The difference can be as little as nine-millionths of a second.

As if people had three ears. "Triangulating between the three points" is gibberish. The between-ear time-of-arrival comparison gives you a direction, not a location (which is what triangulation does). Perhaps it was added by a copy editor. If you delete it, the passage makes sense.

Wouldn't that make a nice newsbreak (one of The New Yorker's column-ending "Funny Usage Mistakes Made by Other Publications")? I tried to submit it but couldn't. So I wrote a Letter to the Editor about it.

In this week's issue, Hendrik Hertzberg, the magazine's main editorial writer, [2]calls the idea that "global warming is a hoax" a "denial of reality". He lumps it with birtherism and the ideas that "evolution is just another theory, on a par with the theory that the earth is six thousand years old." In case you are reading this blog for the first time, I'll say it again: Claims that humans have dangerously warmed the planet are based on climate models that are far from fully verified. That these models manage to fit past temperatures [3]means little because the models have many adjustable parameters. Alas, this was no over-zealous editing mistake.

1. [http://www.newyorker.com/reporting/2011/04/25/110425fa\\_fact\\_bilger#ixzz1KUTQ8kak](http://www.newyorker.com/reporting/2011/04/25/110425fa_fact_bilger#ixzz1KUTQ8kak)
2. [http://www.newyorker.com/talk/comment/2011/05/02/110502taco\\_talk\\_hertzberg](http://www.newyorker.com/talk/comment/2011/05/02/110502taco_talk_hertzberg)
3. <http://escholarship.org/uc/item/5vt0z72k>

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Alex C. (2011-04-30 07:09:12)

Here's another example: [1]Here, a skeptic of psychotropic drugs talks about being compared to an AIDS-denier.

1. <http://www.psychologytoday.com/blog/mad-in-america/201004/storytelling-in-the-age-corporate-medicine-or-more-being-called-aids-denier>

Perfect Health Diet » Around the Web, Spring Arrives in Boston Edition (2011-04-30 09:28:55)

[...] Interesting posts this week: Do people biangulate? Chris Highcock gives us more reason to use a standing desk. A question I never would have seen [...]

q (2011-04-30 09:41:02)

sounds at different heights will reflect on different parts of the ear, and that will modulate the sounds a bit. the brain can absolutely tell the height of a sound and therefore the direction. you can call that triangulation if you want; i bet the algorithm is like it.

Allen K. (2011-04-30 17:28:20)

The reason bats have such weirdly shaped ears is exactly as q describes. There's a whole chapter devoted to them in The Blind Watchmaker. A tiger's growl is low-frequency enough to do the phase difference; high-frequency sounds don't refract around the head so well, and the brain does amplitude difference instead. Mid-range sounds are harder to locate.

Seth Roberts (2011-04-30 18:15:23)

Figuring out the direction from which a sound came narrows down the location of the sound source to a line. Triangulation narrows down the location of the sound source to a point.

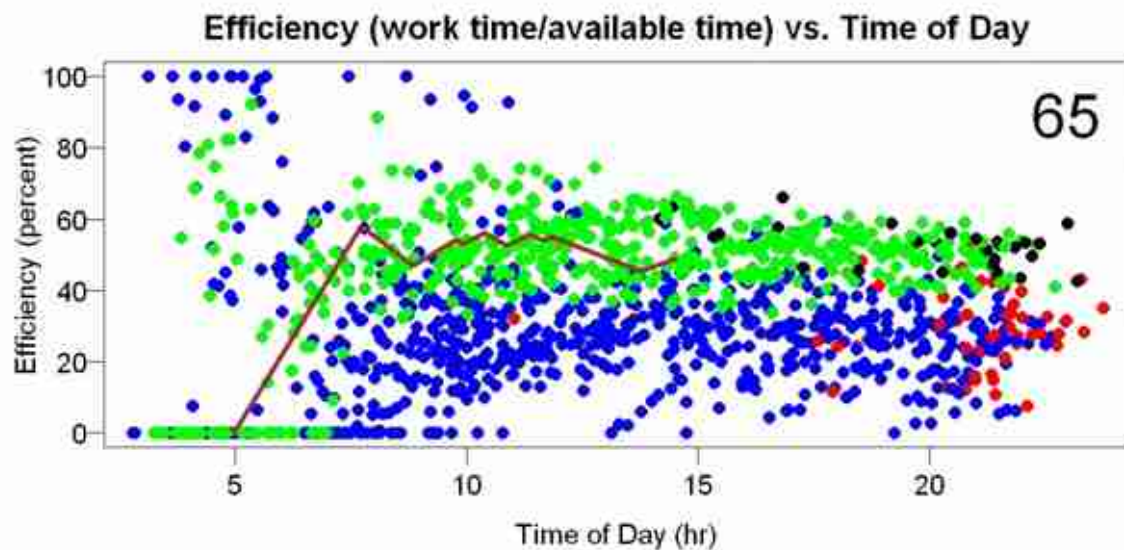
Michael Parker (2011-05-02 10:54:38)

I thought triangulate meant to form a triangle, the two ears being two tips of the triangle and the origin of the sound the third point. To increase hearing sensitivity, a technique I learned was to open my mouth wide, and look at where the sound was coming from. I haven't tested this with rigor, but it seems to work. Opening the mouth seems to give me a more specific location on the vertical axis of origin.

## 6.5 May

### Percentile Feedback and Productivity (2011-05-01 05:00)

[1]



Warning: This post, written for the [2]Quantified Self blog, has more repetition than usual of material in [3]earlier posts.

In January, after talking with [4]Matthew Cornell, I decided to measure my work habits. I typically work for a while (10-100 minutes), take a break (10-100 minutes), resume work, take another break, and so on. The breaks had many functions: lunch, dinner, walk, exercise, nap. I wanted to do experiments related to [5]quasi-reinforcement.

I wrote R programs to record when I worked. They provided simple feedback, including how much I had worked that day (e.g., "121 minutes worked so far") and how long the current bout of work had lasted (e.g., "20 minutes of email" - meaning the current bout of work, which was answering email, had so far lasted 20 minutes).

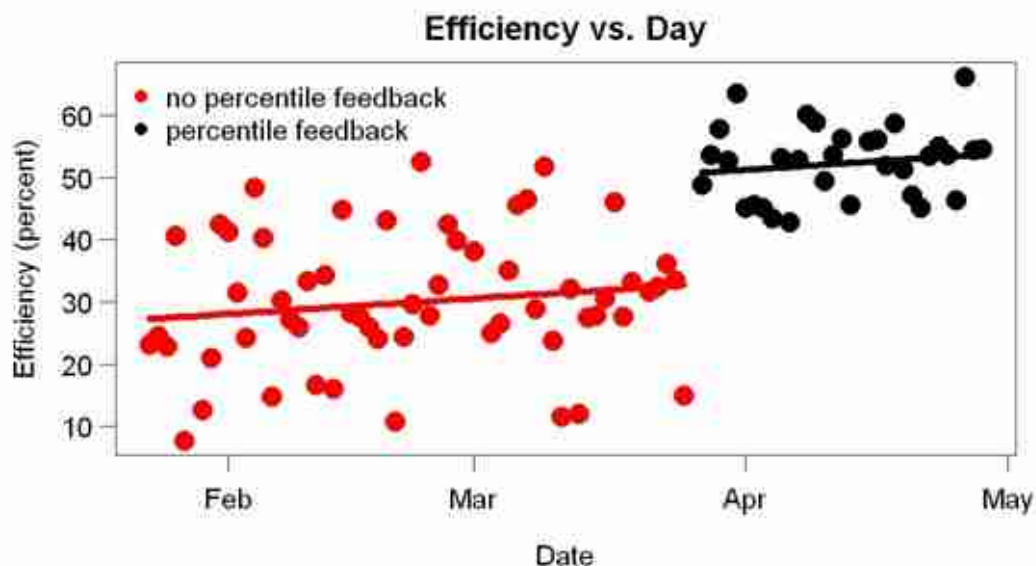
I collected data for two months before I wrote programs to graph the data. The first display I made (example above)

showed efficiency (time spent working/time available to work) as a function of time of day. Available time started when I woke up. If I woke up at 5 am, and by 10 am had worked 3 hours, the efficiency at 10 am would be 60 %. The display showed the current day as a line and previous days as points. During the day the line got longer and longer.

The blue and red points are from before the display started; the green and black points are from after the display started. The red and black points are the final points of their days – they sum up the days. A week or so after I made the display I added the big number in the upper-right corner (in the example, 65). It gives the percentile of the current efficiency compared to all the efficiency measurements within one hour of the time of day (e.g., if it is 2 p.m., the current efficiency is compared to efficiency measurements between 1 p.m. and 3 p.m. on previous days).

I started looking at the progress display often. To my great surprise, it helped a lot. It made me more efficient. You can see this in the example above because most of the green points (after the display started) are above most of the blue points (before the display). You can also see the improvement in the graph below, which shows the final efficiency of each day.

[6]



My efficiency jumped up when the display started.

Why did the display help? I call it percentile feedback because that name sums up a big reason I think it helped. The number in the corner makes the percentile explicit but simply seeing where the end of the line falls relative to the points gives an indication of the percentile. I think the graphical display helped for four reasons:

1. All improvement rewarded, no matter how small or from what level. Whenever I worked, the line went up and the percentile score improved. Many feedback schemes reward only a small range of changes of behavior. For example, suppose the feedback scheme is A+, A, A-, etc. If you go from low B- to high B-, your grade won't change. A score of 100 was nearly impossible, so there was almost always room for improvement.

2. Overall performance judged. I could compare my percentile score to my score earlier in the day (e.g., 1 pm versus 10 am) but the score itself was a comparison to all previous days, in the sense that a score above 50 meant I was doing better than average. Thus there were two sources of reward: (a) doing better than a few hours ago and (b) doing

better than previous days.

3. Attractive. I liked looking at the graphs, partly due to graphic design.

4. Likeable. You pay more attention to someone you like than someone you don't like. The displays were curiously likable. They usually praised me, in the sense that the percentile score was usually well above 50. Except early in morning, they were calm, in the sense that they did not change quickly. If the score was 80 and I took a 2-hour break, the score might go down to 70 – still good. And, as I said earlier, every improvement was noticed and rewarded – and every non-improvement was also gently noted. It was as if the display cared.

Now that I've seen how helpful and pleasant feedback can be, I miss similar feedback in other areas of life. When I'm walking/running on my treadmill, I want percentile feedback comparing this workout to previous ones. When I'm studying Chinese, I want some sort of gentle comparison to the past.

1. <http://blog.sethroberts.net/wp-content/uploads/2011/04/2011-04-27-efficiency-vs-time-of-day.jpeg>
2. <http://quantifiedself.com/>
3. <http://blog.sethroberts.net/category/self-experimentation/productivity/>
4. <http://www.matthewcornell.org/>
5. <http://http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1338316/pdf/jeabehav00165-0047.pdf>
6. <http://blog.sethroberts.net/wp-content/uploads/2011/04/2011-04-30-efficiency-vs.-day.jpg>

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Colin Z. Robertson (2011-05-12 03:09:57)

A few commenters on previous posts have asked for the R code for this system. I was going to add my voice to that chorus but then, hubristic programmer that I am, I thought: I could write that myself. Plus I was looking for a little project that would give me some experience with Mac programming. So I've spent a bit of time the last few days putting together this: <https://github.com/czr/Efficiency> It's currently extremely rough-and-ready. It lacks some of the features of Seth's system and contains numerous bugs. Runs on OS X 10.6. Use at own risk, etc.

Seth Roberts (2011-05-12 04:15:46)

Thanks. I have just finished putting together a workspace with the R code that will be uploadable from my website.

Colin Z. Robertson (2011-05-12 05:40:09)

Great. I'd love to see some of the details of how you do it (and see some R as well, since I'm unfamiliar with the language).



Percentile Feedback Update | Quantified Self (2011-07-19 08:01:48)

[...] March I discovered that looking at a graph of my productivity (for the current day, with a percentile attached) was a big help.... My "efficiency" — the time spent working that day divided by the time available to work — [...]

Calcatraz (2011-08-02 17:00:20)

I've been collecting similar data for the past month, but in a paper-based calendar with half-hour granularity. I am then digitizing it at the end of each week and doing some basic analysis (I watched how much TV?!). This has been useful in pinpointing the big areas I need to work on, but I know it is missing out on the minute-to-minute efficiency boost the constant feedback is giving you. I've tried direct digital entry before, but it has never stuck for more than a few days. I'm hoping I can slowly make the change from paper in such a way that the habit sticks. Do you have any tips? In particular how do you handle entry when you are away from the computer (if ever ;))? Looking forward to the day I have a system like yours happening - nice work!

Seth Roberts (2011-08-03 03:41:06)

When I do a non-computer task that counts as work, I just log starting it at my computer, do it, and then log ending it at my computer. I always found paper to computer transfer difficult and I avoid it as much as possible. I suppose my main tip would be that R is not so hard and you should probably try downloading the workspace and using it. You will need to learn a little bit of R.

## Demand Pricing and the Shangri-La Diet (2011-05-02 05:00)

Demand pricing (also called dynamic pricing) is adjusting the price according to demand. More demand, higher price. It is [1]being considered for movie tickets:

If a movie is hot, the price could rise to whatever the market will bear. For example, I'd have paid \$20 per ticket to see "Avatar" in 3-D when it first opened; maybe others would have been willing to pay even more. As demand becomes clear through lower ticket sales, prices would drop. So "Avatar" might cost \$15 a few weeks after opening, gradually making its way to \$10.

The theory behind the Shangri-La Diet says that body fat is adjusted in a similar way. When food is abundant, the set point (which controls how much fat you have) goes up (= you store more fat). When food is scarce, the set point goes down. This is how many storage systems work, of course; they increase the amount stored when the price is low and decrease the amount stored when the price is high.

Perhaps one day weight control will be explained to children by telling them it is like the price of airplane tickets: "When more people want to go to Los Angeles, the price goes up. When more food is available, your set point goes up . . ."

1. <http://www.latimes.com/news/la-fi-lazarus-20110426,0,6480866.column>

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Miki (2011-05-02 07:19:40)

Seth As you probably know eating a lot of fat will not cause you to accumulate fat (That is my N=1 conclusion anyway). So the price of fat is cheap yet the body doesn't store it. In my opinion accumulating body fat is the body reaction to a perceived

shortage. The signal for food shortage is relatively large consumption of carbs which in ancient times happened only when the preferred food of meat (+ fat) was in short supply.

mk (2011-05-02 07:40:06)

thanks.

Turadg Aleahmad (2011-05-02 08:07:45)

Haven't you got that backwards? More food being available means greater supply, which should have the opposite effect on pricing.

Todd (2011-05-02 16:16:51)

Seth - Just checking...did the comment I sent earlier today get lost? Todd

Todd (2011-05-02 16:24:09)

Seth, I think the analogy between demand price and food abundance is not valid. Food abundance is the analogue of supply, and increased supply makes price ("setpoint") go down, not up. Animals like squirrels and bears tend to get fatter and hoard food in preparation for the scarcity of winter, and shed weight when fresh food is more abundant in summer. The better analogue for demand price is energy expenditure, which tends to make set point go down (at least under certain conditions). I think SLD is an effective diet, but I think your food scarcity argument is not the correct explanation. I proposed an alternate explanation based on the role that flavor plays in psychological conditioning of the vagus nerve and the hormonal control of appetite: <http://gettingstronger.org/2010/02/flavor-control-diets/> Todd

Seth Roberts (2011-05-02 21:15:12)

No it did not...just took a while to be approved.

Seth Roberts (2011-05-02 21:20:16)

Todd, don't confuse anticipatory changes in set point (e.g., bears) with reactive changes. I assure you that abundant food causes the set point to increase – otherwise we would be suffering from an epidemic of thinness.

Seth Roberts (2011-05-02 21:23:57)

Miki, I lost weight by drinking sugar water (carbs). The notion that carbs cause weight gain is wrong.

Seth Roberts (2011-05-02 21:29:22)

Higher set point corresponds to lower price. I'm afraid I don't see the problem, although yeah it is a bit hard to understand.

Alex C. (2011-05-03 09:33:21)

Seth, what is the critical flaw in Gary Taubes's reasoning regarding carbohydrates causing a spike in insulin, which in turn leads to fat accumulation? I know that that theory is inconsistent with your evidence regarding sugar water/Shangri-La, but Taubes marshals some fairly compelling evidence of his own. Not sure what to make of it all.

Miki (2011-05-03 11:05:25)

I doubt that a monotonic sugar or any other diet is a good enough simulation of anything. Low carb diets are causing weight loss (References can be provided on request) and I was merely proposing an evolutionary explanation for this fact.

Todd (2011-05-04 18:10:39)

Seth, I'm not convinced that the obesity epidemic can be blamed on the sheer "availability" of food. Many non-Westerners with abundant food don't have nearly the obesity we have in the U.S. and Westernized society. There must be other factors at play – most likely the unnaturally high levels of factors like fructose and certain fatty acids, which inflame insulin receptors & glucose transporters and disregulate the hypothalamus. In addition, highly flavored, palatable food in combination with calories induces

a magnified insulin response, rapid emptying of glucose and fatty acids from the bloodstream, and consequent overeating in the attempt to normalize blood sugars and fatty acids. Robert Lustig has mapped out the science behind this pretty convincingly. Your experience with drinking sugar water does not disprove Taubes' insulin theory of obesity. The amount of sugar calories you consumed was probably too small to elicit an insulin response strong enough to elicit the kind of blood sugar crash that leads to overeating. Strong, appetizing flavors magnify the preprandial insulin response that ramps up hunger – your flavorless calories tend to suppress this effect. Try consuming much larger amounts of sugar water or carbohydrates and doing it more frequently, and you'll find at some point the blood sugar swings will cause increased hunger and overeating. I've measured my own blood sugar after consuming small carbohydrate meals vs. larger carbohydrate meals and the difference is instructive. Todd

Seth Roberts (2011-05-05 05:09:38)

Todd, Taubes' theory about insulin causing obesity says nothing about a "blood sugar crash that leads to overeating". You say I consumed amounts of fructose too small to produce overeating. I don't remember that proviso anywhere in Taubes (that a mere 300 calories of fructose per day is harmless) – and in any case, keep in mind I lost a huge amount of weight. At the beginning I tried huge amounts of fructose water – much larger than I ended up with. They caused profound loss of appetite, not overeating.

Todd (2011-05-05 07:29:02)

Seth, Taubes' account of the connection between insulin, appetite and eating is carefully laid out in Chapter 24 of *Good Calories, Bad Calories*. Particularly noteworthy in this respect are the experiments of Jacques Le Magnen, including rat studies (on pp. 441-2) demonstrating how more palatable or familiar flavors induce a preprandial first-wave insulin response that "shuts down the mobilization of fat...and stores away glucose...As a result, hunger increases..." My point about fructose is different. Fructose doesn't induce any insulin response, so it is not involved directly in the above mechanism. However, over time, fructose can alter insulin sensitivity by impairing the GLUT4 receptors, and insulin resistance can make lead to overeating as higher levels of insulin (from larger carb/protein meals) are needed before glucose is readily transported into cells. However this is not a short term effect: in the context of a single meal or drink, Taubes' theory would predict that, since you could drink a lot of fructose without triggering insulin, appetite would be reduced since there is no insulin to store away calories. The same is not true for drinks containing glucose or sucrose (half of which is glucose), since large amounts of these will spike insulin and deplete blood sugar.

Seth Roberts (2011-05-06 03:25:31)

"Fructose doesn't induce any insulin response." What?! I have never heard that before.

Todd (2011-05-06 11:37:46)

Yes, it's a well-known fact. Fructose, unlike glucose, does not stimulate insulin secretion from the pancreas: <http://jcem.endojournals.org/cgi/content/full/89/6/2963> However, over a period of weeks, high levels of fructose in the diet can lead to impaired glucose tolerance, insulin resistance and reduced leptin levels: <http://www.ajcn.org/content/76/5/911>. So fructose consumption may ultimately lead to higher than normal insulin levels – when insulinogenic carbs or protein are ingested. This is not due to any direct action of fructose, but rather a gradual metabolic change by which the pancreas begins putting out more insulin to overcome the insulin resistance. Yet consumption of fructose by itself – as in your French sodas – will not cause any appreciable insulin response. Try repeating your French soda experiment, but add 300 calories of glucose or 600 calories of sucrose. I think you may find a different effect on appetite.

Todd (2011-05-06 11:48:00)

Seth, One more thought. Adding 600 calories of sugar to a soda may or may not stimulate rebound hunger, depending on the level of insulin resistance of the individual. For carb-addicted, insulin resistant individuals, I expect that would be sufficient. But I expect there is some level of sugar – it may be 1000 calories, it may be higher – that will set up enough of a swing in blood sugar to lead to hypoglycemic hunger. And this will happen with or without added flavor; flavor only enhances the effect. If a pure flavor-calorie association effect explained appetite and set point, it should not matter how many calories you ingest. And yet I think the fact that SLD works best with a limited dose of calories supports the idea that a small dose of calories will not provoke an insulin response, whereas a large enough dose will. The amount needed to trigger hunger will vary depending on

the insulin sensitivity of the individual.

Seth Roberts (2011-05-07 15:41:45)

Thank you for your comments, which have helped me learn about fructose metabolism. Leaving that aside, the French sodas I drank were not "fructose by itself". They were sweetened with either sucrose or high-fructose corn syrup. Many people have found you can lose weight by drinking unflavored sucrose water. Nor does your theory of why SLD works explain why unflavored oils work and why the sugar water must be unflavored.

Todd (2011-05-10 00:04:55)

Seth, I think my theory does offer an explanation for those facts. It is based upon several observations or hypotheses, leading up to conclusions #6 and #7, which I hope address your objections: 1. Hunger and weight gain are driven largely by having insulin levels above a certain threshold for more time each day than they are below that threshold. That doesn't mean just "insulin spikes" – it's the integrated area above vs. below the threshold over the 24-hour cycle. At the same time, raised insulin levels either pre- or post meal will increase hunger by making glucose and fatty acids less available. (Raised insulin during a meal is no problem). 2. Having insulin resistance (due to obesity) will make it more difficult to lose weight because insulin levels don't drop below the critical threshold as quickly, since the pancreas oversecretes even basal insulin, and hunger is more easily stoked. 3. Glucose (and starches or sugars that metabolize to glucose) and to a lesser extent certain proteins, will raise insulin levels. Small and/or infrequent glucose will not lead to weight, but large or frequent doses will. 4. Fats and oils (in the absence of insulin or insulinogenic carbs or protein) don't provoke an insulin response, and thus don't cause hunger or weight gain. Of course, there are often "stealth carbs" in many high fat foods, so you have to be careful with this one and use pure oils and fats. 5. Flavor, particularly familiar flavors, increase or amplify the insulin response, both before and during the meal, due to classical conditioning. (This has been demonstrated in animals and humans and tied to vagus nerve activation by taste sensors in the nose and palate). This serves a biological purpose in reading the digestive system to "recognize" and prepare for a meal. It is a kind of "feed forward" process control! See the work of Karen Teff documenting this. 6. Unflavored oils induce neither an inherent insulin response (direct stimulation) or a conditioned response (since there is no flavor), so they provide fatty acid energy to the bloodstream with no storage effect, hence they suppress appetite because the fatty acids remain available. 7. Sugar water will suppress appetite only if it is provided (a) in small doses and (b) without flavors that condition a significant insulin response. But large doses of sugar water will raise insulin. There is probably an optimum dose where a small dose of unflavored sugar adds available glucose to the blood stream but is too low to elicit a large enough insulin response to quickly store it away. But adding familiar flavor to the sugar will provoke a learned pre-prandial insulin response. This can especially be a problem when the flavor is very reinforcing and the sugar dose is low – whereby the enhanced insulin response leads to depletion of blood glucose and fat, causing hunger. 8. We perhaps need some critical experiment to decide between your theory of SLD and mine. First, my theory predicts that very large doses of unflavored sugar will not suppress appetite as well as smaller doses, and may actually stimulate hunger later on – there is a point where the SLD benefits "rolls over". I think your theory would not predict this. Second, my theory predicts that larger doses of unflavored oils will continue to suppress appetite, perhaps even better than smaller doses, so long as they contain zero carbs or protein. Furthermore, my theory predicts that even adding some flavor to oil will also work, because the insulin response from the flavor will be minimal combined with zero insulin response from the oil. I wrote about this theory on your forum, calling these flavored non-insulinogenic fat or oil calories "Platinum Calories". In short, my theory predicts different qualitative behavior for carbs and protein than for fats and oils. By contrast, I believe your theory lumps them together as "calories" and predicts no qualitative difference in their action. I hope I did misrepresent your theory; please correct me if I did. But you, or I or anyone can test out my predictions. There may be individual differences, so it would probably be best to have several different people try these experiments. Let me know if you'd like to do a joint test on this. I'm certainly willing to eat my words if I'm wrong. Todd

Seth Roberts (2011-05-10 17:58:37)

Todd, in an earlier comment I pointed out that when I started to drink fructose water, I started with a really large dose – much larger than I ended up with. The really large dose, as I said, produced profound appetite suppression and weight loss, not weight gain. This contradicts your first prediction. You might want to read the work by Israel Ramirez I cite for more examples of what your ideas don't explain.

justin (2011-08-02 05:58:55)

I'm only injecting a comment here as it seems the thread here is dead, but Seth, you note that "when I started to drink fructose water, I started with a really large dose — much larger than I ended up with." Assuming you meant sugar water (that contained sucrose or HFCS or glucose and not just pure fructose), this does not contradict Todd's alternative theory inasmuch as you had yet to develop a strong pre-prandial insulin response to the sugar water. The question is: had you continued drinking large doses of sugar water, would the profound AS continue or not? If it did, then this would be a problem for the insulin response theory Todd has developed here. On the face of it (and admittedly not knowing all the details of your initial experiment), there is no problem with Todd's alternative theory to SLD here.

Seth Roberts (2011-08-02 08:31:15)

It was pure fructose. No sucrose, HFCS or glucose.

justin (2011-08-02 10:54:38)

In that case, it definitely doesn't refute Todd's theory – having no insulin response from fructose, you'd expect profound AS.

Maha (2012-05-03 02:34:28)

Hi Seth, I have recently been diagnosed with insulin resistance. Before this i have been on the diet and have been having the oil regularly for over a month. However i have not lost any weight although my appetite has reduced. Does insulin resistance affect results? M Seth: Sorry, I don't know.

### Assorted Links (2011-05-03 05:00)

- Most epidemiology papers I've seen do too many tests, which has the same effect as throwing away data. However, the criticisms of epidemiology I've seen are often too harsh (e.g., epidemiology is worthless). The next time someone criticizes epidemiology, point them to [1]these three papers on prenatal pesticide exposure and IQ.
- [2]positive reinforcement training improves chimp welfare
- [3]Rajiv Mehta introduces Tonic, an app to help you remember and track recurring events, such as taking medicine. [4]Video.
- [5]The STAR\*D scandal (STAR\*D was a large study of the effectiveness of antidepressant drugs).
- [6]The statin scandal. "The years 2008 and 2009 [were] very disappointing for cholesterol experts and the cholesterol drug industry." Via [7]Steve Hsu. Statins are expensive and have serious side effects – and it is now clear they are close to worthless. My half-stick of butter/day is looking better and better. (Link fixed.)

1. <http://www.newswise.com/articles/view/575813/?sc=c6237>

2. <http://onlinelibrary.wiley.com/doi/10.1002/ajp.20703/pdf>

3. <http://bit.ly/eVPRBU>

4. <http://quantifiedself.com/2011/04/rajiv-mehta-on-tonic-and-experimentation/>

5. <http://www.madinamerica.com/madinamerica.com/Pigott.html>

6. [http://www.jstage.jst.go.jp/article/jln/19/1/65/\\_pdf](http://www.jstage.jst.go.jp/article/jln/19/1/65/_pdf)

7. <http://infoproc.blogspot.com/2011/03/statins-cholesterol-and-medical-science.html>

Joe (2011-05-03 08:06:40)

Quick question, Seth, as I'm not sure if you're still following the earlier butter threads: Is the half-stick of pastured butter now your only daily fat/oil supplementation? Or are you also still supplementing with 2T flax oil? (Or if not flax, what else?) Thank you.

Seth Roberts (2011-05-03 13:23:53)

Joe, in addition to the butter I still take a flaxseed supplement, now use ground flaxseed (66 g/day) rather than flaxseed oil. I grind the flaxseeds myself using a blender and eat it with yogurt. Whole flaxseeds are much easier to store than flaxseed oil, which must be kept cool. I suspect flaxseed oil goes bad faster, too.

Joe (2011-05-03 13:48:28)

Thank you.

JeffR (2011-05-03 18:20:50)

Can you explain what you mean by this? "Most epidemiology papers I've seen do too many tests, which has the same effect as throwing away data."

Seth Roberts (2011-05-04 02:42:59)

By too many tests I mean too many statistical tests – tests of hypotheses. So they get too many false positives. They don't correct for the number of tests done. They do too many tests in two ways: 1. They divide the data into many pieces (e.g., men and women) and test each piece separately. 2. They fail to combine across measures (combine correlated measures into one). For example, testing diastolic and systolic blood pressure separately, even though they are correlated. This has the effect of adding noise (false positives) – thus decreasing the signal to noise ratio. When you throw away data, you decrease the signal to noise ratio.

vic (2011-05-05 23:58:15)

interesting stuff re:epidemiologists doing too many tests, enjoyed that

## **Insider/Outsiders, Chinese History, and the Shangri-La Diet (2011-05-04 05:00)**

Darwin was an insider/outsider; so was Mendel. Insider/outsiders are close enough to their subject to have a good understanding and skills yet far enough away to have freedom. In the case of Chinese history, [1]a journalist named Yang Jisheng has filled that role. He wrote a book called Tombstone (Mubei) about the Great Famine (1958-61). He was able to write what professional historians could not:

Why are you the first Chinese historian to tackle this subject seriously?

Traditional historians [i.e., college professors] face restrictions. First of all, they censor themselves. Their thoughts limit them. They don't even dare to write the facts, don't dare to speak up about it, don't dare to touch it. And even if they wrote it, they can't publish it. And if they publish, they will face censure. So mainstream scholars face those restrictions.

But there are many unofficial historians like me. Many people are writing their own memoirs about being labeled "Rightists" or "counter-revolutionaries." There is an author in Anhui province who has described how his family starved to death. There are many authors who have written about how their families starved.

"If they publish, they will face censure." With respect to weight control, I am an insider/outsider. When I published The Shangri-La Diet, I did not expect censure. My colleagues (other psychology department faculty) wouldn't care

what I wrote about a different subject. To my surprise, I was censured – maybe a better word is denounced – by a nutrition education lecturer in the UC Berkeley Nutrition Department. The woman who denounced me had not seen my book. Based on what a reporter told her, she expressed her opinion of it in an email she sent to twenty people in her department and the chairman of my department. It said, in part:

I did give the SF Chronicle reporter my opinion of the diet making these points:

- one cannot possibly meet nutrient needs on 1200 kcals per day
- sugar and oils are not nutrient dense; they are calorically dense and thus dilute the nutrient density of the total kcal intake.
- 1200 kcals per day is less than the semi-starvation diet used in the only published formal study ever conducted in this country on human starvation (Ancel Keys, 1950)
- human semi-starvation is not a path to health whether one is discussing physical, psychological, or social well-being
- the results of single subject research are applicable only to that subject; they cannot be generalized to others.
- I cannot recommend this diet, in fact, I recommend against it.

In other words: Ridiculous. Her many misconceptions (e.g., she is unaware of many examples of path-breaking self-experimentation in the field of nutrition) aren't terribly interesting. What's fascinating is her decision to trash a book she hasn't read to a large number of her colleagues.

Thanks to Steve Hansen.

1. <http://www.nybooks.com/blogs/nyrblog/2010/dec/20/finding-facts-about-maos-victims/>

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dearieme (2011-05-04 14:34:32)

"the only published formal study ever conducted in this country on human starvation (Ancel Keys, 1950)": set aside the fact that Keys was a crook, what on earth is the import of "in this country"? Isn't that carrying American Exceptionalism a little far?

Joe (2011-05-04 16:08:32)

Blogs need twit filters.

q (2011-05-05 10:47:14)

uh, i don't think she was saying you were nuts. i don't see any attack on your sanity or authority. and i don't see YOU being denounced. i see the diet being denounced, but that is completely different. the difference is that she's addressing what she sees as the facts, not the person behind them.

Seth Roberts (2011-05-05 12:25:19)

By "I was nuts" I meant "my claims were ridiculous". Maybe I am spending too much time in China and my English is going downhill...

Todd (2011-05-05 12:54:59)

Seth, I definitely agree with you. The woman who denounced your diet entirely failed to address the soundness of the supporting theory or data, relying entirely on a superficial view of what the diet was about – suggesting she hadn't really read the book. Furthermore, there is nothing in the SLD diet that forces you to eat 1200 kcal/day or any specific amount of calories; the beauty of the diet is that appetite and food intake will spontaneously adjust, and you can continue to eat normal, nutritionally balanced foods. Starvation means not getting enough nutrients to sustain health, and it may be that a temporary reduction to 1200 kcal/day or even less is fine, as long as you get essential nutrients, especially if you are overweight and

losing excess fat. If you look at Ancel Keys Minnesota Starvation Experiment (see Wikipedia on that) it was far from balanced – consisting of potatoes, rutabagas, turnips, bread and macaroni – a diet very poor in protein, fat, essentially fatty acids and minerals. No wonder the participants lost muscle mass and became food-obsessed and depressed. SLD is a far cry from the MSE! Todd

TalkingRat (2011-05-05 20:20:37)

Actually, I'm surprised a nutrition professor would generalize based on Key's study of young, active males. The assumption that 1560 calories will be starvation level calories is not the case, even for those subjects, whose maintenance level was 3200 calories. Starvation levels were achieved by extreme diet \*and\* a high level of activity, designed to burn 3000 calories. By design, they had a 25 % weight loss over 6 months. It must have been hard on his subjects. IMO, it is a good thing this is the 'only' US starvation study. There is a great deal of variation in calorie calculators, based on weight, age, gender, and level of activity. Even conservative calculators over-estimate my 1200 calorie maintenance level. The nutrition prof would probably call me a liar or a diet cheater, since I'd be gaining weight at her 'starvation' level. Fortunately, my doctor understands that patients are individuals, and people don't always present as a textbook case.

### Assorted Links (2011-05-05 05:00)

- [1]Gary Taubes on bloggingheads. Mentions self-experimentation toward end.
- [2]Beijing bans ancient history. "[China's] leaders are now delegitimizing themselves, one harsh act at a time."

Thanks to David Gerard.

1. <http://bloggingheads.tv/diavlogs/35831>

2. [http://www.worldaffairsjournal.org/new/blogs/chang/Beijing\\_Bans\\_Ancient\\_History](http://www.worldaffairsjournal.org/new/blogs/chang/Beijing_Bans_Ancient_History)

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Thomas Seay (2011-05-05 09:25:39)

The article on China is wishful thinking on the part of the writer. If draconian dialectics were in play, then there should have been a revolution ( a real one, not the "Cultural Revolution") during the 1960s when things were MUCH more repressive than they are today. Of course, there is the phenomenon of "rising expectations" that may seal the CPC's fate. Paradoxically, it is the capitalists of the world who don't really want to see a change in China. They like the cheap labor and absence of independent trade unions.

Seth Roberts (2011-05-05 12:35:38)

Thomas, if I were a CCP official, the last people in the world I would want to piss off would be Beijing University students. This is not rocket science. Yet look what they did . . . CCP officials know something important I don't.

Joseph Moroco (2011-05-06 07:43:30)

He who controls the present controls the past. He who controls the past controls the future. 1984 We shall see if the cp can pull it off. Good luck.

Seth Roberts (2011-05-06 08:30:06)

what about "he who clumsily controls the past"?



Joseph Moroco (2011-05-06 08:45:13)

Exactly the question. Will the connection between clumsy controlling of the past and Mao's "power out of the barrel of a gun" be enough to save totalitarian government? Not a betting man, but my guess would no, but a lot of dead people in getting there.

## **Tucker Max on Paleo: "I Started Feeling So Much Better" (2011-05-06 05:00)**

In [1]this interview, [2]Tucker Max talks about eating paleo.

Once I started doing this, I started feeling so much better. My brain felt like it worked better. Everything about me improved. So I kinda went down the rabbit hole, and I started reading up on diet and nutrition from alternate sources. Art De Vany, Robb Wolf, and Loren Cordain, they didn't invent it but they kinda popularized the concept of paleo eating. I realized that if you're just a normal person, and you have the normal ideas about diet and nutrition, everything you know is wrong.

If you ask me, Tucker's enthusiasm/support for paleo is huge. [3]Max Planck said progress happens funeral by funeral. I say it happens keg party by keg party – college students, more than anyone else, have open minds. A friend told me that when she was a freshman in college, her sociology professor criticized the textbook. Whoa! she thought. Textbooks can be criticized!? She had thought they were beyond criticism. As far as I can tell, American college students respect Tucker more than they respect anyone else. (My Tsinghua students may favor Nassim Taleb.) For example, [4]this recent tweet: "[5]TuckerMax is my idol. and he's on this paleodiet...so i think im going to do it too." I found no tweets about the dietary influence of Michelle Obama ("[6]coolest First Lady ever").

In spite of what the interview was shortened to say, Tucker got the idea of eating flaxseed oil from this blog, especially [7]Tyler Cowen's experience. He wrote to me about it at the time. I posted his comments about dental health ([8]here and [9]here) and sports injuries ([10]here, [11]here and [12]here) under the name Anonymous.

I am pleased to announce that Tucker will be talking at the upcoming Ancestral Health Symposium at UCLA. The title of his talk is::

From Cave to Cage: Mixed Martial Arts in Ancestral Health

Sorry Tucker Max fans, symposium tickets are sold out. But after the conference you will be able to see the talk on the website.

Tucker's latest book is [13]Assholes Finish First.

1. <http://www.adultswim.com/blog/interviews/celeb-nerdy-tucker-max.html>
2. <http://www.tuckermax.com/>
3. [http://www.goodreads.com/author/quotes/107032.Max\\_Planck](http://www.goodreads.com/author/quotes/107032.Max_Planck)
4. <http://twitter.com/#!/MORGANWTF/status/60851334848585728>
5. <http://twitter.com/TuckerMax>
6. <http://twitter.com/#!/badrobot68/status/66218755713286144>
7. <http://blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>
8. <http://blog.sethroberts.net/2007/11/06/omega-3-and-dental-health-even-more/>
9. <http://blog.sethroberts.net/2007/11/16/omega-3-what-happens-when-you-stop/>
10. <http://blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>

11. <http://blog.sethroberts.net/2007/11/25/omega-3-and-sports-injuries-more/>
12. <http://blog.sethroberts.net/2008/02/26/omega-3-and-sports-injuries-part-3/>
13. <http://www.tuckermx.com/blog/details-about-assholes-finish-first/>

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UncleLongHair (2011-05-06 19:03:27)

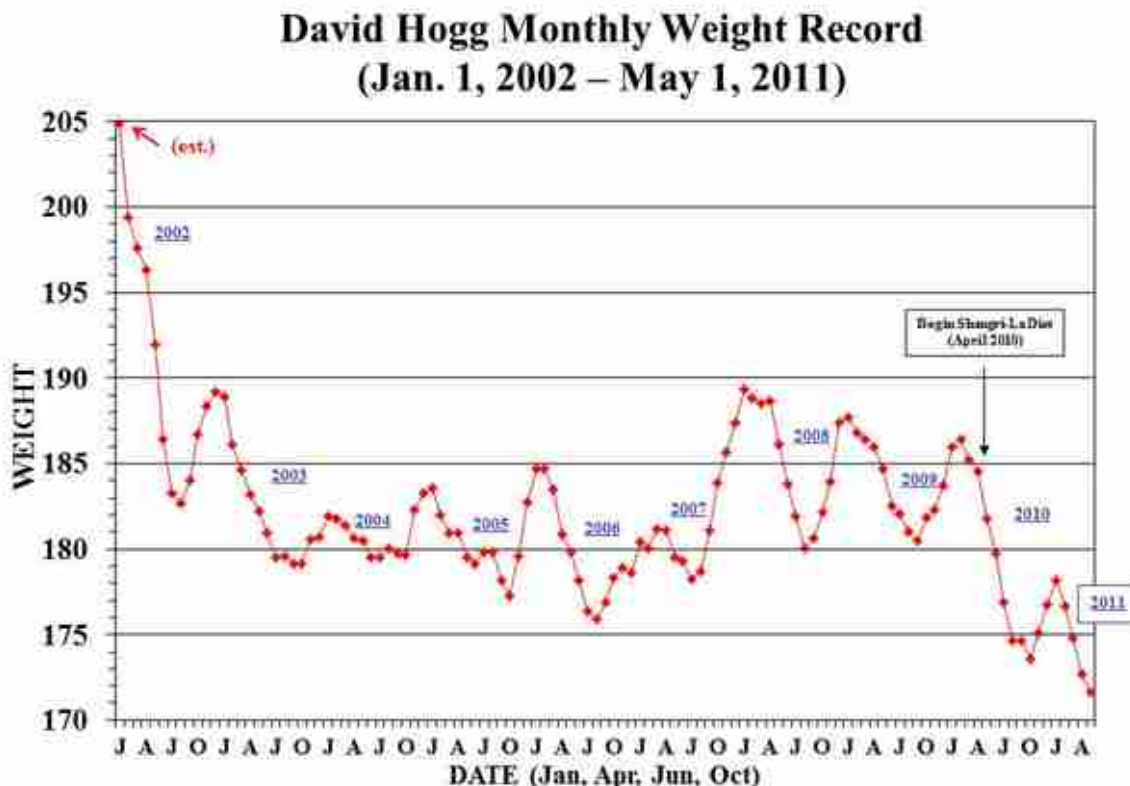
Never seen so many f-bombs and "dude"s in an article about diet and health. Great stuff!

Peggy The Primal Parent (2011-05-09 09:22:09)

So if we want to popularize the Paleo diet all we need to do is convert a few celebrities. Awesome. That should be a way easier job than a grassroots movement. I'm going to see if I can get started on that...

### Nine Years of Weights, More Shangri-La Success (2011-05-07 05:00)

[1]



Seeing [2]Alex Chernavsky's ten years of weights inspired David Hogg, a professor of entomology at the University of Wisconsin, to send me his weight data for the past nine years – see above. Like Alex, he found that the Shangri-La Diet worked where other methods failed.

He is 5' 10" and 63 years old. When his weight reached 205 pounds (in 2002) he decided to take serious action.

He began by increasing how much exercise he did, to "watch what [he] ate," and to take "diet" pills. I asked him about the diet pills. He replied:

On [the advice of a local supplement store owner] I began to take L-Carnitine, which has a variety of effects (including some evidence for weight loss?), and an ephedrine based diet supplement (I don't recall the name of the product). I took the ephedrine until its sale was outlawed (2006?), after which I started taking a NOW Foods product called Diet Support, which lists as major ingredients iodine, chromium, forskolin (from Coleus root), L-Carnitine, extract of Garcinia cambogia, green tea extract, and extract of Uva ursi leaf.

He described "watching what [he] ate" like this:

I started having a fruit smoothy with protein powder and flaxseed oil for breakfast (rather than eggs/cereal and toast) and I cut back from a full sandwich and fruit to a half sandwich and fruit for lunch. I did not modify what I ate for dinner but did attempt to eat less, and I tried to not snack between meals. I think all of this was somewhat successful, although I was hungry a lot and suffered regular setbacks.

He described his exercise like this:

My goal was to get some form of exercise daily. In reality I probably get exercise on average 5 days a week, but this was not too different than what I was doing previously. My primary means of exercise are bicycling and racquetball/squash, but I also golf (walking, not cart) and take a range of classes at a local health club that includes Pilates, spinning, and weight lifting.

In 2002 he increased how much exercise he did.

In 2002, in other words, he began to do conventional weight-loss things (eat right, eat less, and exercise more) plus take diet pills. This lowered his weight from 205 to 180 but not further, even though continued for years. So far the Shangri-La Diet has lowered his weight about 10 pounds. He does it like this:

I started out with sucrose water, after several weeks switched to ELOO (which did not seem to work for me, perhaps because it reminded me of popcorn?), quickly switched to fructose water, which I used exclusively for 6+ months, then switched again to walnut oil (the fructose water made me feel bloated). For the past approximately 4 months I have added fructose to the walnut oil, which I started to use up the large supply of fructose I ordered, but it actually seems to work the best of anything I've tried to date. I drink 2 tablespoons of walnut oil containing about a quarter of a tablespoon of fructose, twice daily.

My ideas about dietary control of the set point made a lot of sense to him.

At one time I believed weight gain or loss was purely a matter of calories in vs. calories burned. Up to age 30 that model seemed to explain my weight. After 30 it was not so simple, with my weight seemingly resistant to sustained loss or (in the short term) gain, and this led me to adopt the view that my weight was governed by an equilibrium or set point. This was easy for me conceptually. My professional interest at the time was insect population dynamics, and the prevailing view was that although insect population densities fluctuate (sometimes widely) through time, for a given species the fluctuations tend to occur around an equilibrium that is enforced through density dependent processes. However, I viewed my set point weight as "fixed", so my paradigm did not explain the upward drift in set point and weight. Your discussion of this, from an evolutionary perspective, made me rethink my idea of a fixed set

point and provided the perfect explanation for the upward drift in my weight (plus the way to convince the brain to decrease one's set point).

His data are an important advance in understanding. They cover a long period of time and allow comparison of the Shangri-La Diet to three popular weight-loss methods: "controlling what you eat", exercise, and various supplements ("diet pills"). No conventional weight-loss experiment covers as long a period of time.

1. <http://blog.sethroberts.net/wp-content/uploads/2011/05/Dave-Hogg-Monthly-Weight-Record-050111.jpg>

2. <http://blog.sethroberts.net/2011/04/22/ten-years-of-weight-measurements/>

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Perfect Health Diet » Around the Web; Say Hey Kid edition (2011-05-07 13:37:32)

[...] [7] Seth Roberts has another long-term weight loss chart: This time the Shangri-La Diet comes out the best. [...]

### **Sterilities of Scale and What They Say About Economics (2011-05-08 05:00)**

You have surely heard the phrase economies of scale – meaning that when you make many copies of something each instance costs less than when you make only a few copies. Large companies are said to benefit from "economies of scale" – so there is pressure to become bigger. Every introductory economics textbook says something like this.

Here's what none of them say: The more of Item X made by one company, the more "sterile" Item X becomes, meaning the less Item X is able to spark innovation. Call this sterilities of scale. You have never heard this phrase – I invented it. (I cannot find it anywhere on the Web.) But it is just as obviously true as the notion that when you make more of something you can make each one more cheaply. If 100 widgets are made by one company, there is going to be less innovation surrounding widgets than if 100 widgets are made by 10 different companies. Sterility of Scale 1: When ten different companies make something, more people are studying and thinking about and pursuing different ways of making it than if only one company makes it. Sterility of Scale 2: The more profitable a single item becomes (due to low cost of manufacture), the more pressure not to change anything – not to kill the goose that lays golden eggs. Sterility of Scale 3: The larger the company, the more employees who care only about preservation of their fiefdom (comparing 10 companies of 10 people each to 1 company of 100 people). See how obvious it is that sterilities of scale exist?

The two concepts – economies of scale and sterilities of scale – are equally elementary. But only one is taught. Study of innovation should be 50 % of economics but in fact is close to 0 %.

This is why Tyler Cowen's The Great Stagnation [1] is so important – because it begins to point to this great gap. Jane Jacobs did so, but had little or no impact. (At a Reed Alumni Gathering I was seated next to a professor of economics. "What do you think of the work of Jane Jacobs?" I asked her. "Who's Jane Jacobs?" she replied.) I think human decorative preferences are so diverse (chacun a son gout, no accounting for taste) for exactly this reason, to avoid sterilities of scale. Diversity of preference makes it easier for many different manufacturers to thrive, which increases innovation. For example, diversity of furniture preference makes it easier for dozens of furniture companies to survive, thus increasing innovation surrounding furniture. Clayton Christensen's The Innovator's Dilemma describes many examples where large companies were much less innovative than smaller companies – so much so they often went bankrupt. Which suggests sterilities of scale can be fatal.

If there were more understanding that ten small things are going to be more innovative than one big thing, I like

to think that scientists would better understand the value of very small research and grant sizes would go down. An illustration of the general cluelessness is [2]someone who wrote to Andrew Gelman complaining that a sample size was only 30.

I started thinking about this after hearing Nassim Taleb discuss economies of scale (e.g., [3]here).

1. <http://blog.sethroberts.net/2011/03/05/the-great-stagnation-part-1/>
2. [http://www.stat.columbia.edu/~cook/movabletype/archives/2011/05/statistics\\_ethi.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2011/05/statistics_ethi.html)
3. <http://www.simoleonsense.com/nassim-taleb-latest-paper-too-big-to-fail-hidden-risks-the-fallacy-of-large-institutions/>

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gwern (2011-05-08 07:21:13)

> If 100 widgets are made by one company, there is going to be less innovation surrounding widgets than if 100 widgets are made by 10 different companies. So, was there more or less 'innovation surrounding' computers when there were dozens or hundreds of companies selling computer processor chips for thousands and hundreds of thousands of dollars, as compared to the handful now selling for hundreds?

Glen Raphael (2011-05-08 07:38:00)

I question sterility of scale #2 in this sense: the more profitable a single item becomes, the more \*potential competition\* is drawn out of the woodwork. More people \*outside\* Apple are spending more money and effort developing tablets now as a result of iPad being so visibly profitable; if it had been less profitable it wouldn't be seen as a valuable niche worth pursuing. All these competitors both provide innovation directly and incentivise Apple to keep innovating - concrete example: Apple \*had\* to add a camera in the latest iPad revision to keep in the running. Sterility of scale #1 also seems problematic in that real standardization of one product within a product category tends to spawn massive innovation in the form of add-on products. When automobiles are all handcrafted, there's not much of an aftermarket business opportunity making things like custom floor mats and spoilers and foglights. The iPhone and iPad may themselves be pretty "sterile" but the ecosystem they created in cases and apps and accessories is vibrant and would be much less so without a stable base to work on.

Glen Raphael (2011-05-08 07:51:00)

Sterility of scale #3 is much more plausible than the others. Though there are a couple of conflicting tendencies. One is that companies generally \*get\* really large by providing value to customers. To the degree that empire building interferes with profitability, it prevents company growth; the fact that one company won out suggests - doesn't prove, but does suggest - that it's the most efficient provider \*despite\* the tendency empire building. Still, that one is a real phenomenon. The term you might be looking for is "diseconomies of scale". [http://en.wikipedia.org/wiki/Diseconomy\\_of\\_scale](http://en.wikipedia.org/wiki/Diseconomy_of_scale)

David (2011-05-08 07:52:18)

Interesting. We agree and are in the process of trying to integrate innovation into our curriculum. There are some recent books by Baumol that are looking at this. And, there's Clayton Christensen's work as well. But, it's a challenge. In order for students to be able to "think outside the box," they need to know what's in the box. Though innovation certainly isn't a center of most micro theory, I disagree that this question hasn't been studied. There is a huge empirical literature on "the Schumpeter hypothesis," which is roughly that large concerns are responsible for innovation. His conjecture is that large firms get large because they are doing something right, and, absence some significant barriers to entry, they are going to have to continue to remain innovative or they will get caught by their rivals. Wal-Mart might be a good instance of a tremendously innovative

firm that had its profitability cut out from underneath it because its rivals mimicked its cost-saving measures. If you type "Schumpeterian hypothesis" into google scholar, you'll get plenty of discussion of this very topic. Here's where Schumpeter makes his case: [http://www.sp.uconn.edu/langlois/Creative %20destruction.htm](http://www.sp.uconn.edu/langlois/Creative%20destruction.htm)

David (2011-05-08 07:55:17)

Oh, and this, [www.schumptoberfest.com](http://www.schumptoberfest.com)

Glen Raphael (2011-05-08 09:20:31)

Sterility #1 might be best rephrased as "market competition encourages innovation", a concept that \*is\* taught. Sterility #2 is one of a variety of pitfalls profitable companies can fall into; the chief check on this is...market competition. Sterility #3 is one of a variety of pitfalls that can eventually limit the growth of large firms, aka "diseconomies of scale". Again, the chief check on this is market competition. So you could summarize all of these as "competition - including \*potential\* competition - encourages innovation." That is taught as the conventional wisdom. Economics tries to explain why the world look the way it does, so one learns that: (1) Competition produces variety and innovation (2) Economies of scale (including specialization of labor) produce large firms that reduce costs (3) Diseconomies of scale ultimately limit the size and/or effectiveness of large firms. To the degree that people don't learn (3) or insufficiently appreciate (1), there are calls to forcibly break up large firms. (Many such calls are misguided because they under-appreciate (2) or don't realize that government regulators themselves are also subject to (3).)

Sean Estey (2011-05-08 09:49:22)

Good stuff. As soon as I started reading this, I thought of NNT. In the updated version of The Black Swan, he goes further into depth on the concepts of fragility/anti-fragility that you linked to. I love how he uses mother nature as a model that economics should strive to follow. The hono genus has survived for 2.5 million years not because there was a premium placed on efficiency, but because there was an emphasis on redundancy: 2 eyes, 2 lungs, 2 kidneys, etc. We could have traded some of these redundant features for a bigger brain, more muscle mass, etc, but at some point you need to make some trade-offs to create a robust system resistant to natural shocks. Modern economics could learn a lot from mother nature.

Jan Leeman (2011-05-08 09:59:35)

I see evidence of sterilities of scale in the local public school districts in California. The small school district in a nearby town with just a few schools frequently runs single class experiments (e.g. does a multi-grade class work better for students?), but the large, well-funded district that my kids attend is proud of their ability to have every teacher doing the same lesson in every classroom every day. I think that Sterility of Scale 3 is applicable in this case.

Seth Roberts (2011-05-08 13:16:10)

Gwern and Glen, yes, a tiny fraction of products benefit from standardization – sometimes these are called "producer's goods" (e.g., nuts and bolts, chemicals for industrial processes), sometimes "platforms", sometimes "two-sided markets". If that's what you mean, I agree. That is another basic point about innovation missing from introductory textbooks. I am not saying sterilities of scale are the only thing that differs between large and small companies. In the case of platform goods, what you say is also important.

Seth Roberts (2011-05-08 13:25:39)

Here's the first sentence of the Wikipedia article you link to: "Diseconomies of scale are the forces that cause larger firms and governments to produce goods and services at increased per-unit costs." Nothing about innovation. The whole article mentions innovation in only one section. Of course economists know that innovation exists; they simply pay very little attention to it. (Just as epidemiologists know that the immune system exists but pay very little attention to it.) The Wikipedia article is one more example.

Seth Roberts (2011-05-08 13:38:06)

Thanks for the Schumpeter link. If I were trying to teach about innovation to college economics students, I think I would tell

stories about how a few products began. Then I would say: "You're lucky. Economists haven't studied innovation very much. They haven't come up with basic rules about what makes innovation large or small. So you can. I want you to study several examples of how products began and from those examples come up with testable generalizations about innovation." I might give the students links to stories of how products/services began or I might require them to find the stories themselves. This is a lot more exciting and educational than the usual stuff that is taught in intro economics and in this sense it is easier to teach about innovation than the more conventional stuff.

Glen Raphael (2011-05-08 16:33:56)

Have you read *The Wealth Of Nations* \_? Adam Smith had a very different model of innovation than you do and emphasizes sources of it that you might have overlooked. Consider Smith's example of a pin factory. Suppose we have ten firms making pins from scratch, where each person does *\*all\** the work involved in making each pin. You seem to imply that should be good for innovation because ten people will have ten different worldviews, ten different backgrounds. But now suppose one larger company applies assembly-line technology to making pins. One of the ways you get economies of scale is that at the new larger firm there's likely to be one guy who *\*all he does\** is sharpen, and he does this full time, hundreds or thousands of pins a day. Since all he thinks about is pin-sharpening and since he does so much of it, he *\*gets better\** at it. He is likely to invent new innovative processes to make pin-sharpening more efficient. Ten companies making 1/10th as many pins - or 100 companies making 1/100th as many - are not in a position to do this. For a firm that makes a few pins a day, sharpening is such a small part of the overall task/job that realistically they'll never make it much more efficient. Ten people take a lot longer to climb a learning curve than one person doing the same task ten times as often. Market concentration thus can enable *\*more\** technical innovation. Concentration of capital at industrial scale makes investments possible that have huge returns which weren't possible for smaller-scale producers to achieve. So that is one story economists tell about how innovation occurs. Now, it's not *\*quite\** clear what you mean by "innovation" in this context - does accomplishing the exact same goal more cheaply count? - but in the way economists define it they do have a story to tell. In their story (in which cost savings *\*do\** matter), economies of scale tend to matter a lot *\*more\** than diseconomies. It's not clear to me that they're wrong to think this. If you think they are, you need to make more of a case.

James (2011-05-08 19:48:48)

"Learning by doing" is a related concept in economics. Firms learn how to produce things better and more cheaply as they produce more, but there are diminishing returns and we don't learn as much from the 1000th unit as the 10th. [http://en.wikipedia.org/wiki/Learning-by-doing\\_%28economics%29](http://en.wikipedia.org/wiki/Learning-by-doing_%28economics%29) The idea was applied to Intel and microprocessors here, check out the graph on page 12: <http://www.antitrustinstitute.org/sites/default/files/scherer%20commentary.pdf>

Glen Raphael (2011-05-08 20:53:05)

Economies of scale are something you can measure or calculate. In [1]Smith's example, he ballpark-estimated that a combination of division of labor and learning-by-doing led to pins being hundreds or thousands of times cheaper than they otherwise would be. Now that we can calculate much more precisely how much innovation we get from scale, this helps economists explain questions like: "Why do firms exist at all? Why is there trade between nations? How do countries with relatively free trade prosper?" Diseconomies of scale seem a lot smaller in magnitude than that, but do help to answer second-order questions such as: "Why don't firms just keep growing and consolidating until one firm produces everything? Why don't we just let the government produce all the goods and give them away for free?" When you say "a tiny fraction of products benefit from standardization", I can't think of any products offhand that *\*aren't\** in that "tiny fraction". Standardized cars are a platform based on standardized tires which are based on standardized rubber...standardized computer chips enabled innovative computers, standardized computers enabled innovative software, then standardized software itself became a platform... standardized food staples made food cheaper and safer, standardized electronics made fires less likely, standardized thread made standardized cloth made clothes in standardized sizes and shapes... So: what products are you thinking of that don't benefit?

1. [http://www.debunkingeconomics.com/Marx/Smith\\_Pin.htm](http://www.debunkingeconomics.com/Marx/Smith_Pin.htm)

Seth Roberts (2011-05-08 21:33:05)

By "standardization" I meant being almost identical - as produced by one company. You are using the term more loosely.

I don't know what you mean by "standardized cars". In any case, non-platform products include all sorts of food, all sorts of clothes, all sorts of cleaning materials, all sorts of decorative stuff, all sorts of art, all sorts of furniture. The innards of many products ("producer's goods") are standardized, of course, as I said – tires, rubber, and so on. If you simply mean that elements of standardization touch most products – sure, language will do that. One does not need large companies to produce that effect – to make loaves of bread vaguely the same size, and so on. Language is involved with the sale of most products, and it enforces a certain amount of uniformity – a "loaf" of bread is taken to be a certain size. Likewise, uniformity among producer's goods (e.g., loaf pans) produces a certain uniformity among the final products. That will happen regardless of the size of bread companies. So long as bread companies don't make loaf pans. "Now that we have measured how much innovation..." – I see no measurement of innovation. I see a measurement of cost ("thousands of times cheaper"). I find nothing about specialization improving/increasing innovation in Adam Smith. Perhaps that is true, but as far as I can tell Smith missed it completely. I have never heard any economist say that specialization improves/increases innovation.

Glen Raphael (2011-05-08 23:30:40)

Specialization of labor *is* itself an innovation; that was one of the core theses of WoN. (Though he didn't use the exact word "innovation". Rather he referred to "improvements", including but not limited to "[1]improvements in the productive power of labor".) Finding a better production process that results in goods being thousands of times cheaper both *is* innovative and also *enables* additional innovation in all the downstream products. On cars: From the Model T onward, standardization in how cars are constructed on a large scale enabled vast improvements in quality and maintainability compared to when car-building was a craft, and also enabled a huge aftermarket in things like better tires or speakers or replacement headlights. In short, cars became a platform. Even art benefits from standardization of canvases and paint; furniture from standard fittings and cuts of wood and so on. (Human decorative preferences don't actually strike me as particularly diverse. There are only so many common themes/styles. If they were truly diverse, Restoration Hardware and Ikea wouldn't have been so successful)

1. <http://www.gutenberg.org/files/3300/3300-h/3300-h.htm#2HCH0001>

Seth Roberts (2011-05-08 23:42:44)

The question that interests me is whether Smith said anything about what makes innovation more or less likely. As far as I know he did not.

## **Meat Consumption and Weight Gain: Health Journalism Done Right (2011-05-09 05:00)**

[1]This article by Eoin O'Connell reports [2]a study in the American Journal of Clinical Nutrition (the top nutrition journal) that found a correlation between meat consumption and weight gain: The more meat you ate, the more weight you gained over five years. Meat is fattening! reported several newspapers.

Mr. O'Connell did something unusual for a health journalist: He thought for himself. I don't mean he applied a formulaic criticism (e.g., "correlation does not equal causation"). That's not thinking, that's knee-jerking. Mr. O'Connell read the paper. And he noticed an interaction: The correlation between meat consumption and weight gain depended on activity level. The study involved about 400,000 people. The researchers put each person in one of four activity levels: inactive, moderately inactive, moderately active, and active. There was a correlation between red-meat consumption and weight only for the two most active groups (moderately active and active). The original article reported that this interaction was significant:

The relation between red meat and weight gain was also stronger in physically active subjects compared with moderately inactive or inactive subjects (P values for interaction = 0.02)

The obvious implication of this interaction, as Mr. O'Connell says, is that meat caused muscle gain. Weight differences between more-meat and less-meat eaters were due to differences in muscle mass. This puts an entirely different spin on the results. The alternative explanation is quite plausible. I once had a grad student who was a vegetarian. When he was an undergrad, he told me, he and his roommate would go to the weight room and do similar sets. His room-



mate, who ate meat, rapidly gained muscle; he did not. Of course, meat = animal muscle.

Mr. O'Connell continued to the really interesting part of his article:

Perhaps not so surprisingly, the consideration that muscle is a form of weight gain does not appear in the newspaper articles but much more surprising is the fact that it does not appear in the original journal article either.

The AJCN article has fifty authors. Not one of them, apparently, noticed this all-important point! Nor did the reviewers for this prestigious journal. The article concludes: "Our results are therefore in favor of the public health recommendation to decrease meat consumption for health improvement." No, they're not, if the more meat, more muscle explanation is correct.

Most prestigious journal. Fifty authors. Huge expense. Total F-up in the sense that the final conclusion is probably wrong. (To be fair, the paper has plenty of value in other ways.) Congratulations, Mr. O'Connell, for noticing.

1. <http://www.significancemagazine.org/details/webexclusive/1044471/Meat-consumption-and-weight-gain.html>

2. <http://www.ajcn.org/content/92/2/398.abstract>

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Lemniscate (2011-05-09 07:01:21)

It's a good example of how lazy the thinking and methodology of scientists can get once prejudices are well established. Red meat is seen as suspect and weight gain is assumed to be fat mass gain. It would have been nearly as easy to measure change in waist circumference, which would have given a better indication of metabolic risk. The conclusion is applied generally to "weight management", when all they're justified in saying is that active people could consider reducing red meat intake if they want to maintain a lower overall body mass. They could also conclude that inactive people shouldn't worry about their red meat intake's effect on their mass, but that wouldn't chime with public health prejudices. The incentive to bolster the public health message appears stronger than the scientific spirit, unfortunately.

Mark (2011-05-09 07:29:15)

Good catch! This is a great post!

chuck (2011-05-09 08:31:34)

Great find. This is the danger of only assessing weight rather than looking at body fat percentage. i believe the science has evolved enough to be able to use this measurement rather than weight or BMI. especially when exercise is involved in the intervention.

Tyler @ Evolutionary Health Systems (2011-05-09 10:32:12)

That's astounding. Fifty authors and nobody caught that... Wow.

Thomas Seay (2011-05-09 10:48:40)

Apparently this point never occurred to the people who came up with BMI either. I am 6'1 210 pounds but a competitive Olympic Style Weightlifter. I come up as overweight just like the other guy who is 6'1 210 pounds, sits on his couch all weekend watching reruns and hasn't done any exercise since 6th grade PE.

Aaron Blaisdell (2011-05-09 12:43:44)

@Thomas, Agreed! It's like measuring a bag of nickles to determine how rich you are. Doesn't matter if they're real copper-nickle clad nickles or lead-wood fake nickles. Same logic should be levied at standard calculations of BMI which is

agnostic to where the weight is coming from, fat versus muscle (it's both, of course, but the ratio is what really matters and is not determinable from conventional measures).

q (2011-05-09 14:32:26)

i don't quite understand though - why is more muscle not as bad as more fat?

Seth Roberts (2011-05-09 15:27:40)

obesity is almost always due to lots of fat, not lots of muscle. obesity is correlated with higher risk of many health problems.

Chris Sturdy (2011-05-09 19:23:44)

This is a great catch, Seth! Too bad more journalists weren't like this.

Pete Ballerstedt (2011-05-10 05:15:48)

Thank you for this post, Seth! Amazing ...

Linzi Jayne (2011-05-10 05:50:39)

Definitely food for thought! I am trying to gain weight at the moment and it isn't easy; so any related info' is much appreciated! I have been charting my (minimal!) progress on my blog <http://www.underweight-arewewhatweeat.blogspot.com>

Peggy The Primal Parent (2011-05-10 07:55:12)

Logical inconsistencies abound in medical literature, don't they. How bout the cholesterol myth and the fat makes you fat myth. Mark at MDA just posted today about how CLA supplements aren't beneficial after all. Seriously, the nutritional scientists don't know what they're doing most of the time. I think finding a wholly valid, well executed study would be a bigger feat!

Christopher Burd (2011-05-10 12:44:17)

"That's astounding. Fifty authors and nobody caught that... Wow." With 50 authors, I expect there was a 3- or 4-level hierarchy within the project, and a big budget. So, you can imagine an underling being afraid to criticize his boss and boss's boss, people he's unlikely to have collegial relations with. A more senior author ("manager" is perhaps the accurate term) might not want to risk discrediting the whole effort and earning the wrath of his peers (again, people he may not have true collegial relations with). I wonder if a team of 15 might be more likely to self-correct, since team members (even of different ranks) might be more likely to know and respect one another.

Seth Roberts (2011-05-10 15:24:39)

Christopher, yes, psychologists have studied this sort of thing. The effect is called "diffusion of responsibility". The more people who might take action (such as point out a mistake) the more passive each person becomes.

Crossfit WOD :: Crossfit Dublin (2011-05-10 16:16:35)

[...] Meat Consumption and Weight Gain \*post thoughts to comments Categories : Uncategorized [...]

Greg (2011-05-11 06:42:59)

In defense of the 50 authors, probably 40 of them never read the article they authored

## **Liberation Therapy: Contradictory Evidence (2011-05-10 05:00)**

As you may know, an Italian surgeon named Paolo Zamboni has proposed that multiple sclerosis (MS) is often due to poor blood drainage from the brain. Improving drainage, he and his colleagues found, reduced MS symptoms. The surgery is called liberation therapy. From [1]this article (thanks, [2]SB) I learned of evidence contradicting Zamboni's

findings:

The studies were independently conducted case-control experiments designed to determine whether abnormal out-flow of blood in the head and neck is actually a defining feature of MS. Two of the studies appeared to confirm Zamboni's observations; the pooled results identified 31 cases of CCSVI out of 35 MS patients and none in 45 matched controls. Yet three other studies, from Germany, Sweden and Holland, with a pooled set of 97 MS patients and 60 matched controls, found no significant evidence of a difference in blood flow between those with MS and those without. In fact, when Doepp et al. attempted to replicate the Zamboni trial they did not find a single case of CCSVI in either the 56 MS patients or the 20 controls examined.

Wow. What intense disagreement. The failure-to-replicate studies used different ways of measuring blood flow so the disagreement is less stark than it appears from this description. But it is still remarkable.

This is highly newsworthy. I can't think of another case where two different labs have gotten such different results. Unfortunately the article is appalling in its one-sidedness (e.g., liberation therapy is said to have "known risks, unknown benefits").

1. <http://onlinelibrary.wiley.com/doi/10.1111/j.1740-9713.2011.00478.x/pdf>

2. <http://blog.sethroberts.net/2010/11/27/examples-of-ms-liberation-therapy/#comment-914703>

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JeffR (2011-05-10 17:08:18)

How "highly newsworthy" this is depends on how much Zamboni isn't a crackpot. If it turns out liberation therapy is bunk, then of course we would expect results like Doepp's. And the studies in support of Zamboni were wishful thinking, perhaps consciously, perhaps not. This is precisely why controlled studies or observational studies with  $n > 1$  are so important. Anecdotes are fine for generating hypothesis but I'm always concerned with your (Seth's) enthusiasm for their results. Especially when this runs counter to what people in biology or public health are saying. Being right about some things discovered with self experimentation (probiotics, acne?) doesn't mean every self experimenter has discovered a medical breakthrough. p.s. I haven't read any of the papers.

Todd (2011-05-10 17:39:25)

My wife has multiple sclerosis and she has been evaluated by Dr. Michael Dake, a U.S. colleague of Zamboni's, for possible evidence of CCSVI. We'll find out the results next week. I too am struck by the stark differences in these different studies and am obviously determined to get to the bottom of what might explain the diametrically opposed conclusions. At this point, I have two hypotheses: (1) Zamboni's diagnostic method was not truly "blind" but involved an element of looking for what he wanted to see; (2) the diagnosis is objective and "blind", yet complex and subtle, and the measurement of "blood flow" is sensitive to the particular parameters used or to control of possible interfering factors – so that only those with the right technique or understanding can make the correct diagnosis. This second possibility is not uncommon in science – analytical methods are often riddled with artifacts or uncontrolled variables that mess up the analysis if you are not experienced. I'm hoping that the explanation is #2, but I'm realistic enough to realize it could be #1. And my wife and I don't want to take any chances on a procedure which is based upon a faulty hypothesis or wishful thinking. Todd

Seth Roberts (2011-05-10 17:52:43)

JeffR, a vast number of people (millions?) have taken Zamboni's results seriously. That's what makes it newsworthy. Were they all fooled? Or did the non-replicating research teams do a poor job? Why this disagreement shows "the importance of controlled studies or observational studies with  $n > 1$ " I don't understand. Both sides of this disagreement have such studies. To persuasively criticize self-experimentation, you need to point to self-experimental conclusions that turned out to be wrong.

This is unrelated to that.

Seth Roberts (2011-05-10 17:53:48)

Todd, keep in mind how hard it is to measure blood flow.

James A Donald (2011-05-10 19:34:30)

I have been following this debate for some time, and it is apparent that one side, or the other side, is lying. The theory that the proponents of liberation therapy are telling the truth involves more liars and a larger conspiracy than the theory that the opponents of liberation therapy are telling the truth. On the other hand, it seems obvious to me that those producing evidence against liberation therapy were committed to getting the results that they got, before they got these results, so I am inclined to think that liberation therapy does work, and its critics are lying, even though this theory requires a larger and more evil conspiracy than the converse theory.

Seth Roberts (2011-05-10 22:41:09)

If Zamboni were making all this up, I think we would have heard about it from jealous colleagues. I think that is impossible. On the other hand, I think measurement of blood flow in the brain is really difficult thus allowing the opponents to get the results they prefer – they simply do bad measurements. And since they like the results, they don't look further. I think the contradictory papers reflect bias. If the scientists who found contradictory results really cared about the question, they would have flown an MS patient in whom Zamboni et al. had detected CCVSI to their lab to make sure they could find CCVSI when it is present.

John (2011-05-11 05:54:54)

Acupuncture is similar as far as researchers drawing very different conclusions. Roughly speaking, all Asian researchers get positive results and Western researchers do not. More detail [1]here.

1. <http://www.johndcook.com/blog/2011/01/30/acupuncture-and-confirmation-bias/>

Ulysse (2011-06-18 03:46:15)

All this conversation about the right method of taking ultrasound pictures is misleading. The golden standard for finding venous obstructions is old fashioned venography accompanied by IVUS. But it's the underlying question that matters: Is MS of autoimmune or vascular origin? Under this perspective, Zamboni is hardly the first one to talk about blood flow problems. Putnam, Prineas, Behan, Lumsden and Franz Schelling have almost proven that MS is NOT autoimmune.

## **To Kill A Mockingbird Joke (2011-05-11 05:00)**

After the fantastic success of To Kill a Mockingbird, its author, Nelle Harper Lee, never wrote another book. She gave her last interview in 1965. A BBC documentary recently visited her hometown and recorded this:

They say if you meet her [Harper Lee] and don't recognize her, she is not happy. If you meet her and recognize her, she is not happy.

dearieme (2011-05-11 11:18:57)

Then she wouldn't like me: I've never read it.

Jesus Sanchez (2011-05-11 14:56:41)

I read this book in my quest to read Penguin's Top 100 Classics. I'm glad I picked this book early on because it set the tone for what I was looking for in a "classic". Honestly, I can understand why she never wrote again. St. Thomas Aquinas never wrote anything after he had a mystical experience. He said that after God showed him what He had, there was nothing else worth writing.

Seth Roberts (2011-05-11 16:03:00)

yes, To Kill a Mockingbird is about a hundred times more readable and enjoyable than most classics.

Allen K. (2011-05-12 16:51:01)

This reminds me of Michael Caine's line to his co-stars, before filming love scenes: "If, when we film, I have an erection, I apologize. If, when we film, I do not have an erection, I apologize."

John S. (2011-05-13 07:17:26)

I liked To Kill A Mockingbird, both the book and the movie. However, over the years I have come to have a more jaundiced view of this type of entertainment, the goal of which seems to be to make white people feel good about themselves. The second half of the 20th century saw an epic struggle for civil rights in this country. Why is it that when this era is portrayed in film, the heroes are always white? Why are the black characters usually so one-dimensional? This continues to the present day in films like The Blind Side, which again portrays affluent white folks coming to the aid of poor blacks. I don't know, it just seems patronizing. Like the only way black people can get ahead is if a noble white man comes along to help them out.

### **Seth Roberts Interview About Self-Experimentation (2011-05-12 05:00)**

For an article about self-experimentation and self-tracking to appear in Men's Fitness UK this summer, Mark Bailey sent me several questions.

In what ways have the results of your self-experimentation directly affected your daily life e.g. health / work / lifestyle changes?

1. Acne. My dermatologist prescribed two medicines. I found that one worked , the other didn't.
2. Weight. Found [1]new ways to lose weight (e.g., [2]nose-clipping).
3. Sleep. Found [3]new ways to sleep more deeply, avoid early awakening (e.g., [4]one-legged standing).
4. Mood, energy, serenity. Found that [5]morning faces make me more cheerful, more energetic, and more serene.
5. Productivity. After I started to track when I was working, I discovered that [6]a certain feedback system made me work more, goof off less.
6. Inflammation. Self-experimentation led me [7]to take flaxseed oil. In the right dose – which I determined via self-experimentation – it greatly reduces inflammation. As a result, my gums are pink instead of red. They no longer bleed when I floss.
7. Balance, reflexes. [8]Flaxseed oil improved my balance and quickened my reflexes – I catch what I would have dropped.
8. Blood sugar. I found that [9]walking a lot improves my blood sugar level.

9. Mental clarity. I found that [10]flaxseed oil and [11]butter improve how well my brain works in several ways.

Changes 1-6 are/were obvious. The rest are more subtle.

How long have you been self-experimenting?

About 35 years.

What are the main advantages of self-experimentation e.g. yields results specifically relevant to the individual and engages them directly in the process of finding solutions?

My self-experimentation has had three benefits:

1. Find new ways to improve health. Ways that no one knew about. I mentioned most of them earlier: New ways to lose weight, sleep better, be in a better mood, and so on. I find them to be much better (safer, cheaper, more powerful) than what was already available.
2. Test health claims made by others. I've done this many times. My interesting self-experimentation started when, as I said earlier, I measured the efficacy of two acne medicines my dermatologist had prescribed. I found that Treatment A worked and Treatment B did not work, which was the opposite of what I had believed. It's been claimed that drinking vinegar causes weight loss. I tried that, it didn't work. Many people say that exercise improves sleep. I found that aerobic exercise made me fall asleep faster but did not reduce early awakening. The most dramatic "test" of health claims made by others came when I discovered that butter improved my arithmetic speed – which meant it was likely that butter improved overall brain function. I took this to mean that butter was good for the rest of the body – in contradiction to the official line that saturated fats are bad for us.
3. Find best "dose" of a treatment. Many people have claimed that flaxseed oil is beneficial. I found they were right. I tested different amounts/day and found the dosage that produced the most benefit. The best dose (2-3 tablespoons/day) was much larger than you would guess from the size of flaxseed oil capsules and the suggested dose on bottles of flaxseed oil capsules.

What do you consider are the potential weaknesses e.g. lack of clinical precision / possible placebo effect?

Is too-high expectations a weakness? You could spend a lot of time and not learn anything useful. Which isn't so much a weakness as a fact of life.

In my experience, useful self-tracking and self-experimentation are slow. Other people's self-tracking projects often strike me as too ambitious – doing too much too soon. For example, they are tracking too many things. Or worrying too much about placebo effects. Because they are doing too much – carrying too much, you could say – they may get tired and stop before they have learned something useful.

From a psychological perspective, why is the use of data / numbers, as in self-tracking, so much more powerful and engaging than merely 'setting a goal'?

For one thing, it's more forgiving. When I set goals for myself, I often fail to meet them. That can be so unpleasant I give up. When you simply measure something, it's much easier to succeed – all you have to do is make the measurement. For another thing, it's more informative. By studying my data I can learn what controls what I'm measuring (e.g., sleep). Setting a goal doesn't do that.

Why, in a world dominated by numbers / statistics, has it taken so long for us to use data to learn about ourselves, our lives and our bodies?

You seem to be asking why has it taken so long to apply something so useful elsewhere ("numbers/statistics") to ourselves? I have a different starting point. I think it is science – which is more than numbers and statistics – that has been useful elsewhere. Numbers/statistics by themselves are little help. I also think health scientists (e.g., medical school professors) have used numbers/statistics to learn about ourselves – with little success.

In my experience, [12]you need four things to make useful progress on health: 1. Good tools. Computer, numerical measurement. 2. Experiments. You need to systematically change things. 3. Knowledge of what others have learned. You can't do experiments blindly, there are too many possibilities. You have to choose wisely what to change. 4. Motivation. You have to really care about finding something useful.

Professional scientists have Numbers 1-3 (tools, experiments, knowledge). Lacking Number 4 (motivation), they haven't gotten very far. Self-trackers have Number 1 (tools). If they have a problem, something they want to improve, they have Number 4 (motivation). Most self-trackers have Numbers 1 and 4. Without Numbers 2 and 3 (experiment and knowledge) they aren't going to get very far. What's so important about the self-quantification movement is they might get Numbers 2 and 3. They might learn to experiment. They might learn to study what everyone else has already learned. When that happens, I think they will make a lot of progress. They will discover useful stuff that professional scientists have missed. And the whole world will benefit.

What developments will need to occur before self-tracking can really grow in the future e.g. better analysis / devices etc?

More successful examples. More examples where self-tracking led to improvement. They will teach everyone how to do it usefully. I think these examples will show that self-tracking alone is not nearly enough, as I said. But maybe I'm wrong. We need examples to find out.

1. [http://www.amazon.com/Shangri-Diet-Hunger-Anything-Weight-Loss/dp/B0014E92NC/ref=sr\\_1\\_1?ie=UTF8&qid=1249187928&sr=8-1](http://www.amazon.com/Shangri-Diet-Hunger-Anything-Weight-Loss/dp/B0014E92NC/ref=sr_1_1?ie=UTF8&qid=1249187928&sr=8-1)
2. <http://boards.sethroberts.net/index.php>
3. <http://escholarship.org/uc/item/2xc2h866>
4. <http://blog.sethroberts.net/2011/03/22/effect-of-one-legged-standing-on-sleep/>
5. <http://escholarship.org/uc/item/2xc2h866>
6. [http://blog.sethroberts.net/wp-admin/edit.php?post\\_type=post&category\\_name=productivity](http://blog.sethroberts.net/wp-admin/edit.php?post_type=post&category_name=productivity)
7. <http://blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>
8. <http://blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>
9. <http://blog.sethroberts.net/2010/07/18/fasting-blood-sugar-reduced-by-walking/>
10. <http://blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>
11. <http://quantifiedself.com/2010/09/seth-roberts-on-arithmetic-and/>
12. <http://sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

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dearieme (2011-05-12 06:10:20)

I thought nthis might interest you. [http://www.timeshighereducation.co.uk/story.asp?sectioncode=26 &storycode=416000 &c=1](http://www.timeshighereducation.co.uk/story.asp?sectioncode=26&storycode=416000&c=1)

Self-Experimentation « Permutations (2011-06-14 14:24:43)

[...] Seth's more academic writeups [here](#) and [here](#), blog writeups [here](#), and [here](#). Log your own experiment [...]

## Assorted Links (2011-05-13 05:00)

- [1]wacky computer model predictions
- [2]excellent magazine article about a Los Angeles murder investigation
- The enablers of Michael Mann: [3]words versus action at the University of Virginia, his employer
- [4]new use for kombucha: clothes
- [5]graduate school rankings, including [6]psychology department rankings

1. <http://drtimball.com/2011/disastrous-computer-model-predictions-from-limits-to-growth-to-global-warming/>

2. <http://www.theatlantic.com/magazine/print/2011/06/the-lazarus-file/8499/>

3. <http://climateaudit.org/2010/05/03/correspondence-with-the-university-of-virginia/>

4. [http://www.ted.com/talks/suzanne\\_lee\\_grow\\_your\\_own\\_clothes.html?utm\\_source=newsletter\\_weekly\\_2011-05-10&utm\\_campaign=newsletter\\_weekly&utm\\_medium=email](http://www.ted.com/talks/suzanne_lee_grow_your_own_clothes.html?utm_source=newsletter_weekly_2011-05-10&utm_campaign=newsletter_weekly&utm_medium=email)

5. <http://www.phds.org/>

6. <http://graduate-school.phds.org/rankings/psychology>

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Adam G (2011-06-14 07:18:14)

It would be useful if Dr Tim Ball had actually read the Limits to Growth report before criticising it. If he had, he would have noted that it's projections are remarkably, sadly, on track and the authors did not in anyway predict collapse before this point in time. Here's a good summary by late energy banker Matt Simmons: <http://www.energybulletin.net/node/1512> Paul Ehrlich did not use computer models, and was certainly overly panicked when he wrote the Population Bomb. However, by ridiculing quotes like "In ten years [i.e., 1980] all important animal life in the sea will be extinct," it would be tragic to imply that since he was wrong, that the real situation is therefore rosy. The reality is terrifying enough: <http://www.guardian.co.uk/news/datablog/-/2011/jun/03/fish-stocks-information-b-eautiful#zoomed-picture>

Seth Roberts (2011-06-14 08:14:07)

You make good points.

## The Future of China (2011-05-14 05:00)

Recently I had dinner with two Tsinghua students I advise.

ME Do you know what "science fiction" is?



BOTH OF THEM Yes.

ME I have an idea for a science-fiction story. Five years from now, Tsinghua and Beida [Beijing University] students get together and decide to change the government. What do you think?

They were amused by this idea. However, here's what they said:

BOTH OF THEM Where's the science?

I explained that science fiction often takes place in the future.

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No One (2011-05-14 09:39:20)

In American English (and possibly British English as well), "Science Fiction" has been modified sometime in the last 40 years to include what was originally called "Fantasy". The scenario you described is a fantasy happening in the future. There's no element of science (that would make it "science fiction") - I'm with your students on that one. Almost every science fiction story has some fantasy, or it wouldn't be interesting as fiction. "Star Wars" is pure fantasy - replace the light saber by magical swords and spaceships by dragons and you're there. On the other hand, most of Asimov's stories have a scientific element in them. And there are always stories that defy categorization - such as <http://www.amazon.com/Evolution-Man-How-Ate-Father/dp/0679750096> , which some people classify as science fiction, and some as historical fiction although "fiction" is the only descriptive characterization.

Kevin R. Bridges (2011-05-14 11:25:33)

That's a funny point, that Science Fiction is a broad enough genre that it doesn't always involve anything that has to do with science. Also, I might comment more if I got an email when comments were made in response. Is this by design?

Seth Roberts (2011-05-14 15:05:58)

no it is not by design. I agree that's an important feature. It is by neglect. I will look for a wordpress plugin that does that.

Kevin R. Bridges (2011-05-14 16:17:42)

Awesome. I would love that. You tend to blog a mixture of things that I strongly agree with, right alongside things I strongly disagree with, and I'd love to freely comment without adding "check that blog post" to my agenda. Thanks.

TomGinTX (2011-05-15 18:16:27)

You can subscribe to the RSS feed for the comments as well as the blog entries.

## **The Signaling of Economists (2011-05-15 05:00)**

I like [1]this essay by Brad DeLong about the failure of economics professors. They didn't just fail to predict the recent economics crisis but they have failed, as far as he can tell, to learn from it. If you are naive, of course this is astonishing - but DeLong is not naive. Yet he is "astonished". That's interesting.

It's hard to imagine DeLong doesn't know what I am about to say. I imagine anybody with any academic sophistication is aware of it – especially economists. As Thorstein Veblen (an economist) pointed out in *The Theory of the Leisure Class* (1899), a great deal of what professors do, including economics professors, is about signaling high status. In economics, this is done by being highly mathematical. (Same in statistics. In art history, it is done by using big words. In engineering it is done by being theoretical. In many areas of science, it is done by using expensive equipment and having a large lab. In many fields it is done by being useless – e.g., preferring "pure" research over "applied" research.) This is no mystery. Economists think a lot about signaling. Michael Spence wrote an influential [2]paper (which included Veblen's phrase "conspicuous consumption") and book about it, for example, for which he won a Nobel Prize. ([3]More examples from economics.) But DeLong ignores the signaling of economists. Let me propose why economists haven't taken the steps DeLong is astonished they haven't taken: Because it would make them more useful and less mathematical. Thereby signaling lower status.

Why is signaling so common? It is basic biology, yes. But it is also convenient. Here is what Veblen didn't say: It is so much easier to signal than to make progress. Among animals, it is much easier to signal you will win a fight than to actually win one. Among professors, it is easier to use big words than to write clearly. DeLong wants economists to choose progress over signaling. Shouldn't an economist not be astonished when the lower-priced option is chosen?

1. <http://www.project-syndicate.org/commentary/delong113/English>
2. <http://www.jstor.org/stable/1882010>
3. [http://octavia.zoology.washington.edu/handicap/honest\\_economics\\_01.html](http://octavia.zoology.washington.edu/handicap/honest_economics_01.html)

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Joseph Dantes (2011-05-15 05:30:40)

Instead of writing an insightful comment, I will simply signal that I understood your point.

Andy (2011-05-15 06:10:24)

Why do you think the signal DeLong sends is credible? My experience with his blog and debates is that he cares a lot more about status, affiliation, and scoring debate points than progress and understanding.

Sonic Charmer (2011-05-15 06:29:29)

Given that what Professor DeLong evidently 'learned' is that we need "more old-fashioned Keynesians and monetarists" (i.e. more people like him, given more authority/prestige), I'm inclined to say there's signaling all around. But frankly the problem with economics is worse than merely the science being overwhelmed by signaling. It's that the science is pseudo-science, or scientism. What is this 'economics' that people like DeLong practice? Well, there are equations and letters. They invent concepts ('aggregate demand'), give them letters, and play with them in equations on chalkboards. They think they are doing something meaningful here. Then their prescriptions (at least the ones who are 'Keynesian') are all rooted in thinking of the economy in metaphor as if it is a giant hydraulic machine - 'velocity of money', 'boost aggregate demand', 'stimulus' - using mathematical and scientific concepts straight out of 19th century thermodynamics and suchlike. And then it doesn't work. (Unemployment is still near 10 %, four years into the 'recession'.) And what is their prescription? MORE! More 'Keynesians'. This is more akin to bloodletting than it is to a Veblenesque signaling game.

Gunnar (2011-05-15 08:11:17)

Money is just numbers on paper. The only value it has is the value that people \_believe\_ it has. The current USD is not even money, it is a Federal Reserve Note - which is a fancy name for a piece of paper with numbers on it. Real money would be silver and gold coins for example, which carry inherent value. The US deficit results from the US government borrowing those FRNs from the Federal Reserve instead of printing numbers on paper themselves. The people profiting from this scheme

are the owners of the Federal Reserve, who unsurprisingly invented this scheme. These systems are built on lies and deception. Those are really big lies, which makes it hard to understand them. But once you break the barrier it gets easier. Be well.

Jon (2011-05-15 08:51:45)

I thought the Austrians called this recession. Theirs isn't an exact science since they use praxiology to determine things (from what I understand). I talked to people that sold their homes before the crash because it was that obvious, the Austrians were calling it about 4 years in advance. Keynesians are either really off in understanding or they're just liars.

Glen Raphael (2011-05-15 08:52:23)

Nobody knows how to entirely prevent recessions or bubbles. Some people have theories on the subject, but few that are well proven. Most of the relevant economic theories are more descriptive than prescriptive - they can tell you what's happening, but not how to fix it. That doesn't mean macroeconomics isn't a science, just that it's a science like Astronomy, focused on things that are large, slow-moving and hard for us puny humans to change. DeLong thinks "more stimulus" and "more regulation" would have made things better, while others argue at least as credibly that the stimulus made things worse and the regulatory bodies were part of the problem. DeLong doesn't really want "economists to choose progress over signaling", he just likes to signal via claims of "astonishment" that his side is right and should be given more resources. Any time things go badly, anyone can claim "if only they'd listened to me more, things would have been better" but that doesn't mean these claims are credible.

Roger Sweeny (2011-05-15 09:07:37)

Seth, You give two different reasons why economists do too much useless math and theory, and not enough useful prediction and prescription. They are morally different and have different implications. At the end of the second paragraph, you say they do it "Because it would make them more useful and less mathematical. Thereby signaling lower status." Most of us find that morally reprehensible, and hope that shame and introspection will lead economists to better results. In the last paragraph, you say, "It is so much easier to signal than to make progress." Economies are incredibly complex things--and, of course, there is no such thing as an economy that is not also a society and a polity. Economists have failed to answer many important questions because those questions are probably impossible to answer. Even super-intelligent people who cared nothing for status and only wanted to be useful would not be able to answer them. Perhaps my own experience influences me too much but I went through a very high status graduate economics program. I left before picking up a degree because I felt that the important questions couldn't be answered and I didn't want to play pretend.

Seth Roberts (2011-05-15 19:42:55)

Roger, yes, those are two different reasons, I agree. I have a lot to say about the rest of your comment, too, but at the moment don't have time to figure out how to say it.

Paul Sherrard (2011-05-16 14:59:21)

Dr Roberts, I'm wondering how you square the economic crisis with Jane Jacobs' idea that there is no class struggle, only the struggle between innovation & status quo. The recent crisis was the result, not of a defense of the status quo by the powerful, but of a prolonged attack on the status quo on their behalf (the status quo being the Depression-era financial regulatory apparatus). In addition, a huge transfer of wealth from lower to higher classes was effected not by quashing innovation but by embracing it (in financial instruments such as mortgage derivatives and default swaps, to say nothing of innovative accounting practices, risk assessment methods, etc).

Sean Estey (2011-05-16 17:41:42)

Paul, I would argue your assertion that the financial crisis was caused by deregulation. It was in fact the introduction of new legislation beginning in the 70's, including affordable housing policies and land restriction laws, which led to rising house prices, which enabled the bubble in the first place. Creative financing was a downstream consequence of these facts, not the initial cause. In a completely free market, this entire mess would not have occurred.

Paul Sherrard (2011-05-16 18:30:19)

Sean: Interesting idea, but I don't see how it makes much difference to my question. The banking-finance industry spent the past few decades lobbying heavily against the status quo (regulation), and innovating fervently in the use of new instruments and practices (derivatives, creative accounting, etc)—contra Jacobs, who posits entrenched power supporting the status quo and resisting innovation.

Stephen M (Ethesis) (2011-05-16 18:35:56)

Ah, but applied economics, which is really applied statistics (think Freakeconomics for a popular example) is both math and useful. But it is micro economics, not macro.

Seth Roberts (2011-05-17 21:08:42)

Paul, I don't have a simple answer as to the cause of the financial crisis but I do think that derivatives and the like were a kind of pseudo-innovation. They had three strange properties: 1. They solved no obvious problem. 2. They were opaque – the people who bought them didn't understand them. For example, they didn't understand how the rating agencies worked. (By comparison, I really do understand how my laptop works.) 3. They were created with little trial and error. Calling this innovation is like calling a new version of three-card Monte innovation. Civilization has been built on countless innovations that 1. solved obvious problems, 2. are understandable by the people who buy them, and 3. involved vast amounts of trial and error. So the financial innovation you are talking about is a special case. It is really about people nearly at the top of society (Wall Street) figuring out new ways to rip off everyone else. That is different than figuring out stuff from which everyone gains.

Ragout (2011-05-18 09:44:55)

"Derivatives" is a very broad category. Mostly, they function like insurance, and solve the same problem as other kinds of insurance: they transfer risk to those best able to bear it. Mostly, they are perfectly understandable. What's so hard to understand about wheat futures or a put option or a credit default swap? I'm no financial historian, but I think it's safe to say that derivatives have existed for at least a century, and there has been a lot of trial and error over the years. So, criticisms of "derivatives" as a whole are based on ignorance. Certainly, there are particular types of derivatives that fit your critique, complex instruments that solve no obvious problem. In general, I think the purpose of these derivatives is to reduce taxes or get around regulatory restrictions (interest-rate swaps may be an example). Thus their opacity is deliberate: the intention is to keep the government from understanding how taxes and regulations are being avoided.

Paul Sherrard (2011-05-18 09:56:16)

Thanks for the replies! 2 things: (1) The derivatives did solve an "obvious problem" from the banks' perspective: the problem of getting toxic mortgages off their books. And, as is becoming quite clear from the Levin report, this was fully understood by the banks to be their function. (2) A new version of 3-card monty IS innovation. As sure as a better mousetrap is. You can amend Jacobs' idea to exclude antisocial innovation, but I don't see how you can deny that antisocial innovation is still innovation.

Roger Sweeny (2011-05-18 12:19:01)

Seth, 1) Derivatives purported to solve a problem that has been obvious to bankers since there have been bankers: as things change, you don't know how many of your borrowers are going to repay. Derivatives were supposed to lower that risk. Many financial regulations are also supposed to reduce the riskiness of the financial system, so bankers didn't feel too bad when they also used some derivatives "to ... get around regulatory restrictions" (to quote commenter Ragout). 2) For most people, most innovations are opaque. In Arthur C. Clarke's famous formulation, "Any sufficiently advanced technology is indistinguishable from magic."

Roger Sweeny (2011-05-18 12:25:14)

(continued) Most people who buy laptops have absolutely no idea how they work. Some bankers, and some economists, thought they knew how the rating agencies worked.

Seth Roberts (2011-05-20 05:53:03)

Those are fair points. I was trying to say that the new financial products were innovations quite different than the innovations Jacobs was talking about.

Roger Sweeny (2011-05-22 07:35:09)

Seth, I thought this might tickle you. It's from William Allen's memoir of his life as an economist: "All this is not to suggest that mathematics, so prized by the Economics Establishment, was to be denigrated in the mansion of economics—but mathematics was not to be allowed to evict economics and make itself sole, or even major, inhabitant of the mansion. ... By a generation after Cournot, such notables as Walras [1834-1910], Marshall [1842-1924], Edgeworth [1845-1926], and Fisher [1867-1947] were among those who championed mathematical techniques as an essential tool in the economist's toolbox. But used unwisely and naively, it turns economists into pretentious parasites on the rest of the community." [http://econjwatch.org/file\\_download/452/AllenMemoirSept2010.pdf](http://econjwatch.org/file_download/452/AllenMemoirSept2010.pdf) p.15

### **Morning Faces Therapy for Bipolar Disorder (2011-05-16 05:00)**

In 1995, I discovered that [1]seeing faces in the morning improved my mood the next day. If I saw faces Monday morning I felt better on Tuesday – but not Monday. The delay was astonishing; so was the size of the effect. The faces not only made me cheerful, they also made me eager to do things (the opposite of procrastination) and serene. This is the opposite of depression. Depressed people feel unhappy, don't want to do anything, and are irritable. Eventually I found that the mood improvement was part of a larger effect: morning faces produced an oscillation in mood (below neutral then above neutral) that began about 6 pm on the day I saw the faces and lasted about a day. As strange as this may sound, there was plenty of supporting data – the connection between depression and insomnia, for example.

After I had observed the effect on myself hundreds of times, I urged a friend with bipolar disorder to try it. Recently he wrote me about how it has helped him.

Here is the very short story of my experience with this treatment.

I have used your treatment since 1997. As an indication of its effectiveness, from 1999 to 2003 I was completely off of medications, and now I've been off again since August of last year.

I was severely ill when I began the treatment. I was first hospitalized in 1985 for manic psychosis, and I was hospitalized later for suicidal thoughts and then again for psychosis. In 1997 I was 46 years old, taking Prozac, Depakote, and Moban (an anti-psychotic), and I was barely functioning.

The initial reaction, after three days of the treatment, was astonishing. It felt like a giant headache was just lifted off me. But the [new] clarity of mind enabled me to see my awful condition, and I had acute suicidal thoughts for a day or two. After that initial bounce, the improvement in mood was more subtle, but definitely correlated to how early I started looking at faces.

The early years of the treatment were often rocky. You were still working out some of the kinks in the treatment. The biggest surprise came when you found that exposure to fluorescent lights at night cancelled the effect of the faces. Another problem, also having to do with fluorescent lights, arose when I added early-morning bright-light therapy: the start-time and duration had to be adjusted by trial-and-error. At least six times I was one step away from becoming delusional, and then the treatment would pull me back within 48 hours. You were indispensable during those early years because I could call you and you would give me advice and the will to pull through.

By 2003, I had made some good progress. I had moved back to Berkeley, I was living with “normal” roommates instead of with other bipolar guys, and I had even been able to work for short periods. But along the way I had accumulated several minor pains. Back pain and stress made it difficult to get more than 4 hours of sleep. Sleeping pills did not solve the problem. I was scared that I would have to return to the mental health system; I would be a failure at the only thing I ever cared about [using the face treatment to stay out of the mental health system]. I made a pathetic attempt at suicide and wound up back in Herrick Hospital.

It was back to the crappy life—dulling medications, the psychiatrist and the psychotherapist, the support group, a volunteer job. Then, in 2006, the publicity for your diet book motivated me to try the “faces in the morning” treatment again. By that time, you had found that using a mirror was as effective as using videotapes [such as C-SPAN Booknotes recordings], which greatly simplified the process.

By 2009 I had reduced my doses of Prozac and Depakote to only 10 mg and 250 mg, respectively. (I hadn’t needed Moban since 1999.) In August of 2010, dissatisfied with my low energy level, I decided to go off medications completely again. Getting off of Prozac and Depakote gradually was tricky, because Prozac, which can induce mania, has a plasma half-life of about 10 days, while Depakote, which is anti-manic, has a half-life on the order of only 10 hours.

Today, most people would no doubt say that I’m still a loser. No matter, I’m able to enjoy life and relate to others in ways that I never could my entire life. I’m a Total Believer in the treatment. I don’t proselytize, though. People automatically reject the idea, and in any event I don’t want to be (directly) responsible if the treatment doesn’t work for someone. (Example: My nephew has clinical depression; he also has guns. If he tried this treatment, went off of medications, and then for some reason killed himself, my sister would never speak to me.)

The most difficult aspect of the treatment for me has been simply going to bed early. Even though I feel better the earlier I go to sleep, 10:45 pm is the best I can do on a regular basis.

To sum up, I believe you have discovered a powerful anti-depressant treatment that, in my case, has been effective for severe bipolar disorder. As a complete substitute for medications, however, it has entailed serious risks, and it requires substantial discipline to maintain. It is also important to note that “face therapy” is not the only alternative therapy that I use. In addition to the bright-light therapy that I mentioned above, I currently take 3 grams of omega-3 per day in the form of fish oil capsules.

There are a few more details and observations in these blog posts:

[2]<http://blog.sethroberts.net/2007/05/06/life-size-faces/> #comment-10539

[3]<http://blog.sethroberts.net/2007/07/31/more-about-faces-and-mood/>

[4]<http://blog.sethroberts.net/2009/10/15/more-about-faces-and-mood-2/>

Tomorrow I will comment on this.

1. <http://escholarship.org/uc/item/2xc2h866>

2. <http://blog.sethroberts.net/2007/05/06/life-size-faces/#comment-10539>

3. <http://blog.sethroberts.net/2007/07/31/more-about-faces-and-mood/>

4. <http://blog.sethroberts.net/2009/10/15/more-about-faces-and-mood-2/>

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Levy (2011-05-16 06:07:41)

This is a very inspiring story. Of course, parts of it are, well, very hard to read. Moving back to Berkeley was quite a move. And the ups and downs, well, all one can say is, More power to you. Do you ever get to a gym? You might look for a tough, and we mean that in terms of discipline, gym atmosphere. Maybe a martial arts type. These things can do wonders. Keep moving forward.

Joe (2011-05-16 15:52:31)

Re the above: with the looming phase-out of the incandescent bulb in favor of the CFL, one has to wonder if we're heading into a period of low-level yet omnipresent mental illness (one that may dwarf the effect of the low-fat experiment we're mired in.) BTW, Seth, when it comes to "automatically rejected ideas", you are the thought-leader. :-)

Around the Web; It's Anthropology Week! | Perfect Health Diet (2011-05-21 11:45:42)

[...] from Seth, his "morning faces therapy" has produced a great result for a man with bipolar disorder. We believe that "circadian rhythm therapies," and bio-rhythm restoring techniques generally, [...]

Michelle Mendoza (2011-05-27 12:08:25)

This is truly a great story. I love hearing about ways people can conquer their personal issues to become successful.

Andy (2011-08-27 11:56:26)

This is a really interesting read. I love reading inspiring stuff like this I was diagnosed with Bipolar at the age of 17 and really had a torrid time at School because there was confusion between me just been a moody teen and Bipolar. Thankfully mental health is taken more seriously these days and the NHS do a fantastic job. (in the UK) There is a stigma still attached to mental health issues. its a real shame that in this day and age that this is an issue For people researching bipolar I write a Blog that is full of my personal experiences and information. I hope you find it useful. Mental Health has positive side that is often overlooked. <http://www.lithiumandchips.com> (for the blog)

### **Comment on "Morning Faces Therapy For Bipolar Disorder" (2011-05-17 05:00)**

In [1]yesterday's post, a friend of mine with bipolar disorder told how he used [2]my faces/mood discovery. It allowed him "to enjoy life and relate to others in ways that I never could my entire life," he wrote. Partly because it allows him to stop taking the usual meds prescribed for bipolar disorder, which have awful side effects.

What do I think about this?

To begin with the obvious, I am very happy that something I discovered has helped someone else. Practically all science has no obvious use. (A tiny fraction is eventually helpful.) In experimental psychology, my field, I can't think of a single finding that's helped many people. Because of this background, managing to help someone via science seems like a fairy tale. It's too soon to say the story has a happy ending – it isn't over – but it is beginning to have a happy ending.

Thank heaven for blogs. Something like my faces/mood discovery is difficult to publicize, yet without accumulation of evidence it will go nowhere. It wouldn't be easy to publish in a psychiatric or psychotherapeutic journal because

I'm not a psychiatrist or psychotherapist. Even if published, the chances of interesting psychiatrists and psychotherapists are low because it doesn't involve a treatment you can make money from ([3]gatekeeper syndrome). It should greatly interest persons with bipolar disorder but they are not the typical readers of the scientific literature on mood disorders. However, like all sufferers, they search the Internet.

In my internal calculus, the story provides what I think of as "industrial strength" evidence. Industrial-strength evidence is evidence that something works in practice, not just in the lab. In a laboratory setting, which to some extent includes me studying myself, you try to keep things constant. You want to reduce noise. Noise reduction makes signals clearer. An effect you can see easily in a lab experiment, however, may be too small to matter outside the lab, where more powerful forces push people around. Whether your lab experiment – in which you have managed to control Force X – has practical value depends on the size of Force X relative to other forces at work outside the lab. An example is the theory behind the Shangri-La Diet. Does that theory tell us anything useful about why people are fat? Does it explain the obesity epidemic, for example? I knew the theory had plenty of truth because it had led me to several new ways of losing weight and had helped me lose considerable weight and keep it off forever. But that was far from showing (a) it was the only thing that controls weight or even (b) one of the big things. Lab experiments can't do that. It's been claimed that obesity is due to a virus. Experiments support the idea. Yet the idea is irrelevant to everyday life, I'm sure. No one has written *How to Lie With Laboratory Science* but it could be written. The only way to find out if a "true" idea explains enough of reality to be useful is to use that idea in real-world situations. Which is what my friend did.

But that isn't the biggest thing. The biggest thing, from my point of view, is that what my friend has done helps keep this idea alive. When it comes to ideas, grow or die. My friend's story keeps the idea alive by expanding it. It gives it a new and personal dimension. It isn't just about mood measurements, it's about living a reasonable life. I've given talks about this idea, but this story makes it much easier to talk about to a general audience.

1. <http://blog.sethroberts.net/2011/05/16/morning-faces-therapy-for-bipolar-disorder/>
2. <http://escholarship.org/uc/item/2xc2h866>
3. <http://blog.sethroberts.net/category/gatekeeper-syndrome/>

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Joseph Dantes (2011-05-17 05:20:27)

May I suggest the following: You need to look at faces, right? So here's how you accomplish that. And this ties in with something Tim Ferriss talks about... how when he's writing late at night, he avoids depression by having his favorite movie on silent loop in the background. I find motion to be too distracting. So I don't do movies. But I have a wide computer screen... so I have some extra screen real estate. So in the morning, I wake up and read all my interesting RSS stuff and simultaneously play a random slideshow of softcore porn hotties. If faces are good, the rest of the body is even better, right? Seriously though, it's a little weird to just look at faces but very natural to look at naked women, who incidentally have faces with expressions on them. And once you realize that the faces in particular are beneficial, you start paying more attention to the subtleties of the facial expressions, which heightens the enjoyment and the positive effect. And this is something you can leave on all day, for



a steady mood boost instead of just a morning thing. Why not? A favorite comes up and you involuntarily smile. Now that's solid evidence of mood lift. Anyway, to build your collection I recommend stumbleupon's adult section and phapit.com. I use geeqie for the slideshow but I'm on linux, I'm sure someone can recommend a lightweight windows slideshow viewer.

Bob (2011-05-17 10:53:36)

Seth, You wrote: "In experimental psychology, my field, I can't think of a single finding that's helped many people." And: "Industrial-strength evidence is evidence that something works in practice, not just in the lab." A couple of months ago I commented on another post of yours that the logic of subject sampling applied equally to task sampling and that in order for the results of experiments to generalize outside the lab and outside the sample it was necessary to sample tasks and environmental conditions just as we sample subjects. Your reply was that the history of experimental psychology demonstrated that such sampling was unnecessary. I chose not to reply at the time because it was apparent that we have a different understanding of the history of experimental psychology. It is my understanding that the history of experimental psychology is one of failure to discover much of anything that stands up over time and is of any benefit to anyone. Since you say part of that above, maybe you would be willing to toss out examples where the (poor) design of psychological experiments over the last sixty or seventy years has lead to robust, generalizable results.

Seth Roberts (2011-05-17 21:00:35)

"It is my understanding that the history of experimental psychology is one of failure to discover much of anything that stands up over time." My field of experimental psychology is animal learning. In that field, the phenomena of reward learning and Pavlovian conditioning have been repeated thousands of times in countless laboratories. Those two discoveries stand up fine. And they come from experiments that I'm sure you'd describe as poorly designed. There is no sampling of subjects, much less tasks and environments. Is this research "of any benefit to anyone"? Well, the theory behind the Shangri-La Diet is firmly based on Pavlovian conditioning experiments. Without those experiments, no theory – as you can see from what happens when people who don't understand Pavlovian conditioning theorize about weight control. In any case, the Shangri-La Diet has helped many people lose weight. Such as me. The theory behind SLD is not based on any one finding – it is based on many findings put together.

Seth Roberts (2011-05-17 21:10:58)

The faces need to be lifesize. And they are only effective in the early morning. In case you're not joking.

Joseph Dantes (2011-05-18 00:15:10)

I'm not joking. I find it remarkably effective in mitigating the depressive effects of long hours at the computer. Otherwise my mood drops below the point where I can sustain productive work. You do have to make a conscious effort to focus on the facial expressions. Perhaps that's why less than life-size facial photos didn't work. While I appreciate the insight on the importance of the morning exposure, and have started using that to good effect, I also enjoy benefits all day long. Perhaps the naked women increase engagement incentives, whereas faces alone lose their appeal.

Joseph Dantes (2011-05-18 00:21:39)

By focusing on the facial expressions, I mean two things 1. Reading the micro-expressions 2. Engaging or mirroring her state with your own emotions In other words, using her face as a window into her soul, at the moment captured on the photograph. This activates the emotional and social aspects of the brain for a split second, then allowing you to return to your more logical work-mode feeling refreshed. Facial recognition and engagement seem to be a key part of that area of the brain. And of course, I enjoy the "moment" created on an erotic level as well. Which intensifies its emotional vividness.

Porn Productivity Hack – Facial Engagement Edition | Rough Drafts of a Koanic Soul (2011-05-20 11:09:37)

[...] This was originally written as a series of comments in response to Seth Robert's post, Morning Faces Therapy For Bipolar Disorder. [...]

Jazi yechezkel zilber (2011-05-28 03:27:41)

Regarding sampling tasks, environments etc. I am against these procedures that make experiments impossible and very costly. The main thing experimentalists need to learn is to do \*valid\* experimnts (i.e. Avoid anything that biases results etc.). But then proceed to do as much ezperiments as possible in as cheap costs (time energy money) as possible. The present science goes the opposite. Many useless rules for "correct protocol" making things costly and very limited. Then also forgetting the essential critical thinking about validity, confounding parameters etc. Making results costly AND useless

Blog Commenter (2011-09-14 03:50:11)

Automated Backlinks... [...]Seth's Blog » Blog Archive » Comment on "Morning Faces Therapy For Bipolar Disorder" [...]...

## Percentile Feedback Workspace Available (2011-05-18 05:00)

I have put a requested R workspace on my website so that you can download it. The [1]percentile feedback workspace compares your productivity (time spent working/time available to work) today to previous days. When I started using it, I became more productive. [2]Here is an introduction. [3]Here are all posts about it.

This is not for everyone. You need R installed to use it (of course) and you'll need to know at least a little R. You must edit a function called save.ws so that the workspace is saved in the right place. I have used it under Windows XP.

1. [http://sethroberts.net/about/2011-05-20\\_percentile\\_feedback.RData](http://sethroberts.net/about/2011-05-20_percentile_feedback.RData)
2. <http://blog.sethroberts.net/2011/05/01/percentile-feedback-and-productivity/>
3. <http://blog.sethroberts.net/category/self-experimentation/productivity/>

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Joseph Dantes (2011-05-18 10:07:13)  
Sweet thanks!

Brian Newman (2011-05-18 12:00:57)  
Thank you!

Ulrich (2011-05-18 13:09:51)  
Great, thanks.

## Six Signs of Profound Stagnation in Health Care (2011-05-19 05:00)

In [1]a recent interview, Tim Harford, the Underground Economist, said,

That's what makes medicine such an effective academic discipline.

By "that" he meant certain methodologies, especially randomized experiments. I disagree with this assessment. My opinion is that health care is in a state of profound stagnation, unable to make much progress on major problems.

Here are six signs of the stagnation in health care (by which I mean everything related to health):

1. The irrelevance of Nobel Prizes. Year after year, the Nobel Prize in medicine is usually given for research that is so far useless (e.g., telomere research) or irrelevant to major health problems.
2. The obesity epidemic. Starting in 1980, obesity rates climbed fast. Thirty years later, doctors seem to know no more about how to cure obesity than in 1980. Low-fat diets, popular in the 1980s, are still popular! Low-carb diets are ancient – the Banting diet became popular in the 1860s.
3. Ancient treatments for depression still popular. SSRIs were introduced in 1988. Cognitive-behavioral therapy began in the 1980s, combining earlier ideas. Neither works terribly well – and notice how different they are.
4. The high cost of ineffective care. Americans pay much more for health care than people in other rich countries, yet American health is no better. All that new technology that Americans are paying for isn't helping. In [2]an article complaining about our education system, Joel Klein, the former head of New York City schools, wrote, "unlike in health care . . . in education, despite massive increases in expenditure, we don't see improved results." Actually, that's exactly what we see in health care when we compare America to other countries. Tyler Cowan makes this point in The Great Stagnation.
5. Statins. A defender of modern medicine would claim that statins were an important innovation. They are heavily prescribed, yes. Yet in recent tests they have been [3]stunningly ineffective – so much so that the earlier favorable evidence has been questioned.
6. The stagnation has become invisible – the normal state of affairs. Allowing Harford to make that comment. Harford, like Dr. Ben "Bad Science" Goldacre (whom Harford praises), believes you judge science by whether it follows certain rules. By making various rules (e.g., the need for placebo controls) and then following them, medical researchers have drawn attention – at least Harford's and Goldacre's – away from lack of progress. They're making progress, they say, because they're following self-imposed rules. Well, what if the rules make things worse? (For example, placing high value on placebo controls may draw attention away from non-pill treatments.) Better to judge by results.

What do you think are the clearest signs of health-care stagnation – if you agree with me about this?

1. <http://thebrowser.com/interviews/tim-harford-on-unexpected-economics>
2. <http://www.theatlantic.com/magazine/archive/2011/06/the-failure-of-american-schools/8497/>
3. [http://www.jstage.jst.go.jp/article/jln/19/1/65/\\_pdf](http://www.jstage.jst.go.jp/article/jln/19/1/65/_pdf)

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Nancy Lebovitz (2011-05-19 05:34:40)

How about the idea that the obesity epidemic is a problem, considering that "overweight" people live a little longer than "healthy weight" people? [1]Chart.. [2]Article about chart. I'm not convinced that medicine is stagnating in all areas- people do seem more apt to recover from cancer than they used to be.

1. [http://www.amptoons.com/blog/wp-content/uploads/2006/09/rr\\_by\\_bmi.png](http://www.amptoons.com/blog/wp-content/uploads/2006/09/rr_by_bmi.png)
2. <http://www.amptoons.com/blog/2009/02/05/should-a-59-160-lb-woman-want-to-lose-35-pounds/>

charlie (2011-05-19 05:54:35)

That 75 % of all medical expenses go to maintaining someone's life for an extra six months....

john (2011-05-19 06:30:24)

First, many health care revolves around ideas that are questionable in the first place (like statins), and many doctors dismiss nutrition as being silly. Americans in general have terrible diets, and it's a long way from improving. It seems like preventive medicine just means going to the doctor more often, so he can diagnose you. I think the technology point you made ties in well with nutrition/prevention. Everything is developed for diagnosis and treatment, but treatment is often ineffective because of unhealthy lifestyles. Of course, nobody considers that—we just keep pushing "better" "treatments."

vs (2011-05-19 07:57:59)

A clear sign of health-care stagnation: it's not helping us live longer. From David H. Freedman's recent book "Wrong": On distinguished professor put it to me this way in an e-mail note: "Our life expectancy has almost doubled in the past seventy-five years, and that's because of experts." Actually, the vast majority of that gain came earlier in the twentieth century from a very few sharp improvements, and especially from the antismoking movement. As for all of the drugs, diagnostic tools, surgical techniques, medical devices, list of foods to eat and avoid, and impressive breakthrough procedures and technologies that fill medical journals and trickle down into media reports, consider this: between 1978 and 2001, according to one highly regarded study, U.S. life spans increased fewer than three years on average—when the drop in smoking rates slowed around 1990, so did life expectancy gains.

Jazi zilber (2011-05-19 09:13:19)

The problem is with imposing too many rules and procedures, while researchers have no real understanding of why these are needed. Designing a formal study nowadays, involves you in a myriad of useless rules, most of which are perfectly unrelated to getting valid results. Randomising groups + double blind, is not the main barrier to having results. Most of the effort get spent on endless more details that naive students are told in school that has nothing to do with getting scientifically reliable results (think approval committies). It is absurd. They say you need many studies to prove something, which is empirically true, but laughable logically. If you do one really good experiment, you got to get valid results. The reason so many experiments get refuted is because people do experiments in invalid ways, or have no idea how to handle data. They only know that you need much work and endless procedures. I wrote elsewhere on the problem of focusing on the measurable and on what experiments are easily done, The academic bias. <http://yzilber.blogspot.com/2008/08/academic-bias.html>

dearieme (2011-05-19 09:38:09)

Thanks, Nancy. It seems that a fatso like me is somewhat safer than someone in the lightest subset of the "normal" range. By the by: my cardiologist told me recently that the results of my angiogram were "normal". I asked him whether he meant "normal" as in commonplace, or "normal" as in desirable. He goggled at me; I inferred that not only had no-one ever asked him before, but that he'd never himself reflected on it before. Doctors, eh?

Joe (2011-05-19 10:05:21)

"How about the idea that the obesity epidemic is a problem, considering that 'overweight' people live a little longer than 'healthy weight' people? Chart.. Article about chart." I wonder how and when they calculate those weights? At death? After 12 months of radiation/chemotherapy, for example? Until we know more about things like that, the chart really isn't meaningful. At least not to me. Joe

kxmoore (2011-05-19 10:44:16)

Seth, perhaps a failure to understand science lies at the heart of our healthcare follies. Here is a great video by Tom Naughton. Funny too. [http://www.youtube.com/watch?v=y1RXvBveht0&feature=player\\_embedded#at=221](http://www.youtube.com/watch?v=y1RXvBveht0&feature=player_embedded#at=221)

nix (2011-05-19 11:51:11)

I disagree with you on the stagnation of mental health treatments. In the past five years, medication advances for mental illness have been tremendous. There is a much greater understanding of the nuances of mental illness and many, many more medication options available. As someone who has had a lifelong struggle with dysthymia and major depressive disorder, I can attest to that personally. After trying treatments and giving up so many times earlier in my life, I was amazed and relieved by just how much the field has changed. "SSRIs were introduced in 1988. Cognitive-behavioral therapy began in the 1980s, combining earlier ideas. Neither works terribly well — and notice how different they are." But combined they've been shown to be quite effective. I believe, very strongly, that the main problem in the treatment of mental illness in America is the disconnect between therapy/close observation and medicating. (I can't speak for the rest of the world as I'm not familiar with other mental healthcare systems.) The standard in the USA has been for a psychiatrist to see a patient once a month for 15 minutes. Unless they're getting reports from the patient's therapist, there's no way the psychiatrist would be able to accurately assess for themselves how well the patient is doing. The doctor would be relying 100 % on the patient's self-assessment and their observation of the patient. That day's mood or recent circumstances can easily taint a patient's perception so that the report they give their physician would be inaccurate (and even more likely, incomplete). Even the doctor's observations could easily be misinformed. For instance, the patient might have just had a hard time finding a parking spot after running later than they'd have liked to the appointment. That's not a major enough life event that they would necessarily mention it, but it would affect their body language and behavior. Even more than that, the standard protocol has been to wait 2-8 weeks between making medication adjustments (changing doses or prescriptions), which, to someone suffering from severe mental illness, is an eternity-especially when they're fully aware that if that next switch doesn't work, they'll have to wait several more weeks to try something else that's new. It's no wonder so many patients give up on meds, especially when those adjustments are often made on faulty information. A health care provider meeting with a patient on a weekly basis or so and providing both therapy and medication fixes all those problems. But it's a rare patient who even knows that option even exists. Psychiatry is the black sheep of the medical field, and it doesn't help that some of the medical students who end up in the field are there because they weren't good enough to get into their first-choice specialty and they see it as a cushy job. It has the lowest malpractice rate of any medical specialty, dermatologist-like hours (without the uber-high competition to get into the field), and so on. I'm actually starting grad school next January to become a psychiatric mental health nurse practitioner so that I'll have the prescribing rights but will still be able to do therapy. /soap-box :)

Darrin Thompson (2011-05-19 12:31:57)

Autism.

eric (2011-05-19 19:48:57)

OK, I'll bite on Point 1. Barry Marshall recently got a Nobel for demolishing entire industries (with a bit of personal science) and I note the 'so far useless' qualifier in the example of telomeres. The 'health' of the ends of chromosomes and 'health/redox state' of cells are correlated and life can be debilitated and short in diseases where telomere repair is compromised. E.g., ataxia telangiectasia, which is kind of a disease of premature aging, in part is caused by loss of DNA repair and subsequent chromosomal instability. It is in fact a genetic, genomic/cancer, neurodegenerative and metabolic doozy that includes immune, insulin signaling and cellular respiration irregularities etc. It may turn out that telomeres are the useless bit of research into genomic and metabolic damage repair mechanisms but that will only be obvious in hindsight. For a not uncontested metabolic and nutritional slant on cancer management - including the possible link between telomerases, glucose metabolism and cellular respiration - see Seyfried 2010 'Cancer as a metabolic disease'.

Kevin R. Bridges (2011-05-19 20:10:30)

I wanted to point out that you appeared on the Discover Magazine blogs today. [http://blogs.discovermagazine.com/discoblog/2011/05/19/ncbi-rofl-holy-correlation-batman/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+DiscoverDiscoblog+%28Discoblog%29](http://blogs.discovermagazine.com/discoblog/2011/05/19/ncbi-rofl-holy-correlation-batman/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+DiscoverDiscoblog+%28Discoblog%29)

Seth Roberts (2011-05-20 05:35:25)

Barry Marshall, "personal science"? No he did his self-experimentation as part of his job, not to help himself. It isn't much of a

counterexample because ulcers are not a major health problem and because the bacterium that supposedly causes ulcers lives harmlessly in a billion people. The big and important question that Marshall failed to answer is what distinguishes infected people who get ulcers (1 %?) from infected people who don't get ulcers (99 %?).

Seth Roberts (2011-05-20 05:39:58)

It isn't progress to come up with 20 more medications. Number of treatments doesn't matter, what matters is their effectiveness. It's progress to come up with something that works much better than existing treatments.

Seth Roberts (2011-05-20 05:42:39)

The weights are often measured prospectively. For example, in 1970, and the death rate after 1970 is measured.

Seth Roberts (2011-05-20 05:45:57)

yes, that's a good example: little improvement in life expectancy.

Seth Roberts (2011-05-20 05:53:34)

thanks, hadn't seen it.

Allen K. (2011-05-20 13:36:56)

The fact that cancers are still treated with one drug at a time, rather than with a cocktail as the AIDS activists helped make standard for AIDS sufferers. In both cases the disease is a moving, evolving target, and the best outcomes come from hitting it on all fronts. (Google results about "treatment-naïve" patients; they do better on new drug treatments than ones who have already had other, \_unrelated\_, drug treatments.) Of course, giving someone several drugs is bad science. (And more expensive, and with more chance of weird side-effects, yadda yadda yadda.)

Nancy Lebovitz (2011-05-21 02:30:13)

I wonder how much stagnation in medical care is the result of lack of knowledge, and how much is the result of inadequate practice. For example, I've got a lot of anecdotal evidence that it's hard to find a doctor who will listen and think. (The estimated percentage is pretty low- would people care to post their own estimates? I'm concerned that I've been anchoring the responses I've been getting because I've been giving a number.) There've been the work showing that doctors aren't reliably washing their hands, and that checklists make a huge difference to hospital outcomes.

### Assorted Links (2011-05-20 05:00)

- [1]More about radiation hormesis. Introductory.
- [2]Fungus improves violin tone. Combines fermented foods and global warming.
- [3]The New Yorker ran a cartoon that the editors didn't understand. Added later: Now that I know where the cartoon came from (see comments), I'm afraid this is the most tasteless cartoon I have ever seen in the magazine.
- [4]How modern medicine killed my brother. "I turned to her and asked, "Well, do you tell your patients to avoid glutamate?" She looked puzzled and said, "No one told us to.""

Thanks to Paul Sas and Gary Wolf.

1. <http://www.lewrockwell.com/miller/miller12.html>

2. <http://www.popsoci.com/scitech/article/2009-09/fungus-infected-violin-beats-stradivarius-listening-test>

3. <http://blog.farhadmanjoo.com/post/1416933245/i-asked-bob-mankoff-cartoon-editor-of-the-new>
4. [http://www.who.net/medicine\\_killed\\_brother.htm](http://www.who.net/medicine_killed_brother.htm)

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dearieme (2011-05-20 07:27:16)

There's a dialogue on radiation hormesis at <http://a-place-to-stand.blogspot.com/>

Around the Web; It's Anthropology Week! | Perfect Health Diet (2011-05-21 11:41:08)

[...] diet a fool's errand? He takes the view that individuals have an optimum, but not humanity. Via Seth Roberts, a fascinating story of how even doctors cannot get good care out of today's medical system: How [...]

tom (2011-05-22 06:09:45)

The joke was the Tennessee family that sent its recently-adopted Russian son back to Russia in April 2010 after he proved difficult. [http://www.msnbc.msn.com/id/36322282/ns/world\\_news-europe/](http://www.msnbc.msn.com/id/36322282/ns/world_news-europe/) The story was 6 months old when the cartoon got published in Oct 2010. I am adjusting down my opinion of Manjoo (and his many readers who-according to him-did not know the inspiration for the cartoon). Mankoff was just answering another random question in an open internet forum.

Seth Roberts (2011-05-22 08:16:20)

Tom, thanks for explaining the mysterious cartoon. After reading the news story from which the cartoon derived (the boy sent back to Russia), I think the original story is incredibly sad and not something to make cartoons about.

## **Percentile Feedback R Workspace Updated (2011-05-21 05:00)**

I fixed a few problems and eliminated the one Windows-specific function so it can be used with Macs.

The new version is [1]here.

1. [http://sethroberts.net/about/2011-05-20\\_percentile\\_feedback.RData](http://sethroberts.net/about/2011-05-20_percentile_feedback.RData)

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Hamish Barney (2011-05-21 22:56:47)

I'm interested in trying your program. I've downloaded the workspace and installed R (ver 2.13.0). When I load the workspace into R though it doesn't seem to do anything. Sorry for the ignorance but could you please give me some tips on how to get started with the software? Thanks a lot! Hamish

Seth Roberts (2011-05-22 00:08:08)

You have to know a little bit of R to use it. R workspaces don't "do something" when loaded. You need to run the functions they contain. I'm afraid my advice to you is to study R.

Hamish Barney (2011-05-22 04:25:56)

I was just confused about the way a workspace would work given the way workspaces work with other IDEs that I have used. I assumed it would show the set of files with the source code for the percentile feedback software. I work as a software

developer so I'm not adverse to getting my hands dirty. That also means that I know how hard it is to understand other peoples code and how they intended it to be used no matter how well written it is. For those interested in using this software I've done a little bit of fiddling and reading about R. Running "c(lsf.str())" from the R prompt will give you a list of the functions that were loaded as part of the workspace. You can view the source for a given function by typing its name at the prompt (e.g. "work.start"). This will also give you a clue about the parameters the function expects. The software expects a file ('C:/percentilefeedback.RDataTmp') to exist in order for most of the functions to work. I created an empty file but that didn't placate it. I'll keep fiddling. If anyone gets it to work let me know what steps you followed. Seth, have you considered putting the source code into a version control system like bitbucket.org or github.com?

Seth Roberts (2011-05-22 08:06:04)

Thanks for the suggestions and info. I didn't know about bitbucket.org and github.com. To see the workspace contents, type ls() To see the program in action, type work.plot()

Joseph Dantes (2011-05-26 11:46:42)

I didn't have much luck with installing this in Ubuntu and it doesn't look like I will. For total noobs, .rdata's are autoloaded when R is started in that directory. I'm gonna try it in Wine.

Joseph Dantes (2011-05-26 12:10:25)

I got it semi working in Wine. The first time I ran work.plot(), no result. Then I tried fix(save.ws). Didn't edit anything, just closed the editor. Ran work.plot() again. This time it appears I have all Seth's work data, except my trend line doubles back and terminates in the upper left hand corner. Pretty screwy. No idea where to go from here. Maybe releasing it to Github will build a community that can troubleshoot/document. I went through the functions, trying them all, didn't wind up much the wiser, got a number of different errors. A basic instruction set would include: 1. How to clear seth's data 2. How to enter new data

Seth Roberts (2011-05-27 07:32:22)

It works with Windows XP and Mac. Haven't tried Ubuntu.

Zans (2011-06-19 09:38:14)

Great script, Seth. Could you upload your arithmetic one as a downloadable workspace as well? Somehow i is not displayed properly on my browser so when I try to run it I get many error messages.

## **Morning Faces Therapy For Bipolar Disorder: A Story (Part 1: Background) (2011-05-22 05:00)**

In the mid-1990s I discovered that [1]seeing faces in the morning raised my mood the next day. If I saw faces Monday morning, I felt better on Tuesday – not Monday. This discovery and many other facts suggest that we have an internal oscillator that controls our mood – in particular, how happy we are, how eager we are to do things, and how irritable we are. For this oscillator to work properly, we must see faces in the morning and avoid faces and fluorescent light at night.

In rich countries, almost everyone gets nothing resembling the optimum input. One of the problems this may create is bipolar disorder. A week ago I posted [2]how a friend of mine used my faces/mood discovery to control his bipolar disorder. After that post, a man I'll call Rex wrote to me thanking me – that post had inspired him to try to control his own bipolar disorder that way. Before knowing anything about whether he would be successful, I decided it would be good to follow and record what happens. Either way – successful or not – it should be revealing.

I am going to post his story in several parts. The first few parts are background.

My first full-blown bipolar episode was at 29 years of age. (I am now 37.)



I was a civil engineer working for the government in an Eastern State. I had self-diagnosed myself as having Seasonal Affective Disorder (SAD), also known as the morning blues. The symptoms are mild to severe depression, lethargy, apathy and weight gain. A form of treatment for SAD is the light box. Mine is an Apollo GoLite Box. As soon as I read about this device, I was excited. It came via UPS. I plugged it in during my lunch break soon after it arrived. By the end of the work day my mind was in overdrive. I was a total motor mouth, with racing racing thoughts and unusual activities such as inventing things, writing songs and books for the first time. Friends knew I was totally not myself. I went without sleep for days at a time. I began drinking heavily and not going to work. My mind could not rest. Alcohol or extreme exercise were the only medicine. I stopped eating, lost about 30 pounds in 30 days. I became paranoid and shut everyone out of my life including my friends, family, and co-workers. I was buying hundreds of books and dozens of bottles of supplements. Overall I was turning into a different person with new interests.

Finally my parents stepped in because of my isolation and irresponsible behavior. This led to a three week outpatient clinic stay in Illinois. Right away I was diagnosed as Bipolar I. I was vaguely familiar with it, but was quite stunned I had it. On the other hand, it was a huge relief to have a name to this craziness I was feeling. I was put on four medications and went through extensive therapy, including talk therapy, group therapy, family talks, and letter writing. It was a wonderful experience that helped me to deal with painful past experiences. It had an excellent scheduled program with early-morning group therapy and prayer. [Note the morning exposure to faces.] This was a Christian-based psychiatric clinic. Then daily small classes on mental health issues, then one-on-one discussions with a licensed therapist and plenty of other group activities and meals on the town. Lots of love, support and scheduled work.

That was an ideal setting. After three weeks I came home. I slowly went back to those sad, frustrated days. The drugs seem to stop working. My moods began turning sad or mad, for no particular reason. [Note that this downturn happened soon after exposure to morning faces – via group therapy – stopped.] The frustrations of an unfulfilled, boring and dead-end career grew worse. Maybe the worst was a lonely life. Silence in the mornings and only late-night television before bed.

The disappointments of my life were bad, but the bipolar manifestations of the highs and lows seemed to magnify all emotions to the nth degree. My medications were replaced by the new ones, without expired patents. Perhaps I have been prescribed ten different anti-depressants overall, sometimes in combinations, but I only found relief in narcotics such as prescription xanax or klonopin.

They truly numbed the pain, but led to regrettable behavior. I took to cutting myself as a sort of punishment for the unwarranted guilt and self-absorption (for feeling depressed and angry) and to ease the pains with the endorphin releasing that was given by cutting with a razor blade. It seems insane now, but at the time it was the quickest release. These cuttings not only led to my first surgery, but led me back into a different psychiatric hospital in Vanderbilt at age 31. I had a tendon transfer surgery from my the top of my wrist to closer to my thumb, where I had severed my tendon. It was very embarrassing to my family and myself. I came clean to my employer and became eligible for FMLA (The Federal Medical Leave Act).

During these last couple of years, my manias have been much rarer and weaker. I faithfully take my medication daily. I still experience mild depression, but to a lessor extent, a more numbing feeling. I still feel sad but not the weepy, nostalgia I felt overwhelmed with previously.

To be continued.

1. <http://escholarship.org/uc/item/2xc2h866>

2. <http://blog.sethroberts.net/2011/05/16/morning-faces-therapy-for-bipolar-disorder/>

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Joseph Dantes (2011-05-22 05:43:34)

Damn. I see a lot of my potential life trajectory there. Except for me it was heavily diet driven. But the faces and light were definitely factors that have impacted me as well.

Scott Pierce (2011-09-14 04:29:03)

Hi Seth, For the last few weeks, I have been looking for more efficient ways to add faces to my morning. I tried the bloggingheads (without sound) but I wasn't thrilled with the result. Then I came across picasa. I have been using picasa's face recognition to catalog my family's pictures and once I had them all tagged by the face that was in the picture, I could easily create slideshows. Then, after uploading them all to the web, I started using a web browser and running slide shows as more convenient. But now I just run a generic slideshow of all the faces on picasa. I never see the same slideshow twice and I can run it as long as I want.

### **Health Care Stagnation: Sleep (2011-05-23 05:00)**

The January 2011 issue of Bottom Line/Health has an article called "Dirty Drugs" about popular drugs with bad side effects. It is based on an interview with an assistant professor of medicine at Harvard named James Rudolph. It contains the following:

Insomnia. Most OTC drugs taken for insomnia, including the allergy medicine Benadryl and sleep aid Sominex, contain diphenhydramine. It can cause constipation, difficulty concentrating, urinary retention, and trouble with eye focus – and stays active in the body for 12 to 18 hours, which can cause next-day grogginess.

My advice. Avoid taking diphenhydramine for insomnia.

Better. Practice good sleep habits. Examples: Go to bed at a reasonable hour, and maintain the same schedule every night. Exercise regularly but not within two hours of bedtime – it will make falling asleep more difficult. Take a warm bath before bed to help you relax.

I agree, insomnia drugs are bad news. But the "better" advice could be a hundred years old.

[1]Effect of one-legged standing on sleep. [2]Six signs of the profound stagnation in health care.

1. <http://blog.sethroberts.net/2011/03/22/effect-of-one-legged-standing-on-sleep/>

2. <http://blog.sethroberts.net/2011/05/19/six-signs-of-profound-stagnation-in-health-care/>

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charlie (2011-05-23 08:02:09)

Great point, but I'd say sleep – along with nutrition, weight loss, and a variety of other syndromes – are sub-medical. How many people see a doctor complaining about sleep disorders? And given the costs, should they?

Patrick (2011-05-23 11:11:51)

You're keeping up on Bottom Line all the way other there in Beijing?!

Nancy Lebovitz (2011-05-23 17:28:38)

charlie, sleep apnea is one major cause of sleep problems, and while the medical solutions (CPAP etc.) don't work for everyone, they seem to work very well and safely for a lot of people. CPAP strikes me as being somewhat in the spirit of Seth's approach— I don't know whether it started with self-experimentation, but it does seem like a fresh, practical look at a problem.

Seth Roberts (2011-05-23 17:44:14)

There are several anti-insomnia drugs.

Randy (2011-05-23 20:34:30)

I recently discovered that eating fresh spinach helps me sleep quite a bit better, so I've started eating spinach salads with dinner. Without fail, when I wake up the next morning I can tell I had a much deeper sleep than normal. I've never noticed this effect with cooked spinach or frozen spinach, only fresh. What I've read indicates it's due to the magnesium. I've been meaning to try a magnesium supplement to see if I get the same effect, but haven't gotten around to it yet.

Sam Schulman (2011-05-23 23:40:06)

"I'd say sleep — along with nutrition, weight loss, and a variety of other syndromes — are sub-medical." I agree - and a good sign of its sub-medicality is that the Dr. Rudolph's advice to those with sleep problems is "go to bed and get a good night's sleep - oh, and don't have sleep problems."

Seth Roberts (2011-05-24 06:25:33)

That's fascinating, Randy, I will test it on myself.

B.B. (2011-05-25 13:56:43)

I am curious about your views on using melatonin. I find it helps with sleep. Also, the amino acid typtophan seems to help relaxation to help sleep.

### **Assorted Links (2011-05-24 05:00)**

- [1]Low-level radon exposure appears to reduce lung cancer
- [2]Dubious science of climate crusaders. "The committee included members whose careers depended on global warming alarmism, and the predictable result was that not one word was changed."
- [3]Graduate school in the humanities is for the already-privileged. What's especially interesting about this column is that it appeared in the Chronicle of Higher Education, which you might expect to be pro-establishment.
- [4]Rediscovery and opposition to the ketogenic diet for childhood epilepsy. "One of the reasons that the keto-genic diet is not popular at this point is because there's not a big drug company behind it, selling it to doctors."

1. <http://enochthered.wordpress.com/category/radiation-hormesis/>

2. <http://www.firstthings.com/article/2011/05/the-truth-about-greenhouse-gases>

3. <http://chronicle.com/article/The-Big-Lie-About-the-Life-of/63937/>

4. <http://www.watercure2.org/epilepsy.htm>

Joe (2011-05-24 16:53:25)

*Graduate school in the humanities is for the already-privileged.* Especially the Art department. The hottest girls were always in the Art dept. Their moms were trophy wives, and their daughters could study art, secure that their trust funds would cover that pesky "making a living" thang. :-)

### **"Stuff of Seth": Faces/Mood and Anticipatory Waking (2011-05-25 05:00)**

After trying the Shangri-La Diet, [1]Jazi yechezkel zilber found that other aspects of my research ("stuff of seth") were relevant to his life:

Years ago, I was part of a community where people would be up early praying etc. For an hour and then eat together. I noticed that going there in the morning was good for me, but was puzzled by the effect. I hypothesized it was the social effect per se.

At some point, I stopped this (what the hell do I have with religion and prayer?) and noticed that I got depressed. I remember that the depression came with a delay. It was funny to see it, as I could not make sense of it. But this I remember well. The depressive effect was not the same day as not going to the prayers but tomorrow (or later?).

I was not having early awakening then. Afterwards, I started having periodically early awakening, I cannot remember the frequency, but it was there and annoying. Now when going to the community, I had two hours between awakening and eating. Whereas at home I would eat immediately after waking. Another thing that puzzled me was how I came to wake up naturally \*before\* my scheduled wake-up time. I used to wake up much later. With food anticipation it makes perfect sense. I woke up two hours before conditioned feeding.

The Amish have extremely low rates of depression – and eat communal breakfasts. The story about early awakening reminds me of a student who told me when you told us this in class I didn't believe it but lately I started waking up too early and was puzzled until I realized I had changed my breakfast.

1. <http://boards.sethroberts.net/index.php?topic=8001.msg103539#msg103539>

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q (2011-05-25 06:44:07)

do people who ride mass transit in the morning have lower rates of depression?

Seth Roberts (2011-05-25 09:01:34)

You need to look people straight in the face to get the benefits. What you see during a conversation. I have found that is very hard to do via mass transit.

dilys (2011-05-25 12:16:28)

I do think "stuff of Seth" is a phrase that will have legs... This material interests me because I expect some day in the middle distance to look at retirement-and-beyond housing programs. I notice that the most well-regarded place in my city has excellent

dinners, but people are on their own for breakfast and lunch. It strikes me that if I moved there – or elsewhere – I would try to spearhead a cadre to have breakfast together, even if they are not a natural seamless social group otherwise. (Fortunately I enjoy cooking and serving simple meals.) The retirement programs sponsor lots of social features for the apparent purpose of keeping depression at bay; but not in the relatively early morning. In fact, I now think I will keep my ear to the ground in my current homeowner's association for a chance to set up something. And do some very simple kind of record-keeping of the results. Here's to further testing of Stuff of Seth!

Rachael (2011-05-25 16:09:18)

The waking up thing works in the other direction too: I had a really hard waking up on time for years, I started eating a higher protein/fat breakfast with about double the calories of my old breakfasts and now I wake up on my own about an hour before my breakfast time, which is great, since I lie in bed and read and have time to get dressed, etc.

Seth Roberts (2011-05-25 21:31:43)

around the same time I discovered that breakfast is bad for sleep I discovered that the faces you would see at a communal breakfast are very good....

### Assorted Links (2011-05-26 05:00)

- [1]Dennis Mangan makes great progress against chronic fatigue syndrome
- More Dennis Mangan:[2] statin dangers.
- [3]Statins fail to save lives. "Statin therapy for an average period of 3.7 years had no benefit on all-cause mortality in a high-risk primary prevention population." About 60,000 subjects were involved.
- [4]Probiotic tested with cyclists. The men benefited (less sickness), the women did not.

1. <http://mangans.blogspot.com/2010/08/curing-chronic-fatigue-my-story.html>

2. <http://mangans.blogspot.com/2009/03/dont-take-statins-if-you-need.html>

3. <http://www.gaia-health.com/articles251/000264-major-jama-study-shows-statins-do-not-prevent-heart-disease.shtml>

4. <http://www.nutritionj.com/content/10/1/30>

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Thomas Seay (2011-05-26 09:19:21)

Happy for Dennis. I am sure though that the Paleo diet is not optimal for everyone. It is a very seductive narrative that our ancestors ate such and such and that that is the way we should eat. However, leaking through the cracks over on PaleoHacks are stories of people not doing that well on Paleo. I already ate pretty well before trying Paleo (I've been doing it for a few months now, though I am starting to abandon it now) and the results have been pretty dismal. Reduced libido, reduced muscle mass, chapped lips, more sensitive to stress, poor sleep.

Nancy Lebovitz (2011-05-26 11:04:46)

Thomas, thanks. Information about failures of various techniques intended to improve quality of life can be hard to find. \*\*\*\*\*  
Supposing that low cholesterol levels are bad for people and those low levels aren't caused by drugs, what can people with low cholesterol do about it?

dearieme (2011-05-27 03:18:52)

An excitable article with a second interesting remark inside a box. <http://www.dailymail.co.uk/health/article-1391398/Found-ultra-bad-cholesterol-present-elderly-type-2-diabetes-sufferers.html>

dearieme (2011-05-28 06:57:27)

a blog post and some comments: [http://pipeline.corante.com/archives/2011/05/27/niacins\\_unexpected\\_flop.php](http://pipeline.corante.com/archives/2011/05/27/niacins_unexpected_flop.php)

## **The Romance of Tracking (2011-05-28 22:05)**

I am at the First Quantified Self Conference in Mountain View. The attendees are much more relaxed and cheerful than at the academic conferences I've attended, presumably because they chose to come. Some are from Europe. My overall take is that the conference's theme is the romance of tracking, in the sense that the typical presentation is something like: isn't it wonderful that I'm measuring this? Or hypothetical. (Of course, the research presented at typical academic conferences is almost never shown to have practical value.) I think this is entirely reasonable. In my experience, it is very hard to learn something clearly useful and takes a long time. For example, I measured my sleep for about 10 years before figuring out how to improve it.

[1]Sean Ahren's presentation was one of the best I heard, and illustrated the difficulty. He has Crohn's Disease. He wondered if hookworms would help. Day by day, he measured how much pain he felt, and for some of the time took hookworms. There was no clear difference between the two periods (with and without hookworms). He learned plenty of useful stuff – how easy/difficult it was to do the measurements, what the data look like, the apparent ineffectiveness of one brand of hookworms – but when contrasted with the goal of learning how to reduce pain from Crohn's, it doesn't seem like much. Perhaps the average Crohn's sufferer would say it's great you're doing this but think how does this help me? I think his observations lasted about 8 months. Perhaps if he continues for 6 years, by then the amount of learning will be larger and more tangible. Overall it's a good example of the way scientific progress and job don't mix well. When you have a job, you make tangible progress quickly: you fill someone's order, for example. They wanted something, you gave it to them. Tangible. Whereas trying to clearly improve one's Crohn's Disease might take ten years. Too long if your motivation is connected to making a living. Too long for professional scientists.

At a breakout session on sleep experiments, I learned that someone had great success wearing blue-blocking glasses (which look orange) after 9 pm. Something I want to try. I've heard about these glasses before but these results were especially impressive. The glasses quickly reduced how long it took him to fall asleep. Someone else was told he had sleep apnea. But when his acid reflux got better, so did his sleep.

You can read about many talks, including mine, in great detail at [2]Ethan Zuckerman's blog.

1. <http://seanahrens.net/>

2. <http://www.ethanzuckerman.com/blog/>

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Wilhelm (2011-05-29 05:30:15)

This blue-blocking glasses thing sounds interesting. And it makes totally sense. I have noticed improvements in my sleep by looking in a daylight lamp (the ones against winter depression) throughout the day. And the newest iteration of these lamps does only use blue light. So it is the blue part of the light that seems to do the job in the eyes. And of course in the evening

we want want to avoid simulating it to be midday. So blocking away the blue part might be very helpful (especially when one is looking a lot in computer displays or works in a bright environment). I will definetly try this.

Chase Saunders (2011-05-29 07:32:26)

Seth, check out a program called Flux (F.lux?) which gradually filters blue out of your computer monitor after sunset.

Cakeb Cooper (2011-05-29 09:11:25)

Do you know if the blue blockers were a common 'over-the-counter' variety, or medical grade specifically designed to block out the blue wave lengths that can disrupt sleep in the evening? I remember years ago trying to find blue blockers specifically made and marketed for the latter, but never could find any so just settled for some amber clip-ons, but I've always wondered if there as good as those used in the John Hopkins sleep research where I first got the idea from.

Kira (2011-05-29 09:14:21)

Hi Seth, You might find the article on this topic at: <http://www.psycheducation.org/depression/LightDark.htm> to be useful. We have started using the amber glasses with our daughter who is ultradian cycling bipolar, hoping to reset the circadian rhythm. You might be interested in the Dark Therapy link on that page. We are also considering some blue light therapy or a dawn simulator in the winter months (we are in Canada so winter days are short).

TomGinTX (2011-05-29 15:00:37)

I bought a Pair of BluBlockers many years ago. I think I got them mail order. That was before the net. Now You can get them at <http://www.blublocker.com/>

## **Snoring and the Shangri-La Diet (2011-05-29 13:00)**

Over at the SLD forums, [1]Newbie Numpty has lost about 50 pounds in four months. His starting weight was 320 pounds. Recently [2]he reported:

My wife tells me that I have stopped snoring - this is something I've done for years (decades) so it could actually mean that I am now at a lower body fat that I have been for a number of years - no way to tell. But a great thing for sleep quality - I've spent money on nose strips and mandibular extension devices to help with this, SLD is again a cheaper fix!

1. <http://boards.sethroberts.net/index.php?topic=7776.0>

2. <http://boards.sethroberts.net/index.php?topic=7776.msg103604#msg103604>

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Robert Conn (2011-05-30 03:03:23)

Let me tell you from personal experience diet is everything wehn it comes to stopping snoring and has changed my life. I lost 10 kilos and was able to stop snoring in 6 months

q (2011-05-30 05:05:47)

it stopped my snoring as well. i attributed it to weight loss pure and simple.

## Why Does Personal Science Matter? (2011-05-30 05:00)

"Why does personal science matter?" is the title of [1]my talk at the First Quantified Self Conference, which I gave two days ago. My answer to that question is personal scientists are more likely to make useful discoveries than professional scientists. Relative to professional scientists, personal scientists have two big disadvantages (less resources, less knowledge) and three big advantages (more time, more freedom, and more desire to be useful). Over the last half-century, the disadvantages have been getting smaller – the personal scientists have been catching up – causing them to overall move ahead of (= have a greater likelihood of making useful discoveries than) professional scientists.

The data behind this answer fall into two groups: (a) the profound stagnation in health care and, by contrast, (b) innovation from personal scientists. A self-serving example is obesity. Mainstream treatments for obesity are ancient. The "eat less, move more" advice was common in the 1950s. Low-fat diets became popular starting in the 1960s. The first popular low-carb diet was introduced in 1864. In contrast, the Shangri-La Diet is based on new ideas. It took far longer to develop (about 15 years) than any professional weight-control researcher would have time for.

I worked harder on this talk than any talk I have ever given. I gave [2]a kind of rough draft a month ago and more recently I practiced it three times. After that I tried to memorize a few sections, such as the beginning and the end. The feedback has been the best I've gotten for any talk I've given so the whole thing has been great. I feel strongly about the overall message, which I don't think is obvious, especially to me. It took me a very long time to have a good answer to why I was finding useful stuff (about acne, weight, sleep, and mood, for example) that the experts didn't know.

1. [http://www.sethroberts.net/about/2011-05-27\\_Why\\_Does\\_Personal\\_Science\\_Matter.ppt](http://www.sethroberts.net/about/2011-05-27_Why_Does_Personal_Science_Matter.ppt)

2. <http://www.sethroberts.net/about/2011-04-23%20The%20Value%20of%20Personal%20Science.ppt>

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Around the Web, Food Reward Edition | Perfect Health Diet (2011-06-04 18:18:49)

[...] with an endorsement of fecal transplants. Seth Roberts argues that personal science is becoming more productive than institutional science. Melissa McEwen declares chicken "the ultimate crap meat" and argues that "much of human [...]"

Around the Web, Food Reward Edition | Everything about HEALTH (2011-06-21 17:42:45)

[...] with an endorsement of fecal transplants. Seth Roberts argues that personal science is becoming more productive than institutional science. Melissa McEwen declares chicken "the ultimate crap meat" and argues that "much of human [...]"

## Highlights of the First Quantified Self Conference (2011-05-31 14:17)

The First Quantified Self Conference happened last weekend in Mountain View. It resembled a super-duper QS meetup: more talks, more varieties of expression (short talks, long talks, booths, posters, breakout sessions, panels), people from far-flung places, such as Switzerland, and more friends.

Above all, it felt sunny, after a long overcast. Something I'd done most of my life was now enthusiastically being done by many others. Other highlights for me:



Talking with [1]Steve Omohundro, an old friend I hadn't seen in years. After I saw him on the attendee list, I aimed it at him. After it, he came up and said he really liked it. Mission accomplished :-). Like so many smart people, he has started to eat paleo.

Meeting John de Souza. I really admire what he has done at [2]Medhelp ("the world's largest health community"). I like to think that, in the future, the first thing you'll do when you have a serious health problem will be to contact others who've had that problem.

[3]Christine Peterson's poster. She measured her sleep with a Zeo for three months. Her poster showed how various things, such as caffeine consumption, correlated with sleep measurements, such as REM time. I believe the most important Zeo measurement is how long you are awake during the night (less is better). Christine's data showed a strong correlation between her score on Zeo's [4]Sleep Stealer's index (you get points for all sorts of things, such as alcohol consumption, that studies have shown disrupt sleep) and how long she was awake at night. With a high score, she was awake twice as long (about 1.5 hours) as with a low score. This shows the practical value of the Zeo. Assuming that the correlation reflects cause and effect, it's now clear how she can improve her sleep (reduce her Sleep Stealer score). It also shows that what's true for other people is true – in the sense of helpful – for her.

The difference between two breakout sessions. Robin Barooah and I ran two breakout sessions about self-experimentation. In the first (many attendees), we talked about 15 % of the time. In the second (six attendees), we talked about 5 % of the time. In the second, but not the first, it became clear that everyone had something they wanted to talk about. If they could talk about it, they were pleased.

Migraines. I met a woman who used self-experimentation to figure out that her migraine headaches were due to common household chemicals. Doctors had repeatedly told her she had a brain tumor. One doctor had proposed trying twenty-odd medicines one by one until one of them worked.

Speaking advice. Melanie Cornwell, a friend of Gary Wolf's, gave me advice about [5]my talk. I'm sure her advice will help me in the future.

Mood improvement via sharing. At an excellent mood measurement breakout session run by Margie Morris, I learned how Jon Cousins had tracked his mood for several years and then started to share it with a friend. The sharing had a huge positive effect. He has started [6]a website called Moodscope to help others do this. At the same session Alexandra Carmichael told about sharing mood ratings with someone who, at first, was not an especially good friend but who became her best friend. The sharing improved her mood ratings and curiously their moods become more synchronized.

So I enjoyed the conference on several levels: socially, professionally, and intellectually. Above all, as I said, it was a relief to finally meet others with similar values and goals.

1. <http://steveomohundro.com/>

2. <http://www.medhelp.org/>

3. <http://www.foresight.org/about/Peterson.html>

4. [http://www.myzeo.com/pages/58\\_zeo\\_personal\\_sleep\\_coach\\_sleep\\_information\\_center.cfm](http://www.myzeo.com/pages/58_zeo_personal_sleep_coach_sleep_information_center.cfm)

5. [http://sethroberts.net/about/2011-05-27\\_Why\\_Does\\_Personal\\_Science\\_Matter.ppt](http://sethroberts.net/about/2011-05-27_Why_Does_Personal_Science_Matter.ppt)

6. <http://www.moodscope.com/>

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eri (2011-06-01 00:04:21)

Yes, it was very much like a super-duper QS meetup! I really enjoyed myself and look forward to the next one. What I didn't like was not having enough time to see everything! So, thanks for this summary. I'd really like to check out Christine's poster. Do you happen to know where there might be a copy online? Also, what speaking advice did you receive? (Incidentally, I asked Christine for speaking advice at the conference. I'll be doing my first keynote at OSCON this summer and wanted her input. I also got great recs!)

Seth Roberts (2011-06-01 05:29:30)

I will post Christine's poster in a few days. The speaking advice I got isn't easily summed up. Here is some of it: 1. Have less text on slides. 2. Have more of a punchline for the two slides about Nobel Prizes. 3. Start with a story. 4. Connect what I am saying to my job as a psychology professor. 5. More numbers (data) to support assertions. E.g., number of people using the ketogenic diet.

Karen Herzog (2011-06-01 14:20:46)

@Seth, I enjoyed reading your QS conference highlights and appreciate the speaking tips. Like @Eri, I wished I had had more time to see all the amazing projects, talks, breakout sessions, etc. I only attended the conference for a couple of hours on Sunday due to illness, so next year's will be that much more charming. @Eri, I'll be posting QS posters online soon. Stay tuned. Two favorites public speaking and presentation blogs are Presentation Zen <http://bit.ly/iF30u9> and Speaking about Presenting <http://bit.ly/jXziK3>. You might like this tip article, "Uncovering Steve Jobs' Presentation Secrets." <http://buswk.co/jJlsQn> Good luck with your talk!

eri (2011-06-02 23:30:02)

Karen & Seth - thanks for all! Karen, I'm enjoying the reading material. I just confirmed speaking at TEDxSOMA on the 18th, so it's going to come in so handy!

How the Other Person Sleeps: Seth Roberts on Christine Peterson's Zeo Research (2011-06-21 07:24:34)

[...] of her Zeo research (download poster) was one of the highlights of the QS conference for me, as I said in an earlier post: She measured her sleep with a Zeo for three months. Her poster showed how various things, such as [...]

## 6.6 June

### Assorted Links (2011-06-01 05:00)

- [1]personal genetics
- [2]The man cured of AIDS. The researcher responsible is an insider/outsider – not an AIDS researcher. Robert Gallo, whom [3]I wrote about long ago, is dismissive.
- [4]Drug companies behaving badly. "Prosecutors charged that Forest [a drug company] deliberately ignored an FDA warning to stop distributing an unapproved thyroid drug, promoted the use of an antidepressant in treating children although it was only approved for adults and misled FDA inspectors making a quality check at a manufacturing plant."
- [5]The iPad foretold (1988).

Thanks to Michael Bowerman.

1. [http://genomera.com/downloads/genomera\\_201009\\_nature\\_medicine.pdf](http://genomera.com/downloads/genomera_201009_nature_medicine.pdf)
2. <http://nymag.com/health/features/aids-cure-2011-6/>
3. <http://www.virusmyth.com/aids/hiv/srlabrat.htm>
4. [http://www.salon.com/news/feature/2011/05/31/us\\_health\\_care\\_fraud\\_1/index.html](http://www.salon.com/news/feature/2011/05/31/us_health_care_fraud_1/index.html)
5. [http://omohundro.files.wordpress.com/2009/03/young\\_omohundro88\\_academic\\_computing\\_in\\_the\\_year\\_2000.pdf](http://omohundro.files.wordpress.com/2009/03/young_omohundro88_academic_computing_in_the_year_2000.pdf)

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peter (2011-06-02 10:13:50)

sgmo (public biotech co) is working on a cure that block ccr5 with zinc fingers

### **Weak Iced Tea and the Shangri-La Diet (2011-06-02 05:00)**

Pat McGee of Grand Prairie, Texas, learned about the Shangri-La Diet last week and realized the theory behind it explained something strange that had happened to him:

A couple of years ago I unpacked my scale and was astonished to see that I had lost 25 lbs sometime in the couple of years before that. [He went from 165-170 pounds to 140-146 pounds. He is 5 feet 8 inches tall.] I was mystified as to why, as I could point to no changes in anything I thought might be relevant in my life.

Last week, I found out about the SLD and read the first few chapters of the book. I realized that about three years ago, I had switched from sodas [with sugar, such as Coke and Pepsi] to weak iced tea. I did this mostly because I was feeling cheap and didn't feel like paying for bottled sodas any more. I use 5 small teabags and a cup of sugar per gallon, steeped for about 6 minutes with a little lemon juice. Basically I want something that's got just enough flavor that it's not plain water.

When you are 5'8" and 170 pounds, losing 25 pounds without trying (from BMI 26 to 22) is astonishing. Not only that, he has kept it off. His story is a little different than mine because I didn't stop drinking anything – certainly nothing as fattening as Coke or Pepsi.

Here is a new use of the ideas behind the Shangri-La Diet – namely, identifying what caused massive accidental weight loss. Obviously others can use his discovery. From a theoretical point of view, he replaced strongly-flavored drinks with a weakly-flavored one. According to conventional ideas about weight control, this should have no effect.

It is also an interesting example of behavioral engineering because he switched from standard soft drinks (such as Pepsi) to his concoction without difficulty. His drink was pleasant enough. It derived pleasure from flavor (tea), sweetness (sugar), and sourness (lemon juice). A little salt would have allowed him to reduce the flavor even more.

Joseph Dantes (2011-06-02 05:30:16)  
So THAT'S why Southern girls stay slim.

dearieme (2011-06-02 05:48:46)  
Tea should be weak, coffee strong and soda abjured. Everyone knows that?

rphil (2011-06-02 05:49:51)  
interesting story but the 'surprise' of weighing one's self and discovering one has unexpectedly lost 15 % of one's body weight is hard to believe. how much did his pants/waist size change? i fluctuate between 190 and 205 and even a 5lb change pushes me an inch in waist size. no way he lost that much weight and didn't have to change all of his pants to a dramatically smaller waist size - like 2-3 inches at least. And if he had tailored clothing like suits?

Tomas (2011-06-02 05:54:13)  
Seth, the temperature of the drink should be considered as well. There are weight-loss plans that basically recommend you to drink as much as 2 litres of cold water daily. The logic behind is that your body must "heat" the liquid, which means you burn energy, at least part of which is fat. Which makes sense, considering that polar explorers and climbers in high altitudes prefer warm drinks in order to conserve energy. That is to say that I do not dismiss your explanation, I only suggest additional mechanisms that may be involved.

Tomas (2011-06-02 05:58:31)  
Regarding my previous comments see the comment section here <http://high-fat-nutrition.blogspot.com/2011/05/energy-expenditure-in-obese-vs-slim-non.html>

Jeff (2011-06-02 06:12:57)  
Not to discount the shangri-la effect, but much of his weight loss can be attributed to the reduction in intake of calories by eschewing the soda. Soda especially can have an amplifying affect on weight gain if you're vulnerable to the metabolic syndrome/insulin effects of all those sugar calories. Tomas, From a purely thermodynamic point of you burn an extra 37 (kilo)calories for every liter of ice cold water you drink. I'm guessing there are some inefficiencies in the system, but I don't think it's that significant. And there's a good chance all his sodas was ice cold or at least refrigerator cold.

justin (2011-06-02 06:17:31)  
I've started noticing a correlation between my general food cravings and my consumption of diet sodas – more diet sodas = more cravings. Replace with carbonated water (La Croix) and my cravings become more controllable. All of this makes me think that the danger of the diet soda is that it's like a 1/0 increase in flavor sensations. Since there's such strong flavor but so little reward, the brain is confused and seeks out additional consumption (more soda, perhaps more food?) as it seeks the caloric reward that it expects to accompany the flavor. Anyone else notice something like this? Struggling a bit to explain what I think is going on here, so curious if anyone has observed similar things and if they could put a theory to their experience.

Seth Roberts (2011-06-02 06:19:55)  
Hundreds of studies and millions of people have found that reduction of calories produces no long term change. Suppose you eat less than usual today, for example. It won't change your weight a month from now. As for temperature, his ice tea was as cold as his sodas.

Tomas (2011-06-02 06:24:11)  
justin, I have a similar experience. I am generally weary of foods and drinks that make me consume them more and more until I am "mechanically" full, ie. I would still eat more, but my stomach can't take anymore and I feel a bit sick. Eliminating such foods completely is the best way to go for me.

Seth Roberts (2011-06-02 06:24:21)  
rphil, I think he knew he'd lost weight without weighing himself, he just didn't have the details until he weighed himself. If you

use a belt you might not have to get new pants.

Seth Roberts (2011-06-02 06:28:39)

Justin, if you usually drink the diet sodas with other food they may produce cravings because they become unusually strong signals for calories – the smell of the diet soda becomes associated with the calories of the other food. (And your surroundings become associated with the smell. Surroundings -> smell -> craving.) However, if you drink diet sodas away from other food I can't explain this.

BlueMorrissey (2011-06-02 07:23:21)

In response to Justin. I have had serious diet soda addiction through the years. At one time I switched to Mineral Water(Pellegrino) most of the day to help my sleep. I definitely noticed a reduction in cravings and lost some weight. It is so expensive and our Sams quit carrying it, so I rarely buy it anymore, but have been able to limit my diet soda intake with the help of supplements.

Tom Passin (2011-06-02 08:28:03)

@BlueMorrissey - I too had a serious diet soda addiction. I kicked it when I ended up in the hospital, heavily doped up for a week. I used that time to get past the withdrawal symptoms. It worked well but I can't really recommend using this method on purpose. However, changing from diet soda (and any caffeinated drink) to water had no effect on my weight (about 40 pounds too many).

nix (2011-06-02 08:32:07)

BlueMorrissey- I invested in a carbonator and bottle of trace mineral drops and make my own sparkling mineral water at home now from tap water. I drink so much more water (much more enjoyably) and I have spent almost nothing. I highly recommend looking into doing something similar. Here's the mineral drop I use (it lasts years): <http://bit.ly/mbMltm>

Cakeb Cooper (2011-06-02 08:45:37)

Seth, getting into possible biological pathways, do you think one of the major factors might be Dopamine 'food reward' pathways overriding the Leptin 'satiety' pathways that are supposed to make us stop eating. I've been reading up on Dopamine and addiction, and am beginning to suspect it may be directly correlated with the Set Point theory of weight regulation.

Nancy Lebovitz (2011-06-02 09:59:07)

Which diet soda it is might matter - I've got a little anecdotal suggesting that aspartame in particular increases appetite.

vs (2011-06-02 10:07:46)

In response to Justin and others- I also find diet cola seems to increase cravings and induces me to drink more diet cola. It may be best for some people to avoid it, even if just to save money as Pat did with regular cola. I would also be curious if anyone has a theory on this. A starting position might be that some diet soft drinks still impact blood sugar and insulin, whether through caffeine and/or artificial sweeteners: "Dr. Atkins' New Diet Revolution" recommends diet soft drinks sweetened with sucralose rather than aspartame. Dr. Atkins notes sucralose does not raise blood sugar. He also encouraged people to avoid caffeine, as excessive caffeine can cause unstable blood sugar. In "Good Calories Bad Calories" Gary Taubes describes the animal research of Stylianos Nicolaidis, where rats secreted insulin in response to the mere taste of a sweet substance. It did not matter whether the sweet substance was sugar or a no-calorie sugar substitute.

TomGinTX (2011-06-02 18:33:46)

@Nancy: anecdotal - like that word. @rphil: Maybe he wore stretchy pants. 8-)

Thoughts on Obesity Inspired by Stephan | Perfect Health Diet (2011-06-02 18:39:10)

[...] by subtle changes in the intensity of flavors and flavor associations. Seth Roberts today has a post illustrating this: a reader lost almost all excess weight simply by shifting from Coke and Pepsi to iced tea flavored [...]

Pat McGee (2011-06-02 19:25:14)

Hi rphil, I don't know how much my waist size changed. I retired a couple of years before that and switched from fitted pants to elastic waistbands, since I didn't have to dress up anymore. I might have noticed something the once I had to wear a suit, but wearing the suit was so unpleasant in itself that I didn't. Pat

Chuck (2011-06-02 19:32:08)

He also cut his sugar intake in half - assuming he consumed the same amount of tea as he once did cola. A gallon of cola has 100 tsp of sugar and a cup of sugar (his weak tea recipe) is 48 tsp.

Pat McGee (2011-06-02 19:32:44)

Hi Jeff, I don't think switching away from drinking soda had anything to do with it. Remember that I switched from sodas to sugared water (well, weak tea), not to plain water with no calories. With a cup of sugar per gallon, I think it had around the same number of calories. Or at least I once counted calories given my typical consumptions of each and decided that it wasn't enough to make a difference, much less that much difference. Pat

BlueMorrissey (2011-06-02 19:33:51)

Thanks nix. I will definitely check that out. I will drink more water period, if it is mineral water. Something about the carbonation that helps replace the diet soda. Come to think of it vs. I began the switch to mineral water when I was doing Atkins. It was his recommendations that helped me make the change. That did help with the diet and helped me lose about 60 lbs on it. My moods eventually became so awful while doing super low-carb that I cannot stick with it. I just try to stay away from sugar now. SLD is so much easier and takes away many of those cravings, and especially diminishes the desire to get seconds.

BlueMorrissey (2011-06-02 19:39:20)

Nancy, it was/is Diet Mt. Dew mostly, but also Diet Pepsi. Yes aspartame.

Pat McGee (2011-06-02 19:42:48)

Hi Chuck, I actually do drink more weak tea than I did sodas. When I did the soda thing, I also drank about as much ice water as I did soda. Well, without measuring, it seemed to me to be about the same. When I switched, I pretty much quit drinking ice water at all and now just drink tea. Water is so boring. I find it interesting that I didn't think to put these little details in my initial description. Y'all's questions pushed me to remember and to describe them. It's a good thing I wasn't trying to publish this in a scientific journal - the referees would have bounced it for being irreproducible. (and JIR probably wouldn't have taken it as being too factual.) Oh, another detail, which I don't know whether it matters or not: from Labor Day to Memorial Day, I still always had two sodas a week when I volunteered at the Monday Night concert and got them free. I did take bottles of frozen tea to the summer music festivals instead of buying sodas. Pat

dearieme (2011-06-03 12:42:06)

Fizzy mineral water can be very cheap - Tesco, the British supermarket chain, sells a two litre bottle for 16p - that's ca 27 cents. We always have a couple in the fridge.

Chris L (2011-06-04 17:06:16)

I lost 5-10 lbs as well when I stopped drinking Soda. I believe it came not from caloric deficit (I notice there is no mention of how much soda he drank)...but from the reduction of sugar. Couldn't this particular anecdote be explained by Paleo diet principles? Admittedly, there could be overlap between the two, but I see this as one of the weaker examples of Shangri-la proof that have been presented.

Seth Roberts (2011-06-04 18:39:30)

I don't remember anything in paleo principles about weak flavors being less fattening than strong flavors.

Chris L (2011-06-05 09:31:07)

Sorry...I wasn't talking about the strength of flavors. I was talking about the amount of sugar (not the amount of calories). That was exactly my point. I think there is another way to interpret these results...in terms of carbs as opposed to strength of flavor. The paleo story...carbs stimulate insulin which stimulates fat storage....cutting carbs (and keeping calories constant) would stimulate fat loss because of the hormone changes. I hope I don't come off too grumpy. I do mean all of this in good faith. Big fan of the self-experiments you do and I own a copy of the Shangri-la diet (even loaned it out with my recommendation).

Seth Roberts (2011-06-05 20:30:05)

I see. Thanks for clarifying that. Since I lost weight by drinking sugar water – that is, by consuming more sugar – I am the last person you will convince that eating less sugar inevitably causes weight loss, as the paleo story has it.

### **Flavor-Calorie Learning: Root Beer Floats (2011-06-03 05:00)**

After having guests over for dinner, my friend Carl Willat realized he had the ingredients for a root-beer float: Haagen-Daz vanilla ice cream and A & W root beer. He hadn't thought about root beer floats in years. He made one. The next day he made another one. He ran out of root beer, bought some more. The day after that, another one. They seemed to taste better and better each day. He ran out of ice cream, bought some more. The next day, another root-beer float. The next day, another one. Toward the end of the week, he found himself thinking: When am I going to have one tomorrow? He had to force himself to stop buying ice cream and root beer, and after a while he didn't think about them anymore.

At the heart of [1] the theory behind the Shangri-La Diet is the idea that we learn to associate flavors (more precisely, smells) with calories. Here is a vivid example.

I've noticed this learning with liquor. A few months ago I bought my first bottle of rum – to flavor yogurt. Sometimes I drank the rum without yogurt, and it tasted better and better.

1. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>

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John W (2011-06-03 05:50:09)

An interesting experiment might be to try to learn to like something that you currently don't like. Cucumbers for example in my case. According to this model, if I pair cucumbers with a source of calories like yogurt and eat them on a regular basis this way, I should start to like them.

justin (2011-06-03 07:21:47)

@John, I'm not sure it would – yogurt is fairly bland (unless it's particularly sour) as are cucumbers. The flavor might not be strong enough to trigger the association.

Elizabeth Molin (2011-06-03 08:11:56)

Add chopped fresh mint to the cucumber and yogurt.

dearieme (2011-06-03 08:27:54)

Buy decent bread and just make cucumber sandwiches. Yum, yum.

insert name here (2011-06-03 15:37:19)

Eat pickles instead of cucumbers? That might add enough flavor to start the association?

Seth Roberts (2011-06-03 15:38:20)

John W, yes, this should work. You could also sprinkle the cucumbers with sugar – that should make you like the smell of cucumbers. Several years ago I heard of an experiment that did just that: caused people to like vegetables more by adding sugar. The preference remained after the sugar was removed.

Seth Roberts (2011-06-03 16:08:24)

what matters is the strength of the smell. Saltiness, sweetness, and sourness don't count.

Nancy Lebovitz (2011-06-03 18:49:55)

How does this square with foodies– people who are generally up for trying new flavors?

Seth Roberts (2011-06-04 10:01:32)

I think trying new flavors helps you be thin.

Nancy Lebovitz (2011-06-06 05:42:12)

Have you checked this theory on foodies? I'm one of those people who has a streak of "I've never heard of that, let me try it", and I'm moderately fat. I grant that I don't get new flavors that often, but mere newness (as distinct from something like strong bitterness, which I simply don't like) is fun rather than off-putting.

### **Christine Peterson's Zeo Research (2011-06-04 05:00)**

[1]Christine Peterson's poster of her Zeo research was one of the highlights of the QS conference for me, [2]as I said. Here's why.

The correlation between Sleep Stealer score and time awake. When her Sleep Stealer score was 5 or less, she was awake about an hour during the night. When her score was more than 5, she was awake about two hours – a big difference. There should be a big difference, but you could fail to see it for a thousand reasons. The large difference is a validation of the whole thing – above all, an indication that her Zeo is working correctly.

Even when her Sleep Stealer score is low, she is awake a long time. This means there are major determinants of sleep depth not captured by the Sleep Stealer score. With the right Sleep Stealer score – assuming the correlation reflects cause and effect – she can improve from two hours to one hour (one hour difference) but that leaves one hour. This implies that the determinants of time awake not in the Sleep Stealer score are just as important as those that it contains.

Even when she is at the best level of important factors, she is awake a long time. When she had no drinks, she was awake 56 minutes/night. When other people didn't disrupt her sleep at all, she was awake 54 minutes/night.

The average wake time for women 50-59 is half an hour. That's a lot of lost time, day after day, night after night. Note however that the data is from Zeo users, who may have worse sleep than average.

It only took three months to collect the data. This isn't on the poster. Yet this is a solid contribution, in the sense that I learned from it. With perhaps nine months of data and better data analysis, it might be publishable. The main point such a paper would presumably make is that even when you do everything right (Sleep Stealer score = 0) you're still awake a lot. This point is nowhere in the sleep literature.



Christine, if you would like to sleep better I suggest:

1. Don't eat breakfast until at least three hours after you wake up.
2. Get at least one hour of sunlight early in the morning – e.g., 6 to 7 am. You can do this by working outside. (I work outside several hours every morning.)
3. [3]Stand on one leg to exhaustion four or more times per day. (I do it six times/day.) You can do this while reading – it should not reduce your free time.

1. [http://blog.sethroberts.net/wp-content/uploads/2011/06/QS\\_ChristinePeterson\\_rev.pptx](http://blog.sethroberts.net/wp-content/uploads/2011/06/QS_ChristinePeterson_rev.pptx)
2. <http://blog.sethroberts.net/2011/05/31/highlights-of-the-first-quantified-self-conference/>
3. <http://blog.sethroberts.net/2011/03/22/effect-of-one-legged-standing-on-sleep/>

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### Questions About One-Legged Standing and Sleep (2011-06-05 05:00)

Rajiv Mehta asked some questions about [1]using one-legged standing to improve sleep. I do three sets of two (left leg, right leg) each day.

Q. How do you spread out your three sets (have you found some minimum time between sets, say 3 hours)?

A. I make sure there's at least 4 hours between sets. The effect was weaker with only 2 hours between sets. The time of day doesn't matter but for convenience I usually do one set in the morning, another set in the afternoon, and a third set in the evening.

Q. They say exercise before bed is not a good idea. Do you make sure your last set is at least X hours before bed?

A. No. If anything this particular exercise will make you more sleepy, not less.

[2]Using the Tonic app for this.

1. <http://blog.sethroberts.net/2011/03/22/effect-of-one-legged-standing-on-sleep/>
2. <http://tonicselfcare.blogspot.com/2011/06/bobbing-for-sleep.html>

Wayne (2011-06-05 18:53:39)

Seth, I continue to be impressed by this phenomenon. I'll give a smidgen of background followed by a few questions ... I'm a psychophysiolgologist, and have taught sleep hygiene principles to clients for 20 years now. I've also had to be very careful to manage my sleep thoughtfully myself because of how I'm wired. When I use this technique, my sleep is consistently better than when I don't. There is something going on here beyond just an exercise effect, because the quality of sleep with this technique is different in a way that is hard to articulate. It's almost like a "drugged" sleep without any of the negative side effects of a drug. I haven't been able to get regular exercise for some time now because of injuries, and so until I incorporated this technique I was missing that crucial component of my sleep hygiene. I'm going on memory here, but it seems to me that the sleep this technique gives me is qualitatively different from the sleep I'd have the night after "ordinary" strength training or aerobics. Now for some things I'd love your feedback on: 1. DIFFERENT EXERCISES One of my injuries is a knee injury, and I have been cautioned that my quads are too strong for my hamstrings (this may have figured into injury). I'm told that the quad/hamstring balance is critical. For a long time I was doing this technique by standing on one leg, with the knee a little bent in order to make it more work. I've stopped doing that for now until the knee issues are better sorted out. Now I do these in rotation on different days: one very slow ab curl, one "superman" (get on stomach, arch back with arms and legs extended like superman flying), a slow push-up, etc. As best as I can tell, the same phenomenon is at work with these various iterations, as long as I am working a group of large muscles to the fatigue point. I'm not clear if any of them deliver superior results with sleep though. I'm interested in your thoughts on this, and also have you considered calling this something other than "standing on one leg"? I've found myself tagging it "interspersed isometrics" but that is really gangly. It would be interesting to know if anyone else is using other muscle groups. It might be possible to have some small but positive effect on overall strength and fitness by switching methodically between muscle groups. 2. You wrote earlier about "signaling molecules" playing a role, and I wonder if you can share more about that. Is that a hypothesis or have such been identified? I wonder if you could increase your "dose" by doing to different sets in a row (stand L leg, stand R leg, ultra slow situp, ultra slow superman). If each muscle group sends signaling molecules, then I wonder what's the impact of such a large dose vs. multiple smaller doses. 3. That leads to my final question for the night: I'd be interested to start tracking this sort of thing more systematically. What would you recommend? I have a Mac at home, and also use an Android phone. Any ready made programs that would do the job well? It would be nice to have a way to track the impact of various exercises to tease apart what works best for myself. Thanks! Wayne P.S., if the impact on my sleep is typical, I think you've happened upon perhaps the most powerful behavioral tool for improving a person's sleep!

Seth Roberts (2011-06-05 20:40:20)

Thanks, Wayne. To answer your questions: 1. I haven't done much with other muscle groups. It's so easy to get the effect via one-legged standing: I can read at the same time I stand on one leg. I couldn't read or watch TV while doing the other exercises you describe. But I completely agree that for overall fitness it would be better to use more than just your legs. I haven't considered other names, no. "standing on one leg" is really clear, although I agree it's not the essence of it. The essence is probably use large muscles to exhaustion. 2. The signalling explanation is just a hypothesis. I'm sure you can increase your dose by using different muscles besides the legs, but it is easier, at least for me, to increase the dose by doing the legs more than once - waiting until the signalling molecules are resynthesized, which seems to take about 4 hours. The molecules just seem to swim in the blood with no noticeable effect until you are asleep. For example, at the end of the day I can't tell how much one-legged standing I've done. Only the quality of my sleep will reveal that. 3. To measure the effect objectively you can use a Zeo or WakeMate. I haven't yet done this but plan to. I'm sure the one-legged standing reduces how often you wake up in the middle of the night. You can use either one to measure the reduction in waking up at night. The WakeMate is much cheaper and works with an Android phone. But you don't need any technology at all to make the measurements I did. Just rate how rested you feel when you wake up in the morning. If you make these measurements I'd be very curious to see what you find out.

Wayne (2011-06-06 05:26:22)

Thanks Seth. I just ordered the WakeMate - had been thinking about the Zeo but like the WakeMate price a lot better. Looks like it will travel well as well. For something so simple there are actually a number of variables, such as exercise used and timing of the exercises. Do you have any thoughts about how to proceed most efficiently to test out some of these factors? Warmly, Wayne

Seth Roberts (2011-06-07 16:48:52)

To test the effects of various exercises and so on, I suggest you proceed with slow and simple designs. Such as ABA. Do one thing for one or two weeks, then do another thing for one or two weeks, then go back to the first thing.

TomGinTX (2011-06-07 17:25:59)

Seth, I tried standing on one leg to improve my sleep. It did not work at all. Every time I dozed off, I fell over.

## **Andrew Solomon on Right to Death (2011-06-05 20:55)**

[1]From The New Yorker website:

My brother and I had by then been authorized by Willie's next of kin to make his medical decisions. When we asked to discontinue life support, the hospital began putting up barriers; they did all they could to prevent our doing what Trish, my brother, my father, I, and everyone else who knew and cared about Willie agreed he'd have wanted. . . . Hospital officials repeatedly accused me of murdering him, and wildly misrepresented New York State law relevant to his case. We had, with his biological family, the legal right to decide on his behalf, and having to duke it out with these doctors exacted a great cost we should not have had to pay.

Ugh. I am sorry Andrew did not name the hospital.

1. <http://www.newyorker.com/online/blogs/newsdesk/2011/06/on-my-mother-and-dr-kevorkian.html>

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Sam Schulman (2011-06-05 21:27:31)

That's bad. This would be worse: My brother and I had by then been authorized by X's next of kin to make his medical decisions. When we asked to continue life support, the hospital began putting up barriers; they did all they could to prevent our doing what Y, my brother, my father, I, and everyone else who knew and cared about Willie agreed he'd have wanted. . . . Hospital officials repeatedly accused me of wanting to keep him alive against his will, at enormous cost, and wildly misrepresented New York State law relevant to his case. We had, with his biological family, the legal right to decide on his behalf, and having to duke it out with these doctors exacted a great cost we should not have had to pay.

Haggus (2011-06-05 21:56:14)

I can so relate to Mr. Schulman's comment. Unlike the state of New York, where I live (north of the 49th), the law states doctors have the final say on who gets to live or die, regardless of family wishes.

Sam Schulman (2011-06-05 22:39:42)

Sorry - left off conclusion: since error is inevitable, that it is better for docs and hospitals to err on the side of not-pulling-the-plug than it is to err on the other side, particularly since absolute knowledge about when end of life is coming is rarer than anyone admits. Certainly the self-interest of many "stakeholders" is on the side of pulling the plug - weary family, crowded hospital, profit-seeking insurer (or spending-averse govt), etc. etc. - all against one patient who signed a paper in good health but is unable now to communicate. He'll have the rest of his life to be dead - what's the hurry? Given the urgency and activity of the hospital in Solomon's example, I wonder whether there was a genuine medical disagreement about the patient's condition that Solomon scants.

Seth Roberts (2011-06-06 01:48:51)

I suspect the self-interest of the hospital was on the side of not pulling the plug. As a general rule, hospitals make less money when they are less crowded. It was in nobody's self-interest to accuse the patient's legal guardians of murder.

Sam Schulman (2011-06-06 19:26:27)

Without reference to Solomon's story: my father, an academic neurologist practicing 50s-80s, had numerous instances of family/friends eager to pull plug, never in doubt, even when there wasn't a plug to pull - it's human nature. He had admirable control of his temper; not everyone does. But as Haggus says, mores change, and the gravitational pull is toward institutional control of death, as in Canada, and even more so in the Netherlands. Pain is horrible, and easy to sympathize with - but who bothers to imagine the horror of watching someone kill you when you happen not to want to be killed; and the greater horror of anticipating your own killing. Seth, I encourage you and your readers to look at Florence Nightingale's classic 19th century book "Notes on Nursing: What it is and What it is Not." There is a tremendous amount of concern about the patient's state of mind - and the necessity of avoiding whispered conferences at bedside. The patient always imagines the worst, and thinks his death is being discussed (all based on Nightingale's beautifully observed experience) which has a dreadful affect on recuperation and recovery. Even though medicine lacked most of what works in modern medicine, there was an absolute commitment to the patient that made a difference - and is vanishing these days. The fine-sounding right to die is not going to be a benefit for most of us.

Gunnar (2011-06-07 11:55:22)

There is no death. Get over it. It's proven that some people remember former lives. Do your homework.

### Assorted Links (2011-06-06 05:00)

- [1]How one obscure sentence upset the New York Times by Renata Adler. A great and revealing story. My explanation of the Times's over-the-top hostility to Adler's book (Gone: The Last Days of The New Yorker) differs from Adler's. She says it was due to her lack of deference, whereas I suspect currying favor with Charles McGrath, the editor of the New York Times Book Review, was a big part of it. In Gone, Adler criticized McGrath, who was apparently very upset. Gone is the rare critique that combines negativity and deep familiarity. Usually you have one or the other.
- [2]fish oil and joint pain
- [3]life and death consequences of job choices
- [4]one more reason for health care stagnation. Innovations excluded by hospital purchasing groups.
- [5]pickled vegetables and cancer. Alas.
- On the other hand, [6]yogurt linked with lower risk of colon cancer. [7]This study points in the same direction.

Thanks to Dave Lull and Alex Chernavsky.

1. <http://www.harpers.org/archive/2000/08/0066912>
2. <http://www.nytimes.com/2011/05/31/science/31qna.html?emc=eta1>
3. <http://www.overcomingbias.com/2011/05/jobs-kill-big-time.html>
4. <http://www.washingtonmonthly.com/features/2010/1007.blake.html>
5. <http://www.slate.com/id/2295964/>
6. <http://www.ncbi.nlm.nih.gov/pubmed/21607947?dopt=AbstractPlus>
7. <http://www.ncbi.nlm.nih.gov/pubmed/8205538>

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Paul Sherrard (2011-06-06 07:45:24)

Speaking of yogurt, did you ever happen to read Abbie Hoffman's yogurt-making tips from *Steal This Book*? They sound pretty sensible to me, but I've never tried to use them to the letter: "...Begin by going to a Turkish or Syrian restaurant and buying some yogurt to go. Some restaurants boast of yogurt that goes back over a hundred years. Put it in the refrigerator. Now prepare the culture in which the yogurt will multiply. The consistency you want will determine what you use. A milk culture will produce thin yogurt, while sweet cream will make a thicker batch. It's the butter fat content that determines the consistency and also the number of calories. Half milk and half cream combines the best of both worlds. Heat a quart of half and half on a low flame until just before the boiling point and remove from the stove. This knocks out other bacteria that will compete with the yogurt. Now take a tablespoon of the yogurt you got from the restaurant and place it in the bottom of a bowl (not metal). Now add the warm liquid. Cover the bowl with a lid and wrap tightly with a heavy towel. Place the bowl in a warm spot such as on top of a radiator or in a sunny window. A turned-off oven with a tray of boiling water placed in it will do well. Just let the bowl sit for about 8 hours (overnight). The yogurt simply grows until the whole bowl is yogurt. Yippie! It will keep in the refrigerator for about two weeks before turning sour, but even then, the bacteria will produce a fresh batch of top quality. Remember when eating it to leave a little to start the next batch..."

Darrin Thompson (2011-06-06 09:35:44)

That pickle thing sounds fishy. They've got clearly elevated cancer rates but when they try to isolate the pickles the results are mixed? Sounds like they've identified a non-factor.

Tomas (2011-06-07 03:32:11)

Well I was laughing all the while reading the pickles study. Live with the fear, your days are cucumbered!

Seth Roberts (2011-06-07 16:52:28)

Those suggestions do not agree with my experience. You can get really thick yogurt using milk – no need to use cream. Use a long fermentation time, such as 24 or 30 hours, at constant temperature. And I found that my yogurt improved when I used less starter. I use 1/4 teaspoon – much less than Hoffman's 1 tablespoon. However, you can certainly get thin yogurt using this recipe.

## **Conway's Law and Science (2011-06-07 05:00)**

[1]Conway's Law is the observation that the structure of a product will reflect the structure of the organization that designed it. If the organization has three parts, so will the product. In [2]the original paper (1968), Conway put it like this:

Any organization that designs a system (defined broadly) will produce a design whose structure is a copy of the organization's communication structure.

Here is an example:

A contract research organization had eight people who were to produce a COBOL and an ALGOL compiler. After some initial estimates of difficulty and time, five people were assigned to the COBOL job and three to the ALGOL job. The resulting COBOL compiler ran in five phases, the ALGOL compiler ran in three.

A consumer – someone outside the organization who uses the product – wants the best design. Conway's Law implies they are unlikely to get it.

I generalize Conway's Law like this: It is hard for people with jobs to innovate – for reasons that outsiders know nothing about. Whereas persons without jobs have total freedom. An example is a politician who promises change but fails to deliver. The promises of change are plausible to outsiders (voters) so they elect the politician. However, being outsiders, they barely understand how government works. When the promised changes don't happen, the voters are "disillusioned".

To me, the most interesting application of the generalized law is to science. In my experience, people who complain about "bad science", such as [3]John Ioannides and [4]Ben Goldacre, have the same incomplete view of the world as the "disillusioned" voters. They fail to grasp the constraints involved. They fail to consider that the science they are criticizing may be the best those professional scientists can produce, given the system within which they work. Better critiques would look at the constraints the professional scientists are under, the reasons for those constraints, and how those constraints might be overcome.

"Much research is conducted for reasons other than the pursuit of truth," writes Ioannidis. Well, yes – people with jobs want to keep them and get promoted. They want to appear high status. That's not going to change. It's absolutely true that drug company scientists slant the evidence to favor their company's drug, as Irving Kirsch explains in [5]The Emperor's New Drugs. But if you don't understand what causes depression and you're trying to produce a new antidepressant and you want to keep your job . . . things get difficult. The core problem is lack of understanding. Lack of understanding makes innovation difficult. Completely failing to understand this, Ioannidis recommends something that would discourage new ideas: "We must routinely demand robust and extensive external validation—in the form of additional studies—for any report that claims to have found something new."

Truly "bad science" has little to do with what Ioannides or Goldacre or any [6]quackbuster talks about. Truly bad science is derivative science, science that fails to find new answers to major questions, such as the cause of obesity. Failure of innovation isn't shown by any one study. Given the rarity of innovation, it is unwise to expect much of any one study. To see lack of innovation clearly you need to look at the whole distribution of innovation. Whether the system is working well or poorly, I think [7]the distribution of innovation resembles a power law: most studies produce little progress, a tiny number produce large progress. The slope of the distribution is what matters. Bad science = steep downward slope. With bad science, even the most fruitful studies produce only small amounts of innovation.

Just as outsiders expect too much from professionals, they fail to grasp the innovative power of non-professionals. Mendel was not a professional scientist. Darwin was not a professional scientist. Einstein did his best work while a patent clerk. [8]John Snow, the first person to use data (a graph) to learn the cause of an infection, was a doctor. His job had nothing to do with preventing infection. To improve innovation about health (or anything else), we should give more power to non-professionals, as I argued in [9]my talk at the First Quantified Self Conference.

Thanks to Robin Barooah.

1. [http://en.wikipedia.org/wiki/Conway%27s\\_Law](http://en.wikipedia.org/wiki/Conway%27s_Law)

2. [http://www.melconway.com/Home/Committees\\_Paper.html](http://www.melconway.com/Home/Committees_Paper.html)

3. <http://www.scientificamerican.com/article.cfm?id=an-epidemic-of-false-claims>
4. <http://www.badsience.net/>
5. <http://www.popularscience.co.uk/reviews/rev488.htm>
6. <http://www.anh-europe.org/news/quackbuster-stephen-barrett-md-loses-appeal-and-leaves-home-town>
7. <http://sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>
8. [http://en.wikipedia.org/wiki/John\\_Snow\\_%28physician%29](http://en.wikipedia.org/wiki/John_Snow_%28physician%29)
9. [http://www.sethroberts.net/about/2011-05-27\\_Why\\_Does\\_Personal\\_Science\\_Matter.ppt](http://www.sethroberts.net/about/2011-05-27_Why_Does_Personal_Science_Matter.ppt)

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David (2011-06-07 19:10:48)

Just to help a little to prove your point..."It is hard for people with jobs to innovate": <http://edge.org/conversation/geoffrey-west> But, "Much research is conducted for reasons other than the pursuit of truth"... yes, he is right: <http://edge.org/conversation/the-argumentative-theory-anyway...> nice post!

Robbo (2011-06-07 21:32:45)

"the science they are criticizing may be the best those professional scientists can produce, given the system within which they work. " Are you familiar with the work of W E Deming ? Your remark here reminded me strongly of his statement on Quality (in the context of industrial production) that it is c 96 % determined by the system in which the worker is working, and c4 % by the worker. Hence, if you want to improve quality, you should focus on improving the system. Sounds to me like Science is the same.

Nathan Myers (2011-06-08 00:17:46)

The best supported widespread cause of obesity I know of is the one that very strongly correlates antibodies to a particular rhinovirus with obesity. Unless somebody can show that only obese people catch that cold, or that only obese people continue to express that antibody, it really looks as if this particular cold actually leaves a propensity to obesity in its wake. The mechanism remains unknown Does it cause addiction to fructose? Reduced metabolic rate? Increased muscle pain after exercise? Insatiety? Your guess is as good as mine, maybe better. I wonder if anybody is actually looking into it, as a day job. The best we can do now is to stay away from fat people suffering colds.

Seth Roberts (2011-06-08 05:22:38)

yes, I know about and like Deming's work.

Nancy Lebovitz (2011-06-08 14:53:12)

Nathan, staying away from fat people with colds won't help you. If the theory is correct, the crucial cold happened before the person got fat. In fact, if the theory that you become immune to the specific rhinoviruses which have made you sick in the past, then it's slightly more risky to be around thin people with colds than fat people with colds.

Cambios Constitución chilena entre 1980 a 2005 « Desarrollo de ideas y proyectos para mejorar la calidad de vida en Chile y el Mundo. (2011-06-08 15:41:28)

[...] a la clase política, es decir, a la estructura de partidos que sostiene las democracias, tal como operan hace cerca de dos [...]

RandomReal[] (2011-06-09 07:21:44)

Seth, Thanks for alerting me to Conway's Law - I had never heard of it. I agree with your thoughts on quackbusters. Making a life of debunking creationists and homeopaths does not lead to anything new and innovative, nor does it lead to a better understanding of evolution and disease. If only they would train their eye to uncover foundations of some modern scientific beliefs, say climate science. But, they would be branded as heretics. An aside. I find creation science/ID and popular climate science to be quite similar: both are lazy and unimaginative. Creation scientist: I can't imagine how such complexity arose, therefore god must have done it. Climate scientist: I can't think of a natural explanation for this observed change in the weather,

therefore it must be CO<sub>2</sub>. I don't want to cast aspersions on all climate scientists, since some are actually doing interesting stuff. But, you will never hear about their work in the popular scientific press. Derivative science is indeed pernicious. My thesis adviser had a name for it: sandwich science. Take two slices of known and insert a little unknown between them. Voila! Science! An mpu (minimal publishing unit)! My model of the scientific enterprise is one of a hunter/gatherer society. Most scientists are gatherers. They go out and do their experiments and gather data. Hunters work on the edges of knowledge and explore new lands. They are not productive according to the gatherer metric and are often wrong. Nevertheless, the hunters are the innovators and are necessary for the advancement of science. The two need each other to survive. Indeed, the mythology of science celebrates the hunters (e.g., Einstein), allowing them to be tolerated and to feed from the gatherer's work. This tolerance derives from the need for fat and protein (new theory to explore) that the hunters provide. But, just as hunter/gatherer societies evolved into farming societies, the pursuit of science has evolved. The current academic/industrial scientific complex resembles farms on which scientific results are grown. Along with this farming society come the politicians and bureaucrats with their rules and regulations that will eventually lead to the depletion of nutrients (innovation) from the scientific soil. My tongue in cheek saying is: Scientists figure out how things work. Engineers figure out how to make things work. Businessmen figure out how to sell it. Politicians, thinking themselves experts in all of the above, come in a screw things up.

Seth Roberts (2011-06-09 09:57:18)

I agree, especially with this:

Making a life of debunking creationists and homeopaths does not lead to anything new and innovative, nor does it lead to a better understanding of evolution and disease.

I also like your comparison of creation science and climate science. I would add two things. One is that having a job pushes the job holder toward playing it safe. Playing it safe and science don't work well together, as you say. The other is that rules and regulations about science, ostensibly for the benefit of the public, flourish and grow ("IRB mission creep") because jobs are created to enforce them. The more paperwork the bureaucrats can generate, the more people they can hire to process the paperwork, the larger their budget, and the more important they feel. This is a disaster for the public, which has no idea of the deadening effect of IRBs.

RandomReal[] (2011-06-10 09:23:44)

"IRB mission creep" My best personal experience were my two stints at NIH. My first started in the early 90's. My sign up, papers, contract, finger printing, etc. involved 2 bureaucrats and about 1.5 h. The only mandatory courses that I needed to take were in radiation safety and laboratory safety. During that time, Clinton & Gore were on the "efficiency in government" kick and Harold Varmus held them to their word. The campus was amazingly open. You could walk onto campus (parking was impossible) and into any lab on campus, save the Human Genome Center which was under constant threat from animal rights activists. Amazingly, hardly anything changed while I was there except it became easier to get orders processed. From the late 90's to 2005, rules, regulation & bureaucracy exploded. The formal paper signing took almost a whole day. It was interspersed with talks from bureaucrats (powerpoint-bulleted enhanced). Funny thing was radiation and lab safety were not required, but perhaps 8 other online courses were. Being bureaucratically-challenged, I ignored them until a frantic call came from the Institute's main office saying that I would not get paid until I completed them. Moreover, it had been turned into "Fort NIH". The past openness was gone. There were some labs where I could not just drop in as I passed by: I had to call in advance and have my name put on a list and then I could pass through airport like security. The best science, there and elsewhere, was performed in laboratories (Sections in NIH speak) which had 5-10 members and there was an active community of related labs with weekly interaction. The size of these communities was 100-200 researchers in which ideas and materials flowed freely. The small labs were under constant assault from the Empires of NIH headed by Gallo-like lab chiefs seeking to conquer and expand. These labs produced interesting results inversely proportional and mpu's geometrically proportional to their size. I haven't looked at the numbers but I would expect that bureaucracy creep has increased overall spending without a similar increase in spending on research and bench science. Sorry for the ramble, but I'll end with one last question: Is there an equivalent to the Paleo Diet for institutions?



Seth Roberts (2011-06-10 21:54:15)  
that's a fascinating comparison.

Arquitectura de sistema complejos « Desarrollo de ideas y proyectos para mejorar la calidad de vida en Chile y el Mundo.  
(2011-07-14 04:36:32)

[...] recientemente he leído un artículo sobre la Ley de Conway, que que reafirma estas ideas, pues ésta ley plantea : “la estructura de un producto refleja [...]

## How To Make Kefir: What I Didn't Know (2011-06-08 05:00)

Kefir is much easier to make than yogurt because you ferment the milk at room temperature, once you have the starter culture. I've made it about ten times. The most recent batch was the easiest and best because I learned two things from the woman who gave me the starter:

1. Ferment it until there is a line of separation. There eventually form a line of clear liquid between the curds (top) and the rest (bottom). This took about two days. In the past I didn't know how long to wait.
2. After fermentation, separate the curds from the rest by putting it through a colander. This provides good separation. You drink the liquid, use the solids to make more kefir. In the past I tried to spoon out the kefir grains.

If I had to choose between kefir and yogurt I'd choose kefir. Not only is it easier to make but it is [1]far more complex. Unlike yogurt, it's a drink. I drink more often than I eat so there are more opportunities to consume it.

I suspect you can make kefir by putting store-bought kefir into ordinary milk. I haven't tried this, however.

1. <http://en.wikipedia.org/wiki/Kefir>

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Charles (2011-06-08 05:31:00)

In my experience, kefir is a more powerful probiotic. Everyone is different, of course, but I've seen more healing of long-standing gut issues happen from consumption of kefir. And as you say, it is easy to make.

SB (2011-06-08 06:55:45)

"you ferment the milk at room temperature, once you have the starter culture." Do you mean you don't have to heat up the milk before adding the starter?

Mike H (2011-06-08 07:28:48)

Mark's Daily Apple talked about kefir a couple weeks ago. <http://www.marksdailyapple.com/homemade-coconut-milk-kefir/>

Kim Øyhus (2011-06-08 09:20:59)

Lazy mans kefir: I just buy a carton of kefir, and let it ferment for about two days at room temperature, so the carton gets roundish. Then I shake it, open it, drink some, and put it in the fridge. The point, in addition to me being lazy, is that it is not legal to sell sufficiently fermented kefir, so I let it ferment some more.

Seth Roberts (2011-06-08 11:04:31)

right, you don't heat the milk before you add the culture.

Richie (2011-06-08 11:37:49)

Yes, mixing store-bought kefir with milk works. I mix 1/2 cup kefir with a gallon of whole milk, heat to about 100 degrees, and then pour in jars and let sit on the counter for 24-48 hours.

Seth Roberts (2011-06-08 11:41:12)

that's very good to know.

Erik Cisler (2011-06-08 15:52:52)

This works well with pasteurized milk?

Seth Roberts (2011-06-08 19:23:24)

yes, it works with pasteurized milk.

NuLu SLD (2011-06-09 03:31:45)

It works with pasteurized milk directly from the fridge. No need to heat or warm. I used store bought kefir for a few batches and then got some grains and have been using it for 14 months. But I read on the net that store kefir is prepared with starter culture which does not contain as many types of probiotics as grain fermented kefir. I asked one manufacturer about it but did not get a response. I prefer grains because of that. Kefir helped with my hay fever. Did not clear it completely but alleviated the symptoms. I am a believer.

Erik Cisler (2011-06-09 14:45:45)

Fantastic. Thanks.

BPT (2011-06-10 10:05:21)

The best way is to use raw whole milk, kefir grains, and allow to ferment for two days or so at room temp. Heating can kill some of the valuable microorganisms, and you don't want to do that. Also, the higher the ambient temp (to a point), the faster the fermentation process happens. Store-bought kefir has been pasteurized, so many of the microorganisms that make up the kefir colony have been killed. The resulting kefir is then less nutritionally valuable. Making kefir from the store-bought stuff is not the best technique for this reason.

Todd Fletcher (2011-06-10 11:12:02)

Kefir has cured my excema completely. I know because if I stop drinking it it comes back within about 1-2 weeks. It's also helped my hay fever too. So I'm really happy to hear how easy it is to make.

Mitch Cooper (2011-06-13 06:44:22)

Hi Seth, where do you buy your kefir at in Beijing? Thanks!

Seth Roberts (2011-06-13 08:47:43)

I have not seen kefir for sale in Beijing.

guna (2011-06-29 20:19:31)

hi, I've been trying the trader joes strawberry flavored kefir, but would like to make my own :-). so to get started I am looking for the starter culture/grain..could you please let me know where can buy/get the culture?. Thanks. much appreciated.

AI (2011-07-06 09:17:45)

Lots of very good info about kefir here: <http://users.sa.chariot.net.au/dna/Makekefir.html>

Ludovic Gallant (2011-12-25 20:34:09)

Have you heard of water kefir ? It's something I intend to try soon!

jackie (2012-04-27 08:59:16)

I am interested in beginning making yogurt and kefir. Where do I obtain kefir grains? Can store bought yogurt/kefir work? Seth: You can use store-bought yogurt to make yogurt, yes. It is hard to get kefir grains. You can probably use store-bought kefir to make kefir, but I haven't tried it.

## **Paleo Diet versus Mediterranean Diet (2011-06-09 05:00)**

[1]A 2010 study (via [2]Whole Health Source) compared a Paleo diet with a Mediterranean diet. For twelve weeks, twenty-nine volunteers could eat as much as they wanted, whenever they wanted. Half ate Paleo ("lean meat, fish, fruit, vegetables, root vegetables, eggs, and nuts"), half Mediterranean ("whole grains, low-fat dairy products, vegetables, fruit, fish, and oils and margarines").

The main result was that the Paleo food was "more satiating per calorie". The Paleo eaters ate less but no more often than Mediterranean eaters. The paper does not report weight loss. (See [3]an earlier report of the same experiment for that.)

I suspect the Paleo diet was less familiar than the Mediterranean diet (of course I can't be sure from the descriptions). [4]My theory of weight control says familiarity matters: less-familiar food pushes your set point lower than familiar food because its smell-calorie associations are weaker. The smells of less-familiar food is less associated with calories than the smells of more familiar food. With a lower set point, you will need less food to feel full.

If familiarity matters, this causes big problems for clinical studies. It means that short-term results (e.g., after 6 months) may be quite different than long-term results (e.g., after 2 years) – and most clinical trials last about six months. Short term, says my theory, any new food will cause weight loss. Indeed, a wide range of diets that cause dieters to eat new foods, such as the cabbage soup diet, cause short-term weight loss. Over the long term, however, the new foods become familiar and, according to my theory, the set point goes back up as the new smell-calorie associations are learned. Indeed, on most diets there is great long-term weight regain. If familiarity matters, we need data sets lasting a long time (e.g., [5]nine or [6]ten years) to understand weight control. Such data sets allow enough time for the chosen diets to become familiar so that (a) the diets being compared are equal in familiarity and (b) we can see their long-term effects – which may easily be different from their short-term effects.

Thanks to Steve Hansen.

1. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3009971/>

2. <http://wholehealthsource.blogspot.com/>

3. <http://www.ncbi.nlm.nih.gov/pubmed/17583796>

4. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>

5. <http://blog.sethroberts.net/2011/05/07/nine-years-of-weights-more-shangri-la-success/>

6. <http://blog.sethroberts.net/2011/04/22/ten-years-of-weight-measurements/>

Peggy The Primal Parent (2011-06-09 10:04:16)

Your theory supports the idea to eat local, in season food. If people eat whole foods (which itself encourages weight loss) and rotate foods every three months or so, they would never gain weight because every three months they would be eating new foods, hence causing weight loss! Cool.

R.K. (2011-06-09 14:36:28)

Puzzling, then, how an experiment could radically change the subjects diet and yet weight stays stable. From <http://wholehealthsource.blogspot.com/2011/05/food-reward-dominant-factor-in-obesity.html> : "The first thing they report is what happened when they fed two lean people using the machine, for 16 or 9 days. Both of them maintained their typical calorie intake ( 3,075 and 4,430 kcal per day) and maintained a very stable weight during this period."

bjk (2011-06-09 15:54:22)

If I eat a monotonous, non-rewarding diet, does that counteract the effects of familiarity? Because I can lose weight eating the same thing every day, it solves the problem of what to eat, which is half the problem.

Seth Roberts (2011-06-09 17:07:07)

I'm not sure what you mean by a "non-rewarding" diet. But, yes, if you eat bland foods you will lose weight. Cabanac and his colleagues found that. Foods with weak smells do not form strong smell-calorie associations.

Seth Roberts (2011-06-09 17:09:18)

I explain those results by assuming that when the set point is already low, changing the diet doesn't lower it. Only when the set point has been raised by smell-calorie associations do you get the loss-followed-by-regain effect.

Seth Roberts (2011-06-09 17:10:09)

The Sensa system of Alan Hirsch changes the flavorants (sprinkled on food) every month. So perhaps there is significant smell-calorie learning within a month.

Robbo (2011-06-10 22:47:36)

I don't think this is a Mediterranean diet since it contains " low-fat dairy products and margarines". I would also question what oils were included (only olive oil = Mediterranean) The hilarious thing is, by travestying the Med diet, the study owners probably thought they were improving it.

Carlos (2011-08-24 03:14:32)

One thing that bothers me about this studies is how often they make up the "mediterranean diet" Being from Spain I can assure you that the proposed diet does not resembles our traditional food. whole cereals were unheard of until a decade or so. Low-fat dairy was a niche product and margarine was started to being use at the beginning of the 90's (and because it spreads easier on bread) Another thing that always bothers me is how devoid of legumes are these "so called" mediterranean diets. I don't know about the rest of the mediterranean countries but in Spain legumes are a staple food.

Nick (2012-03-04 10:55:00)

I agree that novelty has additional effects outside of the traditional norm. Usually not controlled for in studies. I also find this effect in other areas like exercise and pointless to state the obvious "learning". I'd like Seth to comment on the effects of chronic novelty as applied to food or anything else for that matter. Would this cancel out the "set point" mechanism in the long run and force the body to seek an alternative. What would that alternative be?

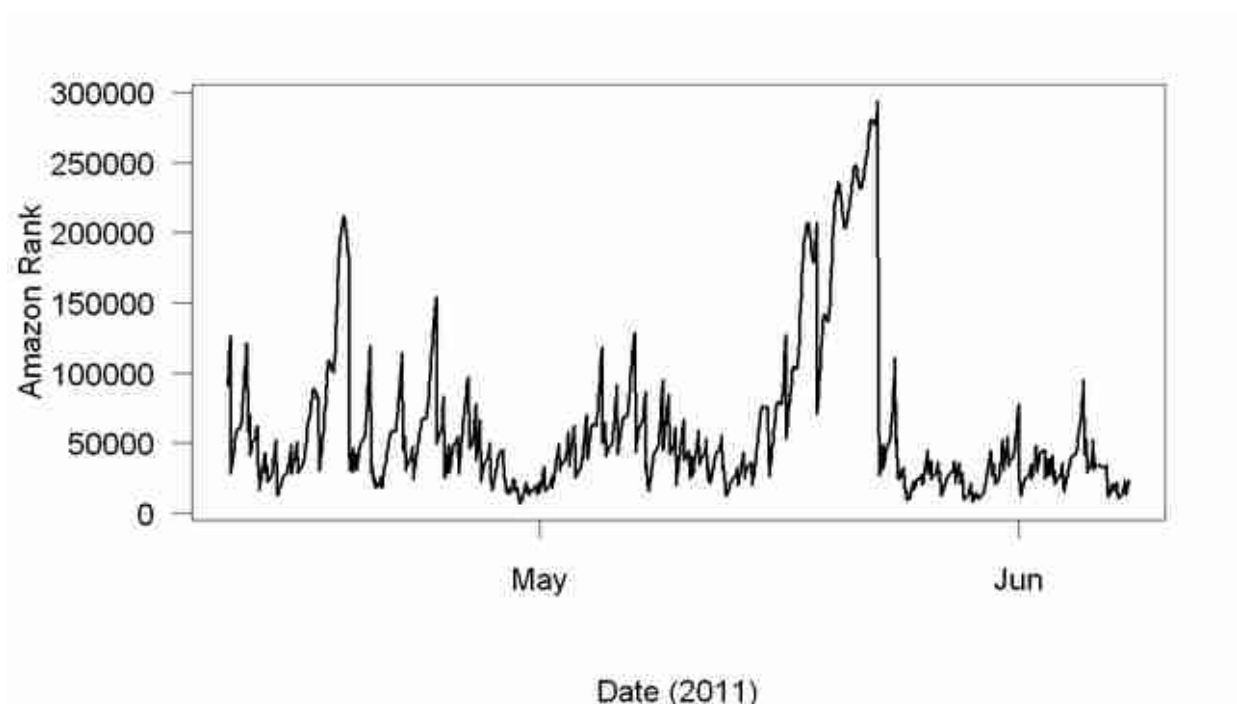
## The Curious Amazon Rank of The Shangri-La Diet (2011-06-10 05:00)

When The Shangri-La Diet was published (2006), I enjoyed checking its Amazon rank. The rank got worse. I checked less often. Eventually it was usually above 100,000 and I barely checked at all.

A few months ago, I noticed it was much better than I expected – maybe 40,000. How did that happen? Were sales improving? To find out, I subscribed to RankTracer, which records Amazon rank every hour and plots the results.

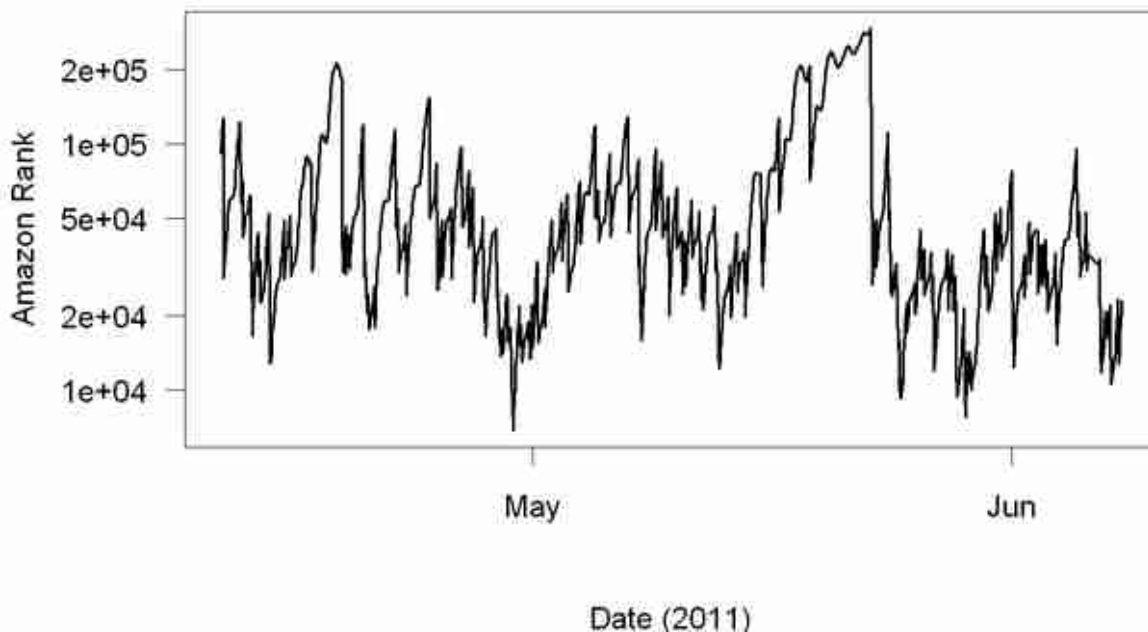
Here are the first two months of data from RankTracer:

[1]



This resembles the graphs that RankTracer makes. Whether the rank is steadily improving isn't clear. Here is the same data with a logarithmic y axis:

[2]



Now steady improvement is obvious.

I'm pretty sure that slowly increasing sales five years after publication is extremely rare. But a bizarre sales record is entirely consistent with two recent comments on the SLD forums. One is [3]this:

It does work, and it is totally boggling that something so counter-intuitive would work. . . . You don't have to devote your life to starving and working out. One of the best-kept secrets of all time.

The other is [4]this:

I refuse to get drawn into 'how crazy' it sounds ... I just like the results.

1. <http://blog.sethroberts.net/wp-content/uploads/2011/06/2011-05-06-raw-amazon-rank-vs-date.jpeg>

2. <http://blog.sethroberts.net/wp-content/uploads/2011/06/2011-05-06-log-amazon-rank-vs-date.jpeg>

3. <http://boards.sethroberts.net/index.php?topic=8000.msg103536#msg103536>

4. <http://boards.sethroberts.net/index.php?topic=7736.msg103741#msg103741>

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Alex Chernavsky (2011-06-10 05:49:56)

"Now steady improvement is obvious". I don't have your experience with data analysis, but the improvement isn't obvious to me. There seems to be a lot of noise in both plots. Can you explain further?

SB (2011-06-10 05:56:59)

Steady improvement is not obvious to me either. Also, rank of your book should be extremely dependent on sales of other books. So this graph is just a comparison and says nothing about absolute sales.

Jay Cobal (2011-06-10 07:04:08)

a very well followed biologist Dr. Stephen Guyenet has posted recently about this exact theory which caused quite a stir in the nutritional blog sphere (<http://wholehealthsource.blogspot.com/>), no doubt the references made to your work in this field were noted and likely resulted in people seeking you out and buying your book. kudos!

Seth Roberts (2011-06-10 07:12:55)

yeah, that's a good point. I hadn't thought of that. On the other hand, being mentioned here or there should simply produce a spike in sales. Perhaps there are such spikes – too small to be clear – but a series of spikes would not produce steady improvement across months, except by coincidence.

Joe (2011-06-10 09:27:28)

Another dataset: <http://www.google.com/trends?q=seth+roberts&ctab=0&geo=all&date=ytd&sort=0>

Erik La Gattuta (2011-06-10 11:47:23)

I heard about fat set point in exactly that way, from Stephen Guyenet's recent posting and interviews. That is what led me to buy the book last month and also read this blog on a regular basis. Mark Sisson has also been singing Seth's praises recently. It would be interesting to compare the uptick in sales to the blog readership over time.

Jim (2011-06-10 13:38:14)

I agree with Jay above. I've seen recent mentions by Tim Ferriss and Quantified Self (of course), as well as Stephen Guyenet and others like this one by Melissa McEwen <http://www.huntgatherlove.com/content/can-complex-flavors-cause-weight-loss>

Seth Roberts (2011-06-10 21:57:42)

If you fit a straight line to all the points in the lower graph it would have a negative slope. (I did so and the slope had a very high t value – that is, was extremely unlikely to be negative by chance.) Perhaps next time I make such a graph I will include a fitted straight line.

David (2011-06-11 09:30:44)

It seems a simple moving average would help see the longer term trend better.

Noumenon (2011-06-14 07:10:00)

Man, I should submit that RankTracer graph to Junk Charts. Why would you graph something where higher is better with higher at the bottom, and why would you produce a graph that gave equal weight to a move between 50,050 and 50,000 and a move between #50 and #1?

Seth Roberts (2011-06-14 08:12:25)

It is reasonable to plot a rank of 1 lower than a rank of 100 – because 1 is less than 100. But you are right about the weighting.

Paul Jaminet (2011-06-17 09:57:17)

I think referrals from blogs is a likely explanation. My blog linked to you a number of times starting Feb 26, and did two dedicated posts Mar 22 and Mar 24, with more posts since. We have 24,000 monthly unique visitors. An Amazon sales rank of 40,000 is probably about 2 copies per day. That could easily be generated by blog referrals. You might try checking your referrer traffic to see where web traffic was coming from, and also go back farther than April to see when the sales surge started.

Jazi yechezkel zilber (2011-06-18 04:09:20)

Tim Ferriss can be a cause. He sold millions of books, and Seth has a chapter, and an additional piece in the "bonus" chapters online.

Jazi yechezkel zilber (2011-06-18 04:12:24)

Evidence. Checking "customers who bought this also bought" on amazon, gives the 4 hour body in tje second page, and i see other items that are frequently bought by ferriss followers

Noumenon (2011-06-18 06:10:10)

*It is reasonable to plot a rank of 1 lower than a rank of 100 — because 1 is less than 100.* Not in sales ranks, it's not. But maybe I'm just projecting because I personally had trouble flipping the graph upside down to understand it.

## Two Years of Weight Measurements (2011-06-11 05:00)



[1]

This shows [2]Justin Wehr's weight over two years. He is 26 years old and 6 feet 2 inches tall – at 140 pounds, very thin. The record begins with a switch to a vegan diet. Over three months he lost seven pounds but gradually regained the lost weight, even though his diet didn't change. In the middle he suddenly gained five pounds on a trip to Alaska and Seattle and then gradually lost it.

He describes his diet like this:

My diet was pretty average Midwestern meat and potatoes sort of thing prior to going vegan-ish, and I emphasize the ish. I've been vegan-ish since I started tracking weight, meaning that I don't buy meat or dairy products at the store, but I'll happily eat whatever sounds good off of a restaurant menu or whatever is being served when I'm eating at someone else's place. I intentionally keep my diet very boring. I eat an absurd amount of peanuts and raisins, I estimate in the range of 600 - 900 calories per day. Besides peanuts and raisins, most of my calories come from lentils, frozen vegetables, and bread + olive oil. I drink almost exclusively water, with a few swigs of OJ most days, and have a glass of wine or a bottle of beer on occasion.

The features of this data that interest me are (a) weight loss when he changed what he ate (first three months) and (b) gradual regain of the lost weight (after that). Few theories of weight control can explain the regain. However, [3]the theory behind the Shangri-La Diet can. It says that he initially lost weight because he shifted to foods with relatively weak flavor-calorie associations – weak because the foods were relatively new. As he ate them again and again, the flavor-calorie associations got stronger and this raised his set point.

1. <http://blog.sethroberts.net/wp-content/uploads/2011/06/weight-chart-6-10-11.png>

2. <http://wehrintheworld.blogspot.com/>

3. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>

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Edward Edmonds (2011-06-13 20:17:29)

I recently bumped into your theories looking for something to explain the same patterns, I've never tracked my weight data like Justin but I've found the exact same pattern with weight loss and your diet-SLD-seems like a sound idea. I haven't had a chance to read your book but I did buy the ebook, and am looking foward to reading about your ideas. I've always noticed that when I eat a variety of foods my stomach stays flat vs. when I eat e.g. paleo or a LC, Ray Peat or some variation/combo of



that. I'm an undergrad anthropology student and I think exploring this idea will make for some interesting papers for class; I think you have a good model here. It's too bad that this idea doesn't have more exposure this is really a breath of fresh air and seems to be able to explain a lot more about weight loss/gain than your standard eat this stay away from that. There is real intelligence in this idea. I'd really be interested to see how regulation hormones change during the weight loss and weight gain periods.

### Assorted Links (2011-06-12 05:00)

- [1]n=1 tests of low-carb products. Are low-carb versions of everyday foods (such as pasta) better for your blood sugar, as claimed?
- [2]Chelation improves Alzheimer's. After lengthy trial and error.
- [3]How to teach computer programming. The article contains a quote ("That student is taught the best who is told the least") from Robert Moore, a college mathematics teacher. An article by Paul Halmos about Moore's method ("The best way to learn is to do" it began) inspired me to start my self-experimentation.
- [4]Overview of the first Quantified Self conference

1. <http://livinlavidalowcarb.com/blog/jimmy-moores-n1-experiments-the-purpose-and-the-process/10864>

2. <http://health.groups.yahoo.com/group/frequent-dose-chelation/message/64140>

3. <http://www.theatlantic.com/technology/archive/2011/06/how-i-failed-failed-and-finally-succeeded-at-learning-how-to-code/239855/1/>

4. <http://www.arichlife.me/2011/06/08/quantified-self-conference-2011/#more-26>

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nansen (2011-06-14 14:31:57)

I went to a Math library to look up the Halmos article. The statement that you quote is immediately qualified in the second paragraph. Halmos says that of course he is being idealistic, and that only a select few can realistically follow his dictum (for learning math).

### Salt is Good, Says New Study (2011-06-13 05:00)

[1]A new study in JAMA found higher salt consumption strongly associated with less death from heart disease. The association with total mortality (more salt, less death) was almost significant. To grasp the strength of the evidence, see [2]this. Yes, it's a correlation, but I don't know of any examples of such a strong correlation reversing (so that more salt is now correlated with more death) when now-unknown confounders are taken into account. In 1998, [3]Gary Taubes argued that the benefits of salt reduction were greatly overstated. The new study did find more salt correlated with higher systolic blood pressure but in the big picture (mortality) that didn't matter. If all those warnings about salt had any effect, the new study suggests their effect was negative.

Perhaps people who eat less salt are more credulous (they believed the experts) – and this damages them in other ways? Perhaps they rely on doctors more, for example. It is hard to interpret this finding in a way that makes mainstream health care look good. A [4]New York Times article about the study points out that "the new study is not the only one to find adverse effects of low-sodium diets." And it reports what someone at the Centers for Disease Control

said:

Dr. Peter Briss, a medical director at the centers, said that the study was small; that its subjects were relatively young, with an average age of 40 at the start; and that with few cardiovascular events, it was hard to draw conclusions.

Dr. Briss fails to understand statistics. Ordinary statistical calculations take sample size and number of events into consideration when indicating the strength of the evidence. That's the one of the main purposes of those calculations. As for "relatively young," I know of nothing to suggest that the effects of sodium reverse with age – so it is irrelevant that the subjects were relatively young. That someone at the CDC is so clueless is remarkable.

1. <http://www.ncbi.nlm.nih.gov/pubmed/21540421>
2. <http://jama.ama-assn.org/content/305/17/1777/F2.large.jpg>
3. <http://www.sciencemag.org/content/281/5379/898.short>
4. <http://www.nytimes.com/2011/05/04/health/research/04salt.html?ref=salt>

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Dennis Mangan (2011-06-13 05:25:02)

The link to JAMA goes to a registration page; here's the abstract to the paper from PubMed:  
<http://www.ncbi.nlm.nih.gov/pubmed/21540421>

ChristianKI (2011-06-13 05:42:04)

Is there a cost effective way to measure your own blood sodium concentration for daily tracking?

Dennis Mangan (2011-06-13 05:47:05)

*Is there a cost effective way to measure your own blood sodium concentration for daily tracking?* Sodium in blood or urine is easy to measure in a medical lab - the analysis takes under a minute - but in this study they would have measured 24-hour urine excretion, which involves collecting all urine over a day. Not very convenient. Also, blood concentrations of sodium are tightly regulated in healthy people, so presumably blood levels wouldn't give the required information.

Cakeb Cooper (2011-06-13 07:38:10)

I bet the mechanism is iodine up-regulating the thyroid. If the coastal Japanese are any example, humans can experience health benefits from very high iodine levels. Many of the patients I see in my practice suffer from low thyroid hormone. Yet another national health problem inflicted on us by public health advice.

Joseph Dantes (2011-06-13 08:00:50)

Question - it seems to me the correlation != causation bias here is strong. What if people who already regulate the sodium intake are doing it consciously and deliberately? And what if they're doing it because of pre-existing health concerns? That would explain a higher mortality rate.

Seth Roberts (2011-06-13 08:46:55)

The authors did not consider this idea. They merely say their results are not consistent with current recommendations. The health of the three groups (low, middle, high tertile of salt intake) appears about the same. However, those in the highest tertile drink more than those in the other two tertiles. Drinking (alcohol) seems to reduce heart disease mortality. Perhaps that has something to do with these results.

Jake (2011-06-13 08:47:45)

A better thing to do is test whether salt affects your blood pressure. A small minority of people are sensitive to salt. You can determine if you are one of those people by doing what I did. One week before your salt free diet, take daily blood pressure readings. Then go on a salt free diet for a week and take daily blood pressure readings. Compare the two weeks of readings, if there is no decrease in blood pressure during the salt free week, you are not sensitive to salt. I saw no change in my blood pressure so I ignore all salt free propaganda.

Dennis Mangan (2011-06-13 09:25:26)

Re correlation and causation, in many studies the healthy user effect causes spurious correlations, e.g. people who eat more vegetables are healthier in part because they're already healthier and they're smart and likely to pay attention to diet. I think it can be ruled out here because the healthy users would be more likely to lower their salt consumption. It was the "unhealthy users" who had lower mortality.

Michael (2011-06-13 09:28:21)

I remember Robb Wolf making a comment in a podcast that salt consumption will lower cortisol levels via aldosterone.

q (2011-06-13 10:32:13)

what i've understood is that some people excrete salt better than others (related to renal function), and that those who excrete salt poorly have a link between heart disease and salt intake. further, it's not clear that it's mediated through directly raising blood pressure - it could be indirect. if someone is sensitive to salt in this way, it weakens their heart over time, which causes blood pressure. so @jake, i don't think your test is meaningful.

Timothy Beneke (2011-06-13 10:35:58)

Let me throw in some inarticulate skepticism about drawing any conclusions. It's just too hard to interpret, given that so much of our other knowledge that is supposed to help us control for confounds is itself shaky and based on correlation - and it controls for confounds based on other shaky knowledge. It's a guessing game based on knowledge drawn from other guessing games... Seth: Regarding light/moderate alcohol consumption and its health benefits - there is correlational evidence from a 2009 study that people who drink a lot also exercise a lot, which throws a monkey wrench into the benefits of alcohol. A summary of the data: "Light, moderate, and heavy drinkers worked out 5.7, 10.1 and 19.9 minutes more per week, respectively. Also, drinking resulted in a 10.1 percent increase in the probability of vigorous physical activity." (<http://www.livescience.com/7910-exercisers-drink-alcohol.html>) The study was published here. (<http://www.healthpromotionjournal.com/publications/journal/ib2009-09.htm>)

Jake (2011-06-13 11:28:23)

Q: My test is meaningful. If salt is going to give you problems the first place it is going to show up is in a blood pressure rise. There may be other effects but blood pressure will always be affected.

Ashish (2011-06-18 11:30:44)

"But among the study's other problems, Dr. Briss said, its subjects who seemed to consume the smallest amount of sodium also provided less urine than those consuming more, an indication that they might not have collected all of their urine in an 24-hour period." This seems to me like a pretty important (possible) flaw in the study.

Seth Roberts (2011-06-19 19:07:05)

Ashish, such a difference ("less urine") between subjects would not produce differences between groups on other measures, unless being careless is somehow health-promoting. It's hard to see why that would be. If Briss is saying that subjects in the lowest-sodium group probably ate more sodium than recorded, that makes the results more impressive (because a smaller difference in sodium was correlated with the same heart disease difference) rather than less impressive.

JBG (2011-06-20 16:16:13)

Hunter-gatherers seem to have eaten very little sodium. That puts a heavy burden of proof on those who would claim that high sodium intake is healthful, a burden that I would say this one study doesn't come within a mile of meeting.

JBG (2011-06-20 16:20:33)

Cakeb Cooper's comment about iodine might well be the explanation for the study's results.

Sans (2011-06-21 23:28:13)

This reminds me of your article on Salt and Lyme disease, where the author claimed that salt kills parasites within the body. Do you think there is a connection?

lemmy caution (2011-07-15 13:29:13)

I agree with Taubes but there can be problems with small sample sizes. If a small sample size test is found to be "statistically significant" that necessarily means that the effect found is going to be pretty large. Maybe there is a large effect, but a lot of times this large effect disappears when they get around to doing a large sample size test.

Freedom from Health » Salt ad makes my blood pressure rise! (2011-09-14 20:29:35)

[...] I'm not too worried. Recent studies suggest that the conventional wisdom that salt leads to heart disease is [...]

Joanna (2012-04-30 14:58:50)

Hi Seth, I wondered if I could pick your brains (please!); I've been trying to use the SLD theory to inform my food choices - I understand that less flavour will mean a weaker flavour/calorie association, but I was wondering about salt. If I'm trying to lose weight - would salt not contribute to the strength of the association? I hope not! Also - just to clarify - if I ate a potato - would it be better to have it without any spices added - just have it plain - and this would help to lower my set point? ( due to its blandness), or maybe I could have it with spices but vary the spices each day. I was also wondering how far apart you could eat a food before the flavour/calorie association would kick in - so if you had something with a certain flavour/calorie combination once a week - would that be enough for the brain to start to recognise it and raise the set point when you ate it? thankyou! Seth: 1. I don't think salt has any effect on flavor-calorie associative strength. 2. I found that eating bland foods doesn't work very well. Don't think that eating potatoes without spices is going to do much. 3. Yes, you can certainly learn a flavor/calorie association if you eat that food once/week.

Joanna (2012-05-01 06:01:07)

Thanks for answering my questions! I have another question about food and was wondering if you might know the answer or be interested in it yourself. I found it totally interesting in your book - the thing about adding water to food making it more fattening. Was wondering about soup though, cos I've read loads of evidence for soup being really good for filling you up. Just wondered - is soup somehow different to bread because the water is incorporated in a different way? Seth: I remember a study where just having soup for lunch instead of something else caused weight loss. Surprising. I don't know why soup has this effect.

Joanna (2012-05-02 14:22:41)

Hi Seth, just to let you know, in case you were wondering... I found a study; 'Water incorporated into a food, but not served with food decreases energy intake in lean women' It found that when the food was eaten as a soup; energy intake was about 1209kj, when the food was eaten not as a soup but with water served alongside; energy intake was about 1657kj and with no extra water served, about 1639kj was consumed. So eating foods as a soup has quite a significant effect on calorie intake. Been thinking about how best to eat in the SLD way - and it seems as though eating low energy dense foods is one of the most important ways that we can eat to feel full on fewer calories. Do you think eating low energy dense foods somehow lowers the set point by creating a weaker flavour calorie association? Seth: Yes, that is a reasonable possibility.

## The Second Immune System: A New Way of Treating Cancer (2011-06-13 11:37)

[1] This is a great documentary about a new cancer treatment invented by a Texas doctor named Stanislaw Burzynski. You can watch it for free until June 20 (and perhaps later, since an earlier deadline was extended).

1. <http://articles.mercola.com/sites/articles/archive/2011/06/11/burzynski-the-movie.aspx>

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Cancer Cure Exposes The Cancer In Our Institutions « Rhymes With Cars & Girls (2011-06-13 20:25:35)

[...] no way of knowing whether the cancer treatment that is the subject of this documentary works. (HT Seth Roberts) I do know that it's impossible to watch that documentary all the way through – which I [...]

UncleLongHair (2011-06-14 06:33:53)

I would love to believe that this guy is on to something. But the facts are pretty scarce. He has reportedly treated about 8,000 people at his clinic. Treatment costs between \$30-60k (from the web site). There are absolutely no numbers available for his success rate, remission rate, etc. There are about a dozen success stories on the web site. 8,000 patients at \$30-60k apiece is \$240-480 million. The total dollars is probably less than that adjusted for inflation and the treatment was probably not that expensive when he started out. Even so, that is a heck of a lot of money for a small clinic to bring in, and he can't be bothered to publish any results?

Seth Roberts (2011-06-14 08:10:55)

You're complaining that he hasn't published enough? According to this anti-Burzynski article <http://www.quackwatch.org/01QuackeryRelatedTopics/Cancer/burzynski1.html> he has "published profusely". "There are absolutely no numbers..." The documentary gives the numbers you ask for.

Joe (2011-06-14 12:43:53)

Apparently one can still watch the video for FREE, because I just did. It made me very, very angry. It should make anyone who watches it very, very angry. It also made me ashamed to be an American. That this can happen in this country? Unbelievable. I don't know a better way to put it. To UncleLongHair: The numbers are available in the film. On the other hand, you seem to be missing the point. It's not the numbers, it's the way the government and Big Pharma work together to steal, cheat, lie, and to KILL people, and still are. In my opinion, it's time for torches and pitchforks. Joe

Seth Roberts (2011-06-14 14:10:28)

Yes. At first it seems paradoxical. In a health care system desperately in need of innovation, two government or quasi-governmental agencies (the Texas Board of Medical Examiners and the FDA) do their best to block innovation. Later, of course, it makes sense: Because established powers are allowed to do this sort of thing, that's why we have profound stagnation.

UncleLongHair (2011-06-14 14:42:40)

I stand corrected, my facts about the lack of results from Burzynski's treatments came from various websites such as Mayo Clinic, Dr. Weil, and cancer.org, who must be trotting the party line about the trials being ineffective, which it turns out are likely based on flawed trials that were done intentionally incorrectly. In the documentary, Burzynski claims a 27.5 % success rate in curing cancers otherwise thought to be incurable. This is astonishing because the cancers are otherwise uniformly fatal. He doesn't give a whole lot of other numbers, but through the absurdly lengthy and intense legal campaign by the FDA, they never contested the effectiveness of this treatment. Assuming the documentary is mostly true, what bothers me more about the poor treatment of Burzynski is the fact that what looks to be a very viable treatment for cancer has been tied up in this stupid pissing contest for more than 20 years. Burzynski made his discoveries in the 1980's and the treatment is only now

being seriously studied. It makes you wonder how many other treatments for how many other diseases will never see the light of day.

JeffR (2011-06-14 16:41:45)

I'd urge caution for anything in health research if no other researchers are duplicating the results. The evils of the FDA aside, there are a lot of researchers that want to help cure cancer.

Kim Øyhus (2011-06-15 00:01:54)

Perhaps fermentation can produce antineoplastons.

### Assorted Links (2011-06-14 05:00)

- [1]FT on the First Quantified Self Conference
- [2]great library of articles about hormesis. Such as [3]Hotel Hormesis (from the MIT undergraduate research journal).
- [4]Pay attention to lunch. "Rated vividness of lunch memory was negatively correlated with snack intake."
- [5]Dean of medicine at the University of Alberta plagiarizes well-known graduation speech. Philosophy professor says this "merits no more than a wrist-slap." In [6]an apology, the dean says the actual author "was flattered by my use of his text and took no offense," apparently unaware that boasting is not appropriate in an apology.
- [7]More plagiarism by Canadian medical school professors – this time in a report on medical ethics.
- [8]The philosophy of CureTogether

Thanks to Grace Jone, Anne Weiss and Bryon Castañeda.

1. <http://b.rw/iR46Yl>

2. <http://www.radiationhormesis.com/RadiationHormesis/HORMESIS%20WHY%20IT%20IS%20IMPORTANT%20TO%20TOXICOLOGY%20AND%20TOXICOLOGISTS.pdf>

3. <http://www.radiationhormesis.com/RadiationHormesis/Hotel%20Hormesis.pdf>

4. <http://nymag.com/news/intelligencer/lunch-amnesia-2011-6/>

5. <http://news.nationalpost.com/2011/06/13/university-of-alberta-dean-of-medicine-in-midst-of-plagarism-scandal/>

6. <http://www.edmontonjournal.com/Read+Faculty+Medicine+dean+Philip+Baker+letter+apology+students+sent/4937587/story.html>

7. <http://www.nationalpost.com/news/First+hailed+medical+report+retracted/4291649/story.html>

8. <http://curetogether.com/blog/2011/06/02/open-letter-curetogethers-philosophy/>

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RandomReal[] (2011-06-14 10:59:11)

Adventures in fudging: Lewis JE, DeGusta D, Meyer MR, Monge JM, Mann AE, et al. (2011) The Mismeasure of Science: Stephen Jay Gould versus Samuel George Morton on Skulls and Bias. PLoS Biol 9(6): e1001071. doi:10.1371/journal.pbio.1001071

dearieme (2011-06-14 11:15:18)

Hormesis presumably cuts both ways? Something in the diet that seems to be a Good Thing could become a Very Bad Thing if over-indulged in. Of course Mummy knew this, but does the Nanny State? Come to that, is hormesis at work with exercise for the middle-aged? A bit of light ambling = good, running marathons = bad?

Alex Chernavsky (2011-06-14 17:42:36)

RandomReal: Interesting article about Stephen Jay Gould. Thanks for the tip. Here's a link to the full text: [http://www.plosbiology.org/article/info %3Adoi %2F10.1371 %2Fjournal.pbio.1001071](http://www.plosbiology.org/article/info%3Adoi%2F10.1371%2Fjournal.pbio.1001071) (I never did like Gould much.)

## Chinese University Press Plagiarizes Free Course Materials (2011-06-15 05:00)

A Chinese university press has printed [1]course materials from Yale's free online classes. Yale has complained, okay, but the incident reminds me of something Stan Ulam attributed to John von Neumann: "It's amazing what you can accomplish if you are willing to give someone else the credit."

Via [2]Andrew Gelman.

1. [http://chronicle.com/blogs/wiredcampus/yale-u-complains-that-chinese-university-press-plagiarized-free-course-materials/31609?sid=wc&utm\\_source=wc&utm\\_medium=en](http://chronicle.com/blogs/wiredcampus/yale-u-complains-that-chinese-university-press-plagiarized-free-course-materials/31609?sid=wc&utm_source=wc&utm_medium=en)

2. [http://www.stat.columbia.edu/~cook/movabletype/archives/2011/06/further\\_wegman.html#more](http://www.stat.columbia.edu/~cook/movabletype/archives/2011/06/further_wegman.html#more)

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Adam (2011-06-15 05:41:37)

Who cares? Yale was not going to make any money from these materials and substantial effort was invested into making a tangible product out of them (i.e. translating them into Chinese and using physical resources to print them).

Michal (2011-06-15 06:54:02)

Yale was going to be payed just not in money. The payment they requested was recognition. Clearly someone added something to it for the Chinese market but that is beside the point.

Thomas Seay (2011-06-15 12:14:59)

Chinese plagiarize something? No, all they have to do is make a few changes and it is no longer plagiarism. I was shocked when I saw the 2001 "Beijing Bicycle". It was such an out and out copy of De Sica's classic, "Bicycle Thief" that it was unbelievable that the director would have the guts to put it on the international market. All he had to do was say that he had adapted it from De Sica's movie, and that would have been ok. But I have never seen him say that in any place....and I looked.

Robbo (2011-06-15 22:51:28)

It reminds me of another old saying. There was a firm that used to sell a kit of body parts so that you could make a Ford Escort look like a Porsche 911. When Ferdinand Porsche was asked if he was bothered about this, he said. "No, I but would be really worried if there was a kit to make a Porsche look like a Ford".

Larry (2011-06-16 11:21:20)

A variant of the von Neumann quote, "There is no limit to what a man can do or where he can go if he doesn't mind who gets the credit," is allegedly one of Ronald Reagan's favorites. I think he meant the sentiment for others, though, since a sign featuring

these words is, without a hint of irony, available for purchase in the gift shop of the vast and wildly expensive hilltop shrine Reagan built to himself in Simi Valley, California. <http://tinyurl.com/RRDeskSign> ([http://www.reaganfoundation.org/store/product/\\_Ronald\\_Reagan\\_Quote\\_Desk\\_Plaque-1194.aspx](http://www.reaganfoundation.org/store/product/_Ronald_Reagan_Quote_Desk_Plaque-1194.aspx))

### **Tucker Max on Omega-3 and Writing Ability (2011-06-16 05:00)**

Re-reading [1]an old post recently, I found this comment by Tucker Max:

I took four tablespoons [of flaxseed oil] a few hours ago, instead of the regular two, thinking that maybe I could load up and it might help me get back to normal quickly. The pain is pretty much the same, and I just brushed and my gums bled, so obviously the flaxseed oil takes more than a few hours to affect those problems. But—and I haven't measured this with reaction tests like you do—I feel considerably more mentally alert right now. I don't know if I felt like this before, and maybe I didn't notice it because it came on slowly, or maybe I need four tablespoons at once to see a difference, but I really do feel the difference.

By coincidence I had noticed the same thing the day before: I was distinctly sharper than usual a few hours after drinking flaxseed oil (two tablespoons), as measured by my arithmetic test. I had noticed the same thing twice before – years earlier – but had decided not to study it in detail because it was much easier to study the long-term effects of flaxseed oil.

I wrote Tucker to say he had been right. He replied:

Yeah, there's zero doubt in my mind now that fish oil/omega 3 is crucial to brain function. If I don't take it, I can't write effectively.

That's very interesting. Sure, drugs have short-term effects. If you ingest caffeine, for example, it will make you more awake for a few hours. But drugs are dangerous. The notion that a necessary nutrient has benefits that last only a few hours is new. (The notion that a necessary nutrient can make us distinctly sharper will also be new to most people, but not to readers of this blog.) Perhaps we should eat omega-3 every few hours. You've heard of RDAs (Recommended Daily Allowances). Perhaps the future will contain RHAs (Recommended Hourly Allowances).

If you haven't been reading this blog for several years, see [2]these posts for background. Flaxseed oil also will make you smarter long-term, e.g., the next day. The short-term effect is in addition to the long-term effect.

1. <http://blog.sethroberts.net/2007/11/16/omega-3-what-happens-when-you-stop/>

2. <http://blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>

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BlueMorrissey (2011-06-16 06:34:27)

Today is my 4th day in a row of taking 4 tablespoons of flaxseed oil. I've been taking it in the mornings. Beginning early yesterday I felt a big difference in my mental clarity and focus. I am studying for a professional exam most of the day, so it is



more obvious how my brain is functioning. Also, my mood was wonderful for no special reason. I'm sold on flaxseed oil.

Alex Chernavsky (2011-06-16 06:37:02)

For what it's worth, I take 3.5 tablespoons of flaxseed oil every day around lunch time. I've never noticed any effect on my mental abilities. In fact, the only thing that's ever had a noticeable effect on my sharpness is sleep. I am chronically sleep-deprived. On those rare occasions when I actually get enough sleep, I feel significantly happier and more-alert during the day.

mike kenny (2011-06-16 07:04:57)

is the energy gotten from omega-3 meant to encourage us to go get more omega-3? for example, you're a cave man and you stumble upon a stream w/lots of fish in it, easily gotten. you grab some, eat them, feel mentally alert, and then go back to the stream and catch more fish--the mental vigor helps you fish more effectively. the cave man who didn't get pep might not go back and get more fish, and lose out on getting a valuable nutrient. just a theory. but then you might expect sea food or other sources of omega-3 to have an addictive quality, and I don't know if they do. some people do love sushi, but I think most think flax seed tastes weird.

Ben Brinkley (2011-06-16 08:45:08)

I've seen a fast-acting effect of omega-3 on balance that I think anyone could replicate: walking on railroad rails. On vacation and hiking with my wife and kids, I tried walking along some railroad rails. I hadn't done this in fifteen years or so, and remembered that it was hard -- a game of how many steps can I go before I fall off. But now I found it was trivial! I could walk on a rail as long as I wanted, even turn around on the rail and walk backwards. The next morning I wanted to have some more fun with my new abilities, but rail-walking was just as hard as I remembered it from years before: I could only go ten or twelve steps before losing my balance. What was the difference? Day 1 the rail-walking was about 90 minutes after taking my fish oil capsules (about 3g of EPA+DHA). Day 2 it was about 15 minutes after taking them. Not enough time to get to my brain. Sure enough, on the return leg of my Day 2 hike, about an hour later, my rail-walking superpowers had come back. I remember thinking, "Do circus performers and fighter pilots know about omega-3???"

JJ (2011-06-16 09:48:33)

Years ago, I did multiple tests on mental performance and memorization using Omega 3 Fish Oil, and I came away convinced that the fish oil had a big impact on my ability to retain and use information. I was listening to Japanese language instruction in the car, and on mornings where I had taken fish oil the previous night, I recalled information learned the previous day more often and was able to learn new information more quickly. It was pretty dramatic and I performed the test a number of times as some nights I would forget to take the fish oil. I considered that it could be the placebo effect, but I also noticed differences in performance and then would try to remember if I had taken the fish oil the previous night; in other words, I noticed the memory effect before connecting it to the supplement.

Jahed (2011-06-16 12:10:04)

I'm curious about the mechanism at play here. Isn't the omega 3 in flaxseed oil very poorly utilized due to the enzymatic processes involved? I believe the idea was that ALA, the primary omega-3 in flaxseed oil, has only 10 % conversion to EPA and even less DHA, therefore it would be better to consume fish oil? Does anyone have numbers comparing their mental clarity on fish oil as opposed to flax?

Jonathan Graehl (2011-06-16 12:44:17)

The short term boost could be mostly caused by the caloric content, assuming an overall trend of weight maintenance or loss. Could someone point me to experiments that rule out this obvious explanation? I recall Seth's long-term omega-3-oil arithmetic-performance experiments controlling for the calories (even comparing against the same amount of some other type of fat). The same should be done in demonstrating a short-term performance enhancement.

Seth Roberts (2011-06-16 14:38:46)

That "ALA poorly converted to EPA" conclusion was based on people with little ALA experience. Experience with a food induces (increases the concentration of) the enzymes you need to digest it. This is very well known to at least some biologists. It was the basis of a Nobel Prize in the 1950s.

Seth Roberts (2011-06-16 14:40:07)

Yeah, and what about gymnasts? On a plane I sat next to the mother of an Olympic caliber gymnast and told her about the balance-enhancing effects of omega-3. But her son never contacted me. That's a very persuasive story about rail walking.

Seth Roberts (2011-06-16 14:46:13)

Alex, after I took flaxseed oil for the first time, I didn't notice any change in sharpness. But I did notice an improvement in balance when I did something difficult requiring balance (putting on my shoes standing up). You may need a challenge to easily notice the difference.

Jahed (2011-06-16 23:00:47)

Seth, thanks for indulging my curiosity. Is there any other reason to use flax instead of fish oil (heavy metal contamination?) I recently switched over from flax to fish oil (this one, in particular: <http://www.bodybuilding.com/store/asc/sea.html>) because of the high amounts of EPA/DHA delivered per serving (I still use 15 ml). I was just thinking that, sure, your conversion after prolonged use could be way higher, 60 % or more, but why not just consume EPA/DHA directly from fish oil? Did you conduct some other subjective "feel" type test for fish oil and find it lacking, or did you just luck into flax's benefits and decide it was good enough? Cost? Sorry for the deluge of questions! Thanks for your responses.

Nathan Myers (2011-06-17 02:31:03)

I once walked a mile on a rail without stepping off. I hadn't had any n3 oil, and couldn't have said what it was. Nowadays, at my age, it seems to make a difference, but I doubt I could walk that mile with or without. I'm curious how the "n3" known to chemists turned into "ω3" in marketing text.

Seth Roberts (2011-06-17 08:36:58)

The omega naming system came from a chemist and is older than the n naming system. The details are discussed in a chapter in *The Queen of Fats*.

Jazi yechezkel zilber (2011-06-18 00:47:00)

It is possible that the hurly effect is due to low depositories in the system. What is interesting is what happens when a person has enough omega 3 for a long time. Is there then a strong sort temr effect? Talking from an evolutionary perspective. We are wired for high variability in food sources. Does not make local effect impossible, but suggests that the healthy ways of things are not on having a short term nessecity of food sources (but a long term need for healthy food etc.)

Sonia (2011-06-22 08:54:46)

As a result of your years of self-experimentation, have you discovered that certain types of flaxseed oil are more effective than others? Whenever I go to buy flaxseed oil, I feel overwhelmed by the options and I'm never sure what exactly I should be looking for. I've consistently heard that unrefrigerated flaxseed oil isn't worth buying, but that's about it. I saw your response to a reader's comment in 2007, saying that you took Spectrum Organic (Original Formula) back then. Is that still the case, or have you found something else works better, or that maybe something new in the market is more potent?

## **Self-Tracking as a Source of Political Power (2011-06-17 05:00)**

The more certain you are the more power you have to convince others and convince yourself. You may want to convince them that change is needed – e.g., that a polluting factory should be shut down or cleaned up. China has a huge

problem with industrial pollution, as [1]this report describes. Children are especially at risk.

The danger to those in power posed by self-tracking – in particular, blood tests that measure lead – is shown by this quote from the report:

Even parents who were able to access [lead] testing for their children reported difficulties in obtaining the results of the tests conducted. Many parents in Yunnan and Shaanxi reported that test results from their children's lead tests were withheld completely. Some parents in Yunnan and Shaanxi told Human Rights Watch that they never saw any test results. Others were allowed to see the results from initial testing but were prevented from seeing the results from follow-up testing.

My daily arithmetic tests (how fast can I do simple arithmetic, such as  $3 + 5$ ) have the same purpose as the lead tests: to assess the quality of the environment. If my scores get worse, it may reflect poisoning. Comparison with a blood test for lead highlights strengths and weaknesses of my arithmetic test.

#### Strengths

1. Sensitive to many things. Can detect any bad influence on the brain, not just lead.
2. Free in the sense that the cost is zero (so long as you have a laptop).
3. Unrestrictable. No one can deny you access.
4. Fast. You get the results immediately.
5. Great sensitivity. You can test yourself as often as you want. The more tests you do the more easily you can detect a change.
6. Variability known. By looking at a graph of your data (score vs. day) you can judge the natural variability – essential for judging the importance of a deviation. With lab tests, the variability is rarely known to the person whose blood was tested or the doctor that reviews the results.
7. Measures what you care about. You care about health. Brain health is part of that. Sure, high levels of lead are bad, but what about low levels? Is there a hormetic effect? The dose-response function isn't obvious.

#### Weaknesses

1. Unconventional. A lead test is easier to understand.
2. Unspecific. If a score is bad (= if I get slower) it isn't clear why. If you have too much lead in your blood the cause is likely to be obvious (e.g., polluting factory, lead in food).
3. Sophistication needed. The arithmetic test is sensitive to hundreds of environmental factors, I'm sure, so identifying the cause of any change inevitably requires sophistication. For example, perhaps you need to control the time of day. Another example is that you need to control/allow/adjust for practice effects.

If the Chinese parents were able to measure their children's brain functions themselves, they might be far more outraged – and therefore far more powerful.

1. <http://www.hrw.org/en/node/99441/section/5>

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Oxonian (2011-06-17 06:59:40)

Interesting. Can you elaborate on the tests you use to measure cognitive performance? Can they be found online? Thanks.

Seth Roberts (2011-06-17 11:04:26)

The test I use cannot be found online. But you can watch a video about its use here: <http://vimeo.com/14281896>

### Assorted Links (2011-06-18 05:00)

- [1]The Burzynski Case discussed by Ben Williams in Surviving "Terminal" Cancer. Starts on page 186.
- [2]Watching the Watchdogs at Quackwatch by Joel Kauffman
- [3]The self-quantification movement: Implications for health-care professionals by Rajiv Mehta
- [4]This game might be good for measuring brain function. Play for ten minutes, note average score. [5]Later version with leaderboard and music.
- [6]Elsevier attempts to fend off the extreme challenge posed by open-access journals such as PLoS

1. <http://books.google.com/books?id=LxupcCSA0ToC&pg=PA191&lpg=PA191&dq=thomas+elias+%22saul+green%22&source=web&ots=k-kS0uPXZA&sig=esfP7CjEFpcVsFjGfTUI8mhBdzY#v=onepage&q=thomas%20elias%20%22saul%20green%22&f=false>

2. [http://www.scientificexploration.org/journal/reviews/reviews\\_16\\_2\\_kauffman.pdf](http://www.scientificexploration.org/journal/reviews/reviews_16_2_kauffman.pdf)

3. <http://www.selfcarejournal.com/view.article.php?id=10051>

4. <http://10k.aneventapart.com/Uploads/83/>

5. <http://hakim.se/experiments/html5/sinuous/01/>

6. <http://www.articleofthefuture.com/about>

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dearieme (2011-06-18 07:44:54)

I took an exercise-for-heart-patients class this week. While we cooled off afterwards we were addressed by a young dietician. When one chap challenged her about cholesterol in the diet she said the "recent" research showed that it didn't matter; it was fat, and type of fat, in the diet that mattered. Some progress? P.S. the same chap had a further interesting question - he invited her to look at the twenty or so patients in the class. "Only three of us are fat" he said; "what's up?".

dearieme (2011-06-18 07:47:21)

P.P.S. "it was fat, and type of fat, in the diet that mattered" - meaning, of course, "mattered for the worse".

Jeff (2011-06-20 19:00:56)

The quackwatch article was a great read. Thanks.

## The Torchlight List by Jim Flynn (2011-06-19 05:00)

In college and afterwards, I tried to educate myself by reading well-written stuff. At first, I went through back issues of The New Yorker in the Caltech library. Later I stuck with books. For example, I learned about molecular biology by reading The Eighth Day of Creation. [1]The Torchlight List by Jim Flynn (discoverer of the Flynn Effect, the slow increase in IQ scores) has the same underlying philosophy: a good way to learn is to read books you enjoy.

The Torchlight List describes 200 books in pleasant narrative prose that Flynn both enjoyed and found educational. Here are the first three:

1. The Story of Language by C. L. Barber
2. The Greek World edited by H. Lloyd-Jones
3. The Decipherment of Linear B by John Chadwick

Indeed, I read the Chadwick book and enjoyed it. I have yet to find a well-written book about language evolution (although I liked [2]John McWorter's lectures on the subject) so I look forward to the Barber book.

More people should write books like this; the underlying idea is very good. I found one important gap in Flynn's categories of books (Science and Early History, American History, America Broods, The Human Condition 1, ...): Books That Caused Discomfort (and are fun to read). There are not many such books. Robert Moses was intensely discomforted by Robert Caro's The Power Broker. (A recent enjoyable TV series that caused discomfort was [3]The Kennedys.) Lolita was discomforting, far more than Nabokov's other books. First prize in this category goes to The Man Who Would be Queen by Michael Bailey.

1. <http://www.awapress.com/products/published/books/CurrentAffairs/thetorchlightlist>
2. [http://www.thegreatcourses.com/tgc/professors/professor\\_detail.aspx?pid=304](http://www.thegreatcourses.com/tgc/professors/professor_detail.aspx?pid=304)
3. <http://blog.sethroberts.net/2011/04/28/the-kennedys-tv-mini-series/>

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bjk (2011-06-19 06:11:44)

Adam's Tongue by Derek Bickerton is a very entertaining book on language evolution, or on Bickerton's theory of language evolution.

mike kenny (2011-06-19 06:39:40)

robert wright's 'the moral animal' was almost traumatic to read—it's one of my favorite books. i'd love to read a list of your favorite educational/enjoyable books seth.

vgm (2011-06-19 08:46:36)

Professor: A 'Books that Caused Discomfort' would be a phenomenal! Do you think you could write a post (or maybe a guest post on Tim Ferriss' blog, which I imagine may receive more traffic) asking for recommendations?

dearieme (2011-06-19 12:09:42)

If discomfort is what you want, read James Hogg's *The Confessions of a Justified Sinner*.

Alex Chernavsky (2011-06-19 12:49:17)

"I believe that we should read only those books that bite and sting us. If a book we are reading does not rouse us with a blow to the head, then why read it? Because it will make us happy, you tell me? My God, we would also be happy if we had no books, and the kind of books that make us happy we could, if necessary, write ourselves. What we need are books that affect us like some really grievous misfortune, like the death of one whom we loved more than ourselves, as if we were banished to distant forests, away from everybody, like a suicide; a book must be the ax for the frozen sea within us. That is what I believe." – Franz Kafka, letter to Oskar Pollak, January 27, 1904

Gestion de patrimoine (2011-06-20 04:58:40)

*The Story of Language* by C. L. Barber is great. It's one of the most important piece of my library.

I.S. (2011-06-21 09:16:05)

Hi Seth, "I have yet to find a well-written book about language evolution" Everyone points me to Pinker's books on this topic. I was wondering what you thought of his popular writings?

reader (2011-06-21 14:15:27)

Until the list is put online, here's [1]an edited extract of books 93 through 114.

1. <http://www.odt.co.nz/entertainment/books/142618/edited-extract-torchlight-list?page=0%2C0>

### **Marcia Angell on Psychiatry: A Train Wreck (2011-06-21 22:22)**

Marcia Angell, a former editor of *JAMA*, may be the most prominent critic of drug companies. The most recent two issues of the *New York Review of Books* contain a two-part critique by her of psychiatry. I liked [1]Part 1 because she described the excellent work of Irving Kirsch (*The Emperor's New Drugs*). [2]Part 2, however, is a disaster.

She goes on and on about the evils of the DSMs – the diagnostic manuals of psychiatry. Improving the reliability of diagnosis is playing into the hands of the drug companies, she seems to say. She complains that the number of diagnoses is increasing. Well, yes, all diagnostic systems get larger over time. This is a good thing; if you don't have a name for a problem, it is hard to do cumulative research about it and hard to communicate research results to everyone else. She complains, apparently, that new categories are being added:

There are proposals for entirely new entries, such as "hypersexual disorder," "restless legs syndrome," and "binge eating."

She does not say why this is bad. Maybe she thinks it's obvious. It isn't obvious to me. Diagnostic categories help researchers and doctors and the rest of us communicate. For example, [3]Dennis Mangan's research shows why it is a good idea for the term restless legs syndrome to have an agreed-upon meaning.

She complains that the DSM doesn't have enough "citations":

There are no citations of scientific studies to support its decisions. That is an astonishing omission, because in all medical publications, whether journal articles or textbooks, statements of fact are supposed to be supported by citations of published scientific studies. (There are four separate "sourcebooks" for the current edition of the DSM that present the rationale for some decisions, along with references, but that is not the same thing as specific references.)

Please. This is clueless. A diagnostic manual is a dictionary. It assigns meanings to diagnostic categories. You can make a useful dictionary without "citations of scientific studies". Long before you can do scientific studies about the best way to define dog you can come up with a definition of dog that is better than nothing.

She ends her review with this:

Above all, we should remember the time-honored medical dictum: first, do no harm (*primum non nocere*)

Gag me with a spoon. Time-honored? Doctors – with the support of JAMA, not to mention the rest of the health-care establishment – continually prescribe drugs with bad side effects and high prices and suppress innovative alternatives. (Not only that. [4]My own surgeon recommended a dangerous surgery of no clear value.) How they can claim to do no harm escapes me.

Sure, psychiatry is awful. For a long time psychiatrists rallied around a transparent intellectual fraud (Freud and his offshoots). Now they rally around a less transparent intellectual fraud (neurotransmitter theories of mental illness). Psychotherapists and their wacky theories and no-more-effective treatments are no better so I wouldn't blame the drug companies for the underlying problem. I put the problem like this: Our health care system consists of a very large number of people, many with very large salaries, who must get paid. Being human, they strongly oppose any progress that would reduce their salary or influence or, heaven forbid, eliminate their job. Because of them, many promising lines of research, such as prevention via environmental change or cure via nutrition, are completely or almost completely ignored. This is the fundamental reason Angell's critique is so bad: She is part of the problem. She is very smart, but she's been brainwashed ("*primum non nocere*"!). She utterly ignores the fact that we don't know what causes depression, what causes schizophrenia, what causes autism, and so forth. Only when we learn what causes these and other mental disorders will we be in a good position to improve our mental health.

1. <http://www.nybooks.com/articles/archives/2011/jun/23/epidemic-mental-illness-why/>
2. <http://www.nybooks.com/articles/archives/2011/jul/14/illusions-of-psychiatry/?pagination=false>
3. <http://mangans.blogspot.com/2009/05/niacin-for-restless-legs.html>
4. <http://blog.sethroberts.net/2008/08/29/suppose-you-write-the-times-to-fix-an-error-part-2/>

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Analog Eye (2011-06-21 23:50:10)

"She does not say why this is bad. Maybe she thinks it's obvious. It isn't obvious to me." I'd guess she's talking about hypermedicalization of situations that do not really warrant a medical treatment, or at least a treatment with drugs. Maybe she's confusing both of these (e.g. prescribing changes in exercise patterns or diet rather than drugs), but that's the general point I think she's trying to make.

Seth Roberts (2011-06-22 05:49:59)

How can we learn how to treat a problem if we don't have a name for the problem? The term "hypermedicalization" doesn't answer that question.

Alex Chernavsky (2011-06-22 06:22:31)

I think the issue is whether the problem exists in the first place, or whether the DSM contains a bunch of self-serving pseudo-diagnoses that allow the mental-health industry to prescribe harmful "treatments", dis-empower people, and further entrench the *status quo*. See, for example: [1]'Shyness: How Normal Behavior Became a Sickness'

1. <http://online.wsj.com/article/SB119402985846180627.html>

mike kenny (2011-06-22 07:37:15)

regarding increasing diagnoses-why do we even need a formal diagnostic manual? doctor's obviously want to get a handle on what people have, and will use words to express problems, and if they have a set of official diagnoses, then they might be constrained in what they would diagnose. 'it must be one of these diagnoses on this table.' in other words, getting rid of official tables of diagnoses would allow for many more possible diagnoses, and inventions of diagnoses. french is guarded by a body that approves words that are 'officially' french, while english doesn't-which language do you think is going to be more expressive in the long run? two, freud and his disciples seem to be getting bashes too much. where's the appreciative thinking? he seemed to apply the empirical approach to introspection and challenged orthodoxy, trusting his lying eyes over authority, very much in the spirit of self experimentation. his disciples often seemed to do this too, breaking with freud. i think albert ellis was a freudian, and then he went his own way and developed an obviously effective cognitive behavioral approach.

Nancy Lebovitz (2011-06-22 08:00:15)

So far as restless leg syndrome is concerned, I have a friend who's plagued by it- if she doesn't take meds for RLS, she can't get nearly enough sleep. There may be some other solution (I've heard a little good stuff about acupuncture), but meds seem to be legitimate for that one. On the other hand, I can't see why it's filed under psychiatry. It's pretty clearly neurological, with no emotional or cognitive component.

Seth Roberts (2011-06-22 08:19:38)

"the issue is whether the problem exists in the first place" - you are saying that a large fraction of the disorders in the DSM are not problems? Angell doesn't say this. And I don't agree with this. I have never heard this claim made. Even Szasz never said this.

Alex Chernavsky (2011-06-22 09:58:37)

I don't know the fraction of problems vs. non-problems. Recall that homosexuality was apparently a problem prior to 1973 - but then suddenly ceased being a problem. Now, apparently, shyness is a problem worthy of medical attention. Angell's point (or one of them) is that the ever-expanding scope of the DSM is an underhanded attempt by the psychiatric establishment to medicalize (problemetize?) the range of normal human traits and behaviors. I'm not really a big fan of Thomas Szasz, but for whatever it's worth, see this essay about his views on the DSM: <http://www.themoralliberal.com/2010/12/20/the-illegitimacy-of-the-%E2%80%9Cpsychiatric-bible%E2%80%9D/>

Vic (2011-06-22 18:37:07)

"On the other hand, I can't see why it's filed under psychiatry. It's pretty clearly neurological, with no emotional or cognitive component." Not clear at all... lots of seeming "neurological" problems have emotional and cognitive underpinnings, sometimes nonconscious (see Freud, who made acute observations and had some revolutionary insights regarding nonconscious mental activity, even if much of what he said was wrong)

Vic (2011-06-22 18:37:55)

ps Seth, have you ever actually read Freud or are you just going off how he's been represented by others?



Seth Roberts (2011-06-23 21:29:52)  
I have read about 15 books by Freud.

Mark Shulgasser (2011-07-18 14:51:44)  
Part One and Part Two are of a piece. Superficial, or perverse, not to recognize that. Both of them of a piece with her 1995 "The Truth about Drug Companies".

### **Albert Einstein: Out-of-Touch Theorist (2011-06-23 17:41)**

[1]Martin Wolf relays what passes for wisdom:

Albert Einstein is reported to have said that insanity consists of doing the same thing over and over again and expecting different results.

Which, if true, shows that Einstein was a theorist.

Call me insane. Based on many years of data collection, I believe [2]scientific progress has a power-law distribution. You sample from this distribution when you collect data. You collect data again and again – "doing the same thing over and over again". Almost all the data you collect produces little progress; a tiny fraction produces great progress. The secret to scientific progress is doing the same thing over and over – and being wise enough to grasp that the results will vary greatly. (Nassim Taleb understands this.) In the short term, it seems like you are getting nowhere.

I learned this lesson from [3]my sleep research. For ten years I tried various solutions to my problem of early awakening. Nothing worked. All my ideas were wrong. Eventually I got "lucky" but actually I made my own luck by persisting so long.

Once you realize the distribution of progress, you grasp that the secret of success is making the cost per sample as low as possible. Few scientists, in my experience, have figured this out. They prefer expensive experiments because larger grants signal higher status. Won't fancy equipment tell me more? they rationalize. Grant givers, also failing to understand the basic point, are happy to oblige the status-seekers: Much easier to administer one \$200,000 grant than 10 \$20,000 grants. And progress slows to a crawl.

More [4]Rita Mae Brown is a more likely source of this saying than Albert Einstein.

1. <http://www.ft.com/intl/cms/s/0/ac468dee-9c35-11e0-acbc-00144feabdc0.html#axzz1Q0qm8oY2>
2. <http://sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>
3. <http://escholarship.org/uc/item/2xc2h866>
4. [http://en.wikiquote.org/wiki/Rita\\_Mae\\_Brown](http://en.wikiquote.org/wiki/Rita_Mae_Brown)

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Vince (2011-06-23 19:40:58)  
It depends what you mean by "the same thing." Does repeatedly collecting data about a problem while trying various solutions count as doing the same thing? I'd say no - the various solutions that you're trying are different things that you're doing, and

the data that you're collecting are the results which you're checking to see if they've come out different.

Alex Chernavsky (2011-06-23 19:51:39)

Lots of quotes are falsely attributed to Einstein (and Mark Twain, Abraham Lincoln, Samuel Johnson...).

PS (2011-06-23 22:53:03)

I second Vince. I think you're confusing perseverance with "doing the same thing". I don't think Einstein (or whoever else) would've dissed perseverance. That's just anathema to research, and pretty much excellence in any sphere.

dearieme (2011-06-24 04:00:07)

<http://www.telegraph.co.uk/health/8594293/Crash-course-diet-reverses-Type-2-d-iabetes-in-a-week.html>

Seth Roberts (2011-06-24 04:36:37)

What is the difference between perseverance and doing the same thing again and again?

Chung-chieh Shan (2011-06-24 05:37:25)

One difference between perseverance and doing the same thing again and again is that perseverance includes doing slightly different things again and again.

Nancy Lebovitz (2011-06-24 06:55:28)

Would you describe what's required for the focused practice needed for the 10K hours to mastery as perseverance?

Seth Roberts (2011-06-24 07:00:16)

"perseverance includes doing slightly different things again and again." It does? I have never heard that definition of perseverance. Is it in any dictionary?

Seth Roberts (2011-06-24 07:01:32)

Nancy, no, the long practice you need to become good at something is inevitably varied.

Olga (2011-06-24 07:35:34)

I always read this quote if you are doing exactly the same (e.g. collect the same data and do the SAME experiment) then you are insane. For example, in trying to lose weight, trying the same diet (e.g. chocolate-chip cookies), but each time expect to lose weight. This is insanity. I think that the difference here is in the process. The quote says that if you want different results, you need to change something in the process. So to answer this question: "What is the difference between perseverance and doing the same thing again and again?" Perseverance is in the goal (e.g. lose weight, find inner piece, etc.). Doing the same thing again and again - is in the process (trying the same method over and over). It looks like you have shown perseverance without insanity. You have tried different methods to achieve your goal.

Tuck (2011-06-24 10:04:46)

I agree with the others: you're misinterpreting Einstein's quote. To understand how, examine Thomas Edison: "While working on the nickel/iron storage battery, he performed 10,295 failed experiments before achieving success." <http://www.yeartosuccess.com/members/y2s/blog/VIEW/00000021/00000257/Inspiration-from-Thomas-Edison.html> That's 10,295 \*different\* experiments. If he'd performed the same experiment 10,295 times, expecting a different outcome, he would have clearly been insane. Edison was known as the "Godfather of Perseverance".

Seth Roberts (2011-06-24 10:48:27)

Repetition is never exact, in my experience. If Einstein's quote is to mean anything - is to apply anywhere - it must refer to inexact repetition. In the article by Wolf from which I took it, it refers to inexact repetition. But the exact meaning of "repetition" and "perseverance" is a digression. The point of this post is that I learned something from my self-experimentation

(the power-law distribution of progress) that I hadn't known, that makes a difference in what scientists should do, and that I have never heard anyone else say. I did know about Edison ("genius is 99 % perspiration"), but thought of him as an engineer, not a scientist. If the power law distribution of scientific progress is well-known, I would be happy to be corrected.

Michael Whitaker (2011-06-24 11:50:07)

To me the salient point in this post is "the secret of success is making the cost per sample as low as possible". Now that's a great quote, Seth! In my world of web analytics, there is a lot of interest in doing AB testing/controlled experiments. The challenge is to get some successes from time to time, otherwise people will lose interest. And the only way to get there is to do lots of experiments, which is only possible if the implementation of these AB tests is quick and cheap.

twelve (2011-06-24 12:44:30)

Dear Professor- If you take a narrow view of 'doing the same thing over and over again', then Einstein's own statement would define Einstein as insane. After all, it took him 10 years to formulate general relativity after the special case (1905 to 1915) and he spent most of this time thinking and occasionally writing it down. But I think, and I'm sure you agree, what Einstein means is that insanity is attempting the same thing over and over again and expecting different results, all other things being equal. I think Olga is correct when she gives the example of eating chocolate chip cookies. Now things get a little messy for me, so maybe you can help me out: it is certainly true that the statement is impotent if it only applies to noise-free cases, but I think a fair reading would suggest that in cases where noise and variability are low, trying the same thing over and over and expecting different results is foolish. Certainly, it's hard to draw lines here, but I think we would agree that collecting data over a sufficiently long period of time, finding that your approach produces insignificant results, and attempting it again under the same circumstances with no modification, is foolish.

Vic (2011-06-25 09:49:45)

brilliant post

Oliver Mayor (2011-06-26 19:35:11)

Good observation. Would a fair summary be: "Self-experimentation is antifragile; it benefits from volatility rather than suffering because of it"? Perhaps Taleb already includes personal science under "aggressive tinkering/convex bricolage". Ask him next time he's around.

Tom Passin (2011-06-28 12:10:51)

I'm certainly in favor of doing lots of cheap, easy experiments. But I'm not completely convinced that it's always the best thing. Thinking back say 30 or 40 years ago when it was much harder to do lab measurements (in physics labs, for example, especially pre-computer) because the equipment cost a lot, budgets were smaller, and generally speaking it was harder to make measurements, to analyze the results you generally had to think a lot harder before setting up an experiment, and you had to work harder to understand what the results were telling you. The result was you learned more at both ends (before and after) of the measurements. The drawback was that it was harder to discover if you had observed a special case or exception. I'm not sure that this trade off has changed in favorable ways over the years.

Seth Roberts (2011-06-28 16:01:21)

Tom, you seem to be saying that if you slow down research you are forced to think harder and therefore do more productive research. This is exactly what I thought BEFORE I started doing self-experimentation. Before self-experimentation, I believed it was a good idea to think long and hard before doing an experiment. When I started doing more frequent experiments, I came to see that I was completely wrong about this. I made more progress in one month of doing fast "unthinking" "sloppy" experiments than I had in a year of doing careful thoughtful ones. I think your idea that slower is better is an illusion. If you were actually able to compare different speeds of research I predict you would find that faster is better.

Tom Passin (2011-06-28 18:57:35)

That's certainly how I program, and I don't know how I'd be able to do it any other way, not with effectiveness. And it's how I

\*like\* to work in other areas, too. It suits me pretty well. But I'm not convinced it's a one size fits all thing. I'm not exactly saying if you slow down, you will automatically do better work. I was reflecting on when our circumstances or equipment forced us to be slower and more thoughtful. It's not quite the same thing. I think - just based on what I noticed in myself and others - that when it became easier to work quickly, people tended to lose touch with the phenomena (or the world) - sometimes, anyway. It takes a different attitude to make good use of little throwaway steps, and maybe that doesn't work well for everyone or for all areas. But personally, it suits me fine!

### Assorted Links (2011-06-25 05:00)

- [1]trouble at the American Meteorological Society
- [2]the power of mood-sharing by Alexandra Carmichael
- [3]crash diet reverses Type 2 diabetes in a week
- [4]archeology of fermentation
- [5]American capitalism with Chinese characteristics: James Stewart's first column for the New York Times. Stewart is one of my favorite writers.

Thanks to Anne Weiss.

1. <http://wattsupwiththat.com/2011/06/16/on-the-hijacking-of-the-american-meteorological-society-ams/>
2. <http://quantifiedself.com/2011/06/the-transformative-power-of-sharing-mood/#more-1911>
3. <http://www.telegraph.co.uk/health/8594293/Crash-course-diet-reverses-Type-2-diabetes-in-a-week.html>
4. <http://www.smithsonianmag.com/history-archaeology/The-Beer-Archaeologist.html?c=y&story=fullstory>
5. <http://www.nytimes.com/2011/06/25/business/25stewart.html?pagewanted=1&hp>

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Dave Lull (2011-06-25 05:37:27)

For comments on that "crash diet" see Jenny Ruhl's latest blog posting: 'Idiotically Dangerous Diet "Reverses Diabetes" but So Does Moderate Carb Restriction Without Calorie Restriction' [http://diabetesupdate.blogspot.com/2011/06/idiotically-dangerous-diet-reverse s.html](http://diabetesupdate.blogspot.com/2011/06/idiotically-dangerous-diet-reverse-s.html)

Tom (2011-06-29 10:09:13)

Ruhl doesn't really support her assertion that the diet is dangerous. It seems very unlikely to me that it is. I have to believe that we evolved to be extremely well equipped to go a **single week** on sparse food. It seems very believable that it would have a salutary effect after **five or six decades of uninterrupted gorging**. The "KimKins" diet that she throws up is a red herring. Kimkins was the fat, fraudulent, scientifically-illiterate housewife whose low carb, low fat, **high protein** "Kimkins" diet really **was** dangerous as it results in "rabbit starvation": [http://en.wikipedia.org/wiki/Rabbit\\_starvation](http://en.wikipedia.org/wiki/Rabbit_starvation)

### Mercury Damage Revealed by Brain Test (2011-06-26 16:28)

For several years I have been doing simple daily tests to measure my brain function. I got the idea when I noticed that a few capsules of flaxseed oil improved my balance. Flaxseed oil also improved other measures of brain function,

such as digit span. I wasn't surprised I could do better; what was surprising was how easy it was. It revealed a big gap in our understanding of nutrition. I do the daily tests not only to improve brain function but also to improve the rest of my body. I think the brain is like a canary in a coal mine – especially sensitive to bad environments. Learning what environment was best for the brain would suggest what environment is best for the rest of the body. When I started taking an optimal amount of flaxseed oil, my gums turned from red (inflamed) to pink (not inflamed), supporting this assumption.

I tried six or seven mental tests and eventually settled on a test of arithmetic (how fast I could do simple problems such as 5-3). I hoped that now and then my score would change (in either direction, faster or slower) and that these changes would point to new things that control brain function. No one had/has done such a thing. I had no idea if unexpected changes would show up or, if they did, how often. I didn't know what the score changes would look like (their size and shape) nor, of course, what would cause them. Would all of them involve diet? Would all of them make sense in terms of what we already know? (Flaxseed oil makes sense because the brain contains lots of omega-3.)

The first two surprises were these: 1. My score suddenly improved a few days after switching from Chinese flaxseed oil to American flaxseed oil. This made sense: It is easy to destroy omega-3 if flaxseed oil is kept at room temperature. 2. My score suddenly improved when I switched from pig fat to butter. This was counter-intuitive: pig fat is more paleo than butter.

Last fall, [1]there was another surprise: My score greatly improved since the summer. I was much faster than ever before. At first I thought the improvement was due to moving to Beijing. I had moved from Berkeley to Beijing in early September. My Beijing life differed in a thousand ways from my Berkeley life. I had three ideas about which differences might matter. 1. Walnuts. Perhaps I ate more walnuts in Beijing. Walnuts are supposed to be good for brain function. 2. Heat. It was much hotter in Beijing than Berkeley. Maybe that improved brain function. 3. Vitamins. I took less vitamin supplements in Beijing. Maybe they harmed brain function.

I tested these possibilities. 1. I stopped eating walnuts. My arithmetic score did not clearly change. 2. Winter came, it got much colder. The improvement did not go away. 3. I took the same amount of vitamins I'd taken in Berkeley. My arithmetic score didn't change. So all of these ideas were wrong.

Because they were wrong, I considered a fourth possibility: The improvement was due to removal of two mercury amalgam fillings on July 28, 2010. They were replaced with non-amalgam fillings. I'd had them removed for precautionary reasons. I wasn't suffering from any signs of mercury poisoning. Hair tests had repeatedly shown mildly high amounts of mercury in my hair (75th percentile of an unspecified sample). Measurements of the mercury in my breath had come out higher than usual but it was hard to be sure the machine was working correctly.

I looked again at my data. It showed something I hadn't noticed: the improvement started before I went to Beijing. It started very close to July 28. That was good evidence that the mercury explanation was correct. Now the evidence is even stronger. I've returned to Berkeley and thereby made my life quite similar to the situation when my scores were much higher than now. The improvement has remained.

The evidence for causality – removal of mercury amalgam fillings improved my arithmetic score – rests on three things: 1. Four other explanations made incorrect predictions. 2. The improvement, which lasted months, started within a few days of the removal. Long-term improvements (not due to practice) are rare – this is the only one I've noticed. 3. Mercury is known to harm neural function ("mad as a hatter"). As far as I'm concerned, that's plenty.

[2]A long Wikipedia article describes evidence on both sides of the question of whether mercury amalgam fillings cause damage. In 2009, the American Dental Association stated in a press release "the overwhelming weight of scientific evidence supports the safety and efficacy of dental [mercury-containing] amalgam." As recently as 1991, Consumer Reports told readers "if a dentist wants to remove your fillings because they contain mercury, watch your

wallet." (Dental insurance will pay most of the cost of removing my remaining amalgam fillings.) In an essay last revised in 2006, Stephen "Quackwatch" Barrett [3] explained at length why mercury toxicity is a "scam". According to Barrett, "there is overwhelming evidence that amalgam fillings are safe."

[4] Ask your dentist some pointed questions.

1. <http://blog.sethroberts.net/2011/01/22/another-mysterious-mental-improvement-2/>
2. [http://en.wikipedia.org/wiki/Dental\\_amalgam\\_controversy](http://en.wikipedia.org/wiki/Dental_amalgam_controversy)
3. <http://www.quackwatch.org/01QuackeryRelatedTopics/mercury.html>
4. <http://blog.sethroberts.net/2008/04/12/ask-your-dentist/>

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Mario Iwakura (2011-06-27 03:55:36)

After reading some studies of Jarmila Prochazkova (notably pubmed 16804512, 15349088 and 12743535), I decided to have my 11 amalgams removed. Where I live (Brazil) there are no dentists specialized in safe amalgam removal. Before the extraction, my thyroid antibodies (anti TPO) were decreasing while following a gluten free paleo diet. But somewhat stabilized around 400 UI/ml. Fifteen days after extraction, my tpo jumped to 454, then peaked 505 after 3 months, and then started to decrease. Only after 6 months, it returned to 400. During all this time, I was supplementing with chlorella, cilantro, vitamin c, high dose iodine and selenium. Unfortunately, I started to eat fish (cod) twice a week, and that raised, again, my antibodies. Now, amalgam and fish free, I can say that I'm in the right track to overcome my autoimmune condition.

Steve Wright (2011-06-27 08:35:56)

Hey Seth, did you take any precautionary supplements or steps before or after the removals? The info on how and if to remove amalgams seems way too convoluted, it would be nice to find more successful detailed stories. There just doesn't appear to be any referenced and creditable resources of science plus testimonials. Any thoughts? Thanks for all you do!

Seth Roberts (2011-06-27 10:25:37)

I didn't take any precautionary supplements or steps before or after the removals. Re the absence of "referenced and credible

resources of science plus testimonials". There is credible evidence amalgam fillings are dangerous; that is why they have been banned in several countries. You seem to be focusing on what is missing ("more successful detailed stories") but I suggest you pay more attention to what is present – the evidence implying amalgams are dangerous.

TomGinTX (2011-06-27 13:16:03)

I had read about this a long time ago, but did not want to get my fillings removed because I had read that this could be dangerous too, by releasing more Hg during the removal. And I did not know of a dentist who would remove them anyway. So I was pleasantly surprised a couple of years ago when my dentist told me I needed a filling replaced and he was going to use some kind of space age plastic resin. I asked why, and he said that he thought the Hg amalgam might be unhealthy, and there was finally something that was sturdy enough to use instead.

Jonathan (2011-06-27 14:45:22)

Seth, sorry if this is off-topic, but have you checked whether fish oil has the same positive effects for you (or other people) as the flaxseed oil? I'm wondering whether omega-3 oils are somewhat interchangeable, or whether there's something special about flaxseed oil. Thanks.

JohnN (2011-06-27 16:15:26)

Seth - Have you considered another confounding factor that is living in the new city (Beijing) with the worst air quality - bar none? Additionally, your score is expected to improve over time from repeated cognitive exercise.

Ragout (2011-06-27 18:57:36)

As I understand it, mercury is very persistent in the body. So removing amalgam fillings can't be expected to have an effect on your mercury levels for a long time. Hence, it seems very implausible that removing your fillings had any effect on brain function a few days later.

Erik La Gattuta (2011-06-27 21:19:54)

Hi Seth Do you have a recommendation for a specific hair test? A recommended lab?

Seth Roberts (2011-06-28 06:37:09)

on a friend's recommendation, I use Doctor's Data for hair tests.

Seth Roberts (2011-06-28 06:39:00)

John N, bad air (Beijing) should not make my brain work better. As for "repeated cognitive exercise" I had stopped getting better from practice long before this.

Seth Roberts (2011-06-28 06:40:31)

Jonathan, I tried fish oil once. It gave me a headache, so I've stuck with flaxseed oil. However, other people report the same effects (as I get with flaxseed oil) with fish oil.

Jan (2011-06-28 12:37:51)

Hi Seth, I've been wanting to remove my amalgam fillings for quite some time now. But I haven't found a dentist who had something that I trusted as a safe replacement. Most composites contain either bisphenol A or nanoparticles. And polymerisation of the composites is never 100 %, so there could be stuff leaking into your body, if I've understood well. I'm interested in any info on fillings that seem safe to you!

Seth Roberts (2011-06-28 15:56:13)

Jan, the next time I talk to my dentist I'll find out what filling material he used.

Vic (2011-06-28 21:47:03)

Most likely he used a composite that includes bisphenol A - supposedly the levels that leech from it are minimal and safe, but then that's what they say about mercury amalgams too. On the other hand, maybe bisphenol A is improving your brain function - it's the other thing that changed at the same time as the removal of mercury.

Chris (2011-06-29 02:23:08)

If it's really mercury, then there should also be a measureable effect in individuals with mercury fillings who just eat a lot of coriander/cilantro as that's supposed to chelate the metals out of the body and into the urine..

Jeff M. (2011-07-05 15:10:43)

Seth, Is your dentist a 'regular' dentist or a 'holistic' dentist? Many anti-amalgamists claim there is special training required to safely remove amalgams. How much does it cost to have amalgams replaced? I'm trying to find out if the holistic folks charge significantly more than a regular dentist would, but Google isn't turning up much, because most folks don't like to list costs online.

Jeff M. (2011-07-05 15:29:46)

Also, have you repeated the Doctor's Data hair test before and after the amalgam removal on your new hair growth to compare mercury pre- and post? Thanks, Jeff

Seth Roberts (2011-07-05 21:00:39)

My dentist, Sandor Hites, is a holistic dentist. I recently had 3 fillings replaced. Two of them cost \$260 each; the third cost \$339. I don't know why the price varied. My dental insurance paid 70 %.

Seth Roberts (2011-07-05 21:01:53)

it is too early to tell what has happened to the mercury in my hair as a result of my filling removals. But, yes, I have had the hair test repeated.

Mercury Damage Revealed by Brain Test « Thor's Reads (2012-03-08 06:54:44)

[...] Seth's Blog » Blog Archive » Mercury Damage Revealed by Brain Test. Share this:FacebookTwitterRedditMoreLinkedInDiggStumbleUponTumblrPinterestPrintEmailLike this:LikeBe the first to like this post. [...]

Kim (2012-03-08 09:51:41)

I had a mouthful of amalgams (12+) removed last fall at the insistence of my functional medicine doctor, and my autoimmune (Hashimoto's) symptoms are finally improving. My endocrinologist has been fiddling with my medicine for years, but they never helped. I'm a believer.

## **The Medtronic Scandal (2011-06-28 20:39)**

In August 2010, John Farber, a reporter at the Milwaukee Journal Sentinel, wrote [1]an article about how a medical device called Infuse, used for spinal surgeries, "went from revolutionary advance [2002] to public health alert [2008]." Bad side effects were common when Infuse was used, far more common than when it wasn't used. Infuse is a hugely profitable product of Medtronic, the largest medical device company in the United States.

How did the high rate of bad side effects go unnoticed? Farber went on to find that there were unreported conflicts of interest in the journal articles about Infuse. The authors of the articles had received (before and after publication of the articles) large payments from Medtronic, on the order of \$5 million per person. The articles themselves greatly underreported side effects. [2]Moreover,



Evidence has accumulated suggesting that the superior clinical results reported by doctors with financial ties to Medtronic have not been replicated when the device was used by doctors who receive no payments from Medtronic.

[3]A whole issue of The Spine Journal has been devoted to the problem and [4]a Senate committee is investigating.

Thanks to Zachary Hamaker.

1. <http://www.medpagetoday.com/Surgery/Orthopedics/21908>
2. <http://www.medpagetoday.com/Surgery/Orthopedics/27200>
3. <http://www.medpagetoday.com/Orthopedics/Orthopedics/27330>
4. <http://www.medpagetoday.com/Surgery/Orthopedics/27200>

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Janna (2011-06-28 21:37:04)

Great topic. The company is called Medtronic (no "s"). Feel free to delete this comment.

dearieme (2011-06-29 07:47:42)

When I started reading about statins, the first thing that struck me was the systematic suppression of evidence about side-effects: lies, in other words, but lies of a specific sort.

### **Health Care Stagnation (2011-06-30 18:27)**

In December, the Los Angeles Times reported – very briefly – that from 2007 to 2008, [1]life expectancy in the United States declined by 0.1 year. It should have been the lead story of every newspaper in the country with the largest possible headlines ("LESS LIFE"). Did 9/11 reduce life expectancy this much? Of course not. Did World War II? Not in a visible way – American life expectancy rose during World War II. I can't think any event in the last 100 years that made such a difference to Americans. The decline is even more newsworthy when you realize: 1. It is the continuation of trends. The yearly increase in life expectancy has been dropping for about the last 40 years. 2. Americans spend far more on health care than any other country. Meaning vast resources have been available to translate new discoveries into practice. 3. Americans spend far more on health research than any other country and should be the first to benefit from new discoveries.

Maybe I'm biased (because my research is health-related) but I think this is the biggest event of our time. It is the Industrial Revolution in reverse – progress grinding to a halt. For no obvious reason, just as the Industrial Revolution had no obvious reason. Health researchers have been given billions of dollars to improve our health, the whole system has been given tens of billions of dollars, and the result is ... nothing. Worse than nothing.

No journalist, with the exception of Gary Taubes, seems the least bit aware of this. It is a difficult story to cover, true. But several journalists, such as health writers for The New Yorker (Atul Gawande, Michael Specter, and Jerome Groopman) are perfectly capable of covering it. They haven't. With a few exceptions, they write about progress (e.g., Peter Provonost's checklists). It is like only reporting instances when Dirk Nowitzki missed a free throw. Each instance is true but the big picture they create – he misses all free throws – is profoundly false.

Among academics, the stagnation has received a tiny amount of attention. In [2]a recent paper (gated), two University

of Southern California professors, considering a wider time period, point out that there has been some improvement in how long you live after you get sick, but no improvement in how long you live before getting sick. Here is how the discussion section of their article begins:

There is substantial evidence that we have done little to date [meaning: from the 1960s to the 1990s] to eliminate or delay disease or the physiological changes that are linked to age. For example, the incidence of a first heart attack has remained relatively stable between the 1960s and 1990s and the incidence of some of the most important cancers has been increasing until very recently. Similarly, there have been substantial increases in the incidence of diabetes in the last decades.

Here is my explanation of the paradox of: 1. Enormous and increasing health care costs. 2. Vast amounts spent on research. 3. No better health. Health researchers, such as medical school professors, shape their research to favor expensive treatments, such as expensive drugs. In fact, the best treatments would cost nothing (e.g., the Shangri-La Diet). To make the expensive treatments seem worth studying, they invent utterly false theories and claim to believe them. For an example (research about depression), see *The Emperor's New Drugs* by Irving Kirsch. Because health researchers are forced to worship absurd theories, they are incapable of good research. Absence of good research is why there is no progress. The health care supply chain – everyone between you and the research, such as doctors, nurses, drug company employees, hospital employees, alternative medicine practitioners, [3]medical device makers, and so on – is happy with the situation (useless research) because it ensures that little will change and they will continue to get paid. They are the supposed experts – and remain silent.

It is human nature that everyone in the supply chain remains silent. They are protecting their jobs. But the silence of the journalists is *The Emperor's New Clothes* writ large. To explain why smart journalists fail to notice the stagnation, I think you have to go back to studies of conformity. When everyone you talk to – people in the supply chain – says black = white (i.e., that progress is being made), you say the same thing.

Why is personal science, the main subject of this blog, important? Because [4]it is a way out of this stagnation.

1. <http://articles.latimes.com/2010/dec/09/news/la-heb-stroke-20101209>
2. <http://psychsocgerontology.oxfordjournals.org/content/66B/1/75.full>
3. <http://blog.sethroberts.net/2011/06/28/the-medtronics-scandal/>
4. <http://blog.sethroberts.net/2011/05/30/why-does-personal-science-matter/>

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Pippy (2011-06-30 20:37:01)

I think this is possibly the best and most important post you have ever written. A decline in life expectancy in the U.S. is absolutely shameful. I hope the journalists you mentioned sit up and take notice. Lack of integrity in the U.S. health, economic and political systems is a major problem and is causing us to stagnate. Corruption and poverty go hand in hand. Without independent journalists and bloggers shining a very bright light on such conflicts of interest, they will continue to go on unaddressed. Maybe this post will get the ball rolling.

Seth Roberts (2011-06-30 22:06:16)

Thanks, Pippy, that's very nice to hear. I added a new category (health care stagnation) for this post and hope to write about it often.

Sonic Charmer (2011-06-30 22:08:49)

I would like to see a more granular breakout of this life expectancy calculation. Specifically, as it relates to something like: residency status.

Terveydenhuollon stagnaatio | Tutkimusmatka terveyteen (2011-06-30 23:10:31)

[...] Seth Roberts kirjoittaa tärkeästä mutta hyvin vähälle huomiolle jääneestä asiasta: terveydenhuollon jämähtäneestä kehityksestä. Periaatteessahan tiedämme jatkuvasti enemmän ihmiskehosta ja siitä, miten sitä saa hakkeroitua terveempään suuntaan. Mutta miksi tämä ei näy käytännössä? Vuosien 2007 ja 2008 välillä elinaikaodote lyhentyi Yhdysvalloissa 0,1 vuodella. Tuo on loppujen lopuksi aika järkyttävä luku. Miten tuollainen on edes mahdollista nykypäivänä – kun kehitys kiihtyy yhä nopeammaksi ja nopeammaksi? [...]

Jake (2011-07-01 02:35:03)

Excellent. You didn't mention the huge breakthrough in health care-the internet. It allows us to use personal science to give us a disease free life. From my reading of research papers, advances are being made in biochemistry but it is not reaching the medical profession. I am using those advances to bypass the doctors. I would much rather see a biochemist for my illness than a doctor.

Mark Cancellieri (2011-07-01 03:35:23)

Life expectancy as a measure of the quality of a health care system has its limitations. For example, here in the United States, we often get criticized because our life expectancy isn't the highest despite having the highest health care costs, but if you make a simple adjustment for life expectancy by excluding fatal injuries, then suddenly we have the highest life expectancy. Why? Maybe it's because of a greater degree of deaths from car accidents since car ownership is so high in the U.S. Maybe it is because of a high degree of violent deaths. I'm not certain, but it is highly likely to be a demographic issue rather than a issue of not responding effectively to fatal injuries. The United States also faces the challenge of soaring obesity rates (and people who are just overweight and not classified as obese), which is another factor that is a demographic issue and doesn't reflect poorly on the health care system. The obesity rate in the US is far higher than most other nations of the world. The fact that it has been steadily getting worse could be contributing to a stagnating life expectancy. It would probably be preferable to track more precise measures of health care quality. One example might be historical 5-year cancer survival rates. The incidence of cancer in a country is probably fairly closely related to demographics, whereas the survival of cancer is probably somewhat less so. I agree that personal science could go a long way to reducing costs and improving outcomes. I think far too often patients are put on drugs (such as statins) without really tracking the results in any careful way. For example, my mother is on medication for high blood pressure. It would be interesting to track her results without the medication for a month, then with it, and then without it again. This would probably be sacrilegious to both the medical community and my mother though. It's a shame.

Tomas (2011-07-01 04:43:08)

Mark, maybe I misunderstood your second paragraph about obesity being a demographic issue... surely it is, but I tend to view it as a result of the failure of the health care system, not just a standalone factor outside it which contributes to the decrease of life expectancy.

Mark Cancellieri (2011-07-01 04:56:43)

Tomas, How exactly is obesity a result of the failure of the health care system? Should we blame doctors and nurses for the way that we eat or how little we exercise?

Seth Roberts (2011-07-01 04:58:05)

Mark, like Tomas I see obesity as a failure of the health care system. Among other health problems, obesity makes diabetes more likely. "Should we blame doctors and nurses for obesity?" Well, yes, to some extent. Doctors and nurses seem to be satisfied with weight-loss advice that obviously doesn't work. (A typical doctor says "eat less, move more.") If doctors and nurses are brain-dead, as in this case they appear to be, that's a real problem. Either they should shut up ("sorry, Mr. Jones,

your weight is an enormous health problem but I have no idea what to do about it”) or say something sensible.

Mark Cancellieri (2011-07-01 06:57:39)

Seth, Obesity is one area that we will disagree on. Even faced with the prospect of dying, the vast majority of people don't change their behaviors: Change or Die <http://www.fastcompany.com/node/52717/print> Don't get me wrong. There is definitely room for improvement in the health care community's response to obesity. Their understanding of nutrition and exercise is in serious need of updating, but the real challenge is in teaching others how to change their behavior in a sustainable way. I personally don't blame the medical community for not having solved this immensely difficult problem, especially when the medical community has essentially zero control over the behaviors of their patients.

q (2011-07-01 07:47:54)

if i were to guess why, probably just that a higher percentage of children are born into poverty each year and poor people don't live as long. so not health care per se but income distribution. or it could be a statistical artifact of same.

q (2011-07-01 07:51:58)

or (to continue) it could be an artifact of the fact that we are in a big recession and so people are poorer than they were a year or two ago and will be able to afford less health care.

dearieme (2011-07-01 10:53:33)

In Britain we are told that continuous increases in our life expectancy is one of the main reasons that our pension schemes are in financial trouble. As far as I know this is true. Is the decline unique to the USA?

Jonathan (2011-07-01 12:16:04)

Seth, I recommend you Google Bruce Charlton's blog, as well as his "The story of real science", for the very best discussion I've seen of stagnation in both medicine and science in general. The man sees reality on a higher level than most people can.

E. coli (2011-07-01 13:16:23)

Just my opinion: 1. As a commenter above pointed out, life expectancy takes into account deaths resulting from non-medically related issues such as car accidents, crime, and illegal drug use. 2. Incidence of cancer in the United State (and probably in other developed nations) is likely increasing due to changing lifestyle and increasing exposure to risk factors (e.g. chemical products, tanning). 3. It's extremely unlikely that healthcare researchers are deliberately slowing down the progress of medical research to a halt in order to retain their jobs. Are we really worried that making people's lives better will cause reduced funding in health research because we no longer need improvements in healthcare? - only in your wildest dreams. There may be problems with how funding agencies tend to fund the research topics that are "hot" right now and a lot of researchers jump on the bandwagon when they really don't have any innovative ideas. However, I think it's unfathomable that people are intentionally studying problems that have no prospects of improving the quality of life, given that a healthcare researcher's success mostly depends on how much of a positive impact one's research program has on healthcare (duh!).

bjk (2011-07-01 13:31:38)

What if we've just chosen a trade-off between better tasting food and a shorter life expectancy? If somebody gave me the choice between 10000 hamburger-and-milkshake meals and an extra two years of life, I'm not so sure what I'd choose. Years 77-78 don't sound like much fun, and I like hamburgers. We make that same choice every day in small ways, and it is a choice. I don't know that doctors or drug companies are to blame, they're essentially unarmed compared with the appeal of modern conveniences.

Seth Roberts (2011-07-01 15:43:58)

E. coli (is that your real name?), you write "I think it's unfathomable that people are intentionally studying problems that have no prospects of improving the quality of life, given that a healthcare researcher's success mostly depends on how much of a positive impact one's research program has on healthcare (duh!)." There is always a cover story that the research will somehow

improve the quality of life. But compared to what? I am claiming that much different research – e.g., focussed on prevention – would do a much better job. The ability of people to rationalize what they do is quite good. The highest aspiration of a large number of medical school professors is to win a Nobel Prize, not to improve the quality of people's lives. In the short term, they want a big lab and a large grant. You reach that goal by publishing many papers. They would laugh if you said their main motivation was "to improve healthcare".

Nancy Lebovitz (2011-07-01 18:03:08)

"Overweight" people actually live a little longer than "healthy weight" people, and low end obese people are in between. [1][<http://www.healthnewstrack.com/health-news-1606.html>] [2]] Fat people have difficulty getting access to competent medical care– they're at risk of having doctors ignore their symptoms in favor of just telling them to lose weight.

1. <http://www.healthnewstrack.com/health-news-1606.html>

2. <http://www.amptoons.com/blog/2009/02/05/should-a-59-160-lb-woman-want-to-lose-35-pounds/>

Nancy Lebovitz (2011-07-01 18:06:10)

Sorry. Here are the links: <http://www.amptoons.com/blog/2009/02/05/should-a-59-160-lb-woman-want-to-lose-35-pounds/>  
<http://www.healthnewstrack.com/health-news-1606.html>

Jack in Davao (2011-07-03 06:18:31)

To which one could add as a further cause of the appalling pace of progress in American biomedical research: the top-down, centrally planned funding monopoly, with a peer review process dominated by established researchers who are deeply invested in (often) failed or unproductive theories and are not about to fund any upstarts proposing ideas that might challenge them, and with politically driven priorities that channel most of the money into whatever are the latest fads. The growth of personal science and web-based information exchange are hopeful signs, but in America the medical gatekeepers remain a serious obstacle to personal experimentation – they keep lab testing, drugs, and devices at best expensive and at worst unavailable without a prescription. Fortunately some Asian countries (including here in the Philippines) take a less paternalistic view, and that, coupled with the incentive to promote medical tourism, may shift the center of gravity of progress to Asia.

Assorted links — Marginal Revolution (2011-07-03 13:13:01)

[...] 5. Seth Roberts on health care stagnation. [...]

iamreddave (2011-07-03 15:00:41)

"I can't think any event in the last 100 years that made such a difference to Americans" "The worst epidemic in American history killed over 600,000 Americans during World War I" <http://www.pbs.org/wgbh/americanexperience/films/influenza/> "Life expectancy for American women is declining for the first time since the Spanish influenza epidemic in 1918" [http://environment.about.com/od/healthenvironment/a/life\\_expectancy.htm](http://environment.about.com/od/healthenvironment/a/life_expectancy.htm) Population of the US seems to have been around 85 million in 1918 <http://usgovinfo.about.com/library/weekly/aa122102a.htm> Spanish Flu killed young adults due to an over response of the immune system. So say the average person was 25. and this took 45 years off their life. So Spanish flu took about 0.3 years of lifespan off people back of the envelope

A fantastic sentence about healthcare « slightdelay (2011-07-03 16:55:00)

[...] got it from this blog post on health care stagnation, via Marginal Revolution, but the original source is a (gated) paper by two USC [...]

Bulldog (2011-07-03 17:41:52)

It's more like reporting that Dirk Nowitzki's free throw rate has decline from 95 % to 94 % after improving for a decade. I think part of the disconnect comes from ideas about economic growth. In the former we don't need growth just to maintain the status quo. If economic growth declines by 0.1 %, America is in a huge amount of trouble. If life expectancy declines by 0.1 %, things are exactly the same as they were yesterday.

Sean Estey (2011-07-03 18:23:40)

Great post. It'll probably take someone you describe as an outsider with insider knowledge to really bring this issue into the public spotlight. As for where these absurd health theories come from in the first place, I believe it stems from the contamination of politics into the research domain. When politicians make it their job to fund science and make public health guidelines, they do so 1) before the science has settled, and often reach incorrect conclusions, then 2) direct research almost exclusively in the direction of confirming rather than falsifying public health recommendations, eliminating the marketplace of competing idea. Science ceases to be science and you reach stagnation.

Nancy Lebovitz (2011-07-03 18:55:10)

What about bad practice? Last I heard, it's hard work to get doctors to wash their hands reliably.

quigley (2011-07-03 20:47:28)

First, disclosure. I'm an MD who spends "vast amounts...on research" as a basic and clinical researcher. Second, where we agree: a. Falling life expectancy is a shame on our society. b. Losing weight means eating less. How you get there and how much royalty you collect off books sales are details. Now where we disagree: Specifically regarding obesity and its consequences, the medical community has pushed decreased food intake and increased exertion to treat one of the leading consequences of obesity, Type 2 diabetes. Patients don't do it. If your diet is so great, the medical community will applaud you, and overweight people will build statues in your honor, just like they did with Atkins...right? An important reason that cancer rates have increased is better detection. Please include this in your discussion. BTW, MD's in medical research make 1/2 what they could in private practice on the whole. No one's in this game just to be paid.

Seth Roberts (2011-07-04 04:26:28)

quigley, you write: "the medical community has pushed decreased food intake and increased exertion to treat one of the leading consequences of obesity, Type 2 diabetes. Patients don't do it." I agree. The medical community has pushed that solution for at least 50 years. And patients don't do it – meaning it is a bad solution. That is a sign of stagnation I don't mention in this post: Ancient solutions that don't work well continue to be promoted.

quigley (2011-07-04 07:19:56)

Dr. Roberts: I've tried to find data that your diet works for SUSTAINED weight reduction in a study that would be applicable to a generalizable population. As you know, temporary weight loss is relatively easy. Sustained weight loss (wt loss > 2 yrs), is hard. If your diet can do it, I'd prescribe it every day.

Alex Chernavsky (2011-07-04 07:59:29)

Quigley, I started the Shangri-La diet on October 22, 2009 when I weighed about 222 lbs. At my lowest point since then, I weighed about 191. I'm currently hovering around 194, for a net loss of about 28 lbs. (I know it's not quite two years.) Here's a quick-and-dirty graph that's current as of July 4, 2011. The solid, darker line is a ten-day moving average. <http://www.astrocyte-design.com/shangri-la-diet/shangri-la.jpg> See also my description of my diet, although this page is a little out of date: <http://www.astrocyte-design.com/shangri-la-diet/index.html>

Bill Cecil (2011-07-04 08:04:33)

According to the report "Life Expectancy in the United States" by the Congressional Research Service, at: <http://aging.senate.gov/crs/aging1.pdf>, since 1910 life expectancy has declined about 20 times-the last time before 2007-08 in 1993. Clearly it is an important event for some of the reasons mentioned but it does seem to happen, luckily, with decreasing frequency over time: 5 times in the 10s; 5 times in the 20s; twice in the 30s; twice in the 40s; once in the 50s; 3 times 60s; once in the 80s; once in the 90s and once in the 2000s. Looks like improvement to me.

Seth Roberts (2011-07-04 11:44:39)

Bill, thank you for bringing that document to my attention. It shows that the 1918 influenza epidemic was by far the biggest disaster in terms of life expectancy in the past 100 years. As you say, life expectancy has declined several other times. The

overall trend is unquestionably a slowing down of the rate of increase. The fact that the overall rate of increase is slowing down at the same time that the number of year-to-year declines is decreasing (as you point out) suggests that improvement in data quality (less random error) is why the number of year-to-year declines is decreasing. As data quality increases, each decline becomes more significant.

Seth Roberts (2011-07-04 12:13:02)

Quigley, in my book I show that my initial use of sugar water and extra-light olive oil (ELOO) led to a weight loss that was sustained at least 5 years. Now I do the diet using butter (nose-clipped) – a healthier calorie source than ELOO or sugar water. In 1990 I weighed 200 pounds. That's when I started trying to lose weight. Making dietary changes that led to my theory and that the theory later explained, including the Shangri-La Diet, I have been well below 200 pounds ever since. I'm now about 170 pounds. That's more than 20 years of sustained weight loss. I think that low-carb diets work, too, but I believe they work for the same reason the Shangri-La Diet works – by reducing the overall strength of smell-calorie associations in your diet, they reduce your setpoint. Before I discovered SLD, I lost about 6 pounds by no longer eating bread. It never came back.

quigley (2011-07-04 20:49:02)

Fine. You provide one anecdote, and Alex provides another. How do you know that if you'd tried something else, your weight loss wouldn't have been better or equal? Anecdotal evidence is the weakest form of evidence of generalizable benefit for an intervention.

Seth Roberts (2011-07-05 03:56:41)

Quigley, the theory behind the Shangri-La Diet explains a range of hard-to-explain observations that come not only from many people but from rats. That is excellent reason to believe that if the theory is true, the phenomena it predicts will be general. You ask: "How do you know that if you'd tried something else, your weight loss wouldn't have been better or equal?" Because I tried many other things. They produced much less weight loss.

Alex Chernavsky (2011-07-05 06:38:49)

My cousin once had a friend who relied a lot on anecdotal evidence, and really bad things ended up happening to the guy.

npm (2011-07-06 06:36:20)

This is seriously misleading. Go here: [http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59\\_04.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_04.pdf) Scroll down to Figure 1, on p.31. You will see that the 2008 increase was a blip in the long-term trend of a steady decades-long decrease in mortality rates. Here's the real story from that figure: Today, we are avoiding over a QUARTER of the deaths that would have occurred if death rates had not changed over the last 30 years. That's freaking amazing. (Yes, that's aggregate and hides shamefully high levels of differential mortality, but still! A QUARTER! And it's not like people were dying like flies in 1980.) Why look at mortality rather than life expectancy? Because life expectancy is a complicated transformation of mortality rates, and even large improvements in mortality don't translate into large increases in life expectancy in low-mortality countries. From <http://www.deathreference.com/Ke-Ma/Life-Expectancy.html>: "Since the middle of the twentieth century, gains in life expectancy have been due more to medical factors that have reduced mortality among older persons. These reductions are harder to achieve than decreases in infant mortality; hence, improvements in life expectancy at birth have slowed down."

Seth Roberts (2011-07-07 03:53:28)

That's very interesting and helpful. I agree that the steady decline in age-adjusted death rates since 1980 does not suggest stagnation. But the usual stagnation claim – "improvements in life expectancy have slowed down" – is not about early in 1980-2009 versus late in 1980-2009 but comparison of much earlier (e.g., 1930-1960) to later (e.g., 1980-2010). The statement "these reductions are harder to achieve" is not an explanation ("hence") of the slowdown but a description of it. The big picture, as far as I can tell with this new data, is what the USC authors described: Over the last 30 years, people are living somewhat longer after they get sick, but they are getting sick at the same age. This makes sense given the overwhelming emphasis of our health care system on keeping symptoms from getting worse relative to prevention of those symptoms. For example, we treat diabetes rather than prevent it. This is a kind of stagnation all by itself: A problem becomes large (e.g., diabetes) but all

you ever do is treat it. Okay, people with diabetes live a bit longer, but progress on prevention remains stagnant at roughly zero.

"It is the Industrial Revolution — in reverse" « Blog on the Run: Reloaded (2011-07-07 17:48:39)

[...] Murca. Hail. yeah: In December, the Los Angeles Times reported — very briefly — that from 2007 to 2008, life expectancy in the United States declined by 0.1 year. It should have been the lead story of every newspaper in the country with the largest possible headlines ("LESS LIFE"). Did 9/11 reduce life expectancy this much? Of course not. Did World War II? Not in a visible way — American life expectancy rose during World War II. I can't think any event in the last 100 years that made such a difference to Americans. The decline is even more newsworthy when you realize: 1. It is the continuation of trends. The yearly increase in life expectancy has been dropping for about the last 40 years. 2. Americans spend far more on health care than any other country. Meaning vast resources have been available to translate new discoveries into practice. 3. Americans spend far more on health research than any other country and should be the first to benefit from new discoveries. [...]

Around the Web; Cancer, Infections, Cholesterol, and Nitrates Edition | Perfect Health Diet (2011-07-09 10:17:36)

[...] except the experimenter; no one believes a theory except the theorist." In another post, Seth reports that health in the US as measured by age of disease onset has not improved since the 1960s, life [...]

Bernd Jendrissek (2011-07-09 12:05:38)

"For example, we treat diabetes rather than prevent it." Seth, you remind me of people in my country complaining about high crime rates, pleading, "Somebody should DO SOMETHING!" Without being very specific at all about what "do something" might entail. What would you have the medical community do that satisfies you that they are earnestly working on preventing, say, diabetes? Would you like to see medical practitioners applying to courts to have their patients declared legally incompetent, in order to inter them in starving houses? Hold guns to their patients' heads and MAKE them lose weight? Aren't you just being a bit sore about the fact that the medical community isn't just accepting your assertions that your diet is the silver bullet of weight control? That instead they recommend "eat less, move more" and leave it up to their patient to decide how (or if!) to achieve that, without specifically recommending your diet? Without actual hard evidence that a particular method works, it wouldn't be appropriate for a medical practitioner to be pushing any one method. Asking them to do so under the guise of "It is both cheap and safe" is to propose a sort of dietary Pascal's wager. From a distance your diet looks just like any other fad diet. Without significant investment in time, I cannot determine if your diet works any better than, say, eating only raw meat. I really don't think it's reasonable to hold party A (the doctor) accountable for a recommendation they make (to lose weight - somehow!) that party B (the patient) doesn't follow through with personal research and ACTION. If you're into transactional analysis a la Berne you'll see the problem here.

Seth Roberts (2011-07-09 13:01:50)

"What would you have the medical community do that satisfies you that they are earnestly working on preventing, say, diabetes?" Right now, research money is about 99 % cure (study of possible cures) and 1 % prevention. This is insane. It is wonderful for the people inside the research community and ordinary doctors, who benefit from that allocation. (Doctors benefit because it means more people will need to be cured - by them.) It is horrible for everyone else. When the percentages are reversed (99 % of research money goes to studying how to prevent, 1 % how to cure) I will know they are serious. "Aren't you just being a bit sore about the fact that the medical community isn't just accepting your assertions that your diet is the silver bullet of weight control?" I don't think my diet is the silver bullet of weight control. I do think my diet introduces an entirely new idea into our understanding of weight control and how we handle obesity. I found that something that absolutely should not work according to all prevailing wisdom - including the wisdom of the low-carbers - does work. Rather than "accept [my] assertions" the medical community should test my assertions. But with one exception (Lisa Kaufmann) they haven't. It isn't just diabetes of course. The medical community's record on prevention is terrible. Prevent heart disease by prescribing statins? Just one problem: They don't prevent heart disease. Oops. Prevent depression? Never heard of it. Prevent arthritis? Never heard of it. Prevent cancer? Uh, doctors discourage patients from smoking - a 50-year-old idea.

Sunday Reading « zunguzungu (2011-07-10 12:47:39)

[...] should have been a bigger story when life expectancy in the US briefly declined, via Ezra [...]



July 2011 Links: Public Pay, L.A. Charter Schools, Penelope Trunk, Medicaid and CHCs, Beans up the Nose, and More (2011-07-10 12:54:00)

[...] Health care stagnation, and an explanation of why expensive treatments often don't do much on a macro [...]

## 6.7 July

### Ancient Wisdom: Butter is Brain Food (2011-07-02 05:00)

In Ayurvedic medicine (Indian traditional medicine), ghee, a type of clarified butter, is believed to improve brain function. [1]For example, "Vedic medicine extols the virtues of ghee and dairy for the brain." I found that [2]butter improved how fast I could do arithmetic.

1. <http://www.ayurveda-ayurvedic.net/brain.html>

2. <http://blog.sethroberts.net/category/animal-fat/butter/>

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john (2011-07-02 18:20:32)

Seth, was kind of butter was it? What are some of your thoughts as to why butter is effective? Have you tried suet or tallow?

Txomin (2011-07-03 05:59:45)

I have tried eating more butter but I have found that it increases my weight dramatically. I have been wondering for a while what your experience and thoughts are on this since you eat huge amounts of it. By the way, thank you for all the effort that you put into this site. It has been a steady source of interesting information.

Seth Roberts (2011-07-03 14:17:23)

When I started eating lots of butter, I lost weight. After several months, I started gaining weight. Then I switched to eating the butter nose-clipped. Then I started losing weight. All this is consistent with the theory behind the Shangri-La Diet, which predicts new foods and foods without smell (which have weak or no smell-calorie associations) cause weight loss compared to familiar foods (which have strong smell-calorie associations). I suggest you eat the butter nose-clipped.

Alex Chernavsky (2011-07-03 19:18:20)

Seth, I've been eating coconut fat nose-clipped, but I can still taste it a little bit when I remove the clip, even if I drink a glass of water first. How sensitive is the system that associates smells with calories?

Txomin (2011-07-03 21:37:38)

Thank you very much, Seth. The smell/calorie connection is news to me. An interesting venue for experimentation.

gwern (2011-07-09 08:06:09)

So, would this be the same ancient wisdom infatuated with heavy metals ([#Safety](https://secure.wikimedia.org/wikipedia/en/wiki/Ayurveda))? Well, I suppose even a stopped clock... /goes back to looking at some numbers for [#melatonin-analysis](http://www.gwern.net/Zeo)

## Unofficial Beer Tasting Winner: Uncommon Brewers (2011-07-03 07:59)

Last night I went to a beer tasting in San Francisco. I didn't taste all the beers but of the 15-odd I did taste the best were by [1]Uncommon Brewers – especially their [2]Siamese Twin ("the floral notes of lemongrass and sharper bite of kaffir lime blend with the deep malt") and [3]Baltic Porter ("whole licorice root and star anise").

Five or six years ago I went to a sake-tasting event in San Francisco called "The Joy of Sake". About 140 sakes. In a few hours I became such a sake connoisseur that the sake I could afford – and used to buy regularly – I now despised. The only sake I now liked was so expensive ( \$80/bottle) that I never bought another bottle of sake.

1. <http://www.uncommonbrewers.com/index.php>

2. <http://www.uncommonbrewers.com/twin.php>

3. <http://www.uncommonbrewers.com/baltic.php>

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Jahed (2011-07-03 12:13:20)

Did you go to the Marin Brewing Company's BreastFest as well? Haha, small world if you did. Cheers

Seth Roberts (2011-07-03 14:14:13)

yes, that is where I went.

Kirk (2011-07-04 09:32:41)

Many years ago I decided to buy a fragrance for my wife. Since at the time we didn't have much money, we visited several shops where we smelled at least a hundred fragrances on test strips, plus another dozen or so on the skin (for fragrance changes over time as it interacts with the skin). They all smelled OK, but a few seemed somewhat better than the others. We finally settled upon one. Over the years, as we subsequently visited fragrance shops, I have noticed how much more sensitive I am to smells. My wife says, for a typical unappreciated fragrance, that my eyes wince and my face flattens as I shrink back, and I'll use language to describe it along the lines of, "It's an army of Brazilian ants marching up towards my sinuses, and each ant swings a machete."

James (2011-07-04 19:59:21)

"The only sake I now liked was so expensive ( \$80/bottle) that I never bought another bottle of sake." And you still go to tastings?? It seems like ignorance is bliss here, better to preserve your ability to enjoy cheap things.

Are Single-Game Players Happier? | Kill Ten Rats (2011-07-04 23:03:28)

[...] Are Single-Game Players Happier? Posted by Zubon on July 5, 2011 in General and World of Warcraft. 0 Comments Five or six years ago I went to a sake-tasting event in San Francisco called "The Joy of Sake". About 140 sakes. In a few hours I became such a sake connoisseur that the sake I could afford — and used to buy regularly — I now despised. The only sake I now liked was so expensive ( \$80/bottle) that I never bought another bottle of sake. — Seth Roberts [...]

Seth Roberts (2011-07-05 04:25:11)

James, good question. I will blog about it.

Geraldine (2011-07-06 11:52:39)

That sounds like a fun kind of night. But sake, don't get me started, an acquired taste I guess! PS: Was the cookbook I sent

received? I hope so, sent several weeks ago.

### Assorted Links (2011-07-04 11:29)

- [1]2007 IPCC climate model predictions compared to what actually happened. I hope the discrepancy will be enlightening.
- [2]In response to food safety scares, the Chinese Health Ministry has announced measures to combat and contain 'the few media organizations that are deliberately misleading the public.'"
- [3]Dangerous hospitals. "Only [4]14 percent of physicians favored making hospital errors public."
- [5]Track your breath.

Thanks to Dennis Mangan.

1. <http://clivebest.com/blog/?p=2277>
2. <http://www.worldcrunch.com/food-safety-scares-china-prompt-government-choke-press-freedom/3338>
3. [http://takimag.com/article/our\\_scary\\_filthy\\_killer\\_hospitals](http://takimag.com/article/our_scary_filthy_killer_hospitals)
4. <http://www.nejm.org/doi/full/10.1056/NEJMsa022151#t=articleResults>
5. <http://www.nytimes.com/2011/07/03/business/03novel.html>

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Maria Droujkova (2011-07-05 05:40:07)

An assorted link: a blind man who "sees" through echo-location <http://www.mensjournal.com/the-blind-man-who-taught-himself-to-see> Kish is seeking — despite a lack of support from every mainstream blind organization in America — nothing less than a profound reordering of the way the world views blind people, and the way blind people view the world. He's tired of being told that the blind are best served by staying close to home, sticking only to memorized routes, and depending on the unreliable benevolence of the sighted to do anything beyond the most routine of tasks. Kish and a handful of coworkers run a nonprofit organization called World Access for the Blind, headquartered in Kish's home. World Access offers training on how to gracefully interact with one's environment, using echolocation as a primary tool. So far, in the decade it has existed, the organization has introduced more than 500 students to echolocation. Kish is not the first blind person to use echolocation, but he's the only one to meticulously document it, to break it down into its component parts, and to figure out how to teach it.

### Great Delusions: James Watson (2011-07-05 05:00)

[1]In an interview, James D. Watson, co-discovery of the structure of DNA, said

Some day a child is going to sue its parents for being born. They will say, My life is so awful with these terrible genetic defects.

(Quoted by Richard Bentall in Doctoring the Mind.) Watson is implying that genetic defects matter in the big picture of human impairment. They don't. Changes over time in disease incidence, migration studies (in all instances I know of, the disease profile of the migrating group changes to match the place where they live), powerful nutritional effects (e.g., Weston Price) and other evidence of environmental potency show that all major diseases (heart disease, cancer, depression, obesity, plague, tuberculosis, smallpox, etc.) are mostly caused by the environment, in the sense that environmental changes could greatly reduce their incidence. Genes are a distraction. (To say that major diseases are also "caused" by genes in the sense that genes affect environmental potency is to miss the point that we want to reduce the diseases – want to reduce obesity for example – so it is the environmental lever that matters. If a child could eliminate its obesity by changing its environment, it would not sue its parents.) If Watson was unaware of that, okay. But for him to claim the opposite is a great – and I am afraid profoundly self-serving – delusion.

[2]As I blogged, Aaron Blaisdell had a certifiably "genetic" disease. The chromosome involved had been identified. It turned out to be under nutritional control. When he improved his diet, it vanished. Calling it "genetic" seriously distracted from learning how to eliminate it, it turned out. Another example of how "genetic" problems are not what they seem – impossible to change – is provided by lactose intolerance. The rate of lactose intolerance [3]varies greatly from group to group. (I thank Phil Price for the link.) It is rare in Sweden, common in Asia, including China. I assume these differences reflect genetic differences. Yet Beijing supermarkets have aisles full of milk products. How can that be? Because the aisles are full of yogurt. Yogurt bacteria digest the lactose. So lactose intolerance is not a big deal. You can still drink milk, after it has been predigested by bacteria.

[4]The dreams of geneticists.

1. [http://books.google.com/books?id=o6rFno1ffQoC&pg=PA804&lpg=PA804&dq=Some+day+a+child+is+going+to+sue+its++parents+for+being+born.&source=bl&ots=Qy7cHbLh40&sig=5Y\\_tWHDIn0ImcsPFD9LmU8QdoNw&hl=en&ei=9qYQTturLY66sAPhwsz9DQ&sa=X&oi=book\\_result&ct=result&resnum=2&ved=0CCEQ6AEwAQ#v=onepage&q=Some%20day%20a%20child%20is%20going%20to%20sue%20its%20%20parents%20for%20being%20born.&f=false](http://books.google.com/books?id=o6rFno1ffQoC&pg=PA804&lpg=PA804&dq=Some+day+a+child+is+going+to+sue+its++parents+for+being+born.&source=bl&ots=Qy7cHbLh40&sig=5Y_tWHDIn0ImcsPFD9LmU8QdoNw&hl=en&ei=9qYQTturLY66sAPhwsz9DQ&sa=X&oi=book_result&ct=result&resnum=2&ved=0CCEQ6AEwAQ#v=onepage&q=Some%20day%20a%20child%20is%20going%20to%20sue%20its%20%20parents%20for%20being%20born.&f=false)
2. <http://blog.sethroberts.net/2010/04/05/my-porphyria-went-away/>
3. <http://mathildasanthropologyblog.wordpress.com/2008/03/08/the-evolution-of-lactose-tolerance-and-its-distribution/>
4. <http://blog.sethroberts.net/2010/06/13/the-dreams-of-geneticists/>

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Cindy (2011-07-05 09:39:54)

Perhaps other context was not included in the above quote but I certainly did not take the quote to mean the diseases of civilization (obesity, atherosclerosis, diabetes, etc.) As a mother of a child with a congenital heart defect, I took it to mean congenital defects. As his grandmother has the exact same heart defect but to a lesser degree, we know it's genetic. He has had two heart surgeries in his life so far and will have more through his life. The treatment for the defect sucks and has cognitive impact. He knows it. We see it. It sucks. While researching the genetic cause of the heart defect, we've engaged in conversations with genetics doctors who've led us to believe that congenital structural defects as well as childhood onset cancers are almost always genetically based (teratogenic agents, notwithstanding.) Parents of children suffering childhood cancers and heart defects know that the cures, while heroic, have life long cognitive effects that are not cured by environmental factors. Chemotherapy and heart-lung bypass have real excitotoxic impact on the rapidly developing pediatric neurons. It sucks. The irretrievable loss of the child's full cognitive potential is heart breaking for a parent. The cost of treating or maintaining the life of human with an impactful genetic defect is great. It has become my goal to discover the genetic defect that causes the heart defect. I want my progeny to have the option to fix this problem. If we can fix the genetic defect but don't, the child

should sue.

Seth Roberts (2011-07-05 10:57:32)

Cindy, thanks for the informative comment. Watson said similar things many times, in contexts where it was clear he believes that genetic diseases are a big contributor to human disability and disease. Based on comments like his, vast amounts of research money have gone to study "the genetic basis" of this or that big health problem – even obesity! Your particular case is an example of what I am talking about. Perhaps I am mistaken, but based on what you have written, neither you nor anyone you talked to seems have understood that a "genetic" congenital defect in a child may be caused by the child's mom's environment, such as her prenatal diet. (I'm not surprised "genetic doctors" would fail to understand it. It would make them less important.) As you may know, there is plenty of evidence that prenatal nutrition can have lifelong effects – e.g., increasing the rate of heart disease. Perhaps those life-long effects are produced by structural changes in the fetus. Due to genetics, some babies will be more susceptible than others to imperfect prenatal nutrition. You can read about this in a book called Mothers, Babies, and Health in Later Life by D. J. B. Barker. Of course the mom's nutrition is a thousand or million times easier to modify than the mom's genes. You might want to consider prenatal-nutrition causality given that you "want [your] progeny to have the option to fix this problem."

Jenny (2011-07-06 10:55:08)

I have a 2 generational example of environment affecting the genetic status. I have enlarged vertebrae in my back - the result of genetic translocation error. My daughter has a gigantic finger - likewise from a translocation error. However, belatedly, we found that we are a family of coeliacs. My own mother developed problems in late age, I was obviously always coeliac (always ill) but not diagnosed till 58. I feel there is a good chance that our poor nutritional systems affected the respective pregnancies. With knowledge and luck, my daughter will not pass on any disability!

### **New Support for Prenatal Ultrasound Cause of Autism (2011-07-06 05:00)**

I have [1]blogged several times about Caroline Rodger's idea that sonograms during pregnancy greatly increase the risk of autism in the fetus. Her idea is supported by several lines of evidence, as she explains in [2]this talk.

[3]A new study provides more evidence. It found a high concordance rate among fraternal twins. In the general population from which the new study was drawn (California), about 1 child in 100 has autism. But if you are an identical twin, and your co-twin has autism spectrum disorder, your chance of having the same diagnosis is about 70 %. The crucial point of the study is that the concordance was also high for fraternal twins: about 40 %. [4]As one commenter put it, this result "puts a spotlight on pregnancy as a time when environmental factors might exert their effects".

[5]Another study found more risk of autism if the mom took an anti-depressant during pregnancy. This supports the idea that a bad prenatal environment causes autism.

Thanks to Paul Sas and Gary Wolf.

1. <http://blog.sethroberts.net/category/autism/sonograms-cause-autism/>
2. <http://carolinerodgers.wordpress.com/2010/07/20/red-flags-regarding-first-trimester-care-autism/>
3. <http://archpsyc.ama-assn.org/cgi/content/full/archgenpsychiatry.2011.76>
4. [http://www.sci-tech-today.com/story.xhtml?story\\_id=011000ME25V5](http://www.sci-tech-today.com/story.xhtml?story_id=011000ME25V5)
5. [http://online.wsj.com/article/SB10001424052702304450604576419761141034324.html?mod=rss\\_Health](http://online.wsj.com/article/SB10001424052702304450604576419761141034324.html?mod=rss_Health)

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SB (2011-07-06 08:02:59)

Twins are exposed to the same environmental factors even after pregnancy. They are fed the same foods, go out together, live in the same house, even go to pre-school together. The commentator completely ignores this. These studies just point to the importance of epigenetics, nothing else.

Tomas (2011-07-06 09:02:45)

I guess that ultrasound should remain potentially dangerous until proved safe. More so when the current technology capabilities and accuracy are rather poor, only adding to the prenatal stress and the mother's stress ("Madam, there is a 1 in X probability that your child will have XXX). Meanwhile, Michel Odent is a great source of information on pregnancy and birth-giving <http://www.wombecology.com/maternalemotional.html>

Jonathan (2011-07-06 12:54:37)

It seems to me that the figure for fraternal twins is useless for drawing conclusions about pregnancy unless we also know the figure for siblings gestated apart. Fraternal twins share half the genes, so the 40 % correlation is what you would expect.

Seth Roberts (2011-07-06 18:46:20)

This study did not measure the concordance for siblings gestated apart. I think it's about 10 %.

Death is a star (2011-07-25 23:51:41)

If ultrasounds "cause autism" (per the title of your post), the difference between identical and fraternal twins would be negligible. The difference between 70 % and 40 % only suggests that ultrasounds may exacerbate a predisposition for autism.

## **Causal Reasoning in Science: Don't Dismiss Correlations (2011-07-07 05:00)**

In [1]a paper (and [2]blog post), Andrew Gelman writes:

As a statistician, I was trained to think of randomized experimentation as representing the gold standard of knowledge in the social sciences, and, despite having seen occasional arguments to the contrary, I still hold that view, expressed pithily by Box, Hunter, and Hunter (1978) that "To find out what happens when you change something, it is necessary to change it."

Box, Hunter, and Hunter (1978) (a book called Statistics for Experimenters) is well-regarded by statisticians. Perhaps Box, Hunter, and Hunter, and Andrew, were/are unfamiliar with another quote (modified [3]from Beveridge): "Every-one believes an experiment except the experimenter; no one believes a theory except the theorist."

Box, Hunter, and Hunter were/are theorists, in the sense that they don't do experiments (or even collect data) themselves. And their book has a massive blind spot. It contains 500 pages on how to test ideas and not one page – not one sentence – on how to come up with ideas worth testing. Which is just as important. Had they considered both goals – idea generation and idea testing – they would have written a different book. It would have said much more about graphical data analysis and simple experimental designs, and, I hope, would not have contained the flat statement ("To find out what happens ...") Andrew quotes.

"To find out what happens when you change something, it is necessary to change it." It's not "necessary" because belief in causality, like all belief, is graded: it can take on an infinity of values, from zero ("can't possibly be true") to one ("I'm completely sure"). And belief changes gradually. In my experience, significant (substantially greater than zero) belief in the statement A changes B usually starts with the observation of a correlation between A and B. For example,

I began to believe that one-legged standing would make me sleep better after I slept unusually well one night and realized that the previous day I had stood on one leg (which I almost never do). That correlation made one-legged standing improves sleep more plausible, taking it from near zero to some middle value of belief ("might be true, might not be true") [4]Experiments in which I stood on one leg various amounts pushed my belief in the statement close to one ("sure it's true"). In other words, my journey "to find out what happens" to my sleep when I stood on one leg began with a correlation. Not an experiment. To push belief from high (say, 0.8) to really high (say, 0.99) you do need experiments. But to push belief from low (say, 0.0001) to medium (say, 0.5), you don't need experiments. To fail to understand how beliefs begin, as Box et al. apparently do, is to miss something really important.

Science is about increasing certainty – about learning. You can learn from any observation, as distasteful as that may be to [5]evidence snobs. By saying that experiments are "necessary" to find out something, Box et al. said the opposite of you can learn from any observation. Among shades of gray, they drew a line and said "this side white, that side black".

The Box et al. attitude makes a big difference in practice. It has two effects:

1. Too-complex research designs. Just as researchers undervalue correlations, they undervalue simple experiments. They overdesign. Their experiments (or data collection efforts) cost far more and take much longer than they should. The self-experimentation I've learned so much from, for example, is undervalued. This is one reason I learned so much from it – because it was new.
2. Existing evidence is undervalued, [6]even ignored, because it doesn't meet some standard of purity.

In my experience, both tendencies (too-complex designs, undervaluation of evidence) are very common. In the last ten years, for example, almost every proposed experiment I've learned about has been more complicated than I think wise.

Why did Box, Hunter, and Hunter get it so wrong? I think it gets back to [7]the job/hobby distinction. As I said, Box et al. didn't generate data themselves. They got it from professional researchers – mostly engineers and scientists in academia or industry. Those engineers and scientists have jobs. Their job is to do research. They need regular publications. Hypothesis testing is good for that. You do an experiment to test an idea, you publish the result. Hypothesis generation, on the other hand, is too uncertain. It's rare. It's like tossing a coin, hoping for heads, when the chance of heads is tiny. Ten researchers might work for ten years, tossing coins many times, and generate only one new idea. Perhaps all their work, all that coin tossing, was equally good. But only one researcher came up with the idea. Should only one researcher get credit? Should the rest get fired, for wasting ten years? You see the problem, and so do the researchers themselves. So hypothesis generation is essentially ignored by professionals because they have jobs. They don't go to statisticians asking: How can I better generate ideas? They do ask: How can I better test ideas? So statisticians get a biased view of what matters, do biased research (ignoring idea generation), and write biased books (that don't mention idea generation).

My self-experimentation taught me that the Box et al. view of experimentation (and of science – that it was all about hypothesis testing) was seriously incomplete. It could do so because it was like a hobby. I had no need for publications or other steady output. Over thirty years, I collected a lot of data, did a lot of fast-and-dirty experiments, noticed informative correlations ("accidental observations") many times, and came to see the great importance of correlations in learning about causality.

1. <http://www.stat.columbia.edu/~gelman/research/published/yalecausal2.pdf>
2. [http://www.stat.columbia.edu/~cook/movabletype/archives/2010/08/no\\_understandin.html](http://www.stat.columbia.edu/~cook/movabletype/archives/2010/08/no_understandin.html)
3. [http://www.todayinsci.com/B/Beveridge\\_WIB/BeveridgeWIB-Quotations.htm](http://www.todayinsci.com/B/Beveridge_WIB/BeveridgeWIB-Quotations.htm)
4. <http://blog.sethroberts.net/2011/03/22/effect-of-one-legged-standing-on-sleep/>
5. <http://blog.sethroberts.net/category/scientific-method/evidence-snobs/>
6. <http://blog.sethroberts.net/2007/08/08/something-is-better-than-nothing-part-2/>
7. <http://sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

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Sean S (2011-07-07 07:36:46)

It's a great point that the world also needs better theory generation, but you're reviewing a different book when you criticize their focus on experimental design. Was their book a failure since it wasn't *The Soup to Nuts Encyclopedia of the Scientific Method*? Box, Hunter and Hunter were many things, but they were not evidence snobs. When I asked George Box, what he thought about requiring a  $p\text{-value} < 0.05$  to declare a factor "important", he said it was much more important to use your brain than to pass some artificial statistical threshold. It feels like you're stretching your thesis a bit (academics are more interested in earning status through publishing the arcane than doing "useful" work) when you also claim that engineers in industry are only interested in research. Process optimization and problem-solving are decidedly not ivory tower, and most of the industrial examples from BHH's book were real-world problems. Problem: too many defects on the production line? Answer: run a fancy experimental design to impress your colleagues, but still not fix the problem. Good luck in your next job. My reading of the quote about "you need to change something to learn" is not against using induction to generate new theories and it's not saying "correlation is not causation", it's about the simple truth that once you have an idea in your head, the only way to learn about it (get more confidence in your belief), is to test it. How did you learn about one-leg standing in the first place; you had to try it. By my reading the real-world problems they were addressing with their book were: 1) coming up with a theory, assuming it's true, and never testing it (a staple of executives in business) 2) over-reliance on one-factor at a time experiments to generate knowledge in a world where interactions exist. You're painting Box and the Hunters with the brush of the ivory-tower statistician that only believe results with a  $p\text{ value} < 0.05$  from randomized studies when they were quite practical in using experimental design to improve real-world processes. The current efforts of statisticians in experimental design does fit 100 % with your ideas about academia though. The designs get more esoteric, harder to use, and less useful to the engineers working on real-world problems. Since their book completely missed the theory-generation mark, do you have any recommendations of books that cover that topic well?



Seth Roberts (2011-07-07 09:28:38)

I heard Box speak once. One of his examples involved design of a cake mix. Yes, Box et al. is genuinely useful, especially to people who are designing stuff. In the broad sequence of science/engineering, the steps are 0. have no idea. 1. have an idea that might be right. 2. confirm idea. 3. use confirmed idea to do something useful. Box, I gathered, was much more familiar with the end of this sequence (where interactions really matter) than the beginning (where they don't matter at all). If the book had been titled Statistics For Engineers I wouldn't be complaining. Their conventional emphasis on "hypothesis testing" is actually misleading in two ways: it disregards idea generation and it is a poor name for idea development, which much of their book is about. John Tukey's Exploratory Data Analysis is a good guide to data analysis that will help you generate ideas. No one, as far as I know, has ever written at length about how to design research (e.g., experiments) to generate ideas.

Paul (2011-07-08 15:35:07)

Great post. Really insightful point.

Around the Web Meets Cancer, Infections, Cholesterol, and Nitrates | Perfect Health Diet (2011-07-09 10:04:06)

[...] Seth Roberts reminds us of a good quote (modified from Beveridge): "Everyone believes an experiment except the experimenter; no one believes a theory except the theorist." In another post, Seth reports that health in the US as measured by age of disease onset has not improved since the 1960s, life expectancy in the US peaked in 2007 and is now declining, medical care has stagnated, and this should be a big story. [...]

Justin (2011-07-25 12:47:36)

A book is dying to be written on generating ideas, and who better to do it than you, Seth.

John Hunter (2011-08-05 01:16:16)

William Hunter was my father. He did many experiments. George Box did many experiments. You are entitled to your opinions obviously but the claim that they only dealt with other people data is not accurate. It is true they were world renowned experts on experimenting and had many people consult them about their experiments, for help: designing them, analyzing them, what to do next, how to improve the process of experimentation in their organization, etc.. While it seems to be implied in the post that such consultation was a reason to distrust their thoughts on experimentation I hardly think that is a sensible conclusion to draw. Most of those they helped were running experiments in industry, to improve results (not to publish papers). They were and are applied statistician. What experiments need to be done is critical for an applied statistician. What matters is making improvement in real world processes. If you don't run the right experiments, you won't learn things to help you improve. They worked on the problem of where to focus to learn quite a bit. One significant part of there belief was to have those involved in the work do the thinking about what needed to be improved. This isn't tremendously radical today but in the past you had many people that thought "workers" should do what the college graduates in their office at headquarters tell them to do. Here is one of many such example, from [http://williamghunter.net/articles/managing\\_our\\_way\\_to\\_economic\\_success.cfm](http://williamghunter.net/articles/managing_our_way_to_economic_success.cfm) "The key is that employees at all levels must have appropriate technical tools so that they can do the following things: - recognize when a problem has arisen or an opportunity for improvement exists, - collect relevant data, - analyze the situation, - determine whose responsibility it is to take further action, - solve the problem or refer it to someone more appropriate..." I don't have the book in front of me, but doesn't it start with an example on learning where you can use inductive reasoning and from the facts that you see you can draw conclusions and construct a theory that fits the facts. If so, it seems to call into question the idea that they claimed "[the] opposite of you can learn from any observation." is not actually accurate. They understood you can use inductive reasoning to create theories. You then use experiments to test theories. The books is called Statistics for Experimenters, right? Not statistics for drawing conclusions when not doing experiments. When you are experimenting you can test whether beliefs you have are accurate and you can learn about things you try. Smart people can make guesses what will happen and be right. I know the authors would believe those knowledgeable about the system in question are well suited to determine what variables to test. It is that knowledge that will lead to experiments that are likely to be effective. The authors of the book were trying to help those that often failed to learn as much from experiments as they could. Far too many people still don't use the most effective statistical tools when experimenting. They emphasized, consistently, the need for those doing the work to involved in the experiments. The job of statisticians was to help in the cases

where advanced statistical tools and knowledge would be useful. The reason for those who do the work (are familiar with the process) is because they have knowledge to bring to what should be tried in experiments. When I read through *The Scientific Context of Quality Improvement, 1987* by George Box and Soren Bisgaard <http://cqpi.engr.wisc.edu/system/files/r025.pdf> it seems to me it discusses the types of issues you raise: how do we learn without experimenting? I am not sure if it is just me, or if it clearly addresses that issue. Here is another <http://cqpi.engr.wisc.edu/system/files/r172.pdf> *Statistics as a Catalyst to Learning by Scientific Method* by George E. P. Box. Here is another <http://cqpi.engr.wisc.edu/system/files/r179.pdf> *Statistics for Discovery*. There are many other sources, I am sure. They understood the importance of learning as much as you could from available sources. They just also understood the importance of experiments and learning the most you could from experiments. And the book, *Statistics for Experimenters*, was focused on the most effective ways to improve using statistics to learn from experiments. Here is what Box, said in his own words about the objective (and it isn't proving the hypothesis) <http://management.curiouscatblog.net/2009/11/16/highlights-from-recent-george-box-speech/> [too many people ]"can't really get the fact that it's not about proving a theorem, it's about being curious about things. There aren't enough people who will apply [DOE] as a way of finding things out" *Statistics for Experimenters: Design, Innovation, and Discovery* shows that the goal of design of experiments is to learn and refine your experiment based on the knowledge you gain and experiment again. It is a process of discovery. That discovery is useful when it allows you to make improvement in real world outcomes. That is the objective.

Seth Roberts (2011-08-05 05:10:40)

John Hunter, thank you for your comments and links. I'm sorry that I don't have time to revisit the whole subject at length right now and I imagine that anyone reading this can judge for themselves whether I am being fair. A briefer comment on George Box's contribution is this: There are three stages of scientific/engineering inquiry: 1. discovery (finding ideas to take seriously). Above all, this involves discovery of new cause-effect relationships. 2. testing (distinguishing among the ideas created in the first stage). 3. development (using ideas from stage 2 to create useful products). Box was an expert at Stage 3; he seems to have known little about Stage 1. All the detailed examples in his work, including the papers you link to, come from Stage 3. In Stage 3, interactions are what matter most – the main effects were figured out in Stage 2. In Stage 1, interactions are unimportant because the main effects haven't yet been figured out. The best tools for Stage 3 are quite different from the best tools for Stage 1 – which is why *Statistics for Experiments* is so incomplete for anyone who wants to do Stage 1. In contrast, *Exploratory Data Analysis* was heavily focussed on Stage 1. A statistician once said to me that no one actually used Tukey's ideas. It was true that for Stage 2 and especially Stage 3, Tukey's ideas were indeed less useful. Stage 2 and especially Stage 3 are more remunerative than Stage 1 so there are far more people working there, as far as I can tell.

John Hunter (2011-08-08 00:49:26)

Thanks for your reply. I realize you can't try to respond to every person who comments in detail, I just wanted to make some points I think are important. I'm not so sure Box expertise is limited to stage 3, but that is certainly something people can decide. I think the idea that they were disconnected from the real world improvement results is the thing I feel strongly against. They focused precisely on how to improve. They did not care for elegant statistical models that didn't actually result in better results in the real world. And they fought the heavy emphasis on math-statistics that existed and exists - contrasted to applied statistics. They were (in my biased opinion) in the lead for promoting (what is still a minority) statisticians actually working with people on real world improvements as what matters. As part of that they completely understood the systems involved that include generating ideas as a very important component. It is also true they didn't write about that aspect as much. Though they did write about it quite a bit (it seems to me), but it might not be as in your face as the writing on using statistics and experiments to continually improve results. And it is true they had less new knowledge to share with the world in that area I think.

Seth Roberts (2011-08-08 16:28:08)

John Hunter, you are right, to lump Box in with the many many statisticians who had less real-world experience than he did is misleading. By calling him a "theorist" I probably did that. He was a theorist in the sense that the title of his book seemed to imply that it applied to all experimentation, whereas it did not – for example, it said nothing useful about how to do experiments that generate ideas in the Stage 1 of science I describe above. But thank you for writing again to clarify this. The

reason I read Box, Hunter and Hunter in the first place was that it was more applications-oriented and realistic than a dozen other books on the subject.

### **The Willat Effect: Side-by-Side Comparisons Create Connoisseurs (2011-07-08 05:00)**

About ten years ago, while visiting my friend Carl Willat, he presented me with five versions of [1]limoncello (an Italian lemon liqueur) side by side in shot glasses. Two were store-bought, the rest homemade, if I remember correctly. I tried them one by one. I had had limoncello many times but never different versions side by side. It was easy to notice differences between them. Obviously. What surprised me was an hedonic reaction: I thought two of them (with more complex flavors) were wonderful and one (store-bought) was awful. Both reactions (wonderful and awful) were stronger than usual. In a small way, I'd become a connoisseur. After that, I was happy to buy expensive limoncello (e.g., \$26). I no longer bought cheap limoncello ( \$18). I call the hedonic changes produced by side-by-side comparisons the Willat Effect. Carl became a connoisseur of Italian hand-painted tableware due to side by side comparisons. I believe [2]connoisseurs were important in human evolution because they helped support skilled artisans. Our design preference for repeated elements (e.g., wallpaper, textiles) evolved so that we would put similar things side by side.

I mentioned a downside of the Willat Effect [3]a few posts ago:

Five or six years ago I went to a sake-tasting event in San Francisco called "The Joy of Sake". About 140 sakes. In a few hours I became such a sake connoisseur that the sake I could afford – and used to buy regularly – I now despised. The only sake I now liked was so expensive ( \$80/bottle) that I never bought another bottle of sake.

[4]A reader named James Bailey commented:

And you still go to tastings?? It seems like ignorance is bliss here, better to preserve your ability to enjoy cheap things.

Yes, I still go to tastings. The sake tasting was the only one that had that effect. Mostly they have no effect because the samples vary too much. For example, I've been to many wine tastings but haven't become much of a wine connoisseur. The many wines at the tastings were all over the place. If I want to get the effect, I usually have to do it myself: buy several versions of a product and try them side by side. I recently did this for whiskey. When I go back to Beijing maybe I'll do it for some sort of tea.

When I do it myself I control the price range and limit the high end to what I can afford. I didn't buy \$80 whiskeys, for example, although many were available. So the effect makes me enjoy stuff at the upper end of what I'll pay. When I became an assistant professor, I thought it would be fun to enjoy fine art (e.g., paintings) more. I attended several art history classes. They had no effect – I was bored. Side-by-side comparisons, in contrast, actually work and, as Carl illustrated, are easily shared. And they are consumerist and artisanal at the same time.

1. <http://en.wikipedia.org/wiki/Limoncello>

2. <http://blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/>

3. <http://blog.sethroberts.net/2011/07/03/unofficial-beer-tasting-winner-uncommon-brewers/>

4. <http://www.pursuitoftruthiness.wordpress.com/>

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Alrenous (2011-07-08 07:11:31)

Amusement. I use the Willat Effect to test governments. (It's depressing, I don't recommend it if you don't have to.) Of course the most important connoisseurship is of things you produce. Everyone should do side-by-side comparisons of parenting, for example. I'd like to be a blog connoisseur but it's hard to find directly comparable blog posts by different people.

Kirk (2011-07-08 09:49:36)

I'm not sure that it requires side-by-side comparisons. For example, I remember the day I became a real cook. I used to buy canned chow mein, heat it, and pour it over chow mein noodles which had just come tumbling fresh out of the bag, and we thought that was decent home-cooking. Then, for some reason that day, I decided to taste supper. Really taste by focusing on the flavor. There was an underlying metallic tone, and that's when I realized that I'd never be able to buy canned chow mein again. I have repeated this experience multiple times with different foods, and smells, and music. What puzzles me is why I start caring about certain categories. I don't care about specific plants, for example, although we often visit botanical gardens, and I can easily spend half an hour sniffing roses and irises when they're in bloom. But I'll never write down the names of the plants. On the other hand, I agree that once you start caring about a particular category, the best way to sharpen your selection criteria is via side-by-side comparisons. And for some categories, I can play a game where an uninteresting category becomes interesting for a few hours. It's usually when going to some place which interests somebody else and I'm just tagging along. I ask myself, 'What are the 3 most interesting things here?' or 'What seems to be the most bizarre thing here?' or 'What did somebody else craft that makes me envious and I wish I had that skill?'

RioRico (2011-10-18 12:04:23)

Who is Willat? I think of the Willat-Spadina Witch House, designed and built by Harry Oliver on the Willat Studios cine lot back in the 1920's. I visualized the Willat Effect as side-by-size comparisons of Witch-House architecture. Am I nutz?

ChaTo (2011-10-18 12:38:42)

There are two parts (i) a distaste for the lesser varieties and (ii) a knowledge about what constitutes a good variety. For the first part.- Barry Schwartz in "The paradox of choice" popularized an idea that has been tested experimentally many times: when you compare several options side by side, each of the option's value is decreased. That explains why now for you cheap limoncello fell beyond the level of what you would consider acceptable. For the second part.- The fact that now you learned about what makes differences are between different limoncelli, well, would not be possible without comparing them. All the best, - ChaTo

The Willat Effect – hedonic change caused by side-by-side comparison of similar things « Science for Artists (2011-10-18 19:27:10)

[...] by side-by-side comparison of similar things), it was interesting to see 31. I discovered the Willat Effect when my friend Carl Willat offered me five different limoncellos side by side. Knowing that he likes [...]

The Willat Effect And Demand Variation « Demand by Adrian Slywotzky (2011-10-20 08:56:05)

[...] evolutionary basis for this seemingly endless human proclivity for demand variation. He calls it The Willat Effect, and he believes it arises spontaneously whenever people have the opportunity to minutely compare [...]

Andrey Shestakov (2012-01-31 02:48:28)

In the world of programming, it's very possible to achieve this effect by side-by-side comparison of two versions of the same code (differently formatted, with different variable namings etc.). I think it's actually where the desire for clean and beautiful code comes from. Probably, I could derive much more pleasure out of programming if I will always code in a side-by-side setup (or at least look at previous versions often enough). General purpose text editing tool with a possibility like this would be really great for bloggers and other writers, don't you think?

Nick (2012-03-04 10:02:50)

The experience is colored by order. Side by side can also happen in the range of days and is probably easier to practice in the long run.

### Assorted Links (2011-07-09 05:00)

- [1]MMO (massively multiplayer online) game connoisseurship
- [2]Thorstein Veblen lives! (cartoon)
- [3]article about self-tracking in Technology Review with several associated articles. The author, Emily Singer, describes [4]a month of self-tracking, including [5]what went wrong.
- [6]triumph of new-age medicine. Emily Blackburn, a Nobel Prize winner, says modern medicine does a good job with infectious disease. What about antibiotic resistance? What about failing to understand how to boost the immune system?
- [7]Medtronic didn't waste \$23 million. [8]Associated article. A surgeon named Thomas Zdeblick, who received \$23 million from Medtronic, has drawn attention away from the company by claiming he has no financial interest in a product that generates substantial income for him whenever it is used according to FDA guidelines.

Thanks to Tim Lundeen, J.C. and Ben Casnocha.

1. <http://www.killtenrats.com/2011/07/05/are-single-game-players-happier/>
2. [http://www.smbc-comics.com/index.php?db=comics&id=2300&utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+smbc-comics%2FPvLb+%28Saturday+Morning+Breakfast+Cereal+%28updated+daily%29%29](http://www.smbc-comics.com/index.php?db=comics&id=2300&utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+smbc-comics%2FPvLb+%28Saturday+Morning+Breakfast+Cereal+%28updated+daily%29%29)
3. <http://www.technologyreview.com/biomedicine/37784/>
4. <http://www.technologyreview.com/blog/themeasuredlife/26892/>
5. <http://www.technologyreview.com/blog/themeasuredlife/26944/>
6. <http://www.theatlantic.com/magazine/archive/2011/07/the-triumph-of-new-age-medicine/8554/>
7. [http://www.spine.org/Documents/TSJ\\_LettertoEditor\\_AuthorsReply.pdf](http://www.spine.org/Documents/TSJ_LettertoEditor_AuthorsReply.pdf)
8. <http://www.medpagetoday.com/Surgery/Orthopedics/27441>

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### Better To Do Than To Think (2011-07-10 05:00)

The most important thing I learned in graduate school – or ever – about research is: Better to do than to think. By do I mean collect data. It is better to do an experiment than to think about doing an experiment, in the sense that you will learn more from an hour spent doing (e.g., doing an experiment) than from an hour thinking about what to do. Because 99 % of what goes on in university classrooms and homework assignments is much closer to thinking than doing, and because professors often say they teach "thinking" ("I teach my students how to think") but never say they teach "doing", you can see this goes against prevailing norms. I first came across this idea in [1]an article by Paul Halmos about teaching mathematics. Halmos put it like this: "The best way to learn is to do." When I put it into practice, it was soon clear he was right.

I have never heard a scientist say this. But I recently heard a story that makes the same point. A friend wrote me:

I met Kary Mullis after high school. I knew that PCR was already taught in some high schools (like mine) and was curious how he discovered it. He said that he had some ideas about how to make the reaction work and discussed them with others, who explained why it wouldn't work. He wasn't insightful enough to understand their explanations so he had to go to the lab and see for himself why it wouldn't work. It turned out it worked.

An example of better to do than to think.

Better to do than to think is not exactly anti-authoritarian but it is close. I was incredibly lucky to learn it from Halmos. It isn't obvious how else I might have learned it. It took me many years to learn Research Lesson #2: Do the smallest easiest thing. And I learned this only because of all my self-experimentation. I started doing self-experimentation because of better to do than to think.

1. <http://www.jstor.org/stable/2319737>

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Bob (2011-07-10 08:33:50)

The first sentence in the Halmos article you linked is something I pound on constantly with tennis coaches: "The best way to learn is to do; the worst way to teach is to talk."

Practice and proposition | Anthony Burgoyne (2011-07-10 12:30:24)

[...] Roberts, Professor Emeritus of Psychology at U.C. Berkeley, says: It is better to do an experiment than to think about doing an experiment, in the sense that you [...]

Dennis Mangan (2011-07-10 13:13:43)

The current number two downloaded paper (it was number one for quite some time) on the SSRN is by an outsider, Mebane Faber. He has a bachelor's degree in, I think, biochemistry, but the paper is in the field of finance, in which he now works. He appears to be self-taught in finance. [http://hq.ssrn.com/rankings/Ranking\\_display.cfm?TRN\\_gID=10&requesttimeout=900](http://hq.ssrn.com/rankings/Ranking_display.cfm?TRN_gID=10&requesttimeout=900)

Erik La Gattuta (2011-07-10 15:00:03)

As an artist, the same thing applies. Your imagination is in your fingers.

Jack in Davao (2011-07-10 17:00:20)

As with Mullis, most of the great discoveries have come from creative people tinkering, often using new tools. Therefore, academic science is organized so that in order to "do", you must first write a grant application (i.e. lots of "thinking" and "writing"), which must be scored by a committee (i.e. a minimal amount of "thinking" and lots of "reading" and "talking"), and then if you're one of the one in ten or so lucky ones who get funded you may finally get a chance for a small amount of "doing" (except it won't really be tinkering since you'll be limited by what you said you were going to do in the application). Hmm – perhaps if we had more committees to "set direction" and tell researchers what subjects they should be "thinking" about . . . that could work . . .

Michael (2011-07-10 18:01:46)

Completely agree. I tutor inmates trying to get their GED in math. The only method I've seen have any success is for them to do tons of problems, and then do even more problems. So when I'm teaching someone how to multiply fractions, I'll spend maybe five minutes showing him the rule for multiplying fractions, and then we spend the rest of the hour just multiplying fractions. The next time we meet, I'll have him do even more problems. I used to try to explain what fractions are, why the rule is the way it is, but I quickly found that was a waste of everyone's time. Thing is, after doing several hundred problems with fractions, most are able to give a pretty good explanation of what fractions are, and why the multiplication rule is what it is.

JeffR (2011-07-10 19:12:49)

Seth, I would disagree with your use of PCR as a supporting example. Let's think about how PCR came to be and the influence of thinking vs doing. PCR was conceived in a theoretical sense by Mullis. He likes to tell the story of figuring out PCR, a thought that came to him while driving in California. It was from "thinking" about this problem not "doing" something. You are right about the importance of Mullis persevering when others told him it wouldn't work, but that is illustrating something closer to perseverance or believing in oneself. Mullis probably would never have figured out PCR if he was pursuing a solution by "doing." I'm not sure what that would even mean in this context but trying various experiments probably wasn't going to lead him to this solution or at least not as fast. In the field of health, with so many opportunities for false positives and negatives, confounding, correlation not being causation, etc I would prefer if people engaged in even more thinking about what they are doing, not less. I think the examples given in the above comments are instructive; teaching tennis, doing art or learning fractions. For those examples I would agree with the quote "the best way to learn is to do." These are very different from attempting to show cause and effect in factors relating to human health. For that, the "doing" can make you better at the techniques, such as collecting data. But while trying to determine truths one can easily be lead astray by not having thought enough.

Seth Roberts (2011-07-10 23:06:00)

JeffR, yes, you need to do a little thinking – I agree with you there. A more subtle version of my "doing-better-than-thinking" point would be about the optimal mix of thinking and doing. It would be that the optimum doing-to-thinking ratio (time spent doing compared to time spent thinking) is a lot more than you probably think or practice. (That is, most people spend far too much time thinking.) But the rest of what you say I disagree with. For example, the notion that "correlation is not causation" is an anti-doing way of looking at correlations. It discourages people from using correlations to come up with testable ideas; testable ideas encourage doing.

Shane (2011-07-11 10:18:18)

It's important also to keep in mind the opportunity costs for various kinds of things under discussion. I love the math problems idea – of course the best mix would be lots and lots of doing, because the cost of doing is cheap and the price for failure is low: if you get a problem wrong, do another one. Simple. Who could argue? Same with a lot of the self-tracking stuff: if an important insight can be had, and the cost of bad experimental design, or confounded data, is low, then who cares? Do the experiment. More data is better. But this is not always the case, and in fact is probably not often the case, at least with respect to the scientific enterprise that Seth likes to kick around. I'm in the process of doing an fMRI study, and I can tell you that a kind of wild west "just do it" mentality is about the best way I can think of to waste a hundred thousand dollars and never ever get the opportunity to do another study. A host of other examples come to mind: launching a satellite; building a house; building a highway, or a shopping center; figuring out what regions around a brain tumor can be resected with the least chance of turning someone into a cauliflower. The "correlation vs. causation" canard is getting kind of tired, too. Yes, the mantra "correlation is not causation" is probably overused and wrongly used. And yes, Seth is right to point out that following correlations can be an incredibly fruitful tool for finding interesting questions. But why can't you be satisfied with making an insightful and reasonable comment without barreling headfirst into a tree? Correlation is not causation; and when the scientific question is subtle, potentially misleading, and expensive to misdiagnose, you damn well better understand why the difference matters. The goal with all of this shouldn't be to get everyone to renounce the distinction between the two (thinking vs. doing, correlation vs. causation) but rather to know when to care about that distinction, and how much.

Seth Roberts (2011-07-13 05:17:59)

Shane, I was talking about research, not building ("building a highway or shopping mall") or brain surgery. With an fMRI experiment, you are forced to spend a lot of time thinking since the cost is so high. "Correlation is \_not \_ causation." That's a truism. Not helpful. In this post I was summarizing my experiences. If you have had an experience that suggested a correlation was overinterpreted, that would be good to know.

Shane (2011-07-13 14:38:22)

"Shane, I was talking about research, not building or brain surgery." Brain surgery is research. Where someone cuts depends on a large body of research. If that research is sloppy, the putative function of some bit of brain may turn out to be rather more important wrt some particular functionality than was thought. "Correlation is \_not \_ causation." That's a truism. Not helpful." Activity, or lack thereof, in anterior temporal lobe correlates nicely with progression of semantic dementia. The same activity also correlates nicely with social processing. So what can you say about social processing based on ATL activation? Not too damn much. What can you say about ATL wrt general semantic processing, the kind lost in SD? Also not too damn much. What you can say, based on these very nice correlations in both cases, is that ATL does something, at some point, during the course of both types of processing, and yet that hasn't stopped a lot of overprediction based on correlation worshipping.

JeffR (2011-07-13 17:29:58)

In public health school, an example they use to teach us that correlation is not necessarily due to causation (to fancy up the expression a bit) is of initial research that indicated coffee was a cause of pancreatic cancer. Additional research lead to the realization that pancreatic cancer is caused by cigarettes and smokers drink coffee more often. It's a little more complicated than that, more available [1]heret.

1. [http://learningobjects.wesleyan.edu/cancer/data\\_maps/info/causation.php](http://learningobjects.wesleyan.edu/cancer/data_maps/info/causation.php)

The Image is in Your Pencil « oxpal blog (2011-07-14 05:09:01)

[...] interesting Blog post at Seth's Blog again – called "Better To Do Than To Think". He applies it there to science: Rather do experiments than spending time thinking of how to [...]

Thomas (2011-07-14 06:56:32)

Erik La Gattuta Says "As an artist, the same thing applies. Your imagination is in your fingers." Exactly my thoughts when I read the post. Either I have the perfect image in my head in the moment I hear the assignment, or there is no other way then to pick up a pencil. I really tried the tough way - sitting half a day around thinking, trying to get an image in my head. But it just doesn't work. Starting to draw does the trick. I nearly suspect humans are just not very good at thinking... Your text just puts it more poetic than I could have said it. Kinda adapted on my page, hope thats ok.

Josh Fisher (2011-07-15 14:39:19)

To me the difference between doing and thinking is the scale. When we think something physical is happening so it could be considered that we are doing something. What concerns me about doing on a larger scale is there is always a reaction of which we are only assuming what the results will be. I do not feel well informed enough to make a decision as to whether or not it is good or bad, it just is. For me I hope all that I do is good, but all I can trust is my gut instinct which has been too conditioned since birth to completely trust. I think the answer lies deeper than we could possibly be aware of, but I've noticed plenty of signs along the way that make we question the expectations I've been following. Its usually when I stop and reflect on past actions. This may reason that no action would be the answer, however with no action I'm assuming we wouldn't exist. This leads me to believe one again there is a balance and its going to vary for every single person at different times.

Nick (2011-07-17 02:28:43)

How ironic (yeah, I know) that the ad on the top-right is "Anything's possible. Keep thinking."



Joe User (2011-07-17 08:05:14)

Do I really have to point out that to think is in the subset of verbs that are to do? My experience has been, for anything sufficiently complicated thinking comes first. I should also point out that there are plenty of studies that suggests that thinking about doing something is as good or better than practicing that thing. Of course, there is some physical practice required for this to work, and maybe that is what the poster is trying to get at. As someone who does \*a lot\* of troubleshooting and is very good at it, I can tell you how I do this one activity where thinkers outperform doers. I get some information about a system that may be broken. I then time thinking about what could cause the symptoms, that is, I simulate the system in my head, and twist and turn knobs until I can see in my head something that might have symptoms similar to the knowledge I already have. Now I have a hypothesis. Now I can test my hypothesis. I gather more data, then I adjust the simulation in my head (occasionally I even get such new information that I actually need to adjust the model in my head of the system I am working on). Now I think some more, running some more simulations until I have a new hypothesis to test. Rinse. Repeat. There's always a trade off here though. Thinking is usually cheap, but it can take you places that could never happen. Doing is usually expensive, but you'll never do something impossible. Thinking prevents you from doing something that won't work. Doing prevents you from thinking about what can't work. Each can save you time and effort. And the ratio changes depending on their relative costs for a given person and a given problem space.

Seth Roberts (2011-07-17 08:54:19)

In this post I am talking about scientific research at the low end of the cost/hour scale. When something is well-understood theoretically, as is usually true in engineering (e.g., electrical engineering), I agree you should use the theory ("thinking") to guide what to do.

steve (2011-07-17 10:08:03)

I think you should set some time for thinking and if you still don't get it, then it's time to start doing it.

Seth Roberts (2011-07-17 12:52:26)

Yeah, that makes sense. I suppose I usually "don't get it".

beagle3 (2011-07-17 23:31:34)

Very relevant: <http://www.brepettis.com/blog/2009/3/3/the-cult-of-done-manifesto.html> (Bre Pettis is a cofounder of the NYC Resistor hackerspace, and of MakerBot Industries) I agree with what you write here, but on the other hand I also keep in mind the adage that "Two years in the lab can save you as much as two weeks in the library!" - there needs to be a balance between the effort spent thinking and the effort spent doing.

Seth Roberts (2011-07-18 08:25:03)

I wouldn't call time spent in the library "thinking". I call that reading. And I have learned plenty of useful things from reading—my reading has led me to many self-experiments that had useful results.

## Assorted Links (2011-07-12 05:00)

- [1]Top uses of natto
- I found Three Cups of Tea (about establishing schools in Pakistan) unreadable. Whereas I want to learn more about [2]Pratham schools.
- [3]Stagnation in claims about climate-change skeptics (such as me)
- "A 51-year-old physician colleague who looked the picture of health—no cardiovascular risks, a marathon runner who had exercised vigorously each day for 30 years—had just flunked a calcium screening scan of his heart"

([4]link). After I started doing the "wrong" thing (eat half a stick of butter per day) my calcium screening score substantially improved.

- [5]more about scientific fraud at Duke University

1. [http://blogs.lawweekly.com/squidink/2011/07/natto\\_fermented\\_soy\\_beans\\_natto\\_day.php](http://blogs.lawweekly.com/squidink/2011/07/natto_fermented_soy_beans_natto_day.php)
2. <http://pratham.org/M-13-2-History.aspx>
3. <http://www.bishop-hill.net/blog/2011/7/10/old-arguments.html>
4. <http://www.allvoices.com/contributed-news/9635666-why-do-so-many-thin-runners-have-calcified-arteries-high-blood-pressure-and-high-ldl-cholesterol>
5. <http://www.nytimes.com/2011/07/08/health/research/08genes.html>

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Alex Chernavsky (2011-07-12 06:40:02)

Two more links that may be of interest: In a *New York Times* op-ed piece, Dr. Peter Kramer argues in favor of antidepressants: "[1]In Defense of Antidepressants" Robert Whitaker responds to Peter Kramer: "[2] The New York Times' Defense of Antidepressants: More misinformation in the Age of Prozac"

1. <http://www.nytimes.com/2011/07/10/opinion/sunday/10antidepressants.html>
2. <http://www.psychologytoday.com/blog/mad-in-america/201107/the-new-york-times-defense-antidepressants-0>

## Phone Hacking and Jane Jacobs (2011-07-13 07:28)

I am fascinated by the British phone hacking scandal. Jane Jacobs has helped me understand it.

Should police officers be paid per arrest? Most people think this is a bad idea, I imagine, but the larger point (what can we learn from this?) isn't clear. In [1]Systems of Survival, Jacobs tried to spell out the larger point. She wrote about two sets of moral rules. One set ("guardian syndrome") applied to warriors, government officials, and religious leaders. It prizes loyalty and obedience, for example. The other set ("commercial syndrome") applied to merchants. It prizes honesty, avoidance of force, and industriousness, for example. The two syndromes correspond to two ways of making a living: taking and trading. The syndromes reached the form they have today because they worked – different jobs need different rules. When people in one sort of work (e.g., guardian) follow the rules of the other, things turn out badly. Ayn Rand glorified the commercial syndrome. When Alan Greenspan, one of her acolytes, became a governor, he did a poor job.

What about journalists? As a journalistic business becomes more powerful, it becomes more guardian-like. A powerful newspaper isn't inherently bad; we want a powerful newspaper to keep other powerful institutions (government, large businesses) in check. Murdoch's News International, of course, has become very powerful. Yet Murdoch newsrooms retained commercial norms, especially an emphasis on selling many copies. Reporters in Murdoch newsrooms were under intense pressure to produce – like policemen paid per arrest. Other journalists, with guardian norms (e.g., at the New York Times), didn't like the commercial norms of Murdoch newspapers. The mixture of commercial values and guardian power led to the phone hacking scandal. Friends of mine blame Murdoch himself – but commercial norms are not unique to Murdoch. The problem is their mixture with great power.

When newspapers are small, they are not powerful, not guardians, and must adopt commercial norms – they must try to sell more copies or they will be crushed. When a small newspaper becomes large and powerful, however, its norms must change to guardian ones or things will turn out badly. This suggests that the phone-hacking scandal happened

because Murdoch became very powerful too fast – too fast for a shift in values to accompany much greater power.

1. [http://en.wikipedia.org/wiki/Systems\\_of\\_Survival](http://en.wikipedia.org/wiki/Systems_of_Survival)

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Alan (2011-07-13 09:48:21)

Seth, I think you got it exactly backwards. In the past, journalism felt the need to be guardians - they felt a responsibility to the public, which they took seriously. News had to be "fit to print" and all that. This is evidence that the transition \*is\* complete. They are fully commercial enterprises doing whatever it takes to sell a story.

Robin Barooah (2011-07-13 12:09:03)

This is thought provoking, but I'm not sure I see how 'speed of acquiring power' could be the independent variable determining which syndrome emerges. What forces are different if power is acquired slowly? I think that one problem (not of your analysis - of modern business) is a failure to recognize the limits of using price to regulate action. For example the reason it's bad to pay police per-arrest, is that the value of the arrest is determined by information only available much later, and it can be negative so there is no way to discount the price based on quality without looking at the later consequences of each arrest. Paying by arrest quality - i.e. the guilt to innocence ratio creates an even worse incentive; for police to distort the evidence to improve the ratio. Furthermore, there is no disincentive against collusion. A nightmare scenario, yet such a police force might well be very financially successful, especially if paid directly by consumers of its services. Imagine investing in such a business - you put up money for police stations, guns and batons and handcuffs etc. You hire some 'officers', you charge victims for 'bringing perpetrators to justice', and you pay the officers a percentage. The point here is that profit making organizations can be created that have the semblance of other institutions but are devoid of the value those institutions were intended to provide. The belief that we can attach a monetary value to anything we want to promote is simply a delusion. Unfortunately, acknowledging this means recognizing that we have less control than we would like, and leads to political disadvantage compared to those who deny it.

Seth Roberts (2011-07-13 12:30:56)

"in the past journalism felt the need to be guardians". Many journalists still feel this need. Maybe the majority do. If you go back to the very beginning of newspapers, when they had no power at all, I think you will find a more commercial attitude. The term "yellow press" comes from the 1890s and describes a more commercial attitude. It arose during circulation wars. Even by then journalists had become enough guardian-like to condemn such behavior.

Robin Barooah (2011-07-13 15:04:27)

I don't doubt the existence of journalists who want primarily to serve as guardians. I'm just not certain that our system is going to keep allocating enough resources to them to enable them to practice. They are competing against organizations who have a greater flexibility in how they acquire those resources and so are at a disadvantage.

UncleLongHair (2011-07-15 02:46:38)

The era of the "big newspaper" is gone, because the era of the newspaper is gone. Every reader has access to thousands of news outlets every day, all vying for their attention. News doesn't come once a day now, it comes every second. In order to compete in this world, news outlets need a constant stream of splashy short headlines in order to attract "clicks" (see cnn.com). Quality, depth and accuracy of the underlying journalism is a distant tertiary priority. I think the Murdoch scandal is an example of an "old fashioned" newspaper getting more and more desperate to stay competitive and resorting to riskier and riskier tactics to find stories. I am sure they lost all of their what we used to call legit journalists long ago, and were staffed with paparazzi with a short attention span. I hope the New York Times survives because I prefer to read thoughtful, in-depth stories, but I am not sure how they will.

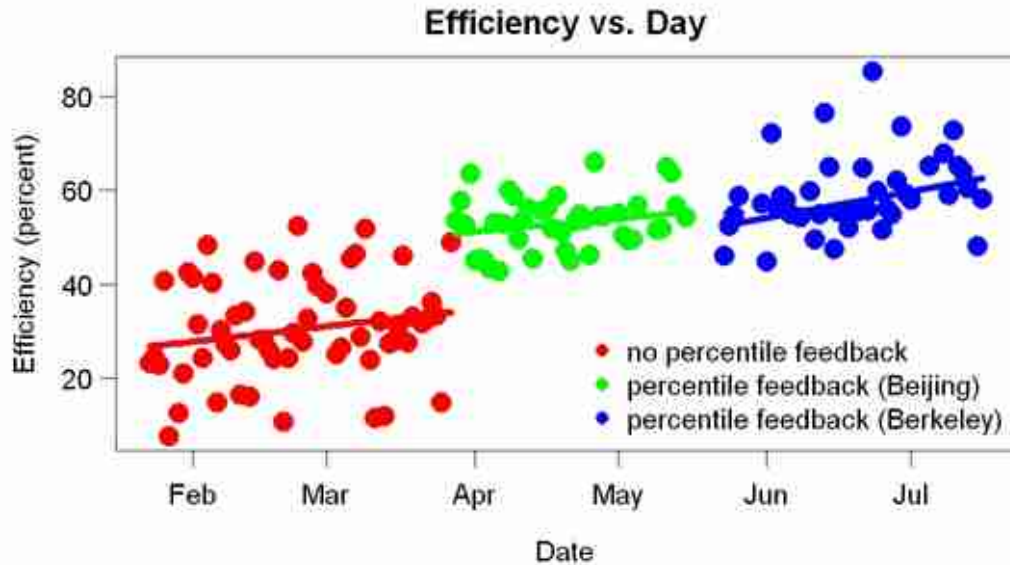
Tom (2011-07-16 00:52:00)

Great post, Seth. I'm not sure it's just 'speed' though - I think it's a matter of generations. Though Rupert Murdoch did inherit his father's firm, he did "cut his teeth" on Fleet Street in the fifties. He absorbed the competitive ethos and retained it sixty years later when he had (arguably) become one of the most powerful people in the world. Most newspapers would have iterated through one or more generations by that point. Harrison Otis, founder of the LA Times, profited greatly from buying up land in the San Fernando Valley while his paper stampeded readers into thinking that L.A. was running out of water (thus driving support of the aquaduct that would turn the Owens valley into a desert.) Subsequent generations of Times owners - notably the Chandler family - were no longer pirates but very much staid guardians. Otis & Mulholland stole the money that the Chandlers would then use to build opera houses.

Glenn (2012-01-04 15:56:02)

Hi Seth, You have made an excellent point in connecting the phone-hacking scandal and Jane Jacobs's systems of survival, however I have interpreted slightly differently. Whilst Jacobs agrees that newspapers have become the guardians of guardians I believe she would interpret the phone-hacking as a form of what she termed 'monstrous hybrids'. Not only did the newspapers break the commercial syndrome precepts of 'respect contracts' and 'be honest' to name a few, but they inadvisedly adopted a precept from the guardian syndrome; 'Deceive for the sake of the task'. Following Jacobs' argument, I believe this picking of the precepts from the different syndromes, which Jacobs and Plato state should never happen, created the 'monstrous hybrid' that is the News of the World phone-hacking. Ironically, this was then reported by other newspapers, adopting the guardian role, aiming to protect the public, all very confusing! Please comment as I am actually writing an essay on this very book as part of my Masters Degree and warmly welcome any criticism or comments you have about what I have said :)

## Percentile Feedback Update (2011-07-17 08:43)



In March I discovered that [2]looking at a graph of my productivity (for the current day, with a percentile attached) was a big help. My "efficiency" – the time spent working that day divided by the time available to work – jumped as soon as the new feedback started (as this graph shows). The percentile score, which I can get at any moment during the day, indicates how my current efficiency score ranks according to scores from previous days within one hour of the same time. For example, a score of 50 at 1 p.m. means that half of the previous days' scores from noon to 2 p.m. were better, half worse. The time available to work starts when I get up. For example, if I got up at 4 a.m., at 6 a.m. there were 2 hours available to work. The measurement period usually stops at dinner time or in the early evening.

This graph shows the results so far. It shows efficiency scores at the end of each day. (Now and then I take a day off.) One interesting fact is I've kept doing it. The data collection isn't automated; I shift to R to collect it, typing "work.start" or "work.stop" or "work.switch" when I start, stop, or switch tasks. This is the third or fourth time I've tried some sort of work tracking system and the first time I have persisted this long. Another interesting fact is the slow improvement, shown by the positive slopes of the fitted lines. Apparently I am slowly developing better work habits.

The behavioral engineering is more complicated than you might think. My daily activities naturally divide into three categories: 1. things I want to do but have to push myself to do. This helps with that, obviously. 2. things I don't want to do a lot of but have to push myself away from (e.g., web surfing). 3. things I want to do and have no trouble doing. But the recording system is binary. What do I do with activities in the third category? Eventually I decided to put the short-duration examples (e.g., standing on one foot, lasts 10 minutes) in the first category (counts as work), keeping the long-duration examples (e.g., walking, might last one hour) in the second category (doesn't count as work).

Before I started this I thought of a dozen reasons why it wouldn't work, but it has. In line with my belief that it is [3]better to do than to think.

1. <http://blog.sethroberts.net/wp-content/uploads/2011/07/2011-07-12-efficiency-vs.-day.jpg>
2. <http://blog.sethroberts.net/2011/05/01/percentile-feedback-and-productivity/>
3. <http://blog.sethroberts.net/2011/07/10/better-to-do-than-to-think/>

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Paul (2011-07-17 11:48:32)

Hi, Seth. I have enjoyed your blog for a while but am a first-time commenter. Many thanks for all your insights. (I have especially enjoyed and benefited by your articles on fermented foods.) Your tracking system seems helpful. When doing work that requires creativity or deep insight, however (as I'm sure much of your work does), I would be reluctant to use this sort of tracking system for fear of over-emphasizing quantity of work at the expense of quality. I tend to prefer productivity systems that focus attention on outputs rather than inputs, thereby rewarding efficiency and creativity. Have you found your tracking system to have any adverse effects on the quality of your work or your morale? Have you tried tracking other variables that measure your outputs rather than your inputs?

Seth Roberts (2011-07-17 12:48:18)

I would think that "productivity systems that focus attention on outputs" reward quantity at the expense of quality. For example, how many words you have written at the expense of the quality of those words. They reward efficiency, yes, but I don't see how they reward creativity. One reason I measure time spent (an input) rather than other things (such as outputs) is exactly this issue: to encourage quality over quantity. Maybe I can't produce much output (= words) but at least I get credit for trying. To answer your question about adverse effects, I haven't noticed any change in quality. The system has improved my morale since I am more aware of making progress every day and believe I am using my time more productively (in terms of time spent working).

Paul (2011-07-17 13:47:39)

Thanks for your thoughtful reply, Seth. I agree that a crude measure of output such as # of words written would tend to lower quality, and I was not recommending such a measure. Since you are monitoring yourself, you are free to try more nuanced and more subjective measures of output than raw word counts (as, for example, when you measure the quality of your sleep). I don't know whether you would find such measures as useful as your current measure of efficiency, but they may merit some experiments. :)

carl (2011-07-18 06:08:04)

Seth, a little off topic here, but I'd be curious to know what you think of "brain training" like Lumosity. I would really like to think I could improve my overall mental performance by playing these games every day, and the software (on-line) offers tracking functions to show if improvement is being made.

Seth Roberts (2011-07-18 10:35:52)

carl, I believe you will improve only on tasks similar to the task you practice on.

carl (2011-07-25 06:24:27)

seth, thanks for the reply. that's a good thought. i agree it's probably not a good idea to put too much stock into it. still, i'm going to continue to play them, mostly because I enjoy them and it seems to help refresh the mind on occasion.

## **Worse Than Placebo? Forest Laboratories's Shameful Marketing (2011-07-18 05:00)**

While Forest [Laboratories] applied to the FDA for pediatric use of Celexa [the anti-depressant] and was eventually denied, the company admitted it had marketed the drug to doctors by hiring speakers to tout its benefits for young patients. Forest also admitted it had suppressed the negative results of research in Europe that found Celexa was no more effective in treating depressed children and adolescents than a sugar pill. Fourteen young patients in that study attempted suicide or contemplated suicide, compared with five in the placebo group, court records show.

From [1]this article. Is Forest Laboratories worse than other big drug companies? Probably not. What's horrible is how this sort of thing – suppression of negative results – keeps happening. It suggests that the evaluation of drugs should be taken entirely out of the hands of drug companies.

1. <http://www.businessweek.com/printer/magazine/howard-solomons-career-may-meet-a-sad-end-07142011.html>

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Nancy Lebovitz (2011-07-18 07:33:36)

[1]Journals which publish negative results Unfortunately, none of them specialize in drugs.

1. <http://nancylebov.livejournal.com/492876.html?nc=1>

Alex Chernavsky (2011-07-18 08:54:14)

See also, "[1]A cure worse than the illness?"

1. <http://www.irishtimes.com/newspaper/health/2011/0222/1224290501283.html>

Glen Raphael (2011-07-18 13:27:53)

Are there any laws preventing drug companies from pointing out the flaws in the drugs of their competitors? It seems like that would be a natural way to find this sort of thing out. Just like "negative campaign ads" are more informative - and more convincing - than positive ones, you could imagine a drug market in which the drugs that objectively did best were advertised as such (and false claims were investigated by the media and/or the courts as possible fraud). You could even include a standardized URL where all the fine print caveats are listed (instead of scrolling past pages of fine print spoken by a fast-talker) Another thing to consider is that FDA approval is too binary: "approved" or "unapproved". If we made FDA approval optional it seems likely something like Consumer Reports would come about to arbitrate not just whether drugs work but \*how well\* they work. Including ranking drugs against each other to see what the comparative advantage is.

## **The Value of a Diagnosis of Asperger's (2011-07-19 05:00)**

In [1]a recent post I said Marcia Angell was too hard on psychiatric diagnosis. Long before perfection, diagnoses can be useful. For example, Alexandra Carmichael recently found out she has something close to Asperger's Syndrome (note that she has not been diagnosed by a doctor). She explained why:

I feel like at least I'm on the \*path\* to a much smoother life now - whether I'm there or not can be debated. :) Learning about Asperger's has illuminated sensory and social sensitivities that I didn't realize other people \*didn't\* have. It was understandably confusing to live in a world where I thought I was defective because I couldn't do what other people were doing as easily. Knowing that there is a subset of people who experience the world the way I do has been liberating, and seeing how other "aspies" modify their lives and routines to suffer less has helped me make helpful structural changes in my life, too.

For example, right now I am wearing my Bose QC 15 headphones on a flight from Boston to San Francisco, because I know that too much sound in a day can make me incredibly weak the next day. I've arranged to do 90 % of my work by email and chat these days, with the occasional in-person meeting, because I know that my auditory processing is not great for phone calls, and it takes me days to prepare for and recover from a social meeting/event. I say no to most things I get invited to (conferences, dinners, etc),

because I prefer to contribute my thinking/organizing/connecting talents online and reserve social energy for one-on-one time with close friends. I've also become aware that my ability to listen and empathize with people is powerful and something I enjoy, maybe in part because I build such intricate models of everyone I meet, so my purpose in life has become to listen and help where I can. I only wear comfortable clothes, because my mood will suffer terribly if I have jeans or high heels on. I give and receive lots of hugs, because these are very calming for me. I have a very detailed daily routine that I follow, which reduces cognitive load used to consider options every day and feels comfortable for me. I'm much more aware of my weaknesses, especially regarding relationships, and am very careful about communicating clearly and non-violently, making sure I have a good understanding of both my needs and the needs of people around me - so that I can help, or at least not harm them.

So things like this have all come about because of trying on the Asperger's hat for a while, and the increased self-awareness that came with it. After a certain point, you can drop the label and integrate what you've learned into your identity. But for me, having the label for a while was a guide and a relief, helping me realize that it's really ok to be myself.

1. <http://blog.sethroberts.net/2011/06/21/marcia-angell-on-psychiatry/>

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David Clingingsmith (2011-07-19 09:02:25)

It's quite inspiring to read how knowledge about Asperger's has improved this woman's life. I'm puzzled by your raising it in the context of Angell's views on psychiatric diagnosis, given that Ms. Carmichael seems to have benefited most from the classification of a set of experiences, abilities, and limitations she has as part of a human "type" that allows her to feel at peace with who she is and organize her life according to what works for her. She has not even been diagnosed by a doctor! This speaks much more to the power of making the ideas and findings of research accessible to the public. An important question is whether that research could be produced without the diagnostic apparatus. Probably not if we mean a system of organizing and classifying phenomena, but that's not really at issue in the debate.

Seth Roberts (2011-07-19 09:38:50)

Asperger's is a psychiatric diagnosis. Created in the context of psychiatric diagnosis. "This speaks much more to the power of making the ideas and findings of research accessible to the public." Well, who knows about "more", but yes, it also suggests the value of doing that. Alex's experience required both A (psychiatric diagnosis) and B (making ideas accessible). That B matters doesn't mean A doesn't matter.

Looking for a new project? « EcnaLab | Balance (2011-12-27 17:39:04)

[...] Are You Neurotypical? The Transformative Power of Sharing Mood What I Learned From Tourette's The Value of a Diagnosis of Asperger's [...]

Are You Neurotypical? | Quantified Self (2012-02-09 10:19:33)

[...] attached to me in the past couple of years as I gathered data on myself – Tourette's, Asperger's, OCD, Migraneur, Bipolar. Definitely not [...]

## **Quantified Self Forums Now Open (2011-07-19 13:06)**

The [1]Quantified Self Forums have started. The discussion groups include Mood, Design, Habit Change, Apps & Tools, Nutrition, Sleep, Self-Experimentation (moderated by me), and several others.



## Morning Faces Therapy for Bipolar Disorder: Follow-Up Questions (2011-07-20 05:00)

In May [1]I posted a friend's story about how he used [2]my morning-faces discovery to improve his life. It helped enormously ("It felt like a giant headache was just lifted off me"). I asked him some follow-up questions.

What time of day do you look at your face in a mirror? For how long?

I look at my face in a mirror for an hour starting at about 6:20am (Daylight Saving Time). It doesn't feel weird or vain to me. I usually listen to C-SPAN, Comedy Central, or music during the therapy.

You wrote: "I'm able to enjoy life and relate to others in ways that I never could my entire life." Could you elaborate?

In my letter I said that my initial reaction to the face therapy was that it felt like a giant headache was just lifted off of me. That "headache" was the weight of depression and anxiety on my mind. My whole life I have been burdened by that weight, under its shadow to one degree or another. Another angle on this: Your initial reaction was "I felt great – cheerful and calm, yet full of energy". I am quite certain that before the therapy I was never in that state of mind. But I'm not just talking about typical enjoyment—hearing the music, conversing and laughing, a fine meal, etc. In The Simpsons episode "Barting Over", Homer is twirling slowly high in the air on a skateboard, and a novel idea pops into his head: if he buys two kinds of nuts separately, he can combine them at home to get "mixed nuts". That sensation of weightlessness, with little solutions to little problems just popping up, is new to me. When you add up hundreds of those solutions, you find life itself less burdensome. You make more room for appreciation, gratitude, friendship, and so on. You begin to get an inkling of what a full human life could be.

People "automatically reject the idea", you wrote. What happens?

"That's the most ridiculous thing I've ever heard" was the comment of a woman in the bipolar support group. Some in the group of the if-it-sounds-crazy-enough-I-believe-it persuasion would nod their support. My sister theorized that it was all just meditation (!) and finished by saying, "I get enough faces at work." My dental hygienist was somewhat persuaded by the fact that a newborn can recognize its mother's face within hours of birth. Do you continue to see a psychiatrist and/or a psychologist? If so, are they curious about how well you are doing without meds? If they're not curious, how do they explain it? My psychiatrist and psychotherapist are glad that I'm doing well, but they are not curious about the face therapy, the bright lights, or the fish oil. They are skeptical toward alternative treatments. I gather they think that my improvement is due to remission, or an upswing in the illness's cycle, or the accumulated years of talk therapy. Or they abandon reason altogether, saying, "Whatever works for you." Why do you need to go to bed "early"? What happens if you don't? What makes it difficult or discipline-requiring to go to bed "early"? If I go to bed late, I need to take an hour nap the next day, which is a drag. At 10pm I'm almost never tired enough, plus I usually feel that I haven't accomplished enough for the day. At your suggestion, I am trying to reset my circadian rhythm by getting 2 hours of morning light from approximately 7:30am to 9:30am. What effect does the early morning bright light therapy have? How do you do it (e.g., equipment, time of day)? Why did you start it? As I recall, the lights helped me to wake up early, fairly rested and alert. I started in 1997 at your suggestion with a bank of four GE

F40SP65-ECO tubes, 40 watts each, 48 inches long. I now cover half of the bank to reduce the intensity. I get thirty minutes of exposure starting at about 6:50 am (Daylight Saving Time). In 1997, what made you decide to try the faces? I was primed for the idea that a big change might help. Six months prior, I had made a somewhat beneficial switch to Depakote after taking lithium for 11 years. Also, you claimed that you already had good experimental results with several people, and that Andrew Gelman at Columbia University was impressed with your work. "I hadn't needed Moban since 1999," you write. Why not? From 1999 to 2003, the face therapy was so effective that I didn't need an antipsychotic (e.g. Moban). From 2003 to 2006, when I didn't use the face therapy, I kept certain habits that I had adopted during that therapy: keeping a fairly normal sleep schedule, avoiding fluorescent lights at night, and getting a decent amount of social interaction. With the benefit of hindsight, why do you think it did not keep you out of the hospital in 2003? When I told my psychiatrist in 1999 that I was going to use the face therapy instead of medications, he exclaimed, "That's like taking off a cast and trying to walk right away!" Indeed, for 12 years my mind had been numbed with psychiatric drugs. Although the face therapy was seemingly miraculous, it couldn't restore all that was lost. Yet with little support from others I was trying to "walk": I had the goals of getting a job and a social circle; I had a dream of leading the way for all depressed people. It was unrealistic to expect that I could do much more than crawl through life. By 2003, I needed the hospital because I was in over my head. Why did back pain and stress put you back in the hospital? Why did they lead to a suicide attempt? My mental state deteriorated because of lack of sleep, which in turn was due to back pain and stress. Both back pain and stress are manageable—given enough time and attention. Unfortunately, at the time I was overwhelmed with many new problems and many lingering old problems. I had just moved. The house had far more traffic noise and housemates than I was accustomed to. I didn't have the money or strength to move again; I was falling out with an old friend; my wrists and feet were injured. If I went back to the mental health system, I would be more handicapped than ever. The situation seemed hopeless. Why did publicity related to The Shangri-La Diet make you try this again? I actually thought that Diane Sawyer might call me after saying to herself, "Wow, what else has Professor Roberts discovered?" So I wanted to shape up my mood fast! I assumed that the Shangri-la Diet in its way must be about as great as the face therapy. I didn't suspect that the media would treat your diet like any other—as an offbeat fad. You wrote: "In August of 2010, dissatisfied with my low energy level, I decided to go off medications completely again. What did you do? I had been "stabilized" on 250 mg of Depakote, which is a sedating anti-manic drug, and 20mg of Prozac, which is an antidepressant that can induce mania. About once a month, I got rid of the sedation by skipping the Depakote for a few days. On one occasion, when I tried to skip the Depakote for 9 successive days, I became slightly hypomanic and had trouble sleeping. Over the course of several months, I reduced the Prozac to 10mg, and even to 5mg, but still I couldn't stay off the Depakote for more than about 7 days without problems. You wrote: "Getting off just the two drugs was tricky, because of the difference in half-lives." What was "tricky" about it? I was boxed in by the difference in the drugs' half-lives. Prozac has a plasma half-life of about 10 days, while Depakote has a half-life on the order of only 10 hours. I considered splitting the enteric-coated Depakote, but never did. I decided that the only way out was to stop taking the Prozac, but continue taking the Depakote for 10 days until the Prozac was out of my system. So I tolerated being depressed and sedated until I could stop the Depakote, too.

1. <http://blog.sethroberts.net/2011/05/16/morning-faces-therapy-for-bipolar-disorder/>

2. <http://escholarship.org/uc/item/2xc2h866>

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Peter Silverman (2011-07-21 18:37:30)

I tried a bunch of alternative treatments for my bi-polar after it seemed clear that psychiatric medications weren't helping. When I tried a supplement from Canada for bi-polar, it went away, and I've been six years now with no mania, no depression, and no meds. Of course I don't know for sure the supplement (emPower Plus from truehope.com) was what did the trick, but the timing makes me think so. I've also never met anyone else who tried that supplement.

Seth Roberts (2011-07-22 05:39:46)

Peter Silverman, thanks for your comment. [1]More about EmPower Plus here.

1. [http://www.bpchildresearch.org/dcforum\\_public/DCForumID1/1371.html](http://www.bpchildresearch.org/dcforum_public/DCForumID1/1371.html)

Jeff (2011-07-22 14:33:01)

Seth - I've tried morning faces on several occasions without success. You previously mentioned that exposure to faces in the evening removes the positive impact of morning faces. I can't avoid seeing faces most evenings because I live with someone else. Have you ever known morning faces to work for people who are not living alone?

Seth Roberts (2011-07-22 20:06:44)

Yes, one of my subjects had/has a family. It is long face-to-face contact you need to avoid in the evening. The sort of contact you have in a face to face conversation. Seeing faces in other situations won't have much effect, as far as I can tell. You certainly need to go to bed relatively early (like 10 or 11 pm) and get up relatively early (like 6 pm) for it to work. However, I think you bring up a good point – it isn't easy to avoid face to face contact at night. Perhaps special glasses will be sold that both filter out blue light (which when experience at night can disturb circadian rhythms) and obscure faces.

Jeff (2011-07-23 11:20:30)

Thanks for the feedback and additional information about sleep time, Seth.

Jeff (2011-07-27 15:53:53)

Seth or anyone else - I have a follow up question on blue blocker glasses. I recently purchased a pair, but there are small gaps at the top and bottom of the glasses that would allow some blue light in. Is it essential the lenses completely block out all blue light to obtain the sleep benefit? If so, any suggestions on what to do to correct this problem, hopefully, outside of purchasing a new pair? TIA

Seth Roberts (2011-07-27 16:31:50)

Jeff, my answer to your question is: I doubt it. Whether the glasses will help you sleep I don't know – I don't know enough about you – but I suspect that the small amount of light they let in isn't going to make much difference.

Jeff (2011-07-28 17:41:09)

The blue blocker glasses appear to have the most impact on how quickly a person initially falls asleep based on your earlier posts and information from the Quantified Self conference. Any other sleep benefit(s) these glasses would offer that you know of?

Seth Roberts (2011-07-29 07:41:40)

I believe the blue blocker glasses reduce disruption to an invisible circadian rhythm that controls when we are awake and asleep and controls the morning-faces effect on mood that this post is about. This invisible rhythm creates a "sensitive period" during which the faces have an effect. If the rhythm is disrupted there is no sensitive period.

## **Welcome to the Sausage Factory: Multiple Fraud in a Paxil Study (2011-07-21 05:00)**

Dr. Jay Amsterdam, a professor of psychiatry at the University of Pennsylvania, recently lodged [1]a very interesting complaint against five authors of a 2001 study that compared Paxil to another drug and placebo for treatment of bipolar disorder. The paper reports research paid for by SmithGlaxoKline, the makers of Paxil. For a subgroup of patients, it says, Paxil worked better than the other drug and better than placebo. Paxil supposedly had fewer side effects than the comparison drug. Amsterdam accuses the five academic authors of plagiarism – meaning they put their names on a paper they didn't write (like a student who buys a paper). He also says the paper grossly misrepresents the results

(because the subgroup analysis was completely ad hoc and the side effects description utterly wrong). So if they did write it . . .

The paper has been cited hundreds of times. Given the actual results – Paxil had worse side effects than the other drug, and the subgroup result means little – this is no small matter.

As Spy magazine has said, if you cheat your customers, don't fire anyone. Email included with Amsterdam's complaint suggests he was upset because he was not an author on the paper. Why? Well, the study was done at many sites and there could be only one author per site – according perhaps to SmithGlaxoKline. At Penn, the work (enrolling subjects) was first given to a junior faculty member named Laszlo Gyulai. However, Gyulai couldn't enroll enough subjects. Amsterdam was asked to help and paid for doing so. He ended up enrolling more subjects (12) than Gyulai (7). Yet Gyulai was an author and he was not! This greatly bothered him. He considered it "misappropriation" of his data, said Gyulai had engaged in "the theft and publication of a professor's data", and wanted Gyulai censured. Perhaps Gyulai had considered Amsterdam's non-authorship okay because many professors who contributed subjects were not authors. Whatever the reason, it appears that authorship was determined by the firm that did the ghostwriting, Scientific Therapeutics Information, presumably following orders from SmithGlaxoKline.

I don't know why Amsterdam waited ten years to complain. Since 2001, however, the ghostwriting problem has become much clearer. In 2001, Amsterdam complained to his department chair, Dr. Dwight Evans, about the situation. In 2010, Amsterdam learned that Evans had benefited from ghostwriting. That's how common it was.

There's [2]also this:

POGO [Project on Government Oversight], in a letter to President Obama [related to Amsterdam's complaint], asked that he remove Amy Gutmann, president of the University of Pennsylvania, from her position as chairman of the Presidential Commission for the Study of Bioethical Issues, until the two cases involving Dr. Evans are fully investigated and resolved.

Chairman! Another indication how common and tolerated ghostwriting is. It is as if an obesity expert, appointed head of the most important obesity committee in the country, charged with recommending how to stop the obesity epidemic . . . is fat.

Perhaps British journalistic phone-hacking has been more common than misrepresentation of results by med school professors but the latter, I'm sure, has done more damage.

[3]Attachments to the Amsterdam complaint. [4]Pharmalot weighs in. [5]Some of the accused defend themselves.

1. <http://www.pogo.org/resources/public-health/amsterdam-complaint-to-wright-re-evans-et-al-misconduct-20110708.html>
2. <http://chronicle.com/article/U-of-Pennsylvania-Professor/128192/>
3. <http://www.pogo.org/resources/public-health/attachments-to-amsterdam-complaint-20110708.html>
4. <http://www.pharmalot.com/2011/07/the-professor-a-paxil-study-misconduct-charges/>
5. <http://www.nature.com/news/2011/110712/full/475153a.html>

AZ (2011-07-21 09:46:31)

I found a case where a public health official outsourced the writing of a report. I checked the properties feature of the document. I googled the listed author and found the name attached to a scientific writing firm abroad. I emailed that person and the person confirmed doing the design for the report. I sat on the information, but I probably could have done something with it when the individual came before the Senate for confirmation to higher office.

JeffR (2011-07-21 18:44:04)

I think your writing on this subject is valuable and I'd love to see it reaching a wide audience.

### **Harvard Psychiatrist Joseph Biederman and Parents: "Should Be Left in a Room Together" (2011-07-22 05:00)**

Joseph Biederman is a professor of psychiatry at Harvard. [1]He recently received a far-too-mild sanction for behavior that included this:

Biederman was then placed in charge of the institute and began a study of 40 children between 4 and 6 years old who were given Risperdal [made by Johnson & Johnson] and Lilly's Zyprexa, another antipsychotic. At the time, Harvard and MGH [Massachusetts General Hospital] rules forbid researchers from running trials with [drugs] if they receive more than \$10,000 from a company that makes the drug.

It was eventually revealed that Biederman had received at least \$1.6 million from drug companies, including far more than \$10,000 from Johnson & Johnson and far more than \$10,000 from Lilly. One comment on the quoted article made the excellent point that bipolar disorder had a usual onset age of onset of 18 years or more and had never been found in young teenagers (e.g., 14-year-olds). Yet Biederman suddenly claimed it appeared in 6-year-olds. In a good expression of how I feel about Biederman's behavior, another comment said he should "be left alone in a room with the parents of the children [he] treated".

1. <http://www.pharmalot.com/2011/07/harvard-docs-disciplined-for-conflicts-of-interest/>

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Alex Chernavsky (2011-07-22 06:11:11)

Yeah, and I would have put the word "treated" in scare quotes. Joseph Biederman and Charles Nemeroff (among others) should be permanently barred from doing any clinical work and any research.

Seth Roberts (2011-07-22 08:24:26)

Alex, you are too forgiving. Biederman should go to jail.

Ruth (2011-07-22 13:16:56)

I wish I were surprised.

psychotherapy (2011-08-04 19:48:13)

It is very unfortunate that such high caliber professional was involved in such a scheme. Many doctors are "in bed" with pharmaceutical companies and prescribe only medications that are more profitable for them. Unfortunately, it is very common. Thank you for an interesting post.

## Google Yes, Wikipedia Yes, Aaron Swartz No? (2011-07-22 06:00)

We praise Google and Wikipedia for making knowledge more available – consider them two of the best innovations of the last 50 years – but after Aaron Swartz, a friend of mine, apparently tried to do the same thing [1]he was charged with wire and computer fraud and faces up to 35 years in jail and a \$1 million fine.

The prosecutor, U.S. Attorney Carmen Ortiz, made an interesting statement:

Stealing is stealing, whether you use a computer command or a crowbar, and whether you take documents, data or dollars. It is equally harmful to the victim whether you sell what you have stolen or give it away.

In my experience, tautological statements such as "stealing is stealing" or "correlation is not causation" do not bode well for that side of the argument. As Thorstein Veblen might say, the reason for the tautology was the need for it.

Ortiz's statement shows that she, like the rest of us, thinks that what matters is amount of harm. Harm is hard to find here. The only clear harm is that MIT access to JSTOR was shut down for a few days. This is so minor that [2]JSTOR's statement about the case (which includes "it was the government's decision whether to prosecute, not JSTOR's. . . . We [have] no interest in this becoming an ongoing legal matter") doesn't mention it. I don't think many people will agree that this amount of harm justifies the charges that Ortiz has brought.

[3]Sign a petition supporting Aaron.

1. <http://www.guardian.co.uk/technology/2011/jul/21/aaron-swartz-indicted-hacking-charges>
2. <http://about.jstor.org/news-events/news/jstor-statement-misuse-incident-and-criminal-case>
3. [http://act.demandprogress.org/sign/support\\_aaron/](http://act.demandprogress.org/sign/support_aaron/)

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tom (2011-07-25 08:19:58)

Seth, he was trying to take something and knew he did not have permission to take it. Or do you dispute this description of what he did: The indictment (.pdf) accuses Swartz of repeatedly spoofing the MAC address — an identifier that is usually static — of his computer after MIT blocked his computer based on that number. Swartz also allegedly snuck an Acer laptop bought just for the downloading into a closet at MIT in order to get a persistent connection to the network. Swartz allegedly hid his face from surveillance cameras by holding his bike helmet up to his face and looking through the ventilation holes when going in to swap out an external drive used to store the documents. Swartz also allegedly named his guest account "Gary Host," with the nickname "Ghost."

Seth Roberts (2011-07-25 11:23:32)

"Seth, he was trying to take something and knew he did not have permission to take it. Or do you dispute this description of what he did?" What I dispute is that what you just said is all we need to think about when deciding how his actions should be dealt with. There have been many examples of civil disobedience in human history. All of them involved people doing what they did not have "permission" to do. For example, Rosa Parks sat where she did not have permission to sit. I think it is a good idea to think about them when deciding what should happen in this case.

tom (2011-07-29 06:24:27)

Seth, "civil disobedience" usually means intentionally violating a law and intentionally and publicly taking the consequences because you think the law is unjust and should be challenged. That's Rosa Parks. The goal is to testing the law and people's reactions to the case against the person testing it. The civil disobedience you are talking about is different. Swartz didn't want to get caught, he wanted a fait accompli. He wanted the articles irretrievably released. So compared to Rosa Parks, Swartz is not a civil disobedient. You also argue that there was no 'harm' other than the MIT shutdown of JSTOR access. Of course, the actual harm of a failed crime is irrelevant. You need to look at the harm if the person had succeeded. I think you are really saying there would have been no harm to others if Swartz had 'freed' huge chunks of JSTOR because it is unjust for JSTOR to be limited-access. Is that right? It's not exactly the same, but should I free Shangri-La Diet and email it to huge groups of people so I can help thousands of them get healthier? Should I free the archives of high-quality subscription websites giving paleo- health advice?

Seth Roberts (2011-07-29 07:36:32)

"I think you are really saying that there would have been no harm to others if..." No, of course there would have been harm to others – JSTOR employees, for example. Just as Rosa Parks caused harm to many. And of course there are differences between what Rosa Parks did and what Swartz did. I am saying the similarities matter.

tom (2011-07-29 14:54:25)

I feel like you're skipping the key harm: to the journals and people whose works are published through JSTOR. If you say there would be no harm to the publications and no harm to the authors, that's a very big point. Will you step up and say that? You are also ignoring that Swartz didn't choose civil disobedience like Rosa Parks did: He wasn't petitioning for a law to make JSTOR public, he didn't try to get each of the journals in JSTOR to agree with him, he didn't go to Congress, and he didn't try to publish a small number of articles illegally so that he could get caught on purpose and try to test the issues in court and change people's minds. He tried to take everyone's publications–without their consent–and make them all public so that JSTOR was public. You may like what he did, and you may like civil disobedience, but what he did is not civil disobedience. He wasn't trying to start a debate, he was trying to end one.

Seth Roberts (2011-07-29 17:12:18)

"What he did is not civil disobedience." Okay. I am not concerned about whether his actions fit your definition. "Harm to authors". None – they want their work publicized. "Harm to journals" – Unlikely. They too want wide distribution. "He wasn't trying to start a debate, he was trying to end one." Huh? I don't understand how you know what he was trying to do. Of course he could have done a dozen other things. That could be said about anything anyone does to achieve any goal. My point is that what he did and what Rosa Parks did have similarities, which are important. Rosa Parks believed that Negroes should be able to sit where they want on a bus. To help create such a world, she deliberately broke a rule restricting where they can sit. Swartz believed that the journal articles he downloaded should be more widely available. To help create such a world, he deliberately broke a rule restricting access. It's perfectly reasonable that if you want to create a better world, you take steps in that direction, even if some of the steps break rules. Even if what you do differs from what someone else did. Even if what you do isn't exactly "civil disobedience." Tom, your questions about harm to journals and authors, which you call the "key harm", emphasize how little harm Swartz did. The harm to journals and authors is vague or non-existent. Whereas the benefit to the rest of us – had he made the downloaded papers widely available – is obvious.

## Assorted Links (2011-07-23 05:00)

- [1]Intervention bias by Nassim Taleb
- [2]article about self-tracking in the Economic Times (India).
- [3]Autism and PFCs

- [4]Two weeks of FitBit
- [5]Psychology professor Marc Hauser resigns from Harvard
- [6]Stay classy, Larry Summers. Calling people far less powerful than himself "assholes" is entirely consistent with [7]this. I like to think if Spy magazine still existed, it would run a Larry Summers Watch.

Thanks to Dave Lull and Aaron Blaisdell.

1. <http://www.fooledbyrandomness.com/notebook.htm>
2. [http://articles.economictimes.indiatimes.com/2011-07-14/news/29773294\\_1\\_iphone-app-coffee-intake-emotions](http://articles.economictimes.indiatimes.com/2011-07-14/news/29773294_1_iphone-app-coffee-intake-emotions)
3. [http://www.mheproducts.com/autism/PFCs\\_and\\_Autism.htm](http://www.mheproducts.com/autism/PFCs_and_Autism.htm)
4. <http://ihaveneverdonethisbefore.com/2011/07/03/my-first-two-weeks-with-the-fitbit/>
5. [http://articles.boston.com/2011-07-20/news/29795455\\_1\\_embattled-harvard-arts-and-sciences-faculty-marc-hauser](http://articles.boston.com/2011-07-20/news/29795455_1_embattled-harvard-arts-and-sciences-faculty-marc-hauser)
6. <http://gawker.com/5823110/winklevoss-twins-were-total-assholes-says-larry-summers>
7. <http://blog.sethroberts.net/2010/01/01/academic-horror-story-harvard-university/>

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q (2011-07-23 12:21:20)

> Because of refined screening techniques, autism can be diagnosed at younger and younger ages, getting closer and closer to the birth of the child, indicating that whatever is triggering autism must be affecting the child while still in the womb. what in the devil is he talking about? autism isn't generally diagnosed until people are several YEARS of age. and "advanced screening" is – what exactly? that invalidates his entire argument, as far as i can tell. which is not to say that he is wrong, necessarily, but that he has NO IDEA what he is talking about.

Sean Estey (2011-07-23 12:24:17)

The intervention bias is interesting to me, because unlike other cognitive biases like confirmation bias, it seems to be deliberate and strategically rather than an unconscious, systematic error in thinking. I think many decision makers are smart enough to know that often non-intervention is the best course of action, but micro-management pre-emptively deflects the "you didn't do anything to prevent this!" criticism. Nixon knew well the consequences of price controls in the 70's, yet he invoked them anyway for fear of being accused of not "doing anything" to fix the economy. For this reason I don't blame the decision makers for erring on the side of over-managing. They are simply reacting to the ignorance of the general population, who in my opinion are the people who truly lie at the root of the problem.

dearieme (2011-07-24 03:53:00)

Steven Pinker ... "Marc is a scientist of enormous creativity...": sure is.

Seth Roberts (2011-07-24 04:23:45)

"that invalidates his entire argument". No, I would say he hasn't been clear about what "refined screening techniques" are. They are tests that predict the outcome when a child is tested for autism later in life.

Seth Roberts (2011-07-24 04:25:27)

"They are reacting to the ignorance of the general population." I would say they are taking advantage of the ignorance of the general population. Doctors are paid for intervention; they are paid much less for doing nothing.



Justin (2011-07-24 16:48:42)

Why don't you have a Fitbit, Seth? Mine just became 3x more valuable to me now that I can download the raw data.

Seth Roberts (2011-07-24 18:38:23)

I might get a FitBit, but I am less interested in measuring inputs (e.g., amount walked) than outputs (e.g., sleep). It's the outputs I want to control but don't know how to. Whereas I know how to control the amount I walk. I know roughly how much I've walked without a FitBit.

### **Amy Winehouse, R.I.P. (2011-07-23 11:50)**

Amy Winehouse, my favorite singer, [1]is dead. I'm very sad. She [2]made half my music collection unlistenable because she set such a high standard. I wish you a good journey, Amy.

1. <http://www.bbc.co.uk/news/uk-14262237>

2. <http://blog.sethroberts.net/2008/02/11/amy-winehouse-and-nassim-taleb/>

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Melinda (2011-07-23 21:34:04)

I listened to a few of her songs and was very impressed but as time went by I turned away from the train wreck in the making that was her life and didn't follow her. I too am very sad to learn she has died. It reminds me of Janis Joplin. How sad.

### **Flaxseed Oil Cures Bleeding Gums in Three Days (2011-07-24 05:00)**

I am pleased by [1]these results:

After a possibly overzealous dentist told me I need a gum graft [which [2]may cost \$3000], my husband encouraged me to start taking flaxseed oil. A few people online have [3]reported that flaxseed oil dramatically improved their gum health, and we figured it was worth a shot.

My initial dose of flaxseed oil was two tablespoons a day, and my gums stopped bleeding and hurting within three days. This is pretty huge for me, because my gums have been bleeding since I was in junior high. [Emphasis added.] At the same time, I added using a Sonicare toothbrush and flossing a little more vigorously. Considering that I had tried these things in the past without the flaxseed oil and they only made me bleed more, I feel like the flaxseed oil is the difference maker.

I have subsequently reduced my flaxseed oil dose to one tablespoon, which I feel is more appropriate for a woman my size. I haven't gained any weight from the flaxseed oil, which was a bit of a surprise. Taking it in the morning seems to help curb my appetite by at least the 130 calories it consumes.

The online reports she mentions are from this blog. A recap: [4]Because of the Shangri-La Diet, one evening I took four or five flaxseed oil capsules. The next morning, I was surprised to notice that putting on my shoes standing up, which I'd done hundreds of times, was much easier than usual. This suggested that the flaxseed oil had improved

my balance. I started to carefully measure my balance and varied my flaxseed oil intake. My measurements showed that variations in amount of flaxseed oil really did affect my balance. They also suggested the best dose. My balance improved up to a dose of 3 tablespoons/day of flaxseed oil. So the best dose was about 3 tablespoons per day. [5]I blogged about this.

[6]Tyler Cowen, inspired by my results, started taking 2 tablespoons/day. A month later, he no longer needed gum surgery. Knowing nothing about my flaxseed oil intake or Tyler Cowen's results, [7]my dentist told me my gums were in excellent shape, better than ever. [8]My sister's gums showed similar improvement. [9]Tucker Max noticed his gums stopped bleeding after he started taking flaxseed oil. He'd had bleeding gums most of his adult life. Nothing else had helped. He also found [10]training injuries healed faster. [11]When he stopped drinking flaxseed oil, his gums soon got worse. [12]Carl Willat noticed dramatic gum improvement. [13]Joyce Cohen had excellent results (her gums were "in great shape - better than ever"). [14]Tim Beneke and [15]Jack Rusher had similar results. [16]Gary Wolf, on the other hand, didn't like the mental effects. [17]A recent epidemiological study found a weak correlation between inflamed gums and omega-3 intake.

What have I learned? Above all, that such a pattern of results is possible. These results suggest there was/is a big hole in the usual nutritional ideas. Tyler Cowen, me, my sister, etc., were eating a conventionally "good diet" yet there was a lot of room for improvement, both in brain function and overall inflammation level. (I'm sure flaxseed oil heals gums because it reduces inflammation.) And improvement wasn't hard - there was a simple fix. In other words, omega-3 deficiency is very common. The conventional deficiency diseases, such as scurvy and pellagra, were/are rare. They appeared only under extreme conditions with very limited diets (e.g., prison, long sea voyage). Yet just as scurvy and pellagra are easily cured, there is a simple cure for omega-3 deficiency: about 2 tablespoons/day of flaxseed oil. (Perhaps ground flaxseed is an even better source.)

Other facts support the idea of widespread omega-3 deficiency. When gums are very red, and bleed very easily, it's called gingivitis. According to [18]this article, " estimates of the general prevalence of adult gingivitis vary from approximately 50 to 100 %". Heart disease is common. There's plenty of evidence that [19]heart disease is caused by inflammation (gated). For example, it's well-known that [20]inflamed gums correlate with heart disease. Statins may reduce heart disease - to the mild extent they do - [21]because they reduce inflammation.

I also learned that psychology can help improve general health (too much inflammation causes all sorts of problems, as Tucker Max's experience suggests). My background in experimental psychology made it easy for me to measure balance. I also found other mental tests were sensitive to flaxseed oil. These mental tests were like an animal model in the sense that they made helpful experiments (e.g., different doses) much easier. My friend Kenneth Carpenter, in [22]his book about the discovery of Vitamin C (gated), stressed the importance of an animal model of scurvy. Once the best dose of flaxseed oil (for me) was known, it turned out to be easy to take a dose that produced dramatic improvement (in others).

The idea that psychology and self-experimentation can improve overall health is new. I presented my flaxseed oil results at a meeting of the Psychonomic Society a few years ago. After my talk, one member of the audience, a professor of psychology at Illinois State University, angrily complained that my talk was "pop culture" - not even pop psychology - and said I shouldn't have been allowed to speak. He thought I had made elementary mistakes.

[23]Flaxseed oil better than fish oil. [24]Bad results of flaxseed oil.

1. <http://ihaveneverdonethisbefore.com/2011/07/21/two-successful-dietary-experiments/>

2. <http://www.experienceproject.com/stories/Had-A-Gum-Graft/250104>

3.

4. <http://blog.sethroberts.net/2006/07/05/brain-food/>
5. <http://blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>
6. <http://www.blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>
7. <http://blog.sethroberts.net/2007/03/28/omega-3-and-dental-health/>
8. <http://blog.sethroberts.net/2007/11/22/at-thanksgiving-dinner/>
9. <http://blog.sethroberts.net/2007/11/06/omega-3-and-dental-health-even-more/>
10. <http://blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>
11. <http://blog.sethroberts.net/2007/11/16/omega-3-what-happens-when-you-stop/>
12. <http://blog.sethroberts.net/2011/03/03/root-planing-cancelled/>
13. <http://blog.sethroberts.net/2007/10/03/joyce-cohen-gets-her-teeth-cleaned/>
14. <http://blog.sethroberts.net/2007/10/03/joyce-cohen-gets-her-teeth-cleaned/#comment-48774>
15. <http://blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/#comment-342479>
16. <http://forum.quantifiedself.com/thread-the-effect-of-diet-on-energy-focus?pid=505#pid505>
17. [http://www.sciencedaily.com/releases/2010/10/101026090655.htm?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+sciencedaily+%28ScienceDaily%3A+Latest+Science+News%29](http://www.sciencedaily.com/releases/2010/10/101026090655.htm?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+sciencedaily+%28ScienceDaily%3A+Latest+Science+News%29)
18. <http://www.ncbi.nlm.nih.gov/pubmed/3522645>
19. <http://thelancet.it/journals/laninf/article/PIIS1473-3099%2810%2970029-3/fulltext>
20. <http://blog.sethroberts.net/2007/08/17/why-does-gum-disease-correlate-with-heart-disease/>
21. [http://www.spacedoc.com/statins\\_inflammation\\_heart\\_disease.html](http://www.spacedoc.com/statins_inflammation_heart_disease.html)
22. <http://jn.nutrition.org/content/117/3/599.full.pdf>
23. <http://paleohacks.com/questions/30520/why-does-flaxseed-oil-have-a-better-effect-on-my-gums-than-fish-oil#axzz1SsBA10v2>
24. <http://forum.quantifiedself.com/thread-the-effect-of-diet-on-energy-focus?pid=526#pid526>

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Allen K. (2011-07-24 09:49:00)

I think you've mentioned before, but I can't locate it now – where do you recommend buying flaxseed oil in Berkeley? (Where I am presently.) And was there a kind to get vs. a kind to avoid?

Flaxseed Oil? | Mark's Daily Apple Health and Fitness Forum page (2011-07-24 11:10:36)  
[...] [...]

Seth Roberts (2011-07-24 12:45:28)

I have tried Spectrum, Barleans, and the Whole Food house brand flaxseed oil and noticed no differences between them. I have bought them at Andronico's and Whole Foods.

SM (2011-07-24 13:35:24)

Seth, The overall effect seems substantiated, but the mechanism, not so much. How do you know it's the omega 3? And wouldn't it be pretty easy to test this – just substitute the flaxseed oil for fish oil and see if the effect remains? If anything, the effect should be stronger, since omega 3 from animal sources is shown to be much better assimilated by humans. Also, if it is in fact omega 3 (a big if), I think a much better prescription is to cut down on omega 6 rather than load up on omega 3. Omega 3s are anti-inflammatory only because most people's diets are way too overloaded with omega 6s as a result of our modern industrial diet/food system. Omega 3s just balance out Omega 6s (they work antagonistically), they aren't really anti-inflammatory in and of themselves. Always better to eat a good diet rather than supplement to make up for a deficiency, in my opinion.

SM (2011-07-24 13:40:25)

BTW, just noticed the flax oil vs. fish oil link at the bottom of the post. So I guess that's one data point negating the omega 3 mechanism.

Mike (2011-07-24 15:29:12)

As always, interesting stuff, Seth. What are your thoughts on the low human conversion of ALA to EPA and DHA, and, based on that, fish oil supplementation over flax? Or is there a constituent of flax beyond EPA & DHA that is reducing inflammation?

Seth Roberts (2011-07-24 18:34:28)

Mike, I think that the experiments that have measured conversion rate have not realized there is a large effect of experience: the more you eat a food, the better you get at digesting it. They probably gave ALA to people unfamiliar with it.

Seth Roberts (2011-07-24 18:42:32)

SM, I believe that omega-3 is responsible for several reasons, above all that others have gotten similar results with fish oil. "Better to eat a good diet": It is much easier to vary the dose by varying amount of flaxseed oil. Varying the amount of omega-6 by varying the amount of "good diet" would be hard. Simply reducing the amount of omega-6 will not necessarily increase the amount of omega-3 in the brain. It may be much easier to increase the amount of omega-3 in the brain by increasing the amount in the diet.

Julia (2011-07-25 06:22:45)

Very interesting! My gum health has improved since I've been adding 2 tablespoons of ground flaxseed to my yogurt in the morning. Not to mention my hair and nails are doing exceptionally well.

Seth Roberts (2011-07-25 07:26:43)

Julia, that's very interesting. Could you say more about the improvement in your gums, hair, and nails? When did you start adding 2 tablespoons of ground flaxseed to your yogurt? What caused you to make this change?

Fred Stange DDS (2011-07-29 05:02:13)

I have also seen the benefits of Omega 3 oils in my patient's diet. In 3 different instances I have asked what the difference in their hygiene routine was...nothing, just adding the Omega 3. Of course this will not take the place of brushing and flossing as you see here...our writer began brushing and flossing better as well. The Omega3 reduces the inflammation in the body and thus the gum tissue improves as well. Bleeding gum is the body response to "infectious" bacteria remove the bacteria and the body response will return to less bleeding. Brushing Flossing and Omega3 things will look much better. Your gum graft may be a separate issue as the Omega3 oils will not change bone levels below the gum tissue however this is a separate issue and sounds like you are on a good track!

Daz (2011-07-29 16:04:04)

my last comment did not appear. so this is a test comment. thanks for the post Seth.

Daz (2011-07-29 16:06:13)

Thanks for some very informative articles on Flax. Your post 'flaxseed-oil-vs-fish-oil' was a great brief snapshot for me. Paul Jaminet pointed me over here, after I asked a question on ALA (from Flax oil). Reading your posts has reinforced my recent decision to start back on the flax oil after I quit back in Jan this year (2011). From memory I quit to reduce my Poly intake & after reading some negative comments over at raypeat.com on linseed (flaxseed). Have you tried Chia Oil, its EFA breakdown is very similar to Flax Oil, do you think it would work the same as Flax oil?

Seth Roberts (2011-07-29 17:14:08)

Comments must be approved before they appear.

Seth Roberts (2011-07-29 17:15:19)

I haven't tried Chia Oil. I will look into it. Yeah, if its EFA profile is similar it should have similar effects.

Tana (2011-11-01 07:21:36)

I started taking 2 TB of flax oil daily about four days ago and now my gums are barely bleeding at all after I brush and floss. My gums were red, swollen and would bleed after I brushed and flossed and are now pink and healthy looking. I've had this problem for years and I could not understand why it would keep happening even though I was consistent with my dental routine. I take the berry flavored Barlean's flax oil mainly because it tastes good and so I look forward to taking it- if it was gross I would not be consistent with taking it. Anyhow, thanks for the information! I wish dentists would look into this but they probably won't so I'm glad that you do.

Parviz Edalat (2012-01-13 08:09:38)

That's very attractive. Can you say more concerning the development in your gums, hair, and nails? When did you start adding up 2 tablespoons of land flax-seed to your yogurt? What caused you to create this change?

### **Yogurt and Nuts Correlate With Weight Loss: Why? (2011-07-25 05:00)**

[1]A new longitudinal study finds:

Despite conventional advice to eat less fat, weight loss was greatest among people who ate more yogurt and nuts, including peanut butter, over each four-year period. . . .

That yogurt, among all foods, was most strongly linked to weight loss was the study's most surprising dietary finding, the researchers said. Participants who ate more yogurt [than the average for all participants?] lost an average of 0.82 pound every four years.

Why might this be?

Yogurt and peanut butter are both unusual foods. Yogurt is strange because unflavored yogurt has little or no smell. It tastes good for other reasons: strong sourness, creaminess, and coolness. People are also pushed to eat it not only by how pleasant it is to eat but by the thought that it is good for them. Most foods, in the form that we eat them, have a smell. I explain the yogurt results by saying that yogurt consumption replaced consumption of foods with stronger smells.

Peanut butter is unusual because when I was visiting publishers to sell The Shangri-La Diet, I met a woman who told me she had lost weight simply by eating peanut butter – that is, by adding peanut butter to the rest of her diet, making no other changes. I think she ate about 3 tablespoons per day. This predisposed her to think there might be something to my ideas. No one has ever told me such a story about another food. If peanut butter has a smell, it's really weak. It's pleasant to eat because of fat content and texture. When I was a boy, my mom made me peanut butter sandwiches (no jam) for school lunch. I never came to like them. This implies I never learned a smell-calorie association. The bread must have supplied a strong fast calorie signal so this implies that the peanut butter generated little or no smell signal.

Thanks to Eri Gentry.

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Glen Raphael (2011-07-25 07:09:52)

If you google "peanut butter diet" you find a lot of recipes that involve adding peanut butter to familiar foods. Mix peanut butter into your oatmeal or your maple syrup or what-have-you. That seems like a form of "crazy spicing" to make your familiar foods taste a little strange. If the peanut taste is dominant it could also make your overall diet seem more bland. I may have to try it and report back.

David (2011-07-25 09:37:34)

I've also noticed an SDL-effect with scrambled eggs and toast or tortilla. No strong smell -> weight loss.

Elisa (2011-07-25 09:56:55)

Eh? Peanut butter is one of the most recognizable smells. It's a strong smell. I think it's the fat. Eating a spoonful of peanut butter is similar to drinking a tablespoon of oil (but much tastier).

Weston (2011-07-25 11:18:18)

I've got to agree with Elisa. I would not categorize peanut butter's smell as "really weak"

Kirk (2011-07-25 13:05:46)

But without the data, it's all speculation. I can just as easily explain the yogurt results as a replacement of 'bad' gut bacteria with 'good' bacteria, which leads to signals by the 'good' bacteria to the brain to ingest more nutritional food and less junk food. Or another explanation: people who eat yogurt generally eat more nutritious food in general than those who don't. Also, most yogurt on the store shelves is flavored and sweetened. That's why I would want to see the data, in detail. The study was supported by grants from the NIH; as a taxpayer, I want that data made available for analysis by others (presuming, of course, that the identity of the participants can be obscured.)

Justus (2011-07-25 13:54:10)

Isn't the real news that 0.82 pounds over four years is pathetic? Would you change your diet if you were told it would help you lose a quarter of a pound a year?

Seth Roberts (2011-07-25 15:28:17)

Kirk, in my experience speculation based on data is where good ideas begin. Where experiments begin. For example, this result might be followed up by an experiment where people deliberately eat yogurt. That would help establish cause and effect. If yogurt really did cause weight loss I would predict that flavored yogurt would cause less weight loss than unflavored yogurt. If that were true it would support my explanation (lack of smell) over yours (replacement of bad gut bacteria) because my explanation would have made a correct prediction. If both flavored and unflavored yogurt produced the same weight loss that would support your explanation over mine.

David (2011-07-26 00:05:11)

Justus: If I were gaining weight and someone said eating some yogurt and nuts (not such a bad thing) would make me stop gaining weight and start losing modest amounts, I'd be interesting. So we'd have to know how the non-yogurt and nut eaters did. Anyway, you can do much better than .82/4 years with SLD techniques.

Kirk (2011-07-26 12:05:35)

That would be an interesting experiment; a group eats plain yogurt, another group eats flavored yogurt. If they ate the yogurt only during an SLD-like eating window, then I agree the plain yogurt folks would probably lose more weight. I don't think SLD would apply if they ate the plain yogurt with other foods. The thing is that this longitudinal theory suggests three theories to

me, and I sympathize with all three theories. The first theory is SLD. I agree that SLD techniques work. Used them myself. As for the impact of SLD on this study, I suspect little impact, unless the data shows that people took extra effort to eat certain foods during an SLD-like eating window. The second theory could be labeled the Paleo eating theory. If I had to make bets on this particular longitudinal study before seeing the detail, this is the theory I would choose as to what influenced the weight loss. I suspect that the people who lost weight shopped the edges of the grocery store . . . they ate fresh fruit, fresh vegetables, meat, fish, eggs, cooked their own food, avoided industrial seed oils and processed foods, ate fewer neolithic grains, and so on; the way of eating as articulated by Robb, Mark, Chris, Kurt, and Paul and Shou-Ching. The final theory, and it's a long shot, is the influence of good bacteria. I'd be tempted to place a 'long bet' on bacteria therapy as an eventual cure for obesity. As for yogurt, the shelves are crowded with flavored yogurt, and my guess is that most people who buy plain yogurt take it home to eat it with their own favorite flavoring . . . cinnamon sugar, honey, maple syrup, or their favorite granola. To me, peanut butter has a strong smell. That would be an interesting experiment for you and your friends . . . a blind smell test, and include peanut butter amongst the candidate foods. Perhaps peanut butter is a bland smell to you. I just ran a (visible) test and found that I could identify the smell of peanut butter when my nose was positioned 4 inches above a open jar.

Kirk (2011-08-07 13:35:31)

from [http://www.swissbusinesshub.com/photos/news/YogurtMarket\\_US.pdf](http://www.swissbusinesshub.com/photos/news/YogurtMarket_US.pdf) Sales and Market Share by Flavor (2001) Flavor, Value ( \$ Millions) Plain, 123.4 Vanilla, 150.8 Flavored, 1995.9

### **Finding The Source of Migraines (2011-07-25 15:51)**

Please read [1]my story at Boing Boing about how a woman figured out what caused her migraines. I am always interested in cases where people figure out for themselves how to be healthy. If you have a story like that please contact me.

It has generated a lot of comments. Mark Frauenfelder, who posted it, told me he knew it would generate a lot of comments and one of the first would be "anecdotes are not data". He was right. [2]Preventive stupidity in action. It tells you something that scientists teach that "anecdotes are not data", when all major scientific truths, as far as I know, began with a single observation. For example, the discovery of electricity began with a single observation that a dead frog's leg twitched when touched with a scalpel. Why is something so at odds with reality taught and repeated by scientists, whose job is paying attention to reality? My explanation is human nature: How much we enjoy feeling superior.

1. <http://boingboing.net/2011/07/25/finding-the-source-of-migraines-and-fifty-useless-migraine-drugs.html>

2. <http://blog.sethroberts.net/2010/05/12/preventive-stupidity-exists/>

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some anonymous guy (2011-07-25 18:11:04)

The dismissive comments to your post are infuriating me. It's as if everyone has forgotten, or been brainwashed to forget what science actually is. All they can see now is "science industrial complex" not the actual genuine process. It's so strange to me that the whole system has managed to sort of stamp out the type of independent inventor and discoverer activity that is responsible for the largest advances in medicine – the kinds that existed way before the whole complex was even around. Not only that, but you must have the politically appropriate scientific beliefs (as defined by the complex) at all times otherwise people try to threaten and reject what you say as "not science". Newton spent a large amount of time dabbling in alchemy and trying to decode the bible for hidden messages... but you know, he did some other interesting things too.

Seth Roberts (2011-07-25 19:47:53)

Thanks. I am not yet sure what to learn from all the dismissive comments but I agree there is something importantly bad about them.

JeffR (2011-07-25 20:10:15)

I think "anecdotes are not data" should be thought of as meaning more evidence should be pursued, not that the particular example given is wrong. Sometimes people "discover" a cure for their disease or a way to be healthier and they are in fact mistaken. I'm sure you understand there are lots and lots of people on the internet with wrong ideas about health due to something they think happened to them (an anecdote). In those cases, pursuing more data will reveal the mistaken association. Whereas in this case, pursuing more data could validate what she learned about migraines. Or not, which is of course the key part. How do we ever learn truths about health unless we are willing to go past the single data points.

JeffR (2011-07-25 21:51:29)

And later that very night, I found an example for Seth of someone finding a health solution by personal observation. Caffeine and dementia. <http://www.tinyrevolution.com/mt/archives/003542.html>

Tom (2011-07-25 22:05:16)

*Thanks. I am not yet sure what to learn from all the dismissive comments but I agree there is something importantly bad about them.* You know what I think it is? There is this mindless herd rage, bordering on lethality, at people who *don't know their place*. It's the same impulse that led to hundreds of thousands of people making the most vicious statements about Rebecca Black, the middle-schooler who dared make a music video. People pretended they were enraged by the song, but they were actually enraged because she dared to act like a rock star without having been anointed by the music establishment. The comments on the migraine article are the same phenomenon. They're at a higher reading comprehension level, but its still all about class, and the primitive urge to destroy those who don't cower accordingly.

Seth Roberts (2011-07-25 22:26:56)

In the migraine example, I don't see how Sarah could be "mistaken" about what caused her migraines. She did hundreds of tests.

Michal (2011-07-26 09:42:55)

This article highlights one of the biggest problems with medicine. The girl tried 50 different drugs and they didn't work. The messed up part is that this is a best case scenario. She was forced to figure out the cause of her migraines. If there was a drug that worked it wouldn't have been like an antibiotic. You don't take an antimigraine drug for 2 weeks and then are cured for life. You have to keep taking it and dealing with side effects for the rest of your life. Modern medicine is great at treating symptoms but tends to be poor at finding and treating causes.

Susan (2011-07-26 09:52:52)

After over 20 years of migraines, and after much searching, I finally discovered the reason: aspartame. I never used the sweetener packets, but found aspartame interspersed among the items in my pantry and refrigerator. It's been almost two years now since I've had a migraine. What a relief!

James Lockwood (2011-07-26 18:09:13)

One story of a self-cure would be Jasper Lawrence's. He went to Africa, infected himself with hookworms, cured his asthma, and started a company selling them. <http://www.asthmahookworm.com/> <http://autoimmunetherapies.com/> Another individual who found a self-cure would be that of Gary Rea, who went on the Paleo Diet for a year with amazing results. He is no longer a type II diabetic, his blood pressure has gone from 180/90 to 115/72, he went from 233 lbs. to 160 lbs. and, at 56 years old, his body looks like it did when he was in his 30's. <http://paleoeater.blogspot.com/> <http://www.thepaleodiet.com/>



heffiji (2011-07-27 16:08:48)

As someone who was raised and trained as a scientist and worked for years in medical research, you are spot on. Though there is more to it than just ego, there are also particular issues in science surrounded by a deep cultural well of buttheadedness around a truth being suppressed for some reason. I think of them as f-nords, though it's a bit removed from the original definition. "Things one is not supposed to question or think about", science has them too. Some of it is obviously profit-based upon closer inspection, some of it is weirder, like the "central dogma" of molecular biology, so named by Francis Crick because he was trying to point out that it has absolutely no basis in evidence or sense and was in fact a moronic thing to assume. The named assumption is that information only passes from the DNA to the RNA and there is no means other than completely random mutation combined with successful reproduction to change the DNA. Which of course has been disproven in many ways by now. That one comes in part out of the politicization of science by the communist/capitalist thing, each side tried to warp their science to support their ideology, I heard the story first from a microbiology prof. But my point was, actually thought in science is cluttered up by all sorts of variously motivated PR campaigns against various ideas, old and new, buttheadedness plays into it but there is more going on than that. You are spot-on about the difference between real science and what currently goes on in medicine. My doctor can not look at my problem like a scientist even if he wants to. I can tell him what happens to me and how to test it, and he can probably think of tests I wouldn't even know about, but he/she has to work from a script and within the limits imposed by a whole flock of bureaucracies, none of whom have anything to gain by actually helping me. In the end even if he believes me and wants to help, he won't do the tests that could prove the question because there is no way to bill for it, full stop no appeal. And yes, looking at the anecdotal and even utterly mundane is exactly where a lot of breakthrough science comes from, and from looking at the places where the current assumptions seem to not actually hold true. The problem lies in how it gets chosen what gets researched, and in the way the industry has warped to game the patent laws. Nothing easier than not funding research and using 'lack of evidence for efficacy' as a dismissal. On the subject of medical miracles: the news is full of them, I know, legitimately miraculous and wonderful things. Science fiction become reality, lives saved and greatly improved. But when I go to the doctor with crippling pain, they genuinely have no way to tell the difference between me and some plausible con looking for opiates for a good time, because the state of the art method for determining my level of pain is to ask me how bad, on a scale of one to ten, I think it is. They don't even ask me what personal experiences might have formed my scale, that does vary widely, seems like they should care. The world is full of hustlers who are far more plausible telling a complete fabrication than I am being dead honest, medicine really needs a reality check or three, there is really no excuse. Seriously. They are not really that utterly and completely helpless that they can not come up with one single solitary objective test if they actually tried even a little bit. They have monkeys moving computer cursors with their minds, and do some damn fancy research when trying to improve their ability to sell me things, and they can't do a single chemical or imaging test to find some evidence of genuine pain meaning something is wrong and a closer inspection is in fact warranted? That should not be passing anyone's bullshit detector. Look at your medical care as if it were some other service, are they actually even trying to fix what you really want and need fixed? If I don't sound like a crank yet I will the instant I say "government-backed monopoly", but that is exactly what we have and exactly what the problem is. I don't have a grand plan to fix it, I just have seen some of the ways it is broken. :-)

Seth Roberts (2011-07-28 09:15:37)

You put it well. Especially: 1. "None of whom have anything to gain by actually helping me." 2. "Nothing easier than not funding research and using 'lack of evidence for efficacy' as a dismissal."

## **Billionaire, Genius, and This? (2011-07-25 21:04)**

Nathan Myhrvold is presumably a billionaire. He is regularly called a genius. Yet he is in charge of a business (Intellectual Ventures) that one person, in [1]a great This American Life podcast, compared to the Mafia.

1. <http://www.podtrac.com/pts/redirect.mp3/podcast.thisamericanlife.org/podcast/441.mp3>

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wcw (2011-07-25 21:18:43)

The only surprise here is that you are surprised.

Seth Roberts (2011-07-25 22:24:49)

wcw, why should I have not been surprised?

Nathan Myers (2011-07-26 01:13:38)

I can answer that. This person learned business at Microsoft, where the most appealing business model in any market was always extortion. He found a business that was inherently extortionate, yet inherently proof against anti-trust law, and is exploiting it with great energy. Were you going to suggest that genius implies ethical behavior? Maybe you should see the movie "Mars Attacks". Or, that everybody's definition of genius is the same? Many people admire "genius" Bill Gates, apparently just because he got lots of money through largely extortionate means. Did Myhrvold ever do anything that benefited society or the species, or is he just clever with applied math problems? There's nothing more wrong with cleverness than with a capacity for hard work. Either way, what matters is what you do with it. Edward Teller had a (probably much better deserved) reputation for genius, yet spent most of his life arranging for a large fraction of his adopted country's wealth to be consumed in constructing and operating weapons of mass destruction.

Darrin Thompson (2011-07-26 07:13:12)

The US patent system is an economic disaster. Patent trolls are this disaster's looters. Their only redeeming purpose in life is that they call attention to the problem that is modern patents. If Nathan Myhrvold is a genius then so is Jeffrey Skilling. IMHO.

Seth Roberts (2011-07-27 09:59:47)

My reasoning is billionaire x genius = better business opportunities than patent troll

Dr W (2011-08-21 09:01:18)

Nathan Myers, funny thing you should mention Teller, Myhrvold's best friend is apparently Lowell Wood, the man who was chief scientist for the US "Star Wars" program and actually did much of the technical work for Edward Teller back in the day!  
<http://www.atmos.washington.edu/bitz/111/readings/drevil.pdf>

## **Phone Hacking and Jane Jacobs (Roberts/Jacobs emails: Part 1 of 3) (2011-07-26 05:00)**

After I wrote about [1]the relation between Jane Jacobs's ideas and the British phone-hacking scandal, I heard from Jim Jacobs, one of her sons. He wrote:

Mary Rowe forwarded your post about News of the World and Systems of Survival. It's an interesting observation. Here's my take on it:

The moral principle we all value most in our news media is 'Be honest'. Even the slightest deviation is viewed with alarm. Among other types of dishonesty, when newspapers get too close to government or filter their presentations through ideology they become worthless, often destructive. This requirement for honesty pervades the work of searching out the news too, just as it does for scientists searching for an understanding of something. (We expect reporters to respect 'off-the-record' confidentialities, for

example.) Together with honesty, the entire commercial moral syndrome fits a newspaper, whatever its size. I won't repeat the list here, but just look at it and see if you don't think every one of the commercial moral principles are considered admirable in a newspaper, right down to 'Be optimistic' - newspapers are frequently criticized for too much doom-and-gloom. Note that there is no moral principle of 'Sell more newspapers': commercial morals don't always lead to financial success. In fact, what Jane dubs 'Monstrous Hybrids' are often the roads to quick, immoral, riches. Media empires frequently drift toward guardian morals, immoral for them, and Murdoch's is no exception. Therein lies their destructiveness, and eventual demise.

I hope this helps.

I replied:

It's great to have your take on this. Here's what I think about the points you raise.

For newspapers the overwhelming value isn't "be honest" but "be accurate". Honesty is saying what you think; accuracy is being accurate in what you say. It's easy to be honest and inaccurate.

I believe that powerful newspapers consider themselves a fourth branch of government, and rightly so. Publication of the Pentagon Papers, for example, had nothing to do with selling more papers; it was all about fulfilling their responsibilities - which included loyalty to readers.

"Shun trading" is a part of newspaper practice in the sense that paying for interviews is thought to be bad. "Respect contracts" is not supposed to apply to them - it is bad for a magazine to strike a deal with a celebrity in order to get their cooperation.

"Be optimistic". Sure, some readers want newspapers to be different, including more optimistic. They want more entertainment listings, for example. They want more stories about celebrities (and Murdoch gave them this). But the people who run powerful papers don't agree. Editorials are usually preachy: this is bad, that is bad. That's not entertaining at all - which is why Us magazine has no editorials - but whoever writes them thinks it is their job to make the world a better place by telling others what to do. When one of Murdoch's lieutenants took over the Wall Street Journal, he said something about other papers being too concerned with their status in the eyes of other journalists (an example of "treasure honor") than selling newspapers. Whereas to NY Times journalists, Murdoch's papers "pandered".

"Respect contracts". I agree with you there.

"Come to voluntary agreements." Newspapers are supposed to be nonviolent, yes. But when they have something important to say - e.g., some dirt to reveal - they are supposed to ignore legal threats. For example, the CBC is now being sued by a nutrition researcher because they aired a negative program about him.

"Deceive for the sake of the task." Journalists do this all the time. For example, a restaurant reviewer will wear a disguise.

"Treasure honor". There is now talk of a Hippocratic oath for journalists.

"Dissent for the sake of the task." I don't see that. I see newspapers with a party line. For example someone was fired from NPR recently for expressing views his bosses didn't agree with.

"Be open to inventiveness and novelty." I don't see this. Perhaps newspapers are no more stagnant than other powerful companies however.

Because newspapers are actually businesses, they do value certain commercial values. But they see themselves as quite different from other businesses. Few people in other businesses are so concerned with "truth" and "the public interest".

I will post Jim's reply tomorrow.

1. <http://blog.sethroberts.net/2011/07/13/phone-hacking-and-jane-jacobs/>

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Jake (2011-07-26 07:40:31)

Happily for accuracy and honesty in the world, the audience for mainstream media is shrinking every day. In fact they are irrelevant in today's world. Accuracy and honesty takes a leap forward whenever a journalist loses his job. And there is plenty to cheer about with ever increasing layoffs in the media.

### **Phone Hacking and Jane Jacobs (Roberts/Jacobs emails: Part 2 of 3) (2011-07-27 05:00)**

<http://blog.sethroberts.net/2011/07/26/phone-hacking-and-jane-jacobs-robertsj>

acobs-emails-part-1-of-3/ of [1]Jane Jacobs's Systems of Survival and the British phone-hacking scandal continued. Jim wrote:

It's of course important to look at what morals a newspaper is admired for, not what it does, nor what makes it successful. Jane was often frustrated at how people found it difficult to sort out which moral syndrome they belonged in, most often imagining they were 'guardians' when they weren't. She thought in part it was the name 'guardian' that led people astray.

In the sense Jane uses it, 'Be honest' here means do your best to report the truth, or report what you think, but not to pretend one is the other. We don't admire Fox for saying what they think mixed with what they observe, and newspaper editorials are admirable when kept separate from the news.

Opinionated tracts and advertising copy can be fine and honest representations of someone's opinion, but they aren't newspapers. Accuracy as an admirable trait is, like bravery, universal, and thus not useful in distinguishing one moral syndrome from another.

This is going to be long-winded, I'm afraid.

Look at the Commercial list:

Shun force - violence inflicted on reporters is never admired, nor is 'embedding' them in army forces.

Come to voluntary agreements - Armies and government are allowed great latitude in the means they use to get information. Reporters are expected to work with information voluntarily given, and payment to a source for an exclusive interview is considered part of legitimate competition. Hacking phones is not a voluntary agreement. It's considered admirable when used by government to catch criminals, but not when done by a newspaper. Wikileaks is admired for bravely putting out information voluntarily provided to it; the soldier who provided it is rightly despised by the Army (operating under guardian morals).

Be honest - A reporter who augments his story with stuff that might have been true, or chances things like names without telling the reader is considered reprehensible. (But it's fine for a novelist, even an historical novelist.) So are dishonest business dealings of the organization. This is pretty much the same situation for scientists (always governed by the commercial syndrome, as we both know, and used as a drawn-out example in *Systems of Survival*). As Jane points out, scientists need to be honest in their means as well as their ends - no pirated software. Newspapers do dishonest things all the time, but they aren't considered admirable.

Collaborate easily with strangers and aliens - reporters are admired for getting a story from someone they don't know, often in a foreign land and language. A recent Toronto reporter was greatly admired for getting in-depth interviews from Taliban fighters and reporting what was said.

Compete - We admire a reporter who gets the scoop. We don't admire anti-competitive collusion by media empires.

Respect contracts - Confidentiality agreements with sources are contracts as are 'off-the-record' agreements. Newspapers are admired for respecting both, even when this restricts the information that can be provided. Judith Miller was admired for going to jail to 'protect her source's identity' and then despised (and fired from the NY Times) when it turned out she was actually working with Bush to slant the news to support their shared ideology.

Use initiative and enterprise - Any clever way to get a story is admired, as long as it's honest.

Be open to inventiveness and novelty - Newspapers are admired for putting their content online, even if they still haven't figured out how to make any money there. Newspapers are admired for endlessly tinkering with their format, even if they get it wrong trying. Newspapers were admired for being pioneers in new printing technology.

Be efficient - There are many kinds of efficiency, but efficient writing is something newspaper reporters have always been especially admired for, even when it makes for less-fun reading. But honesty and voluntary agreement trump efficiency, always, in commercial morals. Hacking phones may be efficient means, but not admired.

Promote comfort and convenience - A newspaper is admired as a bulwark of everyday civilization and a bastion of consumerism.

Dissent for the sake of the task - News reports that bravely dissent from the government line or from advertisers' vested interests are admired. Crusading journalism is admired as long as it's truthful.

(A reporter too close to his story is considered suspect.) Governments that shut down dissident papers are not admired.

Invest for productive purposes - Newspapers are admired for using their resources in getting their job done. Conrad Black was criticized for using his papers' resources to support his political causes and lavish lifestyle. Likewise Murdoch.

Be industrious - The steady work of putting out a paper every day is admired. A daily paper that can put out a brilliant edition once a week and can't get it together the other days is criticized, and soon slips to being a weekly. Although a paper may happily report flamboyant leisure it shouldn't indulge in it itself.

Be thrifty - No media was ever admired for wasting money, or time. Getting a story may involve expensive travel for example - that's productive investment - but it shouldn't be wasteful or show-off.

Be optimistic - Although much of the news that's important is bad ("No news is good news.") news media are praised for an optimistic outlook, even when pessimism might be more realistic.

Now, go through the guardian list (a little more quickly, I hope):

Shun trading - Media are admired for trading information with each other. Buying and selling information is despised when done by spies (guardian morals) but not when done by the newspapers.

Exert prowess, Show fortitude - Media powerhouses are not admired for using their strength to suppress small independents (as Amazon is now trying) or to control government policy. Media execs who go into public service (Bloomberg) are expected to keep hands-off and are criticized for using their power (and even their money) to support their careers. All these things are commonly done, but they aren't considered admirable.

Be obedient and disciplined & Respect hierarchy & Be loyal - This is what's needed in a government-controlled propaganda paper - always despised. When there's no conflict between loyalty and honesty there's no problem; but when they're in conflict which way should a newspaper go? Honesty is the moral imperative for a newspaper - loyalty is more important to the army it may be writing about. A paper that thinks it's an arm of government is in moral trouble.

Take vengeance - Media competition is considered good and moral - vendettas are not.

Deceive for the sake of the task - A reporter is expected to identify himself before asking questions. When they don't they're criticized. Deceptions (and force) used by paparazzi to get a photo are not admired. Reporters are not admired for tricking each other in competitive zeal. Media companies and their execs are never admired for deceptive business practice (Conrad Black is now in jail). Small innocent deceptions of the reader to give him a better story are considered inappropriate. All of these things are done, of course, and often to good effect - they just aren't good media morals.

Make rich use of leisure, Be ostentatious, Dispense largesse - These are characteristics of media empires, like Murdoch's, and are considered immoral and inappropriate, even when they appear to be harmless. Charity, on the other hand, is one of the universally 'good' morals, for everyone, but often confused with largesse. Papers that promote charities are admired for it.

Be exclusive - In Jane's context, exclusive means avoiding outsiders. The diametrical opposite of

Collaborate easily with strangers and aliens. It won't help a media empire to behave like that, and even the Murdochs' excessive aloofness is criticized as poor form.

Be fatalistic - A newspaper that thinks there's no hope for change, even if there isn't, has given up. Why would you go to all the trouble to find and write the news if you didn't hope it could do some good. Copy that's purely for entertainment value (News of the World?) is considered lightweight, frivolous, dumb. To say it's just to sell newspapers, or just to sell advertising, is cynicism obscuring the point.

Treasure honor - When a newspaper makes a mistake should it protect its honor by hiding the error? It was a huge embarrassment to the NY Times when the NY Review reported that the Times' lead reporter, Miller, had been slanting the news in favor of the invasion of Iraq. The Times was admired for coming clean, its honor badly tarnished.

Seth, all the bad stuff the Murdoch press has done, and been roundly criticized for, and many other deficits - are the result of moral slippages, largely into guardian territory. That some of these help sell papers is beside the point. Lots of immoral things are profitable, although always corrosive. There is no smooth transition from one moral syndrome to the other as an entity grows larger. And mixing syndromes is the moral disaster Jane is most vociferous about, largely because of its insidiousness. As you say, Systems of Survival is helpful in understanding this stuff, but it isn't easy. Jane sometimes regretted having left out too much helpful stuff in the interest of keeping the book short and readable.

Tomorrow I will post our concluding emails.

1. <http://blog.sethroberts.net/2011/07/13/phone-hacking-and-jane-jacobs/>

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### **Phone Hacking and Jane Jacobs (Roberts/Jacobs emails: 3 of 3) (2011-07-28 05:00)**

After I posted on [1]the relation between Jane Jacobs's ideas and the British phone-hacking scandal, Jim Jacobs, one of her sons, wrote to me. The first back-and-forth emails in our discussion are [2]here and [3]here. Finally, I wrote:

Thanks for more explanation. You're quite right that exposure of the truth is at the heart of journalism and is utterly counter to what governments want. In this sense good journalism and governments are opposites - or rather opponents. In this sense, also, journalism is inherently populist whereas governments rarely are. Businesses are inherently populist.

On the other hand, journalism is not a standard commercial enterprise. This is why at many publications there is strict separation between advertising (devoted to raising money) and "editorial" (which spends it). They don't want what they print to be affected by commercial considerations. That is utterly different than a conventional business. Powerful newspapers, such as the NY Times, see themselves (rightly) as far more than mere commercial enterprises - which is one reason the NY Times has lost so much money lately. It is one reason the NY Times took so long to get a sports section and why they barely have a gossip

column. I have seen too many "undercover investigations" and "hidden camera" interviews to believe that journalists find anything wrong with deceiving for the sake of the task. They usually identify themselves, true, but so do police officers.

Exclusivity varies with organizational needs. Journalists do mix with everyone to get stories but that's because of what they do; it couldn't be otherwise. Some religions (which are far more guardian than commercial) make a big deal out of missionary work – again, the details of their enterprise demand it. Along the same lines, some businesses try to appear exclusive – the nature of their brand (luxury) demands it.

I agree that journalists trade information and favors with powerful sources. (But think it bad form to pay for interviews.) Whether this is different than governments forming alliances and signing treaties I don't know.

Because journalism is actually a business, there are necessarily some commercial values, such as avoiding waste, being efficient, and so on.

In contrast to trading and rulers, which have been around for many thousands of years, powerful newspapers and powerful journalists are no more than a few hundred years old, if that. So there has been less time to clarify values. But there's a reason they're called the "fourth estate" – two of the other estates being religion and government.

And you've heard the phrase "the pen is mightier than the sword" – implying that the pen and the sword are on the same playing field. I can't imagine anyone saying "the jacket is mightier than the sword" or "the carton of milk is mightier than the sword".

To which Jim replied:

As I mentioned before, Jane had real trouble finding good names for the two syndromes. You can see it in the part of Chapter 2 where she talks about names - first A & B, then heroic is rejected, etc. and finally she ended up with commercial & guardian. She later regretted the choice because these names can be quite misleading. Activities using the commercial syndrome don't need to make money or be 'commercial' - most good science, for example. Activities using the guardian syndrome don't need to be guarding anything - classical music, for example. Writing can be either, depending on its use. Advertising shares much with propaganda writing - deception, ostentation, fortitude, etc. No wonder advertising and journalism need to be kept apart! Too much charitable work will ruin any business' profitability, but it isn't inherently at odds with the moral syndrome. Nor are stupid business decisions.

I agree that journalists do use unscrupulous means to get their information - like hacking phones. It works. It's effective. But it isn't right, and in the end, like all unethical behavior, there'll be a comeuppance. But what's wrong for a journalist is right for a police detective, as Jane explains.

Religions are guardian activities, as you say, and missionary work can be either charity or largesse, or a mix. It's not an aberration that missionaries were traditionally expected to remain aloof from their flocks, just as religious leaders were. Although a luxury goods dealer may sell its goods to royalty, it should itself operate 'commercially', being non-exclusive in its dealings with suppliers, rich foreigners, etc. Journalists get much of their material from government, and to government the selling of information is treason.



Don't expect government to give such activity any blessing! Unlike the breaking of a contract, the breaking of a treaty between governments is considered 'strategic' (the Hitler/Stalin pact, for example). Between governments the aberration is a contract (Alaska purchase, for example).

Journalism may be older than one would guess. Sometimes it's hard to tell after ages of editing and translation. Homer probably wrote propaganda, but Herodotus and Thucydides, although usually thought of as historians, seem much like journalists to me - their values certainly align with those of journalists. And just as the sword and shield can be used to make dinner (paella may have originated as a soldier's meal, prepared on a shield) so may the pen be made to serve both commercial and guardian work - and be mighty in either role.

And there you have it.

- 1.
2. <http://blog.sethroberts.net/2011/07/26/phone-hacking-and-jane-jacobs-robertsjacobs-emails-part-1-of-3/>
3. <http://blog.sethroberts.net/2011/07/27/phone-hacking-and-jane-jacobs-robertsjacobs-emails-part-2-of-3/>

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### Assorted Links (2011-07-29 05:00)

- [1]The Practice of Personal Science (talk by Gary Wolf)
- [2]fingerprints predict mental abilities (might be gated).
- "When compared with nondepressed individuals, both medically ill and medically healthy patients with MDD [Major Depressive Disorder] have been found to exhibit all of the cardinal features of inflammation." [3]Article [here](#).
- "A professor of physics [from Australia] told me: Brian [J. O'Brian, a professor of physics], I completely support what you're saying [about lack of evidence for man-made climate change], but I've got 65 researchers in my laboratory and the only funding I can get for them and to get their PhDs is greenhouse funding from Canberra or wherever. Twenty years people have been indoctrinated.". [4]Excerpts [here](#).

Thanks to [5]Mark's Daily Apple.

1. [http://www.youtube.com/watch?v=1d7ZnoeXSTQ\[/video\]](http://www.youtube.com/watch?v=1d7ZnoeXSTQ[/video])
2. <http://www.sciencedirect.com/science/article/pii/S0191886900000568>
3. <http://archpsyc.ama-assn.org/cgi/reprint/67/12/1211?maxtoshow=&hits=10&RESULTFORMAT=&fulltext=raison&searchid=1&FIRSTINDEX=0&resourcetype=HWCIT>
4. [http://blogs.news.com.au/heraldsun/andrewbolt/index.php/heraldsun/comments/a\\_professor\\_speaks\\_out\\_money\\_has\\_corrupted\\_our\\_global\\_warming\\_debate](http://blogs.news.com.au/heraldsun/andrewbolt/index.php/heraldsun/comments/a_professor_speaks_out_money_has_corrupted_our_global_warming_debate)
5. <http://www.marksdailyapple.com/monday-musings-dirt-deficit-depression-active-learning-and-thought-for-foo>

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## Morning Faces Therapy For Bipolar Disorder: A Story (Part 2: First Two Months) (2011-07-29 05:00)

In the 1990s, I discovered that if I see faces on TV early in the morning, I feel better (happier, more eager, more serene) the next day, but not the same day. Faces Monday morning, for example, make me feel better on Tuesday but not Monday. [1]I studied this effect extensively. The results suggested that a circadian oscillator controls our mood and sleep and needs morning face exposure to work properly. Absence of morning face exposure, this theory says, increases your risk of depression – a view not compatible with the “chemical imbalance” explanation of depression but one supported by [2]the strong association between depression and insomnia.

I told friends about this. One of them had devastating bipolar disorder. As he describes [3]here and [4]here, he got great benefit from looking at faces in the morning. After I posted his account of his experience, a man I’ll call Rex wrote me that he was going to try it. At 29, he was diagnosed with bipolar disorder. At 32, he slit his wrists. He is now 37. Since then he’s been in and out of mental hospitals. Now he lives at home. I wanted to follow his use of morning face therapy “prospectively” – before knowing what would happen. I posted [5]this, about his background, around the time he started.

Treatment details. He began about two months ago. He gets up naturally (no alarm) at about 8 am. He starts watching faces on TV – Squawk on the Street (CNN) – soon after he gets up. He watches for 1-2 hours on a 43-inch high-definition TV; the faces are roughly life-size. He sits 10 feet away.

Mood. Before starting the faces, he was in a depressed mood 5-7 days per month. During those days he had low energy, low motivation, and a bad attitude. The low phases would last a few days, then he’d start feeling better. Now, he says, “my mood is better first thing in the morning. I feel ready to go, turn the TV on, watch something. I feel a little lighter. I no longer feel the early morning doom that I used to feel. I’ve never been a morning person, but I feel that way more now than any time I can remember. I haven’t had any depressed moods since I started the faces. I haven’t had any really adverse or negative emotions. Things are going very smoothly. I have less worries, I feel a more uplifting, upbeat tempo throughout the day. Everything seems better.” (Note: Morning faces likewise shifted me toward being a morning person.)

Medication. He used to take an antidepressant every day (Simbalta, 60 mg/day). Now he takes 30 mg once every 3 to 4 days. He’s tried to stop taking it entirely but gets withdrawal symptoms (headache, nausea) when he does that. Note that he still had 5-7 days/month of depressed moods every month even when taking the antidepressant. In the spring his depression was better so he cut back slowly on the medication.

Sleep. For a long time he has had great difficulty falling asleep. He would lie in bed for an hour without falling asleep. He took sleep medication, usually Lunesta or Ambien, very often. “Lots of times in the past I would give up [after lying in bed a long time] and go watch TV. Or start to read, stay up to 2:30. That’s always been a problem – ever since I was in college. In college, my sleeping schedule went nuts. When I got into the working world, it continued to where I would stay up late and couldn’t sleep.” Since he started the morning faces, his sleep is much better. He usually falls asleep within 20 minutes of lying down, a very noticeable difference. He has taken much less sleep medication – about 20 % of what it was before. (He still takes it when he knows he has to get up early or he feels wired.) At one point, when he took antipsychotics, he did fall asleep quickly “but the side effects were awful,” he said. “Grogginess, foggy head all day. I didn’t have as much mania and depression but I would sleep 11 hours per night and I couldn’t get out of bed in the morning. I couldn’t concentrate. I couldn’t go back to college, because I couldn’t think clearly.”

At the same time he started the faces, he started getting blue light exposure in the morning from a blue light box called the [6]Apollo Health goLITE. He started with 20 minutes of exposure. It did seem to improve his mood and make him feel tired earlier. However, it also made him feel anxious and tense. To try to get rid of this effect, he reduced the exposure: 10 minutes, 5 minutes, 2 minutes. After a week, he stopped using it altogether.

"I'm just ecstatic about the results," he said.

1. <http://escholarship.org/uc/item/2xc2h866>
2. <http://www.psychologytoday.com/articles/200307/bedfellows-insomnia-and-depression>
3. <http://blog.sethroberts.net/2011/05/16/morning-faces-therapy-for-bipolar-disorder/>
4. <http://blog.sethroberts.net/2011/07/20/morning-faces-therapy-for-bipolar-disorder-follow-up-questions/>
5. <http://blog.sethroberts.net/2011/05/22/morning-faces-therapy-for-bipolar-disorder-a-story-part-1-background/>
6. <http://healing.about.com/od/sad/fr/golite.htm>

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Joseph Dantes (2011-08-06 11:21:37)

As far as I'm concerned, this phenomenon is established fact and you are its discoverer. I still say though that slideshow pics of pretty women on a computer monitor are even better than CNN. Clothed or otherwise. See here for the science: [http://chaosandpain.blogspot.com/2011/07/evil-will-always-triumph-because-goo d.html](http://chaosandpain.blogspot.com/2011/07/evil-will-always-triumph-because-goo-d.html) (Link NSFW) Testosterone... it does a body good. And those gals will put a smile on your face. And motivation in your life. I get the feeling you don't think I'm serious about this but I definitely am. Also, I don't see why a computer screen that's a foot and a half from your face is less effective at delivering sufficiently large facial sizes to your eyeballs than a TV screen that's 10 feet away.

Seth Roberts (2011-08-06 16:13:59)

Joseph Dantes, I varied screen distance. A conversational distance worked best. And life-size faces worked best.

Joseph Dantes (2011-08-07 01:07:18)

Interesting, I guess I'll have to try that then

## Science in Action: Why Energetic? (2011-07-30 05:00)

Last night I slept unusually well, waking up more rested and with more energy than usual. I slept longer than usual: 7.0 hours versus my usual 5.1 hours (median of the previous 20 days). My rating of how rested I felt was 99.2 % (that is, 99.2 % of fully rested); the median of the previous 20 days is 98.8 %. Because the maximum is 100 %, this is really a comparison of 0.8 % (this morning) with 1.2 % (previous mornings); and the comparison is not adjusted for the number of times I stood on one leg to exhaustion, [1]which improves this rating. During the previous 20 days I often stood on one leg to exhaustion six times; yesterday I only did it four times. Above all, I felt more energy in the morning. This was obvious. I have just started to measure this. At 8 am and 9 am, I rate my energy on a 0-100 scale where 50 = neither sluggish nor energetic/energized, 60 = slightly energetic/energized, 70 = somewhat energetic/energized, and 75 = energetic/energized. My ratings this morning were 73 (8 am) and 74 (9 am). The median of my 9 previous ratings is 62. The energy improvement (73/74 vs 62) is why I am curious. I would like to feel this way every morning.

What caused it? I had not exercised the previous day. My room was no darker than usual. My flaxseed oil intake was no different than usual. I had not [2]eaten more pork fat than usual. However, four things had been different than usual:

1. 2 tablespoons of butter at lunch. In addition to my usual 4 tablespoons per day.

2. 0.5-1 tablespoons of butter at bedtime. Again, in addition the usual 4.

3. 1 tablespoon (15 g) coconut butter at bedtime. Part of a longer study of the effect of coconut butter. Gary Taubes suggested this. I had eaten 1 T coconut butter at bedtime 13 previous days. On the first of those 13 days, I had felt a lot more energetic than usual in the morning. On the remaining days, however, the improvement was less clear. I started measuring how energetic I felt in the morning to study this further. Last night was Friday night. On the previous two nights (Wednesday and Thursday) I had not eaten the coconut butter. Maybe absence of coconut butter followed by resumption of coconut butter is the cause.

4. Fresh air and ambient noise. Following a friend's suggestion, I opened one of my bedroom windows.

My first question is whether the improvement is repeatable. If so, I will start to vary these four factors.

1. <http://blog.sethroberts.net/2011/03/22/effect-of-one-legged-standing-on-sleep/>

2. <http://blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>

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Alex Chernavsky (2011-07-30 10:31:51)

Seth, what was Gary Taubes's reasoning to recommend the coconut fat? Also, I'm impressed that you can get to almost 99 % rested on just over 5 hours of sleep. I would need 7 hours or more to get anywhere near that level of restfulness. I know you do one-legged standing, you expose yourself to sunlight in the morning, and you avoid eating until three hours or more after you wake up. Do you have an estimate for the relative effects of those three strategies? Also, Is there anything else you would recommend to improve the efficiency of one's sleep?

dearieme (2011-07-30 10:36:46)

I put toasted coconut into my muesli. This has the advantage that whether or not it does me good, it tastes delicious.

Seth Roberts (2011-07-30 11:29:10)

Gary Taubes reasoning re coconut butter (which isn't the same as coconut oil): It worked for him. one-legged standing: 50 %. morning sunlight: 30 %. avoid early breakfast: 20 %. I believe a diet high in animal fat can greatly sleep. see my experiments on pork fat and sleep.

August (2011-07-30 11:37:00)

It could be simply a function of increased calories, though I have been trying to eat more lately (more butter too) and haven't noticed an increase in energy. I haven't tried coconut butter at night; I've always assumed the MCTs would keep me awake. Good to know. I could certainly use more energy in the morning.

Seth Roberts (2011-07-31 05:44:01)

"increased calories": unlikely. If I eat more butter, I eat less of other foods.

### **"Everyone Agrees: Fresh Food Better." Uh, Not Everyone. (2011-07-31 05:00)**

In [1]a brief Atlantic article about the paleo diet, Alesh Houdek writes:

There is no question that we should eat more fresh and unprocessed foods. . . . The Paleo diet's dictum to eat as fresh as possible is shared universally with all modern sane eating guidelines.

As regular readers of this blog know, I disagree that "fresh is better". Fermented is not just better but necessary. To work best, I think our bodies need substantial daily doses of fermented food or their microbial equivalent. Evolution has shaped us to like sour, umami-flavored, and complex-flavored food so that we will eat more microbe-laden food. More about this in [2]these posts. Pass the[3] umeboshi.

1. <http://www.theatlantic.com/life/archive/2011/07/the-paleo-diet-caveman-cure-all-or-unhealthy-fad/242621/>
2. <http://blog.sethroberts.net/category/umami-hypothesis/>
3. <http://en.wikipedia.org/wiki/Umeboshi>

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dearieme (2011-07-31 06:53:42)

Beer and bread, then?

dearieme (2011-07-31 06:54:48)

Oops, beer and bread-and-butter? And cheese?

Michal (2011-07-31 07:38:51)

bread is dead after it bakes. Some beers are still alive. it's about the bacteria, they are good for you

q (2011-07-31 18:57:51)

i right now have a raging headache after eating a quart jar of pickles.

dearieme (2011-08-01 06:32:25)

beer, bread-and-butter, cheese, pickles: we call that a ploughman's lunch - favourite pub fare. Eat healthy, eat English!

ce (2011-08-02 08:38:22)

Well, before re Fridgeration, food was fresh for a little bit, then it was fermented/covered in microbes, whether you wanted it to be or not. Meat, fruit, veggies, everything. My family leaves (cooked) animal products out overnight without even thinking about it. People from families who don't do this are afraid of eating a hard boiled egg that's been out of the fridge for a day. Something about stomach pain and vomiting? Anyways, where are the calls to be less of a baby about food spoilage?

Steve G. (2011-08-03 13:09:23)

Seth, Some of these comments raise an interesting question that you might clarify : does the microbial content need to be alive? As one writer points out, bread is made with yeast, but the yeast would be killed in baking. Also, what about pickles: alive or dead (salt or vinegar)? Finally, what about beer? I'm fond (in moderation, mind you) of Belgian traditional brews, which I believe retain active yeast cultures. On the side of the angels? I will say that when ever I down some sour kraut or yogurt--and I am fond of both--I have you to thank for the feeling having made a good health choice while I enjoy the flavor.

Seth Roberts (2011-08-03 14:52:16)

To improve digestion they need to be alive. To improve immune function, probably not. It's hard to measure effectiveness. So I play it safe with several kinds of fermented foods every day.

## Edward Jay Epstein Offer (2011-07-31 07:25)

Edward Jay Epstein, the investigative journalist whom [1]I praise here, [2]offers free copies of his latest books (which include [3]Myths of the Media, [4]Who Killed God's Banker?, and [5]Armand Hammer, The Darker Side, all Amazon Kindles) to those who will write Amazon reviews. I took him up on it. You can reach him at ed at edwardjayepstein.com.

1. <http://blog.sethroberts.net/2009/08/03/edward-jay-epstein/>
2. <http://blog.sethroberts.net/2009/08/03/edward-jay-epstein/#comment-921196>
3. <http://www.amazon.com/Myths-of-the-Media-ebook/dp/B005D9IXN4/>
4. <http://www.amazon.com/Who-Killed-Gods-Banker-ebook/dp/B005D9IEUG/>
5. <http://www.amazon.com/Armand-Hammer-Darker-Side-ebook/dp/B005D9IZSM/>

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## 6.8 August

### Assorted Links (2011-08-01 05:00)

- Marcia Angell makes good points in [1]reply to critics of her anti-psychiatric-drug article

- [2]The ADA and early detection of diabetes. "If you wait for your doctor to give you a diabetes diagnosis, the chances are good that by the time you are diagnosed you'll already have one or more serious diabetic complications. . . . This is not an accident." [3]Jimmy Moore's interview with Jenny Ruhl.
- [4]Stolen children in Hunan Province. Via [5]Evan Osnos.
- Michael Wolff, one of my favorite writers, podcast [6]on Rupert Murdoch and the phone-hacking scandal.

1. <http://www.nybooks.com/articles/archives/2011/aug/18/illusions-psychiatry-exchange/>
2. <http://www.phlaunt.com/diabetes/14046782.php>
3. <http://www.thelivinlowcarbshow.com/shownotes/4290/486-a-crash-course-in-blood-sugar-101-with-jenny-ruhl/>
4. <http://english.caing.com/2011-05-10/100257774.html>
5. <http://www.newyorker.com/online/blogs/evanosnos/2011/07/wendi-murdoch-china-train-crash.html>
6. <http://www2.lse.ac.uk/newsAndMedia/videoAndAudio/channels/publicLecturesAndEvents/player.aspx?id=1096>

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### The Comments on "Finding the Source of Migraines..." (2011-08-02 05:00)

Nowadays, far more than ever before, people can do useful science (collect data, draw conclusions) about their own health. This personal science can produce much better results than expert advice. For example, I found ways to sleep better and raise my mood superior to what sleep and mood experts know. I wonder how others are using this new power. This is why I wrote a story for Boing Boing about [1]a woman (Sarah) who figured out what caused her migraines after conventional doctors failed to help her. She was eventually helped by an expert (a naturopath) but most of the improvement came from self-experimentation showing that cleaning and skin care products caused migraines.

The story got many comments. A surprising number were eerily dismissive. You might think it was a good thing that Sarah got rid of frequent crippling migraines after doctors failed to. Nope: "Anecdotes are not data" (56 likes). The same person also said "data is data". Both are examples of [2]preventive stupidity. "Big Brother loves you," replied Mark Frauenfelder, and I agree. Another surprising comment was "Don't encourage these people" (= people like Sarah). One of the dismissistas came to his senses. "I'd simply like to close with an apology, as on reflection little I've posted here has been useful or expansive," he wrote.

Some comments nicely summed up the main points of the story. "When all you have is a hammer, everything looks like a nail" was a good description of Sarah's conventional doctors. They acted as if their only tool was the ability to write prescriptions – so every problem called for a prescription. When the first 10 drugs didn't work, they tried more drugs. When the first 30 drugs didn't work, they tried more drugs. Surely this is bad medicine, yet, as far as I can tell, that's what they learn to do.

Some comments asked questions it would have helped if I had anticipated. How could Sarah have tried 50 different migraine drugs and 13 different birth control pills in one year? I wasn't puzzled by this but details would have clarified things.

Above all, the comments supported my belief that Sarah's problem was common. Many commenters said they had migraines caused by environmental triggers. Only one said his migraines turned out to be caused by a tumor. In spite of this pattern of causality, the comments also suggested that conventional doctors generally prescribe drugs for migraines. ("They had the prescription typed into the system before I was even finished telling them what was going on.") It's like trying to enter a room by breaking through a wall (prescribing a drug) instead of using the door

(finding the triggers). It's as if all they have is a sledgehammer.

1. <http://boingboing.net/2011/07/25/finding-the-source-of-migraines-and-fifty-useless-migraine-drugs.html>

2. <http://blog.sethroberts.net/2010/05/12/preventive-stupidity-exists/>

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dearieme (2011-08-02 05:54:26)

"data is data": bollocks. "Data" is plural.

Alex Chernavsky (2011-08-02 06:51:30)

"It's time to admit that data has joined *agenda*, *erotica*, *insignia*, *opera*, and other technically plural Latin and Greek words that have become thoroughly Anglicized as singular nouns, taking singular verbs. No plural form is necessary, and the old singular form, *datum*, can be left to the Romans." <http://www.linztech.com/grammarcentral-topics.htm> #data

Kris (2011-08-02 09:30:56)

There is a certain ingredient in that is common in perfumes and personal care products that triggers migraines for me. I know it as soon as I smell it. My wife has had to throw out new soaps and lotions because of the "smell." Another trigger for me is eating something made of processed carbs first when I am very hungry. Since I cut the wheat and most processed food out of my diet, I rarely get migraines anymore, and when I do they are usually pretty mild compared to the old days. Hardly anyone believes it though, and very few try it. People do not want to change how they are living, even if it is harming them. They prefer a short cut every time (i.e. drugs).

John III (2011-08-02 13:55:38)

Dearieme and Alex, lol. You really get to the heart of the matter.

Pen Pen (2011-08-03 04:08:26)

I recently suffered migraines up to 2 times per week which started in my right temple. I thought I had tried everything - naturopath, chiropractor, regular neck stretches, avoiding common triggers (e.g caffeine, chocolate, red wine etc). After seeing a very clever osteopath, we deduced that looking at the ergonomics of my desk at work was key because it was likely that my right shoulder was getting overworked from using the mouse with my right hand. She also gave me exercises to strengthen my mid back. The thing that made the greatest difference was swapping the mouse to my left hand (which required a few days training) and surprise, surprise, no migraines.

Seth Roberts (2011-08-03 04:47:48)

Fascinating story, Pen Pen.

Ruth @ Ruth's Real Food (2011-08-03 14:09:01)

These reactions have everything to do with psychology and nothing to do with science. A real man/woman of science would at a minimum look at Sarah's story as a fascinating lead that he/she can learn from and study further. A doctor with an ego sees someone going over his/her head and doesn't like it. (I was just going to use "they" "there" but I didn't want to upset the grammar police :) )

Jazi yechezkel zilber (2011-08-05 02:47:57)

The doctros were actually tinkering. They tried all drugs looking fr the effects. The only difrences were More dangerous. Less emthodical (they do not measure methodically the effects daily). And pretending authority and science. This is what a friend



noted to me. That we do many tricks etc. Unconsciously, but do not notice it consciously. PS. What is your new book about?

Ela (2011-08-06 09:47:20)

I have had migraines since I was a child and my 13 yr. old son has had them since he was 8. He was having 2/week with vomiting by age 10. 6 years ago I began suspecting my diet was the primary cause of my migraines. At that point they ruled my life and affected every aspect. Doctors, naturopaths, herbalists, acupuncturist, holistic MD's, biofeedback, and medications did not help much or for long. After going gluten-free for unrelated reasons I noticed a small improvement immediately and thus began my search for an answer in my diet. I now avoid consuming artificial chemicals; all herbs and spices; most fruits and veggies (not all!); anything fermented; and generally avoid all grains. I also avoid strong and artificial scents. Foods that are high in amines, salicylates, and tannins definitely cause headaches for me. If I follow the diet, I have no migraines. My son follows a modified version of my diet and has a migraine less than every month. My best diet consists of meat, salt, butter, (Dr. Mercola at <http://articles.mercola.com/sites/articles/archive/2010/12/07/why-is-butter-better.aspx>) has great info regarding the benefits of butter!), raw milk, egg yolk, cabbage, kale, lettuce, carrots, potatoes, apples, pears, and mango. David Buchholz, MD (Johns Hopkins neurologist) wrote a book, Heal Your Headache: The 123 Program, about the strong connection between headaches and diet and has a good explanation for the difficulty in determining headache triggers. And this sight is great for info on the potentially problematic chemicals in foods <http://failsafediet.wordpress.com/>.

nicole harkin (2011-08-17 21:18:53)

On the topic of the efficacy of drugs, I was wondering if you had read these two New York Review of Books articles: <http://www.nybooks.com/articles/archives/2011/jun/23/epidemic-mental-illness-why/> and <http://www.nybooks.com/articles/archives/2011/jul/14/illusions-of-psychiatry/> A fascinating review of books comparing whether drugs work better than placebos...mostly they don't...

Seth Roberts (2011-08-18 07:18:02)

Yes, I read them and blogged about them: search "Marcia Angell".

## **Personal Science in Japan: Radioactivity Measurements (2011-08-03 05:00)**

Personal science isn't just self-measurement. [1]In Japan:

Kiyoko Okoshi had a simple goal when she spent about \$625 for a dosimeter [that measured radioactivity]: she missed her daughter and grandsons and wanted them to come home. Local officials kept telling her that their remote village was safe, even though it was less than 20 miles from the crippled Fukushima Daiichi nuclear power plant. But her daughter remained dubious, especially since no one from the government had taken radiation readings near their home.

So starting in April, Mrs. Okoshi began using her dosimeter to check nearby forest roads and rice paddies. What she found was startling. Near one sewage ditch, the meter beeped wildly, and the screen read 67 microsieverts per hour, a potentially harmful level. Mrs. Okoshi and a cousin who lives nearby worked up the courage to confront elected officials, who did not respond, confirming their worry that the government was not doing its job.

With her simple yet bold act, Mrs. Okoshi joined the small but growing number of Japanese who have decided to step in as the government fumbles its reaction to the widespread contamination, which leaders acknowledge is much worse than originally announced.

Maybe it is obvious that a woman who wants to see her grandchildren yet keep them safe is far more motivated to find the truth than a local politician or even surveyors hired by the government. Personal scientists who study other

things have the same motivational advantage. As I have said [2]more than once, I care far more about improving my sleep than any professional scientist.

Mrs. Okoshi misses her daughter and grandchildren very much. Her husband recently died and her daughter's family left, afraid of nuclear fallout.

"Our life was so lively when the four boys were running around the mountains in the back of the house," she said.

Personal science channels her emotion in a way that helps everyone around her.

1. <http://www.nytimes.com/2011/08/01/world/asia/01radiation.html?hp=&pagewanted=all>

2. <http://sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

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### **My Daily Dose of Flax Seed (2011-08-03 17:00)**

Currently I eat 33 grams (= 45 ml = 3 tablespoons) of flax seed in yogurt twice a day. That's 66 g/day (which contains about 2 tablespoons of flaxseed oil). I grind it for 30 seconds before adding it to the yogurt. I like yogurt with ground flax seed better than yogurt without it, leaving aside the health benefits.

Unlike flaxseed oil, which must be kept cool, flax seed can be stored at room temperature, which makes a huge difference. I discovered that Chinese flaxseed oil was worthless, presumably because it hadn't been kept cool. To bring American flaxseed oil to China was a nightmare – lugging it, trying to keep it cool. Chinese flax seed is fine, and not hard to get in Beijing.

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Haggus (2011-08-03 20:26:46)

Dr. Roberts, I'm losing out by nuking my flaxseed with water, for 30 seconds to warm it up (not boiling.) Or how about mixing it with water heated to around 80C?

Timothy Beneke (2011-08-03 23:03:26)

I take it that ground flax seed must be kept refrigerated, given that it is sold that way in health food stores. Is that right?

Sophie Ogle (2011-08-04 02:31:18)

What kind of grinder do you use for grinding flaxseed? Is it manual? Electric? Mortar and pestle? Something else?

dearieme (2011-08-04 04:09:01)

I use half a tablespoon in a week's supply of muesli. You seem to be suggesting that that is too little? I store it at (UK) room temperature.

Seth Roberts (2011-08-04 07:16:44)

In China I use a blender. There is an attachment meant for grinding spices. In America I use an immersion blender (Braun) – again, there is an attachment meant for grinding spices. As blenders go, both of these are small.

bjk (2011-08-04 08:02:55)

Doesn't all this flax seed contribute lots of omega-6? And doesn't the absolute level of omega-6 matter?

Seth Roberts (2011-08-04 08:36:17)

"Doesn't all this flax seed contribute lots of omega-6?" No. The reason that the omega-3/omega-6 ratio is very high in flaxseed oil is that the ratio is very high in flax seeds. The oil extraction process does not discriminate between omega-3 and omega-6. It does not selectively remove omega-6.

David (2011-08-06 18:58:21)

I notice that drinking tablespoons of flaxseed oil can be constipating but consuming a similar amount of ground flaxseed causes no problems. I also put it in yogurt, in smoothies, and on salads.

Eric (2011-09-14 15:00:54)

I use a coffee grinder that was \$13 on Amazon and got good reviews. In 20s it turns the seeds into a fine powder. I do, however, wonder about the phytoestrogens in flax. I'm not sure if they matter as these doses.

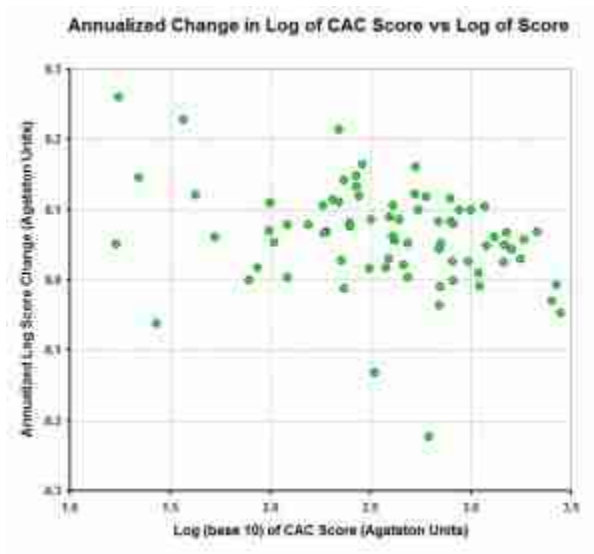
haig (2011-11-18 14:16:28)

Seth, are you at all concerned with the phytoestrogen content of flaxseeds and the studies that have found a correlation between flaxseed consumption and prostate cancer? I am really interested in the positive results on gum health and reduction of inflammation in general, but have thus far not started taking flaxseed due to my above concerns. Have you or any other males taking daily flaxseed noticed increase in breast size, inflamed prostate, or any other side-effects?

Seth Roberts (2011-11-18 15:35:30)

I haven't noticed any bad effects. I agree that it would be better to have multiple sources of omega-3.

## How Rare My Heart Scan Improvement? (2011-08-04 05:00)



In 2009, I had a heart scan – a three-dimensional X-ray. The scan was used to calculate an Agatston score, a measure of arterial plaque. Higher scores mean a higher risk of heart attack. A few months after that, I discovered that butter improves how fast I do arithmetic.

Because butter was good for my brain, I started eating half a stick of butter (66 g) every day. Surely the butter was improving overall brain function. The effect of butter on the rest of my body I didn't know. However, I thought it was highly unlikely that a food that greatly improves brain function is going to damage the rest of the body. The food you eat, after digestion, goes to the whole body (leaving aside the blood-brain barrier). Every part of the body must have been optimized to work well with the same food.

As I have posted earlier, I had a second heart scan, producing a second Agatston score, about a year after the first one. Amazingly, the second score was better (lower) than the first score. The woman in charge of the testing center said this was very rare – about 1 time in 100. The usual annual increase is about 20 percent.

Now I have gotten more information about the annual rate of change in Agatston scores. The graph above (thanks to Harry Rood) shows data from 40 people who listed their scores at the Track Your Plaque site. It is based on pairs of consecutive scores: it plots change versus level (average?). Because some people provided more than two scores, the data allowed 77 points to be plotted. My two scores were 38 (log 38 = 1.58) and 29 (log 29 = 1.46). So the decrease in log units was 0.12. If you look at the graph, you can see what an outlier this is – as I was told, it really is about 1 in 100.

Here we have the conjunction of two unusual things: 1. Eating half a stick of butter per day. Almost no one eats so much butter. 2. An extremely rare drop in the Agatston score over the same period. A principle of reasoning called Reichenbach's Common Cause Principle says if two rare events might reflect cause and effect, they probably do. You can think of it like this: Lighting doesn't strike twice in one place for two different reasons. Indeed, there is other evidence that high levels of saturated fat cause heart-scan improvement (even though this contradicts everything you've been told). [2]Mozzafarian et al. (2004) found that in postmenopausal women, "a greater saturated fat intake is associated with less progression of coronary atherosclerosis." So it is quite plausible that my butter intake improved my Agatston score.

1. <http://blog.sethroberts.net/wp-content/uploads/2011/06/log-change-in-score-vs-log-score.jpg>

2. <http://www.ajcn.org/content/80/5/1175.full>

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Chris (2011-08-04 06:42:42)

Do you need to eat half a stick of butter a day to maintain the cognitive benefits? Or do you think that once a deficiency has been corrected you can reduce the dose? Thanks, Chris

Tuck (2011-08-04 07:56:04)

Fascinating result. Dr. Davis might reconsider his anti-butter stance... <http://www.trackyourplaque.com/blog/2010/10/butter-just-because-its-low-carb-doesnt-mean-its-good.html> Of course Peter at Hyperlipid has already explained how Dr. Davis mis-read this... (I'm a big fan of Dr. Davis, but no-one is perfect.)

Seth Roberts (2011-08-04 08:41:33)

You need to eat the butter regularly to maintain the benefits. When the butter goes away, the brain gets worse.

Wilhelm (2011-08-04 11:44:40)

Do you eat the butter mostly as it is or cooked/fried/heated ?

Alex Chernavsky (2011-08-04 12:18:40)

I know that Eri Gentry's "Buttermind" study suggested that coconut oil doesn't have the same positive effect as butter. Aside from flaxseed oil, is there any other plant-based food that may have the same (or similar) beneficial effect as butter?

Paul Winter (2011-08-04 14:21:00)

K2, found in butter. Dr. Davies has a couple of posts on K2 causing a reduction of the arterial plaque.

Aaron Ashmann (2011-08-04 16:30:04)

Seth do you consume a lot of choline? I'm worry that if I eat a primarily vegetarian diet that if I add a lot of butter, I might not be ingesting enough choline to break down the fats. I don't consider taking a supplement to be adequate way of getting the nutrient- any ideas here?

Jonathan Shewchuk (2011-08-04 18:00:40)

While I think saturated fat is probably good for you, I don't see why you're focusing on it for heart scans. My guess for the most likely hypothesis is that the Vitamin K2 in the butter (and maybe the Vitamins D and A too) is regulating your calcium so it goes into your bones instead of into your arteries. Check out these posts on K2 and heart disease: <http://wholehealthsource.blogspot.com/2008/11/can-vitamin-k2-reverse-arterial.html> <http://wholehealthsource.blogspot.com/2008/11/cardiovascular-disease-and-vitamin-k2.html> <http://wholehealthsource.blogspot.com/2008/06/vitamin-k2-menatetrenone-mk-4.html> Of course, the butter-calcium relation could be a many-factored effect, but the fat-soluble vitamins have a lot of evidence behind them. It's not clear to me whether the fat itself is important or just a carrier for the vitamins.

Alex (2011-08-04 21:39:17)

It's "Agatston." I only mention it because it's a search keyword. I love the interesting insights from your blog.

Vic (2011-08-04 22:34:29)

Seth, is the yogurt you eat also full fat?

Aaron (2011-08-05 01:27:43)

Dear Seth - What do you think about the (rather conflicting) research regarding flaxseed consumption and prostate cancer? I assume you are not worried?

Seth Roberts (2011-08-05 04:37:08)  
Thanks for the correction.

Seth Roberts (2011-08-05 04:47:21)  
Aaron, I haven't looked into it much. The benefits of omega-3 are overwhelming. I will eventually compare different sources of omega-3 but haven't yet.

Seth Roberts (2011-08-05 05:04:39)  
yes, the yogurt I eat is full fat.

JohnN (2011-08-07 11:53:10)  
Seth, There are probably more causation than correlation between your consumption of butter and improved brain functions. Have you considered, however, other factors such as K2 (mentioned by other posters), added sodium as electrolyte and brain running on ketone (not uniquely limited to butter)? John PS: is there any positive effect on teeth and dental health as well? The butter fat can break up dental plaque and neutralize the acidic environment created by the bacteria.

The Ancestral Health Symposium | Perfect Health Diet (2011-08-09 17:08:15)  
[...] On Saturday I started with Seth Roberts and Tucker Max. Seth's talk was excellent – the gist can be found in recent blog posts, such as the one on butter reducing his coronary calcium score. [...]

Seth Roberts (2011-08-09 22:53:42)  
JohnN, re correlation or causation. The Genomera experiment, based on my findings, was an ABA design, where A = no butter and B = butter. It found a difference in outcome between A and B supporting causation. Re K2. I haven't noticed a difference in effect between cheap and expensive butters, which I would expect to differ in K2 content. Re added sodium. I got the effect with unsalted butter. I haven't noticed a difference between salted and unsalted butter. Haven't noticed any dental changes. My gums are pink due to flaxseed oil.

Chris (2011-08-11 15:50:10)  
With K being a fat soluble vitamin, I would guess that it is not responsible for the cognitive benefits since, as Seth wrote, you need to eat the butter regularly. I would think that the K would accumulate in the body and the benefits would be maintained for some time after due to the body mobilising its stores. Does cheese provide a similar effect? If not, the differences between cheese and butter might hold clues to the mechanism.

harry (2011-08-14 11:38:16)  
Hi Seth, I'd be a little cautious about concluding that eating a half-stick of butter every day will result in a significant CAC score reduction. Not that I think that the butter is detrimental, I eat a quarter of a stick every day myself, and lots of other saturated fat, a total of about 80 grams of it per day. My caution about concluding that saturated fat reduces CAC score is due to 2 things. First, the fact that my CAC score isn't going down, and second, the large uncertainty in each CAC score measurement, especially at the lower values of total score. Your Agatston score was initially 38 and it changed to 28.8 a year later, if I understand what you have said. That's great, but it's a relatively low level of calcium as these things go. If we look at studies of reproducibility of CAC score where they have taken into account the score uncertainty as a function of score, we see considerable uncertainty. For example, the study "Serial Electron Beam CT Measurements of Coronary Artery Calcium: Has Your Patient's Calcium Score Actually Changed?", by Sevrakov, Bland, and Kondos, 2005, suggests that if the measured CAC score is 40, the 95 % repeatability limits on that value fall between 8.8 and 71 agatston units. Similarly, the 95 % repeatability limits on a score of 30 is between 3 and 57. This is based on a large number of scores repeated serially within a short time. And the other major study of CAC reproducibility is even worse. See "Repeatability Limits for Measurement of Coronary Artery Calcified Plaque with Cardiac CT in the Multi-Ethnic Study of Atherosclerosis, by Chung, McClelland, Katz, Carr and Budoff, 2008; I think we need a lot more tests of the hypothesis that butter, or saturated fat reduces calcium score before we can conclude that the hypothesis is valid. I've been eating a high-fat, high-saturated fat diet for several years, and my CAC score continues to increase (although it may

be slowing down, percentagewise).

Seth Roberts (2011-08-14 18:16:25)

Harry, the graph suggests that a reduction like mine is quite rare – about 1 in 100. That probability calculation includes error of measurement. But I certainly agree that more tests of the hypothesis are needed. Yet it is still meaningful that my results were so different than predicted by conventional wisdom. Conventional wisdom says that butter causes heart disease. My results, to the extent they say anything, point in the opposite direction.

Kelly (2012-02-07 00:26:13)

Thanks Seth...this "improvement" story by eating a half stick of butter a day was truly hilarious. I needed the laugh.

Seth Roberts (2012-02-07 11:37:57)

Kelly, thank you for your sneer.

## **The Evolution of Lactose Tolerance and My Butter Discoveries (2011-08-05 05:00)**

From a BBC documentary called [1]Are We Still Evolving? I learned that after the development of farming there was intense selection in Europe for "lactose tolerance" – meaning the ability to digest lactose as an adult, which requires the enzyme lactase. (The technical name is lactase persistence.) The necessary gene spread rapidly. Now most Europeans have the gene. In Ireland almost everyone has the gene. [2]Mark Thomas, an evolutionary geneticist interviewed on the show, who does [3]research on lactose tolerance, said this:

It's probably the most advantageous characteristic that Europeans have evolved in the last 30,000 years..  
. . The advantage that's been measured is just incredible, absolutely incredible, how big an advantage it was for these early farmers in Europe.

"Why would drinking milk into adulthood be so strongly selected for?" asked Alice Roberts, the presenter. Thomas replied,

Milk has got lots of energy in it, it's very nutrient dense, it's got lots of other goodies, like various vitamins, calcium, and so on. Also, it's a relatively clean fluid, so it's much better than drinking stream water or river water or well water or something like that. Another advantage is if you're growing crops you have a boom and bust in terms of the food supply.

Not a word about butterfat – "lots of energy" is true of all fats. The rapid spread, the "incredible" advantage, suggests that milk supplied something resembling a necessary nutrient. As if everyone had been suffering from scurvy and the new gene allowed them to eat citrus – something like that. Such a gene would spread rapidly.

Does milk supply a necessary nutrient? My results suggest that butter – half a stick (60 g)/day – provides two clear benefits: 1. [4]Better brain function. 2. [5]Less risk of heart disease (probably). As far as I can tell, roughly everyone in America would get these benefits because their diets now lack enough of whatever it is. Both benefits reflect invisible problems. Like everyone else, I had no idea my brain function could be substantially improved and had no idea of my rate of progression (narrowing of arteries) toward atherosclerosis. Only because of unusual tests (the arithmetic test and a "heart scan") did I notice sudden large improvements when I started eating lots of butter – what you'd expected from addition of a missing necessary nutrient. This explains why Thomas and almost everyone else is unaware of these benefits.

Keep in mind that before I started eating butter, I already ate a high-fat low-carbohydrate diet. Yet I wasn't getting enough of something in butter. I already ate lots of pork fat. Perhaps the saturated fat in butter is better digested than the saturated fat in pork. Or perhaps the fat profile is better.

If lactose tolerance is so helpful, why are most Asians lactose intolerant? My work suggests two answers: 1. Yogurt. Long ago, Asians ate lots of yogurt. I know the Mongols did. There are present-day indications of this. The Chinese appreciate the value of yogurt more than Americans. Yogurt is more common in Chinese supermarkets than American ones. Yogurt makers are better and more common in China than Europe and America. Lots of Chinese make their own yogurt; as far as I can tell, home yogurt making is more popular in China than America. You can buy a cheap good yogurt maker many places in Beijing, unlike San Francisco. Yogurt provided butterfat. 2. Pork. The Chinese, of course, eat far more pork than Europeans. Unlike cows, pigs supply a cut with a large amount of fat: pork belly. I found it easy to get plenty of pork belly in China and eat it as the main course. Difficulty getting pork belly in the Bay Area is what pushed me to eat butter. This view predicts that European farmers raised more cows than pigs.

Anyway, to summarize, the great advantage conferred by lactose tolerance suggests the great value of something in milk if you eat a European-farmer-like diet. My work supports this; it suggests the crucial ingredient is butterfat. Which many Americans carefully avoid!

Note: The [6]danger posed by the high level of AGEs (advanced glycation endproducts) in butter I don't know about – but of course this danger has nothing to do with why lactose tolerance was so beneficial. My experience so far (the heart-scan improvement) suggests that that ordinary butter is not "artery-constricting". Presumably AGEs are formed when milk is pasteurized so I would prefer to eat unpasteurized butter.

1. <http://topdocumentaryfilms.com/are-we-still-evolving/>
2. <http://www.ucl.ac.uk/mace-lab/people/mark>
3. <http://www.ucl.ac.uk/mace-lab/publications/articles/2011/LPnichePGerbault2011.pdf>
4. <http://blog.sethroberts.net/2011/01/29/the-buttermind-experiment/>
5. <http://blog.sethroberts.net/2011/08/04/how-rare-my-heart-scan-improvement/>
6. <http://www.trackyourplaque.com/blog/2010/10/butter-just-because-its-low-carb-doesnt-mean-its-good.html>

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Valtsu (2011-08-05 06:14:25)

Hello Seth! Chris Masterjohn wrote an article regarding Davis' butter-AGE statement: <http://blog.cholesterol-and-health.com/2010/10/is-butter-high-in-ages.html> BTW, your blog is wonderful!

Michal (2011-08-05 06:36:28)

AGE's in food aren't the same as AGE's in your blood. Just like cholesterol in your diet doesn't lead to cholesterol increases in your blood.

Tomas (2011-08-05 06:40:47)

Seth, the supposed danger of AGEs from butter is based upon degradation of either milk proteins or milk sugar, not sure right now which one. As butter contains little of both, the theory seems to be wrong. I think Stephan Guyenet wrote about the issue recently. AFAIK he thinks that the whole AGE thing is trash



Tomas (2011-08-05 06:41:20)  
ah sorry it was Chris Masterjohn

Max (2011-08-05 06:43:02)

Hi Seth, How do you manage to consume half a stick of butter every day on a low carbohydrate diet? I am on a similar diet; if I weren't I would probably just spread the butter on bread. I enjoy cooking with butter but don't think that alone will get me close to half a stick per day. Thanks, Max

john (2011-08-05 06:44:13)

Seth, Chris Masterjohn has written a good article talking about AGEs and butter, I think somewhat as a response to Dr. Davis' post you linked.

Tuck (2011-08-05 06:55:14)

I mentioned a commentary on Dr. Davis' post in my other comment. I should have looked it up, it wasn't from Peter at Hyperlipid, it was from Chris at the Daily Lipid. It's tough keeping my Lipid sources straight. ;) Here it is: "Is Butter High in AGEs?" <http://blog.cholesterol-and-health.com/2010/10/is-butter-high-in-ages.html> I wouldn't get to stressed about the ill effects of butter. I don't. As far as the advantage to butterfat, it's likely vitamin K2, which was identified by Weston Price as "factor X" that made butter so healthy. Stephen Guyenet has done a bunch of posts on the cardiovascular advantages of K2, and K2 has specifically been shown to prevent arterial calcification in rats (MK4 is K2): <http://content.karger.com/produktedb/produkte.asp?typ=fulltext&file=JVR2003040006531> So keep eating your butter. Btw, as I just started following your blog, I don't know if you've discovered the joys of pastured (grass-fed) butter. It tastes far better, and is available in most Whole Foods I've been to. What makes butter taste better or worse? K2 content. Pastured butter has more.

Darrin Thompson (2011-08-05 07:12:50)

You found an easy way to get unpasteurized butter? Do tell.

Joseph Dantes (2011-08-05 09:37:29)

Have you tested butter against seafood, non-farmed, specifically shellfish? I've noticed an improvement of similar or greater magnitude when I eat shellfish. Perhaps that's the missing nutrient pathway... farming and farm raised animals create deficiencies correctable by seafood or butter. I'd like to test the butter/yogurt hypothesis once I've got my current problems fully corrected. Right now my vitality scores are acceptable but not stupendous.

Kirk (2011-08-05 10:47:54)

Interesting. Things must have changed in China since the 1989 China Study. The authors of that study said about consumption of animal fat (D053 ANIMFAT), "This (6.5 g/day) constitutes a relatively small proportion of total lipid intake (D002:TOTFAT), which averages about 50 g/day." And about milk (D047: MILK) they said, "Milk is almost never consumed in most parts of rural China. The few places where it is consumed are nomadic herding areas." Have you considered whether there is a specific ingredient of butter which has that impact on you? For somebody like me, whose gut dislikes more than a teaspoon of butter per six hours, have you found a good breakdown of the ingredients of butter? The only unique ingredient that I know about is K2, which supposedly pastured butter has in greater quantity than commercial butter. (It seemed to me that my skin improved once I started taking K2, but it's not that I had major skin problems to correct, so it's more of an impression than a measurement.)

Jeff (2011-08-05 11:54:48)

Seth - How did you settle on eating half a stick of butter? Why not more or less?

steve (2011-08-05 12:10:43)

The decrease in your heart scan score may most likely be attributable to variability in score results; the measurements are calculations based on an algorithm and there is variability; the score could have been up or down by 10 %. It can also change from machine to machine. So I would not base your argument so much on a decreased scan score, but upon the

fact it remains unchanged. This alone is quite an accomplishment given plaque can grow by as much as 30 % per year. Great job!

Tom (2011-08-05 13:56:01)

Kirk said: *Interesting. Things must have changed in China since the 1989 China Study. The authors of that study said about consumption of animal fat (D053 ANIMFAT), "This (6.5 g/day) constitutes a relatively small proportion of total lipid intake (D002:TOTFAT), which averages about 50 g/day." And about milk (D047: MILK) they said, "Milk is almost never consumed in most parts of rural China. The few places where it is consumed are nomadic herding areas."* The actual data is not what Campbell pretends it is in his book (which is a pop nutrition book with no peer review, by the same publisher behind *Seven Seasons of Buffy*.) In fact, Campbell played fast and loose with the data from Tuoli county whose Uyghur residents eat a diet that's extremely high in dairy, yet are healthier than the Chinese from counties who don't. Campbell protested being caught out on this by Denise Minger, saying that he was convinced that the residents were "feasting" on the days of data collection, and thus the data for the county was not representative. (He did not explain why only one county would behave this way, while all the others would not.) Anyway, for more on why "The China Study" (speaking of the pop culture book, rather than the dataset) cannot be trusted, read here: <http://rawfoodsos.com/2010/08/06/final-china-study-response-html/> ...and here: <http://rawfoodsos.com/2011/07/31/one-year-later-the-china-study-revisited-and-re-bashed/>

08/06/11 – Super Saturday (2011-08-05 18:02:13)

[...] The Evolution of Lactose Tolerance and My Butter Discoveries - Seth's Blog [...]

kxmoore (2011-08-05 22:48:03)

Seth great blog. I would like to add more butter to my diet but the thought of eating half a stick straight is unappealing. How do you eat your butter?

pacob (2011-08-06 01:43:59)

2. Pork. The Chinese, of course, eat far more pork than Europeans. In fact, this is not true for all European countries. Germany and Spain are the biggest pork meat consumers in the world. Only third place go to China.

Seth Roberts (2011-08-06 06:26:16)

I eat the butter with small pieces of meat – for example, small pieces of roast beef or roast pork.

Seth Roberts (2011-08-06 06:28:37)

Steve, you can see from the graph the average variability. It shows that the decrease in my heart scan score is unlikely to be due to variability. There was no change of machine – both scores were measured on the same machine.

Seth Roberts (2011-08-06 06:29:50)

Jeff, a half a stick was easy. I have tried larger amounts now and then and found them both difficult and producing noticeable improvement.

Seth Roberts (2011-08-06 06:31:23)

Max, as I said in reply to someone else, I eat the butter with small pieces of meat.

Alex Chernavsky (2011-08-06 11:10:13)

Just did some Googling and found out that natto (Japanese fermented soybeans) contain K2. Being a vegan, I won't eat butter, but I'll have to try natto. I understand it's an acquired taste.

Kirk (2011-08-06 11:14:44)

@Tom, I am not quoting from the book titled 'The China Study' by T. Colin Campbell. I have that book checked out from the library right now and about every 20 pages I am tempted to throw it against the wall whenever Campbell proudly points to something as proof of his assumptions, and meanwhile I remember clearly how Taubes or Minger or one of the paleo bloggers

has previously destroyed that argument. I took my information directly from the China Study data. I found the data by chasing the links in Denise Minger's reviews of Campbell's analysis. My assumption is that the data itself is valid, since both Denise Minger and Ned Kock have used it for statistical analysis. The text extracts I used were taken from the PDF titled 'Mono \_Diet \_Survey.pdf' (which, on the CTSU web page, is labeled 'Diet survey intake').

Jeff (2011-08-06 16:52:44)

Seth - If you had no trouble consuming more butter, how much would you eat daily? Also what kind of trouble are you experiencing? I've consumed as much as 1/2 a stick twice a day. It took a few tries for my digestive system to adapt, but now I don't experience any problems. Lastly, where are you finding unpasteurized butter? TIA

Willis Morse (2011-08-07 05:14:16)

Interesting short article from biology writer Robert Dunn on lactose tolerance: <http://www.robrdunn.com/2011/05/the-secret-truth-about-lactose-deficiency/> He says lactose tolerance genes have evolved independently from the European lactose tolerance gene several times in Africa and in other nomadic populations, but they were ignored because none of the genetic databases have much coverage of non-Western populations until one researcher traveled through Africa and did her own genetic sampling. Also, there are African tribes that exhibit lactose tolerance without having any known lactose tolerance gene, raising the possibility of population-wide gut flora adaptations.

Seth Roberts (2011-08-07 11:53:16)

I got some unpasteurized butter from a friend of mine who got it from an Amish farmer. As you say it is very hard to find.

Tom (2011-08-07 14:05:13)

I've had this raw butter from Organic Pastures. It's good, but expensive and hard to find. Note that many of the stores they list on their website as carrying it do not; it's best to call first. For those in Southern California, Co-Opportunity in Santa Monica carries it.

Tom (2011-08-07 14:05:33)

Sorry, forgot the link: [http://www.organicpastures.com/products\\_butter.html](http://www.organicpastures.com/products_butter.html)

Tom (2011-08-07 14:06:02)

last try: [organicpastures.com/products\\_butter.html](http://www.organicpastures.com/products_butter.html)

some anonymous guy (2011-08-07 17:45:03)

Hi Seth, Since butter is just heavy cream whipped, have you tried drinking the appropriate amount of heavy cream, or do you think there is something in the change from one state (liquid) to the other (sort of solid?) that makes it beneficial? I know that as far back as the 1950s, bodybuilders used to use heavy cream as a staple of their diets: [http://www.google.com/search?sourceid=chrome &ie=UTF-8 &q=heavy+cream+bodybuilder+1950s](http://www.google.com/search?sourceid=chrome&ie=UTF-8&q=heavy+cream+bodybuilder+1950s) If you really think about it, bodybuilders have been self-experimenting for their data for some amount of decades now. And their self-experimentation which has yielded significant results, as you might predict, is argued against by establishment figures. As an example, you can still see a lot of dietitians (maybe even the majority) argue that extra protein is not needed if someone engages in a heavy weight lifting program. This advice is mostly rejected by almost everyone involved in a heavy weight lifting program that has seen significant results (which are of course, tracked in a log book, like any good self-experiment).

Seth Roberts (2011-08-07 19:20:22)

I haven't tried just drinking cream. It's a good idea. Easy.

Adria (2011-08-10 11:05:14)

Actually, butter is not simply whipped cream. Butter has the buttermilk (which contains most of the protein that was in the cream) drained off.

Great links for the weekend! (2011-09-02 13:04:10)

[...] Roberts is back at his n=1 studies and has some interesting comments on the evolution of humans to consume lactose. Of course, Seth has some direct interest in this, since he has found that his mental ability and [...]

Months of thinking – lots of links « Sceptically Fit (2011-11-26 06:34:04)

[...] doesn't work the way we thought. A look at the effect of a paleo diet on testosterone. The evolution of lactose tolerance and how to use it if you have it. An interview with Dr Loren Cordain. Wholegrain pasta offers no [...]

## **At the Ancestral Health Symposium (2011-08-06 05:00)**

I am in Los Angeles for the Ancestral Health Symposium. I am giving a talk called "What Foods Make My Brain Work Best?" Readers of this blog won't be surprised: I will talk about flaxseed oil, pork fat, and butter. On Thursday, there was a party at Aaron Blaisdell's house for presenters and volunteers. It was kind of magical to see at the same party Mark Cohen, Gary Taubes, Denise Minger, Mark Sisson, Jimmy Moore, Boyd Eaton, Loren Cordain, Chris Masterjohn, and Tucker Max. Plus others, such as Staffan Lindeberg, whom I didn't manage to meet. More like an historical tableau in a mural or tapestry than an actual event.

There was more meat than any other party I've ever been to. Grilled outside. Mostly steak but also boar and salmon. It was delicious. I wish I knew the name of the grillmaster so I could thank him.

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David (2011-08-06 18:53:21)

Were the steaks grass finished or corn fed?

Chris Sturdy (2011-08-06 22:36:52)

Hi Seth, His name was Christian, and his last name escapes me at the moment, but he is John Durant's cousin. Nice to meet and chat with you. Cheers, Chris

Seth Roberts (2011-08-07 11:48:58)

David, I didn't ask about the steaks but probably they were grass fed.

Aaron Blaisdell (2011-08-07 18:01:09)

The steaks were grass fed, donated by US Wellness meats. The chef is Christian Page. Richard Nikoley (free the animal blog), Stephan Guyenet (whole health source blog), Dr. BG (animal pharm blog), Emily Deans (evolutionary psychiatry blog), Jamie Scott (that paleo guy blog), John Durant (hunt gather blog), Melissa Mcewan (hunt gather love blog), Don Matesz (primal wisdom blog), Robb Wolf (paleo solution), Mat Lalond (aka the Kraken), and Craig Stanford were there as well.

Chris (2011-08-07 20:06:26)

I think the term is pitmaster rather than grillmaster.

David (2011-08-10 06:59:31)

So all beef is grass fed for a while at least. Grass \_finished\_ beef is quite pricey, so if you were getting that then you had some very generous patrons. When I buy grass finished beef, the poor clerks think they made a mistake when they see the total. David

## The Curious Popularity of "How To Win an Argument With a Meat-Eater" (2011-08-07 05:00)

Denise Minger started her presentation at the Ancestral Health Symposium (titled "How to win an argument with a vegetarian") with a comparison of number of Google hits:

"how to win an argument with a meat-eater": 53,700 hits

"how to win an argument with a vegetarian": 7 hits

Why all this concern with winning arguments? Sure, vegetarians are outnumbered, but shouldn't the results speak for themselves?

Denise went on to make the excellent point that some of the most popular proponents of less meat and low-fat diets, such as Dean Ornish, base their claims on experiments with complex treatments. Group A (no meat, low fat) turns out to be more healthy than Group B (baseline) but the two groups differ in twenty other ways. Group A eats less sugar, gets more exercise, eats less processed food, and so on. But, as Denise said, it must be the vegetarianism.

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ala lala (2011-08-07 17:58:36)

It's a bit harsh to lump all vegetarians in the low-fat diet camp. A significant percentage of south-asians are vegetarians for cultural reasons rather than healthy reasons. Additionally, many vegetarians may chose the meat free life style for ethical reasons. The hits for "how to win an argument with a meat eater" may in fact be from people that need a list of strong arguments to support their moral choices. As a non vegetarian I enjoy pork belly, chicken liver, bone marrow and other "exotic" animal parts (many cooked in butter). However, I also use arguments from the "how to win an argument with a meat eater" when trying to raise awareness about current un-sustainable and often un-ethical meat producing practices.

Seth Roberts (2011-08-07 19:22:28)

The particular diet gurus, such as Dean Ornish, that Denise discussed did in fact recommend low fat diets. Keep in mind that the Google hit comparison and the inference discussion (what can we learn from an outcome difference between Groups A and B) were separate parts of her talk.

Tomas (2011-08-08 01:39:16)

I understand that some vegetarians might avoid meat for purely ethical reasons. But if you look at their approach from a different angle, you can see that their cause is not that noble - they are just avoiding the responsibility of finding an "ethical" source of meat. That equals hypocrisy in my book.

Forrest (2011-08-08 15:00:43)

Actually, I googled "how to win an argument with a vegetarian" and got over 14,000 hits. But only 4 for "vegan". I think the point still stands, though. To me, the question is this: How many people switched to paleo diets from vege- diets due to health problems, vs. the other way around? When she asked for a show of hands of recovering herbivores, it seemed like it must have been a fifth of the room! Is there even one person that got sick on the paleo diet and stopped eating all meat?

Seth Roberts (2011-08-08 16:20:12)

Re 14,000 hits: Because of Denise's talk. When she googled it, there were 3 hits. By the time I got around to googling it, there were 7 hits. Re the number who switch from vegetarian to paleo versus the other way. Yeah, except vegetarian is many thousand times more popular. Hard to correct for that.

Alex Chernavsky (2011-08-08 18:09:24)

A couple of points: Seven years ago, I switched from an Atkins-type diet to a purely vegan diet. I did it entirely for ethical reasons, after I started working at an animal shelter that houses both domestic pets and farm animals. After spending time with different types of animals and learning about them, I came to the conclusion that all sentient beings have an interest in avoiding suffering and living out their lives. (Of course, this idea is hardly original and is – or ought to be – fairly obvious.) Another point: There is no morally relevant difference between eating *flesh* versus eating *eggs* or *dairy products*. It's all the same, and it all involves suffering and death. In fact, there is probably more suffering in a glass of milk or an egg than there is in a steak. (A single cow produces a lot of meat, and hens and dairy cows typically live under quite horrible conditions.) After I switched from a low-carb diet to a vegan diet, I did gain weight – but I lost it again after doing Seth's Shangri-La diet. Other than the weight gain, I have not noticed any change in my overall physical health or mental status. At some point, I need to do some research to figure out what aspects of the paleo diet might be both healthy and amenable to being veganized.

William S. (2011-08-09 20:34:48)

Vegans and vegetarians define violence down. All farming kills sentient creatures.

Alex Chernavsky (2011-08-10 04:34:22)

@William S. – the issue is with *numbers* of creatures. See, "Least Harm: A Defense of Vegetarianism from Steven Davis's Omnivorous Proposal", by Gaverick Matheny. *JOURNAL OF AGRICULTURAL AND ENVIRONMENTAL ETHICS* Volume 16, Number 5, 505-511. [http://ethik.univie.ac.at/fileadmin/user\\_upload/inst\\_ethik\\_wiss\\_dialog/Matheny\\_G\\_2003\\_Defense\\_of\\_Veg\\_in\\_J\\_Agric\\_Ethics.pdf](http://ethik.univie.ac.at/fileadmin/user_upload/inst_ethik_wiss_dialog/Matheny_G_2003_Defense_of_Veg_in_J_Agric_Ethics.pdf)

David (2011-08-10 06:54:52)

@Tomas: Ethical meat is pretty expensive. It's hard to imagine any but the most affluent buying grass finished beef. Ethical eggs are pretty cheap though.

## Andreas Eenfeldt on the Ancestral Health Symposium (2011-08-07 10:33)

I'm beginning to think Andreas Eenfeldt, a Swedish doctor, gave the very best talk at the just-finished Ancestral Health Symposium. (Which was full of excellent talks.) And I missed it. Well, that's what the Internet is for. His talk was about the spread of paleo ideas in Sweden. Apparently not all establishments are hostile to all new ideas. Someone told me that sales of butter in Sweden have recently increased 40 %.

Eenfeldt has written [1] a great series of posts about the Symposium.

1. <http://www.dietdoctor.com/>

Chris Sturdy (2011-08-07 18:56:55)

I saw his talk and it was great! Almost seemed like he was talking about a different planet since people actually agreed that conventional advice for diet was wrong.

Must-Hear Podcast Interviews After Attending The 2011 Ancestral Health Symposium | The Livin La Vida Low-Carb Show (2011-08-09 18:34:16)

[...] Latest In Paleo About.com Low-Carb Diets (Part 1) (more segments coming soon) Perfect Health Diet Seth Roberts (Part 1) (Part 2) Healthy Mind Fit Body Primal Wisdom Nell Stephenson Matt Metzgar The Paleo Garden Dr. Jack [...]

### Assorted Links (2011-08-08 05:36)

- [1]effect of food on justice. Via [2]Aaron Swartz.
- [3]can chocolate make you stronger?
- [4]do insecticides cause auto-immune disease?

Thanks to David Archer.

1. <http://blogs.discovermagazine.com/notrocketscience/2011/04/11/justice-is-served-but-more-so-after-lunch-how-food-breaks-sway-the-decisions-of-judges/>
2. <http://www.aaronsw.com/weblog/delegation>
3. <http://community.nytimes.com/comments/well.blogs.nytimes.com/2011/08/03/how-chocolate-can-help-your-workout/?permid=2#comment2>
4. <http://news.health.com/2009/10/19/household-insecticides-may-be-linked-autoimmune-diseases/>

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Kim Øyhus (2011-08-08 22:46:46)

The insecticide my parents used in our cabin many years ago was just a couple of atoms different from a neurotoxin developed for warfare, and it was very efficient against insects. But if it is that close to being directly lethal to humans, then it is likely to be damaging to humans, just not obviously so, because they test against that. And then there are all the random chemical reactions happening everywhere, surely changing some the insecticide to variants of the one for killing humans. And then there is the farmer branch of my family tree, with a lot of clearly inherited aquired genetic defects. The farmer who was said to be sloppy with insecticides.

dearieme (2011-08-09 02:45:43)

"a couple of atoms different from a neurotoxin developed for warfare, .... But if it is that close to being directly lethal to humans..": chemistry doesn't work like that. Common salt is just one atom different from a toxic gas and a flammable metal.

Kim Øyhus (2011-08-09 07:01:01)

Example of a nerve toxin similar to an insecticide: Organophosphates are fairly complex poisons, where small differences can give similar properties. Sarin is a potent nerve toxin for humans. <http://en.wikipedia.org/wiki/Sarin> Diisopropyl-fluorophosphate is an insect poison, but to humans it is a medicine. It has a molecule very similar to Sarin, except it has two iso-propane groups instead of one. [http://en.wikipedia.org/wiki/Diisopropyl \\_fluorophosphate](http://en.wikipedia.org/wiki/Diisopropyl_fluorophosphate)

Seth Roberts (2011-08-10 00:39:03)

"Common salt is just one atom different." But common salt has just two atoms – obviously changing 50 % of a molecule will make a huge difference. The pesticides that Kim is talking about have far more than two atoms.

Alrenous (2011-08-10 10:02:39)

I want to see that justice study, except done on judges on a paleo diet or otherwise not sugar-addicted.

## **Top and Bottom Versus Middle: China, Schools, Health? (2011-08-09 05:00)**

[1]My explanation of the Ten Commandments is that someone at the top (Moses) was trying to convince people at the bottom to join him. People at the bottom were being preyed upon. "Thou shalt not steal" meant, to Moses's audience, "no one will steal from you – or at least we, your leaders, will discourage it." At the very beginning of [2]the Code of Hammurabi, another ancient set of rules, it says one purpose of the rules is "so that the strong will not harm the weak".

I keep seeing this pattern – people at or near the top of the hierarchy making common cause with people on the bottom against people in the middle. I was reminded of it by [3]this story:

One anecdote described a Hu Yaobang [top Chinese leader] visit that Mr. Wen arranged with Guizhou Province villagers — secretly, he wrote, because Hu Yaobang did not trust local leaders to let them speak freely.

In the 1960s, the U.S. civil rights movement gained considerable force and accomplishment when the very top of the government (first, President Kennedy and Attorney General Robert Kennedy, later President Johnson) weighed in on the side of the protesters (bottom) against the various state governments (middle).

The practical value of this alignment of forces is illustrated by [4]How to Walk to School, a book about school reform (which I reviewed [5]here). Two mothers of young children, Jacqueline Edelberg and another woman, wanted to improve their neighborhood schools before it was too late for their own children to benefit. On the face of it, this was impossible. But they found common cause with the principal of a local school (Susan Kurland). It goes unmentioned in the book but my impression, reading between the lines, is that the main thing that happened is that the worst teachers were shamed into leaving, above all by parents sitting in their classrooms. The principal alone could do nothing about terrible teachers; the parents alone could do nothing; together they did a lot. I spoke to Edelberg about this and she agreed with me.

I point out this pattern because it works. Judaism (Moses) still exists; people still read the Old Testament. Even more powerfully, all governments have lists of laws (Hammurabi). Jacqueline Edelberg's neighborhood school is much better. The next big revolution in human affairs, I believe, will be health care. The current system, in which people pay vast amounts for drugs that barely work, have awful side effects, and leave intact the root cause (e.g., too little dietary omega-3), will be replaced by a much better system. The much better system will be some version of paleo. As [6]Woody Allen predicted, people will come to believe that butter is health food.

How will it happen? I suspect this pattern will be the driving force. People at the top and people at the bottom will put pressure on people in the middle. Self-experimentation, self-quantification, and personal science (which overlap greatly) are tools of people at the bottom. They cost nothing, they are available to all. When you track (quantify and record) your health problem, and show your doctor, via numbers and graphs, that the drug he prescribed didn't work, that puts pressure on him. When you bring your doctor numbers and graphs that show a paleo solution did work,



that puts even more pressure on him. The point, if it isn't obvious, is that numbers and graphs, based on carefully collected day-after-day data, amplify what one person can do. Not just what they can learn, not just how healthy they can be, but how much they can influence others. And this amplification of influence, which I never discuss, may ultimately be the most important.

1. <http://blog.sethroberts.net/2010/03/08/top-and-bottom-versus-middle/>
2. <http://avalon.law.yale.edu/ancient/hamframe.asp>
3. <http://www.nytimes.com/2011/08/08/world/asia/08china.html?hp=&pagewanted=all>
4. <http://www.amazon.com/How-Walk-School-Neighborhood-Renaissance/dp/1442200006>
5. <http://blog.sethroberts.net/2010/03/08/top-and-bottom-versus-middle/>
6. <http://www.workoutconditioning.com/?p=1072>

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Kirk (2011-08-09 11:16:42)

Agreed. I wonder how long it's going to take to change their minds. When I went in for my recent annual, I brought a full-page description of my various exercises, resting heart rate, morning and afternoon BP, morning, one-hour, and two-hour blood glucose readings after a typical meal, supplements, and description of diet (paleo) . . . and his response was to advise me that we all get sick and die. He sees himself as a mechanic, and his virtuous fight is against his penny-pinching administrators , the insurance companies, and Big Pharma. Oh well. I just go in there for the insurance-covered physical, to ask a few questions, and to get the covered blood tests. One book which impressed me this year was *The End of Medicine* by Andy Kessler. I also liked the TED talk by Daniel Kraft: 'Medicine's future? There's an app for that' .

Tom (2011-08-09 13:12:36)

And if you're *really* devious, you can manipulate the lower class into attacking themselves as well. Thus we see the Murdochs and the Koch brothers propagandizing working class evangelicals into voting for people who slash taxes on billionaires – all while collapsing the dollar (a gigantic, invisible tax on the middle and lower classes.) Ted Turner famously said "Christianity is a religion for losers." Boy, did he nail it.

Noumenon (2011-08-12 04:24:56)

In the first link you said, "I predict that someday someone in the American government (top) will realize that a way to greatly improve health care is to empower patients (bottom) against doctors (middle)." My father wants to know where insurance companies fit into this. Are there two middles?

### **Ancestral Health Symposium: Meat versus Fat (2011-08-10 05:00)**

Yesterday I was telling a relative about the Ancestral Health Symposium and I mentioned the emphasis on meat eating – for example, two vendors gave out samples of beef jerky. To most people, I think paleo means eating lots of meat. I told my relative I disagreed with this. I find nothing wonderful about meat protein; I would happily get my protein from plants. I eat meat almost only for the associated fat. Which I can get from butter. A lot of meat I am served, such as in fancy restaurants, strikes me as too low in fat. Yesterday I requested butter at a sushi restaurant. The waitress was unsure if they had some.

Today I see Melissa McEwen [1]said the same thing much better:

It was interesting to observe that [at the Ancestral Health Symposium] among the low-carbers, there seemed to be an epidemic of puffy red skin, particularly in older men. I'm sure the pictures, when they are posted, will make obvious who these people are. The ones who had healthy complexions like the Eades and Nora are those espousing a high-fat diet. It goes very well with some of the anthropological stuff I've been working on showing that almost all cultures that eat meaty diets are doing so because they have access to high-fat game.

1. <http://huntgatherlove.com/content/ancestral-health-symposium-part-1>

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Ahrand (2011-08-10 06:24:21)

That's why they called it the Ancestral Health Symposium, not (only) about the paleo diet which seems to be mostly 'Atkins for hippies' (the high protein, low carb part). There are notable exceptions, even at the AHS : - Dr. Lynda A. Frassetto from UCSF - Don Matesz from [donmatesz.blogspot.com](http://donmatesz.blogspot.com) Who advocate low protein (to maintain proper PH balance)

Jay (2011-08-10 06:45:48)

Hello Seth, I apologize for not being familiar with you before this, I stumbled in through some AHS links. I'm curious what you personally consider good sources of plant protein? I've tried to do a cursory scan of your blog to find out but I'm coming up empty - I'm sure it's there, I'm just not doing a very good job of tracking it down.

David (2011-08-10 07:01:17)

Seth, you're awesome! First you told me I could lose weight by drinking sugar water, now you tell me I can be smarter by eating sticks of butter. David

Seth Roberts (2011-08-10 09:49:20)

Jay, I have never blogged about good sources of plant protein. I don't know anything you don't know: that we need several different amino acids to make muscle and other proteins and therefore you need protein from several different plant sources if you want it to be well matched to the needs of your body. For example, I've heard that the combination of rice and beans are well-matched, i.e., rice and beans are good complements. Whereas animal protein is already well-matched.

Owen (2011-08-10 13:14:33)

Seth, this is a good point you make and it also ties in to the somewhat misguided anti-vegetarian stance of a lot of the paleo superstars. You don't need to eat meat to get good quality protein and in fact meat is by no means the best source: <http://en.wikipedia.org/wiki/PDCAAS> (Although plant protein comes out looking extremely problematic on that level as well, unless you are willing to consume soy as a bulk food source, which has very well documented problems of its own...) Paleo theory can go on about how milk isn't "paleo" (I'm not entirely sure where they stand with the Maasai these days), but if you can escape that paradigm, dairy (and egg) protein has some excellent qualities to consider: they are higher quality than muscle tissue, generally cheaper, more convenient to prepare and eat when you are busy, may have a less inflammatory amino acid balance than muscle and are much lower in oxidative iron. Egg yolk can, to an extent, function in place of organ meats as a good source of retinol, B-vitamins and cholesterol. In truth though, I am not vegetarian and do enjoy eating all manner of steaks, lamb, offal, game birds, seafood, etc., but I do it with the mindset that it is a sensory treat and not the credo that it is the ideal food for everyone at all times. Though, one thing you can say pretty accurately is that red meat is one of the best sources of dietary zinc.

Vic (2011-08-10 16:50:34)

"The ones who had healthy complexions like the Eades and Nora are those espousing a high-fat diet." uh, the Eades' web sites are called [eatprotein](http://eatprotein.com) and [proteinpower](http://proteinpower.com) - and they don't get their protein from plants!

Lemniscate (2011-08-11 00:37:48)

Some of the meat enthusiasts don't focus enough on organ meat, as this would have comprised a much larger part of the diet of ancestral meat eaters than it does for modern meat eaters. Eating endless bovine muscle meat might be a good way to put on muscle (although whey protein and egg protein would be cheaper), but I doubt it is as healthy as giving good space in the diet to organ and bone based dishes, which tend to be much more nutritious.

Adria (2011-08-11 07:24:54)

@ Vic I think the reason the Eades have that titular focus on protein is due to pressure from their publishers, and because of the public's irrational fear of fat. If you actually look at the content of the diet they recommend, they are by no means suggesting low fat, and actively suggest eating saturated fat. A "high-protein" diet is code for high-fat. Compare that with, for example, Cordain, who has been claiming that hunter-gatherers ate a low-fat diet because wild muscle meat tends to be lean. (He seemed to ignore observations of HGs noting that the fat, brains, marrow, and organ meat are prized, and often eaten first). @ Owen I think a lot of the AHS "big names" have moved away from paleo as historical reenactment and more using it as a guiding principle, a la Kurt Harris or Peter "Hyperlipid" or the Jaminets. Personally, one of the reasons I am so late to the paleo party is that, as someone who studied archaeology, the idea that we can reconstruct details of diet during the paleolithic struck me as extremely silly. If we use it more as a way to generate testable hypotheses about what may or may not be good for us, it becomes a much more interesting idea. For me, anyway.

Owen (2011-08-11 08:13:42)

Adria, definitely agree, especially regarding Peter. His views on protein are very compelling to me: he limits it to around 65g/d (this was in 2008, so I'm not sure if it's still accurate) and so he mentioned that he enjoys "spending" his "allowance" on meat, rather than egg white or milk protein (this is why he uses only yolks and cream for fat, rather than whole egg and milk...) His reasoning... "This comes from Dr Kwasniewski's ideas. The basic plan is to minimise insulinaemia and also metabolic work by the liver. Using the highest quality protein minimises the total amount and also the requirements for amino acid transformation. No point in using more than needed." (<http://high-fat-nutrition.blogspot.com/2008/01/what-do-i-eat-fitday-analysis.html>)

Thomas Seay (2011-08-11 09:45:20)

The problem with the "Paleo" diet is that its very name implies that we KNOW what Paleo man ate AND we SHOULD eat that way. It's a nice name for a fad, because it is simple to grasp and has a "jingle" quality to it like a radio ad. As such, it becomes somewhat difficult for people to get unglued from Paleo dogma. Do we really know what our ancestors ate? Have we stopped evolving? Was what Paleolithic people ate really what is the healthiest for us? Don't we live in a different time and environment (pollution, stress, etc) in which maybe we need to eat differently? I think "Paleo" isn't useful or helpful anymore. It could even be a construct that limits our ability to see better possibilities.

Tyler (2011-08-11 10:55:32)

@Thomas For me, the term "paleo", with regards to what we eat, simply means cutting grains and legumes out of my diet. I think there's very little room for argument as to how that can be a bad move. Beyond that, however, there exists many different opinions. High fat, low fat, dairy or not... That's all evolving. But I think there's merit to that foundation.

08/12/11 - Deadlift + Sprints (2011-08-11 18:01:45)

[...] Meat Vs. Fat - Seth's Blog [...]

David (2011-08-11 20:37:44)

I also wonder if it's even possible to eat the way paleolithic man ate unless you live in the country and can get a lot of calories from game animals. But even those game animals will have eaten a lot of crops planted by man and so might not offer the same nutrition to the cave man wannabe.

## The Beer Archaeologist (2011-08-11 05:00)

Patrick McGovern is a professor of archaeology at the University of Pennsylvania who studies fermented beverages. [1]His work reveals their long history. Just like modern nutritionists, modern archaeologists overlook this:

Many of McGovern's most startling finds stem from other archaeologists' spadework; he brings a fresh perspective to forgotten digs, and his "excavations" are sometimes no more taxing than walking up or down a flight of stairs in his own museum to retrieve a sherd or two. Residues extracted from the drinking set of King Midas—who ruled over Phrygia, an ancient district of Turkey—had languished in storage for 40 years before McGovern found them and went to work. The artifacts contained more than four pounds of organic materials, a treasure—to a biomolecular archaeologist—far more precious than the king's fabled gold.

Beer figures more in his work than wine. I'm not surprised. I'm a beer snob. The best beers at [2]a recent beer tasting were far better than the best wines at similar wine tastings. The upper-class preference for wine over beer may have the same explanation as earlier upper-class preferences for white rice over brown rice (rich Japanese got beriberi more than poor Japanese) and white bread over dark bread. Or it may also have something to do with the fact that cheap beer in America is terrible.

Thanks to [3]Melissa McEwen.

1. <http://www.smithsonianmag.com/history-archaeology/The-Beer-Archaeologist.html?c=y&story=fullstory>

2. <http://blog.sethroberts.net/2011/07/03/unofficial-beer-tasting-winner-uncommon-brewers/>

3. <http://huntgatherlove.com/>

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Glen Raphael (2011-08-11 06:58:47)

> "I'm a beer snob." That data point might help explain why I couldn't personally reproduce your "complex tastes are better" claim. I recently went to a beer tasting run by a beer snob. There were a couple dozen beers available that were supposed to represent the widest possible variety of types. The problem I had with all of them was that they "tasted like beer". The only thing called "beer" I find somewhat tasty (rather than wince-worthy) is a Belgian Lambic which tastes \*nothing\* like beer - it tends to taste like a strawberry wine cooler. Do you have any suggestions for \*learning\* to like beer? Or to at least tolerate it?

Seth Roberts (2011-08-11 10:21:10)

how to learn to like beer: first you must learn to like the taste of alcohol. That happens just by drinking alcoholic beverages. if you already like the taste of alcohol, I'm puzzled.

dearieme (2011-08-11 13:23:09)

Beer is an acquired taste. People, or at least men, used to acquire it late in adolescence - though I must say that many Brits no longer acquire it and so drink lager instead, largely muck in the style of cheap American beer. If even that is too manly for them then they drink spirits with 'orrible additives.

garymar (2011-08-11 16:40:00)

Beer is the great summer thirst quencher. How good it tastes right now in the northern hemisphere! But I usually stop and switch to wine around mid-September.

BarryBrolley (2011-08-11 18:25:45)

Seth, Seems Matt Lallonde liked your question: <http://robbwolf.com/category/podcasts/> (go to episode 92 19 minutes in) Barry

Glen Raphael (2011-08-11 19:21:32)

I don't much care for the taste of alcohol generally but I like the taste of wine, especially white wine. And can drink some dessert-type liquors. I have no trouble at all drinking wine on social occasions. When you say "The best beers at a recent beer tasting were far better than the best wines at similar wine tastings." - My contrary sense is that all beers taste more-or-less bad - it's a chore to try to finish even \*one\* bottle of (any variety of) beer. Whereas all wines taste...fine. Some taste pretty good. Wines that are considered especially "good" don't taste noticeably better than average. In blind taste testings even experts can't reliably tell the difference between an expensive wine and a cheap one - it's mostly about expectation - so at a restaurant I tend to go with the cheap one. Anyway, put me down as a data point: I like wine over beer because beer reliably tastes terrible, though I've tried "good" beers. (Beer is fine as a food ingredient, just not as a drink.)

Seth Roberts (2011-08-12 07:34:51)

Thanks, Barry. Nice to hear. It's a great podcast.

Owen (2011-08-12 11:52:51)

When people say they don't like beer, I always assume it's the bitterness from the hops that is bothering them. Good American craft beer is usually incredibly hoppy unless they are imitating a European style and using noble hops. And on the other side you have cheap American beer that is bland because it is brewed with a huge proportion of rice and not so great. But I think non-beer drinkers might have the best luck trying a Belgian or English ale that tends towards being malty and spicy or nutty and hides the bitterness and alcohol well. Leffe Blond and Fuller's London Pride are two that might be worth a shot and aren't hard to find. I worry about drinking beer a lot thought, because the hops really are strongly estrogenic: <http://jcem.endojournals.org/content/84/6/2249.abstract> My new interest is to track down some of these traditional Scottish-style ales being brewed by Williams Bros, where in lieu of hops they use either heather or Scots pine to flavor the beer. I've heard they are very unusual and drinkable!

Seth Roberts (2011-08-12 18:58:03)

That's a subtle and helpful take on the whole thing, thanks, Owen. It's true, I don't like bitter beers. I like the spicy, malty, nutty ones.

## **What We Learn From the Better Health of Vegetarians (2011-08-11 17:00)**

Lots of people think it's obvious: vegetarians are healthier than omnivores in Study X. Therefore vegetarianism is healthy. This is such a common line of argument that I draw your attention to [1]Denise Minger's slides for her talk at the Ancestral Health Symposium, which I have [2]already blogged about. The slides make clearer than I did what she said. It's all excellent but the best part is at the beginning where she points out the many confounds in the studies of Dean Ornish, Neal Barnard, Caldwell Esselstyn, and John McDougall. They change many things but - as Denise put it - What caused the benefits? It must be the vegetarianism! Paleo humor.

There are lots of other interesting things in Denise's talk, as you will see, such as the health of religious vegetarians.

1. <http://www.slideshare.net/ancestralhealth/ahs-slidesdenise-minger>
2. <http://blog.sethroberts.net/2011/08/07/the-curious-popularity-of-how-to-win-an-argument-with-a-meat-eater/>

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Shane (2011-08-11 17:53:17)

Wait, what? Correlation is not causation?

Jon (2011-08-11 22:37:02)

One of the slides is misleading. The exercise comparison was 70 % compared to 80 %. Proper charting says you always start your bar chart at 0, the person that did the chart started at 50 or so. Otherwise, interesting, not a lot of info, just the last slide that gives a website to look at. Will make me look at it a little closer when I do comparisons in the future. BTW, bought your book and have been losing weight. It'll be nice when I get down to my desired "ideal". Maybe then I'll be able to run again without getting injured all the time.

Seth Roberts (2011-08-12 07:27:42)

Shane, the data Denise was talking about (Ornish, etc.) is not correlational – that is, from a survey. It's from experiments. Moreover, one of Denise's slides is about "religious vegetarians" – what we can learn from them. The data in that slide is correlational. I believe that data is helpful. To claim, as Denise did (and I agree), that you can learn something helpful from survey data is roughly the opposite of "correlation is not causation".

### Assorted Links (2011-08-12 05:00)

- [1]Edward Jay Epstein on Kindle publishing
- review of [2]The Beekeeper's Lament, a book about the fragility of bees. "Colony Collapse Disorder [CCD] is a problem. But it isn't the problem. Instead, it's just a great big insult piled on top of an already rising injury rate. Saving the honeybee isn't just about figuring out CCD. Bees were already in trouble before that came along."
- Vanity Fair provides a public service by providing full access to [3]the final installment of Michael Lewis's great series of Financial Disaster Travel Writing. Earlier installments were about Iceland, Ireland, and Greece. This installment is about Germany.

1. <http://www.theatlanticwire.com/business/2011/08/can-e-books-pay-writers/40975/>
2. <http://boingboing.net/2011/07/15/the-beekeepers-lament.html>
3. <http://www.vanityfair.com/business/features/2011/09/europe-201109>

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griff (2011-08-13 14:19:12)

Thanks for pointing out the excellent Vanity Fair article on Germany and finance. Nevertheless, parts of it made me laugh out loud as I had recently seen this via a reddit link. <http://asecular.com/scott/misc/toilet.htm>. Apparently Germans really do like to inspect their fecal matter.

Sam (2011-09-03 13:09:39)

According to a beekeeper the CCD problem is mainly caused by beekeepers themselves: Beekeepers tended to be annoyed by some sticky stuff bees produce and for decades bred bees which produced less of this sticky stuff. Problem is, this sticky stuff (called propolis) is important to bee health and by breeding this out of the bees they made them more susceptible to health problems, which 'assisted' in CCDs.

## More Migraine Headaches Caused by Cleaning Products: From N=1 to N=2 (2011-08-13 05:00)

At Thursday's Quantified Self Silicon Valley Meetup (where I gave a talk called [1]QS + Paleo = ?), Alexandra Carmichael introduced herself with the three words "no", "headache", and "today". About five days earlier, she had started having migraine headaches every day. Before that, she hadn't had a migraine headache in a year. After the headaches began, her husband, having read [2]my Boing Boing story (about a woman whose migraines were mostly from cleaning products), suggested that her headaches might be caused by the [3]Febreze they had just started using. They stopped using it. Because it can linger in carpets, etc., they cleaned their whole apartment with vinegar and baking soda, to get rid of all traces. That's when Alexandra's headaches stopped. When they started using Febreze, one of their daughters became very cranky. After they stopped using it and cleaned their apartment, she returned to her usual self.

Other people have found that Febreze gives them migraines. For example, [4]R. Haeckler:

[Febreze] gives me terrible migraines. . . . Whenever I go to someone's house who uses it I get a headache almost immediately that lasts the rest of the night.

And [5]this woman ("No Febreze EVER. Gives me a headache and makes me dizzy").

This is a good example of why n=1 experimentation is so important. The woman I wrote about for Boing Boing (Sarah) figured out, beyond any doubt, that certain cleaning products caused migraines. Yes, Sarah's results were unusual. They "don't generalize" to most people in the sense that most people don't get migraines from cleaning products. But, as Alexandra's story shows, they were still helpful – they helped Alexandra avoid migraines.

My writing about n=1 experimentation has emphasized learning widely-applicable truths – how to lose weight, sleep better, and so on. But this other use – learn stuff that is true only for you and perhaps a small subset of people (1 %?) – is also important. Sarah's n=1 experimentation doesn't fit in the standard healthcare system. It was not suggested or encouraged by her doctors. No professor or researcher could write a paper about it – it's too small. But it made a difference – first, to herself, now, to Alexandra. The results of n=1 experiments can be spread, however, in the new patient communities, such as the ones at [6]PatientsLikeMe, [7]MedHelp, and [8]CureTogether (started by Alexandra and her husband).

When I submitted for publication [9]my long self-experimentation paper, one of the referees decided he would find out if fructose water would help him lose weight (one of my examples). He discovered that fructose water made his fingers ache – he had a sensitivity to fructose he hadn't known about. In his review, he said that these sorts of individual differences were not an argument against my method but actually favored it: We need n=1 experiments to fully understand human variation in health.

1. <http://blog.sethroberts.net/wp-content/uploads/2011/08/2011-08-11-QS-plus-Paleo-what.ppt>

2. <http://boingboing.net/2011/07/25/finding-the-source-of-migraines-and-fifty-useless-migraine-drugs.html>

3. <http://www.febreze.com/>
4. <http://www.amazon.com/Febreze-Refresher-Antimicrobial-27-Ounce-Bottles/product-reviews/B001D1YJKC>
5. <http://www.mothering.com/community/forum/thread/1239269/would-you-use-febreeze/40>
6. <http://www.patientslikeme.com/>
7. <http://www.medhelp.org/>
8. <http://curetogether.com/>
9. <http://escholarship.org/uc/item/2xc2h866>

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Around the Web; Post-AHS Edition | Perfect Health Diet (2011-08-13 10:48:00)

[...] Roberts reports that cleaning products such as Febreze can cause migraines and cranky mood. Vinegar and baking soda [...]

Bryan (2011-08-13 16:25:17)

Febreeze and most colognes and perfumes have always given me a headache too. (My dad is the same way so perhaps there's a genetic component.) I always avoid them.

q (2011-08-14 05:06:11)

some chemical in Tide makes me unable to sleep if i am around it too much. it's the scent, not the detergent as I often use Unscented Tide (at the very least I don't like cleaning scents whether they are harmful or not) and have no problem with it.

David (2011-08-14 19:34:07)

Strong chemical smells also give me headaches. but I don't think they're migraines (i.e. they're annoying but not debilitating). My daughter had some fresh finger nail polish on the other day and very quickly I had a headache. So the proposition that the smell of certain chemicals trigger migraines in some people sounds quite plausible to me.

Pasta Maker (2011-08-15 12:48:34)

This is interesting. Thinking back, I always have headache when using most of the perfumes, and my friends never believe about my claims that the perfumes are causing me headaches. After reading this, I'm relieved that maybe it is not just my imagination that the perfumes are causing me the headaches.

Dr.Zachar (2011-08-15 15:25:40)

That's interesting. I'm always one to opt for NATURAL cleaning products of the sort. Thanks for the informative post though!

More migraine headaches caused by cleaning products: from N=1 to N=2 | It's like, Really? (2011-08-17 17:21:06)

[...] More Migraine Headaches Caused by Cleaning Products: From N=1 to N=2 [...]

Syngen (2011-08-17 18:53:09)

I would venture that it's the fragrance component of the Febreze that's offensive and probably not the  $\beta$ -cyclodextrin. I'm actually very curious to know if these migraine sufferers react the same way to unscented Febreze? I think the cyclodextrin molecules are too big to get properly airborne? Of course this would require a double blind randomized trial. (I'm a scientist so even with self experimentation I run the control. My doctor made fun of me for doing that last time I had an appointment.) Also, "natural" cleaning products are usually just similar surfactants with some citronellol to make it smell "natural." I'll grant that that I'd rather the citronallol than the artificial scents, but still. The marketing of this stuff drives me bonkers.

E A R (2011-08-17 20:28:44)

I haven't been able to use any scented cleaning products for 30 yrs. For many with these headaches (and other types), inhaling natural peppermint oil eases them. It's cheap. Or you can grow mint in a window box.



Joanna (2011-08-17 22:03:05)

The Febreze / headache case is not an outlier. Here is an example of a WHO meeting in May where Spanish physicians demanded inclusion of multiple chemical sensitivity in the WHO ICD10 code list. <http://www.ei-resource.org/columns/multiple-chemical-sensitivity/world-health-organization-meeting-on-mcs-and-ehs/> What is interesting is the number of people affected – estimated at around a 15 % prevalence worldwide. Then add in the migraine sufferers, asthmatics, people with chronic respiratory conditions... chemical triggers are very common in these illnesses, as well as less obvious illnesses such as chronic fatigue and fibromyalgia. For some reason doctors refrain from informing patients about such common irritants, and most people have no idea of the epidemic happening right in front of them.

More migraine headaches caused by cleaning products: from N=1 to N=2 « News Xazri (2011-08-18 04:23:47)

[...] More Migraine Headaches Caused by Cleaning Products: From N=1 to N=2 [...]

Barry Spencer (2011-08-18 22:50:55)

A trial study involving only one subject can't demonstrate that Febreze causes migraine episodes in some people, because a trial using only one subject can't rule out coincidence. People who blame their migraines on odors are mistaking symptom for cause. Migraine symptoms can include "olfactory aura:" olfactory amplification, olfactory distortion, and even olfactory hallucination. Olfactory aura, like visual aura, often precedes the headache phase. Many migraine patients notice and remember strong or unusual odors right before onset of headache, and mistakenly conclude the odor must have caused or triggered the subsequent headache. The truth is, by the time they noticed the odor, the migraine episode had already been developing for some time. It's not odor → headache but rather odor amplifies headache.

Seth Roberts (2011-08-19 05:26:28)

Barry, in my story about a woman who cured her own migraines, the woman discovered that if she avoided chemicals called artificial fragrances her migraines became less common. Cause and effect was shown beyond doubt. In this case, I think the chances of it being a coincidence are very low.

Rachael (2011-08-23 13:32:47)

It may be that some people have olfactory auras, but I absolutely get headaches, and migraines from artificial, and even some natural fragrances. Every year when the lilacs bloom, hyacinth and lily of the valley too, I have constant headaches. I am not hallucinating flowers, and the life-long consistency of the response is pretty telling. However, it is interesting to me that I can lower my sensitivity in other ways. For years any strong floral scent gave me migraine, but changing my diet, exercising enough but not too much, taking magnesium and B vitamins, etc. have lowered my sensitivity so now only lilac time and stores that sell many scented products give me migraine. Any way, it's hardly n=1, google fragrance migraine trigger and there are thousands of hits. (I use only unscented household products because I also get serious eczema from scented products.)

Asteroid (2011-09-10 08:58:51)

My migraines are without a doubt CAUSED by aerated Chemical cleaning products. Caused. Not amplified. I use natural liquid cleaning products only. I can without a doubt prove this if given a scientific environment. I can't be around any aerated artificial scents either such as junk perfume (and some 'nice' ones) febreze air fresheners etc. The funny thing is, I've found that if I have a bad migraine I usually have a severe sneezing attack at some point. At which time the headache, auras, nausea and blurriness start to dissipate. For the life of me though I can't force myself to sneeze before that though. I wish I could.

## Assorted Links (2011-08-14 05:00)

- [1]Ancestral Health Symposium Awards
- [2]Taurine cures eczema

- [3]Surprises from celiac disease. "This is a perfect example of why healthcare is so expensive," says one comment. I agree. Not because of the conspiracy theory espoused in the same comment but because of the way expensive ineffective solutions are promulgated when a much better cheaper one exists.
- One problem with a low-carb high-meat diet: [4]bad metabolites. This is why it is a good idea to find out what causes obesity rather than simply lose weight with something that works (such as a low-carb diet).
- [5]Could spoiled food be safe to eat?
- [6]reform the IRBs!
- [7]conning the Kindle

Thanks to Tucker Max, Melissa McEwen, Peter Couvares, Edward Jay Epstein, and Alexandra Carmichael.

1. <http://hunter-gatherer.com/blog/2011-ancestral-health-symposium-awards>
2. <http://curetogether.com/blog/2011/06/21/what-works-for-eczema-patient-study-results/comment-page-1/#comment-3116>
3. <http://www.scientificamerican.com/article.cfm?id=celiac-disease-insights>
4. <http://www.ajcn.org/content/93/5/1062.short>
5. <http://www.slate.com/id/2170633/>
6. <http://themonkeycage.org/blog/2011/08/11/help-reform-the-institutional-review-board-irb-system>
7. <http://bits.blogs.nytimes.com/2011/08/12/amazon-cracks-down-on-some-e-book-publishers>

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Ahrand (2011-08-14 05:23:23)

Seth, here is another one you'll probably like : <http://blog.jayparkinsonmd.com/post/4024600220/what-happens-to-doctors-who-think-outside-the-box> Via <http://hunter-gatherer.com/>

Erik M Jacobs (2011-08-14 06:34:45)

Unfortunately, the colonic health study does not appear, at first glance, to indicate the specific sources of the foods provided. It is likely that typical factory/industrial foods were provided to the individuals in this study. It would be interesting to see the results of HP/hflc industrial compared to 'primal'/paleo non-industrial hp/hflc.

Tom (2011-08-14 09:52:01)

Seth, The spoiled food link doesn't work.

Kudzu Bob (2011-08-14 16:35:30)

Interesting that taurine may be helpful for eczema. Isn't taurine a sulfur-rich amino acid? If I recall correctly, sulfur—particularly in the form enjoyed by people who bathe in those hot springs that smell like rotten eggs—has long been reputed to promote skin health. Incidentally, on the same thread that you link to, one commenter remarks upon the beneficial properties of MSM lotion for eczema. MSM also contains a lot of sulfur. As for my own eczema, a type that my doctor called "neurodermatitis," I suffered with it for the better part of a decade. Once I finally understood that what goes into my mouth might actually have some bearing on the state of my health, I began to consume both flax oil and fish oil. Within two months my condition had improved to the extent that I no longer needed a dermatologist. I don't miss him, his ineffectual steroid creams, or his bills one bit. I have been eczema-free for several years now. I still take omega-3, in addition to a number of other supplements, and enjoy excellent health.

Tomas (2011-08-15 02:45:18)

This is the spoiled food link <http://www.slate.com/id/2170633/>

Seth Roberts (2011-08-15 20:12:01)

thanks for the correction, Tomas. I have fixed it.

Around the Web; Shark-Whale-Man Friendship Edition | Perfect Health Diet (2011-08-20 11:03:16)

[...] Seth Roberts also linked to a paper showing that high-protein diets are bad for the colon, due to toxic protein metabolites.  
[...]

Around the Web; Shark-Whale-Man Friendship Edition (2011-08-24 14:03:11)

[...] Seth Roberts also linked to a paper showing that high-protein diets are bad for the colon, due to toxic protein metabolites.  
[...]

## **A Happy Reader Writes: Yogurt, Butter, Flaxseed Oil (2011-08-14 07:42)**

A reader of this blog started taking flaxseed oil, half a stick of butter daily, and yogurt. "This works wonders," he wrote me. "It feels like lubricant to the mind."

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Ruth @ Ruth's Real Food (2011-08-14 22:47:38)

Seth, what kind of butter and yogurt do you take? Are they made from raw milk?

Seth Roberts (2011-08-15 20:14:43)

Ruth, I have tried many butters and a few milks. I have been unable to detect a difference between cheaper and more expensive butter. Including butter that costs \$10/pound, presumably made from raw milk. I don't make yogurt from raw milk. I make yogurt from DHA enriched organic milk.

Ezer (2011-08-15 21:55:42)

Seth, I started taking 260g of magnesium in form of magnesium glycinate and this works wonders too, my mood improved clearly. Do you supplement magnesium too? It would be interesting to evaluate. Now, I was thinking: maybe flaxseed oil is more effective than fish oil to improve cognitive function, not because ALA conversion to EPA and DHA, but mainly because ALA and EPA conversion uses elongase fatty acids, thus reducing elongase fatty acids available, needed to LA conversion into arachidonic acid, which could increase inflammation. What do you think about it? Very nice blog :)

Ruth @ Ruth's Real Food (2011-08-15 21:56:17)

Interesting. How do you actually ingest such a large quantity of butter? I usually use about a tablespoon and a half to make eggs in the morning, but half a stick is four tablespoons.

Ezer (2011-08-15 22:00:49)

Ruth, my two cents: I ingest 80g of butter with cooked hot sweet potatoes and coffee. this is delicious.

Seth Roberts (2011-08-16 04:41:29)

That magnesium effect is fascinating. I do not take magnesium but I will try it. It's not "elongase fatty acids" but "fatty acids elongase" (an enzyme that elongates fatty acids). Your idea makes sense to me but I cannot judge how plausible it is.

Tom (2011-08-16 06:23:06)

Michael Eades has written that as many as 70 percent of people don't even get the minimum RDA of magnesium: [1]Magnesium and Inflammation

1. <http://www.proteinpower.com/drmike/uncategorized/magnesium-and-inflammation/>

Tom (2011-08-16 06:24:09)

another by Dr. Eades (scroll down to magnesium section): [proteinpower.com/drmike/saturated-fat/tips-tricks-for-starting-or-restarting-low-carb-pt-ii](http://proteinpower.com/drmike/saturated-fat/tips-tricks-for-starting-or-restarting-low-carb-pt-ii)

Shawn (2011-08-26 07:30:18)

Isn't butter & other fats bad for your heart, arteries, veins, etc., despite the fact that it can help you sleep?

Martin (2011-11-21 08:08:49)

Flax seeds two tbsp (around 30 gram), making ground in grinder, mix with appropriate yogurt, that is the way to go I feel awesome after that, lots of energy and awesome mood. But indeed flax seed alone doesn't do that much, Yogurt boosts Flax seed job?

## **Deborah Estrin on Top and Bottom versus Middle (2011-08-15 05:00)**

[1]Deborah Estrin is a computer science professor at UCLA. Commenting on my recent post [2]Top and Bottom versus Middle: Schools, China, Health? she said "amen to that".

I asked her why she agreed. Because she sees the same thing a lot, she said. In particular, performance metrics are often devised by people in the middle, and those metrics tend to serve their interests – and not the interests of everyone else. She gave three examples: 1. Fee for service. Doctors are paid per office visit and per surgery, for example. The bad effects of this are obvious. For example, [3]surgeons are pushed to recommend ill-advised surgeries. 2. Financial instruments, such as derivatives. They were sold to outsiders as ways to reduce risk but we all now know they had the opposite effect. As [4]Michael Lewis puts it, "extremely smart traders inside Wall Street investment banks devise deeply unfair, diabolically complicated bets, and then send their sales forces out to scour the world for some idiot who will take the other side of those bets." 3. Publications. Professors are rated and promoted and to some extent paid based on how many publications they produce. This pushes them toward "safe" projects that are likely to produce a publication within a reasonable time and away from harder, more important problems.

When you measure yourself you can use whatever metric you want – and thereby a metric that serves your interests.

1. <http://research.cens.ucla.edu/people/estrin/>

2. <http://blog.sethroberts.net/2011/08/09/top-and-bottom-versus-middle-china-schools-health/>

3. <http://blog.sethroberts.net/2008/09/13/the-case-of-the-missing-evidence/>
4. <http://www.vanityfair.com/business/features/2011/09/europe-201109>

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Tim Beneke (2011-08-15 12:08:43)

A friend who recently got her Ph.D. through the Berkeley psych dept describes how in her "professional seminar" a distinguished professor in the dept came and gave a talk and explained how by the time they got their Ph.D.s they needed to have about 7 publications. At least one should be in X journal; another should be in Y journal; the others should be in A, B, and C journals; etc. She loves doing psychological research and exploring ideas, but she found this rather shattering; it took some of the joy out of the process and biases the kinds of research people are willing to do...

### **Absence of Fermented Food From the Thoughts of a Foodie (2011-08-16 05:00)**

A diagnosis of stomach cancer and the need for radical surgery led a writer named Anna Stoessinger to plan [1]a series of meals before surgery. She and her husband care enormously about food:

My husband and I have been known to spend our rent money on the tasting menu at Jean Georges, our savings on caviar or wagyu tartare. We plan our vacations around food — the province of China known for its chicken feet, the village in Turkey that grows the sweetest figs, the town in northwest France with the very best raclette.

Yet in her two-page article she doesn't mention fermented food even once. (Leaving aside a mention of cheese.) Here are some foods she does mention:

- roast duck, crostini and rich fish stews
- roast chicken with leeks
- roadside cheeseburgers, bonito with ginger sauce, hazelnut gelato
- peanut butter and jelly doughnuts, ginger ice cream, sashimi, grilled porterhouse, wild blueberries
- candy
- foie gras and fig torchon
- butter-poached smoked lobster
- passion fruit coulis
- butter-seared scallops
- wild boar terrine and Guinness vegetable soup with rosemary whipped cream
- apple and cinnamon tarte tartin

Of the thousands of fermented foods, eaten daily by people all over the world from time immemorial, nothing. To me, it's like she's had a stroke and has spatial neglect. She is unaware of half the visual field but doesn't notice anything wrong. The absence of fermented foods from her article reflects the larger near-total absence of fermented foods in American restaurants (both high and low), supermarkets, cookbooks, newspapers, and health advice.

I no longer use cookbooks. I rarely use spices. I make the food I cook taste good by adding fermented foods – for example, miso or yogurt or stinky tofu or fermented bean paste. The result is much tastier than almost anything I can get in restaurants (if I say so myself) and no doubt much healthier.

Ms. Stoessinger's article reads like a series of boasts: look how much I know and care about food. I think that's part of the problem: You can't boast about fermented food. It doesn't require expensive skilled preparation to taste delicious. You can't impress guests with fermented food, you just serve it. A bowl of miso soup: big deal. The bacteria made it delicious, not you. So fermented food can't be a high-end product. Nor can it be a low-end mass-produced product because it takes too long to make, is hard to standardize, and is "objectionable" (e.g., stinky tofu). The growth of our modern food economy has pushed it to the margins, with very bad consequences for our health.

1. <http://www.nytimes.com/2011/08/14/opinion/sunday/i-wont-have-the-stomach-for-this.html?pagewanted=all>

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Andrew (2011-08-16 05:38:57)

Are you sure fermented foods can't be high-end or impressive?! Wine, cheese...? I used to live in Korea, and a restaurant's reputation could be made or ruined by the quality of its various kimchi. The fermented skate is a very special delicacy (like Iceland's Hákarl), and also one of the worst things I've ever tried in my life. I live in Japan now, and in Kyoto especially, the humble pickle has definitely been raised to an art form. Certain mountain villages are as famous for their pickles as certain Turkish ones are for their sweet figs. On a side note, it's always the mountainous regions in Japan and Korea that are famous for their pickled foods. I always assumed this was because the colder winters meant they needed foods to keep, but I've been wondering lately if it's not equally because of limited access to fresh seafood, which fermented foods could compensate for somewhat nutritionally.

mike kenny (2011-08-16 06:12:28)

seth writes: "Nor can it be a low-end mass-produced product because it takes too long to make, is hard to standardize, and is "objectionable" (e.g., stinky tofu). The growth of our modern food economy has pushed it to the margins, with very bad consequences for our health." but don't they?—cheese, pickles, beer, yogurt—all fermented and mass-produced. one thing that really puzzles me is, why would stuff that smells objectionable be good for us, and indeed taste good? very odd—just going on a certain evolutionary logic, wouldn't we be wired to want to avoid stuff that stinks? but then we eat it and like it. very odd. maybe the shortage of food in our ancestral environment made us less picky about smells and we made some happy discoveries.

Tracy (2011-08-16 07:27:57)

I've also been making my food taste good by adding ferments - lamb meatballs, for example, with a sauce made by adding homemade goat yogurt and a squeeze of lemon to the pan juices. Fermented lemonade with a hint of nutmeg, either drunk on its own or transformed into gelatin and served with fermented cream. So, so simple and tasty! A lost art, really... if people understood how easy it is to ferment your own foods, why would they buy sour cream, sauerkraut etc from the store? And as to the mass-produced thing... @mike kenny many foods like pickles that were traditionally fermented are now just pickled, with vinegar etc creating that sour taste we love so much, as opposed to being rammed in a big barrel and left to the whims of bacteria.

aeK (2011-08-16 07:35:11)

Intriguing point, Seth! I spoke (on the NYT site) to her mourning over her perceived benefit of spontaneity and abandon in approaching food. From the list, it seems as if she is going quite a bit for mouth feel. Your assertion that you rarely use spices is interesting, too. I learned how to make yogurt, and eat it almost daily. But I add cocoa power, cayenne, ginger, cinnamon and pumpkin pie spices to it. I also heavily add spices and herbs to protein and vegetable dishes. That seems to add to the satiety factor in my case.

Seth Roberts (2011-08-16 07:37:17)

I am now eating yogurt nose-clipped. Like you, I do add spices to yogurt, such as cardamon, cinnamon, nutmeg, and cocoa, when I eat it without my nose clipped.

Seth Roberts (2011-08-16 07:40:47)

good question, Mike, why would stuff that smells objectionable be good for us? Perhaps a large part of the (mild) aversion is cultural, lack of exposure to strong smells and a belief that bacteria are bad. In ancient times there was plenty of exposure to strong smells and the concept of bacteria didn't exist.

Brian (2011-08-16 07:49:57)

"Ms. Stoessinger's article reads like a series of boasts: look how much I know and care about food. I think that's part of the problem: You can't boast about fermented food." I think you just proved yourself wrong...

dearieme (2011-08-16 10:03:21)

This reminds me of a childhood trade between me, supplying a fermented drink made with liquorice (I can't remember the recipe), and a neighbour, supplying ginger beer made with a "ginger beer plant". I have no idea why these were viewed as childish tastes.

Paul Sherrard (2011-08-16 17:07:40)

Re the "smells bad but good for us" thing: An intriguing point! I feel that our relationship to the smell & flavor of fermented food is complex. The initial reaction—"this is stinky"—can be accounted for as a useful aversion to garbage or rotten food. As humans evolved, an aversion to foodborne bacteria may have been quite useful, e.g. avoiding salmonella could have been more immediately advantageous than cultivating stomach cultures. In my experience, most children can't tell fermented food from rotten food. But we learn: it's normal for adults to have a taste for wine, veined cheese, pickles, etc. I love gorgonzola cheese, and absolutely hated it when I was a kid, but I can still understand exactly why it smells like garbage to someone without a taste for it. Isn't it possible that the mechanisms that tell us "this is bad; don't eat it" can be retrained when it's to our advantage. They can be taught to "make exceptions." Other instincts can be modified: for instance, contact lens wearers have trained themselves to suppress their blinking instinct when they're putting in their lenses. They "make an exception," but leave the blinking instinct otherwise intact.

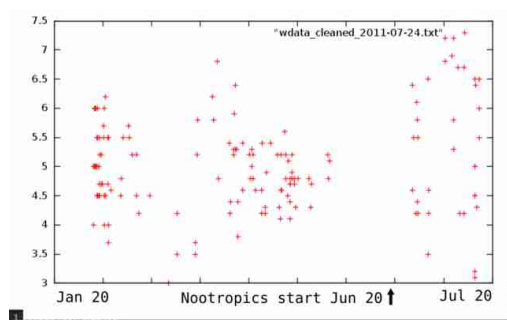
Dr.Zachar (2011-08-16 21:35:41)

Nothing like the natural process of fermentation to liven up the taste buds! I've actually had some experience with this recently at a local Indian place. It was some kind of fermented peanut, can't remember it for the life of me though.

et (2011-08-18 10:50:34)

Food spoilage bacteria are harmless Anastacia Marx de Salcedo of Slate explains the difference between spoilage bacteria and pathogenic bacteria. It turns out the the bacteria that stinks and makes food look disgusting is harmless, but the bacteria that makes you sick "provide no sensory clues as to their presence in food." <http://boingboing.net/2011/08/10/food-spoilage-bacteria-are-harmless.html>

## Many Supplements Taken Together Reduce Depression/Dysthymia (2011-08-17 05:00)



At the recent Quantified Self Meetup in Mountain View, Fenn Lipkowitz told me that he had started taking a long list of supplements and now felt much better. At last week's QS Silicon Valley Meetup, he gave a talk about it. The graph above shows "wellness" ratings before and after the change. Here's what the scale numbers mean:

- 3 = "i'm hurting, i just want to crawl under my blanket and suffer for a few hours."
- 4 = "today sucks, i think i'll hide and eat some chocolate and read manga."
- 5 = "well, i'm here and dont have any excuses, so i guess i'll go do something."
- 6 = "bright eyed and bushy tailed, ready to go do some work"
- 7 = "why am i writing in my log, i should be out dancing!"
- 8 = "holy shit, tearing it up, backflipping over ninjas and juggling fire"

He describes the improvement like this:

Things seem really easy now that were serious barriers before. I now sleep 4-6 hours a night instead of 12, and bounce out of bed. I no longer have high dance inertia, I can just start dancing on demand. I can type 143 works per minute vs my maximum of 92 wpm a month ago.

Every morning he takes:

- vinpocetine 10mg
- vitamin-d 125ug
- fish-oil 1g
- piracetam 1600mg
- alpha-gpc 300mg
- choline-bitartrate 500mg
- dmae 260mg
- boswellia 300mg
- curcumin 300mg
- cordyceps-extract 1.2g
- aloha-cordyceps 525mg
- coq10 30mg



- ginkgo-extract 60mg
- tryptophan 500mg
- Flintstones multivitamin B-complex

Here are his explanations for some of these:

vinpocetine - vasodilator derived from periwinkle plant. enhances focus, seems to improve long range vision, seems to cause your eyes to fixate more steadily on what you're looking at, less saccades.

piracetam - increases communication between two halves of brain; the effects of this vary by person depending on which half of their brain is in control. for me it makes interpersonal relations become more clear, easier to cooperate and understand the motivations and intentions of others. also uses up choline at a faster rate, which is why i also take

alpha-gpc - a high bioavailability form of choline precursor, which is in the form that cells usually generate when they're self-scavenging in choline-depletion state. it doesn't go into rebuilding the cell walls, but is used for synthesis of acetylcholine, a neurotransmitter involved in memory and muscle control.

choline-bitartrate - choline is transformed into phosphatidyl choline in order to (re)build cell membranes. this is low oral availability (doesn't cross blood/brain barrier easily?) but super cheap and tastes good. i have a theory that alzheimers is caused mostly by long-term choline deficiency.

dmae - another choline precursor? aka "deanol" and has been shown to increase the life-span of mice by 50 %, possibly through the mechanism of clearing out lipofuscin deposits. cheap, tastes good.

boswellia - no idea, it's in the curcumin pills; somewhat aromatic and pungent, like tea tree oil or piperazine.

curcumin - this is straight up turmeric extract. antioxidant and various other bodily health effects.

cordyceps extract - zombie ant brain fungus. look up images of it online, it's sick. it makes you want to climb up to the top leaf in a tree, clamp your mandibles, and explode spores everywhere. well, not really. but it improves oxygenation, energy, and will kill a viral infection in one day. the extract is prepared by rapidly growing a lot of cordyceps mycelia in a warm fermenter and spray drying the liquid that comes off. this is highly unnatural environment

aloha cordyceps - aloha pharmaceuticals saw the explosion in "farmed" cordyceps and decided it wasn't natural enough or something, so they recreated the mushroom's natural environment of tibetan steppes. they grow it up fast and then let it sit for months in the dark in refrigerators with low oxygen. they claim that their process increases the number of good chemicals (cordycepin, uracil, based on HPLC analysis) and reduces the gross things. i can confirm it tastes/smells much better than swanson brand cordyceps extract. i started taking regular cordyceps extract first and can confirm it works as advertised, but maybe aloha is better, so i take that too. i have a friend taking only aloha cordyceps so we'll see what happens.

[1]More here.

1. <http://fennetic.net/sleep/nootropics.html>

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David (2011-08-17 06:01:58)

The "Flintstones multivitamin B-complex" is a nice touch.

Alex Chernavsky (2011-08-17 06:31:58)

When you look at clinical trials for depression, you find that no matter *what* treatment you try, everything seems to work. (And when I say "treatment", I don't mean just pills – I mean stuff like exercise, meditation, etc.). The important thing seems to be do *something* to address the problem, as opposed to just lying in bed or whatever. So I'm not surprised that Fenn's elaborate regimen had an effect. The more-interesting question is *why* it worked. The graph is also curious for the amount of variability that he experiences. Note the data points toward the far-right side. I wonder what's going on there.

Glen Raphael (2011-08-17 09:52:44)

Alex: One possible explanation for the fact that almost anything you try "works" to treat depression is simple regression toward the mean. Assuming your depression level has cyclical and/or random variable components to it, you are likely to seek professional help when you are in or have just been through an \*unusually bad\* period. Sample a random period some time later and through chance alone it'll tend to be better than that, regardless of what potions the witch doctor prescribed. Therefore, you'll think the potions worked. If you're \*really\* depressed, you might not have the energy to go see someone. So if you get up and try something, that's already a symptom that you're recovering.

CK (2011-08-17 11:12:56)

Alex, The far right side of the graph is explained if you click the link.

BenB (2011-08-17 12:14:14)

His website links to a quite wonderful 1981 paper by Allen Neuringer on self experimentation, including many of his own and his student's self-experiments. One of these was inspired by Neuringer taking Judy Masee's Dance 110 class at Reed College.

???? (2011-08-17 19:36:22)

That seems a lot of stuff to take on everyday.... is that really needed, too many pills isnt it ?

justsomeguy (2011-08-19 06:24:30)

Interesting list. 2 quick thoughts ... I'm "justsomeguy", but I thought Tryptophan was illegal in US ? Thought that's why folks take GABA or 5-htp as an alternative to boost Serotonin. B-complex very important, but suspect Flintstones brand includes a sweetener that ain't so healthy.

Great links for the weekend! (2011-11-11 14:05:56)

[...] up of someone else's experiment, taking a long list of supplements which seemed to succeed in reducing depression. I found it interesting because Chris and I have ended up with a long list of supplements to try [...]

## My Self-Tracking Wish List (2011-08-18 05:00)

Right now I am tracking 6 things:

1. Sleep. I use a stopwatch and Zeo.
2. Weight. I use three expensive scales.
3. [1]Blood glucose (fasting). I use Abbott's Freestyle Lite system. I get the blood by pricking my forearm; it's painless.
4. Brain function. I use an [2]arithmetic test.
5. Morning energy. I rate my energy on a 0-100 scale at 8 am and 9 am.
6. Productivity. I use the [3]percentile feedback system I've described.

I keep crude measures of my workouts (on scraps of paper). Two more things I want to track:

1. Inflammation. I would like to measure the redness of my gums. This is possible (take photo, measure redness), but hard.
2. The effects of fermented foods, especially their effect on my immune system. I believe fermented foods differ greatly in potency but I am unable to do any quantification.

1. <http://blog.sethroberts.net/2010/07/18/fasting-blood-sugar-reduced-by-walking/>
2. <http://blog.sethroberts.net/2010/08/13/arithmetic-and-butter/>
3. <http://blog.sethroberts.net/2011/05/01/percentile-feedback-and-productivity/>

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Tomas (2011-08-18 06:11:26)

I can imagine that tracking the effects of fermented foods would require some kind of intestine content sampling for the quality and quantity of gut flora.

gwern (2011-08-18 08:14:28)

As far as inflammation goes, you might look into whether you could get personal or trial or otherwise informally supplied tests like <http://chronopause.com/index.php/2011/07/14/supar-power-a-rapid-inexpensive-highly-accurate-method-of-predicting-all-cause-and-disease-specific-mortality/>

Metodo Dukan (2011-08-18 15:45:13)

Mine is very similar... ;-)

David (2011-08-18 22:08:32)

Why three scales instead of on very good one?

Seth Roberts (2011-08-19 05:21:03)

I have three scales rather than one because if I have one scale and it breaks I am in bad shape. This once happened. If something changes, I want to make sure it's because I've changed rather than the scale.

Jazi yechezkel zilber (2011-08-19 13:33:04)

High sensitivity CRP (c-reactive protein) gauges overall inflammation.

Jazi yechezkel zilber (2011-08-20 01:00:36)

There is research showing crp being a reliable marker for cardiovascular health

Jazi yechezkel zilber (2011-08-20 02:03:32)

Acid - base balance Easy to test at home even multiple times a day, with saliva or urin. It is balanced in ancestral lifestyle. But highy acid today. Reviews on ancestral vs. Modern habits hold that modern people have chronic low level acidosis, causing bad health It is an independent predictor of mortality. (reference in next comment) Tests strips are cheap. Saliva and urn. Phion is one brand. Or search ph balabce strips. I can help It is also easy to trick by supplemeting with potassium bicarbonate.

Jazi yechezkel zilber (2011-08-20 02:06:33)

<http://archinte.ama-assn.org/cgi/reprint/164/14/1546.pdf> Uric Acid Level as a Risk Factor for Cardiovascular and All-Cause Mortality in Middle-aged Men A Prospective Cohort Study

Jazi yechezkel zilber (2011-08-24 12:17:10)

Glucose levels after (identical) meals. A central predictor of prediabetes illnesses <http://munews.missouri.edu/news-releases-/2011/0823-mu-study-links-inactivity-with-risk-factors-for-type-2-diabetes/>

Jamie Morrison (2011-08-29 17:43:44)

"I keep crude measures of my workouts (on scraps of paper)"... If you have an iPhone/iPad check out My Session Plan in the app store... It was designed to get rid of the scraps of paper and record times and reps. I use Overtraining Monitor in the app store to track resting heart rate and weight.

## **Flaxseed Oil Reduces Healing Time (2011-08-19 05:00)**

A few days ago, Dominic Andriacchi, a 25-year-old law student living near Detroit, told me that he mentioned some of my self-experimentation ([1]my discovery that postponing breakfast reduced insomnia) in an Amazon ebook ([2]Law School Livin') he'd just published. He added that something he read in this blog really helped him:

Thank you for introducing me to flaxseed oil. Recently, I re-injured my back (a injury that occurred during college football). While I've never seen a doctor for the injury, I did a little internet searching and figured that I had herniated a disk in my lower back. I also had pain in my leg due to, I presume, pressure on the sciatic nerve from the herniated disk.

He re-injured his back pulling a small tree uphill.

Usually, it takes at least a week for the pain to go away. I have trouble sitting, walking, and so forth. That day, because I [had] read [3]the post of Tucker Max's ankle injury and flaxseed oil, I immediately upped my flaxseed oil to a total of 15 1000mg capsules. The next day, there was nearly no pain at all. I could bend over and touch my toes with only the slightest pain. The day after that, I was back to normal.

Later he added some details:

I took 15 capsules of flaxseed oil [the day of the injury] to see what would happen. There was no immediate benefit that I felt that day, but the next day it was great. Even sitting or the slightest bending can cause a lot of pain, but I was able to bend over and nearly touch my toes. I took another 10 capsules that day as well. The day after that, I was completely pain free. I took more flaxseed oil capsules even though I was experiencing no pain at all. I expected the pain to come back, but it didn't. From then on, I would just take my normal two flaxseed oil capsules [per day]. I was spacing them out, 5 at a time in between meals.

1. <http://escholarship.org/uc/item/2xc2h866>
2. <http://www.amazon.com/Law-School-Livin-ebook/dp/B005GVCRHM>
3. <http://blog.sethroberts.net/2007/11/05/omega-3-and-sports-injuries/>

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Michal (2011-08-19 06:06:02)

I find all the effects that you see from flax seed oil very interesting (high in ALA). There is no evidence that ALA gets converted to DHA or EPA in any significant amounts (doesn't mean it doesn't, however that is my hypothesis). I've read something by Dr Eades that suggests overall eicosanoid production is decreased by ALA. I do wonder about the effects of flax seed oil and how it differs from fish oil.

Aaron (halotek) (2011-08-19 07:23:41)

I also find it interesting that flax oil could have such fast effects – I would figure it would take some time for the benefits to accrue because of how fatty acids incorporate. Maybe there is some type of other anti-inflammatory compound in flax oil? Also, what about people who have problems with flax oil? When I take any I seem to be jumping off walls and start to feel real tired – almost like I have taken a stimulant – and it disrupts my night sleep too. DHA supplements do not have this effect with me so I know something else is going on with the flax.

john (2011-08-19 08:38:24)

I was wondering the same as Michal. What would happen if one tried fish oil instead?

Michal (2011-08-19 09:30:15)

I thought about this some more. There were trials done that showed human synthesis of dha from ala is minimal. Dr. Roberts is under the impression that this is because it was in people that are not used to ALA. With repeated exposure the body gets better at turning it into dha. Unless I'm mistaken, Dr Roberts saw immediate benefits from flax oil. There was no delay while the body was getting better at conversion. This leads me to the conclusion that ALA is beneficial in its own way.

Kevin (2011-08-19 09:33:47)

I have had a similar experience with Salmon oil. A few years ago I started taking it on the advice of my doctor to help lower my cholesterol levels, and I found after a few weeks that my chronic knee pain was significantly reduced. I had made no other changes to my diet or routine that would account for the change.

Joanna (2011-08-19 11:29:26)

I have read that conversion of the alpha-linolenic acid in flax oil into EPA and DHA is dependent (among other things) on genetic factors and your nutrient status. I've been a vegetarian for 20 years (well fed, I thought!), and eaten flax oil regularly the last 5 of those. After reading that DHA composes 60 % of your brain (Mark Hyman Ultramind Solution and other places), I thought I would try an actual DHA supplement. I have had frequent (often incapacitating) swelling-type headaches for years, difficulty thinking, some general inflammation, and the regular feeling that my brain is a little on fire, and sometimes terribly on fire. So – algal DHA, 100 mg capsules. As soon as I started taking these, I experienced a greatly increased ability to think clearly, and a gentle cooling in the region of my brain. There is actually a striking difference for me between before taking a pill, and the

hours after taking one. This is one supplement where an effect is obvious for me. I started taking fish oil instead of the algal DHA so I could get 'more' DHA, but oddly the effect wasn't as pronounced. I don't understand why that would be (and I think I am going to try a different fish oil). However, my baseline neural discomfort is also much improved since April (start of DHA supplementation), so it is harder to compare. I find self-experimentation involving my brain a bit complicated. Anyhow, I think that this is an example of DHA providing a benefit where flax oil failed, even in a long-term flax user, at least in the nervous system where DHA is the critical substance.

Michal (2011-08-19 12:07:55)

I don't see why fish oil would be much different from algal dha. Maybe one has more dha?

Joanna (2011-08-22 09:51:12)

The algal DHA is just DHA (and less – 100 mg), whereas a serving of that cod liver oil should have had more DHA (it didn't give the breakdown, and claimed it varies), but also would have had other omega-3's (EPA and 7 others?), and also could have had impurities, despite the labelling. It also had significant vitamins A,D,E,K, I think. So it's a very different product than straight DHA. It made me feel syrupy. This site inspires me to quantify more of my experiences (with results of supplements, for example), but I don't yet grasp how to quantify some things, like the sticky, syrupy feeling that that fish oil gave me. Higher amounts of DHA (like more than one algal DHA capsule) still feels great. And I went and bought a new type of fish oil this weekend (550mg DHA per serving), and I also feel very good after taking it – enough so that I think about it frequently and can't wait to take it again.

joseph (2011-08-24 15:24:32)

I started eating Flaxseed for the first time this week, i took monday about 2 TBS then increased it today to 9 TSP i didnt have a TBS... interesting in the morning i felt better then usual but late afternoon i become very tired almost eyes clsoing, anyone any ideas why? is it cuased by falxseed? or somthing else? but it seems a new occurance to me as in the past i had many tiring dayes just grumpy, now i start the day better but then i feel really tired... any suggestions? btw im using ground flax took it with a soup...

Eric (2011-08-31 14:24:24)

I would like to reiterate the comments and questions about the difference between flax and fish oil. Anecdotes here and on PaleoHacks suggest that flax has unique effects. But nobody seems to have any ideas about why this might be the case. You (SR) seem to think that flax is unique and perhaps better, but to my knowledge you've never elaborated on this. Even if it's speculative, I'd like to hear what your current thoughts are on their differences. Have you experimented with fish oil?

Seth Roberts (2011-08-31 14:29:25)

Because the short-chain omega-3 in flaxseed oil must be converted to long-chain omega-3 (DHA) to be useful in the brain, flaxseed oil is like a delayed release source of DHA. Fish oil is like an all-at-once source of DHA. That's one theory.

Eric (2011-09-12 18:03:17)

Do you think that the phytoestrogen content of flax are a concern? Dose probably matters, so, fwiw, I've been consuming two tablespoons of ground flax seed a day.

## More About the Migraine Story Comments (2011-08-20 05:00)

[1]My post at Boing Boing about a woman who figured out the sources of her migraines attracted lots of comments, some of them [2]preventive stupidity (e.g., "anecdotes are not evidence"). I asked the subject of the story what she thought of it. Here's what she said:

I feel that many people entirely missed the point when reading the original article. I wasn't trying to com-

municate that a) all doctors are evil/drug-pushing/uncaring or b) my 'natural' solution would magically cure everyone. I have to admit, I'm a little tired of both sides of that old 'Real Science vs. Natural Healing' argument anyway. In my case, at least, both extremes are obvious oversimplifications of years of my life that were a very trying, difficult struggle for me.

I am quite aware that the number of drugs I had been tried on was absurd (and layering them as was done: some to 'prevent', some to treat as needed, etc, definitely did not help. How can you distinguish what works? You can't). The armful of drugs to "try until one works" left me dumbfounded for that very reason. At the same time, without the help of a doctor (who happened to be a naturopath, but that is beside the point) who was willing to take a look at my data and listen and apply what she knew, I'd never have reached the stable, much healthier point I'm at now. She hit on a pattern that made a significant difference. One that I wouldn't have known how to help had I even seen it, because I'm not a doctor.

I believe the take-away message from my story ought to be simply: take charge of your health. I'm also well-aware that this isn't a new message.

Nevertheless, if you have migraines, there's only one person who wants them solved more than anyone else in the world, and that's you. So tracking, I believe, is necessary.

As for my self-experimenting on removing harsh chemicals: so what? It made (and continues to make) a significant difference for me. Perhaps it is placebo, perhaps it's a sensitivity. I have to say, the allegations that 'spreading lies about how cleaners cause migraines cause doctors to have to clean up the mess' strike me as particularly amusing because, with a touch of further digging, one quickly realises that switching to a fragrance-free, SLS-free, paraben-free cleaner isn't exactly the kind of thing that lands people in the hospital.

I don't care to argue about so-called natural living. Annie B. Bond's story (and if I'm tooting horns for anyone, it's her) and contributions to various websites made me start to wonder about the things I took for granted in the world around me and their impact on my health. If reading my story gave someone else a moment's pause to consider what had changed in their environment along with the return or start of a health issue, well. I'm the first to admit that correlation is not causation. The science isn't "perfect": you don't live in a lab. To my mind, that's poor reason to give up before trying. It's a terrible reason to give up before even considering. Critical thinking about your life, habits, environment, health, and how they intersect is not wasted thinking.

In any case, I have to admit, the only thing that surprised me is how willing people are to get into the arguments. I've commented on the natural-vs.-real-science bit above; the anecdotes-don't-make-good-research theme is really an equally old and equally tedious argument to have with someone (my current faculty still tries to balance on the qualitative vs. quantitative data debate). For those who care, then, I hope they can come to consider this a piece of a much larger, multivariate puzzle of "everyone's health". Migraine sufferers, as far as I know, don't have a "patients-like-me" site dedicated to them. Even if you get nothing else out of a story, you should get a sense of community. Other people are also going through what you're going through- whatever the cause, whatever the outcome.

[3]One person helped by the Boing Boing story. [4]My comment on the comments.

1. <http://boingboing.net/2011/07/25/finding-the-source-of-migraines-and-fifty-useless-migraine-drugs.html>
2. <http://blog.sethroberts.net/2010/05/12/preventive-stupidity-exists/>
3. <http://blog.sethroberts.net/2011/08/13/more-migraine-headaches-caused-by-cleaning-products/>
4. <http://blog.sethroberts.net/2011/08/02/the-comments-on-finding-the-source-of-migraines/>

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Elizabeth Molin (2011-08-20 08:14:06)

There is actually a site for migraine sufferers to track their headaches and possible triggers. They give a list of standard triggers, to which you can make as many of your own additions as you like. You then fill in a daily questionnaire, which takes only a minute after you get on to it. [mymigrainejournal.com](http://mymigrainejournal.com)

### **Tucker Max on Writing and the Importance of Understanding How You Differ (2011-08-21 06:47)**

I recently heard Tucker Max speak about writing books. He said he had succeeded because he told the truth about himself – including the unpleasant stuff. Most people don't. That, plus an ability to make it entertaining, was what he could do that other people couldn't. He was saying that "being yourself" – more precisely, building on how you are different – was the only good place to start. Imitating other people is not a good place to start. Jane Jacobs said the same thing about how cities should develop. She said it was pointless to try to imitate other cities – to imitate them by building a stadium or convention center, for example. Each city should figure out what its unique strengths are – what makes Springfield Springfield – and build on them. Amplify them.

I was pleased to hear Tucker's remarks because I never hear such stuff said publicly (or privately), except from Jane Jacobs. When I was at Berkeley, now and then I'd tell other professors: It's a mistake to treat all students in a class the same (by giving them the same assignments, the same tests, etc.). They're not all the same. They differ greatly. A lot is lost by treating them all alike – a lot of self-esteem, for instance. My colleagues didn't like hearing this. It was convenient to treat all students the same. And it was status-boosting. My fellow professors worked in a system where the dimension used to gauge success was something they were good at. The notion that there were many other useful ways to excel was undermining. If there is only one measure of success and I am #1 on that measure, I am #1 period. If there are thirty measures of success, all equally valid, and I am #1 on only one of them, my superiority is less clear.

Tucker's presence at the Ancestral Health Symposium was criticized. Here is an email that the organizers (who include me) received:

One thing neither I nor my attendee friends can explain: Tucker Max as a speaker? Really? His claim to fame is having rough sex with drunk girls and then writing about it. I'm pretty sure the majority of his speaking gigs take place at bars and frat houses. From his own website:

"I get excessively drunk at inappropriate times, disregard social norms, indulge every whim, ignore the consequences of my actions, mock idiots and posers, sleep with more women than is safe or reasonable, and just generally act like a raging dickhead."

If you have a chance, could someone please explain this choice of speaker? I'd love to support this conference in the future, and I'm all for challenging social norms, but not those that have to do with basic respect for other people.

I replied:

I wanted Tucker Max to come and went so far as to give up half my presentation time to allow him to speak.



Why did I want him to speak? Because he is a big supporter of paleo, because he had something fresh to say, because he would say it well (and he did), and because he is deeply respected by an audience it is crucial to reach – college students. Sure, some things he writes offend some people. I don't think that means he doesn't have something helpful to say.

I don't think college students respect him so much because he writes about getting raging drunk, etc. I think they respect him because he speaks the truth about subjects where most people don't speak the truth.

The connection between "being yourself" and speaking the truth about difficult subjects is simple: Being yourself inevitably involves being different and being different inevitably involves some people scorning you. As Tucker said things that caused people to scorn him. As some people scorn my self-experimentation. In a society where being yourself isn't valued enough, the fear of scorn wins, people self-censor, and, as in the above email, they censor others. Everyone's loss.

The effect of an educational lifetime of being treated the same – from kindergarten thru college – is that the notion that you are different and have something unique to add becomes less and less plausible to you. Because it becomes implausible, that possibility doesn't enter into your calculations about what to do with your life – in particular, what job to choose. You begin to think that success = imitation of successful people, when that is misleading. Imitate successful people like you, yes, but most people aren't like you. I chatted with Tucker after his talk. He said it isn't enough to be different, you have to act on it, become better and better at exercising your unique talent. I agree. In a better world, you would do this starting young, like 10, and slowly become better so that by the time you needed to make a living you would have substantial skill. But our educational system, by treating everyone the same, or nearly the same, discourages this.

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Nancy Lebovitz (2011-08-21 08:11:03)

<http://www.ribbonfarm.com/2011/08/19/the-calculus-of-grit/#more-2701> This is an extensive piece about building mastery of a field that didn't exist until you developed it. Googling turned up a little. <http://dbcs.typepad.com/lifeatwork/2010/05/build-your-strengths-rather-than-fix-your-weaknesses.html> <http://www.amazon.com/Discover-Your-Strengths-Marcus-Buckingham/dp/0743201140>

David Perch (2011-08-21 11:38:51)

Wow, what a great post... It moved me because it really resonates with my personal experience. Thank you.

Maxy (2011-08-21 17:08:58)

It's ok you guys! I degrade and humiliate women, and have profited handsomely from it, but I don't pretend I'm not degrading women. Telling the truth makes it ok. I'm an ideal choice for speaking at your conference.

Tom (2011-08-21 17:31:14)

Holy cow. One of the best pieces of writing I've ever read.

Robbo (2011-08-21 23:23:12)

When I was hiring people into my team, while sifting CVs, one of the criteria I used was 'Does this one have something special about themselves?'. In building a team it is much better to have individuals with different strengths than to have a group who are all average at everything. If college doesn't get this, it's college that is wrong.

Jill (2011-08-22 05:47:04)

"...the notion that you are different and have something unique to add becomes less and less plausible to you. Because it becomes implausible, that possibility doesn't enter into your calculations about what to do with your life — in particular, what job to choose." This is so true. Growing up, I always wanted to be a writer, but there was this idea that so few writers are able to make a living at it... what makes me think I could be one of them? Instead, I ended up going into a field (software designer - i.e., programmer) where "success" is practically guaranteed.

Jscott (2011-08-22 15:00:53)

Fear is central to most discussions dealing with anything ancestral. Thought provoking post, Seth. Robert Greene's book, The 50th law deals with the issue of fear and highlights another figure that is not popular with the pressed and polite crowd. Fantastic book that made me cringe a bit. Odd thing about not exposing who we are is that it creates the very anxiety (of not wanting to be found out) we are trying to avoid. A prison of sorts. One that we have constructed. Thanks for the reminder.

Seth Roberts (2011-08-22 23:12:40)

Maxy, here is one response to Tucker Max's talk at AHS: <http://hunter-gatherer.com/blog/2011-ancestral-health-symposium-awards>

Olga (2011-08-23 09:08:56)

Interesting, would you find a man bragging on beating his wife/child as "he speaks the truth about subjects where most people don't speak the truth"?

Jscott (2011-08-23 15:14:40)

"Olga" You have links for the accusations? (TM is not married with children)

Jscott (2011-08-23 15:16:02)

Related: [http://www.huffingtonpost.com/cent/keep-moving—flow\\_b\\_380221.html](http://www.huffingtonpost.com/cent/keep-moving—flow_b_380221.html) "Every individual we come across in life is unique, with his or her own energy, desires and history. But wanting more control over people, our first impulse is generally to try to push them into conforming to our moods and ideas, into acting in ways that are familiar and comfortable to us. "

Olga (2011-08-23 16:04:49)

Jscott: I'm sorry if it is sounded like an accusation. No, it was an example. The guy is bragging of being an asshole. I gave an example of a different type of asshole, bragging and being honest about it. I don't see big difference between the two: both being honest.

Jscott (2011-08-23 17:04:02)

I understand ya Olga. Wanna dive deeper? What can you share that is scary? Something that is disappointing to the mainstream, offensive, or embarrassing? The asshole is just a category. Some people can benefit. It matters not to me. I might need your category of honesty. One that OTHER people might find offensive and "wrong." But it might help me and 100 others. Anything to share? I will show you mine if you show me yours.

Adam (2011-08-23 17:07:21)

Seth: Q: Is there a transcript of his talk? BTW, couldn't help thinking of this routine by Bill Cosby: I said to a guy, "Tell me, what is it about cocaine that makes it so wonderful," and he said, "Because it intensifies your personality." I said, "Yes, but what if you're an asshole?"

Tom (2011-08-24 01:02:14)

I am so bored by the "Olgas" of the world and their blithering hatred of anything male. And I am disgusted that these liars have cowed 99 % of our society with their moronic, libelous shrieking. And I am delighted that the AHS is in the 1 %. It makes sense that AHS would be. But God damn, it's a delightful surprise, nonetheless. And even though most of the people blogging about TM have written about being "surprised" about his acquitting himself well – I think they're lying, too. Even John Durant – he's LYING. I think Durant KNEW Tucker Max would take his AHS slot seriously and KNEW Max would do a good job. But Durant is PRETENDING that this surprised him – because for Durant to acknowledge that he expected an intelligent, interesting talk from TM might cause others to think that Durant holds the "wrong" opinion about TM in other areas. Lying is so fucking endemic in our culture that people don't even know when they're lying any more.

Shawn (2011-08-24 05:11:12)

I'm a little surprised that you choose to write about Max, because whenever you do so, you elevate the status of that goofball.

Olga (2011-08-24 07:07:06)

Jscott: I am not really following your thoughts here. Why is honesty associated with offensive and 'wrong'? I would agree that admitting that one is wrong is honesty. But I don't see it here. Bragging of insulting other people is not. Using other people for advantages of one person without regard for other people feelings is not. Again, an asshole is just an asshole. There is nothing really heroic about it. Tom: I do not have blithering hatred of anything male. An asshole can be a female. It is just a category. I just don't see anything heroic to be proud to be an asshole. On some level, it simply assumes that everybody around is an asshole - just uncertain about it. However, I do wonder why you consider somebody's bragging of using, humiliating, and degrading other people as highest standard of honesty. Or is this so difficult for you to accept that women are human too?

anna (2011-08-24 07:09:31)

I think this blog post misses the point entirely. Written from a male, privileged perspective, its easy (but disappointing) to see why. Max is consistently celebrated as a, bold, ballsy, writer who isn't afraid to speak truth. Fine. But, I think it's dangerous to ignore his content. How he treats women, how they (at times) allow themselves to be treated, and how he takes advantage of them (or situations) when they're intoxicated - isn't bold, new and different. It's actually cowardly, old and extremely common. A majority (not all) of women are deeply offended and emotionally affected by his writing. Personally, I think exploring "why" is far more interesting than Tucker Max himself. There's nothing, at all, new about him.

Jscott (2011-08-24 11:45:49)

"Olga" It seems that T.Max might be blinding you from Seth's point. You do not like that he is not contrite and that he is elevated because of his antics. Fine. The highest form of honesty comes when dealing with myself. The inner world. You are associating things with me I did not say. So, fine Tucker has been a bad bad boy. Now what? We could have been talking about individuality and fear and why so many of us stay in the middle of the back instead of doing something great or at least something real. This, at least for me, started once I was able to express myself without protection of anonymity. To be able to take criticism and to deal with me while leaving the judgement of the world at large alone. You know, a Buddhist or Gandhi type of thing. Awake to awaken others or be the change you want to see in the world blah blah. Now, back to fear and individuality...

Jscott (2011-08-24 12:18:55)

"Olga" It seems that T.Max might be blinding you from Seth's point. You do not like that Max is not contrite and that he is elevated because of his antics. Fine. The highest form of honesty comes when dealing with myself. The inner world. You are associating things with me I did not say. So, fine Tucker has been a bad bad boy. Now what? We could have been talking about individuality and fear and why so many of us stay in the middle of the pack instead of doing something great or at least something real. This, at least for me, started once I was able to express myself without protection of anonymity. To be able to take criticism and to deal with me while leaving the judgement of the world at large alone. You know, a Buddhist or Gandhi type of thing. Awake to awaken others or be the change you want to see in the world blah blah. Now, back to fear and individuality...

Olga (2011-08-24 12:34:29)

Jscott: You are right, I have deviated from the bigger point in this discussion about individuality and Seth's remarks on the importance of being different and unique. I got caught up in the example of an individual instead of the main point itself because I do not think that it is a good example. I disagree with Seth that the speaker is being respected for telling the truth. I think that it is exactly because of his drunken stories. Trying to change the world to be a better place, Gandhi style, takes courage and guts. Being a proud asshole, praised for 'individuality', does not. There is not much individuality in being an asshole. Being individual is much more than that. And by the way, both Buddhist philosophers and Gandhi emphasized not using other people. I guess I got diverted because I really like the main about individuality, but I do not like the example lacking it.

Tom (2011-08-26 01:04:03)

You got diverted because you only like individuality that conforms to your beliefs. ie, you despise individuality. TM outrages you because he gets how irrelevant non-individuals like you are and acts according to it. That courage, plus hard work and tremendous intelligence, have given him more of a platform than you'll ever have. Despite (actually because of) the fact that you only ever say the "right" things. You flatter yourself that you're striking a blow for something. But you're just being predictable, common and snotty. Even after a talk universally regarded as one of the most interesting at AHS, you're lobbying for him to be silenced in the future. That makes you the asshole. Parrotting PC contempt counts for nothing. Multiply you by ten million, the product is still nothing.

q (2011-08-28 15:59:13)

i don't see why womanizing and acting like an asshole is a mark of individualism. in the society i was brought up in, it's just a sign of lack of respect for other people. can someone enlighten me in this? for instance, can you tell me, does he like women that match society's ideal sense of beauty or does he make up his own mind about this?

andrew (2011-09-01 09:17:05)

If you have to ask you'll never know

### **Assorted Links (2011-08-22 05:00)**

- [1]suppression of innovation in ice cream by the State of Illinois
- [2]Nassim Taleb: "We have wasted three years doing nothing but transferring money to the pockets of the bankers"
- [3]Fish oil associated with larger brains

Thanks to Dave Lull and Tucker Max.

1. <http://www.kitchenlore.com/2011/08/more-on-artisan-ice-cream-vs-state-of.html>

2. <http://nourielroubini.blogspot.com/2011/08/nassim-taleb-banks-are-more-powerful.html>

3. [http://www.sciencedaily.com/releases/2011/08/110817120220.htm?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+sciencedaily+%28ScienceDaily%3ALatest+Science+News%29](http://www.sciencedaily.com/releases/2011/08/110817120220.htm?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+sciencedaily+%28ScienceDaily%3ALatest+Science+News%29)

## Sulfites in Wine May Cause Bad Dreams (2011-08-23 05:00)

Eric Stroud, [1]a web and marketing consultant, thought it would be nice to have a glass of wine an hour before bed-time. Wine is healthy, right?

But after seven or so nights of this, he began to have unpleasant dreams of a sort he'd never had before. They became more and more visceral, nightmarish, and anxiety-drenched. This continued four or five nights. Then he stopped drinking the wine. The bad dreams went away in one or two days. Something similar happened to one of his cousins.

He believes the bad dreams were due to the sulfites in wine. When he drank sulfite-free wine, he felt fine.

1. <http://www.70b3.com/>

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Ben B (2011-08-29 11:15:40)

I've not experienced this with wine, but I certainly have with magnesium supplementation: 500mg before bed will reliably give me-not nightmares exactly-but intense, 'visceral' and disturbing dreams.

Louis (2011-08-29 12:16:42)

Supposedly all wine has naturally occurring sulfites. When a bottle of wine indicates that no sulfites are added, it doesn't necessarily mean that it is sulfite-free. Perhaps the form which is artificially added to wine is more harmful than the naturally occurring one? Or maybe it's a matter of quantity?

Ray Sawhill (2011-09-03 00:32:23)

I had to give up drinking red wine because it was causing bad dreams. Quite reliably, a glass or two of red wine in the evening would lead to really awful, hyper-emotional dreams, often about suicide. Given that in the daytime I'm one of the world's cheeriest and most appreciative people, this clearly wasn't right, and it clearly wasn't me. Gave up the red wine, the bad dreams (at least those bad dreams) went away. White wine and spirits don't bother me similarly. I've run into other people who've had similar problems with red wine, god knows the term "red-head" (for being bothered by red wine) is pretty common.

Bill (2011-09-12 19:41:59)

Might this also have to do with the fact that red wine contains some mycotoxins from the fermentation process? I have noticed that since starting anti-fungal herbs and medication (Diflucan) I have had a strange nightmare almost every night.

Great links for the weekend! (2011-09-22 13:02:38)

[...] Eric Stroud realised that drinking wine gives him bad dreams and thinks it is due to the sulphites in the wine. What do you [...]

mbtuna (2012-01-26 10:14:18)

Drinking either Red or White wine has been giving me horrible, terrifying nightmares! After being up all last night, and then reading this blog... I'm giving up wine for good! It's not worth it!

Nick (2012-03-04 10:41:15)

I drink red wine before bed on a regular occasion as part of my night time prep ritual. Not controlling variables I do believe I remember my dreams more and overall experience more lucid dreams, but I can't relate to having more nightmares.

## Morning Faces Therapy For Depression and Bipolar Disorder: Resources (2011-08-23 07:02)

In 1995, I found that if I see faces in the morning, I feel better the next day. If I see faces Monday morning, I feel better on Tuesday. Here is information about this discovery and related material.

### Discovery

- [1]Self-experimentation as a source of new ideas: Examples from sleep, mood, health, and weight. Example 2 of this paper describes the discovery.

### Related Results

- [2]A 'sticky" interhemispheric switch in bipolar disorder? by John Pettigrew, an Australian neuroscientist. He argues that bipolar disorder may be caused by a sluggish internal oscillator that is overly prone to stay in a high or low state.
- The connection between depression and circadian rhythms is reviewed in [3]this 2007 article.
- [4]Van Gogh Defense Project: Rationale. Mood tracking to prevent manic episodes.

### Applications

- A friend of mine tried it in 1997. He still does it. [5]These posts tell what happened. [6]Here is what he's learned.
- [7]A man who started doing it in 2006.

### Sources of Faces

- [8]Bloggingheads TV. This site contains many videos of hour-long conversations with two people look at the camera – perfect. On a large monitor, the picture size can be adjusted until they are life-size.
- [9]An animated face. Pretty but slightly creepy.
- [10]Life-size faces on YouTube.
- [11]Big Think. Many interviews with experts.

### Other Resources

- [12]My blog posts about this.

1. <http://escholarship.org/uc/item/2xc2h866>

2. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1689515/pdf/9872002.pdf>

3. <http://www.ncbi.nlm.nih.gov/pubmed/17917561>

4. <http://blog.sethroberts.net/2011/09/01/van-gogh-defense-project-rationale/>

5. <http://blog.sethroberts.net/category/mood-disorders/faces-and-mood/nansen/>

6. <http://blog.sethroberts.net/2012/05/03/morning-faces-therapy-for-bipolar-disorder-what-one-user-has-learned/>

7. <http://blog.sethroberts.net/2011/10/06/morning-faces-therapy-personal-account/>
8. <http://bloggingheads.tv/>
9. <http://www.cubo.cc/creepygirl/>
10. <http://blog.sethroberts.net/2007/05/14/life-size-faces-on-youtube/>
11. <http://www.bigthink.com/>
12. <http://blog.sethroberts.net/category/mood-disorders/faces-and-mood/>

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Hormesis and the limbic brain   Getting Stronger (2012-01-02 21:46:31)

[...] this explains why Seth Roberts observation that looking at faces in the morning makes people happy—a simple anti depression [...]

Maximizing Fat Loss with Exercise | Critical MAS (2012-04-13 11:25:54)

[...] 2011 Edition ( #2). I'm guessing that one could time stress reduction exercises (meditation, Morning Faces Therapy, yoga, nature exposure, etc) post workout to speed up [...]

» Can seeing faces lift our mood? Thrive (2012-11-13 09:48:44)

[...] research to support this (sort of). Seth Roberts is the author of The Shangri-La Diet and an avid self-experimentalist. He once decided to eat [...]

R.I.P. Seth Roberts | Uncouth Reflections (2014-04-28 10:07:31)

[...] Morning Faces therapy. [...]

Hack Me Now, for Humanity's Sake - Words & Work of Ariel McNichol: Portfolio, prototypes, ponderings from an interactive creative director, entrepreneur, future-enthusiast (2014-09-17 13:18:18)

[...] play around with simple emotional video clips. This guy made himself look faces every morning and noted that he felt better the next day. We have got to do [...]

## **The Rules of the Tunnel by Ned Zeman (2011-08-24 15:05)**

I loved Ned Zeman's new book [1]The Rules of the Tunnel, which I read during a long plane flight. Not only does it combine three of my favorite subjects – high-end magazines, bipolar disorder, and the crappiness of modern psychiatry – but it's very well-written and revealing. I haven't enjoyed a book so much in a long time.

Zeman once wrote for Spy, as did I. Long ago, I met him at a Spy party. I suppose I could have gotten a free copy of his book but I bought it. I wanted something great to read on the plane.

1. <http://therulesofthetunnel.com/>

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Peter Silverman (2011-08-26 13:17:27)

My bi-polar symptoms went away a few month after I started taking a supplement from Canada for bi-polar (emPower Plus from Truehope.com.) This was six years ago, and I discontinued Lithium et. al. six months later. I don't know for sure of course,

if the supplement was what did the trick, but I keep hoping it lasts, I haven't had any severe mood swings in the six years, the psychiatrist was skeptical, said maybe the bi-polar "spun itself out." My wife said: My husband's back!"

### **Morning Faces Therapy Page (2011-08-24 18:16)**

If you want to find out about using morning faces to improve your mood, go to [1]this page, to which I will be slowly adding links. If you have suggestions about what to include, please leave a comment or email me. The page is meant to be an easy way to learn more.

1. <http://blog.sethroberts.net/morning-faces-therapy-resources/>

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Tom (2011-08-24 23:55:32)

As the URL indicates, the animation is indeed a bit creepy (not to mention slow to load), but it works as a morning face on a reasonably large computer display. <http://www.cubo.cc/creepygirl/>

Jazi yechezkel zilber (2011-08-25 00:00:12)

A very important resource would be links to where one can with a click get lots of faces time. There is one..... The doing in practice is the main barrier for most

Seth Roberts (2011-08-25 03:16:24)

Jazi, okay I will add more. Now there are two...

Jazi yechezkel zilber (2011-08-25 05:56:31)

Thanks. Frankly, i wanted to try it. But the idea of searching for sources blocked me (irrationally) There are also posts of you with parameters. I.e. Distance, screen size, option for mirror etc. I know about these, but the average reader will not know without a direct link.... Thanks again

### **Assorted Links (2011-08-28 04:45)**

- [1]interview with Daniel Lieberman, who studies barefoot running. "People are looking to evolution to find out how our bodies adapted and what might be healthier for us." I walk and run barefoot on my treadmill. During the first few months, my feet got several cuts but now they're fine.
- "[2]One [Ancestral Health Symposium] presentation was quick and easy to follow" ([3]mine).
- [4]Science reviewers find bad modelling acceptable.

Thanks to Anne Weiss.

1. [http://www.nytimes.com/2011/08/23/science/23conversation.html?\\_r=1&pagewanted=all](http://www.nytimes.com/2011/08/23/science/23conversation.html?_r=1&pagewanted=all)

2. <http://naturopathichealthandfitness.com/2011/08/23/improve-brain-function-violence-and-immortality/>



3. <http://www.vimeo.com/27930992>

4. <http://www.sciencedaily.com/releases/2011/08/110825141621.htm#.TlfzN5jV6uY.email>

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peter (2011-08-28 11:05:22)

another reason to be bare footed on ground is "grounding"; it's suppose to drain the build up of electro-magnetic frequency build up in one's body. whatever the precise mechanism, i found that i have considerably more stamina since standing in my bare feet at least 20 minutes a day. i do a form of qi gong; one of the stances/postures is embracing horse, which you're suppose to do/hold for 20 minutes; before i started grounding i was limited to 10-12 minutes until i was exhausted; i now can do the complete 20 minutes with no problem.

Todd (2011-08-29 11:04:43)

The Lieberman interview is great. I especially agree with his statement that "We think that one reason runners crash into the ground is because the shoe makes it possible to hit the ground hard." Thinking that cushioned shoes PREVENT injuries is a consequence of the mindset that fails to look at how complex adaptive systems (like human beings) actually respond to stress. In case after case, measures intended to buffer us from hardship and stress end up hurting us. Edward Tenner's excellent book "Why Things Bite Back" is a grand tour of how the law of unintended consequences applies when such "preventive" measures are unwittingly attempted. Barefoot running is often justified on evolutionary or "paleo" principles, but I think a far more powerful explanatory principle is that of hormesis, the application of controlled stress to elicit an adaptive response that builds long term strength or capacity. I wrote about how this applies specifically in the case of barefoot running mechanics in this post: <http://gettingstronger.org/2010/03/the-paradox-of-barefoot-running/> Todd

Jarno Virtanen (2011-09-10 23:54:34)

The Vimeo page says: Sorry, ""What foods make my brain work best?" by Seth Roberts, PhD & "From cave to cage: Mixed martial arts in ancestral health" by TM" was deleted at 9:48:56 Tue Aug 30, 2011.

### **Alexandra Carmichael Almost Eliminates Headaches (2011-08-29 20:32)**

In [1]this post, Alexandra Carmichael describes how she recently figured out what caused most of her headaches. She had suffered from frequent headaches for twenty years. One source was dairy. She confirmed this source when eating 1/4 stick of butter gave her a splitting headache. Another source was gluten. She got the idea that gluten might matter from the [2]CureTogether list of migraine treatments. A final source turned out to be Febreze, as I mentioned in [3]an earlier post.

You might marvel that conventional healthcare (e.g., doctors, the [4]Mayo Clinic website, and so on) was no help. Or you might not. In the case of [5]the woman I wrote about for Boing Boing, her conventional doctors actively got in the way of helping her find the source of her migraines. Alexandra takes ibuprofen for her headaches. So conventional healthcare (in this case, the makers of ibuprofen) has managed to profit from every one of her headaches but hasn't done one useful thing to prevent them. A nasty state of affairs (provide expensive relief of symptoms, ignore prevention and underlying causes, thus ensuring that people continue to get sick and need relief) that is repeated a thousand places in our healthcare system (e.g., in depression, cancer, etc.).

At the First QS Conference, I gave a talk that included the following equation:

progress = resources\*knowledge\*time\*freedom\*motivation

I used this equation to explain why mainstream medicine was stagnating, but personal science was not. Personal scientists (individuals trying to improve their own health) seem tiny and insignificant compared to medical school professors with million-dollar grants and large labs. But the visible superiority of medical school professors – they have far more resources and knowledge than personal scientists, not to mention more prestige – masks an enormous hidden inferiority: Personal scientists have far more time, freedom, and motivation than medical school professors. And personal scientists are rapidly gaining more resources and knowledge. This is why, in terms of progress, they are catching up to and surpassing mainstream healthcare.

Alexandra's story illustrates the pattern. In this case, personal science made progress (it eliminated most of her headaches), mainstream healthcare did not (it eliminated none of them). And the success of personal science depended on increases in resources and increases in knowledge. A new resource that helped Alexandra was a DailyBurn iPhone app that helped her track what she ate. From those records she noticed a curious pattern: that changes in how much dairy she ate caused trouble. Two new sources of knowledge also helped her. The accumulation of knowledge at CureTogether led to her to suspect gluten was one of her triggers. And my story in Boing Boing led to her to suspect that Febreze and other cleaning products were triggers.

1. <http://quantifiedself.com/2011/08/my-n1-quest-to-live-headache-free/>
2. <http://curetogether.com/migraine/treatments/>
3. <http://blog.sethroberts.net/2011/08/13/more-migraine-headaches-caused-by-cleaning-products/>
4. <http://www.mayoclinic.com/>
5. <http://boingboing.net/2011/07/25/finding-the-source-of-migraines-and-fifty-useless-migraine-drugs.html>

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## **The Continued Existence of Acne Reveals the Perverse Incentives of Modern Medicine (2011-08-31 05:00)**

[1]Yesterday I wrote how [2]Alexandra Carmichael's headache story illustrated a large and awful truth about modern healthcare: It happily provides expensive relief of symptoms while ignoring investigation of underlying causes. If we understood underlying causes (e.g., causes of migraines), prevention would be easy. Let people get sick so that we can make money from them. There should be a name for this scam. In law enforcement, it's called entrapment.

Sensible prevention research would start small. Not by trying to prevent breast cancer, or heart disease, or something like that: They take many years to develop and therefore are hard to study. Sensible prevention research would focus on things that are easy to measure and happen soon after their causative agents. One example is migraines. Migraines happen hours after exposure. The fact that Chemical X causes migraines means it is likely that Chemical X is bad for us, even if it doesn't cause migraines in everyone. This is the canary-in-a-coal-mine idea. Migraines are the canary.

Acne is another canary. Acne is easy to measure. Figuring out how to prevent it would be a good way to begin prevention research. To prevent acne would be to take the first steps toward preventing many more diseases. A high-school student could do ground-breaking research – research that would improve the lives of hundreds of millions of people – about how to prevent acne but somehow this never happens. In spite of this possibility, grand-prize-winning high-school science projects, from the most brilliant students in the whole country, are always about trivia.

[3]A just-published review in The Lancet reveals once again the unfortunate perspective of medical school professors. The abstract ends with this:

New research is needed into the therapeutic comparative effectiveness and safety of the many products available, and to better understand the natural history, subtypes, and triggers of acne.

Actually, finding out what causes acne is all that's needed.

To figure out what causes acne (and thereby how to prevent it) three things are necessary: (a) study of environmental causes, such as diet, (b) starting with  $n=1$ , and (c) willingness to test many ideas that might be wrong (because it's far from obvious how to prevent acne). All three of these things are exactly what the current healthcare research system opposes. It opposes prevention research because drug companies don't fund it. It opposes  $n=1$  studies because they are small and cheap, which is low-status. To do such a study would be like driving a Corolla. It opposes studies that could take indefinitely long because such studies are bad for a researcher's career. Researchers need a steady stream of publications.

High school students, who aren't worried about status or number of publications, could make a real contribution here. You don't need fancy equipment to measure acne.

Thanks to Michael Constans.

1. <http://blog.sethroberts.net/2011/08/29/alexandra-carmichael-almost-eliminates-headaches/>
2. <http://quantifiedself.com/2011/08/my-n1-quest-to-live-headache-free/>
3. <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2811%2960321-8/abstract>

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Valtsu (2011-08-31 06:10:29)

Re causes of acne, You might find this  $n=1$  experiment interesting! <http://www.acne.org/messageboard/Zinc-Zinc-Regimen-Adul-t243340.html> Here are some real studies with nice results: <http://www.lipidworld.com/content/7/1/36> <http://www.ncbi.nlm.nih.gov/pubmed/16871775> <http://www.ncbi.nlm.nih.gov/pubmed/20666829>

Acnefreenow (2011-08-31 11:33:38)

Systemic Inflammation is the primary cause of acne. It causes the tissue around pores to swell up, blocking the pores, which causes oil, etc. to build up, and bacteria to be trapped inside and swell up, resulting in infection. Anything that reduces such inflammation reduces acne. Eating a non-inflammatory diet such as one that excludes refined flours and sugars, helps for example. If you want to convince yourself, conduct your own  $N=1$  experiment by reading up on non-inflammatory nutrition, cut out flours and sugars, and you'll see a massive difference in two weeks.

Seth Roberts (2011-08-31 14:31:01)

"Systemic Inflammation is the primary cause of acne." what is your evidence for this? A student I know cut way down on sugar to test this theory. It helped, but did not make a "massive difference".

Nancy Lebovitz (2011-08-31 15:43:22)

Nitpick: I know someone who gets migraine a few days after eating seafood, so it's not always hours. Still, your general point stands.

Acnefreeenow (2011-08-31 16:19:02)

Seth, Evidence 1: acne-free primitive peoples that go from paleo diets to modern inflammation-promoting diets achieve acne incident rates the same as people in the developed world Evidence 2: at age 44, I have found that like clockwork, when I go off a good paleo/anti-inflammatory lifestyle too far, I still get acne coming back like a teenager, every time, but virtually never when I stay on track I'm not surprised your student didn't see much effect from just reducing sugar. I would recommend they read up on which foods and supplements promote and reduce systemic inflammation, and make whatever changes make sense to them for a full two weeks. At a minimum, I would expect they would need to eliminate ALL sugars and flours for a full two weeks to cool down the body's cytokine levels and other markers of inflammation.

Acnefreeenow (2011-08-31 16:36:30)

The reason I suggest people look at all factors that go in to an anti-inflammatory lifestyle, and not just, say, reduce sugar, is that if your student is unaware that their bad oral hygiene, for example, is an even bigger source of inflammation than their diet, then dietary changes may not be enough. That being said, a good paleo diet plus things like plenty of flax seed oil can go a long way towards reducing orally caused inflammation even if the patient is not a regular brusher/flosser. Other lifestyle factors, like exercise, can also help reduce inflammation. Self-experimentation is the only way to determine what will work for oneself.

MikeW (2011-08-31 17:23:25)

Well, I'll agree with the end of the previous comment, "self-experimentation is the only way to determine what will work". I challenged my acne-prone skin with a load of sugar that would horrify any paleo follower: 3 pounds of jelly bellies over the course of a week. (No lie - I find JB's incredibly addictive.) Result: my skin was perfectly clear, so clear I joked to myself that I had found a cure. Yet one handful of dried blueberries with citric acid added, or so-called fruit snacks (also with citric acid), I immediately feel a tingling in my mouth, a little heat on my face, and within a day I have a few pimples. So in my case I think it's local inflammation, not systemic. I don't know why I have such a reaction to added citric acid - something to do with the mold or yeast they use to produce it industrially I guess. I know there are many good reasons to avoid sugar, but in my experience acne isn't one of them.

bjk (2011-08-31 19:57:56)

I tried many different approaches, this is what worked. First, cut out all omega-6 from diet. Especially soybean oil, but also nuts, peanut butter, olive oil, and some other stuff you wouldn't expect to have it (I know, because I'll eat a large amount (lots of peanut butter, for instance) and then get acne). Second, FCLO daily, not the unfermented kind, that didn't work at all. I like the FCLO with the vitamin K etc etc, don't know if that works better than just plain FCLO. Third, daily benzoyl peroxide regime adds to the effectiveness. I know all of this works because when I don't follow the regime, I get acne. When I do, no acne. My skin also feels much softer and cooler.

john (2011-08-31 20:56:55)

I haven't eaten any junk in about a year, but I still have very mild acne. I eat starches and fruits, but I'm relatively low carb. I do eat high calorie though, as I've never seemed to gain body fat, so that might be a factor. I'm skeptical of the idea that we simply need to do enough "anti-inflammatory" things, as I eat quite a lot of n-3s from fish and have tried flaxseed oil (didn't notice anything) and get a decent amount of sun. I do eat significant amounts of dairy and a coffee every other day, so maybe that'd be a good place to start.

Brent (2011-09-01 00:24:57)

I thought this problem was definitively solved in 2006 with Professor Cordain's book, The Dietary Cure for Acne. <http://www.amazon.com/Dietary-Cure-Ph-D-Loren-Cordain/dp/0978510917-B>

Seth Roberts (2011-09-01 03:19:58)

Brent, this long discussion suggests a different cause of acne than the ones theorized by Cordain: <http://www.acne.org/messageboard/Zinc-Zinc-Regimen-Adul-t243340.html>

bjk (2011-09-01 06:27:09)

"I'm skeptical of the idea that we simply need to do enough "anti-inflammatory" things, as I eat quite a lot of n-3s from fish and have tried flaxseed oil (didn't notice anything) and get a decent amount of sun." I found flaxseed oil didn't work. It has high omega-3:omega-6 ratio, but the absolute level of omega-6 is too high. That's my experience, not saying I could pass an exam on the difference, but lowering the absolute level has made a noticeable difference on my skin.

Jeff (2011-09-01 17:30:54)

As a high school student myself, I experience firsthand the poor environment most of my peers live in and see the possibility of what could be. However, I do not feel I could "do groundbreaking research." Cooperation would be hard, if not impossible, to come by. To be honest with you, the majority of my peers could care less about their health. I can not even bring up my dietary opinions in casual conversations with some of my peers because they simply do not want to hear that their two-Gatorade-a-day habit could be detrimental to their health. I'm ashamed to admit this, but this close-minded, apathetic attitude has led me to keep my mouth shut when discussions of health and diet do happen to arise. I would love to make a contribution, but have no idea where to start. No mother would allow some teenager to be guiding her child's nutritional habits. Additionally, who would listen to a teenager? We are stereotyped as immature and irresponsible as it is, therefore have no credibility, even if one did have sound data pointing to a sound conclusion. -Jeff

Seth Roberts (2011-09-01 18:15:55)

Jeff, you can study yourself, if you have acne.

Acne here, acne there, acne acne everywhere! | Personal Influence (2011-09-02 12:41:00)

[...] Seth Roberts posted this week encouraging high school students to take on big pharma and the medical establishment with some n=1 [...]

Diet, Acne, and n=1 Experimentation | A Mom On A Mission . . . . . to nurture and nourish her family (2011-09-03 07:36:05)

[...] found an interesting blog post the other day over at Seth's blog about the perverse incentives of the modern healthcare system [...]

Maria Schröder (2011-09-28 08:25:19)

Hello all ! I am new to forums that discuss Acne and other skin imperfections. I have been suffering for many years and sometimes almost given up on mingling with other people because of my looks. I can never talk to anyone unless I feel that the person is looking at my ugly blackheads, whiteheads and scars. I write to day because I am stuck. I heard last week of a new formula that was so powerful that a person with my skin problems would get rid off the acne in just 2 or 3 months and could stay acne free by using the formula once a month. But the person that told me this had forgotten where this formula was obtained from. The only thing she remembered was "wonderful scandinavia". Has anyone of you people heard about this fomula ? I really would appreciate the info if this is as good as the story was. Maria Schröder maria@myndabankinn.is

Maria (2011-10-03 17:44:02)

I had the worst cystic acne you ever saw from the time I was 16 until age 27. It was hard for me to even look at myself in the mirror. Like most people facing that I went from doctor to doctor and tried every medication available but nothing really helped much. Then In starting taking Accutane and everything changed. In a couple of weeks the cysts were gone and when I finished taking all the prescribed pills the cysts were gone and never came back. I know that Accutane won't prevent or cure acne but it sure delivered the knockout punch to my cystic acne.

Ted (2012-01-22 01:37:37)

My acne cleared up after I had been taking lots of fish oil (6 grams) every day for 5 months. After a couple of years, though, I noticed that the fish oil, while improving my skin and initially my mood, was starting to make me feel sluggish and depressed. So I cut way down on fish oil (half a gram a day) and instead eliminated as much omega-6 from my diet as I possibly could. My skin remained clear and I stopped feeling sluggish and depressed. (Off-topic, but when I cut gluten out of my diet, my lifelong

dandruff disappeared within a couple of weeks and has never returned.)

## 6.9 September

### Assorted Links (2011-09-01 05:00)

- [1]Western Governors University: An innovative online university focused on students.
- [2]Tucker Max's talk at the Ancestral Health Symposium about the paleo movement's neglect of fighting
- [3]Van Gogh is Bipolar, a restaurant in Quezon City, the Philippines.
- "Behind every great fortune is a great crime." [4]The Rockefellers by Edward Jay Epstein.

1. [http://www.washingtonmonthly.com/magazine/septemberoctober\\_2011/features/the\\_college\\_forprofits\\_should031640.php?page=1](http://www.washingtonmonthly.com/magazine/septemberoctober_2011/features/the_college_forprofits_should031640.php?page=1)
2. <http://vimeo.com/28386624>
3. <http://www.ourawesomeplanet.com/awesome/2010/01/van-gogh-is-bipolar-are-you.html>
4. [http://www.amazon.com/Rockefellers-EJE-Original-ebook/dp/B005FX5YVW/ref=sr\\_1\\_8?s=digital-text&ie=UTF8&qid=1313760093&sr=1-8](http://www.amazon.com/Rockefellers-EJE-Original-ebook/dp/B005FX5YVW/ref=sr_1_8?s=digital-text&ie=UTF8&qid=1313760093&sr=1-8)

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Nancy Lebovitz (2011-09-02 12:42:43)

I listened to the Tucker Max piece. He didn't sound deliberately offensive- just kind of nervous. If you've been following his career, has he been taking a more reasonable tone after he'd been doing MMA for a while. He talked about how MMA was good for him psychologically as well as physically.

### Van Gogh Defense Project: Rationale (2011-09-01 18:19)

A colleague I'll call John has decided to start tracking his mood for a long period of time (years). He explains why:

A few years ago, after a severe manic attack, I was diagnosed with bipolar disorder. The attack was preceded by an intense period of stress, then two weeks of elevated mood, increased social activity (hanging out and meeting people), and racing thoughts (hypomania). Then I skipped a few nights of sleep, wandered down roads in the middle of the night, and eventually became psychotic, in that I could no longer distinguish between reality and imagination. I was chased by cops on several occasions, and was involuntarily committed to the mental health wing of a hospital for a month. It put a massive dent in my life.

Family, medicine, and time helped me recover. Being out of control like that was fun only for the first two weeks. Having my life turned upside down was not fun either. As I recovered I became increasingly interested in finding ways to prevent a relapse. One doctor said: You have a vulnerability. You need to protect yourself. I agreed.

Looking back on the experience, I realized there was a rise in odd behaviors two weeks before I started to skip nights of sleep and fell into psychosis. There was an even longer buildup of stress, anxiety, and fear in the months before the mania hit. During the last two weeks before the mania, my behavior was different from what is normal for me. I felt

elated and had a sense of general "breakthrough". I suddenly felt no fear and anxiety. I felt on top of the world. I was constantly taking notes because ideas and thoughts were running through my head. I scheduled meetings and social activities almost constantly throughout these two weeks and shared my experiences as my new self. As I started to sleep less and skip nights of sleep, others later told me I seemed agitated and down.

Maybe it is possible to catch these early warning signs and take counter measures before they worsen into mania or depression. This is why I have started to track my behavior starting with mood and sleep. If I can get a baseline of my behavior and know what is 'normal' for me, it will be easier to notice when I am outside my normal range. I can alert myself or be alerted by others around me who are monitoring me. Long-term records of mood will also help me experiment to see which things influence my mood. This may give me more control over my mood.

Mood tracking might be a good idea for anyone to do, but it may be especially helpful for people with a bipolar diagnosis. Everyone has mood variation. For bipolars, however, mood swings can be more extreme (in both directions, up and down) , have far worse consequences (psychosis on one end and suicide on the other), change more rapidly, and be more vulnerable to environmental triggers like stress. The good news is that the first changes in mood can happen hours or days before more extreme changes. This gives people a chance to take countermeasures to prevent more extreme states.

The project name refers to the fact that Van Gogh had bipolar disorder.

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Tim Beneke (2011-09-02 11:31:50)

I want to thank Seth's colleague "John" for articulating and sharing this. I am not bipolar, but I do have relatively mild manic tendencies, and I am very vulnerable to serious depression and work hard to find ways to avoid/avert it, with reasonable success the last decade or so. I periodically rediscover how important good circadian rhythms are in protecting me from depression – getting up and getting sunlight early in the morning makes a big difference. (A realization I owe to Seth.) Reading "John's" account is helpful. It's a real challenge to maintain some objectivity about one's moods and the factors that may be influencing them; it requires real work – and work that one should not try to do entirely alone. The help and feedback of loved ones, colleagues, etc. is important. And gaining valid causal knowledge of what is influencing your mood is crucial – I find it regrettable that the therapeutic establishment that I sought help from for many years had little valid knowledge. They mostly wanted me to revisit the "repressed" emotions of my childhood – that road led only to more suffering and was mostly a waste of time. My impression is that many people of my baby boomer generation are learning to become managers of their moods, weight, sleep, energy, relationships, etc.... Thanks again, "John".

Minhaj (2011-09-04 06:01:23)

Thanks! That is a very clear description of what you went through. I love the name Van Gogh Defense Project. As you you have experienced with intensity what some of us go have only felt at a mild level, I think this is inspiring. After reading this I want to track my mood because this is very relevant and its about self awareness. I think getting to know ourselves better is the dream and goal of a philosopher/Writer and having years of data can really help improve my life.

**Workplace of the Future: The Chair (2011-09-03 05:00)**

[1]



Standing desks are becoming popular. From [2]a WSJ article:

A growing number of workers at Google Inc., Facebook Inc. and other employers are trading in their sit-down desks for standing ones, saying they feel more comfortable and energized. They also are motivated by medical reports saying that sitting for too long leads to increased health risks.

I started standing while working fifteen years ago, after I found that [3]I slept better if I stood a lot. I got a standing desk. (Parts at Ikea \$100.) I made what was apparently [4]the first treadmill desk. But since then I learned a lot and my preferences changed. I never went back to a conventional desk, but I found that a standing desk wasn't optimal. Here's what I learned:

1. Standing a lot is not all good. Standing in one place for a long time is psychologically difficult. If I stood for more than 8 hours or so, my feet started to hurt. Yet I needed at least 8 hours of standing to get the sleep benefits. I also found epidemiology that suggested that if you stand a lot, your blood puddles in your legs, with bad effects. Above all, standing in one place is distracting, probably because it is inherently unpleasant. I find it much easier to write in the lounge-like position I describe below.

2. Walking a lot is bad. I work perhaps 8 hours per day. No way would I walk that much. The main use of my treadmill desk was standing, not walking. There was also a noise problem. Occupants of adjacent office complained.

3. Walking a little is good. If I walk about 20 minutes per hour, I found I can work really long periods of time—without stimulants. I have also found that walking makes my brain work better. The measure I used to detect this improvement was arithmetic speed but I'm sure it applies to all sorts of thinking.

4. [5]One-legged standing can produce the sleep benefits of normal standing. The benefits of better sleep are huge. After I started sleeping better, mainly because of standing a lot, [6]I stopped getting obvious colds. I also felt more energetic during the day.

When you put these together it is easy to grasp that the best workplace will not involve, as its main component, a standing desk.

Nowadays I mix lounge-like sitting (there is no one word for it) and walking. By "lounge-like sitting" I mean I sit in



such a way that I lean back somewhat (so that some of my weight is on my back) and my knees are both bent and supported. The chair pictured above is the closest piece of furniture I could find designed for this. The goal of such a piece of furniture is to make the surface area (i.e., skin) supporting you as wide as possible so that the maximum pressure is minimized. A normal chair does a terrible job of this, but even the chair in the picture is not ideal: (a) It should have armrests. (b) It should have adjustable weights so that the angle at which it reclines can be set to the best position. How much walking I do depends on the time of day. During the day, when I feel restless, I might walk on a treadmill 20 minutes per hour. In the early morning and evening I don't walk at all.

It's fascinating there's no word for an action I spend many hours every day performing and that perhaps a billion people would do many hours per day if they could. (At least a billion people have jobs where they must sit in ordinary chairs.) What I do is roughly a billion times more comfortable. Given the size of the market and the size of the benefit, it is equally fascinating that you cannot buy anywhere the proper furniture for doing this. [7]The company that made the chair in the picture seems to have stopped making it. This should give pause to anyone who thinks that any or all of (a) free markets, (b) governments, or (c) academic/pure research can produce all the products we need to live a healthy happy life.

1. <http://blog.sethroberts.net/wp-content/uploads/2011/09/office-chair-of-the-future1.jpg>
2. [http://online.wsj.com/article/SB10001424053111904199404576541011003270644.html?mod=WSJ\\_hp\\_us\\_mostpop\\_read](http://online.wsj.com/article/SB10001424053111904199404576541011003270644.html?mod=WSJ_hp_us_mostpop_read)
3. <http://escholarship.org/uc/item/2xc2h866>
4. [http://berkeley.edu/news/media/releases/2000/08/29\\_work.html](http://berkeley.edu/news/media/releases/2000/08/29_work.html)
5. <http://blog.sethroberts.net/2011/03/22/effect-of-one-legged-standing-on-sleep/>
6. <http://escholarship.org/uc/item/2xc2h866>
7. <http://www.cassina.com/portal/page/portal/UI/webpages/cassina/home?lang=en>

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Charles (2011-09-03 07:25:46)

For the same reason I got a "Zero-gravity Chair." (You can Google it.) They are expensive, but have all the features you discuss. Highly recommend it! I've had mine for five years and love it. I have it in my office and use it as you suggest.

Charles (2011-09-03 07:27:03)

<http://www.relaxtheback.com/recliners/zero-gravity.html> I didn't know if your filter would allow the link.

Shawn (2011-09-03 08:07:41)

When I lounge-like sit I simply lean back in my chair and put my legs on the desk. I can obtain the same position you describe. I've been doing this naturally for quite some time; it just feels right, most likely because it helps even-out blood flow throughout the body. (Usually the part of the knee down to the feet goes on the desk.) It's easy for me to reposition myself because sometimes I like to sit normally as well.

Leslie (2011-09-03 08:48:40)

Some researchers did a study where they put people in an MRI, seated at either a 70, 90, or 135 degree angle, and came to the conclusion that leaning back in your chair is better for you... <http://news.bbc.co.uk/2/hi/6187080.stm>

sawfoot (2011-09-03 10:33:07)

You can get garden lounge chairs "zero gravity" style pretty cheaply ( \$50) which would seem to fit the bill.

Kirk (2011-09-03 10:44:23)

Several months ago I switched over to standing at my computer. My sleep has been much better since. (There is one other change that I made at that time, so I'm not positive it's the standing, but I think it is.) This change to standing at the computer replaced about 3 hours of sitting with 3 hours of standing. As for a chair that leans back with legs supported, I have one of those, the Lazboy Forte Reclina-Rocker. Not standard cubicle equipment. (I work from home so I can get away with it.) I have two problems with extended sessions in the recliner: (1) I get sleepy and (2) it hurts my lower back when I read. Mostly I use it for short naps, light reading, or when I have to sleep while keeping the head elevated, such as when suffering nasal congestion. I think the better approach involves sitting straight. If I remember correctly, Esther Gokhale in '8 Steps to a Pain-Free Back' recommends this approach to sitting. Another expert on posture whom I respect, Professor Cheng Man-ching, said, "The back of the chair is for hanging your coat." Wolfe Lowenthal explained that meant you should not lean back in your chair.

et (2011-09-03 11:21:41)

Couldn't this be summed up as: Variation is better than static?

Kevin Miller (2011-09-03 12:11:15)

I've been using a standing desk for about a year and have discovered something my physician friend says is well known among people who have to stand all day - that being able to have one foot higher than the other makes a big difference. This is implemented in a few different ways - the desk I made uses a Geekdesk, which has a horizontal bar conveniently place for leaning a foot against, I've also used a small rubbermaid stool, and most recently I've been standing on a partly inflated Bosu ball (which helps me work on my balance). I also have a table I sit at when I'm meeting with students and a comfortable chair with footrest that I can sit in if I'm just reading a long paper, and I do move back and forth among these locations. The big advantage I find in standing is that it makes it easier for me to pace around or to take short walks; the minor gravity well of sitting in a chair seems to inhibit some of that activity. But I note that if I end up sitting all day I'm a bit stiff at the end, and I don't have that experience with my standing desk.

Kim Øyhus (2011-09-03 12:28:32)

I used the chair you are looking for, for two decades: <http://artdco.net/wp-content/uploads/49877b0f8eccd.jpg>  
[http://www.opsvik.no/index.asp?page=works\\_11002\\_balans\\_Duo\\_anim](http://www.opsvik.no/index.asp?page=works_11002_balans_Duo_anim) It even got a prize for being the best office chair, so they discontinued it. Nagging them to make new ones got me nowhere, and the one I had was completely worn out and repaired many times, so I bought one of designer Opsvik's newer chairs, which is not nearly as good.

Perfect Health Diet » Around the Web; Labor Day Edition (2011-09-03 15:28:16)

[...] Seth Roberts, who pioneered the treadmill desk, is on to the next big thing: the lounge-office. [...]

Ren (2011-09-04 21:01:20)

Professor i am a thu student. i want to be a Postgraduate in THU Psychology.and when i came to the thu Psychology website to learn something and see your website then i clicked to here. I write my wordpress blog about my thinking life in chinese here:<http://rene1989.web-126.com/> it seems that you have difficulty in chinese.it is a pity that you will not read my blogs. I ADORE YOU ,YOU ARE NOT ONLY A SERIOUS PRO, BUT ONE LIKE TO SHARE YOUR IDEAS

bc (2011-09-05 11:52:37)

That chair pictured above looks to be inspired by the Le Corbusier chaise lounge, although the one above looks like it rocks and the LC doesn't, although you can slide it to different angles. You can certainly still buy the Le Corbusier chair.

gesher (2011-09-05 15:28:47)

Nowadays I mix lounge-like sitting (there is no one word for it) and walking. ... It's fascinating there's no word for an action I

spend many hours every day performing [...] You mean reclining?

Seth Roberts (2011-09-05 15:43:20)

"You mean reclining"? No, I don't. My knees are bent & supported. Reclining does not imply that.

Noumenon (2011-09-06 01:48:32)

I spent a long time in the La-Z-boy store shopping for a "computer recliner" that would have a mouse pad holder instead of a right armrest. I did find some half-recliners but eventually came up empty. Don't people want to surf from a recliner? I suppose you use a laptop.

Seth Roberts (2011-09-06 13:11:09)

yes, I use a laptop.

### Assorted Links (2011-09-04 05:00)

- [1]more evidence that chocolate is healthy. "The highest levels of chocolate consumption were associated with a 37 % reduction in cardiovascular disease and a 29 % reduction in stroke." This is good news.
- [2]The great bank robbery by Nassim Taleb and Mark Spitznagel. "For the American economy . . . the elephant in the room is the amount of money paid to bankers over the last five years.. . . That \$5 trillion dollars is not money invested in building roads, schools and other long-term projects, but is directly transferred from the American economy to the personal accounts of bank executives and employees. Such transfers represent as cunning a tax on everyone else as one can imagine." This is a new variation of "behind every great fortune is a great crime".
- [3]Nutritionist, heal thyself. Fat is obviously good for the skin. Which suggests it is good for the whole body, just less obviously.
- The Taleb/Spitznagel point is supported by [4]this article (via [5]Marginal Revolution), which concludes: "Who has been the first to lose confidence in the European banking system? . . . The European banking system itself." As they say: Don't con a conner.

1. <http://www.bmj.com/content/343/bmj.d4488.abstract?etoc>

2. <http://globalpublicsquare.blogs.cnn.com/2011/09/02/the-great-bank-robbery/>

3. <http://low-carb-news.blogspot.com/2011/07/old-51-and-young-51-what-do-these-women.html>

4. <http://streetlightblog.blogspot.com/2011/09/europes-banking-system-transatlantic.html>

5. <http://marginalrevolution.com/marginalrevolution/2011/09/assorted-links-210.html>

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Jennifer Eloff (2011-09-04 13:34:59)

Just thought I'd comment. Thanks for the link to my blog post (not one I am particularly proud of, but it makes a point). You have a popular blog because my stats went through the roof. That was fun!! Have a nice day. :)

James A Donald (2011-09-04 14:51:35)

The five trillion was not stolen by the banksters. Check all that spam in your inbox. Along with the ads for real viagra, fake viagra, and viagra manufactured in violation of patents, you will see offers of no money down loans. A very large number of people, most of them Hispanic, many of them with no job or legal income, purchased million dollar houses no money down,

and never made a payment on them. If the price went up, they intended to flip them for a profit. If the price went down, they intended to live in it rent free indefinitely. And who is responsible for the bright idea of lending to such people? You will find the answer at [http://www2.fdic.gov/crapes/2007/32069\\_071001.pdf](http://www2.fdic.gov/crapes/2007/32069_071001.pdf)

UncleLongHair (2011-09-05 08:44:12)

Where does this 2.2 trillion figure come from? I think it is completely fabricated. The CEO of Wells Fargo was recently paid \$21 million in a year. That is a lot, maybe too much and excessive, but it would take 22 thousand pay packages this size to add up to 2.2 trillion over 5 years, and only a handful of execs are paid like this. What exactly constitutes a "banker", are they including hedge funds and investment banks like Goldman Sachs? Maybe they are including all of the rank and file bank employees - suggesting that bank tellers are overpaid? I think some fact checking is in order before accepting this argument.

Paul Sherrard (2011-09-06 13:00:00)

"OMG we gave trillions of \$ \$ \$ to the banks? Michelle Malkin never told me!" The federal government bought up trillions' worth of worthless toxic assets from the banks. <http://sanders.senate.gov/newsroom/news/?id=9e2a4ea8-6e73-4be2-a753-62060dcbb3c3>: They have NOT SPENT ONE DIME in aid for defaulting homeowners. Hispanic or not. Furthermore, the homes were foreclosed on. They represent assets RETURNED to the banks. This is not too hard to figure out. The people who bought homes they couldn't afford and are now out on the street? No, they're not the ones who took our money and ran.

Paul Sherrard (2011-09-06 13:05:44)

Anyway, I think it's important that Taleb's larger point be stressed: the call for widespread divestment in banks that enrich their employees at public expense.

Joseph Moroco (2011-09-08 08:29:20)

Love all the chocolate is good for us articles, but really wish someone would lie to me and say there is scientific proof that it is "milk" chocolate that benefits me.

## **Poor Replication Rate in Psychiatric Genetics Research (2011-09-05 13:29)**

With the ability to measure individual genes has come interest in learning what they do. Perhaps Person X is depressed and Person Y is not depressed because Person X's genes differ from Person Y's. A whole generation of psychiatry researchers now believes this is plausible. There are "general reasons to expect that GxEs [gene by environment interactions] are common," says [1] a new review paper in the American Journal of Psychiatry. By "common" they mean large enough and common enough to do research about.

I don't agree with this conclusion. Sure, twin studies show that genes matter for psychiatric diagnoses. Identical twins are more likely to be concordant (= have the same diagnosis) than fraternal twins, for example. But this is a very long way from indicating that single genes matter. Twins results are entirely consistent with the possibility that a large number of genes each matter a little. If this is true - and I find it far more plausible, when it comes to psychiatry, than the single-gene idea - then searching for one gene that does this or that is a waste of time. Individual genes are too weak. To do psychiatric gene research you have to dismiss or ignore the many-tiny-effects possibility, because if true it would mean what you are doing is bound to fail. The new review paper I mentioned ignores it.

The new review paper surveys all of the research papers about GxEs during the first decade of research (2000-2009) in this area - about 100 papers. It asks (a) if initial findings have been repeatable and (b) how much we should trust the repetition attempts. To answer the first question, they found that only a third (10 of 37) of initial findings were repeated when tested a second time. If things were working well, all of the initial findings would have been repeatable. The low replication rate doesn't mean that two-thirds of the initial findings were false. Perhaps the replication attempts were poorly done and all of the initial findings would have held up if they were better done (e.g., larger

samples). Or perhaps the replication attempts were biased toward positive results and none of the initial findings would have held up if they were better done.

The review paper also found that positive replication attempts had much smaller samples (median sample size about 150) than negative replication attempts (median sample size about 380). This suggests that the negative replication attempts are more trustworthy than the positive ones. The true replication rate is probably lower than one-third.

The findings, in other words, support my initial belief that the whole field is a waste of time. Amusingly, the authors of the review (one at Harvard, the other at the University of Colorado) conclude the opposite. Here's what they say:

This review should not be taken as a call for skepticism about the G×E field in psychiatry. . . . True progress in understanding G×Es in psychiatry requires investigators, reviewers, and editors to agree on standards that will increase certainty in reported results. By doing so, the second decade of G×E research in psychiatry can live up to the promises made by the first.

Of course their findings support skepticism about G×E research. This isn't slanting your conclusions to be more convenient, this is bending them backwards. And failure to mention the many-tiny-effects possibility, a plausible explanation for all the results they describe, is another sign that this area of research is not to be trusted.

1. <http://ajp.psychiatryonline.org/cgi/content/abstract/appi.ajp.2011.11020191v1?roi=echo3-9731920218-6637731-66c7f550bf1ab6cf89a08a832131bef4&papetoc>

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Alex Chernavsky (2011-09-05 19:45:05)

Speaking of concordance studies in identical twins, see: [1]"The Fallacy of the 50 % Concordance Rate for Schizophrenia in Identical Twins"

1. <http://human-nature.com/nibbs/03/joseph.html>

Sam (2011-09-06 01:23:19)

Twin studies usually forget that even twins grew in the same womb, got the same nutrients and stimulants there and therefore share a very important part of growing (up) even if they are separated at birth. The time in the womb is the foundation for everything that follows. Of course people with the same foundation will have similarities. Gerald Hüther has published very good information about this.

Seth Roberts (2011-09-06 13:25:05)

Sam, that's why I pointed to differences between fraternal twins and identical twins.

Perfect Health Diet » Around the Web; 9/11 Remembrance and Brain Injury Recovery Edition (2011-09-10 11:53:44)

[...] Other times, research proceeds busily in a hopeless direction. For instance, genes are densely networked, and so no one gene has a big effect; observed effects may be mostly noise. Seth Roberts argues that reported gene-environment interactions may all be invalid. [...]

## Anil Potti, Ranjit Chandra, and Reducing Scientific Fraud (2011-09-07 05:00)

[1]An account of the genomics scandal at Duke University has appeared in Significance (a journal sponsored by British and American statistical societies). The scandal caused the end of a clinical trial – it had been based on fraudulent data – and the resignation of assistant professor Anil Potti, who had among other things falsified his resume.

It reminded me of [2]the Ranjit Chandra case. Similarities: 1. The published results could not be reconstructed from data. In Chandra's case, some of the results were statistically impossible. In the Potti case, two statisticians were unable to go from raw data they were given to the published results. 2. Outsiders important. Saul Sternberg and I, who are psychology professors, not nutrition professors, wrote an article that drew attention to what Chandra had done and caused retraction of one of his papers. As far as I could tell, at least a few nutrition professors had believed for many years that Chandra made up data. In Potti's case, the deception was revealed by two statisticians. Perhaps Chandra and Potti both believed (a) hardly anyone will notice and (b) if anyone notices, they won't do anything. 3. Incidental fabrication. In one paper, Chandra said that everyone asked to be in the study agreed to participate. The study involved having blood drawn many times. Potti claimed to be something similar to a Rhodes Scholar. 4. Found innocent. Years before Sternberg and I got involved, Chandra had been accused by his research assistant, a nurse. A Memorial University committee found him innocent of her accusations – at least, her accusations were not upheld. Chandra then sued the nurse. In the Potti case, a Duke University committee looked into the case and found no serious wrongdoing. A clinical trial based on the Potti results, which had been stopped, was resumed.

Factor 2 (outsiders important) is no surprise to readers of this blog, although the new account doesn't mention it. But Factors 1 (reconstruction impossible) and 3 (incidental fabrication) mean that the fabrication should have been relatively easy to confirm. Yet Factor 4 seems to suggest it was hard to confirm. Factor 4 – in spite of Factors 1 and 3 – implies there is something mysterious and important going on here, more mysterious and interesting than someone lying. But I cannot say what.

The Significance article, which is by Darrel Ince, a professor of computing at the Open University, includes several suggestions for improving the system. I fail to see why they will help and they have significant costs. One of them is to put the original data and software in an independent repository. I think this would make things worse. People would continue to fake research; now, they would now also fake raw data, in addition to the graphs and tables needed for publication. In the past, thinking they wouldn't be caught, fakers would either (a) not make up the raw data (Chandra) or (b) do so carelessly (Potti). Their overconfidence was key to catching them.

My suggestion along these lines is a requirement that researchers make available upon request the raw data and any original software. They store it themselves, in other words. If they fail to fulfill outside requests for these materials within one month, this will be grounds for immediate retraction of the paper. Without something like this, a store-it-yourself requirement means little. I once requested the raw data for a paper that had appeared in a journal that had a make-data-available policy. The authors refused my request. The editor did nothing. As A. W. Montford makes clear in [3]The Hockey Stick Illusion, we would all be better off if Michael Mann and other authors had simply handed over the raw data behind their "hockey stick" temperature graphs when requested rather than fight a long string of FOIA battles (and [4]mull over what emails to delete).

1. <http://onlinelibrary.wiley.com/doi/10.1111/j.1740-9713.2011.00505.x/abstract>
2. <http://sethroberts.net/chandra/index.html>
3. <http://blog.sethroberts.net/2010/04/22/the-hockey-stick-illusion/>
4. <http://bishophill.squarespace.com/blog/2009/11/20/climate-cuttings-33.html>

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John (2011-09-07 05:53:20)

As I understand it, the Duke case was not about fraudulent data but sloppy data analysis. Some may feel that "sloppy" is being too generous and that there was fraud in the analysis. But I don't believe anyone is questioning the data itself, only the analysis.

Jun Zhai (2011-09-07 09:41:08)

Anil Potti did avoid share his raw data from his bioinformation and statistician colleagues. They've been suspecting fishy data handling way before the scandal outbreak. He made Joe Nevins believe he did better job analyzing their data than statisticians can.

Mike H (2011-09-07 11:32:34)

I like this idea. Assumedly competing "data banks" would arise, that would offer to store the data and fulfill requests for a fee.

Seth Roberts (2011-09-07 12:59:59)

John, you're right, I have not heard the data "questioned" – just the whole analysis, which could be said to include more than the data. On the other hand, you are the first person I've heard say that perhaps Potti was merely sloppy – that is, made honest mistakes. The whole picture doesn't support that conclusion. There were too many problems, for one thing. And the effect of all the supposed sloppiness was far too favorable for the sloppy person.

Alrenous (2011-09-07 15:27:39)

Factor 4 does prove that the oversight committees are incompetent at oversight. They're either not using the obvious metrics or invalidly explaining away negative results. As always, I distrust official pronouncements unless I have specific evidence to confirm them. Historically, such committees have been rubber-stamp providers, used as political gatekeepers. For example, if these scientists and committees were Chinese, everyone would just assume it was all political. In this case, we have specific evidence that they are similar to the historical norm. Fact is, unravelling the support for the corrupt institution is highly complex. (That's why they're the historical norm.) For example, having the entire voting public well-versed in history would do it - it would be well known they're usually 100 % political - but that's impossible. In any case, the perverse incentives have to be disrupted, and these particular perverse incentives are due to system-wide perverse incentives. Though, eventually it will go away on its own. Rubber-stamp enough fraudulent studies, and even the thickest observer will realize the scientists aren't reliable.

Parvathi (2011-09-07 18:29:46)

Both researchers are Indians. Indians cheat a lot.

horace (2011-09-07 19:27:36)

Your are missing the most important part of the story, what happened to the nurse ? Was she punished ? If so the most important lesson that we can draw is that if you see scientific misconduct on the part of a superior, keep your mouth shut.

{ Brown Pundits } » Three Links (2011-09-07 21:42:57)

[...] Seth Roberts, of "Shangri-La Diet" fame, beats the Anil Potti drum after a year of silence. Medscape reports that yet another Potti paper has [...]

Seth Roberts (2011-09-08 03:14:18)

"was the nurse punished?" As I said she was sued. That is punishment, for sure.

John (2011-09-08 10:53:32)

I followed the Potti story more closely at the beginning than now. My colleagues were the ones who tried and failed to reproduce the analysis. At first it looked like incompetence. Now more people are suggesting fraud. It's sobering to realize how difficult it was to get anyone to acknowledge there was a problem here. Baggerly and Coombes had to be very persistent in their criticism before people started to pay attention. Eventually it became a scandal, but it would not have been if they had given up after, say, a year.

Seth Roberts (2011-09-08 23:00:13)

"At first it looked like incompetence." At first it was interpreted as incompetence, I suppose, only because that was the more charitable and safer interpretation. It was not a likely explanation. Incompetence turns great raw data into bad surface data. Never the opposite. Potti had great surface data.

John (2011-09-09 14:56:03)

I believe you're arguing that the probability of a positive result given an error is small. And I agree. Mistakes usually don't help your case. But consider the opposite probability, the probability of an error given a positive result. Suppose you're working in an area where positive results are few and far between. What is the probability that a promising result resulted from a bungled analysis? Possibly high. If nearly every result is truly negative, the positive ones that catch our attention are likely to be in error. There could be an effect analogous to stochastic resonance.

John (2011-09-10 03:38:40)

Here's a new article about the Potti case from The Economist that was just posted. <http://www.economist.com/node/21528593>  
Here's my favorite line from the article: "I find it ironic that we have been yelling for three years about the science, which has the potential to be very damaging to patients, but that was not what has started things rolling." Bad science didn't bring Potti down, padding his resume did.

Seth Roberts (2011-09-10 04:57:22)

Thanks for the link, John. Excellent article. My favorite line is: Dr. Nevins "could not explain why he had not detected the problems even when alerted to anomalies." In other words, Nevins did not understand the research in a paper that he co-authored.

John (2011-09-10 11:56:23)

Your comment about Nevins reminds me of someone – I forget who, I may have seen it on Andrew Gelman's blog – who blamed problems with his article on a graduate student who had not been listed as a co-author. In other words, "I get the credit and my peons take the blame." What a deal!

### **Acupuncture Critic Misses Big Points (2011-09-09 12:11)**

Recently the Guardian ran [1]an article by David Colquhoun, a professor of pharmacology at University College London, complaining about peer review. His complaints were innocuous; what was interesting was his example. How bad is peer review? he said. Look what gets published! He pointed to [2]a study of the efficacy of acupuncture and included graphs of the results. "It's obvious at a glance that acupuncture has at best a tiny and erratic effect on any of the outcomes that were measured," he wrote.

Except it wasn't. There were four graphs. Each had two lines – one labelled "acupuncture," the other labelled "control". You might think to assess the effect of acupuncture you compare the two lines. That wasn't true. The labels were



misleading. The "acupuncture" group got acupuncture early in the experiment; the "control" group got acupuncture late in the experiment. Better names would have been early treatment and late treatment. You could not allow for this "at a glance". It was too complicated. With this design, if acupuncture were effective the difference between the two lines should be "erratic".

The paper's data analysis is poor. To judge the efficacy of acupuncture, their main comparison used only the data from the first 26 weeks. They could have used data from all 52 weeks. That is, they ignored half of their data when trying to answer their main question. Colquhoun could have criticized that, but he didn't.

Colquhoun's criticism was so harsh and shallow, apparently he is biased against acupuncture. But there are two big things few pharmacology professors appear to know. One is how to stimulate the immune system. This should be central in pharmacology, but it isn't. Half of why I think fermented foods are so important is that I think they stimulate the immune system. (The other half is they improve digestion.) There are plenty of less common ways to do this. The phenomenon of hormesis suggests that small doses of all sorts of poisons, including radiation, stimulate repair systems. The evidence behind the hygiene hypothesis suggests that dirt improves the immune systems of children. Bee stings have been used to treat arthritis. And so on. In this context, sticking needles into someone, which puts a small amount of bacteria into their blood, is not absurd. Acupuncture also allowed patients to share their symptoms, the value of which [3]Jon Cousins has emphasized.

The other big thing Colquhoun doesn't seem to know is the absurdity of the chemical imbalance theory of depression. Speaking of ridiculous, that's ridiculous. Which plays a larger role in modern medicine – antidepressants or acupuncture? If you want criticize peer review, criticize the chemical imbalance theory. It is as if peer reviewers have been saying, yes, the earth really is flat for fifty years. Perhaps this is ending. During a talk that Robert Whitaker gave at the Massachusetts General Hospital in January, he was [4]told by doctors there that the chemical-imbalance theory was an "outdated model".

Thanks to Dave Lull and Gary Wolf.

1. <http://www.guardian.co.uk/science/2011/sep/05/publish-perish-peer-review-science>
2. <http://www.dcs-science.net/paterson-acu-BJGP-2011.pdf>
3. <http://www.moodscope.com/>
4. <http://madinamerica.com/madinamerica.com/Answering%20critics.html>

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gwern (2011-09-09 13:47:47)

> In this context, sticking needles into someone, which puts a small amount of bacteria into their blood, is not absurd. In the vast acupuncture literature, no particular importance has been noted about breaking the skin barrier... eg. <http://www.sciencedaily.com/releases/2008/12/081201082353.htm> > 109 received traditional acupuncture, with needles penetrating the skin in particular points. According to ancient Chinese tradition, the needle is twisted until a certain 'needle sensation' arises. The other 106 patients received a simulated acupuncture instead, with a telescopic, blunt placebo needle that merely touches the skin. The acupuncture was performed by physiotherapists two or three times a week throughout the five-week radiation period. > > Afterwards 95 percent of the patients in both groups felt that the acupuncture treatment had helped relieve nausea, and 67 percent had experienced other positive effects such as improved sleep, brighter mood, and less pain.

Seth Roberts (2011-09-10 04:59:58)

Thanks, Gwern. I agree, that argues against the little-bit-of-bacteria explanation.

The Way to Healthy Living - Page 5 (2011-09-10 09:35:50)

[...] repeats his interventions he can be certain what is causing what. You may also be interested in his article on Acupuncture There is too much sloppy science around and too much telling of stories that have little basis in [...]

gwern (2011-09-10 14:20:16)

Another anti-bacteria point that occurred to me this morning. The usual way acupuncture trials are blinded are by sticking in needles in places which \*aren't\* the special chi meridians or whatever hogwash that particular acupuncture claims. Presumably both the meridians and random points near meridians are equally unclean, and so studies should never show a difference beyond random noise and bias if the bacteria point were true (both 'control' and experimental groups being equally contaminated); but acupuncture is still a live issue, so...

David Colquhoun (2011-09-12 11:01:25)

Well, you may have written a book about diet, but I have written a textbook on statistics. If you want to get mathematical I'll take happy to take you on, You really shouldn't invent things. I have never from its start thought much of the "serotonin hypothesis". As it happens I'm talking tomorrow to clinicians about, among other things, that downfall of SSRIs, once the whole evidence emerged (and incidentally, the downfall with them of St John's Wort, which every herbalist boasted is as good as SSRIs. Talking of made up theories, the corniest of all has to be "stimulating the immune system". There is, and never has been, any evidence that it happens -it is the eternal mantra of every quack who is trying to sell you their own brand of implausible therapy. Incidentally, it is considered polite to spell authors' names correctly. Gamma minus

Seth Roberts (2011-09-12 14:28:01)

Prof. Colquhoun, I have fixed the spelling of your name, thanks for the correction. As for the rest of your comment, I am glad you never took the "serotonin hypothesis" seriously. Because antidepressants are far more important than acupuncture, that theory would have been a far more interesting target of criticism than an acupuncture experiment. You say that stimulating the immune system is the "eternal mantra of every quack". And I say that few pharmacology professors know how to stimulate the immune system. We seem to agree here. If you would like evidence that the immune system can be stimulated, you should study the many connections between better sleep and better health. I am sure that sleep stimulates the immune system. If you would like to see evidence of immune stimulation by something like drugs, check out studies of the effects of probiotics on health. Finally, as for statistics, I believe that your criticism of the acupuncture graphs was misleading and you failed to point out a really big blunder in the acupuncture paper – ignoring half of their data when answering their biggest question. But perhaps we agree here too. You say peer reviewers make big mistakes. I say you – who surely review many papers – made big mistakes. You see the similarity of our positions, I hope. It seemed to me that the pot was calling the kettle black.

## **Great TV: Downton Abbey, Switched At Birth, Suits (2011-09-10 23:41)**

Everyone knows Mad Men, The Good Wife, and Glee – especially Mad Men – are great TV. If you read about TV, you have read about them – especially Mad Men – endlessly. Not everyone knows that Downton Abbey [1](second season trailer), Switched At Birth, and Suits are also great TV.

Downton Abbey is great because Julian Fellowes, who also wrote Snobs and Gosford Park, is a great writer. The plot is good, the details are good. I'd read or watch anything he does. (After I wrote this post I came across [2]this interview with Fellowes – apparently the NY Times saw the same gap in coverage as I did.)

Switched At Birth is great because to a perfectly good idea for a TV show (two girls are switched at birth, a fact discovered when they are teenagers) was added – by management, not the originators of the show – an excellent

idea: one of the girls is deaf. This adds an attractive layer of complexity and novelty (deaf teenage life).

Suits appears formulaic: lawyer show, buddy show, cartoon villain, romantic plot connecting the episodes, every episode, the good guys win cleverly. But perhaps the formula, whatever it is, is really well-executed because I enjoy every episode and don't feel dirty afterwards.

1. [http://www.youtube.com/watch?v=xpoSSLeX60Q&feature=player\\_embedded](http://www.youtube.com/watch?v=xpoSSLeX60Q&feature=player_embedded)

2. <http://www.nytimes.com/2011/09/11/magazine/julian-fellowes-the-creator-of-downton-abbey.html?pagewanted=all>

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dearieme (2011-09-11 07:29:05)

Downton Abbey bears one resemblance to Pride and Prejudice: everything turns on an "entail" in a will.

TomGinTX (2011-09-11 09:29:08)

I like the shows on USA Network, but \_Suits\_ is at the bottom of the list. I like Psych, Burn Notice, and White Collar much better.

Stephen M (Ethesis) (2011-09-11 15:37:14)

Now I have to watch some television again. ;)

Eric (2011-09-12 17:55:35)

Other good shows that are overlooked: Luther, Zen, Louie, The Hour, The Killing, and Friday Night Dinner.

dearieme (2011-09-13 07:32:31)

Yes, I liked "Zen" too. Unfortunately they decided not to make any more.

emily (2011-09-13 15:56:51)

so are u saying there is a book series on the tv series switched at birth

Seth Roberts (2011-09-14 02:55:28)

no there is no book series based on the switched at birth tv series.

Alrenous (2011-09-14 10:27:36)

That pretty much rules out me thinking that I'm liking TV more because, as I grow up, they address my demographic better. I wonder if it's a permanent upswing in quality or just a cyclical trend. Because good lord TV was awful when I was growing up. It's nice that I don't watch Glee because it isn't my kind of show, not because it is utter dreck. Appreciation and respect are way better than the alternative, contempt. Suits, on the other hand, sounds like exactly my kind of show. Kings is cancelled now, but when I was growing up I was constantly wondering why they didn't make exactly that kind of show. I think they flubbed the plot in episode 9; otherwise stellar in every detail. I don't know a single other show where I actually cared enough about the plot to tell if they screwed it up or not.

Seth Roberts (2011-09-14 11:24:32)  
Alrenous, you mean "episode 9" of Suits?

Alrenous (2011-09-16 12:56:24)

Your mention of good television, including Suits, reminded me of Kings. Kings screwed up the plot in episode 9. Suits is now on my list of things to watch.

erica (2011-11-27 09:21:52)

I like Switched at Birth personally. Also, I want to be an actor, especially ON Switched at Birth. The problems are: I only have slight acting experience I am not, and don't desire to be on a AFTRA contract thingy And I wouldn't be able to start until towards the end of 2012 And the way I would be on the show, is (I have ideas for it but don't know what to do with them accept for dream...) : Ty comes back, and bay and Ty get back together, Bay gets Pregnant. Emmitt and Daphne get together, but Emmitt slowly "drifts away" from Daphne, because of his new friendship with a little younger girl, that newly goes to their Deaf school. who was from NY. But this girl he becomes friends with, also happens have to been adopted by the Kennish family, and she becomes Bay and Daphne and Tobye's little sister, (13-15 yrs played by me). The girl is deaf, (isn't a deaf actor) but is still learning sign (the character and the actor) because she recently has gone deaf. (not the actor, the actor is hearing, playing a deaf character, both the actor (me) and the character are still learning sign language) so Emmitt and this girl, (me) (I don't know what her name should be) become really close friends like Emmitt and Daphne were, and the whole friendship between \_ \_ \_ \_ \_ Kennish and Emmitt is a secret because you know Bay and Daphne would flip and stuff. And from there they can do what they want with the story... The thing is, if they were to use any part of my idea, they have to use me. But that's never going to happen. But I dream. The reason why I like this idea for the show is because i feel like its just going... I think this would really twist it up, especially give it a spice. But I don't know if it would work because the second season isn't out yet, but whatever.....

### Assorted Links (2011-09-12 03:50)

- [1]A medical device expected to reduce strokes turns out to make them three times more likely. Revealing how well stroke researchers understand strokes.
- [2]skin cancer diminished with marijuana oil
- why might current climate models - the ones supporting Anthropogenic Global Warming - be way off? [3]Cosmic rays.

Thanks to Peter Spero and Alex Chernavsky.

1. <http://www.nytimes.com/2011/09/08/health/research/08stent.html>
2. <http://detroit.cbslocal.com/2011/08/29/skin-cancer-patient-says-oil-from-medical-marijuana-is-a-cure/#photo-1>
3. [http://online.wsj.com/article/SB10001424053111904537404576554750502443800.html?mod=WSJ\\_article\\_comments#articleTabs%3Darticle](http://online.wsj.com/article/SB10001424053111904537404576554750502443800.html?mod=WSJ_article_comments#articleTabs%3Darticle)

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Martin (2011-09-12 04:55:10)

Seth, I like your blog as it addresses self-experimentation, what I do not understand however is why you persistently are trying to discredit AGW as a theory. Not only that, but you use evidence against it that is flimsy at best and has been

debunked in the (very recent) past. <http://blogs.discovermagazine.com/badastronomy/2011/08/31/no-a-new-study-does-not-show-cosmic-rays-are-connected-to-global-warming/>

Seth Roberts (2011-09-12 16:17:03)

Martin, the post to which you link (at Bad Astronomy) is right that several newspapers badly misinterpreted the study. But the poster at Bad Astronomy misses a much more important point: That (a) we don't know if cosmic rays influence climate and (b) therefore the models on which all AGW claims are based could easily be wrong. Those models assume no cosmic ray influence – but we don't know that. The models are going out on a limb. They could easily be wrong. They have never been shown to predict correctly. There is no good reason to believe them. I am saying that AGW claims are overstated because they are based on models that could easily be wrong. I am "denying" that the evidence for AGW is as strong as AGW proponents say.

Alrenous (2011-09-14 10:01:04)

I thought stroke researchers didn't claim to understand stroke. I was clearly wrong, thanks Seth.

Todd (2011-09-14 20:44:16)

Seth, I think that the cosmic ray theory of Svensmark, though not proven is quite credible. The post at "Bad Scientist" leaves out some key results regarding how pions (cosmic ray analogues) did in fact generate nucleating clusters that could seed clouds. Together with earlier work of Svensmark, and studies correlating ice ages with the Earth's travel through the oscillating spiral arms of the Milky Way galaxy, there are the elements of a consistent explanatory theory. The best overall account of the theory is given in Calder's book "The Chilling Stars". There is also an excellent series on YouTube, reviewing all the supporting data: [http://www.youtube.com/watch?v=n1qGOUiRa\\_c0](http://www.youtube.com/watch?v=n1qGOUiRa_c0) By contrast, there are three key observations which render the AGW theory of global warming untenable: 1. The "correlation" between atmospheric CO2 levels and global temperatures are extremely good, but with one problem: the rise and fall in CO2 actually lags the rise and fall and temperature by about 800 years. This proves that rising CO2 is a consequence, not a cause of temperature, and hence cannot be the major forcing issue. The same is true of methane, another "greenhouse" gas. The lag is better explained by the outgassing of CO2 from the oceans as they warm, and resolubilization as they cool – with the lag explained by the very large solubility capacity of the oceans. AGW advocates have tried to "explain" this, but their explanation has been debunked: <http://www.sciencebits.com/IceCoreTruth> <http://motls.blogspot.com/2007/04/co2-lags-temperature-how-alarmists.html> 2. Water vapor is a far more potent "greenhouse gas" than carbon dioxide, and is present at far higher levels, yet water vapor (in the form of clouds) is typically left out of climate models because clouds are too difficult to model. (This is one of the points that Svensmark's cosmic ray theory may fill in). <http://www.theweatherprediction.com/habyhints/155/> 3. Warming on other planets correlates well with that on Earth, and with solar irradiance. Certainly, that can't be explained by an anthropogenic effect, and it is hard to find any alternate explanation that solar effects: Neptune: <http://www.worldclimaterreport.com/index.php/2007/05/08/neptune-news/> Mars: <http://news.nationalgeographic.com/news/2007/02/070228-mars-warming.html> So the cosmic ray theory may not yet be proven, but it is at least as credible as the AGW/CO2 theory, which itself has many holes in it. And Svensmark has faced incredible ostracism from the entrenched peer-reviewed publications. Whether you agree or not, it is an amazing demonstration of the lack of freedom in contemporary science, which is largely a result of the system of government funding and peer review. Stay tuned. There will be more to come out of the CLOUD study at CERN.

Todd (2011-09-14 21:04:01)

Seth, As further points to my above comment, I think these discussions of the Nature article on the CERN results by Nir Shaviv and Nigel Calder are instructive: <http://motls.blogspot.com/2011/08/nir-shaviv-cloud-is-clearing.html> <http://calderup.wordpress.com/2011/08/24/cern-experiment-confirms-cosmic-ray-action/> Shaviv came to the cosmic ray theory independently of Svensmark, from his background as a cosmoclimatologist. The fact that completely different, orthogonal types of data support the cosmic ray theory is itself quite striking. It's all documented here. Take a look at Figure 2 and try to explain it away! [http://stephenschneider.stanford.edu/Publications/PDF\\_Papers/shaviv-veizer-03.pdf](http://stephenschneider.stanford.edu/Publications/PDF_Papers/shaviv-veizer-03.pdf)

Tom Fid (2011-09-15 08:04:37)

Whether we do or don't know that cosmic rays influence climate, we do know that there's been no trend in cosmic rays since

the 50s, so they don't have any explanatory power for observed recent temperature trends. Also, it's quite false to claim that models haven't predicted correctly. Observed temperature corresponds rather well with predictions by Budyko in the 60s, Charney et al in the 70s, Hansen in the 80s, 1990 IPCC report, etc. Also, models have predicted several phenomena that were only later verified through observations, including tropospheric temperature trend where observations turned out to be wrong due to UAH processing errors. There are still many gaps, but compare the performance of mainstream models to alternatives, for example the hypothesis that cosmic rays drive climate and climate sensitivity is otherwise very low, like Lindzen's preferred  $0.5C/2xCO_2$ . Rewind to 1970 or so, and backcast future global temps with that model, and you'll find that you're pretty far out on the low tails of the likelihood. You'll also have a very hard time explaining natural variability and ocean heat accumulation with strong negative feedback on temps. The models also assume no influence of pirates, angels and aliens - and we can never be sure that those don't matter either. But there are endless sources of possible systematic error in every endeavor. The fact that mainstream climate models, from simple energy balances to GCMs, have withstood investigation of a long list of those errors without major changes to their central conclusion speaks in their favor.

Seth Roberts (2011-09-15 15:39:17)

Tom, I am unable to find support for your statement that "Observed temperature corresponds rather well with predictions by Budyko in the 60s, Charney et al in the 70s, Hansen in the 80s, 1990 IPCC report, etc." Could you tell me where I can find the predictions by Budyko (not Budyko) and Charney et al? My phrase "the models have not predicted correctly" is short for "the models have not predicted global temperature in a way that increases belief in them." It is no great success for a model when it predicts the continuation of a trend - e.g., continuation of a linear increase in temperature. The models may predict all sorts of things correctly without being able to predict global temperature correctly. (Maybe this is what you mean by "there are still many gaps".) If they can't predict global temperature, they can't be used to argue that humans have had or will have a big effect on global temperature. That's what I am saying here, in short hand: The models can't be trusted. Without being able to trust the models, reason to believe AGW disappears.

Marc Drops (2011-09-15 23:48:38)

Nice discovery that marijuana oil can help prevent skin cancer. I have too many of those worthless plants growing around my yard. Now they have a real purpose.

Tom Fid (2011-09-16 09:58:19)

Budyko wrote a lot, and unfortunately I haven't figured out where to get it all, but one discussion of CO<sub>2</sub> and aerosol effects is in Tellus (1977), 29, 193-204, "On present-day climatic changes". A related and well-known, extremely simple model is in "The effect of solar radiation variations on the climate of the earth", Tellus 1969. Note that in both articles, the temperature data on which Budyko relies does not show a clear long-term warming trend, so he is not merely extrapolating. Trend extrapolation is a lousy null forecast anyway, because it's impossible for any length of time, and lacks physical justification. A plausible null forecast really needs some kind of mean reversion or stationarity built in to be plausible, especially if your position is "we know nothing." It's a bit of a dodge to say that "models may predict all sorts of things correctly without being able to predict global temperature correctly" as if they were predicting the price of chocolate. Many of the things that they're reproducing reasonably well are features of global temps, e.g. seasonal and latitudinal patterns, response to volcanic eruptions. A single time series is a weak test of a model. Physics also matters. Getting things right, other than global temps, provides a lot of information that you can't get out of temps alone, in part because the inputs to the model (forcing) are uncertain. By your metric, (not predicted correctly = predicted continued trend), it would be impossible to validate any that one would naively expect to continue, which is pretty silly. (Especially so if competing alternatives, like cosmic rays, fail to show a long term trend.) Charney = [http://www.atmos.ucla.edu/brianpm/download/charney\\_report.pdf](http://www.atmos.ucla.edu/brianpm/download/charney_report.pdf) - not a model, but does put bounds on climate sensitivity (3 +/- 1.5 C). You can plug that into an early energy balance model, like Schneider, S. H. & Thompson, S. L. (1981) J. Geophys. Res. 86, 3135-3147, for retrospective tests. There are quite a few interesting early works collected in <http://www.amazon.com/Warming-Papers-David-Archer/dp/1405196173>

Seth Roberts (2011-09-16 16:19:33)

Thanks, Tom. This is from the Charney report:

Our confidence in our conclusion that a doubling of [atmospheric] CO<sub>2</sub> will eventually result in significant tem-

perature increases and other climate changes is based on the fact that the results of the radiative-convective and heat-balance model studies can be understood in purely physical terms and are verified by the more complex GCMs.

That does not increase my belief in those GCMs. Not even a tiny bit.

Tom Fid (2011-09-16 18:32:14)

From what you've said so far, you're not convinced by correct predictions of time series data, replication of other phenomena or physical grounding of model structure. That would seem to rule out all possible lines of evidence by which one would compare models in a non-experimental field. On the other hand, you're willing to entertain a nontrivial probability that cosmic rays drive observed temperatures, in spite of flimsy evidence for the mechanism and lack of a trend coincident with temperature. It seems like you're applying an inconsistent burden of proof. If you really don't believe models (or just GCMs?), what's your null model for climate over the century?

Seth Roberts (2011-09-16 23:24:29)

Tom, I will be convinced of the value of GCMs when they correctly and persuasively predict global temperatures. Simple as that. Persuasive = the prediction was a priori unlikely. It is not enough to make correct predictions. A model only gains belief when it correctly makes predictions that seem unlikely a priori. This is why I came to believe my own model of weight control: It predicted that sugar water could cause weight loss. This was highly counterintuitive – practically everyone thought sugar is fattening. That the prediction was counterintuitive is what made the fact that it turned out to be true persuasive. If GCMs did a good job of predicting global temperature, and did so without assuming anything about cosmic rays, no smart person would be looking into cosmic rays as a possible big influence. That smart people are doing so should tell you something.

Tom Fid (2011-09-17 09:09:51)

By your metric, it seems impossible to validate a model of any system that generates 'a priori likely' behavior. That's a problem, because you're defining 'likely' ex post. If you look at the data available to Budyko, Manabe & Wetherald, and others predicting warming in the 70s, they were coming off a 3-decade period of level or declining temperature, and expecting an end to the interglacial at some point. So how was a positive trend a priori likely? That's why I was trying to nail down your null model or forecast. I doubt that there's a plausible choice, trained to pre-1970 data, that makes observed warming likely. You still haven't pointed out a specific flaw in GCM temperature replication that would motivate a smart person to look for alternatives. The AR4 ensemble fits history pretty well. Admittedly that's a weak test - but then you have to get into validating the physics. 'Smart' is not the only motive. Regardless of what you think of the models, you'd have to be a bit naive to not notice a cottage industry in exploring even silly alternatives for ideological and financial gain.

Todd (2011-09-18 20:56:51)

@Tom, You write: "Whether we do or don't know that cosmic rays influence climate, we do know that there's been no trend in cosmic rays since the 50s, so they don't have any explanatory power for observed recent temperature trends." That's an old claim by Lockwood and Frolich that was rebutted convincingly by Svensmark in this 2007 paper: <http://icecap.us/images/uploads/SvensmarkPaper.pdf>

Todd (2011-09-18 21:52:25)

Recent empirical calculations by Roy Spencer- showing how the last decade of global radiative energy balance has changed with variations in cosmic ray activity-have converted him from a skeptic of Svensmark's cosmic ray theory to a believer: <http://wattsupwiththat.com/2011/05/20/indirect-solar-forcing-of-climate-by-galactic-cosmic-rays-an-observational-estimate/>

Tom Fid (2011-09-19 08:12:56)

The link's not working at the moment, but I assume this is the Cosmoclimatology paper. The CLIMAX data (red in Fig 5), also found elsewhere, actually confirms 'no trend since the 50s.' Also, since the amplitude of the cycle in cosmic rays is large relative to the trend (Svensmark Fig 5), where's 11-year spectral line in temperature? If the net solar/cosmic forcing trend was negative

over the last decade, as Spencer concludes, and that's responsible for level temperatures and ocean heat, then wouldn't a solar/cosmic explanation require a strong positive trend to explain warming from '70-'00? (Bearing in mind that temperature is the integral of forcing and feedbacks, not merely correlated, of course.)

### Assorted Links (2011-09-15 06:48)

- [1]Jason Epstein on Jane Jacobs. He edited most of her books.
- How former Emory psychiatrist Charles "Disgraced" Nemeroff [2]found a home at the University of Miami. A comment on the article put it well: "I am even more concerned as to the scientific truth and validity of the studies, drugs, treatments etc they [= Nemeroff and his supporters] have been involved in." At the same time her university was hiring Nemeroff, the president of the University, Donna Shalala, sent out [3]a letter boasting how the University of Miami was increasing the "integrity" of their medical school by improving policies related to conflicts of interest! "There is no room for compromise in this area," wrote Shalala.
- [4]More about Jane Jacobs

Thanks to Dave Lull, Paul Sas and Alex Chernavsky.

1. <http://www.tabletmag.com/arts-and-culture/books/77650/city-girl/?all=1>
2. <http://www.forbes.com/sites/paulthacker/2011/09/13/how-an-ethically-challenged-researcher-found-a-home-at-the-university-of-miami/>
3. [http://www6.miami.edu/communications/dialogue/2009-2010/dialogue\\_11\\_02\\_09.html](http://www6.miami.edu/communications/dialogue/2009-2010/dialogue_11_02_09.html)
4. <http://www.themillions.com/2011/09/fifty-years-on-jane-jacobs-and-the-rebirth-of-new-york.html>

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dearieme (2011-09-15 08:46:12)

"UM officials had serious concerns about Nemeroff's history of ethical blunders...": blunders? That's not the mot juste, surely?

### Why is Health Care So Expensive? (2011-09-16 16:54)

Because health care costs have been increasing faster than other costs for a long time. Everyone knows that. But why is that happening? Not so clear. [1]This excellent article (via [2]Marginal Revolution) says that health care is not subject to the same pressures as industries where costs have come down. Off-shore manufacturing is one such pressure. For example, a cell phone used in California can easily be made in China. In contrast, the health care a person in California is likely to want (e.g., X-rays, check-ups) must be supplied locally.

Let me suggest other reasons:

1. A large fraction of medical school professors are co-opted by industry. They get lots of money from health care companies. The companies have no interest in cutting costs. They fund research by medical school professors for exactly one reason: to sell more product.
2. The average medical school professor has little idea how to do research. Recently I mentioned a study in which



they threw away half of their data. An article about the Potti scandal revealed that Potti's main co-author, Dr. Nevins, essentially confessed [3]he didn't understand the research in the papers he had co-authored with Potti. As far as I can tell, medical school professors usually know so little statistics they cannot analyze the data from the studies they do. If you don't understand how to do research, innovation will be difficult.

But I think the bigger and less obvious reasons are these:

3. The health-care supply chain is long. Some medical school professors can innovate – Peter Provonost, for example. But they face a special problem: the enormous health-care supply chain. It includes doctors, nurses, hospital workers, drug company employees, health insurance employees, medical equipment manufacturers, alternative medicine practitioners, psychotherapists, X-ray techs, health food store employees, and on and on. No other industry is like this. No one in the supply chain can innovate, yet all of them can block innovation. Everyone in the health-care supply chain must be paid. They care enormously about being paid. They hate to take a pay cut. Any innovation – unless it increases the cost of health care – threatens their paycheck. So there is a huge bias in favor of change that increases cost and a huge bias against change that decreases costs.

4. Let them get sick. If a man is not afraid, you cannot sell him protection. This is why protection rackets have two parts: (a) threat followed by (b) offer of (expensive) protection. Modern health care workers understand a similar truth: If a person is not sick, you cannot sell him (expensive) health care. Modern health care workers do not actively make people sick, they let a dysfunctional research system do that. (E.g., cluelessness about how to stimulate the immune system.) Then they pounce – and the money starts to flow. Once the money starts flowing, political power builds up. In a sane world, schools of public health, which care about prevention, would receive vastly more money than medical schools, which ignore prevention. In fact, the opposite is true.

This is why personal science will be so important: It is a way around our massively-dysfunctional health-care system – dysfunctional, that is, for everyone outside it.

1. <http://www.theatlantic.com/business/archive/2011/09/the-greater-recession-america-suffers-from-a-crisis-of-productivity/242704/2/>

2. <http://marginalrevolution.com/marginalrevolution/2011/09/assorted-links-216.html>

3. <http://www.economist.com/node/21528593>

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Zetji (2011-09-16 22:11:32)

I work in health care, and the main reason for outrageous profit margins is because health care is heavily subsidized and supported by the government: about a third of the work force works for the state now, and their benefits are 400 % times those of the private sector, which usually includes the most expensive health care plans. The government gets them because, hey, it's other peoples money, so they can just spend more by raising taxes or firing up the printing presses. The government also mandates coverage in many cases such as medicare and medicaid, and heavily encourages companies to provide insurance. With so many people covered doctors can fill their practice with only insured patients. At which point no market controls exist, and the sensible thing to do is just make up as high of charges as you want. Sure, the insure companies could try and police the doctors, but it's easier to just raise premiums. The really high margins plans are the ones held by the government anyway, and they have bottomless pockets since, as I said before, they can just steal money from the public through taxation or inflation. Just screw over the taxpayers and everyone in the private sector. Why do we health care practitioners charge so much? Because we can and there are no market forces to stop us, no incentives

to not gouge. Insurance also acts as a moat, insulating bad practice and keeping competition away, because patients will be reluctant to seek alternative treatment that they have to pay out of pocket when they can see their doctor and have the insurance cover it. As an example of price inflation: a 90 minute massages market price around where I live is about \$90. When charged to the government though as manual therapy and neuromuscular reeducation I've seen the same treatments get paid out for over 300 % more. Elites will use their position at the top to manipulate the laws and the social structure to accrue benefits to themselves at the expense of others. The solution would be to restore a real market economy to health care. Ban all automatic health insurance; no government plans, no employee plans; the only health insurance should be that which individuals buy of their own will from the private market. If doctors could no longer depend on having practices full of insurances patients subsidized by the government prices would come crashing down to reasonable market level.

Seth Roberts (2011-09-16 23:29:42)

Zetji, I agree with your analysis. I just think it is incomplete. All the downward pressure on prices in the world will not produce innovation. Our current system is based on an inherently expensive idea (first, let people get sick).

iamreddave (2011-09-17 00:11:32)

There is the Hanson theory that healthcare is expensive for the same reason engagement rings are. the purpose of healthcare is not to make people better but to show how much we care "our ancestors showed loyalty by taking care of sick allies, and that, for such signals, how much one spends matters more than how effective is the care, and commonly-observed clues of quality matter more than private clues. So today we spend enough to distinguish ourselves from people who don't care as much as we do, and we pay little attention to private clues about the health effectiveness of medicine" <http://www.cato-unbound.org/2007/09/10/robin-hanson/cut-medicine-in-half/>

dearieme (2011-09-17 04:41:56)

Long ago I had a tenuous connection with medical research. A statistician told me that medics would rather be taught Statistics by a fellow medic than by any statistician. At most they'd learn a few, probably misunderstood, statistical recipes.

aretae (2011-09-17 10:16:17)

Seth, Great answer...wrong question. Medical care is expensive for 2 main and 1 subsidiary reason. 1. Supply restriction. An emt can do 50 % of the useful work of a doc...with 6 months training. India has 4 year degree doctors. FDA limits drug entry massively and patent law limits supply of existing drugs. High regulation. 2. First dollar insurance as encouraged by US tax law...as compared to Singaporean catastrophic insurance with HSAs. Subsidiary: Unclear benefits. Given other people's money (lack of alignment between beneficiary, payer & decider roles)...the incentive to find what works is weak.

Paul Sherrard (2011-09-17 13:37:42)

Zetji says: "the main reason for outrageous profit margins is because health care is heavily subsidized and supported by the government." If that's true, why do so many countries where health care is FULLY subsidized by the government have such affordable health care compared to us? If the solution is to "restore a real market economy," why do the countries with the least exposure to market forces consistently provide the best care for the most people? I think it's worth at least entertaining the idea that obscene profit margins are driven by a capitalist (i.e., profit-taking) system. I dunno. Just a thought.

Seth Roberts (2011-09-17 13:39:23)

Arætae, an ounce of prevention isn't just worth a pound of cure, it costs a thousand times less. There is a "supply restriction" on prevention. Eliminating it - figuring out how to prevent major diseases - would reduce health care costs by a huge factor. People would die eventually, yes, but they would contribute more to other people's health (via taxes and caring for children) and have more money to spend on their own health (due to savings) before doing so. What is the "wrong question" I have asked?

Matt McCandless (2011-09-18 11:42:34)

Paul, I always have to respond to comments such as yours. One of the greatest fallacies of our current healthcare debate is the assumption that our current health care system resembles anything close to a free-market. Our current National Healthcare

System differs from it's foreign counterparts only in it's inability to offer universal access. It is subject to the same absurd barriers to entry that have stifled progress in everything from food costs to energy efficiency. The system is SO massive and convoluted that it really knocks me on my face when people such as yourself assert such claims. The counter question to yours now is given that free markets have worked so well at effectively distributing everything from diapers to cellphone. Making life changing technology available to even the poorest sections of the planet. Why are people so afraid to let our most valuable resources, food and healthcare, be controlled by those same mechanisms.

Paul Sherrard (2011-09-18 13:50:59)

Matt McCandless: "The system is SO massive and convoluted that it really knocks me on my face when people such as yourself assert such claims." In fact I made no claim of any kind anywhere in my post. I posed a couple of questions, then offered the opinion that a particular idea—the idea that profit-taking itself could be the culprit—was worth considering. However, your claim—"Our current National Healthcare System differs from it's foreign counterparts only in it's inability to offer universal access"—is not a factual statement. Our current system differs dramatically from its foreign counterparts in that it is (1) overpriced and (2) grossly inefficient in every area EXCEPT that of delivering profits to investors in the insurance and drug industries as well as the beneficiaries of profiteering hospitals and HMOs (their ostensible for- or non-profit status notwithstanding).

Matt McCandless (2011-09-18 17:36:05)

Excuse me, I assumed your last statement, "I think it's worth at least entertaining the idea that obscene profit margins are driven by a capitalist (i.e., profit-taking) system. I dunno. Just a thought.", as a passive assertion. I am still not convinced I was wrong but I will give you the benefit of the doubt. Given my new interpretation of your statement I would say, No, it is not worth considering. To offer something up as a culprit in a crime assumes that that something exists. In this case there is not Capitalist Health System to scape goat. Capitalism implies choice, our current system offers none. Everything from diagnosis to acceptable treatments to prevention are dictated by a series of committees and enforced under the penalty of law. What we have in America much more closely resembles socialism than capitalism and that was my point. It is the underdog nature of you comment that really prompted me to comment though. As if no one as yet thought profits could be at the core of the current crisis. When in reality you would be hard press to find a New York Times article that does not cite capitalism as the main culprit of our current situation. Why target capitalism you might ask? Because it is the only real threat to their current monopoly. Regulation, socialization, these are things that can be manipulated through politics. Free choice and open competition cannot.

Matt McCandless (2011-09-18 17:53:59)

On a separate note though, it is hard not to notice that the three areas that The Atlantic cites as becoming more expensive, "beds, meds, and higher-ed" are the three most regulated areas of our economy. So I guess where Seth might say this is because they are not open to the same types of innovation that other areas such as electronics may be open to. I would say we to not see those types of innovation in those fields because our economy is not open to them.

Paul Sherrard (2011-09-19 07:12:31)

Matt McCandless: "Capitalism implies choice"—how so? You could say it rewards innovation, but (1) that doesn't mean "choice" is implicit and (2) it rewards it via buyout, i.e. assimilation, and tends toward the "Mac & PC" duopolistic parody of choice that lies at the end of the capitalist road in every sector. The triumph of the capitalist has always involved the elimination of real choice. This has always been true, from Big Auto tearing up trolley tracks to Big Pharma writing the health care bill. What you see as anti-business regulation actually benefits big business, and the important point is that someone's pockets are lined in the process. Someone is getting rich off the status quo. And I would venture to suspect that you've been trained not to view that someone as a Capitalist, although he is the quintessential Capitalist; he is the very definition of a Capitalist. The objectivist-libertarian-Austrian ideology talks up a storm about "capitalism" while hardly whispering a word about Capital. But it is Capital that frantically seeks returns even when it has all the money; it is Capital that bribes politicians to create huge barriers to entry; it was Capital that wrote Romneycare and Obamacare and it will be Capital that thwarts any of your efforts at a return to small-market logic, or at least any meaningful elements thereof. "[Y]ou would be hard press to find a New York Times article that does not cite capitalism as the main culprit of our current situation." If you can find, and link to,

a Times article that actually asks "cui bono," as I did, I'll be greatly surprised. (What you don't seem to grasp is that I wasn't attacking "free choice and open competition"; I was asking "cui bono.") Matt says: "What we have in America much more closely resembles socialism than capitalism and that was my point." And my point was this: If that were true, it would follow that countries that more fully embrace a Socialist model would have even worse problems. And instead the opposite is the case. In case after case after case.

Matt McCandless (2011-09-19 16:04:45)

In order to reward innovation there must be a choice? Or else it is just giving things to people. It is natural in any competitive process that you will eventually whittle down to two or three choices. No one is going to buy the fifth best operating system, it is a feature not a flaw. Market share does not insulate firms from competition or restrict choice. I believe it is you who has been trained, to see any move toward ones best interest as necessarily destructive or immoral. Your "Quintessential Capitalist" is not necessarily a capitalist at all, in reality he could be a pacifist, he could be an anarchist, he could even be a baker. What you have described is an immoral human being and he can just as easily fit into one mold as the next. I believe that most socialist healthcare systems, to the extent that they have worked, have done so by successfully pitting the medical establishment against it's political overlords. A politician may be elected in a single payer system based on his ability to control healthcare costs by directly intervening in the market, and because he is subject only to his constituency he is free to pursue those ends. In America we still retain a belief that we have a free healthcare market and in the past have not generally voted for politicians who claimed they would directly intrude into healthcare the way a European Politician might. It is hostile to our fantasy. In this system it is the medical establishment that comes out as the big winner as they are able to secure all of the monopolistic powers befitting a social enterprise without any of the downward pressure from their political counterparts. You can see how in this best of both worlds scenario it is the people who lose. A step either direction on the spectrum of choice would most likely result in a much more optimal outcome for the average consumer. But when in doubt most libertarians will repeat the mantra, "freedom is it's own end". I think the problem with anti-capital arguments is the belief that capital is only present in a capitalist society. The question for an economy is not whether or not capital should or should not exist or make returns, but rather, who should get those returns and how much should those returns be. In any socialist system there is still "capital" but instead of being allocated through a system of prices, it is allocated through a system of bureaucrats. Ideas are not priced according to their market value but rather their political appeal. This is in stark contrast to true capitalism where ideas are disseminated, not based on their appeal to a political faction, but rather by their ability to satisfy the needs of enough individuals to secure a return on the initial investment. I would argue that contemporary capitalism implies the lack of an over arching control structure, and that it is that structure, not the capital that it controls that defines socialism. So in closing, yes, it is humans ever present quest for capital return that lures them to lobby politicians for handouts, but it is a societies susceptibility to those efforts that places it somewhere on the spectrum of Capitalist/Socialist. I think George Will said it best in his interview on econotalk, as the state attains a greater and greater ability to influence the profitability of enterprise it follows naturally that enterprise will spend a greater and greater amount of time trying to influence the state. I guess I would leave up to you to decide how to best address that problem.

Paul Sherrard (2011-09-19 16:37:31)

No offense, but as I am already familiar with the libertarian catechism to the extent that it bores me to tears, I'll just cut to the part that's relevant to the current discussion: "In this system it is the medical establishment that comes out as the big winner as they are able to secure all of the monopolistic powers befitting a social enterprise without any of the downward pressure from their political counterparts." Interesting. Who, specifically, within "the medical establishment" is "the big winner"?

Tuesday miscellany — The Endeavour (2011-09-20 07:41:36)

[...] Why is health care so expensive? An immune system trained to kill cancer [...]

Justin (2011-09-20 09:25:22)

Paul asks "Who, specifically, within "the medical establishment" is "the big winner"?" Answer: Everyone who has a stake in the supply chain. This includes "doctors, nurses, hospital workers, drug company employees, health insurance employees, medical equipment manufacturers, alternative medicine practitioners, psychotherapists, X-ray techs, health food store employees, and

on and on", academic professors and researchers, union leaders, hospital and clinic administrators, and even [currently in our system setup] politicians and beaurecrats. So, who are the losers? Everyone else, particularly the tax payer and patient (customer). To head off the discussion that many of the winners also fall into the losers group... I'll pay 20 % more for my industry services and in fact cheer on cost/price increases if that means I get a 50 % raise myself!

Alex (2011-09-20 09:56:25)

Maybe average consumer shopping in the insurance marketplace needs more transparency and product education? If you wouldn't sign a mortgage without checking your credit report, why do some many people pay for insurance policies without verifying their medical report? In fact, many consumers and even many insurance agents are unaware that Humana, UnitedHealth Group, Aetna (AET), Blue Cross plans, and other insurance giants have ready access to applicants' prescription histories. An investigation in 2008 by the Federal Trade Commission found that the two companies supplying these pharmacy profiles—MedPoint and IntelliScript—violated federal law for years by keeping the system hidden from consumers. The FTC has now required disclosure of personal medical and prescription files. MedPoint and IntelliScript say they are now fully complying with the FTC's order. Yet, 2/3 of all health insurers are using prescription data—not only to deny coverage to individuals and families but also to charge some customers higher premiums or exclude certain medical conditions from policies, according to agents and others in the industry. Some carriers are also using the data to charge small employers higher group rates. Separately, some 20 % of life insurance companies are relying on prescription histories when reviewing applications, according to experts in that business. <https://www.annualmedicalreport.com/prescription-analytics-corporate-database-s-track-whats-in-your-medicine-cabinet/> Unfortunately, failing to check your medical report can be costly; errors or omissions within individual medical report files can cause applicants to be rejected outright, pay higher policy premiums, or suffer outright rescission of coverage! For example, the Consumer Reports Health Blog discusses how insurance can be denied because a medical coding error in your medical report file in the MIB Group Inc. databases. <http://blogs.consumerreports.org/health/2008/08/denied-insuranc.html> Few people realize the MIB Group has a file on them. Like the credit-reporting agencies, MIB monitors virtually every aspect of a person's health care. When someone applies for individual health-care coverage, the application is routinely run through MIB's huge database of health and medical information. Insurers effectively use the MIB data for health-insurance applicants like they use motor-vehicle administration records for auto-insurance applicants, adjusting premiums or even denying coverage based wholly or in part on what is in a person's MIB file. All health insurance applicants and policyholders should request an annual copy of their "medical report" files from the three major specialty nationwide consumer reporting agencies to ensure they aren't overpaying for insurance or in danger of policy rejection or rescission for reported pre-existing conditions.

Matt McCandless (2011-09-20 10:34:53)

While I would never claim to understand the issue entirely. It would seem that the "Big Winners" would actually be a conglomerate of, (in no particular order) 1. Medical Lobbyists, who are able to secure a nice paycheck by greasing wheels of the establishment and help their own accent into it's ranks. 2. Doctors, who are able to charge substantially inflated prices due to the protected nature of their field and there access to consumers who have no real choice in service or price thanks to "Cost Control Mechanisms". The icing on the cake and where all social ideas eventually break down is that they are not spending their own money so there is no incentive to make a good decision. 3. Politicians, who are able to secure donations and support by giving the whole process the federal stamp of approval. 4. Regulatory agencies such as the FDA, who are able to intervene in markets and hence enjoy a level of power that should exist no where in a free society. 5. Insurance Companies, who, while potentially paying more in benefits, are able to recoup that cost by creating barriers to entry that would not be possible without the explicit support of all other players. I am sure we could think of more but I think the point is clear, this is not a capitalist system, in any honest interpretation of the word.

Paul Sherrard (2011-09-20 13:11:15)

OK, this is what I find astonishing. I see this again and again, yet it never fails to amaze me. Every single champion of "capitalism" on the Internet is the same: they have utterly NO IDEA, not a CLUE, how capitalism actually works. They can analyze a profiteering situation and not even wonder where the profits go. They can witness skyrocketing prices and a simultaneous boom in the wealth of the investing class without ever connecting the dots. They can even refer to lobbyists and bribed

politicians without, apparently, wondering on whose behalf the lobbyists lobby and from whose largesse the pols are bribed. Matt, who do you think pays the lobbyists? Who do you think benefits from the status quo enough to take the trouble to "contribute" to so many key candidates' war chests? I'll give you a hint: it's not doctors. Doctors haven't prospered as medical costs have risen out of control. On the contrary, their incomes have declined. <http://www.marketwatch.com/story/primary-care-doctors-income-drop-may-lead-to-shortage-study> As for the FDA, its budget and staff has been steadily cut since the Reagan administration. I don't see how it could be construed as a "winner." Maybe it "wins" every time it approves a drug that's actually harmful, because Merck or whoever pays them off? But then that's a case of Merck's investors (i.e., Capitalists) greasing the necessary wheels en route to massive profits. Over the past few decades we've had a boom in private hospitals and private HMOs. At the same time, reports of profiteering by "non-profit" hospitals are rampant and some have undergone restructuring efforts administered by investment banks. Over the same period, pharmaceutical co.s have become the most widely held stocks on the NYSE, and insurance companies have reported record profits. AND costs are rising uncontrollably, while doctors' pay declines. The writing is on the wall. Big investors are making out like bandits. Or, to use old fashioned terminology, Labor's pay declines while Capital pockets record profits. And contrary to your assertion, this is exactly what Capitalism is. It's just not how Capitalism has been (mis)represented to you.

aretae (2011-10-03 14:39:34)

Responding finally... Supply restriction prevents the folks who could make money by selling the prevention from doing so...and especially for advertising the results (See: baby aspirin + Heart Disease). Who is allowed to make money from prevention? Not many, as the FDA is now cracking down on supplement manufacturers? First Dollar insurance + sick days insulates consumers from the immediate costs of their health behavior. The incentives to solve the health problem are broken...so it's not being solved. As far as I've seen, every industry that gets the incentives right, even in medicine (plastic surgery, lasik, etc.), has hugely decreased and still decreasing costs. As to wrong questions: I think you answered the question of how the medical industry responded to massive levels of protectionism...not the question of why the costs are high. I'd look at Kaiser Health Care, or Singapore or Germany before concluding that the problem is insufficient prevention..

josey jasen (2011-10-05 05:59:03)

I just stumbled upon your blog and wanted to say that I have really enjoyed browsing your blog posts. In any case I'll be subscribing to your feed and I hope you write again soon!

Carl (2011-11-05 18:20:31)

on the 90's the minimum wage was \$ 4.25/hour, a full coverage individual health insurance policy \$ 75.00 (I mean full without so many co-pays) 2011 the minimum wage is \$ 7.50/hour, a (full coverage?) individual health insurance policy is = over \$ 700.00 the difference is that the suppliers, equipment's etc are manufacturer in China for a "fraction" of the cost... It's getting very close to the point that lots of people will going to drop their health insurance plans and if the USA think that a crisis exist, wait until we got on this point to see what a massive destruction for good means. The government need to step up and act right now to audit and cut the health insurance plans costs in at least 50 %.

## How to Start a Talk (2011-09-17 16:22)

[1]A recent talk at the London School of Economics by Carne Ross, author of a book called *The Leaderless Revolution: How ordinary people will take power and change politics in the 21st century*, began with this:

I was preparing the talk this afternoon at my beloved cousin's, where I'm staying. 'cause I don't live in London anymore. She said, "How are you, Carne, how are you doing?" I said, "I'm a bit nervous, to be honest." She said, "Don't worry, Carne, I've heard lots of bad talks at the LSE."

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Katy (2011-09-18 13:07:41)

Wow- that talk was extremely inspiring! I wish his new book was available over here, I'd love to read it. Maybe when my current TBR list is a bit shorter, I'll go ahead and order it from amazonUK.

### **First, Let Them Get Sick (2011-09-18 20:58)**

In *Cities and the Wealth of Nations*, Jane Jacobs tells how, in the 1920s, one of her aunts moved to an isolated North Carolina village to, among other things, have a church built. The aunt suggested to the villagers that the church be built out of the large stones in a nearby river. The villagers scoffed: Impossible. They had not just forgotten how to build with stone, they had forgotten it was possible.

A similar forgetting has taken place among influential Western intellectuals – the people whose words you read every day. [1]Recently I wrote about why health care is so expensive. One reason is that the central principle of our health care is not the meaningless advertising slogan promoted by doctors ("first, do no harm") but rather the entirely nasty first, let them get sick. Let people get sick. Then we (doctors, etc.) can make money from them. This is actually how the system works.

It is no surprise that doctors and others within the health care system take the first, let them get sick approach. It is wholly in their self-interest. It is how they get paid. If nobody got Disease X, specialists in Disease X would go out of business. What is interesting is that outsiders take the first, let them get sick attitude for granted. It is not at all in their self-interest, just as it was not at all in the self-interest of the Carolina villagers to think building with stones impossible.

An example of an outsider taking first, let them get sick for granted is [2]a recent article in the *London Review of Books* by John Meeks, an excellent writer (except for this blind spot). The article is about the commercialization of the National Health System. Much of it is about hip replacements. How modern hip replacements were invented. Their inventor, John Charnley. How a hospital that specialized in hip replacements (the Cheshire and Merseyside NHS Treatment Centre) went out of business. And so on. Nothing, not one word, is said about the possibility of prevention. About figuring out why people come to need hip replacements and how they might change their lives so that they don't. Sure, a surgeon (John Charnley) is unlikely to think or say or do anything about prevention. That's not his job. But John Meeks, the author of the article, is outside the system. He is perfectly capable of grasping the possibility of prevention and the parasitic nature of a system that ignores it. Long ago, people understood that prevention was possible. As Weston Price documents, for example, isolated Swiss villagers knew they needed small amounts of seafood to stay healthy. But Meeks – and those whom he listens to and reads – have forgotten.

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1. <http://blog.sethroberts.net/2011/09/16/why-is-health-care-so-expensive/>

2. <http://www.lrb.co.uk/v33/n18/james-meek/its-already-happened>

dearieme (2011-09-19 03:00:10)

And yet when politicians talk about saving money by spending more on prevention and less on cure, I assume that the "prevention" will be some puritanical doctrine for which no good evidence exists. After all, for decades the buggers told us not to eat egg yolks.

dearieme (2011-09-19 03:00:34)

Nor, come to think of it, butter.

q (2011-09-19 04:40:29)

i guess you're right. doctors would never ever tell someone to stop smoking, for example, and more perversely lung cancer rates have been skyrocketing in the USA because neither physicians nor public health officials have any attempt to convince people to stop smoking.

dearieme (2011-09-19 06:38:16)

But smoking is the past - the only really substantial mass killer identified successfully by more-or-less modern epidemiology. (And even then it's worth noting that the original discovery of the perils of smoking was rejected by doctors on the grounds that it was Nazi science.) Since then doctorly lecturing has been regularly based on weak or absent evidence. Or it amounts to a feeble repetition of the stuff your mother told you - "Go out and play, dear" - or, as I say, erroneous countermanding of your mother's excellent advice to eat up your egg. Dim-witted nagging is not the same thing as prevention.

JPB (2011-09-19 08:07:28)

Very true, but until that message gets out to the masses, it will be more of the same. My former doctor was convinced I would drop dead very soon because I declined to take a statin. He also said there was no way to correct lipid numbers with diet. Wasn't even willing to give me some time to see if it would work!

Seth Roberts (2011-09-19 09:36:21)

"Doctors would never ever tell someone to stop smoking, for example." yeah, "for example". Except that (a) it is almost the only example and (b) everyone already knows smoking is unhealthy and (c) giving such preventive advice is a very small fraction (0.1 %?) of what doctors spend their time on and (d) this advice is 50 years old - that is, stale. The other example of what a doctor might do to prevent disease I can think of is telling patients to lose weight. As if (a) the patient didn't realize he/she was fat and (b) the notion that they should lose weight was a new idea. If you went to a doctor and all they did was tell you to stop smoking and lose weight you might wonder if they were an imposter - if they went to medical school. You would certainly resent paying \$100 or whatever for such blindingly-obvious advice.

jeff borsato (2011-09-19 10:06:45)

I think it is difficult to quantify how many illnesses or diseases are directly the result of poor lifestyle or risky behavior. It is equally difficult to paint the health care industry with the same brush because it is so varied from state to state let alone from nation to nation. Doctors do not have a vested financial interest in the basic health and safety of people while they are healthy. Car companies have a financial interest in making cars safer to avoid excessive litigation, but doctors are only called in when people require their services. Should doctors be paragons of public health and safety? Should they like priests of old preach to the masses the evils of certain risky behaviors? Im not so sure, and in Canada there exist layer upon layer of prevention and safety positions staffed by doctors and nurses to preach that same message to the people. The assumption your argument appears to rest up is that sending a message of prevention will be received and put into practice and what line should this message not cross? If these strategies worked, let us compare mortality/accident rates for nations with varying levels of spending on prevention/health and safety type outreach among medical professionals to qualify that sentiment. Medical professionals are not without their own disagreements and moral dilemmas, asking a doctor to invest himself in prevention could result in varying messages, some smacking of a morality not shared by all and not scientific in nature. This would simply give rise to a sort of propaganda unit of central control to provide the message doctors "ought" to give, which in itself presents a host of problems. A carpenter should not beyond a moral inclination be expected to learn about sustainable tree planting to



work with wood. With the amount of training for a doctor just to treat the sick, we might make best use of their time doing just that. Prevention is a messy tangle of morals and science when we move beyond the very basic messages. Doctors preach already to patients to stop smoking or loose weight, but many simply refuse to listen because there is little or no incentive to do so. The message is not the problem, human nature is.

David (2011-09-19 16:41:52)

The reason doctors make an exception to the "no prevention" rule for smoking and losing weight is simple: they know from experience that almost no one can or does follow that particular advice.

Alrenous (2011-09-19 17:04:03)

Tabacco chewing was considered a [1]filthy habit at least as long ago as 1870, and I hope you'll excuse me for concluding that cigarettes would have acquired the moniker instantly, by association. Especially as it in fact smells bad. Fifty years old is too young by a factor of nearly three.

1. [http://books.google.ca/books?id=issHAQAAMAAJ&pg=PA703&lpg=PA703&dq=%22filthy+habit%22+etymology&source=bl&ots=whVNxA-ZrU&sig=UqJe81Ylf6Ht0kRFz9rn7AbKN38&hl=en&ei=add3ToKyK6jl0QGk74nqCw&sa=X&oi=book\\_result&ct=result&resnum=6&ved=0CDsQ6AEwBQ#v=onepage&q=filthy&f=false](http://books.google.ca/books?id=issHAQAAMAAJ&pg=PA703&lpg=PA703&dq=%22filthy+habit%22+etymology&source=bl&ots=whVNxA-ZrU&sig=UqJe81Ylf6Ht0kRFz9rn7AbKN38&hl=en&ei=add3ToKyK6jl0QGk74nqCw&sa=X&oi=book_result&ct=result&resnum=6&ved=0CDsQ6AEwBQ#v=onepage&q=filthy&f=false)

WCB (2011-09-19 18:12:33)

Seth, I'm a regular reader and really appreciate your blog. Re your above piece, I have often thought that a better term than disease "prevention" would be to coin the term "disease avoidance." That's because it seems the term "prevention" in this context has been corrupted to refer to the marketing and delivery of more and more medical services such as annual physicals and regular medical testing,. The resulting doctor prescriptions of pharmaceuticals for high blood pressure, "high cholestrerol" and "treatment" of numerous other "conditions" are of course intended to be prescribed for the remainder of the patient's life and need to be constantly monitored by the service provider. More visits, more services, more income for you-know-who. With regard to the example of prescription of drugs for many of the typically diagnosed "conditions," it is clear that most of these don't actually cure any condition in anybody; but they sure pad the income statements of the drug manufacturers year after year. The result is that the system is well on its way to bankrupting Medicare and Medicaid. I've also arrived at the view that many of these conditions (especially type 2 diabetes which is now rampant) are almost always the result of a bad nutritional lifestyle, not genetics. So in the end, the system seeks to market a type of "prevention" that puts money in the pockets of medical care professionals, hospitals and pharma companies, but hardly ever prevents illness and doesn't cure anybody. I suppose all of this has become the driver of a terribly corrupt and unsustainable "let them get sick" medical system. BTW, while I'm in rant mode, we should all stop using the misleading term "health care" system since the system has evolved to a point where the "health" of the individual has become largely irrelevant. It's now just about churning profit.

Seth Roberts (2011-09-19 18:46:11)

yes, WCB, that's a good point. Our health care system is happy to do "prevention" so long as it is expensive – e.g., statins. The quality of this prevention is indicated by the finding that statins don't seem to help people who haven't had a heart attack.

JeffR (2011-09-20 01:38:38)

A question for Seth. What are the prevention strategies that you think doctors should be sharing with their patients? Bear in mind doctors are going to be hesitant to share health advice without a strong base of evidence.

Nancy Lebovitz (2011-09-20 04:45:32)

One possibility for prevention of joint problems– Feldenkrais method is a system of gentle movements done attentively so that people can recover varied, well-coordinated movement.

Seth Roberts (2011-09-20 06:10:20)

Jeff, I think doctors are helpless. They can only repeat what they are told. There is a lack of prevention research. That's where a better health care system would start: with more prevention research. Nancy, I suspect a lot of hip replacement is due to

inflammation, which would be prevented by sufficient omega-3.

WCB (2011-09-20 12:34:15)

@Nancy: In addition to Seth's comment (about omega-3 supplementation being helpful in preventing joint problems), I would like to mention the work of Dr. William Davis regarding the problems of inflammation, arthritis, celiac disease (and many other serious issues) caused by consumption of grains, particularly wheat. In case you aren't familiar with Dr. Davis, he is a practicing cardiologist in Milwaukee and offers a lot of useful info on his Heart Scan blog. Dr. Davis also recently published his book entitled "Wheat Belly" which is newly listed in the NY Times book review as number 5 on the best seller list for its category. It looks like Dr. Davis is really onto something when it comes to sound ideas for prevention (or avoidance, as I prefer to think of it) of a number of common diseases, all based on his clinical experience with numerous patients and research he has done on the subject. WCB

Rajiv Mehta (2011-09-20 16:02:22)

Seth, your critique is right in line with a couple of books I read recently: "Over-Diagnosed" by Dr Gilbert Welch, and "Worried Sick" by Dr Nortin Hadler. Both point out that a great deal of today's medical practices, especially the purportedly "preventive" stuff, is unproven, and worse is making us sicker. I reviewed the books on my blog (<http://bit.ly/opoqAl>).

Seth Roberts (2011-09-20 16:54:57)

Rajiv, thanks for drawing my attention to Over-Diagnosed. It sounds good.

JPB (2011-09-21 07:55:37)

Also, "Selling Sickness"

### Assorted Links (2011-09-19 10:01)

- [1]The shame of college sports. Great article by Taylor Branch.
- [2]Retraction watch
- [3]protein folding problem solved by on-line gamers
- [4]Edward Jay Epstein review of two books about the 2001 anthrax attacks

Thanks to Dave Lull and Justin Owings.

1. [http://www.theatlantic.com/magazine/archive/2011/10/the-shame-of-college-sports/8643/?single\\_page=true](http://www.theatlantic.com/magazine/archive/2011/10/the-shame-of-college-sports/8643/?single_page=true)
2. <http://retractionwatch.wordpress.com/>
3. <http://www.cs.washington.edu/homes/zoran/NSMBfoldit-2011.pdf>
4. <http://on.wsj.com/oIkCt7>

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dearieme (2011-09-19 14:35:47)

Dear God, so of three suspects, two were driven to their deaths and a third had to be handed a huge sum in compensation for FBI actions. Add this yarn to Waco and I am left wondering whether Federal government agencies have carte blanche to misbehave.

Property of the State (2011-09-19 17:06:11)

"I am left wondering whether Federal government agencies have carte blanche to misbehave." Sovereign Immunity. a.k.a The King is above the law. Thus it always was. Thus it always will be.

Alrenous (2011-09-19 17:16:46)

That protein thing is hilarious. "Well, we have a computationally intractable problem." "Obviously, the solution is to give it to regular people to solve." And then it works. "Hi, I'd like to buy the 'human' peripheral for my computer. I bought some software it was a pre-req for without realizing..."

Alex Chernavsky (2011-09-20 09:13:22)

Somehow, that protein-folding article reminded me of that case in 2005, whereby someone discovered that it's trivially easy to open those fancy, expensive Kryptonite bike locks: <http://www.wired.com/culture/lifestyle/news/2004/09/64987> You can pick the locks without any special training, using just a plastic pen cap. Or, you *could* do it, before the company re-designed the locks.

Nancy Lebovitz (2011-09-20 13:24:17)

[1]I Heard the Sirens Scream is about 9/11 and the anthrax attacks. I've only heard the NPR interview with her, but she seems generally reasonable, and believes that Al Qaeda was behind the anthrax.

1. [http://www.amazon.com/HEARD-SIRENS-SCREAM-Americans-ebook/dp/B005DFHYQK/ref=sr\\_1\\_1?ie=UTF8&qid=1316549909&sr=8-1](http://www.amazon.com/HEARD-SIRENS-SCREAM-Americans-ebook/dp/B005DFHYQK/ref=sr_1_1?ie=UTF8&qid=1316549909&sr=8-1)

Seth Roberts (2011-09-20 16:07:23)

I Heard the Sirens Scream is by Laurie Garrett. Her most famous book is The Coming Plague (1995). Which hasn't yet come.

Vic (2011-09-20 20:48:34)

I don't know why you insist on continuing to wallow in ignorance along with E. J. Epstein with respect to the anthrax investigation when I have posted here on your past posts about the guy at [anthraxinvestigation.com](http://anthraxinvestigation.com)... he's spent the last 10 years of his life doing almost nothing but follow every single detail of this case and makes it unambiguously clear that the FBI got the right man on this one. He also specifically debunks Epstein's crackpot nonsense...

Nancy Lebovitz (2011-09-22 10:06:22)

Interesting point about Laurie Garrett. Did she say anything about when she expected a new plague?

Seth Roberts (2011-09-23 16:51:39)

Nancy, I forget the details of her prediction.

## First Day of Class 2011 (2011-09-20 05:00)

Yesterday was the first day of one of my Tsinghua classes. It has about 25 students. I asked each of them to say their favorite book in English. Several were mentioned twice: Pride and Prejudice (mentioned three times), Harry Potter, Catcher in the Rye, The Little Prince, and – this surprised me – The Secret. The last student to answer this question said her favorite book was Lolita. The class oohed. Last year a student said his favorite book was Ulysses. I said my favorite book was [1]Cities and the Wealth of Nations. (A close second is [2]Totto-Chan.)

I said the class would have three underlying principles: (a) Every student is different. (b) [3]The best way to learn is to do. (c) Reading group. Two years ago, a Tsinghua engineering student started a reading group to read some famous Chinese book. He put a sign-up sheet in the library. The idea spread and now there are maybe ten reading groups, which meet weekly. It's a alternative and successful educational system, they must be doing something right. To try to learn from their success, I am going to imitate their most obvious feature, which is a presentation about the

week's reading. For the coming week I asked for volunteers to give 5-minute presentations about the reading assignment. I said that if you gave a presentation, you wouldn't have to do the regular homework assignment (commenting on the reading) for two weeks. Three students volunteered. After class, as I was leaving, one of the volunteers came up to me. She wanted to do the homework anyway, she said. She had volunteered to do a presentation "to exercise my bravery".

1. <http://www.portifex.com/BSPages/Cities&Wealth.htm>
2. <http://www.arvindguptatoys.com/arvindgupta/Tottochan.pdf>
3. <http://courses.csail.mit.edu/6.042/fall11/The%20Best%20Way%20to%20Learn.pdf>

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Tom (2011-09-21 06:00:26)

Seth, the "exercise my bravery" thing reminded me of an interesting article in the NY Times which I thought you'd like: <http://nytimes.com/2011/09/18/magazine/what-if-the-secret-to-success-is-failure.html>

Karen (2011-09-24 02:22:29)

Hi Seth!! I'm one of the volunteer..... I'm now dealing with my comments and presentation and finding everything available to help my work so that my performance on Monday won't ruin your enthusiasm of reading group:)

Karen (2011-09-24 02:24:20)

Oh! sorry!! I mean READING GROUP .....

Karen (2011-09-24 02:25:49)

And honestly speaking, I find your paper quite interesting!

Thussy (2011-09-28 03:39:10)

Professor Roberts, What time/place does your class meet at Tsinghua?

Seth Roberts (2011-09-28 16:48:40)

My Frontiers of Psychology class meets Monday 3:20 pm in Teaching Building 6, Section A, Room 113. My R class meets Tuesday 3:20 pm in Teaching Building 3, Section 3, Room 3109. You are welcome to attend.

## **Arthritis Relief From Flaxseed Oil (2011-09-20 23:24)**

From [1]the Shangri-La Diet forums:

I have just been doing the flaxseed oil for a few days and I am experiencing a dramatic decrease of my arthritis pain! It is a wonderful benefit. . . . My doctor friend who told me about the SLD told me that the flaxseed oil would help my arthritis as well, but I never expected anything this dramatic or quick!

[2]A friend of mine noticed something similar: his sore back stopped hurting shortly after he started taking flaxseed oil. If he skipped a day or so, the pain returned. Update: Reminded of this, he said, "I had forgotten all about that. When people ask me how my back is I tell them it never bothers me anymore since I stopped going to the gym."

Update 2: At first the arthritis sufferer took 4 1200-mg capsules 3 times/day – that is, 12 capsules per day. Then she increased her dosage to 6 capsules 3 times/day (= 18 capsules/day).

Update 3. " Yesterday, I was off to work and could not find my oil capsules. I didn't have time to look for them, so I resigned myself to doing sugar water during the day. . . . I did notice a small but significant worsening of the pain in my knees. When I got home, I found the capsules, and began taking them again. By the time I woke up this morning, I noted that my knees are again feeling better."

1. <http://boards.sethroberts.net/index.php?topic=8179.0>

2. <http://blog.sethroberts.net/2008/10/28/advances-in-the-shangri-la-diet/>

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BLJ (2011-09-21 02:07:34)

I'll chime in here as well. I began taking the oil about a month ago to see if it could improve my gum health. Instead I have noticed considerable improvement in some pain in my back and somewhat arthritic hip. Still working on the gums.

Adam (2011-09-21 05:01:42)

Hey Seth, I'm also living in China (Shanghai, to be exact) and I've been having a hard time finding flaxseed. I've looked at all the local pharmacies and TCM stores. Can't find it anywhere. Any hints?

Seth Roberts (2011-09-21 12:59:09)

Adam, I get my flax seed from LohaoCity, which sells organic food. I used to get it at Carrefour. There is no branch of LohaoCity in Shanghai but there are several Carrefours. The flax seed I get has a label printed with LohaoCity and [www.lohaocity.com](http://www.lohaocity.com) so LohaoCity might ship it to you from the nearest store.

## Assorted Links (2011-09-22 05:00)

- [1]Lard chic. "“I might have a cold,” she says. “Eat this, then,” I say, proffering a piece of hot toast with a thin, transparent slice of cured pork fat.”
- Skeptical Science is a blog devoted to rebutting every argument offered by AGW skeptics like me. [2]Bishop Hill points out that after two comments were critical of a post about Antarctic ice, the post was rewritten. Rather than point out the rewriting, replies were added to the critical comments saying that the commenters hadn't read the post ("read and reread the post above").
- [3]Nobel Laureates Behaving Badly. "In his Nobel Prize Lecture of December 12, 1946, Hermann J. Muller argued that the dose-response for radiation-induced germ cell mutations was linear and that there was “no escape from the conclusion that there is no threshold [below which radiation is harmless]”. However, assessment of correspondence between Muller and Curt Stern 1 month prior to his Nobel Prize Lecture reveals that Muller knew the results and implications of a recently completed study at the University of Rochester under the direction of Stern, which directly contradicted his Nobel Prize Lecture.” This is related to radiation hormesis – the observation that low doses of radiation are beneficial. Airport screening may be making people healthier.

- [4]Harvard's "Healthy Eating Plate". No fermented food, nothing about omega-3 (beyond the recommendation of fish). "Limit butter". "Stay active" but nothing about sleep.
- [5]Dangers of compact fluorescent lighting.

Thanks to Steve Hansen and Anne Weiss.

1. <http://www.telegraph.co.uk/foodanddrink/foodanddrinkadvice/8765553/The-best-lard-that-money-can-buy.html>
2. <http://www.bishop-hill.net/blog/2011/9/20/cooking-the-books.html>
3. <http://www.springerlink.com/content/e1620444r0329061/>
4. <http://www.hsph.harvard.edu/nutritionsource/healthy-eating-plate/>
5. <http://pathwithpaws.com/blog/2009/02/21/the-danger-of-compact-fluorescent-lighting/>

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Michal (2011-09-22 07:31:41)

I just eat fatty cured meats straight without anything, you can taste them much better that way.

Stephen M (Ethesis) (2011-09-27 15:57:16)

[http://en.wikipedia.org/wiki/Hockey\\_stick\\_controversy#Mann\\_et\\_al.\\_2008\\_and\\_2009\\_fyi](http://en.wikipedia.org/wiki/Hockey_stick_controversy#Mann_et_al._2008_and_2009_fyi)

Glen Raphael (2011-10-07 22:12:10)

Stephen: why do you think that wikipedia ref is relevant or particularly informative? Have you looked into the issues re: Mann 2009? McIntyre pretty clearly had the better end of that debate, Mann's dismissive response notwithstanding.

## **Why Antidepressants Barely Work (2011-09-25 00:16)**

When antidepressants are compared to placebos, they do only slightly better. This is not a problem for psychiatrists. People get better, they can charge money for access – that's what matters. The rest of us, who would benefit from a better understanding of depression, do not feel bad because we have no idea what we are missing. But the puzzle of weak effectiveness remains. If the theory used to justify the antidepressants is correct, shouldn't they work better? If the theory is totally wrong, why do they work at all?

John Horgan, a science writer, [1]commented about this recently:

I first took a close look at treatments for mental illness 15 years ago while researching an article for Scientific American. At the time, sales of a new class of antidepressants, selective serotonin reuptake inhibitors, or SSRI's, were booming. The first SSRI, Prozac, had quickly become the most widely prescribed drug in the world. Many psychiatrists, notably Peter D. Kramer, author of the best seller Listening to Prozac, touted SSRI's as a revolutionary advance in the treatment of mental illness. Prozac, Kramer said in a phrase that I hope now haunts him, could make patients "better than well."

Clinical trials told a different story. SSRI's are no more effective than two older classes of antidepressants, tricyclics and monoamine oxidase inhibitors. What was even more surprising to me—given the rave reviews Prozac had received from Kramer and others—was that antidepressants as a whole were not

more effective than so-called talking cures, whether cognitive behavioral therapy or even old-fashioned Freudian psychoanalysis. . . . Psychiatry has made disturbingly little progress since the heyday of Freudian theory.

To psychiatrists, psychiatry has made great progress since Freud. First, it is much easier to prescribe a pill than listen to a patient talk for 50 minutes. Second, the new pseudoscience of serotonin deficiency is far more respectable (more "scientific") than the old pseudoscience of psychoanalysis (ego, id, super-ego, repression, etc.). It is harder for other doctors to make fun of psychiatrists.

But Horgan was not thinking like a psychiatrist. He was thinking like the rest of us. From that point of view, he should not have been "disturbed" by "little progress". Antidepressants will never work well. Poor effectiveness is inherent in the situation. Antidepressants must do two things: (a) people must get better and (b) psychiatrists must make a living. Those are different goals ("misaligned incentives") and they conflict.

Suppose a repairman comes to fix your dryer. One part is broken. The repairman orders a replacement and installs it. Your dryer now works fine. Because you could not diagnose the problem nor fix it, the repairman continues to be necessary. Suppose, on the other hand, the repairman can not replace the broken part. He must do something else. Maybe use duct tape. In this situation, the repair cannot possibly work well. Whatever he does can be better than nothing, but it cannot be a good repair

That is the situation of psychiatrists. I'm sure depression is due to the wrong environment. My work suggests [2]we need to see faces in the morning for our mood-controlling system to work properly. Jon Cousins' work suggests [3]we need to believe others care about us. Those are two possibilities. Psychiatrists cannot fix the environment. The pieces of the environment we need to be healthy must have been abundant during the Stone Age. This means they must be cheap. Psychiatrists cannot supply things that are cheap and abundant. If that's what they did, they couldn't make a living. This means they can only supply something that is not what is missing. Like a repairman who cannot replace a broken part, they are stuck with second-rate solutions. This is the fundamental reason that all mainstream treatments for depression, whether talk or drug, have roughly the same effectiveness – and none of them work very well.

Thanks to James Lucoff.

1. <http://chronicle.com/article/Are-Psychiatric-Medications/128976/>
2. <http://escholarship.org/uc/item/2xc2h866>
3. <http://www.moodscope.com/>

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dearieme (2011-09-25 01:08:18)

To what extent can the faces of pets do in place of human morning faces?

Alex Chernavsky (2011-09-25 06:38:50)

Interesting post, but I think that antidepressants are worse than placebos in one crucial way. Antidepressants are known to cause long-term changes in synaptic function. Evidence exists that those changes may be harmful and may actually **cause** depression (or at least exacerbate it). The main thesis of Robert Whitaker's recent book, [1]*Anatomy of an Epidemic*, is that

the widespread use of antidepressants (and other psychiatric drugs) is causing an epidemic of mental illness. For a shorter treatment, see: [2]Now Antidepressant-Induced Chronic Depression Has a Name: Tardive Dysphoria.

1. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452425/>

2. <http://www.psychologytoday.com/blog/mad-in-america/201106/now-antidepressant-induced-chronic-depression-has-name-tardive-dysphoria>

q (2011-09-25 17:11:37)

ok, so new yorkers who get up early and ride the subway into work should suffer from depression very infrequently?

Seth Roberts (2011-09-25 22:27:44)

the morning faces need to be face to face - what you see when you are having a conversation. That doesn't happen on the NYC subway.

Tom (2011-09-25 23:03:39)

Reminds me of a problem the Xacto corporation was having a few decades back. They were successful company, but profits were modest. They would sell a customer a handheld knife and a pack of refill blades, but that was it. Xacto called in a consultant to advise them on what to do to grow. The consultant told them to make the blades out of softer steel. Profits exploded, since the blades now needed constant replacement. (Previously, they lasted until one happened to break, which might take months.) Progress.

Jazi yechezkel zilber (2011-09-26 00:51:55)

Dearieme, Why not try for facing your dog for an hour every morning and record the results? All of us here will be highly interested in it. Seth, Therapies that work a tiny bit abound. (every change in whatever parameters of body, mind, environment should have. \*some\* effect). Basically the only plus of antidepressants is that they have huge clinical trials and have the aura of science. Otherwise, I bet there are very many things that have a tiny effect on almost any complex illness

LisaW (2011-09-26 01:39:40)

My normal but unhappy brother in law was put on a cocktail of anti depressants and has now developed bipolar disorder, so they very well may make things worse. I think that talking therapies could be a route to helping an individual change their environment, as this can often involve hard choices.

Jazi yechezkel zilber (2011-09-26 04:27:11)

Talkig therapies work. But most of the effect is in the very act of coming to talk and the talking. Methods of talk therapy do not matter much. When compared to "placebo" (i cannot remember how they managed to fix a placebo to. Tlk theraoy) there are claims that it gives similar results. I am fully supporting using the placebo effect (somehow medicine ignores its strong effect, maybe not much money to make from. Or the delusion at we need "something real"). Anyway, placebo is superior, as it does not contain harmful chemicals. One only needs to make the psychological staging as strong as possible. (the more professional looking, aura etc. The stronger the placebo effect)

David Perch (2011-09-26 08:01:29)

I am an avid reader of this blog and totally respect and admire Mr. Roberts' sometimes unconventional way of looking at things. But I have to say I was disappointed in the one-sidedness of this article (and the comments on it so far). These opinions do not seem to come from people with personal experience with depression and/or anti-depressants. Why be so judgemental about something you know nothing about? Try to believe me when I say that when you are in the midst of a depression (which is NOT the same as 'being in a bad mood') and you suddenly feel the clouds lifting you will KNOW it is because of the pills you have been taking, not the result of the placebo effect. Especially if you, like many others, have tried different drugs before you found one that works.



Alex Chernavsky (2011-09-26 10:17:11)

David – a couple of things: First, I have some experience with antidepressants. From 1995 to 1998, I worked on the team that managed the antidepressant Zoloft (generic name: sertraline; known as Lustral in the UK and in some other countries). Second, I don't think that introspection is a reliable method to distinguish placebo effects from true drug effects. See, for example, [1] this article, which starts with the story of a person who participated in a clinical trial for an antidepressant. The woman's response to the treatment was so profound that she was *astonished* to find out that she had actually been enrolled in the placebo arm of the study. I've included the first few paragraphs below.

Janis Schonfeld recalls the events that started her on her recovery from 30 years of depression with snapshot clarity: the newspaper ad she saw in 1997 seeking subjects for an antidepressant study; the chair she was sitting in when she called UCLA's Neuropsychiatric Institute; the window she was looking out of when she first spoke with Michelle Abrams, the research nurse who shepherded her through the trial. She remembers being both nervous and hopeful when she arrived at the institute, and a little uncomfortable when a technician put gel on her head, attached a nylon cap shot through with electrodes, and recorded her brain activity for 45 minutes. But most of all she remembers getting the bottle of her new pills in a brown paper bag from the hospital pharmacy. "I was so excited," she told me. "I couldn't wait to get started on them." Within a couple of weeks, Schonfeld, then a 46-year-old interior designer, got quickly and dramatically better, able once again to care for herself and her husband and daughter, no longer so convinced of her own worthlessness that she'd consider killing herself. For the next two months, she came back weekly for more interviews and tests and EEGs. And by the end of the study, Schonfeld seemed to be yet another person who owed a nearly miraculous recovery to the new generation of antidepressants – in this case, venlafaxine, better known as Effexor. But during her final visit to the institute, one of the doctors directing the research sat her down to deliver some disturbing news. "He told me I hadn't been taking a medicine at all. I'd been on a placebo. I was totally shocked."

<http://motherjones.com/politics/2003/11/it-prozac-or-placebo>

1. <http://motherjones.com/politics/2003/11/it-prozac-or-placebo>

Joe Montgomery (2011-09-26 10:52:40)

Definitely good analysis there... And I totally respect people who have used SSRI's and had great personal success, but you have to look at the problem from a scientific perspective. And if they don't make sense to all parties when you look at them scientifically, there needs to be a change somewhere. I'm not sure whether that means trying to change public perception, medical practice, or research practices, but something needs to change.

Jazi yechezkel zilber (2011-09-26 11:03:08)

David Perch, I accept the possibility that a specific drug that is compatible to a specific person can work well for depression. The studies of antidepressants use large groups of people, so the personal compatibility is probably nonexistent. In terms of scientific knowledge, however, we have no information. There are no strong effects in the studies, and we cannot take personal experience as proof. Practically speaking, I believe that science aside, what works for a person works. And it is foolish to avoid using a drug that proved highly effective for a person for whatever sophisticated thinking possible. (I would say that Seth would accept this as kind of personal science)

Pablo Stafforini (2011-09-26 11:26:20)

Seth, I am generally in sympathy with the tenor of your article, but I do object to one argument you appear to be making towards the end of your post. You conclude that psychiatry will never succeed in curing depression because (a) depression is due to environmental factors and (b) psychiatry cannot change the environment nor supply the "cheap and abundant" things that were present in the ancestral environment but missing in contemporary society. This is a non-sequitur. Suppose your own hypothesis is correct and depression is caused by a failure to see faces in the morning. The brain would still be implicated in this chain of causality: absence of morning faces will cause certain changes in the brain which would themselves cause people to feel and act depressed. If psychiatrists uncovered the relevant neural mechanisms involved in this process, they could in principle develop agents that mimicked the effect of morning faces in the brain. So it is not true that, because depression is ultimately caused by the environment, it falls outside the scope of psychiatry.

David Perch (2011-09-26 11:37:46)

Jazi, thanks for your comment. You hit on something I have been wondering about. I have never really understood the absolute reliance on clinical trials in these matters. They do not seem to take into account that people can react very differently to the exact same thing. If our individual response to recreational drugs like cannabis and alcohol vary so dramatically why can this not be true for non-recreational drugs? Millions of people use paracetamol/acetaminophen successfully but it has never done a thing for me, for instance. Cannabis makes me very relaxed and in touch with my creative side, it makes plenty of other people tired and paranoid. Why would it be different with something like Prozac? It makes me wonder whether we might be missing out on some wonderful drugs just because they did not work on a large enough percentage of people. I thought one of the major points that Mr. Roberts is making in his work is that absolute scientific proof is less important than finding something that works. I am not sure if anyone will ever prove beyond a shadow of a doubt that standing on one leg to improve sleep really works but in the meantime it seems like a good idea to try it when you are having sleep problems. To clarify: I am not from the US so as a result perhaps not so suspicious of our healthcare system as you guys are of yours. One of the perks of living in what a lot of Americans seem to fear so much: a 'socialist' society.

Joe (2011-09-26 13:24:41)

David, we're not suspicious of our health-care system; we're suspicious of our government. And the more that the government gets involved with our health care, the more suspicious we will become. One man's perk is another man's poison.

Seth Roberts (2011-09-26 13:57:50)

Alex, good quote, thanks. Pablo, you write, "If psychiatrists uncovered the relevant neural mechanisms involved in this process, they could in principle develop agents that mimicked the effect of morning faces in the brain." Think of it like this. Scurvy is due to lack of Vitamin C. But no one is going to make a living by "developing agents that mimic the effect of [Vitamin C]" because Vitamin C is easy to get.

Jazi yechezkel zilber (2011-09-26 18:16:53)

we should device a clinical trial for morning faces therapy. ideally, we need people who handle something (audio) on a computer screen anyway. we assign to two groups one with random visuals etc. the other with faces, and measure depression scales ( in a masked way, to avoid them knowing the idea. like asking various inventories) I am thinking about where we can find a large enough group of people who can get easily subjected to such an experiment.

John (2011-09-26 19:34:49)

Seth, Vitamin C is easy to get now that we can synthesize it cheaply, just like fish/flax seed oil and Vitamin D pills..but human attention in forms that will alleviate depression? Unfortunately that is a commodity too costly in US society for many people, hence the drive to replace therapy with pills. I'm reminded of Emily in Our Town, back from the dead for one day: "Oh Mama, just look at me for one minute as if you really saw...." Did Book TV really work for you? Joe, I'm not sure why you don't trust the government when you trust the highly paid health care administrators who deny people coverage and suck up 40 % of our health care bill. The hospital is the only place where a bandage can cost you \$50 dollars, and you can't bring your own. After being without insurance for almost two years, I'm looking forward to the day when people don't have to "choose" between affording a pain pill and an antibiotic for lack of coverage like the young man in Cincinnati who died. And I work and I pay taxes, thank you. Health care or endless war? I'd like health care, please.

WCB (2011-09-27 10:58:20)

Seth, your suggestion that needing to see faces of others (and to converse with them) in the a.m. is intriguing. It makes sense if we think about the fact that humans are essentially social animals, seek friendships, and crave regular interaction with others. And here's another thought: Why hasn't the issue of widespread vitamin D deficiency been explored more thoroughly? There has been a good deal of writing (and some scientific examination) into the fact that vitamin D deficiency is rampant in modern society (especially in climes where sunlight is weaker). And there is apparently evidence that using light therapy, or raising the individual's blood levels of 25(OH)D through supplementation with vitamin D3, can be effective in treating SAD or other mood disorders. So why hasn't there been more focused scientific inquiry along these lines? Could it be that

advising people to get more exposure to natural sunlight, or otherwise recommending they raise their serum level of vitamin D with supplementation, is just too simple, direct and cheap compared to drugs and psychiatric treatment, which are expensive?

Alex Chernavsky (2011-09-27 12:08:26)

@WCB: Here's my experience with vitamin D deficiency, for whatever it's worth. About four months ago, I had routine bloodwork done. The results showed very low vitamin D levels. Since that time, I started taking D3 supplements, and the latest lab results showed normal levels. I have not noticed any change in my mood (though I was not depressed to begin with).

thehova83 (2011-09-27 13:45:20)

Lots of commenters are dismissing cognitive behavioral therapy. But it has been relatively successful. The CBT method appears to be effective even outside one on one therapy.

WCB (2011-09-27 14:15:44)

@Alex: Thanks for your comment about your experience with D3. I'm guessing that over a longer time frame you will likely realize many other benefits, apart from the subject matter in this string. In any event, it's certainly clear that more research on the topic of finding effective, inexpensive treatments for those who experience depression is needed. But more broadly re vitamin D supplementation, based on the reading and research I've been doing for quite awhile, and my own experience with adding D3 over some four years and continuing, I'll just mention that eliminating the deficiency can have a number of other benefits, including prevention (or avoidance) of things we would all like to avoid. But rather than me going OT reciting the litany of potential benefits and cluttering up Seth's excellent blog, you might be interested in checking out a blog such as that of Dr. William Davis (Heart Scan blog) and the website of the Vitamin D Council. They both provide a lot of useful info, including, inter alia, advice as to the desirable level of serum 25(OH)D for most individuals to realize the full benefits (based, e.g., on Dr. Davis' own clinical experience) which is significantly higher than the conventional view of something like 25-30 ng/ml. Regards, WCB

Jim Purdy (2011-09-28 20:48:32)

As Jazi yechezkel zilber said above "... placebo is superior, as it does not contain harmful chemicals." I am strongly opposed to using "harmful chemicals" (drugs) of any kind for myself. Despite the severe scoldings I get from doctors, I currently use no prescription medicines, no over-the-counter meds (not even aspirin or vitamins), and certainly no alcohol, tobacco or illegal drugs. My resolve may be severely tested this weekend. This Friday, September 30, I am scheduled for some surgery. (If I had my way, it would be done without anesthesia, but the surgeon will not do it without anesthesia.) The surgeon has told me that I will need medication for pain after the surgery, and she plans to prescribe Lortab (hydrocodone). I told her that I would not take hydrocodone, or even fill the prescription. As I told her: "I have only had one hydrocodone pill in my life, and it made me feel so good that I immediately threw the other 17 pills away. As far as I'm concerned, the only thing worse than a drug that makes me feel bad is a drug that makes me feel good, because the feel-good drug is the one that could get me addicted." That screaming you will hear this weekend will be me suffering without pain meds.

Seth Roberts (2011-09-29 13:59:33)

Jim Purdy, I pretty much agree, except I have no problem with alcohol. I tried to get a dental operation done without anesthesia but I lasted about 0.5 seconds. I was able to avoid pain killers after the operation, however. Seth

Alex Chernavsky (2011-09-29 15:15:25)

My father-in-law gets root canals done without any anesthetics. I don't know how he does it. I need a shot of Novocaine just to walk into the waiting room.

Glen Raphael (2011-10-07 21:41:39)

Try to believe me when I say that when you are in the midst of a depression (which is NOT the same as 'being in a bad mood') and you suddenly feel the clouds lifting you will KNOW it is because of the pills you have been taking,

not the result of the placebo effect. Especially if you, like many others, have tried different drugs before you found one that works.

Sorry, but that methodology doesn't work. Assume for the sake of argument that your depression is either environmental, seasonal, or cyclical - something that gets triggered at time T and then sometime much later at time U goes away. What does that look like to somebody who takes pills? You go to the doctor, who prescribes pill A; it doesn't seem to work, so the doctor prescribes pill B which also doesn't seem to work, and so on until time U is achieved. Since time U happens a couple weeks after you've started drug D, you are now utterly convinced drug D is the "one that works". Regression toward the mean explains much of the apparent effect of antidepressants.

### **The Beginning of the End of AGW (2011-09-26 13:46)**

A month ago at a conference I met a journalist who wanted to increase public understanding of science. I said, yeah, it would be good if the public understood science, then they could see how weak the case that humans are seriously warming the planet (anthropogenic global warming, AGW). After I said that, my questions received short answers, haha.

Then there's Gary Trudeau. According to [1]a recent Doonesbury cartoon, I'm not just a moron, I'm a moron:

The scientific case for global warming is overwhelming – and it grows daily. Only a moron would deny it.

But I think the dissent is getting louder. Jeff Jacoby, a columnist for the Boston Globe, [2]recently wrote:

You don't have to look far to see that impeccable scientific standards can go hand-in-hand with skepticism about global warming. Ivar Giaever, a 1973 Nobel laureate in physics, resigned this month as a Fellow of the American Physical Society (APS) to protest the organization's official position that evidence of manmade climate change is "incontrovertible" and cause for alarm.

Giaever, unlike Jacoby, [3]voted for Obama. And there's this, from ScottishSkeptic:

This weekend I was sitting with a group of (unrelated) people I'd known since a child, and the subject of wheat farming and weather forecasts came up and almost without prompting someone else mentioned their dislike of the politicisation at the Met Office, the way the forecasts were always wrong and their suspicion about what we are being told about global warming. And then the rest of the company agreed with them.

None of these people had any financial interest in the subject, they were all educated in science at leading Universities, but they are not only questioning the assertions of global warming, they were actively sceptical.

To say I was shocked was an understatement. In many other ways this is a very pro-environment group.

So maybe there is hope for the ideas that butter is good and breakfast bad, that sugar can cause weight loss, that food is healthier after the expiration date, that faces Monday morning can make you happier on Tuesday, and so on.

1. <http://thinkprogress.org/romm/2011/09/25/328068/great-doonsebury-global-warming-cartoon/>
2. <http://www.jeffjacoby.com/10407/climate-skeptics-dont-deny-science>
3. <http://www.theblaze.com/stories/nobel-prize-winner-resigns-over-an-incontrovertible-stance-on-global-warming/>

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Steve G. (2011-09-26 15:39:42)

Skepticism is—or should be—the hallmark of science. Unremitting questioning should be the order of the day in science. However, policy and action cannot operate on such standards. You confuse scientific skepticism—almost always a good thing—with rational judgment, which must, in the face of choices, always act in the face of uncertainty. When  $N=1$ , you'd better be sure that you want to run the experiment. We're running an experiment in AGW, and based on the results so far, we'd better think very strongly about stopping the experiment. The experiment is fun—unlimited energy makes all of our lives better by any material measure—but if we don't watch it, we could end up creating a mess for ourselves and future generations. That's what choice is about. BTW, how about an ideological Turing test for you? (E.g. [http://econlog.econlib.org/archives/2011/06/the\\_ideological.html](http://econlog.econlib.org/archives/2011/06/the_ideological.html)). Will you post the strongest possible arguments possible in support of AGW, and based upon that statement, make a set of policy recommendations? After doing so, you can then post what policies you do support and why you've made that choice. Thanks,

B. Compson (2011-09-27 03:27:03)

Seth, I'll bet your opinion on AGW makes many of your Berkeley friends squirm. You're a rebuke to those who would dismiss all AGW skeptics as know-nothing, Fox News-watching tea partiers. If pinned down I would say my degree of belief in AGW is about 68 % and climbing, but I admire your courage and I hope you are correct and "they" are wrong.

Alrenous (2011-09-27 13:19:41)

If they had an actual case they wouldn't need to resort to name calling. If it wasn't politically relevant they wouldn't bother. Follow the money. This has been said before but apparently it bears repeating.

Stephen M (Ethesis) (2011-09-27 15:49:28)

I would think more of AGW believers if they were doing things that fit with what they were espousing. Moving to Canada and moving inland, etc. I need to browse around the internet to see how the hockey stick looks now that we have ten more years of data to add to it.

Nathan Myers (2011-09-28 11:03:21)

Tying the vindication of your butter and breakfast hypotheses to the ultimate repudiation of AGW shows very little confidence in your own ideas. You still have not said whether you don't believe there's persuasive evidence that GW is occurring at all, or whether you don't believe there's any way that human activity can be causing the (manifestly observable) melting of the tundra. The two positions are fundamentally contradictory. Which is it? Even days one, odd days the other?

Tom Fid (2011-09-28 11:54:36)

You still haven't said what your null forecast or model for climate is, or even stated a reasonable burden of proof for non-experimental situations, so that you can never be proven wrong. That doesn't seem very consistent with your experimental approach to other problems, which I admire.

MetaThought (2011-09-28 16:04:11)

@Nathan, it's up to the climate scientists to prove both the assumptions. Disproving either will be sufficient for the anti-AGW people.

Seth Roberts (2011-09-28 16:49:48)

Nathan, I believe that the earth has warmed considerably since the Little Ice Age.

Tom Fid (2011-09-29 13:23:12)

@Stephen Then you should think a lot of the fact that oil companies are placing big bets on oil exploration in the arctic.

Eugene Woodbury (2011-09-29 14:32:18)

Calls for scientific skepticism to yield to the political impulse to act (for the children, for the public good, for the planet, and to keep the money flowing) calls to mind what Bryan Caplan calls the "Activist's fallacy": 1. Something must be done 2. This is something 3. Therefore, this must be done. We know what causes earthquakes, but thankfully no one is seriously proposing a worldwide, trillion-dollar effort to stop continental drift. We do our best to understand it and deal with it. We don't pretend we're powerful enough to stop it. As P.J. O'Rourke points out, "There are 1.3 billion people in China and they all want a Buick." If global warming is caused by burning fossil fuels, nothing can stop it. All the political action in the world will only waste scads of time and money.

Seth Roberts (2011-09-29 16:38:54)

Eugene, I like Bryan's Activist's Fallacy. I suppose it is 90 % fallacy, 10 % reasonable. As I say in my next post, if you don't do anything, you'll learn less than if you do something, even the wrong thing.

MetaThought (2011-09-29 23:04:25)

But are there any signs that we(as a collective) are capable of recognizing that we are doing the wrong thing and changing direction? Doing the wrong thing is a reasonable approach at the individual level, but horribly bad at the State level where mistakes may go unacknowledged for decades.

Mike (2011-10-01 07:25:56)

One less blog for me to read. Your statement that the science is weak on AGW makes me question everything you have written.

## **Spycraft, Personal Science, and Overconfidence in What We Know (2011-09-28 20:21)**

[1]Edward Jay Epstein's newest Kindle book is [2]James Jesus Angleton: Was He Right?. Angleton worked at the CIA most of his career, which spanned the Cold War. He struck some of his colleagues as paranoid: He believed that the CIA could easily contain Russian spies. Colleagues said Oh, no, that couldn't happen. After his death, it turned out he was right (e.g., Aldrich Ames). At one point he warned the CIA director, "an intelligence [agency] is most vulnerable to deception when it considers itself invulnerable to deception."

What interests me is the asymmetry of the mistakes. When it really matters, we overestimate far more than underestimate our understanding. CIA employees' overestimation of their ability to detect deception is a big example. There are innumerable small examples. When people are asked to guess everyday facts (e.g., height of the Empire

State Building) and provide 95 % confidence intervals for their guesses, their intervals are too short, usually much too short (e.g., the correct answer is outside the intervals 20 % of the time). People arrive at destinations more often later than expected than earlier than expected. Projects large and small take longer than expected far more often than shorter than expected. For any one example, there are many possible explanations. But the diversity of examples suggests the common thread is true: We are too sure of what we know.

There are several plausible explanations. One is that it helps groups work together. If people work together toward a single goal, they are more likely to reach that goal and at least learn what happens than if they squabble. Another is the same idea at an individual level. Overconfidence in our beliefs helps us act on them. By acting on them, we learn. Doing nothing teaches less. A third is a mismatch idea: We are overconfident because modern life is more complicated than the Stone-Age world to which evolution adjusted our brains. No one asked Stone-Age people How tall is the Empire State Building? A fourth is that we assume what physicists assume: the distant world follows the same rules as the world close to us. This is a natural assumption, but it's wrong.

Early in Angleton's career, he had a very unpleasant shock: He realized he had been fooled by the Russians in a big way for a long time. This led him to try to understand why he'd been fooled. Early in my scientific career, I too was shocked: Rats in Skinner boxes did not act as expected far more often than I would have thought. I overestimated my understanding of them. In a heavily-controlled heavily-studied situation! I generalized from this. If I couldn't predict the behavior of rats in a Skinner box, I couldn't predict human behavior in ordinary life. My conclusion was data is more precious than we think. In other words, data is underpriced. If a stock is underpriced, you buy as much of it as possible. I tried to collect as much data as possible. Personal science – studying my sleep, my weight, and so on – was a way to gather data at essentially zero cost. And, indeed, the results surprised me far more than I expected. I could act based on the overconfidence effect but I could not remove it from my expectations.

1. <http://www.edwardjayepstein.com/>

2. <http://www.amazon.com/James-Jesus-Angleton-Original-ebook/dp/B005LPE5SC>

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Tom (2011-09-28 23:06:11)

I swear, Seth, you're as interesting a thinker as can be found on the net.

Seth Roberts (2011-09-29 07:28:10)

What a nice comment, thanks!

Todd (2011-09-29 10:42:37)

Your essay contains one of the most beautiful statements I've heard in science: "Data is more precious than we think...data is underpriced." As a scientist, I find that some colleagues love to spend time spinning hypotheses and arguing with each other....when it would take less time to go into the lab and run the experiment. So often the data reveal surprises and confound theories. There is just no substitute for quality data.

Tim Beneke (2011-09-29 11:49:38)

I agree. Great provocative post Seth! Don't forget the influence of professional roles and the situations they cast people in, and how this generates overconfidence and the unwillingness to objectively rate the degree of confidence one should have in a prediction, given the relative knowledge available. For example, psychiatry for most of its history has had virtually nothing to offer people suffering mental illness. (It has only a little now.) When we lack knowledge, the void gets filled with theory – vast, rather obscure psychoanalytic theory based upon intuitions, much or most of which, in the light of subsequent evidence, has turned out to be nonsense. But the psychiatrists are faced with desperate patients and their families; they want to have an upper middle class income, like their other medical colleagues and they need to appear authoritative. They can't just say that they have no idea why someone suffers from schizophrenia or manic depression and that they really have no way to treat it. Who would pay them for that? Or look at economists, who cannot perform experiments with history to get causal knowledge and are only recently beginning to rely on psych experiments to see how economic cognition, affect and behavior function. I like Paul Krugman, but he did not know where the economy was headed in 1994, or in 2001, or in 2008; he was fairly clueless. Yet he is very confident that a massive stimulus program will have certain positive effects on the economy. And obviously politics distorts cognition in economics. Or nutrition and the over-authoritization that takes place there. Professionals have a lot of trouble just saying that they don't know much... I don't know how to sort out the effects of economic self interest, situational responses to the strong needs of those they serve, cognitive biases that are just part of the larger culture, and many other things, but it's a mess...

JeffR (2011-09-29 17:10:32)

I'm not sure what to make of the fact that I sometimes think you are overestimating how much you know, Seth.

Seth Roberts (2011-09-30 06:37:58)

JeffR, exactly. If you overestimate what you know, you will underestimate what others know. Maybe that is part of the secret of Wikipedia – taking advantage of that misperception.

Seth Roberts (2011-09-30 22:52:16)

Thanks, Todd. I am puzzled that this idea isn't widespread among laboratory scientists, who – judging by your comment – just like me see that even under highly-controlled highly-studied situations it's still hard to be sure what will happen.

Nancy Lebovitz (2011-10-01 07:28:56)

Seth, you do careful experimentation on yourself, but then you extrapolate the results to everyone.

Seth Roberts (2011-10-01 14:31:37)

Nancy, experimental psychologists have 100 years of data showing that the results from careful studies of individuals (if those individuals weren't specially chosen) extrapolate to many people. I don't extrapolate to "everyone", just many people. And I do it partly because of all that experimental psych data.

Nancy Lebovitz (2011-10-01 16:54:43)

It's sounded to me as though you say things like "everyone should eat more bacteria" rather than, "eating more bacteria may be a good idea for you, here's how to test it".

Seth Roberts (2011-10-01 18:36:53)

Nancy, my ideas about the value of fermented food are based on a wide range of data. very little from me. quite different from my other ideas, most of which involve a lot of data from me (e.g., butter). I am sure that we need fermented food to be healthy just as much as we need Vitamin C. I see no other plausible explanation for the wide range of data. I extrapolate to "everyone" partly because there is no group of people who don't need Vitamin C (or any other vitamin or necessary nutrient, such as iron). That's why I am sure this requirement (plenty of microbes in your diet) is universal. In large part because of the long history of nutrition. That being said, in a tiny number of cases fermented food has had bad effects. This shouldn't interfere with seeing



the big picture.

Scot (2011-10-02 06:36:57)

Seth, See Dan Gilbert's "Stumbling on Happiness" for (a delightful read and) another explanation of why we're so bad at predicting what we will feel in the future. We overpredict how difficult and how satisfying future events will be, because we remember distinctive events, not regular ones. Regular events would be more stable data sources for prediction.

Tom (2011-10-02 09:47:49)

Seth, I'm pretty sure you're aware of him, but just in case, Art Ayers writes in great detail about the importance of ingesting bacteria (and soluble fiber) to promote healthy gut flora: <http://coolinginflammation.blogspot.com/search/label/gut%20flora>

Seth Roberts (2011-10-02 17:33:21)

thanks, great blog. I wasn't aware of it.

## **Two More Shangri-La Diet Success Stories (2011-09-30 22:46)**

From [1]the Shangri-La Diet forums:

I started this process on or around the 3rd week of July. Not sure of the exact date lets say 7-23-11. Weight was 228 lbs, blood pressure maxing out at 160/100. Today (9-30-11) my weight is 195 lbs and the bp is below 120/80.

So in 10 weeks I have dropped 33 lbs about 3.3 pounds a week or half a pound a day. My goal weight is 175. I have done the canola oil twice a day. No breakfast and mixing in salad and fruit for lunch and dinner with 6 ounces of meat, seafood or chicken. Some carbs but not a lot. I have not had any cravings to overeat or to snack on junk food and I just stopped drinking sodas for no reason that I can explain and I don't feel hungry after meals.

People at the gym must think I am sick because I am losing weight and don't do very much. I lift 20 minutes to maintain what I have and ran twice in the past 10 weeks for a total of maybe 3 miles. I have started doing more abs now that you might be able to see them when all the fat is gone.

In 30 years of dieting this is the easiest thing I have ever done. I don't understand why this isn't the number one diet in the world.

Let it not be because I don't blog about it. [2]Someone else, who started at 321 pounds, has lost 67 pounds in 8 months. Graph [3]here.

1. <http://boards.sethroberts.net/index.php?topic=8186.0>

2. <http://boards.sethroberts.net/index.php?topic=7776.msg104927#msg104927>

3. <http://www.tickerfactory.com/weight-loss/wRled2g/>

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Seth's Blog » Blog Archive » Two More Shangri-La Diet Success ... | The Angelove (2011-10-01 06:14:07)

[...] the original post: Seth's Blog » Blog Archive » Two More Shangri-La Diet Success ... Posted in Diet Articles Diet of the Month – Carbohydrate Addict's Diet (CAD) [...]

Rocky (2011-10-03 09:49:12)

I've not done an extensive search of the forums, but I was curious if anyone has tried coconut oil for the preferred oil on the SLD. I lost a bunch of weight back in 2006 trying SLD and I used ELOO and WO. Both of those oils were gross to take and the WO was a bit worse, but I got used to them. Just last week, I bought my first batch of coconut oil (CO) and I ingested it orally. I was shocked that I did not taste anything! I thought it would taste like coconut, but it really didn't have a taste. In fact, when compared to ELOO and WO, CO had even less taste. So I was curious to see if anyone has tried CO for SLD.

Rocky (2011-10-07 07:08:35)

Just as a follow-up from my previous comment ... there is this thread that talks about a few people using CO and having success: [#msg83326](http://boards.sethroberts.net/index.php?topic=6972.msg83326)

## 6.10 October

### **Cheap Safe Remedies: Oatmeal (Cholesterol) & Deep Breathing (Blood Pressure) (2011-10-01 13:44)**

A friend who lives in New York City writes:

The doctor I had when I lived in San Diego believed in always trying the gentlest and simplest remedies before resorting to anything as drastic as drugs or surgery. My cholesterol was high and she suggested I try lowering it by eating oatmeal for breakfast every day, saying it didn't work for everybody but a lot of her patients had been able to avoid going on statins that way. "But I hate oatmeal," I whined, like a sulky child. She said perhaps I would get used to it; wouldn't it be better than being dependent on medications for the rest of my life? So, reluctantly, I bought some Quaker Oats and gave it a try. The results were dramatic – my cholesterol numbers were "perfect" the next time I had a blood test. Dr. Yu was right about getting used to oatmeal, too – I actually like it now, and look forward to my daily bowl.

Perhaps inspired by my success with the oatmeal, I also lowered my blood pressure myself, through breathing exercises. A friend who is into alternative medicine had told me about being advised by several of her alternative-medicine practitioners to try lowering her blood pressure in that way, so when mine was high, I just googled about lowering it until I found [1]a site that offered free demo clips of a kind of breathing exercise geared to music – you can choose whether classical or new age. As it said on the site, they don't work for everybody, and most people have to do them for twenty minutes daily for a couple of weeks before the benefits begin showing up at all, but some lucky folks see an immediate and drastic drop in blood pressure the first time they try. I turned out to be one of the lucky ones. For months, I did the breathing exercises daily, cued to inhale and exhale by their demo tapes, and my blood pressure stayed down. Eventually i even sprang for the CD set they were selling on the site, just because I got sick of hearing those same melodies on the free demo clips over and over. Now I've internalized the rhythms so I don't need any music at all to cue me, and I can do the exercises anywhere, while doing other things, and my blood pressure has remained low. I do notice that if I ever neglect the exercises,

when my life gets busy and I just forget to do them, it starts creeping up again – which is good incentive to keep them up. Basically, the exercises just consist of inhaling to a slow count of 8 and exhaling to a slow count of 16, and doing that for about 20 minutes every day. My blood pressure was around 160/90 before I started the exercises. Now it's 120/80, just as it should be.

I also find the breathing exercises very soothing, in general. When I'm upset about something like, say, being stuck on a slow bus that is crawling through traffic while I'm in danger of being late to something and am surrounded by screeching children, I find that doing those exercises enables me to be reasonably serene and philosophical instead of miserable and angry and anxious.

Notice that by measuring her blood pressure regularly my friend (a) learned how to control it and (b) collected excellent evidence that breathing exercises help. Because individuals can easily collect such evidence – my friend did so by being lazy – a good response to "where's the double-blind randomized trial?" is [2]Mark Frauenfelder's: [3]Big Brother loves you.

1. <http://www.control-your-blood-pressure.com/>

2. <http://boingboing.net/2011/07/25/finding-the-source-of-migraines-and-fifty-useless-migraine-drugs.html#comment-264040626>

3. <http://blog.sethroberts.net/2010/05/12/preventive-stupidity-exists/>

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Vic (2011-10-01 22:52:29)

sounds like she might have had white-coat hypertension...

Jazi yechezkel zilber (2011-10-02 05:20:21)

Here is another advantage of personal science. The huge amount of things that can be tested. I am now reminded in the sheer number of possible relaxation techniques. Making. Formal research on these is a formidable task. But just hundred anxious persons can test thousands of relaxation tricks! I am excited by the possibilities. And here is an idea. Can self experimentation be orchestrated? In principle one. Can coordinate for many people to systematically test whatever. Can be done in many flavors, but the cost effectiveness is high

Jazi yechezkel zilber (2011-10-02 05:21:31)

Ps. I had very good experience with oatmeal for my health. I ate it daily and it was very good for me, until I stopped from other reasons

Seth Roberts (2011-10-02 07:26:46)

Vic, mostly she measured her blood pressure herself. No white coats involved.

Pablo Stafforini (2011-10-02 11:04:22)

Seth, can you or your friend provide the name or address of the site that offers the free demo clips of breathing exercises described in the post? Thanks.

Seth Roberts (2011-10-02 16:51:11)

Pablo, here is the link: <http://www.control-your-blood-pressure.com/>

JPB (2011-10-03 09:00:48)

As far as the oatmeal, your friend should also consider the effect it has on her blood sugar. Check out Dr. William Davis on The Heart Scan Blog for this topic.

### **Flaxseed in Various Units. (2011-10-03 12:59)**

I eat 66 grams of flaxseed per day. (I eat it with yogurt in two batches. For each batch, I weigh out 33 g of whole flaxseeds then grind them.) Not everyone has a scale, so I found that 100 ml of whole flaxseed weighs about 64 grams. Assuming 1 tablespoon = 15 ml, that's 6.9 tablespoons/day whole flaxseed. If you are interested in weight/volume conversion, that's 9.5 g of whole flaxseed = 1 tablespoon. I checked this using two different volume spoons and a scale that matches another scale.

[1]This website says there are 15.02 g of whole flaxseed in a tablespoon. I am measuring brown flaxseeds. Perhaps their golden flaxseeds are smaller and therefore more dense. The overprecision suggests this shouldn't be trusted.

[2]This website says there 14.17 g of "dry" flaxseed in a tablespoon. Again with the overprecision.

According to [3]this website, there are 7.5 g of whole flaxseed in a tablespoon.

1. <http://www.ellies-whole-grains.com/how-many-grams-of-flaxseed-in-a-tablespoon.html>
2. [http://wiki.answers.com/Q/How\\_many\\_grams\\_in\\_a\\_tablespoon\\_of\\_dry\\_flax\\_seed](http://wiki.answers.com/Q/How_many_grams_in_a_tablespoon_of_dry_flax_seed)
3. [http://wiki.answers.com/Q/How\\_many\\_grams\\_of\\_flaxseed\\_in\\_one\\_tespoon](http://wiki.answers.com/Q/How_many_grams_of_flaxseed_in_one_tespoon)

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aretae (2011-10-03 14:21:53)

And in what form? powdered, whole, ?? Do you have thoughts/opinions/data about what forms are valuable?

Tom Passin (2011-10-03 15:35:41)

Today I weighed out a bit over 3 tablespoons of whole flax seeds, and they weighed 31 g. I don't know what kind of flax (I got them at Whole Foods Market).

Seth Roberts (2011-10-03 18:34:42)

Aretae, I eat my flaxseed ground. I have revised the post. Thanks, Tom, that agrees with my measurements. There are two main kinds of flax seed: brown and golden. Whole Foods usually has golden, in my experience.

Alex Chernavsky (2011-10-03 20:32:32)

Do the brown and golden varieties differ in terms of efficacy?

Outis (2011-10-03 22:08:06)

I would suffer from constipation if I consumed that much flaxseed (ground or in a corresponding amount of oil).

dearieme (2011-10-04 02:14:16)

I have just weighed one level tablespoon (British) of brown linseed (= your "flaxseed"). 14 g.

dearieme (2011-10-04 02:16:52)

"convertalot" reports: Not all tablespoons are the same. The Australian tablespoon is 20 ml; the British tablespoon is 17.7 ml. In most Canadian recipes the tablespoon is 15 ml while the American tablespoon is actually 14.2 ml.

Seth Roberts (2011-10-04 07:19:35)

curious

Bill Moran (2011-10-04 07:32:17)

Seth, one question: Why do you weigh your flax seed? I buy and eat Whole Foods organic flax seed (golden is prettier, but I think brown has more oil) every morning and the health benefits are self evident. But it only costs 25-30 dollars for a 25 Pound bag, and it takes Months for me to go through a bag. (I put it on top of raw organic rolled oats, and top it with orange juice, like cereal, but without the dairy products.)

Seth Roberts (2011-10-04 08:36:56)

I weigh it because weight works better than volume for measurement purposes. For example, it is easier to produce 27 grams than 2.7 tablespoons. I want to know how much I eat each day so that I can study the effect of varying the amount and so that I can get an optimal amount.

## **More News about Liberation Therapy (2011-10-03 13:38)**

An Italian surgeon, Paolo Zamboni, claimed that he found low blood flow from the brain in 100 % of patients with multiple sclerosis (MS). He began by studying his wife.

[1]A new study supports the connection:

The Canadian researchers analyzed eight studies from Italy, Germany, Jordan and the U.S. that involved 664 MS patients in total. The studies looked at how frequently CCSVI [chronic cerebrospinal venous insufficiency] was found in people with MS compared to healthy people or those with other neurological disorders such as Parkinson's disease.

One of the studies — Zamboni's — found CCSVI in 100 per cent of people with MS, and zero per cent of people without the disease. Other studies found the vein abnormalities in people who didn't have MS.

Overall, when the results were combined, people with MS were 13.5 times more likely to have CCSVI. Even when the study by Zamboni — which generated the excitement about CCSVI — was removed, the syndrome was 3.7 times more common in people with MS.

Thanks to Anne Weiss.

1. <http://www.canada.com/health/studies+still+uncertain+about+liberation+therapy/5494281/story.html#ixzz1Zkjc>  
mAc

## The 2011 Nobel Prize in Medicine (2011-10-04 08:26)

To rehabilitate his reputation, Alfred Nobel, in his will, established the Nobel Prizes, the crucial element of which was that they honor the most useful research. Nobel wanted to be associated with good works. This has become a considerable problem for the committee that awards the Physiology and Medicine prize because, if you haven't noticed, the most prestigious research – the stuff done at great expense in gleaming new laboratories – isn't useful. The uselessness of high-prestige academic research was emphasized by Thorstein Veblen in *The Theory of the Leisure Class*. Unfortunately Nobel died shortly before it was published.

For a long time, the Nobel prize-winning research in Medicine hasn't provided significant help with major health problems (depression, obesity, diabetes, cancer, stroke, heart disease, etc.). Sometimes it has been a tiny bit helpful. Most often the prize-winning research has been, at the time of the award, no clear help at all. This is one of those years. The press release announcing the 2011 prize tries to hide this important truth. Here is the "what use is it?" section of [1]this year's press release:

From fundamental research to medical use

The discoveries that are awarded the 2011 Nobel Prize have provided novel insights into the activation and regulation of our immune system. They have made possible the development of new methods for preventing and treating disease, for instance with improved vaccines against infections and in attempts to stimulate the immune system to attack tumors. These discoveries also help us understand why the immune system can attack our own tissues, thus providing clues for novel treatment of inflammatory diseases.

"They have made possible the development of new methods for preventing and treating disease." False (and, uh, just a wee bit grandiose). Such development was already possible. Note what isn't said: "They led to new methods for preventing and treating disease."

"Improved vaccines against infections." I have heard nothing about this, in spite of the plural (vaccines rather than vaccine). In any case, this is faint praise because the improvement might be a small percentage. If you know whether this claim is true, please leave a comment. Again note what isn't said: "New vaccines". According to [2]this article, the work led to a vaccine against prostate cancer. (With no noticeable benefit so far.) Does the press release writer think prostate cancer is infectious?

"Attempts to stimulate the immune system to attack tumors." Attempts? As in failed attempts? Apparently.

The final sentence ("These discoveries also help us understand . . . ") is out of place. The section is about actually helping people ("medical use") not ivory-tower stuff like "providing clues". Whoever wrote this is like a student with not enough to say trying to meet a teacher's minimum word count.

There you have it. The practical value of the research awarded the most prestigious prize in the world – a prize that [3]Alfred Nobel's will said should be given to "those who, during the preceding year, shall have conferred the greatest benefit on mankind."

To make your immune system work better, I am sure there are two simple, practical and powerful ways of doing so: [4]deepen your sleep and eat fermented foods.

1. [http://www.nobelprize.org/nobel\\_prizes/medicine/laureates/2011/press.html](http://www.nobelprize.org/nobel_prizes/medicine/laureates/2011/press.html)

2. [http://www.nytimes.com/2011/10/04/science/04nobel.html?\\_r=1&hpw](http://www.nytimes.com/2011/10/04/science/04nobel.html?_r=1&hpw)

3. [http://www.nobelprize.org/alfred\\_nobel/will/short\\_testamente.html](http://www.nobelprize.org/alfred_nobel/will/short_testamente.html)
4. <http://escholarship.org/uc/item/2xc2h866>

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wcb (2011-10-04 10:52:53)

Seth, thanks for these observations which, unfortunately, appear to be quite accurate. Sad to say that, based on all I have learned and personally experienced in the last decade or so, I have to suspect that most of what passes for "high-prestige academic research" in the medical / health arena is sponsored (i.e. largely paid for) by pharmaceutical companies and other commercial interests. So I suppose no one should be surprised that, unless and until the research is being done by individuals whose independence has not been compromised, a true benefit to mankind is much less likely. Whatever happened to integrity in academia and government?

dearieme (2011-10-04 16:27:04)

The difference between Applied Science and Pure Science lies in the motives of those pursuing them. The motives in Pure Science are pure; they are the purely selfish attempt to advance the interests of the researchers. Those interests vary: sometimes they may be dominated by the desire to satisfy intellectual curiosity; more often, I suspect, they are dominated by the desire for career advancement. Given this structure of motivations, it follows that all Applied Science research institutions are at permanent risk of being taken over by Pure Science. Put simply, someone whose motives are mixed, including the desire to do some good for society, must expect to lose in competition against someone whose motives are entirely selfish.

Seth Roberts (2011-10-04 19:41:52)

dearime, yes, I think that is what is happening. If you want to do research that helps people, you must pay a considerable price, especially in prestige. Outsiders fail to understand this, so there is no pressure to change.

### Assorted Links (2011-10-05 05:00)

- [1]Benefits of fermented wheat germ extract
- [2]Why Anthropogenic Global Warming (AGW) is unlikely. A list of AGW-associated "miracles". Some of my favorites: "Unique among all sciences, climatology develops yet finds no surprises whatsoever, apart from when it's worse than we thought" and "AGW is a grave threat to humanity, yet it can take the backseat when AGWers have to score their petty points (such as not sharing their data with the "wrong" people)" and "Having won an Oscar, a Nobel Prize and innumerable awards, having occupied more or less every audio or video broadcast for years, having had the run of more or less every newspaper for the same length of time, suddenly AGW leaders declare they're not "great communicators" and blame this for the generally high levels of skepticism."
- [3]Denmark has started to tax butter. "To discourage poor eating habits and raise revenue."
- Life-saving personal science: [4]Mom figures out cause of daughter's problems. "One spring night in 2002, she stumbled upon an old photocopy of a 1991 Los Angeles Times article that described a young girl whose condition had uncanny parallels with [her daughter's]."

Thanks to David Cramer.

1. <http://www.nutritionj.com/content/10/1/89>
2. <http://omniclimate.wordpress.com/why-agw-is-logically-impossible/>

3. <https://www.npr.org/blogs/thesalt/2011/10/03/141014592/denmark-taxes-butter-and-fat-but-will-it-work?ft=1&f=1001>

4. <http://the-scientist.com/2011/10/01/double-blind/>

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John W (2011-10-05 06:02:08)

I can't even begin to express how angry this butter tax makes me. Let people make their own goddamn decisions about their health. Perhaps my anger stems from the fear that such a thing will happen here (US) soon too - or worse my pastured Irish butter may one day be illegal! Better buy a cow.

Tomas (2011-10-06 07:48:53)

so it has come into effect Something is rotten in the state of Denmark and it's margarine not butter which goes sour

### **Morning Faces Therapy: Personal Account (2011-10-06 05:00)**

Five years ago I heard from someone that he had been successfully using my discovery that seeing faces in the morning improved my mood the next day. Recently I asked him to write about his experiences with it. Here's what he wrote:

I'm a male professional in my 30s and have had mild to moderate depression since my early teens. I am a considerable rationalist and skeptic, so when I read about Seth's morning faces therapy in [1]a New York Times article about 5 years ago, my first thought was to doubt its effectiveness. But it was so easy and simple to try, with nothing to lose, that I gave it a shot. To my surprise, it really worked, and the change was quite noticeable.

I do 30-40 minutes of faces therapy every morning, starting around 7:00, 7:15, but the timing moves around a bit based on my schedule or sometimes for experimentation purposes. My first few years I used videos of actual faces (some of the recommendations that I found on Seth's blog and others that I found on my own). Over time it's become harder to find quality videos of sufficient length and compelling interest, and I now more often use a mirror. The effect, for me, usually lags by a day or two. So if I haven't been doing faces for a while and I'm depressed then it takes a couple of day or so to get back to where I should be, and similarly when I stop the faces therapy it takes a few days or so for the depression to return.

While the therapy itself is simple, getting up on time and doing it every single morning has proven more difficult than expected. Even when I do it for several weeks in a row with no break, at some point the tiredness and weariness inevitably kicks in, whether because I was up late several nights in a row and am too tired to get up early, or because I'm traveling, or for other reasons.

Proof the therapy works is that I'm still carrying on five years after discovering it! When I stop for more than a few days, the resultant drop in mood inevitably brings me back.

As an aside, I sometimes spend time in the evening or morning doing other depression exercises, such as writing a gratitude list (google "count your blessings exercise") or doing meditation/self-hypnosis. In the spirit of self-experimentation, I am currently seeing whether I can get the equivalent effect I get from the faces, by doing these other therapies in morning sunlight at the same early hour as I do the faces therapy. Full results are not yet in.

[2]More about morning faces therapy.



1. <http://www.freakonomics.com/2005/09/11/freakonomics-in-the-times-magazine-does-the-truth-lie-within/>
2. <http://blog.sethroberts.net/morning-faces-therapy-resources/>

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Beth@WeightMaven (2011-10-06 12:03:34)

I've been using Flickr slideshows for what I call "assisted meditation" ... I started out viewing nature shows, but found that looking at smiling faces was more uplifting. Especially when it's babies! [http://www.flickr.com/groups/baby\\_love/pool/show/](http://www.flickr.com/groups/baby_love/pool/show/)

Rex (2011-10-06 16:52:56)

Seth has profiled me on this blog. I have been on anti-depressants continuously over the last 8 years. Most recently I have been taking Cymbalta. I finally weened myself off it during the summer, after experiencing nasty withdrawals. Morning faces has been the one major change in my daily routine. I began in late Spring and have not experienced any depression except for the usual sad stuff we all deal with. I have had some mania, which tends to hit me in late summer. I seem to get quicker benefits from morning faces than others, but also feel more down days when I do not stick to the plan. I do not want to stop what I'm doing, but am sure there will come a time when I go without morning faces for an extended time. Then I will have a better idea of the benefits I am getting using Seth's theory.

Jeff (2011-10-06 17:56:05)

Seth - Your original research paper mentions the need to avoid fluorescent lights in the evening because they mess with the circadian rhythm. I assume that's also the same reason for the recommended consistent sleep schedule of around 10 p.m. - 11 p.m. to 6 a.m. - 7 a.m. Is there a certain point in the evening when one should avoid fluorescent lights (e.g., 2 hours before bed)? I'm asking because my job requires me to attend some evening meetings that have fluorescent lights. It might negatively impact my job security if I start wearing blue blocker glasses to these work functions. :)

Seth Roberts (2011-10-06 18:59:33)

Jeff, I try to avoid fluorescent lights after the sun goes down. I'm sure their damaging effect gets worse the later you are exposed to them - I can't say more than that. Before 7 pm I don't worry much. Seth

Jeff (2011-10-08 09:46:10)

Seth - Thanks for the info. I live in the midwest where nightfall happens as early as 5 p.m. in the middle of winter. My sleep time remains fairly consistent. Does your suggested 7 p.m. fluorescent light time frame hold true under these circumstances as well?

Seth Roberts (2011-10-09 01:44:34)

Jeff, I don't know, sorry. Nowadays when I am exposed to fluorescent lights after dark I wear blue-blocker glasses. I still try to avoid fluorescent lights after dark but sometimes they are unavoidable. I worry much less about them now so long as I am wearing my blue-blocker glasses.

Donald (2012-04-06 01:37:32)

This is very interesting and I may well try it. These are some random points I'd make: - It might be useful to combine a SAD light above the computer while looking at vlogs, particularly if the people are talking supportively about mood disorders. I even wonder if people who record vlogs could be given instructions in how to make their posts useful for this technique, i.e. looking directly at the camera, filling the frame. - I'm reminded of psychology research where 2 groups of employers told staff they were changing the temperature (or some other variable) by 1 degree to increase productivity and this resulted in higher productivity whether or not the temperature became higher or lower; i.e. taking any steps whatsoever to produce an outcome may be enough to get the result. - This therapy takes a lot of commitment so may encourage strong mindfulness which may be the cause of improvement. I wonder if this level of commitment would produce a result

regardless of the goal, i.e. spend an hour every morning on a demanding technique and you will lose weight as you are creating a strong commitment to weight loss. - As well as using faces other changes have been incorporated: light therapy, early sleeping, early rising, consistent sleep and wake times (?). I suppose I'm still skeptical, however only a few years ago even light therapy raised eyebrows. Seth: When I discovered the effect, I found that lots of details mattered (e.g., face distance). If the effect was due simply to making a big commitment, or changing something, these details shouldn't have mattered.

## **Appetite Suppression from the Shangri-La Diet (2011-10-07 05:00)**

[1]This person has been doing the Shangri-La Diet (SLD) for two weeks:

The appetite suppression is now strong. Yesterday I went to dinner at one of my favorite Mexican restaurants. Ordered my favorite meal there. I could only eat about 1/3 of my favorite dish and a few chips and salsa. . . . That is nothing short of amazing. The best part is: it satisfied me. I would normally eat the whole meal and not be satisfied, I would be able to eat more. I wouldn't normally eat more, but I could eat more. Not this time. Didn't want more.

He eats about 700 calories/day nose-clipped - that's his version of the diet. Before he started the diet he was gaining 10 pounds every year. When he started SLD, he weighed 250 pounds at 5 feet 10 inches tall (BMI = 36).

If I were to write The Shangri-La Diet all over again I would emphasize nose-clipping. You can easily eat lots of smell-free yet healthy calories nose-clipped and get great appetite suppression, as in this case. That's one reason the book is short. I wanted to get the idea out in the world soon, so other people could help improve it. That's what happened. Nose-clipping was someone else's idea (Gary Skaleski, 2006), not mine. It was a better application of my theory and early findings (e.g., sugar water causes weight loss) than I was capable of. Now, thanks to the Internet, I can find out what happens when people do the new improved version.

1. <http://boards.sethroberts.net/index.php?topic=8178.msg104939#msg104939>

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Michal (2011-10-07 08:02:46)

I've tried this diet and lost a few pounds but not very many. It was weird in that I sort of felt hungry but I didn't necessarily want to eat. I hear about weight loss all the time, but that only tells a limited part of the story. What body fat percentage have people gotten down with with SLD?

Meegs (2011-10-07 15:13:33)

I have been doing this diet the past few months, and it's amazing to me. For years I have never been able to lose those pesky last 10-15 pounds I need to lose, and as of today I've lost 7 pounds. It started slow, but after a month or two I noticed the weight steadily start to come off. Also, I find I can adjust the amount of oil I take to adjust my appetite. If I'm eating too much and getting cravings, I take more oil. If I'm eating too little, I take less. Another benefit- it's made it easy to switch to a "paleo-style" diet that limits processed foods, and I don't crave the old foods. But I don't think the paleo diet would work for me without the oil. Seth, I think it's an amazing discovery, I just wish I had found your book earlier!

Meegs (2011-10-07 15:19:25)

Michal, I would recommend you keep up the diet. That's exactly how I felt for the first month or two- still kinda hungry. But then the effects really kicked in and the hunger was gone. Now I feel in control of what I want to eat.

Tom (2011-10-09 13:18:31)

*Another benefit- it's made it easy to switch to a "paleo-style" diet that limits processed foods, and I don't crave the old foods. But I don't think the paleo diet would work for me without the oil.* This is what I've found, as well – drinking oil suppresses overall hunger, true, but it also shifts the foods I desire. If I'm not drinking oil, I want a blast of carbs before bed. On the oil, I may get hungry late at night, but I want a bit of protein instead. That's been one of the key benefits of Shangri-La for me – it makes it possible for me to remain compliant with LCHF/Paleo. (This experience is also why I don't take Stephan Guyanet's Unified Theory of Palatability seriously.)

Seth Roberts (2011-10-09 17:43:39)

Tom, that's an interesting comment:

(This experience is also why I don't take Stephan Guyanet's Unified Theory of Palatability seriously.)

Could you explain it? The difference between Stephan's theory and mine, as far as I can tell, is that his theory says that anything that makes food more pleasant raises the set point. Whereas I say only flavor-calorie associations (which make food taste better) raise the set point. I find that unlikely – why should salting one's food raise the set point? How much pleasure we derive from salt is determined by how much we are salt-deficient. Which seems to me unrelated to fat storage. Anyway that is related to your criticism but not the same. I would like to understand your criticism better.

Tom (2011-10-09 20:18:44)

Hi, Seth, My point is probably more basic than the question you're asking. But I'm simply thinking that my ingesting oil clearly did nothing to change any quality *inherent* in the carbs that I invariably crave on days when I'm not drinking oil. Yet oil-drinking drives their *perceived* 'palatability/food reward' to zero. The effect is clear and 100 % repeatable for me. On no-oil days I *always* want carby cookies or crackers, with milk, before bed. On oil days I *sometimes* want meat (or eggs), with water, before bed...but *never* carbs. (I'm wondering if there's only one 'set point' – perhaps there are different ones for different classes of nutrients?)

Meegs (2011-10-10 18:39:15)

Isn't the oil itself sort of a bland food? It has calories with zero taste. This tricks the body into lowering the setpoint. Perhaps that's how it is compatible with Guyanet's theory of palatability.

Tom (2011-10-10 22:50:29)

Yet I still get hungry, Meegs. But the food I desire shifts. One food gets more palatable, another gets less palatable, because oil was consumed hours earlier? That makes no sense to me. I read the comments on WHS and people seem to be tying themselves in knots to make Stephan's theory work. But...why? I hope it's not because Stephan is supposedly "nicer" than Gary Taubes. (At this point, I hardly think he is. And who cares? I just want to know what to eat to get healthier.)

Tom (2011-10-10 23:03:47)

Sorry for following-on to my own post, but I just saw J.Stanton's comment over at Hyperlipid, which expresses my feelings about Stephan's current tangent better than I ever could: *"When one starts with a conclusion and works backwards, it is often necessary to skip over, gloss, conflate, or otherwise befuddle the explanations of the parts that don't support the predetermined endpoint.* source: <http://high-fat-nutrition.blogspot.com/2011/10/adipocyte-insulin-resistance.html>

Meegs (2011-10-11 07:35:20)

Tom, I guess I have a different experience with the oil. When I take it, my hunger goes away. I simply stop thinking about food. And yet, even if I have taken the oil, if I go to a restaurant and start eating something highly rewarding (chips, dessert, etc.) I

find it difficult to stop. This isn't the case with protein. If I eat a couple of eggs, I'm satisfied.

johnny (2011-10-11 14:14:09)

Hi Seth: Correct me if I'm wrong but I interpreted your statement "He eats about 700 calories/day nose-clipped — that's his version of the diet" to mean the person ate food nose-clipped, yet got the same results as if he/she had taken oil or sugar water without a nose clip. Is this correct? Please clarify.

Seth Roberts (2011-10-11 14:22:20)

johnny, your interpretation is correct.

Tim (2011-10-15 07:54:47)

Diet Soda - I believe the prevailing theory is that diet soda tends to increase appetite, resulting in the person eating more calories, gaining more weight over time. I'm doing intermittent fasting (not eating during work, until about 6 PM in the evening). I have no problem fasting during the day, but I get by by drinking obscene amounts of diet soda. I've recently read about your Shangri-La diet and started implementing those concepts into what I am already doing. My guess is that diet soda is ultimately bad for weight loss, but it would seem that drinking diet soda without ingesting calories close to the time I drink the soda (during my fast) would support flavor/calorie disassociation. I'm guessing it doesn't work as my appetite has not decreased at all, but I would like your take on what the difference is between that and doing calories with no flavor, if any.

Seth Roberts (2011-10-15 14:16:09)

Ingesting flavor w/ no calories (such as diet soda) can be helpful, I believe if –you would have otherwise drunk/eaten something fattening (such as regular Coke) –it reduces a craving for flavor. when I started ingesting lots of calories without flavor (the Shangri-La Diet) I started to crave flavor. So the calories without flavor helped me do SLD. I hope that answers your question. To put it briefly: Flavor w/o calories by itself does nothing. But it will help you do SLD (calories w/o flavor).

Matt (2011-10-26 07:19:38)

Seth, after listening to your podcast on Jimmy Moore I have been thinking more about SLD and I have a couple of theories/observations that have been bubbling around for a couple of days - wondering your thoughts. 1. Often, I lose weight when I have a cold. I had always attributed that to a boosted metabolism, but now I'm considering the change in smell that occurs when I'm congested. 2. Smokers weigh less than non-smokers, and crave sweets when they quit. This is perfectly consistent with what you wrote above about calorie-free flavor. 3. Often I drink sugar water at work, because it's convenient when I travel to different offices - sugar is easy to come by at the coffee station. Am I sabotaged if someone put a big pile of brownies in the kitchen? Should I avoid drinking the sugar water in the kitchen, or should I wait at least an hour before or after SMELLING the brownies before drinking the sugar water?

Seth Roberts (2011-10-26 13:16:08)

Are you sabotaged by brownies that you smell but don't eat? No, I think smells not from your food don't matter.

John (2012-02-06 10:35:40)

Is salt a flavor or a taste? My nephew posed the question in response to your defining the difference between you and Stephan "I think that if you add salt to white rice that white rice becomes more palatable" That led me to ask is salt a flavor or a taste. Sugar is a taste and my assumption is that salt would be similar. You said: Whereas I say only flavor-calorie associations (which make food taste better) raise the set point. I find that unlikely — why should salting one's food raise the set point? How much pleasure we derive from salt is determined by how much we are salt-deficient. Which seems to me unrelated to fat storage. Anyway that is related to your criticism but not the same. I would like to understand your criticism better.

Seth Roberts (2012-02-06 17:50:06)

Salt is a taste. My theory says that smell is what matters. Salt has no smell. Just as sugar has no smell.

Nick (2012-03-04 10:37:16)

Hi Seth, I really like you blog, podcasts and the concept of this book. I didn't like the implementation, but tried another variation with similar effects. Eating as much as possible novel foods and spacing repeat foods apart when I didn't have access to a novel food. Originally I thought I'd run out of novel foods but that hasn't happened nor do I think it will happen anymore. Same weight management effect but also up regulating senses of smell and taste. My appetite hasn't changed however and remains healthy. Overall I had a good experience with this approach and must say that it's given more reason to enjoy life. A few drawbacks is that it also polarized me giving me more favorites but also dislikes. Some smells now practically send me running

### Assorted Links (2011-10-08 05:00)

- The Shangri-La Diet: still [1]too good to be true. It was my dream – and maybe every scientist's dream – to discover something (a) useful and (b) counter-intuitive, the more surprising the better. It did not occur to me that (a) and (b) conflict. I think that more surprising discoveries are eventually more useful (as logic suggests), but it takes much longer.
- Marisa Tomei [2]wants to play Jane Jacobs. "I love that she saved Greenwich Village." When she does, perhaps Robert Caro will post the unpublished Jane Jacobs chapter of The Power Broker.
- [3]Symposium on The Death and Life of Great American Cities by Jane Jacobs.
- Did you know that Mindy Kaling's [4]amusing article in this week's New Yorker is [5]an excerpt from a forthcoming book? Neither did I. Likewise, the recent Murakami story [6]Town of Cats was from a forthcoming book. The New Yorker, unlike other magazines, never identifies book excerpts. This is unfortunate because doing so would help both writers (sell books) and readers (find books to read). For more criticism of The New Yorker, see the great book [7]Gone: The Last Days of The New Yorker by Renata Adler.

Thanks to Dave Lull.

1. <http://answers.yahoo.com/question/index?qid=20111005151654AAX8TLC>
2. <http://www.toronto.com/article/700440--marisa-tomei-gets-political>
3. <http://www.theamericanconservative.com/blog/janejacobs/>
4. [http://www.newyorker.com/humor/2011/10/03/111003sh\\_shouts\\_kaling](http://www.newyorker.com/humor/2011/10/03/111003sh_shouts_kaling)
5. <http://blog.moviefone.com/2011/09/26/mindy-kaling-new-yorker-excerpt/>
6. [http://www.newyorker.com/fiction/features/2011/09/05/110905fi\\_fiction\\_murakami](http://www.newyorker.com/fiction/features/2011/09/05/110905fi_fiction_murakami)
7. <http://www.amazon.com/Gone-Last-Days-New-Yorker/dp/0684808161>

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Alrenous (2011-10-08 11:03:54)

A: So are you saying most with the job title 'scientist' aren't scientists, or are you saying Veblen was wrong? I think it is very, very significant that most of the time voters are considered to want quick, easy fixes yet if you offer a quick, easy fix that actually works, they'll reject it. (Principle: life is usually not easy, and for good reason. But it can't be hard all the time - sometimes the simple and easy is effective.) My housemate is trying to lose weight. I've told him about Shangri-La. His behaviour is better explained by the theory that he's not dieting to lose weight, but dieting to prove to himself he's a worthwhile person because he has the self-control to starve himself, and the weight is just one possible objective metric. This is especially ironic when we go out to eat and he has three times what I have. I couldn't eat that much if I wanted to. What I'd do if I had weight issues would be to just try it. It takes what, like a few weeks, at most? And a few days, usually? How does one go about simultaneously

*actually* wanting to lose weight and not just trying it?

q (2011-10-08 14:14:32)

i'm quite glad that greenwich village was saved, but of course you understand that 95 % of its current residents are extremely wealthy and live there mostly as a show of their high status. there is essentially no 'community' there any more of the form that was there in jj's time. (i don't think it's her fault, and i don't know what to do about it if anything, but i don't think she would be particularly happy with the way things are now if she came back today.)

Seth Roberts (2011-10-09 01:53:04)

Alrenous, that's a good point about Veblen being wrong. I think scientists have many goals. In practice, they choose prestige (attached more to useless research than useful research, as Veblen said) over usefulness. They want to be useful, but in practice a desire for prestige is more powerful.

Alrenous (2011-10-10 06:10:18)

So scientists are scientists, but not so you would notice? It's always weird for me when I see people accepting an insider's status hierarchy. Why doesn't every non-scientist laugh at useless science? How is it at all in their interest to support it?

## **Fermented Foods In Gladiator (2011-10-09 04:38)**

From the movie Gladiator:

Slave Trader 1 These slaves are rotten.

Slave Trader 2 It all adds to the flavor.

A big reason I believe we need to eat fermented foods to be healthy is that they taste so good.

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Alex Chernavsky (2011-10-10 16:54:41)

After I began reading Seth's blog a couple of years ago, I started experimenting with fermented foods. It's fun. I make kombucha on a regular basis, and I usually let it undergo a second fermentation. I add a couple of ounces of fruit juice to a 16-ounce glass bottle, top it off with kombucha, and then close the lid tightly. Within a couple of days, the kombucha is nicely carbonated. You have to be careful, though, to use juice without any preservatives – otherwise, it doesn't work. I've also made lacto-fermented salsa and fermented jalapeño slices. I tried making kim chee once, but it had a pretty nasty flavor to it, so I threw it away. Anyway, making your own fermented food is fun, and it tastes good (usually).

## **Let Them Get Sick (running) (2011-10-09 05:00)**

I [1]wrote recently about how our health care system resembles a protection racket. In a protection racket, you or someone else threatens people so that you can make money protecting them. Modern health care, especially in America, ignores prevention. It says let them get sick. Let the general public get sick so that we (health care providers) can

make money treating them.

The profitability of let them get sick is illustrated by some numbers in [2]Run Barefoot Run Healthy, a new book by Ashish Mukharji (who gave me a copy). Ashish has run several marathons. Before he started running barefoot, running caused all sorts of problems. To deal with them was costly:

- Two or three pairs of orthotics (a type of insole): \$200- \$300 each.
- One MRI, for what turned out to be ITBS (Iliotibial Band Syndrome, a thigh injury): around \$1,000.
- Twenty or more deep-tissue massage treatments for ITBS: around \$80 each.
- Corns removed (twice): \$500 per treatment.
- Twenty or more sessions of physical therapy for ITBS and Achilles tendonitis: \$100- \$250 per session.
- Several visits to orthopedists and podiatrists: \$150 per visit.
- Cortisone injection for plantar fasciitis: \$200.

Since he started barefoot running (3 years and 2 marathons ago), he has incurred no (zero) running-injury expenses. Interviews with other barefoot runners convince him this is typical. Long ago a runner friend of mine told me everyone who runs eventually hurts themselves. The truth of this was confirmed many times by runners I met after she said this. Now it appears she was right because all the runners she and I knew wore shoes.

I started barefoot running/walking on my treadmill a year ago. I have never had running injuries (probably because I walk – uphill fast – much more than run). Going barefoot saved time. During the first few months, I got four or five cuts (actually, splits) on the sides of my feet. The skin was split by downward pressure. The cuts made ordinary walking (in shoes) a little unpleasant. I did nothing about them. They healed and have not recurred.

A better health care system would have discovered the damage caused by running shoes long ago. We are lucky to live when personal scientists such as Ashish can figure out the truth themselves and tell others.

1. <http://blog.sethroberts.net/2011/09/18/first-let-them-get-sick/>

2. <http://www.amazon.com/Run-Barefoot-Healthy-Less-Runners/dp/0983035407>

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Tuck (2011-10-09 15:04:08)

"A better health care system would have discovered the damage caused by running shoes long ago." It did. In 1912. Somewhat shakes your faith in humanity, science, and the notion of "progress" to realize that all this was known and forgotten 100 years ago. "The Soldier's Foot and the Military Shoe" [http://books.google.com/books?id=frFJAAAAIAAJ&printsec=frontcover&source=gbs\\_ge\\_summary\\_r&cad=0#v=onepage&q&f=false](http://books.google.com/books?id=frFJAAAAIAAJ&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false) We shod millions of Americans in "barefoot-style" shoes, and then forgot all about it. Oops.

Steven Sashen (2011-10-09 16:13:09)

I switched to barefoot 2 years ago after I heard it could cure my various running injuries. Well, within a month they were all gone and haven't come back. And, as a sprinter, going 2 years without an injury is unheard of. Geek that I am, I started

making high-tech huaraches (so I could be almost barefoot all the time, and still get into restaurants ;-)). That turned into [www.invisibleshoe.com](http://www.invisibleshoe.com) and I'm thrilled to say we've now helped over 10,000 people make the transition. I'm also happy to report that last year I decided to see how long I could make it into the Colorado winter before I wanted to put on shoes.... next thing I knew, it was Spring! ;-)

Michal (2011-10-09 16:56:15)  
or just stop running all together.

Evelyn Majidi (2011-10-09 20:44:52)  
Stopping in a local physical therapy office I saw a bulletin board advising patients about future amateur athletic events, some of which were quite dangerous to life and limb. Drumming up future business no doubt.

Alrenous (2011-10-10 06:20:26)  
Tuck, it doesn't shake my faith too much, as A: I already know that kind of thing happens and B: there's a fairly good explanation. We have forgotten, but before the industrial revolution people feared nature because it had much more power in their lives than they did. And didn't particularly care to use that power for good, obviously. Thick soles were probably psychologically motivated by wanting to reject this dangerous 'nature' stuff. To us it's obvious that we can't design a better shoe-ground interface than nature did. (At least, not for a while yet.) To them it was just as obvious, but they were too invested to accept it. In 1912, the culture hadn't yet forgotten its fear and hatred of nature. Even though nature had already been conquered, these feelings take a while to subside in cultures, just like feelings take a while to subside in individuals. The whole 'nature is good' thing is really new and was, as far as I'm aware, spurred by the whole radioactive consumer goods debacle. Before that, the emotional affect of 'all-natural' was held by the words 'artificial' and 'synthetic,' which you can check by looking at period advertisements. Subsequent events with pesticides etc. have played into confirmation bias.

Unshod Ashish (2011-10-10 09:46:42)  
Sadly, individual hospital chains within the US healthcare system (possibly excepting Kaiser) appear to have no incentive to improve their patients' health or reduce injuries - quite the opposite. To podiatrists, just the mention of barefoot running is a red flag waving in front of their face, as they see all business disappearing. I need to get my book in front of decision-makers at Kaiser.

Jazi zilber (2011-10-10 11:09:37)  
They say running injuries increased 70 % since the introduction of running shoes in 1972

SPalmer (2011-10-11 06:08:09)  
There are inexpensive biofeedback insoles like Barefoot Science that will help promote a strengthening of the foot. It is a wierd arrangement. The parent company encourages people to be barefoot and strengthen their feet the most natural way possible, but if you need to wear shoes, for running or anything, then you use their insoles to combat the negative atrophying effects of the shoe. The stronger healthier foot makes the transisition to be being barefoot faster and safer, and yes, it also would show huge cost reduction benefits to the helath care system

Virgil (2011-10-11 06:28:24)  
I would not blame the medical system for the above problems, but the shoe manufacturers. Given that plantar fasciitis and ITBS are pretty nasty problems which, left untreated will result in excruciating pain and inability to walk, I'd say the medical system here did a pretty good job - it diagnosed and treated the patient. If the patient then continued with the damaging behavior (running in regular shoes), that's not the medical establishment's fault. Expecting the medical establishment to be fully aware of problems with running shoes, when hundreds of millions of people use them every day without issue, is also unreasonable. I know your blog is usually biased (sometimes correctly) against the medical-industrial-complex, but in this case I think the rage is mis-directed. The shoe manufacturers should be the target.



Seth Roberts (2011-10-11 06:56:16)

Virgil, you write: "The shoe manufacturers should be the target." Hmm. They are not going to voluntarily stop making shoes. Therefore they cannot take seriously the idea that barefoot running is best. In contrast, medical school professors (and by extension doctors ,who repeat what med school professors say) can take seriously that idea. Nothing stops them from learning how to prevent, not just how to cure. The medical system did a bad job here because it focused on the symptoms and ignored the cause of the symptoms.

Seth Roberts (2011-10-11 07:01:02)

That's an interesting way to make money from barefoot running.

Alex Chernavsky (2011-10-12 09:40:13)

The *New York Times* recently had a short article about barefoot running: <http://well.blogs.nytimes.com/2011/09/30/are-barefoot-shoes-really-better/> The comments are interesting, too.

Stephen M (Ethesis) (2011-10-12 17:19:44)

You know, when I used to train in Judo and Karate, I remember having trouble running, so I never jogged (using jogging shoes) but when they made us run some laps as part of the workouts (barefoot), I never had trouble. I never really thought about it then. Jogging shoes = foot problems. No shoes, no problems. On the other hand, I do have shoes I walk in that give me no trouble at all.

michelle@healthylifetoolkit.com (2011-12-09 08:40:30)

Hey Seth. Great post! This is only one of the many ways the health care industry fails us. And one I hadn't considered. The band-aid approach (throw a pill at it) rather than address the underlying cause of an issue is the norm. As a nurse, I see this all too often and find it very frustrating. Glad to see a post on the subject.

reycroxas (2012-03-08 04:03:22)

I have been running barefoot for almost ten months now. And from my experience, it is more comfortable to do. Hence, less injury. Seth is right, shoe manufacturers will not stop making shoes because they make a lot of profit. In order for us to prevent such injuries, we must be wise on what decisions we make.

## **New Source of Omega-3? (2011-10-09 13:28)**

I used to get my omega-3 from flaxseed oil. Then I encountered problems with the flaxseed oil going bad, in the sense of losing potency. (It did not smell bad.) I switched to flax seeds, which I grind and eat with yogurt. This is more difficult than drinking flaxseed oil.

From Peter Spero I have learned of a possible new source of omega-3: camelina oil. Camelina oil, unlike flaxseed oil, [1]contains high levels of anti-oxidants, which protect it from going bad. Camelina is [2]cheap to grow and can be grown where other crops cannot.

1. [http://en.wikipedia.org/wiki/Camelina\\_sativa](http://en.wikipedia.org/wiki/Camelina_sativa)

2. <http://www.hort.purdue.edu/newcrop/proceedings1993/v2-314.html>

Tuck (2011-10-09 14:59:24)

Have you looked into macadamia nuts and chia seeds as sources? Have you looked into the issues converting vegetable sources of n-3 into human-usable sources? Why do you prefer vegetable sources? (I eat macadamia nuts and fatty fish regularly, as well as pastured meats. I no longer feel it necessary to supplement; I was craving n-3s early on in my dietary experiment.)

Jahed (2011-10-09 17:41:52)

Why not something like this? <http://www.bodybuilding.com/store/asc/se a.html> It contains a high EPA/DHA amount per dose and it comes with green tea extract added, presumably to stave off oxidation. The only problem I could foresee is that the fish oil could go bad, and given that it has a lemon scent/taste, it could be difficult to detect whether or not you are imbibing rancid fish oil.

wr (2011-10-09 17:46:41)

Seconding the chia seeds. Any thoughts on those?

Seth Roberts (2011-10-09 17:52:00)

Why do I prefer vegetable sources? Because fish oil gave me a headache. I have nothing against other sources but the vegetable sources have had clear benefits: better balance, better gums, better arithmetic speed, etc. So if those "issues" are about low convertability, the statements are wrong in my case. Plenty of short chain omega-3 is converted to long-chain omega-3. By getting a large amount of omega-3 from flax seeds I can more easily vary the dosage and thereby find out the best dose. I have never – before or after I started consuming lots of flaxseed oil or flax seed – found myself craving omega-3. I don't know what that feels like.

Seth Roberts (2011-10-09 18:02:40)

Chia seeds: I am happy to try them. Flax seeds are much easier to get.

Seth Roberts (2011-10-09 18:04:52)

Why not a product that I must order over the internet? Because flax seeds are available at nearby supermarkets. And probably cost much less.

Peter (2011-10-09 18:08:49)

Seth, I wonder whether a burr grinder would work with flaxseed. I have a Capresso Infinity which I use for coffee. The advantage would be you could just leave a bunch of seed in the hopper, and calibrate the timer so that you could dial the amount you want without having to measure out anything.

Seth Roberts (2011-10-09 22:36:34)

Peter, it is easy to measure out 33 g of flax seeds. It is sort of fun: I see how many iterations it takes, sort of like strokes in golf. Now I can usually hit 33 g with 3 iterations or less.

T (2011-10-09 23:08:31)

I can't find a source to buy this at. Any ideas?

chris (2011-10-10 08:53:40)

I'd look into shiso (aka perilla) oil as well. It has about the same omega 3 content as flax seed oil with less odor...it's easy to find in Japan so it might be easier to get in China than good flax seed oil.

threepipeproblem (2011-10-11 08:26:29)

I have seen plans for simple oil presses for home use. Perhaps you could develop a micro-oil press to press the flax seeds when you want oil. I don't know, maybe it would be too involved.

ajb (2011-10-11 13:11:00)

FWIW, I actually find grinding flax seeds easier than using flax seed oil.

Tyler (2011-10-12 12:07:01)

Seth, What are your thoughts on the estrogen content of flax? I remember reading that flax is about three times higher in estrogen than soy. This is the main reason I have been supplementing with fish oil while consuming mostly ruminant meat.

James A Donald (2011-10-12 20:24:36)

I soak and rinse flax seeds for a couple of days, then grind them up, then mix in some flour, then cook them into pancakes. It is a lot of work, but I think I get a better result - my blood pressure has dropped, and I run without my knees complaining.

Oliver Mayor (2011-10-13 21:34:14)

I finally looked up the Omega-III content for both. Flaxseed seems to be nearly 1.5 as dense as ALA as chia; I'm impressed. I'll still take chia, though, even considering how much it costs (five times as much) because I like taking chia. Taking flaxseed is much less convenient for my habits. Flaxseed and flaxseed meal doesn't mix well with the kind of foods I like eating and can eat. I'd love to mix it with yogurt like Seth does but food allergies stop me. Despite my present very large fermented food intake, cow's milk derivatives, including homemade yogurt and kefir, still trigger my food allergies and cause me to get sick a few days later (ear infections, cold, flu, etc.) It's amusing that consuming milk products is pretty much the \*only\* thing that can get me sick these days, thanks to homemade kimchi and kombucha.

ajb (2011-10-14 07:24:10)

"Flaxseed and flaxseed meal doesn't mix well with the kind of foods I like eating and can eat." You can just add some water to ground flaxseed, which makes it into something like oatmeal. Then, you can add whatever you want to that for flavouring (applesauce, cinnamon, blueberry sauce, and so on).

Evelyn Majidi (2011-11-29 21:55:16)

Based on this suggestion, I ordered camelina oil from the good farmers in Saskatchewan and began taking it using the same dose (3T/day) that I had been taking of flaxseed oil for relief of psoriasis and lichen planus. Unfortunately, the slow but sure improvement I had been experiencing over the past year with flaxseed oil stopped immediately and after a week my skin and mouth began to deteriorate. After using about 1/4 of a bottle of the new oil I went back to flaxseed and am delighted to report that I am now having good results with it. Since both of my conditions wax and wane without any reason identified by medical science I cannot state that it was simply the flaxseed oil that has led to this success. Based on my experience, however, I intend to continue taking the oil regularly and I recommend that others with either psoriasis or lichen planus try it. For me, two tablespoons a day were not enough, I needed three tablespoons of the oil to see a change. I don't think it advisable to take capsules, you'd need to take too many of them to equal 3T of oil.

Seth Roberts (2011-11-30 14:29:38)

thanks, Evelyn, that's very useful information.

## **Edward Jay Epstein on Homeland (2011-10-10 05:00)**

A new series on Showtime called Homeland is about a CIA agent (played by Claire Danes) who believes that a newly-released American prisoner of war may have been "turned" during his years in Iraqi captivity. In the first episode, she tries to find evidence to support her belief. Judging by that episode, it is very good.

I told [1]Edward Jay Epstein about it - [2]his book on James Angleton centers on CIA infiltration by "moles". He commented:

What is interesting here is the schism between the fictional world and real world of counterespionage. In the former, it is an issue of "who". Find the guilty man and arrest or kill him. In the real world, the issue is vulnerability. The bureaucracy has two choices: admit its methods are vulnerable to penetration and paralyze the organization, or deem the search for a mole to be paranoia and sick think. That latter course is what happens in the real world, alas. Some fiction writers understand this: Graham Greene in *Human Factor* and Le Carre in *Smiley's People*.

Yes. If you go back in time, I predict you will find that the term kill the messenger arose at the same time as powerful organizations. I have a theory: Only people who derive power from their placement in big organizations want to kill the messenger (who says the organization assumes something not true). In other situations, bad news is less threatening. In health care, outside ideas are met by insiders, such as doctors, with where's the double-blind placebo-controlled study? As Epstein says, the dismissiveness is partly motivated by fear: fear that something is wrong with their system and its values.

1. <http://www.edwardjayepstein.com/>

2. [http://www.amazon.com/James-Jesus-Angleton-Original-ebook/dp/B005LPE5SC/ref=ase\\_sethrobertand-20](http://www.amazon.com/James-Jesus-Angleton-Original-ebook/dp/B005LPE5SC/ref=ase_sethrobertand-20)

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Tim Beneke (2011-10-10 08:53:25)

FYI: The lore on killing the messenger goes back to the Greeks at least; I'm struck by how often I encounter the phenomenon when I offer people psychological or scientific findings that do not please them - they get mad at me... From Wiki: [http://en.wikipedia.org/wiki/Shooting\\_the\\_messenger](http://en.wikipedia.org/wiki/Shooting_the_messenger) Plutarch's *Lives* has this line: "The first messenger that gave notice of Lucullus's coming was so far from pleasing Tigranes that he had his head cut off for his pains; and no man daring to bring further information, without any intelligence at all, Tigranes sat while war was already blazing around him, giving ear only to those who flattered him..."[5]

Alrenous (2011-10-10 11:00:42)

Ironically, assuming that the organization isn't vulnerable absolutely guarantees it will be compromised.

Nathan Myers (2011-10-11 22:04:57)

Powerful organizations predate written language and even agriculture by thousands of years. They were religions, of course. Respect for facts was never their strong suit. "Where's the double-blind controlled trial?" is a good question, years after it should have been done, published, and acted on. But we are constrained to depend on admitted monopolists to perform those few that are done.

## **Grandmother Knows Best About Crohn's Disease (2011-10-10 15:06)**

On Boing Boing [1]a post by me tell about a man who cured himself of Crohn's Disease mainly by following what is called The Specific Carbohydrate Diet. He got the idea from his grandmother, who heard about it on the radio. The diet is about eighty years old. The version he used appeared in a book published in 1994 - 17 years ago. Still no clinical trial.

As I've said, if you have managed to cure yourself of a serious medical condition please let me know. I would like to learn from your experience and help others learn from it.

1. <http://boingboing.net/2011/10/10/seth-roberts-grandmother-knows-best-about-crohns-disease.html>

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Jay (2011-10-10 20:20:53)

Great post. If it is indeed effective, I wonder how translates to those without Crohn's, or perhaps people with Celiac, etc.

Anne (2011-10-10 22:43:28)

Hi Seth, I had Crohn's for ten years and I was on Prednisone for ten years, in the end i told the doctors that I wanted the large intestine cut out and they did, my small intestine was made into a j-pouch and I began to get my life back. I no longer have the symptoms of the disease but now have adrenal problems from being on Prednisone for ten years. Six months ago I was given antibiotics for an acne break out. After seven days I began to experience much of the same symptoms as I had when I had the disease, i did lots of 'google research' and determined that it was Colistrium Difficile as the symptoms were very much like that of a corkscrew burrowing into my intestine. I knew that if I didn't stop it soon I would be back in hospital. I took probiotics and a rice based protein supplemental powder which has a lot of fibre in it. It stopped within a day of taking these things. I took the probiotics for 2 weeks and then stopped and within 2 days I got the same pain. I started probiotics again only this time I took the ones with Saccharomyces boulardii in it, because it fights against spore producing bacteria. I then had Sauerkraut which is a fermented food. The symptoms were gone within a day of doing this and I have not had them since. I also take Colloidal Silver which kills off any infection that I have. I found out that I was allergic to wheat and dairy and that it was making me sneeze and break out. Once i stopped eating it, my body then began to create a die off effect of the bad bacteria and I broke out even more, lasted a couple of months and then it just stopped. If you take Colloidal Silver, probiotics, you go through what is called a 'die off' reaction and your body acts as if it has the flu. This is normal because it is getting rid of all the bad bacteria. I thought that you might be interested in my story :)

Felix (2011-10-11 02:21:18)

Hi, i suffered for a long time from migraine (megrim?) and nothing did help. I did take heavy pain medicamentation and later triptans. These started to work in the beginning, but they weren't a real cure. so what did me help with this problem? Getting fired from my job! The moment someone told me, that i needed to go, the headache was gone, never to return. I do not blame my doctor for this, since she suspected, that it was a psychological problem. Greetings Felix PS: I read in some of your posts month ago, that you wanted to improve your sleep by opening a window at night. This is interesting because i had some problems with sleeping and what helped me was reducing noise (moving to another place) and minimizing light. Sometimes i sleep with ear plugs and a sleep mask. Since i started this i need aprox. 1 hour less of sleep every night.

Tomm (2011-10-11 03:25:14)

It was mentioned on the wikipedia page, but perhaps you missed it: there is a 100 person clinical trial that was started earlier this year at Rush in Chicago. <http://www.rush.edu/rumc/page-1298328953440.html> Also, thanks for mentioning that the Wikipedia article was imperiled in your article - I went and fixed up the article so it's no longer in any danger of getting deleted.

Christina (2011-10-11 06:42:45)

I had a number of health problems that doctors insisted on treating individually - I couldn't keep food down, had ulcers, anxiety, joint pain, kidney infections....I was told repeatedly that it was IBS and nothing could be done about it and/or that it was just stress and that I needed to "relax." After ten years of starving and being in pain (I'm 5'5" and weighed 98lbs. I was paranoid about eating in public for fear of throwing up as a few bites would trigger me to throw up) an acupuncturist suggested food allergies and I persued cures myself and realized I most likely had Celiac Disease. I went back the the gastroentinelogist who had "cured" my ulcers and he claimed I didn't have the disease based on my lab results from 5 years prior but if eating a gluten free diet made me feel better then to stick with it. When I started getting panic attacks after a

nasty kidney infection/stone my doctor wrote me off when I questioned dietary changes and blamed the antibiotics. She immediately wanted to stick me on Xanax. I self diagnosed and started playing around with a yeast free diet and never filled the subscription. Eventually I started working with a holistic chiropractor who has listened to me, supported my experiments, and given me dietary advice. He convinced me to without telling me to return to meat after twenty years as a vegetarian, got me off sugar (although that is a work in progress), and all grains - not just gluten based ones. I'm not 100 % better, but I am doing so well compared to just a year ago. I know more about nutrition then ever and can "hear' changes in my body - like recognizing when food has something in it that I'm hypersensitive to after a few bites (and knowing how to combat and problems that might result). I too went on glutamine, probiotics, and B12. Through diet I've corrected a lot of problems with my liver, kidneys, intestines (and GI tract), anemia, etc. My thinking is clearer, I don't feel so strung out, no more panic attacks, more energy, no joint pain. I just wish someone had listened and been able to advise me sooner - ten years is way to long to wait.

Seth Roberts (2011-10-11 07:01:56)

Tomm, thanks for saving the Wikipedia article.

CJ (2011-10-11 10:19:53)

I'm a biochemist; I have Crohn's disease. I started the SCD the day I was diagnosed, now almost 4 years ago. The Boingboing discussion is very discouraging. Within 2 weeks, my diarrhea had stopped. Within 2 months, the bleeding had stopped. Within 3 months, I was up 13 pounds, after losing 1 pound/week for almost 9 months. Within 6 months, I was back to arduous caving trips. Within a year, my blood values were all within norms, except for folate. (That pesky folate.) About that time, I converted to a generally low-carb, grain-free diet, a combination of what Lutz (Life Without Bread) and Gottschall (Breaking the Vicious Cycle) had to say. And I felt even better. Today, I'm fine; I suffer not at all, unless I stray from the diet, in which case I suffer severe pain and discomfort. It must be noted my diagnosis is absolute; the doctor is beyond reproach, and in a phone conversation with the attending pathologist, it's clearly Crohn's and the differentials don't match at all. Since my diagnosis, I have read >10,000 pages of books and primary literature on the subject- now adding "Colon and Rectal Surgery" (933 pages) for good measure. Also read Crohn's original books, including his autobiography, the original Crohn, Ginzburg, and Oppenheimer paper, etc. Everything I can read. Anyway, doing great. Also note Leo Galland studied the SCD, and found it worked very well. [http://www.mdheal.org/crohn %27s.htm](http://www.mdheal.org/crohn%27s.htm) "All 20 patients demonstrated a decrease in symptoms and reduction in medication use. Six patients have entered complete clinical remission, discontinued all medication, and maintained remission for five to 80 months." As it is, I think I know what causes Crohn's; I'm writing a book on the subject, but I don't have a publisher. It's a combination of technical literature and "popular" writing, so I don't expect it to sell well. Most Crohnies don't seem to want anything more than pills and surgery. Y'all take care, and if I could offer one tidbit: for those that wish to try dietary control, consider an all-meat diet. Check out the Dirty Carnivore forums.

Henry Zhu (2011-10-11 10:57:29)

Hey Seth, I have had many problems since I was a child. Asthma, eczema, allergies, etc. In high school I fractured my hip but wasn't able to recover to normal. I wasn't diagnosed with anything in particular because no one was really able to know what happened, why it happened, and what the problem was other than I had back problems. They say the hip/back was inflamed, gave me pain pills, and told me to come back if anything got worse (some sort of arthritis/back stiffening). If that would have happened I probably would of had to do surgery. My whole time I had been taking various medicines and things for all my ailments. I also tried a lot of alternative methods. Nothing really 'worked' and satisfied me. However, this past year and summer I learned about a method of self-healing in China and it really helped me. Its called Yixingtianxia. The two main methods are called la-jin and pai-da. They have a pretty bad English website at <http://www.yixingtianxia.com/newpage/en/index.html>. Its catching on pretty fast in China, so I'm not sure if you have heard of it. I was probably one of the few (and youngest) people to go there from the US to do a workshop there. I've written pretty extensively on the subject on a blog I made to talk about my experiences with disease/alternative medicine. I plan to continue to update my status and my thoughts there at [eltacodelmente.wordpress.com](http://eltacodelmente.wordpress.com). I would extremely glad to talk to you about my experience and happy to talk with you about the subject. I can only say that my life has truly been changed through my diseases. I feel like a totally different person not relying on the medicine to 'treat' my pain. Because I've been so greatly helped it only seems right to try and tell other people about what I've been through and what I've experienced. Its all pretty new to me but I feel eager to learn. I guess this passion comes from the personal connection to my life. I just stumbled upon your article yesterday and I feel it really in

alignment with what I've been thinking about lately. Thanks a lot!

Elisa (2011-10-11 14:27:08)

Scads of commenters saying that we can't trust dietary treatments until we do double-blind studies. Uh, guys? You can't do a double-blind study with FOOD! Double-blind studies work for drug trials because placebos and real pills look alike. A carb-free diet doesn't look like a carby one. Seriously, do these people not know what "double-blind" means?

CJ (2011-10-11 14:34:37)

Elisa- while true that double-blind studies are not possible, here's one for you: to deny that diets work in Crohn's disease would be to deny tens- probably hundreds- of controlled studies done on enteral nutrition (EN) and total parenteral nutrition (TPN). Very few medical professionals experienced with IBD would challenge that EN and TPN are effective at inducing and maintaining remission; most studies put the efficacy of EN and TPN at somewhere around 60-70 %. See Oppenheimer's excellent (and well-referenced) "Beat Crohn's!" for more information on the subject. So- if "food in a can" (EN) or a needle-fed diet (TPN) control IBD, what is the mechanism? Note (from Oppenheimer's book) that they are roughly equivalent in terms of efficacy, so it is not a matter of "bowel rest" (as provided by TPN). Instead, close examination of the ingredients of many brands- including Modulen IBD by Nestle- shows they are all depleted in starch and complex carbohydrates. This is extremely important: it's the starch and the polymeric carbs (probably even disaccharides, including sucrose and lactose) that cause the problems. Monosaccharides are absorbed very "high" in the digestive tract- before they get to the part of the intestines in which the bacterial/yeast dysbiosis is occurring. The SCD/Gottschall/BTVC is simply a fork-and-plate version of EN and TPN. It is also important to note that all enteral diets are devoid of wheat, barley, rye, and oats; most have some small amount of cornstarch or rice starch as a texturizing agent.

Elisa (2011-10-11 14:47:48)

Actually, that gives me an idea - maybe you \*could\* do a double-blind study with food if all the food was administered in some kind of liquid form....

CJ (2011-10-11 15:12:27)

Nasogastric tube.

Elisa (2011-10-11 16:40:03)

Of course, the bulk of our "knowledge" about diet and nutrition with regards to health is based on very shaky extrapolation. Nobody has done double-blind studies to test the long-term effects of salt, saturated fat, cholesterol, etc. in the human diet, but doctors keep on advocating that we reduce our intake anyway. The reason we don't do double-blind studies of diets is because diets don't require FDA approval.

Nathan Myers (2011-10-12 00:27:23)

\*\*\*\*\*- 21Perhaps these are too pedestrian, but I discovered that the tiny blisters I got on the backs of my hands and neck only showed up when I eat cranberries, and that the sloughing skin in my nose, and bleeding sinuses, recur only when I eat onions or garlic. I mention these just because I have not found a physician who can name the symptoms. To -

Nathan Myers (2011-10-12 00:30:43)

... To expect sensible treatment, or even advice, is too much to ask when there is no name for the apparent condition.

Jazi yechezkel zilber (2011-10-12 10:04:14)

Used versions of the diet mentioned are almost priced as new. Evidence for the book desirability. Most books especially that old can be found for very cheap prices. [http://www.bookfinder.com/search/?ac=sl&st=sl&ref=bf\\_s2\\_a1\\_t1\\_1&q=qUDpzW5kRtTQqI3uJN0,dBk1jd8\\_3311505934\\_1:39:215&bq=author%3Delaine%2520gloria%2520gottschall%26title%3Dbreaking%2520the%2520vicious%2520cycle%2520intestinal%2520health%2520through%2520diet](http://www.bookfinder.com/search/?ac=sl&st=sl&ref=bf_s2_a1_t1_1&q=qUDpzW5kRtTQqI3uJN0,dBk1jd8_3311505934_1:39:215&bq=author%3Delaine%2520gloria%2520gottschall%26title%3Dbreaking%2520the%2520vicious%2520cycle%2520intestinal%2520health%2520through%2520diet) I have a very sensitive stomach, with chanigng stuff. But food is \*obviously\* a strong cause in the stomach. It is obvious to the blind. Mqny healthy people i know have a clear experience of food affecting the stomach. Denying that, is like saying that day is night. BTW,

i am now browsing the SCD food list, and see that bananas are allowed only when ripe with black points. I know from my stomach experience, that i can eat bananas only when fully ripe. So she was clearly on something.

Missy (2011-10-12 19:59:01)

I've had IBS for ever (since I was 4). Never once did a doctor look at my diet. Really? You're a doctor and you can't, or are being paid off not to, connect the dots between what a patient eats and them having severe diarrhea 20 minutes after each meal? Bitch, please.

Jazi yechezkel zilber (2011-10-13 07:17:40)

Here are detailed records of SCD and all measures for chron's. This lady measured it in many ways! <http://thescdexperiment.com/results/> Seth, This book is a guy who got his academic degrees by optimizing food and diet. He states that he is not smart, but hugely improved brain by a variety of food tricks. He tried everything he says. He is very well versed in the literature (a thousand references!) <http://www.amazon.com/How-to-Become-Smarter-ebook/dp/B0032JT11K>

Christina (2011-10-13 08:42:49)

After reading this (and the boing boing article) and talking to more and more people with digestive and GI related illnesses - I started a little survey (informal) to see what the responses of accurate doctor diagnosis and support is with regards to diet changes. Not sure how I'll publish the results yet, but I am surprised at how many people without these health issues think self-diagnosis is wrong or that seeing a few doctors before someone figures it out is an exception rather than the rule. Would love for this to spread to get a more accurate idea of what people's experiences really are. <http://www.surveymonkey.com/s/XNQKKDF>

Thomas Seay (2011-10-13 11:59:29)

I don't know what constitutes "serious" ailment to your mind, but I had a very severe case of heartburn/acid reflux about 5 years ago. I couldn't sleep well and was in pain most of the time. Eating became misery. At first I tried the acid blockers the doctors recommended, but that stopped working over time. Finally I found out about Dr. Jonathon Wright MD and his suggestion that acid reflux is actually caused by too little digestive acid. I started taking Hydrochloric Acid per his suggestion with every meal. In addition to his suggestion, I took mass quantities of probiotics and also took Mastic Gum. I was better within a few days and completely cured within two weeks.

Seth Roberts (2011-10-13 15:01:27)

thanks, Jazi. Those are both very interesting links.

Jazi yechezkel zilber (2011-10-14 18:02:44)

Logical blindness against SCD In [http://en.wikipedia.org/wiki/Specific\\_Carbohydrate\\_Diet#Criticism](http://en.wikipedia.org/wiki/Specific_Carbohydrate_Diet#Criticism) A doctor says: in my experience, for every patient I see who tried the diet and it worked, there are three to four others who tried it and it didn't work" He practically says that it works for \*some\* people. Yet, if it does not work for all, it does not count. (rationally, if it heals 20 % of sufferers it is a wonderful gamble to try!) Which is again the cognitive illusion that personal solutions are uninteresting and he needs a solution that works for all. I see it as stemming from wanting a "good solution" rather than a practical solution. Looking for a story. A diet that works for some is not a "solution" just a patch. As usual, normal people want to be healthy, and care zilch on whether it helps \*everyone\* PS. The blog is not loading much of the time recently. No idea why

Perfect Health Diet » Around the Web; The Case of the Killer Vitamins (2011-10-15 13:30:00)

[...] Seth Roberts points out that the Specific Carbohydrate Diet has been curing Crohn's for 80 years, but still no clinical trial. [...]

Seth Roberts (2011-10-15 21:39:20)

Jazi, good point. The accepted drug "solutions" don't work for everyone either. As you say, he is just biased against SCD. The same doctor also said (quoted in that wikipedia article), "We're not ruling out the possibility that it works, but you need more than a few successes to establish proof." There are more than a "few" successes.



Christina (2011-10-17 07:22:20)

There are two reasons dietary healing only works for "some" One is that changing your diet - especially when it means cutting out food you love - is difficult. It's easy to cheat and results are rarely instant so it becomes easy to fall back into bad habits, and out of guilt use a white lie or two to justify your habit. The other is that not all people attempting dietary changes are getting good advice, or the right advice. I was treated for ulcers with pills and told to stay away from nightshades temporarily....turns out I had Celiac Disease which was causing the ulcers. Pills and that particular diet were a temporary fix destined to fail. Until there are controlled studies (and better diagnosis) diets will always only work for a small sampling of patients. In the survey I set-up (<http://www.surveymonkey.com/s/XNQKKDF> - still a small sampling) 85 % had to self-diagnose after visiting 1-6 doctors to figure out what was going on. And they also had to bring up the idea of dietary changes as a method for healing.

### **Public Speaking Advice From My Students (2011-10-12 05:00)**

In the Frontiers of Psychology class I teach at Tsinghua (Monday 3:20-4:55, Teaching Building 6, Room A113, visitors welcome) , the students will give several presentations each class period. So I decided to assemble a list of advice. I came up with Items 1-3, the students came up with the rest.

1. Give a presentation that you would like to hear. Don't worry about following a formula.
2. Make your points by telling stories. Don't just say "X is true". Tell a story that will make your listeners think that X is true.
3. Stay within the allotted time (e.g., 5 minutes). In real life – presentations at scientific conferences, for example – most presentations are too long. Listeners rarely like this. They think the speaker is selfish. If one person speaks too long, this usually means that other speakers will have less time to speak.
4. Don't read your talk.
5. Use simple, spoken English. Don't speak fast
6. Smile and use body language to connect with the audience.
7. Pause before the most important points.
8. Ask questions to attract attention.
9. Show the big structure of your talk.
10. When telling a story, don't go far from the point of the story (e.g., with unnecessary details)

To me, the most interesting item is #8 (ask questions). For example, instead of saying "Let us begin" I can say "Shall we begin?" Which is certainly an improvement over coughing, which is what one student said was the usual way officials began talks.

For example, which phrasing works better?

Why does question-asking work? I asked my students.

I asked my students why question-asking works.

The first way ("Why does") grabs my attention more than the second ("I asked"). I did ask my students why it works.

One said that when you hear a question you automatically try to answer it. I cannot do better than that. I suppose we notice questions much like we notice loud noises.

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Txomin (2011-10-12 05:24:05)

I have forgotten how many times I've seen a presenter struggle (and waste everyone's time) because they figure they would be able to improvise. Even those few people that are good at it amount to little more than entertainers. Write a good paper and learn to read aloud well.

Alex Chernavsky (2011-10-12 07:32:57)

If you are using a microphone, a computer & projector, or other audiovisual equipment, spend some time in advance to make sure that everything works properly. I can't tell you the number of times I've seen speakers struggling with their PowerPoint presentation. The most amusing instance was a lecture given by the Chief Technology Officer of a Fortune 500 company. Members of the audience actually ran up on stage to help troubleshoot the equipment, but it was all to no avail. The PowerPoint presentation still wouldn't work. Also, make sure that you are prepared to give a version of your talk without any additional equipment at all, in case of power failure or some such thing.

dearieme (2011-10-12 15:38:29)

#4 is wrong. It should read: 1. Don't you bloody dare to read your talk. to which I would add And don't you bloody dare to read out your powerpoint slides either.

Stephen M (Ethesis) (2011-10-12 17:21:29)

Even if you are an excellent improviser, the kind that wins competitions, you do better if you don't. No matter how good you are, you can improve what you do by not taking more time than you are scheduled for, and a little less (and taking questions or sharing it with other presenters) goes a long way.

Åse (2011-10-13 10:46:21)

I can kind of see #4. (And, I sure as hell don't read lectures, and try to eliminate most writing from my power points these days), but, when I started out, stage fright petrified me. Rather chockingly so the first time. And, when I had to do my first longer presentation when I started grad school, my adviser suggested that I would write it out, write it in a spoken voice, and if I freaked, I could just read it. Which is what I did. And what I did for my first lecture. And, then, rather quickly actually, my stage fright disappeared, my written lecture was more a security blanket, and eventually that stopped too (because who has time to write out an entire talk or lecture, when you don't need it). So, I do suggest writing it out to read for people who are like me and petrified with stage fright. Because actually saying something up there and making it to the end is better than not being able to do anything.

Txomin (2011-10-17 01:47:35)

That's the point, really. The people that do well without reading are those that know the material so thoroughly that, essentially, are reading it directly out of their minds. Anyone that lectures regularly gets to that point eventually. Nonetheless, the only way to be densely informative (and not to waste other people's time) is to sacrifice resources invested in the creation of an illusion of mastery (look Ma', no hands!) and, rather, invest everything into getting the information through with eloquence and clarity. WRITE IT. Memorize if you feel you've gotta dazzle too, but WRITE IT.

Ian Ross (2011-10-18 04:36:02)

One other thing: PRACTICE! When you start out, get as much practice as you can giving talks in non-threatening environments.

And then, always practice the talk you're going to give to an empty room, and maybe once, to friends or colleagues. For conference talks, I usually figure an hour of practice time: 4 times through for a 15-minute talk, 5 times for a 12-minute talk, and so on. Short talks are hard to get right. You need that practice. And so many people give bad bad bad talks that you can really stand out if you're a little more on the ball.

Unshod Ashish (2011-10-18 09:26:10)

I think they missed the most important point: never address a "group." Address individuals within that group, one at a time. At each instant, look at the person you are addressing in that instant. This both: - Helps conquer anxiety - we all know how to talk to one person. - Gives your presentation the conversational flow that the audience wants. Also will pass on this insight I read just a few minutes ago: "In my freshmen psych class, they said that, as a general rule, well-prepared people will perform better when they have an audience, and those who are not well-prepared will do worse."

### **Make Yourself Healthy (Boing Boing posts) (2011-10-12 19:33)**

I have written several [1]Boing Boing posts about people with serious health problems who figured out how to cure themselves.

1. [2]Restless Legs Syndrome (title: Restless Legs Syndrome, Niacin, and Web Search). Co-written with Gary Wolf. Dennis Mangan figured out that his mother, who had Restless Legs Syndrome, might have a niacin deficiency.
2. [3]Frequent Migraines (title: Finding the Source of Migraines – and Fifty Useless Migraine Drugs). A woman greatly reduced her migraines by avoiding household cleaning products. [4]Alexandra Carmichael benefited from this story.
3. [5]Crohn's Disease (title: Grandmother Knows Best About Crohn's Disease). Reid Kimball greatly reduced his symptoms by following the Specific Carbohydrate Diet.
4. [6]Should your child have a tonsillectomy? (title: Tonsillectomy Confidential: doctors ignore polio epidemics and high school biology). After her doctor recommended that her son have a tonsillectomy, a woman, looking into research about them, learned they have little benefit. Your tonsils are part of your immune system and cutting them off because you have too many infections makes as much sense as cutting out part of the brain because you have memory problems.
5. [7]Gluten intolerance (title: Daughter Knows Best About Kidney Disease and Gluten Intolerance). A daughter figures out that her mother's kidney problems may be due to gluten intolerance.
6. [8]Acne (title: Searching For the Cause of Acne). Martha Rotter used a process of elimination to find out that cow dairy was causing her acne.

1. <http://boingboing.net/>
2. <http://boingboing.net/2010/05/17/restless-legs-syndro.html>
3. <http://boingboing.net/2011/07/25/finding-the-source-of-migraines-and-fifty-useless-migraine-drugs.html>
4. <http://blog.sethroberts.net/2011/08/13/more-migraine-headaches-caused-by-cleaning-products/>
5. <http://boingboing.net/2011/10/10/seth-roberts-grandmother-knows-best-about-crohns-disease.html>
6. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>
7. <http://boingboing.net/2012/06/25/make-yourself-healthy-daughte.html>
8. <http://boingboing.net/2012/08/09/make-yourself-healthy-searchi.html>

## Nobel Prize Report Card: Economics (2011-10-13 05:00)

The Nobel Prizes awarded each year resemble a kind of report card where each prize-worthy discipline (Physics, Chemistry, etc.) gets a grade that depends on the prize-winning research. If the prize-winning research is useful and surprising, the grade is high. If not the grade is low. More generally, at least to me, the intellectual history of the prize winners sheds light on the whole profession. Perhaps some biologists were unaware of the behavior of Eric Kandel described in [1]Explorers of the Black Box when he was awarded the biology prize. Kandel, I hasten to add, is an unusual case.

Thomas Sargent is one of the winners of this year's Economics prize. In 2007, he gave [2]a graduation speech at Berkeley to economics majors (via [3]Marginal Revolution). In the speech, Sargent called economics "organized common sense". He went on to list 12 common-sense ideas, such as "Individuals and communities face trade-offs" and "governments and voters respond to incentives" that economists believe. The reasons for their belief weren't stated.

When I started as a professor (at Berkeley) I did many experiments with rats and, to my annoyance, discovered an inconvenient truth: I understood rats less well than I thought. Even in a heavily-controlled heavily-studied situation (Skinner box), my rats often did not do what I expected. My common sense was often wrong, in other words. This experience made me considerably more skeptical of other people's "common sense".

To me, and I think to most scientists, science begins with common sense. Experimental psychology certainly does. I used common sense to design my experiments. Had I not done those experiments, I would not have learned that my common sense was wrong. So relying on common sense was helpful – as a place to start. As a way to begin to understand. You begin with common-sense ideas and you test them. That common sense is often wrong is a theme of Freakonomics, in agreement with my experience. Yet Sargent seemed content (he called economics "our beautiful subject") to end with common sense, perhaps tidied up.

This is really unfortunate because economics, beautiful or not, is so important. If you ignore data, the answer to every hard question is the same: the most powerful people are right. That way lies stagnation (problems build up unsolved because powerful people prefer the status quo) and collapse (when the problems become overwhelming). Alan Greenspan's faith-based belief in free markets and the 2008 financial crisis – after Sargent's speech – is an example. In 2009, Sargent's speech might have been less well-received.

1. <http://www.amazon.com/Explorers-Black-Box-Search-Cellular/dp/0595189628>

2. [https://files.nyu.edu/ts43/public/personal/UC\\_graduation.pdf](https://files.nyu.edu/ts43/public/personal/UC_graduation.pdf)

3. <http://marginalrevolution.com/marginalrevolution/2011/10/assorted-links-247.html>

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The most powerful people are right — The Endeavour (2011-10-13 06:56:22)

[...] Seth Roberts: If you ignore data, the answer to every hard question is the same: the most powerful people are [...]

Scott P. (2011-10-13 07:24:33)

I would only disagree in calling out Alan Greenspan. Though he doesn't get away scot-free, it is more the corrupting influences of government intervention in the housing market and the elimination of moral hazards by that same government that created the financial crisis of 2008 more so than free markets. I place more blame on Barney Frank than I do Alan Greenspan though Greenspan doesn't come away unscathed. Your observations regarding Sargent and his commencement speech are sad. It is

why I disdain consensus science.

James (2011-10-13 07:52:53)

You should be happier about co-winner Chris Sims, all of his work involved looking at data and/or coming up with new ways to look at data.

Tom (2011-10-13 08:48:59)

Is there a difference between common sense and confirmation bias?

George (2011-10-13 09:07:05)

Wow. You learned all you needed to know in order to judge an entire discipline from a *graduation speech*?! If you had bothered to read Sargent's work before judging it you would have seen that he won the Nobel for research showing that what people used to think was common sense (particular fiscal and monetary policy) is actually wrong. Your post (cf. para 3) rests on the unstated assumption that common sense = naive expectations. Sargent's work (on "rational expectations"), on the other hand, specifically argues that this assumption isn't true, so it seems sort of silly to criticize him for making it.

Alex Chernavsky (2011-10-13 09:42:49)

I know Seth blogged about this already, but I'm reminded of "The Truth Wears Off", an article that appeared in the *New Yorker* last December. Here's an excerpt:

In the late nineteen-nineties, John Crabbe, a neuroscientist at the Oregon Health and Science University, conducted an experiment that showed how unknowable chance events can skew tests of replicability. He performed a series of experiments on mouse behavior in three different science labs: in Albany, New York; Edmonton, Alberta; and Portland, Oregon. Before he conducted the experiments, he tried to standardize every variable he could think of. The same strains of mice were used in each lab, shipped on the same day from the same supplier. The animals were raised in the same kind of enclosure, with the same brand of sawdust bedding. They had been exposed to the same amount of incandescent light, were living with the same number of littermates, and were fed the exact same type of chow pellets. When the mice were handled, it was with the same kind of surgical glove, and when they were tested it was on the same equipment, at the same time in the morning. The premise of this test of replicability, of course, is that each of the labs should have generated the same pattern of results. "If any set of experiments should have passed the test, it should have been ours," Crabbe says. "But that's not the way it turned out." In one experiment, Crabbe injected a particular strain of mouse with cocaine. In Portland the mice given the drug moved, on average, six hundred centimetres more than they normally did; in Albany they moved seven hundred and one additional centimetres. But in the Edmonton lab they moved more than five thousand additional centimetres. Similar deviations were observed in a test of anxiety. Furthermore, these inconsistencies didn't follow any detectable pattern. In Portland one strain of mouse proved most anxious, while in Albany another strain won that distinction. The disturbing implication of the Crabbe study is that a lot of extraordinary scientific data are nothing but noise.

Full text: [http://www.neurofly.com/NeuroSeminar\\_files/2011-2.pdf](http://www.neurofly.com/NeuroSeminar_files/2011-2.pdf)

dearieme (2011-10-13 12:38:45)

1) You really ought to acknowledge that the Economics "Nobel" is a rather a pretendy prize - it's not in the old boy's will: all part of the Economists' Physics envy. 2) "If the prize-winning research is useful and surprising...": the science panels seem happily to give prizes for work that has yet to show any "benefit" as the will insists they should. Just another example, I suppose, of institutionalised science operating in bad faith.

Seth Roberts (2011-10-13 14:12:36)

George, I'm not "judging Sargent's work" I'm commenting on a graduation speech. As for Sargent's serious work, here is one paper: <http://www.mpls.frb.org/research/QR/QR531.pdf> Supposedly important. It was linked to in a Washington Post article about why Sargent won the Nobel Prize. Perhaps this paper illustrates what you mean by "showing" that common sense is wrong. Please note the absence of data. In particular, the absence of data and comparison with prediction. To me this instance

of Sargent's work "shows" nothing except theoretical overconfidence. What if, ten years from now, someone tests predictions from Sargent's theory and it turns out that those predictions are wrong? Then you might be less sure than you are now about what Sargent has "shown".

Seth Roberts (2011-10-13 14:24:44)

Thanks, Alex. To me, that example supports my point. Crabbe believed that he was likely to have controlled all the important factors but he was wrong. His common sense was wrong. He tested it, which is good. I don't agree with the author's conclusion here ("a lot of extraordinary scientific data are nothing but noise"). I would say the Crabbe data suggests that a lot of data are less generalizable than we might think. But that data is an improvement on common sense – which is to say it is not "noise". In essence my conclusion is exactly the opposite of the author's (the author is Jonah Lehrer). The Crabbe example shows how important all data is and how we should never ignore it.

Seth Roberts (2011-10-13 14:49:11)

James, that's right, I am much happier with Sims.

Seth Roberts (2011-10-13 15:08:01)

Tom, you ask "Is there a difference between common sense and confirmation bias?" Yes. Common sense is a set of beliefs that we have great faith in and that are widely shared. Confirmation bias is a scientific strategy that tends to set up tests so that they confirm the beliefs we start with. I think you're right that there's a connection: confirmation bias leads us to be overconfident about our common sense. (Whether that is why we are overconfident in our common sense I don't know but it is plausible.)

Jan Madsen (2011-10-13 21:27:57)

Common sense this: If Alan Greenspan had a "faith-based belief in free markets" why did he champion government intervention?

Seth Roberts (2011-10-14 00:47:04)

Jon, perhaps I was unclear. Greenspan was against government regulation of financial markets.

Seth Roberts (2011-10-14 00:53:35)

dearime, that the Nobel Prize is so often given for useless work, contrary to Nobel's instructions, to me shows the power of the forces (especially the desire to project status) that Veblen wrote about in Theory of the Leisure Class. You project status by being useless. Powerful people can afford to be. When a rich person "wastes" their money I have no objection. When a scientist or whole discipline wastes their power to improve human life, it is a tragedy.

Jan Madsen (2011-10-14 12:46:55)

No, you were quite clear. Yes, he was against government regulation of financial markets - in the 1960s and 70s. As chairman of the Fed, however, he was by definition, in body, mind, soul, to the bone, in every way imaginable, very much FOR government intervention of financial markets. His reputation as a free marketeer is simply wrong, wrong, wrong as well as being and insult to both pro and anti interventionists. But I doubt we'll agree on that... Instead, let me finish by saying I really enjoy your work. Thanx!

Roger Sweeny (2011-10-22 10:53:31)

I wouldn't go as far as Jan Madsen but finance is an industry with lots and lots of government regulations. Perhaps in his heart of hearts Greenspan opposed these. However, he made almost no effort to "deregulate" any aspect of the industry when he was Federal Reserve chairman—no speeches, no lobbying Congress, no Fed "studies." He did oppose most new regulation but that is a different thing. He may have felt that finance was about as good an example of "mixed economy" "regulated markets" as you were likely to get. Of course, he was wrong. But we still don't know exactly what changes will make things better how. Dodd-Frank, on balance, is probably doing more harm than good (I count as harm the increased business for lawyers and lobbyist; many in Congress may disagree).

## Jane Jacobs and Amazon.com (2011-10-14 05:00)

How did air-breathing evolve? In [1]The Nature of Economies (p. 87), Jane Jacobs uses it to illustrate the developmental pattern she calls "bifurcation" (air-breathing isn't a refinement of water-breathing). She speculates on how it started:

Lungfish had both gills and a primitive lung, suggesting that their habitat was swampland. The earliest to take to dry land may have inhabited swamps subject to severe droughts or perhaps they were escaping fearsomely-jawed predators who couldn't follow them to dry land.

According to Steve Yegge's already-famous [2]"psst, Googlers" memo, something much like this was why Amazon started selling web computing services, which wasn't a refinement of their earlier business (selling books, toys, etc.):

Amazon was a product company too, so it took an out-of-band force to make Bezos understand the need for a platform. That force was their evaporating margins; he was cornered and had to think of a way out. But all he had was a bunch of engineers and all these computers... if only they could be monetized somehow... you can see how he arrived at AWS [Amazon Web Services], in hindsight.

People say necessity is the mother of invention. That isn't even close to true. Trial and error is the mother of true, profound invention. The Bezos story, and Jacobs's generalization of it, suggest what is actually true: necessity is the mother of development. Necessity pushes people to use, and thereby develop, inventions they had ignored.

[3]Chapter 1 of The Nature of Economies.

1. <http://www.robertfulford.com/JacobsBusiness.html>
2. <http://news.ycombinator.com/item?id=3101876>
3. <http://www.nytimes.com/books/first/j/jacobs-nature.html>

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## Assorted Links (2011-10-15 05:00)

- [1]Reclamations. Essays by University of California students about the harm done by student loans. Via [2]Boing Boing. Being taught "how to think" (as many college professors claim they do because the details of their class are obviously useless) is fine when it's a choice. (I support the study of esoteric seemingly-useless stuff - when it's a choice.) When it's required (to get a decent job) and very expensive (due to tuition), there's a problem.
- [3]The Cobblestone Conservative: How Jane Jacobs saved New York City's soul.
- [4]Robin Hanson surveys his students. "[Their] opinions [about "random policy questions"] strongly tend to support the status quo - mostly whatever is, is assumed good." Same thing at Berkeley. Most of my students, for better or worse, were very conformist. My conclusion, which I imagine Robin agrees with, is that the reasons

we give for our beliefs have roughly zero correlation with the actual reasons and shouldn't be taken seriously (e.g., argued with). Professors who claim to teach their students "how to think" (e.g., lines of argument) are shutting their eyes to what Robin shows is right in front of them: the lack of importance of "thinking" in the determination of belief.

- [5]Edward Jay Epstein on Michael Milken. Great journalism.

Thanks to [6]Ryan Holiday. If you send me a link that I post I am happy to link to your blog or website.

- 1.
2. <http://boingboing.net/2011/10/07/122076.html>
3. <http://www.theamericanconservative.com/blog/cobblestone-conservative/>
4. <http://www.overcomingbias.com/2011/04/natural-hypocrisy.html>
5. <http://scr.bi/pTEtEp>
6. <http://www.ryanholiday.net/>

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Alrenous (2011-10-15 09:28:46)

I need a name for the set of standard causes of belief. This post caused me to google it up - it's called ethnoepistemology. It's undeniable that science-type reason is only a few percent of ethnoepistemology. The rationalizations generated when you ask students about their opinions are neither for justifying those opinions nor very often for spreading them. I'm not sure what they're for.

Seth Roberts (2011-10-15 21:14:27)

that's a good point about the rarity of science as the reason for our beliefs. So when science - science that actually worked - came into the world, a new (and to some extent higher-prestige) way of forming beliefs, it was predictable that people would continue to use the old ways of producing belief but claim they were using the new way - for example, Scientology, much of evidence-based medicine, much of the AGW argument.

Jill (2011-10-17 09:54:18)

I'm currently dealing with the change in the online federal student loan servicer website (kept getting errors and such last week when trying to access my information, and now find out that the switch apparently involved losing the autopay I've had set up for years and have a past-due amount because it didn't do the auto-pay last week - meanwhile, the customer service phone number has a message that states that it can't be reached "right now - try calling back later"), so the Reclamations essays are definitely striking a chord today.

### **Inside Chinese Higher Education: A Hidden Strength (2011-10-16 05:00)**

China has hundreds of colleges. Tsinghua and Beijing University are at the top (top tier), followed by perhaps 20 colleges considered second-tier. A friend of mine attends a third-tier school. In all of her classes, class consists of the professor reading the textbook. Word for word. (Which, by the way, doesn't happen at Tsinghua, I checked.)

Perhaps you grimace. I think this is a great thing. It means students can easily skip class - any sensible person would. Being able to skip class frees them to do internships, visit the National Museum, explore the off-campus world however they want. My friend took advantage of this to do three internships. At Berkeley I told students to take as few



classes as possible and take as many internships as possible. I taught a class called Psychology and the Real World whose sole purpose was to help students learn off campus. When I was a freshman at Caltech, the school had an unintentionally similar feature: all freshman grades were pass/fail. This made it much easier to skip class, which I did most of the time. Even better than the Chinese system, I no longer had to study much. I used my abundant free time to explore my own interests, which included reading Veblen and Freud. I taught psychology to under-privileged eighth-graders. The freedom provided by pass/fail grading allowed me to explore my own interests and started me on the path to becoming an experimental psychologist. I am not kidding: this is a great hidden strength of Chinese higher education.

By the same twisted logic am I glad that American colleges are [1]becoming insufferably expensive – because then fewer people will attend them? Not yet. I think most American high school students think not attending college is dangerous. Reading the textbook at home and doing an internship isn't dangerous.

1. <http://finance.fortune.cnn.com/2011/10/05/occupation-from-wall-street-to-the-university/>

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### **Willat Effect Experiments With Tea (2011-10-17 05:00)**

[1]The Willat Effect is the hedonic change caused by side-by-side comparison of similar things. Your hedonic response to the things compared (e.g., two or more dark chocolates) expands in both directions. The "better" things become more pleasant and the "worse" things become less pleasant. In my experience, it's a big change, easy to notice.

I discovered the Willat Effect when my friend Carl Willat offered me five different limoncellos side by side. Knowing that he likes it, his friends had given them to him. Perhaps three were homemade, two store-bought. I'd had plenty of limoncello before that, but always one version at a time. Within seconds of tasting the five versions side by side, I came to like two of them (with more complex flavors) more than the rest. One or two of them I started to dislike. When you put two similar things next to each other, of course you see their differences more clearly. What's impressive is the hedonic change.

The Willat Effect supports [2]my ideas about human evolution because it pushes people toward connoisseurship. (I predict it won't occur with animals.) The fact that repeating elements are found in so many decorating schemes and patterns meant to be pretty (e.g., wallpapers, textile patterns, rugs, choreography) suggests that we get pleasure from putting similar things side by side – the very state that produces the Willat Effect. According to my theory of human evolution, connoisseurship evolved because it created demand for hard-to-make goods, which helped the most skilled artisans make a living. Carl's limoncello tasting made me a mini-connoisseur of limoncello. I started buying it much more often and bought more expensive brands, thus helping the best limoncello makers make a living. Connoisseurs turn surplus into innovation by giving the most skilled artisans more time and freedom to innovate.

Does the Willat Effect have practical value? Could it improve my life? Recently I decided to see if it could make me a green tea connoisseur. Ever since I discovered the Shangri-La Diet (calories without smell), I'd been

drinking tea (smell without calories) almost daily but I was no connoisseur. Nor had I done many side-by-side comparisons. At home, I had always made one cup at a time.

In Beijing, where I am now, I can easily buy many green teas. I got three identical tea pots (SAMA SAG-08) and three cheap green teas. I drink tea every morning. Instead of brewing one pot, I started making two or three pots at the same time and comparing the results. I compared different teas and the same tea brewed different lengths of time (Carl's idea).

I've been doing this about two weeks. The results so far:

1. The cheapest tea became undrinkable. I decided to never buy it again and not to drink the rest of my purchase. I will use it for kombucha. Two of the three teas cost about twice the cheapest one. After a few side by side comparisons I liked the more expensive ones considerably more than the cheaper one. The two more expensive ones cost about the same but, weirdly, I liked the one that cost (slightly) more a little better than the one that cost less. (Tea is sold in bulk with no packaging or branding so the price I pay is closely related to what the grower was paid. The buyers taste it and decide what it's worth.)
2. I decided to infuse the tea leaves only once. (Usual practice is to infuse green tea two or more times.) The quality of later infusions was too low, I decided. Before this, I had found second and later infusions had been acceptable.

The Willat Effect is working, in other words. After a decade of drinking tea, my practices suddenly changed. I will buy different teas and brew them differently. I will spend a lot more per cup since (a) each cup will require fresh tea, (b) I won't buy the cheapest tea, and (c) I have become far more interested in green tea, partly because each cup tastes better, partly because I am curious if more expensive varieties taste better. When I bought the three varieties I have now I didn't bother to learn their names; I identified them by price. In the future I will learn the names.

To get the Willat Effect, the things being compared must be quite similar. For example, comparing green tea with black tea does nothing. I have learned a methodological lesson: That tea is a great medium for studying this not only because it's cheap but also because you can easily get similar tasting teas by brewing the same tea different lengths of time. I haven't yet tried different water temperatures but that too might work.

I have done similar things before. I bought several versions of orange marmalade, did side-by-side tastings, and indeed became an orange marmalade connoisseur. After that I bought only expensive versions. After a few side-by-side comparisons of cheese that included expensive cheeses, I stopped buying cheap cheese. You could say I am still an orange marmalade and cheese connoisseur but this has no effect on my current life. Because I avoid sugar, I don't eat orange marmalade. Because of all the butter I eat, I rarely eat cheese. My budding green tea connoisseurship, however, is making a difference because I drink tea every day.

[3]My posts about human evolution.

1. <http://blog.sethroberts.net/2011/07/08/the-willat-effect-side-by-side-comparisons-create-connoisseurs/>
2. <http://sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>
3. <http://blog.sethroberts.net/2007/06/27/my-theory-of-human-evolution-directory/>

David Scrimshaw (2011-10-17 06:27:07)

I get two take-aways from this. 1) If I want to consume more of something that I don't really enjoy, I should do side-by-side taste tests of different versions to find the better tasting version and develop a taste for it. 2) If I enjoy an inexpensive product, I should avoid side-by-side taste tests so that I do not develop an aversion to the inexpensive version.

Seth Roberts (2011-10-17 06:33:47)

David, yeah, that's correct. I used to enjoy green tea less than black tea. Now I like it more. The bigger point is that here is a faucet of pleasure and here is how to open it. Something that produced a tiny amount of pleasure per day or whatever can now produce pleasure at a much greater rate. Sure, it will cost you but it will feel worth it and you will feel good about the whole thing.

dearieme (2011-10-17 06:51:48)

For God's sake don't try this with wine - it will cost you a packet.

gwern (2011-10-17 07:39:32)

To me, the interesting question is Scrimshaw's. Is one really better off deliberately engaging the Willat effect? You say you are happier but... I think we'd all agree that it would be a bad idea to engage the Willat effect for everything (no one but a millionaire can afford to be a connoisseur in their tea, their milk, their bread, their computer and computer chair, their house, their car, their book etc etc.), which implies that there's some point at which the Willat effect would make one \*worse\* off. Where is that?

Zach (2011-10-17 08:35:23)

As an aside, I'm pretty sure the Willat effect exists in at least some animals. My parent's dog is certainly picky when it comes to dog food (though I suppose that could be a matter of the different types of food being categorically different), and some fruit trees will be picked bare by birds and other critters while others in the same orchard go relatively unscathed.

Robin Barooah (2011-10-17 09:49:30)

I think this is a pretty interesting effect. I've experienced it for myself at coffee and wine tastings. I wonder how much it is related to context as opposed to an absolute scale of what is 'better'. When you set up a side by side comparison there are a few implications: 1. A grading is implied. 2. If you aren't alone, you risk social standing by not being able to identify the 'best'. 3. Costs are already sunk. It seems to me that these are the circumstances of a game that would naturally lead one to seek specific criteria for choosing the 'best'. Perhaps other games are possible. Here are couple of examples from my own experience: I regard myself as something of a coffee connoisseur. In the past I've spent more than \$100 on a single pound of coffee, and pre-ordered specific auction lots prior to harvest. I've tried almost all methods of coffee brewing. Occasionally I buy a coffee by mail order that sounds good by the description, but turns out to be a long way from my tastes - to the point of unpleasantness. When that happens, I have learned to start tweaking the brewing method, temperature, contact time, amount of coffee, grind, etc. to try to get the best out of the specific coffee - it regard it as a challenge. Sometimes I will experiment with blending. I've found that this approach leads me to suspend judgement and focus much more on the distinct qualities of the 'bad' coffee. Through the process, the bad coffee turns into a coffee that I understand, and can like because it has a place in my mental map. It can become something I would choose again for the contrast it provides to the supposedly better coffees. The point here is that by playing a different game, I am able to extend my preferences along more than one dimension of good/bad. Similarly with wine - I've had the opportunity to compare some pretty expensive wines on occasion, but even one bottle of the really good stuff would be out of my price range. So for the wine I drink at home, I think of experiences of drinking table wine at lunch time in the South of France.

Robin Barooah (2011-10-17 09:55:04)

(sorry - tapped post prematurely) ...and so I have tried to find the 'best' cheap french table wine to fit the context I am imagining - which for me turns out to be a \$6 côtes du rhone. More expensive wines have different connotations for me - and although I like them, I don't particularly want to drink them every day. Once again, my point is that by playing a different game, I am able to derive a great deal of pleasure using different criteria to grade what I consume. So my question is - how much of the perceived quality is built into the structure of the game and the context in which you play it, and how much is inherent in the

product?

CJB (2011-10-17 10:00:35)

Seth, I find the Willat effect fascinating, and I feel like I can confirm it from personal experience with beer. I do have a follow up question with Seth – what about the so-called experienced quality affect with price? [http://media.caltech.edu/press\\_releases/13091](http://media.caltech.edu/press_releases/13091) Wouldn't you want to blind yourself to the cost of items to make sure this wasn't having an effect on perceived quality?

CJB (2011-10-17 10:03:52)

As for others concern about cost, keep in mind the additional utility/pleasure experienced the more often you use the product (basically unless you use something very infrequently you should see payback quickly.) If you are buying a lot of something, perhaps you should test it out to see if you like something else better, because you may be spending more money on something you don't like as much...

Tim Ozenne (2011-10-17 10:41:49)

You say the Willat Effect isn't helpful in the choice between, say, green and black tea. How does one know when two items are near enough to make the side-by-side comparison useful. I am thinking specifically of various beers. As you know, there are lots of beer "styles." Would I want to use Willat within a style or would it also apply across styles? Or, all red wines, or only among cabernet sauvignons? (I assume no value in comparing a chardonnay to merlot. )

Alex Chernavsky (2011-10-17 11:05:41)

I'm surprised that more-expensive products consistently taste better than cheaper ones. I wonder if this effect would hold up under blind conditions. See, for example, this study that appeared in the *Journal of Wine Economics*: [1]Do More Expensive Wines Taste Better? Evidence from a Large Sample of Blind Tastings (The answer seems to be, "No, they don't".)

1. [http://www.wine-economics.org/journal/content/Volume3/number1/Full%20Texts/01\\_wine%20economics\\_Robin%20Goldstein\\_vol%203\\_1.pdf](http://www.wine-economics.org/journal/content/Volume3/number1/Full%20Texts/01_wine%20economics_Robin%20Goldstein_vol%203_1.pdf)

Tom (2011-10-17 15:53:04)

There's a huge Willat effect with sushi.

Kirk (2011-10-17 17:25:59)

I predict there is a normal distribution of people susceptible to the Willat Effect. In other words, a few people in a group could participate in tastings day after day and still not be able to discern a difference. Another small group of people are born with this capability; many times they become great cooks (whether in the restaurant business or simply renowned among family and friends). These people can read a cookbook and start wincing at ridiculous combinations, because they have stored flavors in memory. That's why they can instantly tell you if a particular item they're tasting right now is best in class to anything they've tasted before. Most people are in the middle and can be influenced by the Willat Effect, yet usually aren't, unless they get caught up in a social event with somebody who has enthusiastically put together a tasting.

wcw (2011-10-17 22:10:45)

Sometimes, you discover the cheaper offering is better. File under, El Farolito is better than Chipotle.

Stirner (2011-10-17 23:56:02)

I would second that the cheaper offerings can be identified as better. I have done several blind taste tests of Vodkas, and have consistently found that humble Gordon's Vodka tastes cleaner than top flight brands like Grey Goose, and Ketel One. How is this possible? First, I guess the power of marketing. Second, apparently the Vodka industry is in large part supplied by bulk distillers that provide pure vodka to liquor brands. They all put their spin on the final taste, but since the starter material is basically tasteless, it's more feasible for a low end product to carry through the tastelessness.

Jonathon Barton (2011-10-18 00:01:30)

Seth, Here's the flaw I see in your plan. It has been established for quite some time that, in a rigorous scientific taste test, a person will choose the wine in the glass that they are \*told\* is the most expensive - even when the wine, in reality, came out of the exact same bottle. So, it doesn't surprise me that you self-selected the most expensive item as being the best. In order for you to apply the same rigor and validate the Willat Effect, you need to have someone else purchase three kinds of tea on at least two separate occasions: - One occasion where they do not tell you which tea is which. You must select the best tea, and then it will be revealed which tea is at which price point. - A separate occasion where they tell you which one is which, but lie to you about it...giving you the cheap tea, and telling you that it's actually the expensive tea. The Willat Effect is only valid if the taste differences among the teas is sufficient for you to pick out the best one consistently, and more importantly \*blindly\*.

Tim in SF (2011-10-18 10:58:03)

You lost me at "I predict it won't occur with animals." It's already happened with animals. It's happened with us.

Swetch (2011-10-18 11:06:22)

Saw the link to this on Boing-Boing (prepare for the deluge) - and I find this all very fascinating (certainly more so then the work I should be doing). Two comments from me: 1. Hedonic? Ouch - even recognizing the root, I had to look that one up to be sure. 2. I work in snow-ski development, and we exploit this effect when we test product on-snow, to help testers differentiate between a group of very similar models. 5 skis in a group, 5 skiers - we each take ONE run on a pair of skis and then switch to a new pair, eventually looping back taking two runs on the pair of skis that were skied 1st. Any good skier can adjust their technique to accommodate most skis, but by switching every run, you get a good "1st impression" of the ski. And even intermediate skiers that are convinced they won't be able to feel differences are surprised that they DO feel significant differences between similar skis when tested in this way. And with on-snow testing, this process has the added benefit of making the test go quickly - useful for battling the effects of muscle fatigue & changing snow conditions. (BTW - ideally, these are blind tests with all skis sporting the same graphic).

RasmusF (2011-10-18 11:12:35)

Fwiw, whenever I've done blind tests of wine (more than once, less than five times and typically with 3-4 different wines) I've almost always done a reverse ranking by price. Roughly, I've ranked the sweeter, less complex wines as better tasting than the more tart, complex wines. I don't really enjoy wine, spirits or beer all that much though.

Jordan (2011-10-18 11:28:43)

I used to sell televisions and this effect is staggering. In the electronics store- side by side you can see the difference. but once you get the television home nobody notices those differences. Maybe not the cheapest TV, but the \$5K version vs the \$2500 doesn't hardly make a difference (once you're not in the store anymore) If you haven't watched this TED lecture, much of it relates to this exact effect you're talking about here. [http://www.ted.com/talks/benjamin\\_wallace\\_on\\_the\\_price\\_of\\_happiness.html](http://www.ted.com/talks/benjamin_wallace_on_the_price_of_happiness.html) a couple things, #1 Never disclose the prices of what you're comparing for accurate results. #2 Just pretending something is worth more will convince you it's better

Jim Z (2011-10-18 12:00:40)

Maybe I missed something but I really think this would have to be done on a blind testing basis. Or are you saying that the Willat effect really is just people having a tendency to try to be snobbish when they think they can get away with it, calling it intellectual curiosity.

Sally Van Eycke (2011-10-18 13:40:22)

So you've inspired me to do a BLIND study of this with various Rums. I'm part of a drinking club and if I do it right, I can get at least 50 people to test on!

Gnu (2011-10-18 14:33:11)

It does happen in animals. We have two cats at home. We feed them dry food and wet food. The cats notify us that they are hungry by waiting until we're in the kitchen, then whining pathetically until we fill their bowls. Note that the whining only happens when we're in the kitchen, and only before we've fed them - once they stop being hungry, they are content. Up until a few months ago, we only fed them organic dry food of a particular brand. They ate it happily. One week we ran out, and got the generic (non-organic) stuff from the corner store, and they loved it. Since then, when we give them the organic food, they sniff it, and keep whining for the "good stuff". Eventually, one of two things will happen - they get hungry enough to eat the organic food, or my wife will break down and give them the non-organic. They clearly have a preference, in that they will go hungry rather than eat the inferior substitute. Before they knew there was a better alternative, though, they ate it without complaints. About a month ago, we ran into the same situation with the wet food, and yeah, they now do the exact same thing with the wet food.

Bryan (2011-10-18 14:35:28)

Here I have confirmed a finding of my own. Use the cheapest tea you can find for making kombucha. Off topic sure, but kombucha is mentioned in the article.

wangston (2011-10-18 14:45:15)

As many others have noted, it really needs to be a double-blind if you want to exclude price as a factor. CLB and others note that price matters a lot - and I think the study that CLB quoted makes it clear that this is NOT unconscious snobbery or social climbing - price is actually a flavor - it is perceived as taste at the sensory level. More expensive things taste better because rarity is delicious. The point in excluding price as a factor is not because it obscures reality (it *is* reality), but because you are stingy and cheap and want to minimize expenses :) Since all taste is arbitrary anyway, you could go all the way and cultivate an appreciation of cheap flavors.

Seth Roberts (2011-10-18 18:25:40)

Bryan, yeah, cheap tea is fine for kombucha. I have noticed this.

Jennifer (2011-10-18 18:53:30)

@Gnu - it was Meow Mix, wasn't it? At my house, and at my friend's it's the same situation. Once they tasted the Meow Mix they didn't want anything else, much to our dismay.

JR in WV (2011-10-19 08:51:34)

I agree that finding that the most expensive brand of foodstuff is always best reveals a built-in bias. Taste testing must be blind as to brand and comparative price to eliminate this bias. Anecdotally, while spending time in Santa Fe, New Mexico, USA we visited various "Southwest" restaurants for lunch and dinner. The best one was away from tourist districts in a blue-collar neighborhood, serving a wide variety of authentic central-American foods from various cultures. It was neither fancy nor expensive, but the food was well prepared, the recipes were widely varied, the ingredients were top quality and fresh, wonderful. Can't remember the name, couldn't find it now without a lot of driving around that part of town, but it was really popular with the local folks.

Nick (2011-10-20 05:37:00)

I would like to point out that your intention was originally to maximize pleasure, but your results indicate you minimized pleasure derived from at least one tea. It sounds like you used to be happy with any old green tea, but now you've limited the range of acceptable teas by nurturing a disgust for some of them. It is only compounding the problem that the ones you do still enjoy (and would have enjoyed regardless) are more difficult to access. To think, you could have been content with the cheap stuff if you'd never compared. At least you have derived pleasure from the experiment!

Word of the Day - The Willat Effect | Les Jones (2011-10-20 05:37:56)

[...] [...]

Alex Chernavsky (2011-10-20 06:34:56)

@JR in WV: I had a different experience. The worst Mexican restaurants I ever encountered were in Mexico. Maybe they were more authentic... I dunno. But the food was not good.

Seth Roberts (2011-10-20 06:47:03)

Nick, I have vastly increased the pleasure I get from tea. I just spend more money to get it. It is easy to get more expensive teas and I can afford them. It's true, it could go the other way if I couldn't afford the expensive stuff I liked.

marmolillo (2011-10-20 13:44:11)

Another reference: As blueberries go, the wild variety ("lowbush") are the rock stars. The cultivated kind ("highbush") can be planted anywhere, and grow in huge fields in places like New Jersey and Michigan. You're as likely to find either topping your cereal. Sometimes you've got these big, fat berries bobbing in your milk, and other times you'll have tiny bold nuggets on your spoon. Do a taste test someday. The cultivated ones are watery and mealy compared to the tiny wild ones—intense bursts of candy-like fruit. Once you notice the difference, you will never buy the fat ones again.

Maria Droujkova (@MariaDroujkova) (2011-10-21 05:12:34)

I quoted your post in application to mathematics education: <http://www.naturalmath.com/blog/example-spaces-hedonic/> Apparently, there are some delicious complexities there. Check out this quote from a study: "Surprisingly, induction proved from spacing, even though massing apparently created a sense of fluent learning: Participants rated massing as more effective than spacing, even after their own test performance had demonstrated the opposite."

Seth Roberts (2011-10-21 13:52:44)

Thanks, Maria. I think of using the Willat Effect to teach young children science. It is fun to make the comparisons, the results aren't obvious (e.g., how long to brew tea), and the comparisons are tiny experiments. It is mini-science.

Maria Droujkova (@MariaDroujkova) (2011-10-21 17:08:10)

There are classic (in math ed circles) experiments where kids determine which of the mixes of orange juice and water will taste more like orange juice (for example, 1:2 vs. 3:4). The classic study is done on paper, presented as symbols or diagrams, which is sort of funny, in a sad way. In the math club, we once played with making simple shakes out of milk, honey and cocoa. That was a lot of fun, and good math. Please blog if you work with kids on tea experiments - I'd like to know how it works.

Brian J. (2011-11-05 05:31:56)

Just a quick note: it seems like you're working with a taste-level instance of a broader phenomenon discussed by epistemologists: we need to see contrasts in order to see similarities. If I have a very dark blue pair of pants, I'll tend to see them as black if I wear them with a white shirt. But, if I lay out the dark blue pants against a black shirt, I'll see it as blue. Same, even with the color black itself. When I lay out blue-black against red-black against green-black, I can see the differences against each other. But, if I take one at a time and put them against white, it will be harder to see. Same with the color white!

Seth Roberts (2011-11-05 13:47:14)

Brian, that's very interesting. You write, "if I lay out the dark blue pants against a black shirt, I'll see it as blue". That sounds like an instance of seeing similarities (dark color) brings out differences (blue vs. black). Not needing to see differences in order to see similarities (which is also true). An instance of that is comparing blue-black to white brings out the similarity between blue-black and red-black (both are dark).

Jim (2011-12-01 08:11:04)

Interesting concept to apply on the spiritual level as well. Do we get used to certain thought processes that are higher in nature and therefore spoil us into keeping to those processes, therefore making us better people?

Zans (2011-12-20 15:34:23)

That sounds like an interesting observation. I wonder what's the best way of making use of it? Developing a liking for tea is good if you want to drink more tea, but at this point in my life I don't see how I would benefit from developing connoisseurship for wine, movies, or other trivial things. However, there can be certain qualities that would be very useful to develop. Developing a connoisseurship for clothing (something that most women acquire naturally through shopping) could allow one to rise in society faster. A connoisseurship in writing could allow one to become a better writer. The same could be said about speeches and any type of art or crafts. You could argue that developing a good taste in a field is necessary to advance in it (eg you need to be a connoisseur of indie films to make good indie films). But what other hidden willat effects could one exploit? Could you become a connoisseur of productivity? A connoisseur of conversations? Why not see if you could compare two days of your life to each other? In theory you could compare any two things so long as you had them side by side and were mindful of the differences. There's so much potential here, where would you even start?

Seth Roberts (2011-12-20 16:54:03)

The same could be said about speeches and any type of art or crafts. You could argue that developing a good taste in a field is necessary to advance in it (eg you need to be a connoisseur of indie films to make good indie films).

Yes, good point. A friend of mine suggested that musicians be trained by being exposed to side-by-side versions of the same piece. His underlying idea was the same as yours. I like your generalization of it.

Mark Milley (2012-02-21 08:40:04)

Do you believe this study counters your hypothesis? If not, how do you feel they are integrated?  
<http://www.npr.org/blogs/thesalt/2012/02/14/146874769/why-the-best-chocolate-is-the-one-you-eat-last>

Nick (2012-03-04 10:22:27)

Usually when I cook, I often ask for feedback from my wife and or other guests and compare their experiences. I try to elicit as much description as possible and try to force comparisons with past memorable shared dishes. I make small changes each time I cook mostly with substitutions and not volumes. I usually see much more changes than they do, but I also miss some observations. In a tapas I made recently my wife and her father tasted a sardine like flavor independently and without the others awareness. I didn't include any sardines but did use fish roe. Was there a genetic connection? I didn't taste sardines either. I am a foodie but forcing them to make comparisons on a regular basis has made them foodies as well. I find with non foodies in general mixing multiple brands of the same thing usually gets the response of "it's better than usual". For example mixed rice, and mixed coffee brews.

## More About The Willat Effect (2011-10-18 19:21)

[1]The Willat Effect is the hedonic change produced by side-by-side comparisons of similar products – for example, two green teas. It happens in seconds: Suddenly the differences matter more. Some versions become more pleasant, other versions less pleasant. I first noticed it with limoncello that my friend Carl Willat offered me. Here are some reactions to [2]my recent post about it:

1. [3]A Facebook comment from a friend of Carl's:

I too can confirm the existence of The Willat Effect. Example: I'll look at a coat that feels and looks great, see the price and say I can't afford this. Then I'll try another on and it's close to the first but not quite but it's also 300 dollars less. I opt for the first, spending more. Carl's taught me to never settle for second best. And he doesn't make a bad limoncello either.



Yes to both. I recently went bike shopping in Beijing. I asked a Chinese friend who makes the best bikes: Giant, she said. A Taiwanese company. I found a Giant store. I chose the model I wanted. I test-drove it. Fine, except the seat was too short. This could not be fixed, they said. I didn't like any other Giant model. I would have to buy a different make of bike. There were other bike stores nearby, all with cheaper bikes. (Giant bikes cost about 40 % more than the next most costly.) I tested a few. The cheaper bikes were clearly worse than the Giant bike: less smooth ride. Too bad for me. I chose one to buy. The problem of too-short seat remained, but the seller said he could fix it. He brought out a longer neck that could be attached to a seat. I bought the longer neck, took it to the Giant store, and got my first-choice bike. I am especially pleased how smoothly it rides. In the Giant store (franchise), there was no bargaining – the sticker price was the actual price – and the employees were standoffish. In the other stores (non-franchise), you could bargain and the employees were friendly. [4]This talk mentions the very smooth ride of a very expensive car.

2. [5]A Boing Boing post about this linked to [6]a side-by-side comparison of expensive cameras – that is, a side-by-side comparison of the pictures they take. As [7]David Scrimshaw commented, this sh\*\* is dangerous. It could make me dissatisfied with what was previously (and in other ways still is) perfectly acceptable.

3. I compared black tea steeped for 3 minutes with the same tea steeped for 5 minutes. I tasted them side by side. I have been drinking black tea for 10 years. For the first time I noticed that the 5-minute tea had a strong bitter note unnoticeable in the 3-minute tea. People had told me that if you steep black tea too long it becomes bitter. I thought they meant if you steep it for 8 minutes it becomes bitter. I routinely steeped black tea 5 minutes. I told someone about this and he said rinse the tea first. This made no sense (experienced tea drinkers rinse certain green teas, not black teas) but I tried it. I found that ten seconds of rinsing (add water, wait 10 seconds, discard water) didn't eliminate the bitterness. There was no clear difference between rinsed and unrinsed tea.

4. I agree with commenters who said I should taste my tea "blind" – not knowing the price. That's a good idea. During a tea-tasting tour of Beijing (which did not include side-by-side comparisons of similar teas and had little effect on my green tea consumption), I learned that at the wholesale level green tea leaves are priced lot by lot. The buyer tastes tea made from the tea leaves for sale and offers a price. If I notice a correlation for green tea between cost and how much I like it, it presumably reflects this earlier process. As far as I can tell in Beijing there is no advertising for different varieties of green tea. Tea stores usually sell it in bulk in identical bins. No packaging, no boasts or claims.

5. Does the effect happen because I knew the teas cost different prices? I doubt it. During the first example, with limoncello, I had no idea of the prices. The homemade limoncellos, which were not identified, had no price. I have noticed the effect [8]with YouTube videos (different covers of one song), which are free. I have done side-by-side tastings of cheeses, wines, etc., that varied greatly in price countless times. No Willat Effect, presumably because they weren't similar enough (e.g., the two wines came from different lines of grapes). But I agree it would be nice to eliminate the effect of price differences.

6. [9]Wangston commented: "More expensive things taste better because rarity is delicious." There is certainly pressure to say expensive things taste better. You/we are supposed to think that. Millions of advertisers would like us to think that. Surely the phrase the finer things in life came from an ad. Maybe ads are where the pressure comes from. In my experience, without side-by-side comparisons more expensive things usually do not taste better. For example, I have never done side-by-side comparisons of wine. And expensive wines ( \$30/bottle) taste no better than much cheaper wines ( \$10/bottle). Before I did side-by-side cheese tastings, \$30/pound cheese tasted no better than \$10/pound cheese. After side-by-side cheese tastings, only then did I notice and care about the difference. I started to pay much more for cheese. I wish I could make the cheap stuff taste better but every time (tea, cheese, orange marmalade, sake) the expensive stuff turns out to be what tastes better. Contradicting the "rational actor" assumption of economists.

7. [10]Robin Barooah commented that with experience you form a mental map of the product space. He is "something of a coffee connoisseur" and has a mental map of the coffee space. This has allowed him to enjoy less-than-the-best

coffees because they have their place and he enjoys brewing them in different ways. My limited experience entirely supports this. I have never gone far with these close comparisons. I am not a connoisseur of anything. But from my mere two weeks of close tea comparisons I feel the beginnings of a mental map. I hope, as Robin says, it will allow me to enjoy tea I can afford. In Beijing, the most expensive tea is insanely expensive – like \$1000/pound.

1. <http://blog.sethroberts.net/2011/07/08/the-willat-effect-side-by-side-comparisons-create-connoisseurs/>
2. <http://blog.sethroberts.net/2011/10/17/willat-effect-experiments-with-tea/>
3. [http://www.facebook.com/n/?benfischler%2Fposts%2F261755930527999&mid=507e1ddG209d0c13G867c26aG5b&bcode=VkghKG9i&n\\_m=carl%40carlsfinefilms.com](http://www.facebook.com/n/?benfischler%2Fposts%2F261755930527999&mid=507e1ddG209d0c13G867c26aG5b&bcode=VkghKG9i&n_m=carl%40carlsfinefilms.com)
4. [http://www.ted.com/talks/lang/eng/benjamin\\_wallace\\_on\\_the\\_price\\_of\\_happiness.html](http://www.ted.com/talks/lang/eng/benjamin_wallace_on_the_price_of_happiness.html)
5. <http://boingboing.net/2011/10/18/the-willat-effect-hedonic-change-caused-by-side-by-side-comparison-of-similar-things.html>
6. [http://boingboing.net/2011/10/18/iphone-4s-vs-canon-5d-mkii-video-comparison-side-by-side.html#disqus\\_thread](http://boingboing.net/2011/10/18/iphone-4s-vs-canon-5d-mkii-video-comparison-side-by-side.html#disqus_thread)
7. <http://blog.sethroberts.net/2011/10/17/willat-effect-experiments-with-tea/#comment-928600>
8. <http://blog.sethroberts.net/2007/05/09/my-theory-of-human-evolution-american-idol-edition/>
9. <http://blog.sethroberts.net/2011/10/17/willat-effect-experiments-with-tea/#comment-928788>
10. <http://blog.sethroberts.net/2011/10/17/willat-effect-experiments-with-tea/#comment-928626>

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dearieme (2011-10-19 04:39:13)

We've just done a gin test, in the form of G & T with a slice of lime: Gordon's vs Beefeater vs Bombay Sapphire vs Adnam's First Rate. Conclusion: We do like G & T. The choice of gin is secondary, but perhaps the Bombay Sapphire edged it. Maybe we'll compare tonics some day.

Elizabeth Molin (2011-10-19 06:12:35)

A couple of years ago we were lucky enough to be invited to a Bordeaux wine dinner (my favorite wine at that time), featuring wines that STARTED at \$85/bottle. I discovered that it would be foolish for me to spend (allowing that I could) over \$250 a bottle, because my palate could not distinguish between the wines above that price level. Up to \$250, I could taste differences; the one I liked best was not the most expensive, but close. This experiment (if I can call it that) left me with new ideas about professional wine tasters: can they REALLY tell the difference? I'm skeptical, but if they can, they have my profound respect.

David (2011-10-19 06:22:00)

I have long known of this effect, but I hadn't framed it quite this way. I have a good memory for taste, so I am able to imagine foods side by side even if sampled at different times. I have long tried to avoid even a taste of premium foodstuffs when offered to me, if I know that I will not be able to afford them after the free taste. I was happy with my cheap tea, chocolate, cheese, etc., until I tried the better versions. Now I am forced to compromise either my eating pleasure or my budget on the things where I didn't resist the taste. Now I know what my problem is called! One example where I have actually been successful to a small extent is tea. I don't order the samples of the super premium teas from my tea catalog. I could afford the sample but not the bulk, and I know that having had the sample I would probably be less satisfied with my merely premium tea.

Matt B (2011-10-19 08:48:51)

Paul Jaminet, a tea connoisseur over at Perfect Health Diet is particularly concerned about toxins in Chinese (vice Taiwanese and Japanese) teas. <http://perfecthealthdiet.com/?p=2101> Somewhere on his blog I recall seeing that he or his wife Shou-Ching

steeps tea for a minute, then discards that water and steeps again, since any toxins in the tea would be present on the surface, and that would serve to eliminate much of them.

Duncan (2011-10-19 10:14:36)

YouTube videos are free, but the reputation (assuming you have any knowledge of this) or appearance of the artist(s), the quality of the video, etc., may affect your perception of the quality of the renditions.

Jeffery Fields (2011-10-19 12:42:52)

I too have difficulty in deciphering the quality of wines. I think I may also do a type of blind tasting to understand the difference of woody, fruity, etc....Jim

marmolillo (2011-10-19 14:01:49)

A wine of 30 \$ bottle it is not expensive wine. In wine is probably where it is more difficult to appreciate the extraordinary quality of a expensive one (300 \$ and much more). Usually they are not better tasting, just unique in flavour.

Jim (2011-10-19 17:12:25)

When I was in high school, I had this experience with stereo equipment. My stereo system was great until I heard my friend's older brother's high-end stereo system. Then mine sounded like an AM radio.

Paul Sherrard (2011-10-20 14:34:03)

Seth, a question: Why are your comparisons always evaluative instead of merely descriptive? In other words, why do the differences between things always lead to the conclusion that one is BETTER than the other? I like bitter lager when it's cold out and smooth lager when it's hot. High-acidity, light-bodied coffee when I'm taking my time over it; full-bodied coffee when I'm knocking one back fast on my way to the subway. And sometimes one is just in the mood for different things. I think a side-by-side comparison has its uses, but if it's used strictly to decide "what's better" then (I suspect) a certain type of thing will always "win"—the type of thing with immediately obvious virtues, that wears its charm on the surface, as it were. The instinct to rank everything from best to worst tends to make complex things dull, in my opinion. If I may make a pretty big digression, I always feel this way when the Winter Olympics are on and the poor figure skaters have to go through hell. Figure skating is simply a far more complex thing than ski jumping or racing, and the attempt to rank performances in defiance of this fact reduces world class athletes to quivering choke machines every time.

Paul Sherrard (2011-10-20 14:36:04)

("ski jumping" above refers to distance jumping, not freestyle.)

Seth Roberts (2011-10-20 15:17:09)

Paul, you ask "Why are your comparisons always evaluative instead of merely descriptive?" It isn't "instead of"; it's "in addition to". In my experience, side-by-side comparisons increase both: I am more conscious of the differences between two things (e.g., two teas or the same tea brewed two different ways) and I care about the difference more. Why is there is a change in desirability (one of the things being compared becomes more desirable, i.e., "better") not just better knowledge of the differences? My evolutionary explanation is: So that the experience will cause action. You pay more for the "better" one or become more likely to buy it. You compare X and Y side by side, X becomes more pleasant, you buy more X. Resources flow to the makers of X. That's the evolutionary point. In the bigger economy, not just trading, I agree with you. For example, professors often rank their students based on how smart they are. Smarter being a synonym for "better". Not a good idea. As you say, a lot is lost by such a narrow descriptive system.

Jazi yechezkel zilber (2011-10-20 18:50:17)

There is reserach showing that when people see pictures of beautiful models their satisfaction and commitment to present partner declines.

Paul Sherrard (2011-10-21 07:40:23)

Thanks for elaborating! One further question: Is the "better" item always more expensive, and is the more expensive one always "better"?

Seth Roberts (2011-10-21 14:02:56)

Paul, the answers to your questions are no and no. When I brew tea, variations in brewing time and whether I wash the tea or not have made clear differences. The tea – and its price – remain the same. So far with green tea, I have only tried three varieties and within that tiny sample, yes, the more expensive is better. But there are so many green teas and some are so expensive I am sure that there is a price above which the more expensive teas are not noticeably better. In the big world of tea (not just green tea), my favorite teas have not been expensive. However, that was before I started learning from these side-by-side comparisons.

Paul Sherrard (2011-10-22 10:56:27)

This blog is so great. Thanks Seth!

Memphis Boot Camp (2012-02-03 00:22:26)

In my experience, without side-by-side comparisons more expensive things usually do not taste better. I have a good memory for taste, so I am able to imagine foods side by side even if sampled at different times. I have long tried to avoid even a taste of premium foodstuffs when offered to me, if I know that I will not be able to afford them after the free taste.

### **Crazy-Spicing Coke Machine (2011-10-20 07:05)**

Has someone been reading *The Shangri-La Diet* (2006)? In 2009, the Coca-Cola Company [1] began offering new Coke machines ([2]Coca-Cola Freestyle) that are close to what I proposed in the last chapter. They produce great diversity of flavor because you can mix many different flavors. Your soft drink, with or without sugar, can be different each time.

According to [3] this curiously-worded article, they did not get the idea from me:

The self-serve fountains – which represent a complete departure from anything The Coca-Cola Company has offered previously – were in development for more than four years prior to launching in 2010.

In *The Shangri-La Diet*, I proposed adding random flavoring to your food so that it tastes different each time. Someone named this crazy spicing. Nose-clipping is much easier but less socially-acceptable.

Thanks to Phil Alexander.

1. <http://www.popsci.com/scitech/article/2009-07/coca-cola-freestyle-most-advanced-soda-fountain-ever>

2. <http://www.coca-colafreestyle.com/>

3. <http://www.marketwatch.com/story/del-taco-tests-coca-cola-freestyler-new-touch-screen-fountain-in-12-locations-throughout-southern-california-2011-10-17>

Meegs (2011-10-20 10:51:48)

You can do this at home with sodastream as well.

Alex Chernavsky (2011-10-20 12:56:06)

Seth, do you have a sense of how much (or how little) extra spice you need to add in order to fool your system? So if I eat a bowl of plain oatmeal every day, is it enough to top it with a sprinkle of random herb/spice from the pantry, or do I really need to spice the hell out of it to get the desired effect?

James A Donald (2011-10-20 13:40:25)

I tried fairly strong spicing with random garlic, ginger, and chili. That, I think, should be strong enough for anyone, but did not seem to work. Maybe one needs a wider variety of spices.

Nancy Lebovitz (2011-10-20 14:42:09)

I suspect there's individual variation- I'm moderately inclined to seek out new flavors, and they don't make me eat less.

Seth Roberts (2011-10-20 15:28:09)

James, when I've done crazy spicing I used about six or seven spice blends (so that I wasn't already familiar with them) and randomly put two of them on my food. Alex, you need to add enough spice so that it gains a "ehh" (what is this?) taste. Hedonically neutral. "Is this food?" you should wonder. "It doesn't taste like any food I've had before."

Erica (2011-10-20 17:05:25)

I don't understand how Coke has "just" come up with this. I mean didn't everyone do this as a child. They were called Suicides... you mix any and all of the pops available in the fountain. This was in the late 80's early 90's and everyone I knew did this. :)

BlueMorrissey (2011-10-20 18:13:30)

Ha, we called them Graveyards when I was a kid in the 80's.

Alex Chernavsky (2011-10-20 19:23:42)

In college, it was called "purple Jesus punch". Everyone was required to come to the party with a bottle of some random alcoholic beverage. All the bottles were dumped into a big plastic garbage can. When you drank the punch, your face turned purple, and you said, "Jesus!".

Nancy Lebovitz (2011-10-21 09:08:50)

I think you'd be amazed at how fast I can go from hedonically neutral to "hey, that's kind of interesting". Admittedly, my recent experience was with food which had been deliberately flavored in a Korean restaurant, but one of the side dishes definitely make a fast transition from weird to pleasant.

## **Beijing Earthquake (2011-10-21 05:00)**

Last week an earthquake centered in Russia was strong enough to be noticed in Beijing. A friend of mine, a designer for Sony Ericsson, was on the 22nd floor of a 27-floor building. She felt the building sway. Everyone rushed downstairs. She was the only one carrying a laptop. Her colleagues told her she was stupid: The company owns that laptop.

dearieme (2011-10-21 07:48:23)

Long ago I knew a Postdoctoral Fellow, one of the small number who had then been let out of Red China to work/study in the West. Once he'd got the hang of things he confided to me that he'd learned the expression "civic responsibility" as a good summary of what no Chinese took seriously: they cared only for self and family. I was astonished at his courage, or foolhardiness, in saying as much to a near-stranger. (We also had an interesting conversation in the wake of his first visit to the British Museum. "Were the civilisations of Egypt and Mesopotamia as old as the museum said?" "Yes." "Then I have been lied to.")

Jack (2011-10-22 22:34:47)

I would like to know how he had been lied to. What was his country telling him of ancient civilizations?

dearieme (2011-10-23 03:59:17)

He didn't elaborate much, apart from checking with me that he understood correctly that the British did not consider themselves the descendants of the ancient Egyptians, Sumerians and whatnot. But that he'd been taught that China pretty much predated everyone at everything was presumably the gist of it - whatever it was, it left him unhappy at the history he'd been taught.

dearieme (2011-10-23 04:02:26)

Come to think of it, there must be plenty of Chinese in their mid-sixties who could, if they wished, explain why he might have been upset. My evidence is restricted to the remarks by one clever, serious-minded, reflective but perhaps naive scientist.

### Assorted Links (2011-10-22 05:55)

- [1]Interview with me on Jimmy Moore's Livin' La Vida Locarb
- [2]This article about natto helped its author win [3]a prize for best newspaper food column
- [4]great QS talk about self-measurement by John Sumser. "It all started when I quit smoking. Bad idea. Since I quit smoking in 2004, every quarter for 7 years it has rained shit on me."
- In [5]a QS talk, I compare the Quantified Self movement and the paleo movement.
- [6]Chinese high-school students in America: Not what was promised. Lack of "rigor" has benefits, as [7]I have blogged: "Dismayed by the school's [poor] college placement record, Chen considered transferring. Instead, he began to enjoy himself. Because his courses were undemanding, he had time for friends and outside interests. He took four Advanced Placement tests on his own. "I've developed my personality a lot," Chen said. "Everything turned out for the best."
- If you read The China Study by T. Colin Campbell, a pro-vegetarian book, you may remember the big role played by some casein experiments with rats. Rats that ate a low-casein (= low animal-protein) diet were supposedly in better health than rats that ate a high-casein (= high animal-protein) diet. In [8]this article Chris Masterjohn shows how misleading that was. "One thing is certain: low-protein diets depressed normal growth, increased the susceptibility to many toxins, killed toxin-exposed animals earlier, induced fatty liver, and increased the development of pre-cancerous lesions when fed during the initiation period of chemical carcinogenesis."

Thanks to Janet Chang.

1. <http://livinlavidalowcarb.com/blog/the-llvlc-show-episode-506-uk-paleo-physician-dr-sarah-myhill-and-shan-gri-la-diet-author-seth-roberts/11951>

2. <http://www.thestar.com/living/food/article/787859--sticky-stringy-and-stinky-to-some>

3. <http://www.torontolife.com/daily/daily-dish/aprons-icons/2011/10/11/jennifer-bain-wins-association-of-food-journalists-award/>
4. <http://quantifiedself.com/2011/10/john-sumser-on-symptoms-vs-causes/>
5. <http://quantifiedself.com/2011/10/seth-roberts-on-qs-paleo/>
6. <http://mobile.bloomberg.com/news/2011-10-19/chinese-lose-promise-for-52-000-as-u-s-schools-exploit-need>
7. <http://blog.sethroberts.net/2011/10/16/inside-chinese-higher-education-a-great-and-hidden-strength/>
8. <http://www.westonaprice.org/blogs/2010/09/22/the-curious-case-of-campbells-rats-does-protein-deficiency-prevent-cancer/>

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Mark (2011-10-27 05:58:29)

For more on how misleading the China Study is, you should really check out Denise Minger's analysis. <http://rawfoodsos.com/the-china-study/>

Seth Roberts (2011-10-27 14:23:13)

Mark, good point. When I read The China Study, I was more impressed by the rat experiment data than by the survey data (from China).

## **Bipolar Disorder: Good Results With Blue-Blocker Glasses (2011-10-23 05:00)**

At the Shangri-La Diet forums, [1]Anima writes:

I have been diagnosed with ADHD and Bipolar II disorder. I am also a Non-24, a chronic circadian rhythm disorder where one's body thinks a day is longer than 24 hours. . . .I've been using amber safety glasses (around \$3 in the hunting section of the sporting goods store) for [2]dark therapy. I put them on 3 hours before I want to go to sleep. They block blue light, allowing dark therapy without the dark. I also wear an eye mask while I sleep. The glasses make me look like a big weirdo, but they really work. It's easier to get to sleep, and they prevent hypomania (the milder form of mania that people with Bipolar II experience) better than any medication I have tried. It makes sense that almost anyone could benefit from them, because our ancestors were not exposed to blue light after dark.

She makes many other interesting observations, such as how she kept her cat from waking her up too early.

I don't have trouble falling asleep but this makes me wonder what effect blue-blocker glasses would have if I wore them regularly at night. Nowadays I carry them in my backpack in case I have to be exposed to fluorescent light at night, such as on the subway. Even though I avoid fluorescent light at night, I still get blue light at night from my laptop screen. I have thought it is too weak to matter because using [3]f.lux (which reddens the screen at night) made no clear difference. I can test this idea again by wearing blue-blocker glasses. I have been using a Zeo to measure my sleep, which may help me notice changes.

At Genomera, Michael Nagle and Eri Gentry are doing [4]a study of the effect of blue-blocker glasses on sleep.

1. <http://boards.sethroberts.net/index.php?topic=8193.msg104982#msg104982>

2. [http://en.wikipedia.org/wiki/Dark\\_therapy](http://en.wikipedia.org/wiki/Dark_therapy)

3. <http://stereopsis.com/flux/>

4. <http://blog.genomera.com/announcing-orange-you-sleepy-genomeras-1st-gr>

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Joseph Buchignani (2011-10-23 06:20:08)

Hey Seth, F.lux sucks. It's too weak, and there's no way to fix it. I use redshift on Linux, which is quite powerful and actually does make a difference. When I switch from redshift to F.lux on my Windows PC, my eyes hurt. I think it definitely makes a difference.

Seth Roberts (2011-10-23 07:12:54)

okay, Joseph, you've convinced me to try wearing blue-blocker glasses after 9 pm.

Valtsu (2011-10-23 13:06:53)

Hello Seth! Have you heard about this Finnish product: <http://www.valkee.com/uk/> ? They report that in one study, subjects achieved a huge symptom relief rate with that product. However, the study report hasn't been published yet. "In Valkee's CE medical device certification clinical trial, 92 % of severely depressed seasonal affective disorder (also known as 'winter blues') patients experienced total symptoms relief in 4 weeks with 8-12 minutes of bright light via ear canal [8]." The product costs a huge amount of money here in Finland. Almost two hundred euros. Hmm... I think that I should possibly try blue blockers. Are all eyeglasses with orange lenses sufficient to block the melatonin-suppressing effect of my computer screen?

Tom (2011-10-23 22:23:15)

*The product costs a huge amount of money here in Finland. Almost two hundred euros.* Why not make your own? It appears to be nothing but two high intensity LEDs and a rechargeable battery.

Stephen M (Ethesis) (2011-10-24 19:35:48)

Ok, I've got to know how she kept the cat under control. ...

Stephen M (Ethesis) (2011-10-24 19:37:02)

Other than moving his supper time. Guess I have to close off the feed the critter on demand system we use now.

Nansen (2011-10-25 13:46:52)

Seth, have you changed your belief that *incandescent* light at night is harmless (with respect to circadian rhythms)?

Seth Roberts (2011-10-25 14:35:51)

I still believe incandescent light is harmless.

Joseph Buchignani (2011-10-27 08:42:52)

After just having been woken up by a stupid blue cell phone screen, I feel even more certain about the effects. Good luck with your experiment.

Steve Mayall (2012-03-20 12:56:41)

Incandescent light will certainly affect your circadian rhythm. In fact any light source which contains a blue component will suppress melatonin production. This is due to the ganglion cells in our eyes. They are sensitive to blue light as they connect to the pineal gland. Blue light can travel through our eyelids and when it hits the ganglion cells, melatonin is suppressed and we become alert. When it's dark, melatonin production increases and we feel sleepy. You can place yourself in 'virtual darkness' by wearing blue blocking glasses. I tried a number of different pairs of sunglasses without much success and ended up making my own very cheaply. If you want to try them, google rodsnconesdotnet. I'd be grateful if people could tell me how they get on with them. Best of luck Steve



## Even More About The Willat Effect (2011-10-24 05:00)

I have had tea daily for the last ten years, ever since I discovered the Shangri-La Diet. A few weeks ago, I [1]started doing side-by-side comparisons of similar teas or the same tea prepared two ways (e.g., different brewing times). Would [2]the Willat Effect make me a tea connoisseur?

Since then I have done at least one side-by-side comparison every day. It's almost as easy as making an ordinary cup of tea and a lot more fun. These comparisons have taught me more about tea preparation than the previous ten years. I've learned:

1. The black tea I have (an Earl-Grey variant) tastes better when brewed for 3.5 minutes than 4.0 minutes.
2. The black tea tastes better when I use 1.5 grams of tea than when I use 2.0 grams of tea. (After starting these comparisons, I bought [3]a scale for weighing tea.)
3. One of the green teas I have tastes better when "rinsed" for 30 seconds before brewing 1 minute than when simply brewed for 1 minute. In China, this preference (rinse green tea before brewing) is common. I was reminded of it by [4]this comment and [5]Paul Jaminet's post about tea. Black tea is different, as [6]I noted earlier.
4. I have a caffeine-free tea blend called [7]Choco Late made of cacao husks, vanilla, and rooibos. The package says brew 5 minutes. Which is nonsense. It tastes better (fuller, more rounded) when brewed 30 minutes than when brewed 15 minutes. (I've noticed the same thing with caffeine-free chai blends. Enormous brewing times, like 60 minutes, produce much better results than short times.)
5. My most interesting discovery is when I brew Choco Late for 30 minutes it tastes so good I no longer want to sweeten it. It is pleasant enough already and sweetness would distract from the complexity, fullness, and slight bitterness. (At first I wrote "lovely complexity, fullness ...") I was shocked when I noticed this. It has never happened before.

[8]This tea-selling website mentions the Willat Effect under the heading "Do you want to be a tea connoisseur?" I hope this means the idea will spread among the fancy-food community. They have a lot to gain from better understanding of how to make people connoisseurs. Many times I have asked people in that community what makes someone a connoisseur? The usual answer is education. In my case, Willat-Effect comparisons (side-by-side comparisons of similar teas) were far more powerful than reading about tea, drinking a variety of teas, going on tea tours, going to ordinary tea tastings (where you taste a wide range of teas), and talking about tea with experts. I have been to five or six Fancy Food Shows and have visited thousands of booths. Exactly one booth offered side-by-side comparisons of similar products. It was their product made with and without a special ingredient.

Willat-Effect comparisons are mini-science. They aren't quantitative but they include three other things central to science: 1. Close comparisons. This is the essence of experimentation. 2. You don't know the answer. 3. You care about the answer.

1. <http://blog.sethroberts.net/2011/10/17/willat-effect-experiments-with-tea/>

2. <http://blog.sethroberts.net/2011/07/08/the-willat-effect-side-by-side-comparisons-create-connoisseurs/>

3. <http://www.camry.cn/products/Pocket-Scales-EHA901.htm>

4. <http://blog.sethroberts.net/2011/10/18/more-about-the-willat-effect/#comment-928868>

5. <http://perfecthealthdiet.com/?p=2101>
6. <http://blog.sethroberts.net/2011/10/18/more-about-the-willat-effect/>
7. <http://www.americantearoom.com/choco-late-no-caffeine-tea.html>
8. <http://www.tealula.com/blog/14/do-you-want-to-be-a-tea-connoisseur>

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Scott P. (2011-10-24 11:33:17)

I wonder if the rinsing is actually blunting the harshness of hot water versus doing any kind of actual rinsing? Did you rinse then let dry or at least reach room temperature again?

dearieme (2011-10-24 12:58:15)

Does it matter whether the water is hard or soft?

Jonathan Shewchuk (2011-10-25 00:09:35)

Thanks for these observations; I'll have to buy a scale and start experimenting. How do you brew the Choco Late for 30 minutes without it losing too much heat? Do you brew it in a saucepan on the stove?

Oskar Pearson (2011-10-25 01:18:02)

Hi Stray thought: My impression is that some cultures (eg: Italian) make it culturally acceptable to share dishes at the table, as their meals often consist of platters which contain numerous types of meat, cheese, bread, pickles, and so forth. I think this would thus lead to a culture-wide connoisseur effect... which is what we have in Italy, with huge numbers of specialist cheeses, wines, and so forth. Of course this is difficult to prove, but it might be quite nice to create a micro-culture of sharing food with friends and see if people become "more foodie" over time. :) Oskar

Seth Roberts (2011-10-25 12:42:15)

Oskar, yeah, maybe so. I haven't noticed the effect from eating different kinds of salami, though. It has to be two types of prosciutto, or two types of mortadella, etc.

Seth Roberts (2011-10-25 12:45:40)

Jonathan, I don't heat the Choco Late while brewing; that might be a good idea. I have brewed chai for 80 minutes keeping it warm in a microwave by using a temperature probe.

Seth Roberts (2011-10-25 12:50:18)

Scott, I just "rinse" (= soak, wait, discard hot water) and then immediately add more water.

Kirk (2011-10-25 14:55:35)

Reminds me of this quest for the perfect omelet: <http://www.gilttaste.com/stories/699-chasing-perfection> .

Ludovic Gallant (2011-12-25 20:22:36)

An interesting experiment you could try is brewing the same tea, in the same conditions (water, temperature, time) but in different teapots (by example ceramic, yixing (clay), kyusos and gaiwan). You will notice some interesting differences in the taste. PS: The water temperature makes a huge difference, make sure you never use boiling water on green or white teas. Use a 75 degrees water on Japanese green teas and white teas and a 85 degrees water on Chinese green tea.

## The Curious Case of Richard Muller (2011-10-25 05:00)

About fifteen years ago I had lunch with Richard Muller, a Berkeley professor of physics, at the Berkeley Faculty Club. He told me his theory that the "miracles" that the Bible says Jesus performed, such as changing water into wine, were magic tricks. He was writing [1]a novel about it, he said. He also said he had submitted to Science a new theory of climate change based on [2]Milankovitch cycles (cycles of changes in the Earth's distance and tilt relative to the sun). The editor liked it; the problem was getting it past the reviewers. [3]This press release shows the editor succeeded. So Muller was nice enough or curious enough to have lunch with a stranger (me) who could not possibly help him and was/is creative about big questions. He is now retired. He's had great career success, including a MacArthur Fellowship (in 1982). He's won a teaching award. A talented and decent person. (Steve McIntyre, [4]whose comment I read after I wrote this, also says good things about Muller: "one of the few people in this field I regard as a friend.")

Two years ago he started the Berkeley Earth Surface Temperature Project, devoted to improving the climate record. Fine. In March [5]I liked a talk he gave about climate change. Fine. Now he has done something astonishing. In [6]a recent Wall Street Journal article titled "The Case Against Global-Warming Skepticism" he took "skepticism about global warming" to be skepticism that the Earth has warmed recently. In it, he describes several problems with surface temperature measurements. Then he says:

Without good answers to all these complaints, global-warming skepticism seems sensible. But now let me explain why you should not be a skeptic, at least not any longer.

The vast majority of skeptics, including me, believe the Earth has warmed substantially since the Little Ice Age. That's not the issue. Here's the issue: We are skeptical that we understand why it has warmed and in particular skeptical that humans have caused recent warming. A big difference. Muller has ignored the obvious: what skeptics actually think.

Muller's view of "global warming skepticism" is so strange let me state what might be obvious. For me, and many others, there are three issues: 1. Can we trust climate models? I say no: They have never been shown to be good predictors of what they are being used to predict. The physics of clouds isn't simple or well-understood. 2. Is it unusually hot now? I say no: The Medieval Warm Period was roughly as hot or hotter. 3. Has recent warming been unusually fast? (Which is what Michael Mann's discredited Hockey Stick seemed to show.) I say no. Over the past 200 years, the temperature has increased as fast or faster at least twice. Muller's new data doesn't address any of these concerns. Whether surface temperatures are higher now than in 1950 (which is what Muller's new data shows more conclusively than before) is not a big issue.

Why did Muller misrepresent so badly what skeptics say? I don't know. Maybe he wanted to make his results seem more important than they are. Maybe he has never met a skeptic. I truly don't know. Lots of famous scientists (e.g., James Watson) have said what I consider wacky things about unverifiable stuff. But there is nothing vague or unverifiable about this. It is as if Muller had said Shanghai is the capital of China.

James Fallows, whose work I like, [7]has taken Muller seriously. Paul Krugman [8]has taken Muller seriously. Marc Morano, who runs Climate Depot, has [9]responded at length and created [10]a special Muller page. In March, Morano points out, he (Morano) complained about exactly the same thing from Muller: "Who denies that warming has taken place?" Yes. Morano links to many scientists who are displeased by what Muller has done. [11]One says, "It is not true that the Berkeley group has found relevant evidence for the core questions in the AGW debate." Yes. "Doubts about the validity of the surface temperature record constitute something like 1 % of the issues that climate skeptics as a community have ever raised." Yes.

Muller's error interests me because I can't explain it. Perhaps it illustrates how unwittingly we shape reality, as shown

in [12] a famous split-brain anecdote:

The split-brain patient had to point with his two hands at pictures of two objects corresponding to two images that he had seen on the divided screen (one with each of his two separated hemispheres). The patient's left hand [pointed] at the card with a picture of a snow shovel, because the right hemisphere, which controls this hand, [had] seen the projected image of a winter scene. [The left hemisphere had seen a picture of a chicken. When asked why he chose a shovel, the patient said (via the left hemisphere, which controls speech):] you use a shovel to clean out the chicken house.

Split-brain patients do not have more mental tricks than the rest of us. Surely we all do this. My question is: When?

Thanks to Tim Beneke.

1. <http://www.richardmuller.com/>
2. [http://en.wikipedia.org/wiki/Milankovitch\\_cycles](http://en.wikipedia.org/wiki/Milankovitch_cycles)
3. <http://www.lbl.gov/Science-Articles/archive/ice-age-sediments.html>
- 4.
5. <http://blog.sethroberts.net/2011/03/04/climate-model-predictions-and-what-happened/>
6. <http://online.wsj.com/article/SB10001424052970204422404576594872796327348.html>
7. <http://www.theatlantic.com/national/archive/2011/10/things-to-read-and-watch-this-weekend/247191/>
8. <http://krugman.blogs.nytimes.com/2011/10/21/more-people-who-cant-handle-the-truth/>
9. <http://www.climatedepot.com/a/13375/Befuddled-Warmist-Richard-Muller-Declares-Skeptics-Should-Convert-to-Believers-Because-His-Study-Shows-the-Earth-Has-Warmed-Since-the-1950s--Climate-Depot-Responds>
10. <http://climatedepot.com/s.asp?tag=muller>
11. <http://motls.blogspot.com/2011/10/berkeley-earth-recalculates-global-mean.html>
12. [http://thebrain.mcgill.ca/flash/capsules/experience\\_bleu06.html](http://thebrain.mcgill.ca/flash/capsules/experience_bleu06.html)

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Alex Chernavsky (2011-10-25 06:35:24)

Why not invite Muller to another lunch meeting, where you can ask him these questions in person?

Lemniscate (2011-10-25 07:31:27)

It's partially the protean meaning of "global warming". Does it mean simply an increase in the global mean temperature? Does it mean anthropogenic (and perhaps catastrophic) global warming? People tend to use whichever meaning serves their propaganda and publicity purposes best, even if it is deeply misleading.

Scott P. (2011-10-25 07:40:40)

What you have described is exactly what has frustrated me regarding this issue for nearly a decade.

JohnG (2011-10-25 08:32:43)

Thanks for continuing to bring lucid reasoning to this debate!

john (2011-10-25 09:22:08)

What is the wacky James Watson stuff?

Seth Roberts (2011-10-25 12:37:00)

Wacky James Watson stuff: fat people are happier than thin people. <http://www.rense.com/general2/fathappy.htm>.

Tom Fid (2011-10-25 14:03:59)

Your historic perspective may be a little thin on the question of whether any skeptics deny that any increase in temperature is occurring. I've seen a great many such claims. Here's one high profile version: August 27, 2010 (D'Aleo & Watts): SUMMARY FOR POLICY MAKERS 1. Instrumental temperature data for the pre-satellite era (1850-1980) have been so widely, systematically, and uni-directionally tampered with that it cannot be credibly asserted there has been any significant "global warming" in the 20th century. [http://scienceandpublicpolicy.org/originals/policy\\_driven\\_deception.html](http://scienceandpublicpolicy.org/originals/policy_driven_deception.html) As Lemniscale points out, the term "global warming" is ambiguous here too, but a read of the paper leaves no doubt that the authors were claiming exaggeration of the long term instrumental temperature trend.

Seth Roberts (2011-10-25 14:38:07)

Yes a small part of the overall skeptic "movement" is about the temperature record. I think it is obvious there has been plenty of warming since the Little Ice Age so I consider that a minor point.

Drewski (2011-10-25 15:32:01)

What Muller has conclusively shown is that climate scientists ARE rigorous in their work and that there is no "fudging". He has put to bed – once and for all – the ridiculous notion of a world-wide conspiracy amongst climate scientists. That is one very important hurdle now crossed.

Seth Roberts (2011-10-25 15:49:16)

Drewski, I am not saying Muller's work is unimportant. I am saying: why does he so badly misrepresent the position of skeptics? As for "world-wide conspiracy" I believe a substantial number of climate scientists (all over the world) have vastly overstated how certain we can be that humans have caused significant global warming. In this sense they have not been rigorous. I would not use the word conspiracy here but whatever word is used, Muller's new data does not change my opinion about that.

Drewski (2011-10-25 15:57:14)

Seth, you know and I know that there is a sizable percentage of skeptics who believe that the whole climate change issue is a scam encouraged and even manipulated by climate scientists out for money or control or both. It has been a distracting influence on the entire debate. Now, hopefully, that nonsense can be put in the dustbin and we can move on to more germane and important matters. Agreed?

Jonathan (2011-10-25 17:29:20)

In your list of issues, I'm surprised you left out "4. Would global warming be bad for us?" This strikes me as the least-discussed but most vulnerable of the four issues. Have there been arguments against the evidence that life flourished, and food was more plentiful, during previous warming periods?

Thomas (2011-10-25 19:26:03)

Seth Roberts said "I think it is obvious there has been plenty of warming since the Little Ice Age so I consider that a minor point." Just because you think it's obvious, doesn't mean everyone does. Just turn on Fox-News on a day of cold weather, and they will scream "where is the global warming those scientists invented". I've seen full books on the issue that deny the ice-record - or claim that weather stations are merely too close to volcanoes. Drewski said: "Now, hopefully, that nonsense can be put in the dustbin and we can move on..." Wouldn't it be nice if the world would work that way.

Christopher Meyer (2011-10-25 22:12:43)

Request: Can you write about your position on ocean acidification (or attach a link in the comments if you've already done so and I missed it)? I respect your opinion quite a lot, so I've been paying attention to what you write about Global Warming, and am trying to keep an open-mind on it. However, even if you were entirely correct that carbon pollution has not led to

an increase in temperature, that would not affect my opinion that we need to take drastic measures to reduce our carbon pollution. I feel that ocean acidification is the knock-down argument that carbon pollution is having devastating effects. Carbonic acid dissolves calcium carbonate, which is the substance of which shell-life and corals are comprised. Carbonic acid levels are steadily rising, and if they continue to do so shells will grow weak and brittle, which in turn will create an ecological catastrophe. Perhaps the reason we're not seeing as much of a temperature increase as expected is because the carbon is being removed from the atmosphere and absorbed into the ocean. But that doesn't make carbon pollution any less of a problem.

Ashish (2011-10-25 23:28:10)

The top hit for a Google search for: Fox News "global warming" includes this quote: "The planet isn't heating up, in other words." Based on my reading of the newspapers, I'd say that most (US Republican-voting) skeptics of global warming do deny the existence of global warming or any climate change. And yes, they also deny that we have anything to do with it. Because when "1000 year weather catastrophes" roll around year after year, they can just blame gay people.

dearieme (2011-10-26 07:35:05)

I find it entirely plausible that there's been global warming - like many people, I expect, I compare my experiences with my parents' in my part of the world: the notion of warming is consistent with that comparison. But ever since I first looked into Global Warming I've been baffled by the incompetence and, in my view, dishonesty displayed in even so apparently simple a task at trying to calculate a graph of mean land surface temperature versus time, with a decent stab at representing the degree of uncertainty involved. I can't say whether Muller has achieved this either - for a start, I suspect him of having used surface "measurements" that are not measurements at all, having been pre-fudged. Anyway, I'll have to wait for his stuff to be published and then, if I can summon the effort, have a look at it. I have already seen a couple of criticisms that argue that he hasn't remotely achieved what I referred to as "a decent stab at representing the degree of uncertainty involved".

Drewski (2011-10-26 17:30:34)

dearieme says that Muller's measurements may have been "pre-fudged" - and the beat goes on.

dearieme (2011-10-27 06:04:24)

As I understand it (and I'm open to correction) Muller used the usual land surface data, which is undoubtedly pre-fudged, or as the climate scientists like to put it, "adjusted". (Surely no-one denies that it's been "adjusted" - the adjusters boast of their efforts.) So I am still left in the preposterous situation that I find it entirely plausible that the world has warmed since, for example, my parents' childhoods in the 1920s, but I cannot gauge how much it has warmed because no-one has managed to publish a graph that uses un-fudged data, and includes a decent estimate of the uncertainties in the results. This is, I have to say, scandalous. Millions upon millions have been spent, and still there's nothing competent and trustworthy. Why the climate scientists behave like such berks I don't know - do they believe that the warming is so small and uncertain that they need to lie about it? Is doing a decent statistical analysis beyond their intellectual level?

Drewski (2011-10-27 08:13:31)

dearieme, the whole point of the BEST study was to revisit the RAW data with complete openness and to make this data available to any and everyone who wishes to crunch the numbers themselves. BEST used new methodology, a world-class team of climate scientists and statisticians (including the famed skeptic Judith Curry) and looked specifically into areas (such as UHI) that other skeptics deemed to be ignored by NASA, NOAA and HadCRU. BEST also increased the sampling by 5 fold (39,000+ stations) and compiled 1.2 billion (with a 'B') data points. Statistically speaking, getting 4 independent temperature reconstructions (5, if you want to count Anthony Watts' Surface station study) to be so closely aligned based on false data would be like flipping a coin and getting "heads" five hundred times in a row. Your use of the terms "pre-fudged" and "un-fudged" is nothing more than gobbledygook.

dearieme (2011-10-27 11:18:26)

And the representation of uncertainty?

dearieme (2011-10-27 12:22:20)

Here's Matt Briggs on the uncertainty. "BEST's estimates of uncertainty are too narrow. That is, BEST is too sure of themselves. By how much they are uncertain, there is disagreement. There is strong evidence that their certainty is off by at least a factor of two. That is, BEST should at least double its uncertainty, which means we should have even less confidence in what happened in the past. Which means we are still unsure—we may always be unsure—exactly what the temperature was prior to about 1940. We may be sure what it was at a few individual land stations, but we will probably remain unsure what the temperature was averaged over all land surfaces. This is likely a case of scientific tough luck. If only our ancestors had thought to measure temperature most assiduously, we wouldn't be in this boat." For Doug Keenan's view, there's this <http://www.informath.org/apprise/a5700.htm> As for our other differences, I suppose I'll just have to wait until the papers are published and read them and the criticisms that will presumably appear. I'll be particularly interested in Steve McIntyre's, who obviously has no animus towards Muller but is properly sceptical of any data analysis put before him.

Drewski (2011-10-27 21:45:54)

Before I comment on the uncertainties or error bars, lets agree that climate scientists involved in temperature reconstructions are above reproach and that they are both honourable and scrupulous in their work. Agreed?

dearieme (2011-10-28 05:36:28)

Don't be daft.

Drewski (2011-10-28 08:42:32)

Don't be disingenuous and pretend you want a proper discussion. You have just been presented with a 5th temperature reconstruction that so closely matches the other 4 that it would be next to impossible for any of them to have been "fudged", "pre-fudged" or "un-fudged" – statistically speaking of course. Therefore, you must either trust the data and how it was collected or you don't trust statistics. Which is it? You have not even a hint of a shred of a whiff of impropriety by any scientist involved with temperature stations and yet you choose to continue the charade. You, my dearieme, have an agenda and honesty doesn't enter in to it.

dearieme (2011-10-28 09:44:01)

Of course I have an effing "agenda". I think the climate scientists are largely a bunch of duds who made silly, hubristic claims in the early days and since then that many of them have been dishonest as a way of defending their positions. But that's not the point here. This is the one bit of the whole field that the Global Warming hysterics and the sceptics needn't disagree on, namely that it has (probably) got warmer. My complaint is specific: they still haven't been able to produce a convincing curve of mean surface temperature accompanied by a decent stab at its uncertainty. What the hell's the point speculating about the cause of the warming, or predicting its future course, if you can't even provide a trustworthy account of its history? It's an extraordinary failure.

Drewski (2011-10-28 10:35:30)

Moving the goal posts I see. The conversation is not about the ramifications of global warming but about about temperature reconstructions from recording stations of which there have now been 4 (5 with the American focused Surface Station study by Watts). Because they all closely align means that there is an almost statistical impossibility that any one of them could have been fudged, pre-fudged or double fudged. This logically implies that the data from NOAA, NASA, HadCRU and BEST was collected in a professional and rigorous manner. If you can't you admit that then we have nothing to talk about.

### **"We are Heroes, They are Villains": My Brilliant Students (2011-10-26 05:00)**

At Tsinghua University, which is like a Chinese MIT, I am teaching a small class (25 students) called Frontiers of Psychology. It is required of freshmen psychology majors. There are a few students from other majors. So many of my students do brilliant work that it is hard to keep track. For example, two classes ago I started having presentations (short

talks related to the reading). In the very first one, a student talked about her dysmenorrhea and self-experimentation to stop it. Later, during a discussion of how to give a talk, another (female) student said, "I could not have given such a talk." "That's a compliment, right?" I said. "I don't know," she said. Which is only to say what a radical and stunning talk it was.

For this week's class I assigned several readings, from which students chose one. [1]The shortest and most popular paper, by Joshua Knobe, a Yale professor of philosophy, was about judgments of intentionality. Knobe showed subjects various scenarios and asked them whether the side effects of a action described in the scenario should be considered intentional or not. Changing one word had a big effect. Knobe concluded that we tend to see bad side effects as intentional, good side effects as unintentional. I assigned it because the effect of changing one word was large and I liked the source of data ("Subjects were 78 people spending time in a Manhattan public park").

Here is one student's comment:

When I was in primary school, we had a very kind English teacher who was quite close to me. After she left school, she sent some photos to me and I found it a great honor to deliver them to my classmates. Later on, a math teacher got married and she gave another pupil some sweets to deliver the class. I felt unpleasant since not every student could get a sweet. I thought it unjust.

However, in both cases, photos and sweets, there weren't enough for the whole class. The only difference was who passed them out. When I did, the main issue I cared about was "I'm the one to deliver them"; in the other case, "Why can't everyone get one?"

She titled her comment "We are the Heroes, They are the Villains". Her point was that Knobe's results could be explained by the idea that we slant our judgments of others and ourselves to make them look worse and us look better – an explanation that Knobe didn't consider.

Knobe isn't the only one who didn't think of it. Other students proposed other plausible explanations. But I think the "we are heroes" explanation is quite plausible because three other students made the same point in other ways. One of them repeated a story from a test preparation book:

A teacher had a student do ten math problems on the board. Then she asked another student to describe what he saw. "Two of the answers are wrong," he said. "What about the eight correct answers?" said the teacher.

Not a true story but surely based on actual events. Another student told of the time her teacher had made her push her fellow students to exercise for an half-hour per day. The students complained to her about their loss of time. Later, however, her class had finished first in a physical competition – much better than usual. Her classmates did not give her any credit for this.

To emphasize how unobvious this idea is, here is [2]what two professors make of Knobe's results:

This asymmetry in responses between the 'harm' and 'help' scenarios, now known as the Knobe effect, provides a direct challenge to the idea of a one-way flow of judgments from the factual or non-moral domain to the moral sphere. 'These data show that the process is actually much more complex,' argues Knobe.



My students disagree. Their proposed explanations, such as the "we are heroes" idea, were not "much more complex".

I believe they have noticed a broad truth about human nature that has escaped many psychologists, not just Knobe. In [3]this excerpt from his new book, my former colleague Danny Kahneman describes what he calls "the illusion of validity": personality judgments were considered more predictive than they actually were by the people who made them. Could this be another example of "we are heroes"? The "we are heroes" idea also explains the Lake Wobegone Effect: Most people consider themselves above average. The technical name for this is [4]illusory superiority. The Wikipedia article about illusory superiority does not mention the Knobe Effect and vice-versa. In this important aspect of human nature, professors (including me) have had trouble seeing that the trees make a forest.

1. <http://pantheon.yale.edu/~jk762/Side-Effect.pdf>

2. [http://en.wikipedia.org/wiki/Joshua\\_Knobe#The\\_Knobe\\_Effect](http://en.wikipedia.org/wiki/Joshua_Knobe#The_Knobe_Effect)

3. <http://www.nytimes.com/2011/10/23/magazine/dont-blink-the-hazards-of-confidence.html?ref=magazine>

4. [http://en.wikipedia.org/wiki/Illusory\\_superiority](http://en.wikipedia.org/wiki/Illusory_superiority)

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SB (2011-10-26 06:16:52)

This reminds me of the book "Mistakes were made, but not by me". [http://www.amazon.com/Mistakes-Were-Made-But-Not/dp/0156033909/ref=sr\\_1\\_1?s=books&ie=UTF8&qid=1319634975&sr=1-1](http://www.amazon.com/Mistakes-Were-Made-But-Not/dp/0156033909/ref=sr_1_1?s=books&ie=UTF8&qid=1319634975&sr=1-1)

dearieme (2011-10-26 07:22:40)

I suppose there must be several ways of pronouncing Knobe.

Tom (2011-10-26 10:02:36)

It's fascinating that the concept wouldn't occur to psychologists. Is it too obvious to be worthy of their notice? To me, the insight is almost a truism. "Where you stand depends on where you sit." ? Nelson Mandela It may be a corollary of your idea that academics disdain simple, high-benefit research in favor of complex research of little use: Perhaps they also disdain simple, actionable conclusions in favor of complex, useless ones.

Scott P. (2011-10-26 10:16:26)

I have often thought that if we all know someone we believe to be "crazy" then surely some of us are that someone to someone else.

Åse (2011-10-26 10:20:33)

This is interesting (that it has not been noticed), because ingroup-outgroup (and how you talk about and deal with them) is very standard fare in social psychology, as is, what is called, the fundamental attribution error (which is not necessarily group based, but suggests that you give environmental excuses for yourself, and dispositional for others).

Seth Roberts (2011-10-26 13:12:43)

"Is it too obvious to be worthy of their notice?" I don't think it's obvious at all. After it is pointed out it may sound obvious. My students came up with other possible explanations of Knobe's results. Meaning the "we are heroes" explanation wasn't obvious to them.

Seth Roberts (2011-10-26 13:20:16)

SB, yeah, that book is a good source about this sort of stuff. I haven't read it but the title and range of topics covered are saying something like this is a big part of human nature.

Alex Chernavsky (2011-10-26 13:40:35)

*Mistakes Were Made (But Not by Me)* is truly excellent. I only wish I could force all my co-workers, relatives, and friends to read it, so that they might see themselves as they really are. Heh.

Nancy Lebovitz (2011-10-26 20:20:32)

So, what did she try to stop her dysmenorrhea? Did any of it work?

Seth Roberts (2011-10-27 14:24:33)

Nancy, she tried exercise and eating fruit, if I remember correctly. I forget the results, I'll ask her.

Perfect Health Diet » Around the Web; Snowy Halloween Edition (2011-10-29 15:49:15)

[...] "We are Heroes, They are Villains": a must-read tribute to his students from Seth Roberts. Also, Seth tells us that bees make more honey with kombucha. I wonder how much they would make if given other fermented beverages? [...]

jojo1490 (2012-03-16 01:15:28)

I never thought of it that way....But your students have a point, different decisions and different outlook always affect how we interpret any event that happens to us. Be it intentionally or not. We always find it hard to blame ourselves, because we always think we are right. It's really hard to look at it another way.

## **Kombucha For Bees, Man, and Woman (2011-10-27 05:00)**

Dennis Murrell calls himself a "natural beekeeper". This is one reason [1]he sprayed kombucha on his bees:

In the early spring, I grade my hives strong, average, below average, weak. This year, I sprayed the below average hives with a slightly diluted, about 30 %, solution of overly ripe kombucha. It was probably about 3 weeks old. The spraying was done incidentally, without any planning, etc., just to watch the first reaction of the bees. After spraying, the below average hives were left alone, without any more manipulation or observations. . . . Ten weeks later, I popped the covers off the below average hives and found they had a full super of honey, while all the others, even those with larger bee populations had none. I was quite surprised to say the least! And I'd had forgotten about the incidental kombucha spraying until looking at my notes a week later.

Wow. Does this presage a honey surplus? As other beekeepers follow his example? He sprayed kombucha on his bees partly because [2]he himself had found it so beneficial:

I began drinking about a cup a day. . . . I'd been afflicted with a skin ailment since my youth [psoriasis?]. There's no known cure. Modern medicine can relieve the symptoms. But the drugs used have more long term side effects that are worse than any benefits. Well, within 24 hours [of drinking kombucha], the itching associated with the irritated skin disappeared. Within three days, the slight swelling associated with the irritated skin also disappeared. Within a month, 99 % of the irritated areas disappeared. During that time, I lost joint pain that had plagued me for a decade, commercial beekeeping is rough on the back and joints. I regained full movement in my right shoulder. And a sense of wellness replaced whatever

biologically stressed out condition I thought was normal. Once you're over 50, some of the things lost along the way become more apparent. Hair texture, intestinal fortitude, urinary function, energy level, and sexual prowess all decrease. And weight increases. Using kombucha, a probiotic, has reversed my losses to that of a man 10 to 15 years younger. And I've lost some weight. Before using it, I felt old. After using it, I feel alive. . . . My wife, a nurse, was more than skeptical, she thought I'd poison myself with that ugly looking concoction. But when she saw my results, she tried it. Within a month, her joint pain completely disappeared, allowing her to get up off her knees without help or pain. And her hair has returned to the luster and thickness it had when she was in her 30's.

I gained a few pounds when I moved from Berkeley to Beijing in August. Until I read this, it hadn't occurred to me that it might be due to kombucha deprivation. (It took three weeks to brew kombucha in Beijing. I have not seen it for sale in Beijing [3]even in Western-style health food stores!) To me, the most interesting change he describes is better hair texture. Perhaps it reflects better digestion. I can't see why better immune function would improve your hair.

Thanks to Steve Hansen.

1. <http://beenatural.wordpress.com/probiotics/>
2. <http://beenatural.wordpress.com/probiotics/kombucha-experience/>
3. <http://kombuchatea.wordpress.com/faq/#comment-304>

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Maria Droujkova (@MariaDroujkova) (2011-10-27 07:38:50)

Here is a hypothesis. The hair texture probably depends on the same mechanisms that cause reduction in joint pain. Short-term hair changes depend on the excretions from the scalp. Conditioners attempt to substitute for the healthy scalp oils, but of course it's not as natural-looking as what the body can produce. So, when the body works better with its fats, that includes the substances that "oil" joints and substances that "oil" the hair.

Joseph Buchignani (2011-10-27 08:44:24)

The two things I can safely eat are starches (potatoes and rice) and lean meat. Fat is definitely out, even small amounts of it. So I think kombucha is impossible for me, even if it didn't trigger lactose intolerance. What can I ferment? How do I do it?

Joseph Buchignani (2011-10-27 08:49:29)

Oh wait... kombucha isn't milk based. Now I definitely will try it.

Alex Chernavsky (2011-10-27 09:15:59)

I've been drinking kombucha daily for about two years. I haven't noticed any health improvements – but then again, I was pretty healthy to begin with. My wife also drinks it daily, or almost-daily. She has a history of chronic indigestion, bloating, and related digestive problems. She's tried all sorts of drugs, both prescription and over-the-counter, without any success. Probiotics have not helped, either. Drinking kombucha is moderately helpful to her. The digestive problems continue but in abated form. When she misses drinking kombucha for a day or two, she notices a distinct worsening of her symptoms.

Seth Roberts (2011-10-27 13:55:47)

Maria, no doubt kombucha increases digestion of many nutrients. If one of those nutrients is omega-3, that would reduce joint pain. But I suspect kombucha reduces joint pain for the same reason bee stings (and perhaps acupuncture) are effective: introducing antigens reduces inflammation. The better hair, on the other hand, I'd guess is due to better digestion.

Tim Deagan (2011-10-27 15:44:30)

I LOVE kombucha. However, I also love good data and good science. The article Kombucha: The Manchurian Mushroom My Adventures with "The Blob" by Paul Stamets Updated July 1995 Originally published in Mushroom, The Journal, Winter 1994-95 Available at <http://www.fungi.com/info/articles/blob.html> Is amazing reading for anyone who'd like to understand the contents and challenges with repeatable kombucha. Don't get me wrong, I drink kombucha on a regular basis, but I've become much more aware of the underlying issues with it after reading this article. P.S. I found this through the amazing Wild Fermentation site (<http://www.wildfermentation.com/index.php>), another fan of live foods!

Great links for the weekend! (2011-11-25 14:04:56)

[...] I'd not come across it before and then Seth Roberts wrote a post about a guy who used it to great effect on his bees and then, with similarly impressive effects on himself and his wife. All I can find [...]

kombu (2012-02-13 15:40:41)

where did you manage to find kombucha in beijing? although i know how to say it in chinese, none of the people around me seems to know where i could find some. Thanks!!

Seth Roberts (2012-02-13 18:04:34)

I have found kombucha nowhere in Beijing. I brought some mother from America.

kombu (2012-02-13 23:55:02)

any chance you're still in beijing and we can buy you a mother?

### Assorted Links (2011-10-28 05:00)

- [1]Edward Jay Epstein's Adweek columns. [2]Epstein on James Angleton, the spy.
- [3]Indigenous fermented foods (1st 8 pages of chapter)
- [4]Did McDonald's cause a decline in violence in America?

Thanks to Navanit Arakeri and Casey Manion.

1. [http://www.adweek.com/search/apachesolr\\_search/Edward%20Jay%20Epstein](http://www.adweek.com/search/apachesolr_search/Edward%20Jay%20Epstein)
2. <http://www.scribd.com/doc/69735925/James-Jesus-Angleton-Was-He-Right-by-Edward-Jay-Epstein>
3. <http://www.wiley-vch.de/books/biotech/pdf/v09indig.pdf>
4. <http://www.lastappetite.com/did-mcdonalds-cause-the-decline-of-violence-in-america/>

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### No Cheap Remedies: A Guiding Principle of Modern Health Care (2011-10-29 05:00)

[1]I blogged earlier that a guiding principle of our health care system is first, let them get sick. Show no interest in prevention or environmental causes, thus ensuring that people will get sick and become desperate for remedies, which you (health care provider) can charge lots of money for. An example of the disinterest in prevention is that schools of public health, which do considerable prevention research, get a tiny fraction (1 %?) of the money spent on medical

schools, which never do prevention research. As they say, an ounce of prevention is worth a pound of cure – and the government and other powerful players invest exactly the opposite of what this common-sense wisdom implies. You know the term war profiteering. Modern health care is sick profiteering.

It is profiteering, not ignorance, because another guiding principle of modern health care is no cheap remedies. Along with zero interest in prevention, there is zero interest in cheap remedies, such as dietary ones. Doctors usually prescribe drugs or surgery. Both are expensive. Surely doctors are intelligent, but this principle makes them look stupid: They ignore or dismiss cheap remedies, no matter what. At Boing Boing I wrote about two examples. [2]Sarah suffered from frequent migraines. Her doctors wanted to try one drug after another and do expensive tests. No matter how useless the tests and drugs – Sarah tried 30 drugs – her doctors acted unaware of other possibilities, such as looking for environmental triggers. [3]Reid Kimball, who had Crohn's Disease, found a diet that worked. He told a UCSF doctor how well it worked. I don't think you can manage Crohn's with diet, said the doctor. As if he hadn't understood what Reid had said.

[4]My self-experimentation is a reaction to this state of affairs. It is a way to test cheap remedies. I started self-experimentation about sleep (I woke up too early) because I knew a doctor would simply prescribe a drug. I didn't want to take a drug for the rest of my life. You cannot easily do self-experimentation on prevention (e.g., compare how many colds you get with Regimen A versus Regimen B) but, no surprise, there is great overlap between cheap remedies and prevention. I found various cheap safe ways to sleep better – and [5]I stopped getting colds. Not only does omega-3 make my brain work better, it [6]prevents gum disease. I eat butter to make my brain work better, and [7]I suspect it prevents heart attacks. What's that? Someone told you butter is evil? That's another consequence of our deeply messed-up health care system: When the people at the center of the system, the ones with the most power and prestige, promote twisted self-serving ideas (e.g., Harvard psychiatry professor Joseph Biederman and his advocacy of giving powerful drugs to six-year-olds), these ideas spread outward to everyone else, who believe and repeat them. I was no different. When my self-experimentation starting reaching conclusions utterly different than what I'd been told (e.g., I found that [8]breakfast is bad and sugar can cause weight loss, I was stunned. I'd heard a thousand times that breakfast is good and sugar is fattening.

[9]Gatekeeper syndrome.

1. <http://blog.sethroberts.net/2011/09/18/first-let-them-get-sick/>
2. <http://boingboing.net/2011/07/25/finding-the-source-of-migraines-and-fifty-useless-migraine-drugs.html>
3. <http://boingboing.net/2011/10/10/seth-roberts-grandmother-knows-best-about-crohns-disease.html>
4. <http://escholarship.org/uc/item/2xc2h866>
5. <http://escholarship.org/uc/item/2xc2h866>
6. <http://blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>
7. <http://blog.sethroberts.net/2011/08/04/how-rare-my-heart-scan-improvement/>
8. <http://escholarship.org/uc/item/2xc2h866>
9. <http://blog.sethroberts.net/2009/11/17/gatekeeper-syndrome/>

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dearieme (2011-10-29 07:03:43)

I don't know whether breakfast is bad, but I suspect that large glasses of fruit juice at breakfast time might not be a good idea for everyone. Anyway, can "breakfast is bad" possibly be right for everyone, and irrespective of what they eat for breakfast?

jpb (2011-10-29 07:48:12)

Very good post, Seth! I wrote a guest post for KevinMD on the problems with the pharmaceutical industry. I did a lot of research and wrote a serious piece which outlined the abuses of the industry and ways to make it better. Kevin declined to publish it without giving any reason. I think that the medical industry as a whole does not want to make any changes that will cause anyone to earn less money. They certainly do not want a healthy population!

Alex Chernavsky (2011-10-29 08:01:59)

@jpb – why not post your essay here (or post a link to it, if it's long)?

Seth Roberts (2011-10-29 12:53:36)

"Can 'breakfast is bad' possibly be right for everyone?" Yes. Assuming that everyone has 24-hour access to food. The phenomenon I uncovered (anticipatory awakening) is merely an example in humans of something that has been found in a wide range of other mammals – for example, rats. Rats become more active at the time of day food is available. The phenomenon occurs with protein, fat, and carbohydrate sources of calories. If you eat a breakfast with no calories, you can avoid the problem I uncovered. I drink calorie-free tea early in the morning.

Ashish (2011-10-29 14:38:53)

I don't think the guiding principle you mention need be absolute. As an advocate of barefoot (less to buy) running, I'm trying to identify groups with a financial incentive in prevention - they do exist. Those who sell drugs and devices, or provide healthcare, generally don't benefit from providing prevention. Long-term insurers, on the other hand, do. Kaiser has many "cradle-to-grave" clients, so benefits from cost-effective prevention. I'm in contact with them. The US military does as well - they don't want their soldiers to get injured on duty, and they provide lifetime health care, so are on the hook to pay for long-term health issues. I'm meeting them as well. Who else?

Tom (2011-10-29 15:11:16)

The ultimate expression of this may be converting common nutrients into patentable forms: [1]Lead to Gold: Transforming Nutritional Supplements into Medications

1. <http://www.trackyourplaque.com/blog/2009/01/lead-to-gold-the-alchemy-of-transforming-nutritional-supplement-to-medication.html>

Seth Roberts (2011-10-29 15:37:17)

Ashish, yeah, absolutely. The practical implication of what I am saying is simple: Empower those who benefit from prevention and cheap remedies. Which is everyone outside the current system, plus a few groups inside it, such as insurers.

Seth Roberts (2011-10-29 15:42:28)

I agree with Alex. Post it here or post a link to it.

TomGinTX (2011-10-29 17:55:32)

Seth, can you explain further about breakfast being bad for everyone? I eat breakfast regularly, but I do not wake up early.

LemmusLemmus (2011-10-29 23:10:04)

What TomGinTX said.

Seth Roberts (2011-10-29 23:41:36)

You eat breakfast and don't wake up early? If you stop eating breakfast (or delay it by three hours) you might wake up more rested. (The effect of eating breakfast takes about a week to go away.) Again, research about anticipatory activity – the diversity of animals in which it's been observed – implies that what I found is true for everyone. There are thousands of examples where something like this (observed in a wide range of animals and a few humans) has turned out to be true for all humans. I don't know of a single exception. Another way to think about it is to consider the correlation between the DNA of

one human and the DNA of another human. Very very high.

Digby (2011-10-30 03:11:08)

I have reservations about your breakfast ideas, and serious problems with sugar as we get it the majority of diets–yours excepted. I was just rereading an Upton Sinclair article from the 1920s, he was also a famous self-experimenter, and his comments about the medical professionals as mainly interested in keeping their profession from financial loss due to simple, low- or no-cost remedies mirrors your own. So little had changed.

jpb (2011-10-30 08:27:13)

1. I would be happy to send my article if I had an email address. Where do I find it on your site? 2. Not so sure about the breakfast being bad for all. I think it has something to do with what you eat and how long after awakening.

Seth Roberts (2011-10-30 12:52:26)

Digby, could you provide a link or reference to the article by Sinclair that you mention?

Seth Roberts (2011-10-30 12:55:26)

jpb, could you post your article as a comment? or as several comments? To contact me see "Contact Seth" on the right side of this blog.

Seth Roberts (2011-10-30 13:15:57)

jpb, you can simply post your article as one or more comments. You can find my email address under Contact.

TomGinTX (2011-10-30 14:17:31)

Seth, I will give no-breakfast a try eventually. I just started eating food while pinching my nose shut. I want to see how that works before experimenting with something else.

jpb (2011-10-31 12:03:38)

I needed to do some more editing but will send this evening.

Paul Sherrard (2011-10-31 17:48:17)

Re the "breakfast is bad" thing: I eat breakfast, but don't wake up too early. Is there another reason to stop eating breakfast?

Seth Roberts (2011-11-02 03:20:46)

"Is there another reason to stop eating breakfast?" Yes, you might wake up feeling more rested.

Mike Ellwood (2011-11-02 08:03:23)

FWIW, the "no breakfast" approach would contradict Dr Jack Kruse's idea of a "Leptin Fix", part of which involves eating a breakfast including at least 50 grammes of protein within half an hour of waking. Of course, not everyone has a leptin issue that needs fixing.

## **E-Cat Passes Test (2011-10-30 05:00)**

[1]Andrea Rossi, an Italian inventor, has constructed a version of [2]his E-Cat invention – a new source of energy – that produces 1 gigawatt/hour. [3]A test to verify this claim satisfied an unknown customer, who bought the device. This is easily the most impressive physics/chemistry news of my lifetime. It remains to be determined how long the device can run on a given amount of fuel (supposedly the fuel is cheap), but the evidence that a new source of energy has been found is much better (in my eyes) than anything else I have ever heard. The (previous) evidence for cold

fusion, for example, never came anywhere close to this. (More I learned more after writing this and no longer take E-Cat seriously. For details see end of post.)

The recent BBC documentary Shock and Awe: The Story of Electricity (great, by the way) tells of one big misleading demonstration: Edison's demonstration of direct current near Wall Street. As everyone knows, the world uses alternating current, not direct current. But Edison's demonstration was far less astonishing than Rossi's. Edison's misleading demonstration was no engineering miracle. It was just costly. Again and again, the documentary tells of inventions and demonstrations that appeared miraculous (the battery, wireless transmission) based on the common knowledge of the time. They turned out to predict the future.

[4]According to Wikipedia, Rossi has a doctorate from Kensington University, California, [5]a diploma mill. His nonsense-doctorate is in chemical engineering. His discovery is not chemical engineering. But who better than me to ignore this? My doctoral degree, although real, came from research on animal learning, which is quite different than weight control, mood, sleep, nutrition, all the stuff I claim to have learned new things about. And now I am commenting on physics! What I have learned from my experience of science is that major discoveries require knowledge and freedom – freedom to try a thousand things. It appears that Rossi – who wasn't a professor at a major university, worrying about his next grant – had both.

More Stop the presses! Having read [6]this and [7]this (thanks, expedient), I have much greater doubts about Rossi's claims and would not have written this post had I read them earlier.

1. [http://en.wikipedia.org/wiki/Andrea\\_Rossi\\_%28entrepreneur%29](http://en.wikipedia.org/wiki/Andrea_Rossi_%28entrepreneur%29)
2. <http://www.nyteknik.se/taggar/?tag=Cold+Fusion>
3. [http://www.nyteknik.se/nyheter/energi\\_miljo/energi/article3303682.ece](http://www.nyteknik.se/nyheter/energi_miljo/energi/article3303682.ece)
4. [http://en.wikipedia.org/wiki/Andrea\\_Rossi\\_%28entrepreneur%29](http://en.wikipedia.org/wiki/Andrea_Rossi_%28entrepreneur%29)
5. [http://articles.latimes.com/1996-04-23/local/me-61657\\_1\\_kensington-university](http://articles.latimes.com/1996-04-23/local/me-61657_1_kensington-university)
6. <http://blog.newenergytimes.com/2011/10/30/noble-aspirations-are-not-enough/>
7. <http://blog.newenergytimes.com/2011/10/28/energy-catalzyer-extraordinary-scams-require-extraordinary-claims/>

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expedient (2011-10-30 06:00:17)

Steady on there. Steven Krivit, the most prominent LENR advocate/journalist these days, soured on Rossi with a vengeance some months ago <http://newenergytimes.com/v2/news/2011/37/NET370.shtml> and reports some odd things about this latest news too: <http://blog.newenergytimes.com/2011/10/30/noble-aspirations-are-not-enough/>.

jon k (2011-10-30 06:28:57)

Your blog posted excited me greatly. Unfortunately, after doing a bit of reading, I am pretty sure Rossi's device is a scam. Several reasons, but this Quote from Wiki is a good start: As Ny Teknik reports, Peter Ekström, lecturer at the Department of Nuclear Physics at Lund University in Sweden, concluded, "I am convinced that the whole story is one big scam, and that it will be revealed in less than one year." [34][24] He cites the unlikelihood of a chemical reaction being strong enough to overcome the Coulomb barrier, the lack of gamma rays, the lack of explanation for the origin of the extra energy, the lack of the expected



radioactivity after fusing a proton with  $^{58}\text{Ni}$ , the unexplained occurrence of 11 % iron in the spent fuel, the 10 % copper in the spent fuel strangely having the same isotopic ratios as natural copper, and the lack of any unstable copper isotope in the spent fuel as if the reactor only produced stable isotopes.[34] He later added in New Energy Times that the steam velocity in a videotaped test appears to be way too low for the reported energy production, and that some liquid water might be exiting the system via the drainage tube.[35]

Michael (2011-10-30 07:29:01)

The very act of getting a diploma from a diploma mill is a red flag.

gwern (2011-10-30 07:51:52)

What probability do you give Rossi not being a fraud?

James Babcock (2011-10-30 08:22:40)

Endorsing this scam seriously damages your credibility. If there were something useful here, its creator would either avoid talking it up to the press, or would provide details. The only reason for not discussing details would be if he knew that someone would take those details and use them to write up an explanation of why the idea won't work. As for what the actual mechanism is, it could be any exothermic chemical reaction. But, in order for it to actually be useful, it would have to use inputs that can be gathered in quantity from nature, without using more energy to mine/refine them than is produced in the reaction. If this isn't a scam, then it's almost certainly a confused person who's failed to grasp this point, and used a chemical input without knowing how much energy it took to gather or produce in the first place. As for academic credentials, I think it makes sense to look at it from a Bayesian perspective: how likely is it that a piece of research is good, conditional on its author having a relevant degree, an irrelevant degree, no degree, or a fake degree? This depends on the amounts of valid and invalid research produced by each group. Your point that the good-to-bad research ratio isn't significantly better for people with relevant degrees than for people with an irrelevant degree or no degree is well taken. The existence of good research by people without relevant degrees is explained by people wanting to do research but not wanting to pay the high cost of getting one. But a fake degree is something else entirely, because someone who just wanted to do research wouldn't bother; they'd rather be uncredentialed. Which makes having a fake degree strong evidence against someone being credible, in a way that lacking a degree isn't.

Bob (2011-10-30 11:39:08)

Very, very high probability of fraud: <http://motls.blogspot.com/2011/10/wuwt-f-orbes-wired-keep-on-pushing-cold.html> #more

Igor Carron (2011-10-30 12:34:39)

Seth, When reading the summary I noticed a mention that the device was still hooked up to the grid with the assurance that no electricity was going through the cables. Why, oh why, would somebody trying to convince some customer of the validity of their claim allow any type of doubt to remain by leaving a cable hooked up to this machine is beyond me... And a red flag. Cheers, Igor

Seth Roberts (2011-10-30 12:50:14)

After reading the Krivit post (from expedient) my estimated probability that this is real went way way down – from about 20 % (when I wrote this post) to about 1 %.

dearieme (2011-10-30 16:48:52)

"that produces 1 gigawatt/hour": dear God, scam or not, that's tosh.

Alrenous (2011-10-31 04:50:39)

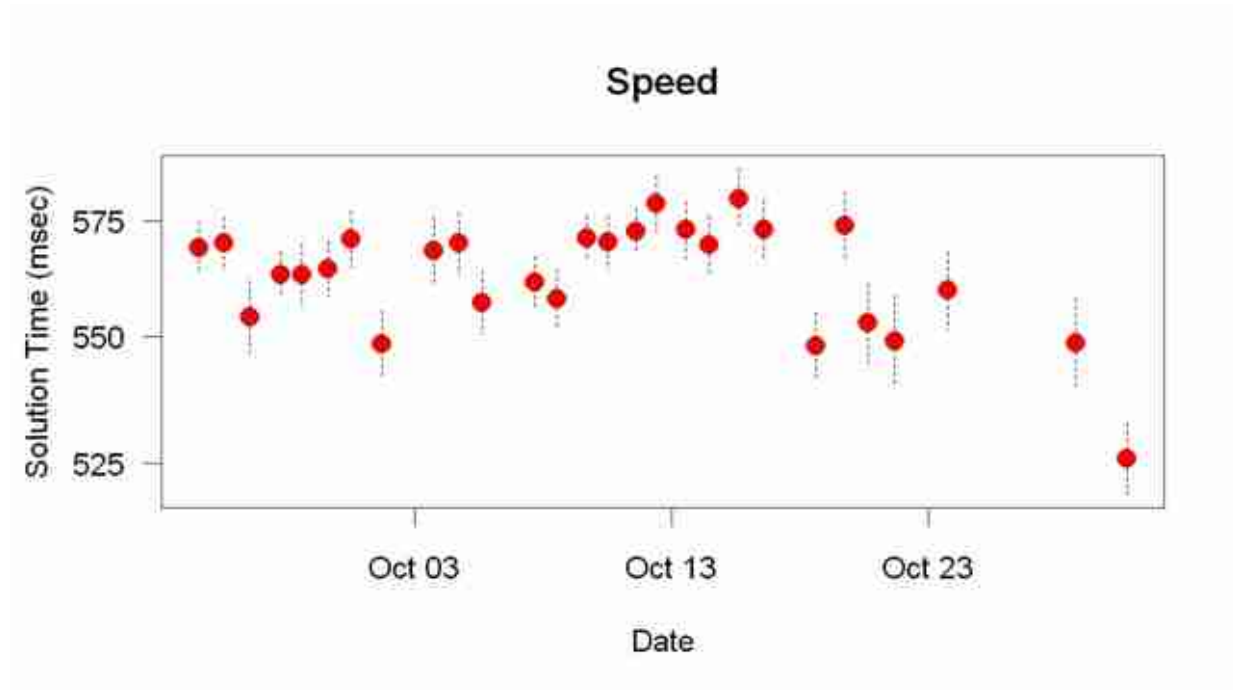
Don't forget the point is to assess things on their merits, not on their credibility. I find this a useful test case to separate out merits from red herrings, by comparing it to biological heresies. They're similar in that they're both not what Scientists would expect, but can also be reliably tested on the cheap, for the first-hand observers. (They're like NP-complete: deriving them is hard but checking the solution is easy.)

## Brain Surprise! Why Did I Do So Well? (2011-10-31 05:00)

For the last four years or so I have daily measured how well my brain is working by means of balance measurements and mental tests. For three years I have used a test of simple arithmetic (e.g,  $7 * 8$ ,  $2 + 5$ ). I try to answer as fast as possible. I take faster answers to indicate a better-functioning brain.

Yesterday my score was much better than usual. This shows what happened.

[1]



My usual average is about 550 msec or more; my score yesterday was 525 msec. An unexplained improvement of 25 msec.

What caused the improvement? I came up with a list of ways that yesterday was much different than usual, that is, was an outlier in other ways. These are possible causes. From more to less plausible:

1. I had 33 g extra flaxseed last night. (By mistake. I'm not sure about this.)
2. The test came at the perfect time after I had my afternoon yogurt with 33 g flaxseed. When I took flaxseed oil (now I eat ground flaxseed), it was clear that there was a short-term improvement for a few hours.
3. Many afternoons I eat 33 g ground flaxseed with yogurt. Yesterday I ground the afternoon flaxseed an unusually long time, making made the omega-3 more digestible.
4. I did kettlebells swings and a kettlebell walk about 2 hours before the test. These exercises are not new but usually I do them on different days. Yesterday was the first time I've done them on the same day. I'm sure ordinary walking improves performance for perhaps 30 minutes after I stop walking.
5. I had duck and miso soup a half-hour before the test. Almost never eat this.

6. I had a fermented egg ("thousand-year-old egg") at noon. I rarely eat them.

7. I had peanuts with my yogurt and ground flaxseed. Peanuts alone seem to have no effect. Perhaps something in the peanuts improves digestion of the omega-3 in the flaxseed.

8. I started watching faces at 7 am that morning instead of 6:30 am or earlier.

Here are eight ideas to test. Perhaps one or two will turn out to be important. Perhaps none will.

After I made this list, I read student papers. The assignment was to comment on a research article. One of the articles was about the effect of holding a warm versus cold coffee cup. Holding a warm coffee cup makes you act "warmer," said the article. Commenting on this, a student said she thought it was ridiculous until she remembered going to the barber. She sees the person who washes her hair (in warm water) as friendly, the barber as cold. Maybe this is due to the warm water used to wash her hair, she noted. This made me realize another unusual feature of yesterday: I had washed my hair in warm water longer than usual. I think I did it at least 30 minutes before the arithmetic test but I'm not sure. In any case, here is another idea to test. [2] I found earlier that cold showers slowed down my arithmetic speed.

This illustrates a big advantage of personal science (science done for personal gain) over professional science (science done because it's your job): The random variation in my life may suggest plausible new ideas. As far as I can tell, professional scientists have learned almost nothing about practical ways to make your brain work better. You can find many lists of "brain food" on the internet. Inevitably the evidence is weak. I'd be surprised if any of them helped more than a tiny amount (in my test, a few msec). The real brain foods, in my experience, are butter and omega-3. Perhaps my tests will merely confirm the value of omega-3 (Explanations 1-3). But perhaps not (Explanations 4-8 and head heating).

1. <http://blog.sethroberts.net/wp-content/uploads/2011/10/2011-10-30-arithmetic-outlier-day2.jpeg>

2. <http://blog.sethroberts.net/2011/01/05/does-shower-temperature-affect-brain-speed/>

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Maria Droujkova (@MariaDroujkova) (2011-10-31 06:17:08)

I sometimes suggest to my math students they hold their hands under hot water for a while. This is a folk remedy against headaches, but it also helps you relax (that's the reason I suggest it - math anxiety) and seems to have an effect on blood pressure. It would be interesting to try it as an intervention. What is frustrating to me, as an instructional designer, is that changing curriculum often has smaller effects compared to physiological interventions like food, or sitting on an exercise ball rather than a chair. Argh!

ajb (2011-10-31 08:16:37)

Butter in specific, or cream in general?

Thomas Johnson (2011-10-31 12:12:47)

Seth, I have a question about your test. I think that the one at Genomera is identical to the one you use, correct? If so, my understanding is that the test does not count incorrect answers when calculating average speed. So if you answer 8 questions correctly before you answer 32 questions right, you use only the response time for those 32 questions to determine your brain function. But what if a faster speed sometimes indicates poorer brain functioning? For example, let's say that you're getting many "hard" questions (e.g., "13-7") wrong, so your results are biased towards easy questions (e.g., "8-8"). Even if your brain

is functioning poorly, you will be very fast at those easy questions. So because of this sampling bias, your test may actually give backwards results in some cases. I also use the genomera test, so I'm curious about your thoughts on this.

Brian (2011-10-31 12:39:02)

I use the 20-question quiz (addition, subtraction, and multiplication) from the Brain Tuner Lite iPhone app. The quiz involves pressing either a "right" button or a separate "wrong" button to say whether a given simple math equation is wrong or right. Since the app adds five second penalties for each wrong answer, it would seem to avoid the problem @Thomas describes. I perform several tests in succession to measure my cognitive functioning so that I can avoid the problem of an unusually easy batch of questions suggesting improved cognitive function. For example, following the addition of bulletproof coffee to my diet and 20 minutes of dual n-back training to my daily routine, I decreased my speed from an average of just over 600 msec/problem to an average of under 575 msec/problem. Interestingly enough, this increase happened notwithstanding 30 minutes daily of icepacks on the back of my neck and on my trapezis prior to bed (for weight loss purposes as described by Tim Ferriss).

Seth Roberts (2011-10-31 14:50:54)

Ajb, I have not varied the amount of cream I consume. I drink a little bit of cream during the day. I suppose butter and cream will have the same effect, but I have not tested that idea. At first I would use only one brand of butter but now I am sure that many brands produce the benefit.

Seth Roberts (2011-10-31 15:00:40)

Thomas, the Genomera test is very similar to mine, yes. And, yes, I count only correct answers. About the possibility of bias: 1. Variation in error rates is a problem, yes. But I have found wide variation in error rate to be uncorrelated with average speed. There is no clear speed-accuracy tradeoff. 2. I correct for difficulty. Before averaging across trials, the score on every trial (in msec) is adjusted by the difficulty of that trial. Suppose the trial was  $7+3$ . If  $7+3$  is on average 50 msec slower than average, the score on a  $7+3$  trial has 50 msec subtracted before I average over trials. Because of this adjustment, it is no help to get the hard questions wrong so that your score will be based only on easy questions.

jon k (2011-10-31 19:59:25)

I would have thought that this was within the normal variation for this kind of test. Some factors that maybe you didn't think of/account for: hours of sleep the previous night, time the test was taken (in hours after waking, and hour of day), time spent doing analytical things (research, writing, reading) the day before, time spent socializing the day before. Also, do you have a link for the software to run this test? I'd be interested in tracking my own results.

Tom (2011-10-31 23:23:46)

Seth, off-topic, but along the lines of one of your interests: "The New Einsteins Will Be Scientists Who Share From cancer to cosmology, researchers could race ahead by working together—online and in the open" [http://online.wsj.com/article/SB10001424-052970204644504576653573191370088.htm?mod=googlenews\\_wsj](http://online.wsj.com/article/SB10001424-052970204644504576653573191370088.htm?mod=googlenews_wsj)

dearieme (2011-11-01 05:44:24)

O/T but I thought that this might interest you. [http://www.dutchnews.nl/news/archives/2011/10/tilburg\\_professor\\_faked\\_data\\_i.php](http://www.dutchnews.nl/news/archives/2011/10/tilburg_professor_faked_data_i.php) (H/T Naked Capitalism)

Jazi yechezkel zilber (2011-11-02 19:40:04)

Two variations on flaxseed and yogurt 1) i noticed that the ground seeds are dry when mixed with yogurt. I usually out them first in a little water, and then add yogurt. 2) if left in water for ten or five minutes, it gets a whole different texture and feels different. May chAnge avilability and digestion Now, I noticed that long grinding makes the ground very hot. With probably effects. Ps. When i eat flaxseed and yogurt at night i sleep very. Well. Such a sweet wake up that I rarely had.

## 6.11 November

### Assorted Links (2011-11-01 12:46)

- In 1910, Abraham Flexnor [1]anticipated my complaint that [2]modern health care is sick profiteering. "The overwhelming importance of preventive medicine." Flexnor, who was not a medical doctor, had a big effect on American medical schools.
- [3]Vitamin E supplements linked to prostate cancer.
- [4]A website of home remedies. Apple cider vinegar = poor man's kombucha.
- [5]You mean a messy room doesn't make people aggressive? Dutch academic fraud.

Thanks to Brent Pottenger, Phil Alexander, dearime, and Casey Manion.

1. <http://books.google.com/books?id=3cM8jVGr4qEC&lpq=PA329&ots=xONIQdhT9A&dq=The%20overwhelming%20importance%20of%20preventive%20medicine%2C%20%20sanitation%2C%20%26%20public%20health%20%20indicates%20that%20in%20modern%20life%20the%20%20medical%20profession%20is%20an%20organ%20%20differentiated%20by%20society%20for%20its%20%20own%20highest%20purposes%2C%20not%20a%20%20business%20to%20be%20exploited%20by%20%20individuals%20according%20to%20their%20%20own%20fancy.%20%E2%80%93%20Abraham%20F&pg=PA329#v=snippet&q=flexner%20preventive&f=false>
2. <http://blog.sethroberts.net/2011/10/29/no-cheap-remedies/>
3. <http://www.fool.com/investing/general/2011/10/28/supplement-makers-choke-with-vitamin-e-tied-to-pro.aspx>
4. <http://www.earthclinic.com/>
5. [http://www.dutchnews.nl/news/archives/2011/10/tilburg\\_professor\\_faked\\_data\\_i.php](http://www.dutchnews.nl/news/archives/2011/10/tilburg_professor_faked_data_i.php)

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Erica (2011-11-01 15:40:55)

I love Earth Clinic. I do have a question about Kombucha. I've only seen it at Whole Foods even tried it a couple times. I was wondering if you think that Kombucha is good enough. When I googled it I found people making their own and was wondering if you make your own or buy it somewhere? Do you think if I just bought it at whole foods it would be just as good as making it? Also, how much should I drink a day would you suggest? The bottles from WF are pretty large.. like at least 20oz I think.

Seth Roberts (2011-11-02 03:17:54)

yes, Whole Foods kombucha is good enough. I prefer to make my own, partly because it tastes better and partly because it's much cheaper (the ingredients are practically free) and more convenient. Try half a bottle per day. That might be enough to notice benefits.

Åse (2011-11-04 01:20:42)

Seth, I'd really like to hear your thoughts about the Stapel case. I've been talking to a lot of people both at my work, on google+ and on facebook. One thing that keeps turning up are questions about how to make science more robust (well, that is my take on the discussions about open source data, publication of direct replication), perhaps not to prevent fraud, because there will always be the temptation for some to cheat, but to limit the damage. I always appreciate what you have to say (whether or not I agree), and I know you have been involved with detecting fraud.

Seth Roberts (2011-11-04 02:30:18)

Given that Stapel supposedly faked so many papers, I would like to know if the numbers in his papers pass that distribution-of-first-digit test that has been used to detect accounting fraud. If he made them up, they should fail that test, whereas the same sort of digits from a random sample of similar papers should pass that test. That would be a way to learn to detect fraud in the future. My experience with fraud detection suggests that fraudulent data is pretty easy to notice. A good exercise would be to ask for this or that paper: How can we test whether the data in this paper are real? Perhaps now that journals are more likely to require raw data, that first-digit test can be more sensitive since it can be done on the raw data. It would be interesting to give grad students (or someone else) five papers, one by Stapel, with names removed. Five similar papers. Then ask them which is most likely to be faked. I also wonder what other researchers in his area thought of his research before the fraud was detected. Now too late to find out, I suppose.

Åse (2011-11-05 00:37:29)

Thanks Seth And, yes, it is too late, but, for what it is worth, I can give you my n=1 experience from having attempted to adapt one of Stapel's paradigms. And a kind of filtered current impression. I'm kind of peripheral when it comes to the field. I'm interested in emotion, and I was interested in modeling emotion (from a kind of dynamical systems perspective), so I ended up accepted into a joint PhD at IU [Indiana University?] where I did a lot of cog sci/math psych classes as well as social cognition. They were very accepting of my somewhat unusual position. I'm still very peripheral for various reasons. Stapel visited during my first couple of years (so this is late 90's). He gave a talk, things surrounding the talk have by now become short propositions mostly in my memory. A couple of things stand out (it will be relevant). He had done work showing that the Ebbinghaus illusion is influenced by social categories. Instead of using the regular circles, they had used line drawings which in some instances depicted people of different social status (they also used trucks). Rich Shiffrin was incredulous. Not, as I recall, in a "fake data" way, but more in a "must be a fluke" way. But the result of the visit was that my adviser, Paula Niedenthal, thought we could adapt this paradigm for investigating our interests which was how emotional state influences perception of emotional stimuli. Her former grad student got stimuli put together at his lab, and I did the actual running of subjects. We did two versions of it, and nothing panned out, which was unremarkable. I had just run 5 studies based on a promising pilot, and nothing panned out. I think all of us have experienced that (I keep thinking about your comment on your experience with rats and data). Also, we are very familiar with results that make us incredulous and are hard to replicate, etc. At the time the priming work from Bargh was something people wondered about. I've done some work on that (we tried to tease out whether the effects we see from felt emotion were from emotion or from the priming of emotion concepts which also comes with the feeling). That was 10 versions of studies, that eventually got published (and conclusion is that it is the emotion, not the priming). I was reading Stapel's paper about the Ebbinghaus work, and at that time none of it struck me as fishy. I still don't know if this was one of the papers where he faked data, I'm now simply assuming it. But I must say I was quite shocked when I heard that he had been fabricating data for a long long long time, possibly because I had done that work. I'm reading a lot of discussions about this (and I'm working on initiating a discussion at my university where I want to focus on how to make the science more robust – more to lessen the impact of the inevitable cheaters than to catch them out). Some of those that are in the middle of the field are (understandably) very defensive. Some discuss ideas about how to prevent this from happening again. Some talk about whether this is a failure of the process or not (I'm reminded of the book Plastic Fantastic). One person claims that Stapel's work wasn't that big of a deal. More flash than theory advancement. Hard to make something out of it, considering that there are myriad reasons why someone would think that now. The anecdote I told is my only encounter with his work, so take it for what it is worth.

## **Can Vitamin D Replace Sunlight? A Stunning Discovery (2011-11-02 05:00)**

[1]Primal Girl is a stay-at-home mom. I met her at the Ancestral Health Symposium. Her sleep was bad. I made recommendations. One of them was to get an hour of sunlight soon after you wake up. She can't do that – too busy being a mom. So she decided to take Vitamin D early in the morning. After all, sunlight exposure produces Vitamin D.  
[2]Here's what happened:

One day as I was taking my supplements, I was thinking about how many units of Vitamin D your skin produces in 30 minutes of sun (20,000 I believe). I looked aghast at the 10,000 units of Vitamin D I was taking. It was 7 o'clock at night! I was essentially giving my body 15 minutes worth of bright sunlight energy. No wonder I was waking up in the middle of the night! I was telling my body that it wasn't really time for bed, it was still the middle of the day. I wondered what would happen if I only took my Vitamin D first thing in the morning. It wouldn't be an hour naked in the sun, but 15 minutes is better than nothing. That night I slept like shit. Worse than normal.

I usually took my supplements mid-afternoon. I vowed to take them first thing every morning. If I forgot, I would not take the Vitamin D at all that day. I tried it the next day and that night I slept like a rock. And the next night. And the next. Days I forgot and skipped the D3, I still slept great. That was the only change I made to my lifestyle and my sleep issues completely resolved. [emphasis added]

OMG! Double OMG! Like Primal Girl, I have never heard anything like this. Even I am stunned that such a simple safe easy change could have such a positive effect. (Taking Vitamin D at sunrise is a lot easier than standing on one leg four times!) I've read lots about circadian rhythms. Many studies showed that a drug would be much more powerful at certain times of day. Most of these studies were with rats. It never occurred to me that the time you take a vitamin could matter so much.

1. <http://www.primalgirl.com/>

2. <http://www.primalgirl.com/2011/11/01/nprimalgirl-sleep-issues-vitamin-d/>

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Matt (2011-11-02 05:41:09)

I had heard of this somewhere as well, and I too don't take Vitamin D later in the day - if I forget my vitamins one morning/early afternoon then I skip the D that day. I've always tried to take my magnesium at bedtime. <http://www.nutritionalmagnesium.org/articles/insomnia/309-how-magnesium-helps-you-sleep.html>

JG (2011-11-02 05:50:13)

Chrissake man, this is so embarrassing to read early in the am - this is a revelation? With a study of ONE person? My VAST experience with D3 (many more years than "Busy Primal Momz", whatevs) does not support this theory. There...does that make you think twice about making broad generalizations? I cannot believe that this passes as science in your version of self-quantification. Where is the testing before jumping to conclusions? I know this is your blog and you're free to publish what you want, but I've seen less and less self-editing from you and more pruning to fit the message...and everything you write seems to be framed as some MASSIVE REVELATION that required your genius and eye to solve it - further positioning yourself vs. the mainstream, etc. It's clear to me that, while it's cool to rail against mainstream researchers, you have not spent any time in the lab or actually talking with QS peers and bouncing these ideas off of them. This stuff - this STUNNING REVELATION - is old weak sauce. This is not so far removed from what actual doctors know. Seriously, this is medicine 101. It's so obvious that I can't believe this is a revelation to you. HEY, DO YOU THINK THERE WILL BE SOME EFFECT IF YOU TAKE MELATONIN IN THE MORNING...of course! Let's see if you don't fall asleep! Same with Magnesium Citrate - see how long you can go without feeling sleepy. I dare you to take Melatonin and Magnesium today with your yoghurt...and when you wake up eight hours later, perhaps you can write another post about another stunning timing revelation! TRIPLE OMG! D3 is TECHNICALLY a hormone...just like MELATONIN. OF COURSE timing is everything when it comes to HORMONES. I think you're really stretching the scope of discoveries here. Please, kind sir, as an admirer of yours, I ask that you get yourself an editor. Or bounce these ideas off a REAL PRACTITIONER before you go declaring some discoveries as though you're in Mendel's company. TALK TO MORE PEOPLE. You are big and respected enough now to have to face the heat for half-digested posts.

john (2011-11-02 06:39:32)

Nephropal has mentioned this before.

Tim Beneke (2011-11-02 08:10:54)

Fascinating. I've been recently trying to reset my circadian rhythms by getting more morning sunlight. I'll add some morning Vitamin D to the mix and see what happens.... It sounds unlikely that it's just "placebo" - the effect seems pretty striking...

dearieme (2011-11-02 09:19:16)

If you breakfast on smoked salmon and scrambled eggs, or on kipper, would you get some of this effect?

gwern (2011-11-02 09:20:00)

Hm, interesting. I always take my vitamin D with my other capped pills, which include caffeine and sulbutiamine so I never take them after 7 PM. I also never noticed any effects on my sleep when I got fresh supplies on vitamin D. (I probably don't care enough to test this with my Zeo and see whether taking vitamin D right before bedtime makes a difference, though - bad sleep is nasty.)

jpb (2011-11-02 09:24:00)

That is a amazing! I never thought about the effects of taking D3 at night. I have been doing that for a long time and it always takes me hours to fall asleep. I will try the new schedule today and see how things go tonight!

Joseph Buchignani (2011-11-02 10:00:30)

You the man, Seth! And she's the woman! Thanks for the awesome tip. Never liked melatonin. This is much better. Call Tim Ferriss. He'll give you a guest post or something. He NEEDS this.

Chuck Currie (2011-11-02 10:24:46)

I always take my D3 5000 (along with 400 mg magnesium citrate) right before going to bed, but only if I don't get a good dose of natural sun exposure during the day. I have no problems with sleep either way. I sleep at least 8 hours with maybe one bathroom break and wake naturally - no alarms. I've also found that I become drowsy and fall asleep earlier if have more carbs with dinner (potato/sweet potato/rice) or a small bowl of ice cream for dessert (usually an hour or two after dinner). I have also postponed my first meal of the day for about 3 to 4 hours after awakening. I have found that I awaken later than I did when I ate 1 hour after awakening. I only eat two meals a day - usually bacon & eggs with a little sweet potato/plantain/or berries for breakfast and meat and veggies for dinner. I also have two or three glasses of cold tea with heavy cream though out the day. Plus 1/4 stick of butter and two tbls of flax oil, some souerkraut and/or kombucha. Just for reference, I'm 65, male and have been practicing a paleo/primal life style for a year and a half. I know this is a long comment on D3, but I think context is important.

Aaron Blaisdell (2011-11-02 11:37:58)

Like John, I also read about this on Neohropal blog. That's why for the past couple of years I have been taking it in the morning with my coffee.

Seth Roberts (2011-11-02 13:13:26)

"this is a revelation?" To me, yes. "required my genius...to solve it"? My contribution to this was minimal. The notion that morning sunlight might help you sleep is pretty obvious. "This is not so far removed from what actual doctors know. . . . It's so obvious." I have never heard a sleep doctor (or any doctor except Nephropal) say this. Many things that are "obvious" are wrong. The [1]Wikipedia entry for Vitamin D says nothing about time of day effects.

1. [http://en.wikipedia.org/wiki/Vitamin\\_D](http://en.wikipedia.org/wiki/Vitamin_D)

Greg Biggers (2011-11-02 13:16:16)

This is a provocative and probably helpful observation! I would love to see some people turn it into a group study over at Genomera. We (or Seth, for that matter) can help you with study design if you wish.



Seth Roberts (2011-11-02 13:27:52)

Thanks, Aaron & John. Gotta start reading Nephropal. However, there are important differences between what Nephropal said and what Paleogirl says. I will discuss this in tomorrow's post.

Seth Roberts (2011-11-02 13:29:19)

"If you breakfast on .. " No, they have little or no Vitamin D.

Rachael (2011-11-02 13:58:01)

Other supplements that will keep you up if you take them at bed time are B vitamins, and calcium. Magnesium at bed time will help you sleep. I suspect everyone has varying levels reaction to supplements, perhaps if one is replete in vit D one responds to it less?

Jazi yechezkel zilber (2011-11-02 16:22:08)

This book discusses the effects of time of time on ANYTHING! Drugs sex all you can dream of [http://www.amazon.com/Body-Clock-Guide-Better-Health/dp/0805056629/ref=sr\\_1\\_14?s=books&ie=UTF8&qid=1320275979&sr=1-14](http://www.amazon.com/Body-Clock-Guide-Better-Health/dp/0805056629/ref=sr_1_14?s=books&ie=UTF8&qid=1320275979&sr=1-14) I gained a lot from it. Because, I learned that what matters is not the exact time you wake up, but the rythm. So I started sleeping late and waking late an exact timing, which wass good.

Jazi yechezkel zilber (2011-11-02 16:35:21)

Btw, in another book of the author [http://www.amazon.com/Bodyrhythms-Chrono-biology-Performance-Lynne-Lamberg/dp/0595147852/ref=sr\\_1\\_4?s=books&ie=UTF8&qid=1320276492&sr=1-4](http://www.amazon.com/Bodyrhythms-Chrono-biology-Performance-Lynne-Lamberg/dp/0595147852/ref=sr_1_4?s=books&ie=UTF8&qid=1320276492&sr=1-4) See the chapter rythms and depression, where she says - like you - that rythm disruption and depression are ddeeply linked

Seth Roberts (2011-11-02 16:41:51)

Jazi, you have convinced me I should have titled the post Can Vitamin D Replace Sunlight? A Stunning Discovery.

Jim Purdy (2011-11-02 19:55:55)

Seth, I hope you'll forgive me for asking a very off-topic question, but at least it's about self-experimentation, sort of. I am a binge eater with type 2 diabetes, but I refuse to take any medications of any kind, not even over the counter stuff like aspirin or vitamins. (My doctors call me everything from "non-compliant" to "crazy and suicidal.") And I really struggle to get my blood sugar readings out of the stratosphere. However, something happened today that really surprised me. This morning, my blood sugar was very high (I don't want to admit how high, but it was high). And then I went on a binge, eating 30 (yeah, 30!) fast food chicken wings deep-fried in peanut oil. I checked my blood sugar several times over the next 9 hours, and my blood sugar plummeted rapidly, just as if I had taken a huge dose of insulin. Does that make any sense to you? Could chicken wings - and/or peanut oil - help control diabetes? I'm thinking about buying a bunch of plain chicken wings and microwaving them, without any oil or other ingredients. A chicken-wing binge diet for diabetes? Will I die tomorrow?

Jim Purdy (2011-11-02 19:59:23)

oops ... I think I mis-typed my email address in a comment a moment ago. The correct address is [jimpurdy1943@yahoo.com](mailto:jimpurdy1943@yahoo.com)

Seth Roberts (2011-11-03 03:36:03)

Jim, I'm afraid I have no insight about your plummeted blood sugar. I suggest seeing if you can repeat the original observation before trying to figure out what caused it. If you manage to figure anything out about the cause, please let me know.

Jim Purdy (2011-11-03 05:50:56)

Seth, I will repeat my chicken-and-peanut-oil binges ... I mean experiment ... in the name of good science. But at least one of my lacto-vegetarian sons reads your blog, so I may get a severe scolding from them (and my doctors) about my super-binges. I hope you appreciate my big sacrifice here for science. Of course, I am familiar with the Atkins Diet, and how it should have a minimal effect on blood sugar. However, my blood sugar numbers yesterday seemed to go far beyond any Atkins Diet effect that I would

have expected. The numbers, seem amazing to me, considering that I take no medications. About 1145 am yesterday, I ate the first batch of 15 chicken wings, deep-fried in peanut oil. I didn't record the other times that I ate chicken wings, but I did eat a second batch of 15 several hours later, and a third batch of 15 another few hours later. I don't know if it's relevant, but I had a can of Diet Coke with each batch of 15 wings. Yesterday, 1010 am (before any chicken wings): 347 blood sugar 1225 pm (after 15 wings): 263 350 pm: 213 650 pm 210 1005 pm: 164 (down 200 in 12 hours. despite 45 deep-fried chicken wings, and no meds) Today, 130 am: 245 (the wing effect fading?) Today, 325 am: 261. Then I drank 8 ounces of apple juice. Today, 720 am: 256 I've never seen changes of this magnitude before without medications. I will do this again, keeping more detailed records ... unless I die of a heart attack first. To do it right, I should eat the same wings deep-fried in peanut oil, but I think I'll just microwave them, with no oil or anything else. Maybe it's the peanut oil and not the chicken? I hope my cardiologists never see this. My doctors already call me crazy and suicidal because I won't take any of their drugs. Incidentally, I asked Jenny at Diabetes Update about this same experience yesterday, and she replied with some real skepticism [1]here. I will repeat this to see what happens.

1. <http://diabetesupdate.blogspot.com/2011/10/normal-blood-sugars-in-pregnancy.html>

Seth Roberts (2011-11-03 06:35:16)

If someone is scolding you about binging once or five times on deep fried chicken wings they are missing the point. I believe a much bigger problem for you is your very high blood sugar score. If you can find a way to get them way down (and keep them down) you will be helping yourself immensely. You might also want to try large amounts of walking. Perhaps tolerable amounts of walking will reduce your blood sugar substantially. I found that was true.

John W (2011-11-03 08:06:35)

Just to clarify, the D3 you take as a supplement (25-dihydroxy-vitamin D3) is NOT a technically hormone, it is a prohormone. The hormone form (1,25-dihydroxy-vitamin D3) is made from the prohormone form and is tightly regulated. Furthermore, the prohormone has a half-life of a couple of weeks. So it is, in fact, a little surprising that the dose timing can have such an effect. By the way, I noticed this myself a couple years ago - I never take vitamin D in the evening, so n>1.

Nancy Lebovitz (2011-11-03 08:45:06)

Jim, just to check- did you do a significant amount of walking before your blood sugar went down? From what I've heard, doing a lot of mild exercise can make a big difference.

nile (2011-11-03 09:25:15)

Mr. Purdy- In addition to walking, as Seth suggested, you might try, depending on your tolerance for exercise, HIIT or High Intensity Interval Training. A fair amount of research has been done on this in the last 10 years or so. Just go to pubmed (<http://www.ncbi.nlm.nih.gov/pubmed>) and you can search for HIIT studies. About 10 minutes per day of exercise above your aerobic capacity will help a lot. I think it will have the same effect as large amounts of walking. A good protocol to start is "P.A.C.E." by Dr. Al Sears. The book is poorly written but the protocol works fine. Out of shape, unconditioned individuals can use this method to get started. Start slowly and work up to 10 minutes. I think you will find your cravings for carbs and sweets will diminish with exercise - either long walking or HIIT. I hope you can get your blood sugar down. Good luck.

Jim Purdy (2011-11-03 10:19:21)

I hope Seth doesn't get upset with me for going off topic with his blog, but I really appreciate everybody's input. And, actually, I only gave a very short version of my situation. Here are a few more details: 1. THE LEG THAT HAD TO BE AMPUTATED - BUT I REFUSED In early 2010, doctors told me that my right foot had a very bad diabetic ulcer, and that the leg had to be amputated. Being non-compliant, I did not have the amputation, and I went to work on exercise, especially walking up stairs. RESULT: I still have my leg, and it has healed just fine. 2. THE HEART ATTACK THAT WAS MOMENTS AWAY AND REQUIRED QUADRUPLE BYPASSES - BUT I REFUSED In the summer of 2010, cardiologists rushed me straight to a heart hospital because they said I needed emergency quadruple bypasses for had badly blocked coronary arteries and that I could die of a heart attack at any moment. I did not have the bypasses, and I relied on exercise and diet changes. RESULT: I exercise regularly now, and I no longer have any chest pains at all. 3. THE KIDNEYS THAT WERE FAILING AND WOULD SOON NEED DIALYSIS - BUT NOW THEY ARE FINE For a few years, doctors have said my kidneys were failing and that I would eventually need dialysis unless I too lots of BigPharma chemicals. I felt that the chemicals would actually be more of a burden on my kidneys and

liver, and I didn't take any of them. RESULT: On my most recent lab work, my kidneys are just fine. 4. MY ONLY REMAINING BIG HEALTH ISSUE – MY HIGH DIABETIC BLOOD SUGARS Since all my other health issues have improved greatly with lifestyle changes, I am fully confident that the right lifestyle adjustments can control my diabetes. Interestingly, when I asked for advice from Seth Roberts and Jenny Ruhl (of Diabetes Update), they gave me very different responses. Seth recommended exercise, which is indeed what I am working on now in a brand-new exercise room in my apartment building. Jenny had only one suggestion: insulin. I 'm going to go with Seth over Jenny. Exercise has worked for our evolutionary ancestors for many millions of years, but BigPharma's injected insulin has only been around since 1921. I'll take my chances with millions of years of evolution, over 90 years of BigPharma lab products. Sorry for the distraction, Seth, but I really appreciate the input here.

Seth Roberts (2011-11-03 16:05:26)

#1-3 are great and powerful stories, Jim. I am very pleased to have them on this blog.

Matt B (2011-11-04 11:42:20)

@Jim, have you written the very long versions of your stories yet? #2, "cardiologists ...said I needed emergency quadruple bypasses for had badly blocked coronary arteries and that I could die of a heart attack at any moment" is a common refrain that could use some alternate thought.

grace (2011-11-04 19:52:21)

Hi Seth! It is my personal experience as well as observations that vitamin D in the evening disrupts awakening or sleep for some, so I generally always take it < 12-3pm unless I am sick (in which case if I am coming down with a cold, it doesn't matter and I sleep well despite the timing of the dosage). Is this story from Tara at <http://primalgirl.wordpress.com/?> The link above didn't work right for me? Jim Purdy, Awesome story and biohacking! Do you check your BGs frequently (20, 40, 60, 120 min after meals and fasting)? Protein/amino acids and their timing make profound changes on hormones, growth hormone, sex hormones, insulin/glucagon and leptin. Sounds like to me that you have lingering insulin resistance issues. Do the food cravings persist despite eating 50 grams protein in the AM + 15-30 grams carbs in the morning? Have you considered the value of 5HTP or L-tryptophan in the morning for cravings? Often these are deficient with leaky gut/intestinal permeability. Would love to hear your progress. G

Seth Roberts (2011-11-05 01:58:35)

Yes, this story is from Tara at [primalgirl.wordpress.com](http://primalgirl.wordpress.com).

Perfect Health Diet » Around the Web; Wise Traditions & CrossFit NYC Pre-Talk Edition (2011-11-05 17:44:04)

[...] Seth Roberts reports "a stunning discovery": it's better to take vitamin D in the morning. [...]

Dan (2011-11-05 20:10:17)

Vit D, when produced on the skin, is absorbed over a period of days. Hard to square that with this anecdote.

Seth Roberts (2011-11-05 21:28:34)

Dan, several others have reported that Vitamin D at night causes sleep problems. Which supports the idea that it really does affect circadian rhythms. No matter how slowly it is absorbed.

Harpoirseoul (2011-11-10 22:45:35)

Hi Seth, Thank you for your interesting blog. Myself, before going to bed I take Magnesium, and Vitamin B12. I personally find it helps me sleep well. BTW, any thoughts on sulfure? Just wondering.

Seth Roberts (2011-11-11 00:03:35)

I don't know what sulfure is, sorry.

Erin (2011-11-20 14:37:34)

Jim, I'm confused as to if you've made huge lifestyle changes before and gotten miraculous results through them why you still can't kick the binge eating! You should check out Tim Ferris' book 4-Hour Body. His plan is very close to a paleolithic diet, but with very low glycemic index foods, and will lower your blood sugar - and you can still eat wings, just not fried in peanut oil! I think that book would be a good one for you because there is one set binge day a week. Check out the book by Eric Braverman, The Edge Effect. There's a test in there for your neurotransmitter balance. Supplementing certain amino acids can help balance your brain chemistry and help curb your desire to eat compulsively.

Don't take Vitamin D at night | Aquatic Ape Diet (2011-11-25 09:51:47)

[...] should've remembered Seth Roberts' advice - don't take it at night or [...]

Henk Poley (2011-11-26 03:28:59)

View [1]this lecture by Stasha Gominak, where she explains her findings about vitamin D (and B12) in relation to sleep.

1. <http://drgominak.com/lecture>

Seth Roberts (2011-11-26 04:07:04)

Thanks, Henk. A fascinating and informative lecture. Curiously she says nothing about the time of day one takes Vitamin D.

Joseph Buchignani (2011-11-26 04:27:18)

Dan, the chemical mechanism for absorption of Vit-D from skin is different than ingested Vit-D. See the Mayo clinic vitamin D page.

jscott (2011-12-06 13:59:32)

I've been having massive insomnia, but it has been sporadic...or so I thought. Within the past month there have been 5 cases of insomnia. Onset of sleep has varied. Waking time has remained constant. D3 late at night (one hour prior bed) has been the only tracked variable that I have to point to and test. The D3 dosage has also been varied. I have yet to test but found it interesting to say the least.

Seth Roberts (2011-12-06 16:01:22)

I've been having massive insomnia, but it has been sporadic...or so I thought. Within the past month there have been 5 cases of insomnia. Onset of sleep has varied. Waking time has remained constant. D3 late at night (one hour prior bed) has been the only tracked variable that I have to point to and test. The D3 dosage has also been varied. I have yet to test but found it interesting to say the least. I hope you will comment here to say what happens when you change the time you take your Vitamin D.

Sceptically Fit (2012-01-29 12:54:34)

[...] an ongoing look at the effects of Vitamin D3 supplementation and its role on sleep. A month ago I blogged about a "stunning discovery": Primal Girl's sleep got much better when she took Vitamin D3 in the early morning instead of [...]

jeanine (2012-02-27 23:13:32)

Jim Purdy, I was diagnosed with gestational diabetes. I tested my blood sugar levels constantly during the day and I found that beans of any sort (chili, refried, etc.) always dramatically lowered my blood sugar levels. Just an fyi.

Pennyjeans (2012-03-16 21:31:45)

Is anyone here a bit concerned that no one has heard from this person Jim Purdy since November 3rd and his last post was that he would continue eating 50 fried chicken wings a day and tell how that worked out for his glucose levels...?

## Vitamin D, Sunlight, and Sleep: More (2011-11-03 05:00)

In the comments on [1]yesterday's post ("Can Vitamin D Replace Sunlight? A Stunning Discovery"), two commenters (John and Aaron Blaisdell) noted that Nephropal had said something similar. They're right. Here's [2]what Nephropal said in 2009:

Vitamin D taken at night causes insomnia. This is a complaint of a few of my patients. Moreover, when they switch to morning dosing, the insomnia subsides. Thus, Vitamin D should be taken in the morning.

That's a great observation, but not the same as Primal Girl's. Here is [3]her observation, shortened for clarity:

I usually took my supplements mid-afternoon. I vowed to take them first thing every morning. I tried it the next day and that night I slept like a rock. And the next night. And the next.

The two observations support each other. Both support the idea that the timing of Vitamin D matters. But there are also big differences. Paleo Girl had been taking her Vitamin D in mid-afternoon, not at night. She shifted to first thing in the morning, which is more specific than morning. I changed the title of yesterday's title to make clearer what is new here: the idea that Vitamin D can substitute for sunlight.

Lots of things cause insomnia if you take them in the evening. Caffeine and other stimulants, for example. [4]A comment on yesterday's post said that B vitamins and calcium cause insomnia if taken in the evening. This is why Nephropal's observation, although very important, is not a stunning surprise. You stop taking X in the evening, your sleep improves – I won't be astonished, no matter what X is.

Vitamin D is not a stimulant or is at best a mild stimulant. Taking Vitamin D in the afternoon should not cause trouble sleeping. Yet Primal Girl had trouble sleeping. And she was getting little morning sunlight. It is a real insight that first-thing-in-the-morning Vitamin D could have the same effect as first-thing-in-the-morning sunlight – in other words, could substitute for missing sunlight. Against all odds, the results supported this idea.

[5]One commenter on yesterday's post said Primal Girl's results were both unproven and obvious. Vitamin D is technically a hormone! Melatonin is a hormone, said the comment. I have not heard anyone propose taking melatonin first thing in the morning to improve sleep. It is standard to take melatonin in the evening. The accepted view among circadian rhythm researchers is that sunlight produces its effects on circadian rhythms via nerves, not blood. For example, hundreds of experiments have found that destroying the suprachiasmatic nucleus of rats destroys their circadian rhythms. The suprachiasmatic nucleus receives neural input from the eyes – that's why these lesions were first made (by Irv Zucker, a Berkeley colleague of mine).

Lots of people think Vitamin D improves sleep. That's not new. Here's what one of them said, in a post promisingly titled "[6]When is the best time to take your Vitamin D supplement?":

In an effort to boost absorption of vitamin D, individuals were asked to take their vitamin D supplements with the largest meal of the day. After 2-3 months, vitamin D levels were checked again. At the end of the study period, vitamin D levels had risen to an average of 47.2 ng/ml (118 nmol/l) – an average increase in vitamin D levels of about 57 per cent. . . It seems sensible, I think, for individuals who are currently supplementing with vitamin D to take this with their largest evening meal.

1. <http://blog.sethroberts.net/2011/11/02/it-matters-when-you-take-vitamin-d-a-stunning-discovery/>
2. <http://nephropal.blogspot.com/2009/09/vitamin-d-and-office-observations.html>
3. <http://www.primalgirl.com/2011/11/01/nprimalgirl-sleep-issues-vitamin-d/>
4. <http://blog.sethroberts.net/2011/11/02/it-matters-when-you-take-vitamin-d-a-stunning-discovery/#comment-930503>
5. <http://blog.sethroberts.net/2011/11/02/it-matters-when-you-take-vitamin-d-a-stunning-discovery/#comment-930453>
6. <http://www.drbriffa.com/2010/03/16/when-is-the-best-time-to-take-your-vitamin-d-supplement/>

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Joseph Buchignani (2011-11-03 07:27:51)  
Haters gon hate, Seth. Great defense.

Elizabeth Molin (2011-11-03 08:27:21)  
This is off-topic (I apologize), but are you familiar with this: <http://www.badsience.net/2011/10/new-edition-of-testing-treatments-best-lay-text-on-evidence-based-medicine/>

Confused (2011-11-03 09:19:53)

I'm a little confused. I understand the claim to be: Vitamin D first thing in the morning helps you sleep better at night. Now here's the sequence of events as I see it: 1. Primalgirl has been sleeping poorly 2. She was and had been taking Vitamin D3 for a while 3. At night. 4. She then started taking it first thing in the morning 5. Starts sleeping like a rock BUT, crucially, she also says: "Days I forgot and skipped the D3, I still slept great." So it sounds like the Vitamin D at night was interfering with her sleep, and now it's been taken away and hence no more interference. If the D3 in the morning was actually helping her sleep better (than baseline) then she should sleep poorly (less better) on the days she skips it. Or am I missing something?

Seth Roberts (2011-11-03 15:58:38)

"Am I missing something?" Yes. She usually took the Vitamin D in mid afternoon, not night. Unlikely that she slept poorly because her afternoon Vitamin D was interfering with her sleep. It might be true that although she usually took her Vitamin D in the afternoon, perhaps once/week she took it in the evening and that was enough to keep her from getting a high-amplitude (= powerful) circadian rhythm in her sleep/wake oscillator. An oscillator doesn't require constant (e.g., daily) input to work properly. You don't have to push a swing every oscillation to make it keep swinging in a big arc. A few pushes at the right time can have a powerful and long lasting effect. A few pushes at the wrong time can be very damaging. So perhaps she was damaging her sleep every night by once/week taking her Vitamin D at night. And once she started doing the right thing (taking her Vitamin D at a favorable time, morning, rather than a neutral time, afternoon) everything started working great.

gwern (2011-11-03 17:02:22)

I could definitely believe the B vitamin thing. Sulbutiamine is a version of B vitamin thiamine, and I definitely noticed it messing with my sleep: <http://www.gwern.net/Nootropics#sulbutiamine>

Seth Roberts (2011-11-03 19:00:55)

no, not familiar, thanks. I downloaded it. It is full of attitudes that I think make progress more difficult (e.g., the idea that some evidence should be ignored). Maybe I will blog about it.

Confused (2011-11-03 20:33:29)

@Seth That's a great answer, thank you.

MetaThought (2011-11-05 00:55:55)

Seth, IIRC your first self-experiment was to test if animal fats promote sleep. I found a plausible explanation for that one. Oleamide is found in animal fats as well as Olive oil. It promotes sleep and has a hypnotic effect: <http://www.ncbi.nlm.nih.gov/pubmed/11681856>

Seth Roberts (2011-11-05 02:00:29)

MetaThought, thanks for the link. You are correct that I have studied the connection between animal fat (pork fat) and sleep. My first self-experiment of any consequence was about acne.

Perfect Health Diet » Around the Web; Wise Traditions & CrossFit NYC Pre-Talk Edition (2011-11-05 17:44:20)

[...] Seth Roberts says that sunlight works "via nerve, not blood." [...]

Daz (2011-11-05 19:42:22)

Thanks for the post Seth. I've linked to it & to the Nephropal one in response to a recent question on Vit D posted over at PaleoHacks. <http://paleohacks.com/questions/74996/when-and-what-is-best-supplement-for-vit-d>

donat (2011-11-06 05:08:37)

lunchtime might be best? J Bone Miner Res. 2010 Apr;25(4):928-30. Taking vitamin D with the largest meal improves absorption and results in higher serum levels of 25-hydroxyvitamin D. Mulligan GB, Licata A. "Many patients treated for vitamin D deficiency fail to achieve an adequate serum level of 25-hydroxyvitamin D [25(OH)D] despite high doses of ergo- or cholecalciferol." "Thus it is concluded that taking vitamin D with the largest meal improves absorption and results in about a 50 % increase in serum levels of 25(OH)D levels achieved." PMID: 20200983

Seth Roberts (2011-11-06 05:20:32)

donat, what about sleep? Percent absorbed is not a big deal – no need to maximize it. If you want more Vitamin D in your blood you need only take more Vitamin D. It isn't expensive.

donat (2011-11-06 06:10:13)

ouch, sorry. I was reacting to your earlier post where this aspect was not yet remarked on. The point was simply that one needs to be aware that dosage might be timing/food dependent.

cel (2011-12-01 14:17:36)

Seth, I recently found your book on Amazon while searching for a book to help me improve my sleep . . . just ordered it and can't wait to start reading it. Very interested to know the principles laid out in the book and will definitely try the diet. Re: vitamin D, i am taking vit D3 with my first meal of the day but when too busy it's not until noon I get to do it . . . I am wondering if taking it first thing in the morning mean taking it on an empty stomach. Since I can't eat until around 11-12 noon I wanted to know if it is safe to take Vit D or any other supplement on an empty stomach. Thank you.

Seth Roberts (2011-12-01 14:27:48)

I wanted to know if it is safe to take Vit D or any other supplement on an empty stomach. I have taken Vitamin D on an empty stomach many times with no problems.

Sleeper (2012-01-11 10:52:50)

this entire exchange surprised me because i started taking 5000 IU of vitamin d before bed and slept 10 hours both nights since, so i expected to find people saying it helped them sleep by taking it before bed

Seth Roberts (2012-01-11 14:10:45)

this entire exchange surprised me because i started taking 5000 IU of vitamin d before bed and slept 10 hours both nights since, so i expected to find people saying it helped them sleep by taking it before bed

you've only taken it two nights?

Sceptically Fit (2012-01-29 12:55:42)

[...] better when she took Vitamin D3 in the early morning instead of much later (afternoon or evening). Others pointed out a similar observation: Taking Vitamin D3 in the evening caused insomnia. These observations suggest [...]

## **Flaxseed Oil Heals Bleeding Gums, Again (2011-11-04 05:00)**

In response to [1]this post, which went up three months ago, [2]a reader named Tara has just written:

I started taking 2 TB of flax oil daily about four days ago and now my gums are barely bleeding at all after I brush and floss. My gums were red, swollen and would bleed after I brushed and flossed and are now pink and healthy looking.

I've had this problem for years and I could not understand why it would keep happening even though I was consistent with my dental routine. I take the berry flavored Barlean's flax oil mainly because it tastes good and so I look forward to taking it- if it was gross I would not be consistent with taking it.

Anyhow, thanks for the information! I wish dentists would look into this but they probably won't so I'm glad that you do.

I agree about the Barlean's, by the way. Their [3]Omega Swirl flaxseed oil does taste good. The Omega Swirl webpage does not list healthy gums as one of its benefits. Instead it lists a bunch of benefits, such as "Heart Health" that are nearly impossible to verify.

Someone recently told me something fascinating about flaxseed oil: It made it much easier to kneel on the floor. Before he started taking it, his knees would hurt after a few seconds. Now they don't. I don't remember my knees hurting quickly but I consume 66 g/day of ground flaxseed (= about 2 T flaxseed oil) and can kneel without pain for minutes.

The tiny fact reflected in Tara's comment – an easily-available supplement (flaxseed oil) quickly cures a common problem (bleeding gums) but hardly anyone knows this – is a devastating comment on our health care system.

1. Dentists haven't managed to figure this out. Flaxseed oil is not an obscure supplement. Dentists are not making money giving people much worse advice ("floss regularly").

2. Nutrition professors haven't managed to figure this out. Omega-3 is not an obscure nutrient. Nevertheless, the [4]2010 USDA Dietary Guidelines says omega-3 fats are "essential" but says nothing about how much you need. Inflammation is believed to be the cause of many diseases, including heart disease. By getting this one thing (minimum omega-3 intake you need to be healthy) right, the USDA could do a world of good. Instead they tell people to eat less animal fat ("consume less than 10 percent of calories from saturated fatty acids").

To be fair, professional researchers are starting to figure this out. [5]A 2010 study of 9000 people found that "participants in the middle and upper third for omega-3 fatty acid consumption were between 23 percent and 30 percent



less likely to have gum disease than those who consumed the least amount of omega-3 fatty acids." With the right dose, I believe gum disease becomes 100 % less likely. But at least they noticed a connection.

1. <http://blog.sethroberts.net/2011/07/24/flaxseed-oil-cures-bleeding-gums-in-three-days/>
2. <http://blog.sethroberts.net/2011/07/24/flaxseed-oil-cures-bleeding-gums-in-three-days/#comment-930329>
3. [omega\\_swirl.asp](http://omega_swirl.asp)
4. <http://health.gov/dietaryguidelines/2010.asp>
5. <http://www.businessweek.com/lifestyle/content/healthday/644899.html>

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Tuck (2011-11-04 07:50:56)

Interesting. I've also noticed that gum bleeding has decreased almost to nothing since fixing my diet by eliminating wheat and seed oils. I never take flax seed oil, however, although I do eat a lot of fish and macadamia nuts (which are another source of vegetable-omega-3 oils). And lots of pastured meat.

Rashad (2011-11-04 08:52:08)

To be fair, I think in most people brushing and flossing DOES reduce bleeding gums, at least that is true for me. When I'm lazy about flossing, I get bleeding gums, when I start doing it regularly, about a week later my gums stop bleeding. So part of the problem is that I think many dentists view the problem as "solved".

Leslie (2011-11-04 09:01:45)

Hi Seth, I'm wondering if you have tried comparing flax seeds to chia seeds? And do you get much omega 3 from other sources, like fatty fish?

Tim Beneke (2011-11-04 09:10:19)

Once again, add me to the list of people who find that 2-3 tablespoons of flax seed oil a day improves both my gums and joint pain. I suffer intermittent knee, hip and now shoulder joint pain and find after doing a few days on and then a few days off consuming the flax seed oil that there is substantially less pain when I take it. And yes bending down and picking something up is a much less painful experience when I've been doing the oil. I don't like the taste of the oil and don't want to, since I also use it as weak-tasting calories in my weight loss efforts. I swallow it quickly in water with my tongue outside (under) the glass and immediately drink some strong green tea afterwards to mask the taste. It is work to do this, but well worth it... Onwards with more self experimentation! Pooling the efforts of even a small number of self experimenters, we seem to be able to come up with a lot of solutions to problems that high falutin scientists are blind to.

Seth Roberts (2011-11-04 15:38:15)

Thanks, Tim, those observations are very helpful. As you say.

Seth Roberts (2011-11-04 15:43:19)

Leslie, I have not compared flax seeds to chia seeds. Flax seeds are much easier to get. When I'm in Beijing, I rarely eat fatty fish. I first discovered that flaxseed oil (just a few capsules) improved my balance when I was in Berkeley. At the time I ate fatty fish (salmon) regularly, once or twice/week. My initial observation was that a relatively small amount (by my current standards) of flaxseed oil noticeably improved my balance (measured by how easily I could put on my shoes while standing). Eating fatty fish (or anything else) had never done that.

Seth Roberts (2011-11-04 15:45:03)

Rashad, that's a good point. I found the same thing as you: if I flossed enough, my gums stopped bleeding. However, I don't think flossing changed them from red (inflamed) to pink (not inflamed).

Alex Chernavsky (2011-11-06 08:37:36)

Tim, with regard to your procedure for taking flax oil: I take about four tablespoons – straight – every day around noon, as part of my Shangri-La diet regimen. I do not make much effort to mask the taste. Sometimes I chase the oil with water, but I don't always do it, if I'm busy. Still works for me.

David (2011-11-06 11:26:40)

Seth, I agree regarding flossing. I am a regular flosser who never had bleeding gums, yet I did have inflammation which manifested itself in the form of periodontal pockets. I was told the pockets were the result of genetic bone loss. As I posted previously on your blog, I significantly shrunk these pockets between visits to the dentist (6 months) by drinking flaxseed oil. On a different topic, I'm wondering how (if) you reconcile the ideas of people like Chris Masterjohn who believe that the degeneration of PUFA is what drives atherosclerosis. I know flaxseed oil helps my gums, and I have a hunch it may help with my degenerating lumbar disc, but I am concerned about the seemingly contradictory effect on my vascular system. Thoughts?

Seth Roberts (2011-11-06 13:13:04)

"I know flaxseed oil helps my gums, and I have a hunch it may help with my degenerating lumbar disc, but I am concerned about the seemingly contradictory effect on my vascular system." My advice: go with what you can see ("helps my gums"), don't worry about untested theories. I like Chris's work but I doubt he has convincing evidence of that theory.

Jon K (2011-11-07 07:30:13)

Hi, I tried posting a question before and it appears to have not gone through. so I'll try again. Have you noticed any increase in hair loss/thinning as you changed your omega 3 consumption? There appear to be several people (40+) who posted on a hair loss blog with the observation that increased flax/fish oil produced significant hair loss/thinning. Several of the comments were from women, which I found interesting. Less clear was the effect of ground flax seed, which contains lignans, vs flax oil. Some claimed it thickened hair, others that it thinned. Since you've used both methods for a long period, I'm wondering if you could give your observations. Also, anecdotally, there appears to be a link between turmeric intake and an increase in hair loss. What is it with anti-inflammatories that could potentially have this side effect? (the fourth google hit for "flax seed hair loss" contains a blog post where most of the comments I'm referring to come from, though they appear in many other places across the web)

Seth Roberts (2011-11-07 14:28:55)

"Have you noticed any increase in hair loss/thinning as you changed your omega 3 consumption?" No I haven't. Why anti-inflammatories should increase hair loss – if they do – I have no idea. One of my students is measuring hair loss. He is also working on a study about inflammation. Perhaps he will be interested in studying this.

Sade (2011-11-07 17:59:15)

Interestingly, the ophthalmology industry seems to be catching on to the importance of Omega-3's. I'm not sure what they have to do with eye health, but at my doctor's office it is the only "medicine" that he advertises on his walls.

Dan (2011-11-08 00:55:05)

Have you heard of Oil Pulling for dental hygiene? It involves pulling/swishing 1 teaspoon of sesame seed through your teeth first thing in the morning. Just google "oil pulling" and you will find links.

Kevin (2012-01-10 20:26:45)

This is an interesting, yet positive, reaction to taking flaxseed oil. I've always known flaxseed oil was an excellent plant-source of omega 3 fatty acids and their anti-inflammatory effects. I wonder if these effects would occur if you took an omega 3 fish oil or

other sources of omega 3 fatty acids? Nevertheless, I definitely agree with the use of omega 3 supplements; our bodies cannot make these essential fats so it's very important we get these healthy fats in our diets.

### **Ten Reasons To Distrust Drug Companies (2011-11-05 05:00)**

A reader of this blog who wants to be identified as Doctor's Daughter wrote the following editorial and submitted it to [1]KevinMD, which turned it down. KevinMD is aimed at doctors. One recent article ("[2]Why 99 % of health care should be angry") said this: "The real top earners in health care, however, are not physicians, but executives of big corporations, non-profit and especially for profit." Here is what Doctor's Daughter wrote:

(On Kevin MD's website there was a recent piece entitled "How Can Pharma Earn the Trust of Patients?" which was submitted by Richard Meyer, the executive director of Online Strategic Solutions, which develops strategies for companies that engage in direct-to-consumer marketing. . . I feel compelled to offer a different viewpoint, focused on pharma's actual business practices.)

Far too many pharmaceutical companies have:

1. Spent more money on marketing than on honest research and development.
2. Set exorbitant prices for drugs. For example, they have engaged in price-gouging for cancer drugs, with many costing more than \$50,000 annually.
3. Tried to medicalize almost everything and, quelle surprise, they have a pill for that! Few of these drugs do anything to cure the condition; they just alleviate the symptoms.
4. Undermined the independence of guideline panels by making sure that the panels are filled with pharma friendly researchers and clinicians.
5. Unduly influenced the judgment of physicians and tried to undermine their integrity with gifts and cash.
6. Prevented lower-priced generics from coming on the market with "pay to delay" agreements and by other means.
7. Chosen profits over safety (remember the Heparin scandal?).
8. Designed studies that only report the supposed benefit of a particular drug and suppress information about adverse effects.
9. Exercised undue influence over panels that review the efficacy and safety of drugs.
10. Have continued to spend billions on advertising by saturating prime-time TV with Direct-To-Consumer ads to "Ask your doctor..."

With these kinds of abusive practices, should anybody trust these guys?

A reasonable list of complaints.

1. <http://www.kevinmd.com/>

2. <http://www.kevinmd.com/blog/2011/10/99-percent-health-care-angry.html>

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Jim Purdy (2011-11-05 05:48:32)

Great list! I especially like # 3, and of course BigPharma doesn't stop once they create a scary name for a previously unrecognized disease, or even after they lobby the FDA to approve their new drug for their new made-up disease. They then go to work lobbying the FDA to change the guidelines, so that many more millions of people will get prescriptions for the new drugs to treat the new diseases. Why doesn't the FDA ever de-classify any of these fictional diseases?

WFA (2011-11-05 07:28:59)

Whether it's intentional or unconscious, the numbing repetition of TV commercials suggests to me an additional tactic. It isn't just the drug being promoted, it's the disease. How many people might even succumb to some condition repeatedly 'plugged' as common? There's also the "Ask your Doctor if X-drug is right for you!" which affirms the Doc as an authority figure, garners appointments for him, and presumably produces celebrity ("as seen on TV") prescriptions, when doing nothing might be a better option. (Truth in advertising: "Nothing works better than \_ \_ \_.") And now there's that grey-haired retiree on our screens, getting down with his motorcycle on the salt flats. Sure, 60 may be the new 50 (or some such), and so-called 'active lifestyles' are becoming more common. But having seen these sorts of commercials, how many now on Medicare ("Free!") will take the commercial dare and engage in high risk activities? Dumping his bike at Bonneville could land the guy in just the hospital which shot the commercial! I don't think all the above is necessarily intentional. But why would it not happen?

Glen Raphael (2011-11-05 08:43:18)

#1 and #10 aren't reasonable. If and when drug companies have a drug that actually can make people's lives better, how the potential customers supposed to know about it if the companies don't advertise? It's entirely conceivable that spending lots of money - even billions of dollars - on advertising might both (a) make the drugs being advertised cheaper and/or better, and (b) make customers better off. Ad spending does not conflict with the ability to spend on "honest research and development" nor is there any logical reason it would be better to spend more on R & D than on ads. A well-designed ad campaign "pays for itself", bringing in more than enough extra revenue to cover the cost of the campaign. Which means the company that runs good ads has \*more\* money to spend on R & D (or other appropriate expenses) than they would have without running the ads. Speaking as a consumer, I'm glad companies run direct-to-consumer ads, but I wish the companies were legally allowed to tell me exactly what the product does and that I was legally allowed to go buy it in stores without going through a doctor.

Tom (2011-11-05 11:23:17)

Glen, ad spending aimed at non-physicians by pharmaceutical companies used to be illegal, for good reason in my opinion. I think your points are optimistic to the point of Pollyannaism. Once stocked with right-wing justices, the Court gave corporations - "people" who exist solely as a *legal fiction* - the same free speech rights that actual citizens have. Hence the billions of dollars spent medicalizing children with too much spunk. And don't get me started on the symbiosis between Big Medicine's voracious diabetes/dialysis complex and endless supply of human chum created by Archer/Daniels/Midland-General Foods-Nabisco-Coca Cola etc etc etc. You might think that the fact that fake people can out-shout folks like Seth a billion to one has raised the level of discourse in America and improved the lives of non-imaginary citizens. I'd sooner believe in unicorns.

wcb (2011-11-05 15:56:52)

Tom makes the excellent point that direct-to-consumer ads used to be illegal in this country, like they still are in most other countries including Europe and Canada. A good case can be made that the FDA (or Congress) should revisit this issue in the USA. After all, there's a big difference (or should be) between, say, consumer ads for fashion wear or lipstick and the marketing of prescription drugs that are costly to begin with and may very well cause adverse effects requiring even more expensive

medical interventions. No wonder government programs such as Medicare and Medicaid are going broke. None of this means that pharma companies couldn't cheaply publish objective information about their products (say on their websites) as long as they eliminated the hype and fully disclosed the potential adverse effects. And if they stopped all consumer TV advertising and direct marketing to doctors, imagine how much less expensive some truly useful medicines could be. But perhaps Congress has become too far over-lobbied and compromised by campaign contributions (from you-know-who) to have the backbone and common sense to prohibit TV advertising of prescription drugs. If that turns out to be the case, then maybe the IRS should take the initiative to begin disallowing pharma companies' deduction of these costs as "ordinary and necessary" business expenses on their tax returns. In light of experience, I suggest the prevailing view should be that direct-to-consumer advertising of drugs, although it has most unfortunately become ordinary, should in no way be necessary; and most certainly is not good public policy.

Glen Raphael (2011-11-07 07:17:16)

The "right of corporations to speak" is just the right of \*people\* to speak through corporations. The ACLU is a corporation. Amnesty International is a corporation. Prior to that ruling, the government had effectively banned large swaths of \*political speech\* - exactly the sort of speech the constitution was meant to protect. That ruling makes it easier for people to get the word out, in any direction. The answer to bad speech is more speech, not laws that make whole categories of speech illegal. "Ask your doctor" ads are a second-best solution. The real problem here is that doctors have the prescription monopoly. If pharmacists could sell you drugs without a doctor's prescription (as is done in Mexico), the doctors would have less power \*and\* customers would have more ability to get medicine cheaply when they need it. We should make \*all\* drugs "over the counter", make FDA approval voluntary, and let companies market freely to consumers. Competition would then drive down the cost and improve the effectiveness of drugs. The reason we see so little innovation and such high costs in medicine today is that everything medicine-related has to go through the FDA \*and\* through doctors; there is no opportunity for a tiny startup that comes up with some new treatment that \*might\* help people with some rare disease to start selling it on a small scale and grow organically until lots of people see the benefit or until it gets outcompeted by some better solution. The fact that you have to spend billions of dollars satisfying the FDA \*and\* more billions marketing to the doctors, effectively turning doctors into your sales force, makes real innovation rare and denies effective help to anybody whose disease only affects a few people. Real innovation has risks associated with it. We \*need\* innovation, so we need to accept some level of risk. Trying to eliminate all risk in advance is the riskiest course of all.

Seth Roberts (2011-11-07 14:43:10)

Glen, giving corporations "free speech" amounts to giving defenders of the status quo more power. I think they have enough power already. Yes, FDA regulation and the need for prescriptions reduce drug company innovation. I agree. But drug companies themselves reduce innovation. They reduce the search for non-drug solutions. Which I for one have found enormously helpful. In the case of diagnostic devices, I agree completely. FDA approval impedes innovation, with no significant benefits.

Glen Raphael (2011-11-07 21:01:09)

With regard to "free speech", incumbents in congress get their 98 % reelection rate in large part because they already have power, goodies to auction off and name recognition. Incumbents don't \*need\* big contributions to win; challengers to the status quo do. If we decontrolled "political speech" and let anybody contribute however much they want to any candidate, we'd see better candidates. Right now we have this weird situation where if you're rich you can spend as much as you want on your \*own\* campaign but only a trivial amount on somebody else's. As a result, we tend to get a lot of rich nitwits running for office even when \*they themselves\* know they aren't the best man for the job. Under freedom, a really good candidate would only have to win over \*one\* crazy billionaire - say, Ross Perot - in order to get a seat at the table. Under regulation, we instead get Ross \*actually running\*, which isn't good for anybody. :-) I agree that the status quo reduces the search for non-drug solutions. But it also reduces the search for improved with-drug solutions. We're free to do n=1 experiments with light and vitamins and flax-seed oil but we're not free to do n=1 experiments with, say, Prozac. Or, heck, LSD. We mostly learn new things about prescription drugs through big, official, slow, expensive experiments, and trying to learn more about controlled drugs can actually get patients sent to prison. That seems like a wasted opportunity all around - drugs that \*actually work well\* - either for prevention or for cure - would be a godsend and we don't really have enough of them.

Txomin (2011-11-08 00:09:27)

Sure. The ugly side of pharmaceutical companies is... ugly. But it is also true that none of us have any fear whatsoever of many diseases that not long ago were deadly. Where is the reasonable middle ground?

andrew (2011-11-08 11:31:44)

Seth if you ended drug marketing wouldn't that make patients more dependent on doctors for information?

Seth Roberts (2011-11-08 12:16:23)

Andrew, the answer to your question ("if you ended drug marketing wouldn't that make patients more dependent on doctors for information?") is yes. But patients have other sources of information (on the Internet) less biased than their doctor (or should I say: even their doctor?). Sources of information who surely haven't accepted gifts and free samples from drug company representatives.

### **Testing Treatments: Nine Questions For the Authors (2011-11-06 05:00)**

From [1]this comment (thanks, [2]Elizabeth Molin) I learned of a British book called Testing Treatments ([3]pdf), whose second edition has just come out. Its goal is to make readers more sophisticated consumers of medical research. To help them distinguish "good" science from "bad" science. Ben Goldacre, the Bad Science columnist, [4]fulsomely praises it ("I genuinely, truly, cannot recommend this awesome book highly enough for its clarity, depth, and humanity"). He wrote a foreword. The main text is by Imogen Evans (medical journalist), Hazel Thornton (writer), Iain Chalmers (medical researcher), and Paul Glaziou (medical researcher, editor of Journal of Evidence-Based Medicine).

To me, as I've said, medical research is almost entirely bad. Almost all medical researchers accept two remarkable rules: (a) [5]first, let them get sick and (b) [6]no cheap remedies. These rules severely limit what is studied. In terms of useful progress, the price of these limits has been enormous: near total enfeeblement. For many years the Nobel Prize in Medicine has documented the continuing failure of medical researchers all over the world to make significant progress on all major health problems, including depression, heart disease, obesity, cancer, diabetes, stroke, and so on. It is consistent with their level of understanding that some people associated with medicine would write a book about how to do something (good science) the whole field manifestly can't do. Testing Treatments isn't just a fat person writing a book about how to lose weight, it's the author failing to notice he's fat.

In case the lesson of the Nobel Prizes isn't clear, here are some questions for the authors:

1. Why no chapter on prevention research? To fail to discuss prevention, which should be at least half of health care, at length is like writing a book using only half the letters of the alphabet. The authors appear unaware they have done so.
2. Why are practically all common medical treatments expensive?
3. Why should some data be ignored ("clear rules are followed, describing where to look for evidence, what evidence can be included")? The "systematic reviews" that Goldacre praises here (p. 12) may ignore 95 % of available data.
4. The book says: "Patients with life-threatening conditions can be desperate to try anything, including untested 'treatments'. But it is far better for them to consider enrolling in a suitable clinical trial in which a new treatment is being compared with the current best treatment." Really? Perhaps an ancient treatment (to authors, untested) would

be better. Why are there never clinical trials that compare current treatments (e.g., drugs) to ancient treatments? The ancient treatments, unlike the current ones, have passed the test of time. (The authors appear unaware of this test.) Why is the comparison always one relatively new treatment versus another even newer treatment?

5. Why does all the research you discuss center on reducing symptoms rather than discovering underlying causes? Isn't the latter vastly more helpful than the former?

6. In a discussion of how to treat arthritis (pp. 170-172), why no mention of omega-3? Many people (with [7]good reason, including [8]this) consider omega-3 anti-inflammatory. Isn't inflammation a major source of disease?

7. Why is there nothing about how to make your immune system work better? Why is this topic absent from the examples? The immune system is mentioned only once ("Bacterial infections, such as pneumonia, which are associated with the children's weakened immune system, are a common cause of death [in children with AIDS]").

8. Care to defend what you say about "ghostwriting" (where med school professors are the stated authors of papers they didn't write)? You say ghostwriting is when "a professional writer writes text that is officially credited to someone else" (p. 124). Officially credited? Please explain. You also say "ghostwritten material appears in academic publications too – and with potentially worrying consequences" (p. 124). Potentially worrying consequences? You're not sure?

9. Have you ever discovered a useful treatment? No such discoveries are described in "About the Authors" nor does the main text contain examples. If not, why do you think you know how? If you're just repeating what others have said, why do you think your teachers are capable of useful discovery? The authors dedicate the book to someone "who encouraged us repeatedly to challenge authority." Did you ever ask your teachers for evidence that evidence-based medicine is an improvement?

The sad irony of *Testing Treatments* is that it glorifies evidence-based medicine. According to that line of thinking, doctors should ask for evidence of effectiveness. They should not simply prescribe the conventional treatment. In a meta sense, the authors of *Testing Treatments* have made exactly the mistake that evidence-based medicine was supposed to fix: Failure to look at evidence. They have failed to see abundant evidence (e.g., the Nobel Prizes) that, better or not, evidence-based medicine is little use.

Above all, the authors of *Testing Treatments* and the architects of evidence-based medicine have failed to ask: How do new ideas begin? How can we encourage them? Healthy science is more than hypothesis testing; it includes hypothesis generation – and therefore includes methods for doing so. What are those methods? By denigrating and ignoring and telling others to ignore what they call "low-quality evidence" (e.g., case studies), the architects of evidence-based medicine have stifled the growth of new ideas. Ordinary doctors cannot do double-blind clinical trials. Yet they can gather data. They can write case reports. They can do  $n=1$  experiments. They can do  $n=8$  experiments ("case series"). There are millions of ordinary doctors, some very smart and creative (e.g., [9]Jack Kruse). They are potentially a great source of new ideas about how to improve health. By denigrating what ordinary doctors can do (the evidence they can collect) – not to mention what the rest of us can do – and by failing to understand innovation, the architects of evidence-based medicine have made a bad situation (the two rules I mentioned earlier) even worse. They have further reduced the ability of the whole field to innovate, to find practical solutions to common problems.

Evidence-based medicine is religion-like in its emphasis on hierarchy (grades of evidence) and rule-following. In the design of religions, these features made sense (to the designers). You want unquestioning obedience (followers must not question leaders) and you want the focus to be on procedure (rules and rituals) rather than concrete results. Like many religions, evidence-based medicine draws lines (on this side "good", on that side "bad") where no lines actually exist. Such line-drawing helps religious leaders because it allows their followers to feel superior to someone (to people outside their religion). When it comes to science, however, these features make things worse.

Good ideas can come from anybody, high or low in the hierarchy, on either side of any line. And every scientist comes to realize, if they didn't already know, that you can't do good science simply by following rules. It is harder than that. You have to pay close attention to what happens and be flexible. Evidence-based medicine is the opposite of flexible. "[10]There is considerable intellectual tyranny in the name of science," said Richard Feynman.

Testing Treatments has plenty of stories. Here I agree with the authors – good stories. It's the rest of the book that shows their misunderstanding. I would replace the book's many pages of advice and sermonizing with a few simple words: [11]Ask your doctor for the evidence behind their treatment recommendation. He or she may not want to tell you. Insist. Don't settle for vague banalities ("It's good to catch these things early"). Don't worry about being "difficult". You won't find this advice anywhere in Testing Treatments. If I wanted to help patients, I would find out what happens when it is followed.

More Two of the authors respond in the comments. And I comment on their response.

1. <http://blog.sethroberts.net/2011/11/03/vitamin-d-sunlight-and-sleep-more/#comment-930611>
2. <http://www.elizabethmolin.com/>
3. <http://www.testingtreatments.org/wp-content/uploads/2011/10/TT-interactive-optimised.pdf>
4. <http://www.badsience.net/2011/10/new-edition-of-testing-treatments-best-lay-text-on-evidence-based-medicine/>
5. <http://blog.sethroberts.net/2011/09/18/first-let-them-get-sick/>
6. <http://blog.sethroberts.net/2011/10/29/no-cheap-remedies/>
7. <http://blog.sethroberts.net/category/nutrition/omega-3/>
8. <http://blog.sethroberts.net/2011/11/04/flaxseed-oil-heals-bleeding-gums-again/#comment-930756>
9. <http://jackkruse.com/>
10. [http://www.fotuva.org/feynman/what\\_is\\_science.html](http://www.fotuva.org/feynman/what_is_science.html)
11. <http://blog.sethroberts.net/2008/08/29/suppose-you-write-the-times-to-fix-an-error-part-2/>

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Lemniscate (2011-11-06 06:04:02)

Evidence-based medicine has a good name. Who doesn't want their medical treatments to be based on evidence? In practice, however, it means medicine deemed by a certain group of experts to be supported by evidence. It's an attempt to create a knowledge monopoly, in the same way that the IPCC attempts to act as a monopoly on climate change knowledge. All monopolies suppress innovation and are often captured or created by special interests – government, academia and corporations. I would suggest knowledge monopolies are often even more damaging than production monopolies, because they deeply affect the entire web of knowledge that they are integrated in to with wide-ranging consequences.

wcb (2011-11-06 10:03:07)

Seth, excellent review and commentary on this topic. I would offer the additional thoughts that, among the things neglected or overlooked by conventional medical research (whether "evidenced-based" or not) is anything having to do with diet/nutrition. I give you mucho credit for addressing these matters on your blog. Along these lines, if more physicians (and our fellow citizens) would but remove their heads from their butts on such issues, I dare say there could be a dramatically positive effect on public health. More focus on nutritional issues would go a long way in advancing prevention for many common diseases and (the way I prefer to look at it), would help people become proactive on their own in avoidance of same. Of course we would also have to change the incentives in a medical care system that is so driven by profit and conflicts of interest. The other reality that would have to be overcome within the medical industry, to foster much less costly prevention (or avoidance) of disease, is the current system that allows issues of diet/nutrition to default to government agencies that have been captured by those whom



they are supposed to regulate (the USDA comes to mind) or trade groups such as the American Diabetes Association that get their financial support from pharma and packaged food companies. Talk about conflict of interest! At the risk of sounding like a pitchman (which I'm not), I would also like to suggest we at least become aware of the work of some doctors (still largely in the minority) who are already practicing (real) preventive medicine. In this case, I'm specifically referring to William Davis, a cardiologist in Milwaukee. His blog is available to anyone with access to the Internet, but he has now also published a book, "Wheat Belly," that contains actual case studies from his medical practice, as well as end notes citing the supporting, scientific sources. Anyone interested in getting a better idea of what it's about can simply go on Amazon.com and check out the reviews. I might add that the book has been on the NY Times best seller list, within its category, off and on for several weeks, and can probably now be found in many public libraries.

Alrenous (2011-11-06 10:12:44)

Ironically and tragically, I heard about the solution when I was a kid. I remember it being about traditional Chinese doctors, though I never verified the story. Pay a doc when you're healthy. When you get sick, stop paying until you get better. You get what you pay for. If you pay for treatment, you get treatment. If you pay for health, you get health.

Seth Roberts (2011-11-06 13:09:30)

"You get what you pay for...if you pay for health, you get health." – Exactly. When doctors are paid for health, I believe we will see a vast improvement.

Tom (2011-11-06 17:02:04)

Seth, Your point is so important, and I think it's worth doing whatever it takes to call attention to how the entire medical establishment is designed to reward the lowest ROI research. How about creating an annual award to draw more news coverage? Why don't you create the **Roberts Prize**, for each year's *highest ROI* health advance?

Seth Roberts (2011-11-06 17:48:31)

That's an interesting idea, Tom. I will think about it. It is certainly a way to publicize the problem.

Seth Roberts (2011-11-06 17:54:47)

Lemniscate, I like your comment very much. I think the term knowledge monopoly, which I haven't heard before, brilliantly describes the problem. I especially like these parts of your comment:

Evidence-based medicine has a good name. Who doesn't want their medical treatments to be based on evidence? .  
. It's an attempt to create a knowledge monopoly, . . . All monopolies suppress innovation and are often captured or created by special interests

You have put the problem very well and I hope that someday people who support evidence-based medicine will address it.

Lemniscate (2011-11-07 11:39:38)

I got the term from Richar Tol's paper "Regulating Knowledge Monopolies: The Case of the IPCC." via Judy Curry. I don't think his solution to regulate knowledge monopolies is that good; the regulator is just as likely to be captured or created by special interests. However, the idea that (effective) knowledge monopolies have bad effects is important. The idea of one super-authoritative technocratic body seems to have some intuitive appeal to many, including "evidence-based medicine" advocates.

Elizabeth Molin (2011-11-10 12:17:06)

This post and the discussion got me thinking, and I wanted to post a comment on a peripherally related idea. When I drafted it, however, it turned out to be much too long for a comment, so I've posted it myself: <http://www.elizabethmolin.com/?p=261>

Seth Roberts (2011-11-10 14:37:39)

Elisabeth, thanks for the link. The post is titled "What should we ask the doctor?" If you ever ask your doctor for evidence, I hope you will write about what happens. I will post it in my blog if you send it to me or link to it if you post it in your blog.

Elizabeth Molin (2011-11-11 11:26:39)

My husband is the one with the (slightly) elevated cholesterol. I hated that our doctor put him on statins, so I did a lot of research (much of it with the help of your blog), and gave him a bunch of links to relevant studies and information to present to her. Her response: "I didn't know that. Thank you. You probably shouldn't be on statins." So now he isn't. Needless to say, I love our doctor!

Seth Roberts (2011-11-11 12:37:42)

Elisabeth, thanks for explaining that. To say you love your doctor because she changed her mind when told about evidence she should have known (statins are dangerous and expensive) is quite a comment on doctor behavior. What if your husband had asked your doctor "what's the evidence behind your recommendation?" Do you have any idea what would have happened?

Paul Glasziou & Iain Chalmers (2011-11-11 15:14:53)

Testing Treatments: nine answers to Seth Roberts' nine questions for the authors The questions raised in Seth Roberts' review of our book reveal a number of misunderstandings about it. The aim of our book is to improve awareness of the need to test treatments properly – old or new – through fair tests of the impact of treatments in patients, on outcomes that matter to them. It was not our intention to provide an overview of the effects of past and present treatments. That information is available from a multitude of other sources. Interested readers can assess our book for themselves: the full text is FREE - a downloadable pdf from [www.testingtreatments.org](http://www.testingtreatments.org). Here are some brief answers to the nine questions posed by Seth Roberts. 1. Why no chapter on prevention research? The book is primarily about testing treatments and interventions for secondary prevention; but it does not exclude prevention. We discuss screening in detail and several preventive interventions, for example, putting babies to sleep on their backs or sides. 2. Why are practically all common medical treatments expensive? We refer to loads of inexpensive common treatments in the book, including citrus fruits, folic acid, vitamin B12, insulin, lumpectomy, aspirin, caffeine, magnesium sulphate, saline, tranexamic acid, streptokinase, co-trimoxazole, diuretics, morphine, mother's kiss, propranolol, steroids, and zidovudine. 3. Why should some data be ignored? We don't suggest ignoring data, but do recommend gathering it all, then sifting the stronger from the weaker evidence – that is the central process of a systematic review. You write in your comment that "medical research is almost entirely bad"; so it should come as no surprise to you that systematic reviews "may ignore 95 % of available data". 4. Why are there never clinical trials that compare current treatments (e.g., drugs) to ancient treatments? The ancient treatments, unlike the current ones, have passed the test of time. We are not sure what qualifies as an 'ancient treatment', but bloodletting and purging were certainly "ancient" and they passed the 'test of time' for over a millennium. Most people believe now that these ancient treatments do more harm than good. All treatments, ancient and modern, need to be subjected to fair tests. Why is the comparison always one relatively new treatment versus another even newer treatment? Would that that were the case! The power of the pharmaceutical industry and the equipment manufacturers has meant that comparative effectiveness studies are all too rare. 5. Why does all the research you discuss center on reducing symptoms rather than discovering underlying causes? We include many examples of treatments aimed at causes, including citrus fruits, folic acid, vitamin B12, and insulin. 6. In a discussion of how to treat arthritis, why no mention of omega-3? Our book is about methods for testing treatments. It is not intended to cover all options for all conditions, and no conceivable book could do that. However a search for trials and systematic reviews of omega-3 for osteoarthritis suggests we have not overlooked convincing evidence. 7. Why is there nothing about how to make your immune system work better? Our response to your question 6 applies. 8. Care to defend what you say about "ghostwriting"? We wrote ghost-writing is "... when a professional writer writes text that is officially credited to someone else. Sometimes the pharmaceutical industry employs communication companies to prepare articles which, unsurprisingly, cast the industry's product in a favourable light." Some of us have been lobbying for transparency in doing and reporting research for over a quarter of a century. 9. Have you ever discovered a useful treatment? Our book was about testing treatments, not inventing treatments. Though we have contributed to the discovery of useful treatments, we're not inclined to indulge in self-promotion.

Seth Roberts (2011-11-11 16:39:35)

Thank you for responding to my questions. That is generous of you. I will discuss your answers at length later but let me make some simple points right now. 1. "We don't suggest ignoring data," you write. Yet you praised "systematic reviews," which do exactly that: exclude large fractions of relevant research. My opinion of medical research is irrelevant to the question of whether you advocate ignoring data. 2. "Our book was about testing treatments, not inventing treatments," Inventing treatments includes testing treatments. The big point of my comments on your book was that what you advocate suppresses innovation. It does so because it denigrates (and, in systematic reviews, ignores) the cheap small-scale studies (i.e., tests) important in the beginning of an idea. 3. "However a search for trials and systematic reviews of omega-3 for osteoarthritis suggests we have not overlooked convincing evidence." Apparently (your use of "convincing") you have decided that some evidence doesn't count. Yet omega-3 is, compared to other treatment options you include, very cheap, very easy to get and take, and very safe. I suspect those considerations (price, availability, ease of treatment, safety) did not enter into your judgement of the evidence. You seem to have simply looked at how convincing the studies were. (This is what evidence-based medicine preaches over and over.) Perhaps if you considered those factors, you would value the studies you now dismiss more highly. You should take those considerations into account. I think I speak for every person in the world outside medicine and health care when I say that. 4. One of my questions was this: "Did you ever ask your teachers for evidence that evidence-based medicine is an improvement?" You seem to have ignored it. The research you praise has its place. The research you denigrate also has its place – at least, I think so. That is why I ask: What is the evidence that evidence-based medicine has made things better? 5. The large point of my questions, to repeat myself, was that the preferences and values shown in your book suppress innovation because they denigrate the work needed in the beginning. You denigrate the cheap obviously-imperfect tests needed to find good ideas worth testing in more expensive ways. You have not addressed this point.

Lemniscate (2011-11-12 08:52:05)

I think the difference in attitude between Seth and the authors can be partially explained by differing emphases on type I and type II errors. "Evidence-based" medicine puts far more emphasis on type I errors at the expense of type II errors. Not caring about type II errors is bad for innovation and expense. There may be lots of safe and cheap potential treatments one could try. If you're worried about making a type I error then you might not try a treatment that actually works, committing a type II error. Which type of error you should try and avoid depends on the treatment being considered – cost, potential risks, etc. – and trying to fit all assessments of treatment efficacy in to one methodology is a mistake.

Tonsillectomy Confidential: doctors ignore polio epidemics and high school biology | Vladimir Putin 2012 (2012-01-10 15:25:19) [...] I have criticized). He has co-authored a book on systematic reviews and a consumer's guide to evidence-based medicine. He now heads the Centre for Research in Evidence-Based Practice [...]

Tonsillectomy Confidential | The Health Care Blog (2012-01-14 02:30:50)

[...] medicine (which I have criticized). He has co-authored a book on systematic reviews and a consumer's guide to evidence-based medicine. He now heads the Centre for Research in Evidence-Based Practice at Bond University in [...]

## **The Verb "To Google" (2011-11-06 17:38)**

I visited Google New York a few years ago. In conversation, an engineer used the verb to google – just like everyone else. Slightly amusing. Today I used the verb to google in an email. Gmail told me it was misspelled! Google is okay but google is not in their dictionary. Too modest!

Mike deCock (2011-11-06 18:39:57)

There is a wiki entry explaining Google's dislike of using the word as a verb: [http://en.wikipedia.org/wiki/Google \\_ %28verb %29](http://en.wikipedia.org/wiki/Google_%28verb%29) "Fearing the genericizing and potential loss of its trademark, Google has discouraged use of the word as a verb, particularly when used as a synonym for general web searching" Perhaps Google is getting too big for its own good. Maybe more of us should start using Yahoo and Bing for our googling. :)

Tom (2011-11-06 20:09:28)

Not modesty...they can lose their trademark if they can't show that they actively protect it by correcting misuse. Aspirin is an example of a lost trademark. "Frigidaire" is a mark that is still alive in the U.S. but has been lost in France. Kleenex and Xerox are marks that would be lost if their companies couldn't show concerted effort to prevent it.

Ashish (2011-11-07 18:13:45)

As others have pointed out, genericization is a standard worry for big companies. As a marketing manager of consumer technology products, I've sat through long lectures from our lawyers about what usages are and are not permitted. I'm actually surprised that Google (the company) hasn't cracked down on "to google" a lot more.

Nathan Myers (2011-11-08 23:23:48)

American trademark law, as I understand it, does not protect verbs. Therefore, you and everyone else are welcome to google generically in lower case – even using Bing if you are not feeling especially pedantic or loyal. It's unlikely that "bing" will ever be a verb. MS should be so lucky.

Seth Roberts (2011-11-09 00:58:31)

Interesting. Clearly there is an incentive for lawyers to be overcautious. I wonder if anyone at Google ever checks what lawyers tell them.

## Assorted Links (2011-11-07 05:00)

- [1]More about the Stapel fraud. [2]The whole report.
- [3]participatory action research. "A way to increase understanding of how change in one's actions or practices can mutually benefit a community of practitioners." More practical than most academic research. Edging toward group self-experimentation.
- At a Reed College alumni lunch, I sat next to a professor of economics. "What do you think of Jane Jacobs?" I said. "Who's that?" she said. I am glad to learn that Elinor Ostrom, winner of a recent Nobel Prize in economics, [4]was influenced by Jacobs. Ostrom is a political science professor.
- "[5]Science is the belief in the ignorance of experts." A talk by Richard Feynman that I linked to [6]recently. I first realized the power of self-experimentation when it showed my dermatologist was wrong.
- [7]Monopolies of knowledge (Wikipedia entry).

Thanks to Bryan Castañeda, [8]Lemniscate, Dave Lull and Reihan Salam.

1. <http://chronicle.com/blogs/percolator/the-fraud-who-fooled-almost-everyone/27917>
2. <http://www.tilburguniversity.edu/nl/nieuws-en-agenda/commissie-levelt/interim-report.pdf>
3. [http://en.wikipedia.org/wiki/Participatory\\_action\\_research](http://en.wikipedia.org/wiki/Participatory_action_research)
4. <http://www.commondreams.org/view/2011/11/04-5>

5. [http://www.fotuva.org/feynman/what\\_is\\_science.html](http://www.fotuva.org/feynman/what_is_science.html)
6. <http://blog.sethroberts.net/2011/11/06/testing-treatments-eight-questions-for-the-authors/>
7. [http://en.wikipedia.org/wiki/Monopolies\\_of\\_knowledge](http://en.wikipedia.org/wiki/Monopolies_of_knowledge)
8. <http://blog.sethroberts.net/2011/11/06/testing-treatments-eight-questions-for-the-authors/#comment-930996>

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Nancy Lebovitz (2011-11-07 17:43:09)

Stapel reminds me of Bernie Madoff, which I suppose isn't surprising. A big fraud by an individual requires clever social engineering. If someone is arrogant or dismissive when asked for their sources of information, be careful!

### **A Great Idea From Nassim Taleb: End Banker Bonuses (2011-11-08 05:00)**

This is the best response to the 2008 financial crisis I have seen: [1]An op-ed by Nassim Taleb that says end banker bonuses. They encourage risk-taking with other people's money.

Separation of risk-taking from consequences (you gamble, if you lose, other people pay) is an ancient problem. The Chinese government would be wise to take a page from Hammurabi's code, which Taleb quotes:

If a builder builds a house for a man and does not make its construction firm, and the house which he has built collapses and causes the death of the owner of the house, that builder shall be put to death.

During the Szechuan earthquake, hundreds of schoolchildren died when their schools collapsed. Surrounding buildings did not collapse. It turned out the schools were badly built. No builder was punished, much less put to death.

At the end of his op-ed, Taleb puts it very clearly and simply: "bonuses and bailouts should never mix".

Thanks to Dave Lull.

More Large areas of medicine consist of the doctor or someone else gambling with your health.

An especially clear example is surgery. Surgeon are paid per operation. The more operations they do, the more money they make. If an operation kills you, the surgeon is still paid. No penalty for a bad outcome. Wonderful for the surgeon, terrible for the rest of us. The more corrupt the surgeon, the more surgery they will recommend. Taleb's idea suggests that surgeons pay a fine if a patient dies. The size of fines a surgeon would be willing to pay for bad outcomes would be helpful information for patients, who must decide what to do.

Drugs and medical devices are more subtle examples. You pay upfront for the drug or device, which are always expensive. They often have bad side effects, for which, of course, you pay. The drug company or device maker loses nothing. Wonderful for them, bad for the rest of us.

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1. [http://www.nytimes.com/2011/11/08/opinion/end-bonuses-for-bankers.html?\\_r=2](http://www.nytimes.com/2011/11/08/opinion/end-bonuses-for-bankers.html?_r=2)

Jim Purdy (2011-11-08 09:26:28)

No banker bonuses? Seth! Is that you in the tent next to me at the Occupy protest camp?

dearieme (2011-11-09 02:15:54)

Combine your ideas. Let apprentice surgeons develop their skills by practising on bankers!

Seth Roberts (2011-11-09 03:02:25)

dearime, yeah. I would be happy to introduce them. Gambler With Other People's Money, meet Gambler With Other People's Lives.

Daniel (2011-11-10 14:21:39)

Charging surgeons a fee when a patient dies doesn't necessarily fix the problem. The problem is simply that the agent (in this case, the surgeon) is incentivized by something other than matching the patient's intentions, and the system should try to be realigned to make that less the case. A bigger problem that I think of in this case is - if a surgeon is paid per operation, how is a surgeon supposed to tell you that surgery may not be a good idea?

Seth Roberts (2011-11-10 15:12:12)

If surgeons paid a fine when a patient died, they would be less likely to recommend surgery. A surgeon who lost more in fines than he gained in payments would quit doing surgery. Those are two ways in which the fines I propose would improve matters.

Seth Roberts (2011-11-11 13:31:07)

Daniel, thanks for explaining your reasoning. What is your proposal for improving the situation? "Paying for good decisions" strikes me as too vague to be practical. The domain of "good decisions" can be anything. A surgeon would say if a patient survives, that shows the surgeon made "good decisions" during surgery. If a surgeon fails to give patient nutritional advice, is that a good decision, a bad decision, or no decision? If a primary care doctor fails to give nutritional advice, same question.

## **The Willat Effect: More Consequences (2011-11-09 05:00)**

A month ago I bought three identical tea pots [1]to compare tea side by side. I hoped to take advantage of[2] the Willat Effect (side-by-side comparisons create connoisseurs) to become a tea connoisseur.

It worked. Side-by-side tea comparisons are fun, easy, and have taught me a lot. When I drink tea I notice more and like it more. I do about three comparisons per day. I blogged about the first results [3]here. The most useful idea about these comparisons came from Carl Willat himself: Compare the same tea brewed differently (e.g., different amounts of tea, different brewing times, different water temperatures). Most of my comparisons vary amount of tea or brewing time.

These many comparisons have had several effects:

1. Yeah, I'm a snob. No more cheap tea. Yeah, I'm more nerdy about it.
2. I bought a scale ([4]Camry EHA901, \$12 in America) with a precision of 0.01 gram. No more heaping teaspoons. Mostly I use 1.5 grams of tea with about 170 ml water. For dense tea, 1.5 grams is roughly 1 teaspoon. Standard-size teabags contain about 2 g of tea.
3. Much different brewing times than recommended. The black tea I have now is Ahmad Tea English Tea No. 1 (in spite of the name, not expensive). The tin says "infuse 4-6 minutes." I used to brew it (and all black tea) 5 minutes, now I prefer less than 3 minutes. I found that 2.75 minutes is better than 3 minutes. Around 3 minutes it starts getting

bitter – I never noticed! Another example is [5]American Tea Room's Choco Late, which contains cacao husks, vanilla, and rooibos. The package says brew 5 minutes. I prefer 30 minutes – 30 minutes tastes better than 20 minutes, I have found several times.

4. To make the comparisons as sensitive as possible I want to start with equal tea pots, so I need to clean them well after each use. This became boring. I could eliminate cleaning by using tea bags. I bought ordinary-size empty tea bags. Side-by-side comparisons (same tea, bagged versus loose) showed they made the flavor much worse. Too bad I'd bought 200. I bought much larger tea bags to use as liners rather than bags. That worked fine – no cleaning needed, taste just as good. However, they are too large, so I shorten them. The concept of a disposable tea liner (instead of tea bag) [6]seems to be new. I cannot [7]find any for sale. My connoisseurship has not only caused me to spend much more on tea, it has made me want an interesting new product. Tea pot makers could sell liners specially designed for their pots. Continuing revenue, like razor blades.

5. I stopped adding artificial sweetener (e.g., Splenda) to black tea. Now I prefer it without sweetener. I continue to add cream to black tea. This is the most surprising and intriguing change. Maybe sweetness is a distraction from the complexity of the flavor (which I now notice more and derive more pleasure from), but creaminess is not. I imagine the same thing is behind [8]Richard Stallman's "If it is tea I really like, I like it without milk and sugar." And maybe the same thing is behind all sorts of artistic expression that strike outsiders as harsh and unpleasant. A few years ago I went to a [9]BAM (Brooklyn Academy of Music) concert and was stunned how unpleasant it was. Yet the composer (who performed it) surely enjoyed it.

Regular readers know I think [10]connoisseurship evolved because it increased technological innovation. My experience so far supports this. Thanks to the Willat Effect, I am more of a connoisseur. As a result of this change, I am spending more on high-end artisanal goods (expensive tea) and precision manufacturing (precision scale) and I want a new product (disposable tea liners).

People think of connoisseurs as having higher standards. The word connoisseur seems to mean exactly that. In some obvious ways, they do. Yet the sweetener change (I no longer want sweetener) is in a way a lowering of standards. Sweetness is pleasant. I no longer require, or even want, my tea to be sweet. As far as I can tell, something like this is true throughout the arts. Connoisseurs make unusual demands, yes, but in some ways they are easier to please than non-connoisseurs. Indie films are less pleasant than mainstream films. Yet film connoisseurs like them more. To most people, indie films are also much cheaper and more experimental than mainstream films. By supporting them – by preferring them – film connoisseurs are supporting innovation. The connoisseurs have lowered their standards for film in the sense that they can enjoy cheaper films. A friend of mine attends the San Francisco International Film Festival each year. He enjoys it. I wouldn't. The SF film festival films don't cost much, yet they have a certain innovative quality. (I'm not a film connoisseur, I barely understand it.) The source of pleasure has shifted from conventional sources (plot, music, dialogue, gorgeous actors, sets, and landscapes) to something else, perhaps novelty and complexity.

1. <http://blog.sethroberts.net/2011/10/17/willat-effect-experiments-with-tea/>

2. <http://blog.sethroberts.net/2011/07/08/the-willat-effect-side-by-side-comparisons-create-connoisseurs/>

3. <http://blog.sethroberts.net/2011/10/24/even-more-about-the-willat-effect/>

4. <http://www.camry.cn/products/Pocket-Scales-EHA901.htm>
5. <http://www.americatearoom.com/>
6. [https://www.google.com/search?q=\"tea+liner\"](https://www.google.com/search?q=\)
7. [https://www.google.com/search?q=\"%22disposable%20tea%20liner%22](https://www.google.com/search?q=\)
8. <http://www.gizmodo.com.au/2011/10/please-do-not-buy-richard-stallman-a-parrot-and-other-rules/>
9. <http://www.bam.org/>
10. <http://sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

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Rashad (2011-11-09 09:15:46)

Great post! As to the lack of disposable filters, I think it is because there are so many with removable, reusable filters that are almost as easy to use. For example: <http://www.enjoyingtea.com/anjasttewifi.html> [http://teaguys.com/buy\\_tea\\_accessories.htm](http://teaguys.com/buy_tea_accessories.htm) <http://www.amazon.com/Glass-Teapot-w-Filter-42oz/dp/B0052AXO74>

Lemniscate (2011-11-09 09:36:25)

Have you thought about using a tea infuser? I've found the large ball tea infusers to be best, although I've not done a side-by-side comparison. They should be a lot easier to clean than teapots, but they don't need constant replacement like tea bags.

Kirk (2011-11-09 10:56:52)

I switched from paper filters to Finum Goldton tea filters, shortly after the Finum filters were written up on Cool Tools. The Finum filters make a good cup of tea and clean easily. Agreed about cream in black tea. I discovered that cream is better about five years ago. Cream is better than half-and-half, half-and-half is better than milk, milk is better than plain black tea. Several months ago I started transitioning from sweetened coffee and tea to unsweetened, mostly from a nutritional point of view (under the theory that if the brain perceives sweet, the body actually should be digesting incoming glucose). I'm halfway between preferring sweet to unsweetened. In my case, it's a matter of retraining, not preference. I keep a spreadsheet of my ratings of black teas which I have ordered over the years from Upton Tea. My current top 2 favorites are ta30 and zk16. You almost have me convinced me to start measuring and timing during tea preparation.

David (2011-11-09 11:34:29)

Very interesting. Are you brewing the Choco Late at a constant 185 degrees for 30 minutes?

Seth Roberts (2011-11-09 14:07:22)

"Are [I] brewing the Choco Late at a constant 185 degrees for 30 minutes?" No. The water cools. Maybe I could get better results if I kept the water hot but that would be difficult. I have done that with a microwave and temperature probe – brewed chai at constant temperature for 80 minutes. I still remember how great it tasted. It just took too long.

Seth Roberts (2011-11-09 14:18:33)

"Have you thought about using a tea infuser?" Good suggestion, I will try it. For many years, that's what I did. It bothers me to have tea in my waste water (from rinsing the infuser) but now that I think about it that's silly.

Seth Roberts (2011-11-09 14:22:06)

Rashad, thanks for taking the trouble to provide these links.

Seth Roberts (2011-11-09 14:37:03)

Kirk, that's great info! Upton Tea's a30 tea costs \$11 for 125 g, which at 3 g/serving (for me, a serving consists of the same tea made 2 ways) is \$0.26/serving. Their zk16 costs \$7 for 125 g. Shipping (USA domestic) is \$4.



q (2011-11-09 17:46:40)

just wait, you go down this road, and you'll find yourself buying a \$100 scale

Jazi yechezkel zilber (2011-11-10 01:38:06)

I drink only mint tea. I always noticed 1) exactly one minute is great. 15 more seconds makes it ugly. Not nice in stomach, and not tasty. I also noticed a huge difference between brands. It was hard to believe, but it was too clear to neglect. 2) i used sweeteners. 2.1) only one sweetener ( a mixture of aspartam and saccharine) was good in my sensitive stomach. I would run to other stores to find it and gather an inventory. 2.2) it was exactly half a ball of sweetener that was great. No more. No less.... I thoughts i am crazy or fantasizing. But i knew i am right It comes together with many other things that I gave up my eyes because there was no theory, and common opinion were not accepting my eyes. No more blindness! What I See Is What I Believe

Kirk (2011-11-10 10:53:31)

@Jazi Several months ago I started drinking peppermint tea after supper. I agree with your observation that there's a huge difference between brands. I'm about ready to throw out one brand because the tea tastes stale. Also, I hadn't thought about brewing for just one minute; I'll give it a test tonight. @Seth Another advantage to Upton's is that you can order samples for about a dollar each. That's what I did in my first several orders, several dozen samples in each order, and then did a bake-off between them. The smart thing I did at the time was to start a spreadsheet to track my ratings and reactions.

Daniel (2011-11-10 14:14:41)

Hi Seth, I have not been as diligent and methodical as you. However, I have meandered my way into being very bitchy about how my tea is prepared from experimentation and toying around. 1) Like you mentioned with black tea, I have consistently, across all forms of tea or tisanes, preferred less steeping than is suggested, and this is one of the most important factors as to whether the tea is tolerable (to me). 2) Whenever possible, I make tea in french presses so the leaves have plenty of room to move around. When the tea is finished steeping, I transfer the tea to another vessel. I also have a single cup+infuser for traveling, and spent a while finding a brand with an infuser I liked (holes were small enough to accomodate tisanes with small leaves, infuser was almost the entire size of the cup - FORLIFE). As my main, I use a double-walled steel french press to preserve the temperature during steeping. 3) I pour the tea into either small cups (3.5oz) or halfway into larger cups (6oz) so that I can finish the cup while the tea is at a temperature I like. Rest is stored in a thermos. 4) Bagged tea is always terrible, unless it is luxury (fancy infusers, whole leaves) bagged tea where the prices are ridiculous. Fortunately, quality loose tea is very competitively priced to cheap bagged tea. I still have many questions and curiosities and things I'll hope to figure out. For example, the samovar method of tea is common in some cultures and makes some delicious tea, at least black tea, but involves oversteeping and then diluting this oversteeped tea with hot water. Does the temperature of the water matter? Does giving a short pre-soak in cold water help? Does storing or serving the tea in metal vs. glass vs. ceramic matter? Steeping in cast iron vs. clay vs. glass ? My conclusion has been similar to yours - figuring these things out may not necessarily be the right way, but they're the right way for me and gives me pleasure when I'm enjoying my hobby later. The only frustrating thing is, like you mentioned with the liners, you realize you want a product to solve your problem that doesn't exist yet.

Seth Roberts (2011-11-10 14:28:29)

Daniel, I like your definition of connoisseur: "bitchy about how X is prepared." Two things I didn't mention in my post that are related to what you say: 1. I now prefer black tea to green (at the same price). Black has a more complex flavor than green. Now that I make black tea in a way that minimizes the bitterness and drink black tea without cream or sweetener (the same way I drink green tea), that's quite clear. 2. Room temperature tea is fine. The complexity of flavor is clearer at room temperature than other temperatures.

Elizabeth Molin (2011-11-13 08:38:45)

With reference to the Willat effect and your theories of human evolution, do you think connoisseurship and an aesthetic appreciation of "beauty" (or deliciousness, or repeated patterns, or whatever) are evolutionarily beneficial? Do they contribute to the survival of the fittest in some way? I can see that things that taste better might also be more beneficial to one's health, but I can't get any further in my thinking about this.

Seth Roberts (2011-11-13 13:51:31)

Elizabeth, I think connoisseurship was evolutionarily beneficial because it increased innovation. It increased innovation because it made it easier to make a living as a highly-skilled artisan. People with such jobs produce more technological innovation than people with other jobs. Basically connoisseurship raised their salary. Our enjoyment of beautiful objects, and willingness to pay more for them than similar but less attractive objects (e.g., decorated cup versus undecorated cup) likewise increased technological innovation. It caused innovation in decoration, which was a stepping stone to innovation in obviously useful stuff (e.g., better weapons).

Jazi yechezkel zilber (2011-11-13 23:33:19)

Tea making. More parameters. Steering or not? (i.e. letting the tea in gently, and later pulling it out without much movement) Pouring hot water on the tea packet, or easing the tea bag gently into the cup? Water temperature (there are claims that say 90 degrees celsius is better. (can be handled with thermometer

Elizabeth Molin (2011-11-14 07:20:04)

Seth, I understand your discussion of connoisseurship, and it sounds intuitively compelling to me. My question is, where does "our enjoyment of beautiful objects" come in? How did that originate? What is its evolutionary benefit? I just can't seem to come up with a reason why someone with an appreciation of beauty would have an evolutionary advantage over someone without.

ajb (2011-11-14 09:42:52)

"My question is, where does "our enjoyment of beautiful objects" come in? How did that originate? What is its evolutionary benefit? " Beauty seems like a pretty basic 'moving towards' valuation. So, we want to be around or look at things that are beautiful, and presumably these things tend to be good for us. When it comes to art, it seems more like we're recreating the experience of natural patterns or events ...

Elizabeth Molin (2011-11-14 11:56:31)

I'm not explaining myself well. "We want to be around or look at things that are beautiful." Where did the idea of "beauty" come from? Do primates have a sense of beauty? How big a leap is it from "tasty" or "comfortable" (and therefore pleasing) to AESTHETICALLY pleasing? And what evolutionary purpose does an aesthetic appreciation of something (that may not be tasty or comfortable or even useful) serve?

Seth Roberts (2011-11-14 19:55:43)

Elizabeth, I suppose our sense of beauty started with mate assessment. Our distant ancestors, including primates, preferred more symmetrical less damaged mates. But in humans this sort of assessment, at least applied to objects, has gotten much more complicated and powerful, I believe. In other words, whether something (not somebody) is beautiful or not plays a much bigger part in our lives than it does in the life of any (other) animal. The evolutionary purpose of this great expansion of a sense of beauty happened because it caused resources to be given to highly-skilled artisans – the ones who can make the most beautiful things. These resources increased technological innovation. Here I'm talking about visual beauty. I believe our appreciation of auditory "beauty" (music) came about because it caused the same thing: resources going to those who could make the best-sounding instruments. Who were the most skilled artisans, etc. Perhaps the word "beauty" (what might be called the idea) was invented to describe the more attractive objects. Since many animals choose mates based on appearance, it isn't clear what it means to say the idea of beauty was "invented". It's like asking who invented hunger.

Allen K. (2011-11-14 23:08:36)

This film connoisseur is a good example of your observation that connoisseurs are less demanding of conventional perfection: [http://www.slate.com/blogs/browbeat/2011/11/11/william\\_monahan\\_picks\\_his\\_favorite\\_british\\_crime\\_films.html](http://www.slate.com/blogs/browbeat/2011/11/11/william_monahan_picks_his_favorite_british_crime_films.html) After the dogs of memory had had a few days to hunt around, I realized that I'd heard this observation some 30 years ago at an AAAS talk by computer game designer Chris Crawford. He talked about candy, comic books, and computer

games. In the first two cases, one expects that a small child will grow out of a predilection for simple confections and wish to experience more complicated flavors (spicy!) and may eventually become a gourmand, who eats some things that really taste \_bad\_. Crawford was largely expressing a hope that the level of connoisseurship and sophistication we see in cuisine and literature might come someday to computer games. [http://en.wikipedia.org/wiki/Gossip\\_\(computer\\_game\)](http://en.wikipedia.org/wiki/Gossip_(computer_game))

Kirk (2011-11-16 20:15:40)

Tonight I tried a new box of peppermint tea. I brewed just from this new tea, without a comparison cup which would have been brewed using my current favorite boxed peppermint tea. I think of it as a tasting where the comparison is done in memory. (I think it's valid but not as good as having them both available in real time.) I found myself describing this tea as 'fresh, has two sharp edges, a smooth mint flavor, fades well'. Which, I agree, sounds annoyingly like those wine snobs. Which made me curious as to whether you record impressions during your black tea tastings ('malty', 'bitter', 'rich'), or if you are interested solely in the winner? And if you capture impressions, have you noticed any patterns, or whether one way to describe is better than another?

Seth Roberts (2011-11-16 23:55:55)

I don't write down impressions, but I remember them. Smooth is better than rough, not bitter is better than bitter. Full is better than sharp or jagged. Perhaps what I call full other people would call rich. You're certainly right that I notice more than which tastes better: I can always say why (e.g., "A tastes fuller than B").

Stone Glasgow (2012-02-26 10:37:02)

This is a great way to adjust/perfect recipes, too. It works because our brains judge everything relatively, even colors. And it's why we respond to anchor pricing (was \$159, now only \$99!). To humans, characteristics are always based on direct comparisons.

## Assorted Links (2011-11-10 05:00)

- [1]Super-old Ashkenazi Jews. Did they live to be more than a hundred "in spite of" their "bad habits" (eating steak & pork chops, smoking, refusal of Lipitor) or because of those habits? Small amounts of smoking could easily be beneficial due to (or illustrating) hormesis.
- Does Hollywood have a sense of humor? In the new movie about noted anti-Communist J. Edgar Hoover, Hoover's love interest is played by Armie Hammer, grandson of Armand Hammer, who worked for the Soviet Union as a money launderer. Edward Jay Epstein writes about Hammer and the Soviet Union in [2]this excellent Kindle book.
- An advantage of ebooks, not yet realized, is easy updates. When the book is improved – for example, mistakes fixed – you get a new copy. In [3]an even better Kindle book, Epstein writes about the diamond industry. The vast difference between the purchase price of a diamond and its resale value may be the advertising industry's greatest achievement. Recent events caused Epstein to add a new chapter. The book was easy for Epstein to update but unfortunately earlier purchasers did not get the new version.
- Michel Cabanac, who did some of the research behind the Shangri-La Diet, has written [4]a book about his life's work: how we self-regulate via pleasure. During a meal, for example, exactly the same food becomes less pleasant. When it becomes unpleasant, we stop eating. When we are hot, cold water is more pleasant than when we are cold. The secret to weight loss, Cabanac realized, is making exactly the same food less pleasant – an insight few weight-loss writers understand.

1. <http://nymag.com/print/?/news/features/ashkenazi-jews-2011-11/>

2. <http://amzn.to/tLHC4G>

3. <http://www.amazon.com/Tried-Diamond-Other-Investigations-ebook/dp/B0050CM1K0>
4. <http://www.amazon.com/Fifth-Influence-Dialectics-Pleasure/dp/144018836X>

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Joseph Buchignani (2011-11-10 05:43:56)

You've no idea on smoking. It goes far, far beyond hormesis. Google for the anonymous author "Nightlight". He posts on lots of forums, including forces.org and longecity. I started smoking - \*handrolled\* cigarettes only - based on his arguments. Industrially processed cigs are about like eating McDonald's. Yes, meat is good for you. No, McDonald's patties aren't.

Jim Purdy (2011-11-10 06:51:58)

Seth, when it comes to pathologically compulsive binge eaters, I think there is a fatal flaw in this statement from your post above: "During a meal, for example, exactly the same food becomes less pleasant." For a sometimes binge eater like me, there's no loss of pleasure at any point while I'm eating a massive meal of one of my favorite binge foods, whether the food is dozens of Krispy Kreme donuts or dozens of deep-fried chicken wings. Many years ago, my binge eating was so bad that there were a few times when I ate until my stomach was full, and yet I continued eating while the food starting filling up my esophagus, and I would quit only when the very next bite of food would have blocked my airway and killed me. Literally. Fortunately, I finally figured out that I just can't do that any more, but only because another problem started to develop even before airway obstruction: a few years ago, huge meals started giving me terrible chest pains that made me go to emergency rooms for what I thought were heart attacks. According to EKGs in the emergency rooms, those episodes were not heart attacks, but perhaps something more like a hiatal hernia. Those chest pains finally made me stop eating massive meals. As a result, my weight has been dropping, and several of my health problems have improved. And, actually, I think that it's not all bad to continue to enjoy the same food, as long as the food is healthful. If only I could just keep enjoying a big meal of nothing but lettuce and celery... I am moving in that direction. I have been taking your advice to self-experiment and to monitor and record what I eat, and how my blood sugar responds (<http://thepancreasfiles.blogspot.com/>). I'm finding that some of my favorite foods actually seem to sharply lower my diabetic blood sugars. Maybe I'm just re-discovering the Atkins Diet. I was startled several years ago that a week on a very strict Atkins or low-carb diet would lower my blood pressure, my blood sugar, my LDL cholesterol, my pulse, and my weight.

dearieme (2011-11-10 08:25:51)

Ashkenazi Jews eating pork chops? Very "bad habits".

Tom (2011-11-10 09:05:59)

What's wrong with McDonald's patties?

dilys (2011-11-10 10:16:24)

Thanks for the heads-up on Cabanac. My own weight-loss discovery was making "safe"/filling (lots of shredded raw or steamed vegetables) foods \*more\* pleasurable, by mixing them with teaspoon-quantities of highly flavored rich desirable food. Thus, via satiety, "unsafe" foods became less appealing at the point of choice. The Follow-Your-Pleasure approach, when the pleasure has been tweaked for effectiveness, has been the great practical discovery of my life, along with a related tactic of gentle-but-relentless minutely-incremental change of behaviors with no drama around occasional minor regression. Cabanac's insights also help account for the folly of deciding prematurely what one wants, since in many realms the needs and wants in the moment are more pertinent, and may be more wholesome, than the mind's reach into the future. One diet writer talks about the hazards of the thought, "I'm-a gonna want some-a that [for dessert]." The semi-abstract pursuit of pleasure, while undervaluing its immediacy as a feedback principle, IMO occurs at some peril to our well-being.

Seth Roberts (2011-11-10 15:36:03)

"It goes far beyond hormesis"? What do you mean? Hormesis can be powerful. Nightlight goes off the rails when he blames "big pharma" for anti-smoking science. Ernest Wynder, one of the pioneers, was a medical student. But yeah, there is plenty of reason to think a modest amount of smoking is good for you.

Nancy Lebovitz (2011-11-11 04:25:56)

From what I've read in *The Longevity Project* maintaining social relationships is important to longevity, but it isn't usually on the list of good habits.

Joseph Buchignani (2011-11-11 08:52:08)

If you've read Nightlight, you know everything I'm getting at. By beyond hormesis, I mean that it has positive first order effects through biological pathways that aren't related to poisons.

Seth Roberts (2011-11-11 12:27:47)

Joseph, thanks for explaining that. I have a book called *The Health Effects of Tobacco*.

Peter (2011-11-12 16:32:52)

My wife recently conducted an unintended self-experiment on less pleasant food. I eat gluten-free, and we recently found that our six-year old daughter is also gluten intolerant. As a result, my wife, who is above her desired weight, decided to cook gluten-free meals for the whole family. She found that when she used rice noodles in lasagna and mac and cheese, two of her favorite meals, she could only eat about half of her former portion size and then the food became unappealing, bordering on repellant. The effect has also been noticeable with other meals, such as spaghetti made with rice noodles and pizza baked with a gluten-free crust.

rps (2011-11-12 21:31:21)

The idea that very light smoking is healthy because of hormesis is plausible, if unproven, but the problem with light smoking is that virtually all smokers end up smoking 10-30 or so cigarettes/day within several years. In my entire life I've known hundreds of smokers, and only two people who managed to consistently smoke just a few cigarettes/day for extended periods of time. There are lots of ways to get hormesis that aren't addictive and don't end up titrating themselves to harmful levels. I came across nightlight on a forum several years ago. I can't remember the details, but I do recall that he argued that evidence against smoking is worthless because it's epidemiological, and then he argued in favor of smoking based on epidemiological evidence. [1]Bozo bit set to TRUE.

1. <http://c2.com/cgi/wiki/SetTheBozoBit>

Jazi yechezkel zilber (2011-11-13 04:26:43)

Fifth infouence book ordered. Thanks. Waiting. I have evidence that stoping to smoke can damage the lungs and cause lung cancer. It is only the formidable load of writing a "paper" that proibits me from making my case formal.....

### Assorted Links (2011-11-11 05:00)

- [1]Non-traditional science. Interview with Michael Nielsen, a physicist.
- [2]Nassim Taleb argues with a drug company employee about big pharma (on Facebook)
- [3]Too many medical tests. Quite right!
- [4]Paleo versus Vegan. I think this illustrates that data matters.

Thanks to Dave Lull and Alex Chernavsky.

1. [http://scienceblogs.com/confessions/2011/11/interview\\_with\\_michael\\_nielsen.php](http://scienceblogs.com/confessions/2011/11/interview_with_michael_nielsen.php)

2. [http://www.facebook.com/permalink.php?story\\_fbid=10150379534483375&id=13012333374](http://www.facebook.com/permalink.php?story_fbid=10150379534483375&id=13012333374)

3. <http://blogs.scientificamerican.com/cross-check/2011/11/07/how-can-we-curb-the-medical-testing-epidemic/>
4. <http://freetheanimal.com/2011/03/the-paleo-diet-smashin-the-livining-shit-out-of-the-vegan-diet-since-2010.html>

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charlie (2011-11-11 06:28:58)

The point about medical tests is valid. However, in terms of cost control, you're going to wrack up 75 % of the costs in the last six months of life. A few tests or MRI are wasteful – but they aren't what is driving the medical costs. Most doctors aren't healers. They are guardians of death. One big exception is psychiatrists, and like dentists, they should be excluded from most medical plans.

Tim Ozenne (2011-11-12 08:01:29)

Not a reply on your posting, but did you see Panel Urges Cholesterol Testing for Kids in WSJ 11/12/11? Yikes.

wr (2011-11-12 09:59:38)

The popularity of a diet has nothing to do with its efficacy, and if one were to look at correlations, it's almost certainly an inverse relationship. Who would know this better than you! And anyway, most of the vegans I know consider it an ethical diet, with any health benefits/risks of secondary importance. I'm a vegetarian myself. I find the paleo diet very interesting and believe may be the most healthy for humans. But I also believe that animal suffering matters, so I do my best to approximate it without the meat.

jscott (2011-11-13 15:50:23)

(Off topic...kinda) Have you looked into Reams Biological Theory of Ionization? Specifically with a homebase offshooting from Challen Waychoff and Matt Stone? It seems it would be an interesting study as there are specific measurements to test against.(?) I am skeptical (perhaps because of my own bias) because of naturopathy influences.

Seth Roberts (2011-11-13 18:50:56)

I have heard just a little about the Reams theory. Don't know what to make of it. If there are data about its effectiveness, that would be interesting.

Alex Chernavsky (2011-11-13 20:25:49)

@wr: I used to be a vegetarian, until I started looking into the egg and dairy industries. If your concern is with animal suffering, you'd be better off giving up eggs and dairy and continuing to eat flesh. There is more suffering in an egg or a glass of milk than there is in a steak. Better just to go vegan.

danimal (2012-01-06 14:20:49)

Seth, As for Reams, I think it's mostly anecdotal as far as the human data go, but if you read up on it or read Matt Stone's posts on it while he was interning there, you'll see that it's probably some of the most profound anecdotal data. I don't think it's the ultimate solution, but having just a few of these measurable quantities like saliva and urine PH and salts and sugars and making thousands of these comparisons and tests over time has produced some fantastic results. RBTI for humans is based off of RBTI for agriculture and I think the data is more established there. At least the anecdotal evidence is also just as amazing as people report the tastiest foods of their lives incorporating this methodology.

## Testing Treatments: The Authors Respond (2011-11-12 05:00)

In a [1]previous post I criticized the book Testing Treatments. Two of the authors, Paul Glasziou and Iain Chalmers, [2]have responded. I have [3]replied to their response. They did not respond to the main point of my post, which is that the preferences and values of their book – called evidence-based medicine – hinder innovation.

Sure, care about evidence. Of course. But don't be an [4]evidence snob.

1. <http://blog.sethroberts.net/2011/11/06/testing-treatments-eight-questions-for-the-authors/>
2. <http://blog.sethroberts.net/2011/11/06/testing-treatments-eight-questions-for-the-authors/#comment-931970>
3. <http://blog.sethroberts.net/2011/11/06/testing-treatments-eight-questions-for-the-authors/#comment-931978>
4. <http://blog.sethroberts.net/2008/06/08/evidence-snobs/>

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Elizabeth Molin (2011-11-12 11:08:34)

To continue our discussion: I have had dealings with superior, arrogant doctors, and doctors who didn't give a damn, and doctors who were sadists (OB/GYN seems to attract those, both male and female). I am very glad to now have a doctor who actually listens, who can admit she's wrong, and who is willing to learn. The statin episode happened before I was well enough informed to suggest that my husband ask for evidence; I would be pushier now. I think our doctor, like most of them, is battling patient expectations. She was delighted (and surprised) that my husband was perfectly willing to make dietary and life-style changes. I think many patients come in demanding Celebrex or Lipitor or whatever was advertised on TV last night. I think many more feel that the doctor is not doing his/her job if they don't come away with at least one prescription. At one point our doctor advised me to "take Tylenol or Advil," and I told her I would not, because of the side effects; if I needed an anti-inflammatory or an OTC painkiller I preferred aspirin. She answered at once that of course I was absolutely right; aspirin is much better! But most people nowadays think it's old-fashioned or has been superseded somehow. So she doesn't suggest it. I guess doctors too get tired of doing the King Canute thing. I'm just glad that I can challenge ours and have a thoughtful, reasoned discussion of what matters to me.

Seth Roberts (2011-11-13 02:23:24)

That's very interesting about how your doctor said "you're perfectly right" about the aspirin. She sounds conflict adverse.

### **"Setting Students on Fire" at Universities: An Alternative (2011-11-12 20:22)**

The first paragraph of [1]an article by Anthony Grafton called "Our Universities: Why Are They Failing?" contains this:

At every level of the system, dedicated professors are setting students on fire with enthusiasm for everything from the structure of crystals to the structure of poems.

Grafton means this as praise, of course: Wow, these professors are doing a great job! I disagree. I think there are a million things in the world to be enthusiastic about – the structure of crystals and the structure of poems are two examples, no better or worse than the rest. I also think it is fundamentally foolish for a professor to try to make every student in his or her class as enthusiastic about X as the professor happens to be. It is foolish because it ignores human variability, which is great along these lines. (I think diversity of interest and enthusiasm is large because [2]such diversity helps produce diverse economies.) It would be much better for the students if the professor were to help them develop their own unique enthusiasms.

I suspect Grafton has never considered this possibility. In discussions at Berkeley that I attended about how to be a good teacher, including special seminars, it never came up. Yet I taught a class at Berkeley (Psychology and the Real World) where I did just that: I allowed students to do volunteer work off-campus about almost anything they wanted. They chose the work, not me.

1. <http://www.nybooks.com/articles/archives/2011/nov/24/our-universities-why-are-they-failing/>
2. <http://sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

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dearieme (2011-11-13 05:46:21)

Your thoughts on this are commendably measured: my first response was to sneer with derision at such silly purple prose.

Jazi yechezkel zilber (2011-11-14 00:11:51)

"getting students excited" feels fake. If you need to artificially get people enthusiastic, it means there is nothing to be excited about

### **Danny Kahneman's Decision Making (2011-11-13 05:00)**

[1]A lovely article by Michael Lewis about Daniel ("Danny") Kahneman, my former Berkeley colleague, emphasizes his indecision whether to write a popular book about his work. Should I or shouldn't I? He doesn't like what he's written so far. Finally he decides to pay some experts for their opinion:

He called a young psychologist he knew well and asked him to find four experts in the field of judgment and decision-making, and offer them \$2,000 each to read his book and tell him if he should quit writing it. "I wanted to know, basically, whether it would destroy my reputation," he says. He wanted his reviewers to remain anonymous, so they might trash his book without fear of retribution. The endlessly self-questioning author was now paying people to write nasty reviews of his work. The reviews came in, but they were glowing.

Uh, why would anonymous experts trash his book? They gain in two ways from having it published: 1. It draws attention to their field, making them more important. 2. They can use it as a textbook. I love that Michael Bailey wrote [2]The Man Who Would Be Queen ([3]pdf). It allows me to assign my students a book I admire.

I think Danny has raised two great questions here:

1. How can we set up a situation so that others will tell us the truth (= what they actually think)?
2. How can we tell if we've succeeded – if they've told the truth?

The answers aren't obvious, at least to me. The best answer I can give to Question 1 (what situation?) is write a blog. I take positive and negative comments to be what their authors actually think. Variations on Question 1 are common. [4]Robin Hanson's blog is about how bias distorts what we say and do. [5]Hot or Not provides truthful answers to how attractive you are. [6]CureTogether tries to get truthful answers about health care. The best answer I can give to Question 2 (how to assess) is do a test. Wear something ugly. Do your friends say you look great in it? Why do I think the comments on my blog are truthful? Well, [7]my recent post about E-Cat was poorly-informed (unintentionally).



The comments quickly and overwhelmingly said so. That supports my belief. In contrast to Question 1, Question 2 is rare.

The last time I talked to Danny was in the 90s. I was thinking of writing a book based on my introductory psychology lectures. I wrote a sample chapter based on my possessiveness lecture. The center of that lecture was the endowment effect (we value what we possess much more than the same thing when we do not possess it). Danny had written about it and loss aversion is part of prospect theory. By then Danny was at Princeton. I spoke to him on the phone. Does the endowment effect affect your everyday life? Does it affect what you do? I asked. He thought about it. No, he said. Or at least he couldn't think of examples. In contrast, Richard Thaler chatted happily about the everyday implications.

One everyday sign of the endowment effect is a car in front of a big garage. The car isn't in the garage because the garage is full of "junk". Another is garage sales (also called yard sales). Such sales are held when the clutter becomes unbearable. They illustrate the everyday relevance of the effect. My point isn't that Danny was unobservant, it's the difference between his answer and Thaler's. There is definitely room for two answers to my question. Humans are traders. We specialize and trade. This is central to economic life. Early papers about the endowment effect (I haven't looked at recent papers) didn't notice the problem/puzzle. How can we both (a) hold on to stuff tightly (= the endowment effect, loss aversion) and (b) trade easily? [8]John List noticed.

My friend [9]Michel Cabanac, whose research was behind the Shangri-La Diet, has criticized Danny. In [10]a book (p. 140), Michel wrote:

At a lecture in Jerusalem on January 19, 2001, he [Danny] was kind enough to inform the audience that the recent reorientation of his research toward what he calls "experienced utility," which he acknowledged to be a synonym of pleasure, had been inspired by my 1993 lecture at Princeton University and by previous readings of my publications on pleasure.

In an email he elaborated:

However the "lecture" [at Princeton] was a only an invited seminar in his laboratory with an audience limited to him and his team. If I remember well, he reimbursed my travel and housing expenses. Yet, the Jerusalem mentioning of my contributions was only verbal [i.e., spoken], as I failed and still fail to find reference to Cabanac in his publications.

Michel's whole research career has centered on the idea that pleasure guides our actions, including "cognitive" ones. Faced with an arithmetic problem ( $2 + 7 = ?$ ), for example, some answers will seem more pleasant than others. ( $2 + 7 = 9$  is more pleasant than  $2 + 7 = 10$ , not just more familiar.) He has especially stressed that changes in pleasure – the same events become more or less pleasant – help us self-regulate. We stop eating when food becomes unpleasant, for example. The food stays the same, we change. No one has understood the role of pleasure – which is at the center of all human decision making – better than Michel.

When I get a copy of Danny's new book, *Thinking Fast and Slow*, I will be curious to see what he says about the endowment effect, loss aversion, and Michel Cabanac.

More [11]Via scrbd, I have found that Danny's new book does reference Michel – see p. 488. And, in a chapter about the endowment effect, I found this: "Knetsch, Thaler, and I set out to design an experiment that would highlight the contrast between goods that are held for use and for exchange." He goes on to discuss List's research. I am unable to find anything like the phrase "the contrast between goods that are held for use and for exchange" in

[12]the paper that the three of them wrote about the effect. Jack Knetsch began to study the effect because different ways of trying to establish the value of the environment (e.g., clean water) produced enormously different answers. The endowment-effect chapter is weak on everyday examples – nothing about garage sales – but does include an unsourced quote: "She didn't care which of the two offices she would get, but a day after the announcement was made, she was no longer willing to trade. Endowment effect!"

Thanks to Dave Lull, who suggested online searching.

1. <http://www.vanityfair.com/business/features/2011/12/michael-lewis-201112>
2. [http://en.wikipedia.org/wiki/The\\_Man\\_Who\\_Would\\_Be\\_Queen](http://en.wikipedia.org/wiki/The_Man_Who_Would_Be_Queen)
3. <http://faculty.wcas.northwestern.edu/JMichael-Bailey/TMWVBQ.pdf>
4. <http://www.overcomingbias.com/>
5. <http://hotornot.com/>
6. <http://curetogether.com/>
7. <http://blog.sethroberts.net/2011/10/30/e-cat-passes-test/>
8. <http://www.economist.com/node/2021010>
9. [http://www.fmed.ulaval.ca/ap/francais/chercheur/chercheurs/CABANAC\\_Michel.htm](http://www.fmed.ulaval.ca/ap/francais/chercheur/chercheurs/CABANAC_Michel.htm)
10. <http://www.amazon.com/Fifth-Influence-Dialectics-Pleasure/dp/144018836X>
11. <http://www.scribd.com/doc/70550803/Thinking-Fast-and-Slow-by-Daniel-Kahneman>
12. <http://harbaugh.uoregon.edu/Readings/UGBE/KKT%20Endow%20JEP.pdf>

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M (2011-11-14 07:48:50)

You say that writing a blog is one way to get others to tell you the truth. Unfortunately, I don't think it necessarily works this way. A blogger can be wrong on an issue and simply attract comments from others who have the same wrong view, eventually driving out those who have other views. I suspect this happens a lot in the world, leading to "echo chamber" blogs. In fact, I think this has happened in the case of one major issue that you write about on your blog. (I think you are right on many other issues, though!)

John (2011-11-14 11:40:03)

M: Your comment might be more useful if you'd tell us what you think that one major issue is, and also why you think Seth is wrong about it. Don't let us languish in ignorance!

Seth Roberts (2011-11-14 13:33:12)

M, you write "A blogger can be wrong on an issue and simply attract comments from others who have the same wrong view." By "the truth" I don't mean objective truth – I mean it in the sense of what a person really thinks. Whether they like what you've written, whether they like what you're wearing. Truth in the sense of "tell the truth" (versus lie). People may have what you think is "the wrong view" but when they post comments stating that view or agreeing with that wrong view, they are telling the truth, as I am using the word. That said, I agree with John Harper, what's the "one issue" that I write about where I have the wrong view and people just echo me? My guess is man-made climate change.

## Seth Roberts Interview With Pictures (2011-11-14 05:00)



[1] This sidebar appeared in an article about self-tracking (only for subscribers) by James Kennedy, who works at [2]The Future Laboratory in London. The top photo is at a market near my apartment. Below that are photos of my sleep records, my morning-faces setup, my butter, and my kombucha brewing jars. Back then I was comparing three amounts of sugar (each jar a different amount). Now I'm comparing green tea/black tea ratios.

1. <http://blog.sethroberts.net/wp-content/uploads/2011/11/SQ-4.jpg>
2. <http://www.thefuturelaboratory.com/>

TD (2011-11-14 09:59:26)

Another contribution that I think you've made is the realization of how decidedly low-tech *\*real\** progress can be. I like the emphasis on paper, wood, real food...other than the screens, all simple tools. No watch. Good man. You look 38 or 48 in that picture.

Seth Roberts (2011-11-14 14:31:12)

Thanks, TD. Yes, my research is rather low-tech. It was lowest-tech in the very beginning, when I did an experiment on my acne. I just counted pimples every morning and wrote down the number. No computer, not even to analyze the data. After that, however, two recent inventions have been really helpful: 1. Personal computer, so I don't have to bring the data to my office. 2. Photocopier. So I can easily consult journal articles. Berkeley has a service where for a few dollars you can get a journal article copied and put in your mailbox. I was a big user. A lot of treatments I've tested have a basis in the scientific literature, which is much more accessible now. For example, I tried looking at faces on TV in the morning because of a photocopied scientific article I read. I was able to look at all sorts of different faces on TV because of VCRs – long ago, a big new thing.

Nancy Lebovitz (2011-11-14 17:30:25)

<http://www.thisamericanlife.org/radio-archives/episode/450/so-crazy-it-just-might-work?act=1> Off-topic, but I think it counts as an example of the roadblocks conventional science puts in the way of research that might be very useful.

Seth Roberts (2011-11-14 18:42:41)

Nancy, I thought the same thing after I listened to that episode.

by (2011-11-15 13:18:33)

Always wanted to get a glimpse into the appearance of daily life of Seth Roberts. I enjoyed this post.

Parker Bohn (2011-11-15 16:26:06)

I make kombucha with 100 % grape juice. It tastes better, and it seems to have the same relaxing effect. It does seem trickier to get it to the right degree of 'doneness', however.

Seth Roberts (2011-11-15 18:37:22)

Parker, that's fascinating. Could you elaborate on what you mean by "it's more difficult to get it to the right degree of doneness"?

Tom (2011-11-15 21:29:35)

*I make kombucha with 100 % grape juice. It tastes better, and it seems to have the same relaxing effect. Isn't that wine?*

Alex Chernavsky (2011-11-15 22:06:56)

I make kombucha the regular way and then bottle it with a couple of ounces of fruit juice. I use empty bottles from GT Dave's kombucha. With the cap tightly sealed and the bottles stored at room temperature, the result is a nicely carbonated beverage within a day or two. I usually use apple cider for the juice, but I've also used juice from grapes, acai berries, mangoes, black currants, and whatever other stuff I can find in the health food section.

Seth Roberts (2011-11-16 01:47:22)

Wine or not, I have gotten apple juice and grape juice to see what happens when I put kombucha culture in them.

Sara (2011-11-19 01:10:40)

That's very interesting about the morning faces thing - obviously old science now, but I'd not heard of it. When I got back from overseas after visiting my niece, I went into a real depression (jetlag always does this to me anyway, but combined with missing her it was pretty grim). I started watching Deutsche Welle in the mornings just because it reminded me of being with my family and it was always the news program. After a few days I was feeling really good, better than usual. I also work and study from home and spend a lot of time alone (but I'm busy so I don't really feel lonely). I stopped doing the morning TV thing

and have slumped a bit so I'll give it another try. What I thought you might find interesting is that I am a beginner at German and don't understand much of what I hear on Deutsche Welle, so I'd say, if it works, it is the 'face', and maybe the sound but not the influence of recognisable language.

Seth Roberts (2011-11-19 04:20:57)

Sara, I think the sound of voices reduces how lonely we feel. I don't the voices need to be speaking a recognizable language. It's a quite different effect than the effect of seeing faces. For one thing, voices make you feel better right away (within minutes of hearing the voices). With the faces effect, you don't feel better until the next day.

### **Chinese Medicine As Now Practiced (2011-11-15 05:00)**

In America, I often hear praise for "Chinese Medicine". By this they mean Traditional Chinese Medicine, which includes acupuncture and techniques that harness hormesis. I tend to agree. Medicine as now practiced in China is a different story.

Last night, I had dinner with some of my students. I asked them what their parents thought of their decision to major in psychology. One of them had a surprising answer. Her mom was happy that she was majoring in psychology because among the required courses was a human anatomy and physiology class. If her daughter took this class, her mom believed, it would be harder for doctors to cheat us.

Chinese doctors "cheating" patients is a big problem, in other words. They prescribe drugs that don't work, said my student, and perform useless surgeries. Little different than Western medicine, except perhaps the drugs are less dangerous. Just as in Western medicine, drug reps try to bribe doctors to request their drugs. Unlike Western medicine, doctors steal the drugs of hospitalized patients, my student said, which they then sell. After a friend of mine was badly burned, she had (wisely) turned down the recommendation of a skin transplant. This angered her doctor, who would have made money from the operation. Later, when he changed her bandages, he did so roughly, which was very painful. Revenge.

"Don't see the doctors at Tsinghua hospital [the campus hospital]," said my student. She had had a bad experience. She had gotten injured and gone to the hospital. She had had to wait half an hour to see a doctor; who had taken a mere 30 seconds to prescribe a cream that did almost nothing. That evening I watched The Poseidon Adventure. A doctor visits a sick woman in bed in her cabin. After a long wait, he gives her cursory treatment.

HUSBAND (to doctor) Hold it, hold it. You mean to tell me we had to wait all this time just for you to come in here and kiss her off with a couple of pills and some crap about staying in bed? How do you know she's just seasick? Look at her! It could be something else! You didn't even examine her.

Same complaint.

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Jim Purdy (2011-11-15 08:07:34)

If you get sick, will you go to the campus hospital? I enjoyed the Poseidon adventure. Did you watch the original 1972 Poseidon Adventure with Hackman and Borgnine, or the remake? Did you have any difficulty getting it in China? And how did you like it?

Shawn (2011-11-15 08:08:35)

I like setups like the Mayo clinic where doctors are paid a straight competitive salary. Private practice & medicine do not go together.

Tim Beneke (2011-11-15 10:09:49)

A pretty horrifying picture of Chinese doctors! Is this just a reflection of mass corruption among Chinese authorities? Did you post research finding that more than half of Tsinghua professors fabricate or falsify data? One point: My understanding is that the experiments with "sham" acupuncture where you don't actually let the needles enter the skin but the person feels a bit of pinching finally offered a control. The research strongly shows that whatever is giving the (rather small) positive effects of acupuncture, it's not the needles puncturing the skin, since sham acupuncture got effects as good as the real thing. It is clear that people get some relaxation from acupuncture, most likely an endorphin rush from the needles, and that this can be taken away by an endorphin blocker, Naltrexone.

Chris U (2011-11-15 11:17:53)

Seth, What you seem to be describing is Western-style medicine being practiced in China. Usually when referring to 'Chinese medicine' one means 'Traditional' Chinese medicine (TCM) which is the use of herbs, acupuncture, tuina massage and moxibustion, but primarily herbs. Chinese herbal medicine has been developed over more than 2000 years and is an awesome form of medicine when practiced by a qualified practitioner. My understanding is that although herbalism is practiced in some hospitals, the primary mode of health care in China is the Western style allopathic medicine and that TCM is a struggling if not dying modality. I'm not surprised that your story paints a poor picture of the Chinese medical 'system'. I hope that readers don't associate this negatively with TCM.

Seth Roberts (2011-11-15 13:10:05)

Chris, that's a good point – distinguishing TCM from what I describe. I have changed the post to reflect it.

Seth Roberts (2011-11-15 13:19:36)

Tim, I do not remember posting "research finding that more than half of Tsinghua professors fabricate or falsify data." On the other hand, the same student who told me about bad Chinese doctors has two university professors as parents. Her parents told her not to become a professor because of the "darkness" of Chinese academia. The big problem, said her parents, was what you say: fabrication and falsification of data, including plagiarism. A recent paper by John Ioannidis and a Chinese co-author likewise suggested a large problem with data fabrication among papers from China.

Adam (2011-11-17 18:15:40)

I have had some experience with the medical system here in China. I work in a small international hospital in Shanghai which is clean and modern, but quite expensive. The standards we follow are often much higher than the standards imposed by the Chinese govt. On vacation in Yellow Mountain (Huang Shan / ??) my girlfriend came down with pneumonia. We ended up going to a local, Chinese hospital. The doctor told her she would have to stay overnight in the hospital for 14 days while getting IV antibiotics. As a pharmacist trained in the US, I knew this was absolutely not true. In the US, she could easily receive oral antibiotics and be treated on an outpatient basis. Due to the language barrier, I had a hard time communicating this to the doctor, but the doctor apparently said something to the effect of, the drugs in China are not the same as the drugs in the US, we have to use IV here. I don't believe this at all. I asked one of my co-workers, who is also a pharmacist and whose mother works for a local hospital in Shanghai. She said doctors will try to get any patients they can to stay overnight in the hospital and to get IV fluids and/or antibiotics, because they make "grey money". I'm not sure exactly what she meant by that, but it sounds to me like a case of doctors' greed influencing their treatment of patients, leading them to choose unnecessary and inconvenient treatments over equally effective and convenient ones. Staying overnight in a Chinese hospital is about the last thing anyone would want to do. Many of the patients are not well educated and will spit on the floor and smoke in the beds right next to you. In the hospital we visited, there were people vomiting into trashcans and no cleaning service to tidy it up afterward. I witnessed an old man pull his IV out by accident and get blood all over the floor. It was there for at least 2 hours. I never saw anyone come to clean it up. We ended up gritting our teeth and coming in once a day for about 10 days to get IV

antibiotics. We eventually managed to purchase some oral antibiotics (without a prescription) at a local pharmacy outside the hospital. My girlfriend's pneumonia cleared up and we haven't had any problems since.

Seth Roberts (2011-11-17 19:12:24)

Thanks, Adam. Your account of your experience is very helpful.

### **Dr. Eileen Consorti and Patient Power (2011-11-16 05:00)**

My alternative to Testing Treatments (199 pages), [1]I said recently, is three words: Ask for evidence. Ask your doctor for evidence that their recommendation (drugs, surgery, etc.) is better than other possibilities. A few years ago, I asked Dr. Eileen Consorti, a Berkeley surgeon, for evidence that the surgery she recommended (for a hernia I couldn't detect) was a good idea. Surgery is dangerous, I said. What about doing nothing?

To reread what I'd written about this ([2]here and [3]here), I googled her. I learned she has [4]a blog. It contains only one post (June 21, 2011). That post is only seven words long. I also learned she has two very similar websites ([5]here and [6]here). Both use her full name and title where most people would use she. Perhaps I caused the blog and websites.

Here's what happened:

1. In 2008, during a routine physical, my primary-care doctor finds that I have a hernia, so small I hadn't noticed it. He says I should see Dr. Consorti. Do I need surgery for something so small? I ask. Ask her, he says.
2. Dr. Consorti examines my hernia. She recommends surgery (that she would perform). Why? I ask. It could get worse, she says.
3. Eventually I realize that's a poor reason. Anything can get worse. Influenced by [7]Robin Hanson, I speak to Dr. Consorti: Surgery is dangerous. What about doing nothing? Is there evidence that the surgery you recommend is beneficial? Dr. Consorti says, yes, there is evidence supporting her recommendation. She says I can find it (studies that compared surgery and no surgery) via Google.
4. I try to find the evidence. I use Google and PubMed. I can't find it. My mom, who used to be a medical librarian at UC San Francisco, is an expert at this. She has done thousands of medical searches. She too cannot find any studies supporting Dr. Consorti's recommendation. Moreover, she finds an in-progress study that compares surgery for my problem with doing nothing. Apparently some researchers think doing nothing may be better than surgery.
5. I tell Dr. Consorti that my mom and I couldn't find the studies she said exist. Dr. Consorti says she will find them. She will let me know when she's found them and make copies. I can pick them up at her office.
6. Months pass. I call her office twice. No response.
7. In August 2008, [8]I blog about Dr. Consorti's continuing failure to produce the studies she seemed sure existed.
8. [9]A reader named kirk points out "[10]what looks like a relevant hernia study". It concludes: "Watchful waiting is an acceptable option for men with minimally symptomatic inguinal hernias. Delaying surgical repair until symptoms increase is safe." This argues against Dr. Consorti's recommendation. No one points out studies supporting

her recommendation.

9. Two weeks after my post, [11]someone who appears to be Dr. Consorti replies. She's busy. She has 30 new patients with cancer. She terms my question "scientific curiosity". She says "I will call you once I clear my desk and do my own literature search."

10. More than a year passes. In 2010, I receive a call from Dr. Consorti's office. An assistant asks me to remove [12]my blog post about her failure to provide the studies. Why? I ask. It makes her look bad, he says. He says nothing about inaccuracy. I say I would be happy to amend what I wrote to include whatever Dr. Consorti wants to say about it. The assistant asks if I have any "further questions" for her. No, I say. The conversation ends.

11. A little later, I realize I do have a question. In 2008, during the conversation when I asked Dr. Consorti for evidence, I had said surgery is dangerous. In response, she had said no one had died during any of her surgeries. By 2010, I realized that such an answer was seriously incomplete. Many bad things can happen during surgery. Death is only one bad outcome. How likely were other bad outcomes? Dr. Consorti hadn't said. She knew about these other bad effects much better than I did, yet, in a discussion of the safety of surgery, she hadn't mentioned them. By not mentioning them, she made surgery sound safer than it actually is. Why had she not mentioned them? That's my question. I call Dr. Consorti's office and reach the person who had called me. I ask my question. [13]As I wrote ,

He tried to answer it. I said I wanted to know Dr. Consorti's answer. Wait a moment, he said. He came back to the phone. He had spoken to "the doctor", he said. She wasn't interested in "further dialogue". She would contact a lawyer, he told me.

I haven't heard from her since then.

This story illustrates a big change. As recently as twenty years ago, the doctor-patient balance of power was heavily weighted toward the doctor, in the sense that the doctor exerted considerable influence on the patient (e.g., to have surgery). One reason, [14]Robin Hanson has emphasized, is human nature: The more fearful we are, the more we trust. Patients are often fearful. Another reason for the power imbalance was information imbalance. The doctor knew a lot about the problem (had encountered many examples, had read a lot about it). The patient, on the other hand, knew almost nothing and could not easily learn more.

During the last twenty years, of course, this has changed dramatically. Patients can easily learn a great deal about any health problem. Google, PubMed, on-line forums, [15]MedHelp, [16]CureTogether, and so on. The story of Dr. Consorti and me illustrates what a difference the new access to information can make.

Personal science (science done to help yourself) has two sides. One is: collect data. My self-experimentation is an example. To improve my health, I gathered data about myself. It worked. My skin improved, [17]I lost weight, slept better, improved my mood, and so on. The other side is: use data already collected. That's what I did here. My search for data (including my mom's search) showed that data already in existence (including the absence of evidence supporting surgery) contradicted Dr. Consorti's recommendation. My search was not biased against her recommendation. I didn't care whether she was right or wrong. I just wanted what was best for me. [18]As Feynman said, science is the opposite of trusting experts – including doctors. My first glimpse of the power of self-experimentation was when it showed me that one of the two medicines my dermatologist had prescribed didn't work.

Overtreatment is an enormous problem in America. [19]Overtreated by Shannon Brownlee and [20]Overdiagnosed by H. Gilbert Welch, Lisa Schwartzl and Steve Woloshin are recent books about it. Overtreatment could easily be why [21]Americans pay far more for health care than people in any other country yet die earlier than people in many countries. A large fraction of our health care may do more harm than good. A common view is that the incentives are



wrong. As [22]one commenter put it, pay for treatment, you get treatment. The solution, according to this view, is to change the incentives. That's a good idea but will not happen soon. I believe overtreatment can be reduced now. You can (a) ask for evidence (as I did) and (b) search for evidence (as I did). The difference in lifespan between America and other countries suggests this might add years to your life.

I would like to find out what happens when people ask for evidence and/or search for evidence. Please send me your stories or post them in the comments.

More Two days after I posted this, Dr. Consorti replied to this post and the earlier one with essentially the same comment, which is [23]here.

1. <http://blog.sethroberts.net/2011/11/06/testing-treatments-eight-questions-for-the-authors/>
2. <http://blog.sethroberts.net/2008/08/29/suppose-you-write-the-times-to-fix-an-error-part-2/>
3. <http://blog.sethroberts.net/2010/02/02/a-call-from-dr-eileen-consortis-office/>
4. <http://eileenconsorti.wordpress.com/>
5. <http://dreileenconsorti.com/>
6. <http://eileenconsortimd.com/>
7. <http://blog.sethroberts.net/2008/03/21/robin-hanson-on-doctors/>
8. <http://blog.sethroberts.net/2008/08/29/suppose-you-write-the-times-to-fix-an-error-part-2/>
9. <http://blog.sethroberts.net/2008/08/29/suppose-you-write-the-times-to-fix-an-error-part-2/#comment-214362>
10. <http://www.ncbi.nlm.nih.gov/pubmed/16418463?dopt=Abstract>
11. <http://blog.sethroberts.net/2008/08/29/suppose-you-write-the-times-to-fix-an-error-part-2/#comment-219500>
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13. <http://blog.sethroberts.net/2010/02/02/a-call-from-dr-eileen-consortis-office/>
14. <http://www.overcomingbias.com/2011/11/fear-makes-trust-blindness.html>
15. <http://www.medhelp.org/>
- 16.
17. <http://escholarship.org/uc/item/2xc2h866>
18. [http://www.fotuva.org/feynman/what\\_is\\_science.html](http://www.fotuva.org/feynman/what_is_science.html)
19. [http://overtreated.com/the\\_book.html](http://overtreated.com/the_book.html)
20. <http://www.beacon.org/productdetails.cfm?PC=2174>
21. <http://opinionator.blogs.nytimes.com/2011/10/27/spending-more-doesnt-make-us-healthier/>
22. <http://blog.sethroberts.net/2011/11/06/testing-treatments-eight-questions-for-the-authors/#comment-931027>
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Jim Purdy (2011-11-16 07:02:59)

What about doctors who refuse to accept the evidence from patients sitting right in front of them? I was amazed a few years ago when a very highly regarded medical specialist actually told me that it would be malpractice for him to pay attention to his patients. He said he had to treat patients according to national guidelines, even if his patients said the treatments weren't working.

Brian (2011-11-16 07:10:09)

A little over two years ago, I was "depressed". My psychiatrist wanted to prescribe an SNRI. I related, once again, my poor experience with an SSRI and asked for evidence that an SNRI would be any more effective. He said there was evidence that SSRIs worked. I pointed out the 2004 meta-analysis that showed no meaningful difference between SSRIs and place-

bos. Then I asked whether there was any better evidence for SNRIs. Since he wasn't able to provide any, I told him that since we know that extremely low Vitamin D blood levels, poor diet, no exercise, and no social life can cause depression, (all things I had at the time), we'll try fixing those things first and then resort to drugs if that fails. It did not fail and I quit seeing him.

Rachael (2011-11-16 07:24:31)

I want to thank you for posting this and re-posting it now. Around the time you were having those experiences my son's pediatrician recommended a tonsillectomy for recurring strep. The Ear Nose and Throat specialist also said it would help. I searched pub med and found research that suggested most children who receive a tonsillectomy have one fewer strep infection in the following year than those that don't. The time, expense, and risk of surgery vs. one strep infection, hmmm, not a tough choice. I don't believe that either doctor was motivated by any thing other than a desire to help my son, but their education pre-dated the meta-analysis I had read, and their training was in conflict with more recent research. No doctor can be as motivated to stay current as someone who will be directly impacted by the decisions. I think it should be standard procedure to e-mail patients the top ten search returns relating to any suggested treatment and discuss those studies before taking action. Government funding to remove pay-walls to all government supported research wouldn't be a bad idea either.

dearieme (2011-11-16 08:34:56)

Here's a question that I asked that, rather unexpectedly, stumped a specialist. "Your coronary arteries are normal" he said. "Ah", I said "do you mean 'normal' as in 'desirable' or 'normal' as in 'average'?"

Tom (2011-11-16 09:38:20)

You did cause those websites, and there are tons more than the ones you mentioned. She's hired a firm to do online 'reputation repair.' It's a big business, very expensive, and it doesn't really work. The company she hired told her that they can push your posts about her off the first page, yet you're still #2 for searches about her. But it's a good business, as people in her position will pay anything.

PJ (2011-11-16 09:40:45)

About five years ago, I had been hospitalized when I simply couldn't breathe anymore, following what I called 'chronic recurring bronchitis' and my body apparently called 'chronic lung infection from reaction to gluten'. After getting out of the hospital, carting around an oxygen tank until the little alveoli in my lungs regrew etc., I went to see the Respiratory Specialist that had been assigned me. Now, he was a handsome guy, very charming as well, seemed very knowledgeable. He prescribed me three kinds of inhalers. "What specifically do these do to prevent the severe asthma?" I asked. He frowned at me in surprise. "Well they {yada yada, make it so you can breathe better }" he says. "But isn't that kind of after the fact?" I say. "I mean, at that point the problem's already in place. Do they do something toward preventing the problem in the first place?" "No," he says. "That is not curable." "So these are ONLY for symptoms," I insist on understanding. "Right," he says. Ok. I had no health insurance and they were a good chunk of extra single-mom budget but hey, you'd be surprised how selfish one is about being able to breathe. Time passes. My cardiologist-assigned me also in the hospital for an event that actually was just about days of steroid, pain and stress combined, I don't actually have a heart problem aside from enlargement from obesity - prescribes me the PPLP low-carb book. After reading it, I decide to do a trial. Just a trial. Without realizing the association at the time of course, I didn't just drop carbs, I dropped gluten. (Back then, LC bread, tortillas, bake mix, etc. didn't much exist-fortunately!) 3 weeks later my "severe asthma" has vanished. My "severe allergies" are gone. My "severe OMFG I'm gonna die" nightly acid reflux is gone. And a lot of less extreme things. I had a follow up appointment, and with shining eyes I told him of this miracle. I thought he'd be as excited about it as I was. So I made a mistake (or not). "Doc," I say, "You're a specialist in this stuff. I wonder if this could help other people. Have you not seen a change in eating affect respiratory problems?" "So you aren't taking the medication I prescribed?" he answers instead. "I - uh - well no of course not, not anymore. You told me they were for symptoms. I don't have any symptoms anymore!" "It's not appropriate for you to be my patient if you can't follow medication direction," he says, looking at me as if I have just confessed to secretly being Evil in some truly egregious way. I was still saying, "but - but - " when he left the room. The nurse finished that appointment and told me not to bother making another. I left feeling like the really smart handsome charismatic guy had told me I sucked, and feeling like I'd done something bad and got caught in it. And then I thought: what am I talking about?! This is the best thing that ever happened to me!! He's an idiot! That's just the way it is I

guess. I mean this wasn't even about surgery or something major, it was nothing more than expensive inhalers for symptoms I no longer had any of at all. Yet still the doctor was bizarrely... what's the word. Resistant? I might add I used to study with a doc who worked in psychoneuroimmunology (a long word that in his case mostly meant using stuff like biofeedback). He had cases where people had carpal tunnel and were about to have surgery that would forever remove their ability to use their hand (which they already couldn't), leaving them a sort of minimal claw effect. He would talk them into putting off the surgery and working with him using biofeedback and hypnosis, and they would go back to their docs showing him hands that worked again. (It's a muscle stressed induced displacement so there isn't any reason why this can't be reversed.) The doctors would be angry. The patients were always bewildered. I think there is some control psychology in play with a lot of medical professionals. They have a hammer. They see you as a nail. They don't really care or want to know what better tools might be applied. PJ

Shawn (2011-11-16 09:58:48)

Doctors aren't always right, that's for sure. While it's good that people have more access to information now than ever before, a lot of people simply are not capable of looking up that information. A lot of old people or mentally challenged people do not know how to use the internet and are not able to read complex studies and understand their implications. The best argument of socialized health care is that the incentives are more properly aligned. My mom was misdiagnosed with epilepsy (I was about 7 years old at the time). She was told she had a petit mal seizures (after supposedly experiencing one on front of her mother) and was put on anti-seizure medications, including depakote. This drug caused her brain to shrink, memory & emotional problems, coarsening of the features, depression, and sleep problems (she would fall asleep during the day at random times). She was kept on all those meds because her "blood levels" supposedly were not where they were "supposed" to be at. 18 years later after talking with a doctor at the Mayo who said she did not need to be on all those medications she cut back until she was not taking any and never had a seizure. She described them as being in a "cloud all those years;" all those years she felt miserable. After she got off them she felt a 1000x better. She ended up getting pancreatic cancer and died from that. We don't know if all the drugs contributed/caused that they could have.

Jim (2011-11-16 10:09:30)

I think many doctors would say they are too busy to look for or provide the type of research you were asking for. I think Dr. Consorti's mistake was when she told you there were plenty of studies on point. In retrospect, she should have just said "I don't know of any such studies. Practicing medicine is part science, part art. Research can't always help, and doctors often have to go with standard practice, gut instincts and experience." You may not have been satisfied with her answer, but at least she would have put the issue to bed instead of prolonging it by having to try to save face each time you followed up.

Alex Chernavsky (2011-11-16 11:03:35)

This kind of stuff isn't limited to doctors. About fifteen years ago, I had conducted some complicated financial transactions during the year, so I hired a tax specialist to prepare my income tax return. He made a big mistake that would have cost me thousands of dollars, had I not spotted it on the draft. When I pointed out his mistake, he initially refused to acknowledge it. Eventually, he admitted that he was wrong. The sad truth of the matter is that you can't trust anyone to be competent, and you always have to do your own homework on matters of any importance.

Jim Purdy (2011-11-16 11:47:15)

PJ's story is very powerful, and all too common. I propose a zero-based "Rick Perry Rule" for health care. In a recent Republican presidential debate, Rick Perry said his foreign aid budget would start at zero, and every country wanting foreign aid would have to justify every dollar. I'm not a Rick Perry fan by any stretch of the imagination, but I wish the government and insurance companies would start all health care budgets at zero, and require at least a little bit of evidence for every treatment, every drug, every device, and every surgery. I suspect that thousands of lives would be saved, millions of lives would be improved, and billions of dollars would be saved, if America were taken off 90 percent of all drugs and surgeries, and doctors were required (and re-trained) to work with patients on lifestyle changes. When I try to talk with most doctors about lifestyle, they look like I'm speaking in Klingon. All they want to do is print out prescriptions and move on to the next patient every 5 minutes.

Jay (2011-11-16 13:35:55)

I think a major reason why doctors are so disapproving of patients experimenting with their own solutions is the fact that they mostly only get to see the results when it doesn't work. Patient A and Patient B go off the reservation and decide to try something different than what the doctor thinks is the way to fix their problem. Patient A manages to figure something out and doesn't visit the doctor anymore since the problem has resolved itself. Patient B doesn't manage to figure something out, or makes things worse with their self-experimentation. Patient B then goes to the doctor, tells him\* of the self-experimentation and the doctor thinks "People who aren't listening to me are really fouling themselves up – the problem is that they are not listening to me." This is repeatedly reinforced. The doctor never gets to see patient A. The doctor sees all the downside, and none of the upside – given the data he is receiving, his viewpoint makes sense, but the data is self-selected and skewed. \*or her

Seth Roberts (2011-11-16 14:02:40)

Jim Purdy, you wrote: "it would be malpractice for him to pay attention to his patients. He said he had to treat patients according to national guidelines, even if his patients said the treatments weren't working." Wow. I am also amazed. That doctors aren't trained to have a more reasonable response when treatments don't work.

Lisa Wainer (2011-11-16 14:07:07)

Hi Seth, Your interaction with this doctor is a really illustrative example of something I have experienced multiple times, having suffered from a serious health condition (Crohn's disease) and self-experimented my way off all medications and avoided of surgery for 20 years. In my view it is a rare to find a doctor who is a thinker, and they are certainly not trained/encouraged to be thinkers. I just wanted to mention a couple of books I read a while ago that you may be interested in (you may know of them) that sound like they are related to the books you mention here. The first is Medical Nemesis by Ivan Illich - a short book noted as a medical classic. I think he first coined the word 'iatrogenic' to mean disease caused by medical intervention. The other one is The Death of Humane Medicine by Petr Skrabanek (available as pdf online) which rallies against 'healthism' and state based health promotion. It is a little harsh on alternative medicine (it was written some time ago) but it is quite a read.

Seth Roberts (2011-11-16 14:20:31)

"I think Dr. Consorti's mistake was when she told you there were plenty of studies on point." I think that when she discovered my blog post, which apparently bothered her, she should have done the search, told me the result, and asked me to amend the post. [More After I wrote that, she did so – see above] "Many doctors would say they are too busy to look for or provide the type of research you were asking for." I agree. One doctor said this in the comments on a previous post. Keep in mind that Dr. Consorti would be paid a considerable amount of money for doing the operation she had recommended.

threepipeproblem (2011-11-16 14:39:58)

Thank you for having the courage to call out someone who acts more like a high priestess than a woman of science. My suspicion is that most doctors are more like priests than scientists.

Seth Roberts (2011-11-16 15:08:24)

"My suspicion is that most doctors are more like priests than scientists." Yeah, that's a good question: What fraction of what doctors do is priest-like, and what fraction scientist-like?

Seth Roberts (2011-11-16 15:11:45)

The Death of Humane Medicine can be downloaded here: [1]<http://bradtaylor.files.wordpress.com/2009/06/death-of-humane-medicine.pdf>

1. <http://bradtaylor.files.wordpress.com/2009/06/death-of-humane-medicine.pdf>

Lisa Wainer (2011-11-16 15:37:03)

I just found the introduction chapter of Medical Nemesis online which can be downloaded here: [http://www.digitallibrary.kcci.com.pk/bitstream/32417747/155/1/MedicalNemesis Introduction.pdf](http://www.digitallibrary.kcci.com.pk/bitstream/32417747/155/1/MedicalNemesis%20Introduction.pdf)

Carlson (2011-11-17 09:23:06)

New to your blog, but your thinking parallels what my wife and I have been figuring out over the last few years. One of the things that bothers me about "Obamacare" or any 'one size fits all' healthcare 'fix' is the idea that the current healthcare system is too reliant on pharmacological and surgical solutions. We've known many people who are too quick to seek solutions to their health problems via surgery or drugs. Surgeries ARE dangerous and drugs almost always have side effects. The benefits of surgery and or prescription drugs need to be seriously weighed against the downside (not to mention the ongoing expense).

Grundle (2011-11-17 14:02:53)

Many of you are quick to excoriate doctors while discounting the bewildering amount of knowledge they have to keep track of. Classifying doctors as "non-thinkers" is disingenuous and untrue. The biggest problem I see with doctors is either arrogance or greed. When either of those two get in the way it clouds their ability to provide the best care to patients. An arrogant doctor obviously won't listen to a patient because he "knows better". It is easy to see how someone's view can become so jaundiced when they have to sacrifice four grueling years to medical school and another four to residency. I imagine that many doctors resent a patient who really doesn't know anything, but what they read from some article. In truth, I think the cases where self-diagnosis and self-treatment are successful happen to be the minority. Remember that the body is so complicated that we still don't completely understand how it works. Just understanding cellular metabolism is a challenge. That is only a small percentage of the entire corpus of knowledge a doctor is expected to master. The second case is the greedy doctor that is only in it for the money. This is how I see the physician in this article. She probably knows that the condition is minor, but the accepted approach is always surgery and that means she gets paid to perform that surgery. Every surgery is a paycheck and if someone is greedy enough they will line as many up as possible without worrying about monitoring the condition to see if it gets worse. There is a third type of doctor that is there for their patients. They listen to what the patient says and strive to provide the best care possible. I have met many of these doctors, and although they are not infallible, they constantly work to make sure they are giving the best and most up to date care possible. My point is that if you have questions and your doctor cannot answer them satisfactorily then find a physician who will take the time to sit down and answer your questions, and tell you why his approach may be better. In every profession there are idiots who will make the entire group look bad, however shunning the entire group because of those idiots is not an adequate response either.

Seth Roberts (2011-11-17 14:55:58)

Grundle, is what you say here based on something that happened to you? Or something that you saw? I would like to present a balanced view of doctors. I agree with you that my experience is not the whole story.

David Harmon (2011-11-17 19:42:47)

I'd say there's an even bigger factor than arrogance involved, which is interference from the health insurance companies. A doctor who doesn't toe their line can be dropped from coverage, which for most types, basically puts them out of business. Naturally, this will get worse with ObamaCare's mandatory insurance.... "It's very difficult to make a man see something, when his salary depends on his not seeing it"....

Lisa Wainer (2011-11-18 03:30:49)

Grundle, I have met a lot of doctors in my capacity as a sick person and a few as a healthy person. I have yet to meet one who is happy to accept that my self-experimentation has made me healthy. Some even find it hard to believe that I actually am healthy - i.e. refusing to believe my experience and wanting to do expensive, invasive medical tests to 'check' that what they are seeing with their own clinical judgement is true. That is what I mean by not being able to think. But that is only my experience. This is not to say that I have not met nice doctors or doctors who genuinely care about their patients. Being caring and nice and wanting to do the right thing does not necessarily result in effective treatment (although it can be extremely helpful and supportive) - especially if a doctor does not listen to the patient and think for themselves. I often think of this as an agency problem. Doctors in the UK don't work for the patient - they work for the NHS. But similarly, the doctor that Seth encountered has also lost her agency. She doesn't understand that she should be working for her patient (as her patient pays her directly) and the reverse of personal recommendation happened to her - which risks her livelihood (evidenced by how much spent on reputation repair). Her extra bad luck that her patient had an influential blog.

Alex Chernavsky (2011-11-18 08:50:27)

There are a couple of funny things about this. If Dr. Consorti had just admitted her mistake and eaten a little crow, she probably could have avoided the whole issue. Instead, she has to spend a lot of money to hire a firm to restore her on-line reputation. The other funny thing is that I wonder whether her "reputation consultants" actually know what they're doing. Note to Dr. Consorti: You'd be better off using hyphens in the URLs to separate your names: i.e., instead of eileenconsorti.wordpress.com use eileen-consorti.wordpress.com. Similarly, use eileen-consorti-md.com instead of eileenconsortimd.com. If you use hyphens, search engines will treat the names as separate words. (No charge for my advice.)

Nansen (2011-11-20 17:36:50)

Why didn't you ask for a second opinion? I had two hernia repairs in Berkeley, by two surgeons, and both made it very clear that watchful waiting was an option. (One repair was in 1998, so it wasn't a matter of the doctor needing new research.) I'm not discounting the value of what you're saying, but in this case you might have saved a lot of effort by just doing what many patients commonly do already.

Seth Roberts (2011-11-21 14:47:25)

Why didn't you ask for a second opinion? I had two hernia repairs in Berkeley, by two surgeons, and both made it very clear that watchful waiting was an option. Because a literature search established there was no good reason for the surgery. That was more conclusive than anything a doctor could say. It was also much easier to search the literature (and ask my mom to do so) in the comfort of my apartment than travel to a doctor's office, wait, etc.

Grundle (2011-11-23 09:44:45)

@Seth - Sorry to wait so long to get back to this. I am not sure this is based on anything specific. To be fair, I do a lot of volunteering at a free medical clinic as an interpreter which gives me an advantageous viewpoint of seeing both the viewpoint of the doctors and the patients. Since I effectively become the path of communication between them it is a perfect vantage point to be able to observe and make conclusions on what is happening. Because it is a volunteer clinic run in association with a medical school there are also students learning there, so I get to see the entire gamut of attitudes from the doctor's perspective and since it is a general clinic it is like playing the lottery on knowing what kind of malady the patient will have. @David Harmon brought up a good point when he mentioned doctor's toeing the line with respect to insurance. The fact is, it is even more convoluted than that, because they also have to be aware of swindlers/hypochondriacs who want to get a quick fix of pain killers etc. Doctors have to be on the lookout for not only physical illness but mental illness and respond accordingly. If they work in a hospital they are also required to treat anybody that comes in regardless of their Insurance status. That is a fact. @Seth I think your reaction was correct in your case. You had knowledge of research and asked her to respond to it, which she could not. I do not think that she acted in an ethical manner and as such I would be leery in seeing a doctor of that caliber. Like anything, the relationship between a doctor and patient is predicated on trust and when a physician breaks that bond there really is no way for them to provide adequate care for that patient. @Lisa Wagner - I do not know a doctor that would be happy with self-experimentation either. I know tons of doctors that would be willing to take your ideas into account, sit down with you and try to come up with a plan to tackle the issues. Basically when you throw the doctors advice away for your own self-experimentation you are saying that you know more than they do, which from the perspective of human biology and the scientific approach of treating human illness you are way behind, but I am sure they are lacking in your knowledge of self-awareness. Self-experimentation without guidance is dangerous. As for the issue of "invasive" procedures, I also agree with you that many times this isn't the best approach, but once again doctors have been bound by legal issues. They are basically required to rule out a number of things based on the symptoms, and this precedent has been established due to any number of malpractice lawsuits that have been filed over the years. It is really a no-win for the doctors if you think about it. At least that is how it is here in the US, I can't speak for the UK.

Seth Roberts (2011-11-23 15:02:40)

Grundle, thank you for your helpful reply. Here is what is to me the most interesting part:

I do not know a doctor that would be happy with self-experimentation either. . . .Self-experimentation without

guidance is dangerous.

This is a fascinating state of affairs. What if a teacher said they were unhappy if a student learned on his/her own? Learning without guidance is dangerous, the teacher might say. If doctors knew 100 % of the relevant info, then there would indeed be no need for self-experimentation. You would just follow the doctor's orders. But what if doctors knew only 10 % of the relevant info? Or less? Which is not to be critical of doctors. They are merely the part of the health care system that has the most contact with the rest of us. It is deep inside the system that ignorance is dressed up as wisdom.

Grundle (2011-11-30 08:39:57)

Seth, I understand what you are saying, but I think you are taking too lightly the complexity of the human organism. I don't view self-experimentation on the human body as a simple research project, because there can be some very real and even fatal consequences. I have no problem with learning, and I think it should be encouraged, but let us take your example and expand it. If you were learning about efficient synthesis of Nitro Glycerin, or Serin gas would you go off and try to experimentally come up with a solution or would you seek guidance from already established knowledge before tackling it? One misstep in either of those scenarios could bring disaster. This is where I have a problem with the over prescription of medications in this country. I think doctors are too quick to prescribe when many drugs are going to have an impact on the balance of the overall organism. At the root of everything, we are really just a giant set of complex chemical reactions, but they feed off each other with feedback mechanisms and "on off switches" based on which enzymes become activated and inactivated. Throwing a drug or chemical into that mix will upset the balance. The self-experimentation I would advocate is common sense and good health that can be obtained through a good diet and regular exercise. Of course I could be overthinking your definition of self experimentation. I suppose I should read more of your blog now ^^

Tonsillectomy Confidential: doctors ignore polio epidemics and high school biology | Vladimir Putin 2012 (2012-01-10 15:24:23)  
[...] and risk of surgery vs. one [sore throat]," Rachael wrote on my blog, "Not a tough choice." Rachael believes "when [...]"

Timothy (2012-01-11 03:21:15)

Doctors are clueless :( they start off with a decent education, next they get real hands on training and get their license... they are good, honest doctors. But then they get visits from drug reps daily... the so bombarded by propaganda and sales bullshit and out right lies. Then on top of all this they have to run a business, dealing with all the insurance with what they will pay or won't. This "system" that these good doctors are put through would drive anyone crazy. They don't practice medicine anymore because they can't!!! they are not allowed to :(

Tonsillectomy Confidential | The Health Care Blog (2012-01-14 02:29:59)

[...] was easy. "The time, expense, and risk of surgery vs. one [sore throat]," Rachael wrote on my blog, "Not a tough [...]"

Tonsillectomy Confidential | Health Care Jobs In Connecticut (2012-01-14 09:34:14)

[...] the decision was easy. "The time, expense, and risk of surgery vs. one [sore throat]," Rachael wrote on my blog, "Not a tough choice." Rachael believes "when things are going badly with your body, nutrition [...]"

## Is Health Data Ever Harmful? (2011-11-17 05:00)

In [1] yesterday's post I described how searching the medical literature helped me avoid a dangerous surgery with no obvious benefit. The surgeon I consulted, who recommended the surgery, said that published evidence backed her up. I could not find that evidence, however. Others found evidence that contradicted her recommendation.

Among the comments on that post were similar stories: Searching/reading the medical literature had been helpful. Learning what had happened (in research studies) was better than relying on an expert (a doctor). Here is an example:

A little over two years ago, I was “depressed”. My psychiatrist wanted to prescribe an SNRI [serotonin-norepinephrine reuptake inhibitor]. I related, once again, my poor experience with an SSRI and asked for evidence that an SNRI would be any more effective. He said there was evidence that SSRIs [selective serotonin reuptake inhibitors] worked. I pointed out the 2004 meta-analysis that showed no meaningful difference between SSRIs and placebos. Then I asked whether there was any better evidence for SNRIs. Since he wasn’t able to provide any, I told him that since we know that extremely low Vitamin D blood levels, poor diet, no exercise, and no social life can cause depression (all things I had at the time), I’ll try fixing those things first and then resort to drugs if that fails. It did not fail and I quit seeing him.

None of the stories in the comments described the opposite outcome: Knowing the data made things worse.

Are there exceptions? Is it always helpful (or at least not harmful) to know what happened (i.e., know research outcomes)? Has anyone reading this had an experience where knowing health research data was harmful?

1. <http://blog.sethroberts.net/2011/11/16/dr-eileen-consorti-and-patient-power/>

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Alex Chernavsky (2011-11-17 05:37:20)

Well, there’s the issue of [1]cyberchondria:

Cyberchondria (or cyberchondriasis) refers to the unfounded escalation of concerns about common symptomology based on review of search results and literature online.[1][2] Articles in popular media position cyberchondria anywhere from temporary neurotic excess to adjunct hypochondria. Cyberchondria is a growing concern among many healthcare practitioners as patients can now research any and all symptoms of a rare disease, illness or condition, and manifest a state of medical anxiety.

1. <http://en.wikipedia.org/wiki/Cyberchondria>

Joseph Buchignani (2011-11-17 05:44:52)

I can’t cite peer reviewed studies that harmed me, but certainly amateur medical science has slowed me in my progress towards a personal cure, because it was so convincing, yet wrong. During my search for a cure for my dietary issues, I tried and discarded IBS theory, then extended IBS theory (SCD and FODMAPS et al), then paleo diet, then non-conventional paleo, then ketogenic diets, then Aquatic Ape theory, before finally arriving at a diet of 1. white rice and 2. ultra lean seafood, including shrimp, lean fish, and scallops Other influential models included food reward theory, various elimination diet theories, etc. Each paradigm cost me a great deal of time to finally falsify and reject, and clouded a clear interpretation of the evidence staring me in the face. The apparent persuasiveness made me spend much more time and be much more meticulous in my falsification than I needed to be. After each model finally inarguably failed me, I felt betrayed and angry. I eventually adopted a solution that fit no known models. Had I pursued a strict data-driven approach, I might’ve found a solution much faster. Or maybe not. The paradigms were all useful in interpreting and constructing the final theory. I think it is very difficult to see data for what it is when we have persuasive, compelling paradigms suggesting incorrect interpretations and approaches. The solution would be to conduct more rigorous and analytical and intelligent experimentation. Unfortunately this was not possible for me, because strict elimination diets are difficult to adhere to, especially when sick, and often don’t provide sufficient food reward or even sufficient basic nutrition. I guess the major lesson I take away from this is that one should always focus on interpreting your own data properly, and never fall into the cognitive trap of assuming that a model must be correct simply because there is no better model available. But that’s very, very hard to do. I think the vast majority of medical studies don’t even rise to the



level of amateur health models, because they are poorly constructed and therefore suggest false or useless paradigms. The only health info I truly value at this point is rigorous self-experimentation. Everything else is merely for purposes of theoretical suggestion and inspiration. And it's a good thing to try things you "know" won't work, and compare the results to things you "know" should work, to see whether one significantly outperforms the other. That's a rapid way to test a model's validity, instead of testing every possible permutation before junking it.

q (2011-11-17 05:54:34)

well, there's the story, i don't know how accurate it is, that steve jobs died much earlier because he chose a dietary therapy over a surgical one. was that a decision driven by data in any way?

Seth Roberts (2011-11-17 06:21:47)

Thanks, Alex. I consider diagnostic categories theory, not data.

Seth Roberts (2011-11-17 06:24:56)

Joseph, I agree that theories can be harmful. Since the SCD diet has helped many people with IBS (cases where it helped are data, not theory), I don't see why it was a bad idea to try it.

Adam StJames (2011-11-17 06:44:19)

About 12 years ago, my Dr. prescribed Lipitor for high cholesterol. After some research, I decided that there was more risk than benefit and I refused. After many weeks of arguing with him, I told him that if he didn't stop, I'd change doctors. He grudgingly told me that there is a diet that "sometimes" works. He prescribed, then, a very high fat diet. Lots of animal fat, fatty meat, butter, avocados, cream, things like that. Within six months, I lost 40 lbs. and my cholesterol was back into the normal range. That easy. And free.

Jim Purdy (2011-11-17 07:10:14)

For me, the funding sources of the published data are all important. For example, there are many dozens, if not hundreds, of published studies extolling the health virtues of California walnuts. All the studies are paid for by the California Walnut Board. If walnuts are so great, why do they need heavy research and advertising subsidies from the industry? That's just for an inexpensive commodity like walnuts. When it comes to BigPharma or BigSurgery, the billions of dollars involved inevitably distort the studies and their conclusions. As far as I'm concerned all funded studies need to be held to an extremely high standard. Or ignored. But there is one source of data that I consider the gold standard: self-experimentation. I trust my body to tell me when something is working, or not. And my body has told me repeatedly that it does not like BigPharma chemicals, while it does like simple paleolithic foods. Self-experimentation! Hmmm ... who is the Berkeley professor who has written extensively about self-experimentation? :) Maybe the government should find him and make him the head of the FDA.

by (2011-11-17 09:58:49)

re: J.Buchignani's frustration: Maybe the emotion of having put so much work into testing a theory and having it fail, is necessary to solidifying your will to stick to a white rice and lean seafood diet for the rest of your life. Pain seems to be a necessary precursor to lasting habit change, in anything.

Ashish (2011-11-17 11:53:24)

It seems to me that any time your specific health situation/need turns out to be the opposite of the usual case, knowing the "health data" would be harmful. But that's really Monday-morning quarterbacking, isn't it?

Scott P. (2011-11-17 13:26:32)

My only thought is that information can be paralyzing either through volume or being unable to establish information's validity especially in light of contradictory information, which there is a lot of on any given subject.

Seth Roberts (2011-11-17 14:47:57)

Any time your specific health situation/need turns out to be the opposite of the usual case, knowing the "health data" would be harmful. But that's really Monday-morning quarterbacking, isn't it? Sort of. It's not a convincing argument for ignorance, I think we agree.

David Harmon (2011-11-17 19:52:57)

The big problem with self-research is that it's not always obvious which articles are (1) peer-reviewed medical science, (2) alt-med craziness, or (3) paid shills for drug companies (or for that matter, alt-med companies). It is possible to learn enough to tell the difference, but it's not necessarily easy – and some of the ringers feature deception and pressure tactics at cult-like levels. The Mercury Mafia is a good example there – they not only denigrate the vaccines that have turned so many deadly diseases into rarities, but promote dangerous chelation therapies which have already outright killed several children. But if you disagree with them, they'll tell you you're endangering your child.

Joseph Buchignani (2011-11-20 23:04:03)

I've just learned that my needs are unique due to Accutane side effects. I've been diving deep into that community. It's an interesting example that has some bearing. The data showed it could cure acne quick and permanently. The initial clinical trials didn't show THAT bad side effects, I guess. Unfortunately due to its mechanism of shortening telomeres for rapidly dividing cells, the damage shows up years later. So they put it on the market and a ton of people got delayed poisoning. Also, due to the way that studies are done, it's very hard to establish causation for compensation, because the general nature of the mechanism creates widely different effects in people, that are often hard to diagnose. And the delayed and gradual nature of onset makes causation even more difficult to establish in the legal sense. So, the way we collect health data in official studies created this disaster by its formal structure - the link between Accutane and curing acne was easy to establish, while the link between subsequent damage was much more vague, easy to miss if you put on the typical "evidence-driven medicine" blinders.

Joseph Buchignani (2011-11-21 00:29:48)

By the way, kombucha and apple cider vinegar both failed for me, and now I know why - it's the same reason I can't digest fat. Accutane can impair bile production. So I need a non-acidic fermented food. Would yoghurt qualify? And, if anyone has clues on reversing epigenetic damage, especially to telomere lengths, I'm all ears.

Aileen Kennedy (2011-11-24 21:22:23)

Really interesting. What I wondered when I read this was why the commenter, knowing that those were all issues that might contribute to his/her depression, did not take those steps before seeing a doctor. Why wait until you are sitting in the doctor's office before deciding to address them? I agree that such issues should be explored by a doctor first, before medication is suggested, but I was just puzzled by the attitude.

Ben (2011-12-10 07:02:17)

Cyberchondriasis: Fact or fiction? A preliminary examination of the relationship between health anxiety and searching for health information on the Internet: <http://dx.doi.org/10.1016/j.janxdis.2011.11.005>

## Assorted Links (2011-11-18 05:00)

- [1]Scientific heresy, a lecture by Matt Ridley mostly about climate change. "Jim Hansen of NASA told us in 1988 to expect 2-4 degrees [of warming] in 25 years. We are experiencing about one-tenth of that."
- [2]The continuing influence of Jane Jacobs. "Rouse spoke first, recalling the words of Daniel Burnham, "Make no little plans, for they have no magic to stir men's blood," he said. Jacobs followed and began, "Funny, big plans never stirred women's blood. Women have always been willing to consider little plans.""

- [3]A self-experimental study of lactose intolerance. " I came across an article that pointed out that levels of [lactase, the enzyme that digests lactose] peak in the morning and evening hours. So I experimented with having either ricotta products or a half cup of milk with my supper. It worked like a charm, and sure enough, if I tried having any between 11 AM and about 4 PM, I would get sick."
- A rather dramatic Google bug. [4]Google the phrase "first let them get sick". You will be told there are hundreds of thousands of results – perhaps 250,000. Look through them and you will see the correct number is much less (recently, 47).
- [5]Lorrie Moore reads one of my favorite short stories, "Day-Old Baby Rats" by Julie Hayden. "[In a confessional:] 'I have missed Mass.' 'How many times?' 'Every time.'"

Thanks to Dave Lull and Nile McAdams.

1. <http://www.thegwpf.org/opinion-pros-a-cons/4262-matt-ridley-scientific-heresy.html>
2. <http://www.theatlanticcities.com/arts-and-lifestyle/2011/11/jane-jacobs-and-power-women-planners/502/>
3. [http://www.science20.com/chemical\\_education/using\\_oneself\\_guinea\\_pig-84550](http://www.science20.com/chemical_education/using_oneself_guinea_pig-84550)
4. [https://www.google.com/search?q=\"first+let+them+get+sick\"](https://www.google.com/search?q=\)
5. [http://www.newyorker.com/online/2010/03/22/100322on\\_audio\\_moore](http://www.newyorker.com/online/2010/03/22/100322on_audio_moore)

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Vince (2011-11-18 09:30:08)

Where does Ridley get his 2-4 degree number from? It sounds like he might be referring to [1]this set of projections, but Hansen only predicted about a 0.7 degree C increase (in Scenario B, which was based on the emissions assumptions that turned out to be closest to what happened) and the actual warming has been about 3/4 of that.

1. <http://www.skepticalscience.com/Hansen-1988-prediction-basic.htm>

Jim Purdy (2011-11-18 11:58:26)

Seth, your Google search for "first let them get sick" has uncovered a nasty truth about the internet and its supposed billions of pages: Actually, the internet is a virtual Potemkin Village, and there really are only 87 pages in the whole internet.

charlie (2011-11-19 09:05:53)

Ridley's argument is filled with straw men. The BEST series puts forward a good argument there has been warming. I agree the historical record is a bad joke, and the models are so augmented to be near meaningless. That being said, he [Ridley] is attacking the straw men, not the bigger problems. We are in a propaganda war, and truth is always the victim. A broad based carbon tax makes a lot of sense. Moving us away from coal and crude oil is a good thing. And frankly, we need the revenue. But any carbon tax that would STOP global warming would also end life as we know it (ie \$20 for a gallon of gas)

Seth Roberts (2011-11-19 12:44:17)

Charlie, that's an interesting comment. When you say "we need the revenue" you seem to be saying you work for the government. But perhaps I am misunderstanding. I agree that taxing the status quo in order to develop alternatives makes sense. On the other hand, there seems to be plenty of innovation related to alternative energy and energy saving ("negawatts") without such a tax.

D (2011-11-19 16:46:33)

"Ridley's argument is filled with straw men." How so?

Thomas (2011-11-20 03:17:29)

Hansens projections seem to me astonishingly good (see Vince's link). Considering how hard it is to predict future events, having just a slight overestimation over 25 years is praiseworthy. Either way, what is your point right now? You said in a recent post that nobody would even contest that there is global warming. Additionally I find it sad that you only ever cite sources that support your point. What about all the studies and findings that say the situation is much worse than projected? How about the fact that Chinese scientists just recently alarmed that their glaciers are melting - their 14 weather stations at 4000 meter height showed a rise since 1961 of 1.73 degree celsius. It's a rare event that Chinese scientists are even allowed to alarm their population. Another recent report says that considering the actual rising use of fossil fuel will make the politically agreed goal of 2 degree rise of temperature until 2100 impossible to reach - the situation will be much worse. I think you're creating yourself a tunnel vision.

charlie (2011-11-21 07:00:54)

Revenue is going to go up. Sorry, Seth. Since you are now a US creditor in China, you should worry about that. We're paying taxes so we the Chinese can waste money on education. How to do that: income tax, sales/GST tax, or a carbon tax. In most countries, income/GST taxes are pretty maxed out. In the US, there is some room for increase, and room for a sub 5 % national GST. Taxing carbon (or energy use) solves problems of the GST or income tax approach. Again, from the revenue side, easy to do. The problem for global warming types is that increase isn't going to stop global warming.

Kirk (2011-11-21 18:04:18)

@Vince, See this article in the Miami News from June 11, 1986: [news.google.com/newspapers?nid=71XFh8zZwT8C&dat=19860611&printsec=frontpage](http://news.google.com/newspapers?nid=71XFh8zZwT8C&dat=19860611&printsec=frontpage) or [astheysawit.com/15389-1986-meteorology.html](http://astheysawit.com/15389-1986-meteorology.html)

Ashish (2011-11-24 23:28:37)

I suspect the Google "bug" is just Google removing redundancies, but I'm forwarding this to a friend who works in the relevant group there.

Vince (2011-11-26 14:46:41)

Thanks for the links, Kirk. But I'd like to see Hansen's actual words or figures, rather than a one-sentence paraphrase by a reporter. Reporters sometimes get things wrong, or leave out unstated assumptions - I'd look to Hansen's published work or public testimony to see what he thought, rather than to a brief newspaper piece. For instance, maybe the high end of that 2-4 degree range is based on Hansen's Scenario A from my link, which assumed that future emissions would be much higher than they actually turned out to be. Hansen's temperature projections were conditional on assumptions about future emissions; since emissions turned out to be much less than that model assumed, it's not a problem with the model if temperatures also turn out to be much less. One thing that the newspaper articles do make clear is that the 2-4 degree estimate was in degrees Fahrenheit, not Celsius. Since the actual amount of warming since the mid 1980s has been about 1 degree F (0.5 degrees C), I don't see how Ridley gets his claim that actual warming is only a tenth of the projection, unless he's taking the high end of the range and mixing up Fahrenheit and Celsius (and thus comparing the actual warming to an "expected" 4 degree C increase). Warming has been about half of the low end of the range given in the newspaper article (1 degree F when the newspaper reports 2-4 degrees F).

Kirk (2011-11-29 12:39:31)

@Vince, If that testimony was inaccurately quoted, then has Dr. Hansen disputed the reportage? I was not able to find such a denial. Is the actual testimony available? I looked around for a while, and it seems like it might be stored in some government library, but I don't have the resources to research further. Since the public newspaper record from that time reports that Dr. Hansen testified there would be an increase of 2 to 4 degrees, I think the burden to prove that reporting was inaccurate is now yours. Good luck. If you look at the WoodForTrees Temperature Index, which is the Mean of HADCRUT3VGL, GISTEMP, UAH and RSS, offset to UAH/RSS baseline (-0.0975K), available at [www.woodfortrees.org](http://www.woodfortrees.org), you will see that the mean (in C) for 1988 was -0.03, and the mean for 2011 (for the first ten months) was 0.12, which is a difference of 0.15 C. If we take a guess at a world average temperature as 56.3 F, and then add 2 degrees and 4 degrees to that temperature, we get the following

temperatures in C: 13.50, 14.61, and 15.72. The difference between the base temperature and the increased temperatures, in C, is 1.11 and 2.22, respectively. Ten times the value 0.15 is definitely between those two. Ridley said in his speech, "Remember Jim Hansen of NASA told us in 1988 to expect 2–4 degrees in 25 years. We are experiencing about one-tenth of that. We are below even the zero-emission path expected by the IPCC in 1990."

## **Evidence-Based Medicine Versus Innovation (2011-11-19 05:00)**

In [1]this interview, a doctor who does research on biofilms named Randall Wolcott makes the same point [2]I made about Testing Treatments – that evidence-based medicine, as now practiced, suppresses innovation:

I take it you [meaning the interviewer] are familiar with evidence-based medicine? It's the increasingly accepted approach for making clinical decisions about how to treat a patient. Basically, doctors are trained to make a decision based on the most current evidence derived from research. But what such thinking boils down to [in practice – theory is different] is that I am supposed to do the same thing that has always been done – to treat my patient in the conventional manner – just because it's become the most popular approach. However, when it comes to chronic wound biofilms, we are in the midst of a crisis – what has been done and is accepted as the standard treatment doesn't work and doesn't meet the needs of the patient.

Thus, evidence-based medicine totally regulates against innovation. Essentially doctors suffer if they step away from mainstream thinking. Sure, there are charlatans out there who are trying to sell us treatments that don't work, but there are many good therapies that are not used because they are unconventional. It is only by considering new treatment options that we can progress.

Right on. He goes on to say that he is unwilling to do a double-blind clinical trial in which some patients do not receive his new therapy because "we know we've got the methods to save most of their limbs" from amputation.

Almost all scientific and intellectual history (and much serious journalism) is about how things begin. How ideas began and spread, how inventions are invented. If you write about Steve Jobs, for example, that's your real subject. How things fail to begin – how good ideas are killed off – is at least as important, but much harder to write about. This is why [3]Tyler Cowen's *The Great Stagnation* is such an important book. It says nothing about the killing-off processes, but at least it describes the stagnation they have caused. Stagnation should scare us. As Jane Jacobs often said, if it lasts long enough, it causes collapse.

Thanks to Heidi.

1. <http://bacteriality.com/2008/04/13/wolcott/>

2. <http://blog.sethroberts.net/2011/11/06/testing-treatments-eight-questions-for-the-authors/>

3. B004H0M8QS

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Jim Purdy (2011-11-19 22:50:14)

The Wolcott interview you cited has profound implications for diabetics. This statement was particularly meaningful to me: "... a small cut or sore can become infected, and flare into a limb- or life-threatening condition in as little as three days. These wounds are so difficult to heal that most of medicine considers them a lost cause and treats them with amputation." In early 2010, I was hospitalized while numerous physicians and surgeons said that my right foot had a massive

diabetic ulcer and that my leg needed to be amputated immediately or I would die. That didn't sound to me like a great idea, and I left the hospital after 6 days, even though the doctors said I would be back within a few days in much worse shape, if I didn't die first. It took many months, but my leg healed just fine. Over millions of years, our bodies have evolved awesome defenses against illness, but doctors give up too quickly and perform many unnecessary life-changing leg amputations.

Thomas (2011-11-20 02:44:12)

I'm sure I'm just missing something here. Didn't you just the other day request that doctors always provide you data with evidence that their treatment works?

Seth Roberts (2011-11-20 03:15:16)

Didn't you just the other day request that doctors always provide you data with evidence that their treatment works? Not quite. I said it was always a good idea to ask for data. If the doctor has no data, fine, now you know. If the doctor has anecdotal data, fine, now you know. The problem with evidence-based medicine is not the emphasis on evidence, it is the emphasis on being an evidence snob. Asking for evidence, to be perfectly clear, is not the same as being an evidence snob.

Grundle (2011-11-30 08:45:06)

Risk versus reward – what doctor is going to risk a hefty malpractice suit and losing their medical license to step out of the norm? There ARE places where this can happen. There are research hospitals trying to pioneer new treatments every day, but because of heavy government regulation there is a lengthy process they go through before their new treatments are allowed to be used.

Mark (2011-12-09 14:05:08)

Seth- Avid reader of your blog (and your book). Just saw this article about a treating physician potentially conflicted due to business relationships with pharma: [http://www.minnpost.com/healthblog/2011/12/09/33717/how\\_u\\_student\\_with\\_ms\\_came\\_to\\_doubt\\_her\\_neurologists\\_motives?utm\\_source=MinnPost-RSS&utm\\_medium=feed&utm\\_campaign=Feed%3A+minnpost-region+%28MinnPost+-+MinnPost.com%3A+Region%29#108-33717](http://www.minnpost.com/healthblog/2011/12/09/33717/how_u_student_with_ms_came_to_doubt_her_neurologists_motives?utm_source=MinnPost-RSS&utm_medium=feed&utm_campaign=Feed%3A+minnpost-region+%28MinnPost+-+MinnPost.com%3A+Region%29#108-33717).

Elaine (2012-01-11 21:11:21)

Evidence-based medicine is an improvement if you compare it not to innovation, but to doing the same thing that has always been done even when that practice does not actually work that well. That is usually what evidence-based medicine is compared to, and that is where the push for evidence-based medicine is coming from. It's not the practitioners pioneering new treatments who are viewed as a problem here, so much as the medical "wisdom" that is unstintingly followed, even when it turns out that it's not so wise after all.

## **Fruit Juice Kombucha (2011-11-20 05:00)**

A reader of this blog named Heidi noticed the discussion of "kombucha" made by fermenting fruit juice with a kombucha culture (SCOBY) [1] started by Parker Bohn. She wrote as follows:

I read somewhere on the internet that kombucha was traditionally brewed with rosehips and elderberries. Since then I've been combining tea (either green, black, or raspberry leaf) with several kinds of wild fruit and making some absolutely amazing kombucha! (Before then I experimented with lots of different herbal kombuchas with different medicinal properties.) Black current, rosehips, elderberries, sumac berries, autumn olive berries, black cherries, and raspberries all made excellent kombucha. The best results seemed to be from tea combined with two different fruits, one tart and the other with a unique flavor. I also tried wild grape juice and hawthorn fruits but wasn't as happy with the results, though the kombucha was still good. Also the SCOBY grows thicker with the tea and fruit combos.

I still used the same amounts of sugar and tea that I had been using, but I was using tart wild fruits that weren't as sweet as store brought juice. My brew of tea, wild fruits, and sugar was a lot stronger and more flavorful than the weak tea and sugar combo that most people use. I would have two or more people sample the results. Different people would have different favorites, but everyone agreed that the fruit and tea combos were the best kombucha they'd ever had.

I also created herbal kombuchas to target different health issues that people had. For example I made a kombucha with wormwood and other parasite killing herbs. After awhile, I pushed it too far with the herbs though, and the SCOBY stopped fermenting well and started to mold. I was able to nurse it back to life though. Certain herbs work much better than others.

Perhaps a mixture roughly half tea and sugar, half fruit juice will work best. At least, that's where I'll start exploring these possibilities. I may never go back to traditional kombucha. Because they are more complex, I can easily believe these newfangled brews taste better. It's interesting they aren't available commercially. Flavored kombucha drinks in stores are kombucha with small amounts of fruit juice added at the end.

1. <http://blog.sethroberts.net/2011/11/14/seth-roberts-interview-with-pictures/#comment-932638>

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Alex Chernavsky (2011-11-20 06:45:15)

Seth, can you ask Heidi for more-specific instructions? It's not clear whether she includes whole fruit/berries with the tea, mashes it the fruit first, squeezes juice out of it, etc. I'd like to have enough detail to reproduce her kombucha myself.

Seth Roberts (2011-11-20 07:09:44)

okay, I'll ask for more details.

John Eels (2011-11-20 15:21:10)

You might be interested in this drink: <http://www.carpediem.com/en/products/kombucha>

Tom (2011-11-20 16:37:14)

I'm wondering if some of the health benefits attributed to wine may not have more to do with the fact that it's a fermented beverage.

Seth Roberts (2011-11-20 17:19:45)

John, yes, it sounds like they ferment the fruit juice for a long time. The product I said didn't exist.

Heidi 555 (2011-11-21 08:25:33)

Alex, I processed the fruit in different ways depending on what it was and the form that I had it in. For example with the sumac, I steeped the fresh berries in the fridge for 1-4 days. With wild grapes and autumn olive berries I blended the fresh fruit and poured off the liquid. The rosehips and elderberries that I had had been dried, so I steeped them in hot water. The black current and raspberries were part of a green tea blend. The black cherries I cooked, but if I could find a simple way to remove the pits, I would process them differently. If possible I tried not to heat the fruit to preserve the vitamin C. In general I processed the fruit separate from the tea and sugar and then mixed them both together at room temperature. Occasionally, I steeped dried fruit with the tea and then strained it all off. My kombucha brew would be stronger than the weak tea and sugar that is typically recommended. Different fruits combined better with different kinds of tea. I always made two different blends at a time, plus I saved a few bottles from a previous batch. So I did a lot of direct comparisons, and as Seth would say

I became a kombucha snob or connoisseur. I stockpiled a lot of kombucha in my fridge and stopped brewing it for the winter. The kombucha SCOBY can just rest dormant for a long time. I gather most of my own fruits. So it was a labor intensive process. But I have lots of new ideas and combinations that I want to try next year. I would be curious to hear what combos other people discover to be exceptionally good.

Seth Roberts (2011-11-21 14:41:58)

Thanks, Heidi. The way you combine fruit and tea to make kombucha reminds me of the lambic beers I like so much. They involve two fermentations: beer and fruit juice. Also the way I got good results from using three fermented sources of flavor in soups: e.g., miso, fermented black bean sauce, and stinky tofu.

Alex Chernavsky (2011-11-21 15:39:10)

Heidi, thanks for the additional information.

Heidi 555 (2011-11-21 17:27:48)

You are both welcome. I look forward to hearing about your results.

### Assorted Links (2011-11-21 05:00)

- [1]Doctoring to the test. Megan McArdle describes the medical equivalent of "teaching to the test". Although she had the usual symptoms of too-little thyroid hormone, her doctor would not give her more synthetic hormone because her Thyroid Stimulating Hormone (TSH) level was within "normal range".
- The Rotten Heart of Europe: The Dirty War for Europe's Money by Bernard Connolly is out of print, but you can buy a used copy ( \$600) or [2]download it (free).
- [3]More evidence that butter is good for you.
- [4]The trouble with lab mice. Nobel Prizes in Medicine, I've said, show the continuing failure of researchers to make significant progress on all major diseases. This article is a closer look at the problem. "We've had thousands of mouse studies of tuberculosis, yet not one of them has ever been used to pick a new drug regimen that succeeded in clinical trials. 'This isn't just true for TB; it's true for virtually every disease,' he tells me."

Thanks to Ivy Hsieh and Allan Jackson.

1. <http://www.theatlantic.com/business/archive/2011/11/the-tyranny-of-blood-levels/248681/>

2. <http://library.nu/>

3. <http://crossfitconcept.blogspot.com/2010/02/butter-good-for-you.html>

4. [http://www.slate.com/articles/health\\_and\\_science/the\\_mouse\\_trap/2011/11/the\\_mouse\\_trap.html](http://www.slate.com/articles/health_and_science/the_mouse_trap/2011/11/the_mouse_trap.html)

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charlie (2011-11-21 07:07:39)

rule of thumb: women goes into a doctor complaining about a thryoid issue. Give her a reference to a psychologist. True about 75 % of GI complaints as well. If there's not blood in the toliet, you dont' need a doctor.



Jim Purdy (2011-11-21 09:10:23)

Megan McArdle asked: "Will evidence-based medicine push us even more towards looking at numbers rather than listening to patients?" "Listening to patients?" Now that's a concept that I haven't seen practiced by many doctors. They all seem to be spend my allotted 3-minute visit typing out expensive prescriptions that their computers tell them that my insurance will cover. Meanwhile, they ignore me sitting there telling them that I don't want any drugs for lifestyle-caused issues like cholesterol, blood pressure, and blood sugar, and that I only want lifestyle advice. Forget evidence-based medicine, I'm ready to try shoe-based medicine. Maybe I could get a doctor's attention if I whack them over the head with a shoe.

Alrenous (2011-11-21 12:30:04)

There's a good reason you go with the objective tests, though. If you have a bunch of thyroid symptoms but normal thyroid levels, most of the time it's because someone's made a mistake somewhere and your thyroid's fine. That said, in this case the House solution is perfect. Give 'em thyroid stuff and see if they improve. Unlike say, chemo, hormones tend not to have the capacity to cause permanent damage. May as well just try it and see.

Seth Roberts (2011-11-21 14:37:46)

Megan McArdle asked: "Will evidence-based medicine push us even more towards looking at numbers rather than listening to patients?" Maybe we should call it evidence-rationalized medicine.

Seth Roberts (2011-11-21 14:59:37)

rule of thumb: women goes into a doctor complaining about a thryoid issue. Give her a reference to a psychologist. and you know this because...?

Sam (2011-11-22 13:38:58)

Just a note on the butter article: according to Wikipedia, kombucha contains butyric acid. [http://en.wikipedia.org/wiki/Butyric\\_acid](http://en.wikipedia.org/wiki/Butyric_acid) #Biosynthesis

Pieter (2011-11-23 05:16:02)

I think the link about the butter should go to Stephan Guyenet himself at <http://wholehealthsource.blogspot.com/20-09/12/butyric-acid-ancient-controller-of.html>, and not to a site that just copies other blogs.

Perfect Health Diet » Around the Web; Home for the Holiday Edition (2011-11-26 14:59:13)

[...] Seth Roberts, the trouble with lab mice. "We've had thousands of mouse studies of tuberculosis, yet not one [...]"

## **"Allergic to the Practical": Law Schools Imitating Academia (2011-11-22 05:00)**

Thorstein Veblen might have gloated that [1]this 2011 article – about the uselessness of law schools and legal scholarship – so thoroughly supports what he wrote in a book published in 1899 (see the last chapter of [2]The Theory of the Leisure Class). Why are law schools useless? Because law professors feel compelled to imitate the rest of academia, which glorifies uselessness:

"Law school has a kind of intellectual inferiority complex, and it's built into the idea of law school itself," says W. Bradley Wendel of the Cornell University Law School, a professor who has written about landing a law school teaching job. "People who teach at law school are part of a profession and part of a university. So we're always worried that other parts of the academy are going to look down on us and say: 'You're just a trade school, like those schools that advertise on late-night TV. You don't write dissertations. You

don't write articles that nobody reads.' And the response of law school professors is to say: 'That's not true. We do all of that. We're scholars [i.e., useless], just like you.' "

Yeah. As I've said, there's a reason for the term ivory tower. And seemingly useless research has value. Glorifying useless research has the useful result of diversifying research, causing a wider range of research directions to be explored. Many of my highly-useful self-experimental findings started or received a big boost from apparently useless research.

The pendulum can swing too far, however, and it has. A large fraction of health researchers, especially medical school researchers, have spent their entire careers refusing to admit, at least in public, the uselessness of what they do. Biology professors have some justification for useless research; medical school professors have none, especially given all the public money they get. Like law professors, they prefer prestige and conformity. The rest of us pay an enormous price for their self-satisfaction ("I'm scientific!" they tell themselves) and peace of mind. The price we pay is stagnation in the understanding of health. Like clockwork, every year the Nobel Prize in Medicine is given to research that has done nothing or very close to nothing to improve our health. And every year, like clockwork, science journalists (all of them!) fail to notice this. If someone can write the article I just quoted about law schools, why can't even one science journalist write the same thing about medical schools – where it matters far more? What's their excuse?

1. <http://www.nytimes.com/2011/11/20/business/after-law-school-associates-learn-to-be-lawyers.html?ref=general&src=me&pagewanted=all>
2. <http://www.gutenberg.org/ebooks/833>

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Jazi yechezkel zilber (2011-11-22 10:19:54)

I observed that most lawyers are worse than useless. They cite the law with zero practical acumen. What one needs is knowing the procedure. How the judges think, etc. In a way, judges even smirk at naive lawyers that cite with full earnest the texts with no clue about what is actually going on. The surprise of the many totally clueless lawyers around, lies partly in that these lawyers studies for years how to be stupid. That is to be covered head to toe in textual thinking, while it simply does not work like this.

Alex Chernavsky (2011-11-22 14:03:58)

See also this article about the useless research conducted at business schools: "[1]Is Research in the Ivory Tower 'Fuzzy, Irrelevant, Pretentious'?" The article is actually from 1990, but I doubt that things have changed much since then. Here's a short sample from the article:

[Dean Richard R. ] West, a well-published academic himself, was shocked. Six years later, he's still amazed by what he considers the overemphasis placed on scholarly research at most business schools. After spending some time over the weekend with a recent issue of the *Journal of Strategic Management*, West found only one article, on corporate entrepreneurship, of any interest. "It's often crap," he says of academic writing in learned journals. "They say nothing in these articles, and they say it in a pretentious way. If I wasn't the dean of this school [NYU], I'd be writing a book on the bankruptcy of American management education."

1. <http://chernavsky.dreamhosters.com/b-schools/>

Tom (2011-11-22 17:35:25)

*If someone can write the article I just quoted about law schools, why can't even one science journalist write the same thing about medical schools — where it matters far more? What's their excuse?* Probably because the science journalists suffer from the same phenomenon. (Although science journalists are, if anything, *more* pathetic, as they are only groupies of the

useless.) Gary Taubes is one of the few who hasn't fallen into this trap. By focusing on things that are actually **useful** (such as "Why do people who eat as they 'should' get fat?"), he both earned huge amounts of opprobrium and turned the science world upside down. This is about rock music, but it encapsulates the phenomenon: [theonion.com/articles/history-of-rock-written-by-the-losers,736/](http://theonion.com/articles/history-of-rock-written-by-the-losers,736/)

Alex Chernavsky (2011-11-22 21:30:33)

Robert Whitaker is in the same vein as Gary Taubes. Whitaker does an outstanding job at pointing out the pseudoscience that's prevalent in psychopharmacology. See, [1]*Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*. [2]John Horgan is a good journalist, as well.

1. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452425/>

2. <http://www.johnhorgan.org/>

Toyinulye (2011-11-22 22:18:04)

Hey Seth, I am longtime reader and lurker of your blog. I have a burning question for you and that is; why are white males in aggregate not attracted to black women?? I am a slim (5'4 120pounds, 21 years old) African woman. People tell me that I am attractive and that I favor Naomi Campbell. I attract all sorts of men but never white males. Even the liberal white males don't approach me. I tend to wear my hair in a long afro hair style do you think this can be apart of the problem. Do yo suggest that I seek out older white men?? Please let me know. Sorry for all of the questions.

Seth Roberts (2011-11-22 23:14:12)

Probably because the science journalists suffer from the same phenomenon. Well, part of the problem, as everyone acknowledges, is that science journalists are often liberal-arts majors who have difficulty with science. Whereas Taubes majored in physics. Another problem is that if you write critically about scientists you may have trouble getting them to talk to you. And science journalism requires access. This is a well-known problem throughout journalism.

Seth Roberts (2011-11-22 23:27:03)

why are white males in aggregate not attracted to black women? Someone who doesn't want his name used once explained this to me by saying that black culture was more masculine than white culture, which was in turn more masculine than Asian culture, and that men prefer somewhat more feminine women and women somewhat more masculine men. So black men and white women fit together better than white men and black women; and white men and Asian women fit together better than white women and Asian men.

Toyinulye (2011-11-22 23:39:03)

Seth, Thank you so much for your speedy reply. How can I attract white males? Or is it a lost cause?

Txomin (2011-11-23 03:17:26)

As long as the editors and reviewers of academic journals continue to ignore their responsibilities, useless research is the most we can aspire to. I belong to an editorial board and the fight for quality/standards has only gotten crueller over the years.

Seth Roberts (2011-11-23 03:50:12)

How can I attract white males? Or is it a lost cause? I think the man behind Norton Utilities, who is white, has a wife who is black. You could examine how they got together.

Jim Purdy (2011-11-23 04:41:32)

Re Toyinulye's question about white males and black females, I wonder what to make of the secret relationship of Tom Jefferson and Sally Hemings. He was the author of the Declaration of Independence and President of the USA, but he also was a slave owner, making him a very bad example by today's standards. I think that a lot of black women understandably don't trust white men because of their historically bad treatment by white men. Unfortunately, we white men have had a pretty horrible history with lots of women and non-white males.

Jazi yechezkel zilber (2011-11-23 17:06:52)

Seth, Bang on about white men and asian women. I always felt that this match is a win win situation. Both sides are happier than with their respective mates

Grundle (2011-11-30 09:16:30)

I disagree with you strongly on the uselessness of Nobel Prize winners in Medicine. Let us take a look at a few :) 1996 - "the specificity of the cell mediated immune defence" Knowledge of this has given us a new understanding of how to treat viruses and it is also related to the rejection of transplants which, with this new knowledge, has allowed us to reduce the incidence of rejection. I would say this is a significant discovery. 1997 - "discovery of Prions - a new biological principle of infection" This showed us an entirely new branch of infectious disease. Remember "Mad Cow Disease"? It is a prion infection. With this new knowledge we now can combat another subclass of illnesses that we didn't even know about before. This is a significant discovery. 1998 - "for their discoveries concerning nitric oxide as a signalling molecule in the cardiovascular system" - You got me here, I don't know how this one is significant. If I were to guess I would think it would have applications in treating lung maladies such as emphysema 1999 - "for the discovery that proteins have intrinsic signals that govern their transport and localization in the cell" With this new knowledge we can now design gene therapies using these signals to our advantage. Since the signals and the proteins construction are all tied to a specific set of genes. This knowledge brings us a step closer to treating genetic illnesses. I would say it is significant. 2000 - "for their discoveries concerning signal transduction in the nervous system" This one cannot be understated in it's importance. It is like discovering an integral part of the human body such as how breathing works. Knowing that the nervous signal works on "signals" is not enough, but knowing the mechanism behind those signals now gives us a more precise knowledge which of course will allow us to be more specific in treatments and diagnosis. This is significant. So far every one of these I have listed, except for the NO2 lung one, I can think of several ways for how it has helped improve our health. I think you made too much of a generic statement there. This is not to say that I agree with everything academia does. I do think there is incredible waste in research institutions, but I don't think all medical researchers are as incompetent as you paint them to be. The one thing I hope never disappears is honest research in the medical community, because the more we know about the human body the closer we can get to providing proper treatment to people who deserve to live long healthy lives

Seth Roberts (2011-11-30 14:43:50)

Grundle, thank you for your comment. I am not saying that all the prize-winning discoveries are completely useless. I am saying that for a long time none of them have helped us with major health problems (= cancer, heart disease, strokes, diabetes, depression, obesity, etc.). Sure, the 1998 award was for a discovery that reduced male impotence - not usually considered a major health problem. 1996: I am unaware of an important shown-to-work new treatment for viruses based on this discovery.. Organ transplant rejection is not a major health problem. 1997: I am unaware of any benefit from the discovery of prions. 1998: I am unaware of any benefit. "brings us closer" is a statement that it has not yet been useful. 2000: "will allow us to be more specific", you write. The useful application to a major health problem, you seem to imply here, hasn't yet happened. And it's been 10 years since the prize.

### Assorted Links (2011-11-23 05:00)

- Bruce Handy (who wrote for Spy) [1]on Newsweek. "The second biggest problem is the way each issue begins with a miles-long slog of columns by A-list writers eager to champion the incontrovertible and rehash the already thoroughly hashed. . . . Niall Ferguson has discovered that, thanks to technology, "the human race is interconnected as never before.""
- [2]The Willat Effect in Venice, CA: side-by-side coffee comparisons at Intelligensia .
- Why is the headline [3]28 Unexpected TV Ratings Facts more attractive than Unexpected TV Ratings Facts?
- [4]Engaging interview with Julia Schopick, creator of [5]Honest Medicine. "After they [his surgeons] were done with him . . . "

1. <http://www.vanityfair.com/online/daily/2011/11/Is-a-Crumbling-iNewsweeki-Really-All-Hell-and-Agony>
2. <http://www.good.is/post/the-end-of-cheap-coffee/>
3. <http://nymag.com/daily/entertainment/2011/11/which-tv-show-rich-people-hate-the-most-and-27-other-unexpected-ratings-facts.html>
4. <http://healthymedicine.blogspot.com/2011/09/healthy-medicine-113-honest-medicine.html>
5. <http://honestmedicine.com/>

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### Geniuses: Just Like Us! (2011-11-24 05:00)

[1]I've described how smart my students are. Recently I had dinner with some of them.

ME Why did you decide to go to Tsinghua rather than Beida [Beijing University]?

ONE OF MY MOST BRILLIANT STUDENTS There are more boys here.

1. <http://blog.sethroberts.net/2011/10/26/my-brilliant-tsinghua-students/>

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Sam (2011-11-24 07:55:38)

Which actually is brilliant: probably the most important decision in their life is: with whom do they want to life with, who are your friends, your social network. And the most important of these will be your spouse, obviously. So it matters a lot to go where you have good chances to find a good match.

Alex Chernavsky (2011-11-24 08:30:28)

Yeah, I think one of the best reasons to attend an elite university isn't so much the quality of the education but the network of contacts that you can establish and that you can rely upon to help you during the rest of your life (witness George Bush at Yale [undergrad] and Harvard [grad]). The education itself is probably overpriced.

gwern (2011-11-24 10:38:35)

Quite brilliant: why go where there is an oversupply of your gender?

Sam (2011-11-24 11:39:52)

(of course we all think it's a girl who said this)

Seth Roberts (2011-11-24 13:43:31)

Yes it's a girl who said this. I was less brilliant: I started college at Caltech, 90 % male.

Tom (2011-11-25 10:20:26)

Off-topic, but in line with one of your interests...a Dutch cardiologist and leading researcher of statin drugs (and who is co-author of over 500 papers), has been fired for fabricating data: (registration may be required to view) [www.theheart.org/article/1315171.do](http://www.theheart.org/article/1315171.do)

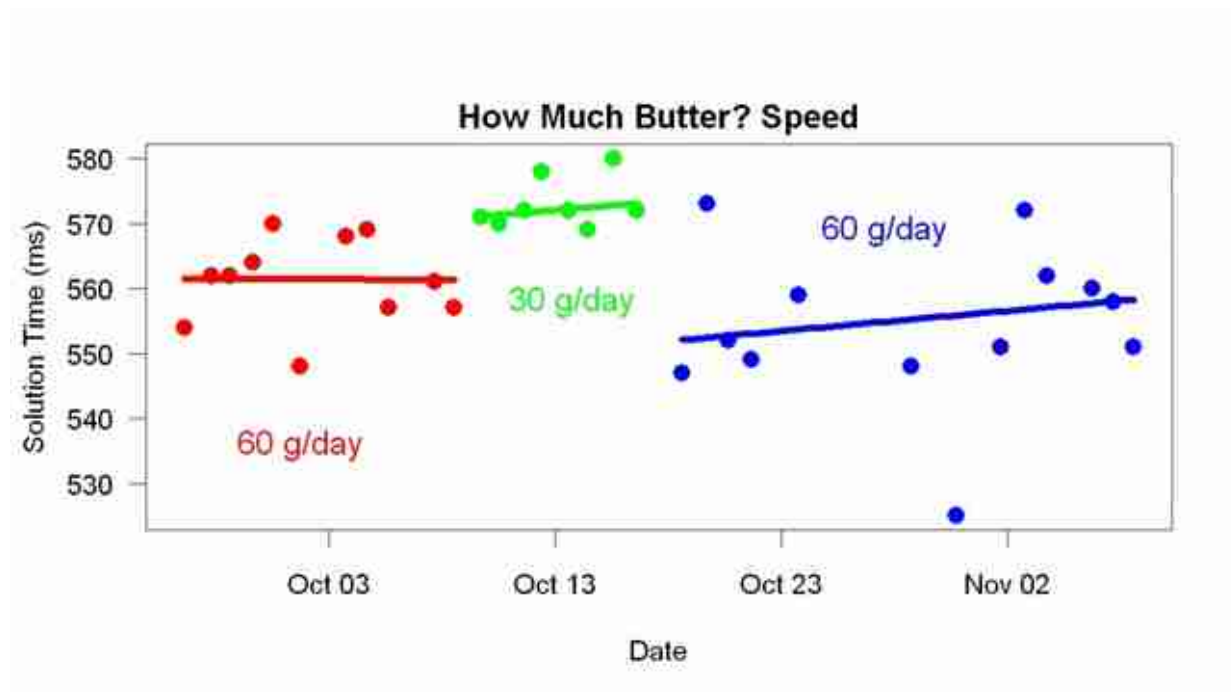
## Butter and Arithmetic: How Much Butter? (2011-11-25 05:00)

I measure my arithmetic speed (how fast I do simple arithmetic problems, such as  $3+4$ ) daily. I assume it reflects overall brain function. I assume something that improves brain function will make me faster at arithmetic.

[1] Two years ago I discovered that butter – more precisely, substitution of butter for pork fat – made me faster. This raised the question: how much is best? For a long time I ate 60 g of butter (= 4 tablespoons = half a stick) per day. Was that optimal? I couldn't easily eat more but I could easily eat less.

To find out, I did an experiment. At first I continued my usual intake (60 g /day). Then I ate 30 g/day for several days. Finally I returned to 60 g/day. Here are the main results:

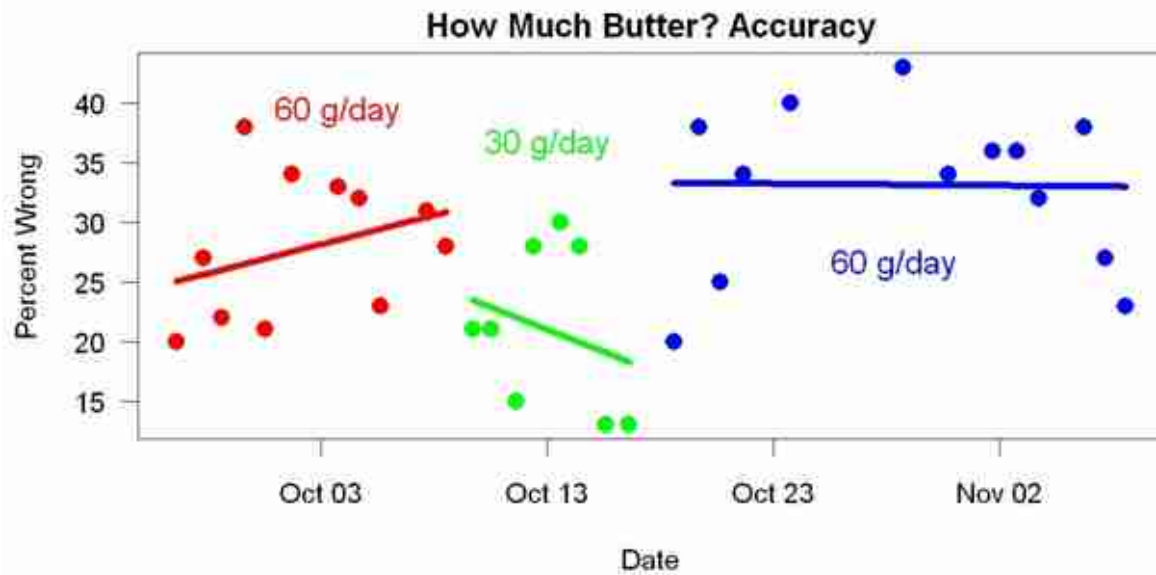
[2]



The graph shows that when I switched to 30 g/day, I became slower. When I resumed 60 g/day, I became faster. Comparing the 30 g/day results with the combination of earlier and later 60 g/day results,  $t = 6$ ,  $p = 0.000001$ .

The amount of butter also affected my error rate. Less butter, less errors:

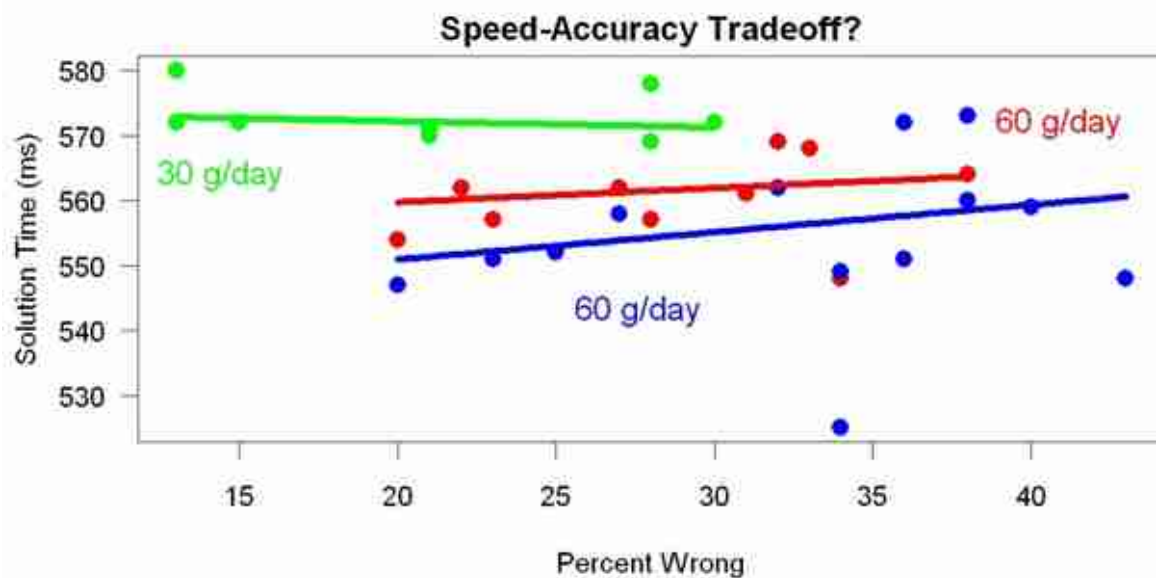
[3]



Comparing the 30 g/day results with the combination of earlier and later 60 g/day results,  $t = 3$ ,  $p = 0.006$ .

The change in error rates raised the possibility that the speed changes were due to movement along a speed-accuracy tradeoff function (rather than to genuine improvement, which would correspond to a shift in the function). To assess this idea, I plotted speed versus accuracy (each point a different day).

[4]



If differences between conditions were due to differences in speed-accuracy tradeoff, then the points for different days should lie along a single downward-sloping line. They don't. They don't lie along a single line. Within conditions, there was no sign of a speed-accuracy tradeoff (the fitted lines do not slope downward). If this is confusing, look at the points with accuracy values in the middle. Even when equated for accuracy, there are differences between the

30 g/day phase and the 60 g/day phases.

What did I learn?

1. How much butter is best. Before these results, I had no reason to think 60 g/day was better than 30 g/day. Now I do.
2. Speed of change. Environmental changes may take months or years to have their full effect. Something that makes your bones stronger may take months or years to be fully effective. Here, however, changes in butter intake seemed to have their full effect within a day. I noticed the same speed of change [5] with pork fat and sleep: How much pork fat I ate during a single day affected my sleep that night (and only that night). With omega-3, the changes were somewhat slower. A day without it made little difference. You can go weeks without Vitamin C before you get scurvy. Because of the speed of the butter change, in the future I can do better balanced experiments that change conditions more often.
3. Better experimental design. An experiment that compares 60 g/day and 0 g/day probably varies many things besides butter consumption (e.g., preparing the butter to eat it). An experiment that compares 60 g/day and 30 g/day is less confounded. When I ate less butter, I ate more of other food. Compared to a 60 g/0 g experiment, this experiment (60 g/30 g) has less variation in other food. Another sort of experiment, neither better nor worse, would vary type of fat rather than amount. For example, replace 30 g of butter with 30 g of olive oil. Because the effect of eliminating 30 g/day of butter was clear, replacement experiments become more interesting – 30 g/day olive oil is more plausible as a sustainable and healthy amount than 60 g/day.
4. Generality. This experiment used cheaper butter and took place in a different context than the original discovery. I discovered the effect of butter using [6]Straus Family Creamery butter. "One of the top premium butters in America, " says its website, quoting Food & Wine magazine This experiment used a cheaper less-lauded butter ([7]Land O'Lakes). Likewise, I discovered the effect in Berkeley. I did this experiment in Beijing. My Beijing life differs in a thousand ways from my Berkeley life.

The results suggest the value of self-experimentation, of course. Self-experimentation made this study much easier. But other things also mattered.

First, reaction-time methodology. In the 1960s my friend and co-author [8]Saul Sternberg, a professor of psychology at the University of Pennsylvania, introduced [9]better-designed reaction-time experiments to study cognition. They turned out to be far more sensitive than the usual methods, which involved measuring percent correct. ([10]Saul's methodological advice about these experiments.)

Second, personal science (science done to help yourself). I benefited from the results. Normal science is part of a job. The [11]self-experimentation described in books was mostly (or entirely) done as part of a job. Before I collected this data, I put considerable work into these measurements. I discovered the effect of butter in an unusual way (measuring myself day after day), I tried a variety of tasks (I started by measuring balance), I refined the data analysis, and so on. Because I benefited personally, this was easy.

Third, technological advances. Twenty years ago this experiment would have been more difficult. I collected this data outside of a lab using cheap equipment (a Thinkpad laptop running Windows XP). I collected and analyzed the data with R (free). A smart high school student could do what I did.

There is more to learn. The [12]outlier in the speed data (one day was unusually fast) means there can be considerable improvement for a reason I don't understand.



### [13]The Genomera Buttermind Experiment.

1. <http://blog.sethroberts.net/2010/08/13/arithmetic-and-butter/>
2. <http://blog.sethroberts.net/wp-content/uploads/2011/11/2011-11-21-30-g-vs-60-g-butter-per-day-speed.jpg>
3. <http://blog.sethroberts.net/wp-content/uploads/2011/11/2011-11-21-30-g-vs-60-g-butter-per-day-accuracy.jpg>
4. <http://blog.sethroberts.net/wp-content/uploads/2011/11/2011-11-21-30-g-vs-60-g-butter-per-day-speed-vs-accuracy.jpg>
5. <http://blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>
6. <http://www.strausfamilycreamery.com/?title=Butter>
7. <http://www.landolakes.com/Products/Butter/>
8. <http://www.psych.upenn.edu/~saul/>
9. <http://www.psych.upenn.edu/~saul/am.scientist69.pdf>
10. <http://www.psych.upenn.edu/~saul/rt.experimentation.pdf>
11. [http://books.google.com/books/about/Who\\_goes\\_first.html?id=V1jwT-P8FjoC](http://books.google.com/books/about/Who_goes_first.html?id=V1jwT-P8FjoC)
12. <http://blog.sethroberts.net/2011/10/31/brain-surprise-why-did-i-do-so-well/>
13. <http://blog.sethroberts.net/2011/01/29/the-buttermind-experiment/>

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Bob (2011-11-25 08:20:43)  
Have you tried 90g/day?

Chris (2011-11-25 09:12:28)  
Seth, Very interesting as usual. My interpretation is as follows: Based on the Speed-Accuracy Tradeoff chart I estimate Average time increased from 555 to 570 (60g vs 30g), a 2.7 % decrease in performance. Average accuracy increased from 30 % to 21 %, a 30 % increase in performance. Such a large improvement in accuracy with a minor decrease in speed would lead me to favor the 30g dose over the 60g dose. Am I missing something? Thanks for sharing and inspiring, Chris

Chris (2011-11-25 11:31:54)  
Maybe I should have expressed the accuracy improvement as an increase in correct answers  $9/70 = 13\%$ . 30g still wins IMO.

Seth Roberts (2011-11-25 11:38:15)  
Have you tried 90g/day? Not for very long. It's hard to eat much more than 60 g/day.

Seth Roberts (2011-11-25 11:45:28)  
Such a large improvement in accuracy with a minor decrease in speed would lead me to favor the 30g dose over the 60g dose. Am I missing something? Yes. As I say, when equated for accuracy, I was faster with 60 g/day. Accuracy is malleable. If I were slower I could easily be 100 % accurate.

Tom (2011-11-25 13:36:21)  
Seth, do you think that the effects of the Land o'Lakes butter are just as strong as with the premium (pastured) butter? Do you have any interest in A/B/A testing a premium, grass-fed butter vs. Land o'Lakes? (Which I'm assuming is not butter from pasture-raised cows.)

Andy (2011-11-25 14:35:25)

Hi Seth, Stephen over at whole health source seems to be suggesting that butters healthful properties come from its butyrate content - <http://wholehealthsource.blogspot.com/2009/12/butyric-acid-ancient-controller-of.html> I wonder if it is also responsible for its mind enhancing properties as well. Butyrate supplements are fairly readily available, maybe its time for Butter Mind 3! Let me know what you think. Cheers, Andy

jon k (2011-11-25 15:24:56)

I'm interested in running similar experiments on myself with diet and other inputs (exercise for example). Question: Where do you find a program that records your trials, and are you manually inputting each data point to graph or can that be done automatically?

Seth Roberts (2011-11-25 17:10:22)

I wonder if it is also responsible for its mind enhancing properties as well. Butyrate supplements are fairly readily available, Yeah, I've heard this idea. I plan to test it.

Seth Roberts (2011-11-25 17:20:48)

Question: Where do you find a program that records your trials, and are you manually inputting each data point to graph or can that be done automatically? I wrote the program myself in R. R runs the experiment and plots the data. You can find much of the R code I use in this blog - look under R - but you will need to know some R to use it.

Seth Roberts (2011-11-25 17:22:39)

do you think that the effects of the Land o'Lakes butter are just as strong as with the premium (pastured) butter? Yes. I have switched between expensive and cheaper butters several times and never noticed a difference. Doing yet another test isn't very attractive because there are too many things that are more likely to have an effect, such as sodium butyrate.

Jazi yechezkel zilber (2011-11-25 20:24:36)

The easiest theory is that speed + accuracy is related to underlying arousal. (baseline arousal, potential arousal change). In which case it is hard to know which one is better slower or faster. If you had a composite measure for general health or general brain functioning it would be better? Note the ideas of "how to become smarter" book, he did lots of self experimentation on brain pformance, and found different foods for attention, concentration, socialization etc.

Jazi yechezkel zilber (2011-11-25 20:25:10)

Ps. I am convinced that butter quality matters. I feel it in my stomach immediately.

Seth Roberts (2011-11-26 04:03:38)

The easiest theory is that speed + accuracy is related to underlying arousal. (baseline arousal, potential arousal change). In which case it is hard to know which one is better slower or faster. Increasing arousal does not make one faster at the same level of accuracy. It pushes you down (toward lower accuracy and greater speed) on a speed-accuracy tradeoff function. I observed that more butter made me faster at the same level of accuracy. Contradicting your theory.

Joseph Buchignani (2011-11-26 10:45:51)

For your encore, you should try Ghee. It's easy to make. Using ghee should greatly narrow down what components of butter are producing the effect. <http://paleodietlifestyle.com/paleo-fats/>

Nansen (2011-11-27 18:17:27)

In addition to butter, do you regularly consume oils (that is, when you're not experimenting).

Seth Roberts (2011-11-28 06:40:12)

In addition to butter, do you regularly consume oils (that is, when you're not experimenting). I regularly consume flax seeds, due to their high omega-3 content. The omega-3 is entirely in the oil. Whether flax seeds are a better source of omega-3 than flaxseed oil I don't know.

wcb (2011-11-29 11:34:28)

Seth, I have begun to employ your idea of consuming 1/4 or more stick of butter and have concluded there is great merit to doing this, if for no other reason than that it supplies the body with some healthy saturated fat. It's also a great quick snack when melted in a cup in a microwave oven and topped with some grated parmesan cheese. You can eat it like soup. :-)

Seth Roberts (2011-11-29 14:02:34)

You can eat it like soup You can also put it in tea. In place of milk or cream.

Christian (2011-12-04 19:45:18)

Hello Seth, great discoveries. But, what about the cream? Is it not supposed to be the same type of fat as the butter? As I use to cook with butter and have cream on sauces and coffee this is an important question to know as to define how much milk fat I take during the day and its effects. Thanks;

Greg Harrington (2011-12-05 11:53:36)

Seth, I have had a casual interest in trying this for a while, but I hadn't figured out how to consume that much butter. \*You can eat it like soup.\* ...did the trick! I just "souped" half a stick of regular grocery store butter. I found it to taste \*extremely\* salty-much more so than eating it as a solid. Do you use salted or unsalted butter?

Seth Roberts (2011-12-05 14:45:26)

I use unsalted butter.

Lisa Wainer (2011-12-07 04:46:26)

Hi Seth, Just a note from the other side of the pond. I wondered how you ate 'half a stick' of butter a day as I eat loads of butter but would struggle to eat half a 'stick'. Now that I see the 60g measure it all becomes clear! In the UK a 'stick' of butter is 250g. I often make scrambled eggs with 30-50g butter as a way to get a good dosing per day. I am going to try the melted butter in tea (and hot chocolate) idea and see how it tastes - thanks.

Seth Roberts and Citizen Science « My Year of Data (2011-12-10 21:17:19)

[...] discovered that eating half a stick of butter per day improves his brain function, as measured on a standardized test of simple arithmetic questions that he takes every day. (He [...])

Patti (2012-05-02 09:15:07)

Hi Professor Roberts, I understand you are conducting the butter experiment for cognitive results. I was wondering if you are self reporting any physical changes or noting any trends in blood work completed. Also, in conjunction with the butter what is the quantity of other fats you consume daily? (I am assuming you are still take a couple of tablespoons of ELOO) Thank you for your time.

Patti (2012-05-02 09:32:20)

No need to answer my question - I found answers on other blogs you wrote about butter. Thank you.

## **Climategate 2.0: How To Tell When an Expert Exaggerates (2011-11-26 05:00)**

[1]The newly-released climate scientist emails (called Climategate 2.0) from University of East Anglia (Phil Jones) and elsewhere (Michael Mann and others) show that [2]top climate scientists agree with me. Like me (see [3]my posts on

global warming), they think the evidence that humans have caused dangerous global warming is weaker than claimed. Unfortunately for the rest of us, they kept their doubts to themselves: "I just refused to give an exclusive interview to SPIEGEL because I will not cause damage for climate science."

This is a big reason I have found self-experimentation useful. It showed me that experts exaggerate, that they overstate their certainty. At first I was shocked. My first useful self-experimental results were about acne. I found that one of the two drugs my dermatologist had prescribed didn't work. He hadn't said This might not work. He didn't try to find out if it worked. He appeared surprised (and said "why did you do that?") when I told him it didn't work. Another useful self-experimental result was [4]breakfast caused me to wake up too early. Breakfast is widely praised by dieticians ("the most important meal of the day"). I have never heard a dietician say It could hurt your sleep or even a modest There's a lot we don't know. [5]My discoveries about morning faces and mood are utterly different than what psychiatrists and psychotherapists say about depression.

As anyone paying attention has noticed, it isn't just climate scientists, doctors, dieticians, psychiatrists, and psychotherapists. How can you tell when an expert is exaggerating? His lips move. There are two types of journalism: 1. Trusts experts. 2. Doesn't trust experts. I suggest using colored headlines to make them easy to distinguish: red = trusts experts, green = doesn't trust experts.

1. <http://www.forbes.com/sites/jamestaylor/2011/11/23/climategate-2-0-new-e-mails-rock-the-global-warming-debate/2/>
2. <http://climateaudit.org/2011/11/23/private-expressions-of-uncertainty/>
3. <http://blog.sethroberts.net/category/global-warming/>
4. <http://escholarship.org/uc/item/2xc2h866>
5. <http://blog.sethroberts.net/morning-faces-therapy-resources/>

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dearieme (2011-11-26 05:05:26)

I tended to rate my colleagues partly by how often the words "I don't know" passed their lips. Often = good.

Joseph Buchignani (2011-11-26 05:48:19)

Re depression, I wanted to note that deranging my Circadian by taking Vit-D morning and night produced a severe but brief depressive episode. I also experienced nausea. Back to 100 % mood after shifting to taking Vit-D in the morning only. This was on back to back days.

Joseph Buchignani (2011-11-26 05:52:11)

Connected with this, I believe early breakfast deranges the Circadian, causing a similar effect that is masked by food intake producing an energy/pleasure swell. It seems far more natural to experience a period of morning fasting before satisfying hunger.

Joseph Buchignani (2011-11-26 05:53:27)

This, of course, presupposes a healthy diet. Dietary composition greatly affects fasting dynamics.

Txomin (2011-11-26 08:16:54)

It is even simpler. Anything you cannot independently verify on your own, consider it belief. It will hurt at first. After all, how many of you can design a scientific experiment that demonstrates the Earth is round? Few, if any. The lesson here is that your ignorance does not imply anything regarding the shape of Earth. Your ignorance is only telling you that all you have is belief,

not knowledge. In order to achieve intellectual maturity, it is crucial to acknowledge that different critical mechanisms apply when working with knowledge and beliefs. Those people that apply the same critical methodologies to both scenarios are hopelessly lost and at the mercy of their gullibility.

Why experts exaggerate — The Endeavour (2011-11-26 08:38:42)

[...] Seth Roberts writes this morning: How can you tell when an expert is exaggerating? His lips move. [...]

Glen Raphael (2011-11-26 09:11:22)

That earth's shadow on the moon is round implies the earth is too

Chuck Currie (2011-11-26 09:41:06)

The shadow only implies that the earth is circular, like a ring, but not necessarily round, like a ball. Also, how do you know that the shadow you see on the moon is actually caused by the earth? Isn't this fun?

ARaybould (2011-11-26 16:53:37)

You have picked a bad example to generalize, as there are special circumstances in that case that do not apply to all areas of expertise. Specifically, there is what amounts to a well-funded industry devoted to sowing doubt, confusion and denial over every issue related to anthropogenic climate change, by any means that works. As the science does not indicate doubt of a sufficient degree and scope for their purpose, the workers in this industry have created a bold and impressive array of deceitful techniques, up to and including simply lying. Given this situation, who can blame a scientist for being careful with his doubts, knowing that they will be exaggerated beyond all reason, and that he will have no effective course for redress, as his antagonists have the best possible access to the media - they own a significant part of it?

Seth Roberts (2011-11-26 18:31:14)

there is what amounts to a well-funded industry devoted to sowing doubt, confusion and denial over every issue related to anthropogenic climate change, by any means that works. As far as I know this does not describe Steve McIntyre, who has been the most persuasive critic. He is not an "industry" nor is he "well-funded". Nor do I have any reason to think whoever leaked the Climategate emails is "well-funded". Leaking those emails cost very little. Although you seem to think climate scientists are different from other experts - better, apparently - I can't think of any reason they would be. Nor do you explain why that would be so. I say: Climate scientists are like other experts. I give several examples. You say: (a) There is a well-funded industry sowing doubt, confusion, etc. You give no evidence or examples. (b) Climate scientists, for no stated reason, are better than other experts. My claim strikes me as a lot more plausible.

Josh (2011-11-26 21:04:35)

Your blog is predominantly red, I suppose we know where you stand. Dun nun nun!

Seth Roberts (2011-11-27 00:02:24)

Fortunately the title of my blog is white on red rather than red on white.

ARaybould (2011-11-27 00:38:12)

As this is the only part of my reply that you have taken issue with, I trust we can assume that you agree with my central point: the author you quoted at the end of your first paragraph has reason to be guarded in what he says to certain parties, in order to protect himself from misrepresentations against which he has no effective recourse. There are a couple of reasons for us to assume that you have no disagreement. The first is that the specifics you take issue with make no difference: even if you would not personally regard the opposition to anthropogenic climate change (ACC) as an "industry" and have not noticed that it is well-funded (more on that below), it does not follow that the researcher in question lacks reasonable grounds for worrying about being misrepresented. An example of misrepresentation: Forbes presented Roy Spencer's recent remote-sensing paper as "blow[ing] a gaping hole in 'global warming alarmism'" when the contents of the paper neither claimed nor supported any conclusion remotely so sweeping. Furthermore, no conceivable evidence with regard to Steve McIntyre's personal funding leads to the conclusion that there is no well-funded opposition to ACC claims. When a

senator who is well-funded by the oil industry uses a novelist to address a Senate committee in order to debunk ACC, the only reasonable responses are of astonishment and cynicism. Then there is the way the Fox channel presents the issues, and Forbes, as mentioned above... I'm sure you could deny every case I could find, but that will merely leave us with an unresolvable disagreement to which Steve McIntyre's funding has no relevance, so there is little point in continuing this line. Therefore, one wonders what the paragraph referencing Steve McIntyre is doing in your reply at all. Is it a non-sequitur, not actually referring to the previous paragraph or anything else I wrote, but placed perhaps to give the hasty reader the impression that there is an actual argument there? Perhaps you are trying to exploit the fact that I failed to explicitly state that not all the opposition is well-funded or indifferent to the facts, but if so then your resort to this splitting of hairs reveals the weakness of your case. You demand proof from me over the funding question, one that is not central to the point - a much-used rhetorical ploy. At the same time, I notice that the standard that you set for yourself on the whole issue, in your last sentence, is mere plausibility - something of a mismatch, it seems. Another well-used ploy repeated here is to make claims, about what I have written, which are unsupported by my words. I invite you, and any other reader who is still with us, to examine what I wrote and notice that nowhere do I assign any level of credence to climate scientists, either absolutely or relative to any other expert (the 'special circumstances' are, as should be quite clear, the nature of some of the opposition to ACC, not some special credibility of climate scientists.) Furthermore, even if I were to hold that view, it would have no relevance to my point. This strikes part b) from your last paragraph, leaving us disagreeing as to whether there is a well-funded opposition to mainstream ACC research. I am comfortable with leaving third parties to make up their own minds on this.

Txomin (2011-11-27 00:41:00)

Like I said, there is no need to panic. The shape of the Earth is not dependent on anyone's beliefs. Only the scientific method guarantees factual knowledge and, exclusively, to the extent of its currently accepted paradigms. Belief, in contrast, has no correlation (or need to correlate) with knowledge whatsoever. That is the reason why it is crucial that we learn to distinguish what we know from what we believe and that we develop separate critical mechanisms to deal with these different cognitive phenomena. If we can't, we are dependent on "authority" and "people say" in order to manage our perception of reality... a dangerous proposition as history repeatedly demonstrates.

Seth Roberts (2011-11-27 15:47:33)

That's interesting, thanks. I agree, you didn't say that climate scientists are better than other experts. I should have phrased my comment differently. If by "well-funded industry" you mean Senator Inhofe, Fox News, and Forbes, I agree, they are well-funded. By "well-funded industry" I thought you meant specific to climate science. Perhaps CFACT is well-funded. I have not studied Forbes but, like you, I don't trust Inhofe and I don't trust Fox News. I mentioned McIntyre because, as far as I can tell, he has been by far the most persuasive and effective critic.

Rubashov (2011-11-27 16:18:11)

Seth, A while back when you were ragging on macroeconomists I thought about replying that they do exactly what climate scientists do: generate predictive models of complex systems based on long runs of time series data. And like Climate scientists, they express more certainty than they should. Reading your critique of climate science here, however, makes me think that I underestimated your criticism of macroeconomics.

Andre (2011-11-28 11:50:38)

The only thing I know for sure is that I don't know - too many people are too uncritical.

### **Assorted Links (2011-11-27 05:00)**

- [1]Salem Comes to the National Institutes of Health. Dr. Herbert Needleman is harassed by the lead industry, with the help of two psychology professors.
- [2]Climate scientists "perpetuating rubbish".

- [3]A humorous article in the BMJ that describes evidence-based medicine (EBM) as a religion. "Despite repeated denials by the high priests of EBM that they have founded a new religion, our report provides irrefutable proof that EBM is, indeed, a full-blown religious movement." The article points out one unquestionable benefit of EBM – that some believers "demand that [the drug] industry divulge all of its secret evidence, instead of publishing only the evidence that favours its products." Of course, you need not believe in EBM to want that. One of [4]the responses to the article makes two of the criticisms of EBM [5]I make: 1. Where is the evidence that EBM helps? 2. EBM stifles innovation.
- [6]What really happened to Dominique Strauss-Kahn? Great journalism by Edward Jay Epstein. This piece, like much of Epstein's work, sheds a very harsh light on American mainstream media. They were made fools of by enemies of Strauss-Kahn. Epstein is a freelance journalist. He uncovered something enormously important that all major media outlets – NY Times, Washington Post, The New Yorker, ABC, NBC, CBS (which includes 60 Minutes), the AP, not to mention French news organizations, all with great resources – missed.

1. <http://pediatrics.aappublications.org/content/90/6/977.full.pdf>
2. <http://climateaudit.org/2011/11/25/behind-closed-doors-perpetuating-rubbish/>
3. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC139053/>
4. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1125493/>
5. <http://blog.sethroberts.net/2011/11/06/testing-treatments-eight-questions-for-the-authors/>
6. <http://www.nybooks.com/articles/archives/2011/dec/22/what-really-happened-dominique-strauss-kahn/>

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disgruntledphd (2011-11-27 05:47:50)

On the Strauss-Kahn thing, it was obviously an attempt to destroy his candidacy for the French elections. I thought I was being cynical when talking about that, but perhaps I wasn't being cynical enough.

Jim Purdy (2011-11-27 13:17:28)

Is it April Fools Day? Or is this a "Special Conspiracy Edition" of Seth's Blog? In any case, all these conspiracies make for fascinating reading. Regarding the DSK story, I remember noticing (but not taking seriously) an odd little news story out of France just hours before the DSK hotel incident. The story, which seemed silly at the time, claimed that DSK was soon gong to be the target of a vicious smear campaign. Within a short time, that story didn't seem so silly after all. Re evidence-based medicine, I think the story has great significance. EBM is in fact nothing more than a way to ignore real evidence in the form of real patients. The fact that EBM has spread like a virulent plague is evidence for the idea that medical doctors are the laziest and most gullible of all the world's fools.

Alex Chernavsky (2011-11-27 15:41:50)

I'm not sure about the rest of medicine, but I think that psychiatry needs evidence-based medicine (or something like it). Most psychiatrists believe in the effectiveness of antidepressants (and of other psychiatric drugs), despite the fact that a careful analysis of the evidence suggests that these drugs are largely ineffective and often harmful. So.. if EBM is bad, then what approach do we need to reform psychiatry?

Seth Roberts (2011-11-27 17:37:33)

I'm not sure about the rest of medicine, but I think that psychiatry needs evidence-based medicine (or something like it). Most psychiatrists believe in the effectiveness of antidepressants (and of other psychiatric drugs), despite the fact that a careful analysis of the evidence suggests that these drugs are largely ineffective and often harmful. So.. if EBM is bad, then what approach do we need to reform psychiatry? Whether EBM taken as a whole has been beneficial or not I don't know. I think it has two big effects: 1. Pushing doctors to pay more attention to evidence (helpful). 2. Increasing denigration and dismissal of evidence that doesn't reach some standard of goodness (harmful). Which effect is larger I don't know. Are anti-depressants

worse than what they replaced? I don't know. I don't think psychiatry will make substantial progress until there is better research into the causes of depression and other mental disorders. In contrast to research about symptom relief. Why research into causes is bad I suppose has many answers, among them (a) all the money given to med school professors and others by drug companies (which love reducing symptoms while leaving the source of those symptoms intact, thereby creating a never-ending demand for their product) and (b) the lack of interest in prevention (because prevention is less profitable than cure). That is, all the money and status linked to perpetuating the status quo. I don't blame EBM for that.

## **Vitamin D: More Reason to Take at Sunrise (2011-11-28 05:00)**

[1]I blogged earlier about what I called a "stunning discovery": [2]Primal Girl found her sleep got much better when she started taking Vitamin D first thing in the morning (= soon after she got up) rather than mid-afternoon. This suggested that Vitamin D acts on your circadian system similar to a blast of sunlight. (More evidence and discussion [3]here.) In [4]his blog, Joseph Buchignani reports another experience that supports the idea that you should take Vitamin D first thing in the morning:

I picked up a bottle of Vit-D and Calcium. Dosage of Vit-D per pill was 1.6ud. Per the instructions, I took 1 at morning and 1 at night. I began this regimin on the night of the 24th of November. It's now the night of the 25th of November, and my circadian rhythm is completely fucked. . . . I'm fully awake now (12:30 AM), and I probably took the last dose of Vit-D around 7-8 PM. . . . I woke up with dark eye rings on the morning of the 25th. My energy level did not rise as it should have, but sort of meandered in the middle, before finally tailing off. Stress levels and depression were both elevated. I got little productive done.

Yesterday I started taking Vitamin D first thing in the morning. I took 2000 IU of Vitamin D3 at 8 am. In the afternoon I felt more energetic than usual. The next morning (this morning) I woke up feeling more rested than usual. This also supports Primal Girl's experience.

Let me repeat: first thing in morning. If you wake up before sunrise, take at sunrise (say, 7 am). Sunlight has a considerably different effect on your circadian system at 7 am than 10 am. (Look up circadian phase-response curve and especially the work of [5]Patricia DeCoursey if you want to understand why three hours makes a big difference.) I have two bottles of Vitamin D. Neither mentions time of day. Both say take with meals.

1. <http://blog.sethroberts.net/2011/11/02/it-matters-when-you-take-vitamin-d-a-stunning-discovery/>
2. <http://www.primalgirl.com/2011/11/01/nprimalgirl-sleep-issues-vitamin-d/>
3. <http://blog.sethroberts.net/2011/11/03/vitamin-d-sunlight-and-sleep-more/>
4. <http://www.aquatic-ape-diet.com/blog/2011/11/25/dont-take-vitamin-d-at-night/>
5. <http://www.biol.sc.edu/faculty/decoursey.html>

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Joseph Buchignani (2011-11-28 07:28:11)

About the take with meals bit - I took 3 on an empty stomach, about 1.8k IU, and didn't eat. About midday I had stomach trouble. I don't know if it was the building up soybean oil from these pills (I'm fat intolerant), or this particular instance of failing to eat with a meal.



Jazi yechezkel zilber (2011-11-28 08:56:52)

If one takes vitamin d3, it stays in circulation for weeks. And what is mainly counting is the blood levels, which are a long term average. Vitamin d2, on the other has a short life (i vaguely rememb 12 hours, but this is a vageu memory. I am sure its something about a day or less). I would be hugely curious to hear if the girl mentioned used D2. Alternatively, the taking of the stuff can have signaling value irrespective of the blood levels and inherent functions

Tyler (2011-11-28 09:27:34)

Do you take it with meals? What about for those of us who don't eat breakfast?

Seth Roberts (2011-11-28 09:35:42)

If one takes vitamin d3, it stays in circulation for weeks. And what is mainly counting is the blood levels, which are a long term average. Something like that. Which is another reason it is so surprising that the time of day you take it matters.

Seth Roberts (2011-11-28 09:36:44)

Do you take it with meals? What about for those of us who don't eat breakfast? No I take it by itself. I don't eat breakfast.

Clay (2011-11-28 11:02:54)

Isn't taking it buy itself useless? (it's fat soluble, correct?)

Jarno Virtanen (2011-11-28 12:05:20)

*"Let me repeat: first thing in morning. If you wake up before sunrise, take at sunrise (say, 7 am). Sunlight has a considerably different effect on your circadian system at 7 am than 10 am."* So let me get this straight: if I typically wake up at 7am and the sun rises at 9am [1], you recommend to take the dose at 9am? [1] That's when it rises in our place at this time of year. In the northern region of our country, the sun doesn't rise at all for couple of months! :-)

Joseph Buchignani (2011-11-28 12:05:23)

After running through today's irritation cycle, it's pretty clear that this was a reaction to soybean oil on an empty stomach ideosyncratic to fat malabsorbers, not a fundamental problem with taking Vit-D on an empty stomach. Given that Seth is taking it without problem in the morning, it looks like taking it without a meal is fine.

by (2011-11-28 12:21:59)

Dr. Roberts, I know you don't eat soon after waking up to prevent early awakening, but why not breakfast in general? When time do you usually go to sleep and get up in general? Actually, I'm curious to hear the answers of others who skip breakfast.

Jarno Virtanen (2011-11-28 12:45:31)

*"Actually, I'm curious to hear the answers of others who skip breakfast."* I usually go to sleep at 10-12pm and wake up at 7-8am. I skip the breakfast completely and eat lunch at around 11am. (I do drink coffee at 9-10am.) I sometimes feel a little bit hungry at around 9am, but that doesn't last for long. At lunch time, however, I'm usually very hungry.

Latha (2011-11-28 13:13:38)

What do you think about halogen lamps?

by (2011-11-28 13:29:58)

Why do you skip it? Not just to relish the feeling of being very hungry I assume.

Robbo (2011-11-28 14:41:49)

Hej Jarno, I was going to ask the same question because I live in Sweden, and in winter we have to go to work etc well before the sun rises, so it was not clear whether to take the Vit D on waking or at sunrise. But I guess a Finn asked the question first. :)

Seth Roberts (2011-11-28 15:19:04)

So let me get this straight: if I typically wake up at 7am and the sun rises at 9am [1], you recommend to take the dose at 9am? No, I do not mean to be that precise. I am trying to say: 1. A few hours can make a big difference, because changing morning light exposure by a few hours can make a big difference. 2. Start with early morning (e.g., 7 am) rather than late morning (e.g., 11 am). And vary when you take by a few hours to assess the effect of a variety of times. It may have no effect at 8 am but a big effect at 6 am.

Seth Roberts (2011-11-28 15:22:37)

What do you think about halogen lamps? I know little about them. What matters is how much energy they have in the blue area of the spectrum. My guess is: more than incandescent but less than fluorescent.

Seth Roberts (2011-11-28 15:27:08)

Why do you skip breakfast? Breakfast causes me to wake up too early in the morning. See this article: [1]<http://escholarship.org/uc/item/2xc2h866>

1. <http://escholarship.org/uc/item/2xc2h866>

by (2011-11-28 18:59:14)

Oh yes, I've read the section on breakfast/early-awakening several times. I was just wondering if you (or others) had found other benefits from skipping breakfast.

Jarno Virtanen (2011-11-28 22:43:12)

I've not found any other particular benefits from skipping breakfast. However, I do not get hungry before lunch time so I guess you could a benefit is that I don't *have* to eat before that.

Jazi yechezkel zilber (2011-11-29 04:25:57)

Jarno, Fasting part of the day is probably very healthy. So skipping breakfast is is a great way to have a long stretch of hours fasted with no special effort. Dinner till lunch is great

Chris Sturdy (2011-11-29 08:08:54)

Vitamin D should be taken with fat, so for those who skip breakfast (Seth) perhaps adding some cream to coffee/tea or a spoonful of coconut oil to accompany the D would be a good plan.

wcb (2011-11-29 11:22:08)

@ Joseph B. who on 11/28 said in part re Vitamin D: "...I don't know if it was building up soybean oil from these pills (I'm fat intolerant)... Joseph, you should not use a capsule of anything that contains soybean oil as the excipient because it is basically a trans fat slurry and, like all trans fats is pro-inflammatory. There are plenty of D3 capsule formulations available that use better fats such as sunflower or safflower oil. Or you can buy the dry tablet version of D3 and just take it with a tablespoon of light olive oil.

David (2011-11-29 23:00:51)

FYI, Jarrow and Nordic Naturals both offer D3 capsules in olive oil.

Gayle (2011-12-19 11:50:46)

Hi, Seth, This link seems to support the morning exposure to vitamin D: <http://thatpaleoguy.com/2011/12/02/sunbathing-and-circadian-rhythms/>

## Duct Tape, the Eurozone, Status-Quo Bias, and Neglect of Innovation (2011-11-29 05:00)

In 1995, I visited my Swedish relatives. We argued about the Euro. They thought it was a good idea, I thought it had a serious weakness.

ME It ties together economies that are different.

MY AUNT It reduces the chance of war in Europe.

You could say we were both right. There have been no wars between Eurozone countries (supporting my aunt) and the Eurozone is now on the verge of breaking apart for exactly the reason I and many others pointed out (supporting me).

Last week a friend said to me that Europe was in worse shape than America. I was unconvinced. I said that I opposed Geithner's "duct-tape solution". It would have been better to let things fall apart and then put them back together in a safer way.

MY FRIEND Duct-tape works.

ME What Geithner did helped those who benefit from the status quo and hurt those who benefit from change. Just like duct tape.

This struck me as utterly banal until I read [1]a one-sided editorial in The Economist:

The consequences of the euro's destruction are so catastrophic that no sensible policymaker could stand by and let it happen. . . . the threat of a disaster . . . can anything be done to avert disaster?

and [2]similar remarks in The New Yorker (James Surowiecki):

The financial crisis in Europe . . . has now entered a potentially disastrous phase.. . . with dire consequences not just for Europe but also for the rest of us. . . . This is that rarest of problems—one that you really can solve just by throwing money at it [= duct tape]

Wait a sec. What if the Eurozone is a bad idea? Like I (and many others) said in 1995? Why perpetuate a bad idea? Why drive further in the wrong direction? Sure, the dissolution will bring temporary trouble ("disaster", "dire consequences"), but that will be a small price to pay for getting rid of a bad idea. Of course the Euro had/has pluses and minuses. Anyone who claimed to know that the pluses outweighed the minuses (or vice-verse) was a fool or [3]an expert. Now we know more. Given that what the nay-sayers said has come to pass, it is reasonable to think that they (or we) were right: The minuses outweigh the pluses.

You have seen the phrase Japan's lost decade a thousand times. You have never seen the phrase Greece's lost decade. But Greeks lost an enormous amount from being able to borrow money for stupid conventional projects at too low a rate. Had loans been less available, they would have been more original (the less debt involved, the easier it is to take risks) and started at a smaller scale. Which I believe would have been a better use of their time and led to more innovation. Both The Economist's editorial writer and Surowiecki have a status-quo "duct-tape" bias without realizing it.

What's important here is not what two writers, however influential their magazines, think or fail to think. It is that they are so sure of themselves. They fail to take seriously an alternative (breakup of the Eurozone would in the long run be a good thing) that has at least as much to recommend it as what they are sure of (the breakup would be a "disaster"). I believe they are so sure of themselves because they have absorbed (and now imitate) the [4]hemineglect of modern economics. The whole field, they haven't noticed, has an enormous status-quo bias in its failure to study innovation. Innovation – how new goods and services are invented and prosper – should be half the field. Let me repeat: A few years ago I picked up an 800-page introductory economics textbook. It had one page (one worthless page) on innovation. In this staggering neglect, it reflected the entire field. The hemineglect of economics professors is just as bad as the hemineglect of epidemiologists (who ignore immune function, study of what makes us better or worse at fighting off microbes) and statisticians (who pay almost no attention to idea generation).

MORE Even Joe Nocera, whom I like, has trouble grasping that the Euro might be a bad idea. "The only thing that should matter is what works," [5]he writes. Not managing to see that the Euro isn't working.

1. <http://www.economist.com/node/21540255>
2. [http://www.newyorker.com/talk/financial/2011/12/05/111205ta\\_talk\\_surowiecki](http://www.newyorker.com/talk/financial/2011/12/05/111205ta_talk_surowiecki)
3. <http://blog.sethroberts.net/2011/11/26/climategate-2-0-behind-the-curtain/>
4. <http://www.scholarpedia.org/article/Hemineglect>
5. <http://www.nytimes.com/2011/11/29/opinion/nocera-germany-cuts-off-its-nose.html?hp>

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Joseph Buchignani (2011-11-29 06:41:58)

You've been beating the idea generation drum for a while. My blog and twitter feed at [www.aquatic-ape-diet.com](http://www.aquatic-ape-diet.com) is an example of an exo-self geared for max idea generation. The infrastructure behind it isn't fully visible, but is described at [www.cyborgorganize.org](http://www.cyborgorganize.org) It is not just idea generation that counts - it's idea capture, processing, development, and feedback. My system is primarily focused on maximizing individual idea development, whereas you mostly talk about network effects, as far as I've noticed.

Terry O. (2011-11-29 07:46:01)

"James Surowiecki: This is that rarest of problems—one that you really can solve just by throwing money at it " I have borrowed \$x, which I am unable to repay because I chronically spend more than I earn. So if I borrow more that will "solve" things? My 8 year old knows better. Where do they find these "experts"?

Felix (2011-11-29 10:51:41)

Nice article. It's good to see people arguing against "there is no alternative". Interesting also, that people, who profit from the status quo have no shame arguing (threatening) with war. <http://www.zerohedge.com/news/bring-out-your-dead-ubs-quantifies-costs-euro-break-warns-collapse-banking-system-and-civil-war>

David (2011-11-29 13:38:03)

A lot of people have trouble getting their heads around these recurring financial problems, their causes and potential remedies. Obviously a complex system can be viewed in different ways, using various simplified models to try to understand it. Incorrect models do not lead to useful insight. I think the best model is that of a Ponzi scheme. In a Ponzi scheme, you will generally see the scheme operator offer complex-appearing and opaque investment vehicles to the Ponzi investors. The early investors get generous returns, the Ponzi operators pay themselves very well, but at some point the money is gone and all remaining "investors" holdings are worthless. A Ponzi operator can simply sit on the money, like Madoff, or actually make risky

investments with it, claiming to the "investors" that the investments are not as risky as they actually are. In the ongoing banking "crisis", you have seen the investment banks offer complex investment vehicles with great returns for early investors, take a generous cut for themselves, then suddenly, all of the "investments" are worth nothing or next to nothing. The challenge for the investment banks has been to get the governments of the world to purchase, in one way or another, these "investments" and give them large sums of money to keep the scheme running longer. Viewing the events using this model, the remedies to avoid future "banking failures" are simple. Ban all "investment vehicles" except savings accounts, company stocks, bonds, and simple mortgages. Keep the banking reserve requirements robust. In addition, and this is how this links to the Euro discussion, make sure every country has their own currency. Something along these lines was done after the 1929-1933 crisis. It does not look it will happen this time.

Seth Roberts (2011-11-29 13:59:34)

I think the best model is that of a Ponzi scheme. I think your idea is good. Why was Madoff so successful? Because people (investors) were encouraged to be ignorant and passive. To fail to understand. To fail to ask. That was normal. Madoff was not only one who profitted – the whole financial industry profitted. As you say. Yet the reporting about Madoff blamed Madoff (and the SEC). The broader culture (the encouragement of ignorance and passivity – reliance on experts) was never criticized, at least in what I read.

Joseph Buchignani (2011-11-29 15:28:49)

Here's an example of a suppressed innovative idea, and a discussion of why it happens: <http://vault-co.blogspot.com/2011/11/its-magnetic-reversals-stupid.html>

MetaThought (2011-11-29 20:42:18)

Ban all "investment vehicles" except savings accounts, company stocks, bonds, and simple mortgages. That would mean a drastic reduction in the financial sector, which makes up a large chunk of GDP of many developed countries. Of course, the fact that a lot of money is spent on financial services instead of elsewhere (mal-investment!) is ignored.

Aaron Blaisdell (2011-11-30 13:43:31)

"Had loans been less available, they would have been more original (the less debt involved, the easier it is to take risks) and started at a smaller scale. Which I believe would have been a better use of their time and led to more innovation." Seems like the same principle in economics as we've written about for reinforcement learning in rats and pigeons. In regards to duct taping the EU, I'm familiar with the term shotgun wedding, but perhaps we need another term for shotgun anti-divorce.

Rubashov (2011-12-02 11:54:25)

Not only does accepting student diversity help students be all they can be (instead of all that they would be if they were us), it makes grading much more pleasant. In my research methods class, for example, since I switched my final project from "analyze this set of data using the methods I taught you" to an open-ended "Find a question that interests you, gather your own data, answer it, and make a video about your discovery," I've gotten wonderful, creative work. Today I received one video from a bunch of guys who tested whether appliances actually stop bullets like they do in the movies (hint: they don't. None of them will do particularly well on the written final, but they successfully carried out a piece of independent research and discovered something useful about their world on their own. That's worth a lot. BTW, have you tried "contract grading," where you give students a menu of varied assignment choices/styles for them to individually pick from?

Becky Hargrove (2011-12-02 14:28:56)

Hemineglect is a good term and one I had not been familiar with. But it's not just the failure of economists to study innovation. There seems to be a lack of research regarding ways in which the innate drive to succeed might be incorporated into present day economic activities.

Seth Roberts (2011-12-02 17:30:21)

Not only does accepting student diversity help students be all they can be (instead of all that they would be if they were us), it makes grading much more pleasant. In my research methods class, for example, since I switched my final project from “analyze this set of data using the methods I taught you” to an open-ended “Find a question that interests you, gather your own data, answer it, and make a video about your discovery,” I’ve gotten wonderful, creative work. I had the same experience. When I gave students much more choice, the quality of their work went way up. They learned much more, wrote better about what they had done, and made more thoughtful comments about their experience.

## **An Unbiased View of What We Should Eat . . . From a Rat (2011-11-30 05:00)**

[1]



In nature animals must choose a healthy diet based on what tastes good. This doesn’t work for modern humans – lots of people eat poor diets – but why it fails is a mystery. There are many possible reasons. Are the wrong (“unnatural”) foods available (e.g., too much sugar, too little omega-3, not enough fermented food)? Is something besides food causing trouble (e.g., [2]too little exercise, too little attention to food)? Are bad cultural beliefs too powerful (e.g., “low-fat”, desire for thinness)? Is advertising too powerful? Is convenience too powerful? Lab animals are intermediate between animals in nature and modern humans. They are not affected by cultural beliefs, advertising, and convenience (the foods they are offered are equally convenient). Their choice of food may be better than ours.

Nutrition researchers understand the value of studying what lab animals choose to eat. In 1915, the first research paper about “dietary self-selection” was published, followed by [3]hundreds more. The general finding is that in lab-

oratory or research settings, animals choose a relatively healthy diet. There are [4]two variations:

[1.] Cafeteria experiments with chemically defined [= synthesized] diets showed that some of these animals, when offered the separate, purified nutrient components of their usual diet, eat the nutrients in a balance that more or less resynthesizes the original diet and that is often superior to it. [2.] Other animals eat two or more natural foods in proportions that yield a more favorable balance of nutrients than will any one of these foods alone.

Both findings imply that housing an animal in a lab does not destroy the mechanism that tells it what to eat.

Which is why I was fascinated to recently learn what Mr. T (pictured above), the pet rat of [5]Alexandra Harney, the author of *The China Price*, and her husband, liked to eat. It wasn't obvious. "We tried so many foods with him and always thought it made a powerful statement that even a wild rat turned his nose up at potato chips," says Alexandra. "He hated most processed food. He also hated carrots, though." Here are his top three foods:

1. pate
2. salmon sashimi
3. scrambled eggs

Pate = protein, animal fat, complex flavors (which in nature would have been supplied by microbe-rich, i.e., fermented, food). Salmon sashimi = protein, omega=3. Scrambled eggs = ??

He liked beer in moderation, but not yogurt. "Owners of domestic rats say they love yogurt," says Alexandra, "but Mr T only liked it briefly and then hated it, even lunging to bite a friend who brought him some. [Curious.] He loved cheese, stored bread for future consumption (but almost never ate it). Loved pesto sauce and coconut." Note the absence of fruits and vegetables. Alexandra and her husband have no nutritional theories that I am aware of. They did not shape this list to make some point.

For me the message is: Why scrambled eggs? I too like eggs and eat them regularly and cannot explain why.

More Alex Tabarrok's [6]Thanksgiving post shows the connection between libertarian ideas (economies work better when more choice is allowed) and dietary self-selection.

1. <http://blog.sethroberts.net/wp-content/uploads/2011/11/Mr-T.jpg>
2. <http://www.sciencedirect.com/science/article/pii/S003193846990016X>
3. <http://www.ajcn.org/content/42/5/940.full.pdf+html>
4. <http://www.annualreviews.org/doi/abs/10.1146/annurev.en.36.010191.000355>
5. <http://alexandraharney.com/>
6. <http://marginalrevolution.com/marginalrevolution/2011/11/thanksgiving-lessons.html>

dearieme (2011-11-30 05:13:25)

Scrambled eggs with smoked salmon makes a fine breakfast, though I must say I do prefer a kipper.

Jan (2011-11-30 05:13:33)

Eggs = high quality proteins?

Elizabeth Molin (2011-11-30 07:00:03)

The importance of dietary cholesterol?

Valtsu (2011-11-30 08:44:46)

Eggs... Choline? Sulfur?

Rashad (2011-11-30 09:55:56)

Well, an egg contains all the essential nutrients to turn a single celled embryo into a living breathing baby chick. Seems logical that they would be healthy.

Elisa (2011-11-30 10:57:25)

Eggs are the same as salmon – protein and omega 3.

by (2011-11-30 11:13:24)

Real support for paleo and low-carb. "Stored bread but never ate it." Ha.

Jeff (2011-11-30 12:36:48)

Interesting. You might want to look at Stephan Guyenet's recent posts. The studies he mentions suggests that rats will undergo(hot, cold, foot shocks, etc.) near torture while ignoring their rat chow. Was the situation different here?

Evelyn Majidi (2011-11-30 16:55:49)

Scrambled eggs are a mixture of fat and protein, same as the rat's two other favorite dishes. Now, if he preferred scrambled eggs to fried eggs, for example, that would be a conundrum. Was that the case? Saving the bread shows that he knows that bread will remain edible even though it is stale, while foods rich in protein and fat are likely to rot and make him sick if he doesn't eat them quickly. Since he doesn't lack for food, he didn't need to touch the stored bread. I bet if they didn't feed him for a day or two he would have gone back to the bread and congratulated himself on his wisdom in planning for the rainy day. But as for the aversion to yogurt, I don't have a clue. Could it have been tarted up with fruit or jam?

Seth Roberts (2011-11-30 21:02:48)

Scrambled eggs are a mixture of fat and protein, same as the rat's two other favorite dishes I am pretty sure they tested many fat/protein mixtures – other meats, for example. These three came out on top..

Anand Srivastava (2011-12-01 01:34:26)

Could it be that the yogurt was store brought and not made from real pastured milk, and there by didn't have the good profile in other preferred foods.

Elizabeth Molin (2011-12-01 08:30:55)

I am not a very good researcher, and, frustratingly, I've not been able to find any documentation, so the following is produced from my possibly (very) sketchy memory. Shortly after World War II, Dr. Clara Baker (?) conducted a nutrition experiment in the Chicago (?) area. She recruited 100 (?) babies who had never tasted anything but breast milk. Three (?) times a day the babies were set before an array of little dishes containing cereals, custards, scrambled eggs, and many kinds of pureed fruits, vegetables, and meats. If the baby stuck its fist into a dish and tried to lick it off, the attendant was allowed to feed the baby one bite of that food.. At the end of the experiment (six months?), Dr. Baker determined that although the babies' day-to-day intake was not necessarily nutritionally sound (e.g. nothing but mashed banana for two days), their diets were perfectly



nutritionally balanced over the long term, better balanced than the diets of a control group fed by a nutritionist.

Nancy Lebovitz (2011-12-01 08:56:59)

You probably need to study more than one animal. Cats tend to be very idiosyncratic about what people food they like. Some like fruit, some don't. Same for salad, hot pepper-flavored food, and commercial cat foods. I live with cats who aren't crazy about turkey, but there are so many cat foods with turkey that I bet there are cats who favor it.

john (2011-12-01 09:55:50)

...Cholesterol, choline, general protein & fat...?

by (2011-12-01 10:12:27)

Anyone have links to studies on this? (which foods are freely chosen by babies or animals) I think this is actually a valuable way to get insight on the proper human diet.

Seth Roberts (2011-12-01 13:41:51)

Anyone have links to studies on this? See the links I provided. Here's another: <http://blog.sethroberts.net/2009/08/16/dietary-self-selection-by-young-childr-en/>

Seth Roberts (2011-12-01 14:02:59)

Elizabeth Molin, thanks for motivating me to find the following link: <http://blog.sethroberts.net/2009/08/16/dietary-self-selection-by-young-childr-en/> which I should have included originally.

Elizabeth Molin (2011-12-01 14:11:00)

Thanks, Seth-I might have had more luck (and been more accurate) if I'd searched Davis, not Baker...

Lumiere (2011-12-20 21:44:44)

Seth, I ran across this and thought you'd be interested. FERMENTED FRUIT AND VEGETABLES. A GLOBAL PERSPECTIVE. Food and Agriculture Organization of the United Nations AGRICULTURAL SERVICES BULLETIN No. 134 1998 <http://www.fao.org/docrep/x0560e/x0560e00.htm>

Perfect Health Diet » Around the Web; Revisiting Green Meadows Farm (2011-12-25 07:12:30)

[...] Roberts reports on a rat who favors pate, salmon sashimi, and scrambled eggs. What a lucky [...]

Leha (2012-02-17 20:14:38)

Eggs are notable for both choline and a high methionine-to-other amino acids profile. The thing about choline is that it's really hard to get enough of it from anything but eggs. Methionine is easier to come by. However, there may be some evidence to support that amino acid balance is almost more important than the old "complete protein" model. I'm saying this as a person who has speculated that \*less\* methionine might be healthier than more, but regardless of my personal opinion, Mr. T apparently liked something known to be pretty high in methionine, so I guess it's his word against mine. (-: My rats also hated yogurt, BTW. But they loved tapioca pudding, a formula that does contain a bit of egg...

## **iTunes For Windows is Horrible (2011-11-30 18:18)**

May I interrupt my usual posts to complain about something? Something minor?

It is that iTunes for Windows – from Apple, the maker of what are said to be brilliantly-designed products – is horribly designed. I have two examples.

1. Suppose I want to see what's in the iTunes Store. I open a new window. I can't close that window without closing iTunes! And if, after closing the whole program, I open it again, it still gives me the Stores window! Maybe the Stores window went away after a few weeks...I don't want to even think about it.

2. I pressed the wrong button and started 181 downloads. There is no way to cancel them! If I stop the whole program, they will resume the next time I start it. This is software design from the 1960s.

And this is iTunes version 10.something, not version 0.3.

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Alex Chernavsky (2011-11-30 19:15:10)

I'm with you on this one. I have iTunes, and I'm underwhelmed with it. It's caused me many instances of puzzled head-scratching. It's true, though, that I never sat down and made anything like a serious effort to understand its intricacies and how it works – but I thought that the whole point of well-designed software is that you don't have to do that. In fact, I'm sort of puzzled by the whole "cult of Apple". The Macintosh was truly revolutionary when it came out. Everything else has been fairly unremarkable.

John (2011-11-30 19:22:17)

There's much to dislike about iTunes. I feel I have to pamper it. There are several scenarios that it doesn't disallow, but it doesn't reliably support either.

q (2011-11-30 20:34:29)

not just what you say, which i agree with, but itunes and the ipod in general are not up to the task of dealing with large music libraries. mine is 40GB and it's a complete organizational mess.

jordan (2011-11-30 21:09:00)

My wife has the latest iphone - not me. I hate the software. It's not intuitive and it's overly INVASIVE! (I have the pc version)

wcb (2011-11-30 21:16:59)

Seth, I experienced a similar problem some time ago. On a tip from a computer literate friend I was finally able to cure it by simply downloading the newest, updated version of iTunes from Apple's website. Hopefully that will work for you as well. Agreed that the system is aggravating and, I think, too geared to selling product that we may not really want. On the other hand, I really like the iPod Touch which I use solely for its WiFi capability when I want to go online and check email and other stuff (such as your blog) without having to fire up the desktop. :-)

Seth Roberts (2011-11-30 21:45:49)

Yeah, I did solve the downloading problem by simply updating the whole thing....of course that is ridiculous but it did work. I am in the extraordinary position of needing to postpone updates so that they are there when I need them to solve problems caused by something as common as hitting the wrong button. Which every other piece of major software in the entire universe solves with a Cancel or Are You Sure? button.

Jay (2011-12-01 01:07:04)

iTunes is a great example of how some needed features simply cannot be reduced below the elegance threshold set by Apple. I have 400gb of classical music. MP3 metadata is a non-option for organization (e.g. Rachmaninoff vs Rachmoninov vs Sergei

Rachmaninoff). The only option is folder organization. Good media players, such as foobar2000, allow you to sort by directory structure. Apple, in their stubborn pursuit of simplicity, refuses to add an option to sort music in this way. It's a shame because: 1) I need iTunes for my iPad (a device that I use often and quite like), and 2) on mac os x, there are very few music player alternatives. So you're kinda stuck with the program.

Seth Roberts (2011-12-01 01:33:19)

"some needed features simply cannot be reduced below the elegance threshold set by Apple." You mean some needed features cannot be implemented in a way that makes them elegant enough for Apple?

Robin Barooah (2011-12-01 02:04:53)

iTunes is pretty bad on Windows, and although it performs a lot better on MacOS is still not exactly 'magical'. It's actually a very hard problem for Apple at this point and I'm pretty sure they're working hard on it. iTunes is a 12 year old program that started off life on MacOS 9. It has an enormous number of features, and has to support a huge range of iPods, etc. It still runs on PowerPC based Macs and OSX Lion as well as Windows. All of this means that it is actually really really hard for Apple to improve it. Apple has been one of the most aggressive companies in the world at replacing old technologies with new ones, but in the case of iTunes, they have half a billion users relying on it to keep fitting in with their usage patterns. In many ways, iTunes is to Apple as Windows is to Microsoft. I don't know of an example in software history of anyone painlessly solving this problem. There is evidence in the newer versions of iTunes for Mac that Apple is retrofitting newer technologies behind the scenes, which will ultimately allow them to make major changes to it, but this is a pretty monumental task. My guess is that they'll start to split the functionality into separate and more elegant apps, like they have on iOS. But don't hold your breath for this, particularly on windows.

Glen Raphael (2011-12-01 08:59:13)

Jay: Have you explored using iTunes "smart folders" to consolidate whatever groups are meaningful to you? Or for that matter, iTunes plain old dumb folders? iTunes does, under the hood, store files by directory structure, but you're free to make up your own categories and put stuff in those categories to your heart's content. You could either fix the metadata or make a (Rachmaninoff OR Rachmoninov OR Sergei Rachmaninoff) smart folder or just type "Rachm" in the search bar to collect them on the fly. I don't listen to much classical music, but I also just noticed that the default smart folder called "classical" in the current (Mac) version of iTunes already includes the ability to (a) select by composer (b) grab groups of composers into a "grouping". So they might have already done some of the work for you. Seth: I'm going by how the Mac version works and I know the Windows version is less intuitive, but: with the Mac version if you \*single-click\* on "iTunes Store" it changes the main window to view the store, but if you then click something else on the left pane (like, say, "music", the store view is replaced with a view of your music. If you double-click it does open a new window, but when you relaunched that might be what happened - it remembered the last thing you looked at was the store, so you saw store content in the main pane and thought that was "the store window" when it was just the store \*view\* from the main window. Updating the software got you back to the default view, but clicking on "Music" in the left-side tab would have done the same.

Richard (2011-12-02 08:28:10)

I agree iTunes is not a great program, but you actually can cancel downloads. Just select the item(s) in the Downloads page and press the Delete key. Alternately, you can right click and select Delete. It's not the most intuitive interface in the world, but it does work. -Richard

Chris (2011-12-02 12:18:06)

Seth...I use iTunes for PC and don't have the problem opening the Store. I single click on iTunes Store in the left-hand column and it shows the store, which usually takes 5-10 seconds to load. To get out of the store, I simply single click on Music or another option in the left-hand column. Not sure if yours is set up just like mine, but I've never had to deal with a separate window opening as you describe above.

CeeJay (2012-02-07 04:27:02)

I love my iPod touch and use it constantly I do believe that Apple got things right there.. so why oh why have they got it so wrong with iTunes for windows. I think the thing that bugs me most about it (and I do have a lot of things in my list) is just how slow iTunes is. I own a computer that is so blazingly fast it scares the pants off of me and a broadband connection that is in the top 5 % of the country and yet when I open up iTunes it takes an age to sort itself out. I'm sat there twiddling my thumbs whilst it looks for and then slowly, oh so slowly connects to my iPod Touch. I am very much with Jay regarding the cataloguing of music. I too have a vast classical music collection and trying to organize it with iTunes is just pathetic. How I wish it iTunes was like 'MusicMatch' used to be in the days before Yahoo got a hold of it, ruined it and then killed it off.

## 6.12 December

### Bryan Caplan Disses College (2011-12-01 05:00)

In [1]this post, Bryan Caplan says ([2]again) that college is vastly overrated. Like me, he says that the only thing college professors know how to do is be professors and that is all they can actually teach. Graduate school, where professors teach students who want to be professors, makes sense. Undergraduate school, where almost no students will become professors, does not. Like me, he ridicules the idea that professors teach students "how to think".

He omits half of my criticism. It isn't just teaching ("how to think" – please!), it's also evaluation. Professors are terrible at evaluation. Their method of judging student work is very simple: How close is it to what I would have done? The better you can imitate the professor, no matter what the class, the higher your grade. This is one size fits all with a vengeance because there is no opting out. Sure, you can choose your major. But every class is taught by a professor. What if your strengths lie elsewhere – in something that your professors aren't good at? Tough luck. Your strengths will never be noticed or encouraged or developed.

At Berkeley (where Bryan went and I taught) and universities generally, the highest praise is brilliant. Professor X is brilliant. Or: Brilliant piece of work. People can do great things in dozens of ways, but somehow student work is almost never judged by how beautiful, courageous, practical, good-tasting, astonishing, vivid, funny, moving, comfortable, and so on it is. Because that's not what professors are good at. (Except in the less-academic departments, such as art and engineering.) To fail to grasp that students can excel in dozens of ways is to seriously shortchange them. To value them at much less than they are worth – and, above all, to fail to help them grow and find their place in the world after college.

At Berkeley, I figured this out in a way that a libertarian should appreciate: [3]I gave my students much more choice. For a term project, I said they could do almost anything so long as it was off-campus and didn't involve library work. What they chose to do revealed a lot. I began to see not just how different they were from me but how different they were from each other. One of my students chose to give a talk to a high-school class. This was astonishing because she has severe stage fright. Every step was hard. But she did it. "I learned that if I really wanted to, I could conquer my fear," she wrote.

One of my Tsinghua students recently asked me: "Are you a brave man?" (She wanted to give me a gift of stinky tofu.) I said no. She said she thought I was brave for coming to China. Perhaps. I have never done anything as brave as what my student with stage fright did. I have never done something that terrified me – much less chosen to do such a thing. Her homework hadn't been very good. When I read about her term project – conquering stage fright – I realized how badly I had misjudged her. How badly I had failed to appreciate her strengths. I saw that it wasn't just her and it wasn't just me. By imposing just one narrow way to excel, the whole system badly undervalued almost everyone. Almost everyone had strengths the system ignored. And it's a system almost everyone must go through to

reach a position of power!

This is related to what I call [4]the hemineglect of economists – they fail to see that innovation should be half of economics. Diversity of talents and interests is central to innovation because new things are so often mixtures of old things. By rewarding only one kind of talent, colleges suppress diversity of talent and thereby reduce innovation. (It's no coincidence that Steve Jobs, whom we associate with innovation, didn't finish college. He saw his talents wouldn't be valued.) Psychologists are also guilty of this. Many psychologists glorify IQ. Somehow having a high IQ is crucial to success . . . somehow a society that doesn't encourage people with high IQs will do badly. And so on. In The Bell Curve, Herrnstein and Murray showed that high IQ scores correlated with other measures of desirable social outcomes (e.g., income – people with higher IQ scores made more money). Like many successful people, they failed to see the possibility that the whole world had been shaped to reward the things that the people in power (i.e., they themselves) are good at. Not because those talents work (= produce a better economy). But because they are easy to measure (by college grades). The glorification of IQ has had a solipsistic aspect and has ignored what should be obvious, that diversity of talents and skills promotes innovation. Without a diverse talent pool, any society will do a poor job of solving the problems that inevitably arise.

1. [http://econlog.econlib.org/archives/2011/11/the\\_magic\\_of\\_ed.html](http://econlog.econlib.org/archives/2011/11/the_magic_of_ed.html)
2. <http://blog.sethroberts.net/2007/03/24/agrees-with-me-about-college/>
3. <http://graphics8.nytimes.com/images/blogs/freakonomics/pdf/whatdostudentswant.pdf>
4. <http://blog.sethroberts.net/2011/11/29/duct-tape-the-eurozone-and-neglect-of-innovation/>

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Ashish (2011-12-01 08:11:34)

I went to Berkeley. Without disagreeing with much of what you say, college is valuable as a signaling device: where you get in (cost is changing that), what you choose to study, whether/how you get through it.

Shawn (2011-12-01 08:24:25)

I think you overestimate the usefulness of what you call a "diversity" of talents, if diversity is to encompass the entire range in IQ. There is no advantage in having a low-IQ (IQ is roughly 50 % heritable, BTW).

by (2011-12-01 10:40:27)

Just about everything you said in this post, I wouldn't have expected you to say.

Seth Roberts (2011-12-01 13:42:53)

Just about everything you said in this post, I wouldn't have expected you to say. Such as? I've made all of these points several times before.

Seth Roberts (2011-12-01 13:51:34)

There is no advantage in having a low-IQ Interesting point. I agree, to encourage a diversity of talents (in contrast to simply trying to get the highest possible IQ) among a group of people would indeed reduce their average IQ. But I don't see how this supports the idea that I overestimate the usefulness of a diversity of talents.

Seth Roberts (2011-12-01 13:54:36)

college is valuable as a signaling device, You mean: valuable to students? Only if you get into a good college. It's like grades: They are helpful if you are good at what they measure or want to be good at what they measure (then they provide useful feedback). If not, they are unhelpful. Suppose you want a career in public speaking. Grades don't measure that. They are

uncorrelated to your public speaking ability.

Jim Purdy (2011-12-01 15:58:29)

Since every credible theory has to have a name and an acronym, let me propose my "Molted Paradigm Theory (MPT)." In the first few years of life, each human is spoon-fed a whole set of overly simplistic explanations for the universe around us – Santa Claus, tooth fairies, gods, devils, talking serpents, whatever. Some people never outgrow those simplistic childhood myths. They become preachers, Fox News anchors, and Republican presidential candidates. It is not easy to shed old paradigms, and many people choose to never question the fables of their parents. This tendency is so strong that ancient creation myths become fossilized into religions that chastise anyone who dares question the old tales. Fortunately, many people eventually outgrow the most simple stories, and progress through a series of ever-more-complex paradigms. And that is where good schools and good teachers make a difference: They are there to help their proteges through the process of shedding or molting the old paradigms. The childhood paradigms are essential to teach early lessons about life and social responsibility (Santa's naughty or nice list?), but it can be troubling when it becomes necessary to discard those old comforting paradigms. That is where good teachers matter: to be there when an individual needs help shedding or molting an old paradigm. Seth, you and your colleagues don't have to know what your proteges will do in the future. You just have to encourage them as they molt.

by (2011-12-01 16:15:06)

[i]Such as? I've made all of these points several times before.[/i] I meant it as a positive comment. You criticized traditional education in other posts, but I didn't expect you to put forth the idea that students would be good judges of what activities to undertake to help them learn. I guess in general I expect mentors or teachers to feel that with their longer life experience, they can make better decisions for younger people on how to spend their time. I also didn't expect you to say that you didn't "think you were a brave man," or to give so much respect to a student for overcoming stage fright. I agree that that student did a brave thing, but didn't think you would think it worth mentioning how you compared yourself to her, and that you would say you misjudged her by looking at her homework scores. I may have missed earlier posts of yours though. I've read about 60 % of the posts on your blog.

Mark (2011-12-01 17:55:20)

Seth, I really appreciate these posts (and your blog in general, by the way). An anecdote you might appreciate: I went to Berkeley, too, and as a very bright and intellectually curious 17-year-old first semester freshman, I got a very surprising lesson. After getting the first "C" of my entire life on the first midterm of an intro sociology course, I went to an informational session about the grading of the midterm presided over by one of the grad student instructors. I listened very carefully to what the GSI said in response to each question posed to him by disgruntled students (all of which were variations on "why weren't my exam answers worthy of an A?") After maybe half a dozen responses by the GSI, I discovered a clear (albeit never explicitly stated) theme: to get an 'A', you needed to regurgitate EXACTLY what the professor had said in lecture. This completely shocked me (hey, I was only 17). This was a Sociology class taught by an (allegedly) "cutting edge" professor who said lots of radical things (well, they were radical to me). This had actually inspired me to make a genuine effort to analyze what he said and introduce my own ideas into my exam essay responses on the first midterm. If my analysis sucked (certainly possible), that would have been one thing, but I was stunned to have been penalized simply for \*attempting\* analysis! I never bothered to ask the GSI about my particular exam at that session. I walked out, proceeded to memorize the professor's lectures and (quite literally) transcribe them into subsequent midterm and final exam responses. I got perfect scores on every remaining test, and an A+ semester grade in the class. This approach worked in most of my other Berkeley classes, as well (I was a social sciences major). I got a whole lot of A's at Cal and graduated summa cum laude. Observers were impressed, and I was embarrassed to say to anyone how stupidly easy it had been.

Kim Øyhus (2011-12-02 00:07:43)

Real jobs are overrated. They are full of bullshit too. The jobs one gets are quite random, not much related to experience or knowledge. For example my current situation: I get paid well as a consultant programming C # and Windows Presentation Foundation, which I have almost no experience in, being a Linux kind of guy, while being dissed when I applied for a job at a finger print company, analysis of which I am one of the best in the world. This is typical, not an exception, and I see that other people are misplaced too. However, it is better than the alternative, which is not being placed at all, i.e. no job, no money, no food,

etc. My best explanation for what work life really is, is that it is tribes. Tribes where alphas dominate the rest, and get status by having more subordinates, and doing stuff that have some vague resemblance to actually producing stuff and making money.

Ahrand (2011-12-02 01:54:26)

Ken Robinson has some great insights on this, you can watch some of his work on TED talks : Some quotes : - from [http://www.ted.com/talks/lang/en/ken\\_robinson\\_says\\_schools\\_kill\\_creativity.html](http://www.ted.com/talks/lang/en/ken_robinson_says_schools_kill_creativity.html) "what is the ultimate goal of public education ? To produce university professors." - from [http://www.ted.com/talks/lang/en/ken\\_robinson\\_changing\\_education\\_paradigms.html](http://www.ted.com/talks/lang/en/ken_robinson_changing_education_paradigms.html) "The problem is that the current system education was designed for the intellectual culture of the enlightenment and the economic circumstances of the Industrial Revolution."

Harold Jarcho » Jobs, work and technology (2011-12-02 05:34:35)

[...] Seth's Blog: Without a diverse talent pool, any society [company] will do a poor job of solving the problems that inevitably arise: Diversity of talents and interests is central to innovation because new things are so often mixtures of old things. By rewarding only one kind of talent, colleges suppress diversity of talent and thereby reduce innovation. [...]

Seth Roberts (2011-12-02 05:58:12)

My best explanation for what work life really is, is that it is tribes. Tribes where alphas dominate the rest, and get status by having more subordinates, and doing stuff that have some vague resemblance to actually producing stuff and making money. The fact that salaries are rarely tied to profits helps employees ignore profits and spend their time trying to maximize something else. It is a large dose of communism right in the middle of capitalism.

Alex Chernavsky (2011-12-02 08:49:24)

@Kim: Off-topic for this thread, but have you seen this article about serious problems with interpreting fingerprints? If you've read it, what is your opinion of it? "[1]Do Fingerprints Lie?"

1. <http://www.michaelspecter.com/2002/05/do-fingerprints-lie/>

Seth Roberts on Diversity, Education and Innovation — Marginal Revolution (2011-12-02 11:16:31)

[...] Wonderful post from Seth Roberts. Not sure if I even agree but Seth makes me think about how I can better serve my students: People can do great things in dozens of ways, but somehow student work is almost never judged by how beautiful, courageous, practical, good-tasting, astonishing, vivid, funny, moving, comfortable, and so on it is. Because that's not what professors are good at....To fail to grasp that students can excel in dozens of ways is to seriously shortchange them. To value them at much less than they are worth — and, above all, to fail to help them grow and find their place in the world after college. [...]

mobile (2011-12-02 12:00:08)

> The glorification of IQ has had a solipsistic aspect and has ignored what should be obvious, that diversity of talents and skills promotes innovation. Without a diverse talent pool, any society will do a poor job of solving the problems that inevitably arise. What is an example of a problem that has not been solved very well because the group of people working on that problem put too much emphasis on the IQ of the problem solvers and not enough emphasis on the diversity of the problem solvers?

Seth Roberts (2011-12-02 13:36:00)

What is an example of a problem that has not been solved very well because the group of people working on that problem put too much emphasis on the IQ of the problem solvers and not enough emphasis on the diversity of the problem solvers? Here are two examples: 1. The 2008 financial crisis. The people in charge had/have high IQs. I believe a more diverse group of people would have found a better solution. (They would have had less of a status-quo bias, for one thing.) 2. Stomach ulcers. People with high IQs think that those two Australian Nobel Prize winners, Marshall and Warren, found the cause of stomach ulcers (a certain species of bacteria). I think a more diverse group of problem solvers would find a better solution. (Almost everyone who has the supposedly causative bacterium doesn't get ulcers.)

Becky Hargrove (2011-12-02 13:59:44)

Seth, Not since Buckminster Fuller was alive do I remember reading about human worth in this way, and lately I have missed him terribly.

Derek Scruggs (2011-12-02 15:39:29)

Re: the comment about no advantage to lower IQ. That's true, but in many fields there are diminishing returns above about 120. Think about how important (and highly compensated) sales jobs are. Do you think the average sales guy would benefit from a 150 IQ? Michael Milken made all his money not because he was brilliant, but because he was good at sales. Jack Welch and Ted Turner spoke of how much he seemed to care about their personal lives instead of just trying to push a transaction. Further, something like 20 % of successful entrepreneurs are dyslexic (including such names as Charles Schwab). Shouldn't such relatively rare learning disability predict failure?

Seth Roberts (2011-12-02 15:51:31)

Not since Buckminster Fuller was alive do I remember reading about human worth in this way. Becky, yeah, there is some similarity. I found this quote from Fuller: "Everyone is born a genius, but the process of living de-geniuses them." What were you thinking of?

dearieme (2011-12-02 16:10:08)

"The problem is that the current system education was designed for the intellectual culture of the enlightenment and the economic circumstances of the Industrial Revolution." That's not a problem - it suited me terribly well.

Ashish (2011-12-02 19:17:33)

» college is valuable as a signaling device, > You mean: valuable to students? School work may be largely (although not entirely) meaningless. But getting a degree demonstrates that you can follow instructions and work hard and achieve deadlines. It's not everything - but knowing this much about someone is more useful (to an employer) than not knowing anything.

Alex Chernavsky (2011-12-02 19:45:03)

It's difficult to teach those things that are most important to a successful career. I spent a huge amount of money to get an MBA degree, but I learned almost nothing that was useful to me. Off the top of my head, these are the skills that I think are most important to succeed in the business world (note that I don't claim to be good at any of them): 1) Getting along well with others, including navigating office politics 2) Maintaining a sense of optimism and enthusiasm even in the face of set-backs 3) Appearing sharp and "on the ball" at meetings 4) Being organized, dependable, meeting deadlines, and keeping your promises. There are probably others, but those are the ones that come to mind. None of these things were taught in business school (well, possibly indirectly - and not very well). The stuff that we *did* learn, like net present value calculations and the Black-Scholes pricing model, never came up again for me. And if they did, I probably could have learned them on the job.

Professors teaching students to act like... professors. « hopaulius (2011-12-02 23:22:22)

[...] Roberts responds to Byran Caplan with a critique of professional academia's myopic focus on IQ and [...]

Kim Øyhus (2011-12-03 02:58:01)

Lying fingerprints: All methods I have seen for analyzing fingerprints are inaccurate heuristics which throw away information and do not make proper estimates of uncertainty or the amount of information present in the prints. DNA analysis is a counterexample to this, because there are several very good deep statistical methods which do a very good job, but forensic people still mess it up in courts from time to time. Detectives McKie and fingerprint expert Bayle have been victims of the typical tribal nonsense, communism style, where status and hierarchy counts more than evidence and truth. Looking at the results from the 2006 Fingerprint Verification Competition, I see that the best fingerprint programs typically extract 5-8 bits of information from each print, with some outliers of 9-12 bits on easy tests. This is much less information than is actually present in most fingerprints. From my experience, what happens here, is that the programs are fragile. They do better when the prints are easy to recognize, but typically deteriorate a lot when there are even slight modifications to the prints, such as



being partial, deformed, dirty, scarred, worn, etc., which they typically are in real life. As a comparison, DNA tests today can read billions bits of information from a cell, though those methods are not used by forensics. My fingerprint analyzer, which was made about 10 years ago, read about 7 bits per print, and was fairly robust. This was fairly good at the time, unless one take into account that this was done on encrypted fingerprints, without having keys for decryption. Then it was quite fantastic, far beyond everything similar in the industry. To identify a person uniquely, 32.5 random bits are necessary, for 6 billion people. To identify all persons uniquely, twice this is necessary, 65 bits. In the article, they claim 99.97 % accuracy while searching the forensic database of fingerprints, which corresponds to about 12 bits of information, similar to the best entries in the FVC on easy prints. As for my education as a physicist: I could not have made my fingerprint analyzer without a lot of that math and physics.

Kim Øyhus (2011-12-03 03:06:03)

Einstein and Newton both did their revolutionary work outside of school. Newton at home while the university was closed due to a plague. Einstein while on his bicycle, or while working at the patent office.

Roger Sweeny (2011-12-03 08:24:32)

*After maybe half a dozen responses by the GSI, I discovered a clear (albeit never explicitly stated) theme: to get an 'A', you needed to regurgitate EXACTLY what the professor had said in lecture. This completely shocked me (hey, I was only 17). This was a Sociology class taught by an (allegedly) "cutting edge" professor who said lots of radical things (well, they were radical to me). A lot of what we call education is substituting one religion (sometimes even with a catechism!) for another. Jim Purdy, take note.*

Sarah (2011-12-03 13:40:01)

Most psychologists don't in fact glorify IQ, because they know that IQ is a construct that bears little relationship to ability. Nobody has even been able to pin down what intelligence actually IS. Is the rest of your article any better researched?

Becky Hargrove (2011-12-03 15:50:49)

After thumbing through Critical Path (yet again) it's hard to say exactly which quote impressed me most. His belief in the individual, however, really stayed with me. He believed that - if we would tell the truth - we had a great chance at not just survival but much more. He had the kind of hope for knowledge that I also hold, that it can somehow survive in the Universe for the long haul. Buckminster Fuller would stress to people that they should never give up on their own unique way of looking at the world, that our uniqueness was the very element that could make the difference. And in his day it was hard to be a generalist. While it is easier now, people still don't know how to relate to that because money is not really capable of reaching across disciplines much of the time.

Seth Roberts (2011-12-03 16:55:36)

Becky, thanks for the information.

Seth Roberts (2011-12-03 17:07:42)

Most psychologists don't in fact glorify IQ, because they know that IQ is a construct that bears little relationship to ability. Nobody has even been able to pin down what intelligence actually IS. Is the rest of your article any better researched? "Researched"? Huh? I lived it, am still living it. I am a psychology professor. I haven't encountered any researcher who worries that "nobody has even been able to pin down what intelligence actually IS". As to whether or not IQ has been glorified, can you tell me a book about some other mental ability that had the impact of The Bell Curve? Among psychologists, Howard Gardner and Robert Sternberg are important exceptions to the general rule of focusing on IQ as the most important way that people differ. IQ tests predict who will do well at school. We have a society that rewards people who do well at school. Then those very same rewarded/powerful people turn around and say: Doing well at school (= IQ) is the most important thing! When the circularity is pointed out, they get confused. They fail to understand the whatever is, is right feature of their argument.

Tracy W (2011-12-03 22:03:24)

I've read your examples here, and I think they're very interesting, but I wonder how much of what you do here you can do because you're a professor of psychology, and thus these things shouldn't be expected of every professor. Take for example evaluating whether someone has displayed courage - your student giving a talk to a high-school class - can a professor of mathematics bring anything to this evaluation more than a lay person? When I was 13, we had to give speeches at school and one of my friends was so scared she was crying while doing it, but she didn't run away, and since then I have considered her one of the bravest people I know. I haven't learnt anything from university that has led me to change my mind. You might have a special insight into the level of courage displayed from your psychology training, but what can a maths professor be expected to add? Or take your students' project, reading your linked article, it sounds like the students didn't do anything they couldn't have done without going to university, I know people who volunteer for a depression hotline despite doing a full-time paid job in a very different field. What you appear to have provided was a "kick-up-the-bum" to try something new. A good school teacher, or scouts leader, can do the same. As a psychology professor, you might be more competent at working out how to do this, and how to evaluate the results, than most people, but I can't see how a political science professor would have similar skills. And the other thing is that college is very expensive, a lot more expensive than high school, or joining toastmasters to practice public speaking, or taking a cooking course to improve the quality of your food, or trying your hand at writing funny stories and posting them online for feedback. Indeed, some ways you can even get paid for doing some of these things, for example if you want to demonstrate courage, joining the army and specialising in mine clearing would be one way. So college should be providing something that can't be gotten far more cheaply in other ways. Not being an expert, but I'd say that for most professors, the thing they can do that is unusual and not easily replicable by someone without their training, is to evaluate how close what the students are doing is to what said professor would have done (and perhaps provide the structure of learning, the only way I've been able to defeat my procrastinating tendencies when it comes to learning maths is by signing up for a formal class). As a psychologist you are, I think, unusually qualified to do different things.

Seth Roberts (2011-12-04 00:32:34)

for most professors, the thing they can do that is unusual and not easily replicable by someone without their training, is to evaluate how close what the students are doing is to what said professor would have done True. But in most cases college isn't optional. For a large fraction of good jobs, you must go to college. Professors have a captive audience. Their students did not choose to be there. This is why it is unreasonable for professors to simply do whatever they want to do. That would be abuse of power.

Becky Hargrove (2011-12-05 08:38:07)

I want to do a little thought experiment with what Tracy W said, "So college should be providing something that can't be gotten far more cheaply in other ways." College is but a small part of the world of knowledge, but should college offerings only be what people can "make a living at" there would not be much left to college at all. What, then, might people be missing? Quite a lot that makes the world go round. The problem for college is not that it is impractical. The problem for higher education is that it has not been able to integrate the actual use of knowledge in its many forms at local levels. When people can not actually validate their worth amongst one another through knowledge, they eventually react by insisting that knowledge is not even important. This is the real issue that formal education needs to address.

What should assessment mean? « flibitygibity (2011-12-07 05:51:53)

[...] will give them the qualification they are working for. Yesterday a tweet linking through to this blog posting by Seth Roberts caught my eye. He argues for broader criteria for assessing students. In the [...]

## **Flaxseed Oil Alleviates Psoriasis and Lichen Planus (2011-12-02 05:00)**

[1]Two months ago I wrote that camelina oil might be a good source of omega-3. A few days ago, a reader named Evelyn Majidi [2]commented as follows:

Based on this suggestion, I ordered camelina oil from the good farmers in Saskatchewan and began taking it using the same dose (3T/day) that I had been taking of flaxseed oil for relief of psoriasis and lichen planus. Unfortunately, the slow but sure improvement I had been experiencing over the past year with flaxseed oil stopped immediately and after a week my skin and mouth began to deteriorate. After using about 1/4 of a bottle of the new oil I went back to flaxseed and am delighted to report that I am [again] having good results with it. Since both of my conditions wax and wane without any reason identified by medical science I cannot state that it was simply the flaxseed oil that has led to this success. Based on my experience, however, I intend to continue taking the oil regularly and I recommend that others with psoriasis or lichen planus try it. For me, two tablespoons a day were not enough, I needed three tablespoons of the oil to see a change. I don't think it advisable to take capsules, you'd need to take too many to equal 3T of oil.[emphasis added]

[3]Psoriasis is a skin disease that usually involves "thick, red skin with flaky, silver-white patches called scales".  
[4]Lichen planus is "an itchy rash on the skin or in the mouth". To give some idea of how common they are, psoriasis has 36 million Google hits; lichen planus 1-2 million. ("Heart disease" has 64 million.)

Evelyn's experience provides four pieces of evidence that suggest flaxseed oil (FSO) improved her psoriasis and lichen planus:

1. When she started taking FSO at 3 T/day, they started improving. They did not improve with 2 T/day.
2. Over the first year of FSO, she saw steady improvement in both in place of the usual up and down.
3. When she replaced FSO with another oil, which she hoped would be better, the results were the opposite of what she wanted: The improvement stopped and the two conditions got worse.
4. When she switched back to FSO, the improvement resumed.

I can think of no plausible alternative to the conclusion that FSO helped. There is plenty of other evidence that supports this conclusion: the evidence that omega-3 is anti-inflammatory, FSO is high in omega-3, most of us don't get enough omega-3, and so on, including [5]my own experience. You could write [6]a book about the evidence that supports it. (Evelyn tried flaxseed oil because of reports on this blog that it improved/cured bad gums.)

In any case, the conclusion that FSO reduces psoriasis and lichen planus is new, in the sense that FSO (or another source of omega-3) is not a popular treatment for either condition. [7]Here are about 16 treatments for psoriasis, including topical corticosteroids. None includes omega-3. Here are [8]eight "lifestyle and home remedies" for psoriasis, including "take daily baths" (seriously, Mayo Clinic Staff?). None includes omega-3. After going through about forty-odd treatments, I found [9]a reference to fish oil: "Other research has suggested that taking oral fish oil supplements containing 1.8 to 3.6 grams of eicosapentaenoic acid (EPA) a day may bring improvement."

Same thing for lichen planus. FSO is not [10]a popular treatment.

If you take flaxseed oil or other omega-3 source to treat psoriasis or lichen planus, I hope you will let me know what happens.

1. <http://blog.sethroberts.net/2011/10/09/new-source-of-omega-3/>

2. <http://blog.sethroberts.net/2011/10/09/new-source-of-omega-3/#comment-935886>

3. <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001470/>

4. <http://www.ncbi.nlm.nih.gov/pubmedhealth/PMH0001870/>
5. <http://blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>
6. [http://www.acresusa.com/toolbox/reprints/April08\\_Allport.pdf](http://www.acresusa.com/toolbox/reprints/April08_Allport.pdf)
7. <http://www.mayoclinic.com/health/psoriasis/DS00193/DSECTION=treatments-and-drugs>
8. <http://www.mayoclinic.com/health/psoriasis/DS00193/DSECTION=lifestyle-and-home-remedies>
9. <http://www.webmd.com/skin-problems-and-treatments/psoriasis/understanding-psoriasis-treatment?page=2>
10. [http://en.wikipedia.org/wiki/Lichen\\_planus#Treatment](http://en.wikipedia.org/wiki/Lichen_planus#Treatment)

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Annette (2011-12-02 16:48:03)

I grew up as a kid with psoriasis and eczema and after a couple of topical steroid treatments my mom hoped to control my symptoms better. Since I can remember she would boil up the flax seeds to create that 'gel' was used as a kind of lotion after showering (also makes a great hair gel!) I wonder if one works better than the other? The benefit to my way is that it was instantly soothing to any of the itchy or redness symptoms

David (2011-12-02 22:34:36)

Not psoriasis or lichen planus, but drinking FSO cured a stubborn patch of eczema on my leg that had tormented me for several years. Steroid ointments worked to some extent to relieve the itching, but the underlying condition persisted until I discovered FSO.

michael (2011-12-03 10:50:07)

T-nation.com has an article titled flax oil vs fish oil which criticizes flaxseed oils omega 3 absorbability but praises it for its ability to lower excess estrogen levels in men

Andrew (2011-12-08 10:05:35)

Hey Seth, I think flax oil works due to its content of unprocessed linoleic acid (O-6), not the alpha-linolenic acid (O-3). Flax oil is 56-71 % ALA and 12-18 % LA and so my guess is that 2T of flax does not provide enough LA to produce therapeutic results. This is the reason why 2T has not effect, whereas 3T does. Here is a link (full free article) that delineates the composition of normal, healthy skin: <http://www.ajcn.org/content/71/1/361S.full> It is stated in the article that O-3 fatty acids are NOT present in normal skin. Rather, the preponderance of skin fatty acids are LA as well as its derivatives, arachidonic acid and GLA. I've experimented with cold-pressed pumpkin seed oil and sesame oil, which are rich in LA, with very good results. Great blog, Andrew

Seth Roberts (2011-12-08 14:26:22)

I've experimented with cold-pressed pumpkin seed oil and sesame oil, which are rich in LA, with very good results. could you say more about this? "very good results" with what?

Andrew (2011-12-08 17:17:53)

The red bumps on the back of my arm (chicken skin?) has nearly gone away and skin in general feels softer and smoother. I thought it would help with my acne after reading that paper, but I haven't noticed much change. I have found that the only thing that does make my acne disappear is eating a VLC, calorie-restricted, plain diet and maintaining low body fat. Works EVERY time for me.

Seth Roberts (2011-12-08 17:56:09)

The red bumps on the back of my arm (chicken skin?) has nearly gone away and skin in general feels softer and smoother. Many people who did the Shangri-La Diet by drinking olive oil reported that their skin felt a lot softer and smoother. I noticed the same thing. Olive oil is low in omega-3 but high in other fats. So, yeah, the smooth skin part is not due to omega-3. But your overall point that psoriasis and lichen planus improvements are not due to omega-3 but other fats is contradicted by the

bad results she got with a different oil.

Andrew (2011-12-08 18:11:07)

according to wiki the fatty acid composition of camelina oil is: ALA: 35-45 % LA: 15-20 % again, flax oil is: ALA: 56-71 % LA: 12-18 %. Camelina oil is still quite high in ALA, nearly as high as that found in flax, and higher than most other oils available. As far as I'm concerned, their fatty acid contents are the same. Did you get a chance to read the article? Psoriasis, as I understand, is an inflammation based condition characterized by over-proliferation of cells in the skin that leads to scaly plaquing. The metabolites of LA have anti-proliferative and anti-inflammatory activities. LA is also what is physiologically found in skin - not ALA. Could be worth a try to try a cold pressed oil with more LA. I would be interested to see if it produces faster improvements.

Seth Roberts (2011-12-08 23:46:00)

Camelina oil is still quite high in ALA, nearly as high as that found in flax, and higher than most other oils available. As far as I'm concerned, their fatty acid contents are the same. Then why did they produce such different results? That difference in results is why this is an interesting story. Perhaps you are right, but your idea doesn't even explain the available facts. Yeah, I read the article. Keep in mind: 1. Omega-3 is fragile. The camelina oil may have been treated in some way (e.g., too high temperature) that destroyed its omega-3. 2. Omega-3 is much rarer than omega-6. You are much more likely to get too little omega-3 than too little omega-6. 3. Omega-3 is far more anti-inflammatory than omega-6.

Andrew (2011-12-09 09:56:14)

If Omega-3 is much rarer in nature, does it make sense to take massive doses of it in a ratio that is nearly impossible to get eating a natural diet? What about land dwelling people in the past that did not have access to sea foods- the richest, most concentrated sources of O-3? Not everyone had access to seafoods. O-3 is not "far more anti-inflammatory than O-6." They are both important and O-6 metabolites such as prostaglandin E1 and prostaglandin D2 are very anti-inflammatory. The body produces prostaglandins as needed and they are produced in a balance to regulate blood pressure, inflammation, platelet aggregation, etc. If you're using the argument that O-3 is fragile, why can't you say the same for O-6? Yeah, LA has 2 double bonds and O-3 has 3, but they are both polyunsaturated and therefore both susceptible to oxidation/rancidity. What is more, the process of producing O-6 rich vegetable oils is very intensive and includes very high heat, bleaching, de-odorizing, etc. So whatever O-6 most people are getting is probably damaged. Again, I'm saying its the O-6, not the O-3. Don't know the company the patient got her camelina oil from but maybe its something unique about that product itself. Don't know the history of its use as an edible oil.

Seth Roberts (2011-12-09 13:55:21)

Andrew, thanks for the additional information. I only have time to address one point: If Omega-3 is much rarer in nature, does it make sense to take massive doses of it in a ratio that is nearly impossible to get eating a natural diet? "Much rarer in nature"? What makes you think that? The usual claim is that long ago people got roughly equal amounts of omega-3 and omega-6 in their diet. In this paper <http://www.westonaprice.org/know-your-fats/precious-yet-perilous> Chris Masterjohn points out that scaly skin (in rats) is a sign of omega-6 deficiency. Which supports your argument.

Andrew (2011-12-09 17:05:49)

I'll just add one more thing Seth. O-3 is not only limited in the skin, but there is not much of it in other tissues as well - with the exception of the brain and nervous tissue of course. Even in the brain, eyes, and nervous tissue, though, the turnover rate of fatty acids in their phospholipids and triglycerides is extremely slow and most of the O-3 fatty acids are of the longer and desaturated kinds (i.e. DHA, EPA). I just thought I'd say that because it concerns me when people start taking large amounts of an oil, long term, that does not have a long history of consistent use and without a physiological basis. "Much rarer in nature"? What makes you think that? The usual claim is that long ago people got roughly equal amounts of omega-3 and omega-6 in their diet. Look up the fatty acid profiles of various foods ([nutritiondata.com](http://nutritiondata.com)). With the exception of seafood, nearly all foods are predominantly O-6 - even plant foods. And the reason why fish need long chain, super unsaturated fatty acid chains is because they live deep in the cold waters, where these lipids are needed.

Seth Roberts (2011-12-10 02:48:30)

nearly all foods are predominantly O-6 – even plant foods. You're talking about modern foods. The usual claim is that long ago people ate a lot more animal fat which was high in omega-3.

Efaitch (2011-12-20 17:30:39)

Hi Seth, I used to have red scaly bumps on my arms (keratosis pilaris). It cleared up with flaxseed oil too. In bed on phone, so no linkage... However, it seems that it's a fatty acid deficiency that causes KP. I take CLO [cod liver oil] now rather than FSO and the KP is still under control. But, if I stop taking it, it comes back. It seems that the skin disorders are due to either fatty acid deficiency or fat soluble vitamin deficiency.... And, I have an autoimmune skin disorder (vulval lichen sclerosus) which is in remission too - this happened after the birth of my son, but FSO didn't really make a difference with that one.

Seth Roberts (2011-12-20 19:04:37)

Efaitch, thanks for your comment. What does "In bed on phone, so no linkage..." mean?

Nick (2012-03-04 09:54:20)

I am a life long suffer of psoriasis and also a big consumer of many types of oils including canelina, olive, macadamia, and flax seed oil for many years as soon as these types of oils became available to me. I don't see a connection with psoriasis consuming these oils orally and never experimented them topically. Aloe Vera seems to cause a flare?. My psoriasis overall goes into remission completely and flares up acutely. My psoriasis usually flares up with stress. Exercise helps reduce the flares in general. Calorie restriction also helps. If I get psoriasis on the bottom of my feet I find sleeping with socks helps ALOT.

Ryan (2012-03-09 22:19:57)

I've had psoriasis for 12 years, tried absolutely every alternative method I can think of - except Flax See Oil. Even though I've read about the benefits before, never tried it until a week ago. Results - first time in 12 years for patches to become less inflamed and some of them look to be contracting. I am taking 3 tablets a day, 1,000mg each. I have also combined this with Vitamin D3 (first attempt ever), uncertain if they are working together.

### Assorted Links (2011-12-03 05:00)

- [1]Top ten excuses for climate scientists behaving badly. For example, "the emails are old" and "the timing is suspicious".
- [2]Scientific retractions are increasing. My guess is that retractions are increasing because scientific work has become easier to check. Tools are cheaper, for example.
- [3]More Dutch scientific misconduct. "Professor Poldermans published more than 600 scientific papers in a wide range of journals, including JAMA and the New England Journal of Medicine."
- The next time someone praises "evidence-based medicine", ask them: [4]What about Accutane? It illustrates how evidence-based medicine encourages dangerous drugs. You can't make lots of money from cheap, time-tested things that we know to be safe (such as dietary changes) so the drug industry revolves around things that are not time-tested and therefore dangerous – far more dangerous than dietary changes. Evidence-based medicine, which says that certain tests (expensive) are much better than other tests (cheap), provides cover for this. Because the required tests are so expensive, they are allowed to be short.

Thanks to Allan Jackson.

1. <http://joannenova.com.au/2011/11/climategate-ii-handy-guide-to-spot-whitewash-journalism-the-top-10-excuses-for-scientists-behaving-badly/>
2. <http://www.wired.com/wiredscience/2011/08/why-are-scientific-retractions-increasing/>
3. <http://www.bmj.com/content/343/bmj.d7690?etoc=>
4. <http://www.aquatic-ape-diet.com/blog/2011/12/02/critiquing-the-lesswrong-mineral-supplementation-5000-con test/>

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dearieme (2011-12-03 06:50:58)

"Poldermans published more than 600 scientific papers": old joke, but I wonder if he'd read them all?

Glen Raphael (2011-12-03 09:20:07)

The first link is a bit broken; it tries to resolve at this site when you click it. Good article, though.

Seth Roberts (2011-12-03 11:41:48)

thanks, Glen, I fixed it.

David (2011-12-05 02:58:09)

Related to evidence based medicine, this story discusses doctors treatment choices when they themselves are ill: <http://zocalopublicsquare.org/thepublicsquare/2011/11/30/how-doctors-die/read/nexus/>

SB (2011-12-13 18:05:05)

<http://www.ottawacitizen.com/entertainment/Hurricane+predictors+admit+they+predict+hurricanes/5847032/story.html>  
Hurricane experts admit they can't predict hurricanes early;

## **Butter and Eggs: What They Share (2011-12-04 05:00)**

To many dieticians and much of the general public, the similarity between butter and eggs is that both are bad for you. Butter: Fattening! Clogs arteries! Eggs: High in cholesterol! To me, it's the opposite: both seem to be unusually good for us. Butter seems to [1]make my brain work better and [2]may have reduced my risk of heart attack. Eggs – at least, scrambled eggs – are [3]especially well-liked by Mr. T, a rat. There are many similarities between rats and humans. Humans also like eggs. The foods we like are a guide (imperfect) to what foods are good for us.

Here's another similarity between butter and eggs: Both must be complete – contain all necessary nutrients – much more than any other food. Butter is large part of milk. When mammalian offspring are very young, mother's milk is their only food. Eggs, of course, must contain everything needed to become a baby chick (as [4]a commenter named Rashad pointed out). No other foods – not fruits, not vegetables, not whatever other foods [5]your great grandmother or other [6]ancestors ate – have been under this sort of evolutionary pressure.

[7]The evolution of lactose tolerance and my butter discoveries.

1. <http://blog.sethroberts.net/2011/11/25/butter-and-arithmetic-how-much-butter/>
2. <http://blog.sethroberts.net/2011/08/04/how-rare-my-heart-scan-improvement/>
3. <http://blog.sethroberts.net/2011/11/30/an-unbiased-view-of-what-we-should-eat/>
4. <http://blog.sethroberts.net/2011/11/30/an-unbiased-view-of-what-we-should-eat/#comment-935994>
5. <http://www.slashfood.com/2010/01/15/michael-pollan-on-food-rules/>
6. <http://ancestryfoundation.org/AHS.html>
7. <http://blog.sethroberts.net/2011/08/05/the-evolution-of-lactose-tolerance-and-my-butter-discoveries/>

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Ezer (2011-12-04 05:58:15)

Scrambled eggs with butter and cheese: superfood? I love it!

Elizabeth Molin (2011-12-04 08:13:32)

Seth, can you give me the source for the info you posted previously on Dr. Clara Davis? Thanks.

Ezer (2011-12-04 11:27:57)

I think the preference for the food is a guide to the importance of that food only in a sort of "environment of evolutionary adaptedness", in terms of the constraints under which humans evolved. For example, our taste for sweet evolved in an environment with scarcity of fruits and where the benefits of additional calories and vitamin C outweighed the harm of the fructose.

Ezer (2011-12-04 11:30:50)

In our actual environment, this taste for sweet is maladaptive, because there isn't restriction on the fructose available anymore.

Seth Roberts (2011-12-04 11:35:08)

Elizabeth, my post contained a link to my source. Here is another link: <http://www.cmaj.ca/content/175/10/1199.full> if you want more sources. search "clara davis diet self-selection".

Seth Roberts (2011-12-04 11:44:39)

I think the preference for the food is a guide to the importance of that food only in a sort of "environment of evolutionary adaptedness" (EEA) "only in" is too strong. Lab experiments – that is, not in an EEA – show that rats can choose a healthy diet, as I described in my original Mr. T post. I agree that away from an EEA the interpretation of food preferences – what they tell us about how to be healthy – isn't simple. But they still tell us something.

SB (2011-12-04 15:02:34)

What they share is my plate!!

Jeff (2011-12-04 15:42:21)

Seth - Just curious if you have ever determined an optimal dose for fermented food as you have with Flaxseed oil? I consume about 1/2 a cup of home fermented kefir including the cottage cheese like substance in my taste free smoothie daily. TIA

Ezer (2011-12-04 18:06:52)

I agree with you, an innate preference could be indicate something worthy of investigating, especially in consideration of an probable EEA. OT: How can I italicize text in a comment? [i]test of italic[/i]



Alex Chernavsky (2011-12-04 18:57:35)

@Ezer: Instead of the square brackets, use the less-than and greater-than signs.

UncleLongHair (2011-12-04 18:58:32)

Including the eating preferences of a single domesticated rat is pretty weak evidence.

Aaron Blaisdell (2011-12-04 23:09:19)

Aaron Blaisdell (2011-12-04 23:10:44)

I tried "" suggested by Alex, but it didn't seem to work. Btw, I love butter. I try to eat a tablespoon of grass-fed raw milk derived butter each morning along with my high-vitamin fermented cod liver oil.

Aaron Blaisdell (2011-12-04 23:11:54)

Yikes. In the "" in the above comment, I typed the less than sign followed by "test in italics" followed by the greater than sign. It seems to result in the text being entirely omitted from the comment. Would be nice to know how to create an italicized comment, though.

Tom (2011-12-05 00:08:16)

Aaron, it's a pretty standard markup. Hopefully the symbols will come through if I put in additional spaces: [Obviously, remove the extra spaces before and after the angle-brackets (shift-comma and shift-period) when you use them]: Start italics: *End italics*: Start bolding: **End bolding**:

Tom (2011-12-05 00:11:39)

Dang, it accepted them even with the spaces. Anyway, before the section you want to italicize, enter a shift-comma, then a lowercase i, then a shift-period. To stop italicizing, enter a shift-comma, then a forward-slash (unshifted questionmark), then a lowercase i, then a shift-period. (You can bold by replacing the lowercase i with a lowercase b.)

Sara (2011-12-05 03:21:21)

I am thinking about what might cause the effects you see with high butter consumption. As your diet was low fat, do you think you are experiencing the benefits of fat-soluble vitamins? (D, K and A specifically are quite high in butter, particularly Vit A, retinol form). If you analyse your diet as it was, perhaps you were low in these vitamins? The question of Vitamin D is interesting because eggs also contain it, but apart from fish, there are hardly any other dietary sources (milk, eggs, fish and some mushrooms, I think that's it for vitamin D). Do you think you might have been in a state of vitamin D deficiency perhaps and have rectified it with the butter and egg consumption?

Seth Roberts (2011-12-05 06:24:27)

As your diet was low fat, It was not low-fat. It was very high fat. Before I started eating lots of butter, I ate lots of pork fat (for the sleep benefits).

dearieme (2011-12-05 07:10:16)

What are the dietary benefits of blood? I'm thinking of "black pudding" and other "blood sausages".

Sara (2011-12-05 13:17:29)

Oops, I misread the link as 'low fat, high cho'. Sorry. I'm new to the blog but did a bit of reading. It seems you were already taking vitamin D3 as well. Maybe it's not related to micronutrients at all but the effect is very interesting, for sure. I've got to say, I would like to try the butter experiment but the amount of calories in that much butter scares me. I might get a fat butt, and that would give me anxiety.

Elizabeth Molin (2011-12-05 14:46:47)

Thanks again, Seth (did I say that I'm a very bad researcher?).

et (2011-12-05 18:35:34)

Why stop with cow's milk? Is milk from any mammal good for you?

dearieme (2011-12-06 04:52:43)

"Is milk from any mammal good for you?" Milk from goats and ewes is certainly good for cheese.

Nick (2012-03-04 09:37:53)

I agree with the milk and egg theory but I think it also comes down to the phenotype, life stage and life style of the person. I see these foods as anabolic overall, and if your system still contains anabolic capacity than it could be good for you, however if you do not have this anabolic capacity left than it can be detrimental. Staying on the edge of and measuring your Homeostasis is hard but swinging up and down between anabolism and catabolism on average would put you on that edge.

### **Taobao Cashes In on Singles Day (2011-12-05 05:00)**

All cultures, as far as I know, have festivals and special celebratory days. At least they are extremely widespread - [1]harvest festivals, for example. [2]I believe they have a genetic basis. The underlying genes evolved because they increased sales of high-end "useless" stuff. This helped skilled artisans - a big source of technological innovation - make a living. Economists speak of [3]the "deadweight loss" of Christmas because people buy stuff that would otherwise not be bought.

China retail giant Taobao (like Ebay, except better) has shown a shrewd understanding of the festival/shopping link. On Chinese campuses since the 1970s there has been a joke holiday called Singles Day (11-11). For people who are not in a relationship. In 2010 Taobao started having a sitewide sale on that day. [4]This year total sales were \$500 million. One retailer, one day. (For comparison, all US online retail sales for the 2010 holiday season were [5] \$33 billion.) No crowds, no difficulty parking, no long lines. Still stressful, yes, but in a good way: "This is so exciting - a war and a carnival at the same time," said one shopper.

1. [http://en.wikipedia.org/wiki/List\\_of\\_harvest\\_festivals](http://en.wikipedia.org/wiki/List_of_harvest_festivals)

2. <http://blog.sethroberts.net/2011/04/07/my-theory-of-human-evolution-new-version/>

3. <http://blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>

4. [http://www.china.org.cn/business/2011-11/12/content\\_23898262.htm](http://www.china.org.cn/business/2011-11/12/content_23898262.htm)

5. <http://www.comscoredatamine.com/2011/01/2010-holiday-online-retail-sales/>

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jeff (2011-12-05 12:47:01)

This is why it's so easy to not take evolutionary psychology seriously, because most often amateurs, but in this case, even people with psychology degrees, can and do simply make up stories and declare them genetic in basis. You say "The underlying genes evolved because they increased sales of high-end "useless" stuff. This helped skilled artisans" but stop! The underlying genes became human-universal so that they could help a small cadre of people? No way! This is group-evolution theory at its subtlest! An evolutionary psychology argument that has even the slightest bit of probability needs to not just be a Just

So Story, but to propose a mechanism by which individuals with the genes in question benefitted over individuals without. Harvest festivals require massive participation to be beneficial, and would seem to benefit everyone once they exist. There is no mechanism (proposed or immediately obvious) by which this could influence the relative frequency of an allele. Wishful thinking is a common failure of amateur evolutionary psychologists, and it does a lot of damage to the credibility of the field as a whole. It takes very very careful analysis to discover a genetic basis to human behavior because of the massive adaptability of human behavior.

Seth Roberts (2011-12-05 14:44:41)

This is why it's so easy to not take evolutionary psychology seriously, because most often amateurs, but in this case, even people with psychology degrees, can and do simply make up stories and declare them genetic in basis. I suggest you read my paper and see if I "simply made up a story". That paper will also help you judge how plausible my explanation is. If you have another plausible explanation of the ubiquity of harvest festivals and the like, I would like to hear it. propose a mechanism by which individuals with the genes in question benefitted over individuals without. Groups with the genes innovated more than groups without the genes. The more innovative groups competed successfully against less innovative groups. I am sure you are aware of group-vs-group competition, even if critics of "group selection" have had trouble with the concept.

### **Vitamin D3 Reduces Mortality (2011-12-06 05:00)**

[1]A recent Cochrane Review summarizes several experiments that measured the effect of Vitamin D on mortality. Here is a summary:

This systematic review analysed the influence of different forms of vitamin D on mortality. In the 50 trials that provided data for our analyses a total of 94,148 participants were randomly assigned to either vitamin D or no treatment or a placebo. All trials came from high-income countries. The mean age of participants was 74 years. The mean proportion of women was 79 %. The median duration of vitamin D administration was two years. Our analyses suggested that vitamin D<sub>3</sub> reduces mortality by about 6 %,

Vitamin D3 helped; Vitamin D2 and other forms of Vitamin D did not. The doses of Vitamin D3 were usually low: less than 800 IU/day.

Stimulated by [2]Primal Girl's discovery, I have been taking Vitamin D3 at about 7 am in the morning, slowly increasing the dose to see if there are any clear effects on my sleep (or anything else). I am up to 4000 IU/day.

1. <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD007470.pub2/full>

2. <http://blog.sethroberts.net/2011/11/02/it-matters-when-you-take-vitamin-d-a-stunning-discovery/>

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jay (2011-12-06 08:41:15)

Be careful with Vitamin D3 Seth. I started getting heart palpitations. I have since stopped the d3 (I was taking 4000ui a day), but maybe I'll start again and supplement with magnesium. I'm thinking about it. It's strange that I never got palpitations with sun exposure, since they're supposed to be the same thing - and you can get as much as 10,000ui from just being outside for a while in the summer. There are D3 deficiency tests out there, but I haven't taken one. <https://www.inspire.com/groups/national-osteoporosis-foundation/discussion/he-art-palpitations-with-vitamin-d3/>

TD (2011-12-06 09:36:49)

Are you still calling PrimalGirl's personal finding a discovery? I will be looking for the studies where this has already been accomplished within the scientific community and posting the links right here for you to see. Credit must be given to where credit is due.

Tom (2011-12-06 10:47:14)

Off-topic, Seth, but you may be interested in Paul Jaminet's post on fermenting vegetables:  
<http://perfecthealthdiet.com/?p=5165>

Alex Chernavsky (2011-12-06 11:49:49)

That's odd that D2 doesn't work. That's the form I take. Any ideas about why D3 would show the effect, but not D2?

Seth Roberts (2011-12-06 13:48:59)

Any ideas about why D3 would show the effect, but not D2? I've heard this ("take D3 not the others") before. I forget the reasons given.

Seth Roberts (2011-12-06 13:55:57)

Are you still calling PrimalGirl's personal finding a discovery? I will be looking for the studies where this has already been accomplished within the scientific community and posting the links right here for you to see. I don't know of any studies "within the scientific community" showing or even hinting at what Primal Girl found. If you can find such studies, I'd love to learn about them. Practically all Vitamin D studies look at blood concentrations of the vitamin, as if that is what matters. The blood concentration is quite constant with time of day. You seem to disparage Primal Girl's discovery by calling it "a personal finding". Several other people have reported similar results – changing the time of day that they took Vitamin D changed their sleep. I've seen thousands of recommendations to take Vitamin D that say nothing about time of day. Millions of people take Vitamin D. Primal Girl's discovery can help all of them.

Robert (2011-12-06 15:36:52)

Hi Seth, I was wondering if you had seen this article/study from 2010 and what your thoughts about it might be.  
<http://www.sciencedaily.com/releases/2010/03/100310164011.htm> -Rob

Guv (2011-12-06 19:10:32)

Hi Seth, keep an eye (pun intended) on your vision as you increase your D3 intake. Increasing your D3 may create a Vit A deficiency (or imbalance). Paul Jaminet speculates that a healthy A to D ratio is 3 IU to 1 IU. Paul also suggest 1mg K2 per day as Vitamin D is known to deplete Vitamin K2. The Vit A, Vit D subject was discussed recently on PaleoHacks in relation to Night Blindness, see here; <http://paleohacks.com/questions/77024/creaky-knees-night-blindness-what-am-i-missing/80528#80528>

cremes (2011-12-06 20:07:09)

I changed the time of day when I consume my 8k IU of daily D3. I now take it between 7am and 8:30am. Within 2 days I noticed that I was waking up earlier than usual (5am). I wonder if this is the "breakfast effect" that Seth has written about before. I don't mind the early rising. I need to get going early anyway, so it's not a burden. I just thought I would document this n=1 result.

Seth Roberts (2011-12-07 01:13:31)

I changed the time of day when I consume my 8k IU of daily D3. I now take it between 7am and 8:30am. Within 2 days I noticed that I was waking up earlier than usual (5am). Thanks. More evidence that the time of day you take Vitamin D matters. As I've said, none of the several hundred million Vitamin D bottles says what time of day to take it.

Sara (2011-12-07 02:32:20)

This is extremely interesting. I take D3 in winter and will move it to the morning - insomnia has been a lifelong companion, I've practically given up on curing it, but there are a lot of things that help me not be a zombie all day, maybe this will

improve things further?. Worth a try. One of my lecturers is doing a lot of vitamin D research, so I'll have a look and see if she is investigating circadian rhythms at all. I think her focus is bone health. I don't want to be a wet blanket, but this vitamin can be toxic. In fact, Cholecalciferol is used as a pesticide here in NZ. Overdose (acute or chronic) can lead to dangerous arrhythmia and hypercalcaemia. Please be careful, especially the person taking 8000 IU a day.. you're scaring me a bit.

Dave Lull (2011-12-07 06:37:46)

"The case against vitamin D2" Posted on August 11, 2009 by Dr. William Davis <http://www.trackyourplaque.com/blog/2009-08/the-case-against-vitamin-d2.html>

cremes (2011-12-07 07:15:09)

Sara, I appreciate your concern and do not mean to frighten you. Based on my reading of Vitamin D research, Vit D toxicity generally comes from an imbalance of A, D and K. Therefore, I also take a Vitamin K supplement to avoid that imbalance. The human body produces 15k-20k IU of Vitamin D from 30 minutes of direct sunlight (assume shirt off). That little nugget of info should help ease your unease. :)

wcb (2011-12-07 11:49:58)

Seth said "I've heard this (take D3 but not the others) before, but I forget the reasons given." Seth, here's one explanation given by Dr. William Davis which may be useful, quoted below: "Vitamin D is measured in the blood as 25-OH-vitamin D and is distinct from 1,25-diOH-vitamin D, a kidney measure, a test you do not need unless you have kidney failure. The human form of vitamin D is cholecalciferol and is usually obtained via activation of a precursor molecule in the skin on activation by the sun. You can also take cholecalciferol and it increases blood levels of 25-hydroxy vitamin D reliably. However, there is a cheap, plant-sourced, alternative to vitamin D3, called vitamin D2, or ergocalciferol. D2 has far less effect in the body. Taking D2 or ergocalciferol orally is an extremely inefficient way to get D. Unfortunately, it's the form often used in milk and many supplements, even the prescription form of D. About half the multivitamins and calcium supplements I've looked at contain ergocalciferol rather than cholecalciferol. Taking vitamin D2 yields very little conversion to the effective D3. "

Alex Chernavsky (2011-12-07 14:54:44)

@wcb: But see <http://www.sciencedaily.com/releases/2008/01/080102122306.htm> I don't take D3 because it's animal-derived.

Jess (2011-12-08 09:38:13)

Vitamin D is the effect that the sun is giving u?/ what is in Vitamin D3

Jazi zilber (2011-12-09 06:56:55)

Vitamin d2 has a very short life in the body. D3 stays in the body for weeks, whereas D2 maybe half a day.

### Assorted Links (2011-12-07 21:48)

- [1]Tale of two workers. "Worker A is in the bottom quintile of income. . . .Worker B is in the upper quintile of income. . . .Worker A is a college drop-out. . . .Worker B has a Bachelor of Arts, a Masters, and a doctorate."
- [2]Citizen scientists. "More than a decade ago, in hopes of advancing research on the rare genetic disease that afflicts her children, Sharon Terry let two different researchers draw their blood for study. But when she asked for the results of the investigations, the scientists gave her a startling response. Information generated from her own children's DNA, they said, didn't belong to her."
- [3]Ten academic frauds.

Thanks to Tucker Max, Dave Lull and Chuck Currie.

1. <http://hopaulius.wordpress.com/2011/11/06/a-tale-of-two-workers/>
2. <http://online.wsj.com/article/SB10001424052970204621904577014330551132036.html>
3. <http://www.onlinecolleges.net/2011/12/05/10-academic-frauds-fooled/>

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Txomin (2011-12-08 00:48:06)

I just want to thank you for continuing to call attention to academic fraud.

Michael (2011-12-08 06:57:55)

Did you see this story on the mouse research diet? [http://blog.cholesterol-and-health.com/2011/11/this-just-in-infamous-lard-bas ed-high.html](http://blog.cholesterol-and-health.com/2011/11/this-just-in-infamous-lard-bas-ed-high.html)

Matt Weber (2011-12-08 07:46:04)

Just curious to hear what appealed about the "Tale of Two Workers." It's a cute reversal, but the reversal changes the way you view the worker"s" – the initial framing describes two situations that anyone would describe as typical, and the twist turns it into a situation that anyone would describe as exceptional. Which supports the point made at the end, that "it's all in how you tell the story," but also vitiates the apparent point of the story, which is that more fortunate people aren't obliged to help less fortunate people because less fortunate people could do it themselves if they tried. (A proof of principle doesn't necessarily mean much if the phenomenon still doesn't happen very often. It may be true that anyone could write the next Harry Potter, but no amount of hard work will change the fact that most people won't.) Of course, the implied conservative/libertarian moral may be more mine than the author's. And I do think it's interesting how Worker A's "disadvantage" and Worker B's "advantage" are not as incompatible as they seem when the framing implicitly opposes them. That might be the most interesting thing about the story.

by (2011-12-08 10:05:17)

"A tale of two workers" was a very cool and creative story. A movie having a twist is par for the course, but this story had two, and did it in a few minutes instead of a few hours.

Tom (2011-12-08 11:22:06)

A more interesting tale than the "two workers" is the story of the massive, silent campaign to push memes like this, to distract from the obscene concentration of societal wealth in the hands of the top .1 % of the population – largely financial titans and CEOs (with lapdog compensation committees.) <http://krugman.blogs.nytimes.com/2011/11/03/inequality-trends-in-one-picture/>

Seth Roberts (2011-12-08 14:33:43)

Just curious to hear what appealed about the "Tale of Two Workers." I just thought it's a good story. The ending surprised me. If I wanted to draw some lesson from it, it wouldn't be what you say ("more fortunate people aren't obliged to help less fortunate people because less fortunate people could do it themselves if they tried"); it would be that life is less predictable than we usually assume.

Seth Roberts (2011-12-08 14:36:48)

the story of the massive, silent campaign to push memes like this, to distract from the obscene concentration of societal wealth in the hands of the top .1 % of the population Where is this story told? It's not told in the link you provided.

Nathan (2011-12-08 16:44:18)

<http://www.youtube.com/watch?v=KLjgBLwH3Wc> &feature=youtu.be this medical doctor changed her diet and reversed her MS symptoms so that she was able to walk again, after having been wheelchair-bound.

Tom (2011-12-10 17:20:29)

Seth, that link spoke more to the concentration of wealth. Here are some more links that speak more to the propaganda effort:  
<http://guardian.co.uk/world/2011/nov/07/koch-brothers-database-2012-election> <http://bloomberg.com/news/2011-10-02/koch-brothers-flout-law-getting-richer-with-secret-iran-sales.html> <http://articles.latimes.com/2011/feb/06/nation/la-na-koch-brothers-20110206> [http://huffingtonpost.com/2011/11/04/her-man-cain-koch-brothers\\_n\\_1076835.html](http://huffingtonpost.com/2011/11/04/her-man-cain-koch-brothers_n_1076835.html)  
<http://nytimes.com/2011/02/22/us/22koch.html?pagewanted=all> <http://thenation.com/blog/165077/koch-brothers-alec-and-savage-assault-democracy>

## **The Dominique Strauss-Kahn Victory Dance (2011-12-08 19:02)**

In May, Dominique Strauss-Kahn (DSK), as everyone knows, was accused of raping a maid. The story received huge worldwide coverage, reaching billions of people within days. Strauss-Kahn was greatly damaged. A week ago Edward Jay Epstein, [1]whose work I've praised, published [2]an article in The New York Review of Books with many new details that implied what happened was not as simple as the first reports suggested. Was DSK set up (a possibility not mentioned in the initial media reports)? New facts in Epstein's article – [3]which I called "great journalism" – made this a lot more plausible.

One such fact is that soon after the assault was reported to 911 (after a long delay), two men involved in the call performed what Epstein called a "victory dance". A plausible explanation of the celebration (which Epstein doesn't state, it's obvious) is that they were celebrating because they had succeeded in entrapping DSK and would get a huge payoff from his enemies. Epstein's article said the dance lasted three minutes. Critics of his article said the dance lasted eight seconds. Amy Davidson of The New Yorker had the poor taste [4]to joke about it. "But maybe it's all true, and the BlackBerry is not a red herring but the key, and another cell phone was passed in the soccer match box, with news of a character assassination, whereupon Sarkozy did his own dance of celebration," she wrote. Yesterday The New York Review of Books [5]issued a correction: The dance lasted thirteen seconds (a correction with which Epstein agrees). Davidson [6]continued her dismissiveness. "The victim of some sort of insidious conspiracy." The victory dance, she wrote, "doesn't seem outlandish, given the sorts of things men do in New York, particularly when talking about sport."

Missing from criticism of Epstein's article, which does suggest conspiracy, was a plausible alternative explanation. Why were the men celebrating? [7]They can't remember. Both of them. In spite of all the attention. Which began within hours. Perhaps a sport event, they said, but no such event has been identified. Excitement usually improves memory. The men are clearly excited. Failure to come up with a plausible alternative explanation supports Epstein's point that there is something very important about this we don't know.

What makes this especially interesting, at least to me, is that you can judge for yourself. (This blog is all about that.) Epstein has [8]posted on his website three items: (a) a recording of the 911 call that led to DSK's arrest ("she doesn't have any sustained injuries," says the caller), (b) CCTV video showing the security area at the time of the phone call, and (c) CCTV video showing the victory dance, which includes one man picking up the other man and swinging him around.

1. <http://blog.sethroberts.net/2009/08/03/edward-jay-epstein/>
2. <http://media.nybooks.com/strauss.html>
3. <http://blog.sethroberts.net/2011/11/27/assorted-links-140/>

4. <http://www.newyorker.com/online/blogs/closeread/2011/11/strauss-kahn-and-the-dancing-men.html>
5. <http://www.nybooks.com/articles/archives/2012/jan/12/note-strauss-kahn-case/>
6. <http://www.newyorker.com/online/blogs/closeread/2011/12/a-dance-to-the-music-of-conspiracy.html>
7. <http://www.thedailybeast.com/articles/2011/11/27/dominique-strauss-kahn-s-new-york-hotel-disputes-allegations-of-conspiracy.html>
8. <http://www.edwardjayeinstein.com/Newvillains.htm>

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dearieme (2011-12-09 03:24:30)

"At one point, the larger man lifts the well-dressed man off the floor. " What mimsy stuff, especially since both men are wearing jacket, collar and tie. There is another characteristic available to distinguish one man from the other, which would be quite unambiguous.

spacenookie (2011-12-09 21:08:30)

yeah, but this was six months ago. Quick - "you were captured on video camera dancing and celebrating something for 8 seconds, six months ago. What was it?"

Seth Roberts (2011-12-10 03:18:46)

yeah, but this was six months ago. Quick - "you were captured on video camera dancing and celebrating something for 8 seconds, six months ago. What was it?" I assume you're a man. When was the last time you picked up another man and swung him around?

Someduded (2011-12-10 12:08:57)

> The victory dance, she wrote, "doesn't seem outlandish, given the sorts of things men do in New York, particularly when talking about sport." Really ? There was NO sporting event of note that day. And cheering like that ONE MINUTE after having called the police, are you kidding me ? Also, how comes the two guys are both struck with amnesia about this event ? How comes they can't remember having cheered about it ? The ACCOR group states they were cheering about a won bet on a (non existent) sport event. Given the way they cheered, obviously they won a LOT of money. How comes they can't remember it ?? That doesn't make any sense. They are ALL lying, this is obvious to any person who looks at this with a fair eye.

Somedude (2011-12-10 12:33:31)

Sorry, I should have read the whole post, I see that we share the same doubts. I want to add a few things that you guys may not know from your side of the Atlantic. 1) The first person who twitted about DSK arrest is a guy who belongs to UMP youths, (UMP is Nicolas Sarkozy's party). He twitted about something "exceptional" happening at the Sofitel about 15 minutes after the arrest. That's WAY earlier than any journalist. That was one of the first facts that led to the Sarkozy conspiracy hypothesis. 2) It seems to me that the Sofitel security called Paris BEFORE calling the NY police. They took one hour before calling the police. 3) It is now clear (as written by daily newspaper Libération on 12/09/2011) that the french ministry of foreign affairs (quai d'Orsay) called the prosecutor Cyrus Vance Jr on may 15th, the day after DSK's arrest, to weigh in to maintain him in prison. DSK's name was cited in an investigation in an affair of prostitution. The quai d'Orsay illegally communicated to Vance elements of this investigation that are normally protected by the secrecy of judicial instruction (in France, Justice is not independant from the executive, leading to such problems...). DSK was about to be released on parole against \$250,000, but after the call, the prosecutor changed his mind and DSK was incarcerated that very evening at Riker's Island. The initiative came from Paris and was completely stranger to any judicial procedure. 4) The director of security of the hotel is an ancient member of the DGSE/DCRI (the french secret services) who worked under the current chief of DGSE/DCRI. DSK was by far the most dangerous opponent of Sarkozy for the french presidential elections of 2012, beating him by more than 25 points in all polls.



Somedude (2011-12-10 13:02:15)

To sum up, many (most ?) french people now firmly believe in a political plot. I don't believe at all DSK is a rapist, but what is sure is, DSK's appetite for prostitutes (or should I say sexual disorder) would have, sooner or later, undermined him politically. Yet multiple sexual scandals didn't kill Berlusconi, the economical near collapse of Italy did. Still, DSK knew that his sexual misconducts would be the catalyst of his own demise. He also knew that Sarkozy knew everything about them, and that he would try to kill him politically with this weapon. So for me, everything was ready for a trap. I didn't mention that the behaviour of Ray Kelly, the chief of NY police, looks to me extremely suspect in this affair. He is very well known to Sarkozy (who awarded him the Legion d'Honneur medal), and I believe he is at the source of numerous police leaks with blatant lies, like the fact that DSK fled the hotel in a hurry (which is proven false by the video). He also fired the police officer in charge of sexual affairs, who quickly discovered that Diallo was lying (as was accounted by the NY Times). I suspect him to have done everything he could to slow down the investigations. There are many unanswered questions: - what was the role of N. Diallo in such a plot ? What did she do in room 2820 ? - who was the occupier of room 2820 (the Accor group refuses to give his name) ? - where is the "FMI telephone" ? - what was the content of the conversations between the Sofitel management and Paris ? It is clear that in Paris, there will be NO serious investigation, as the power of the judges are dependent on the ministry of Justice, which is indirectly under the orders of Sarkozy. So the hopes for any full understanding entirely resides in America.

Jean (2011-12-10 19:47:15)

"To sum up, many (most ?) french people now firmly believe in a political plot." I dont it is crazy. Political plot to down DSK Actors 2 Dancers 1 Hotel Maid with bad visa/status problems 1 Breakfast Waiter 2 Security Officers Sofitel Sofitel management who put Diallo on that floor Sofitel management who gave DSK that room Scene Suite Script Client rushing to get ready to go to meeting with his daughter Wait until 15 minutes after he should have left Get Breakfast waiter to go into room and check he is naked Send in hotel maid Take advantage of clients inability to leave any orifice empty I cant even see French agents cooking up such a crazy plot

### Assorted Links (2011-12-10 04:42)

- A brash high-school student discovers – maybe by accident – how much famous writers, such as Ralph Ellison, Norman Mailer, and John Updike, don't want to write. [1]Any excuse to avoid writing will do.
- [2]A pretty good talk by John Cochrane, a University of Chicago professor of economics, called "Restoring Robust Economic Growth in America". What's most interesting is what's missing. At one point he asks: "Why are we stagnating? I don't know. I don't think anyone knows, really. That's why we're here at this fascinating conference." In spite of this topic, his talk contains nothing about what controls the rate of innovation. Not only does he not know anything about this (judging by this talk), he doesn't even realize the gap in his knowledge (judging by this talk). Shades of [3]Thomas Sargent. It's as if a Harvard Medical School professor spoke about how to fight disease without mentioning the immune system, without even appearing to know that the immune system exists. ([4]Which happens.)
- [5]Garum, a fermented fish sauce. It was the "supreme condiment" of ancient Rome.

Thanks to Allan Jackson and Peter Couvares.

1. <http://www.theparisreview.org/blog/2011/12/05/document-the-symbolism-survey/>
2. [http://econlog.econlib.org/archives/2011/12/john\\_cochranes\\_1.html](http://econlog.econlib.org/archives/2011/12/john_cochranes_1.html)
3. <http://blog.sethroberts.net/2011/10/13/nobel-prize-report-card/>
4. [http://www.newyorker.com/reporting/2011/12/12/111212fa\\_fact\\_specter](http://www.newyorker.com/reporting/2011/12/12/111212fa_fact_specter)
5. <http://en.wikipedia.org/wiki/Garum>

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TMS71 (2011-12-10 10:04:54)

So what does control the rate of innovation?

Tim Beneke (2011-12-10 12:43:29)

Isn't one reason we are stagnating because in order to generate wealth, to innovate, somebody – wealthy corporations, entrepreneurs borrowing from banks, the state – has to take risks, has to invest, has to believe in a possible future with a payoff; this requires a certain psychological orientation, of groups of people who believe. Americans lost maybe 20 % of their wealth in recent years; no one really understands the world economy, or the intricacies of capital flow and investment; and corporations are sitting on huge amounts of money and are still playing it safe. So there are reasons for such caution. Everyone knows we don't know as much about economic processes as we thought we did. There is some principle of herd pluralistic ignorance/knowledge at work. The tide may be changing as people get over the freak-out of the last few years and corporations start to invest.... I sure hope so...

Seth Roberts (2011-12-10 13:36:11)

So what does control the rate of innovation? I don't know. But I can guess: 1. The heavier the regulatory burden, the less innovation. For example, certain FDA regulations require that businesses have a ROOM for the FDA inspector. 2. Lower crime, more innovation. 3. The easier it is to leave your employer and set up your own business, the more innovation. So, for example, universal health insurance → more innovation. 4. The easier it is for a small business to advertise, the more innovation. 5. Cultural values. The more value placed on innovation, the more innovation. 6. The larger the percentage of people that live in cities, the more innovation. 7. The greater the education level, the more innovation. 8. The greater access to a wide range of information, the more innovation. (I think #7 and #8 were behind the Industrial Revolution. Printed books changed everything.)

Becky Hargrove (2011-12-10 18:15:18)

Okay, you're in my area of interest now but where to start? I started working on my own inner economic dialogue about seven years ago but am only beginning to learn the many languages of economics, especially the macro I've been so fascinated with. Consequently my ideas sound pretty loony. I don't believe that money is capable of doing all the things that people try to make it to do, not even close. But what it can't do, people still need and for me that's the place to begin - human capital. Just the same, ownership needs to be far more flexible and markets need to be completely opened up so as to offer what people actually need to work and live, as well as a 'floor' of survivability one can actually progress from.

andrew (2011-12-12 10:54:00)

Seth Are you reading the book Launching the Innovation Renaissance by Alex Tabarrok of Marginal Revolution fame?

Seth Roberts (2011-12-12 16:22:04)

Are you reading the book Launching the Innovation Renaissance by Alex Tabarrok of Marginal Revolution fame? yes, I am reading that book. It's very good.

Nancy Lebovitz (2011-12-12 19:28:11)

Possibly of interest: [1]7 Secrets of the Prolific by Hillary Rettig. It's specifically about writing, though there's also advice which would apply to anything, like getting yourself good tools. In any case, there's a description of making writing into a pleasure, and at least some of it overlaps with your self-experimentation. The idea is to make writing into a bunch of small experiments, so that the cost of failure is made lower.

1. <http://hillaryrettig.com/the-7-secrets-of-the-prolific/>

Charlie (2011-12-22 17:23:01)

I am not sure why you think understanding the rate of innovation is central to understanding the movement of the business cycle since 2007. The 1930s was an extremely innovative time period\*, but alas we still had the great depression. It doesn't seem like changes in the level in innovation are a good explanation for large changes in the unemployment rate. Why do you think this should be in his talk? \*Source <http://marginalrevolution.com/marginalrevolution/2011/04/a-great-leap-forward-1930s-depression-and-u-s-economic-growth.html>

Seth Roberts (2011-12-22 23:08:38)

It doesn't seem like changes in the level in innovation are a good explanation for large changes in the unemployment rate.

If you read between the lines of [1]Collapse by Jared Diamond, you will see that every case of collapse that he describes happened because the society stagnated badly – failed to innovate, kept doing the same thing over and over and over. In each case, just before the society collapsed, the level of unemployment became very high.

1. [http://en.wikipedia.org/wiki/Collapse:\\_How\\_Societies\\_Choose\\_to\\_Fail\\_or\\_Succeed](http://en.wikipedia.org/wiki/Collapse:_How_Societies_Choose_to_Fail_or_Succeed)

Charlie (2011-12-23 00:56:08)

"happened because the society stagnated badly — failed to innovate, kept doing the same thing over and over and over." Those are very strange examples, because it's very hard to show that the societies he chooses ever innovated at all. The Norse, Easter Island, Polynesians, the Mayan, it's very hard to show that these societies ever innovated. Like most of human history, these societies had next to no innovation, as it was very rare in pre-industrial societies to innovate (see Greg Clark's Farewell to Alms for the data). Collapse argues for environmental causes to societal breakdown, and while I agree that these societies didn't adapt to these conditions by innovating, since they weren't innovating before that seems completely beside the point. It almost appears that you might believe that if a society stops innovating that unemployment will follow, but most of human history is a counter example to that. There is no reason new technology or ideas are necessary to create new jobs. It's funny that Australia is one of the only modern western examples in Diamond's book as a cautionary tale of problems to come, and yet, Australia has been one of the best faring countries. Is there any evidence that Australia has markedly kicked up their innovation or is much more innovative than the U.S.? Taking a longer view, it's extremely difficult to pin today's unemployment on a lack of innovation in the U.S. ([http://www.washingtonpost.com/business/economy/economists-explain-2011-in-charts/2011/12/21/gIQA3lg9O\\_gallery.html#photo=16](http://www.washingtonpost.com/business/economy/economists-explain-2011-in-charts/2011/12/21/gIQA3lg9O_gallery.html#photo=16)), much less trying to pin cross country differences by innovation. The lesson of Diamond's book is that as societies are collapsing their ability to generate output (food, clothing, shelter, goods, services...) collapses with it, as well as their ability to utilize their resources (like labor). In some sense, saying a society that is collapsing will "fail to innovate" is much more accurate than saying a society that fails to innovate will collapse.

## **Worldwide Butter Shortage? (2011-12-11 05:00)**

The first sentence of [1]this article is:

The soaring popularity of a fat-rich fad diet has depleted stocks of butter in Norway creating a looming Christmas culinary crisis.

Except it's not a fad diet. It's not going to go away, I predict. I eat lots of butter because I discovered it [2]made my brain work better than a similar amount of pork fat. [3]Pork fat made me sleep better. Desire for better sleep and a better-working brain are not desires that come and go. I haven't even mentioned the conventional benefits (e.g., weight loss). The article continues:

Norwegians have eaten up the country's entire stockpile of butter, partly as the result of a "low-carb" diet sweeping the Nordic nation which emphasizes a higher intake of fats.

"Sales all of a sudden just soared, 20 percent in October then 30 percent in November," said Lars Galting, the head of communications at TINE, the country's biggest farmer-owned cooperative. . . .

Butter is now selling on Norway's top auction website, with a 250-gram piece starting at around \$13 (8.28 pounds), roughly four times its normal price.

At the Beijing store closest to me that sells butter, I seem to buy more butter than all other customers combined. Chairman Mao noticed the value of pork fat. What happens when the Chinese realize the value of butter?

Thanks to Dave Lull.

1. <http://uk.reuters.com/article/2011/12/07/oukoe-uk-diet-butter-norway-idUKTRE7B622620111207?rpc=401>
2. <http://blog.sethroberts.net/2011/11/25/butter-and-arithmetic-how-much-butter/>
3. <http://blog.sethroberts.net/2009/11/10/more-animal-fat-better-sleep/>

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Q (2011-12-11 06:06:10)

Fwiw, I restarted sld a month or so ago with butter. Appetite suppression is very very good. Butter is available a lot of places - I can get it at the work cafeteria for free - I get three pats and eat them with nose plugged in the bathroom. Taste is gone in 2 minutes. Little or no stomach nausea. Have not been weighing myself but hunger is down a lot, which for me is the main reason for doing sld. Attention and time management. My other experience is that butter gives me an energy high similar to coffee, but more at the 2-3 tbsp level. Not as pleasant as coffee, a little weird feeling.

JohnF (2011-12-11 07:27:11)

I think you're making too big a deal about Norway's butter shortage. The market for dairy there is very messed up with virtually a central planner by virtue of a state granted monopoly and very, very high tariffs\*. Essentially it's Norwegian law that the vast majority of food has to be produced inside the country and almost everything imported is taxed to the point where it's economically unfeasible to import. Due to their crappy system they're left without any mechanisms to adapt decently quickly to any increased demand for things like butter. - They can't import butter to make up the shortage, as it's simply too expensive and there's no regular channels to do so. - The farmers making the butter have no incentive at all to increase production, since there's only one buyer who's already decided how much to buy in advance. - The monopolist dairy processor has no idea what's going on in stores as the price is pre-negotiated. And most likely do not pay any attention whatsoever to what the grocers say, if they say anything. Absent these issues, the Norwegians could very simply either have ramped up their internal butter production or imported more to make up the shortage. It's a failure of planning, rather than production not being able to deal with a massively increased butter demand. The bump in demand itself is somewhat artificial since it's largely fueled by people worrying they won't have any butter for Christmas, and hence stockpiling, rather than people actually consuming more butter on average. I don't know how much the average consumption has gone up, but I would guess it's just a few percentage points and the rest is a consequence of people reacting to media coverage and poor flexibility in the supply system. \* In Sweden it's becoming common for organized crime to smuggle "groceries" to Norway, rather than drugs, due to the dysfunction and high prices of the Norwegian food market.

Ed M. (2011-12-11 11:50:33)

There is no shortage of butter, there is a shortage of free trade. See Angus at Kids Prefer Cheese: <http://mungowitzend.blogspot.com/2011/12/mars-needs-women.html> -Ed

Tom (2011-12-11 13:36:12)

This has been a concern of mine. With the growing paleo community praising grass-fed butter, how long before demand overwhelms supply?

Kim Øyhus (2011-12-11 15:54:31)

Our farmers here in Norway could actually have delivered the butter needed, but were prohibited from doing so through regulations with quotas. So in this particular case, it was a failure of state socialism, not capitalism. I agree that this is probably going to continue for a long time, so I better learn making my own butter. Currently I am eating some specially imported French butter. One of the really bad things about this, is that the shops now sells large amount of margarine, which is really detrimental to health, since it is made of chemically modified plant fats, something we are not built to handle well.

Jahed (2011-12-11 17:17:35)

Poor bastards, my heart goes out to them, I can't imagine being without Kerrygold!

dearieme (2011-12-12 04:52:40)

"...eat them with nose plugged in the bathroom. Taste is gone in 2 minutes": one could easily mistake that for some sort of obsessional food puritanism. Why not just enjoy some butter on your potatoes, on your veggies, on your steak, on your toast?

Lisa Wainer (2011-12-12 08:51:19)

On my way to work today, I stopped to buy some butter from a local supermarket (in the UK) - and they had run out! I hope this is just a coincidence ... :)

charles (2011-12-12 14:18:24)

Seth.. Have you ever experimented with Cream instead of butter? Easy to drink a lot of it.

Seth Roberts (2011-12-12 16:21:22)

Have you ever experimented with Cream instead of butter? Easy to drink a lot of it. No, but I switched from adding half and half to my tea to adding cream. I agree, it's worth trying. There is a practical problems: In Beijing, where I am now, I cannot get enough cream. I have to go to up-scale supermarkets to get butter. Even those supermarkets don't have much cream. There is also a theoretical problem: It's unclear why butter and cream should have different results.

Joe E O (2011-12-12 17:12:01)

Wow, I can't believe how BUTTER (and only butter) controls my insane hunger. I have been trying to lose weight via IF [intermittent fasting] - which has work great in the past but have been having a tough time with hunger....3 or 4 tablespoons of butter seems to do the trick.

Seth Roberts (2011-12-12 17:44:18)

Joe E O, that's very interesting. You write: Wow, I can't believe how BUTTER (and only butter) controls my insane hunger. I What else have you tried?

Joe E O (2011-12-13 04:54:51)

What else have you tried? In addition to adding butter to my diet I have tried the following: 1) Elimination of Wheat - very effective. Starting in 2008 - I have mostly eliminated wheat from my diet (not 100 % compliant). This has lead to an 80 lbs weight loss. I have been "stalled" for about a 18 months because of can't seem to manage my hunger. See Dr William Davis's blog "Wheat Belly" for details. 2) Vitamin D supplementation. Somewhat effective. I started the Vitamin D supplementation

before I eliminated wheat. I don't recall the effect on my hunger - but made a significant increase in my quality of life. (I am sure I was significantly Vitamin D deficient) 2) Higher Protein/Lower carb/Lower Fat i.e "Body Builder diet" (think veggies and lots of egg whites/chicken breast/pork loin ) Not effective 3) Fiber supplementation (Oat Bran, acacia fiber) - Not Effective 4) Coconut oil - Not particularly effective by itself - seems to work when used with butter. 5) BCAA supplementation - Effective (Expensive and inconvenient)

Seth Roberts (2011-12-13 09:27:25)

Thanks, Joe, that's very helpful information. Could I ask some more questions? What was your starting weight (before giving up wheat)? How tall are you? When you say you've been "stalled for 18 months", you mean you want to lose more weight but you haven't because you get too hungry? At what weight are you stalled? I understand that eliminating (most) wheat from your diet allowed you to lose 80 pounds. I gather that at some point you started to eat much more butter. When was that? How much butter do you eat? What effect has the butter had on your weight? I understand it has reduced your hunger. But has it also reduced your weight?

Maria (2011-12-13 10:26:16)

Seth, I find your blog very interesting. I am sure you've answered this question somewhere, but I couldn't find it. Is there anything specific about the type of butter you eat? I mean, is it raw, pastured-raised, is it sourced locally, is it organic or is it similar to standard (American) pasteurized grocery store butter?

Joe E O (2011-12-13 10:43:41)

Ouch....you want me to admit how morbidly obese I was? I am 5' 10" and at my heaviest I was 320 lbs (man that hurts). I am currently at or about 240. I need to lose 40 more pounds. I generally do not track my weight on a daily basis. My weight loss has happened in spurts. I lose twenty or so pounds over 6 or 8 weeks period and then more or less stall for a period of time. When I am losing weight I am in the "zone" - meaning that I am: a) managing my hunger (as being hungry all the time is stressful) b) exercising vigorously (circuit training with heavy weights) c) I am fasting (which I have found it the easiest way to eat less calories) I actually misspoke - I have been stalled for less than 18 month - more like a year at this point. The last time I lost weight quickly was in Sept/Oct of 2011 when I went from 269 to 250 in about 6 weeks...I have slowly inched down from 250 to 240 during 2011 (after really working out like a dog over the summer). As I indicated above during 2011 I have been trying different method to control my hunger (the high protein/low carb/low fat diet, fiber supplementation, coconut oil, bcaas) - none of them really worked. I have started using butter about 2 or 3 weeks ago and it seems to be doing the trick as it really kills my hunger and makes fasting "do-able" Peace, Joe E O

Joe E O (2011-12-13 11:56:00)

because sharing is caring...In addition to the above details.... I have more or less eliminated all corn/vegetable oils and consume a minimal amount of olive oil. This started when I eliminated wheat. I have been supplementing with fish oil 3 to 6 grams daily for several years now (See Dr William Davis's track your plaque program) I have tried SLD using extra light olive oil - didn't notice a difference in appetite. Over 2011, I have tended to avoid lots of raw cabbage (which I used to consume copious amounts) as it is a goitrogen - haven't notice difference in weight. As far as hunger goes - after wheat the substance that most stimulates my hunger is Whey Protein powder.....

Seth Roberts (2011-12-13 12:48:00)

Is there anything specific about the type of butter you eat? I mean, is it raw, pastured-raised, is it sourced locally, is it organic or is it similar to standard (American) pasteurized grocery store butter? I've tried all sorts of butter, including Amish butter (\$11/pound). I have found no difference between the expensive organic pasture-raised butter and the more common Land O'Lakes butter. I've never done a careful comparison, I've just never noticed a difference when I change butters.

Eric (2011-12-14 17:33:13)

Hey Seth, My wife has made either hong shao rou (pork belly cooked in soy sauce) or lu rou fan (pork belly chopped super fine w/ mushrooms and a ton of spice, then boiled for hours) 2x per week for a few weeks now. I've eaten more fatty pork in the

past few weeks than I've ever eaten in my life, but I haven't noticed any extremely dramatic sleep or brain changes. That said, I don't track either of these things in any rigorous way at all, although I might start doing so. Do you think 2x per week is enough to notice something?

Jason (2011-12-15 17:24:39)

Joe - Congrats on the weight loss! I've been vegan for 10+ years, and a couple of years ago I started to crave raw cabbage. I ate copious amounts of vingered quick pickled mexican cole slaw to satisfy those cravings, until I read about ice chewing, and started taking an iron supplement. After that, no more desire to eat huge quantities of raw cabbage. I'm sure it was the same mechanism that drives some people to chew on ice: anemia induced cravings for crunchy things (theorized to resemble chewing on cartilage) - If your cabbage eating was the result of cravings rather than the result of a conscious dietary choice, or if you still have similar cravings, consider an iron supplement. My bloodwork indicated I was at the low end but within the "normal" range of iron, but once I started the supplement, the daily desire to eat raw cabbage completely vanished.

Seth Roberts (2011-12-15 18:31:05)

My wife has made either hong shao rou (pork belly cooked in soy sauce) or lu rou fan (pork belly chopped super fine w/ mushrooms and a ton of spice, then boiled for hours) 2x per week for a few weeks now. I've eaten more fatty pork in the past few weeks than I've ever eaten in my life, but I haven't noticed any extremely dramatic sleep or brain changes. That said, I don't track either of these things in any rigorous way at all, although I might start doing so. Do you think 2x per week is enough to notice something?

No. The effect of pork fat on my sleep lasted just one night. In other words, my sleep Tuesday night depended on how much pork fat I ate on Tuesday, but not Monday. And it takes a considerable amount of pork fat (80 g? 100 g?) to easily notice a difference.

Maria (2011-12-16 14:13:19)

Interesting. With all the talk these days about different nutritional properties of different substances, it's very interesting that you're getting those good results with standard butter. Definitely a relief to my pocketbook! I find our blog very interesting and inspiring. I'm trying to get into the habit of doing some self experimentation myself.

## **Vitamin D3 and Sleep Update (2011-12-13 05:54)**

A month ago [1]I blogged about a "stunning discovery": Primal Girl's [2]sleep got much better when she took Vitamin D3 in the early morning instead of much later (afternoon or evening). [3]Others pointed out a similar observation: Taking Vitamin D3 in the evening caused insomnia. These observations suggest that Vitamin D3 resembles sunlight in its effect on sleep: morning exposure good, evening exposure bad. Sunlight, of course, is hard to control and sometimes hard to get (which is why Primal Girl tried Vitamin D3). Sunlight is also time-consuming: it takes an hour to get one hour of sunlight. The timing and dosage of Vitamin D3 is much easier to control.

Now I've tried it. This isn't the first time. I've taken Vitamin D3 on and off several times through the years. Each time I didn't notice any change so I stopped. But then I'd hear an interesting argument (never anything as clear as what Primal Girl found), and try again. And stop again. This time I took the Vitamin D3 around 8 am. (In previous attempts, I never controlled the timing and never took it early in the orning.) I started with 2000 IU/day. I did that for nine days. No clear effect. Then I increased the dose to 4000 IU/day. The change was unmistakeable: I started to wake up feeling somewhat more rested and, for the first time, with a pleasant warm feeling. So far it's been eight days. Something is different and better.

I am writing about this now because the results are already interesting. My experience so far "proves" nothing, of

course. Let me make clear the limitations: 1. You might consider the effect small. I was already sleeping well. I fell asleep quickly, did not wake up during the night, and woke up feeling rested. Now I wake up feeling more rested. 2. Eight days isn't much. Maybe the effect will go away. 3. Maybe the effect doesn't depend on time of day. I haven't yet tried taking Vitamin D3 at other times of day.

Why do I think this is so important?

1. Sleep is central to health. You fight off infection while you are asleep. [4]When I improved my sleep, I stopped getting noticeable colds. I'm sure if people slept better, they would get sick less often. Heart attacks are more common in the winter. People sleep worse in winter.

2. Sleep is a huge problem. As far as I can tell, most adult Americans complain about their sleep.

3. No one expected this. Nutrition researchers, dieticians, and so on obviously didn't expect it. Nor did circadian rhythm researchers. They (or we) think that everyone, including plants, has one or more internal circadian clocks that is/are synchronized (= set) by the environment. The general public thinks that sunlight affects the clock. Lots of research supports this, but circadian-rhythm researchers know something the public does not: that those rhythms are also affected by the time of food and social contact. All three (sunlight, food, social contact) are part of the environment. Their power over our sleep makes sense (e.g., we should be awake when food is available.) Vitamin D3 is not part of the environment. Its power doesn't make sense. No one in the paleo community expected this. Stone-Agers got a lot of sunshine, yes. They did not take Vitamin D3 pills. Sure, many in the paleo community praise Vitamin D3 but I have never heard anyone say you should take it in the morning.

4. Vitamin D3 is safe, cheap, and widely available. It probably has many benefits, not just better sleep.

5. Taking pills is easy. There presently are no safe sleeping pills. Nor are there any cheap sleeping pills. Nor will drug companies ever invent them, if the past is any guide.

1. <http://blog.sethroberts.net/2011/11/02/it-matters-when-you-take-vitamin-d-a-stunning-discovery/>

2. <http://www.primalgirl.com/2011/11/01/nprimalgirl-sleep-issues-vitamin-d/>

3. <http://blog.sethroberts.net/2011/11/03/vitamin-d-sunlight-and-sleep-more/>

4. <http://escholarship.org/uc/item/2xc2h866>

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MikeW (2011-12-13 07:30:25)

A note on your "safe, ... widely available" comment. It seems some folks still doubt D3's safety. When I order 2000 IU D3 online (from Swanson), I am warned it can't be shipped to Canada. Turns out Canada limits vitamin D capsules to 1000 IU. That seems silly to me, you can always take more than one. But I live in the US, so it doesn't matter. I only take D3 in the winter months, when Chicago's climate keeps me indoors most days. Usually at my first meal. I can't say I've ever noticed a difference on my sleep, but I've never tried more than 2000 IU/day.

gwern (2011-12-13 09:32:06)

MikeW: yeah, it is pretty silly. In old people, they've done acute doses of hundreds of thousands of IUs, with reductions in mortality. So... Chronic is not acute, that is true, but still. > 5. Taking pills is easy. There presently are no safe sleeping pills. Nor are there any cheap sleeping pills. Nor will drug companies ever invent them, if the past is any guide. What's wrong with melatonin?



Tyler (2011-12-13 09:40:57)

I will be trying this myself, keeping track of the timing and my sleep.

TD (2011-12-13 10:41:51)

Glad to see some science and disclosures and boundaries behind this finding, Seth. A short search on Nexus and others did not yield any scientific literature about this. I think I just have a knee-jerk reaction when someone reports on something and it's suddenly a "newthing." Could it be that Primal Girlz really did make a deliberate discovery by blogging about her experience? Could be. But now let's move on to other matters.

TD (2011-12-13 10:44:43)

I would also like to see more about D3 delivery methods and dosage. I currently take 10-15,000 IU/day and this seems perfect for me. Can you elaborate, perhaps in an eventual blog post so that the message is not buried in the comments, how do you take D3? Do you then have to eat something in the morning because it's fat-soluble? I don't like to eat in the morning, and I believe your personal findings also don't justify breaking the fast first thing in the morning. How to get D3 then?

Tim Beneke (2011-12-13 11:52:13)

I've been taking about 8,000 IU of it whenever I get up for several weeks now. I cannot separate out causes because I've also been losing about 2.5 pounds a week during this period, and have reduced my hemoglobin A1 C number (diabetes) substantially. But: I am amazed at the change in sleep, to wit, I need much less sleep and no longer need the roughly 1.5 hour nap in the afternoon. I do not have attacks of fatigue any more. I don't know if this is solely the effect of losing weight, or if the Vitamin D is playing a role. In previous weight loss experiences nothing so dramatic has happened, so I'm inclined to think that the Vitamin D is having an effect. Does anyone know at what levels Vitamin D intake becomes "toxic" or unsafe?

Seth Roberts (2011-12-13 12:33:06)

Tim, you wrote:

But: I am amazed at the change in sleep, to wit, I need much less sleep and no longer need the roughly 1.5 hour nap in the afternoon. I do not have attacks of fatigue any more. I don't know if this is solely the effect of losing weight, or if the Vitamin D is playing a role. In previous weight loss experiences nothing so dramatic has happened, so I'm inclined to think that the Vitamin D is having an effect.

With 4000 IU/day I have noticed I am less tired in the afternoon. But I still take a nap. You have convinced me to try 6000 IU/day. How much less sleep do you need? In other words, how much were you sleeping before you started the Vitamin D3 and how much are you sleeping now? Weight loss certainly reduces sleep need but it would still be nice to know the details here.

Seth Roberts (2011-12-13 12:43:41)

how do you take D3? Do you then have to eat something in the morning because it's fat-soluble? I don't like to eat in the morning, and I believe your personal findings also don't justify breaking the fast first thing in the morning. How to get D3 then? I take my D3 in 1000 IU tablets. Tablets, not capsules. I suspect tablets are digested faster. I do not eat anything else, although I have a small amount of cream an hour or so later. Yeah, D3 is fat-soluble. I suppose I have enough fat already in my system. I do not eat for several hours after I take the D3, just as you say.

Jonathan (2011-12-13 15:19:01)

"I suspect pills are digested faster." Seth: Dr. William Davis of Heart Scan Blog, who monitors his patients' blood levels of Vitamin D, claims that many pills don't budge the serum D—they don't get absorbed properly. He insists that Vitamin D should always be taken in oil (gelcaps or drops—I really like the Carlson drops, as I hate swallowing pills). He's done this monitoring with thousands of patients, so I trust his observations.

Jazi Zilber (2011-12-13 15:50:09)

the centrality of vitamin D is clear in the literature. Shortage of vitamin D is related to most mortality causes, and the evidence sounds that the vitamin shortage is causing the health issues. Also, vitamin D shortage is unnatural. Ancestors wore not that much cloth. in Africa there is much sun. and no long winters. Also, evolution changes northerners to blonds with pale skin to get more vitamin D. Also, evolution made northerners having more health negative cholesterol in order to absorb more vitamin D. Enough?

Seth Roberts (2011-12-13 16:59:16)

"I suspect pills are digested faster." Seth: Dr. William Davis of Heart Scan Blog, who monitors his patients' blood levels of Vitamin D, claims that many pills don't budge the serum D—they don't get absorbed properly. He insists that Vitamin D should always be taken in oil (gelcaps or drops—I really like the Carlson drops, as I hate swallowing pills). He's done this monitoring with thousands of patients, so I trust his observations.

I should have said "tablets" rather than "pills" but your comment still holds. Perhaps the fact that I eat a lot of butter explains why I am having good results with tablets – there is plenty of fat in my system already. Perhaps most of Dr. Davis's patients are on low-fat diets. And that is why they have trouble with tablets.

Tim Beneke (2011-12-13 17:15:01)

Hi Seth, You write: "How much less sleep do you need? In other words, how much were you sleeping before you started the Vitamin D3 and how much are you sleeping now? Weight loss certainly reduces sleep need but it would still be nice to know the details here." My best estimate is that I went from needing about 9 hours to about 7.5 hours of sleep which is about where I am now. Upon reflection, what is most striking is that it happened very suddenly, shortly after I started the Vit D. There was no gradual period where I needed shorter naps, no transitional period. Suddenly I didn't need the nap one day, and then didn't the next, until I observed that I needed 2 naps over a 2 week period – both times for various reasons I had gone to bed late and gotten up early and the naps were a function of sleep deprivation. It is hard to believe that the weight loss could cause such a sudden dramatic change. Over this period I have not been as good about getting actual morning sunlight, probably because I see myself getting it in a pill...

Seth Roberts (2011-12-13 18:56:39)

Tim, you write:

My best estimate is that I went from needing about 9 hours to about 7.5 hours of sleep which is about where I am now. Upon reflection, what is most striking is that it happened very suddenly, shortly after I started the Vit D. There was no gradual period where I needed shorter naps, no transitional period. Suddenly I didn't need the nap one day, and then didn't the next, until I observed that I needed 2 naps over a 2 week period — both times for various reasons I had gone to bed late and gotten up early and the naps were a function of sleep deprivation. It is hard to believe that the weight loss could cause such a sudden dramatic change.

I agree. That convinces me it was the Vitamin D, not the weight loss. I had a similar experience. One afternoon after I started taking it recently (at 8 am), I noticed I wasn't tired in the afternoon. I was surprised. I have still been taking naps anyway, even though I need them less. As I said I am going to increase my dose of Vitamin D (from 4000 IU/day to 6000 IU/day) to see the larger dose has a bigger effect. What brand Vitamin D do you use? Is it Vitamin D3? Is it gelcaps or tablets? How many IU's per pill? How much did it cost?

Tim Beneke (2011-12-13 20:18:14)

Hi Seth, I've been taking Vitamin D3 by Nature Made, tablets, 2000 IU each. I usually have a little bit of food with it, the mush I make, which has a fair amount of almond meal and flax meal and other stuff so that I'm getting fat with it. I grab anywhere from 4 to 6 tablets as soon as I'm up. (Yes, I'm that sloppy about it.) I don't recall the exact cost but I got this kind because the GNC health food store had a "buy 1 get 1 free" sale. I take the kind that is second from the left here:

<http://www.naturemade.com/Products/Segments/Vitamin-D> It was not terribly expensive, maybe \$15 for 440 tablets at 2000 IU each And FWIW: A group calling themselves "The Vitamin D Council" claims: "What exactly constitutes a toxic dose of vitamin D has yet to be determined, though it is possible this amount may vary with the individual. Published cases of toxicity, for which serum levels and dose are known, all involve intake of ? 40000 IU (1000 mcg) per day. 1 Two different cases involved intake of over 2,000,000 IU per day - both men survived." <http://www.vitaminDcouncil.org/about-vitamin-d/what-is-vitamin-d/vitamin-d-toxicity/> Sounds like little is known about Vitamin D toxicity.

Richard (2011-12-13 21:25:18)

Seth, Is it possible you need MORE Vitamin D (4000 worked but 2000 didn't) because you don't take it with food? I also noticed persistent insomnia when I ate Vitamin D containing foods in the evening, such as salmon and yogurt. I stopped eating those foods, and had no insomnia but I never made the connection until Primal Girl's experiences chronicled in your blog. I actually thought it was the flax seeds I added to the yogurt. Now I eat yogurt with flax seeds only in the morning, and my sleep is dramatically better. I swim several times a week at noon so my vitamin D levels are probably already high.

Seth Roberts (2011-12-14 04:31:34)

Is it possible you need MORE Vitamin D (4000 worked but 2000 didn't) because you don't take it with food?

It's not only possible, it's likely. But it's easy and cheap to take one more pill, so it makes little difference.

gwern (2011-12-14 08:53:13)

> No clear effect. Then I increased the dose to 4000 IU/day. The change was unmistakeable: I started to wake up feeling somewhat more rested and, for the first time, with a pleasant warm feeling. So far it's been eight days. Something is different and better. Incidentally, have I mentioned yet that you really ought to get a Zeo or even just one of those little motion trackers? That would make your sleep observations a lot more interesting.

wcb (2011-12-14 11:00:30)

Seth said: Perhaps most of Dr. Davis's patients are on low-fat diets. And that is why they have trouble with tablets. Actually Dr. Davis advocates a low carb diet for his patients, with a particular focus on eliminating wheat. Since there is a lot of interest in and discussion of how much D3 should be taken, I thought I'd mention that Dr. Davis advocates checking the serum level of vitamin D in the body by use of the 25-hydroxy Vitamin D test from time to time. He suggests one should target a blood level of between 50-80 ng/mL year round for best results. Obviously, as Dr. Davis points out, it is the serum level that is important, not the dosage which will vary by individual and time of year. On the other hand, I will admit that I dose myself by how I feel, rather than going through the aggravation of obtaining and paying for the test. :-)

Seth Roberts (2011-12-14 14:43:54)

Actually Dr. Davis advocates a low carb diet for his patients, with a particular focus on eliminating wheat.

The problem is that Dr. Davis fails to advocate a high-saturated-fat diet. So his patients accept the conventional wisdom that saturated fat is very very bad.

Sam (2011-12-15 02:04:44)

On our local packages there is no dosage in IU - How many micro-grams is 1 IU for vitamin D3?

JohnF (2011-12-15 10:00:12)

I've had some positive effects of an increased vitamin D-dosage (and/or fishoil) the last few days. brief history: Starting January I were at about 94 kg and 30 % bodyfat. Started doing light if (first meal 13-14 last meal 22), light exercise and some

bodyweight exercise. Lost some weight. Basically I'd start every morning with 1-2 cups of coffee with some milk and kept that up the whole time. By April I exchanged the light exercise for heavy weightlifting and also started eating much more protein. By August I was at 82 kg, lower bodyfat and much stronger. In early September I had a personal crisis and became somewhat depressed. Kept up the training and I, but started eating a lot of junk food and sugary drinks. Sometime in October I started taking fish oil caps, magnesium tablets and vitamin D3 gel caps. 4000 mg fish oil, 120 mg magnesium and 2400 IU D3, mostly taken in the morning or early part of the day. I didn't really notice anything different. (I'll note here that I live in Sweden and hence have very little sunlight exposure this time of year. I usually have very low energy during the winter.) By November I had gained about 12 kg, and while significantly stronger, clearly a big fat gain. Throughout October and November I'd become increasingly more listless, and in December it started becoming a big problem. At the level where I barely went outside and only did the dishes once a week and started missing the 2-3 times a week gym sessions completely. 2 days ago I upped the dosage in D3 to 4000 IU and doubled the fishoil intake to 4000 mg (about half being omega3). The first night I became more energetic and today the difference in energy level is HUGE. I've cleaned the apartment, cooked a bunch of food and my level of anxiety has dropped by a lot. The only negative is that I do feel a small excess of slightly nervous energy and the need to move. It's nowhere near a panic attack or manic state, but a little unpleasant (though far better than being lethargic). I haven't thought much about the sleep aspect, as far as I can recall I've slept OK the last few months, with some early awakenings. Last night and today I've woken up at 9 and 10:30, though I haven't noticed anything different about the actual sleeping.

JohnF (2011-12-15 10:14:41)

My diet is very heavy on somewhat to very fatty cuts of meat, something like an average 4 eggs a day, fairly large amounts of dairy fat (whole milk, butter, cream and fermented cream), a little fruit, some vegetables, occasional potato or rice. Sugary drinks and junk food = Coca-Cola (almost every day during the last few months), crisps (maybe 250-500 g a week), chocolate bars (4-5 a week). Mostly eaten to lessen anxiety, but occasionally due to intense cravings.

Guv (2011-12-15 15:05:33)

Sam, 25 mcg (micrograms) Cholecalciferol (Vitamin D3) = 1000 IU. You can work the rest out from there.

Guv (2011-12-15 15:39:09)

I read/heard that high doses of Vitamin D3 can increase urination. Though I cannot find the source of this info. So I do not know what the definition of a 'high dose' is in this case. Just something to be aware of though as you increase your D3 intake. If you find yourself getting up in the night to go to the toilet this could be a factor.

Guv (2011-12-15 15:48:14)

interesting post from Dr Kruse...including some info headed "How do you tell if you are taking too much Vitamin D to get to optimal?". Here's some of the text: "...Vitamin A deficiency affects vision by inhibiting the production of rhodopsin, the eye pigment responsible for sensing low light situations. Rhodopsin is found in the retina and is composed of retinal, which is an active form of vitamin A, and opsin a protein made by the retina. Basically, if you "over do" the use of Vitamin D3, you will not make enough rhodopsin (from a relative Vitamin A deficiency) and you will suffer from night blindness. I pick this up in patients who notice night time visual driving issues....." <http://jackkruse.com/what-can-you-find-about-your-own-health/> Paul Jaminet has also mentioned the A/D3/K2 balance in his posts & book.

Personal Science | stocker cary (2011-12-20 11:04:19)

[...] has been doing personal science for some time and picked up on the vitamin D thread and then added his personal findings to the [...]

Pippy (2011-12-23 23:54:13)

Late to the party here, but wanted to report my experience. I was feeling really down and depressed without knowing why when this post came out. Then I realized that I just don't get enough sunlight at this time of year, so I started on 5000 IU of D3 in the morning (Nature's Bounty Brand, gel caps, with breakfast) and the difference in my mood is amazing. I have much more energy and depressive thoughts are gone since I started on the D3. The difference was noticeable in 2 days. No apparent

difference in sleep or weight for me, however. Thanks for the reminder of the importance of vitamin D.

Adilah (2011-12-24 03:00:52)

Hi Seth, MOOD: I've been taking vitamin D for about a month now. When I first started taking it (1000-2000 IU), I noticed that my mood improved. I was getting depressed I think... there was a very heavy feeling, but I couldn't explain why that was the case or what I should do about. However, it was a very similar feeling to what I had years before when I had a very long depression, so I was quite sure I was walking down the path again. After regularly taking vitamin D as soon as I woke up, my mood improved considerably. It is like the heaviness just disappeared. I did not yet notice improvements in my sleep however, until I upped the dosage to 4000 IU. SLEEP: Since being on 4000 IU (taken as soon as I woke up on an empty stomach with a glass of water or green tea), I have noticed remarkable changes in my sleep. The first is that, as you and Primal Girl have put it, I started feeling sleepy by 9-10PM. As a night owl who sleeps at different hours (although always sleeping for 8 hours no matter), it was an interesting feeling to receive these indicators from my body that I should sleep at 9-10PM. However, I do not always comply with these indicators (see 3rd point). Secondly, like Guv mentioned above, I started waking frequently to urinate at night. This somehow always occur around 5-6AM. Thirdly, I have been measuring my sleep-wake interval for about 2 months now. In the period that I took 4000 IU, I noticed that my sleep quality improved drastically! Despite waking at night to urinate AND despite nights where I only managed a total of 6 hours sleep instead of 8, I would wake up with lots of energy! It was the kind of waking up from a sleep then feeling, "Oh, I cannot go back to sleep anymore now, let's get out of bed", whereas before, any time I slept less than 8 hours, I just could not get out of bed, was not alert, wanted to continue to sleep.... For me this effect is quite remarkable. I'm going to continue measuring this effect. I am also considering lowering the dosage to see what will happen.

Adilah (2011-12-24 03:09:30)

Hmm I was debating whether I should mention this because it is only a hypothesis on my part at the moment. On the days when i slept less than 8 hours but still woke up feeling very awake, I felt like my body WANTED to wake up despite whatever amount of sleep I got. It seems as if my body has shifted from a sleep-quantity state to a state where it needs to be awake no matter what at a certain time. I'm not sure if I am explaining this well. It is like the reverse of the sleep-indicators that my body was telling me around 9-10PM that I should sleep. Instead of telling me to sleep, it is now telling me to wake... For me this is quite a marked change. I have tried, unsuccessfully, for many years, to regularize my wake hour. My body used to refuse to be awake unless I had 8 hours of sleep. That 8 hours was so constant, it seemed as if ingrained in my body that I need 8 hours of sleep otherwise I would wake up in a "fog". Also, when I used to sleep without the alarm clock, I would wake up after 8 hours of sleep, no matter whatever the time I slept was. Now however... I think there is a subtle change. Instead of 8-hours quantity, my body seems to go by a different signal. I am not quite sure what it is. I have only noticed this recently and am still investigating it, however, I decided to type it up as well in case anyone else has had the same effect or any theories as to why this is occurring.

### **UC Berkeley Joke (2011-12-14 04:35)**

From a Berkeley professor: "On Monday, Wednesday, and Friday, we have budget cuts. On Tuesday and Thursday, student protests. On the weekend, police brutality."

## Gelman and Fung versus Levitt and Dubner: How "Wrong" is Freakonomics? (2011-12-15 05:00)

In the latest issue of American Scientist, Andrew Gelman (an old friend) and Kaiser Fung [1]criticize Freakonomics and Superfreakonomics by Steve Levitt and Stephen Dubner (who [2]wrote about my work). Although the article is titled "Freakonomics: What Went Wrong?" none of the supposed errors are in Freakonomics. You can get an idea of the conclusions from the title and this sentence: "How could an experienced journalist and a widely respected researcher slip up in so many ways?"

Gelman and Fung examine a series ("so many ways") of what they consider mistakes. I will comment on each of them.

1. The case of the missing girls. I agree with Gelman and Fung: Levitt and Dubner accepted Emily Oster's research too uncritically.
2. The risk of driving a car. I think Gelman and Fung miss the point. Yes, the claim (driving drunk is safer than walking drunk) was not well-supported by the evidence provided because the comparison was so confounded. However, I read the whole example differently. I didn't think that Levitt and Dubner thought drunk people should drive. I thought their point was more subtle – that comparisons are difficult ("look how we can reach a crazy conclusion").
3. Stars are made not born. I think Gelman and Fung fail to see the big picture. The birth-month effect in professional sports, which Gelman and Fung dismiss as "very small," is of great interest to many people, if not to Gelman and Fung. It suggests what Levitt and Dubner and Gladwell and others say: Early success matters. That's not obvious at all. There are lots of similar associations in epidemiology. They have been the first evidence for many important conclusions, such as smoking causes lung cancer. Are professional sports important? Maybe. But epidemiology and epidemiological methods are surely important. By learning about this effect, we learn about them. Lots of smart people fail to take epidemiology seriously enough (e.g., "correlation does not equal causation").
4. Making the majors and hitting a curve ball. Gelman and Fung point out that one sentence is misleading. One sentence. This is called praising with faint damn.
5. Predicting terrorists. Gelman and Fung say that the terrorist prediction algorithm of a man named Ian Horsley, which Levitt and Dubner seem to take seriously, is not practical. But their review fails to convince me it was presented as practical. Since there are no data about how well the algorithm works, and Levitt and Dubner are all about data....
6. The climate change dust-up. I agree with Gelman and Fung that Nathan Myrvoid's geoengineering ideas are unimportant. ([3]My view of Myrvoid's patent trolling.) But in this case, I'd say both sides – Gelman and Fung and Levitt and Dubner – miss what's really important, namely that the usual claims that humans are dangerously warming the planet are held far too strongly. The advocates of this view are far too sure of themselves. I have blogged about this [4]many times. In a nutshell, the climate models that we are supposed to trust have never been shown to persuasively predict the climate ten or twenty years from now (or even one year from now). There is no good reason to believe them. That Levitt and Dubner seem to take that stuff seriously is the only big criticism I have of their work . At least in that geoengineering stuff Levitt and Dubner were dissenting from conventional wisdom. Gelman and Fung do not. They fail to realize that something we've been told thousands of times is nonsense (in the sense of being wildly overstated). It was Levitt and Dubner's comments about this that led me to look closely at all that climate-change scare stuff. I was surprised how poor the evidence was.

The biggest problem with Gelman and Fung's critique is that they say nothing about the great contribution of Steve Levitt to economics. They fail to grasp that he has made economics considerably more of a science, if by

science you mean a data-driven enterprise as opposed to an ideologically-driven or prestige-driven one (mathematics is prestigious, the more difficult, the more prestigious). He did so by pioneering a new way to use data to learn interesting things. His method is essentially epidemiological, except his methods are considerably better (better matching, less formulaic) and his topics much more diverse (e.g., sumo wrestling) than mainstream epidemiology. A large fraction of prestige economics is math, divorced from empirical tests. [5]This stuff wins Nobel Prizes, but, in my and many other people's opinion, contributes very little to understanding. ([6]Psychology has had the same too much math, too little data problem – minus the Nobel Prizes, of course.) To persuade a big chunk of an entire discipline to pay more attention to data is a huge accomplishment.

Levitt's methodological innovation makes Freakonomics far from what Gelman and Fung call "pop statistics". It is actually an amusing and well-written record of something close to a revolution. In the 1980s, a friend of mine at UC Berkeley took an introductory economics class. She told me a little of what the teacher said in class. All theory. What about data? I said. It's a strange science that doesn't care about data. My friend went to office hours. She asked the instructor (a Berkeley economics professor): What about data? Don't worry about data, he replied. Gelman and Fung fail to appreciate what economics used to be like. The ratio of strongly-asserted ideas to persuasive data used to be very large. Now it is less.

Thanks to Ashish Mukharji.

1. <http://www.americanscientist.org/issues/pub/freakonomics-what-went-wrong/1>
2. <http://www.nytimes.com/2005/09/11/magazine/11FREAK.html?pagewanted=all>
3. <http://blog.sethroberts.net/2011/07/25/billionaire-genius-and-this/>
4. <http://blog.sethroberts.net/category/global-warming/>
5. <http://blog.sethroberts.net/2011/10/13/nobel-prize-report-card/>
6. 5vt0z72k

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Adam (2011-12-15 05:11:38)

All of science is based on correlation, not causation. Causation can't be proven. We can only say that something is very unlikely to be due to chance (i.e.  $P < 0.005$ ) and has a rational explanation.

dearieme (2011-12-15 06:01:09)

As you know, they are not Nobel prizes, the economics ones. The fact that economists insist you call them Nobel prizes is testimony to that profession's attitude to the truth.

Wilbur (2011-12-15 08:10:06)

I read the American Scientist article and found it unseemly. Levitt and Dubner's shtick is to popularize ideas they find interesting. Neither the book nor the blog can be held to the same standards as peer reviewed literature. Gelman and Fung's criticism reminds me of the way so many PhD's used to nitpick Marilyn Vos Savant's column during its heyday. There were entire blogs devoted to pointing out her supposed errors. It was just a column in Parade, for God's sake, a publication used mostly to line bird cages. Intellectuals should have celebrated the fact that Middle America was being exposed to some mathematics instead of factoids about celebrities. In today's intellectual climate, dissenting from the conventional wisdom on global warming is about the worst sin you can commit. I'm sure you know this. The fact that Gelman and Fung saved the geoengineering stuff for last suggests to me that that was their main problem with Freakonomics. Bringing up the fact that scientists in the 1970s were worried about global cooling might just lead the reader to suspect that science doesn't know everything about climate. And we can't have that now, can we.

charlie (2011-12-15 11:09:01)

and the number of things outside experts can poke hole in is very limited.

Seth's Blog review of Gelman and Fung review of Levitt and Dubner: How "Wrong" is Freakonomics? | Michael Kevane (2012-04-13 22:08:07)

[...] Seth's Blog » Blog Archive » Gelman and Fung versus Levitt and Dubner: How "Wrong" is Fr... Share this:TwitterFacebookLike this:LikeBe the first to like this [...]

## **Justification For Self-Experimentation and My Belief that N=1 Results Will Generalize (2011-12-16 05:00)**

At the Quantified Self blog, in response to [1]a video of me talking about QS and the Ancestral Health Symposium (paleo), someone named Colin made [2]the following comment:

Very interesting talk. I am just curious how someone can claim a study conducted with a sample size of one is "100 times better" than someone else's study. I do not know anything about the other study mentioned, but I do know that a study based on  $n=1$  cannot be considered scientific proof. And sure, he hears from people who have lost weight drinking the sugar water he prescribed, but it is quite possible there are 100 times as many people who didn't email him because they didn't see any positive results and decided to try something else. I think the QS stuff is very interesting and helpful on a personal level, but it seems like a stretch to generalize your results to others.

I responded:

I have two responses.

1. Sample size isn't everything. Sure, a study with  $n=1$  isn't "scientific proof". Nor is any other study, in my experience. "Scientific proof" has always required many studies. New scientific ideas have very often started with  $n = 1$  experiments or observations. Later, larger experiments or observations were done. Both — the initial  $n=1$  observation and the later  $n = \text{many}$  observations — were necessary for the new idea to be discovered and confirmed.

2. The history of biology teaches there are few exceptions to general rules. See any biology textbook. For example, a textbook might say "lymphocytes fight germs". This means no serious exceptions have ever been found to that rule. So, as matter of biological history, the person who managed to figure out what one particular lymphocyte does turned out to have figured out what they all do. Biology textbooks have thousands of statements like "lymphocytes fight infection" meaning that this sequence of events (you can generalize from one to all, or nearly all) has happened thousands of times. There is no shadow hidden history of biology that teaches otherwise.

1. <http://quantifiedself.com/2011/10/seth-roberts-on-qs-paleo>

2. <http://quantifiedself.com/2011/10/seth-roberts-on-qs-paleo/#comment-3984>



Eric (2011-12-16 05:40:09)

I think the first response is much more convincing than the second, and is really all that needs to be said on the topic. You might also explain that  $n=1$  is much better than  $n=0$ , and that many of the things QS folks are studying simply wouldn't be studied at all if they weren't doing it on their own! The second response seems shakier to me. The person who figured out what lymphocytes do must have done so with a series of observations that weren't so conclusive, and any one of them might have been NON-generalizable. Only once they were shown to be generalizable after all could they be used to support the conclusion that lymphocytes fight germs, for ex.

Jay (2011-12-16 09:29:31)

I think " $n=1$ " self-experimentation is entirely consistent with a Bayesian framework, which is all that is needed to claim the approach is scientific. A pet peeve along those lines: too many people get away with the phrase "scientific proof." Science is inductive inference etc etc Also, I thought you would respond by mentioning that 1 subject is different from 1 observation. Hundreds of observations can be observed from one subject and still be "scientific". No neuroscientist complains that H.M. was just "one" subject.

Tuck (2011-12-16 13:09:06)

Marshall got a Nobel for  $N=1$ ...

Jazi zilber (2011-12-17 01:39:48)

limits to  $n=1$  1) it is expected that very many changes will work specifically to specific persons. Hence, much Of the promise of self experimentation is exactly is that. For some people eating carbs for example makes them healthier (with limitations), for reasons related to complexity and individuality. There is a lot of situational I agree that many  $n=1$  things will replicate. But I think that many are inherently individualistic. 2) there is nothing to be ashamed about individualistic effects. The generalization is that for anyone there are some things that can be found. Ad that lack of evidence in others does not imply it will not work for this person.....

Txomin (2011-12-17 04:08:11)

What is scientific (or not) is the method. Proofs can be obtained by means of the scientific method on a  $n=1$  or  $n=100$  basis. It makes no difference.

Jazi zilber (2011-12-19 00:22:56)

3) you can get statistically significant results with  $n=1$ . Ayne who does not get this is an imbecile. There are limits. But the limits are limited. 3.1) generality. Indeed, the formal claim of an  $n=1$  result is local. This is what is verified. Yet, like any scientific result it may be true for other similar cases..... Other limit not now on my mind. Note the difference between my tone and the "non scientific" nonsense. There is a confusion between "instruction for making the perfect experiment" and "scientific". There are endless instructions students get, most of them irrelevant to study validity. Maybe 20 % of the instructions are relevant to validity (i.e. blinding, deciding the measures in advance, etc.) while most (i.e. ethics committee, balancing for sex and hair color etc.) are niceties. What happens is that students get entrapped in the whole instruction set. 1) they lose the sense of what and why is scientifically important. 2) experiments are perceived and taken as much harder than they should scientifically be

Colin (2011-12-20 21:38:00)

Interesting, of course the hard part about experiments, research, studies and trials where  $N=1$  is doing it all with the blindfold on.

### **Sleep, Mood, Restless Legs and ADHD Improved By Internet Research (2011-12-19 03:13)**

At the SLD forums, [1]Anima describes using several safe cheap treatments to improve his mood and sleep. First, he tried wearing blue blocker (amber) glasses in the evening. They made him fall asleep more easily and reduced or

eliminated hypomania. However, he was still depressed. Second, he tried getting twenty minutes of sunlight early in the morning. His mood improved. But he still had trouble synchronizing his sleep/wake cycle with the sun – that is, being awake during the day and asleep at night. He would stay up an hour later every night and wake up an hour later every day, meaning that half the time he was asleep during the day and awake at night. Finally, he tried adjusting when he ate:

I recently found the missing key to this: meal timing. I saw a talk that Seth gave where he talked about curing his problem with waking too early by skipping breakfast. My problem was difficulty waking. I read an article that suggested that our circadian rhythms are not just tied to light, but to food times as well. I used to eat late at night and never eat breakfast. I started eating breakfast immediately upon waking (ick) and stopping all food at least 12 hours before I wanted to wake. Basically, I did what Seth did only opposite. It worked. . . . I was even able to adjust my cat's circadian rhythm – he used to wake me up too early for his breakfast – by gradually moving his supper time.

In [2]another post he describes using B vitamins to treat his restless legs syndrome and ADHD:

I have been taking a supplement with all the B vitamins in amounts much higher than typically recommended. I have also been taking Epsom salt baths for magnesium. I have not experienced restless legs AT ALL since starting. This is quite remarkable to me, because it was such a problem. My ADHD is also much improved.

The idea of treating restless legs syndrome with niacin (a B vitamin) came from [3]Dennis Mangan. Anima had noticed that ADHD and restless legs syndrome often occur together.

He makes some reasonable comments about psychiatrists:

Why are psychiatrists still acting like neurological problems exist in isolation, when clearly they are all related? [In the sense that you can use what is known about how to cure Problem X to help you cure Problem Y, if X and Y often occur together.] I used to take Lamictal, Depakote, Adderall and Ambien every day. That doesn't include all the meds I tried that didn't work. I'm currently wearing amber glasses at night and taking a B complex, flax oil (SLD-style) and bathing in epsom salts three times a week. My mood is more stable than it was on medication, and my ADHD is controlled about the same. My sleep is much better. My psychiatrist told me that I would be on medication for the rest of my life. When I told him that I was using dark therapy and light therapy and had stopped taking my medication, he told me that I was "playing with fire," and that I would end up in a mental institution or commit suicide if I didn't resume my medication, despite the fact that I had stopped taking it for longer than it would be effective. I asked him if he had read the research on dark therapy. He hadn't, but he assured me that it is pseudoscience. I guess the definition of "pseudoscience" is any treatment that doesn't make him money. I puckishly asked him if I seemed manic or depressed, and he was forced to admit that I did not.

The ability of this psychiatrist to ignore contradictory evidence in front of him resembles [4]what happened to Reid Kimball. He told a UCSF gastroenterologist that he was successfully managing his Crohn's with diet. In my experience, Crohn's can't be managed with diet, the doctor said at the end of the appointment.

1. <http://boards.sethroberts.net/index.php?topic=8193.msg104982#msg104982>

2. <http://boards.sethroberts.net/index.php?topic=8204.msg105131#msg105131>

3. <http://blog.sethroberts.net/2010/05/17/restless-legs-syndrome-niacin-and-web-search/>
4. <http://boingboing.net/2011/10/10/seth-roberts-grandmother-knows-best-about-crohns-disease.html>

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Just Me (2011-12-19 08:31:35)

The book "The Brain That Changes Itself" had a fascinating bit about attention deficit - researchers found that having kids memorize long poems and practice a new alphabet (handwriting, not computers) was more effective than drugs for treating AD - the author remarked that a generation ago, it was common for kids to learn poetry (most of our grandparents can still recite poems they had to memorize for school) and of course, there was great emphasis on penmanship. These things were jettisoned in the sixties, when educators figured the typewriter and recording devices rendered these skills unnecessary.

Ed (2011-12-19 11:04:27)

Hello Seth, Thanks for this post and your writing on this site. Have you tried using the Vitamin D in the morning and the leg stands together for better sleep? After reading for a while I started taking Vitamin D in the morning. I have been using the sleep cycle app on my iPhone. Yesterday I walked about 9.5 miles, and I fell asleep quickly and woke up rested, and according to my app it seemed I sleep more deeply as well. Have you heard of anyone mixing vitamin D and walking?

BlueMorrissey (2011-12-19 11:05:12)

As someone who is bipolar, I look forward to trying these suggestions. I have not had depression since using Seth's suggestions on morning faces. The only problem has been some mania and anxiety. I have these same problems with sleep. Going to bed very late and sleeping very late. Started back on ambien recently. Cutting out sugar has really seemed to help my anxiety of late. I realized I had really increased my sugar intake when my anxiety began. Of course starting back exercising has helped too. Cold showers helped my depression last year at this time. I was off medication for the first time in 9 years this summer, but the aforementioned problems from life stresses led me to get back on Cymbalta and Lamictal along with use of xanax when needed. The xanax seems to be the only thing that helps. Hope to eventually be able to get healthy on natural remedies only. Slowly and carefully.

Nancy Lebovitz (2011-12-19 14:15:46)

One more thing that might not be incurable- I can make tinnitus stop for months by relaxing the big neck muscle on the same side as the ear. I generally just move my attention down that muscle a number of times, but massage or visualization might be worth exploring, too. Writing this makes me realize that I should explore moving my attention along other muscles I want to relax. Note- I've never had major exposure to loud sounds, the tinnitus seems to be related to anxiety, perhaps especially anxiety about money. Another note to make all this more plausible- when I move my head, I've occasionally felt the way neck muscles connect to my ear.

Tom (2011-12-19 23:14:13)

*guess the definition of "pseudoscience" is any treatment that doesn't make him money.* Best quote ever.

Joseph Buchignani (2011-12-23 17:34:43)

This worked for me. I can't take vitamin D pills, but limiting nighttime blue light exposure gets me to sleep faster, and eating quickly after waking and stopping eating 12 hours before I want to wake up allowed me to shift my Circadian to normal hours. Awesome!

Anima (2011-12-24 17:07:17)

I am honored that Seth has referenced my posts on his blog, but I wanted to make one minor correction: I'm a girl. (I chose the user name because of Carl Jung's use of it, but I can see how it could be confusing, because men have an anima, but it represents feminine qualities.) My gender is not salient, but ADHD manifests differently in women, and both it and Non-24 are

far more prevalent in males, so I think it worth noting.

Lots of Links « Sceptically Fit (2011-12-30 07:46:32)

[...] Why Women need Fat. Seth takes a look at successful experiments in treating sleeping disorders like Restless Leg with b vitamins, meal timing and regulating light exposure. Here's two years of results of the Shangri-la diet – using flavourless calories to [...]

### Assorted Links (2011-12-20 05:00)

- Harvard professors behaving badly: [1]Alan Dershowitz. "In a phone interview Dershowitz denied writing to the Governor [of California], declaring, "My letter to the Governor doesn't exist." But when pressed on the issue, he said, "It was not a letter. It was a polite note."" Dershowitz wrote the Governor of California to try to keep the University of California Press from publishing Beyond Chutzpah by Norman Finkelstein, which calls The Case for Israel by Dershowitz "among the most spectacular academic frauds ever published on the Israel-Palestine conflict". Finkelstein's book says nothing about whether Dershowitz actually wrote it. According to a statement from the UC Press, "[Finkelstein] wondered why Alan Dershowitz, in recorded appearances after [The Case For Israel] was published, seemed to know so little about the contents of his own book."
- [2]Umami Burger takes Manhattan.
- The trouble with measuring students on only one dimension: [3]South Korea
- [4]Why do twins differ? Both twins have autism spectrum disorder, but one has the disorder much more than the other. Guess which one was "given powerful drugs to battle an infection"?

1. <http://www.thenation.com/article/giving-chutzpah-new-meaning>

2. <http://www.newyorker.com/online/blogs/culture/2011/12/the-unstoppable-umami-burger.html>

3. <http://www.economist.com/node/21541713>

4. <http://ngm.nationalgeographic.com/2012/01/twins/miller-text>

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fot (2011-12-20 07:27:16)

Finkelstein's career has been ruined ever since he started taking on the powerful Israeli lobby. Several universities have been pressured out of hiring him. Meanwhile a liar and fraud like Dershowitz has a comfortable well paid seat at Harvard where he advocates legalized torture. With the recent death of Christopher Hitchens Steve Sailer wrote that no one has paid a price for being wrong on the Iraq war, - and no one who was right (that it would be a disaster) was rewarded or even acknowledged. Likewise, to date, not one top figure in the mortgage meltdown/crisis has gone to jail, despite obvious criminal activity. This is what a corrupt society looks like.

Jay (2011-12-20 09:03:18)

Thank you for the South Korean article – very interesting read.

dearieme (2011-12-21 02:06:41)

Does anyone like Dershowitz? Even his mother?

garymar (2011-12-21 05:51:39)

That South Korean article reminded me once again that South Korea is so much like Japan – just smaller and a lot more intense!

## Two Years on the Shangri-La Diet (2011-12-21 05:00)

Alex Chernavsky, who often comments here, has updated [1]his Shangri-La Diet (SLD) page. It now shows his weight over four years: two years before he started SLD and two years that he has been doing it.

Before he started SLD he was slowly gaining weight. After he started SLD, he went from 220 pounds (BMI = 32) to 193 pounds. He slowly gained a few pounds. Then (on my advice) he added a tablespoon of nose-clipped coconut butter and the steady climb stopped. Ffor about nine months has been steady at 195 pounds (BMI = 28). In other words, there is no sign that he is regaining the lost weight.

Because Alex has added a lot of omega-3 to his diet (via flaxseed oil), I'm sure his health has improved in other ways. Because he is a vegan, he had no interest in a conventional (Atkins) low-carb diet.

Alex reminded me that a doctor named Quigley left [2]the following comment:

I've tried to find data that your diet works for SUSTAINED weight reduction in a study that would be applicable to a generalizable population. As you know, temporary weight loss is relatively easy. Sustained weight loss (wt loss > 2 yrs), is hard. If your diet can do it, I'd prescribe it every day.

1. <http://www.astrocyte-design.com/shangri-la-diet/index.html>

2. <http://blog.sethroberts.net/2011/06/30/health-care-stagnation/#comment-917709>

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Michal (2011-12-21 05:52:27)

We should hold ourselves up to a higher standard. This guy sounds like he is still fat.

Alex Chernavsky (2011-12-21 06:11:55)

This is what I look like now. (This is the only full-body shot I could find.) [http://www.astrocyte-design.com/shangri-la-diet/alex\\_2011.jpg](http://www.astrocyte-design.com/shangri-la-diet/alex_2011.jpg)

August (2011-12-21 07:39:20)

Dr. Quigley should read my thread as well. I did SLD throughout my weight loss (I think that took about two years) and have been weight stable via eating paleo for the past two years at around 170 (it fluctuates a bit but always goes back down). I started at 285. I'm 6'3. If Dr. Quigley were actually the sort of person who understood he at least could be wrong, I'd be happy to talk to him. The difference between the old me and the new me is so striking that it shocks even me when I look in the mirror, and I find myself having to get comfortable with getting a lot more attention. Unfortunately, very few people appear to be able to take the transparently obvious evidence before their eyes.

Stephen M (Ethesis) (2011-12-21 09:58:28)

btw, <http://www.facebook.com/group.php?gid=47847323770> August, same here.

Steph (2011-12-21 16:01:44)

As I have just sent two copies of the book off to family members, I'm glad to see that the diet works in the long term. Thank you, Alex, for sharing this.

### **More Neglect of the Immune System: Bioterrorism Fear (2011-12-23 05:00)**

At UC Berkeley several years ago, I learned about an introductory epidemiology class. I knew the professor. I phoned him. "Are you going to discuss factors that make the immune system work better or worse?" I asked. "No," he said. I wasn't surprised. In my experience, epidemiologists completely ignore this question. As if the immune system had never been discovered. It sounds absurd, but there it is.

Epidemiologists aren't the only ones. All well-publicized attempts to "battle" or "combat" or "defeat" or "beat" viruses, such as cold or flu viruses, neglect this possibility, in my experience. Whole books on the subject do not mention the immune system. The latest example of the blindness is [1]an article by Michael Specter at the New Yorker website about fear caused by discovery of how to make a bird flu virus spread more easily. Maybe the knowledge could be used by terrorists. Specter writes as if the immune system doesn't exist. He doesn't mention it and ignores the possibility of defending against new viruses by improving immune function. For example, he writes:

Instead of focussing so heavily on human terrorists, we ought to take this opportunity to defeat a natural pathogen—one we can now recognize and manipulate with all the sophistication of molecular biology.

You don't need molecular biology to study immune function. He also writes:

There are three conditions necessary for a flu outbreak to become a deadly pandemic, like the one in 1918 that killed between fifty and a hundred million people. Those conditions rarely converge. First, a new virus—one that has never before infected humans and to which nobody would have protective antibodies—must emerge from the animal reservoirs where they originate. That virus has to make people sick. (The vast majority do not.) Finally, it must be able to spread rapidly and efficiently—through a cough, a handshake, or a kiss.

He writes as if whether a virus makes people sick and spreads rapidly depends solely on the virus. This is false: How well your immune system is working makes a big difference. If a virus is fought off quickly, you won't notice – you won't "get sick". Because you are infected more briefly, you will spread it less. (Possibly much much less. If a virus doubles in number [2]in 4 hours, then two fewer days of infection equals a huge reduction in the number of virus particles inside you while you are contagious.)

In this blindness, I'm sure Specter reflects the blindness of the scientists he talks to. They simply talk and think about what they do, which is molecular biology.

I became aware of the power of improving the immune system [3]when I improved my sleep and stopped getting colds. More recently, I have become sure that eating fermented foods improves immune function. I suspect that a lot of traditional medicine, such as Traditional Chinese Medicine, is effective because it improves immune function. (For example, [4]the use of bee venom to treat arthritis.) Everyone knows at an answer-test-question level that the immune system exists. A lot has been learned about how it works. But the vast majority of doctors and other health experts (and journalists) ignore this knowledge in practice.

1. <http://www.newyorker.com/online/blogs/newsdesk/2011/12/the-trouble-with-scientific-secrets.html>
2. <http://jvi.asm.org/content/78/5/2247/F1.expansion.html>
3. <http://escholarship.org/uc/item/2xc2h866>
4. <http://www.medicinenet.com/script/main/art.asp?articlekey=50602>

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Charlie (2011-12-23 06:56:26)

You conflating two things. You get bird flu, you die. No immune boosting there. More lucky genes. Is herd immunity better for populations or better health overall. A bit of both. The difference between individuals and groups.

Adam (2011-12-23 07:59:27)

Antibodies aren't the only mechanism of immunity. What exactly is Seth "conflating" (sic)?

Greg Harrington (2011-12-23 09:58:15)

Any thoughts on how a layperson can track/measure "immune function"? Seth has mentioned several times that he "stopped getting colds", but this is a pretty long-term measure. Any thoughts on some type daily measure of "immune function"?

Seth Roberts (2011-12-23 12:57:31)

Any thoughts on how a layperson can track/measure "immune function"?

I've looked into this. I have been unable to find a practical measure other than measuring how often I get sick and when I get sick how fast I get better.

Tim Beneke (2011-12-23 13:05:51)

Robert Trivers has a book out on self deception that focuses a lot on the immune system: "The Folly of Fools: The Logic of Deceit and Self-Deception in Human Life" [http://roberttrivers.com/Robert\\_Trivers/Welcome.html](http://roberttrivers.com/Robert_Trivers/Welcome.html) He spoke at Microsoft recently. <http://research.microsoft.com/apps/video/dl.aspx?id=156489> About 28 minutes in, he starts talking about self deception and the immune system. It is empirically clear to him that engaging in self deception (which we do primarily to successfully maintain deception of others, which has advantages) or holding in deep dark secrets for that matter, harm the immune system – but he does not yet know why or how it is biochemically mediated. He is looking for chemicals that are active in the brain and immune system to find an answer. He also looks at Pennebaker's work showing that writing about painful experiences initially lowers your mood because it is painful; but simultaneously improves your immune system. And over time your mood catches up with your improving mood system. Improving the immune system improves mood. No surprise – poor sleep and poor nutrition both harm mood and the immune system. The concept of immune function is one that needs clarification. Dean Edell, the doctor who had a call-in show and who reviewed medical findings, is scientifically very conservative in making claims and generally wants strong, controlled, double blind, research before he will endorse things. He is to me, competent at that conventional, rather uncreative level of analysis. When someone would claim that a substance would "enhanced immune function" or "strengthen your immune system" he saw this as either nonsense, or as negative, meaning that it would cause auto-immune dysfunction and disease. He could not give "strengthening the immune system" a positive, substantive meaning or interpretation. Yet the evidence is now clear that certain things protect us from disease. Perhaps most strikingly, being happy, according to Ed Diener and others, correlates with a longer life by a number of years. The "immune system" must be many different systems operating together.

Duncan (2011-12-23 13:24:05)

I read an article some years ago (partly) about the Australian swimming team, in New Scientist. I believe it said they regularly measured the athletes' IgE levels as an indicator of their immune system function. Low levels suggested vulnerability to infectious disease and they were prescribed light training until levels recovered. Prior to this, swimmers suffered colds as often as once a month because they didn't know when they were overstretching themselves. Unfortunately I can't access the article online, so my memory may be betraying me somewhat. I have the notion that it was a salivary test, but I haven't been able to find any kind of testing kit that would be available to the layperson, or even the medical professional. (Presumably the swimmers were tested daily, with fast turnaround of results.)

Seth Roberts (2011-12-23 14:10:07)

Thanks, Duncan. I have heard of IgE levels being used to measure immune function, but not in such a practical way. I don't know of any easy way to measure them.

Brice (2011-12-23 17:13:43)

An interesting and related anecdote just today at <http://www.jamesaltucher.com/2011/12/how-i-cured-my-constipation/> regarding immune system, Lyme disease, western medicine

Sheila Buff (2011-12-23 17:18:03)

The great influenza epidemic of 1918 killed the young and healthy in disproportionate numbers precisely because they were young and healthy and had good immune systems. The disease provoked an overwhelming immune system overreaction that killed quickly. (See *The Great Influenza* by John Barry for details.) So maybe boosting your immunity, assuming that can actually be done in any meaningful way, could be detrimental in some cases.

Ruth @ Ruth's Real Food (2011-12-23 23:36:53)

The 1918 general public were born vaginally, breastfed, never exposed to antibiotics. These people ate home cooked meals, many ate raw dairy and homemade fermented foods. The livestock they got their meat from wasn't raised in a huge factory, fed the wrong foods. They were doing all the right things (because that was the only option) except that they probably ate too much white sugar and flour and had some bad oils. All in all, they were already doing much of what I'm doing to promote good gut health and a good immune system, yet the death rate from the influenza epidemic was enormous. I completely agree that you can't talk about epidemiology without considering the immune system, but a good immune system can't ward off everything.

Eugene Woodbury (2011-12-24 11:30:06)

From the mid-19th century to the early 20th, Japan experienced cholera epidemics on the scale of the 1918 flu pandemic. This was probably the result of populations exploding in the cities. I've heard Japanese unironically compare the British engineer W. K. Burton, who designed Tokyo's first modern sewer system, to Jesus. Another critical factor is that early in the 20th century, rickets had reached epidemic proportions across the "developed world" due to changes in diet—especially an emphasis on processed grains—and lack of exposure to sunlight in the cities. In Japan, beri-beri, also related to dietary "improvements" (polished rice), became endemic.

Nathan Myers (2011-12-27 22:08:14)

I am finding it hard to believe that any epidemiologist could forget the role of immune function. Hygiene and vaccination are the epidemiologist's belt and suspenders: half of their prescription is to improve immune response. Maybe you mean they should also pay attention to countering practices that suppress immune function? We know that long-term stress suppresses immune function, and a long but poorly-known list of bad habits produce long-term stress. What should epidemiologists be doing to counter these habits? Do they have any chance of restoring population-wide immune function, through reduced stress, to a degree that would be detectable vs. the results they get concentrating on vaccination and hygiene? It is hard for me to imagine epidemiologists succeeding at reducing a population's long-term stress levels. That seems to be a political and educational challenge much harder than enforcing hygiene. In principle, though, it seems possible to break the connection



between long-term stress and suppressed immune function by directly modulating everybody's stress response. Perhaps, as is seen in some people, long-term stressors need not actually trigger the response that suppresses immune system function and damages health in numerous other ways. Is that what you meant?

Seth Roberts (2011-12-27 23:50:40)

Nathan, epidemiologists could pay more attention to sleep, for example. Do differences in sleep explain why some people get sick more than others? Do differences in sleep explain why some epidemics spread faster than others? There is no doubt that better sleep improves immune function.

Nathan Myers (2011-12-29 20:54:37)

I suppose I am assuming that sleep disruption causes the stress that has been suppressing the immune system. Better sleeping reduces stress, and thereby enables increased immune-system activity. It's not too surprising to me that epidemiologists don't pay much attention to reducing stress. Efforts to reduce collective stress necessarily operate on a time scale much longer than epidemiologists have to work in. Epidemiologists could point out every time a plague spreads that sleeping and eating better, and establishing a more secure social standing, improve your chances of survival, but at the point they get involved, they need measures that have large and immediate effects (e.g. vaccination, quarantine) to help contain a crisis. Stress reduction is more a topic for (i.e. neglected by) the family doctor. If by some cheap and easy intervention, long-term stress could be prevented from suppressing the immune system (and, perhaps, other systems), that could result in a large and immediate public health boon. People are attempting a superficially similar sort of intervention chasing a long-term goal by taking statins.

### Assorted Links (2011-12-24 05:00)

- [1]Comparing one elbow to the other. I have no idea what "clinical epidemiology" is. The level of self-deprecation is remarkable. From the BMJ Christmas issue.
- [2]The value of cod liver oil. From the BMJ Christmas issue.
- [3]More evidence for radiation hormesis (beneficial effects of small amounts of radiation).
- [4]Evolutionary medicine reaches the BMJ. The word paleo does not appear.
- [5]Medical journals: "information-laundering operations for drug companies"

Thanks to Robin Barooah and Mike Bowerman.

1. <http://www.bmj.com/content/343/bmj.d7653?etoc=>
2. <http://www.bmj.com/content/343/bmj.d7505?etoc=>
3. <http://newscenter.lbl.gov/news-releases/2011/12/20/low-dose-radiation/>
4. <http://www.bmj.com/content/343/bmj.d7671?etoc=>
5. <http://www.nytimes.com/2006/05/02/health/02docs.html?pagewanted=print>

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Jim Purdy (2011-12-24 05:33:58)

YOU SAID: "Evolutionary medicine reaches the BMJ. The word paleo does not appear." I don't get hung up over the word "paleo." The concept is still there. as evidenced by the fact that the much more important words "evolution" or "evolutionary" appear 70 times.

dearieme (2011-12-24 13:31:32)

Cod liver oil was still standard issue in British childhood in the 50s. So, for a different reason, was California Syrup of Figs. Olive oil was used mainly for treating earache.

## Christmas: An Evolutionary Explanation (repost) (2011-12-25 05:00)

I wrote this five years ago. Perhaps it is a holiday tradition to repost [1]old posts about the deadweight loss of gifts.

In a kitchenware store a few years ago I came across the [2]Rotary Nutcracker, a futuristic-looking device that cracks nuts in a new way. The girl at the cash register gave me a few walnuts to test it. It didn't crack any of them. This was a curious product, I thought. Who would buy it? The salesperson told me that they'd stocked it for less than a year. I was the first person to test it. It had sold well during holiday season. Now I understood: people didn't buy it for themselves, they bought it as a gift. As a gift, it mattered much less how well it worked — "it's the thought that counts." No wonder I was the first to test it.

Here, I saw, was [3]my theory of human evolution in . . . well, a nutshell. Part of it. Humans are the only animals with occupational specialization — we specialize, and trade. It started with hobbies. Hobbies became part-time jobs. Part-time jobs became full-time jobs. To support full-time jobs — to generate enough demand for the products of this or that specialization — there has to be enough expertise, which builds up slowly. To build up expertise, our brains changed so as to cause creation of special events like Christmas, Japanese New Year, Spring Festival (in China), and a thousand other examples around the world. Such events increase the demand for high-end craftsmanship, thus helping the most skilled craftsmen — the ones most likely to advance the state of their art — make a living. Christmas increases the demand for Christmas cards (fine printing) and Christmas-tree ornaments, for example. Traditional gift-giving has the same effect: It increases demand for "the better things in life." Most gifts, if you follow the usual norms, are (a) not something you would buy for yourself and (b) not something the recipient would buy. (As [4]Alex Tabarrok has noticed.) They are harder to make — and thus reward skilled craftsmen more — than the stuff we buy for ourselves, just as Christmas ornaments are harder to make than common household objects and Christmas-card printing is more difficult than most printing. Weddings, with the gifts, finery, invitations, etc., are another example. The Rotary Nutcracker didn't work in my tests but it almost worked. If enough people bought it as a gift, that would finance the research needed to improve it.

[5]Marginal Revolution and [6]James Surowiecki have recently written about the "deadweight loss of Christmas" — about how gifts tend to be worth less than their cost. I think they see this as bad thing but I see it as a good thing — at least, in our evolutionary past it was a good thing. Deadweight loss = research grant. Likewise, the denizens of [7]The Devil Wears Prada appear slightly defensive about the social value of fashion. They seem to believe that fashion is less useful than "curing cancer" (by which they mean doing research to learn how to cure cancer). Actually, high fashion, with its hard-to-make skirts, belts, and accessories, is the same as curing cancer — they're two ways of increasing the human skill set. Art is the old Science.

1. <http://www.npr.org/blogs/money/2011/12/23/144195081/the-friday-podcast-why-economists-hate-gifts>

2. <http://gadgets.qj.net/Nothing-Cracks-Your-Nuts-Like-The-Rotary-Nutcracker/pg/49/aid/61135>

3. <http://sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

4. [http://www.marginalrevolution.com/marginalrevolution/2006/12/giving\\_to\\_my\\_wi.html](http://www.marginalrevolution.com/marginalrevolution/2006/12/giving_to_my_wi.html)

5. [http://www.marginalrevolution.com/marginalrevolution/2006/12/worry\\_of\\_the\\_da.html](http://www.marginalrevolution.com/marginalrevolution/2006/12/worry_of_the_da.html)

6. [http://www.newyorker.com/talk/content/articles/061225ta\\_talk\\_surowiecki](http://www.newyorker.com/talk/content/articles/061225ta_talk_surowiecki)

7. <http://www.devilwearspradamovie.com/>

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Tom (2011-12-25 16:49:15)

It's hard to get rich selling people what they need, as we need so little. But what we want never ends. Yesterday, I stumbled into a "Home Goods" store. It was the first one I'd ever seen, though apparently it's a major chain. And it occurred to me: Everything in this store is useless. No one needs ANYTHING in here!

Seth Roberts (2011-12-25 17:56:56)

It's hard to get rich selling people what they need, as we need so little. But what we want never ends.

I disagree. I think what we want is an excellent guide to what we need. When we are cold, we want warmth. When we are thirsty, we want water. Societies need innovation...you can't keep doing the same thing forever. Innovation costs resources. To get those resources, the need for innovation must be turned into wants that cause innovation.

Nancy Lebovitz (2011-12-26 07:56:25)

I think people need variety- new stimulation. Odd consumer goods may not be the best way to get it.

Sonny Eraut (2011-12-28 01:10:40)

Cultural products are software running on the operating system of human perceptions and emotions. I think it's more likely that instead of humans developing a tendency to observe days of celebration because it provides some opportunities for specialized trade, humans already had an ability to observe and respond to seasonal events, in common with other animals. Monkeys would show up at stands of trees at certain times of year, just when the fruit was ripe. There's also seasonal migration as part of the explanation of holidays. Now we aren't looking for where the food is in nature at certain exact times of year. We're creating the experience of that in our artificial ways, indoors. Christmas meant to me when I was little a long trip to see our relatives, and mandarin oranges, the smell of Christmas trees, and some other kinds of treats, including nuts. That should be a clue what secular holidays are, besides an oxymoron.

Seth Roberts (2011-12-28 18:35:27)

Thanks, Glen. Those are very helpful comments and I will study them carefully. You ask: "Have you ever been to a Chinese factory?" No, I haven't. Here's what I can add to the discussion. 1. It is far from the truth that Chinese factory workers are a sea of misery within a wider context of happiness and joy. In fact, a survey of happiness in China found that construction workers (not factory workers) were among the happiest of any group in China. Construction workers are quite different from factory workers, of course, but the point is that simple Western ideas about who should be happy and who should be sad are wrong. I agree that Halpern's reflexive assumptions along these lines (e.g., long hours = bad working conditions) are just wrong. It is utterly true that factory jobs are better than rural village jobs. That's why people migrate to get them, leaving behind their family and sometimes their children. 2. Comparison of raw suicide rates is not a good idea. Compare them after they are adjusted for age and sex and income. 3. Foxconn workers have legitimate complaints. Illustrated by Mike Daisey's show. [1]For example. "Daisey actually went there." 4. I don't believe that much is gained by Apple deciding that a Foxconn factory should be X, Y, and Z. That is the "audit" approach. I believe a lot can be gained by figuring out a way that Foxconn workers can have more power over their own working conditions. (Just as my work illustrates how one person can have more control of their health.) Isn't that one thing Apple supposedly sells: empowerment?

1. <https://profiles.google.com/109183248235415148427/buzz/WuvhUeLfCT1>

## Carl Willat on the Democratization of Magic (2011-12-26 05:00)

My friend Carl Willat (of [1]the Willat Effect) is an amateur magician. I sent him [2]this link ("Is the Internet Destroying – or Transforming – the Magic of Magic?"). He replied:

I hadn't seen that article, but I follow this debate and read both sides of it almost daily. He raises some good points and others I disagree with, but in the end it doesn't matter because the trend of revealing magic secrets is unstoppable, regardless of what I think. But calling it a good thing doesn't really make sense. Steinmeyer says people overestimate the value of secrets in magic by a factor of ten, and this is true in the sense that the secret is not the effect. I can enjoy magic performances even if I know the secret, but if I'm fooled I enjoy it more by a factor of ten, let's say. The engine isn't the only important thing in my car but it won't go without it.

I don't think it makes sense to compare a few people copying Vernon's \$20 manuscript with people giving away secrets on YouTube, because the distribution is so much bigger and it takes almost no effort or even serious interest to learn the secrets. The author also lost me by coming down on one side of the books vs. videos debate. They're each good for different reasons. A book can't always illustrate what something is supposed to look like in action. A video can never have all the detail you can get out of a good book. If all you want is to perform a trick exactly like someone else does, videos are particularly good. I actually think the main value of videos is to see a trick performed so you can see if you want to learn it or not. As time goes on I feel more and more reluctant to perform someone else's material, and when I do I change it around and add my own variations. Otherwise I don't feel like I'm contributing anything. One of the reasons Lennart Green's stuff knocked me out was that his material is mostly fairly original and not obviously related to standard techniques, so his whole performance seems magical.

It would have been interesting in this article to have included information about Armando Lucero, a magician who not only doesn't have any teaching books or videos, but tries to keep even his performances off the internet. I took a fairly expensive workshop from him, and we had to sign a non-disclosure agreement promising not to reveal any of his techniques. This seems to have worked, as his secrets haven't really leaked out, and there is still a kind of mystique around him and his magic. In my opinion that's what magic is supposed to be like. I've obviously benefited by the general availability of DVDs and books about magic, but I didn't just want to learn secrets, I wanted to perform. I think as soon as you have to put out some kind of effort to learn you're already separated from the merely curious, whether it be by getting a magic book out of the library or shelling out some money for a video at the magic store. It shows you want to perform, not just learn the secrets. But I think for most people looking at these internet videos it's just a break from Facebook and pornography.

Is there a relationship between your interest in the democratization of magic and your philosophy of self-experimentation? Because I can see how you might feel we should get out from under the tyranny of Big Magic and its oppressive secrets. (this is where I would put in a smiling emoticon if I knew how to make them)

This trend in magic seems related to the diminishing "specialness" in everything. For example everyone has cameras on their cell phones now and takes pictures all the time, so to be a "photographer" is nothing. My film students at the Academy refuse to think of film as art. Everybody makes films, there are a billion of them on YouTube, so why should we put any special effort into them? Their films all feature their roommates in the dorms. On YouTube everyone can be a magician. Ironically, a recorded video is about the worst way to experience a magic performance.

I replied:

Yeah, I agree, the democratization of science and the democratization of magic (not to mention photography and film-making) are related. Perhaps I should have a blanket opinion about this stuff but you are the first person to raise the issue.

In the 16th century or thereabouts, mathematicians had contests about solving equations. It wasn't known how to solve a 3rd degree equation (e.g.,  $x^3 - x = 5$ ). Finally one guy figured it out. It gave him a huge advantage. Of

course he kept it a secret. When mathematical knowledge became better known, because of books, they stopped having those contests. Mathematicians could no longer make money and impress women by winning them. Math stopped being a kind of sideshow similar to magic and eventually became the foundation of engineering and science. This couldn't have happened if it was still a bunch of secrets.

It is early in the democratization of magic, but I think a similar story is plausible – not likely, just plausible. One possibility is that democratization "cheapens" everything or at least makes it harder to make a living at magic. The whole enterprise withers and dies. Another possibility is that, as [3]the Masked Magician said, the revelation of techniques pushes people to invent new ones. They can no longer keep doing the old ones. I think he is perfectly correct. I think the reason that fashion evolved (a feature of our brains) is to push artisans to keep inventing. You really do need to give people a push, otherwise they will stagnate. A third possibility is that the democratization of magic will push the ideas out into a much wider range of people and these people will see the ideas in a new way. They won't merely invent new tricks; they will begin to grasp how the underlying ideas can be applied in other places.

As a professor of psychology I think I can say this: academic psychologists such as myself have almost no interest in using the ideas we discover and study to help people. (That I used them to lose weight is unprecedented.) It is all about publishing papers, getting tenure, getting promoted, perhaps even winning prizes. That's neither bad nor good, it's human nature. The magic you do, on the other hand, is applied psychology. It is entirely useful. So magicians have (a) figured out psychology that works and (b) use it all the time to get something they want (attention, money). That is no small achievement. But they have zero interest in systematizing it (asking: what are the general principles?) and applying those principles in other domains. Other people, however, could easily want to do this. The ideas have to reach those other people for the systematization and application to happen. Nowadays the ideas behind magic tricks are reaching a wider audience so this is becoming more likely to happen.

So I'm like someone in the 15th century who tells the mathematician who has discovered how to solve cubic equations: hey, tell other people your secrets, it will be great! It would sound crazy. But if you want my overall opinion, I think that magic has stagnated, like many other areas of life. I think the democratization has been a powerful force for innovation, just as the Masked Magician claimed, although you would know better than me. I also think, unlike anything the Masked Magician said, that the ideas behind magic are far more important than what present-day professional magicians are using them for. Professional magicians are too busy doing what they have done for the last 20 years and too busy trying to make a living to take advantage of this (which will have zero monetary payoff, at first). But other younger people are more flexible.

1. <http://blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/willat-effect/>
2. <http://www.lasvegasweekly.com/news/2011/dec/08/secrets-out/>
3. [http://en.wikipedia.org/wiki/Breaking\\_the\\_Magician%27s\\_Code:\\_Magic%27s\\_Biggest\\_Secrets\\_Finally\\_Revealed](http://en.wikipedia.org/wiki/Breaking_the_Magician%27s_Code:_Magic%27s_Biggest_Secrets_Finally_Revealed)

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Alex Chernavsky (2011-12-26 07:34:46)

A couple of points: First of all, I recently read a book called, [1]*Sleights of Mind: What the Neuroscience of Magic Reveals About Our Everyday Deceptions*, by Stephen L. Macknik and Susana Martinez-Conde. It wasn't as interesting as I thought it would be, but I think the very existence of the book is a sign that magic is expanding beyond its usual domains. Second, I'm all in favor of revealing the secrets behind magic tricks. Hucksters like Uri Geller, Sylvia Browne, and Jonathan Edward (among many others) prey on naive people who don't realize how easy it is to be fooled by simple conjuring tricks. Perhaps if some of these tricks become common knowledge, the public will become slightly less gullible. One can only hope, anyway. (On the other hand, even people who ought to know better can be duped. See this write-up of James "the Amazing" Randi's [2]Project Alpha.)

1. <http://www.amazon.com/Sleights-Mind-Neuroscience-Everyday-Deceptions/dp/0312611676/>
2. [http://en.wikipedia.org/wiki/Project\\_Alpha](http://en.wikipedia.org/wiki/Project_Alpha)

Eugene Woodbury (2011-12-26 08:43:25)

Filmmakers will tell you exactly how they perform their cinematic magic, down to the equipment used and the technical specs. This wide sharing of knowledge has resulted in the quality of special effects rising, and the costs dropping, exponentially. The movie-going public has developed higher standards of verisimilitude as a result, but it hasn't put them off watching movies.

Sonny Eraut (2011-12-28 00:19:22)

Reading and writing are a form of magic: "grammarge." One of my brothers said as a conversation topic that he was going to learn everything he needed to know by watching videos. What kind of programmer would someone be who's only seen people sitting at terminals trying to program in videos and hasn't read anything about it? Enough said.

### **New Word: crapeterian (2011-12-27 05:00)**

At Christmas dinner I learned a new word:

crapeterian. n. A vegetarian who eats crap (e.g., Doritos, candy, doughnuts).

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Analog Eye (2011-12-27 05:58:11)

In fairness, that should be ANYBODY who eats that kind of thing... hehehe

dearieme (2011-12-27 06:34:34)

Do profiteroles count?

Bill Strahan (2011-12-27 09:13:50)

Funny, I always called them vegetardians. :)

Adam (2011-12-27 18:54:05)

There's nothing quite like an obese vegetarian / vegan lecturing you about nutrition.

Ian (2011-12-28 14:11:15)

Why this is an awesome word: "vegetarian" looks like it should mean one who eats vegetables, rather than one who doesn't eat meat, while in fact many non-meat-eaters eat far more crap than vegetables. This explanation may be unnecessary for most, but I had to think about it for a few minutes before I really got it.

Seth Roberts (2011-12-28 18:50:48)

I agree. I would like to hear someone say: "You know, the usual word for what I am is vegetarian. But I prefer to call myself a crapeterian."

## The Legacy of Steve Jobs (2011-12-28 05:00)

Sue Halpern has written the first interesting assessment of Steve Jobs I've seen, in the form of [1] a book review of Isaacson's biography. It happens to be very negative. She says little about his now-well-known bad treatment of coworkers, friends and family ("a bully, a dissembler, a cheapskate, a deadbeat dad, a manipulator") and focusses on the effects of Apple Computer, which are obviously much greater.

She makes one very bad point. He should not call himself an artist, she argues:

There is no doubt that the products Steve Jobs brilliantly conceived of and oversaw at Apple were elegant and beautiful, but they were, in the end, products. Artists, typically, aim to put something of enduring beauty into the world; consumer electronics companies aim to sell a lot of gadgets, manufacturing desire for this year's model in the hope that people will discard last year's.

"In the end, products"? "Gadgets"? Are books gadgets? I cannot imagine a future without books. Nor one without cellphones and laptops. If they are lovely and work well, so much the better for all of us. Moreover, cellphones and laptops, much more than other necessities (food, clothes, housing, transportation, medicine) help us express ourselves – our hidden inner selves – in so many ways. (Like art and books, but better.) Mark Fraunfelder [2] made a similar point (obliquely).

"Products" and "gadgets" is Halpern's conventional anti-consumerism. She goes on to make two equally conventional but much better points:

According to a study reported by Bloomberg News last January, Apple ranked at the very bottom of twenty-nine global tech firms "in terms of responsiveness and transparency to health and environmental concerns in China." Yet walking into the Foxconn factory, where people routinely work six days a week, from early in the morning till late at night standing in enforced silence, Steve Jobs might have entered his biggest reality distortion field of all. "You go into this place and it's a factory but, my gosh, they've got restaurants and movie theaters and hospitals and swimming pools," he said after being queried by reporters about working conditions there shortly after a spate of suicides. "For a factory, it's pretty nice."

Apple had (and has) the power to improve working conditions at Foxconn. I completely agree: this was (and is) an enormous missed opportunity, for which Steve Jobs is completely responsible. No doubt he said that Apple products empower individuals (and they do) – well, how about empowering Foxconn workers?

Halpern's final point is about recycling:

Next year will bring the iPhone 5, and a new MacBook, and more iPods and iMacs. What this means is that somewhere in the third world, poor people are picking through heaps of electronic waste in an effort to recover bits of gold and other metals and maybe make a dollar or two. Piled high and toxic, it is leaking poisons and carcinogens like lead, cadmium, and mercury that leach into their skin, the ground, the air, the water. Such may be the longest-lasting legacy of Steve Jobs's art.

Yeah. Apple could (and can) lead the world in making their products easy to recycle. They haven't. Entirely Steve Jobs' fault. As Halpern says, this really matters.

Steve Jobs spent his working life (a) exploiting the commercial potential of new products (home computer, etc.) in

large part by (b) caring obsessively, much more than others in his rarefied position, such as Bill Gates, about how they made him feel. Apple made products that Steve Jobs enjoyed. Fine. The problem is what Steve Jobs enjoyed. My take on him is a lot can be explained by (a) he cared little what others thought of him and (b) he lived in a tiny, uncomplicated intellectual world – as illustrated by his remarks about Foxconn and his Stanford graduation speech. Nabokov might say he had the emotional development of a child and the curiosity of an adult.

He left behind a company that reflects the shallowness of what he cared about. Those who take over Apple Computer are likely to be less shallow than he was – most people are. I predict the company will begin to care more about working conditions, ease of recycling, and other things beyond immediate user experience.

1. <http://www.nybooks.com/articles/archives/2012/jan/12/who-was-steve-jobs/?pagination=false>

2. <http://images.businessweek.com/slideshows/20111006/stories-about-steve/slides/14>

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Glen Raphael (2011-12-28 07:59:16)

Have you been to a Chinese factory? I have and the criticisms of Foxconn seem wildly overblown to me. People who go to China wanting to see suffering they can take umbrage at may find a way to do so, but it's not justified. For instance, consider the ambiguity in this line from the article: "walking into the Foxconn factory, where people routinely work six days a week, from early in the morning till late at night" That statement is trivially true about the factory but has a false implication about the people. Foxconn has \*shifts\*, so the people routinely working "early in the morning" usually \*aren't the same people\* as the ones routinely working "till late at night". Foxconn has \*half a million employees\* at their Shenzhen facility so it'd be quite surprising if they \*didn't\* see at least a dozen suicides a year - the suicide \*rate\* there was still quite low. Ditto for industrial accidents, use of bad chemicals, etcetera - a proper sense of scale diminishes all of them. Bad things happen sometimes; companies do what they can to mitigate and prevent, but overall that job does make life much better for the chinese workers...or the job wouldn't be in such high demand that they could staff such big factories! I submit that the people who choose voluntarily to work at these places probably know better whether the working conditions are \*what they want\* than do western reporters who are seeking whatever hard-luck stories they can find among a population the size of Wyoming. Jobs was almost certainly right in saying that "for a factory, it's pretty nice." Foxconn sounds better than the chinese factories I worked with a decade ago, which themselves were clearly much better places to work than the alternatives available to those workers. Halpern's final point about recycling is just wrong. Apple's products are all lead-free and mercury free already; they constantly work to shrink the packaging, reduce waste, and make products using fewer toxic substances. Every Apple product intro harps on this. (more here: <http://www.apple.com/environment/> ) The Isaacson biography wasn't very good. It was shallow; he didn't ask tough questions and often failed to follow up on key points. Given the level of access Isaacson had, it was a wasted opportunity. The best critical review of the book that I'm aware of was in John Siracusa's audio podcast Hypercritical - these two episodes: Episode 42: The Wrong Guy: <http://5by5.tv/hypercritical/42> Episode 43: The Scorpion and the Frog: <http://5by5.tv/hypercritical/43>

David (2011-12-28 08:15:24)

The management of Apple has one legitimate concern - to increase profits. That is the sole reason why shareholders invest in a company. If the board and management are successful in maximizing the return on shareholder equity, then they will be successful. All other concerns, such as those you mention, are only relevant to the extent they support greater profits. Bettering employee working conditions, or making socially acceptable products, or any other non-profit oriented concern, is a side-show. These may be related to increasing return on investment (although the data isn't clear), but certainly shouldn't be the primary concern of any company's management.



Robin Barooah (2011-12-28 09:45:07)

I don't know enough about the factory conditions to comment, although I did see "The Agony and Ecstasy of Steve Jobs" which paints an extremely grim picture of the reality of Foxconn. However, it seems to me that the claims about recycling and the related innuendo about what jobs cared about are simply not supported by facts. Apple actually does lead the world in recyclability of consumer products. Aluminium and Glass are two of the easiest to recycle materials available, and Steve Jobs was outspokenly aware of this when they started to use them. Apple is ahead of everyone else in removing the "Lead, Cadmium and Mercury" from their products. See this piece by Steve Jobs himself : <http://www.apple.com/hotnews/agreenerapple/> - It's worth noting that they have now completely eliminated mercury use as he said they would. They have also led the world in reducing packaging waste, fuel in transportation, and power consumption by their devices. They have a worldwide recycling program which will accept not only their own products but PCs and Phones from other manufacturers, either at their stores or by prepaid mail. They even pay reasonably for what is returned. 66 % of their product by weight is now recycled, and it's their goal to improve on this. But I think that a key point that is often overlooked is that Apple does care about durability. Apple products retain their value far better than PCs, I think to a great extent because if they are reasonably looked after they remain both fashionable and in physically good condition in a way that the petroleum based plastics used by their competitors do not. This means that there is a much healthier market for used equipment - so the path to the landfill (or more likely the path back to Apple for recycling) is actually a lot longer than with the competition. You can also see this at work with their phones. It's an easy accusation to claim that Apple only cares about getting people to upgrade each year. But the reality is that a used iPhone 4 still locked to AT & T could be sold secondhand for more than \$400. And Apple themselves are still selling models are over 2.5 years old. The most expensive new iPhone today is visibly indistinguishable from an 18 month old phone that they for \$99, and they continue to release software upgrades for all of these products. Compare that to their competitors who are shipping new flagship devices every few months and are abandoning them for upgrades after less than a year. The point here is that there is strong demand for old Apple products, not just new ones. It seems to me that Apple is leading by a long way on durability, reuse, and recycling. And that is by careful design. It's also in their interest to do this because they are in the minority position when it comes to sales share in both PCs and smartphones. By designing their products to be useful for longer, they magnify the installed base for their operating system and hence present a more attractive proposition for software developers. The claim that it's all about getting people to upgrade to the latest version doesn't stand up to scrutiny. They obviously do care about selling as many units as possible, but it matters strategically to Apple that each unit gets a long useful life and isn't just quickly discarded.

Glen Raphael (2011-12-28 10:05:28)

This Wired article on Foxconn is pretty good: [http://www.wired.com/magazine/2011/02/ff\\_joelinchina/all/1](http://www.wired.com/magazine/2011/02/ff_joelinchina/all/1) Though it does miss the simple mathematical point that if Foxconn workers face a \*lower\* risk of suicide than other workers in China - which seems likely from the evidence we have on hand - then buying products produced there is on-net \*saving\* worker lives in China.

by (2011-12-28 11:42:20)

I understand that his Foxconn remarks are insensitive and show his narrowly focused mind, but how did his Stanford speech show that to you as well?

Jazi zilber (2011-12-28 18:30:13)

Steve jobs was extremely focused. He improved products. He may have been able to leverage his company to endless world salvaging ideals. Would he had done so, we would have never had his wonderful products. This is a simple tradeoff. And I wish that everyone creating useful things will be as focused.

Jazi zilber (2011-12-28 18:39:43)

Jobs comment on the Chinese working conditions seems deeper for me. You only judge job quality relative to the other jobs available to people in the area. If the people would have been working 7 days 14 hours a week otherwise in the sun with no kind of food available, then Jobs comments on the nice facility with restaurant is very well pointed.

Seth Roberts (2011-12-28 18:41:11)

All other concerns, such as those you mention, are only relevant to the extent they support greater profits. Bettering employee working conditions, or making socially acceptable products, or any other non-profit oriented concern, is a side-show. These may be related to increasing return on investment (although the data isn't clear), but certainly shouldn't be the primary concern of any company's management.

As many many other people, such as Elizabeth Warren, have said, companies like Apple work within a context supplied by the rest of us. They use roads paid for by the rest of us. They use an education system paid for by the rest of us. Etc., etc. They should recognize that and give something back. That's how groups work – reciprocity. Quite apart from that Steve Jobs was no profit maximizer. It is perfectly possible to be a successful company without obsessing about profit.

Robin Barooah (2011-12-28 20:25:43)

"They use an education system paid for by the rest of us. Etc., etc. They should recognize that and give something back." Companies 'like Apple' do give a lot of things back - they develop new technologies and push the state of the art forward. They give us the choice to have computers in our pockets that we can actually use. They create new categories of work (e.g. programming apps), and transform and democratize existing ones (e.g. filmmaking, music, photography). I dare say they've contributed something to modern science too. The problem is that there aren't many companies 'like Apple'.

Glen Raphael (2011-12-28 22:12:51)

Apple had (and has) the power to improve working conditions at Foxconn. I completely agree: this was (and is) an enormous missed opportunity, for which Steve Jobs is completely responsible. No doubt he said that Apple products empower individuals (and they do) — well, how about empowering Foxconn workers?

Wait, how do we know Apple missed this opportunity? How *haven't* they been empowering Foxconn workers? What would it take to convince you they *have* been generally improving conditions at Foxconn and other suppliers? Apple has an extensive (and impressive) auditing program in place; some progress reports can be found here: <http://www.apple.com/supplierresponsibility/> It seems like "long hours" is still a significant issue. Apple's official standard is that a normal work week should be no longer than 60 hours and should include at least one day of rest per week. When they first started auditing in 2006, only 18 % of their suppliers met that standard. As of the 2011 report (based on audits in 2010) the share meeting that standard was...32 %. On the one hand that's a long way from a solved problem, but on the other hand: 32 is a lot more than 18. :-) What metrics do you think Apple should be tracking and pushing to improve with their suppliers that they aren't already doing? Reading the 2011 report it seemed to me like they've hit the high points already and then some. One thing I found interesting is that these jobs are apparently **so valuable** to employees that the employees are willing to pay huge kickbacks to middlemen in order to get them. Apple considers any fees of this sort larger than a month's salary a serious offense (because people borrow money to pay those fees, Apple considers the pre-committed portion of their work involuntary labor) and it's been an ongoing issue. The fact that employees are willing to pay *more than a month's salary* to get these jobs tells me the workers are in all likelihood *seriously overpaid* and/or have *unusually good working conditions relative to the other jobs available in the region*. Which I guess we already knew, but still: wow.

Zach (2011-12-28 23:33:28)

@David Beyond what Seth said, corporate management has many different "legitimate concerns". They are representing the shareholders, most of whom have interests extending beyond profits. Some people invest in companies because they like the product. I have encountered anecdotal evidence of people investing in Apple for this reason, the Green Bay Packers largely function on this model and many small companies raise initial funding based on this (see Kickstarter). Institutional investor such as academic endowment funds often choose to invest based in large part on the corporate practices regarding environmental concerns and human rights. Profit is a main concern, but not the main concern and certainly not the only one. As Robin said, in many ways Apple is quite the model citizen in these regards. A lot of what I've read suggests that management focused on a narrow definition of profit (the time-frame over which decisions are made is critical) is responsible for most corporate failure. In particular, Apple's near-death experience had at its root a loss of focus beyond short-term profit motives.

Seth Roberts (2011-12-29 03:28:52)

How haven't they been empowering Foxconn workers? What would it take to convince you they have been generally improving conditions at Foxconn and other suppliers?

If I were in charge of Apple, I (and other top execs) would meet with Foxconn workers and ask them how to empower them – that is, give them more control over their working conditions. I disagree with the impose-western-working-conditions approach. Which I called the "audit" approach and which is what Apple now does. I think the workers know a lot better what working conditions they want than whoever came up with the checklist for the audit. I don't mean the Western checklist approach is useless – I have no idea. I am sure however that it is less worthwhile than listening to the workers themselves about what they want. I believe that Apple hasn't done what I recommend (listening to Foxconn workers at great length). The evidence that would convince me that Apple is doing a good job here would be to read about how they have stopped trying to fulfill Western preconceptions about what a good workplace is and have done what they can to achieve the workers' ideas about what a good workplace is. Many times throughout history the top (here, Apple management) and the bottom (here, the workers) have gotten together to force the middle (here, Foxconn management) to treat the bottom better. The Ten Commandments, for example.

Glen Raphael (2011-12-29 09:10:21)

The way they do the audits does include interviewing workers (including giving the workers info so they can call back later and blow the whistle if things change) and asking what the biggest concerns are as well as getting feedback on specific issues. An example of a thing workers complain about unprompted is having to wait in long lines. Lines for the bus to work, lines at the cafeteria, or lines to get through security. I think the reason Apple has such trouble reducing *long hours* is that if you ask the workers themselves, long hours aren't actually a problem. So long as they can get *paid* for their overtime hours, the workers tend to want to do as much work as possible. Some years ago there was a news item about a riot at a factory (not one related to Apple) that started *because* the factory owners cut down on overtime! I doubt any worker ever complained that the exit doors at the cafeteria open inward and/or require two hands to open...that'd be an example of the sort of thing Apple includes in their checklists after consulting with relevant independent experts. If Apple stopped trying to fulfill Western preconceptions and let the workers themselves decide we'd probably see a lot more underaged workers than the one-in-ten-thousand we see now. Which I don't view as a problem, but Apple would get a lot of flack (more than they already do) if they just turned a blind eye to the occasional 15-year-old who gets a fake ID so they can work at the factory. (Apple has already cut off one supplier that didn't care about this issue.) Seriously, read the 2011 Progress Report - you'll be a lot more informed than your other sources on this subject. (And more informed than I was in my initial post at the beginning of this thread.) Here's the link: [http://images.apple.com/supplierresponsibility/pdf/Apple\\_SR\\_2011\\_Progress\\_Report.pdf](http://images.apple.com/supplierresponsibility/pdf/Apple_SR_2011_Progress_Report.pdf)

Steve (2011-12-29 11:12:33)

I bought the first iteration of the Mac mini, buying into the line that Macs are durable, that you are saved from the endless merry-go-round of software upgrading and escalating system demands that often makes Windows PCs unusable after a few years. Now, years later, yes the hardware still purrs along, but Apple no longer offers a browser that is fully functional in that old OS. Nor does anyone else offer such a browser. Also, there is now no way of upgrading the OS so that it will run a functional browser. So, depending on what I am working on, the computer is of limited usefulness. Yet the Windows notebook I'd bought four months later, running XP, is still up to date. I don't clog it with unnecessary software and run it fairly lean, and it runs fine. Microsoft still updates XP and it, and other developers, still offer completely up-to-date browsers. Maybe the machine has retained its value as Robin claims, but that's no use to me if I simply want to be able to do online research for work or do my banking online and can't. The only advice Mac dealers can give me is to upgrade the machine! But the machine sure is pretty.

Robin Barooah (2012-01-02 12:07:07)

STEVE: Have you tried OmniWeb? <http://www.omnigroup.com/products/omniweb/> It is listed as supporting OSX Tiger, and is a Universal binary that runs on PowerPC. I've used it for research and it works fine with my online bank accounts.

Robin Barooah (2012-01-02 12:10:54)

STEVE: also this: <http://www.floodgap.com/software/tenfourfox/>

We Need A Slow Electronics Movement « Glowing Blue Core (2012-01-27 16:06:44)

[...] bloggers such as Seth Roberts and Vince Emanuele echoed similar complaints, and the blogger Grant Kidney called J-Day karmic [...]

## **Acne Cured By Self-Experimentation (2011-12-29 04:24)**

In November, at Quantified Self Europe, Martha Rotter, who lives in Ireland, gave a talk about how she cured her acne by self-experimentation. She [1]summarizes her talk like this (slides [2]here):

When I moved to Ireland [from Seattle] in 2007, I began to have skin problems. It began gradually and I attributed it to the move, to stress, to late nights drinking with developers and clients, to travel, to whatever excuses I could think of. The stress was multiplied by the anxiety of being embarrassed about how my face looked, but also because my new job in Ireland involved me being on stage in front of large audiences constantly, often several times a week. A year later my skin was perpetually inflamed, red, full of sores and very painful. When one spot would go away, two more would spring up in its place. It was a tough time. I cried a lot.

Frustrated, I went to see my hometown dermatologist while I was home for holidays. He told me that a) this was completely normal and b) there was nothing I could do but go on antibiotics for a year (in addition to spending a fortune on creams and pills). I didn't believe either of those things.

I was not interested in being on an antibiotic for a year, nor was I interested in Accutane (my best friend has had it multiple times and it hasn't had long term results, plus it can be risky). What I was interested in was figuring out why this was happening and changing my life to make it stop. I refused to accept my dermatologist's insistence that what you put in your body has no effect on how you look and feel.

I began systematically cutting things out of my diet to see how I reacted. First chicken and soy, based on a recommendation from a food allergist. Over the course of a year I cut out sugar, gluten, carbs, starches, caffeine, meat, fish until finally the magical month of December 2010 when I cut out dairy. My skin was my own again by New Year's day this year.

It took a year to figure it out. It was completely worth it. There's nothing wrong with Irish dairy, it just doesn't work for me. I drink Americanos instead of lattes now, I don't eat cereal; none of that is a huge deal. For what it's worth, I can drink goat's milk.

A great example of the power of self-experimentation compared to trusting doctors. One quibble: I'll be more sure "there's nothing wrong with Irish dairy" if she finds that American dairy also causes skin problems. The evidence so far (she didn't have skin problems until she moved to Ireland) suggests that at least for her American dairy (i.e., dairy where she lived in America) is better than Irish dairy. I have heard Irish dairy praised. They sell Irish butter at Beijing stores near me. I won't be buying it.

At the end of her post she makes a very important point:

Quantified Self isn't for everyone, but everyone should feel they have the power to change things in their body and their life for the better.

I agree. By learning about examples of people who have done just that – such as Martha – we will come closer to having that power. Right now, as far as I can tell, most people feel helpless. They do what doctors or other experts tell them to do, even if it doesn't work very well.

Long ago, hardly anyone could read. This left them in the grip of those who could. But eventually came mass literacy, when the benefits of reading finally exceeded the costs (e.g., because more books were available at lower prices). Reading is primitive science: if you read about things that happened, it is information gathering. It resembles doing a survey. Nowadays, almost everyone (in rich countries) reads, but almost no one does experimental science. This leaves them in the grip of those who can do experimental science (e.g., drug companies). I think my work and Martha's work suggest we are close to another turning point, where, for nonscientists, the benefits of doing experiments exceed the costs.

Thanks to Gary Wolf.

1. <http://martharotter.com/blog/index.php/2011/11/quantified-self-europe-review/>
2. <http://www.slideshare.net/martharotter/curing-your-skin-with-food>

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gwern (2011-12-29 09:22:44)

> The evidence so far (she didn't have skin problems until she moved to Ireland) suggests that at least for her American dairy (i.e., dairy where she lived in America) is better than Irish dairy. I have heard Irish dairy praised. They sell Irish butter at Beijing stores near me. I won't be buying it. Or it could be an equilibrium effect - she tolerated whatever it was in dairy until a shock to her system weakened her. Could retrospect for similar massive shocks (going to college? a parent dying?) and try to recall if there were any acne outbreaks. You've probably seen [https://www.nytimes.com/2012/01/01/magazine/tara-parker-pope-fat-trap.html?\\_r=2&pagewanted=all](https://www.nytimes.com/2012/01/01/magazine/tara-parker-pope-fat-trap.html?_r=2&pagewanted=all) which discusses an equilibrium shift for obesity. (I think something similar happened to my sister which lead to her gluten allergy becoming a huge problem and then discovered.) In any case, if you like the taste of Irish-style butter and don't have acne problems, this doesn't seem like a good reason to shun it.

Jay (2011-12-29 09:45:16)

I'll never stop buying my delicious Kerrygold Irish butter!

Glen Raphael (2011-12-29 09:49:37)

Another quibble: she'd need to *resume dairy for a bit* (and see the acne return) to conclude it was the dairy and not something more like regression to the mean. Her treatment course as described sounds a lot like what convinced doctors to over-trust depression meds. To wit: *I have condition X, so I try treatment A. That doesn't help so I try treatment B. Then C. Then D. At the end of a year, condition X resolves and I credit the last thing I tried right before the improvement - which was treatment H.* If you try one thing and get better right away, that's evidence that the thing you tried worked. But if you try 10 things over the course of a year it's a foregone conclusion that you were trying *something* when you get better, but the evidence is weak that the getting better had to do with the specific last thing you tried. (The things she mentions trying are the removal of: chicken, soy, sugar, gluten, carbs, starches, caffeine, meat, fish, dairy). Ten things. Heck, for all we know it could be one of the earlier ones (with some delay in effectiveness). Or none of them.

Sarah Madden (2011-12-29 10:25:08)

For what it's worth I live in Ireland and used to have acne, cutting out dairy didn't do a thing, increasing it helped though. What was the ultimate cure for me was increasing intake of vitamin E. Anytime people cut out a food they replace it with something else. For all we know that's what made the difference. I would eat Irish dairy which is grass-fed and natural as they come before chinese dairy that has god knows what contaminants in it..

Martha Rotter (2011-12-29 10:55:38)

Hi Glen, good points! What I may not have done a great job explaining in my blog post that I covered in great detail in my talk is that each of those things I cut out for a month. So no caffeine for a month - no result? Okay, caffeine back in. When I cut dairy out it was dairy only. Everything else in my diet was the same. As you mention, it would be impossible to attribute it to one thing otherwise! Now I have introduced goats milk back in to my diet and occasionally cows milk cheeses. But at this point, when I do have cream or milk with coffee or something dairy like a dessert I feel like indulging in, it's often just a matter of hours before I can feel my face heating up somewhere and I know I'll have a spot the following day. But the difference is that now I can weigh the cost and I know what I'm getting in to. Hope that clarifies a little, sorry for any confusion.

Seth Roberts (2011-12-29 13:38:41)

But at this point, when I do have cream or milk with coffee or something dairy like a dessert I feel like indulging in, it's often just a matter of hours before I can feel my face heating up somewhere and I know I'll have a spot the following day.

This does not fit the grass-fed/non-grass-fed emphasis we usually hear when discussing the quality of dairy products (grass-fed = good, non-grass-fed = bad). Grass-fed is supposedly better because grass has more omega-3 than the alternative to grass (e.g., corn). The presence/absence of omega-3 in cream or dessert is unlikely to make such a big difference so quickly. Nor is it clear how omega-3 can cause skin problems. It sounds like something else about Irish dairy is causing the problem.

Seth Roberts (2011-12-29 13:43:56)

I would eat Irish dairy which is grass-fed and natural as they come before chinese dairy that has god knows what contaminants in it.

I agree. There has just been another scandal about contaminated milk in China. In Beijing, I eat American butter (Land O'Lakes). The cream I use is from Nestle but thanks to your comment I see it is made in China - I won't buy it again. No wonder it was much cheaper than other cream. I cannot avoid buying Chinese milk but I buy the most expensive brand.

threepipeproblem (2011-12-31 06:36:39)

I also think you should question eschewing Irish butter from this one tale. Kerrygold is one of the few grass-fed butters that is widely available. It tastes awesome, has a higher omega-3 content, and vitamins such as choline and K which are almost nonexistent in traditional butters.

Darrin Thompson (2012-01-01 09:46:44)

We give Kerrygold to our autism kids because we've found it contriutes to peace around the house. Because we get it at Costco and it's priced well, I wonder how it's being processed, etc. There's got to be something wrong with it, right? I'd like it if there was a third pary who could verify what exactly grass-fed means to Kerrygold and how the product is handled before it makes it to the store shelf. However, the results are pretty good. So, yay Kerrygold. To your point about grass-fed not neccessairly meaning good, what is grass? As consumers we want to imagine cows in a patorial scene grazing lazily in a field of deep green beside a crystal stream of mountain snow melt. I imagine the commercial or regulatory definition (if there even is one) of grass-fed is much broader. It could be that Kerrygold is racing to the bottom by being cheap. Or it could be they're the second

coming of Warren Edward Deming in the dairy industry, an application of scientific method to the process of creating butter with a long term focus on the integrity of the product and the business. Who knows? In the end, I'm happy with the results in our family and we eat a lot of it. What I don't see after a quick perusal, where did she move to Ireland \_from \_? What about \_that \_ dairy? What's the difference? :-)

Seth Roberts (2012-01-01 19:14:02)

What I don't see after a quick perusal, where did she move to Ireland \_from \_? What about \_that \_ dairy? What's the difference?

She moved to Ireland from Seattle. My guess is that Irish dairy is less processed (e.g., less heated) than Seattle dairy. Milk contains dozens of different molecules. Seattle processing destroyed something that the Irish processing left intact. Another possibility is that Irish cows are better nourished and certain allergens were at higher concentrations in Irish dairy than in Seattle dairy.

Peter Andrews (2012-01-04 11:34:36)

My guess is that she may have a dairy sensitivity that only occurs when vitamin D levels are low. I don't know where she is from but Ireland has a very cloudy climate. Dr. Cannell at the Vitamin D council has also written of a vitamin D and acne link.

Seth Roberts (2012-01-04 13:56:26)

My guess is that she may have a dairy sensitivity that only occurs when vitamin D levels are low. I don't know where she is from but Ireland has a very cloudy climate.

Seattle - where she lived before Ireland - is also very cloudy. On the other hand it is possible she spent more time outdoors in Seattle.

jbug (2012-03-21 05:04:58)

does she have a leaky gut and the milk casien is leaking into her system causing and autoimmune/inflammatory response?

### **Assorted Links (2011-12-29 05:00)**

- [1]Five books about cities, including Jane Jacobs: "intellectual success but practical failure".
- [2]Talk by Beatrice Golomb (UCSD med school prof) about biases in drug research. Impressive. For example, favorable studies are more likely to be published than unfavorable studies. (Favorable = favorable to drug company.) First they buy the politicians. Then they buy the medical journals.
- Golomb shows [3]how the term "placebo effect" deceives researchers.
- [4]Some medicine does more harm than good. "More health care often means worse health." Before you take any more medicine (e.g., drugs, surgery, screening tests) read this (by Sharon Begley, who covers science for Newsweek).
- [5]Arrival cities: "the world's next chapter".

Thanks to Hal Pashler, Dave Lull and Mike Bowerman.

1. <http://www.emailthis.clickability.com/et/emailThis?clickMap=viewThis&etMailToID=495736537>
2. <http://video.google.com/videoplay?docid=-7758662442132419447&ei=8f9gSae3HI62iAL-i6naBw&q=Beatrice+Golomb.&hl=en>
3. <http://edge.org/response-detail/1664/what-scientific-concept-would-improve-everybodys-cognitive-toolkit>
4. <http://www.thedailybeast.com/newsweek/2011/08/14/some-medical-tests-procedures-do-more-harm-than-good.html>
5. <http://www.randomhouse.ca/catalog/display.pperl?isbn=9780307396907&view=excerpt>

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q (2011-12-30 06:57:53)

here's one for a future assorted links: [http://mobile.gothamist.com/2011/12/20/health\\_department\\_cracking\\_down\\_on.php](http://mobile.gothamist.com/2011/12/20/health_department_cracking_down_on.php)

### **Ask Me Anything/Contact Me (2011-12-30 16:08)**

My email address is twoutopias...at..gmail.com.

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### **Ten Interesting Things I Learned From Adventures in Nutritional Therapy (2011-12-31 05:00)**

A blog called [1]Adventures in Nutritional Therapy (started March 2011) is about what the author learned while trying to solve her health problems via nutrition and a few other things. She usually assumed her health problems were due to too much or too little of some nutrient. She puts it like this: "using mostly non-prescription, over-the-counter (OTC) supplements and treatments to address depression, brain fog, insomnia, migraines, hypothyroidism, restless legs, carpal tunnel syndrome, and a bunch of other annoyances." In contrast to what "the American medical establishment" advises. Mostly it is nutritional self-experimentation about a wide range of health problems.

Interesting things I learned from the archives:

1. Question: Did Lance Armstrong take performance-enhancing drugs? I learned that LiveStrong (Armstrong's site) is a content farm. Now answer that question again.
2. "If you return repeatedly to a conventional doctor with a problem they can't solve, they will eventually suggest you need antidepressants."
3. "When I mentioned [to Dr. CFS] the mild success I'd had with zinc, he said it was in my mind: I wanted it to work and it did. When I pointed out that 70 % of the things I tried didn't work, he changed the subject. Dr. CFS' lack of basic reasoning skills did nothing to rebuild my confidence in the health care system." Quite right. I have had the same experience. Most things I tried failed. When something finally worked, it could hardly be a placebo effect. This line of reasoning has been difficult for some supposedly smart people to grasp.
4. [2]A list of things that helped her with depression. "Quit gluten" is number one.



5. [3]Pepsi caused her to get acne. Same here.

6. [4]100 mg/day of iron caused terrible acne that persisted for weeks after she stopped taking the iron.

7. "[5]In September 2008 I started a journey that serves as a good example of the limits of the American health care system, where you can go through three months, 15 doctor visits, \$7,000 in medical tests, three prescriptions and five over-the-counter medications trying to treat your abdominal pain, and after you lose ten pounds due to said pain, you are asked by the "specialists" if you have an eating disorder." I agree. Also an example of the inability of people within the American health care system to see those limits. If they recognized that people outside their belief system might have something valuable to contribute, apparently something awful would happen.

8. [6]Acupuncture relieved her sciatica, but not for long. "By the time I left [the acupuncturist's office] the pain was gone, but it crept back during my 30-minute drive home."

9. Pointing out many wrongs does not equal a right. She praises [7]a talk by Robert Lustig about evil fructose. I am quite sure that fructose (by itself) did not cause the obesity epidemic. For one thing, [8]I lost a lot of weight by drinking it. ([9]Here is an advanced discussion.) In other words, being a good critic of other people's work (as Lustig may be) doesn't get you very far. I think it is hard for non-scientists (and even some scientists) to understand that all scientific work has dozens of "flaws". Pointing out the flaws in this or that is little help, unless those flaws haven't been noticed. What usually helps isn't seeing flaws, it is seeing what can be learned.

10. [10]A list of what caused headaches and migraines. One was MSG. Another was Vitamin D3, because it made her Vitamin B1 level too low.

She is a good writer. Mostly I found support for my beliefs: 1. Of the two aspects of self-experimentation (measure, change), change is more powerful. She does little or no self-tracking (= keeping records) as far as I could tell, yet has made a lot of progress. She has done a huge amount of trying different things. 2. Nutritional deficiencies cause a lot of problems. 3. Fermented food is overlooked. She never tries it, in spite of major digestive problems. She does try probiotics. 4. American health care is exceedingly messed-up. As she puts it, "the American medical establishment has no interest in this approach [which often helped her] and, when they do deign to discuss it, don't know what the # %@! they're talking about." 5. "Over the years I've found accounts of personal experiences to be very helpful." I agree. Her blog and mine are full of them.

Thanks to Alexandra Carmichael.

More [11]Her latest post mentions me ("The fella after my own heart is Seth Roberts, who after ten years of experimenting . . . "). I was unaware of that when I wrote the above.

1. <http://www.adnuther.com/>
2. <http://www.adnuther.com/2011/04/the-story-of-the-end-of-my-depression/>
3. <http://www.adnuther.com/2011/05/how-i-induced-cystic-acne-in-myself/>
4. <http://www.adnuther.com/2011/05/how-i-induced-cystic-acne-in-myself/>
5. <http://www.adnuther.com/2011/08/abdominal-pain/>
6. <http://www.adnuther.com/2011/07/six-weeks-of-sciatica/>
7. <http://www.adnuther.com/2011/09/sugar-bitter-pill-video/>
8. <http://escholarship.org/uc/item/2xc2h866>
9. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>
10. <http://www.adnuther.com/2011/06/headaches-and-migraines/>

11. <http://www.adnuther.com/2011/12/self-experimenters-scientific-american/>

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Alex Chernavsky (2011-12-31 07:44:30)

Reading your (Seth's) blog has convinced me of the value of self-experimentation. But I have doubts about the validity of the conclusions that are presented in "Adventures in Nutritional Therapy" (and other, similar blogs/articles I've read). The author of the "Adventures" blog seems unaware of – or at least unconcerned with – possible confounding factors like regression to the mean, placebo effects, and various cognitive biases. She also lacks skepticism with regard to such dubious things as blood tests for neurotransmitters. And, as Seth pointed out, she make little attempt at making measurements and keeping careful records of them.

HelenMarie (2011-12-31 08:10:10)

Hi Seth, Blessing today and all the days of 2012. Please don't stop taking D3 up the B vitamins. It has helped me through a winter without a serious depression. By depression I mean when it is too much trouble to even take a shower or brush my teeth. When the normal activities that I do without notice become so burdensome that every move is like moving through tar. The western medical system shines if you have broken your arm or have been in a gun fight. The eastern medical system shines for chronic conditions. Nutrition and diet are the last bastion of the snake oil salesperson. Nutrition changed my life, finding out I am allergic to dairy changed my life, restricting gluten seems to be doing the same thing. I gave that up for the holidays and guess what I am sick and.....I realized I am sick more often than not during this period and I also noticed I allow myself unrestricted access to all my favorite cookies, tarts, and anything else with lots of sugar and lots of wheat. Happy eating, continued nutritional adventures. hugs, hm

Tom (2011-12-31 08:36:41)

Re #4, Curing Depression, while she put 'quit gluten' as number one, she says that zinc supplementation (50 mg/day for a year) helped the most. (Not sure why she didn't put zinc first on the list.)

Caleb Coop (2011-12-31 11:01:18)

Of \_supplements\_, zinc was the most helpful.

Seth Roberts (2011-12-31 11:36:11)

The western medical system shines if you have broken your arm or have been in a gun fight.

I think it has other strengths as well. Vaccination greatly reduced polio and tuberculosis. Delivery of babies has gotten much better.

Seth Roberts (2011-12-31 11:49:21)

The author of the "Adventures" blog seems unaware of — or at least unconcerned with — possible confounding factors like regression to the mean, placebo effects, and various cognitive biases.

She's aware of the possibility of placebo effects – see Point #3. I don't know what cognitive biases you are talking about. Regression to the mean is rarely a good explanation when Possible Solution #7 worked and Possible Solutions 1-6 did not work. On the other hand, I agree about the numerical measurement, in the sense that if she made numerical measurements and made graphs and so on, you and I and others would probably find her conclusions more convincing.

john (2011-12-31 12:49:01)

One thing I don't like, which you kind of mention, is that she doesn't seem to try actual foods. Almost every isolated nutrient I've tried has had a neutral or negative effect (Mg, vitamin K complex, alpha tocopherol, gamma tocopherol, D3). I feel like one always runs into problems with comparative deficiencies when not using real foods. #9 is an excellent point that has caused me to stop reading several blogs.

spacenookie (2011-12-31 13:50:51)

personally, I look at a self-experimentation anecdote as a source of ideas to test, and ideas about testing. A persuasive, data-driven approach would lend an air of false authority, after all this is just a random internet person making health claims. Well-designed self-experimentation is "cheap, easy, and quick" so I suggest going directly to replication if you find an experiment interesting.

Jay (2011-12-31 19:28:48)

"I think it is hard for non-scientists (and even some scientists) to understand that all scientific work has dozens of "flaws". Pointing out the flaws in this or that is little help, unless those flaws haven't been noticed." Put this on a plaque. Every time I go to a journal club (I'm a scientist), the participants basically masturbate over their ability to recognize such "flaws." When this behavior is taken to excess, I usually take it as an indication that the person lacks abstract reasoning, or at least difficulty in understanding the concept of parsimony. For example, a mathematical model might be reduced description of some phenomena, such that the equations are capturing the "essence" of the phenomena, and omitting the irrelevant details--i.e. if the details \*were\* included, the model would be nevertheless be "isomorphic" to the original, simpler description. Many people get high on their ability to point out flaws without understanding the underlying framework.

Seth Roberts (2011-12-31 21:10:03)

Every time I go to a journal club (I'm a scientist), the participants basically masturbate over their ability to recognize such "flaws."

Yeah. At UC Berkeley I attended a journal club about animal behavior. The other faculty, like me, thought the pointing out of flaws was greatly excessive. Now and then we would say this but the graduate students couldn't stop themselves. Or so it seemed.

Jazi zilber (2012-01-01 09:40:41)

Impssive blog! It also shows how formidable is the task of changing health by playing with all these things (basically fine tuning of multiple parameters) One needs lots of erudition. you can see how much she knows on all miniscule effects bioavailability and relationships. Lots of work and persistence, And a high level of clarity as for the outcome measure. I have no idea how such feats can become commonplace. (it is OTOH strange. Because in ICU the system does the idea of fine tuning multiple parameters forcefully. It is doable. Just so formidable a task. But if someone manages to make it more practical for the masses.....)

Aaron (2012-01-03 03:11:03)

Just a short comment about fructose: Isn't it possible that the effect of fructose follows a J or inverted U curve? No fructose is irrelevant or bad, a little amount of fructose (say, from fruits) is beneficial (faster resynthesis of liver glycogen) and only large amounts (from excessive sugar/HFCS) are bad for your health?

Sara (2012-01-04 04:02:35)

I like her attitude. You can't take no s\*\*t from the medical profession. If they can't 'see' it (either physically or in tests), they will say it's 'in your mind'. I had a very lengthy health battle with a difficult to diagnose health problem (funky kidney - a congenitally 'spiral' ureter, the kidney would block and swell up to the size of a football (major bump in my front), but randomly empty). No doctor believed me that I had a randomly appearing lump. After three years I was progressively told I was stressed, depressed and perhaps even schizophrenic (like my father). Finally the kidney permanently blocked and I went in there to show off my

'alien baby'. Immediate action/surgery. What's that Foucault said about the 'medical gaze'? I lost 80 % of kidney function on that side (thank goodness for having two kidneys!), but did I get an apology for being called insane? Nope. Fructose - I was just blogging a bit about this because I'm doing Lentzner's junkfree jan and was confused about it. I think the demonisation of it is an over-reaction to the acknowledged problems of HFCS and sucrose - high intakes could certainly exceed the liver's ability to deal with it as the usual metabolic control systems don't work with fructose. I haven't found any studies that use fruit, fruit juice, dried fruit or crystallised fructose though. As far as I know, all the research has been done using HFCS (which brings in issues of GM, amongst other things). Somebody put me right if that's not the case.

# 7. 2012

## 7.1 January

### Assorted Links (2012-01-01 05:00)

- [1]The art and science of miso. High-quality miso [2]from Massachusetts.
- A former BMJ editor [3]on research misconduct. [4]Biased reporting of research.
- [5]Health-care CEOs are America's best-paid executives. "John Hammergren, chief executive of McKesson Corporation, . . . took home \$145,266,971 in 2010. McKesson is . . . is the largest pharmaceutical distributor in North America. . . Ronald Williams, boss of health insurance giant Aetna, made \$57,787,786 in 2010. . . . Since he became CEO, Aetna's stock price declined by 70 %."
- [6]"How one man got away with mass [scientific] fraud." I agree with almost none of the opinions expressed in this article, but the facts are interesting.
- From[7] here: Compare the number of articles written by an average physicist and an average mathematician:
  - Physicist: The first announcement, the second, correction, detailed version, and the crucial error found. [5 articles]
  - Mathematician: The proof. [1 article]

Thanks to Alex Chernavsky and Casey Manion.

1. <http://www.serious-eats.com/recipes/2008/09/miso-soup-recipe-trevor-corson.html>
2. <http://www.southernmiso.com/>
3. 232
4. <http://jrsm.rsmjournals.com/content/104/12/532.full>
5. <http://www.guardian.co.uk/business/2011/dec/14/healthcare-ceos-americas-best-paid>
6. <http://news.nationalpost.com/2011/12/30/how-one-man-got-away-with-mass-fraud-by-saying-trust-me-its-science/>
7. <http://weyl.math.toronto.edu:8888/wordpress/?p=1616>

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TMS71 (2012-01-02 09:36:39)

What opinions in the article about scientific fraud do you disagree with?

Seth Roberts (2012-01-02 14:10:01)

Here are two opinions I disagree with in the "mass scientific fraud" article: 1. "There is now enough evidence to say what many have long thought: that any claim coming from an observational study is most likely to be wrong – wrong in the sense that it will not replicate if tested rigorously." I disagree. I think epidemiology has taught us a lot of useful stuff. For example, that heavy smoking causes lung cancer, that folate deficiency causes birth defects. It's true that epidemiologists persistently overstate the strength of their evidence but that doesn't mean their evidence isn't worth anything. To say "any claim" is "most

likely to be wrong" is black-and-white thinking, not to mention a vast overstatement. 2. "Science, at its most basic, is the effort to prove new ideas wrong." Science is also, at its most basic, about coming up with new ideas worth testing. That isn't easy.

### **Tokyo Visit (2012-01-02 03:29)**

I will be in Tokyo from Friday (January 6) through Tuesday (January 10). If you – my one Tokyo reader – would like to get together, let me know.

If you – my other readers – have suggestions about what to do in Tokyo, let me know those, too.

My overall view of Japan is simple: They understand fermented food. Better than anywhere else (France is second).

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garymar (2012-01-02 05:58:40)

sounds like a plan! You've got my email so drop me a line. Good that you'll be here on the weekend.

Andy (2012-01-02 07:55:02)

Damn, missing you by 1 day Seth! Have been reading your blog for months from Tokyo, but I recently moved to Taiwan with my wife. I will be returning to Tokyo on the 11th to close out some stuff and go snowboarding. If you are looking for some off-the-beaten track restaurants I may have some suggestions for you. Personal favorite Tokyo lunch is Saba-Miso-Ni(mackrel with a miso sauce) with natto and raw egg on rice,

KenF (2012-01-02 10:20:56)

Going to the Tsukiji fish market early in the morning, seeing the goings-on, and then getting sushi is a lot of fun. You want to eat somewhere with a long line. The big department stores have huge food markets in the basements with prepared foods as well as pickles, etc., go there to sample the foods. If you are in Tokyo train station, you can also find small markets selling food from all over Japan. . If you want to see temples, the best thing is to take a day trip to Kamakura, but that's really a full day trip.

Seth Roberts (2012-01-02 14:02:18)

Going to the Tsukiji fish market early in the morning, seeing the goings-on, and then getting sushi is a lot of fun. You want to eat somewhere with a long line. The big department stores have huge food markets in the basements with prepared foods as well as pickles, etc., go there to sample the foods.

I have done both those things in the past and really enjoyed them. For me one of the highlights of a trip to Tokyo has been smelling the many kinds of miso available for sale (in a department store food court) and buying some really good miso to take home.

KenF (2012-01-02 17:55:14)

Well, here is something I just found doing a Google search a miso specialty store, apparently they have several branches in Tokyo: [http://www.gov-online.go.jp/pdf/hlj\\_ar/vol\\_0023e/30-31.pdf](http://www.gov-online.go.jp/pdf/hlj_ar/vol_0023e/30-31.pdf) Looks like the Sumo tournament will be going on while you are there, that is A LOT of fun: <http://sumo.pia.jp/en/sumo01.jsp>

KenF (2012-01-02 17:57:58)

I posted a reply with two links, maybe it requires approval to get posted. Anyway, I was suggesting going to the Sumo tournament in Tokyo. I also found an article about a miso specialty shop that looked interesting. You can find the article by Googling "miso food for the samurai" (include the quotes).

Seth Roberts (2012-01-02 19:37:10)

KenF, replies with links are sometimes classified as spam. thanks for letting me know. In any case those sound like great suggestions – I've never been to a miso specialty shop. I did go to a specialty pickle shop once.

chris (2012-01-07 03:24:25)

Hope you're enjoying your trip. On Monday you might get a chance to refine your theories on evolution by being near a city hall or shrine that's doing a 'Coming of Age' day ceremony. You'll see lots of 20 year olds dressed in kimonos and then getting drunk around the city. It's been amazing to me how differently Chinese, Japanese and Korean cultures evolved quite differently while keeping some commonalities.

### **Steve Jobs' Graduation Speech: My Opinion (2012-01-02 05:00)**

In [1]a recent post I said that Steve Jobs seemed to live in a very limited intellectual world. I gave [2]his Stanford graduation speech as an example. Someone asked me to explain. Here is my explanation.

The speech shows no sign of having read a book. It shows no sign of any intellectual interest outside his job.

It makes the insanely self-centered point that "if I had never dropped out, I would have never dropped in on this calligraphy class, and personal computers might not have the wonderful typography that they do."

It shows no sign of learning from anyone else (except his calligraphy teacher, which hardly counts). It shows no sign of even having noticed anyone else – it is all Steve all the time. It mentions Stewart Brand, but only to comment about the Whole Earth Catalog.

It makes the banal point what seemed like bad news was actually good news ("it turned out that getting fired from Apple was the best thing that could have ever happened to me").

It ends with a long string of banalities about death: "And yet death is the destination we all share. No one has ever escaped it. And that is as it should be, because Death is very likely the single best invention of Life. It is Life's change agent. It clears out the old to make way for the new." A high school student could have said that – at a funeral, perhaps.

This is from someone at the center of an enormous on-going revolution. I tried to find praise for it but all I found was that [3]someone in the Ukrainian government had plagiarized it.

1. <http://blog.sethroberts.net/2011/12/28/the-legacy-of-steve-jobs/>

2. <http://www.livingdharma.org/Real.World.Buddhism/SteveJobs-Commencement.html>

3. <http://gizmodo.com/5827086/ukranian-defense-chief-plagiarizes-steve-jobs-graduation-speech>

Alex Chernavsky (2012-01-02 08:36:29)

See also this: <http://www.forbes.com/sites/frederickallen/2011/10/12/steve-jobs-bad-career-a-dvice/>

Jay (2012-01-02 10:13:44)

I sort of liked his calligraphy example. Life is chaotic (in the mathematical sense), meaning you can't very easily predict the future by analyzing the present. But I guess he had an optimism bias – things tend to work out for the better. I disagree there; the calligraphy course could just as easily resulted in an undesirable outcome.

Robin Barooah (2012-01-02 10:23:27)

I think that whether the comments in the speech are 'banal' or not depends a lot on whether you think that Steve Jobs himself is interesting. You say his comments about death 'could have been made by a high school student'. A high school student could have said the following: "You must sleep sometime between lunch and dinner, and no halfway measures. Take off your clothes and get into bed. That's what I always do." Which, had it been said by a high school student it would be banal and uninteresting. It's interesting because it was said by Winston Churchill. If contemplating death really was one of the most important factors in how Steve Jobs lived, isn't that unusual for a CEO and something that it was very valuable for him to attempt to convey? Similarly, the comment about getting fired was also interesting - it sounds to me that he was saying that if he'd carried on being one of the most 'successful' twenty-somethings in modern history, he would not have learned things that were important to his later accomplishments. In any case, I don't think the commencement speech provides evidence either way for Steve Jobs's 'limited intellectual world. He wasn't there to prove that he'd read widely. The students were at Stanford, so presumably they were exposed to intellectual riches from other sources. Whether or not we agree about the paucity of Steve Jobs's intellectual life, I do have a question: What do you wish he'd been exposed to intellectually that you think may have helped him do a more worthwhile job, and how do you think these sources might have influenced him?

wr (2012-01-02 12:32:45)

Seth: THANKS. I intended to flag my appreciation for your earlier post, but forgot. Having read the (truly poor) Isaacson bio, I find myself in complete agreement with you. He was an ethically and intellectually shallow, incredibly adept salesman. Many people lament the bio as a "missed opportunity" to find out what Steve really thought about the "big issues of our time", be they technological or political or what have you. Spoiler: there is zero evidence Steve had deep thoughts about anything. He shares some shallow thoughts – literally – about the surface of various objects, but precious little else. Singe-mindedness is surely not incompatible with great success – he's proof of that. It may even be helpful, and there are many other examples. I do not think his was a happy life, though many will judge it as a great one. On that score I haven't decided for myself.

LemmusLemmus (2012-01-02 12:46:36)

Robin: I would say that if a speech is only interesting because it was made by someone interesting, this means the speech is not interesting.

Seth Roberts (2012-01-02 13:59:25)

What do you wish he'd been exposed to intellectually that you think may have helped him do a more worthwhile job, and how do you think these sources might have influenced him?

I think he could have learned a lot from reading Jane Jacobs. Jacobs constantly criticized top-down solutions to problems – the idea that "we know what is best for them". For example, when she was asked "what should be done with the Twin Towers site (in New York)?" she suggested asking the people who worked there. In dealing with Foxconn, Apple – no doubt with Jobs's approval – has taken a PR approach: Let's do what looks good, lets make sure they conform to Western ideas of goodness (e.g., age of workers, working hours). This is "we know what is good for you" thinking. When the "we" and "you" are far apart it is absurd (but good PR, so it continues). A student of Jacobs would have let the workers say what is good for them.



Seth Roberts (2012-01-02 14:17:39)

I disagree there; the calligraphy course could just as easily resulted in an undesirable outcome.

What you have just said is more interesting than anything Jobs said in that speech.

Seth Roberts (2012-01-02 14:25:09)

A high school student could have said the following: "You must sleep sometime between lunch and dinner, and no halfway measures. Take off your clothes and get into bed. That's what I always do." Which, had it been said by a high school student it would be banal and uninteresting. It's interesting because it was said by Winston Churchill.

I find that quote funny and quirky – not banal. I can't imagine a high-school student saying it. (In my experience, high school students save their sleeping for classrooms.) I might even take it seriously. I take a nap almost every day with my clothes on. What would happen if I took off my clothes?

Robin Barooah (2012-01-02 16:20:16)

Not liking top-down solutions is definitely something I can appreciate. I personally dislike being told what to do, and would probably hate to work for Apple in Cupertino, let alone Foxconn in China. Clearly Steve himself disliked being told what to do, but 'hypocritically' thought it was ok for others. So, let's agree that Apple itself as an organization functions as a monument to top-down thinking. What great non top-down examples of large scale human technological cooperation can you point to that we can compare to them?

Robin Barooah (2012-01-02 16:31:05)

Seth: When I was at high school, I experimented with both napping in the afternoon, and at a separate time, with reducing my sleep to 4 hours per night. I could easily have said (and maybe did) something like the Churchill quote. I have also had brushes with death, and can assure you that those changed my outlook more than the sleep experiments. I think I'd have been much better off taking the reality of death seriously earlier in my life, and yet I don't recall a single adult - certainly not anyone at college making that point. To me, it doesn't seem like a banal point to make in a commencement speech. I think you're clearly right that It's not an intellectually great or even interesting speech if taken out of context. I'm questioning why you are judging it as such when it was meant to be heartfelt life-advice. LemmusLemmus: I disagree. Whether what someone says is interesting depends on what you know of their background. For example: If the chairman of the federal reserve delivers a speech about how capitalism is fundamentally flawed, it would be much more interesting than if a protestor at Occupy Wall Street delivered the same speech.

Seth Roberts (2012-01-02 19:54:02)

I think you're clearly right that It's not an intellectually great or even interesting speech if taken out of context. I'm questioning why you are judging it as such when it was meant to be heartfelt life-advice.

My overall point is that Steve Jobs's legacy reflects the sort of person he was. To be blunt and harsh, he was shallow and incurious. I'm not saying such people should be prohibited from giving graduation speeches, I'm saying that when such people manage to gain control of one of the world's most powerful companies, there will be room for improvement in how that company behaves. I only discuss the Stanford graduation speech because it is evidence about what kind of person Jobs was. You are right, so what if a graduation speech is shallow. I think Apple Computer's response to the Foxconn suicides, which was a great opportunity to improve factory working conditions in many places, was squandered because of Steve Jobs. I also think that a wiser CEO would have pushed much harder to improve recyclability of Apple products. I am afraid that a shallow CEO hires shallow people. I hope I am wrong. Next week This American Life appears to be devoting a whole show to working

conditions at Foxconn. Perhaps it will make the same point I am making here.

Seth Roberts (2012-01-02 20:08:09)

So, let's agree that Apple itself as an organization functions as a monument to top-down thinking. What great non top-down examples of large scale human technological cooperation can you point to that we can compare to them?

It's not Apple the organization – it's Steve Jobs the CEO. He was remarkably successful, compared to other CEOs, at getting his way. In particular, to get Apple products to be enjoyable for him to use. How he did this I don't know. I doubt it was the organization chart. I also doubt it was as simple as he was an insensitive jerk. Lots of people are insensitive jerks. Maybe it was the context, the product, the people he hired (who could see past the bullying) – I don't know. But to answer your question, Southwest Airlines is well-run with happy employees and a very low rate of accidents. I would probably like a graduation speech by the head of Southwest Airlines.

Alex Chernavsky (2012-01-02 20:47:34)

What great non top-down examples of large scale human technological cooperation can you point to that we can compare to them?

I'd say Wikipedia and open-source software are good examples.

Robin Barooah (2012-01-02 23:10:40)

Seth: I don't understand the value of making these 'frank' judgements about Steve Jobs character. I know a number people who have had direct contact with Jobs. Almost all of them have attested to his character flaws, but a lack of curiosity was not amongst them, indeed some of them reported quite the opposite. It's hard to see your comment that he "managed to gain control of one of the world most powerful companies" as anything other than a distortion of well known history. You must know that when Steve Jobs regained control of Apple it was only a few months away from bankruptcy. He did not gain control of one of the world's most powerful companies. He gained control of a company that was on the verge of failure and then over a decade and a half built it into one of the worlds most powerful companies. It seems to me that you're angry about something that Steve Jobs represents, but it's not at all clear what that something is. I don't think it's obvious what level of influence Steve Jobs had over how Foxconn operates. He couldn't just order it to be done differently - it was done by negotiation. How many competitors to Foxconn could Apple turn to if they didn't get their way? He wasn't a deity, and despite his charisma, there were plenty of people who he had to go along with to get things done. Alex: I think those are good examples too. However they also show the limits of what we know how to do so far. How would a bottom-up organization build billion gate 22nm processors? What about unibody laptop chassis, or battery technology? How about six-sigma defect levels in products that ship at a volume of 100m a year? I'm not saying it can't be done, just that these things took decades for top-down organizations to learn to manage and that is real understanding about how to do them in a distributed bottom-up way that we simply haven't developed yet, and I don't see why it's Steve Jobs' fault for not developing them.

LemmusLemmus (2012-01-03 01:20:09)

Robin: We may be talking past each other. I read your original statement as saying that a speech can be made more interesting if you take the speaker's background into account. I disagree with that. If the chairman of the fed and an OWS protester give the same speech, these speeches are equally interesting, because, by definition, they're the same speech. (I am assuming no substantial differences in delivery.) What is more interesting about the chairman of the fed's speech is not the speech itself, but \*the fact that he would speak out against capitalism\*. Even if it is a very poor speech, \*this fact\* would still be newsworthy. But that doesn't make the speech itself interesting. Along those lines, one might argue that Jobs' speech is interesting because it teaches you how to be successful, but such an interpretation would be wrong, as quite a few commenters have pointed out

after the video went viral. If you want answers to those questions, you want, at minimum, an n»1 sample with variation in the dependent variable.

Seth Roberts (2012-01-03 03:52:16)

Robin, yeah, I should have said Jobs built Apple into one of the world's most powerful companies. I'm not angry at him. I'm sorry he squandered big opportunities to make the world a better place. It's hard for me to be sure how much influence he could have had at Foxconn, I agree, but I don't think he even tried.

Robin Barooah (2012-01-03 11:08:09)

LemmusLemmus: I think we have a philosophical difference of perspective. I don't regard a communication as bearing information outside of it being a communication between a sender and a receiver. To me, this means that a printed speech is just a message in-transit and is only distinguished from noise at the point when it's read. Whether it's interesting depends on how predictable it is relative to the receiver's preconceptions about the sender. When a receiver is blind to the identity of the sender, they still create a hypothetical model of the sender based on their own history. (my view is basically a straightforward interpretation of Shannon's information theory) Seth: Fair enough. I do think it's an interesting question - what could Steve Jobs have done better, and more importantly what tradeoffs would it have involved?

Nancy Lebovitz (2012-01-03 14:33:42)

"In particular, to get Apple products to be enjoyable for him to use. How he did this I don't know. I doubt it was the organization chart. I also doubt it was as simple as he was an insensitive jerk. Lots of people are insensitive jerks. Maybe it was the context, the product, the people he hired (who could see past the bullying) — I don't know. " Hypothesis: Jobs was unusually good at figuring out what he wanted. I think people generally are much better at knowing what they don't want than what they do want.

Seth Roberts (2012-01-03 19:27:52)

Hypothesis: Jobs was unusually good at figuring out what he wanted. I think people generally are much better at knowing what they don't want than what they do want.

Interesting idea. The same has been said about Alice Waters. She can't cook very well but she is a great critic of food other people have cooked.

LemmusLemmus (2012-01-04 01:58:15)

Robin: Yeah, I disagree with pretty much everything you say in your paragraph, so I think you have identified our points of disagreement clearly and comprehensively.

Robin Barooah (2012-01-07 11:36:33)

Seth & Nancy: I think what you're talking about here is a key aspect of how Steve Jobs functioned - and one of the unusual things about his life was that starting at an early age, he had a huge set of opportunities to practice criticizing product design and then see the consequences. Very few people have the opportunity to do this even once, whereas Steve Jobs had thousands of chances to practice.

Robin Barooah (2012-01-07 11:42:32)

LemmusLemmus: Success!

ShardPhoenix (2012-01-09 05:23:40)

So Steve Jobs didn't engage in some tokenistic behavior (recycling, really?) along your preferred political lines, therefore he's "shallow"?

Seth Roberts (2012-01-09 07:01:52)  
Recycling is "tokenistic"? What does that mean?

Dr. Tim Hadley (2012-01-09 17:52:59)  
Thanks, Seth. You're a breath of fresh air in the world of insane Jobs-worship. Your analysis and openness to discourse make your blog one of the best I read.

Christopher Burd (2012-01-17 10:14:38)  
Jobs got a lot of humanities cred out of having taking one calligraphy course.

### Assorted Links (2012-01-03 05:00)

- [1]omega-3 blood levels correlated with better mental performance in the elderly. "The team found that people who had higher blood levels of vitamins B, C, D and E and omega-3 fatty acids scored higher on the mental-function tests, including attention tasks and visual and spatial skills, than those with lower levels of these nutrients."
- "[2]Inflammation, atherosclerosis, and coronary artery disease." An influential New England Journal of Medicine article from 2005. The next time someone tells you that heart disease is due to high cholesterol, refer them to this article.
- [3]Weak evidence that bacteria in food stimulate the immune system. Indian women who ate yogurt to which a probiotic had been added had more of an immune-related molecule in their feces than before and after that ingestion.
- Speaking of India, do medical students who gain admission by fraud become dangerous doctors? [4]India has a problem.

Thanks to Tim Beneke.

1. <http://healthland.time.com/2011/12/29/how-your-diet-may-affect-your-risk-of-alzheimers-disease/>
2. <http://www.coryi.org/cardiology/Hansson.pdf>
3. <http://www.nutritionj.com/content/10/1/138/abstract>
4. [http://articles.timesofindia.indiatimes.com/2011-12-29/india/30568333\\_1\\_mbbs-courses-medical-education-pmt](http://articles.timesofindia.indiatimes.com/2011-12-29/india/30568333_1_mbbs-courses-medical-education-pmt)

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Tuck (2012-01-03 08:13:07)  
Interesting link on CAD. Although I don't think inflammation is the key any more than cholesterol was. Inflammation is a reaction, a link in the chain of cause-and-effect. What causes the inflammation in the first place?

Joe (2012-01-03 11:50:41)  
Visceral fat? <http://news.wustl.edu/news/Pages/8990.aspx>

{ Brown Pundits } » Fake Doctors in India (2012-01-03 15:09:39)  
[...] Seth Roberts we find the TOI reporting on a pre-med test scam: A government probe found that the students, mostly [...]

Seth Roberts (2012-01-03 19:22:44)

Inflammation is a reaction, a link in the chain of cause-and-effect. What causes the inflammation in the first place?

Perhaps the inflammation is an overreaction. Maybe it is caused by infection – e.g., infection by bacteria in the mouth.

joseph (2012-01-03 19:57:09)

"•Weak evidence that bacteria in food stimulate the immune system" Why is it weak and not strong evidence? im actually not sure of you'r point or rather opinion of the study? concurring or disagreeing?

Seth Roberts (2012-01-03 20:37:46)

Why is it weak and not strong evidence? im actually not sure of you'r point or rather opinion of the study? concurring or disagreeing?

I agree with the conclusion of the study. It is weak evidence because the signal isn't especially strong and the design isn't terribly good.

Jim Breed (2012-01-04 14:09:58)

Re: Inflammation. I was doing SLD using flax seed oil for two weeks before my last dental appointment. My pockets that were 4's and 5's magically changed to 2's and 3's. I had my dentist print both the reports because I was so grateful that they stopped talking about some really painful sounding root work. My brushing and flossing were totally unchanged. I was expecting the result because of what I've read on the blog, but nothing this good. I am convinced that taking flax=reduction in gum inflammation, at the very least.

Alex Chernavsky (2012-01-05 07:48:02)

@Jim, I used to have big problems with staining on my teeth. I had to get my teeth cleaned every three months. After I started taking flaxseed oil daily, the staining was greatly reduced. I did not change my flossing or brushing habits, and I didn't cut down on my coffee consumption (the dental hygienist seemed to think that the staining was caused by the three cups of coffee I drink daily). I wonder if the staining was related to some sort of inflammatory process.

Tuck (2012-01-05 20:18:31)

"Perhaps the inflammation is an overreaction. Maybe it is caused by infection — e.g., infection by bacteria in the mouth." I suspect that's a secondary symptom as well. The folks who've studied non-Western people looking for signs of the diseases of civilization find a lack of heart disease and a lack of tooth decay... Are you familiar with Burkitt's "Western Diseases, Their Emergence and Prevention"? The most fascinating finding from that book was that autoimmune diseases were absent in Africa prior to the adaptation of the Western diet... <http://www.hup.harvard.edu/catalog.php?isbn=9780674950207>

## Assorted Links (2012-01-04 05:00)

- [1]More evidence that the SCD (Specific Carbohydrate Diet) diet really helps people with Crohn's Disease. "Since starting this diet, I have had no pain. Some might attribute this to surgery, but I am convinced the diet has so much to do with it. My blood work is normal, and it hasn't been in 8 years. The sed rate level in the blood is normal instead of elevated outrageously."
- [2]How to improve on lectures when teaching physics.

- [3]More selenium, less risk of cancer. Contrary to what the researcher quoted in this article says, there is already substantial evidence that selenium reduces cancer risk. For example, in a county-by-county map of USA cancer rates, there is a clear rift in the north east. On one side of the rift rates are clearly higher than on the other side of the rift. The rift corresponds to geological fault line. On the low-cancer side of the rift, there is more selenium in the soil. There are also rat experiments. You certainly should take selenium supplements.
- American health care plays a surprisingly large role in [4]an excellent story by Peter Hessler in The New Yorker about the Japanese yakuza (mafia). 1. From 2000 to 2004, [5]four yakuza members got liver transplants at UCLA at a time when liver transplants were hard to get. A few months later they made large donations to UCLA. The money went into a general fund at the surgery department. According to a UCLA spokesperson, [6]there was no connection between the transplants and the donations. According to [7]a UCLA press release, "No money or donation was offered or paid to anyone at UCLA as a quid pro quo for getting a transplant or moving up on the list." Because a general fund is not a person, this is literally true. 2. In the early 1990s, at a Columbia, Missouri hospital, a nurse was suspected of killing patients. Hospital administrators covered it up. "Everyone took part in the coverup was promoted, everybody who tried to expose it was punished," said someone who tried to expose it.

Thanks to Alex Chernavsky.

1. <http://littlescdwoman.yolasite.com/>

2. <http://www.npr.org/2012/01/01/144550920/physicists-seek-to-lose-the-lecture-as-teaching-tool>

3. [http://www.nytimes.com/2012/01/03/health/research/trace-elements-and-levels-of-pancreatic-cancer-risk.html?\\_r=1](http://www.nytimes.com/2012/01/03/health/research/trace-elements-and-levels-of-pancreatic-cancer-risk.html?_r=1)

4. [http://www.newyorker.com/reporting/2012/01/09/120109fa\\_fact\\_hessler](http://www.newyorker.com/reporting/2012/01/09/120109fa_fact_hessler)

5. [http://www.cbsnews.com/2100-18560\\_162-5484118.html?tag=contentMain;contentBody](http://www.cbsnews.com/2100-18560_162-5484118.html?tag=contentMain;contentBody)

6. <http://www.latimes.com/news/local/la-me-ucla31-2008may31,0,1503718.story>

7. <http://newsroom.ucla.edu/portal/ucla/statement-on-ucla-s-organ-transplantation-111951.aspx>

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Jim Breed (2012-01-04 13:12:57)

Re: Hospital administrator's cover-up. Read today's WSJ by Edward Jay Epstein. He recounts how the CIA covered up their own incompetence and resulted in exposure of National Secrets. [http://online.wsj.com/article/SB10001424-052970204720204577132884094630806.html?mod=googlenews\\_wsj](http://online.wsj.com/article/SB10001424-052970204720204577132884094630806.html?mod=googlenews_wsj) "The obstacle to finding the mole is the intelligence service itself, which attempts to rid itself of the mole hunter. It doesn't want to admit that it has been gulled—a story that's all too rooted in reality. "

Sara (2012-01-05 04:40:56)

You know that Brazil Nuts (or, the Brazil Nut tree) are selenium concentrators? One kernel has about 120 % of the RDI. I find it fascinating how some foods are just crazy high in one nutrient, when compared even to similar foods.

Steve Wright (2012-01-05 11:06:48)

Hey Seth here is a Crohn's infographic: <http://curetogether.com/blog/2011/09/20/crohns-study-results-29-treatments-rated-by-patients/> Showing more evidence that trying a side-effect free change, specific carbohydrate diet, in this case is as effective as most conventional pharmaceutical and surgery options. Which all come with public known side effects. One would could also deduce that if you coupled several of the safe natural treatments on that list, for instance SCD diet, fish oil, probiotics, vitamin D, and stress reduction you could easily have a recipe for complete remission of Crohn's disease. The success stories in

my inbox from people using strategies like the one above AFTER failing with conventional drugs is astounding!

Jazi zilber (2012-01-05 12:36:32)

<http://thescdexperiment.com/results/> Scd crohn

Jazi zilber (2012-01-06 01:49:05)

Selenium is only good if you are deficient. Bad when u have enough. Has an inerse U effects on cancer risk <http://jama.ama-assn.org/content/301/18/1876.2.short> If you have 120-150 mmol/l Avoid taking

Seth Roberts (2012-01-06 02:00:46)

that's really interesting about Brazil Nuts. I didn't know that.

Jazi zilber (2012-01-06 02:16:03)

There are also research hints that selenium yeast form is the one that has effect on cancer markers, but not other forms. One study.

Jazi zilber (2012-01-06 03:12:29)

The Negative Results of the SELECT Study Do Not Necessarily Discredit the Selenium-Cancer Prevention Hypothesis Is headline of the work relating differences of different kinds of selenium

Thor Falk (2012-01-11 05:55:00)

Re physicist's teaching: I guess the physicists just learned from the most dismal part of the dismal science - this is pretty much the way MBA courses are taught, at least the good ones: (1) reading assignments, (2) group projects, mainly around case studies, (3) significant classroom participation...

## **Is Epidemiology Worthless? The Case of Calcium (2012-01-05 05:00)**

Epidemiology has lots of critics. In [1]this article, for example, it is called "lying on a grand scale." Every critique I have read has ignored history. Epidemiologists have been right about two major issues: 1. Heavy smoking causes lung cancer. 2. Folate deficiency causes birth defects. In both cases, the first evidence was epidemiological. Another example is John Snow's conclusion about the value of clean water. In my experience, epidemiologists often overstate the strength of their evidence (as do most of us) but overstatement is quite different from having nothing worth saying.

Let's look at an example. Many people think osteoporosis is due to lack of calcium. Bones are made of calcium, right? The epidemiology of hip fractures is clear. In spite of the conventional idea, the rate of hip fracture has been highest in places where people eat a lot of calcium, such as Sweden, and lowest in places where they eat little, such as Hong Kong. ([2]For example.) In other words, the epidemiology flatly contradicted the conventional idea. This was apparently ignored by nutrition experts (everyone knows correlation does not equal causation) who advised millions of people, especially women, to take calcium supplements to avoid osteoporosis. Millions of people followed (and follow) that advice.

[3]Thanks to a recent meta-analysis we now know that experiments and better data firmly support the earlier epidemiology, which suggested that calcium supplements are dangerous. Here are its main conclusions:

In meta-analyses of placebo controlled trials of calcium or calcium and vitamin D, complete trial-level data were available for 28,072 participants from eight trials of calcium supplements and the WHI CaD

participants not taking personal calcium supplements. . . .Calcium or calcium and vitamin D increased the risk of myocardial infarction (relative risk 1.24 (1.07 to 1.45),  $P = 0.004$ ) and the composite of myocardial infarction or stroke (1.15 (1.03 to 1.27),  $P = 0.009$ ). . . . A reassessment of the role of calcium supplements in osteoporosis management is warranted.

If the epidemiology had been taken more seriously, many heart attacks might have been avoided.

Is this an "anecdote" – a single example – proving nothing? Here's how you can check. Randomly select a meta-analysis of epidemiological studies. Thousands have been done. Then ask if the results summarized in the meta-analysis appear random. Better yet, randomly pick two meta-analyses. Suppose the first summarizes 5 studies and the second summarizes 6. If the 11 results were shuffled together, how well could you assign them correctly?

1. <http://www.numberwatch.co.uk/epidemi-reviews.htm>

2. <http://mydrmo.com/2011/10/got-milk-the-truth-about-osteoporosis-calcium-dairy-products/>

3. <http://www.ncbi.nlm.nih.gov/pubmed/21505219>

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Lemniscate (2012-01-05 05:52:37)

I think epidemiology is a field of study that is particularly ill suited to the modern research environment. The pressure to continuously publish results, especially results pertinent to public health policy, produces mass false positives. Government policy can help entrench these false positives. This is a "boy who cried wolf" situation. People will ignore important results like the calcium result because they're used to epidemiological results being false positives.

Valtsu (2012-01-05 06:24:23)

Hmm... One reason why there are more fractures in Sweden than in Hong Kong might be climate. More snow and ice in the winter?

Jonathan (2012-01-05 06:52:39)

While this isn't directly relevant to the main point of your post, readers might be interested to know that current thinking leans toward the idea that both osteoporosis and arterial calcification are problems not of insufficient/excessive calcium, but of the body's failure to distribute calcium to its proper places. Likely candidates for the driving factors include hyperinsulinemia and deficiencies of the fat-soluble vitamins D, K2, and A. To avoid osteoporosis or heart attacks, there seems to be a good case for supplementing D (or sunlight) and K2. When your metabolism is putting calcium into the blood vessels instead of the bones, it seems like a reasonable hypothesis that more calcium would increase the risk of heart attack. Regarding epidemiology: I think most of the correlations found by epidemiologists do not reflect direct causation; rather than  $A \rightarrow B$  or  $B \rightarrow A$ , they usually mean that both A and B have a common cause that was not measured. Unfortunately, many epidemiologists and nearly all readers of popular science articles have not grasped this.

charles (2012-01-05 07:07:29)

Supposedly, most of the forms of Calcium supplements that people use actually remove calcium from the bones. Calcium citrate, etc. Calcium carbonate (like from eggshells, oysters) works correctly though..

Jazi zilber (2012-01-05 12:40:17)

I have read that only 20 % of epidemiological findings turn true in controlled experiments. 80 % are refuted. It is a question of the cost of different mistakes. + whether people can accept information with the idea that it has a very low probability of being true. Many people cannot handle informatiothat way



Becky Hargrove (2012-01-05 12:54:54)

My dad has a nice batch of mustard greens in the garden. I'll stick with them!

Seth Roberts (2012-01-06 01:57:36)

I think most of the correlations found by epidemiologists do not reflect direct causation; rather than  $A \rightarrow B$  or  $B \rightarrow A$ , they usually mean that both A and B have a common cause that was not measured.

I am curious why you think this. Your belief seems much stronger than the available evidence warrants. "Most of the correlations" is a very large set. My impression is that most of the correlations discovered by epidemiologists are still unexplained – that is, we are not sure why they happened. To think they suggest cause and effect simply means they make a cause-effect statement (e.g., A causes B) more plausible. Almost always they do. I see nothing wrong with epidemiologists pointing this out. It is also true that an A/B association makes a common cause explanation more plausible. Epidemiologists often point this out, too.

Seth Roberts (2012-01-06 01:59:37)

I think epidemiology is a field of study that is particularly ill suited to the modern research environment. The pressure to continuously publish results, especially results pertinent to public health policy, produces mass false positives.

I agree (although I have no idea about the number of false positives). Is epidemiology worse than any other area of health research? I tend to think it is better because it is not distorted by vast amounts of drug company money. All researchers are under pressure to publish.

Alex Chernavsky (2012-01-06 08:07:47)

Gary Taubes had an interesting article about epidemiology and some of the problems associated with it: <http://www.nytimes.com/2007/09/16/magazine/16epidemiology-t.html?pagewanted=all>

Lots of Links « Sceptically Fit (2012-01-07 14:50:42)

[...] takes a look at the value of the epidemiological method. And Silverhydra asks does masturbation lower testosterone [...]

dearieme (2012-03-13 09:47:13)

Thanks for the Taubes reference, AC: a very useful summary.

Faevia (2012-04-10 01:15:05)

It's good to do some research about things like calcium. Not only do you need calcium, but magnesium is important too, but most people do not know that they work together. People get enough calcium, but common calcium sources like milk have very little magnesium, so instead, people should focus on getting more magnesium to improve their bone strength. If anyone would like to read more about this, here is an article that explains how to make the most from calcium: <http://faevia.com/2012/02/getting-the-most-out-of-calcium/>

## Why Language Began: Words Say What We Want (2012-01-06 05:00)

[1]My theory of human evolution posits that many features of human nature began because they increased specialization and trade. One is language. Language began with single words, I assume. The use of single words began and grew because they helped the two sides of trade find each other. The first language, in other words, was the first advertising. Advertising has two sides: (a) saying what you have too much of and (b) saying what you have too little

of.

Single words are still used this way. Stores are often adorned with single words that say what they sell. When you go to an unfamiliar store, you may use single words to find what you want ("thermometers?"). The use of single words to convey desires is clear in a paper by Alexander Graham Bell, which I learned about from *Electric Universe* by David Bodanis. Bell (the inventor of the telephone) was a teacher of the deaf and wrote [2] a paper about teaching deaf children language. His method involved labeling objects around the house with their names. One of his students was a five-year-old boy:

One morning he came downstairs in high spirits, very anxious to play with his doll. He frantically beat his shoulder with his hands, but I could not understand what he meant. I produced a toy-horse; but that was not what he wanted. A table; still he was disappointed. . . . At last, in desperation, he went to the card-rack, and, after a moment's consideration, pulled out the word "doll" and presented it to me.

For a different view of why language evolved, see [3] this paper by Hauser, Chomsky and Fitch.

1. <http://sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>
2. <http://dspace.wrlc.org/doc/get/2041/68524/AADDvol128no2text.txt>
3. <http://chomsky.info/articles/20021122.pdf>

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Tim Beneke (2012-01-06 11:41:33)

"The use of single words began and grew because they helped the two sides of trade find each other." But surely the necessity for sounds that provided warning of threat from predators (and other danger) preceded words for trade? And perhaps vocalizations that encouraged silence in the presence of predators. Before we could trade we had to be able to survive... And the need to communicate specificity of edible plant locations might have encouraged enough fine-grained cognition so that words developed – think of the bee wagging behavior that locates pollen. I'm not saying your theory is wrong, but parts of it are perhaps over-stated.

Josh (2012-01-07 14:48:30)

I see words as a representation. As what they represent gets more complex, so do the patterns used to create them. I think the most pure form of communication is sharing an experience. However even that experience is limited by a person's perception. I often lose perspective on what communication really is, it's an abstract, not the reality of the moment. It intrigues me as to how much is perceived without words. This would reason to place great emphasis on health and awareness to maximize perception and cognition. To better understand and communicate with one another to get what we want and also redefine what we want.

Nathan Myers (2012-01-10 21:28:11)

The most persuasive arguments I've encountered on the origins of language trace it to mother/child interactions. Babies' wants are very simple, and not different from those of other species, so cannot sustain language development. Teaching is an activity can take advantage of every conceivable improvement in language technology.

## Tokyo Restaurant Recommendations – and Why They Might Be A Bad Idea (2012-01-07 05:00)

An earlier post asked for Tokyo recommendations. A kind reader (Andrew Clarke) provided the following recommendations of off-beat restaurants:

One place I always recommend is Andy's Shinhinomoto, in Yurakucho: [1]<http://www.frommers.com/destinations/tokyo/D61101.html>. I have never seen a travel show that has covered the place, but it's a best kept secret within the ex-pat community. Its menu is a standard Japanese Izakaya (pub) menu with some of the freshest sashimi (and fish in general) in Tokyo, and the strangest thing - it's ran by a long-term British ex-pat, who is so renowned for his ability to pick good ingredients that he selects and delivers fish for several local sushi shops. Upstairs seating is best for atmosphere, but the food is the same downstairs. They have an English menu, and I'd also recommend the fish head and tempura. It's also not super expensive, somehow I never manage to spend more than 7000Y with alcohol.

Teyandei is another one that I would generally recommend: [2]<http://www.bento.com/rev/2133.html>. You'll be lucky if you manage to find this one, most taxi drivers I have ever asked couldn't find it even with GPS, it's located in a residential area of the back of Roppongi. Great atmosphere, and again Izakaya style but not fish oriented, and not strictly traditional. The most memorable dish I had was a french baguette, vanilla ice cream and maple syrup slider - which was very good, but to be enjoyed occasionally. Outside of that they have many great dishes, with more of a meaty or stuff on sticks vibe.

Last general recommendation is for sushi: [3]<http://tokyofood.blog128.fc2.com/blog-entry-52.html>. I used to live in Tsukiji town and this place is a friendly joint that attracts many locals in the evening. Probably because it's not super-expensive, but great quality and I particularly recommend the Uni if that is your thing. Their 'aburi (blow torched)' dishes are great too, and the Aji (mackerel) and the tsuki maguro (marinated tuna).

[follow-up:] The Moroccan place, I'm not sure why I didn't include this the first time, as it is possibly the most strange and off-the-beaten-path: [4][http://www.dalia58.com/d\\_map.html](http://www.dalia58.com/d_map.html). [5]Google Maps. The owner is a Japanese lady who spent 1 year in Morocco on a home stay. She loved the home cooked food and fastidiously learned to replicate them the way only Japanese people can. I learned about from a Moroccan co-worker who swears it's the most authentic Moroccan food he has had out side his homeland. You definitely need to book ahead, there are only maybe 12 seats in the place and only 4 of those are not on the ground. The menu is fairly small and changes every once in a while as the owner travels back to Morocco regularly, but usually I have the meatball tagine (best), fish tagine, freshly baked wheat bread and vegetable couscous. I have never been there alone, you'd need at least two people to eat all that.

[6]Alexandra Harney, author of The China Price, who has spent years in Tokyo, recommended:

My favorite watering hole: Asahi Shokudo in Nogizaka, near Tokyo Midtown. Unless you speak Japanese, the best thing to do is probably to have someone call ahead, make a reservation (a very good idea) and fax you a map. Their tel: 03-3402-6797. GREAT food, very good atmosphere, sake good too. It's not fancy, but authentic and creative.

Tyler Cowen's forthcoming book ([7]An Economist Gets Lunch: New Rules For Everyday Foodies) says a lot about Japanese food and restaurants. In an email he said "Pierre Gagnaire Tokyo was the best meal I've ever had...that is

expensive, though.”

I am in Tokyo now. Last night I took a long walk around my hotel ([8]Hotel Changtee), which is in Ikebukuro. I have stayed here three times before. On my walk, for the first time, I noticed a Spanish restaurant (Agalito) a few blocks from my hotel. In Beijing, I often have Japanese food, so I decided to try it. The menu (mostly tapas) looked good. It wasn't expensive (Ikebukuro is full of relatively cheap restaurants).

I had seven dishes. Every one surprised me and tasted great. I had pickles, a vegetable terrine, deep-fried shrimp and avocado (the avocado was also deep-fried), mackerel, a dish of large mushrooms and bacon, marinated cherry tomatoes (skins removed), and baked/grilled cheese and tomatoes. Far better than the tapas I had in Barcelona (or anywhere else). Far better than the tapas at a Berkeley restaurant (Cesar) next to Chez Panisse owned by Alice Waters' ex-husband. The pickles were a small dish of carrots, cucumber, cabbage, and red pepper. The best pickles I've ever had, and I've had pickles hundreds of times, as anyone who knows my passion for fermented food will understand. They are a staple of Japanese and Szechuan cuisine. I've had Japanese pickles at dozens of places. The carrot pickles were so good, such a great blend of sweet and sour, so perfectly crunchy, that I want to start trying to recreate them. I didn't know carrot pickles could be that good. The tomato and cheese dish also opened my eyes. I never knew that cheese and tomatoes could go so well together. I want to get special equipment (the baking pan) just to make this one dish. I want to try many different cheeses and tomatoes to find the best pairing. No meal at Chez Panisse or anywhere else has pushed me to do two new things. A tiny number (five?) have pushed me to do one new thing.

This restaurant is a few blocks from my hotel. No one recommended it. The meal, with drink, cost \$60. I'm told that if you ask a Tokyo resident what are your favorite restaurants? they look at you blankly. Now I see why. There are so many great restaurants it doesn't matter. This meal also taught me that recommendations may be counter-productive. Recommended restaurants are often expensive. Expensive food is likely to require lots of labor, special tools, and expensive ingredients. Making it harder to copy and thus less inspiring. Whereas this "plain" meal, with cheap ingredients and relatively little labor, will continue to influence and teach me whenever I do stuff it has inspired me to do.

1. <http://www.frommers.com/destinations/tokyo/D61101.html>
2. <http://www.bento.com/rev/2133.html>
3. <http://tokyofood.blog128.fc2.com/blog-entry-52.html>
4. [http://www.dalia58.com/d\\_map.html](http://www.dalia58.com/d_map.html)
5. [http://maps.google.com/maps?f=q&source=s\\_q&hl=en&geocode=&q=%E6%9D%B1%E4%BA%AC%E9%83%BD%E4%B8%AD%E5%A4%AE%E5%8C%BA%E6%97%A5%E6%9C%AC%E6%A9%8B%E5%A4%A7%E4%BC%9D%E9%A6%AC%E7%94%BA2-9&sl=35.687345,139.993026&sspn=0.010195,0.01929&vpsrc=0&ie=UTF8&hq=&hnear=Japan,+T%C5%8Dky%C5%8D-to,+Ch%C5%AB%C5%8D-ku,+Nihonbashi%C5%8Ddenmach%C5%8D,+%EF%BC%92%E2%88%92%EF%BC%99&ll=35.690259,139.778302&spn=0.010195,0.01929&t=m&z=16&iwloc=A](http://maps.google.com/maps?f=q&source=s_q&hl=en&geocode=&q=%E6%9D%B1%E4%BA%AC%E9%83%BD%E4%B8%AD%E5%A4%AE%E5%8C%BA%E6%97%A5%E6%9C%AC%E6%A9%8B%E5%A4%A7%E4%BC%9D%E9%A6%AC%E7%94%BA2-9&sl=35.687345,139.993026&sspn=0.010195,0.01929&vpsrc=0&ie=UTF8&hq=&hnear=Japan,+T%C5%8Dky%C5%8D-to,+Ch%C5%AB%C5%8D-ku,+Nihonbashi%C5%8Ddenmach%C5%8D,+%EF%BC%92%E2%88%92%EF%BC%99&ll=35.690259,139.778302&spn=0.010195,0.01929&t=m&z=16&iwloc=A)
6. <http://alexandraharney.com/>
7. [http://www.amazon.com/Economist-Gets-Lunch-Everyday-Foodies/dp/0525952667/ref=sr\\_1\\_1?s=books&ie=UTF8&qid=1323874242&sr=1-1/marginalrevol-20](http://www.amazon.com/Economist-Gets-Lunch-Everyday-Foodies/dp/0525952667/ref=sr_1_1?s=books&ie=UTF8&qid=1323874242&sr=1-1/marginalrevol-20)
8. <http://changtee.com/>

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Rashad (2012-01-07 07:04:58)

Seth, don't be a tease. We want details. Was it this place? <http://maps.google.com/maps/place?q=spanish+restaurant&cid=9685442174116055089>

James (2012-01-07 07:50:24)

"I never knew that cheese and tomatoes could go so well together" Umm, pizza?

dearieme (2012-01-07 10:24:06)

"I never knew that cheese and tomatoes could go so well together": I'm baffled. Cheddar and tomato in Britain; Brie and tomato in France; dish after dish in Italy .....

Seth Roberts (2012-01-07 13:05:51)

"I never knew that cheese and tomatoes could go so well together": I'm baffled. Cheddar and tomato in Britain; Brie and tomato in France; dish after dish in Italy.

I've had tomato and mozzarella many times...it is not a good example of the power of the tomato/cheese pairing because the cheese is too weakly-flavored and the tomato is not roasted. Neither is at their best. It's not enough to put the two together. You have to optimize the combination – choose the best cheese, the best tomato, and the best proportions.

Seth Roberts (2012-01-07 13:09:41)

"I never knew that cheese and tomatoes could go so well together" Umm, pizza?

It did remind me of pizza, yeah. I suppose the pizza I've had has had too much toppings. This makes me want to compare pizza with and without toppings.

Seth Roberts (2012-01-07 13:16:14)

Rashad, I cannot find it online. The name is something like Agalito. If you want to go there, go to the Ikebukuro Station, leave by Exit C6, go in the direction away from the station on the main street until you reach the Seiko building (very close, 2-3 blocks) and then turn left and go about 4 short blocks. You can also follow the directions to the Grand House Chang Tee, which are probably online. It is a few blocks before the hotel.

garymar (2012-01-08 01:26:03)

The real foodies in Japan are in *Osaka*. They have a phrase there that goes back to the Edo period: "kui-daore", literally "eat-fall", meaning "go bankrupt overeating (extravagantly expensive food)". It's almost impossible to get a bad meal there, in any price range. Aren't the Italians like that as well?

Perfect Health Diet » Around the Web: Epiphany Sunday Edition (2012-01-08 16:55:01)

[...] of the best food in the world. His findings remind me of our discussions of "gourmet Paleo": simple food can be incredibly tasty: I had seven dishes. Every one surprised me and tasted great.... No meal at Chez Panisse or [...]

Adam (2012-01-08 21:17:39)

No. It's perfectly possible to get a crappy meal in Italy, at any price.

Assorted links — Marginal Revolution (2012-01-08 23:47:41)

[...] 3. Is it counterproductive to recommend restaurants in Tokyo? [...]

bob (2012-01-10 08:13:08)

I have no doubt the tapas were good, but none of those sounded even remotely authentic. Avocado? As typically Spanish as grasshopper. Spanish food is not really about tapas, but about what Americans would call stews and soups. What a Spaniard would have for lunch, not what he'd have for dinner if he is not at home or in a restaurant

## Flaxseed Oil and Gum Disease: Still More Success (2012-01-08 05:00)

[1]The following comment was left a few days ago:

I was doing SLD using flax seed oil for two weeks before my last dental appointment. My pockets that were 4's and 5's magically changed to 2's and 3's. I had my dentist print both the reports because I was so grateful that they stopped talking about some really painful sounding root work. My brushing and flossing were totally unchanged. I was expecting the result because of what I've read on the blog, but nothing this good. I am convinced that taking flax= reduction in gum inflammation, at the very least. [emphasis added]

Take that, "[2]decline effect" (big experimental effects, when the experiment is repeated, get smaller)!

The commenter sent me the records of the two cleanings. At the pre-flaxseed-oil cleaning (April 28, 2011), he had 24 sites (13 teeth) with pockets of depth 4 or 5. At the cleaning after he started flaxseed oil (July 28, 2011), he had no sites with pockets of depth 4 or 5.

You can find many similar reports [3]here.

1. <http://blog.sethroberts.net/2012/01/03/assorted-links-149/#comment-943915>
2. [http://www.newyorker.com/reporting/2010/12/13/101213fa\\_fact\\_lehrer](http://www.newyorker.com/reporting/2010/12/13/101213fa_fact_lehrer)
3. <http://blog.sethroberts.net/category/nutrition/omega-3/omega-3-and-gum-health/>

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Jazi zilber (2012-01-08 06:13:52)

I have experienced another effect worth mentioning. I have one pocket, and after eating spareribs (i usually eat full rack, = lots of pork fat), it gets inflamed seriously, No spareribs, no inflammation. It was repeated several times. Initially, i thoughts it is the chewing. (most of my food is not that hard to chew, and i feel the effort different). But then i tried chewing on the other side, or very gently, mbut still inflammation and serious pain! Once i stopped spareribs, i forgot the pocket, the pain inflammation. As if it never happened.....

gwern (2012-01-08 08:34:42)

> Take that, "decline effect" (big experimental effects, when the experiment is repeated, get smaller)! "Take that, reporting bias (small experimental effects, when the 'experiment' is repeated, get bigger)!"

David (2012-01-08 12:30:07)

Jazi: What type of pork was this? Grass fed pastured or conventional?

Seth Roberts (2012-01-08 13:05:31)

Gwern, your use of the term "reporting bias" is different than Wikipedia's definition: "reporting bias refers to a tendency to under-report unexpected or undesirable experimental results, attributing the results to sampling or measurement error, while being more trusting of expected or desirable results, though these may be subject to the same sources of error." I have never heard of "reporting bias" being used to mean what you say it means.

gwern (2012-01-08 16:31:38)

Anecdotes selectively reported are useless; and the stronger your reporting bias, the further from truth the effect size becomes - if everyone reports their results, good, if only people with strong effects report, bad, if only people with very strong effects report, even more bad. Is this an unfair characterization of the anecdotes you post, which are selected for their enthusiasm? Perhaps, but your decline remark is even unfairer.

Nancy Lebovitz (2012-01-08 19:32:05)

Jazi, is that the only pork you eat? Could it be something about the sauce?

Seth Roberts (2012-01-08 21:33:14)

Anecdotes selectively reported are useless

There's a strong statement. Care to provide evidence for it? I think I understand your explanation - you mean that what gets reported will be biased upwards. Sure, it's clear that if you repeat an experiment you should expect a smaller effect. It's also true that the first report of an effect is unlikely to be the maximum possible size of the effect...so making a big deal of this bias is not a good idea.

Sara (2012-01-09 02:43:23)

I have a self-experiment if you are interested. It's off topic to the post, but interesting, I think. I have familial high-cholesterol - it was 8.4. About twice the norm (I know in America you measure it on a different system). I was prescribed statins but begged for six months to try natural intervention - they told me it wouldn't work. I took high dose vitamin C and niacin (flushing - not niacinamide/nicotinamide) for six months, but was still nervous at the test. When I rung for my results the nurse told me she had never seen statins work so well. When I said I hadn't taken any she said the first test results must have been wrong :D I've stayed at the high end of normal since then. Side effect: I used to have terrible acne. Within two weeks of staring that regime (5-10g vitC a day and 50mg niacin when I remembered - about 4-5 times a week) it went away completely. As in.. completely and without recurrence. Through experimentation I've determined it was the niacin that had this effect on my skin. There's two more for you 'anecdotal' files of no scientific significance, Seth!

Tim Beneke (2012-01-09 10:20:27)

There is rat research plus correlational and controlled human research on fatty acids and gum disease - we obviously need a lot more, but it's encouraging - see the following: - With rats: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2220053/> "The purpose of this study was to examine the potential anti-inflammatory effects of PUFA supplementation, by administration of fish oil as a source of the n-3 PUFA, eicosapentaenoic acid, and borage oil as a source of the n-6 PUFA, gamma-linolenic acid (GLA), to adults with periodontitis." <http://www.ncbi.nlm.nih.gov/pubmed/12591005> - From Harvard Medical: "We found that n-3 fatty acid intake, particularly docosahexaenoic acid and eicosapentaenoic acid, are inversely associated with periodontitis in the U.S. population," <http://www.colgate.com/app/CP/US/EN/OC/Information/Articles/ADA/2010/article/ADA-10-Polyunsaturated-Fatty-Acids-Lower-Gum-Disease.cvsp>

Out of the fishbowl (2012-04-01 03:30:16)

I also read that an aspirin a day has shown results in reducing pocket depth. Thank you for the information. I will start my Flax therapy ASAP!

## Assorted Links (2012-01-09 05:00)

- Edward Jay Epstein on [1]The Lessons of Le Carre (the spy novelist)
- [2]Gary Taubes recommends five excellent books, including Weston Price.

- [3] This article about the Marc Hauser case tells a brief story about a Harvard coverup in the 1960s. "In the late 1960s I was eating lunch in William James Hall with a few fellow assistant professors in the Harvard psychology department when a woman named Patricia Woolf sat down at our table. . . . She asked whether we had heard anything about the fabrication of data by one of our colleagues."
- [4] This sad and fascinating post tells how pediatricians encourage Vitamin D deficiency by warning parents to keep children out of the sun. Then, making things even worse, children with broken bones due to Vitamin D deficiency are assumed by pediatricians to be victims of child abuse. "Dr. Carole Jenny, head of the American Academy of Pediatrics Section on Child Abuse, implies such tragic miscarriages of justice simply don't happen. She then claims, "We have been checking every child with multiple fractures for metabolic bone diseases for several years and have not identified a single child with vitamin D deficiency." How can that statement be true if every other researcher is reporting infantile and early childhood vitamin D deficiency to be rampant in normal children? Furthermore, how can an infant beaten severely enough to cause multiple fractures not be bruised or in distress? Dr. Jenny cleverly avoids the question."

1. <http://bit.ly/AejVWe>

2. <http://thebrowser.com/interviews/gary-taubes-on-dieting?page=1>

3. <http://www.thenation.com/authors/charles-gross>

4. <http://www.vitamindcouncil.org/news-archive/2009/child-abuse-or-vitamin-d-deficiency-rickets/>

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Tom (2012-01-09 06:27:32)

Seth, thanks for linking to the Taubes interview. It contains the pithiest explanation of the obesity epidemic that I've ever read: "The experts decide that Americans get fat by eating fat. Then they find strains of rat that get fat eating fat, then they breed those strains. And now that they have found an animal model that confirms their preconceptions they argue that the preconceptions must be true too – obviously humans get fat on fat because the rats do. Then some journalist like me comes along, and says, "What about all the other animals that get fat on grains and vegetable matter?" And they look at you and say, "Oh, you're one of those Atkins people aren't you?"

Seth Roberts (2012-01-09 18:32:27)

The experts decide that Americans get fat by eating fat. Then they find strains of rat that get fat eating fat, then they breed those strains. And now that they have found an animal model that confirms their preconceptions they argue that the preconceptions must be true too – obviously humans get fat on fat because the rats do.

Most rats do not get fat eating fat. This was a big reason that Sclafani developed the supermarket diet (consisting of supermarket foods, such as salami and cookies) – so that rats would get fat more quickly (making it more easy to use them to study obesity). You cannot get a rat fat quickly simply by feeding him a high fat diet, Sclafani told me.

John (2012-01-10 21:29:50)

The link to the Vitamin D post seems to be broken.

Seth Roberts (2012-01-10 22:07:21)

Fixed the Vitamin D link.



## Why We Touch Our Mouths So Much: Forewarned is Forearmed (2012-01-10 05:00)

When I taught Introductory Psychology, I came across a study in which researchers put people in a room with food and watched them. They were looking for cycles in eating and drinking. They noticed that their subjects spent a lot of time touching the face near their mouth – what they called “the snout area”. After I read that, I noticed the same thing countless times. Right now I am at an airport waiting for a flight. Looking around, I see three of about 50 people touching their mouth or nearby.

Why do we do this? I propose an evolutionary explanation: To expose our immune system to all the germs near us in small amounts. Mouth-touching is part of a larger sampling process: 1. We touch many things constantly. In particular, we shake hands, hug, and otherwise touch people near us. Germs that have managed to live in or on other people are the most dangerous. 2. We lick our lips often, moving germs on our lips inside our mouths. 3. When you eat, food transfers bacteria from the inside of your mouth to your tonsils, which circle your throat. Tonsils are full of lymphocytes, the immune-system cells that detect germs. Once we have developed antibodies to a microbe, of course, we are much less vulnerable to it. The whole sampling process is a kind of self-vaccination.

We need conventional vaccination when self-vaccination fails. Polio vaccination was the first big vaccination program, and it worked: polio was nearly wiped out. Before around 1900, polio was not a big problem. It became a big problem at roughly the same time that public health measures and the replacement of horses by cars caused cities to become much cleaner places. Others have theorized that this is why polio became a big problem. As recently as 1951, thousands of children died from polio.

This is related to but different than [1]my ideas about our need for fermented food. (I believe we need to eat plenty of fermented food, day after day, to be healthy.) When we eat fermented food, we ingest large amounts of bacteria that are familiar and safe. The amount is large because the food has been fermented. The bacteria are familiar because we eat the same food repeatedly. They are safe because the insides of our bodies are dramatically different than what we eat (e.g., different temperature). The sampling system I am proposing here exposes us to small amounts of unfamiliar dangerous bacteria. However, this sampling system and the factors that push us to eat fermented food (our liking for complex, sour, and umami flavors) both act to produce the best environment for our immune system. Fermented food resembles exercise and practice; the mouth-touching system resembles information.

A similar sampling system is our love of gossip. We love to hear it, we love to spread it. Gossip spreads information about the dangers around us. Again, forewarned is forearmed.

I am in Tokyo (for a few more minutes), an admirably clean city. Public rest rooms, for example, are convenient, clean, and free. (Unlike New York, Los Angeles, San Francisco, Beijing . . . ) The practical point of this idea isn't that there is something wrong with public health measures, it is that they can go too far.

1. <http://blog.sethroberts.net/category/umami-hypothesis/>

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Tomas (2012-01-10 05:54:17)

Re:polio this article recounts how methods of counting polio cases were changing over time  
<http://insidevaccines.com/wordpress/2010/06/02/polio-and-acute-flaccid-paralysis/>

threepipeproblem (2012-01-10 06:35:03)

Years ago, I recall a doctor made the rounds in the media claiming that nose picking is essentially the same thing.

Scott Pierce (2012-01-10 08:32:26)

I have seen studies relating the increase in nut and other allergies to our modern obsession with cleanliness. When I was a kid in grade school, there was that kid in some other class or maybe in another grade that you had heard about having a nut allergy that would kill him if he came within 20 feet of a peanut but they were almost a myth. Now it seems every third kid has some kind of allergy issue. Maybe it is perception on my part.

Scott Pierce (2012-01-10 08:33:33)

Oh and I have always seen gossip as the means by which we tear others down that we might be built up.

Alex Chernavsky (2012-01-10 08:39:02)

These two books look promising: [1]*Good Germs, Bad Germs: Health and Survival in a Bacterial World* [2]*Why Dirt Is Good: 5 Ways to Make Germs Your Friends*

1. <http://www.amazon.com/Good-Germs-Bad-Survival-Bacterial/dp/0809016427/>

2. <http://www.amazon.com/Why-Dirt-Good-Germs-Friends/dp/1427798044/>

Alex Chernavsky (2012-01-10 08:43:19)

@Scott – part of the problem is that food allergies seem to be "trendy" now. Many people who *think* they're allergic to foods are really not allergic to them:

J Psychosom Res. 1999 Dec;47(6):545-54. Psychological characteristics of people with perceived food intolerance in a community sample. Knibb RC, Armstrong A, Booth DA, Platts RG, Booth IW, MacDonald A. School of Psychology, University of Birmingham, UK. [rebecca.knibb@nottingham.ac.uk](mailto:rebecca.knibb@nottingham.ac.uk) Abstract In most adults who believe themselves to be food intolerant there is no objective supporting evidence. It has therefore been proposed that the misperception of intolerance to food is linked to psychiatric illness or personality disorder. This hypothesis was tested in a community-derived sample of individuals who attributed an adverse symptom to a type of food. A random mailing recruited 955 participants aged > or =18 years, of whom 232 perceived themselves to be food intolerant (PFI). All recruits were sent two questionnaires, the General Health Questionnaire-28 (GHQ-28) and the shortened version of the Eysenck Personality Questionnaire (EPQ-R). A total of 535 GHQ-28 and 518 EPQ-R forms were returned that were correctly completed, an overall response rate of 55 %. For the subscales of the EPQ-R, neuroticism was greater in those with a PFI than those without. Women with a PFI were more extroverted than

control women. For the GHQ-28 subscales, women with a PFI had significantly higher scores than control women on somatic symptoms, anxiety, insomnia, and severe depression. There was a greater percentage of psychiatric caseness among women with a PFI than among men with a PFI or control women. Nevertheless, this percentage was no greater than that reported among a reference sample derived from NHS and university staff. It is concluded that perceived food intolerance is associated with psychological distress in women with a PFI, and neurotic symptoms in both men and women with a PFI, but there is no greater prevalence of psychiatric disorder among women or men with a PFI than there is in some professional groups. PMID: 10661602 [PubMed - indexed for MEDLINE] <http://www.ncbi.nlm.nih.gov/pubmed/10661602>

gwern (2012-01-10 09:11:17)

Much more plausible explanations: 1. the mouth region, for obvious reasons, is one of the most sensitive and nerve-dense regions; face-touching is about dealing with itches and transient discomfort, in the same way people knead their fingers or scratch their hands or what not. (Look around, how many people are doing fiddling with their fingers in some way? I thought so.) 2. Body language; the face in general is a major source of cues about one's state. One's hands can hide the face. Such obscuration is very useful in public. 3. The head is fairly heavy and modern people do not get much exercise. It's simply about resting the neck muscles. Germs... I would be quite surprised if that turned out to be the explanation. Well, at least it's testable (manipulate immune systems with immunosuppressants, etc).

dearieme (2012-01-10 16:54:27)

I'd always enjoyed mixed nuts but at about age 60 they started upsetting my stomach. I stumbled across the explanation in Jim Watson's book on DNA - he alluded to an allergy to the protein in Brazil nuts. Now if I stick to almonds, hazelnuts and walnuts, all is well. One Brazil seems to do little or no harm - a handful is bad news. To my surprise, when I checked the wikipedia page on Brazils no mention was made of the problem.

Jim Purdy (2012-01-11 11:20:16)

Seth, you said: "I propose an evolutionary explanation: To expose our immune system to all the germs near us in small amounts." So exposure to lots of germs is good for our immune system? In recent years, each time that I have been in a hospital it takes them about 2 days to give me a staph infection, 2 more days to give me MRSA, and another 2 days to give me VRE. If being exposed to germs is good, then I must be getting very healthy from all these hospital-acquired infections. But maybe I could get the immunity-conferring benefits without the inconvenience of a hospital stay: Maybe I could just sit in a hospital ER waiting room for an hour a day, and get acquainted with lots of germs.

Seth Roberts (2012-01-11 13:39:43)

So exposure to lots of germs is good for our immune system?

Lots of germs in small amounts is good. You want your first exposure to Germ X to be a small amount, not a large amount. If it is a small amount, you will survive later exposures to large amounts of the same germ. If your first exposure is to a large amount of Germ X, well, good luck.

Tim Beneke (2012-01-12 10:26:23)

One aspect to keep in mind is that we may touch our face as an act of self soothing. Dacher Keltner had his students go to restaurants and observe people as they entered - more than 80 % of the time, they touched their face. My impression is that when entering a room with a crowd of strangers, it can feel rather overwhelming; touching your face can ground and soothe you, or at least it can me Notice the woman in the bottom right who is holding her cheeks: <http://andrewsullivan.thedailybeast.com/-2011/11/the-devastating-blissful-life-of-a-fan.html> I think I touch my face to make myself feel more secure - this does not contradict other motivations/effects necessarily of course.

Nick (2012-03-04 09:21:21)

It's interesting that usually the first response to eating a novel food is NOT having an allergic reaction to it.

### **Tonsillectomy Confidential (2012-01-11 05:00)**

I wrote [1]a piece for Boing Boing about tonsillectomies that has just been posted. It stemmed from a comment on this blog by a woman named Rachael. A doctor said her son should have a tonsillectomy. When Rachael did her own research, however, it seemed to her that the risks outweighed the benefits. I looked further into tonsillectomies and found that the risks were routinely greatly understated, even by advocates of evidence-based medicine.

More [2]Here is a page on a doctor-run website called MedicineNet that grossly understates the risks of tonsillectomies. Compare their list of possible bad effects to mine.

1. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

2. <http://www.medicinenet.com/tonsillectomy/page2.htm>

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threepipeproblem (2012-01-11 05:44:16)

Link is broken. Should be <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

Seth Roberts (2012-01-11 06:23:47)

Thanks, link fixed.

ck (2012-01-11 07:12:13)

Are there analogous risks/benefits to be found for appendectomy?

ck (2012-01-11 07:25:26)

I'd like to expand a little on my comment above "Are there analogous risks/benefits to be found for appendectomy?": Wikipedia mentions that the appendix could play a role in immune function, in particular in maintaining the gut flora. Like tonsillectomy, appendectomy also has been a routine operation (I have been told that many doctors used to remove the appendix of their own children per laparoscopy at an early age). Unlike tonsillectomy, appendectomy can be strongly indicated, that is in case of acute appendicitis. It would be interesting to know if people who had their appendix removed show signs of lowered immune function or have an increased risk of gut diseases.

jeff borsato (2012-01-11 08:35:53)

enjoy the blog on a daily basis, but Seth, please note the response from the folks at my other fav blog Science Based Medicine, they pose some reasonable questions that would be interesting as a f/u piece.. <http://www.sciencebasedmedicine.org/index.php/tonsillectomy-indications-and-complications/> #more-18655

SB (2012-01-11 09:46:41)

Great article - thank you for writing it.

Tuck (2012-01-11 10:55:38)

The blog "Science-Based Medicine" posts a rebuttal to this post here: <http://www.sciencebasedmedicine.org/index.php/tonsillectomy-indications-and-complications/> I find their rebuttal less than convincing, but judge for yourself.

Science-based medicine purports to be more scientific than evidence-based medicine, but is still not quite scientific medicine, sadly.

Jim Purdy (2012-01-11 10:59:26)

Your Boing Boing article is fascinating, especially the many correlations between tonsillectomies and various health problems. Here's a correlation that I've noticed: The more doctors I see, the more drugs and surgeries they say that I need. In 2010, I had two very unpleasant interactions with medical professionals. First, in early 2010, orthopedic surgeons told me that I would die unless they amputated my right leg because of a severe diabetic ulcer; I did not have the amputation, and my leg healed fine. Then a few months later, cardiologists told me that I could die at any moment unless they did quadruple coronary artery bypasses. I did not have any bypasses, and I have no chest discomfort as long as I avoid very large meals. Heart problems? Maybe, but perhaps a hiatal hernia, or GERD. But I learned two lessons: 1. Stay away from orthopedic surgeons if you want to keep your limbs intact. 2. Stay away from cardiovascular surgeons if you want to keep your heart intact. As a rule, I give my body time to heal itself using natural defenses that developed over many millions of years of Darwinian evolution. As a result, many doctors have called me crazy and suicidal. And I call those doctors (expletive deleted).

Seth Roberts (2012-01-11 13:35:29)

Thanks. I have posted a reply to that post. Not yet approved. Here it is: There are many factual mistakes in your comment on my article. 1. "Roberts displays a persistent bias toward downplaying the benefits and exaggerating the risks of tonsillectomy while accusing the medical establishment of doing the exact opposite." I do not say that the Cochrane reviewers exaggerate the benefits of tonsillectomies. Your post does not contain a single example where I say the medical establishment exaggerates the benefits. 2. "Roberts fails to mention that the benefit described above – one fewer sore throat – was for the mild group only." That's wrong. I do mention it. Rachael's son would have been in the mild group. I wrote "(two instead of three for children like Rachael's son)". 3. "In his article Roberts assumes that the only indication as a preventive measure for tonsillectomy is for recurrent sore throats." Nowhere do I assume that. You give no examples. 4. "while not understanding the evidence." I failed to find any examples in your post of my "not understanding the evidence." I omitted some of the evidence for benefit because that was not the main point of my post. Omission of evidence does not equal misunderstanding of evidence. 5. "Roberts accuses physicians of ignoring relevant information about tonsillectomy, but he ignores published practice guidelines that look much more deeply into the issue than is reflected in his analysis." I said that doctors ignore relevant information about tonsillectomies when making statements to parents about the risks of tonsillectomies. For example, they fail to tell parents that tonsils are part of the immune system. What you say about practice guidelines does not contradict that. 6. "Roberts engages in very simplistic reasoning – the tonsils are part of the immune system, removing them therefore compromises immune function and is a bad idea." Because tonsils are part of the immune system, removing them runs a considerable risk of compromising immune function, just as removing part of the brain runs a considerable risk of causing brain damage. I say this in the post. It is common sense. 7. "He ignores the fact that those tonsils that are removed are unhealthy." What you call a "fact" is not a fact – it is a theory. As you say yourself in the next sentence ("perhaps they have become counterproductive"). 8. The "summary of current thinking" is a theory of unknown validity. By failing to say this, you overstate your case. 9. "There are no studies to date that demonstrate a significant clinical impact of tonsillectomy on the immune system." Since practitioners of evidence-based medicine refuse to take seriously evidence that doesn't come from a placebo-controlled double-blind experiment, there will surely never be – for ethical reasons – a study that "demonstrates a significant clinical impact of tonsillectomy on the immune system." To say that one's point is supported by the absence of evidence that cannot exist is not serious argument. 10. "Roberts' endorsement of the naturopathic approach to chronic sore throats. . . . he then offers as an alternative that is blatantly not evidence-based." I suggest you look further at the Vitamin D evidence I link to. There is evidence that Vitamin D supplementation helps. Rachael searched for evidence. My post includes a long paragraph about her search. To call what she did "blatantly not evidence-based" is like saying white is black. 11. A biased view of evidence is shown by the following which you quote approvingly: "However, available scientific evidence does not support claims that larch bark is effective in treating cancer or any other disease in humans. Early laboratory evidence suggested that larch arabinogalactan may stimulate the immune system. However, a more recent study in mice contradicts this finding." In other words, there is some evidence supporting the value of larch bark ("early laboratory evidence") and some evidence ("a more recent study in mice") not supporting the value of larch bark. Given this, to say "available scientific evidence does not support claims . . ." is false. An accurate statement is that some evidence does and some evidence doesn't. 12. You recommend "summaries of the

evidence prepared for the non-expert.” The Cochrane review that I discuss included a summary of the evidence for non-experts. That summary – the only summary for non-experts I found – was grossly misleading. Unless you can point to a tonsillectomy summary for non-experts that is not misleading, the available evidence (one bad summary, zero good summaries) contradicts your recommendation. 13. Here are your most serious factual mistakes: “In none of the cases [of bad side effects] is a cause and effect established. He wonders why doctors do not list all of the complications he found – that’s why.” I listed more than a dozen bad side effects associated with tonsillectomies (polio, obesity, etc.). The associations – association is not causation – were made by the authors of the articles and PubMed indexers, not me. Mistake One: I did not claim these associations reflected cause and effect. Mistake Two: I did not “wonder why doctors do not list all of the complications he found” – I simply pointed out that the Cochrane reviewers did not list them. These are serious factual mistakes because they reflect a poor understanding of risk and what parents (and other people contemplating medical treatments) want to be told. They go to the heart of my objection to how “evidence-based medicine” is practiced. Consideration of evidence is good, of course. Omission of evidence is bad. Omission of evidence of danger, when telling parents about the pros and cons of a treatment, is very bad. Right here you endorse exactly that – omission of evidence of danger. You are not alone, of course. “Evidence-based medicine” practitioners endorse omission of evidence over and over and over. If it were called “some-of-the-evidence-based medicine” it would be less deceptive. Risks are inherently uncertain. In contrast to benefits, risks are usually low probability or hard to measure. It will always be difficult (and sometimes impossible) to go beyond association to causation. To wait for certainty of causation before mentioning them is to deprive parents of useful information. Parents do not want to wait for certainty before being told of the risks of tonsillectomies. If tonsillectomies have been associated with obesity, they want to be told this. They do not want this information to be omitted simply because it hasn’t yet been established that the association reflects causation. If tonsillectomies have been associated with a 50 % increase in heart attacks, they want to be told this. They don’t want this information to be omitted because it is uncertain whether it reflects causation. Yet you endorse that omission.

Seth Roberts (2012-01-11 13:36:29)

Thanks, Jeff. Again, please note my reply (above).

Seth Roberts (2012-01-11 14:12:17)

It would be interesting to know if people who had their appendix removed show signs of lowered immune function or have an increased risk of gut diseases.

I agree. The 2011 study that associated tonsillectomies with a higher rate of heart attacks found a similar but weaker association with having your appendix removed.

Seth Roberts (2012-01-11 14:13:31)

Science-based medicine purports to be more scientific than evidence-based medicine,

I thought they were similar.

jeff borsato (2012-01-11 15:18:19)

Great response Seth. Im torn because I value the analysis from Science Based Medicine as much as I value your approach to medical issues. I believe an important conversation is taking place here and hopefully they respond to your post. I do think that debates about “evidence based” vs. “science based” and the like detract from the ultimate good both sites are hoping to achieve. SBM does a great job of dispelling myths that are perpetrated in the absence of truth or evidence. Essentially saying that evidence must consist of something showing at least some effect as claimed. The reason their attack against chiropractic has worked is because Chiro’s have long been able to claim that people confirm pain relief after their treatment but no evidence can support their reasons why people enjoy pain relief.

worthwords (2012-01-11 15:41:30)

For the appendectomy query above. The primary indication for an appendectomy is acute appendicitis. The consequences of not removing an appendix that is likely to burst is likely to be feces entering the abdominal cavity causing a septic shock-> death. For a doctor, missing a presentation of appendicitis case can be a devastating experience. There was a time when the appendix would be removed prophylactically while performing other abdominal surgery, since it was seen in the patient's best interest to avoid a future appendicitis. The appendix does seem to have a role in immunity, there were some theories about helping to recolonise the gut with bacteria post gastroenteritis. However, as with tonsillectomy - there is no global immunocompromise from having it removed, and immunological changes seem quite subtle rather elusive. It's worth reading up on the sorts of awful infections a patients with AIDS to understand what a deficient immune system looks like.

Deidre (2012-01-11 16:06:30)

Per this article, "Your Appendix Could Save Your Life": <http://blogs.scientificamerican.com/guest-blog/2012/01/02/your-appendix-could-save-your-life/>

Evelyn M. (2012-01-11 19:34:28)

I would like to respond, "Hear! Hear!" to Mr. Purdy's advice. I worked for many years with physicians in public health. The key medical and scientific journals published in English all passed my desk. I never saw any articles describing research that was undertaken to bolster the claims made by the various specialties about the necessity for their patients to have annual physical examinations, certain laboratory tests, etc. One day I asked my boss, an M.D., MPH, about this. He replied that the standards we see are just made up out of whole cloth by the medical community. He added that as far as the medical community is concerned "a healthy person is just a patient who hasn't been fully worked up."

ck (2012-01-12 01:26:21)

@Deidre Thanks for the link. Interesting article. Kind of what I expected from prior knowledge. Now the question is: Should people who had their appendix removed do things different? For example, should they eat more or less fermented food than people with intact appendix? Guess it is time for some n=1 experiments for me.

Seth Roberts (2012-01-12 06:04:12)

Thanks, Jeff. They have yet to approve my reply.

Tuck (2012-01-12 08:16:40)

Great response. Neither "evidence-based" nor "science-based" medicine is really adequate. But scientific medicine would leave doctors with little to do. @Seth: here's the first post from SBM, explaining the difference between SBM and EBM. <http://www.sciencebasedmedicine.org/index.php/hello-world/> I've had lots of discussions in the comments there on various articles. The treatment you received is pretty typical. The best explanation I've ever heard of how modern medicine operates was from an old French play, reviewed here: "Get to Know Your Inner Hypochondriac" <http://online.wsj.com/article/SB10001424-052748703866704575224280938569458.htm> I saw the play based on that review and it was terrific, and deeply disturbing. Dr. Knock \*is\* modern medicine, and is in line with Evelyn M's quote: "He added that as far as the medical community is concerned 'a healthy person is just a patient who hasn't been fully worked up.'" Or as Dr. Knock explains: "'To get sick, what does that mean? That's a worn-out idea. It doesn't hold up against modern science. . . . In my experience people simply are more or less sick, with more or less numerous diseases that progress more or less rapidly. Now naturally, tell people they're well, they're only too happy to believe you. But why lie to them?'"

Bob (2012-01-12 08:20:19)

Seth, they approved your reply and posted it, followed by a couple of responses.

Seth Roberts (2012-01-12 12:29:33)

Thanks, Bob. I saw it and wrote another response.

Seth Roberts (2012-01-12 12:35:33)

Thanks, Tuck. Yes, I was wrong to equate science-based medicine and evidence-based medicine. I do think science-based medicine is an improvement for exactly the reasons they say. I hope to see "Dr. Knock" (the play) some time. I didn't know about it.

Ann (2012-04-09 19:11:59)

Funny. I had stomach problems my whole life. After my appendectomy, for acute appendicitis, my stomach problems went away.

### Assorted Links (2012-01-12 05:00)

- In [1]this short video about self-tracking and Crohn's Disease, "tension" between doctor and patient ("Ari is a sensitive person. He let me know that he respected my knowledge and experience," says Ari's doctor, presumably in response to a question) receives more attention than the treatments Ari tried.
- Nature – the most prestigious scientific magazine in the world – [2]makes a climate scientist look better than he actually is. "Nature suppressed [Phil] Jones' candid admission that he simply didn't see why he should provide [climate] data to people that wanted to criticize him and substituted a fabricated explanation."
- [3]A talk critical of research universities, such as Berkeley. He criticizes careerism, for example.
- [4]Melissa McEwen explains how SCD (the Specific Carbohydrate Diet) – very useful against Crohn's disease and similar problems – can be improved. Via [5]Perfect Health Diet.

1. <http://online.wsj.com/video/the-measured-life-hacking-your-health/C27BF77B-FE88-41D2-9B26-AC110831047A.html>
2. <http://climateaudit.org/2012/01/08/nature-and-the-inundation-legend/#more-15352>
3. <http://video.google.com/videoplay?docid=7360071583907371449>
4. <http://huntgatherlove.com/content/why-paleo-didnt-fix-my-ibs>
5. <http://perfecthealthdiet.com/?p=5407>

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dearieme (2012-01-12 11:33:13)

Fraud? [http://pipeline.corante.com/archives/2012/01/12/a\\_resveratrol\\_research\\_scandal\\_oh\\_joy.php](http://pipeline.corante.com/archives/2012/01/12/a_resveratrol_research_scandal_oh_joy.php) #comments

dearieme (2012-01-13 04:38:54)

Fraud      widespread?      [http://www.ft.com/cms/s/2/bc6f7204-3d1f-11e1-8129-00144feabdc0.html?ftcamp=rs](http://www.ft.com/cms/s/2/bc6f7204-3d1f-11e1-8129-00144feabdc0.html?ftcamp=rs&ftcamp=crm/email/2012113/nbe/ScienceEnvironment/product#axzz1jKLvVzQ1)      s  
&ftcamp=crm/email/2012113/nbe/ScienceEnvironment/product #axzz1jKLvVzQ1

### Peter Lawrence on the Ills of Modern Science (2012-01-13 05:00)

Peter A. Lawrence is a British biologist who has written [1]several papers about problems with the way biology and other areas of science are now done. In[2] this interview a year ago he summarizes his complaints:



- Scientific publication "has become a system of collecting counters for particular purposes – to get grants, to get tenure, etc. – rather than to communicate and illuminate findings to other people. The literature is, by and large, unreadable." There is far too much counting of papers.
- "There's a reward system for building up a large group, if you can, and it doesn't really matter how many of your group fail, as long as one or two succeed. You can build your career on their success." If you do something on your own it is viewed with suspicion.
- There is too much emphasis on counting citations. "If you work in a big crowded field, you'll get many more citations. . . . This is independent of the quality of the work or whether you've contributed anything. [There is] enormous pressure on the journals to accept papers that will be cited a lot. And this is also having a corrupting effect. Journals will tend to take papers in medically-related disciplines, for example, that mention or relate to common genetic diseases. Journals from, say, the Cell group, will favor such papers when they're submitted."
- Grant writing takes too much time – e.g., 30-40 % of your time. "There is an enormous increase in bureaucracy – form filling, targeting, assessment, evaluations. This has gone right through society, like the Black Death!"
- "Science is not like some kind of an army, with a large number of people who make the main steps forward together. You need to have individually creative people who are making breakthroughs – who make things different. But how do you find those people? I don't think you want to have a situation in which only those who are competitive and tough can get to the top, and those who are reflective and retiring would be cast aside." I've said something similar: Science is like single ants wandering around looking for food, not like a trail of ants to and from a food source. The trail of ants is engineering.

I agree. I would add that I think modern biology is far too invested in the idea that genes cause disease and that studying genes will help reduce human suffering. I think the historical record (the last 30 years) shows that this is not a promising line of work – but modern biologists cannot switch course.

What explains the depressing facts Lawrence points out? I think it is something deep and impossible to change: [3]Science and job don't mix well. The demands of any job and the demands of science are not very compatible. Jobs are about repetition. Science is the opposite. Jobs demand regular output. Science is unpredictable. However, jobs and science overlap in terms of training: Both benefit from specialized knowledge. They also overlap in terms of resources: More resources (e.g., better tools) will usually help you do your job better, likewise with science. So we have two groups (insiders – professional scientists – and outsiders – everyone else). Both groups have big advantages and big disadvantages relative to the other. In the last 50 years, the insiders have been "winning" in the sense of doing better work. Their advantages of training and resources far outweighed the problems caused by the need for repetition and predictability. But now – as I try to show on this blog – outsiders are catching up and going ahead because the necessary training and tools have become much more widely available (e.g., tools have become much cheaper). And, as Lawrence emphasizes, professional science has gotten worse.

1. <http://www.mrc-lmb.cam.ac.uk/PAL/NewFiles/PAListFrames.html>

2. [http://www.lab-times.org/labtimes/issues/lt2011/lt02/lt\\_2011\\_02\\_24\\_31.pdf](http://www.lab-times.org/labtimes/issues/lt2011/lt02/lt_2011_02_24_31.pdf)

3. <http://sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

August (2012-01-13 07:20:32)

[1]Celia Green and other members of the Oxford forum decry the loss of personal capital. The wealthy, the aristocrats- these people were independent enough to either do independent research themselves or fund others.

1. <http://celiagreen.blogspot.com/>

Bob (2012-01-13 08:04:43)

I just came across Michael Nielsen's Reinventing Discovery that looks relevant to this topic. <http://michaelnielsen.org/blog/reinventing-discovery/>

Nandalal Rasiah (2012-01-13 08:42:45)

What exactly do you mean regarding genes and disease? It's already a non-controversial argument that following single genes and developing drugs to target them individually ignores the networks more likely responsible for the disease in question. i.e: <http://blogs.discovermagazine.com/gnpx/2012/01/missing-heritability-interaction-edition/>

Nandalal Rasiah (2012-01-13 09:06:38)

<http://www.genetic-inference.co.uk/blog/2012/01/phantom-heritability-and-additivity/> that's a bit clearer re additivity.

dearieme (2012-01-13 09:48:43)

Pippard used to draw a distinction between overcrowded and underpopulated fields of science. The latter can be recognised because even quite important results won't have been replicated. The former can be recognised by the ruthless competition to be first to some discovery - and often after one research group gets there first, another one or two groups will get the same result within weeks. The latter field tends to be characterised, he said, by bad behaviour - his own subject, Physics, was prone to this, he said.

Seth Roberts (2012-01-13 10:11:05)

What exactly do you mean regarding genes and disease? It's already a non-controversial argument that following single genes and developing drugs to target them individually ignores the networks more likely responsible for the disease in question.

Yes, I've heard that. As far as I can tell, it is pure speculation - meaning there is no evidence - that these "networks [are] most likely responsible for the disease in question". I have yet to see a single example where studying genetic networks has led to useful results. If you know of one, I would like to hear about it. What is happening here, as far as I can tell, is that when it turned out that Assumption 1 (single genes matter in common diseases) was wrong, biologists have shifted to Assumption 2 (networks of genes matter in common diseases) that has not yet been disproved. They have no evidence for Assumption 2, just as they had no evidence for Assumption 1.

Mark (2012-01-13 10:37:30)

I agree that the whole idea that "genes cause disease" is silly. It's possible that genes might serve to subdivide a population into groups, some of which might be, for whatever reason, more susceptible to certain diseases, but this in no way implies cause and effect. Take for instance the most basic genetic trait, gender, and one of the most prevalent "diseases", pregnancy. Being female is certainly a necessary condition for being pregnant, but it is ludicrous to think of it as a cause.

Daniel Lemire (2012-01-13 11:28:15)

This is a fantastic find Seth. I agree with Bob that Nielsen's book is a must if we are to address these issues. For those who won't buy the book immediately, you can check my recent commentary on this topic: Open science: why is it so hard? <http://lemire.me/blog/archives/2012/01/10/open-science-is-hard/>

Seth Roberts (2012-01-13 14:57:34)

I agree that the whole idea that "genes cause disease" is silly. It's possible that genes might serve to subdivide a population into groups, some of which might be, for whatever reason, more susceptible to certain diseases, but this in no way implies cause and effect. Take for instance the most basic genetic trait, gender, and one of the most prevalent "diseases", pregnancy. Being female is certainly a necessary condition for being pregnant, but it is ludicrous to think of it as a cause.

Yes. I'd put it like this: Genes move susceptibility to this or that environmental deficiency up and down but their effect – in the case of common diseases – appears to be so small relative to the environmental influence that "it is ludicrous to think of [them] as a cause." For example, genes no doubt move susceptibility to scurvy up and down but it is ludicrous to think of them as a cause of scurvy. At the moment this is the empirical picture. Powerful environmental influences, much weaker genetic ones.

Jazi zilber (2012-01-14 01:24:38)

Just reading on the fantastic breakthroughs of gentlemen in the 19th century. For them it was a personal love affair with knowledge, not a job. There is denigration of simple stuff. Genes, drugs, enzymes, all ultra sophisticated stuff are over studied. While simple but enormously useful questions (sleep details. Which mattress is better? Will you be more healthy eating yogurt?) are ignored. As if the glare is most important than life usefulness

Seth Roberts (2012-01-14 02:48:57)

For them it was a personal love affair with knowledge, not a job.

Yes, that is a good way of putting it.

Jif (2012-01-17 17:24:53)

Professional science has only gotten worse by some standards. The best science is continually getting better. The rate at which science is being done is increasing. However, the average level of science is decreasing. This makes it easier and easier to find examples of bad, sloppy or pointless work being done to satisfy external bean counting. This is sad but it is not reflective of the best work being done. And, to sneer that science is a "job" and hence less meaningful, reliable or whatever is nonsense. I know of no good scientists (the type this blog ignores) who could not at least double their salaries and greatly decrease their administrative loads by working in industry. We are driven to do science as a passion and put up with the other nonsense so that we can do what we love not as an end to itself. The problems mentioned above are real and serious and getting worse. They come from the need for "accountability" to the tax payer and will never improve until we can all be grown ups. Cheers, Jif. PS the plural of anecdote is not data.

Lemniscate (2012-02-08 03:22:19)

I broadly agree with Seth that a lot of science is about funding and prestige and not useful innovation. This can especially be the case with genetics/genomics, which requires massive capital investment and sounds very sophisticated. However, I think you're being a little premature in writing off the utility of genetics in understanding disease. The greatest promise does not come from accounting for the missing heritability but from discovering relevant biological mechanisms by looking at the genetic influence on disease. There's no reason why looking for genetic influences on disease and environmental influences on disease have to be in conflict, either: understanding one should help understand the other and build a complete and detailed picture.

## Assorted Links (2012-01-14 05:00)

- One of my Tsinghua American colleagues [1] writes an op-ed: "China wants you. Job prospects are abundant."
- [2] Robert Anton Wilson's skepticism about skeptics. "Those people claim to be rationalists, but they're governed by such a heavy body of taboos. They're so fearful, and so hostile, and so narrow, and frightened, and uptight and dogmatic. . . . None of them ever says anything skeptical about the AMA, or about anything in establishment science or any entrenched dogma." I agree. They should be called one-way skeptics.
- [3] Excellent Vanity Fair article about Occupy Wall Street. Better than The New Yorker's article covering similar stuff.
- [4] The many side effects of statins. I am impressed by the new way of learning about drug side effects.

Thanks to Ryan Holiday and Gary Wolf.

1. [http://www.nytimes.com/2012/01/09/opinion/china-as-a-destination-for-job-seekers.html?\\_r=2&src=me&ref=general](http://www.nytimes.com/2012/01/09/opinion/china-as-a-destination-for-job-seekers.html?_r=2&src=me&ref=general)
2. <http://boingboing.net/2012/01/10/robert-anton-wilson-week-on-bo.html>
3. <http://www.vanityfair.com/politics/2012/02/occupy-wall-street-201202>
4. [http://people.csail.mit.edu/seneff/why\\_statins\\_dont\\_really\\_work.html](http://people.csail.mit.edu/seneff/why_statins_dont_really_work.html)

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Elizabeth Molin (2012-01-14 09:11:19)

Thanks for the link to Seneff's excellent article. I have passed it on to everyone I know.

dearieme (2012-01-14 11:45:44)

Hm. But the Wikipedia entry says that the quotation you carry was about "...scientific types with overly rigid belief systems...". That doesn't sound like the people I think of as sceptics.

Evelyn M. (2012-01-14 20:55:12)

Many thanks for the link to the article about statins; you do good work on this site!

Txomin (2012-01-15 03:25:14)

The kind of people RAW refers to should not be called skeptics at all.

Nathan Myers (2012-01-18 19:15:53)

But they call themselves skeptics. If he's not talking about you, what should you call yourself to distinguish yourself from them? That paper by S. Seneff has more astonishments per page than anything I have read in years. All by itself, it's easily worth all the time I have spent keeping up with this site. I am breaking my rule against spamming my address list for this one.

## More about Tonsillectomy Confidential (2012-01-15 05:00)

The blog Science-Based Medicine ran [1] a long critical comment about [2] my recent Boing Boing piece ("Tonsillectomy Confidential: doctors ignore polio epidemics and high school biology") followed by a back-and-forth (my reply, their reply to my reply, on and on) in the comments.

The exchange had three curious features.

1. In Tonsillectomy Confidential, I described how Rachael critically evaluated what a naturopath told her:

Rachael and her son went to see a naturopath that a neighbor had recommended. The naturopath was especially knowledgeable about nutrition and supplements. After an hour interview, she suggested Vitamin D3 (5000 IU/day), a multivitamin, Vitamin C (500 mg/day), and powdered larch bark. Rachael searched for research about these recommendations. She found many studies that suggested Vitamin D might help. Her son is a pale redhead and used sunblock a lot. It was easy to believe he wasn't getting enough Vitamin D. Because Vitamin D won't work properly without other vitamins (called co-factors), a multivitamin was a good idea [Rachael discovered during her research]. Rachael found studies that implied that a multivitamin was very unlikely to be very harmful. She found few relevant studies about Vitamin C. Maybe extreme claims about its benefits had scared off researchers – "Linus Pauling burned that bridge," said Rachael. But she took the Vitamin C recommendation seriously because the naturopath had made other reasonable recommendations, the recommended dose was not large, Vitamin C is easily excreted in urine (in contrast to building up in the body), and Rachael had never heard of anyone having trouble at that dose. The naturopath had said that larch bark had reduced ear infections in children with chronic ear infections. A little bit of theory supported this, Rachael found, but overall the larch-bark research was "dodgy," she said.

This was described by the Science-Based Medicine critic (Steven Novella) as "blatantly not evidence-based".

2. In my first reply to the criticism, I wrote:

In other words, there is some evidence supporting the value of larch bark ("early laboratory evidence") and some evidence ("a more recent study in mice") not supporting the value of larch bark. Given this, to say "available scientific evidence does not support claims . . ." is false. An accurate statement is that some evidence does and some evidence doesn't.

This got the following reply from a second critic (David Gorski):

No, Seth. Note two words Steve used, "in humans." Steve was quite correct. If there is only a preliminary animal study, even if positive, that does not support the efficacy of larch bark in humans.

Apparently Gorski thinks animals (e.g., rats) and humans share no DNA. A few sentences later, contradicting himself, he notes that animal studies are used as screening tests.

3. Finally there was this, from Steven Novella:

It is fine to search for information yourself, and no one here is advocating "blind trust" in anyone. We are all activist skeptics. But it is folly to substitute one's own opinion for that of experts who have spent years mastering a subject.

What a lovely motto for this blog: "It is folly to substitute one's own opinion for that of experts who have spent years mastering the subject." And, after all that study, think animals and humans share no DNA.

1. <http://www.sciencebasedmedicine.org/index.php/tonsillectomy-indications-and-complications/>
2. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

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Jay (2012-01-15 05:52:52)

Maybe they could read this article: <http://yudkowsky.net/rational/bayes> and understand what evidence really is? Science is not about picking cute statements that serve as epistemic axioms. ("correlation is not causation", "anecdotes are not data", "rat studies say nothing about humans"). It's about evaluating evidence in the context of Bayesian inference. It's infuriating to see rational people not understand this.

Alex Chernavsky (2012-01-15 07:28:03)

Steven Novella is a professor of neurology at Yale Medical School. He's an entrenched insider. His status necessarily limits the scope of his skepticism. I occasionally read his blog, and it's fine as far as it goes. But he usually focuses on easy targets.

Seth Roberts (2012-01-15 09:44:12)

Science is not about picking cute statements that serve as epistemic axioms. ("correlation is not causation", "anecdotes are not data", "rat studies say nothing about humans"). It's about evaluating evidence in the context of Bayesian inference.

Yeah, I agree. That's a good way of putting it. Evidence pushes belief in Statement X up (toward agreement) or down (toward disagreement).

Seth Roberts (2012-01-15 18:55:36)

Steven Novella is a professor of neurology at Yale Medical School.

I didn't know that. It makes him more quotable.

Kirk (2012-01-16 14:16:15)

I found four things odd in the whole exchange. First, I couldn't tell whether the folks at the SBM blog think Rachael should continue her current approach (nutritional), or should withdraw those efforts and instead choose surgical removal of the tonsils. (After all, the nutritional approach had been suggested by one of those 'quack naturopaths'.) Secondly, they make no distinction between levels of risk. If one's femoral artery is cut, it would be poor personal risk management to insist, upon arrival at the ER, that the doctors first search PubMed for the perfect solution before taking any action. On the other hand, for a situation where a mother has been coping with a child who has had six sore throats in a year, the risk of delaying surgery for one more month while trying a nutritional approach seems to me to be low. The third problem is that they fail to acknowledge that experts disagree. Every one of us has to curate which experts to believe. The most obvious example is in the area of nutrition. And finally, probably due to legal issues, I suspect that most doctors feel they cannot recommend nutritional approaches. For example, I had a year-long issue which caused numbness in my right foot. My doctor said he could prescribe a Big Pharma product which had a low probability of success and a history of negative side-effects, but he would do so reluctantly and only if I insisted. I appreciated his advice and chose not to use that product. What he did not tell me is to look for alternate approaches. I looked online for advice and, yes, I considered advice from people without an M.D. behind their names. Now, after a year of nutritional changes, supplementation, and topical treatments, that condition has mostly cleared. I strongly

suspect that my efforts caused that condition to reduce, rather than it clearing by its own. I can't prove it and since there is no money to be made by producing a trademark product, it is unlikely that research will be funded for trials on this type of solution.

Seth Roberts (2012-01-16 19:00:27)

First, I couldn't tell whether the folks at the SBM blog think Rachael should continue her current approach (nutritional), or should withdraw those efforts and instead choose surgical removal of the tonsils. (After all, the nutritional approach had been suggested by one of those 'quack naturopaths'.)

Good point. The question "what should Rachael have done?" wasn't answered. And Novella's claim that what actually happened (her son had no more sore throats) provided "evidence against" Rachael's approach couldn't be more ridiculous. What are they putting in the water at Yale Medical School?

Juergen (2012-01-17 02:50:16)

I used to have serious problems with my tonsils; whenever I got sick they'd start to hurt & stayed that way for weeks if not months. And I was sick a lot; I'd have this several times per year ... It stopped when I started taking fish oil about 18 months ago (I also started weight training at the same time, but I've had periods where I exercised a lot before; the fish oil was new). I take around 3-5 g of fish oil per day. In those 18 months I was sick once - just a case of the sniffles; but the tonsils never got inflamed and I was well again after a week. No lingering pain in the throat! I don't think I can communicate how awesome that is. These days I also take Vitamin D3, but I've only been doing so for 6 months; the tonsil problems were gone long before that.

Darrin Thompson (2012-01-17 09:05:25)

Request: Next do "Botulism Confidential."

Tuck (2012-01-17 12:13:32)

Thought you'd find this article in today's WSJ of interest: "What if the Doctor Is Wrong?" "Hardeep Singh, chief of the health policy and quality program at Michael E. DeBakey VA Medical Center in Houston, says a growing number of centers are requiring an internal second review of pathology reports to prevent misdiagnosis. If the second opinion differs markedly, a third opinion may be necessary to get a consensus on what course of treatment is best." <http://online.wsj.com/article/SB10001424-052970203721704577159280778957336.htm> I That nicely puts "It is folly to substitute one's own opinion for that of experts who have spent years mastering the subject." into perspective. We're supposed to trust the experts when the experts won't trust the experts? Do the doctors at SBM think we're all fools? (I think they do, but you should draw your own conclusions... :)

Josh M (2012-01-17 17:20:28)

"Apparently Gorski thinks animals (e.g., rats) and humans share no DNA. A few sentences later, contradicting himself, he notes that animal studies are used as screening tests." You know when you read something, and it's as if the words themselves manifest into a face-palm and make you exhale with a mixture of pity and impatience? That's exactly what I feel when reading something that lacks any logical credibility. Objective achieved with those two sentences there.

Gyro Protagonist (2012-01-17 17:21:27)

I'm not sure why you think Gorski's quote is conclusive evidence that he doesn't think humans and mice/rats share any DNA. He simply brought up the point that drugs/compounds/botanicals that produce a biologic effect in mice might not produce the same (or indeed any) biologic effect in humans. Mice and humans have many homologous genes, but rodents have massively different CYP450s than humans (these enzymes often help metabolize drugs). So it's not at all unreasonable to ask for proof of efficacy in, you know, actual humans. Regarding the "contradiction," it's certainly possible for someone to point out that while evidence of drug efficacy in rodents is promising (hence why they are used for screening), it doesn't mean that the drug is guaranteed to work in humans (even though we share TEH DNA). And yeah, if you couldn't do a proper literature search/don't have an idea about how drugs are tested, you should probably refrain from bringing the snark when corrected by someone who actually knows something about the subject.

æk (2012-01-17 17:21:51)

"What are they putting in the water at Yale Medical School?" Hubris

Shannon (2012-01-17 17:56:47)

There are arrogant and unreasonable physicians. There are also arrogant and unreasonable bloggers and commenters. I don't think that being smart and accomplished always = arrogant. Most doctors and researchers are genuinely good people seeking to do right by others. Just like, presumably, most bloggers are genuine and good people. I think the esteemed doctor is well aware that mice and human genomes share similarities, that kind of snark does little to bolster your argument. I don't understand how his statement about rat studies are not equated human evidence is contradicted by sharing DNA. We share DNA, but have vastly different anatomies proteomic expression, et al. That's why we do clinical trials in medicine: bench research, animal testing, then small scale human, then large scale human studies. There are examples of promising drugs in animals that are ineffective or harmful in humans. And for every story of fish oil curing chronic sore throats, there are examples of naturopathic approaches being harmful to the point of mortality (see Steve Jobs). Both are anecdotes and not a substitutes for an evidence based approach. I know this sway no one in the blogosphere, but I hope it will dampen the shrillness of the debate.

Doug (2012-01-17 18:01:32)

The fact that humans and rats share DNA does not mean that conclusions reached in rats are always relevant in humans. The patent office is littered with drug candidates that behaved very differently in humans than they did in model organisms like rats. I think Novella's statement is absolutely accurate. Having an opinion is great, but trusting experts is a necessary byproduct of living in a society based on specialization. Reasoned challenge of experts' viewpoints and (especially) examination of their motives and biases is necessary. However, adopting an anti-expert viewpoint is counterproductive.

Amber K (2012-01-17 18:46:32)

"Apparently Gorski thinks animals (e.g., rats) and humans share no DNA. " Where on earth did you get this idea? Of course mice are used in screening tests...that's where we start. Then we move to animals that are closer, genetically to humans and finally to human trials. A positive result in an animal study is no indicator that the treatment will work in humans, but a negative result will usually inhibit further research. The point is to see if it's POSSIBLE the treatment will work. A mouse study is not conclusive of anything except that further research is needed. Dr Novella is also the lead host of The Skeptic's Guide to the Universe, the biggest podcast in skepticism and is known as an excellent science educator, especially in evaluating research. He's also a huge proponent of Bayesian inference which he has spoken on at length. The point of his article was not to advocate for or against tonsillectomy, but to evaluate your understanding of the research, which he found flawed because of lack of expertise and bias. Dr Novella is a neurologist and therefore would not presume to make a recommendation for or against tonsillectomy, but would presume to be able to get a consensus of what the research shows is the best treatment. His podcast can be excellent tutorial for evaluating research and I highly recommend it.

The nagging truth (2012-01-17 18:53:53)

Do you honestly think that a little DNA homology is all that's needed to ensure efficacy of medical therapies transfer between species? There is more to it my friend. Post transcriptional splicing? I suppose they never taught you about that at Berkeley? Your continual oversimplification of complex issues in an attempt to achieve folksy populist charm may work on many, but not us "experts" :)

Sirkowski (2012-01-17 19:04:03)

Your second point is pretty dishonest. Gorski didn't say there's no shared DNA in mice and humans. He didn't say that AT ALL. You just made that up.

ShadowfaxMD (2012-01-17 19:14:44)

Kirk: You're creating quite a false equivalence with the modest statement "Experts disagree," when the relative weight of evidence for varying viewpoints is so disproportionate. There is essentially zero good evidence for vitamin or nutrition based



treatment for recurrent sore throats, compared to the reams of data, both pro and con, for tonsillectomy. Seth, the reason Novella demurred on the question of whether your friend's child should proceed with surgery (other than the folly of trying to diagnose/treat over the Internet) was explicitly stated: he wanted to point out a clear example of biased reading of the evidence, not make a treatment pronouncement outside of his specialty. And, sorry, the unqualified litany of ostensible risks of tonsillectomy without acknowledging (or being aware of) countervailing evidence or problems with the suggested risks raises the question of bias. I'll give you the credit of assuming that any bias is accidental, due to cursory or inexperienced reading of the data, rather than intentional (as is often the case with, say, anti-vaxxers).

Seth Roberts (2012-01-17 20:08:25)

And, sorry, the unqualified litany of ostensible risks of tonsillectomy without acknowledging (or being aware of) countervailing evidence or problems with the suggested risks raises the question of bias. I'll give you the credit of assuming that any bias is accidental, due to cursory or inexperienced reading of the data.

"Countervailing evidence" to the conclusion that tonsils are part of the immune system? Care to say what that is? This comment raises the question of education – whether you have been educated well enough to know (a) how the immune system works and (b) the evidence behind that understanding.

Seth Roberts (2012-01-17 20:10:15)

Do you honestly think that a little DNA homology is all that's needed to ensure efficacy of medical therapies transfer between species?

"A little"? It's more than a little. It's obvious that there are great similarities between rat physiology and human physiology. If they are not based on DNA overlap, what are they based on?

Seth Roberts (2012-01-17 20:13:55)

A mouse study is not conclusive of anything except that further research is needed.

Not so. The many similarities between mice and humans mean that if Statement X is true for mice, X is more likely to be true for humans than if X is not true for mice.

Seth Roberts (2012-01-17 20:15:53)

Both are anecdotes and not a substitutes for an evidence based approach.

Could you explain why you think anecdotes are not data? I hear that a lot. But it seems to be more of an insult ("you stink!") than an empirical statement.

Seth Roberts (2012-01-17 20:20:43)

He simply brought up the point that drugs/compounds/botanicals that produce a biologic effect in mice might not produce the same (or indeed any) biologic effect in humans.

That's not what he said. He made a stronger point – that a positive result in mice does not make a positive result in humans more likely (his exact words: "If there is only a preliminary animal study, even if positive, that does not support the efficacy of

larch bark in humans"). That's absurd, but that's what he said.

Seth Roberts (2012-01-17 20:23:28)

However, adopting an anti-expert viewpoint is counterproductive.

I believe that you should look at evidence whenever possible – at least where doctors are concerned. Is that "anti-expert"? If so, what is counter-productive about it?

Seth Roberts (2012-01-17 20:36:37)

Curious. Here's what Gorski said:

If there is only a preliminary animal study, even if positive, that does not support the efficacy of larch bark in humans.

Here's what I said in response:

Apparently Gorski thinks animals (e.g., rats) and humans share no DNA.

I reached that conclusion because I could not think of another explanation for the pattern of results that Gorski refers to: results with animals tell us nothing about what will happen with humans. In other words, knowing that X is true for rats tells us nothing about whether X will be true for humans. Let's assume it's true that animal results tell us nothing about what will happen with humans. Can you think of another plausible explanation for this pattern of results besides zero DNA overlap?

Amber K (2012-01-17 20:40:58)

"Not so. The many similarities between mice and humans mean that if Statement X is true for mice, X is more likely to be true for humans than if X is not true for mice." Yes, and therefore more research is needed. It is not conclusive evidence of efficacy in humans. It shows a possibility of efficacy. Which I stated in my comment.

Kirk (2012-01-17 21:10:08)

@ShadowfaxMD You say, "There is essentially zero good evidence for vitamin or nutrition based treatment for recurrent sore throats, compared to the reams of data, both pro and con, for tonsillectomy." Color me skeptical. Wouldn't this have been highlighted by one of the editors for the Science-Based Medicine blog? All they would need to do is cite the studies. Can you list those PubMed papers which show SBM-approved double-blind studies indicating no efficacy? Since you have so bravely joined the give-and-take over here, I would like to post a few questions to you. If this situation was happening to a child in your extended family, would you counsel scheduling immediate surgery once the physician communicated that opinion? (I assume you are aware of the risks of surgery.) Or would you say to the parents, 'There is an alternative, and I'll be the first to say it may be a long-shot, but, you know, the risks are low for delaying surgery for a month. You might consider a nutritional approach like the one which reportedly worked for Rachael and her son.' Do you think Rachael should stop the nutritional approach and schedule surgery? And finally, I'd like to make a point about experts. Experts are great. I was one in a particular field several years ago. And yet, sometimes we ignore experts when the risk is low. The major illustration is nutrition. I'm guessing from your handle that you're an MD or somewhat associated with the medical field. If so, are you an MD who treats patients exclusively about nutritional problems? My guess, no, that's not your exclusive focus. You're not a nutritional expert and thus you probably base your Way of Eating on one of the eating plans developed by an M.D. Am I right? Which one? Dr. Atkins, Dr. Ornish, Dr. Willett? And here's the key issue . . . do you completely and absolutely comply to that diet? Or do you subtract something, or adjust a ratio, or add something? For example, it may be a low-salt diet but you like salt and your own research indicates there's nothing wrong with a reasonable amount of salt. If so, then you're ignoring an expert. And why do you ignore an expert? Because the risk is low and you've done your homework.

David Gorski (2012-01-17 21:44:09)

That's not what he said. He made a stronger point — that a positive result in mice does not make a positive result in humans more likely (his exact words: "If there is only a preliminary animal study, even if positive, that does not support the efficacy of larch bark in humans").

Nice straw man ya got there, Seth. Let's put it this way. A positive animal study might mean it's more likely that a treatment will work in humans, but it is still not evidence of efficacy in humans. (Amber K's comment was spot on.) In other words, it's suggestive that a therapy might work, not evidence that it will. That's why no clinician bases therapy decisions in humans on animal studies. I can only conclude that you really don't understand this or being deliberately obtuse about this point. As for your comment about my supposedly thinking that rats and humans don't share DNA, now really. That was just plain dumb. I'm sorry, but there really is no other politer way to put it. As others have pointed out, just because we share DNA does not necessarily mean that results in rats will translate into humans.

Seth Roberts (2012-01-17 22:21:50)

it's suggestive that a therapy might work, not evidence that it will.

Huh? I fail to understand this. You seem to be using "evidence" in a way I have never encountered. The usual meaning of "evidence" is this: Observation X is evidence for Statement A if and only if Observation X makes Statement A more plausible. With this usage, anything that is "suggestive that a therapy might work" (= makes it more plausible that a therapy will work) is also "evidence" that it will work. Could you explain what you mean by "evidence" in your sentence?

As others have pointed out, just because we share DNA does not necessarily mean that results in rats will translate into humans.

Of course not. But that's not what you said. You made a stronger statement:

If there is only a preliminary animal study, even if positive, that does not support the efficacy of larch bark in humans.

Whereas I think that a preliminary animal study, if positive, does support (= make more plausible) the efficacy of larch bark in humans. My belief is based on the many many similarities that have been observed between lab animals and humans (e.g., any physiology textbook). Can you explain the basis of your belief ("If there is only a preliminary animal study, even if positive, that does not support the efficacy of larch bark in humans")?

"Nice straw man . . . deliberately obtuse . . . just plain dumb"

Curious. You think such terminology improves your argument?

Jeff Alexander (2012-01-18 00:13:58)

Huh? I fail to understand this. You seem to be using "evidence" in a way I have never encountered.

Evidence of efficacy in humans would be the observation of an effect after administering to humans. Administering to a rat can only provide evidence of efficacy in rats. Seeing an effect in rats might lead you to believe that there will be a similar effect in humans but it is not evidence of such an effect. This is why it is suggestive but not evidence of efficacy. There have been plenty of therapies that looked promising based upon animal studies which have later failed when tested on humans. If evidence of efficacy in rats truly was evidence of efficacy in humans there would be no such failed transfers.

Mike Scott (2012-01-18 00:35:22)

You're being unfair here, whether deliberately or accidentally. Everything is made of the same particles and works in the same way, so everything is technically evidence for everything. In the field of evidence-based medicine, we must thus restrict ourselves to *useful* evidence. Experience has found that the results of a small number of animal studies do not constitute useful evidence for what works in humans, merely a promising line of attack to conduct further research and build up a body of evidence that is useful.

Seth Roberts (2012-01-18 04:38:01)

Everything is made of the same particles and works in the same way, so everything is technically evidence for everything.

Care to provide evidence for that?

Seth Roberts (2012-01-18 04:40:48)

Evidence of efficacy in humans would be the observation of an effect after administering to humans. Administering to a rat can only provide evidence of efficacy in rats.

You mean the statement by David Gorski that I have been complaining about is true by definition? I thought we were discussing science, not mathematics.

Jazi zilber (2012-01-18 05:00:27)

I think there is a Wording issue here. "evidence" has two meanings. 1) any kind of information 2) conclusive proof In the jargon of SBM folks evidence means (like in court) conclusive proof. Hence their use of the word.

Jazi zilber (2012-01-18 05:03:11)

Miriam webster give both definitions here <http://www.merriam-webster.com/dictionary/evidence>

Nam (2012-01-18 05:27:28)

Let's assume it's true that animal results tell us nothing about what will happen with humans. Can you think of another plausible explanation for this pattern of results besides zero DNA overlap?

Yes, different metabolism and breakdown of compounds. Differences in physiology, etc. Extending your logic would say, for example, cows can digest cellulose, and since we share a lot of DNA with cows, therefore we should be able to digest cellulose too. Since we can't digest cellulose we must have zero DNA overlap with them, its the only explanation.

Seth Roberts (2012-01-18 05:33:23)

Yes, different metabolism and breakdown of compounds. Differences in physiology, etc.

Since our metabolism and other aspects of physiology are heavily dependent on our DNA, I fail to see how this is a substantially different explanation.

Seth Roberts (2012-01-18 05:38:46)

Here's what that linked-to definition says: 1a : an outward sign : indication b : something that furnishes proof : testimony;

specifically : something legally submitted to a tribunal to ascertain the truth of a matter 2: one who bears witness; especially : one who voluntarily confesses a crime and testifies for the prosecution against his accomplices Not the two meanings you give.

Josh Neal (2012-01-18 06:04:26)

Seth, these guys aren't the bad guys. They are trying to help you understand what they mean. You aren't addressing many of the points made in response to you. 1. If I kill a mouse, is this evidence that I will kill a man? 2. What is your explanation for things that affect different animals in different ways? 3. What if the Doctors are being honest when they tell you what they mean by the word evidence? 3.

Amber K (2012-01-18 08:55:25)

Seth, I think this can help you understand the meaning of evidence as we're using it. "scientific evidence: Results when a theory or hypothesis is tested objectively by other individuals such as in an experiment or in a controlled environment." The mouse experiment is testing the hypothesis that the treatment is efficacious in mice vs the null hypothesis, the treatment has no effect in mice. The results from the experiment are evidence of whether or not the null hypothesis or the alternate hypothesis is disproved. If we disprove the null hypothesis (i.e., the treatment is efficacious in mice) then we will set up further experiments, each testing a new set of hypotheses. It is not until we get to a controlled, double-blinded study in a human population of significant size that we are testing the hypothesis, "this treatment is effective in humans." Therefore any evidence gathered until that time is not considered evidence that the treatment is effective in humans. It is only evidence for the hypotheses that were tested in each experiment. So in a nutshell, each step of the process infers a possibility of success in the next, but is not evidence for it. Why? In order to make the statement that evidence of efficacy in mice is evidence of efficacy in humans, we would have had to set up an experiment to test that hypothesis and proved the null hypothesis invalid. We have no need to do that, however, because of the large number of studies that have proved efficacy in mice and not in humans (in other words, it's already been done). I hope that makes things more clear.

Alex Chernavsky (2012-01-18 09:30:49)

Doug wrote:

...adopting an anti-expert viewpoint is counterproductive.

I disagree. Here are three books that illustrate why experts should be treated with deep suspicion: [1]*A Random Walk Down Wall Street*, by Burton Malkiel. The author provides convincing evidence that stock analysts (and other Wall Street professionals) don't know what they are doing. Note that this is a separate issue from corruption. [2]*Mistakes Were Made (But Not by Me): Why We Justify Foolish Beliefs, Bad Decisions, and Hurtful Acts*, by Carol Tavis and Elliot Aronson. What's particularly interesting about this book are the examples where experts are shown to be dreadfully, horribly wrong - but then stubbornly refuse to admit it. [3]*Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*, by Robert Whitaker. The author argues that "expert" psychopharmacologists have produced drugs that are not only ineffective but are actually harmful, though most mental-health professionals continue to swear by them.

1. <http://www.amazon.com/Random-Walk-Down-Wall-Street/dp/0393325350/>

2. <http://www.amazon.com/Mistakes-Were-Made-But-Not/dp/0156033909/>

3. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452425/>

Nam (2012-01-18 09:34:11)

Since our metabolism and other aspects of physiology are heavily dependent on our DNA, I fail to see how this is a substantially different explanation.

Not sure what you mean. But yes, while we share some DNA and aspects of our physiology with other species, we also have substantial differences. Thus whatever effect a certain drug or treatment may have in a rodent, there is by no means any guarantee that it will have the same effect in humans. In some cases it might even have the opposite effect. Animal studies are important in that they allow us to test the plausibility of certain treatments and have allowed for a great many

medical advances. But they have a limit as most doctors and scientists know. Which is why translational research is important for bridging the gap between basic science and medical treatment. But you just can't jump to the conclusion that because something may work in rodents, then you have evidence that it works in humans.

Seth Roberts (2012-01-18 10:00:05)

It is not until we get to a controlled, double-blinded study in a human population of significant size that we are testing the hypothesis, "this treatment is effective in humans."

What is the evidence for this claim? Which would shock epidemiologists, by the way.

Amber K (2012-01-18 10:17:38)

"What is the evidence for this claim? Which would shock epidemiologists, by the way." Sigh. I tried, Seth. I really tried. No epidemiologists would be shocked by rigorous experimental practices to remove subjective bias. It seems to me you are just cherry-picking statements from everyone's comments to try to mine some kind of semantic victory for yourself. This is petty, purposefully obtuse and I am done playing this game. Good luck to you.

Seth Roberts (2012-01-18 10:49:43)

It seems to me you are just cherry-picking statements from everyone's comments to try to mine some kind of semantic victory for yourself.

No, I'm trying to learn something. I'll never know where your beliefs come from – what is behind them – unless I ask. I pick one statement (what you call "cherry-picking") to make responding more manageable.

Jazi zilber (2012-01-18 10:51:44)

I referred to 1a vs. 1b definitions.

Seth Roberts (2012-01-18 12:27:27)

The 1b definition does not mean "conclusive proof". Not even close. It just means the sort of stuff that is called "evidence" in legal proceedings.

Sirkowski (2012-01-19 00:11:11)

Seth Roberts Says: Since our metabolism and other aspects of physiology are heavily dependent on our DNA, I fail to see how this is a substantially different explanation.

Humans have a gallbladder, rats don't. Rats have whiskers, humans don't. I could go on. I mean, seriously? I don't think genetics work the way you think it does.

Josh Neal (2012-01-19 07:29:09)

It's very simple. Some things work the same in mice and humans, yet some things don't. If you are really trying to learn something here, then why not engage the points that people have made to you. Instead of deciding what you think other people mean, why not listen to what they tell you they mean.

Josh Neal (2012-01-19 07:34:31)

Also kind of strange that the person above gave three books about how experts fail us. I guess those authors are experts on the matter?

Someone (2012-01-19 07:46:09)

Treatment that works well for mice does not automatically work for humans. There are tons of failed treatments for humans, which worked on lab rats. Which is bad news for my son...

Greg (2012-01-19 10:27:11)

Such a long and an interesting conversation...that seems to be winding down. I had my tonsils removed forty years ago and can still see the video in my mind's eye of my tearful plea to my father: "Don't let them take me away!". I remember that the promised course of post-surgery therapeutic doses of ice cream did not materialize as soon as expected. With what I know now (I utilize alternative and nutritional therapies more so than pharmaceutical and surgical ones), I may have kept my tonsils a bit longer. In arguments, it is easy to keep gnawing at one tree. Gorski responded to Robert's challenge of the widespread practice of tonsillectomy by suggesting that laymen does not always know how to interpret and prioritize the data. Roberts has taken the bait regarding this minor question of mice and men and evidence and the trap has snapped shut. I must give points to the doctors on this one, but wish Gorski would respond to the spirit of Robert's original blog: Is questioning standard surgical practices a good thing?

Seth Roberts (2012-01-19 12:38:42)

Greg, thanks for your final question ("Is questioning standard surgical practices a good thing?"). What I am really questioning is how evidence-based medicine is done. They omit a lot of evidence. Often the omitted evidence is much more negative than positive. This leads to a huge positive bias in what outside observers see – the treatment under review appears much better than it actually is. Yet the possibility of such a bias is never mentioned.

Seth Roberts (2012-01-19 12:41:31)

Some things work the same in mice and humans, yet some things don't.

That's why rat studies help us predict what will happen when a similar experiment is done in humans. They don't provide certainty, of course – the results of an animal study doesn't allow us to predict with certainty the results of a human study – but they are better than nothing. This is why Gorski's complete dismissal of a "preliminary animal study" is so strange.

Sam Fen (2012-01-19 14:45:23)

Last year I put a lot of compost in the ground and my carrots grew much bigger than they had before. By your argument, since humans share a great deal of DNA with carrots (about 20 %), this is evidence that putting a human in compost will cause them to grow bigger. Suppose someone suggested that this was not evidence at all. We could then just copy-and-paste your argument:

Let's assume it's true that the [carrot] results tell us nothing about what will happen with humans. Can you think of another plausible explanation for this pattern of results besides zero DNA overlap?

Now this argument is clearly absurd. There are hundreds of plausible explanations for why this carrot result is not evidence for the conclusion, and it is a strawman to say that the only possibility would be if there were "zero DNA overlap" between carrots and humans. On the other hand, if you do actually believe that my "carrot study" above *is* evidence that putting a human in compost will cause them to grow bigger, then you are using such a definition of "evidence" that is so useless to research as to be virtually meaningless, and, in any case, this is not the kind of "evidence" that a doctor should rely on when prescribing medicine.

LisaW (2012-01-19 15:07:33)

Alex, I would like to add another book to your list about being wary of experts 'Future Babble' by Dan Gardner. It examines not only the so called experts but also why we often believe them.

Seth Roberts (2012-01-19 23:06:09)

Okay, Sam Fen, two questions: 1. Let's assume results from Organism X (carrots, perhaps) tell us exactly nothing about what will happen when humans get the same treatment. What's your plausible alternative to the zero DNA overlap explanation? 2. What did you think of the main point of my article – that "evidence-based-medicine" practitioners ignore too much evidence?

Sam Fen (2012-01-20 12:49:14)

Let's assume results from Organism X (carrots, perhaps) tell us exactly nothing about what will happen when humans get the same treatment. What's your plausible alternative to the zero DNA overlap explanation? Simple: Carrots and humans have an extremely different physiology, despite sharing a large percentage of DNA. Therefore, the fact that putting carrots in compost makes them grow faster tells us virtually nothing about whether putting humans in compost will achieve the same thing. Now let me ask you the question straight out: 1) Do you think that my "carrot study" is evidence that putting humans in compost would make them grow? 2) If yes, how much evidence? Enough evidence that a family doctor should use it when suggesting a course of treatment for a child?

Seth Roberts (2012-01-20 16:12:57)

Sam Fen, if you answer my Question #2, I would be happy to answer yours.

Myk (2012-01-21 16:35:43)

Clinical practitioners should only use evidence of efficacy in the species they are treating. Researchers can use evidence in similar species to guide their efforts. That's David Gorski's point that you seem to have completely missed.

Seth Roberts (2012-01-21 19:15:00)

Clinical practitioners should only use evidence of efficacy in the species they are treating. . . .That's David Gorski's point that you seem to have completely missed.

You mean Gorski's point was true by definition (of "evidence of efficacy")? Huh. I thought we were discussing science, not law.

Josh Neal (2012-01-22 02:36:51)

In response to the above question number two. I'm sure you would agree that not all the studies in the literature stand equally. Therefore doctors and scientists must choose which studies to believe. For this they need to have a consistent system to help separate the good from the bad. This system is always evolving and getting better. Some of the principles that have come out of this system are: human studies are more relevant than animal studies. Large studies outweigh small studies. Blinded studies outweigh non blinded studies. Double blinded studies outweigh blinded studies. Effects with explainable mechanisms outweigh effects with unexplained mechanisms when dealing with small effect sizes.

Seth Roberts (2012-01-22 04:39:41)

I'm sure you would agree that not all the studies in the literature stand equally. Therefore doctors and scientists must choose which studies to believe.

I agree with your first statement (not all studies equal). However, your second sentence ("therefore doctors...") doesn't follow from it. Instead of "choosing what studies to believe" doctors and scientists can assign each study a degree of belief. And consider all of them. Not ignore any of them. In my experience this is what scientists usually do. Only doctors and evidence-based medicine advocates and the like promote black-and-white all-or-nothing thinking about evidence. Bayesian statistics is a formalization of what most scientists do.



Sam Fen (2012-01-23 06:53:04)

What did you think of the main point of my article — that “evidence-based-medicine” practitioners ignore too much evidence?

I can't possibly answer that, not knowing the majority of evidence-based-medicine practitioners. How can I possibly make a generalization like that based on your anecdotes? But I was dealing with a very specific point, not an abstract one: should a family doctor make a medical recommendation based on one rat study?

Seth Roberts (2012-01-23 11:56:52)

I can't possibly answer that, not knowing the majority of evidence-based-medicine practitioners. How can I possibly make a generalization like that based on your anecdotes?

If you knew more about evidence-based medicine, you would know that the situation I described in Tonsillectomy Confidential is typical: A vast amount of evidence is ignored. Even if you didn't know that, you could comment on the particular example I described.

Sam Fen (2012-01-24 07:53:30)

You haven't answered any of my questions yet, you just keep asking more of your own.

### **Vitamin D3: More Reason to Take it First Thing in the Morning (2012-01-16 05:00)**

At the Fancy Food Show, one of the exhibitors asked me what I did. I said I studied how food affected the brain. That's interesting, she said. She proceeded to tell me that Vitamin D3 has really helped her.

When do you take it? I asked.

First thing in the morning, she said.

Why? I asked. Because she had tried taking it at bedtime and it hadn't worked. So she switched to first thing in the morning and it worked well. It gave her energy and raised her mood. Her 28-year-old son had the same experience.

I told her I had seen the same pattern several times. The time of day really matters, I said. She said she had never thought of that – that what was true for her was true for other people. She had told lots of people about the benefits of Vitamin D3 but she hadn't told them what time to take it.

I hope to interview this woman at length and get more details.

As far as I'm concerned, [1]the totality of evidence, including this story, is overwhelmingly persuasive. Taking Vitamin D3 at the right time of day is crucial. Take it at the best time of day (first thing in the morning), it will have a powerful good effect. Take it at the worst time of day (evening), it will have a bad effect.

Why Vitamin D researchers missed this, and how long it will take them to stop dismissing “anecdotes” about it, are interesting questions.

1. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>

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Daniel (2012-01-16 05:37:24)

Seth, What does this mean for multivitamins?

thuphaer (2012-01-16 06:44:44)

I usually skip breakfast. Should I still take the vitamin D first thing in the morning ?

Seth Roberts (2012-01-16 07:20:41)

I usually skip breakfast. Should I still take the vitamin D first thing in the morning ?

Based on my experience, yes. I skip breakfast and take Vitamin D first thing in the morning.

Seth Roberts (2012-01-16 07:23:23)

What does this mean for multivitamins?

It means you should take a multivitamin since Vitamin D3 requires co-factors to work properly.

cremes (2012-01-16 07:27:41)

Which co-factors does Vitamin D3 require? I googled around for it but all I could find were discussions about keeping a (roughly) 2:1 ratio between vitamins A & D (e.g. 10k IU of Vitamin A needs 5k IU of Vitamin D3 to balance).

Seth Roberts (2012-01-16 08:21:49)

Yes, Vitamin A is the known co-factor of Vitamin D. Perhaps there are others.

Karen (2012-01-16 08:42:00)

Taking vit D early in the morning has been a game changer for me. I take it first thing after getting out of bed. I take 15k IU. I started doing this after reading the suggestion on your blog. I'd been taking it for years at different times of the day but never early in the morning. It hasn't helped my sleep but the upgrade in mood and energy has been staggering. I started taking vit K and CLO (for the A) along with the D and the affect diminished. I dropped the K and CLO and it came back. I wish I had thought to try this years ago. Thanks for passing the tip along.

Tom (2012-01-16 09:59:19)

Vitamin K2 is another co-factor, with a role in bone and arterial health. [http://en.wikipedia.org/wiki/Vitamin\\_K](http://en.wikipedia.org/wiki/Vitamin_K) #Vitamin\_K\_and\_bone\_health Apparently D3, A, and K2 are all needed to carboxylate osteocalcin, and osteocalcin is what keeps calcium in the bones and out of the arteries. (When it's undercarboxylated, osteocalcin can't 'hook' the calcium molecules, so they aggregate in the circulatory system, and show up on calcium scans.) Many people don't get enough of D3, A, or K2.

Jenny (2012-01-16 11:14:30)

I too discovered independently that D3 first thing in the morning works. I have also found that the best time of day for 5HTp, if you need that, is about 40 minutes before bed. And by the way, if you wake up stiff- thinking you are getting old, try the 5HTp. Muscles need serotonin too, and stiffness will show up before depression.

david (2012-01-16 13:23:23)

Tomorrow, I'm going to start taking D3 first thing in the morning. I am having a very hard time getting up in the morning when I need to. Last week I began eating breakfast (two eggs scrambled with bacon and cheese) soon after waking (within 30min). By the end of the week, waking up was not any easier. Let's see if adding D3 helps.

Daniel (2012-01-16 19:47:23)

Re: multivitamins. Yes, but if the timing is important, when do you take the multivitamin? I take Vit-D in the morning and magnesium at night. but my multivitamin has both what to do then?

Adam (2012-01-17 04:01:10)

Rather than taking a multivitamin, you could get the other necessary vitamins from whole foods. Liver, dandelion greens, carrots and sweet potatoes are the top 4 sources of vitamin A. Vitamin K is usually pretty high in dark green, leafy vegetables.

Iwan (2012-01-17 09:31:06)

I am about to run a self-experiment on using timing and levels of Vit D ingestion to combat jet lag. Does anyone else have experience with this method? Thanks

Paul Winter (2012-01-17 20:22:54)

I grew up in England, for the past few years I have been in NZ, does the change in locations make a difference. I will let you know. P Winter.

### **Tara Parker-Pope, "The Fat Trap" and the Shangri-La Diet (2012-01-17 05:00)**

Years ago I had lunch with a woman whose father ran a chain of weight-loss clinics. They were very successful and he was often invited to give talks. He never accepted these invitations, his daughter said, because he was seriously overweight – like 300 pounds.

I was reminded of this by [1]Tara Parker-Pope's recent New York Times Magazine article "The Fat Trap". Parker-Pope tells us she is "at least 60 pounds" overweight, a bit of brave honesty for which I give her credit. I give her less credit for unskeptically quoting expert after expert – her article is essentially a review of expert opinion. If these experts are as wonderful and accurate as she says (by repeating their ideas), why is she 60 pounds overweight?

She never answers this question. She doesn't even seem to ask it. However, someone else asks it. "The Fat Trap" includes this:

In most modern cultures . . . to be fat is to be perceived as weak-willed and lazy. It's also just embarrassing. Once, at a party, I met a well-respected writer who knew my work as a health writer. "You're not at all what I expected," she said, eyes widening. The man I was dating, perhaps trying to help, finished the thought. "You thought she'd be thinner, right?" he said. I wanted to disappear, but the woman was gracious. "No," she said, casting a glare at the man and reaching to warmly shake my hand. "I thought you'd be older."

I already knew it was "just embarrassing" to be fat. What's interesting is that the story that follows this unremarkable idea doesn't support it. Her date wasn't saying she's fat. Sixty pounds overweight is not surprisingly fat. The "well-respected writer" can't possibly have been surprised simply by that. Her date knows this. He's bringing up something that puzzles him ("if you know so much about health, why are you fat?"), a reasonable question. By "you thought she'd be thinner, right?" he means "you thought, because of her job, she'd be thinner, right?" Parker-Pope and her editor don't notice this.

Parker-Pope continued to reshape reality in [2]an interview she gave, which included the following:

Q. What were your hopes in writing "The Fat Trap"?

A. My hope was that people would leave the article feeling informed and empowered. . . . [I got the story idea talking] with Dr. Michael Rosenbaum at Columbia about the science of weight loss. . . . [He told me what dieters already know:] that most people who are fat, are going to stay fat. . . . The truth is: Once you've gained weight, it's really, really hard for most people to lose weight and keep it off.

Is she sure this "truth" is empowering? To me it sounds discouraging.

The speed of the obesity epidemic – 30 years ago, Americans were much thinner – implies that the obesity epidemic has an environmental cause. Genes don't change that fast. Something about the environment – something that controls weight – has changed. Not exercise. Thirty years ago, Americans probably exercised less than now. It is likely that something they ate kept them thin, without trying. Parker-Pope fails to understand this. Or at least failed to ask the experts she spoke to about it. What about the environment has changed? she should have asked. If I were her, I'd be angry. The obesity epidemic is 30 years old! Thirty f—ing years! Why is it taking so long to figure out the cause?

The length of the obesity epidemic reflects research failure. Against her own self-interest, she doesn't grasp this. At the end of "The Fat Trap", like a brainwashing victim, she says:

I do, ultimately, blame myself for allowing my weight to get out of control.

I disagree. She should not blame herself for not knowing how to stay thin – hardly anyone knows. No, her failure is journalistic: (a) not grasping that the obesity epidemic must be due to changes in what we eat (lots of people understand this), (b) not grasping this means there must be a way to be almost effortlessly thin (in the 1970s people were much thinner with little effort), and, above all, (c) not confronting the experts she interviews. Her insensitive date spoke an uncomfortable truth. Now she is failing to ask uncomfortable questions (why is it taking so long?) Much worse.

[3]My theory of weight control says the crucial environmental change that caused the obesity epidemic was increased consumption of foods that produce very strong (= very fattening) smell-calorie associations. To produce a very strong smell-calorie association, a food must (a) have a strong smell (a strong "flavor"), (b) have quickly digested calories (e.g., a high glycemic index), and (c) have exactly the same smell each time. All three features, especially the third, are much more true of factory food, fast food, and junk food than of handmade food. Typical food processing almost always increases flavor (e.g., add spices) and speeds digestion (e.g., cooking). Factory and chain restaurant food processing produces much less variable flavor than ordinary human food processing. Exactly when the obesity epidemic started, there was a big shift toward factory and chain restaurant food. One reason was microwave ovens. Microwave entrees taste exactly the same each time. Another reason was an increase in eating at chain restaurants. The Shangri-La Diet goes into more detail.

At the end of "The Fat Trap" is this:

All the evidence suggests that it's going to be very, very difficult for me to reduce my weight permanently.

No, not all the evidence. [4]Alex Chernavsky used the Shangri-La Diet to lose 25 pounds and has kept it off easily and apparently permanently.

1. <http://www.nytimes.com/2012/01/01/magazine/tara-parker-pope-fat-trap.html?pagewanted=all>
2. [http://www.huffingtonpost.com/jean-fain-licsw-msw/fat-trap\\_b\\_1184847.html](http://www.huffingtonpost.com/jean-fain-licsw-msw/fat-trap_b_1184847.html)
3. <http://sethroberts.net/about/whatmakesfoodfattening.pdf>
4. <http://www.astrocyte-design.com/shangri-la-diet/index.html>

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john (2012-01-17 07:27:59)

Hi Seth, I think it's unlikely that obese people ever break free of the standard gluttony-sloth idea. You probably have a similar proportion of people "breaking free" of the "saturated fat 'clogs' your arteries" idea. Most people are unquestioning followers of authority and don't have experience, or maybe even capability, in thinking scientifically. I have literally presented papers to people to support an idea, but they simply re-tell me what [Dr Oz] has said. They don't register the science as evidence; I think they consider differing ideas as opinions, which they technically are not. I don't know how we can change that sort of culture. Off topic a bit, did you have specific reasons for giving up rice, bread, and potatoes? Was low carb self-experimentation that brought you to that (with all carb sources having negative effects), or was it an idea based on readings, etc, and you found it worked well?

MikeW (2012-01-17 08:23:44)

TPP's "very, very difficult" comment isn't surprising - the one successful longterm dieter she profiles in that article is a hopelessly obsessed calorie-counter. Daily food diary for 5 years, weighing all her food, researching restaurant menus online every time she eats out, exercising 100-120 minutes every day to burn exactly 500 calories. I'm glad it works for her, but who wants to live like that? Whether it's SLD, Paleo, Atkins, whatever - I'm sure there are lots of folks out there who have achieved longterm weight loss by adopting simple, easy-to-follow rules. If Ms. Parker-Pope had focused on one of those success stories, maybe she wouldn't have given herself such a gloomy prognosis.

tom (2012-01-17 09:37:00)

I know this isn't Seth's or Parker-Pope's focus, but imagine if getting fat once really does re-set your body to make you fat for life, as the article seems to say. There have been so many news stories about girls/women with anorexia where the author blames American culture for being obsessed with keeping them thin. But if the biggest cause of life-long fatness is simply getting fat once, then maybe family/cultural disapproval of fatness serves an important function.

charlie (2012-01-17 10:54:23)

The article set itself up to fail — looked at a crash diet program. I'm not even sure the program was meant to lose weight - it was a research program. Is anyone surprised that a bunch of fatties fed minimal protein shakes for six weeks regain their weight? The real point is does something happen to fat people? answer - probably yes. But is it hard to lose weight? No. It is hard to keep that weight off - well, it requires some changes.

Tim Beneke (2012-01-17 14:59:06)

Using various applications of Seth's core ideas I can report that I've lost 33 pounds and kept them off for 11 years, about 12 % of my body weight. And even this is a very misleading statement because for roughly 10 of those 11 years I had lost more than 50 pounds and kept them off. And about 5 of those years I had lost more than 70 pounds. For 2, about 90. For 1, about 100. I'm currently about 70 pounds lighter than I was when I started applying Seth's ideas - from 280 in November 1999, to 210 or so now - 25 % weight loss. And I'm working hard to get thin again... Obviously it's a long story. The key point is that the flavor environment profoundly influences hunger and it's relatively easy to stay lighter if you are not hungry - assuming you do not eat when you are not hungry. If you eat when not hungry, it's probably impossible to lose weight long term. One thing I would add: It's my distinct impression that the more nutritious the food you consume, the less hunger you will have, so a 1000 calories of poor nutrition should leave you hungrier than a 1000 calories of good nutrition. Last time I checked a few years ago - there seemed to be little scientific research on this, something I found strange. Also, in trying to lose weight and keep it off, it's very easy to confuse bad method with weakness of will. You need both willingness to do the work, plus a good method. Before encountering Seth's ideas, I was very good at heroically enduring hunger to lose weight - and inevitably gained it back and then some. Strong will is not enough if the method is bad. I'm hopeful - perhaps naively so - that eventually truth will out and Seth's discoveries about weight loss will be widely recognized and accepted. It's depressing that the Times is running articles by respected health journalists who are recycling old ideas that have obviously failed. Basic science: if you make causal claims, you need to be able to accurately predict something. If you claim to know what can cause people to permanently lose weight, you need to be able to show people permanently losing weight with your methods.

Glen Raphael (2012-01-17 16:46:56)

*All the evidence suggests that it's going to be very, very difficult for me to reduce my weight permanently.* No, not all the evidence. Alex Chernavsky used the Shangri-La Diet to lose 25 pounds and has kept it off easily and apparently permanently. *Assuming by "reduce my weight permanently" she means reduce it to a socially-acceptable "normal" weight level,* SLD doesn't really answer to that. Yes, SLD clearly helps some people lose some weight but what percentage of SLD-ers get from "very overweight" to near their "goal" weight? What percentage don't find it "very very difficult" to reach their goals at all, much less to do so "permanently"? SLD is arguably a step in a better direction, but it's not a complete solution. It still takes willpower to stick with SLD and even if you do, the effectiveness varies. If there's really a way to get and stay "effortlessly thin" it probably hasn't been found yet.

dearieme (2012-01-17 17:32:30)

Is there a rational way to determine a sensible target that is practical for a particular individual? Not just on grounds of classification variables - age, sex, race, and so on - but for that specific individual?

Cliff Clayton (2012-01-17 18:47:37)

I am male. At 49 I discovered, to my horror, I weighed 205lbs. I was 165 all through high school. I understood nothing about diets or weight loss then, but in less than two years I lost 35lbs by mainly starving myself. At that point I decided to get in shape too, so now I ride a bike through the hills of PA at 17mph average and lift weights in the winter. I eat low carb, hi fat, hi protein, I am never hungry unless I do a fast. I hit a low of 165 late fall when I'm riding long and hard (I do 4-5000 miles a year), and hit 175 in the winter when I bench 1rep max of 200lbs. I am 58 now. I don't weigh myself any longer. My asthmatic wife would love to lose 25lbs. We have two children. She eats excellent, no crap, cakes, pies, fast food, chips, no crap. IE we eat basically the same. She does no exercise to speak of (walking) but she is not sedentary or lazy. She is very active until she crashes at 8pm. Each of us seem to have reached a weight that we can't get below. From my experience (n=2) low carb takes off weight, exercise keeps it off. With that said, I'll let you know how that works out when I'm 68. I tell anyone who asks: "Don't eat white stuff (flour, sugar, milk) and do something fun that sends your heart rate to your max as often and for as long you can stand it, everyday if possible.

Seth Roberts (2012-01-17 22:49:22)

did you have specific reasons for giving up rice, bread, and potatoes? Was is low carb self-experimentation that

brought you to that (with all carb sources having negative effects), or was it an idea based on readings, etc, and you found it worked well?

I gave them up because they have a high glycemic index. I found that substituting a low-glycemic-index food for higher-glycemic-index foods led to easy weight loss. As my weight-loss theory predicted. My theory was based on both self-experimentation and lots of reading. my theory: <http://sethroberts.net/about/whatmakesfoodfattening.pdf> related self-experimentation: <http://escholarship.org/uc/item/2xc2h866>

Sara (2012-01-18 01:46:30)

I wrote an undergraduate paper on the FTO gene and the way it is reported in the media. I looked at the research behind the media reportage and it just wasn't as conclusive as what the media made out. But, if the media reported the equally correct headline 'Modern life proves fattening for 33 % of the population' where would this lead? 'Science' magazine can't publish that. Funding bodies aren't interested in studying aspects of society - they want to find 'the gene' and develop an expensive drug to turn it off. In my case, dealing with obesity required a holistic approach and took a really long time. I can't even say how I did it because it was so haphazard - you couldn't put it into a book. But somehow now I'm thin and it's easy to stay that way. I wish I could pinpoint the exact thing or things I did that turned off my appetite. I don't know if was psychological or physical, but I worked on both aspects. It is possible to lose weight and keep it off, I've done it, but I couldn't really say how.

Robbo (2012-01-18 05:42:02)

I shed c 45 lbs about seven years ago, and have kept it off since, using Atkins / Paleo / LCHF. It was never very hard, but I do take a little care not to get into a cinnamon bun habit. In my view Tara's problem is that she is following the wrong advice. This usually has the effect of making even simple things difficult. If I was being unkind, I would ask why she hasn't figured out that she has been following the wrong course and tried a different one (or two, or three,). And she's a journalist !

Seth Roberts (2012-01-18 06:17:43)

In my view Tara's problem is that she is following the wrong advice.

I agree. Another way to put it is: Experts are giving her the wrong advice.

tom (2012-01-18 10:01:22)

But Seth, do you believe in the 're-set' idea? Do you think set points change and that it's much easier to stay thin if you don't let yourself get fat to begin with?

Seth Roberts (2012-01-18 10:48:05)

I believe set points change, yes. I believe they are changing all the time - going down between meals and up during meals. I believe your set point depends on the food you eat (it also depends on other things, too). I don't know what the "re-set idea" is.

Tom (2012-01-18 12:53:43)

I feel bad for her. It's hard to question authority(-ies) when you're on a first-name basis with all the key ones. (As she is by virtue of her position.) I wonder if she's ever read Good Calories, Bad Calories. But I don't doubt that she's talked to both Dean Ornish and Mehmet Oz about how wrong Taubes is.

Kevin (2012-01-19 06:28:30)

disagree. She should not blame herself for not knowing how to stay thin — hardly anyone knows.

This is completely false. Everyone knows how to lose weight. Eat less. It just takes discipline so no one wants to do it. Before I accepted this simple truth - that it does not matter what I eat, provided I eat less of it - I was struggling with diets (paleo, low

carb, you name it) and was chronically fat. Simply accepting the disagreeable and unwelcome truth that I need to eat LESS (in my mind, it meant less pleasure in my life. As it turned out, that was a flawed belief. I actually began to enjoy my meals much more) finally liberated me to lose weight and I went from 200 lbs to 155 lbs and have stayed there for 5 years so far. All I do is eat less, but I eat anything I want (sugar, desserts, fat, meat, pasta - anything)

Something about the environment — something that controls weight — has changed. Not exercise. Thirty years ago, Americans probably exercised less than now. It is likely that something they ate kept them thin, without trying.

While you are right that this has to be caused by environmental changes, you make 2 logical mistakes 1) The changes can easily be CULTURAL and not in what we ate (as in loss of self-discipline, loss of a willingness to put up with deprivation, marketing that encourages us to always want MORE of everything, including food) 2) It does not follow that people were \*effortlessly\* thin in the 70s. It is quite possible that people were simply willing to put up with more deprivation and self-discipline was valued. Heck, even a cultural force like fat shaming can be the catalyst for change. I know you say that there is fat shaming in today's culture, but it is not really serious.

Seth Roberts (2012-01-19 06:52:18)

The changes can easily be CULTURAL and not in what we ate (as in loss of self-discipline, loss of a willingness to put up with deprivation. . . . It is quite possible that [in the 1970's] people were simply willing to put up with more deprivation [than now] and self-discipline was valued [more than now].

That's an interesting idea. In addition to the obesity epidemic, where else can we see evidence for this?

dave schutz (2012-01-19 07:04:33)

In the 70s, lots of people smoked, a lot. They were thinner than people who didn't smoke. I'm interested that this does not seem to be mentioned at all as a possible cause for all of us ballooning in the 30 years since.

Seth Roberts (2012-01-19 08:42:35)

In the 70s, lots of people smoked, a lot. They were thinner than people who didn't smoke. I'm interested that this does not seem to be mentioned at all as a possible cause for all of us ballooning in the 30 years since.

Less smoking does not explain why children are now much fatter than 30 years ago.

Kevin (2012-01-19 14:59:03)

That's an interesting idea. In addition to the obesity epidemic, where else can we see evidence for this?

Seth, I spent a lot of time on business in Thailand and Japan, where the people are incredibly thin and eat tons of carbs and sugars, etc. After a while you grasp that the people are not thin \*effortlessly\*. There are strong traditions governing how much to eat and what you eat (traditions we have lost), and there is a MASSIVE social stigma to being fat. It just is not acceptable. There was an article a while ago in the NYT about how Japanese women obsessively watch what they eat in order to stay incredibly thin. Portions are much smaller too, which studies have shown play a role in feeling full. To me, this is some amount of evidence in support of the idea that cultural factors are the culprits here. Also, if EVERYONE is eating much less and it is just part of the tradition governing food consumption, it really IS much easier, but it is not \*effortless\* in the sense that no self-discipline is involved and one can just eat impulsively.



john (2012-01-19 17:39:11)

Seth, n=1 In 1968 I was doing my honours year in a science faculty in australia. On Saturdays, I was one of the very few doing their project in the labs, others were at the football match or getting ready for parties. At 1230pm I was hungry and there was only one lunch place open within 3 miles, a greek hamburger joint, ONE! We were all a thin cohort then, except for the exception. Today in 2012, temptation to the brain through the eyes is everywhere through the explosion in coffee shops, food shops etc, and I can feel the brain assessing and visualising food images as I walk to the train, walking the dog, etc, past the multitude of temptations, it's everywhere. The reverse to 1968 is now apparent to me as a time evolution experiment.

tom (2012-01-19 21:44:12)

Seth, on re-setting set points, your articles speak of it differently than Pope's sources: Scientists are still learning why a weight-reduced body behaves so differently from a similar-size body that has not dieted. Muscle biopsies taken before, during and after weight loss show that once a person drops weight, their muscle fibers undergo a transformation, making them more like highly efficient "slow twitch" muscle fibers. A result is that after losing weight, your muscles burn 20 to 25 percent fewer calories during everyday activity and moderate aerobic exercise than those of a person who is naturally at the same weight. That means a dieter who thinks she is burning 200 calories during a brisk half-hour walk is probably using closer to 150 to 160 calories. .... A full year after significant weight loss, these men and women remained in what could be described as a biologically altered state. Their still-plump bodies were acting as if they were starving and were working overtime to regain the pounds they lost. \_\_\_\_\_ Pope is saying that there is something about getting fat itself that makes it harder for a person to be thin. That's the 're-set' that I'm talking about, and it's very different from your concept. If that's at all true, then imagine how much more important the cultural argument is. The best way to be thin is never to get fat?

Seth Roberts (2012-01-19 23:33:30)

I think the effects of losing weight probably vary greatly depending on how the weight is lost. If you lose weight WITHOUT lowering your set point, I think this is when you see all the changes you mention. But if you lose weight BY lowering your set point, I think the long-term consequences are far less. Cabanac has pointed out the enormous subjective difference between the two kinds of weight loss. The first is painful, the second is not.

Jim Purdy (2012-01-20 09:24:51)

Seth, I just read an interesting little article from the Association for Psychological Science, with the title: To "Think Outside the Box", Think Outside the Box. It studied whether people were more creative when they literally were physically inside or outside a large box. According to the article, people really were more creative when situated physically outside a box. I don't have much room in my apartment for big boxes, but I'm trying a variation of this, using two very small boxes, one on my desk, and one in my refrigerator. The idea is that every time I get a food craving, I will see a box, and maybe, just maybe, it will get me to "think outside the box" and find a healthier way to satisfy the craving. Silly idea, maybe, but isn't it in the spirit of self-experimentation? The article: <http://www.psychologicalscience.org/index.php/news/releases/to-think-outside-the-box-think-outside-the-box.html> My blog comment about it: <http://jimpurdy.blogspot.com/2012/01/thinking-and-dieting-outside-box.html>

Link love for January 14th through January 20th | FitChutney (2012-01-20 11:26:28)

[...] Seth's Blog » Blog Archive » Tara Parker-Pope, "The Fat Trap" and the Shangri-La Diet- I recently summarised some of responses to the recent "Fat Trap" article. Here's another one! I like this paragraph: [...]

Perfect Health Diet » Around the Web; Congratulations Naomi Edition (2012-01-21 19:53:25)

[...] Seth Roberts comments on Tara Parker-Pope's "The Fat Trap": Its defects were what it didn't say. [...]

tess (2012-01-22 07:39:32)

I find it interesting that it's men in this comment section who claim that losing weight is easy.... for men, it DOES seem to be easy - my husband is the same. Women find it much harder to lose weight, especially as they progress into midlife. A lifetime of trying to be thin is a handicap, which limits our progress with every new attempt. Add to this other hormonal changes which

skew the body toward wanting to store more fat. for those women who are also getting bad advice about ideal diet, i imagine it seems impossible. i'm incorporating Seth's (thank you!) SLD tweak to my strict paleo regimen (i was 80-20 before); the first week, weight POURED off me. the second week, with no change in menu, the loss was not consistent – some days my weight was up. i'm into my third week now, and far less hopeful of reaching my goal any time soon (WON'T be moving to Step 2 at the 30-day mark).... btw, i'm only moderately overweight – less than 28 bmi. so, YEAH – it IS hard to lose weight as well as to keep it off – if you're a woman.

Kevin (2012-01-23 09:14:47)

No one said it was easy, tess, just that it is simple and we know exactly how to do it. Simply eat less. There is no mystery. Everyone pretends that there is this incredible mystery in how to lose weight - ironically, it is precisely this belief that might be preventing people from coming to terms with the reality of what needs to be done. Instead they waste time on fad diets like low-carb which promise you you can still eat lots and lose weight. Most people are shocked when they discover how few calories the body really needs to maintain itself and how few we have to eat to lose weight. For instance, we have this idea that a \*healthy\* calorie intake per day is around 2000 for men. Even a very large man over six feet needs much less than that! Most people today would believe they are eating \*unhealthy\* and be in \*starvation mode\* if they ate the number of calories they really needed to lose weight and be healthy. It was living in Japan and Thailand that helped open my eyes to this truth. The good news is that this idea that you have to eat this ridiculous amounts to be healthy is just something programmed into us by our deficient culture, and we CAN de-program ourselves. The fact of the matter is that the initial stages of weight loss can be quite difficult as you learn to de-program yourself from all the messages that you will \*feel miserable\* on anything less than 1800 calories per day (for a man) - its complete nonsense - and that you need to eat 5 times a day and always eat MORE bla blah. Yes, it can be difficult. But it is simple. And we know how to do it. There is no mystery.

tess (2012-01-23 13:38:36)

Kevin, this is exactly the attitude that pisses me off. you don't know diddly-squat about managing a middle-aged woman's body, and yet you're very eager to offer your opinion on it. YES, it is EASY for my husband to lose weight. CICO. two weeks into eating a VERY low calorie paleo diet, and MY weight has ALREADY plateaued, despite the appropriate levels of exercise. certain vegetables, even – which everybody agrees are great weight-loss foods – that others can eat with impunity create havoc with my metabolism. so you say it's SIMPLE to know what to do to lose weight? BS.

Kevin (2012-01-24 02:16:01)

Tess, weight loss was NOT EASY for me (at first) nor for ANY MALE that I know. It was an incredible STRUGGLE and for you to simply dismiss my dedication and effort as \*easy\* is incredibly rude. It sounds like you are simply making excuses for why YOU are not losing weight. When people start complaining that weight loss is \*easy\* for some but not for \*them\* (because of gender, or \*my metabolism is just slow\*, lol) they are simply making excuses. Trust me, I used to do the SAME THING all the time before I got thin! It was a major mental block I had to overcome. The truth is, the INITIAL stages of fat loss (first 6 months at least) are easy for NO ONE. Not you. Not me. THINGS ARE NOT ESPECIALLY HARD JUST FOR YOU. Get over the self-pity. You may THINK you are eating \*low calorie\*, but if you are not losing weight then you are not eating LOW ENOUGH. You are either cheating in ways you are not aware of (a little cookie here or there), or just dont really understand how little you have to eat. It might shock you learn how little you actually have to eat, but it is the truth. This is the mental block we all have to overcome to lose weight. There is NO such thing as a weight loss plateau (how do you think people starve to death? Why dont they just plateau lol? They have done studies on Army rangers where they put them in massive caloric deficits for a few months and they just kept on losing to incredible levels. No plateaus). If you \*plateaued\*, you have to eat even LESS. I once bought into plateauing also - I \*fixed\* it by just adjusting my calories down. There IS such a thing as a weight loss slow down because as you lose fat the body has less fat available to burn, but there is no such thing as a total stall IF you are eating less calories than you burn. Its simple science. Two things might suggest the culprit here 1) Exercise will not help you lose weight. You burn a tiny amount and then frequently compensate by either reducing activity the rest of the day through exhaustion (thus burning the same amount total, making the exercise pointless), or overeating out of hunger. 2) You are still messing around with nonsense like PALEO, which suggests you have not fully internalized the message that you simply have to EAT LESS.

Kevin (2012-01-24 02:24:06)

certain vegetables, even — which everybody agrees are great weight-loss foods — that others can eat with impunity create havoc with my metabolism.

More culprits here. *There is no such thing as a great weight loss food.* There is only calories in calories out. If you eat 300 calories of chocolate muffin or 300 calories of veggies you *gain the exact same amount of fat*. Second culprit - *your metabolism is not special*. They have done studies on *\*naturally\** thin people who supposedly can eat whatever they want and have discovered that they are *eat less without even being aware of it*. Conversely, fat people *underreport* what they eat while not being aware of it. When YOU see these thing people eat socially they just ate 3 gigantic slices of pizza - what you DONT see is how little they ate at home. Perhaps they eat nothing the rest of the day. I lived with no less than 3 very thin people in my life and had occasion to observe first hand how they remained thin - they were all convinced they could eat whatever they wanted and just had fast metabolisms. It was nonsense. They simply ate almost nothing without being aware that this was not how other people ate. This was another eye opener in my path to thinner.

Seth Roberts (2012-01-24 04:22:01)

There is only calories in calories out. If you eat 300 calories of chocolate muffin or 300 calories of veggies you gain the exact same amount of fat.

In two studies published in the 1970s, Michel Cabanac and his colleagues found that two different ways of eating the same number of calories per day (about 2000) produced very different results. They produced the same weight loss, but different psychological effects. One way (eating the same foods, but less of them) produced considerable hunger and suffering. The other way (switching to a SlimFast-like drink) produced no hunger and little suffering (the main suffering was boredom).

Kevin (2012-01-24 12:36:39)

Yes, but as you correctly note, the difference is primarily psychological, not physiological. In a society like ours saturated with messages to eat more, going *\*cold turkey\** (slim-fast drink) might be an effective way to purge oneself of the psychological addiction to food, at least in the short term. But I don't for a moment believe that such a radical solution is necessary. French women, and Thais and Japanese, all eat deliciously, yet little, and do not suffer greatly. It took me some time to get over my addiction to food - even to recognize that I had an addiction to food that was psychological and cultural in origin - and I did suffer when I ate less, but over time, the suffering vanished. Today I can eat tiny amounts and feel quite good. The key is to remove all the stumbling blocks preventing you from recognizing that the suffering is psychological not physical.

Training and nutrition linkfest, vol. 3 « Blunt Object (2012-01-29 04:00:58)

[...] Tara Parker-Pope, "The Fat Trap", and the Shangri-La Diet [...]

Bookmarks for January 11th through February 2nd | 6sigmahealth (2012-02-02 16:37:10)

[...] Seth's Blog » Blog Archive » Tara Parker-Pope, "The Fat Trap" and the ... - I recently summarised some of responses to the recent "Fat Trap" article. Here's another one! I like this paragraph: [...]

## SOPA Strike (2012-01-18 05:00)

SOPA is an example of what Thorstein Veblen called "the vested interests" trying to prevent change. In an essay called "[1]The Vested Interests and the Common Man" he [2]pointed out "the existence of powerful vested interests which stand to gain from the persistence of the existing, but outdated system of law and custom." Jane Jacobs said much the same thing. The most important conflict in any society, she wrote at the end of *The Economy of Cities*, isn't between

the rich and poor or management and labor; it is between those who benefit from the status quo and those who benefit from change. If those who benefit from the status quo usually win, problems stack up unsolved.

1. <http://socserv.mcmaster.ca/econ/ugcm/3113/veblen/vested>

2. <http://forums.infoshop.org/viewtopic.php?f=25&t=9007>

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Mike (2012-01-18 10:12:53)

What problem is stacking up, unsolved? IP protection, like patent protection, is meant to encourage creators to create, by giving them a monopoly over their work. Do we have a shortage of books, movies, music? If not, what is the problem stacking up unsolved?

Seth Roberts (2012-01-18 10:44:10)

IP protection, like patent protection, is meant to encourage creators to create, by giving them a monopoly over their work. Do we have a shortage of books, movies, music? If not, what is the problem stacking up unsolved?

You seem to be saying we do NOT have a shortage of books, etc. If so, why do we need SOPA? If we have enough books, etc., creators have enough encouragement without it. As for the problems stacking up unsolved...in several ways health is getting worse. Obesity is getting worse, for example. A free Internet helps people explore solutions to health problems.

Mike (2012-01-18 11:46:55)

I think I mis-read your post, thinking you were saying \*opponents\* of SOPA were \*supporters\* of the status quo, allowing problems to remain unsolved. I guess it's hard to see what the status quo is here: is it a system of mechanical reproduction and physical distribution being overturned by digital zero-marginal-cost copying? Or is the status quo the current state of easy-to-offshore piracy and whack-a-mole infringement? I clearly side with the anti-SOPA people, but I don't think it has to do with wanting to preserve or subvert the status quo.

Seth Roberts (2012-01-18 12:27:02)

The supporters of SOPA want to return to the status quo of a few years ago. That's what I meant.

Jill (2012-01-18 12:31:25)

I don't have anything to say about SOPA, but your statement, "If those who benefit from the status quo usually win, problems stack up unsolved," suggests that the status quo is usually problematic and change is usually beneficial for solving those problems. I'd think you should be a little more circumspect. If there is a problem caused by the status quo, change would be necessary to solve it, but that doesn't mean any change that benefits someone is going to solve the problem (it can and often does make the problem worse). Also, just because someone benefits from change doesn't automatically mean there's a problem with the status quo. Of course, I do understand that your focus is innovation.

Outis (2012-01-21 10:50:39)

For background, read Lawrence Lessig's *Free Culture* (available for free on the internet in a variety of formats). [https://en.wikipedia.org/wiki/Free\\_Culture\\_%28book%29](https://en.wikipedia.org/wiki/Free_Culture_%28book%29)

## Vitamin D3 and Sleep: More Good News From Primal Girl (2012-01-19 05:00)

Late last year, Tara Grant (aka [1]Primal Girl) considered the possibility that taking Vitamin D3 has the same effect as sunlight exposure. For example, taking Vitamin D3 at 7 pm is like getting sunlight at 7 pm. This idea – with my advice about how to sleep well (get an hour of sunlight first thing in the morning) ringing in her ears – [2] led her to try to improve her sleep by taking Vitamin D3 first thing in the morning. It worked:

I usually took my supplements mid-afternoon. I vowed to take them first thing every morning. If I forgot, I would not take the Vitamin D at all that day. I tried it the next day and that night I slept like a rock. And the next night. And the next. Days I forgot and skipped the D3, I still slept great. That was the only change I made to my lifestyle and my sleep issues completely resolved.

I called this "[3]a stunning discovery" and have [4]blogged about it several times. I recently asked Tara for details and an update. She replied:

I am so happy to hear that 1) other people didn't make the connection easily so I'm not a little slow and that 2) there seems to be something to my discovery. :) I've had a few comments from people who have said it has worked for them too. So let me answer your questions:

[What type of Vitamin D3 do you take?]

I take Trader Joe's brand of Vitamin D3, which is a 1000 IU gelcap, in olive oil. 180 capsules for \$4.99. Best deal I've found. I tried the tablets years ago and they had no affect on me (even on 8000 units a day plus tanning twice a week my blood levels were only at 58.)

[Has your sleep remained solid?]

My sleep HAS remained solid. I have not had ONE night of bad sleep since I started paying attention to when I was taking my Vitamin D.

[How much do you take?]

I was initially taking 10,000 units a day. After about 2 months, I cut that back to 5000 units to see if there was a difference. I did not wake up quite as rested, but I still slept soundly through the night. On days that I increase my dosage, I sleep better, deeper and feel more rested the following morning. I've tried this several times, even when I've been spending the night away from home, and it has made a difference. I have also tried eating sugar shortly before bedtime and caffeine in the afternoon (both things that would always make my sleep restless in the past) and I still sleep well!! I've also thrown exercising into the mix to see if it makes a difference but it doesn't change the quality of my sleep - it just makes me tired earlier in the evening. I continue to change my dosage randomly and monitor the results.

1. <http://www.primalgirl.com/>

2. <http://www.primalgirl.com/2011/11/01/nprimalgirl-sleep-issues-vitamin-d/>

3. <http://blog.sethroberts.net/2011/11/02/it-matters-when-you-take-vitamin-d-a-stunning-discovery/>

4. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>

Paul Sherrard (2012-01-19 07:31:40)

I started taking Vitamin D3 about six months ago, but at first I wasn't paying attention to what time of day I took it. When I read on this blog that it was best to take it first thing in the morning I began doing so. Prior to that, I had sometimes had trouble falling asleep. Once I started taking D3 first thing in the morning this ceased to be a problem. I get very tired right around bedtime, fall asleep quickly, and wake up feeling rested. This is one of the two invaluable pieces of information I've picked up here—the other is flax oil, which did for my gums what it seems to do for everyone else's. (There have also been a few things that have NOT worked for me: Skipping breakfast, which I tried for a few weeks, had no noticeable effect on the quality or quantity of my sleep. Eating half a stick of butter daily seemed to make me mentally slow. And the SLD has not worked for me [although I should note that I'm not overweight; I was interested in the SLD because I'm very busy and it would be extremely convenient to not get hungry.]) I realize I've gotten off the subject here, but this brings me to a question I've been wanting to ask for some time. I'm interested in what you write about fermented foods and probiotics, and I'd like to eat more of them, but I don't know much about them and don't know where to start. Have you ever posted some kind of recommended daily regimen or diet for them? I couldn't find one, but didn't do an exhaustive search.

Seth Roberts (2012-01-19 08:45:30)

I'm interested in what you write about fermented foods and probiotics, and I'd like to eat more of them, but I don't know much about them and don't know where to start.

I suggest you read my posts about them, which you can find by clicking on the "fermented foods" category.

Erica (2012-01-19 14:08:41)

I'm curious about the cut off time. I believe I've read all of your posts on taking D3 in the morning and I see a lot of talk about 7 am and not taking it later in the day if you forget it. But, I'm not seeing a range. When does "later in the day" start? I ask because I am not a morning person. I have to try very hard to get up at 9 am and even then that rarely lasts for longer than a wk. I invariably get back to getting up b/w 11am-12pm. I am a night person and I have a hard time wanting to go to bed earlier. Even if I do start getting up at 9am and therefore going to bed around 12-1am I will always be more tired during the day than if I slept the same amount of hours but got up at 11am. I think possibly my circadian rhythm is not on a 24 hour cycle. Anyways, I take my D3 when I wake up, but I would like the benefits I am reading about here. So, is there a suggested time I should not take it. Like is it ok to just take it before 12pm or is even 9am kind of late?

Tyler (2012-01-19 14:41:55)

Erica, My first guess would be that you have some larger cortisol issues that need to be resolved. I'm fairly convinced that there is no such thing as a "night person" (as I used to consider myself), but rather there are people with irregular circadian rhythms due to hormonal issues. Ideally, your cortisol should spike in the morning and peter off throughout the day, leaving you naturally tired by the time darkness comes around. Check other life stressors that could be contributing to your inability to fall asleep earlier at night. Start by aiming for 10:30 or so, even supplementing with melatonin of Natural Calm to boost start the reset. But getting cortisol under control will come first. Another option I heard good results with is Seriphos taken around dinner time. I'd be interested to see when the wake-and-D3 benefits start to kick in. My guess would be that D3 may help in regularizing sleep, but if you have other hormones sending even more powerful signals you won't reap the full benefits.

Seth Roberts (2012-01-20 05:03:15)

I see a lot of talk about 7 am and not taking it later in the day if you forget it. But, I'm not seeing a range. When does "later in the day" start?

If D3 has effects similar to sunlight, you shouldn't take it after dark.

Margaret (2012-01-20 08:21:00)

Erica, What if you set your alarm for 7 or 8 in the morning, and when it goes off, just sit up, swallow some D3, and go back to sleep? Could you try that? It might help reset your circadian rhythm.

Erica (2012-01-20 17:31:36)

Thanks Tyler, Seth, and Margaret. @Tyler: I probably do have cortisol issues. I started eating paleo/primal in Aug. My weight loss stalled at the beginning of Nov.. by the end of Nov my hair started falling out more noticeably. My mother has hypothyroidism.. I'm thinking I may have it now too. Unfortunately, I have no money or insurance therefor I can't get anything tested. Sadly, I'm fighting for ever pound lost now. I just looked into adrenal fatigue as well. So, maybe. Only thing is I've been this way my whole life.. even as a child and teen. At that time I was very healthy. Not overweight, woke up refreshed every day, pretty active, ect. Idk it's hard to do too much when I can't get any blood tests at this time. But, I still want to take my D3 as I know it's an extremely important vitamin/hormone. @Seth: Ok, I wasn't sure about it being earlier. Only because I read the Vitamin D Solution book awhile ago and he talks about most places you can only get D during like 7-12/1pm.. So, I was thinking that maybe there would be an earlier cut off point if we naturally don't make D much later than 1pm. Now, I don't remember if that holds true somewhere closer to the equator as I live in Ohio so I remember that specific comment for where I lived. @Margaret: I was thinking of maybe trying that actually. Maybe it would help put on a more "normal" schedule. I'll try it this wk. Thanks. :)

Jazi zilber (2012-01-21 04:22:18)

Erica, From what i read what is important is regularity rather than the exact time. If for you, 10am is the beginning of the day, i think everything that others do at 7 am should work for you as well on 10 am

Link love for January 21st through January 27th | FitChutney (2012-01-28 13:22:58)

[...] Seth's Blog » Blog Archive » Vitamin D3 and Sleep: More Good News From Primal Girl – Late last year, Tara Grant (aka Primal Girl) considered the possibility that taking Vitamin D3 has the same effect as sunlight exposure. For example, taking Vitamin D3 at 7 pm is like getting sunlight at 7 pm. This idea — with my advice about how to sleep well (get an hour of sunlight first thing in the morning) ringing in her ears – led her to try to improve her sleep by taking Vitamin D3 first thing in the morning. It worked! [...]

Robert (2012-02-26 10:14:48)

Has anyone observed a difference between taking vitamin D in the morning without food and taking it in the morning with food? Also, from my own n=1: When I first started taking 10,000 IU vitamin D a month ago, my sleep instantly improved (e.g. I used to wake up multiple times during the night and suddenly I could sleep through the night) and I felt more refreshed upon waking. I was so excited to have found a "cure." Fast forward to today, and the last week or so my sleep has regressed to what it was like before (multiple awakenings) and I feel like I've hardly slept when I wake up. Additional details: I try to fall asleep around 11:15, but usually lay in bed for varying lengths of time (from 15 minutes to hours). I wake up and take the vitamin D at 8:15. If anyone has any advice, I would appreciate it. I imagine what I am feeling is the feeling of someone who tries an amazing drug (I'm thinking something like soma from "Brave New World") and then loses their lifetime supply. Not cool.

## **The Beauty and Tragedy of Tokyo (2012-01-20 05:00)**

I told a Chinese friend I would stop in Tokyo on my way home. "Tokyo is a beautiful city," she said. "Sort of," I said. After a day in Tokyo, I realized she was right. Tokyo is beautiful, not sort of beautiful. Tokyo business signs and outdoor advertising aren't beautiful but they are swamped by many things that are:

1. Small irregular streets. On foot, the weird address system works fine.

2. Plenty of parks and greenery.
3. Many small neat attractive shops selling a huge variety of goods. A miso store, for example. Many parts of Tokyo are like Greenwich Village, in other words.
4. Clean convenient free public restrooms. Unlike other cities, as I've said.
5. Excellent service in shops. Unlike Paris and Amsterdam.
6. Excellent map and direction signage. In subways, for example, way-finding signs tell the distance, not just the direction, of the destination. This is so basic (distance and direction are orthogonal) yet other places, such as New York, don't do it. Such creative attention to detail, such improvement on something so old (wayfinding signs) isn't just helpful, it's inspiring. I came across a construction site sign that appeared to say how loud the work would be. Again, serious improvement on tradition.
7. Everyone I asked for directions was helpful, although many were surprisingly ignorant (e.g., didn't know which direction to Roppongi).
8. So very walkable. Partly because the streets are curvy, partly there are so many little interesting things everywhere I went but also because when I got tired of random wandering, I could simply go to the nearest subway station and get to my ultimate destination.
9. The proportions of buildings. Slightly thin, slightly tall.
10. The repeated exterior details of apartment buildings. They are not smooth slabs. They have visible balconies, stairs, etc.
11. The food shops in the basements of department stores. There are dozens of small booths. One sells miso, another sells pickles, a third sells salads, a fourth sells eel, and so on. Not only is the food itself often beautiful – Japanese food packaging is supremely lovely – but it is beautifully arranged. You could learn a lot about aesthetics (the hidden laws of beauty) by comparing these displays with similar (less attractive) displays in other countries.
12. Clean air, clean streets. In spite of heavy use.
13. Well-maintained neat small houses.
14. Temples scattered throughout the city.
15. Healthy-looking people, especially old people. I think it's all the fermented food they eat (e.g., miso, pickles), not the health-care system.

I did not find Tokyo expensive, even with the dollar way down against the yen. I never took a cab (and never wanted to – in Beijing I always want to). Equated for quality, I think Tokyo is cheaper than New York.

The tragedy of Tokyo is the lack of human diversity: few foreigners. Such a great city should draw people from all over the world, but it doesn't. It has a lot to teach the rest of us about how to live in cities (for example, where does Japanese perfectionism come from?) but somehow this sharing hasn't happened. Like a cure for cancer in a journal no one reads.



Shawn (2012-01-20 06:47:28)

"The tragedy of Tokyo is the lack of human diversity: few foreigners." Its lack of diversity is its strength as it allows the city to be composed of people who are relatively high-IQ. If Tokyo had diversity more like NYC, for example, the city itself would resemble the deficient NYC.

Andy C. (2012-01-20 08:36:44)

Thanx, very poetic ! I am looking forward to visiting such an interesting city ! Bye, Andy C. - Italy

gwern (2012-01-20 08:40:25)

> Excellent map and direction signage. In subways, for example, way-finding signs tell the distance, not just the direction, of the destination. This is so basic (distance and direction are orthogonal) yet other places, such as New York, don't do it. Such creative attention to detail, such improvement on something so old (wayfinding signs) isn't just helpful, it's inspiring. I came across a construction site sign that appeared to say how loud the work would be. Again, serious improvement on tradition. I recently binged through 4 of Edward Tufte's books, and I couldn't help but notice how many of his graphics examples were Japanese. I couldn't help but wonder if there was some connection to kaizen and artisanal pride and lifetime employment.

Ashish (2012-01-20 12:41:51)

Seoul is similar in many respects - even including the distances on the subway signs, which are comical when pointing out an entrance "5 meters" distant, i.e. right in front of you. I wonder how much of this can be generalized to other Japanese (and Korean) cities.

Gayle (2012-01-20 15:18:11)

Apropos #11: have you ever seen the book How to Wrap Five Eggs by Hideyuki Oka?

Kevin (2012-01-21 01:51:04)

Really? I found Tokyo the prototypical ugly industrial city utterly lacking in any kind of charm whatsoever. Its a typical Asian \*shambles\* city (everything is thrown together higgledy piggledy without any regard for aesthetics or beautiful architecture) . Many of your points refer to convenience and not beauty. For me, a really characterful city would be Amsterdam, London, Paris, Rome - now THAT is beautiful. New York and Boston are much more beautiful than Tokyo also. Whats \*beautiful\* about Tokyo is not the setting, which is ugly, but the human element - not in the sense that they are especially beautiful per se, but rather because they all make an effort to be wonderfully thin and fit looking and dress exquisitely and often even picturesquely. The human element represents the true \*beauty\* of Tokyo.

Seth Roberts (2012-01-21 07:35:35)

"Many of your points relate to convenience." True, but I would put it differently: Many of my points relate to great care taken with small things. To me, this is beautiful.

D (2012-01-21 08:46:53)

"Its lack of diversity is its strength as it allows the city to be composed of people who are relatively high-IQ. If Tokyo had diversity more like NYC, for example, the city itself would resemble the deficient NYC." Bingo. Such an obvious point it's amazing that it had to be said. But it did.

E (2012-01-21 18:19:56)

If you want to experience a vibrant, diverse city you might try Detroit.

Shawn (2012-01-21 20:00:38)

D, Seth is very smart guy; funny how very intelligent people can miss such obvious things...

Deidre (2012-01-27 07:38:01)

The WSJ has a wonderful piece "Made Better in Japan" in case you missed it: [http://online.wsj.com/article/SB10001424-052970204542404577157290201608630.htm?mod=WSJ\\_Magazine\\_LEFTSecondStories](http://online.wsj.com/article/SB10001424-052970204542404577157290201608630.htm?mod=WSJ_Magazine_LEFTSecondStories)

garymar (2012-01-27 17:51:28)

Deidre, pretty good article! There's a long-running Japanese manga series (started in 1983) called *Oishinbo*, which has also become an animated series, a movie, and even a game. It's all about a group of food reporters who visit restaurants and have various food and cooking-related adventures. Remember, this is a *cartoon*. During the New Year holiday I caught a rerun of the animated series on TV, and the storyline was about a bartender and his little bar in Shinjuku. One of the reporters said this bar had the best on-the-rocks whiskey in town, so they all went there, drank some, and agreed it was tops. But the owner was sad because he had to close the bar soon. Why? Because the rural company that made his ice was going out of business, and without that special ice, made from the water coming from a particular well, he couldn't make the best on-the-rocks ever. So the plot was how the gang went off to the country and solved his problem by securing his ice supply! The whole story was presented as a *crisis of conscience* for the bar owner. If he couldn't make it just so, he wouldn't make it all – he refused to break faith with his customers. Just another indicator of the level of obsession they bring to food here.

Traherne (2012-02-04 15:45:33)

Diversity?!?!?! Merciful Father... Right. More black people! More chicanos! Invite the world! That's exactly what Japan needs... No. The only reason why Japan can have such a orderly, united, peaceful country is precisely because of it's homogeneity. Let it be. "Striving to better, oft we mar what's well."

Seth Roberts (2012-02-04 17:43:29)

The only reason why Japan can have such a orderly, united, peaceful country is precisely because of its homogeneity.

I did not praise Tokyo's order, unity, or peace. I praised its beauty. If by "order" you mean clean public bathrooms, I don't agree that diversity must surely cause dirty public bathrooms.

Traherne (2012-02-04 18:30:49)

Right. Diversity wont surely cause dirty public bathrooms because in a more diverse society there wouldn't be pristine public bathrooms to sully in the first place. Neither would there be much beauty without order, unity, and peace. There are sociological preconditions to the beauty and unique culture of Japan. A high level of trust is one of them. And high levels of trust and other forms of social capital are inversely correlated with diversity.

Traherne (2012-02-04 18:38:05)

Also, like you point out above about how care taken with small things is a form of beauty to you, consider the contribution that things like perfectionism and orderliness &c make to your perception of beauty.

Sadie (2012-02-23 10:20:41)

I also loved Tokyo for all the reasons you describe so beautifully. I particularly liked that that many people have small gardens, some just six inches wide or in wall-mounted planters, and everyone hung their laundry out to dry. The sheer practicality of nearly everything was so appealing.

## Google Analytics: "Make This Version Default" (2012-01-20 22:21)

I use Google Analytics to measure web traffic to my blog, forums, and website. A few months ago a new version was introduced and, as far as I can tell, made the default. The new version is worse than the old version. Every time I use GA, I click on "old version".

In an excess of confidence, the new version isn't merely the default, it also has a link called "make this version default". The old version has no such link. There seems to be no way to make the old version the default. It is a Google version of "this sentence is false."

More Apparently someone from Google read this or was told about it. The problem has been fixed.

Even More And then someone changed it back – it remains unclear how to make the old version the default.

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Jarno Virtanen (2012-01-20 23:33:59)

Heh, I guess they are trying to unify the look-and-feel of several different webapps and in the process they are making a lot of them worse. They will probably completely deprecate the old versions eventually.

Jazi zilber (2012-01-21 04:15:25)

Same thing with wordpress.com I have to work hard every single time I land on a wordpress.com blog to maneuver to the use standard site link, and every time a new

threepipeproblem (2012-01-21 06:18:09)

Is Google making some crazy decisions lately or what? I could not believe they just killed off PostRank, probably their coolest acquisition ever, without ever letting it's coolest feature see the light of day in Google form (the feature that automatically identified top posts on any blog). As Kirkpatrick of ReadWriteWeb summarizes this and other dismal closures, "Google announced today that it is closing a number of services that it wasn't able to attract millions of users to without making any effort."

R. Vincent (2012-03-08 09:36:30)

The old version is vastly superior.

## Vitamin D3 First Thing in Morning: Story 6 (2012-01-21 05:00)

In November, [1]I wrote about Tara Grant (aka Primal Girl)'s discovery that taking Vitamin D first thing in the morning rather than later improved her sleep. Then several people commented that they had observed something similar – some in response to my post (my post led them to try it), some independently. Perhaps people who tested her observation and found it wasn't true didn't comment.

One way to assess this possibility is to ask people who have tried it what happened. In the comments to one of [2]my posts about this, Tyler Tyssedal [3]said he would try it. A few days ago I asked him what had happened. Here's his reply (shortened):

I have been tweaking the timing of my Vitamin D3 intake since I made that comment [on December 13 – one month ago]. I have also made a few other life changes (such as supplements), so the changes I've experienced cannot be attributed only to Vitamin D3 (5000 IU) timing. But yes, taking D3 first thing in the morning instead of later noticeably improved my sleep quality. I have been experiencing perpetual, involuntary biphasic sleep on and off for years. I would go to bed around 11 and wake up every day between 4 and 6 am, conscious enough to check the time and sigh. I had been taking my D3 with lunch or dinner, sometimes never. I changed my D3 intake to first thing in the morning. Within a week I noticed I would wake up two out of three nights, around 6 (so a little later), a marked improvement.

I am a 6'2", 160-lb male. I live in Minneapolis, Minnesota. Desk job, lift 2-3 times per week, 45 min-1 hr per session with 15 min walking to and from gym. I typically eat two meals a day (1-2 pm and 6-8 pm). In the morning (between 7:30 and 10am) I consume about 20-30 oz of coffee with 1-3 T cream. I also eat 1 T coconut oil with my coffee and 1 T of it with my dinner.

When I changed my [4]400 mg magnesium citrate supplement to early afternoon rather than right before bed, I experienced even better sleep. After all these changes, I no longer wake up in the middle of the night. I sleep straight through. A week and a half ago I started taking ALA and NALC with my D3, coconut oil and coffee in the morning. The results have been fantastic and I feel a strong clear headedness in the morning.

Here's a summary:

WAKE (7:30-9:30am): 5000 IU D3, 500 mg acetyl L-carnitine, 250 mg alpha lipoic acid, 1 T coconut oil, 20-30 oz coffee, 1-3 T cream.

LUNCH (12-2pm): 30 % food for the day, typically lowish carb, 400 mg magnesium citrate, 1.2 g EPA/DHA fish oil (on days I don't consume sardines or salmon, which is 2-3 days a week), Vitamin K2 (1000 K2 MK4, 1000 K2 MK7).

DINNER & POST DINNER: Rest of food (100-150 g carbs post workout workout days; 50-100 g non workout days). On restless nights, 2-5 mg melatonin.

I've been pleased with 2-5 mg melatonin before bed on days when I am not heavy eyed by 9:30 pm. I have taken melatonin on and off for years and would still experience biphasic sleep, with or without it.

1. <http://blog.sethroberts.net/2011/11/02/it-matters-when-you-take-vitamin-d-a-stunning-discovery/>

2. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>

3. <http://blog.sethroberts.net/2011/12/13/vitamin-d3-and-sleep-update/#comment-939106>

4. [http://www.amazon.com/Solgar-Magnesium-Citrate-120-Tablets/dp/B00013Z0ZG/ref=sr\\_1\\_4?ie=UTF8&qid=1326742457&sr=8-4](http://www.amazon.com/Solgar-Magnesium-Citrate-120-Tablets/dp/B00013Z0ZG/ref=sr_1_4?ie=UTF8&qid=1326742457&sr=8-4)

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Vitamin D3 First Thing in Morning: What Happens If You Try It? « Thor Falk's Reading List (2012-01-21 08:38:47)  
[...] Seth's Blog » Blog Archive » Vitamin D3 First Thing in Morning: What Happens If You Try It?. [...]

Guv (2012-01-21 16:19:32)

I wonder if there is a relationship between serum 25(OH)D levels, morning D3 supplement and sleep? For instance may be this relationship is more common in people who are D3 deficient. Personally i have stopped supplementing with D3 at the moment as it is summer here in Australia and my 25(OH)D level is already a bit higher than i prefer.

John (2012-01-21 16:48:29)

Would anyone care to comment on this recent item from the New York Times: "Risks: When Too Much Vitamin D Is Too Much" [http://www.nytimes.com/2012/01/17/health/research/risks-when-too-much-vitamin-d-is-too-much.html?\\_r=1&scp=1&sq=vitamin%20D&st=cse](http://www.nytimes.com/2012/01/17/health/research/risks-when-too-much-vitamin-d-is-too-much.html?_r=1&scp=1&sq=vitamin%20D&st=cse) The original medical journal article is here: [http://www.ajconline.org/article/S0002-9149\(11\)02748-2/abstract](http://www.ajconline.org/article/S0002-9149(11)02748-2/abstract)

Guv (2012-01-21 21:51:06)

John, the following links me be of interest to you. They all discuss the study you mention. <http://blog.vitaminadecouncil.org/2012/01/11/response-to-crp-and-vitamin-d-association-finding/>  
<http://paleohacks.com/questions/88772/for-those-with-high-vitamin-d-blood-levels-what-is-your-crp>  
<http://paleohacks.com/questions/90088/what-do-folks-think-about-this-article-on-vitamin-d-in-the-ny-times>

Andrey Shestakov (2012-01-22 00:32:30)

I started taking D3 first thing in the morning yesterday. I drink 1.5 T cod liver oil and immediately after that 4500 IU of D3 concentrate with a plate of sauerkraut. Prior to that I took 2000 IU of D3 in the morning and 2000 IU before bed for three weeks. I'll take D3 for another three weeks, then try to plot different things I measured (mood, bedtime and waketime, efficiency tracked via your R percentile feedback script). I also drink a cup of kefir with chelated magnesium right before bedtime.

Tom (2012-01-22 08:59:41)

Andrey, Have you considered adding some K2 to balance the D3 and A you're getting?

Andrey Shestakov (2012-01-22 10:26:14)

Tom, I eat sauerkraut as suggested by Tim Ferris: "It has also been hypothesized that vitamin D toxicity is often a result of vitamin K deficiency. If you choose to supplement with vitamins A and D, as I do with cod liver oil and liquid vitamin D, it is important to ensure adequate K(2). Suggested sources include butter from grass-fed cows and the aforementioned lacto-fermented foods." But I didn't, in fact, checked his suggestion for validity yet (which might be really dumb).

Tom (2012-01-22 18:53:39)

K2 from fermentation is the Mark 7 form, not the animal form. I hadn't heard that sauerkraut was a source; K2 Mk7 typically comes from natto (a fermented Japanese delicacy.) Most of what I've read is that the better form for humans is the Mk4 type. (Pastured dairy is a good source of Mk4.) Both are available in supplement form. I actually take both, along with cod liver oil (for A) and D3. When I take all three my teeth feel slippery for several days. When you have adequate D3/A/K2, the calcium phosphate in the tartar on your teeth is actually being taken up (rather than deposited) by your saliva, so they feel as if they've just been cleaned. It's very cool. And I like to think that something similar is happening to the calcium in my arteries. More info: <http://wholehealthsource.blogspot.com/2008/11/can-vitamin-k2-reverse-arterial.html>

Andrey Shestakov (2012-01-23 00:08:57)

Thanks a lot, Tom! I will look into K2 Mk4. Apparently it isn't easy to get it in supplement form in Russia (much like pastured dairy). I thought about eating liver for K2, but I live in a highly industrial area, so I'm afraid it can contain mercury and lead. What do you think is the right proportion of K2 to D3?

Tom (2012-01-23 03:30:20)

Andrey, I'd recommend reading Chris Masterjohn on the subject, and you can search for "K2" to bring up specific posts. [blog.cholesterol-and-health.com](http://blog.cholesterol-and-health.com)

Bookmarks for January 19th through January 23rd | AstoundingNutrition (2012-01-23 16:02:53)

[...] Seth's Blog » Blog Archive » Vitamin D3 First Thing in Morning: What Happens If Yo... – Interesting supplements and timing: [...]

Louise (2012-01-26 00:30:17)

I've always been a night owl who found it difficult to get going in the morning. I was also someone who really didn't like breakfast. After going through your blog I started taking vitamin d3 tablets as soon as I woke up in the morning and found they certainly made a difference to my energy level. About 2 hours after ingesting the d3, it was like a lightbulb went off in my head and I suddenly felt energetic. I don't know if I my sleep was any deeper but I did wake up earlier and feeling somewhat alert. I then started eating breakfast (normally something small and light) and found this made a significant difference in how early I woke up. After three weeks of combining the two I went from an average wake up time without alarm clock of 8am to an average wake up time without alarm clock of 6am. This is regardless of the time I went to bed the night before. I also find that I am alert and energetic as soon as I wake up. Before the combined D3/breakfast routine it took me about an hour before I felt completely alert and energetic. Although I still have to force myself to eat first thing in the morning, the benefits for me are worth it. Hopefully the longer I do this, the more it will feel natural, rather than a bit of a chore. Thank you so much for your blog, it's one of my favourite internet indulgences.

## Centenary of the Theory of Continental Drift (2012-01-22 05:00)

One hundred years ago (January, 1912), at the annual meeting of the Geological Association in Frankfurt, Germany, Alfred Wegener, a meteorologist, presented his theory of continental drift for the first time. It was almost uniformly dismissed by geologists. One of them called it [1]"mere geopoetry". Much later, he was proved right.

To me, this is a classic example of [2]the power of what I call insider/outside. Wegener had a great deal of scientific training, including a Ph.D. in astronomy. Unlike professional geologists, however, (a) he had the freedom to say whatever he wanted about geology without endangering his job (as a meteorologist) or prospects for advancement and (b) was under no pressure to publish. He could spend as much time on his theory as he wanted.

1. <http://pangaea.org/wegener.htm>

2. <http://blog.sethroberts.net/category/scientific-method/insideroutsider/>

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dearieme (2012-01-22 07:18:22)

When I started Secondary School geography in the late 50s, Continental Drift was where we started. Our teacher did warn us that it wasn't universally accepted but predicted that it would be, in due course.

Jay (2012-01-22 10:50:33)

This could be a useful example in favor of "undiscriminating skepticism" (or two-way skepticism): [http://lesswrong.com/lw/1ww/undiscriminating\\_skepticism/](http://lesswrong.com/lw/1ww/undiscriminating_skepticism/) The Less Wrong article suggests that a good litmus test for rationality (as opposed to just adopting the opinions of your "tribe") is whether or not you can argue for a non-mainstream position.

Becky Hargrove (2012-01-23 18:21:34)

In a time when it seems the middle class is disappearing, one might argue that economists don't have the ability to venture too far outside the theories of the last 100 years...which is unfortunate given that so much of the current situation really is new and different from what has happened before.

### Assorted Links (2012-01-23 05:00)

- [1]Drug industry now the biggest defrauder of the US government, as measured by False Claims Act payments.
- [2]CT scans linked with cancer. Even worse, "doses of radiation from the scans varied wildly, according to the study, even within the same procedure at the same hospital. Some patients got only one-tenth the radiation that others got." As if the concepts of calibration and maintenance are foreign to the operators of this exceedingly dangerous equipment.
- [3]Fermentation in Montreal.
- Edward Jay Epstein on [4]Hollywood's Pirates of the Internet.

Thanks to Hal Pashler and Anne Weiss.

1. <http://www.bmj.com/content/344/bmj.d8219?etoc=>

2. <http://online.wsj.com/article/SB126082398582691047.html>

3. <http://www.montrealgazette.com/life/little+culture+your+cooking/6009594/story.html>

4. <http://thehollywoodeconomist.blogspot.com/2012/01/hollywoods-pirates-of-internet.html>

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JPB (2012-01-23 09:27:47)

Re the radiation issue: I have been ridiculed for asking about maintenance and calibration issues at both medical and dental offices. Too many doctors and dentists are cavalier about radiation exposure for their patients!

Darius Bacon (2012-01-23 14:50:19)

JPB, what do you ask them? I suppose I should be asking about that too. (Though my doctor was already deflecting other questions, like about the type of contrast agent they'd use.)

Kim Øyhus (2012-01-23 15:14:27)

I actually took my geiger counter with me to the dentist a long time ago. As a student, I could not afford an expensive model, so it is small, has a small aperture, and clicks once for each particle/ray measured. It does not have a dial or readout. Apart from that, it seems to be very good, biologically representative, and sensitive. So, seconds before the X-ray machine pointed at my jaw was about to fire, a few seconds after the dentist wisely left the shielded room, I put the counters sensitive end to the other side of my jaw, where the rays not stopped by the lead plate behind the photo film could hit it. It sounded somewhat like static on the radio, for a large fraction of a second. The normal background radiation is heard as clicks about 4 seconds apart. The amount of radiation I got seems to have been about the same as a month of natural background radiation. In that respect, it does not seem too much. However, considering that we now know that nature's error correcting mechanisms have the same properties as the ones in computers, namely the ability to fix a few errors at a time very well, while failing when more of them comes, this was somewhat bad.

Seth Roberts (2012-01-23 18:01:05)

I have been ridiculed for asking about maintenance and calibration issues at both medical and dental offices.

JPD, the next time this happens I hope you will email me with the details (where, what was said, etc.) I would like to report this on my blog. There seems to be considerable room for improvement here.

Jim Purdy (2012-01-23 23:29:05)

Drug industry fraud, cavalier attitudes about radiation, there's always something scary going on in the "health" professions. All this just make me feel more comfortable with my tendency to stay away from doctors and hospitals. I think I'll start my own church – The Congregation of the Almighty Placebo.

JPB (2012-01-24 12:18:05)

Seth, I will certainly let you know if this happens again. One dentist told me that you get as much radiation from walking out to get the mail as you get from a dental X-ray. He was using very old machines, hence my query about calibration. He was very offended but I still declined! There were several articles in the NY Times in the last year or so about the lack of oversight on the equipment used in imaging including those used in the irradiation of babies. We have cause to be concerned. I don't understand why our medical professionals are not concerned also!

### **Vitamin D3 in Morning Improves Falling Asleep (Story 7) (2012-01-24 05:00)**

I recently learned that a reader named Paul improved his sleep – he now falls asleep more easily – by taking Vitamin D3 first thing in the morning. He had previously taken the same amount of D3 at other times of day for five months with no obvious effect. Because of [1]my first post about D3 first thing in the morning, he started to take his D3 at that time. Right then his sleep improved.

I asked him for details.

Tell me about yourself.

I live in Jersey City, NJ. I work in advertising. I'm 39 years old, 6 foot 1 inch, and 180 pounds.

How much D3 do you take?

5000 IU/day.

What time?

Usually around 8:00 a.m., but sometimes as early as 7:15 or as late as 10:30.

What brand, etc.?

I take Mason softgels. Each softgel is 5000 IU, "from fish liver oil." Other ingredients are soybean oil, gelatin, glycerin, and purified water.

Tell me more about what happened?



Before taking D3 first thing in the morning, I was having trouble getting to sleep quite often: I'd say 3 times a week on average. I would just feel wound up for no apparent reason. I would toss and turn, usually till 1:00 or 2:00 but sometimes until the sun came up. (It's possible this was caused by taking D3 in the evening, which I sometimes did. But this had happened to some extent for as long as I can remember, going back to my childhood.) I read your blog post this past November 2 about "Primal Girl"'s experience with D3, and began taking it right after getting up. Right away (I don't remember whether it was the first night or not, but it couldn't have taken more than 2 days because it felt immediate), I started getting tired right around 11:00 or 11:30, which is when I ought to be falling asleep.

Not just "tired," though—extremely tired. So tired that if I didn't get to bed I'd fall asleep on the spot. It took me by surprise at first, so that I had to struggle to stay awake while I took out my contact lenses and brushed my teeth. When I went to bed I was out like a light. This continued through most of December.

Over the holidays I went out of town for 8 days and wasn't taking D3. By the end of my vacation I was having insomnia again. When I got home, I forgot to start taking it again right away and noticed that I was not getting tired like I had been last Fall. I started taking D3 again around the 4th or 5th of January with the same result as previously. I continue to take it and experience the same result.

Addendum by Seth. One reason this story is interesting is that it supports the idea that Vitamin D3 acts like sunlight – which is different than acting like a stimulant (e.g., caffeine). A stimulant will push you toward being awake a few hours after you ingest it. Sunlight, on the other hand, will push you toward being awake a few hours after you are exposed to it and push you toward sleep a dozen hours after that.

1. <http://blog.sethroberts.net/2011/11/02/it-matters-when-you-take-vitamin-d-a-stunning-discovery/>

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Darrin Thompson (2012-01-24 07:06:33)

Chris Masterjohn has been writing lately that the best source of vitamins A & D is cod liver oil and/or liver when the animal is pastured. Furthermore, there is evidence that they have positive effects on autoimmune diseases. <http://www.westonaprice.org/blogs/cmaterjohn/2012/01/22/new-evidence-of-synergy-between-vitamins-a-and-d-protection-against-autoimmune-diseases/> At our house we are planning to try Chris Kresser's "liver pill" trick. (I've honestly tried to like liver. So far I'm failing.) Also, I wonder if some of the observed benefits of flax seed oil are due the flax seed oil having a similar effect on the "messaging" mechanism Chris Masterjohn described in the link above.

Alex Chernavsky (2012-01-24 10:08:35)

For what it's worth, I've taken vitamin D at different times of the day, and I've never noticed any effect on my sleep. Of course, my sleep is already pretty good, in the sense that I fall asleep quickly and don't usually wake up during the night. (My sleep is *not good* in the sense that I don't get enough of it.)

Greg Harrington (2012-01-24 13:44:17)

I have had very similar results from first-thing in morning D3. Differences: - NOTE: I have great flexibility in my schedule (I can sleep/awake whenever I want), so I have been most focused on "restful" sleeping. - My pre-D3 issue was restless sleep (waking up frequently), not failure to fall asleep. - The effect of sleeping all the way through the night was definitely immediate—very first night. - Also, most days I also wake up feeling more "rejuvenated". This is not 100 % though. - I take 50,000 IU. (Why? Don't know...Amazon sells that large of a dose, so I wanted to maximize the effect! I think I calculated this as 75-90 minutes of full-body sunlight equivalent. - I take D3 at 8a typically. I do not take it any later than 9a, so if I wake up late or forget, I

skip that day. Does anyone have any info about side-effects of taking this much D3? I haven't observed any, but I'd like to know what to watch for. \$19.99 for a 3 month supply of restful sleep is an amazing bargain!! ;-) This is the product I use: [http://www.amazon.com/gp/product/B000A0F2B2/ref=as\\_li\\_ss\\_tl?ie=UTF8 &tag=harrslife-20 &linkCode=as2 &camp=1789 &creative=390957 &creativeASIN=B000A0F2B2](http://www.amazon.com/gp/product/B000A0F2B2/ref=as_li_ss_tl?ie=UTF8 &tag=harrslife-20 &linkCode=as2 &camp=1789 &creative=390957 &creativeASIN=B000A0F2B2)

Jim (2012-01-24 18:01:10)

Greg, That's a high dose. Some people take such doses weekly or bi-weekly, not daily (see the description at the Amazon link you posted. It has references for further inquiry). I think many people would recommend that you request a routine 25 hydroxyvitamin D test from your physician to establish your own Vitamin D3 blood levels now, and in a few months.

Tom (2012-01-24 20:58:38)

Greg, Chris Masterjohn has written a lot recently on how it is important for D3 to be balanced by adequate A: [blog.cholesterol-and-health.com/2012/01/my-interview-with-carl-lanore-on.html](http://blog.cholesterol-and-health.com/2012/01/my-interview-with-carl-lanore-on.html) Very high D3, unbalanced by enough A, may increase likelihood of soft-tissue calcification (kidney stones, etc.)

Meegs (2012-01-25 07:16:11)

I started taking D3 recently, and it definitely helps me fall asleep faster. Being able to fall asleep has always been a problem for me, and taking this supplement seems to be helping so far.

Robert (2012-01-25 12:46:04)

Question: do you take your vitamin D with or without food? I thought you needed fat to absorb vitamin D, but I also thought most people here skipped breakfast.

Seth Roberts (2012-01-25 22:09:27)

I take my Vitamin D without food.

Charlene (2012-01-26 04:12:06)

I just started using this less than a week ago. I'm a terrible insomniac - waking all through the night with eyes wide open, roaming my house, going to the bathroom. No lie, I have not slept 8 hours or anything, but since I started taking it, I have slept straight through without once waking up to go to the bathroom or just because my brain is so wired. I take 5000 IU with about 1/4 cup water at approximately 7:00 a.m. before leaving for work.

Tim G (2012-01-26 05:41:23)

My blood tests earlier this year showed I had low Vitamin D levels and was put on a 50,000IU/week regimen for 3 months using a prescription D2 (ergocalciferol). A recheck then showed my level had hardly changed. A search of PubMed showed conflicting views on using the D2 form. So for the next 3 months I used ProHealth D3 Extreme 50,000IU (via Amazon.com) instead of another D2 scrip my doc had given me. I always took the D2 or D3 in the morning (just lucky happenstance.) A second recheck after the second 3 mo. showed my vitamin D level as normal. I hadn't put it all together until seeing this post, but when using the D3 I had the same effect of when I got tired, I got \*really\* tired right at bedtime, and slept like a rock. However, even though it has been less than a month since ceasing the weekly dose, I have noticed my sleep degrading somewhat, and lately not even being tired when I should. I'll be setting up a maintenance dose regimen ( 5,000 IU/day) now!

Robert (2012-01-29 11:36:03)

Thanks, Seth.

ync (2012-02-01 09:25:45)

I get my fat soluble nutrients, including D3, from a great paleolithic quality raw handcrafted oil I recently found: <http://ratfishoil.org/> I take 12 drops twice a day. It contains balanced levels of nutrients and no synthetic vitamins or nutrients.

Bookmarks for January 24th through February 7th | AstoundingNutrition (2012-02-07 09:15:52)

[...] Seth's Blog » Blog Archive » Vitamin D3 First Thing in Morning Improves Falling As... – One reason this story is interesting is that it supports the idea that Vitamin D3 acts like sunlight — which is different than acting like a stimulant (e.g., caffeine). A stimulant will push you toward being awake a few hours after you ingest it. Sunlight, on the other hand, will push you toward being awake a few hours after you are exposed to it and push you toward sleep a dozen hours after that. Related Reading: Share and Enjoy [...]

### **Vitamin D3: Which is Better, Gelcaps or Tablets? (2012-01-25 05:00)**

I have been getting good sleep improvement from Vitamin D3 (early in the morning) using tablets. However, Tara Grant and Paul have gotten good results with gelcaps. Apparently both formulations work. Which is better?

This story, from a woman I'll call JMW, suggests gelcaps are better:

Sorting out all the nutrition for [celiac disease], about 3 years ago, [my two boys and I] started taking D3 - 2000 IU of Solgar in capsule form. That first winter, NO ONE had seasonal affective disorder [= depression]. I had had it since I was 21, can't remember further back than that, the youngest had had it since he was 4 yrs old, can't remember the others.

We unintentionally proved it needs to be in capsules (i.e. oil) rather than tablets when I mistakenly repeat-ordered with tablets, and everyone got worse until I got the capsules again.

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Valtsu (2012-01-25 09:12:48)

Hi Seth! You might find this article interesting: <http://suppiversity.blogspot.com/2011/12/fat-d-ficiency-do-you-really-need-more.html> The title is: "A Fat D-Ficiency! Do You Really Need More Vitamin D or Simply More Fatty Foods? Study Shows, Even 50.000 IU of Vitamin D3 Useless, When You Ingest It Without Fat."

by (2012-01-25 09:34:03)

Just curious, Dr. Roberts. I remember before you stating that your sleep is extremely good: a significant improvement was going from 99.3 % to 99.7 %, or something like that. Why are you so interested in further improvements to your sleep ability (this Vitamin D discovery)?

Brody (2012-01-25 10:22:34)

I've had good luck with liquid Vitamin D. It makes the dosing less precise, but I like it better than swallowing a gelcap.

Andrew (2012-01-25 10:24:31)

What about liquid drops, taken sublingually?

Ross (2012-01-25 10:29:19)

There are other reasons to consume Vitamin D, including the health of your teeth. See [1]Dr. Guyenet's article here. Specifically see this picture: ( [2]here's a link to the picture if gt; img lt; tags are not allowed). Basically, vitamin D drastically reduces cavities and my wife is anecdotal evidence. She used to have at least one cavity \*every\* time she went to the dentist, and after I put her on 2,000 I.U. of vitamin D per day, her last two visits to the dentist have been cavity free. - Ross

1. <http://bit.ly/AtTexU>

2. <http://bit.ly/xvSXJ1>

Seth Roberts (2012-01-25 10:51:22)

Why are you so interested in further improvements to your sleep ability (this Vitamin D discovery)?

I am interested in this discovery for several reasons: 1. It is surprising. Vitamin D has been heavily studied but this has been missed. 2. It is practical. Lots of people have sleep problems. 3. I was involved in the discovery. 4. My sleep has room for improvement. 5. Maybe I can take Vitamin D3 in place of one-legged standing. That would be much easier.

Michael Cole (2012-01-25 11:00:50)

I'm confused. I was under the impression that Vitamin D basically completely ineffective without oil. Is there any reason you are taking tablets, instead of gelcaps, in first place? Although in your case you may be digesting oil near enough to taking the tablet D3 to metabolize it properly.

Seth Roberts (2012-01-25 11:06:58)

Is there any reason you are taking tablets, instead of gelcaps, in first place?

Because they were what I had lying around. Perhaps the tiny amount of cream I would have with tea around the same time made a difference.

Vitamin D3: Which is Better, Gelcaps or Tablets? « Thor Falk's Reading List (2012-01-25 12:32:39)

[...] Seth's Blog » Blog Archive » Vitamin D3: Which is Better, Gelcaps or Tablets?. Apparently gelcaps Share this:TwitterRedditFacebookMorePrintEmail StumbleUponTumblrDiggLinkedInLike this:LikeBe the first to like this post. [...]

Tyler (2012-01-25 12:48:04)

>Because they were what I had lying around. Perhaps the tiny amount of cream I would have with tea around the same time made a difference. I typically have cream with the coffee I consume shortly after my Vit D supplement in the morning, too. Hm.

Joe E O (2012-01-25 16:09:48)

Cardiologist Dr William Davis (<http://www.trackyourplaque.com/blog/>) treats all his patient with Vitamin D. The end goal of his vitamin D treatment is to raise individuals vitamin D blood level to 60 - 80 NG/ML. He has found that using anything OTHER than gelcaps does not work to raise his patient's vitamin D levels Peace Joe E O

Jonathan (2012-01-25 17:41:44)

I think that I've mentioned here before that the cardiologist Dr. William Davis has discussed this multiple times on his blog. He tests the blood Vitamin D level of all his patients, and has found with many patients that Vitamin D tablets often barely budge their serum levels. After a lot of bad experiences, he started insisting that all his patients take D in gelcaps or oil drops.

Chris U (2012-01-26 07:11:08)

A couple of years ago, in the winter, I was taking 4000 IU vit D in tablets daily. A blood test showed that My levels were at the top end of what my doctor considered safe, nearing toxicity levels. Therefore, in my case, the tablets were effective at increasing my vit D levels. I always take them with a meal, so perhaps I ingest enough fat along with the tablets.

Maurile Tremblay (2012-01-26 20:06:05)

No need for a pill. Fermented cod liver oil.

Anne Wright (2012-01-30 18:25:10)

Thanks. This is very interesting. I have run across one other person talking about a sleep-vitamin D connection: [1]Dr. Stasha Gominak who has a YouTube video up on this topic. She found that her patient's sleep got better when they were supplementing D3 and got their 25(OH)D3 blood levels up into a certain range (I think it was 50-80 ng/ml). She claimed that she'd seen sleep quality get worse again when that range got overshoot ( 90 ng/ml or over).

1. <http://bit.ly/d-sleep>

### **Vitamin D3 First Thing in Morning: 4000 IU Better Than 2000 IU (Story 8) (2012-01-26 05:00)**

On a status update, Alexandra Carmichael (of [1]CureTogether) noted she was taking 4000 IU of Vitamin D3. I asked her for details:

I've been taking 2000 IU of D3 every morning for many months, but after hearing about your Meetup talk topic from Gary/Ernesto ["Vitamin D3 and Sleep"] and talking to [redacted] about his experience with it, I decided to switch to 4000 IU, starting yesterday. I take it between 6 and 7 am, with my other morning supplements/meds.

Yesterday I noticed an unusual sense of "clear and smooth" mood for much of the day, which is very odd for me. The day after a meetup, I usually experience intensely fluctuating moods (I've been tracking hourly moods, and on my worst days, it's a 3-hour cycle between peaks, like a super rapid cycling, ultra-dian bipolar - my therapist suggested this term when I showed him my mood tracking data.)

I also slept unusually well - I've been having a good deal of trouble sleeping lately, both falling asleep and night waking. Last night I slept a solid 8 hours!!!

That's a very small sample (one day) of what happens with 4000 IU. However, Alexandra's experience is similar to mine. I found that 2000 IU of D3 had no clear effect compared to nothing. However, the very first night after I upped the dose to 4000 IU (from 2000 IU) my sleep was noticeably better.

Alex is using Nature's Bounty 2000 IU Vitamin D3 gelcaps.

1. <http://curetogether.com/>

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Merv (2012-01-26 06:32:06)

Is there a upper limit for consumption of D3 before toxicity starts?

Scott W (2012-01-26 06:41:28)

Seth, you talk a lot about fermented foods. I'm wondering about your thoughts on fermentation of grain to make its nutrients more accessible. It's cooked after it is fermented, so I don't think it falls into the same category of fermented foods you favor, but certainly seems to be another good use of fermentation for natural food processing. Here's a very brief discussion: <http://wholehealthsource.blogspot.com/2009/04/new-way-to-soak-brown-rice.html> I have not been reading for a long time, so forgive me if this has been covered in the past. Scott W

Seth's Blog » Blog Archive » Vitamin D3 First Thing in Morning: 4000 IU Better Than 2000 IU « Thor Falk's Reading List (2012-01-26 06:41:58)

[...] Seth's Blog » Blog Archive » Vitamin D3 First Thing in Morning: 4000 IU Better Than 2000 IU. More on Vitamin D3 Share this:TwitterRedditFacebookMorePrintEmailStumbleUponTumblrDiggLinkedInLike this:LikeBe the first to like this post. [...]

Vitamin D3 First Thing in Morning: 4000 IU Better Than 2000 IU « Thor Falk's Reading List (2012-01-26 06:43:02)

[...] Seth's Blog » Blog Archive » Vitamin D3 First Thing in Morning: 4000 IU Better Than 2000 IU. More on Vitamin D3 Share this:TwitterRedditFacebookMorePrintEmailStumbleUponTumblrDiggLinkedInLike this:LikeBe the first to like this post. [...]

Seth Roberts (2012-01-26 07:11:56)

I'm wondering about your thoughts on fermentation of grain to make its nutrients more accessible.

I think that is a minor benefit. Our preference for microbe-rich food is so strong I believe other mammals will show the same thing. The major benefits of fermented foods, in my opinion, are digestion improvement & immune-system improvement.

Seth Roberts (2012-01-26 07:13:21)

I don't know what the upper limit is, no. But no doubt there is one and for that reason I believe in figuring out the minimum dose that produces the maximum effect and using that. For example, if 4000 IU/day produces the same benefits as 6000 IU/day, I would use 4000 IU/day.

M. Love (2012-01-26 07:43:30)

As a counterpoint, I've been taking 4-5,000 IU of D3 for a couple of months now, and while it \*might\* be making me feel better in other ways (more vital, upbeat, and energetic), it has coincided with a stretch of poor sleep for me. I have what they (hilariously) call "terminal insomnia"; that is, I usually have no trouble at all falling asleep, but I wake regularly at night and am permanently awake very early, often from 4:30am onwards. This has been a periodic problem for a few years now, though this stretch is notably tolerable, for some reason.

skyricho (2012-01-26 10:30:35)

@M. Love What time of the day do you take D3? I would be surprised if it is first thing in the morning.

skyricho (2012-01-26 10:33:00)

I work night shift 1.30pm to 8am. I sleep from 1pm to 5pm and 10.30 to 1.15am I would like to self-experiment if taking D3 will make me =me to be alert during my night shift and then sleep better around midday. Does this mean for me i should I should take D3 when I wake up at 1.15am?

Eugene (2012-01-26 14:15:00)

M. Love, I had the same problem and rhodiola extract works wonders for me.

Guv (2012-01-26 15:33:19)

I would advise/recommend that anyone taking D3 long term have their blood levels tested. At least twice a year to begin with until you have your dosing dialled in. And it will probably need to be adjusted over time. When i was taking 4,000 IU per day for a while, my highest serum 25(OH)D level was tested at 85 ng/ml. I prefer to keep my 25(OH)D in the 50-70 ng/ml range.

Jim (2012-01-26 15:51:55)

I agree with Guv about testing blood levels. Vitamin D accumulates in the system over time. Prior to Seth's posts on using D3 for sleep aid, most of what I've read about D3 was based on getting blood levels built up to a certain levels (e.g., for bone or cardiovascular health). In contrast, the specific line of thinking being explored by Seth here has to do with daily morning supplementation of D3 to simulate or mimic early morning sun exposure, to help with sleep cycles. Thus, I'm wondering if the daily morning effect would be changed by an overall increase in stored D3 in the body over time (i.e., raised blood levels). For sleep benefits, perhaps a low dose is needed so that the overall long-term accumulation of D3 is minimized, to accentuate the contrast between morning and evening levels of D3 in the body.

Jonathan (2012-01-26 17:49:22)

The Vitamin D Council says toxicity has been seen at doses over 40,000 IU. I have never heard of a report of toxicity in adults at doses of 10,000 IU, though. The main long-term risk of too much Vitamin D is tissue calcification. (Of course, arterial calcification is a risk of too little Vitamin D, too.) Children's doses should be smaller, of course, proportional to body weight. Some references I've read suggest that the toxic effects of Vitamin D may be partly a result of competition with Vitamin A, and that getting enough Vitamin A may oppose those effects. (Could it compete with Vitamin K2 as well? I don't know.) The Council also says that the most common cause of symptoms on taking Vitamin D is that it unmask a magnesium deficiency. Magnesium deficiency seems to be the norm among Americans, so supplement that too.

M. Love (2012-01-26 20:59:22)

@Skyricho I usually take my D3 at around 6:30am, with my coffee. I don't usually eat breakfast or lunch, so I'm wondering if the D3 is metabolizing correctly in the absence of any other nutrients.

Nancy Lebovitz (2012-01-27 05:17:53)

Any advice on a good ratio between vitamin D and vitamin A?

## **Vitamin D3 in Morning Increases Energy Levels: Story 9 (2012-01-27 05:00)**

I know [1]Robin Barooah from Quantified Self meetups. When I learned he had started taking Vitamin D3 early in the morning, I asked him what happened:

I've been taking it since December 20. I initially thought of trying it immediately on my return from London because I thought that it might help to reduce jet lag, given its apparent coupling with the circadian rhythm.

It didn't seem to have a dramatic effect on my jet lag - which was as bad as I usually experience it for about the same number of days (around 3-4). However it had a very pronounced effect on my general energy levels. At first I was almost hyperactive, yet my concentration was good. I was using 5000 IU per day, at 7:30 am. The hyperactive feeling subsided but the dramatic improvement of my energy levels (and increased concentration) continued until I decided to reduce the dose to 2000 or 3000 IU per day

[from 5000 IU/day]. My mood has improved too, although I think indirectly though feeling more capable and productive.

I decided to reduce the dose because I was concerned that my sleep wasn't noticeably better than before taking the D3, and might have been worse. Reducing the dose caused a huge reduction in my energy levels and concentration, and no improvement in sleep. After a week of that I went back to the 5000 IU dose, and again am very happy with the effects. The improvement in sustained concentration is so dramatic that it's disturbing to think of how much this could have changed my life had I been using it for years (assuming the effect lasts).

It's possible that my sleep quality has improved in some way that isn't reflected in my subjective experience of sleeping, and this has caused the improved energy and concentration. I am sleeping about the same length of time, and waking up in the night just as often and feeling about as rested as before I started (which is not quite as rested as I'd like to feel, despite having a lot of energy). I am not taking a multivitamin, so it's also possible that I'm not getting all of the possible benefit.

Without doubt, this is one of the most effective things I've ever tried.

Emphasis added. He takes Now Foods Vitamin D3 (easy to buy on Amazon), the 5000 IU and 1000 IU softgels. He also said:

I used to get quite severe tiredness (enough to need to lie down) at numerous times during the day. Now I seem to get tired just a little in the afternoon, and then progressively so into the evening. There's a very distinct slowdown in my energy that happens very obviously around 5pm, which is coincidentally around dusk here at the moment.

I have noticed something similar. Before Vitamin D3 early in the morning, I used to get really tired around 10 am. Enough to make me lie down. This happened on more than half of all days. Now that I am taking a lot of D3 (8000 or 10000 IU) first thing in the morning (8 or 9 am) it doesn't happen at all. (I may eventually go down to a lower dose, such as 5000 IU/day.)

1. <http://www.sublime.org/>

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Jonathan Erickson (2012-01-31 21:19:03)  
Wow this is really good to know!

### **Vitamin D3 in Morning Helped Her Sleep Through Night (Story 10) (2012-01-28 05:00)**

A woman named Jenny West, who lives in Chiltern Hills (west of London), [1]commented that she "discovered independently that D3 first thing in the morning works." I asked her for details:



I (and my family) started to take Vitamin D3 because we are all dyslexic/dyspraxic and had Seasonal Affective Disorder (SAD, a type of depression). Previously we had tried using light boxes (minimal effect), getting out every lunchtime (more useful) and finally 5HTp – which works but is expensive and if you start it once you are in SAD you can end up 'wired'. Our SAD symptoms were mainly sleepiness and lack of energy (= hibernation), and brain fog (= difficulty concentrating).

We started taking D3 (2000 IU, Solgar) in gelcaps. That first winter, for the first time ever, no one had any seasonal affective disorder. I had had it since the age of 21, my youngest child when only 4 yrs old, and my other two children by the time they were 18 yrs old. At this point, we were taking the D3 at random times, commonly lunchtime or later, often when everyone was together and the vitamin pot was handed around!

This autumn, all the youngsters had moved out. I found I was forgetting the D3, so I moved it to the bathroom and started taking it first thing in the morning (8-9 am). Then in September, I started taking 3000 IU (instead of 2000 IU). We'd been in Greece and had come back to a gloomy autumn and I wanted to make sure SAD didn't kick in. In a month I started sleeping through the night most nights.

Before I started taking D3 first thing in the morning, I only slept through 10 % of my nights, and had been doing so for at least 15 years. I would wake at 3-4 am, but didn't get up unless I had been awake for more than 3/4 hr. Then I would be awake until 6 am. Now I sleep without a break (other than turning over) from midnight to 8 am. I sleep like this 95 % of my nights, and that includes the odd night when I took the D3 much later in the morning because I had slept in – and consequently woke the following night.

As a coeliac, I take the supplements many coeliacs take – probiotics, minerals, vitamins – but none of these affected my sleep either way. So it really looks as if it is the timing plus the correct dose of D3.

BTW the extra daytime energy is fantastic.

She is 5 feet 4 inches, 64 kg. Notice that 2000 IU first thing in the morning did not improve her sleep but 3000 IU first thing in the morning did. I had a similar experience: 2000 IU had no clear effect but 4000 IU did.

1. <http://blog.sethroberts.net/2012/01/16/vitamin-d3-more-reason-to-take-it-first-thing-in-the-morning/#comment-946262>

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Vitamin D3 First Thing in Morning: Still More Experience « Thor Falk's Reading List (2012-01-28 06:11:14)

[...] Seth's Blog » Blog Archive » Vitamin D3 First Thing in Morning: Still More Experience. Share this: [Twitter](#) [Reddit](#) [Facebook](#) [More](#) [Print](#) [Email](#) [StumbleUpon](#) [Tumblr](#) [Digg](#) [LinkedIn](#) Like this: [Like](#) Be the first to like this post. [...]

babar (2012-01-28 11:48:02)

Negative result here: I've taken 5-8k per day for 2 weeks, first thing in the morning, and not found myself sleeping through the night or with significantly improved energy.

Daniel (2012-01-28 12:54:41)

If we had consistent sunlight exposure throughout the day, wouldn't steady dosage of Vitamin D during daylight hours work better? Or is the high "shock dose" just important to program circadian rhythms?

Cap (2012-01-28 17:10:48)

I wonder about what Daniel asked too. I might have guessed taking D3 at noon when sunlight is most intense would be the most natural thing to do. In any case after the morning D3 entries started to appear here sometime before Christmas, I switched to taking my D3 first thing in the morning too (between 4-7000 IU) and so far I've noticed significantly increased feelings of sleepiness at bedtime, with moderate improvement falling asleep, reduced wakings throughout the night, and much better ability to sleep in.

Seth Roberts (2012-01-28 17:36:14)

If we had consistent sunlight exposure throughout the day, wouldn't steady dosage of Vitamin D during daylight hours work better? Or is the high "shock dose" just important to program circadian rhythms?

All sorts of things slow down and spread out over time D3 uptake starting with the need to digest the gel around the D3. But I guess that your second idea ("important to program...") is correct.

Ted (2012-01-29 19:20:00)

I've been taking my D3 (4,000 IU) at various times throughout the day but haven't noticed it having any effect on my sleep. (One thing I have noticed having an effect on my sleep was taking iodine in the form of kelp in the morning. It gives me a real boost during the day and helps me sleep better at night.)

nydwacu (2012-01-30 06:49:54)

I've been taking 3000 IU for the past two weeks or so. It's not enough to affect my restfulness much, I think (I'm about 6'5"), but it does keep my sleep schedule regulated; ordinarily, I'd wake up half an hour later every day, but now I wake up between 5 and 7 every day. (Interestingly, I'm much more rested when I wake up at 7 than I am when I wake up at 5 or 6, even if I got less sleep.)

Seth Roberts (2012-01-30 06:56:30)

it does keep my sleep schedule regulated; ordinarily, I'd wake up half an hour later every day, but now I wake up between 5 and 7 every day.

That supports the idea that Vitamin D3 is acting like sunlight.

Mathew Ferguson (2012-01-31 05:24:46)

Hi, I was wondering about the levels of Vitamin D that some of these people are taking. Various websites I've looked up list as low as 600 IU as a recommended maximum dose for adults. At the levels noted here they list a range of negative side effects (mostly due to calcium in the blood). Are there any long-term vitamin D users at the 3000+ IU level around who are doing well on the blood chemistry front?

Sarah Madden (2012-01-31 13:28:21)

I've been following all the stories with interest so I decided to start yesterday (6,000IU) and the results have been pretty quick. Slept better and woke up easier this morning which is very unusual for me. Too soon to judge completely so I will let you know.

Seth Roberts (2012-01-31 16:23:43)

thanks, Sarah, yes, please let me know what happens after more experience.

## **One Doctor's View of Personal Science: "You Won't Learn Anything" (2012-01-29 05:00)**

Bryan Castañeda, who lives in Southern California, told me this:

The law firm I work at specializes in toxic torts. We represent people who have been occupationally exposed to chemicals and are now sick, dying, or dead. Most of our clients have been exposed to benzene and developed some kind of leukemia. We sponsor various leukemia charities, walks, and other events. [On January 21, 2012] in Woodland Hills, CA, the Leukemia & Lymphoma Society held[1] its first annual Blood Cancer Conference. Although the speakers were mainly doctors, it was a conference meant for laymen. The chair was an oncologist from UCLA Medical Center.

After introductory remarks and the keynote speaker, there were several breakout sessions. I attended a session on acute lymphoblastic leukemia and acute myeloid leukemia. The speaker was [Dr. Ravi Bhatia,] a doctor specializing in leukemia from City of Hope in Duarte, CA. His talk was almost exclusively about new drugs and clinical trials. Very dry and dull. Things got more interesting during the question period. At one point, [Dr. Bhatia] told an attendee not to experiment on his own because "you won't learn anything and others won't learn from it, either."

I would have liked to ask Dr. Bhatia three questions:

1. What's the basis for this extreme claim ("you won't learn anything and others won't learn from it")? Ben Williams, a psychology professor at UC San Diego, wrote a whole book ([2]Surviving "Terminal" Cancer, 2002) about taking an active approach when faced with a very serious disease (in his case, brain cancer). Likewise, the website [3]Patients Like Me is devoted to (among other things) learning from the experimentation of its members. Lots of forums related to various illnesses spread what one person learns to others. [4]MedHelp has many forums devoted to sharing knowledge.
2. What's so bad about "learning nothing"? Why should that outcome stop one from trying to learn? It doesn't seem like a good enough reason.
3. Do you have a bias here? In other words, what do you want? Do you prefer that your patients not self-experiment? Doctors may prefer that their patients not experiment for their (the doctors') own selfish reasons. When a patient self-experiments, it makes their doctor's job more complicated and makes the doctor less important. If Dr. Bhatia is biased (he wants a certain outcome), it may bias his assessment of the evidence.

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1. <http://www.lls.org/aboutlls/chapters/los/events/bloodcancerhighlights/>

2. <http://www.virtualtrials.com/pdf/williams1.pdf>

3. <http://www.patientslikeme.com/>

4. <http://www.medhelp.org/>

Dennis Mangan (2012-01-29 09:05:18)

Wrt brain cancer, Thomas Seyfried has written a number of journal articles showing the efficacy of a ketogenic diet for that condition when little else works. So it appears that "taking an active approach" could be literally a lifesaver.

Perfect Health Diet » Around the Web; Why I Blog Edition (2012-01-29 10:49:19)

[...] Seth Roberts defends personal science. [...]

JPB (2012-01-29 11:26:33)

I suspect this doctor does not want informed patients who might question the "orders."

Jim Purdy (2012-01-29 14:09:31)

" ... a doctor ... new drugs ..." Those four words say all I need to know before I head for the exit.

WCB (2012-01-29 15:10:14)

It is that kind of mindset that has seriously damaged the credibility of the medical profession and the overall system of medical care. This is leading more and more people to conclude that the term "health care" is a gross misnomer, in that the health of the individual is largely irrelevant. All too often, it's mostly about money and conflicts of interest.

Sara (2012-01-29 15:59:07)

I live very close to an 'integrative' medical centre (medical doctors that also practice so-called 'fringe' medicine, like intravenous vit C). One of these doctors was the subject of a documentary here because she came out and claimed that intravenous vitamin C can save lives in cases of viral infection. She presented a case of a man that was literally hours from death from the Swine Flu and recovered after his family paid privately for her to administer intravenous vit C. They did this against the advice of the doctors that were watching him die. The program interviewed doctors from the Auckland hospital and none of them had tried it, they just kept repeating 'there is no science behind it' and that they wouldn't use it even when asked because it 'would give the family false hope'. That last statement I found... astounding. You have a terminal patient, the family has NO hope left and you are scared to try what they ask in case it gives them some?? There is no logic. So, the patient dies and the family is left forever wondering what would have happened if they 'had' tried it. People should be allowed, encouraged to try anything they think will help them. In the case of terminal illness, even a bit of placebo effect might be a good thing (as a Psych., I'm sure you know that placebo effect is sometimes biochemically measurable). It makes me annoyed when I read about doctors beating down self-experimentation. Oh, and that's on top of the way that environmental contamination already makes my blood boil.  
..

Seth Roberts (2012-01-30 07:03:59)

The program interviewed doctors from the Auckland hospital and none of them had tried it, they just kept repeating 'there is no science behind it' and that they wouldn't use it even when asked because it 'would give the family false hope'. That last statement I found... astounding. You have a terminal patient, the family has NO hope left and you are scared to try what they ask in case it gives them some??

I agree. And I would also say: How do these doctors know the hope is "false"? If the idea is untested, as they say, why are they sure it is wrong? That makes no sense.

Nina (2012-01-30 13:21:38)

Interesting comment from the lawyer and links between benzene and leukemias. I'm currently looking out for evidence of correlations between leukemias and osteoporosis medication.

bob r (2012-01-30 16:43:58)

Maybe he should tell [1]Terry Wahls that "self" experimentation won't allow you or anyone else to "learn from it." I guess he thinks she should have just stayed in her wheelchair.

1. <http://www.youtube.com/watch?v=KLjgBLwH3Wc>

Seth Roberts (2012-01-30 22:32:08)

I guess he thinks she should have just stayed in her wheelchair.

good point!

### The Great Climate Change Debate: Which Side is Funnier? (2012-01-30 05:00)

A few days ago the Wall Street Journal published [1]a letter from 16 people saying what I say, that the case that humans are warming the planet is much weaker than you'd guess from mainstream media. An excerpt:

The number of scientific "heretics" is growing . . . Perhaps the most inconvenient fact is the lack of global warming for well over 10 years now.

Here is [2]a rebuttal by a biological anthropologist named [3]Greg Laden:

Shameful. . . . Out and out lie, easily falsified . . .  
"16 scientists" who signed this letter: They are idiots  
judgements is now in serious question. . . . Let Googl

Peter Gleick, MacArthur "genius" Fellow, also wrote [4]a re  
years? Here's Gleick:

The authors claim there has been a "lack of warming  
year in a row in which global temperatures were abo  
the warmest years on record.

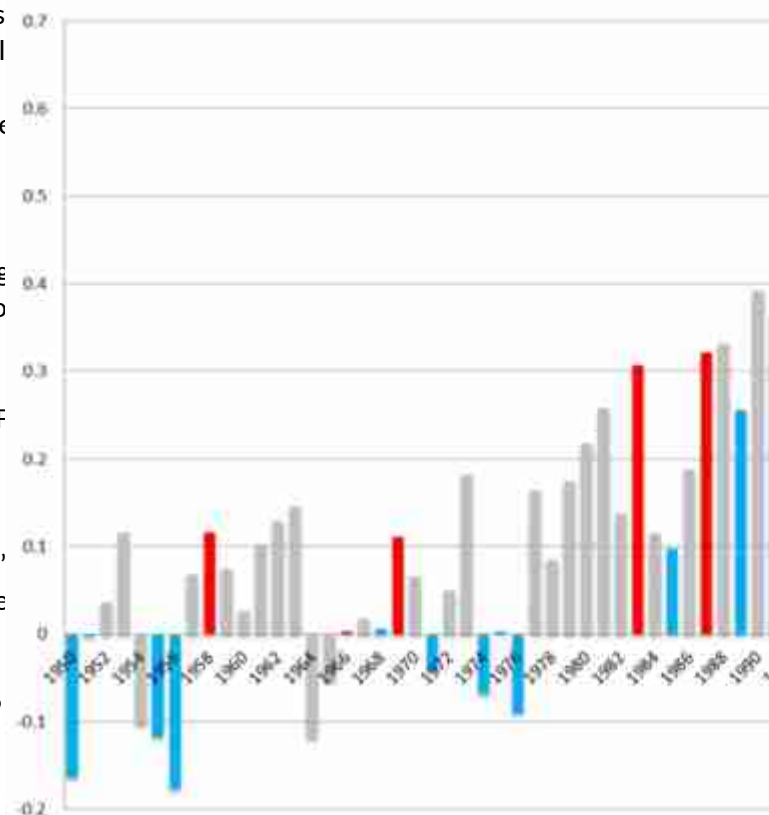
I have not omitted quotation marks. Here's how [6]Peter F  
same point:

The authors claim there has been a "lack of warming"  
[7]35<sup>th</sup> year in a row in which global temperatures we  
were the warmest years on record.

I went to the link given to support the "35th year in a row"  
link:

[8]

Annual Global Temperature  
1950 - 2011



1. [http://online.wsj.com/article/SB10001424052970204301404577171531838421366.html?mod=WSJ\\_hp\\_us\\_mostpop\\_read](http://online.wsj.com/article/SB10001424052970204301404577171531838421366.html?mod=WSJ_hp_us_mostpop_read)
2. [http://scienceblogs.com/gregladen/2012/01/two\\_incontrovertible\\_things\\_an.php?utm\\_source=combinedfeed&utm\\_medium=rss](http://scienceblogs.com/gregladen/2012/01/two_incontrovertible_things_an.php?utm_source=combinedfeed&utm_medium=rss)
3. <http://scienceblogs.com/gregladen/about.php>
4. <http://www.forbes.com/sites/petergleick/2012/01/27/remarkable-editorial-bias-on-climate-science-at-the-wall-street-journal/>
5. <http://www.ncdc.noaa.gov/sotc/global/>
6. <http://blog.ucsusa.org/dismal-science-at-the-wall-street-journal>
7. <http://www.ncdc.noaa.gov/sotc/global/>
8. <http://blog.sethroberts.net/wp-content/uploads/2012/01/enso-global-temp-anomalies.png>

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Wilbur (2012-01-30 05:32:40)

Yes, the rebuttals seem to have missed the point. If global warming has indeed stopped as the original letter claimed, and we have entered a period where global average temperatures will routinely be about 0.55 degrees above the historical average, then conceivably we would still see "record warm years" all the time. Personally I think that given the variance in the data, 10 years is not a lot of time to reach the conclusion that the warming has "stopped". Looking at the data up to 1988 only, one might have concluded that the data from 1978-1988 showed no warming trend either. A rebuttal along these lines would have made more sense.

Nile (2012-01-30 07:23:50)

From the Daily Mail "The supposed 'consensus' on man-made global warming is facing an inconvenient challenge after the release of new temperature data showing the planet has not warmed for the past 15 years. . . Based on readings from more than 30,000 measuring stations, the data was issued last week without fanfare by the Met Office and the University of East Anglia Climatic Research Unit. It confirms that the rising trend in world temperatures ended in 1997." Oops! No warming for 15 years? Those folks at the East Anglia Climatic Research Unit better get busy and "hide the decline" with this data or they will find their grant money drying up.

threepipeproblem (2012-01-30 07:27:53)

This blog may be worth looking through for those exploring the skeptical position: <http://themigrantmind.blogspot.com/>

Seth Roberts (2012-01-30 08:02:47)

Yes, I agree – good blog. Good series on the urban heat island effect. For example, <http://themigrantmind.blogspot.com/2011/02/urban-heat-island-in-pictures-part-4.html>

Steve G. (2012-01-30 13:26:51)

11 cooling years 1950 to 1976 and none since then?. What does this reveal? Aren't 2005 & 2010 the two hottest years on record? Does this mean that human activity is not creating global climate change? What if the the earth is naturally cooling while we humans are warming it up? Do we do nothing? While name-calling adds nothing except to signal strength of emotion and to perhaps-and only perhaps-to cover a weak logical argument, I still don't understand the glee in the skeptics, nor for that matter, how they differ from say, Republican presidential candidates.

Jenny (2012-01-30 14:17:56)

An interesting sideline - in December, UK's Natural World programme on British Butterflies noted that butterflies, which respond very sensitively to temperature, are coming out of their chrysalids earlier and earlier, and the warmth-loving ones are

moving further and further north. These countryside butterflies are acting as if their world is still warming; they are also those that have a varied diet and are free to move following their food supply. Presumably, when the world starts to cool again, they will move back south.

Nathan Myers (2012-02-01 21:01:58)

What is it that is supposed to be funny about that graph? It looks to me like it supports the assertion, and also that 9 of the last 11 highest temperatures ever recorded happened since Justin Bieber entered grammar school. You can talk about a "medieval warming period" all you like, but the tundras didn't turn to mud then, nor at any time in many thousands of years, as they are now. Nile: The "heat islands" trope was debunked long ago. To trot it out again only suggests that you don't have valid arguments to draw upon instead. The joshua trees' range is also moving north. Sadly, unlike the butterflies, the joshua trees cannot move north with it. Land north of the Joshua Tree National Monument is not available for annexation, not even in exchange for the denuded southern reaches. In a few years it will be as devoid of joshua trees as the Glaciers National Park is of glaciers. It's not just temperature; ocean acidification follows CO2 levels, too. How many years before Australia's Great Barrier Reef is as devoid of coral, and is neither a barrier to storms in the Pacific, nor a reef?

et (2012-02-02 03:08:41)

I don't understand what you are saying either. As Nathan Myers mentions above the graph does seem to point to a warming trend.

Seth Roberts (2012-02-02 06:10:40)

As Nathan Myers mentions above the graph does seem to point to a warming trend.

The graph shows that during the most recent 10-15 years there is no warming trend (= a line fitted to the data of the last 10-15 years has a near-zero slope). As the WSJ letter said.

Tim Beneke (2012-02-02 11:08:07)

It is disturbing that those who believe humans are overwhelmingly the cause of global warming will not explain why the temperature has stabilized for the last 10-15 years. It's a very simple question. (Their response, to point to the 2 highest years on record being in the last decade is utterly unscientific and silly, and reminds me of the childhood joke about the contest between the US and USSR where the US won; the USSR put out propaganda saying the USSR came in second and the US came in next to the last.) They can only know the role that humans are playing in global warming if they know what other factors are at work, and it's fairly obvious that our knowledge is limited. Does anyone know if there is a serious attempt by scientists to explain the recent stabilization? More greenhouse gases have entered the atmosphere in the last 15 years, so it should be getting hotter and it's not. Why? On the other hand, my rough impression from eyeballing the graph is that one can pick other 10-year periods like '84-'94 where it has been stable, and yet the longer term trend is towards higher temperatures. But if the stability continues for another 5-10 years, the mainstream climate scientists will have some serious explaining to do.

mike (2012-02-04 10:44:51)

The graph is calibrated in tenths of a degree Celsius, a tiny amount. The graph would be a horizontal line if it were calibrated in whole degrees, showing no warming.

Nathan Myers (2012-02-07 01:52:33)

I see. By looking at few enough samples of any noisy sequence, you can assert no clear trend. But look! There's a clear *downward* trend if you look at the last two years! Likewise, since this afternoon! Spare me.

George (2012-02-18 21:53:25)

This post saddens me. I stumbled upon this blog and was quite impressed, at least until I saw this. The graph looks like a

(somewhat noisy) step function to me. By looking at a small enough segment of data, you can prove anything you want. @mike, .6 C is not "no warming". what in the hell do you think is happening all around us, with plant and animal ranges changing, permafrost melting? Honestly, the denialists astound me.

Seth Roberts (2012-02-18 22:57:03)

George, I am sure the world is warmer now than during the Little Ice Age. The question is: why? I don't believe the answer is as clear as AGW advocates say. World temperature went up and down by large amounts long before humans started burning lots of carbon.

mike (2012-02-24 16:57:17)

@mike, .6 C is not "no warming". George, The WSJ article talks about the last 10 years, not the full extent of the graph. There has been no warming for 10 years. (and there will be no warming for the next 30 years)

### Assorted Links (2012-01-31 05:00)

- [1]no detectable association between heart disease and fried-food consumption
- [2]tiny amounts of alcohol greatly lengthen worm's life
- [3]climate models fail to predict ocean heat content
- [4]disgust and fermented food

Thanks to Aaron Blaisdell, Alex Chernavsky and Navanit Arakeri.

1. <http://www.bmj.com/content/344/bmj.e363?etoc=>

2. <http://newsroom.ucla.edu/portal/ucla/tiny-amounts-of-ethanol-dramatically-221986.aspx>

3. <http://www.c3headlines.com/2012/01/ocean-heat-content-climate-models-continue-to-fail-miserably-at-predicting-ohc.html>

4. [http://online.wsj.com/article/SB10001424052970204661604577186843056231170.html?mod=WSJ\\_hp\\_editorsPicks\\_4#articleTabs%3Darticle](http://online.wsj.com/article/SB10001424052970204661604577186843056231170.html?mod=WSJ_hp_editorsPicks_4#articleTabs%3Darticle)

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Dennis Mangan (2012-01-31 07:48:05)

Not quite personal or amateur science, but according to the second linked item on alcohol and longevity in worms, the lead researcher did the work as an undergrad.

Alex Chernavsky (2012-01-31 07:55:03)

@Dennis, I remember seeing a paper on neuroanatomy that was authored by five people – the principal investigator and four high school students who had done a summer internship. It was a decent paper.

Seth Roberts (2012-01-31 11:34:27)

the lead researcher did the work as an undergrad



Interesting point. Maybe undergrads can do more risky research.

vimspot (2012-01-31 11:39:37)

Does the Spanish study have any real implications for the United States where people don't tend to fry food in Olive Oil, and don't tend to eat a Mediterranean diet more generally?

## 7.2 February

### **Vitamin D3 in Morning Makes Her Fall Asleep Faster and Sleep Better (Story 11) (2012-02-01 05:00)**

I have heard many stories about Vitamin D3 and sleep, often in the comments section of this blog. From now on I am going to number them. (I retitled earlier posts.)

Elizabeth Funderburk emailed me:

I've always suffered, rather lightly I guess, from SAD in the winter. In 2010 I started eating primal, which I thought would help - it helped in many ways but I still got gloomier all winter and didn't even realize it til that first warm sunny spring day when I "woke up." [1]Your November post about D3 reminded me that I wanted to try it this winter, so I got a bottle and started taking it in the morning. I forgot a few times and took it in the midday or afternoon, and yes, I felt noticeably more spazzy and awake those evenings. Now, if I forget, I just skip it if I remember later than 10 am. I do think I sleep better. I take 4000-6000 IU daily.

I asked her for details.

Tell me about yourself.

I live in Reno, NV, USA, and I'm 34. I do home renovations.

What brand?

Kirkland D3 2000 IU gelcaps. The first bottle I got was from Walgreen's, so I guess it was Nature's Bounty gelcaps. Both seem to work equally well. I have not tried capsules. I take the D3 while I'm waiting for my coffee, usually 6 or 7 am.

How has your sleep improved?

With D3, I would guess I fall asleep in 10-30 minutes most of the time (trouble falling asleep once every 7-10 days). The wave noise thing by my bed is on a 45 minute timer. If the wave sounds stop and I'm still laying there conscious, I categorize that as a "trouble falling asleep" night and I will usually get back up and read for an hour. In the fall before I started the D3, I'd take more than 45 minutes to fall asleep more often than after starting D3.

But I think more importantly, the quality of my sleep was not restful more often before D3 - I slept well (lightly, vivid dreams, woke up briefly, woke up feeling rested) maybe twice a week. I slept poorly (heavy, dark pit of sleep, no remembered dreams, unwilling to wake up and get up) 5 nights a week. It's pretty binary; I usually sleep well or poorly, not "so-so." Now, taking D3, I sleep well 6 nights a week, and poorly once a week.

What do you mean by "spazzy" ("more spazzy in the evening")?

When I did take it in the afternoon, I noticed that I felt energetic when I'd prefer to feel sleepy - really raring to go at 7 or 8 instead of starting to wind down. I think it would be a fabulous tool for people working swing or graveyard shifts!

"thanks for the reminder" - you mean you had read elsewhere that Vitamin D3 first thing in the morning is a good idea?

You gave me the idea to take it IN THE MORNING. You "reminded" me about it in the sense that it's one of the few supplements Mark Sisson ([2]mark's daily apple) suggests everybody could benefit from - I noted that when I gave up grain and started eating primal in early 2010, but it wasn't something I'd bothered to take at that point, because I spend a lot of time outside in the spring/summer/fall. (Winter, too, but because I'm all covered up in clothes and the sun is so weak, I don't seem to get the natural level of D3 I need.)

1.

2. <http://www.marksdailyapple.com/>

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Valtsu (2012-02-01 06:23:27)

"But I think more importantly, the quality of my sleep was not restful more often before D3 - I slept well (lightly, vivid dreams, woke up briefly, woke up feeling rested) maybe twice a week. I slept poorly (heavy, dark pit of sleep, no remembered dreams, unwilling to wake up and get up) 5 nights a week." Question: Should we see dreams while sleeping, or is dreaming a marker of good sleep? Usually, I don't remember any dreams when I wake up but today I remembered two different dreams I saw during the night. Hmm... I take vitamin D (5000IU) in the morning too, but usually 1 to 1.5 hours after waking (at breakfast).

Henk Poley (2012-02-02 23:51:59)

About the time of day to take D3. Apparently the appropriate amount of UV-B in sunlight for D3 photosynthesis to happen is when the sun is at 40 degrees in the sky. Given that the earth rotates 360 degrees in 24 hours you calculate this for the equator:  $40 / 360 * 24 * 60 = 160$  minutes before and after noon. So, 2h40m before and after 12:00 is: between 9:20 and 14:40 Your skin has the appropriate metabolites replenished during the night, so most of the photosynthesis happens early on. So the most natural time to take D3 would be around 9:30.

## Law Schools Sued For Lying About Post-Grad Employment (2012-02-02 05:00)

If it isn't clear [1]for whom law schools exist, now [2]it is clearer:

The saga began last year, when Strauss and Anziska, both veterans of corporate legal work, filed lawsuits against New York Law School and Thomas M. Cooley Law School, in Michigan. The allegation: That Cooley and NYLS, by allegedly inflating post-graduate employment numbers, had committed fraud and violated local consumer protection acts. . . . The job market for lawyers has been contracting for years; hiring is down across the board. At the same time, law schools have continued to crank out young lawyers at an alarming rate.

This is the legal version of [3]the joke that people go to law school because they aren't good at math. So far twelve schools have been sued. I look forward to learning how the teachers at those schools react. Which side will they take?

[4]More about the lawsuits. [5]I blogged about the deception a year ago. The California Culinary Academy in San Francisco [6]was successfully sued for similar deception a few years ago. [7]Inside the Law School Scam, a blog.

1. <http://blog.sethroberts.net/2008/05/13/for-whom-do-law-schools-exist/>
2. <http://nymag.com/daily/intel/2012/02/law-schools-sued-for-lying-about-lawyering.html>
3. <http://insidethelawschoolscam.blogspot.com/2012/01/why-people-dont-get-jobs-as-lawyers.html>
4. [http://www.law.com/jsp/nlj/PubArticleNLJ.jsp?id=1202540950653&Fresh\\_round\\_of\\_litigation\\_targets\\_\\_law\\_school\\_s\\_over\\_jobs\\_data&slreturn=1](http://www.law.com/jsp/nlj/PubArticleNLJ.jsp?id=1202540950653&Fresh_round_of_litigation_targets__law_school_s_over_jobs_data&slreturn=1)
5. <http://blog.sethroberts.net/2011/01/13/law-schools-deceiving-students/>
6. <http://news.yahoo.com/culinary-school-grads-claim-were-ripped-off-203350240.html>
7. <http://insidethelawschoolscam.blogspot.com/>

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JPB (2012-02-02 11:29:03)

As bad as the problem is with law schools, it is equally bad in other fields. Colleges and universities have been expanding at a breath taking pace. They NEED ever more warm, tuition- paying bodies! There is definitely a bubble here and eventually, there will be some really bad fall-out. Perhaps this suit will help focus attention on the problem!

Bryan (2012-02-02 12:05:55)

Fascinating. I'm surprised my 4th tier school wasn't one of the ones sued. BTW, the Law School Scam blog is absolutely correct about how law schools game their employment numbers. Just recently Chapman Law School went from a 4th to 2nd tier school. One of the reasons their rank increased was post-graduate employment. I had friends that went to Chapman and, although they were happy their school went up, they were cynical about the U.S. News ranking process. They said the school made a BIG push among alumni to get them to hire recent graduates, even if it was for part-time work. Also, the undergraduate school hired a Nobel Prize winner (Vernon Smith) which also had a halo effect on the law school's prestige. But the way law school lies to its students is even deeper than the employment numbers or star faculty. The bigger scandal is that law school – ostensibly a professional school – is NOTHING like the actual practice of law. The ABA accreditation standards ensure a specific model that hasn't changed much in 100 years, discourages innovation, and does not adequately prepare students for the day-to-day practice of law. Law school trains appellate lawyers when the vast majority of students will become litigators or trasactional attorneys. And don't even get me started on the waste of time that is the law review.

wcb (2012-02-02 12:59:45)

@Bryan The civil action filed against Widener Law School this week is pending in the USDC, New Jersey, although the main campus of the school is located in Wilmington, Delaware. Of course, Widener recruits students from NJ and PA, as well as Delaware and other surrounding areas. The case, which seeks class action status, is based on the Delaware Deceptive Trade Practices law, Title 6, Sections 2531 et seq. As noted by Seth in his piece and in the provided links, the factual basis of the complaint is allegedly-inflated, post-graduate employment data used by the school as part of its recruitment program for new students. Counsel for the plaintiffs have filed a very interesting, 30-page complaint with allegations which, if proven, will obviously be very damaging for Widener, both reputationally as well as financially, since the suit apparently seeks to claw back student tuition costs, among other monetary claims. (As an aside, one factoid which seemed surprising to me is that the law school dean was recently being paid more that \$300K per annum in total comp. This seems over the top for a lower-tier institution whose admission standards are alleged in the complaint to be comparatively low.) Here's a link to the text of the complaint for

those who may be interested. <http://www.scribd.com/doc/80168175/Filed-Widener-Lawsuit-Without-Index-Number> -2

Nancy Lebovitz (2012-02-02 13:00:52)

It wouldn't surprise me if law schools are at greater risk of being sued.

Tom (2012-02-02 16:48:27)

This lawsuit is particularly exciting, because it's just the leading edge of the wedge. The truth is that most higher education is a scam. If this case succeeds – and I think it has a good chance – it has the potential to set off the unraveling of the entire higher education cartel.

Tom (2012-02-02 16:50:41)

By the way, AdSense is hilarious – I love how this page is filling up with ads for expensive for-profit universities. :-)

Seth Roberts (2012-02-02 17:42:23)

Colleges and universities have been expanding at a breath taking pace. They NEED ever more warm, tuition- paying bodies! There is definitely a bubble here and eventually, there will be some really bad fall-out.

Yeah. I find it curious that the two sectors of the economy that I criticize the most – health care and higher education – are also the two sectors of the economy with out-of-control cost increases, far outstripping inflation. My criticism has nothing to do with price, it is about quality of the product. The usual explanation of health-care cost increases is that it is hard to shop around (e.g., compare hospitals). But it is easy to shop around in the case of colleges. On the face of it the two products (health care and education) are quite different.

garymar (2012-02-02 18:53:02)

Elite universities can take care of themselves. What we need is unstinting support for our *community college* system. This is the real backbone of higher education, where a lot of real education takes place.

Sara (2012-02-02 19:23:01)

This certainly makes me feel better for ditching law in favour of Psychology and Nutrition. At least in these fields they make it clear that you're doing it more for the love than the money... ;) Several of my classmates have law degrees and could not get the required practice hours.

Sara (2012-02-02 19:32:07)

Interesting also about cost increases. It's not just cost, but time taken to complete a qualification. Psychology is a very good example. You used to be able to practice with a bachelor degree and internship (this is NZ I'm talking about so it might be different in the US), now it is minimum masters degree plus postgraduate diploma. Minimum six years to be a Psych in general practice, seven or eight years for a Clinical Psych, 9 or 10 years if you do a PhD as well. Total student loan? Somewhere upward of \$30,000 depending on scholarships. To register as a nutritionist used to take three years (undergrad. degree). You can still do it in three, but registration then takes five years. Or you do a postgrad diploma or masters plus two years to register. For every profession they are trying to keep us at university for longer AND they are sometimes not upfront about the requirements. In my third year of Psych. I learned that internship was no longer part of the masters degree and now takes the form of a postgrad 'practicing diploma' (or you can go and try and find an internship yourself, but they are hard to get).

Alex Chernavsky (2012-02-02 20:50:48)

This post reminds me of a passage from an excellent book called, [1]*Travels with Lizbeth*, by Lars Eighner:

"The purpose of welfare systems is not to help poor people. If the object were to help poor people, then that would be most surely done by giving money to poor people. But that is not the idea, as our tax code proves. If you give twenty dollars to someone on the street, there is not a way in the world you can deduct that donation from your

taxes. To claim a deduction you must give the money to an organization that employs clerks and administrators and social workers and that, more than likely, puts nothing material into the hands of the poor... When the agency makes an accounting of the good it has done the poor, it will count the money it spent on paying social workers to hold the hands of the poor the same as money, if any, spent on bread. The purpose of welfare systems is to provide jobs for social workers and bureaucrats. I told Billy he should be grateful to have a job in the poverty industry, but to ask that such a job be meaningful is to ask too much."

1. <http://photo.net/travel/travels-with-lizbeth>

WCB (2012-02-03 06:10:20)

@ Alex Excellent quote. The same might be said for a number of high profile "charitable" 501c3 organizations that pay outrageous compensation to their executives.

JPB (2012-02-03 09:07:22)

Seth: It is interesting that the 2 out-of-control industries (medicine and academia) either do not respond when asked the reasons for the high rates or they just say that there is no way to make any cuts! Of course, the "authorities" never offer to show the books...

Jim (2012-02-05 18:13:06)

Another issue is that many law school graduates, while getting jobs, get those jobs outside of the legal industry. Some do this by choice, but many do so because they can't get a job within the legal industry. The law schools spin this by stating that law school trains your mind, and that such training is good for any endeavor. But using a legal education as training for a career outside the law is an inefficient use of time and money at best, and a total waste of time and money at worst.

C. Shoemaker (2012-02-14 16:25:35)

No education is worth 200,000 dollar debt plus lost wages for three years. If someone is willing to take this risk, with slim job prospects after graduation, it shows they can't make good decisions and use critical thinking skills.

## **Vitamin D3 in Morning Has No Clear Effect on Sleep (Story 12) (2012-02-03 05:00)**

Alex Chernavsky, who has [1]used the Shangri-La Diet successfully for two years, recently [2]commented as follows (emphasis added):

For what it's worth, I've taken Vitamin D at different times of the day, and I've never noticed any effect on my sleep. Of course, my sleep is already pretty good, in the sense that I fall asleep quickly and don't usually wake up during the night. (My sleep is not good in the sense that I don't get enough of it.)

By email, I learned that Alex is now taking Vitamin D3 - [3]this particular product, which is vegan ("plant-source") - at 5000 IU every other day. On weekdays, he takes it at about 8:00 am, on weekends, 9:30-10:00 am.

What might explain Alex's failure to notice better sleep?

1. Not enough D3. I found that 2000 IU/day had no noticeable effect, whereas 4000 IU/day did produce noticeable benefit. Alex is getting 2500 IU/day - or less, if he takes it too late on the weekends.

2. His source of D3.

3. Individual differences large enough to matter. If you do sensitive psychology experiments, you will learn there

are individual differences in everything.

4. Ceiling effect. Alex's sleep is too good to notice improvement.

Those are the just the obvious possibilities.

1. <http://www.astrocyte-design.com/shangri-la-diet/index.html>

2. <http://blog.sethroberts.net/2012/01/24/vitamin-d3-first-thing-in-morning-improves-falling-asleep/#comment-947481>

3. <http://www.amazon.com/gp/product/B0042DDP44/>

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Francesco (2012-02-03 06:13:58)

I also didn't see an effect. Tried 2000 and 4000. Low-quality sleep in either case. I use Duane Reid gelcaps. No effect of standing on both legs or on just one (to exhaustion). I guess I am hopeless

Paul (2012-02-03 08:32:54)

5. Vitamin D3 doesn't improve sleep. Should be included for the sake of intellectual cleanliness.

David (2012-02-03 08:45:35)

Since you started posting these, I've been taking D3 in the mornings and notice that I wake up much more easily. I started with just 400 IU, then increased to 800 IU. One day I took 1200 IU and woke up at 4:00 AM the next day. I've gone back to 800 IU since 4:00 AM seems a bit early. For the past week, I've also been giving one of my daughters (11 years old) 400 IU each morning, and she seems easier to wake up in the morning (normally it's quite difficult). Sorry I'm too lazy to keep detailed records. I'm taking NOW Softgels. I do wonder if there would be an initial effect that goes away over time as your body adjusts.

David J (2012-02-03 10:55:40)

Lack of fat. You need fat present to absorb the D3. I've been taking A,D3 & K2, chased down with Jersey cream for 1 week. I think I have improved sleep, but it's very subjective.

Randy Knudson (2012-02-03 11:47:44)

Seth- I started taking D-3 4000 IU, this week. My sleep has definitely gotten much better. I typically have no problem falling asleep, but wake up at 12, 2 and 4. Last night I slept until 2:30 and overall feel like I'm much more rested. One thing I have experienced which has not been mentioned is that my dreams are much more vivid, and I recall them more easily. Thanks for alerting me to this very interesting and useful nutritional idea.

Chris U (2012-02-03 14:56:34)

I suspect that those already replete with vit D will not see an effect. Anybody who is taking vit D should have their blood levels tested from time to time both to avoid toxicity (rare but possible) and to provide some insight to the dose required to achieve a target blood level. The folks at grassrootshealth have some good info on target levels and how to choose dosage.

David (2012-02-03 22:03:19)

For the last 4 weeks, I've been eating within 30min of waking up and taking 4000 IU D3 (Kirkland brand, just like Elizabeth from story #11) along with a multivitamin. I am trying to get my body to wake up, rested and energetic, at 6:00 am everyday. This regimen has not helped me wake up any easier. In fact, this last week I've had to skip eating breakfast in order to not be late for work. I did take 10,000 IU of D3 one day. I had a tremendous initial bust of energy. I literally could not sit down for the next 3 hours. But it was not any easier to get out of bed the next morning. My number one desire right now is to improve my ability

to get up early. I had high hopes for the early breakfast/D3 combo. I'm pretty frustrated that it has not worked for me. I'm not sure what to try next.

Adrien (2012-02-03 23:52:50)

I have not tried vitamin D as a means to sleep improvement. As I know vitamin D has little or no effect on sleep.

Seth Roberts (2012-02-04 04:59:00)

For the last 4 weeks, I've been eating within 30min of waking up and taking 4000 IU D3

I discovered long ago that eating breakfast caused me to wake up less rested. You might want to try D3 alone.

Five Daarstens (2012-02-04 06:42:46)

I'm on 1000 a day D3 in the morning. I have not noticed any difference in sleep, but my rosacea has cleared up considerably.

David (2012-02-04 13:24:12)

I discovered long ago that eating breakfast caused me to wake up less rested. You might want to try D3 alone.

I'll give it a try.

Juha (2012-02-12 08:57:49)

I have difficulties in falling asleep, I rarely wake up feeling refreshed and I often feel slightly exhausted during the day. I've been taking vitamin D3 a couple of years now with doses ranging from 1000 to 6000 IU, but I don't remember ever noticing any effect of D3 on my energy levels or sleep. Before coming across Seth's writings about the timing of D3 I usually took my pill sometime in the evening (7 to 9 pm perhaps). Now I've been taking my D3 in the morning, but I haven't noticed an effect. (In fact, I feel that my sleep might have been a bit worse, but if so, it's probably unrelated.) A while ago I was still taking a shower and brushing my teeth before taking the D3 so that I could consume it with a spoonful of coconut oil. When that didn't seem to help, I started taking D3 before getting up from the bed - no effect. I wouldn't be particularly surprised if D3 didn't have a noticeable effect on me - not many supplements do. If there's something that I could still try it might be increasing the dose. I'm tall, I've got at least a little muscle and my metabolism seems to be quick (I eat a lot and stay lean) so it's possible that I have a floor effect on my current dosage. I'm a bit hesitant to increase the dosage though since I don't know if I'd get some adverse effects, too. I'm planning to try taking D3 in the evening to see if it makes my sleep or energy levels worse. I'll probably go back to taking it in the morning since that's probably the best, but I'm curious to see if my body responds to the timing of D3 in any way at all.

### **Assorted Links (2012-02-04 05:00)**

- [1]Independent discovery of nose-clipping? Nasal soft strips reduce appetite, according to an infomercial.
- [2]Does it matter how you take Vitamin D? A little bit of research.
- [3]Hypercalcemia (too much calcium in the blood) after patient takes 5500 IU/day Vitamin D3 plus 2000 mg/day calcium.
- [4]Fat Chef. A new TV show on the Food Network. Chefs try to lose weight.
- [5]Kickstarter project: Restaurant guide to San Francisco on a map folded in a new way.
- [6]The acne-diet connection. Dermatologists – the supposed experts – continue to say they aren't connected.

Thanks to Anne Weiss, Phil Alexander and Dave Lull.

1. <http://www.infomercial-hell.com/blog/2012/01/18/nasal-soft-strips-suppress-your-appetite-by-dangling-something-from-your-nostrils/>
2. <http://blog.vitamindcouncil.org/2011/11/08/does-it-matter-how-you-take-vitamin-d/>
3. <http://archneur.ama-assn.org/cgi/content/abstract/69/1/129?maxtoshow=&hits=10&RESULTFORMAT=&fulltext=hypocalcemia&searchid=1&FIRSTINDEX=0&resourcetype=HWCIT>
4. <http://www.newyorker.com/online/blogs/culture/2012/01/the-trouble-with-fat-chef.html>
5. <http://www.kickstarter.com/projects/1147214836/toc-guide-to-sf>
6. <http://www.theglobeandmail.com/life/health/new-health/health-nutrition/leslie-beck/diet-does-matter-when-it-comes-to-acne/article2313187/>

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Mary (2012-02-05 08:58:22)

I still take only 2000 IU vit. D but I've been taking it solo first thing in the morning and it's made a noticeable difference. I have more energy and now rarely get sleepy mid-afternoon. I also notice a big difference in 'tossing and turning' frequently during the night. Next I'm going to increase it to 3000 IU daily—at least for the remainder of the cool weather. I live along the gulf coast so I get a lot more sun exposure during the rest of the year.

Stephen M (Ethesis) (2012-02-08 20:57:31)

Climate scientists are "stunned" By TigerHawk at 2/08/2012 09:47:00 PM Even though the warmists claim the science is "settled," they keep getting surprised: The world's greatest snow-capped peaks, which run in a chain from the Himalayas to Tian Shan on the border of China and Kyrgyzstan, have lost no ice over the last decade, new research shows. The discovery has stunned scientists, who had believed that around 50bn tonnes of meltwater were being shed each year and not being replaced by new snowfall. Oops. 1 Permalink - - Main 1 Comments: By Anonymous Anonymous, at Wed Feb 08, 10:25:00 PM: A bit like unexpected increases in unemployment. Post a Comment

## **Vitamin D3 and Sleep: 5000 IU Better than 3000 IU (Story 13) (2012-02-05 05:00)**

Jenny West, the Englishwoman [1]who discovered independently the value of taking Vitamin D3 in the morning, wrote again:

Since reading some of the other D3 stories, I increased my D3 [morning] dosage to 5000 IU/day [from 3000 IU/day] two days ago.

1. I immediately slept even better – no longer being aware of mid-sleep turning-over.
2. I've had a large boost of energy and the clarity of thought that both [2]Robin Barooah and [3]Alexandra Carmichael mentioned.
3. A year-long injury – specifically a dislocated coccyx – has suddenly taken a step forward, and I found myself running for the Tube last night – something I can't remember when I last did it. Is this a direct effect of the D3, or an indirect one resulting from much better sleep?



This agrees with what both Alexandra and I experienced: a dose of 4000 IU worked much better than a dose of 2000 IU.

1. <http://blog.sethroberts.net/2012/01/28/vitamin-d3-first-thing-in-morning-still-more-experience/?preview=true>
2. <http://blog.sethroberts.net/2012/01/27/vitamin-d3-first-thing-in-morning-more-experience/>
3. <http://blog.sethroberts.net/2012/01/26/vitamin-d3-at-7-am-4000-iu-better-than-2000-iu/>

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Mike (2012-02-05 06:34:39)

Interesting posts on Vit D & Sleep, Seth. It would be nice to know optimal 25(OH)D levels and sleep...makes me wonder just how depleted, (or not), they folks are that have positive anecdotes.

Jenny (2012-02-05 17:12:02)

Being coeliac, I am almost certainly depleted. Coeliacs don't absorb fat easily, even when they have apparently 'healed guts'. I have have been gluten free for 6.5 years, and various other things 'healed' at the 2 year point, but the nutritionist warned me that absorption can always remain problematical.

mr magoo (2012-02-06 01:49:17)

all good but also at least nod to the notion that this could be ascribed to a placebo effect. its well documented that inceasing the dosage of a sugar pill, e.g two pills rather than one, makes a placebo more effective. that's the problem with relying on anecdotes alone.

JBB (2012-02-06 03:58:27)

I've had SAD (Seasonal Affective Disorder) every Fall and Winter that I can remember, though it's been more severe as I became a young adult and middle-aged adult. I had been trying Vitamin D, in doses of 2000, 4000, and 5000, with very little, if any, effect. This year I saw a new variety - D3 in 10,000. I figured I'd try it... And I am going to go down to 5000 again! I've definitely had more energy during the day, less sleepiness (though I'm still tired during the day, if you see the difference between sleepiness and tiredness). But it's lasted too long, and pushed my bedtime back an hour and a half before I can really feel like falling asleep. What I didn't think of was the delivery mode. I'd been taking tablets of D3 before. This much higher dose isn't just a higher dose, it's a geltab filled with oil. It seems much, much more effective... too effective. I'm going to try the 5000 dose also in the same oil-filled gel tab and see if that's a better fit for me.

Seth Roberts (2012-02-06 05:36:39)

all good but also at least nod to the notion that this could be ascribed to a placebo effect.

Right now I'm trying to answer the question: Is there an effect? Does D3 in the morning make a difference? How to explain the effect - if there is one - comes later.

BlueMorrissey (2012-02-06 10:06:47)

I have needed to use a light box for Seasonal Affective Disorder every winter since I self diagnosed myself 10 years ago. I have upped my Vitamin D usage up since Seth began advocating it. This is the first January/Feb I have not felt the need to use or used the light box in 10 years.

## 50,000 IU Vitamin D3 in Morning Once/Week Improves Sleep (Story 14) (2012-02-06 05:00)

A reader named Tim G [1]commented:

Blood tests last year [2011] showed I had low Vitamin D levels so I was put on a 50,000 IU once/week regimen for 3 months using a prescription D2 (ergocalciferol). A recheck after 3 months showed my level had hardly changed. A search of PubMed showed conflicting views on using the D2 form. So for the next 3 months I used ProHealth D3 Extreme 50,000 IU (via Amazon.com) instead of another D2 scrip my doc had given me. I always took the D2 or D3 in the morning (just lucky happenstance.)

The second recheck, after the second 3 mo., showed my Vitamin D level was normal. I hadn't put it all together until seeing this post, but when using the D3 I had the same effect [as what is described in [2]this post] – when I got tired, I got \*really\* tired right at bedtime, and slept like a rock.

Even though it has been less than a month since stopping the weekly dose, I have noticed my sleep degrading somewhat, and lately not even being tired when I should.

I asked for details:

Tell me about yourself.

I'm a 50 year old reasonably healthy guy who is a lifetime Massachusetts resident. I'm in the IT profession (managing computer systems, programming and such). So I am someone who 1) lives at a higher latitude, 2) during the day garners minimal Vitamin D from the glow of LCD displays and fluorescent lights, and also 3) generally dislikes the heat of summer and burns easily.

Why did you take D3 once/week rather than once/day?

My intent was to mimic the original doctor's prescription of a single 50K/wk dose, while substituting D3 for the prescribed D2. At the time, I had no good reason to change to a daily schedule, although it intuitively struck me as odd to take a single large dose rather than smaller, more evenly distributed doses.

What time in the morning did you take it? What time do you get up in the morning?

I get up around 6-6:30 am. I would take the D3 around 6:15-6:45 am.

Why did your doctor prescribe D2 rather than D3?

I think it was simply rote procedure and cost. When I asked him after my first 3 months on D2, he said that the prescription D2 was cheaper than the prescription D3, and that he had seen the D2 usually work quite well to bring up Vitamin D levels, although it did sometimes take multiple 3-month courses to achieve normal levels. He seemed unaware of the literature criticizing the use of D2 as a supplement.

You write: "When using the D3 I had the same effect of when I got tired, I got \*really\* tired right at bedtime, and slept like a rock" What was it like when you were taking the D2? What was your sleep like before you started the D2?

To the best of my recollection I did not have a similar response when taking D2. However, since this was not something I intentionally tracked, I may be mistaken.

Before taking D2 or D3 I thought I slept reasonably well. However, in retrospect, I would awake a few times during the night, take longer to fall asleep, and awaken less refreshed than with my "Vitamin D sleep".

You write: "not being tired when I should" – when is that?

What I meant is that when I'd get into bed at night, rather than feel tired (in the sense of "an onset to sleep", not "worn out") I would feel either wide awake or worn out, or both. By contrast, when taking the D3, almost as soon as I would lie down in bed I would feel an onset to sleep. Yesterday morning, I took one of my leftover 50K D3 pills and last night's sleep did seem to confirm the efficacy of the D3.

When you took the D3 once per week, you slept better every night? Or just the night after you took the D3?

To the best of my recollection, I slept well every night. I don't recall there being any noticeable variance relative to the day I took it.

Addendum by Seth. It is impressive that two things appear true: (a) the time of day D3 is taken mattered (other stories) and (b) a dose once/week at the right time improved sleep for seven nights (this story). The combination of the two supports the idea that our sleep is controlled by an oscillator and D3 at the right time gives that oscillator a push, increasing its amplitude.

1. <http://blog.sethroberts.net/2012/01/24/vitamin-d3-first-thing-in-morning-improves-falling-asleep/#comment-947679>

2. <http://blog.sethroberts.net/2012/01/24/vitamin-d3-first-thing-in-morning-improves-falling-asleep/>

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Guv (2012-02-06 16:15:27)

The once per week dosing is very interesting. Makes me wonder what the minimal dose would be in this once-per-week dosing scenario. Given that other posters ( & yourself i think?) have mentioned that smaller daily doses did not help sleep. ie. (from memory) 2000 IU not effective, 4000 IU effective. I wonder if 28,000 IU once per week (7 x 4000) would have the same sleep benefits throughout the week as 4000 IU per day (all taken in the morning of course).

Guv (2012-02-06 16:17:12)

.... & 'minimal does' should read 'minimal dose'.....

Guv (2012-02-06 20:02:20)

just thinking some more about this, if you were going to experiment with a larger weekly dose; it would probably be better & more interesting to start with a smaller "big" dose & see how many nights the sleep benefit (assuming you saw a benefit) lasted. ie. take 12,000 IU one morning & monitor your sleep over subsequent nights.

## **How Things Begin (honey wine vinegar) (2012-02-07 05:00)**

At the recent Fancy Food Show in San Francisco, the most impressive product I encountered was a honey wine vinegar made by [1]Slide Ridge Honey, a small family business in northern Utah. I interviewed the developer, Martin James,

about how the business and product began.

How did your business begin?

I started keeping bees when I was 9 years old. It was a hobby. When I was in my thirties, I wanted to start a business. I'd been doing flooring. Carpet, linoleum, that sort of thing. Large commercial jobs and residential. I wanted to be my own boss, control my own destination, have my own business. I started a honey business with my two sisters, one older, one younger. That was 10 years ago.

How did this product begin?

We wanted a more unique product. We wanted to expand beyond Utah. When you ship butter somewhere, it's already there – local honey. So it's hard to enter the market. We wanted to diversify our business so we weren't only selling honey. We wanted higher profit margins.

My sisters and I discussed lots of possible products. Eventually vinegar came out the favorite. There are only two other people making honey wine vinegar – one in Washington State (Honey Ridge Farms), the other in Italy. If you put our products side by side, you'll see they're totally different.

The development took 7 years. The first step was to use honey to make wine. I got yeasts from wine shops, brewing shops, and mail order. I needed to find a yeast that was compatible with honey. The first ones I tried produced off flavors – for example, the wine smelled like gasoline. I finally found a yeast that was compatible with honey, that made an excellent honey wine. The next step was [2] to produce vinegar. To do that I used an acetobacter – a microbe that eats alcohol and makes acid. It feels like piece of wet leather. What kombucha makers call a SCOBY. I found the acetobacter I needed from a vinegar maker in Napa Valley – a vinegar maker.

There was also four years of paperwork. Local, state, federal.

What has surprised you?

The reception. When they taste it, people's eyes light up. I hadn't prepared myself for the product to take off so well. Repeat customers buy 3 bottles. A lot of specialty chefs have taken an interest. A lot of TV chefs have come by.

1. <http://www.slideridgehoney.com/>

2. <http://www.popsci.com/diy/article/2008-12/making-vinegar-home>

wcb (2012-02-07 12:50:46)

Seth, the honey wine product sounds interesting. Can you specify what it was that impressed you with it and what you think the benefits might be.

wcb (2012-02-07 12:58:17)

Checked the slideridgehoney.com website and they are selling a bottle of the vinegar for 22 bucks, but no indication of how many ounces. Would be interested in your description of how it tastes and what "applications" you think it has. Seems like it might be great on salads, but what else? :-)

Seth Roberts (2012-02-08 04:12:27)

The honey wine vinegar tastes really good ... I suppose because it combines complexity, sweetness, and sourness better than other vinegars and other products. Not giving the bottle size is a serious omission, I agree. I'd probably use it on ice cream and meat.

Clyde Adams III (2012-02-08 09:43:24)

As best I can make out from the label on the bottle in the photo, it says: "8.5 FL OZ (250 mL)"

## **Vitamin D3 in Morning Has Ambiguous Effects on Sleep and Energy (Story 15) (2012-02-08 05:00)**

A reader named Murray Love [1]made a comment about Vitamin D3 and sleep that at least sounds negative:

As a counterpoint [to [2]this post], I've been taking 4-5,000 IU of D3 for a couple of months now, and while it might be making me feel better in other ways (more vital, upbeat, and energetic), it has coincided with a stretch of poor sleep. I have what they (hilariously) call "terminal insomnia" – that is, I usually have no trouble at all falling asleep, but I wake regularly at night and am permanently awake very early, often from 4:30am onwards. This has been a periodic problem for a few years now, though this stretch is notably tolerable, for some reason.

I asked for details:

Tell me about yourself.

I'm an engineer, Victoria, BC, age 44. A big confounding factor with me is that I started a new job in November, for which I get up at 6 am and (on most days) ride my bicycle about 12 km (7.5 mi) to work, instead of walking a few blocks as I did with my previous job. I started taking the D3 and having this round of sleep problems all within a few weeks of starting the new job, so it's difficult to disentangle all the correlations.

What time of day do you take the D3? What brand?

I take it around 6:30 am with my coffee. London Drugs (generic Canadian drugstore brand) 1000 IU tablets, though I'd prefer higher-IU gelcaps for ease of swallowing. I usually don't eat anything for breakfast unless I'm cooking for my sons, in which case it's meat and eggs with some fruit. Other times, when I'm not cooking but feeling hungrier than the norm at that time of day, I'll have a handful of almonds or mixed nuts around the same time as the D3.

You started taking D3 because of my posts about it?

That sparked my interest, since I thought it might help with early-morning insomnia. But I've also been reading about the benefits of D3 for a while, such as at Dennis Mangan's blog [3]here and [4]here.

You write: "This has been a periodic problem for a few years now," What do you mean by "periodic"? For the last few years – before the D3 – on what fraction of nights did you have this problem?

"Periodic" means that I experience it almost every day (weekends included) for several weeks or a few months at a time, then it goes away for some reason and I sleep more normally for several months. The usual pattern for my insomnia is: I go to bed at 10:30, give or take 90 minutes, fall asleep almost immediately, wake up 1-2 times during the night (usually briefly), then around 4:30 am wake up and either a) doze lightly and intermittently until my 6 am get-up time, or b) stay awake.

Since you started the D3, on what fraction of nights do you have this problem?

I'd guess 85 %. Once in a while, I manage to get some catch-up sleep and surprise myself by sleeping in.

You write: "this stretch is notably tolerable, for some reason." Could you say more about this? What do you mean by "notably tolerable"?

It means I am surprised that my typical 4.5- to 7-hour sleeps do not seem to be affecting my energy level, mood, or ability to concentrate, even over several days. Since I went low-carb mixed with intermittent fasting back in 2008, I don't tend to get mid-morning or early-afternoon energy dips, but since I started taking D3 (NB. plus new job, plus riding my bike again) I seem to be much more alert and cheerful, almost regardless of sleep. My experience seems remarkably similar to [5]the other reader's comment you posted this morning (27-Jan).

1. <http://blog.sethroberts.net/2012/01/26/vitamin-d3-at-7-am-4000-iu-better-than-2000-iu/#comment-947698>
2. <http://blog.sethroberts.net/2012/01/26/vitamin-d3-at-7-am-4000-iu-better-than-2000-iu/>
3. <http://mangans.blogspot.com/2010/02/vitamin-d-omega-3-index-obesity.html>
4. <http://mangans.blogspot.com/2009/11/vitamin-d-dosage.html>
5. <http://blog.sethroberts.net/2012/01/27/vitamin-d3-first-thing-in-morning-more-experience/>

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Daniel Lemire (2012-02-08 06:58:07)

My own experience. I have irregularly taken 1000 UI in the morning for years with no noticeable effect. For about two years, I have had poor sleeping patterns characterized mostly by the fact that I tend to go to bed at 1am or later (and then I get up around 7h15 am). Whenever I would try to go to bed earlier, I would simply fail to fall asleep. After reading this blog, I increased my intake of D3 to 4-5,000 IU. I'm now falling asleep about an hour earlier. This could be a placebo effect, of course, but I consider it a very significant improvement. It is unclear whether I have more energy. I don't know how to measure such an effect. I expect that I'm less irritable, but that's a side-effect of getting more sleep. I plan to continue to see whether the effect is sustained over months.

Shawn (2012-02-08 08:12:20)

"...for which I get up at 6 am and (on most days) ride my bicycle about 12 km (7.5 mi) to work,..." High-intensity early morning exercise can cause people to wake up earlier than expected. I used to do heavy cardio first thing when I woke up but noticed I would wake up 1-2 hours earlier with my heart beating fast and I would not be able to fall back asleep. The problem went away when I stopped exercising early in the AM.

gm (2012-02-08 09:17:11)

I have WEAK evidence that taking 4000 IU Vit D at 8am will cause me to wake spontaneously at 6am. I have no trouble going back to sleep. The sample size is small and I conjecture that the dosage is insufficient because the Vit D is not making me tired.

Vi (2012-02-08 10:27:20)

I also have terminal insomnia and also have found no effect on sleep from taking Vit D3 early in the morning. In fact, I also feel my sleep might be a bit worse from it. I do wonder though if there is perhaps some genetic variability at work here. My ancestors are from Northern Europe/Scandinavia. If they lived in that part of the world for many thousands of years wouldn't it be possible that they evolved a different way of handling Vit D, (perhaps a need for less, a super efficient way of handling small amounts, a preference for D from a different source (fish liver) for example) from those ancestors who lived in warmer, sunnier climates over the same period, and who consequently didn't have a need to modify the way they handled Vitamin D.

Ginna (2012-02-08 10:37:56)

Hey Murray, I started taking Vitamin D with gelcaps (on sale), and had good results. (I always slept well, but seemed more alert during the day.) But then my frugality kicked in, and I bought the tablets from Walmart, probably similar to the London Drugs. They don't seem to have the same effect, so I wonder if active ingredient works as well. I will have to bite the bullet and try the gelcaps again. Regarding why "this stretch is notably more tolerant", it could be that this new job situation is making the difference. I know I slept much better... :)

Stone Glasgow (2012-02-08 16:02:17)

5,000 IU of D3 wakes me up for a few hours and then I am very tired, needing a nap. 50,000 IU kept me up all day. I think my body needs a constant dose of it every few hours and "withdrawal" induces sleep.

Paul Sherrard (2012-02-09 08:27:54)

My immediate reaction to this was: "He's drinking too much coffee." Not that I could actually know that, but when I drink more than 2 cups a day this "terminal insomnia" thing happens to me until I cut back. Just a thought.

Seth Roberts (2012-02-09 10:21:09)

My immediate reaction to this was: "He's drinking too much coffee."

Interesting idea. I will try to find out.

M. Love (2012-02-09 23:39:24)

I do drink a lot of coffee, yes. Two or three cups of strong coffee between 6:15-7:15am, and then another two or three (of far inferior quality) at work between 8-11am. I don't usually drink coffee in the afternoon. What's the half-life of caffeine in the bloodstream? Around 5-6 hours, apparently, so maybe there's enough remaining to interrupt sleep. Maybe I'll give up coffee for Lent one of these years and see what happens, but the fact remains that the insomnia comes and goes while my coffee consumption remains more or less constant. And if I had to choose between coffee and getting a bit more sleep ... I might well choose the coffee, especially since the insomnia doesn't seem to be affecting my functioning this time.

## **What is a Healthy Scientific Ecosystem? (2012-02-09 05:00)**

An area of science is an ecosystem in the sense that research builds on other research. In an ordinary ecosystem the animals and plants need each other. Different organisms add different things. Their contributions fit together. In a healthy scientific ecosystem, different types of research add different things and fit together.

Personal science (science done to help yourself) differs greatly from professional science (science done as a job). The big differences help personal science and professional science benefit from each other. They are likely to benefit each other because they have interlocking strengths and weaknesses. Personal science is fast (experiments can be started quickly), has great endurance (experiments can last years), cheap, and intensely focussed on benefit. Professional science has none of these features, but it has other features that personal science lacks: it is "wealthy" (allowing expensive equipment and tests), peer-reviewed, and not intensely focussed on benefit, which allows studies without obvious value. These differences suggest that a system that contains both kinds of science is going to function better than a system with only one kind. Peer review, for example, is a helpful filter but may also suppress the diversity of ideas that are tested. Which implies that not all science should be peer-reviewed.

The relation between personal and professional science somewhat resembles the relation between animals (= personal science) and plants (= professional science). Animals and plants are very different, as are personal and professional science. Animals move faster than plants; personal science moves faster than professional science. Animals range more widely than plants. Likewise, a personal scientist can test a much wider range of treatments than a professional scientist. If you want to sleep better, for example, you can try almost anything. Professional scientists cannot try almost anything. For example, they cannot test treatments considered "crazy".

Animals and plants helped each other evolve, in the sense of diversifying to exploit new habitats. Animals helped plants exploit new habitats because they increased seed dispersal. This helped plants "test" more locations, helped them survive difficult circumstances such as drought (because some places are drier than others), and reduced competition between seeds (allowing more resources to be devoted to overcoming bad features of new places). Animals are like catalysts that speed up the combination of old plant and new environment to yield new plant. Likewise, plant evolution helped animals evolve because new plants in new places provided more food, more diverse food, and more places to live.

It is likely that personal science and professional science will help each other "evolve" (e.g., solve problems). Personal science wouldn't function well without professional science. For example, statistical packages, which help personal scientists, wouldn't exist without professional science. In the other direction, personal science can help professional science "evolve" (e.g., solve problems, build better theories) in two ways. One is idea generation, especially discovery of new cause-effect relationships. Personal scientists can easily do large amounts of trial and error. They can easily test many "crazy" (= low-probability-of-success) treatments, one after the other, until they find something that works. Professional scientists cannot do this sort of thing, which in the world of professional science has a derogatory name: fishing expedition. The other way personal science can help professional science involves idea application. Personal science can tailor ideas from professional science to individual circumstance. Professional scientists don't like to do this. They would rather do a big study in which all subjects are treated alike. Making better practical use of ideas from professional science is what Richard Bernstein did when he invented home blood glucose monitoring. He made better use of already-known cause-effect relationships.

I have not heard scientists talk about science as an ecosystem. If they did, it might cut down on the dismissiveness (correlation does not equal causation, the plural of anecdote is not data, etc.), evidence snobbery, and one-way skepticism.



dearieme (2012-02-09 05:21:17)

But "correlation does not equal causation" is a vital truth, the ignoring of which has led to two generation's worth of drivel health advice/instruction to the population.

Jim Purdy (2012-02-09 05:21:34)

Obviously, when different entities interact in an ecosystem, they co-evolve. However, these interactions are not always as benign as your portrayal. The players may be also be predators and prey, for example. And in the case of individuals and BigScience (or BigMedicine, or BigPharma), they may be rivals, especially when the large institutions dismiss N=1 evidence as "anecdotal." Whenever I have to choose between a large expensive study and my own N=1 experiences, I will feel comfortable going with N=1.

John (2012-02-09 10:06:06)

Seth, You recently posted about someone who experienced breakouts and [Irish] dairy. I think I have noticed this with Fage [full fat], but I have not tightly controlled my variables. Have you had any comments like this before? Would you suspect a difference between homemade yogurt (I like strained) and Fage?

Seth Roberts (2012-02-09 10:08:09)

Whenever I have to choose between a large expensive study and my own N=1 experiences, I will feel comfortable going with N=1.

Me too. But I am saying here that this choice – deciding which is better – doesn't do justice to the relationship. For example, people who do N=1 studies may be able to learn from large expensive studies. My first self-experimentation of any interest was a comparison of two Big Pharma treatments for acne. One worked, the other didn't. It was helpful to know that one worked.

Seth Roberts (2012-02-09 10:19:44)

But "correlation does not equal causation" is a vital truth, the ignoring of which has led to two generation's worth of drivel health advice/instruction to the population.

I disagree. I call "correlation does not equal causation" a phony critique. It appears to be helpful but actually isn't because it ignores the complexity of specific cases (the extent to which a correlation implies a specific causation depends on the plausibility of alternative explanations – about which no blanket statement is possible). I explain the poor health advice of recent decades as due to poor science – the health scientists involved (e.g., the ones studying weight control) are unable to make progress. A large fraction of them do experiments – e.g., the large clinical trials that "correlation does not equal causation" advocates are fond of. The lack of progress provided by large clinical trials cannot be explained by a failure to understand that "correlation does not equal causation".

dearieme (2012-02-09 17:11:02)

But much of the dud health advice - particularly but not solely dietary advice - is sourced not in large RCTs but in correlational studies, the sort of things that reveal (to quote an old joke) that it's people who wear bras whom are most prone to breast cancer.

Seth Roberts (2012-02-09 17:34:39)

John, several studies have pointed to dairy as one cause of acne. Even in America.

wcb (2012-02-09 18:24:52)

Seth, for me this is a very profound and astute insight. It is also expressive of what I think should be an ideal for real scientific discovery and progress. The caveat here, as I see it, is that the "professional" side of scientific study/ experimentation/inquiry

must be done more honestly and not be influenced or corrupted by special interests and/or those with an axe to grind. All too often, it appears to me that the "professionals" are engaged in the opposite of true scientific method; i.e. the research/inquiry is not conducted with a focus of trying to disprove a hypothesis, but rather to seek a specific result for financial or other material gain. (Have any of those guys ever heard of Karl Popper?) I'm sorry to say that pharma company research / drug development practices come to mind as one glaring example. So at this point I have to side with Jim P. on the virtue of N=1, but I certainly agree that professional science could (and should) be an invaluable aid to progress, but only if the corrupting incentives of \$ \$ can be removed from the equation, or at least attenuated.

### Assorted Links (2012-02-10 05:00)

- [1]Treasure trove of faces.
- [2]Is the Quantified Self movement a fad? "Does this numerical "self knowledge" make [Gary] Wolf healthier, happier or more effective?"
- [3]Interview with me about personal science by Doc Fermento.
- [4]Junk food in schools not obviously fattening.
- [5]A chemical in miso (genustein) strengthens bones better than bone drugs.

Thanks to Jim McGuire, Dave Lull and Peter Spero.

1. <http://bigthink.com/experts?sort=name>

2. [http://www.computerworld.com/s/article/9223594/Is\\_the\\_quantified\\_self\\_movement\\_just\\_a\\_fad\\_?taxonomyId=75&pageNumber=all](http://www.computerworld.com/s/article/9223594/Is_the_quantified_self_movement_just_a_fad_?taxonomyId=75&pageNumber=all)

3. <http://askbryan.com/thepodcast/14-seth-roberts-zero-is-a-low-dose.html>

4. [http://www.nytimes.com/2012/01/24/health/research/study-finds-no-childhood-obesity-link-to-school-junk-food.html?\\_r=2&partner=rss&emc=rss](http://www.nytimes.com/2012/01/24/health/research/study-finds-no-childhood-obesity-link-to-school-junk-food.html?_r=2&partner=rss&emc=rss)

5. <http://www.greenmedinfo.com/blog/humble-food-extract-puts-bone-drugs-shame>

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Jim Purdy (2012-02-10 11:48:19)

1. Faces ... no Seth Roberts? 2. Quantified Self movement a fad? Hardly, but hopefully all the intrusive gadgets will be a short-lived fad. Henry David Thoreau's book about his time at Walden Pond was a great self-experiment, especially since gadgets weren't distracting him from his self-observations.

Stephen M (Ethesis) (2012-02-12 19:41:19)

Another link: <http://www.biopoliticaltimes.org/article.php?id=6070>

Andrey Shestakov (2012-02-15 01:57:46)

Yesterday I watched about half an hour of the talks with bigthink's experts. Today I feel especially well—almost euphoric. The change is very easy to notice. I will look into it further. I must admit that my prior attempts to watch Bloggingheads didn't have any noticeable effect. The difference between Bigthink and Bloggingheads is that I actually enjoy Bigthink's videos a lot more, so I constantly look at the experts' faces. When I watched Bloggingheads I oftentimes looked away, because I usually listened to a podcast instead of Bloggingheads own audio. Because of that, my perception of time spent actually looking at faces may

be skewed.

### **What Is a Good Word For This? (2012-02-10 22:39)**

Can you help me? I am looking for a word – maybe a new word – to describe the transformation of an activity from (a) something done only by trained specialists, as part/all of their job to (b) something done by the general public, not as a job. For example:

- word processing software has made producing an attractive manuscript something that you no longer need hire a secretary to do – you can do it yourself.
- digital cameras and software have made producing high-end photographs something you no longer need a professional photographer to make.
- When I was a graduate student I hired a professional to make publication-quality figures for my scientific papers. Now I make them myself.

The transition I am talking about is part of a longer historical sequence that goes like this:

1. Hobby
2. Part-time job
3. Full-time job
4. Specialization (= division of labor)
5. [new word goes here]

The best word I can think of is deprofessionalization. Unfortunately that has been used [1]with a different meaning. Amateurization doesn't work because amateur often means hobbyist. Popularization doesn't work because the status of the activity has changed – from something done as part of a job to something done not as a job. It is one of several ways a job can change:

- More efficient. New tools, materials, etc., make it possible to do the same job in a shorter period of time or at lower cost.
- Higher quality. New tools, etc., make it possible to do a better job.
- More exclusive (= higher barriers to entry). Something (e.g., licensing requirements) makes it harder for others to compete with you.
- Less exclusive. Something (e.g., the Internet) makes it easier for others to compete with you.
- ????. People no longer need to hire you or someone like you to do what you do. They do it themselves.

I care because personal science (science done to help oneself) is an example. For a long time, non-trivial science was done only by professional scientists. Now it is being done by non-professionals.

More What about publicization? Or is it too ugly? I looked up democratization as a possibility but found this under "democratization of photography": "Serious photography has gone from being the preserve of the reasonably well off to something that just about anyone can take up with minimal expense". That isn't what I mean here – that the price of something comes down. Hoipolloization is too long. What about massification?

Still More It really is DIY, I hadn't thought of that. That exactly conveys the transition from job to non-job. DIYing (or should it be DIYization?) has a nice ring to it, is very short, is not pompous, and would not need to be defined. I also like promethization, deguilding, democratization, and deprofessionalization.

1. <http://www.medscape.com/viewarticle/494608>

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Tim Beneke (2012-02-10 23:25:49)

How about "X democratization" with the domain as an adjective? Or "democratized X"? Democratized scientific research; democratized publishing; or demo-technologized publishing/science/photography...? Or demotechnic?

David Johnston (2012-02-10 23:45:00)

Despecialization seems to fit.

Jim Purdy (2012-02-10 23:51:57)

1. – Meme Break Out (like a jail break) 2. – Idea Break Out (same as 1. above) 3. – De-Walling (like taking down the Berlin Wall) 4. – De-Latinization (like when the Catholic Church in the 1960s moved away from the Latin Mass) 5. – Epidigm or Epidigmia, or Epidigmatic (When a paradigm breaks out and spreads rapidly, like an epidemic)

Seth Roberts (2012-02-11 00:04:32)

The problem with "despecialization" is that it is not the reversal or undoing of specialization. On the other hand, I may not be able to do better...

Seth Roberts (2012-02-11 00:07:20)

"democratization" already has a (different) meaning but yes, that is close to the spirit of it. The specialists no longer have a monopoly.

Seth Roberts (2012-02-11 00:23:07)

Yes, "break out" is how I think of it.

gaspard (2012-02-11 00:25:16)

Democratisation is used to mean this in French, among other things - 'accessibility' is also used in British English. I heard a great soundbite way of expressing this by an open source software guru "zero to expert in zero dollars".

Ian (2012-02-11 00:35:37)

Laification? It's close, but it sounds a bit too much like religion should be involved.

Seth Roberts (2012-02-11 01:37:32)

"laification" is very close in terms of meaning ... it is just too obscure, "laity" being a rare word that I barely can spell.

Keimpe Wiersma (2012-02-11 01:49:32)

DIY

Wilhelm (2012-02-11 01:59:26)

Easyfication ;-)

wobbly (2012-02-11 02:05:53)

Deguilding? As in the science is no longer held by a guild. Maybe there's a better word around 'guild'. Commodification or Commoditization? It implies the limited nature of expertise has been let loose for the masses. A pain to spell. Defrocked? Religious, but more personal.

Jeremy (2012-02-11 02:41:32)

Empowerment is what you mean, I think. Empowering?

LM (2012-02-11 03:45:02)

multiversality?

dearieme (2012-02-11 05:00:15)

de-artisanilisation.

justin (2012-02-11 05:01:34)

"Distribution" is the closest I can get to it.

Mark Cancellieri (2012-02-11 06:26:20)

How about "ubiquitization"? :-) The funny thing is that I thought that I just made it up, but "ubiquitization" and "ubiquitize" are already on Urban Dictionary. :-)

Carl Willat (2012-02-11 09:07:26)

Deprofessionalization is still your best choice. Just commandeer it. "Photography has become deprofessionalized." Sounds just right. Who cares if it has another meaning too? However, mugglefication (adapting a term from Harry Potter) would mean it's not being done exclusively by the wizards anymore. Too cute for my taste, though.

Andrey Shestakov (2012-02-11 09:08:17)

Massification sounds good. For example, in programming, available to virtually anyone with a computer, there is a strong tendency for hobbyist projects to grow into worldwide-accepted tools. Gmail started as a side-project, as several website-building frameworks. I'd call that massification without a doubt (:

Michael D (2012-02-11 09:10:42)

De-skilling

Elizabeth Molin (2012-02-11 09:12:02)

Panification? It doesn't have a definition yet and it's easy to say. To me, massification sounds too much like mastication.

gwern (2012-02-11 09:25:49)

Toffler's 'prosumer' and 'prosuming'?

Nancy Lebovitz (2012-02-11 09:30:53)  
Skill access?

Ken (2012-02-11 09:40:53)  
"Commonification"

Ken (2012-02-11 09:42:43)  
or better, "Commonification", the new verb being "to commonify"

Aaron Blaisdell (2012-02-11 10:23:26)  
prometheitization, prometheitize?

Bryan (2012-02-11 10:51:57)  
I vote for "democratize" too. The second dictionary definition is, "Make (something) accessible to everyone."

Stone Glasgow (2012-02-11 11:46:25)  
Any examples of this occurring where the cause was not borne of improved technology, affordable to average people?

Stone Glasgow (2012-02-11 11:54:54)  
Personal science is more like practicing a religion without going to church; without the blessings of the ordained leaders of the religion. It is today considered blasphemous to examine one's own reactions to change, even if most confounding variables can be eliminated.

Seth Roberts (2012-02-11 12:50:39)

Personal science is more like practicing a religion without going to church; without the blessings of the ordained leaders of the religion.

yes, that's very true. It does have a "how dare you!" (blasphemous) aspect, which other instances of deprofessionalization or whatever you call it – such as digital photography – do not. To answer your question, all the examples I can think of came from new cheap technology.

wobbly (2012-02-11 14:56:21)  
Post-guild.

Darius Bacon (2012-02-11 15:54:46)  
I like 'demotic' better than 'democratic' since it's shorter and avoids political associations. Poor basis for a noun, though, and obscure. Self-help is to the point too, but has a more specialized meaning now.

WCB (2012-02-11 16:21:42)  
How about self-reliafication? Aren't we talking about being less reliant on others so we can be more self-sufficient? "Self-sufficientiation" seems a little too much for one word. -:-)

Jenny (2012-02-11 17:36:21)  
How about 'imspecialisation' as in perfect-imperfect?

Chris U (2012-02-11 21:18:03)  
mass enabling - more positive connotation than de-something

nile (2012-02-11 22:03:39)

Laity (and related terms as lay workers, laymen, laypersons, etc ) is widely used and understood in most Catholic and Protestant congregations. I think it is much more widely used and understood than you might imagine or have experienced. I think "laification" is a good fit. Some congregations have lay pastors or lay preachers - exactly the transition from specialist (priest or preacher) to "something done by the general public, not as a job." that you are looking for.

Christopher Burd (2012-02-12 11:35:41)

My contribution is "vernacularization". But I actually agree with Carl Willat. Just commandeering "deprofessionalization". Linguistic patterns like "de + X + ization" don't typically have precise meanings out of context, but people coin new instances because they need a term for some precise meaning. So, the established meaning of "deprofessionalization" (= a shift in a job's requirements from a high to lower skill level [?]) occupies only one point in the field of potential meanings of that word. There is room for alternative meanings.

Stone Glasgow (2012-02-12 13:45:58)

I think that this process is simply the march of technology, and the growth of wealth in society. Over time, the total amount of valuable things grows, and stuff that was only available to royalty and billionaires eventually becomes ubiquitous. Examples include automobiles (85 % of households below poverty line have one, 35 % have two cars), cell phones, computers, spices (black pepper was worth more than gold at one time), indoor plumbing, medicine (most common drugs are now \$4 per bottle at Walmart), electronics (DVD players, navigation systems), etc. As time passes, we find ways to make everything cheaper, and everyone can afford to do what specialists used to charge a premium for, basically because they had access to expensive equipment that regular people could not afford. I think personal science is a different phenomenon. It's an act of dissension, taking matters into one's own hands instead of asking high-ranking men of science for approval, who have convinced most of us that large double-blind studies are the only way to differentiate causation from correlation. Most people are convinced that anecdotal evidence is worthless, and that the only way to know if a drug or treatment will work is to look to the leaders of the scientific community, in the same way that religious leaders in the middle ages convinced most that they were the only way to decide what is moral and what is not, and the only way to predict the future. In the past, they predicted armageddon; today they predict runaway man-made global warming that will kill us all. It's basically the same religious process. So, in the future, I suspect that more and more of us will realize the nature of scientific religion, as it were, and begin to defect from its grip in ever greater numbers. Today huge percentages of Europeans are agnostic about God, and I suspect that many years from now most of the developed world will be pro-personal-science, and will largely discount the influence of the scientific-religious leaders of tomorrow. Many years from now we will realize that science is today controlling the lives of average people in the same way as medieval priests.

Paleophil (2012-02-12 16:24:58)

folkification, laicization, demystification, detechnicalization, generification, reverse specialization

Peter (2012-02-12 16:57:30)

I think you're looking for "disintermediation".

Maria Droujkova (2012-02-12 17:18:13)

When something that was done by everybody becomes the domain of professionals, it's called "professionalization" - and the opposite would be "de-professionalization." This is similar to, for example, deschooling as Illich used it, which I like in this context. And similar to de-medicalization of breastfeeding which needs to happen, and de-professionalization of breastfeeding consultants back to LLL ideals.

Stephen M (Ethesis) (2012-02-12 20:02:05)

The word is almost automation. Most of these tasks are ones where a computer has taken them over. There ought to be a word for that process, and I think there is, just can not remember it.

Rafael (2012-02-12 23:22:42)

Younification. Reminded me of TIME magazine's 2006 Person of the Year.

Melissa (2012-02-13 08:30:40)

I really like Christopher Burd's suggestion of "vernacularization". I also like the idea of a public skill set that changes and has things enter (and exit, say weaving or sewing) this way. Having language to talk about the public skill set would be useful because I most often see people talking about how we have fewer public skills, when it seems that they just change over time and changing based on technology available is normal flow (eg high literacy)

Christopher Burd (2012-02-16 17:39:37)

"Vernacularization" is also a good Ivan Illich word. DIYization does what Seth want, but makes linguistic purists grit our teeth.

## **Vitamin D3 in Morning Helps Him Sleep Through the Night (Story 16) (2012-02-11 05:00)**

Greg Harrington left a comment on [1]an earlier post:

I have had very similar results [fall asleep more easily] from first-thing in morning D3.(NOTE: I have great flexibility in my schedule – I can sleep/awake whenever I want – so I have been most focused on "restful" sleeping.) Differences: (a) My pre-D3 issue was restless sleep (waking up frequently), not failure to fall asleep. (b) The effect of sleeping all the way through the night was definitely immediate–very first night. (c) Also, most days I also wake up feeling more "rejuvenated". This is not 100 % though.

I asked him for details.

Tell me about yourself.

I've lived Austin,TX since 07/2011. Kansas City, MO before that. I'm a software programmer. 6' 3". 210 lbs. (White male, mostly German, but completely European descent.)

How did you want to improve your sleep?

I want to sleep through the night without waking up 3-6 times in a 6-9 hour sleep. This problem has lasted for 2-3 years. It sort of crept up on me. I go to sleep between midnight and 2 am.

How much D3 do you take? At what time?

I take 50,000 IU between 8 and 9 am. If I forget or wake up later, I don't take it. [2]This is the product I take: Bio-Tech D3 in 50,000 IU capsules.

Why 50k? It was available on Amazon, and I calculated that to be what you'd get from 75-90 minutes of full-body sunlight. Thinking about Paleo lifestyle...that seemed reasonable. This is a LOT more than most SE people are taking but I wanted to maximize the effect! ;-)

Any effects of D3 on something other than sleep?

I often waking up feeling more rested/rejuvenated. But not every day. I tend to feel tired between 11 pm and midnight.



What happened when you started taking D3 in the morning?

1. <http://blog.sethroberts.net/2012/01/24/vitamin-d3-first-thing-in-morning-improves-falling-asleep/>
2. [http://www.amazon.com/gp/product/B000A0F2B2/ref=as\\_li\\_ss\\_tl?ie=UTF8&tag=harrslife-20&linkCode=as2&camp=1789&creative=390957&creativeASIN=B000A0F2B2](http://www.amazon.com/gp/product/B000A0F2B2/ref=as_li_ss_tl?ie=UTF8&tag=harrslife-20&linkCode=as2&camp=1789&creative=390957&creativeASIN=B000A0F2B2)

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Albert (2012-02-11 09:09:30)

50000 IU seems like way too much to take on a daily basis. (I've never seen anyone recommend more than 5K to 10K per day.) I would recommend that this person get his blood levels checked and make sure they are not too high. Otherwise serious complications could occur.

Chris U (2012-02-11 11:35:01)

Some recommend taking 50k once per week. IMO, if you're taking 3k or more per day get a blood test. Do some research and pick a target level, mine is 100 nmol/L (40 ng/ml), then retest to monitor progress. The units differ according to your location. In Canada our tests are in nmol/L in the USA it is usually ng/ml.

Jean (2012-02-11 13:43:40)

Making vitamin D by exposing skin to sunlight creates a create negative feedback-the skin darkens and makes less vitamin D, so no one is getting 50000 units of vitamin D on a daily basis from sunlight. Wrong assumption, but good guess. Complications of high vitamin D include abnormal bone formation, kidney stones and possibly brain function. 50,000 a week for 8-12 weeks is the medical regimen for true deficiency, then the replacement is based more on geographic latitude than anything else.

Alex Berg (2012-02-11 14:35:26)

I'm wondering if Greg Harrington took the negative feedback effect into account when he computed how much d-vitamin is created from 75-90minutes fullbody daylight. The body has a negative feedback system which cuts down d-vitamin production after some or enough has been produced. I've once heard it said that it only takes 15 minutes sunlight to reach that limit for white people. I tried confirming this number by asking Google + Wikipedia, but none made we wiser. But the negative feedback system definitely exists.

Henk Poley (2012-02-22 05:01:52)

Huhm.. your body can only keep around 200,000 IU total. Taking 50k IU daily is too much, as it uses only about 5k per day.

## Vitamin D3 in Morning Improves Mood But Not Sleep (Story 8 Update) (2012-02-12 05:00)

In [1]an earlier post, Alexandra Carmichael of [2]CureTogether noted that 4000 IU/day Vitamin D3 gave her better results than 2000 IU/day. Her mood was better and her sleep was better. But she'd only taken the larger dose once.

She recently sent me an update:

Since I last wrote to you [8 days earlier], I've been taking 4000-6000 IU Vitamin D3, and I can report that it's NOT having a positive effect on my sleep, but it is balancing my mood significantly, helping me to handle normally overwhelming situations with much more ease, and avoiding mood extremes. This is a wonderful thing!

Anyway, just wanted to let you know I don't fit the sleep-improvement set - I still wake up super easily in the night. Falling asleep is easy, but I attribute that to the blue blocker glasses. Also, 4000 IU is much better at balancing my mood than 2000 IU (no noticeable effect) or 6000 IU (feelings of intensity or overwhelm increase).

1. <http://blog.sethroberts.net/2012/01/26/vitamin-d3-at-7-am-4000-iu-better-than-2000-iu-story-8/>
2. <http://curetogether.com/>

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Shawn (2012-02-13 08:26:46)

If vitamin D3 tricks the body into thinking it's getting a lot of sunlight, unless someone is seeking to reset their circadian rhythm (for example when traveling) it seems to me that it would be best to take it in the afternoon, or, ideally, small doses throughout the day, with the strongest concentration around during the brightest times of the day.

Seth Roberts (2012-02-13 12:12:20)

If vitamin D3 tricks the body into thinking it's getting a lot of sunlight, unless someone is seeking to reset their circadian rhythm (for example when traveling) it seems to me that it would be best to take it in the afternoon, or, ideally, small doses throughout the day, with the strongest concentration around during the brightest times of the day.

I think the goal is to increase the amplitude of your circadian rhythm so that you will be more awake during the day and more asleep during the night. Perhaps morning sunlight has more effect on circadian amplitude than sunlight later in the day. I've taken D3 at various times in the morning; around 10 am the effect seemed to go away, although I'm not sure of that.

Anima (2012-02-17 19:51:52)

I have bipolar disorder that has been well-controlled for some time now. I recently had an episode of hypomania that seems to have been triggered by upping my morning dose of vitamin D to 5000 IU for several days. I used to take 2000 IU, and I have taken 4000 IU without incident, so 4000 IU may be my sweet spot - or at the very least upper limit - as well. The hypomania lasted longer than what is typical for me and it was not followed by depression, despite the fact that I drank a lot of alcohol (binging on alcohol has always immediately ended a hypomanic episode in the past for me, but would also always cause debilitating depression). It's great that this blog is highlighting the potential benefits of taking vitamin D, but I really wish I had been more careful with this supplement. It seems obvious that a person with BPD should be cautious with anything that effects mood and circadian rhythm, but since my mood has been a non-issue for some time now and I no longer take handfuls

of medication, I've stopped thinking of myself as bipolar (as stupid as that sounds). This was definitely a wake-up call.

### **High Defect Rate in Ultrasound Machines That Scan Pregnant Women (2012-02-13 05:00)**

Two studies in Sweden by the same group have found high rates of defects in ultrasound machines used to scan pregnant women. The line of research began when doctors at the Karolinska Hospital discovered that many of their ultrasound machines were malfunctioning.

[1]The first study examined about 700 machines from 7 manufacturers. About 40 % had defective transducers – the only element tested. "The high error frequency and the risk for incorrect medical decisions when using a defective transducer indicate an urgent need for increased testing of the transducers in clinical departments," the authors concluded.

[2]The second study tried to find out how fast the machines break. The researchers examined about 300 machines all of which were working correctly (or had been fixed to work correctly) a year earlier. The retest showed that about 30 % were defective. Apparently they break easily – and nobody notices.

These are lower bounds on the defect rate of the whole machine because only one part of it was tested. Because one part of the machine breaks so easily without detection, it makes me worry about the part of the machine that determines the strength of the ultrasound. How often is the actual strength much higher than the intended strength?

[3]Caroline Rodgers has argued that ultrasound is a plausible cause of autism. [4]A 2010 epidemiological study found no link between autism and ultrasound but these high defect rates call that study into question. In that study, almost all children (about 90 %) had had experienced ultrasound before birth. This means that lack of correlation with autism means lack of correlation of number of scans (1 or more) with autism. This leaves open the possibility that it only takes one scan from a defective machine to produce autism. If that were true, and each child scanned repeatedly by the same machine (e.g., if a child has three scans, all are from the same machine), there would be no correlation between autism rate and number of scans.

These results scare me. It isn't just ultrasound and autism. I [5]blogged a few weeks ago about gross dosage errors in CT scans, some patients getting 10 times the intended dose of radiation. Here is another example where the operators of dangerous medical devices had no clue about appropriate testing and maintenance.

Thanks to Emily Williams who sent me a paper that mentioned these studies.

[6]More about the ultrasound/autism link. [7]Association between prenatal ultrasound and lefthandedness, which implies that ultrasound affects fetal brain development.

1. <http://www.ncbi.nlm.nih.gov/pubmed/18945726>

2. <http://ehjcmaging.oxfordjournals.org/content/11/9/801.full>

3. <http://www.midwiferytoday.com/articles/ultrasoundrodgers.asp>

4. <http://www.ncbi.nlm.nih.gov/pubmed/19728066>

5. <http://blog.sethroberts.net/2012/01/23/assorted-links-145/>

6. [http://www.huffingtonpost.com/michealene-cristini-risley/autism-ultrasound\\_b\\_892788.html](http://www.huffingtonpost.com/michealene-cristini-risley/autism-ultrasound_b_892788.html)

7. <http://www.ncbi.nlm.nih.gov/pubmed/11679787>

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dearieme (2012-02-13 08:16:56)

I need ultrasound studies on my heart and CT scans on my head. Should I be worried?

Jim Purdy (2012-02-13 08:27:18)

Why am I not surprised?

Dennis Mangan (2012-02-13 08:47:26)

In the clinical lab, QC is the rule on every piece of equipment for every test, daily or sometimes once every 8 hours. It seems like no one was doing any quality control testing on these ultrasound instruments.

High Defect Rate in Ultrasound Machines That Scan Pregnant Women « Thor Falk's Reading List (2012-02-13 10:48:12)

[...] Seth's Blog » Blog Archive » High Defect Rate in Ultrasound Machines That Scan Pregnant Women.... [...]

Seth Roberts (2012-02-13 12:14:12)

I need ultrasound studies on my heart and CT scans on my head. Should I be worried?

I don't know. But the next time I am asked to have dental X-rays made I will ask to see the maintenance/testing records.

Jim Purdy (2012-02-13 13:47:56)

Are dental x-rays really necessary? BTW, do you remember back in the 1950s when shoe stores had x-ray machines that let you see how well your feet fit in shoes? I think I would prefer that my feet get zapped for that sensible purpose instead of my head getting zapped.

Seth Roberts (2012-02-13 18:05:18)

Are dental x-rays really necessary?

A very good question.

CFortier (2012-02-14 13:20:41)

In regards to dental x-rays, I believe people on the fence about them should look to another theme of this blog: hormesis. I, for one, am not too worried. The ultrasound topic strikes me as altogether more sinister. Has anyone had experience taking a skeptical attitude to these tests? I imagine the pushback from the docs would be extreme.

Seth Roberts (2012-02-14 17:51:10)

In regards to dental x-rays, I believe people on the fence about them should look to another theme of this blog: hormesis. I, for one, am not too worried.

yeah, I am not worried so long as the machine is working properly. If it is not working properly...

The ultrasound topic strikes me as altogether more sinister. Has anyone had experience taking a skeptical attitude to these tests? I imagine the pushback from the docs would be extreme.

Good question. I also wonder what happens if you take a skeptical attitude toward the machines themselves ("when was the last time this machine was tested?").

Nancy Evans (2012-02-22 15:07:20)

Prenatal ultrasound may be hazardous for developing babies because ultrasound involves heat, sound and vibration, all or any of which can interfere with normal brain development. During the prenatal period, the developing human is most vulnerable to any environmental insult, either chemical (pesticides, industrial chemicals) or physical (radiation, ultrasound). The use of prenatal ultrasound has increased dramatically over the past 30 years as has the prevalence of autism. Yet the focus of most research into causes of autism has been primarily genetics and chemical exposures. However, there is considerable research showing cause for concern and you can find abstracts of the studies at [www.ultrasound-autism.org](http://www.ultrasound-autism.org) You can also find Caroline Rodgers excellent powerpoint presentation The Elephant in the Room at <http://iacc.hhs.gov/events/2010/full-committee-mtg-slides-Oct22.shtml> Ultrasound may be safe for adults whose body systems are fully developed but it can severely affect developing babies.

### **DIYization: The Word I Was Looking For (2012-02-13 17:00)**

In [1] a recent post I wondered what's a good word to describe the next step in economic progress after specialization – when making/doing X is done by the general public (not as a job) instead of just by paid specialists (as a job). For example, the introduction of [2] cheap cameras allowed the general public, not just professional photographers, to take pictures. Personal science is an example of such a shift, of course. Thank you for your many suggestions, such as laitization, deguilding, promethization, and several more. The combination of Keimpe Wiersma's suggestion (DIY) and wobbly's suggestion (deguilding) led me to DIYing and DIYization.

DIYing, I learned, is [3] an existing word with a different meaning (to do DIY). Although ordinary DIY (Home Depot) is associated with men, women appear to use DIYing far more than men and they use it to describe traditionally feminine activities (see [4] this). For example, there is a blog [5] DIYing To Be Domestic by a woman. This is irrelevant to whether I use it – it's just interesting.

DIYization is much rarer. It appears in [6] a 2005 essay called "Scandinavian Dreams: DIY, Democratisation and IKEA" where it refers not to a change in an activity but to a change in society – toward more DIY. IKEA, says the essayist, is an example of "the DIYization of society."

DIYing is shorter. DIYization is more self-explanatory, less likely to be confused with dying, and makes clearer the connection with specialization. Not to mention it is more pompous – more Veblenesque. In the last chapter of The Theory of The Leisure Class, Veblen used long rare words to say that academics show off their uselessness using by using long rare words.

1. <http://blog.sethroberts.net/2012/02/10/what-is-a-good-word-for-this/>
2. [http://en.wikipedia.org/wiki/Brownie\\_%28camera%29](http://en.wikipedia.org/wiki/Brownie_%28camera%29)
3. <http://en.wiktionary.org/wiki/DIYing>
4. <http://en.wiktionary.org/wiki/DIYing>
- 5.
6. [http://www.transformationsjournal.org/journal/issue\\_11/article\\_02.shtml](http://www.transformationsjournal.org/journal/issue_11/article_02.shtml)

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Keimpe Wiersma (2012-02-14 13:15:52)

Thanks for the credits. I'm glad I could be of service. Love your work!

## Apple Admits It Has a Workplace Problem (2012-02-13 20:39)

From [1]The Independent:

Facing a growing scandal over the working conditions of those making its best-selling gadgets, Apple has called in assessors from the same organization that was set up to stamp out sweatshops in the clothing industry more than a decade ago. The move is an admission that Apple's own system of monitoring suppliers has failed to stamp out abuses, and that the negative publicity surrounding its Chinese operations threatens to cause a consumer backlash against its products.

[2]I blogged about this a month ago. I think this announcement suggests the power of This American Life (which recently aired [3]a show about working conditions at Apple's factories) or Steve Jobs (his ability to "see no evil") or both. It reminds me of the American Civil Rights movement. That movement made considerable progress soon after TV became widespread and Northerners could see Southern brutality on the evening news. Mike Daisey, via This American Life, suddenly made this problem a lot clearer to a lot of people outside Apple, thereby putting pressure on Apple management.

1. <http://www.independent.co.uk/life-style/gadgets-and-tech/news/apple-admits-it-has-a-human-rights-problem-6898617.html>
2. <http://blog.sethroberts.net/2011/12/28/the-legacy-of-steve-jobs/>
3. <http://www.thisamericanlife.org/radio-archives/episode/454/mr-daisey-and-the-apple-factory>

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Jim Purdy (2012-02-13 23:51:24)

YOU SAID: "...the American Civil Rights movement ... made considerable progress soon after TV became widespread and Northerners could see Southern brutality on the evening news." It's hard for me to think of TV, especially with "reality" shows, violence, and Rupert Murdoch's Faux News, as being a force for good. But what do I know? I don't even have a TV. You may be a little bit correct about TV having an effect on the politics of civil rights. However, I would suggest that the real change came from a repositioning of the political parties, as the Democratic voters shifted to the north and west, and the GOP embraced the views of the Old South. The recent failure of Jon Huntsman showed that the once-mighty moderate wing of the GOP has been replaced by the likes of anti-moderates like Santorum and Gingrich.

Robin Barooah (2012-02-14 01:47:31)

I am uncomfortable about the disingenuous reporting side of this, and I'm very skeptical about the cause-effect relationship. The media attacks anyone who has a vulnerability, whether it's in the interests of society or not. The more high profile the target, the more money the media can make by selling advertising against the attention it attracts. Apple has been openly reporting labor problems on its own, for years, and it very much appears that they called in the FLA voluntarily, before the NYT or NPR pieces. It's flat out dishonest of the media in general (not Seth) to present Apple as a problem case without pointing out that they are ahead of their competitors in this area. If they wanted to help more, they could promote real competition in this area by showing comparisons rather than hoodwinking people into supporting companies with even worse practices.

Seth Roberts (2012-02-14 06:25:38)

Robin, the only media I have seen criticizing Apple lately has been This American Life - is this what you mean by "NPR"? If it is, I am curious why you think it was dishonest. The TAL program started with Apple and emphasized Apple but it did not end with Apple - working conditions at non-Apple factories were considered - and it gave a voice to a defender of these factories

(Nicholas Kristof). To me it was basically a show about how American companies exported jobs overseas but did not export the worker protections that had grown up around those jobs. This is how the show ended – with Daisey saying that.

Adam (2012-02-14 07:55:20)

<http://cache.johnchow.com/wp-content/uploads/2012/01/apple-foxconn.png>

Robin Barooah (2012-02-14 09:53:59)

The main pieces I'm referring to are the two in the NYT which were far less balanced.

Seth Roberts (2012-02-14 17:43:37)

Adam, I take the comparisons in the johnchow.com page differently than you do. They are unadjusted for anything – age, sex, location (e.g., urban/rural), type of work, etc.

Seth Roberts (2012-02-14 17:46:16)

The main pieces I'm referring to are the two in the NYT which were far less balanced.

oh, I see. I probably would agree with you. That happens a lot with the NYT.

Glen Raphael (2012-02-14 21:21:50)

Seth, this really is much ado about nothing. Adjust for whatever the heck you want, you'll be hard=pressed to find \*any\* context that says working at Foxconn is worse than these worker's other available opportunities. Adjusting for location (urban/rural) actually isn't appropriate because many workers flock to the urban factories to escape rural life - their next best option is working on the farm, where they'd have much higher risks of every sort including the risk of causing their family to starve. But as for the rest, the documented suicide rate at Foxconn isn't merely lower than that in china generally; it's also lower than that in the US and lower than the rate at US or chinese colleges (an appropriate comparison since assembly workers tend to be in the 16-21 age group). One way we know that conditions are \*unusually good\* at Foxconn is that one of the problems Apple found (and is trying to stamp out) is that many workers are willing to pay large bribes to third parties in order to get these jobs. Some pay more than a month's salary in advance as a kickback to intermediaries. Near as I can tell, the chief problem here is that people aren't willing to do math. They just say "20 people in a year seems like a lot" without making that a percentage or comparing it to \*anything\*. But Foxconn employs more people than the entire population of Wyoming, so our intuitions about how many should happen are out of whack. If you want to claim "too many" people are harmed in industrial accidents or are committing suicide or are in violation of safety regulations or even in are violation of local child-labor laws, one thing you might try is to find the equivalent numbers for the population of Wyoming. Hint: they'll probably be worse. I have yet to see any such comparison that made Foxconn look bad. (full disclosure: I've worked in a Chinese factory alongside assembly workers; I've also seen Mike Daisey's show. After the show I asked him a clarifying question and he admitted he exaggerates a bit for dramatic purposes.)

Glen Raphael (2012-02-14 21:33:54)

btw, the previously-linked graphic was based on this (pretty good) Forbes article: <http://www.forbes.com/sites/timworstall/-2012/01/29/the-apple-boycott-people-a-re-spouting-nonsense-about-chinese-manufacturing/>

Seth Roberts (2012-02-14 23:04:38)

Adjust for whatever the heck you want, you'll be hard=pressed to find \*any\* context that says working at Foxconn is worse than these worker's other available opportunities.

1. If you have done any adjustments, what were the results? No epidemiologist on earth would seriously compare rates of suicide among Foxconn workers to "Chinese national average". What about comparisons to American workers of similar age,

job, etc.? What about comparisons to Foxconn suicide rates in earlier years? 2. The workplace injury comparison in the graphic was not between "these worker's other available opportunities", it was with US workers. I think it is praiseworthy, not "nonsense" (Forbes), that at least some Americans believe Chinese workers should be as safe as American workers doing similar jobs. Which is blatantly not the case. Not because of the suicides, which are hard to interpret without more comparisons, but because of other problems, such as repetitive strain damage. As Daisey says. I agree with the Forbes writer (Tim Worstall) about wages but not working conditions. I don't think Daisey complained about low wages. 3. Fine to criticize Daisey but pointless to leave out the details. What did you ask him and what did he reply?

Glen Raphael (2012-02-15 07:52:00)

> I think it is praiseworthy, not "nonsense" (Forbes), that at least some Americans believe Chinese workers should be as safe as American workers doing similar jobs. Which is blatantly not the case. What's your evidence that this is "blatantly not the case"? We know the rate of \*fatal\* work injury is \*higher\* for American workers than for Foxconn workers and it often makes sense to use fatal injuries (which are easiest to unambiguously measure) as a proxy for non-fatal ones. I've seen no calculation of repetitive strain injuries per 100,000 there but it seems likely to me that's lower at Foxconn too, based on the additional context that this is work young people do for quite a short period of time. (and also based on my knowledge of the work conditions at a similar plant) > If you have done any adjustments, what were the results? No epidemiologist on earth would seriously compare rates of suicide among Foxconn workers to "Chinese national average". What about comparisons to American workers of similar age, job, etc.? **The Foxconn suicide rate is less than the suicide rate of American college students, who are of a roughly similar age.** (It's hard to compare to American \*workers\* of a similar age/job since many American workers at the same age aren't allowed to work full-time.) I think it's incumbent on those claiming Foxconn's rates are unacceptable to find \*some\* comparison that Foxconn is worse than so we can figure out what rates they \*would\* consider acceptable. In his show, Daisey implied there were much older workers on the factory line, which wasn't true. He did this partly for comic effect when taking about how factories allegedly evade "child labor" restrictions by swapping in their oldest workers when the inspectors arrive. I asked him if he actually \*met\* any old workers (say, older than 26) and he said he hadn't and that he had exaggerated. If repetitive motion injuries are caused by doing the same job for a very long period of time, it's relevant that nobody does this for a full career. Most people don't do this job for long; they're there for, say, 2-3 years and then go do something else. The nearest relevant US comparison might be with working at McDonald's. Or being in the army. Daisey complained that if you were to start work (illegally) at 14 and work the same station the same way continuously until you're 23 it'd be bad for your health, ignoring the fact that nobody does that. The jobs don't stay stable for that long nor do the workers stick around for that long. If you deal with the conditions and problems that actually exist in practice rather than the worst hypotheticals one can dream up, it's not so bad. Yes, you can find sad hard-luck stories there, but you'd be able to do that anywhere given the size of the relevant population.

Seth Roberts (2012-02-15 13:52:18)

What's your evidence that this is "blatantly not the case"?

What Daisey said. Plus what is in China Blue, a movie about blue-jean production in China.

We know the rate of \*fatal\* work injury is \*higher\* for American workers than for Foxconn workers and it often makes sense to use fatal injuries (which are easiest to unambiguously measure) as a proxy for non-fatal ones.

Jobs differ enormously in how often they cause injury. This is why such comparisons (Americans with all jobs vs. Foxconn workers) are not very convincing.

Glen Raphael (2012-02-15 14:29:55)

> What Daisey said. Daisey has made no effort to place the safety at Foxconn in a context that would allow statistical comparison with the US. He did demonstrate that some people (out of a population of hundreds of thousands) were injured, but did NOT demonstrate the injury rate to be unusual or higher than that in the US. He didn't calculate the rate and didn't compare it to anything else. All efforts to actually do so have failed to demonstrate these factories to be unusually bad. > Plus what is in China Blue, a movie about blue-jean production in China. The garment industry is totally different from the



electronics assembly industry. Working conditions in electronics assembly are far, far better. To make electronic products that work, you need a working environment that is clean and cool and dust-free and well-lit and you need to break the tasks into chunks that are really really easy for your workers to replicate *\*flawlessly\**, which involves constructing the right custom fixtures and making sure the exact right tool for each job is close at hand and the work environment generally conducive to the work being done. Jeans (and shoes!) can be made in a hot, muggy, dusty, poorly-lit factory by exhausted and stressed-out workers and the product will still be functional at the end. iPads and iPhones cannot, so it's largely for the benefit of the *\*product\** that the conditions at Foxconn are so good. BTW, the head of the FLA agrees. Quote: "Working conditions at Chinese manufacturing plants where Apple Inc's iPads and iPhones are made are far better than those at garment factories or other facilities elsewhere in the country, according to the head of a non-profit agency investigating the plants." source: <http://www.reuters.com/article/2012/02/15/us-china-apple-idUSTRE81E1FQ20120215>

Seth Roberts (2012-02-15 18:22:37)

Daisey has made no effort to place the safety at Foxconn in a context that would allow statistical comparison with the US.

He said that Chinese workers are not rotated the way American workers are. Surely rotation reduces repetitive strain injuries. That is why I do not need additional evidence to convince me that Chinese workers have more repetitive strain injuries than Americans doing similar jobs. The China Blue stuff goes to make the point that workplace protections are much weaker in China than in America.

Glen Raphael (2012-02-15 20:07:39)

>He said that Chinese workers are not rotated the way American workers are. No, he didn't do that. He did rather dubiously *\*assert\** that Chinese workers never rotate tasks, but he made no effort to evaluate whether American workers doing similar work rotate tasks more often than Chinese workers do. It's vaguely plausible that they *might*, but you'd have to gather evidence to establish it. In fact, you'd have to gather evidence both here *\*and\** in China, since what Daisey did to get this claim was seek out malcontents. He didn't do a random survey, he sought out people who had complaints. I don't doubt that those particular workers made those complaints, but we can be pretty sure the *average* worker's experience was a fair bit better than **the experiences of those who were gathering illegally to try to form a union**. Imagine if you went to a American non-union manufacturing plant and talked to the local union organizers and the people they thought you should hear from. (this is essentially what Daisey did in China to get his RSI story). Do you think you couldn't in that situation find a few people claiming they work too long at tasks that are likely to cause RSI? Would you then extrapolate from their experience and assume it's typical of the half-million other workers you hadn't heard from? Or might you take into account the selection bias that caused you to find those particular workers and conclude that there *might* be a problem but the extent of the problem is as-yet undetermined?

Seth Roberts (2012-02-16 14:18:42)

Glen, okay, you think it is selection bias. You seem to have ignored this sentence by me: "The China Blue stuff goes to make the point that workplace protections are much weaker in China than in America." Do you believe that Chinese workplace protections resemble American workplace protections? That Chinese workplaces are as safe as American workplaces doing the same job? If so, why?

Alex Berg (2012-02-17 12:57:01)

» Glen, okay, you think it is selection bias. Seth it seems to me that at this point you probably should admit that there most likely is a problem with selection bias in the whole Apple story (rather than just stating what Glen thinks). Since you do not I suspect you might be falling victim to various human thinking biases such as: [http://lesswrong.com/lw/jx/we\\_change\\_our\\_minds\\_less\\_often\\_than\\_we\\_think/](http://lesswrong.com/lw/jx/we_change_our_minds_less_often_than_we_think/). The following sentence just struck me: Eliezer Yudkowsky - Knowing about common biases doesn't help you obtain truth if you only use this knowledge to attack beliefs you don't like. Besides that I praise you both for an interesting rational discussion!

Seth Roberts (2012-02-17 14:45:21)

Alex, I should have said I don't think it is ALL selection bias.

Glen Raphael (2012-02-17 21:02:57)

I think *electronics assembly* in China at Foxconn is probably at least as safe as the sorts of jobs done by people of a similar age in the US. This despite or regardless of China having fewer explicit "workplace protection" laws and a more corrupt legal system. My reason for thinking this is as follows: (1) The job itself inherently promotes safety. Unlike most jobs, electronics assembly (especially FOR APPLE) requires ludicrously small error tolerances or else the product doesn't work and building it isn't profitable. People tend to get injured on a job when they make mistakes. People tend to make mistakes when they are in a rush or tired or careless or haven't received proper instruction or don't have the right tools for their task or aren't being well supervised. But people who make mistakes don't produce a consistently high-quality end product. Foxconn's margin on these products is tiny and the value of each product produced is large. If they force workers to work faster or harder than their capacity (or force them to work with inadequate tools or inadequate light or...), the workers are likely not *just* to occasionally injure themselves but also to make mistakes that generate tens or hundreds or thousands of worthless iPhones, wiping out the profit margin for the run or even causing Apple to pick another supplier. In short, Foxconn has every incentive to make the work segments *utterly consistently achievable* which has the side effect of making the work *unusually safe*. Certainly safer than, say, working in a restaurant. (And unusually boring, which explains the high turnover rate). (2) Foxconn in particular has rather ludicrous economies of scale. Every possible mistake that could injure a worker (which invariably costs time and money and holds up production) **has been seen by now** and most have been dealt with. They work on such a scale that even the *tiniest* available improvement in per-worker productivity is worth spending some money and effort chasing down and fixing. (3) I've been on a Chinese assembly line, and it just plain *felt* boringly safe. It's hard to explain, but the fact that everything is being so meticulously measured and controlled is a big part of it. Whereas my intuition suggests that US workers (who don't live on site and have more autonomy) are more likely to goof off or show up at work with a hangover, leading to mistakes and injuries. All that said, I do have a few caveats. My argument does apply to the most visible job that employs the most people - assembly - but the same argument does not apply with the same force to one-off jobs like manufacturing the tooling. There *are* jobs at Foxconn that won't have been so brutally optimized for efficiency (and hence, safety) because these jobs don't have the same leverage as assembly-line work. *Those* jobs might be less safe (albeit more efficient and more convenient to the workers) than their U.S. equivalents. And I saw this in China too - the people who made the tooling at GSL didn't wear their safety goggles (because the goggles were hot and uncomfortable to wear) while cutting metal and there was nobody ordering them to do so. *That* end of production might well be a lot less safe...but that's not where most of the employment is and wasn't what the recent allegations were aimed at. I didn't comment on China Blue mostly because I haven't seen it. I am sure Chinese employers are more abusive in various ways than American employers, because China hasn't got our legal culture - there's no army of lawyers willing to file class-action suits against denial of back pay or what-have-you. I'm sure there's lots of room for improvement in other areas. But the claim that successful electronics assembly-line work could scale up to the size of Foxconn while specifically being *less safe* than other forms of manual labor strikes me as a claim that requires *actual evidence* to establish. "some injuries exist" does not constitute evidence that it's unsafe, since that will always be true for any employer. What would constitute evidence would have to involve an injury **rate** and at least one point of comparison - that Foxconn's rate is *worse than* some other relevant rate somewhere else. Absent that, I tend to give Foxconn the benefit of the doubt.

Seth Roberts (2012-02-18 22:55:14)

The suicide rate at Foxconn. I don't think the owners of Foxconn are stupid. If there were a comparison suicide rate that showed the Foxconn suicide rate to be innocuous, I believe they would have brought it to my (and the world's) attention. Instead I am shown the nonsense of a comparison to overall Chinese suicide rate. As if I am stupid. That alone makes me think something is seriously wrong. What evidence would I like to see? Suicide rates at Foxconn in previous years. Suicide rates at similar factories, including other countries. Safety records likewise. This isn't complicated - but such evidence is absent. I believe it is absent because it would not make Foxconn look good. Again, I am assuming the people in charge of Foxconn are not stupid and are making the best defense money can buy. "The job itself promotes safety." Really? Surely trained workers make less mistakes and are safer than untrained workers. If so - and if the job is as optimized as you claim - why do workers quit so soon, requiring untrained workers to replace them? Why don't they make the job more attractive, thereby increasing the training level of the average worker? I don't know why workers quit so fast but whatever their reasons, they are aspects of the job that do not

promote safety. I am unpersuaded by your Candide-like argument ("Foxconn has every incentive . . . ") that things must be good because margins are thin. Oh yes, Foxconn is safer than other forms of manual labor. I don't think much of the random inspection stuff that Apple PR promotes. It is much more about protecting Apple than protecting the employees. But it is better than nothing. As Apple indicates with their latest announcement, it can be improved. Daisey's contribution, in my opinion, is his attempt to listen to Foxconn employees. To give them a voice. There are many ways to do such a thing. His is only one way, with obvious sampling biases. There are other ways. I hope they are tried. Until someone such as Daisey begins to make clear what can be learned from listening to employees, there is unlikely to be any pressure to do so. The TV show Undercover Boss makes clear episode after episode how much the reality of a job can differ from what people in high places (or distant places) imagine. High-ups at Apple, I'm sure, don't know what Foxconn is like. Jobs made laughable statements ("swimming pool"). Maybe someday they will be forced to know – because the rest of us know. I look forward to a Chinese version of Undercover Boss. After I wrote this reply I saw this: <http://www.nytimes.com/2012/02/19/technology/foxconn-to-raise-salaries-for-workers-by-up-to-25.html> The salary raise argues against your idea that margins are thin ("Foxconn's margin on these products is tiny"). Nor does this quote from the article support your overall view: "the auditor at the Fair Labor Association said recently that he had already found "tons of issues" at Foxconn plants."

Glen Raphael (2012-02-28 10:33:49)

> After I wrote this reply I saw [nyt article] Daisey claims in his show that the last time Foxconn announced salaries would be increased, it was just an accounting trick. The prior convention had been that workers get a very small salary \*plus room and board\*. American journalists have been prone to ignoring the room-and-board part when making cross-country comparison. We just look at the bottom-line salary, ignoring that this job provides "a living wage" by definition - it pays for food and shelter. So the trick is to price that in. In order to get some good press, the company announced salaries would increase by 30 %...but simultaneously started charging for some of the previously-free rent and/or food so that on balance the compensation package was approximately unchanged. Given the sheer amount of services Foxconn provides for its workers, it's hard to know whether this new "up to 25 %" increase is meaningful. > High-ups at Apple, I'm sure, don't know what Foxconn is like. What makes you so sure? When I worked at a company in silicon valley that did its production in China, we sent engineers and management at various levels to the factory on a regular basis. Certainly there are people at Apple who know what it's like better than Daisey does. I spent months in China working alongside the assembly workers when we were debugging our production process and getting the quality level up, as did others in QA, product management, hardware design and senior management. I'd be surprised if Jobs himself didn't visit the factory. Jobs' statements weren't laughable to those of us who have BEEN to a Chinese factory. On the suicide rate: We've heard so far that Foxconn's appears to be much lower than China (overall), China (college students), US (overall), US (college students), and US (auto manufacturing), which ought to be enough to shift the burden of proof to the other side. The rates at "similar factories" are not available because (a) nobody keeps the info indexed that way, (b) it's not even clear what would constitute being sufficiently "similar". > Nor does this quote from the article support your overall view It's ambiguous. I'm sure there are "tons of issues", but having "issues" doesn't mean the job is fundamentally unsafe. "issues" are likely to include things such as long hours and unpaid overtime that aren't relevant to the current discussion. Seth: I am going to post again on this so I will be brief here. "We sent engineers and management at various levels to the factory on a regular basis". Okay, what was the purpose of these visits? I've heard of such visits. If I am not mistaken, their purpose was to make sure the products were being manufactured appropriately – meaning high enough quality. Nothing to do with worker safety or worker complaints. I think there is something to what you are saying here – that it is to Daisey's advantage to exaggerate bad working conditions. Likewise it is to many other people's advantage. But it is likewise to many people's advantage to hide bad working conditions. Which is why I don't take seriously these visits by engineers from your company – who even if they spoke regional dialects (very unlikely) would not be terribly interested in listening to people far below them on the social scale (factory workers).

Glen Raphael (2012-02-29 19:37:25)

I personally liked the factory workers and enjoyed trying to communicate with them. They seemed like happy, healthy teenagers. I was interested in listening to them out of normal human curiosity and to practice my language skills. We didn't have particularly deep conversations because I only spoke a very small amount of Mandarin and they only spoke a very small amount of English, going through a translator was tedious, and we had few points of common experience. (For instance, they didn't know where California was). We mostly communicated non-verbally. For instance, I taught them some magic tricks

involving rubber bands. And we sketched in notebooks to get ideas across. We didn't discuss safety or worker complaints because I had no reason to think this was an issue of concern (this was in 1998/1999). (At my factory the workers spoke Mandarin and the managers spoke Cantonese; we often had a translator assigned to us.) The purpose of our visits was to keep production on deadline, to establish an acceptable quality level and to track down the source of various problems we were seeing in preproduction so they could be resolved in the next run. Toward that end, I brought some specialized test equipment, showed them how to set it up and use it and actually sat on the line and ran my own tests on devices as they came down the line. I consulted with their white-gloved QA people and helped them decide what did or didn't constitute a failure. I debugged some of their software installation processes. At the same time, one of our hardware engineers looked at the steps being followed to assemble a tricky custom component that wasn't working very well and tried to debug what could be done to make it more reliable. While at the factory, we saw up close a reasonable slice of what the job consisted of, both for workers on our line during this preproduction run and for workers on some neighboring lines doing regular production runs. The products I saw produced included PocketMail, the Sharp Wizard, and some electronic language dictionary products, all produced at the GSL (Group Sense Limited) factory in Dongguan. (This one: <http://www.groupsense-sp.com.hk/en/contacts.php> ) Here's a picture of me at my test station - the workers found it hilarious whenever I put on a pink cap since that cap style/color does indicate social status: [http://impel.com/pictures/glen\\_factory.jpg](http://impel.com/pictures/glen_factory.jpg) Here's a shot that shows the scale of the factory floor with a couple lines running: <http://impel.com/pictures/factory.jpg> The workers worked long hours sometimes...but then, so did we. The work I saw didn't seem especially strenuous; the working conditions were obviously MUCH BETTER than those at most of the jobs in that city on account of having good lighting and good air conditioning and reliable power and well-made custom fixtures and the right tools close at hand. Salary aside, it seemed like a decent job. One of the people I work with today grew up near Foxconn and had friends who worked at places like that; her impressions matched mine. As did what I heard thirdhand by way of a coworker who was dating a local at the time. Given the scale on which Apple produces, I assume Apple has people permanently at the factory who have better language skills than we did. If you want to hypothesize that the conditions get worse when there's nobody looking, the trouble is that there's just about always somebody looking. The squeaky wheel gets the grease; in order to get problems resolved quickly you pretty much \*have\* to have people visiting the factory in person on a regular basis. Both my company and Sharp Electronics had people there quite often. It's low-status dead-end transitional employment; the turnover rate is high for much the same reason the turnover rate is high at McDonalds or Disneyland. It's not a career; it's something people do for a couple years until they find something better to do elsewhere.

Glen Raphael (2012-02-29 21:49:44)

The Nightline report on Foxconn is here: <http://www.youtube.com/watch?v=hLuPtMvwwA0> One interesting thing they did was go to the nearby city and see how the dorms compare to where the workers were living before. If I were to do what Mike Daisey did, my questions would include: (a) If you weren't working at Foxconn, what would you be doing instead? (b) what do you plan to do in a few years, and how is this job preparing you for the future? Note that is that according to the Nightline segment the dormitory housing is paid for with <1 day's wages per month. That is extremely cheap, suggesting that it's still mostly paid for by the employer. Note also that if one employer in China were to (as suggested at the end) pay more than double the market rate, this would cause riots among jobseekers and kickbacks and all sorts of corruption - these jobs would end up going to the politically well connected rather than those who need them most and the excess profit would get competed away. Apple can make things a little better - and has - but asking them to double wages across the board seems frankly insane.

Glen Raphael (2012-03-16 12:16:35)

This American Life has decided to officially \*retract\* their story about Mike Daisey and the Apple Factory on the basis that Daisey was simply lying about a lot of what he claimed to experience. Some of the parts I found implausible turned out, in fact, not to have happened. Daisey's defense is that the story he tells is essentially a work of fiction - it makes for better \*theater\* if he pretends to have \*personally met\* with underaged workers and workers injured by n-hexane or who had their hand crushed whereas in fact he appears to be combining stories he's heard third-hand about factories in general and telling them as his own in the context of the Apple factory, adding poignant details here and there so it reads better. Ira Glass now says "I suspect that many things that Mike Daisey claims to have experienced personally did not actually happen." <http://www.thisamericanlife.org/blog/2012/03/retracting-mr-daisey-and-the-apple-factory> Seth: Thanks, Glen. To make up

stuff about those you are criticizing is a huge mistake, at least if you want to improve things. To say it is okay because it is "dramatic license" – as Daisey has – is absurd.

Glen Raphael (2012-03-16 13:43:57)

More details on the retraction here: [http://www.marketplace.org/topics/life/i\\_economy/acclaimed-apple-critic-made-details](http://www.marketplace.org/topics/life/i_economy/acclaimed-apple-critic-made-details)  
Quote: "Daisey claims he met underage workers at Foxconn. He says he talked to a man whose hand was twisted into a claw from making iPads. He describes visiting factory dorm rooms with beds stacked to the ceiling. But Cathy says none of this happened. " The fact that the incidents Daisey talks about are such statistically rare events - something that affects less than one in ten thousand workers. happening at one specific plant, one specific year - makes it extremely unlikely that a single man could have managed to find so many good examples. If one assumes Mike Daisey is telling the truth, it really does cast doubt on the notion that these incidents are as rare as they are. But he was lying. In retrospect, the claim to have seen the workers quarters should have been a tip-off. I never saw the worker quarters at GSL and it's hard to imagine a reasonable pretext for why Daisey would have been shown them. How would that conversation even go? "I'm thinking of using your factory to build my product, but first I need to know...what the worker dormitories look like!" I mean, really? Who does that?

### Assorted Links (2012-02-14 05:00)

- [1]Big Pharma versus Parkinson's disease – perfectly good non-Big-Pharma treatments (ECT, nicotine, caffeine) are neglected in favor of a much worse Big-Pharma treatment (L-dopa).
- Substances high in Essential Fatty Acids, such as evening primrose oil, [2]used to treat allergy-associated problems (case reports). From the 1980s. [3]Other articles from the Foundation for Integrated Medicine.
- [4]Artisanal sake survives the tsunami and makes an accidental discovery.
- [5]Food tour of Tokyo by Jeffrey Steingarten.
- [6]Should England's Royal Society be taken seriously? Judging by their leaders' certainty about global warming . . .
- [7]60 Minutes covers the Anil Potti scandal at Duke University.

Thanks to Allen Carl Jackson, Phil Alexander and Navanit Arakeri.

1. <http://charlonteaching.blogspot.com/2012/01/prevention-and-treatment-of-parkinsons.html>
2. <http://mdheal.org/fatty.htm>
3. <http://mdheal.org/articles.htm>
4. <http://www.wbez.org/blog/louisa-chu/2012-02-01/artisanal-sake-brewer-survives%E2%80%94and-thrives-96035>
5. <http://www.vogue.com/magazine/article/jeffrey-steingarten-turning-japanese/#1>
6. [http://www.thegwpf.org/images/stories/gwpf-reports/montford-royal\\_society.pdf](http://www.thegwpf.org/images/stories/gwpf-reports/montford-royal_society.pdf)
7. <http://dukecheck.com/?p=69>

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Greg M. (2012-02-14 08:48:03)

I came across this article on better sleep and thought this eclectic group of readers might find it interesting. Anyone want to ground their their bed and see if they sleep better? <http://www.foodrenegade.com/can-earthing-help-adrenal-fatigue/>

steve (2012-02-16 09:09:42)

interesting discussion on atopic and EFA's. It should be noted however, that it is a hit or miss proposition and in most cases the scientific literature shows no benefit from supplementing with EPO for atopic conditions.

### How to Eat Natto (2012-02-15 05:00)

I started to eat natto, a kind of fermented soybean, after I became convinced that we need to eat plenty of fermented foods to be healthy. That was four or five years ago. Recently I learned it is [1]a very good source of Vitamin K2, which is a co-factor of Vitamin D3.

[2]This post about [3]an infographic called World Stinky Foods (in Japanese) complains that the infographic doesn't include natto. In my experience, however, natto has a moderately strong taste but does not stink. If anything it has too little smell, which is why it comes with packets of mustard and sauce. I think it is the texture that some people don't like. [4]Wikipedia refers to this difference of perception: "The flavor of natto can differ greatly between people; some find it tastes strong and cheesy and may use it in small amounts to flavor rice or noodles, while others find it tastes bland and unremarkable, requiring the addition of flavoring condiments."

By ordering it in restaurants, I have finally figured out a good way to eat it: 1. Add both flavoring packets (mustard and sauce). 2. Add a raw egg. 3. Add chopped onion. 4. Mix. The egg adds protein and creaminess, the onion adds bite and crunch. I might try it with scrambled eggs. Ever since I learned that [5]Mr. T (a rat) liked scrambled eggs, I have been eating about one egg per day.

1. <http://chriskresser.com/vitamin-k2-the-missing-nutrient>
2. [http://inventorspot.com/articles/tripadvisor\\_japans\\_world\\_stinky\\_foods\\_infographic\\_reeks\\_your\\_wor](http://inventorspot.com/articles/tripadvisor_japans_world_stinky_foods_infographic_reeks_your_wor)
3. [http://gigazine.jp/img/2012/01/26/tripadvisor-stinky/tg\\_021f.png](http://gigazine.jp/img/2012/01/26/tripadvisor-stinky/tg_021f.png)
4. <http://en.wikipedia.org/wiki/Natt%C5%8D>
5. <http://blog.sethroberts.net/2011/11/30/an-unbiased-view-of-what-we-should-eat/>

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Andy (2012-02-15 08:36:04)

I too found the texture of natto a problem at the start, I can barely taste anything from it except a faint hint of burnt coffee or something slightly bitter. I always do a raw egg with natto, and usually just the yolk as I dont think it needs to be any slimier! Good tip on the onions though.

Glen Raphael (2012-02-15 09:15:41)

In my experience, natto seems horrifically stinky. Maybe one gets used to what wikipedia calls the "powerful smell" with repeated exposure. I didn't mind the texture at all, but the smell seemed like ammonia, kind of hard to put up with.

Rashad (2012-02-15 09:54:01)

Sort of unrelated, but I thought you might find this blog post and the linked article interesting, given your focus on specialization and craft production. [http://www.slate.com/blogs/moneybox/2012/02/15/artisanal\\_pickles\\_and\\_the\\_u\\_curve\\_of\\_economic\\_development.html](http://www.slate.com/blogs/moneybox/2012/02/15/artisanal_pickles_and_the_u_curve_of_economic_development.html)

Ashish (2012-02-15 15:34:11)

Timely - I was wondering what to do with the natto in my freezer, since I rarely cook rice any more. I take it you are eating

this "straight," i.e. not over rice. Why do you add a raw (rather than scrambled) egg? Red onion or yellow/white onion? As a complete aside, it's interesting that the styrofoam natto box does not feel cold to the touch even when straight out of the freezer.

Nick Winter (2012-02-21 20:31:25)

3/3 of my friends so far, when asked (or not asked), never want me to microwave or even eat natto anywhere near them because of the smell. Thanks for the raw egg tip; always on the lookout for more places to put those. Double bonus for supreme gross-out when others see me eating it like that. Wonder if I can somehow get the half stick of butter in there, too.

Martine (2012-02-26 17:27:43)

I tried some natto this past week and it was not exactly what I had expected. It didn't smell totally horrific, but a wee bit off-putting. I mixed a bit in with some green onion and soy sauce and served it over rice for breakfast. Slimy, yes, but not bad tasting at all. I can't imagine eating a ton of it one sitting. But I think any taste can be acquired.

## **Vitamin D3 in Morning Improves Sleep Three Ways (Story 17) (2012-02-16 05:00)**

Chris Cappadocia [1]recently commented here:

After the morning D3 entries started to appear here sometime before Christmas, I switched to taking my D3 first thing in the morning too (between 4-7000 IU) and so far I've noticed significantly increased feelings of sleepiness at bedtime, with moderate improvement falling asleep, reduced wakings throughout the night, and much better ability to sleep in.

I asked him for details:

Tell me about yourself.

I am a graduate student. I live in the Greater Toronto Area. I exercise almost daily (6 days a week maybe) with weights (but nothing especially strenuous); most of the year I walk about an hour a day (but not January and February); I try to eat some vegetables every day, I have taken fish oil for at least six years, and in the last 8 months I've started to eat as much fermented food as I can easily obtain (kombucha and apple cider vinegar every day, kefir or yogurt or miso occasionally). Another thing which might be relevant is I've consumed a lot of caffeine ever since I started university. Regarding sleep though, I was off caffeine for six months one time and noticed no improvements (whatsoever!) in sleep.

When is "first thing in the morning"?

For about a month (January 2012) I have been taking D3 when I get out of bed, around 8:00 am. For this month, waking up and getting out of bed have roughly coincided. In December 2011 I took it usually at 9:30 am; if I woke up earlier than I preferred, at say 7:00 am, I would wait to take the D3.

Before you started taking D3 first thing in the morning, what time were you taking it? How long had you been taking it at that time? How long have you been taking it first thing in the morning?

I have been taking D3 daily for about 3 years. My daily intake was in the range 5000-12000 IU. I took the D3 throughout the day with food, and therefore somewhat randomly; a typical day on the high end might have been 2000 IU with a small breakfast, 5000 IU at lunch, 3000 IU at supper. Most often it was more like 5000 IU at lunch,

1000 IU at supper. I have been taking D3 in the morning since about early December 2011.

You say morning D3 caused "moderate improvement falling asleep" – you mean you fall asleep faster?

As an adult it has seemed to take an hour minimum, with two hours not being at all unusual (two or three nights a week). And then I could easily wake up shortly (an hour) after that. These times are all estimates, since I try to avoid looking at the clock. But of course I do look sometimes, so I have some sense of these times, but it's not so reliable. Also sometimes it's not clear whether I've slept or not.

With that said, I would estimate the improvements falling asleep to be that in January it has mostly taken me under an hour, perhaps 45 minutes, to fall asleep. Also, I feel more content to just lie there and wait for sleep, it feels like less of a struggle.

What are the average (median) times taken to fall asleep before and after starting to take your D3 in the morning?

I estimate:

90 minutes to fall asleep before starting morning D3

50 minutes to fall asleep after starting morning D3

over the last 6 months (the last two being the months on morning D3).

You say morning D3 "reduced wakings throughout the night" – Can you estimate the size of the change? What was it before morning D3? What is it now?

Three nights ago I woke up only once in the middle of the night, and it felt like maybe 20 minutes or so. Two nights ago I slept from 9:30 pm until about 7:45 pm, and I don't recall waking up once. Last night 12:00 pm until 7:00 am, and I don't recall waking up once. Before morning D3 I could easily wake up at 1:00 am for 5 minutes, 3:00 am for 30 minutes, 5:30 am for 45 minutes. This January, my impression is that I still do wake up three times a night or so, but remain awake only 5 to 20 minutes each time.

You say morning D3 has given you "much better ability to sleep in" – could you say more about this?

For at least the last 4 years I have been waking up earlier than I would prefer. I might go to bed at 11:00 pm and wake up at 6:00 am feeling very tired, unrested, and in a negative mood. (Due to not sleeping enough during those 7 hours; I am fairly confident I do not have sleep apnea.) Waking up early would not be an issue for me if I fell asleep at 11:00 pm and slept straight through until 7:00 am.

So by "much better ability to sleep in" I meant that I have woken up most days in January at 8:00 am, feeling rested but most notably, not feeling like "Ugh, I need more sleep" yet being unable to fall asleep again. I've felt like when I wake up, it's the right time to get up. By the way, I did not notice this effect at 4000 IU. It showed up around 7000 IU.

What brand of D3 are you taking? Gelcaps or tablets?

Carlson gelcaps. Each cap is 1000 IU, in safflower oil. (I do not eat breakfast, so I take these on an empty stomach and this seems to give me no problems.)



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1. <http://blog.sethroberts.net/2012/01/28/vitamin-d3-first-thing-in-morning-still-more-experience/#comment-947972>
2. <http://www.hbf.com.au/>

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Daniel Lemire (2012-02-16 06:53:46)

"I've noticed significantly increased feelings of sleepiness at bedtime, (...)" This looks like a good description of the effect it has on me. It would be interesting to verify this specific effect over several individuals.

Nate W. (2012-02-16 07:51:32)

Seth, why do you never write about sexual health - e.g., the effect of vitamin d on sexual health? Obviously, it's an aspect of health most people care about, do you not consider it important?

Stone Glasgow (2012-02-16 11:55:13)

D3 is a stimulant with a "crash" for me. The crash happens about 3 hours after ingesting 5,000 IU. I can now time my sleep to coincide with my expected D3 crash, which has improved my sleep tremendously.

ChristianKI (2012-02-17 12:06:00)

@Chris Cappadocia: Maybe it's time to get a Zeo to get better data on falling asleep and night awakenings? @Nate W: If one starts talking about improvement of sexual health the media types who want to report about Quantified Self will use it as the core example. It reduces the seriousness of the media reporting and people see self experimentation as "fringe". Talking about improving sleep is much better for the self experimentation meme.

## **Father Versus Surgeons and New York Presbyterian Hospital (2012-02-17 05:00)**

I decided to read [1]this book review because of a brief description ("A father describes, and rages at, the loss of his teenage son.) in an email. Then I found this:

Weber's story becomes more spirited and urgent when Damon's health begins to fail more seriously, and his father is forced to locate his true enemy: the received wisdom and arrogance of the American medical establishment.

Weber père . . . admits he doesn't trust "any single voice on Damon's illness." And he's wise not to, as he discovers in short order that health care for his son is first and foremost a business, and that surgeons frequently talk out of their hats.

Heart transplants represent big money for hospitals: at half a million dollars each, 20 pediatric transplant operations a year make a significant contribution to the finances of New York-Presbyterian Hos-

pital/Columbia University Medical Center, where Damon's surgery is eventually performed. Hospitals compete to attract patients (every transplant center Weber speaks with wants to perform his son's operation) and stringently guard their surgical outcome data, as Weber discovers when he tries to find out if the blithe assurances of the Columbia transplant team are scientifically valid. He quickly realizes "each hospital is a fiefdom."

Worse still, the medical barons who run the fiefs care as much [i.e., as little] for protocol as they do for patients. Over Christmas of 2004, Damon is casually "listed" as a potential heart recipient — meaning he has to be ready to receive a new heart at a moment's notice — without his father's knowledge. His doctors then disappear for a week and more.

Before Weber can truly blow his stack, he discovers Damon's doctors have also misclassified his son's transplant status as less urgent than it is. Dad bulls [sic] them into fixing the problem, and 11 days later, a heart is found for Damon. The transplant in turn initiates a tragic cascade of doctor errors so egregious that Weber eventually sues both the medical director of pediatric heart transplants at New York-Presbyterian Columbia hospital and the hospital itself for malpractice. (Three years into the lawsuit, the medical director claimed Damon's post-op records couldn't be located.) All this happens at one of the country's best heart transplant centers.

"Passively relying on the medical establishment and trusting them to manage my son's care in his best interest is not . . . a luxury I have allowed myself," Weber writes, with good reason.

Maybe I should start a series called "The Culture of Surgeons". Entry 1: [2]Eileen Consorti, a Berkeley surgeon who told me I should have surgery for a hernia I could not detect. Entry 2: [3]Martin Burton, an Oxford ear nose and throat surgeon whose Cochran Review about the pros and cons of tonsillectomy failed to consider that tonsils are part of the immune system.

1. <http://www.nytimes.com/2012/02/05/books/review/immortal-bird-doron-webers-lament-for-his-son.html?nl=books&emc=booksupdateema4&pagewanted=all>
2. <http://blog.sethroberts.net/2011/11/16/dr-eileen-consorti-and-patient-power/>
3. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

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JPB (2012-02-17 13:04:49)

One should always be wary of the medical industry, especially surgeons. Too many in that industry are either covering their backside or protecting their income stream...

JimPurdy.blogspot.com (2012-02-18 00:28:04)

As I asked in one of your recent posts about medicine: "Why am I not surprised?" What does surprise me is that so many people blindly trust the medical industry. Maybe it's partly because of all the "gold standard" research studies published in prestigious medical journals. But the "gold" in the "gold standard" seems to refer to all the money involved, from the studies funded by drug companies, the reports published in journals that make huge sums of money selling reprints of those articles to BigPharma marketing departments, all the way down to the surgeons and drug-pushing doctors. As I've discovered through repeated personal experiences, the medical industry isn't very interested in low-cost approaches like simple lifestyle changes, especially when hundreds of thousands of dollars can be made from tests, surgeries and drugs for each patient. If you want to contain escalating medical costs, just shut down the entire health care industry for a year, and watch the sharp decline of prescription

drug abuse deaths, of hospital-acquired infections, and of deaths from botched surgeries and drug prescribing errors. Jim Purdy

Brice (2012-02-27 23:34:32)

Check out this just posted article from WSJ on hernias and operations. <http://online.wsj.com/article/SB10001424-052970203833004577249344022834000.htm> l?mod=WSJ\_myahoo\_module Hernia repair, one of the most common surgical procedures, carries a risk many patients don't consider: chronic pain after surgery. More than 30 % of patients may suffer from long-term chronic pain and restricted movement after surgery to fix a hernia, a bulge of the intestine or body fat through a weak area in the abdomen, studies show. Damage to nerves and muscles from the hernia may cause lingering discomfort. New synthetic mesh devices, though better than traditional sutures at reinforcing the abdominal wall, can irritate nerves and carry a slightly higher risk of infection.

### One Doctor's View of Personal Science (more) (2012-02-18 05:00)

A few weeks ago [1]I blogged about a leukemia doctor's disapproval of self-experimentation ("you won't learn anything and others won't learn from it, either"). What I wrote was [2]reposted at The Health Care Blog, where it elicited this comment (by "rbar"):

Sigh. Mr Roberts did it again, he simply does not (want to) understand that anecdotal evidence is of little value (let me give you an example: I self experiment with traffic signals; I noted that I can considerable cut down on travel times when ignoring red lights and stop signs; there are no drawbacks whatsoever, no one get hurts, and even my gas mileage/carbon footprint got better) .

Individuals who have similar questions as Mr. Roberts should look up the following key words, because they may understand why controlled studies are far superior to anecdotal evidence:

- placebo effect
- regression to the mean
- misattribution error [apparently rbar means error in determining the cause of a change]
- self limited conditions/natural fluctuation of chronic conditions
- and in terms of drawbacks of experimentation: primum non nocere, and also the fact that anecdotal evidence adds relatively little to humanity's knowledge base

Does all that mean that patients should not be well informed, active and making suggestions to their treating physicians? Of course absolutely not. Being knowledgeable about one's condition is different from self experimentation. Is that intellectually challenging?

One reply to this comment said we should be aggregating data across patients. "I believe Mr. Roberts is alluding to the power of aggregating real-world data across patients to generate insights into what may and may not work, not to giving undue weight to any single anecdotal case." No, I was looking at it from the point of view of the self-experimenting patient. If you have a health problem, and you can measure it often (daily, weekly) you can find out what works faster than your doctor – often much faster. You can test many more possible solutions. This is what Richard Bernstein taught the whole world of diabetes, starting in the 1960s, when he pioneered home blood glucose testing. Apparently rbar also objects to that.

Rbar's comment is dismissive ("Sigh", "Is that intellectually challenging?") and partly obscure ("ignoring stop signs and stoplights" – huh?). Because patients who self-experiment may make "misattribution errors" they shouldn't self-experiment? That's like saying because people may make reasoning errors they shouldn't reason.

The true meaning of rbar's comment may be hidden in his statement that it's okay for patients to "make suggestions to their treating physician." Which shows who he thinks should be boss in the doctor-patient relationship. When a patient self-experiments, the doctor is no longer boss. Maybe rbar is a doctor. Maybe he feels threatened by self-experimentation. If so, I hope he's right.

More A later reply to rbar put it well: " Your list of possible pitfalls . . . is similar to lists I remember seeing back in graduate school in various research handbooks. I do not see how you go from the fact that these effects and errors are possible to the conclusion that the whole endeavor isn't worthwhile."

1. <http://blog.sethroberts.net/2012/01/29/one-doctors-view-of-personal-science/>

2. <http://thehealthcareblog.com/blog/2012/01/31/one-doctor%E2%80%99s-view-of-personal-science-you-won%E2%80%99t-learn-anything/>

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Jordan (2012-02-18 06:12:22)

It's very problematic. Everyone self-experiments in different areas of their life. In my time, I have seen too many people make false attribution errors through wishful thinking and other biases to not realize that while it can be useful, self-experimentation has to be done with extreme caution and its conclusions treated with extreme care. I myself have gone through long periods of my life completely convinced that certain factors were the culprits in certain situations, only to later discover to my astonishment how wrong I was, and how my biases have led me to overlook important conflicting data. The problem is, your biases and assumptions can often literally not let you SEE relevant data. It's why \*peer review\* is so important. This has made me extremely careful these days. I now believe that self-experimentation has to be done with the utmost of reservations and care - no conclusions can be treated as anything more than extremely provisional - and that it really is of limited use to people at large.

Jordan (2012-02-18 06:15:30)

I think, really, self-experimentation has more value in areas where we can be reasonably sure that there are a few factors, and that we can isolate those factors. Many situations we must admit are just too complex for that and are just useless for self-experimentation, even if what we do seemingly \*works\* (there are too many factors for us to know WHAT exactly worked. This does not mean we should stop DOING what works until we understand WHAT is working, only that we must be aware that our explanations for WHAT is working and WHY might be completely off base) Also, we cannot expect others to treat our results as anything other than invitations to thought.

Glen Raphael (2012-02-18 07:25:37)

"stoplights and stopsigns" struck me the most relevant point rbar made. If the condition you're trying to treat is "my commute takes too long" and you self-experiment with ignoring stoplights and record the outcomes, the data will tell you that is perfectly safe and gets you where you're going faster...right up until the day you die in a horrible crash. If we apply that metaphor to self-experimentation, his fear is that that somebody just trying random treatments will find a false local maximum - a treatment that \*seems\* to help in the short run but has a worse long-term prognosis than doing nothing, due to a serious secondary effect that takes longer to develop or has some semi-random component. Applied to conventional drug trials (eg: thalidomide), it's a valid concern. But applied to the sort of treatments you're usually exploring/recommending, not so much. He's basically applying a precautionary principle (if it could cause harm, don't do it), whereas you're applying a proactionary principle (if it's broken, try to fix it). Your rule makes more sense for patients trying to get better; his rule makes more sense for doctors trying

not to get sued.

Jazi zilber (2012-02-18 07:43:08)

Let me respond to this guy 1) there are negatives to self experimentation. Likewise, there are negatives to talk with a doctor. Everything has negatives. Of only relevance is the sum of the effects. Indeed, one got to be smart. Always. Albeit self experimentation requires a little more than average wisdom. 2) placebo effects are over rated. It is a cultural prejudice that placebo effects are "nothing" they are very real. And anything that bring about placebo improvements is highly welcome. If self experimentation is an effective method to induce placebo healing, it is a great reason to embrace it. Besides, when someone tries many things and only some work, the odds for placebo effects are quite lower. 3) one MUST look for the statistical significance of self experimentation results. 4) one can only look for the statistical expected value for contribution to the world knowledge. It is childish to ask whether a specific finding will contribute. The question is whether it has some chance to contribute. And it has. Every self experimenter has a tiny chance to add for new knowledge. But it adds up. Besides, the average doctor adds zero to overall knowledge. And since when do patients live for adding for the world's knowledge? How ludicrous it is to even mention this to someone with a condition! People try things to get healthy.

Tuck (2012-02-18 08:41:57)

Two thoughts: Barry Marshall got a Nobel Prize in Medicine for self-experimentation. Any individual who says "anecdote is not data" doesn't understand how science is done. Second thought, if you do the experiment that Glen Raphael described, you might also (tickets aside) come to the conclusion that stop lights are a waste of your time, and actually increase the accident rate. The town of Makkinga in the Netherlands ditched all their street signs and stop lights, and the accident rate went to zero. Other towns are now following their example... So even the type of self experimentation that Rbar would have us not do yields useful results. What does not yield useful results in science is a slavish adherence to precedent. Although that is the way to get through medical school... "European Cities Do Away with Traffic Signs" <http://www.spiegel.de/international/spiegel/0,1518,448747,00.html>

Outis (2012-02-18 10:14:04)

+1 to Glen Raphael's comment (I especially like the last sentence).

JimPurdy.blogspot.com (2012-02-18 10:27:47)

Two more of my off-the-wall opinions, about placebos and what I will call "The Hundredth Patient Effect:" 1/ PLACEBOS: In my opinion, the reason that placebos sometimes look good relative to BigMedicine is not that placebos work. Rather, BigMedicine often doesn't work, so there's not much difference. But sometimes, BigMedicine actually kills the patient. 2. MEDICAL STATISTICS: I think medical statistics conceal a dirty secret of modern medicine, which is that the statistics are applied for the benefit of the doctors, and very much to the detriment of the patient's health. The doctors are gambling with the patients, and the patients are losing. After my bad medical experiences in 2010, when I refused a leg amputation and quadruple coronary artery bypasses (and both conditions got better with simple cheap lifestyle changes), I have often asked myself why doctors could have made such bad recommendations. Let me try to explain my reasoning: Suppose that, over a period of time, a doctor considers whether to perform a major and expensive (profitable) procedure on 100 patients. In the past, I would have thought that the profit motive would have been an incentive for the doctor to operate. I still think that is a factor, but I now think there is another, more important factor: statistics. If the doctor amputates 100 ailing legs, and all the patients live, the doctor make a lot of money, and he is praised for saving 100 lives. BUT WAIT A MINUTE THERE! Based on my experience, the body is capable of healing very sick legs and other body parts. Maybe, if no amputations had been done, one, or 10, or 50, or even 99 of those 100 patients would have recovered fully and kept their legs. So why amputate 100 legs? Because of that hundredth patient, the one that dies. If 100 patients are not operated on, but one dies, that one death will almost certainly result in a major malpractice lawsuit and perhaps even the end of the doctor's career. So, the doctor's options are: (a) amputate and make a lot of money, and be credited with saving 100 lives, or (n) don't amputate, and save 99 legs (and 99 lives), but get one major lawsuit and very bad publicity. Unfortunately, I think there may be strong pressure for the doctor to take the safe (for him) choice and amputate 100 legs just to avoid one messy lawsuit. I call my theory "The Hundredth Patient Effect."

Seth Roberts (2012-02-18 10:52:01)

If the condition you're trying to treat is "my commute takes too long" and you self-experiment with ignoring stoplights and record the outcomes, the data will tell you that is perfectly safe and gets you where you're going faster...right up until the day you die in a horrible crash. If we apply that metaphor to self-experimentation, his fear is that that somebody just trying random treatments will find a false local maximum – a treatment that \*seems\* to help in the short run but has a worse long-term prognosis than doing nothing, due to a serious secondary effect that takes longer to develop or has some semi-random component.

Glen, thanks for explaining that. This happens with modern clinical trials, too – FDA-approved drugs are found to have bad effects later and are taken off the market. So it is unclear that self-experimentation is more dangerous. As you say, I test stuff that has been safely engaged in (such as looking at faces in the morning) for very long times.

Kirk (2012-02-18 10:54:30)

I keep coming back to the concept of risk management. I think these doctors have heard too many stories of patients who died from a burst appendix because the patient had received herbal treatment from some quack who thought he knew Chinese medicine. For high-risk situations, these physicians are right. (The TV show 'Doc Martin' illustrates several such situations in an entertaining fashion.) And yet if a patient goes to a physician who assesses the condition and says, sorry, it's a low-risk issue, nothing I can do, live with it, these things sometimes clear up over time . . . In those situations, where the physician has already assessed it as low-risk, then why shouldn't the patient experiment? Suppose it's a sleep issue. What's the risk with experimenting with light levels at night, timing of Vitamin D, drinking peppermint tea after supper, or standing on one leg? I also argue that these 'obey the physician' advocates do no such thing in the case of their own diet. No matter which diet they follow, the one designed by a physician who clinically treats for obesity, I bet not one of these advocates strictly follows that specific diet. Which is fine. The risk is low.

Seth Roberts (2012-02-18 10:58:22)

I now believe that self-experimentation has to be done with the utmost of reservations and care – no conclusions can be treated as anything more than extremely provisional – and that it really is of limited use to people at large.

Jordan, care to give examples to support these conclusions? My experience has led me to opposite conclusions. For example, I can point to many people who have used self-experimentation successfully. For me, the interesting comparison is not self-experimentation versus nothing – I think it's obvious that some data is better than none. (And, of course, sometimes data is misleading.) The interesting comparison is self-experimentation versus expert advice (e.g., doctor's advice). What has been your experience comparing the two?

Tim Beneke (2012-02-18 14:42:51)

"Self experimentation versus expert advice." To repeat something posted on this site elsewhere: I suffered a great deal of clinical and sub-clinical depression over the years. Between 1975 and 1996, I went through 4 antidepressants, was told that I needed to return to the considerable trauma I felt as a child and relive the experiences and release a lot of repressed emotion. I saw 3 clinical psychologists and 3 psychiatrists. I was a night person during this time staying up to anywhere from 2-4 a.m. on average. No mental health professional told me to start going to bed and getting up earlier as a way to treat my depression, even though I made it very clear that I was a night person. Seth Roberts strongly impressed upon me the notion that going to bed at 3:30 a.m. was my biggest problem. When I finally changed my circadian rhythms in December 2003, I felt a quick mood uplift, about 20 point rise on a scale of 100 in terms of baseline mood, I estimated. With baseline mood improved, I started enjoying music enormously and life became more fun. I agree with earlier posts that self experimentation requires a certain capacity for objectivity, disciplined observation, and engaged reflection and some people probably are not able to do it effectively. But lots of people are, if they are willing to do some work, and it has helped me in many ways. Experts have an incentive to overstate their knowledge.

dearieme (2012-02-18 19:00:32)

All the RCTs in the world won't tell me whether I can tolerate beta-blockers: only self-experimentation can do that.

Jazi zilber (2012-02-19 02:29:33)

Jimpidry, Doctors have good reason not to plan on lifestyle changes. Most patients do not adhere to large lifestyle changes. Even if a doctor is sure that a list of exercises, food etc. will heal the foot, he may judiciously recommend to amputate it, if the chances a patient will do the complex changes is near zero. (assuming the risk from doing nothing is high) It may sound undemocratic etc. but every suggestion you do is related to what are the chances of it being used.

Barcelona psicologos (2012-02-19 05:53:36)

I believe that there is still much research in medicine. Should not be making diagnoses closed. You can always have hope.

Brian Toomey (2012-02-19 16:25:04)

Hi Seth, I've been reading for a while. I've had delayed sleep onset my whole life, and seem to have pretty much fixed it reading this blog. I am still varying the factors but what seems most important is: 1) 5000 IU liquid D3 first thing on waking 2) Blue Blocker Glasses 3) Using the xiser (xiser.com) for what I am seeing as a combination of one legged standing to exhaustion and anaerobic exercise Don't seem to have much effect: 1) 10,000 Lux lamp 2) Niacin to flush 3) Magnesium 4) Cold shower before bed My sleep onset insomnia was terrible, with me often unable to sleep before 3-5am, and now I've been waking between 8am and 9am feeling refreshed. My wakeup time seems to be inching back slowly. Thanks for the help your blog gave me! Best, Brian

Hamish Barney (2012-02-19 16:49:08)

What does this doctor do every single day if not experiments of  $n=1$  on his patients? Doesn't this doctor try and assess the efficacy of the treatments that they dole out? Doesn't this doctor change the drug that he prescribes to his patients if they don't seem to work, even if the clinical data says that the drug is 99 % effective?

Perfect Health Diet » Around the Web; Paleo Summit Edition (2012-02-25 20:09:36)

[...] Seth Roberts explains what Richard Bernstein taught the world. [...]

Nina (2012-02-26 12:46:04)

And that's why Dr Richard Bernstein - former engineer- went on to train as a physician. He continues to amass data from masses of grateful patients. Does that squash the sceptics? Nope. 'No double blind trials... blah de blah de blah'

### **"We're Economists. And We Don't Care About Innovation" (2012-02-19 05:00)**

In a Planet Money show about whether Super Bowls help host cities, a sports economist named [1]Victor Matheson, a professor at College of the Holy Cross, described himself and other sports economists:

We're economists. And we're concerned about equity and we're concerned about efficiency. And what most economists see . . . "

He didn't say "We're concerned about innovation". The way he ignores innovation reflects the whole field of economics. Here's the same thing from Christine Romer. In [2]an editorial about whether manufacturing deserves special treatment, she considers only productivity and equity:

It might be better to enact policies that will make all American businesses and workers more productive and successful. . . Today, we face a profound shortfall of demand. . . We need actions that raise overall

demand. [She doesn't say we are in a period of profound stagnation in most industries, which is also true.] . . . More aggressive monetary policy that lowered the price of the dollar would stimulate all our exports . . . Moving is very costly for dislocated workers with ties to their communities. . . Manufacturing jobs are seen as one of the few sources of well-paying jobs for less-educated workers. . . . Public policy . . . should be based on hard evidence of market failures, and reliable data on the proposals' impact on jobs and income inequality.

As if innovation (and lack of it) don't exist. Here's an example from Robert Reich, in [3]a post "rebut[ing] the seven biggest economic lies":

Shrinking government generates more jobs. Wrong again. It means fewer government workers – everyone from teachers, fire fighters, police officers, and social workers at the state and local levels to safety inspectors and military personnel at the federal. And fewer government contractors, who would employ fewer private-sector workers. According to Moody's economist Mark Zandi (a campaign advisor to John McCain), the \$61 billion in spending cuts proposed by the House GOP will cost the economy 700,000 jobs this year and next.

Nothing about the effect of shrinking government on innovation. Many types of innovation increase jobs.

This is like [4]doctors ignoring the immune system. Ignoring the effect of this or that policy on innovation is likely to lead to decisions that reduce innovation in favor of something easier to measure or defend, such as productivity or equity. The cumulative effect of ignoring innovation is stagnation and decline, caused by problems that got worse and worse as, due to lack of innovation, they failed to be solved.

Tyler Cowen (The Great Stagnation) and Alex Tabarrok (Launching the Innovation Renaissance) are absolutely right to focus on innovation and the lack of it. The obesity epidemic is 30 years old – a good example of a problem that has gotten worse and worse. Judging by [5]Tara Parker-Pope's reporting, mainstream weight researchers don't have a clue – in the form of empirical results – how to solve it. Outside mainstream academia, the dominant weight-loss idea is a low-carb diet. That idea is a hundred years old (Banting). How little innovation there has been. That Parker-Pope failed to criticize researchers for their lack of progress shows how deep the problem is. She appears not to grasp the possibility.

1. <http://college.holycross.edu/faculty/vmatheso/>

2. [http://www.nytimes.com/2012/02/05/business/do-manufacturers-need-special-treatment-economic-view.html?\\_r=2](http://www.nytimes.com/2012/02/05/business/do-manufacturers-need-special-treatment-economic-view.html?_r=2)

3. <http://robertreich.org/post/11329289033>

4. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

5. <http://www.nytimes.com/2012/01/01/magazine/tara-parker-pope-fat-trap.html?pagewanted=all>

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Matt (2012-02-19 06:50:37)

Maybe I'm a little slow today (or a little overemployed?), but I'm not bridging a gap here. How would the loss of hundreds of thousands of jobs spur enough innovation to be more in favor of losing those jobs? This sounds like Mitt Romney's ridiculous thought process that we should drive families into foreclosure sooner, so that the market could reset faster. No regard for the families that get wrecked in the fray.



Nancy Lebovitz (2012-02-19 09:08:57)

In Murray Rothbard's *Man, Economy, and State*, he assumes that businesses always have more ideas than they have resources to take action on, so the only limiting factor is the availability of capital. I don't know what any other economists have to say about innovation.

MikeW (2012-02-19 10:37:28)

Maybe economics needs a sub-field, "evolutionary economics". Analogous to biology vs. evolutionary biology. One group looks at the way things are, the other looks at how things change over time. From an evolutionary perspective, you could say a healthy economy is a lot like a healthy ecosystem. Species (businesses and individuals) continually adapt to exploit new niches or gain an edge over competitors. Some will thrive, some will go extinct (blacksmiths, elevator operators). And Stephen Jay Gould's "punctuated equilibrium" is obvious when you look at the revolutionary impact of personal computers and the Internet on the overall economy. Where government policy fits in, I don't know. But I think it would be a fun field to study if I were 18 again.

Seth Roberts (2012-02-19 10:57:31)

How would the loss of hundreds of thousands of jobs spur enough innovation to be more in favor of losing those jobs?

If it spurred any innovation, you should be more in favor of losing those jobs. I am not saying consideration of innovation effects would change every decision. Just some of them.

Andy (2012-02-19 11:22:06)

It is incorrect to generally conclude that economists don't care about innovation by citing researchers who aren't in fields (sports and business cycles) that closely deal with innovation and whose research questions don't appear to be greatly affected by the mechanisms of innovation one way or another. Industrial organizational economists and growth economists spent a great deal of time and effort thinking about innovation and productivity growth both at the individual/firm level and at the macro level. The evidence presented here is akin to accusing a cell microbiologist about ignoring macro-ecological considerations in their research and therefore condemning all of biology. While the first claim is likely true by design the conclusion does not really follow. I suspect that you would still find IO and growth economists' attempts at studying innovation limited, but at least consider the attempts of those who are actually working on innovation before condemning all of economics.

Jazi zilber (2012-02-19 11:51:09)

The expected value of innovation is hard to quantify. Hence, economists may have a hard time to analyze it. It is a common habit to ignore things that are not measurable. I wrote about it [1] the academic bias

1. <http://yzilber.blogspot.com/2008/08/academic-bias.html>

Seth Roberts (2012-02-19 12:57:17)

Industrial organizational economists and growth economists spent a great deal of time and effort thinking about innovation and productivity growth both at the individual/firm level and at the macro level.

Is there a book that describes what they have learned from all this "thinking about innovation"? I haven't seen it, but you would know better than me. These efforts have not shown up in the introductory economics books I have seen, which devote very few pages to innovation. That makes me think that my overall summary is fair. Also the way some economists define economics (the whole field) as "how to allocate scarce resources". Nothing about innovation in that definition.

Seth Roberts (2012-02-19 13:00:25)

From an evolutionary perspective, you could say a healthy economy is a lot like a healthy ecosystem.

Yes, in the sense of containing great diversity. Jane Jacobs made this point in her book *The Nature of Economies*.

TMS71 (2012-02-19 15:27:33)

EconTalk with Russ Roberts did an episode on innovation with Alex Tabarrok as the guest. You should check it out.

js (2012-02-19 16:15:21)

I get the sense you don't know much academic economics. Think of Paul Romer's work on the economics of ideas and the huge subfield of endogenous growth theory, or the industrial organization literature on patents, or the economic geography work on agglomeration economies like in Silicon Valley. This is all strictly mainstream stuff, but there is also a rich Austrian tradition on this topic. I'm not sure what the quotation from the sports economist serves to illustrate. Your implicit demand seems to be that economists use the word "innovation" in every sentence they utter.

April Harding (2012-02-19 17:13:08)

I think you may be misinterpreting the absence of innovation from Matheson's and Romer's comments (and implicitly, their conceptual framework for understanding the issues under discussion) as suggesting lack of attention to innovation across the whole field of economics. Until the past few years, economists' training and research did pay too little attention to innovation. Even so, a number of economists have been doing useful research on the issue ever since Joseph Schumpeter's work in the 1940s. And recently, interest in and research on the topic has increased dramatically. Here is a very brief overview of these developments [http://en.wikipedia.org/wiki/Innovation\\_economics](http://en.wikipedia.org/wiki/Innovation_economics)

Seth Roberts (2012-02-19 17:32:54)

I get the sense you don't know much academic economics.

I'm sure you know more than I do. Could you refer me to an introductory economics text that spends more than a few pages on innovation? Or to a book about all the stuff that been discovered?

js (2012-02-19 18:01:03)

You're right, it doesn't feature prominently in introductory textbooks. But introductory textbooks aren't a good indication of what's happening on the research frontier (and economics is hardly unique in this respect - the same is true of physics, for example). At the risk of sounding somewhat curt, perhaps you should explore the field beyond the introductory textbooks before you dismiss it entirely.

Seth Roberts (2012-02-19 21:17:52)

Perhaps you should explore the field beyond the introductory textbooks before you dismiss it entirely.

I'm not dismissing economics! I'm saying they nearly ignore something really important. I am saying the effects of any policy on innovation should be considered when deciding whether it is a good or bad idea. I almost never see that done. Am I wrong? And is there a book that summarizes all the work economists are supposedly doing on innovation? Or is it not just introductory courses, but also upper-level undergrad courses that mostly ignore innovation?

A straffing critique from Seth Roberts « Economic Sophisms (2012-02-19 22:26:19)  
[...] "We're Economists. And We Don't Care About Innovation" [...]

js (2012-02-20 09:46:04)

Here's some of the academic literature: [http://www.nber.org/s/search?restrict\\_papers=yes &whichsearch=db &q=innovation](http://www.nber.org/s/search?restrict_papers=yes&whichsearch=db&q=innovation)

Chris (2012-02-20 23:51:09)

Economists have been paying more attention to innovation albeit indirectly. There's a lot more emphasis today on [1]productivity as a key economic indicator than there was a few years ago. And economists can't seem to answer why productivity increases over the long run, except...technology leading to innovation.

1. [http://en.wikipedia.org/wiki/Productivity#Labor\\_Productivity](http://en.wikipedia.org/wiki/Productivity#Labor_Productivity)

Ragout (2012-02-21 11:46:03)

About half of Christina Romer's article is about innovation. The entire section titled "Market Failures" is about the proper role of government in fostering innovation. Perhaps you feel that her discussion is lacking in some way, but you haven't explained why. You've just ignored it, or perhaps failed to recognize what Romer is talking about. For example, the claim that Romer discusses productivity but not innovation is simply nonsensical. Innovation is the main way to increase productivity, so when an economist talks about increasing productivity, they're talking about innovation. Finally, innovation does not "increase jobs." Innovation can increase or destroy jobs in particular firms or industries, but not in the economy as a whole (excepting perhaps "frictional" and "structural" unemployment). So that's something about innovation that economists know that you don't.

Andy (2012-02-21 13:20:13)

I don't know of any good undergrad level text that covers these issues. That is partly my ignorance as I do neither growth nor IO and partly because I believe that the economics of innovation is underdiscussed at the undergraduate level. My recollection is that the basic coverage in undergrad is to tell students who Schumpeter was and briefly discuss the idea behind creative destruction and then discuss a simple stylized model of the reasons firm may invest in R & D and why patents may be socially desirable. For a richer coverage at the graduate+ level, Zvi Griliches edited a nice book "R & D, patents, and productivity" in the 1980s. Unfortunately I'm not enough of an expert to suggest any more recent work on the subject. Finally, on endogenous growth theory, I recommend 'Wealth and the Knowledge of Nations' which gives a good overview about how innovation and growth were understudied and how David Romer got a lot of people to pay attention to it (by providing a parsimonious model). It also gives an interesting viewpoint on the culture of academic economists.

Seth Roberts (2012-02-21 16:27:29)

Innovation is the main way to increase productivity, so when an economist talks about increasing productivity, they're talking about innovation.

Another way to increase productivity is to spread innovations. For example, there was a time when only a small fraction of workers had knives. Spreading knives made the remaining workers more productive. Same for any tool. A third way to increase productivity is to increase employment. Giving someone a job makes them more productive. So it isn't clear to me why you think innovation is the main way to increase productivity. Both of these other ways are very common.

Ragout (2012-02-21 17:13:41)

Economists have found that innovation is the main way to increase productivity and I assure you that this is what Prof. Romer means when she talks about increasing productivity. Increasing inputs of capital or labor are alternative ways to increase productivity, as you suggest, but they are much less important. The key role of innovation in boosting productivity is mainly an empirical finding, although there are also theoretical reasons to expect this (i.e., diminishing marginal returns to inputs). For more, you could read about the Solow Residual, the Solow growth model, and growth accounting. For example, see the chapters on growth theory in an intermediate macro textbook, such as chapters 7 & 8 in Mankiw, "Macroeconomics."

[http://en.wikipedia.org/wiki/Solow\\_residual](http://en.wikipedia.org/wiki/Solow_residual) bcs.worthpublishers.com/mankiw7/

Seth Roberts (2012-02-21 18:42:59)

Thanks for referring me to the Mankiw chapters.

### **Hot Miso with Cream and Sweetener: Coffee/Tea Substitute (2012-02-20 05:00)**

A few weeks ago, I wondered if I drink too much tea. Is 4 cups/day too much? What about 2 cups/day? To learn more, I needed to drink a lot less tea.

What about miso? I wondered. I had some high-quality miso paste in my refrigerator. I got it in Tokyo at [1]a miso store (thanks to Gary Rymar for taking me there). I made a cup (about 25 g miso paste – 2-3 teaspoons? – mixed with 1 cup hot water). It was delicious. The complex taste reminded me of coffee and chocolate. I added a little cream and a half packet of sweetener (Sucralose). It tasted even better.

I did the same thing with miso from Berkeley. It was still very good.

I cannot imagine not drinking tea. But I can now imagine drinking less tea because miso is much healthier. Replacing tea with miso is an easy way to eat more fermented food. A cup of miso is easier to make than a cup of tea.

Incidentally, don't waste your time with powdered miso. It is much worse than the refrigerated miso (paste) sold in tubs.

1. <http://foodpia.geocities.jp/man9miso/>

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Not Tony (2012-02-20 08:46:15)

The forums are broken. New users can't create a profile because the image that we're supposed to enter the letters from won't display. This was the only way I could find to contact anybody.

Seth Roberts (2012-02-20 12:26:20)

Thanks for your comment about broken forums. I will look into it.

Jeff M. (2012-02-20 19:46:07)

Why do you use sucralose instead of sugar? My impression was that artificial sweeteners seem eventually shown to be less healthful than natural sweeteners (perhaps depending upon quantity, frequency, other dietary factors, and preexisting digestive & physiological status, e.g. artificial sweeteners are probably less harmful to diabetics than natural sweeteners would be).

Seth Roberts (2012-02-21 02:59:01)

I use sucralose rather than sugar to keep my blood sugar down – although I am not diabetic. Perhaps this is a mistake, as you say.

Alex Chernavsky (2012-02-21 07:37:14)

Seth, do you have any sense of what a dose-response curve would look like for ingestion of fermented food? Also, is your miso

fairly salty? I may try your suggestion (miso with hot water, sweetener, and [soy] creamer), but I wonder about the saltiness.

Oliver Mayor (2012-02-21 07:55:03)

I have a cup of miso now and then in place of tea. When having it this way, I usually mix it with a little coconut oil. For Alex: saltiness is one of the dominant flavors in miso, but there are variations that are less salty. To generalize a bit, if you prefer milder flavor, stick with shiromiso ("white miso"), which has a sweeter flavor, and avoid akamiso ("red miso") which is often stronger-tasting and saltier. But since there are so many varieties; I guess this is a good time to try out side-by-side comparisons. I prefer stronger flavored food, but just to put it out there, the brand I usually buy from my local Asian food market is called "Yamabuki Milder Miso". It has much less sodium for some reason than the other brands, which is not that important to me, but it is also one of the more expensive brands that doesn't have added MSG or additional flavorings.

Chris U (2012-02-21 11:39:58)

Re: Sucralose I've been eating alot of xyllitol for dental health. I suspect that it has other health benefits but haven't done too much research yet. Might be an alternative for you Seth.

Stone Glasgow (2012-02-21 11:48:04)

Tea is a fermented food. Why do you consider it to be unhealthy? You can even find very strongly fermented teas, like "puer," that contain myriad bacteria and related enzymes (one enzyme in puer has a strong ability to digest wheat gluten), and last many years, improving with age like fine wine.

worthwords (2012-02-22 02:10:35)

On what basis is tea unhealthy? Especially a mere 1-2 cups per day.

Seth Roberts (2012-02-22 12:58:12)

I wonder about the caffeine in tea. But not the caffeine in a mere 1-2 cups.

Stone Glasgow (2012-02-22 21:40:59)

Why do you suspect that caffeine may be harmful?

Seth Roberts (2012-02-23 01:56:26)

Caffeine may be harmful because in large amounts it causes sleep trouble. Maybe small amounts also have that effect...hard to say.

## **Vitamin D3 in Morning Makes Waking Up Easier (Story 18) (2012-02-21 05:00)**

David Cramer left [1]the following comment here:

Since you started posting these, I've been taking D3 in the mornings and notice that I wake up much more easily. I started with just 400 IU, then increased it to 800 IU. One day I took 1200 IU and woke up at 4:00 AM the next day. I've gone back to 800 IU since 4:00 AM seems a bit early. For the past week, I've also been giving one of my daughters (11 years old) 400 IU each morning, and she seems easier to wake up in the morning (normally it's quite difficult).

I asked him for details.

Tell me about yourself.

I'm in my 40s and live in Austin, Texas and have two daughters. I first encountered your work when I read about the SLD in Levitt and Dubner's blog. I read the pdf of your papers linked from that blog post and tried the SLD with sugar water. At the time, I was at the high end of my ideal weight, but was not motivated by weight as much as curiosity. I found the irony and absurdity of the SLD appealing. I also liked the idea that it could be tested easily and cheaply. I went from 170 to 145 lb in couple of months, but really only did SLD for 3 weeks. I now occasionally have a nose clipped green smoothie in the morning.

How long have you been taking D3 in the morning? What time do you take it?

I started a couple of weeks ago after you started blogging about it. I take it around 7:00 AM. That would normally be about an hours after I wake up.

The most obvious change since you started taking it is that you wake up more easily? How soon did this start after you started the D3?

Yes, that's the change I notice. It may be improving my sleep quality, but that's very subjective and not something I track closely anyway. The effect started almost immediately.

Could you describe (a) how easy it was to wake up in the month before you started the D3 and (b) how easy it was to wake up after you started the D3?

I would often set three alarms on my cell phone and return to bed for more sleep after dismissing the first two. After D3, I usually wake up before my alarm and don't feel the need to go back to sleep (e.g. after going to the bathroom). Post-D3, when I wake up, I'm awake. Previously, I was still very drowsy for some time, even after getting up.

What time do you usually wake up? get out of bed? do you use an alarm clock to wake yourself in the morning?

Usually 6 or 6:30. Occasionally a little earlier if I have an early meeting at work.

Did D3 have any effect on how easily you fall asleep in the evening? On how often you wake up in the middle of the night?

I haven't noticed any difference in falling asleep. I don't typically wake up in the middle of the night.

How much sunlight do you get on a typical morning?

Although I live in Texas, I doubt I get much in the morning this time of year. I do bike to work a couple of times a week, but my arms and legs would be covered. I might even wear gloves if it's cold. I work inside in an office during the day.

What brand of D3 do you use? what form (e.g., gelcap)?

NOW gelcaps.

How can you tell your daughter "seems to find it easier to wake up in the morning"?

She's a sound sleeper. Normally it requires repeated reminders and threats to get her up. Even after you get her out of bed, she'll fall back asleep on the couch. With 400 IU, I'm noticing less of that. I plan to up to 800 IU this

week to see if there's a difference.

1. <http://blog.sethroberts.net/2012/02/03/vitamin-d3-and-sleep-story-11/#comment-949098>

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Tim Ozenne (2012-02-21 09:40:10)

In the past, you discussed the effect of morning light—or its absence—on "mood" and such on "normal" individuals (as opposed to SAD types). Any idea if "Daylight Savings Time" has any deleterious effects? I arise early every morning for a swim workout. Right now, it is just barely dawn when practice is over in the outdoor pool, and soon Congress will make it dark again even at the end of the workout. I am wondering if anyone has looked at the effect on mental health of screwing with the clocks to get us up in the dark? Do you know?

beagle3 (2012-02-21 09:41:34)

Just noticed this post: <http://www.gwern.net/Zeo> #vitamin-d n=1, but mostly rigorous proof that vitamin D at night hurts sleep.

carol (2012-02-21 19:47:08)

Maybe this is why I wake up so early! I don't like waking up at 4 am. I never have trouble waking up - I'm too awake. I may drop the D3 for now.

JimPurdy.blogspot.com (2012-02-21 23:32:59)

David Cramer said: "I found the irony and absurdity of the SLD appealing." The absurdity of the Shangri-La Diet? Hmmm ... now there's an interesting thought. David, maybe you've discovered something. Maybe, all these years, the psychologist Seth Roberts has been running a psychology experiment on a grand scale, by proposing absurd stuff (sugar water to lose weight, balancing on one foot, staring at pictures of people in the morning), to see how many people can be fooled into doing ridiculous things. Yup, any day now, Ol' Seth will announce that his whole self-experimentation thing has been a big stunt funded by the propaganda gurus of Madison Avenue. Seth Roberts = the new Allen Funt, with all of America as the unwitting stars of a new Candid Camera program. Seth, does David Cramer get a prize for discovering your secret? Hee Hee ...

gwern (2012-02-22 14:55:08)

Tim: a quick check in Google Scholar with the very most obvious search terms - eg. <http://scholar.google.com/scholar?q=mood+daylight+savings> - suggests that there are many results in that vein.

Seth Roberts (2012-02-22 19:31:23)

Is the Shangri-La Diet "ironic and absurd"? I don't know what "ironic" means but yeah it does seem absurd. 1. Using sugar or fat (olive oil) to lose weight. 2. Making such a small change – all other weight-loss diets involve big changes. 3. Adding foods to what you eat (all other weight-loss diets involve some sort of deprivation – don't eat this or that). 4. Nose-clipping: why should that have any effect? The calories don't change, and calories are what matters. Or: the carbs don't change, and carbs are what matters.

JimPurdy.blogspot.com (2012-02-22 22:22:14)

And of course I was just joking about your supposed hoax. Actually, I am fascinated by how often that you detect things that nobody else seems to have noticed before. It reminds me of how a young child (who still has an open mind, at least until TV kills their brain cells)) will often spot things that adults see every day but don't notice. While I'm in my full-blown "TV-kills-the-brain" mode, Seth, I'm curious about how much TV you watch, and what kinds of TV you watch. As an ultra- liberal, I hope you tell me that you watch MSNBC and CNN, but you'll destroy my theory if you watch Fox News.

Seth Roberts (2012-02-23 02:11:02)

I watch about 2 hours of TV per day. My favorite shows include Homeland, Mad Men, The Bachelor/Bachelorette, Switched At Birth, The Amazing Race, Glee, Survivor, Revenge, The Good Wife, Downton Abbey, 60 Minutes, Work of Art, Episodes, and Suits.

JimPurdy.blogspot.com (2012-02-23 02:45:29)

Interesting, Seth, thanks. Since I gave away all my TVs back in 2005, I'm not familiar with any of those except 60 Minutes.

TomGinTX (2012-02-25 12:51:38)

Seth, have you watched any of the USA Network shows besides Suits? Psych and Burn Notice are my favorites. I also like White Collar, In Plain Sight, Royal Pains, and Covert Affairs. For just plain zaniness, it is hard to beat Psych. The "spy tips" on Burn Notice would come in handy at some odd moment. 8-)

Seth Roberts (2012-02-25 13:18:31)

Seth, have you watched any of the USA Network shows besides Suits?

Thanks for the suggestions. To answer your question: Not regularly. I think I've sampled most of them. Recently I confused White Collar and Suits so I watched a few seconds of White Collar.

TomGinTX (2012-02-25 14:27:53)

Easy to get them mixed up 8-) How to Create a USA Show in Six Easy Steps [http://www.vulture.com/2011/06/usa\\_shows.html](http://www.vulture.com/2011/06/usa_shows.html)  
Seth: Funny article. I am still surprised I like Suits, since on the face of it it's as formulaic as a romance novel.

Amara (2012-03-02 04:35:59)

Hello! i am not into blogging but this time i wanna leave a message that I didn't know that was very effective. I am 27 year old and if I'm going to buy vitamin D3, how many amount of dosage i am going to take? Hope you guys will answer me. Thanks for your wonderful website.

## **Vitamin D3 in Morning (1000 IU) Improves Rosacea (Story 19) (2012-02-22 05:00)**

A reader named Bob H left [1]the following comment:

I'm on 1000 [IU] a day D3 in the morning. I have not noticed any difference in sleep, but my rosacea has cleared up considerably.

Rosacea is not usually believed to be due to Vitamin D3 deficiency. For example, Wikipedia [2]lists many causes, but not that. [3]Here is another list of causes that does not include Vitamin D3 deficiency. [4]The Vitamin D Council says Vitamin D "cannot be used to prevent or treat rosacea" (but without supporting evidence). On the other hand, when people with rosacea consider the question, [5]they find evidence that D3 helps rosacea. If you have rosacea and have tried D3, please comment or email me about what happened.

I asked Bob H for details.

Tell me about yourself.



47 year old, white, IT worker, 230 lbs, runner, beer drinker, Maryland, but I lived in the Netherlands from Jun-2008-Jul-2011.

When did you start taking 1000 IU/day D3 in the morning? Were you taking D3 before this?

I started taking it about 6-8 weeks ago, in the morning, about 9:00 am 1000 IU - my first time for D3.

Please describe your rosacea before you started 1000/day D3 in the morning. please describe your rosacea now.

I've had consistent rosacea for years on my chest. It has not gone away completely, but it's much better.

Please describe your sleep.

My sleep was good before I started taking D3, and is still good.

Most of the success stories about Vitamin D3 in the morning have involved 4000 IU/day or more. Why did you decide to try 1000 IU/day?

I wanted to start out at a lower dose and build up.

What brand and form of D3 do you take?

1000 IU NatureMade gel.

1. <http://blog.sethroberts.net/2012/02/03/vitamin-d3-and-sleep-story-11/#comment-949258>
2. <http://en.wikipedia.org/wiki/Rosacea>
3. <http://www.medicinenet.com/rosacea/page2.htm#2whatcauses>
4. <http://www.vitamindcouncil.org/health-conditions/skin-disorders/rosacea/>
5. [http://www.rosaceagroup.org/The\\_Rosacea\\_Forum/showthread.php?18193-Vitamin-D3-and-Rosacea](http://www.rosaceagroup.org/The_Rosacea_Forum/showthread.php?18193-Vitamin-D3-and-Rosacea)

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Kirsten (2012-02-22 11:09:28)

Funny, I thought everyone knew that-but maybe not. I developed rosacea about 10 years ago, after being sick with a mystery illness that kept me out of work for a month and taking massive antibiotics that, in the end, had nothing to do with getting me better. After that, I developed digestive problems and also a tendency for facial flushing. I noticed it first in pictures-I'd be the person with the bright red nose. I never got the bumps on my skin that some rosacea sufferers have, just flushing. It was aggravated by cold, caffeine, spicy foods, strong emotions, and alcohol. Also, sugar and wheat consumption seems to aggravate it generally-not cause an attack but make me more prone to them. I got laser treatment for it, which helped for a while, though it came back, as the doctor had said it would. Anyway, a few years back I started taking D3 regularly, based on advice on paleo sites and this website, and I noticed that it had a dramatic affect on my flushing-even more than just avoiding my triggers. (That's hard anyway, since I love tea, coffee, and red wine.) I told a friend with rosacea, and he found that it worked too. My D3 intake varies a lot, since sometimes I'm very good about taking it regularly and sometimes I get out of the habit of taking it (like right now). I sometimes take cod liver oil, and sometimes D3 gels. When I stop taking it, the flushing comes back-I notice it after my morning coffee and after wine with dinner. When I start again, the flushing subsides. I've never paid attention to how long it takes-like whether it's instant or whether I need to take it for a while to notice the effect. Perhaps I'll start taking it again and see what happens.

Cliff Clayton (2012-02-22 19:08:06)

For everyone out there reading this, Cooling Inflammation by Dr. Art Ayers has information on rosacea and how D3 works to reduce inflammation. His blog is huge and covers many diseases.

### Assorted Links (2012-02-23 05:00)

- [1]new kind of magnesium supplementation. I look forward to trying it. With ordinary magnesium supplements, I notice no difference.
- [2]Tracking replication attempts in psychology. One person behind this is Hal Pashler, a co-author of mine.
- [3]Truth in olive oil.
- [4]Online patient communities, including some I' hadn't heard of.
- [5]The fat in women's thighs is higher in DHA than fat elsewhere. "Writers can quote studies that show foragers are healthy in one breath, and demonize foods that make up most of their diet in another."
- [6]Media about David Owen's new book The Conundrum ("declaration against massive greenwashing campaigns").

Thanks to Peter Spero and Allan Jackson.

1. [http://www.lef.org/magazine/mag2012/feb2012\\_Novel-Magnesium-Compound-Reverses-Neurodegeneration\\_01.htm](http://www.lef.org/magazine/mag2012/feb2012_Novel-Magnesium-Compound-Reverses-Neurodegeneration_01.htm)
2. <http://psychfiledrawer.org/>
3. <http://www.extravirginity.com/>
4. <http://www.forbes.com/sites/davidshaywitz/2012/02/07/getting-better-online-communities-elevate-voice-of-the-patient/>
5. <http://huntgatherlove.com/content/why-women-need-fat>
6. [http://www.davidowen.net/david\\_owen/the-conundrum.html](http://www.davidowen.net/david_owen/the-conundrum.html)

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Tom (2012-02-23 05:55:48)

It can be hard to get enough magnesium orally, as it's bulky, and ingesting too much can cause diarrhea (the 'milk of magnesia' effect.) Apparently, it is much more efficiently absorbed transdermally, via baths or soaking your feet in water to which magnesium chloride crystals have been added. This is the stuff when marked up as a bath product: [http://magneticclay.com/store/Department s/Ancient-Minerals-Magnesium-Bath-Flakes.aspx](http://magneticclay.com/store/Department%20s/Ancient-Minerals-Magnesium-Bath-Flakes.aspx) But this is the same stuff from an aquarium supply store (about a third the price): <http://bulkreefsupply.com/store/review/product/list/id/648/>

James A Donald (2012-02-23 15:30:20)

Since magnesium disassociates in the body, it is unlikely the form of magnesium supplement makes much difference.

garymar (2012-02-23 20:27:43)

Tom, that's a great link. I just bought some Epsom salts, magnesium sulfate, to put in my bath (besides taking magnesium citrate orally). The magnesium chloride would be a lot cheaper. I can buy it here in Japan in bulk because it's used in the making of tofu (it's called nigari). It costs about \$30 for 50 lbs.

Tom (2012-02-27 18:53:37)

garymar, not sure if you'll see this, but the way to make transdermal magnesium ridiculously cheap is just to dissolve the magnesium chloride in water and apply it with a sponge while in an empty tub. Read a book or email w/ your phone while it absorbs. If the concentration is too strong, you'll feel a mild stinging sensation after about ten minutes (which stops immediately upon rinsing off.) I just can't see the point in diluting it with a tub full of water each day and then losing it all down the drain.

### **Excellent Customer Service From Fidelity Investments (2012-02-23 22:13)**

Because I am in China, I want my new credit card sent here. After 45 minutes arranging this, my credit-card company asked me one last security question: What were the last four digits of the bank account used to pay my most recent bill? I told them. They said my answer was wrong. Huh?

I pay my credit card bills through Fidelity Investments (which is not a bank). I contacted them. I was routed to their BillPay department. The person who helped me, whose name I wish I had written down, said that he was as puzzled as I was. It was not clear at all why my answer was wrong. He suggested a conference call. He started a conference call with my credit-card company. Within a few minutes, he and the credit-card company representative figured out that there was a mistake in the number listed by the credit-card company. Their software had lost the last digit of my account number, so that if my account number had ended in 12345, their records would have showed 1234. (Yet the payment still went through.)

I was greatly relieved. "At least the problem had a solution!" I told the credit-card-company representative. Imagine not being able to control one's money because of a software error. I was/am grateful to the Fidelity representative for quickly solving a problem that had nothing to do with Fidelity.

You might think that such heavily-used software would by now be free of bugs. But it wasn't.

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Darrin Thompson (2012-02-24 07:18:35)

My dad, who is a very good long term saver, told me that if you are serious about saving your money and investing (the right way, i.e. buy low cost index funds and hold), you either put your account with Vanguard or Fidelity. Everybody else is out to suck you dry with "management" fees.

David Johnston (2012-02-24 08:58:04)

So was it the check digit that was the problem? I can see how software might either conclude that the 'last digit' was the last digit of the account number or the check digit they tack on the end. It suggests organizational incompetence if they can't agree and standardize on these simple things.

dearieme (2012-02-24 10:07:05)

"You might think that such heavily-used software would by now be free of bugs. But it wasn't." Oh very sharp. You do intend it as an analogy, don't you?

Seth Roberts (2012-02-24 15:03:49)

So was it the check digit that was the problem?

It was the last digit. Whether the last digit of the account number is a check digit I don't know.

Seth Roberts (2012-02-24 16:08:28)

You do intend it as an analogy, don't you?

Yes. As another example of the fallibility of experts.

David (2012-02-24 21:02:13)

You might think that such heavily-used software would by now be free of bugs. But it wasn't. No, I wouldn't think that. Not for nanosecond.

### **Lame Response of the AMA to HealthTap (2012-02-24 05:00)**

Many years ago, when I was a professor at Berkeley, I sought out David Freedman, a professor of statistics, for comment on an idea of mine. I knew he would dislike it – he was negative about everything – and I wondered how strong his reasons for disliking it would be. It turned out, as I expected, that he disliked it but – I was glad to see – had no convincing reasons. That was helpful, I thought.

Likewise, it is obvious that the AMA would dislike [1]HealthTap, a website that solicits doctors' answers to medical questions (along the lines of "I have X symptoms. What should I do?"). [2]Here's the AMA response:

Dr. Peter W. Carmel, president of the American Medical Association, says he is concerned about the use of online medical information, which should "complement, not replace, the communication between a patient and their physician," he wrote in an e-mail. With online health information sites, "a medical history is not taken, a physical exam does not occur and any suggested treatment is not monitored or assessed," he said. "Using this information in isolation could pose a threat to patients."

These comments could have been made by someone with no medical training. Practically everything has a hypothetical downside ("could pose a threat"). Since he fails to call into question the obvious upside (patients will get questions answered much faster and cheaper), he is practically endorsing it.

1. <https://www.healthtap.com/>

2. [http://www.nytimes.com/2012/02/05/business/on-healthtap-advice-for-you-and-points-for-doctors.html?\\_r=1](http://www.nytimes.com/2012/02/05/business/on-healthtap-advice-for-you-and-points-for-doctors.html?_r=1)

tess (2012-02-24 10:07:35)

such a thing threatens the AMA monopoly – we can't have that!!! patients MUST NOT have ideas of their own! what are you thinking??? ;-)

Jim Purdy (2012-02-26 00:00:36)

HealthTap sounds very interesting, Seth. Thanks for calling attention to another great (hopefully, anyway) resource.

Bennett Werner, MD (2012-05-04 06:08:01)

The AMA doesn't (want to) understand that Healthtap is not proposing to "practice medicine" in its allotted 400 character answer space. It provides much needed information and there's plenty of need for that!

### **Stephen McIntyre on Gleickgate (2012-02-24 15:57)**

Gleick might as well have signed the fake document. Mosher identified him as the author almost instantly. The fake memo, unlike the actual documents, put Gleick in a position of prominence in the climate debate, whereas, in his actual encounters with skeptic blogs, Gleick has come across as an erratic and even comic figure. The style parallels came afterwards.

From [1]here. I sat next to Peter Gleick at a friend's dinner party about five years ago. He seemed to me staggeringly accomplished, not erratic (or comic) at all. Yet recently [2]I too found him to be comic. Remember that famous New Yorker cartoon – "On the Internet, no one knows I'm a dog"? The bitter truth is "On the Internet, no one knows I'm a nice person." I don't mean Gleick is not a nice person – if anyone is a jerk it is me for what I just quoted – I mean that his recent actions strike me as weirdly uninhibited.

1. <http://climateaudit.org/2012/02/24/heartland-publishes-gleick-emails/#comments>

2. <http://blog.sethroberts.net/2012/01/30/the-great-climate-change-debate-which-side-is-funnier/>

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mike (2012-02-24 17:06:00)

Check out Gleick's review of "The Delinquent Teenager Who Was Mistaken for the World's Top Climate Expert" and the comments in reply. [http://www.amazon.com/Delinquent-Teenager-Mistaken-Climate-ebook/product-reviews/B005UEVB8Q/ref=cm\\_cr\\_pr\\_top\\_link\\_next\\_2?ie=UTF8&showViewpoints=0&filterBy=addOneStar&pageNumber=2](http://www.amazon.com/Delinquent-Teenager-Mistaken-Climate-ebook/product-reviews/B005UEVB8Q/ref=cm_cr_pr_top_link_next_2?ie=UTF8&showViewpoints=0&filterBy=addOneStar&pageNumber=2)

mike (2012-02-24 17:37:27)

Gleick was one of the authors of the response to the WSJ article. He said that most of those authors have no expertise in climate science. Those authors included the people below: Claude Allegre, former director of the Institute for the Study of the Earth, University of Paris; J. Scott Armstrong, cofounder of the Journal of Forecasting and the International Journal of Forecasting; William Kininmonth, former head of climate research at the Australian Bureau of Meteorology; Richard Lindzen, professor of atmospheric sciences, MIT; Henk Tennekes, former director, Royal Dutch Meteorological Service; Antonio Zichichi, president of the World Federation of Scientists, Geneva.

dearieme (2012-02-25 15:19:31)

Is he mad or just a conceited chump who considers himself above petit bourgeois notions such as propriety and legality? The funny farm or jail?

## **The DIYization of Beer Brewing and Innovation (2012-02-25 03:43)**

The key point – as far as I'm concerned – in [1]this article about the DIYization of beer brewing comes in the middle of a paragraph:

Home brewing is part of a broad spectrum of DIY activities including amateur astronomy, backyard biodiesel brewing, experimental architecture, open-source 3-D printing, even urban farming. . . . Many of these pastimes can lead to new ideas, processes, and apparatus that might not otherwise exist.

Likewise with the DIYization of science: It will produce new ideas, solutions, etc. The Shangri-La Diet is an example.

Thanks to David Archer.

1. [http://www.slate.com/articles/technology/future\\_tense/2012/02/home\\_brew\\_and\\_the\\_diy\\_innovation\\_movement\\_.single.html](http://www.slate.com/articles/technology/future_tense/2012/02/home_brew_and_the_diy_innovation_movement_.single.html)

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## **Vitamin D3 in Morning: 4000 IU Better Than 1000 IU (Story 20) (2012-02-25 05:00)**

[1]Daniel Lemire, a Canadian computer science professor, left [2]the following comment here

I have irregularly taken 1000 UI in the morning for years with no noticeable effect.

For about two years, I have had poor sleeping patterns characterized mostly by the fact that I tend to go to bed at 1am or later (and I get up around 7:15 am [woken up by an alarm clock]). Whenever I would try to go to bed earlier, I would simply fail to fall asleep.

After reading this blog, I increased my intake of D3 to 4-5,000 IU. I'm now falling asleep about an hour earlier. This could be a placebo effect, of course, but I consider it a very significant improvement.

It is unclear whether I have more energy. I don't know how to measure such an effect. I expect that I'm less irritable, but that's a side-effect of getting more sleep.

I asked him for details.

Tell me about yourself.

I'm in my 40's. I enjoy a flexible schedule and often work from home.

You write: "For about two years I have had poor sleeping patterns characterized mostly by the fact that I tend to go to bed at 1 am or later (and get up around 7:15 am [woken up by an alarm so that he can eat breakfast with his family and walk his kids to school]). Whenever I would try to go to bed earlier, I would simply fail to fall asleep." You mean you are still tired when you get up? You want to sleep longer but are unable to?

I was getting about 6 hours of sleep, and yes, I was still tired when I got up. I'm less tired now that I am getting around 7 hours of sleep.

"I tend to go to bed at 1 am or later". What was the average (median) time of going to bed? When you went to bed at this time ("1 am or later"), how long would it take you on average (median) to fall asleep?

The median is 1 am. I fall asleep immediately. I don't go to bed unless I know I will soon fall asleep: I tried to go to bed earlier, but it made me feel worse about my insomnia and I did not get better sleep. I tend to stay up until I feel like I must go to bed.

"After reading this blog, I increased my intake of D3 to 4-5,000 IU." How many days have you been at the new dosage?

2 weeks +/- 3 days.

Was this the only change?

Yes. As far as I can tell. The time did not change. It is around 7:30 am. Soon after I get up. Before coffee.

"I'm now falling asleep about an hour earlier. " What time (median) is that? How long (median) does it take you to fall asleep? What time are you now waking up?

I now fall asleep around midnight. I just instantly fall asleep. So I am getting approximately 7 hours of sleep.

"I expect that I'm less irritable." You've noticed that you're less irritable?

Yes. I feel less irritable.

What brand and formulation (e.g., capsule, gelcap, tablet) of D3 do you take?

Walmart house brand ("equate"). Tablets, 1000 IU/tablet. I take 4, sometimes 5. (Median is 4.)

1. <http://lemire.me/blog/>

2. <http://blog.sethroberts.net/2012/02/08/vitamin-d3-and-sleep-story-14/#comment-949971>

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Nancy Lebovitz (2012-02-25 07:57:00)

Off-topic, but a striking case of self-experimentation: [1]MS symptoms reversed with scientific-theory based diet change- in the paleo range, I think.

1. <http://www.youtube.com/watch?v=KLjgBLwH3Wc&feature=youtu.be>

Stone Glasgow (2012-02-25 12:11:08)

Seth, have you considered two-stage sleep? We appear to be naturally inclined to sleep in two, four-hour stages per night, with a waking period in between, according to modern studies, historical references, and modern day hunter gatherer tribes: [http://www.bbc.co.uk/news/magazine-16964783?utm\\_source=twitterfeed&utm\\_medium=twitter](http://www.bbc.co.uk/news/magazine-16964783?utm_source=twitterfeed&utm_medium=twitter)

Seth Roberts (2012-02-25 13:22:41)

Seth, have you considered two-stage sleep? We appear to be naturally inclined to sleep in two, four-hour stages per night, with a waking period in between, according to modern studies, historical references, and modern day hunter gatherer tribes:

I am not so sure. What if all those studies involved people who didn't stand much (say, less than 4 hours/day) but long ago people stood much more (say, more than 8 hours/day)? And if you stand a lot the two-stage structure disappears? So it is not so clear what we are "naturally inclined" to do. I admit however that I can get a lot done after I wake up early in the morning but before I later fall back asleep...so it is not so clear there is anything wrong with this two-stage structure.

Stone Glasgow (2012-02-25 15:37:42)

Perhaps the methods that you have used to combat your early-waking have been interfering with our natural tendency to have twin sleeping-cycles. Did you see the side bar in the BBC link? When segmented sleep was the norm: "He knew this, even in the horror with which he started from his first sleep, and threw up the window to dispel it by the presence of some object, beyond the room, which had not been, as it were, the witness of his dream." Charles Dickens, Barnaby Rudge (1840) "Don Quixote followed nature, and being satisfied with his first sleep, did not solicit more. As for Sancho, he never wanted a second, for the first lasted him from night to morning." Miguel Cervantes, Don Quixote (1615) "And at the wakening of your first sleepe You shall have a hott drinke made, And at the wakening of your next sleepe Your sorrowes will have a slake." Early English ballad, Old Robin of Portingale The Tiv tribe in Nigeria employ the terms "first sleep" and "second sleep" to refer to specific periods of the night

Stone Glasgow (2012-02-25 15:39:35)

Why would the Tiv tribe in Nigeria have twin sleep-cycles? They are presumably on their feet a lot and in the sun generating D3.... Perhaps they don't skip breakfast ;)

Seth Roberts (2012-02-25 16:37:53)

you didn't like my first example, okay, let me give you two more: 1. Is whatever language the Tiv speak likely to be the very first human language? 2. Is whatever diet the Tiv eat likely to be the very first human diet (or even the diet of 100,000 years ago)? I don't mean that you're wrong - just that I am less convinced than you.

Stone Glasgow (2012-02-25 19:35:41)

So you think that perhaps even 500 years ago, we were eating and acting outside of the natural behavior of our ancestors, which was (and is) disrupting our sleeping patterns? Seem plausible to me. Seth: Yes, that's what I think. One reason the Tiv may have segmented sleep is that they don't eat enough animal fat.

Kirk (2012-02-26 13:12:43)

I am skeptical about most claims about what might be considered normal human sleep. For example, the entertaining and fascinating book "Don't Sleep, There are Snakes" is one of several accounts I have come across where hunter-gatherers slept according to odd schedules. And the health blogs constantly talk about keeping your room pitch-black so as not to affect melatonin levels. And yet didn't hunter-gatherers camp under full moons? Seth: yeah, and did they or didn't they sleep in the shade of trees? and did they or didn't they cover their eyes while they slept? I don't think we'll know the answer to these questions any time soon. However, my many attempts to make my sleep deeper did eventually improve my ability to fight off colds.

Chris (2012-02-26 14:45:29)

I can see how this can happen. For most people 1,000 i.u is not enough and it has been proven in many case studies. The ideal amount of D3 consumption can range from person to person, but it should be around 5,000 i.u - 10,000 i.u. I was



reading an article on: <http://whatvitaminsshoulditakeinfo.com/> and it basically explained this is due to changes in society; electricity, working inside for long hours, sunscreen..etc Kirk, it is recommended to sleep in complete darkness. Any form of light immediately signals to your body to stop producing melatonin. However, you did bring up a very valid point that I have not yet studied. I'll have to look into that.

Iwan (2012-03-08 08:42:15)

Has anyone else noticed this? I have been taking 4 x 1000 u in the mornings for the past 6 weeks. In the past 2 weeks, 4 people have asked me if I've been on holiday as I appear 'tanned' and healthy. I live in Canada. We have limited daylight at this time of year and I do an office job. Blood pressure is okay and I eat mostly paleo, and I have had no other significant lifestyle changes in the period. Has anyone else seen similar effects?

### **Carl Willat Suffers From the Willat Effect (2012-02-26 05:00)**

[1]Carl Willat, for whom [2]the Willat Effect is named, wrote to me:

I had two cartons of half and half in the fridge, neither had reached its expiration date but one was three days newer. I wondered if I could taste the difference between them, and I found that I could. Neither was sour, but one tasted fresher. I made a batch of vanilla ice cream out of each of them, figuring that together with the other ingredients I was adding (vanilla, egg yolks, cream, salt and sugar) the difference in taste would be less noticeable. After putting both mixtures through the ice cream freezer I tasted them [side by side] and one tasted a lot better. I gave a friend of mine a spoonful of each and she immediately noticed the difference. She correctly identified the good one and described it as tasting fresher and lighter. I can't bear to eat the less good batch and I don't know what to do with it. I don't want to give it away for fear someone will think it representative of what my ice cream tastes like. I'm sure in the past I've made plenty of ice cream of this same quality that I and everyone else thought was perfectly acceptable, even delicious.

The fascinating part is "can't bear to eat the less good batch". Same thing with me and tea: In the last half year or so, I've made hundreds of side-by-side comparisons of tea. I now throw away cups of tea I don't like. I never used to do that.

1. <http://www.carlsfinefilms.com/>

2. <http://blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/willat-effect/>

jeff (2012-02-26 05:57:24)

I had an experience with this just this week. I brought a cup of starbucks to a meeting that had a carton of Dunkin Donuts coffee. After having the starbucks the DD tasted awful. I am seeing many more examples with this effect in real life.

Adam (2012-02-26 06:24:10)

I am interested in knowing which was the best tasting ice cream. The one made from the freshest ingredients or the one made from the fermented? Is it fermented or just on its way to spoiled. I have also noticed this effect, especially with coffee, and it's not always the one that I assume to be the "freshest".

Alex Chernavsky (2012-02-26 07:32:30)

Then there's something that I would call the reverse Willat effect. I recently bought a new brand of kim chee that, at first, tasted much better to me than my usual brand. But when I compared them side-by-side, the two brands tasted remarkably similar to me. See also: [1]Double-Blind Violin Test: Can You Pick The Strad?

1. <http://www.npr.org/blogs/deceptivecadence/2012/01/02/144482863/double-blind-violin-test-can-you-pick-the-strad>

Brian (2012-02-26 12:44:39)

Hi Seth, I wonder what your thoughts are about when we should and should not avoid the Willat effect. On the one hand, nicer things are nice, but on the other I don't want to need the best of everything. Looking at the Willat Effect next to the Hedonic treadmill what do you think is optimal? I already can't stand normal chefs knives, produce, yogurt, speakers, music, movies, and books! - Brian Seth: In my experience the Willat Effect both increases (tea) and decreases (sake) consumption. Of course when it decreases consumption it decreases enjoyment - since I don't drink sake, I no longer enjoy it. But I don't miss sake, there are plenty of substitutes. So, in my experience, there has been no serious downside. The upside is really noticeable: I do side-by-side tea comparisons every day.

Kirk (2012-02-26 12:59:48)

I'm tied in knots in a fierce debate with myself as to whether I should continue with the comparison tea tasting. You see, I had grown bored with a regular black tea (organic Assam, brewed 2.5 minutes, served with cream). A month ago I tried another round of tea comparison with a variety of samples, and the winner was the one I had settled on three years ago. But it's still kind of boring. Given this state of boredom with black tea, several years ago I started making chai tea out of a random blend of spices, grinding the spices myself with a granite mortar and pestle. And the tastes have been reasonably pleasurable, like adding fermented foods to soups and steps. But as I contemplate taking on a half-year investigation into what makes the best chai blend, I have to ask myself, "Do I really want to shun all those other almost-good-enough blends?" On the other hand, at the end, I'll have the perfect chai blend.

dearieme (2012-02-26 17:35:12)

You give the inferior ice cream to the cat. Life isn't all that complicated.

## Assorted Links (2012-02-27 11:52)

- [1]The advantages of raquetball self-education
- [2]Nassim Taleb on British economic governance. I like the idea of a list of firms that will be bailed out.
- [3]Lactofermented mayonnaise. "[Without fermentation this] will only last for about a week in the refrigerator. On the other hand, [if fermented (7-12 hours at room temperature), it] will last about 6-8 weeks or longer."
- [4]Cosmic rays and cloud formation. Does cosmic ray variation cause global temperature variation?

- [5]Man the opportunist by Melissa McEwen
- [6]WSJ anti-AGW letter writers respond to critics.

Thanks to Ryan Holiday, Matt Cassel, Tom George and Dave Lull.

1. <http://www.nytimes.com/2012/02/14/sports/self-taught-racquetball-player-kane-waselenchuk-in-a-class-by-himself.html>
2. <http://www.spectator.co.uk/coffeehouse/7645873/nassim-taleb-ban-tesco-bonuses.thtml>
3. <http://fastpaleo.com/lacto-fermented-mayonnaise/>
4. [http://www.realclearpolitics.com/articles/2012/02/10/the\\_galileo\\_of\\_global\\_warming\\_113090.html](http://www.realclearpolitics.com/articles/2012/02/10/the_galileo_of_global_warming_113090.html)
5. <http://huntgatherlove.com/content/politically-correct-stereotypes-about-hunter-gatherers>
6. [http://online.wsj.com/article/SB10001424052970203646004577213244084429540.html?mod=WSJ\\_article\\_comments#articleTabs%3Darticle](http://online.wsj.com/article/SB10001424052970203646004577213244084429540.html?mod=WSJ_article_comments#articleTabs%3Darticle)

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Tuck (2012-02-27 12:28:54)

Fallon and Enig's "Nourishing Traditions" cookbook contains a similar recipe for mayo. In their recipe whey is optional, and if excluded reduces the life of the mayo, but if included a period of fermentation is not required. I've made mayo with and without whey, and with whey it lasts a lot longer, even if you put it directly in the fridge. Homemade mayo is well worth it, and once you get the procedure down takes very little time.

David (2012-02-29 06:40:11)

the death of man-made global warming will go uncovered by much of the media - - - <http://newsbusters.org/blogs/tom-blumer/2012/02/28/richard-who-ap-nyt-others-ignore-uks-lindzen-he-pwns-global-warming-alar>

## **Toenail Fungus Home Remedies (2012-02-28 05:00)**

[1]Here is a huge amount of information about the effects of various home remedies for toenail fungus. I was especially impressed by a woman who tried soaking her feet in apple cider vinegar and reported back twice, at six-month intervals, about what happened.

1. <http://www.earthclinic.com/CURES/fungus.html>

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Not Tony (2012-02-28 15:01:19)

Sorry to keep posting in here, but the now the forums won't send the verification email to new posters, so no more new posters can register. Seth: after you register for the forums, send me your username and I will approve your registration. I do it this way to prevent thousands of spam registrations.

Stone Glasgow (2012-03-01 14:09:20)

What did she report regarding apple vinegar? Have you found an effective cure for toenail fungus?

## **Personal Science and Varieties of DIY (2012-02-29 19:48)**

How does personal science (using science to solve a problem yourself rather than paying experts to solve it) compare to other sorts of DIY?

Here's an example of personal science. When I became an assistant professor, I started to wake up too early in the morning. I didn't consider seeing a doctor about it for several reasons: 1. Minor problem. Unpleasant but not painful. 2. Doctors usually prescribe drugs. I didn't want to take a drug. 3. Sleep researchers, based on my reading of the sleep literature, had almost no idea what caused early awakening. They would have said it was due a bad phase shift of your circadian rhythm. They often used the term circadian phase disorder but never used the term circadian amplitude disorder – apparently they didn't realize that such a thing was possible. I decided to try to solve the problem myself – an instance of DIY. Except that, if I made any progress, that would be better than what the experts could provide, which I considered worthless.

There are thousands of instances of DIY, from fixing your car yourself to sewing your own clothes to word processing. Here is one dimension of DIY:

1. Quality of the final product. Better, equal, or worse to what you would get from professionals. Richard Bernstein's introduction of home blood glucose testing led him to much better control of his blood glucose levels than his doctors had managed. Same as my situation: DIY produced acceptable results, the experts did not.

In contrast to Bernstein, who reduced his blood glucose variability within months, it took me years to improve my sleep. That is another dimension:

2. Time needed. Personal science, compared to other DIY, is orders of magnitude slower.

Here are some more dimensions:

3. Training needed. I don't know how much training personal science requires. On the face of it, not much. I had acne in high school. I could done self-experimentation at that point. It just didn't occur to me. On the other hand, I think effective personal science requires wise narrowing of the possibilities that you test. For most health problems, you can find dozens of proposed remedies. How wise you need to be, I don't know.

4. Commercialization. Some forms of DIY are entirely the creation of businesses – cheap cameras, home perms, IKEA, etc. Bernstein's work happened because of a new product that required only a drop of blood. The company that made it wanted doctors to do DIY: measure blood glucose levels in their office (fast) rather than having the measurement made in a lab (slow). When I started to study my sleep, no business was involved. Now, of course, companies like Zeo and the makers of FitBit want users to do personal science.

5. Price. My sleep research cost nothing, which in the DIY world is unusual. The term DIY is almost entirely a commercial category: Certain books and goods are sold to help you DIY.

6. Customization possible. Some kinds of DIY give you the tools to build one thing (e.g., IKEA, home perms). Other kinds (e.g., Home Depot, word processing) give you the tools to build a huge range of things. This dimension is variation in how close what you buy is to the finished product (Ikea = very close, word processing = very far). Personal

science allows huge customization. It can adjust to any biology (e.g., your genome) and environment (your living conditions).

7. Benefit to society. If I or anyone else can find new ways to sleep better – especially safe cheap easy ways – and these solutions can be spread, there is great benefit to society, by comparison to DIY that allows non-professionals to reproduce what a professional would create (e.g, IKEA).

You might say that personal science isn't really DIY because, compared to other DIY, (a) it is much slower and (b) the potential benefit to society is much greater. But those features are due to the nature of science. Any form of DIY has unique elements.

My mental picture of DIY is that there are two sides, producers and consumers, and in many domains (health, car maintenance, word processing, etc.) they creep toward each other in the sense that what producers can make slowly increases and what consumers are capable of slowly increases. When they meet, DIY begins. In some cases, the business has done most of the changing; the DIY is very easy (e.g., Ikea). In other cases, the consumer has changed a lot (literacy – not easy to acquire). Either way, the new DIY causes professionals who provided that service or good for a living to lose business.

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Rocky (2012-03-09 07:26:13)

I just read this Wired article this morning. Thought you might be interested in this.

Rocky (2012-03-09 07:26:54)

sorry ... link to article -> <http://www.wired.com/epicenter/2012/03/opinion-wolfram-life-analytics/all/1>

## 7.3 March

### Tucker Max on How to Eat an Egg (2012-03-01 05:00)

A few months ago I blogged that [1]a rat had persuaded me to eat more eggs. This particular rat liked scrambled eggs. Rats are omnivores, like humans. Unlike humans, they ignore advertising, nutrition fads and disinformation. Related to this, [2]Tucker Max emailed me:

Have you thought about eating your egg raw? It sounded weird to me at first, but after looking extensively into it, there was a lot of good evidence that cooking an egg destroys a lot of the beneficial nutrients/enzymes in it. Once I started doing this, I noticed a HUGE increase in energy from the egg. It was like I almost eating a different food. In fact, the very first time I did it was at night, like 9pm, and I couldn't get to sleep until 3am I had such a huge burst of energy. It's not quite like that anymore, but I take it about an hour or two before I work out, and its like taking a red bull (I may be a bit vitamin B12 deficient, which would explain this).

As to how I do it, I just crack the egg into a coffee cup, and swallow it whole. It has pretty much no

flavor. I also only do it with organic pasture-raised eggs. I don't think I'd do this with normal, crappy store bought eggs.

I replied:

On my blog I said that butter and egg were in that way different from other foods – butter or at least milk must be a complete nutrient since it is the only food the baby gets. Other foods are under no such evolutionary pressure.

Tucker replied:

Which is why its SO important to get raw milk/butter from grassfed cows. Almost a completely different food than normal grocery store milk.

Yeah. When I get back to California I will compare raw and cooked eggs. In Beijing I eat mainly fermented eggs.

1. <http://blog.sethroberts.net/2011/11/30/an-unbiased-view-of-what-we-should-eat/>

2. <http://www.tuckermax.com/>

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Tomas (2012-03-01 06:58:07)

I don't agree that raw eggs have no flavor, I specifically eat eggs raw for flavor. Usually I discard whites though, which have inferior nutritional value compared to yolks. Many people including me have noticed that eggs eaten alone strongly decrease blood sugar. My BG tends to be lower in the morning, so I prefer eating eggs later on. I haven't noticed any effect on energy levels.

Tomas (2012-03-01 07:00:29)

... and my main concern is that cholesterol oxidizes quickly when heated and becomes toxic

MetaThought (2012-03-01 07:33:13)

Sunny side up is the best of both worlds.

Tony (2012-03-01 08:08:46)

Hi, In case you never saw this article on the glutathione boosting benefits of raw milk and eggs: <http://www.westonaprice.org/blogs/2010/09/11/the-biochemical-magic-of-raw-milk-and-other-raw-foods-glutathione/>

Eric (2012-03-01 08:42:34)

I eat my eggs scrambled OR raw, but when I eat'm raw I only eat the yolk. It's a Spanish snack: Huevo con miel ( <http://www.spain-in-iowa.com/2011/04/huevo-con-miel-raw-egg-yolk-with-honey/> ) I don't think that raw egg whites are good. I'm not sure about it, but I think I read somewhere that the egg white should be heated before consumption. I like the taste of a raw yolk, it's basically the same as "sunny side up"! I don't like the taste and texture of the egg white. Just the yolk for me, with some salt most of the time!

beagle3 (2012-03-01 09:11:06)

How and where do you get eggs you trust to be salmonella free? I'm living in NYC, and I can't seem to find in-shell pasteurized eggs anywhere. Given how horrible chicken raising conditions in the US are (even the so called "cage free" ones - 15 minutes a day outside the regular cage is enough for that designation), how do you trust your eggs to be disease free?

gwern (2012-03-01 09:31:00)

> the very first time I did it was at night, like 9pm, and I couldn't get to sleep until 3am I had such a huge burst of energy. It's not quite like that anymore Yeah, that's how the placebo effect works for me too.

Brad Czerniak (2012-03-01 09:46:10)

There may be side benefits to eating raw eggs, but eating them raw means only about half as much bioavailable protein.

Cap (2012-03-01 09:58:48)

@beagle3, I recall reading somewhere that people know techniques to tell by inspecting an egg whether it is likely to have salmonella; sorry I can't recall any details, but it's worth looking into maybe.

Tony (2012-03-01 10:10:23)

@beagle3, I get safe eggs at ShopRite in Upstate NY. Search for locations here for NYC: <http://www.safeeggs.com/store-locator>

Alexian (2012-03-01 10:19:13)

@gwern Your life must be amazingly energetic if every single new thing you try gives you a burst of energy for 7 hours. The problem with citing the 'placebo effect' is that most stuff you'll try will never trigger any placebo effect, whether you expect it to work or not. Not to mention, why would anyone have a pre-expectation that eating a raw egg would give them a burst of immediate energy?

aretae (2012-03-01 11:41:44)

I concur with Tucker Max, at least on the difference between pastured eggs, and not. We have chickens in our backyard...they live on grass, bugs, weeds, etc...and the eggs aren't even recognizeable as the same type of food as store fed, even "Free Range" ones. 1. The yolks are impossible to describe as yellow. I'm pretty sure yellow yolks are a strong indicator that the chicken producing them is undernourished. Think orange, like the fruit. 2. My wife has an egg allergy, getting pimples if she eats many store-bought eggs. Not true of our backyard chickens.

dearieme (2012-03-01 12:14:11)

The principle is well known. <http://www.youtube.com/watch?v=eqvddpX1uYA>

Mike deCock (2012-03-01 13:41:09)

I don't worry about salmonella (the odds are something like one in 10,000 - 30,000) and most healthy adults won't suffer greatly from an occasional exposure. I do avoid raw egg whites as avidin can cause biotin depletion. Mark Sisson has a good article explaining it. It seems like the best of both worlds is sunny side up or poached. <http://www.marksdailyapple.com/drinking-raw-eggs/>

Tom (2012-03-01 14:10:04)

The yellow in commercial eggs comes from tumeric or other compounds which are added to the feed. Commercially-raised chickens do not get enough beta carotene in their food for their yolks to become yellow. If the feed were not adulterated, the yolks of commercially-raised eggs would be gray. [www.universaloleoresins.com/natural.php](http://www.universaloleoresins.com/natural.php)

Tom (2012-03-01 14:10:38)

The yellow in commercial eggs comes from tumeric or other compounds which are added to the feed. Commercially-raised chickens do not get enough beta carotene in their food for their yolks to become yellow. If the feed were not adulterated, the

yolks of commercially-raised eggs would be gray.

Paleophil (2012-03-01 19:17:09)

Like humans, monkeys, prefer yolks, though some will eat whites too, and they don't have frying pans, so they of course eat them all raw: Monkey eats a raw egg <http://www.youtube.com/watch?v=6wPuS3ozmWM> A monkey eating a raw egg in Bali <http://www.youtube.com/watch?v=X9FrFK6FbNU>

Conor (2012-03-01 19:39:06)

Raw eggs are great, however it's worth being aware of the possibility of creating a biotin deficiency if you're eating them a lot and eating the whites as well as the yolk. There is a quick run-down here: <http://www.marksdailyapple.com/drinking-raw-eggs/#axzz1nvGj1Z31>.

Paleophil (2012-03-01 21:05:25)

I tend to eat more raw egg yolks than whites myself, but I don't currently discard all raw egg whites. Here is some info to consider that's counter to the standard view of raw egg whites as mostly or completely harmful and cooking as a total solution to the alleged problem: Even Mark Sisson says at that above link: "If you like raw eggs, I'd say have at it – with the above info in mind." "Let's start with one simple idea: Mother Nature isn't stupid. She didn't make human beings the only species that prefers foods that will kill us." -Tom Naughton Cooking doesn't destroy all egg white avidin: "It is a myth that light cooking completely destroys the avidin. According to this study (<http://www3.interscience.wiley.com/journal/119344834/abstract?>), poaching eggs only destroys one third of the avidin while even frying leaves 30 percent of it behind." (The Incredible, Edible Egg Yolk, July, 2005, by Chris Masterjohn, [http://www.cholesterol-and-health.com/Egg\\_Yolk.html](http://www.cholesterol-and-health.com/Egg_Yolk.html)) Raw egg whites may actually provide benefits: "Heck, even — shudder — raw egg whites may give a glutathione boost in some people comparable to that given by raw milk! .... Raw Egg White — The Trusty Sidekick? The researchers searched over thirty publications identifying the sequences of edible plant and animal proteins and concluded that the only two types of protein in the food supply containing these unique bonds are whey proteins and egg white proteins. They noted the following: 'It may also be noteworthy that from time immemorial, whey from raw milk and/or undenatured raw egg white have been administered to children and to the sick as prophylactic or therapeutic measures in folk medicine.'" (The Biochemical Magic of Raw Milk and Other Raw Foods: Glutathione, September 11, 2010, by Chris Masterjohn, <http://www.westonaprice.org/blogs/cmaterjohn/2010/09/11/the-biochemical-magic-of-raw-milk-and-other-raw-foods-glutathione>) Wild animals and hunter gatherers don't restrict themselves to eating only infertile eggs, the way most modern Americans do. One difference between conventional supermarket chicken eggs and the wild eggs that primates and other wild animals eat in the wild, is that most supermarket eggs are infertile and restricted to a narrow range of egg development. It turns out that fertile eggs contain less avidin than infertile eggs (The Merck Veterinary Manual, <http://merckvetmanual.com/mvm/index.jsp?cfile=htm/bc/171406.htm>). Wild animals don't restrict themselves at all to any particular stage of development in the egg cycle. They eat anything that won't fight back so much as to be a serious threat. Thus, they eat some of their eggs in the fertile stage or beyond (see also Balut [http://en.wikipedia.org/wiki/Balut\\_\(egg\)](http://en.wikipedia.org/wiki/Balut_(egg))), maybe most of them. Luckily, fertile eggs are increasingly available in the USA. "Maybe fertilized eggs would be helpful for folks who want to down a lot of raw whites without worrying about inducing biotin deficiency." -Denise Minger "An egg seems intuitively analogous to a seed, so it seems like fertilization should neutralize the anti-nutrients like sprouting does to seeds. That's a good topic to research for another blog post perhaps!" -Chris Masterjohn "Dr. Sharma, PhD, who is a biochemist with Bayer, contacted me about this issue. His investigation into the matter revealed that there is not enough biotin in an egg yolk to bind to all the avidin present in the raw whites. He found that 5.7 grams of biotin are required to neutralize all the avidin found in the raw whites of an average-sized egg. There are only about 25 micrograms – or 25 millionths of a gram – of biotin in an average egg yolk." <http://articles.mercola.com/sites/articles/archive/2005/02/09/raw-eggs.aspx> It will be interesting to see what results Seth's raw vs. cooked egg experiment produces. It's refreshing to find someone who doesn't jump to conclusions before he has done any testing. For it to be a relatively fair test, he should presumably use fertile, pasture-raised chicken eggs, or perhaps other high-quality eggs like free-range duck eggs.

gwern (2012-03-02 15:00:30)

Alexian: unfortunately the effect only works for things I have loudly and repeatedly publicly committed to believing and



practicing - since I don't write on the paleo diet nor eat it, nothing in the diet gives me a rush...

Evelyn M. (2012-03-02 22:05:24)

When I was a very little girl in the - gulp - 1940s, it was common knowledge that anyone feeling under the weather should take a raw egg whisked into a glass of milk to regain his strength. (Kind mothers added a bit of vanilla and sugar.) I have no idea why such a sensible idea went out of fashion.

www.hydroxatone.com (2012-03-03 05:33:07)

Maybe I'm being a bit slow...but where does the rat reference come in..have I missed something? Mmmmm eggs are good though...fish-finger sandwich with a cooked egg with runny yolk..the food of kings...!.. Seth: A rat liked scrambled eggs. I thought that translated into good advice: eat eggs.

### **Coconut Oil Cures Foot Fungus (2012-03-02 05:00)**

About ten years ago my doctor pointed to a thin white line on my foot: That's fungus, he said. Huh. He prescribed an antifungal medicine, previously available only by prescription, that had recently become over-the-counter (OTC). I tried several OTC remedies from my drugstore. None worked. According to the directions, they were to be applied twice per day. My doctor said the reason for the failure was that I hadn't precisely followed the directions. This reminded me of a doctor who said that fat people know what to do about being fat (eat less) and simply fail to do it.

Years later I discovered that socks matter. [1]With a much larger number of socks, my foot fungus got much better. Apparently the fungus died if it didn't come in contact with my foot within a week or so. (I had it only on one foot.) With a large number of socks, my foot fungus never got really bad. But it did not entirely go away.

I discovered that tea tree oil works. When my foot fungus got noticeable I would put on some tea tree oil and it would get better.

In January I went back to Berkeley for a month. Without doing anything, my foot fungus seemed to vanish. Apparently being away from my apartment for 4 months was enough to get rid of the fungus. When I returned to Beijing in February, the fungus returned within a day or two. The shape of a particularly bad spot matched exactly where a plastic sandal touched the upper part of my foot. A sandal I'd worn in the shower to prevent foot fungus.

All this is to show how little I know about foot fungus in spite of having it for years.

In November (3 months ago) a reader of this blog named Chuck Currie wrote me:

Sometime in the spring I noticed that I was getting what looked like a rash around the large toe of my right foot. It began spreading, first under and between my toes and then across the top and then under my foot. There was a definite line with little bumps that showed its progression. And, it itched really bad - like bad athlete's foot.

In July I was prescribed Nystatin and Triamcinolone Acetonide cream. [I tried this - Seth] I was told to put it on twice a day, which I did. Because I wear flip flops all summer, I didn't need to cover it. The cream did not work at all. It actually seemed to make it worse.

I have been interested in coconut oil since going paleo, even though I can't eat it, or coconut milk - they really upset my stomach. I was reading an article on coconut oil that mentioned its anti-fungal properties

and I remembered reading this before. So I thought I would give it a try on my foot.

After showering, I cover my foot with coconut oil, place a plastic bag over my foot (the kind you put produce in) to keep it from being wiped off and then place a sock over the bag to hold it on. I leave it on for two or three hours and then take everything off and lightly wipe my foot with a paper towel and go to bed.

I do this three or four nights a week and have been doing it for three months. I knew immediately that it was doing something. My foot became very warm, almost like it was on fire, the first time I did this. It didn't have this effect the second time. My fungus/rash started to retreat. My skin would dry out and flake off between sessions, like I was using an exfoliate.

Then I noticed that my [toenail fungus] started to clear up and I could see the nail growing from the cuticle on my big toe was clear, not yellow and thick. By now the line has progressed two thirds of the way up my toe. At this rate, it should be completely clear in another couple of months.

I still get small flare ups of the rash/fungus on my foot, but it has almost completely cleared up. You can still see where it had been. The skin is dryer and lighter in color than the rest of the foot.

I think if I had done this every night the progress would have been faster. I'm now starting to put a small amount of coconut oil on the top of my foot in the morning and letting it air out for a while before putting on my socks and shoes. When the fungus was on the bottom of my foot this was not possible, but now that it only seems to be on the top, this works and I think this will speed up the process. The best thing is there are no bad effects. I use extra virgin, cold pressed, unprocessed coconut oil. My understanding is that heat processed coconut oil does not have the same anti-fungal properties.

Pretty convincing, huh? In Berkeley I bought Whole Foods house brand coconut oil (cold-pressed). Edible was cheaper than non-edible. In Beijing, after my foot fungus had gotten quite noticeable, I started to use it. At bedtime, I rub it all over my foot, put my foot in a thin plastic bag, and put on a sock. When I get up, I take off the sock and the plastic bag.

After doing this once, my foot was much better. After five applications, I couldn't detect any fungus. Application is pleasant (without trying, I don't miss a night) and, as Chuck says, obviously safe – I could eat what I am spreading on my foot. It costs a few dollars/month. Tea tree oil works, too, but it wasn't easy to spread all over my foot, wasn't pleasant to apply, wasn't edible, and cost \$15/tiny bottle. On the internet you can find many home remedies, such as soaking your feet in apple cider vinegar. Apparently they work. This is much easier.

If you try this, please tell me your experience, whether it works or not.

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1. <http://blog.sethroberts.net/2010/05/23/foot-fungus-revisited/>

Darrin Thompson (2012-03-02 07:09:22)

Let's not forget to give the Doc a cookie for noticing and correctly diagnosing "foot fungus." Seth: yeah, good point.

Margaret (2012-03-02 07:31:37)

I recently got 2 spots of what appeared to be Ringworm on my shoulder. I tried coconut oil on them daily for about a week and a half, but it didn't help. Of course, I didn't cover it up, maybe that would have helped. Tinactin (2x a day) worked in a week. Natural cures so seldom work for me. It's frustrating, I try them often. So far the vitamin D hasn't helped my sleep much, either. It may have helped my rosacea, but that always goes away when warmer weather starts, and so I can't be sure why it's finally gone for the winter. I've been taking Vitamin D for about 6 weeks, starting with 2000 iu a day, and working up to 6000, the same Trader Joes brand that Primal Girl uses. I haven't noticed much of a difference, but it's hard to measure it much in my case as I have rather little control over when and how long I sleep. I co-sleep with my 3-year-old, who wakes me up often to nurse in the night, and of course when she wakes up in the morning I have to get up, and I can't go to sleep at night before she does... The help I need with my sleep, is being able to go back to sleep again after having been awoken. Also, being able to go to sleep quickly when we go to bed is sometimes a problem. The vitamin D may be helping a bit with these things but it's hard to be sure.

john lushefski (2012-03-02 09:38:26)

I would guess that processed coconut oil should still have the same effects, as I think the anti-microbial/fungal/etc properties are from the fatty acids. Is there a proposed reason as to why processing/filtering would remove those properties? Seth: Heat might destroy the crucial enzymes or whatever. Filtering might remove them. It's easy to think of reasons.

Maria (2012-03-02 11:06:15)

This is why I so appreciate your blog: such a wide range of topics, such practical information, such detailed personal evidence. I've read in a number of places that coconut oil was anti-fungal, but references were so vague that I didn't know what to do with that information. This is so specific with real life evidence. Thank you so much! I will try it.

Tom (2012-03-02 11:17:36)

It's fascinating, yet it makes sense. Coconuts have to hang in the blazing sun for weeks without being eaten alive by all manner of life.

Kirk (2012-03-02 12:00:55)

I forced my toenail fungus into a major retreat by switching to the Perfect Health Diet (which added more carbs, which, according to Paul, supplies the body the glucose needed to fight fungal infections). I also added in a number of their recommended supplements. And I soak my feet daily in Epsom Salts and apply an over-the-counter anti-fungal cream. Although most of the fungus has disappeared, some remains; I can feel numbness when I lightly tap my toes on the floor. (Plus there is visual evidence.) I'm glad you brought up the story about the socks; I have been wearing Chinese cotton slippers this winter, without socks, which makes me think that perhaps the fungus has settled into them. I started the cider vinegar treatment several days ago, followed by drying my toes in the sun, and then topping with coconut oil. However, the coconut oil I have been using is refined and doesn't say anything about being cold-pressed. I will change to virgin, cold-processed, unprocessed coconut oil, and also try the plastic bag technique. Will let you know if anything changes. Seth: Yeah, I think there is something to the idea that a low-carb diet makes you more susceptible to fungal infections. I am beginning to think I don't eat enough carbs.

Coconut Oil Cures Foot Fungus | Health Impact News (2012-03-03 17:07:07)

[...] by Seth's Blog [...]

susan (2012-03-03 23:58:48)

i wonder if it is because the coconut oil is preventing the fungus from getting oxygen to live? sort of like when you want to get a tick out, you rub it with crisco?

Leila (2012-03-04 21:19:51)

I've never heard of the crisco trick to get rid of ticks but I bet it works great. A warm bath will make them let go, so that's what we use. There is definitely a link between low carb diets & skin problems. I started a very low carb diet in the fall of 2010. About a year ago (spring 2011) I developed skin problems on my arms, back & scalp. I don't have a definite diagnosis, but based on appearance & from what I can find online, I think it's keratosis pilaris on my arms & psoriasis on my scalp. I've added carbs back into my diet, have vastly increased my vitamin A intake, & I'm sitting here with coconut oil on my scalp & hair. It feels good, sure hope it helps! I did it once before but have trouble sleeping with a plastic on my head, so it's tough to do often.

Phoenix (2012-03-05 14:05:57)

I developed toenail fungus after a couple years of vegetarianism; I think there's something to be said about zinc deficiency and nail/skin susceptibility to infections. Anyway, I turned to a Perfect Health Diet-ish diet and starting supplementing zinc. I've been rubbing coconut oil on my foot and nails every night. I also mixed some rubbing alcohol with some apple cider vinegar, put it in a little spray bottle, and spray it all over my foot every morning (it smells pretty bad, but the smell dissipates fairly quickly). It's been about 10 months, and my toenails look close to perfect. Hard to say which thing made it work (zinc, diet, alcohol+ACV, coconut oil). Normal toenails are awesome!

Michael (2012-03-06 20:24:57)

That's pretty fascinating, actually. I've never heard of coconut oil being used in this way (as a medication, more or less). I bet your foot (or feet) were silky smooth after these treatments as well!

Jon (2012-03-09 13:44:23)

After reading this blog entry I started using coconut oil instead of olive oil as a moisturizer (I get cracks in my hands). It works much better, hands aren't getting cracks any more. I'll see if it keeps working.

JPB (2012-03-17 15:50:19)

How long and how often do you need to apply the coconut oil?

Coconut Oil Cures Foot Fungus | Coconut Oil (2012-04-15 17:32:56)

[...] by Seth's Blog [...]

## **Vitamin D3 in Morning: Mixed Evidence From PaleoHacks (2012-03-03 05:00)**

Paleo Hacks has [1]a thread about timing of Vitamin D3. Better in morning (my and several other people's experience) or evening (Robb Wolf's experience)?

This answer supports morning:

I prefer taking it in the morning. I think it helps set my circadian rhythm.

This answer supports night:

I prefer it at night. I find I sleep better.

This answer supports morning:

I had trouble sleeping when I started Paleo and was taking my D3 at night before bed. Was nervous and couldn't seem to settle down. No problems since I went to morning, I have them with my fish oil right after breakfast.

By the time you read this there will probably be more evidence.

Thanks to [2]Melissa McEwen.

1. <http://paleohacks.com/questions/98166/vitamin-d-morning-seth-roberts-versus-night-robb-wolf/98247#98247>
2. <http://huntgatherlove.com/>

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Alrenous (2012-03-03 08:38:34)

What's not mixed is that doses of Vit-D five times the Canadian RDA (sometimes higher) help sleep when properly timed.

TalkingRat (2012-03-03 11:47:24)

I used to take my D3 at bedtime, with the rest of my vitamins and fishoil. I was curious whether I'd notice anything with morning timing of D3, so I changed to morning supplements at first light, and as on that same day, I started yawning around 7:30 pm. I noticed because I don't normally yawn, except that yawning is an effect I get from my bedtime melatonin supplement. So I suspect the switch to morning D3 aids in the body's changeover to melatonin production. I can't say I notice better sleep, because the dog's been having a hard time sleeping past 5 am. But I'm sticking with morning D3 timing because it appears to trigger melatonin production with the end of daylight. I take 2000 IU D3 on top of 900 IU in multivitamin and calcium pills.

Peter (2012-03-03 19:25:49)

I've always taken my D3 early in the morning. Last fall, I decided to stop eating breakfast because, much like Seth's experience, my body was waking me up earlier and earlier, usually associated with a growling stomach. Skipping breakfast helped me sleep until 6:30 or 7:00 a.m. on the weekends, which is a significant improvement. Even without breakfast I continued to take my D3 in the morning (8K IU). Two weeks ago, I tried taking D3 at lunch. I slept through the night but felt as if I hadn't slept at all when I woke up. It was the worst week of sleep that I can remember. Last week I reversed the experiment, taking D3 in the morning, and my sleep returned to being restful.

Nick (2012-03-04 09:03:26)

I like the idea of nutrient timing especially aligning with the circadian rhythm. Vitamin D in the morning and vitamin C before bed. Anyone else experiment with this combo?

Patrik (2012-03-04 23:25:28)

I happen to take Vitamin D3/K2 combo in the morning – and at night, I drink some magnesium. Anyone else try this?

### **"Thou Shalt Not Testify Against Another Doctor" (2012-03-04 05:00)**

First do no harm . . . As [1]Robin Hanson has said, what does that mean? In contrast, the rule illustrated by this story, from Bryan Castañeda, who works for a Los Angeles law firm, is quite clear:

At the old firm I used to work at, I was talking to one of the senior attorneys and the topic of medical malpractice cases came up. He said he avoids them. Why, I asked. He said – I'm paraphrasing here – "Because you won't find a doctor who will testify against another doctor in open court. They may advise you in private, 'Oh yeah, so-and-so definitely screwed up,' but you won't get them to say that on the stand. They all protect each other."

Judging by this story, if your doctor makes a mistake, the only person who will suffer consequences is you. Thank heavens the rest of us [2]have more power than ever before. [3]A recent survey of doctors found that "more than a 10th (11.3 %) admitted to telling patients something that was not true." The survey did not ask about lies of omission (when silence is misleading); unwillingness to testify that someone else made a mistake is that sort of lie. [4]The survey also showed that doctors (at least, those who took the survey) have a self-serving interpretation of the term not true. Although only about 10 % said they had said something "that was not true" – meaning something that they knew wasn't true – "more than half had described a patient's prognosis more optimistically than warranted." Apparently they consider such descriptions not instances of "not true".

In *Systems of Survival*, Jane Jacobs described two moral systems (lists of rules/values): The guardian syndrome and the commercial syndrome. In certain areas of life (e.g., military), the guardian syndrome prevailed; in other areas (e.g., small business), the commercial syndrome prevailed. Loyalty (e.g., "never testify against a fellow doctor") is a guardian value – indeed, the main guardian value. In contrast, honesty is the main commercial value. Jacobs said that the two syndromes corresponded to two ways of making a living: taking and trading. Doctors do not represent themselves as predatory (= taking). But, according to Jacobs, this sort of rule ("never testify against a fellow doctor") puts them squarely in that camp.

I asked Jim Jacobs, one of Jane Jacobs's sons, for comment. He replied:

Exactly right. Jane experienced this herself, unfortunately. It's really a major problem. I see the very same behavior among medical researchers too.

1. <http://blog.sethroberts.net/2008/03/21/robin-hanson-on-doctors/>
2. <http://blog.sethroberts.net/2011/11/16/dr-eileen-consorti-and-patient-power/>
3. <http://www.bmj.com/content/344/bmj.e1069?etoc=>
4. <http://well.blogs.nytimes.com/2012/03/01/when-doctors-dont-tell-the-truth/>

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Stone Glasgow (2012-03-04 13:09:06)

Doctors are squarely in the "guardian" group, and (mostly) operate under its morality as described by Jacobs. This includes accepting money only at arm's length (indirectly via insurance), and active deception "for the greater good," as you have described here. This is fine if we trust these men as the most intelligent, moral, and capable beings on earth. If not, we have a serious problem, which is further exacerbated when doctors begin operating under a blend of both moralities—protecting each other and maximizing profits—without concern for the welfare of the patients they are sworn to protect. If understood in light of Jacobs' theory, this is the most rational argument, in my mind, for placing healthcare completely in the hands of (local) government, along with all other guardian functions, like military and police. As I argue at length at my blog, there is little difference between viral invaders that plan to kill us, and men with guns planning our demise. We need guardians to protect us from both dangers, regardless of their size.

Stephen M (Ethesis) (2012-03-09 17:57:59)

The other thing that doctors do is give you a negative diagnosis, deliberately saying things are worse than they are. If you survive or do well, then you have done better than expected and will be happy. If you don't, then you did as predicted and are less likely to blame them. This, in spite of the research indicating that positive predictions improve patient health. I remember sitting there, listening as a faculty member at a medical school explained that to me, in between his classes teaching ethics.

### **The Parable of the SAME (2012-03-05 05:00)**

SAME is a drug well known to help depression. [1]For example, "a popular dietary supplement called SAME may help depressed patients who don't respond to prescription antidepressant treatment, a new study shows." But there's something important few people know about SAME.

While talking to a Seattle woman about how Vitamin D3 first thing in the morning helped her with depression, she told me the following story:

When I was 47, I just wanted to be healthier. I kept gaining weight. I knew what foods are healthy. I just didn't seem to eat them. A naturopath suggested SAME. I tried it – Twin Labs SAME. That was really fabulous for me. For the first time I got a glimpse of what being not depressed was like. Cravings weren't there any more. Went from a size 24 to a size 14. Lost 70 pounds. I'm 5' 8". I didn't feel deprived. I was eating plenty of food. going to yoga. Feeling really great.

Then Twin Labs discontinued it. It was [2]made in Japan. I tried every other SAME out there, eight different brands. None of them worked. I gave each of them a month. I tried different dosages.

I started slipping back into depression. Not being able to cope. I was sleeping more. Sugar cravings returned.

[why did Twin Labs stop making it?]

It wasn't a good seller for them. So fucking wrong. I wrote letters to try to get them to start making it again. I did a campaign. People found pockets of what was left in the country and sent it to me. But it finally ran out.

The moral(s) of the story? 1. So much for word of mouth. You might have thought it would make the good SAME sell well, better than the bad SAME. Apparently not. 2. So much for the placebo effect. 3. Clinical studies (e.g., of SAME) may higher-quality versions of what they are testing than the versions available to the rest of us. 4. So much for quality control in the supplement industry – except maybe in Japan. There can be substantial quality variation among supplements, undetected by the industry. I have to believe the companies selling the useless SAME didn't realize it. Surely they thought that good SAME would be a better product for them than bad SAME.

This resembles [3]the Vitamin D3 story I have been telling. [4]Tara Grant said she'd heard countless times that Vitamin D is good. She hadn't heard once that it must be taken in the morning. I've heard countless times that SAME is good. This was the first time I heard about huge quality control issues. In both cases individual self-observation uncovered a crucial truth that an industry had overlooked. They didn't want to miss it. The Vitamin D Council didn't want to miss the time-of-day effect. They just did.

This also resembles [5]what I said about ultrasound machines: A lot of them are broken, unbeknownst to their operators and the people (often pregnant women) being scanned. The countless "experts" (doctors) who recommend

ultrasound don't seem to know this.

Which is why personal science (trusting data, not experts) is more valuable than experts want you to think.

1. <http://well.blogs.nytimes.com/2010/08/31/study-shows-same-may-ease-depression/>
2. <http://online.wsj.com/article/SB10001424052970204542404577157290201608630.html>
3. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>
4. <http://www.primalgirl.com/2011/11/01/nprimalgirl-sleep-issues-vitamin-d/>
5. <http://blog.sethroberts.net/2012/02/13/high-defect-rate-in-ultrasound-machines-that-scan-pregnant-women/>

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gwern (2012-03-05 09:00:02)

> 2. So much for the placebo effect. Que? I see zero mention of anything like blinding. Seth: All brands should have been equally effective placebos. (Some Muslims get so upset about some cartoons being drawn or books being burned they will kill dozens of people over it. Proof that paper is a drug more powerful than testosterone or steroids at inducing rage!)

Stone Glasgow (2012-03-05 11:02:12)

What brands did she try? Surely someone makes a high quality SAME today. Did she try Jarrow? Consult [consumerlabs.com](http://consumerlabs.com)? Perhaps twin labs' version was actually the wrong chemical? Seth: She tried all brands for sale in the US.

Kim Øyhus (2012-03-05 14:06:09)

Market forces driving real quality, is a myth. The places I have worked, have confused quality with satisfying and fooling customers. This is often called TQM, Total Quality Management. The bosses have also been mainly concerned with having alpha primate status, and considers real quality improvement to be a threat to their status. All this nonsense of the pharmaceutical industry, the climate scam, the military industrial complex, corrupt doctors, etc., are not aberrations. They are rather typical of most work today, in my experience.

Jenny (2012-03-05 17:26:05)

When I trained as an Occupational Therapist, one of the things we were warned about was that not all prescription drugs are equal - sadly the fillers and colours can change the drugs affect/ absorption rate etc. I was working in the NHS at the time NICE came into being, which was going to limit people's (and their doctors') choice of manufacturer of their drug, and we knew that many people were going to get a less satisfactory outcome. I personally have a problem with drugs with a pink colouring - it slows the absorption rate for me. I found this out with Indomethacin - our British 'cheap' indomethacin has bright pink colour on it, and takes about 45 mins to start to help me, whereas the 'white' ones start to work in 10 mins. This is a serious delay for any drug with a time base to it. Luckily I have a very on-the-ball pharmacist who hunts out and stocks the 'right' coloured medication for me.

Stone Glasgow (2012-03-05 23:30:33)

It must have been that the Twinlab product contained something active other than SAM-e, or consumerlab's tests for SAM-e are dreadfully inaccurate. They tested about 15 different brands and only a few failed; the rest contained the stated amounts of SAM-e according to their method: <http://articles.latimes.com/2000/mar/27/health/he-13037> Seth: That's fascinating. Thanks.

Perfect Health Diet » Around the Web; PaleoFX Edition (2012-03-10 17:49:47)

[...] Seth Roberts warns that supplement quality can vary widely. [...]



## Assorted Links (2012-03-06 05:00)

- [1]In praise of Rush Limbaugh.
- [2]Shangri-La Diet experience ("Bottom line: I lost three pounds in a week and a half") of an artist named Elizabeth Periale.
- [3]Long interview with Tucker Max. "His fridge . . . is in one way very different: where you'd expect the six-pack of cold ones waiting for the game, instead you'll find rows and rows of kombucha, the fermented health beverage."
- [4]End of college campuses. Megan McArdle imagines a world in which college is replaced by distance learning. "95 % of tenure-track jobs will be eliminated." Jane Jacobs, in *Systems of Survival*, divided jobs into taking and trading. Teaching is trading if the student really wants to learn the subject. Teaching is taking if the student is forced to take (and pay for) the class. Scary thought: Every college student is asked about every class: would you take this class if you didn't need to (and didn't need to take other classes)?

1. <http://blog.jim.com/economics/rush-limbaugh-smarter-than-ten-thousand-ecology-phds.html>
2. <http://www.blogger.com/frame.php?url=http://xoxoxoe.blogspot.com/2012/02/eating-in-shangri-la.html>
3. <http://www.forbes.com/sites/michaellellsberg/2012/01/18/tucker-max-gives-up-the-game/>
4. <http://ihaveneverdonethisbefore.com/2012/02/13/the-end-of-the-college-campus/>

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Darrin Thompson (2012-03-06 07:29:29)

Why is that a scary thought? Seth: It is a scary thought because of the emptiness – lack of overlap between what is taught and what students want to learn – it might expose.

Tom (2012-03-06 08:07:14)

If I had been asked that question, I would've replied yes to only about 5 % of my classes. I don't think college is about educating people anymore. I think at this point it exists just to feed millions of unsuspecting people into gigantic loans that cannot be discharged by bankruptcy. It is the new slavery. [latimes.com/business/la-fi-student-loan-delinquencies-20120306,0,6387032.story](http://latimes.com/business/la-fi-student-loan-delinquencies-20120306,0,6387032.story) Undergraduate colleges are no more legitimate than law schools.

Stone Glasgow (2012-03-06 16:18:47)

Tom, I agree completely. It is no longer a good idea to attend most modern universities. I suspect that in the future, college will become compulsory in the same way that American grade-school was at one time provided by the private market, and has since become a forced part of every American child's life.

w (2012-03-06 17:00:26)

If no praise had ever been written about Rush, too much praise would already have been written. Seth: What about this example?

w (2012-03-07 08:30:47)

When you cast about for a good to say in a person's defense and the best you can come up with is a single instance of epistemic luck, well, as I said: no praise is plenty. Seth: I wasn't casting about. I posted that link weeks before Rush's current problems. There is a backlog of posts, that's why it appeared recently

Leslie (2012-03-09 12:17:15)

Biologists are saying it will take years for the fallout from the BP oil spill to develop (<http://gulfofmexicooilspillblog.com/201-1/02/21/gulf-of-mexico-oil-spill-blog-effects-10-years-and-10-cm-thick/>), and "Despite low concentrations of oil constituents in Gulf of Mexico waters from the Deepwater Horizon spill, fish were dramatically affected by toxic components of the oil." ([http://www.nsf.gov/news/news\\_summ.jsp?cntn\\_id=121786](http://www.nsf.gov/news/news_summ.jsp?cntn_id=121786)). But if Rush Limbaugh says everything is fine, then the biologists must be wrong.

### **More About the Lawsuits Against Law Schools (2012-03-06 05:00)**

New York magazine has just published [1]a long article about the lawsuits against law schools for deceptive reporting of job prospects. This is the most radical (in the sense of challenging what "every reasonable person knows") article I've seen in a major magazine in a long time. Gary Taubes's article ([2]"What if It's All Been a Big Fat Lie?") is a good example of such an article. It was published in 2002. Long long ago The New Yorker published a series of articles by Paul Brodeur (published as a book in 1989) arguing that power lines cause cancer. So long ago that Brodeur [3]has retired. Unlike what Taubes and Brodeur wrote, the New York article is not investigative journalism. It was much easier to write. But that does not change the similarity of basic message – that powerful respected people have been lying to us.

Beyond the sheer existence of this article, it's also interesting that nobody interviewed for the article said the allegations were false. For example, here's a dean at New York Law School, one of the defendants:

"We teach critical thinking, and writing, and so forth," Buckler said. "And that's always been the case, and those skills have always been useful. I guess I would say that it's never been a good reason to go to law school or any grad school, because you think there's a guarantee at the end. Whether that was twenty years ago or ten years ago or this year."

In other words: It doesn't matter if we publish false or misleading data because (a) we teach useful skills and (b) the data don't matter – right-thinking people ignore such data ("it's never been a good reason to go to law school" because you think it will provide a job). Recent graduates of New York Law School do an even worse job of defending the school:

"Mathematically, it's a ton of graduates, yes, and no, there aren't enough jobs for them," Daniel Gershburg, a 2006 graduate of NYLS and an attorney with a successful practice in Manhattan, says. "At the same time, what are schools supposed to say? 'No, no, don't come here! Run for your lives! . . .'" [That is: Of course they lied.] Julia Shapiro, who graduated from NYLS in 2007—and who works as a lawyer in Los Angeles—puts it this way: "Suing the school is not going to help them find a job. I would not put my energy into wallowing in my sorrows." [That is: Get over it.]

In contrast, it's easy to make a case that the schools intentionally deceived prospective students. One of the lawyers behind the lawsuits said:

"NYLS [New York Law School] has to put students in seats," Strauss said. "That's the system they set up for themselves. They've got a huge new building, gleaming classrooms, but they're cutting corners on transparency. They've created this reality where the only way they can put [enough] people in seats is by misleading them."

A commenter put it like this:

Over the past 20+ years (since the advent of the U.S. News Rankings, really), the non-elite law schools have perpetrated a pervasive and dynamic fraud aimed at luring unsuspecting college students to throw away their financial futures [due to] reliance upon utterly fraudulent salary-and-employment data. The goal is obvious: to keep the student-loan teat gushing into administrative pockets.

[4]

As I said earlier, there's an old joke: Why do students go to law school? They're bad at math. Apparently law school administrators are also bad at math. The existence of this story suggests that average reader of New York magazine is not inclined to forgive them.

1. <http://nymag.com/news/features/law-schools-2012-3>
2. <http://web.mit.edu/knight-science/fellows/interviews/taubes.html>
3. [http://en.wikipedia.org/wiki/Paul\\_Brodeur](http://en.wikipedia.org/wiki/Paul_Brodeur)
4. <http://blog.sethroberts.net/2012/02/02/law-schools-sued-for-lying/>

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JPB (2012-03-06 07:41:01)

The real crime is that not only are there NOT enough jobs out there but that these students have been encouraged to go over \$100K in debt...

Andrea (2012-03-06 08:14:14)

My brother attended a "non-elite" law school and has spent the last decade working as a paralegal.

Tom (2012-03-06 08:39:13)

I don't think college is about educating people anymore. I think at this point it exists just to feed millions of unsuspecting people into gigantic loans that cannot be discharged by bankruptcy. It is the new slavery. [latimes.com/business/la-fi-student-loan-delinquencies-20120306,0,6387032.story](http://latimes.com/business/la-fi-student-loan-delinquencies-20120306,0,6387032.story) Undergraduate colleges are no more legitimate than law schools.

dearieme (2012-03-06 08:43:13)

"It is the new slavery." Don't be so silly. It would, however be the new indentured labour, if only they could find jobs.

Gary Wolf (2012-03-06 17:37:09)

Peter Thiel recently said in an interview that the for-profit education companies were the sub-prime mortgage dealers of the education bubble. But the dynamics of education fraud are doubtless not confined to for-profit colleges. (That the emergence of large scale fraud is a normal phase of a bubble is well argued in Kindleberger's classic "Mania's, Panics, and Crashes.")

### **An Example of Predatory Medicine (2012-03-06 20:29)**

I [1]recently posted about how doctors act like predators, in the sense of having what Jane Jacobs called "guardian values" (e.g., loyalty to other doctors is more important than honesty to patients). [2]Here is an example of medical

behavior that coming from an ordinary business would be shocking:

On February 21 [2012], I had my evaluation for a kidney transplant at a university-affiliated medical center about 100 miles from where I live. The way this institution operates, it takes about 8 months to get from initial referral to evaluation and there are all kinds of diagnostic tests in between (see previous blogs for more details). Once you are an approved transplant candidate and an organ becomes available, you go to the hospital and have surgery. The average stay for a kidney transplant is about 3 days and then you are discharged to a local hotel for 5-7 days. During that time, you return to the hospital every day for blood work, monitoring of the immunosuppressive medications and patient education. Also, you must have a full-time caregiver. That can be a friend, family member, stranger off the street corner, but they must be with you at all times to ensure that you are eating, taking meds, bathing, etc. Also, driving is prohibited until about six weeks post-transplant so the caregiver is also a chauffeur and attends the educational activities as a back-up in case the patient becomes incapacitated or symptoms of rejection appear.

In short, your caregiver must be able to put their own life on hold for about two weeks with as little as two hours notice. When you think about it, that's a pretty tall order to fill. I have a caregiver, he happens to be a member of this forum. He is a dear, dear friend and always will be if only for the fact that he is willing to undertake this role with only the merest of acquaintance. He is more than willing to put himself and his home at my disposal if necessary. I won't call him out by name, he obviously knows of whom I speak, but I truly feel as though Karma has smiled on me since our paths have crossed.

So the evaluation finally rolls around. Caregivers must be present during the evaluation. We check in at the medical center and are shown to an exam room. We are seen by a barrage of clinicians; dietitian, nephrology resident, nephrology attending (the doctor in overall charge of my medical care while at the transplant unit), and the transplant surgeon. There are physical exams (kind of interesting since my caregiver knows me pretty well, but not THAT well), an EKG and a side trip to the lab. At the lab, the phlebotomist doesn't pay any attention to my advice about using a butterfly catheter and proceeds to draw 20 (count 'em, 20) vials of blood for type, cross match, antigen levels, etc, etc through a Vacutainer. About halfway through, my vein collapses and she has to switch to the other arm, this time with a butterfly. After that, a chest x-ray. Back up to the 9th floor for our final meeting of the day; the social worker.

Up until this time, everything had been encouraging. I can't say enough good things about the clinical staff, they were all wonderful, professional, warm, willing to answer questions, etc. My transplant surgeon looks like he should be on a TV medical drama, he can unzip me any time! The good vibes ended the minute we sat down with the social worker. She informed me that I would be required to have a second caregiver, a backup so to speak. WTH? People that can call a halt to their lives don't grow on trees. Talk about hitting a brick wall. Here's a sample of the conversation:

Social worker: What will you do if you are discharged to home and you can't take care of yourself?

LadyDoc: Well, if I can't take care of myself then I guess I shouldn't be discharged, should I?

Social worker: Well, you could always go into a nursing home.

LadyDoc: Over my dead body.

And there you have it, the standoff. I have looked through every single printed word and email that I have ever gotten from this institution (and I keep very good records) and there is NOT A SINGLE WORD about having a second caregiver. The only family I have in the area is my daughter and she has two little boys under the age of five at home, so I can hardly ask her. My circle of friends is painfully small, many are disabled and not up to the challenge and the others

have lives of their own.

The social worker called me a few days later to see if I had changed my mind and it suddenly began to sound like a sales pitch. She was touting all the advantages of this particular institution but I just don't see it. I am now turning my attention to medical centers where the inpatient stay is closer to 5-7 days and then the patient is discharge directly to home, none of this stay-in-a-hotel stuff. I can't think of too many places where germs and nastiness run more rampant than a hotel. I am so frustrated, I feel as though the last 7 months of my life have been an utter waste of time. Furthermore, the evaluation day was wasted; if we had met with her first we could have simply gotten up and walked out and said "Thank you for playing, please try again".

In case you needed any convincing that customers for health care differ from customers for other services. (The difference: they are more desperate.) Think of this example if you are sure that government-run health care must be worse than the current system. You can learn what happened next at the link.

1. <http://blog.sethroberts.net/2012/03/04/the-culture-of-doctors-thou-shalt-not-testify-against-another-doctor/>
2. <http://www.zity.biz/index.php?mx=blog;ox=showitem;id=234>

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Tuck (2012-03-06 21:32:59)

Or they could put her on a ketogenic diet for a few weeks and cure her kidneys. But where's the money in that?

Michael 2 (2012-03-07 01:05:25)

I second Tuck's comment. There are anecdotes about people doing a paleo diet (low carb, low protein (high protein is bad for those with kidney disease), high fat) and regaining kidney function. The blog nephropal which contained one such anecdote is now hidden. It was written by a paleo friendly nephrologist, Ken Tourgeman.

Wilbur (2012-03-07 04:22:32)

Wow, there are anecdotes??? Man, I'm sold. Hey doc, cancel my chemo! I read on a blog the there are anecdotes that this fad diet will cure me. Signed, Steve Jobs Alta Mesa Memorial Park Seth: what if the fad diet was harmless? And takes only a few weeks to try

Dennis Mangan (2012-03-07 08:44:07)

"Reversal of Diabetic Nephropathy by a Ketogenic Diet [in mice]... ..Diabetic nephropathy, as indicated by albumin/creatinine ratios as well as expression of stress-induced genes, was completely reversed by 2 months maintenance on a ketogenic diet." Paper can be found at PLOS One. Seth: Thanks, Dennis, that's good to know. [1]The paper was published in 2011. Three of the authors are from a neurobiology department.

1. <http://www.plosone.org/article/info:doi/10.1371/journal.pone.0018604>

Ginna (2012-03-07 18:40:17)

Wilbur, yes, anecdotes are not necessarily clinically valuable. But as Seth points out, if the alternative treatment suggested does no harm on its own, there's only upside. I really don't get this attitude. My mom's kidneys were beginning to lose function last year. For various reasons, I suspected she had a problem with gluten. Her doctor offered no real advice, other than 'when they actually fail you will need dialysis etc.' He offered no other treatment possibilities. He suggested she lose a little weight, although she wasn't particularly overweight. (Maybe 15 extra lbs.) I insisted she adopt a paleo-ish diet, with gluten avoidance being the priority. A year later, she feels better in many ways, and has improved her kidney performance substantially. Her GFR has improved from 31, which is moderate-to-severe, to 62, which is mild kidney disease. Apparently this kind of improvement

is vanishingly rare for a 70-yr old. So I'll take that anecdote, thank you very much.

Tuck (2012-03-08 06:23:09)

In mice (as mentioned above): <http://lavinlavidalowcarb.com/blog/dr-charles-mobbs-diabetic-kidney-damage-can-actually-be-reversed-with-a-high-fat-low-carb-ketogenic-diet/10660> You'll get a kick out of that one. Of course he doesn't want to put actual \*humans\* on a ketogenic diet, he wants to develop a drug... In humans: "Pete is a 30 YO male, 175cm tall, 110kg (I can't tell you how depressing and embarrassing it is that the US can't figure out the metric system) and pretty much a mess. He is sedentary, stressed, has terrible sleep and exists on packaged pastry products and beverages with "DEW, Pepper" and similar monikers. Recently Pete had to get a physical and he had: high blood pressure, elevated: blood glucose, BUN, creatinine. Given that his condition was obviously not good it was recommended that his renal function get checked out. Tests indicated Pete was operating on approximately 10 % of normal kidney function. Pete was pretty shaken up by his condition...peri-diabetic, facing dialysis ( his doctor wanted to start dialysis IMMEDIATELY) and all at the ripe old age of 30. Fortunately for Pete, his employer was a member at a wacky little gym called NorCal Strength & Conditioning and the employers offered to not only pick up his gym membership for a few months, but would pay Pete on an incentive basis: \$5 for every pound lost. This is a small IT company, and I'm sure this situation violated multiple California state "fair employment" laws...but it's what happened here. Pete went through an initial assessment at NorCal, and it was recommended that he work with Amy Kubal on his nutrition. The course of action involved a low protein (10-15 % protein) low carb ( less than 10 %) high fat (mainly from coconut products), ketogenic diet. Pete's doctor was horrified, but we petitioned for one month of "tinkering" to see how things went. Three weeks later Pete's GFR was 80 % of normal instead of the previous 10 % and his BUN was within normal ranges. His doctor was interested...but baffled. Pete has subsequently titrated up his protein intake with no ill effects on kidney function." <http://www.robwolf.com/2011/06/16/clearing-up-kidney-confusion-part-deux/> "Anyway, the first thing to do with a paper like this is to check whether the authors cited Nielsen's 2006 case report of a human being having their diabetic renal failure halted and partially reversed. I mean, this might be relevant... They didn't." <http://high-fat-nutrition.blogspot.com/2011/04/diabetic-nephropathy-and-lost-swede.html> I hadn't kept up with the comments on your post... Sorry for being unnecessarily cryptic. The fascinating thing from Mobbs work was the importance of keeping protein very low, since protein in excess of dietary requirements was converted to glucose, which is what was poisoning the kidneys... Remove the glucose, kidneys heal. And to Wilbur: All case reports, or any published science, is an anecdote. What's important in science is reproducibility.

Catherine Shaffer (2012-03-12 11:57:54)

This person misunderstands the purpose of a hospital. Patients are kept admitted to the hospital for medical care, not help with activities of daily living. If a patient can't manage ADLs, they need a caregiver or nursing home. She will not find a hospital that is willing to keep her admitted for the entire recovery. This is her own fault for being unwilling to use a skilled nursing facility/rehab center, which is a very common and normal thing to do, and not the fault of the hospital for providing poor "customer service." Rather, the hospital would have been negligent to perform a procedure on a patient that had no way to meet her care needs at home. Another option would have been to hire a visiting nurse or home health aid.

## **How Accurate are the QuackWatchers? Mercury Amalgam Fillings (2012-03-08 05:00)**

From [1]Amalgam Myths and Facts (amalgam here means mercury-containing amalgams used by dentists):

Myth 10: Amalgam has been banned in Germany and Sweden and therefore should be banned in the United States.

Fact 10: Dental amalgam has not been banned in any country in the European Union.

From [2]a 2009 press release:

The [Swedish] Government today decided to introduce a blanket ban on mercury. The ban means that the use of dental amalgam in fillings will cease.

In response to the Swedish ban, the American Dental Association put out [3]a press release that said such a ban was "not necessary" in America because dentists do such a good job recycling the amalgam that doesn't go into your mouth. Moreover, "a recent economic impact study published in the journal Public Health Reports indicates dental care costs in the U.S. would increase up to \$8.2 billion in the first year alone if amalgam use was discontinued." I don't know what "up to" means. Perhaps it means that dental care costs would increase by a trivial amount "up to" \$8.2 billion. Mercury-containing amalgam fillings are about half mercury.

[4]Soon after I had two mercury fillings removed, I slowly became faster at arithmetic.

1. <http://www.dentalwatch.org/hg/myths110.html>
2. <http://www.sweden.gov.se/sb/d/586/a/118550>
3. <http://www.ada.org/3298.aspx>
4. <http://blog.sethroberts.net/2011/06/26/damage-due-to-mercury-revealed-by-brain-test/>

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Adam (2012-03-08 05:25:32)

Dental amalgams are also banned in Denmark, which has been a member of the European Union since 1973. <http://nyhederne-dyn.tv2.dk/article.php/id-9868029:slut-med-kviks%C3%B8lv-i-t%C3%A6nderne.html>

Tom Passin (2012-03-08 06:30:18)

What happened to you accuracy in the mental arithmetic tests? I remember you wrote an earlier post (not about mercury) that mentioned that your speed increased but the accuracy decreased. How much did your speed increase? Seth: About 50 msec? From an average time/problem of 600 msec to 550 msec. Something like that.

Margaret (2012-03-08 07:10:42)

Quackwatch makes no effort to be accurate, it's merely a website put there to scare you away from any healthful natural remedy or lifestyle change and into your doctor's arms. I really hate that guy!

Kim (2012-03-08 09:54:34)

I had a mouthful of amalgams (12+) removed last fall at the insistence of my functional medicine doctor, and my autoimmune (Hashimoto's) symptoms are finally improving. My endocrinologist has been fiddling with my medicine for years, but they never helped. I absolutely believe amalgam fillings are deleterious to health.

Char (2012-03-08 10:01:19)

I asked my dentist about fillings last time I had to have one put in. Now, granted he is probably pretty "main stream" but he said something that made me think. He said "we have a history with the metal fillings but we don't with the new fillings." I.E. we know what happens with the metal fillings but what will all the material in the new fillings in our mouths do to us? Aren't they a form of plastic? Seth: Yes, they are [1]thermosetting plastics. I'd ask your dentist: what does that history show? There's an even longer history of tonsillectomies. Long history does not equal safe. Tonsillectomies were recently found to be associated with a 50 % increase of risk of heart attack.

1. [http://en.wikipedia.org/wiki/Thermosetting\\_plastic](http://en.wikipedia.org/wiki/Thermosetting_plastic)

Char (2012-03-13 17:35:46)

No, just because we've always done something a certain way does NOT mean we should keep doing it that way if something better comes along. But the thing that I've noticed is that the "new thing" ends up being worse for us than the old. Butter and margarine are examples. We are told to not eat butter because of the saturated fat then we find out that margarine is very bad for us due to trans fats. We hear of a new drug that is supposed to really help people and five years down the line we find out it causes strokes. We are told to take/eat more of a vitamin and then find out that higher rates of cancer are correlated to higher intake of that vitamin. It's confusing. So should I remove what is already in my mouth which I don't think is causing me harm (I could be wrong though!) , an expensive proposition, and replace it with an unknown substance? Will we find out in 20, 30, 50 years that it's leaching out chemicals into the body? That is the question.

Elise Mattu (2012-03-15 14:17:22)

Here's the thing about dental amalgams - they do reduce the metal that they are made out of at the rate of something like 1 % of that metal to 2.1 % of that metal per year. Now the big problem is that when people get all concerned about the amalgams, they go into their local dentist, and demand the amalgams get removed. There is a right way to do it. This right way involves there being an cannula providing oxygen from a canister to the nasal passages of the person having the mercury and silver fillings removed. Otherwise, without the cannula, the person is breathing in somewhere's between 5 to 15 % of the amalgam itself! Depending upon how the dentist drills out the material. No one should ever have more than one filling removed at a single time. And make sure you have a dentist who understands that his drilling away at the filling will be essentially vaporizing the filling. Make sure you are not going to breathe in any of the amalgam. The dentist must be careful to provide you with you protection. Otherwise his or her actions will hurt you more than help you. To say nothing of his or her health, and the health of the staff.

Mark (2012-03-19 21:08:47)

Given how heavy metals remain in the body, wouldn't any harm from them be more-or-less permanent? In other words, wouldn't you expect your arithmetic ability to stop falling further, but not to recover? Seth: "Given how heavy metals remain in the body..." That my arithmetic score improved after my amalgam fillings were removed suggests your theory is wrong - that a substantial amount of heavy metals are removed. Mercury is excreted in hair. Maybe it is also excreted in other ways.

Mickie Roller (2012-03-22 07:04:50)

Read my website: [www.strokesurvivorswithsavvyideas.com](http://www.strokesurvivorswithsavvyideas.com), "Mercury Fillings". Thanks. Seth: you spelled it wrong. I fixed it.

DonDDP (2012-04-19 15:48:13)

Yes it is true that amalgam has been banned in Sweden and Denmark, this month there are meetings in Europe to create more restrictions on the use of this mercury filled material, it is true that mercury comes off silver fillings all day long in small doses. The largest amount of mercury is when it is placed in and taken out of a tooth. Mercury is a toxin, our body is not built to defend against a chronic exposure to mercury. The EPA demands that this filling material be delivered and picked up from dental offices in special hazard material containers but it is ok to put in peoples mouths, that makes no sense. All consumers should atleast be informed and sign a note of consumers consent upon knowing that what is being placed in there teeth is 50 % mercury and small amounts come out into the body on daily basis.

## **Vitamin D3 in Morning: 7000 IU Improves Sleep (Story 21) (2012-03-09 05:00)**

Someone who wishes to be anonymous wrote me:

I had been taking 400 IU D3+calcium morning noon and night for years. I usually fell asleep fitfully. My sleep was rarely uninterrupted throughout the night.

After reading your blog, I started taking all three pills in the morning. Getting to sleep was easier, but



sleep was still usually fitful.

After more reading of your blog, I stopped the D3+calcium and switched to 7000 IU of D3 every morning. Within a couple days, my usual pattern became that I fell asleep quickly and slept soundly through the night.

It is now three weeks, and I continue to enjoy excellent sleep. I noticed no changes in energy or mood.

I asked some questions.

Tell me about yourself.

I'm an academic (professor of decision sciences), 52 years old. I live in Philadelphia.

What you mean by "I fell asleep fitfully"?

Even if I was tired, sleep did not come easily. I had no worries, so it wasn't that.

How long did/does it usually took/take you to fall asleep under the three conditions?

Original 400 IU D3+ calcium 3 times/day: 1/2 hour was usual.

All 3 are taken in morning: 15-30 minutes, but still awakening in the night frequently

7000 IU in morning: 10-15 minutes, and sleeping like a log.

What time do you wake up? What time do you take the 7000 IU?

I usually wake between 7 and 7:15. Sometimes I head straight for the kitchen (where the vitamins are stored) and I take them immediately. Other times I head for the shower and then to the kitchen, whereupon I take the vitamins.

What brand of Vitamin D3 do you take now?

[1]Vitamin Shoppe

1. [http://www.vitaminshoppe.com/store/en/browse/sku\\_detail.jsp?id=VS-2463](http://www.vitaminshoppe.com/store/en/browse/sku_detail.jsp?id=VS-2463)

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disgruntledphd (2012-03-09 05:30:47)

Seth, you should probably remove the place of residence for your anonymous person, I found it quite easy to identify them given the information provided. Seth: Thanks for letting me know. I have identified him as he chose to be identified.

Joe (2012-03-09 11:24:39)

That brand of D3 contains soy oil, which is bad for the gut (increases gut permeability), according to Dr. Loren Cordain. A better way would be to use Vitamin 3 drops, which are pure vitamin D3. It would be interesting to see the results of using drops compared to using gel caps on sleeping patterns. I use them, and have always used drops (I sleep like a log, too), so I can't be a

n-1 experiment.

BlueMorrissey (2012-03-09 11:26:10)

First of all, I am bipolar, so things fluctuate in my moods and sleep patterns. I was hesitant to post on the D3 experience. I have been taking D3 for over a year, because of my lack of sunshine. I was taking much less than what has been recommended by Seth and had been taking it at various times of the day. A few weeks ago I began increasing the amounts from 5,000 to 10,000 IU and first thing upon waking. My sleepiness at night has gradually increased during this time, but remarkable so during the past week since I've upped my dosage to the 10,000 to 15,000 IU. This is very rare for me to become sleepy before midnight. I work until 10 pm. Usually, I would fall asleep between 2 to 3 am and sleep until 10:30 to 11:00. Now I wake up closer to 9 am. Most importantly I've been able to stop taking ambien and/or benedryl on a nightly basis. I'm excited about this result, and hope to give future positive updates.

Jenny (2012-03-09 13:29:59)

One of you earlier D3 story tellers, I have been sleeping consistently well - until last night when I made the mistake of having a snack at 10pm, instead of supper at 7-8pm. I woke at 2am, had great difficulty going back to sleep - and then was thoroughly woken by one of our computers turning on loud at 3.30am!! By the time I had stared at that blue screen, trying to work out how to turn the damn thing OFF (it wasn't my computer - it's owner was snoring peacefully) I was wide awake. No snack tonight for sure.

Jenny (2012-03-10 13:11:22)

Last night, I made sure I didn't snack, and sure enough I slept all night very soundly. Nice to experiment...

## **The Value of Moodscope (2012-03-10 05:00)**

In 2007, Jon Cousins started tracking his mood to help NHS psychiatrists decide if he was cyclothymic (a mild form of bipolar disorder). After a few months of tracking, he started sharing his scores with a friend, who expressed concern when his score was low. Jon's mood sharply improved, apparently because of the sharing. This led him to start [1]Moodscope, a website that makes it easy to track your mood and share the results.

I was curious about the generality of what happened to Jon - how does sharing mood ratings affect other people? In January, Jon kindly posted [2]a short survey about this. More than 100 people replied.

Their answers surprised me. First, in a survey about sharing your mood - not about tracking your mood - most respondents did not share their mood. It is as if, in a survey about being tall, most respondents were not tall. Second, although Jon's mood sharply rose as soon as he started sharing, this was not the usual experience. Sharing helped, some people said, but other people said sharing hurt. For example, one person said her mood was used against her in arguments. Finally, the respondents gave all sorts of persuasive reasons that rating their mood helped them. To me, at least, the value of mood rating isn't obvious. I can list a dozen hypothetical benefits but whether they actually happen is unclear to me. [3]I rated my mood for years and did it only to learn about the effects of morning faces. MoodPanda, another mood-rating site, [4]gives a few brief vague unenthusiastic reasons to track your mood. And their site is all about mood rating.

In contrast, Moodscope users were clear and enthusiastic about the value of tracking. Here are some reasons they liked mood-tracking:

It is useful to look back sometimes to help you find ways of 'keeping up' a positive mood/outlook.

My mood range has definitely narrowed since starting mood stabilizers, so using Moodscope has

given me solid evidence that the treatment is working well. I also run statistical analyses of my mood charts against variables like sleep, medication use, and alcohol consumption. The correlations were not particularly meaningful using a 9-point Likert-like scale from a standard mood chart. When I used my Moodscope scores instead, I suddenly found that some of the correlations are (ridiculously!) statistically significant, which also made me feel more certain about what I need to do and change to better manage my mental health.

I could express my miserableness in total safety, without leaning on anybody else. It has proved wonderful. My profile has risen from a score of 7 on day 1 (11 months ago) to the 90s now. Being able to track my reasons for feeling better or worse has been part of this. The patterns are visible, ditto the triggers that send me up or down.

The great benefit of Moodscope has been to confirm the advantages of my own lifestyle management for coping with bipolar disorder. It has shown that what I felt was bad for me, is indeed bad, and what I felt was good for me, is indeed good. (I know that I have to take the meds.)

It helps that I can post things about sleep hours in the comments and see the correlation to the chart.

I have found the tool immensely helpful in gaining insight into how my own behaviour and thoughts can impact upon my mental health. I have gained more control.

It helps me to gain insight into my moods, take responsibility for them and steer a calmer, more productive course through life.

It allows me not to panic when I am low as I can see that ups and downs are all part of life.

Pre-Moodscope, I would not realize I was on the way down until 10 or so days had passed, and so I had done nothing. But with Moodscope, I can see if it's a trend and do something immediately. It means I deliberately intervene earlier.

I use my scores, and comments, to understand what triggers my low mood and take steps to stop it getting lower, in so far as I am able.

I view it as a diary of sorts, private for my own contemplation.

I want to catch myself before I make a deep plunge and stay down too long. I do use the info with my doctor. I love having something concrete to show and talk about.

It has helped me feel like there is a greater safety net there, and given me a greater awareness of when I'm slipping back into my treacle pit; I now know that any score between 20 and 30 means I am in dangerous territory and need to take some remedial action, and if I get below 20 then I'm really in a bad way.

Moodscope has helped me identify incidents in my life with my mood. For example if I have to assert myself strongly with someone, I feel exhilarated and very proud of myself for about two days then gradually my mood will lower and a week later I will feel apathetic and down. I love that it is helping me make sense of my emotions and as a result I am not judgmental of them.

I've found Moodscope really useful in finding out what influences my moods. I am bipolar and af-

ter 20 years on lithium I'm managing without any meds. Don't worry, I came off it slowly, under medical supervision!

I use Moodscope as a sort of diary of how I am feeling. Looking back I can see what really pushed my mood down and oddly it's not always the major things that you'd imagine. In my case depression is brought on more by physical health problems - I am a CFS sufferer.

I sum up their reasons like this: 1. Helps understand causality (what causes mood to be low or high?). 2. Immediate guidance (should I take action to raise it?). 3. Self-expression (similar to diary). 4. Reassurance (low moods are "part of life"). [5]Alexandra Carmichael wrote about the value of mood-tracking and mood-sharing. Her experience did not repeat Jon's: She found little initial benefit of sharing, but great eventual benefits ("a kind of deep, healing therapy"). This was the main benefit of tracking for her - that it allowed this sharing. [6]Kari Sullivan also tried Moodscope. She didn't share her mood. The benefits she list fall under the heading of Reason #1 (helps understand causality). For example, she learned "most social interaction lowers my mood," which surprised her.

Not everyone liked tracking:

My girlfriend . . . stopped using Moodscope. In her words, "I don't want Moodscope to remind me how terrible I'm doing."

She has now decided to give up on taking the test as it just reinforces her feelings of general greyness and sometimes despair.

At a website devoted to collecting new ideas about health, [7]Moodscope ranked #1 out of about 500 ideas.

When I started my self-experimentation I didn't get anywhere for a long time (after initial success with acne). After 1990, however, I was astonished at the progress I made. One useful discovery after another - how to lose weight, sleep better, be in a better mood, and so on. Over the next 20 years, I improved my health considerably more than all the other scientists in the world put together. I came to see what was happening as a kind of catalysis. The useful information was already there; my personal science was the catalyst that turned it into something useful. (Lack of people like me was why the discoveries were so abundant - a counter-example to Tyler Cowen's lack-of-low-hanging fruit explanation for stagnation.) Professional scientists were too restricted in what they did.

The Moodscope story is similar. Psychologists have been studying and measuring mood for a long time. The Profile of Mood States is an important result of their research. But no psychologist saw it as an agent of change. It was simply a research tool, albeit a popular one. Only when Jon Cousins started using it for his own selfish purposes did it become clear how useful it could be. He was the catalyst.

Both my story and Jon's are examples of what I say about DIYization of science: It gets tools into the hands of a larger and more diverse group of possible innovators, who are less "stuck" - less committed to old ways of doing things - than the professionals. They are also more motivated to do something useful than the professionals, who are weighed down with other big concerns - about status, job security, money, and so on.

1. <http://www.moodscope.com/>

2. <http://moodscope.blogspot.com/>

3. <http://escholarship.org/uc/item/2xc2h866>

4. <http://www.moodpanda.com/WhyUseAMoodDiary.aspx>

5. <http://quantifiedself.com/2011/06/the-transformative-power-of-sharing-mood/>
6. <http://ihaveneverdonethisbefore.com/2011/07/28/what-moodscope-is-teaching-me-about-my-mood/>
7. <http://departmentofhealth.ideascale.com/a/dtd/Moodscope-measuring-your-state-of-mind-and-alerting-friends/42673-15482>

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Stone Glasgow (2012-03-10 11:25:09)

Well said! And this applies to innovation and improvement in all areas of life. It is exactly why economies "stagnate" - because industries gradually come to organize themselves as if they were government departments, often with explicit support from governments. Modern medicine and public schooling are good examples of this process, but it can happen to any business, any time the focus is removed from individuals. Guardian syndrome morality does not allow innovation except by elite leaders. Commercial syndrome morality allows for more innovation (wealth creation) by allowing everyone to create innovative products and ideas - not just the men at the top of the pyramid. If individuals lose their ability to innovate and create solutions to problems, the growth of the economy slows - precisely because a "growing economy" is just another way to say "lots of people finding ways to make life better for each other." And this is why half the nation feels that reducing government is stimulating to an economy - because they recognize that wealth (new and useful stuff) depends on the creativity of individuals, not just leaders.

Seth Roberts (2012-03-10 13:04:50)

Thanks, Stone. I agree with what you say. What you say about guardian syndrome morality ("does not allow innovation except by leaders") is a perfect description of modern medicine.

Chris (2012-03-10 21:50:08)

Oh my god I hate people who use my mood against me in constructive debates. Like any argument is moot just because I'm not super happy at that exact moment? Even my mom does it at times, "I'll come back when you're in a better mood" I mean, why are my opinions of less value at that point? Anyway, it's very interesting to see the effects of a scientific study of moods, although I would imagine there's quite an ambiguity among people - like how would you define your moods? For some you need to be REALLY pissed off to be angry, whilst some find it easy and natural. In any way it's something to look out for, particularly in the field of mood related disorders - let's just not hope that everyone starts seeing bipolarity in themselves. PS: Very nice blog Seth, I just found you today via Google :-)

Alasdair (2012-03-12 02:06:52)

I used Moodscope for a few months, as I was learning to cope without SSRI's after a 4 year period with miserable, life-limiting depression. I haven't used it for about 3 months now - principally because its user interface is REALLY IRRITATING! For those who don't know it, Moodscope presents a set of 20 choices to make in random order. Half of these are positive ("inspired", "attentive"), and half negative ("hostile", "nervous") on a scale of 1..4, from "Not at all" to "very". I know WHY the interface is this way, but selecting a score is VERY TEDIOUS for this late-50's computer scientist. Each card has two scores on each of two virtual faces and is presented in a random orientation, so to select a score, I need to "flip" and "rotate" the card until the score I wish to select is at the top and then click on it. At the end of the process, Moodscope presents a score, between 0 % and 74 %, which used to pretty closely mirror the way I was feeling. So, for me personally, the pain of clicking irritating cards outweighed the benefits of getting an objective measure of my mood. The graph of mood over time was interesting, but not compelling. I see Moodscope is now advertising paid subscriptions for premium services. I haven't played with those. The value of sharing? Sharing a mood is a VERY intimate thing to do. I experimented it for a while - one person was simply not interested, and another was interested enough to respond, but I didn't find the interactions helpful or unhelpful. I think I'd have carried on with Moodscope, but not with sharing, had it been possible for me to enter the data more conveniently. Typing this has (almost) encouraged me to set up a google spreadsheet for the purpose...

## Assorted Links (2012-03-12 05:00)

- [1]Older eyes block blue light more than young eyes, which may cause sleep problems.
- [2]Caroline Rodgers makes a case (29 slides) that autism is often caused by prenatal ultrasound. This link is from the comments on [3]my previous post about the danger of prenatal ultrasound.
- [4]Why did Deep Throat leak the secrets that brought down President Nixon?
- [5]Do bitters make a difference? A taste test. A better test would have been simpler: to ask, many times in paired comparisons, which is better: Drink X with bitters or drink X without bitters?

Thanks to David Cramer, Jahed Momand and Nancy Evans.

1. [https://www.nytimes.com/2012/02/21/health/aging-of-eyes-is-blamed-in-circadian-rhythm-disturbances.html?\\_r=2](https://www.nytimes.com/2012/02/21/health/aging-of-eyes-is-blamed-in-circadian-rhythm-disturbances.html?_r=2)
2. [http://iacc.hhs.gov/events/2010/slides\\_caroline\\_rodgers\\_102210.pdf](http://iacc.hhs.gov/events/2010/slides_caroline_rodgers_102210.pdf)
3. <http://blog.sethroberts.net/2012/02/13/high-defect-rate-in-ultrasound-machines-that-scan-pregnant-women/>
4. <http://blogs.reuters.com/jackshafer/2012/02/21/what-made-deep-throat-leak>
5. <http://newyork.grubstreet.com/2012/02/sloshed-guide-to-bitters.html>

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Darrin Thompson (2012-03-12 05:56:13)

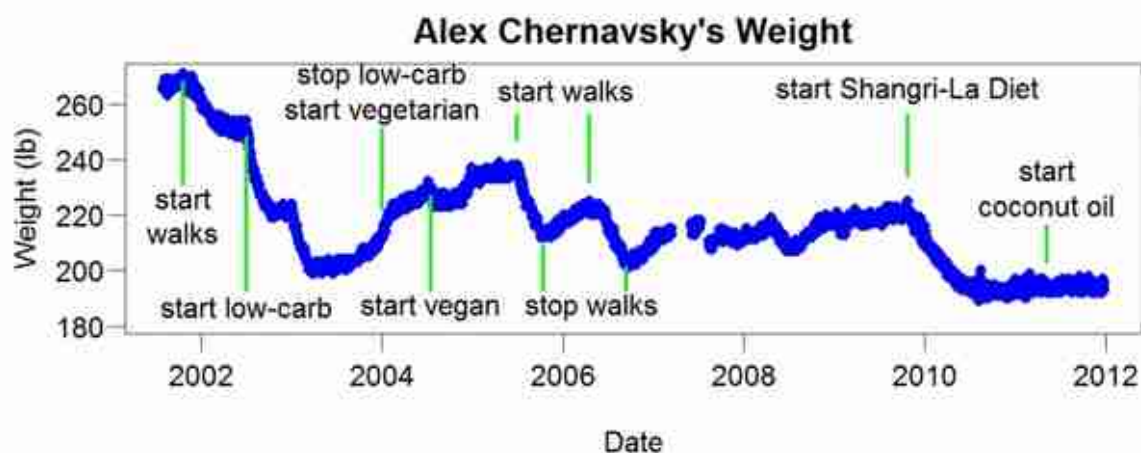
Your deep throat link is broken. Seth: Fixed, I hope.

Tony (2012-03-12 06:47:14)

For now: <http://blogs.reuters.com/jackshafer/2012/02/21/what-made-deep-throat-leak/> Seth: Thanks.

## Ten Years of Weights, Including Two Years on the Shangri-La Diet (2012-03-13 05:00)

[1]



Here's a new graph I've made of Alex Chernavsky's data. In 2001, he started weighing himself and recording his weight with the hope that it would help him lose weight. His data shows several interesting things:

1. Long walks really helped. The walks lasted 1.5-2 hours. They weren't sustainable but the weight loss they caused lasted a remarkably long time – years, apparently, in the sense that it took years to regain the lost weight.

2. A low-carb diet worked well, but only at first. Alex lost a lot of weight initially but then started to regain it. Just before he became vegetarian, he was regaining weight quickly. I don't know if this is typical. The popularity of low-carb diets has not been matched by availability of data about long-term effects, where by "long-term" I mean four years. Even though low-carb diets are 150 years old (Banting wrote in 1863).

3. The Shangri-La Diet is working better than other alternatives. There's a difference between (a) showing that a diet causes weight loss and (b) showing that it works better than other ways of losing weight. In this comparison, it appears more sustainable than long walks and the weight loss it causes appears more sustainable than the weight loss from a low-carb diet.

Alex originally used Shangri-La Diet principles by ingesting 4 tablespoons of flaxseed oil washed down with water. ([2]Details here.) He lost weight but then started to slowly regain it. I suggested he increase his intake of flavorless calories so he started to eat 1 tablespoon of coconut oil (about 100 calories) each day with his nose clipped. He stopped slowly gaining weight.

I asked Alex why he has persisted weighing himself so long. He replied:

I had at best a vague idea of what I wanted to do with the data. When I was in graduate school [in neuroscience], I enjoyed plotting the results of my experiments, so I thought it would be fun to have a dataset that consisted of my own weight measures. After I started the SLD, I had a more-concrete reason why I needed to collect the data. I explicitly set out to test the diet.

1. <http://blog.sethroberts.net/wp-content/uploads/2012/02/2012-02-27-Alex-Chernavsky-color.jpeg>

2. <http://www.astrocyte-design.com/shangri-la-diet/index.html>

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John W (2012-03-13 06:40:39)

It would be interesting to see an update on your weight, and your current implementation of the diet.

Alex Chernavsky (2012-03-13 07:27:51)

John, I have an update here: [1]<http://www.astrocyte-design.com/shangri-la-diet/index.html>

1. <http://www.astrocyte-design.com/shangri-la-diet/index.html>

Andrew (2012-03-13 08:25:00)

When did he stop walking the first time? It's not listed in the chart. Seth: I think he stopped when winter came.

Alex Chernavsky (2012-03-13 15:06:07)

Yeah, I never really walked during winters (I live in Upstate New York).

BlueMorrissey (2012-03-13 15:07:52)

I've had success on and off on the shangri-la diet. I usually stop because of stress in life leads me back to old habits of anxious snacking and bad habits of diet soda and smoking at night cut into that 1 hour window of non-flavors. I've tried every diet imaginable, but really do prefer the SLD due to its simplicity, cost effectiveness and only small amounts of exercise. My only curiosity is whether or not it works because of the aspect of our paying more detail to our diet and true hunger or the actual flavorless calories. All in all, I do want to enjoy my food, and seem to be losing out on the positive effects of tasty foods. Also, is it the fat content that suppresses appetite. Lately I have found my best formula in a long time. I take about 10 grams of fish oil first thing in the morning, then a couple of eggs with some cheese on Scandinavian Bran Crispbread. This combo leaves me filled and satisfied throughout the day. Only diet soda, tea and maybe some peanuts during the rest of the day. I'm single and work nights, so it has not been a social problem. I would imagine I'll continue to make changes, but I have lost 25 pounds since early January. I usually weigh around 250 and am 6' 2". I do want to add the SLD in combination again and see what happens. By the way, my sleep has been much better than in a long time. I think the vitamin D and late sleeping has been beneficial, along with the high Omega 3 content, which I take for my bipolar. I will add the SLD and give a later update. Thanks Seth.

Joanna (2012-04-15 02:50:40)

Hi Seth! I have just read your book and I could not put it down!! I had been complaining recently that no one had yet made sense of the whole weight loss puzzle. People have got close but no one has put all the pieces together to make a coherent theory. And then I find this book - it is a mind blower and truly does make sense of all the facts about weight loss, everything fits and makes sense in this theory. I really do believe you've hit the nail on the head. I'm so glad you have because I had set myself a project to figure it all out - but I could never have come up with this - as it's coming from a different angle to the purely physiological. Quite honestly - I think you ought to be up for a Nobel prize or something - this information will be priceless to millions - once it becomes better known. I had just started 'The Carbohydrate Addict's Diet' book before I read this and this is probably the second closest thing I have found to getting the full picture after your book. Your theory makes sense of all the observations about food cravings described in their book, for example; MSG, which intensifies flavours, leads to intense food cravings and weight gain. Totally brilliant - it's all starting to make sense :) Thanks so much - reading your book is one of the best things I've ever done! I'll be back to post my own success with the diet - started yesterday and definitely noticed some appetite suppression already. Seth: Thanks, Johanna, that's nice to hear. From your lips to God's ear.

Ross (2012-04-18 17:51:07)

Dr. Roberts, When I consume 2 tablespoons of coconut oil at a time, it doesn't feel right and I get a stomach ache. Is there a way to consume the coconut oil in one fell swoop and somehow mitigate this mild nausea? I imagine the issue is consuming the oil on an empty stomach, but isn't that the point? Thanks for your blog! - Ross Seth: The issue may be lack of the right enzymes for digesting it. Your body doesn't make enzymes it doesn't need. Start with a tiny amount of coconut oil - that doesn't cause a stomach ache - and gradually work up to 2 tablespoons.

ob (2012-04-19 17:14:46)

thanks to this blog,,am happy i saw this

Selection bias, or, How you can think the experts don't check their models, if you simply don't look at what the experts actually are doing « Statistical Modeling, Causal Inference, and Social Science (2012-05-02 08:18:24)

[...] has a blog on topics ranging from thoughtful discussions of scientific evidence, to experiences with his unconventional weight-loss scheme, offbeat self-experimentation, and advocacy of fringe [...]

## **This American Life Retracts Daisy Show (2012-03-16 15:33)**

[1]This American Life has retracted the Mike Daisy show it did a few months ago because it turns out several details - not trivial ones - were wrong. Daisy knew this, and kept the TAL producers from finding out by concealing the cellphone number of his translator. He told them it no longer worked. TAL producers didn't ask for her email address,



apparently. It is a lot like Gleickgate – Daisey/Gleick believing it was okay to stretch the truth in pursuit of some greater good (better Foxconn working conditions/less global warming). At least, I would like to think that is why Daisey did it. I hate to think he needed the money.

The position of This American Life is more complicated than their press release reveals. A few years ago [2]Alex Heard revealed that parts of David Sedaris stories were made up. Sedaris is one of TAL's biggest contributors. He is also their most famous. He probably owes his success to TAL. Did TAL retract his stories? Did it even mention the new information? Uh, no. But TAL remains a great show. These are missteps.

A few weeks ago I complained about Sedaris in a comment on the New Yorker website: Why does The New Yorker publish his stuff as memoir rather than fiction? What exactly is funny about making up derogatory stuff about living people (e.g., Sedaris's guitar teacher) and spreading the false info far and wide?

1. <http://www.businessinsider.com/ira-glass-heres-everything-that-was-made-up-in-our-big-apple-foxconn-story-2012-3>
2. <http://www.tnr.com/article/american-lie-midget-guitar-teacher-macys-elf-and-the-truth-about-david-sedaris>

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Jon (2012-03-17 00:19:09)

I love that show (it seems we always need to be skeptical of everything, I'm a big fan of the free market so I had a hard time with that show too, but it did feature a short rebuttal by a couple economists - one that is quite horrid in his viewpoints but nailed it for that segment): alternate viewpoint on this story: [http://www.coyoteblog.com/coyote\\_blog/2012/03/danger-of-the-mono-culture.html](http://www.coyoteblog.com/coyote_blog/2012/03/danger-of-the-mono-culture.html)

### Assorted Links (2012-03-17 05:00)

- [1]Kombucha news: new scientific studies. Plus an expert says: "'When diets are fads, they never seem to last long.'
- [2]University of Pennsylvania clears medical school professors of ghost-writing. "'It's important to note,' [said the Penn report,] 'that the results of the study were negative to the sponsor's product [and] were so characterized in the publication' . . . But Lisa Lehmann, the director of the Center for Bioethics at Brigham and Women's Hospital in Boston, notes that the study's findings were not unequivocally negative. 'Penn noted that the study was negative and seems to imply that diminishes concerns about bias, but this is not entirely true. There is a segment of the population, those with low serum lithium levels, for whom the study recommends the medication.'

- [3]Jeffrey Sachs apparently believes in AGW (Anthropogenic Global Warming). He also believes, according to Felix Salmon, "that development is easy, we know how to do it, and that given enough money, it's relatively trivial to spend that money in an effective way to reduce poverty around the world." Results from the Millennium Project do not support his beliefs.
- [4]5 years of success with the Shangri-La Diet

Thanks to Alex Chernavsky.

1. <http://www.thedailybeast.com/articles/2012/02/28/is-celebrity-favorite-kombucha-really-a-health-and-anti-aging-cure.html>
2. <http://www.nature.com/news/university-clears-psychiatrists-of-misconduct-1.10156>
3. <http://blogs.reuters.com/felix-salmon/2012/03/02/dont-send-sachs-to-the-world-bank/>
4. <http://voluntaryxchange.typepad.com/voluntaryxchange/2012/03/shangri-la-diet.html>

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## More About the This American Life Retraction (2012-03-17 06:02)

Mike Daisey had a perfectly good point about the shallowness of Steve Jobs. Too bad he took "dramatic license". The more interesting part of the story for me is why This American Life (TAL) producers were fooled by Daisey and how they reacted when this became clear.

Suppose I make a short film in which Michael Jordan misses ten free throws in a row. Ten separate free throws, spliced together. Every detail is true, but the whole is false. Mostly he made free throws. You are never going to learn how false my film is by fact-checking it. Because every fact is true. That was the first big mistake made by TAL producers. They assessed Daisey's story by fact-checking. In their retraction they say nothing about this point and seem unaware of it. Had they assessed it more broadly they might have become aware of the exaggerations.

The second big mistake made by TAL was to accept the standard journalistic view that you should get "both sides" of a story. If Person X claims Y, try to find someone who disagrees. If a Democrat says such-and-such, find a Republican to comment. In the Daisey story broadcast in January, the TAL producers took Daisey to be saying "Chinese factories are bad" and countered this, in standard journalistic practice, by finding someone who would defend Chinese factories: New York Times columnist Nicholas Kristof, of all people. Yeah, the salaries are low but they are better than rural jobs, said Kristof. I could have said that. Kristof knows almost nothing about Chinese factories – that was perfectly clear. Thinking they needed "the other side" confused TAL producers and wasted their time. Instead, they should have asked someone who knows a lot about Chinese electronics factories to comment. Again, if they had done this they might have realized that Daisey was not telling the truth. Most journalists know not to demonize. But many of them haven't learned not to polarize.

From [1]the retraction broadcast it is obvious that Ira Glass is furious. He lied to us! was the dominant note. Given how furious he is it is perfectly understandable that he and the rest of TAL didn't manage to reach even one interesting conclusion the entire show. They simply wanted to set the record straight quickly, which is fine. If there are more stories about this, in-depth ones, I am afraid Glass is going to conclude We wanted to believe. That is going to be his deepest comment on this. I hope I'm wrong. I don't agree with that assessment. I think the real problem is We wanted things to be simple. In particular, they wanted (and still want) the simple-minded view of the world taught in

journalism school to be correct. The one in which experts can be trusted, every story has two sides, and truth can be ascertained by fact-checking.

A medium-sized scandal in American journalism is the mainstream journalistic view of global warming – of course humans have caused it (= AGW). To say otherwise is "anti-science". The question has complexities (e.g., how models are tested, how scientists distort stuff) that journalists ignore. I don't think journalists "want" to believe anything about global warming. I think what they really want is simplicity. It makes their jobs easier. A considerably larger scandal is the free pass given to medical schools and drug companies and [2]their first, let them get sick attitude. The recognition that that this is horrible and there are alternatives seems beyond the thinking of most journalists who cover the subject. Again, the notion that our health care system is predatory is complex. Much simpler to believe it is good and not question basic assumptions. Both scandals – AGW and health care – are well in evidence at The New Yorker, an even more respected outlet than TAL, where Elizabeth Kolbert blindly accepts AGW and Atul Gawande, Michael Specter, and Jerome Groopman accept the first let them get sick way of doing things.

1. <http://www.thisamericanlife.org/radio-archives/episode/460/retraction>

2. <http://blog.sethroberts.net/2011/09/18/first-let-them-get-sick/>

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Robin Barooah (2012-03-17 06:58:38)

Honestly, I don't see why you are defending Daisey in your opening here. Are you not aware that Apple's supplier responsibility report began while Steve Jobs was CEO, and that the only things that Daisey added to what they publish turn out to be lies? Seth: I don't think Daisey's lies are interesting. He lied to make a better story. He took "dramatic license". Not the first person to do that – see David Sedaris, James Frey, and so on. TAL's failure to catch those lies is more surprising, that's why I discuss it at length. I think I have more to learn from it.

Nancy Lebovitz (2012-03-17 08:17:01)

"First, let them get sick" is partly appropriate modesty. Sometimes a treatment which seems plausible (like hormone replacement) isn't such a brilliant idea. Seth: Yes, there is something to that. By first, let them get sick I mean three things: (a) Too little attention paid to fixing small problems, which become larger problems. Small things wrong are ignored until they become big things wrong. Because drugs are so dangerous, they cannot be used on small problems – the risks outweigh the benefits. An example is gingivitis. I believe it indicates too much inflammation all over your body, not just in your gums. (b) Too little interest in nutrition, which is a major cause of illness. (c) Too little interest in prevention.

Tom (2012-03-17 09:42:34)

Not quite correct: – There was no hexane poisoning – There was no mangled hand – There were no guns at the gates when Daisey arrived at the factory. – There were no bunks stacked to the ceiling. I certainly agree with you that not every story has two sides (or can be intelligently "polarized"), but if the fact checking had been done, the problems with his narrative would have been caught, and the broadcast would never have happened. I also think Daisey is a major-league bastard who doesn't haven't the decency to feel shame when he lies to millions of people. That puts him a few rungs below James Frey, which isn't saying a whole lot.

Nancy Lebovitz (2012-03-17 09:52:32)

Also, Daisy apparently doesn't get that what he says on the stage matters. And that getting people to care by lying to them can lead to not believing information about actual atrocities. Back to the need for medical modesty, not to mention the risks of using surrogate measures of "health": [1]Hazards of lapbands. [2]What gets ignored when obesity is considered to be a primary risk factor.

1. <http://www.diabetesselfmanagement.com/Blog/David-Spero/gastric-bands-too-dangerous/#comments>
2. <http://danceswithfat.wordpress.com/2012/03/17/jumping-to-conclusions-is-not-great-exercise/superflat>

superflat (2012-03-17 11:13:29)

i agree generally, but think you're very wrong when you say the problem isn't that journalists tend to want to believe certain things – many if not most journalists at reputable, influential press believe a certain narrative about the world and see their job as political, speaking truth to power, etc.

Dr. Tim Hadley (2012-03-17 11:57:44)

One of the mistaken assumptions here is that "New York Times columnist Nicholas Kristof" might shockingly get something wrong. Just because he works at the NYT, he knows something? Or anything?

Kirk (2012-03-17 13:07:06)

It is a continuing trend: Gleick and his fabricated Heartland memo, Breitbart and his out-of-context editing of Sherrod's speech, and now Daisey and his spin on Apple factories. These people created lies to tell what they consider to be the true underlying story; they were motivated to influence the world to make it better. Interestingly enough, the brilliant David Simon in his 'The Wire' series developed the character of a reporter, Scott Templeton, who also wrote articles based upon lies, but Scott had different motivations. Scott Templeton did not care to influence the world to make it better; he simply craved money and glory. Sometimes professional storytellers anticipate reality and yet just miss.

Tom (2012-03-17 14:59:36)

Nancy, agreed. Interestingly, the Public, the theater where Daisey is currently performing (the show closes Sunday) revealed yesterday that they also hadn't known that he was lying in his monologue about what he had witnessed, saying "...we wish he had been more precise with us and our audiences about what was and wasn't his personal experience in the piece." So even the playhouse was expecting a higher level of integrity. Seth: "So even the playhouse was expecting a higher level of integrity." That's a good way of putting it. There is such a thing as too much dramatic license. And Daisey's defense that his work is "theatre" does not please an actual theatre owner.

Jim (2012-03-17 18:38:42)

Wonderful post Seth! I think you are correct. A bias for the simple story is behind a lot of this. Life is complicated! That takes a lot of the "conspiracy type thinking out of the equation." I had as default model "journalists are dumb" but I have had some really sharp students as declared journalism majors so I was always troubled by my "simple story". p.s. Thanks so much for Shangri-La! The flax oil has raised my HDL, allowed me feel in control of my weight, and improved my gums. My dentist after a 2-3 year absence by me asked "who is taking care of my teeth." No one but the flax oil, brushing, and Seth! Thanks!

Kirk (2012-03-19 10:37:06)

I like this guy's analysis of of the Daisey lies. [www.insidehighered.com/blogs/education-oronte-churm/mike-daisey-liar-and-so-a-m-i-Advocates-like-Daisey, Mortenson, Frey, Breitbart, and Gleick make it difficult to understand the truth when looking at issues like the Keystone oil pipeline](http://www.insidehighered.com/blogs/education-oronte-churm/mike-daisey-liar-and-so-a-m-i-Advocates-like-Daisey-Mortenson-Frey-Breitbart-and-Gleick-make-it-difficult-to-understand-the-truth-when-looking-at-issues-like-the-Keystone-oil-pipeline). Each side spins a believable tale. But what source can we trust, when no news organizations pay for decent fact-checking any more?

Glen Raphael (2012-03-19 11:16:48)

I really like your Michael Jordan example and will probably use it elsewhere. Firsthand testimony is a powerful thing. Or imagine applying Daisey's technique to the US military. Take the worst examples of injured soldiers that you could find in the news anywhere in the country over a few-year period. Tell a story in which you personally met all of these people as individuals, in a context that suggests the injury rate must be many orders of magnitude higher than it is. Give those soldiers words and actions that fill out the needs of your story to make it especially poignant and close with a call-to-action to email some high mucky-muck to "do something". Come to think of it, I'd be surprised if this hasn't been done yet. Somebody call Michael Moore, I've got a pitch for him... :-)

Elisa (2012-03-19 17:16:48)

TAL's audience wants to a) feel good about liking This American Life and b) feel OK about using Apple products. Scapegoating Daisey kills two birds with one stone. But it seems to me the producers are just as much to blame as Daisey for this story being presented as "journalism." Tom, if you listen to the retraction show, Daisey quite evidently feels shame. Seth: "The producers are just as much to blame." I agree and have yet to see this point made even once in all the journalistic comment (e.g., James Fallows, The New Yorker). Apparently journalists prefer to blame non-journalists (Daisey) for bad journalism. It doesn't make complete sense but there it is.

## **Genomics Confidential: Iceland Not So Wonderful (2012-03-18 05:00)**

Many people think that personal genomics will change medicine. Doctors will choose treatments based on your genome, learning your genome will tell you what diseases you are at high risk of so you can take precautions, and so on. One person who believes this is Eric Topol. In his new book, [1]The Creative Destruction of Medicine, he writes:

The biggest leap came in the first decade of the twenty-first century. The six billion bases of the human genome were sequenced, and this led to the discovery of the underpinnings of over one hundred common diseases, including most cancers, heart disease, diabetes, autoimmune disorders, and neurologic conditions.

[2]Here is the founder of a company that makes sequencers: "I believe that the impact on the medical community of whole human genome sequencing at a cost comparable to a comprehensive blood test will be profound."

I disagree. I have seen nothing that suggests genes make a big difference in any common disease and plenty that suggests environment makes a big difference. My self-experimentation led me to one powerful environmental factor after another, for example. Biologists have invested heavily in the study of genes for reasons that have nothing to do with practical applications, as Thorstein Veblen would be the first to point out.

In 1999, New Yorker staff writer Michael Specter wrote [3]an admiring article about a neurology professor named Kari Stefansson. Stefansson had returned to his native Iceland to take advantage of Iceland's genetic homogeneity to find genes for common diseases. "In the past, drugs were discovered almost by chance," Specter wrote, as if this would soon change. The wishful thinking involved is indicated by passages like this:

[Stefansson] and Gulcher selected the five per cent of Icelanders among the hundreds of thousands in their genealogical database who had lived the longest— most of them over ninety. The database allowed the two scientists to seek an answer to a simple question: Are these people who live so long related to each other more often than the average in Iceland? The answer quickly became apparent. People over ninety are much more closely related to each other than people in the general population are, and their children are more likely to live longer than the children of others. That provides strong evidence that the trait is inherited.

"Strong" evidence? The "people over ninety" observation is strong evidence that longevity is inherited only if relatives share nothing but genes. The "their children are more likely" observation is strong evidence of genetic control only if parents pass on to their children only genes. Both assumptions are highly unlikely. For example, surely an Icelandic person lives closer to his relatives than to randomly selected Icelanders.

The article quotes no one with my view (geneticists are overstating the practical value of their work), but it does

say that "Stefansson set out to raise capital at a time [1996] when investors had become skeptical about the many unfulfilled promises made by companies claiming that genetic research would solve the ills of humanity."

Will reality overtake hype? Here is [4]an indication this is happening:

Kari [Stefansson], a neurologist, was a Harvard professor when he co-founded deCODE in 1996. Two years later, Iceland's parliament gave deCODE access to one of the country's unique resources—health records of the genetically homogenous population. DeCODE debuted on the NASDAQ stock exchange in 2000, and it made dramatic discoveries of genetic factors associated with cancer, heart disease and other conditions. But the company never turned a profit and filed for bankruptcy protection in 2009.

1. <http://creativedestructionofmedicine.com/?p=4>

2. <http://www.nytimes.com/2012/03/08/technology/cost-of-gene-sequencing-falls-raising-hopes-for-medical-advances.html?ref=science&pagewanted=all>

3. <http://www.michaelspecter.com/1999/01/decoding-iceland/>

4. <http://www.theglobeandmail.com/report-on-business/rob-magazine/icelands-hard-road-out-of-economic-collapse/article1848477/>

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Albert (2012-03-18 06:51:36)

Michael Rose found that he could breed longer living fruit flies by natural selection (<http://www.nytimes.com/2005/12/06/science/06conv.html?pagewanted=all>), so it is not that far-fetched to think there could be something in the genome to account for longevity. Seth: No doubt genes influence longevity. But how much – the size of the effect – is important. Is the genetic influence on longevity like pieces of gold laying on the sidewalk (high benefit/cost ratio) or like the gold found in seawater (low benefit/cost of extraction ratio)? In other words, how does studying genetic effects on longevity compare to studying other effects (e.g., nutritional effects) on longevity?

Alex Chernavsky (2012-03-18 07:08:02)

See also this: "[1]Personality Without Genes?"

1. <http://neuroskeptic.blogspot.com/2012/03/personality-without-genes.html>

mike (2012-03-18 09:17:53)

Parents increase their child's risk of coronary heart disease through their genes and not through the family's diet or lifestyle a study of more than 80,000 men and women who were adopted as children showed that susceptibility to the disease is transmitted in the womb and not in the home. They found that adoptees who had at least one biological parent with CHD had up to 60 per cent more chance of suffering the disease themselves, compared with a control group. In contrast, growing up in a home with adoptive parents who suffered from CHD resulted in no additional risk for the child, even if both parents had the disease. <http://www.telegraph.co.uk/health/healthnews/8725739/Heart-disease-risk-inherited-through-genes-not-behaviour.html>

JRM (2012-03-18 11:34:57)

Maybe it won't change medicine, but it is extremely interesting nonetheless. I just got my 23andme results back. One of the things they look at is warfarin sensitivity. I have a gene that reduces the efficiency of vitamin K recycling. Guess what? Liquid vitamin K2 drops is one of the few supplements where I notice the effects. Before, I always had chapped lips. Personal genomics has the potential to indicate which supplements would be most useful. What else? I apparently have some gene variants for increased intelligence. Over time, personal genomics will help break the taboo on differences in IQ. I am a carrier for cystic fibrosis. The gene affects transport of chloride ions. Personally, I am neurotic about salt intake. It has to be just right. If I eat fruit, I need to balance it with salt because the potassium in fruit throws off the electrolyte balance. CF sufferers produce

mucus in excess. So, I imagine that carriers still produce abnormal amounts of mucus. This would provide an explanation of why I suffered chronic ear infections as a child. Mucus would block the Eustachian tube creating a breeding ground for bacteria. Of course, it wasn't the sole cause. Mucus producing foods such as dairy would also be a cause. Since going paleo, it is not a problem anymore. What else? One of the reasons I got tested was to see if I had genes for hemochromatosis. I don't. So I can keep on eating my 1.5 pounds of meat a day. Seth: You sound like an extremely sophisticated consumer of genetics information. Yet even for you the only practical benefit seems to be what you say in the last three sentences: "One of the reasons I got tested was to see if I had genes for hemochromatosis. I don't. So I can keep on eating my 1.5 pounds of meat a day." I wonder why you think we know everything about "genes for hemochromatosis". How much variance do the hemochromatosis genes we know about explain? what if they explain only 10 % of the variance? If I were worried about too much iron in my blood I would simply have it measured. So even your one practical example doesn't make sense. I'm not saying the info isn't interesting...but the defenders of its practical value seem to have a hard time being convincing.

threepipeproblem (2012-03-18 18:37:18)

This guy has a bunch of anecdotes of the kind you said you haven't seen. [http://www.ted.com/talks/richard\\_resnick\\_welcome\\_to\\_the\\_genomic\\_revolution.html](http://www.ted.com/talks/richard_resnick_welcome_to_the_genomic_revolution.html)

Pauline (2012-03-19 03:44:10)

This is a nice article reminding us of the limitations of the scientific method. <http://everythingyouknow-iswrong.blogspot.co.uk/search?updated-max=2011-02-25T04:37:00-08:00&max-results=2&start=18&by-date=false>

Sadie (2012-03-20 08:49:18)

"I have seen nothing that suggests genes make a big difference in any common disease and plenty that suggests environment makes a big difference." You are dead right about this. The more we learn about epigenetics, the less our previous model of genetic determinism makes sense. We know beyond a doubt that gene expression can be turned off and on (it's an essential part of how we determine a gene's function in the first place). Any given gene's function is affected by other genes and by the cellular environment. What we learn from genetic studies in the future may help us understand the mechanisms of how gene expression can be modified by behavior, but it's missing the big picture- that behavior can change gene expression, and thus every bodily process! I'm interested in JRM's example: "I have a gene that reduces the efficiency of vitamin K recycling. Guess what? Liquid vitamin K2 drops is one of the few supplements where I notice the effects." Did you experiment with vitamin K2 drops before you received your genetic analysis, or after?

## **Vitamin D3 in Morning: Moving D3 & Fish Oil from Evening to Morning Improves Sleep (Story 22)** (2012-03-19 05:00)

A few weeks ago I got an email from a reader named Alexander Vinther:

I take Vitamin D3 (2000 units) in the morning (between 7 and 9 am) together with fish oil. My sleep is deeper and I don't wake up at odd times during the night. I tried increasing my intake 3-fold [= to 6000 IU] but felt too energetic/restless when going to bed (regardless of the time). I stopped taking Vitamin D3 (the regular dose) for a while to check my results only to start waking up in the night (or waking up early). Before this, my intake of D3 and fish oil was usually in the evening (everybody seems to recommend taking vitamins in the evening). The change from evening to morning was with both fish oil and D3 (I have always been taking them simultaneously) with huge improvement in sleep.

This is especially interesting because he made the evening-to-morning change long before I blogged about it. I asked for details.

Tell me about yourself.

Male, 24 years old. I live in Denmark and study philosophy. I exercise a lot (6 times a week, crossfit).

What were your sleep and energy like before you started taking D3 and fish oil in the morning?

My energy levels during the day would change a lot, sometimes with a huge surge in energy in the evening making falling asleep difficult. This would lead to few hours of sleep or a general feeling of not having slept at all (this in comparison to what I feel now, the feeling of "deep" sleep). [This is what happened when he was taking D3 and fish oil in the evening. -Seth]

Have you tried other D3 dosages?

I started out with 1400 units of Vitamin D3. I now take a multivitamin which has a small amount of D3, hence the 2000 units. I didn't notice a difference between 1400 and 2000 units, but 6000 made me giddy/restless for the first week, which is for as long as I tried that particular dosage. 4000 units seems to have the same effect as 2000 units, but it is a dosage I haven't taken for more than a week.

How long have you been taking Vitamin D3 in the morning?

I switched the time (from evening to morning) of my D3 intake about a year ago. Stumbling upon your blog confirmed my belief in or underlined the evidence for a difference in morning/evening intake.

How soon after you started D3 and fish oil in the morning (instead of the evening) did you notice better sleep?

I would say I see improvements in my sleep 3-4 days after D3 intake

What brands of Vitamin D3 and fish oil do you use?

My D3 brand is Danish: Naturdrogeriet D Mega. My fish oil brand is Biosym EPA-GLA+. I take 2 capsules containing a total of 1200 mg fish oil (DHA, EPA, GLA), 600 mg Borago oil and 700 mg soyalecithin.

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Åse (2012-03-19 05:58:35)

This is all so interesting. When I read about the vitamin D on your blog this fall, I went out and got me a bottle from the local supermarket (in Sweden). What caught my eye then was that I hoped it would help with my around 3 pm slump, which was so bad I basically could not work beyond it. OK, maybe I could, but it would be hard concentrating, and I would need a nap, and by that time I needed to go home anyway... I started taking 1 in the morning, with my cup of sugar water, and fish oil capsules that I use for the SLD (which has gotten me down from slightly overweight, to normal weight, and my waist is now roughly where I expect it to be). And, I do think it improved the afternoon slump rather quickly. But, nothing for the night. I never had sleeping problems earlier (except during pregnancy). It took 3 kids for me to become sleep-deprived. But, I have been having a hard time sleeping, and also of waking up multiple times. I upped the intake to 4 tablets - but that just hurt my stomach. I have eased back - between 2 and 3. And, there may be an improvement. Not back to where I used to be, but fewer waking up in the night. But, not as noticeable as the lesser afternoon slump (or finding my waist).



Boris (2012-03-19 15:31:53)

I 38 tried 2000 D3 and 4000 for 2 months with my regular multivitamins and did not notice anything different. Seth: Thanks for reporting your experience.

BlueMorrissey (2012-03-19 15:36:23)

I began taking mega doses of Barleans fish oil in the morning a few weeks after increasing the D3 to 5000. I've never fell asleep so fast and deep as I have now. I'm 38, bipolar and am off ambien and benedryl just recently. I do take a small amount of melatonin. The only problem is I sleep at least 9 hours a night and am quite slow in the mornings. It'd take this anyday over the chronic insomnia. Thanks for the article Seth and the sharing Ase. Seth: Thanks for reporting your experience. Your immune system is probably working much better now than when you had chronic insomnia.

Jared D (2012-04-05 11:11:56)

First and foremost; Seth, I thank you for sharing. May of last year til August of last year, I was on 4000IU D3 and 1000mg/q12hr. I was ok but still sluggish and work at night and sometimes with an OT. Since I am diabetic II and loosing weight it isn't working on my favor. October of last year, I was tweaking with OTC med for a month. I increased my D3 to 10,000 (q12hrs) and Lovaza 2gm(q12hrs) and Multivitamins with D 400IU as well as cooking mushrooms as meat substitute. this one works for me quite well my energy is back 200 %. Being said, I have lost almost 20lbs in two months. Addendum: My Dr is well aware of my OTC and Rx meds.

### **"Seth, How Do You Track and Analyze Your Data?" (2012-03-20 05:00)**

A reader asks:

I haven't found much on your blog commenting on tools you use to track your data. Any recommendations? Have you tried smart phones? For example, I have tried tracking fifteen variables daily via the iPhone app Moodtracker, the only one I found that can track and graph multiple variables and also give you automated reminders to submit data. There are other variants (Data Logger, Daytum) that will graph one variable (say, miles run per day), but Moodtracker is the only app I've found that lets you analyze multiple variables.

I use R on a laptop to track and analyze my data. I write functions for doing this – they are not built-in. This particular reader hadn't heard of R. It is free and the most popular software among statisticians. It has lots of built-in functions (although not for data collection – apparently statisticians rarely collect data) and provides lots of control over the graphs you make, which is very important. R also has several programs for fitting loess curves to your data. Loess is a kind of curve-fitting. There is a vast amount of R-related material, including introductory stuff, [1]here.

To give an example, after I weigh myself each morning (I have three scales), I enter the three weights into R, which stores them and makes a graph. That's on the simple side. At the other extreme are the various mental tests I've written (e.g., arithmetic) to measure how well my brain is working. The programs for doing the test are in R, the data is stored in R, and analyzed with R.

The analysis possibilities (e.g., the graphs you can make, your control over those graphs) I've seen on smart phone apps are hopelessly primitive for what I want to do. The people who write the analysis software seem to know almost nothing about data analysis. For example, I use a website called [2]RankTracer to track the Amazon ranking of The Shangri-La Diet. Whoever wrote the software is so clueless the rank versus time graphs don't even show log ranks.

I don't know what the future holds. In academic psychology, there is near-total reliance on statistical packages (e.g.,

SPSS) that are so limited perhaps they can extract only half of the information in the usual data. There are many graphs you'd like to make that it is impossible to make. SPSS may not even have loess, for example. Yet I see no sign of this changing. Will personal scientists want to learn more from their data than psychology professors (and therefore be motivated to go beyond pre-packaged analyses)? I don't know.

1. <http://www.r-bloggers.com/>
2. <https://www.ranktracer.com/>

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Darrin Thompson (2012-03-20 05:57:27)

One thing that might help would be if someone could identify a book or resource that would educate work-a-day computer programmers on data analysis. I think we're special and deserving of a special book just for us. We are capable of implementing analysis if it's described to us, but woefully incapable of applying it to real data. It's a painful blind spot for me. For instance, I find this very interesting: <http://blog.linkibol.com/2010/05/07/how-to-build-a-popularity-algorithm-you-can-be-proud-of/> But the best I could do would be to pick one and implement. I don't get much insight from reading it. Painful to admit...

Joe Harris (2012-03-20 13:29:39)

Just wondered if you're familiar with KXEN and whether they're making inroads into academic circles. Also have you tried Tableau for going over the data visually? It's my personal favourite.

Brian Toomey (2012-03-20 13:53:58)

Hi Seth, I am learning R now, and finding that having a Google form synced to my iphone, which I can then read into R is a flexible way to collect data. What tools or publications would you recommend for learning more about data analysis and visualization. I've been reading the R blogs. In my psych education I received the SPSS approach you critique. Thanks, Brian  
Seth: Exploratory Data Analysis by John Tukey is pretty good. It is a strange subject, data analysis: Those who do it all the time (practicing scientists) don't write about it – they don't write statistics books or even articles – and those who write about it (the authors of statistics books) appear to do not much of it. For a long time statistics textbooks used made-up examples, presumably because their authors had so little contact with actual examples. Psychology professors don't seem to entirely realize their advantage (considerable experience with actual data) because when they write about statistics they often imitate statistics professors – e.g., most intro stats texts written by psych professors imitate intro stats texts written by stats professors.

Nancy Lebovitz (2012-03-21 04:15:39)

Off-topic: [1]They're only testing drugs they think they can understand, and that's part of why we aren't getting miracle drugs.

1. <http://wavefunction.fieldofscience.com/2012/03/unstoppable-moore-hits-immovable-eroom.html>

Paleophil (2012-03-24 08:39:19)

It would be nice if there was an effective simple way to track and analyze our brain function data for those of us who aren't computer programmers. Has anyone come up with good simple methods other than Moodtracker?

### Assorted Links (2012-03-21 05:00)

- [1]The high value of free food. "About 1 in 4 doctors take cash directly from drug companies or medical device makers and 2 out of 3 take free food . . . Those who [do so] are more willing to prescribe drugs in unapproved or potentially risky ways."

- [2]Beware the North Carolina Board of Dieticians.
- [3]Tonsils make T-cells. One more reason cutting off part of your immune system (your tonsils) is a terrible idea.
- [4]Long-term Shangri-La Diet success. "I've been doing the [5]Shangri-La "Diet" for over 5 years now (see [6]here, [7]here, and [8]here). My weight went down right away, and it's stayed down."

Thanks to Anne Weiss.

1. [http://www.bankrate.com/financing/insurance/ending-the-doctor-gravy-train/?ec\\_id=m1078094](http://www.bankrate.com/financing/insurance/ending-the-doctor-gravy-train/?ec_id=m1078094)
2. <http://www.diabetes-warrior.net/2012/01/28/this-site-free-speech-are-being-investigated/>
3. <http://www.sciencedaily.com/releases/2012/03/120305173657.htm#.T1d77lshP7Q.email>
4. <http://voluntaryxchange.typepad.com/voluntaryxchange/2012/03/shangri-la-diet.html>
5. <http://sethroberts.net/about/index.html>
6. [http://voluntaryxchange.typepad.com/voluntaryxchange/2007/04/the\\_shangrila\\_d.html](http://voluntaryxchange.typepad.com/voluntaryxchange/2007/04/the_shangrila_d.html)
7. <http://voluntaryxchange.typepad.com/voluntaryxchange/2008/04/shangri-la-diet.html>
8. <http://voluntaryxchange.typepad.com/voluntaryxchange/2007/12/thank-you-shang.html>

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MikeW (2012-03-21 10:00:57)

Off-topic, but that "long-term SLD success" link points to one of the ugliest websites I have ever seen. I can't imagine a worse combination of text/background color and font style. Makes my eyes hurt. That blogger could use web design tips from you in addition to the dietary advice.

Ethan Fosse (2012-03-21 22:17:33)

Excellent post. Most medical doctors know very little about nutrition (or more generally how to interpret the statistical models and graphs commonly used in epidemiological studies), so even those who aren't lured into giving questionable advice by private companies are still usually not reliable sources of information on these nutrition and diet.

Bryan (2012-03-22 17:14:26)

I posted the "doctor gravy train" story on Facebook and two people commented. Both said the story is overblown: one said the dinners are little more than "cold cuts and a boring lecture," the other said they were nothing but "cold noodles and pens." Neither seemed to address the fact that those who went to these lectures were more likely to prescribe the drugs in dangerous or risky ways. Also, incidentally, both are attorneys whose significant other is a doctor: one is married to an ER doc, the other is engaged to a psychiatrist. Seth: Interesting. Yeah, what about the main finding?

## Gary Shteyngart is a Very Funny Guy (2012-03-22 05:00)

I heard Gary Shteyngart (latest book [1]Super Sad True Love Story) at the Beijing Bookworm. No better job of authorial self-promotion have I seen. He was born in Leningrad in 1972, he grew up hearing jokes from his parents. For example: The 1980 Summer Olympics were in Moscow. At the time, Brezhnev was in charge. He was going senile. At an Olympic ceremony, he gave a speech. His hands shook holding the text of his talk.

"Ohhhhhh....." he read.

He paused.

"Ohhhhh....."

He paused.

"Ohhhhh....."

An apparatchik ran up to him. "Senior Comrade Brezhnev, those are the Olympic Rings!"

The moderator asked Shteyngart what he thought of Putin's plan to require every Russian teenager to read a specified 100 great books by graduation. "These things never work," said Shteyngart. "American cities have done this. Everyone's supposed to read a certain book, usually *To Kill a Mockingbird*. Never tell someone what to read." However, he said one of his favorite authors is Karen Russell. (For a New Yorker podcast, he read a story by Andrea Lee.)

I asked about his favorite TV shows. He mentioned *The Sopranos*, *The Wire*, and *Breaking Bad*. "Who would have guessed that TV would become a great art form?" He is writing a show for HBO about Brooklyn immigrants.

I learned that he was [2]interviewed by a magazine called [3]Modern Drunkard. The interviewer – not Shteyngart – mentions an Russian saying: "The church is near, but the road is icy. The bar is far away, but I will walk carefully." How true.

1. <http://supersadtruelovestory.com/>
2. [http://www.drunkard.com/issues/06\\_06/06\\_06\\_gary\\_shteyngart.html](http://www.drunkard.com/issues/06_06/06_06_gary_shteyngart.html)
3. <http://www.drunkard.com/>

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Tracy (2012-04-27 21:45:27)  
I like bookworm too!!

### **Flavour, a New Scientific Journal (2012-03-22 12:01)**

A new online open-access journal called Flavour has just started publication. The first issue has [1]three articles and an editorial.

The journal

encourages contributions not only from the academic community but also from the growing number

of chefs and other food professionals who are introducing science into their kitchens. . . . often in collaboration with academic research groups.

The first set of articles has an example of a collaboration between chefs and professional scientists – [2]how to get a strong umami flavor from Nordic seaweed. Then you add the flavor to ice cream. Which reminds me of dessert at a friend's house where he poured expensive balsamic vinegar on vanilla ice cream.

Thanks to [3]Melissa McEwen.

1. <http://www.flavourjournal.com/content>
2. <http://www.flavourjournal.com/content/1/1/4#sec5>
3. <http://huntgatherlove.com/>

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David (2012-03-22 12:04:20)

Off topic: Seth, in a video of a lecture you gave, you were wearing orange goggles, presumably because it was after sunset. Do you have a source for those goggles? Seth: I got mine from Amazon. They cost about \$7.

Andrey Shestakov (2012-03-23 02:19:21)

David, following Seth's advice I decided to buy myself similar goggles, but was unable to find anything like this within my reach. So I decided to order custom glasses from an optician's shop (my eyesight is good, so lenses are not corrective). I chose the biggest frame I could find, but it was small nevertheless. After getting my glasses I found out that my eyes hurt when I wear them! I contacted the optician's and they told me that never did they hear about someone's eyes hurting when wearing non-corrective lenses. I don't know yet what causes this. Probably the frame is too small. I just wanted to warn you that it's sensible to try the lens for 5-10 minutes before buying.

### **Another Unintentionally Revealing Response From the American Medical Association (2012-03-23 05:00)**

A few weeks ago [1]I blogged about the lame response of the American Medical Association to HealthTap, a website that solicits doctors' answers to medical questions. Their criticism was so weak it amounted to praise.

More recently, the AMA was asked about its position on doctor rating websites. [2]Here's what happened:

Robert Mills, a spokesman, sent me a statement that he said was from the A.M.A.'s president, Dr. Peter W. Carmel, that read, in part, "Anonymous online opinions of physicians should be taken with grain of salt and should not be a patient's sole source of information when looking for a new physician." This, however, is almost exactly the same statement [3]it provided to its own publication, American Medical News, in 2008, when it was attributed to Dr. Nancy H. Nielsen, the president-elect of the A.M.A. at the time.

Such plagiarism is more consistent with what Jane Jacobs in *Systems of Survival* called guardian values (where honesty is unimportant) than commercial values (where honesty is very important). When you grasp that doctors follow guardian values rather than commercial ones their behavior becomes far more predictable – and plainly in need of

control by outsiders. That doctors are allowed to charge for their services resembles allowing policemen to write as many parking tickets as they like and pocket the fines.

Thanks to Bryan Castañeda.

1. <http://blog.sethroberts.net/2012/02/24/lame-response-of-the-ama-to-healthtap/>
2. <http://www.nytimes.com/2012/03/10/your-money/why-the-web-lacks-authoritative-reviews-of-doctors.html>
3. <http://www.ama-assn.org/amednews/2008/06/23/bil10623.htm>

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Glen Raphael (2012-03-23 06:11:37)

I do not understand why people keep trying to apply the concept of "plagiarism" to domains in which it's not relevant. There is nothing wrong with saying something that other people have said before. It is quite common that a company (say, Apple) or some other organization (say, the AMA) has its PR people come up with a set of "talking points" to answer particular kinds of questions. After that has been done, no matter who you ask, you're likely to get something resembling that answer. So the AMA president either did say this line himself (and it wasn't original) or was willing to have it said on his behalf in his name. Nobody ever claimed this statement was "original research" so there's no dishonesty here. The correct term for this sort of reuse is not "plagiarism", it's "consistency". An earlier place I noticed this odd trend was in connection with the Wegman Report - when Congress asks somebody for a summary of technical information it seems to me like a downright \*bad idea\* for it to be all original research - copying from whatever the best sources available are and saying "I stand by this" is the best way to efficiently get good information into the record. Originality is nice and all, but it doesn't trump accuracy. If you ask a question and get an answer, the important issue is whether the answer is \*accurate\*, not whether it is \*original\*. Indeed, the more "original" the answer is, the less likely it is to be accurate.

Tuck (2012-03-23 07:01:04)

"That doctors are allowed to charge for their services resembles allowing policemen to write as many parking tickets as they like and pocket the fines." LOL. I wouldn't have a problem with policemen like that if I was allowed to fire them and hire their replacement. I think a big part of the problem with the medical industry is that it's been distorted by a government-mandated payment scheme that makes absolutely no sense (insurance through the employer). Many folks have noted that the medical industry works much better in those realms, like plastic surgery and laser eye treatment, which are outside the government scheme, i.e. are forced to operate more like an auto-repair business. +1 to Glen's comment, also.

Jim (2012-03-23 10:42:06)

I agree with Glen as well. "Plagiarism" does not apply to that (repeated?) statement. Also, the statement regarding online ratings seems pretty fair. He just says they shouldn't be a patient's sole source of information when selecting a doctor. Sounds fair to me. As for the grain of salt, I agree as well. I'm sure if we look at the online reviews for the SLD book, there will be quite a few, ahem, "outliers." Seth: I would like to think the president of the AMA is not brain-dead. He could have said "This has come up before. Our position is...". As for the actual content of the statement (e.g., shouldn't be sole source of info), it reminds me of scientists who say "I think we should be cautious when interpreting this result." Oh really?

Nancy Lebovitz (2012-03-23 16:08:09)

The quoted statement is so cliched that I really can't worry about plagiarism.

Tom (2012-03-23 22:02:51)

*I think a big part of the problem with the medical industry is that it's been distorted by a government-mandated payment scheme that makes absolutely no sense (insurance through the employer)* I don't get where all weirdo libertarians spouting

these bizarre falsehoods are coming from. Insurance through the employer is not and never was "government-mandated". It was something employers came up with after WWII to attract workers in short supply. They kept it up because it reduced worker mobility, keeping an artificial ceiling on wages. The group-buying power of large employers vis-a-vis insurers enabled them to buy insurance far cheaper than an individual could, making changing jobs extremely risky and expensive. Further, despite the vastly higher health premiums paid by individuals, the coverage in reality is practically non-existent for major health problems. My late father was a heart surgeon. He was always reimbursed immediately with no problems by a given insurance company when the worker was employed by a large employer (say, General Motors.) When the *same insurance company* insured an individual who needed the *same operation*, it was pulling teeth to get the insurer to honor the policy. Blue Cross simply didn't dare fuck with General Motors. But individuals were dead meat. And this was thirty years ago. Forgive me if I doubt that insurers are more ethical now. Sorry if that doesn't jibe with your fantasy of how magnificently corporations always behave, vis-a-vis the moustache-twirling government.

### **The Hunger Games (2012-03-23 20:52)**

I recently read The Hunger Games and liked it a lot. I finished it in a few hours – couldn't stop reading. In contrast, I read a few pages of the first Harry Potter and stopped. When I was ten years old, I read The Hobbit, The Fellowship of the Ring (the first book of The Lord of the Rings trilogy), and stopped halfway through the second book. I never went back and have not seen the movies. I have never read a book by Stephen King, John Grisham, Robert Patterson, Anne Rice, Stephanie Meyer, and so on. None of them appealed to me. The Hunger Games is different than other books that have sold huge numbers of copies. When it came out, Stephen King reviewed it in Entertainment Weekly [1]and gave it a B. The second book in the trilogy, [2]reviewed by someone else, got a C.

Sentence by sentence, even scene by scene, The Hunger Games is mediocre. It is not quotable. There is no vivid writing. The characters are barely interesting. It is not Jonathan Franzen, much less Vladimir Nabokov. But it does a wonderful job of supplying the four basic elements of a good story: a hero, a villain, making you care about the hero, and putting the hero in jeopardy.

Beneath the surface, also, is something I rarely find in novels: the author feels strongly about her subject matter. Collins, the author of The Hunger Games, has said she is writing for teenagers about war. Her father, who was in the Army, cared deeply about this and taught his children about it. "A family trip to a castle, which [the 13-year-old Collins] imagined would be "fairy-tale magical," turned into a lesson on fortresses [given by her father]," says [3]an article about Collins. Did Vladimir Nabokov know this much about child molesters (Lolita)? No, it was a literary device. Did Tolstoy or Flaubert have the events of Anna Karenina or Madame Bovary drilled into them in childhood? Unlikely. Both novels are built on basic novelistic subjects (actually, the same subject – infidelity). Somehow Collins's deep connection comes through. I have no idea if you can write a good book simply because you love something. But you can definitely write a good book if you hate something: The Devil Wears Prada.

1. [http://www.ew.com/ew/article/0,,20419951\\_20223443,00.html](http://www.ew.com/ew/article/0,,20419951_20223443,00.html)

2. [http://www.ew.com/ew/article/0,,20419951\\_20300507,00.html](http://www.ew.com/ew/article/0,,20419951_20300507,00.html)

3. <http://www.nytimes.com/2011/04/10/magazine/mag-10collins-t.html?pagewanted=all>

FredR (2012-03-23 21:13:04)

"Was Tolstoy or Flaubert personally affected by the events of Anna Karenina or Madame Bovary?" Seeing as a lot of Anna Karenina is autobiographical, this seems like a pretty weird question. Seth: Maybe I'm wrong. Maybe "personally affected" is the wrong way to put it (and I will change it). Sure, many pieces of Anna Karenina are autobiographical – details of the marriage proposal, for example. But I never got the sense that the overall theme of the book was something Tolstoy had studied. On the other hand, The Death of Ivan Ilych seemed incredibly heartfelt.

gesher (2012-03-23 21:31:38)

The Hobbit is not the first book in the Lord of the Rings trilogy. It's not part of the trilogy at all.

Ryan Holiday (2012-03-23 21:43:39)

Just finishing the 3rd book now, I started the series 4 days ago. Honestly, they could do a lot worse than teaching this book in middle or high school English classes.

Bryan (2012-03-23 22:20:21)

Flaubert famously said "Madame Bovary c'est moi." so he may have been more personally invested than you think.

Yogesh (2012-03-24 00:35:58)

"When I was ten years old, I read The Hobbit, the first book of Lord of the Rings trilogy, and stopped halfway through the second book." Did you mean you read \*The Fellowship of the Ring\*, which is the first book in the LOTR trilogy? \*The Hobbit\* is the prequel to the trilogy. Seth: I read two and a half books: The Hobbit (the prequel), Book 1 of the trilogy, and half of Book 2 of the trilogy.

w (2012-03-24 07:45:27)

Surprised by your surprise that authors feel strongly about their subject matter. I read the first two and found them a bizarre combination of bland prose, predictable plotting, and high entertainment. They were also the most morally irresponsible books I'd ever read. Same league, perhaps, as the Bible, Celine, etc, but the target audience is young adult. Take one case: none of the "good" main children are ever placed in a situation where they have to kill, except in self-defense. Highly convenient that all of the other good/innocent children are murdered by the "bad" ones, who thereby become worse in our eyes and can thereafter be acceptably dispatched by a protagonist. Zero meaningful psychological reflection by the about this situation. Seth: Yes, The Hunger Games is mediocre in so many ways – zero interesting psychology is one of them, as you say.

Eugene Woodbury (2012-03-24 08:07:07)

I'm reminded of this by Philip Pullman: "We need stories so much that we're even willing to read bad books to get them, if the good books won't supply them." Seth: Yeah, good point. Week after week I am puzzled that the short stories in The New Yorker ("good books") are not more fun to read.

Allen K. (2012-03-24 08:11:21)

I haven't read the Hunger Games yet, but if you want a writer who unquestionably supplies the four ingredients you listed, plus can actually write, try Lois McMaster Bujold (multiple Hugo and Nebula winner). All her back catalogue is on-line, e.g. [http://baencd.thefifthimperium.com/24-Cr yoburnCD/CryoburnCD/Novels/Cordelia's %20Honor/index.htm](http://baencd.thefifthimperium.com/24-Cr%20yoburnCD/CryoburnCD/Novels/Cordelia's%20Honor/index.htm)

T.D. (2012-03-24 11:11:04)

First off, there is no way for you to know whether the authors mentioned above cared less for their stories than Collins. There is no way for you to equate Collins' upbringing with the way her story is told. You just used what you read about her extraneously to make judgments about the text, and any text should always work alone if put under scrutiny. I would put forth that the main reason why I, and most everybody else, found the Hunger Games enjoyable, apart from the premise, is that every chapter ends with RAISING THE STAKES. Collins does this masterfully. But this is a function of structure, of weaving a narrative, and nothing to do with the premise of warfare itself. It's the process of reading it that appeals. When I devoured the



trilogy in two days, I had to step back and determine whether I had read a great series or if my senses had been manipulated by perfect execution of narrative. Was there something really there? I am doing the same after watching the film, although I'd recommend you hold out for as much as possible after finishing the trilogy before you watch it. Seth: "As much as possible"? You mean as long as possible? Why? I don't remember this "raising the stakes". Given that the narrator faced death, the stakes were high early. I don't remember them going higher. Maybe the appropriate comparison of Collins is not with high literature (e.g., Flaubert) but with Ann Rule (true crime). Rule is a terrific writer and several of her books I could not stop reading. Her best book is *The Stranger Beside Me* – and that is the book of hers where she had the most personal involvement. I still believe that Collins's personal involvement with warfare (through her dad) has a lot to do with why I enjoyed *The Hunger Games*.

Aaron Blaisdell (2012-03-26 11:07:30)

I think Tolkien knew quite a bit on a deep personal level of the subject matter of his books. He was a WWI veteran and witnessed first hand a lot of trench warfare, and subsequently became a philologist with an expertise in Anglo and Norse language, history, and mythology. I found his books gripping and addictive and have read his trilogy about 6-8 times all the way through since my teenage years. I also plowed through the Harry Potter books. Couldn't put them down. I'm rereading them out loud to my daughters who love them, too. I also raced through the *Sword of Truth* series by Terry Goodkind. Another series I reread every few years is Asimov's *Foundation* novels. The original trilogy is fantastic pulp fiction.

Kayode (2012-03-29 08:31:09)

I think there's a lull in the middle of the "2 towers" (*Lord of the rings* book 2) because I stopped there too and never went back. As for the HP books, you could give them another chance. The first two are slow but Rowling starts to hit her stride at book 3. That's where all the grand themes of the series start to show up. Well, that's where I started noticing at least.

## **Sleep and Mood Strongly Linked (2012-03-24 05:00)**

I recently came across [1]a 2005 survey, done in Texas, that found people with poor sleep were far more likely to be depressed or anxious than people with better sleep. Huge risk ratios:

People with insomnia . . . were 9.82 and 17.35 times as likely to have clinically significant depression and anxiety [than persons without insomnia.]

Other studies have found similar results. For example, [2]a 1979 survey interviewed the same people twice, one year apart. People who had insomnia both times were 40 times more likely to be newly diagnosed with major depression during the intervening year than those who did not have insomnia at either time.

A simple thing to say about the sleep/mood correlation is that it supports [3]my theory of depression, which says depression is often due to malfunction of two circadian oscillators (one controlled by light, the other by faces). If they are working properly (in sync, with large amplitude) you sleep well and are in a good mood when you are awake. If they are not working properly (e.g., not in sync) then you do not sleep well and are in a bad mood at least part of the time while you are awake. What is called depression (e.g., not wanting to do anything) is actually a good thing in the middle of the night. Not wanting to do anything – being still – is necessary to fall asleep.

A sad and more complicated thing about this correlation is that it is ignored. It is not explained by any theory of depression popular among psychotherapists, such as cognitive-behavioral therapy, not to mention a dozen other explanations of depression (psychoanalytic, etc.) that psychotherapists favor. Nor is it explained by any pharmacological theory of depression. In other words, if you seek treatment for depression within our healthcare system the treatment you will receive will derive from a theory that cannot explain this result. Yet the correlation is so strong it must be telling us something important.

You can read endlessly about the high cost of health care. What if the high cost is not the core problem? What if it is only a symptom of something less obvious? What if health care costs a lot because we have a poor understanding of health and disease (as the failure of popular theories of depression to explain the sleep/mood correlation suggests)? What if we have a poor understanding of health and disease because health research is too concerned with allowing healthcare providers to make money?

1. <http://www.ncbi.nlm.nih.gov/pubmed/16335332>
2. <http://www.ncbi.nlm.nih.gov/pubmed/2769898>
3. <http://escholarship.org/uc/item/2xc2h866>

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JPB (2012-03-24 07:27:04)  
Your final paragraph says it all!

Tim Beneke (2012-03-24 09:09:29)

To repeat what I've said before. I suffered a lot of clinical and sub-clinical depression that was unsuccessfully treated by the medical/psychological establishment for many years. When I stopped being a night person, I got a lot of relief and began to turn it around! None of the 3 psychiatrists or 3 clinical psychologists, all of whom knew I was going to bed at 3:30 in the morning, advised me to go to bed earlier. Seth told me that my biggest problem (I was also obese at the time but that is another story) was going to bed at 3:30 in the morning. I said that I got my best writing done starting around midnight when I really came alive. He said that no one should be coming alive at midnight. Boy was he right! Seth: Thanks, Tim.

Brian Toomey (2012-03-24 13:17:57)

Hi Seth, Interesting post. I suspect you are also familiar with the research that sleep deprivation is a potent anti-depressant: <http://opinionator.blogs.nytimes.com/2010/04/07/in-sleepless-nights-a-hope-for-treating-depression/> With your theory we would say that the extra wakefulness puts the two oscillators into sync, but they fall out soon after if the problem remains (blue light, stress based elevation of cortisol, whatever). Some questions though: There are plenty of other things that seem important for depression like mercury levels (<http://www.ncbi.nlm.nih.gov/pubmed/16891999>) or trauma. How do you theorize these with respect to your theory. Seth: Yes, depression has other causes. I am saying that people need to see faces in the morning (plus other things to make them effective) for their mood oscillator to function properly. Without this, they don't necessarily become depressed—they are more vulnerable to a hundred things that can push them over the edge into depression. Like the way HIV destroys the immune system. Roughly everyone is lacking what I say is necessary (morning faces). In contrast, only a small fraction of the population is poisoned by mercury. Imagine an entire population with a grossly malfunctioning immune system. That's what I'm proposing, substituting mood-regulation system for immune system. With a non-functioning mood-regulation system – which is what I think almost everyone has – all sorts of things will go wrong and will be considered the "causes" of depression and other mental and behavior problems. For example, I think a large fraction of addictions are due to bad mood regulation. What other factors do you think are important? How do you theorize interaction and causation across the levels? Perhaps, as UK researcher Richard Bentall claims with respect to psychosis, looking for the cause of depression is like looking for the cause of coughing. There are many, but some major players. Also, I wonder how important you think \*seeing\* faces is as opposed to other methods of interaction (touch, smell, talking). Perhaps people are differentially dominant across sensory modalities, with you and the people who seem helped being visually focused? Anecdotally, my girlfriend seems much more touch focused as a mood moderator. Seth: I would be surprised if something that seems so important – mood synchrony via faces – is absent in a large fraction of people. The effect of morning faces on mood is profoundly different than the mood alteration you are familiar with – e.g., "I feel better after a drink" and so on. thanks, Brian

Dr Cory Annis (2012-03-24 14:31:31)

Sleep is second only to oxygen in terms of essential "nutrients". We can go longer without water and food than we can without sleep. The "energy" that the brain regenerates during sleep has to be made up somewhere but all our substitutes pale in comparison. People who don't sleep well consume more calories, more caffeine, more alcohol, more tobacco, and more drugs, legal and otherwise. What might happen to our collective health and it's monumental current costs if, instead of protracted political battles and expensive regulation, the government simply shut off the electricity at sundown. Seth: An idea that is more practical than you might realize. In Chinese college dorms, the electricity goes off at midnight. This would be a reasonable experiment in an American college: randomize dorms so that some have their electricity turned off at midnight and others don't. Compare the health and grades of the students in the two sets of dorms.

shtove (2012-03-24 18:24:16)

Final paragraph is powerful. Very pleased I found this blog.

April (2012-03-24 18:34:16)

I have observed this pattern in myself. I didn't realize what the underlying mechanisms were. When I switched to "being a morning person" (actually, I got a dog...who insisted on getting up reasonably early every morning) - my insomnia mostly disappeared, and my depression diminished considerably. I suppose I get exposure to "morning faces" too, in the form of my pals in the park, whom I see most morning when we walk our dogs.

April (2012-03-24 18:36:59)

It is a real pity this mechanism is not more widely known though. I have suggested to other people with insomnia/depression to try going to bed earlier, and I am unable to convince them to try it. Seth: I think it's hard to force oneself to go to bed earlier - by sheer force of will. But it isn't hard to get more sunlight in the morning and more exposure to faces in the morning, both of which will make you tired earlier.

TMS71 (2012-03-24 20:35:03)

I think you nailed it. My biggest beef with the state of understanding of mental health issues is that their explanations for different disorders don't even seem to be slightly influenced by evolutionary theory. Emotions aren't even put into their proper functional context (from an evolutionary standpoint) before theorists try to understand what has gone wrong with them. I like the circadian theory. How would you suggest bringing these 2 circadian rhythms back into synchronicity? Seth: get sunlight and faces in the morning, avoid sunlight (and fluorescent lights) and faces late at night. That's the basic solution.

Ken Snyder (2012-03-25 06:06:30)

Seth, enjoyed reading your post and your "faces" oscillator has me intrigued; I've added your depression paper to my reading list.

Alex Chernavsky (2012-03-25 10:04:38)

April - perhaps the companionship of the dog was the reason your depression diminished considerably. "[1]Could A Dog Benefit Your Mental Health?"

1. <http://psychcentral.com/blog/archives/2009/03/04/could-a-dog-benefit-your-mental-health/>

TMS71 (2012-03-25 20:01:04)

Why do you rule out the straightforward explanation for the correlation, that anxiety and depression make it difficult to fall asleep? Seth: Here are four reasons that your proposed explanation does not strike me as likely: 1. In the 1979 study, the insomnia preceded the diagnosis of depression. 2. It isn't interesting to explain a correlation between A and B by saying, without data, A causes B. That's too easy. 3. Why should depression make it hard to fall asleep? 4. The insomnia involved is not restricted to difficulty falling asleep.

Rob (2012-04-14 10:44:19)

Seth, Do you think there is any connection between Anxiety, eye-contact avoidance, and mood oscillators? Disliking eye contact is a common occurrence in people with social anxiety and autism. (Though avoiding eye contact also has cultural differences) Do you have any thoughts on the implications of night time socializing on couples? Since it seems that direct face viewing is important, perhaps most socializing doesn't necessarily fulfill the face viewing requirement. One last thought.. Has anyone tested the difference between real faces and television / mirrors. I seem to recall from infants that eye contact entrains the right hemisphere

Rob (2012-04-14 11:11:06)

I'm reading through Self-experimentation as a source of new ideas: Ten examples about sleep, mood, health, and weight and had a bit of an insight. In western society to take a break from standing....we sit. However... more often than not if a chair isn't available here in Thailand.. I see people squatting. As squatting doesn't displace weight onto an object, do you suspect it would be a reasonable alternative to walking or standing? Seth: No, I don't think squatting substitutes for standing or walking. I think the crucial feature of standing and walking is that they stress the muscles. Break muscle fibers. The more breakage, the more time necessary for recovery. Squatting doesn't break muscle fibers, I suspect.

### Assorted Links (2012-03-25 05:00)

- [1]White rice associated with Type 2 diabetes.
- [2]Whistleblower says drug company failed to report bad side effects. "She also claims that the company failed to report 28 of 100 cases of bladder cancers to the FDA, which she called a "serious discrepancy," and that Takeda told her to change her notation that the cancers were "related" to "unrelated." The suit says that she was fired after she complained to her supervisors about the company's failure to report all serious adverse events."
- [3]Natto speed eating contest. Why do some foods (hot dogs, natto) get a speed-eating contest, but not others?
- [4]Drinking olive oil with your nose held shut (short video).
- [5]Is self-experimentation  $n=1$ ? or is that misleading?

1. <http://www.bmj.com/content/344/bmj.e1454?etoc=>

2. <http://www.bmj.com/content/344/bmj.e2002?etoc=>

3. <http://www.japantimes.co.jp/text/nn20120321f3.html>

4. <http://how-can-i-lose-weight.org/shangri-la-diet-4/>

5. <http://healthcorrelator.blogspot.com/2011/09/calling-self-experimentation-n1-is.html>

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js (2012-03-25 15:39:51)

Yeah I was surprised about how you didn't repudiate the " $n=1$ " rhetoric before. It's simply wrong. The number of observations is not equal to the number of people with self-experimentation, since it's not cross-sectional data. Self-experimentation means a possibly large and growing " $n$ ", all on the most relevant subject - yourself. Seth: It's a subtle thing. Experiments with one subject are called " $n = 1$ ". Yet experiments done in only one lab are not called " $n = 1$ ". Is " $n = 1$ " derogatory? Or does it just serve to identify a certain kind of experiment? Not obvious.

## Assorted Links (2012-03-26 05:00)

- [1]more health, less profit?
- [2]Long interesting review of Michael Mann's new book. "The controversy is actually very simple. Mann's papers give undue focus to a small amount of data."
- [3]excellent article in The Smithsonian about fermentation. "We're trying to see if there's a way to get more of that [4]umami richness and less fishiness."
- [5]Flaxseed in Human Nutrition (1995 book).
- [6]Spy magazine highlights.

Thanks to Tom George and Mark Griffith.

1. <http://thisisindexed.com/2012/03/more-pain-more-gain/>
2. <http://wattsupwiththat.com/2012/03/11/shollenbergers-technical-review-of-manns-recent-book/>
3. <http://blogs.smithsonianmag.com/food/2012/02/fish-sauce-ketchup-and-the-rewilding-of-our-food/>
4. <http://blogs.smithsonianmag.com/food/2008/12/yummy-the-neuromechanics-of-umami/>
5. [http://books.google.com/books/about/Flaxseed\\_in\\_human\\_nutrition.html?id=JGATAQAAMAAJ](http://books.google.com/books/about/Flaxseed_in_human_nutrition.html?id=JGATAQAAMAAJ)
6. <http://splitsider.com/2011/04/digging-into-the-archives-of-spy/>

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minderbender (2012-03-26 22:51:47)

The Smithsonian piece is okay, but it's bizarre that it identifies *Lactobacillus sanfranciscensis* as a yeast. Seth: good point.

## The Future of Email: What I Want (2012-03-27 05:00)

In [1]this essay, which I learned about from [2]Alex Tabarrok, Paul Graham complains about email. Too easy for someone to send him email. Also slow. He thinks of email as a todo list. Here's what he wants:

More restrictions on what someone can put on my todo list. And when someone can put something on my todo list, I want them to tell me more about what they want from me. Do they want me to do something beyond just reading some text? How important is it? (There obviously has to be some mechanism to prevent people from saying everything is important.) When does it have to be done?

Here's what I want: A price per email. A service that charges people for each email they send me (e.g., \$1/email). I get most of the price, the company providing the service gets a small percentage (1 %?). With two additional features: 1. The initial charge is just for me to look at it. Then, after I read the email, there is a mechanism that allows me to easily charge more to do what they ask, such as give them Shangri-La Diet advice. 2. I can easily put people on a list that allows them to send me email for free.

Since Google already has Google Checkout, it might be relatively easy for them to add this to gmail.

1. <http://paulgraham.com/ambitious.html>
2. <http://marginalrevolution.com/marginalrevolution/2012/03/at-the-frontier-of-personalized-medicine.html>

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August (2012-03-27 06:07:33)

A great feature would be allowing people to pay more and being able to see that in the inbox. The \$40,000 email gets answered first! Seth: Yes, rank them in your inbox by how much was paid. More paid, closer to the top.

Darrin Thompson (2012-03-27 07:47:28)

I'll put this on my list of fun things to build. It's currently in position 2, behind Trailers for Netflix, which is currently in development. Important detail: if someone builds this do you swear on your honor that you will use it? I should also send you this by email just for the awesome irony.

Damon (2012-03-27 10:57:43)

Makes no sense. Why don't you just open a new email address and keep it private, your Majesty?

Bryan (2012-03-27 14:20:46)

Seth, if I'm sending you too many messages, just say so. No need to go through this whole charade. Seth: ha-ha!

garymar (2012-03-27 14:34:49)

When email first got popular in Japan, I remember reading about old-school CEOs who would delete unread any emails from people they didn't know personally. I laughed at his backwardness then. Now I'm not so sure.

Bryan (2012-03-27 14:35:30)

BTW, Paul Graham is an excellent writer. All of his essays are worth reading.

Hit 'n Run Commenter (2012-03-27 16:30:06)

Would this idea apply to blog comments? Seth: I have never gotten too many blog comments.

Steve | Web Direct (2012-03-28 04:39:28)

This would certainly focus companies into making sure any email they sent to you was totally relevant and worthwhile.

Alrenous (2012-03-28 05:59:44)

That is an excellent idea. Now I want that too. Bravo.

JRM (2012-03-28 10:17:46)

I wish people could do this for telephone calls, too. There is an analogy to this in trading. The person who posts the bid or the offer doesn't pay the exchange fees, but the price taker who hits the bid or lifts the offer pays the exchange fees.

garymar (2012-03-28 14:42:31)

Now that I think about it, this is what *secretaries* are for. Someone who knows your needs and wants and can sort your mail by order of importance. Stem the tide of disintermediation! Time to re-intermediate.

## Nick Winter's Big Success with Percentile Feedback (2012-03-28 05:00)

I have<sup>[1]</sup> posted several times about using what I call percentile feedback to boost productivity. Percentile feedback means comparing your current performance to your previous performance using a percentile. If the current performance is in the middle of your previous performances, the percentile is 50, for example. Percentile feedback is easy to understand (scores above 50 are better than average) and is sensitive to small improvements – so even small improvements are rewarded. My implementation had three other helpful features: 1. It adjusted for the time I woke up to make different days more comparable. 2. It measured efficiency (time working/time available) to further improve comparability across days. 3. It was graphical. I made a graph of efficiency throughout the current day versus previous days. It greatly increased how much I worked every day.

I love it and wish I had it for everything I measure. Unlike so many feedback systems, it is realistic and encouraging. I found it worked extremely well – to my surprise, actually. It's not so surprising I would think of it because it vaguely resembles an animal-learning procedure. (Animal learning is my area of expertise within psychology.)

Nick Winter, one of the developers of <sup>[2]</sup>Skritter (which I use), recently started to use it. He gave <sup>[3]</sup>a much-too-short QS talk about it in Pittsburgh a month ago. I asked him about his experience. He is as enthusiastic as I am. He wrote:

The percentile feedback has been a huge success—I'm getting way more done than I ever did, and I'm much better at prioritizing toward my main project. Seeing the graph going in real time has been much better at making me aware of what I need to do to hit high targets each day. I will do a full writeup on this, and on my self experiments, when I finish this iOS app and stop focusing so much on work. The short teaser goes something like this:

Phase 0: just tracking normal work at end of day in a Google Doc, average 2 hours a day on iOS development

Phase 1: tracking normal work and iOS dev separately in the Google Doc, average 4 hours a day on iOS development

Phase 2: using Beeminder to have better graphing and goal incentive for iOS dev, average 5 hours a day

Phase 3: first three weeks of using percentile feedback, average 6.4 hours a day

Phase 4: second three weeks of using percentile feedback, deciding to really push it based on the positive feedback from my metrics (more productivity, more happiness), average 9.4 hours a day

So now I'm getting close to averaging 70 hours of focused iOS dev a week and it feels great. In a normal work place, "time spent working" != "productivity", but for me they're very similar as long as my energy is good, which it almost always is now.

The surprising insight is that changing the way that I measured my work performance—from spreadsheet, to better spreadsheet, to graph, to better graph—has had such a huge impact. I have been working on maximizing work productivity for four years, ever since starting the startup, but in the last six months I've become radically more effective. I love the percentile feedback graph design!

You can see his implementation on <sup>[4]</sup>his homepage.

1. <http://blog.sethroberts.net/category/percentile-feedback/>

2. <http://www.skritter.com/>

3. <http://vimeo.com/groups/quantifiedself/videos/36503801>

4. <http://www.nickwinter.net/>

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Tom (2012-03-28 08:10:29)

Seth (or anyone), Any suggestions for an iPhone app that's a good tool for this method?

Ben B (2012-03-28 09:16:58)

Is he gathering his data in R like you do, and then presenting it via this Highcharts API?

Andrey Shestakov (2012-03-28 22:33:32)

The percentile feedback actually worked very well for me. I used your R scripts on Max OS X. I have a two-display set-up, so I dragged the window with the chart to the second display, so that it wasn't obscured by other windows. This was a critical factor for me to make this system effective. When I started to see the productivity chart all the time, it started to be much more motivating.

Nick Winter (2012-03-29 12:39:46)

Ben, I'm not using R for this (although R is cool). I put a start/stop button on my site when I'm logged in, and the data lives on my App Engine server.

Alexis (2012-03-30 14:33:02)

I'm very interested in this but I'm not sure it's a feature or a bug that the system results in feeling "great" about working 70 hours a week. Perhaps it is a way to become pleasantly addicted to extremely hard work, but that's a dangerous power. I was working about 60-75 hours/week doing ios development over Jan & Feb, and in the end I was sick (but I'm not in my exactly young). Also, I worry that using monitoring to drive up efficiency means you get very efficient at what you can monitor, and crowd out all slack which is valuable over the longer term for creativity even if it's benefit harder to monitor. Reading this post, for instance, would not count as productive. That said, if there were a good app for this, I'd be trying it tomorrow.

Tom (2012-04-01 01:05:31)

Same here. I think a ton of people would buy that app.

Nick Winter (2012-04-06 07:17:28)

Alexis, I can see your point about motivation hacks potentially cutting off useful signals sent by unmotivation, and about blindness to the unmeasured areas of life. I use other tools (like daily journaling, happiness/health tracking, and time set aside for faraway thinking) to be strategic about those things, which I think is better. But certainly it should be pointed out that one should not blindly hack productivity without another way of getting perspective.

## Assorted Links (2012-03-29 05:00)

- [1]All about kefir
- [2]Fraud and waste at a New York hospital. From the comments you can see that the problems have lasted decades. If someone is always sick, year after year, it means there is something about their sickness (about health in general, actually) we do not understand. Likewise, the decades-long persistence of huge problems at this hospital suggests there is something fundamental about regulation (and perhaps health care) we do not understand.
- [3]This paper about how well blood uric acid level predicts mortality, which appeared in 2004, did not get nearly the attention it deserves. I was shocked by its existence – American medical school professors are almost incapable of good research. Well, it's from Finland.



- [4]David Healy's new blog.

Thanks to Bruce Charlton, Jazi Zilber, [5]Melissa McEwen and [6]Alex Chernavsky.

1. <http://www.kefirpedia.org/>
2. <http://www.nytimes.com/2012/03/26/nyregion/at-ailing-brooklyn-hospital-insider-deals-and-lavish-perks.html>
3. <http://archinte.ama-assn.org/cgi/reprint/164/14/1546.pdf>
4. <http://davidhealy.org/blog>
5. <http://huntgatherlove.com/>
6. <http://www.astrocyte-design.com/shangri-la-diet/index.html>

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Tuck (2012-03-29 05:14:26)

The study on uric acid and mortality isn't surprising, as gout and metabolic syndrome are highly correlated: "Gout, Diet, and the Insulin Resistance Syndrome": [http://www.jrheum.org/content/29/7/1350.full.pdf+html?ijkey=f725dc5a637823eb123e4ef812a42f23f988a51f&keytype=tf\\_ipsecsha](http://www.jrheum.org/content/29/7/1350.full.pdf+html?ijkey=f725dc5a637823eb123e4ef812a42f23f988a51f&keytype=tf_ipsecsha) Have you seen this: "Gout: The Missing Chapter from Good Calories, Bad Calories" <http://www.fourhourworkweek.com/blog/2009/10/05/gout/>

dearieme (2012-03-29 16:47:25)

"...whether its relationship to cardiovascular events is circumstantial or causal remains to be answered." Has it been answered?

garymar (2012-03-29 16:57:21)

Serum uric acid levels serve as an easily available and inexpensive risk marker, but whether it is an "innocent bystander," a "partner in crime," or even a protector in proximity to CVD cannot be answered based on observational studies.

These guys are too reasonable for their own good. Since they didn't shout "Stop eating meat!" to the media they were simply ignored.

## **Fermented Foods Improve Irritable Bowel Syndrome (2012-03-30 20:38)**

It's hard to get scurvy. If you eat anything resembling an ordinary diet you won't get it. The existence of scurvy, produced by extreme conditions, led to the discovery of Vitamin C. From the case of scurvy and Vitamin C we learned – well, most people learned – that some diseases are clues to what we need to eat to be healthy.

There is no lab test for irritable bowel syndrome (IBS). It is diagnosed if you have "abdominal pain or discomfort in association with frequent diarrhea or constipation," [1]says Wikipedia, and a dozen other things (colon cancer, lactose intolerance, celiac disease and so on) can be ruled out. It is common. In the United States, one study found that 14 % of those surveyed had it. Surveys in other countries produce even higher values – the United States is not a hotspot. "It is one of the most common diseases diagnosed by doctors," says [2]an NIH webpage.

What is it telling us? According to the NIH webpage, "medications are an important part of relieving symptoms." Those medications include anti-depressants. If you treat the problem with drugs, you completely ignore the possibility that a digestive problem is due to eating the wrong food. You might think that would be obvious – but no. Of

course, people with IBS are less interested in taking medicine so they often believe they are "intolerant" to various foods. But they have a hard time figuring out what those foods are, and their problems persist. The Wikipedia section about causes is a monument either to the ignorance of medical school professors or Wikipedia contributors:

The cause of IBS is unknown, but several hypotheses have been proposed. The risk of developing IBS increases sixfold after acute gastrointestinal infection. Post-infection, further risk factors are young age, prolonged fever, anxiety, and depression. Publications suggesting the role of brain-gut "axis" appeared in the 1990s, such as the study "Brain-gut response to stress and cholinergic stimulation in IBS" published in the *Journal of Clinical Gastroenterology* in 1993. A 1997 study published in *Gut* magazine suggested that IBS was associated with a "derailing of the brain-gut axis." Psychological factors may be important in the etiology of IBS.

That's all. Nothing about eating the wrong food. And people wonder what to do about the cost of health care! My suggestion: get rid of everyone (especially medical school professors) too blind or biased to consider that a digestive problem may be caused by the wrong food.

Fortunately not everyone is rushing to treat IBS sufferers with drugs. In an obscure journal called *Molecular Medical Reports*, [3]an open-access article recently appeared about diet and IBS ("Diet and effects of diet management on quality of life and symptoms in patients with irritable bowel syndrome"). [4]The authors are from Norway, which makes the sanity more understandable. The article looks at the effect of dietary advice on IBS symptoms. It compares three groups of patients (IBS patients given dietary advice, IBS patients not given dietary advice, and people without IBS). Patients with IBS eat quite differently than everyone else (for example, they eat less dairy, thinking they might be lactose intolerant), but they are still bad off.

The main point of the article is that the dietary advice was helpful. IBS patients given the advice two years before the study were better off than IBS patients not given the advice, although even those given the advice were considerably worse than normal. Looking at the difference between the diets of the two IBS groups, the better-off group ate a lot more probiotic dairy:

The guided IBS patients reported a consumption of sour milk products containing probiotics almost twice as often as the unguided IBS patients and one and a half times that of the controls. The products used were supplemented with *Lactobacillus rhamnosus* GG, *Lactobacillus acidophilus* La-5 and *Bifidobacterium* Bb-12. Patients with IBS were found to have fewer *Lactobacillus* spp. and *Bifidobacterium* spp. in their intestinal flora than healthy individuals (44). These bacteria have been shown to bind to epithelial cells and inhibit pathogen binding, and to enhance barrier function (46). Furthermore, these bacteria do not produce gas on fermenting carbohydrates, an effect which would be amplified as they also inhibit *Clostridia* spp. (46). A number of studies have shown an improvement in flatulence and abdominal distension with a reduction in the composite IBS symptom score, following probiotic intake (45,46) [emphasis added]

It is highly unlikely that we need to eat sour milk products containing probiotics to be healthy – such products are new in evolutionary history. But it is entirely possible that we need to eat plenty of microbe-laden (e.g., fermented) food to be healthy, [5]as I have said countless times on this blog. The big improvement in IBS symptoms produced by probiotics supports my belief that we need to eat plenty of fermented foods to be healthy. (The Wikipedia entry about IBS mentions probiotics and yogurt, but not fermented foods.) Maybe IBS, like scurvy, is a clue to something really important.

Thanks to Melissa McEwen.

1. [http://en.wikipedia.org/wiki/Irritable\\_bowel\\_syndrome](http://en.wikipedia.org/wiki/Irritable_bowel_syndrome)
2. <http://digestive.niddk.nih.gov/ddiseases/pubs/ibs/>
3. <http://www.spandidos-publications.com/10.3892/mmr.2012.843>
4. <http://blog.sethroberts.net/2012/03/29/assorted-links-166/>
5. <http://blog.sethroberts.net/category/umami-hypothesis/>

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Txomin (2012-03-30 21:27:17)

How do (non-dairy) fermented foods fit in our evolutionary history? Seth: Early in evolution, I believe more fermented foods were chosen over less fermented foods, when both were available – because the more fermented foods tasted better. Call it accidental fermentation. For example, old fruit was chosen over fresh fruit. Later in evolution, I believe foods were deliberately fermented, as they are now.

Tom (2012-03-30 23:21:28)

Seth, Art Ayers had a great post on this earlier this month: [coolinginflammation.blogspot.com/2012/03/dr-oz-constipation-soluble-fiber-foo d.html](http://coolinginflammation.blogspot.com/2012/03/dr-oz-constipation-soluble-fiber-foo-d.html) Seth: Thanks for the recommendation. I learned a few things but his weird idea that "there are no genes for food intolerance" makes me wonder about everything else he says.

Alex Chernavsky (2012-03-31 04:31:35)

My wife suffers from chronic digestive problems, probably IBS (other possible diagnoses have been ruled-out by tests). She finds significant relief from drinking kombucha. Before trying kombucha, she tried various drugs – to no effect. She also tried soy yogurt and various probiotics sold at health food stores, but none of those treatments had any effect. Drinking kombucha is not a cure. She drinks eight or ten ounces every day, but she still has flare-ups of her symptoms. Nevertheless, she's much better now than before. She also eats kim chee and miso soup, but we haven't tried to isolate the effects (if any) of those foods, and she doesn't eat them daily. Seth: I suggest eating several fermented foods daily, not just kombucha. Kefir is easy to consume and easy to make.

Tuck (2012-04-01 14:02:11)

"I learned a few things but his weird idea that "there are no genes for food intolerance" makes me wonder about everything else he says." I like that idea. I've often explained to people who tell me that celiac is a genetic condition that this is logically equivalent to saying that a person who falls to his death died of a genetic condition: his genes didn't give him wings. Wheat's a toxic plant. It's hardly surprising that we can't digest it, but that fact doesn't mean there's a gene that's responsible for gluten intolerance. On a related note, you might find this interesting: "IBS and Gluten Intolerance" <http://www.ibstreatmentcenter.com/Newsletters/MidMar2008.pdf> My IBS is food-triggered. Either wheat or seed oils sets it off, wheat is worse. I suspect IBS is simply one manifestation of wheat poisoning (goat-grass poisoning, to be correct), and celiac is another. Which effect you have is determined by your genes, of course... Seth: yes, it is misleading to call celiac disease a genetic condition. But unlike wings, a certain gene that makes you more susceptible to celiac disease is quite common.

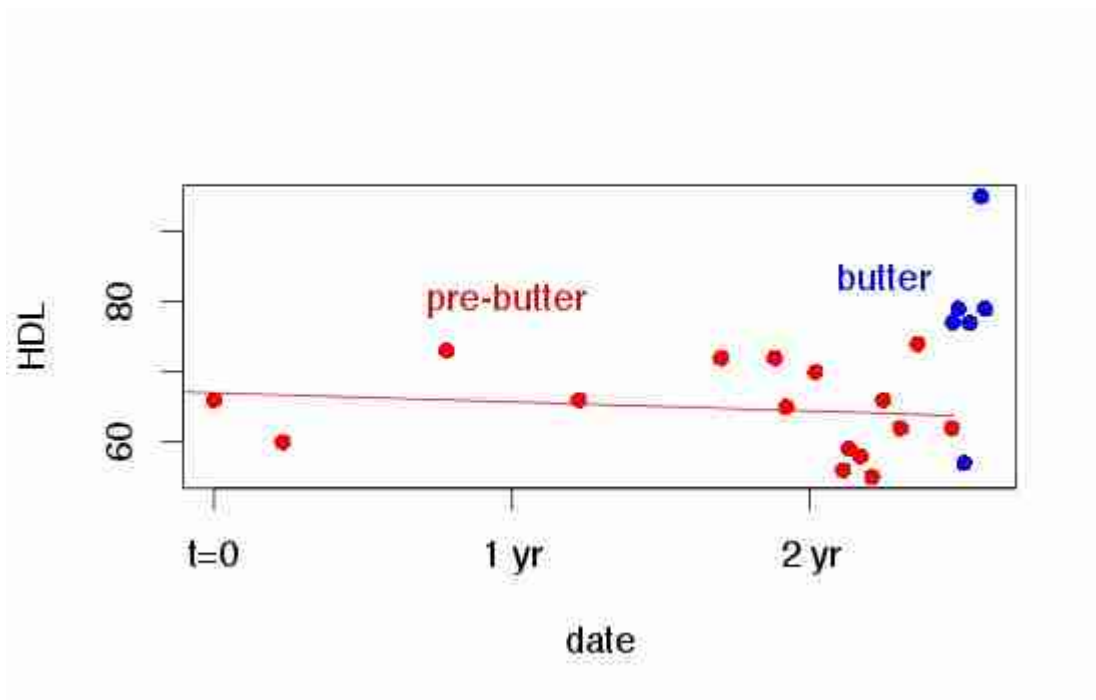
Ethan (2012-04-07 05:47:54)

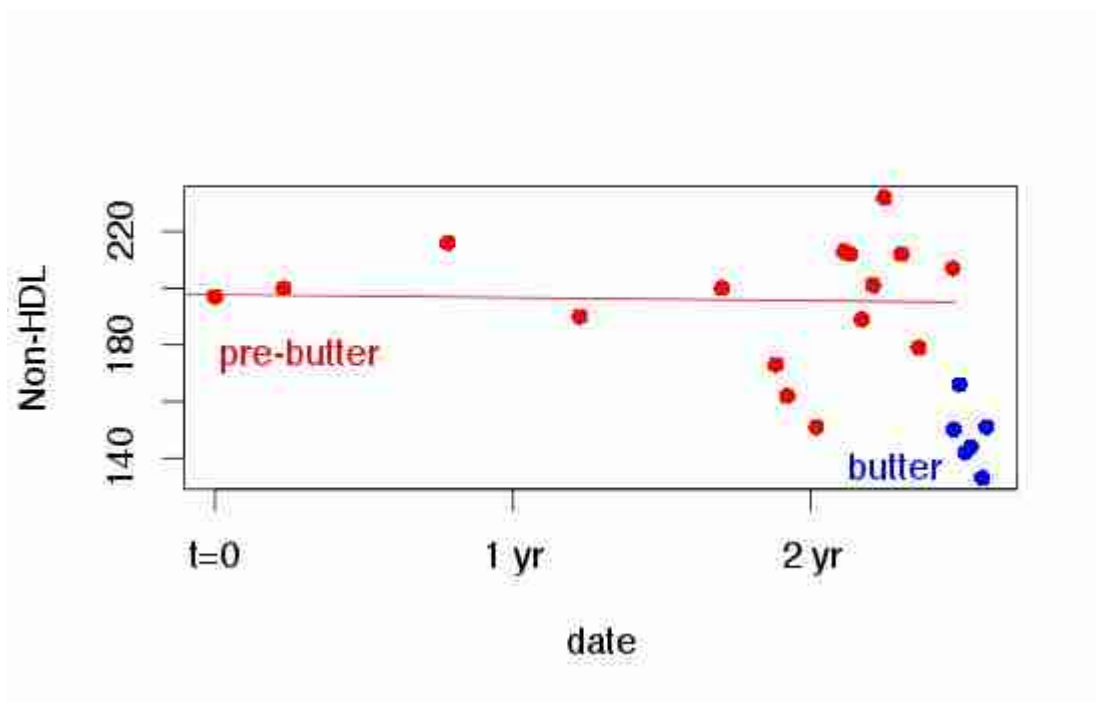
So why not update/fix the wikipedia article?

## Does Kerrygold Butter Improve HDL and LDL? (2012-03-31 14:13)

More: Greg used Kerrygold butter in the results given below. I now see that he omitted data from other butters that did not agree with his conclusions. This makes his results considerably more doubtful and his whole post (in which Kerrygold butter is called "butter") misleading. I have changed the title of this post to reflect this.

A New York lawyer named Greg [1] reports remarkably clear evidence about the effect of butter on blood lipid levels: It improved them. For a few years he measured his HDL and LDL regularly with a home cholesterol device. For unrelated reasons, he started eating more butter. He ate a half stick (about 60 g)/day, like me. Here's what happened.





The first five measurements are from lab tests. The rest are from his home machine.

I asked Greg for details.

I'm 36. I bought the cholesterol meter last July after my doctor said he couldn't figure out why my numbers were a bit high. We both agreed it was not something to worry too much about and that there was no point charging my insurance company for a VAP test every 6 months. We both also agreed that going on a statin was a bad idea. I picked up the meter out of curiosity. I had previously been monitoring my blood sugar (since 2009) and found it to be very interesting, so I thought I could have some fun with the numbers. The result is all the more surprising because I did not expect it. I was tracking my numbers around the time of the experiment [with butter] to make sure they did not go the wrong way like everyone says they should.

The machine is a [2]CardioChek PA [about \$600], which is designed for use in doctors offices, not for the consumer market. The device is "CLIA-waived", which means that the FDA considers it so simple that the user does not need any special training in clinical chemistry (home glucometers fall into the same category). The machine gives significantly different numbers for different people, suggesting it is measuring something real and not spitting out random numbers.

I asked what the reaction to this data has been.

Most people I've spoken to have been receptive to the idea [that butter improves blood lipids], but I got no sense that they would be willing to try it for themselves. Most people I know seem to be quite willing to accept the fact that the old stories about cholesterol are not true. In contrast, one conservative cardiologist said I must have "unique genetics".

1. <http://kneelelessmegafauna.blogspot.com/2012/03/is-butter-as-powerful-as-statin.html>

2. <http://www.cardiochek.com/>

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Tom Passin (2012-03-31 19:41:13)

That home device sure has a lot more scatter than the lab tests. I suppose we'd like to have the lab be more precise than we can be at home, wouldn't we? Seth, I don't remember your figures. How do these results compare with your own changes?

Seth: I didn't measure the effect of butter on my HDL, etc.

peter (2012-04-01 08:37:18)

seth, when you consumer butter is it by cooking or just eating it raw? does it matter? Seth: I don't know if it matters. I eat it raw (with small pieces of meat.)

dustin (2012-04-02 21:37:08)

I had a similar result with butter consumption. I did a brain function month trial of eating a half cube a day and (w/out planning) ended up getting a lipid profile pretty much exactly at the end of it. Both LDL and HDL were the best they have ever been for me. In fact on my whole blood report there was only one thing in the "warning" column and humorously that was a note that my risk of a heart attack was less that 1/2 of the average. On a related note I always find it funny when people ask how can you possibly stand eating that much butter in a day. I vaguely remember having to hide the butter in bread or other things the first week or two, but by the end of the month I was totally addicted to plain butter by the slice. In fact, while I'm happy that it is good for my brain and my body I now find it hard to pass by the fridge w/out sneaking a slice of butter (at least several times a day). My kids are slowly acquiring a butter addiction as well.

Greg (2012-04-04 17:08:33)

Tom: I believe the scatter you see in HDL reflects actual physiological changes. The device has very little variance from test to test in that measurement. Part of why the skew in HDL reflects other experiments during the red time series (my second post is about that). I have an idea about where the rest of the skew comes from and will post a follow-up if I can figure it out. The non-HDL number (i.e. the total cholesterol measurement minus the HDL) is much less accurate and the device seems to contribute considerable variance. With enough data points I think the readings are useful. Dustin: my doctor told me some of his patients have had similar results from butter consumption.

Peter (2012-04-06 13:43:20)

Greg also ate coconut oil with his butter, which is likely a confounder given coconut oil's known ability to increase HDL.

## 7.4 April

### Moderate Alcohol Consumption Associated With Less Cirrhosis (2012-04-01 12:50)

Alcohol is bad for your liver, we're told. However, moderate amounts may be good for your liver. [1]A recent meta-analysis found that men who drank moderate amounts of alcohol had considerably less risk (a risk ratio of 0.3) of liver cirrhosis than men who drank no alcohol. It wasn't clear if some forms of alcohol (e.g., wine) were more protective than others. I came across this study because [2]another article called the association "biologically implausible", whereas I think it is highly plausible due to vast experimental literature on hormesis (animals given small amounts of poisons are healthier than animals given none).

The findings about cirrhosis join a much large body of evidence that moderate drinking is associated with less heart disease. [3] A recent meta-analysis reached this conclusion once again and found, in addition, that moderate drinking is associated with less all-cause mortality.

These are more examples of the health benefits of fermented foods, one of my favorite subjects. It is unfortunate the liquor industry does not run long-term human experiments on the effects of moderate amounts of beer, wine, and so on.

1. <http://onlinelibrary.wiley.com/doi/10.1111/j.1465-3362.2009.00153.x/abstract>
2. <http://www.bmj.com/content/344/bmj.e2276?etoc=>
3. [http://www.bmj.com/content/342/bmj.d671?ijkey=f01927626ac8332fc7248b4fadbfdc8c258ace34&keytype=tf\\_ipsecsha&linkType=ABST&journalCode=bmj&resid=342/feb22\\_1/d671](http://www.bmj.com/content/342/bmj.d671?ijkey=f01927626ac8332fc7248b4fadbfdc8c258ace34&keytype=tf_ipsecsha&linkType=ABST&journalCode=bmj&resid=342/feb22_1/d671)

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Leila (2012-04-01 14:37:29)

Paul Jaminet has posted about alcohol - "the harmful effects of alcohol on the liver occur only when it is combined with polyunsaturated fats" - <http://perfecthealthdiet.com/?p=509>. Definitely a worthwhile research topic!

Tim Beneke (2012-04-02 09:34:12)

As I understand it, there is substantial evidence that people who consume a lot of alcohol also exercise substantially more than people who don't. This is certainly true among people I know.... Perhaps it's a matter of compensation. <http://www.livescience.com/7910-exercisers-drink-alcohol.html> "Michael French, a health economics professor at the University of Miami, and his colleagues dug into data from the 2005 Behavioral Risk Factor Surveillance System, a yearly telephone survey of roughly 230,000 Americans, and found a surprisingly strong positive correlation between the levels of alcohol intake and exercise. For both men and women, those who drank at least some alcohol exercised 7.2 minutes more per week than non-drinkers. While that may not seem like much, the study showed that the more booze, the more minutes spent sweating. Light, moderate, and heavy drinkers worked out 5.7, 10.1 and 19.9 minutes more per week, respectively. Also, drinking resulted in a 10.1 percent increase in the probability of vigorous physical activity." Perhaps this confound has to be integrated into any analysis of the putative health benefits of alcohol... Seth: A surprising correlation.

MetaThought (2012-04-02 17:49:59)

Could it be that people with very weak livers just don't drink alcohol at all, because of negative effects, and so skewing the results somehow?

Jordan (2012-04-02 19:51:50)

I think the associations beg a question: What are the alcohol drinkers "not eating" because they are consuming a glass or wine or other spirits? Maybe those not drinking alcohol are replacing it with an extra large serving of ice cream. Seth: Yes, associations always raise the question of what is causing them.

D (2012-04-02 20:40:07)

"Paul Jaminet has posted..." The guy is awesome. His book is fantastic. And no, I am not Paul Jaminet nor associated with him in any way other than being a fan.

Tom (2012-04-02 20:41:59)

...found a surprisingly strong positive correlation between the levels of alcohol intake and exercise. **Seth: A surprising correlation.** I think they're just talking about what young people do. I bet young people socialize more, drink more, and exercise more. They probably get laid more, too. :-)

D (2012-04-02 21:16:34)

My interpretation of this: Moderate drinking signifies conscientiousness. High conscientiousness is one of the BEST predictors of longevity. Seth: Interesting idea. Why are people who drink moderately more conscientious than those who don't drink at all? That puzzles me. I suppose I'm an example of the correlation in the sense that I am more conscientious than average and I drink moderately. But I see no connection between the two. I'm not saying there isn't a connection, just that I don't see it.

Aaron Blaisdell (2012-04-02 21:33:54)

Yet another possibility from the strong correlation between heavy drinking and exercising; both can be addictive. Perhaps individuals more prone to addiction are more prone to comorbid (multiple) addictions, such as drinking, endurance exercise (for the runners high), gambling, smoking, sugar, etc. Seth: Good point. There is certainly something to the concept of an addictive personality.

Alex Chernavsky (2012-04-03 04:53:15)

Seth wrote: "Why are people who drink moderately more conscientious than those who don't drink at all? That puzzles me." Possibly because (some) people who don't drink at all used to drink excessively and had to give it up after getting themselves into trouble.

D (2012-04-03 07:56:28)

Hi Seth, What Alex said. Someone who can regularly eat just 10 potatoe chips or have just one glass of wine, are people who know they can touch these things without overindulging. Someone who abstains entirely may also have good discipline, but they may not, and that's why they avoid it all together. So that cohort is a mixture of high and low conscientiousness. But the cohort who can cut themselves off doesn't include people with low high conscientiousness.

### Assorted Links (2012-04-02 20:51)

- [1]Where are they now? J. S. Boggs, profiled by Lawrence Wechsler in The New Yorker. Boggs made small paintings closely resembling money (e.g., a \$100 bill) that he offered in place of real money. He sold surrounding details (e.g., the receipt) to a collector who would try to get the bill Boggs had drawn from the merchant in order to "complete" the work of art.
- A SLDer (Shangri-La Dieter) [2]loses 80 pounds in 18 months. That's 1.0 pounds/week.
- [3]More medicine does not equal better medicine. I agree with every word of this critique by a Glasgow general practitioner named Des Spence. For example, "The prescribing of powerful antipsychotic and potentially addictive stimulant drugs to children is a societal norm. . . . A quarter of US women are taking mental health drugs." As Spence says, these are signs of a healthcare system biased toward those who make money from it and against everyone else (including children). One way to sum up why this is a mistake: Your health is too important to be left to those who only make money if you are sick.
- [4]Japan: from rice to wheat to rice.

Thanks to Bryan Castañeda.

1. <http://lostatsea.net/feature.phtml?fid=1699328264460a7f12afe23>

2. <http://boards.sethroberts.net/index.php?topic=7721.msg105402#msg105402>

3. <http://www.bmj.com/content/344/bmj.e2346?etoc=>



4. [http://www.slate.com/articles/life/food/2012/04/wheat\\_in\\_japan\\_how\\_the\\_nation\\_learned\\_to\\_love\\_the\\_american\\_grain\\_instead\\_of\\_rice\\_.single.html](http://www.slate.com/articles/life/food/2012/04/wheat_in_japan_how_the_nation_learned_to_love_the_american_grain_instead_of_rice_.single.html)

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Bryan (2012-04-03 09:37:28)  
I'd love to read that BMJ piece, but THIRTY BUCKS for one article?

Mary (2012-04-07 07:28:23)  
Part of your quote from the Des Spence article, "A quarter of US women are taking mental health drugs," does not appear to be supported by the actual facts. I believe it is true that psychiatric drug usage is high and growing, the statement that "over 25 % of US women are taking them" overstates the case a great deal. The source of that assertion apparently traces to the study described here: <http://blogs.wsj.com/health/2012/03/19/womens-use-of-psych-medications-rises-other-health-regimens-lag-men-studies/> Although the study examined records of 2 million patients, those patients were hardly a representative cross-section of the US population. The study was carried out by Medco, a large mail-order pharmaceutical company which caters to patients covered by prescription drug coverage plans. The only patient records to which Medco has access are those of its own customers, that is, a pool consistently entirely of people with prescription drug coverage who have actually filled a prescription for a long-term prescription drug of some sort. Patients who do not have prescription drug coverage or those who do have it, but who do not use it for long-term medications, will not be in the Medco database. So, women who do not take any prescription meds of any sort, or those who take only take the occasional short term course of antibiotics for an acute infection (of the sort they would fill at a local pharmacy rather than through the mail order drug company) were not included in the study.

### **Lack of Repeatability of Cancer Research: The Mystery (2012-04-03 13:30)**

In [1] a recent editorial in Nature (gated), the research head of a drug company complained that scientists working for him could not repeat almost all of the "landmark" findings in cancer research that they tried to repeat. They wanted to use these findings as a basis for new drugs. [2] An article in Reuters summarized it like this:

During a decade as head of global cancer research at Amgen, C. Glenn Begley identified 53 "landmark" publications – papers in top journals, from reputable labs – for his team to reproduce. Begley sought to double-check the findings before trying to build on them for drug development. Result: 47 of the 53 could not be replicated.

Yet these findings were cited, on average, about 200 times. The editorial goes on to make reasonable suggestions for improvement based on differences between the findings that could be repeated and those that could not. The Reuters article goes on to describe other examples of lack of reproducibility and includes a story about why this is happening:

Part way through his project to reproduce promising studies, Begley met for breakfast at a cancer conference with the lead scientist of one of the problematic studies. "We went through the paper line by line, figure by figure," said Begley. "I explained that we re-did their experiment 50 times and never got their result. He said they'd done it six times and got this result once, but put it in the paper because it made the best story.

Okay, cancer research is less trustworthy than someone just barely outside it (Begley) ever guessed. Apparently careerism is one reason why. What is unexplained in both the Nature editorial and the Reuters summary is how research

can ever succeed if things aren't reproducible. Science has been compared to a game of Twenty Questions. Suppose you play Twenty Questions and 25 % of the answers are wrong. It's hopeless. In experimental research, you generally build on previous experimental results. The editorial points out that the non-reproducible results had been cited 200 times but what about how often they had been reproduced in other labs? The editorial says nothing about this.

I can think of several possibilities: (a) Current lab research is based on experimental findings of thirty years ago when (for unknown reasons) careerism was less of a problem. Standards were higher, there was less pressure to publish, whatever. (b) There is a silent invisible "survival of the reproducible": Findings that can be reproduced live on because people do lab work based on them. The other findings are cited but are not the basis of new work. (c) There is lots of redundancy – different people approach the same question in different ways. Although each individual answer is not very trustworthy their average is considerably more trustworthy.

Leaving aside the mystery (how can science make any progress if so many results are not reproducible?), the lack of reproducibility interests me because it suggests that the pressure to publish faced by professional scientists has serious (bad) consequences. In contrast, personal scientists are under zero pressure to publish.

Thanks to Bryan Castañeda.

1. <http://www.nature.com/nature/journal/v483/n7391/full/483531a.html>

2. <http://www.reuters.com/article/2012/03/28/us-science-cancer-idUSBRE82R12P20120328>

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Jim (2012-04-03 17:31:50)

Wow. They did it six times and got the result they published once!? I'm generally a skeptic of medical research, but I still find this amazing. Seth: I agree. That this sort of thing is perfectly legal – goes undetected – is one illustration of the fact that enormously prestigious journals, such as Science and Nature, employ peer reviewers with major gaps in their understanding. It's like an accounting system with a big hole that allows fraud.

Alex Chernavsky (2012-04-03 18:09:01)

This post reminds me of [1]this excellent article about the shenanigans used by Bristol-Myers Squibb (pharmaceutical company) to gain approval for their antidepressant drug, Serzone. "In testing results submitted to the FDA, Serzone failed to show a clear benefit in six of the eight clinical trials." And the two positive trials were suspect.

1. <http://web.archive.org/web/20060408124343/http://washingtonian.com/health/hardtoswallow.html>

jbug (2012-04-03 19:17:18)

Integrity seems so rare in research anymore...sigh....

James A Donald (2012-04-03 21:10:01)

You don't seem to consider the obvious possibility: That science, in most fields, is simply not making progress, that such "progress" as is reported is accomplished by rewriting the past and imposing official consensus. Seth: If "science, in most fields" is no longer making progress, what changed?

James A Donald (2012-04-03 21:10:45)

As to what caused the problem: Peer review caused the problem. It is career suicide to discover that someone else's research is irreproducible. Seth: Your second sentence ("It is career suicide...") is an excellent point. I don't see the connection with your first sentence ("As to what...").

garymar (2012-04-04 00:09:12)

Is it really career suicide? Depends on the case. Everybody jumped on "cold fusion" immediately and multiple labs rushed to replicate it but were unable to. The reputations of none of these labs were harmed by failure to replicate. Of course this was a celebrity case, and a media event.

Stone Glasgow (2012-04-04 00:34:42)

The reason most drug and disease studies are done is only to support or discredit various products. Professional science today is an advertising war – and has nothing to do with reality. Even government-funded studies are likely corrupted by lobbying efforts. Labs are funded with an expected outcome. And are repeated, apparently, until that outcome is achieved, with failures discarded anonymously.

Tom (2012-04-04 07:04:06)

Remember how we used to think that people who believed that the country was a giant invisible criminal conspiracy were cranks?

Andrea (2012-04-04 07:13:52)

It seems to me that some of the best research is being done by self-taught bloggers like Denise Minger and Paul Jaminet, neither of whom has credentials in nutrition. Almost every professional field has now become a guild that exists primarily to perpetuate itself and not to seek the truth. Education, psychotherapy, literary studies, the arts, and even many of the sciences have become disconnected from the joy of learning.

Tony (2012-04-07 02:54:18)

It's not completely correct to believe that experiments are just done once and then blindly believed to be true if in a respectable paper. A proper explanation of research methods and equipment used is standard part in scientific articles, so it's easy to snatch that and make your own things with it. Hence, results are often reproduced in following studies by various researchers, when experiments are built by using previous research methods as a starting point.

gwern (2012-04-07 08:27:51)

garymar: The difference is that cold fusion wasn't \*supposed\* to exist. New successful drugs are supposed to exist; if they didn't, how do these fields & the scientists they employ justify themselves?

Alrenous (2012-04-07 10:22:34)

I see the situation only slightly differently than James. I see peer review as reproducing the pre-existing status hierarchy. When Richard Feynman submits a paper, it is career suicide to reject it. Reviewers are supposed to be anonymous, but in practice cannot rely on that formal reality. If they repeatedly reject papers due to science instead of sociology, they take the risk several times. For example, I keep hearing about reviewer shenanigans, such conflicts of interest, which should be impossible to discover. When J random submits a paper, it is career suicide to accept it. When J random, Ph.D submits a paper, it is decided based on [1]whether it makes Feynman look bad. As per the link, if it makes Feynman look bad, the journals will reject it, and get legalistic if J random insists, strenuously pursuing plausible deniability. Feynman will be able to publish multiple replies without difficulty. Under certain conditions, s/Richard Feynman/Michael Mann/g

1. <http://www.scribd.com/doc/18773744/How-to-Publish-a-Scientific-Comment-in-1-2-3-Easy-Steps>

Jason H. Moore, Ph.D. (2012-04-12 06:08:53)

Great post. This is a very real concern in biomedical research. One valid explanation for why some results don't replicate is complexity. Under a model of complexity and nonlinearity you don't necessarily expect some things to replicate. I wrote a paper several years ago showing how and why real genetic association results might not replicate as allele frequencies change slightly from study to study. The paper was published here in PLoS One (open): <http://www.plosone.org/article/info:doi/10.1371/journal.pone.0005639>

Elizabeth Iorns, PhD (2012-04-16 14:31:10)

Hi Seth, great post! I think this is a major issue. To address it will require changes in the incentive system that promote collaboration and reproducibility of preclinical academic research. Any new set of incentives should focus, in part, on the funding agencies and journal publications that support academic research. For instance: - Funding agencies should allocate some proportion of a grant to allow research groups to include independent replication in their project work flow. - Journal editors should encourage and acknowledge independent replication of key results (either pre or post publication). Seth: Thanks. I agree with your broad point and I like your specific suggestions.

### **What is "Unnecessary" Medicine? (2012-04-04 15:28)**

An organization called the American Board of Internal Medicine Foundation has launched a campaign to reduce the cost of health care by reducing "unnecessary" tests, drugs, and procedures. [1]A bare-bones website lists them. For example:

Don't routinely do diagnostic testing in patients with chronic urticaria [hives].

Here is the explanation of that recommendation:

In the overwhelming majority of patients with chronic urticaria, a definite etiology is not identified. Limited laboratory testing may be warranted to exclude underlying causes. Targeted laboratory testing based on clinical suspicion is appropriate. Routine extensive testing is neither cost effective nor associated with improved clinical outcomes. Skin or serum-specific IgE testing for inhalants or foods is not indicated, unless there is a clear history implicating an allergen as a provoking or perpetuating factor for urticaria.

Not clear. Are they trying to say the tests are useless ("not associated with improved clinical outcomes")?

My broad question about the campaign is: What does "unnecessary" mean? This is not explained on the website nor in [2]a Washington Post article about the campaign.

A nearby article on the Post website is about "the downside of mammography". It says:

[3]A study published Monday in the Annals of Internal Medicine adds to a growing body of [4]evidence that the potential risks of routine breast-cancer screening via mammography might in fact outweigh such screening's benefits.

That's clearer. It seems to be saying the costs outweigh the benefits. (What are "potential" risks? I thought all risks were potential.) But that doesn't mean that breast cancer screening is "unnecessary", it means it is a bad idea.

If the foundation is trying to say that a lot of medicine does more harm than good, then, please, say so. If they are trying to say that a lot of medicine is useless, then, please, say so. Stop being polite.

I contacted the foundation to ask them about this.

Thanks to Bryan Castañeda.

1. <http://choosingwisely.org/>
2. [http://www.washingtonpost.com/blogs/the-checkup/post/doctors-groups-call-for-end-to-unnecessary-procedures/2012/04/03/gIQAvrDptS\\_blog.html](http://www.washingtonpost.com/blogs/the-checkup/post/doctors-groups-call-for-end-to-unnecessary-procedures/2012/04/03/gIQAvrDptS_blog.html)
3. <http://www.annals.org/content/156/7/491.abstract?aimhp>
4. <http://summaries.cochrane.org/CD001877/screening-for-breast-cancer-with-mammography>

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JPB (2012-04-04 17:17:04)

What they will say is that unless you are an MD, you do not have the knowledge or intelligence to decide if you should have the tests....

### **Do Sonograms Cause Autism? New Evidence (2012-04-06 13:30)**

A female American engineer named Parrish Hirasaki has started [1]a website devoted to the idea that prenatal ultrasound is a major cause of autism. It includes a long list of supporting research. In spite of all this research, "as of spring 2011, analyzing the ultrasound results was not among the 23 hypotheses [about the cause of autism] being tested by the National Children's Survey", says the website.

I first heard this idea from Caroline Rodgers, a science writer, and [2]have blogged about it several times. Nevertheless, the website's home page taught me several things I didn't know:

1. "A recent major study of twins supports earlier studies in concluding that environmental exposures during or shortly after gestation cause a majority of autism cases." This is inconsistent with many other explanations (e.g., vaccine, genetic).
2. "In a recent study, autistic children had reduced connectivity between the two sides of the brain." Which supports the idea that neural misdevelopment is a cause of autism.
3. "Twenty years ago, the FDA increased the allowable intensity of prenatal ultrasound 8-fold to improve images. Autism rates have risen dramatically since that time."
4. There is "widespread misunderstanding among ultrasound operators of the safety guidelines."
5. "A fast-growing commercial business is keepsake ultrasound photos. Franchisers advertise that no medical background or certification is required."

I asked Hirasaki a few questions.

How did you become interested in this?

My age and my profession led me to the theory that the rise in autism is caused by exposure to prenatal/neonatal ultrasound.

1. When my last child was born in 1978, there was one ultrasound machine serving the entire population of Houston.
2. My work experience in the industrial and aerospace industries was extensive in heat and vibration.
3. For several decades, my work included industrial instrumentation in chemical plants and refineries. Most such instruments require routine calibration to stay accurate.
4. In the space program, there are always redundant devices because mechanical and electrical equipment may malfunction.
5. A first cousin died at age 6 of cancer caused by x-ray overdose in the 1940's. I am old enough to remember getting my feet x-rayed at the shoe store.

Who else, in addition to Caroline Rodgers, has independently had this idea and written or posted about it?

Manuel Casanova, a neurologist. Nancy Evans, a science writer.

When you started looking into possible causes of autism, did you look into other possible explanations?

No. I asked myself what had changed about having a baby. Ultrasound seemed to be the obvious major change. Exposure to caffeine, smoking, alcohol and medications had all decreased.

Was there any particular evidence that you found especially persuasive?

On my website, there are 37 papers pertinent to the topic. My primary theory is that overexposure is the cause. The most persuasive evidence that points to this is:

1. The girls in [3]the Kaiser-Permanente study who have the highest exposure to ultrasound during the second trimester have more than double the expected rate of autism.
2. Interruption of the neural migration patterns in the brains of the overexposed mice in[4] the Yale study.
3. A known cause of autism is the mother having an infection. One theory is that as the mother's body fights the infection with a fever, the rise in temperature of the fetal brain causes the damage. The temperature rises in tissue exposed to ultrasound are reported in [5]a paper which calls for the FDA to examine the current allowable limits.
4. The much higher rate of autism for children who weighed less than 4.5 pounds at birth. [6]The medical and AIUM protocol for infants this small is an immediate head ultrasound.

What has made it difficult for the research community to find this?

1. The researchers have education and experience [and funding – SR] in medicine, biology, genetics. This is where they look.
2. In the 1950's, the FDA turned the regulation of medical ultrasound over to the American Institute for Ultrasound in Medicine (AIUM) which is funded by the government and the manufacturers. In November 2011, I expressed my concerns via email to the AIUM Bioeffects Committee. The chair responded that the AIUM monitors the topic and has conducted a thorough [7]search of existing literature (2008) and found no link except the "weak association" in the Kaiser-Permanente study. The report states that there are potential risks to administering

ultrasound tests, which include “postnatal thermal effects, fetal thermal effects, postnatal mechanical effects, fetal mechanical effects, and bioeffects considerations for ultrasound contrast agents.” Another section says “the long-term effects of tissue heating and cavitation have shown decreases in the size of red blood cells in cattle when exposed to intensities higher than diagnostic levels. However, long-term effects due to ultrasound exposure at diagnostic intensity is still unknown.” In 1992, the AIUM and the FDA increased the allowable intensity of prenatal ultrasound 8-fold without knowing whether it was safe. Twenty years later, they still don't know.

3. Engineers who could do such research receive funding from the manufacturers. Such a researcher would be unlikely to propose research that could decimate the industry.
4. This is the classic search for a needle in a haystack. Less than 1 in 300 ultrasounds is causing noticeable brain damage.

I would add that links between sonograms and left-handedness are more evidence that sonograms can cause important brain changes. [8] Here is a doctor who does sonograms dismissing the connection but what I find important is that the connection has been found repeatedly.

1. <http://ultrasound-autism.com/>
2. <http://blog.sethroberts.net/category/autism/sonograms-cause-autism/>
3. <http://www.ncbi.nlm.nih.gov/pubmed/19728066>
4. <http://www.pnas.org/content/103/34/12903.full>
5. (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2724319/>). Cellular-level damage to living tissue is reported in this study: <http://www.pnas.org/content/108/8/3258.full?sid=65af7c85-6330-40b7-a09f-2e44a3332a0c>
6. <http://pediatrics.aappublications.org/content/early/2011/10/14/peds.2010-2846.abstract>
7. <http://www.jultrasoundmed.org/cgi/content/abstract/27/4/503>
8. <http://www.healthline.com/health-blogs/fruit-womb/obstetrical-ultrasound-and-lefthandedness>

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gwern (2012-04-07 06:52:11)

> The girls in the Kaiser-Permanente study who have the highest exposure to ultrasound during the second trimester have more than double the expected rate of autism. Is this consistent with the claimed 20x increase? Seth: Yes. The 20x increase happened over a period of time at the beginning of which many fetuses got no exposure. Now no exposure is rare. The Kaiser-Permanente study compared girls with high and low exposure to ultrasound. > what I find important is that the connection has been found repeatedly. So has crystal healing and sympathetic magic. Seth: I am unaware of even one study showing the efficacy of crystal healing much less repeated studies. Same for sympathetic magic.

David (2012-04-08 10:52:18)

Gwern feels skeptical of a link. Does gwern know of studies that compare the rates in populations with no prenatal ultrasound exposure? The idea that 1 in 300 machines might be running 'hot' is disturbing. The fact that the idea that ultrasound generated bubbles might get hot enough when collapsing to trigger nuclear fusion is even considered is another reason to exercise caution. Nuclear reactions need 1000000 more energy to trigger vs chemical.

David (2012-04-08 11:45:53)

The other consideration is the reward. In any risk reward or cost benefit situation, you can't neglect the reward half of the equation. What is the chance your baby will benefit from the ultrasound? Perhaps gwern could provide a table, giving each

potential benefit, and the probability it will occur for a given baby.

Adam (2012-04-08 16:01:45)

Although I'm in medicine, I don't know much about labor and delivery. A friend who is a nurse said sonograms can help identify children in the womb with heart defects. They sometimes will actually do surgery on the child while it is still inside the mother to repair it, so that when the child is born, he has a healthy heart. I don't know what heart defect they're fixing, what the incidence is or what other benefits of sonograms there are, but I'd like to know!

Adam (2012-04-09 16:07:53)

I found this article: <http://www.cnn.com/2011/HEALTH/02/09/surgery.spina.bifida/index.html> Which is possibly what my nurse friend was talking about. It is not a heart defect and they don't "cure" it, but it seems to help. The incidence of this disease is about 1 in 3000. The incidence of autism is though to be about 1 in 110. If sonography allows us to identify kids with spina bifida early and start treating them, it could prevent parents from choosing to abort the child.

Wedding Countdown & Pregnancy Prep « (2012-04-10 11:20:09)

[...] is fairly resistant to learning about it all. While he'll glance through articles I send him (like this one about new evidence pointing towards sonograms as a cause of autism) he has no interest in reading the books I have given him... I even mark off the parts of the [...]

Link Love « (2012-04-16 08:31:39)

[...] New evidence that sonograms may cause autism. [...]

Selection bias, or, How you can think the experts don't check their models, if you simply don't look at what the experts actually are doing « Statistical Modeling, Causal Inference, and Social Science (2012-05-04 06:34:31)

[...] with his unconventional weight-loss scheme, offbeat self-experimentation, and advocacy of fringe scientific theories, leavened with occasional dollops of cynicism and political extremism. I agree [...]

## Gene Linked to Autism? (2012-04-08 05:00)

[1]An article in the New York Times describes research that supposedly linked a rare gene mutation to autism:

Dr. Matthew W. State, a professor of genetics and child psychiatry at Yale, led a team that looked for de novo mutations [= mutations that are not in the parents] in 200 people who had been given an autism diagnosis, as well as in parents and siblings who showed no signs of the disorder. The team found that two unrelated children with autism in the study had de novo mutations in the same gene — and nothing similar in those without a diagnosis.

"That is like throwing a dart at a dart board with 21,000 spots and hitting the same one twice," Dr. State said. "The chances that this gene is related to autism risk is something like 99.9999 percent."

It is like throwing 200 darts at a dart board with 21,000 spots (the number of genes) and hitting the same one twice. (Each person has about 1 de novo mutation.) What are the odds of that? If all spots are equally likely to be hit, then the probability is about 0.6. More likely than not. (Dr. State seems to think it is extremely unlikely.) This is a variation on [2]the birthday paradox. If there are 23 people in a room, it is 50/50 that two of them will share a birthday.

When Dr. State says, "The chances that this gene is related to autism risk is something like 99.9999 percent," he is making an elementary mistake. He has taken a very low p value (maybe 0.000001) from a statistical test to indicate



the likelihood that the null hypothesis (no association with autism) is true. P values indicate strength of evidence, not probability of truth.

One way to look at the evidence is that there is a group of 200 people (with an autism diagnosis) among whom two have a certain mutation and another group of about 600 people (their parents and siblings) none of whom have that mutation. If two instances of the mutation were randomly distributed among 800 people what are the odds that both instances would be in any pre-defined group of 200 of the 800 people (defined, say, by the letters in their first name)? The chance of this happening is 1/16. Not strong evidence of an association between the mutation and the actual pre-defined group (autism diagnosis).

Another study published at the same time found an link between autism and a mutation in the same gene identified by Dr. State's group but again the association was weak. It may be a more subtle example of the birthday paradox: If twenty groups of genetics researchers are looking for a gene linked to autism, what are the odds that two of them will happen upon the same gene by chance?

If the gene with the de novo mutations is actually linked to autism, then we will have insight into the cause of 1 % of the 200 autism cases Dr. Smart's group studied. When genetics researchers try so hard and come up with so little, it increases my belief that the main causes of autism are environmental.

Thanks to Bryan Castañeda.

1. [http://www.nytimes.com/2012/04/05/health/research/scientists-link-rare-gene-mutations-to-heightened-risk-of-autism.html?\\_r=1&pagewanted=all](http://www.nytimes.com/2012/04/05/health/research/scientists-link-rare-gene-mutations-to-heightened-risk-of-autism.html?_r=1&pagewanted=all)
2. [http://en.wikipedia.org/wiki/Birthday\\_problem](http://en.wikipedia.org/wiki/Birthday_problem)

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jbug (2012-04-10 14:33:01)

for some reason scientist keep banging their heads against the same genetic door. why do they want this to be genetic so badly? There's no such thing as a genetic epidemic! as a parent with a child who has autism, I find this a frustrating waste of energy, time, and funds. its environmental folks. time to come out of denial. its epigenetics. the toxins/pollutants in the environment are changing the way genes are expressing the cells of the brain during gestation and altering the structure and developmental trajectory of the brain. the timing, duration, and intensity of exposure during specific critical windows of development dictate the level of damage done and where that individual will fall on the autism " spectrum" and its in us. these toxins are already in us. so this will be only be getting worse. time to take all those funds and work on trying to isolate the worse toxic offenders and clean up the environment if its not already too late... I'm not hopeful though.

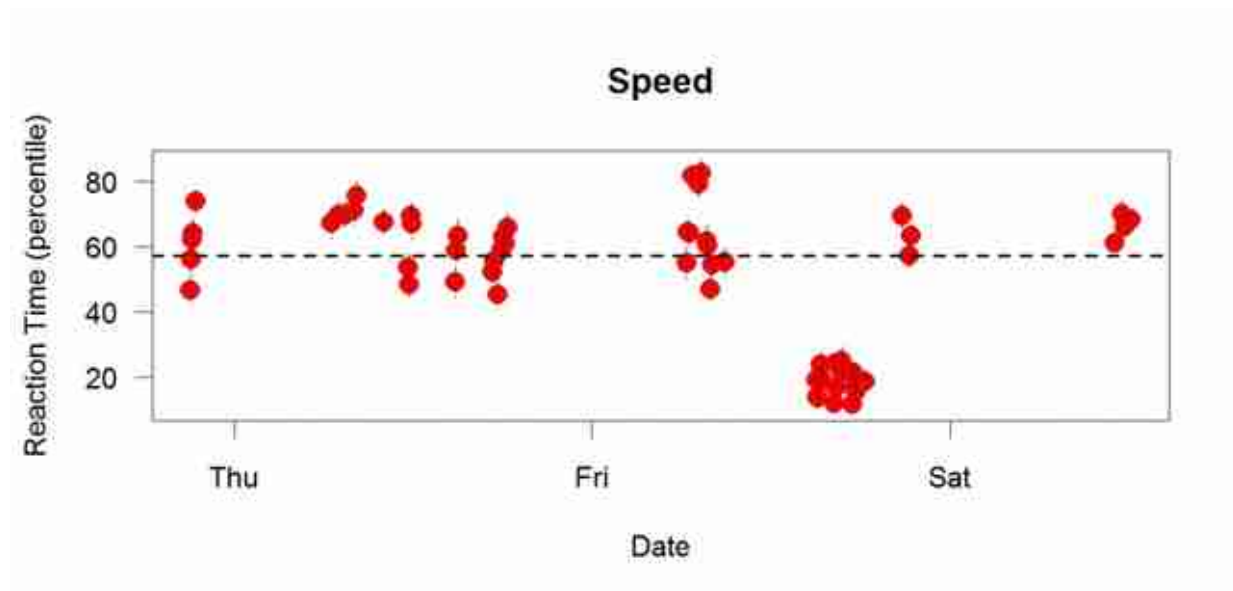
Matthew Ackerman (2012-04-16 11:11:02)

This is a fabulous post, and I whole heartedly support your analysis. [nitpicking] Never the less, I wouldn't be in the sciences if I didn't love nit-picking and correct people. While your number of 1 de novo mutation is doubtlessly the right number to use for your analysis, there are about 175 de novo substitutions per diploid genome, and you can't forget that there are many other classes of mutations. Whole gene duplications and deletions are quite common and likely occur at per base rates comparable to substitutions. Since, of course, the authors were only sequencing the exome, which entails roughly 1 % of the human genome, they were only able to identify 1 substitution mutation per individual. [/nitpicking] I would call their results somewhat suggestive (after all, they did only have 15 nonsense mutations), but certainly the press release and the paper itself oversell their results. I'm not really sure why people are looking for genetic factors when it seems so obvious that an environmental change must be associated with the rise in rates of incidents, since genes simply do not change in frequency

that fast without strong selection. Oh well, yet another case of marginal science getting too much press attention.

## Science in Action: Unexplained Changes in Brain Speed (2012-04-09 05:00)

[1]

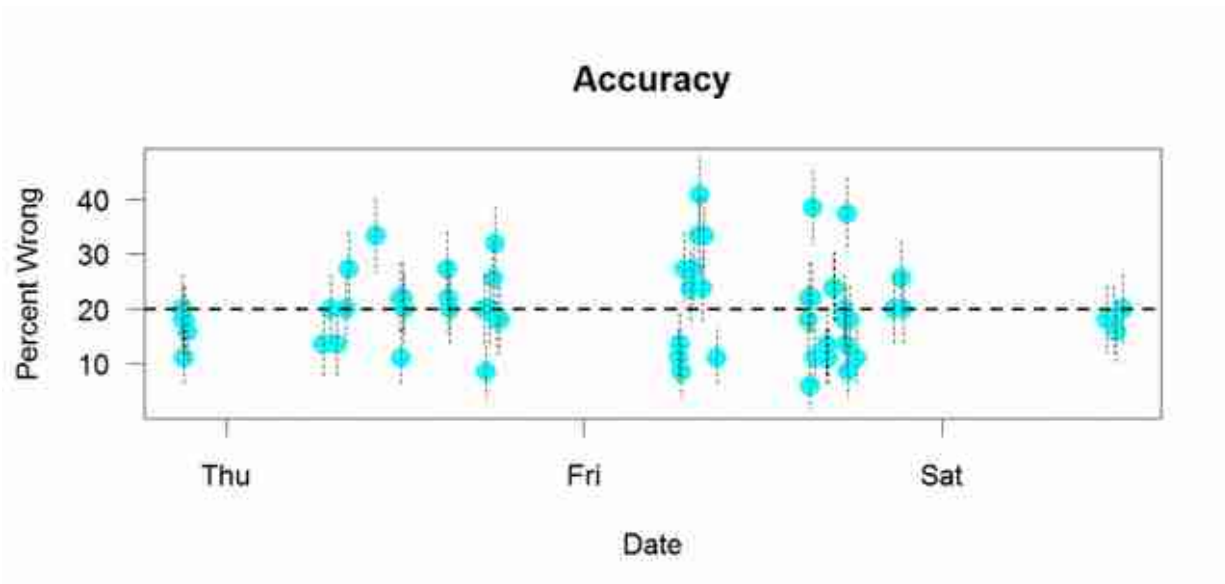


This is me a few days ago. I did a choice reaction time task many times. Each dot is a session with enough trials to supply 32 correct answers. The y axis is in "percentile" units, meaning speed relative to recent performance. If my speed was at the average of recent performance, the percentile would be 50, for example. Higher percentiles = better performance = faster (shorter reaction time). Each point is a mean; the vertical bars are standard errors. The dotted line is the median of the means.

The graph shows that Friday afternoon I was suddenly unusually slow. After dinner, I returned to normal. A change from 60 %ile to 20 %ile to 60 %ile resembles an IQ change from 105 to 87 to 105 (an 18-point change).

At the same time accuracy was roughly constant:

[2]



Because accuracy was roughly constant, the change in speed was not due to a shift on a speed-accuracy tradeoff function.

There are two puzzles here. 1. Why were my scores low Friday afternoon? 2. Why did they recover after dinner? On Friday I didn't feel well. As a result, I didn't eat much. Maybe my blood sugar was lower than usual. I usually eat 30 g butter twice/day. On Friday I didn't have any. At dinner I did have moderate amounts of pork fat (but not butter) and sugar (in lemon citron tea). Friday 6 pm I had a cup of black tea. Although I haven't noticed effects of tea on these scores, there's a first time for everything.

Here is a clue to what makes my brain work well (= fast), I conclude. Butter causes sudden improvement, I have found; which makes it plausible that lack of butter (and other animal fat) could cause sudden degradation. Another possibility was that my blood sugar was low Friday afternoon. (I didn't think of this at the time, and didn't measure it.) I'm surprised that something as important as brain function would be as fragile as these results imply. When various nutrient deficiencies are studied with conventional measures, it generally takes weeks or months without the nutrient for the bad effects to become apparent. It takes many weeks without Vitamin C to get scurvy, for example.

These results raise the intriguing possibility that everyone has sudden ups and downs in brain function and that these ups and downs can be detected at high signal/noise ratios. If so, we can use these ups and downs to learn how to make our brains work well. These results also imply – because my choice reaction time test required only a laptop – that anyone can detect them, study them, and learn what causes them. No experts needed. What a change that would be.

1. <http://blog.sethroberts.net/wp-content/uploads/2012/04/2012-04-07-sudden-unexplained-decrease-and-increase-in-speed.jpeg>
2. <http://blog.sethroberts.net/wp-content/uploads/2012/04/2012-04-07-sudden-unexplained-decrease-and-increase-in-speed-accuracy.jpeg>

Kevin Burton (2012-04-09 20:51:30)

I'm currently running some similar tests. I noticed that in the morning my responses are pathetic. But tend to improve around noon and peak around 6pm. I need to find a way to make the tests FASTER so I do them more often. But it would be nice to get even responses ...

G.H. (2012-04-09 21:18:05)

I've noticed that my performance of tasks involving manual dexterity is best when my normally chilly hands ( 75°F) are closer to body temperature. I have seen this effect in my typing and guitar playing, as well as in my times on tests at the website 'cognitive fun' (e.g. the reaction time and flanker tests). The effect seems to be the same no matter whether I warm up my hands by exercising, considerably overconsuming calories, or hanging out somewhere hot, and with respect to my typing speed the difference is roughly equal to one standard deviation. So, hand temperature might be an interesting variable for you to track, at least for a period, if you haven't done so already.

yiedyie (2012-04-10 03:36:34)

Can you try the same experiment with fish oil (or other omega 3) Did the butter contain omega 3' ALA, EPA, DHA (the grass fed contain omega 3)? Seth: "The same experiment"? what do you mean? I don't know about the omega-3 content of the butter.

David (2012-04-10 04:26:50)

Perhaps your immune system was fighting a low level infection. The body prioritized that fight over general quickness.

dustin lee (2012-04-10 06:54:49)

I'm curious what a "choice reaction time task" is. Is there software for this? Web apps? I searched on the term and saw a few things similar to some lumosity.com games. Just interested in what people are using and what this is proposed to measure.

Kirk (2012-04-10 13:57:17)

I second what David said. I have noticed a number of times that my body prioritizes fighting an infection over other tasks, especially those self-initiated initiatives which require willpower.

Selection bias, or, How you can think the experts don't check their models, if you simply don't look at what the experts actually are doing « Statistical Modeling, Causal Inference, and Social Science (2012-05-02 08:19:12)

[...] discussions of scientific evidence, to experiences with his unconventional weight-loss scheme, offbeat self-experimentation, and advocacy of fringe scientific theories, leavened with occasional dollops [...]

### Assorted Links (2012-04-10 05:00)

- [1]A "safe starch" lowers HDL.
- [2]DIY clinical trials
- [3]omega-3 content versus mercury content of fish: a handy guide.
- [4]Predictions of climate models versus reality. I have only seen careful prediction-vs-reality comparisons made by AGW skeptics. Those who believe humans are dangerously warming the planet appear to be silent on this subject.
- [5]UNESCO's list of "intangible cultural heritage". I like to think the items on the list are clues to human nature.

Thanks to David Cramer and Nadalal.

1. <http://kneelessmegafauna.blogspot.com/2012/04/do-carbs-lower-hdl.html>
2. <http://blogs.wsj.com/health/2012/03/30/when-medicine-really-gets-personal-the-diy-clinical-trial/>
3. [http://www.washingtonpost.com/national/health-science/2012/04/03/gIQA Bd16sS\\_graphic.html?tid=sm\\_gplus\\_wap](http://www.washingtonpost.com/national/health-science/2012/04/03/gIQA Bd16sS_graphic.html?tid=sm_gplus_wap)
4. <http://mises.org/daily/5892/The-Skeptics-Case>
5. <http://www.unesco.org/culture/ich/index.php?lg=en&pg=00011>

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Tom (2012-04-10 08:18:44)

There needs to be a Journal of Personal Science. Seth: I hope so. Thanks for the suggestion.

Alrenous (2012-04-10 13:42:29)

Herring is my fish of choice. This is measured entirely by how it feels to eat it. Now the science tells me it happens to be optimum. I recently did a Willat test of oysters vs. mussels and mussels won. As a bonus, mussels are cheaper. Also fond of crab, and planning to do a proper test of squid. Cod liver oil might be good at mercury and omegas, but in any significant quantities it will give you an overdose of vitamin A. It feels bad to eat.

somebro (2012-04-10 16:50:16)

You also want to look out for persistent organic pollutants in fish. Personally, I don't eat any fish.

Phil (2012-04-11 10:38:21)

Funny, on the day you made your post saying that you haven't seen comparisons between models and predictions except by skeptics, the top entry on RealClimate, the single most prominent global-warming-related blog that is not run by skeptics, was "Evaluating a 1981 temperature projection": <http://www.realclimate.org/index.php/archives/2012/04/evaluating-a-1981-tempe-rature-projection/> Of course, the models have improved a lot since the 1980s but it is still good to look back. You might also want to look at the second plot on <http://web.archive.org/web/20070323005914/http://www.ghcc.msfc.nasa.gov/MSU/musuci.html> which shows global tropospheric temperature anomaly for a longer series, starting in 1979. See if you can figure out why Evans chose to look at how much the temperature has changed since 1988 rather than choosing predictions from a different year. Think it has anything to do with 1988 having the highest measurements of the entire temperature record up to 1998? Nah, gotta be a coincidence, right? After all, he's a climate change skeptic, and we can trust those people to give us the straight truth every time.

Selection bias, or, How you can think the experts don't check their models, if you simply don't look at what the experts actually are doing « Statistical Modeling, Causal Inference, and Social Science (2012-05-02 06:27:45)

[...] response, Phil commented: Funny, on the day you [Seth] made your post saying that you haven't seen comparisons between [...]

### **Paging Dr. Google: Magnesium, Constipation, and Subarachnoid Hemorrhages (2012-04-11 05:00)**

Did you know that magnesium can reduce constipation? I didn't. Did you know that constipation can cause bleeding under your skull (subarachnoid hemorrhages), which are earth-shatteringly painful? Apparently a lot of doctors who treat subarachnoid hemorrhages don't know this. Here is [1]a story from Metafilter:

A year after [cancer] chemo ended I had . . . 4 aneurysms (subarachnoid bleeds) in 12 days. These aneurysms (subarachnoid hemorrhages) were serious agony, the most pain I've ever experienced. . . .

It's like the World Trade Center falling down in one's head, involuntary non-stop screaming, passing out from the pain kind of thing. . . . None of the docs could figure out what these aneurysms were from. They all seemed totally mystified. They gave me a very risky test, brain surgery basically, a brain endoscopy that meant putting a probe into my brain. I had to sign papers that it wasn't their fault I came out a vegetable.

Several lumbar punctures. 2 CT scans then an MRI. Then my neurologist wanted me to do a really risky test, that involved stopping my heart momentarily. . . . The chances of surviving just one of these aneurysms isn't good: "An estimated 10-15 % of patients die before reaching the hospital. Moreover, mortality rate reaches as high as 40 % within the first week, and about 50 % die in the first 6 months." So I felt forced to take this dangerous test. . . .

[I] looked at when the aneurysms happened and the relief I experienced in the Emergency Ward when I'd been injected with magnesium. I googled magnesium and realized its help in treating constipation. I'd been constipated for over a year from the chemo and pain meds for the chemo pain. I realized I had these aneurysms after trying to go to the toilet, from straining. The neurologist didn't want to hear about constipation . . . . None of the docs asked me about constipation. . . .

I self medicated with magnesium citrate, which relieves constipation in a different way than laxatives, it brings water into the colon, which helps the evacuation process a lot. Calcium and magnesium citrates combined, to be exact. And that did the trick, instantly. No more aneurysms. No more dangerous tests. No more brain surgeries.

I wonder if blood tests showed she was magnesium deficient. I also suspect fermented foods would have helped. Chemo causes constipation, I'm guessing, because it kills intestinal microbes, which fermented foods replace.

If you are nickyskye (the author of this) I hope you will contact me, I would like to write more about it and I have some questions.

Thanks to [2]Melissa McEwen.

1. <http://www.metafilter.com/114586/This-is-not-a-necessary-test#4279773>

2. <http://huntgatherlove.com/>

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Paul Jaminet (2012-04-11 06:10:09)

Wouldn't it be equally logical to infer that magnesium deficiency causes aneurysms, hemorrhage, and constipation, as to infer that constipation causes hemorrhage? I can see the constipation-induced blood pressure elevation increasing the rate of bleeding, but there might need to be a vascular injury to begin with.

Nina (2012-04-11 12:05:32)

You sound surprised that head docs don't look below the navel. We live in an age of the specialist and medics rarely stand back to get an overview. I think we always have to do our own research and take responsibility for fighting our own corner, rather than assuming that busy medics will see connections and act on them. Nina

JeffR (2012-04-11 14:40:31)

"chemo causes constipation, I'm guessing, because it kills intestinal microbes, which fermented foods replace." How is this any better than what you complained about other doctors doing. Why would there be any reason to think that constipation due to chemo is related to intestinal microbes? Additionally, why wouldn't you learn about this so you can say why chemo causes constipation and how intestinal microbe death might or might not be related? I don't know why you seem so committed to commenting from a position of ignorance. Not ignorance as in stupid, but ignorance as in a lack of relevant knowledge. Seth: I'm assuming chemo kills intestinal microbes.

Andrew Morrison (2012-04-11 20:04:45)

While well-absorbed forms of magnesium, such as citrate, are better for raising blood and tissue levels, bowel-motility boosting is another distinct project that may work better with less-well-absorbed forms of magnesium, such as oxide. Because less is absorbed, larger doses can be taken safely, and most of it stays in the gut sucking in water until it is dumped.

JRM (2012-04-11 23:26:19)

I knew magnesium was a laxative. Also, calcium acts as an anti-laxative ie it causes constipation.

LB (2012-04-12 00:07:10)

A bit confusing. The original poster seems to be equating aneurysms with subarachnoid hemorrhages. If the former ruptures, the latter happens. However, it is possible to have the latter from other reasons. Also, straining because of constipation may cause an aneurysm to burst. It will not cause an aneurysm to form where there wasn't one before. So... four separate aneurysms burst? Or one bled four times? Because of straining? Anyway... she's very, very lucky to be alive.

peter (2012-04-14 17:33:16)

a number of things, taken at a sufficient dose, will loosen stool. Magnesium is one, potassium is another. as i recall sufficient dose of Vit. C has the same effect, as does epsom salts probably many supplements

## **The American Dietetics Association Wants No Competition (2012-04-11 05:00)**

Michael Ellsberg has [1]an excellent article about the American Dietetic Association's attempts to make it illegal for anyone they haven't approved to give nutritional advice. In [2]this document, they are frank that this is their goal. After Ellsberg drew attention to it, [3]it was taken down. I look forward to learning why it was taken down.

The [4]Washington State chapter of the ADA, now called the Washington State Academy of Nutrition and Dietetics, is responsible for taking down the document. The organization has this mission statement:

Empowering the people of Washington to improve health with safe, effective and reliable food and nutrition information.

Our Vision: Optimize the health and well being of Washington State individuals through food & nutrition.

Our Mission: Empower members to be Washington State's food and nutrition leaders.

Long ago, in the civil rights or suffrage movements, for example, empowerment meant removal of barriers. This organization preaches empowerment by creation of barriers. Their empowerment is someone else's disempowerment.

1. <http://www.forbes.com/sites/michaellellsberg/2012/04/05/american-dietetic-association/>
2. <http://www.reallyeatright.org/wp-content/uploads/2011/11/MarketPlaceRelevanceBackgrounder.pdf>
3. [http://www.eatrightwashington.org/docs/Delegate%20Info/Spring%202011%20-%20HOD%20Market\\_Place\\_Relevance\\_Backgrounder.pdf](http://www.eatrightwashington.org/docs/Delegate%20Info/Spring%202011%20-%20HOD%20Market_Place_Relevance_Backgrounder.pdf)
4. <http://www.eatrightwashington.org/>

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LB (2012-04-11 23:58:13)

"Make it illegal for anyone they haven't approved to give nutritional advice" is inaccurate, misleading, and a gross oversimplification of the issue. And yes, I read both the Forbes piece and the PDF to which you linked. Seth: What was inaccurate or misleading? It's awfully easy to criticize if you don't give examples.

LB (2012-04-12 09:59:09)

Misleading/inaccurate: you make it sound like they want to be able to sue me for telling my friend that an easy way to cut out hundreds of calories a day is to skip the morning and afternoon mochas. I see where you're coming from on this issue, but your post is, as I said, a gross oversimplification. Seth: Thank you for clarifying that. I thought it was clear that they want to eliminate competition and that free advice isn't competition. Competition is other people charging money for nutritional advice.

Kirk (2012-04-12 10:03:03)

The ADA isn't going to like this, but they're going to lose this fight because of technology. The Silicon Valley folks are busy building devices and software so that people can measure their own internal systems. And the Internet allows for consumers to send that information to a nutritional consultant based somewhere out there on the net, whether that consultant is based in the States or in Thailand. Technology is going to blow a hole through many a business plan based upon obtaining rent-seeking gatekeeper status. In the meantime, libertarian-influenced lawyers might successfully fight the rent-seekers.

Floyd (2012-04-22 13:21:32)

I followed there diet gained 39 pounds, had no improvement in blood or sugar went Paleo, no more, lost 40, pounds, blood normal,BP normal its a big con, my Dr said keep up with what I am doing,he had no answers? really

## **Interview with Daniel Wolfson of Choosing Wisely (2012-04-12 07:46)**

The new [1]Choosing Wisely campaign is centered on lists of "unnecessary" medical tests and procedures. The hope is that these lists will reduce waste in the health care system. [2]I wondered what "unnecessary" meant so I interviewed Daniel Wolfson, who is Executive Vice President and Chief Operating Officer of the American Board of Internal Medicine, located in Philadelphia.

At the heart of my question was: why these procedures and not others? Each list has five items. How were they chosen? Here is how the five items on [3]the American College of Physicians' list were selected:

The American College of Physicians (ACP) formed a workgroup of eleven experienced internal medicine physicians with specific skills in the assessment of evidence. . . . The group collaboratively identified and narrowed down screening or diagnostic tests commonly used in clinical situations where they are unlikely to provide high value or improve patient outcomes. The results were further reviewed and narrowed by clinically active ACP staff physicians before being placed for review into a randomly selected internal medicine research panel. Representing 1 percent of ACP members, the panel selected five scenarios that represented the greatest potential for overuse or misuse of a diagnostic test leading to low value care.



I said this sounded like a popularity contest. Mr. Wolfson said, no, the recommendations are based on evidence. "Do you know what a randomized trial is?" he asked. What evidence? I said. It's not on your website.

Yes, it's there, said Mr. Wolfson. He pointed me to the "sources" at the end of the ACP list. Here is one of those sources:

2011 USPSTF screening for coronary heart disease with electrocardiography (draft) guideline; 2011 AAFP recommendations for preventive services guideline; 2010 ACCF/AHA assessment of cardiovascular risk in asymptomatic adults guideline.

This is evidence? I said. It's very vague. At this point Mr. Wolfson ended the interview.

So I continue to think it is a popularity contest. Who knows how the doctors on that "randomly selected internal medicine research panel" made their decisions.

I think the Choosing Wisely campaign is worthwhile, in spite of Mr. Wolfson's implausible claims (he also said the doctors who created these lists were "courageous"). Here's what I would say: The items on these lists are things that many doctors in that specialty think are done too often. The lists are like a free second opinion.

1. <http://choosingwisely.org/>
2. <http://blog.sethroberts.net/2012/04/04/what-is-unnecessary-medicine/>
3. [http://choosingwisely.org/wp-content/uploads/2012/04/5things\\_12\\_factsheet\\_Amer\\_College\\_Phys.pdf](http://choosingwisely.org/wp-content/uploads/2012/04/5things_12_factsheet_Amer_College_Phys.pdf)

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Sam (2012-04-12 12:04:18)

I agree that the "evidence" is vague, but at the same time, I just googled "2011 USPSTF screening for coronary heart disease with electrocardiography" and found the USPSTF's 2004 guidelines (which do not appear to have changed in regards to screening exercise ECG testing). That page is here: <http://www.uspreventiveservicestaskforce.org/uspstf/uspsacad.htm> And here is the accompanying "summary of evidence", which looks pretty thorough (though I admit I've looked at it for all of 15 seconds) <http://www.uspreventiveservicestaskforce.org/3rduspstf/chd/chdsum1.htm> Seth: Thanks, that's helpful. I've looked at it for more than 15 seconds. Here's part of what it says: "when the risk for coronary heart disease events is low, most positive findings will be false and may result in unnecessary further testing or worry. The risk level at which the benefits of additional prognostic information outweigh the harms of false-positive results is unclear and requires further study." I think that it is true for a large fraction of medical tests that "most positive findings will be false and may result in unnecessary further testing or worry". So why pick these five?

Kim Øyhus (2012-04-12 22:43:05)

Here we go again. Seth: You mean here we go again with more self-serving definitions of evidence?

Jim Breed (2012-04-13 09:04:07)

"Do you know what a randomized trial is?" I read that and now I am wiping tea off of my keyboard.

Selection bias, or, How you can think the experts don't check their models, if you simply don't look at what the experts actually are doing « Statistical Modeling, Causal Inference, and Social Science (2012-05-02 06:27:30)

[...] (we taught a course together on left-handedness), has a blog on topics ranging from thoughtful discussions of scientific evidence, to experiences with his unconventional weight-loss scheme, offbeat [...]

## Morning Faces Therapy Improvements (2012-04-13 05:00)

A friend with bipolar disorder writes:

I began the morning faces therapy in April, 1997. I can think of only two significant changes over the years in my use of the therapy: 1) I use a mirror instead of videotapes, and 2) I accept that once or twice a week I'm too tired to start as early as I'd like (so I get more sleep instead). To elaborate:

1) When I restarted the treatment in 2006 after having been hospitalized, I was too depressed to deal with videotaping. In fact, I was too depressed to get out of bed so early. The mirror solved both problems, because I could easily prop it on my mattress top. After a few days I was able to get up, allowing me to listen to music, use bright lights, etc., during the treatment.

2) Whether for lack of discipline or the proper genes, I simply can't go to sleep early enough so that I can get up early every morning. (Granted, I haven't tried everything, but for the sake of the argument, let it stand.) This shortcoming used to bother me a great deal. Then on October 6th, 2011, I read in this blog about someone else who didn't always start the treatment early, because he was "too tired to get up early". Well! It didn't seem so bad if someone else had the same problem. Over the years I've found that starting 30-60 minutes late once or twice a week doesn't seem to perturb my mood enough to cause great concern.

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BlueMorrissey (2012-04-13 11:42:32)

As a bipolar guy, I appreciate your story. I also struggle with the discipline of getting up early and always doing morning faces. I cannot for the life of me look at my face in the mirror. Fortunately I watch CNBC in the morning which has studio hosts that look into the camera and my tv is HD and large enough to keep them close to actual size faces. Music while walking on the treadmill helps too. Like you I just can't wake up in the morning and exercise late, which probably only keeps me up later. I am lucky to have a job that does not start until late in the afternoon so I am not in a rush in the morning. I honestly just feel better when I sleep late, even when I had a 7 am job for 10 years, I could never get my circadian clock in sync and always seemed to be lethargic, unless manic. Good luck getting that balance. I'm always experimenting as I'm sure you are too.

Donald (2012-04-13 14:48:31)

I've recently started morning faces therapy and I still don't know if it works but I do enjoy my routine - before I get out of bed (or after I come back to bed with a cup of tea) I open up my laptop and watch some interviews on bigthink.com for 30 minutes. I watch it full screen but I don't think the faces are life-size, if there's a way round that I'd be keen to know. For me the therapy isn't purely face therapy, people are talking about inspiring and motivating goals and achievements, often with rags to riches

overtones (and I remember reading that it is often goal-oriented events that trigger hypomania so this subject matter is far from neutral). There's lots of scope for tweaks to effectiveness but the positive side at the moment is that it doesn't take discipline.

Kim (2012-04-22 15:51:40)

I would like to subscribe to your blog. Where is the subscribe button? I too, do many self-experiments and have done iodine and coconut oil with success for foot and nail fungus. The jury is still out on the plantar's wart I have had since my teens and the wart that popped up on my hand after I had a 'deep cleaning' done to my teeth by the periodontist.

### **Coconut Oil/Foot Fungus Update (2012-04-15 11:09)**

A month ago [1]I wrote about Chuck Currie's discovery that coconut oil cured his foot fungus and seems to be curing his toenail fungus. He put coconut oil on his foot, put it in a plastic bag, and put a sock on it. Then he could walk around or whatever – vastly more convenient than the soaking remedies (e.g., soak your feet in vinegar) many people recommend (which I tried) and incomparably better than the foot fungus and toenail fungus remedies you find in a drugstore (which I tried many times).

For some strange reason I had foot fungus on one foot but not the other – for ten years. I have been doing Chuck's remedy for a month. Within a few days it was clear it worked. Now the "good" and "bad" foot are indistinguishable. I am writing this post because I discovered that the plastic bag is unnecessary, making it even more convenient. I put the coconut oil on my feet and then put on socks. It still works. Nothing bad happens to the socks, which I think are a cotton/polyester blend.

I've been using Whole Foods house brand ("365") food grade ('expeller pressed virgin organic') coconut oil. A 16-oz jar cost about \$8. Maybe it will last 4 months with daily application. (For toenail fungus. My foot fungus is completely gone.) All other commercial foot fungus remedies should quietly disappear...

1. <http://blog.sethroberts.net/2012/03/02/coconut-oil-cures-foot-fungus/>

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Kirk (2012-04-15 11:22:59)

I tried applying cider vinegar in the morning and coconut oil in the evening. Within 3 weeks the fungus had started to creep down my toes and the numbness in my right foot increased. I abandoned the vinegar/coconut oil experiment and returned to my previous treatment, and am now trialing a modification. The fungus has receded and I have little numbness in my right foot. My current treatment: I apply Povidone Iodine to my toenails in the morning, and in the evening soak my feet in Epsom Salts and then apply Clotrimazole to the toenails. I admit to being surprised at how quickly I saw a change. I'm used to running long-term experiments.

gwern (2012-04-15 12:14:58)

> Nothing bad happens to the socks, which I think are a cotton/polyester blend. So this isn't a very thick layer of coconut oil then? Seth: Yes, a thin layer.

Philip Kilner (2012-04-15 12:47:49)

I'd had athlete's foot for years which kept flaring up again and again (as it does), and a couple of years ago I got a cut in my finger

and developed what I suspected was a fungal infection. The hand infection was much more distressing for me, and was also intermittently quite painful. My doctor made it clear that she would not test it and use something specific, but rather would prescribe ointments by trial and error, so I gave up on that route. When I read your post, I started using Extra Virgin Coconut Oil, as sold for cooking, on both hands and feet. The feet were clear within days, the hands quickly started to improve and are now almost clear. The oil is solid at room temperature, but liquid at skin temperature, so it's easy to handle as it's solid as it comes out of the jar and melts as it is rubbed in. I use a couple of bean sized lumps morning and evening, and I find that I can rub it into the skin so that it's not oily enough to be an issue - less so than the stuff from the pharmacy, anyway. Easier and much less unpleasant to handle than the creams and potions I'd used before, leaves me smelling faintly of coconut (which I like but which doesn't last for very long), but with one critical difference - so far, it actually works! I'm very happy - thanks for the pointer! (BTW, also lost four stone with SLD, so this site has made a huge difference to my life)

Chuck (2012-04-15 19:16:19)

The reason I haven't used the "sock only" method is because I don't often wear socks (I live in So CA a block from the beach). I'm glad it's working for you and you found a more convenient application. I believe I also mentioned to you that a dermatologist told me to soak my foot in a bucket of warm water with a cap-full of household bleach for twenty minutes once every week or two to kill any new fungus. I found this work well along with the coconut oil. Also, the fungus can survive in your shoes, slippers and even the straps of flip-flops (the non-rubber/plastic kind). So it's a good idea, once you start treatment to put anti-fungal powder in your shoes - I through out my sleepers and flip-flops (I replace my flip-flops regularly anyway). Happy Feet

Alex Chernavsky (2012-04-16 06:22:08)

Speaking of skin problems, I have had a long-standing problem with painful cracks developing on my hands during the colder months of the year. I've tried various remedies, including different skin lotions, A & D ointment, and skin crack sealers (the type that resemble nail polish). Nothing worked very well, until I discovered [1]O'Keeffe's Working Hands Cream. O'Keeffe's is truly amazing. I apply it just once a day, using a generous amount at bedtime (I keep a jar of it in my nightstand). The cracks are totally eliminated. I ran out once this winter and didn't replace it for about ten days, and the cracks returned quickly - so I'm pretty sure that it works.

1. <http://www.amazon.com/O'Keeffe's-Working-Hands-Cream-3-4/dp/B00121UVU0>

Tyler (2012-04-16 08:13:21)

Has anyone had any success with this regarding any face-related fungus? I've had a recurring itchy bump for as long as I can remember, and nothing's seemed to work, including nightly coconut oil. I am hesitant to go to a dermatologist and get pills, as I imagine that can't be too great for gut flora, but I'm reaching wit's end. :)

Stone Glasgow (2012-04-16 11:25:48)

Try acetylcysteine for your face. Find cream with it or make your own.

Scott Pierce (2012-04-17 12:10:13)

I've been using H2O2 on ring worm (fungus) that keeps showing up on my sternum and it works within days. If I stop, it will come back in a month or two. Maybe I'll try the coconut oil.

Weekend Link Love - Edition 186 | Mark's Daily Apple (2012-04-22 08:01:19)

[...] Weekend Link Love Welcome Stumblers and all newcomers! If you want to lose weight, gain muscle, increase energy levels, reduce stress or just generally look and feel healthier you've come to the right place. Subscribe to my free weekly newsletter for tips, advice and special insider-only information. Learn more about the Primal Lifestyle by visiting the Primal Blueprint 101 page. Thanks for visiting! Coconut oil: cure for foot fungus? [...]

Weekend Link Love | TrenchPress (2012-04-22 08:42:55)

[...] Coconut oil: cure for foot fungus? [...]

PHIL G (2012-04-22 11:17:21)

I personally use tea tree oil as an anti-fungal agent. As a teen, I frequently had athletes foot infections but never nail fungus. At the first sign of redness, warmth or cracking between toes I now apply tea tree oil. Clears in days. When I travel; hotel showers, gyms and pools are notorious for spreading fungus (tinea pedis) so I preempt the infection by routinely using small amounts of tea tree oil. Seth: A friend of mine used tea tree oil to get rid of her toenail fungus. I tried it and found it worked for foot fungus but not for toenail fungus – maybe I wasn't diligent or careful enough. You write: "As a teen, I frequently had athletes foot infections but never nail fungus." Why is that, do you think?

Stephanie (2012-04-22 16:36:33)

I also successfully treated toenail fungus with coconut oil. After getting out of the shower each day, I put a drop of rubbing alcohol on the nail and allowed it to get completely dry, then I massaged in some coconut oil and went about the day as normal. Within a month, it was nearly gone and after a few more weeks, totally gone. It works!

chuck (2012-04-22 19:04:35)

@scott, Ringworm on sternum - Fought this for 5 years but a few times in the tanning booth killed it and have had no problem for 3 years now

Jscott (2012-04-22 20:07:40)

I've never had 'athlete's foot.' I find this odd. I wonder if that is more important than the cures for it...?

BigTex (2012-04-23 05:11:12)

Just pee on your feet in the shower. Uric acid is your friend.

Jay Valento (2012-04-23 05:46:37)

Trader Joes has coconut oil for 5.99

Brad (2012-04-23 06:08:44)

I'll add another ingredient to this story in that perhaps non-topical application of the Coconut Oil will even required achieve the effect. I recently (3 weeks) started a Paleo type diet including using Coconut Oil in my cooking, at least once a day for breakfast's eggs but often 2 or 3 times. I had developed a fungus like look to one of my big toes over the last two years and it had slowly been spreading, much to my sadness. As of today, however, all of the new growth on the nail is fungus free. Completely unexpected results.

Ronald (2012-04-23 11:10:22)

I too have foot fungus - left foot only - toe nails are "messed" up - since mid 60's - Grisovulfin until mid 70's - also had fungus on right hand - lost all finger nails on right hand only at least 4-5 times - was in a research program for about one year in the mid late 70's - completely cleared fungus on the nails and skin on hand only no impact on the foot - fungus never came back on the hand!! - right foot did not have fungus until 3 years ago - damaged big toe nail at the base - fungus spread very rapidly - the soles and edges on both feet are extremely dry - need to use pumas stone to remove callus build up and sometimes the skin will split causing a little bit of bleeding - thanks I will try the coconut oil Seth: I predict good results.

Kristen (2012-04-24 09:51:32)

Isn't foot fungus or nail fungus a symptom of a systemic yeast infection. I know if I lay off sugar it clears up. Anyone else find the problem is from the inside out?

Gruesome (2012-04-25 09:56:21)

I believe the surest long-term remedy for athlete's foot is going soapless. Your skin will take on Teflon-like qualities, repeling all manner of infections and rapidly healing when broken. This works not only for athlete's foot, but also acne, and festering wounds. It's amazing how little scarring is left if you're hurt, but take all your baths soapless – just running warm water over

your skin without rubbing, or soaking in a warm bath. Your hair also becomes shiny, smooth and full of body without being greasy. And your pits and bits actually smell less and better. Seth: I stopped using soap on my face many years ago. I agree, it's a good idea. I cut way down on soap on the rest of my body when Richard Nikoley recommended it. I think that's a good idea, too, but it did not get rid of foot fungus. I didn't have athlete's foot. Sometimes going soapless helps with acne, sometimes not.

Monica Kelly (2012-04-25 10:00:41)

My doctor had me mix a concoction of coconut oil with oregano oil (from the health food store). I was skeptical as I had fungus in toenails for decades. Completely cleared up with in 6 months!

## **The Feeding Tube Diet (2012-04-16 21:35)**

In The Shangri-La Diet I noted that hospital patients given intravenous feeding often lose a lot of weight without hunger. I said this supported my theory that the body fat set point is raised by the smell of food. Without smell, the set point goes down. When your set point goes down you lose weight without becoming hungry.

You should be able achieve the same effect by nose-clipping all your food.[1] A new diet, however, makes smell avoidance considerably more difficult and expensive.

The K-E diet, which boasts promises of shedding 20 pounds in 10 days, is an increasingly popular alternative to ordinary calorie-counting programs. The program has dieters inserting a feeding tube into their nose that runs to the stomach. They're fed a constant slow drip of protein and fat, mixed with water, which contains zero carbohydrates and totals 800 calories a day. Body fat is burned off through a process called ketosis, which leaves muscle intact, Dr. Oliver Di Pietro of Bay Harbor Islands, Fla., said.

It is a hunger-free, effective way of dieting," Di Pietro said. "Within a few hours and your hunger and appetite go away completely, so patients are actually not hungry at all for the whole 10 days. That's what is so amazing about this diet."

Di Pietro says patients are under a doctor's supervision, although they're not hospitalized during the dieting process. Instead, they carry the food solution with them, in a bag, like a purse, keeping the tube in their nose for 10 days straight. . . .

Schneider said she was never hungry throughout the 10 days she was on the K-E diet, but admits that it still wasn't easy. "It was emotionally difficult, the 10 days of not eating," Schneider said. . . . Although the K-E diet is new to the United States, it has been around for years in Europe. Dr. Di Pietro charges \$1,500 for the 10-day plan, and says the before-and-after pictures sell themselves.

I sympathize with the "emotionally difficult." When I lost 30 pounds in 3 months drinking sugar water, I ate maybe 50 % of my usual calorie intake. I was never hungry and that too was bad. The world seemed drab without hunger.

Thanks to Tom George.

1. <http://gma.yahoo.com/k-e-diet-brides-using-feeding-tubes-rapidly-080053646--abc-news-health.html>

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Adam (2012-04-17 04:55:36)

You can lose a lot of weight quickly without a feeding tube if you cut out all carbs like they do in this diet. When you stop eating carbohydrates, your body will start burning Glycogen for energy. With every molecule of Glycogen you lose four molecules of water – depleting Glycogen stores can, by itself, add up to a 5 kg "weight loss" in which NO FAT AT ALL has been burned. Since the health effects of weight loss are mediated by fat loss and not water loss, this isn't a diet for people who are interested in health. As far as I've seen, they aren't marketing it as such either (which I admire them for), but rather market it toward people who just want the illusion of being slim and healthy, for example for a photo shoot or a wedding.

Jim (2012-04-17 06:03:08)

@Adam, I agree. Although, in general, I do think that losing "water weight" has greater than zero value. If a relatively obese person ends up losing 5 or 10 or 20 pounds of water weight (not necessarily with the above described diet), I think that could add to their quality of life, mobility, self esteem, and ability to be active and continue the process of becoming healthful. So, IMO, while losing fat would have greater benefits, losing water weight would have some health benefit as well (in addition to the aesthetic benefits that you point out).

Ed (2012-04-17 06:20:00)

Dr. Roberts- would you ever think of setting up a SLD Clinic? Basically a formal way to try to get into the habit? Or some sort of community App where people could start it with thier friends, virtual or real? Seth: Thanks for the suggestion. Yeah, I would consider setting up a SLD Clinic. I'll mull it over. As for "community app" [1]the Shangri-La Diet forums are sort of like that.

1. <http://boards.sethroberts.net/>

Kirk (2012-04-17 09:02:55)

@Adam, I disagree. The K-E solution could be changed to include 25 % carbs (and 15 % protein and 60 % fats) , and so long as the client perceived no flavor, it would be as effective for weight loss as is the current solution. If this does not make sense, read Seth's paper about the science of the Shangri-La Diet. @Seth, I wonder if the perceived "emotional difficulty" of flavorless dieting is due to the high quantity of "pleasure mental objects" we moderns have become accustomed to experiencing due to flavored foods. (I am using Cabanac's concepts as he argues in his Fifth Influence book.) If that quantity is removed, then either we feel deprived of pleasure, or we need to adjust our senses and behavior to obtain a replacement quantity of pleasurable mental objects from other sources.

gwern (2012-04-17 09:54:01)

Link missing? Seth: fixed. thanks!

Adam (2012-04-17 17:55:12)

@Kirk, I'm not 100 % convinced that the Shangri-La Diet works for the reasons Seth thinks it does. The only way to find out for sure would be to give it a go. I wonder if they trialed using other combinations of macronutrients... if so, why did they settle on the combo that they use if it isn't the most efficient? Also, 25 % of 800 calories would still be only 50 grams of carbohydrate, which would still be sufficient to put many people into ketosis. Where is the paper about the science of the Shangri-La Diet? Maybe I can convince myself. Thanks for your feedback. Seth: Here is the paper ("What makes food fattening? A Pavlovian theory of weight control") about the science of the Shangri-La Diet: <http://graphics8.nytimes.com/images/blogs/freakonomics/pdf/whatmakesfoodfattening.pdf>

David Johnston (2012-04-17 20:02:38)

I've seen papers that support and papers that refute the set point hypothesis. So I think the jury is still out. It seems fairly certain to me that the brain is in the loop on energy regulation in non-simple ways. So maybe this model (feeding people through a nasal tube) is a way to disentangle some of the variables. It cuts out of the major hard-to-control variables (the nasal and tongue receptors signaling things to the brain as you eat). It's a simple matter to vary the macronutrient ratios without the test subject being aware of what they're being fed. This makes control subjects better controls as well. It's hard to be a good control if you know you're a control. In electronics (I'm an EE) when you have a circuit loop that is misbehaving, the

way to understand it is to break the loop so you can observe the in-out behavior of the individual parts of the loop. Find the broken bit, reattach the loop and see if it works. In a system with multiple interacting feedback loops (as with human diet), understanding it by observing the dynamic behavior is a futile approach. So if there are methods like this that help break the loops, researchers should jump on them and do all sorts of experiments.

Kirk (2012-04-18 09:54:45)

@David, Can you provide links to some of the papers which argue against the set point? It has become a new hobby of mine to read about set points. I have seen some of the more knowledgeable bloggers in the Paleo Nutrition sphere argue against a ponderostat, but they never provide links to scientific papers, nor do they explain how scientists such as Cabanac designed incorrect experiments or misunderstood the results. Bonus points if the papers aren't hidden behind a paywall! Seth: Yeah. And those who don't believe in a set point or ponderostat have yet to discover new ways of losing weight. In contrast to Cabanac and me. A serious problem with their position that they don't seem to understand.

john (2012-04-18 18:54:27)

Seth, you might like the flavour of this abstract . I like *C. elegans* for a number of reasons. <http://www.ncbi.nlm.nih.gov/pubmed/22491324> Abstract Feeding behaviour is modulated by both environmental cues and internal physiological states. Appetite is commonly boosted by the pleasant smell (or appearance) of food and destroyed by a bad taste. In reality, animals sense multiple environmental cues at the same time and it is not clear how these sensory inputs are integrated and a decision is made to regulate feeding behaviour accordingly. Here we show that feeding behaviour in *Caenorhabditis elegans* can be either facilitated by attractive odours or suppressed by repellents. By identifying mutants that are defective for sensory-mediated feeding regulation, we dissected a central flip-flop circuit that integrates two contradictory sensory inputs and generates bistable hormone output to regulate feeding behaviour. As feeding regulation is fundamental to animal survival, we speculate that the basic organizational logic identified here in *C. elegans* is likely convergent throughout different phyla.

john (2012-04-18 18:57:41)

there are some neat abstracts to be found by entering food/smell into pubmed

David Johnston (2012-04-18 19:57:47)

Kirk, Hyperlipid first pointed me to some anti set point papers. I'll go and dig them up. I didn't keep records. This web site pointed me to the supporting papers I've seen. Personally I can see why SPT is convincing. My own personal experience is of set-point like behavior. 245Lbs by for years. High fat, Low carb got me down to 215, but no further. I've been at this weight for a year and now I can 'eat badly' and stay pretty much at 215. It sure looks like a set point. But stable feedback states can look like a set point when it is stable state is actually sensitive to other inputs that aren't being exercised. I'm about to give Shangri-La a go. My goals are more to do with my waistline than in doing science.

David Johnston (2012-04-18 20:18:10)

Kirk, I started here: <http://high-fat-nutrition.blogspot.com/2011/10/adipostat-ballon.html> . Which points here: <http://www.ncbi.nlm.nih.gov/pubmed/14500570> and here: <http://www.ncbi.nlm.nih.gov/pubmed/19190032> Peter's article argues that these two papers give evidence to argue against set point theory. I don't see it myself, but then I'm not nearly as smart as Peter. Stephan Guyenet wrote about Cabanac here <http://wholehealthsource.blogspot.com/2011/08/food-palatability-and-body-fatn-ess.html> and links to the original papers. There were at least two other papers I didn't find. I got them by searching pubmed. What I see is the antis saying the mechanisms aren't set point like and the pros saying but it looks like a set point when we try it. Mechanism vs Effect. Apples aren't being compared with apples. Seth: In his comment at the end, Stephen Guyenet says "this supports the hypothesis that there is a body weight setpoint." True. What Stephen doesn't say, and what is the essence of Cabanac's contribution, is that Cabanac showed you can use the setpoint idea to find powerful new experimental effects. The setpoint idea itself is ancient - from the 1950s. I took the setpoint idea even further: I used it to find new ways of losing weight that work in the real world. I think ideas are ultimately judged by what they can do for us, not by whether they are "true", whatever that means.



Kirk (2012-04-19 11:49:10)

@David, Thanks for the links. I have to admit, I don't understand much of anything written at Hyperlipid. My guess is that the author at Hyperlipid believes the cause of excess weight is malfunctioning mitochondria (which is almost a good enough phrase for a band name). As for the abstracts, the first abstract uses the word 'suggests' several times, which indicates to me that they wade deep in speculation. The second abstract proposes a model based upon a review of the literature; alas, models by definition are speculation. I find it interesting that the abstract says, 'Adiposity is known to be carefully regulated', given that regulation is exactly Cabanac's argument. My hunch is that the people who oppose the concept of a ponderostat do so because they have their own favorite hunch as to THE Cause of Obesity and a ponderostat does not fit their theory.

joseph (2012-04-20 13:49:52)

I'm curious being on the seth diet I'll call it, is the nose clipping part of life for good? Or just for the few months it takes to lose weight?

Nancy Lebovitz (2012-04-20 22:44:37)

What are the aftereffects of the K-E diet? Is the weight loss stable?

TomGinTX (2012-04-21 15:41:27)

Seth wrote: > ... Yeah, I would consider setting up a SLD Clinic. ... I can imagine: "Welcome to the Shangri-La Clinic! Please sit here for an hour." (Hour passes.) "Now pinch your nose shut and drink this oil.... Good! Now sit here for another hour." (Hour passes.) "That's great! You can go home now. Come back tomorrow!" 8-)

Erik (2012-04-22 04:31:16)

Why stop at a feeding tube? Why not walk around with an IV? Maybe hook up electrodes to your head to shock your brain whenever you think of food? Hey, self lipo-surgery sounds good too. Seems what people really need is a little discipline and common sense.

nk (2012-04-22 13:27:53)

what's the ideal ratio of water and sugar for drinking sugar water? I purchased the book but it didn't cover much on the sugar water method so I'd appreciate it if someone can clarify for me! Thanks.

## **Cod Liver Oil Best Taken in Morning? (2012-04-18 05:00)**

Is it better to take cod liver oil in the morning than at other times of day? Kim Øyhus's experience suggests that:

Each mid winter and summer I tend to lose my feeling of when it is day or night, especially if I am in the northern parts of Norway, or if the weather is dark clouds for a long time, which often happens. So sorry, no statistics, just my sense of being unhinged from the diurnal cycle.

Taking 1-2 spoons of cod liver oil in the morning got me back to this rhythm in about 3-5 hours. It even works for fixing my diurnal rhythm after partying to sunrise, but only after a day's rest.

I have [1]posted many times about the value of taking Vitamin D3 in the morning.

1. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>

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## Do Sonograms Cause Autism? A New Study (2012-04-19 05:00)

[1]A new paper ("Are Prenatal Ultrasound Scans Associated with the Autism Phenotype? Follow-up of a Randomised Controlled Trial" by Yonit K. Stoch, Cori J. Williams, Joanna Granich, Anna M. Hunt, Lou I. Landau, John P. Newnham and Andrew J. O. Whitehouse) takes another look at the results of a randomized trial started in 1989. Half the mothers were given one ultrasound during their pregnancy, the rest got five. This study gave a questionnaire sensitive to autism-like traits to the now-grown-up children. This is potentially more sensitive than binary (yes/no) assessment because the questionnaire has about 50 questions.

Here is the entire abstract:

An existing randomised controlled trial was used to investigate whether multiple ultrasound scans may be associated with the autism phenotype. From 2,834 single pregnancies, 1,415 were selected at random to receive ultrasound imaging and continuous wave Doppler flow studies at five points throughout pregnancy (Intensive) and 1,419 to receive a single imaging scan at 18 weeks (Regular), with further scans only as indicated on clinical grounds. There was no significant difference in the rate of Autism Spectrum Disorder between the Regular (9/1,125, 0.8 %) and Intensive (7/1,167, 0.6 %) groups, nor a difference between groups in the level of autistic-like traits in early adulthood. There is no clear link between the frequency and timing of prenatal ultrasound scans and the autism phenotype.

[2]Parrish Hirasaki pointed out to me that when the study was done the intensity of ultrasounds was eight-fold less than now. Here's what the paper says about this:

Technological advancements over the past two decades have led to considerable improvements in ultrasonographic capabilities, with corresponding increases in acoustic output.

Did you read that and realize the intensities have increased by a factor of eight? Neither did I. Such a big difference in intensity means the results are not serious evidence – contrary to what the abstract implies – against the idea that sonograms are now causing autism.

More Asked about the failure to make clear the difference in intensity, the corresponding author, Andrew Whitehouse, replied:

The parameters of the ultrasound scans were reported clearly in the Methods section, and we refer to several other articles that include a description of the USS administered in this cohort. We are also very clear in the Discussion when we state that "the current study was not designed to investigate the use of [modern] instruments".

I disagree. So what if the parameters of the ultrasound scans were reported clearly in the Methods section? That's not the issue. The issue is failure to make clear the huge intensity difference between the ultrasounds they studied and modern ultrasounds. Saying that "the current study was not designed to investigate the use of [modern] instruments" does not make clear at all (much less "very clear") how much modern ultrasounds differ from the ultrasounds actually studied. Any study can put caveats like that at the end. Yet few studies are as irrelevant as this one to the question they claim (in the title, abstract and introduction) to help answer.

1. <http://www.springerlink.com/content/x6w858663540135k/fulltext.html#CR21>
2. <http://blog.sethroberts.net/2012/04/06/do-sonograms-cause-autism-new-evidence/>

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JRM (2012-04-19 07:50:29)

Could someone make a graph of sonogram intensity vs. autism rate?

WB (2012-04-19 09:16:07)

Seth, the manner in which "Dr." Whitehouse responded to your inquiry seems very suspicious to me, suggesting a dishonest answer. Maybe I'm being overly cynical, but his comments to you make me suspect serious conflicts of interest on the part of the investigators; probably difficult to prove of course. Makes me wonder, however, if the journal that published this, or any of the listed investigators, receive \$ \$ from the major manufacturers of ultrasound devices such as GE, Siemens and SonoSite. BTW, I note his basic background is as a speech pathologist who later acquired a PhD in psychology, according to his profile on the website of his employer, the Telethon Institute for Child Health Research based in Perth, Australia. Makes me wonder if any of the investigators were MDs. Seth: My guess is that the article is so misleading because to make clear its shortcomings - its lack of relevance - would have made it harder to publish. But that's just a guess.

Roger Sweeny (2012-04-19 09:53:53)

The study is misleading but not useless. It is evidence that old intensity ultrasounds don't cause autism. It leads to the inevitable question: did the recent surge in autism diagnoses began when old intensity ultrasounds were done or did it wait until modern eight-times intensity? If the former, there is evidence that ultrasounds are not responsible. If the latter, there is evidence that they are.

Tom (2012-04-19 12:18:28)

It seems that it would be very easy to test this in mice. At least whether prenatal ultrasound radiation affected socialization or ability to learn. Seth: It has been tested in mice. Realistic durations and intensities of ultrasound changed (i.e., damaged) the brains of fetuses.

Tomas (2012-04-20 07:51:33)

Seth, are you aware that there is also a very strong correlation between Pitocin (oxytocin) administration and autism? I think that both make strong case, though no studies have been conducted yet.

Nancy Evans (2012-04-20 15:07:32)

This is not a graph but some interesting numbers on Caroline Rodgers' blog <http://carolinerodgers.wordpress.com/2012/04/02/parallels-between-autism-prenatal-ultrasound-increases/> Her presentation at the Interagency Autism Coordinating Committee (IAAC) of U.S Department of Health & Human Services also offers more evidence on this issue.

Nancy Lebovitz (2012-04-20 19:40:27)

Have you read *\_The Brain that Changes Itself\_*? IIRC, that's where I ran into the theory that exposure to white (unstructured) noise before age two could lead to autism because the brain is trying to make sense of sounds where there is no sense.

## Why We Touch Our Mouths So Much: Evidence From Ants (2012-04-20 05:00)

In [1] a recent post I proposed that [2] we touch our mouths so much to transfer germs from our hands to our immune system. It's an early warning system. The full sequence is: 1. Hands. 2. Skin around mouth. 3. Tongue (lick lips). 4. Tonsils (immune system). Forewarned is forearmed: exposure to a tiny amount of Germ X makes you much more likely to survive exposure to a large amount of Germ X.

Ants have a similar early-warning system, says [3] a new study described [4] here.

Cremer and her colleagues began by investigating how nestmates encountering an infected ant acted. They infected *Lasius neglectus* ants with *Metarhizium anisopliae*, a fungus that sticks to the insects' outer cuticles and causes infection only after it has worked its way into the body, which takes a day or more. The researchers then placed infected or non-infected ants in a box with five nestmates, and watched what happened. . . . Ants without the spores were groomed at a constant rate over 5 days, while Cremer saw a spike in grooming of the fungus-infected ants in the first day or two of infection, suggesting that the pathogen was prompting a behavior change in the nestmates.

The grooming was protective:

But even though they'd been exposed, only 2 percent of nestmates died from fungal infections, even though half of the initially infected ants, which had been dipped in solvent with *M. anisopliae* spores, died within 5 days. When ants were exposed to a dose of fungus expected to cause a 2 percent death rate, Cremer's group saw an increase in antifungal activity, suggesting that this low level of infection was indeed enough to stimulate a protective immune response.

Earlier studies had shown what is called "social immunization" ("a protection of naive individuals of a colony after social contact to exposed individuals") among insects. This study was about how social immunization happens.

After I thought of this explanation of mouth touching, I became much less concerned about contact with sick people. I hadn't known about social immunization.

1. <http://blog.sethroberts.net/2012/01/10/why-we-touch-our-mouths-so-often-forewarned-is-forearmed/>
2. <http://blog.sethroberts.net/2008/06/15/why-do-we-touch-our-mouths-so-much/>
3. <http://www.plosbiology.org/article/info:doi/10.1371/journal.pbio.1001300>
4. <http://the-scientist.com/2012/04/03/ants-share-pathogens-for-immunity/>

Ahrand (2012-04-20 07:07:11)

Maybe eye rubbing close to bedtime is similar ? Maybe even nail biting is similar ? (combined with precious nutrient recycling in that case)

charlie (2012-04-20 07:57:46)

What I noticed in law school, where you really don't want to get called upon and then ritually humiliated for an hour, that if you didn't touch your face it looked as if you understood the material – and were less likely to be the victim of the day. Did not work when the prof used an alphabetical chart.

### **Assorted Links (2012-04-22 05:00)**

- [1]ALS patients test home-brewed drug themselves
- [2]Vitamin K in American foods. I was surprised there is a lot more Vitamin K in chicken than other meats.
- [3]Value of early exposure to microbes.
- [4]40+ years of mislabelled cell lines in cancer research. "Nearly 40 years later, Dr. Masters, in a study of scientific papers published between 2000 and 2004, found nearly 1,000 citations of the same contaminated cancer lines revealed in Dr. Gartler's 1966 findings, which have since been replicated many times using more advanced techniques. "They are either crooks or stupid," said Dr. Masters."

Thanks to Peter Spero and Hal Pashler.

1. [http://online.wsj.com/article/SB10001424052702304818404577345953943484054.html?KEYWORDS=AMY+DOCKSER+MARCUS#articleTabs\\_comments](http://online.wsj.com/article/SB10001424052702304818404577345953943484054.html?KEYWORDS=AMY+DOCKSER+MARCUS#articleTabs_comments)

2. [http://www.ars.usda.gov/sp2userfiles/place/12354500/articles/jafc54\\_463-467.pdf](http://www.ars.usda.gov/sp2userfiles/place/12354500/articles/jafc54_463-467.pdf)

3. <http://the-scientist.com/2012/03/22/let-them-eat-dirt/>

4. <http://online.wsj.com/article/SB10001424052970204571404577257513760102538.html>

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The FDA: Even worse than the Fed? « Economic Sophisms (2012-04-22 07:47:06)

[...] saw a link to a WSJ article on 'Do it Yourself ALS Treatment' at Seth Roberts' blog. The gist is that because the FDA (the fiendish bureaucracy which controls medicine in America) [...]

dearieme (2012-04-23 04:45:19)

Is there a way to read the cell line article free?

### **Merck's Vioxx and the American Death Rate (2012-04-23 05:00)**

[1]Ron Unz makes a very good point – that just one awful drug (Vioxx) sold by just one awful drug company (Merck) appear to have caused hundreds of thousands of deaths:

The headline of the short article that ran in the April 19, 2005 edition of USA Today was typical: "USA Records Largest Drop in Annual Deaths in at Least 60 Years." During that one year, American deaths had fallen by 50,000 despite the growth in both the size and the age of the nation's population. Government health experts were quoted as being greatly "surprised" and "scratching [their] heads" over this strange anomaly, which was led by a sharp drop in fatal heart attacks. . . .

On April 24, 2005, the New York Times ran another of its long stories about the continuing Vioxx controversy, disclosing that Merck officials had knowingly concealed evidence that their drug greatly increased the risk of heart-related fatalities. . . .

A cursory examination of the most recent 15 years worth of national mortality data provided on the Centers for Disease Control and Prevention website offers some intriguing clues to this mystery. We find the largest rise in American mortality rates occurred in 1999, the year Vioxx was introduced, while the largest drop occurred in 2004, the year it was withdrawn. Vioxx was almost entirely marketed to the elderly, and these substantial changes in national death-rate were completely concentrated within the 65-plus population. The FDA studies had proven that use of Vioxx led to deaths from cardiovascular diseases such as heart attacks and strokes, and these were exactly the factors driving the changes in national mortality rates.

The impact of these shifts was not small. After a decade of remaining roughly constant, the overall American death rate began a substantial decline in 2004, soon falling by approximately 5 percent, despite the continued aging of the population. This drop corresponds to roughly 100,000 fewer deaths per year. The age-adjusted decline in death rates was considerably greater.

This illustrates how Merck company executives got away with mass murder on a scale that the Khmer Rouge would be proud of. It also illustrates why I find "evidence-based medicine" as currently practiced so awful. Evidence-based medicine tells doctors to be evidence snobs. As I showed in[2] my Boing Boing article about tonsillectomies, it causes them to ignore evidence of harm – such as heart attacks and strokes caused by Vioxx – because the first evidence of harm does not come from randomized controlled studies, the only evidence they accept. It delays the detection of monumental tragedies like this one.

1. <http://www.theamericanconservative.com/blog/chinese-melamine-and-american-vioxx-a-comparison/>
2. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

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WB (2012-04-23 08:45:04)

In addition to the issue you rightfully raise about so-called evidence-based medicine, the Vioxx experience presents glaring "evidence" that the profit motive in medicine is a terrible component of what passes for a health care system. In my view, this is especially true with regard to publicly held companies such as Merck, Pfizer, the medical device unit of Johnson & Johnson, ..... and the list goes on and on. So what we end up with is an egregious combination of bad science and bad policy concerning public health.

bjk (2012-04-23 17:25:19)

"The FDA studies had proven that use of Vioxx led to deaths from cardiovascular diseases such as heart attacks and strokes, and these were exactly the factors driving the changes in national mortality rates. The impact of these shifts was not small. After a decade of remaining roughly constant, the overall American death rate began a substantial decline in 2004" To show that Vioxx was responsible for the decline, we would look at the rate of deaths from cardiovascular diseases and heart attacks

and strokes, not the overall death rate. I don't know what the numbers are, but looking at the overall death rate in 1999 and 2004 is taking evidence anti-snobbery too far.

Alex Chernavsky (2012-04-25 04:38:49)

Evidence that antidepressants lead to premature death: <http://www.sciencedaily.com/releases/2012/04/120424120450.htm>

Nancy Lebovitz (2012-04-28 12:56:42)

What's the lag effect for deaths from Vioxx?

Peter Schaeffer (2012-05-13 12:55:10)

The TAC needs to do some fact checking before publishing something like this. If Vioxx actually resulted in 500,000 premature deaths it would have shown up in the overall death rate. It didn't. See "National Vital Statistics Reports" ([http://www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60\\_04.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr60/nvsr60_04.pdf)). The overall and age-adjusted death rates fell from 1999 to 2005. Indeed, the age-adjusted death rate fell faster after 1999 than it did before. If the 500,000 statistic was correct, there should have been at least 100,000 incremental deaths in the peak year from Vioxx. That's 33 per 100,000 for the entire U.S. See any blips in the data of the magnitude? They don't stand out... Of course, the incremental deaths should really show up in the CVD (cardiovascular disease) mortality statistics. They don't. See "US Death Rates 1975-2009" ([http://seer.cancer.gov/csr/1975\\_2009\\_pops09/results\\_merged/topic\\_graph\\_heartdis\\_cancer.pdf](http://seer.cancer.gov/csr/1975_2009_pops09/results_merged/topic_graph_heartdis_cancer.pdf)). Also see some Arizona specific data ("Trends in Age-Adjusted Mortality Rates of Deaths due to Cardiovascular Disease, Arizona and US, 1980-2004" - <http://www.azdhs.gov/azcvd/documents/pdf/az-burden-of-cardiovascular-disease.pdf>). The Arizona data is not by itself particularly important (state level death rate variations are huge). However, the Arizona data exactly tracks the U.S. overall data. Is it possible that Vioxx resulted in 50,000 deaths over the period in question? Sure. I don't have anything approaching the background to evaluate such a claim. I wouldn't be surprised either way as to the truth. For the record, I do have opinions on topics like this. I spent years deflating Thiomersal / autism claims... However, there is a larger issue here. NSAIDs (Celebrex, Vioxx, Bextra, etc.) are all associated with incremental mortality. Indeed, even Naproxen (also a COX-2 NSAID) has been linked to higher death rates. However, these drugs are simply too valuable to give up. Ask the people who take them, if anyone has any doubts. For many, NSAIDs are the difference between a normal life and ongoing, severe pain. This is why the FDA panel voted 31-1 to keep Celebrex on the market. The same panel also voted 17-15 to keep Vioxx for sale. Even excluding panelists with industry ties, the vote was 8-14 (losing) to approve Vioxx. If Vioxx was really as bad as some allege, why did 8 panelists (with no industry ties) favor its continued sale? Why was the vote in favor of Celebrex (which is also linked to CVD) almost unanimous? See "10 on FDA Vioxx panel had ties to companies" (<http://www.msnbc.msn.com/id/7031927/ns/health-arthritis/t/fda-vioxx-panel-had-ties-companies/#.T6lukFJpe18>) Thank you Peter Schaeffer P.S. I have no ties to the drug industry (other than as a customer). I was once prescribed Naproxen many years ago. It was astonishingly helpful even though I only took it for a week or two. I have taken Aleve (OTC Naproxen) from time to time.

Peter Schaeffer (2012-05-13 12:55:47)

A few more notes. 1. If Vioxx had anything approaching the impact TAC (The American Conservative) is suggesting, it would have shown up in the CVD death statistics first and foremost. It doesn't. 2. Vioxx was withdrawn on September 30th, 2004. Many folks probably continued to take their pills for a few weeks longer. If Vioxx was really so deadly that removing it from the market for the last 3 months of 2004 had a material effect, then much larger increased in death rates should have shown up sooner. Indeed, since it was still on the market for most of 2004, the largest impact on death rates should have been from 2004 to 2005. In fact, the crude death rate rose from 2004 to 2005. Evidently, removing Vioxx raised death rates. 3. The age-adjusted death rates tell a more useful story. The age-adjusted (AA) death rate plunged from 2003 (832.7) to 2004 (800.8). From 2004 (800.8) to 2005 (798.5) it was almost flat. Removing Vioxx from the market stopped (for a while) progress in reducing death rates. 4. The introduction of Vioxx provides even stronger evidence. Vioxx was introduced on May 20th of 1999. However, sales were slow at first. Only 4.845 million prescriptions were written in 1999. The number of prescriptions rose to 20.630 million in 2000 and 25.406 million in 2001 (the peak year). The crude death rate rose from 847.3 in 1998 to 857.0 in 1999. However, it fell to 854.0 in 2000, and 848.5. Evidently an extra 15 million Vioxx prescriptions in 2000 reduced the death rate as did another 5 million in 2001. 5. The AA death rates tell an even better story. The AA death rate rose from 870.6 in 1998 to 875.6 in 1999. However, the

extra 15 million Vioxx prescriptions reduced it to 869.0 in 2000 and another 5 million Vioxx prescriptions reduced it to 854.5 in 2001. As mentioned above, the AA death rate falls from 832.7 in 2003 to 800.8 in 2004 (with Vioxx still on the market for most of the year). It then essentially flat lines in 2005 (798.8). 6. The use of crude death rates is ultimately misleading. The American population is obviously aging. AA death rates make considerably more sense. In a few years, the baby boomers will start dying off in large numbers. The crude death might even rise. What does that demonstrate other than the pig coming out the other end of the Python? 7. Obviously everyone will die eventually and that 500,000 is an estimate of premature deaths. Premature by how much? A year? A month? One second? If the reduction is material it should show up in death rates (AA and crude). It doesn't. 8. Death rates rise and fall for reasons clearly unrelated to Vioxx. The crude death rate rose from 1994 (866.1) to 1995 (868.3) and from 816.5 in 2004 to 825.9 in 2005. 9. See Table 8 [http://www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr49\\_08.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr49/nvsr49_08.pdf) for a comparison of 1998 versus 1999 death rates. The overall death rate fell in the 65-74 cohort while rising 75-84 cohort and the 85+ cohort. CVD fell in both the 65-74 cohort and the 75-84 cohort from 1998 to 1999. The CVD death rate rose for the 85+ cohort from 1998 to 1999. See also Table 9 in [http://www.cdc.gov/nchs/data/nvsr/nvsr50/nvsr50\\_15.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr50/nvsr50_15.pdf) for a 1999 to 2000 comparison. As Vioxx prescriptions soared (quadrupling to 20 million) all 65+ death rates fell. The CVD 65+ death rate also fell. 10. In the last pre-Vioxx year the overall death rate was 847.3. In 2003 with Vioxx going strong, it was 841.9. In 2004 (14 million Vioxx prescriptions) it was 816.5. Of course, the age-adjusted data show that Vioxx "saved" even more lives. The 1998 AA rate was 870.6. The 2003 rate 832.7. The 2004 rate was 800.8. 11. The crude death rate was essentially flat from 2004 to 2005 when it should have fallen the most. The 65+ data is more dramatic. Table 9 of [http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59\\_10.pdf](http://www.cdc.gov/nchs/data/nvsr/nvsr59/nvsr59_10.pdf) shows 65+ mortality rates fell every year from 1999 to 2008. So did the CVD death rates. 12. Any alleged linkage between Vioxx going off the market in 2004 and mortality statistics suffer from a basic flaw. Vioxx was recalled on September 30. September 30th isn't Jan 1. Thank you Peter Schaeffer P.S. I am not claiming that Vioxx was harmless. NSAIDs are (apparently) intrinsically dangerous. However, the incremental deaths were too few to show up in the overall mortality statistics and more decisively, too few to show up in the CVD mortality statistics.

Peter Schaeffer (2012-05-13 12:56:20)

A few more notes 1. There were rumors that Vioxx was dangerous before the recall. Indeed the claims predate FDA approval (clearly another story). However, rumors aren't numbers. There were 19.959 million Vioxx prescriptions in 2003 versus 13.994 million in 2004. That's a fall of 5.965 million. However, the fall from 2004 to 2005 was 13.994 million. Yet, somehow raw (but not AA) death rates fell from 2003 to 2004 and rose from 2004 to 2005. 2004 Vioxx prescriptions were 70.11 % of 2003. That's only slightly below the 75 % we would expect from the withdrawal date. In other words, physician avoidance (pre-recall) was quite modest at best. 2. Total COX-2 sales did not plummet in 2004. The IMS data shows that they were flat or down slightly. Let me quote from "IMS Health, National Sales PerspectivesTM, 2/2005" "Despite the negative publicity and the voluntary withdrawal of Vioxx®, the COX-2 inhibitor class was flat for 2004 with sales of over \$5.3 billion. Celebrex® remained the largest product with sales of \$2.7 billion and Vioxx® achieved sales of \$1.8 billion in the first nine months of the year before being withdrawn on September 29." The link is [http://www.imshealth.com/portal/site/ims-health/menuitem.a46c6d4df3db4b3d88f61\\_1019418c22a/?vgnnextoid=003a1d3be7a29110VgnVCM10000071812ca2RCRD&vgnnextfmt=default](http://www.imshealth.com/portal/site/ims-health/menuitem.a46c6d4df3db4b3d88f61_1019418c22a/?vgnnextoid=003a1d3be7a29110VgnVCM10000071812ca2RCRD&vgnnextfmt=default) Other sources show Celebrex and Bextra sales peaking in 2004. Another report from IMS makes this point and suggests a decline in total COX-2 sales. See "Biotech Remains Industry Growth Engine, With 17 Percent Sales Growth". The key quotes are "Merck's surprise, voluntary withdrawal of Vioxx® in September and potential safety concerns associated with other pain relief medications resulted in doctors switching patients away from Vioxx or starting them on other COX-2 products. Patient volume for the remaining COX-2s initially increased by more than 25 percent following the withdrawal, driven by a 15 percent increase in new therapy starts and a two-thirds share of all Vioxx switches. "Over time, COX-2 usage has declined to below pre-Vioxx withdrawal levels, due in part to further safety concerns about this class of drugs," said Lisa Morris, global director, IMS longitudinal services. "By year-end, the prescription COX-2 and NSAID market saw a 9 percent decline in total patients." The link is [http://www.imshealth.com/portal/site/imshealth/menuitem.a46c6d4df3db4b3d88f61\\_1019418c22a/?vgnnextoid=933a1d3be7a29110VgnVCM10000071812ca2RCRD&vgnnextchannel=41a67900b55a5110VgnVCM10000071812ca2RCRD&vgnnextfmt=default](http://www.imshealth.com/portal/site/imshealth/menuitem.a46c6d4df3db4b3d88f61_1019418c22a/?vgnnextoid=933a1d3be7a29110VgnVCM10000071812ca2RCRD&vgnnextchannel=41a67900b55a5110VgnVCM10000071812ca2RCRD&vgnnextfmt=default). The 9 % decline may have been versus the third quarter of 2004 which means that total COX-2 prescriptions could have easily equaled 2003 (which appears to be the case). See also "Sales rise for Celebrex and Bextra after Vioxx withdrawal" ([http://www.usatoday.com/news/health/2004-11-30-painkillers\\_x.htm](http://www.usatoday.com/news/health/2004-11-30-painkillers_x.htm)) "Pfizer's Celebrex gained a majority of sales for new-generation painkillers in the month after Merck & Co. yanked Vioxx due to safety concerns, according



to IMS Health, a pharmaceutical information company.” 3. 2005 was a very different story. Vioxx sales were zero of course. Bextra went off the market on April 7th, 2005. Bextra did generate substantial revenues in the first quarter of 2005. However, the retail data (not the entire story) show Bextra growing from 2003 to 2004 (to over \$250 million per quarter) and then falling to \$148.370 million for all of 2005. Once again this is retail only data. Even though Celebrex stayed on the market with FDA approval, sales crashed in 2005. See “Sales plummet as cox-2 miasma vexes consumers” ([http://findarticles.com/p/articles/mi\\_m3374/is\\_10\\_27/ai\\_n15341417/](http://findarticles.com/p/articles/mi_m3374/is_10_27/ai_n15341417/)). Quote “According to IMS Health, sales of cox-2 inhibitors have plummeted 65 percent for the first five months of 2005, representing \$1.5 billion in lost sales of Bextra, Celebrex and Vioxx. Of those three drugs, only Celebrex remains on the market. And now, two other cox-2 inhibitors that were in the drug development pipeline at the time of the Vioxx withdrawal are not expected to make it to market any time soon—if at all.” Another source gives a 48 % fall in Celebrex sales in 2005. See “Pfizer to resume airing ads for Celebrex” ([http://www.usatoday.com/money/industries/health/drugs/2007-04-01-celebrex-usat\\_N.htm](http://www.usatoday.com/money/industries/health/drugs/2007-04-01-celebrex-usat_N.htm)). Quote “The return of Celebrex to TV follows its financial comeback. Celebrex sales hit \$3.3 billion in 2004 then dropped 48 % in the year after Vioxx’s withdrawal. Last year, Celebrex sales were \$2 billion. Still, it ranks behind ibuprofen and naproxen in arthritis prescriptions, according to market tracker Verispan. Before the Vioxx recall, Celebrex was ahead of naproxen but behind ibuprofen.” Let’s recap for a moment. COX-2 volumes were flat from 2003 to 2004 and death rates fell. COX-2 volumes crashed in 2005 and death rates rose. This is not the correlation the TAC is suggesting. 4. Drug companies do give away samples that could impact total consumption in 1999. However, volumes appear to be low compared to prescriptions. In 2007, drug companies spent \$8.4 billion giving out samples. See “Pharma scales back drug samples to physician offices” (<http://www.ama-assn.org/amednews/2012/03/26/prl20326.htm>). Total prescription sales were \$286.5 billion (IMS Health). The notion that Vioxx early adopters were more at risk is conceivable, but lacking in any substantiation. Why would doctors single out patients with the greatest CVD risk, as the first users of Vioxx? To make such a claim, the TAC needs facts or at least a mechanism (in my opinion). If Vioxx had been the first COX-2 drug on the market this would be a stronger thesis. A person could argue that the sickest patients (in general), with the most pain, were the first users. However, Celebrex was approved on December 31, 1998. 5. TAC’s use of overall and 65+ death rates suffers from several large problems. The biggest problem is that Vioxx apparently caused heart problems (all of Vioxx’s critics agree on this point). However, there is nothing in the heart disease data to support the TAC thesis. Online data shows that the CVD death rate fell from 1998 to 1999. To be precise the CDC has two sets of data from 1998. The standard data shows a fall for all age groups except for the 85+ group. Overall the rate falls from 268.2 to 265.9. Row 44 (the modified data) shows a slight rise overall (from 264.4 to 265.9) and big falls for the 65-75 group and the 75-84 group. The 85+ group rises as well. Any hint of a spike is absent. The 1999 versus 2000 CVD data show CVD death rates falling for everyone (as Vioxx sales quadrupled). Let’s look at this another way. An incremental 100,00 deaths per year is roughly 33 per hundred thousand for the entire population. No shifts of that magnitude show up in the CVD data. The NVSS (National Vital Statistics System) data makes the same point. The Major cardiovascular death rate fell from 1998 to 1999 (and kept falling in 2000) for all groups except for the 85+ cohort as Vioxx sales soared. Even the 85+ cohort is below 1998 levels in 2000. There is a big fall from 2003 to 2004. However, that should have occurred in 2005. The data has other big falls as well (1988 to 1989, 1989 to 1990, 2000 to 2001, and 2005 to 2006). The subcategories (Heart disease, Heart attack, Chronic ischemic heart disease, Atherosclerotic cardiovascular disease, Heart failure, and Stroke) show the same pattern. Most fall from 1998 to 1999 and 2000. Heart failure and Stroke rise slightly. If Vioxx was nearly deadly as TAC’s asserts, it would show up in the NVSS CVD data. It doesn’t. As a check, I graphed CVD mortality from 1998 to 2007. The Vioxx effect is not apparent. The expected spike from 1999 to 2000 and crash from 2004 to 2005 are clearly absent. Thank you Peter Schaeffer P.S. David Graham estimates that Vioxx might have caused 88,000 to 139,000 additional heart attacks / strokes with a 30-40 % mortality rate. That’s certainly plausible and not contradicted by the CVD data. Of course, total COX-2 mortality must have been higher because of the side effects of Bextra / Celebrex. As everyone knows, Celebrex remains on the market.

Ron Unz (2012-05-15 16:00:16)

Thanks for the interest in my discussion of the Vioxx mortality statistics. Among other matters, my latest column responds to some of the critique above: <http://www.ronunz.org/?p=3637>

## What Motivates Scientists? Evidence From Cancer Research (2012-04-23 05:00)

A friend of mine who worked in a biology lab said the grad students and post-docs joked about the clinical-relevance statements included at the end of papers and grant proposals: how the research would help cure cancer, retard aging, and so on. It was nonsense, they knew, but had to be included to help funding agencies justify their spending.

Principal investigators never say such things. Are they wiser than grad students and post-docs? Fortunately for the rest of us, actions speak louder than words. An action – actually, a lack of action – that suggests that P.I.'s know their research has little connection to curing cancer, etc., is 50 years of widespread indifference by cancer researchers to the possibility that their research uses a mislabeled cell line. For example, you think you are studying breast cancer cells but you are actually studying melanoma cells.[1] A recent WSJ article says that the problem was brought to the attention of cancer researchers in 1966 but they have been "slow" to do anything about it:

University of Washington scientist Stanley Gartler warned about the practice [of using mislabelled cells] in 1966. He had developed a pioneering technique using genetic markers that would distinguish one person's cells from another. Using the process, he tested 20 of the most widely used cancer cell lines of the era. He found 18 of the lines weren't unique: They were Ms. Lacks' cervical cancer. . . . A decade after publication of his findings Gartler attended a conference and introduced himself to a scientist. Dr. Gartler recalled the man told him, "I heard your talk on contamination. I didn't believe what you said then and I don't believe what you said now." "

What he meant was: I ignored what you said. Yet it costs only \$200 to check your cell line. Fifty-plus years later, mis-labeled cell lines remain a big problem. "Cell repositories in the U.S., U.K., Germany and Japan have estimated that 18 % to 36 % of cancer cell lines are incorrectly identified," says the article. This indicates considerable indifference to the possibility of mislabeling.

If you truly wanted to cure breast cancer, would you spend \$200 (out of a grant that might be \$100,000/year) to make sure you were using a relevant cell line? Of course. If you were trying to cure your daughter's breast cancer or your mother's melanoma, would you make absolutely sure you were using the most relevant cell line? Of course. I conclude that a large fraction of cancer researchers care little about the practical value of their research.

I believe that one reason [2]my personal science found new solutions to common problems (obesity, insomnia, etc.) is that my overwhelming goal was to find something of practical value. I wasn't trying to publish papers, impress my colleagues, renew a grant, win awards, and so on. No doubt many cancer researchers want to cure cancer. But this 50-year-and-not-over chapter in the history of their field suggests that many of them have other more powerful motivations that conflict with curing cancer.

Thanks to Hal Pashler. Hal's work on "[3]voodoo neuroscience" is another instance where the guilty parties, I believe, knew they might be doing something wrong but didn't care.

1. <http://online.wsj.com/article/SB10001424052970204571404577257513760102538.html>

2. <http://escholarship.org/uc/item/2xc2h866>

3. [http://www.pashler.com/Articles/Vul\\_etal\\_2008inpress.pdf](http://www.pashler.com/Articles/Vul_etal_2008inpress.pdf)

Alex Chernavsky (2012-04-23 08:00:52)

That *Wall Street Journal* article was really one of the most astounding things I've read in recent memory. Here's another quote that stood out for me:

"Screaming and shouting, it doesn't do any good. No one takes any notice for reasons I don't understand," said John Masters, a professor of experimental pathology at University College London, UCL. "The whole ethos of science is to strive for the truth and produce a balanced argument about the evidence. Yet, all this crap is being produced."

Seth: A curious quote. I don't think it's controversial that scientists have motivations other than "truth". To say "the whole ethos of science is to strive for truth" is to ignore those other motivations: status, job security, attention, community, and so on.

Tom (2012-04-23 09:46:23)

It will change when Fox News demands gigantic cutbacks in research spending because it's all based on fraud like this. A little drum-banging, some Limbaugh mocking, a Bill O'Reilly rant or two, and the grants will be suspended across the board as the GSA tries to clear its name by launching the biggest fraud investigation in recent memory. These can't-be-bothered researchers will start screaming like they're being burned alive. They don't seem to realize that they are standing on the precipice.

Tom (2012-04-23 14:48:54)

More misleading research, this time supporting the use of drugs to treat repetitive behaviors in autism: [pediatrics.aappublications.org/content/early/2012/04/17/peds.2011-3285.abstract](http://pediatrics.aappublications.org/content/early/2012/04/17/peds.2011-3285.abstract)

Nathan (2012-04-24 13:22:43)

[http://www.carolinajournal.com/exclusives/display\\_exclusive.html?id=8992](http://www.carolinajournal.com/exclusives/display_exclusive.html?id=8992) Seth, interesting article: "State Threatens to Shut Down Nutrition Blogger." By North Carolina's reasoning, your blog should probably be shut down.

## Assorted Links (2012-04-26 05:00)

- [1]EMDR discovered by self-experimentation
- [2]Citations about nutritional supplements
- [3]Data support Jane Jacobs's view that diverse cities do better than specialized ones. Ed Glaeser: "To innovate, in Jacobs's view, you often need to borrow the insights of another occupation—and since diverse cities contain many occupations, they should encourage more leaps of insight. . . . About 20 years ago, three coauthors and I examined industrial clusters within cities to test the Marshall-Arrow-Romer hypothesis against the rival Jacobs view. The data supported Jacobs. High levels of industrial concentration within the clusters in the mid-1950s were associated with less subsequent growth between 1956 and 1987." Via [4]Marginal Revolution.
- [5]North Carolina Board of Dietetics threatens nutrition blogger. "Jan. 12 [2012], Cooksey attended a nutrition seminar at a church in Charlotte. The speaker was the director of diabetes services for a local hospital. "She was giving all the wrong information, just like everyone always does — carbs are OK to eat, we must eat carbs to live, promoting low-fat, etc.," Cooksey said. "So I spoke up." After the meeting he handed out a couple of business cards pointing people to his website. Three days later, he got a call from the director of the nutrition board. "Basically, she told me I could not give out nutritional advice without a license," Cooksey said."
- [6]A petition asking the FDA to survey the ultrasound machines used to scan pregnant women. What fraction are defective? Did you know you can buy them on Ebay?

Thanks to Alex Chernavsky.

1. <http://healthland.time.com/2012/04/18/getting-past-your-past-qa-with-therapist-francine-shapiro/>
2. <http://examine.com/>
3. [http://www.city-journal.org/2012/22\\_2\\_ny-finance.html](http://www.city-journal.org/2012/22_2_ny-finance.html)
4. <http://marginalrevolution.com/marginalrevolution/2012/04/assorted-links-436.html>
5. [http://www.carolinajournal.com/exclusives/display\\_exclusive.html?id=8992](http://www.carolinajournal.com/exclusives/display_exclusive.html?id=8992)
6. <http://www.change.org/petitions/fda-conduct-a-field-evaluation-of-ultrasound-devices-in-use-in-prenatal-c>  
are

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Darrin Thompson (2012-04-26 05:56:43)

Re: the NC blogger, I finally figured out how to explain this to software people. The AMA is the MPAA of medicine.

Alex Chernavsky (2012-04-26 10:28:43)

See also this article about "practicing engineering without a license", which is apparently a misdemeanor: <http://www.newsobserver.com/2011/02/03/964781/citizen-activist-grates-on-state.html> By the way, what is it about North Carolina?

Leila (2012-04-27 10:56:09)

NC is also the place where corporal punishment is still legal. [http://www.mattmetzgar.com/matt\\_metzgar/2012/04/corporal-punishment-ii-y-our-mind-is-playing-tricks-on-you.html](http://www.mattmetzgar.com/matt_metzgar/2012/04/corporal-punishment-ii-y-our-mind-is-playing-tricks-on-you.html)

Jm Purdy (2012-04-29 08:04:24)

When I attended Duke University in the early 1960s, I was appalled at how much racism and ignorance there was in North Carolina. At that time, I was told (perhaps erroneously) that there were no black undergraduate students at Duke. The racism began to lessen in North Carolina in the 1960s, but ignorance apparently is still endemic. Some things never change.

### Assorted Links (2012-04-27 13:04)

- [1]The corruption of science by research grants. This reminds me of a BBC documentary called something like Science Under Attack. It was hosted by a Nobel Prize winner (Biology) named Paul Nurse. Part of it was about "climate change denialism". If you don't believe that humans are dangerously warming the planet, Nurse implied, you are somehow attacking science. When people who win Nobel Prizes cannot see that AGW is a crock, something curious has happened.
- [2]Edward Jay Epstein interviews DSK. ""Thank you so much for your interest in this case," he says."
- [3]Researcher discovers new treatment for her own vertigo. "A University of Colorado School of Medicine researcher who suffers from benign paroxysmal positional vertigo (BPPV) and had to "fix it" before she could go to work one day was using a maneuver to treat herself [the usual treatment] that only made her sicker. "So I sat down and thought about it and figured out an alternate way to do it. Then I fixed myself and went in to work" and [thereby] discovered a new treatment for this type of vertigo."

Thanks to Melissa Francis.

1. <http://charlonteaching.blogspot.com/2012/04/how-grant-chasing-corrupts-science.html>
2. <http://www.guardian.co.uk/world/2012/apr/27/strauss-kahn-affair>
3. <http://www.sciencedaily.com/releases/2012/04/120423131846.htm>

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peter (2012-04-27 15:02:25)

use of co-enzyme Q10, ( the Ubiquinol form not the ubiquinone form) has alleviated vertigo.

Volksverhetzer (2012-05-02 16:06:16)

Almost everybody has Vertigo, if you get high enough. It is easy to study construction workers, where they start out not that different than the rest of the population, but end up virtually losing it, after having worked for months on a scaffold or on a roof. I have noticed myself, for instance when I have not worked in a ladder for a long time, that you need some getting used to, before you stop getting Vertigo from looking down. So the simple way to treat Vertigo, is just to spend hours in an altitude where you get dizzy looking down, and sooner or later it stops, and then you can go higher. That construction workers stop having vertigo is also dangerous, as many die from falling down, after behaving like they were working just a couple of meters above ground, when they in reality are perhaps 10 meters or higher.

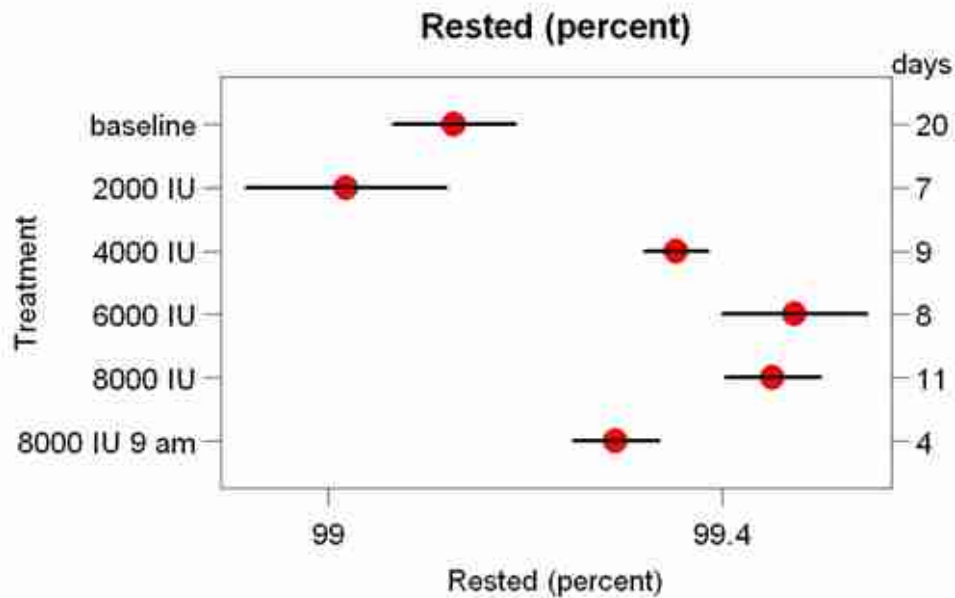
## **Effect of Vitamin D3 on My Sleep (2012-04-28 05:00)**

I have [1]blogged many times about [2] biohacker Tara Grant's discovery that she slept much better if she took Vitamin D3 in the morning rather than later. Many people reported similar experiences, with a few exceptions. [3] Lots of professional research has studied Vitamin D3 but the researchers appear to have no idea of this effect. They don't control the time of day that subjects take D3 and don't measure sleep. If the time of day of Vitamin D3 makes a big difference, measuring Vitamin D3 status via blood levels makes no sense. Quite likely other benefits of Vitamin D3 require taking it at the right time of day. Taking Vitamin D3 at a bad time of day could easily produce the same blood level as taking it at a good time of day.

I too had no idea of the effect that Grant discovered. I had taken Vitamin D3 several times – never in the morning – but after noticing no change stopped. I tested Grant's discovery by taking Vitamin D3 at 8 or 9 am. First, taking it at 8 am, I gradually increased the dose from 2000 IU to 8000 IU. Then I shifted the time to 9 am. The experiment ended earlier than I would have liked because I had to fly to San Francisco.

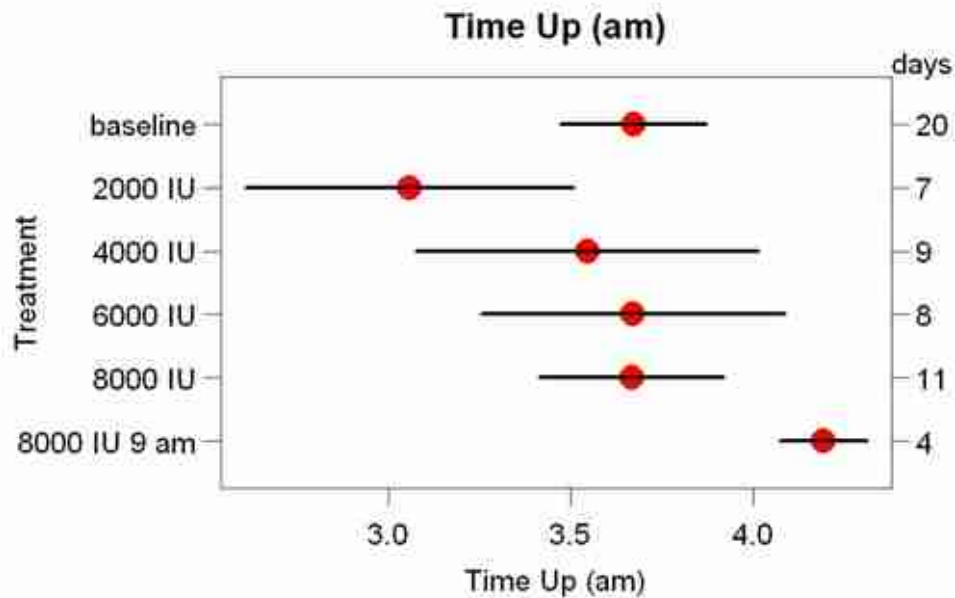
When I woke up in the morning I rated how rested I felt on a 0-100 scale, where 0 = not rested at all and 100 = completely rested. I'd been using this scale for years. Here are the results (means and standard errors):

[4]



Vitamin D3 had a clear effect, but the necessary dose was more than 2000 IU. If Vitamin D3 acts like sunlight, you might think that taking it in the morning would make me wake up earlier. Here are the results for the time I woke up:

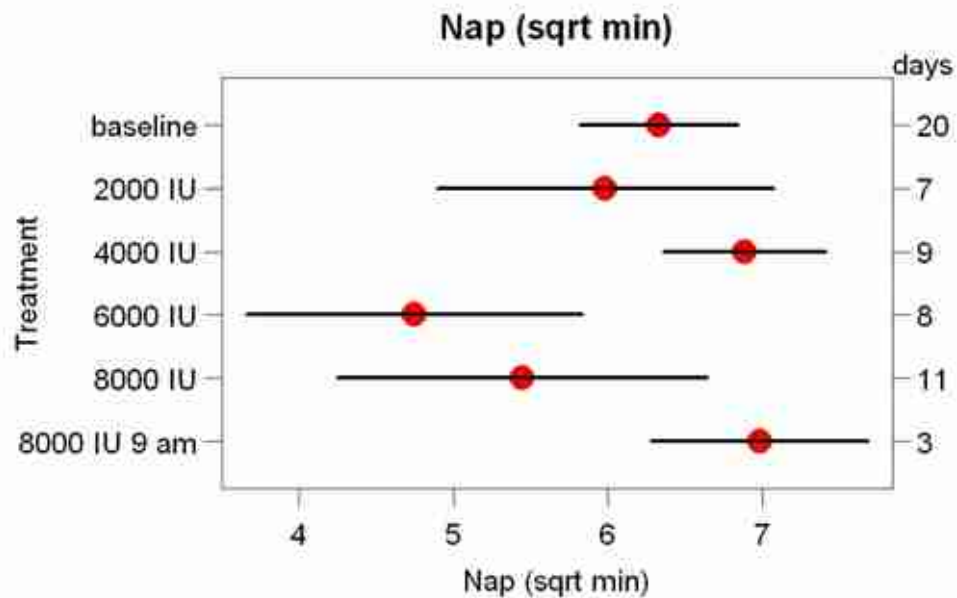
[5]



There was no clear effect of dosage on when I got up. Shifting the time from 8 am to 9 am may have had an effect (I wish I had 3 more days at 9 am).

Many people have reported that taking Vitamin D3 in the morning gave them more energy during the day. I usually take a nap in the early afternoon so I measured its effect on the length of those naps:

[6]



Maybe my naps were shorter with 6000 and 8000 IU at 8 am. It's interesting that 4000 IU seemed to be enough to improve how rested how I felt but not enough to shorten my naps.

What do these results add to what we already know? First, the large-enough dose was more than 2000 IU. ([7]A \$22 million study of Vitamin D3 is using a dose of 2000 IU.) The dose needed to get more afternoon energy may be more than 4000 IU. Second, careful experimentation and records helped, even though many people found the effect so large it was easy to notice without doing anything special. For example, these results suggest the minimum dose you need to get the effect. Three, these support the value of supplements. Many people say it is better to get necessary nutrients from food rather than supplements. However, supplements allow much better control of dosage and timing and these results suggest that small changes in both can matter. I cannot imagine this effect being discovered with Vitamin D3 in food.

1. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>
2. <http://www.primalgirl.com/2011/11/01/nprimalgirl-sleep-issues-vitamin-d/>
3. <http://the-scientist.com/2012/03/01/vitamin-d-on-trial/>
4. <http://blog.sethroberts.net/wp-content/uploads/2012/04/2012-01-17-rested-ratings-vs-Vitamin-D.jpeg>
5. <http://blog.sethroberts.net/wp-content/uploads/2012/04/2012-01-17-time-up-vs-Vitamin-D.jpeg>
6. <http://blog.sethroberts.net/wp-content/uploads/2012/04/2012-01-17-nap-length-vs-Vitamin-D.jpeg>
7. <http://the-scientist.com/2012/03/01/vitamin-d-on-trial/>

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Stone Glasgow (2012-04-28 05:17:56)

You need to control your sun exposure; the body generates huge amounts of D3 in sunlight. Seth: Well, these results were helpful without doing that.

Paleophil (2012-04-28 07:37:01)

Hi Seth, I love your blog and have a couple questions. If taking vitamin D supplements in the morning is beneficial, then does that suggest that eating vitamin-D-rich animal/sea foods in the morning might also be beneficial? Seth: No I don't think it suggests that...I think there is too little Vitamin D3 in them. What do you think of the report by Mira and Jason Calton, authors of Naked Calories, that they traveled around the world to observe over a hundred traditional peoples in what they called The Calton Project (<http://caltonnutrition.com/calton-project.aspx>) and found that traditional peoples tend to eat a meal in the morning (<http://www.fatburningman.com/best-seller-naked-calories-mira-calton-jayson-calton-interview>)? Seth: That's very interesting. I'll try to find out more about it.

Chuck (2012-04-28 08:28:31)

Dave Asprey of Bulletproof Executive mention that the body can store D3 for up to a week. This was in reference to going on a trip and not wanting to take along a bottle of D3. You can take a weeks worth (25-50K IU) at one time and be good to go - if you're going to Hawaii and laying on the beach all day, you're doubly good to go. There doesn't seem to be an upper limit on D3 supplementation. However, tanning could be argued that it is a self regulating limiting factor (the tanner you are the more sun you need to produce the same amount of D3). I've read that the optimal dose is 1000 IU per 25 lbs of body weight - I'm around 130 and take 5000 IU/day - as soon as I get up - plus I spend as much time in the sun without sun screen as possible because I also heard or read that the type of D3 produced from the sun is slightly different from the supplements (and I just like being out in the sun). When it comes to sleep quality, and testing some protocol, I think it would be interesting to hook yourself up to a sleep monitor and compare the results from the monitor to how you feel when you wake up and how you perceived your nights sleep - restless, calm, don't remember a thing, etc. I would test it for some period of time where I didn't see the results from the monitor until the end of the test. I think that would give you a clearer picture of what your mind was doing compared to how you perceived your sleep. Anyway, the sun is out, so I gotta go. Cheers

Tom (2012-04-28 13:54:46)

Seth, if you have an iPhone, there is an app called "sleep cycle" that will track your restlessness during sleep. It uses the phone's accelerometer as a proxy for soundness of sleep. (While the app is designed to wake people up at the best point in their sleep cycle- thus maximizing their feeling of being rested - it also has a "no alarm" mode that would allow you to use it just for its sleep statistics display.)

by (2012-04-28 23:18:57)

I'm interested in the best way to track one's sleep quality. I know Dr. Roberts and others use "sleep-wanted" rating first thing in the morning, but when trying this plus an end-of-day rating for average fatigue, I felt sleep-wanted was sometimes wildly off. However, in some ways it's easier to jot down a number first thing in the morning than review the whole day's energy level at the end of the day. Anyone have any other tips for "pen-and-paper" sleep quality measuring?

Jazi zilber (2012-04-29 02:52:50)

I would not expect naps to be affected. Their function is to refresh after half a day. Which should not correlate much with night sleep. Interesting it is.

Antonio Pedro (2012-04-29 03:33:54)

I am also doing some experiments with it, which I will report soon. I have a question though: what is the maximum recommended dose for D3? Taking over 4000 IU for long periods of time, say years, seems a very large dose to me: I was wondering how safe it is. Cheers, Seth: Different places recommend different dosages. Some people say 2000 IU/day is dangerous. Some people have taken 10000 IU/day for a long time with no problem. Given the time of day effect and the huge importance of good sleep for good health, all previous studies (which did not control for this) are suspect. For example, maybe 2000 IU is only dangerous if you take it at night.

Vic (2012-04-29 10:03:09)

Seth, are you still taking the tablets or have you switched to gel-caps? Supposedly there is a big difference in absorption



between them... Seth: this study was done with tablets. Now I use gelpcaps...what is the difference in absorption?

Paleophil (2012-04-29 12:38:12)

It was an interesting podcast, so I listened to it again and my memory was a bit off. The Calton's visited over 100 countries (with peoples of all types), rather than over 100 traditional peoples. Here is what Jayson said about morning meals: 36:36 "When we traveled around the world, this is what we found: people basically ate in the morning, they would kind of snack on something small in the afternoon and then they'd eat again at night." [http://www.fatburningman.com/best-seller-naked-calories-mira-calton-jayson-ca lton-interview](http://www.fatburningman.com/best-seller-naked-calories-mira-calton-jayson-ca-lton-interview) This and other reports cause me to question whether Stone Age peoples really did mostly skip "breakfast." I suspect that if they had food in the morning before going out to hunt/gather, they would eat some of it (not knowing about any theories about better sleep from skipping breakfast), and if they didn't have any food, they didn't. Also, I doubt they would pass up choice berries, honey or other preferred available foods they came across just because it was morning. This doesn't mean that eating "breakfast" is necessarily optimal in today's world, of course, and some food would probably be gathered and brought back to camp for the main feast in the evening and the foods closest to camp would be used up first, forcing longer-distance foraging and later meal times. Seth: I wonder what they ate in the morning and when, relative to when they got up. I found that eating within about 3 hours of getting up was a bad idea. So an early breakfast would be bad but brunch is okay.

Paleophil (2012-04-29 16:01:11)

Yes, I wondered about that too and did some searching and found some indication that centuries ago people tended to eat breakfast around 9-10 am (<http://www.foodtimeline.org/foodfaq7.html>), rather than earlier. On the other hand, my understanding is that hunters and fishers tend to rise early. If true, then if I were a hunter, I'm thinking I would want to grab a quick bite of leftovers upon rising, so I wouldn't have to carry much or any food while hunting/fishing. Maybe meats and fish are less of a problem when consumed early in the morning than agricultural foods (there is some evidence for this - <http://www.gnolls.org/2181/the-breakfast-myth-part-2-the-art-and-science-of-not-eating-breakfast>)? Then again, going back further in time, in pre-weapon and pre-fire days I doubt hominids would have left much food uneaten in their camps overnight, so as not to attract predators. Perhaps there hasn't been enough time to adapt to morning meals? Seth: I listened to part of the podcast and heard that these indigenous people did not store food but ate it soon after they gathered it. That would rule out eating soon after you wake up. To get food they must have had to walk a considerable distance.

Vic (2012-04-29 22:50:54)

Dr. Davis heartscanblog claims that some people fail to absorb the vitamin D from tablets as well as the vitamin D from gelpcaps. This is based on his clinical experience tracking the response of serum vitamin D in response to supplementation. Seth: Thanks, that's good to know. I found that tablets worked.

Antonio Pedro (2012-04-29 23:58:02)

Hi Seth, thanks for your reply. I understand and agreed with your point regarding previous studies. Yet, "Some people have taken 10000 IU/day for a long time with no problem" is still a little too uninformative (though I see there can't be more precision as of now). My follow up questions is this: can we be tested in any way, such as take a blood test, to detect overdosages? I find it curious that apparently nobody is much worried high intake. Cheers, Seth: "Nobody is much worried high intake"? I am. I use the minimum dose that produces the sleep improvement.

Paleophil (2012-04-30 04:04:38)

Good point. That would fit better with a late morning brunch.

Guv (2012-04-30 19:58:06)

<http://blog.vitamindecouncil.org/2011/11/08/does-it-matter-how-you-take-vitamin-d/> "Does it matter how you take vitamin D" Summary: "The fact is that the studies are so conflicting, and the 25(OH)D measurement techniques are so variable, that it simply does not matter if you take vitamin D in oil or as a powder, it does not matter if you take food with your vitamin D, or on an empty stomach. What matter is that you take enough so that you obtain vitamin D levels of 50 -60 ng/ml"

Jenny (2012-05-01 02:46:34)

I have found over the last 5 months that there is an interaction between D3 (in the morning) and food intake in the evening. I need 3-4000IU D3 (gel caps) to enable me to sleep all night. However, a late (post 8pm) evening meal will disturb this, especially when carbohydrates - as in a pudding - are involved. Then I will wake again, and will not easily return to sleep. This suggests that the Leptin system is involved, (see Jack Kruse's work) and presumably overrides the D3 effect. However, without the D3 to enable me to sleep most of the time, I would not have noticed the effect of the late evening meal. Anyone else have similar observations? Seth: I don't understand the connection with leptin. I think your results suggest that D3 and late meals push in opposite directions. D3 pushes you toward sleeping through the night, late meals push you in the other direction. As for "without the D3 to enable me to sleep..." look up floor and ceiling effects.

gwern (2012-05-02 07:08:12)

As it happens, I finished my own experiment & analysis on Saturday, and as far as my data is comparable to Roberts's, I found the same thing - no effect on anything but restedness/'Morning Feel': <http://www.gwern.net/Zeo> #vitamin-d-at-morn-helps Isn't that strange? You'd expect the mood improvement to be mediated by sleeping better on one of the other metrics - sleeping more, waking less, etc. - but apparently not. Are there any neurobiologists or circadian specialists around?

Nick Winter (2012-05-05 05:51:45)

Seth, what's going on with the "Rested (percent)" x-axis? Are you really measuring significant difference in restedness feelings only around 98.9 % - 99.5 % on a scale of 0-100 %? Or is there some mistake with the labeling? Seth: The label is correct. If you think those differences are too small to tell apart, subtract them from 100. The implication that I wake up each morning feeling very rested is true. A psychologist named S. S. Stevens spent his whole career showing that people were quite good at attaching numbers to "sizes" (he used the word "magnitude") of internal states, such as loudness. Here I am attaching a number to how tired I feel when I wake up.

Anne (2012-05-16 10:26:04)

Hi Seth I just found this blog and it is very interesting. I am amazed about this topic. I have struggle with sleep problems for over 10 years and have tried almost everything. But this is complete new to me. I take 2000 D3 in the morning since some years back and it have worked wonders with the mood in the winter. May I ask to have some advice on how much I should take in the morning, and do I need to take something more. As I usually take Magnesium and calcium in the evening. Or is it posted in more detail earlier that I have missed Seth: I found that 2000 IU had no effect on me but 4000 IU and higher doses did have an effect. Now I take 5000 IU D3. Try different times in the morning: 7 am, 7:30 am, 8 am, etc. Figure out which works the best.

Anne (2012-05-16 23:55:16)

Thank you Seth ! I have taken 6000 this morning, as I have earlier irregular been taken 4000 and have not notice any diffence.

Guv (2012-05-17 20:26:45)

Just come across a few articles by Stasha Gominak, M.D. She writes that ideally the D25OH blood level should stay between 60 and 80 ng/ml to sleep perfectly. She also writes that "sleep (is) just as abnormal when it goes over 80, as it does when it's under 50." <http://drgominak.com/vitamin-d> <http://drgominak.com/sleep> Some food for thought there, something to keep an eye on if/when your 25ohD gets above 80 ng/ml Seth: Dr. Gominak's emphasis on blood levels - although conventional - doesn't make sense given the enormous importance of time of day. Maybe a blood level of X (e.g., 60) is good if you take your D3 at the right time of day and bad if you take it at the wrong time of day.

Anne (2012-05-18 13:01:34)

@ Gav Thank you so very much for the link on May 17th on D3- Ot was very useful and interesting. Now it really make sence too my and I undertand a lot of my doughther al well

Guv (2012-05-18 22:08:05)

I have also found the time of day to be important. & I have tested the theory that taking D3 in the evening before bed may disrupt sleep. In one experiment i took 2000 IU before bed & it felt like i was awake all night....I will not be repeating that experiment. I wonder if Dr. Gominak's upper limit of 80 ng/ml may also have some validity; ie. if ones serum 25ohD was slowly rising from the morning supplementation over time (months) until it finally got over 80 ng/ml, then sleep may become disrupted again, even with the morning D3 supplementation. That said, i would presume that most peoples serum 25ohD is nowhere near 80 ng/ml. That reminds me, i must get mine tested again, as we head in to Winter here in the southern hemisphere.

Anne (2012-05-20 01:11:38)

@ Gav I have read the Gominak links once more, they are really good and gives a lot of answers. I need to find a place to have my level checked to.

### **Interview with a Shangri-La Dieter (2012-04-29 05:00)**

A few days ago I asked Mark Qualls, a 59-year-old truck driver who lives in Longmont, Colorado, about his success with the Shangri-La Diet, which [1]he posted about.

How did you learn about it?

Freakonomics. When I read about you in that book, it made sense to me. The whole idea of a setpoint. I used to be an accountant. I weighed 290 pounds. I'm 6' 2". I lost 25 pounds when I started driving a truck. I've been there for almost 12 years. Around 260. I get a lot of exercise delivering groceries. I can eat anything I want but the idea of going on a diet makes me hungry. My doctor said lose a bit of weight but I just couldn't do it.

How do you do the diet?

I use canola oil. I tried flax seed oil but it has a horrible taste. I have no problem taking the oil. I feel like I could do the oil for the rest of my life. At least 4 tablespoons per day. I don't measure it. I have a jar by a sink at home, another in my truck. I take a sip, what seems about a tablespoon. I figure I'm getting at least 4 tablespoons per day. Some days I may get only 3 tablespoons.

What effect has it had?

I feel like I'm in control. I stopped drinking sweet tea, used to drink tons of it. For 20 years. I've been able to stop. I couldn't stand drinking water. Now that's all I drink. That's all I've had for two months. The most bizarre thing to me in the world. I deliver to convenience stores. All they have is soda pop and doughnuts and all that kind of stuff. I'd stop and have a doughnut and chocolate milk. Now I can go without it. I still think about it but now I can say no.

What about weight loss?

I'm down from 255 to 229 – a little over 2 months. I don't really try that hard. I pretty much eat what I want. On two days per week I try to eat hardly anything. Unless I almost eat nothing, I stay at the same weight. It's not hard to do it – to eat almost nothing. Almost any time of day or night I think "I could eat something". But then it's okay not to. It gives you willpower – that's how I explain it to people. Find the book and read the whole thing, I tell them. They need to understand the whole concept before they start taking oil.

Any downsides?

Eating is enjoyable to me. My mom is a great cook. My wife is a great cook. I like to eat. It's emotionally satisfying thing to eat stuff. But when I take the oil I can not eat. Now I eat slower. To try to enjoy the little bit of food you do it. You're not going to eat 3 more times today. I tell myself, I'm going to enjoy every bite of this cottage cheese. Because that's all I'm going to eat today. The social part I miss. It's a social part of your life that you don't have any more. Most of the time I've gone to eat with people since I started, I go ahead and eat something because I don't want to be a jerk about it. I still lose weight. That will be a day where I don't lose weight when I go out to eat. To lose weight I have to have a day when I don't eat anything. Today is a day where I told myself I want to lose 1 more pound. I ate breakfast with a friend,. There's nobody who expects me to eat with them. My wife's away.

How do other people react?

My wife's a skeptic about the whole thing. She doesn't think I can't keep the weight off. One lady at church, she got the book right away. She'd lost 50 pounds eating 1000 calories per day. She started the oil. She's gung ho about it. We see each other Sunday: how much did you lose this week? we ask.

1. <http://boards.sethroberts.net/index.php?topic=8231.msg105461#msg105461>

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## 7.5 May

### Assorted Links (2012-05-01 02:23)

- [1]The magic of mangoes. "In one double blind trial which included a low fat diet, the participants who took the mango supplements lost 5.3 per cent of their body weight while the control group lost only 1.3 per cent." Which sounds impossible.
- [2]Greek yogurt taste test
- [3]Umami flavour as a means of regulating food intake and improving nutrition and health
- [4]Babies fed breast milk have better intestinal microflora than babies fed formula. "Our findings suggest that human milk promotes the beneficial crosstalk between the immune system and microbe population in the gut, and maintains intestinal stability."

Thanks to [5]Melissa McEwen and Bryan Castañeda.

1. <http://www.timesofmalta.com/articles/view/20120318/health-fitness/The-magic-of-mangoes.411687>

2. <http://nymag.com/restaurants/features/greek-yogurt-2012-5/>

3. <http://nah.sagepub.com/content/21/1/56.short>

4. <http://www.sciencedaily.com/releases/2012/04/120429234641.htm>  
5. <http://huntgatherlove.com/>

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dearieme (2012-05-01 05:41:55)

i) Mango: I don't know the African variety but can vouch for the Pakistani ones - delicious. ii) Yog: I buy Total and when I want a bit of fruitiness stir in some of my wife's wild bramble jam. Delicious too.

gwern (2012-05-01 08:09:35)

Agree on yogurt. I don't know if there are health benefits (no-fat versions seem to be most common), but plain slightly tart strained yogurt certainly does taste great when you mix in some jam or jelly.

sm (2012-05-01 13:41:27)

Mangoes—university where mangoes are a major export (Benin) publishes a study showing that mangoes cause weight loss. Please don't judge me, but I'm a little skeptical. Seth: I am more than a little skeptical.

Bob (2012-05-01 17:14:42)

Close tag to make Umami item appear. Seth: perceptive of you to figure out it was about Umami.

aelephant (2012-05-02 06:14:51)

Full free text of the mango study is here: <http://www.ncbi.nlm.nih.gov/pubmed/19254366>

Carol (2012-05-03 10:20:03)

Wow, the lowering of the CRP is dramatic. 50 % over the course of the study. This older study also concluded that IG (and another product together) worked <http://www.lipidworld.com/content/7/1/12>

## **Overtreatment in US Health Care (2012-05-01 22:31)**

In April there was a conference in Cambridge, Massachusetts, about how to reduce overtreatment in American health care. [1]Attendees were told:

The first randomised study of coronary artery bypass surgery was not carried out until 16 years after the procedure was first developed, a conference on overtreatment in US healthcare was told last week. When the results were published, they "provided no comfort for those doing the surgery," as it showed no mortality benefit from surgery for stable coronary patients.

One participant said that overtreatment cost one-third of US health care spending. As far as I can tell, no one said that "evidence-based medicine" underestimates – [2]in the case of tonsillectomies, almost completely ignores – bad effects of treatments. This failure to anticipate and accurately measure bad effects of treatments makes the overall picture worse. Maybe much worse.

1. <http://www.bmj.com/content/344/bmj.e3144?etoc=>
2. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

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WB (2012-05-03 17:00:07)

Seth, thanks for providing this info. It is extremely important and I'm surprised no one else has commented yet. To my way of thinking, the story of medical overtreatment should have exploded into a major scandal years ago; and I don't understand why the main stream media hasn't been all over it. Must be the "anechoic" effect at work; Dr. Roy Poses at Healthcare Renewal has been talking about that for a very long time. Thanks again for your blog and the interesting topics you bring to us. Regards, WB

### **Morning Faces Therapy for Bipolar Disorder: What One User Has Learned (2012-05-03 05:00)**

A friend of mine has been using [1]morning faces therapy to improve his mood – he suffers from bipolar disorder – for 15 years. He is the first person I told about it. I recently asked him how his use of it has changed over the years. He replied:

I began the morning faces therapy in April, 1997. I can think of only two significant changes over the years in my use of the therapy: 1) I use a mirror instead of videotapes, and 2) I accept that once or twice a week I'm too tired to start as early as I'd like (so I get more sleep instead). To elaborate:

1) When I restarted the treatment in 2006 after having been hospitalized, I was too depressed to deal with videotaping. In fact, I was too depressed to get out of bed so early. The mirror solved both problems, because I could easily prop it on my mattress top. After a few days I was able to get up, allowing me to listen to music, use bright lights, etc., during the treatment.

2) Whether for lack of discipline or the proper genes, I simply can't go to sleep early enough so that I can get up early every morning. (Granted, I haven't tried everything, but for the sake of the argument, let it stand.) This shortcoming used to bother me a great deal. Then on October 6th, 2011, I read in this blog about someone else who didn't always start the treatment early, because he was "too tired to get up early". Well! It didn't seem so bad if someone else had the same problem. Over the years I've found that starting 30-60 minutes late once or twice a week doesn't seem to perturb my mood enough to cause great concern.

I asked how the therapy has helped him. He replied:

The benefits of the morning faces therapy have been both 1) quantitative and 2) qualitative.

1) I have had bipolar disorder for 27 years. With the therapy, I've been medication-free for 6 years, and I was on much reduced doses of medication for about 7 years. So it's fair to say the therapy has reduced the severity of the illness by around one half. Also, the lithium that I took in part caused kidney disease, whereas, obviously, there are no side effects from looking at faces in the morning.

2) The qualitative difference seems far more important to me. I am basically content with life; I am

comfortable in my own skin. I've never felt like this before, and life without this is empty.

Note to skeptics: you might think, well, bipolar disorder is known to go in remission, and maturity often brings contentment. But this fails to explain why stopping the treatment brings back both the illness and the essential sadness.

1. <http://blog.sethroberts.net/morning-faces-therapy-resources/>

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### Three Days in May: Sex, Surveillance, and DSK (2012-05-03 05:00)

Nicholas Sarkozy must be kicking himself. Sometimes a bird in the bush is worth more than a bird in the hand. If only I'd waited... He struck too soon. If only he'd waited until Dominique Strauss-Kahn (DSK) became his main opponent and then created a DSK scandal. The opposition would not have had time to regroup. DSK was careless, creating opportunities for his opponents. Edward Jay Epstein's new book, [1]Three Days in May: Sex, Surveillance, and DSK, makes clear that DSK was being monitored, presumably via his cell phones. A first-rate intelligence organization, says Epstein, can turn on your cell phone and listen to you. At one point a French journalist is given a transcript of a call that DSK made. How was this possible? the journalist asked. The answer given is that by freakish coincidence "DSK's speaker phone was accidentally left on while his line was somehow connected to a French phone that was legally under surveillance." Why the speaker phone should matter is not explained.

Such means of surveillance – available to those in power, but not to the rest of us – make those in power more powerful, harder to unseat. However, Epstein's book also shows the effect of lower-tech new recording devices, especially CCTV recordings, cell phone records, and key-entry logs. They make it harder to lie. DSK's accuser, Nafissatou Diallo, was lying, no doubt. The district attorney's office got to "Version 3" of her story before giving up. The discrepancies between what she said happened and the key-entry records reveal her lies beyond doubt. The new recording devices also pull two people into the story who otherwise might have remained out of it: a security guard and the head engineer at the hotel, who went into a private loading-dock area and did a kind of victory dance shortly after 911 was called. The 911 call made the matter public, which effectively destroyed DSK's chance of elective office. They claim to not remember what they were celebrating. If it had nothing to do with the 911 call, it is exceedingly strange – another freakish coincidence – that it happened at exactly the same time.

Three Days in May is a new kind of investigative journalism in the sense that it is based on detailed electronic records (such as CCTV tapes and key-entry records) that weren't available until recent years. Stories and movies are often set in remote locations or times to give the story a kind of freshness. Here freshness derives from the information being used. Epstein assembles hundreds or thousands of facts from these records into his story. I was interested to see a kind of power-law distribution of information value,[2] the same thing I see in my self-experimentation: almost all of the facts tell us just a little, a very tiny fraction of them tell us a lot. Although electronic surveillance is usually considered a government tool ("Big Brother is Watching") Epstein's book makes a more subtle point. These records make false accusations more difficult to sustain and conspiracies more difficult to carry out without detection – and who does that help? In any case, Three Days in May is a fascinating true crime story – and the criminal is not DSK.

1. <http://mhpbooks.com/books/three-days-in-may/>

2. <http://media.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

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Paul (2012-05-03 07:44:11)

DSK was a key threat to the austerity regime currently ruling (and decimating) Europe. I suspect the order to take him out came from higher up than Sarkozy.

Tom (2012-05-03 08:14:20)

Every couple of months, there's a story about how police pulled over a car for a burned-out taillight and "happened" to find millions in drugs in the car. I've always assumed those are actually illegal cellphone wiretap/warrantless search cases. BTW, look for many more of these cases shortly, as the FAA is about to be forced to give all police depts the right to fly quiet, unmanned surveillance drones everywhere, 24/7, without a warrant. Yep, only a few days before your local Chief Billy Bob has his own swarm of the things. [nytimes.com/2012/02/18/technology/drones-with-an-eye-on-the-public-cleared-to-fly.html?pagewanted=all](http://nytimes.com/2012/02/18/technology/drones-with-an-eye-on-the-public-cleared-to-fly.html?pagewanted=all)

Toli (2012-05-03 11:11:40)

At yesterday's debate between the French Presidential contenders, Sarkozy was trying to squeeze as much out from the DSK situation for political advantage... From the Times' liveblog: But that high-minded discussion quickly descended into crosstalk and a return to accusations of guilt-by-association that marked the debate's beginning. "No lessons from the political party that united behind Dominique Strauss-Kahn," Mr. Sarkozy said. Mr. Hollande responded by observing that Mr. Sarkozy had appointed Mr. Strauss-Kahn to the International Monetary Fund. All the best to set you up, my dear...

LemmusLemmus (2012-05-03 12:22:24)

Unless you have strong evidence from the book or elsewhere that Sarkozy's people were surveilling DSK, the first few sentences appear quite careless. I have not read the book, but I am pretty sure no such evidence is presented in it, having read an in-depth interview with Epstein on the occasion of its publication. Seth: A transcript of a phone call is not evidence of surveillance?

LemmusLemmus (2012-05-03 23:26:42)

Seth, was the transcript found in Sarkozy's pockets? His home? His office? Seth: Feel free to ignore my Sarkozy speculation.

Phil (2012-05-10 21:26:57)

This thread seems long dead but I just read the blog entry. You say 'At one point a French journalist is given a transcript of a call that DSK made. How was this possible?' the journalist asked. The answer given is that by freakish coincidence "DSK's speaker phone was accidentally left on while his line was somehow connected to a French phone that was legally under surveillance." Why the speaker phone should matter is not explained.' Maybe I'm missing something but the possible explanation that jumps immediately to mind is that DSK left his speakerphone on, connected to a phone under surveillance, while he made a call on his cell phone or on another phone. This would of course let the surveillers (if that's a word) hear DSK's end of the conversation, or, if his other phone was also on speaker, would let them hear the whole thing. That part seems easy enough and quite plausible; for instance, I use my office phone for some calls and my cell phone for others (even when I'm in my office) so if I somehow were to leave my speakerphone on, this could happen to me. Or at least, it could happen to me if my speakerphone were connected to another phone that was under surveillance. But that's the part that seems wildly improbable. For this to have happened, DSK \_and\_ the party on the other line would have to have \_both\_ failed to hang up. Or at least I think that's the case. Maybe it isn't; maybe if the person on the other end hung up, but DSK didn't the connection would still exist? If so then this is at least plausible: if DSK fails to hang up his phone 1 % of the time, and the person on the other end is the same, then this is the difference between a 1 % chance and a 0.01 % chance.



## Drug Companies Release More Data From Drug Trials (2012-05-05 05:00)

Drug companies, in a few cases, have<sup>[1]</sup> recently started to release much more data from drug trials. Unsurprisingly, analysis of the new data by outsiders – people who have nothing to gain from positive results – has often contradicted the drug company analysis of the same data.

One example involves the flu drug Tamiflu. The new analysis suggested that "Tamiflu falls short of claims—not just that it ameliorates flu complications, but also that the drug reduces the transmission of influenza." Another example involved Prozac. The new analysis "ended up bucking much of the published literature on antidepressants. . . . [It]found no link between Prozac and suicide risk among children and young adults . . . Prozac appeared to be more effective in youth, and antidepressants far less efficacious in the elderly, than previously thought."

Another reason to believe in the value of this new data is the work of Lisa Bero at UCSF. She looked at the efficacy of nine drugs using unpublished FDA data. "Nineteen of the redone analyses showed a drug to be more efficacious, while 19 found a drug to be less efficacious. The one harm analysis that was reanalyzed showed more harm from the drug than had been reported."

I hope that the FDA will eventually require that all raw data from drug trials be publicly available as a condition of approval. (The same should also be true of journal articles, as a condition of publication.) It is abundantly clear that drug company analyses are often misleading – which harms the public.

1. <http://the-scientist.com/2012/05/01/data-diving/>

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## How to Beat the Heat: Wet T-Shirt Edition (2012-05-05 13:52)

It has gotten hot in Beijing. Two days ago it was 90 degrees. Yesterday it was 84. For my (2 or 3) Beijing readers: I discovered an incredibly easy way to cool off. Take a T-shirt, get it as wet as desired, put it on. Instant cool. No need for noisy fan or air conditioner. Surely this is widely known, but I didn't know it.

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aelephant (2012-05-05 15:22:21)  
Extra points if you are an attractive co-ed.

Elizabeth Molin (2012-05-06 07:44:00)  
A friend told me years ago that in the pre-airconditioned South, on hot nights one went to bed in a wet bathing suit, the thicker the better, in order to be able to sleep.

Greg (2012-05-06 11:24:44)  
I visited Mexico in the summer and stayed in a hotel with nothing but cold brackish water on tap. I discovered that cold showers are wonderful in the heat and can keep you comfortable for a few hours.

me (2012-05-06 11:43:34)

Wouldn't this only work in dry environments? Seth: Well, Beijing is dry.

dearieme (2012-05-07 07:43:05)

But you must have known that standing in wet clothes on a cold day gets you very cold indeed? Seth: That has never happened to me. But, as you say, I could have passed a multiple-choice test about it.

## **The Umami Hypothesis: We Need to Eat Microbes (2012-05-05 22:38)**

I believe we need to eat plenty of microbes to be healthy, an idea I call the umami hypothesis. I have blogged about it [1]many times. Here is an overview of those posts.

1. Psychological. We like foods with sour, umami, and complex tastes/flavors. My evolutionary explanation: these preferences increased microbe intake, which increased health. Fermentation, which increases microbes, easily produces all three of these characteristics. They [2]are not easily produced otherwise (in the absence of lemon trees). As a result, until recently these three characteristics were correlated with the microbe content of food. For example, until recently, the more sour a food, the more microbes. Seeking out sourness caused us to eat foods with more microbes. It's easy to see this correlation today. As milk becomes yogurt, it becomes more sour and more microbe-rich at the same time. As juice becomes vinegar, same thing. [3]The Chinese character for sour connects it with fermentation. As meat ages, it gets a stronger umami flavor and becomes more microbe-rich. For example, [4]umami in dry-cured hams increases with time. Umami flavor is produced by glutamate molecules. They increase in concentration when proteins break down into components. Nowadays meat is aged because it tastes better aged than fresh. The flavor improvement with age presumably caused our ancestors to age their meat. Microbes add complexity to flavor because they produce many byproducts. Many experiments support the idea that our food preferences are a guide to what we should eat. [5]When children chose their own food, they turned out very healthy.

2. Food traditions. Fermented foods are found in huge variety in a wide range of culinary traditions. [6]Sour fish soup. [7]Aged cookie dough. This suggests they taste good for genetic reasons. [8]Animals appear to like fermented foods – more evidence that this preference has an ancient genetic basis rather than a recent cultural one. [9]Fermented oat husks. [10]Eskimos eat "rotten" fish.

3. Benefits of probiotics (experimental evidence). Many experiments have found that children or adults given probiotics fare better than a control group. [11]Irritable bowel syndrome (IBS). [12]Competitive cyclists – men benefited but women didn't. [13]Probiotics help Italian children with IBS. [14]Probiotics reduce ventilator-associated pneumonia. [15]Probiotics help preterm infants ward off necrotizing enterocolitis – reducing the death rate by more than half. [16]Cheese with added bacteria stimulated the immune system of elderly subjects. [17]A probiotic reduces sick days among employees of a large company. [18]Probiotics reduce diarrhea and C. difficile infection among hospital patients. [19]Probiotics prevented colds in children. [20]Probiotics reduce/prevent diarrhea caused by antibiotics.

4. Benefits of fermented food (experimental evidence). [21]An experiment found a big protective effect of Vitamin K2, which is found in much larger amounts in fermented foods than other foods. [22]An experiment found that fermented bean paste is more protective against cancer when it is fermented longer. [23]A review article about the anti-allergic effects of fermented foods. [24]A book about the benefits of fermented foods cites hundreds of experimental studies. [25]Fermented noni juice fights cancer in rats, apparently because it stimulated the immune system. [26]Benefits of natto.

5. Hormesis. Small amounts of many "poisons" – chemicals or radiation in large amounts will kill you – pro-

duce big health improvements, especially less cancer. The usual explanation is that the small amounts of poison activate repair systems. The benefits of probiotics are easy to understand if the microbes in fermented foods activate the immune system. [27]Introduction to radiation hormesis. [28]Small amounts of radiation activate DNA repair. [29]Moderate radon exposure associated with less lung cancer. [30]Mortality of atomic bomb survivors in Hiroshima and Nagasaki. [31]The Baltimore shipyard study. [32]The implausibility of hormesis and more examples. [33]Reviews of the vast evidence.

6. Bad effects of antibiotics. Fermented foods add microbes inside the body, antibiotics reduce them. [34]Antibiotic use associated with higher risk of later infection. [35]Mosquitos made microbe-free via antibiotics are more susceptible to infection than untreated mosquitos.

7. The Hygiene Hypothesis. The hygiene hypothesis is that exposure to dirt in childhood reduces childhood asthma and allergies. The author's original idea was that the dirt caused infections. That didn't seem to be true but many studies have found that living on a farm and similar experiences reduce childhood asthma and allergies. This supports the general idea that exposure to microbes improves immune function. [36]Asthma and farm life. [37]Maternal exposure to farms helps babies. [38]Less allergic disorders among children in a polluted German city than in a clean one. [39]Benefits from biodiversity around the house where you grow up. [40]Review of the hygiene hypothesis. [41]What was wrong with the original proposal.

8. Epidemiology. Many studies have found that people who eat specific fermented foods are healthier.[42] Benefits of moderate drinking. [43]Yogurt consumption associated with less allergies in Japanese schoolchildren. [44]The later in life your family gets a refrigerator, the lower your chances of getting Crohn's disease. Refrigeration reduces microbial growth.

9. N=1. Cases in which fermented foods improved one person's health. [45]Kombucha. [46]Do fermented foods shorten colds? [47]High-dose probiotic, but not several fermented foods, eliminated exercise-induced asthma. [48]Kombucha eliminated heartburn. [49]Probiotics cure extreme coughing fits in a young girl. [50]Kefir improves digestion disrupted by antibiotics. [51]Yogurt apparently reduces how long colds last. [52]Yogurt reduces seasonal allergies. [53]A four-year-old gets sick less often after she starts eating more yogurt. [54]After eating lots of yogurt and acidophilus pearls, sinus congestion greatly reduced. [55]Soon after a big increase in fermented food and probiotic consumption, sinus congestion went down 90 %. [56]Kombucha improves bee health. [57]Acid reflux cured by kombucha. [58]Stonyfield yogurt employee gets sick less often, maybe because she is eating much more yogurt. [59]Professor of immunology starts taking probiotic and yogurt, stops needing asthma inhaler.

10. Unusual remedies. Several unusual remedies produce effects inside the body similar or identical to the effects of fermented foods. [60]Bee stings. [61]Hookworm infection (also [62]here). [63]After parasites greatly reduced on a remote island, allergies greatly increase.

11. The importance of gut bacteria. They must come from outside – our bodies do not make them. [64]They protect us against disease. [65]Japanese but not Americans have gut bacteria that digest seaweed. [66]Babies with diaper rash had less diverse fecal bacteria than babies without diaper rash. William Parker, a professor of medicine, has proposed that [67]the evolutionary reason for our appendix is that to allows quick repopulation of gut bacteria when they are lost due to diarrhea.

12. Miscellaneous. [68]High fermented-food consumption in Japan, the healthiest country in the world. [69]Japanese men who smoke have considerably less lung cancer than American men who smoke the same amount. [70]Filthy socks smell like kimchi, in spite of vastly different bacteria, suggesting the existence of a detection system that lumps different bacteria together. [71]Benefits of bacteria found in soil. [72]The value of readiness in another domain (military). [73]The health benefits of smoking. [74]Bacteria-free mice have malfunctioning immune systems. [75]Irradiated food (irradiated enough to kill microbes) makes cats sick. [76]Wild mice with more parasites have

better functioning immune systems. Analogy with pagophagia (ice chewing).

Disagreement with my view includes the following. To prevent asthma you should avoid all triggers, [77]says one group. [78]Health claims for probiotics were dismissed by scientists at the European Food Safety Agency. A UCLA professor of medicine who specializes in infectious disease [79]says we "will have to" produce more antibiotics to reduce infectious disease. [80]According to one writer, all "modern sane eating guidelines" say "fresh is better".

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Seth's Blog » Blog Archive » Does Bedtime Honey Improve Sleep? Nine Reasons to Think So (2013-11-25 07:03:01)

[...] wondering why we like sour, umami and complex flavors was the first thing to suggest to me that we need to eat plenty of fermented food to be healthy. Many facts later, I'm sure this is true. Finally, evolutionary reasoning has helped me find [...]

## Climate Science Humor: What if Your Model Predicts Wrongly (2012-05-06 05:00)

After noting that James Hansen's 1988 climate model predicted too much warming in the subsequent 22 years, [1]someone [2]at Skeptical Science concluded:

The main reason Hansen's 1988 warming projections were too high is that he used a climate model with a high climate sensitivity, and his results are actually evidence that the true climate sensitivity parameter is within the range accepted by the IPCC.

There is no consideration of the possibilities that (a) one or more other parameters were wrong or (b) the model – aside from parameter values – is wrong (e.g., it oversimplifies). Surely you are joking, Mr. Skeptical Science.

Thanks to Phil Price.

1. <http://www.skepticalscience.com/Hansen-1988-prediction.htm>

2. <http://www.skepticalscience.com/Hansen-1988-prediction.htm>

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Tom Fid (2012-05-07 13:34:27)

Climate sensitivity is sometimes a parameter in simple energy balance models, like the Schneider-Thompson model later used by Nordhaus. But in GCMs, as used in Hansen's work, climate sensitivity is an emergent property of other structure and parameters. So, stating that the model's sensitivity was too high (as I recall, by about 1/3) subsumes both (a) and (b). Seth: Interesting. Not so much "subsumes" but "is an example of" both (a) and (b). Then I would ask: what about other examples? Why are they not considered as possible explanations for the wrong predictions?

Phil (2012-05-09 07:01:30)

I can't comment on the technical content of the Skeptical Science post — I haven't even looked at Hansen's model — but I have to say that you are mis-characterizing the post. The post says "Unfortunately, Dr. Christy decided not to investigate why the NASA climate model was too sensitive, or what that tells us. There are two main reasons for Hansen's warming overestimates..." Obviously implicit in this statement is "Dr. Christy decided not to investigate...but I did." You may be right that the guy didn't consider that there are other possibilities, but you certainly can't conclude that from what he says here! Seth: I also read the other answers (intermediate and advanced levels) to the question/objection. When a complex model with many assumptions predicts incorrectly, it is close to impossible to figure out why because there are so many possibilities. The Skeptical Science author says nothing about the difficulty. The reasoning seems to be: if we adjust Parameter X, the prediction becomes accurate, therefore the reason the model predicted incorrectly was that Parameter X was given the wrong value. If we could estimate Parameter X entirely independently, this would make sense but nothing is said about that and that too is very hard. To me it looks like there are two possibilities: (a) although the Skeptical Science writer wants to impress readers with the quality of climate science, an enormous and enormously careful and highly unusual and very important effort by climate scientists – figuring out why Hansen's model was wrong – goes unmentioned or (b) the writer is overstating what is known.

Phil (2012-05-09 14:42:43)

Seth, I think you're missing Tom Fid's point. The climate sensitivity is not an input parameter to the model; it's an outcome that is determined from the model. Seth: When you put it like that, the Skeptical Scientist answer sounds circular. "Why is the room too hot?" "Because it got too warm." "Why was the predicted warming too much?" "Because a measure of output closely correlated with amount of predicted warming was too low." I do not disagree with you, however.

Phil (2012-05-09 23:24:26)

It's not circular. Suppose we agree that Hansen predicted more warming than actually occurred. There are three ways that could happen: 1. Emissions were higher than predicted, but climate sensitivity to those emissions was much lower than predicted. 2. Emissions were about the same as predicted, but climate sensitivity was lower than predicted. 3. Emissions were lower than predicted, but climate sensitivity was about right or was slightly higher than predicted. Of course you could make finer distinctions — "much much lower," "very slightly higher," etc. — but these are the coarse ones. Any of those three possibilities would lead to less warming than predicted. Global warming skeptics assume the answer is 1 or 2. The Skeptical Science guy is claiming to have looked into it and found the answer is 3. It's not circular.

Phil (2012-05-09 23:25:01)

Note that I have not looked into it and \_I\_ am not making any claims here. I'm just explaining that you have mischaracterized the Skeptical Science blog post.

## How Common Are Medical Errors? A Horror Story (2012-05-07 05:00)

[1]In this post a contract artist who calls himself Wolverine gives a long list of life-threatening medical errors that happened to him. I hope that he will eventually add dates so that the rate of error becomes clearer [more: all the errors happened within a 14-month period] but even without them the stories suggest that life-threatening errors are common. (As does the effectiveness of surgical checklists.) Medicine is a job where if you make a mistake only the customer suffers not you. Surely this is why the error rate is so high. Wolverine was operated on by a surgeon who, because of a fatal error, had lost his license to practice in California. He changed states, was hired again, and made the same error on Wolverine.

I learned about this from [2]Tucker Goodrich, who has been corresponding with the author and told me something remarkable:

He's eating a paleo with raw milk diet. The other transplant patients he knows are all eating the modern American diet and dying of infections; he's been infection-free for two years.

1. <http://roarofwolverine.com/archives/3019>

2. <http://yelling-stop.blogspot.com/>

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BlueMorrissey (2012-05-07 07:55:46)

I had a surgeon who lost his license in one state for stealing drugs from the hospital and taking them himself. He moved to my state and performed surgery on me. It was botched, and a few weeks later he was arrested for writing prescriptions to friends and taking the drugs himself. His license was suspended for a short time and he is still in this state practicing. I had to have another surgery. The problem was then fixed. I would say the medical doctor lobby is strong.

WeeMike (2012-05-07 08:14:45)

I'd say that drinking raw milk may well have saved his life several times. The natural good bacteria in raw milk is vastly underrated when it comes to its health giving properties to us humans. I can add that having consumed it for several years now I have yet to have any kind of cold/flu or infection from cuts etc. Before that I would have a yearly or twice yearly bout of cold/flu, and yes this is the only thing that has changed in my diet.

Mitra (2012-05-07 16:26:04)

Hi Seth, I was wondering whether I can ask you an unrelated question! I know you said that eating breakfast sometimes causes early awakening as it did in your case. Would this apply to a cup of tea with a handful of nuts - like if I take that some time after waking but skip any other food till lunch? I am trying to experiment with this (following your method!), but would be glad to know your opinion/experience. Seth: I think early awakening can be caused by any calorie source. That includes nuts but not tea if you have it without cream or sugar.

Buffet Infantil Brinque Abrace (2012-05-08 14:22:13)

Apparently the problem is global, because in Brazil the same or worse. Announced this week on TV Globo, a fake doctor who did care within a hospital, but before his arrest held several consultations as a doctor, an absurdity, and medical error is not uncommon these days.

Lisa Wainer (2012-05-09 07:53:09)

The story above is really a horror story. I always joke that I have been nearly killed three times by medical professionals. These incidences were similar in nature (but not scope). The first time was when a doctor I had never seen before tried to discharge me ( I had already been given pain medication so was a bit out of it) before I had an xray that subsequently showed a bowel obstruction. Second time was a nurse who tried to give the incorrect dose of steroid medication. Had to fight to get the correct dosage. Third time was when a consultant wanted to do a camera endoscopy on me, despite my insistence that I had a history of obstructive disease and narrowing of the intestine and that this investigation was contraindicated in my condition (confirmed later by his superior). I refused to have the investigation. It is exhausting trying to get the appropriate care - but if you have to interact with the medical profession, it is wise, as the author says, to have someone there to advocate for you. Thankfully I was in a position to fight for myself, but only because I understood what I was being treated for and had educated myself about my condition both through my own research and constantly pestering the doctors for information. Curiosity did not kill this cat.

alphagruis (2012-05-14 11:30:49)

I agree heartedly with the above comment. It is of utmost importance to make every necessary effort to understand your condition and constantly pestering the doctors for reliable information. There are some nice outstanding doctors. Take the time to find them. I had parathyroid disease and for those who have similar condition here is a team of surgeons who did revolutionize the cure of it and do really the best job in the interest of their patients. <http://www.parathyroid.com>

## **Beijing Quantified Self? (2012-05-07 13:58)**

I recently had lunch with Richard Sprague, an engineer at Microsoft Beijing. He raised the possibility of starting a Quantified Self Meetup group in Beijing. The meetings could be held in one of Microsoft's two brand new buildings, which are in the exact center of Zhongguancun. If you might attend, please let me know (e.g., by commenting on this post).



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Li Jie (2012-05-12 01:41:39)

I'm up for it! Will be in Beijing over the next week or two and will be interested in finding out more!

Xiaoyu (2012-05-13 21:59:11)

I hope this isn't too late. I would be interested in attending.

## **What Koreans Know About China That Many Chinese Don't Know (2012-05-08 05:00)**

Everyone knows that Chinese media is heavily censored. I recently learned from my Chinese tutor, who is from Korea, that the South Korean media delights in spreading China-is-scary-and-weird stories, which tend to be censored in China. Here are examples:

1. A frozen dumpling made in China contained part of a cigarette. Someone took a picture and posted it. Someone from Korea noticed before it was censored. News of this spread all over South Korea.
2. Someone in China took a picture of the Yangtze River in Jiangsu Province full of pill containers (e.g., blue/green capsules) floating on the surface. Censored in China, the picture was publicized widely in South Korea. I saw it on my teacher's cell phone.

Along similar lines, on May 2, a Korean journalist reported that she secretly entered a factory where medical pills were being made and found that among the ingredients were human baby parts. It sounds impossible, yes, but that is what was reported. (I wrote this several days ago, [1]I should have posted it sooner.)

"I never take Chinese medicines," said my teacher. I asked her why the Korean media like these stories so much. "They show that something impossible is happening in China," she said.

1. <http://www.dailymail.co.uk/news/article-2140702/South-Korea-customs-officials-thousands-pills-filled-powdered-human-baby-flesh.html>

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peter (2012-05-08 16:56:50)

whatever the credibility problems of China, the South Koreans seem to have a penchant for lying to make themselves look good. From Wiki "Hwang Woo-suk (Korean: 황우석, born January 29, 1953)[1] is a South Korean veterinarian and researcher. He was a professor of theriogenology and biotechnology at Seoul National University (dismissed on March 20, 2006) who became infamous for fabricating a series of experiments, which appeared in high-profile journals, in the field of stem cell research." In addition, as i recall they were sore losers at the Olympics. the story about human baby parts sounds like pure bullsh\*t. The other 2 examples are plausible. Seth: I don't think the "baby pill" story makes South Koreans – in particular the journalists who reported it – look good. Rather, it makes Chinese look bad.

Txomin (2012-05-08 17:09:34)

Now, now, Peter, individuals like that can be found in any country.

peter (2012-05-08 17:44:40)

although, [http://www.dailymail.co.uk/news/article-2140702/South-Korea-customs-officials -thousands-pills-filled-powdered-human-baby-flesh.html](http://www.dailymail.co.uk/news/article-2140702/South-Korea-customs-officials--thousands-pills-filled-powdered-human-baby-flesh.html) #ixzz1uDZvdZaW reports baby flesh pill reported by a UK paper. Txomin: i agree

Sam Reeves (2012-05-09 04:28:23)

I'm not sure if the following article is the one you are referring to or not, but it's pretty similar. Although it's not the Yangtze river. <http://www.chinasmack.com/2012/pictures/rainbow-river-unused-medicine-capsules-dumped-in-henan-ditch.html> But this story is available for viewing in China, having said that it's not in Chinese, but was translated from the original story that was in Chinese. Seth: Thanks. I was told the story was censored in China...that doesn't mean it was entirely censored, but what you link to raises the possibility that it wasn't censored at all.

Alex Chernavsky (2012-05-10 11:09:22)

I'm puzzled by these stories of Chinese "medicines" being made from ground-up fetuses, or rhino horns, or bear bile, or some such crazy thing. Why don't the manufacturers just use fake ingredients? Who would ever know? Plus, it's a lot cheaper. God only knows how much real rhino horns cost these days.

### Assorted Links (2012-05-09 16:31)

- [1]Difficulties repeating priming effects
- [2]Unexpected benefits of yogurt in mice. "The yogurt-eating mice were incredibly shiny. . . . These animals had 10 times the active follicle density of other mice."
- [3]A 13-year-Old invents a cure for hiccups.
- [4]A business that sells starter cultures for yogurt, kefir, kombucha, and so on – even natto. Here's a little secret: you shouldn't need to buy starter cultures. The store-bought product (e.g., bottle of kombucha), if not pasteurized, should function as starter culture for yogurt, kefir, or kombucha.
- [5]Amish farm kids have fewer allergies than Swiss farm kids. Suggesting that something besides growing up on a farm can reduce allergies. Drinking microbe-rich raw milk?

Thanks to [6]Hal Pashler and [7]Bryan Castañeda.

1. [http://www.sciencenews.org/view/feature/id/340408/title/The\\_Hot\\_and\\_Cold\\_of\\_Priming](http://www.sciencenews.org/view/feature/id/340408/title/The_Hot_and_Cold_of_Priming)
2. <http://www.scientificamerican.com/article.cfm?id=real-males-eat-yogurt>
3. <http://theweek.com/article/index/227616/the-13-year-old-ceo-who-invented-a-cure-for-hiccups>
4. <http://www.chicagotribune.com/business/sns-mct-diy-yogurt-company-gets-boost-from-npr-20120504,0,6667367.story>
5. <http://ca.news.yahoo.com/amish-farm-kids-remarkably-immune-allergies-study-200835366.html>
6. <http://www.pashler.com/>
7. <http://www.bryancastaneda.com/>

Allen K. (2012-05-10 08:51:43)

"On measuring the males, they found that the testicles of the yogurt consumers were about 5 percent heavier than those of mice fed typical diets alone and around 15 percent heavier than those of junk-eating males." That last adjective is ill-chosen.

Alrenous (2012-05-10 20:10:35)

Well, I was definitely wrong about priming, thanks. Even if Bargh's counter-arguments are sound, I didn't think about it enough. All those criticisms are ones I could have made, but didn't. Moreover, Bargh seems to care more about being responsible for new tech than getting the right answer, presumably for the status benefits. Which means that odds are favour of Doyen and Pashler. Especially Pashler, who actually founded a desperately needed resource in his psychfiledrawer.com site. Standard journals seem to aggressively avoid replications, which means someone needs to even more aggressively pursue them for our culture to even pretend to have a working scientific tradition.

jazi Zilber (2012-05-26 11:59:18)

That priming studies are extremely sensitive is evident to anyone following this literature. It is still about drawing attention and making a really efficient but unnoticed manipulation. Thus, replications that have not done it "all right" are a priori expected to fail. Researchers that do not believe in the effect, are naturally expected to be the most careful to optimize priming effect. The main focus of the media (the "failed replication" of old walking slowly) is a priori faulty. Using 30 out of 30 words for priming is not only a "no go" for priming, but shows that the researchers had poor knowledge of how priming works. Making us expect less than perfect design in other uncontested aspects. True, Bargh's response was not wise in many ways. But at the moment the PLoS paper is no "failed replication".

jazi Zilber (2012-05-26 13:21:41)

typos. second sentence should read: researchers that do not believe in the effect, are naturally not expected to be the most careful to optimize priming effect.

## **A Beijing Bystander Inaction Story (2012-05-10 05:00)**

Long after the famous [1] Kitty Genovese story – supposedly many people watched her being murdered without doing anything – doubt was cast on its accuracy. In the meantime, John Darley and Bibb Latane, two professors of psychology, it as the starting point for a series of experiments on what they called [2] the bystander effect – the more bystanders, the less likely that each one will help. They concluded there was "diffusion of responsibility" – the more people that witness something, the less each witness feels responsible for doing something.

In China the problem is much worse. A few years ago a woman was hit by a car. A second car stopped to help her. The woman told the police that the second driver had hit her. The second driver was furious, gave many interviews, and eventually a witness was found who said it was the driver, not the injured woman, who was telling the truth. Someone I spoke to attributed her behavior to the need to pay hospital bills. The driver who hit her would never be caught, she reasoned. Maybe the second driver could be forced to pay.

My Chinese tutor, who is Korean, told me a story that illustrates the depth of Chinese bystander inaction and suggests another reason for it. A friend of hers was visiting from Korea. When this friend was in Wangjing (in the Chaoyang district of Beijing), she saw a person lying on a busy street, bleeding but still alive. Apparently the bleeding person had been hit by a car. Three hours later, the friend returned – and the accident victim was still there! Now dead. So, with difficulty – she doesn't speak Chinese – she called the police.

The police treated her as a suspect. She was forced to come to the police station five times, for hours each time.

What a deterrent to calling the police! I cannot believe the police were so stupid as to consider a Korean tourist

on foot who calls the police a serious suspect in the death of someone lying in the middle of traffic. I believe that by causing her a lot of trouble, they wanted to send a message: Leave us alone. The fewer calls they get, the less work they have to do. No wonder everyone ignored the bleeding victim.

"I am afraid I am scaring you," said my Chinese teacher. "You are," I said.

1. [http://en.wikipedia.org/wiki/Murder\\_of\\_Kitty\\_Genovese](http://en.wikipedia.org/wiki/Murder_of_Kitty_Genovese)

2. [http://en.wikipedia.org/wiki/Bystander\\_effect](http://en.wikipedia.org/wiki/Bystander_effect)

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Tom (2012-05-10 09:38:18)

I'd be scared to post from inside China.

Bryan (2012-05-10 10:20:48)

I forwarded this to a friend who knows someone living in China. She said he told her "literally dozens of stories like this."

Patti (2012-05-11 05:38:53)

That is very disturbing information, but on an intuitive level makes sense. When a population is that large with economic/social growing pains it seems right that caring about your fellow citizen would be a low priority.

### **"How Ignorant Doctors Kill Patients" (2012-05-11 05:00)**

I have already linked to [1]this 2004 article ("How Ignorant Doctors Kill Patients") by [2]Russell Blaylock, a neurosurgeon, but after rereading think it deserves a second link and extended quotation.

I recently spoke to a large group concerning the harmful effects of glutamate, explaining it is now known that glutamate, as added to foods, significantly accelerates the growth and spread of cancers. I [rhetorically] asked the crowd when was the last time an oncologist told his or her patient to avoid MSG or foods high in glutamate. The answer, I said, was never.

After the talk, a crowd gathered to ask more questions. Suddenly I was interrupted by a young woman who identified herself as a radiation oncologist. She angrily stated, "I really took offense to your comment about oncologists not telling their patients about glutamate."

I turned to her and asked, "Well, do you tell your patients to avoid glutamate?" She looked puzzled and said, "No one told us to." I asked her who this person or persons were whose job it was to provide her with this information. I then reminded her that I obtained this information from her oncology journals. Did she not read her own journals?

Yet, this is the attitude of the modern doctor. An elitist group is in charge of disseminating all the information physicians are to know. If they do not tell them, then, in their way of thinking, the information was of no value.

The incentive structure of modern medicine in action. If you do harm, you are not punished – thus [3]the high error rate. If you do good, you are not rewarded – so why bother to think ("no one told us")? The similarity to pre-1980 Chinese communism, where it didn't matter if you were a good farmer or a bad farmer, is obvious. It is a big step forward that the rest of us can now search the medical literature and see the evidence for ourselves.

1. [http://www.who.net/medicine\\_killed\\_brother.htm](http://www.who.net/medicine_killed_brother.htm)

2. <http://www.russellblaylockmd.com/>

3. <http://blog.sethroberts.net/2012/05/07/how-common-are-medical-errors-a-horror-story/>

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Alex Chernavsky (2012-05-11 06:33:22)

How does the evidence against glutamate compare with the evidence against all the other myriad foods / substances / lifestyle choices that have been implicated as risk factors in cancer?

JPB (2012-05-11 06:52:49)

Wow! Exactly why I avoid doctors as much as possible. I think the medical establishment contributed to my father's death last August. He was also a physician and blindly trusted his doctors advice! We also experienced the stone walling, lack of coordination of care and following of protocols without thinking.

Sam (2012-05-11 12:54:05)

I absolutely agree that modern medicine needs to change, and I'm a huge fan of your blog. Fermented food has made me healthier, and flaxseed oil has helped my gums. However, I have to point out that Dr. Blaylock is a member of the Association of American Physicians and Surgeons, a primarily political organization that publishes "peer-reviewed" research claiming HIV doesn't cause AIDS and Obama is a hypnotist (seriously). Their journal barely contains any scientific articles, just essays about how Obamacare is a communist menace, and what to do when the FBI raids your practice (again, seriously). They also published that study you posted a couple years ago showing that autism rates were falling due to the removal of mercury from vaccines, which relied on questionable data and some eyebrow-raising outliers. And of course we know that autism rates have not fallen - they continue to rise: <http://articles.latimes.com/2012/mar/30/local/la-me-0330-autism-rates-20120330> And just for fun, here's "A Doctors' Wives' Survival Guide, or What To Do When the FBI Knocks at the Door" <http://www.jpands.org/vol16no3/orient.pdf>

KenF (2012-05-12 06:59:56)

If "glutamate, as added to foods, significantly accelerates the growth and spread of cancers" Japanese people would be dropping like flies.

Unwell Linkblogging For 12/05/12 « Sci-Ence! Justice Leak! (2012-05-12 15:22:18)

[...] How ignorant doctors kill patients Alex on Terror Of The Autons Share this:PrintEmail Tagged with: linkblogging, self-pity, whinge whinge whinge [...]

### Assorted Links (2012-05-12 05:00)

- [1]Probiotics reduce/prevent diarrhea caused by antibiotics. [2]News article. The abstract says "The pooled evidence suggests that probiotics are associated with a reduction in AAD [antibiotic associated diarrhea]." It should say that the evidence suggests – very strongly, in fact – that probiotics cause a reduction in AAD (because

there is no plausible alternative explanation of the association). This mistake is so elementary it is like saying  $2 + 2 = 3$ . And JAMA is one of the world's most prestigious medical journals.

- [3]Living without money. The author was much healthier than when he lived with money. Among the many possible explanations is that dumpster food, old enough to allow microbes to grow on it, is healthier than fresher and therefore more sterile food.
- [4]Not just farms. Children who grow up on farms have fewer allergies and less asthma than children who grow up in cities – important support for a modified version of the hygiene hypothesis (and [5]my umami hypothesis). This study finds that living near other sorts of biodiversity provides similar benefits.

Thanks to Brody, Jazi Zilber and Mark Griffith.

1. <http://jama.ama-assn.org/content/307/18/1959.abstract>
2. <http://www.reuters.com/article/2012/05/08/us-probiotics-idUSBRE8471A820120508>
3. <http://sites.google.com/site/livingwithoutmoney/Home>
4. <http://news.sciencemag.org/sciencenow/2012/05/the-great-outdoors-is-good-for.html?ref=hp>
5. <http://blog.sethroberts.net/the-unami-hypothesis-why-i-believe-fermented-foods-are-necessary-for-health/>

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Tim Beneke (2012-05-12 10:07:49)

A naive question: I understand that consuming a lot of dairy is associated with constipation. Mostly, there was a reliance on lactobacillus in the studies that were covered here. What is the connection between the constipation associated with dairy, the reduced diarrhea, and the lactobacillus – if any? Seth: Lactobacillus reduce diarrhea because they push out the bad diarrhea-causing bacteria. I suppose they do a better job digesting your food. I don't know why dairy causes constipation.

Alex Chernavsky (2012-05-12 11:14:26)

With regard to living without money – see also this excellent essay by Lars Eighner, a writer who spent several years being homeless: "[1]On Dumpster Diving"

1. <http://producer.csi.edu/cdraney/archive-courses/fall07/engl102/e-texts/eighner-dumpster.htm>

Jenny (2012-05-14 16:00:54)

Probiotics also prevent diarrhea in coeliacs, caused by gluten. I, a coeliac, always take probiotics, my daughter - also coeliac - usually forgets to. We have, on occasion been 'glutenated' at the same events, and I always react 'better', ie am less affected than her. The gluten doesn't just cause food poisoning symptoms - more seriously it causes brain fog or concentration problems. The probiotics protect me from the brain fog too. (I use lactobacillus and saccharomyces boulardii.) I believe other coeliacs find this too.

## Umami Hypothesis Page (2012-05-13 05:00)

[1]Here is a summary/directory of my posts about what I call the umami hypothesis – the idea that we must ingest plenty of microbes to be healthy. My [2]Watts Towers. The easiest way to ingest plenty of microbes is to eat fermented foods.

1. <http://blog.sethroberts.net/the-unami-hypothesis-why-i-believe-fermented-foods-are-necessary-for-health/>
2. [http://en.wikipedia.org/wiki/Watts\\_Towers](http://en.wikipedia.org/wiki/Watts_Towers)

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## Vitamin K2 Deficiency Linked To Parkinson's Disease (2012-05-14 05:00)

Parkinson's disease often runs in families and [1]some of the genes responsible have been identified. One is called PINK1. [2]A new fruit fly model uses fruit flies with a similar genetic defect.

Patrik Verstreken and his team used fruitflies with a genetic defect in PINK1 or Parkin that is similar to the one associated with Parkinson's. They found that the flies with a PINK1 or Parkin mutation lost their ability to fly.

Upon closer examination, they discovered that the mitochondria in these flies were defective, just as in Parkinson's patients. Because of this they generated less intracellular energy – energy the insects needed to fly. When the flies were given vitamin K2, the energy production in their mitochondria was restored and the insects' ability to fly improved. The researchers were also able to determine that the energy production was restored because the vitamin K2 had improved electron transport in the mitochondria. This in turn led to improved energy production.

The obvious conclusion is that some Parkinson's patients may benefit from eating more Vitamin K2. Less obvious and less certain is that our diets contained more K2 in the past (so that the various genes that now cause Parkinson's were rendered harmless). Warren Buffet [3]famously said about risk exposure: "It's only when the tide goes out that you learn who's been swimming naked". Likewise, changes in diet (such as reduction in K2 intake) expose disease-causing genes. I have made this point [4]several times. It is counter-intuitive that disease-gene linkages suggest bad environmental changes.

Thanks to [5]Melissa McEwen.

1. <http://p973.ccmu.edu.cn/4-zuixinjinzhan/2/15.pdf>
2. <http://www.vib.be/en/news/Pages/Vitamin-K2-new-hope-for-Parkinson-patients.aspx>
3. [http://www.economist.com/node/9609521?story\\_id=9609521](http://www.economist.com/node/9609521?story_id=9609521)
4. <http://blog.sethroberts.net/2010/04/05/my-porphyrin-went-away/>
5. <http://huntgatherlove.com/>

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Tom Passin (2012-05-14 06:03:36)

And the same for (other) essential nutrients that we don't make for ourselves, like Vitamin C, I think. If our bodies can't make it, our ancestors must have been able to get enough of it routinely.

Nancy Lebovitz (2012-05-14 18:33:19)

Have you looked into [1]Terry Wahls' recommendations? She's a doctor with MS who did her own research, developed a mitochondria-supporting diet (at least, that's the theory), and restored her health. I'm bringing this up because vitamin K2 is present in cabbage and such, and Wahls' diet is heavy on veggies, specifically including cruciferous vegetables. Seth: I've heard about her findings, yes. But hadn't made the connection with K2.

1. <http://www.terrywahls.com/>

### Assorted Links (2012-05-16 05:00)

- [1]Spy magazine iPad archive. On the magazine's [2]Facebook page, Drew Friedman (the illustrator, who worked for Spy) asks, "Whatever did happen to Graydon Carter?"
- [3]Echinacea reduces respiratory illness among air travelers. [4]Original article. A big reduction. It's easy to imagine echinacea stimulates the immune system.
- [5]the Umami Burger empire. "With Umami," says a critic, "there's too much of that artificial, fermented taste."
- [6]Dietary inositol hexaphosphate protects against cancer. It is found in many plants.

Thanks to Tucker Max.

1. [http://andrewhearst.com/blog/2012/03/spy\\_magazine\\_ipad\\_archive](http://andrewhearst.com/blog/2012/03/spy_magazine_ipad_archive)
2. <http://www.facebook.com/pages/The-Original-Spy-Magazine/51392578504>
3. <http://www.vrp.com/immune-system/echinacea-enhances-respiratory-health-of-air-travelers>
4. <http://www.hindawi.com/journals/ecam/2012/417267/>
5. <http://www.lamag.com/features/Story.aspx?ID=1684949>
6. <http://www.ncbi.nlm.nih.gov/pubmed/17044765>

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Darrin Thompson (2012-05-16 06:05:09)

Anyone know \_which \_ plants contain inositol hexaphosphate? And also, a little googling pulled up this: [http://en.wikipedia.org/wiki/Phytic\\_acid](http://en.wikipedia.org/wiki/Phytic_acid) Is IP(6) closely related to phytic acid? Phytic acid is supposedly one of the big problem chemicals in grains. My brane asplode.

Tomas (2012-05-16 06:18:33)

Well, it IS phytic acid. I guess the effect on cancer are due to its iron chelating capabilities. It also binds other minerals. Why not just avoid iron then, which makes more sense. The supposed cancer-fighting capabilities are the main argument of the proponents of whole grains - I think this article puts the whole topic into perspective <http://anthonycolpo.com/?p=852>

Nancy Lebovitz (2012-05-16 09:13:53)

[1]Mirepoix is a surprisingly high umami food- it's just two parts onion, 1 part carrot, 1 part celery, chopped up and pan-fried at a low to moderate heat. It's much more savory than its components.

1. [http://en.wikipedia.org/wiki/Mirepoix\\_%28cuisine%29](http://en.wikipedia.org/wiki/Mirepoix_%28cuisine%29)



## Surprising Predictions From Self-Measurement (2012-05-17 03:50)

Patrick Tucker, an editor at The Futurist,[1] posted a request on the Quantified Self Forums for "astounding" predictions based on self-quantification. He is writing a book about using data to make predictions.

Here are examples from my self-measurement:

1. Drinking sugar water causes weight loss. The self-quantification was measuring my weight. It began when I found a new way to lose weight, which pushed me to try to explain why it worked. The explanation I came up with – a new theory of weight control – made two predictions that via self-experimentation I found to be true. That gave me faith in the theory. Then the theory suggested a really surprising conclusion, that loss of appetite during a trip to Paris was due to the sugar-sweetened soft drinks I had been drinking. If so, drinking sugar water should cause weight loss. (The nearly-universal belief is that sugar causes weight gain, of course.) [2]I tested this prediction and it was true. [3]More.
2. Seeing faces in the morning improves mood the next day (but not the same day). This is so surprising I'll spell it out: Seeing faces Monday morning improves my mood on Tuesday but not Monday. For years I measured my sleep trying to reduce early awakening. Finally I figured out that [4]not eating breakfast helped. There was no breakfast during the Stone Age; this led me to take seriously the idea that other non-Stone-Age aspects of my life were also hurting my sleep. That was one reason I decided to watch a certain TV show one morning. It had no immediate effect. However, the next morning I woke up feeling great. Via self-measurement of mood, I determined it was the faces on TV that produced the effect, confirmed the effect many times, and learned what details of the situation (e.g., face size) controlled the effect. [5]More.
3. One-legged standing improves sleep. Via self-measurement I determined that [6]how much I stood during a day controlled how well I slept. If I stood a long time, I slept better. Ten years later I woke one day after having slept much better than usual. The previous day had been unusual in many ways. One of them was so tiny that at first I overlooked it: I had stood on one leg a few times. Just for a few minutes. Yet [7]it turned out that it was the one-legged standing that had improved my sleep. Without the previous work on ordinary standing I would have ignored the one-legged standing – it seemed trivial.
4. Butter is healthy. I found that [8]butter improved how fast I can do arithmetic problems. No doubt it improves brain function measured in other ways. Because the optimum nutrition for the brain will be close to the optimum nutrition for the rest of the body – at least, this is what I believe – I predict that butter will turn out to be healthy for my whole body, not just my brain.
5. Mainstream Vitamin D research is all messed up. Via self-measurement I confirmed Tara Grant's conclusion that taking Vitamin D3 in the morning (rather than later) improved her sleep. [9]It improved my sleep, too. When I had taken it at other times of day I had noticed nothing. Apparently the timing of Vitamin D – the time of day that you take it – matters enormously. Take it at the right time in the morning: obvious good effect. Take it late in the evening: obvious bad effect. Vitamin D researchers haven't realized this. They have neither controlled when Vitamin D is taken (in experiments) nor measured when it is taken (in surveys). Because timing matters so much it is as if they have done their research failing to control or measure dose. If you fail to control/measure dose, whatever conclusion you reach (good/no effect/bad) depends entirely on what dose your subjects happened to take. And you have no idea what dose that is.

1. <http://forum.quantifiedself.com/thread-journalist-seeking-stories>

2. <http://escholarship.org/uc/item/2xc2h866>

3. <http://boards.sethroberts.net/>

4. <http://escholarship.org/uc/item/2xc2h866>
5. <http://blog.sethroberts.net/morning-faces-therapy-resources/>
6. <http://escholarship.org/uc/item/2xc2h866>
7. <http://blog.sethroberts.net/2011/03/22/effect-of-one-legged-standing-on-sleep/>
8. <http://blog.sethroberts.net/2011/11/25/butter-and-arithmetic-how-much-butter/>
9. <http://blog.sethroberts.net/2012/04/28/effect-of-vitamin-d3-on-my-sleep/>

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BlueMorrissey (2012-05-17 16:19:06)

Thank God for Seth's book and blog. These have all changed my habits and improved my life. I tend to get more immediate relief with the morning faces, that's my only difference. Good work my friend. I am so thankful to stumble upon The Shangri-La Diet many years ago. Looking forward to your next light bulb moment. I'm sure you are familiar with David Asprey's work which resembles some of your theories. Would love to hear your view on his strategies. Thanks!

Briskella (2012-05-26 13:45:29)

Love this blog amazing!

#### Assorted Links (2012-05-18 05:00)

- [1]Anti-cancer effect of ginger in mice experiment.
- [2]Food safety in China.
- [3]An egregious error in the New York Times. The [4]correction issued by the Times is funny. It says a certain survey, whose results were used, "was not based on a representative sample". If that is the standard, then no number in the NY Times should be there. They are never based on representative samples. GNP, heights, distances, etc. Plus journalists select what to report – and not in a representative way. Perhaps the paper should consist entirely of blank pages, ads and what are called "thumbsuckers" (fact-free opinion pieces)? I wrote something for Spy that included a representative description. My editor changed it to be funnier.

Thanks to Song Chen and Edward Epstein.

1. <http://www.ncbi.nlm.nih.gov/pubmed/21849094>
2. <http://www.timeoutbeijing.com/features/Blogs/15611/Cheat-eats-China%27s-food-safety.html>
3. <http://www.thedailybeast.com/articles/2012/05/17/how-crazy-is-wall-street-new-york-times.html>
4. <http://www.nytimes.com/2012/05/13/opinion/sunday/fables-of-wealth.html>

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SpiceGuy (2012-05-20 18:07:58)

Its nice to know that ginger has effective anti-cancer benefits. How do I make use of it? How does obtain or consume 100mg/kg body weight of whole ginger extract from a ginger root I bought at the grocery store?

## The Next Time a Top Economist Predicts Disaster... (2012-05-19 05:00)

Shortly before Obama took office, [1]many American banks, including the largest ones, were given a huge amount of money by the Federal government ("bailed out"). Why? Because Secretary of the Treasury Henry Paulson, Chairman of the Federal Reserve Ben Bernanke and other economists (not necessarily independent of Paulson and Bernanke) predicted a second Great Depression if they weren't. I didn't believe Paulson et al. – their track records of prediction were terrible. They hadn't foreseen the crisis. Why should I think they knew how to fix it? I believed their predictions of disaster were too confident.

At the time I didn't know [2]this bit of history:

The blood-curdling threats [now] being issued by Eurocrats should sound familiar to British readers. We went through precisely the same experience 20 years ago, when we were stuck with an over-valued exchange rate in the Exchange Rate Mechanism.

As in Greece, our leaders – all the main parties, the CBI, the TUC, the Bank of England – assured us that leaving the ERM would be disastrous. On September 11, 1992, John Major solemnly told us that withdrawal was 'the soft option, the inflationary option, the devaluer's option, a betrayal of our country's future'.

Four days later, we left the system, and our recovery began immediately. Inflation, interest rates and unemployment started falling, and we enjoyed 15 years of unbroken growth

Those who don't know the past are doomed to over-trust experts.

1. [http://en.wikipedia.org/wiki/Emergency\\_Economic\\_Stabilization\\_Act\\_of\\_2008](http://en.wikipedia.org/wiki/Emergency_Economic_Stabilization_Act_of_2008)

2. <http://www.dailymail.co.uk/news/article-2145139/Cameron-calls-eurozone-action-experts-warn-Britain-faces-depression-lasting-DECADE.html>

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Anand Srivastava (2012-05-20 04:19:08)

Actually if they did not bail out the banks very rich people would have lost a lot of money. Yeah the middle class gets the shaft either way. But this way they lose more than they would have lost without the bail. The largest banks would have crashed, wouldn't that cause a depression. Bailing them out just postponed the problem. The USG is spending too much, and they have been spending a lot for a long time. China has been supporting their spending by mopping up all that excess USDs. Now that China is going into deficit, ie not mopping excess USDs anymore, how will USG pay for its deficit. Will some other entity mop up the excess? Or will the excess USDs be flooding the local market trying to prop up USG's lifestyle. Where will those excess USDs go? Will they cause inflation? If you look at the US's Trade Deficit, if it cannot be reduced very soon, it's a ticking bomb. It will explode and it will take down USD with it. Will USG reduce its expenditure? The interesting thing is that currently the Trade Deficit is completely due to the Budget Deficit, ie created by USG. When Inflation arrives, USG will print more money to continue to have the same budget in real terms, devaluing USDs further. It's not for fun that BRICS countries are making agreements for using local currencies for trade. And China and Russia are doing it with as many countries as possible. The end of the IMF system is near, you can choose to ignore it.

Lothario (2012-06-05 11:26:52)

You should research Austrian Economics from the likes of Ludwig Von Mises, Henry Hazlitt, and Murray Rothbard. The school of economic thought has an incredible track record of prediction, and explanation of all economic events based on praxeology - the study of human action. It was supplanted by the current and quite opposite Keynesian Economic method of thinking without ever being disproved for one very specific reason - Austrian Economics posits that the key to society wide wealth creation is savings, which means everything the government does from taxation to bailouts is extremely deleterious to the wealth of a nation and in direct conflict to the Austrian School of thinking. The Keynesian School of thinking teaches that spending is the key to generating society wide wealth creation, and with this thinking, the government is given the green light to tax, spend, bailout, or whatever else they can do to increase private or public spending. For this reason, the curriculum of government schools have adopted the Keynesian method of thinking. The only problem is that the Keynesian School of thought has failed miserably, over and over again, both in predictions and results, and yet the government maintains the tagline, "well we stopped it from getting even worse," and no one is the wiser because no one is taught Austrian Economics. An essay written by Murray Rothbard in the 60's I believe, titled 'Depressions, Their Cause and Cure,' explains exactly why our current 2008 recession occurred, and why not only did the government's not actually fix any of the underlying problems, but in fact has set the stage for a cataclysmic depression that must result now to purge the system of the endless malinvestment that resulted from manipulated, non-market established interest rates, etc. Brace yourself ^^

### **Usual Drug Trial Analyses Insensitive to Rare Improvement (2012-05-20 05:00)**

In [1]a comment on an article in The Scientist, someone tells a story with profound implications:

I participated in 1992 NCI SWOG 9005 Phase 3 [clinical trial of] Mifepristone for recurrent meningioma. The drug put my tumor in remission when it regrew post surgery. However, other more despairing patients had already been grossly weakened by multiple brain surgeries and prior standard brain radiation therapy which had failed them before they joined the trial. They were really not as young, healthy and strong as I was when I decided to volunteer for a "state of the art" drug therapy upon my first recurrence. . . . I could not get the names of the anonymous members of the Data and Safety Monitoring committee who closed the trial as "no more effective than placebo". I had flunked the placebo the first year and my tumor did not grow for the next three years I was allowed to take the real drug. I finally managed to get FDA approval to take the drug again in Feb 2005 and my condition has remained stable ever since according to my MRIS.

Apparently the drug did not work for most participants in the trial - leading to the conclusion "no more effective than placebo" - but it did work for him.

The statistical tests used to decide if a drug works are not sensitive to this sort of thing - most patients not helped, a few patients helped. (Existing tests, such as the t test, work best with normality of both groups, treatment and placebo, whereas this outcome produces non-normality of the treatment group, which reduces test sensitivity.) It is quite possible to construct analyses that would be more sensitive to this than existing tests, but this has not been done. It is quite possible to run a study that produces for each patient a p value for the null hypothesis of no effect (a number that helps you decide if that particular patient has been helped) but this too has not been done.

Since these new analyses would benefit drug companies, their absence is curious.

1. [http://the-scientist.com/2012/05/01/data-diving/#disqus\\_thread](http://the-scientist.com/2012/05/01/data-diving/#disqus_thread)

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Thomas Wunderlin (2012-05-20 06:52:50)

Negative individual outcomes in clinical trials with generally positive results are, of course, the other side of the coin.

Alex Chernavsky (2012-05-20 07:45:10)

I have to say that I find statistics to be very confusing, both in the abstract and the concrete. I'm currently reading, *The Theory That Would Not Die: How Bayes' Rule Cracked the Enigma Code, Hunted Down Russian Submarines, and Emerged Triumphant from Two Centuries of Controversy*, and I can't make sense of why, exactly, there was so much controversy over Bayes' Rule. I feel like I'm missing something, which is how I often feel when I try to understand statistics. So, likewise, I don't know why drug companies would neglect to apply a statistical test that would likely work in their favor. Seth: Thanks for the book recommendation. The test I am talking about would need to be invented/developed. That is one reason it has not yet been applied. I suppose a drug company executive would say: Innovations in this area would not help us get drugs approved. There is a certain evaluation system. We need to follow it.

LemmusLemmus (2012-05-20 10:18:28)

"It is quite possible to run a study that produces for each patient a p value for the null hypothesis of no effect (a number that helps you decide if that particular patient has been helped) but this too has not been done. Since these new analyses would benefit drug companies, their absence is curious." I don't know what kind of test in particular you are thinking of (matching?), but if you can causally link an individual patient's health improvements to the drug, that means you can also link an individual patient's health deterioration to the drug. Enter lawsuits?

dearieme (2012-05-21 03:00:44)

Alex: try Gerd Gigerenzer's book on Risk. It's excellent, easy enough even for medics to follow, and very mind-clearing. <http://www.amazon.co.uk/Reckoning-Risk-Learning-Live-Uncertainty/dp/0140297863>

## Assorted Links (2012-05-21 05:00)

- [1]A good example of how misleading drug-company-sponsored analyses of drug trials can be. Independent reanalysis by Daniel Coyne, a professor of medicine at Washington University in St. Louis, reached opposite conclusions. Good work, Coyne.
- [2]Coke contains a carcinogen.
- [3]"I used sunflower seeds to lose weight." Someone else used them to reduce addictions. The link between the Shangri-La Diet and reduction of non-food addictions (smoking, coffee) fascinates me. People start SLD to lose weight and say they become less addicted to smoking, coffee drinking, and so on. One possibility is that by reducing hunger, SLD reduces discomfort. Addictions gain strength from discomfort, often resemble self-medication.
- [4]Steve McIntyre replies to Gavin Schmidt's claim that McIntyre's beliefs resemble "classic conspiracy theory". I used to watch a lot of football – when the 49ers won most of their games. (I am a classic fairweather fan.) I get a similar pleasure reading Steve McIntyre's posts as I did from watching 49er games.
- [5]Congratulations, UCLA press office! A study that measured the effect of omega-3 by comparing two groups of rats – one gets omega-3, the other doesn't – is called a study about the evils of fructose (both groups got a high-fructose diet). I am surprised the scientists involved didn't object to this misrepresentation. The study

supposedly shows – according to the press office – that fructose is bad because performance went down when the rats were switched from standard lab chow to a high-fructose diet. Let's say you start with a diet (standard lab chow) that has a barely adequate amount of omega-3. You feed both groups lab chow for several months. Then you do an experiment in which both groups get 60 % of their calories from the lab chow and 40 % of their calories from a diet that contains no omega-3. Performance is likely to decline due to insufficient omega-3 no matter what the new diet contains.

Thanks to Tim Beneke.

1. <http://the-scientist.com/2012/05/14/opinion-misleading-drug-trials/>
2. <http://www.independent.co.uk/life-style/health-and-families/health-news/coke-reveals-its-secret-it-may-not-ed-to-carry-a-cancer-warning-7547457.html>
3. <http://forum.quantifiedself.com/thread-the-sunflower-seed-cure-how-to-end-all-addictions?pid=1450#pid1450>
4. <http://climateaudit.org/2012/05/16/schmidts-conspiracy-theory/>
5. <http://www.sciencedaily.com/releases/2012/05/120515150938.htm>

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Mitra (2012-05-21 06:21:26)

Hi Seth, I have another question on an issue related to sleep. (thanks a ton for your response last time!). Sorry to bother you with this, but I thought you might find my experience interesting given your research on circadian rhythms...so here goes! Generally I used to go to bed anytime between 4 AM and 6 AM every day and wake up 7-8 hours later- it was a pretty weird routine, but it worked for me, I slept well and continuously, woke up well rested and never had any trouble with sleep. (I am an academic mostly working from home, not a shift worker). Suddenly I started having trouble sleeping - couldn't fall asleep on my usual time on quite a few occasions which left me puzzled - since there was nothing new in my life that would cause stress/anxiety etc. I later understood (my inference) that the way I practised intermittent fasting probably screwed up my sleep/wake cycle.(I was also taking Vitamin D at night while starting to eat more healthy and roughly following a Paleo style diet). In an attempt to loose weight, I would eat only one major meal in 24 hours and I would take that meal before I go to bed - that means at 2 AM or 3 AM. (taking only light snacks through the day). I read a Harvard study that suggested that if an animal takes food after a 16 hour fast, then its body starts treating the time when it takes food as "morning". According to Paul Jaminet, food intake dominates light in the setting of circadian rhythm, given the role the liver can play in the setting of the biological clock (particularly true in an environment of food scarcity created through the fasting). <http://www.wisebread.com/how-to-naturally-reset-your-sleep-cycle-overnight> To fix my routine, I have now started (a month back) going to bed at around 12- 1 AM after having dinner at normal time at 8 PM, but I observe two problems. First, I have occasional trouble falling asleep which is quite unusual for me. Second, I wake up after sleeping 5-6 hours every day and can't go to sleep after that, which is very unusual for me as well. I don't typically feel very tired throughout the day, so it is not a big problem I guess, but I don't feel nearly as well rested as I did before and I know 7-8 hours sleep is healthier, so I want to fix this if I can. I found your blog while investigating these issues - I have been trying out some of your ideas - skipping breakfast, morning sun, morning faces, Vitamin D and animal fat. They have helped, but haven't completely resolved the issue. (I am still continuing to experiment with your ideas, however). I was wondering whether you think .....a) Taking a time release melatonin tablet one hour before bedtime will help in more firmly re-establishing circadian rhythm - does melatonin have a role in this? b) Any other ideas? (Now I eat at 12 at noon and 8 PM at night, so only lunch and dinner, two meals in a day with only a small snack in between). Thanks a lot for your time if you have read up to this (don't blame you if you didn't) and hope you find my problem interesting! Best p.s: One clue - I have more trouble sleeping on those nights when I have more social contact in the evening. Seth: How much Vitamin D3 are you taking and when are you taking it? How much sun exposure in the morning are you getting and when? I've never tested melatonin. How much butter are you eating and when?

Glen Raphael (2012-05-21 06:53:08)

The link to McIntyre/ClimateAudit is broken. Seth: Fixed.

ddd (2012-05-21 10:57:37)

it's always better if a link to mcIntyre/climateaudit is broken.

dearieme (2012-05-21 14:06:26)

"I am surprised the scientists involved didn't object to this misrepresentation." I am surprised that you are surprised.

BlueMorrissey (2012-05-21 16:04:52)

Too add to the SLD. I have done varying degrees of it and lost weight with fish oil and bland foods since Christmas. I have not done nose-clipping or ELOO in a long time since my weight not far from where i'd like it to be. I recently began taking MCT oil for it's health benefits. It has no taste and I have noticed my appetite is substantially down. I'm losing more weight even though i'm really trying to right now. Just wanted people to know it's worked for me.

Mitra (2012-05-21 16:59:10)

Hi Seth, Thanks a lot for your response. Here are the answers to your questions. a) I am taking a little more than one table spoon of butter every day. I also eat meat and eggs fairly regularly - though it is often difficult to get fatty cuts of meat due to the low fat craze! I am eating the butter during the evening - around 8 PM. Should I eat more butter/animal fat? b) I used to take 1000 IU of Vitamin D every night. For the past two weeks, I switched to morning (after reading discussion of this in your blog) - then I upped my doze to 2000 IU in the morning - now for the last 2 days I have again upped my doze to 3000 IU in the morning around 9 AM. Should I try increasing my dose again? c) I have a lawn and the sun falls on it directly every morning. (I live in Brisbane which is often sunny on most months). So I stand (standing desk) and work on my computer in front of the lawn every morning starting around 9 AM. I would get more morning sun if I take a walk outside (it is a lawn rather than a back porch, so the roof is covered), but I don't do this until later in the day. I wake up around 7.30 every day, but I lie on my bed till 9 every morning trying to get back to sleep, so my day begins at 9 AM. Thanks again for your help. If I do try melatonin, are you aware of any negative side effects of melatonin? (I didn't find much in the literature, except that people ask you not to take it regularly, because then your body stops making enough of it once it senses it in the blood). Seth: Sorry, don't know about melatonin. I suggest you increase your butter intake to 4 T/day. And take 10000 IU of Vitamin D at 7 am. Continue the morning sun exposure. That should help a lot. After you are sleeping better you can reduce the Vitamin D and/or butter until your sleep gets worse, if you dislike those amounts. I don't know your weight but you have been taking dosages that are quite far from what data posted on this blog suggests are best.

Mitra (2012-05-21 18:30:21)

Thanks a lot. Seth. I will do this....I need to be go to bed a little early to wake up at 7 A.M and take the Vitamin D then. You are right about the dosages, I saw now that you recommend 60 grams of butter. ( I also probably shouldn't lie on bed so long after waking up so that I get morning sun sooner rather than only after 9 AM). I am 5 feet 9 inches (age 37) and my weight is now 170 pounds (male). I lost 14 pounds over the last three months (a Paleo style diet and 1600 calories a day approx), so I am not too overweight now, but I still have some abdominal fat and I also have impaired glucose tolerance or pre-diabetes and want to get my weight in the optimal range. (particularly given that I am South Asian and at a high risk for diabetes). Thanks a lot again for generously sharing your advice and all the great info on your fantabulous blog!

Anne (2012-05-21 23:00:22)

Hi Seth I will start to thank a lot for this goldmine of information you share on the blog and all the help with answer you give to everyone. That is so amazing rare in this age, and have put you on to my favorite to find the best information. I have read in to all the posts for days now and tried out all the tips for sleeping, except not enough one leg standing. When I saw this questions and your answers about sleep from Mitra. I almost get all the needed answers to many of my questions. As I have wondered when the best time for D3 was in the morning and if I should take the high amount of butter to. My experience so far is that I wake up earlier and earlier now in this test. I have started to take 7.200 iu of D3 some were between 6.30 am

to 7.30 am and around 5 to six tsp of butter a day to my meals. Yesterday I even tried to take 2 tsp of flaxseed oil at 11 pm, after reading a post about that. But today I woke up even earlier than ever at 4.30 am and was not able to get back to sleep, as I was extremely hungry. I am always very hungry in the morning and are not able to skip breakfast yet. I have order the Shangri-La diet book and hope to have it any day now. But I don't now how much answers there is on sleep in the book. I saw your answers to Mitra , so I have increased the D3 to 9600 today and also understand the right time to take it, as I have wondered about that to. But I still have some questions ( I live in Sweden and I am 5,5 inch tall and 150 pounds.) Does it matter when you have the butter to promote longer and better sleep To skip breakfast,how long has it to be before eating after wake up Does it matter what to eat and how long before bed, you eat dinner Does early sun exposure get me to sleep longer Do you take Omega 3 fish oil as well and If when in the day Do you take Flaxseed as well as butter or only one of them Kindly Anne

Mitra (2012-05-22 17:27:20)

Hi Anne, I will try to answer your questions BASED on the information that is already provided on Seth's blog and Seth's response to my questions. First, I think you can take butter anytime through the day, but Seth found taking fat (animal fat?) in the evening helped his sleep, so I plan on taking 60 % of my butter in the evening. To skip breakfast, it should ideally be 3 hours after waking up - like if you WANT to wake up at 7 AM, don't eat earlier than 10 A.M. Usually, it is recommended that people eat dinner 2-3 hours before they go to bed. Early sun exposure (along with Vitamin D3 in the morning) should strengthen your circadian rhythm and help with sleep. I don't know about omega 3 fish oil or flaxseed oil - I mean I don't know whether they can be taken together with butter or only butter is enough. You can experiment with all combinations. (Seth also says that more social contact in the morning and less social interaction in the evening can help - I found this to be true). Also, remember lot of standing in a day or one-legged standing enough number of times. You will find more info on these things in Seth's blog if you look at the topic "sleep" here. (Personally I felt less hungry when I started eating a fat heavy low carbohydrate diet). I take my dietary advice from Seth and from another book called "Perfect Health Diet" by Paul Jaminet. I plan to experiment with these remedies using Seth's advice. If these don't work for me, and given my specific problem, I also plan to take time release melatonin tablet one hour before bedtime for a week and see if it helps. It is annoying because I had perfectly fine sleep before I screwed it up by trying to do intermittent fasting in a wrong way.

Anne (2012-05-23 12:35:28)

Hi Mitra Thank you for taking the time to answer me on all the questions. I thought that I had read all the posts on sleep. Anyway after increase the dose to 9600 yesterday the sleep was better. If you have had a good deep and it went away whit a diet, it seems to me that what you eat really matters to sleep. All this years I have struggled, I have been told that I need to relax more and it is only happens to me, because I am stressed :-). Now it is summer and light in the morning, and very easy to get sun in the morning. But half the year it is dark when you go to and from work. I am thinking maybe to bay sun light box. I have one of the earlier and it did nor work that well, but the are very developed today. I got the Shangri La book yesterday so I hade read a lot yesterday. I tried to take oil capsule between breakfast and lunch as I was on the move, when I usually are starving. It worked very well and I could wait for a late lunch. But between lunch and dinner I used some flaxseed oil and it did nor work so well, I was starving after some time. But I am new so it will take some practice with try and error until it works as designed Kindly Anne

Mitra (2012-05-23 16:53:46)

Thanks - if you read my post carefully, my sleep problem didn't happen because of what I ate, it was more of a timing issue. Flaxseed oil has a strong flavour, so you have to drink it with your nose clipped for it to work. Anxiety about sleep (or more typically about other things) can also have an impact- so I think we have to strike a balance between doing absolutely nothing about this problem and being overly concerned about it. Best of luck!

### Assorted Links (2012-05-23 05:00)

- [1]Correlation between fat intake and brain-test scores. "Those women who reported the highest saturated fat intake also had, on average, the worst scores on reasoning and memory tests."



- How many iPads does it take to change a textbook market? [2]A perfectly good physics textbook is now available for free download (pdf). The author of the post, a physics professor at William and Mary named Marc Sher, does not understand what's going on when he refers to "the textbook publishers' price-gouging monopoly" and their "outrageous practices". Textbooks cost so much because students can be forced to pay that much. This has nothing to do with publishers, I submit, and everything to do with the power professors have over students. Sher would reply: All the textbooks are expensive. And I say: So what? If students could choose not to buy \$200 textbooks, none would be sold. Zero. And future years would see no more \$200 textbooks.

Thanks to Jonathan Graehl.

1. <http://www.boston.com/dailydose/2012/05/18/tweaking-dietary-fat-intake-could-help-slow-brain-aging-study-suggests/007tmvxhB2E8V0algT7DlL/story.html>
2. <http://blogs.discovermagazine.com/cosmicvariance/2012/05/21/guest-post-marc-sher-on-the-open-textbook-movement/>

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D (2012-05-23 08:06:59)

I imagine the people w/ high saturated fat intake weren't eating a paleo or low carb diet but were instead people who ate a lot of Mcdonald's and other fast foods. In other words, the group, having more of the obese and dumb, probably had more people on the left side of the bell curve to begin with. Contrast this with the kind of people who use olive oil, eat avocado, etc., who are middle to upper class people who are somewhat informed and follow trendy health advice, so they would be more likely to have more on the right side of the bell curve to begin with. Seth: I agree. This is common in epidemiology: People who do the "good" (= approved) thing are in better health than people who do the "bad" (disapproved) thing. But not because the "good" thing (such as avoiding saturated fat) is actually good, but because of other ways the two groups differ.

Patti (2012-05-23 08:07:06)

Seth - I am not a scientist and I am curious to know what you think of this study as it correlates to your consumption of butter. Thank you, Patti

G (2012-05-23 09:27:30)

Ugh, I hope D is right. I've been Shangri-La-ing with butter and coconut oil. I am also curious about Seth's opinion.

Jay Cobal (2012-05-23 09:51:09)

Seth, this is taken right from many of your posts, the new urban "Datasexual" <http://bigthink.com/endless-innovation/meet-the-urban-datasexual>

Hank the plant (2012-05-23 10:16:48)

The Kanazawa Hypothesis would predict the saturated fat result. Still, I second Patti, this is a good change to challenge my bias that quality animal fat is good. Personally, I feel much sharper when running on animal and coconut fat.

John Lusheski (2012-05-23 10:40:57)

The fat correlation must simply be due to confounders. Those kinds of conclusions fail to take into account basic inherent properties of the different fats. Long term controlled interventions show less lipofuscin, less collagen crosslinking, higher energy expenditure, less peroxidation, lower liver triglycerides, less body fat, etc with \*saturated\* fats. Also, there are similar results when compared to glucose, but you have to search deep, as it is hard to find a useful study in that regard (ie, not comparing corn starch to sucrose+lard+corn oil). There is one study in rats that uses a "cereal-based" diet, a "high polyunsaturated fat"

diet, and a "meat and milk based" diet. The last comes out best.

David Johnston (2012-05-23 10:46:34)

In the article, the researcher appeared to make a claim of efficacy for an intervention based on the results observational study with likely confounders and no clear causation argument. The journalist went right along and published it. This is typical but doesn't reflect well on either the journalist or the researcher. Seth: I disagree. The article explicitly stated the limitations ("this one can't prove..."). And the researcher is correct when he says "Our analysis suggests if you substitute out 5 percent of your saturated fat calories with 5 percent monounsaturated fats, you could have a 50 percent lower risk." It does "suggest" that conclusion in the sense of "make more plausible" that conclusion. I believe the correlation is due to confounders but I am not absolutely 100 % sure of that.

dearieme (2012-05-24 01:29:13)

Is there a good review anywhere showing how often results from correlative studies are supported or disproved by randomised controlled trials? Seth: I haven't seen such a review.

somebro (2012-05-24 19:12:48)

Dearieme: I believe John Ioannidis published something about this. His conclusion was that non-interventional studies should be given more credit.

john lushefski (2012-05-25 07:00:49)

dearieme, Why compare unrelated studies just because they are observational-turned-controlled? What makes you think their methods and/or results would provide any insight to a brand new observational result? But just for kicks, Harvard's Walter Willet and his team have been wrong with many [all?] of their conclusions from observatories. somebro, A blanket statement like that is completely useless though, as different studies vary significantly. These correlation studies with unsaturated fats go against the basic properties of fats, saturated being theoretically superior. Except, we don't even need to say "theoretically" because the work has been done already! We don't have the clear results in humans because they live too long to do well-controlled interventions that look at aging or aging indicators. Short term mice/rat studies, which are inconsistent anyway, that use industrial lard and/or sucrose tell us near-nothing about diet. They are useful for studying the physiology of obesity, but any diet advice given based on them is a set-up, or the authors [of the paper] are stupid.

## **Vitamin D3 in Morning: Moving D3 to Morning Improves Sleep (Story 23) (2012-05-24 05:00)**

Jim Breed has been taking large amounts of Vitamin D3 (5000-10000 IU/day) since 2008. Yet when he switched to taking it in the morning, his sleep quickly improved. Here's what happened:

I'm a married man, 230-240 pounds over the past 4 years, born in 1957, and I work as an engineer for the Department of Energy in an office. I try to do cardio for thirty minutes four times a week.

In 2008, I began taking 5-10000 IU Vitamin D3 daily. My blood tests:

October 2009 50 ng/ml

August 2010 65 ng/ml

May 2012 84 ng/ml

My doctor said to reduce my intake from 10000 IU to 5000 IU when it hit 84, as he prefers levels under 80.

Prior to beginning the morning D, I took one 5000 IU gel cap two times during the day. I usually took my supplements at breakfast, lunch, and dinner. I might take 5000 at lunch and 5000 at dinner. Since I started taking Vitamin D in 2008, I have not missed a day of work due to illness. This is unusual. Throughout grade school, high school, college, and my work for the Federal Government, I have never had a complete year where I wasn't sidelined by some cold, flu, what have you for an unscheduled absence due to sickness.

In November 2011, I started reading posts on your blog about morning D affecting sleep. I tried taking my Vitamin D in the morning – upon awakening, which is usually 6:30 am. Definitely by 8:30 am. Within a week, I noticed two things:

1. I started sleeping all night without waking in the middle of the night. For years, I have had trouble sleeping throughout the night. I usually slept with earphones so I could listen to the radio around 2 am for an hour until I fell asleep again. Once I woke up, it took a lot to get back to sleep. Now, I may stir for a few minutes or get up to use the toilet, but I fall back to sleep very quickly.
2. My bed times became more consistent and earlier. I married my wife in 2005. It had been a consistent source of tension between us that she liked to go to bed earlier than me (10:30 pm for her 11:30 for me). I wasn't tired. Midnight would have been better for me. Since the morning D, I have consistently beaten my wife to bed. I am just done for the day and ready to go to sleep by 10:30. This is truly a change for the better.

I did not expect these results. I reasoned that since my blood levels were so high, when I took D would not matter. I was surprised to be wrong.

I also found that an unexpected reduction in my dosage screwed up my sleep. This was really exciting. My wife and I traveled to Livermore, CA from our home in KS. She gave me some travel supplement packs that she makes up and it did not have our usual brand of D. Here is how the trip went.

1. Friday-fly to CA 10,000 iu at waking; great sleep in hotel room
2. Saturday-travel D; great sleep in hotel room
3. Sunday-travel D; great sleep in hotel room
4. Monday-travel D; great sleep in hotel room
5. Tues-travel D; restless sleep in hotel room. I heard the A/C unit. The bed was uncomfortable. I fell asleep during a meeting with the lights down at work
6. Wed-travel D; terrible sleep in hotel room. In a meeting at the lab I make a mental note to ask my wife what the travel dosage is.

It turns out that the travel dosage was 1000 IU. I thought it was just a different brand. Definitely, 1000 IU was not enough. I immediately went to Walgreens and got some 5000 IU gelcaps and began taking the 10000 IU upon waking. It took about a week to re-establish my previous restful sleep.

Reducing my dosage from 10000 IU to 5000 IU did not disturb my restful sleep patterns- When my doctor had me cut back to 5000 IU at the beginning of May, I didn't notice any decrease in restful sleep. If anything, it seems to be better than when I was taking 10000 IU.

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Anne (2012-05-26 12:51:45)

Thank you Jim for sharing, I found it very valued and interesting to understand more. If I understand your story right, it actually take you many years to reach the right levels on D3, even as you took 10.000 IU daily. That could explain the reason why I after only one week does not yet have reached the good sleep. The travel part was also very good to know, how important the right levels are.

Thomas Johnson (2012-05-27 17:34:03)

Hi Seth, Do you have any results from personal experiments or anecdotal reports on using D3 to support an off-hours sleep schedule? I need to work 2 out of every 3 weeks on a 1am-1pm schedule, which requires going to bed around 5pm when it's quite light out and waking up around 12am. Do you know anyone who's tried D3 on waking to adjust their biological clock for an off-hours schedule, or perhaps for jet lag? Thank you for all of your research and for publishing these reports on D3 and other supplements! Seth: No I don't. I will soon fly from Beijing to San Francisco and I will use D3 to combat jet lag.

Anne (2012-05-27 21:32:29)

@Thomas I have a daughter 28 years old with severe disrupted sleep pattern developed over several years, meaning being up all night and stay up for two days and then go to bed at 4 pm and things like that. When she later wanted a more normal sleep. She had problem and never know if she would fall asleep at 6 pm or 6 am. She also never know if she would sleep to 3 am or 4 pm and she has really tried to have it working for over a year now with out any success. After reading this amazing blog I gave her a bottle of D3 for about 10 days ago, the first days 8000 IU and after reading more on the blog 10.000. She gets help most of the day that someone calls at 11 -12 am and she take the D3 up on awaking. The amazing results is that she has not have one single day that she has fell asleep at 6 pm and she also have more energies. Seth: Thanks for posting this story.

## **Medieval Metallurgy, the Evolution of Decoration, and the Shangri-La Diet (2012-05-25 05:00)**

[1]A new BBC series Metalworks! is about the history of British metal working. [2]My theory of human evolution says that decoration – more precisely, our enjoyment of it – evolved because it helped the most skilled craftsmen make a living. Long ago, technology evolved via massive amounts of trial and error, which required subsidy since payoff (discovery with practical value) was so infrequent. It was much easier to discover/learn how to make something that looked better than something that worked better, but the two sorts of discoveries were correlated: trial and error produces both.

The episode on ironwork (The Blacksmith's Tale) makes explicit how desire for decoration made it easier for the most skilled iron workers to make a living:

[Expert, at 16:50:] "I think decoration entirely depends on the amount of money the patron wanted to spend on that particular object." [Narrator:] By the end of the 15th Century, wealthy patrons, such as the Church and monarchy, were hand-picking known craftsmen at the top of their game to match a commission's requirements. When King Edward IV commissioned the Cornish smith John Tresillion to make these Gothic gates at Windsor in 1497, he did so with good reason. . . . [Expert:] "No blacksmith, ordinary blacksmith who was used to making horseshoes, could dream of working to this standard of perfection."

Quality of decoration is easy to see. It doesn't matter but it correlates with something that does matter – amount of trial and error (more trial and error, more innovation). We reward decoration to increase innovation.

The Shangri-La Diet derives from [3]a theory of weight control that emphasizes smell-calorie learning. Smell-calorie learning evolved for the same logical reason. Smells don't actually matter for health. But they are easy to notice and

they correlate with things that do matter for health, such as calories. Via smell-calorie learning we learn the correlations. After that the foods that smell best are the ones that contain more calories.

1. <http://www.bbc.co.uk/programmes/b01fhphb>
2. <http://www.scribd.com/doc/61801724/How-Economics-Shaped-Human-Nature-by-Seth-Roberts>
3. <http://media.sethroberts.net/about/whatmakesfoodfattening.pdf>

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Tom (2012-05-25 11:46:52)

*Smells don't actually matter for health.* Smells don't matter for health? It seems to me that detecting rot, rancidity or the presence/absence of certain chemicals might be as useful as calorie detection. I also wonder how well caloric density typically correlates with smell. Seth: Yes, the analogy breaks down here, I agree. Some smells are unconditionally repulsive. Smell-calorie associations are learned so the smell becomes a very accurate predictor of caloric density.

bjk (2012-05-26 09:08:44)

A number of your themes touched on in this article. The National Institutes of Health (NIH) spent \$830 million funding obesity studies in fiscal year 2011. Between 2008 and 2011, NIH spent over \$3.3 billion on obesity research. Spending on obesity research also overshadows many other areas of research funded by NIH, including research on Alzheimer's disease, heart disease and breast cancer, which received \$448 million, \$437 million and \$715 million in 2011, respectively. Read more: <http://dailycaller.com/2012/05/24/government-spends-billions-on-obesity-studies/#ixzz1vzbNiu5J>

Alex Berg (2012-05-30 13:40:40)

Hi Seth, Regarding your evolutionary theory of Connoisseurs. I'm going a bit out on a limb here because I haven't read the full article you posted. I did read the section about Connoisseurs, and this post is mostly a comment to previous post about evolutionary theory of Connoisseurs. I believe the theory of evolution says that for a trait to prosper, it must be carried by a collection of genes which prosper. And genes prosper (by definition) if the individuals carrying the genes get more babies in each generation. Therefore, for the Connoisseurship gene to prosper, it must be good for the Connoisseurs themselves. It is irrelevant that its good for producers, as they are not necessarily carrying the gene. And in fact if the only good thing about Connoisseurship is that its good for the producers, then its bad for the Connoisseur-gene, because it means the Connoisseurs have less money/resources for other life-preserving options. I think that a theory for Connoisseurs which might fit with the evolutionary theory is that Connoisseur gene might prosper, because people who have access to both good and bad food should develop taste for the good food because it good for the body. But people who do not have access to good food, should accept the bad food and be happy. This is just an example of how the theory should be built. In particular this theory could be used on the Willat Effect. I'm a computer scientist, not evolutionary scientist. I read the book Robert Wrights 'The Moral Animal' (great book), and a bit of Less Wrong, and found that the right way to look at evolutionary theories is by looking at the proliferation of the genes. So I'm no expert in this, I just could not hold my tongue anymore. Seth: You write: "Therefore, for the Connoisseurship gene to prosper, it must be good for the Connoisseurs themselves. It is irrelevant that its good for producers, as they are not necessarily carrying the gene." People who live together tend to have more genes in common than people who live far apart. And people who live together have "shared fate" – they tend to live and die together. The effect of these two correlations is that if you help someone nearby, you are helping your own genes even if the action produces no immediate benefit to you. A large number of evolutionary biologists have been getting this wrong for a long time – making arguments like yours, which ignore correlations. This is now being recognized – e.g., E. O. Wilson.

## How Difficult is Chinese? A Tsinghua Professor Complains (2012-05-28 05:00)

Recently there was a competition for Tsinghua civil engineering majors. Whose structure can support the most weight? And so on. At the end of the competition, a professor handed out prizes to the winners. After the awards ceremony, the professor who had handed out the awards said to a colleague, "I don't like this job." His colleague was surprised: What was so bad about handing out awards? The professor explained that the students' names sometimes included characters so obscure that he didn't know them. Which was embarrassing.

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garymar (2012-05-29 00:03:25)

Ditto for Japanese, with bells on! There are plenty of *common, ordinary* Chinese characters that take on strange readings when used as names in Japanese that even well-educated native speakers will shake their heads in puzzlement. That's why they print the pronunciation along the side with *furigana*.

M (2012-06-01 20:23:48)

After I came to China, I acquired a Chinese name. It turns out that one of the characters (suggested by a Taiwanese friend) is fairly obscure. Some native speakers have trouble with it – and I sometimes don't tell them if they make a mistake with the pronunciation, not wanting them to feel uncomfortable.

## Assorted Links (2012-05-29 05:00)

- [1]Harvard on trial for research fraud
- [2]About yogurt and similar foods. "Dannon, the yogurt giant, faced litigation against claims of immune and digestive benefits of its products." [3]Lawsuit outcome.
- [4]the Korean wave (spread of Korean pop culture)
- Natto first and pu'er last on [5]a list of superfoods
- [6]Amateur molecular biologists

Thanks to [7]Craig Fratrik and Bryan Castañeda.

1. [http://www.huffingtonpost.com/2012/05/11/alzheimers-research-fraud-harvard-marilyn-albert\\_n\\_1508026.html](http://www.huffingtonpost.com/2012/05/11/alzheimers-research-fraud-harvard-marilyn-albert_n_1508026.html)
2. <http://www.3quarksdaily.com/3quarksdaily/2012/03/friendly-ferments-cool-cultures.html>
3. <http://abcnews.go.com/Business/dannon-settles-lawsuit/story?id=9950269#.T738RcXm6PU>
4. [http://en.wikipedia.org/wiki/Korean\\_wave](http://en.wikipedia.org/wiki/Korean_wave)
5. <http://www.fourhourworkweek.com/blog/2012/05/23/10-uncommon-superfoods-from-the-world-of-ultra-endurance/>
6. <http://www.popsci.com/science/article/2012-05/guess-whats-cooking-garage?single-page-view=true>
7. <http://fratrik.posterous.com/>

dearieme (2012-05-29 14:35:23)

"...researcher accused of using falsified data to obtain a government research grant are set to stand trial...": will that give some "Climate Scientists" sleepless nights?

Adam (2012-05-29 17:59:17)

Re: superfoods They recommend Elk Antler Velvet because it boosts IGF-1 & 2. While it might make you beefy, it might also give you Cancer. A quick PubMed search for IGF-1 & Cancer turns up about 6254 results, and they aren't talking about prevention.

## **Personal Science is to Professional Science as Professional Science is to Engineering (2012-05-29 05:00)**

A few days ago I gave [1]a talk at Microsoft Beijing titled "The Rise of Personal Science: Discoveries about Acne, Blood Sugar, Mood, Weight Loss, Sleep, and Brain Function." (Thanks to Richard Sprague, who invited me.) The audience was engineers.

In response to a question, I said that the relationship between personal science and professional science resembled the relationship between professional science and engineering. Cause-effect statements (X causes Y) vary in their degree of plausibility anywhere from zero (can't possibly be true) to one (absolute certainty). Engineers, professional scientists, and personal scientists tend to work at different places along this scale:

Engineers work with cause-effect relationships at the top of the scale, that are well-established. (For example, Newton's Laws.) Relationships in which we have total confidence.

Professional scientists like to study cause-effect relationships that are in the middle of the scale of degree of belief: true and false are equally plausible. When both true and false are plausible, you can publish the results no matter what you find. If everyone already agrees that X causes Y, further evidence isn't publishable – too obvious. If it is highly implausible that X causes Y, professional scientists cannot study the question because a test of whether X causes Y is too unlikely to pay off. If you find that X does cause Y you can publish it but that's too unlikely. Finding that X does not cause Y is unpublishable ("we already knew that").

Personal scientists can easily test ideas with low plausibility. First, because personal science is cheap. Many tests cost nothing. Second, because what other people think is irrelevant. (A professional scientist who takes seriously an idea that "everyone knows is nonsense" risks loss of reputation.) Third, because there is no pressure to produce a steady stream of publications. An example of a personal scientist testing an idea with low plausibility is when I tested the idea that standing causes weight loss. I thought it was unlikely (and, indeed, I didn't lose weight when I stood much more than usual). But I could easily test it. It led me to discover that [2]standing a lot improves my sleep.

Plainly we need all three (engineers, professional scientists, personal scientists). Has anyone reading this heard someone besides me make this point?

I have been shocked – I sort of continue to be shocked – how much I have been able to discover via personal science. But a high rate of discovery makes sense if personal science supplies a necessary ingredient – ability to test low-plausibility ideas – that has been missing.

1. <http://blog.sethroberts.net/wp-content/uploads/2012/05/2012-05-27-The-Rise-of-Personal-Science.pptx>

2. <http://escholarship.org/uc/item/2xc2h866>

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Patti (2012-05-29 07:11:52)

Maybe because you actually have an educational background in statistics and psychology I think you have a slight advantage at personal science. I also think you might have a more innate ability for observation. Some people are able analysis their behavior but are unable to be successful. The question then is why is Seth Roberts so successful at personal science/low plausibility ideas while others fail? For instance, I tried an extremely low-salt diet (low-flavor) and was able to lose 10 pounds. Then I could not stand the lack of flavor and started to eat salt again thus gaining back all the weight. I have been doing personal science all my life with abysmal outcomes. I can't think of any idea I have ever come up after careful observation has changed my life in a significant way. Seth: My weight loss ideas derived from a combination of unexpected observation and new theory. But a lot of other things I have found that worked came from long-term monitoring (e.g., sleep) that turned up a sudden change. That's what led me to study one-legged standing and butter, for example. I think long-term monitoring is something many people can do.

Jenny (2012-05-29 11:19:44)

Not quite, but nearly on the same track - I have been reading the beginning of Good Disruptive Change (<http://gooddisruptivechange.com/start-here/>) where Susan Alexander talks about the importance of measurement for keeping track of change. This seems to me as personal science in action - even if it is only for the benefit of the originator.

Alrenous (2012-05-29 11:49:56)

Why is it important to make sure a medical ultrasound is properly calibrated and maintained? "Ultrasound is used in labs normally for lysing cells, for ripping them open and getting out the DNA," So, how many ways can medical ultrasound go wrong and create the same effect? Can it accidentally get lensed or echo?

## **How I Will Teach Next Semester: Human Evolution and College Teaching (2012-05-31 05:00)**

I have wondered for a long time how to apply my ideas about human evolution to teaching. [1]My theory of human evolution says that specialization and trading are central to human evolution and includes a mechanism that increases diversity of expertise. The more diverse the expertise of you and your trading partners, the more you gain from trading. If I make knives and you make knives, we will gain less from trading than if I make knives and you make baskets.

I also discovered - independently - that the more choice I gave my Berkeley students (junior and senior psychology majors) about what to learn, the more they learned. It was as if they had an internal drive to learn all sorts of different things and the more I allowed that motivation to push and guide them, the more they learned. To see big effects it wasn't enough to merely give them a wide choice of term paper topics (as many college teachers do). I pushed them out into the "real" (off-campus) world (they couldn't do a library project) and said learn whatever you want. In this situation they learned an enormous amount. The connection with my theory of evolution was obvious: something inside of them was pushing them to be diverse in what they learned. What they learn = what they will become expert in. What they become expert in = what they will have to trade.

The more I allowed the underlying diversity of my students to be expressed, the more they learned. Yet almost all college classes treat all of the students in the class the same: same material, same assignments, same tests. The diversity of the students - especially the ways they differ from the professor - is a nuisance. So my theory suggests that standard college teaching is greatly at odds with human nature. It assumes one size fits all when that could hardly be more wrong. It should be possible to greatly increase how much is learned by doing a better job of recognizing human nature. My experience so far supports this prediction.



Recently I thought of a new way to deal with diversity among my students. Next semester I will try it. One of the courses I am teaching (at Tsinghua University) is Frontiers of Psychology, with about 25 students. It's required of freshman psychology majors. Here's what I'll do. For the first four or five class periods (one class per week), I'll cover a wide range of psychological topics, ideas, and methods. There will be reading assignments (e.g., choose one paper out of 30 and do a class presentation) but no grading. Then every student will draw up a list of "learning goals" for the rest of the semester. The goals can be whatever they want (related to psychology). They can read a book, read some articles, collect some data, give a talk to a high school class, whatever. Each goal will have a deadline. The assessment will be binary: goal completed/not completed. Their final grade will depend on how many goals they completed. The goals will be ordered. The further down their list they get, the higher their grade, with each level of completion assigned a grade at the beginning. They will make class presentations throughout the semester about their progress: what they are doing, what they have learned.

For the students, the benefits (compared to conventional teaching) are that (a) they get to learn exactly what they want yet (b) the grading criteria are very clear and (c) they are still motivated to work. For me, the benefits are that it should be a lot easier to judge if a goal has been completed than to grade homework essays, which is what I've done recently. Nor will I have to worry about what happens in class each week.

Any comments?

1. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

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ChristianKI (2012-05-31 06:18:47)

This incentives students to set easy goals. Whether that's a good thing depends on your students. If they are perfectionist that need to learn to set goal that they can actually achieve it's good. If they on the other hand are people who try to game the system to get the highest grades with the least amount of effort it's bad. Seth: In my experience, college students want to learn stuff quite apart from grades. I will assign grades to the various achievements so if the most difficult goal isn't very hard that student will have ensured they don't get a very good grade. But I agree with your basic point: it isn't obvious it will work.

Darrin Thompson (2012-05-31 07:03:16)

I have a reservation much like ChristianKI. What about a well defined skill, like computer programming? Mark Guzdial's research shows that most colleges don't teach computer programming and computer science well. At Georgia Tech all students had to take an intro to computer science and for business majors it was known as a "three-peat" until the department figured out more effective teaching methods. (I follow Mark's writing to this day. I tried to teach a group of high school aged home schoolers to do programming a couple of times. I considered my efforts a failure because I only ever selected the students likely to succeed if they practiced on their own. Mark's work shows there is a better way, much like you are attempting here.) However, coding and computational thinking are a hard skill, in the dual sense that you either have the skill or don't, and that it is difficult for many people to acquire. "Learn what you want" seems too open to allow teaching difficult skills. <http://xkcd.com/863/> Once you have the prerequisite skills there's tremendous benefit to go and "build what you want using your newly minted skills. You have two weeks." Or two days even. We did a three day project here where I work. Anyone in R & D could work on anything they wanted for two (and a half) days and then there were dozens of presentations as we explained what we built. It was successful at generating a lot of innovative ideas, which are otherwise very tough to come by in our environment.

Andrea (2012-05-31 07:17:43)

Cool!

Elizabeth Molin (2012-05-31 09:52:14)

When I was teaching World Lit (1st semester: the Bible through Milton; 2nd semester: Rousseau through Richard Wright), I had no discretion as to the material to be covered. For the midterm and final exams, my students were required to choose three of the (many) exam questions and wrote a one-hour essay on each—but I had the students set the exams: each could suggest as many questions as they liked, and I put all their questions as choices on the exam. The idea was to let them dig deeper into whatever interested them and write their essays on that, even if this meant an essay on Mme Bovary, an essay on Hedda Gabler, and an essay comparing Mme Bovary and Hedda Gabler.

Kirk (2012-05-31 09:53:04)

To satisfy the 'easy goals' concerns, after a student makes a presentation, you could ask the class whether the goals were sufficiently difficult to merit a passing grade. Peers can always identify slackers. As for drawing up one list of goals at the top of the semester . . . the companies I worked for always required yearly goal-setting, and then the manager and I would review the goals and progress every quarter. During most Q1, Q2, or Q3 review sessions at least one goal would be revised. Now that I am out on my own, I set personal goals every year and review them at least every 3 months, and I typically modify at least one goal. Either I exceeded or underachieved the target metric, or I changed life direction such that one enthusiasm has replaced an earlier one. In summary, you may be spending less time grading essays and more time consulting one-on-one with your students. (Sounds like a good trade-off to me.) I don't know if it applies; your approach reminds me of Lee Sheldon's teaching method where he has students accumulate experience points (XP).

Jill (2012-06-01 07:23:22)

Will you help the students who need greater direction/structure to develop their goals? I think for some freshman, a "sky's the limit" approach could be scary.

Aaron Blaisdell (2012-06-01 10:43:07)

Very interesting, Seth. I've been trying to revamp some of my courses to better meet the diversity of student interests and tap into a more natural way to learn. This quarter, I'm teaching a large course (188 students) on the Principles of Learning (Pavlovian and Instrumental conditioning, mostly), so I followed the traditional lecture and test format out of necessity. But, I did have three students from the class taking the course for honors, which entails conducting their own research of the primary literature (with some exceptions) to more deeply explore a particular topic or theme. Instead of the typical APA format paper to turn in at the end of the quarter, I had the students publish a weekly blog, each blog post focusing on one or two papers. At the end (next week) they are to write a wrap-up blog post to put what they've covered into perspective along with their own analysis and bigger question, future direction type stuff. They and I have thoroughly enjoyed the process so I'll replicate this again! One of the blogs even covered the Shangri-la diet (which I also covered in class lecture as an example of using our knowledge of Pavlovian conditioning principles to manage our own eating behavior in the real world). The blogs, if anyone is interested, are here: <https://willyoublogwithme.wordpress.com/> <http://royakarakian.blogspot.com/> <http://behavioraltreatmentsfor substanceabuse.blogspot.com/>

Roger Sweeny (2012-06-03 08:03:23)

*The more I allowed the underlying diversity of my students to be expressed, the more they learned.* Well, yes, but ... Perhaps the major justification for school (certainly elementary and high school) is that everyone should know some minimum set of things. In other words, the major justification for school is that students *don't* get to pick what they learn. Seth: Fair point. I agree that it is important to teach everyone how to read, basic math, basic science, and a few other things. As you say this happens in elementary school and high school. I don't think it has been explored enough how to allow students to learn these basic skills in many different ways but I agree every student should learn them.

Sweet Nina (2012-06-05 10:54:53)

I agree that it is important to teach everyone how to read, basic math, basic science, and a few other things.

## 7.6 June

### Assorted Links (2012-06-01 05:00)

- [1]Blogger sues North Carolina Board of Dietetics and Nutrition. Also [2]here. May justice roll down like water.
- [3]Red wine and lies.
- Vitamin D and fertility: [4]here, [5]here, [6]here, and [7]here.
- [8]Vitamin D wiki.

Thanks to Brian Horrigan.

1. <http://www.drbriffa.com/2012/05/30/us-blogger-sues-dietetic-body-for-attempting-to-curtaill-his-freedom-of-speech/>
2. [http://www.weeklystandard.com/blogs/criminalizing-dear-abby\\_646303.html](http://www.weeklystandard.com/blogs/criminalizing-dear-abby_646303.html)
3. <http://chronicle.com/blogs/percolator/red-wine-and-lies/28345>
4. <http://aboutplanb.blogspot.com/p/science-of-in-fertility.html>
5. <http://aboutplanb.blogspot.com/2010/12/on-vitamin-d.html>
6. <http://www.ncbi.nlm.nih.gov/pubmed/19589516>
7. <http://www.ncbi.nlm.nih.gov/pubmed/19056816>
8. <http://www.vitamindwiki.com/tiki-index.php>

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Tom (2012-06-01 22:42:24)

Off-topic, Seth, but you may find these n=1 observations on vinegar and weight loss interesting: [itsthewooo.blogspot.com/2012/06/things-i-used-to-do-that-help-wt-loss.html](http://itsthewooo.blogspot.com/2012/06/things-i-used-to-do-that-help-wt-loss.html)

### Academic Politics, Alan Turing and Stanford (2012-06-02 05:00)

[1]This series of posts about a proposed Alan Turing conference at Stanford left me wondering about the best academic novels I had read. Pnin is good, but not very academic. Gone by Renata Adler is fantastic but about office politics. I didn't like Changing Places nor Lucky Jim. I doubt a novel could be better than this:

A couple of days later we received a note from Lester Earnest to say he was withdrawing from the committee. Since Les was underwriting the event this was a blow; we had lost our funding.

I wrote to Les asking him what had happened, knowing that the exchange with [Jennifer] Widom [chair of the Stanford CS department] over the December holiday was surely sufficient to deter and depress anyone.

A few hours later Ed Feigenbaum wrote to the committee saying that he had not spoken to Les but that he would withdraw from the committee himself. This puzzled both me and Les because Les had just told me that Ed had talked him out of supporting the conference.

Is there a blog about academic politics?

1. <http://challengingturing.org/>

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Darrin Thompson (2012-06-02 06:01:57)  
Gripping.

Allen K. (2012-06-02 08:34:06)  
"Changing Places", you mean. I didn't like it either. Seth: Thanks for the correction.

Jonathan (2012-06-02 14:54:04)  
Richard Russo's "Straight Man" is the funniest novel I've ever read.

Nancy Lebovitz (2012-06-03 04:21:49)  
Pamela Dean's "Tam Lin" is just the thing if you have any fondness for small liberal arts colleges. Something rotten in the classics department. Donna Tartt's "The Secret History" is a gripping story about a less attractive small liberal arts college. Also has something rotten in the classics department. The only thing I remember from "Publish and Perish", aside from that it's a horror novel is a scene of going berzerk in a boring meeting. I like to think the scene was developed over the course of many boring meeting.

dearieme (2012-06-03 04:50:36)  
"I didn't like ... Lucky Jim": then it's as well I don't read you for your sense of humour.

Alex Chernavsky (2012-06-03 05:08:34)  
[1]*Cantor's Dilemma: A Novel*, by Carl Djerassi, is an academic novel. I read it years ago, when it first came out. It was decent but not great. (Djerassi is the inventor of the Pill. He is emeritus professor of chemistry at Stanford University.)

1. <http://www.amazon.com/Cantors-Dilemma-Novel-Carl-Djerassi/dp/0140143599>

## How Much Vitamin D Should I Take? (2012-06-03 10:00)

[1]A new study of a quarter million Copenhagen residents found that those with Vitamin D blood levels of 40-70 nmol/L [16-28 ng/ml] had the lowest death rate. People with lower and higher amounts had higher death rates, in other words. The death rate versus blood level function has a reverse-J shape, i.e., too little is worse than too much. About 1 % of the sample had levels above 140 nmol/L [56 ng/ml], for practical purposes a "high" level.

Because [2]Vitamin D3 seems to have a big time-of-day-dependent effect on sleep (Vitamin D in the morning improves sleep, Vitamin D in the evening makes sleep worse) it is plausible that people with high Vitamin D levels were more likely to take it in the evening than those with moderate levels and this is why they had higher mortality. Likewise, it is plausible that those with moderate levels were more likely to take Vitamin D in the morning than those with low levels and better sleep explains the lower mortality. Although epidemiologists adjust for smoking in studies like this, they don't yet adjust for sleep quality. It is also plausible that people who were more sick took more Vitamin D – hoping it would improve their health.

I think I have a better way to decide how much Vitamin D3 to take: choose the minimum amount that produces

the best sleep. Sleep is so strongly connected with health that I wouldn't want to choose worse sleep over better sleep simply because of epidemiology. [3]At the same time that I greatly improved my sleep, I stopped getting easy-to-notice colds. Apparently my immune system was doing a better job of fighting them off.

There is evidence that [4]Vitamin D improves immune function independently of its effect on sleep. [5]A 2009 survey found that "those with less than 10 nanograms of vitamin D per milliliter [25 nmol/L] of blood, considered low, were nearly 40 percent more likely to have had a respiratory infection [over what period of time?] than those with vitamin D levels of 30 ng/ml [75 nmol/L] or higher."

So those three studies (epidemiology, lab, epidemiology) taken together make a good case that my Vitamin D levels should be at least 25 ng/ml. I will have my Vitamin D level measured soon and it will be interesting to see how much an approach based purely on self-measurement (find the minimum amount of Vitamin D that optimizes sleep) agrees with this.

Thanks to Chase Saunders.

More. In an earlier version of this post I confused ng/ml with nmol/L.

1. [http://news.ku.dk/all\\_news/2012/2012.5/too\\_much\\_vitamin\\_d\\_can\\_be\\_as\\_unhealthy\\_as\\_too\\_little/](http://news.ku.dk/all_news/2012/2012.5/too_much_vitamin_d_can_be_as_unhealthy_as_too_little/)
2. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>
3. <http://escholarship.org/uc/item/2xc2h866>
4. <http://www.sciencedaily.com/releases/2010/03/100307215534.htm>
5. <http://health.usnews.com/health-news/managing-your-healthcare/infectious-diseases/articles/2009/02/23/too-little-vitamin-d-may-mean-more-colds-and-flu>

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Joe (2012-06-03 11:33:51)

Looking forward to your vitamin D3 test results! Mine is 90 ng/ml, and I generally sleep like a baby.

Caleb Coop (2012-06-03 13:25:21)

That's a good point Seth; based on how people take pills it's likely many with the high levels were taking a 5000 w/ breakfast and a 5000 w/ dinner. So it's still an open and very interesting question what the long term effects high levels obtained differently might be. Since the body tops out around 10,000 when producing from the skin, I tend to think supplementing under that would be safe. It's finally warm enough to make Vitamin D naturally where I live, and I believe there are additional hormeosis benefits from moderate solar radiation damage below the sunburn level. So I've stopped taking my D in the morning because of worry about unnaturally high levels. Seth, would you still take your 6000-7000ish dose in the morning if you were going to be getting enough sun exposure later in the day to top out skin production? My default is to be conservative in exceeding what would have happened in nature. Though I do believe some bio-hacks could surpass the benefits of simple ancestral reenactment, and really respect those like you who try them out on themselves. We're all richer for you sharing your results. Seth: I take 5000 IU, not 6000-7000 IU, in the morning. Yeah, I'd still take it even if I were going to the beach. Which is purely hypothetical!

P. Winter (2012-06-03 16:10:53)

Have you read THE MIRACULOUS RESULTS OF EXTREMELY HIGH DOSES OF THE SUNSHINE HORMONE VITAMIN D3 MY EXPERIMENT WITH HUGE DOSES OF D3 FROM 25,000 to 50,000 to 100,000 IU A Day OVER A 1 YEAR PERIOD [Kindle Edition \$1.99 } written by Jeff Bowles?

Guv (2012-06-03 17:19:59)

Hi Seth, looks like you have a couple of typos..... The two nmol references should read nmol/liter (not nmol/milliliter). For those people not familiar with the nmol/L measurement, divide by 2.498 (or 2.5) for ng/ml. eg. 40-70 nmol/L = 16-25 ng/ml This range is a lot lower than all the various recommendations i have seen around the web; which generally quote the optimal range anywhere between 40 ng/ml (100 nmol/L) on the bottom end to 80 ng/ml (200 nmol/L) on the top end, depending on where you look. I have seen higher ranges recommended to treat illnesses, ie. the Mercola web site suggests 70-100 ng/ml (175-250 nmol/L) to treat Cancer & Heart Disease. Seth: I have fixed the mistakes, thanks. If Vitamin D has a strong of time-of-day effect - i.e., it matters a lot what time of day you take it - then I believe all recommendations will need to be reconsidered in the light of new evidence that measures or controls time of day.

Guv (2012-06-03 17:48:39)

thx Seth, i too will be interested to hear what your Vit D level is measured at. ( & how you interpret the result). I actually had mine tested last week, tho i have not been back to get the results yet.

Chuck (2012-06-03 20:47:26)

I just had mine checked - 84 nmol/L. I take 5000 IU each morning (I recently switched from capsules to liquid on Robb Wolf's advise - capsules maybe less effective) and get plenty of sun (7 - 15 hrs/wk). So I'm not sure if it's the sun or supplements, or both. I began supplementing 3 years ago and haven't had one cold in that time - usually got one cold / flu per year. Seth: That's very interesting. When you started the supplements 3 years ago, did you also increase how much sunlight you got? Or did amount of sunlight stay more or less constant?

P.Bear (2012-06-03 22:02:02)

Please read: Vitamin D and host resistance to infection? Putting the cart in front of the horse <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3138330/> I recommend that only a very few of my patients take vitamin D, only those whose levels are below 14ng/ml. Higher levels of 25-D above (about 40ng/ml) are associated with increased all cause mortality. P.Bear Seth: Thanks for the link. That paper references an experiment measuring whether 2000 IU/day Vitamin D reduced colds. It found no effect. This may be because the experiment used too low a dose and did not control the time of day that the subjects took Vitamin D - that is, Vitamin D in the morning may help but not at other times of day.

Sara (2012-06-04 02:41:11)

Seth, I wonder if you are aware of the link between early D3 deficiency and Type I diabetes? The research is pointing toward D3 having a modulating effect on the immune system (Type I diabetes is an autoimmune disorder). There is probably a factor of genetic vulnerability due to a polymorphism of the VDR gene which combined with an early (even in utero) lack of D3 is linked fairly conclusively with development of Type I diabetes. I found it veeeeery interesting that high intake of D3 seems protective against a hyperimmune response. I can link you up to some papers if you are interested. Obviously each paper has its issues (for example, you can't really induce a deficiency or leave one untreated in order to observe the effect) but the body of evidence taken together is quite convincing. Seth: I was not aware of the link, thanks for pointing it out. Please post another comment with links to the papers, if that's possible.

David (2012-06-04 05:47:20)

What did the study that you cited mean by "lower" death rate? Lower by some material amount? After watching this TedX video, I have a renewed appreciation for asking about the significance of most scientific studies. <http://www.youtube.com/watch?v=TDB6iBOhuq0> &feature=share Seth: The highest and lowest death rates differed by a factor of 2.

Pete (2012-06-04 06:57:58)

As vitamin d as taken is inert the time of day is unlikely to matter. It is then converted to 25(OH)D which is inert. It is only converted to an active compound when needed, so when it is taken is very unlikely to matter. Your body is used to getting it at midday but I doubt it cares. Please do not take sustained daily doses above 20,000IU a day without being told to do so by a

doctor it is dangerous. If you can take those high doses without getting ill it is because your parathyroid has failed. Seth: Since the time of day obviously matters, at least some of the time – see the 20-odd examples I have collected – something is wrong with your theory.

Pete (2012-06-04 08:45:05)

20 examples is not many so it could easily be a fluke. However, it is more likely one of the other ingredients. The oil could give you reflux and that could be affecting you sleep. Do you get the same effect from sun light? Do you get the same effect if the vitamin d is applied to the skin rather than taken orally? Seth: "Easily be a fluke"? Do you know of a case where someone collected twenty examples of something that turned out to be a fluke? I found that Vitamin D in the morning improved my sleep. I found the same effect with gencaps (with oil) and tablets (without oil). So it's not the oil. I have found that sunlight in the morning improves my sleep. I have not tried applying Vitamin D to my skin.

Dave (2012-06-04 11:56:19)

In the study claiming higher blood levels were correlated with a higher death rate, did they try to correct for the possible effect of people with poor health being more likely to supplement with vitamins, or that sort of thing? Seth: No they didn't. That's what I meant by "It is also plausible that people who were more sick took more Vitamin D — hoping it would improve their health."

P.Bear (2012-06-04 12:33:55)

This video may interest some of you artificial seco-steroid "Vitamin D" takers: [https://www.youtube.com/watch?v=E\\_SwHX5K\\_nE](https://www.youtube.com/watch?v=E_SwHX5K_nE) One might also read this interesting blog: <http://www.newswithviews.com/Ellison/shane158.htm> This article in Townsend Letter is of interest, but I would not follow any medical advice from non health care professional MP cult members. <http://www.townsendletter.com/Jan2009/vitaminD0109.htm> for health, P.Bear

Carol (2012-06-04 13:26:49)

For years I've had bad sleep, and once I was in peri-menopause, it got worse. I had trouble going to sleep, and if I had a hotflash during the night, I would wake up, and be unable to go back to sleep again. I was the walking dead some days. I worked in a windowless office 5 days a week, for 9+ hours a day for the last 13 years. I also live in the PNW, so sunshine is a fleeting thing most of the time. I had been taking Vitamin D (low dosage) in the evening, but then I switched to the morning, and was taking 10,000 a day for about 2 months. The sleeping got progressively better, and I'm now to the point that I fall asleep easily, and even a hot flash only wakens me a bit, and I can go back to sleep. This is HUGE for me. I had my levels tested, and it is 63.4 ng/ml, which is in range (30-100). I've switched to 5,000 iu a day now, since I get almost no sun exposure opportunities. I also took both dry and oil based capsules. I didn't notice a difference.

Antonio Pedro (2012-06-04 16:05:26)

Hi all, Have you guys heard about this? [http://www.amazon.com/MIRACULOUS-EXTREMELY-SUNSHINE-EXPERIMENT-ebook/dp/B005FCKN2S/ref=sr\\_1\\_1?s=books&ie=UTF8&qid=1338666649&sr=1-1](http://www.amazon.com/MIRACULOUS-EXTREMELY-SUNSHINE-EXPERIMENT-ebook/dp/B005FCKN2S/ref=sr_1_1?s=books&ie=UTF8&qid=1338666649&sr=1-1) It is not quite the same as what has been discussed here but it is surely related. Cheers, Antonio Pedro

Chuck (2012-06-05 06:31:44)

A qualified yes to the increase of sunlight. I've always gotten some sun exposure during the summer - more some years than others - but it wasn't until last year ( 16 mos ago) that I really put an effort into getting daily sun. Living in So CA you have opportunities for sun exposure - you can have a warm sunny day any month of the year - but you still have to have ability to go outside and take your shirt off. Last year my ability became open ended. I started with 15 minute sessions - front and back, shirt off, pants on, no sunscreen (this is important) and I do wear a baseball cap most days (it makes it easier to read) - when the sun was at it's highest point. You'd be surprised at what 15 minutes of sun on white skin will do. I would do this on every sunny day, extending the time a little each week or 5 straight days of sun exposure. I can now spend two hours in the sun with no sign of burning. If I start feeling any burning sensation, I cover up or get in the shade. Most days I'll just sit out facing the sun with my shirt off for an hour or so. Sometimes I'll split the time between front and back. As it gets hotter, I actually spend less time in the sun, unless it's before noon or after 3 PM, or I'm on the beach close to the water. I've found, if you listen to

what your body is telling you, you won't get burnt or sun stroke. Like most other things in life, the poison is in the dose.

Guv (2012-06-13 16:48:38)

it looks a new study on Vitamin D levels has been released since the Copenhagen study (discussed in the article above). This is some blurb from the Vitamin D Council. "While a study out of Denmark reports, in an observational study, that both high and low vitamin D levels are associated with an increase in mortality, a study published just last week out of Israel reports that only low vitamin D levels are associated with increased risk of mortality. Published in the Journal of Endocrinology and Metabolism, lead investigator Dr Walid Saliba of the Carmel Medical Center found that in an analysis of 182,152 subjects, vitamin D levels above 20 ng/ml were better than levels below 20 ng/ml." <http://blog.vitamindcouncil.org/2012/06/12/the-research-continues-low-vitamin-d-increases-mortality/> That is all the info i have on it, to find out more a login is required, which i do not have.

Leszek (2012-06-14 15:15:06)

Long story, but interesting. Once I get better, I'll be brief :) Yesterday, I took D3 in the morning (just 800 IU) and for the first time in several months, if not years, I slept soundly all night. Too early to proclaim a victory but I have no explanation for this other than early morning D3 dosing. Need some advice. Need to tell my story. I experimented with D3 before, with mixed results. I have Hashimoto Thyroiditis and have had cognitive, mood, and sleep problems for about 15 years. Thyroid medication, which I have been taking last two years (an equivalent of about 120 mcg levothyroxine, which is a fairly typical dose) has not worked well, until about a year ago, when I briefly experimented with D3 supplementation. I am not sure how much I took then, I think about 8000 IU, twice a day, 4000 in the morning and 4000 with dinner. Ten days into D3 supplementation, I had my levels measured and I was low (25 ng/mL). Two weeks into supplementation, I started feeling normal, confident, clear-headed, energetic, just like what I had prayed for for years. I am not sure how well I slept at that time. This improvement did not last. One month later I felt thirsty all the time, got up at night every half an hour, my normally very slow heart rate increased uncomfortably and I was in a worse shape than ever. It had felt like an excess thyroid supplementation (except for thirst which seemed odd to my doctors), but it was not. I discontinued D3 and went back to my pre-D3 normal. I resumed supplementation, and that again caused restless nights, thirst, frequent urination, etc. I discontinued D3 for about six months. I thought for good. Last six months I nearly lost all hope: sluggish, sleepy, confused, getting lost in familiar places, avoiding people, stiff and achy all over, particularly in calves and achilles tendons, in a word: your standard low-thyroid mess. Last month, I spent some time in Utah and felt a touch better. I don't have much sun here (Seattle) so I thought perhaps it is a matter of D3 after all. This time (a week ago) I took 2000 IU (half in the morning, half at night) and excessive thirst and fast heart rate, particularly at night, had returned immediately, within just 24 hours. After just 2000 IU of D3! This is really not that much for someone with just D3 at 35 ng/ML (as of two months ago). So I bought 400 IU tablets and yesterday decided to take two (800 IU), in the morning (I am not sure why in the morning, pure accident). The effect on sleep was so good and so dramatic that I started looking for empirical evidence that perhaps all I need to get over this nightmare is to take D3 in the morning. I think 800 might not be enough to improve my other problems. I want to take 2000 early in the morning for a week and see what happens. What do others think? Keep your fingers crossed for me.

Leszek (2012-06-14 15:44:39)

Let me just add that thyroid problems are highly correlated with D3 and, in women, with iron deficiency. Furthermore, I was briefly on a too high dose of levothyroxine (my TSH was 0.08) and it felt very much like what I was experiencing during night-time D3 dosing, except for excessive thirst. I have no proof but it seems to me that D3 is making thyroid hormones more effective, perhaps via increased t4 to t3 conversion.

Leszek (2012-06-15 13:04:02)

Relative vitamin D insufficiency in Hashimoto's thyroiditis. <http://www.ncbi.nlm.nih.gov/pubmed/21751884>

Sara Lake (2012-06-27 18:54:42)

Here you go, Seth. Some light reading.. Each one of these takes a slightly different angle. <http://www.ncbi.nlm.nih.gov/pubmed/19906128> Borkar, V., Devidayal, V. & Bhalla, A (2010). Low levels of vitamin D in North Indian children with newly diagnosed type 1 diabetes. Pediatric diabetes, 11, 345-350.



<http://www.ncbi.nlm.nih.gov/pubmed/14758446> Giulietti, A., Gysemans, C., Stoffels, K., van Etten, E., Decallonne, B., Overbergh, L., Bouillon, R. & Mathieu, C. (2003). Vitamin D deficiency in early life accelerates type 1 diabetes in non-obese diabetic mice. *Diabetologia*, 47, 451-462 <http://www.ncbi.nlm.nih.gov/pubmed/11705562> Hyppönen, E., Läärä, E., Reunanen, A., Järvelin, M. & Virtanen, S. (2001). Intake of vitamin D and risk of type 1 diabetes: a birth-cohort. *The Lancet*, 358, 1500-1503 <http://www.ncbi.nlm.nih.gov/pubmed/14668274> Stene, L., Joner, G. & the Norwegian Childhood Diabetes Study Group. (2003). Use of cod liver oil during the first year of life is associated with lower risk of childhood-onset type 1 diabetes: A large, population-based, case-control study, *The American Journal of Clinical Nutrition*, 78, 1128-1134 <http://www.ncbi.nlm.nih.gov/pubmed/10027578> The EURODIAB Substudy 2 Study Group (1998). Vitamin D supplement in early childhood and risk for type I (insulin dependant) diabetes. *Diabetologia*, 42, 51-54. <http://www.ncbi.nlm.nih.gov/pubmed/16905645> Zhang, J., Li, W., Liu, J., Wu, W., Ouyang, H., Zhang, Q., Wang, Y., Liu, L., Yang R., Liu, X., Meng, Q. & Lu, J. (2011). Polymorphisms in the vitamin D receptor gene and type 1 diabetes mellitus risk: An update by meta-analysis. *Molecular and Cellular Endocrinology*, 355, 135-142. <http://www.ncbi.nlm.nih.gov/pubmed/18339654> Zipitis, C. & Akobeng, A. (2008). Vitamin D supplementation in early childhood and risk of type I diabetes: a systematic review and meta-analysis. *Archives of Disease in Childhood*, 25 March 2008, 1-15

## **What to Do About Antibiotic Resistance? Improve Immune Function (2012-06-05 05:00)**

I recently got a flyer from my HMO. "Feel better soon . . . without antibiotics!" said the front page. "Antibiotics do not kill viruses" said the second page. Apparently the point of the flyer is to reduce antibiotic usage. I am surprised that doctors need protection from patients asking for antibiotics for viral diseases.

Antibiotic resistance is a problem, yes, but the bigger problem is how those who run our health care system ignore the immune system. Here are examples:

1. The historical solution to the problem of antibiotic resistance has been to develop new antibiotics. The problem has not stimulated research into how to strengthen the immune system. Here is [1]a 1992 editorial in *Science*: "Mechanisms such as antibiotic control programs, better hygiene [= more handwashing], and synthesis of agents with improved antimicrobial activity need to be adopted in order to limit bacterial resistance." Nothing about improving immune function. [2]A 2012 World Health Organization report about the problem does not contain the word immune.

2. [3]The idiocy of tonsillectomies. Forty years after researchers figured out that tonsils are part of the immune system, tonsillectomies remain common. Removing tonsils because of too many infections makes as much sense as removing part of the brain because of memory loss. I have never encountered a doctor who appears to understand this.

3. Epidemiologists have yet to systematically study what makes the immune system more or less powerful. For example, [4]this epidemiology textbook does not contain the word immune. Nor does [5]this review of 25 epidemiology textbooks.

4. A respected professor of pharmacology at the University College London named [6]David Colquhoun left [7]the following comment on this blog: "Talking of made up theories, the corniest of all has to be "stimulating the immune system". There is [not], and never has been, any evidence that it happens – it is the eternal mantra of every quack who is trying to sell you their own brand of implausible therapy." [8]Here is an example of the evidence he says doesn't exist. Professor Colquhoun is a Fellow of the Royal Society.

5. I know very little about the immune system. I barely know what a T cell is. My job (psychology professor) has nothing to do with it. Yet I have come up with three ideas related to it: 1. Tonsillectomies are idiotic. 2. [9]We need regular intake of microbes to be healthy – in part to stimulate the immune system. 3. [10]We need exposure in small

amounts to the germs around us for our immune systems to best protect us. (So it's not obvious that outside of hospitals more handwashing is a good thing.) Only because these ideas are obvious ( #1 and #3) or semi-obvious ( #2) was someone as ignorant as me able to think of them. That one ignorant outsider thought of three of these things before the hundreds of thousands of health researchers did suggests how little they think about the immune system.

Someday the people in charge of our health care – or the rest of us, ignoring them – will figure out how to make our immune systems work much better. We will sleep much better, eat much more fermented foods, take enough Vitamin D at the right time of day, and so on. Perhaps we will wash our hands less and kiss more. Antibiotic usage will go way down, selection for resistant microbes will become much less intense, and antibiotic-resistant microbes will become much less common. The problem will disappear.

1. <http://www.ncbi.nlm.nih.gov/pubmed/1509257>
2. [http://whqlibdoc.who.int/publications/2012/9789241503181\\_eng.pdf](http://whqlibdoc.who.int/publications/2012/9789241503181_eng.pdf)
3. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>
4. <http://www.amazon.com/Epidemiology-Introduction-Kenneth-J-Rothman/dp/0195135547>
5. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1060557/pdf/jepicomh00180-0002.pdf>
6. [http://en.wikipedia.org/wiki/David\\_Colquhoun](http://en.wikipedia.org/wiki/David_Colquhoun)
7. <http://blog.sethroberts.net/2011/09/09/acupuncture-critic-misses-big-points/#comment-925422>
8. <http://www.sciencedaily.com/releases/2010/03/100307215534.htm>
9. <http://blog.sethroberts.net/the-unami-hypothesis-why-i-believe-fermented-foods-are-necessary-for-health/>
10. <http://blog.sethroberts.net/2012/01/10/why-we-touch-our-mouths-so-often-forewarned-is-forearmed/>

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Mike (2012-06-05 05:18:17)

A while back I went to a doctor because I had a persistent sore throat and some other symptoms and he did a bunch of other tests first. Me: "What about my sore throat." Doc: "I'm not concerned. It just looks like a virus." Me: "OK, but it's been sore for over a month now." Doc: "I can prescribe you an antibiotic." Me: "Antibiotics don't do anything to viruses." Doc: "Correct." Me: "...". Doc: "...". Me: "...". Doc: "We could do an allergy panel." Me: "No thanks."

Koanic (2012-06-05 05:33:23)

The Antiseptic Baby and the Prophylactic [1] Pup Were playing in the garden when the Bunny gamboled up; They looked upon the Creature with a loathing undisguised; — It wasn't Disinfected and it wasn't Sterilized. They said it was a Microbe and a Hotbed of Disease; They steamed it in a vapor of a thousand-odd degrees; They froze it in a freezer that was cold as Banished Hope And washed it in permanganate [2] with carbolated soap [3]. In sulphurated hydrogen [4] they steeped its wiggly ears; They trimmed its frisky whiskers with a pair of hard-boiled shears; They donned their rubber mittens and they took it by the hand And 'lected [5] it a member of the Fumigated Band. There's not a Micrococcus [6] in the garden where they play; They bathe in pure iodoform [7] a dozen times a day; And each imbibes his rations from a Hygienic Cup – The Bunny and the Baby and the Prophylactic Pup. - by Arthur Guiterman

Nancy Lebovitz (2012-06-05 06:29:48)

One way that the medical profession doesn't respect the immune system– hospitals tend to be bad about interrupting patients' sleep. Seth: yes, very good point.

Tuck (2012-06-05 07:36:34)

"Someday the people in charge of our health care — or the rest of us, ignoring them..." I'll go with the latter scenario. We recently had a bit of a battle with our pediatrician over how to handle a fever. She just had no clue that fever is a first line of

defense against infection... If you read the literature, which I did, you can pretty quickly ascertain that "treating" a fever leads to worse outcomes, while letting it run leads to better outcomes (survival is better, in my book). I even found an amusing study, basically a letter to the pediatric profession, noting that parents were alarmed by fever in direct relation to their time spent with a medical professional. The letter concluded that pediatricians ought to do a better job of conveying correct information to their patients. Obviously our doctor hadn't gotten the memo. And I think she's a good doctor, she's just hobbled by a bad education (Harvard Med, as I recall...). After chastising us for not treating the fever with Motrin (I refused) she sent us an alarmed text telling us \*not\* to use Motrin, as the illness likely had a hemorrhagic component, which the Motrin would make worse. The kid recovered nicely with essentially no treatment whatsoever, but a healthy paleo diet and lots of sunshine... (Interestingly, I had her sit out in the sun for a bit to generate some Vit. D, and her fever promptly skyrocketed. Cause and effect?)

Rich (2012-06-05 09:38:45)

It's funny, I was watching The Brady Bunch with my 9 yr old yesterday where Mrs. Brady and Cindy both get their tonsils out because they were getting periodic sore throats and the sniffles.

peter (2012-06-05 10:16:41)

<http://www.lowdosenaltrexone.org/> since i've been taking low dose naltrexone (about 3-4 years) i've had one cold.

Walter (2012-06-05 16:24:46)

Seth, Given I have no tonsils would you add anything to your list of suggestions? Thanks, Walter Seth: Sue the doctor who removed them.

Patti (2012-06-05 17:01:47)

Tuck you are very lucky your child was okay. Yes although fever is the first line of defense it is also the first sign the body is out of homeostasis. Fevers in children can be very dangerous due to their unpredictability. Nancy Lebovitz. I agree with you 100 %.

Introsphere Roundup: All the news that's fit to ponder – June 5 | Koanic Soul (2012-06-05 19:01:16)

[...] best guys in the game, Ive deduced game down to one thing., – I am alpha Seth Roberts – What to Do About Antibiotic Resistance? Improve Immune Function Sovereign Man – These popular services won't keep your information private! Unamused [...]

chris (2012-06-05 21:09:10)

Hey Seth, A few problems with your post. I'll organize them by point. 1. Researchers would love to stimulate the immune system, however, that is not a reason to forgo antibiotics. Antibiotics save lives, and even in non-fatal diseases can greatly increase quality of life. The immune system is incredibly complex and difficult to try to regulate from the outside, so progress is very slow on that front. Also, increasing your immune system (whatever that means exactly? More T cells, B cells, cytokines, better complement response, etc? You would need to specify what you mean by that first and foremost) response has nothing to do with bacterial resistance to antibiotics, so it is not surprising that it wasn't included in the editorial you link to. Bacterial resistance is a competition between bacteria and antibiotics, not our immune system. Sure, a better (still too vague) immune system would help resistance to any disease, but we don't have good data on exactly how to do that yet (from what I currently understand). 2. Tonsillectomies. You are absolutely right than an abuse of tonsillectomies would be idiotic. However, the current guidelines (seen here from the Mayo clinic <http://www.mayoclinic.com/health/tonsillectomy/MY00132/DSECTION=why-its-done>) only call for the procedure in the case of severe recurrent infections and other complications (basically if your tonsil keeps getting infected, the immune system there isn't doing its job and the risks are outweighing the benefits of keeping that tonsil). Seth: Sounds tautological ("if the risks are outweighing the benefits"). 3. Before that question could even start to be addressed you would have to explain what exactly constitutes a "more powerful" immune system. Otherwise what do you study? Give a phone survey asking how powerful someone thinks their immune system is? Seth: The more powerful your immune system, the fewer colds you get and the shorter time they last. That's one way to measure immune function. 4. What I think the professor was referring to is the incredible overuse of the term "stimulating the immune system" by quacks who simply use it as a way to claim that all modern medicine is a waste of time.

That is very different than the article you linked to that gives a specific mechanism, specifically showing how a vitamin D deficiency could limit immune system function. 5. Conventional medicine does not ignore healthy habits that also support your immune system such as getting enough sleep, eating healthy, not being deficient in nutrients, etc. Also, your second and third points in point number 5 are based on conjecture, not hard evidence. I would recommend that you do a little more research into exactly what medical researchers and immunologists are doing before you assume you've come up with something that completely overturns a field. For example, if I thought I came up with a simple thought experiment that overturned special relativity, I would go educate myself more on the topic, maybe email an expert or two and ask their opinion before I posted my opinion on a blog saying I was smarter than a bunch of Ph.D. physicists. It is much more likely that I just don't understand relativity than that I've disproved it. Seth: "I would recommend that you do a little more research into exactly what medical researchers and immunologist are doing." You seem to be saying I have overlooked something that contradicts what I say here. What is it? Contrary to what you say, my second and third points in point number 5 are based on hard evidence, which you can find via the linked page and posts. I have posted twice about hard evidence for the third point (existence of an early warning system) and dozens of times about hard evidence for the second point (microbes in our food stimulate our immune system). The fact that you think "thought experiments" are involved supports my view that these ideas are remarkably obvious.

Jaroslav (2012-06-06 01:39:49)

[1]Early Exposure to Microbes Reduces Inflammation Related to Chronic Disease Later In my country (Czech Republic) we have a saying - or rather, used to have, as the hygienic and neurotic approach to raising children has caught up with us - that every child should eat a cart of dirt and cart of manure during childhood to be healthy.

1. <http://www.sciencedaily.com/releases/2012/05/120530152318.htm>

Adam (2012-06-06 05:00:18)

Chris said: "1. Researchers would love to stimulate the immune system, however, that is not a reason to forgo antibiotics. Antibiotics save lives, and even in non-fatal diseases can greatly increase quality of life. The immune system is incredibly complex and difficult to try to regulate from the outside, so progress is very slow on that front. Also, increasing your immune system (whatever that means exactly? More T cells, B cells, cytokines, better complement response, etc? You would need to specify what you mean by that first and foremost) response has nothing to do with bacterial resistance to antibiotics, so it is not surprising that it wasn't included in the editorial you link to. Bacterial resistance is a competition between bacteria and antibiotics, not our immune system. Sure, a better (still too vague) immune system would help resistance to any disease, but we don't have good data on exactly how to do that yet (from what I currently understand)." Seth's point wasn't that people that need antibiotics should forgo them, so you are attacking a Straw Man in the first part here. He also never said that antibiotics don't save lives or that no one needs them. What I think he is trying to say is that the specialists are looking at a small part of a bigger picture, which is limiting the potential solutions they could come up with. The body isn't a sterile environment where bacteria and antibiotics are interacting with each other alone. In many cases, people will recover even from bacterial illnesses all on their own, even without antibiotics. In some illnesses, antibiotics merely shorten the duration or intensity of the disease. In this sense, you can think of antibiotics as an aid to the immune system, not as a replacement for it and not separate from it. Your last point, that we don't have a good idea about what boosts the immune system might be true for you specifically, but that doesn't mean that information isn't out there. There are several examples in this thread already. To add to them, there is some good data out there that zinc boosts the immune system. I recently read a study where they gave zinc to severely ill pediatrics and reduced the rate of antibiotic treatment failure by about 50 %. Search PubMed for "2012 Lancet zinc" and I'm sure it'll come up.

Chris (2012-06-06 11:55:52)

Hello Seth and Adam, Thank you for your responses. I will try to clarify what I may have left too vague while trying to be brief. Seth, I don't understand your tautological argument. All I am saying is that there are still situations today where tonsillectomies are a good procedure. Sometimes, the damage that can be done by leaving a tonsil outweighs the potential benefits of keeping that tonsil (cancer, severe recurrent painful infection, etc) I apologize for the tongue in cheek response about an immune survey. You can indeed measure components of the immune system in response to certain therapies. Maybe looking at cold rates would be beneficial for some studies, but not antibiotic resistance because the common cold is

typically caused by rhinoviruses, not bacteria. Also, the amount of confounding variables (including differential exposure to germs) in an epidemiological study would make it very difficult to justify creating an entirely new immune boosting treatment without a more controlled trial. About the field as a whole (and this should help to answer your questions too Adam), you are conflating infectious disease/microbiology with immunology. Yes, both components (the infecting microbe and the host immunity) are important, but they are so complex that two different fields currently deal with them. Antibiotic resistance is fundamentally a bacteria vs. antibiotic problem, our immune system is not really a part of it, outside of being part of the environment that the bacteria are trying to inhabit in your body. Yes, the antibiotic aids our immune system, but that is by killing off some of the bacterial population, not by "working together" in some way. The only difference between antibiotic resistant bacteria and susceptible bacteria is that one will not be killed by an antibiotic while it is infecting you. Your immune system does not influence bacteria susceptibility to that antibiotic, nor does the antibiotic boost your immunity. Therefore, to accuse infectious disease people about not studying the immune system is to accuse them of not doing someone else's job. Immunologists are working on that, try searching for nature reviews of microbiology in Pubmed. You can find articles like this one (<http://www.ncbi.nlm.nih.gov/pubmed/22113499>) that involve immunologists looking at things like dietary components and their influence in innate immunity. However, the field is still in its infancy and nowhere near making good enough treatments to negate further antibiotic production. Still, contrary to your post, scientists are researching how to improve immunity. Immunologists are not all a bunch of dense scientists completely ignoring entire avenues of potential therapies.

Chris (2012-06-06 15:02:10)

Adam, To clarify what appears to be a strawman: Seth asserts and implies in his post that research into antibiotics is unnecessary and that simply following his guidelines will make antibiotics obsolete. That to me implies that he thinks we should stop researching antibiotics. "Antibiotic usage will go way down, selection for resistant microbes will become much less intense, and antibiotic-resistant microbes will become much less common. The problem will disappear." "Antibiotic resistance is a problem, yes, but the bigger problem is how those who run our health care system ignore the immune system. " -not necessarily true... There are diseases out there that will still infect you no matter how strong your immune system is (MRSA, B. anthracis, tuberculosis, the list goes on) and that is what we need antibiotics for (and of course antivirals for the major viral diseases) I found what I think is your article in the Lancet (<http://www.ncbi.nlm.nih.gov/pubmed/22656335>). Some points: deficiency in many vitamins/minerals is known to affect your immune system, and the researchers didn't measure pre-treatment zinc status. It could have been that all the subjects were zinc deficient, and that increasing their zinc levels brought their immune function back to normal (rather than boosting it). Also, what was considered a failed outcome of the study (death, intensive care, or a need to change antibiotics rapidly) has very little to do with antibiotic resistance (that is, the zinc supplementation does not change whether or not the infection was caused by a resistant microbe, which actually makes me wonder as to why they included that 3rd failed outcome). Finally, as the authors clearly state: zinc is an adjunct treatment, NOT a potential substitute for antibiotics. Please tell me if anything above is unclear, it is difficult to discuss studies in a medium as limited as blog comments.

Chris (2012-06-06 15:41:23)

And in one more obnoxiously long blog comment, I will try to address your posts you link to in points 2 and 3 under point number 5: Your evidence for "we need to eat microbes" is weak overall and misleading in places. What can seem painfully obvious is often wrong in experiment. I will go through each of your points Point 1: We like umami, sour, complex flavors, etc. Another interesting theory is that we like spices in our foods because many extracts of spices contain antimicrobial compounds (allicin in garlic, this study on traditional Indian foods and Vibrio cholera <http://www.ncbi.nlm.nih.gov/pubmed/21415500>, onions, turmeric, etc, the list goes on and on). This would imply that it was better for us evolutionarily to ingest less microbes. Two competing thought experiments, no hard evidence either way. You need more than just that conjecture to prove that all microbe exposure is good for you. Seth: My theory is not "all microbe exposure is good for you." It is that the microbe exposure we get from eating microbe-rich foods (e.g., fermented foods) is good for us. There's a big difference. Why you keep talking about "thought experiments" puzzles me. That's not where my data are from. Point 2: Food traditions. People fermented their food first and foremost to make it last longer, not for health benefits. There may be some benefit to eating fermented foods, no doubt, but claiming "genetic preference" for fermented foods is a stretch. Back in the day, you ate what was available, and if that was only fermented stored food, you would probably develop a taste for it. Seth: "People fermented their food first

and foremost to make it last longer.” And you know this because . . . ? Point 3: Probiotics. I agree with probiotic use and definitely appreciate their therapeutic potential. That said, only certain species of microbes are beneficial in our guts (variants of *E. coli*, *Lactobacillus*, *Bacteroidetes* and *Firmicutes* families, etc). Probiotic benefits do not imply that you should just throw every microbe into your system that you can. If you throw the organism I do research on, *Salmonella enterica*, in your gut in the name of probiotics, you will be one very unhappy person for 7-14 days. Point 4: Fermented foods. See point 3. Certain microbes are great for you, certain microbial products are great for you, but NOT all of them. The details absolutely matter. *Staph aureus*’s toxin is also a microbial byproduct, just as much as lactic acid or propionic acid (propionic acid is what gives Swiss cheese its flavor). Seth: What does *Staph aureus* have to do with fermented food? Point 5: hormesis. None of your cited evidence has anything to do with bacteria or infectious microbes. The mechanisms by which radiation and other stressors may cause hormesis are very different from your immune system. Seth: Radiation hormesis involves intracellular repair systems. The immune system is another sort of repair system. Point 6: Bad effects of antibiotics. Are caused by a decrease in normal microbiota. Which would imply improvement by reintroducing the normal microbiota, NOT just any microbe randomly. Not just eating microbes. Still. Seth: I suggest that many (or all?) of the bacteria we need in our gut are found on the food we eat. When we eat food with lots of microbes, we are inevitably eating food with lots of bacteria specialized for that food. Not “random” microbes. Point 7: Hygiene hypothesis. Very interesting area of active research. Not a reason to just flood yourself with any microbe though. In case it is hidden behind a paywall, here is the conclusion of a recent review (on pubmed here <http://www.ncbi.nlm.nih.gov/pubmed/22257145>): “While it is clear that the microbiota significantly influences host immune maturation and immune activity, the molecular basis for these immunomodulatory mechanisms is only beginning to be elucidated. The presence of certain bacterial species or strains seems to be important, potentially because of direct interactions with the host (e.g., via PRR activation) or via their metabolic activity in vivo (e.g., SCFAs generation). Thus, care should be exercised in the selection of immunoregulatory microbes for administration in human studies as it is likely that not all microbes are equally effective and dietary factors may significantly influence the production of immunoregulatory metabolites. In addition, significant effort needs to be focused on the elucidation of the microbiota-associated molecular pathways that are impacted by dietary factors so that rationale prevention and treatment strategies can be formulated, which will include matching essential microbes and dietary components. Specific projects mining the microbiota for metabolites and ligands that modulate host immune function will likely lead to a new class of immunotherapeutic agents with relevance to a variety of inflammatory states, including allergy and asthma. Lastly, the hygiene hypothesis should now be updated to include dietary factors and the interaction of dietary factors with the microbiota.” Points 8-12 can all be explained with information above that discusses why fermented foods and certain probiotics can be good for you, so I will end here. In conclusion, I find no hard evidence for your point number two, at least in terms of the “just eat plenty of dirt and/or microbes and you’re set”. There is evidence that specific microbes at specific times can have great benefits to patients, but what you advocate is a huge overgeneralization and could potentially lead some of your readers to put themselves at more risk of disease than they should be.

Adam (2012-06-06 17:18:40)

Chris, it sounds like you are a microbiologist? If so, you must be aware that there are both Bacteriocidal and Bacteriostatic antibiotics. As the name suggests, some of these drugs KILL bacteria and some just prevent them from multiplying. If there is not an interaction between the immune system, the bacteria and the antibiotic, how is it that Bacteriostatic antibiotics are effective in treating bacterial infections? It seems to me that Bacteriostatic agents slow the bacteria down enough that the immune system itself can eliminate the bacteria successfully. I don’t really get your distinction between bringing an impaired immune system back up to normal function and boosting the immune system. It seems like you think the immune system is always running at 100 %, except in rare cases. Do we even have a good definition of what 100 % is? How do we quantify it? To me, it seems much more likely that most people’s immune systems are somewhere between 0 and 100 % of their potential, maybe on a sort of Bell Curve. It isn’t hard to imagine that there are a variety of interventions that could move one toward the right (toward 100 %).

Cliff Clayton (2012-06-06 18:11:00)

As a fellow non immunologist, I refer everyone to the Jamniet’s Perfect Health Diet. They recommend Potassium Iodide. This may not be an example of immune boosting but I will take it. I have suffered from chronic sinus infections most all my life (58 I am). I have slowly worked my dosage up to 8 mg/day over the course of 4 months. I now have free breathing through both

nostrils most of the time instead of seldom if ever. I sleep better. No sinus pressure/headache. This must be how most people breath. Amazing.

Chris (2012-06-06 20:41:59)

Hey Adam, Yes, as you stated, bacteriostatic antibiotics do exist, and their mechanism of action is to prevent bacterial growth without killing them (although the line is a bit blurry, because many bacteriostatic compounds become bactericidal at a higher concentration). So yes, they would ideally hold the bacterial population in stasis while your immune system acted to kill them off. However, the key distinction is that the antibiotic is still not interacting with your immune system, it is just slowing bacterial growth giving your immune system time to respond. The same immune response would happen without the antibiotic, but the bacteria would have had more time to multiply and cause a more severe disease without the antibiotic. A stronger immune system won't make the bacteria more or less susceptible to the drug, and is therefore not an acceptable answer for the problem of bacterial antibiotic resistance. It will help you clear any infection more quickly (if it is an infection that your body is able to handle, for those it can't you'd better hope you have some antibiotics available), so it may make the drug APPEAR more effective, but it is still a completely separate entity. I think I may be coming off a little unclear on my overall point, so let me clarify. A stronger immune system is a great thing, there are whole branches of immunology focused on defining exactly what a strong immune system is and figuring out how we can make our immune systems better. That said, it is an extremely complex process that on this blog is erroneously depicted as being extremely simple and withheld from the public because all immunologists are supposedly a bunch of morons. That's what I have an issue with, because it is simply not true. The medical establishment is not ignoring the fact that our immune system is an incredibly important tool and many researchers are actively trying to improve it. The author of the blog is falsely depicting himself as smarter than an entire field of medicine, while acknowledging that he barely knows a T cell from a B cell. That just ain't right. Seth: You write: "it is an extremely complex process that on this blog is erroneously depicted as being extremely simple and withheld from the public because all immunologists are supposedly a bunch of morons." That is far from what I wrote. One of my points is that there are simple helpful things that can be said about the immune system (e.g., the existence of an early warning system) that have not been said by insiders. That is not the same as saying the immune system is "extremely simple" or "all immunologists are . . . a bunch of morons". You have ignored my broad point that the problem of antibiotic resistance can likely be solved by improving immune function. Another simple idea I haven't heard from insiders.

Yoshie Gilb (2012-06-07 01:49:16)

I enjoy you because of all your labor on this web page. My mom really likes working on internet research and it is easy to see why. We learn all about the lively way you present sensible secrets on this web site and as well as inspire participation from other ones on this subject matter plus my princess is certainly discovering a lot of things. Have fun with the rest of the year. Your carrying out a glorious job.

andrew (2012-06-07 10:34:23)

He isn't saying he is smarter only that the incentive structure of doctors and researchers is not aligned with patients very well. The point is pay attention to your daily routine and make small changes is a good strategy for staying healthy.

Jill (2012-06-07 11:04:29)

@Chris, my take on what Seth was saying re: antibiotic-resistant bacteria and stronger immune system is this: If people generally had stronger immune systems, antibiotic use would probably decrease, thereby reducing the process by which bacteria become antibiotic-resistant (and out-compete the nonresistant strains). I don't think he was trying to say that a stronger immune system will modify the response of resistant bacteria to the antibiotics they are resistant to. Seth: That's right, thanks.

Chris (2012-06-08 21:37:15)

Tried to respond to respond to Andrew and Jill a few days ago but the internet was eating my comments. I'll just skip that for now and go back to Seth's. " It is that the microbe exposure we get from eating microbe-rich foods (e.g., fermented foods) is good for us." First of all, thank you for clarifying that you only think certain microbes are good for frequent ingestion. I apologize

for writing so much that attacked the idea that any microbe exposure is good for you (the impression I got reading many of your posts discussing spending time around sick people and dumpster dive for food with microbes on it etc). Seth: I have proposed two ideas. 1. Regular intake of food-associated microbes (in large amounts – e.g., fermented foods) is good for us. 2. Exposure to all microbes in small amounts – amounts large enough to stimulate the immune system but small enough so that the immune system gets rid of them quickly – is good for us and we do various things to expose ourselves (early warning system). If you disagree with #2 – apparently you do – I would like to know why. Yes, many microbes in fermented foods can be good for us. And this idea came from medical researchers, not you, like back in 1986 <http://www.ncbi.nlm.nih.gov/pubmed/2666378> Seth: That paper barely mentions fermented foods. It says yogurt is good for people with lactose intolerance. My claim – and my evidence – are much broader. Nor does that paper say that humans need regular intake of food-associated microbes, which is the whole point. If some nutritionist or health organization or anybody associated with health care has said we need regular intake of food-associated microbes to be healthy, please provide an example (e.g., a link). Look at any mainstream book about nutrition and you will see that what I am saying is novel. What part of your hypothesis, which you have now clarified to be almost exactly in line with medical research, was ignored by the medical establishment again? Seth: My ideas #1 and #2. And my claim that tonsillectomies are idiotic. Again, it should be easy to show I'm wrong. Just provide a link. "Seth: Radiation hormesis involves intracellular repair systems. The immune system is another sort of repair system." Yes. A COMPLETELY DIFFERENT SORT OF REPAIR SYSTEM. Seriously, are you saying that the INTRAcellular machinery (think little proteins in a single cell that cut and paste DNA) that repairs DNA damage (like strand breaks, indels, base analogues, etc) is the same as an EXTRAcellular immune system made up of T cells, B cells, macrophages, neutrophils, antibodies, complement etc? Please tell me you're not. Seth: "The same as"? Of course not. Two things can have similarities without being "the same as" each other. In this case the similarity between intra-cellular repair systems and the immune system is generalized benefit from stimulation. Stimulation by X provides protection against Y. "You have ignored my broad point that the problem of antibiotic resistance can likely be solved by improving immune function. Another simple idea I haven't heard from insiders." I have not. A quote from me above "There are diseases out there that will still infect you no matter how strong your immune system is (MRSA, B. anthracis, tuberculosis, the list goes on) and that is what we need antibiotics for (and of course antivirals for the major viral diseases)" To elaborate: you haven't heard it from insiders because insiders know that there is no reason to believe an improved immune system will protect you from all disease. People will always get sick, and we will always need antibiotics. Seth: Just because "people will always get sick" doesn't mean antibiotic resistance will always be a problem. Your main claim ("There are diseases out there that will still infect you no matter how strong your immune system is (MRSA, B. anthracis, tuberculosis, the list goes on)") is unsupported by any evidence I can find. Here are examples of articles that argue that a better immune system helps fight off MRSA: <http://suite101.com/article/new-treatment-for-mrsa-may-include-boosting-the-immune-system-a287293> <http://www.ncbi.nlm.nih.gov/pubmed/22665379> <http://www.ncbi.nlm.nih.gov/pubmed/22164166> Re tuberculosis: Huh? Surely you've heard of TB vaccines? The fact that you, who identify yourself as an insider, appear unaware of TB vaccines supports my point about insiders ignoring the immune system. Including simple obvious stuff about it. If the bacteria are resistant to the antibiotics we use, we need new antibiotics. Bacteria have co-evolved with us for millions of years, and with antibiotics more extensively for the last century. They have intricate cellular machinery to attack us that is just as complex and profound as the immune system is. Upping our immune "power" will not protect from all pathogens. We need all the tools in the toolbox to defend ourselves, particularly vaccines and antibiotics. quick aside to Andrew: where in the post did Seth mention medical research's incentive system? Jill: see my response to Seth above.

Eugene Woodbury (2012-06-09 15:31:31)

The consumption of microbes is enjoying a fast food revival in Japan. *Aspergillus oryzae* even has its own cute mascot: <http://blog.japantimes.co.jp/japan-pulse/moldy-mos-burger-confirms-koji-boom/>

Adam (2012-06-09 18:40:59)

Another cool non-antibiotic cure for bacterial disease: fecal transplant. [http://en.wikipedia.org/wiki/Fecal\\_bacteriotherapy](http://en.wikipedia.org/wiki/Fecal_bacteriotherapy) "Benefits of FMT include the restoration of the colonic microbiota to its natural state by replacing missing Bacteroidetes and Firmicutes species, eradication of *C. difficile*, and resolution of clinical symptoms such as diarrhea, cramping and urgency. Antibiotic resistance in CDI is an uncommon event- rather CDI relapses due to the presence of *C. difficile* spores[19]. Although once considered to be 'last resort therapy' by some medical professionals due to its unusual nature and 'invasiveness' compared with antibiotics; perceived potential risk of infection transmission; and lack of Medicare coverage for donor stool, the recent po-



sition statement by specialists in infectious diseases and other societies[1] is moving away from FMT as a last-resort treatment and toward acceptance of FMT as standard therapy for relapsing CDI and also Medicare coverage in the United States. Indeed the Editor-In-Chief of the Journal of Clinical Gastroenterology, Dr Martin Floch, announced in a recent editorial that "FMT using donor stool has arrived as a successful therapy"[20]. Given that antibiotics are the original cause of CDI through their damage of the normal human flora and removal of protective Bacteroidetes and Firmicutes species, further antibiotic therapy should be avoided. It has now been recommended that endoscopic Fecal Microbiota Transplantation be elevated to first-line treatment for patients with clinical deterioration and severe relapsing C. difficile infection[5]. The earlier the infusion is initiated, the less likely the patient's condition will deteriorate, thereby preventing the higher mortality rate associated with severely affected patients. Fecal Microbiota Transplantation is being increasingly used in clinical practice and since complications of FMT are so rare its use is likely to increase exponentially in the coming years." Seth: Very interesting, especially the low complication rate.

Chris (2012-06-09 20:56:03)

Still the tonsillectomies thing?? Did you not read the Mayo clinic guidelines are posted? Tonsils are no longer removed for flippant reasons like a one-time infection. They are removed for things like cancer of the tonsils, and extremely painful recurrent infections that hamper quality of life. Seth: I read the Mayo Clinic guidelines long ago. Unlike you, apparently, I don't believe everything I read on the Mayo Clinic website. Only a small fraction of tonsillectomies involve cancer of the tonsils. For "recurrent infections", tonsillectomies are ineffective – see the latest Cochrane Review. "Seth: "The same as"? Of course not. Two things can have similarities without being "the same as" each other. In this case the similarity between intra-cellular repair systems and the immune system is generalized benefit from stimulation. Stimulation by X provides protection against Y." Except when it doesn't. Please provide any evidence that exposure to a nonpathogenic bacterium throughout the lifespan (not just in development, which is discussed in the hygiene hypothesis) increases immune response to a different microbe, via either increased innate or adaptive immunity. Seth: See studies of how probiotics reduce colds and other infections. I provided links to them on my umami hypothesis page. Also, thanks for doing my research for me. You just cited two studies from Pubmed that cite real medical researchers doing research on...wait for it... the immune system!! What happened to this? "those who run our health care system ignore the immune system" Seth: I didn't say it was completely ignored. Of course not. Also, if you actually read the paper, Seth: Which paper? they do not do what you say they do. No immune system is "improved" through our intervention (although I applaud you for finally deciding to search pubmed instead of just claiming you know things). In the PVL paper, the PVL cytotoxin SECRETED BY THE BACTERIA increases the immune response. This was not a treatment that boosted the immune system, it was a finding that this specific type of bacteria is going to be associated with better outcomes because your immune system recognizes it better (this is a simplistic explanation, but captures the idea). The staph aureus paper, if you read beyond the "immune enhancement" title, actually involves injecting P4 along with a pathogen specific antibody. This is a form of chemotherapy, it just doesn't happen to involve antibiotics. It is still a drug however, and it doesn't just magically "boost" the immune system. You add antibodies that are specific to the bacteria into the blood, they coat the pathogen, your body recognizes them like any other antibody and engulfs the bacterium. It is just another tool to use against tough to treat diseases. No one is throwing out antibiotics because of these tools, because bacteria will become resistant to things like pathogen-specific antibodies via mutations just like they would become resistant to antibiotics. All of these forms of research are useful and will hopefully give us enough options to treat future disease, but none is perfect on their own. Seth: I fail to see how all this supports your claim that "There are diseases out there that will still infect you no matter how strong your immune system is (MRSA, B. anthracis, tuberculosis, the list goes on)" – as if, when it comes to these diseases, strength of immune function didn't matter. "Re tuberculosis: Huh? Surely you've heard of TB vaccines? The fact that you, who identify yourself as an insider, appear unaware of TB vaccines supports my point about insiders ignoring the immune system. Including simple obvious stuff about it." And if you had in-depth knowledge about TB vaccines instead of knowledge from Google University, you would know that the TB (aka BCG) vaccine is one of the least effective vaccines we have (approximately a 50 % success rate) <http://www.ncbi.nlm.nih.gov/pubmed/8309034> and that active research to make a better one is underway. If we had a good vaccine, TB wouldn't be such a massive worldwide problem <http://www.ncbi.nlm.nih.gov/pubmed/22608339>. Currently MDR-TB (multi drug resistant TB) is one of the most devastating global pathogens. New antibiotics developed to treat TB (the second line antibiotics) have saved countless lives, but now TB is resistant to those as well, and we are looking for more. Seth: I don't see how any of this makes your claim that TB "will still infect you no matter how strong your immune system is" less wrong. As shown by the (partial) effectiveness of TB vaccines, the immune response to TB matters a lot. Stronger immune

system -> less need for anti-TB antibiotics -> less concern with multi-drug resistant TB. I am unable to figure out what part of this reasoning you disagree with, and why. "Seth: I have proposed two ideas. 1. Regular intake of food-associated microbes (in large amounts — e.g., fermented foods) is good for us. 2. Exposure to all microbes in small amounts — amounts large enough to stimulate the immune system but small enough so that the immune system gets rid of them quickly — is good for us and we do various things to expose ourselves (early warning system). If you disagree with #2 — apparently you do — I would like to know why." Sigh. Okay, I'm done trying to assume what you are trying to say, because you keep re-clarifying your statements (moving goalposts). Please provide peer-reviewed research, ideally with a plausible mechanism, that explains your points 2 and 3. Also, explain how point 3 is different from the widely researched hygiene hypothesis. For point 2, explain how it is different from probiotics. I didn't cite that paper as a specific example of a paper that said fermented food was good for you, I cited it as an example that probiotics had been in the literature for 30 years. Seth: The notion that yogurt is good for us is more than 100 years old. There is a big literature on probiotics, of course. If you think the idea that yogurt and probiotics are good is the same as my umami hypothesis (yogurt and probiotics do not taste of umami), fine, let's move on. How my point 2 (early warning system) is different from the hygiene hypothesis: I am saying all of us (not just children) actively do things to expose ourselves in tiny amounts to the microbes around us. We actively self-vaccinate. The hygiene hypothesis says nothing about self-vaccination. Finally, please don't just self-cite your old posts again. I read them, and magazine articles that talk about elephants liking beer don't count as scientific evidence. Please show me the relevant literature that spells out a plausible mechanism that explains exactly your statement "Regular intake of food-associated microbes (in large amounts — e.g., fermented foods) is good for us." -Specifically why the intake must be regular, and why the microbes must be food associated. Otherwise you are just talking probiotics and normal flora, which is nothing new. Also explain this "Exposure to all microbes in small amounts — amounts large enough to stimulate the immune system but small enough so that the immune system gets rid of them quickly — is good for us and we do various things to expose ourselves (early warning system)." -specifically how the immune system is stimulated by these microbes, and what changes in the immune system we can expect from this exposure. Give solid evidence why things like touching our mouths means we are sampling bacteria and not just itching. As I side above, clearly explain why this is not just the hygiene hypothesis. Seth: I cited two kinds of evidence (both peer-reviewed) for the early warning system idea: 1. people frequently touch themselves near their mouth. (Your "itching" explanation: read about the differences between "proximate" and "evolutionary" explanations. Both may be true.) 2. "group immunity" data with insects. I could have added (peer-reviewed) data about 3. Placement and function of tonsils. 4. Effect of loss of tonsils (very bad long-term). These 4 lines of evidence have never been proposed to support the hygiene hypothesis. Enough hiding behind old posts and vague explanations. If you really know your stuff, I want coherent, testable hypotheses that are proven true by scientific experiments. Seth: My post put forth an obvious idea: If our immune systems were much stronger, we would need to use antibiotics much less. If we used antibiotics much less, antibiotic resistance would be much less of a problem. Are you still saying this is WRONG?

Vas (2012-06-10 00:07:45)

Hi Seth, I was referred to your excellent blog by Allen. I know very little about medicine, but I can tell you that when I go to Ukraine I find a different approach. Antiviral medicine is freely available and affordable (from personal experience it works - though that could be a placebo effect). There are also sprays that are said to stimulate the immune system (prescribed by doctors.. may have been a hormone, I could find the name if you were interested). Vasiliy Seth: By Allen you mean Allen Neuringer? Yes, I am interested in the name of these sprays that are said to stimulate the immune system. I have not heard of them.

Vas (2012-06-10 21:02:40)

Yep, Allen Neuringer. Interferon is what my sister was prescribed by a doctor for her kids to do something like boost their immune system if they were to be in an environment where they were likely to get sick (e.g., around other sick kids). The wikipedia page seems to suggest that interferons do indeed have something to do with the immune system. For less medical things, there are echinacea sprays that are said to boost the immune system (apparently there have been some scientific trials that suggest echinacea decreases the duration of a cold). Seth: That's interesting, thanks. I didn't know about echinacea sprays.

Patrik (2012-06-10 21:58:06)

*Removing tonsils because of too many infections makes as much sense as removing part of the brain because of memory loss.*  
What? Are you implying that physicians actually treat the cause, and not the symptom? HOW DARE YOU? ;P

Vas (2012-06-11 14:04:49)

Of course echinacea sprays/teas are not prescribed by M.D.s, but I've had positive experiences with them.

Chris (2012-06-12 21:14:00)

Hi Seth, Been without internet for a few days, saw you had a new post on this topic, so I will put more emphasis on responding to that, but in brief I will address your closing comment: "Seth: My post put forth an obvious idea: If our immune systems were much stronger, we would need to use antibiotics much less. If we used antibiotics much less, antibiotic resistance would be much less of a problem. Are you still saying this is WRONG?" Yes. Probably not the part that you think though. If we used antibiotics much less, there would be less antibiotic resistance, yes. However, you have no evidence that if our immune systems were much stronger, we would need to use antibiotics much less. First of all, you still cannot clearly define what a stronger immune system consists of. Secondly, you have not shown data shown that "XYZ" indicator of improved immune function was shown to be protective against "ABC" disease. Finally, you haven't taken into account the fact that oftentimes, people get sick not because their immune system is deficient, but because the microbe simply has better mechanism of attack than your body has of defense. Even if the body's current immune mechanisms were improved (whatever that means), if a microbe has bypassed the immune system, it won't matter (e.g. staph aureus had a protein A on its surface that binds antibodies in reverse, preventing normal immune response, a higher titer of antibodies would not necessarily then lead to a better disease outcome. There are thousands of other examples of similar mechanisms bacteria use to defeat the immune system (phagosome survival, altered membrane charge, etc) Just because something seems "obvious" doesn't mean it is right. @ Patrick And when you cannot treat the underlying cause, treating the symptoms is better than nothing, no? Painkillers do not treat the underlying cause of migraines, but they can sure help. @ Vas N=1, placebo effect (that actually describes a lot on this blog) Seth: You write "you have no evidence that if our immune systems were much stronger, we would need to use antibiotics much less." When I started to sleep much better, I got colds much less than previously and much less than most Americans. This suggests that most Americans would get sick less if their immune function was improved. The most interesting part of your answer is "oftentimes, people get sick not because their immune system is deficient, but because the microbe simply has better mechanism of attack than your body has of defense." This view implies that "oftentimes" variations in immune function have no effect on probability of getting sick. What is your evidence that it has EVER happened that strength of immune function made no difference? I believe there is none.

Vas (2012-06-14 21:22:27)

Chris, I make no claims about the efficacy of echinacea (in terms of improving immune function), and perhaps it has been a placebo effect in my case, but I can say that N is substantially greater than 1. Here are just some of the studies: <http://www.umm.edu/altmed/articles/echinacea-000239.htm>

## **Attention The New Yorker Subscribers! (2012-06-08 16:24)**

My New Yorker subscription runs out in July. In February I got a letter from the magazine that said "We Need Your Instructions At Once". Renewal price: \$49.99 (1 year) or \$79.99 (2 years). In May I got a similar letter that said "Renewal Confirmation". Renewal price: \$29.99 (1 year) or \$49.99 (2 years).

dearieme (2012-06-08 23:08:29)

30 bucks? Worth it for the cartoons alone, I'd have thought. That's assuming it lasts a year.

BlueMorrissey (2012-06-09 08:08:19)

My dad got a price that was about double for a wall street journal subscription than the asking price I received. Have no idea why, but of course he used my mailing to renew his subscription. Thought maybe at first mine was for just half a year, but it was for just as long. He gets the paper and I use the online edition from the same subscription. Not much difference in cost to add the internet version.

Nancy Lebovitz (2012-06-09 08:33:55)

I've heard about websites tweaking prices in an effort to get the most revenue.

Tom (2012-06-09 15:22:14)

Standard practice in the magazine business for decades. If you want the cheapest price, let your subscription lapse, then resubscribe with one of the "blow-in" cards from a newsstand copy. Make sure you keep a xerox of the offer; when the bill arrives it will invariably be for far more than the contracted price, (just as with any long distance phone plan you ever signed up for.) Yes, systematic fraud on a grand scale. Never prosecuted, AFAIK.

Jack (2012-06-09 18:47:59)

What do you think happens to psychology students who don't become professors? They become marketers and invent tests to subject their professors to. Just another rat in a maze. In general, in marketing, you offer your best prices to your worst customers.

P.Granja (2012-06-09 19:39:07)

Regarding an older post/link - Amish farm kids have fewer allergies than Swiss farm kids. You suggested that something else besides growing up on a farm could be responsible for reducing allergies: drinking microbe-rich raw milk. I don't know if you already thought of it, but how about the lack of electric light and a better sleep/12hour fasting? «"People who work at night have a 150 percent higher rate of metabolic disease," and "If you overlay the CDC diabetes map with the NASA nighttime satellite map, there's an almost perfect match," says Satchin Panda, regulatory biology specialist at the Salk Institute. The more light in a region at night, the higher the incidence of diabetes. According to Panda, this is because your liver needs sleep. Actually, it's not the sleep per se that your liver needs, but a defined period of fasting each day, which throughout humanity's evolutionary history was the hours of darkness when you couldn't really do much but snooze» <http://www.bakadesuyo.com/should-we-blame-the-diabetes-epidemic-on-light>

Dennis (2012-06-28 15:33:52)

Hi, Can you publish the promo code for the renewal rate or site that was in your letter? The people of the CS won't let me renew my sub for that price if i don't have a promo code... Thanks! Seth: Sorry, I don't have it any more.

### Assorted Links (2012-06-10 06:43)

- [1]Food goggles make cookies appear larger.
- [2]Ten strange self-experiments
- [3]College TV segment (about 3 min) on Quantified Self
- [4]More about Colony Collapse Disorder. Reminds me of [5]the beekeeper who improved his hives by spraying them with kombucha.

Thanks to Ken Feinstein and Dave Lull.

1. <http://www.japantimes.co.jp/text/nn20120606a5.html>
2. <http://www.neatorama.com/2012/06/05/the-top-ten-strangest-self-experiments-ever/>
3. <http://www.youtube.com/watch?v=aGoqd-DGNQQ>
4. <http://www.guardian.co.uk/environment/2012/jun/07/honey-bees-virus-varroa-destructor-mites>
5. <http://blog.sethroberts.net/2009/08/04/bees-and-kombucha/>

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### More Examples of Mainstream Health Care Ignoring the Immune System (2012-06-11 05:00)

In [1] a recent post I made an obvious point. If our immune systems were stronger, we would need antibiotics less often and antibiotic resistance would become less of a problem. I hadn't heard this point made (for example, [2] this WHO report fails to say it). This was one example, I said, of how mainstream health care ignores the immune system. Perfectly obvious things, such as this idea about antibiotic resistance, fail to be noticed. I gave five more examples. Since then I have come across even more examples:

1. Hospitals do little to help patients sleep and often interrupt sleep, [3] Nancy Lebovitz pointed out (better sleep → better immune function). [4] This article describes the problem. One way to improve hospital sleep – beyond don't wake patients up – would be to provide exposure to strong sunlight-like light in the morning and prevent exposure to sunlight-like light after dark. [5] I found that an hour of sunlight or similar light from fluorescent lamps in the morning improved my sleep. Most fluorescent light resembles sunlight (both have strong bluish components), incandescent light (reddish) does not. Until they install dual lighting systems (bluish light during the day, reddish light at night), hospitals can provide blue-blocker glasses to wear after dark.

2. The book [6] *Immortal Bird* (sent me by the publisher) tells how Damon Weber, born with a defective heart, had a heart transplant when he was a teenager. After the transplant, problems arose. The doctors involved (at [7] New York-Presbyterian Hospital/Columbia University Medical Center) took the problems to be signs of transplant rejection. In fact they were due to infection. Drugs given to deal with the mistakenly-assumed rejection suppressed Damon's immune system. They reduced his ability to fight off the infection and he died. The author of the book, Damon's father, sued the doctors and hospital for malpractice. The doctors did not exactly "ignore" the immune system, but they apparently failed to fully grasp the danger of immune suppression, even though the infection that killed Damon is common in transplant cases. (Although Columbia Presbyterian charged half a million dollars for the transplant, [8] "three years into the lawsuit the [hospital's] medical director claimed Damon's post-op records couldn't be located.")

3. I asked a UCSF medical student what she'd been taught about the immune system. "We cover it!" she said. In a section called "Infectious Disease, Immunology, and Inflammation". What makes the immune system work better or worse? I asked. "If you're stressed out, it doesn't work well," she said. If you're malnourished, like in Bangladesh. You need "nutrients and vitamins". (A booklet I got telling me to take less antibiotics told me to "eat healthy".) She also said the students get entire lectures on how to treat diseases so rare they might never be encountered. There is a whole section on genetics. Sure, they cover it. So superficially that they don't remember the most basic idea: Better sleep → better immune function. I said our health care system is built around first, let them get sick. That's right, she said. Ignoring the immune system is an excellent way to allow people to get sick.

4. [9] Melissa McEwen pointed out that proton pump inhibitors, such as Nexium, reduce the body's ability to fight

infection. They are prescribed for acid reflux and reduce how much acid the stomach makes. Because stomach acid kills bacteria, there should have been far more concern about their safety. "Proton pump inhibitors (PPIs) are among the most widely prescribed medications worldwide [billions of prescriptions]. . . . The collective body of information overwhelmingly suggests an increased risk of infectious complications," says [10]this article. Because the drugs are so common, the damage is great and, because of more infection, not restricted to those who take them. It could have been avoided by research into treatments that do not harm the immune system.

1. <http://blog.sethroberts.net/2012/06/05/what-to-do-about-antibiotic-resistance-improve-immune-function/>
2. [http://whqlibdoc.who.int/publications/2012/9789241503181\\_eng.pdf](http://whqlibdoc.who.int/publications/2012/9789241503181_eng.pdf)
3. <http://blog.sethroberts.net/2012/06/05/what-to-do-about-antibiotic-resistance-improve-immune-function/#comment-969914>
4. <http://well.blogs.nytimes.com/2011/09/07/need-sleep-stay-out-of-the-hospital/>
5. <http://escholarship.org/uc/item/2xc2h866>
6. <http://immortalbirdpostscript.wordpress.com/>
7. <http://nyp.org/>
8. <http://www.nytimes.com/2012/02/05/books/review/immortal-bird-doron-webers-lament-for-his-son.html?pagewanted=all>
9. <http://huntgatherlove.com/>
10. <http://www.ncbi.nlm.nih.gov/pubmed/19786155>

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Rachel (2012-06-11 07:02:04)

Also getting your feet cold and wet decreases immune resistance: [http://www.ctv.ca/CTVNews/Health/20051114/cold\\_warm\\_nose\\_051114/](http://www.ctv.ca/CTVNews/Health/20051114/cold_warm_nose_051114/) Seth: A very interesting study, thanks. It deserved a lot more publicity than it got. I had guessed people get more sick during the winter because their sleep is worse.

Chuck (2012-06-11 08:53:59)

I think there are too many confounding factors in the cold wet feet study to give it much credence. Number one on the list is exposure to the virus - past or present - dormant or active. A better test, but by no means conclusive, would be to set up the test as they did and then expose everyone to the virus. Then see who comes down with a cold and who doesn't. Still too many confounders though.

Chuck (2012-06-11 08:58:16)

I commented on your last post on vitamin D how I haven't had any colds since I've been taking 5k IUs and getting plenty of sun exposure. I also stopped taking Prilosec (a proton pump inhibitor) at about the same time. Interesting.

Patti (2012-06-11 12:54:12)

Let's be clear, there is no such thing as an Immune System in the human body. There are eleven systems in the body and not one of them is called the Immune System. The body has the Lymphatic System which includes organs that develop cells devoted to immunity. Geez I learned this the first week of Anatomy and Physiology, you would think a doctor would know better.

Kirk (2012-06-11 16:24:31)

@Patti, Thank you so much for educating us. While you are at it, you should send a blistering letter off to the Mayo Clinic, because they have a web page titled, 'Your Immune System.' Also send a nasty snarky letter of correction to WebMD, because they have a web page with the subtitle, 'Using Your Immune System to Stay Well'. And be sure to lecture the Cleveland Clinic, given that they have a web page saying, 'The human body has a highly efficient immune system, providing multiple defenses

to ward off invaders such as bacteria, viruses and harmful chemicals.'

Patti (2012-06-11 19:30:18)

Kirk, Yes those are all great websites for the general public. My point was directed at a medical professional not you, but since you have responded I shall make this comment just for you. There is no such thing as an Immune System. Cells/tissues of the Lymphatic System make up immunity. If you look at an actual college level Anatomy and Physiology textbook you will be able to read that there is no such thing as an Immune System. There are eleven systems in the body, not twelve. Maybe someday they will subdivide the Lymphatic System into two systems, but that is not how it is today. Suggestion for you - maybe you should consider getting your information from actual fact based text books instead of web pages? Just saying... Patti

Tom Moertel (2012-06-11 20:24:49)

The human body doesn't actually have "systems." Believing that it does is to mistake a model of the thing for the thing itself.

Nancy Lebovitz (2012-06-11 21:27:20)

For what it's worth, it seems to me that people are more likely to get sick when the weather does wide daily swings- mostly in the spring where I've lived (Delaware and Philadelphia).

Chuck (2012-06-12 07:56:54)

"...fact based text books..." Now there's a laugh.

Greg (2012-06-12 09:35:49)

Seth, here's an example of the widespread belief that suppressing the immune system is harmless. The immune system is involved in the local inflammatory response post-injury. One might imagine that this has something to do with the healing process (though I have no idea what the medical textbooks say about this). It has been known for many years that non-steroidal anti-inflammatory drugs, which suppress inflammation, may also impair healing, particularly of bone and cartilage (see e.g. <http://www.ncbi.nlm.nih.gov/pubmed/15177303> from 8 years ago). Many years later, human data on this subject is still lacking (see <http://www.ncbi.nlm.nih.gov/pubmed/20487623>), while perscription of NSAIDs apparently remains standard of care for orthopedic injuries. My friend was recently perscribed one for a sprain, and I asked a doctor I knew why. He agreed that they could slow the healing process, and that they were only perscribed for pain relief (my friend had no pain, and was not given this information by the perscribing doctor).

Kirk (2012-06-12 10:30:21)

@Patti, First, my apologies for the tone of my previous reply. I still do not understand why using 'immune system' is inappropriate. A search of PubMed for titles which include 'immune system yields 6815 titles. I briefly browsed several papers to learn the authors worked in departments such as Medicine and Immunology. (The search string at PubMed is: immune system[Title] )

Kirk (2012-06-12 11:33:37)

Seth, it would be interesting if you could use your contacts to find a competent Traditional Chinese Medicine physician to interview about whether that system considers it important to improve the immune system. Seth: Good idea. I think a lot of Traditional Chinese Medicine herbs do just that - stimulate the immune system. But what about prevention?

susan (2012-06-12 20:58:05)

It seems to me that our problem is not a weakened immune system, but rather an overactive immune system. there is an epidemic of autoimmune diseases happening, whether it is type 1 diabetes, multiple sclerosis, eczema or lupus. my recent experiences demonstrate this. my daughter was recently diagnosed with type 1 diabetes mellitus (T1DM). T1DM is a disease in which the body's immune system attacks the insulin-producing cells in the pancreas. the endocrinologist who diagnosed my daughter said that there is a big increase in T1DM, especially in the northern latitudes. He posited that it may be due to lack of sunlight, much like MS. I suffer from eczema, which is also on the increase and is also an autoimmune disorder. Just some observations. Thank you-Susan


Chris (2012-06-12 21:36:00)

Oh boy... 1. Yes better sleep does seem to lead to better immune function. Good thing no one in the medical community studies that. Oh wait, <http://www.ncbi.nlm.nih.gov/pubmed/21835655> Also, hospitals don't wake patients up solely to disturb their sleep, usually it is to get rounding/pre-rounding out of the way so the doctors can see and treat more patients. If you ran a hospital where you could never disturb the patients, you would get very little done. 2. That is a tragic story. However, if it was transplant rejection, and immunosuppressive therapy wasn't initiated there would have been a guaranteed organ rejection and death. That's the thing about medicine, you actually have to make hard choices with real consequences. Transplant rejection and an infection can manifest very similarly, and the life of your patient hangs in the balance. Then you have to own up to your mistakes. Very much unlike watching from the stands and having 20/20 hindsight as you criticize from a blog. Its not like they gave immunosuppressive therapy for no reason. They knew it had risks. 3. Thanks for that anecdote from talking to one medical student. Did you by chance ask her if sleep deprivation effected the immune system, or just listen to her list variables from a course she took and see if she missed your favorite variable sleep? I would bet that if you directly asked her about sleep deprivation, she would have told you it was not good for the immune system. Either way, one medical student at one medical school is hardly damning evidence. My friend, who will be a medical student next year, knew that before taking a course on the immune system. Of course her evil medical education will probably beat that knowledge out of her and teach her how to give advice that makes people sicker (/sarcasm). 4. Please, less citing of blogs and more citing of studies. Oh and btw, the study you did cite said this "PPIs have REVOLUTIONIZED the management and complications of acid-related disorders with a HIGH MARGIN OF SAFETY; however, with the data available, efforts to reduce the dosing of or discontinue the use of PPIs must be reassessed frequently." (emphasis mine) It does not call for the end of PPIs, only that they be used responsibly in the treatment of acid related disorders with this new data in mind. But hey, you do a great job of quoting out of context. Oh would you look at that, evidence based medicine changing practices to improve patient care! But I thought the doctors didn't care about making people better! Seth: What does "HIGH MARGIN OF SAFETY" mean? I have no idea. "High margin" compared to what?

Chris (2012-06-12 21:39:49)

@ Kirk It would be even more interesting if the TCM practitioners actually had data showing their treatments could increase immune function. Also, competent TCM Doctor is a bit of an oxymoron when there is no evidence supporting TCM being, oh I don't know, effective against disease. Seth: You appear unaware of evidence that the immune system is effective against disease ("you have no evidence that if our immune systems were much stronger, we would need to use antibiotics much less").

Adam (2012-06-13 08:45:49)

To feed the troll (though I know I shouldn't): "A 2011 Cochrane review documented that acupuncture is effective in the treatment of migraines, neck disorders, tension headaches, and some types of osteoarthritis ..." There's also a little drug called  (Artemisinin) from TCM that is the most effective known medicine for treatment of Malaria and the worldwide standard. The discoverer is being considered for a Nobel prize.

Kirk (2012-06-13 11:05:06)

By 'competent TCM physician' I mean the following: ask for a referral from a trusted colleague. Seth works/lives in both the Bay Area and Beijing. He knows intelligent and skeptical colleagues who have had various medical issues. I think it possible that one or more of them would have received useful treatment from a TCM physician, most likely after failing to find relief from allopathic medicine.

Kirk (2012-06-13 11:36:15)

If you ask a TCM physician about prevention steps to improve the immune system, I suspect you will hear about food therapy, supplements, Qigong, acupuncture, and meditation. You may also hear about unfamiliar concepts such as Yin or Yang deficiency (and many more). I am slogging through a book about Chinese healing, but the concepts are so foreign that not much is making sense. I have never been to a TCM physician so I have no idea what you might hear. I have an economic perspective on whether TCM is valid, in that those medical technologies which do not succeed at treating problems eventually fade away due to lack of customers. TCM appears to be practiced in the Bay Area and is thriving in China.



Bryan (2012-06-13 13:29:36)

"She also said the students get entire lectures on how to treat diseases so rare they might never be encountered." Sort of like how we get entire lectures in law school on esoteric legal issues we will probably never encounter.

### **The Glacially-Slow Conquest of Scurvy And Its Relevance to Modern Life (2012-06-12 05:00)**

Scurvy is a disease of civilization because you need civilization to make long ocean voyages. It is the first disease of civilization to be understood and eliminated. In [1] a paper called "Innovation and Evaluation" (gated), Frederick Mosteller, a professor of statistics at Harvard, noted how long it took. In 1601, James Lancaster, a sea captain, did an experiment involving four ships on a long voyage. Men on one ship got lemon juice, men on the other three ships did not. The men given lemon juice were far less likely to get scurvy. In 1747, James Lind, a doctor, compared six purported cures for scurvy. Lemons and oranges (one cure) were much better than the other five (as Lind expected). In 1795 the British Navy started using citrus juice regularly and wiped out scurvy on their ships. In 1865, the British Board of Trade recommended citrus juice for commercial ships. It took more than 200 years for a simple and effective remedy – discovered before Lancaster – to spread widely.

The sailors at risk of scurvy did not control what they ate. The people who controlled what they ate never got scurvy. Sure, the people who controlled what sailors ate did not want them to get scurvy (high rates of scurvy were a big problem) but they also had other concerns. The lesson I draw from this story is do not let anyone else (doctor, expert, etc.) solve your health problems for you. Sure, other people, as part of their job, will sell you something, provide advice, write a prescription, provide therapy, do surgery, whatever. It might work. They want to help you – the more they help you, the better they look, the more business they attract. But it is entirely possible, this bit of history teaches, that they are slow on the uptake or have conflicts of interest and a much better solution is available.

Thanks to Steve Hansen.

1. <http://www.springerlink.com/content/p46128q5lgt85xpn/fulltext.pdf>

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Darrin Thompson (2012-06-12 06:28:42)

If you dig around the internet long enough you can find an article describing how the cure to scurvy was found and then lost for a long time.

Andrea (2012-06-12 06:51:38)

Sorry, Seth, I'm having trouble understanding what you mean about the sailors: "The sailors at risk of scurvy did not control what they ate. The people who controlled what they ate never got scurvy." Do you mean that the cooks on the ship always made sure that they ate lemon juice, but they didn't build it into the menu for the rest of their shipmates? How do you know this? Seth: What the sailors ate was determined by the food they took on board at the beginning of their trip. This was not determined by the cooks, as far as I can tell from the books I have read about this. It was determined by higher authorities.

Nancy Lebovitz (2012-06-12 07:57:41)

I'm pretty sure Seth means that the people who made decisions for the Royal Navy weren't getting scurvy.

gwern (2012-06-12 09:17:23)

Darrin: you mean [http://idlewords.com/2010/03/scott\\_and\\_scurvy.htm](http://idlewords.com/2010/03/scott_and_scurvy.htm) ?

dearieme (2012-06-12 10:51:05)

I suppose the likes of Pepys were in charge of provisioning. Does he say much about it?

Introsphere roundup – Week thru June 12 | The Second Estate (2012-06-13 04:21:49)

[...] Roberts – The Glacially-Slow Conquest of Scurvy And Its Relevance to Modern Life, – More Examples of Mainstream Health Care Ignoring the Immune System, – What to Do [...]

Tuck (2012-06-13 14:15:42)

@gwern: If that's not what Darrin was referring to, it's a fine account.

Phil (2012-06-16 17:01:52)

gwern - that is the best article on health i have read. the lessons to be drawn, the parallels, and the sheer magnitude of the story are awesome.

Douglas Knight (2012-06-21 19:19:19)

[1]An alternative link for the Frederick Mosteller paper The paper Darrin and Gwern cite suggests that it isn't so simple as saying "lemons cure scurvy." What happened between Lancaster and Lind? It is not hard to imagine that people did experiments, and rejected citrus. It does seem, though, that they should have done enough to get the right answer. Seth: I think the paper they cite says that people forgot that lemons cure scurvy. Or were confused. Not that any experiment rejected citrus.

1. <http://www.sciencemag.org/content/211/4485/881.short>

Douglas Knight (2012-06-22 09:43:37)

There was no controlled experiment, but it wasn't a matter of people forgetting. You can say they were confused, but Lancaster and Lind were just as confused. Several arctic expeditions got scurvy, despite lime juice. This wasn't an experiment, but it was very good evidence. Actually, there was even better evidence: there was no difference between people on the ship, with more juice, and those off. The simple claim "citrus cures scurvy" is just not true. The biochemical situation is simple, but the food consequences are complicated. What if the British Navy had listened to Lind? They would have put lemon juice in his copper vats and found no effect on scurvy. Would we today know they had tried? We remember Lancaster and Lind because their experiments matched the slogan "citrus cures scurvy," not because they were the only experiments, let alone the only claims of data.

### Assorted Links (2012-06-13 05:00)

- [1]Hospital costs at one hospital over 200 years (via [2]Marginal Revolution). The graph of hospital costs versus year illustrates what you should never do: make a graph like that using an unlogged (raw) y axis (cost). It is nearly impossible – or actually impossible – to learn anything from the low numbers since they are so close to zero. New England of Journal of Medicine editors need better statistical advice.
- [3]Cooking with Marmite.
- [4]Steve Jobs, orthorexic.
- [5]The Telgi fake stamp paper scam.
- [6]preorder Trust Me I'm Lying by Ryan Holiday

1. <http://www.nejm.org/doi/pdf/10.1056/NEJMp1202628>
2. <http://marginalrevolution.com/marginalrevolution/2012/06/assorted-links-479.html>
3. <http://newyork.grubstreet.com/2012/06/how-to-cook-with-marmite-vegemite.html>
4. <http://www.westonaprice.org/blogs/kdaniel/2011/12/27/ivegetarian2-the-eating-disorders-of-steve-jobs/>
5. <http://oakblue.wordpress.com/2010/09/19/telgi-and-the-fake-stamp-paper-scam/>
6. <http://www.ryanholiday.net/announcing-my-first-book-trust-me-im-lying-and-the-preorder-campaign/>

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Matt (2012-06-13 11:09:33)

It's not true that you can't learn anything from the low numbers. You can get a sense that hospital costs were very low relative to late 20th century costs, and you can get a sense of when hospital costs started climbing rapidly. The effect on the reader – especially one who might not appreciate he is looking at a log plot (which for NEJM readers would be quite a lot I would imagine) wouldn't be as large with a log plot. So it depends on what the presenter of the graph wants to accomplish. If he wants the reader to see a rise in hospital costs in the 1870s then a fall in the 1910s then a log plot is best. If he just wants to point out the large and dramatic climb of healthcare costs in the late 20th century, I think an unlogged plot is best. Seth: "You can get a sense that hospital costs were very low relative to late 20th century costs, and you can get a sense of when hospital costs started climbing rapidly." You may get the wrong sense. With no correction for inflation who knows what the hospital costs in 1910 were relative to late 20th century costs. Nor do you know when hospital costs started climbing rapidly. Perhaps hidden in those tiny values are large percentage increases. Perhaps the sharp rise apparent on the graph is an artifact of changes in the inflation rate.

Matt (2012-06-13 23:31:27)

The cost is in 2010 dollars. Seth: Good to know. Then I would just say that the graph makes it hard to see anything interesting apart from the date when costs first started to rise quickly.

max (2012-06-15 05:45:24)

To me the interesting thing (purely visual estimate) is to see that for an (on average) 2 times decrease of the mortality rate a modern (post-1965) hospital required a 7-fold cost increase.

### **Variation in Abbott Blood Sugar Test Strips: A Warning (2012-06-14 05:00)**

I've measured my fasting blood sugar (= blood sugar before breakfast) for about four years. I began out of curiosity but became alarmed when the values approached "pre-diabetic" (> 100 mg/dl, diabetic is 126 mg/dl or so). Eventually I learned that walking an hour/day put them in the 80's consistently. Perhaps 84 is optimal, who knows.

I have used Abbott test meters and strips. They need so little blood that testing is painless. Recently (January 2012?) Abbott introduced new "butterfly" test strips that "wick" the blood. The meters stayed exactly the same. The new test strips are certainly better. I started to use them. I started using them after a gap (a month?). All of a sudden my scores were about 5 mg/dl better – for example, 84 instead of 89. I assumed this was due to lifestyle changes on my part. I was walking more, I was more muscular, whatever. These were plausible explanations. Surely Abbott had not corrected a huge mistake (given the size of the business, the importance of diabetes, and the need for accurate test strips, to be consistently off by 5 mg/dl would be a huge mistake).

Now I wonder. I recently found some old-style test strips, barely expired (2012/04). I have compared them to the new-style strips (expiration 2013/06). Here are my results:

Morning 1. New: 81, 84. Old: 99, 91, 100.

Morning 2. New: 80. Old: 96, 94, 95.

Morning 3. New: 84. Old: 104, 97, 105.

Morning 4. New: 86. Old: 101, 100, 100.

These results involve three different meters. The old strips come from three separate vials. It is clear that the old strips produce readings much higher (about 15 mg/dl higher) than the new strips.

The old strips are expired but I doubt they got 15 mg/dl worse in 1-2 months. I expect they are accurate when they leave the factory and slowly get worse. Now I have some idea of how much worse (and in what direction). Apparently there is a big increase in bias with little increase in variability. I've gone from batch to batch before and never noticed a difference. Only when comparing the new strips with the old has a difference been clear. The earlier comparison, with a 5 mg/dl difference, compared unexpired old strips with the new strips.

I conclude that with the old strips, deterioration with age is worse than I expected and I should pay more attention to test strip age.

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Darrin Thompson (2012-06-14 06:58:05)

Cool. Now you are a connoisseur of test strips.

dearieme (2012-06-14 07:23:34)

It's one of the Miracles of Modern Medicine that no test reading ever comes with a plus-or-minus interval attached. To ask them also to record potential bias is therefore a hopeless cause. Seth: I don't mind the absence of a plus-or-minus interval. I can figure that out myself by doing repeat tests. I cannot figure out bias and 15 points is really bad.

Carol (2012-06-14 08:50:21)

I am using a Reli On meter that uses strips by Abbott that take a larger amount of blood, and they too suffer from this effect - and it starts happening before they expire. These strips are individually wrapped. I originally noticed this problem with my original meter (that came from Target) that used strips in a bottle, so I switched to a meter that used individually wrapped strips. It still happens, just more slowly. By the end of the pre-expiration period, they are 10-15 points higher.

Alex Chernavsky (2012-06-14 09:30:55)

I bought a digital fever thermometer a few years ago. The first time I had to use it, I measured my temperature about five or six times in a row. I was appalled by the variability in the readings - they differed by as much as a degree. I'd prefer to use one of those old-fashioned mercury thermometers, but I think that they're not available anymore. Maybe I could get a used one from eBay.

Christopher Burd (2012-06-14 12:28:16)

I believe consistency is a big problem with glucose test strips, second only to price (alleged markups 1000 %+ over production costs).

Govert (2012-06-17 03:27:21)

You might find this post about Diabetes Technology (and how little has changed) quite interesting:  
<http://www.hanselman.com/blog/TheSadStateOfDiabetesTechnologyIn2012.aspx>

Jazi zilber (2012-06-17 09:13:10)

Tim ferriss compared sugar strips of various makers, finding large differences (i faintl think 10-20) I think it is reported in four hour body

## How Useful is Personal Genomics? A Case Study (2012-06-15 09:42)

How much can you help yourself by getting your genome sequenced? A lot, a little, not at all? Scenario 1 (big help): You discover you have a greatly elevated risk of Disease X. You do various things to reduce that risk that actually reduce it. Scenario 2: (a little help): You discover you have a greatly elevated risk of Rare Disease X. You do various things to reduce that risk but they don't help. At least, when Disease X starts, you will be less upset. Scenario 3 (no help): You discover that you have a greatly elevated risk for a common easily-noticed disease (such as obesity). You already watched your weight, this changes nothing. Scenario 4 (harm): You discover that you have a greatly elevated risk of Scary Disease X (e.g., bipolar disorder). It is depressing news. Later studies show that the gene/disease association was a mistake. (Many gene/disease associations have failed to replicate.)

[1]A recent Wired article tries to answer this question for one person: Raymond McCauley, a bioinformatics scientist who had his genome sequenced four years ago and learned he was "four or five times more likely than most people to develop age-related macular degeneration (AMD)". The article says "of all the ailments described in the 23andme profile, AMD has one of the strongest genetic associations". If I found this in my genetic profile, I would want to know the confidence interval of the increased risk. Is it a factor of 4.5 plus or minus 1? Or 4.5 plus or minus 8? This isn't easy to figure out. In addition to the question of variability, there can easily be bias (= estimate is too high). Let's say I do 100 gene/disease association studies. Then I scan these studies to pick the one with the strongest gene/disease association. It should be obvious that this particular association is likely to be too high and, depending on the details, could plausibly be pure chance (i.e., true association is zero). I have been unable to find out how replicable the gene/AMD association is. According to [2]Wikipedia, "the lifetime risk of developing late-stage macular degeneration is 50 % for people that have a relative with macular degeneration, versus 12 % for people that do not have relatives with macular degeneration." (Until it was eliminated via better diet, pellagra also ran in families.) The Wired article does not say whether any of McCauley's relatives have/had AMD – a huge omission, given the uncertainty of gene/disease associations.

It wasn't obvious what McCauley should do, according to the article:

McCauley read that there were a few preventative measures he could take to reduce the chances of AMD one day rendering him blind: don't smoke and avoid ultraviolet light, for instance. Also, it seemed, he could try taking a special combination of vitamins, including B12 and lutein. But when he consulted the research, he could find little evidence to support the effectiveness of the regime, based on his genotype.

The article says nothing about quitting smoking but he does wear glasses that reduce ultraviolet light and takes certain vitamins. It is very hard for him to determine whether they help.

[3]Here is a study that found greater omega-3 consumption associated with lower risk of AMD. [4]Here is a study that found AMD associated with inflammation (too little omega-3 increases inflammation). [5]Here is a study that

found no association between vitamin and mineral intake and AMD. Based on this, if 23andme told me I had an increased risk of AMD, I would make sure to optimize my intake of flaxseed oil (or other omega-3 source) using some sort of brain test.[6] I have documented in other posts that brain function is sensitive to omega-3 intake and (probably) most people don't get enough. Of course, just as it is foolish to smoke (a lot) regardless of whether you have genetic risk of AMD, it is foolish to not optimize one's omega-3 intake, whether or not you have genetic risk of AMD. In other words: everyone should optimize their omega-3 intake. If the 23andme results cause McCauley to do something wise like this that he would otherwise not have done, they have helped him.

The omega-3 study appeared after the Wired article so I don't know how McCauley reacted to it. A puzzle about the story is that it isn't even clear that the gene/AMD associations are true. Consider McCauley's older relatives: parents, grandparents. Did/do any of them have AMD? If not, it is more plausible that all of them were at 12 % risk of the disease than at 50 % risk. Suppose all of them had, according to 23andme, the same increased risk as McCauley (at least some of them have the risk-bearing genes). Now it becomes more plausible that something is wrong with the 23andme risk estimate. If some of McCauley's older relatives do have AMD, it is not clear why the 23andme results would make much difference. He should have already have known he was at increased risk of AMD.

The upshot is that in this particular case, I cannot even rule out Scenario 4 (does harm). All four scenarios strike me as plausible. Based on this article, we are a long way from learning the value of personal genomics.

Previously I used [7]the example of Aaron Blaisdell to make the possibly counter-intuitive point that if you have a genetic disease something is wrong with your environment. Well, I do not have any obvious genetic disease. But I discovered, via self-experimentation, that my environment was terrible – meaning it could be improved in all sorts of ways: stop eating breakfast, drink flaxseed oil, eat butter, look at faces in the morning, take Vitamin D in the morning, and so on, not to mention eat fermented foods (which I figured out via psychology, not self-experimentation). My findings about what is optimal are so different than the way anyone now lives (except people who read this blog) that I believe everyone's environment can be vastly improved. If so, the value of discovering you have a genetically elevated risk of this or that is not obvious – you should already be trying to improve your environment. At least that is what my data has taught me. On the other hand, maybe genetic info (even wrong genetic info!) will give you a kick in the pants. Maybe that has happened with McCauley.

1. [http://genomera.com/downloads/genomera\\_201103\\_wired.pdf](http://genomera.com/downloads/genomera_201103_wired.pdf)
2. [http://en.wikipedia.org/wiki/Macular\\_degeneration](http://en.wikipedia.org/wiki/Macular_degeneration)
3. <http://www.sciencedaily.com/releases/2011/03/110314163439.htm>
4. <http://www.sciencedaily.com/releases/2008/02/080229140218.htm>
5. <http://www.sciencedaily.com/releases/2007/10/071008171034.htm>
6. <http://blog.sethroberts.net/category/nutrition/omega-3/omega-3-directory/>
7. <http://blog.sethroberts.net/2010/04/05/my-porphyrria-went-away/>

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gwern (2012-06-15 10:21:09)

> The upshot is that in this particular case, I cannot even rule out Scenario 4 (does harm). All four scenarios strike me as plausible. Based on this article, we are a long way from learning the value of personal genomics. The ultimate value could be as propaganda - fake information - like the evopsych theory of placebos. The value of information for a recommendation like 'quitting smoking is 1 % better for you than the average person' is exactly 0: you should already be doing it! But the impressive circumstances - whoo \*genomics\* - may be more likely to make one do it. As far as paying voodoo priests to impress you with

theatricality, \$1-1000 isn't that expensive.

Greg (2012-06-15 12:00:19)

I have found 23andMe to be a very big help. It told me three years ago that I have elevated risk for Celiac Disease. I had never heard of it before. When I read about the symptoms, they described my health situation at the time. I had been suffering for years. Additional testing confirmed that I should not consume gluten. My symptoms resolved with a gluten free diet and I continue to be symptom free today.

Tom (2012-06-15 12:35:42)

Off-topic, but any idea why women are feel cold when most males are comfortable? I'm sitting in a Starbucks in a short-sleeved shirt and the AC just switched on, and as a result I'm finally getting comfortable. Yet I noticed that every woman near me has just put on a sweater. It doesn't make sense to me that the genders have always been this way. Any idea what might have changed in the modern environment to create this discrepancy? Seth: As a way of defending body fat. It is clearly more difficult for women to lose weight than for men to lose weight. Perhaps the evolutionary reason is to give women a greater chance of surviving a famine.

Sheila Buff (2012-06-15 15:35:49)

Hi Seth, Risk factors for AMD are indeed well established from epidemiological studies, but for the personal component you would have to know family history, and not everyone does. If McCauley's parents died young, for example, their genetic tendency for AMD wouldn't have been expressed and he wouldn't know he's at risk. In such circumstances, having the genome info would be helpful, since some preventive measures, such as not smoking, can prevent or slow AMD. Solid research shows that the main candidate gene for AMD is HF1. Assuming that 23andme tested accurately for SNPs of HF1, McCauley's increased risk is highly likely. In addition to not smoking, he should consider taking ocular supplements. The AREDS study showed that taking high levels of antioxidant vitamins (C, E, beta carotene) and zinc could reduce the risk of progression to advanced AMD by about 25 %. The AREDS II study, which is expected to end in 2013, adds fish oil, lutein, and zeaxanthin to the formula. Seth: You write: "Assuming that 23andme tested accurately for SNPs of HF1, McCauley's increased risk is highly likely." I'm less sure. In the genome-wide association studies that found the association that 23andme relies on, a huge number of tests were done, looking for gene/disease associations. I have yet to read anything that convinces me that the researchers involved understand how to correct for the number of tests done. That leaves replication as the only test of accuracy and these gene/disease associations often don't replicate. I believe the 23andme statement about increased risk could easily be wrong.

Tom (2012-06-15 17:55:00)

*Seth: As a way of defending body fat. It is clearly more difficult for women to lose weight than for men to lose weight. Perhaps the evolutionary reason is to give women a greater chance of surviving a famine.* Interesting, and makes sense. I understand that, compared to men, women store a higher percentage of Omega 3 fatty acids (vis a vis Omega 6 fats), enabling them to continue to supply the developing fetal brain should food supplies falter during pregnancy.

Nancy Lebovitz (2012-06-15 21:24:18)

Off topic: I've [1]raised the question of whether there's any evidence about the health effects of organically raised vs. conventional food, and turned up practically nothing. One anecdote about someone who ended their celiac problems by switching to organic food, and no experiments on multi-cellular animals. It occurred to me that folks here might be doing some self-experimentation on the subject, or know about institutional research.

1. <http://nancylebov.livejournal.com/548256.html?view=3677856#t3677856>

Kirk (2012-06-16 10:13:24)

@Tom, In the past few years I talked with two women (at separate times) who each said she wanted to move to a colder climate. Each woman was overweight, comfortable with her size, and was eating high-carbohydrate foods during the conversation. In terms of my own experience, I have felt excessively cold during several periods in the past ten years. The first was when I was trialing a low-carb way of eating. The second was when I attempted 16-hour true fasts. Based upon my experience, my con-

clusion is that the women you noticed were in the midst of a restricted-calorie, low-carbohydrate, or intermittent-fasting regime.

LemmusLemmus (2012-06-16 15:12:17)

Nancy: I believe the British government published a report on that some months ago, finding essentially no health effect. There may have been a link to that study from the Marginal Revolution blog. Hope this helps somewhat.

Kirk (2012-06-16 16:10:48)

@Nancy, I definitely noticed a huge difference between non-organic coffee and organic coffee. Regular coffee generates muscle knots in my upper back. Usually I buy organic apples, potatoes, and sweet potatoes, based upon the recommendations of several smart bloggers in the paleo field, but I have not noticed any difference.

Evolutionarily (2012-06-27 23:03:34)

This appears relevant to the discussion: <http://www.fooledbyrandomness.com/NEJM.pdf> NEJM Whole-Genome Analysis In their article on a whole genome scan looking for SNPs associated with sporadic ALS, Dunckley et al. (NEJM August 3 2007 issue) 1 consider finding ten SNPs that replicate over three studies unusual, based on unadjusted p-values of <0.05 in each study. We question the non-randomness of the result as presented, as it recalls the following "mysterious letter" effect 2 . In study one with 766,995 SNPs, one expects 38,350 SNPs to meet the criterion by chance; 5 % of that gives 1,917 SNPs; 5 % of that gives 95 SNP expected to replicate over the three studies; the authors report ten. A major assertion is a Bonferroni adjusted p-value for marker FLJ10986 less than 0.05 in the first study. Computation of a Bonferroni p-value is the simple multiplication of the unadjusted pvalue,  $1.8 \times 10^{-5}$ , by the number of tests under consideration, 766,995, which, being greater than 1, is taken to be not significant. We are skeptical that any of the claims (See Figure 1) would replicate and the biological conclusions could be ex-post explanations to what appear to be random data Seth: Yes, this is what I mean when I say the scientists involved seem to have no idea how to handle the false positive problem produced by doing so many tests.

J Q Simon (2012-07-14 08:22:13)

Re: Macular degeneration - both my parents had it, which puts me at high risk. I started taking lutein every day and increased my intake of purple and orange foods (zeaxanthin and beta-carotene). I am over 50, which also increases the risk. After one year I had to change my eyeglass and contact lens prescription to a lower one - my vision has improved.

J Q Simon (2012-07-14 08:31:36)

Re: Women feeling colder than men. I was always the one (woman) wearing a sweater when everyone else was in T shirts. It turns out I was hypo thyroid. The standard medication, Synthroid, did nothing to change this, or the other symptoms. I finally found a doctor who would listen to me instead of just taking a TSH test, and I started taking compounded T3 only. Every symptom improved, including temperature. Many people, especially women, are subclinical hypothyroid. TSH test alone does not find this. (Subclinical really means TSH alone does not find hypothyroidism) The doctor should also test Total T4, Free T4, Total T3 and Free T3.

### MIT Professor Reenacts the Movie Groundhog Day (2012-06-16 04:49)

A friend of mine went to college at MIT. "One of my professors repeated himself," she said. "Every lecture was the same."

The class was introductory physics. "You mean he gave the same lecture year after year?" I said.

"No. Every lecture." Hard to believe, but yes, every lecture was the same. The professor was replaced in the middle of the term.



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dearieme (2012-06-16 06:11:35)

I had a lecturer in freshman physics who launched himself into a repeat of his previous lecture. We persuaded him to desist by throwing things at him.

Evelyn M. (2012-06-17 17:22:43)

They must be pretty slow at MIT if it takes them half a semester before taking any action.

### Assorted Links (2012-06-17 05:00)

- [1]New study shows that a Yakult probiotic drink helps people with lactose intolerance and the benefits persist 3 months after one month of drinking it. Yakult is common in Chinese and Japanese supermarkets but rare in American ones. Until I read this article, I didn't realize that people drink it because of lactose intolerance, which is much more common in Asia than America. Via [2]Cooling Inflammation.
- [3]news from the Human Microbiome Project. "To the scientists' surprise, they also found genetic signatures of disease-causing bacteria lurking in everyone's microbiome. But instead of making people ill, or even infectious, these disease-causing microbes simply live peacefully among their neighbors." You may recall that a Nobel Prize was given for the discovery that ulcers are caused by a certain species of bacteria. However, almost everyone with the "disease-causing" bacteria does not get ulcers. Apparently the "surprise[d]" scientists studying the human microbiome did not know that. If it were better known that you don't need to kill bacteria to make them harmless, antibiotic usage would be less attractive.
- [4]Air pollution epidemiologist fired from UCLA after his research contradicts claims about the danger of air pollution.
- [5]How to conduct a personal experiment: biphasic sleeping

Thanks to [6]Melissa McEwen, Peter Spero, Tim Beneke, Dave Lull and Bryan Castañeda.

1. <http://ncp.sagepub.com/content/27/2/247>

2. <http://coolinginflammation.blogspot.com/2012/04/genetics-of-food-intolerance.html>

3. <http://www.nytimes.com/2012/06/14/health/human-microbiome-project-decodes-our-100-trillion-good-bacteria.html?pagewanted=all>

4. [http://www.acsh.org/factsfears/newsid.3704/news\\_detail.asp](http://www.acsh.org/factsfears/newsid.3704/news_detail.asp)

5. <http://www.marksdailyapple.com/how-to-conduct-a-personal-experiment-biphasic-sleeping/#more-29683>

6. <http://huntgatherlove.com/>

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Bacterium (2012-06-17 11:32:01)

It's "a bacterium". (Sorry, pet peeve) Seth: Thanks for the correction. I have fixed it.

dearieme (2012-06-17 14:19:58)

Yakult is widely available and widely advertised in Britain. Seth: Any idea why? For instance, who buys it? Why do they buy it? I haven't seen it for sale anywhere in Berkeley, including Whole Foods, which has about 8 brands of kombucha. I have never seen it advertised. It is for sale in Asian markets near Berkeley

dearieme (2012-06-17 17:21:01)

No idea, it's just a commonplace supermarket product. For example: [http://www.mysupermarket.co.uk/#/tesco-price-comparison/yogurt\\_and\\_milk\\_drinks/yakult\\_original\\_fermented\\_milk\\_drink\\_7x65ml.html](http://www.mysupermarket.co.uk/#/tesco-price-comparison/yogurt_and_milk_drinks/yakult_original_fermented_milk_drink_7x65ml.html)

dearieme (2012-06-17 17:26:08)

P.S. That link shows that it's stocked at ASDA, the British branch of Walmart. Maybe our supermarkets just stock a wider range of stuff than yours or, at least, a different range. I remember a few years ago an American blog speculating on the identity of an exotic fruit photographed at a store in Latin America somewhere. It was a lychee, which we wouldn't consider unusual at all.

dearieme (2012-06-17 17:34:39)

Come to think of it I remember being in a till queue in Sainsbury's a couple of years ago and an American behind me being astonished that I was buying goats milk. He seemed to think that v exotic, but our big supermarkets stock goats milk (full fat, skimmed, semi-skimmed) goats butter, yoghurt.... [http://www.mysupermarket.co.uk/#/grocery-categories/goats\\_milk\\_in\\_tesco.html](http://www.mysupermarket.co.uk/#/grocery-categories/goats_milk_in_tesco.html) Tesco is our biggest supermarket chain: you might care to google to see whether they stock stuff that interests you. Their delivery service is very good, though perhaps not to Beijing.

dearieme (2012-06-17 18:42:17)

Since you don't like Lucky Jim, I had better explain that that last sentence is a joke of sorts. :)

max (2012-06-18 00:16:31)

Seth, a recent review (<http://v.gd/yCy0FS>) has found that: "The available trials showed no benefit of omega-3 PUFA supplementation on cognitive function in cognitively healthy older people. Omega-3 PUFA supplementation is generally well tolerated with the most commonly reported side-effect being mild gastrointestinal problems." Seth: Thanks for the link. I think time will eventually show that the cognitive tests used were insensitive.

How to manifest whatever you want | Koanic Soul (2012-06-27 17:28:32)

[...] to the Melonhead, and flicked open my RSS reader while deciding what to do next. Up popped an article by Seth Roberts mentioning the GI healing properties of Yakult, a fermented yoghurt drink common in Asia. [...]

## Double Interview on the Benefits of Probiotics (2012-06-18 05:00)

[1]This curious 2006 article has an interview with one researcher in one column and an interview with another researcher in another column. Their results differed.

Pro probiotic. "Children with [infectious acute diarrhea] who took Lactobacillus [various strains and species, in nutritional supplement form, not in yogurt form] had a shorter duration of diarrhea (on average 0.7 days shorter) than those who took placebo. Also, they had fewer episodes of diarrhea, i.e. fewer stools, on the second day of treatment than those in the placebo group. Interestingly, the children who took higher doses of Lactobacillus had shorter duration of diarrhea, and it seems that a daily dose of at least 10 billion viable bacteria is necessary to have a beneficial effect."

Anti probiotic. "I published a big study looking at Lactobacillus GG in kids with Crohn's disease who were already doing fairly well on medication. We put them on the probiotic or a placebo for two years. We followed them for two

years and looked for whether the probiotic group had a lower rate of relapse and whether there were any differences between the two groups. We didn't find any differences."

1. <http://www.npr.org/2006/07/20/5568701/q-a-pros-and-cons-of-probiotics>

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Tom (2012-06-18 08:19:35)

Seth, you may have already seen it, but Art Ayers' most recent post also talks about probiotics: [coolinginflammation.blogspot.com/2012/06/dr-oz-on-gut-flora-repair.html](http://coolinginflammation.blogspot.com/2012/06/dr-oz-on-gut-flora-repair.html)

john (2012-06-18 10:11:07)

Okay, I don't know how much of a difference is the "supplement factor" [vs natural food], but to me, the idea of beneficial effects of certain diverse bacterium is beyond the need for a trial like this. It simply makes sense according to all the physiological evidence we have, and these large-scale trials are too easily corrupted to tease out much useful information. Seth: My guess is that there are lots of things that can go wrong – lots of ways taking probiotics that don't work. You need the right dose, you need enough diversity, maybe the bacteria can die. Or don't work optimally. For example, is taking two probiotics better than taking one? Until you can measure the benefits you can't answer questions like that.

### **Who Watches the Watchdogs? The Myths of Journalism (2012-06-19 16:00)**

In [1] a great essay, Edward Jay Epstein points out, at least by implication, that the Pulitzer Prize committee is not terribly interested in the truth of things:

A sustaining myth of journalism holds that every great government scandal is revealed through the work of enterprising reporters who by one means or another pierce the official veil of secrecy. . . This view of journalistic revelation is propagated by the press even in cases where journalists have had palpably little to do with the discovery of corruption. Pulitzer Prizes were thus awarded this year to the Wall Street Journal for "revealing" the scandal which forced Vice President Agnew to resign and to the Washington Star/News for "revealing" the campaign contribution that led to the indictments of former cabinet officers Maurice Stans and John N. Mitchell, although reporters at neither newspaper in actual fact had anything to do with uncovering the scandals. . . . Yet to perpetuate the myth that the members of the press were the prime movers in such great events as the conviction of a Vice President and the indictment of two former cabinet officers, the Pulitzer Prize committee simply chose the news stories nearest to these events and awarded them its honors.

The Nobel Prize in Biology committee operates the same way, except with the disadvantage that there is not one important (= useful in a big way) biology discovery per year. There are far fewer than that. So almost every year the Nobel Prize in Biology goes to discoveries with little practical importance that are described as having great practical importance. The profession (in this case, biology) is credited with much more power than it actually has.

Why does this happen? One possible reason is that no one points it out. (Epstein's essay, still relevant today, was published in 1974.) When a powerful journalistic institution does bad things, it is incredibly dangerous (to your career) to point this out. This is why the Murdoch scandal is so big – it went on so long. Spy magazine had a column called Review of Reviewers. It was hilarious because the misdeeds were great. Unlike almost anything else in Spy, the

author was anonymous. Brilliant writing that the author did not take credit for because it was dangerous to criticize the watchdogs. Likewise, hardly anyone except Epstein criticizes the prize committees (who resemble watchdogs) so they can be profoundly inaccurate.

1. <http://www.edwardjayepstein.com/archived/watergate.htm>

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dearieme (2012-06-20 11:33:48)

None of the greatest scientists - the real top drawer chaps - has won a Nobel, except for Einstein. The reason is that the others worked, and died, too early. It almost makes you wonder whether the institution of the Nobel was part of social changes that led to a reduction in the standard of science. (P.S. Am I too hard on Planck, Rutherford, Mme Curie?)

### **The Difficulty of Finding a Good Experiment to Do (2012-06-20 05:00)**

My self-experimentation began because of one tiny thing – [1]an article I noticed in the Brown University Science Library about teaching mathematics to college students. "The best way to learn is to do," it started. Which made sense. To learn how to do experiments – one of my goals as a graduate student – I started doing self-experiments. Let's imagine I had never seen that article, which is entirely possible. In this parallel universe, I become a psychology professor and then one day notice that someone else has done the personal science I have actually done. Has written "[2]Self-experimentation as a source of new ideas," The Shangri-La Diet, and so on, including the experiments I've described on this blog. How would I react?

Many things about it would not impress me. You devised an arithmetic test to measure your brain function – so what? You measured yourself for a long time – big deal. You did an experiment – yawn. I might be slightly impressed by the experimental designs, which are simple and effective. Most experimental psychology uses more complex designs. What would baffle me would be the discovery of safe powerful beneficial treatments. How did this guy find these treatments? For example, the first experiment in "Self-experimentation as a source of new ideas" is about the effect of breakfast on early awakening. Eliminating breakfast reduced the fraction of days with early awakening from about 50 % to 10 %. Not eating breakfast is easy and perfectly safe. I don't know of anything like this in all sleep research.

To a psychology professor, doing an experiment on one's sleep is nothing. Finding something naturalistic (= not a drug) and sustainable that caused a big improvement, however, would be . . . unprecedented? Seemingly impossible? Psychology professors study everyday topics of great interest, such as memory and problem-solving and happiness, quite often. They would love to find easy safe sustainable non-drug ways of improving these things by large amounts. But I can't think of a single example.

I thought about how hard it is to find big beneficial experimental effects (it's easy to make things worse) when I read [3]this post by the economist Yanis Varoufakis. He is excited about working for an online game company (Valve) because the nature of their game will allow experimental study of economics.

Econometrics is a travesty! . . . Econometrics purports to test economic theories by statistical means. And yet what it ends up testing is whether some 'reduced form', an equation (or system of equations),

that is consistent with one's theory, is also consistent with the data. The problem of course is that the 'reduced form' under test can be shown to be consistent with an infinity of competing theories. Thus, econometrics can only pretend to discriminate between mutually contradictory theories. All it does is to discover empirical regularities lacking any causal meaning. [Why is he sure they lack any causal meaning? – Seth]. . . The reason for this unavoidable failure? None other than our inability to run experiments on a macroeconomy such as rewinding time to, say, 1932, in order to see whether the US would have rebounded without the New Deal (or to 2009 to see what would have happened to the US economy without Ben Bernanke's Quantitative Easing). Even at the level of the microeconomy, keeping faith with the ceteris paribus assumption (i.e. keeping all other things equal in order to measure, e.g., the relationship between the price of and the demand for milk) is impossible (as opposed to just hard).

In sharp contrast to our incapacity to perform truly scientific tests in 'normal' economic settings, Valve's digital economies are a marvelous test-bed for meaningful experimentation. . . . We can change the economy's underlying values, rules and settings, and then sit back to observe how the community responds, how relative prices change, the new behavioural patterns that evolve. An economist's paradise indeed...

I find this baffling. It's like thinking: Now I can write. Soon I will be writing stuff that the world wants to read! Okay, now he can do experiments. Good. After a few of them, I suppose, he will learn what every experimental scientist knows and confronts every working day: it is incredibly hard to do interesting experiments. The "sharp contrast" between the new setting and the old one has yet to be demonstrated.

Okay, how did I find a bunch of big beneficial safe sustainable effects? I am now finishing a paper in which I try to answer this question. To be brief: 1. [4]As I've said, I believe that the distribution of surprise/observation follows a power-law-like distribution. Almost all observations, very little surprise, a tiny fraction of observations, great surprise. Which is pretty obvious. 2. The "slope" (parameter) of the distribution depends on subject-matter knowledge (more knowledge = more favorable slope, i.e., "chance favors the prepared mind"), scientific skill (more skill = more favorable slope), and novelty (more novelty = more favorable slope). I was in good shape on all three. For example, when I studied sleep, I knew a lot about sleep. Novelty is enormously important. In my personal science I could easily study treatments (e.g., not eating breakfast) and dimensions (e.g., how rested I felt when I awoke) that had rarely if ever been studied before. I could do this again and again, keeping novelty high and thus keeping the slope very favorable. (Varoufakis will get a burst of novelty when he begins experimentation (the situation is new) but forced to use that situation for all his experiments the novelty will run down, making the slope of the distribution less favorable.) 3. My cost/observation was very low and the benefit/observation remarkably high (I was improving my own health). So I was very motivated to make observations. My answer in the paper is a little more complicated but that's most of it.

1. <http://www.jstor.org/stable/10.2307/2319737>

2. <http://escholarship.org/uc/item/2xc2h866>

3. <http://blogs.valvesoftware.com/economics/it-all-began-with-a-strange-email/>

4. <http://media.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

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gwern (2012-06-20 07:47:05)

> Psychology professors study everyday topics of great interest, such as memory and problem-solving and happiness, quite often. They would love to find easy safe sustainable non-drug ways of improving these things by large amounts. But I can't

think of a single example. Spaced repetition comes to mind for memory.

Alex Chernavsky (2012-06-20 09:30:17)

Gretchen Rubin wrote a book about using self-experimentation to increase her happiness. The book is called, [1]*The Happiness Project*.

1. <http://www.amazon.com/The-Happiness-Project-Aristotle-Generally/dp/006158326X/>

Cliff Styles (2012-06-20 11:03:07)

I read this excellent post, and one thought that came was that science fiction writers need to do more self-experimentation. Or perhaps any fiction writers: Nabokov's comment that he saw his writing as working in his laboratory seems apt?

ChristianKI (2012-06-20 12:02:54)

@gwern: Spaced repetition didn't get discovered by a professor but by a student who did self experiments. Piotr Wozniak was a student in molecular biology at first and afterwards a student of computer science. Hermann Ebbinghaus became professor after doing his work on memory.

gwern (2012-06-22 09:21:19)

Christian: Ebbinghaus was already a PhD when he began his memory experiments... And nothing about the context in Roberts's post says he \*had\* to be a professor: Roberts said he couldn't think of an example of a safe non-drug-related procedure which has large benefits on memory. I provided one.

## **No Mention of Fermented Foods in Article about Importance of Bacteria (2012-06-21 05:00)**

[1]A new article in the New York Times by Carl Zimmer is about the importance of the bacteria inside of us. Several studies are described. Then it comes to the practical use of the knowledge. Here's what we can do to improve our inner bacterial ecology:

To ward off dangerous skin pathogens like *Staphylococcus aureus*, for instance, Dr. Segre envisions applying a cream infused with nutrients [Treatment 1] for harmless skin bacteria to feed on. . . . Adding the bacteria directly may also help. Unfortunately, the science of so-called probiotics [Treatment 2] lags far behind their growth in sales. In 2011, people bought \$28 billion of probiotic foods and supplements. . . . A growing number of doctors are treating *C. difficile* with fecal transplants [Treatment 3]: Stool from a healthy donor is delivered like a suppository to an infected patient. The idea is that the good bacteria in the stool establish themselves in the gut and begin to compete with *C. difficile*. This year, researchers at the University of Alberta [2]reviewed 124 fecal transplants and concluded that the procedure is safe and effective.

No mention of fermented foods. The obvious difference between fermented foods and Treatments 1-3, besides pleasure (fermented foods more pleasurable), is that Treatments 1-3 can be sold for high prices. Fermented foods cannot. (Except wine.) The omission is curious. Just because the people that Zimmer interviews have tunnel vision doesn't mean that Zimmer must.

1. <http://www.nytimes.com/2012/06/19/science/studies-of-human-microbiome-yield-new-insights.html?pagewanted=2&r=1&smid=pl-share&pagewanted=all>
2. <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2036.2012.05033.x/abstract>

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dearieme (2012-06-21 07:52:39)

In the days when we made our own wine we found that the yeast was so mobile that it could even start a fermentation in a jar of pickled gherkins in the fridge. In the era when people made their own bread and beer, yeast must have got everywhere.

minderbender (2012-06-21 13:03:54)

dearime, that may be true of wine yeast, but I am skeptical. I am a homebrewer (beer), and I also make bread from time to time, and I have never noticed anything like this.

dearieme (2012-06-21 15:29:06)

"skeptical"? The bloody stuff was bubbling.

minderbender (2012-06-22 12:48:01)

So, something got in it. What leads you to believe it was wine yeast?

### **Effect of Niacin on Restless Legs Syndrome: The Importance of Dosage (2012-06-22 05:00)**

K. Thomas Packard, who works in the healthcare industry, recently studied the effect of niacin on his Restless Legs Syndrome. He had read how a megadose [1]helped Dennis Mangan's mother. He gave [2]a talk about his results and [3]posted at Genomera.

The niacin didn't help him. However, the highest dose he tried was 500 mg/day. Mangan's mom, who surely weighs less than Packard, took 1000 mg/day. He doesn't explain why he thought a much lower dose would work. Perhaps he weighs twice as much as Mangan's mom, so 500 mg/day, in terms of body weight, may have been only 25 % of the dose that worked for her. It's too bad he went to all that trouble and used a maximum dose that could easily have been too low.

Part of the study "hypothesis" (= idea to be tested?) was

The "medium" dose may generally be more effective, than both the "low" and "high" doses, in eliminating symptoms of RLS and avoiding side effects of niacin.

Why this might be true isn't explained.

After Week 3, Packard wrote "The niacin was not working, so I abandoned the experiment on Wednesday. I went back to my original medication and am doing OK." He says nothing about side effects.

Packard later found that his ferritin was low, apparently a side effect of this study. If his RLS persists after he improves his ferritin level, I hope he tries niacin again at better dosages.

1. <http://www.boingboing.net/2010/05/17/restless-legs-syndro.html>
2. <http://www.genomedad.com/self-tracking-presentation-at-quantified-self>
3. <http://genomera.com/studies/effects-of-niacin-on-restless-leg-syndrome>

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Tomas (2012-06-22 05:43:50)

I think that niacinamide is generally safer, because it doesn't have the "niacin flush" effect. Niacinamide lowers stress hormones by lowering free fatty acids; I usually take 500mg once or twice a day and it makes me feel calmer. I guess it might work for RLS as well.

JRM (2012-06-22 13:22:57)

"The "medium" dose may generally be more effective, than both the "low" and "high" doses, in eliminating symptoms of RLS and avoiding side effects of niacin. Why this might be true isn't explained." Paul Jaminet in his book, Perfect Health Diet, talks about the concept of plateau ranges for nutrients. For zero up to a certain level, a nutrient is of increasing benefit. Then there is a plateau range of maximum benefit for a nutrient. Then intake over that amount causes a decrease in benefit and finally, excessive nutrient intake is harmful. In my own case, I find carb intake is best between 50-75 grams of carbs a day. Less than that, I get jittery from being in ketosis. More than that, I get acne.

Tom (2012-06-23 00:31:08)

*I find carb intake is best between 50-75 grams of carbs a day. Less than that, I get jittery from being in ketosis* You might test supplementing with inositol: [itsthewooo.blogspot.com/2012/05/dont-cold-turkey-inositol.html](http://itsthewooo.blogspot.com/2012/05/dont-cold-turkey-inositol.html)

Edward J. Edmonds (2012-06-23 11:46:26)

I never see this get mentioned but 0.5-1 tsp of salt dissolved in 250mL of warm water works whenever I have RLS like symptoms.

David (2012-06-26 01:10:46)

Seth I had RLS for many years. I discovered through time that inflammation was the primary cause of my discomfort. A new study was published in the January 14, 2012 issue of "Sleep Medicine Review Journal" that supports my theory: [http://www.rlcure.com/rls\\_study.pdf](http://www.rlcure.com/rls_study.pdf) The following website has evidence based on scientific studies that the vitamins/supplements that people have claimed has made their RLS less irritating all have anti-inflammatory qualities, including niacin. <http://www.rlcure.com/studiesr.html> A blog for RLS sufferers with helpful tips can be found here: <http://therestlesslegsblog.wordpress.com> David

Laura (2012-06-26 09:35:55)

Some research suggests that low ferritin levels are a secondary cause of RLS. When I read this, and was aware of my own low ferritin levels, I upped by Iron supplementation...no more RLS! <http://www.aafp.org/afp/2000/0701/p108.html>

## **The Art of Fermentation by Sandor Katz (2012-06-23 05:00)**

The Art of Fermentation by Sandor Katz was published two weeks and I got a copy from the publisher. It has a few conceptual chapters ("fermentation as a coevolutionary force", health benefits, small business) but most of it is DIY, how to ferment X, Y, and Z. Unlike a set of recipes, he includes background with each food so the result is a cross between an encyclopedia and a cookbook. There are also several pages of color photographs, cute marginal drawings, and excellent lists of references and sources. It covers lots of stuff I rarely see. For example, there is one page on fermenting eggs. When I'm in China, I eat lots of fermented eggs. The book doesn't mention the controversy in China about heavy metals in the fermented eggs.



The author's enthusiasm is contagious and I'm sure the book will encourage me to ferment more stuff. Nowadays I just make yogurt, kefir, and kombucha – not even sauerkraut. I once got a book called something like The Book of Yogurt that consisted of 30 different yogurt recipes – which differed from each other by only about 5 %. Page after page the same with only minor differences. Talk about [1]cut and paste! I got rid of it ("this is useless!") but now I wish I had saved it because it was so funny.

Which is only to say that food writing is either incredibly difficult or incredibly awful. I used to subscribe to Saveur. Some of their recipes were very good. The writing was awful, however – like something from a tourist guide. Please, don't tell me how beautiful the country, how friendly the cook, or how tasty the food! Katz does better than that, especially when he is describing what he has actually done. But about half of the book reminds me of my first piece of extended writing – a "state report" about Maine that I did when I was in fifth grade. I went to several encyclopedias and copied the interesting stuff. Katz has gone to quite a few books and copied the interesting stuff.

In at least one case, he has copied too much. I have made yogurt hundreds of times. Only in the beginning did I do something like what practically everyone in America, including Katz, advocates: heat the milk up, let it cool, put in the culture. Now I just take the milk from the refrigerator, put in a tiny amount of culture, surround the milk with hot water (using a Chinese yogurt-making machine that keeps the water warm), and wait. So much easier. The final product is better (smoother, thicker) than the old hard way, especially when I learned that tiny amounts of culture work better than large amounts. "In my experience, cultures from commercial yogurts never maintain their viability beyond a few generations," Katz writes. My experience is different: I've never had a problem using them.

In contrast to Harold McGee's *On Food and Cooking*, *The Art of Fermentation* is more personal, more hands-on, and less scientific, all of which are improvements, in my opinion. It is also more opinionated, which since the opinions are commonplace, is bad. "I too love the beer they are usually thinking of . . . However I define beer more broadly than the famous 1516 Bavarian beer purity law . . . I define beer as a fermented alcoholic beverage in which . . . " At another point, to my surprise, he mentions Jane Jacobs and her theory that agriculture began in cities. "If Jacobs's theory is correct, then fermentation practices must also have had urban roots," writes Katz. This is not interesting. The small business chapter is interesting whenever Katz is telling the story of a small business and uninteresting the rest of the time ("Consistency is not necessarily important to the home experimentalist").

Oh well. I am glad to have a book that will encourage me to ferment more stuff and from which I can learn a lot about fermentation. The book is obviously a labor of love and there are not many of those.

1. [jonah-lehrer-plagiarism-new-yorker-examples-pile-up.html](#)

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Chuck Currie (2012-06-23 07:40:41)

I'm going to get the book because I've become very fascinated with fermentation - made yogurt a few years ago using a heating pad for a constant heat source. The first pad was new, however it would automatically shut off to keep from burning the user - obviously that didn't work. Got an old style pad from a neighbor who had two - it worked great, yogurt turned out great, burnt out the heating pad on the second batch - haven't made yogurt since. I like sauerkraut (Bubbe's), but get a little bored with it - my 93 yr old, Swiss heritage, Kansas farm girl mom says it tastes just like her mom's. They kept it in a crock in the cellar. Found Sonoma Brinery barrel fermented Kosher pickles at WF - really good (most Koshers have too much garlic for my taste - not these - they even have little red chillies floating in the container with them). Really like kombucha (would really like to know how to pronounce that correctly) - but find it sometimes gives me stomach problems - a little heartburn - could be the carbonation - any ideas? I only drink the "original" flavor, so it's not any added ingredients. Have you posted your fermentation

recipes? If not, would you? Cheers Seth: I too like Sonoma Brinery products, the kosher pickles and the "raw sauerkraut".

Char (2012-06-23 20:46:36)

How long do you let your yogurt ferment? Seth: 24 hours.

Andrea (2012-06-24 17:41:42)

Would you give us your recipes for kombucha and yogurt? It sounds as though you have figured out lots of shortcuts.

Chuck Currie (2012-06-25 07:55:18)

Sonoma Brinery Outrageous Bread and Butter pickles are Outrageous too. My daughter has a friend who is a chef and says they're the best pickles he's ever eaten. Do pickles in vinegar count as fermented food? Seth: that's good to know about the Bread and Butter pickles, which I haven't tried. I like to think that sour pickles count as fermented food. They're aged at room temperature.

minderbender (2012-06-26 10:23:40)

I think Chuck's point is probably that you can imagine different ways for something to get sour: (A) It is sour because it contains bacteria that are producing some kind of acid (lactic, acetic). (B) It is sour because it contains a product that itself contains/contained bacteria that produced some kind of acid (e.g. vinegar, yogurt). (C) It is sour because someone simply added a bunch of acid (lactic, acetic, citric). (A) obviously counts as a fermented food. (B) depends a little on why fermented food is healthy, but it could be considered a fermented food to the extent it contains the relevant stuff. Some vinegar is distilled, some isn't. Maybe non-distilled vinegar has good stuff from the aceto bugs. (C) probably doesn't count as fermented food. And distilled white vinegar is basically (C), it is hard to imagine that it contains any bacteria cells or even bacteria by-products (other than the acetic acid itself). So if you make pickles by soaking cucumbers in room-temperature distilled white vinegar, you may not be getting any real benefit beyond flavor. I suppose there are probably a few bacteria in there, but it's hard to imagine they are numerous/active enough to provide real benefit.

minderbender (2012-06-26 10:32:05)

Incidentally, if you are going to try to home-brew beer, I suggest starting with an actual homebrewing guide, not a chapter of a larger book on fermentation. Brewers are doing lots of interesting stuff, e.g. this: [http://www.themadfermentationist.com/2012/06/100-lactobacillus-berliner-weiss e.html](http://www.themadfermentationist.com/2012/06/100-lactobacillus-berliner-weiss-e.html) In general there is a large, thriving community experimenting with beer (and mead and wine), and people who are operating outside that community tend not to be up-to-date and to make a lot of rookie mistakes. E.g.: <http://www.themadfermentationist.com/2011/10/booze-for-free-book-review.html> Many homebrewers, myself included, think that John Palmer's *How to Brew* is the best starting place: <http://www.howtobrew.com/> (The website is free, the book is more extensive and is probably worth buying.)

### Assorted Links (2012-06-25 05:00)

- [1]interview with Sandor Katz about his new book *The Art of Fermentation*
- [2]How well do climate models predict?
- [3]Bryan Caplan reviews a book about twins separated at birth.
- [4]UC Davis professor harassed after he criticizes prostate cancer screening. "[UC Davis] officials said the dispute should have been handled internally and that Wilkes should not have published his concerns in a public forum."
- [5]Andrew Gelman chooses five books about politics.

Thanks to David Cramer.

1. <https://www.npr.org/2012/06/13/154914381/fermentation-when-food-goes-bad-but-stays-good>
2. [http://www.rossmckittrick.com/uploads/4/8/0/8/4808045/fp\\_june12\\_models\\_i.pdf](http://www.rossmckittrick.com/uploads/4/8/0/8/4808045/fp_june12_models_i.pdf)
3. <http://online.wsj.com/article/SB10001424052702303552104577436333754014866.html>
4. <http://www.bmj.com/content/344/bmj.e4150>
5. <http://thebrowser.com/interviews/andrew-gelman-on-how-americans-vote>

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Jay (2012-06-25 07:59:18)

The climate model paper is interesting. I'm an ex-physicist in the life sciences. It's humbling to see how little we know about complex systems – and even more humbling to come face to face with the general intractability of complex systems. I recently came across an excellent paper that compares condensed matter physics to biology (evolution in particular). It shows just how difficult it is to find appropriate models for complex systems. The same applies for climate science. Paper here: <http://arxiv.org/pdf/1011.4125v1.pdf> Non-free version here: <http://www.annualreviews.org/doi/abs/10.1146/annurev-conmatphys-062910-140509> Conclusion from paper below:

In the natural development of the sciences, issues of complexity are sensibly postponed until they can no longer be avoided. Physics was able to delay serious consideration of collective effects for nearly three hundred years, and only in the last thirty years or so has it confronted complex collective phenomena involving multiple scales of space and time, unpredictable dynamics and large fluctuations. Its track record of success is mixed. Biology was not so lucky: at its outset, complex phenomena were encountered, but tools were lacking to cope with the difficulty. Rather than abiding by ignorance, a language-culture was developed to explain away the conceptual difficulties using guesswork solutions such as “natural selection”. As Schrodinger wrote, “Instead of filling a gap by guesswork, genuine science prefers to put up with it; and this, not so much from conscientious scruples about telling lies, as from the consideration that, however irksome the gap may be, its obliteration by a fake removes the urge to seek after a tenable answer.”—E. Schrödinger, *Nature and the Greeks*, pp7-8.[202] Today, with the “urge” removed, the development of sophisticated technology has allowed biology to take refuge in single-molecule biophysics, genomics and molecular biology. But the stultifying language-culture still remains. This sanctuary is an illusionary respite: the core problems of biology remain irksome to some, and are inextricably interwoven with evolution. Indeed, the very existence of biological phenomena is an expression of physical laws that represent a new asymptotic realm in nonequilibrium statistical physics. Ulam famously quipped[203] “Ask not what physics can do for biology; ask what biology can do for physics.” Our answer is clear.

dearieme (2012-06-25 08:37:27)

The link to the UC Davis Inquisition didn't work for me. Seth: Thanks, I have fixed it. It may be gated.

Alex Chernavsky (2012-06-25 11:06:12)

The *BMJ* link still isn't working. The correct link is here: <http://www.bmj.com/content/344/bmj.e4150> Seth: thanks, I fixed it . . . again.

## **Make Yourself Healthy Article by Me at Boing Boing (2012-06-25 10:16)**

[1]An article by me about how a woman figured out she had gluten intolerance is on Boing Boing today. I first learned about the story through a comment this blog. Thanks, Ginna!

If you know of a case where someone (such as you) improved their health through science (= looking at data, experimentation, collecting data – the opposite of trusting experts) please let me know. In the gluten intolerance story, the experimentation and data collection were as simple as trying a gluten-free diet and learning its effect on (a) how

you feel and (b) a kidney function score.

1. <http://boingboing.net/2012/06/25/make-yourself-healthy-daughte.html>

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Alex Chernavsky (2012-06-25 11:24:32)

There's a problem with the link in the post. This link should work: <http://boingboing.net/2012/06/25/make-yourself-healthy-daughte.html> Seth: Thanks, I fixed it.

Jim Purdy (2012-06-25 14:19:35)

This isn't exactly a self-experimentation story with an ending, not yet anyway. Instead, it's more like the beginning, or just a question that may lead me to a self-experiment that would be different from medical advice. I often have swelling in my legs (lymphedema), and sometimes the skin starts to break down, and clear fluid (lymph) drains out. In the past, I have worn tight over-the-calf socks to provide some compression, and I try to restrict salt, elevate my feet, moisturize the skin on my legs, and walk more. But one solution from doctors bothers me a bit: they treat the fluid loss as the problem (instead of just a symptom of something else), and they try to stop the draining with compresses soaked with a Domeboro solution. The Domeboro does seem to slow and stop the drainage, but I'm not sure that's the best approach. From what I've read, the lymph carries some healing substances, including tPa, or Tissue Plasminogen Activator. As a survivor of two mild strokes, I'm familiar with tPa, which is used in emergency rooms to break up clots after a stroke. It seems to me that there may be some good evolutionary reason why the body is sending clot-busting tPa to an open wound, instead of the usual clot-forming substances in blood. After all, a small skin wound usually is closed off in seconds or minutes with a blood clot. So why is the body trying to keep the wound open and draining? I can think of 3 possible answers: 1. Maybe the wound is being kept open to release fluid and reduce the swelling. A clot, on the other hand, might trap the lymph, and perhaps interfere with normal blood flow. 2. Or maybe the clot-busting tPa is keeping dangerous clots from forming in the legs, which could travel to the heart or lungs and form fatal blockages. In either of the cases above, the tPa may be beneficial, and stopping the lymph could cause worse problems. 3. Of course, on the other hand, the oozing lymph may just indicate a failure of normal functioning, in which case the doctors might be right to try to stop it. I don't know the answer, but I'm reluctant to fight against something that the body seems to be trying very hard to do. I have several medical appointments in the next few days, and I see some possible arguments in my future. In previous arguments with doctors, they wanted to amputate a leg and do quadruple coronary bypasses. In both those cases, without surgeries, the leg and heart conditions got better. Those would have been dangerous and life-changing surgeries, so I don't blindly follow "doctors' orders," and I'm not sure I want to follow their orders now. I'll let you know what happens. I may just end up ditching my atheism, and becoming a Christian Scientist, since they don't trust doctors either. Seth: No one could forget your amputation story.

Ginna (2012-06-25 15:16:49)

No problem!

Jim Purdy (2012-06-25 20:15:00)

Seth, your BoingBoing article was fascinating. And I loved the doctor's arrogance in dismissing a patient's comment as "trendy." Doctors ... who needs them? Oh, I remember who needs doctors: the drug and medical device companies.

Wally Vanzile (2012-06-26 17:48:15)

My dad asked me one time "How far can a dog run into the woods?" There is an accurate answer.

Roger Sweeny (2012-06-28 10:38:34)

Last year, I read *How Doctors Think* by Jerome E. Groopman (Mar 12, 2008). Groopman is an honored establishment doctor.

Just about the first story in the book concerned a woman who almost died from gluten intolerance because her doctors weren't looking for it. Seth: I didn't know that. I will get the book.

## Disappointing Visit to Apple Store (2012-06-26 05:00)

One of my friends loves her Ipad so I decided to get one. On the same day I started looking at options Microsoft announced their tablet, the Surface. It sounded good. I decided to do more research.

I went to the Apple Store in Palo Alto. The main things I will do with my Ipad are read books and magazines and watch movies. I asked to see a movie on "the new Ipad". No movies were available, so I watched a trailer for Brave. It was not a good experience. Lots of glare. How much worse could the Surface be? I wondered.

I was curious about the new naming policy. No "Ipad 3", just "the new Ipad". "Why isn't this called the Ipad 3?" I asked an employee. "Company policy," he said. "What's the reason for the policy?" I asked. "They don't tell us that," he said.

I left the store thinking I would wait for the Surface. Later that day I had lunch with a friend, [1]Steve Omohundro, who (with colleagues) long ago predicted the tablet computer and won a design competition (possibly sponsored by Apple) for doing so. He and his colleagues gave a talk about it and Steve Jobs was in the audience. I forgot to ask him what he thinks of the Ipad and the Surface.

1. <http://steveomohundro.com/>

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Allen K. (2012-06-26 05:53:52)

Did he predict it before the movie 2001? <http://www.youtube.com/watch?v=JQ8pQVDyaLo>

Damon (2012-06-26 08:39:11)

Totally random post! In other news, Google is announcing its tablet tomorrow. Seems there's a multitude of tablets to choose from now...but I must say the Surface does look compelling.

Jim Breed (2012-06-26 10:29:49)

I love my new iPad (iPad 3 to me). 1. The retina display is really easy on the eyes. I like reading it on the elliptical much better than physical books. 2. It makes it very easy to keep up with email. 3. The Wall Street Journal app was the deal sealer; when I tried it on my daughter's iPad, I knew my android tablet was history. 4. A few, 10 %, of my business students would pull up the powerpoints in class. I predict this use will only grow. I use the iPad more than my phone or computer. It is at the sweet spot of usefulness and portability.

Shawn (2012-06-26 13:04:35)

I hate glare too. It give's me killer migraines. Most people don't get migraines quite like I do from glare but I guess my eyes are extra sensitive to reflected light. However, a sizable # of people are sensitive to it and a website was created to petition Apple to offer a non-glare laptop option, which they ended up giving in to. I really dislike the fact that a lot of the new laptops and flat screen computer monitors have reflective surfaces and essentially look like a mirror. I prefer the old TFT LCD screens which do not have me headaches. If it was not for self experimentation it would have been very tough to discover the trigger (it took

me many years before starting to self-experiment, and not long afterwards I figured it out).

Kim Øyhus (2012-06-26 20:54:42)

There are several anti-glare films available for all pads.

Alex Chernavsky (2012-06-27 08:09:15)

I have an iPad 2. I don't use it very much. I far prefer to sit at a regular desktop computer (the iPad's on-screen keyboard is very awkward to use). When I *do* use the iPad, my main use is reading articles that I had previously save in my InstaPaper account. The glare doesn't bother me (I never even noticed it, to tell you the truth). Frankly, I'm a little puzzled by all the hoopla surrounding tablet computers and smart phones. Using either type of device is an exercise in frustration, in my opinion. I can see how they might be useful, though, if you don't have easy access to a regular desktop PC. Luckily, though, I am almost always in close proximity to either my work computer or my home computer, and I rarely travel.

### Assorted Links (2012-06-27 05:00)

- [1]criticism of Richard Florida
- [2]tea drinking associated with reduced risk of stroke
- [3]James Lovelock changes his mind about global warming. "Having observed that global temperatures since the turn of the millennium have not gone up in the way computer-based climate models predicted, Lovelock acknowledged, "the problem is we don't know what the climate is doing." . . . He responds to attacks on his revised views by noting that, unlike many climate scientists who fear a loss of government funding if they admit error, as a freelance scientist, he's never been afraid to revise his theories in the face of new evidence."
- [4]The American Psychiatric Association suppresses criticism of the forthcoming new edition of its diagnostic manual, the DSM. (The new edition is DSM 5). The more arbitrary, top-down and evidence-ignoring the actions of health professionals, the greater the value of personal science (= finding out for oneself). [5]Here are criticisms of the new edition.
- [6]More about autism and ultrasound
- Nora Ephron [7]misses butter and bacon

Thanks to [8]Bryan Castañeda and Alex Blackwood.

1. <http://thirtytwomag.com/2012/06/the-fall-of-thecreative-class/>

2. <http://www.ncbi.nlm.nih.gov/pubmed/19228856>

3. <http://www.torontosun.com/2012/06/22/green-drivel>

4. <http://hcrenewal.blogspot.com/2012/01/self-inflicted-damage.html>

5. <http://dxrevisionwatch.wordpress.com/2012/06/21/three-professional-organization-responses-to-third-and-final-dsm-5-stakeholder-review/>

6. <http://jerobison.blogspot.com/2012/05/more-thoughts-on-ultrasound-questions.html>

7. <http://www.showbiz411.com/2012/06/26/nora-ephron-left-clues-about-dying-in-her-final-book>

8. <http://www.bryancastaneda.com/>

Andrew (2012-06-27 05:37:13)

Tea Drinking - also associated with increased risk of prostate cancer - <http://www.bbc.co.uk/news/uk-scotland-glasgow-west-18494725>

JohnG (2012-06-27 07:39:55)

A blog with near unending variety and quality

## **The Power of Blog (Fermented Foods Division) (2012-06-28 05:00)**

A few weeks ago I posted [1]a short note about Yakult, a probiotic dairy drink popular in Asia. Yesterday, I came across [2]someone who had read that note. He wrote about it in a post categorized as Learning Koanic Soul.

To test whether I did indeed now possess Melonhead powers, I attempted to manifest the thing I wanted most, and had been striving to attain the longest: a cure for the adverse side effects of the Accutane I'd taken 8 years ago.

Here's a brief list of the side effects I suffered:

- chronic diarrhea
- chronic fatigue
- inability to eat almost every food, including pills
- insomnia
- additional symptoms, increasing exponentially when I eat forbidden foods or miss sleep

Over the last 8 years I'd painstakingly developed a coping regimen that worked in theory, as long as I did it perfectly. But it was so strict that holding down a job or traveling were almost impractical. And any error meant days if not weeks of down time. I rarely achieved better than than 50 % functionality. And my diet was so limited that I ate only one meal continuously – lean steamed meat with rice, scallops and shrimp.

All attempts at a cure had failed, and not only failed, but proven that I couldn't even digest the pills that might make me better. Instead, the difficulty of digesting the pills induced a failure cascade, a reinforcing feedback loop of insomnia, stress, fatigue and diarrhea. After years of fighting this illness, I had learned a great deal but was running out of things to try.

So, for my first manifestation attempt, I decided to demand an INSTANT cure.

Not a regimen for coping with symptoms... Actual, immediate, damage reversal. . . .The experiment began as I wrapped up a Skype conversation with a Melonhead. He'd just finished describing his "powers" to me. I got the idea for the experiment, and told him what I'd try to manifest. Immediately I experienced a boost in energy – I'd been feeling sick. I was shocked – it appeared to be already working.

I finished talking to the Melonhead, and flicked open my RSS reader while deciding what to do next. Up popped an article by Seth Roberts mentioning the GI healing properties of Yakult, a fermented yoghurt drink common in Asia. Accompanied with link to scientific paper and news report.

This startled me, because I'd been planning to try fermenting my own yoghurt next, although I had low expectations for success. I was planning on getting a yoghurt making machine, yada yada. I began reading with interest. Could this be the sign I'd requested?

As I finished reading, my girlfriend arrived home. I told her I wanted to buy some of this "Yakult" stuff tomorrow, figuring the grocery stores were closed tonight. She replied that she had some in the refrigerator.

This got my attention. I'd requested an instant cure... and the cure, if it was one, had been sitting IN MY REFRIGERATOR before I requested it.

The main problem was the massive sugar content of Yakult. I knew that I had sugar malabsorption issues – I can't eat fruit. There was an excellent chance that if I tried the Yakult, I would become sick for at least 3 days, and endure excruciating pain. For the record, torture by several consecutive days of gut cramps is one of the few things I am afraid of, being a subset of torture in general. Nevertheless, I elected to drink two (disgustingly sweet) Yakult bottles that night.

Over the next couple of days I continued to ramp up my Yakult dosage. My body rebelled some at the radical change, but it also showed signs of improvement. The expected disaster failed to materialize.

Day two was the worst. I felt as if I might be becoming genuinely sick. Given the amount I'd drunk, this meant a solid three days of agony were kicking off. That night I endured some physical pain, but I was also strangely energized, so that I had the mental reserves to face it out. Normally the illness saps all capacity for resistance.

That night I received a "message" (or had a thought, whichever you prefer) that "it would take three days." Sure enough, on day 3 I knew was better, significantly so, instead of worse. There could be no further doubt that it was working. For me, something had finally changed.

Note that I would expect a full gut healing to take place over 3-6 months. It's not simply a matter of fixing diet or finding the right pill, but 1. rebuilding bacterial colonies and 2. regrowing and healing intestinal lining damaged or eaten away by inflammation and acidity. While these results are not instant, they are screamingly fast in GI terms.

Impressed by this initial success, over the next few days I began to let manifestation guide my behavior intuitively, rather than using logic to determine my actions. An image of a key supplement appeared in my head – I went and bought it at the precise store I remembered seeing it. When I arrived I discovered it was on sale: 2 for 1.

At the grocery store, I simply wandered, letting manifestation dictate my purchases. I grew disgusted with the excessive sweetness of Yakult: lo and behold, I found a bulk yoghurt with a lower sugar content. I tested a few key supplements I had lying around, and found I could now digest pills. So I started taking everything I'd stored up but been unable to use. This resulted in a major improvement. At the same time, I gradually began eating a more diverse collection of foods, letting intuition guide me. No disaster ensued.

Once it was clear that I was cured, I wanted to know my new limits. And I didn't intend to wait 6 months to find out. Among other things, I've tested a half block of cheese (lactose and fat intolerance), modest amounts of fruit (fructose and insoluble fiber intolerance), and the finisher, a greasy-spoon



restaurant meal.

None of these could induce a return of the diarrhea that has plagued me for the last 8 years. However, the first and third did make me tired and give me gas for a couple of days. So I'm not invincible. The former was probably a matter of trying too much fat too soon (I have liver damage impairing fat digestion), and the latter was simply unfit for human consumption.

All this took about two weeks to transpire, from June 15 to June 28 [2012], and brings us to the present. I am eating a varied and delicious diet, and enjoying good energy and good health. My 8 year torment is at an end.

Conclusion: His girlfriend is Asian, he isn't. More seriously, it really does show the power of fermented foods, in this case Yakult and yogurt.

1. <http://blog.sethroberts.net/2012/06/17/assorted-links-184/>

2. <http://www.koanicsoul.com/blog/2012/06/27/how-to-manifest-whatever-you-want/>

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Koanic (2012-06-28 06:23:05)

Hah, didn't know you were a reader. I do know how to embarrass myself, don't I? By the by, I fit the success of yoghurt, versus the failure of other fermented foods I tried such as kombucha and apple cider vinegar, under the Neanderthal cave herder hypothesis, that they fermented milk and cheese in the cool backs of their caves. Seth: It's interesting that Yakult worked where kombucha and apple cider vinegar failed. Not easy to predict that.

Tom (2012-06-28 11:06:27)

Such a moving post. You have a wonderful impact on the world, Seth.

dearieme (2012-06-28 11:45:23)

OK, so why is the stuff on the shelves of every British supermarket but hard to get hold of in Berkeley? Seth: Good question. Better choice of distributor in Britain?

## **How Low Blood Sugar is Too Low? New Evidence (2012-06-29 05:00)**

Some people avoid all carbs (that is, all bread, pasta, rice, etc.). Others advocate "safe starches". No doubt wheat can be dangerous – witness celiac disease (associated with a genetic difference). But I have noticed clear improvements in brain function (measured by arithmetic speed or something similar) after eating something sweet, such as pudding. None of this, unfortunately, helps answer the question: how low blood sugar is too low?

[1]A new study makes more plausible the idea that really low levels of carbs may be bad for you:

A nested case-control study data set was generated from the cohort-study data set ( $n = 4140$  type 2 diabetic outpatients) by sampling controls from the risk sets. Cases ( $n = 427$ ) were compared with an equal number of controls chosen from those members of the cohort who were at risk for the same follow-up time of the case, matched for age ( $\pm 3$  years), sex, body mass index (BMI) ( $\pm 2 \text{ kg m}^{-2}$ ), duration of diabetes ( $\pm 5$  years), and Charlson's Comorbidity Score (CCS) ( $\pm 1$ ). The main predefined analysis was the comparison of cases and controls for proportion of patients with each HbA1c class ( $<6.5\%$ ,  $6.5\text{--}7.4\%$ ,  $7.5\text{--}8.4\%$  and  $\geq 8.5\%$ ). During a mean follow-up of  $5.7 \pm 3.5$  years, 427 deaths were recorded. The lowest risk of death was observed in the HbA1c  $6.5\text{--}7.4\%$  category; a lower HbA1c was associated with a non-significant trend towards a higher risk. The risk associated with a low ( $<6.5\%$ ) HbA1c was significantly greater in patients who were insulin-treated than in the rest of the sample.

The study is saying that diabetic patients in the HbA1c  $6.5\text{--}7.4\%$  category do not improve their health when given insulin that lowers their blood sugar even more. Their health may get worse.

1. <http://www.ncbi.nlm.nih.gov/pubmed/22633797>

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dearieme (2012-06-29 05:29:12)

As I understand it, HbA1c is a weighted average reading of blood sugar over the preceding few months. But what if not only the level matters, but also how variable it is? Wouldn't that be lost in correlating HbA1c versus this-and-that?

anand srivastava (2012-06-29 05:32:38)

They probably did not include diabetics who were controlling it based on diet alone. That is diabetics only on drugs were considered. Its very obvious that the body will not be able to control bg if you supply any external way of reducing bg. The external factors and the internal factors will be in conflict. So the chances of death due to hypoglycemia will get higher as you keep the blood control below a certain level, and the death due to hyperglycemia will become more prominent as the bg level goes to another extreme. I guess the  $6.5\text{--}7.4\%$  is the happy medium, in the insane world of drug based glycemic control.

dearieme (2012-06-29 05:33:03)

It looks to me as if they should have separated the  $<6.5\%$  people into two groups: (a) the insulin-treated, and (b) the others. Then they could tell whether there is any higher risk for group (b) and whether group (a)'s higher risk is significant.

Chris Masterjohn (2012-06-29 05:47:08)

Hi Seth, This might represent too low blood sugar, or too much insulin treatment, or it might not. The problem is HbA1c is not a specific marker for blood sugar exposure. A lower HbA1c could indicate higher red blood cell turnover. Or, it could reflect a greater activity of fructosamine 3-kinase, which "detoxifies" the fructosamine residues of HbA1c to a product that, if it is not quickly taken care of itself, will degenerate to form 3-deoxyglucosone. Second only to methylglyoxal, 3-deoxyglucosone is one of the most major sources of advanced glycation endproducts (AGEs) in diabetes. The problem is that the formation of HbA1c probably does not mediate much of the disease process in diabetes, whereas the formation of 3-deoxyglucosone probably mediates a major part of the disease process. I wonder if they discuss this issue in the full text. Unless they looked into it specifically, it could just mean that HbA1c is not a very useful marker of the pathological process of diabetes. Chris Seth: Those are good points, thanks.

Tuck (2012-06-29 06:36:39)

It's well-established that "tight" control of blood sugar via medication increases mortality. This is the finding of the ACCORD Diabetes trial. However I don't know that you can read that result, or the result in this trial, to infer that a low-carbohydrate diet would also have ill effects. The difference, of course, is that a low-carb diet allows the body to produce the appropriate amount of glucose to fuel the body, and also results in a low insulin level. Hyperinsulinemia has its own dangers, which may be the cause of the increased mortality seen in this study. "ADA: ACCORD Diabetes Trial a Complete Bust" <http://www.medpagetoday.com/MeetingCoverage/ADA/9739>

Ann (2012-06-29 08:16:01)

Funny thing is... I would swear to an increase in my math abilities, as well as all other non-critical brain function, when in ketosis - just the opposite of what you've said. I find myself thinking much more clearly, and, using my judgment in stressful situations as a marker, much more effectively and quickly, when I HAVEN'T eaten carbs. I suppose there may be something to be said of the type of carbs one eats, and the relative fat content of said foods. Something to blunt the "sugar rush" that I always feel when eating simple carbs. And I'm not even diabetic!

James Babcock (2012-06-29 09:34:42)

This result does not generalize to non-diabetics. The most likely relevant difference is the number of hypoglycemia events (both reported and unreported), which is much higher in the intensive-control group but which is caused exclusively by mistakes in use of insulin. Also conspicuously missing from the study: any thiamine or thiamine analogs. Thiamine deficiency is extremely common among diabetics (because of increased excretion), and a major risk factor for heart disease.

Mark (2012-06-29 09:35:38)

I agree with Ann, I also focus better when in ketosis.

vgm (2012-06-29 09:54:29)

Seth: the brain uses a lot of the body's glucose intake for energy. Is this a possible explanation for your improvement after eating something sweet? Furthermore, pudding strikes me as somewhat fatty. Given the buttermind results, perhaps you could test the hypothesis by trying sweet; sweet + fat; and fat. Seth: Yes, that is a plausible explanation. I am unclear about how your proposed experiment tests that explanation.

Jonathan (2012-06-29 11:52:09)

I think you're framing the question wrong. I would bet that the insulin itself is causing more damage than the level of blood sugar. This would be consistent with the study's result, and also consistent with the possibility that people who do not inject insulin have better health when they eat in a way that causes less cumulative pancreatic insulin release. Seth: Yes, that is a fair comment. As a way to decide how much "starch" to eat, this is crummy evidence. It is also better than nothing. Alternative explanations like yours point the way to better evidence - studying non-diabetics, for example.

Robbo (2012-06-30 04:54:11)

"But I have noticed clear improvements in brain function (measured by arithmetic speed or something similar) after eating something sweet, such as pudding." Interesting. The guy who holds all the Swedish memory records eats very low carb during competitions because he says it helps him sustain his concentration.

Jazi zilber (2012-07-01 18:49:09)

Extremely low blood sugar is dangerous. I mean really low (maybe 60 and down or something) Now, having diabetes means sugar fluctuates, especially when using insulin. Thus, having lower A1c means that sometimes sugar went really low. Which is dangerous. I think that without diabetes, H1c is best at about 5 or a tiny bit more. Indicating blood sugar of <100.

WB (2012-07-02 17:06:23)

In my view Anand and Tuck are onto something important that deserves much more discussion; and is typically overlooked in

the context of Type 2 diabetes. It seems to me that using artificial methods of adding (synthetic) insulin to the body to control blood glucose in the T2 diabetic is a wrong-headed way to deal with the problem. It seems almost too obvious to have to say that T2 diabetes is a "disease" of too much glucose in the bloodstream. If this is a true statement (and I don't know who could reasonably argue with it), then it follows that a T2 sufferer should take steps to restrict (not completely eliminate) the intake of foods (sugars and other carbs) that turn into too much sugar in the blood, thereby burdening (i.e., overworking) the pancreas day in and day out; ultimately to the point of exhaustion. It's well known that constantly high level of insulin production (caused by the pancreas having to overwork itself to knock down the constant flow of excess glucose from ingested sugars and other excess carbs - together with whatever synthetic insulin is added artificially in the case of the T2 diabetic) causes and/or adds to inflammation in the body (particularly of the pancreas and other major organs). This alone could, and likely does, explain the higher mortality rate.

Robbo (2012-07-04 01:38:44)

@WB "T2 sufferer should take steps to restrict (not completely eliminate) the intake of foods (sugars and other carbs) that turn into too much sugar in the blood" I'm curious why you specifically say 'not completely eliminate' rather than 'or completely eliminate'.

Adam (2012-07-04 04:13:48)

Seth, you said: "I have noticed clear improvements in brain function (measured by arithmetic speed or something similar) after eating something sweet, such as pudding." They have also measured increases in willpower following consumption of sweet things. What occurred to me is that this might be more like a tradeoff than a net benefit. What I mean by that is that yes, you might gain a brief moment of improvement in brain function or willpower, but what happens after it? There is a medical term called "reactive hypoglycemia" or "postprandial hypoglycemia" that describes low-blood sugar in non-diabetics after consumption of high amounts of carbohydrates. If temporarily elevated blood glucose increases brain function, I wonder what happens when blood sugar is depressed... People who do not eat carbs don't have problems with low blood sugar as far as I know and they certainly aren't going to have reactive hypoglycemia. Average fasting glucose level for patients on a low-carb diet in one trial I looked at recently was 92.6 mg/dL. Seth: I get the improvement after eating what most people would consider small amounts of sweet things (e.g., a small package of pudding). There is no reactive hypoglycemia afterwards.

WB (2012-07-04 16:06:34)

@Robbo: Hi Robbo, you ask a valid question. I've been restricting carbs for the last 5- plus years and have greatly benefited from it. I will never go back to the so-called standard "balanced" USDA approved diet. When I first decided to commence carb restriction I was probably on the edge of becoming a T2, but fortunately succeeded in avoiding or circumventing it by being very strict for a long time. And even now, most of the time my carb intake is still very low (probably no more than 10-15 grams of carb per day). But nowadays I do allow myself to indulge in carbs to some extent; e.g., dark chocolate or some cheesecake or, strawberries with cream. I completely understand the "no carb" frame of mind because I've been there, and in fact most of the time I'm still doing essentially that. It's just that now I feel I can loosen up from time to time. I firmly believe, from my experience, that T2 can be cured with carb restriction (while avoiding all meds), and for many individuals something close to complete elimination, especially in the early days of recovery, is definitely a good thing. Regards, WB

Adam (2012-07-04 22:16:05)

Seth, you said: "I get the improvement after eating what most people would consider small amounts of sweet things (e.g., a small package of pudding). There is no reactive hypoglycemia afterwards. From JELL-O's website a 100g package of pudding has 92g of carbohydrate and 72g of sugar. The medical standard for an oral glucose tolerance test is 75g and oral glucose tolerance tests are no longer used to diagnose reactive hypoglycemia because they were found to CAUSE it. I'm not saying that you're wrong and you do get reactive hypoglycemia, rather I'm trying to say that it is highly plausible that a sugary snack could cause it in people in general. Even if it doesn't cause clinical reactive hypoglycemia, it could still cause lowering of the blood sugar after it has peaked, which would presumably have the opposite effects of increased blood sugar on cognition and willpower. Seth: I ate much less than 100 g of pudding. Maybe 30 g.

## Assorted Links (2012-06-30 05:00)

- [1]Are the Boston Red Sox malnourished? Paul Jaminet looks at the connection between poor health of the Boston Red Sox and the dietary advice they were given.
- [2]Cognitive benefits of chewing gum. "Chewing gum was associated with greater alertness and a more positive mood. Reaction times were quicker in the gum condition, and this effect became bigger as the task became more difficult."
- [3]Dave Asprey and Quantified Self. "He claims to have jacked up his IQ by 40 points."
- "Why is this country called China in English?" I asked a Tsinghua student. "It was a source of china," she said. She was more right than she could have known. The world's oldest pottery [4]has been found in China. (Via [5]Melissa McEwen.) Given this head start, it's no surprise that for a long time China had a monopoly on really hard pottery, called bone china or [6]porcelain. It was the only source of this china.

1. <http://perfectthealthdiet.com/2010/10/are-the-boston-red-sox-malnourished/>
2. <http://www.ingentaconnect.com/content/maney/nns/2010/00000013/00000001/art00002>
3. <http://www.sfgate.com/health/article/Biohackers-mining-their-own-bodies-data-3668230.php#photo-3122018>
4. <http://www.bbc.co.uk/news/science-environment-18602281>
5. <http://huntgatherlove.com/>
6. <http://en.wikipedia.org/wiki/Porcelain>

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Jim Purdy (2012-06-30 05:26:24)

Seth, the chewing gum study will have huge ramifications, including: – Presidential debates with all the candidates chewing gum. No more "oops" moments. – Chess competitions with grandmasters chewing gum. – The collapse of the SAT/ACT test prep industry. Why would anybody spend money and time studying, if they could just chew gum instead? – The collapse of business for psychiatrists and antidepressants. Why pay for that when you can just chew gum? – Parents will start their infants on chewing gum at a very early age. – A whole new industry of "smart gum" products – A new government revenue source, taxing gum as a luxury item. – But, alas, all this will be short-live, because government regulators and organizations will ban gum chewing as performance-enhancing "doping." (All above was said with tongue, I mean gum,in cheek.)

Jim Purdy (2012-06-30 16:45:42)

Is that Jaminet story about one baseball team's bone injuries just a case of cherry-picking their data? By contrast, I did a Google search for diets of the highly successful marathon runners from Kenya and Ethiopia, and it looks like their diets tend to be low-fat, with lots of items from corn and cereal grains. And I would suggest that running marathons requires stronger bones than standing around in a ball park. Of course, there could be confounding factors. but we all know that US baseball players have never used performance-enhancing substances that might have harmful health effects. No, uh-huh. Seth: Implicit in Jaminet's post is the idea that (a) the Boston Red Sox could easily be given better food (according to what Jaminet believes) and (b) you could measure the effect of the change in diet – for example, team batting average, number of broken bones.

D (2012-06-30 17:23:18)

"...jacked up his IQ by 40 points." That's enough make me set my default to "ignore" whenever this man makes claims.

Jim Purdy (2012-06-30 19:03:17)

D, do you really mean that you're not going to order Dave Asprey's \$69 whey protein powder and his other products that he spent \$ 250,000 to develop? <http://www.bulletproofexec.com/products/> I guess I'll just have to settle for cheaper things like

the gallon of Organic Valley Whole Milk that I bought today at Whole Foods Market. But then I don't claim to be as smart as Dave.

Adam (2012-07-01 17:35:27)

Re: chewing gum My understanding is that the effects are short-lived, maybe lasting only about 15 minutes or so. With that said, I think it makes a lot of sense to bring a stick of gum with you into a test, even if it is a temporary boost. Re: Dave Asprey I'm also incredibly skeptical of this guy.

Introsphere roundup: June 13 – June 30 | The Second Estate (2012-07-02 01:05:27)

[...] Assorted Links [...]

Stone Glasgow (2012-07-02 14:23:52)

Chicken is high in vitamin K2.

Stone Glasgow (2012-07-02 14:28:41)

Soybeans are high in magnesium.

## 7.7 July

### DIY Medicine: Sinus Infections Caused by Wheat Gluten (2012-07-02 05:00)

Five years ago programmer and author [1]David Kadavy suffered from constant sinus infections. The doctors he had seen about it hadn't helped: "They tended to test me for environmental allergies, stick a camera up my nose, and ultimately prescribe some bullshit allergy medication that didn't work." What did work:

One day I was reading an old book on holistic medicine. Of course, the first thing I wanted to know was how could I prevent being constantly congested. The book said that foods such as wheat, meat, and dairy often contributed to excess mucous production – and thus, sinusitis. I was miserable, and clearly willing to try [2]anything, so I cut out all three of those things the very next day.

Within two days, the difference was incredible. My head had cleared up, I had boundless energy, and other problems – such as a patch of eczema that I had on my eyelid for years – all cleared up. . . . Through a bit of experimentation I was able to place the blame for my sinus woes (and that eczema thing) on wheat. . . . Not only did the experience have me looking at food differently, it also had me looking at medicine differently. How could I see so many GPs, allergy specialists, ENT [ear nose and throat] specialists, and dermatologists without a single one of them saying "you know, you should look at your diet?"

Yes, how could that be? And, to paraphrase [3]Alex Tabarrok, what else are they missing?

Thanks to [4]Melissa McEwen.

1. <http://www.kadavy.net/blog/posts/wheat-gluten-sinus/>

2. [http://www.kadavy.net/blog/archive/2005/06/sinusrinse\\_nasa.php](http://www.kadavy.net/blog/archive/2005/06/sinusrinse_nasa.php)

3. <http://marginalrevolution.com/marginalrevolution/2012/06/a-visual-illusion.html>

4. <http://huntgatherlove.com/>

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Joe levy (2012-07-02 05:11:50)

What else is missing? How about a control group? Seth: You think it's plausible that his health improvement might not be due to the dietary change? Why?

dearieme (2012-07-02 05:43:45)

My sinus problems ameliorated when I gave up citrus fruit, and improved again when our cats died. So pelt your cats with oranges, chaps!

Joe (2012-07-02 10:44:07)

I wonder how he's doing today. Any idea?

David Kadavy (2012-07-02 11:41:28)

I'm doing well, Joe. I still avoid gluten, and don't get sinus infections (or colds, really, for that matter) anymore. I do even better if I avoid lectins as well (Paleo diet), but I'm not as strict with that.

Evolutionarily (2012-07-02 21:05:36)

A similar but milder incidence happened to me upon removing Wheat from my diet when first trying "Paleo". I used to wake up every morning with a mildly runny nose that would always need a good blowout in my morning shower. It was about a week into the diet experiment when I noticed that for the first time for as long as I could remember I was no longer doing this and my nose was noticeably clearer.

Fatcat (2012-07-03 06:42:08)

I have noticed the same thing since going gluten free 2 years ago for my fibromyalgia/chronic fatigue. In addition to the fibro and the fatigue, I got rid of my sinus problems and my daily headache and my skin cleared up. I'm not even tempted to eat wheat now.

Robert McMaster (2012-07-03 10:24:07)

Joe Levy needs to be introduced to the 'scientific method'. When wheat containing substances are removed from the diet chronic sinus infections abate. When wheat is re-introduced, the symptoms re-emerge. Repeat this experiment. Do it again. Once more. If the evidence squares up, decide under which regime you wish to live and act accordingly. Are not the controls clear enough? There's 'evidence based medicine' and 'outcomes based medicine'. Can Waldo spot the racket? Seth: Yeah. Science is about learning from evidence, yet many people who learn terms like "control group", "placebo", "double-blind", and "randomized" use them to avoid learning from evidence. They use them to belittle evidence. There should be a name for this paradox. Evidence-based medicine may be better than what it replaced but it has a strong strain of this belittlement, as you say.

Robert McMaster (2012-07-03 14:42:33)

ahh... 'evidence based medicine'. What kind of '[\*.\*] based medicine' were they practising so long before that? Have the charlatans of that time - what, 15 years ago - been turned out, dismissed, fined, jailed? By what (objective) measures are health outcomes better or different under this new regime than the one nameless one it has replaced? Headline of today: GSK fined \$3b for casually lying about everything while the evidence based physicians lined their pockets and smacked their lips. plus ca change, plus c'est la meme chose

Sam (2012-07-31 16:35:20)

I used to have extremely bad congestion in my sinus cavities. I heard from Jerry Pournelle, who I respect, that a machine called the SinuPulse cleared up his sinuses. I bought one and had good results. Even better results happened after using it for a year. It

seems that I now no longer get sinus build up as easily as I used to. I go months without using it and have no problems. I wonder if sinus problems come from some bacteria or other creature that builds up and washing it away cures the irritation of the sinuses?

### **Where to Buy Miso in Tokyo (2012-07-03 05:00)**

In Tokyo I went to a shop that specialized in miso. It sold about thirty varieties, several of which I liked very much. There is a choice of packaging: hard or soft. The hard packages could be used for gifts. The phone number of the shop is 03(3841)7116, which you can use to google it. It is in the Hanakawado district, between Kototoi Dori and Edo Dori, near the Senso-ji Temple and the Amuse Museum. It is open 9 am to 6 pm. Maybe closed Sunday.

Address: 2 - 8 2-chome, Taito-ku, Tokyo Hanakawado ☞ 111-0033, which 0.23 km from the Asakusa Station.

Incidentally, nowadays I tend to eat miso with a poached egg. Boil 0.8 cup water, add egg, cook until poached, add the miso which has been mixed with 0.1 cup water.

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JC (2012-07-03 06:19:17)

Interesting. How much miso? Seth: Start with 1.5 tablespoons. Strangely enough this is the part of the recipe I am least sure of.

Nancy Lebovitz (2012-07-03 10:29:27)

What types of miso do you prefer? Seth: Dark rich. Older. More pungent. In Tokyo you can smell the miso before buying it and some miso smells more complex.

garymar (2012-07-03 15:06:09)

Definitely closed Sundays. I've been back there several times, still picking up the Hatcho Miso which is pure non-GMO soybean fermented for a minimum of 3 years.

mk (2012-07-04 12:44:57)

what about radiation? Fukushima Daichi nuclear melt-down of four reactors is contaminating everything.

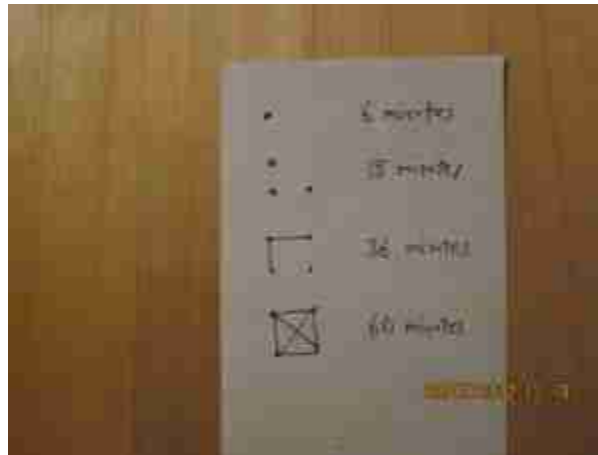
JC (2012-07-09 04:42:41)

Wow, 1.5 tablespoons mixed with 0.9 cup of water makes for a very miso-y concoction. Will give it a go though, thanks

### **Magic Dots: Quasi-Reinforcement Helps Get Things Done (2012-07-04 05:00)**

[1]





This photo illustrates a method I have used for many years to get work done, usually writing. Every six minutes of work, I make a dot or line. One hour = 10 marks = a box (counting method from Exploratory Data Analysis). I use a stopwatch. I make a mark when I am more than halfway to the goal. If I glance at the clock and it says 4 minutes (more than halfway to 6 minutes), I make a mark. If I glance at the clock and it says 10 minutes (more than halfway to 12 minutes from 6 minutes), I make a mark. I only zero the clock when I take a break. I use one piece of paper per day.

I devised this. It is based on an effect discovered by [2]Allen Neuringer and Shin-Ho Chung called quasi-reinforcement. Neuringer and Chung studied pigeons. They found that if you give a pigeon food every 500 times it pecks a key, it will peck the key slowly (say, 2 pecks/minute). If you give the pigeon a brief flash of light every 20 pecks – a marker that shows it is doing the right thing to get food – it will peck much faster (say, 4 pecks/minute). The flashes of light are quasi-reinforcement, said Neuringer and Chung – they have some but not all of the properties of ordinary reinforcement, such as food. By themselves, the flashes of light don't interest the pigeon. It won't peck a key to get them. The amazing thing about this effect is that it doubles how hard the pigeon works without raising its salary.

I noticed improvement – it was easier to write – within about 20 minutes the first time I tried this. I chose six minutes as the unit because shorter times were more distracting and longer times less effective.

I told [3]Gary Wolf about the dots method two years ago and he's been using it ever since. He says it is good for getting started on something he needs to write. After he gets going, he stops doing it. He uses it as an example of the value of self-tracking. I too find that after I get going on something, I need it less. If I stop, however, I drift backwards toward doing less productive stuff or nothing.

Gary asked me about this a month ago and I started doing it again (instead of [4]percentile feedback). I noticed something I had never noticed before, which was that the system lifted my whole energy level and gave me a "can't wait to get started" feeling in the morning. This too made it easier to get stuff done. It reminded me of some rat research I'd done. Put a rat in a Skinner box and it will explore for a while. If it doesn't get any food, after a while (10 minutes?) it will stop exploring and curl up in the middle of the box. However, if I give the rat a pellet of food at random times (at the rate of one pellet/minute), it will keep exploring the box indefinitely. Learning psychologists have emphasized that when you reward an action, you make it more likely. The rat experiment I just described suggests a second effect: when you give reward – at least, when reward is rare – you make all actions more likely. You increase exploration, not just the rewarded response. When I was a young professor I went to a two-week neuroscience program at Dartmouth. It was all lectures. The other attendees were graduate students. I had little in common with them. There was little to do in the town, besides eat Ben & Jerry's. The next town was 8 miles away. I couldn't find anything I enjoyed doing. After a week, I had trouble getting out of bed, like the rat curled up in the middle of the Skinner box. A psychiatrist might have said I had major depression. I flew home and was fine.

1. [http://blog.sethroberts.net/wp-content/uploads/2012/06/IMG\\_02451.jpg](http://blog.sethroberts.net/wp-content/uploads/2012/06/IMG_02451.jpg)
2. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1338316/>
3. <http://aether.com/>
4. <http://blog.sethroberts.net/category/percentile-feedback/>

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MikeW (2012-07-04 07:31:41)

A couple years ago I came up with a similar timer-based strategy to handle household chores. I wrote a simple Windows app that, every 9 minutes, grabs a random item from my long to-do list, displays it, and beeps loudly (in case I'm not in the same room as the computer). I settled on 9 minutes because that was usually enough time to do the kind of task on my list (start a load of laundry, wash dishes, pay bills, order vitamins, brainstorm ways to improve my diet, etc.). I find it to be a very effective motivator - it makes even the most tedious tasks almost enjoyable when I know in 9 minutes I can drop it. The randomness is important, too. If I did things in the order I'd prefer to do them, the cat's litter box would never get changed. I noticed the higher energy effect, too. But I always thought it was physiological, not psychological. Most of my tasks involve getting up and physically doing something, so I assumed the energy came from deeper breathing and getting some light exercise.

dearieme (2012-07-04 08:13:20)

I don't see how these methods let you benefit from procrastination. (I was due to move office. I delayed (ill health). Finally I've been told they've found another solution and I needn't move at all. Result!) Don't do today what can be put off beyond tomorrow.

by (2012-07-04 12:50:00)

I guess both systems are good. (the box, and percentile feedback) Your mind just became inured to the percentile feedback system and so it is not having the same exciting effect on your productivity. Maybe in a few months you will switch back to percentile feedback. Do you think? I notice the same thing with hobbies. No matter how much I love something, after I've done a lot of it it gets stale. This is too bad. I could create a menu of hobbies for myself and rotate among them to keep my excitement high every day, but it's difficult to make progress at something when one must drop it and pick it back up frequently. Not to mention finding enough things that I actually really enjoy. Seth: Percentile reinforcement becomes hard for me when for whatever reason productivity goes down. It is hard to look at low scores all day.

by (2012-07-04 16:32:30)

Dr. Roberts, How many days after starting up the dots method again, was it before you first had the can't wait to get started feeling? Seth: about 2.

by (2012-07-04 16:39:53)

MikeW, so you've been using the 9 minute random timer for a couple of years now, and it's still as useful as when you started?

MikeW (2012-07-04 18:16:43)

by: yes, I'd say the random task timer is just as useful as ever, but I've never used it on a regular schedule. It goes in spurts. Lately I've had it running daily because I felt I wasn't making enough headway on my to-do list.

by (2012-07-04 22:41:00)  
Thanks!

Andrea (2012-07-05 06:37:08)  
MikeW, is the app available? On iTunes, by any chance?

MikeW (2012-07-05 07:20:53)

Andrea: I've seen a similar app available for Android and iPhone, called Job Jar. It has the random selection I want, but not the cracking-the-whip-every-9-minutes functionality. I suppose you could download that, then use a stopwatch app (or a real stopwatch) in conjunction with it. I'm a programmer, so I often cook up apps for my own use with no desire to distribute them commercially. I've thought about rewriting this Windows app to work on my Android phone, but haven't put that on my to-do list yet, ha-ha. It would take more than 9 minutes!

Darrin Thompson (2012-07-05 12:40:12)

Been trying this today on a bunch of un-fun work I have to do. This is a life changer. Thanks for posting it. Seth: You're welcome. What happened?

Aaron Blaisdell (2012-07-05 15:01:09)

Seth, I've been using this type of secondary reinforcement for some of my pigeon and rat studies, too. It's very useful when the subject must complete a set of responses before receiving its primary reinforcement. I'd say the reason why the rats were exploring the box throughout the session when you gave them random food deliveries is that you kept activating the general search mode (exploration) of the food reward system. This idea ties into the behavioral systems theory work of Staddon & Simlehaug, Shettleworth, and Timberlake. I doubt that ANY activity would increase (in fact, you state that sleeping curled up in a ball decreased), but certainly feeding-related activities (which includes exploring for more food) would increase. Self grooming might be another activity that would decrease (cf. Sara Shettleworth's studies of hamsters in the 1970s).

by (2012-07-05 16:00:36)

I gave the dots a first try. They didn't motivate me enough that I could keep at the task for a full hour. There was confounding from the effects of coffee, though. I kept track of my motivation while using the dots, and it went down the whole time, but that was because caffeine was wearing off. I guess my point is the effect isn't stronger than caffeine, but I'll give it another go later. Seth: My first question is: do they motivate you at all? Meaning: do they make work easier?

by (2012-07-05 22:12:31)

This first experiment didn't give me any reason to think so. All I noticed was that I was looking at the clock to see if it were time to make another dot. I will try the system again tomorrow. The percentile feedback system I downloaded here though has increased my productivity about 20 % since I started using it three weeks ago. Seth: Glad to hear it about the percentile feedback. About the dots: Their obvious value is to get started and gain momentum on difficult stuff. I don't think you will notice any effect on stuff that isn't hard to do.

by (2012-07-06 09:34:09)

Ah, well won't be a problem finding a source of test opportunities for that!

by (2012-07-06 17:09:20)

I tried again, and this time my enthusiasm for the work increased over the hour while doing the dots. I think it was just due to getting into the task, but the dots did give me an extra push to keep going. The stream of ratings of my enthusiasm was (18 % before starting), 22 %, 14 %, 22 %, 19 %, 20 %, 26 %, 22 %, 33 %, 30 %, 26 %. Thanks for discussing this and the other productivity techniques. They're fun to try. Seth: That's a good idea, measuring enthusiasm on a numerical scale. I think I would use a 0-100 scale with 50 = neutral, >50 = want to do the task, < 50 = don't want to do the task. Maybe 60 = barely want to, 70 = somewhat want to, 75 = want to, 80 = quite want to, 90 = very much want to.

Vanner (2012-07-08 08:34:54)

Video game designers have been using this strategy for years now. I first noticed this playing the online multiplayer game "Call of Duty". Even if you ended up with the worst score at the end of the game, you always received an accolade of some kind. This positive feedback always had me playing the game well past a reasonable bed-time.

by (2012-07-08 12:41:45)

(re: Dr. Roberts' numerical rating system) I'm very glad to hear how you interpret percentages and their corresponding feelings. To me, this is the hardest part of self-experimentation, coming up with a rigorous, reproducible scale. The percentages I used were "what popped into my head from my gut" when asking myself, so, how enthusiastic do I feel right now? I am chronically sleep deprived, so I think that's why my numbers were so low. I see your system provides guideposts for keeping the ratings consistent.

### **Morning Faces Therapy: More Good Results (2012-07-06 07:37)**

Navanit Arakeri, who is 31 and lives in Bangalore, sent me [1]the following email about the effect of looking at faces in the morning:

Thank you, it's the most extraordinary thing. It's taken my average daily mood from 6/10 to about 8/10 [on a 1-10 scale where 1 = very, very bad mood, 5 = neutral, and 10 = amazingly good mood. 6/10 = just better than neutral and 8/10 = very good. Note: if 5 = neutral, then a 1-9 or 0-10 scale will work better than a 1-10 scale] It has made me officially "happy". And much more emotionally resilient to irritants and bad news.

I do it on waking at around 8:00 AM every day. I play "morning news" videos on mute on my iPad with no zoom (so it's much smaller than life-sized). [2]Example video

I do it for only 20-40 minutes, usually around 25 minutes. I've been doing it for about 45 days now.

I'm seeing a few interesting differences compared to your experience:

1. I don't get the evening irritability at all. In fact, sometimes I get a Big Mood Improvement (see #2) in the evening (around 8:00 PM). The evening effect doesn't happen every day, while the morning improvement is much more consistent.
2. Sometimes the mood improvement is so strong that I have an involuntary smile on my face. I can sit and stare into space feeling very happy. . . .

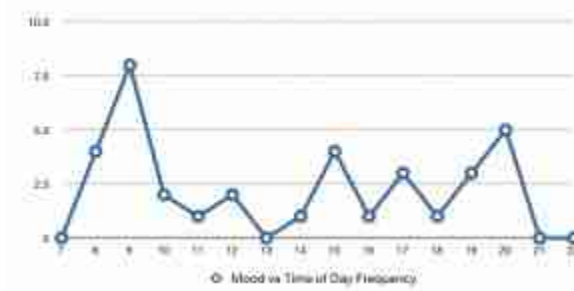
Sleep quality has been good throughout.

What led him to try it? "I wanted a simple self-experiment to test [3]my lifelogging iPhone app and this fit nicely. I had read [4]your original self-experimentation paper several years back, but never got around to trying it," he said.

How long before he could tell it was working? "It was very clear by the 3rd morning," he said.

He recorded the "involuntary smile" states, which lasted 30-60 minutes, on his iPhone. This graph shows how often they happened versus time of day over a 33-day period:

[5]



A value of 8, for example, means that there was roughly a one-quarter chance that during that time period he would be in the "involuntary smile" state. Before this the likelihood of involuntary smiles was zero.

1. <http://blog.sethroberts.net/morning-faces-therapy-resources/>
2. [http://www.metacafe.com/watch/388672/melissa\\_theuriau/](http://www.metacafe.com/watch/388672/melissa_theuriau/)
3. <http://itunes.apple.com/us/app/zen-log-life-logging-for-self/id527824945?mt=8>
4. <http://escholarship.org/uc/item/2xc2h866>
5. <http://blog.sethroberts.net/wp-content/uploads/2012/07/moodVStimeofday.jpg>

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by (2012-07-06 09:28:37)

Involuntary smiles is a nice idea of rating mood. Random querying is automatically part of the system. This post inspires me to look into trying morning faces again; the difficulty of finding the faces sources and the time investment put me off it. So many ideas to try.

Jim Purdy (2012-07-06 10:49:26)

Seth, when I read your blog, sometimes I think that I'm reading some amazing Nobel Prize-worthy science. But other times, I think I'm reading a hilarious spoof from The Onion. The problem is, I never know which is which. Seth: Navanit Akakeri is a real person.

dearieme (2012-07-06 14:21:24)

I don't know what the fuss is about: doesn't one automatically contemplate the ancestral portraits on the walls of one's breakfast room?

Pablo Stafforini (2012-07-07 02:31:44)

If I understand your correspondent's message correctly, he watches muted news videos for 20-40 minutes each day. Lacking any sound, such videos would be unbearably boring for nearly every person—however attractive the news reporter might be. Am I missing anything here? Seth: It's a good question how Navanit keeps from being bored. I've asked him. I listen to podcasts, lectures, audiobooks, etc., while looking at the faces.

BlueMorrissey (2012-07-07 09:32:53)

As i've stated before, I watch Squawk on the Street on MSNBC in the morning for 30-60 minutes for my morning faces. I don't know how people look at only faces or their own face. I need a little entertainment. I also watch Red Eye which I dvr the night before on Fox News. It has faces and some witty comedy which puts me in an even better mood.

Jim Purdy (2012-07-07 12:00:42)

The recent comments above by Pablo Stafforin, Seth, and BlueMorrissey are fascinating to me, because I feel just the opposite. I gave away all my TVs and radios back in 2005, and I thoroughly enjoy the peace and quiet – no faces, no noise, and my apartment is almost soundproof, so I seldom hear the neighbors. And I get really annoyed when I go to a website and it immediately starts automatically making some noise. Without radio, TV, or newspaper subscriptions, I get all my news from the internet, especially New York Times, CNN, MSNBC, Google News, and Yahoo News. For fiction, I watch all those shameless lying fake journalists on Rupert Murdoch's Fox "News."

Pablo Stafforini (2012-07-07 13:34:12)

Jim, my living conditions are very similar to yours—I also lack TVs and radios, and proudly so. (I don't get my "news" from anywhere, since I follow a [1]low information diet.) My point was simply that it would be very boring to do nothing but watch silent videos of faces for 20-40 minutes. I hope Seth's correspondent can elaborate on his strategies to avoid boredom.

1. <http://changethis.com/manifesto/show/34.04.LowInfo>

dearieme (2012-07-07 16:50:35)

To avoid boredom, wouldn't the obvious strategy be to watch Buster Keaton movies?

Navanit Arakeri (2012-07-08 00:03:27)

I do fidget a lot and glance at the clock every 5-6 minutes while looking at the videos. I tend to start day dreaming and need to consciously bring my attention back to the face. Having said that, I don't feel "bored" in the conventional sense while watching them. It never feels like a chore. I look forward to them every morning.

### **Notes on Navanit Arakeri's Morning Faces Experience (2012-07-07 09:57)**

[1]My last post described how [2]Navanit Arakeri found that looking at faces on his iPad in the morning improved his mood. Three things struck me about his experience.

1. Small faces worked ("much smaller than life-sized"). [3]I found that life-size faces produced the biggest effect. I never studied the effect of face size in detail (trying many different sizes). I first experienced the effect after watching Jay Leno do his monologue on a 20-inch TV – much smaller than a life-size face. Obviously we recognize faces when they are much smaller than life-size. For example, we recognize faces in newspaper photos. And we recognize people at a wide range of distances, meaning that the retinal image of a face can vary greatly in size without preventing recognition. Both facts suggest that the size of the face may not matter a lot for this effect.

2. He watched right after he got up. There is surely a window of effectiveness – a time period outside of which the faces do nothing – but when? And how long? I don't know. It surely depends on your exposure to sunlight, which is incredibly hard to measure. Navanit found a simple rule that worked ("watch right after you get up"). When I first experienced the effect I did the same thing that works for him – I watched TV a few minutes after I woke up.

3. He became less irritable ("much more emotionally resilient to irritants and bad news"). I noticed the same thing. A paradox of depression is that people become more irritable. Depression is a disease of passivity – you don't want to do anything – but irritability is over-reaction. I've heard it claimed that depression may be caused by not eating enough fruits and vegetables. Okay, lack of a vital nutrient might cause people to have less energy, but why would it make them more irritable? Not obvious. The fact that the morning-faces effect includes this component is part of why I think it sheds light on what causes depression. Perhaps anything that raises your mood will make you less irritable but I can only say it didn't feel that way – it felt like something special. Like everyone else I have my mood raised by ordinary events (e.g., good news, a joke) and these do not seem to produce a big increase in serenity.

1. <http://blog.sethroberts.net/2012/07/06/morning-faces-therapy-more-good-results/>
2. <http://navanitarakeri.com/>
3. <http://escholarship.org/uc/item/2xc2h866/>

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Jeffie D (2012-07-07 13:29:03)

What's never been clear to me is how many faces are needed to have a favorable effect. Is watching one person performing a monologue for 30 minutes enough, or is a random sampling of faces flashed onto a screen for a few seconds apiece just as or more effective? Seth: One person is enough. Most of my research was done watching Booknotes on C-Span, which involves two persons.

Andrea (2012-07-07 14:17:05)

Does this technique apply mainly to single people? I am wondering if I could improve my mood if I took a good look at my husband's face in the morning instead of rushing around. Seth: You need 15-30 minutes to get a noticeable difference. A few minutes, no.

Navanit Arakeri (2012-07-08 00:06:41)

I now use a single 2:20 minutes video looped to play again and again on the iPad. When I first started I used a variety of different faces. For me there's no difference between the two in terms of impact on mood. I save a lot of searching and tapping with the current method though.

Nancy Lebovitz (2012-07-08 01:20:06)

I'm convinced that irritability is a thing in itself. Serenity might also be a thing. For a while, I'd get irritable whenever I had a hot flash, and that seemed reasonable because I generally don't like being overheated. Then I had some no irritability hot flashes, and I concluded that there were some PMS symptoms involved in some hot flashes, but not all of them. (Note: hot flashes vary tremendously, and not just by intensity.) It wouldn't surprise me if some irritability is a nutritional issue. I'm pretty sure that not all depression has a large component of irritability.

Michael Bishop (2012-07-08 09:04:46)

"There is surely a window of effectiveness — a time period outside of which the faces do nothing — but when? And how long? I don't know. It surely depends on your exposure to sunlight, which is incredibly hard to measure." Why are you sure there is a window. Why are you sure exposure to sunlight interacts with it? Seth: I varied the time I saw the faces. The time made a big difference. Later in the day, such as noon, they had no effect at all. The window must be open and shut by another clock and sunlight is the only plausible driver of such a clock.

vs (2012-07-10 10:24:03)

On a somewhat related note, this is a very interesting article on a therapist dealing with her own mid-life crisis. In a way it illustrates the value of personal science, due to the futility of seeking help from a professional who is likely to be unsuccessfully dealing with their own issues: [http://www.themorningnews.org/article/therapist-know-thyself?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed:+TheMorningNews/features+\(The+Morning+News\)](http://www.themorningnews.org/article/therapist-know-thyself?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed:+TheMorningNews/features+(The+Morning+News)) Seth: yes, very interesting article and very good point about its relation to personal science.

Alex Chernavsky (2012-07-10 20:30:32)

Seth, just wondering if you have any experience with meditation. This method of looking intently at faces reminds me of some meditation techniques (I have not tried them myself).

## Assorted Links (2012-07-09 05:00)

- [1]ALS patients test promising chemical, collate the results themselves.
- Did you know about "side letters"? [2]New ways that Hollywood makes money by Edward Epstein.
- [3]Parents have stronger immune systems than non-parents.
- [4]Does sewer work improve your immune system? "Sewer workers think so. "The [sewer workers] that Mayhew met were strong, robust and even florid in complexion, often surprisingly long-lived-thanks, perhaps, to immune systems that grew used to working flat out-and adamantly convinced that the stench that they encountered in the tunnels [while searching for valuable stuff, such as coins] "contributes in a variety of ways to their general health."
- [5]Steve McIntyre tries to get Science and PNAS to enforce their data archiving policies. Thompson = Lonnie Thompson, an Ohio State climatologist.

Thanks to Adam Clemens, [6]Melissa McEwen, and Navanit Arakeri.

1. <http://the-scientist.com/2012/07/01/medical-mavericks/>
2. <http://thehollywoodeconomist.blogspot.com/2012/07/hollywoods-brilliant-new-money-machines.html>
3. <http://www.webmd.com/parenting/news/20120706/parenthood-may-reduce-risk-catching-cold>
4. <http://blogs.smithsonianmag.com/history/2012/06/quite-likely-the-worst-job-ever/>
5. <http://www.climateaudit.info/correspondence/thompson/thompson.pdf>
6. <http://huntgatherlove.com/>

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dearieme (2012-07-09 14:29:45)

I've been following your blog for some time now and have at last made an observation on myself. I much prefer (= am made happy by) showering in daylight rather than artificial light. Perhaps everyone else knew this already, but I didn't. It will constrain me a bit in winter, but so be it. Seth: How long does the improvement (greater happiness due to showering in daylight) last?

Tom (2012-07-09 17:53:07)

A couple of stories that are up your alley: Doctor's "ignorance" leads him to the truth about what's making a child ill: [childrenshospital.org/dream/dream\\_fall06/fishing\\_for\\_the\\_right\\_solution.html](http://childrenshospital.org/dream/dream_fall06/fishing_for_the_right_solution.html) Germs from pets = healthier babies: [latimes.com/news/science/la-sci-dogs-cats-babies-health-20120709,0,6527217.st](http://latimes.com/news/science/la-sci-dogs-cats-babies-health-20120709,0,6527217.st) ory

dearieme (2012-07-10 02:02:44)

Seth, it seems to last for much of the rest of the day. Many hours, anyway. I'm wondering whether anyone makes one of those artificial sunlight lamps that would be suitable for our bathroom.

Misericorde (2012-07-10 08:23:41)

May we please have the correct link for the item on sewer work and immunity. Seth: Link fixed, thanks.

Sean Estey (2012-07-10 22:25:44)

I'm not seeing the cause and effect between having kids->better immune system. Couldn't a simpler explanation be that healthy people are more likely to have children than non-healthy people? They may have been healthier than the non-parents



even before their children were born. Unhealthy people are probably more likely to have lower fecundity.

Tom (2012-07-11 00:28:30)

The simplest explanation is that children, like dogs, track in a lot of germs.

Tom (2012-07-11 00:30:25)

(and, in case my implication wasn't clear, the immune system then develops a broader portfolio of antibodies.)

### **Prize Fight: The Race and Rivalry to be First in Science by Morton Meyers (2012-07-10 05:00)**

Prize Fight: The Race and Rivalry to be First in Science (2012) by Morton Meyers (copy sent me by publisher) is about battles/disagreements over credit, often within a lab. Jocelyn Bell noticed the first quasar – how much credit does she deserve relative to her advisor, Anthony Hewish, who built the structure within which she worked? (Not much, said Bell. "I believe it would demean Nobel Prizes if they were given to research students.") The structure and subtitle of the book make little sense – there is a chapter about how science resembles art and a chapter about data fabrication, for instance, and nothing about races or being first. The core of the book is two stories about credit: for the discovery of streptomycin, the first drug effective against tuberculosis, and for the invention of MRI (magnetic resonance imaging). Meyers is a radiology professor and a colleague of one of the inventors of MRI.

I liked both stories. I find it hard to learn anything unless there is emotion involved. Both stories are emotional – people got angry – which made it easy to learn the science. Streptomycin was found by screening dirt. It was already known that dirt kills microbes. The graduate student who made the discovery was indeed a cog in a machine but later he was mistreated and got angry and sued. The first MRI-like machine was built by a doctor named Raymond Damadian, who was not one of the recipients of the Nobel Prize given out for its invention. He had good cause to be furious. The otherwise good science writer Horace Freeland Judson wrote an op-ed piece about it ([1]"No Nobel Prize for Whining") that ended "His behavior stands in stark and elegant contrast to the noisy complaining of Raymond Damadian". To name-call ("whining", "noisy") in a New York Times op-ed is to suggest your case is weak.

I have had a related experience. When I was a graduate student, at Brown University, I did experiments about cross-modal use of an internal clock. Do rats use the same clock to measure the duration of sound and the duration of light? (Yes.) I got the idea from human experiments about cross-modal transfer. By the time [2]my paper ("Cross-Modal Use of an Internal Clock") appeared, I was an assistant professor. A few months after it was published, I went back to Brown to visit my advisor, Russell Church. On the day of my visit, he had just received a new issue of the main journal in our field (Journal of Experimental Psychology: Animal Behavior Processes – where my article appeared). It was in a brown wrapper on his desk. I opened it. The second article was [3]"Abstraction of Temporal Attributes" by Warren Meck and Russell Church. (Meck was a graduate student with Church.) I didn't know about it. It was based on my work. The first experiment was the same (except for trivial details) as the first experiment of my article. The introduction did not mention me. I leafed through it. Buried in the middle it said "This result replicates previous reports from our laboratory (Meck & Church, in press; Roberts, 1982)."

I was angry. Why did you do this? I asked Church. "To make it seem more important," he said. I consoled myself by thinking how bad it looked (on Church's record). I never visited him, and almost never spoke to him, again. Years later I was asked to speak at a conference session honoring him. I declined. What he did amounted to rich (well-established) stealing from poor (not established) and jeopardized my career. When my article appeared, I didn't have tenure. It was far from certain I would get it. I hadn't written many papers. If you read both papers (Meck and Church, and mine), you could easily be confused: Who copied who? This confusion reduced the credit I got for my work and reduced my chance of getting tenure. Church surely knew this. Failure to get tenure could have ended my career.

1. <http://www.nytimes.com/2003/10/20/opinion/no-nobel-prize-for-whining.html>
2. <http://www.ncbi.nlm.nih.gov/pubmed/7057141>
3. <http://psycnet.apa.org/index.cfm?fa=buy.optionToBuy&id=1983-04976-001>

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Nancy Lebovitz (2012-07-10 05:47:20)

Is anything known about how internal clocks work? I'm not sure if I can still do it, but when I watched tv, I had a very accurate idea of what an hour and a half hour were. Seth: My research implied that the internal clock of rats – the one used to measure minutes and seconds – resembled a stopwatch in several ways.

Darius Bacon (2012-07-10 15:24:17)

[http://en.wikipedia.org/wiki/Jocelyn\\_Bell\\_Burnell](http://en.wikipedia.org/wiki/Jocelyn_Bell_Burnell) #Nobel\_Prize gives quite a different impression about the credit over pulsars. It does list a bunch of other awards she received.

dearieme (2012-07-10 16:01:47)

It wasn't until I read his WKPD entry some time ago that I learnt that the attribution of the transistor to Shockley was somewhat polluted. Much more was made of the point that "Shockley's field effect principle had been anticipated and devices based on it patented in 1930 by Julius Lilienfeld, who filed his MESFET-like patent in Canada on October 22, 1925" than is made in the current WKPD entry.

Bryan (2012-07-11 21:29:57)

Just came across this in my Twitter feed: <http://www.guardian.co.uk/books/2012/jun/29/experiment-eleven-tuberculosis-pe-ter-pringle-review> Seth: Yes, this book is another view of the streptomycin discovery.

dearieme (2012-07-12 06:47:48)

WKPD: "Originally, the discovery of streptomycin was credited only to Schatz's supervisor, Selman Waksman, who would later receive a Nobel Prize in 1952 for this work. Schatz, however, strongly contested the crediting and in 1950 brought litigation against Waksman, requesting recognition as streptomycin's co-discoverer and a portion of streptomycin royalties. Schatz's requests were eventually granted in an out-of-court settlement." So why didn't the Nobel Committee then aware a prize to Schatz? (i) Cowardice? (ii) Vested interest of professors not happy with recognising research students as contenders for the prize? Seth: the Nobel Prize was given for work that "led to the discovery of streptomycin" not for the discovery itself.

## **"I Hate Dreamhost!" Beware, Potential Dreamhost Customers (2012-07-11 05:00)**

I recently got the following email:

I googled "dreamhost sucks" and found your blog. I really hate this company. I have a small business and they somehow managed to create a second account for my company in spite of the fact that we never requested one. Then they emailed us that we owed more money on our account and shut off our access

and emails due to the amount overdue. After months of various DH staffers replying to my emails (we hadn't ever selected phone support so they would only correspond via email) the problems were finally passed to a "supervisor". The supervisor promptly cancelled the duplicate account and reset our live and fully paid account so that we could use it again. This took months of frustration and provision of the same information to the different DH staffers. There is obviously no communications within their staff there. Very frustrating.

Today, they sent an email to me requesting an additional albeit minor sum of \$9.95 for a temporary account that was created when nobody at my company could access our account. They insist we created it and pay for it or they'll suspend our live account. I complained and asked for the same supervisor that resolved DH's past errors, and the staffer, Jay H, promptly cancelled our fully paid, live account, and told me we still had to pay for this temporary account created by a DH staffer when we didn't even have access to our site and emails due to DH's original errors!!

So frustrating. I'm now looking for a new domain and web host company, with excellent customer service and professionalism. DH doesn't take responsibility for their own errors and seems to dream up ways to charge clients extra money for stuff they never requested. Outside of the online world, this would be called extortion.

Feel free to post. I hate Dreamhost!

As do I. I wish I had left the second I discovered they hadn't backed up my site, after saying they had. (They had backed up only a small fraction of it.) After that, my sites kept getting hacked. First, we moved this blog and [www.sethroberts.net](http://www.sethroberts.net) off Dreamhost. They stopped getting hacked. Then the Shangri-La Diet forums got hacked. We moved them off Dreamhost. No more hacking. The cost of even one incident of hacking is far more than you will ever save from their low rates.

[1]Dreamhost hacked – and see the comments.

1. <http://techcrunch.com/2012/01/20/dreamhost-hacked-password-changes-made-mandatory/>

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Alex Chernavsky (2012-07-11 08:04:04)

For what it's worth, I've hosted all my sites on DreamHost for the last five years. I have not had any significant amount of trouble with the company.

Darrin Thompson (2012-07-11 08:36:07)

Use Rackspace Cloud. It's not expensive. My pathetic affiliate link: <http://www.rackspacelcloud.com/550.html> I've used them for a few years now. I've needed their support people on a few occasions and they are always available, super helpful, and know what they are doing. One time I thought some service I was using might down over an account issue. The support person's response? We never do that.

James A Donald (2012-07-11 16:16:12)

I am on the extremely cheap and competent cyberultra, have never had a problem with them. They don't do backups, or indeed anything, other than simply work.

James A Donald (2012-07-11 16:19:52)

Going through my logs, it looks as if someone has been attempting to guess my passwords, making tens of thousands of failed guesses, and Cyberultra made no attempt to filter them out. However, since my passwords are unguessable, this was no problem for me. The usual attack is to socially engineer password recovery services. If anyone has been trying that on cyber

ultra, they have failed. <http://www.000webhost.com/directory/reviews/cyberultra.net>

SB (2012-07-24 04:35:31)

A recommendation for A2Hosting: [http://calnewport.com/blog/2012/04/29/walking-in-merlin-manns-footsteps-and-a-book-you-should-know-about/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed %3A+StudyHacks+%28Study+Hacks %29 &utm\\_content=Google+Reader](http://calnewport.com/blog/2012/04/29/walking-in-merlin-manns-footsteps-and-a-book-you-should-know-about/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+StudyHacks+%28Study+Hacks%29&utm_content=Google+Reader) "When I first started blogging in 2007, I needed web hosting. I noticed that Merlin Mann had a note on 43 Folders about his happiness working with a company named A2 Hosting. That was good enough for me: I signed up for their introductory package. That was five years ago and I've been nothing but happy with their service ever since."

### **American Dietetics Association Tries to Outlaw Competition: More (2012-07-11 17:27)**

Michael Ellsberg has written [1]another fascinating article about how the American Dietetics Association is trying to make it illegal to compete with their members – that is, make it illegal to give nutritional advice without board certification. ([2]His earlier article.) State boards have threatened several bloggers with jail if they continue to provide nutritional advice.

Thanks to [3]Dr. B G.

1. [http://www.forbes.com/sites/michaelellsberg/2012/07/10/american\\_dietetic\\_association\\_2/](http://www.forbes.com/sites/michaelellsberg/2012/07/10/american_dietetic_association_2/)

2. <http://www.forbes.com/sites/michaelellsberg/2012/04/05/american-dietetic-association>

3. <http://drbganimalpharm.blogspot.com/>

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JerseyCynic (2012-07-12 19:16:35)

Interesting. I wonder how the "dietitians" serving up our public school lunches get away with giving nutritional advice... OT – I've started taking my vitamin D in the morning. I'll let you know how the sleep issues play out. Thanks for all you do! Seth: You're welcome. Yes, please let me know the effect of the Vitamin D, no matter what it is.

### **Assorted Links (2012-07-12 05:00)**

- [1]Therapists must appear perfect. If their marriage isn't happy, it undermines their claim that they can make your marriage happy.
- [2]More about butter and cholesterol (n = 1).
- [3]The neuroscience of epiphanies (TED talk).
- [4]Immunonutrition blog.
- [5]Dr. Drew Pinsky paid \$275,000 by GlaxoSmithKline for "services for Wellbutrin".

Thanks to Tucker Max.

1. [http://www.themorningnews.org/article/therapist-know-thyself?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed:+TheMorningNews/features+%28The+Morning+News%29](http://www.themorningnews.org/article/therapist-know-thyself?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed:+TheMorningNews/features+%28The+Morning+News%29)
2. <http://kneelessmegafauna.blogspot.com/2012/07/butter-not-like-statin-after-all.html>
3. <http://talentsearch.ted.com/video/John-Kounios-The-neuroscience-b;TEDNew-York>
4. <http://blog.lucastafur.com/>
5. [http://www.slate.com/articles/health\\_and\\_science/medical\\_examiner/2012/07/dr\\_drew\\_pinsky\\_cashed\\_in\\_on\\_drug\\_company\\_money\\_is\\_your\\_doctor\\_on\\_the\\_take\\_.html?wpisrc=obinsite](http://www.slate.com/articles/health_and_science/medical_examiner/2012/07/dr_drew_pinsky_cashed_in_on_drug_company_money_is_your_doctor_on_the_take_.html?wpisrc=obinsite)

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by (2012-07-12 11:19:25)

The TED talk reminds me of the creativity blogs I see around. I've never been able to get up the motivation to read them. A productivity blog, which is sort of how I classify this one, I see the benefit. I need to clean my house. I need to get my work done. I would like to sleep better and be in a better mood. I love reading Dr. Roberts's and others' ideas on these. But creativity? Will it really help my life out much?

Txomin (2012-07-12 18:00:10)

Indeed. I've met family therapists whose personal life is a complete train wreck and professionally are no more reliable than fortune cookies.

shtove (2012-07-14 06:02:29)

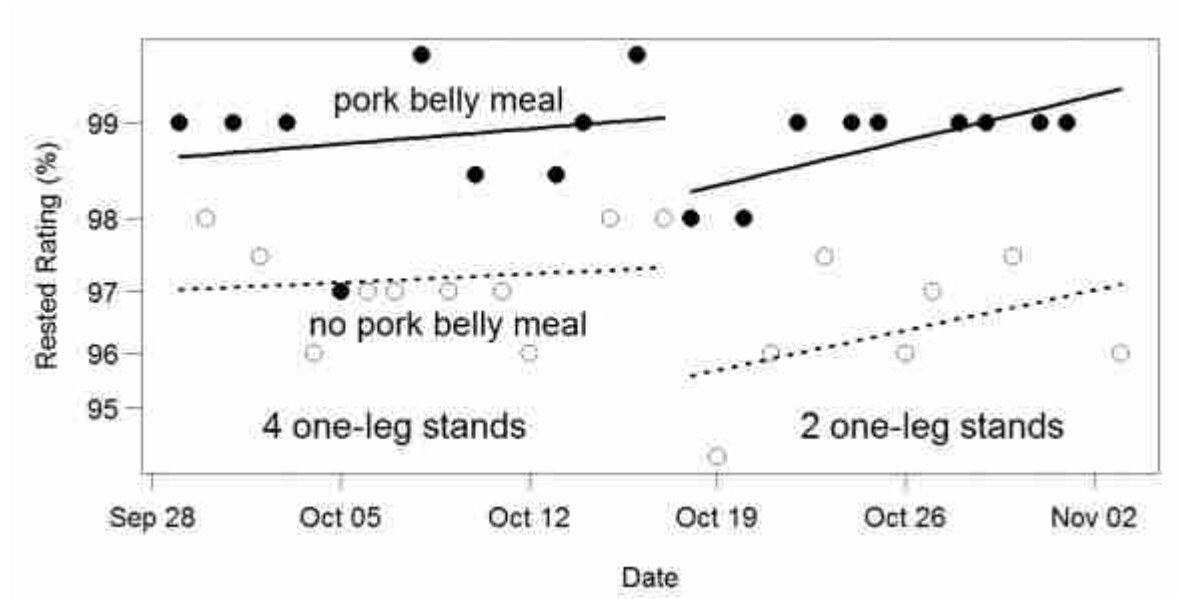
Spotted this from the Atlantic: Lies, Damned Lies, and Medical Science <http://m.theatlantic.com/magazine/archive/2010/11/lies-damned-lies-and-medical-science/8269/>

## More About Pork Fat and Sleep (2012-07-14 13:56)

One day in 2009, I ate a large amount of pork belly (very high in fat – pork belly is the cut used to make bacon). That night I slept an unusually long time. The next day I had more energy than usual. This led me to do an experiment in which I ate a pork belly meal (with lots of pork belly, about 250 g) on some days but not others. I compared my sleep after the two sorts of days. I kept constant the number of one-legged stands I did each day because [1]that has an effect. During the first half of the experiment I kept this constant at 4; during the second half, at 2. I [2]originally posted the results only from the first half.

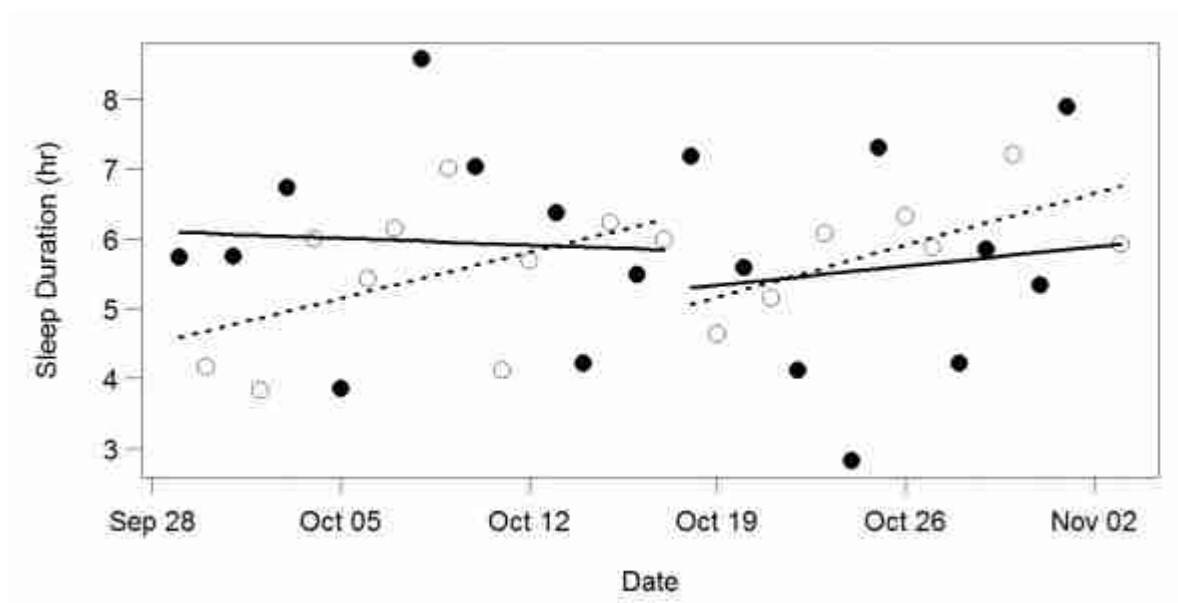
Now I've analyzed the results from both halves. Here are ratings of how rested I felt when I woke up, on a scale where 0 = 0 % = not rested at all and 100 = 100 % = completely rested.

[3]



The two halves were essentially the same: pork belly produced a big improvement. Here are the results for sleep duration.

[4]



No clear effect of pork belly in either half of the experiment.

The main thing I learned was that pork fat really helps. The effect is remarkably clear. With micronutrients, such as Vitamin C, the body has considerable storage. It may take months without the nutrient to become noticeably deficient. With omega-3, which is between a micronutrient and a macronutrient, my experiments found that it takes about two days to start to see deficiency. With pork fat there seems to be no storage at all. I needed to eat lots of pork fat every day to get the best sleep. That repletion and depletion are fast made this experiment easy. How curious we are so often told animal fat is bad when an easy experiment shows it is good, at least for me.

2. <http://blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>
3. <http://blog.sethroberts.net/wp-content/uploads/2012/07/2012-07-15-effect-of-pork-fat-on-rested-ratings.jpg>
4. <http://blog.sethroberts.net/wp-content/uploads/2012/07/2012-07-15-effect-of-pork-fat-on-sleep-duration1.jpg>

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curiousguy (2012-07-14 14:21:24)

Do you feel bad about killing intelligent creatures like pigs?

jeffk8900 (2012-07-14 15:31:02)

I think it is easy for others to scapegoat pork do to religious hang ups. How often does that bias creep in?

Adam (2012-07-14 16:56:51)

@curiousguy He didn't kill the pig, he just ate part of it.

Sky King (2012-07-15 05:24:43)

@ curiousguy: Here's an editorial written in the NY Times that you might find interesting: <http://www.nytimes.com/2011/03/15/science/15food.html?pagewanted=all> Here's another: [http://www.bbspot.com/news/2003/08/plant\\_pain.html](http://www.bbspot.com/news/2003/08/plant_pain.html) So I guess it should be considered to be unethical to eat plants, too! Hopefully, you'll be able to sustain on eating cardboard and styrofoam for the rest of your life. Good luck!

Alrenous (2012-07-15 06:04:25)

Intelligence is not consciousness. You can tell pigs don't have human-style consciousness, because a similar argument about a pig killing me would have no effect on the pig. Even assuming we can speak pigese, the pig would just kill me anyway, regardless of any rational, legal, or moral persuasion.

RAD (2012-07-15 07:20:57)

Seth, your premise about pork fat impacting your sleep is based on your Rested Rating values and those values seem incomprehensible to me. For myself, I think my subjective "Rested Rate" varies much more than your 94 %-100 % range and I can't imagine subjectively distinguishing between 97 % and 98 %, never mind having three values at 97.5 %. Did you really have a night (Oct 24th?) with less than 3 hours sleep that you rated as 99 % Rested? I feel only about 80 % rested this morning so maybe I'm missing something obvious :) Seth: Perhaps my values are higher than yours because I did several things to increase them - e.g., one-legged standing - that you aren't doing. Years ago they were much lower. If you can distinguish between 2 and 3 you can distinguish between 97 % and 98 % - they are equally different from 100 %. And I have had years of practice making these ratings. The values for Oct 24 are correct, I checked. Strange, huh?

Mitra (2012-07-15 07:38:20)

Alrenous Isn't it a disingenuous argument? I mean the pig can still feel pain and wants to avoid it all costs - in that respect the nervous system of the pig and the human operates similarly. Whether the pig can reflect on the pain or the universality of suffering (!) or whether it can compose a poem/essay on the pig condition is besides the point. All beings seek security and wish to avoid pain. Is it right for me to kill a pig? Whether pigs have human style consciousness does not help me answer that question.

peter (2012-07-15 08:30:24)

<http://perfecthealthdiet.com/2012/02/pork-did-leviticus-117-have-it-right/> Pork consumption has a strong epidemiological association with cirrhosis of the liver. Startlingly, pork may be even more strongly associated with alcoholic cirrhosis than alcohol itself! The evidence was summarized by Francis Bridges in a recent (2009) paper [1], building on earlier work by Nanji

and French [2]. A relation between pork consumption and cirrhosis of the liver is apparent across countries and has been consistently maintained for at least 40 years. We would expect that if pork can cause liver cirrhosis it will also promote liver cancer, since injured and inflamed tissues are more likely to become cancerous. Indeed, there is an association between pork consumption and the primary liver cancer, hepatocellular carcinoma. Nanji and French [3] write: The authors investigated the possibility that dietary fat, meat, beef, and pork consumption might be factors that would, in addition to alcohol, correlate with mortality from hepatocellular carcinoma (HCC) in different countries.... The correlation between HCC and alcohol was 0.40 ( $p < 0.05$ ); that with pork consumption was also 0.40 ( $p < 0.05$ ). There was no correlation with total fat meat, beef, and cigarette and tobacco consumption. Seth: That's good to know, I didn't know that. When I started eating lots of butter, I stopped eating lots of pork fat.

Wayne (2012-07-15 10:57:27)

Interesting, Seth. A couple of questions related to your original post, and then a question for peter on the risks of pork. 1. Can you quantify what kinds of pork belly quantities you're talking about here? 2. How are you consuming it? In other words, what kinds of foods are you eating (I'm assuming you're not just tucking into some lard with a spoon, but rather are eating other foods with a lot of pork belly in them). Then, to the animal rights activist, we are designed/evolved to be omnivores. That means we are supposed to be meat eaters. Peter: the article you reference regarding the risk of eating pork. Do you know if there is a distinction made in that work between CAFO pork and pastured, organic pork? Thanks! Seth: The pork belly weighed on the order of 250 g. I ate it in soup with vegetables, such as onion, carrot, and mushrooms, and spices. No potatoes.

curiousguy (2012-07-15 13:10:36)

My problem with eating pigs has nothing to do with religion. @ Adam, "He didn't kill the pig, he just ate part of it." That's like saying I didn't whip the slave, I just bought the cotton. @ Sky King: I wouldn't be surprised if plants are much more intelligent than they seem - that doesn't mean they're as intelligent as mammals, or that killing intelligent animals is ok. @ Alrenous A similar argument wouldn't work on a 3 year old either, and it wouldn't work on millions of mentally handicapped humans out there, but I'm pretty sure they have "human style consciousness", and I doubt you'd be ok with killing children. Pigs generally don't kill people, and even if they did that doesn't mean it's ok to kill them. Psychotic people sometimes kill other humans, but we don't kill them - we just make sure they don't hurt anyone else. Seth: I have no trouble with your avoidance of meat (for example, I can't imagine arguing that it's not "ok" to avoid meat), yet you seem to dislike the fact that I do eat meat. The asymmetry of tolerance is interesting, can you explain it?

curiousguy (2012-07-15 14:45:14)

@Seth, if you replace 'meat' with 'slavery', I think you'll see where I'm coming from. That said, I'm not trying to come down on anyone for eating meat. Rather, I'm sure that someone as open minded as you are has thought about the rightness of killing intelligent animals for food; you don't seem to have a problem with it, so I was curious about how you justify it. Seth: I have watched many nature documentaries - most recently, Frozen Planet. We are surrounded by animals killing animals.

Alex Chernavsky (2012-07-15 14:46:25)

Wayne wrote, "...we are designed/evolved to be omnivores. That means we are supposed to be meat eaters." You're deriving "ought" from "is". Some evolutionary psychologists claim that we evolved to be rapists. That doesn't mean that we are *supposed* to rape. Presumably, we can rise above our evolutionary tendencies. It's perfectly possible to be healthy on a vegan diet. See, for example, the story of Scott Jurek, who is a vegan ultramarathoner: <http://minnesota.publicradio.org/display/web/2012/06/19/books/scott-jurek-veg-an-ultramathon/> @Sky King: Your first link was unconvincing, and the second link was a joke. In any case, even if plants are sentient (which is *highly* unlikely), you'd still be better-off being a vegan, because animal agriculture is inefficient - you have to feed a lot of plant material to an animal in order to produce a small amount of meat.

peter (2012-07-15 15:01:13)

Wayne, if you've read the article, you know as much as i do.



Adam (2012-07-15 16:42:29)

@curiousguy: "That's like saying I didn't whip the slave, I just bought the cotton." What is your point? Buying cotton is not an immoral act, but whipping a slave is. Killing a pig isn't widely considered to be an immoral act, and buying pork most certainly is not.

Alrenous (2012-07-16 07:28:03)

Mitra, Nerves are not consciousness. Wasps avoid pain. There's this one wasp you can trap in a behavioural loop until it starves to death. It blocks its den with a rock, and it checks the immediate environs whenever it opens the 'door.' If you replace the rock, it will check again. Whether pigs have proper consciousness is the whole of the question. And since you argued that they do, not against the idea they cannot act differently than they do, I must conclude you agree that the argument works if the consciousness point is sound. curiousguy, >A similar argument wouldn't work on a 3 year old either, Yes it would. I'm insulted that you'd think I'd believe this nonsense. As such, I will not reply again. >and it wouldn't work on millions of mentally handicapped humans out there I'm thinking of a girl who had a severe head injury after a car accident. I saw her caretaker using these arguments and it worked on her too. You're claiming that someone with handicapped consciousness has full consciousness. No, by definition, they don't. I still argue against killing them, because in the case of humans the thing is never certain. >Pigs generally don't kill people, and even if they did that doesn't mean it's ok to kill them. Irrelevant. The point is that pigs cannot be meaningfully distinguished from squishy machines. Psychotics can easily be distinguished - they only kill when they think they can get away with it. There's a thing called a high-functioning psychotic who act well-adjusted, because they understand it is in their best interest. Rational arguments work on them.

curiousguy (2012-07-16 13:37:47)

@Seth: We're surrounded by both animals and humans doing all sorts of things, that doesn't mean we ought to do the same things. Seth: That's awfully vague ("all sorts of things"). I already knew you disagreed with me so I am not sure what this adds.

Sky King (2012-07-17 04:46:26)

@Alex: Alex, I'd be more than happy to debate you on the merits of meat-eating vs. vegetarianism, but first I was wondering if you could answer for me a few questions. I clicked on your name which brought me to your website. I saw your pics and most had you with a dog or a cat in those pics. It also appears that you work at, or own, a pet store. So it's pretty obvious that you love pets, as do I, but my question is: since your pets are carnivores, what are you feeding them?

Alex Chernavsky (2012-07-17 13:40:45)

Sun King: I work at a large animal shelter. When I was first hired, I worked as a farm hand. After interacting closely face-to-face with the cows, pigs, and chickens, I decided that farm animals are just as worthy of our compassion as are dogs and cats. I then gave up eating all animal products (eggs and dairy are actually worse, in some ways, than meat). I also don't wear fur, leather, or wool. Animals have an inherent interest in living out their lives, just as human beings do. My wife and I share our home with cats. We considered converting our cats to a vegan diet, but there is evidence that cats develop health problems when fed currently available vegan cat foods. The vegan foods are also expensive and reportedly unpalatable to cats. (Dogs do much better on vegan diets, but we don't have any dogs.) Our cats eat conventional commercial cat foods. If someone develops a healthy and palatable vegan cat food, then our cats will likely be switched to that diet.

curiousguy (2012-07-17 18:35:02)

@Seth: Why is it relevant that we are surrounded by animals killing animals? We are also surrounded by animals raping animals, humans killing/raping humans, etc. Seth: Many enormously useful insights - e.g., about the immune system - have come from studying animals. That's why I think animal behavior is relevant.

ds (2012-07-18 02:18:26)

Not everyone can be healthy on a vegan diet. I tried and nearly killed myself. People need to be less myopic. N=1 is great, but does not mean n=every1.

Sky King (2012-07-21 11:33:28)

@Alexia You need to stop being ignorant and start educating yourself concerning the biology and the evolutionary development of humans (and carnivores) so you'll be in a position to better understand nutrition that will enable you, and your pets, to long and healthy life. If you need links to sites and/or books that will help you to understand how vegetarianism is slowly, but surely, killing you and your pets then I'll be more than happy to provide you with some links. Let me know.

Alex Chernavsky (2012-07-22 09:46:57)

@Sky - thanks for your concern, but I'm good. (And please note that there is a [1]substantial difference between vegetarianism and veganism.)

1. <http://www.abolitionistapproach.com/some-comments-on-vegetarianism-as-a-gateway-to-veganism/>

### Assorted Links (2012-07-16 05:00)

- [1]grading and identifying cocoa beans
- [2]benefits of Vitamin K2 (short)
- In 1971, Babette Rosmond, a journalist, [3]failed to take her doctor's advice. "When the tumor turned out to be cancerous, [the surgeon] told her she needed an urgent radical mastectomy. Ms. Rosmond demurred, asking for three weeks to consider her options. The surgeon, who had never before encountered such resistance, called her a "very silly and stubborn woman." Then he played his trump card. "In three weeks," he said, "you may be dead." "
- [4]blood passports

Thanks to John Shonder and Alex Blackwood.

1. <http://online.wsj.com/article/SB10001424052702303292204577516833843957916.html>

2. <http://www.metafilter.com/117835/Vitamin-K2>

3. <http://well.blogs.nytimes.com/2012/06/13/the-right-to-choose-your-cancer-treatment/>

4. <http://www.bbc.co.uk/news/science-environment-14307262>

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dearieme (2012-07-16 10:47:34)

"...now the minimum that cancer patients deserve." I always stop reading when I reach an unjustified "deserve".

### Is Crohn's Disease Really "Incurable"? (2012-07-16 14:11)

I recently came across two different people who, diagnosed with Crohn's disease, repeated [1]the standard line that it "has no known cure". Really? Never? The people who said this were just repeating what they had been told. Unlike twenty or thirty years ago, however, it is easy to do one's own research. The people who said this gave no indication they had done any research. Because Crohn's is so unpleasant, their passivity was curious.

I knew that calling Crohn's disease "incurable" was an overstatement because [2]I had written about Reid Kimball,

who had found a way to eliminate via diet essentially all the symptoms. For practical purposes, he was cured. (Reid objects to the word "cure".) I knew he was hardly the only one. But what if I started from ignorance? How hard would it be to challenge the conventional "incurable" line?

Not hard at all. I googled "Crohn's success" (without quotation marks in the search query). [3]The top search result (titled "Crohn's Disease: Success with Diet and Probiotics") included this:

I learned of a pediatric gastroenterologist, Dr. J. Rainer Poley, who had conducted extensive studies on the effect of certain sugars and starches on people with intestinal diseases. My husband and I decided to take our daughter to see this doctor for another opinion. When we asked him if there was any other treatment she could try besides medications, he explained that at a recent medical conference in Europe, he had learned of success medical doctors were having with probiotics. He instructed our daughter to eat plain yogurt every day and to take a specific probiotic capsule called Culturelle® containing Lactobacillus GG [Gorbach and Goldin] twice daily. Based on Dr. Poley's research, he wanted her to limit the consumption of concentrated sugars (specifically table sugar, technically known as sucrose). The intent of the sucrose-restricted diet was to starve the harmful bacteria by taking away their major food source. The yogurt and Lactobacillus GG would help replenish the "good" bacteria. Since it has been well documented that an overgrowth of bacteria is prevalently seen in people with Crohn's disease, this treatment sounded like a plausible solution.

Our daughter, feeling drained from the effects of Crohn's disease, felt motivated to try the doctor's recommendations. . . . After about two weeks, she began to feel better in general. At the follow-up doctor's appointment three months later, she had gained six pounds and her lab work was ALL NORMAL! . . . She continues to remain well [over 7 years later] with normal lab work and without clinical symptoms.

I asked Ms. Kalichman how others had fared with this treatment. She replied:

Periodically, I hear from others who have tried the treatment that my daughter does, and it seems that many have been helped a lot. Unfortunately they don't always continue to keep in touch, so I don't have any idea how many are totally well. Our daughter continues to be well as she has been for almost 9 years now...no meds and no clinical symptoms.

That took about 5 minutes, including emailing Kalichman. She referred me to [4]a video about it.

1. <http://www.mayoclinic.com/health/crohns-disease/DS00104/>
2. <http://boingboing.net/2011/10/10/seth-roberts-grandmother-knows-best-about-crohns-disease.html>
3. <http://mysite.verizon.net/vzetb4n6/crohnsdiseasesuccesswithdietandprobiotics/>
4. <http://www.youtube.com/marthakalichman>

Jim Purdy (2012-07-16 21:21:08)

I often have digestive problems, sometimes including constipation, bloating, gas, and even a generalized discomfort all through my chest and abdomen. I don't know what my medical diagnosis might be (celiac? IBS? Crohn's? gluten sensitivity?), because I've never mentioned these problems to any doctors. Their solution to everything seems to be a bunch of drugs, and I can't imagine how assaulting my gut bacteria with a lot of chemicals can possibly be a good idea. Instead of drugs, I've been eating a lot of bowls of high-fiber cereal-like concoctions of nuts, seeds, raisins, plain Greek yogurt, ground flax seed, powdered cinnamon, Sweetleaf Stevia with inulin, and whole milk. I get most of the ingredients from my local Whole Foods Market. I say "cereal-like," because it tastes like a bowl of cold cereal, but there are no cereal grains involved. The mixture is delicious, and it seems to be really helping my digestive problems.

Sarit (2012-07-17 01:37:54)

I can't figure out how to sign up for updates :( Seth: Thanks for the suggestion. I'll look into adding email updates.

Mike (2012-07-17 06:44:31)

I have a niece with diabetes type 1. The parents, also, take the view that "it has no known cure" in spite of the fact that the internet has many, many cases of kids who have cured their diabetes with a change in diet (namely Dr. Natasha McBride's GAPS protocol and even Robb Wolf's Paleo Diet). I've sent many references to them - the latest response is that it's just too hard to make these kinds of changes with a 12 year old! So, my niece will have to live with diabetes until she's old enough to do something about it herself.

Alex Chernavsky (2012-07-17 08:14:37)

My wife doesn't have Crohn's disease, but she has a history of idiopathic digestive problems - possibly irritable bowel syndrome. In any case, she's been drinking kombucha daily for the past few years and has experienced considerable relief (though some problems remain). Prior to starting the kombucha, she tried various prescription drugs that either had no effect or actually made matters worse. She's also tried other fermented foods (such as soy yogurt and miso) as well as several different probiotic supplements, but none of those had any effect. Seth: That's very interesting that kombucha was more effective than other fermented foods. It's hard to measure their general potency.

Bob (2012-07-17 11:41:32)

I was diagnosed with Crohn's about 4 years ago. My doctor prescribed Asacol which reduced the symptoms for about 6 months. However they then returned with a vengeance. I wasn't thrilled with what came next on the treatment regimen so I did a lot of research, part of which first brought me to this blog, and stumbled across a YouTube video advocating the use of low doses of Naltrexone for the treatment of MS and other autoimmune conditions. Curiosity piqued, I found that it was also used successfully to treat Crohn's. I decided to self-experiment and ordered some Naltrexone from an online pharmacy. Within a couple of weeks my symptoms were noticeably better and after several months I started to reduce my Asacol dosage ending up at roughly half the prescribed dosage. I am not ready to call myself cured but I have been without symptoms for at least a year and a half and have not had to be subjected to the escalation in treatment.

I have Crohn's (2012-07-17 20:00:05)

This is more of the "blame the victim" bs that is rampant in our culture. It's a huge part of the Tyranny of Positive Thinking that blames the patient and not the disease. It's great that some people can remove their symptoms. However, all the diet changes and meditation and prayer and exercise and all of that did not change my symptoms one bit. Why? Because it's an auto-immune disease. My body is wacky, not my attitude and not the way I take care of myself.

ds (2012-07-18 02:07:39)

Above commenter is right. Crohns and other forms of ibs ibd are highly individual. Some approaches work for some ppl, some don't. Degree of intensity is also highly variable as are co-diseases.

James Babcock (2012-07-18 08:57:45)

> "This is more of the "blame the victim" bs that is rampant in our culture. It's a huge part of the Tyranny of Positive Thinking that blames the patient and not the disease." Er, what? No one's suggesting that people with Crohn's disease are to blame. What this article is saying, is that a few specific foods and supplements might help. That's qualitatively the same sort of thing as saying that particular drugs might help, and I don't think blame enters into the discussion, nor should it. Seth: Maybe he or she means I am "blaming the victim" because I note how easy it was to find Crohn's success stories. Which the two people I refer to did not do. Let's call it "educating the victim".

## Is Crohn's Disease Really "Incurable"? (continued) (2012-07-18 05:00)

The official line on Crohn's disease is that there is "no known cure." In [1]my previous post I described how easily I found contrary evidence – in that case, a girl who with the help of her mom made dietary changes that got rid of her Crohn's symptoms in weeks. She has been symptom-free for more than seven years. An existence proof.

There are many other examples. I asked Reid Kimball for links. Here they are:

A website that collects success stories: [2]<http://scdlifestyle.com/category/specific-carbohydrate-diet-success-stories/page/4/>

Facebook groups: SCD - [3]<https://www.facebook.com/groups/2215406763/> GAPS - [4]<https://www.facebook.com/groups/thegapsdiet/>

Reid's website [5]<http://crohnsend.com>, Jay "CrohnsBoy" Baluk [6]<http://crohnsboy.com/> and Jini Patel Thompson [7]<http://listentoyourgut.com/> are more examples.

The official website of the SCD has a testimonials section: [8]<http://btvc.webfactional.com/book-reviews/listing/>

1. <http://blog.sethroberts.net/2012/07/16/how-incurable-is-crohns-disease/>
2. <http://scdlifestyle.com/category/specific-carbohydrate-diet-success-stories/page/4/>
3. <https://www.facebook.com/groups/2215406763/>
4. <https://www.facebook.com/groups/thegapsdiet/>
5. <http://crohnsend.com/>
6. <http://crohnsboy.com/>
7. <http://listentoyourgut.com/>
8. <http://btvc.webfactional.com/book-reviews/listing/>

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Melissa (2012-07-18 09:26:33)

Are these people cured or are they simply controlling their illness better by eating a strict diet? Seth: I agree, it's a grey area. After I come down with scurvy, I am careful to eat a diet that contains enough Vitamin C and never get scurvy again. Is that controlling my illness by eating a strict diet? People usually say that Vitamin C cures scurvy. I suppose I should ask people who say Crohn's has "no known cure" what they mean.

Sara (2012-07-18 18:47:56)

I was told that my osteo-arthritis was incurable and that I was heading for an early hip replacement (I was 37 at the time). Now, four years later, I'd say it's 'cured' and my method was a gut healing diet (GAPS diet, actually). That was very restrictive for about 4 months and now I just try to stay away from certain foods and I'm ok. I tend to think of these things more as hypersensitivities which require long-term management - it's probably a combination of genetic profile + metabolic damage caused by long term consumption of foods you are not genetically designed to eat so much of. A sort of low-level allergy. As a 'side-effect' my depression disappeared and has never recurred to the same level - I just don't have the level of 'low' that used to exist in my brain. Seth: This supports my belief that the foods that make your brain work best will turn out to make the rest of your body work best and vice versa.

ds (2012-07-21 01:14:51)

Scurvy is not a chronic autoimmune disease. Scurvy IS vitamin c deficiency. Generally "curing" an ai is actually putting symptoms in remission and keeping them there. Seth: I was under the impression that scurvy was caused by Vitamin C deficiency. If taking a drug once/month puts your symptoms in remission, but as soon as you stop the drug your symptoms come back, are you cured? I believe people would say no.

CJ (2012-07-22 19:55:50)

Please don't use the word "cure" in association with dietary management of Crohn's; it's no more of a cure than is a gluten-free diet for celiacs. You don't fix the root problem. That said, for >4-1/2 years, I have been on an SCD-type diet, and found complete relief after tweaking it in. Specifically, I lean towards a meat-heavy, grain-free diet with plenty of Gottschall-type yogurt. Carbohydrate restriction helps more than anything; I find I do best with lots of fatty beef, but (of course) the diarrhea needs to stop first. After about a year on the SCD, I found the works of Dr. Wolfgang Lutz, who found a low-carb diet worked wonders for Crohn's. I combined the two, and have found complete relief. The only times I have problems are when I stray from the diet, either by accident (usually when testing new food products), or during experiments. My weight is normal, I have had \*no\* diarrhea for more than 4 years now, no bleeding, and have a labor-intensive job that requires my lifting almost 150 % of my own body weight. But the disease is still there, and if I eat the wrong thing, it comes to the surface promptly. But since I don't eat the wrong things except on rare occasions, my blood values are normal, my fecal calprotectin is normal- I'm waiting to get another colonoscopy done, but I am confident the results will be very good. The root of the disease is in grains, and secondarily to sugars. Complicating this is a massive imbalance in the intestinal flora- which is why probiotics help, and fecal "transplants" cause marked relief in many. Too many antibiotics, not enough fermented foods, too many sugars, WAY too much starch- and not enough vitamin D. For the love of all things holy, PLEASE take your vitamin D if you have Crohn's, even if you get sunlight. Take 2,000 to 5,000 IU vitamin D every day.

Peter (2012-07-24 14:25:20)

Our friend's daughter's gastroenterologist says 1) there's no scientific proof that the SCD diet relieves symptoms and 2) online testimonials are self-selected to cover only positive outcomes. This doctor practices at the #1 rated children's hospital in the world. He may merely be callous and intellectually uncurious but he is the patient-facing representative for an evil system. That he is paid a vast amount of money and the recipient of much professional adulation is maddening.

Sara Lake (2012-07-28 03:06:15)

I guess the definition of 'cured' is quite broad. I mean, what is it really? No symptoms, no matter what you do? No symptoms when you do what most people do? I consider my arthritis (and my depression) cured, even though I'm pretty sure they will recur if I decided to eat like my sister does for any length of time. Her way is not healthy, although for the moment she 'seems' to be getting away with it. Find the cause and deal with it, then you are cured. Maybe it's a psychological thing - people don't want to feel different, and if they have to live differently to others, they still feel 'sick' or 'faulty'. @Peter, testing special diets is, unfortunately, never going to be a well-funded area. There is no big, expensive drug to market at the end of it, and if you implicate a big part of the food industry (e.g. grains), they will bite back with quite a bit of well-funded force.

## Trust Me I'm Lying: Confessions of a Media Manipulator by Ryan Holiday (2012-07-19 05:00)

When Clinton was President, Ryan Holiday writes in Trust Me I'm Lying (copy sent me by publisher, Ryan is a friend),

[Matt] Drudge accused prominent journalist and Clinton adviser Sidney Blumenthal of a shocking history of spousal abuse – and one covered up by the White House, no less. Except that none of it was true. . . . An anonymous Republican source had whispered into Drudge's ear to settle a political score against Blumenthal. . . . [Drudge] refused to apologize for the pain caused by his recklessness.

In spite of knowing this, I still read Matt Drudge. I don't have to. There are a zillion other things to read. That may or may not make me a horrible person but it illustrates the depth of the problem that Ryan writes about: Spreading lies pays.

A more mundane example is press releases. Bloggers love press releases, Ryan says (speaking from experience working at American Apparel). All the work is done for them. So what if press releases are profoundly dishonest in the way they present a half truth (positive stuff about the product) as if it is a whole truth? It's an easy way to get a few thousand clicks. "I recall sending e-mails to Gawker and Jezebel on several occasions over matters of factual errors and not receiving a response," writes Ryan. "My anonymous tips seem to arrive in their inboxes just fine – it's the signed corrections that run into issues." A car site published a rumor that turned out to be false. A friend of Ryan's complained that the headline wasn't fixed:

[Ryan's friend:] Why keep the headline up since we now know it's not true?  
[Car site:] You guys are so funny.

Taking the headline down would generate fewer clicks than leaving it up. Shameless.

"That way lies madness," I told a friend who worried about how much traffic his blog attracted. Bloggers who will do anything for a click do so, of course, because their salary depends on it, whereas my friend did not get significant income from his blog. Sure, paying bloggers by the click pushes them to write stuff that people want to read – which sounds good, aren't snobs bad? – except what if people don't care that much about the truth?

I think of science. Who do professional scientists more closely resemble? 1. Bloggers who will do anything for a click. 2. Disinterested seekers of truth. Well, it's a job, not a hobby. Science and job are not a good fit ([1]as I've written), just as factory food and health are not a good fit. We can see the consequences of the bad fit between factory food and health in the obesity epidemic (which I believe is caused by eating calorie-dense quickly-digested food that tastes exactly the same each time – factory food is much more standardized than food you make yourself) and the epidemic of digestive problems (caused by too-sterile food – factory food is more sterile than food you make yourself). We can see the consequences of the bad fit between science and job in the failure to find solutions to one growing problem after another (obesity, Crohn's disease, autism, depression, poor sleep, etc.). Trust Me I'm Lying is about the consequences of the poor fit between being paid by the click and caring about the truth of what you write.

1. <http://media.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

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## The Non-Obvious Value of Self-Tracking (2012-07-20 05:00)

A New York doctor named Jay Parkinson [1] is skeptical about the appeal of self-measurement:

There is a very, very small subset of people who want to document their life according to their health—the quantified selfers. But this group is tiny because it's just data geeks who are obsessed with data. They are people who truly believe data changes behavior.

As caricatures go, this is fair. The audience and speakers at Quantified Self meetups do appear to be "data geeks who are obsessed with data" and, yes, this is a tiny subset of people. I don't put myself in that category. I have zero interest in "documenting" my life. I record a tiny amount of stuff and only stuff I think will make a difference. For example, I stopped measuring my blood pressure after it became clear it was low enough.

Parkinson continues:

Data gets old after a while. After about a month, for those who are not obsessed, it becomes meaningless. That is, unless you have an obsession with data. . . . Good luck trying to build a viable business around that group.

Yes, and "there is a world market for about five computers", as [2] the president of IBM supposedly said in the 1940s. I have measured myself for so long (decades) not because I am obsessed with data but because I reaped huge benefits. In the beginning, self-measurement showed me how to reduce my acne considerably more than my dermatologist's advice alone. Later it led to all sorts of improvements: better sleep, better mood, lower weight, fewer colds, healthier gums, better balance, better brain function. Life-changing benefits. The fraction of adults who would like to sleep better, be in a better mood, lose weight, get fewer colds, and so on is very large – perhaps 99 %. Is Starbucks a "viable business"? It is built around people needing stimulants (caffeine). An enormous number of products and services are about losing weight. One of the world's most "viable business" is illicit drugs. I believe a large fraction of illicit drug use is self-medication for depression. (More: The day I posted this, I came across [3] this: "She said heroin helped her fight depression.")

There is nothing obvious about how I managed to improve my sleep, mood, weight and so on. [4] The solutions I discovered via self-measurement were exceedingly surprising, at least to me. So there is nothing obvious about how to use self-measurement to improve one's sleep, etc. Self-measurement is needed, yes, but it's not the only thing that's needed. I needed: 1. Wise choice of what to measure (e.g., measure the problem, not the solution – I don't have a FitBit for example.) 2. Wise choice of what to change. (To improve my sleep, for example, I needed a good understanding of sleep research. "Common sense" was not enough.) 3. Experimental design skill. 4. Data analysis skill. To say data is boring (to most people) is like saying tires are boring (to most people). By themselves, tires have little use, just as data alone has little use. But they are part of something very useful.

Consider literacy. For a long time, the notion that "everyone would benefit from literacy" seemed ridiculous. Books were too expensive! There were so few of them. Only a tiny fraction of people (e.g., monks) knew how to read. It was hard to learn to read. Good luck basing a business on literacy! But eventually everything changed. Right now, few quantified selfers, as far as I can tell, seem to know how to learn something useful from their measurements. (When



I had been doing it for a short time, I didn't know either.) For example, Stephen Wolfram appears to have learned nothing of use from [5] a huge amount of self-measurement. New measurement devices, like FitBit and so on, are like books – it is as if few people know how to read. But that can change.

1. <http://blog.jayparkinsonmd.com/post/19238089868/why-health-and-social-media-dont-mix>
2. <http://www.guardian.co.uk/technology/2008/feb/21/computing.supercomputers>
3. <http://www.wired.co.uk/magazine/archive/2012/08/features/anthrax-has-hit-glasgow?page=all>
4. <http://escholarship.org/uc/item/2xc2h866/>
5. <http://blog.stephenwolfram.com/2012/03/the-personal-analytics-of-my-life/>

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Andrea (2012-07-20 09:00:18)

So where did you get the idea that standing might improve sleep? Was this from your research on sleep? Seth: It was an accident. I tried standing a lot to see if I would lose weight. I noticed my sleep improved – it helped that I was recording it.

Dena Shunra (2012-07-20 09:43:15)

Self-measurement (which is a subset of self-awareness, a virtue lauded as "an unexamined life is not worth living") is not new for individuals. It's not new for business ventures (there's a whole profession dedicated to that, accounting. It helps with counting and paying taxes, but also with figuring out which parts of a business work, who is worth credit and who is not, etc.) Not engaging in self-measurement implies hurtling through the world willy-nilly, willfully ignoring indicators of trouble until the loudest indicator of all, collapse, is noted. Anyone who would belittle self-inspection and self-examination does not have the best interest of his readers at heart.

by (2012-07-20 12:17:39)

Yes, I think data is just the method of life improvement that works very well for you. I'm sure there are people out there who can improve their life simply by wishing it, for years, and then one morning they wake up and pounce upon a discovery and their problem is solved. But data works for me too.

dearieme (2012-07-20 14:16:59)

Some people are self-obsessed, some are not.

Txomin (2012-07-20 16:43:06)

Everyone tracks their habits one way or another in order to manage their health.

## **Fear of Food: "The Hubris of Experts" (2012-07-21 05:00)**

At the end of Fear of Food: A History of Why We Worry about What We Eat by Harvey Levenstein (2012), an historian at McMaster University, the author summarizes what he has learned:

During the course of writing this book, I have often been asked what lessons I personally draw from it. . . . The hubris of experts confidently telling us what to eat has often been well-nigh extraordinary. In 1921, for example, the consensus among the nation's nutritional scientists was that they knew 90 % of what there was to know about food and health.

Yeah. Two questions for an expert giving advice, especially apocalyptic advice ("You'll die if you don't . . ."): 1. What fraction of what there is to be known on your subject do you know? 2. May I quote you?

When I was a freshman in college, I went to hear a talk (off campus) about the chance of life elsewhere in the universe (or was it the galaxy?). The speaker multiplied a bunch of numbers together and came up with an estimate. "What's the error in that estimate?" I asked. The speaker had no answer. He didn't know. It's essentially the same thing.

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dearieme (2012-07-21 06:24:55)

"In February 2010, the press reported on a meta-analysis of 21 lengthy studies, comprising 347,747 subjects, that concluded that there was no association between saturated fat consumption and the risk of heart disease." A reference to the source would have been useful, but still the point is made.

mike (2012-07-21 12:40:34)

Point of the scientific process is it gets it right over time. In the short term are there mistakes... sure. Over time experiments are rerun, repeated and the answers are revised. 1900's science was wrong and right about a large number of things, and improvements are made and the process continues. The point is these reviews of literature take place, and improvements are made. The process is self correcting.

Txomin (2012-07-22 06:47:42)

How many times I've heard "I don't know what to believe"? How many times I've answered "You don't have to believe anything. Search for information to learn not for instructions to follow"? Alas, it is quite common to come across people that can't comprehend the difference between knowledge and belief. Seth: That's an interesting reply ("You don't have to believe anything"). What do people say after you say that?

Txomin (2012-07-22 22:57:34)

They become confused. The usual claim is, essentially, that the veracity of a statement supersedes its understanding... as if, you know, the first could be established independently of the second. Some people get it when I ask them whether they know or they believe the earth is round. Seth: Thanks for explaining that.

sadeyedlady (2012-08-04 12:46:16)

this is precisely why i turn my back when the paleo community aggressively markets its diet. i try very hard (and frequently fail) at staying meat- and leather- free. one time i contributed to a discussion on the New York Times website discussing veganism, and the entire discussion was shouted out by about 5 paleos who were being sarcastic and aggressive vs. the vegans. i think that most paleo eaters are romanticizing early human life and, based on their romantic notions, are making sweeping health generalities about the benefits of the paleo diet. i see great value in eating as many whole foods as possible and limiting grains. but i do NOT believe that invariably means that humans function optimally as carnivores. anyhow, i follow your site and thought i would chime in with my opinions on this issue. p.s. i have brewed kombucha for many years and enjoy it. one can readily find scobys from reputable local dealers via google and the like. not sure whether that is also the case in PRC. Seth: Thanks, very interesting. By the way you don't need a scoby, you can use a few tablespoons of store-bought kombucha.

## Assorted Links (2012-07-22 05:00)

- [1]Another psychology professor resigns after allegations of data fraud

- Is 1 masculine and 2 feminine? [2]Apparently. The pattern seems to be that odd numbers are more masculine and even numbers more feminine.
- [3]Lauren Collins shows again that she is one of The New Yorker's best writers
- [4]inaccuracy in the work of Stephen Jay Gould
- Long ago, Daniel Koshland, the editor of Science, [5]said (not as a joke) that "99.9999 % of [scientific] reports are accurate and truthful". [6]Now it is clear he was wrong.
- [7]Rewriting financial history was, in one dataset, very common. This paper was published in 2009 but I just learned about it.

Thanks to Hal Pashler and Robin Barooah.

1. <http://blogs.discovermagazine.com/notrocketscience/2012/07/12/another-psychologist-resigns-after-a-data-detectives-investigation/>
2. <http://psycnet.apa.org/journals/xge/141/2/206/>
3. <http://www.newyorker.com/online/blogs/lauren-collins/2012/07/summer-weather-in-britain.html>
4. [http://www.nytimes.com/2011/06/14/science/14skull.html?\\_r=1](http://www.nytimes.com/2011/06/14/science/14skull.html?_r=1)
5. <http://www.washingtonpost.com/wp-dyn/content/article/2007/07/25/AR2007072502126.html>
6. <http://arstechnica.com/science/2012/07/epic-fraud-how-to-succeed-in-science-without-doing-any/2/>
7. <http://www.people.hbs.edu/cmalley/pdffiles/Anonymous080910.pdf>

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Alex Chernavsky (2012-07-22 09:02:29)

I'm not the least surprised about the allegations against Stephen Jay Gould. Look at the vicious smear campaign he waged against his Harvard colleague, E. O. Wilson. About the best thing that can be said about Gould is that he occasionally wrote interesting essays for *Natural History* magazine.

dearieme (2012-07-22 16:22:01)

Over the years I became increasingly aware of a problem with a particular line of interdisciplinary work. It often seemed, I guessed, to be refereed by people who were capable of spotting weaknesses in the part of the work they understood best but were prepared to give the benefit of the doubt to the parts they didn't. This, I suspect, led to ropey work being published, ropey workers being promoted, ropey grants being awarded. I've no reason to suppose that what was going on was crooked - not angels, perhaps, a few friendships and connections relied upon, maybe, but nothing (so far as I know or suspect) more. Whether this sort of thing does as much damage as fraud I have no way of knowing.

garymar (2012-07-22 17:15:36)

dearieme, Interesting word, 'ropey'. I looked it up on the OED and it's listed as 'British informal'. In a similar vein, I remember reading a philosopher's critique of Toynbee's idea of the rise and fall of civilizations. In my rough memory, the philosopher noted that, for example, the Egyptologists would say, "Toynbee's view of Egyptian civilization is utter nonsense, but the rest of the book is admirable"; or the students of Eastern European history would say, "his ideas on Russia betray an utter lack of knowledge on the subject, but we were fascinated by his descriptions of other cultures". Etcetera, etcetera. So if you lined up all the criticisms of those versed in their respective fields, you'd find very little left of his original thesis.

by (2012-07-22 21:36:39)

Recently I was scheduling some recurring appointments to visit my relatives. For no real reason I could decide, I decided to visit my male relative in odd months and female in even. It was funny to see this link :)

dearieme (2012-07-23 10:30:01)

@garymar: exactly!

### Assorted Links (2012-07-23 05:00)

- [1]self-experimentation = ouch. The downside of barefoot running.
- [2]Self-experimentation and its role in medical research (paper written by doctor apparently as a hobby)
- [3]The Legacy of a Jerk. Wonderful Freakonomics podcast. "Did you know there are products that change the scent of the air?" says an interviewee.
- all those exhortations to be a better person? [4]They work.
- [5]correlation between dream content and geomagnetic activity.

Thanks to Ken Feinstein.

1. <http://omicron34.livejournal.com/288899.html>

2. <http://pubmedcentralcanada.ca/pmc/articles/PMC3298919/?lang=en-ca>

3. <http://www.freakonomics.com/2012/07/19/legacy-of-a-jerk-a-new-freakonomics-radio-podcast/>

4. <http://whywereason.com/2011/11/09/drawing-out-our-better-angels-the-important-role-of-moral-reminders/>

5. <http://www.newscientist.com/article/dn16871-sweet-dreams-are-made-of-geomagnetic-activity.html>

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Maria (2012-07-25 12:39:29)

I'm sorry, I know you've answered this before, but I was unable to find it. What software do you recommend for self analysis. I have about 20 variables that I've been tracking manually, and it's just too many to do manually. Your recommendation would be very helpful. Seth: I recommend R. It's free and it's good. That's what I use.

### What to Do in Beijing: My Suggestions (2012-07-24 05:00)

Because Tyler Cowen is going to Beijing, I made a list of suggestions:

1. Don't go to the Great Wall. It's a long drive. I preferred to see it on the Today Show. The only interesting bit was a guy who sat in a chair on the path to the wall and charged 30 cents to go further. We paid the 30 cents but in retrospect I wish we hadn't.

2. Visit some of the many "markets" that consist of a building full of tiny booths. There are markets devoted to cameras, jewelry, clothes, electronics, furniture, etc. There can be more choice of furniture in one building (say, 100

manufacturers) than exists in the entire Bay Area. Along similar lines there is a whole neighborhood full of tea sellers – if you like tea.

3. Peking duck is a good dish but I cannot tell the difference between the better restaurants serving it. So don't go out of your way to go to an especially good place. I usually go to [1]Quanjude which has a branch very near my school (Tsinghua).

4.[2] Middle 8 is a very good restaurant (in Haidian and Chao Yang).

5. [3]Din Tai Fung is a very good dumpling restaurant. It is a big international Taiwanese chain. So it isn't even mainland Chinese food exactly.

6. There are grilled chicken wing restaurants near the west gates of both Peking University and Tsinghua University. I don't know their names but they are very good. Popular with students.

7. I have never found a nice place in Beijing to walk. Even in parks there is a lack of shade.

8. In my neighborhood (Wudaokou) there are excellent Korean restaurants.

Feel free to leave your suggestions in the comments.

1. <http://en.wikipedia.org/wiki/Quanjude>

2. [http://www.tripadvisor.com/Restaurant\\_Review-g294212-d1204537-Reviews-Middle\\_8th-Beijing.html](http://www.tripadvisor.com/Restaurant_Review-g294212-d1204537-Reviews-Middle_8th-Beijing.html)

3. [http://en.wikipedia.org/wiki/Din\\_Tai\\_Fung](http://en.wikipedia.org/wiki/Din_Tai_Fung)

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Jim (2012-07-24 06:38:42)

You must visit the Hutongs! Especially long confusing walks in the hutongs that end up at Ho Hai. Once you are finished with Old Beijing (the Hutongs), go to modern Beijing (shopping malls, of course). I recommend Raffles. Take a 1-2 day trip to Chuandixia (to the West of Beijing). This is one of my favorite spots in China! If you do want to go to the Great Wall, stay overnight at Shaan Ba (in English- Mountain Bar). I agree that visiting the wall can be annoying, but for most people it will be a must see.

Tom (2012-07-24 07:47:07)

One of the (authentic) branches of Din Tai Fung is in Arcadia, California: Din Tai Fung Dumpling House [www.dintaifungusa.com](http://www.dintaifungusa.com)  
1108 S Baldwin Avenue, Arcadia, CA 91007-7508 Phone: (626) 574-7068

Andy (2012-07-24 07:49:21)

Din Tai Fung is awesome!! The two in Tokyo are terrible, but I've been to the original in Taipei and few other branches in China/Taiwan and they are much better. So juicy. Best dumplings I have had.

Eric (2012-07-24 14:09:22)

This is a nice walking route: <http://goo.gl/maps/pYscW> Start from the Lama Temple subway exit C, walk down Guozijian St (going into the Confucius Temple or the Guozijian if you want) and then making an arbitrary turn at the end of that st and getting lost in the hutongs.

garymar (2012-07-24 22:41:41)

I ate at Quanjude – it was great! I still have the card giving the number of my duck. It was like 80 million or something. Japan has 12 Dintaifung restaurants, with 7 in the Tokyo area. I'll try it out. Two of them in Shinjuku alone. Are they all bad? Probably because it's "Chinese adapted to Japanese tastes" Chinese food, unlike "Chinese adapted to American tastes" in LA.

garymar (2012-07-24 22:44:46)

Actually the website has the Shinjuku restaurant listed twice, so only one in Shinjuku. [http://www.dintaifung.com.tw/jp/area\\_a\\_list.asp?AreaCountryNO=20](http://www.dintaifung.com.tw/jp/area_a_list.asp?AreaCountryNO=20)

Adam (2012-07-25 05:15:39)

I can attest to the fact that the Shanghai Din Tai Fung is delicious.

Richard Sprague (2012-07-25 13:37:40)

Don't forget to pack a VPN of some kind if you want to access the entire internet while in China. I use Witopia (for my apartment) and 12VPN on my iPhone.

## **You Don't Need a "Mother" to Make Kombucha (2012-07-25 05:00)**

You make kombucha by brewing tea, adding sugar, and adding a starter of some sort. Usually the starter is part of the "mother" (SCOBY) from a previous batch of kombucha but I have just found that adding a little bit of store-bought kombucha also works. I added two tablespoons of GT's kombucha and two tablespoons of Revive kombucha to sugared tea. Two weeks later there was a perfectly good mother on top of the tea. This is useful to know even if you have a mother if you want to make kombucha slowly. In The Art of Fermentation, Sandor Katz advocates adding a bottle of kombucha into your sugared tea if you don't have a mother.

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Alex Chernavsky (2012-07-25 07:01:39)

I've been making kombucha for over two years now, and what's interesting to me is the large amount of variability from batch to batch. I use the same mother, same recipe, same fermentation jars, etc. – and yet, the results are quite variable. Sometimes the kombucha is fizzy right out of the fermentation jar; sometimes it's flat. Sometimes it has a pleasant yeasty taste to it (almost like beer), sometimes it's bland. I wonder why that is. I like to do a second fermentation inside sealed, glass bottles. I pour about two or three ounces of apple juice (or other type of juice) into an empty bottle that originally held GT Dave's-brand kombucha. Then I top it off with my own kombucha (that's been fermented for 8 - 10 days), seal the bottle tightly, and let it ferment for two or three days. The result is a nicely carbonated beverage. You have to be careful to use juice that's free of preservatives – otherwise, there is no fermentation.

Robin (2012-07-25 07:48:47)

Thanks for that Alex. I've had very variable results and figured I was somehow messing something up. I'm going to try your apple juice hack with my next harvest.

LP Johnson (2012-07-25 08:33:50)

I tried using store bought kombucha to ferment a jug of tea, and I got mold only a couple days in. I threw it out, but would it have been ok? Just skim off the mold like with kraut? Some possible factors: temperature was staying around 90 F, I drank directly out of the bottle of kombucha before using it, lastly I was unsure how much sugar to use and used only about 1/4 cup to a gallon tea. Seth: That's not enough sugar. See my answer to another comment for a reasonable amount.

Chuck Curre (2012-07-25 10:15:50)

More details please: How much tea - a quart, a pint, a gallon? How much sugar? Where do you put it to ferment - on the counter, in a cupboard? What did you do with the "mother"? Not through her from a train, hopefully. Thanks... Seth: Here are the quantities I use: 1.8 L water, 180 g white sugar, 10 g high quality black tea. I put the jar on the counter. I put spare mothers in the refrigerator.

Bryan (2012-07-25 14:25:44)

Twice I tried creating my own mother this way and it didn't work. I brewed some tea, added sugar, and then added a bottle of GT's. I then waited 3 weeks - nothing. Maybe there was too much/not enough sugar? Seth: Maybe the problem was the GTs. You might try Revive or another brand. Or try 2 T each of several brands. I think there is wide latitude on the sugar.

Alex Chernavsky (2012-07-25 14:51:10)

I use a third of a cup of white table sugar per quart of water (well, *tea* actually).

Elizabeth Molin (2012-07-26 06:51:04)

On the general subject of fermented foods: <http://jezebel.com/5928541/cheese-may-lower-diabetes-risk-will-also-make-you-very-happy>

Jim Breed (2012-07-26 10:58:45)

I have had better luck with bottled water than tap. I believe that not having chlorine from the water treatment inhibits fermentation. Sandor Katz mentions this in his book.

Sam (2012-07-31 16:08:10)

Nice trick. Ascorbic acid, vitamin C, can be used to take the chlorine out of tap water. Only takes a very very small amount. <http://www.iuhoakland.com/Chloramine.pdf>

sadeyedlady (2012-08-05 10:29:14)

i've been brewing kombucha for about 10 years now. i imagine kombucha as a bacteria bath. if you are lucky, the right bacteria congregate and take over. i have had many batches that didn't work out well-where mold or another unhealthy life form dominated over the brew. initially, a few T of kombucha will work to ferment a batch of sweet tea into kombucha, but i do not think that the batch can be used to create new batches of kombucha, if only because of the variability of the bacteria that the brew will come into contact with. there are so many bad bacteria that can thrive in an acidic environment, that i would be afraid of creating a self-sustaining kombucha brew without a scoby. perhaps you weren't referring to a self-sustaining batch of kombucha in your post. if so, then carry on! just my personal hunches here.

### Assorted Links (2012-07-27 05:00)

- [1]Chicago discourages food trucks. "Some of the drivers say police have shooed them away from spaces near a Starbucks or 7-Eleven." Via [2]Melissa McEwen.
- [3]The Quantified Community by Esther Dyson
- [4]the big business of sleep

- [5]even dim bedroom light may have a bad effect

Thanks to Melody McLaren, Allan Jackson and Bryan Castañeda.

1. <http://www.chicagotribune.com/news/opinion/editorials/ct-edit-trucks-20120725,0,5139541.story>
2. <http://huntgatherlove.com/>
3. <http://www.project-syndicate.org/commentary/the-quantified-community>
4. <http://www.thefiscaltimes.com/Articles/2012/07/23/Sleepless-in-America-A-32-4-Billion-Business.aspx#page1>
5. <http://www.nydailynews.com/dim-lighting-sleep-linked-depression-article-1.1122322>

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Jim Purdy (2012-07-27 10:57:40)

Sleeping in a dark room, and then falling over the furniture on the way to the bathroom, is even more depressing. I think I'll keep sleeping with a light on.

gwern (2012-07-27 11:54:43)

Dim light & hamsters fulltext: <http://dl.dropbox.com/u/85192141/2012-be-drosian.pdf> Jim: maybe you should rearrange your furniture and get the best of both worlds.

dearieme (2012-07-27 13:41:13)

In the lighter months of the year I wear an eye mask.

Tom (2012-07-27 14:54:40)

*Jim: maybe you should rearrange your furniture and get the best of both worlds Shh! Don't tell him. :-)*

## **Fermented Dairy Intake Negatively Associated with Diabetes (2012-07-28 05:00)**

[1]A new epidemiological study followed about 16,000 people in Europe for about 12 years and focused on their dairy intake. Did the ones who came down with diabetes eat differently from those who didn't?

The paper begins:

Current dietary guidelines for prevention of diabetes aim at substituting SFAs [saturated fatty acids] with unsaturated fatty acids. However, conventionally held notions that all SFAs, including those from dairy products, are detrimental to health have recently been challenged.

The shift of evidence (dairy less bad than previously believed) supports my view that what's good for the brain (I found butter was good for my brain) is likely to be good for the rest of the body. The paper's main conclusion is the possible protective value of cheese and yogurt:

This large prospective study found no association between total dairy product intake and diabetes risk. An inverse association of cheese intake and combined fermented dairy product [= cheese, yogurt, and "thick fermented milk"] intake with diabetes is suggested.



The combined fermented dairy association was not large in size (a risk reduction of 12 %) but was significant (barely). When your main finding is barely significant you have no hope of using your data to explain it so the new information essentially stops there. The results support my view that fermented foods are unusually healthy.

In response to these findings, the director of research at Diabetes UK [2] said, "This study gives us no reason to believe that people should change their dairy intake in an attempt to avoid [diabetes]." Wow. It is as if a prominent physicist said the earth was flat.

Thanks to Elizabeth Molin.

1. <http://www.ajcn.org/content/96/2/382.abstract>

2. <http://www.telegraph.co.uk/health/9422230/Cheese-could-reduce-diabetes-risk.html>

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wobbly (2012-07-28 06:16:21)

That Telegraph URL needs a quick trim of its last six characters. Seth: I fixed it, thanks.

Alex Chernavsky (2012-07-28 06:57:00)

Seth, did you see this other article from the *Telegraph*? "[1] Doctor diagnosed with terminal cancer survives after injecting himself with disused drug"

1. <http://www.telegraph.co.uk/health/healthnews/9420980/Doctor-diagnosed-with-terminal-cancer-survives-after-injecting-himself-with-disused-drug.html>

Shawn (2012-07-28 12:43:23)

I'm not sure if my earlier comment got through so I will repeat the gist of it: dairy causes acne for some people.

dearieme (2012-07-28 13:45:39)

Seth, you mentioned Yakult yoghurt a few weeks ago. Do you know anything about how it compares with Actimel? <http://en.wikipedia.org/wiki/Actimel> Seth: No I don't. Probably little difference.

Adam (2012-07-28 18:05:12)

According to Dr. John Ioannidis (yo-NEE-dees), a renowned expert in evaluating medical studies, as many as 80 % of the conclusions drawn from non-randomized trials are false; as many as 25 % from randomized trials; and as many as 10 % from the "platinum standard" \*large\* randomized trials. Old article, but well worth reading if you missed it: <http://www.theatlantic.com/magazine/archive/2010/11/lies-damned-lies-and-medical-science/8269/> With that in mind, I DO believe that fermented foods probably ARE good for you, but this study by itself is not very good evidence for that idea. Out of curiosity, does anyone know why they say Saturated fat causes Diabetes? What do they usually reference when they make that claim? Seth: "this study by itself is not very good evidence for that idea"? Since when is evidence one-dimensional? If you think about the many dimensions of evidence, I hope that you will realize that this study is very good on some of them (e.g., the dimension of realism, the dimension of practicality). I don't agree with Ioannidis's black and white view of research (it is either right or wrong), either. Imagine if someone said "80 % of people are bad".

Adam (2012-07-28 18:09:50)

I think I answered my own question. Saturated fat doesn't cause Diabetes. <http://www.diabetes.org/food-and-fitness/food/what-can-i-eat/fat-and-diabetes.html> "Why should you eat less saturated fat? Because saturated fat raises blood cholesterol levels. High blood cholesterol is a risk factor for heart disease. People with diabetes are at high risk for heart

disease and limiting your saturated fat can help lower your risk of having a heart attack or stroke.” Does it? The Framingham study is often quoted as “proving” that eating Fat increases Serum cholesterol, so what did the researchers conclude?: “The failure to turn up any positive association between food intake and serum cholesterol level in the Framingham Diet Study led to the exploration of a large number of variant analyses. These were uniformly unsuccessful in finding expected relationships.” Hmmmm...

Adam (2012-07-29 17:46:58)

Seth, you said: “Since when is evidence one-dimensional? If you think about the many dimensions of evidence, I hope that you will realize that this study is very good on some of them (e.g., the dimension of realism, the dimension of practicality). I don’t agree with Ionnidis’s black and white view of research (it is either right or wrong), either. Imagine if someone said “80 % of people are bad”. Maybe it’d help if I clarify what I meant by “bad”. I mean, the conclusion reached based on the evidence gathered has a high probability of being wrong. That doesn’t mean it IS wrong, but it means that the evidence isn’t very valuable to someone who values high quality evidence. With that said, it is absolutely hypocritical for the director of Diabetes research to dismiss it, since nearly ALL of the recommendations they DO support are based on Epidemiological evidence to begin with. It gives the impression that they are just picking & choosing willy-nilly which data to accept & which data to reject. Seth: “bad” evidence is inconclusive. it is evidence that doesn’t help much. When the evidence for an idea is “bad” it doesn’t imply that the hypothesis under consideration “has a high probability of being wrong”. I agree, Diabetes UK is just picking the evidence they like.

Paul N (2012-07-30 12:10:32)

Slightly off topic, there is also some evidence, both historical and from studies, that probiotics are beneficial to dental health. Certain lactobacilli species compete for adhesion sites with the nasties that form dental caries. Some lead to increased saliva production, which also benefits teeth (and digestion). Some googling of umami and dental health turns up some interesting, though occasionally conflicting, studies. I think this is further support for the umami hypothesis. I suspect that populations that traditionally ate lots of dairy (i.e. fermented) got good dental health as much from the probiotics as from the dairy itself. Of course, modern highly sweetened dairy products, fermented or otherwise, completely defeat the purpose... Seth: Interesting point, thanks. Hadn’t heard that before.

### Assorted Links (2012-07-29 05:00)

- [1]Yale cancels China year-abroad program. One reason is that students in Beijing (at Peking University, one of the best universities in the country) learned less Chinese than students at Yale.
- [2]European plagiarism epidemic. “More than a third of [3]a new book for law students on how to write papers properly was plagiarised . . . The authors vowed to find the culprits.”
- [4]Penkowa for Dummies. Complicated scientific fraud.
- Self-tracking difficulties: [5]a fickle and too-demanding exercise tracker. I try to walk 60 minutes/day. It’s easy to track.

Thanks to Anne Weiss.

1. <http://www.yaledailynews.com/news/2012/jul/27/end-yale-pku-admins-hopes-unfulfilled/>

2. <http://www.bbc.co.uk/news/18962349>

3. <http://copy-shake-paste.blogspot.co.uk/2012/06/strike-two-serial-plagiarism.html>

4. <http://universitypost.dk/article/penkowa-dummies>

5. <http://www.nytimes.com/2012/07/29/technology/nike-fuelband-tracks-physical-activity-inconsistently.html>

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Rashad (2012-07-29 06:39:51)

The Yale item is so disappointing. My wife does research on study abroad, and one of her key findings/points of emphasis is that program design plays a huge role in how much "immersion" students get during the study abroad process. It sounds like they just expected the students to automatically immerse themselves, whereas studies have shown that without tons of incentives, and effort on the part of the study abroad program, students will often self-segregate and mostly hang out with other foreigners. Seth: Interesting. In this case, it goes beyond what you say. Not only did the Yale students in Beijing not learn Chinese from being in Beijing, apparently the time they spent in Chinese class – in Beijing – was less helpful than the same time in Chinese class in New Haven.

Seth Roberts (2012-07-29 14:25:43)

posted for Ethesis: NPR, yesterday morning, had people on the Peoples Pharmacy (whatever that is) in the last 15 minutes of the show talking about how to teach people to self track and how it improved compliance and effort with diabetics. Neat stuff, especially as it supports many things you've said. BTW: [www.blogger.com/comment.g?blogID=2192186541955038172&postID=7651199277746247337](http://www.blogger.com/comment.g?blogID=2192186541955038172&postID=7651199277746247337) The article that got me thinking about all of this was about a Japanese anesthesiologist who was caught having simply made up the data in 172 papers published in scientific journals. If you can have made up your data 172 times before anyone notices and, according to the journals, it had no impact because no one paid attention to those articles anyway - how much talent do you really have?

Alex Chernavsky (2012-07-30 19:23:38)

Google apparently has a database with 20 million scanned books. You'd think that someone at Google could write a script to search for instances of plagiarism. I suppose it might be difficult to distinguish true plagiarism from cases where an author is quoting another source. Seth: Good idea. It shouldn't be hard to separate quotations from non-quotations with very high accuracy. I think the problem is that this doesn't support anyone's research agenda.

Txomin (2012-07-30 21:28:52)

Thank you for continuing to post on academic fraud.

garymar (2012-07-30 22:55:08)

That Penkowa case is hard to figure out. She looks like someone with real talent *who also* cuts corners and considers academic research a contact sport.

## Assorted Links (2012-07-31 05:00)

- Jane Jacobs, after she got a grant to write her first book, about cities, was invited to lunch by two Harvard/MIT urban studies professors. They wanted her to do a questionnaire survey – that was what they did. [1]"How awful to be a graduate student there," she thought. "They had no faith in me as an independent thinker." [2]A CBC interview with Jacobs.
- [3]Successful protest in China against factory pollution.
- [4]Fermented Sriracha (a faux-Asian hot sauce)? [5]More about Sriracha.
- Genetic info about risk of Crohn's disease [6]fails to produce smoking cessation in smokers at relatively high risk of Crohn's. (Smoking is a risk factor for Crohn's.) "These findings . . . do not support the promulgation of commercial DNA based tests," the authors conclude.

Thanks to Bryan Castañeda.

1. [http://www.youtube.com/watch?v=-Si4fhHfGTs&feature=player\\_embedded](http://www.youtube.com/watch?v=-Si4fhHfGTs&feature=player_embedded)
2. <http://www.brickmag.com/conversation-jane-jacobs>
3. <https://www.commondreams.org/headline/2012/07/28>
4. [http://www.reddit.com/r/AskCulinary/comments/xcm3h/fermented\\_sriracha/](http://www.reddit.com/r/AskCulinary/comments/xcm3h/fermented_sriracha/)
5. <http://www.nytimes.com/2009/05/20/dining/20united.html?pagewanted=all>
6. [http://www.bmj.com/content/345/bmj.e4708?ijkey=ac601158f50a256cf17706c6b6cbfe6190f50095&keytype=tf\\_ipsecsha&linkType=ABST&journalCode=bmj&resid=345/jul20\\_1/e4708](http://www.bmj.com/content/345/bmj.e4708?ijkey=ac601158f50a256cf17706c6b6cbfe6190f50095&keytype=tf_ipsecsha&linkType=ABST&journalCode=bmj&resid=345/jul20_1/e4708)

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Allen K. (2012-07-31 11:29:25)  
[1]More about Sriracha.

1. <http://theoatmeal.com/comics/sriracha>

dearieme (2012-07-31 16:10:42)

"Smoking is a risk factor for Crohn's": the expression "risk factor" is so abused by doctors that I wouldn't be surprised if the world is wearying of it. After all, it's often used essentially to tell lies.

Nancy Lebovitz (2012-08-01 18:20:14)  
[1]sriracha-flavored lollipops

1. [http://www.thinkgeek.com/product/eeb2/?cpg=wnrss&utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+thinkgeek%2Fwhatsnew+%28ThinkGeek+%3A%3A+What%27s+New%29&utm\\_content=LiveJournal](http://www.thinkgeek.com/product/eeb2/?cpg=wnrss&utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+thinkgeek%2Fwhatsnew+%28ThinkGeek+%3A%3A+What%27s+New%29&utm_content=LiveJournal)

## Mark Bittman Glimpses a Big Truth: Avoidance of the Obvious by Doctors (2012-07-31 06:23)

Mark Bittman writes about food for the New York Times. If he covered health instead of food, would he have dared to write [1]this?

When I was growing up, drinking milk at every meal, I had a chronic upset stomach. . . . In adolescence, this became chronic heartburn, trendily known as GERD or acid reflux, and that led to . . . an adult dependence on Prevacid, a proton-pump inhibitor. Which, my gastroenterologist assured me, is benign. ([2]Wrong.)

Fortunately my long-term general practitioner, Sidney M. Baker, author of "[3]Detoxification and Healing," insisted that I make every attempt to break the Prevacid addiction. Thus followed a seven-year period of trials of various "cures," including licorice pills, lemon juice, antibiotics, famotidine (Pepcid) and almost anything else that might give my poor, sore esophagus some relief. At some point, Dr. Baker suggested that despite my omnivorous diet I consider a "vacation" from various foods.

So, three months ago, I decided to give up dairy products as a test. Twenty-four hours later, my heartburn was gone. Never, it seems, to return.

His gastroenterologist (and probably several other doctors) failed to tell him that his digestive problem might be due to eating the wrong foods. It is as if an astronomer fails to understand – or at least tell his students – that the earth is round.

It is equally interesting that someone smart enough to write for the New York Times fails to figure this out for himself. How strange that a food writer would not connect food and health – someone else had to draw his attention to the possibility. Although Bittman praises Dr. Baker, you are not going to figure out what foods are bad by adding things, such as licorice pills, to your diet. Dr. Baker failed to understand this obvious point, which Bittman still fails to see, apparently. Bittman should be utterly astonished by this mountain of avoiding the obvious, including his own.

In [4]a later column he feels "frustration" and begins to notice how big the problem – self-serving avoidance of the obvious by doctors and the rest of mainstream health care – is:

Experiences like mine with dairy . . . are more common than unusual [huh?], at least according to the roughly 1,300 comments and e-mails we received since then. In them, people outlined their experiences with dairy and health problems as varied as heartburn, migraines, irritable bowel syndrome, colitis, eczema, acne, hives, asthma ("When I gave up dairy, my asthma went away completely"), gall bladder issues, body aches, ear infections, colic, "seasonal allergies," rhinitis, chronic sinus infections and more. (One writer mentioned an absence of canker sores after cutting dairy; I realized I hadn't had a canker sore — which I've gotten an average of once a month my whole life — in four months. Something else to think about.)

Although lactose intolerance and its generalized digestive tract problems [5]are well documented, and [6]milk allergies are thought to affect perhaps 1 percent of the American population, the links between milk (or dairy) and such a broad range of ailments has [have] not been well studied, at least by the medical establishment.

Yet [wrong word] if you speak with people who've had these kinds of reactive problems, it would appear that the medical establishment is among the last places you'd want to turn for advice. Nearly everyone who complained of heartburn, for example, later resolved by eliminating dairy, had a story of a doctor (usually a gastroenterologist) prescribing a [7]proton pump inhibitor, or P.P.I., a drug (among the most prescribed in the United States) that blocks the production of acid in the stomach.

Finally he turns to emotion:

There is anger as well as surprise, because you'd think that with a grapevine's worth of anecdotal stories and at least some studies linking dairy to physical problems, few people began this kind of self-testing at the suggestion of their doctor — unless, that is, their doctor was in the "alternative" camp. [he is so angry he gets confused?]

So I got mail saying things like, "When I think back to all the things I've missed because I had a migraine, it makes me a little angry that the solution for me was so simple." When a lifetime of suffering, medical visits and prescription drugs can be resolved with a not especially challenging dietary change — one that, when it works, has rewards well worth the sacrifice — a certain amount of retroactive frustration seems justifiable.

The big trip begins with the small step. Maybe Bittman will begin to wonder at the dystopic miracle of a healthcare system in which respected gastroenterologists fail to grasp that digestive problems are often caused by food. No one

else in prestige media has managed to notice this, as far as I can tell.

Thanks to Lisa Wiland.

1. <http://opinionator.blogs.nytimes.com/2012/07/07/got-milk-you-dont-need-it/>
2. <http://well.blogs.nytimes.com/2012/06/25/combating-acid-reflux-may-bring-host-of-ills/?src=me&ref=general>
3. <http://www.tatamcgrawhill.com/html/9780658012198.html>
4. <http://opinionator.blogs.nytimes.com/2012/07/24/more-on-milk/?src=rechp>
5. <http://www.webmd.com/digestive-disorders/tc/lactose-intolerance-topic-overview>
6. <http://www.mayoclinic.com/health/milk-allergy/DS01008/DSECTION=symptoms>
7. <http://heartburn.about.com/od/medsremedies/a/protonpumpPPIs.htm>

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charlie (2012-07-31 06:56:27)

The big truth is these are sub clinical problems, and most doctors don't have time to deal with them. My father is a GI. He had a patient die on him last week during a procedure. When the next patient comes in complaining of an upset tummy – and he is fat, out of shape, and prone to eating a lot of polish sausage, what do you expect any doctor to say? Doctors have real problems to face – not these subclinical ones. Yes, after 40 you have to be your own physician. But are these subclinical problems something you can blame the medical establishment for. Take two aspirin and call me in the morning....

Sean S (2012-07-31 07:41:50)

It's true that the high and mighty doctors don't have 2 minutes to explain how to fix these "sub-clinical" problems, but how much more time each day would the doctors have to deal with the "real" problems if they quickly disposed of these easy ones? I suspect this is less of an example of doctors having more important stuff to do than it is a case of their ignorance. They learn very little about nutrition in medical school, and we know one thing, doctors NEVER admit their ignorance. For a doctor to take a patient's money, whether the problem is "sub-clinical" or not, he should have a duty to provide decent care and help that patient. If he's too busy to do a thorough job, then he should not schedule as many patients and take a hit in income.

Brian (2012-07-31 09:06:26)

I suffered from GERD my entire life, until I went on the Atkins diet. Over the years, I was prescribed various antihistamines to stop my "allergies", which largely consisted of post-nasal drip (caused by GERD). Eventually, I was prescribed a proton pump inhibitor. By this point, I had developed esophageal ulcers from the frequent vomiting that came with the GERD\*. Fortunately, with medical treatment, the ulcers healed. After stumbling on a dietary cure for the GERD, the post-nasal drip and the vomiting also went away. I don't care if the problems were subclinical, they caused me lots of trouble. (\*The ulcers probably developed while I was on another medication that caused nausea.)

Tom (2012-07-31 09:25:56)

The idea that people should expect doctors to ignore "subclinical" problems is one of the most moronic things I've ever heard. As if anyone – including doctors – know what is "subclinical" without investigation! The New York Times had two articles in the past two weeks about a 12-year-old boy who went from complete health to dead within two days because of a scraped knee. The doctors missed all the signs of sepsis, no doubt out of their conviction that it was a "subclinical" problem unworthy of their time. Back on the topic of Gerd, when I was diagnosed, I didn't hear a single thing about diet from my gastroenterologist, supposedly one of the best in my state. Just take two Aciphex (proton pump inhibitor) daily, and elevate the head of my bed. I got the idea that he thought diet had nothing to do with it.

Javeux (2012-07-31 09:52:57)

I was prescribed PPIs once, but I couldn't understand how they'd provide a cure or justify their side-effects, so I didn't end up filling the prescription. I suggested to the doctor that my long-standing joint pains could perhaps be related to my long-standing GI complaints, but he didn't 'see how that would work.' Luckily, this was an NHS doctor. If I had a snarky GI taking half a day's pay off me to waste my time with unscientific anti-treatments, I wouldn't be so complacent. I got relief from GERD when eating a low-carb diet, but it just seems to be a crutch, rather than a real solution, like for diabetes and other things people use them for. It wouldn't surprise me if some of the people posting in Bittman's comments had underlying problems that dairy was taking the wrap for, e.g. oestrogen can inhibit lactase enzymes <http://pmid.us/21080139> Antibiotic use probably wouldn't help support the bacteria that help digest lactose either.

SB (2012-07-31 11:59:49)

Maybe doctor's would spend time if they were labelled pre-clinical, you know, like pre-hypertension and pre-diabetic and pre-cancerous and pre-obese and other excuses for making patients out of healthy people.

Txomin (2012-07-31 17:28:48)

First, systematic academic/scientific fraud. Then, systematic medical malpractice. The only thing missing now is addressing the systematic miscarriage of justice.

Adam (2012-07-31 17:41:53)

To me the whole premise & approach to GERD is backwards. The stomach is SUPPOSED to be Acidic & if you make it less Acidic, OF COURSE you are going to cause problems (C. difficile associated diarrhea, Pneumonia, Fractures, B12 deficiency, Hypomagnesemia, etc.). It seems like such a simple concept, I refuse to believe that intelligent people in Medicine can't grasp this. As far as GERD being sub-clinical, it is until it isn't. GERD can progress to Barrett's esophagus, which can in turn progress to Cancer.

Tomas (2012-08-01 06:18:49)

I pretty much agree with Javeux, low-carb or avoidance of certain type/class of food can work, but it's only a band aid. And unlike Seth, I am not surprised that doctors and food writers often fail to see the food - gut connection and are not aware of these "easy" fixes. Overall, the Time article looks like a manifestation of the Dunning-Kruger effect - which is when you only know little about something, you easily overestimate your skills or amount of knowledge you possess. Overall, nutrition is in its dark ages compared to other disciplines, e.s. physics

Patrik (2012-08-02 23:18:24)

A couple fundamental problems with medicine today. 1) Western medicine, in most cases, is embarrassingly similar to shamanism. Most of the time, doctors have little or no idea as what they're doing, even though they have great power and prescribe substances with great ceremony with great confidence. We like to laugh at the ignorance of physicians of the 18th century; my guess is that those of the 23rd century will laugh at us. Notable exceptions being where cause and effect are visibly obvious. For example, if I get by a car and my bones are broken and I am bleeding severely. In cases, like these, by all means, take me to a emergency room and fix me up with the latest and greatest in medical technology STAT! 2) Doctors are trained to fix the symptom, not the cause. They are also largely the puppets of Big Pharma. I suffered migraines my whole life until my 30s. I am prescribed meds to help me manage the pain. These meds are better than nothing. Then I quit eating grain-based products, no migraines ever. (Interesting to note is that I don't \*know\* if it is gluten or some other concomitant substance to which I am sensitive.)

Chuck Curre (2012-08-07 12:45:19)

I believe that food is the cause and the cure - Let food be your medicine and medicine be your food. I suffered from GERD for many years, was a Prilosec addict, then discovered Paleo/Primal/etc. Eliminating grains in effect eliminated the dairy - I didn't drink milk ala carte and drank my coffee and tea black. No more GERD no more Prilosec. I was able, after several months, to add back grass fed cream and butter with no obvious consequences, however, plain milk and yogurt still caused a little

heartburn. A few weeks ago I decided to try raw milk and so far all is good. And, the pleasure of a cold glass of milk is under appreciated. I have also noticed a small positive change in body comp - lost some stubborn lower (below the navel) belly fat. So, when it comes to milk, pasteurization and homogenization, could be the problem - not the milk per se. It would be interesting to see if Mark Bittman would be willing to challenge his biases and give raw milk a try. FYI - I am 65 yrs old and probably genetically tolerant of milk (real milk) due to Swiss ancestry.

## 7.8 August

### My Dental Exam: Good Gums (2012-08-01 05:00)

A week ago I had my teeth cleaned. So dirty! said the dental hygienist. This wasn't surprising. Because I am in China a lot, I get my teeth cleaned only twice per year. Long ago they got dirty so fast my dentist insisted on four cleanings per year. "But aren't my gums okay?" I asked the hygienist. They felt okay. Not tender. They didn't bleed when I flossed (which wasn't often). No, she said. You have pockets of 5 (= 5 mm depth). There is bleeding. Indeed, when I washed out my mouth with water at the end, there was some blood.

Yesterday I had my teeth examined. The hygienist was wrong. Almost all my pockets were 2's, with a few 3s. That's very good and a vast improvement from the 4s and 5s I had before I became a big fan of flaxseed oil. My gums improved exactly when I started drinking flaxseed oil, no doubt because the omega-3 in flaxseed oil reduces inflammation. My gums were fine in spite of all the plaque - which is supposed to make gums bad. Apparently the hygienist was so devoted to her theory (lots of plaque = bad gums) that she failed to see an exception she stared at for 30 minutes.

There is a well-established correlation between gum disease and heart disease (more gum disease, more heart disease), probably because both are caused by inflammation. So good gums is very good news - it shows I am doing a good job of reducing inflammation throughout my body. These results also support two of my pet theories:

1. Studying what foods make the brain work best is a good way to improve overall health. I started studying flaxseed oil, and how much to take, because I discovered by accident that it improved my balance. Experiments (what is the effect of flaxseed oil on my balance?) soon showed the optimum amount/day was more than flaxseed oil makers recommended! Before I started eating lots of butter, the optimum for me was about 3 tablespoons/day. After I started eating lots of butter, the optimum seems to have gone down to 2 tablespoons/day. Gum improvement seems to be easy to notice at about 1 tablespoon/day.

2. Our health care system fails to get the simplest things right. Omega-3 is not a mysterious nutrient. It has been shown to improve health in thousands of studies. It is well-known that it is anti-inflammatory. It is also well-known that too much inflammation is a major problem. Even so, our health care system has failed to grasp that a large fraction of the population eats too little omega-3 and this has an easy fix. Other examples of failure to get the simplest things right include [1]gastroenterologists not realizing that digestive problems may be caused by food, [2]dermatologists not realizing that acne may be caused by food, and everyone not realizing that [3]cutting off part of the immune system (tonsillectomies) is a terrible idea.

What other simple things does our health care system get wrong?

1. <http://blog.sethroberts.net/2012/07/31/mark-bittman-glimpses-a-big-truth/>

2. <http://www.freakonomics.com/2005/09/15/seth-roberts-on-acne-guest-blog-pt-iv/>



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Tomas (2012-08-01 06:38:37)

The case of omega3 is not that easy. Yes, it's been confirmed that they can help - but only short-term. Long-term, the good results vanish or even are negative. The mechanism behind may work like this - initially, O3 displace O6, which means less inflammation. But gradually, PUFAs build up in the body and cause trouble (read: oxidation). O3s are even more "fragile" than O6s because of the position of the double bond - one more reason to think that loading on them may not be a good idea. What works for me is cut PUFAs in general and get enough fat-soluble vitamins. The result is basically same as yours - some plague, no carries, ok gums - with less flossing and brushing than before. Seth: The improvement produced by omega-3 is "only short-term"? The improvement in my gums has lasted six years.

Jon (2012-08-01 07:16:10)

How do you consume your butter? I usually only like it with bread products but I've heard some opine that animal fat and wheat are toxic for the body. I don't know if that is true or not but I've found that cutting down on wheat does help me to maintain my weight better, along with your sugar water treatment. Seth: I eat my butter with small thin pieces of roast beef. If animal fat is toxic for the body, why does butter taste so good?

John (2012-08-01 07:35:19)

As Tomas sort of says, omega-3s can help short term because they block arachidonic acid metabolism. High amounts may be a long term problem, but the long chain 3s still seem okay for the brain. It seems safer to just consume low amounts of each though.

Tuck (2012-08-01 08:01:01)

The basic thing that doctors get wrong is that they think their patients are non-compliant or idiots. Sure that's true in some cases, but as someone who now eats in opposition to the standard advice, I can tell you: it's hard. EVERYONE else is eating high-carb, low-fat, as they've been advised to by the government. The medical profession seems to think that the fact that their advice is not producing the result they desire (a low fat diet is not reducing fat) is because their patients are non-compliant liars... They (speaking broadly) don't consider the other possibility, that their advice doesn't produce the desired result. It's much easier to think that your patients are liars. One regularly sees this in the literature: "dietary interventions don't work..." No, dietary interventions work really well, as the paleo and low-carb studies show; what doesn't work is the standard advice. Also, on the omega-3/omega-6 front: "As Tomas sort of says, omega-3s can help short term because they block arachidonic acid metabolism." This is not correct. "As arachidonic acid was not provided by the diet, it can be concluded that alpha-linolenic acid does not inhibit chain elongation and desaturation of linoleic acid to arachidonic acid in man." <http://www.jlr.org/content/27/4/421.short> I suspect that if Seth is seeing improvement in his dental condition because of eating flax oil, it's because the flax oil is altering the ecosystem in his mouth to a more beneficial one, or because the cells of his mouth are able to use it directly, and in place of a carbohydrate-based ecosystem/substrate. I've experienced the same improvement without short-chain n-3 consumption, through eating a low-carb/high-fat diet, but I don't eat much short-chain n-3 fats.

dearieme (2012-08-01 13:55:46)

"How do you consume your butter?" Betwixt toast and marmalade. Between oatcakes and cheese. On boiled potatoes. On steamed vegetables. (Who eats peas without butter on them; or broccoli?) As garlic butter on steaks. In most sauces that my wife makes in her cooking, and in her soups. In sandwiches.

Antonio Pedro (2012-08-01 15:29:26)

"If animal fat is toxic for the body, why does butter taste so good?" I don't really follow that logic. Lot's of people love trash

food. But maybe I am missing something. Cheers, Seth: The logic is that evolution would have not caused us to want to eat something that is toxic.

dearieme (2012-08-01 17:47:22)

"How do you consume your butter? " Another possibility is as ghee, with Indian food. Seth may know whether it's healthy.

Alex Chernavsky (2012-08-01 18:10:50)

I've been taking approx. 3 tablespoons of flaxseed oil daily for about three years. I noticed that I have considerably less staining on my teeth. But, sadly, my pockets have not decreased in size. They're still pretty deep. The last time I visited the dentist, my hygienist said that she'll have to do a deep-cleaning soon. Not sure if that procedure works or not, but I scheduled an appointment for September.

Antonio Pedro (2012-08-01 20:39:47)

So what would explain trash food or bad eating habits more generally? I am now living in US (Los Angeles) and I am surprise that many actually \*prefer\* trash food. Best, Seth: A great deal of time and energy has gone into learning how to fool people into eating food that is bad for them but profitable for the seller. For example, we like all fats – evolution's way of getting us to eat animal fat (good). But our liking for fat also makes us like food made with plant fats (some of which are bad).

Tomas (2012-08-02 02:50:58)

Tuck, for PUFA metabolism I consult Chris Masterjohn's articles. He clearly states that Too much LA, ALA and EPA (twenty-carbon omega-3 eicosapentaenoic acid) can interfere with the body's production and utilization of AA and DHA. Seth: I didn't say that, I don't know what you are doing. I was just speculating why our health care system supposedly fails to see the problem.

Ashish (2012-08-02 17:16:47)

My gums have seen a similar reduction in problems (from 3s and 4s and 5s to 2s) over the past couple of years. I've been taking Omega 3 pills for longer than that, so as far as I can tell, the improvement is due to oil pulling - in my case with sesame oil. What amazes and infuriates me about this is that my dentist and hygienist, who have been managing my oral care for years, are so completely uninterested in what has changed to cause the improvement. I've tried to tell them about oil pulling, but if it's not in their manual, it doesn't exist. (And their other patients won't be hearing about it.)

Morris (2012-08-02 19:39:44)

I have suffered from periodontal gum disease for many years despite following dentists' instructions. Things slowly got worse until 3 years ago when I got a bad flare and lost 3 tooth implannts. I decided to look into the causes myself and found that this is a systemic microbial disease which also affects connective tissue and the heart. I changed my diet, rest and exercise regime. Now 2 years later my gums have (and continue) improved greatly, tartar deposition rates have decreased so much that 6 month cleaning is now the norm (not 2). I see like improvements in my joints. My diet includes ample w-3 fats from seafood.

David (2012-08-02 23:57:26)

I have used a tooth powder (named "Ecodent", made in Wisconsin) for a number of years, and it has resulted in great gum health. The key is to brush within five minutes of eating, always, at least initially. Google "Nara" for background.

shtove (2012-08-06 16:06:53)

My gums are fine. Last checkup didn't need a clean, contrary to previous monthly check ups. The gap between last check up and this was 9 months, in which period I brushed with coconut oil twice a day, one of these with sodium bicarb added. Also on low inflammatory diet a la paleo. Don't take industrial seed oil, like flaxseed - just ghee, coconut oil, animal fat (including beef drippings) olive oil and tinned sardines/anchovies/salmon fillets. Is it the case that the effect of these O3 oils will wear off?

## Assorted Links (2012-08-02 05:00)

- [1]Interview with Wardeh (pronounced Wor-dee) Harmon about fermenting foods. Interesting sauerkraut recipe.
- [2]Several thousand people "like" a fake company advertised on Facebook. "Facebook feels my experiment is worthless."
- [3]Weight loss and elimination of psoriasis. "It's possible to control psoriasis with diet. The medical community doesn't seem to be aware of this, but I am completely psoriasis free after years of being covered in it."
- [4]More evidence that a lot of health care spending is wasted. "The positive association between outpatient spending and inpatient spending we find is consistent with the Dartmouth view that much health care spending, in this case outpatient spending, is "supply sensitive" and largely without substantial health benefit." Via [5]Marginal Revolution.

Thanks to John Batzel.

1. <http://www.permies.com/t/16355/cooking-food-preservation-food-choices/Interview-Wardeh-Harmon-fermenting-foods>
2. <http://www.bbc.com/news/technology-18819338>
3. <http://lifesacker.com/5930378/how-i-lost-100-pounds>
4. [http://www.nber.org/papers/w18255.pdf?new\\_window=1](http://www.nber.org/papers/w18255.pdf?new_window=1)
5. <http://marginalrevolution.com/marginalrevolution/2012/07/assorted-links-524.html>

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Tuck (2012-08-02 07:01:15)

The cessation of psoriasis was probably a function of ceasing to eat wheat, rather than of losing weight... "[1]Psoriasis in a nationwide cohort study of patients with celiac disease." "[2]Serologic markers of celiac disease in psoriatic patients." Lots of mystery skin ailments seem to be caused by wheat consumption, not just dermatitis herpetiformis. What's interesting is the excema, they're now finding, is caused by a breakdown in the tight junctions of the skin. Celiac's hallmark is the breakdown of tight junctions in the intestine, but obviously it can also affect the skin, since dermatitis herpetiformis = celiac disease. It will be interesting to see what the mechanisms turn out to be for non-celiac gluten sensitivity...

1. <http://www.ncbi.nlm.nih.gov/pubmed/21654830>
2. <http://www.ncbi.nlm.nih.gov/pubmed/18384553>

Darius Bacon (2012-08-02 12:37:28)

I've seen psoriasis apparently cured by a vitamin-D/K combo. Sunlight by itself helped but did not tame it. (Self-diagnosis, never went to a doctor about it. Using the Thorne Research D/K2 droplets and I'm curious if anyone else has seen this effect. Vitamin D by itself didn't do it either.) This jibes with the article where he attributes it to green veggies, which tend to have K.

garymar (2012-08-06 00:58:57)

The fake Bagel Company was interesting. The vast majority of "likes" came from Egypt, Indonesia, and the Philippines. Maybe Facebook is so new for these people that they click the Like button to indicate "I have read it". Probably a lot of it is simply, "It was written in English but I understood it!" Notice that he got almost no response from English-speaking countries.

## Whose Side is the FDA On? (2012-08-03 05:00)

The FDA is supposed to protect Americans against unsafe drugs – drugs with bad side effects, for example. According to [1]this interview with Ronald Kavanaugh, a former FDA employee who worked there 10 years, that is not what actually happens. Here are excerpts from the interview:

I think most people would be shocked at how malleable safety data is. Human studies are usually too short and the number of subjects in them too small to adequately characterize [= detect] the most dangerous risks.

Human clinical pharmacology trials are typically done in Europe, yet clinical pharmacology reviewers at FDA have been barred from analyzing this information prior to studies being conducted in the US.

If reviewers say things that companies don't like, they will complain about the reviewer or they will call upper management and have the reviewer removed or overruled.

When you do raise potential safety issues, the refrain that I heard repeatedly from upper management was, "where are the dead bodies in the street?" Which I took to mean that we only do something if the press is making an issue of it.

FDA's response to most expected risks is to deny them and wait until there is irrefutable evidence post-marketing, and then simply add a watered down warning in the labeling.

Which is why bad side effects are sometimes discovered after FDA approval.

Thanks to Anne Weiss.

1. <http://truth-out.org/news/item/10524-former-fda-reviewer-speaks-out-about-intimidation-retaliation-and-marginalizing-of-safety#.UBqaMibyT2c.email>

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Alex Chernavsky (2012-08-03 07:06:37)

See also: <http://alison-bass.blogspot.com/2009/10/is-there-link-between-antidepressants.html>

Tuck (2012-08-03 08:24:14)

Yeah, it's known as "regulatory capture". It's one of the primary criticisms of government regulatory efforts: "Alternatively, it may be better to not create a given agency at all lest the agency become victim, in which case it may serve its regulated subjects rather than those whom the agency was designed to protect. A captured regulatory agency is often worse than no regulation, because it wields the authority of government. However, increased transparency of the agency may mitigate the effects of capture." [http://en.wikipedia.org/wiki/Regulatory\\_capture](http://en.wikipedia.org/wiki/Regulatory_capture) I did a post about this a while ago. One of the reasons the FDA was created was to prevent adulterants like sawdust (primarily composed of cellulose) from being added to foods. Now, the FDA actively promotes adding cellulose to foods, at the prompting of industry. The FDA's not on the consumer's side any more. And it resists all efforts at transparency. "[1]Sawdust and Ice Cream"

1. <http://yelling-stop.blogspot.com/2011/05/sawdust-and-ice-cream.html>

dearieme (2012-08-03 09:26:35)

I have long wondered at the odd but common assumption on blogs that only American trials count - it hadn't occurred to me that it carried the force of law. It would be far more sensible for the US to combine European data with US data taken on blacks and mestizos (spelling?) - that way you'd have a better chance of getting studies with enough of those two racial groups to give them some reasonable assurance of safety. In fact, you could argue that the present US system carries needless risk for those two groups in particular.

dearieme (2012-08-03 09:27:22)

And come to think of it, perhaps Asian racial groups too.

Elizabeth Molin (2012-08-03 12:09:38)

And women? Except in the case of something like a birth-control pill, studies are often done only on male subjects.

dearieme (2012-08-03 14:30:31)

Elizabeth: really? How extraordinary.

Ed Terry (2012-08-17 12:41:07)

The few scientists at the FDA who have the courage and conviction to report questionable practices in their agency now have their email monitoring. The whistle-blower act, which is supposed to protect government employees against reprisal for reporting illegal and dangerous practices at any agency is ineffective. Management and supervisors manipulate the system against whistle blowers, often leading to job loss. I suppose these federal employees ought to resort to the US Postal Service to deliver their concerns to members of congress.

### Assorted Links (2012-08-04 05:00)

- I want to take this! [1]Harvard class on fermented food.
- Psychological stress (depression, etc.) [2]associated with more death and heart disease even at low levels of stress.
- [3]Paleo diet clears up acne. "As someone with bad acne growing up, I remember very clearly going to the dermatologist and them CLEAR AS DAY stating that there is no link between food and acne."
- [4]The world's biggest breast cancer charity misleads women about the value of mammograms.

Thanks to Tim Beneke and Bryan Castañeda.

1. <http://news.harvard.edu/gazette/story/2012/07/when-microbes-make-the-food/>
2. <http://www.bmj.com/content/345/bmj.e4933>
3. [http://www.reddit.com/r/Paleo/comments/xkt31/an\\_added\\_benefit\\_of\\_paleo/](http://www.reddit.com/r/Paleo/comments/xkt31/an_added_benefit_of_paleo/)
4. <http://www.bmj.com/content/345/bmj.e5132?etoc=>

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Txomin (2012-08-04 07:02:13)

Have you seen the latest ads asking for support of lung cancer research? The "do they deserve to die" kind? Seth: No, haven't seen them. Good point.

Shawn (2012-08-04 12:02:44)

Your acne link above is broken. Seth: Fixed, thanks.

James (2012-08-04 20:03:59)

In Queensland, Australia, breast cancer screening has been devolved from a state to a local hospital responsibility, which some are seeing as cancelling it entirely (partly because a \$44m/year agency is being defunded). I am tempted (but don't, because politics) to post about mammograms being not very useful.

dearieme (2012-08-04 22:20:23)

In Gerd Gigerenzer's excellent book on Risk he remarks that German oncologists overwhelmingly reserve their recommendation of mammography (for the non symptomatic) to their patients. They don't apply it to themselves or, if male, to their wives. Seth: How telling. Sort of like the Freakonomics story about real estate agents..

Nibbles: Bananas, Banana genome, Moringa, Hunger games, Deforestation, Digital herbarium, NTFP in Tanzania, CC in Tanzania, CC in Nepal, CC and Ceanothus, Potatoes, Fellowships, Fermentation (2012-08-07 03:57:46)  
[...] Seth Roberts says "I want to take this! Harvard class on fermented food." Me too. [...]

## **Fibromyalgia Improved by No Longer Eating Fruits and Vegetables (2012-08-05 05:00)**

A British doctor in her 40s [1]suffered from a range of problems that all started around the same time:

My legs ached and tingled, I felt tired and my mood was flat. I slept badly — I suffered from restless legs and my muscles kept twitching — and couldn't concentrate during the day. . . I stopped enjoying going out and couldn't get enthused about seeing friends. . . . In December 2010, I had great trouble climbing into the loft to get the Christmas tree, having neither the strength nor the enthusiasm for it. . . . I longed to retire early, so I could stay in bed all day.

She diagnosed herself as having fibromyalgia, a disease usually said to have "unknown cause". Treatments for fibromyalgia

include "painkillers, antidepressants, anti-epilepsy drugs, and cognitive behavioural therapy," wrote the doctor.

She noticed her symptoms varied with what she ate:

The muscle pains were worse after eating carrots, potatoes and parsnips. My son's girlfriend made a delicious parsnip soup for a dinner party last year, and I enjoyed a big bowlful. The following day my legs were aching worse than ever, and I felt terrible. . . . [Using a food diary, I learned] I was also badly affected by potatoes, green beans, carrots, almonds and tomatoes. I searched the internet and found that, among many different theories, some suggested a link between fibromyalgia and dietary oxalate, though this isn't recognised by the medical profession.

Many vegetables contain a lot of oxalate, which acts as a pesticide.

I tried a low oxalate diet, cutting out virtually all 'healthy' food — I avoided most fruits and vegetables, salads, beans, nuts, wheatgerm, soya — as well as tea, coffee and chocolate. I could eat meat, fish, dairy, cheese, white rice, white pasta and only low-oxalate fruit and vegetables, such as bananas, peas, mushrooms, onions and cauliflower. Within a few days the symptoms were totally gone; I could walk without

pain and sleep normally. My motivation came back — in the eight months since starting the diet I've painted the house, landscaped the garden and booked a holiday. Having suffered from the need to pass water frequently, my nocturnal trips to the bathroom have ceased. And, bizarrely, my teeth have felt clean all day long. . . . I've found eating any high-oxalate food results in tingling legs and muscle pains within a matter of hours. I've become so adept at noticing the signs I can tell what foods and drinks have oxalates in a short time after ingesting them.

Would her discovery help others? She suggested the diet to five women in her practice.

They had all presented with at least four of the following [eight] symptoms: muscle pain, tingly legs, fatigue, irritable mood, bladder irritation, poor concentration, restless legs and poor sleep. I asked them to score the severity of these symptoms before and after changing to a low oxalate diet. . . . Out with bran-based cereals, nuts, spinach and smoothies, and in with Rice Krispies, sausages, shortbread and cola! . . . All the patients improved significantly — on average their symptom score halved after three weeks of the 'unhealthy' diet.

This surprises me. I would have thought that a condition as vaguely defined as fibromyalgia would have more than one cause.

In any case, this is extraordinary progress – published in The Daily Mail. Surely more important than any of the 7000 peer-reviewed articles on fibromyalgia I found via PubMed. A PubMed search for "fibromyalgia oxalate" turned up nothing.

[2]More about a low oxalate diet. Thanks to Dave Lull.

1. <http://www.dailymail.co.uk/health/article-2174474/The-GP-gave-fruit-veg-cure-aches-pains.html>
2. <http://autoimmunethyroid.wordpress.com/2008/12/06/the-problem-with-the-low-oxalate-group/>

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dearieme (2012-08-05 05:32:41)

"Apparently she is the first person to make the connection." I suppose that rules her out for the Nobel in medicine/physiology, then? Seth: Since I wrote that I am no longer sure she is the first. A low-oxalate diet is promoted for various disorders, I learned, although apparently never in the PubMed literature. But, yeah, it's been a long time since anyone resembling an ordinary doctor, which she is, has won a Nobel Prize in medicine/physiology.

Jim Purdy (2012-08-05 06:52:55)

Just a little bit of amateur web searching turned up articles about *Oxalobacter formigenes*, which is a beneficial oxalate-degrading bacterium commonly found in the human gut. However, it can be destroyed by antibiotics, and perhaps indirectly by small intestinal bacterial overgrowth as a result of protein pump inhibitors. So, quit the antibiotics, quit the PPIs, take some yogurt and other probiotics, and keep eating lots of fruits and veggies that provide fiber for your good gut bacteria, But I ain't no doctor. I'm just a cranky old patient. So I don't give (or take) medical advice.

Adam (2012-08-05 18:00:47)

Some common foods high in Oxalate are "SCRT": Spinach Chocolate Rhubarb Tea I believe Fibromyalgia is more common in women & there is at least an old wives' tale that women eat more chocolate than men. Maybe I'm grasping at straws here.

Anyway, rather than cutting out ALL vegetables, maybe a 1st approach would be to cut out these big 4 and see if there is improvement? If so, then one might consider further reducing other sources.

dearieme (2012-08-06 03:03:02)

Perhaps the important lesson is that wittering about "healthy eating" is pointless if the advisee doesn't know what is healthy for her. (It's easier for men, who know that sausages are healthy for them.)

Jenny (2012-08-06 04:19:24)

One of the main antibiotics that destroys *Oxalobacter formigenes* in the gut is Augmentin - commonly prescribed with a PPI to enable you to 'tolerate' it. No wonder you can end up with oxalate overload afterwards. The Paleo diet is 'half-way' to the low-oxalate diet, which probably explains why many people get improvements but not quite full health on the paleo. As a gluten-abstaining coeliac, who still has fibromyalgia, I will definitely try modifying my diet to see if I can remove the fibromyalgia. I would like to get fit without severe pain all the time!

Jenny (2012-08-06 04:29:05)

The same doctor mentioned in the article above also said 'It may also be that certain bacteria in the bowel normally break down the oxalate, but that these bacteria may disappear, perhaps after a course of antibiotics. There must be genetic factors, too, as fibromyalgia is more common among families of those affected.' Yesterday, I came across an article stating that gut bacteria are altered during pregnancy (apparently to increase insulin resistance so that the baby gets more glucose) and this alteration is retained. This might explain why more women end up with fibromyalgia - and why more women can never shed their 'baby' weight.

### **Vitamin D3 Timing and Sleep: More from Tara Grant (2012-08-06 18:53)**

It is [1]from Tara Grant, a California journalist whom I met at the 2011 Ancestral Health Symposium, that I got the idea that the time of day you take Vitamin D3 matters (morning good, evening bad). She recently wrote more about her experience:

I had never had a sleep problem growing up, or during my 20s or early 30s. I kept a regular sleep cycle, woke up rested, preformed well in school and never needed to have naps. However, when I was in my mid-to-late 30s, the sleep problems started. [She woke up many times per night.] This was around the same time I went Primal and adopted several changes in my diet and lifestyle, including taking supplements. One of those supplements was Vitamin D3 [10,000 IU/day], something I had never taken before.

The sleep problems persisted for a couple of years. When I changed the time of day I took my Vitamin D [making sure to take it in the morning, never in the evening], they resolved. I didn't change anything else, as I didn't need to.

My experience has been that Vitamin D3 in the morning improved my sleep and that the dose needed to get this improvement was more than 2000 IU. Doses of 4000 IU and more were effective. [2]More than 20 people have had similar experiences. A few people have found that Vitamin D3 in the morning did not improve their sleep.

1. <http://blog.sethroberts.net/2012/01/19/vitamin-d3-and-sleep-more-good-news-from-primal-girl/>

2. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>



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Tom Passin (2012-08-06 20:05:54)

I have slept very badly for many years. It is hard to get to sleep and then I wake up often. I also have sleep apnea, for which I use a CPAP machine while sleeping, which doesn't help because if the pressurizing mask slips it may leak, which tends to wake me up. I've been taking 4000 units/day of D3 in the morning after reading about it here. It does help, but only modestly. But what I do notice is that I tend to get very sleepy about 12 - 13 hours after taking the D3. I don't necessarily fall asleep easily or sleep better if I go to bed at this time, though sometimes I get so sleepy I can't do much else besides lie down. This period of sleepiness seems to last for a few hours. If I get through it, I wake up enough to function all right until I go to bed. If I have gotten through the sleepy period in the evening, I will generally sleep about as well as if I had gone to bed earlier during the sleepy time. The effect will last for one or two more days if I omit taking the D3. Sometimes I adjust the time I take the D3 according to what I may be doing in the evening, such as being at a concert or driving home, to try to avoid getting to sleepy at the wrong time. That's only partly successful. Seth: You might want to try a range of morning times to find what works best. I noticed that taking Vitamin D3 at 7 am had a much better effect than taking it at 8 am.

ChristianKI (2012-08-07 01:37:44)

I think it would be interesting whether "in the morning" mean the same thing for everyone. There are people who get up at 5 o' clock and there are people who get up at 11 o' clock. Maybe the 11 o'clock people don't get the full benefits of taking vitamin D3 after awakening? Seth: I agree. My experience has been that I needed to try a range of different morning times (from about 6 am to 9 am) to find the time that worked best.

Tom Passin (2012-08-07 08:52:53)

I have tried various morning times. So far, I haven't noticed any convincing results except for the 12-hour sleepiness one. I could try again, now that I'm more familiar with the normal effects that I get.

Terry Elliott (2012-08-08 16:04:52)

My wife has had recent good luck with D3, but I have had much better sleep with one ibuprofen. For some reason I am sleeping 30-60 minutes longer and having way more dreams. Anybody else have similar experiences?

Bruce McCullough (2012-08-09 14:44:58)

I found that 5000 IU in the morning eliminates my restless sleep and makes falling asleep much easier. Originally I was at 7000 IU, and dropped it to 4000. I went to a conference and took only 2000 IU every morning. What a mistake. restless sleep came right back. Got home and increased back to 5000. Time of morning appears to be somewhat irrelevant to me. Sometimes I take it at 6am, usually between 7 and 8, sometimes as late as 9am. 9am may well be associated with decreased sleep quality, but 6-8am are not.

### **The Cost of Hope by Amanda Bennett (2012-08-07 05:00)**

I came away from *The Cost of Hope* by Amanda Bennett (copy sent me by publisher) full of admiration for two people the book barely mentions: Bennett's parents. How did they raise her to be such a competent and resourceful person? The book isn't about her. It is mainly about her husband's fatal illness and their marriage. She never brags, but glimpses of staggering competence slip through. In 2006,

I am the only editor of a major newspaper in the United States [the *Philadelphia Inquirer*] to run the Danish cartoon of Mohammed wearing a bomb on his head instead of a turban—the cartoon that causes

riots in Europe. By the following Monday, protesters are in front of our building carrying signs with my face and the face of Hitler. Joe Natoli, my publisher, and I plunge into the crowd, shaking hands, talking to families, listening to their stories. The crowd turns friendly. I emerge with several copies of the Koran.

She tells this story because her husband is proud of her, which means a lot to her:

The pride I see on Terence's face . . . keeps me going, even when I am scared.

However, she was courageous before she met him. In 1983, she took a job in Beijing as a correspondent for the Wall Street Journal, which is where she met her husband. Their first encounters, she says, were a series of fights.

Most of the book is about what happened when her husband came down with a rare form of kidney cancer – especially how much the treatments cost. For \$600,000 – paid mostly by insurance – they bought a few more years of life together. It was worth it, says Bennett, adding but did it have to cost so much? Her best insight comes when she notices the wildly different prices paid for exactly the same treatment (CAT scans) – exactly the same treatment, same machine, same operator. The "retail" rate is, let's say, \$20,000. One insurer pays \$5,000, another pays \$1,000. She wonders why. Her moment of insight comes when she is back in Beijing at a fakes market with her 10-year-old daughter. At such markets, tourists are told prices wildly above what the seller will accept. In one case a fake Chanel purse is offered for 2000 yuan ( \$300). A woman who pays 200 yuan walks away happy. "I got it for 200!" she tells her friends. Bennett's (adopted Chinese) daughter pays 20 yuan. (Apparently Bennett has her parents's parenting skills.) Wildly inflated retail prices for health care – so much more than what sellers will accept that they are almost meaningless – exist to take advantage of poor negotiators, Bennett realizes.

The Cost of Hope was a pleasure to read and, as I've said, Bennett is an astonishing person, but it omits an important point. Bennett, like most people who write about the high cost of American health care, fails to point out its central tenet: [1]First, let them get sick. Bennett's husband died young (early 60s). He was significantly overweight, how much we aren't told. Apparently he had diabetes – again, few details are given. Obesity and diabetes are preventable. One of the first treatments her husband receives for his cancer is IL-2, meant to boost the immune system. What about boosting his immune system before he got sick? For example, by improving his sleep. This [2]neglected approach might have prevented or delayed her husband's cancer and extended his life much more cheaply and painlessly than what happened. The biggest flaw of her book is her failure to ask – literally ask, such as ask the head of the National Institutes of Health – why prevention, especially cheap prevention, is ignored.

1. <http://blog.sethroberts.net/2011/09/18/first-let-them-get-sick/>

2. <http://blog.sethroberts.net/2012/06/11/more-examples-of-mainstream-health-care-ignoring-the-immune-system/>

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Robin (2012-08-07 08:03:20)

I'm curious - why do you think her character is the result of how her parents raised her? The people I know who are the most resourceful have been those who, essentially, raised themselves without much parental involvement (not that my experience is in any way representative of the wider population). But even if we were to credit the parents, was it their genes or upbringing? Sorry to trot out this old question but I do find it odd that you left with, above all things, admiration for her parents.

Seth Roberts (2012-08-07 13:49:32)

Why do I admire her parents? There is a famous poem by Philip Larkin that begins "They fuck you up, your mum and dad. They don't mean to but they do..." He wasn't joking. I am utterly sure there are many ways to raise children that omit important things (which might include periods of independence and stress) and cause those children to be less effective and happy adults than they otherwise would have been. Anybody who thinks that genetics ever acts by itself – in the absence of the right environment – understands very little about development. Parents control the environment. A study that suggests "parents don't matter" may simply be showing that parents don't know what the right environment is.

Robin (2012-08-07 21:22:32)

Yes that opening line resonates! I think it is my own bias to attribute people's successes to their own efforts (and fortuitous circumstances) whereas I'm more likely to think "bad parents" when they are, for want of a better term, fucked up. In my own family, we have one set of parents but wildly WILDY different outcomes for the siblings... from prison to medicine and investment banking. It is hard to not be overly influenced by such data points when they are so close to home.

Robbo (2012-08-08 08:36:46)

Hmm "“They fuck you up, your mum and dad. They don't mean to but they do...” He wasn't joking.” He wasn't a scientist either, argument from poetry isn't one of the classic fallacies but it ought to be. Hmm "Parents control the environment." Not really, sure they are an important influence, reducing as children grow up, but school, TV and the peer group are also important influences so that 'control' is not the word. "...parents don't know what the right environment is." For sure, but who does ? Maybe different children thrive best with different parenting.

Alex Chernavsky (2012-08-08 10:44:49)

Seth, are you then skeptical of the arguments that Steven Pinker presents in his book, *The Blank Slate*? (He argues that your parents have surprisingly little influence on your character [aside from supplying your genes].) See also: "[1]Do Parents Matter?", by Malcolm Gladwell. Seth: Yes, I am skeptical of both books – Pinker and Gladwell (or rather the woman, Judith Harris, that Gladwell writes about).

1. [http://www.gladwell.com/1998/1998\\_08\\_17\\_a\\_harris.htm](http://www.gladwell.com/1998/1998_08_17_a_harris.htm)

AM (2012-08-08 23:00:40)

I don't know Amanda Bennett or her parents, but I'd hate to think that someone would give MY parents the slightest bit of credit for anything I happen to accomplish in life. I'm sure I'm not alone.

eshetti.co.za (2012-08-09 02:50:30)

Seth, are you skeptical of arguments that Steven Pinker presents in the book, *The Blank Slate*? Seth: You mean arguments about how parents don't matter? Yes.

## **What Was Mark Bittman Thinking? (2012-08-07 08:24)**

[1]Stephen Dubner has drawn my attention to a recent comment by Mark Bittman, the main food writer at the New York Times (the most prestigious and influential newspaper in the world), [2]on his NY Times blog:

[3]Sysco is the latest food giant . . . to come out against gestation crate confinement of pigs. . . .

Speaking of pigs, the VP of PR for Chick-fil-A dropped dead of a heart attack the week after the chain's latest homophobia/anti-gay marriage scandal.

As Dubner says, my first reaction is: Was the Times website hacked? Apparently not. My second reaction: Is Bittman in good health? If so, I hope he will explain why he thought it was a good idea to call a person a pig. That the person

in question recently died and his family is grieving makes this even stranger. Dubner emailed Bittman about it but got an automated reply.

More. Bittman removed the comparison and [4]apologized.

1. <http://www.freakonomics.com/2012/08/07/speaking-ill-of-the-dead-apparently-okay-if-the-dead-worked-for-chick-fil-a/>
2. <http://bittman.blogs.nytimes.com/2012/08/03/team-u-s-a-links/>
3. <http://lists.hsus.org/t/6323269/24870703/5379/3/>
4. <http://bittman.blogs.nytimes.com/2012/08/07/a-note-to-my-readers/?gwh=7A55B30C28FF8EA88F3544B6ADC1C9E4>

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Mike C (2012-08-07 10:41:37)

The apparent joke/gibe was inappropriate and insensitive. Ethically, it's maybe questionable, depending mainly on whether the spokesman's family is likely to happen upon this comment. The behavior of Cathy and Chick-fil-A is simply appalling. Ethically, it's utterly out of bounds. It's important to call things out, but also to note the relative perspective.

Adam (2012-08-07 16:48:45)

What is wrong with calling a person a pig? Just because someone died doesn't mean we have to pretend they were fabulous. Maybe the guy was cruel & evil. Maybe his family isn't grieving, but celebrating. I'm not saying it is likely, but it is possible. Seth: Bittman called him a pig because of the company he worked for, not because of his personal traits. Why is calling a person a pig a bad idea? Because I believe it usually does more harm than good. Leaders, of course, love conflict – it empowers them. For them, from a purely selfish point of view, treating other people as dirt really works. But the conflict (e.g., war) they cause by this behavior – which their followers imitate – is usually a terrible thing for everyone else (e.g., lots of people die). Most people aren't leaders. Bittman, for example, gains nothing by calling anyone a pig. He merely looks bad. The simplest answer to the question "why is calling a person a pig a bad thing" is: It makes you look bad.

Tom (2012-08-07 16:50:14)

Yes – a man's early death is only a **relative** tragedy, which must be carefully weighed against the fact that his boss's religious belief **miffs** you. Because the dead person is obviously a baddie. No way he might just be a decent African American executive nearing retirement after decades of just doing his job & providing a better life for his kids than he'd had. Read this and see if you're still as delighted by his death: [uga.edu/gm/ee/index.php?/single/2012/06/1573/](http://uga.edu/gm/ee/index.php?/single/2012/06/1573/) Oh, BTW, what specific part of Cathy's personal behavior was out of bounds or appalling, and why? And what specific corporate behaviors are you referring to? Has the corporation even expressed an opinion? Or are you just offended that they're not open on Sundays? A whole lotta conflation/sloppy thinking/bigotry on this issue. And it's kind of amazing how quickly a sense of entitlement has grown around gay marriage. It might be better to make sure Obama wins before you demonize people for expressing their religious belief....in an interview with a Baptist magazine, no less. (Pardon the relativism.) If Obama loses, gay marriage might not be as inevitable as some are thinking. (Hell, Obama only went all-in because Biden forced his hand by not being able to shut up!) How inspiring!

David Johnston (2012-08-07 18:59:46)

Either he didn't write what you said he wrote or more likely, he has changed it.

Tony (2012-08-07 21:40:46)

He changed it. I read it earlier today.

Adam (2012-08-08 03:08:23)

Tom wrote: "No way he might just be a decent African American executive nearing retirement after decades of just doing his job & providing a better life for his kids than he'd had." He might be, I don't know. Maybe Bittman can clarify what makes Don Perry a pig in his eyes.

JC (2012-08-08 03:48:05)

Bittman has apologised: <http://bittman.blogs.nytimes.com/2012/08/07/a-note-to-my-readers/>

Dapko (2012-08-08 06:29:04)

Yes, "demonizing people for religious belief" those poor poor victims who hide behind religion to justify hatred and discrimination. As the Westboro Baptist Church has shown, there is no limit to the depths that people will sink to justify these hatreds in the name of religion. Women shouldn't have access to birth control? Religion! Two consenting adults shouldn't marry? Religion! Evolution didn't happen? Religion! There is really no end to what a certain sector of society will be satisfied with when hiding their baser beliefs behind their "religion". Certain members of our congress actually felt emboldened to say that insurance companies should be able to refuse coverage for any procedure, pharmaceutical etc that they didn't believe in. Sorry Aunt Millie, no cancer treatment for you, it's against my religion! I don't think Bittman picked the best way to express his opinion on Dan Cathy and his restaurant, but I do think it's time for people to stop cowering in front of clearly discriminatory and hurtful beliefs just because they're done in the name of religion.

Tom (2012-08-08 07:54:01)

Again with the sloppy thinking. I guess being right means never having to reason anything through. *it's time for people to stop cowering in front of clearly discriminatory and hurtful beliefs* Wow, this is insane: "clearly discriminatory and hurtful beliefs" BELIEFS? You contend you deserve dominion over what they BELIEVE? Good luck with that. I'm sure it'll be an effective use of your time on Earth. Or does "people" not mean you, but merely gay and/or vegan columnists you agree with? In which case an end-zone dance on the occasion of another person's heart attack – an EMPLOYEE tasked with cleaning up his boss's mess – is hunky-dory? Please tell us: how many degrees of separation from the guilty party are required before death becomes too harsh a penalty? And what does "stop cowering" actually mean, since it makes no literal sense? Does "stop cowering" mean deface their outlets with 10 foot high graffiti? Because that is a literal crime, but inside the jurisdiction of your skull is merely the cessation of "cowering"? Or does "stop cowering" mean a closeted CFO from an unrelated company interfering with another company's business, harassing its helpless minimum-wage employee from the safety of his Lexus, then posting video of her on the web without her consent? While loudly and defensively asserting his heterosexuality? My hero! Way to not-cower! Back on Earth, what you think of as "not cowering" actually looks like boneheaded, vicious, tone-deaf narcissism.

Dapko (2012-08-08 11:28:46)

For someone who talks about reason, your post is certainly devoid of any. Sheesh, what a big pot of word soup teeming with hyperbole. Ten foot high graffiti? Harassing helpless employees? That's like accusing every pro-lifer of approving the gunning down abortion providers. I already stated that I don't think Bittman picked the best way to express his opinion about Dan Cathy, but why pay attention to anything I've stated when you can off on an outraged rant? I never stated that I wanted dominion over anyone's beliefs, I stated I wanted the right to question those beliefs without being told they are off bounds because they are religious beliefs. If someone doesn't believe in two consenting adults having the right to get married, let them make a coherent argument for why instead of hiding behind "my priest/pastor/religious text told me so". I really don't care what anyone believes until those beliefs start affecting other peoples lives that don't share those beliefs. Believe in heaven? Fine. Believe Jesus rose from the dead? Fine. Believe gays shouldn't marry? Why? Believe woman shouldn't have access to legal reproductive health care? Why? What gives you the right to have your religious beliefs negatively affect the lives of others? No one is forcing you to get an abortion or marry a same sex partner if you don't believe in those things. The same respect should be afforded to others who don't hold the same views.

BlueMorrissey (2012-08-08 14:53:39)

Seth, thanks for calling a spade a spade. As a Christian I believe what Christ says, which mentions nothing about hate, but

love. Some who are hateful are not true Christians, but want to belittle others to make themselves feel self-righteous. As a single man, i'm not zealous about the subject, but many parents do not want to live in a culture that promotes ideals that go against our beliefs and have their children believe what is not taught by our faith. The best solution would be to have the government get out of the business of sanctioning marriage. It is not biblical to put politics in the Christianity forefront. Christ said as much. God is love, that means everyone. I do not expect for one second for unbelievers to accept my ideals, or should anyone else who knows scripture. I do have difficulty understanding why those who are not religious to believe marriage to a same sex partner is necessary for happiness. Sorry, that so many on my side have come across as intolerant, but the same can be said for the other side. Also, where is the outrage against Muslims who put to death and are truly hate mongers of homosexuals. We ALL have done wrong and should not judge or expect others to believe as we do. If you do not believe as I do, then there is no reason to accept my view, but calling us all a hate group is not a good reason to condemn us for our beliefs. Tolerance. I hope we can all express our views without so much anger and hostility, but with open and honest discourse.

Margaret (2012-08-08 20:46:34)

BlueMorrissey: Thanks for most of that! (Mostly) quite reasonable. However, I would say: "where is the outrage against Muslims who put to death and are truly hate mongers of homosexuals" Well, they're not doing that in my town, or state, so I guess that's why we don't get as upset. What people do wrong here in America is more upsetting than what people do on the opposite side of the planet. It's just human nature to care more about things closer to oneself. And this? "I do have difficulty understanding why those who are not religious to believe marriage to a same sex partner is necessary for happiness." Well, why would one believe that marriage to an opposite sex partner is necessary for happiness? Or perhaps, since you're a single person, you'd rather not answer that. Anyway, what's the difference? Presumably many people, gay or not, wish to be married. Is that so odd?

BlueMorrissey (2012-08-08 21:04:59)

I understand we do not get outraged at Muslims because we do not interact with them much in this country. As a matter of fact I do not know any. By the way, they treat Christians in the same matter as homosexuals, so we can both agree that intolerance is wrong in every sense. You have a point about heterosexuals wanting to be married for happiness. I guess my own personal bias is that marriage is a religious ceremony and those who are not religious want marriage instead of a civil union. It's not odd I suppose. It doesn't affect me or Christians in the grand scheme of things. We believe Christ is God and all the other matters are societal and not a big concern of mine. I pray for Christians and non Christians all the same. We are all the same in some sense, but we just have different worldviews and should respect our differences. I just believe we can express our beliefs without being called a hate group just like gay people do not like being told God hates them, which is totally false. I do not have hate in my heart for anyone and I am sure many of those with different views feel the same. There are radicals on both sides. I do live in a bit of a cocoon, but have gay friends and relatives who I care very much for. I think the majority of true Christians feel the same way. Thanks for you reasonable response.

## **How Patrick Vlaskovits Discovered His Migraines Were Due to Wheat (2012-08-08 05:00)**

My personal science taught me that (a) there are useful things health experts don't know (b) that the rest of us can discover. I am curious how these discoveries are made. When [1]Patrick Vlaskovits [2]commented

I suffered migraines my whole life until my 30s. I am prescribed meds to help me manage the pain. These meds are better than nothing. Then I quit eating grain-based products, no migraines ever.

I asked him how he discovered the connection. He replied:

This was in years pre-Paleo – I played with Atkins and one day my wife said to me: "You haven't had a migraine for at least a month now." And it hit me, holy shit, I hadn't.

Until then, my whole life even as a small child, I would get insane mind-melting-migraines seemingly at random — and when they hit, my face would twitch and aside from the pain, I would experience hyper-light-and-sound-sensitivity. My response would be to sit the shower in the dark for hours on end and then crawl into bed to fall asleep and hopefully wake up sans headache. This was from grade-school through post-grad-school.

What no one had seen until then was the lag time between my digesting some wheat product and onset of migraine – usually about a day. Nowadays, I tend to eat wheat-free (and disallow it from my toddler's diet) but I will indulge in a NYC pizza or something similar if traveling – I reckon that about 10 % of those cheat instances I am hit with an earthshattering migraine.

BTW I mentioned this a few years ago to Ryan Holiday, and he mentioned it to his girlfriend – a few weeks ago I saw both of them in NYC, and she has a virtually identical story. Crazy.

He added later:

[After avoiding wheat] my nighttime tooth grinding also stopped as did my insomnia ["being tired but unable to fall asleep, would go to bed at 11pm, my mind would race for hours on end in a state of neither sleep nor being awake, I would finally fall asleep around 5 am, and have to get up at 730 am to go work, and be exhausted all day — this went on for years"] – generally, I feel 1000x better not eating wheat –

I have been tested with a skin-prick test and was told that that my results came back normal, not sensitive to anything.

I am unsure of what it is in wheat that I react to - an obvious culprit could be gluten in modern wheat, could also be mycotoxins (per Dave Asprey's thinking), could perhaps be pesticide residue; I simply don't know. – however, at the end of the day, it doesn't matter. A simple risk less change resulted in orders of magnitude change for the better.

Last thing, another family friend has a 10 year old who has migraines, I recounted my story to them and early evidence looks like health improvement via avoidance of wheat.

How well-known is this connection? A few articles mention it: [3]this one, for example. Here is [4]a whole paper – in 1979 – about how food causes migraines:

The commonest foods causing [migraines] were wheat (78 %), orange (65 %), eggs (45 %), tea and coffee (40 % each), chocolate and milk (37 % each), beef (35 %), and corn, cane sugar, and yeast (33 % each).

Thirty years later, this extremely useful information has yet to reach most migraine doctors, apparently. [5]An even older article (1976) said:

The 10 chief offenders among food allergens are cow's milk, chocolate and cola (the kola nut family), corn, eggs, the pea family (chiefly peanut, which is not a nut), citrus fruits, tomato, wheat and other small grains, cinnamon and artificial food colors. Food allergy results in a remarkable variety of clinical syndromes.

The Mayo Clinic website says that [6]migraines are sometimes caused by food but [7]fails to say that if you suffer from migraines you should try an elimination diet to look for possible causes.

1. <http://www.vlaskovits.com/>
2. <http://blog.sethroberts.net/2012/07/31/mark-bittman-glimpses-a-big-truth/#comment-990614>
3. <http://www.ncbi.nlm.nih.gov/pubmed/16362649>
4. <http://www.ncbi.nlm.nih.gov/pubmed/87628>
5. <http://www.ncbi.nlm.nih.gov/pubmed/946156>
6. <http://www.mayoclinic.com/health/migraine-headache/DS00120/DSECTION=causes>
7. <http://www.mayoclinic.com/health/migraine-headache/DS00120/DSECTION=prevention>

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Josh (2012-08-08 05:59:47)

Thanks for sharing Seth. I'll have to give this a try the next time my cluster headaches arrive.

dearieme (2012-08-08 07:32:34)

My blocked sinuses are made worse by citrus fruit. Dreadful shame - I love freshly squeezed orange juice, but there you are. But I'm not so sensitive that I've had to give up G & T. In my fifties I became intolerant to Brazil nuts and (I now suspect) hazels. Fortunately almonds are OK.

Aaron Blaisdell (2012-08-08 07:58:39)

"My whole life even as a small child" Hahahaha! I can't picture Patrick ever having been a "small" child! Seriously though, Brent Pottenger also banished the migraines that plagued him most of his adolescent and early adult life by giving up grains, especially wheat.

Kris (2012-08-08 11:25:25)

Same with me. I have been wheat free for over two years. I recently realized, I have not had a migraine in a long time, probably two years. I used to get them every month or so. Now it is a great excuse for not eating all the wheat I am offered, instead of an amorphous claim of trying to eat better. I tell them my doctor told me to do it and it has stopped my migraines. Also, since I stopped the wheat: Pre-diabetic symptoms - gone. Seasonal allergies- almost completely gone. Sinus infections- very rare, used to be regular. Stomach aches, heartburn- very rare, used to be common. Soreness after working out is drastically reduced. I could list things all day that are better.

How Patrick Vlaskovitz Discovered His Migraines Were Due to Wheat | Allergy to Wheat - Symptoms Treatment (2012-08-08 16:00:08)

[...] article: How Patrick Vlaskovitz Discovered His Migraines Were Due to Wheat This entry was posted in Uncategorized and tagged almost-completely, doctor, doctor-told, [...]

Tracy Caraker (2012-08-08 17:20:29)

I've noticed that my teeth grinding has stopped since going Paleo/wheat free. I haven't woken my husband in a LONG time! I'd been doing it so long, my canine teeth are flat!

Lori (2012-08-08 18:09:23)

Seth, Great post! I used to wake up every morning unrested and exhausted due to sinus inflammation. I thought the cause of the inflammation was due to environmental factors like dust, pollen, etc. This was not the cause! Ive been wheat free for three weeks now and I wake up every morning rested and not struggling to breath. Amazing that the source of my sinus inflammation



was from wheat.

Joe (2012-08-08 21:50:31)

I'm not an "anti-doctor" or "corporations are evil" type, but I really feel like the entire industry has been co-opted by the pharmaceutical companies. It seems like any time you go to a doctor, the first and only option they even consider is some kind of drug. Food, lifestyle, and vitamins don't even enter the discussion, and if you bring it up, they practically laugh it off. I research canker sores and the whole reason I do so is because I've had them my whole life and pretty much the most information I got from a doctor or dentist was, "Yeah, that happens to some people." I've had great success with Vitamin B12, and when I mention that to doctors, I usually just get a smirk and they pass it off as placebo. A placebo that doesn't work with any of the other supplements I've taken for some reason. It's a shame that this side of healthcare gets so ignored.

Sally (2012-08-09 06:39:46)

I had a similar experience. I suffered from migraines, frequent sinus infections, anxiety, heartburn and IBS symptoms my entire life. I guess I always thought this was the normal state, because my mother had the same problems. In February of this year, I did a 30 day Paleo challenge and eliminated all grains. Within a week, my chronic sinus congestion had disappeared, my digestive symptoms were gone, and I have not had an anxiety attack or a migraine in the past six months since continuing to avoid gluten.

### **Tyler Cowen's Unusual Final Exam (2012-08-09 05:00)**

In a discussion of college education – I believe there should be [1]more allowance for human diversity – sparked by [2]this post, Alex Tabarrok told the following story:

Tyler [Cowen] once walked into class the day of the final exam and said, "Here is the exam. Write your own questions. Write your own answers. Harder questions and better answers get more points." Then he walked out. The funniest thing was when a student came in late and I had to explain to him what the exam was and he didn't believe me!

I was impressed. This approach, unlike most exams but like actual economies, rewards rather than punishes specialization. I asked Tyler what happened. He replied:

I would say that the variance of the test scores probably increased!

I don't recall if I ever did that again for a whole exam but most of my exams do that for at least one question. It's the question where you learn the most about the student.

1. <http://sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

2. <http://marginalrevolution.com/marginalrevolution/2012/08/a-spontaneous-order-firm.html>

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q (2012-08-09 05:43:53)

it's a good idea. my only recommendation would be to do this for an exam near the beginning of the class, just so you can act on the information you get while class is going on.

threepipeproblem (2012-08-09 05:52:30)

This is awesome. It's also awesome when bloggers one has independently elected to follow post about one another.

Wonks Anonymous (2012-08-09 13:52:52)

Your link goes to a post about Valve Software, not a final exam. Seth: The post about Valve Software led to the discussion.

Assorted links (2012-08-12 15:11:01)

[...] 2. Tyler Cowen's unusual final exam. [...]

Lonely Libertarian (2012-08-12 17:20:45)

One principle that I learned over my time doing consumer insights work is that we always tend to underestimate population variance - it is a LOT larger than we measure - Tyler's class is one more data point in support of that theory...

Joseph Ward (2012-08-12 20:29:15)

this is the best idea i've heard of in education. i totally agree with cowen that it might not be feasible for an entire exam, but this is great.

Matt (2012-08-12 21:35:59)

I sat an International Political Economy exam (set by the excellent Alex Coram) in which the final question was "Write a question you wish had been in this exam, and answer it". As I recall some students didn't appreciate that opportunity as much as I did. I think the approach is useful in that it rewards understanding rather than regurgitation, and that it contains a meta-question that is something like: which are the important topics in this course?

Josef (2012-08-12 23:26:40)

This is a good idea except that the question should be more specific and random if this tactic is used repeatedly. e.g. "Write your own question and answer it using cost-benefit analysis" "Write your own question pertaining to business cycles and answer it" This way students won't be tempted to spend large amounts of time designing their own exams beforehand.

Simon K (2012-08-13 04:46:20)

This is a similar approach to something I frequently do when interviewing candidates for jobs. The last question I'll usually ask each one is, "Is there anything else you wish I'd asked you?"

Jill (2012-08-13 04:49:14)

Just personally, if I were given an exam like that, I would want a list of keywords or something for guidance. I can imagine some students panicking and completely blanking on what topics the class covered.

Richard Bruns (2012-08-13 05:41:46)

I was an Economics TA for a few years. The last question on my (ten-question) final exams was always "List and discuss four things you have learned in this class that were not asked about on this exam." I generally got positive responses to that; people were eager to show off things that they had studied.

Chris MacDonald (2012-08-13 07:17:41)

One result of this strategy is that every student will be correct in their prediction of what will be on the exam. Regardless of which material is actually most important, if a student believes X, Y, and Z will be on the exam, she will study X, Y, and Z. Faced with an open-ended exam, she will write on what she has studied, namely X, Y, and Z. Or, in principle, another thing that might happen is that a student might write and answer a bunch of suitably difficult questions all rooted in materials from the last half of the course. That would lead to a high grade, despite ignoring (and perhaps being ignorant of) half the material. So, yes, additional constraints would be wise.

tt (2012-08-13 09:09:36)

my hypothesis: he didn't have an exam ready to give

ragbatz (2012-08-13 13:00:23)

In the 1960's a Harvard chemistry professor posed a question on a chemistry final examination along these lines: 10 % Extra Credit. Write a question to be used as an extra credit question on a final examination in chemistry. The ideal extra credit question should be worth about 10 % of the grade on the examination as a whole, and test facility with the material covered during the course. My friend Tom Hervey received full credit with the following answer: 10 % Extra Credit. Write a question to be used as an extra credit question on a final examination in chemistry. The ideal extra credit question should be worth about 10 % of the grade on the examination as a whole, and test facility with the material covered during the course.

John (2012-08-14 06:46:49)

I like the idea - how will the answers/questions be objectively assessed?

Boabdil (2012-08-14 15:31:45)

I once taught an upper division course. At the beginning of the course I handed out 100 questions. I told the students we will cover the answers to all 100 questions in the course. Further, each student will have 10 questions randomly chosen from the list of 100 questions on his Final Exam. I did not grade on a curve and I told them they could all get A's or everyone could Fail. Surprisingly, the grade distribution was not different from the other courses.

Eric H (2012-08-14 18:23:21)

tt - you evidently have no idea how fast Tyler reads and can generate content.

Swetha (2012-08-15 06:09:04)

What is "Hard" ? Aren't such things relative? So, evaluation would be based on the difficulty as perceived by the student or the teacher?

Sven (2012-08-17 08:28:53)

Seth, it amazes me that on this great blog full of great ideas you continually venerate a great big zero like Tyler Cowen. Thorstein Veblen, Jane Jacobs, Renata Adler, and ... Cowen? One of these things is not like the others... Seth: What's wrong with this post?

World's Strangest | Write Your Own Final Exam (2012-08-22 02:58:30)

[...] Link -via Kottke | Photo: Mercatus Center [...]

Dr. Mike Reddy (2012-08-22 03:10:45)

A few years ago, i was all over the UK papers (some positive, most negative) and had a 2 page spread in THE after doing this; in a more structured way though. Look up "lecturer lets students set own exam" on Google for the media coverage. It worked well as a pedagogic exercise/experiment in assessment for learning. As a PR disaster for my institution, it wasn't quite so good; the first act of the newly appointed VC was to make a statement supporting me on academic grounds, which I'm sure he wasn't pleased about. I even had a poison pen letter from a Daily Mail reader, and lost out at a subsequent job interview when it was raised :-( Oh well... Seth: for example [1]<http://www.dailymail.co.uk/news/article-393053/Write-exam-lecturer-tells-students.html>

1. <http://www.dailymail.co.uk/news/article-393053/Write-exam-lecturer-tells-students.html>

La mejor pregunta para un examen | Actualidad informática (2012-08-23 07:07:09)

[...] en Twitter y me pareció brillante - la mejor pregunta del mundo para un examen: Tyler [Cowen] una vez entró a clase el día del examen final y dijo: "Aquí está el [...]"

jonathan.beaton » the sky-as-limit exam (2012-08-24 07:04:32)

[...] Seth Roberts via kottke.org Posted in Ha!, Philosophical, The Mind | No Comments » [...]

Fabulous Final @ Glen Davis (2012-08-24 14:29:38)

[...] Seth's Blog » Blog Archive » Tyler Cowen's Unusual Final Exam [...]

Jeff Poitevint (2012-09-01 16:07:18)

I think it's a very good idea. You completely eliminate the possibility of cheating and get to evaluate one's understanding of the class. The smartest students would have evaluated the instructors positions on subjects and formed their exam based on what the professor believed.

## **How Martha Rotter Cured Her Acne By Self-Experimentation (2012-08-10 05:00)**

Several months ago I posted about [1]how Martha Rotter figured out that her acne was caused by cow dairy products. Now [2]a longer version of her story (by me) is on Boing Boing. There is a ton of useful information in the comments. Some examples:

"[3]Dairy is what caused my acne." Someone [4]replied: "Same here, specifically milk. I switched to soy milk in high school and my moderately-bad acne went away very suddenly. . . . If I eat a lot of cheese at once, like having pizza more than a couple days a week, my backne gets worse and I get acne inside my ears." [5]Someone else misunderstands genetics: "I do have tumor-forming disease (fortunately stable, and partially corrected with surgery) so I do have some sympathy when it comes to this sort of thing, but my condition is so well established as genetic I never even saw hope in trying to control it with diet." [6]Aaron Blaisdell had a well-established genetic condition (porphyria) that went away when he changed his diet.

[7]Someone else found that dairy mattered:

I had terrible acne as a teenager and I drank almost a carton of milk every day. . . . When I moved out on my own, I no longer had milk delivered at the door and I fell out of the habit of drinking it altogether, switching to tea and water instead. My face cleared within weeks. . . . Whenever I indulged in cheese, the break-outs returned.

[8]Someone else discovered multiple causes:

I have had strikingly similar experiences with a very particular form of acne, for years. Multiple doctors with no results until I got frustrated with it. I heard that the four most common causes of skin reactions can be wheat, milk, peanut butter and eggs - so I took all of them out \*and\* meat.

And watched my skin slowly return to normal.

After playing with my food by putting one thing in, seeing what happened, and then taking that out and trying something else, I found that wheat in particular is the trigger for me with dairy as a close second.

[9]Someone else: "I took wheat from my diet, and my skin cleared up. If I allow wheat back in for one day, the next day I have acne."

[10]Not all solutions were dietary:

My wife and I found the only thing that worked reliably—even including a couple of different kinds of antibiotics—was "the regimen" as described on acne.org. Basically you use a low-strength (2.5 %) benzoyl peroxide every day and moisturise like mad afterwards.

These are just examples. There are many more helpful comments.

1. <http://blog.sethroberts.net/2011/12/29/acne-cured-by-self-experimentation/>
2. <http://boingboing.net/2012/08/09/make-yourself-healthy-searchi.html#more-175757>
3. <http://boingboing.net/2012/08/09/make-yourself-healthy-searchi.html#comment-614848450>
4. <http://boingboing.net/2012/08/09/make-yourself-healthy-searchi.html#comment-614953472>
5. <http://boingboing.net/2012/08/09/make-yourself-healthy-searchi.html#comment-614851182>
6. <http://blog.sethroberts.net/2010/04/05/my-porphyrria-went-away/>
7. <http://boingboing.net/2012/08/09/make-yourself-healthy-searchi.html#comment-614870214>
8. <http://boingboing.net/2012/08/09/make-yourself-healthy-searchi.html#comment-614884952>
9. <http://boingboing.net/2012/08/09/make-yourself-healthy-searchi.html#comment-615206244>
10. <http://boingboing.net/2012/08/09/make-yourself-healthy-searchi.html#comment-614907909>

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MikeW (2012-08-10 08:29:52)

As one commenter says, "I suspect there isn't a one-size-fits-all solution to acne anyway." That seems a very sensible, obvious point. Walk around any American city and you'll see a huge variety in people's faces: skin/hair color, the shapes of their eyes, noses, mouths. I don't see any reason why that wide individual variability wouldn't also extend to food sensitivities. Nobody mentions food combinations. Personally, I don't have noticeable breakouts with wheat or dairy on their own, but eaten together (pizza, buttered waffles) they almost always give me trouble. My theory is that the butter makes my skin oilier, while the wheat has some inflammatory effects that obstruct the oil secretion pathways.

AM (2012-08-10 12:00:16)

I recently took the expensive ALCAT food "intolerance" test. So did a friend. We were each given a list of foods to avoid - completely different lists - and both of us have found some relief from our symptoms. Each of us is complex and unique, and only individualized testing (whether self-testing or a commercial battery of tests) can help us figure out the optimal path for ourselves. For one person it's drinking pork fat and avoiding milk - for another, it could be the opposite. Can we generalize at all? Smoking, mercury, and beefy running shoes: suboptimal.

Javeux (2012-08-10 12:33:23)

People use diet to overcome some of their ailments, but give up on dairy intolerance? I mentioned oestrogen inhibiting lactase in a previous comment, and it seems progesterone can do the opposite. Bacteria in the small intestine are also very efficient at inhibiting lactase. I'm sure there are many other factors than these three. Dr. Ayers talks about the importance of bacteria with lactose-digesting gene clusters, and some of his readers have overcome dairy intolerance by carefully consuming kefir and other LAB-containing foods. Those Peat-arians don't seem to have too much trouble overcoming it when they try either. I'm starting to translate "taking dairy out improved my acne" to "my diet sucks and my GI tract looks as good as my face during a breakout." I'm sure I could be wrong, but it definitely doesn't seem clear cut, and pizza was mentioned more than once in those comments. I don't think it's a case for demonising dairy.

## Edward Jay Epstein Reviewed Movies For Vladimir Nabokov (2012-08-11 05:00)

[1]Edward Jay Epstein attended college at Cornell. When he was a freshman, he took Vladimir Nabokov's [2]lecture course about European and Russian literature. Nabokov told his students that a great writer creates pictures in readers' heads. One of the exam questions, about Anna Karenina, was Describe the train station where Anna met Vronsky.

Epstein hadn't read the book. However, he had seen the movie, so he described in great detail the train station in the movie. After the exam, Nabokov asked to meet him. Epstein told him he hadn't read the book. Nabokov said it didn't matter, and gave him an A. He offered Epstein a job. Ithaca had four movie theaters. Movies were released on Wednesday, so every Wednesday each theater would have a new movie. Nabokov loved movies. He went on Friday. He wanted to know which movie to choose. Epstein's job, for which he was paid, was to watch all four movies and report back.

Epstein did this conscientiously but in retrospect, he said, one of his comments was a mistake. [3]The Queen of Spades (from Pushkin's story) was one of the movies. Epstein told Nabokov it reminded him of Dead Souls. (They were reading Dead Souls in class.) This interested Nabokov. He looked at Vera, his wife, who was sitting at his desk facing him. He asked Epstein why The Queen of Spades reminded him of Dead Souls.

"They're both Russian," said Epstein.

More: [4]Epstein tells the story himself.

1. <http://www.edwardjayepstein.com/>
2. <http://www.nytimes.com/books/99/04/18/specials/nabokov-lectures.html>
3. [http://en.wikipedia.org/wiki/The\\_Queen\\_of\\_Spades\\_%281949\\_film%29](http://en.wikipedia.org/wiki/The_Queen_of_Spades_%281949_film%29)
4. <http://www.edwardjayepstein.com/Nabokov.htm>

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B (2012-08-11 11:38:02)

What's the source for this story? Seth: Epstein is the source. He told me.

minderbender (2012-08-13 17:24:26)

I thought Anna and Vronsky met on a train, not at a train station. I have a vivid memory of snow swirling onto the train while it rushes back - from Moscow to St. Petersburg? - but Vronsky is only on that train because he has already fallen for Anna. They met, if I remember correctly, on the train going the other direction. Anyway, best book I've ever read.

## Eliminating Nocturnal Urination (2012-08-12 05:00)

A male reader who wishes to be anonymous writes:

I am 53. When I was in my late 40s I started having to wake up to urinate in the middle of the night. Sometimes more than once. I complained to the physician. He said, "That's BPH [= benign prostatic hyperplasia = enlarged prostate]. It's what happens in middle age. Live with it."

A couple years later on an airplane, I read an article about [1]pygeum [a herbal remedy] as a cure for BPH. I started taking some. It helped, but not a lot. Reading about pygeum I stumbled across saw palmetto. I started taking a supplement that contained both of them. Now I was much improved, but there was still room for improvement.

A friend told me about magnesium supplementation. I started taking magnesium in addition, and I was cured. It's like I'm in my 30s again. I only have to urinate in the middle of the night if I drink a lot of fluid right before bed.

Sleep is so important, this is really important. At a talk Thursday at the Ancestral Health Symposium, Robb Wolf quoted someone as saying, "If someone sleeps well, you can't kill them; if they sleep badly, you can't keep them alive."

1. [http://en.wikipedia.org/wiki/Pygeum\\_%28herbal\\_remedy%29](http://en.wikipedia.org/wiki/Pygeum_%28herbal_remedy%29)

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Nick (2012-08-12 06:11:07)

Same thing happened to me. I was peeing every night at 4:00 am. Started taking one ZMA before bed, and it went away.

Javeux (2012-08-12 07:00:10)

I found more salt helped. I think a lot of people on wholefoods diets end up eating too little. I'm sure a good balance of all the electrolytes would be most effective, as well as avoiding drinking when you're not thirsty to meet some sort of arbitrary "healthy" H2O quota.

RyanE (2012-08-12 11:36:49)

I was starting with this problem until I found out I had sleep apnea. Since starting on the CPAP, I haven't gotten up in the night, and apparently this is fairly common.

AM (2012-08-13 08:43:51)

Google turns up quite a few studies looking at the effects of magnesium on vasopressin - a hormone very important for our sleep and for not-peeing.

Jim (2012-08-13 13:42:53)

I saw the link on the Happy Healthy Long Life Facebook page: there was a study that linked male waist size with urinary problems and sexual dysfunction. It may be of interest <http://www.newswise.com/articles/view/592070/?sc=sphn>

Brandon (2012-08-13 13:51:12)

Hi Seth, Can you ask your mystery male reader how much of each of the supplements he takes (and/brands he takes etc.)? Thanks, BW

by (2012-08-14 15:40:31)

Silent acid reflux is an inhibitor of good sleep and sadly there does not seem to be any way to know it's disrupting your sleep without seeing a doctor for a scoping.

shane (2012-08-14 17:31:13)

well seth, i just ordered some NOW Foods Pygeum and Saw Palmetto + Pumpkin Seed Oil and Doctor's Best High Absorption Magnesium. i'll give it a shot. thanks for posting.

by (2012-08-15 07:03:51)

Anyone, recommendations on good books on sleep? I read The Promise of Sleep by William Dement already, which was okay, but I feel there must be better out there.

mystery male reader (2012-08-17 12:07:12)

Brandon, I take Vitamin Shoppe vitamins. Magnesium Citrate Complex 160 mg magnesium as magnesium citrate, oxide 3x daily  
Saw Palmetto Plus saw palmetto extract 160mg pumpkin seed oil 40mg pygeum africanum 10mg 3x daily

Brandon (2012-08-20 10:59:49)

MMR, thanks for the follow up. On my way to purchase the above today. I appreciate it. Brandon

Jared (2012-08-20 11:56:59)

Thanks for the info, took extra magnesium chelate at night and now I dont have to get up many times in the night Before reading your blog i actually thought getting up in the night to go to the bathroom was normal!

### Assorted Links (2012-08-13 05:00)

- [1]A Bayesian view of the Shangri-La Diet. "I'm slightly annoyed to have found evidence for something so silly on my first attempt to run an experiment on myself, and I strongly suspect that I've done something wrong, but I can't figure out what. . . [The diet is] clearly ridiculous. . . . Originally I was interested in checking out a hoax that appears to have convinced many people despite a complete lack of rigorous evidence."
- [2]The Desire Project. What do women want? A documentary series.
- [3]It took doctors three years to figure out that a child has a Lego piece in his nose.
- [4]Problems with One Laptop Per Child. More about the history of the project at [5]its Wikipedia page.
- [6]Less sleep associated with less vaccine response. One more reason to think better sleep = better immune function.
- [7]It isn't easy to sell homemade sauerkraut. "All proceeds go to the Sandy Boyce Vacation Fund."

Thanks to Alex Blackwood and Bryan Castañeda.

1. <http://johnlawrenceaspdn.blogspot.com/2012/08/shangri-la-diet-it-works.html>

2. <http://desireproject.com/about/>

3. <http://blog.sfgate.com/sfmoms/2012/08/07/boy-has-lego-piece-removed-from-his-nose-after-three-years/>

4. [http://www.mercurynews.com/nation-world/ci\\_20997947/perus-one-laptop-per-child-effort-marred-by](http://www.mercurynews.com/nation-world/ci_20997947/perus-one-laptop-per-child-effort-marred-by)

5. [http://en.wikipedia.org/wiki/One\\_Laptop\\_per\\_Child](http://en.wikipedia.org/wiki/One_Laptop_per_Child)

6. <http://well.blogs.nytimes.com/2012/08/06/sleeping-less-may-alter-vaccine-response/>

7. <http://www.foodsafetynews.com/2012/08/womans-homemade-sauerkraut-highlights-cottage-food-fight-in-az/#.UCN5q6NmOAY>



Alex Chernavsky (2012-08-13 06:50:17)

Here's another article that I found to be interesting: [1]A very modern trauma It's a blog post about some new studies about post-traumatic stress disorder (PTSD). The studies suggest that this is a modern disease (soldiers from the American Civil War didn't seem to get it, for example).

1. <http://mindhacks.com/2012/08/11/a-very-modern-trauma/>

John Lawrence Aspden (2012-08-13 08:58:37)

Seth, can't imagine how you found my little blog. Sorry if you took any diss from it. You must admit your diet sounds like a (genius) hoax from a standing start! But the combination of actually feeling it working and reading your clear explanations and justifications of the theory have brought me round as far as 'A good idea, not proven'. I'd seriously like it to be true though. Not just for me (I'm usually slightly overweight) but for all the poor fat people in the world who are made extra miserable by idiots telling them it's their fault. The weak spot in the theory to me looks like 'set point adjusting to lack of flavours'. I can't imagine why it would work that way. I can imagine some poor caveman starving to death because last Tuesday he couldn't finish his plate of mammoth and now it's gone off! Surely he'd be well advised to eat everything he can get his hands on in mid-winter. Evolution does seem to come up with some spectacularly crap mechanisms, but control of appetite must be very ancient, and you'd think it properly debugged by now. Also, I get the impression that your diet just doesn't work for some people, so there must be some pieces of the puzzle still to put in, even if the theory's basically right. Why the hell has there not been any large-scale independent controlled experiment on this? The effect seems obvious, large, testable and Nobel-prize worthy. Seth: "The weak spot in the theory to me looks like 'set point adjusting to lack of flavours'. I can't imagine why it would work that way". My explanation: The weight control system uses the strength of smell-calorie associations to judge the abundance of food. When food is abundant, we eat food that tastes better (= stronger smell-calorie association) than when food is scarce. Zero smell-calorie association is treated as close to weak smell-calorie association. When food is scarce is when your set point should go down, just as when you are unemployed is when you should spend money in your bank account.

John Lawrence Aspden (2012-08-13 09:01:07)

Actually our caveman might get more benefit from sharing the spare food. Prediction: This only works in social species.

Jan (2012-08-15 02:40:38)

Sauerkraut: I will never ever cease to be amazed how some countries treat some foods like WMDs (or worse). This reminds me to go to our local market where a local sells home-made sauerkraut from a vat almost the way it was sold for hundreds of years [http://static.etrend.sk/uploads/tx\\_media/2007/01/22\\_Rac03.jpg](http://static.etrend.sk/uploads/tx_media/2007/01/22_Rac03.jpg). And then stop by a farmer to grab a bottle of raw milk to have a healthy sip! Jan

John Lawrence Aspden (2012-09-03 10:42:10)

Seth, second month of this didn't go so well, details here: <http://johnlawrenceaspden.blogspot.co.uk/2012/09/shangri-la-diet-fail-but-interestingly.html> I think I'm using the wrong types of oil. Do you have any specific recommendations for a particular brand that I'd be able to get hold of in England? I'd be quite happy to order it from America if necessary. This is interesting. Any other advice/tips also much appreciated.

## **"How We Stopped SOPA": Talk by Aaron Swartz in New York (2012-08-13 19:15)**

Aaron Swartz was a key figure in the successful fight against SOPA (Stop Online Piracy Act). On Thursday (August 16) he will tell how a tiny number of online activists managed to defeat a bill pushed by the entertainment industry, which had spent hundreds of millions of dollars per year trying to get it passed and believed its survival was threatened if it wasn't passed. [1]Aaron will speak at 7 pm at ThoughtWorks, 99 Madison Avenue, 15th floor, New York NY.

1. <http://www.thoughtworks.com/events/thoughtworks-new-york-and-aaron-swartz>

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### Acne: Reality is Not a Morality Tale (2012-08-14 05:00)

Someone named Red Fury made an interesting comment on [1]my Boing Boing article about acne:

I had acne on/off for years. . . . In my mid-thirties, I tried the Retin-A at night, antibiotic gel for day regimen for about 2 years - no effect. . . . Then, I was talking to a co-worker whose daughter was taking 'modeling classes' to become a teen model. She casually mentioned her acned daughter had to give up rice, potato chips, and bread, all of which are high-glycemic index foods. My quack-radar went off, and I looked around for something scientific behind that advice. [2]<http://www.ajcn.org/content/86...>

Huh. I guess those nutrition-bashing dermatologists actually did a study and published the scientific results in a peer-reviewed journal. . . . My acne disappeared completely as soon as I eliminated rice and potatoes.

He finds a study that supports the casual advice, he follows the advice, his acne disappears. By convincing him to follow the advice, the scientific study helped him get rid of his acne. Which is impressive.

The interesting twist is that [3]the study was published twice, clearly breaking the rules. Bad scientists! Who did something really good.

1. [http://boingboing.net/2012/08/09/make-yourself-healthy-searchi.html#disqus\\_thread](http://boingboing.net/2012/08/09/make-yourself-healthy-searchi.html#disqus_thread)

2. <http://www.ajcn.org/content/86/1/107.full>

3. <http://www.ajcn.org/content/88/1/251.short>

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Tuck (2012-08-14 06:48:22)

Wow, that approach sounds... scientific!

TMS71 (2012-08-14 10:46:25)

Doctors are reflexively dismissive of any claim that people can solve their own health problems. The case for a dietary cause of acne in Loren Cordains 'A Dietary Cure for Acne' was completely overwhelming, even elucidating the mechanisms. Docs are arrogant and ignorant and this is just more evidence that they don't deserve to be held in anywhere near the esteem that they are.

Adam (2012-08-14 16:47:24)

TMS71: I don't think Seth appreciates name calling & it doesn't seem productive to me here either. SOME doctors are arrogant & SOME doctors are ignorant. Don't hold these ones in esteem, but don't lump ALL doctors into one category. Some black people commit crimes, but how would it come off if I said "Black people are criminals"?

Evolutionarily (2012-08-14 22:33:27)

Adam it is a common human bias to make that error. If people hear that all terrorists are Muslim (not true), many people will mistakenly infer that all Muslims are terrorists. That mistake seems elementary, but I think we are all capable of making it in certain applications. Perhaps it is even the default... Does anybody know the formal name of this logical error?

nathan (2012-08-15 10:36:15)

Yep, I just found out that inadequate cleanliness is not the cause for acne outbreaks.

TMS71 (2012-08-15 10:47:09)

Dude, this story is a cliché. Most Docs are reflexively dismissive of any alternative approaches. Its infuriating and they deserve the name calling. As for those Docs who are open-minded, I'm sure they weren't offended. If the shoe fits - wear it.

Juha (2012-08-18 02:21:09)

I've learned that many foods high in carbohydrates cause me acne and heartburn. Three years ago I cut pretty much all sorts of candy and the like from my diet and a few weeks later I also dropped rice, potatoes, bread and pasta. I did this because I believed that the carbs in my diet aren't good for me (increase the risk for diabetes even if I'm not overweight). Over time I realized that my acne and heartburn symptoms have gotten better, too. Initially I wasn't sure if there's a connection but today it seems pretty obvious to me. If I eat any of those high-carb foods on lunch I often have some heartburn and acne in the evening. I don't like to eat those foods often but I don't always have a choice if I want to get enough calories so I unwillingly experiment with this several times a month. So far the evidence seems pretty convincing to me. What's curious is that lentils don't worsen my symptoms. They're high in carbs, too. I'm not sure but it could be that they also have quite a bit of protein and their glycemic index is roughly half what the GI is for rice, potatoes, bread and pasta. I find it interesting that several paleo bloggers suggest to avoid lentils because of their high phytate and lectin content. Rice may be okay since it's a "safe starch". At least for me it's the other way around.

Red Fury (2012-08-30 23:51:22)

Well, if you're interested in self-experimentation after consulting medical journals, I have decades of my own data! The most unusual experiment is discovering that my paternal family's centuries-long history of dying of massive heart attacks around the age of 60 is due to 'Familial Defective Apolipoprotein B-100', and it has inspired me to be the first one to Fight the Future through diet and exercise. BTW, I am female and a long-time Men's Health reader.

Dave Newman (2012-09-03 09:33:34)

Good Post! Other foods you may consider eliminating from your diet to cut down on breakouts are milk, sugar and most processed foods. Drink lots of water and eat a good diet of fruits and veggies.

### Assorted Links (2012-08-15 05:00)

- [1]Misophonia. Hearing people eat causes rage. Presumably this tells us something about brain organization – but what?
- [2]Interview with Renata Adler.
- [3]Teacher threatened with termination for not requiring unnecessary books. How dare he think that schools exist to help rather than exploit students!
- [4]Edward Jay Epstein: Fareed Zakaria didn't plagiarize. Zakaria used almost exactly the same words as Jill Lepore, whom he did not credit. But Lepore's wording was banal. The interesting content was credited. The real crime is unoriginality.

- [5]Outrageous behavior by Progressive Insurance
- [6]Interview with Jane Jacobs

Thanks to Bryan Castañeda.

1. <http://www.misophonia.info/>
2. <http://www.themorningnews.org/article/birnbaum-v.-renata-adler>
3. <http://www.cartoonbrew.com/ideas-commentary/animation-teacher-faces-termination-for-refusing-to-sell-his-students-unnecessary-books.html>
4. <http://www.thedailybeast.com/articles/2012/08/13/fareed-zakaria-didn-t-plagiarize.html>
5. <http://matffisher.tumblr.com/post/29338478278/my-sister-paid-progressive-insurance-to-defend-her>
6. [http://www.voicebase.com/voice\\_file/public\\_detail/138788](http://www.voicebase.com/voice_file/public_detail/138788)

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Tom (2012-08-15 07:55:11)

Epstein's idea that Zakaria did not plagiarize is a bit of a stretch. If anything, what Zakaria did was even more cynical, since what he did was a widely known Internet method called "spinning". In spinning, individual words are swapped with their synonyms to proactively foil Google searches (which only detect identical text strings): [newsbusters.org/blogs/tim-graham/2012/08/10/talk-about-concealed-carry-fareed-zakaria-plagiarized-paragraph-history](http://newsbusters.org/blogs/tim-graham/2012/08/10/talk-about-concealed-carry-fareed-zakaria-plagiarized-paragraph-history) - In other words, Zakarias is not just copying, he's consciously attempting to destroy the evidence at the same time. It's pretty cynical, and when you compare the passages (which Epstein *doesn't* show, making it harder for readers to check his own work, ironically making his own article disingenuous for similar reasons), undeniable. Also, it's a little unfair to suggest Zakaria did it to improve Lepore's "banal" writing. "Banal" writing is not improved by spinning, as the sequence and structure of ideas (and, in fact, the ideas themselves) remain identical. He didn't do it to improve her work. He did it to steal it. Seth: I'm not saying Zakaria improved anything. I don't think Zakaria tried to "destroy evidence" - I think he thought it hardly mattered how the basic facts, which he properly credited, were laid out. You can't "steal" something that is worthless, which I think is a reasonably close description of how much Lepore added to what her source said (i.e., she added almost nothing). Yes, Epstein should have shown the two passages. But I agree with his big point. Zakaria is being punished for changing an insufficient number of words. Like Epstein, I disagree that this deserves the punishment that Zakaria is getting. Let's say I write "saturated fat is bad for you". Sure, I copied this from someone else. Should I be punished for not giving a source? I don't think so. It's a banality. The mainstream media commit major crimes every day - the way they trust self-interested experts who grossly distort the truth. To ignore those major crimes and focus on this trivial crime is yet another sign of how poorly the media police themselves.

q (2012-08-17 15:21:38)

i have a hearing disorder that can lead to hyperacusis and misophonia in some people. i have it as the result of some ear damage, probably from a virus. somw sounds appear distorted to me - for instance the S sound is louder than it "should" be. sometimes i find it unsettling and i feel anxiety because of that. sometimes i feel disoriented because it's harder for me to understand what's going on around me. if i weren't careful, it could become an anxiety type disorder.

Alex Chernavsky (2012-08-18 04:53:33)

Progressive's behavior is perhaps not quite as outrageous as it might seem at first glance. The *New York Times* covered the story here: [http://www.nytimes.com/2012/08/18/your-money/progressives-side-of-the-insuran ce-case-that-blew-up-on-the-internet.html](http://www.nytimes.com/2012/08/18/your-money/progressives-side-of-the-insuran-ce-case-that-blew-up-on-the-internet.html)

## **B. F. Skinner: Brilliant Engineer, Brilliant Self-Promoter, Mediocre Scientist (2012-08-16 05:00)**

I majored in psychology at Reed College. At the time, the whole major centered on Skinnerian psychology – the importance of reward in controlling behavior. The introductory course used a Skinnerian textbook (e.g., we learned the correct meaning of "negative reinforcement" – it does not mean punishment). Other courses also had a Skinnerian emphasis. They never convinced me. I always thought it was an exceedingly narrow way to study behavior.

When I was a graduate student, I visited Harvard and heard Skinner give a talk, titled "Why I am not a cognitive psychologist". During the question period I asked if he was familiar with the work of Saul Sternberg – perhaps the most influential cognitive psychologist. No, said Skinner. I thought it was foolish to criticize an area of research you know little about.

After I became a professor, I went back to Reed to give a talk. After the talk, I went out to dinner with several psychology professors. I told them I thought Skinner was a brilliant engineer – the Skinner box is really useful – but a mediocre scientist. He was unable to discover anything, he just repeated the same result (rewarding something increases how often it is done) countless times. They had no reply.

In the last two days, strangely enough, Skinner has come up in two different conversations. In the first, a friend said that Skinner's views about language were ridiculous. I agreed. Why write such nonsense? my friend asked/complained. I said maybe Skinner's productivity system worked too well. It caused him to write when he had nothing to say. In the second, a different friend brought up [1]David Freedman's recent Atlantic article called "The Perfected Self", which argues that Skinnerian techniques really work when you implement them as smartphone apps – techniques to lose weight, for example. "B. F. Skinner's notorious theory of behavior modification was denounced by critics 50 years ago as a fascist, manipulative vehicle for government control," writes Freedman (or an editor), but actually that theory is really good.

My area of academic psychology (animal learning) is the same as Skinner's. Within this field, I have never heard anyone complain that Skinner's work was "fascist" or "manipulative" or a "vehicle for government control." It never became popular – it was always a minority point of view – probably because it was boring (the same thing over and over) and perhaps because it was anti-intellectual. Skinner wrote a well-known paper about why theories are unnecessary. He didn't understand the role of theories in science and didn't bother to find out. Sure, the psychology theories of the time (1950) were awful. Psychology theories are still mostly awful. But there are plenty of good theories in other areas of science.

For a long time, Skinnerian ideas, nearly dead in academia, lived on in the treatment of autism. The people applying these ideas called themselves "behavior analysts" and the whole field of applied Skinnerian psychology was called "behavior analysis". What caused this persistence was that the techniques worked. Using the techniques (carefully rewarding this or that behavior) improved the lives of autistic children and their parents. Which was a real contribution. I could make a long list of famous psychologists who have done less to improve human well-being.

The success of Skinnerian ideas in improving the lives of autistic children should not be confused with figuring out what causes autism. To figure out the cause of autism is to figure out the environmental cause(s) – to which people with certain genes are more sensitive – and how autism can be avoided entirely, not meliorated. I have blogged about possible causes of autism [2]many times, in particular the possibility that [3]sonograms cause autism. I have no idea if behavior analysts understand the difference between melioration and figuring out the cause. Maybe Skinner would claim there is no difference – he was full of bizarre statements like that. If your child is autistic, you are in crisis. You have zero interest in questions about "cause" – you simply want help. In any form. Behavior analysts, while helping autistic children and their parents, contribute nothing that helps us find the cause of autism. Which, if you are planning on having children, you care about enormously. So you can avoid having autistic children.

So Skinner's legacy is mixed. The Skinner box is terrific. I happily used them in my research for years, even though I hardly believed a single word Skinner said. As an engineer – an applier of stuff discovered by others – Skinner made a lasting contribution. As a self-promoter, he was incredibly successful – he was on the cover of Time, for example. As a scientist, he was a zero. He discovered nothing that matters. As a thinker (e.g., the book Beyond Freedom and Dignity) he was less than zero. He was a charlatan, claiming over and over that he understood puzzling things (e.g., language) that he did not understand. An unusual mix. Few great engineers are charlatans.

1. <http://www.theatlantic.com/magazine/archive/2012/06/the-perfected-self/8970/>

2. <http://blog.sethroberts.net/category/autism/>

3. <http://blog.sethroberts.net/category/autism/sonograms-and-autism/>

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Darrin Thompson (2012-08-16 06:17:06)

"If your child is autistic, you are in crisis." Yes. "You have zero interest in questions about "cause" — you simply want help." Well, sort of. You figure out really quickly that not many people can help much. But if I had good theories about cause I could use those to design interventions on my own. Somehow I've missed on behavior analysis for autism. I will have to look at it. We've got some behaviors at home that need, shall we say, meliorated. :-) Thanks for posting on that.

Jeremy (2012-08-16 15:46:00)

While I agree with many of your criticisms of Skinner I think your characterization of him as a charlatan is too harsh. Skinner did make real contributions to psychology, he framed operant behavior in a useful way and he provided an important critique of punishment that helped to reduce the use of punishment in schools and in the treatment of people with mental illness. Many techniques derived from operant approaches remain useful in education and therapy Although flawed I think Beyond Freedom and Dignity and Walden II are fascinating challenging books well worth reading. Seth: I agree that Skinner made real contributions to psychology: the Skinner box and cases where behavior analysis works, such as autism. I call that engineering. My graduate school advisor, Russ Church, who did a great deal of research about punishment, told me that Skinner ignored data about punishment that did not fit his beliefs. And continued to espouse those beliefs.

Txomin (2012-08-16 18:53:28)

I must say "Bravo!". For reasons unknown (or at least unsaid), it requires an uncommon degree of insight and honesty to voice this sort of criticism. Could you please do the same with Chomsky? He is even more deserving if possible as his tour de force has been far, far more duplicitous, devastating, fallacious, opportunistic, and, ultimately, inane. Seth: Thanks. Yeah, I feel the same about Chomsky as I do about Skinner, minus the brilliant engineer aspect. But I am not a linguistics professor and know far less about him. So I am not very qualified to comment.

David Johnston (2012-08-16 20:37:30)

Chomsky's work on the formal treatment of grammar had a heck of a lot of influence on the path of compiler development in computer science. Regardless of any relevance (or lack of) to human linguistics, Chomsky did good in the world elsewhere.

Angus Stocking (2012-08-17 06:43:19)

It's Freedman, not Friedman. Thanks for the link. Seth: Thanks for the correction.

Jeremy (2012-08-17 08:16:02)

"Skinner ignored data about punishment" This is undoubtedly true, Skinner's theory of punishment did not hold up. However, his work did inspire people to re-examine the use of punishment and to try to avoid it when possible. For a good examination of Skinner's work see the text book: Introduction to Learning and Behavior [Russell A. Powell, Diane G. Symbaluk, P. Lynne Honey]

Txomin (2012-08-18 15:01:04)  
@David. Compiler linguistics. Funny.

Aub (2012-08-21 06:39:07)  
Txomin, I'd love to hear you elaborate on your criticisms of Chomsky.

### Assorted Links (2012-08-19 01:29)

- [1]the science of fermented fish sauce
- [2]there may be a better treatment your doctor knows about but doesn't tell you about.
- [3]brief overview of the human microbiome and its manipulation. In one study, yogurt had no effect.
- detailed illustrated [4]sauerkraut recipe

Thanks to David Cramer and Arthur Niculitcheff.

1. [http://www.slate.com/blogs/browbeat/2012/08/16/fish\\_sauce\\_expiration\\_date\\_hasn\\_t\\_it\\_already\\_gone\\_bad\\_.html](http://www.slate.com/blogs/browbeat/2012/08/16/fish_sauce_expiration_date_hasn_t_it_already_gone_bad_.html)
2. [http://thelastpsychiatrist.com/2009/05/ramachandrans\\_mirror.html](http://thelastpsychiatrist.com/2009/05/ramachandrans_mirror.html)
3. <http://www.economist.com/node/21560523>
4. <http://lisabsf.blogspot.com/2012/08/purple-sauerkraut-hand-crafted.html>

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Paul (2012-08-19 04:16:23)  
Hi Seth. The last link is broken - it should be: [www.economist.com/node/21560523](http://www.economist.com/node/21560523) Seth: thanks, fixed.

jimpurdy1943@yahoo.com (2012-08-19 11:39:48)  
The article about the human microbiome is interesting. If more people – and especially doctors – understood the importance of the bacteria that have co-evolved with humans and other mammals, there would be much less use of drugs that disrupt our gut microflora. Two examples: 1. ANTIBIOTICS devastate our good intestinal bacteria, and thus often create opportunities for drug-resistant pathogenic bacteria to colonize (colon-ize) our bowels. 2. ANTACIDS AND PROTON PUMP INHIBITORS (Nexium, for example) reduce the stomach acids which begin the digestive process and kill harmful bacteria. The result is that bad bacteria and undigested food get to the intestines, causing chaos. Doctors, who needs them? Well, maybe the millions of people who doctors have gotten addicted to painkillers.

garymar (2012-08-19 16:55:24)  
I read Ramachandran's *Phantoms in the Brain* book: absolutely fascinating but the technical portions were very heavy going. The comments in the psychiatrist's blog point to a likely reason for his not thinking of using the mirror technique: if he tries it and it doesn't work, then he's labelled 'altie woo-type', the patient might complain about his unorthodoxy, etc. Malpractice suits hang over every doctor.

Adam (2012-08-19 17:33:34)  
Great post there by the Psychiatrist. "Without ducking responsibility, what's wrong with medicine today is that it is predicated on providing treatment, not on reducing suffering. Not on solving problems. The reason it never occurred to me to use

the mirror is because the mirror is not something doctors do. Never mind it is fairly safe. What we do is offer treatments. Medications. Procedures. Not \*maneuvers\*."

Alex (2012-09-17 08:27:33)

The same passage Adam quoted above in the psychiatrist's article stood out in blinking neon for me as well. This is precisely why I have found personal science such an important component of tackling my kids' autism. Reading you, Seth, opened my eyes to the possibilities. Life is one big experiment now. Thank you, Seth!

### **More Dairy Fat, Less Heart Disease (2012-08-20 05:09)**

I found that [1]butter made me faster at arithmetic. This contradicted the usual view that butter is unhealthy. However, there is plenty of evidence that the usual view is wrong. The latest issue of the American Journal of Clinical Nutrition contains another example. [2]An epidemiological article titled "Dietary intake of saturated fat by food source and incident cardiovascular disease: the Multi-Ethnic Study of Atherosclerosis" found a negative correlation between dairy fat and heart disease:

Although dietary recommendations have focused on restricting saturated fat (SF) consumption to reduce cardiovascular disease (CVD) risk, evidence from prospective studies has not supported a strong link between total SF intake and CVD events. . . . After adjustment for demographics, lifestyle, and dietary confounders, a higher intake of dairy SF was associated with lower CVD risk [HR (95 % CI) for +5 g/d and +5 % of energy from dairy SF: 0.79 (0.68, 0.92) and 0.62 (0.47, 0.82), respectively].

However, saturated fat from meat was associated with more heart disease:

In contrast, a higher intake of meat SF was associated with greater CVD risk [HR (95 % CI) for +5 g/d and a +5 % of energy from meat SF: 1.26 (1.02, 1.54) and 1.48 (0.98, 2.23), respectively].

It isn't obvious how to explain the interaction (the direction of association of saturated fat depends on whether it is in dairy or meat). The authors conclude:

Associations of SF with health may depend on food-specific fatty acids or other nutrient constituents in foods that contain SF, in addition to SF

[3]This recent article also questions the idea that dairy fat causes heart disease. One more reason to question conventional nutritional advice.

1. <http://blog.sethroberts.net/2011/11/25/butter-and-arithmetic-how-much-butter/>

2. <http://www.ajcn.org/content/96/2/397.abstract>

3. <http://intl-advances.nutrition.org/content/3/3/266.abstract>



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dearieme (2012-08-20 05:14:45)

'conventional nutritional advice is less certain than its proponents say': how true. It's like the global warmongers - the lack of intellectual humility is appalling.

Txomin (2012-08-20 05:53:57)

Indeed. The ineluctable foregone conclusion of certainty... smoke, anyone? It is as if anything less than absolute unquestionability in a number of matters implies some sort of treason.

Jim Purdy (2012-08-20 07:22:06)

The "official" advice about cholesterol and saturated fat is very inconsistent. For example, the website of the National Institutes of Health has links to many research studies that seem to show benefits from both saturated fat and cholesterol. And, by the way, the NIH website and the FDA website contradict each other on many issues, especially involving drug safety (the FDA never met a BigPharma drug it didn't like, while the NIH links to many studies about the damage done by drugs.). I tend to trust the NIH much more than the FDA, largely because of the FDA's horrible record of financial conflicts of interest. Recently, based on my reading of information on the NIH website, I began eating a diet of up to a dozen or more hard-boiled eggs daily, with great results. My weight is the lowest in years, my blood sugar is dropping, and my blood pressure is also much lower. On my little blog (<http://nihsearchengine.blogspot.com/>), I have an unofficial search engine of the NIH website, as well as links to NIH information about topics like "Saturated fat and heart disease" and "Eggs and dietary cholesterol." I better finish this comment now, before all these whole eggs kill me.

Links « Rhymes With Cars & Girls (2012-08-21 06:05:52)

[...] Roberts, More Dairy Fat, Less Heart Disease. My first thought here was, don't Indians get heart disease? Presumably whatever effect there [...]

worthwords (2012-08-21 08:54:12)

»I found that butter made me faster at arithmetic. This contradicted the usual view that butter is unhealthy. What do you mean by this? I think the usual view is that TOO much butter means a diet high in saturated fats which is seen as a risk factor for coronary heart disease. How on earth does your one man unblinded experiment contradict that? There's a lot of unknowns about interactions between food and health which is why lots of studies such as the one you referred to are conducted. 'Usual' Dietary advice evolves with evidence (assuming food industry lobbyist are tamed). The problem with dietary advice is that it's almost impossible to run trials and identify co-founders so you resort to theory testing. If some epidemiological study of sufficient power shows that those eating more butter are more likely to develop CHD, then it's reasonable to suggest there may be a link - however you cannot imply causation from such studies - food, people, genetics, diets are too complex. Butter eating may just be a confounder for another factors. That's how we end up with very broad classifications of healthy diets such as "Mediterranean diet/lifestyle". Consuming cholesterol from eggs is not the same as having high blood cholesterol. Eggs are generally do not need to be restricted. Seth: My butter results contradict the usual view because they suggest that butter improves brain function, which is part of health..

Jim Purdy (2012-08-21 11:33:02)

Seth, does butter really make you better at arithmetic? I suspect that a better explanation is the old cliché, "Practice makes perfect," which would mean that butter would give you the illusion of making you better at anything you do often, whether arithmetic, or chess, or public speaking, or weight lifting. In that case, it would be the repetition, not the butter. Seth: Butter made me suddenly better, after a long time when I didn't improve. There is also other evidence for my explanation, including that when I reduced how much butter I ate I got worse.

Adam (2012-08-21 17:19:31)

While it is true some data suggest Fat intake is associated with CVD, there's also data that suggest Fat intake is associated with increase length of lifespan. Here's data from the 7 country study, which is often used to try to convince people NOT to eat Fat: [http://rawfoodsos.files.wordpress.com/2011/12/fat\\_life\\_expectancy\\_men\\_1950.jpg?w=408&h=363](http://rawfoodsos.files.wordpress.com/2011/12/fat_life_expectancy_men_1950.jpg?w=408&h=363) Since this recent study showed DECREASED risk for CVD, maybe Dairy is the ultimate source for getting that life-saving Fat; decrease your risk for CVD \*AND\* increase the length of your life! Sounds like a win-win to me.

## **Lessons of SOPA: How a Slam Dunk Bill was Stopped (2012-08-21 08:00)**

Passage of SOPA (Stop Online Piracy Act) seemed inevitable. It was introduced with 40 Senate co-sponsors, including plenty of both Republicans and Democrats. (At the time it was called PIPA – Protect IP Act.) Senate passage requires 51 votes; to override a filibuster you need more. The entertainment industry (Hollywood) had spent hundreds of millions of dollars per year to pass such a bill; the people behind the lobbying felt the survival of their industry was at stake. Senator Patrick Leahy, whose office wrote the bill, is in the new Batman movie.

Yet SOPA was defeated.

The story, as I was told it, begins on a Sunday. The bill was scheduled for a vote on Wednesday, three days later. [1]Peter Eckersley, who works at the Electronic Freedom Foundation in San Francisco, called [2]Aaron Swartz, who lives in New York, to ask, "How are we going to defeat this?" At that point, Aaron hadn't heard of it. [3]Aaron's talk about this.

It is a stunning example of David defeating Goliath. I asked Aaron what he learned from it. He told me three lessons:

1. Popular support matters. It can overcome large amounts of money. The anti-SOPA forces spent little money but got many people to tell their Congressman or Senator that they opposed the bill. The domain registrar GoDaddy [4]reversed its position on the bill. Aaron worked with lobbyists for Google. The lobbyists believed, at least at first, that the bill could not be stopped, only weakened.
2. A little-known issue can be made a well-known issue. When SOPA was introduced, shortly before the scheduled vote, no one had heard of it. At MSNBC, and presumably other news organizations, employees were told not to cover it. When people at Google were approached to support the opposition, at first they said the bill couldn't possibly be that bad or they would have heard of it. Without coverage by MSNBC etc., eventually everyone heard of it.
3. People will act if they can be convinced they are responsible. People at Wikipedia and Google, not to mention the originator of the GoDaddy boycott, were convinced to act, says Aaron, because they were convinced that they bore responsibility for the outcome, whatever it was. (I would put it differently. I would say they were convinced they could help determine the outcome.)

What interests me most about this story is how wrong the lobbyists were. They're the experts in how to change/defeat legislation. They were utterly wrong. They understood the forces within their system but had no understanding of what was possible outside their system. I think healthcare experts will turn out to be equally wrong.

1. <https://www.eff.org/about/staff/peter-eckersley>

2. <http://www.aaronsw.com/>

3. <http://www.youtube.com/watch?v=g10vHBsapBc>

4. <http://arstechnica.com/tech-policy/2011/12/godaddy-faces-december-29-boycott-over-sopa-support/>

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Gabriel Bennett (2012-08-21 17:55:51)

"Passage of SOPA (Stop Online Piracy Act) seemed inevitable. It was introduced with 40 Senate co-sponsors, including plenty of both Republicans and Democrats. (At the time it was called PIPA — Protect IP Act.) Senate passage requires 51 votes; to override a filibuster you need more. The entertainment industry (Hollywood) had spent hundreds of millions of dollars per year to pass such a bill; the people behind the lobbying felt the survival of their industry was at stake. Senator Patrick Leahy, whose office wrote the bill, is in the new Batman movie." This is incorrect. SOPA (Stop Online Piracy Act) was introduced by Lamar Smith to the House of Representatives. PIPA (PROTECT IP Act) was introduced to the Senate by Patrick Leahy. Two completely different bills, both introduced at nearly the same time and both attempting to accomplish the same thing. Pretty much the rest is correct though, it had bi-partisan support (SOPA introduced by a Republican and PIPA by a Democrat). [http://en.wikipedia.org/wiki/PROTECT\\_IP\\_Act](http://en.wikipedia.org/wiki/PROTECT_IP_Act) [http://en.wikipedia.org/wiki/Stop\\_Online\\_Piracy\\_Act](http://en.wikipedia.org/wiki/Stop_Online_Piracy_Act)

James A Donald (2012-08-21 18:22:30)

Lobbyists are always in favor of a bigger, more intrusive, more activist, and more interventionist state, since that is more money in their pockets, even though it is often less money in the pockets of their clients. Lobbyists are excessively cozy with the state. Let us suppose you are a big business that employs a team of lobbyists. Chances are Senator big shot will call up your lobbyists, and ask "what most terrifies your biggest paying customers. What could plausibly pass, and create the most horrifying ruin and destruction for them. They will tell him. He will then introduce the bill, in order to get paid off for it not passing. Seth: In this particular case, you could say the lobbyists believed that only tweaking was possible because that is the main thing lobbyists are paid for.

Links « Rhymes With Cars & Girls (2012-08-22 05:41:31)

[...] of lobbyists Seth Roberts on how SOPA was stopped. Like him, I find this part the most interesting: Aaron worked with lobbyists for Google. The [...]

## **Why Self-Track? The Possibility of Hard-to-Explain Change (2012-08-22 05:00)**

My personal science introduced me to a research method I have never seen used in research articles or described in discussions of scientific method. It might be called wait and see. You measure something repeatedly, day after day, with the hope that at some point it will change dramatically and you will be able to determine why. In other words: 1. Measure something repeatedly, day after day. 2. When you notice an outlier, test possible explanations. In most science, random (= unplanned) variation is bad. In an experiment, for example, it makes the effects of the treatment harder to see. Here it is good.

Here are examples where wait and see paid off for me:

1. Acne and benzoyl peroxide. When I was a graduate student, I started counting the number of pimples on my face every morning. One day the count improved. It was two days after I started using benzoyl peroxide more regularly. Until then, I did not think benzoyl peroxide worked well – I started using it more regularly because I had run out of tetracycline (which turned out not to work).
2. Sleep and breakfast. [1]I changed my breakfast from oatmeal to fruit because a student told me he had lost weight eating foods with high water content (such as fruit). I did not lose weight but my sleep suddenly got worse. I started waking up early every morning instead of half the time. From this I figured out that any breakfast, if eaten early, disturbed my sleep.

3. Sleep and standing (twice). [2]I started to stand a lot to see if it would cause weight loss. It didn't, but I started to sleep better. Later, I discovered by accident that [3]standing on one leg to exhaustion made me sleep better.

4. Brain function and butter. For years I measured how fast I did arithmetic. [4]One day I was a lot faster than usual. It turned out to be due to butter.

5.[5] Brain function and dental amalgam. My brain function, measured by an arithmetic test, improved over several months. I eventually decided that removal of two mercury-containing fillings was the likely cause.

6. Blood sugar and walking. My fasting blood sugar used to be higher than I would like – in the 90s. (Optimal is low 80s.) Even worse, it seemed to be increasing. (Above 100 is "pre-diabetic.") [6]One day I discovered it was much lower than expected (in the 80s). The previous day I had walked for an hour, which was unusual. I determined it was indeed cause and effect. If I walked an hour per day, my fasting blood sugar was much better.

This method and examples emphasize the point that different scientific methods are good at different things and we need all of them (in contrast to evidence-based medicine advocates who say some types of evidence are "better" than other types – implying one-dimensional evaluation). One thing we want to do is test cause-effect ideas (X causes Y). This method doesn't do that at all. Experiments do that well, surveys are better than nothing. Another thing we want to do is assess the generality of our cause-effect ideas. This method doesn't do that at all. Surveys do that well (it is much easier to survey a wide range of people than do an experiment with a wide range of people), multi-person experiments are better than nothing. A third thing we want to do is come up with cause-effect ideas worth testing. Most experiments are a poor way to do this, surveys are better than nothing. This method is especially good for that.

The possibility of such discoveries is a good reason to self-track. Professional scientists almost never use this method. But you can.

1. <http://escholarship.org/uc/item/2xc2h866/>

2. <http://escholarship.org/uc/item/2xc2h866/>

3. <http://quantifiedself.com/2011/03/effect-of-one-legged-standing-on-sleep/>

4. <http://blog.sethroberts.net/2010/08/13/arithmetic-and-butter/>

5. <http://blog.sethroberts.net/2011/06/26/damage-due-to-mercury-revealed-by-brain-test/>

6. <http://blog.sethroberts.net/2010/07/18/fasting-blood-sugar-reduced-by-walking/>

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Jim Purdy (2012-08-22 05:58:53)

Getting taken seriously when I do any self-tracking is an uphill battle when I'm dealing with arrogant jerks in long white coats (a.k.a. MDs). They dismiss my experiences as anecdotal, and if I don't slavishly follow their "doctor's orders," they call me noncompliant, nonadherent, crazy, and suicidal. At that point, I have a name for them. I call them my ex-doctors. An arrogant jerk is still an arrogant jerk, even if the jerk wears a long white coat.

Lisa Wiland (2012-08-22 07:21:10)

I'm interested in self-tracking, but I haven't figured out HOW to do it (without it being too cumbersome / time consuming / inconvenient). Is there something you've written (or someone else has written) that gives tips to a beginner? I imagine you've learned a lot over years of doing this about what makes it easy enough to stick to. When you suggest that one measure something daily, then wait and see ... well, I'm trying to think about what sorts of things are likely to be worth measuring. I guess that depends on the individual, and what issues/problems they'd like to improve. Sleep and mood are clearly useful

ones. Weight too.... But I'm curious - what do YOU measure daily? And - about how much time does your self-tracking take (not analyzing / making connections, just the stuff you record each day)?

Seth Roberts (2012-08-22 09:08:57)

I measure daily: 1. weight. 2. fasting blood sugar. 3. sleep. 4. brain function. It takes about 7 minutes.

Jim Purdy (2012-08-22 11:59:59)

Seth, Im sorry, but I'm still a skeptic about your butter-arithmetic hypothesis, and your assertion that consuming butter makes you feel better. In one of the Public Library of Science blogs, "Obesity Panacea," a recent post called "Does thinking hard impact your heart?" made this statement: "The results of this study suggest that an experimental mental work condition consisting of a 45-min period of reading and writing a summary, as other types of mental work (such as arithmetic) utilized in the laboratory, can modulate cardiovascular responses in healthy young adults through a reduction in cardiac parasympathetic activity." In other words, perhaps it is the mental work (arithmetic), not the butter, which makes you feel good. (But my long-ago calculus class at Duke in 1961-62 sure didn't make me feel good. And the grade I got really made me feel bad.) <http://blogs.plos.org/obesitypanacea/2012/08/09/does-thinking-hard-impact-your-heart/> Seth: I believe butter makes me faster at arithmetic. From your comment I am unable to figure out why you question this. I have not studied mood effects of butter.

Nancy Lebovitz (2012-08-23 04:07:50)

I've heard about that sort of neutral accumulation of data in studying nature- there are projects that keep track of bird-watching results. I've heard of another project of that sort done by scientists- I'll post if I remember any more details. The Longevity Project is probably another one. Seth: Many scientific projects collect data over long periods of time (years). In psychology this is called longitudinal research. In psychology at least, the people who do these studies don't try to learn the cause of sudden changes (if any). In what I've seen, they ignore them.

Nancy Lebovitz (2012-08-23 04:08:31)

I agree that data accumulation is a rare way to do science, and there should be more of it. Seth: Data accumulation is common. Outlier investigation is rare.

Shawn (2012-08-23 04:13:34)

Thanks for this post. Ever consider posting some of the templates you use for self-tracking? Regarding one-legged standing, I've been doing it for a few days now and am getting restorative sleep that I have rarely had since childhood, where I was on my feet for a large chunk of the day playing. I wonder why I didn't think of doing something so simple on my own; clearly it would have helped to have used a journal.

Adam (2012-08-23 05:58:58)

Seth, you wrote: "I measure daily: 1. weight. 2. fasting blood sugar. 3. sleep. 4. brain function. It takes about 7 minutes." 1. is obvious. 2. I'm interested in, but a Glucometer is expensive. Are you testing only once a day? When do you test? Seth: I test once/day at 8 am. 3. I've heard you describe before. You record your subjective feeling of restedness on a scale from 0 to 100, including decimals (ie 97.5). 4. You test with solving arithmetic in some program. Any chance you could share the details if not the program itself? Seth: I will soon announce a way that a small number of people can use the test I now use. I no longer use an arithmetic test.

## Assorted Links (2012-08-23 05:00)

- [1]Did Jules Hoffman deserve the 2011 Nobel Prize in Medicine/Physiology? "Jules again, in his very subtle manner, described the Toll story as a team-work. I sat there, nauseated."

- [2] Babies given antibiotics more likely to be obese at age 3. This is very likely cause and effect because it is well-established that giving livestock antibiotics makes them fat.
- [3] Lynn Yaeger on collecting. "I'll be trying to get to the bottom of the mystery of what makes otherwise sane people spend all their money on King George coffee mugs."
- [4] Cultured Food Life
- [5] Pushcart kombucha
- [6] Sky natto

Thanks to Adam Clemens.

1. [https://documents.epfl.ch/users/b/bl/blemailto/public/2personalperspective\\_website.pdf](https://documents.epfl.ch/users/b/bl/blemailto/public/2personalperspective_website.pdf)
2. <http://news.yahoo.com/antibiotic-babies-may-increase-obesity-risk-childhood-123706513.html>
3. [http://www.huffingtonpost.com/meredith-barnett/lynn-yaeger-opens-her-clo\\_b\\_508809.html](http://www.huffingtonpost.com/meredith-barnett/lynn-yaeger-opens-her-clo_b_508809.html)
4. <http://culturedfoodlife.com/>
5. <http://www.bostonglobe.com/lifestyle/food-dining/2012/08/21/fizzy-fermented-draft-tea-served-from-pushcart/4EnnhaiFi5HmHM8UyKakFK/story.html>
6. <http://en.rocketnews24.com/2012/08/21/bacteria-from-the-heavens-grants-us-a-new-type-of-natto-still-smells-bad/>

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Frank (2012-08-23 09:11:43)

Web comic for a future Assorted Links page: <http://xkcd.com/1096/>

dearieme (2012-08-23 09:26:10)

I dare say that a Nobel prize goes, from time to time, to what used to be known as an "operator". Since learned societies presumably increasingly fill up with "operators" (consider the state of the Royal Society), what is to be done? Surely few Real McCoy scientists would want to spend their energy and time on crusades to put things right?

BenSix (2012-08-23 10:26:06)

I wonder if people who collect one thing obsessively sneer at the fanatical collectors of another. "Spending all my money on King George coffee mugs is one thing but wasting thousands of vintage striptease costumes? That's *weird*."

minderbender (2012-08-23 16:23:21)

BenSix, I think that can be answered with another recent XKCD: <http://xkcd.com/1095/>

dearieme (2012-08-25 14:02:21)

@Seth, have you any views on these remarks about rice? <http://chiefio.wordpress.com/2012/08/24/you-are-what-you-eat/#comment-39476> Seth: It reminds me of what a friend said: "If rice were so bad for us, the Japanese wouldn't be the healthiest people in the world."

Vic (2012-08-25 21:10:12)

Japanese aren't the healthiest people in the world. They have extremely high incidence of hemorrhagic stroke, one of the most terrible conditions imaginable, and very high incidence of digestive cancers. Japanese male life expectancy is lower than

male life expectancy in Switzerland, Iceland, and Israel. Seth: Thanks for the correction – if it is true that the Japanese (male and female together) do not have the longest life expectancy in the world.

Frank (2012-08-26 12:59:47)

Hey there. Why did you shut down the discussion about Canker Sores. I wanted to see if Heidi from Canada found her cure. I have had Canker Sores for a decade, 2-3 large ones at a time. Then I went vegan and suddenly POOF they were gone for 2 months. But now they are back. Smaller and less frequent. I did accidentally have Walnuts and Flaxseed oil in my diet. Maybe I need to increase them. What is confusing is some sites say Walnuts cause canker sores. Maybe it is just an allergic reaction some people might have.

### **Assorted Links (2012-08-25 15:45)**

- [1]A map of San Francisco highlights folded in [2]an intriguing new way
- [3]Virtuous Pedophiles
- [4]Jane Jacobs video (1969)

Thanks to Dave Lull.

1. <http://theopencompany.net/collections/all/products/san-francisco-map>
2. <http://blog.theopencompany.net/post/19700379823/the-miura-ori-and-how-to-fold-it>
3. <http://www.virped.org/>
4. <http://www.randomhouse.ca/hazlitt/podcast/jane-jacobs-toronto-and-montreal-circa-1969>

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Txomin (2012-08-25 19:41:39)

Since I came to the conclusion that pedophilia is a sexual orientation (and therefore incurable), I've suspected that most pedophiles never act on it. Celibacy is hard regardless of sexual orientation but it is also not an impossible to do. Far from it. The virped site says that most pedophiles are males. This could be true. However, I have come across more female pedophiles than males on a ratio of almost 10 to 1. Anyway, it is difficult to argue this sort of initiative (website, etc) is anything but positive. Good on you for posting this, Seth.

Alex Chernavsky (2012-08-26 06:47:22)

Here's another interesting article: "[1]An Immune Disorder at the Root of Autism"

1. <http://www.nytimes.com/2012/08/26/opinion/sunday/immune-disorders-and-autism.html?pagewanted=all>

Andrew (2012-08-26 18:41:31)

Seth, thought you would find this interesting: [itsthewooo.blogspot.com/2012/08/blocking-out-all-light-while-sleeping.html](http://itsthewooo.blogspot.com/2012/08/blocking-out-all-light-while-sleeping.html)

### **Want to Track Your Brain Function? (2012-08-28 07:28)**

I am looking for people who want to try a mental test I have developed to track brain function. You do it on your laptop, once or more per day. One test session takes three minutes. For five years, I've been using various tests to track my

brain function – first, balance, then, for a long time, arithmetic speed. The new test is better than these earlier tests, at least for me, because I find it enjoyable, which makes it easy to do several times/day. Via brain tracking, I have found that flaxseed oil and butter make my brain work considerably better. I was also able to find the best dosages. I believe that learning what foods (and dosages) make your brain work best is a good way to figure out what foods (and dosages) are best for the rest of your body. For example, after I figured out what amount of flaxseed oil was best for my brain, my gums became much healthier (less inflammation). The new test, which I do more often than the older tests, has made clear that there are all sorts of reliable yet mysterious ups and down in my brain function. I was unaware of this.

I want to find out what happens when other people use the new test. I am looking for a small number of people to do the test at least daily and send me their data at least weekly for at least 3 months. The test requires a computer running Windows 7. The test is written in R (free), but you don't need to know R to use it. The installation requires details that I will need to handle by talking with you.

To find people to do this, I will use a bidding system. (Giving a program to those who ask for it is a waste of time, I have found.) The questions below ask for two bids: non-refundable and refundable. If you use it as promised – you set the details of how much you will use it – you get back the refundable amount.

If this interests you, please apply by sending an email to [try.brain.tracking \(at\) gmail.com](mailto:try.brain.tracking@gmail.com) with answers to the following questions (as email text, not attachment):

1. Name, age, sex, location, job.
2. Computer you will use it on (e.g., Thinkpad 520), age of computer, operating system.
3. Phone number (and Skype id, if any). I need to talk to you to set it up.
4. Website or blog (if any).
5. Any relevant expertise or experience? (e.g., work with computers, researcher, other self-tracking)
6. Non-refundable amount. How much (U.S. dollars) are you willing to pay (via PayPal) to get this test?
7. Over 3 months, on what fraction of days will you commit to doing the test at least once? at least twice?
8. Refundable amount. This money will be refunded if you meet the goals you set in Question 7 and send me the data at least 6 times (spaced at least one week apart).
9. Anything you want to add?

You will get an automated reply. After that, I will contact you only if I want more information or if yours is one of the winning bids.



Clyde Adams III (2012-08-28 09:39:04)

"...send me the data at least 6 weeks." It looks as if there is a word or phrase missing here. Perhaps you meant: "...send me the data [for] at least 6 weeks."

AM (2012-09-11 09:20:39)

I must not be the only one of your readers who has (only) a Mac. Seth: The brain tracking program uses an R program only available for Windows. There is no easy way around this, I have found.

### Assorted Links (2012-08-29 05:00)

- [1]Quantified Self and the Future of Health Care (talk) by Rajiv Mehta
- [2]Did Muhammed Yunus deserve the 2006 Nobel Peace Prize? The truth about microfinance: impact close to zero. Lots of microfinance loans are used to pay off a loan from another microfinance lender.
- [3]Calorie content of almonds – the usual value – wrong by one-third
- [4]The Siege of Academe (online competition with traditional college classes) via [5]Marginal Revolution. An entirely different article could be written about employers who realize that the best employee isn't necessarily a Harvard graduate.
- [6]Inside a "low-performing" San Francisco high school

1. <http://quantifiedself.com/2012/08/quantified-self-and-the-future-of-healthcare/>

2. <http://www.booktv.org/Watch/13698/Confessions+of+a+Microfinance+Heretic+How+Microlending+Lost+Its+Way+and+Betrayed+the+Poor.aspx>

3. <http://proxy.michaelhartog.com/www.ajcn.org/content/96/2/296.full>

4. [http://www.washingtonmonthly.com/magazine/septemberoctober\\_2012/features/\\_its\\_three\\_oclock\\_in039373.php?page=all](http://www.washingtonmonthly.com/magazine/septemberoctober_2012/features/_its_three_oclock_in039373.php?page=all)

5. <http://marginalrevolution.com/marginalrevolution/2012/08/the-coming-disruption-in-education.html>

6. <http://m.motherjones.com/media/2012/08/mission-high-false-low-performing-school>

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dearieme (2012-08-29 09:40:33)

"During this past century, there have been few, if any, studies reporting on the energy value of a whole food within a mixed diet that could confirm the accuracy of Atwater's coefficients." If you allowed bad language here, I might call that a fucking disgrace.

David Johnston (2012-08-29 15:39:15)

The almonds calorie link is sent through [proxy.michaelhartog.com/](http://proxy.michaelhartog.com/). This is blocked by many company filters. All you need is the latter part. I.E. <http://www.ajcn.org/content/96/2/296.full>

### 50 Years of Knuckle Cracking Did Not Produce Arthritis (2012-08-30 05:00)

Warned by relatives that knuckle cracking causes arthritis, Donald Unger decided to crack only the knuckles of his left hand. For 50 years he frequently cracked his left hand, never his right. Finally he wrote [1]a letter to a scientific

journal (in which he calls himself "the author") pointing out that he did not have arthritis in either hand, supporting the conclusion of another study which studied a much smaller amount of knuckle cracking.

Thanks to Bryan Castañeda via [2]Now I Know.

1. <http://blog.sethroberts.net/wp-content/uploads/2012/08/knuckle-cracking-for-50-years.pdf>
2. <http://nowiknow.com/>

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gwern (2012-08-30 07:57:56)

And in gratitude for his decades of work, he received... an Ignoble Prize.

Jim Purdy (2012-08-30 09:12:09)

The National Institute of Health website has links to many published studies which show little or no harm from long-term knuckle cracking. However, according to a 1990 report (<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1004074/>): "Habitual knuckle cracking was associated with manual labour, biting of the nails, smoking, and drinking alcohol." Just wondering: Does Donald Unger drink, smoke, bite his nails, or do manual labor? Seth: Unger's study was better controlled than any of the NIH studies, in the sense that the hands being compared were identical in terms of diet and genetics.

Bob (2012-08-30 11:58:23)

He's an internist in Thousand Oaks. BTW, the reply to Unger's letter is funny & worth reading.

Roger Sweeny (2012-08-30 13:24:35)

This whole thing is, of course, a joke. It is one of the recipients of the 2009 Ig-Nobel Prizes. Seth: Calling someone's 50-year project "a joke" is not terribly nice. What do you mean by "a joke" and how do you know it is "a joke"?

garymar (2012-08-30 18:03:16)

Unger's letter is light-hearted and whimsical ("spinach-eating"!) and the authors of the previous study answered in kind. So in a way it is a joke, on both their parts. More like a case study so of course it's statistically 'underpowered'. Seth: "Joke" usually means "didn't actually happen" ("I was joking!"). I see nothing to suggest that what Unger described didn't actually happen. In fact, I believe Unger – like most of us – is not creative enough to make such stuff up.

Roger Sweeny (2012-08-31 08:16:15)

Seth, You're right. I don't know whether the 50-year "self-controlled study" actually happened or not. It's certainly not impossible but fifty years of one-sided knuckle cracking seemed unlikely to me. The letter and response read like satire to me. The response is certainly satire, especially the "statistical analysis" of Dr. John Adams, e.g., "Typically, sample sizes of roughly twice the available research budget are required for valid inference." (Not seeing a journal name at the top or bottom of either page also made me suspicious.) If I had access to a medical library, I would see if the cited 1973 article actually exists (I'm so ignorant I don't even know if there was a Western Journal of Medicine in 1973). If I was a hot shot Berkeley Psychology Professor, I'd call Dr. Unger and ask him personally whether the letter described something that had actually happened or was "a joke." It is funny.

Roger Sweeny (2012-08-31 08:25:38)

As a very ordinary person, with access to the extraordinary Internet, I could google "Donald L. Unger." There I would find a couple of stories that indicate the project was indeed real and not a joke. Probably should have done that before I commented :)

Tom (2012-08-31 15:09:36)  
Or you could call him. office Phone: (805) 494-4505

### **Textbook Buying Tip (2012-08-30 12:22)**

I met a Berkeley student who paid \$17 (including shipping) for Statistics (4th edition = latest edition) by Friedman, Pisani and Purves at abebooks.com. She got an edition meant for India, but the text is the same. [1]The current lowest price at abebooks is \$37 (including shipping). Amazon charges \$108 (including shipping). More Dave Lull points out it is even less ( \$25) [2]elsewhere.

1. <http://www.abebooks.com/servlet/SearchResults?bi=0&bx=off&ds=30&isbn=0393929728&recentlyadded=all&sortby=17&sts=t&x=45&y=13>
2. <http://www.bookfinder.com/search/?keywords=0393929728&st=sh&ac=qr&submit=>

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Alex Chernavsky (2012-08-31 07:10:22)  
See also this open-source textbook project: <http://openstaxcollege.org/books>

Michael RB (2012-09-04 22:29:14)  
I played that game in grad school and literally handed in a combinatorics problem set for the next chapter. I had no idea that the India edition skipped a chapter. Caveat emptor

### **Benefits of Fermented Foods (2012-08-31 08:41)**

A simple story:

When Steven Kent did an internship at The Farm, a hippie commune in rural Tennessee, he had an epiphany. Eating a steady diet of sauerkraut, pickled vegetables, sourdough bread and other fermented foods, he found the digestive problems that had plagued him since college largely vanished.

There is more [1]here about tempeh (fermented tofu) and a small Northern California company that Kent started called [2]Alive and Healing that makes only tempeh.

1. <http://www.jweekly.com/article/full/66239/the-organic-epicure-sexier-than-tofu-jewish-man-has-a-love-affair-with-temp/>
2. <http://www.aliveandhealing.com/retail-locations/>

Kefirprobiotic.org (2012-09-07 17:57:49)

I'm a college student as well and I suffered from irritable bowel syndrome for the last few years after taking acutane for 2 months. My symptoms have largely disappeared after drinking the fermented milk drink kefir.

## 7.9 September

### Assorted Links (2012-09-01 05:43)

- [1]the power of Marmite
- [2]problems in the Chinese economy
- Edward Jay Epstein [3]reviews A Wilderness of Error by Errol Morris. Janet Malcolm, among many others, assumed McDonald was guilty but new evidence suggests he was innocent.
- [4]Fermented food addiction. Several months ago I had a hard time not eating roasted peanuts. I kept buying them. Eventually the compulsion to eat them disappeared. Maybe they were supplying a nutrient I was deficient in.

Thanks to Anne Weiss.

1. <http://www.telegraph.co.uk/foodanddrink/9504293/Marmite-the-latest-superfood.html>
2. <http://www.baldingsworld.com/2012/08/28/the-real-risk-of-the-chinese-economy/>
3. <http://online.wsj.com/article/SB10000872396390444508504577595580041427656.html#articleTabs%3Darticle>
4. <http://paleohacks.com/questions/146534/fermented-food-addiction#axzz25DkfG7Xt>

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dearieme (2012-09-01 05:59:17)

On what evidence could a jury think that Macdonald's guilt was beyond reasonable doubt? In Britain there are, from time to time, cases where the prosecution's case is so weak that the judge throws it out without any need for a jury decision. Do any of the US states allow that?

Matt (2012-09-01 13:31:57)

I wonder if ice cream is supplying me with a nutrient I am deficient in...

garymar (2012-09-01 17:45:46)

Fantastic scenes of cities in China uninhabited years after construction, with a goatherd tending his goats past immaculate, empty government buildings. I especially like the "Dinosaur" city of Erenhot. I saw an awful lot of high-rise apartments in Shenzhen that were all filled, with laundry hanging out, TV antennas and dishes, etc. But that was 4 years ago.

Bryan (2012-09-01 23:55:41)

dearieme: First, the vast majority of cases – be they civil or criminal – never reach trial. The great majority of civil cases are settled and criminal trials are plea bargained. In civil cases, a defendant can move for summary judgment, which essentially challenges the sufficiency of the plaintiff's case. This is a pre-trial motion that, if granted by the judge, ends the case. In criminal cases, there is no such mechanism. Thus, trial is the only way to test the sufficiency of the prosecution's case/evidence.

Practically, if the prosecution has a very weak case, it won't go through the time or expense of trial. But, if the case is high-profile like the McDonald murders (or the prosecutor is overzealous), the pressure will be great to take it to a jury. There's not much the judge can do stop it.

dearieme (2012-09-02 02:30:04)

Bryan, in British criminal trials the judge has the power to listen to the prosecution case and, if he thinks it lame enough, stop the trial, discharge the jury and deliver a verdict of not guilty himself, without hearing the defence case. I don't suppose it's done often, but you see it in the papers from time to time. I imagine that it leads to peppy debate in the Prosecutor's office. I imagine that it's intended to.

Michael (2012-09-02 23:21:30)

I'm not a lawyer, so I'm not sure on the details, but in America, at least at the Federal criminal level, a judge can simply enter an acquittal without sending the trial to jury, or disregard a jury's guilty verdict and enter an acquittal (called "judgement notwithstanding verdict"). The judge cannot throw out a not-guilty verdict and enter a guilty verdict however, as that would violate the sixth amendment right to a trial by jury. How often this comes up, whether it's the same at state level, or how it works in civil cases, I don't know. At the Federal criminal level, it's in the Federal Rules of Criminal Procedure section 29.

AM (2012-09-11 09:32:54)

Mmmm ... Marmite ...

### Assorted Links (2012-09-03 05:00)

- [1]Five quantified-self stories
- [2]False Alzheimer's diagnosis. "Alzheimer's symptoms such as confusion, memory loss and personality changes also can be side effects from medication—even commonly used drugs. For example, the entire class of anti-cholinergic drugs, which includes many antihistamines, antianxiety drugs, muscle relaxants and sleeping pills . . . Cholesterol-reducing statins have also been linked to brain fog in some people. In many cases, the cognitive symptoms vanish when medication is stopped. "I have had people referred to me with a clear history of dementia and when I started to peel back the medications, they were much better," says Gary Kennedy, chief of geriatric psychiatry at Montefiore Medical Center in the Bronx, N.Y."
- [3]Ancestral Health Symposium 2012 (Boston) recaps. I thought Robb Wolf's talk was excellent. Jay Stanton had original ideas about weight control. Most of the other talks, not so much.

1. [http://spectrum.ieee.org/biomedical/diagnostics/five-stories-from-the-front-lines-of-the-quantifiedself-movement?utm\\_source=dlvr.it&utm\\_medium=linkedin](http://spectrum.ieee.org/biomedical/diagnostics/five-stories-from-the-front-lines-of-the-quantifiedself-movement?utm_source=dlvr.it&utm_medium=linkedin)

2. <http://online.wsj.com/article/SB10000872396390444327204577615353048888094.html>

3. <http://weightmaven.org/2012/08/14/ahs12-posts-pics/>

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Tarkan (2012-09-03 14:47:54)

Could you write more about vitamin d please? I'm interested to know more about sitocalciferol / alfacalcidol, the new synthetic version of vitamin d. Thank you.

## Two Recent Health Care Experiences (2012-09-04 05:00)

A friend and his pregnant wife, who live in Los Angeles and are not poor, recently had an ultrasound. (Probability of the ultrasound machine not operating properly and producing more than the stated amounts of energy: unknown, but [1]a recent Stockholm survey found one-third of the machines malfunctioned.) Part of the office visit was a post-ultrasound visit with a genetic counselor. The genetic counselor walked them through illnesses in their family tree and assessed their coming baby with very low risk for Trisomy 21 (Down syndrome), Trisomy 13 and Trisomy 18.

At the end of their session, they were offered other services they might opt to buy to better know their chances of knowing about any fetal problems: [2]Chorionic villus sampling and [3]amniocentesis as well as a maternal blood test. None were really necessary.

My friend was irked that the CVS and the amniocentesis were called "low risk". Maybe you know that a large fraction of doctors claim to practice "evidence-based medicine". You might think this means they pay attention to all evidence. In fact, evidence-based medicine practitioners subscribe to a method of ranking evidence and [4]ignore evidence that is not highly ranked. Most evidence of harm is not highly ranked, so evidence-based medicine practitioners ignore it. This makes every treatment appear less dangerous – misleadingly so. When a doctor says "low risk," the truth, because the practice of ignoring evidence of harm is widespread (and drug companies routinely underestimate risk), is closer to "unknown risk". The combination of (a) understating risk, (b) selling unnecessary stuff of which you have understated the risk, and (c) doing this with pregnant women, whose fetuses are especially vulnerable, is highly unattractive.

Also recently, the friend's toddler had some sort of infection. The toddler had a bit of a fever, but was generally in good spirits, and played with his toys (i.e., was not bed-ridden or in severe distress). After a few days, his wife took the child to their pediatrician to make sure everything was fine.

"Don't just accept the antibiotics," my friend told his wife. "Push back a little. See what happens."

The pediatrician did prescribe antibiotics. When my friend's wife said she preferred not to give the child antibiotics if it were not really necessary, the doctor (female) said, "You're right. I actually don't know if the infection is bacterial or viral."

Both stories – which obviously reflect common practice – illustrate how the healthcare system is biased toward treatment, including treatments that are unnecessary and dangerous. The good news is that this bias is clearer than ever before.

1. <http://ehjcmaging.oxfordjournals.org/content/11/9/801.full.pdf>
2. [http://en.wikipedia.org/wiki/Chorionic\\_villus\\_sampling](http://en.wikipedia.org/wiki/Chorionic_villus_sampling)
3. <http://en.wikipedia.org/wiki/Amniocentesis>
4. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

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Richard A. (2012-09-04 06:00:07)

Did Neil Armstrong really need that bypass surgery?

Ruth (2012-09-04 07:03:10)

My friend taught me a brilliant system for what to do when the kids were sick. First of all, don't run to the doctor after the first sniffle or cough. When it's more serious, go for a checkup. The doctor usually prescribes antibiotics. Ask if they are warranted. If they are, go home with the prescription but don't fill it. If by next morning the kid is on the mend, you never need to fill the prescription. 90 % of the time, this is what happened. I rarely ended up filling the prescription. I felt good that at least a health professional had seen my kid to rule out something serious - wouldn't want to just never go to the doctor to avoid meds.

Alex Chernavsky (2012-09-04 07:27:41)

"Push back a little. See what happens." This is generally good practice when dealing with experts. About twelve years ago, I had undertaken some complicated financial transactions, so I hired an accountant to prepare my tax return. When he showed me a draft of the return, I was stunned at my unexpectedly high tax liability. I found an area of the return that looked suspicious to me. The account *insisted* that there was no mistake. But he called me a couple of hours later and admitted that he had inadvertently double-counted some income. Experts are to be treated with deep suspicion.

Mark (2012-09-04 07:45:08)

Agreed... all experts should be treated with deep suspicion. Anybody can have an opinion, but experts dangerously base theirs on inductive reasoning, i.e., "what I saw over the past must remain true today."

Richard A. (2012-09-04 07:45:38)

While I do disagree with Dr McDougall's low fat approach- Heart Surgeons Kill First Man on the Moon: Neil Armstrong [http://www.drmcDougall.com/misc/2012nl/a ug/armstrong.htm](http://www.drmcDougall.com/misc/2012nl/a%20ug/armstrong.htm)

## **New Walking-Catalyzes-Learning Results (2012-09-05 05:00)**

[1]Two years ago, I discovered that if I walked on a treadmill while studying Chinese flash cards, it became much easier. Without walking, I could barely study 10 minutes without getting exhausted and stopping. If I walked at the same time, however, I could study much longer - say, 60 minutes. Huge difference. Walking on a treadmill made studying Chinese pleasant. This was stunning because walking on a treadmill by itself was boring and studying Chinese (or any other dry knowledge) is supposed to be boring. I concluded that walking created a thirst for dry knowledge, which studying Chinese satisfied. My evolutionary explanation was that this linkage evolved to push us to explore our surroundings. [2]My posts about this.

In [3]an April 2012 QS talk, Jeremy Howard reported the same thing.

I discovered that if I am walking on a treadmill at 1.2 miles per hour at a 1 degree incline I have an error rate of about 5 %. Whereas if I don't [walk on a treadmill] it's about 8 %. I also know that I can do that for an hour. Whereas normally if I'm just sitting down I can just do it 20 minutes. . . . And at the end of that hour I was ready to do something else. Whereas at the end of 20 minutes, normally I'd [audience member: "Take a nap"] Yeah, I'd be totally ready for a rest . . . I also discovered I was 40 % faster [at learning].

He added, "I love my Chinese every day." More recently, someone named Adam [4]posted on the QS forums that he'd had a similar experience:

As Jeremy Howard mentioned in his talk, SRSing (is that a word?) is exhausting. Like him, after a period of about 20 minutes, I often reach a level of fatigue that makes it difficult to continue studying. I first read

about the "treadmill method" on Seth Roberts's blog & found it highly effective. Like Mr. Howard, I could study for hours without become bored . . . The only problem here is that I don't have easy access to a treadmill. My gym is quite far & it is impractical to go there every day, while I desire to SRS every day.

That two other people noticed such a big effect is good reason to think that it will be true for most people.

1. <http://blog.sethroberts.net/2010/02/23/boring-boring-pleasant/>
2. [http://blog.sethroberts.net/wp-admin/edit.php?post\\_type=post&category\\_name=walking-and-learning](http://blog.sethroberts.net/wp-admin/edit.php?post_type=post&category_name=walking-and-learning)
3. <http://vimeo.com/40265872>
4. <http://forum.quantifiedself.com/thread-srs-brief-wakeful-resting?pid=1717#pid1717>

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dearieme (2012-09-05 05:12:46)

When I was a fresher I was asked to leave a library because my habit of walking around was distracting other readers. My habit was to sit and read for some minutes and then stride about, running the stuff through my mind, looking at it this way and that. Sometimes I'd carry some notes to look at. It worked.

Allen K. (2012-09-05 06:01:14)

For the last couple of years, I've napped 1/2 hour almost every day, but pretty much stopped once I started my treadmill desk ( \$50 treadmill off craigslist). Having a standing desk wasn't enough.

Adam (2012-09-05 07:21:38)

@Seth: That Adam is me! We actually met a while back when you came to Shanghai for a visit. I'm the Anki/SRS obsessed gentleman who was present at the Korean BBQ. @Allen K.: I suppose I could study flashcards on my cellphone while walking on nearly any kind of treadmill, but I'm curious what kind you bought. Did you modify it yourself to turn it into a treadmill desk? Does that mean that you use your laptop on it? If you could share some of your methods and/or pictures, I'd really appreciate it.

Chuck (2012-09-05 09:04:46)

I like to listen to podcasts while I walk, usually with my dog, and easily walk for an hour, or more, while listening. However, if I try to listen to a podcast while sitting, I go about ten minutes, then realize I can't remember a thing the person(s) said, and give up. Not that I can remember everything said in an hour long podcast, but I think if I listened to it daily over a period of time, like studying the same flashcards over and over again, I could remember the whole thing. Or, I could become bored with the parts I do remember and subconsciously stop listening. Video casts are not as hard to get through, and I think it's because what you see on the video usually changes from moment to moment - kind of like flash cards - and there's more of a visual interaction. Probably the influence of television - audio/visual/sedentary conditioning. Ha! Talk radio is another medium I cannot listen to unless I'm driving or walking. I find it all very interesting. Seth: Very interesting. Would online education be better if it were designed to be consumed while walking, instead of looking at a screen?

Bryan (2012-09-05 11:05:13)

When I memorizing stuff for the California bar exam, most of the time I was on my feet. I'd either pace around the room reading my notes aloud or walk around campus reading my notecards to myself. Seth: yes, I will change the title of this post. It's obviously walking, not necessarily treadmill walking.

Joanna (2012-09-05 13:26:45)

But treadmill walking and reading is safer than regular walking if you're looking down at written material - kind of like walking and texting, which is not really very safe. Regular walking outdoors would certainly work for podcasts - I will have to try that



one. And merely glancing at notes while pacing around indoors wouldn't seem to be too dangerous. Other than that I think I would stick with treadmills. Seth: Yes, I quickly stopped walking around my neighborhood studying flashcards – it was too tricky.

Matt (2012-09-06 04:28:18)

I find that I can easily retain information that I hear during a podcast while I'm walking OR driving, but if I'm sitting I do not retain nearly as much. Perhaps it is the motion rather than the walking, specifically.

Adam (2012-09-06 06:50:08)

Bryan's comment reminded me, I used the "Walking Effect" when studying for my licensing exam as well. That was before I had a smartphone or knew what Anki was. I made hundreds of paper flashcards with brand and generic drug names on them, then walked for hours around the track at a local high school. The track works pretty well as long as it isn't too crowded.

Alex Berg (2012-09-06 14:22:38)

Anat Baniel also believes motion improves learning and thinking. She has some interesting ideas, and her movement exercises has been a revelation for me regarding headaches due to desk work

Derek Ramsey (2012-09-06 17:36:50)

To quote "<http://autism.com/pdf/families/adviceforparents.pdf>": "There are several ways to help autistic children learn to talk, including....Vestibular stimulation, such as swinging on a swing, while teaching speech"

## **Bic For Her and Personal Science (2012-09-06 05:00)**

Bic's new line of pens ([1]Bic for Her) was greeted with scorn by Amazon reviewers. [2]David Vinjamuri, experienced in brand marketing, guessed that the reason for the debacle was that the persons who approved the product were quite different than the persons expected to buy it.

Brand companies are not good at assigning authentic consumers [= consumers of their brands] to work on their brands. They [wrongly] assume that [their] lack of personal experience with the product can be made up [for] by lots of analysis. It is very, very hard to imagine that the people who made the decision to launch "Bic for Her" were the same [people] expected to buy them. And that's why the huge majority of consumer brand launches fail. There are lots of ways to make an awful mistake, but some of the worst could be avoided if consumer companies were staffed by actual consumers.

Health care has the same problem. In health care, the persons who devise a new treatment (a new treatment for acne, asthma, arthritis, diabetes, whatever) are usually 100 % distinct from the persons expected to use that treatment. For example, roughly 0 % of acne researchers have acne.

If Vinjamuri is right – and I think he is – this explains a lot about the awfulness of modern health care – [3]the terrible side effects of Accutane, for example. And it explains why personal science works so much better. When [4]personal scientists search for a solution to a health problem (e.g. [5]acne), they are 100 % the same as the people who will use the solution. No wonder the solutions they find are so much better than what a doctor would prescribe.

1. <http://www.amazon.com/BIC-Cristal-1-0mm-Black-MSLP101-Blk/dp/B004F9QBCS>

2. <http://www.forbes.com/sites/davidvinjamuri/2012/08/30/bic-for-her-what-they-were-actually-thinking-as-told-by-a-man-who-worked-on-tampons/2/>

3. <http://www.drugwatch.com/accutane/side-effects.php>
4. <http://blog.sethroberts.net/make-yourself-healthy/>
5. <http://boingboing.net/2012/08/09/make-yourself-healthy-searchi.html>

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dearieme (2012-09-06 10:06:06)

When my GP was recommending a colonoscopy, he was lightning quick to point out that he'd had one. (We have aged together, he and I.)

Robbo (2012-09-06 13:20:37)

Roger Altounyan, who discovered / invented the asthma drug Intal was asthmatic himself and experimented on himself in making the discovery. That was not very unusual in the past, now I believe it is strongly discouraged.

### **Marginal Revolution University: A Hidden Advantage (2012-09-07 05:00)**

Tyler Cowen and Alex Tabarrok have started [1]Marginal Revolution University, intended to be a set of online classes that will "communicate [their] personal vision of economics". One selling point is the content will be designed for online delivery, rather than being recordings of lectures.

They don't mention another advantage. Before I was hired at Berkeley, I went there for a series of interviews. One was with a group of graduate students. One of them asked, "Which do you like better, teaching or research?" "I like research better," I said. The graduate students smiled. You're supposed to say you like them equally.

At Berkeley I met plenty of professors who liked teaching small classes. I never met a single professor who liked teaching large classes. (That included me – I didn't like teaching them.) [2]Berkeley has recently joined Harvard and MIT to form EdX, a nonprofit company that will offer online classes. "We are deeply committed to public education," said Berkeley's chancellor. Well, that might sound good or it might sound pro forma, but either way few of Berkeley's professors want to teach the classes that EdX would offer, such as Introductory Psychology. Unless a class with 100,000 students is more personal than a class with 500 students. Whereas Tyler and Alex must want to do what they're doing. No one is pushing them to do it.

1. <http://mruniverscity.com/>
  2. <http://www.bloomberg.com/news/2012-07-24/berkeley-joins-harvard-mit-offering-free-online-classes.html>
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Jonathan Shewchuk (2012-09-07 18:53:36)

For what it's worth, I'm a Berkeley CS prof who likes teaching large classes. I like them because (1) I thrive better (go into the zone more easily) in front of a large audience and (2) my department is wise enough to award more teaching credit for large classes. Perhaps it's ironic that I'm not really tempted to do an EdX courses because I don't think I lecture well in a studio. I need the live audience. Some of my colleagues in the department seem really excited about their large-scale online courses. Granted, those are usually upper-division courses like software engineering, and it's only the full-time lecturers who seem excited about large-scale lower-division courses.

JeffE (2012-09-07 20:11:19)

I also like teaching large classes. (I'm a CS prof at Illinois.) Administering large classes, on the other hand....

Assorted links (2012-09-10 09:49:17)

[...] 1. Slides from luminaries on development economics, as presented in Stockholm. [...]

### Assorted Links (2012-09-08 05:00)

- [1]Yoni Donner Quantified Self talk about measuring mental performance. He found he did better after eating than after fasting 21 hours.
- [2]When will machines replace doctors? "When Khosla challenged the assembled sawbones to counter his argument, Liu said, the room was silent."
- [3]How current reward structures have distorted British science. I wonder if the author, an Oxford professor of psychology, understands how earlier reward structures distorted science.
- [4]Vertos Medical, which makes surgical devices, accuses a professor of surgery "of scientific misconduct and violating "research ethics" by failing, among other things, to follow the study's original protocol and by independently deciding to follow his patients for added time without seeking agreement from Vertos" (emphasis added). Vertos Medical didn't like the results of the additional observation so they went nuclear.
- [5]An example of great writing (because it's full of emotion).

Thanks to Bryan Castañeda and Alex Chernavsky.

1. <http://vimeo.com/40245743>

2. [http://www.theregister.co.uk/2012/09/03/vinod\\_khosla\\_says\\_doctors\\_passe/](http://www.theregister.co.uk/2012/09/03/vinod_khosla_says_doctors_passe/)

3. <http://deevybee.blogspot.com/2010/08/how-our-current-reward-structures-have.html>

4. <http://www.nytimes.com/2012/09/06/health/a-clash-over-vertos-medicals-spine-treatment.html?pagewanted=2&r=1&pagewanted=all>

5. [http://www.antimoon.com/learners/michal\\_wojcik.htm](http://www.antimoon.com/learners/michal_wojcik.htm)

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gwern (2012-09-08 09:13:59)

> How current reward structures have distorted British science. I wonder if the author, an Oxford professor of psychology, understands how earlier reward structures distorted science. Interestingly, just yesterday I ran into a link showing one way in which British science seems to be superior to American science: less inflation and claims of positive results > Concerns that

the growing competition for funding and citations might distort science are frequently discussed, but have not been verified directly. Of the hypothesized problems, perhaps the most worrying is a worsening of positive-outcome bias. A system that disfavors negative results not only distorts the scientific literature directly, but might also discourage high-risk projects and pressure scientists to fabricate and falsify their data. This study analysed over 4,600 papers published in all disciplines between 1990 and 2007, measuring the frequency of papers that, having declared to have “tested” a hypothesis, reported a positive support for it. The overall frequency of positive supports has grown by over 22 % between 1990 and 2007, with significant differences between disciplines and countries. The increase was stronger in the social and some biomedical disciplines. The United States had published, over the years, significantly fewer positive results than Asian countries (and particularly Japan) but more than European countries (and in particular the United Kingdom). Methodological artefacts cannot explain away these patterns, which support the hypotheses that research is becoming less pioneering and/or that the objectivity with which results are produced and published is decreasing. <http://mres.gmu.edu/pmwiki/uploads/Main/Fanelli2011.pdf> “Negative results are disappearing from most disciplines and countries”, Fanelli 2011; seen on <http://hardsci.wordpress.com/2012/03/10/secular-trends-in-publication-bias/>

Adam (2012-09-10 06:49:26)

One thing that occurred to me is that Yoni’s study only looked at acute effects. Intermittent fasting has a variety of long-term beneficial effects on health, and health has beneficial effects on cognition. It seems plausible to me that if we took 2 people and had one intermittently fast for several months & one eat normally, we might find that the baseline level of cognition was higher in the intermittent faster. Then we could take both & show that, yes, an intermittent faster would have a short-term “boost” in cognition due to elevated blood sugar after a meal, but it could still be the case that his average cognitive level was higher than the control subject. Be aware that I’m aware I’m totally speculating here, but I do think there are still a myriad of reasons to advocate intermittent fasting. I’m also curious of the magnitude of the negative effects Yoni recorded. It is hard to pull that kind of data out of charts shown in a flash in a video clip. Has he a blog or other site where he’s shared them?

Adam (2012-09-10 16:21:21)

“Even blood glucose levels in the range of high normal appear to be associated with brain atrophy, a new study shows. In a sample of randomly selected older middle-aged people, high normal levels of fasting plasma glucose were significantly associated with hippocampal and amygdalar atrophy over 4 years.” <http://www.medscape.com/viewarticle/770353> Elevating blood glucose for a cognitive boost seems to be a good short-term strategy but a bad long-term one. Seth: I found that walking an hour per day reduced my fasting blood glucose from high normal to low normal. Maybe the hippocampal and amygdalar atrophy are due to not walking much. The hippocampus is often called a mental map, sensitive to travel.

## **Independent Discovery That Walking Catalyzes Learning (2012-09-09 05:00)**

Two years ago I discovered that if [1]I walked while studying Chinese flashcards (using [2]Anki), both activities – walking and studying – became easier. I could walk much longer on my treadmill and I could study much longer. Walking made studying more pleasant and vice-versa. Around the same time, [3]Jeremy Howard, the president of [4]Kaggle, made the same discovery independently. In an email to me, he writes:

I came up with the idea accidentally a couple of years ago – I needed to go to the gym every day, and that included 30 minutes on a cross-trainer (but I only managed to do 15 min most days). I needed something to do to keep me amused, so I brought along my PC and started doing my Anki whilst on the cross-trainer. I discovered I could do my cross-trainer for at least twice as long, and my Anki results were better too. Later I added treadmill walking to my Anki study too.

He says more about it, including how much it helped him, [5]in a QS talk.

As Nabokov says [6]in Pale Fire,

If on some nameless island Captain Schmidt  
Sees a new animal and captures it,  
And if, a little later, Captain Smith  
Brings back a skin, that island is no myth.

Learning methods that use this effect are going to have a big advantage over learning methods that don't.

1. <http://blog.sethroberts.net/category/walking-and-learning/>
2. <http://ankisrs.net/>
3. [http://en.wikipedia.org/wiki/Jeremy\\_Howard\\_%28entrepreneur%29](http://en.wikipedia.org/wiki/Jeremy_Howard_%28entrepreneur%29)
4. <http://www.kaggle.com/>
5. <http://quantifiedself.com/2012/05/jeremy-howard-on-language-acquisition-performance/>
6. [http://books.google.com/books?id=5q\\_IhA8UqucC&pg=PA61&lpg=PA61&dq=nabokov+%22brings++back+a+skin%22+that+is+land+is+no+myth&source=bl&ots=o0wCHFahIA&sig=kymPBmJFZLFytvxc0x-L1hHMPjI&hl=en#v=onepage&q=nabokov%20%22brings%20%20back%20a%20skin%22%20that%20island%20is%20no%20myth&f=false](http://books.google.com/books?id=5q_IhA8UqucC&pg=PA61&lpg=PA61&dq=nabokov+%22brings++back+a+skin%22+that+is+land+is+no+myth&source=bl&ots=o0wCHFahIA&sig=kymPBmJFZLFytvxc0x-L1hHMPjI&hl=en#v=onepage&q=nabokov%20%22brings%20%20back%20a%20skin%22%20that%20island%20is%20no%20myth&f=false)

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Ilya (2012-09-10 07:58:58)

Seth, I am thinking about making a treadmill desk. Have you paid attention to your ability to do more creative work while walking? When I say creative work, I mean things like programming, any kind of design, writing. Thanks in advance, Ilya. Seth: I think treadmill walking makes it harder to do creative work, such as writing. I prefer sitting down for that. It puts me in an outer-directed frame of mind (paying more attention to the outside world), while creative work requires introspection.

Zay (2012-10-03 17:07:32)

I find I come up with my most creative ideas when I am moving through space. This used to be walking in the woods but I can no longer go for those hikes because of health reasons. I do notice that while I'm driving in the car, my mind becomes creative. (This is at times other than rush hour.) I am fascinated with the fact that my mind becomes creative the moment I move. When I stop at stop lights my ideas are put on hold. So I prefer to drive in the open country where they can flow freely.

### Assorted Links (2012-09-11 05:00)

- [1]details of home energy usage. For example, how much energy does a rice cooker use?
- [2]Chocolate lowers blood pressure only if your blood pressure is high
- [3]Identical South African twins test different diets. (Ignore the misunderstanding in the first sentence: "My identical twin sister and I have genetically high cholesterol." Maybe their cholesterol is high because of what they eat.) What's important is that their cholesterol levels are similar and their genes are the same, making it easier to detect environmental influences on cholesterol.
- [4]surprising value of cooling hands and feet after exercise

Thanks to Tucker Goodrich and Allan Jackson.

1. <http://physics.ucsd.edu/do-the-math/2012/07/ted-stravaganza/>
2. <http://www.ncbi.nlm.nih.gov/pubmed/20584271>
3. <http://www.jaquelineduncan.co.za/about-the-project/>
4. <http://news.stanford.edu/news/2012/august/cooling-glove-research-082912.html>

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Darrin Thompson (2012-09-11 06:05:16)

That cooling apparatus is really interesting. Will sports governing bodies ban it? Is it really as amazing as the authors say? Is there (dun dun dun) danger? The part at the end where the authors disclose their financial interest really dampened the magic for me. :-) Seth: I saw it as putting your money where your mouth is.

dearieme (2012-09-11 06:11:04)

Cooling hands isn't new: my father taught me it in the 50s. I was to put my hands, palm upwards, under the cold water tap so that the water ran down from my wrists across my palms. It worked a treat.

dearieme (2012-09-11 06:13:22)

I should add that however hot I was, and however hot the day was, the cold water came from high moorland and was always cool.

John Speno (2012-09-11 06:49:08)

When I read about the NZ twins, I assumed they meant they had FH (Familial hypercholesterolemia). Seth: Yes, maybe so.

Sade (2012-09-11 08:34:50)

You do know that inherited high cholesterol is a thing, right? <http://ghr.nlm.nih.gov/condition/hypercholesterolemia>

garymar (2012-09-11 16:49:57)

Seth, this blog is a goldmine of aggregated blog links. I clicked thru and read 3 out of 4 items.

garymar (2012-09-11 16:55:48)

Make that 4 out of 4.

Elizabeth Molin (2012-09-13 08:53:41)

Re home energy use, here is the kind of thing I obsess about: you can line a baking sheet with foil before use, and it won't need washing. But then the foil is dirty and can't be recycled. Washing the baking sheet requires (heated) water and soap. Which is more energy-efficient? Which is more environmentally sound? Which is cheaper? (Sometimes you can slip the dirty baking sheet into a "full" dishwasher, which you have to run anyway. And dishwashers are more energy-efficient and cost-effective than washing by hand. I think.) I have never seen any comparisons of this kind of thing and wish someone would do one; I can't, as I don't have the expertise. How much does it cost to produce, package, ship, and advertise a foot and a half of foil? How do you figure this out?

Alexey (2012-09-13 13:05:53)

>How much does it cost to produce, package, ship, and advertise a foot and a half of foil? How do you figure this out? 75 sq.ft of AL foil is about \$2.50 in a grocery store. 1.5 sq.ft are 5 cents. That of course includes all the costs to produce, package, ship and advertise. Washing the baking sheet in the dishwasher = free if washed with other stuff. Does not happen that often. Washing the baking sheet manually = cost of water and detergent + time spend. Water is \$1.5/1000 gallons -> negligible,

detergent = 1 cent, time = about a minute of vigorous scrubbing. So if you're getting paid more than \$3/hour or getting more than \$3/hour worth of entertainment by not doing the washing, then washing the baking sheet manually may not make sense. ;)

Elizabeth Molin (2012-09-14 13:06:25)

Thanks, Alexey! One less thing to obsess about. I do feel kind of DUH now that I see how simple it is...

### **The Terry Deacon Affair (2012-09-12 05:00)**

Terrence Deacon is a professor of anthropology at the University of California Berkeley – at the moment, chair of the anthropology department. (Deacon, [1]like me, is interested in the evolution of language.) How unfortunate for the department, especially his graduate students, that he has [2]recently been accused of using vast amounts of another person's work without giving her credit. It isn't easy to see the overlap, maybe because Deacon is a terrible writer ("by far the most unreadable book I have ever encountered" [3]said a reviewer of one of his books), but there appears to be no doubt of the similarity and Deacon's exposure to the work he is accused of not citing. Deacon says he doesn't remember it.

When I brought [4]unquestionable examples of plagiarism by Leslie Iversen, an Oxford professor, to the attention of Julie Maxton, the Registrar of Oxford University, [5]she dismissed them ("honest error" – appearing to say that Iversen didn't know that word-by-word copying is wrong). In this case there is no word-by-word copying but the failure to cite is far more upsetting to the persons not cited. What may have been copied is more abstract ("deeper", you could say) and therefore more important.

At first, the complaint was dismissed. "I have concluded that the information available to me does not warrant appointment of an Investigative Officer under our campus faculty disciplinary procedures. The conduct you have alleged would not constitute a violation of the University of California's Faculty Code of Conduct," wrote Janet Broughton, Vice Provost, on May 27, 2011.

Later (December 12, 2011), Robert Price, Associate Vice Chancellor for Research, responded, "The fact that certain concepts or phrases used by Dr. Deacon in the article you provided are the same or similar to concepts that appear in chapters from your book is not evidence of plagiarism, as these concepts may not be unique to your work. Perhaps the way you use these concepts is unique, which then would constitute plagiarism." This understates the evidence, which is a long series of similarities.

Finally, the fact that outsiders find the claims (of failure to give credit) credible appears to have convinced Price that something must be done. "The continuing public dispute that your claims have generated lead me to believe that such an investigation [of the claims] is necessary in order to "clear the air"", [6]wrote Price. After being successfully pressured to investigate, Price, a political science professor, in a September 3, 2012 letter reveals a lack of understanding of social pressure:

I wish to make crystal clear to you, your associates, and to all those to whom you are communicating that the University of California, Berkeley has not found that Professor Deacon has engaged in any form of research misconduct. The sole reason for undertaking an investigation are the claims made by you and your associates. [Contradicting what he said earlier – that the "continuing public dispute" led to the investigation.] . . . The idea that you would use my communications with you ["use" in the sense of posting on a website] and the ongoing examination of your allegations by UC Berkeley as part of what increasing strikes me as a vendetta against Professor Deacon is reprehensible.

My letter to Alicia Juarrero [who complained] ends with this paragraph: "Our University policy on research misconduct, as well as the federal regulation on which it is based, require that all stages in the research misconduct investigation procedure are treated as strictly confidential. (UCB "Research Misconduct: Policies, Definitions and Procedures," item IC and Federal Regulation 45CFR93.108). I expect that you will adhere to this requirement." Rather than adhere to the stated requirement of confidentiality, Dr. Juarrero shared the letter with you and you, in turn, posted it on your website. What purpose is being served other than to make it appear that Deacon is guilty of something before even a single one of your claims has been validated? This sort of tactic will be familiar to those who remember the history of Joe McCarthy.

"What purpose is being served"? Uh, making the accusations harder to ignore? As for McCarthy, he made accusations [7]without supplying evidence ("In this envelope [which he didn't open] I have the names of 80 Communists in the State Department"). That is not happening here.

[8]Why Alicia Juarrero Got Mad at Terry Deacon. [9]New Terry Deacon Website.

1. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>
2. <http://theterrydeaconaffair.com/index.html>
3. <http://emergence.org/McGinn.pdf>
4. <http://blog.sethroberts.net/2010/11/06/plagiarism-by-british-drug-tsar/>
5. <http://blog.sethroberts.net/2010/12/04/leslie-iversen-plagiarism-update/>
6. <http://isce.edu/Juarrero-investigation-notification.pdf>
7. <http://www.thefreedictionary.com/McCarthyite>
8. <http://blog.sethroberts.net/2013/02/05/alicia-juarerro-on-the-terry-deacon-report/>
9. <http://blog.sethroberts.net/2013/02/03/new-terry-deacon-website/>

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Chuck (2012-09-12 09:38:58)

There are those who believe in openness and transparency; and, there are those who do not in order to protect their position and power. I would expect very little openness and transparency from a political science professor from UC Berkley. Developing something new is hard work. Expecting those raised in T-Ball America where no one keeps score and everyone gets a trophy to work hard is no longer the norm. Disciplining a professor for unethical behavior could damage his delicate self esteem. And besides, who's to judge what is, or isn't, unethical? Everyone gets a trophy. Everyone's self esteem is intact.

Txomin (2012-09-12 18:37:43)

Evil hateth the light.

Michael Lissack (2012-09-13 02:19:51)

For the record, Prof. Price directly supplied me with a copy of the letter announcing the investigation and did so WITHOUT making any request of confidentiality. His accusation that Alicia Juarrerro did something wrong is thus completely disingenuous. He supplied the letter. He made no confidentiality request. She DID NOT supply the letter and has not "broken" a request for confidentiality which she never agreed to in the first place. At the Institute for the Study of Coherence and Emergence (<http://isce.edu>) our position on this matter is very clear: Terry Deacon is a serial plagiarist and UC Berkeley has no interest in dealing with that ugly truth. Seth: And Professor Price has a poor memory.



Bryan (2012-09-13 22:31:15)

Seth, I heard two interviews tonight that made me think of your writing on this issue: [http://thestory.org/archive/the\\_story\\_091312.mp3/view](http://thestory.org/archive/the_story_091312.mp3/view)

### Early Immune Warning System: A Bit of Evidence (2012-09-13 05:00)

[1]I have proposed that three things – a tendency to touch each other (e.g., shake hands), a tendency to touch near our mouths, and our tonsils – together form an early warning system for our immune system. The early warning system helps the immune system get tiny exposure to microbes circulating in the community. It performs self-vaccination. Like ordinary vaccination, exposure to tiny amounts of Microbe X protects against exposure to a large amount of Microbe X.

In Daniel Everett's anthropological study of the [2]Pirahã people (Don't Sleep, There are Snakes: Life and Language in the Amazonian Jungle, 2009) he says the Pirahã "all touch one another frequently" (p. 85). "They loved to touch me too." He has never seen kissing but "there is a word for it, so they must do it." This supports the idea that a tendency to touch others is widespread.

If this theory is true, reducing microbe exposure to zero (e.g., sterile food) is a seriously bad thing. It's been proposed that the polio epidemics of the first half of the 1900s were caused by cities becoming too clean.

[3]Evidence from ants.

1. <http://blog.sethroberts.net/2012/01/10/why-we-touch-our-mouths-so-often-forewarned-is-forearmed/>

2. [http://en.wikipedia.org/wiki/Pirah%C3%A3\\_people](http://en.wikipedia.org/wiki/Pirah%C3%A3_people)

3. <http://blog.sethroberts.net/2012/04/20/why-we-touch-our-mouths-so-much-evidence-from-ants/>

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lef (2012-09-13 08:39:19)

in a previous post (what to do about antibiotic resistance?improve immune function) you mentioned this idea( listed as 3 there). You said there "So it's not obvious that outside of hospitals more hand washing is a good thing". I find it interesting because frequently I see that even people who criticize some aspects of cleanliness when it comes to washing hands they are mainstream.If you can make it more precise I think it will be even more interesting.for example what do you mean by more, 1)more than conventional guidelines suggest, 2)more than someone who doesn't wash them even after using a public toilet,your meaning of more, is closer to 1 or closer to 2? Seth: Closer to 1. But, actually, it isn't clear at all to me what level of hand-washing is best.

gwern (2012-09-13 09:19:26)

Counter-example: Japan.

joseph (2012-09-13 13:50:41)

hi there is a NY Times article about autism its a OpEd, and the theory is that its a Immune Disorder <http://www.nytimes.com/2012/08/26/opinion/sunday/immune-disorders-and-autism.html?pagewanted=all>

william (2012-09-14 19:57:05)

A book you might find interesting is The Epidemic of Absence by Moises Valasquez-Manoff.

Adam (2012-09-15 09:48:11)

Then again, Japan has the crazy mutant forms of Gonorrhea resistant to \*everything\*, so they must be sharing germs somehow!

Carlos Urzúa (2012-09-21 13:52:22)

Perhaps sneezing is also a sharing mechanism, not because of vaccination effect, because of the capacity to spread the disease in a not so virulent form. If the microorganism can infect the most quantity of hosts without a very aggressive strategy it will be stable and not evolve to increase virulence. If killing hosts is what infects the most hosts it will be selected to do so. Maybe the body developed this sneeze reflex as a prophylactic measure. Facilitating the spread of non-lethal diseases and in doing so preventing them from being seduced by the lethal option which is a very juicy alternative. I once saw a talk which described how when a country with cholera controlled the sewage in a way that corpse & dying patient contaminated water was prevented from reaching the public supply, forced the bacterium to be less virulent, keeping people alive more as the fittest way to survive. The strategy didn't eradicate, but attenuated the disease. Better to have seasonal flu than SARS. Seth: Good points.

### **Unaccountable by Marty Makary (2012-09-14 05:00)**

The not-yet-released book [1]Unaccountable: What Hospitals Won't Tell You and How Transparency Can Revolutionize Health Care by Marty Makary, a professor of surgery at Johns Hopkins, may or may not make good arguments – I haven't read it – but it certainly begins with a good story:

Harvard surgeon Dr. Luctan Leape at a national surgeon's conference . . . opened the gathering's keynote speech by looking out over the audience of thousands and asking the doctors to "raise your hand if you know of a physician that you work with who should not be practicing because he or she is dangerous."

Every hand went up.

The author, Marty Makary, asked the same question at his talks and got the same response. Both of them – Leape and Makary – should have started asking "What fraction of the surgeons you work with are unfit to practice?"

I wonder how the rest of us can identify those unfit-to-practice surgeons. [2]My experience has taught me not to trust a surgeon who says I need surgery.

1. 16081983677

2. <http://blog.sethroberts.net/2011/11/16/dr-eileen-consorti-and-patient-power/>

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Jim Purdy (2012-09-14 09:22:18)

Seth said: "My experience has taught me not to trust a surgeon who says I need surgery." I agree, and I would add: "My experience has taught me not to trust a physician who says I need BigPharma drugs." Gosh, at least try some lifestyle changes before rushing into slash-and-burn medicine.

Glen Davis » ... (2012-09-17 14:55:32)

[...] Seth's Blog » Blog Archive » Unaccountable by Marty Makary [...]

Bryan (2012-09-29 06:39:31)

Makary has written a piece in Newsweek/Daily Beast addressing some of the issues raised in the book:  
<http://www.thedailybeast.com/newsweek/2012/09/16/are-hospitals-less-safe-than-we-think.html>

## **Does Too Little Vitamin K2 Cause Prostate Cancer? (2012-09-15 05:00)**

People with unusual genomes often resemble canaries in a coal mine: More sensitive than the rest of us to bad environments. This is illustrated by [1]a new study of prostate cancer/genome associations.

Repeating earlier work in Europeans, they compared the genetic profiles of Japanese groups of prostate cancer sufferers with non-sufferers. . . . The joint numbers included 7,141 prostate cancer sufferers and 11,804 non-sufferers. The most recently identified loci are on chromosomes 11, 10, 3 and 2. . . .The locus on chromosome 2 is linked with GGCX, a vitamin K-dependent [actually, vitamin K2] enzyme that regulates blood clotting [Vitamin K2 does not regulate blood clotting], bone formation and cancer biology. Japanese foods such as natto and seaweeds are rich in vitamin K, which is thought to protect against cancer. Interestingly, the association of this SNP with prostate cancer was significant in all populations except for the Japanese in the USA, indicating that environmental factors, such as diet, are involved.

[2]Here is the paper. Why would the correlation not show up for Japanese in the USA? Maybe because Japanese in the USA all get too little Vitamin K2.

Neither the press release nor the article make clear what I am saying: These results make it a lot more plausible that Vitamin K2 protects against prostate cancer. A lot of mainstream nutritional advice is based on epidemiology. The K2/prostate cancer connection is especially interesting because it does not suffer from the usual problems of epidemiology: difficulty measuring intake (do you have any idea how much K2 you consume?) and vast confounding (Vitamin K2 intake is probably correlated with many other things).

1. <http://www.rikenresearch.riken.jp/eng/research/6991>

2. <http://www.nature.com/ng/journal/v44/n4/full/ng.1104.html>

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Alex Chernavsky (2012-09-15 08:43:16)

Denise Minger says that she experienced a lot problems with tooth decay (i.e., getting cavities) before she started taking K2 supplements. The commenting system won't allow me to post a hot link, so I've had to obfuscate the URL [rawfoodsos.com/for-vegans/](http://rawfoodsos.com/for-vegans/)

Adam (2012-09-15 09:50:47)

I can't recall if I found this link here or not, but it is worth posting again if anyone missed it:  
<http://www.metafilter.com/117835/Vitamin-K2> "... [R]ecent studies have shown that poor Vitamin K2 status is associated with a number of other health issues, including increased risk of coronary artery disease and fracture. By directing calcium

from soft tissues into your bones, K2 reduces soft-tissue calcification, including hardening of the arteries (atherosclerosis), and increases bone density. Studies also suggest that Vitamin K2 improves insulin resistance in older men, can be beneficial for patients with leukemia, and may even help patients with Parkinson's by improving electron transport within mitochondria."

Miki Ben Dor (2012-09-17 00:20:01)

"Vitamin K2 does not regulate blood clotting". Do you happen to have a reference for that? A doctor would not allow a friend of mine to supplement K2 due to some pro clotting genetic defect. Seth: There is a difference between Vitamin K (blood-clotting) and Vitamin K-2 (other). Apparently that doctor didn't understand this.

shortdude (2012-09-20 21:41:58)

A couple of Israeli doctors have published a series of interesting papers where they suggest that BPH and prostate cancer are caused by incompetent valves in the testicular veins. This prevents normal drainage of blood from the testicles, and necessitates pathological flow of blood from the testicles to the prostate. The prostate is thus exposed to enormous levels of testosterone from the testicles, which causes hypertrophy and eventually cancer. (and also increases the conversion of testosterone to DHT, think male pattern baldness) This vitamin K2 study is interesting. I feel like there's some obvious connection here between the venous pathology and clotting function that I'm missing.

### Assorted Links (2012-09-16 05:00)

- [1]Propaganda in the Helping Professions by Eileen Gambrill, a professor in the School of Social Welfare at UC Berkeley. "Professionals can take courses in just about anything to satisfy continuing education requirements." A book about false claims made by health care professionals.
- [2]Fermented food causes fire trucks to show up
- [3]Plagiarism at University of Waterloo. Why did they think they wouldn't be caught?
- [4]podcast about fermented foods

1. <http://www.amazon.com/Propaganda-Helping-Professions-Eileen-Gambrill/dp/0195325001/>

2. <http://newsfeed.time.com/2012/09/12/fermented-herring-party-prompts-gas-leak-panic/>

3. <http://news.nationalpost.com/2012/09/11/university-of-waterloo-researchers-issue-retraction-and-apology-after-using-u-s-experts-text-and-information/>

4. <http://www.peoplespharmacy.com/2012/09/15/872-fermented-foods-for-flavor-and-health/>

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Alex Chernavsky (2012-09-16 07:26:42)

That book by Eileen Gambrill looks really good (by the way, the link is broken). I read a few pages on the Amazon site. Too bad the book is available only in hardcover at a price of \$52.51.

Ross (2012-09-16 16:27:35)

FYI, I couldn't follow your first link using Chrome browser on Windows 7. Seth: Fixed, thanks.

Kim Øyhus (2012-09-17 23:31:17)

Genetically modified crops can explain why many of Seths health methods work, such as avoiding carbs helps avoid wheat containing insect poison making guts leak, and eating fermented foods makes G.M. poison producing bacterias outcompeted, etc. This movie is quite scientific, and its hypotheses quite interesting: <http://geneticrouletemovie.com>

Paleophil (2012-09-19 14:26:27)

Here's another fermented food link featuring Sandor Katz: Better Eating, Thanks to Bacteria, <http://www.nytimes.com/2012/09/19/dining/fermentation-guru-helps-chefs-find-new-flavors.html>

Guv (2012-09-20 00:26:37)

where are my manners, should have said Hi Seth first.....Hi Seth, off topic i know, just interested to know if you are still taking 2 tablespoons (approx 30ml/just under 30 grams) of flax oil a day? Seth: Yes. When I am in China I eat about 60 g of ground flaxseed instead. Can't get good flaxseed oil in China.

dearieme (2012-09-20 04:01:47)

Aha, flaxseed (aka linseed). I accidentally sprouted a flaxseed recently. Have you any experience with eating flax shoots? Are they as tasty as bean shoots? (I didn't try eating mine since it had sprouted in a compost bin.)

### **Last Weekend's Quantified Self Conference (2012-09-21 10:09)**

Last Saturday and Sunday there was an international Quantified Self Conference at Stanford. I attended. In Gary Wolf's introductory talk, he said there are 70 Quantified Self chapters (New York, London, etc.) and 10,000 members. I was especially impressed because I recently counted about 50 chapters. One new chapter is Quantified Self Beijing. It has its first meeting – in the form of a [1]day-long conference – in nine hours and I haven't quite finished my talk ("Brain Tracking: Why and How"). Please indulge me while I procrastinate by writing about the Stanford conference.

Here are some things that impressed me:

Office hours. A new type of participation this year was "office hour", meaning you sit at a table for an hour. My office hour, during which two people showed up, was the most pleasant and informative hour of the whole conference for me. I thank Janet Chang for suggesting I do this.

[2]

Robin Barooah used a measure of how much he meditated, which he collected via an app he made, to measure his depression. When he was depressed, he didn't meditate. Depression is half low mood, half inaction. It is very rare that the inactive side of it is measured. It is so much easier to ask subjects to rate their mood, but this has obvious problems. Robin inadvertently found a way to measure level of activity over long periods of time. He also found that participation in an experiment that tested a PTSD drug caused long-lasting improvement, another idea about depression I'd never heard before. At dinner, Robin told me that his partner, when they're at a restaurant, has sometimes said "God bless Seth Roberts" for allowing her to eat butter without guilt.

Steve Jonas, from QS Portland, told me that he spent a long time (many weeks) doing some sort of mental test. During one of those weeks, he consumed butter a la Dave Asprey, in coffee. Much later he analyzed the results, computing an average for every week, and noticed that during the week with butter his performance was distinctly better than performance on other weeks. I hope to learn more about this. Steve also gave a talk about learning stuff using spaced repetition. He noticed that learning new stuff increased his curiosity. After he used spaced repetition to learn stuff about Mali, for example, he became more interested in reading news stories about Mali. I think this is an important conclusion about education, the way rote learning and encouragement of curiosity are not opposites but go together, that I have never heard before.

[3]Larry Smarr, a computer science professor at UC San Diego, gave a talk called "Frontiers of Self-Tracking" centered on his Crohn's disease. I was struck by what was missing from his talk. He began self-tracking before the Crohn's diagnosis and clearly the self-tracking helped establish the diagnosis. However, you don't need to self-track to figure out you have Crohn's disease, roughly everyone who has gotten this diagnosis did not self-track. I couldn't figure

out how much the self-tracking helped. Crohn's is generally associated with frequent diarrhea, which is exactly the opposite of hard to notice. Larry said nothing about this. Later he talked about massive amounts of personalized genetic data that he was getting. I couldn't see how this data could possibly help him. Isn't self-tracking supposed to be helpful? If I had a serious disease, I would want it to be helpful. At the same time, judging from his talk, he seemed to be ignoring the many cases where people have figured out how to better live with their Crohn's disease. I would have liked to ask Larry about these gaps at his office hour but I had an eye problem that caused me to miss it.

I asked Nick Winter, cofounder of [4]Skritter, what he thought of the recent Ancestral Health Symposium at Harvard (August 2012), which we both attended. He didn't like it much, he said, but it more than justified itself because Chris Kresser's talk about iron led him to get his iron checked. It turned out be off-the-charts high. Partly because oysters, partly because of red meat. I think he said he has since donated blood and it came down. I hadn't previously heard of this danger of eating red meat. Again I discussed with Nick why he found that butter had a bad effect on his cognitive performance, the opposite of what I found. One possibility is that the butter slowed digestion of his lunch, thus reducing glucose in his blood at the time of the cognitive tests. But this does not explain why a certain drug eliminated the effect of butter.

In his talk, Paul Abramson, a quant-friendly San Francisco doctor, said that mainstream medicine is "riddled with undisclosed conflicts of interest". I hope to learn more about this.

Jon Cousins contributed a neat booklet about what he had learned and not learned from starting [5]Moodscope. What he hadn't learned was how to make a sustainable business out of it. I suggested to him that he might be able find professors who would apply for grants with him that would use Moodscope as a research tool. The grants would pay Jon a salary and might include money for software development. Mood disorders are a huge health problem – depression is sometimes considered the most costly health problem of all, worldwide – and Moodscope is a new way to do research about them. Paying Jon a salary for a few years would cost much less than assembling a similar-sized sample (Moodscope has thousands of users) from scratch. I wonder how professors who do research on mood disorders will see it.

1. [http://qsbeijing.wix.com/conference#!d\\_clients/cqh1](http://qsbeijing.wix.com/conference#!d_clients/cqh1)
2. <http://www.sublime.org/>
3. <http://boingboing.net/2012/06/22/computing-pioneer-larry-smarr.html>
4. <http://www.skritter.com/>
5. <http://www.moodscope.com/>

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Jim Purdy (2012-09-21 13:14:13)

I hope you will publish more about Paul Abramson and undisclosed medical conflicts of interest. Surely there are no conflicts of interest in medicine. Sarcasm off now.

Josh (2012-09-23 14:35:16)

It was great chatting with you during office hours seth. I hope we can continue the conversation soon. Also great summary of qs.

## Assorted Links (2012-09-23 05:00)

- [1]American-Afghan detainee dispute. "The conflict over the Americans' insistence that some detainees should

continue to be held without charge had [become] public.” Via Ron Unz.

- [2]Hydrogen therapy
- [3]How to improve doctor performance. "Without telling his partners, Dr. Rex began reviewing videotapes of their [colonoscopy] procedures, measuring the time and assigning a quality score. After assessing 100 procedures, he announced to his partners that he would be timing and scoring the videos of their future procedures (even though he had already been doing this). Overnight, things changed radically. The average length of the procedures increased by 50 %, and the quality scores by 30 %. The doctors performed better when they knew someone was checking their work."
- [4]Pistachio miso and other unusual fermented foods.

Thanks to Tyler Cowen, Alex Chernavsky, Patrick Vlaskovits, Chuck Currie and Bryan Castañeda.

1. <http://www.nytimes.com/2012/09/21/world/asia/obama-and-karzai-discuss-detention-of-terrorism-suspects-in-afghanistan.html>
2. <http://digressionalty.blogspot.com/2012/09/hydrogen-medicine.html>
3. [http://online.wsj.com/article/SB10000872396390444620104578008263334441352.html?mod=wsj\\_share\\_tweet](http://online.wsj.com/article/SB10000872396390444620104578008263334441352.html?mod=wsj_share_tweet)
4. <http://www.nytimes.com/2012/09/19/dining/fermentation-guru-helps-chefs-find-new-flavors.html?hp&pagewanted=all>

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Jim Purdy (2012-09-23 11:13:25)

That doctor performance story was enlightening. And scary.

dearieme (2012-09-23 16:53:39)

"The average length of the procedures increased by 50 %": good, bad, unknowable?

Tom (2012-09-23 23:33:03)

They took more care and identified more polyps, I imagine. For a given level of reimbursement, their examination might be more cursory – unless they knew their performance was being monitored.

peter (2012-09-24 13:31:35)

how is hydrogen therapy administered?

dearieme (2012-09-24 16:56:10)

"They took more care and identified more polyps, I imagine": I'd be very suspicious of using time as a proxy for taking care.

## Drug Companies Hide Unfavorable Evidence (2012-09-24 05:00)

Ben Goldacre, a British epidemiologist and newspaper columnist ("Bad Science"), who used to attack homeopathy (trivial), has now written about something important: [1]drug companies hide vast amounts of unfavorable evidence. I already knew this but many details were new to me.

I liked some of the comments:

We live in France and used a traditional GP for five years. Every time one of us went [to see him] he or she would come back with prescriptions for three or four medicines. Over that time he prescribed our family of five an estimated 60-80 medicines. We only ever took one, and everyone always got better without using these medicines. . . . This same GP also would refer us to thoroughly incompetent specialists. A few years ago I had a frozen shoulder. I went to see a 'specialist' who yanked my arm and shoulder about, clearly having no idea how an arm actually moves, and he then suggested operating. . . . Instead I looked on the Internet for info and found some exercises I could do and also underwent some Bowen technique treatment. A year later I was fine.

As a business consultant, I was approached many many years ago by a company who wanted help to set up an independent research institute evaluating farm pesticides. They'd found the doses prescribed for actual application were many times the amount actually needed (for obvious profit reasons), sometimes efficacy was in doubt, and loads of hideous ecological side effects were buried.

Speaking of "many times the amount actually needed", I attended a talk about lighting standards in office buildings in which the speaker said the standards were too high (e.g., desks were better lit than necessary). His explanation was that the more lighting there is, the more air conditioning you need. The more air conditioning, the more cost, and architects are paid a fixed percentage of the cost. One of his slides showed that someone in the industry wrote down this rationale.

My GP often says the pharmaceutical industry wants to see everybody on prescription. He does prescribe tests, a lot of them, but drugs very rarely, and most of his recommendations are targeted at patients' lifestyle: diet, exercise, work, relationships. When he does prescribe drugs, if it is an antibiotic or an anti-fungal, you have to come back after 1 week so that he can see if the treatment has worked/is working. If you need longer term treatment, for example physiotherapy and painkillers for back pains, or if you have a long term condition such as diabetes, he insists on seeing every month, to check that you are treatment compliant. . . . I have to thank him for a lot. Until fairly recently, I was stuck in a really unhealthy work environment, and could not find another job. I had done a Psychology course which had nothing but praise about antidepressants, so I asked him if he would prescribe me one of the newest tricyclic ones. He was extremely angry, told me I needed a new job, not tablets, and that if I ever got that drug elsewhere and he found out, he did not want to see me again (he would probably have found a blood test to check up I was 'clean'). So I did not go down the tablet route, and he was right: all I needed was to change job.

Two or three years ago, I was working in Germany and went to see a German doctor. He looked at the list of daily medications my British doctor had prescribed (5 different drugs), ostensibly to help me survive middle age. He looked shocked, and told me that the British medical profession is dominated by the pharmaceutical industry, and he advised I stop taking three of the drugs prescribed. Now, having come back to the UK, every time I visit my GP, I am bullied once again to take this or that. If I try to resist, I receive very patronizing lectures about this or that risk.

Thirty years of bi-polar disorder taking virtually every possible anti-depressant over time, and at times when hospitalized, forced to take them under the duress of threatened sectioning under the Mental Health Act. Throughout those years I told the psychiatrists that the drugs didn't work beyond an initial "placebo effect" lasting about 2 weeks, and that the side effects were often awful. Now it seems I may have been right all along. . . . Big Pharma, [you] made a difficult life a lot worse.

Maybe Goldacre will someday grasp that "evidence-based medicine", which he often praises, also [2]hides a vast amount of unfavorable evidence.



1. <http://www.guardian.co.uk/business/2012/sep/21/drugs-industry-scandal-ben-goldacre?commentpage=all#start-of-comments>
2. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

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### Assorted Links (2012-09-25 05:00)

- Clayton Christensen's latest book (about universities) is not good, judging by [1]this review. Christensen has had a stroke, which might explain it. This is surprising because The Innovator's Dilemma by him is very good – the best book I can think of with an incomprehensible title.
- [2]How easy it is for doctors to defraud Medicare.
- [3]Why major medical journals won't say how many reprints they sell
- [4]Pros and cons of getting your genome sequenced. Pro: The sequence suggested he was at high risk for diabetes, he started checking his blood sugar, and he got diabetes. Con: Cost of his life insurance went way up. Note: It costs little to test your blood sugar daily, as I do (I am not at high risk of diabetes, as far as I know).

Thanks to Bryan Castañeda.

1. [http://www.amazon.com/review/R3PU7RH0MGEP41/ref=cm\\_cr\\_dp\\_cmt?ie=UTF8&ASIN=1118063481&nodeID=283155&store=books#wasThisHelpful](http://www.amazon.com/review/R3PU7RH0MGEP41/ref=cm_cr_dp_cmt?ie=UTF8&ASIN=1118063481&nodeID=283155&store=books#wasThisHelpful)
2. <http://www.publicintegrity.org/2012/09/15/10810/how-doctors-and-hospitals-have-collected-billions-questionable-medicare-fees>
3. <http://blogs.bmj.com/bmj/2012/07/03/richard-smith-medical-journals-a-gaggle-of-golden-geese/>
4. <http://www.npr.org/blogs/health/2012/09/19/160955379/scientists-see-upside-and-downside-of-sequencing-their-own-genes>

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Jim Purdy (2012-09-26 05:08:49)

Seth, you said: "Clayton Christensen's latest book (about universities) is not good, judging by this review. Christensen has had a stroke, which might explain it." I'm not sure that surviving a stroke explains much of anything. I know lots of fellow stroke survivors, and everything depends upon which part of the brain was affected. In my case, I've had two fairly mild left-brain ischemic strokes, and the most frustrating problems that they caused me were that they messed up the use of my right hand for handwriting and typing. Dadgummit, I can no longer print small enough to fill in the blanks in the books containing the most challenging New York Times crossword puzzles. But if you'll accept a stroke as an excuse for my rambling comments, I'll take that.

Jscott (2012-09-26 15:45:14)

Genome sequence work-around for those that want anonymity <http://www.fourhourworkweek.com/blog/wp-content/uploads/2011/01/Becoming-Brad-Pitt-Uses-and-Abuses-of-DNA.pdf> (Bonus chapter that did not make it into The Four Hour Body by Tim Ferriss)

## Secrets of a Long Life: Butter, Pork Belly, No Medicine (2012-09-26 05:00)

The New York Times recently ran [1]a story about a 107-year-old woman named Juliana Koo, who lives in New York City. Her longevity secrets are remarkably close to what I say on this blog:

“Somebody asked her the secret of long life,” said Ying-Ying Yuan, a step-granddaughter of Mrs. Koo. “She said, ‘No exercise, [2]eat as much butter as you like and never look backwards.’”

Shirley Young said her mother also [3]likes pork bellies, “especially the hot part, but she doesn’t overdo anything.”

“And [4]she doesn’t take any medicine,” she said. “When doctors give her medicine, she usually hides it, or when she takes something, she takes half a pill. People keep on giving her Chinese herbs, things like that. She never takes them.”

1. <http://cityroom.blogs.nytimes.com/2012/09/24/lessons-of-107-birthdays-dont-exercise-avoid-medicine-and-never-look-back/>
2. <http://blog.sethroberts.net/category/animal-fat/butter/>
3. <http://blog.sethroberts.net/2012/07/14/more-about-pork-fat-and-sleep/>
4. <http://blog.sethroberts.net/2012/09/24/drug-companies-hide-unfavorable-evidence/>

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Jim Purdy (2012-09-26 05:22:32)

“And she doesn’t take any medicine.” That’s immensely important. I know way too many old folks who are taking astonishing amounts of prescription painkillers, antidepressants, proton pump inhibitors, statins, diuretics, blood pressure pills, diabetes medications, muscle relaxants, allergy drugs, and much more. All those drugs do very bizarre things to their bodies and minds. And of course the doctors are eager to prescribe even more BigPharma junk to treat all the problems created by the drugs. I’m amazed every time I read about somebody who goes into hospice care, and then they get better when all their drugs are stopped. Seth: “I’m amazed every time I read about somebody who goes into hospice care, and then they get better when all their drugs are stopped.” That’s exactly what happened to the mother of a friend of mine, whose drugs were stopped accidentally. The next time you read about this, please send me the link.

Chuck (2012-09-26 07:10:40)

I’m going on record and officially inviting you to my 107th birthday party in 2053. However, due to the upcoming worldwide shortage of pigs, I may have to become a hog farmer like my great-grandfather in order to assure myself of enough pork belly. Cheers

Wilson (2012-09-26 11:17:39)

You never hear these oldsters mention the real reason for their longevity: pure chance. In graduate school I lived in a house owned by a 96 year old woman. No lie, every Saturday night she would drink one can of beer and smoke one Marlboro cigarette. She claimed that’s what kept her going. Was it hormesis, or just blind luck? Seth: If pure chance is the real reason, the similarities I point out here must also be pure chance. Yet there are three. If someone forced me to guess the effect of one cigarette per week, I’d guess it was beneficial. The trouble with living in badly-polluted Beijing is I don’t know how many cigarettes per week it equals.

KenF (2012-09-26 13:06:16)

107 year olds don't take medicine because they have had good health their whole lives. That is why they are still around at 107.  
Seth: I'm pretty sure she has gotten sick, was offered medicine for her sickness, but didn't take it.

Gary Conway (2012-09-26 13:22:08)

What's the catch? ;-) Just discovered your blog today after seeing your ahs presentation. Very interesting & looking forward to reading more!

Jim Purdy (2012-09-26 13:49:34)

I once was driving a car with a passenger who had an active case of tuberculosis. He asked me if it was okay for him to smoke a cigarette in the car. Normally, I would say no, because cigarette smoke really bothers me. But in his case, I silently did some instant risk assessment, considering two options: 1. If he smoked, would the smoke particles carry the TB pathogens my way? 2. Or would the smoke kill the TB critters? I decided that the second option was preferable, and I told him to go ahead and smoke. Looking back, I probably made the wrong decision, and I got both evils at once. It amazes me every time I see a cigarette being smoked by someone with TB or cancer or COPD. What are they thinking?

Matt (2012-09-26 17:01:18)

They are thinking that they want a cigarette.

Nancy Lebovitz (2012-09-26 18:47:24)

It's interesting that she doesn't trust Chinese medicine, either. I do think there's an element of chance/genetics to unusual healthy longevity.

Txomin (2012-09-26 18:57:55)

Interesting but anecdotal.

Bryan (2012-09-26 22:08:57)

Txomin: I take it you just started reading this blog?

Evolutionarily (2012-09-27 02:28:23)

As we know Jeanne Calment the longest lived human being ever recorded at 122, smoked for almost 100 years. For some strange reason doctors though it would be a good idea for her to give it up, at the age of 116! Some speculate it was actually what killed her, ha! Did it have anything to do with her longevity? If he had not smoked would she have lived longer or shorter? Of course we will never know... According to the Strategies for Engineered Negligible Senescence (SENS) there are seven main causes of ageing (like cell loss, intracellular junk, extracellular junk, mutations, and a few others) so according to pure probability we will have humans born with constitutions robust to some or all of these factors. Perhaps Jeanne Calment was simply a 1 in 6 billion occurrence and she could have done practically anything and made it easily to 120 years old. I don't put much stock in what centenarians credit as being responsible for their longevity because I view it as a bit of a lottery, I see them as equivalent to the market traders Nassim Taleb chronicles in Fooled By Randomness who backwards rationalise their success to certain identifiable factors when in reality much of their success was pure chance/luck. Juliana Koo might credit butter, but perhaps were she brought up in Italy she would be crediting Olive Oil instead.

dearieme (2012-09-27 02:47:53)

My mother smoked heavily all her life. In her mid seventies her doctor persuaded her to stop. This immediately led to more severe coughing fits than before, during one of which she had a heart attack and died. I have no idea what to make of this.  
Seth: I have recently had trouble with my contact lenses. They hurt a little bit. After I take them out (they are designed to be worn continuously for a month), my eyes hurt much more and I can barely keep them open. They take a day or so to stop hurting. If coughing resembles blinking, there is a similarity.

lisa truitt (2012-09-27 12:24:58)

It seems to me that many variables could greatly influence a persons longevity. There is an interesting study in the book Outliers. This community of Italians immigrated to America. They had much lower generative disease than the Americans they lived amongst. Researchers at first assumed they must be eating differently. When it was discovered that this was not the case they were very intrigued. It turned out it was because of their tight knit old world village where everyone knows and is friends with everyone type of social structure. Sure, genetics is one factor, but not the only or even necessarily the strongest factor. People try to blame their diseases on genetics too, but the above study shows that there are powerful environmental factors that determine whether the genes involved in particular diseases are expressed or not. Seth: I agree.

dearieme (2012-09-27 14:42:19)

Or an isolated social structure might protect you from infections that are as-yet-unrecognised causes of many diseases.

Ravi (2012-09-28 07:37:39)

This is silly Seth. At best you can say, Butter, Pork Belly and not taking medicine can be termed as not having an effect on mortality, not the cause of longevity.

### **The Complex Flavor of Fermented Foods (2012-09-27 05:00)**

One of the main reasons I think we need to eat fermented foods to be healthy is that their flavors correspond neatly to the flavors we like. Fermentation of fruits and other sweet foods changes sugars to acids, making the food taste sour – and we like sour food. Fermentation of proteins produces glutamate, which produces an umami flavor – and we like umami-flavored food. With many foods, their fermentation produces many microbial byproducts, giving the food a complex flavor – and we like complex flavors.

The connection between fermentation and complex flavor is well-put in [1]a Saveur article about fermented foods:

[As a child] I only knew Claussen and other vinegar-cured pickles, the kind you buy in jars off the supermarket shelf, and I liked them just fine. But when I finally tasted a real pickle—the kind made the old-fashioned way, fermented with nothing more than salt, water, and time—I realized what I had been missing. A vinegary pickle plows through your palate with its tartness (often in a most pleasing way), but a live-cultured, salt-cured, fermented one tells a more multifaceted story. It is sour, to be sure, but it tastes of something more, something elusive: It's the flavor of Middle Europe captured in one bite. When I started cooking for a living, I realized that the complexity I'd tasted in that pickle is the hallmark of well-made fermented foods, which include some of my very favorite things to eat and drink: not just pickles, but aged cheeses, tangy sourdough breads, blistering kimchis, tart yogurts, winy salamis, and of course, wine itself.

1. <http://www.saveur.com/article/Techniques/Preserving-Plenty>

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Alex Chernavsky (2012-09-27 06:33:45)

But I wonder why many fermented foods seem to be an acquired taste (i.e., they often don't taste good the first few times you try them). I still find that to be the case myself. I recently made a fermented hot pepper sauce (well, more of a *paste*, actually) out of habaneros, carrots, onions, garlic, and salt. The stuff has a pungent odor, and I didn't actually enjoy it much until I ate it a few times. Now I find myself craving it, and I'm disappointed that the jar is almost empty.

threepipeproblem (2012-09-27 07:05:09)

Have you seen Dave Asprey's stuff. He is saying (and supposedly cites sources, although I have not investigated) that many ferments are now unsafe, because they produce histamine, tyramine, and other -amines. He says that this has changed as a result of humans applying fungicide to so many soils, which kill 98 % of the natural fungi and leave nasty ones behind. He says that well produced ferments where they are testing the bacteria are ok but that home ferments are not. I'd love to hear your take on this stuff. Seth: I haven't seen those comments nor was I able to find them via Google.

threepipeproblem (2012-09-27 15:16:32)

He covered this in a video. I'm not entirely sure because I have watched 2 or 3 by him. This might be the one where he made the specific point about fungicide – <http://vimeo.com/44715668> – but he tends to cover the amine stuff in all of them. Interesting watch, anyways.

Paleophil (2012-09-27 16:19:22)

"Fermentation of fruits and other sweet foods changes sugars to acids, making the food taste sour" Some fermented foods taste sour to me (especially vinegars), but meads, wines, liquors, raw fermented honey and raw fermented custard apple have never tasted sour to me (some wines have tasted bitter, but not particularly sour). I find that the best sweet fermented foods are less strongly sweet than fresh domesticated fruits and honeys—a more full-bodied, pleasant sweetness that is not "sickeningly sweet."

Ryan (2012-10-03 19:14:28)

Fermented foods are a great way to change the profile of a food. It took me years (as a child) to figure out pickles = cucumbers. I think it adds a whole new layer to our food and drink opportunities.

### **Writer For Rookie Paints Too Pretty a Picture of Her Treatment For Bipolar Disorder (2012-09-28 05:00)**

It was generous of Sady Doyle, a New York writer in her thirties, to use her real name when writing [1]about her bipolar disorder for Rookie, the website for teenage girls. ("Because of this article, you'll always be able to Google me and find out that I have this sickness.") It is what I expect from Rookie to post this sort of thing – I was a big fan of Sassy, an earlier magazine for teenage girls that tried hard to be truthful. But I was surprised to see this:

Here's the part of the story that matters: once I got the diagnosis, got the pills, and got in touch with a therapist I really liked, I woke up in the morning. And I was happy, genuinely happy, for the first time in a very long time. That's what matters about my nervous breakdown—or yours, or anyone's. When I got the help I needed, I was able to recover.

Okay, that's what happened, as Brave New Worldish as it may sound. But is it true "that's what matters" – meaning that's all that matters? No, I don't think so. I think it also matters (a lot) that Doyle has been told she must take pills (such as lithium) for the rest of her life and those pills usually have bad side effects (lithium causes weight gain, for example). It is seriously misleading for Doyle to fail to make these points. Doyle vaguely implies she has been told she will need to take pills for "a long time", which is an understatement, and says nothing about side effects. Maybe she omitted this stuff because she didn't want her readers "to be afraid to seek treatment" (as she might put it). That is the opposite of truth telling.

Here's something about current treatments for bipolar disorder (a comment left on [2]an article about drug company deception) that is as true now as when I quoted it three days ago:

Thirty years of bipolar disorder taking virtually every possible anti-depressant over time, and at times when hospitalized, forced to take them under the duress of threatened sectioning under the Mental Health Act. Throughout those years I told the psychiatrists that the drugs didn't work beyond an initial "placebo effect" lasting about 2 weeks, and that the side effects were often awful.

I am not saying bipolar disorder drugs are worthless. I am saying they have bad side effects so often that any description of what it's like to have bipolar disorder that makes claims of universality ("That's what matters about my nervous breakdown—or yours, or anyone's") should point this out.

1. <http://rookiemag.com/2012/09/on-falling-apart/>

2. <http://www.guardian.co.uk/business/2012/sep/21/drugs-industry-scandal-ben-goldacre?commentpage=all#start-of-comments>

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Jill (2012-09-28 06:14:13)

How long has she (Sady) been on a regimen that works? Perhaps she is in a sort of "honeymoon" period, during which the relief is so great that to her, right now, that's all that matters. As a journalist, she owes her audience something a bit less short-sighted, but it's not necessarily "the opposite of truth telling." Seth: Yes, an update after a year would be a good idea.

Alex Chernavsky (2012-09-28 07:05:33)

Sady Doyle should read Robert Whitaker's book, [1]*Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*, particularly Chapter 9 ("The Bipolar Boom"). Here's a paragraph that I was able to extract from the preview on Amazon (I removed the superscripts that reference footnotes):

The remarkable decline in the functional outcomes of bipolar patients is easy to document. In the pre-lithium era, 85 percent of mania patients would return to work or to their "pre-morbid" social role (as a housewife, for example). As Winokur wrote in 1969, most patients had "no difficulty resuming their usual occupations." But then bipolar patients began cycling through emergency rooms more frequently, employment rates began to decline, and soon investigators were reporting that fewer than half of all bipolar patients were employed or otherwise "functionally recovered." In 1995, Michael Gitlin at UCLA reported that only 28 percent of his bipolar patients had a "good occupational outcome" at the end of five years. Three years later, psychiatrists at the University of Cincinnati announced that only 24 percent of their bipolar patients were "functionally recovered" at the end of one year. David Kupfer at the University of Pittsburgh School of Medicine, in a study of 2,839 bipolar patients, discovered that even though 60 percent had attended college and 30 percent had graduated, two-thirds were unemployed. "In summary," wrote Ross Baldessarini in a 2007 review article, "functional status is far more impaired in type I bipolar patients than previously believed, [and] remarkably, there is some evidence that functional outcome in type II bipolar patients may be even worse than in type I."

1. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452425/>

Jim Purdy (2012-09-28 15:08:32)

I think medical students must be taught nonsense like this: Bipolar disorder is caused by a lithium deficiency. Diabetes is caused by a metformin deficiency. High LDL is caused by a statin deficiency. Obesity is caused by a xenical deficiency. Pain is caused by an oxycodone deficiency. Upset stomach is caused by a proton pump inhibitor deficiency. Geez. How has modern "medical science" (Now there's an oxymoron!) gotten so loony? Seth: I think they are taught that depression, etc., are "biochemical" disorders. Which means nothing but supports the use of drugs. A Berkeley psychology major who worked in a job where she encountered lots of people with mental disorders found they were quite different than she had been taught. Diagnosis was less clear, for one thing.

## Assorted Links (2012-09-29 05:00)

- [1]Nassim Taleb likes Sheila Bair's new book about the financial crisis
- [2]Arsenic in food
- [3]ADHD drugs suspected of causing high rate of bad side effects. "Dr. Derryck Smith, an ADHD specialist in B.C. [British Columbia], says monitoring side effects is the government's job. "That's why we have Health Canada," he said. . . . Health Canada told the Star it does not have the technical expertise to analyze the adverse reaction reports."
- [4]New treatment for multiple sclerosis to be tested in Canada.

Thanks to Anne Weiss and Dave Lull.

1. [http://www.amazon.com/review/RELTFUW3UIC22/ref=cm\\_cr\\_old\\_cmt\\_rd](http://www.amazon.com/review/RELTFUW3UIC22/ref=cm_cr_old_cmt_rd)
2. <https://www.motherjones.com/files/finalarsenicembargo91912.pdf>
3. <http://www.thestar.com/news/canada/article/1262220--adhd-drugs-suspected-of-hurting-canadian-kids>
4. <http://www.montrealgazette.com/health/Patient+trial+proposed+treatment+announced+headed+researcher/7314464/story.html>

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dearieme (2012-09-29 08:20:51)

Nice juxtaposition, there.

Jim Purdy (2012-09-29 12:42:46)

Arsenic is only one of many toxic substances in our environment and our food. Instead of obsessing over each toxin separately, maybe it would make more sense to take broader actions that would protect against multiple hazards. For example: 1. Eat more organic foods, containing lower levels of pathogens. And don't argue about whether a food meets some government standard for safety. The fewer toxins the better. Period. 2. Take very good care of your gut bacteria. Your intestinal microbiome is very important to your health, by keeping bad stuff from crossing from the intestines into the bloodstream. Do all you can to support your gut bacteria. 2a. PREBIOTIC FIBER: Your good gut bacteria love fiber! I take a Jarrow brand of high-fiber prebiotic supplements with FOS and insulin (that is inulin, not insulin). I also eat a lot of high-fiber fresh produce. 2b. PROBIOTIC GERMS I also take a high-dosage probiotic called VLS #3. And I also eat plain yogurt with live cultures. I prefer plain Greek yogurt. Interestingly, the same toxins that hurt our bodies also harm our gut bacteria, so reducing toxins will give us a double benefit by strengthening our microflora. So eat your yogurt, but not the "fruit-flavored" junk yogurt. Have some plain Greek yogurt, with real fruit like apple slices and red grapes and banana slices. And sprinkle on some inulin powder, or a stevia brand that contains inulin. I'll see you at the Whole Foods Market. I'm the old bearded guy checking out the yogurt.

Tom (2012-09-29 19:48:51)

Reading Taleb's comment got me reading the other books he's raved about. This one might be up your alley: [http://www.amazon.com/review/R1YDOM1Y5TR6FA/ref=cm\\_cr\\_rdp\\_perm](http://www.amazon.com/review/R1YDOM1Y5TR6FA/ref=cm_cr_rdp_perm)

Paul N (2012-09-30 12:37:12)

I agree with Jim Purdy here that obsessing over individual toxins often misses the larger problem, which is the industrial production of food, and the wrong types of food, at that. In the case of rice, the plant has a greater affinity to take up arsenic than other grains, and especially in wet (irrigated) conditions. The arsenic is mainly in the husk, another reason to

avoid brown rice. As for the yoghurt, I'd suggest go a step further and use kefir instead - it has a far better mix of probiotics than any yoghurt. You can learn more than you ever thought possible at Dom's Kefir Site (google it). You can also make kefir, yourself, on your countertop, simply by mixing some store bought kefir with milk at about 10:1 ratio. Let it sit for 24 hours and then refrigerate and leave for another few days. I also use it for culturing mil to make my own cheese, culturing cream to make my own butter, and the whey for pickles and sourdoughs! Better still if you get kefir grains to do it the proper way... Unlike yoghurt, kefir works over a wide range of temperatures, and is best at room temperature - in other words - it's hard, very hard, to go wrong with it! So then you can just buy milk, save the money and reduce your support of the food processing industry. When you can buy a gallon of milk and make kefir for the less than the price of a quart tub of yoghurt, you are making much better use of your money, and supporting the \*production\* of food, not the \*processing\* of it.

Willy (2012-09-30 20:01:28)

Paul N, I bought the Kefir granules. I think I will try water but it does not look so easy.

Paul N (2012-10-01 09:22:59)

Willy, The kefir granules only work with full fat milk - they actually "digest" the milk fats in some way. For doing water (with sugar) you need "water kefir grains" (also called sugar kefir grains, or Tibicos). they are a different beast, good with sugar solutions, fruit juices, coconut water (but not coconut milk), etc. Dom's kefir site explains it all, and examples of different recipes are at [www.kefirgrains.info](http://www.kefirgrains.info) I have the water kefir grains and use them for making carbonated "coconut beer", ginger beer, and a few other things. Left in there long enough, they will make vinegar. ( I also have kombucha that can do that too...) Once you get into making stuff -fermented and otherwise - from just ingredients, it is amazing how much better it is, and how much cheaper too. Well worth an hour every few days. An easier to buy as many ingredients as possible (fruit, veg, eggs) from the producers directly - farmers markets and the like. As Joel Salatin says, the problem is not getting the really good (non-industrial produced) food into the supermarkets, the problem is to get people out of the supermarkets and buying direct from producers. Supermarkets, by their nature, encourage corporate food production. Try going for two weeks not buying anything from a supermarket. Not easy, but you will seek out sources of (fresh) food you never knew existed in your area.

## **The Growth of Personal Science: Implications For Statistics (2012-09-30 05:00)**

I have just submitted [1]a paper to Statistical Science called "The Growth of Personal Science: Implications For Statistics". The core of the paper is examples, mostly my work (on flaxseed oil, butter, standing, and so on). There is also a section on the broad lessons of the examples - what can be learned from them in addition to the subject-matter conclusions (e.g., butter makes me faster at arithmetic). The paper grew out of a talk I gave at the Joint Statistical Meetings a few years ago, as part of a session organized by Hadley Wickham, a professor of statistics at Rice University.

I call this stuff personal science (science done to help yourself), a new term, rather than self-experimentation, the old term, partly because a large amount of self-experimentation - until recently, almost all of it - is not personal science but professional science (science done as part of a job). Now and then, professional scientists or doctors or dentists have done their job using themselves as a subject. For example, a dentist tests a new type of anesthetic on himself. That's self-experimentation but not personal science. Moreover, plenty of personal science is not self-experimentation. An example is a mother reading the scientific literature [2]to decide if her son should get a tonsillectomy. It is personal science, not professional self-experimentation, whose importance has been underestimated.

An old term for personal science might be amateur science. In almost all areas of human endeavor, amateur work doesn't matter. Cars are invented, designed and built entirely by professionals. Household products are invented, designed and built entirely by professionals. The food I eat comes entirely from professionals. And so on. Adam Smith glorified this ("division of labor" - a better name is division of expertise). There are, however, two exceptions: books and science. I read a substantial number of books not by professional writers and my own personal science has had



a huge effect on my life. As a culture, we understand the importance of non-professional book writers. We have yet to grasp the importance of personal scientists.

Professional science is a big enterprise. Billions of dollars in research grants, hundreds of billions of dollars of infrastructure and equipment and libraries, perhaps a few hundred thousand people with full-time jobs, working year after year for hundreds of years. Presumably they are working hard, have been working hard, to expand what we know on countless topics, including sleep, weight control, nutrition, the immune system, and so on. Given all this, the fact that one person (me) could make ten or so discoveries that make a difference (in my life) is astonishing – or, at least, hard to explain. How could an amateur (me – my personal science, e.g., about sleep is outside my professional area of expertise) possibly find something that professional scientists, with their vastly greater resources and knowledge and experience, have missed? One discovery – maybe I was lucky. Two discoveries – maybe I was very very very lucky. Three or more discoveries – how can this possibly be?

Professional scientists have several advantages over personal scientists (funding, knowledge, infrastructure, etc.). On the other hand, personal scientists have several advantages over professional scientists. They have more freedom. A personal scientist can seriously study "crazy" ideas. A professional scientist cannot. Personal scientists also have a laser-sharp focus: They care only about self-improvement. Professional scientists no doubt want to make the world a better place, but they have other goals as well: getting a raise, keeping their job, earning and keeping the respect of their colleagues, winning awards, and so on. Personal scientists also have more time: They can study a problem for as long as it takes. Professional scientists, however, must produce a steady stream of papers. To spend ten years on one paper would be to kiss their career goodbye. The broad interest of my personal science is that my success suggests the advantages of personal science may in some cases outweigh the advantages of professional science. Which most people would consider impossible.

If this sounds interesting, I invite you to read my paper and comment. I am especially interested in suggestions for improvement. There is plenty of time to improve the final product – and no doubt plenty of room for improvement.

1. <http://blog.sethroberts.net/wp-content/uploads/2012/09/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf>
2. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

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Buster Benson (2012-09-30 17:02:28)  
I'd love to read it. Sounds really interesting.

Devin Bean (2012-10-20 20:43:59)  
I'd love to read it as well. Thanks! Seth: You can download it via the link attached to "a paper" above.

## 7.10 October

### Two Dimensions of Economic Growth: GDP and Useful Knowledge (2012-10-01 05:00)

Ecologists understand the exploit/explore distinction. When an animal looks for food, it can either exploit (use previous knowledge of where food is) or explore (try to learn more about where food is). With ants, the difference is

visible. Trail of ants to a food source: exploit. Solitary wandering ant: explore. With other animals, the difference is more subtle. You might think that when a rat presses a bar for food, that is pure exploitation. However, [1]my colleagues and I found that when expectation of food was lower, there was more variation – more exploration – in how the rat pressed the bar. In a wide range of domains (genetics, business), less expectation of reward leads to more exploration. In business, this is a common observation. For example, yesterday I read [2]an article about the Washington Post that said its leaders failed to explore enough because they had a false sense of security provided by their Kaplan branch. "Thanks to Kaplan, the Post Company felt less pressure to make hard strategic choices—and less pressure to venture in new directions," wrote Sarah Ellison.

Striking the right balance between exploitation and exploration is crucial. If an animal exploits too much, it will starve when its supply of food runs out. If it explores too much, it will starve right away. Every instance of collapse in Jared Diamond's *Collapse: How Societies Choose to Fail or Succeed* was plausibly due to too much exploitation, too little exploration (which Diamond, even though he is a biologist, fails to say). I've posted several times about my discovery that [3]treadmill walking made studying Chinese more pleasant. I believe walking creates a thirst for dry knowledge. My evolutionary explanation is that this pushed prehistoric humans to explore more.

I have never heard an economist make this point: the need for proper balance between exploit and explore. It is relevant in a large fraction of discussions about how to spend money. For example, yesterday I listened to [4]the latest EconTalk podcast, a debate between Bob Frank and Russ Roberts about whether it would be a good idea for the American government to spend \$2 trillion on infrastructure projects (fix bridges, etc.). Frank said it would create jobs, and so on – the usual argument. Roberts said if fixing bridges was such a good idea, why hadn't this choice already been made? Roberts could have said, but didn't, that massive government shovel-ready expenditures, such as \$2 trillion spent on infrastructure repair, inevitably push the exploit/explore balance toward exploit, which is dangerous. This is an argument against all Keynesian stimulus-type spending. I have heard countless arguments about such spending. I have never heard it made. If you want examples of how the American economy suffers from a profound lack of useful new ideas, look at health care. As far as I know, there are no recorded instances of a society dying because of too much exploration. The problem is always too much exploitation. People at the top – with a tiny number of exceptions, such as the Basques – overestimate the stability of their position. At the end of *The Economy of Cities*, Jane Jacobs says that if a spaceship landed on Earth, she would want to know how their civilization avoided overexploitation. When societies exploit too much and explore too little, said Jacobs, problems (in our society, problems such as obesity, autism, autoimmune disease, etc.) stack up unsolved. Today is China's birthday. Due to overexploitation, I believe China is in even worse economic shape than America. Ron Unz, whom I respect, [5]misses this.

My broad point is that a lot of economic thinking, especially about growth and development, is one-dimensional (measuring primarily growth of previously existing goods and services – exploitation) when it should be two-dimensional (measuring both (a) growth of existing stuff and (b) creation of new goods and services). Exploration (successful exploration) is inevitably tiny compared to exploitation, but it is crucial there be enough of it. If there is a textbook that makes this point, I haven't seen it. An example of getting it right is Hugh Sinclair's excellent new book [6]*Confessions of a Microfinance Heretic* (copy sent me by publisher) that debunks microcredit. Leaving aside the very high interest rates, the use of microcredit loans to buy TVs, and so on, microcredit is still a bad idea because the money is, at best, used for a business that copies an existing business. (The higher the interest rate, the less risk a loan recipient dares take.) When a new business copies an already-existing business, you are taking an existing pie (e.g., demand for milk, if the loan has been used to buy a cow and sell its milk) and dividing it into one more piece. The pie does not get bigger. As Sinclair says, the notion that dividing existing pies into more pieces will "create a poverty-free world" is, uh, [7]not worthy of a Nobel Prize.

Sure, it's hard to measure growth of useful knowledge. (It is perfectly possible for a company to [8]waste its entire R & D budget.) However, I am quite sure that realism does better than make-believe – and the notion that growth of GDP is a satisfactory metric of economic growth is make-believe. If you've ever been sick, or gone to college, and have a sense of history, you will have noticed the profound stagnation in two unavoidable sectors (health care and

education) of our economy. That are growing really fast.

1. <http://escholarship.org/uc/item/0k16r0pt>
2. <http://www.vanityfair.com/business/2012/04/washington-post-watergate>
3. <http://blog.sethroberts.net/category/walking-and-learning/>
4. [http://www.econtalk.org/archives/2012/09/frank\\_and\\_rober.html](http://www.econtalk.org/archives/2012/09/frank_and_rober.html)
5. <http://www.theamericanconservative.com/articles/chinas-rise-americas-fall/>
6. <http://www.microfinancetransparency.com/>
7. [http://www.nobelprize.org/nobel\\_prizes/peace/laureates/2006/yunus-lecture-en.html](http://www.nobelprize.org/nobel_prizes/peace/laureates/2006/yunus-lecture-en.html)
8. <http://blog.sethroberts.net/2007/09/11/modern-veblen-flight-from-data/>

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Nancy Lebovitz (2012-10-01 05:12:32)

To the extent that microcredit increases individual security, it increases the likelihood of exploration. Also, even a conventional business has room for some exploration, even if most don't use it. Seth: By its nature, taking on debt decreases security, if you must pay back the debt. And taking on debt at high interest – microcredit loans tend to have interest rates on the order of 70 %/year – decreases security even more. Less security, less risk-taking, as you say.

Chuck (2012-10-01 06:14:52)

I like it.

Bob (2012-10-01 07:20:55)

You probably already know this Seth, but the Austrian economists have been stressing the market as discovery procedure for a long time, particularly Hayek's "Competition as a Discovery Process" and Israel Kirzner's work on entrepreneurial discovery. Perhaps there is an Austrian textbook that covers exploration/exploitation, though I've not encountered it in exactly this form that I can recall.

Patrik (2012-10-01 22:42:28)

Just want to note, the exploration/exploitation continuum roughly maps to the The Innovation Spectrum spanning from Sustaining to Disruptive. Image here: <http://vlsvts.co/Ne04U1>

Bryan (2012-10-01 23:34:23)

»If you've ever been sick, or gone to college, and have a sense of history, you will have noticed the profound stagnation in two unavoidable sectors (health care and education) of our economy. That are growing really fast. Case in point: <http://www.theatlantic.com/entertainment/archive/2012/10/why-there-needs-to-be-a-real-grad-school-of-rock/262802/>

anand srivastava (2012-10-03 00:05:37)

Have you read FOFOA? He has a very interesting theory of the current crisis. He thinks that we will not move into Gold Standard after this Fiat crisis. We will instead move to something like Euro. Where Gold is the major reserve but it does not back the currency directly. Also all Paper claims to gold will disappear. The currency in gold standard is also a paper claim to gold. Which depresses the price of gold. It makes so much sense. FOFOA's dilemma: When a single medium is used as both store of value and medium of exchange it leads to a conflict between debtors and savers. FOFOA's dilemma holds true for both gold and fiat, the solution being Freegold, which incidentally also resolves Triffin's dilemma. <http://fofoa.blogspot.in/2011/05/return-to-honest-money.html>

shtove (2012-10-04 13:00:34)

Last place I thought I'd find gold-buggery! My view is we've run up against resource limitations, so tilting the balance toward exploration is vital. Even so I reckon we've seen the end of GDP growth - peak exploitation and peak-debt are already behind us, the age of making money off money is over. Perhaps we're moving into a steady state economy - not a disaster, but certainly far removed from the expectation that it's just a matter of time before we get back "on course". As usual, the hard-science bloggers provide the best insight on areas outside their disciplines because they can apply maths and stats - try this one for the steady-state hypothesis: <http://liminalhack.wordpress.com/> And anyone interested in the Chinese debt disaster has to follow Michael Pettis: <http://www.mpettis.com/>

Thomas Colthurst (2012-10-27 14:12:02)

Interesting post. I'm confused about one part, though: why do you think \$2 trillion of additional infrastructure spending would effect the explore/exploit balance? I don't believe any federal research budgets were being cut to fund the \$2 trillion, so explore would stay the same; almost all of the resources would either come from re-allocating things already in the "exploit sector" (such as private sector construction workers) or from unused resources (such as unemployed workers). In computer science, we often think about the explore/exploit distinction in the context of the "multi-armed bandit" model and we try to prove theorems like such-and-such algorithm does this good of a job of managing the trade-off in such-and-such situations. It isn't just useless theorizing, though: at Google (where I work), we use multi-armed bandits to optimize the ads and websites we show to our users. (See <http://support.google.com/analytics/bin/answer.py?hl=en&answer=2677320> for example). Seth: Why would \$2 trillion of infrastructure spending affect the exploit/explore balance? Because it would all go toward exploit, creating a large number of people (everyone who gets the money) whose interests lie in more exploit, less explore. Unemployed workers drift between explore and exploit - they will do what they are hired to do. Once they are hired, they start to become committed. An unemployed worker hired to exploit will want more exploit; an unemployed worker hired to explore (after working in exploit) will begin to see why the country needs more explore.

Paul N (2012-10-28 10:22:05)

Seth, That's a great explanation - in response to Thomas. I have seen in my community the results of "government stimulus" - the workers hired to exploit do indeed want more, and see that as the best way forward. Even worse, the community starts to buy into it as it seemed to work better than explore - in the short term anyway. I think of it as the economic equivalent of sugar/empty calories. It has a short term benefit of increased activity and usually little long term gain. Explore has an inherent risk component and no one - governments, corporations, people seems to want to take that on. Even universities and research institutions suffer this, as their funding mechanisms often seem to favour exploit. Can you give an example of someone hired to "explore"? Seth: Thanks! To answer your question, someone hired by an innovative small business. When something's new, there's a lot to learn about how to make it, sell it, improve it.

## Assorted Links (2012-10-02 05:00)

- [1]Critique of Steve Jobs's Stanford graduation speech. Yes, it is better to do something you enjoy than something you don't enjoy. Could we go beyond that, please?
- [2]Is graduation from Desirable College worth taking on staggering debt? By a Stuyvesant High student who managed to be admitted to several desirable colleges without enough financial aid. A friend of mine, who graduated from UC Berkeley, got into all the top law schools: Harvard, Yale, etc. But she wanted to go to Sweden for a year. She could not postpone admission. When she got back from Sweden, she ended up going to a local law school. "After my first job, the low prestige won't matter," she thought. How wrong she was. Going to the local law school was a huge mistake.
- [3]Oxytocin improves reading emotion on faces
- [4]Marginal Revolution University is live

Thanks to Chuck Currie, Grace Liu, Alex Chernavsky and Dave Lull.

1. <http://www.fastcompany.com/3001441/do-steve-jobs-did-dont-follow-your-passion>
2. <http://stuyspectator.com/2012/05/15/diary-of-a-mad-senior-you-cant-always-get-what-you-want/>
3. <http://edouard-lopez.com/fac/SciCo%20-%20S6/psychopatho/prez/Oxyticin/Domes%202007.pdf>
4. <http://mruniversity.com/>

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Why "follow your passion" is bad career advice. | Uncouth Reflections (2012-10-02 08:07:26)

[...] HT: Seth Roberts Share this:TwitterFacebookEmailPrintLike this:LikeBe the first to like this. [...]

Mike C (2012-10-02 08:59:33)

It would be very interesting to hear more details on what "a big mistake" really means. As a parent, I'm about to face these choices myself. As a kid, I didn't really have a choice, as there was really no way to afford anything but a state school (even though I likely could have gained an offer from MIT). Regrets? Sort of. But as a technologist, I regret not moving to the SF Bay Area in the 90s a lot more... Seth: It was a few years ago she told me this. I think "big mistake" meant fewer job opportunities and being looked down on a lot.

WB (2012-10-02 09:22:28)

Seth, re your piece on "Desirable College" and particularly your friend who attended the local law school: The cost of post secondary education has become a big problem and in many respects is outright scandalous. It is terrible public policy to require prospective college students and their parents to take on such enormous amounts of debt to get a decent education. The economy is of course part of the problem, but so is the way quite a few colleges and universities are administered. Many have become so "financialized" that they have lost sight of their essential mission. But it has now gotten so bad, maybe more people will finally begin to wake up about the issue and start communicating with their political representatives. And yes, your friend probably did make a big mistake, but not just because she attended the local law school, rather than a "top tier" school. See this link to a blog by a law professor (Paul Campos) who has been writing about this for awhile. It should be required reading for anyone who thinks they want to attend law school (and also their parents). <http://insidethelawschoolscam.blogspot.com/>

shortdude (2012-10-02 10:53:25)

There's a big difference between law school and college. Most people these days acknowledge that if you don't go to a top tier law school, then you face poor employment prospects for the foreseeable future. The market is over-saturated to the extreme. However, when it comes to college, choosing a school really depends on what you want to do. If you plan on medical school, for example, it doesn't matter much at all where you go. If business is your thing, then going to NYU or Penn can make a huge difference. On a side note, that girl sounds kind of spoiled and entitled - maybe her application just wasn't as great as she thought it was?

dearieme (2012-10-02 11:23:14)

Adam Smith wrote about how you must expect a surplus of lawyers, and of how a few would make a lot of money and many would make little. Shrewd chap, Professor Smith.

Tom (2012-10-02 19:59:21)

College is a loan-sharking racket now.

AM (2012-10-02 21:04:47)

Choosing a local law school (unless "local" means Cal or Stanford) over Harvard and Yale was such a horrible decision that I wonder how your friend got into those top schools in the first place. Yes, that sounds terribly snarky, but if she'd spent even five minutes investigating the legal job market (aka reading Above The Law) she'd have made a different choice. The law school market is very different than the college market.

John (2012-10-03 11:07:33)

dearieme, could you give us a citation or link for Adam Smith (and I assume you mean THE Adam Smith) on lawyers?

Bryan (2012-10-03 13:30:29)

I second John's request. I tried searching for it but came up empty.

Pat (2012-10-03 14:15:01)

interesting about your lawyer friend. She was right in that it should not matter, but we are living in a Veblen world.

dearieme (2012-10-03 16:18:42)

@John: my copy of The Wealth of Nations is from Penguin Classics, edited by Andrew Skinner, 1970: the relevant bit is on p 207 onwards. It's probably more useful to you to note that it's from Book I, chapter x "Of wages and Profit in the different Employments of Labour and Stock". It must be available free on the web. You could Google this bit about "your son": "... but send him to study the law, it is at least twenty to one if ever he makes such a proficiency as will enable him to live by the business."

dearieme (2012-10-03 16:20:52)

As predicted <http://www.econlib.org/library/Smith/smWN4.html>

dearieme (2012-10-03 16:34:49)

Here's some more Smithian wisdom, bearing on student loans don't you think? I.10.92 In professions in which there are no benefices, such as law and physic, if an equal proportion of people were educated at the public expence, the competition would soon be so great, as to sink very much their pecuniary reward. It might then not be worth any man's while to educate his son to either of those professions at his own expence. They would be entirely abandoned to such as had been educated by those public charities, whose numbers and necessities would oblige them in general to content themselves with a very miserable recompence, to the entire degradation of the now respectable professions of law and physic.

dearieme (2012-10-03 16:38:28)

Nobody can consider himself educated who has not read The Wealth of Nations, The Origin of Species, and Gibbon's Decline and Fall. Says me.

## **Extremely Disappointing Facts About Doctors (2012-10-03 05:00)**

The gist of Unaccountable: What Hospitals Won't Tell You – and How Transparency Can Revolutionize Health Care (copy sent me by publisher) by Mart Makary, a med school professor at Johns Hopkins, is that doctors have failed to regulate themselves. Nobody else regulates them, so they are unaccountable. In many ways, Makary shows, bad behavior (e.g., unnecessary treatment, [1]understating the risks of treatment) is common. Hospitals hide how bad things are. Makary mostly discusses surgeons – he's a surgeon – but gives plenty of reasons to think other specialties are no better.

The book is one horror story after another. At one point, Makary quit medical school. He was disgusted and appalled by seeing doctors – his teachers – push an old woman to consent to an operation she didn't want and didn't need. She refused, again and again, but the doctors kept pushing. Makary objected. He was ignored. Finally she

agreed. The operation killed her.

I know Peter Attia as a co-founder, with Gary Taubes, of the recently formed [2]Nutritional Science Initiative. Makary met him when Attia did a surgery residency at John Hopkins Hospital. Attia had seen a doctor about back pain and had been told he needed surgery. They operated on the wrong side, causing damage that prevents Attia, an excellent athlete, from playing most sports. Eventually Attia left medicine. He felt "modern medicine was too frequently dishonest with patients, at times understating risks and overtreating patients as a matter of reflex" – "as a matter of reflex" meaning "as a matter of course", i.e., usually. And Johns Hopkins Hospital is one of the better hospitals in America. "Almost everyone I talk to has a story about a friend or a family member who was hurt, disfigured, or killed by a medical mistake," writes Makary. He has six such stories, including his grandfather and his brother. His grandfather died from unnecessary surgery.

The "when-you're-a-hammer problem" says Makary, "plagues modern medicine at every level." He witnessed a case conference where a young otherwise-healthy patient had a small liver tumor. "The transplant surgeons [more than one] in the audience recommended a liver transplant. I was flabbergasted. Why on earth would any doctor recommend a transplant?" Makary asked around. He discovered there was nothing unusual about the transplant surgeons in the audience. He called a friend who was one of the few surgeons trained in both cancer treatment and transplants. His friend said "there was a battle for turf taking place nationwide between transplant surgeons and cancer surgeons. Both claim to be liver experts."

Makary tells about trying to obtain informed consent for a surgery when he was an intern. He didn't know much about the surgery. The patient didn't agree. "It was well-known among interns that if an attending senior surgeon found out that a patient refused surgery close to surgery date, duck for cover. Mine would surely be livid." Makary spoke to an upper resident. He couldn't get approval. They went to the chief resident. He got approval. Congratulations all around amongst the doctors, "glad that the wrath of the attending surgeon would be averted."

Supposedly state medical boards oversee doctors. Makary devotes part of a chapter to describing how they don't. He asked state medical boards why they don't search a national database before issuing a medical license. "My favorite excuse was that they could not afford the four-dollar-per-doctor fee."

In 1978, the Shah of Iran needed an operation. The United States government set him up with a Texan named Michael DeBakey, "considered by many to be the best surgeon in the world." During the surgery, DeBakey failed to take "a simple standard safety measure." Due to this failure, the Shah developed a serious complication, became very sick, and died. The Shah and the United States government had failed to realize – and, more important, none of the experts they consulted had told them (I assume) – is that DeBakey was a famous heart surgeon. The Shah's operation involved his spleen. DeBakey knew little about such operations and had done almost none – but (I assume) didn't point this out.

A survey done at many hospitals asks employees if they "feel comfortable speaking up when [they] sense a patient safety concern." At the median hospital, the percentage is about 70 %. In the Milgram experiment (where subjects are ordered to give painful shocks), when audiences were asked by Milgram to predict what they would do in that situation almost all said they wouldn't give the shocks. In fact, most people did give the shocks – indicating that people vastly overestimated their likelihood of resistance and speaking up. So 70 % is likely an overestimate. (A study of nurses found that about 95 % of them broke safety rules when ordered to do so. Roughly all of them had said they would never do such a thing.) Since talk is cheap, why is the median percentage as low as 70 %? No doubt many respondents had seen themselves fail to speak up.

These aren't the worst stories, these are average, I just opened the book here and there. There are dozens more. No previous book has spelled out so clearly the depth and width of doctor misbehavior, especially how common it is, and the failure of those supposedly responsible, such as hospital administrators and state boards, to do anything

about it.

Title from [3]12 extremely disappointing facts about popular music.

1. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>
2. <http://nusi.org/>
3. <http://www.buzzfeed.com/daves4/12-extremely-disappointing-facts-about-popular-mus>

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charlie (2012-10-03 05:37:25)

You've got to separate hospital from doctors. Two very different incentive structures.

Steve G. (2012-10-03 06:57:24)

Although much maligned and slandered, medical malpractice lawsuits seek to influence physician & hospital behavior, but it's a weak system. Meritorious cases often don't win; they are extremely expensive to pursue; and most doctors and hospitals will go to extreme lengths to avoid liability. For a good consideration of the topic, consult Tom Baker's The Medical Malpractice Myth. In the end, doctors more than lawyers need to address this issue. It's a much greater problem that most realize or (for those who should know), want to admit.

WB (2012-10-03 08:24:06)

1. Seth: There is a term for this that I first learned from reading one of Nassim Taleb's books; a term I'd never heard before: iatrogenic (from the Greek term iatros, physician + E -genic). Of course this ancient term refers to inadvertently induced harm. What the Makary book talks about obviously goes beyond that. 2. There is an important blog, <http://hcrenewal.blogspot.com>, that focuses on ethics problems in the medical care industry. The lead author is Roy Poses, MD who has been actively talking about it for a long time without getting much traction either within his profession or in main stream media. He refers to this as the "anechoic" effect. The blog describes its mission as "Addressing threats to health care's core values, especially those stemming from concentration and abuse of power. Advocating for accountability, integrity, transparency, honesty and ethics in leadership and governance of health care." 3. @ Steve G. The medical malpractice system is more than weak. It is part of the problem because of the way "malpractice" is defined and determined by our court systems. This system helped open the door to what is generally referred to as "defensive" medicine based on "protocols" for testing and treatment concocted by the medical care system and (as it turned out) designed mostly to protect physicians against malpractice claims. As long as the physician follows the applicable "protocol," legal claims are nearly impossible to pursue effectively. This is something that needs to be addressed by policy makers (e.g. legislators) rather than doctors or lawyers. The reason is that there are way too many conflicts of interest among the regular players in the existing medical system. And I agree with you that it is a greater problem than most of us realize - much greater.

LemmusLemmus (2012-10-03 10:23:48)

This somewhat related post may be of interest: <http://economiclogic.blogspot.de/2012/10/disclosing-hospital-quality-works.html> (I have not read the paper it refers to.)



JPB (2012-10-03 13:06:18)

Having lost several family members and friends to doctors pushing for surgery, etc., I have lost faith with the medical profession, despite coming from a family with 5 doctors, 7 nurses, and more. When is the medical "profession" going to come to it's senses? How many more people will have to die before doctors start questioning the protocols?

Alex Chernavsky (2012-10-03 16:38:48)

Unfortunately, you as a patient have to keep your wits about you and do your own homework. By remaining vigilant and skeptical in the face of "expert" medical opinions, I've saved myself a lot of grief on several occasions. God help you if you are, by nature, a trusting soul, or ignorant, or both.

anand srivastava (2012-10-04 00:27:41)

There is a concept called Super Organism. I read it first time on FOFOA's blog. Its not that only ants create superorganism (SO). Every organism will build one. And humans are no exceptions. The Medical establishment is also an SO. It has its own set of incentives, that define the SO. It is not that individual members of the SO are inherently evil, its just that they have to behave that way for the betterment of the SO. So the people who don't work for the SO's health are thrown out and the people who work in accordance are nurtured. Yes the only way to fix the problem would be to change the incentives. And yes criminal penalties for mistakes would make it better, as it will change some incentives.

dearieme (2012-10-04 05:33:52)

"you as a patient have to keep your wits about you and do your own homework": not always easy if you're feeling ill.

Nancy Lebovitz (2012-10-04 08:00:48)

You guys have been focusing on inappropriate care that given, and there's certainly plenty of that, but the other side is appropriate care that isn't given. Fat people (possibly especially fat women) are apt to have their actual symptoms ignored and just get told to lose weight. This can mean years of unaddressed illnesses, whether because the patient has to go through a number of doctors or gives up on trying to get help. I've only heard a little about it, but apparently unusually thin people are at risk of being told to just gain weight. What's more, if you've got a disease that's considered uncharacteristic of your weight (like type 2 diabetes in a person who isn't fat), it can take a long time to get a diagnosis. Pain medication is frequently withheld, partly because doctors have a rational fear of being accused of giving pain meds to addicts or resellers, and partly because of a less rational tendency to not take pain seriously. More generally, only getting paid enough for very short appointments means that doctors have much less time for diagnosis, and are less likely to hear all the relevant symptoms or have time to think about them.

WB (2012-10-04 12:27:19)

@ Nancy: You make valid points. But along a different line of thinking (such as becoming more aware of the things that we all could do to avoid many, all-to-common maladies in the first instance), there is the thing that is often never discussed by doctors: nutritional changes. Most physicians have no in-depth knowledge of this and, if they ever do advise life-style changes, it is usually along the lines of "eat less, exercise more" which is utterly useless advice. ( Our grandmothers can do better than that!) Beyond this, in the case of doctors, it's usually a matter of pulling out the Rx pad or administering tests. But this is not working for most of us, and it will only get worse unless and until we take charge of our own health and well being. We all need to acquire more self knowledge of what works and what doesn't, and it's mostly free. What does (and can) work is some degree of individual effort to set aside certain assumptions (such as, e.g., the "balanced diet" is best) to find out what kind of nutritional changes can actually help many of us eliminate (reverse) many common "diseases" and then implement those changes. Seth has talked about some of these on this blog. There is a lot of great information out there on the world wide Web, and even in "old fashioned" books. One just has to open the mind a little bit and start digging. It's not necessarily easy in the beginning, but is well worth it. In my view, that's a lot better approach (and cheaper to boot) than expecting doctors to be able to show us the way to health. There may be a few, but you won't find them in the main stream. Conventional "medicine" is fine for things such as repairing injuries and helping us overcome some infectious diseases. But if we're seeking long term, every-day health, medicine is a wrong-way street.

Nancy Lebovitz (2012-10-04 13:19:15)

WB, I'm in substantial agreement. Adjusting diets for individuals can make huge improvements. One of my friends has found that his digestive tract shuts down if he doesn't eat a good bit of wheat fairly often, and it's the same for a couple of his relatives. I wonder whether there are people with intractable ailments who just need to add the right food to their diets. Something else that was simple, cheap, safe, and effective- I cleared up a case of acid reflux by sleeping on my left side for a couple of nights. The suggestion was in wikipedia.

### Assorted Links (2012-10-04 05:00)

- [1]On using patents to measure innovation. Fails to ask if using patents to measure innovation is better than nothing.
- [2]Kimchi basics. "So much depth of flavor."
- [3]Reubin Andres, important weight control researcher, dies. "For some reason the idea has grabbed us that the best weight throughout the life span is that of a 20-year-old," Dr. Andres said in a 1985 interview with The New York Times. "But there's just overwhelming evidence now that as you go through life, it's in your best interests to lay down some fat."
- [4]Margaret Wentz, Globe & Mail columnist and serial something or other. [5]Wentz defends herself, plus 1922 comments, few or none of which support her. For example, "Apparently Margaret thinks that a compilation of her journalistic lapses is irrelevant if the person documenting them over time and bringing them to light is a person she doesn't like." [6]More comment on Wentz. [7]Another Globe & Mail columnist uses her column to sell her house. The Globe & Mail is the New York Times of Canada.

Thanks to Rashad Mahmood.

1. [http://www.slate.com/blogs/moneybox/2012/10/02/the\\_scourge\\_of\\_garbage\\_in\\_garbage\\_out\\_research\\_on\\_innovation.html](http://www.slate.com/blogs/moneybox/2012/10/02/the_scourge_of_garbage_in_garbage_out_research_on_innovation.html)
2. <http://www.omaha.com/article/20121003/LIVING/710039997/1696>
3. <http://www.nytimes.com/2012/10/01/health/reubin-andres-an-advocate-of-weight-gain-dies-at-89.html>
4. <http://mediaculapost.blogspot.ca/2012/09/at-bloggerheads-margaret-wentz.html>
5. <http://www.theglobeandmail.com/commentary/columnist-margaret-wentz-defends-herself/article4565731/>
6. <http://www.guardian.co.uk/media/greenslade/2012/sep/24/canada-plagiarism?INTCMP=SRCH>
7. <http://o.canada.com/2012/09/26/globe-and-mail-columnist-leah-mclaren-tries-to-sell-own-house-in-column/>

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dearieme (2012-10-04 05:37:02)

One reason that the tables of desirable BMI must be wrong is that they make no allowance for age or sex. Perhaps they ought ideally to allow for race too. Who knows?

Bryan (2012-10-05 07:14:34)

Gary Becker argues that patents should be minimal: <http://www.becker-posner-blog.com/2012/09/reforming-the-patent-system-toward-a-minimalist-system-becker.html>

## Five Most Important Rules of Nature Photography (2012-10-05 05:00)

A friend sent me some photos taken on a mountain hike. They seemed to derive from the following rules:

1. Carry a small camera in a big bag.
2. Always take a picture of a flower.
3. Change clothes from one picture to the next. (For example, wear pants in one picture and shorts in another picture, or a blue shirt in one picture and a white shirt in another picture.)
4. Make a funny face (for example, press finger into cheek).
5. Wear a funny shirt.

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Tom (2012-10-05 08:25:34)

It's amazing the lengths people go to to convince their Facebook friends that their life really is awesome.

Jim Purdy (2012-10-05 19:37:54)

6. Don't bore everybody you know by showing them your pictures of flowers, shorts, shirts, and funny faces.

## When You're a Lawyer, Everything Looks Like an Opportunity to Argue (2012-10-06 16:29)

I [1]recently posted about Unaccountable by Mart Makary, a book about the bad behavior of doctors. One of his points is "The when-you're-a-hammer problem plagues modern medicine at every level." He illustrated this with a case where transplant surgeons said an otherwise-healthy person with a small liver tumor should get a liver transplant. Which struck Makary as ridiculous.

A lawyer who reads this blog sees the same thing in lawyers. He told me the following story:

One of the sixteen defendants we sued moved to transfer the venue of our case from [Southern California city] to [Northern California city]. Both plaintiffs, all of his doctors (over a dozen), all of the witnesses (again, about a dozen), and all of locations where the incident took place are in or near [N. California city]. When we got the motion I took it to my boss who said, "Huh. We should've filed it in [N. California city] to begin with. I don't know why we didn't." It would've been inconvenient for us, b/c we're in [S. California city], but we've filed cases up there before, so we could handle it.

So, did we stipulate with the defendant and just transfer the case up north? No. We filed a pathetic, perfunctory opposition. We had an argument, but it was very weak: one of the defendants was located in [S. California city]. That's basically all we had to hang our hat on.

We filed our opposition, defendant filed their reply. We all trekked down to court to argue our positions in front of the judge. The hearing should've taken 30 seconds – "Defendant's motion granted." – but the judge actually entertained oral argument. Finally, he granted the motion.

When I got back to the office, I noted to my secretary what a huge waste of time all of this was. The law was clear, virtually all of the facts were on opposing counsel's side, we should've filed up north to begin with, so why fight it? Why not save everyone – us, opposing counsel, the judge and his staff – time and just agree? "Well, you gotta take a shot," was her reply. Which is what I hear from attorneys all the time. "You gotta try, you gotta make the argument." In other words, we have hammers so the hammers must be used no matter what.

No, it isn't quite like a transplant surgeon who says a new liver is needed b/c of a small tumor – no one's life or health is at risk – but how much time and resources are wasted in the legal system on bullshit like this?

1. <http://blog.sethroberts.net/2012/10/03/unaccountable-by-marty-makary-2/>

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Steve G. (2012-10-07 02:22:04)

Seth, Don't fall for the anecdotal evidence trap. Yes, these motions get filed, although I'm surprised that a plaintiff's attorney filed it. As a practitioner, including medical malpractice claims, the waste-of-time stuff usually comes from the defense attorneys representing insurance carriers. Paid by the hour, and with virtually unlimited resources, insurance carriers (never the named the defendant but the ones who call the shots) do this sort of thing. Plaintiffs' attorneys, at least this one, realized that the more time that they put in on a case, the less the rate of return—if there is a return—since we work on a contingent fee basis. I wanted to get my case tried on the merits as quickly & efficiently as possible. You should know that most medical malpractice cases are unsuccessful, regardless of merit. Juries don't like to enter verdicts against the good doctor. Please also note the venue of the anecdote: California. Having practiced in Iowa and Illinois, I can tell you that legal cultures, including the amount of posturing and BS, vary greatly from place to place. Chicago was a very different practice than Champaign. In Chicago-area courts & legal practices, you find a great deal more posturing & tactical use of delays & uncertainties. (And I will not even contemplate corruption of judges, who are elected in Illinois, a hideous thing.) Iowa is more sedate. In a smaller jurisdiction, you can't afford to develop a reputation as a time-waster (think iterated prisoner's dilemma). Judges are busy enough. Also, judges are appointed and don't have to solicit campaign funds, although we do have retention elections, which, until recently, were non-partisan. So are we perfect? No. Do some attorneys waste time & BS? Yes. But on the whole, the courts and the legal culture, at least in Iowa, tend to minimize this nonsense. And I hate it, too!

Bryan (2012-10-07 08:16:50)

»Don't fall for the anecdotal evidence trap. I take it you're new to this blog?

AM (2012-10-07 17:12:29)

» Don't fall for the anecdotal evidence trap. > I take it you're new to this blog? Hah!

Steve G. (2012-10-08 21:42:09)

Ah, no, I've been here before. I think the world of anecdotes. In my professional world they're called cases. Indeed, consider the power of the anecdote, assuming for a moment its veracity (no small assumption, I understand). A single true event can negate contrary statistical suggestions of a virtually infinite data set, thereby pleasing Mr. Popper (of Vienna & London, not of the Penguins). I think that this is why the law is so very cautious about statistics, since we are most often concerned with the single incident. But when making public policy, anecdotes are poison. Case in point: the McDonald's coffee case (see the documentary "Hot Coffee" if you don't appreciate my reference), or other tales of lawyers gone wild. Here statistics should guide us in separating anomalies from trends. So, I'm sweet on both anecdotes & statistical generalizations.

shtove (2012-10-09 11:40:33)

In the UK this is managed through the threat of a wasted costs order - if a lawyer has been unreasonable he runs the risk of paying personally. I imagine many US jurisdictions have the same. We've all come across hammer-nail abuses, but systems do adapt in some degree.

### Assorted Links (2012-10-07 05:00)

- [1]someone agrees with me that "correlation does not equal causation" is not great wisdom
- [2]Vitamin D did not prevent colds. One more Vitamin D experiment that failed to have subjects take the Vitamin D early in the morning – the time it appears most likely to have a good effect.
- [3]The rise and fall of schizophrenia. "Compared to any other medical disease, uniquely patients with schizophrenia in many ways fare far worse now than a century ago."
- [4]The healing power of social networks. "People with schizophrenia . . . do far better in poorer nations such as India, Nigeria and Colombia than in Denmark, England and the United States."
- [5]Rampant overtreatment.

Thanks to Bryan Castañeda.

1. [http://www.slate.com/articles/health\\_and\\_science/science/2012/10/correlation\\_does\\_not\\_imply\\_causation\\_how\\_the\\_internet\\_fell\\_in\\_love\\_with\\_a\\_stats\\_class\\_click\\_.html](http://www.slate.com/articles/health_and_science/science/2012/10/correlation_does_not_imply_causation_how_the_internet_fell_in_love_with_a_stats_class_click_.html)
2. <http://www.latimes.com/health/boostershots/la-heb-vitamin-d-does-not-prevent-colds-infections-study-20121002,0,377309.story>
3. [http://davidhealy.org/the-madness-of-north-wales/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3ADrDavidHealy+%28Dr.+David+Healy%29](http://davidhealy.org/the-madness-of-north-wales/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3ADrDavidHealy+%28Dr.+David+Healy%29)
4. <http://www.washingtonpost.com/wp-dyn/content/article/2005/06/26/AR2005062601091.html>
5. <http://www.bmj.com/content/345/bmj.e6230?etoc=>

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charlie (2012-10-07 11:01:26)

Am I reading it correctly the Vitamin D study recieved 100,000 IU a month? At once? Seth: Yes. Here's a description: "Participants were randomly assigned to receive an initial dose of 200 000 IU oral vitamin D3, then 200 000 IU 1 month later, then 100 000 IU monthly (n = 161), or placebo administered in an identical dosing regimen (n = 161), for a total of 18 months."An experimental design that assumes that all that matters is the blood level of Vitamin D3< /strong>

Jake (2012-10-07 13:56:51)

This Vitamin D study was a poorly done should be ignored. They did not test for blood levels of Vitamin D which is essential as there is huge variation in people's ability to absorb Vitamin D. Here is a better study: A controlled study of severely Vitamin D deficient women over 50 from Harlem were randomly selected to be supplemented. One group was supplemented to bring them up to moderately deficient. They had a 60 % reduced risk of colds and influenza. Another group were supplemented to bring them up to optimum Vitamin D blood level and they had a 90 % reduction in risk.

Nancy Lebovitz (2012-10-07 17:34:30)

Jake, is that an actual study or how you think it should have been done?

dearieme (2012-10-07 17:37:41)

"someone agrees with me that "correlation does not equal causation" is not great wisdom": then you're both wrong. The advice is offered to freshers for good reason. Seth: Correlations are useful. They provide evidence relevant to causation. The saying I disparage says roughly the opposite. How is that helpful?

## **Kahneman Criticizes Social Psychologists For Replication Difficulties (2012-10-08 05:00)**

In [1]a letter linked to by Nature, Daniel Kahneman told social psychologists that they should worry about the repeatability of what are called "social priming effects". For example, after you see words associated with old age you walk more slowly. John Bargh of New York University is the most prominent researcher in the study of these effects. Many people first heard about them in Malcolm Gladwell's Blink.

Kahneman wrote:

Questions have been raised about the robustness of priming results. The storm of doubts is fed by several sources, including the recent exposure of fraudulent researchers [who studied priming], general concerns with replicability that affect many disciplines, multiple reported failures to replicate salient results in the priming literature, and the growing belief in the existence of a pervasive file drawer problem [= studies with inconvenient results are not published] that undermines two methodological pillars of your field: the preference for conceptual over literal replication and the use of meta-analysis.

He went on to propose a complicated scheme by which Lab B will see if a result from Lab A can be repeated, then Lab C will see if the result from Lab B can be repeated. And so on. A non-starter, too complex and too costly. What Kahneman proposes requires substantial graduate student labor and will not help the grad students involved get a job – in fact, "wasting" their time (how they will see it) makes it harder for them to get a job. I don't think anyone believes grad students should pay for the sins of established researchers.

I completely agree there is a problem. It isn't just social priming research. You've heard the saying: "1. Fast. 2. Cheap. 3. Good. Choose 2." When it comes to psychology research, "1.True. 2. Career. 3. Simple. Choose 2." Overwhelmingly researchers choose 2 and 3. There isn't anything wrong with choosing to have a career (= publish papers) so I put a lot of blame for the current state of affairs on journal policies, which put enormous pressure on researchers to choose "3. Simple". Hardly any journals in psychology publish (a) negative results, (b) exact replications, and (c) complex sets of results (e.g., where Study 1 finds X and apparently identical Study 2 does not find X). The percentage of psychology papers with even one of these characteristics is about 0.0 %. You could look at several thousand and not find a single instance. My proposed solution to the problem pointed out by Kahneman is new journal policies: 1. Publish negative results. 2. Publish (and encourage) exact replications. 3. Publish (and encourage) complexity.

Such papers exist. I [2]previously blogged about [3]a paper that emphasized the complexity of findings in "choice overload" research – the finding that too many choices can have bad effects. Basically it concluded the original result was wrong ("mean effect size of virtually zero"), except perhaps in special circumstances. Unless you read this blog – and have a good memory – you are unlikely to have heard of the revisionist paper. Yet I suspect almost everyone reading this has heard of [4]the original result. A friend of mine, who has a Ph.D. in psychology from Stanford, told me he considered Sheena Iyengar, the researcher most associated with the original result, the greatest psychologist of his generation. Iyengar wrote [5]a book ("The Art of Choosing") about the result. I found nothing in it about the

complexities and lack of repeatability.

Why is personal science important? Because personal scientists – people doing science to help themselves, e.g., sleep better – ignore 2. Career and 3. Simple.

1. [http://www.nature.com/polopoly\\_fs/7.6716.1349271308!/suppinfoFile/Kahneman%20Letter.pdf](http://www.nature.com/polopoly_fs/7.6716.1349271308!/suppinfoFile/Kahneman%20Letter.pdf)
2. <http://blog.sethroberts.net/2010/11/11/more-choice-less-satisfaction/>
3. <http://www.scheibehenne.de/ScheibehenneGreifenederTodd2010.pdf>
4. [http://www.nytimes.com/2010/02/27/your-money/27shortcuts.html?\\_r=1](http://www.nytimes.com/2010/02/27/your-money/27shortcuts.html?_r=1)
5. <http://www.amazon.com/The-Art-Choosing-Sheena-Iyengar/dp/0446504106>

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Darrin Thompson (2012-10-08 05:50:59)

We should clarify the saying you are using. It's better stated this way: "a. Fast. b. Cheap. c. Good. Pick any 2." At least that's the software version of it. It expresses our frustrations with management who drive us to produce quickly and cheaply but are horrified to discover that when it's done it isn't any good. Or that we could build it cheaply and have it turn out well, but it's going to take longer. Or that we could build it well, and quickly, but it will cost a lot. And beat that system the answer is to invest some resources to improve our tooling or our processes. Seth: You mean my statement was confusing because I numbered the choices? I've heard the "pick 2" saying in regard to making movies and making physical stuff.

Vic (2012-10-08 12:21:45)

Seth - isn't this the time of year when you criticize the nobel prize in medicine? :) Seth: Any day now. :)

Tim Beneke (2012-10-08 12:51:28)

I liked your post a lot. The whole issue of the "sociology of knowledge and social psychology" (and psychology and science generally) and how the kind of "external-to-truth" factors influence what are considered to be findings in psychology needs to be understood much better than it is. There needs to be better access to all the research that more or less fails to replicate important claims. There needs to be systematic research on the research so the field can better clean up its act... It leaves me rather confused as one who is fascinated by findings in social psychology and tries, a little, to theorize them and integrate them into my daily existence. How seriously should we take important claims? I know one important Asian-American psychologist who has been very skeptical of Bargh as well as other highly publicized findings in psychology... Seth: There's a saying "everyone believes an experiment except the experimenter." Let me revise it to "everyone believes an experiment except other experimenters" – who understand how easily the results can be shaped to fit what the experimenter wants.

David Johnston (2012-10-08 20:49:45)

I strongly suspect that well organized retail companies have large data sets on the effect of choice size on purchasing habits and use that data to decide how many and what type of products to display. The difference is that they're not in the business of publishing their data in research journals and probably consider it proprietary business intelligence.

Tom (2012-10-08 21:43:19)

*The difference is that they're not in the business of publishing their data in research journals and probably consider it proprietary business intelligence.* I think it's more likely that nobody bothered to ask them. Occam's razor.

Duncan (2012-10-09 15:07:32)

Jim Manzi has a pretty good article about the Iyengar experiment: <http://www.nationalreview.com/corner/198579/non-paradox-choice/jim-manzi>

Jim Manzi (2012-10-14 14:25:28)

David, There have been many, many such well-structured RCTs by retail companies. They are generally termed "SKU rationalization" experiments. Duncan, Thanks. I go into this experiment and subsequent analyses in much greater detail in my book published in May. Best, Jim Manzi

## **Hidden Side Effects of Statins and How Easily You Can Uncover Them (2012-10-09 05:00)**

In 2009, a British rheumatologist named Andrew Banji wrote about the hidden side effects of statins [1] in the Daily Mail:

I discovered the link between statins and rheumatic side-effects quite by chance. My attack of tendon inflammation occurred at the front of my shin - a highly unusual place for tenosynovitis - so I decided to do some research into what could have triggered this. I was amazed to discover the only other related case was linked to a patient on statins.

Following a high cholesterol-reading of 9.2 a couple of months before, I'd been put on the drug. Intrigued by the connection, I decided to stop taking my statin to see what happened. Within a couple of weeks, the pain had gone.

I went back to my GP and, over successive months, tried various statins, including rosuvastatin which is one that is often prescribed.

Each form of the drug caused terrible problems, including night cramp, muscle pain, severe muscle disorders known as myopathy and general fatigue. In fact, I became so tired I couldn't lift anything when I was gardening or even walk the half-mile from my home to the center of town.

Yet whenever I halted the medication, my symptoms disappeared within a few weeks. . . .

I began to realize many of my patients with musculoskeletal conditions such as polymyalgia - pain, stiffness, and tenderness in the muscles - were on statins. When I advised them to stop taking their medication, their problems went away.\

By 2009, statins were perhaps [2] the most heavily prescribed drugs ever, making tens of billions of dollars for drug companies. Yet this story shows that at that point a doctor who was taking statins was not yet aware of major common side effects. How convenient for drug companies. The story also shows that patients with a variety of muscular problems had to be told by a doctor to stop taking their statins to find out if the statins were causing the problem. That should have been common sense. On a more positive note, this story shows how easily some health problems can be fixed ("when I advised them to stop taking their medication, their problems went away").

1. <http://www.dailymail.co.uk/health/article-1128333/Viewpoint-The-hidden-painful-cost-statins.html>

2. [http://money.cnn.com/magazines/fortune/fortune\\_archive/2003/01/20/335643](http://money.cnn.com/magazines/fortune/fortune_archive/2003/01/20/335643)



dearieme (2012-10-09 08:22:20)

One of the big studies of statins hid the side effects as follows. They gave the drug and the placebo to the two groups. In the first few weeks of the study many of the subjects suffered side effects so bad that they dropped out. These people were then obliterated from the statistics and the subsequent boasted-about results for benefits and side effects ignored their existence. In my little corner of science we'd have called that "lying". Seth: I didn't know about that. Because these drugs are so widely prescribed and so profitable and yet have so little apparent benefit – so little that the side effects could easily be worse than the benefits – "lying" is a rather weak term for the deception you describe.

Kim Øyhus (2012-10-10 00:12:59)

Patches in the body can have different genes, biochemistry, or something. They react differently from the rest of the body. The front of his shin could be such a patch. This should be useful for something.

Evelyn M. (2012-10-10 05:18:29)

So what did the good British rheumatologist named Andrew Banji do about his elevated cholesterol level of 9.2 mmol/l (355.76179 mg/dl)? It is unlikely that Cholesterol at this level can be brought down by dieting alone.

Adam (2012-10-10 08:05:32)

Evelyn M., total cholesterol is basically meaningless. We're even discovering that LDL cholesterol, while better, is not that useful as a predictor of heart disease.

Statin Enthusiast (2012-10-10 22:37:08)

These are not hidden side effects. These are pretty well known side-effects documented all over literature, especially the joint pain and muscle pain. Most of these happen when statins are over-prescribed, i.e. doctors give patients with very high cholesterol more Statin than the recommended dose (the dose that the original safety trials were done). Some people think CoQ10 supplementation could help but the reality is that no body to-date knows for certain the exact reason why statins cause these problems. Seth: You seem to be saying the author of this article made a fool of himself (and opened himself up to charges of incompetence) in Great Britain's most popular paper.

dearieme (2012-10-11 02:39:16)

A retired friend points out that a far higher proportion of his pals who are on statins report nasty side effects than is consistent with the literature. He's an epidemiologist by trade.

David Evans (2012-10-15 06:35:53)

I've compiled a list of over 140 scientific papers that document the adverse effects of statins [http://healthydietsandscience.blogspot.co.uk/search/label/Statins %20and %20Cancer](http://healthydietsandscience.blogspot.co.uk/search/label/Statins%20and%20Cancer)

## **Vitamin D3 Eliminated Colds and Improved Sleep When Taken in the Morning (Stories 24 and 25)** (2012-10-10 05:00)

A year and a half ago, the father of a friend of mine started taking Vitamin D3, 5000 IU/day at around 7 am – soon after getting up. That his regimen is exactly what I'd recommend ([1]good dose, good time of day) is a coincidence – he doesn't read this blog. He used to get 3 or 4 terrible colds every year, year after year. Since he started the Vitamin D3, he hasn't gotten any. "A huge lifestyle improvement," said my friend. His dad studied engineering at Caltech and is a considerable skeptic about new this and that.

Much more recently his mother changed the time of day she took her usual dose of Vitamin D3. For years she had been taking half in the morning (with a calcium supplement) and half at night. Two weeks ago she started taking the whole dose in the morning. Immediately – the first night – her sleep improved. She used to wake up every 2 hours.

Since taking the Vitamin D3 in the morning, she has been waking up only every 3-6 hours. A few days ago, my friend reports she had "her best sleep in years".

Sleep and immune function are linked in many ways beyond the fact that we sleep more when we're sick. A molecule that promotes sleep turned out to be very close to a molecule that produces fever, for example. I found that when I did two things to improve my sleep (more standing, more morning light) [2]I stopped getting colds. So it makes sense that a treatment that improves one (sleep or immune function) would also improve the other (immune function or sleep).

A few days ago [3]I posted a link about [4]a recent Vitamin D study that found no effect of Vitamin D on colds. The study completely neglected importance of time of day by giving one large injection of Vitamin D (100,000 IU) per month at unspecified time. I commented: "One more Vitamin D experiment that failed to have subjects take the Vitamin D early in the morning — the time it appears most likely to have a good effect." These two stories, which I learned about after that post, support my comment. What's interesting is that the researchers who do Vitamin D studies keep failing to take time of day into account and keep failing to find an effect and keep failing to figure out why. I have gathered [5]23 anecdotes that suggest that their studies are failing because they are failing to make sure their subjects take their Vitamin D early in the morning. Yet these researchers, if they resemble most medical researchers, disparage anecdotes. (Disparagement of anecdotes reaches its apotheosis in "evidence-based medicine".) The same anecdotes that, I believe, contain the information they need to do a successful Vitamin D clinical trial. Could there be a serious problem with how Vitamin D researchers are trained to do research? A better approach would be to study anecdotes to get ideas about causation and then test those ideas. This isn't complicated or hard to understand, but I haven't heard of it being taught. If you understand this method, you treasure anecdotes rather than dismiss them ("anecdotal evidence").

1. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>
2. <http://escholarship.org/uc/item/2xc2h866>
3. <http://blog.sethroberts.net/2012/10/07/assorted-links-213/>
4. <http://jama.jamanetwork.com/article.aspx?articleid=1367547>
5. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>

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Paul N (2012-10-10 09:06:33)

Many great scientific advancements have come about because of "anecdotes" - some unusual "thing" that has been observed/reported. That is how penicillin was discovered, same for x-rays. It is a case of cause and effect, where sometime the cause is not apparent. Most scientists start with a cause and want to see an effect, they are mostly unwilling to take an (anecdotal) effect and identify the cause - what prestige/grants/papers are there in researching anecdotes? Yet that is exactly how (nobel prize winners) Warren and Marshall discovered that a bacteria - H. Pylori - not acid or spicy foods - was the cause of stomach ulcers. Evidence based medicine is getting very good at ignoring real world evidence in favour of lab mice evidence, and, in the process, is becoming less useful by the day.

charlie (2012-10-10 09:28:38)

You're drawing a false contrast here; it isn't evidence based medicine vs. anecdote. The Vitamin D study set out to study one thing : does an improved level of Vitamin D in the blood stop colds. The answer is no. You're asking whether taking Vitamin D in morning improves sleep, which then improves colds. Seth: Okay, maybe I should restate my point by turning it into a

question. Why do I find it easy to find anecdotes showing benefits of Vitamin D – in particular, the importance of taking it in the morning – when those who do clinical trials find it so hard to show benefit?

Nancy Lebovitz (2012-10-10 10:09:30)

Some anecdotes about organic food and health: <http://nancylebov.livejournal.com/556141.html> Following up about a study of GMO and rats <http://nancylebov.livejournal.com/556467.html>

gwern (2012-10-10 17:04:21)

> A few days ago I posted a link about a recent Vitamin D study that found no effect of Vitamin D on colds. The study completely neglected importance of time of day by giving one large injection of Vitamin D (100,000 IU) per month at unspecified time. I commented: “One more Vitamin D experiment that failed to have subjects take the Vitamin D early in the morning — the time it appears most likely to have a good effect.” Why does time matter if the injection is \*1\* day per month? If it affects that day's circadian rhythm, that's just 1 day out of 29-31 days and shouldn't affect the net results. If the disturbance lasts that many days (which there's no reason to think), then conversely, few of the anecdotes should be possible, and in particular neither of my RCTs should have found an effect because they were randomized on a much smaller-than-monthly basis. > Why do I find it easy to find anecdotes showing benefits of Vitamin D — in particular, the importance of taking it in the morning — when those who do clinical trials find it so hard to show benefit? Why indeed.

Adam (2012-10-10 18:53:23)

I take 4000 units of Vitamin D in drop form every morning right when I wake up and I still get colds. I can't say I noticed any improvement in my sleep from Vitamin D. There is plenty of evidence that Vitamin D levels should be in the range of 30-100 & that supplementation is often required to get it there. I'm still a bit skeptical about the sleep bit though.

Adam (2012-10-10 18:55:35)

P.S. Is there a plausible mechanism by which Vitamin D could effect sleep quality? Because it is so persistent in the body, I'm a bit puzzled about why there would be a temporal effect. Seth: There are countless examples where the brain detects change, not constancy. If you have no idea what I'm talking about, search "edge detectors". That could easily be true here. The brain is sensitive to changes in level of Vitamin D.

Jim Purdy (2012-10-11 03:51:53)

Seth, your self-experimentation is always fascinating, in the way you apply it to many diverse health issues, and you come up with many unexpected results. However, with all the data you have accumulated over the years, I wonder whether you are finding any pattern – connecting the dots, if you will – that leads you toward any new and broader hypotheses or theories. One of my favorite authors is the evolutionary psychologist Randolph Nesse, who has written extensively about evolutionary medicine. Nesse seems to start with a broad theoretical evolutionary approach, and he then delves into the details – kind of a top-down approach. On the other hand, your research seems to start with the details from your self-experimentation, and perhaps your data lead to a bottom-up approach toward a theoretical construct. I'm not sure if I'm explaining this well, but I wonder if you are familiar with Nesse's work, and if you see much common ground between his work and yours. Seth: My data has led me to three broad ideas. 1. Evolutionary thinking is a good way to generate ideas to test. 2. A theory of weight control (setpoint controlled by smell-calorie associations). 3. A theory of depression (mood/energy oscillator controlled by seeing faces). Or four broad ideas, if you count 4. There is a lot of useful stuff that medical researchers haven't figured out. I am familiar with Nesse's work. I agree with your description of how we're different. The common ground is both of us see value in evolutionary thinking.

gwern (2012-10-11 09:20:42)

Adam: check out <http://www.gwern.net/docs/2012-gominak.pdf>

Nancy Lebovitz (2012-10-11 10:07:16)

The earlier hypothesis here was that taking vitamin D in the evening disrupts sleep. It wasn't that vitamin D in the morning

would improve sleep in general. Seth: The two ideas – Vitamin D in the evening disrupts sleep and Vitamin D in the morning improves sleep – go together, but it's true that the former is far less interesting than the latter. In my self-experimentation, I tested the latter and found evidence supporting it.

dearieme (2012-10-11 18:13:05)

O/T: of any interest, Seth? <http://blogs.bmj.com/bmj/2012/10/10/richard-smith-a-successful-and-cheerful-whistleblower/>  
Seth: thanks very interesting. I will post about it in a few days.

Adam (2012-10-12 03:41:06)

Gwern: Thanks for the study, I found it very interesting. I think that you don't understand my question, however. I can see how Vitamin D could affect sleep, but I don't understand why it would be related to time of ingestion. If I take Zolpidem, for example, I will get sleepy when my blood level goes up, and the effects will wear off as my body metabolizes and eliminates the drug. With Vitamin D, on the other hand, I take the drug & my blood level goes up & stays up, basically forever (it has a half-life of 10-21 days, whereas Zolpidem has a half-life of about 3 hours).

Guv (2012-10-14 16:33:26)

Adam, My guess would be that Vitamin D probably does fluctuate throughout the day, like a lot of other hormones. But I guess the only way to know for sure is to test every few hours throughout a 24 hour period. I got a few hits googling, "vitamin d" diurnal, & "vitamin d" circadian. Here are 2 studies I had a quick look at, <http://www.ncbi.nlm.nih.gov/pubmed/11980618> (on postmenopausal women). <http://www.jcircadianrhythms.com/content/2/1/3> (I know it's on horses, but what the hay).

## **JAMA Jumps to Conclusions About Vitamin D (2012-10-11 05:00)**

[1]A recent experiment published in JAMA, one of the most prestigious medical journals in the world, found that giving people a very large dose of Vitamin D (100,000 IU) once/month did not prevent colds, even though it greatly increased blood levels of Vitamin D. This finding supports [2]my view that it is important to take Vitamin D in the morning. (Because a study in which this wasn't done found no effect.) My view implies that blood levels may not matter – you can get high levels of Vitamin D by taking it at what I consider the wrong times of day. The usual thinking about Vitamin D has been that blood level is all that matters.

The editors of JAMA considered the Vitamin D study so important that they asked someone ([3]Dr. Jeffrey Linder, associated with Harvard Medical School) to write a commentary – an associated editorial that puts the new finding in context.

[4]Linder's commentary (might be gated) is important because (a) it is a kind of random sample of how top research doctors think (he was selected to write it) and (b) he completely fails to grasp that the time of day Vitamin D is taken might matter. Colds, the immune system, sleep, time of day – it's not far-fetched. When you do an experiment to see if X causes Y, and find no effect, I believe that there are usually many possible reasons other than X never causes Y. Something was wrong with the equipment, something was wrong with your X (e.g., it was stale), something was wrong with your measurements (e.g., ceiling effect), and on and on. Linder did not see it this way.

The 2011 IOM report called for additional research to determine whether vitamin D therapy reduces the incidence of respiratory tract infections. The VIDARIS trial [= the new study] has rigorously addressed this question. Results suggest that vitamin D should join the therapies listed in the Cochrane reviews as being ineffective for preventing or treating upper respiratory tract infections in healthy adults.

He seriously thinks one null result proves something. Sure, the new study is "rigorous" in certain ways. But it was far from exhaustive. It did not explore the many ways Vitamin D may be given, for example. It did not consider the

possibility that blood levels don't matter. Linder's combination of (a) interest in rigor and (b) failure to understand the importance of exhaustive reminds me of a friend. When she was in 1st grade she had a pile of pennies. She knew how many she had – she had counted them. However, she did not know how to subtract. When she spent some of her pennies, to find out how many she had left she had to count them all over again.

My friend had half the skills an accountant needs. Linder's commentary reflects only half the skills a scientist needs. To the extent that he is representative of top research doctors, this is shocking. It is as if most accountants at Arthur Andersen didn't know how to subtract.

I have asked Dr. Linder if he has any response. If he does, I will post it.

1. <http://jama.jamanetwork.com/article.aspx?articleid=1367547>
2. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>
3. <http://connects.catalyst.harvard.edu/profiles/profile/person/78748>
4. <http://jama.jamanetwork.com/article.aspx?articleid=1367448>

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LemmusLemmus (2012-10-11 05:37:25)

What reasons are there to believe that it might matter when you take vitamin D? Seth: I believe this because (a) I never noticed any effect of Vitamin D until I started taking it early in the morning and got the dose right (a weaker dose had no clear effect), (b) cases where people changed the time of day they took Vitamin D and noticed a big change in sleep (Tara Grant's original observation), (c) cases where people started taking Vitamin D in the evening and their sleep suddenly got worse, (d) cases where people started to take Vitamin D in the morning and their sleep suddenly got better, and (e) persistent failure of big Vitamin D studies that do not control time of day to find effects of Vitamin D. Five sorts of findings.

Glen Raphael (2012-10-11 06:48:18)

Lemmus: As I understand it, the reason people thought of taking D at all is that exposure to sunlight boosts Vitamin D. Humans mostly evolved before electricity and cars and artificial light so we're used to regularly getting a big pulse of Vitamin D at a specific time of day, every day, which then tapers off at night. That pulse (it is thought) helps set the rhythm of our body clock - when we feel tired, when we feel awake, how our mood and body temperature change through the day. So the initial idea behind taking Vitamin D was that if people who spend all day indoors and a lot of their time under artificial light get depressed or have trouble sleeping especially in the winter, they might be missing that daily pulse of sunlight. if you give them back a big pulse of Vitamin D \*as if\* they were getting lots of morning/midafternoon sun, they might get back on track. Like a pacemaker. Feel more awake in the morning, feel more tired around bedtime, sleep better through the night. Lots of anecdotal evidence (and a few studies) suggest this actually works - that people who take a daily dose of D early in the day sleep better and feel better and get fewer colds. But if it works, the expected mechanism is that the \*timing\* of the D improves your sleep quality and quantity, and we know that people who sleep well have a stronger immune system and get fewer colds or recover faster from the ones they get. One massive \*monthly\* dose of D does NOT simulate what the sun does to us, so it doesn't fit the pattern that is thought to improve sleep/mood/immune system response. Nor does D taken in the evening, or taken at random times.

Chuck (2012-10-11 06:56:07)

It seems to me that the Pharma/Medical industry want so badly to prove that non-pharmaceuticals are ineffective, they will design their trials to fail. They are not impartial or unbiased. We don't know if there were trials that indicated taking Vit D was effective. It could be the reverse of pharmaceutical trials where they hide the failures - in this case, they hide the successes. Bio-hacking, self experimentation, what ever you want to call it, may have some of the same biases (placebo effect), but not

as likely (you may think something worked, but not long after discover maybe not, and try something else). After all, it's your health you're tinkering with, not some abstract population. Cheers

Arthur (2012-10-11 06:59:20)

Does not seem a very good post to ask for a response. You probably should have talked about your evidence that the time of day matters, instead of just linking to other posts. He will probably not click the link, and respond to you like you were a nutjob, or simply not respond. Seth: My criticism is reasonable whether or not my idea that time of day matters is true or supported by evidence. It surprises me that a serious scientist would take one null result as seriously as Linder does, not recognizing that there are dozens of possible explanations of that result that do not assume Vitamin D is worthless.

Chuck (2012-10-11 07:30:07)

Ok, this is the part of the trial I find incredible: There were 322 participants and during the nine months of the trial, there were a total of 1,204 reported incidents of upper respiratory tract infection - 1,204 UTIs in 322 people in 9 months! I think I could walk down the street and randomly select 322 people who, over the next 9 months, would not have 1,204 incidents of UTI. That is just a crazy number. I think there were some not so healthy individuals in the trial who skewed the numbers in both groups. I wonder if the incident of UTI per individual participant is in the report? Not just the average per all participants. Did everyone contract 3 UTIs? Or, half contract 6, and the the other half none? Or, a third 9? I would also like to see the serum Vit D levels of each individual participant, so you could compare those who contracted a UTI versus those who didn't, those who contracted more than the average versus those who contracted less than the average. Averaging everything out skews the effect, one direction or the other. Think of all the people you know and work with, are they really sick more than 3 times a year? From any cause, let alone UTI? I'm not buying it. I can't remember the last time I had a UTI, let alone 3 or more in 9 months. I've been taking Vid D regularly for over 4 years, and haven't had a single cold, or the flu. This calls for Raspberries, instead of Cheers

MikeW (2012-10-11 07:46:19)

Dr. Linder's eagerness to close the book on D supplementation isn't shared by the study authors themselves. The last paragraph of the JAMA article makes it clear they realize the narrow scope of their findings: "In conclusion, we report that monthly administration of 100 000-IU doses of vitamin D3 did not reduce the incidence or severity of URTIs in healthy, predominantly European adults with near-normal vitamin D levels. Further research is required to clarify whether there is benefit from supplementation in other populations and with other dosing regimens." The authors acknowledge that in another recent randomized controlled trial, Mongolian schoolchildren lowered their RTI incidence by 50 % with only a 300 IU daily supplement. In that case, the D3 was added to milk served in school - whether that was first thing in the morning or later in the school day, I don't know.

Chuck (2012-10-11 07:47:01)

Well, I found it - 13 of 322 participants did NOT contract a UTI. 13 out of 322! What this tells me, is New Zealanders are not very healthy people, and must have very compromised immune systems. Or, do I just hang around a healthier bunch of people? This study proves nothing, one way or the other, to me. I'll keep taking my Vit D every morning. I use the Carlson's drops - might try putting it on my skin, in the crook of my elbow, instead of orally. Heard this might be more beneficial. I need to think about how to test this before I start though. Cheers

David Johnston (2012-10-11 08:51:49)

I've been on A, D3 & K2 at 7.30am for about half a year. It has without doubt improved my sleep. My family is currently in the middle of a shared cold with sneezing and stuffed sinuses, except for myself. I thought I might have mild symptoms two days ago, but it passed without incident. Before taking the morning vitamins, I would have expected to share in their joy. I was similarly immune when I used to travel internationally for work about once a month, to diverse places around the world. I did this continuously for about 4 years. After an initial breaking in period, I found I was broadly resistant to colds. My guess is that my immune systems was being exposed to a wider variety of bugs and so was better primed. The hell of permanent jet lag is not worth it though.

charlie (2012-10-12 09:42:12)  
@chuck; that is a pretty normal rate.

David (2012-10-12 10:44:54)

As far as offering useful guidance to the average person deciding if they should take vitamin D supplements, it is useless: 1. All subjects had normal vitamin D levels, not so for the average person 2. Monthly dose is exactly the opposite of how an average person would take vitamin D 3. As mentioned, it doesn't rule out benefits, seen in other studies, by not even attempting to follow previously used successful protocols

## **The 2012 Nobel Prize in Physiology or Medicine (2012-10-12 05:00)**

As usual, there is plenty of disease and disability in the world: depression, diabetes, heart disease, cancer, stroke, obesity, autoimmune disease, and so on. As usual, the Nobel Prize in Physiology or Medicine – supposed to be given for the most useful research – is given for research with no proven benefit to anyone (except career-wise). Once again implying that the world's best biomedical researchers – judging by who wins Nobel Prizes – either don't want to or don't know how to do useful research.

Once again [1]the press release tries to hide this. "From surprising discovery to medical use" reads one heading. If you read the text, however, you learn there is no actual "medical use". Here's what it says:

These discoveries have also provided new tools for scientists around the world and led to remarkable progress in many areas of medicine. iPS cells can also be prepared from human cells. For instance, skin cells can be obtained from patients with various diseases, reprogrammed, and examined in the laboratory to determine how they differ from cells of healthy individuals. Such cells constitute invaluable tools for understanding disease mechanisms and so provide new opportunities to develop medical therapies.

Apparently you can make "remarkable progress" in medicine without helping a single person, which says a lot about what passes for medical progress. Although iPS cells are supposedly "invaluable tools" for understanding disease mechanisms, we are not told a single disease that has thereby been understood or a single therapy that has been developed.

The Guardian printed [2]a roundup of responses to the award. I read it eagerly. Maybe one of the comments will explain how the prize-winning work actually helped someone (besides career-wise). After all, Yamanaka, one of the winners, had previously won the Finland Prize, given to research that "significantly improves the quality of human life today and for future generations". Paul Nurse says the prize-winning work did such-and-such, "paving the way for important developments in the diagnosis and treatment of disease" unfortunately not saying what those "important developments" are. Martin Evans says:

The practical outcome is that now we not only know that it might be theoretically possible to convert one cell type into another but it is also practically possible. These are very important foundation studies for future cellular therapies in medicine.

Emphasis added. Another comment: "These breakthroughs will ultimately lead to new and better treatments for conditions like Parkinson's and improve the lives of millions of people around the world." A bold prediction, given that they have not yet improved the life of even one person. Julian Savescu, an ethicist at Oxford, says "This is as significant as the discovery of antibiotics. Given the millions, or more lives, which could be saved, this is a truly momentous

award.”

Year after year, the Nobel Prize in Physiology or Medicine is given for research that, we are told by biologists with huge conflicts of interest, will – no doubt! – be incredibly valuable in the future. Indicating there was no research that might be honored that had already been useful. It is as if you have a baseball award for best hitter but all hitters all over the world strike out all the time so you end up giving the award to people who strike out best. They are the best hitters, you tell credulous sportswriters. They receive the prestigious award for best hitter at an elaborate ceremony, with toasts all around. Nobody says they cannot hit.

1. [http://www.nobelprize.org/nobel\\_prizes/medicine/laureates/2012/press.html](http://www.nobelprize.org/nobel_prizes/medicine/laureates/2012/press.html)

2. <http://www.guardian.co.uk/science/blog/2012/oct/08/nobel-prize-2012-live-medicine-physiology>

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dearieme (2012-10-12 07:03:05)

I admit to my surprise some years ago when I glanced at the rules and saw that they required the work to have brought benefits, because it's quite obvious that the prizes are routinely awarded for work that might perhaps contribute to benefits at some time - perhaps distant - in the future. Perhaps it's just another example of the rule that Pure research always drives out Applied. Seth: I think Alfred Nobel included the "have benefits" requirement because he didn't want to have happen exactly what has happened: Scientists decide among themselves, with no regard for anyone else, what research is best. "I don't want this prize to make them rich while they continue to do exactly what they want to do," he thought.

Alex (2012-10-22 07:42:46)

Donnall Thomas just passed away. His 1990 Nobel for developing bone marrow transplants was definitely for results, not potential. Have you seen a trend away from that, or do you think it's always been a mix? <http://www.nytimes.com/2012/10/22/science/e-donnall-thomas-furthered-bone-marrow-transplants-dies.html?hpw&pagewanted=all>

L (2012-10-22 09:54:25)

nobel prizes are not important. stop trippin!! mother teresa of calcutta won and so did balack obama and all gore w his global warming bullshit!! how the hell dey win!! hindi ko alam!!! basta: BUISIT!!!

Tony Mach (2012-10-27 05:57:57)

I looked at the medicine Nobels something like two years ago and was puzzled how little positive impact on everyday medicine came from all this brouhaha. A lot of what I call "molecular masturbation", very fine research no doubt, but with a complete disconnect to finding the causes of the diseases that plague so many of us. Medicine as a whole seems "stuck" and in dire need of a paradigmatic shift (if not several). So many little and big barriers ("common knowledge" like sat-fat is bad, the many problems with the research and publishing process, or "big pharma") that hinder progress in the medical sciences. As more and more people are starting to gain personal experience about things that have a positive (or negative!) result on their very own health (personally I think especially the Paleo thing is going good), there will be some in the medical science that will go down the same path. I sometimes wonder when exactly personal experiments came out of fashion in the medical and biological sciences – your blog is surely an shining example that even as an individual one can make some change.



## New Product: Cascal Fermented Soda (2012-10-12 14:10)

This low-calorie soda (60 to 80 calories in a 12-ounce can) falls somewhere between kombucha and less-sweet sodas such as the aptly named GUS (Grown Up Soda). Its hook is the use of fermented juices as its base, resulting in a more complex flavor than sodas and sparkling waters based on plain juice.

[1] \$1.25 at Whole Foods. I'm in.

My interest in fermented foods partly derives from learning about a similar product. At a Fancy Food Show a few years ago, I learned about someone who wanted to develop a high-end non-alcoholic alternative to wine. He found he couldn't get enough complexity without fermentation. That emphasized to me how our food preferences – in this case, a desire for complexity – push us to eat fermented foods.

1. [http://www.stltoday.com/lifestyles/food-and-cooking/best-bites-cascal-fermented-soda/article\\_852e123c-07fe-11e2-9f55-001a4bcf6878.html](http://www.stltoday.com/lifestyles/food-and-cooking/best-bites-cascal-fermented-soda/article_852e123c-07fe-11e2-9f55-001a4bcf6878.html)

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bjk (2012-10-12 20:01:18)

Is carbonation itself a substitute for fermentation? The tingle from kombucha feels a little bit like carbonation.

Paul N (2012-10-13 15:01:35)

That's because the tingle from Kombucha \*is\* carbonation. You also get the same carbonation from normal yeast ferments, using whey, and kefir-water grains. If you really want to answer your own question, try drinking some club soda and see what you think. Then shake some kombucha to make it go flat - but keep it cool, and try that. There is simply no comparison, and that is why so many "gourmet" foods, the world over, are fermented.

Peter (2012-10-13 18:03:23)

Ikea sells a fermented pear soda. The food department manager in the area store told me it's very popular and they have a hard time keeping it on the shelves. <http://www.nearof.com/?p=266>

## Assorted Links (2012-10-13 05:00)

- [1]Jane Jacobs vs. Robert Moses (excerpt from Ric Burn's documentary New York)
- [2]use of Adderall to treat kids without ADHD. Horrifying. I don't even know if ADHD is caused by bad nutrition or if it reflects too-rigid teaching – that is, teaching all kids the same way. Roughly 99 % of health care ignores the causes of things. I suppose that in a society, like ours, that pays little attention to finding out the causes of problems, the solutions to those problems will become, as the problem worsens, increasingly bizarre and dangerous.
- [3]health benefits of kefir
- [4]The discovery of Vitamin D

Thanks to Paul Nash.

1. <http://www.archive100.org/exhibits/wild-card/jane-jacobs-vs-robert-moses>
2. <http://www.nytimes.com/2012/10/09/health/attention-disorder-or-not-children-prescribed-pills-to-help-in-school.html?pagewanted=3&pagewanted=all>
3. [http://www.nourishkefir.co.uk/upload\\_file/F8.pdf](http://www.nourishkefir.co.uk/upload_file/F8.pdf)
4. <http://www.beyonddiscovery.org/content/view.txt.asp?a=414>

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Jim Purdy (2012-10-13 20:25:34)

That New York Times story about the drugging of America's children is scary. Drug companies and doctors already have saturated the adult market and turned countless millions of adults into drug addicts dependent on painkillers, antidepressants, and other strange chemicals. So how can they keep growing their market? Expand the market by getting America's children addicted, thus creating new generations of drug-consuming zombies.

L (2012-10-14 06:55:30)

You don't need grades to be a billionaire in America.

David C (2012-10-14 08:58:37)

I'd be interested to see if kids diagnosed with ADHD are more likely to be the younger ones in their class. I.e. if you have a summer birthday, are you more likely to be considered ADHD?

David C (2012-10-14 09:00:56)

Should have googled first. Looks like it's been studied and is the case: <http://www.telegraph.co.uk/health/health-news/9123519/Youngest-in-school-year-more-likely-to-be-diagnosed-with-ADHD-research.html>

Jill (2012-10-15 06:21:16)

I also noticed a between-the-lines scare tactic used by the school admins: "Increase our funding, or your children are going to be medicated."

shtove (2012-10-16 11:47:53)

Hi Seth. Thanks for the blog. Keeps me learning. I like the links posts, but can you give a bit more description (Jacobs v Roberts?) + set up the links to open in separate windows? Easier to navigate your post while deciding whether to follow the link. Barry Ritholtz is a good example: <http://www.ritholtz.com/blog/2012/10/10-tuesday-am-reads-42/> Seth: Thanks, I didn't know about how to cause links to open in separate windows. Now I do.

Patrik (2012-10-16 21:04:14)

Horrrifying is the right word. This quote speaks volumes: "We've decided as a society that it's too expensive to modify the kid's environment. So we have to modify the kid." Seth: "As a society"? I wonder. Professors who can do research think it is higher-status to study high-tech stuff like drugs than low-tech stuff like food. (Curiously there is more money to study the high-status stuff, we're taught that rarity increases status.) Maybe this is human nature (as Veblen argued), maybe it is promoted by science journalists who never call them on this. Since Veblen found the same pattern (less useful = higher status) in many societies and cultures, it isn't clear it is a society's "decision".

## How Common is Dishonesty in Medical Research? (2012-10-14 05:00)

Richard Smith, former editor of the BMJ, [1]writes about Peter Wilmshurst, a British cardiologist, an unusually brave and honest man:

He was the coprincipal investigator on a trial funded by NMT, an American company, to see whether closing a hole in the heart of patients with migraine would cure their migraine. It didn't. He refused to agree to be an author on a paper published in the journal *Circulation* because the paper was misleading, and he gave an interview to a journalist in the US pointing out the problems in the study. NMT sued him for libel, not in the US, where proving libel is difficult, but in England, where the onus is on the defendant to prove his innocence. NMT probably assumed (rightly in the case of most people) that the financial risk would cause Wilmshurst to cave in. They were wrong, and the case collapsed when NMT went bust.

The interesting thing about the stories Smith tells about Wilmshurst is the high rate of misconduct they imply:

[In 1996] we invited him to come to the BMJ and give a talk—behind closed doors—to our staff and advisers and colleagues from the *Lancet*. He reeled off case after case of misconduct, many of them involving prominent people. The audience listened intently, but I was unsure of the reaction. Might somebody leap up and say “How dare you accuse x of misconduct. He is one of the great men of British medicine”? In fact in my memory the reaction was the opposite. People said things like “Actually, it's worse than you know...” . . .

Many of [Wilmshurst's stories] involve doctors who are guilty of misdemeanours but who sit in judgement on others. He told the story of Peter Richards who decided to bury the fact that Clive Handler, a doctor, at Northwick Park Hospital, [2] was found guilty of using NHS research funds to subsidise his private practice at a time when Richards was medical director of the hospital and chair of the professional conduct committee of the GMC. Previously he had been dean of St Mary's Medical School, prorector for medical education at Imperial College, and chair of the Council of Deans of UK Medical School and Faculties. When Handler eventually appeared before the GMC, the GMC's lawyers ask that Richards stand down from chairing the committee. As Wilmshurst said, it's as if a judge at the Old Bailey were to say “I'll have to excuse myself from hearing this case as I helped the accused bury the body.” After having to stand down from this committee Richards continued to chair other conduct committees. Wilmshurst told several stories of doctors who had been found guilty of research misconduct but [had] gone on to be deans and others in charge of researchers.

Smith does not point out what this means. Doctor X is found guilty of research misconduct. Everyone knows this. Doctor X is still appointed dean or whatever. Maybe the people who make these appointments don't care. Or maybe research misconduct is so common it cannot be a disqualification.

At the end of the article Smith points out his long friendship with Wilmshurst:

RS has known Wilmshurst for 16 years . . . the BMJ was sued for libel over an article by Wilmshurst that was published when RS was editor of the journal. The article has not been retracted but is not available on the BMJ website.

Presumably Smith was forced by BMJ lawyers to be this vague. I have not been able to locate the article. From [3] a talk by Wilmshurst. “Eventually Rubin got his report published in [*The New England Journal of Medicine*, under the editorship of Dr. Arnold Relman], because he threatened that unless his report was published he would go to the press and point out the collusion between the journal and Sterling-Winthrop.”

Wilmshurst's conclusion: “Dishonesty is common in medical research.”

Thanks to dearime.

1. <http://blogs.bmj.com/bmj/2012/10/10/richard-smith-a-successful-and-cheerful-whistleblower/>
2. <http://www.bmj.com/content/325/7374/1189.2>
3. [http://www.medico-legalsociety.org.uk/articles/dishonesty\\_in\\_medical\\_research.pdf](http://www.medico-legalsociety.org.uk/articles/dishonesty_in_medical_research.pdf)

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Jim Purdy (2012-10-14 05:28:26)

Is anybody surprised? Seth: I was surprised that people were promoted to dean and similar posts after being found guilty of research misconduct. I was also surprised that Smith did not give a reference to the Wilmshurst paper in the BMJ mentioned at the end.

L (2012-10-14 07:05:34)

I'm not surprised. Dr Linder emailed me back! He's the guy Seth wrote about a few days ago. He emailed me right away

Nancy Lebovitz (2012-10-14 07:42:25)

[1]More about the poor quality of published science Publication bias, resistance to replication efforts, fraud. Also, descriptions of efforts to solve the problems.

1. <http://blogs.discovermagazine.com/notrocketscience/2012/10/10/science-has-been-a-very-naughty-boy/>

Tom (2012-10-14 14:02:54)

If Taubes' and Attia's NuSI can get some honest research done, it'll be revolutionary for that fact alone.

Nathan (2012-10-14 19:22:36)

I think a relevant question to consider is "how common is dishonesty in every field/endeavor?" I think that you provide good evidence about dishonesty in medicine, but do you think it is more common than in other places? Or perhaps you just think it's more damaging to lie when it affects physical health directly. Seth: I think you can do a lot more damage inside the body (drugs, surgery, medical devices) than outside the body (most goods and services). So dishonesty – e.g., hiding bad side effects – is much more damaging.

Txomin (2012-10-14 20:03:07)

I also am far from surprised. Dishonesty is ubiquitous in the academic world. I expect nothing different from scientific circles. It is an issue of human nature.

kxmoore (2012-10-14 23:41:53)

great ted presentation here on suppression of clinical trial publications. scary stuff. <http://blog.ted.com/page/5/>

Tuck (2012-10-15 07:43:38)

"...to see whether closing a hole in the heart of patients with migraine would cure their migraine. It didn't." That ironic. As it happens, I have such a hole in my heart: a "patent foramen ovale". When it was discovered, I spoke to a colleague of mine, who had the surgery to close it up. To his surprise, his life-long string of migraines ended, and he's not had one since. Turns out there's two types of patent foramen ovale: the one I have, which operates normally (no blood flow between chambers) and the one he had, which allows blood flow between the chambers, and hence creates micro-clots which can cause micro-strokes, which are thought to be one of the causes of migraines. I wonder if the failure of this experiment was simply checking the wrong variable? As to the topic of your quote, I wish it were surprising, but after a few years of research diet and the medical

profession, I've a: realized that my high esteem for doctors was a matter of faith, not reason, and b: I've lost that faith.

Ray Cathode (2012-10-17 12:42:21)

"Dishonesty is common in medical research." Thankfully, we know that this could not happen with climate change...

L (2012-10-22 03:37:00)

Hey dearime used to comment everyday. Where u at now babe?? Doctors are not ur friends!! We are not ur friends. Seth, stop trying to fight the system and do something more lucrative w ur life. No Nobel prize for people who hurt the prize givers! Cmon, u should do something more positive.

### **One Man's Interest in Fermented Foods (2012-10-15 05:00)**

Julie O'Brien and Richard Climenhage [1]run a small company in the Ballard neighborhood of Seattle called Firefly Kitchens, devoted to making fermented foods. The company was founded in 2010.

Climenhage, a former high-tech executive, became intrigued with fermented foods about 10 years ago after a nutritionist suggested he consume more fats and fermented food. It cured the chronic heart palpitations that he had endured for two years.

"Six weeks and two days after changing my eating the palpitations were gone, never to return," Climenhage said. "So I was sold. I started making my own sauerkraut and never looked back."

1. <http://www.ballardnewstribune.com/2012/10/09/features/firefly-kitchens-bringing-health-through-ferm>

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### **Assorted Links (2012-10-16 05:00)**

- [1]BMJ video about overtreatment. Shannon Brownlee is one speaker.
- [2]The myth of Jim Lehrer, neutral presidential debate moderator.
- [3]Germany's Education Minister, Annette Schavan, accused of plagiarism. "In previous cases, Schavan proved to be one of the most outspoken critics of those caught plagiarizing." She is the second German Cabinet minister in the last year or so to face plagiarism charges. The first one resigned.

Thanks to Anne Weiss.

1. <http://www.bmj.com/multimedia/video/2012/10/03/harms-overtreatment>

2. <http://dailyhowler.blogspot.com/2012/10/lehrers-rerun-jim-lehrers-autumn-of-96.html>

3. <http://www.spiegel.de/international/germany/merkel-cabinet-member-accused-by-university-of-plagiarism-a-861323.html>

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dearieme (2012-10-16 13:45:24)

This might interest you, Seth. <http://climateaudit.org/2012/10/16/forensic-bioinformatics/#more-17077> Seth: Yeah I saw it, thanks. The best part is how fraudsters are found innocent after careful blue-ribbon investigations.

L (2012-10-17 05:03:45)

Dr Linder emailed me from harvard. He's the md gp at brigham womens/internist. I asked for an appointment w him to talk about seths discovery of timing n d. Linder wrote that he is not accepting new patients. Strange bc I didn't say I wntd to be a pt I stated I wanted to talk of seths ideas. Linder can't even figure that out in my email! I never want to be his patient!! I'll always get respiratory infections if he's my gp. Gp are lowest paid drs. Compared to cardiothoracic surgery or neurosurgery, both of which I'm considrg

Alex (2012-11-14 19:51:33)

Link is broken on the Schavan article. Seth: Fixed, thanks.

### The Reddit Protein Powder Tests (2012-10-17 05:00)

A few months ago, a Redditer with access to a protein measurement device [1] offered to measure the protein content of protein powders that readers sent him. He got about twenty samples, presumably from all over the United States. [2] Most of them turned out to have reasonable amounts of protein but four had much less than expected.

The tester interpreted the results [3] here. One of the tested brands, American Pure Whey, [4] clearly has problems. Call it a positive control. By confirming those problems, the rest of the measurements gain credence. One company whose protein powder scored low is Gaspari. Unfortunately I cannot read [5] their reply, which appears on my browser without text.

I look forward to more truth-in-advertising tests. It is really helpful that the data is public – in this case, via Google Docs. Jimmy Moore (of Livin' La Vida Low Carb) has measured the effect of several supposedly low-carb-friendly products on his blood sugar. His results are [6] here.

Thanks to [7] Eric Meltzer.

1. [http://www.reddit.com/r/Fitness/comments/te1rk/offering\\_broscience\\_service\\_ill\\_test\\_your\\_protein/](http://www.reddit.com/r/Fitness/comments/te1rk/offering_broscience_service_ill_test_your_protein/)
2. <https://docs.google.com/spreadsheet/ccc?key=0Ag9uT-E4EIL7dFZPZnR0WVZybGtFWnRKNzdKNm9X0VE#gid=0>
3. [http://www.reddit.com/r/Fitness/comments/uva9t/big\\_reddit\\_protein\\_powder\\_measurement\\_results/?utm\\_source=dlvr.it&utm\\_medium=feed](http://www.reddit.com/r/Fitness/comments/uva9t/big_reddit_protein_powder_measurement_results/?utm_source=dlvr.it&utm_medium=feed)
4. [http://www.reddit.com/r/Fitness/comments/tcpmt/american\\_pure\\_whey\\_is\\_american\\_pure\\_shit/](http://www.reddit.com/r/Fitness/comments/tcpmt/american_pure_whey_is_american_pure_shit/)
5. <http://www.gasparinutrition.com/news/articleview.aspx?ArticleID=276>
6. <http://livinlavidalowcarb.com/blog/n1>
7. <http://ericmeltzer.org/>

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L (2012-10-17 05:22:54)

This post surprises me!! Grt jb Seth!! A Chinese friend says that unborn fetuses r thrown in Chns h2o. Via aborted girls nt wntd chns wnt boys. Says she's chns n wnt b chn goods. Doesn't trust Chinese stuff. They're strangely made. Tea w qustnbl crap in

them!! They club rats lrg as dogs. Eat w beer!!

Chuck (2012-10-17 08:19:55)

I found Reddit's last Edit/Comment to be the most enlightening - that his commenter's were more upset with his analysis than the fact that no third party is even analyzing these products is telling. Brand loyalty uber alles. Cheers

## **The Fallibility of Epidemiologists: Neglect of the Immune System (2012-10-18 05:00)**

Anne Weiss recently repointed me to [1]an interview with the epidemiologist Tom Jefferson about swine flu. Jefferson, let me stress, is a good epidemiologist. In the interview he makes a point I make on this blog, that research is heavily shaped by two questions: 1. what will make money? 2. what will be good for my career? (How curious that economists – with the exception of Veblen and Robin Hanson – spend so much more time on #1 than #2.) For example:

Interviewer Why aren't researchers interested in [other viruses]?

Jefferson: It's easy: They can't make money with [them]. With rhinoviruses, RSV and the majority of the other viruses, it's hard to make a lot of money or a career out of it. Against influenza, though, there are vaccines, and there are drugs you can sell. And that's where the big money from the pharmaceuticals industry is. It makes sure that research on influenza is published in the good journals. And that's why you have more attention being paid there, and the entire research field becomes interesting for ambitious scientists.

Because Jefferson is willing to tell the truth about virology, it is interesting what he doesn't say.

The big glaring gap is that in a discussion about how to avoid getting sick he says nothing about improving immune function. Not one word. He isn't a doctor. He doesn't work for a drug company. There is no obvious reason he fails to discuss this. He is reflecting the blindness of his whole field, I believe. It isn't a mystery how to improve immune function: Sleep better and eat more fermented food. I have blogged before ([2]here, [3]here, and [4]here, for example) about how widely this supremely important question – how to improve immune function – is ignored.

The other gap in the interview is more subtle. Jefferson recommends hand-washing as a great way to avoid getting sick. He says:

I wash my hands very often – and it's not all because of swine flu. That's probably the most effective precaution there is against all respiratory viruses, and the majority of gastrointestinal viruses and germs as well.

Later he says:

One study done in Pakistan has shown that hand washing can even save children's lives. Someone should get a Nobel Prize for that!

In contrast, I believe that touching other people (and thereby picking up their germs on your hands) is part of [5]a self-vaccination system whose goal is to protect us against the dangerous microbes nearby by exposing us to them in

small amounts. Part of the system is an enjoyment of touching others and being touched. Another part is whatever causes us to constantly touch ourselves around the mouth. A third part is the tonsils, perfectly placed to pick up a tiny fraction of the germs around our mouths.

This theory of mine, which is supported by several lines of evidence, suggests that hand washing has a serious downside: It interferes with the self-vaccination system. Jefferson says nothing about any downside of hand washing. I'm not saying that Jefferson should have known of this theory of mine, of course not. (For one thing, the interview was before I thought of it.) My point is that – for reasons having nothing to do with money or career – he is too certain about what he knows. Maybe hand washing is only helpful when persons have weak immune systems or in places with large amounts of germs, such as hospitals. With strong immune systems in normal places, maybe it does more harm than good.

I became aware of the big gap in research after [6]I improved my sleep and stopped getting colds. Before that, I had gotten the usual number of colds. No one had said that could happen – had said there was so much room for improvement in immune function. Anne Weiss became aware of the gap in research when she visited her doctor:

[More than 10] years ago I was seeing a family medicine doc who also taught epidemiology at [Famous Canadian University]. At one of my appointments I asked her how I could strengthen my immune system. She laughed in my face and told me that just was not possible.

Weiss says she was treated "as if I had asked about the existence of fairies or unicorns." (She added that attitudes seem to be changing and one Canadian hospital now uses probiotics to prevent and treat *C. difficile* infection.)

Epidemiologists could easily study environmental control of immune function. They could ask questions like how many colds do you get in a typical year?, when you get a cold, how long does it usually take before the symptoms disappear? and during the last year, how many days did your longest cold last? As far as I know, they haven't done so.

1. <http://www.spiegel.de/international/world/interview-with-epidemiologist-tom-jefferson-a-whole-industry-is-waiting-for-a-pandemic-a-637119.html>
2. <http://blog.sethroberts.net/2012/06/05/what-to-do-about-antibiotic-resistance-improve-immune-function/>
3. <http://blog.sethroberts.net/2012/06/11/more-examples-of-mainstream-health-care-ignoring-the-immune-system/>
4. <http://blog.sethroberts.net/2011/12/23/more-neglect-of-the-immune-system-bioterrorism-fear/>
5. <http://blog.sethroberts.net/2012/01/10/why-we-touch-our-mouths-so-often-forewarned-is-forearmed/>
6. <http://www.escholarship.org/uc/item/2xc2h866>

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Jill (2012-10-18 05:45:51)

I honestly wouldn't be able to answer those questions very well without actually recording my colds for a year. I can say that I seem to get fewer/shorter colds in the last few years than I used to (I spent winters during my teens with a chronic respiratory infection) - maybe I'm doing better due to having children? I don't know, but sometimes I'm surprised to find myself without cold symptoms.



charlie (2012-10-18 06:00:38)

when all you have is a hammer... The hand-washing studies came out of what doctors should do. They are significantly more exposed than anybody else since they see sick people all day. Back in the real world, SR should mark this as "medical error." I am wonder in psychology practices, what percent of complaints are sub-clinical? 85? 95? 99 %

Rashad (2012-10-18 07:10:17)

Well, the other thing to take into account is potency of the disease vector. Obviously most of the time we are exposed to a cold, we don't get sick, so immune function plays a huge role there. However for a lot of the things that go via the fecal-oral route, I think there are much higher rates of infection, hence less variance due to the immune system. For example, with food poisoning, my anecdotal experience is that if you eat the thing that is poisoned, you will get sick, with several instances of shared sickness across multiple people. Similarly with things like cholera, salmonella, etc. But I could be wrong and immune function could have a big role there. Anyway, the potency of the fecal-oral route is I'm pretty sure the main reason for hand washing. Best practice in normal life is probably wash your hands after using the bathroom, but not that often otherwise, which is I suspect what most people do.

Rashad (2012-10-18 07:11:56)

Although one counter-example I just thought of is eating street food in a new developing country. Usually after the first illness or two the body adjusts, although when I lived in Egypt I knew several people that never did and just couldn't eat street food, so maybe they had weaker immune function?

jimrandomh (2012-10-18 08:15:27)

Rashad: I suspect that in most cases food poisoning is actually more about toxins than microbes - ie, it's the nasty chemicals the bacteria made before you ate them, not the bacteria themselves. It's also the case what we think of as food poisoning symptoms are actually immune responses, and if we want to measure immune system strength we should be looking at who's sick two days later. I also suspect that when people go to developing countries, their immune systems start having false positives: they fire in response to things that are actually harmless.

libfree (2012-10-18 09:25:43)

I whole heartily agree with much of what you have said here but I have to pick up on the evolutionary point that we haven't been prepared to live in cities of 1 million+. I think you might get better results from asking people how many days they missed work last year to illness. I get colds but I shrug them off so fast and they are so mild that I haven't missed a day of work to illness in 5 years. Seth: I agree, missed days of work is a good question. And you make a good point about cities of 1 million. In the past ten years I think all of my colds appear to have come from the combination of (a) poor sleep and (b) riding crowded public transit.

Evelyn M. (2012-10-18 13:59:45)

Quite a few travelers who normally are relatively free of colds develop bad colds or the flu following a long flight in economy class. Business class is considered less risky by those who travel frequently for that reason.

Nancy Lebovitz (2012-10-18 17:19:05)

The enough sleep issue is partly economic/political- there are people whose employers want unduly long work weeks from them.

Nancy Lebovitz (2012-10-18 18:58:55)

Off topic: Mathematical paper hoax. <http://www.lrb.co.uk/blog/2012/10/17/pau-l-taylor/stochastically-orthogonal/>

Nancy Lebovitz (2012-10-18 19:02:01)

More careful look at the math paper hoax: the nonsense article wasn't published because the hoaxer wasn't willing to pay the fee, but it did get polite reviews.

Nancy Lebovitz (2012-10-19 06:52:52)

<http://scholarlyoa.com/publishers/> Sorry, guys– the problem seems to be fake open-access journals rather than a fake paper.

Jenny (2012-10-19 14:09:18)

Some mentioned they hadn't counted their colds. I have. For the first 58 years of my life, I had one every 4-6 weeks. Then I found I had coeliac disease and stopped eating gluten. Also, my nutritionist put me onto high levels of probiotics for 3 months, and then a maintenance dose, which I take to this day. In the last 7 years, I have had only 4 illnesses! I attribute this to both the lack of gluten (no gut damage) and the probiotics. Fermented foods are a very effective way of getting probiotics, when you can work out how to make them/get them. These days I have Kefir, and want to experiment with others.

### **Doctor Logic: "Acne is Caused by Bacteria" (2012-10-19 05:00)**

Presumably Dr. Jenny Kim is a good dermatologist because the author of [1]this NPR piece chose to quote her:

UCLA dermatologist Dr. [2]Jenny Kim says many people don't realize it's bacteria that cause acne. "Some people say your face is dirty, you need to clean it more, scrub more, don't eat chocolate, things like that. But really, it's caused by bacteria and the oil inside the pore allows the bacteria to overpopulate," Kim says.

If I were to ask Dr. Kim how she knows that acne is "caused by bacteria" I think she'd say "because when you kill the bacteria [with antibiotics] the acne goes away." Suppose I then asked: "Is there evidence that the bacteria of people who get acne differ from the bacteria of people who don't get acne (before the acne)?" What I assume Dr. Kim would answer: "I don't know."

There is no such evidence, I'm sure. It is quite plausible that the bacteria of the two groups (with and without acne) are exactly the same, at least before acne. If it turned out, upon investigation, that the bacteria of people who get acne is the same as the bacteria of people who don't get acne, that would make it much harder to say that acne is caused by bacteria. As far as I can tell, Dr. Kim and apparently all influential dermatologists have not thought even this deeply about it. To do so would be seriously inconvenient, because if acne isn't caused by bacteria, it would be harder to justify prescribing antibiotics. Which dermatologists have been doing for decades.

It isn't just dermatologists. Many doctors believe that *H. pylori* causes ulcers – wasn't a Nobel Prize given for discovering that? The evidence for that assertion consisted of: 1. *H. pylori* found at ulcers. 2. Doctor swallowed billions of *H. pylori* and didn't get an ulcer. (Not a typo.) It was enough that he got indigestion or something. 3. Antibiotics cause ulcers to heal. That was enough for the two doctors who made the *H. pylori* case and the Nobel Prize committee they convinced. The doctors and the committee failed to know or understand that *H. pylori* infection is very common and almost no one who is infected gets an ulcer. Psychiatric causal reasoning has been even simpler and even more self-serving. We know that depression – a huge problem – is due to "a chemical imbalance", according to many psychiatrists, because (a) antidepressants work (not very well) and (b) antidepressants change brain chemistry.

Dr. Kim's false certainty matters because I'm sure most people with acne don't know what causes it. I didn't. Dr. Kim's false certainty and similar statements from other dermatologists make it harder for them to find out. I wrote about [3]a woman who figured out what caused her acne. It wasn't easy or obvious.

Thanks to Bryan Castañeda.

1. <http://www.npr.org/blogs/health/2012/10/15/162821580/doctors-strike-mutating-bacteria-in-teen-acne-battle>
2. <http://www.uclahealth.org/body.cfm?xyzpdqabc=0&id=479&action=detail&ref=15746>
3. <http://boingboing.net/2012/08/09/make-yourself-healthy-searchi.html>

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Alex Chernavsky (2012-10-19 06:53:40)

Seth, I've read your earlier posts about *H. pylori*, but I'm still unclear about what you think is going on, exactly, when ulcers form – and when they go away following antibiotic use. Can you elaborate? Seth: I don't know why most people with *H. pylori* infection don't get ulcers – in other words, the crucial difference between those who get ulcers and those who don't. Probably it's nutritional, although I'm not sure. I believe ulcers go away following antibiotic use because bacteria were somehow helping to maintain the ulcers.

Brian (2012-10-19 07:12:02)

When I had esophageal ulcers, the gastroenterologist checked to see if they were caused by bacteria, determined that they were not and then prescribed a proton pump inhibitor and something he called a liquid bandaid (I forget the technical name). After a few weeks, my ulcers were gone and I discontinued medical treatment.

Morris (2012-10-19 08:57:44)

Seth There is a view that holds that acne postules are caused by mucin blockage in lymph vessels. The mucin is a response to bacterial endotoxins. This accords with my experience. Healing periodontal gum disease (known to be microbial) has caused occasional postules to appear in the vicinity. I have experienced some other strange correlations to my acne which occurred decades ago.

charlie (2012-10-19 11:50:20)

Isn't *H. pylori* the gold standard for self-experimentation? So, if I parse down, antibiotics cure acne. A lot of people don't want to take anti-biotics and/or accutane. All the poor doctor is saying is don't take sandpaper to your face because that won't help. (Another thought – people with acne are in some way defective, and the acne is just a visual warning not to reproduce with them) Seth: "Poor doctor"? I doubt she is poor. Statements like hers, as I say, block helpful research.

Jenny (2012-10-19 13:58:41)

I've just read Chris Kresser's article on the link between gut bacteria imbalance and/or Sibo and acne. Much more plausible, and I am certainly one who 'lost' the acne the day I went gluten free. <http://chriskresser.com/the-gut-skin-connection-how-altered-gut-function-affects-the-skin>

Kitty (2012-10-19 15:11:40)

I had terrible skin my whole life and tried every cleanser and skin product ever invented (or so it seemed). My skin cleared up almost immediately when I stopped eating wheat, and it has stayed clear.

D (2012-10-20 18:23:05)

What about the role of androgens. Take steroids, get backne. I've also noticed that women who skew towards the masculine side of the spectrum tend to be more likely to have acne problems.

L (2012-10-22 03:42:21)

What the he'll are u doing at tsinghua?? Join me at harvard. Stop wasting ur time teaching chinx who don't know Spanglish!! What a waste!! They can't compare to us Americans in Boston!! MIT is nearby if u want to stop a little lower. But tsinghua?? Babe. What a joke!!

Tony Mach (2012-10-25 15:13:27)

It took me some awful while to figure out my personal connection between my acne and my diet – we need more pages like yours Seth! I can now say with certainty that for me acne is caused by dairy from pasteurized cow milk. Three to six hours after I eat dairy, I get an outbreak of acne. Though dairy is clearly the main cause for my acne, I sometimes get very very low level acne, which I haven't been able to track down: Traces of dairy in my food? Traces of cereal grains? Nuts? A reaction to beef? Bacterias acting up? I simply don't know (yet), this isn't so clear cut as dairy=>acne. And though I have \*not\* been able to trigger an acne out-break with cheese from raw milk, I remain suspicious that milk does more harm to my body than just acne. I had spurious "funky" symptoms after raw milk consumption. I had one low blood sugar episode and recently one swollen hard node (lymph node?), both after raw milk cheese consumption (again within the 3 to 6 hours timeframe).

Tony Mach (2012-10-27 11:06:26)

So Seth, here is the story how I found out my acne/dairy connection: In summer 2010 my health problems got noticeable worse (unrefreshing sleep, strange pains, strange sensations in the skin and other stuff I don't want to share here :-P ), and I had to do something. Furthermore I was gaining weight, I was suspecting something along the lines of Diabetes, or some other metabolic problem. As I was looking into dietary changes, I stumbled over Wolfgang Lutz's and Robert Atkins' work. Being engineer by training, I figured that if blood sugar might be the problem (which, as it turned out, wasn't the case for me), then reducing carbs might be a solution (stop fueling the problematic sub-system) – so both Lutz and Atkins appealed to me and I thought let's give it a try (I was a bit frightened about such an radical change of diet – you read all kind of BS – but hey, I felt like I was going to die anyway). Before the change, I ate a lots of white bread, some milk-chocolate and drank lots of milk. First I reduced carbs – like Lutz suggested, I tried to aim for 6 bread units – but within days I noticed that some problems (like the strange pain and skin sensations) diminished right away. The acne cleared up noticeable. So I thought why bother with low-carb, let's go full no-carb (like Atkins suggests for some month). And voila, with no-carb everything go better, and I started to feel healthy for the first time in my life. I lost over 30 pounds, all health problems either went away or were almost gone, and life started to become enjoyable. This was a period of about two months over with most problems went away, some fast, some slower. So for over half a year I was focused on the carbs=evil scheme, started eating cheese again (hey, no carbs!), when slowly some of the health problems returned, my weight started to rise again. At that point I panicked a bit and made a huge mistake: I thought I can figure this one out too, I have to do something right away. So I trusted what some doctors had written about an pathogen (which I tested for with borderline results), how to cure it (with over the counter medication like Vitamin D and NAC and other stuff) and I thought let's try this too! The things I took made me worse, but as it was supposed to be a "die off"/"herx" reaction, I wasn't too alarmed. Turned out that experiment cost me almost an year until I got better again. So for about a year I was not in the mood for big experiments and personal stuff like moving to another city kept me busy. But slowly I introduced "safe starches" into my diet (like plantains), because kept reading one should not go too much low-carb. I tried out self-made sourdough rye bread (makes me enormously hungry, so I stopped again) and at one point I thought: What the heck, I'm going to eat ice-cream today – 3 hours later I got slightly noticable pimples and local inflammation (I think they are called nodules), and after another roughly 3 hours the acne was prominent. After that, my suspicion was that milk might be bad for me, but maybe some properly "ripe" cheese like hard cheese (properly digested by bacteria) might be OK. So I waited for the acne inflammation to go back and tried again with an parmesan. Bingo, acne again, and again on the 3 to 6 hours timeframe. So I didn't touch milk or dairy again, but now I looked for raw milk cheese, as I read something about it being possibly better. After a while I found raw-milk-cheese, tried it – and got no acne. Tried again, after some time, with another brand – again no acne. Tried cheese from pasteurized milk – acne. As I still have health problems, I am still in the process of figuring out things. Next up for me is trying to get rid of beef for a week or two, to see if that might be a problem for me. In summary: - I was not very systematic in my experiments, and had some lucky moments. - All the macro-nutrient ratio paradigms are IMHO BS and not applicable for the majority (might make sense if someone has real/major metabolic problems like T1DM, etc.) - Having said that, in my view some carb foods come with baggage: e.g. cereal grains and (pasteurized) milk - A quickly reacting, non-dangerous, clearly visible (objective) surrogate health marker (in my case acne) is worth its weight in gold - With such a marker, one should completely eliminate suspicious foods (in my case \*ALL\* dairy) and then introduce it again (two or three challenges) - For me, pasteurized-milk-dairy=acne, raw-milk-dairy=no-acne - Milk-chocolate is dairy - Some surrogate health markers (e.g. weight) reacted "funky" for me: I changed my diet to no-carb, my weight went down, and without any big chances my weight started to climb again. - I still have some residual health problems - For most of the health problems

that went away, I don't know exactly what food (Cereal grains? Dairy? Vegetable oils? etc.) caused what problem - As I felt like I was going to die on my old diet, I am not particular keen on going back full scale to my old diet to see if after one or two month all my old symptoms return, to erode which food caused which symptom... - Medical science and several MDs helped me diddly squat - For me, Paleo blogs were much more helpful than the medical community - There are more tidbits I found out, but I lack the energy right now to write them down shortly - There is a lot I still don't know about my health problems In closing: In my view it is important to get ideas what may (or may not) be a problem, what experiments one can do safely (I had no problem with larger amounts of sat-fat, but two spoons of vegetable oil gave me a weird pressure in the temples...). The time delay between consumption and health effect is interesting to know too, some things act faster, some slower. While I think that I am not alone in that dairy causes acne, I think not everybody seems the same, and by now I wouldn't be surprised if for some people acne is caused by other things besides dairy. So much more to write, I guess ... P.S.: Some conditions are thought to cause acne (e.g. some adrenal issues) and I wonder if the medical science has the causation wrong, and in fact both the accompanying acne and the "primary" condition have both the same underlying cause (e.g. dairy).

### **More Fermented Foods, Less Runny Nose? (2012-10-20 05:00)**

As recently as four or five years ago, and for many years before that, I often had a runny nose. I went through boxes and boxes of Kleenex. I carried a handkerchief everywhere and often used it. Not because I had a cold—I almost never got colds. It was different than that. You might say I was mildly allergic to something in the air.

Because of reading an article I will discuss in a moment, I have just noticed that my runny nose has vanished, both in Berkeley (clean air) and Beijing (dirty air). So I don't think it's due to the dirty air in Beijing. There was no sharp change but as best I can remember it went away during the period when I started eating lots of fermented foods. Most days I eat about three types – yogurt and two other things, such as kimchi or kombucha. It is plausible that more exposure to bacteria caused my immune system to stop overreacting.

[1]The article, from The Scientist, describes research suggesting that not enough bacteria can cause disease – specifically, sinusitis. Sinusitis, just like ulcers, has been associated with a particular bacterium, but the researcher involved, Susan Lynch of UCSF, has a more sophisticated understanding of causality than those two bacteria-causes-ulcers scientists and the committee that gave them a Nobel Prize. Lynch points out, quite reasonably, that the bacteria associated with sinusitis "have also been detected in the sinuses of healthy individuals . . . "Just because you find these organisms, it does not mean they are driving disease." (The bacterium that supposedly caused ulcers, *C. pylori*, turned out to be very common. Almost everyone infected did not have ulcers.)

Lynch and her colleagues discovered

Samples from [sinusitis] patients tended to have less diversity of bacterial species than those of healthy controls. Furthermore the relative abundance of certain species differed between patients and controls. Sinusitis patients's noses were enriched with a skin bacteria called *Corynebacterium tuberculo*stearicum, for example, while samples from healthy controls were enriched with *Lactobacillus* bacteria, including *L. sakei*.

Which you could obviously get from fermented food. Following up this observation, the researchers did a mouse study that found that giving mice the bad bacteria caused sinusitis-like symptoms but giving mice both bad bacteria and good bacteria did not cause the symptoms. The good bacteria were protective.

1. <http://sm.labx.com/track?type=click&enid=ZWFzPTEmbWFpGluZ2lkPTkxMyZtZXNzYWdlawQ9NTI3JmRhRGFiYXNlaWQ9ODAwJnNlcmllhbD0xNjc3NzgyOCZlbWFpGkPXR3b3V0b3BpYXNAZ21haWwuY29tJnVzZXJpZD0xXzg2NTYwJnRhcmdldGkPSZmbD0mZXh0cmE9TXVsdG12YXJpYXRlSWQ9JiYm&&2022&&http://www.the-scientist.com/?articles.view/articleNo/32602/title/Bacterial-Sentinels-of-Noses/>

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Jim Purdy (2012-10-20 08:17:34)

Seth, your fermented probiotics may well have helped promote a healthier bacterial balance in your nasal microbiome, but could there also have been other factors? For example, had you been taking antibiotics earlier, and could the antibiotics have been killing off the "good" bacteria like lactobacilli and bifidobacteria? Seth: I had taken antibiotics 20 years earlier. I doubt their effect lasts so long. The first useful thing I learned from my self-experimentation was that antibiotics were not helping my acne, so I stopped taking them.

Jo (2012-10-20 10:48:52)

Interesting, my spouse has developed a sporadic runny nose for the first time in his life, he was hospitalized a year ago and had some antibiotics at that time but none since. (His immune system has actually been very good for the last year, no or only very mild colds/flu) We were blaming it on the fact he has had to take lots of new medications, but they are for the heart, and we saw no connection whatsoever with his nose. He does eat yogurt, but not on a daily basis. Oh, and we both take Vitamin D, but I'm the one who has had several colds! Seth: great observation! I mean about your spouse.

Paleophil (2012-10-20 14:40:32)

I used to carry handkerchiefs with me always too, and frequently use them, as did my father. After I adopted a Paleo diet, I found I no longer needed them.

Rafael Gray (2012-10-21 10:57:48)

Despite a Weston Price + fermented food products I still had AM congestion (Spring trees, dust mites) although better but became incidentally dramatically improved after markedly reducing wheat. Am not 100 % grain free by any means but must be some total load issue because doesn't worsen after eating a wheat product. And I've certainly done the gamut of various allergy reduction supplements and treatments etc. My Kleenex utilization index has dropped dramatically! Question: is there any rationale for a sinus mucus "transplant"? That's something I have yet to read anything about, a la fecal transplantation

L (2012-10-22 03:28:39)

Can't win, babe. Dirty air in Beijing, prob like smoking, Even worse. U may not need tissue. Later u can get a heart transplant to save u. Pollution might give brain tumor. U may know lots of stuff, but the chinx air will kill n=1!!

## Short-Term Effects of Fat, Protein and Carbohydrate on Cognition: Fat Best (2012-10-21 05:00)

[1]A German study published in 2001 measured the effect of starkly different breakfasts (all fat, all protein, or all carbohydrate) on cognition during the next hours. Participants (17 men in their 20s) ate the same packaged dinner at home and next morning came to the lab and ate different breakfasts. All of the breakfasts were "cream-like" and all contained 400 calories. The design was relatively sophisticated. Practice effects were reduced by giving considerable practice with the tests before the main measurements began. Brain tests included a simple reaction time task, a choice reaction time task, and a "combi-test" in which the subject does two things at once that provides six measures of performance. One set of tests took 15 minutes. The tests were done once/hour for 3 hours after the breakfast.

The simple reaction time test showed no difference between the breakfasts. The choice reaction time test and the combi-test did show differences: The all-fat breakfast was better. The improvement produced by the fat breakfast compared to the other two breakfasts was clearest about two hours after the breakfast.

EMG (brainwave) measurements showed no differences between the breakfasts.

These results agreed with previous work.

Cunliffe et al. (1997) reported that a pure fat meal did not increase reaction times in contrast to carbohydrate ingestion when measured hourly for 4 h after the meal. In our study, fat ingestion even improved reaction times compared with baseline. Our subjects scored best for all tasks of the combi-test after the fat meal. This finding is in line with the higher accuracy of a focused attention task after a high-fat meal compared with a low-fat meal reported by others (Smith et al. 1994).

The "fat" breakfast in this study was 25 % soybean oil (high in omega-6), 25 % [2]palm oil (high in saturated fats) and 50 % cream (high in saturated fats). I have not compared omega-6 to nothing but I suspect it would produce worse results, given that olive oil appears worse than nothing. So I suspect that the improvement due to fat was due to the palm oil and cream. I concluded, based on evidence that I and others collected, that butter (high in saturated fats) improves arithmetic speed. I usually ate 30 g (= 2 tablespoons = 270 calories) of butter twice/day. Close to the dosage of this experiment. The timing of the effects I saw (sharp improvement from one day to the next) is consistent with a change that happens within 2 hours.

These results, which I didn't know about until recently, support [3]my earlier conclusions about butter. My measurements cost almost nothing whereas this experiment must have cost thousands of dollars ( \$400/subject?) plus hundreds of hours of researcher time. Maybe I should compare cream and butter. Cream has advantages. Mark Frauenfelder suggested using cream to make yogurt. Superfood!

[4]A more recent study found saturated fat consumption correlated with cognitive decline. It was a survey, however, with many differences between the groups being compared. I trust experimental evidence much more than survey evidence.

1. [http://journals.cambridge.org/download.php?file=%2F14098\\_85D5EBA4D6F222B1EE147717108D736D\\_journals\\_\\_BJN\\_BJN85\\_03\\_S0007114501000502a.pdf&cover=Y&code=9af04c55c47594932cf84720c13bb8d5](http://journals.cambridge.org/download.php?file=%2F14098_85D5EBA4D6F222B1EE147717108D736D_journals__BJN_BJN85_03_S0007114501000502a.pdf&cover=Y&code=9af04c55c47594932cf84720c13bb8d5)
2. [http://en.wikipedia.org/wiki/Palm\\_oil](http://en.wikipedia.org/wiki/Palm_oil)
3. [http://blog.sethroberts.net/?attachment\\_id=7671](http://blog.sethroberts.net/?attachment_id=7671)
4. <http://news.softpedia.com/news/Saturated-Fats-Intake-Leads-to-Cognitive-Decline-270766.shtml>

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Vic (2012-10-21 07:25:17)

Olive oil is only 10 % Omega-6, it's mostly mono-unsaturated fat.

Jim Purdy (2012-10-21 08:23:23)

I don't understand why doctors have so much fear of essential brain building blocks like fats and cholesterol, and why they promote statins that interfere with these brain functions. Seth: Might be the same reason that tonsillectomy surgeons ignore – or don't even know – that tonsils are part of the immune system.

Alex Chernavsky (2012-10-21 08:25:53)

Seth, can you speculate about why the simple reaction-time test was apparently less sensitive than the other two tests? And does this study change your view of the overall usefulness of the simple reaction-time test as a measure of cognitive function?

Seth: The simple RT test was less sensitive because it involves less mental processing. No, this study does not change my view of the value of simple RT as a measure of cognitive function. I have never believed it is a good measure of that.

MikeW (2012-10-21 08:37:47)

Interesting result, but I wish they had tested past that 3-hour window. Almost all of palm oil's saturated fats, and about 2/3rds of cream's, are the longer-chain c16:0 and c18:0. These don't peak in the bloodstream til about 5 hours after consumption. Short- and medium- chain fats (found in dairy and coconut/palm kernel oil) are metabolized more quickly, and peak in about 2 hours. So, to me, all the 3-hour test shows is that c14:0 and shorter saturated fat consumption can improve mental performance. It doesn't say anything about c16:0/c18:0, the predominant saturated fats in meat, eggs and nuts.

Matt (2012-10-21 08:49:13)

Another thing you could try is beef tallow versus butter. The fatty acid profiles are very similar with at least one notable difference: butter (and cream) have butyric acid, while tallow does not.

gwern (2012-10-21 09:19:52)

One of the downsides of yogurt is that the low-fat craze has gotten there, as well, and it's easy to remove all fat from yogurt. Like my grocery store - if I want Greek yogurt, I can take my choice of 3 delicious varieties... all zero fat.

Nick (2012-10-21 10:22:53)

Currently there are two routes to do science: 1. research institutions (the vast majority of the research) 2. the n=1 self-experimenter (a select minority; people like you, Seth) Yesterday I was struck with an idea: Why not crowd source science? Set up a website where people from across the globe can participate in worthwhile science projects. It could encompass all sorts of subjects, from psychology to nutrition to collaborative physics. People can join in experiments they feel to be promising and interesting. Just as Wikipedia overhauled the encyclopedia, this website could revolutionize science.

Nick (2012-10-21 10:24:51)

[http://en.wikipedia.org/wiki/Citizen\\_science](http://en.wikipedia.org/wiki/Citizen_science) Perfecting a model of citizen science is what I'm talking about.

Ed M. (2012-10-21 11:50:15)

I make my yogurt with heavy whipping cream exclusively. Tastes great. –Ed

David Johnston (2012-10-21 12:50:16)

Ed - Share your heavy cream yoghurt recipe!



Paul N (2012-10-21 22:19:47)

Not sure what Ed's recipe is, but I'm happy to share mine. Buy the best, and freshest, whipping cream you can get. Organic is best, and without any additives like carageenan gum. Buy some plain kefir (not yogurt) -you'll have to look for it- but it's worth it - and you only have to buy it once. Add kefir to the cream in a ratio of about 1:5, place in a glass jar/bottle and leave somewhere at room temp (countertop, cupboard above fridge, etc) for 24hrs. This is why you use kefir instead of yogurt - it works at room temp, not 35-40C like yogurt - and is a much stronger mix of probiotics. After 24hrs, put the cream back in the fridge and leave for three days. It is then ready to eat, is as thick as whipped cream, and has a slight tangy taste. you can flavour with vanilla, stevia, honey, coffee, brandy, etc You can also make cultured butter from it at this point. Just half fill a jar with your kefir-ed cream, leave out to warm to room temp (or sit in a warm water bath if you can't wait), and then just shake the jar end to end. Normally takes about three minutes for the cream to break, but longer if it is cold. You can then pour off the buttermilk, and use that for pancakes or other (gluten free) baking. Wash the butter with cold water until is clear and store. Salt it if you like. Not only will this be the best butter you ever tasted, it is probably the healthiest, and possibly cheapest too. The three minutes of shaking is worth it and makes an ideal pre-dinner mini workout, or to get the blood going in the morning!

Txomin (2012-10-21 22:37:22)

Thanks for the recipe, Paul.

L (2012-10-22 03:21:23)

Perhaps obese Americans should increase intake of saturated fats. It will surely decrease cancers, heart disease, stroke, etc!! Who's willing to do n=1 on this? Let me know! We can publish this together!!!!

dearieme (2012-10-22 03:39:54)

O/T, but I thought you might be amused by this from this morning's Telegraph, by the excellent James Le Fanu. Finally, a cautionary reminder of the confusion that can arise when medication causes the symptoms of the condition it is intended to treat. Here, a lady from Worcester writes to tell of the ever-more intrusive symptoms of her long-standing anxiety, where she would become fixated on the fine detail of things – dots on carpets, small stones, leaves, people's eyebrows, and so on. Her doctors and the community psychiatric nurse were sympathetic, but had no suggestions as to what to do. Then late last year, her anti-anxiety medication Stelazine became unobtainable in Britain – since when her fixation episodes have vanished, so far never to have returned.

L (2012-10-22 07:06:14)

why do stupid people take meds and get stupider????!

David Johnston (2012-10-23 16:58:09)

L: I'm certainly doing a n=1 study on increased saturated fat intake. It's improved my numbers, but so did a low fat diet and exercise in the Look Ahead study. When I die, I'll let you know.

RonBoyd (2012-10-23 17:22:25)

Seth, I don't know what this sentence means. Please explain. "I have not compared omega-6 to nothing but I suspect it would produce worse results, given that olive oil appears worse than nothing. " Seth: In Expt A I compared flaxseed oil to olive oil. In Expt B, I compared flaxseed oil to nothing. Expts A and B were very similar. Comparing olive oil in Expt A to nothing in Expt B, olive oil was worse than nothing.

David Johnston (2012-10-23 20:11:13)

So ELOO worked for weight loss in the Shangri La diet, but not for achieving fast speeds in cognitive speed tests. Is that a correct interpretation of your data? Seth: Yes.

L (2012-10-23 23:52:04)

thank u mr david johnston.

Evelyn M. (2012-10-25 10:26:37)

To make yogurt I use 3 1/2 cups whole milk, 1/2 cup heavy cream and four tablespoons of dried whole milk powder (which adds protein as well as cream). It works very well. If you want to make "Greek yogurt" - in Persian it is called mast-e-keesayee (or bagged yogurt) - just drain the yogurt through cheesecloth in the fridge until it becomes the texture you prefer.

L (2012-10-25 15:14:29)

@ Evelyn m : what do you do after all the milk and cream are put together? Do you always use a cheesecloth for all types of yogurt u make??

Evelyn M. (2012-10-27 14:00:35)

Hello, L. Thanks for reading my comment. I heat the milk and cream mixture to about 125 degrees F in a microwave and then put it in a yoghurt maker that keeps a very low, steady temperature. I usually leave it there for about 24 hours before moving it to the refrigerator. Most of the time I use the yogurt as is, I only make the strained version for special occasions, such as Persian New Year in March or Christmas. By the way, I wonder why sour cream hasn't been mentioned. Sour cream is a wonderful product, pretty well unique to the U.S. (at least I never found it for sale in England). One can easily find a brand that doesn't have any additives, such as Daisy, and it makes just about everything taste better.

### Assorted Links (2012-10-22 05:00)

- [1]You can major in Fermentation Science. No joke. When I was eight, I learned the concept of college major. I asked my mom, "What did you major in?" "Extracurricular activities," she said. I failed to get the joke. She later explained she had spent more time working on the school paper than on her classes.
- In a famous paper, the statistician Ronald Fisher accused Mendel of faking his data. Fisher wrote: "the data of most, if not all, of the experiments have been falsified so as to agree closely with Mendel's expectations." This is not terribly consistent with the fact that Mendel's highly improbable conclusions were correct. It's as if Fisher had said "Person X used false info to claim he is worth \$10 billion" and (b) in fact Person X is worth \$10 billion. You can see that (a) and (b) may both be literally correct but that the term "false info" (Fisher's "falsified") probably conveys the wrong impression. [2]This paper ("A Statistical Model to Explain the Mendel-Fisher Controversy") has a more plausible explanation of the pattern in the data that Fisher noticed.
- [3]Conflict of interest in the Nobel Prize in Literature. The conflicts of interest underlying the Nobel Prize in Physiology and Medicine – which are given out for "pure" science, thus justifying more funding – remain unnoticed by journalists.

Thanks to Bryan Castañeda.

1. <http://www.dailycampus.com/news/fermentation-science-a-major-at-some-universities-1.2928072#.UH8xPVEyrfI>

2. <http://projecteuclid.org/DPubS?service=UI&version=1.0&verb=Display&handle=euclid.ss/1300108237>

3. [http://blog.foreignpolicy.com/posts/2012/10/18/was\\_there\\_a\\_conflict\\_of\\_interest\\_in\\_the\\_nobel\\_literature\\_prize](http://blog.foreignpolicy.com/posts/2012/10/18/was_there_a_conflict_of_interest_in_the_nobel_literature_prize)

Jim Purdy (2012-10-22 06:58:52)

Fermentation science majors are highly cultured folks.

Tom (2012-10-22 08:26:01)

Peter at hyperlipid talks about the Look Ahead study's being halted early because of a supposed lack of difference between the studies arms, pointing out that it's possible that the true reason the study was halted was that it was well on its way of proving that the standard of care kills people (all cause mortality In the intervention arm was higher than the other arm (and rising) when they cut off the study.) In other words, it's very likely that halting the study is a massive cover-up that will permit the standard of care from being corrected, resulting in the continued pointless deaths of thousands of people. [high-fat-nutrition.blogspot.com/2012/10/look-ahead-trial-stopped.html](http://high-fat-nutrition.blogspot.com/2012/10/look-ahead-trial-stopped.html) [www.cardiosource.org/News-Media/Publications/Cardiology-Magazine/2012/10/Look-AHEAD-Trial.aspx](http://www.cardiosource.org/News-Media/Publications/Cardiology-Magazine/2012/10/Look-AHEAD-Trial.aspx) They will do anything to keep from proving the unsurprising conclusion that feeding diabetics huge amounts of carbohydrate (the ADA diet) for years kills them.

L (2012-10-22 10:00:28)

how cute!! at 8! when i was 8, my mom taught me how to be financially independent. i read books and she taught me what to do!'. i love u mom!!! now i am hella rich!!! yowza!! dont need a man to take care of me!!

L (2012-10-22 12:02:56)

i shared ur ideas w harvard director. gave them ur url. medical school director shangri la diet world domination is starting NOW!! i told harvard director to drink olive oil. LOTS OF IT. i shared personal science etc. we'll get seth his well deserved nobel prize in his LIFETIME!!!!!!

Bryan (2012-10-23 00:47:51)

Jim, no offense, but you're going to hell for that.

L (2012-10-23 02:24:45)

ya jim: hellarious!!

## **Big Diet and Exercise Study Fails to Find Benefit (2012-10-23 05:00)**

Persons with Type 2 diabetes have an increased risk of heart disease and stroke. They are usually overweight. A study of about 5000 persons with Type 2 diabetes who were overweight or worse asked if eating less and exercise – causing weight loss – would reduce the risk. of heart disease and stroke. The difficult treatment caused a small amount of weight loss (5 %), which was enough to reduce risk factors. [1]The study ended earlier than planned because eating less and exercise didn't help: "11 years after the study began, researchers concluded it was futile to continue — the two groups had nearly identical rates of heart attacks, strokes and cardiovascular deaths."

Heart disease and stroke are major causes of death and disability. Failure of such an expensive study ( \$20 million?) to produce a clearly helpful result is an indication that mainstream health researchers don't understand what causes heart disease and stroke. Another indication is that the treatment being studied (eating less and exercise) was popular in the 1950s. Mainstream thinking about weight control is stuck in the 1950s. It is entirely possible that greater weight loss – which mainstream thinking is unable to achieve – would have reduced heart disease and stroke. If you understand what causes heart disease and stroke, your understanding may lead you to lines of reasoning less obvious than people with diabetes are overweight -> weight loss treatments).

One of the study organizers – Rena Wing, a Brown University professor who studies weight control – told a journalist "you do a study because you don't know the answer." She failed to add, I'm sure, that wise people do not give a super-expensive car to someone who can't drive. You should learn to drive with a cheap car. Allowing ignorant

researchers to do a super-expensive study was a mistake. To learn something, do the cheapest easiest study that will help. (As I have said many times.) You should not simply do "a study". This principle was the most helpful thing I learned during my first ten years as a scientist. In this particular case, I doubt that a \$20 million study was the cheapest easiest way to learn how to reduce heart disease and stroke.

I made [2]progress on weight control, sleep, and other things partly because studying myself allowed me to learn quickly and cheaply. If researchers understood what causes major health problems, they would be able to invent treatments with big benefits. That the Nobel Prize in Physiology or Medicine is given year after year [3]to work that makes no progress on major health problems is another sign of the lack of understanding reflected in the failure of this study. I have never seen this lack of understanding – which has great everyday consequences – pointed out by any science blogger or science columnist or science journalist, many of whom describe themselves as "skeptical" and complain about "bad science."

1. <http://www.nytimes.com/2012/10/20/health/in-study-weight-loss-did-not-prevent-heart-attacks-in-diabetics.html>
2. <http://escholarship.org/uc/item/2xc2h866/>
3. <http://blog.sethroberts.net/2012/10/12/the-2012-nobel-prize-in-physiology-or-medicine/>

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charlie (2012-10-23 05:33:36)

Given the population – old and very fat – I have a feeling no amount of weight loss would make a difference in mortality. There is plenty of evidence that modest weight loss+exercise can prevent/delay the onset on diabetes, but as a treatment once you get there it isn't going to help.

L (2012-10-23 05:51:00)

hi charlie! i agree w u and seth: its hard to reverse something like diabetes, hypertension....now, we cant eliminate cancers, it would put mds out of business!!! but... if one person can find a cure....and they dont have a special interest in keeping an oncology position.,,. a drug rep at purdue said: ya we want a cure for cancer. that means MONEY!!!! wow! i just thought of another research project. us personal scientists have to be healthy to live longer... i am going to put a bunch of snobby mds out of work!!! yeah!!!

Jim Purdy (2012-10-23 06:19:36)

Charlie and L: Both of you say that diabetes can't be reversed, but then how do you explain all the claims that weight loss surgery can cure type 2 diabetes? I would never consider having weight loss surgery, but I'm fascinated by all the claims that some weight loss surgeries reverse or cure diabetes. I'm not sure whether the "cure" could be due to bypassing an intestinal section that produces some hormones, or whether the surgery alters the gut microbiota and thus changes something. I think these issues need to be researched further. I think one of the sad stories of medical history is the timing of the discovery and commercial production of insulin in the early 1920s, for two reasons: 1. The discovery of insulin put a sudden end to some very promising research being done by Doctor Frederick Madison Allen, who had been treating diabetic patients with an extremely low-calorie "starvation cure." Allen's dietary approach was briefly hailed as a major breakthrough, but insulin gave people an alternative that let them avoid dieting. Dieting was, and still is, the better choice, and the focus should be on how to make diets more successful, maybe with some combination of low carb, high fiber, as well as prebiotics and probiotics. 2. The discovery of

insulin gave a tremendous boost to the BigPharma industry and the development of all the highly profitable bizarre drugs that have led researchers away from natural Darwinian medicine approaches that are based on sound evolutionary science. Seth: I say the same thing about the discovery of antibiotics. The cost of the discovery is rarely noticed. One big cost of that discovery was less attention to how to improve immune function. Another, as you say, was promotion of a drug=cure mentality, when other non-drug solutions are much better in the long run. Diabetes is an obvious example.

Mark (2012-10-23 06:25:07)

"Allowing ignorant researchers to do a super-expensive study was a mistake." Right on, Seth! Unfortunately, this is the name of the game in the publish or perish, grants as academic currency world.

Daytona (2012-10-23 06:38:58)

I have heard speculation that the reason why they cut the study short was not simply that it was obvious that the intervention group wasn't successful. Instead they stopped early because they were seeing worse outcomes in the intervention group and they didn't want to the last 2 years to highlight the trend. By stopping early, they can say "the outcomes between the intervention and control were the same" instead of finishing the trial and being forced to report that the intervention group (following the standard medical advice) did worse. Any thoughts on if there is any truth that rumor?

Tuck (2012-10-23 06:49:00)

The sad thing is: we know how to cure or dramatically improve outcomes in diabetes through changes in diet and exercise. We've known how for a few decades. It's really easy. And to Seth's point, the fellow who figured it out was a self-experimenter who had diabetes himself, figured out that the standard protocol (which hasn't changed) didn't work, and used a simple tool (now cheap and readily available) to solve the problem. But the diet is 100 % the reverse of the American Diabetes Association plan, so it's ignored. One is forced to come to the conclusion that the perceived status of the medical profession is more important than patients' lives. They'd be forced to say: we blew it, we made millions of sick people sicker. This generation won't do it. Neither did the one before. The fellow in the case above was an engineer. He discovered that doctors wouldn't listen to someone who wasn't a doctor. So he went to medical school and became a doctor. They still wouldn't listen to him. His book, btw, is "The Diabetes Solution". Seth: "They still wouldn't listen to him." That's an overstatement. Richard Bernstein, the engineer you refer to, pioneered home glucose measurement, which is now a billion-dollar/year industry. The idea spread from Bernstein to med school professors to standard of care. Bernstein's particular solution to high blood sugar, however – a very low carb diet – did not spread. I think with good reason: it is not a good idea. I found that walking one hour per day vastly improved my blood sugar. Eating a very low carb diet did not. When it came to the solution, I think Bernstein got it wrong.

charlie (2012-10-23 07:44:52)

@jimPurdy; I think the reversal of diabetes with bariatric surgery is in the 5 % range. It happens, but it is rare. Again, once you're a full blown diabetic you're going to be on drugs. Sorry.

Tuck (2012-10-23 07:58:06)

@charlie: or you could google it, and find out. "The clinical and laboratory manifestations of type 2 diabetes are resolved or improved in the greater majority of patients after bariatric surgery; these responses are more pronounced in procedures associated with a greater percentage of excess body weight loss and is maintained for 2 years or more. " <http://ukpmc.ac.uk/abstract/MED/19272486> Bariatric surgery simulates a low-carb diet, essentially. That's also often what is followed after the surgery. If you don't you gain a lot if not all the weight back. Leads one to think it's the diet, not the surgery, but clearly cutting part of your intestinal tract out is going to have some effect...

Tom (2012-10-23 07:58:27)

Actually, Seth, it's worse than that: Peter at hyperlipid suggests that the Look Ahead study was NOT halted early because of a supposed \*lack\* of difference in mortality between the study's arms, but rather because it was well on its way of proving that the ADA diet killed MORE people (all cause mortality in the intervention arm was HIGHER than the other arm – and significance was rising – when they cut off the study.) In other words, it's very likely that halting the study is a massive

cover-up that will permit the standard of care from being corrected, resulting in the continued pointless deaths of thousands of people. [high-fat-nutrition.blogspot.com/2012/10/look-ahead-trial-stopped.html](http://high-fat-nutrition.blogspot.com/2012/10/look-ahead-trial-stopped.html) [cardiosource.org/News-Media/Publications/Cardiology-Magazine/2012/10/Look-AHEAD-Trial.aspx](http://cardiosource.org/News-Media/Publications/Cardiology-Magazine/2012/10/Look-AHEAD-Trial.aspx) They will do anything to keep from proving the unsurprising conclusion that feeding diabetics huge amounts of carbohydrate (the ADA diet) for years kills them. Seth: Peter at Hyperlipid says nothing to support his view that it is "very likely" that more people died in the intervention arm than in the control arm. Or if he does, I didn't understand it.

MikeW (2012-10-23 08:21:49)

charlie's "old and very fat" comment got me looking at the study's participant metrics. I wouldn't call them old - the average age was 59 (look ahead's eligibility requirements were age 45-74). But yes they were very fat. The study specified a starting baseline BMI of at least 25, but the actual average BMI was 36! That bothers me more than the study's cost. Their stated goal was to study "a diverse sample of overweight participants"; the sample they ended up with had way too many morbidly obese individuals. Seth: I think the study designers believed that these people were going to be more easily helped than people who were less fat. It's a reasonable assumption. Which makes the failure to help them all the more damning.

Catherine Shaffer (2012-10-23 09:02:37)

I covered the Look Ahead study for my publication, and there's some misunderstanding here about the termination and what that means. The study did not fail. It was brought to an end by an independent data monitoring committee because upon analysis of the data, there was no chance of showing a difference in mortality between groups the test and control group. The study did not fail, it finished, and the data is valid and publishable and usable, and can be built upon for future studies. Although no benefit in terms of cardiovascular events was found for people with Type II diabetes, the study did confirm the benefits of the 5 % weight loss in preventing Type II diabetes and for some other health outcomes. There's been a huge gap between showing benefits for various surrogate health markers like blood pressure and actually proving that interventions can actually prevent heart attacks, which would be the ultimate holy grail of weight loss intervention. There is no data in the study showing that people in the weight loss group had higher mortality. The two groups were the same with no statistical difference. It's a tough problem, and one of the problems, you are correct, is that much of the conventional wisdom is wrong—for example on the value of a low fat diet. I would disagree, Seth, that the \$20 million was unjustified. There are countless small, retrospective studies on weight loss and diabetes interventions. What is needed is large, prospective studies to put many competing hypotheses to the ultimate test to see if they really have value. This was \$20 million well spent because it tells us in no uncertain terms that weight loss alone is not a cure for Type II diabetes. Jim Purdy, you are confusing Type I and Type II diabetes. The starvation cure was only temporary. It delayed death in diabetic children, but did not prevent it. No one can survive without a functioning pancreas, and diet can not cure a condition that is caused by the failure of a major organ. Insulin was a life-saving revolution and continues to be a valuable, life-saving, life-prolonging drug for people with Type II diabetes. Diet can be used to reduce insulin consumption in Type I diabetes, but can never eliminate it. Diet interventions absolutely can reverse or cure Type II diabetes, however, and progress on that is not hindered by the availability of insulin because insulin is an intervention of last resort for that group, anyway. Seth: I think the \$20 million would have been better spent on numerous small studies trying to understand what causes heart disease. Rather than on a test of a common-sense cure (weight loss). You mention "competing hypotheses" – that's exactly it, there weren't any competing hypotheses. There was just one idea, so simple-minded that to call it a "hypothesis" might be overstatement. There was no theory of heart disease that predicted that the intervention would not work – at least, the study organizers have not mentioned what that theory is.

Catherine Shaffer (2012-10-23 09:04:03)

"Insulin was a life-saving revolution and continues to be a valuable, life-saving, life-prolonging drug for people with Type II diabetes." I meant Type I, of course.

Carol (2012-10-23 09:49:42)

Institute of Medicine's standard 'recommended' diet for non diabetics is 225 to 325 grams of carbs a day. I went to the ADA site, and couldn't find a specific carb count, so I looked up a 'meal plan' (<http://www.diabetes.org/mfa-recipes/meal-plans/>) and the particular one, featuring "Asian Flavors" had 192g of carbs. Barely less than that recommended by the standard

American Diet. This is the current guidelines: [http://care.diabetesjournals.org/content/31/Supplement\\_1/S61.full.pdf%20html?sid=8c9f7471-103e-47c4-b288-fcfa7ab77b58](http://care.diabetesjournals.org/content/31/Supplement_1/S61.full.pdf%20html?sid=8c9f7471-103e-47c4-b288-fcfa7ab77b58) This stood out: •For weight loss, either low-carbohydrate or low-fat calorie-restricted diets may be effective in the short term (up to 1 year). (A) I wonder why the low-carb version isn't recommended more?

Tuck (2012-10-23 09:50:16)

"The primary objective of Look AHEAD is to examine, in overweight volunteers with type 2 diabetes the long-term effects of an intensive lifestyle intervention program designed to achieve and maintain weight loss by decreased caloric intake and increased physical activity. This program is compared to a control condition involving a program of diabetes support and education. The primary basis for the comparison is the incidence of serious cardiovascular events. Other outcomes, including cardiovascular disease risk factors, diabetes related metabolic factors and complications, and the cost-effectiveness of the intensive intervention are also studied." It failed because it was testing a hypothesis, and it demonstrated that that hypothesis was not correct. Losing weight and exercising did not affect the end point. The fact that it failed doesn't mean that nothing was learned... I agree with Peter @ Hyperlipid's hypothesis: they cut it short because it was demonstrating that the intervention wing had a worse outcome, like the ACCORD trial.

Tuck (2012-10-23 09:50:59)

Oops, here's the link to go with that quote: <https://www.lookaheadtrial.org/public/LookAHEADProtocol.pdf>

Paul N (2012-10-23 09:53:08)

Catherine, The press releases said there was no difference in cardiovascular events, they did not, specifically, say "all cause mortality". We'll have to wait for the final report, and hopefully the raw data set, to see what really happened. BUT, the central hypothesis of the trial was that the diet and fitness intervention, in obese diabetics, would reduce CV events - but, after 11 years, it didn't. Even "improvement" in other health markers - weight, treadmill fitness, blood pressure, HDL cholesterol, made absolutely no difference to CV events. so will they conclude that the diet does not work, and that many of the markers are not good indicators for CV health? If it means this paradigm is finally discarded, then the \$20m was well spent, if the results are buried, and the ADA diet remains unchanged, then we have a real problem.

Mark (2012-10-23 10:15:13)

Catherine, Here are two things that you might want to keep in mind when covering future studies: 1) the word "data" is plural (e.g., "the data [are] valid and publishable"); 2) The sentence "The two groups were the same with no statistical difference" is utterly wrong. It is statistically impossible to show that two groups are the same... "no statistical difference" really only means insufficient evidence to reject the null hypothesis, it provides absolutely NO support for the null hypothesis of no difference.

L (2012-10-23 10:55:40)

thanks mr jim purdy. great info i didnt know about.

Aaron (2012-10-23 12:42:47)

CarbSane Asylum is doing some posts about this study: <http://carbsanity.blogspot.com/2012/10/that-diabetes-study-that-ended-early.html> <http://carbsanity.blogspot.com/2012/10/more-on-look-ahead.html> In the first link she discusses the possibility that poor compliance to the diet probably had a significant impact on the results: "Does anyone out there truly believe that if your average 250 lb person complied with a diet of 1500 cal/day for a decade would still weigh nearly as much? It sounds like this study included a diet phase early on (6 months perhaps?) during which the participants lost weight, and then maintained the losses. Did they continue the exercise? These are details I'd like to see when this study is eventually published up. How many are even following the "rigorous program" to any degree?"

L (2012-10-23 14:19:41)

thanks,aaron

Tom (2012-10-23 15:46:37)

Carbsane goes on the warpath whenever there's any threat to her beloved carbohydrates. She has so much hatred for Gary Taubes that you'd think he gave her a wedgie in junior high or something.

Alex Chernavsky (2012-10-23 17:43:39)

Mark wrote, "the word 'data' is plural "

"It's time to admit that data has joined agenda, erotica, insignia, opera, and other technically plural Latin and Greek words that have become thoroughly Anglicized as singular nouns, taking singular verbs. No plural form is necessary, and the old singular form, datum, can be left to the Romans."

From, *Woe Is I: The Grammarphobe's Guide to Better English in Plain English* by Patricia T. O'Conner. Seth: I found 4 times as many Google results for "data is" than "data are", supporting what you say. Here is a discussion: <http://www.guardian.co.uk/news/datablog/2010/jul/16/data-plural-singular>

Nancy Lebovitz (2012-10-23 19:37:45)

Seth, the hard thing is that insomnia happens frequently, but CV events are rare. I'm not sure how self-experimentation could address them unless you had a really good surrogate measure.

Patrik (2012-10-23 21:46:54)

"To learn something, do the cheapest easiest study that will help. " In the technology space, this is akin to building what we call a Minimum Viable Product.

L (2012-10-24 00:01:11)

@tom: mr taubes is very tall and gives lots of free talks. i heard him talk at walnut creek, ca.

L (2012-10-24 00:07:43)

@alex chernavsky: ur knowledge of the ill effects of neuroleptic medication is helpful!!

L (2012-10-24 00:08:39)

@nancy lebovitz: what surrogate measure would u propose?

Tuck (2012-10-24 06:54:49)

"When it came to the solution, I think Bernstein got it wrong." Bernstein's a 70-something year-old Type 1 diabetic, who has no diabetic side effects (they all went away) and is in apparently perfect health. That's not too bad for "wrong". I work with a fellow who's teenage son is also a type 1 diabetic. After going through the usual BS, they went to see Bernstein. Now, when they go see their local doctor, the nurses call everyone over because "You never see a Type 1 diabetic with perfect blood sugar control!" No, you don't, unless you follow a VLC diet. My wife and I also reversed our pre-diabetes by going VLC: in my case, after failing with walking, running, mountain biking, going to the gym. At one point I was working out 12-16 hours a week. Never lost a pound, stayed prediabetic. I think Bernstein got the solution perfectly right. And you're right that they listened to him about measuring glucose, but they missed the point of the measurement. Seth: Bernstein's work was a huge advance, for which he deserves a Nobel Prize. Has Bernstein suffered any bad effects from extreme carb restriction? I am less sure than you that he is in perfect health. In your case, you tried walking one hour per day, and that failed?

L (2012-10-24 08:30:50)

@mr tuck: thank u!! im glad one can reverse it! i never knew it was possible because i always thought a diabetic had to take insulin. wow!!



Nancy Lebovitz (2012-10-24 10:51:57)

I have no idea what a good surrogate measure for CV would be. That's why I raised the question.

L (2012-10-24 18:05:54)

@ms nancy lebovitz: thanks!

Evelyn M. (2012-10-25 10:39:25)

Slightly OT - I'm surprised you haven't spoken about and linked to - <http://summaries.cochrane.org/CD009009/general-health-checks-for-reducing-illness-and-mortality> - as even the NYT has mentioned the results of this meta-analysis (albeit hidden in a small paragraph in Tuesday's science section, whereas it should have been on page one). The Cochrane Collaboration is the group that has shown that hormone-replacement therapy was a bad idea, that mammography causes more harm than good, etc., etc.

Tuck (2012-10-26 08:32:53)

Bernstein says he's in excellent health, with no ill effects from a long-term low-carb diet. In fact, all of his "progressive" diabetic complications regressed after going VLC. Jimmy Moore videoed Bernstein speaking a few years ago, where he discusses his symptoms and life: "Dr. Richard Bernstein (Part 1)-Nutrition & Metabolism Society Meeting-May 8, 2010" <http://www.youtube.com/watch?v=9VaNJO7KMgg&feature=relmfu> Timely: "Type 1 Diabetes No Match for Primal Lifestyle!" <http://www.marksdailyapple.com/type-1-diabetes-no-match-for-primal-lifestyle/> This fellow is effectively following Bernstein's protocol, including the basal/bolus insulin scheme. Agreed about the Nobel. Unfortunately, until the medical profession can admit that their approach for treating diabetes is an utter failure, he'll never get it.

Tony Mach (2012-10-27 06:16:27)

One observation about the "skeptics" community I share with your sentiment: They have very good instincts in going after the scientific "easy" target: all the alt-med, "integrative" and CAM quacks peddling their unscientific woo (though what the skeptics do is IMHO not very effective in combatting the obvious quack medicine). But when it comes to the scientific mainstream producing bad (or costly and useless) science (or rather non-science), they are completely lost. They decry the profits that the alt-med cancer quacks pocket with their useless, dangerous and costly treatments (and the skeptics are right to decry this fraud by the alt-med quacks), but how many billions have been spent on the war on cancer in the last decades, and with what results? The whole state of affairs of the medical science is depressing, especially considering the gap between potential for research and progress we have in our modern societies, and the results the medical science has produced in the last decades.

## **The Personal Scientist Who Knew Too Much (2012-10-24 05:00)**

The San Jose Mercury News recently ran [1] a story by Lisa Krieger about a father (Hugh Rienhoff) who found a single-amino-acid mutation that he believes causes his daughter's growth difficulties.

Born with small, weak muscles, long feet and curled fingers, Beatrice confounded all the experts.

No one else in her family had such a syndrome. In fact, apparently no one else in the world did either.

Rienhoff - a biotech consultant trained in math, medicine and genetics at Harvard, Johns Hopkins and the Fred Hutchinson Cancer Research Center in Seattle - launched a search.

He combed the publicly available medical literature, researching diseases, while jotting down each new clue or theory. Because her ailment is so rare, he knew no big labs or advocacy groups would be interested.

He did some of his own lab work in his San Carlos home, borrowing tools or buying them used online.

A few commercial labs, like the San Diego-based biotech Illumina, offered him help for free. And a wide array of pediatricians, geneticists and neurologists volunteered their opinions.

Over time, he zeroed in on a stretch of genes that control a growth hormone responsible for muscle cell size and number. And he knew he could further target his search – saving time and money by not sequencing Bea's entire genome, but only the exomes, which are the genes that code for proteins.

This is not a simple upbeat story. The father is a genetic researcher and doctor. I agree, he has made considerable progress in understanding the cause of his daughter's problem. Not addressed are two questions: 1. Why is he sure he has the right mutation? Perhaps his daughter has other mutations. I'm sure the father understands this, the journalist may not. 2. What about environmental causes? As [2]Aaron Blaisdell's story shows – Aaron has/had a single-gene genetic disease that vanished when he changed his diet – single-gene diseases may respond to environmental changes. Early work with bacteria emphasized this. If Rienhoff had spent equal effort in trying to find environmental changes that help, he might be further along in discovering them. An obvious place to start would be testing different diets. There is no sign he has done that. His knowledge of genetics, plus the brainwashing that doctors undergo (they are told genes are incredibly important), may have led him to waste a lot of time. Someone with less understanding of genetics may realize better than Rienhoff that knowing what genes have changed may be very little help in finding helpful environmental changes.

Thanks to Allan Jackson.

1. [http://www.mercurynews.com/health/ci\\_21820336/open-source-science-helps-san-carlos-fathers-genetic](http://www.mercurynews.com/health/ci_21820336/open-source-science-helps-san-carlos-fathers-genetic)

2. <http://blog.sethroberts.net/2009/07/14/genes-or-environment-or-environment/>

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Alex Chernavsky (2012-10-24 05:53:12)

The classic example is phenylketonuria – a genetic illness that is easily (more or less) treated by severely restricting dietary intake of the amino acid phenylalanine. Surely Reinhoff is familiar with this disease and its treatment?

L (2012-10-24 18:17:16)

@ mr alex chernavsky: thats a great question. from what i have learned talking to random doctors at boston u or even a director at harvard med or even random harvard students: a lot of doctors are really dumb!! i talked w a new doc at boston u and he didnt know the high sugar content of grapes he was buying. he said hes not the doctor, i am the expert on blood sugar. i made him feel very embarrassed and he was blushing because i was showing how stupid he was in front of others. i made the harvard director cry and i offended her because i said i was bored talking w her at an expensive restaurant i didnt want to go anyways...oh well harvard med paid for my salad and olive oil. she ate lobster roll!!! \$60 she spent on herself!!!

Nancy Lebovitz (2012-10-24 20:54:33)

Off-topic: [1]Quack-in-the-Box, a malpractice card game.

1. <http://www.boardgamegeek.com/boardgame/69904/quack-in-the-box>

## The Dark Side of Open Source (2012-10-25 05:00)

A friend writes:

David [her boyfriend, not his name] learned some of the new languages (Android being one ). He says that any programming involving Open Source software requires wading through undocumented code, sloppily written by guys who de facto require one to email them, asking for technical support.

And without the cooperation of these people, one has no chance in hell of figuring out what the next command syntax should be. And a lot of the guys who wrote the code are reluctant to cooperate, because their knowledge of how their own code is supposed to be written and how to run it is their only job security.

Coding for very simple operations, such as connecting an external camera to an Android cell phone, has been proving impossible. He's been working on it for 10 days now.

David has tried several flavors of Linux kernels and also several brands of smartphone drivers. But it always comes to the same thing. The software won't run, and there are maybe one or two wrong characters in 20,000 lines of code that made it break, and you don't know where to start looking. Because the error message doesn't tell you anything other than it won't run.

To be fair, I use R (which is open source) many times every day. It has far fewer bugs than the S-plus software it replaced. That it's free is a huge plus.

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Jill (2012-10-25 05:07:38)

Also to be fair, you can get those same kinds of problems (sloppy code, useless error codes, and small syntax errors - sometimes involving invisible characters) with just about any code that you're working on.

Philip Kilner (2012-10-25 05:53:15)

Hi, Couldn't help but smile at this one - as Jill suggests above. none of these characteristics are particular to Open Source, and this seems to me to be a case where correlation does not imply causation! Equally in tune with the spirit of your blog, I'd suggest that your own daily experience is of more value than the assertions of a 3rd party... ;-) On a serious note, I use Open Source s/w for preference where I can, because the support is so much better, I think because people who have shared a problem enjoy sharing the solution. I also have to say that the assertion that "a lot of the guys who wrote the code are reluctant to cooperate, because their knowledge of how their own code is supposed to be written and how to run it is their only job security" is not true of any Open Source community that I'm involved with. Cheers, PhilK

ChristianKI (2012-10-25 05:56:34)

"Coding for very simple operations, such as connecting an external camera to an Android cell phone, has been proving impossible. He's been working on it for 10 days now." With closed source software such as the iPhone the task is also impossible: <http://stackoverflow.com/questions/12037169/is-it-possible-to-connect-an-external-camera-module-to-an-iphone-audio-jack> There no reason to expect this task to be easy. Smartphones aren't designed to make it easy extend them with external cameras. "The software won't run, and there are maybe one or two wrong characters in 20,000 lines of code that made it break, and you don't know where to start looking. Because the error message doesn't tell you anything other than it won't

run.” That’s a silly proposition. There’s a debugger that you can run to see where a program crashes. In Android you also have a log that provides you plenty of information about your program. David’s girlfriend doesn’t seem to understand much about programming and is maybe not the best person to fairly describe the downsides of open source.

Daniel Lemire (2012-10-25 06:26:42)

Just think how amazing it is that you can write a program that can interact with a freaking camera on a phone! That you even have a chance of trying to do it outside a corporate laboratory... and for almost no money down... is amazing. The argument that open source people obfuscate and hide their knowledge on purpose to keep their “knowledge” valuable is absurd. Yes, things can be complicated sometimes and issues can be undocumented, but that is not “on purpose”. It is just that life is complicated in general. Obviously, if Linux crashes and you email Linus Torvalds, he is not going to get back to you and explain how to fix the problem. But this just says that resources are limited while problems are plentiful and hard. There is much evidence that the authors of successful open source software go out of their way to help. What the author of these lines lack is perspective. Documentation? Go to Amazon.com: there is probably more books on programming with open source software than on any proprietary software (except maybe for the Windows stack). I am not saying that open source is always the best model. Sometimes, in practice, proprietary software works better. And there are evil people involved with open source software, I am quite certain of that. But the values behind open source are nothing like what is being described here. The programmers who pursue open source have motivations similar to the wikipedians. Sometimes they screw up, but they are very much motivated by the common good and by the hope that if they help people enough, their own status will rise up. Reputation is almost everything in open source and people care very much about it. They don’t obfuscate their work on purpose, and they try their best to produce the very best software they can (given the resources they have).

threepipeproblem (2012-10-25 06:34:52)

I agree... not a great explanation of why open source software often sucks.

Darrin Thompson (2012-10-25 07:00:31)

Sounds like the dark side of embedded hardware to me. Not unique to open source. There’s a community of Android modders who flash their phones to upgrade the Android OS a lot. When a new mod comes out, it’s common to see a bug list like, camera and MMS don’t work yet. Open source really is amazing in the macro but depending where you are in the open source world, your experience might be better or worse. Android’s relationship with the upstream Linux Kernel, for instance, has been a lot worse in the past. <https://lwn.net/Articles/514901/> I think your friend was very unlucky to end up in a bad spot. If he had been trying to build a web site with open source software he might have felt differently.

Mike Packard (2012-10-25 07:37:36)

One thing I like about open source software is that it has the potential to be better than commercial software due to purer motives. The purpose commercial software is to make money. Ideally the developers do this by providing the best software they can, but inevitably design choices will be influenced by the need to sell it (i.e. adding features vs. fixing bugs, flashy vs. useful interface, advertisements embedded, etc.). Anyone who has used software with the word “Enterprise” in the title knows what I’m talking about. The purpose of open source software—it’s only reason to exist—is to be good at its task. So the developers don’t have any motivation besides making the best software they can. It removes 1 layer of obfuscation between design and implementation.

RyanE (2012-10-25 08:40:05)

Another point about Open Source software: Sure, the developer may have moved on to other things, or doesn’t provide support, but at least they provide \*source\*, so you (in theory) should be able to figure it out. Try \*that\* with proprietary software. As most other posts have said, it’s usually a matter of complexity, and familiarity. Any large source base is going to be pretty opaque unless you’ve worked with it quite a bit.

jimrandomh (2012-10-25 10:17:42)

“Coding for very simple operations, such as connecting an external camera to an Android cell phone, has been proving

impossible. He's been working on it for 10 days now." That's not a simple operation at all, it's a hard project for a domain expert. I am not that domain expert, but I can see the overview, and it's likely that David's in \*way\* over his head. Android didn't support USB host mode at all before version 4, and a lot of hardware still doesn't (for electrical and power supply reasons, not just software reasons). Notice that this is the most recent version - ie, it hasn't been iterated on at all yet. Then you not only need to write a USB camera driver, against brand-new and therefore buggy APIs, none of the userspace camera libraries or apps support hot-swapping either, so you need to spin up in two more project contexts (a total of three distinct codebases to modify). It's not a documentation problem, a syntax problem, or a needle-in-a-haystack problem. It's mostly a domain knowledge problem: you need to know kernel development, and to have done it on a well-trodden path in a more forgiving context. Implying that developers are skipping documentation because it gives them job security is highly implausible. (It's because they're busy making things, they're not good at writing, they're not good at modeling what other people don't know, and/or they're lazy.)

Scott Pierce (2012-10-25 18:25:30)

That is just silly. Consider the motivation of the developers of any significant open source code base? It is pride and glory. You don't get that from submitting crappy software to github and then living life defensively over it. Just doesn't make sense. Some devs can be condescending because, frankly, they are just that damn smart but most find a sense of purpose and worth in helping others with their software and most open source projects are a hell of a lot better documented than most closed source projects because a lack of documentation or bad docs is considered a character flaw, countering the motive for publishing open source to begin with, glory. My guess is this individual has been raised on the idea that things should be easy versus simple. Seth: Are you saying your experience with open source has been different? Lots of predictions about human behavior based on theories about "motivation" have turned out to be wrong.

Peter (2012-10-25 19:54:45)

Yeah... not all open source projects are well-maintained, but this sounds like sour grapes.

Nancy Lebovitz (2012-10-26 12:20:21)

My best guess that for a lot of people, writing programs is more fun than designing good interfaces and doing user support. If you're lucky, the open source writer does care about the interface. Even so, programmers probably only want to answer interesting questions if they're not getting paid. Again, this is a problem if they also want open source to rule the world. However, I doubt very many programmers are deliberately hiding how to get good use out of their programs.

David C (2012-10-27 06:58:28)

Your friend doesn't know what she's talking about.

Alex R. Berg (2012-10-29 01:01:00)

Also, just to add a bit of salt in the wound, Android is far from typical open source. It (at least Googles version of Android) is mainly being developed by one huge company who makes money on it, just like iOS, Windows. Google makes more money if Android is easy on the developers, just like Apple.

Todd Fletcher (2012-10-29 10:10:03)

The internet runs in large part on Open Source. Just take Apache as one example. The fact is that Open Source software that gets a lot of use will be stable, but as you get down to much smaller projects they won't have gotten the attention and scrutiny to be as good. Similar to the way the accuracy of wiki articles increases with the number of contributors.

## **Quantified Self Utopia: What Would It Look Like? (2012-10-26 05:00)**

On the QS forums, [1]Christian Kleineidam asked:

While doing Quantified Self public relations I lately meet the challenge of explaining how our lives are going to change if everything in QS goes the way we want. A lot of what I do in quantified self is about boring details. . . . Let's imagine a day 20 years in the future and QS is successful. How will that day be different than [now]?

Self-measurement has helped me two ways. One is simple and clear. It has helped me be healthy. Via QS, I have found new ways to sleep better, lose weight, be in a better mood, have fewer colds (due to better immune function), reduce inflammation in my body, have better balance, have a better-functioning brain, have better blood sugar, and so on. I am not an expert in any of these areas – I am not a professional sleep researcher, for example. I believe that this will be a large part of the long-term importance of QS: it will help non-experts make useful discoveries about health and it will help spread those discoveries. Non-experts have important advantages over professional researchers. The non-experts (the personal scientists) are only concerned with helping themselves, not with pleasing their colleagues or winning grants, promotions, or prizes; they can take as long as necessary; and they can test "crazy" ideas. In a QS-successful world, many non-experts would make such discoveries and what they learned would reach a wide audience. Lots of people would know about them and take them seriously. As a result, people would be a lot healthier.

Self-measurement has also helped me in a more subtle way. It made me believe I have more power over my health than I thought. This change began when I studied my acne. I did not begin with any agenda, any point I wanted to make, I just wanted to practice experimentation. I counted my pimples (the QS part) and did little experiments. My results showed that one of the drugs my dermatologist had prescribed (tetracycline, an antibiotic) didn't work. My dermatologist hadn't said this was possible. Either he had done nothing to learn if worked or he had reached the wrong answer. What stunned me was how easy it had been to find out something important a well-trained experienced expert didn't know. My dermatologist was not an original thinker. He did what he was told to do by med school professors (antibiotics are a very common treatment for acne). It was the fact that I could improve on their advice that stunned me. I didn't have a lab. I didn't have a million-dollar grant. Yet I had learned something important about acne that dermatology professors with labs and grants had failed to learn (antibiotics may not work, be sure to check).

Skepticism about mainstream medicine is helpful, yes, but only a little bit. More useful is finding a better way. For example, it's useful to point out that antidepressants don't work well. It's more useful to find new ways to combat depression. Two years ago, the psychiatrist Daniel Carlat came out with [2] a book called *Unhinged* that criticized modern psychiatry: too much reliance on pills. No kidding. Carlat recommended more talk therapy, as if that worked so well. As far as I could tell, Carlat had no idea that you need better research to find better solutions and had no idea what better research might be. This is where QS comes in. By encouraging people to study themselves, it encourages study of a vast number of possible depression treatments that will never (or not any time soon) be studied by mainstream researchers. By providing a way to publicize what people learn by doing this, it helps spread encouraging results. In the case of depression, [3] I found that seeing faces in the morning produced an oscillation in my mood (high during the day, low at night). This has obvious consequences for treating depression. This sort of thing will not be studied by mainstream researchers any time soon but it can easily be studied by someone tracking their mood.

In a QS-successful world, many people would have grasped the power that they have to improve their own health. (You can't just measure yourself, you have to do experiments and choose your treatments wisely, but measuring yourself is a good start.) They would have also grasped the power they have to improve other people's health because (a) they can test "crazy" solutions mainstream researchers will never test, (b) they can run more realistic tests than mainstream researchers, (c) they can [4] run longer tests than mainstream researchers, and (d) no matter what the results, they can publicize them. In a QS-successful world, there will be a whole ecosystem that supports that sort of thing. Such an ecosystem is beginning to grow, no doubt about it.

1. <http://forum.quantifiedself.com/thread-qs-utopia?pid=1940#pid1940>
2. <http://www.danielcarlat.com/blog/?p=53>
3. <http://www.escholarship.org/uc/item/2xc2h866.pdf>
4. <http://www.astrocyte-design.com/shangri-la-diet/index.html>

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Brian (2012-10-26 10:17:36)

QS offers many benefits, but one of the best benefits is avoiding mistreatment by medical professionals. Before QS, I was mostly a black box to myself and, consequently, medical and psychiatric professionals were often led to inappropriate treatments. If you track most things and can summarize it neatly, you'll no longer be subject to the inexplicable changes in sleep patterns, mood, energy, or weight that are the lynchpins of modern psychiatry. For example, this week the sun rises around 7:40 AM and the days are overcast. My mood and energy are noticeably lower. My sleep is disturbed because I started drinking coffee. Before QS, I was not sufficiently self-aware to reliably document these changes when talking to a doctor. So they're going to look for a medical explanation instead of a simple one.

### **Bacteria are Neither Good nor Bad (2012-10-27 05:00)**

Health experts call bacteria "good" and "bad". Bad bacteria make us sick. Good bacteria help us digest food, and a few other things. Let me propose another view. Any bacteria (i.e., bacterial species) will make us sick if it becomes too numerous – so all bacteria are "bad". All bacteria protect us against other bacteria – so all bacteria are "good". The terms "good" and "bad" are misleading. It is like saying a person is inherently rich or poor. Anyone, given a lot of money, becomes rich. Anyone whose money is taken away becomes poor. Low bacterial diversity or reduction of diversity makes it more likely that one bacterial species can overwhelm its competitors, producing sickness. When this happens, to say that the species (e.g., *H. pylori*) that became numerous "caused" the sickness (e.g., ulcers) is to seriously misunderstand what happened and how to prevent it from happening. We are taught that our immune system protects us from infection. We should be taught that bacterial diversity does the same thing.

The following story, from a reader of this blog, suggested these ideas:

My wife had a lot of problems, visceral fat that wouldn't go away being one of the most obvious symptoms. Every time I convinced her to try a ketogenic (= very low carb) diet, she would get sick. I went to NYC to see Paul Jaminet speak. He suggested that she likely had some type of gut infection or dysbiosis. Not a bad theory, as she'd undergone prophylactic antibiotic treatment to clear up an *H. pylori* infection. (Yes, I know, but at the time it seemed like the thing to do.)

She started putting on weight after that, which is typical.

Finally she gave VLC [very low carb] one last try. She wound up getting inflamed lymph nodes in her thighs. Our doctor was wondering if she might have bovine tuberculosis or the bubonic plague, either of which would explain her symptoms. (The nodes were inflamed, black-and-blue, and sensitive. This is a typical symptom of bovine tuberculosis, and the disease spreads from the gut to the body through the bowel. As we consume raw milk, this wasn't a crazy theory, but there have been no recorded outbreaks in Connecticut for years and years.) All the tests he did for an infection came back negative, but her symptoms clearly suggested she had one.

Finally she went to see a new OB-GYN. His nurse/dietician reaffirmed everything I'd been telling her, and she finally decided to go fully ketogenic. Once again, she got sick, but this time she decided to tough it out. Sure enough, after many weeks she started feeling better, and more importantly, the weight started coming off, and the visceral fat started reducing.

She did a stool test, and (I haven't seen the results yet) we were told that she had the obesigenic gut biota. So she started an intensive probiotic regimen. This helped her one negative from the ketogenic diet: constipation.

She's thrilled with the progress she's seeing, and her few lingering issues after going primal 2.5 years ago seem to be resolving. The constant yeast infections have abated, and she's planning a new wardrobe, heaven help me.

There are several interesting things here: 1. A very-low-carb diet made her sick. 2. This happened after antibiotic treatment. 3. Tests for infection were negative. 4. If she waited long enough, the low-carb-induced illness abated. 5. Probiotics helped. 6. Fermented foods didn't help. At the time of Paul Jaminet's diagnosis, says the reader, they were already eating plenty of fermented food: "Sauerkraut, yogurt, home-made kefir, the whole drill. No effect."

How can these observations be explained?

With some general ideas. Each bacterial species keeps similar species in check by competing for the same resources (food and location). No two species need exactly the same things but there is plenty of overlap. For example, Species 1 needs Resources A and B, Species 2 needs Resources A and C. They keep each other in check by reducing the supply of A. Suppose C = carbohydrate. By reducing C, a very-low-carb diet reduces the number of Species 2, making more A available. This allows Species 1 to greatly expand. Maybe this expansion kills off Species 2. Armed with vast amounts of A, Species 1 out-competes other competitors. Its numbers greatly increase, causing sickness.

The notion that some bacteria are good and others are bad is absurd because all are safe in small amounts and all will cause sickness in large amounts. If any one person was replicated in millions or billions of copies it would cause enormous damage, waste and disruption, no matter who it was. Suppose I was genetically replicated so that there were hundreds of millions of me. I only like a few singers, such as Michelle Shocked and Cat Power. There would be a huge undersupply of records by those singers and a huge oversupply of other music. The music industry would collapse. I am a certain size. There would be a huge shortage of clothes of my size and a huge oversupply of clothing of other sizes.

The bacterial ecosystem is not self-correcting. It is the opposite: disruptions tend to spread. Suppose you eat too little carbohydrate. This reduces Species 2 (which needs A and C = carbohydrate). This means there is more Resource A for Species 1 (which needs Resources A and B). Species 1 increases. By virtue of increased numbers, it pushes down its competitors for Resource B. These weakened competitors, which also need D, E, and F, begin to lose battles for those resources against other bacteria that need D, E, and F. They decline in number. No longer with substantial competition for what it needs (A and B), Species 1 multiplies unchecked and causes damage until A and B run out. (Which may be why the reader's wife, after a long illness, got better.) Fever fights infection because bacteria that grow best at one temperature (normal body temperature) do less well against competitors at a higher temperature.

The tests for infection failed to come up positive because they looked for too few bacteria. According to this view, there are thousands of bacteria inside us that can run out of control. You can test for only a tiny fraction of them. Fermented foods failed to help because they did not provide enough diversity.

We have a huge preference for diversity in what we eat. We much prefer a meal with three foods than one food, for example. The usual view is that this preference evolved because we need many nutrients (e.g., many vitamins)



to be healthy. Now I wonder. Maybe the protective effect of bacterial diversity was the main reason. If so, taking a multi-vitamin pill is not going to do much good, which is [1]what research suggests.

These ideas are obviously supported by evidence that fermented foods improve health and antibiotics harm health, which [2]I've covered many times. They are also supported by two recent studies with a different emphasis. One of them found that [3]teenagers who had more biodiversity near home had more bacterial diversity on their skin. (Maybe there are other important drivers of diversity besides fermented foods.) The other found that [4]people with sinusitis had less bacterial diversity in their nose than people without sinusitis and that increasing diversity tended to prevent sinusitis. Someday the 2005 Nobel Prize for "showing" that ulcers are "caused" by *H. pylori* will seem as medieval as the 1949 Nobel Prize for prefrontal lobotomies.

The practical consequences of this view include: 1. Antibiotics should be a very last resort. When given, they should be followed by treatments that restore bacterial diversity. The reader's story suggests restoration of diversity may not be easy. Plainly diversity should be tracked after antibiotics. 2. Epidemiological studies should not just ask how did the germs spread? They should also ask why were they allowed to do harm? Why didn't natural defenses – the immune system and other bacteria – suppress them to harmless levels? To the epidemiological neglect of immune function we can add neglect of this line of defense. 3. There should be convenient ways to measure one's bacterial diversity so each of us can learn where we are and what makes it go up and down. 4. Researchers should study what makes bacterial diversity go up and down. Here is [5]a recent study about this: old people living in an old-age home, who ate a restricted diet, had less bacterial diversity than people the same age who lived independently and ate more varied foods.. 5. Researchers should learn the correlates of high and low diversity. Take a group of people, measure their bacterial diversity, track their health for six months.

1. <http://aje.oxfordjournals.org/content/early/2011/02/21/aje.kwq447>
2. <http://blog.sethroberts.net/the-unami-hypothesis-why-i-believe-fermented-foods-are-necessary-for-health/>
3. <http://www.pnas.org/content/early/2012/05/01/1205624109.abstract>
4. <http://blog.sethroberts.net/2012/10/20/more-fermented-foods-less-runny-nose/>
5. <http://m.npr.org/news/front/156745291?page=1>

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Tom Passin (2012-10-27 05:42:07)

Here are some articles and publications that support your arguments, including the newly published work from PLOS Pathogens that found a mix of six specific bacteria was effective in suppressing *C. difficile* infection in mice. Pax on both houses (summarizes the PLOS publication below) <http://paxonbothhouses.blogspot.com/2012/10/fecal-transplant-to-treat-clostridium.html> Bacteriotherapy Resolves Relapsing *Clostridium difficile* Disease in Mice <http://www.plospathogens.org/article/info%3Adoi%2F10.1371%2Fjournal.ppat.1002995> Tending the Body's Microbial Garden <http://www.nytimes.com/2012/06/19/science/studies-of-human-microbiome-yield-new-insights.html?pagewanted=all> How Microbes Defend and Define Us [http://www.nytimes.com/2010/07/13/science/13micro.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2010/07/13/science/13micro.html?pagewanted=all&_r=0) I'm especially interested in this since I'm about to have major knee surgery and the docs will insist on hitting me with big jolts of antibiotics. Seth: Thanks for the links. I didn't know knee surgery led to antibiotics. Can you refuse the antibiotics?

Chuck (2012-10-27 07:07:38)

Can't remember now where I read an article/paper written by a leading gut flora doctor/researcher, but his recommendation was to eat a boring diet - the same few plants & animals on a regular basis. His theory is that a very diverse diet breeds too many "jack of all trades" bacteria - none of which are really good at their job. Where a simple/boring diet, breeds experts that are really good at their job. Of course a diet of junk/processed food will most likely breed a population of junk food junkie flora who are very good at their job - maybe, too good. Cheers

threepipeproblem (2012-10-27 07:08:26)

This is the best post on gut health / germ theory ever. Thanks!

Jim Purdy (2012-10-27 08:41:31)

As we learn more, we find that things are much more complicated than we thought, and much too complicated for the simplistic drug-everybody approach of doctors and their BigPharma friends. These things we do know, at least based on recent research: 1. Fiber is good food for gut bacteria, so eat lots of fiber from things like beans, which also have lots of protein. 2. Antibiotics disrupt the gut bacteria, so try to avoid antibiotics. 3. Antacids and proton pump inhibitors disrupt the gut bacteria, so try to avoid antacids. And here's the most important lesson: Doctors love antibiotics and antacids, so try to avoid doctors. Seth: Yeah. Antibiotics are said to be the most important medical advance of the last 100 years. Yet it is plausible they do more harm than good. What does that say about all the other "advances"?

Paul N (2012-10-27 09:14:11)

@ Jim, I wouldn't be so fast to recommend beans, many types (especially soy, kidney and fava) have various components that are irritable/detrimental to many people. We should also draw a distinction between soluble and insoluble fibre. It is the soluble fibre we really want - which gut bacteria ferment into short chain fatty acids, among other things- and this can come from many sources other than beans. The focus on "healthy whole grains" has led to many people getting too much insoluble fibre, which causes problems of its own, in addition to gluten and other grain proteins. But your general point of more (soluble) fibre is in the mark, as are your points 2 & 3 (4). It is amazing how much we are prescribed things that do not cure our ills, but prolong them.

Morris (2012-10-27 09:15:16)

There may be more to this story as my experience suggests. All bacteria are consumers of nutrients ie compete with human cells. Our bodies (the inside) are not perfectly sterile and so bacteria mass accumulates with age as the immune system has a capacity limit. Our cells receive incrementally ever smaller amounts of energy (nutrients) as they age ie become smaller with succeeding replications. I have been able to significantly reverse periodontal disease via measures to limit gut bacteria after decades of gradual decay.

Reanna (2012-10-27 09:22:08)

Very interesting! Do you have a citation for the fever theory? I've never heard that before.

Tom Passin (2012-10-27 09:31:16)

Seth: Thanks for the links. I didn't know knee surgery led to antibiotics. Can you refuse the antibiotics? Probably not, and they are probably a good idea even though they will do a number on my internal flora. The concern with joint replacements is deep infections under or around the implants that can't be effectively treated because of poor blood supply deep in the joint. So the docs want to avoid them at all costs. What's more annoying is that after you have a joint replacement, you have to take antibiotics before dental work - for life, apparently. Supposedly nasty bacteria from your mouth can get into the bloodstream during the dental activities. They can supposedly get deposited around the implant and cause one of those hard-to-treat deep infections. I've had a hip replacement for 20 years. Four years ago when I moved, I didn't find a new dentist and didn't have my teeth cleaned or examined for all that time. I had fixed my acid reflux by adopting a low carb diet, and I didn't want to undo that work by use of antibiotics. Finally I had to go to the dentist because I am required to get a dental clearance for the knee surgery. I had an exam and cleaning. Even though I have a lot of gum and bone recession extending back over more than 30

years, after those four years my teeth were fine and my gums were in better shape than four years earlier. What had changed? 1- low-carb diet. 2- stopped using toothpaste having a lot of glycerin (most of them ... for a while I brushed my teeth with Ivory soap). 3- I stopped flossing and started to clean between my teeth with a little "proxy" brush instead - I had found that flossing would start infections in my gums, and that doesn't happen when I use the proxy brush instead. So - no dentist, no flossing, no standard toothpaste but plenty of attention to cleaning my teeth safely, reduce carbs which cause lots of crud to build up on the teeth. Better results. Hurray!

MikeW (2012-10-27 09:49:52)

Well I can think of a few bacteria that are unequivocally "bad". Bubonic plague. Typhus. I wouldn't blame the Black Death depopulation of Europe on faulty immune systems. Or maybe you were only referring to gut bacteria, not to nasties directly injected into the bloodstream by insects or contaminated medical equipment. Seth: You mean "on faulty immune systems and too little microbial diversity"? Dosage also matters: Exposure to a large amount of Bacteria X may cause illness, exposure to a tiny amount may be safe. I am less convinced than you that exposure to tiny amounts of the bubonic plague bacteria would be dangerous if one had a well-working immune system and plenty of internal microbial diversity. At the time of the Black Death, people may have eaten narrow diets, low in some vital nutrients. Living conditions may have also caused first exposures to the bubonic plague bacteria to be large (dangerous) rather than small (safe). On the other hand, I think you're right. We can be exposed to a large amounts of certain bacteria without harm (e.g., the bacteria in yogurt) yet exposure to a large amount of certain other bacteria is dangerous. In that sense some bacteria are more dangerous than other bacteria.

Paul Jaminet (2012-10-27 11:56:15)

Hi Seth, Great anecdote and very plausible theory. But I'm not sure the anecdote fits the theory, since the ketogenic diet on which she recovered is presumably more restrictive (less varied, even lower in carbs) than the diet on which she got sick. To me that suggests that what we need is a story of diet-microbe equilibria, in which there are multiple microbiomes that can be in equilibrium with any diet, and you can get stuck in a bad equilibrium. Dietary changes can depopulate an overgrown species, leading to a new equilibrium which may be more healthful. Then probiotics/fermented foods may enable a shift back to the original diet but with a different microbial equilibrium. So this view is not "good bacteria / bad bacteria" but "good microbiome / bad microbiome" as in your theory; but it is not a story simply of "diversity good / nondiversity bad" even though it is a story of overgrowth of a nondiverse flora causing problems. The ketogenic diet may have created a nondiverse flora that is not abundant, so the symptoms disappeared. Best, Paul

Paul Jaminet (2012-10-27 11:59:29)

PS - It's also a good example of why chronic infections are often very difficult to heal. Often steps toward healing lead to an initial aggravation of symptoms (usually ascribed to "die-off" releasing toxic cell wall components), causing people to reverse course, as she backed away from VLC/ketogenic diets several times. Seth: The die-off explanation is certainly different than what I am suggesting here (that a change in diet that eliminates a vital nutrient - vital to one or more bacteria - may thereby "unleash" other bacteria). I have never seen any evidence that the die-off explanation is correct but I will look around for such evidence.

peter (2012-10-27 12:52:52)

there was a recent article in the new yorker about bacteria and, as i recall, how H. pylori is good in childhood (and how the absence of it in childhood may account for increase in ?asthma?. as i recall it was one or two issues back. Seth: Thanks. Yeah, I saw it. After I read it again I may post about it.

Yonat (2012-10-27 13:20:02)

You may be interested to read René Dubos (one of the discoverers of antibiotics) , who wrote similar things in the 1950's. From the May 1955 issue of Scientific American: "A new look at the biological formulation of the germ theory seems warranted. We need to account for the peculiar fact that pathogenic agents sometimes can persist in the tissues without causing disease and at other times can cause disease even in the presence of specific antibodies. During the first phase of the germ theory the property of virulence was regarded as lying solely within the microbes themselves. Now virulence is coming to be thought of

as ecological. Whether man lives in equilibrium with microbes or becomes their victim depends upon the circumstances under which he encounters them. This ecological concept is not merely an intellectual game; it is essential to a proper formulation of the problem of microbial diseases and even to their control."

Jim Purdy (2012-10-27 15:10:01)

Here's a fascinating article about a microorganism that can rapidly move in when its competitors die off: "Genetic Switch Underlies *C. albicans* Quick Change Act" <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3139635/> "In most people, *C. albicans* is just another member of the body's flora, harmlessly coexisting with other microorganisms in their host. Bacteria in particular are important competitors that keep its spread in check. However, if the environment suddenly changes, causing bacteria to die off, *C. albicans* quickly adapts and takes over. Usually the effects are minor. Elderly people who use dentures may experience a dry or burning mouth condition known as "thrush." Women who suffer from irritating yeast infections and most babies fussing over diaper rash are the victims of an overaggressive population of *C. albicans*. However, if the patient's white blood cells have been compromised, say because of chemotherapy or an aggressive steroid treatment, the effects can be devastating. Serious complications arise if the fungus enters the bloodstream, perhaps through a catheter, which *C. albicans* can only do while in the more benign yeast form. However, once in the bloodstream, the fungus can deposit throughout the body as invasive hyphae. At that point it becomes known as "hematogenously disseminated candidiasis," which proves fatal in 40 % of cases, even with the best modern treatments."

Roger Sweeny (2012-10-31 20:02:56)

This has nothing to do with human health but I thought it was cool. And it goes with the headline, "Bacteria are Neither Good nor bad." self-healing concrete with limestone producing bacteria [1]<http://www.bbc.co.uk/news/science-environment-20121303>

1. <http://www.bbc.co.uk/news/science-environment-20121303>

### Assorted Links (2012-10-28 05:00)

- [1]The Detroit rule of food naming.
- [2]1962 talk by Jane Jacobs
- [3]website devoted to fermentation
- Academic horror story: [4]rape at Amherst College
- [5]Lynn Margulis on evolutionary biology

Thanks to Yoshi Yamasaki.

1. <http://www.smbc-comics.com/index.php?db=comics&id=2774#comic>

2. <http://www.wnyc.org/blogs/neh-preservation-project/2012/oct/24/jane-jacobs/>

3. <http://www.picklemetoo.com/2012/10/26/fermentation-friday-probiotic-pills-vs-fermented-food/>

4. <http://amherststudent.amherst.edu/?q=article%2F2012%2F10%2F17%2Faccount-sexual-assault-amherst-college>

5. <http://www.edge.org/documents/ThirdCulture/n-Ch.7.html>

Roger Sweeny (2012-10-28 08:15:40)

The Lynn Margulis piece is great. But people should realize that it is almost 20 years old. (And, as far as I'm concerned, the Lee Smolin comment is the best.) Seth: Huh. I didn't know that. Thanks for pointing it out.

lef (2012-10-28 10:45:04)

I also find Lynn Margulis piece great. Also I find it strange that you don't see her mentioned (at least I haven't) in blogs related to "paleo diets or lifestyle". You see other people mentioned like Richard Dawkins. I find it strange because in the paleo diet community (choose whatever meaning you want) 1) we think we are heretics, 2) we think a lot about evolution, 3) we don't have heretical opinions about evolution. Heretical opinions in evolution doesn't have to mean young earth creationist. Lynn Margulis is an example of what else it can mean. I suppose is no accident I see her mentioned here 1) Seth is an original heretic 2) Seth pays attention to bacteria

dearieme (2012-10-28 13:40:07)

From Peter Hitchens in the Mail on Sunday. "When I read in August that the talented Hollywood film director Tony Scott had killed himself without any apparent good reason, I was fairly sure that pretty soon we would find that the poor man had been taking 'antidepressants'. Well, a preliminary autopsy has found 'therapeutic' levels of an 'antidepressant' in his system. I take no pleasure in being right, but as the scale of this scandal has become clear to me, I have learned to look out for the words 'antidepressant' or 'being treated for depression' in almost any case of suicide and violent, bizarre behaviour. And I generally find it." Seth: very interesting. Hitchens might be the best-known person to make this point.

Roger Sweeny (2012-10-29 12:29:49)

I found out this morning that Lynn Margulis died, on November 22, 2011, following a stroke, at age 73. She is the "hook" in a very good Charles Mann article about the history of homo sapiens. "Until Margulis's death last year, she lived in my town, and I would bump into her on the street from time to time." <http://www.orionmagazine.org/index.php/articles/article/7146>

### **"The Scale of the Scandal": Tony Scott's Suicide Quite Possibly Due to Antidepressant (2012-10-29 05:00)**

As [1] pointed out by dearime, the columnist Peter Hitchens recently made [2] the following comment in The Mail on Sunday:

When I read in August that the talented Hollywood film director Tony Scott had killed himself without any apparent good reason, I was fairly sure that pretty soon we would find that the poor man had been taking 'antidepressants'. Well, a preliminary autopsy has found 'therapeutic' levels of an 'antidepressant' in his system. I take no pleasure in being right, but as the scale of this scandal has become clear to me, I have learned to look out for the words 'antidepressant' or 'being treated for depression' in almost any case of suicide and violent, bizarre behavior. And I generally find it. The science behind these pills is extremely dubious. Their risks are only just beginning to emerge. It is time for an inquiry.

"[3] Tony Scott Suicide Remains a Mystery After Autopsy," wrote a Vanity Fair editor. The autopsy found that he had been taking the antidepressant Remeron, whose known side effects include suicide. SSRI's, of which Remeron is an example, cause suicidal thinking in people who are not depressed.

The psychiatrist David Healy was the first to emphasize this point. In 2000, after he began this research, he was offered a job at the University of Toronto. In a very unusual move, [4] the job offer was rescinded. Apparently psychiatry professors at the University of Toronto realized that Healy's research made the psychiatric drug industry look bad.

I don't think it's wrong to sell drugs that improve this or that condition (e.g., depression), even if the improvement

is slight. I do think it's wrong to make false claims to induce people to buy the drugs. In the case of depression, the false claim is that depression is due to a "chemical imbalance." No chemical difference has ever been shown between people who later become depressed and people who don't later become depressed. This claim, repeated endlessly, makes it harder to do research into what causes depression. If you figured out what caused depression, you could treat it and prevent it much better. This false claim does enormous damage. It delays by many years discovery of effective treatment and prevention of depression, a disease from which hundreds of millions of people now suffer.

This happens in dozens of areas of medicine. Dermatologists say "[5]acne is caused by bacteria". Most doctors appear to believe "ulcers are caused by bacteria". [6]Ear nose and throat surgeons claim that part of the immune system (the tonsils) causes illness. The "scale of the scandal" – medical school professors either (a) don't understand causality or (b) deceive the rest of us – is great.

1. <http://blog.sethroberts.net/2012/10/28/assorted-links-218/#comment-1042340>
2. <http://hitchensblog.mailonsunday.co.uk/2012/10/enter-a-church-and-you-should-hear-echoes-of-eternity-not-the-sugababes.html>
3. <http://www.vanityfair.com/online/oscars/2012/10/tony-scott-autopsy-suicide-death>
4. <http://www.pharmapolitics.com/>
5. <http://blog.sethroberts.net/2012/10/19/doctor-logic-acne-is-caused-by-bacteria/>
6. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

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Jim Purdy (2012-10-29 10:05:13)

Unfortunately, many – if not most – medical doctors have become nothing much except a massive sales force for drug companies. Because I refuse to take any drugs, I have had many unpleasant conversations with doctors, and I change doctors frequently. One time, on a first visit with a new doctor, I began by telling her that I refuse to take drugs. She looked genuinely puzzled, and more than a little angry, as she demanded to know, "Then why are you here?" Good question. Why do I go to doctors, anyway? Mostly, because they are the gatekeepers who can order lab tests for blood work and urinalysis, but all I want is the lab results, so I can do my own research. I don't want their opinions about the lab results, and I sure don't want any of their drugs.

JPB (2012-10-29 10:05:24)

Indeed, the scandal is great! In the meantime, one must question all medical advice and only do what seems to be in your best interests!!

WB (2012-10-29 10:57:31)

@ Jim who said: "Why do I go to doctors, anyway? Mostly, because they are the gatekeepers who can order lab tests for blood work and urinalysis, but all I want is the lab results, so I can do my own research." Jim, you don't have to go to a physician any more to get tests from the very same labs that you would use when you have your own doctor's Rx. See for example: <http://www.directlabs.com/Home/tabid/36/language/en-US/Default.aspx> The following from their website describes succinctly how it works: "DirectLabs is the leader in direct access laboratory testing. We offer a wide variety of important health and wellness blood chemistry tests directly to you online at extremely discounted prices. Confidential results are available online in as little as 24 hours for most tests. DirectLabs offers our customers private and secure online accounts called "MyDLS" where you will access your orders, print your lab requisition, and retrieve your results." I don't necessarily recommend this or any other source – there are any number of them that you could find and use after a simple Google search.

WB

WB (2012-10-29 11:12:58)

Seth, this critique is absolutely dead on. I'm sure the modus operandi of so many medical practitioners today is the reason why they are losing credibility among a growing number of intelligent individuals who have been able to inform themselves using excellent sites like yours, and others that are readily available on the Internet. (Of course some due diligence is always required and it's necessary for one to have his/her "bullshit meter" turned on much of the time as well. Also while in the doctor's office, I might add) :-). Eventually, this will bring about dramatic, positive change in the medical system. Unfortunately, it's not happening as fast as it needs to. WB

dearieme (2012-10-30 01:47:40)

<http://www.dailymail.co.uk/health/article-2224826/Why-drugs-dont-work-Scientists-discover-statins-arent-effective-40-patients.html> Are the 40 % (allegedly) for whom statins don't lower cholesterol particularly prone to side effects, or immune to side effects, I wonder?

Sara (2012-10-31 03:51:17)

I wanted to do a research project on a possible link between SSRI use and a certain type of crime - the kind where an apparently normal person with no criminal history flips out without warning and kills or maims someone. I had noticed in the news, and by following trials, that often they would report that the accused had been taking anti-depressants and, more often than not, that they had been self-adjusting the dose (usually taking more than usual because they weren't feeling right). I found these cases so interesting because they did not fit the usual criteria of murderous behaviour (poverty, violent background, bad family life, criminal connections) - they were usually educated, normal people that just one day lost it in the most dramatic manner. I was basically told that the university would definitely not support such a project, the reasoning being that there was no previous research suggesting such a link. Secretly I think they were envisaging being sued for 10 million dollars by an enormous pharmaceutical company. Seth: What a strange reason for turning down a research project: Because it's original. A horrifying story.

Joel Derfner (2012-10-31 08:20:48)

I think the phrase "chemical imbalance" is used more to explain to laypeople what's going on than as an actual scientific analysis. I'm not going to say that there isn't much more to be learned about SSRIs, but in my case at least they've helped me a great deal.

WB (2012-10-31 09:57:19)

@Sara You may very well be on to something important. Maybe you're already aware of some of the writing about this issue, but thought I would link to the following which might be of interest: [http://www.prleap.com/pr/192130/Acts of Senseless Violence: Police data may I.D. psychiatric drug use in violent crimes The mental health watchdog Citizens Commission on Human Rights announces the latest article by journalist Kelly Patricia O'Meara, who uncovers how police may already be obtaining information on psychiatric drug use by those committing violent crimes, yet be unaware of the vital relevance of this information. \[there is more info accessible at the link.\]](http://www.prleap.com/pr/192130/Acts-of-Senseless-Violence-Police-data-may-I.D.-psychiatric-drug-use-in-violent-crimes-The-mental-health-watchdog-Citizens-Commission-on-Human-Rights-announces-the-latest-article-by-journalist-Kelly-Patricia-O'Meara-who-uncovers-how-police-may-already-be-obtaining-information-on-psychiatric-drug-use-by-those-committing-violent-crimes-yet-be-unaware-of-the-vital-relevance-of-this-information.-[there-is-more-info-accessible-at-the-link.]) \*\*\*\* There seems to be a fair amount of material available on the topic that some others have been thinking and writing about. The apparently timorous response you got from the "university" points out that in certain situations it's probably only through government auspices (or maybe some independent private foundations) that potentially controversial research like this can be pursued without threat or corrupting influences. I hope you can find another way to pursue your research. WB

Jenny (2012-10-31 15:45:47)

I was taught over 40 years ago, that anyone taking an anti-depressant was at risk of suicide as they improved. The logic was that the physical apathy of depression improved ahead of the mental aspects - particularly the belief that you would never get better. This resulted in people who now had the energy to commit suicide (which they had not had before) but still had the unhappiness. To attempt suicide was logical. If true, this means that any antidepressant is problematic. Seth: I think there is a lot of truth to this. But I wonder if it is the whole problem with SSRIs. David Healy found that an SSRI, when given to non-depressed persons, caused "dark thoughts" - thoughts of suicide and violence.

Sara Lake (2012-11-06 18:06:57)

@Wb thanks for that. I certainly haven't given up on the idea. I think once I get past Masters level, I might have more luck. For a thesis, they generally like a bit of background research so that there is a good chance of getting a significant finding. Also the funding tends to revolve around certain areas that the professors are already researching and murderous SSRI users is not one of those. As well, I could already see problems with ethics: getting accurate info from psychs on what these people were taking (privacy act!) and, well, there just aren't that many people that go crazy in this way. Even if every single one of them was taking SSRI's, it would only be a drop in the bucket of total people taking them and therefore, not really indicative of anything.

## **Acne Caused By Pasteurized Dairy: How One Person Figured It Out (2012-10-30 05:00)**

A reader of this blog named Tony Mach [1] explains how he figured out that his acne was caused by pasteurized dairy products:

In summer 2010 my health problems got noticeably worse (unrefreshing sleep, strange pains, strange sensations in the skin and other stuff I don't want to share here 🤔), and I had to do something. Furthermore I was gaining weight, so I was suspecting something along the lines of diabetes or other metabolic problem.

As I was looking into dietary changes, I stumbled over Wolfgang Lutz's and Robert Atkins' work. Being an engineer by training, I figured that if blood sugar might be the problem (which, as it turned out, wasn't the case for me), then reducing carbs might be a solution (stop fueling the problematic sub-system) – so both Lutz and Atkins appealed to me. I thought let's give it a try. I was a bit frightened about such an radical change of diet – you read all kind of BS – but hey, I felt like I was going to die anyway.

Before the change, I ate a lots of white bread, some milk chocolate and drank lots of milk. First I reduced carbs – like Lutz suggested, I tried to aim for 6 bread units – but within days I noticed that some problems (like the strange pain and skin sensations) diminished right away. The acne cleared up noticeably. So I thought why bother with low-carb, let's go full no-carb (like Atkins suggests for some month).

And voila, with no-carb everything got better. I started to feel healthy for the first time in my life. I lost over 30 pounds, all health problems either went away or were almost gone, and life started to become enjoyable. This was a period of about two months over with most problems went away, some fast, some slower.

So for over half a year I was focused on the carbs=evil scheme, started eating cheese again (hey, no carbs!), when slowly some of the health problems returned and my weight started to rise again.

At that point I panicked a bit and made a huge mistake: I thought I can figure this one out too, I have to do something right away. So I trusted what some doctors had written about a pathogen (which I tested for with borderline results), how to cure it (with over the counter medications like Vitamin D and NAC and other stuff) and I thought let's try this too! The things I took made me worse, but as it was supposed to be a "die off"/"herx" reaction, I wasn't too alarmed. Turned out that experiment cost me almost an year until I got better again. So for about a year I was not in the mood for big experiments and personal stuff like moving to another city kept me busy.

But slowly I introduced "safe starches" into my diet (like plantains), because I kept reading one should not go too much low-carb. I tried out self-made sourdough rye bread (makes me enormously hungry, so I stopped again) and at one point I thought: What the heck, I'm going to eat ice cream today. Three hours later I got slightly noticeable pimples and local inflammation (I think they are called nodules) and after another roughly 3 hours the acne was prominent.



After that, my suspicion was that milk might be bad for me, but maybe some properly “ripe” cheese like hard cheese (properly digested by bacteria) might be OK. So I waited for the acne inflammation to go away and tried again with a Parmesan cheese. Bingo, acne again, and again in the 3 to 6 hour time frame.

So I didn’t touch milk or dairy again, but now I looked for raw milk cheese, as I read something about it being possibly better. After a while I found raw-milk-cheese, tried it – and got no acne. Tried again, after some time, with another brand – again no acne. Tried cheese from pasteurized milk – acne.

As I still have health problems, I am still in the process of figuring out things. Next up for me is trying to get rid of beef for a week or two, to see if that might be a problem for me.

In summary:

- I was not very systematic in my experiments, and had some lucky moments.
- All the macro-nutrient ratio paradigms are IMHO BS and not applicable for the majority (might make sense if someone has real/major metabolic problems like T1DM, etc.)
- Having said that, in my view some carb foods come with baggage: e.g. cereal grains and (pasteurized) milk
- A quickly reacting, non-dangerous, clearly visible (objective) surrogate health marker (in my case acne) is worth its weight in gold [I agree, canary in coal mine. In this case it isn’t clear what else besides no acne was gained by avoiding pasteurized dairy. – Seth]
- With such a marker, one should completely eliminate suspicious foods (in my case \*ALL\* dairy) and then introduce it again (two or three challenges)
- For me, pasteurized dairy = acne, raw dairy = no acne
- Milk chocolate is dairy [A friend’s mother said, “If I’m ever in jail, bring me some chocolate.” She’ll break out. – Seth]
- Some surrogate health markers (e.g. weight) reacted “funky” for me: I changed my diet to no-carb, my weight went down, and without any big changes [in diet or exercise] my weight started to climb again. [Same thing happened to [2]Alex Chernavsky. – Seth]
- For most of the health problems that went away, I don’t know exactly what food (Cereal grains? Dairy? Vegetable oils? etc.) caused what problem
- As I felt like I was going to die on my old diet, I am not particular keen on going back full scale to my old diet to see if after one or two month all my old symptoms return, to determine which food caused which symptom... [Better to test the old foods one at a time. – Seth]
- Medical science and several MDs helped me diddly squat
- Paleo blogs were much more helpful than the medical community

I can only guess why raw milk and cheese are less harmful than pasteurized milk and cheese. Maybe milk and cheese contain acne-causing chemicals that leak into the blood. Maybe raw milk, which contains bigger entities than pasteurized milk, does a better job of plugging the holes from digestive system to blood.

1. <http://blog.sethroberts.net/2012/10/19/doctor-logic-acne-is-caused-by-bacteria/#comment-1041747>

2. <http://blog.sethroberts.net/2012/03/13/ten-years-of-weights-including-two-years-on-the-shangri-la-diet/>

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Mehmet Koseoglu (2012-10-30 05:27:18)

Maybe you are already aware but there are some studies linking milk consumption to acne: <http://nutritionfacts.org/video/skim-milk-and-acne/> You may also be interested in the nutritionfacts.org website which provides nice short videos regarding the latest research on nutrition. Although (I believe) it cherry picks studies to promote veganism, it is very informative. For example, I am sure you will be interested in how the bacteria in the mouth affects athletic performance: <http://nutritionfacts.org/video/dont->

use-antiseptic-mouthwash/

August (2012-10-30 06:37:26)

I'll get a pimple if I eat anything with casein, soy, or wheat in it. I have heard that there is a cross-reactivity with milk and wheat, but I don't know if a similar protein is in soy or not. I won't even eat stuff with soy lecithin, but what's really annoying is when I try some supplement only to find it is made with soy. In some cases, I think the supplement making process may purify whatever they are taking out of the soy to the point where it isn't a problem any more, but it is still a bit of a gamble.

Thomas W (2012-10-30 09:00:50)

Real Parmesan IS raw milk cheese.

David Johnston (2012-10-30 09:25:33)

Not all Parmesan is created equal. <http://www.italianfoodnet.com/eng/food-and-wine-news/item/fake-parmesan-wins-the-us-best-cheese-award>

Kent Akselsen (2012-10-30 10:05:57)

When you have multiple allergies, it is very difficult to figure out which foods are the culprits. I had terrific results identifying my food allergies with the Meridian Valley E95 Basic and A95 Food Panels. I had severe Rheumatoid Arthritis that did not respond to any of the dozens of treatments that my board certified rheumatologist tried over a period of several years. A holistic doctor suggested we try the Meridian Valley Food Panels, so we drew blood and sent it off. The results were very accurate when I checked them through elimination diet, and most of my symptoms went away when I eliminated dairy, eggs, wheat, and beef from my diet. Unless you can find a doctor already using the Meridian Valley tests, you will have to order a test kit and prepay for the test. And of course you must have a doctor willing to draw the blood and ship it. Meridian Valley is in Renton, WA. Their phone number is 425-271-8689. Seth: very interesting, thanks.

Paul N (2012-10-30 12:25:24)

Many people do better on raw than pasteurised milk. For a whole bunch of information about raw milk, you can check out; <http://www.realmilk.com/> It is known that some of the milk proteins are denatured by pasteurization. For some people, their digestive system reacts to these and their body mounts an immune response to it. Acne is often the result of gut irritation and/or mild autoimmune conditions. Powdered milk is even worse, and any product that has "modified milk ingredients" has powdered milk, or worse. Skim milk is one example - it is "fortified" with powdered milk to make it taste less watery. For many people, they have trouble with skim milk and non fat yogurt - which we are all told to eat - but do fine with full fat milk and yogurt - the fats are somehow protective. Clearly, Tony is more sensitive to this, and acne was the way it was manifested. There are many raw aged cheeses available - under USDA rules, a cheese can be made from raw milk if it is aged for more than 60 days. Not all aged cheeses are raw, so check the labels. A final thought, most cows in the US are Holstein-Friesian, which produce milk with type A1 casein protein. Other cows, like Jersey, Guernsey, Dexter, all Indian breeds, buffalo, sheep, goats, horses and humans produce milk with type A2 casein. Many people are sensitive to A1 casein but not A2 - the people who can only drink goats milk. This is often mistaken for "lactose intolerance". You can read more about A2 milk here; <http://www.westonaprice.org/thumbs-up-reviews/devil-in-the-milk>

Koanic (2012-10-30 19:08:42)

I could be mixing stuff up here, but I thought I heard that the fat droplets in pasteurized milk became too small and pass through cell walls, whereas unpasteurized doesn't have that problem. Maybe Dave Asprey said this?

dearieme (2012-10-31 04:05:03)

I see from the Telegraph that there's a Canadian Cardiovascular Congress going on. I suspect that this might provide you with a target-rich environment, Seth.

wikiderm (2012-10-31 05:36:13)

My research for years has focussed on the dairy hormonal impact on acne. These stories make me more and more interested in learning about the possibility of an antigenic cross-reactivity between the proteins in milk (from mammary glands) and the proteins in sebaceous glands. Could an allergy to one cross-react with the other? There is NO science on this to date. BOTH glands are epidermal appendages and so should share antigens.

### **"Must Prescribe Antibiotic, Must Prescribe Antibiotic ... " (2012-10-31 05:00)**

Jim Purdy, who often comments here, told me the following story:

Recently, a health professional ordered two tests for infectious bacteria in a small foot wound (I think the tests were for gram negative or gram positive bacteria, or maybe aerobic and anaerobic). Even before the bacterial tests came back, she wanted me to start on antibiotics. Instead I waited. The first results showed a very low level of a harmless bacteria, so I was glad I hadn't started antibiotics.

When I saw her again, a few weeks later, I asked about the second set of bacterial tests. She claimed that there had only been one test, but I insisted she check again. She left, and came back a few minutes later and said that she had found the second results, and there had been no bacteria.

Surely the health professional knew that antibiotics are overprescribed, that antibiotic resistant bacteria have become a serious problem, that antibiotics are dangerous, and yet she not only failed give the wound a chance to heal on its own, she failed to allow test results to guide what she did. No wonder she forgot about the second test.

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charlie (2012-10-31 05:43:29)

I think the real mystery is why you are seeing a "health professional" for a small foot wound. Again, sub-clinical. I wish you would focus on system that really have destructive antibacterial systems, such as India or Russia. That is the real danger, not this sub-clinical stuff.

Jim Purdy (2012-10-31 08:12:30)

Charlie, I have type 2 diabetes, so any "sub-clinical" open foot wound can quickly become a serious problem for me. I check my feet daily, but I don't see the point of taking unnecessary antibiotics. For that matter, I don't like to take any medications. I prefer to let my body try to heal itself, without a lot of BigPharma chemicals.

Drewfus (2012-10-31 18:31:24)

Unnecessary prescription of antibiotics would likely result in the atrophying of the immune system. This would result in an increased susceptibility to disease, and this in turn would likely result in more trips to the doctor. The business model of the medical establishment is anti-social.

dearieme (2012-11-01 03:02:38)

Hello, hello: every retreat must start with a first pace. <http://www.telegraph.co.uk/health/healthnews/9645346/Statins-side-effects-war-ning-when-combined-with-other-drugs-regulator.html>

charlie (2012-11-01 07:45:52)

@JimPurdy; good luck with that. As I've said before, self-experimentation is brilliant at sub-clinical issues. However, once you've got a major problem, trying to be smarter than your doctor has moved you into Jenny McCarthy territory. Seth: Jim Purdy was told by a team of doctors that if he didn't have his leg amputated he would unquestionably die. That's a major problem. Thinking life without a leg wouldn't be worth living, he refused the amputation. He recovered. Jenny McCarthy has not had similar experiences, as far as I know.

Adam (2012-11-02 07:16:14)

One of the Chinese pharmacists I work with noticed a doctor prescribing antibiotics for a patient with diarrhea. She then asked me why doctors prescribe antibiotics for diarrhea when antibiotics are well-known to \*cause\* diarrhea. At least she's thinking about it!

Robin (2012-11-02 09:15:26)

I went to my GP once because of a sore throat. He immediately prescribed antibiotics and a ton of other stuff. So I asked - Isn't my problem a virus? Sore throats usually are. He was taken aback and simply said... "yes it is but you know these sore throats often develop into bacterial infections so you should take antibiotics just in case." I live in Singapore where you get the drugs directly from the doctor. This place seems to have an extremely high rate of antibiotic use and very low levels of understanding about how to use them. I've met several people who said they "stopped taking them halfway through the course" because they felt better and saved the rest for the next time they got ill. They save the leftovers then pop them like they are echinacea to ward off a cold.

## 7.11 November

### Vitamin D3 in Morning Improves Sleep After All (Story 26) (2012-11-01 05:00)

Adam Clemans (28 years old, about 80 kg, pharmacist, lives in Shanghai) [1]commented on a recent post that Vitamin D3 didn't seem to improve his sleep ("I can't say I noticed any improvement in my sleep from Vitamin D"). He took 4000 IU in drop form right after he woke up.

I wrote him for details. I said that since 4000 IU was the lowest dose I found effective, he might want to try a higher dose. Adam answered my questions and said he would try a higher dose. Two weeks later he wrote again:

I started taking 4 drops (8000 IU) of Vitamin D3 1st thing in the morning (up from 2 drops or 4000 IU); my sleep seemed to improve immediately and quite dramatically. I had been struggling with middle-of-the-night awakening for a week or so, but after the change I slept like a brick or a baby (pick your metaphor). I would like to experiment with this more before I say I am sold on it, but for now it seems to be working well.

He'd been doing the higher dose for two weeks. Hard to explain as a placebo effect.

1. <http://blog.sethroberts.net/2012/10/10/two-more-vitamin-d-stories-it-eliminates-colds-and-improves-sleep-when-taken-in-the-morning/#comment-1034197>

libfree (2012-11-01 06:07:04)

Any thoughts on the form of Vitamin D3 you take? I notice he is taking it in drop form.

gwern (2012-11-01 08:40:13)

> He'd been doing the higher dose for two weeks. Hard to explain as a placebo effect. No, I mean it's not like a high-status elite person or thought-leader might have told him to do something different and eager to please, he responded. There's not the slightest chance of that, it's beyond hard to explain.

charlie (2012-11-01 09:13:02)

@gwern; exactly. However, at least there is a theory linking early morning Vitamin D to sleep patterns. I'm going to try 4000 IU for a month.

Antonio (2012-11-01 09:33:40)

I wonder what would be the consequences of the higher intake on D3 for long time periods ....

Jonathan Shewchuk (2012-11-01 14:24:33)

libfree: Dr. William Davis, cardiologist, has mentioned repeatedly on his blog that when his patients have taken D3 in tablet form, often their blood levels have not risen as much as anticipated, and sometimes not at all. Based on his experience, he insists on D3 dissolved in oil, usually in the form of gels. I think the drops work too, though probably better if they're taken with some fat, as D is fat-soluble. Davis has hundreds of patients whose serum D levels he monitors, so he speaks from great direct experience of which pills do and don't raise those levels. (He also notes that D2 pills are useless.)

David Johnston (2012-11-01 15:40:22)

Antonio, check out Chris Masterjohn's writings on the how A, D and K2 each work in combination to cover for the toxicity of the others. So it's wise to not just take large doses of D3. Also take A and K2 at the same time.

John Weston (2012-11-01 21:50:12)

The Half life of Vitamin D is measured in weeks(3-4). Consequently it takes months to get close to a steady state blood level so taking it morning or evening is immaterial. 4000 IU/day or 28,000 IU once a week is almost identical. A two week test is not long enough for benefits to really manifest. To jumpstart blood levels, about 3 weeks of your daily dose should be a good start. So at 4000 IU per day, 84,000 IU take once or spread over a couple of days would avoid the months otherwise needed to get to steady state blood levels. The prescription dosage taken is a single 50,000 IU dose taken weekly so this appears to be safe. Seth: If "taking it morning or evening is immaterial" why do many people find the time of day makes a difference (morning much better than evening)? The usual view of how Vitamin D acts, which you describe, can't explain this.

Adam (2012-11-02 07:09:58)

I usually eat about 8 eggs fried in butter for breakfast, along with fish oil capsules, so I doubt I'm lacking fat with my Vitamin D. Just a couple of typos Seth, my family name is Clemans with an "A" & I live in Shanghai, not Singapore. I'll update this thread if there's any further change in my sleep. I'm open to the possibility that it could be a placebo effect, or it could just be that my sleep pattern returned to normal after whatever disturbed it. The problem is, sleep is so valuable to me that I'm not really willing to experiment in ways that might harm it (moving Vitamin D administration to the evening, for example). Seth: I am stunned that I typed Singapore in place of Shanghai. If I were you I would vary the time of taking Vitamin D by an hour, see if that makes a difference. Or by a half hour. I found those changes made a noticeable difference, sometimes improving the effect.

Sam (2012-11-02 19:19:07)

New article by the Hartford Courant about a recent vitamin ad. Not to say that vitamins are ineffective—just that the media can go overboard in claiming how much they can do: <http://www.courant.com/news/opinion/hc-op-barreca-women-in-ad-unreal-1102-20121101,0,2875260.column>

Jim breed (2012-11-02 21:36:18)

Gwen, I unwittingly reduced my d dose from 5000 to 1000 while traveling earlier this year. I noticed a change in my sleep pattern for the worse and then I found out from my wife that the dosage had been reduced. I wrote up my observations and Seth printed them earlier this year. I wasn't expecting this result.

Adam (2012-11-03 03:53:30)

I found some interesting stuff this afternoon that has convinced me a temporal effect of Vitamin D isn't so far-fetched after all. While it is true Cholecalciferol has a long half-life, Cholecalciferol is just one part of a complicated network. It is metabolized into an intermediate in the Liver that is then metabolized into Calcitriol (the active form) in the Kidneys. Calcitriol has an inhibitory effect on gene expression of PTH that is delayed by hours. Say it takes 14 hours for a bolus of Cholecalciferol to increase Calcitriol which then inhibits PTH synthesis. The half-life of PTH is measured in minutes, not days or hours, so we would have a drop in PTH levels around bedtime if we took our Cholecalciferol in the morning. This is all speculation, but it does make it seem much more plausible in my mind.

Guv (2012-11-05 03:12:00)

from a quick google, it would seem that a lot of minerals and hormones in the body follow a diurnal rhythm. including Calcitriol (1,25-dihydroxyvitamin D) and PTH (Parathyroid Hormone). here are 2 studies, <http://www.ncbi.nlm.nih.gov/pubmed/11980-618> <http://jcem.endojournals.org/content/82/1/281.full> so may be it's feasible that supplementing with D3 at the right time & enough of a dose may reinforce theses diurnal variations (increasing the "amplitudes"). If this was the case, then it would make sense that timing (when you supp D3) would be very important. or, another scenario might be that the d3 supp timing is 'correcting' a screwed up rhythm. i have heard anecdotes of people supplementing with melatonin to adjust to new times zones, may be D3 in the mornings might have a similar effect. some food for thought

Jenny (2012-11-07 15:35:36)

I recently started taking my D3 (4-5000IU a day, a.m.) in droplet form, having taken gel caps. I find the droplets work even better - but I am coeliac, and put this down to the chronic coeliac malabsorption problems - even when gluten-free. BTW, I had one set of D3 gelcaps, extracted from lanolin rather than fish oils. Within a week I started feeling slightly off, and within 2 weeks I developed acute joint pain. I checked and found other people reporting the same, so immediately swapped back to fish oil derived D3, and my joints recovered after 3-4 days.

## **A Theft in China (2012-11-02 05:00)**

A friend of mine was at a KFC in Beijing. She returned from the bathroom to find her purse was gone. She called the manager. The police came in 15 minutes. At the police station, she saw security footage, which showed that her purse had been taken by an 11-year-old girl. "Heart-breaking," said my friend.

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Mac (2012-11-02 06:10:11)

Really? This would happen in any big city in America. Your friend should have kept her purse on her person. Seth: My friend is from South Korea, where she says this would never happen. For all I know, you're right that this would happen in any big American city. I would be interested in the results of experiments - leaving purses unattended, seeing what happens - to find

out how often this happens in different places.

Alex Chernavsky (2012-11-02 10:19:48)

Here's a somewhat related article about Japanese honesty in turning-in lost items:  
<http://www.nytimes.com/2004/01/08/world/never-lost-but-found-daily-japanese-honesty.html>

Antonio (2012-11-02 10:55:31)

Honestly, what she did was kind of dumb. She cannot travel. Sorry.

Alex (2012-11-02 11:08:23)

If she routinely leaves her purse unattended while she's in the bathroom, it's remarkable to me that having her purse stolen is remarkable to her.

William Ryan (2012-11-02 11:52:36)

@Mac/Antonio/Alex: Aside from illustrating the concept of blaming the victim, did it ever occur to you that the friend's response to the crime could be the impetus of Seth's post? Empathy vs anger??? @Antonio: Aren't you making an assumption that she's traveling? I don't see anything specifying visitor or resident. Perhaps she's a native and this post is highlighting the point I made above.

BenSix (2012-11-02 16:44:06)

*Really? This would happen in any big city in America.* It's no less heartbreaking for being common!

Minji Ko (2012-11-02 21:54:01)

Here I see the story of mine! I live in China since I was a 13-year-old kid and it was the first time happening to me. I came back within a minute after I left. When I came back, the girl was still nearby, looking at me pointing at the chair where I put my purse, asking people if they had seen someone taking it, and finally calling the manager. Then she ran outside of KFC. It happened on Sunday, but till Friday I couldn't even know if the police checked the other footage or not, so I went to the police office yesterday. At there, what I could hear them saying that the girl cannot be a student so that it was impossible to find the girl (Why this excuse?) But "fortunately", I persuaded a police officer, so he and I went to the mall (where KFC is) and checked the other video footage. The girl left the KFC and went into the mall, walked a little, met her mother. And most surprisingly, she, with her mother, took the elevator and went to the ice rink! The police and I were so shocked to see this, because the entrance fee and the rental fee was not so much reasonable for average Chinese people (about \$10 for 90 minutes) For more, we also found that she was holding her ice rink membership card in her hand... She seemed to be so excited going skating since she never stopped smiling as if she had never even touched my purse. It is heartbreaking that not only had I to say goodbye to my purse, and all the important stuffs like credit cards, and my driver's licence, this little innocent-looking girl who seemed not at all poor but rich took my purse, and seemed to have no sense of guilty or something. And I don't think I will be able to understand why the police made a such excuse.

Antonio (2012-11-03 01:03:28)

Well if she is a native her lack of care with her own stuff is even more remarkable. She cannot really travel; certainly not US; maybe (with luck) to Scandinavia in the low season.

kxmoore (2012-11-04 00:16:04)

how did she know the child was 11? Seth: it's an estimate.

## Movie Grosses and Nobel Prizes (2012-11-03 05:00)

In Edward Jay Epstein's new piece [1]Gross Misunderstanding, in the Columbia Journalism Review, he writes

By focusing on the box-office race that is spoon-fed to them each week, journalists may entertain their audiences, but they are missing the real story.

Something similar happens with the Nobel Prizes. Journalists print what they are told – Scientists X and Y did beautiful "pure science" about this or that – and thereby miss the real story. In the case of Nobel Prizes in Medicine, the real story is the long-running lack of progress on major diseases (cancer, heart disease, depression, etc.).

1. [http://www.cjr.org/cover\\_story/gross\\_misunderstanding.php](http://www.cjr.org/cover_story/gross_misunderstanding.php)

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Jim Daley (2012-11-04 15:38:47)

There is also a national bias against certain diseases that don't match the liberal media agenda. We have just gone through a month-long propaganda campaign to eliminate breast cancer. I support all efforts to find a cure for breast cancer...but where the heck is the strong effort to find a cure or even a good palliative for osteo-arthritis? I'll wager more people suffer from the latter than the former! Seth: Yes, why isn't it "find a way to prevent" breast cancer rather than "find a cure"? A "search for a cure" helps mainstream medicine. Prevention research, the opposite: fewer people sick, less profit. Yet women obviously benefit much more from prevention research.

Adam (2012-11-04 18:32:05)

Benjamin Franklin is quoted as saying: "An ounce of prevention is worth a pound of cure." This is always my response when people start asking ridiculous hypothetical questions of morality too ("would you kill the old woman or save the 6 infants from the train car?"). Life is more complicated than black & white dichotomies. What can we do NOW to prevent the old woman & 6 infants situation from occurring at all?

## Assorted Links (2012-11-04 05:00)

- [1]Trying to crowd-source a cure for brain cancer.
- [2]Interview with Aaron Blaisdell about Ancestral Health Symposiums
- [3]Plagiarism Today, a website.
- [4]Plagiarism averted
- Better late than never. By having him do [5]a Fiction Podcast, the editors of The New Yorker finally acknowledge that David Sedaris is a fabulist. Treating his stories as if they actually happened (putting them under Personal History, not Fiction) was a curious editorial decision for a magazine that fact-checks poetry. Step 2 toward more New Yorker editorial honesty: Book excerpts are labelled as such.
- [6]self-experimentation workshop in Silicon Valley



Thanks to Dave Lull.

1. <http://www.newscientist.com/article/mg21628880.300-crowdsourcing-a-cure-for-my-brain-cancer.htm>
2. <http://www.paleomagonline.com/2012/10/20/interview-with-aaron-blaisdell/>
3. <http://www.plagiarismtoday.com/>
4. <http://jimromenesko.com/2012/09/21/tipster-plagiarism-had-almost-made-it-to-the-final-print-of-chris-andersons-new-book/>
5. <http://www.newyorker.com/online/blogs/books/2012/11/fiction-podcast-david-sedaris-reads-miranda-july.html>
6. <http://www.meetup.com/quantified-self-silicon-valley/events/89249442/>

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Peter (2012-11-14 08:18:33)

Interesting point about Sedaris. I read a couple of his books long ago and I can't say I ever thought about it at the time (I see now that I missed a big 2007 story about this in TNR) ...but thinking back now it's obvious that his stories must have been heavily embellished. I wonder who the most honest modern memoirists are. Even more, I wonder why the non-fiction label is so valuable. So much celebrated fiction is semi-autobiographical that there's clearly an audience for that too, but I guess the audience for "memoirs" is larger or less crowded? Seth: I think the non-fiction label is valuable because other things equal a true story is more impressive than a fictional one. For example, "I was kidnapped by aliens." If true, much more impressive.

### **Posit Science: Does It Help? (2012-11-05 05:00)**

Tim Lundeen pointed me to [1]the website of Posit Science, which sells ( \$10/month) access to a bunch of exercises that supposedly improve various brain functions, such as memory, attention, and navigation. I first encountered Posit Science at a booth at a convention for psychologists about five years ago. They had reprints available. I looked at a study published in the Proceedings of the National Academy of Sciences. I was surprised how weak was the evidence that their exercises helped.

Maybe the evidence has improved. Under the heading "world class science" the Posit Science website emphasizes a few of the 20-odd published studies. First on their list of "peer-reviewed research" is "the IMPACT study", which has [2]its own web page.

With 524 participants, the IMPACT study is the largest clinical trial ever to examine whether a specially designed, widely available cognitive training program significantly improves cognitive abilities in adults. Led by distinguished scientists from Mayo Clinic and the University of Southern California, the IMPACT study proves that people can make statistically significant gains in memory and processing speed if they do the right kind of scientifically designed cognitive exercises.

The study compared a few hundred people who got the Posit Science exercises with a few hundred people who got an "active control" treatment that is [3]poorly described. It is called "computer-based learning". I couldn't care less that people who spend an enormous amount of time doing laboratory brain tests (1 hour/day, 5 days/week, 8-10 weeks) thereby do better on other laboratory brain tests. I wanted to know if the laboratory training produced improvement in everyday life. This is what most people want to know, I'm sure. The study designers seem to agree. The [4]procedure description says "to be of real value to users, improvement on a training program must generalize to improvement on real-world activities".

On the all-important question of real-world improvement, [5]the results page said very little. I looked for the published paper. I couldn't find it on the website. Odd. I found it [6]on Scribd.

Effect of the training on real-world activities was measured like this:

The CSRQ-25 consists of 25 statements about cognition and mood in everyday life over the past 2 weeks, answered using a 5-point Likert scale.

Mood? Why was that included? In any case, the training group started with an average score of 2.23 on the CSRQ-25. After training, they improved by 0.07. (Significantly more than the control group.) Not only is that a tiny improvement (percentage-wise) it is unclear what it means. The measurement scale is not well-described. Was the range of possible answers 1 to 5? Or 0 to 4? What does 2 mean? What does 3 mean? It is clear, however, that on a scale where the greatest possible improvement was either 1.23 (assuming 1 was the best possible score) or 2.23 (assuming 0 was the best possible score), the actual improvement was 0.07. Not much for 50-odd hours of practice. Although the website seems proud of the large sample size ("largest clinical trial ever"), it is now clear why it was so large: With a smaller sample the tiny real-world improvement would have been undetectable. Because the website treats this as the best evidence, I assume the other evidence is even less impressive. The questions about mood are irrelevant to the website claims, which are all about cognition. Why weren't the mood questions removed from the analysis? It is entirely possible that, had the mood questions been removed, the training would have produced no improvement.

The first author of the IMPACT study is Glenn Smith, who works at the Mayo Clinic. I emailed him to ask (a) why the assessment of real-world effects included questions about mood and (b) what happens if the mood questions are removed. I predict he won't answer. A friend predicts he will.

[7]More questions for Posit Science

1. <http://www.positscience.com/>
2. <http://www.positscience.com/why-brainhq/world-class-science/peer-reviewed-research/impact-study>
3. <http://www.positscience.com/why-brainhq/world-class-science/peer-reviewed-research/impact-study>
4. <http://www.positscience.com/why-brainhq/world-class-science/peer-reviewed-research/impact-study>
5. <http://www.positscience.com/sites/default/files/pdfs/study-impact-results.pdf>
6. <http://www.scribd.com/doc/17888028/Smith-2009-IMPACT-Study>
7. <http://blog.sethroberts.net/2013/02/22/questions-for-posit-science/>

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Alex Chernavsky (2012-11-05 14:02:33)

See also this article from the *New York Times* (Oct. 31): "The Brain Trainers" I've only had time to read the first few paragraphs, but Posit Science is mentioned in the article (along with some other companies that are similar). Seth: The NY Times article suggests that parents with learning disabled children will pay enormous prices for training (e.g., \$10,000/year) and the training does help. That's a considerably different target population than the one aimed at by the Posit Science website: old people.

L (2012-11-06 00:13:52)

@ Professr Roberts: Maybe you can start a website to sell your math test to professors who need to measure brain function

L (2012-11-06 00:23:15)

@ Professor Roberts: Can you post Dr Smith's email address? I can't find it and I just spent one hour looking for it. Seth: smitg@mayo.edu

Henry Mahncke (2012-11-06 10:39:56)

Dear Dr. Roberts, I'm the CEO of Posit Science, and an author on the IMPACT papers - I saw your blog post and thought I could shed some light on your questions. Generally, this information is covered in our publications, but was too detailed to have on our web pages. They are great questions! 1) Active Control: We picked an active control that was comparable to what doctors currently recommend - which is to stay cognitively active. People in this group learned from educational DVD's (like Cosmos, History of Art, and so forth) and took quizzes each day on what they learned. This was a good control for our study because we could match the time spent on cognitive training, and people enrolled in this arm believed that this activity could help their cognitive function - so we could maintain the study blind for participants. 2) Self-Report Measure: The CSRQ has 25 questions, with questions like "I have felt I have a good memory", rated 1 (almost always) to 5 (hardly ever) over the past two weeks of time. In clinical trials like this, the best way to consider the magnitude of the effect is an effect size measure - we use the standard Cohen's d measure. On this measure, the effect on standardized neuropsychological tests is about 0.25, which is equivalent to 10 years of cognitive function. The effect size on the self-report measure was about the same, indicating that the improvement in objective measures of cognition matched the improvement in subjective measures - people really noticed the changes in themselves. There are a few mood questions on the CSRQ, because mood and cognition are related, however repeating the analysis with the mood questions removed doesn't affect the results - the effect is the same just considering the core cognition questions. We are proud of the clinical trials that we and our scientific collaborators have run - we think that this kind of evidence is crucial to the field of brain training, and we're proud to have been involved in all of the largest and best executed studies in the field. Thanks for your interest in our work! Best regards, Henry Mahncke CEO, Posit Science

Seth's response to Dr. Mahncke: Thanks for your answers. I understand what you say about the control group. About the size of improvement on the all-important real-world measures, however, I disagree that "the standard Cohen's d measure" is a good way to measure effect size. For an academic audience, maybe, but I am sure that the typical visitor to your website has no idea what that is. To convince me that your treatment reduced cognitive age by ten years, I would want to see three things: (a) All the questions of the CSRQ-25 so I could see what is being measured. (b) How the CSRQ-25 score (with the mood questions omitted) varies with age. You seem to say that the average score gets worse by 0.07 in 10 years. I am unsure that this is the case. I saw no evidence supporting that claim. (c) The effect of the IMPACT treatment on the score-versus-age function. It would be especially good to see the score versus age function separately for the two groups in the IMPACT study. A graph showing both functions (one for each group) would make it much clearer if your claim of 10 years improvement is reasonable.

ChristianKI (2012-11-14 17:39:38)

When it comes to Brain training I would like to see how Posit Science compares to Anki. Anki is also mentally challenging and I would expect similar effects on the measures that the IMPACT studied. On the other hand Anki has the additional advantage of helping you learn knowledge. Seth: I agree, that would be a good comparison.

## **Want to Sleep Better? Through Personal Science? (2012-11-06 05:00)**

If someone sleeps well, it's tough to kill them. If someone does not sleep well, it's tough to keep them alive. Robb Wolf quoted someone to this effect at the last Ancestral Health Symposium. One reason it's plausible is [1]better sleep improves immune function. For example, why are colds more common in winter? Well, flu bouts peak during the light minimum (December) rather than the temperature minimum (February). Less light makes sleep worse, so this supports the idea that colds are more common in winter due to worse sleep. Likewise, [2]heart attacks are more common in the winter, suggesting that better sleep would reduce heart attacks. [3]I stopped getting obvious colds when my sleep got much better. [4]Vaccinations are much less effective if the person vaccinated is kept awake the following night.

I've found new ways to improve my sleep: [5]avoid breakfast, [6]standing a lot, [7]morning light exposure, [8]one-legged standing, and [9]eating more animal fat. I've confirmed [10]Tara Grant's discovery of the value of Vitamin D3 in the morning. I've made these improvements via low-tech tracking, good experimental design and data analysis, and wise choice of treatment.

I want to find out if my method and findings can help others. I am looking for people who would like my (paid) help improving their own sleep. In [11]my search for people to try brain tracking, I judged interest and motivation partly by willingness to pay and it worked well.. If you are interested, please submit an application (see below).

At least at first, I'll only pick one or two people. I'll do whatever I can to help the chosen applicants measure their sleep, choose wisely what to test, do useful experiments, and analyze the data. They can have as much contact with me as they want.

There are four ways you might benefit from this: (a) Sleep better. (b) Learn how to use personal science to improve your health in other ways. (c) Help everyone learn if the treatments you try have value. (I will try to publicize the results, whatever they are.) (d) Help everyone learn the value of personal science to being healthy.

If this might interest you, please email [sleep.where@gmail.com](mailto:sleep.where@gmail.com) with your answers to the following questions:

1. Name, age, sex, job, location.
2. Phone number (good times to call), skype id (if any).
3. What's wrong with your sleep? For how long have you had this problem or problems?
4. How have you tried to improve your sleep? What happened?
5. How many colds do you get in a typical year? How long does a typical cold last?
6. How much would you pay for the first month (after a free consultation)?
7. How much would you pay per month after the first month?

1. <http://ccn.aacnjournals.org/content/32/2/e19.long>

2. <http://qjmed.oxfordjournals.org/content/92/12/689.full>

3. <http://www.escholarship.org/uc/item/2xc2h866>
4. <http://www.ncbi.nlm.nih.gov/pubmed/21632713>
5. <http://escholarship.org/uc/item/2xc2h866/>
6. <http://escholarship.org/uc/item/2xc2h866/>
7. <http://escholarship.org/uc/item/2xc2h866/>
8. <http://quantifiedself.com/2011/03/effect-of-one-legged-standing-on-sleep/>
9. [http://blog.sethroberts.net/?attachment\\_id=7671](http://blog.sethroberts.net/?attachment_id=7671)
10. <http://www.primalgirl.com/2011/11/01/nprimalgirl-sleep-issues-vitamin-d/>
11. <http://blog.sethroberts.net/2012/08/28/want-to-track-your-brain-function/>

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Tom (2012-11-06 05:18:07)

A quick note: Ray Cronise is finding that cold stress (cool baths , showers) helps sleep. Also , I've found that transdermal magnesium before bed helps sleep. Seth: The magnesium might be worth a try. what brand and dose of transdermal magnesium do you use? I found cold showers produced weight gain and mental slowing.

Tom (2012-11-06 08:02:42)

Transdermal magnesium is typically sold at "magnesium oil." (The 'oil' is a misnomer; it's called that because magnesium dissolved in water has a slippery feel.) The 'magnesium oil' products are typically sold in small, pretty bottles at big markups, but i noticed that the ingredients were just magnesium chloride and water. Bulk magnesium chloride is very cheap, and I got mine here: [bulkreesupply.com/brs-bulk-magnesium-chloride-aquarium-supplement.html](http://bulkreesupply.com/brs-bulk-magnesium-chloride-aquarium-supplement.html) I mix a few tablespoons of the powder at a time in a pint of water and keep it in a small bottle in my shower/bath. Occasionally I will sit in the bathtub, pour some of the mixture onto a clean sponge and take a sponge bath of it before bed. (If I have the concentration too high, there will be a slight stinging sensation like a mild sunburn that disappears immediately upon rinsing off.) The soporific effect doesn't happen every time, and I suspect may depend on how magnesium replete one is (that's conjecture). When it happens, 30 minutes to an hour after the sponge bath I'll begin to feel very sleepy. I don't think it's a placebo effect, though. The first time it happened was when I tried a sponge bath mid-day and wound up so sleepy that I wound up sleeping the rest of the day. One benefit of taking magnesium transdermally is there is no laxative effect (which is common when taking magnesium orally.)

Guv (2012-11-06 16:22:09)

if you are in a hurry to buy some magnesium oil (magnesium chloride), you may find smaller quantities in the supermarket. probably in the asian section & labelled as Nigari. It's used as a coagulant for making Tofu. [http://en.wikipedia.org/wiki/Magnesium\\_chloride#Culinary\\_use](http://en.wikipedia.org/wiki/Magnesium_chloride#Culinary_use)

johnG (2012-11-08 13:41:50)

I've found that eating carbohydrates an hour or so before bedtime has helped a lot. Also, the Vit D helps.

Jim E (2012-11-14 17:37:18)

Seth I just watch a video explaining the vitamin D and sleep connection. It also gives the protocol for getting the right amount. Lots of opportunity for personal science. This link came from a comment on Emily Dean's blog. <http://www.youtube.com/watch?v=h7cbBB1c0IM>

guv (2012-11-15 02:04:33)

Hi Jim E, thx for the link, do you know at what time in the video she "gives the protocol for getting the right amount" i only have a mobile connection at the moment which is tight on bandwidth & expensive cheers

gwern (2012-12-02 21:03:43)

Speaking of magnesium, I've been messing with another common biological metal: potassium. Rather than improving my sleep like magnesium reputedly does, potassium seems to be damaging my sleep quality. It's weird since I can't think of any reason why this would be happening, and the only research I've found is an old study where potassium improved sleep quality!

gwern (2012-12-03 10:55:58)

Also, the first link is broken. I think Roberts meant "Sleep and Immune Function", Ganz: > Scientists are only beginning to fully understand the purpose of sleep and its underlying mechanisms. Lack of sleep is associated with many diseases, including infection, and with increased mortality. Lack of proper sleep is an important problem in the intensive care unit, and interventions have been designed to improve it. Sleep is associated with immune function, and this relationship is partially based on the physiological basis of sleep, sleep architecture, the sleep-wake cycle, cytokines and the hypothalamic-pituitary axis.

## **Journal of Personal Science: How Much Salt Should I Eat? (2012-11-07 05:00)**

by Greg Pomerantz

The Journal of Personal Science, [1]suggested by Tom and encouraged by Bryan Castañeda, will contain articles about using science to help yourself. This is the first one. It previously appeared [2]on Greg's blog. If you have written something or plan to write something or are thinking about writing something that might be included, please let me know. – Seth

I spent a few weeks this summer conducting a self-experiment on salt sensitivity and blood pressure. The experiment included a three week phase on a low carb whole foods diet with no added salt, followed by a moderately extreme salt loading phase. This post is a summary of my results.

I learned a lot from the experiment and came out of it with at least one bit of useful information. Will I try to restrict salt in my diet? No, I don't think salt restriction can work for me. From now on I will ensure that I get sufficient salt on a daily basis.

### **Summary**

These are the main points I learned during the experiment, from most to least interesting.

1. Salt restriction caused impaired thermoregulation. In hot weather, my cardiovascular system was not able to sufficiently lower my body temperature. This resulted in an elevated heart rate and hypothermia (up to 101.5 degrees in one instance). This can be dangerous, so be careful if you try this at home.
2. No clinically meaningful change in blood pressure. Systolic pressure was unchanged, though salt loading may have caused a small rise in diastolic pressure. This does not rule out long term negative effects from chronic salt loading (see discussion below), but it does show that, as [3]previously discussed, my kidneys seem to basically work and can regulate my blood pressure through the maintenance of fluid and electrolyte balance in response to changes in my sodium intake.
3. Salt reduction may increase susceptibility to skin infections. Three days into the salt restriction phase, I came down with what was probably a staph infection in my right eyelid. This responded to antibiotics but it came back once I went off them. Since adding back salt I have had no problems with skin infections and no more antibiotics.
4. Possible strength loss. I did not perform well in the gym on my usual strength training program.

5. My taste for salt adapts quickly to restriction and loading. I experienced no cravings even when my sodium intake was too low. I can't just "listen to my body". Likewise, while the salt loading phase was difficult for the first two or three days, my taste rapidly adjusted to the added salt.
6. Bodyweight changes. I experienced substantial changes in body fluid levels (e.g. 6 pound weight gain within two hours of the transition from the salt restriction to the salt loading phase).

Conclusion: A low carb paleo diet must include added salt (for me). Can others do without? Perhaps, and some scientists such as [4]Loren Cordain and Tim Noakes (e.g. [5]this podcast episode 18 at 1:03:50) seem to think they can. Skip ahead to read my further musings on this question.

Study Design

The experiment had three phases. First, I did a one week lead-in phase (phase I) where I made no changes to diet or salt consumption. The purpose of phase I was to establish a blood pressure baseline through daily morning measurements (see Measurement Methods below).

This was followed by a three-week sodium restricted phase (phase II) during which I did not add any salt to my food. In addition, during phase II only, I avoided naturally salty foods such as shellfish. My sodium intake during phase II was limited to the sodium in the foods I was eating. Note however that there were one or two restaurant meals per week during this time where I was not able to strictly control for added salt. Sodium consumption on phase II was estimated to be between 800mg and 1000mg per day. phase II was originally scheduled for two weeks, but was extended due to the aforementioned infection and antibiotic use.

Finally, phase III was a salt-loading phase during which I added an additional 5 grams of sodium to my diet, for a total of nearly 6 grams of sodium per day including the sodium naturally occurring in my food. The supplemental salt during phase III consisted of hand harvested French Celtic sea salt ([6]Eden Foods, Inc.) and was measured daily on an [7]AMW-1000 digital scale. Because the Eden French Celtic sea salt is approximately 1/3 sodium by weight according to the label, the 5 grams of supplemental sodium per day was provided by approximately 15 grams of sea salt. Note that different varieties of salt will contain different percentages of sodium by weight. Sea salts vary significantly due to variations in residual water content (not, as commonly assumed, by the presence of other minerals). Please consult the label or a friendly analytical chemist for guidance.

The diet throughout this experiment consisted of meat, fish, eggs, coconut oil, butter, and non-starchy vegetables. In addition, I typically consumed a banana, an ounce (28g) of almonds and a bit of dark chocolate each day. Potassium intake was fairly consistent at around 4 g/day. Table 1 shows a typical day's macronutrient intake. Given the macronutrient ratio, I believe it is likely that the diet was ketogenic.

Table 1. Approximate daily macronutrient intake.  
Macronutrient

grams
calories percent (calories)
Carbohydrate
50
200 6.6 %
Protein 155 620 20.5 %
Fat 245 2205 72.9 %
Total 3025

100 %

## Measurement Methods

I measured blood pressure daily first thing each morning while seated, with the cuff of an [8]Omron HEM-711 placed on the left upper arm over the brachial artery. I followed guidelines described by [9]Agena et al (see Chart 2 of the linked paper). Each day's blood pressure value was determined by averaging the first three measurements taken that morning. My first measurement of the day was typically higher than the average of the second and third measurements (systolic: +5, diastolic: +4, average over all three phases). This is referred to as the "alarm reaction" and is related to the more commonly known "white coat syndrome", where the presence of a doctor elicits a stress response and therefore an innacurately high blood pressure reading. My alarm reaction seems to be due to the fact that I get slightly stressed out about seeing what my blood pressure is, even when I measure it myself. Therefore I experience a slight rise in blood pressure while waiting to see the first reading each day. I kept all three readings for this experiment. My "true" normal blood pressure is on average slightly lower than these results which include the first "alarm" reading.

## Results

I summarized my qualitative findings in the executive summary above. If you skipped that because you are not an executive, you can go back and read it now. Below are graphs showing my blood pressure and bodyweight during the three phases. [10]

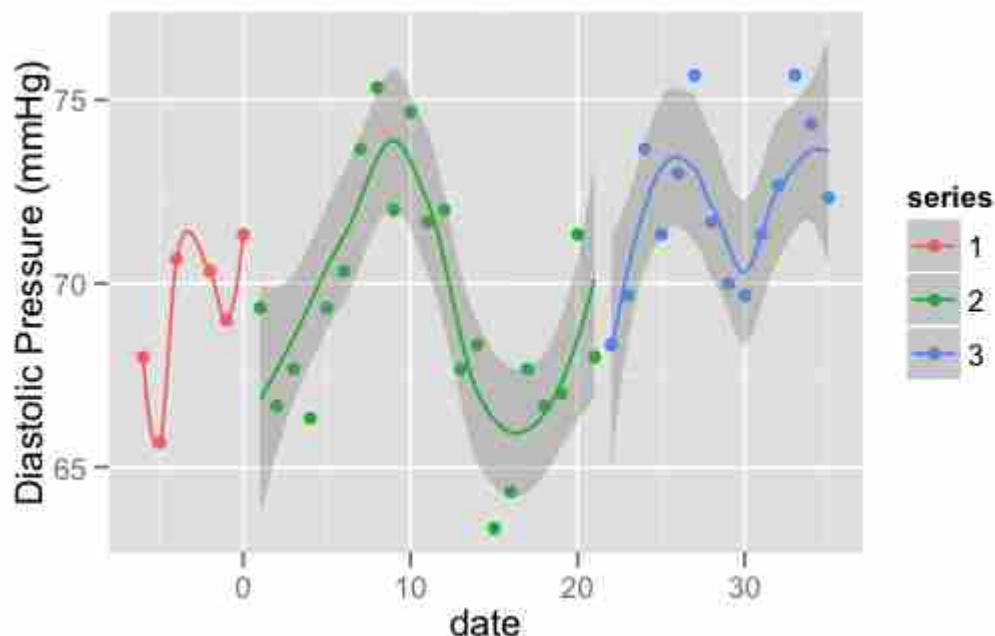


Figure 1: Possible mild elevation in diastolic blood pressure during the salt loading phase. Each point is the average of the three morning blood pressure readings for the day. Red = phase I, green = phase II, blue = phase III. Curves from ggplot2 "geom\_smooth()" using default parameters.

[11]



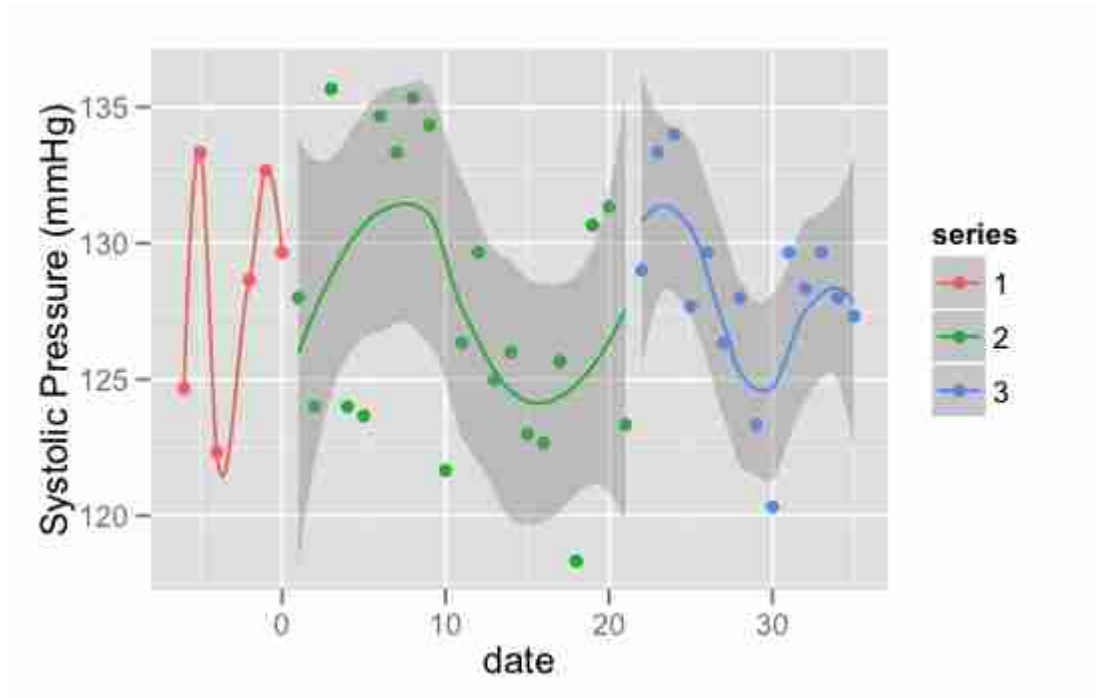


Figure 2. No change in systolic blood pressure.  
[12]

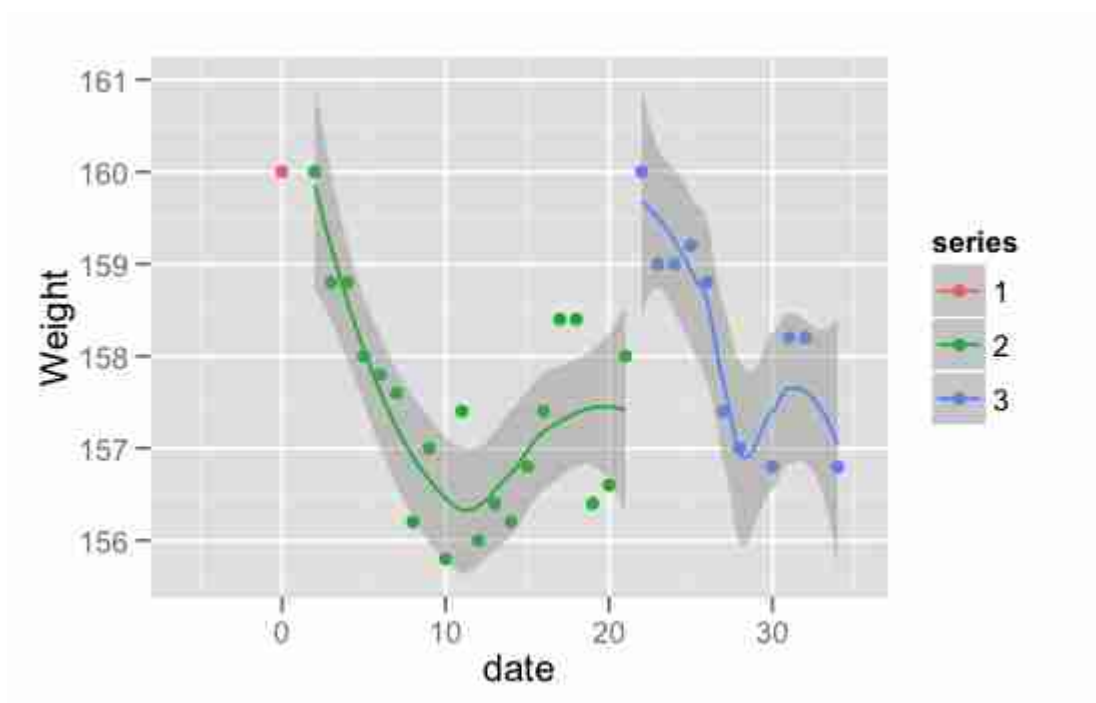


Figure 3: Bodyweight.

Figure 3 shows my daily bodyweight, measured each morning before consumption of any food or fluids. Note that my previous health goal (the [13]415 deadlift) involved an intentional increase in bodyweight and therefore significant excess calorie consumption. My current diet is lower in calories and Figure 3 therefore should show a long term downward trend in bodyweight. Salt restriction clearly resulted in a rapid decrease in bodyweight over the first few days of phase II. There appears to be a stabilization towards the end of the salt restricted phase. The salt loading in phase III produced a very large initial weight gain, followed again by stabilization around the same level seen at the end of the salt restriction phase. As salt is primarily stored in bones and extracellular fluids, an increase in salt would

be expected to correspond to an increase in extracellular fluid (since the body's bone mass should change slowly). The bodyweight changes shown in Figure 3 therefore reflect changes in extracellular fluid levels. While salt loading at the levels used in phase III produced a large acute change in body fluids, this was restored to normal over approximately 5 days. Since my extracellular fluid volume was evidently restored within 5 days, it is not surprising that salt loading had no significant effect on my blood pressure. What is somewhat surprising was that there was no evidence of a temporary increase in blood pressure during the few days in which my extracellular fluid volume was in fact elevated. This suggests that there is an additional regulatory element working to restore blood pressure homeostasis at a shorter time scale than the dominant kidney-fluid mechanism previously discussed on the blog [14]here. Thanks to [15]Mako Hill for guidance with [16]ggplot2, without which these plots would look less nice.

## Discussion

This experiment demonstrated to me that a low carb paleo diet with no added salt is potentially dangerous for me. Impaired thermoregulation is a big deal and would have been a life-threatening issue if I had to hunt for my food in a hot climate. Not only was my body temperature elevated in warm weather, but my pulse was elevated as well, suggesting my cardiovascular system was unable to restore my body temperature to normal. I'm clearly not salt sensitive, and I do not function well with a low salt diet. However, genetic studies suggest the ancestral human genotype is associated with high levels of salt sensitivity and ability to function with very low sodium intakes. How did humans evolve these traits? And why don't I seem to have them?

## A Faustian Kidney Bargain

[17]Susumo Watanabe has proposed an interesting hypothesis about the evolution of sodium metabolism in hominids. The theory is laid out in a 2002 paper called "[18]Uric Acid, Hominid Evolution, and the Pathogenesis of Salt-Sensitivity," published in the journal *Hypertension*. It goes something like this. At some point during the evolution of our common ancestor with gorillas and chimpanzees, a series of mutations inactivated the gene for urate oxidase, an enzyme that breaks down uric acid. As a consequence, we have much higher blood levels of uric acid than other mammals. These mutations seem to have occurred between 24 and 8 million years ago, during the miocene, when our ancestors were believed to be subsisting primarily on [19]fruits and leaves. This diet would have been exceptionally low in sodium. Since there is evidence of multiple independent mutations in this gene in multiple primate lineages, it is thought that mutations deactivating urate oxidase were strongly selected. In rats, uric acid raises blood pressure acutely, but also causes renal vascular disease via renin/angiotensin systems. This over time makes the rats more salt sensitive. If there is very little salt available, salt sensitivity can be a good thing. Watanabe argues that, where salt is scarce, high uric acid is beneficial (via multiple pathways) for preventing blood pressure from going too low. In addition to causing kidney disease, high uric acid causes other problems, like gout, and is associated with heart disease. So this looks like an engineering tradeoff with a number of downsides, but some benefits in the context of a miocene diet that was even lower in sodium than the lowest current estimates for paleolithic diets. The organism with this adaptation is supposed to partially destroy its kidneys on purpose in order to maintain sufficiently high blood pressure. This miocene environment is long gone. However, it is much easier to [20]break a gene than to put it back together. Our urate oxidase gene has been broken more than once and it would take quite a long time to fix it. It's kind of a crazy theory. I'm not sure I believe it but it is interesting to think about.

## Some Hypotheses

During this experiment, I was eating almost exclusively meat, fish (often with bones), eggs and vegetables, plus added calories from butter, coconut oil and olive oil. The diet was grain, legume and dairy free and, as mentioned, possibly ketogenic. This would be considered by many online diet and health personalities to be a good low carb paleo diet, even though of course processed fats like butter and coconut oil are not Paleolithic foods. So I want to discuss a few possible ways to resolve the apparent impossibility of eating this way without added salt.

## Hypothesis 1: Low Carb, Low Crab, or Low Salt: choose any two

I have been eating a low carb diet, and my experiment suggests that, in that context, low salt is not a good idea. It is possible that a healthy human diet can be either low in carbohydrates or low in salt, but not both. A great deal of evidence suggests that ketosis was not the norm for our paleolithic ancestors (see e.g. [21]Kuipers et. al. 2012 for

a thorough review of paleolithic diet research). In fact it would have been quite a struggle for me to eat this sort of macronutrient ratio without modern refined fats such as butter and coconut oil. Or ready access to marine mammal blubber (but then again the Inuit are not my paleolithic ancestors). In contrast to the online paleo diet scene, most low carb diet advocates seem to line up behind the recommendation for ample supplementary salt. My result accord with that clinical experience. Low carbohydrate diets are usually said to have a diuretic effect in this community, at least in the initial stages (e.g. [22]M.R. Eades, [23]Jenny Ruhl). It is possible that my problems were caused by the interaction between diet-induced ketosis and salt restriction, and I would have done just fine without salt if I had some more carbohydrates. This hypothesis would be straightforward to test. In order to keep my sodium intake sufficiently low during the salt restriction phase, I had to remove shellfish such as oysters and mussels from my diet. Crab is also salty and makes for a handy pun. It seems likely that daily shellfish consumption would have pushed my sodium intake into the healthy range. While shellfish does not get much attention these days in the paleo club, there is ample support (again see [24]Kuipers et. al.) that it was an important contributor to actual paleolithic nutrition.

Hypothesis 2: Humans must drink blood. Or eat salt.

File this one in the "[25]teen paranormal romance" department. This hypothesis states that the ancestral human diet was not as low in salt as commonly assumed. Sodium is the body's primary extracellular cation, and most of it is located [26]in the blood and other extracellular fluids. A pint of blood contains about 1.6 grams of sodium (see, e.g., these livestock [27]reference ranges for blood sodium). That much blood per day should have been more than enough to push me into the healthy range of sodium consumption. On the other hand, salt depletion set in pretty quickly for me (probably 3-4 days), so this hypothesis assumes that fresh blood was consistently available to inland populations that did not have ready access to shellfish or sea water. I find this hypothesis intriguing because of the fact that my putative ancestors were commanded not to drink blood ([28]Genesis 9:4, [29]Leviticus 17:13, [30]Deuteronomy 12:15-16), and that [31]salt is used in this tradition specifically to remove blood from meat before it is eaten. Presumably blood drinking was outlawed because it was thought to spread diseases and not because of [32]tacky pop-culture connotations. Were my ancestors salting their meat not just for its preservative qualities, but also to make up for the reduction in sodium intake due to their prohibition on drinking blood?

Hypothesis 3: I'm Not (Genetically) a Paleolithic Human

Some say the human genome has hardly changed in the past 10,000 years. However, the hard evidence points to a number of significant evolutionary changes since the advent of agriculture, the classic example being lactase persistence (see [33]Cochran and Harpending 2009 for a thorough argument on the rapidity of recent human evolution). Genes associated with hypertension and salt sensitivity are also apparently under strong evolutionary pressure. Alan Weder discusses this in an [34]article published in 2007 in the journal Hypertension about evolution and hypertension. It is worth reading as an example of excellent science writing. My experiment clearly demonstrates that I am not salt sensitive. This is not surprising given my European ancestry. As discussed by [35]Weber, the genetics of salt resistance seem to correlate with adaptations to colder climates. It seems possible that in the course of such adaptation, my ancestors lost the ability to function optimally on a low salt diet.

Is a High Salt Diet Safe?

It is possible that, as much of mainstream medicine believes, a high salt diet actually is unhealthy over the long term. There is nothing in this experiment that contradicts that belief. Just because I am resistant to the short term blood pressure effects of salt loading, that does not mean I am immune to whatever long term negative effects a high salt diet may have. While epidemiological studies have their problems, it seems unwise to discount their findings altogether. [36]Edward Frohlich has argued that, notwithstanding the fact that most people's blood pressure does not respond to acute increases in sodium intake, sodium is nevertheless responsible long-term for increases in blood pressure. He argues that excess salt causes kidney damage over time (as with uric acid this is mediated by renin/angiotensin systems), resulting long-term in an increase in blood pressure. While much of this research is based on studies done on rats (including those of the "[37]spontaneously hypertensive" variety), this line of thought is worth looking into and I will continue to do so.

1. <http://blog.sethroberts.net/2012/04/10/assorted-links-169/#comment-962819>

2. <http://kneelessmegafauna.blogspot.com/2012/10/salt-experiment-results.html>

3. <http://kneelessmegafauna.blogspot.com/2012/09/computational-hemodynamics.html>
4. <http://thepaleodiet.com/wp-content/uploads/2011/02/The-Nutritional-Characteristics-of-a-Contemporary-Diet-Based-Upon-Paleolithic-Food-Groupsabstract4.pdf>
5. <http://talkultra.libsyn.com/rss>
6. [http://www.edenfoods.com/store/product\\_info.php?products\\_id=105365](http://www.edenfoods.com/store/product_info.php?products_id=105365)
7. <http://www.awsscales.com/compact-bench-scales/60-amw-1000-digital-bench-scale>
8. [http://www.amazon.com/Omron-HEM-711-DLX-Automatic-Pressure/dp/B00005D4TA/ref=sr\\_1\\_1?s=hpc&ie=UTF8&qid=1349693302&sr=1-1&keywords=omron+hem+711](http://www.amazon.com/Omron-HEM-711-DLX-Automatic-Pressure/dp/B00005D4TA/ref=sr_1_1?s=hpc&ie=UTF8&qid=1349693302&sr=1-1&keywords=omron+hem+711)
9. [http://www.scielo.br/pdf/reeusp/v45n1/en\\_36.pdf](http://www.scielo.br/pdf/reeusp/v45n1/en_36.pdf)
10. <http://3.bp.blogspot.com/-ARKrKQqLsvo/UIncwMeDciI/AAAAAAAAAKA/Pz1XrRhRgBE/s1600/dia.png>
11. <http://1.bp.blogspot.com/-5YKwM7pxTdo/UIncwqmnBI/AAAAAAAAAKI/wH9hGwEPRnQ/s1600/sys.png>
12. <http://3.bp.blogspot.com/-JMNriYfNFXU/UIncwBBG4gI/AAAAAAAAAKQ/V-wJx1aoNnY/s1600/weight.png>
13. <http://www.youtube.com/watch?v=p0Qa1CkLf9o>
14. <http://kneelessmegafauna.blogspot.com/2012/09/computational-hemodynamics.html>
15. <http://mako.cc/>
16. <http://ggplot2.org/>
17. <http://hyper.ahajournals.org/content/40/3/355.full>
18. <http://hyper.ahajournals.org/content/40/3/355.full>
19. <http://www.30bananasaday.com/>
20. [http://en.wikipedia.org/wiki/Humpty\\_Dumpty](http://en.wikipedia.org/wiki/Humpty_Dumpty)
21. <http://humanoriginsleiden.org/index.php/projects?view=publication&task=show&id=210>
22. <http://www.proteinpower.com/drmike/saturated-fat/tips-tricks-for-starting-or-restarting-low-carb-pt-ii/>
23. <http://www.phlaunt.com/lowcarb/19058097.php>
24. <http://humanoriginsleiden.org/index.php/projects?view=publication&task=show&id=210>
25. <http://www.barnesandnoble.com/u/paranormal-teen-romance-dark-romance/379002329/>
26. [http://www.merckmanuals.com/home/hormonal\\_and\\_metabolic\\_disorders/electrolyte\\_balance/sodium.html](http://www.merckmanuals.com/home/hormonal_and_metabolic_disorders/electrolyte_balance/sodium.html)
27. <http://onlinelibrary.wiley.com/doi/10.1002/9780470752425.app3/pdf>
28. <https://net.bible.org/?ref=nbt#%21bible/Genesis+9:4>
29. <https://net.bible.org/?ref=nbt#%21bible/Leviticus+17:13>
30. <http://bible.org/seriespage/deuteronomy-12>
31. [http://www.chabad.org/library/article\\_cdo/aid/82678/jewish/Koshering-Meat.htm](http://www.chabad.org/library/article_cdo/aid/82678/jewish/Koshering-Meat.htm)
32. <http://www.stepheniemeyer.com/twilightseries.html>
33. <http://the10000yearexplosion.com/>
34. <http://hyper.ahajournals.org/content/49/2/260.full>
35. <http://hyper.ahajournals.org/content/49/2/260.full>
36. <http://hyper.ahajournals.org/content/50/1/161.full>
37. <http://www.criver.com/en-US/ProdServ/ByType/ResModOver/ResMod/Pages/SHRRat.aspx>

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L (2012-11-07 07:42:03)  
Thanks! Great article!

gwern (2012-11-07 09:12:58)

Nifty stuff but the conclusions seem overstated. Conclusions #1 & #3 are not data-based but retrospective & subjective, and about rare things in the first place: what, do you get staph every other day? How could you draw any conclusion about rare events like that? #4 could have been quantified but I don't see any graphs for it. #5 is reasonable but the claim about listening to your body sort of begs the question that either of the salt extremes were unhealthy enough that you should have noticed. #6 doesn't mention that the weight returned to normal; when I see 2 spikes on the graph corresponding to both transitions, I

wonder to myself 'is this a Hawthorne effect where the stress of changing entirely his diet causes him to overeat a little bit?'

Greg (2012-11-07 10:17:34)

Gwern, thanks for your comments. Re 1 and 3: The likelihood that these two changes (which had never happened to me before) were coincidences is much lower than the likelihood that they were caused by the intervention. Both outcomes have biological plausibility (though I have not seen prior reports associating infections with salt restriction). I would not necessarily call these "discoveries" but they are important observations that should be reported. Re 4: there was some level of quantification but not enough to graph in a useful manner (there are insufficient data points). This observation has more to do with how I was feeling. Re 5: given impaired thermoregulation, infection and strength loss, I have concluded that the low salt diet was unhealthy. However, I did not crave salt and my appetite adjusted to the lower intake. There is a body of literature on this question which I did not write up – the existence of sodium appetite in humans has been a controversial topic. It seems clear at this point that it does exist when sodium levels are critically low, but that it is extremely difficult in humans to deplete sodium to the extent necessary. My experiment did not reach the requisite level, nor should anyone attempt it without medical supervision. See the paper by Geerling and Loewy for an excellent discussion of this ("Central Regulation of Sodium Appetite", *Experimental Physiology* 2008). Re 6: increase in extra cellular fluid is the only explanation I can think of that could describe an 8 pound change in body weight in this time frame, but I'm open to suggestions if you can think of a better one. I am fairly certain that I did not eat an extra 8 pounds of food for dinner.

gwern (2012-11-07 11:57:14)

> Re 1 and 3: The likelihood that these two changes (which had never happened to me before) were coincidences is much lower than the likelihood that they were caused by the intervention. Both outcomes have biological plausibility (though I have not seen prior reports associating infections with salt restriction). I would not necessarily call these "discoveries" but they are important observations that should be reported. I don't follow. You mean you, in advance, expected that staph and thermoregulation problems would occur and this is why you are rejecting the null? What's the base-rate for either of these, combined with the selection effect of watching like a hawk for any change whatsoever? If you weren't expecting in advance those specific two problems, then you are misframing the problem all the way from the start: now the right question is, what is the base rate of any out of the ordinary event at all? (Quite high - as the old point about the lottery goes, it's surprisingly for a particular person to win, but it's not surprising that any particular person won. See also Littlewood's Law.) > Re 4: there was some level of quantification but not enough to graph in a useful manner (there are insufficient data points). This observation has more to do with how I was feeling. I see. > Re 6: increase in extra cellular fluid is the only explanation I can think of that could describe an 8 pound change in body weight in this time frame, but I'm open to suggestions if you can think of a better one. I am fairly certain that I did not eat an extra 8 pounds of food for dinner. I don't see an 8lb change graphed... Where's this 8lb stuff coming from? Your graph can't even show an 8lb change since it only spans 6lbs, from 155 to 161. I see 1 datapoint for the first phase, almost useless, and variation within the second phase far exceeding variation between the second phase and third phase. I also see a second phase which is increasing just before the transition and decreasing just after the transition. Or, look at the weight graph: between the last green point and the first blue point is 2lbs. 2lbs isn't much of a change, it looks like there are other places in the graph where 2lb shifts occur (and speaking from my personal experience, 2lb shifts happen all the time for me despite no salt experiments).

Greg (2012-11-07 14:33:12)

I do not have a null hypothesis to reject because I was not testing a hypothesis regarding infections or thermoregulation. I'm not seeking to prove or disprove these associations. I reported these results because they are highly unusual (they never happened before) and because they are biologically plausible. They are interesting observations, not discoveries. Why would I keep them a secret? The 8 pound shift is not graphed. The graph shows daily weight, measured consistently as described under Figure 3, not intra-day weight changes. Weight varies more during any given day than from day to day due to food and water consumption and excretion.

Weekend Link Love - Edition 215 | Mark's Daily Apple (2012-11-11 09:00:18)

[...] journal of personal science: in which a man determines how much salt he should [...]

johnn (2012-11-11 10:13:36)

Greg, Thx for the thoughtful and detailed note on your experiment w salt. I loaded salt and small amount of potassium bicarbonate and magnesium citrate into gel capsules and 2-3 of those (4-6 gms) during hiking at high altitude. I found it largely offset my loss of physical endurance at high level of exertion since going low carb. Other situations that this method of salt supplement helps me personally are: fasting (reducing a slight headache), preventing mental fatigue (during long distance driving). 6 lbs of fluid retention is a lot. I never notice it personally. Is there noticeable sign?

James (2012-11-13 02:45:40)

Hi there, When going low carb, you'd better not restrict salt or you will suffer from some quite undesirable side-effects, the most common one being constipation. I also think, IIRC, that you will start losing potassium due to salt depletion. You don't want that ... Anyway, as soon as you go low carb, you have to increase your intake of salt. 5g/day of sodium should do.

Greg (2012-11-13 18:39:18)

Johnn, thanks for the comment. Salt loading at high elevation makes sense since it is easier to lose fluids up there (via respiration). Curious if you have noticed any effect of the magnesium? I took it for a while and it didn't seem to do anything. The 6 pound gain was certainly noticeable, largely because I was just ending the low salt phase during which I was dehydrated. I got a moderately bad headache but felt fine in the morning. James, I have heard the advice to add salt during "induction" of a low carbohydrate diet but not so much emphasis on it once adapted (I've eaten low carb for years). It is quite possible that low salt would have worked better with more carbs in the diet, though I did not experience constipation or the other symptoms typically associated with the initial low carb adaptation period. 5g/day of sodium is quite a lot - is that recommended after adaptation to low carb and if so by whom?

James (2012-11-14 03:20:51)

Hello Greg, Thanks for you feedback on this. A while back, I had read the book called "The Art and Science of Low Carbohydrate Living" by Phinney and Volek and I remember something about low carb - high fat diets and salt intake. I am not sure whether you have to maintain the 5g/day of sodium low carb post-adaptation but I can look it up again, I must have the book around here. FYI, I did experience a little bit of constipation at the beginning, but it is all fixed.

Patients with angina pectoris and EECF | INFO-BLOGGER.NET (2012-11-18 00:12:08)

[...] pepperKaiser Daily Women's Health Policy Report Highlights Recently Released Journal ArticlesSeth's Blog .recentcomments a {display:inline !important;padding:0 !important;margin:0 [...]

ob (2012-11-21 02:58:14)

A few thoughts You would like reading some of the literature where the have salt loaded the victions, I mean subjects. I think there was some food mixed in with the salt somewhere. I have read studies where they fed subjects up to 20grams of salt a day! Amphibians, mammals and then humans all evolved from the sea and our bodies mineral composition is similar to sea water but a bit more dilute. When we left the sea we had to carry a bit of it around inside us and balance input (diet) and output(excretion in urine and sweat). Salt excretion rate is influenced by insulin levels. if you insulin is low you tend to lose more salt. Conversely if you insulin is high you retain more fluid and salt. The salt hypertension link is pretty weak with experiments showing a change of only a few mmHg with large changes in salt content in diet. Some of the salt hypertension link may be a de facto meaasurement of insulin and metabolic syndrome rather than salt per se. Paleo style diets are very low salt- input minus output will allow balance to be maintained until one begins to exercise or is in a hot climate as salt s lost thru sweating. Peak sweat rates can result in a loss of 1-3g sodium/hour. People on a low sodium diet will sweat less salt but still significant amounts eg 1g/hour under hard working conditions. Natural meats, vegetables and fruits will amount to a similar order of magnitude with urinary loss of say 0.5 g or so per 24 hours. Hot weather and exercise tip the balance. Low carb style diet with ketosis would mean that negative sodium balance and hyponatremia is pretty much inevitable under these conditions. Persistence hunters, who high heat tolerance, meant they could hunt down prey vulnerable by a less developed internal heat management system. However, they would have lost a lot of salt... So, there must have been other sources of salt in the diet. As well as shellfish there may have been other "salt sources"" eg -blood consumption is known as well as

liver consumption (with blood), -certain plants accumulate salt - marine species mentioned -mineral waters- these vary in salt content some are quite significant, traditional eskimos cooked with "öld" sea ice which was mildly salty, the waters we get from the water company generally have low mineral content. geophagy is in some cases from clays etc that contain significant amounts of salt but it may have other roles as well, many mammals\birds will use natural salt licks and early humans may have done the same- eventually social evolution may have meant they learnt to carry the salt lick around with them. some animals will lick each other as a cleaning and social ritual- have never heard of primitive humans doing so. Salt like many dietary and environmental factors seems to be something that there are certain amounts needed to achieve an optimal outcome. Many of the low carb "gurus" recommend adding 1-2 grams of salt to diet a day. Certainly worth doing during hot weather or on days when you active exercise. Still trying to work out a better guideline (that doesn't involve consuming blood, eating dirt or similar practices).

Greg (2012-11-22 08:37:18)

ob, thanks for your post. I agree with everything you said. While the salt-hypertension effect is small on a population level, it can be quite large (or even slightly inverse) in individuals. There are a few studies out there showing individual responses in addition to group averages. It would benefit personal science tremendously if more studies reported data in this way. Do you have a good reference for the insulin/sodium connection? My insulin levels were low before going low carb, so I question that theory a bit, even though the guideline to add salt to a low carb diet is widely supported by the clinical experience of doctors working with these diets - it's only the "why" I'm questioning.

### **Positive Psychology Talk by Martin Seligman at Tsinghua University (2012-11-09 05:00)**

Here at Tsinghua University, the Second Annual Chinese International Conference on Positive Psychology has just begun. The first speaker was Martin Seligman, a professor at the University of Pennsylvania and former president of the American Psychological Association (the main professional group of American psychologists). Seligman is more responsible for the Positive Psychology movement than anyone else. Here are some things I liked and disliked about his talk.

Likes:

1. Countries, such as England, have started to measure well-being in big frequent surveys (e.g., 2000 people every month) and some politicians, such as David Cameron, have vowed to increase well-being as measured by these surveys. This is a vast improvement over trying to increase how much money people make. The more common and popular and publicized this assessment becomes - this went unsaid - the more powerful psychologists will become, at the expense of economists. Seligman showed a measure of well-being for several European countries. Denmark was highest, Portugal lowest. His next slide showed the overall result of the same survey for China: 11.83 %. However, by then I had forgotten the numerical scores on the preceding graph so I couldn't say where this score put China.
2. Work by Angela Duckworth, another Penn professor, shows that "GRIT" (which means something like perseverance) is a much better predictor of school success than IQ. This work was mentioned in only one slide so I can't elaborate. I had already heard about this work from Paul Tough in a talk about [1]his new book.
3. Teaching school children something about positive psychology (it was unclear what) raised their grades a bit.

Dislikes:

1. Three years ago, Seligman got \$125 million from the US Army to reduce suicides, depression, etc. (At the

birth of the positive psychology movement, Seligman proclaimed that psychologists spent too much time studying suicide, depression, etc.) I don't mind the grant. What bothered me was a slide used to illustrate the results of an experiment. I couldn't understand it. The experiment seems to have had two groups. The results from each group appeared to be on different graphs (making comparison difficult, of course).

2. Why does a measure of well-being not include health? This wasn't explained.

3. Seligman said that a person's level of happiness was "genetically determined" and therefore was difficult or impossible to change. (He put his own happiness in "the bottom 50 %".) Good grief. I've blogged several times about how the fact that something is "genetically-determined" doesn't mean it cannot be profoundly changed by the environment. Quite a misunderstanding by an APA president and Penn professor.

4. He mentioned a few studies that showed optimism (or lack of it) was a risk factor for heart disease after you adjust for the traditional risk factors (smoking, exercise, etc.). There is a whole school of "social epidemiology" that has shown the importance of stuff like where you are in the social hierarchy for heart disease. It's at least 30 years old. Seligman appeared unaware of this. If you're going to talk about heart disease epidemiology and claim to find new risk factors, at least know the basics.

5. Seligman said that China had "a good safety net." People in China save a large fraction of their income at least partly because they are afraid of catastrophic medical costs. Poor people in China, when they get seriously sick, come to Beijing or Shanghai for treatment, perhaps because they don't trust their local doctor (or the local doctor's treatment failed). In Beijing or Shanghai, they are forced to pay enormous sums (e.g., half their life's savings) for treatment. That's the opposite of a good safety net.

6. Given the attention and resources and age of the Positive Psychology movement, the talk seemed short on new ways to make people better off. There was an experiment with school children where the main point appeared to be their grades improved a bit. A measure of how they treat each other also improved a bit. (Marilyn Watson, the wife of a Berkeley psychology professor, was doing a study about getting school kids to treat each other better long before the Positive Psychology movement.) There was an experiment with the U.S. Army I couldn't understand. That's it, in a 90-minute talk. At the beginning of his talk Seligman said he was going to tell us things "your grandmother didn't know." I can't say he did that.

1. <http://www.nytimes.com/2012/08/26/books/review/how-children-succeed-by-paul-tough.html?pagewanted=all>

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vimal (2012-11-09 08:10:52)

Having read a lot of Seligman, I know he talks about the Lykken finding that 50 % of "the pleasant life" is heritable and 50 % is environment/choices.... "The first drawback is that it turns out the pleasant life, your experience of positive emotion, is heritable, about 50 percent heritable, and, in fact, not very modifiable." [http://www.ted.com/talks/martin\\_seligman\\_on\\_the\\_state\\_of\\_psychology.html](http://www.ted.com/talks/martin_seligman_on_the_state_of_psychology.html) He must have forgotten to mention that part, but I think it's a core part of his ideas. Seth: There it is again. The idea that "heritable" implies "not modifiable". It was everyday conversation among Berkeley psych profs 30 years ago that the genes/environment dichotomy was pure nonsense. Sometimes the point was put like this: Is the area of a rectangle determined by its height or its width?



Derrick Yoder (2012-11-09 08:29:16)

Thank you for sharing this information, but I am confused by some of your critiques. under dislike #1: you give the \$125 million dollar grant as a prior, then give a hazy remark about one slide being confusing. Is this really about the results of the Comprehensive Soldier Fitness initiative? If so, the results are organized here: <http://www.authentic happiness.sas.upenn.edu/newsletter.aspx?id=1552>. If not, perhaps you could clarify. dislike #3: I think what you are referring to is what Positive Psych calls a "setpoint". PP's happiness formula is  $h = s + c + v$ , or happiness = setpoint + conditions + voluntary actions. Seligman never claims that genes determine happiness, rather he says there is a setpoint that can be managed through meditation, cognitive behavioral therapy, or psychopharmaceutical drugs like prozac. I don't think it's fair to over-generalize Seligman's supposed over-generalization, given the scope of his research. The rest of your critiques seem to essentially say 'he doesn't know as much as he thinks he does.' Again, I don't think it is fair to base such judgments on a 90 minute lecture. If I, for instance, read one of your blog posts about vitamin d3 that does not mention dosage, and relate it to my experience saying 'well I've been doing 1000 UI every night and my sleep hasn't improved', I would be doing myself a great disservice by not looking at your other blog posts before reaching reaching a conclusion Seth: Thank you for your comments, especially the link to the Comprehensive Soldier Fitness Initiative. The appearance of a bizarre and incomprehensible graph in a talk by an extremely prominent psychology professor is what stunned me. Believe me, I would rather have the military spend \$125 million on a perfectly plausible psychology-related program than on 5 tanks. It strikes me as a good investment. "Seligman never claims that genes determine happiness" – in his talk, he said that because happiness was so genetically determined, it was hard to change it. Maybe there's a first time for everything? Yes, my comment about China's "good safety net" is a comment about his ignorance. I doubt that somewhere else he shows that he actually knows that China doesn't have a good safety net. If anywhere in his writing Seligman showed that he understood heart disease epidemiology basics, I believe he would not have said what he said. My last criticism – where are the treatments that help people? – is not a comment about ignorance. It is a comment about lack of results.

Richie (2012-11-09 12:01:23)

He must have misspoke or you must have misunderstood him. The premise of positive psychology is that happiness is \*not\* determined by either genetics or circumstances and can be profoundly changed by individual effort. Seth: He really said this. I didn't misunderstand him. Because it was so hard to change happiness, he said, positive psychology should also study other things, presumably easier to change. Maybe positive psychology started with that premise ("happiness is \*not\* determined...") but it turned out to be wrong. There were lots of things in his talk that it would be nice if they were true but evidence was not presented that came anywhere close to showing they were true.

Robbo (2012-11-09 17:05:27)

"It is hard to change happiness" If that is a given, is the implication: a) You need to put some actual work in to improve your happiness, or b) Don't bother, it would take actual work. If a), it would be great to have specific things to try out and evaluate in your n=1 laboratory, but I thought Seligman had done quite a bit of this in his popular books. However, I don't think you are wrong in being disappointed at shortcomings in clear communication, useful and new content, and statements contrary to your own knowledge about China. Seth: The audience was psychology professors who do research about happiness and related stuff. The implication was: do research on other aspects of well-being, they will probably be easier to change. This is a perfectly reasonable conclusion. Not because happiness is "mostly genetic" but because in fact it has been hard to change in research studies. (Leaving aside my work with morning faces, which found big effects on happiness.)

Alex Chernavsky (2012-11-09 18:18:07)

From what I understand, David Lykken (and collaborators) at the University of Minnesota showed that identical twins raised apart are far more similar in their happiness levels than are fraternal twins raised apart. Doesn't this fact argue in favor of a strong heritable (and not very modifiable) component for happiness? Seth: These are findings about predictability. The more heritable a trait, the more you can predict a child's value on the trait from his parents' values on that trait. How much you can modify anything depends above all on how well you understand it (e.g., how much you can control your weight depends on how well you understand how weight is controlled). Just because something is highly heritable doesn't mean it is hard to understand. I doubt there is any correlation.

A Reader (2012-11-09 19:08:14)

I believe that Seligman also advocates that you can't change your weight, which is contradicted by your Shangrila Diet research. While I don't have the book now, I believe it was covered in "What You Can Change and What You Can't." I no longer have the book so I can't fact check my memory.

Lemmy Caution (2012-12-05 16:14:27)

"I believe that Seligman also advocates that you can't change your weight, which is contradicted by your Shangrila Diet research. While I don't have the book now, I believe it was covered in "What You Can Change and What You Can't." I no longer have the book so I can't fact check my memory." This is the book: [http://www.amazon.com/What-You-Change-Cant-Self-Improvement/dp/1400078407/ref=la\\_B001ILOB78\\_1\\_5?ie=UTF8&qid=1354748794&sr=1-5](http://www.amazon.com/What-You-Change-Cant-Self-Improvement/dp/1400078407/ref=la_B001ILOB78_1_5?ie=UTF8&qid=1354748794&sr=1-5) It was an interesting investigation into what is changeable and what is not changeable based on the literature. here is some guy's summary: The results are sobering: from the range of most frequent psychological afflictions, only a few will reliably be relieved by treatment. You can - with appropriate help from a responsible mental health professional - do something about - panic attacks - specific phobias (snakes, spiders, flying, etc.) - sexual dysfunctions. With other problems, such as depression and addiction, "moderate relief" is the best psychiatrists have to offer, often (when psychoactive medication is used) at a considerable price. Beyond that, - enjoy your sexual orientation, - enjoy your weight (dieting will improve it upwards, in the long run), - stop blaming unsatisfactory results of your adult life on your childhood and your parents - it won't do you any good, and there is much less of a causal relationship anyway.

## Japanese Discouragement of Foreign Visitors (2012-11-09 23:28)

In [1]a post about Tokyo, I said it was a tragedy that there were so few foreigners there. You might think that someone in power in Japan would figure out that America's biggest strength is that foreigners want to move there ([2]for example), but apparently not. A Tokyo University student told me today that at her school, the dormitory for foreign students is one hour away from the campus.

1. <http://blog.sethroberts.net/2012/01/20/the-beauty-and-tragedy-of-tokyo/>

2. <http://www.ronunz.org/1994/11/07/value-added-why-national-review-is-wrong/>

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expatLeftCoaster (2012-11-10 03:04:13)

Have a look sometime at the JET program, which brings to Japan every year thousands of young college grads from the US, Canada, UK, Australia, South Africa - - even New Zealand - - to work as assistant language teachers in jr and sr high schools. They do on average a 2 or 3 year stint here (many of em placed in rural communities) and thereby fill some of the void left by Japanese universities and grad schools in particular which, for whatever reason, fail to draw foreign students the way N American and European universities can. Seth: All JET visitors teach English. Sure, the Japanese power structure grasps that English is an important language. They can afford to import people to teach it, yes. I know two people who have been in that program. One did stay in Japan afterwards, although she feels horribly like an outsider.

bjk (2012-11-11 21:45:49)

What I liked about Japan was that it was distinctive. It wasn't Manilla and it wasn't one drab apartment building after another, like Seoul. And you can walk the streets of Tokyo at any time of the night. What other major city can that be said about? Maybe the next frontier in happiness research is the benefit of homogeneity. Mangan had a post recently about diversity and heart

disease.

### The Power of the Willat Effect: Rinsed versus Unrinsed Tea (2012-11-10 05:00)

During my last visit to New York I bought a new black tea. I started drinking it a few weeks ago. I brewed it various ways (different amounts of tea, different steeping times, etc.) but had a hard time telling which way was best. This morning I decided I would learn how to brew it by making paired comparisons (two cups of tea made the same way at the same time except for one difference). The fascinating thing, as I've said, about these side-by-side comparisons is that they produce hedonic changes. They change how much you like this or that. I call this [1]the Willat Effect after my friend [2]Carl Willat who caused me to notice it.

This morning I made two cups of the new tea. The two cups were brewed the same except in one case I "rinsed" the tea before brewing. Rinsing means I poured a bit of hot water on it and quickly got rid of the hot water. Rinsing tea removes from the final product whatever is transferred from the tea to the hot water in the first few seconds. In China, rinsing tea is common; in the United States, very rare.

I tasted the two cups (rinsed and unrinsed) side by side. The rinsed tea tasted much better. The unrinsed tea had something weird about it. Ugh, I thought, I can't drink this. I threw out the unrinsed tea. Over the previous few weeks, I had happily drunk the new tea unrinsed many times. Now I found it repulsive.

1. <http://blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/willat-effect/>

2. <http://www.carlsfinefilms.com/>

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Sean (2012-11-10 11:40:33)

Wouldn't you want someone else to prepare this for you to make it a blind side-by-side test? Otherwise you could spend the rest of your life rinsing tea for the placebo effects. Seth: I have found the effect to occur whether or not I prepare the drinks.

Adam (2012-11-10 16:31:14)

Interesting! My Chinese mother-in-law tells me that if there are bubbles on the top of my tea, I should blow the bubbles to the edge & then pour them off. I don't know if this is widely practiced, but she seems to have learned it from her father. Sometimes I do it if I notice, but I've never done a side-by-side comparison to see if it makes any difference in taste. Could these 2 be linked?

Gayle (2012-11-10 17:31:34)

Hmmm... I wonder if this would work with coffee grounds, too...

Drewfus (2012-11-11 00:31:49)

Seth, what happens when the teas are tasted blind, in regards to not knowing how their preparations differ? *"Over the previous few weeks, I had happily drunk the new tea unrinsed many times. Now I found it repulsive."* Is that purely because of the taste, or because you know the tea has been unrinsed, and are reacting based on that higher level knowledge, or both? Seth: If it had been done blind, I am sure the results would have been the same. To answer your second question: Purely because of the taste. There is nothing inherently wrong with unrinsed tea.

Kirk (2012-11-11 12:01:27)

I agree, rinsing produces a better flavor. The rinsed tea has a rounder and cleaner taste and the sharp edges have been removed. My bake-off compared .5 of an ounce of an organic Assam, using 4 oz. of water, steeped for 2 minutes. After 3

rounds of tasting, I poured the unrinsed tea down the drain.

Jon K (2012-11-11 15:34:30)

I'm pretty sure that rinsing tea removes or greatly reduces the amount of caffeine present. Whether this is directly related to the change in taste, I don't know. But it is interesting because many people drink tea (especially black tea) at least partially for the caffeine.

Txomin (2012-11-11 19:13:23)

Sure. Weak tea is good.

Greg (2012-11-11 20:24:29)

The Willat effect is real and it is very dangerous. Last year I did a few side-by-side taste tests with the Keurig coffee machine at my workplace. Now I can't stand to drink any of it and can only enjoy direct trade hipster coffee that is roasted in Brooklyn.

Drewfus (2012-11-12 08:20:25)

Seth, thanks for the reply. I've more or less asked the same question as Sean (above) so i'm glad i didn't get into trouble for that. Regardless, this (Willat) effect is important, so i've started testing on myself. With green tea, i noticed a small but worthwhile improvement. The rinsed tea has a cleaner taste - especially the aftertaste. I'm slightly concerned that i'm imagining this, so will organize some blind testing. Maybe using a microwave oven to spin the tea cups, so i forget which is which! Seth: there is an easy test for whether you are imagining the difference. use identical tea cups. Put little labels on the bottom of the tea cups (e.g., R and U). Pour rinsed tea into the R cup and unrinsed tea into the U cup. then close your eyes and switch them a bunch of times (not counting how many times). you will soon lose track. Then open your eyes and do the comparative tasting. decide which cup holds the rinsed tea and see if the label on the bottom of the tea cup shows you are right.

Alex Chernavsky (2012-11-13 11:49:21)

I'd like to propose a phenomenon which I'll call the reverse-Willat effect. On a couple of occasions, I did side-by-side comparisons and found that - contrary to my expectations - the samples tasted remarkably similar.

Jenny (2012-11-17 16:57:51)

The evening after I read this, I was chatting to 2 Chinese friends (here in England) about this. They were amazed because they always 'rinse' their tea. So I tried it, and prefer it, finding it less bitter. I haven't tried it with T-bag tea yet, only loose tea. One of the ladies also told me that, having been an avid coffee drinker (8 cups a day), she gave up coffee for 6 months, and now finds that all coffee has an after-taste of peppermint - which she doesn't like.

### **Assorted Links (2012-11-11 05:00)**

- [1]chocolate: what is the best dose?
- [2]tasting sugar water improves self-control
- [3]The Beijing Interceptors.
- [4]doctor complains about over-prescription of opiates. The author, a doctor named Susana Duncan, complains about several things, including "a system where symptoms are treated but the source of pain remains". Treatment of symptoms rather than identification of causes is overwhelmingly true of the whole health care system, not just treatment of chronic pain. One example is depression. Anti-depressants do not reduce whatever caused the depression. Another example is high blood pressure. Blood-pressure-lowering drugs do nothing to eliminate what caused the high blood pressure. Duncan was once science editor of New York magazine, which may have something to do with her ability to cogently criticize the system.

- [5]A British surgeon performs hundreds of unnecessary operations before being caught.

Thanks to [6]Edward Jay Epstein, [7]Bryan Castañeda, Paul Nash, Jay Barnes and Dave Lull.

1. <http://perfecthealthdiet.com/2012/11/chocolate-what-is-the-optimal-dose/>
2. <http://www.sciencedaily.com/releases/2012/11/121107200200.htm>
3. <http://www.smh.com.au/world/how-a-complaint-led-to-an-ordeal-in-a-secret-prison-20091113-ieql.html>
4. [http://www.huffingtonpost.com/susan-duncan/painkiller-addiction\\_b\\_2096906.html](http://www.huffingtonpost.com/susan-duncan/painkiller-addiction_b_2096906.html)
5. <http://www.guardian.co.uk/society/2012/nov/07/gmc-accused-surgeon-breast-operations>
6. <http://www.edwardjayepstein.com/>
7. <http://www.bryancastaneda.com/>

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Cealan (2012-11-11 20:48:12)

Cool links especially "chocolate: what is the best dose?" Helpful and interesting read!

Jim Purdy (2012-11-11 23:18:48)

Doctor Susana Duncan said: "It is not clear that private medical practice as we know it will survive at all under these cuts." One can only hope that she is correct! Considering how pathetic and unscientific and profit-driven the USA's medical system is, the best thing for public health might be to do away with the whole private medical system. I'm not a religious believer, but I suspect that faith healing charlatans would do less harm to the public health than the broken system we have now. At least the money-grubbing faith healers wouldn't be turning millions of people into painkiller addicts. jimpurdy1943@yahoo.com

## Measuring Yourself to Improve Your Health? Want to Guest-Blog? (2012-11-12 05:00)

What surprised me most about [1]my self-experimental discoveries was that they were outside my area of expertise (animal learning). I discovered how to sleep better but I'm not a sleep researcher. I discovered [2]how to improve my mood but I'm not a mood researcher. I discovered that flaxseed oil improved brain function but I'm not a nutrition researcher. And so on. This is not supposed to happen. Chemistry professors are not supposed to advance physics. Long ago, this rule was broken. Mendel was not a biologist, Wegener (continental drift) was not a geologist. It hasn't been broken in the last 100 years. As knowledge increases, the "gains due to specialization" – the advantage of specialists over everyone else within their area of expertise – is supposed to increase. The advantage, and its growth, seem inevitable. It occurs, say economists, because specialized knowledge (e.g., what physicists know that the rest of us, including chemists, don't know) increases. [3]My theory of human evolution centers on the idea that humans have evolved to specialize and trade. In my life I use thousands of things made by specialists that [4]I couldn't begin to make myself.

Here we have two things. 1. A general rule (specialists have a big advantage, within their specialty, over the rest of us) that is overwhelmingly true. 2. An exception (my work). How can this be explained? What can we learn from it? I've [5]tried to answer these questions but I can add to what I said in that paper. The power of specialization is clearly enormous. Adam Smith, who called specialization "division of labor", was right. The existence of an exception to the general rule suggests there are forces pushing in the opposite direction (toward specialists being worse than the rest of us in their area of expertise) that can be more powerful than the power of specialization. Given the power of specialization, the countervailing forces must be remarkably strong. Can we learn more about them? Can we harness them? Can we increase them? The power of specialization has been increasing for thousands of years. How strong

the countervailing forces may become is unclear.

The more you've read this blog, the more you know what I think the countervailing forces are. Some of them weaken specialists: 1. Professors prefer to be useless rather than useful (Veblen). 2. A large fraction (99 %?) of health care workers have no interest in remedies that do not allow them to make money. 3. Medical school professors are terrible scientists. 4. Restrictions on research. Some of them strengthen the rest of us: 1. Data storage and analysis have become very cheap. 2. It is easier for non-scientists to read the scientific literature. 3. No one cares more about your health than you. These are examples. The list could be much longer. What's interesting is not the critique of health care, which is pretty obvious, but the apparent power of these forces, which isn't obvious at all.

I want to learn more about this. I want learn how to use these opposing forces and, if possible, increase them. One way to do this is find more exceptions to the general rule, that is, find more people who have improved their health beyond expert advice. I have [6]found some examples. To find more, to learn more about them, and to encourage this sort of thing (DIY Health), I offer the opportunity to guest-blog here.

I think the fundamental reason you can improve on what health experts tell you is that you can gather data. Health experts have weakened their position by ignoring vast amounts of data. Three kinds of data are helpful: (a) other people's experiences, (b) scientific papers and (c) self-measurement (combined with self-experimentation). No doubt (c) is the hardest to collect and the most powerful. I would like to offer one or more people the opportunity to guest-blog here about what happens when they try to do (c). In plain English, I am looking for people who are measuring a health problem and trying to improve on expert advice. For example, trying to lower blood pressure without taking blood pressure medicine. Or counting pimples to figure out what's causing your acne. Or measuring your mood to test alternatives to anti-depressants. I don't care what's measured, so long as it is health-related. (Exception: no weight-loss stories) and you approach these measurements with an open mind (e.g., not trying to promote some product or theory). I am not trying to collect success stories. I am trying to find out what happens when people take this approach.

Guest-blogging may increase your motivation, push you to think more ("[7]I blog, therefore I think") and give you access to the collective wisdom of readers of this blog (in the comments). If guest-blogging about your experiences and progress (or lack of it) might interest you, contact me with details of what you are doing or plan to do.

1. [http://blog.sethroberts.net/?attachment\\_id=7671](http://blog.sethroberts.net/?attachment_id=7671)
2. <http://blog.sethroberts.net/morning-faces-therapy-resources/>
3. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>
4. <http://www.econlib.org/library/Essays/rdPnc11.html>
5. <http://media.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>
6. <http://blog.sethroberts.net/make-yourself-healthy/>
7. <http://blog.sethroberts.net/2007/10/22/is-it-time-to-revise-ancient-philosophical-questions/>

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John Lawrence Aspden (2012-11-12 06:26:10)

Hi Seth, after four months I'm convinced your diet works: <http://johnlawrenceaspden.blogspot.co.uk/2012/11/shangri-la-diet-month-four-s-uccess-im.html> I'm still not convinced about the scarcity of food -> loss of appetite theory. It looks like a just so story, and it could equally well go scarcity of food -> eat everything you can get your hands on. But I think your diet works for me. Is anyone showing any interest in doing a large scale randomized trial? Seth: Thanks for your excellent blog post. No one has contacted me about doing a randomized trial, I'm afraid. About the theory behind the diet. The theory came before

the diet and led me to it. That a theory produces a diet that (a) works and (b) is very counter-intuitive seems to me to be excellent evidence for the theory. I too was/am skeptical of evolutionary explanations but they have helped me find surprising cause-effect relationships several times.

Koanic (2012-11-12 06:35:24)

I find that Filemaker is a useful program for collecting data, for those of us unfamiliar with and intimidated by R. It is a database program that allows one to design one's tables, fields and forms. This is really what you need to collect personal data. For example, right now I'm measuring sleep onsets and durations, and psychomotor test scores with subjective notes. Both have autogenerated timestamp fields. This is to provide feedback on a polyphasic sleep experiment. In a single database, I can store pretty much every type of self tracking data I collect over my lifetime. Handy. At a more zoomed out level, I track every day that I get to my journaling habit, which serves as a good proxy for conscientiousness and overall health. I use the website "don't break the chain" for this. I believe that the act of tracking should be designed so that in itself it increases your discipline without adding onerous load to your day.

Jim Purdy (2012-11-12 07:41:29)

Seth, in any discussion of specialist and non-specialist behaviors, I think we should consider the natural herding behavior of most people, both specialists and non-specialists. Many animals, including people, feel a instinctive sense of security in numbers. In the wild, the animal that strays from the pack is the most likely to be targeted by predators. That herding or pack instinct is very powerful, because it has been selected for over many millions of years of Darwinian evolution. In many professions, it can be career-damaging to resist the pressure to conform. In my own long-ago profession as a news reporter, pack journalism was and is the expected behavior. When I was with UPI in the 1960s and 1970s, the competition between AP and UPI was so intense that being first with a story, by 4 or 5 seconds, was all-important. The result was very sloppy journalism, and the dumbing down of news consumers. And that trend of 40 years ago has only gotten worse, especially with the relentless pressure from the fake journalists at Fox News. When Fox makes up a story, even a typically bogus story, pack journalism kicks in and soon all the media, even the once-esteemed New York Times, are soon imitating Fox. That herding tendency is true not just in journalism, but in other fields, especially medicine. When I once complained to a doctor that he wasn't paying attention to me, he adamantly insisted that it "would be malpractice" for him to listen to his patients instead of following national guidelines. Self-experimentation may be the only way for most health consumers to find out what works for them. BigPharma certainly is not the solution. jimpurdy1943@yahoo.com Seth: I agree. This is one aspect of what I mean when I say non-professionals have more freedom than professionals. Non-professionals can test "crazy" ideas (e.g., "crazy" ideas about how to lose weight or sleep better), professionals cannot.

Joe (2012-11-13 14:03:59)

"especially with the relentless pressure from the fake journalists at Fox News" Why pick on Fox News? They're all the same. "Fake journalists" everywhere you look. NBC, MSNBC, CBS, ABC, BBC, etc. Ditto for newspapers.

Greg (2012-11-13 19:31:32)

I can think of a few important cross-disciplinary contributions to biology in the 20th century – Linus Pauling: physicist, and a founding father of molecular biology (also a health self-experimenter). Max Delbruck: astrophysicist who made significant discoveries in microbiology. Alan Turing: founding father of computer science, founding father of computational biology. Carl Woese: molecular biologist, revolutionized the science of evolution. Seth: Delbruck changed fields. He was a professional biologist. Woese is a professor of microbiology, which is where his contributions are. If he were a professor of physics, I'd agree with you. Sure, the people who start a field are going to by definition come from outside that field. E.g., Ebbinghaus (one of the originators of experimental psychology) was a philosopher.

Alexander Boland (2012-11-19 11:50:33)

My two main areas of interest are (1) mitigating my ADHD (I've been taking medications on and off since I was a teenager and don't like that) and (2) more recently, dealing with energy levels. Recently I was feeling very sluggish on a daily basis at work and easily getting energy crashes right before and right after lunch. The main culprit here was probably the medications I take;

during a period of time where I was off of them but on a low-carb diet, my energy levels were very stable. That aside, I started engaging in a relatively simple self-experiment but it's not very formal and doesn't have much in the way of data. I got a hunch, from a Leangains.com post on cortisol and breakfast, that having coffee with my breakfast was causing serious insulin spikes and leaving my energy in an extremely volatile state. Lately, I've started waiting around an hour after a meal before having anything caffeinated. The results are mixed, but generally good. That said, this week I have a lot of energy despite the tactic failing me last Thursday and Friday. Odd too because this weekend I was feeling a bit "blah" and was out late drinking a lot. I'm wondering if it was just much needed rest (I don't take medications on weekends), or if it had something to do with consuming carbohydrates (I was eating more carbs than usual, partially to nurse hangovers.) I sometimes find that strategically placed carbohydrates have a positive effect on me. This all feels a bit too vague and simple to talk about on your blog but I thought it wouldn't hurt to talk about my most recent adventure in self-monitoring.

### Assorted Links (2012-11-14 05:00)

- [1]more black tea, less diabetes (cross-national comparison).[2]Earlier research supports the idea that black tea reduces diabetes.
- [3]Nassim Taleb praises an obscure French novel (translated into English) called The Opposing Shore. Says it is about "the antechamber of anticipation".
- [4]Natto consumption in different parts of Japan and correlation with Vitamin K levels and hip fracture risk. The correlation between natto consumption and hip fracture risk is weak but significant and cannot be explained by differences in wealth or overall soybean consumption. This is excellent epidemiology.
- [5]Five reasons butter is a superfood. I was unaware that conjugated linoleic acid (of which butter is a good source) inhibits tumors.
- [6]Fish oil and brain injury. Read this before you have a brain injury.

Thanks to Anne Weiss and Dave Lull.

1. <http://www.sciencedaily.com/releases/2012/11/121107200148.htm#.UJ5-J4p5gKI.email>
2. <http://www.sciencedaily.com/releases/2009/07/090728172604.htm>
3. [http://www.amazon.com/review/RLPRS4XIXYGG6/ref=cm\\_cr\\_old\\_cmt\\_rd](http://www.amazon.com/review/RLPRS4XIXYGG6/ref=cm_cr_old_cmt_rd)
4. <http://www.nutritionjrnal.com/article/S0899-9007%2800%2900554-2/abstract>
5. <http://empoweredsustenance.com/5-reasons-why-butter-is-a-superfood/>
6. <http://edition.cnn.com/2012/10/19/health/fish-oil-brain-injuries/index.html>

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Chuck (2012-11-14 09:37:01)

The problem I have with the black tea/diabetes correlation is that they don't take into account what these populations that consume the most black tea are not consuming that the populations with the lowest black tea consumption, and higher levels of diabetes are consuming. If one population consumes copious amounts of Crisco, wheat flour and sugar, and small amounts of black tea, is it really the low level of black tea consumption that exposes them to higher rates of diabetes, or is it CWS? The myopic focus on one element of a population's diet is what is wrong with all dietary advice today. Population diets are complex and synergistic. All elements of the diet must be taken into consideration if we are to understand why some populations are more prone to contracting a particular disease or metabolic condition. It may be the tea that leads to lower levels of diabetes



in these particular populations, but how do we know it's not the cigarettes they smoke? Cheers Seth: Very likely these studies adjusted/corrected for smoking.

Paul N (2012-11-24 00:59:47)

There is actually lots of evidence for the the health benefits of CLA. One of the theories as to why it works so well is that being a trans fat, and the \*only\* natural source is mammal milk (and grass fed ruminant fat), that bacteria and pathogens just can't digest it. Grassfed beef has five times the cla of grain fed. There is also CLA sold as a supplement, but made from sunflower oil. It has a slightly different chemical structure and is not nearly as effective, though the vegans won;t believe that, of course. Being in mammal milk also suggests it is vital for infant health and possibly brain development. [1]This study found that CLA was a "potent inhibitor" of colon cancer. This supports the empirical results like that of the Tuoli people in NW China, who are dairy herders and have the lowest rates of colon cancer in the country. It might also explain why reduce butter and beef consumption over recent decades has coincided with an increase in colon cancers - it used to be 37th most common cancer and now is 3rd. The fact that (normal) colon cells live on butyric acid might have something to do with this too...

1. <http://www.ncbi.nlm.nih.gov/pubmed/16563722>

### **Bayesian Shangri-La Diet (2012-11-15 06:20)**

In July, a Cambridge UK programmer named [1]John Aspden [2]wanted to lose weight. He had already lost weight via a low-carb (no potatoes, rice, bread, pasta, fruit juice) diet. That was no longer an option. He came across the Shangri-La Diet. It seemed crazy but people he respected took it seriously so he tried it. [3]It worked. His waist shrank by four belt notches in four months. With no deprivation at all.

Before he started, he estimated the odds (i.e., his belief) of three different outcomes predicted by three different theories. What would happen if he drank 300 calories (2 tablespoons) per day of unflavored olive oil (Sainsbury's Mild Olive Oil)? Aspden considered the predictions of three theories.

I called my three ideas of what would happen [= three theories that make different predictions] if I started eating extra oil Willpower, Helplessness and Shangri-La. (1) Willpower (W) is the conventional wisdom. If you eat an extra 300 calories a day you should get fatter. This was the almost unanimous prediction of my friends. Your appetite shouldn't be affected. (2) Helplessness (H) was my own best guess. If you eat more, it will reduce your appetite and so you'll eat less at other times to compensate, and so your weight won't move. Whether this appetite loss would be consciously noticeable I couldn't guess. This was my own best guess. (3) Shangri-La (S) is your theory. The oil will drop the set point for some reason, and as a result, you should see a very noticeable loss of appetite.

[4]More about these theories. His original estimate of the likelihood of each prediction being true: W 39 %, H 60 %, S 1 %. He added later, "I think I was being generous with the 1 %". After the prediction of the S theory turned out to be true, the S theory became 50 times more plausible, Aspden decided.

I like this a lot. Partly because of the quantification. If you were a high jumper in a world without exact measurement, people could only say stuff like "you jumped very high." It would be more satisfying to have a more precise metric of accomplishment. It is a scientist's dream of making an unlikely prediction that turns out to be true. The more unlikely, the more progress you have made. Here is quantification of what I accomplished. Although Aspden could find dozens of online reports that following the diet caused weight loss, he still believed that outcome very unlikely. Given that (a) the obesity epidemic has lasted 30-odd years and (b) people hate being fat, you might think that conventional wisdom about weight control should be assigned a very low probability of being correct.

I also like this because it is the essence of science: choosing between theories (including no theory) based on predictions. The more unlikely the outcome, the more you learn. You'd never know this from 99.99 % of scientific papers, which say nothing about how unlikely the actual outcome was a priori – at least, nothing numerical. I can't say why this happens (why an incomplete inferential logic, centered on p values, remains standard), but it has the effect of making good work less distinguishable from poor work. Maybe within the next ten years, a wise journal editor will begin to require both sorts of logic (Bayesian and p value). You need both. In Aspden's case, the p value – which would indicate the clarity of the belt-tightening – was surely very large. This helped Aspden focus on the Bayesian aspect – the change in belief. This example shows how much you lose by ignoring the Bayesian aspect, as practically all papers do. In this case, you lose a lot. Anyone paying attention understands that the conventional wisdom about weight control must be wrong. Here is guidance towards a better theory. If not mine, you at least want a theory that predicts this result.

1. <http://www.aspden.com/>
2. <http://johnlawrenceaspden.blogspot.com/2012/07/shangri-la-diet.html>
3. <http://johnlawrenceaspden.blogspot.com/2012/11/shangri-la-diet-month-four-success-im.html>
4. <http://johnlawrenceaspden.blogspot.com/2012/07/shangri-la-diet-experiment.html>

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Tuck (2012-11-15 08:07:49)

"I can't say why this happens (why an incomplete inferential logic, centered on p values, remains standard), but it has the effect of making good work less distinguishable from poor work." I think you just answered your own question. There's a whole industry of academies, scientists working at those academies, and journals those scientists publish in to advance at their academies that depends on good work being less distinguishable from poor work. A better standard might reveal that a lot of those scientists aren't doing valuable work... Seth: Why would a journal editor care about protecting them? My favored explanation is inertia.

jimrandomh (2012-11-15 10:47:54)

One of my preferred theories (not mentioned here) is regression to the mean: diet is part of a very complicated system, and making a big change to your diet is akin to taking a reroll; if your health is below average it has a good chance of being an improvement, simply by regression to the mean. Shangri-La is unusual in that it has a high change-size-to-effort ratio (10+ % of calories without needing to learn any recipes or discard any foods).

Kayode (2012-11-15 12:46:27)

Seth, Any good books on understanding p values, bayesian probability and how its used in scientific research? I have a hard time grasping these concepts. Seth: John Kruschke's book: <http://www.indiana.edu/~kruschke/DoingBayesianDataAnalysis/>

random\_process (2012-11-15 13:59:52)

Seth, I tried the Shangri-la diet but not rigorously enough. I wanted to make another go at it since the other diets that work (like low carb) are proving too hard for me. I tried with flax seed oil and nose clipping but there was always a after taste. I like flax seed oil but fear that the it was not flavorless enough to qualify. Will taking fish-oil capsules satisfy as "taste less calories" instead of extra-light olive oil? thanks for your blog - it is a trove of ideas! :) Seth: Yes, capsules = smell-less calories. However, you have to take a lot of capsules/day (about 30, too many, in my opinion) to get enough calories. You might try rinsing your mouth with water after nose-clipping flaxseed oil.

Alex Chernavsky (2012-11-15 21:19:16)

I bought a noseclip used by swimmers, but it wasn't tight enough, and I could still taste whatever I was consuming. I now pinch my nose shut with my hand when I take coconut fat, and I drink four or five mouthfuls of warm water (after sloshing it around my mouth first). When I drink flaxseed oil, I don't pinch my nose. Perhaps I should - maybe I'd lose more weight if I did. Seth: Some of the noseclips I've used are adjustable. Some aren't.

Scott Pierce (2012-11-16 23:18:36)

I read the book when it came out and followed it for a short while but here recently I realized that I had been following the protocol unwittingly. I had been taking MCT oil to drive up my ketone levels. It is almost completely flavorless and has other benefits as well if anyone wants to give it a try. I recommend the Now brand easily found on amazon. Seth: Since you started the MCT oil (how long ago?), has your weight changed?

Paul N (2012-11-25 00:05:38)

For another view on the bayesian approach, check out this XKCD take on it; <http://xkcd.com/1132/>

### Assorted Links (2012-11-16 05:00)

- [1]Olive oil and the Willat Effect. "You can read about great olive oils, and their vast superiority over bad oils, all you want. . . . But until you try first-rate olive oil for yourself - actually put the good stuff in your mouth, and compare that experience to the bad stuff you've eaten in the past - you won't really get it. . . . Once you taste fine olive oils and their low-class imitations [side by side], though, you start to care."
- Petraeus Affair: [2]The journalism of what we don't know.
- [3]Tucker Max on book publishing. Disruptive innovation for popular authors.
- [4]Animal self-medication. Sick animals eat differently than healthy animals.

Thanks to Alex Blackwood.

1. <http://www.truthinoliveoil.com/2012/10/heroes-oil-erin-o%E2%80%99brien-and-joe-hennessy>
2. <http://edjayepstein.blogspot.com/2012/11/ten-missing-dates-in-petraeus.html>
3. [http://www.huffingtonpost.com/tucker-max/book-publishing-tips\\_b\\_2127396.html](http://www.huffingtonpost.com/tucker-max/book-publishing-tips_b_2127396.html)
4. <http://www.the-scientist.com/?articles.view/articleNo/32966/title/Natural-Born-Doctors/>

Jim Purdy (2012-11-16 22:06:55)

Animal self-medication? Really? So animals, living in the wild, are able to take actions to ward off diseases and pathogens? You mean that millions of years of Darwinian evolution have selected for healthful behaviors? Nobody who understands evolution should be surprised. But BigPharma and their shill salespersons (a.k.a. MDs) keep insisting on drugs and surgeries and devices that interfere with naturally evolved healing processes. Do very many medical schools even bother to teach courses – or majors – in evolutionary medicine to medical students? Of course not! BigPharma companies and their shill doctors would lose billions in annual profits if people would follow other animals' examples and just eat fresh natural foods. JimPurdy.blogspot.com jimpurdy1943@yahoo.com

Paul N (2012-11-18 21:03:46)

The FBI investigation into the Petraeus affair has widened - it turns out that people - everywhere - have been having sex, and [1]for quite some time!

1. <http://www.theonion.com/articles/widening-petraeus-scandal-reveals-human-race-has-b,30368/?ref=auto>

### **Taobao's Double Eleven: World's Biggest eHoliday (2012-11-17 05:00)**

Do the heads of eBay and Amazon know about the Chinese shopping site [1]Taobao (like eBay without auctions)? If so, why don't they imitate it? Maybe they can't match its bigger selection (e.g., food, detergent) and better prices, but they could imitate the better seller feedback and instant communication (chat boxes) with sellers.

In [2]my theory of human evolution I propose that we have ceremonies, rituals, and festivals (and associated holidays) because they caused trading that would otherwise not have taken place. Ceremonies and so forth increased the demand for certain goods – gifts and high-end clothes, for example. These goods are important economically far out of proportion to their volume or monetary value or daily use because they increase innovation. They help the most skilled artisans– the ones most likely to innovate – make a living.

The leaders of Taobao understand this function of festivals/holiday and have put it to use: They have created new festivals/holidays. The biggest is Double Eleven (November 11), which started five years ago. On Double Eleven, a large fraction of taobao merchants have discounts, big (50 %) and small (5 %). Sales have grown each year and this year reached about \$3 billion,[3] according to one site. According to a Chinese friend, the sales were about \$10 billion. CyberMonday (about \$1 billion in 2011) is far behind

I have never read about this function of ceremonies, festivals, etc., in any economics book or paper. Double Eleven shows their economic force. This neglect is an example of what I consider the biggest problem with modern economics: lack of attention to and lack of understanding of innovation.

1. [http://www.taobao.com/index\\_global.php](http://www.taobao.com/index_global.php)

2. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

3. <http://www.techinasia.com/china-ecommerce-sales-day-2012-tmall-taobao/>

Nancy Lebovitz (2012-11-17 06:06:27)

Off topic: [1]Some history of what foods get eaten at what times of the day. It doesn't seem to have much to do with what's good for people, it's just what's tolerable and feasible.

1. <http://www.bbc.co.uk/news/magazine-20243692>

Patrik (2012-11-18 15:50:10)

Seth, The city of Santa Barbara has an end of summer celebration called "Fiesta" – <http://www.oldspanishdays-fiesta.org/new/index.php> If I recall correctly, this fiesta was created by enterprising local merchants to do exactly what you suggest in the post, create demand for certain goods. [http://www.oldspanishdays-fiesta.org/new/index.php/history/history\\_of\\_fiesta](http://www.oldspanishdays-fiesta.org/new/index.php/history/history_of_fiesta)

## How I Read (2012-11-18 05:00)

In [1]a review of a book by Alice Munro, Charles McGrath, who edited her at The New Yorker, wrote:

Many of these stories are told in Munro's now familiar and much remarked on style, in which chronology is upended and the narrative is apt to begin at the end and end in the middle. She has said that she personally prefers to read stories that way, dipping in at random instead of following along sequentially,

That's what I do. Most books I find are improved if I start in the middle and hop around. Doing so adds difficulty and mystery, which otherwise they are deficient in. Same reason I usually like reality shows more than scripted shows, scripted shows lack that attractive raw edge. Spy magazine had an article about writing guidelines for a woman's magazine. The guidelines said start in the middle: Talk about someone ("he" this, "he" that) before identifying them.

A few great writers (Vladimir Nabokov, Jane Jacobs, Tolstoy) I don't do this with. Some true crime (The Stranger Beside Me by Ann Rule) I don't do it with. But most books benefit.

1. [http://www.nytimes.com/2012/11/18/books/review/dear-life-stories-by-alice-munro.html?nl=books&emc=edit\\_bk\\_20121116&r=0&pagewanted=all](http://www.nytimes.com/2012/11/18/books/review/dear-life-stories-by-alice-munro.html?nl=books&emc=edit_bk_20121116&r=0&pagewanted=all)

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Terry Elliott (2012-11-18 07:06:37)

I have read many places that reality shows are scripted, too. Sad, isn't it ? Seth: A reality-show producer told me they do stuff to increase conflict.

Aaron Blaisdell (2012-11-18 08:47:14)

Doing this with a novel would give me an anxiety attack. But I love to ski around at random or at least nonlinearly in text books.

TomGinTX (2012-11-18 11:05:24)

Have you ever heard anyone say "uh" in a reality show?

Chuck (2012-11-18 14:03:19)

"The guidelines said start in the middle: Talk about someone ("he" this, "he" that) before identifying them." This is exactly how my wife talks. She'll start a conversation in the middle of the story she is relating. I've gotten use to it and can follow along quite well (once I ask who "he", "she", "them" etc are). When we're with company, I sometimes have to stop her so the other listeners, who have puzzled looks on their face, can catch on/up. Funny thing is, it never bothers her, she just keeps on telling her story, always with a smile and a laugh. Cheers

Alex Chernavsky (2012-11-18 14:37:58)

Chuck, I've noticed that not many people know how to tell stories in a coherent, engaging fashion (at least, not when those stories are at all involved). In a related matter, I've also noticed that very few people know how to give a good lecture.

Adam (2012-11-18 16:13:16)

My mother & grandmother used to always have conversations in pronouns. No one else in my family could ever figure out who or what they were talking about, but they knew somehow.

Paleo Retiree (2012-11-18 22:22:44)

My wife does that thing with pronouns too – zooming into stories and anecdotes without telling anyone who she's talking about. But I believe it's something many women tend to do. The novelist Tom Perrotta once wrote about a guy whose woman was upset with him and talking in ways he couldn't follow, but "Dave knew better than to ask her to clarify her pronouns." My wife tends to get a bit annoyed when I stop her and ask her who she's referring to – evidently I'm expected to be totally on board with her thought processes. Or maybe just to read her mind, I'm not sure which.

Alex (2012-11-19 15:42:18)

I'm with Aaron on this one. I would be anxious skipping around a narrative. It would spoil my sense of the writer's structure. I have no trouble with nonlinear storytelling, such the series "Damages" on FX or the movie "Memento", but I would not enjoy skipping around the story myself. On the other hand, when I tell my husband a story you would swear I wrote it out on cards and then shuffled them before reading aloud. We'll have to ask Deborah Tannen if it's just a wife thing.

## **Flaxseed Lowers Blood Pressure (2012-11-18 05:00)**

[1]A new study found that ground flaxseed powerfully lowers blood pressure:

A patient population with peripheral artery disease (PAD) was selected as ideal to benefit from dietary flaxseed. . . . Patients received 30g of milled flaxseed (or placebo) each day over 6 months. [I eat 50 g/day – Seth] . . . No significant adverse events were associated with flaxseed ingestion. . . . SBP in the placebo group increased by 3 mmHg and DBP remained the same over the experimental period. However, SBP levels were 10 mmHg lower ( $P<0.04$ ) and DBP was 8 mmHg lower ( $P<0.004$ ) in the flax group compared to placebo. In the flaxseed group, patients with a SBP  $<140$  mmHg at baseline did not receive an anti-hypertensive effect but patients who entered the trial with a SBP  $>140$  mmHg at baseline obtained a sustained and significant 15 and 7 mmHg reduction in SBP and DBP, respectively, during the six months. . . . one of the most potent anti-hypertensive effects ever observed by a dietary intervention.

This supports my belief that we can improve our overall health by trying to improve our brains (which are more sensitive than the rest of the body). I have blogged about flaxseed oil [2]many times. I became interested in it when I noticed it improved my balance. Balance measurements showed that the optimal dose (2-4 T/day) was higher than flaxseed oil manufacturers suggested. Then I and others noticed that taking this amount of flaxseed oil produced [3]big improvements in gum health. Tyler Cowen, for example, [4]no longer needed gum surgery. Go home, said the

surgeon.

Thanks to Grace Liu.

1. <http://health.groups.yahoo.com/group/Paleoscience/message/487>
2. <http://blog.sethroberts.net/category/nutrition/omega-3/>
3. <http://blog.sethroberts.net/category/nutrition/omega-3/omega-3-and-gum-health/>
4. <http://blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>

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David (2012-11-18 08:51:09)

it says milled flaxseed, not flaxseed oi. Could lignans or other constituents of the milled seed contribute to the effect, or is it the oil? The excerpt doesn't say what underlies the mechanism for BP modulation. Seth: That's a good point. You're right, it could easily be the lignans not the oil that produces the BP improvement.

Paul N (2012-11-18 11:25:34)

An interesting [1]review article from 2004 investigated numerous cardiovascular benefits of flaxseed, flax meals (no oil) and flax oil (no lignans). The results? "Flaxseed contains 35 % of its mass as oil, of which 55 % is alpha-linolenic acid (ALA). Flax meal, which is devoid of oil, contains the lignan secoisolariciresinol diglucoside (SDG). Flaxseed, flaxseed with very low ALA, flaxseed oil, flax lignan complex (FLC), and SDG reduce the development of hypercholesterolemic atherosclerosis by 46 %, 69 %, 0 %, 73 %, and 34 %, respectively, in the rabbit model. FLC and SDG slow the progression of atherosclerosis but have no effect in regression of atherosclerosis. Suppression of atherosclerosis by flaxseed is the result of its lignan content and not the result of ALA content." The study goes on to say; "Flaxseed and flaxseed oil do not have antioxidant activity except they suppress oxygen radical production by white blood cells. Flaxseed oil/ALA has variable effects on inflammatory mediators/markers (interleukin [IL]-1beta, IL-2, IL-4, IL-6, IL-10, tumor necrosis factor-alpha, interferon-gamma, C-reactive protein, and serum amyloid A). Doses of ALA less than 14 g/d do not affect inflammatory mediators/markers, but 14 g/d or greater reduce inflammatory mediators/markers." if flaxseed oil is 55 %ALA, and you need a minimum 14g of ALA, then you need 25g of flaxseed oil, which is about 30mL. Seth's dose for noticeable reduction in inflammation of 2tbsp is 40 mL, so in great agreement with this study! So flax oil is anti-inflammatory, and flax meal is anti-atherosclerotic, sounds like ground flaxseed, rather than just oil, is the way to go. Flax does have a bunch of phytoestrogens, and their effects -good or bad- are not all known, but one well known effect is to induce premature birth in pregnant women. Finally, there are some toxins in flaxseed (not oil) -cyanogenic glycosides - which can be reduced by [2]fermentation And, our old friends, lactobacillus, [3]can do this This might explain why my flax sourdough (made with kefir whey) bubbles/expands much more than my buckwheat sourdough - getting rid of all that cyanide!

1. <http://www.ncbi.nlm.nih.gov/pubmed/19568181>
2. <http://www.ncbi.nlm.nih.gov/pubmed/22530603>
3. <http://www.ncbi.nlm.nih.gov/pubmed/10634708>

Jim Purdy (2012-11-18 13:56:48)

Seth said: "This supports my belief that we can improve our overall health by trying to improve our brains" Wouldn't protecting the blood-brain-barrier be a good first step to improve our brains, by keeping out disruptive chemicals and pathogens? If so, should we avoid man-made chemicals that cross the blood-brain-barrier - things like sugar alcohols, antihistamines, and ace inhibitors? Better yet, let's avoid all unnecessary drugs and the doctors that prescribe them.

Alex Chernavsky (2012-11-18 14:48:10)

@Paul N, do you ferment your own flax seeds? If so, what is your procedure? I'm interested in trying it. Thanks.

Nina (2012-11-18 16:37:20)

I take flaxseed oil regularly but have noticed no improvement in bp or gum health as a result. I made pizza last night with flaxseed and almond crust and was surprised to see my blood pressure was much lower than it had been for weeks.

Paul N (2012-11-18 20:59:36)

@ Alex, The procedure is, really, quite simple. Get some Kefir - store bought or (much better, and surprisingly simple) make your own. I use kefir instead of yoghurt as kefir has yeasts in it. Get some flour - I make flax "flour" by putting flax seeds in a coffee grinder. I then mix this 50/50 with buckwheat flour, though I have also done it with rice, quinoa, amaranth and sorghum flours (I used to use wheat and rye in my pre-paleo days) In a quart size canning jar (or other non-metallic container) mix 1 part kefir to 2parts (by volume) flour, and then add enough water to make a soft paste (not a thick dough). Jar should be no more than half full. Leave it on the countertop overnight and then put it in the fridge, and leave for another day, or two. It is then ready to use. To keep a continuous culture, which I do, you simply add enough flour (and water) to at least double the volume, and put 1/3 to 1/2 of that back into the container - and use the rest for whatever it is your are making. The culture gets better with each "generation" When I am making a batch of something, I make up the mix from the sourdough starter and leave it out overnight - it will double in volume. if making something like pancakes, involving eggs, only add these right before you cook. I also mix in a saturated fat, like butter or coconut oil - the saturated fats help protect the omega3s against oxidation. Rye traditionally makes the best (most active) sourdoughs, but I have found my 50 % flax to be even more active. Using 100 % flax doesn't give very good texture. Do not use high heat when cooking with flax... Warning - making sourdough (and kefir) is addictive! All you could ever want to know (and then some) about kefir, and where I got the sourdough concept from, is at [1]Dom's Kefir Site

1. [http://users.chariot.net.au/~dna/kefir\\_cheese.html#kefir-straightjacket-pizza](http://users.chariot.net.au/~dna/kefir_cheese.html#kefir-straightjacket-pizza)

Alex Chernavsky (2012-11-19 06:58:20)

Paul, OK, thanks. You're not concerned with the micro-organisms breaking-down the omega-3 fatty acids in the flax? Also, do you use the culture as simply a starter when making something else (like sourdough bread), or is the culture ever the main ingredient in the dish? Are there recipes? Thanks again.

Bruce McCullough (2012-11-19 16:33:34)

Seth, Do you take both flaxseed oil and flaxseed meal? Bruce Seth: Yes. flaxseed oil in Berkeley, ground flaxseed in Beijing.

Paul N (2012-11-24 00:07:24)

Hi Alex, I really have no idea what the microbes do or don;t do to the ALA in flax, that's an interesting topic to research! I do know that kefir grains work best i whole milk, they do some kind of digestion on the butterfat, though I don;t know what, specifically. As to the culture, I keep the quart jar about 3/4 full. I sometimes take some out and just mix some eggs and cook directly as pancakes or dumplings. i don;t make bread anymore but if i was then I would use half the jar to start the bread mix (and let it sourdough for a day or two) and then top up the jar with fresh flour and water (and a pinch of salt). Be aware that sourdoughing whole grain flour (even buckwheat) can make for really \*sour\* dough. As for recipes, well,the theme of Seth's site is self-experimentation, and that's how I approach cooking in general!

DanD (2012-12-13 09:35:12)

Seth, how big of an issue is rancidity / freshness in regard to flaxseed or flax oil? Some sources seem to say I'll be in danger if I don't buy the oil or flaxseed every few days, freeze it, only grind it the day I'm consuming it. What do you think is a sensible regimen regarding avoiding rancid flax? Seth: I discovered it was a big issue. At one point I got flaxseed oil in China. I later discovered it was inactive. Presumably due to too much time at room temperature. Now I used freshly ground flaxseed. Haven't had trouble with inactivity. I freeze the flaxseeds when they arrive (at my apartment) but they are not frozen before that (e.g., for months after being harvested). And they sit at room temperature in my apartment for a week or so.

DanD (2012-12-14 21:53:05)

I appreciate the help. May I ask how you know whether the flax has become inactive? Is there a physical effect that fails to occur in that case? Thanks again. Seth: I was measuring how fast I can do arithmetic. When I switched from the Chinese flaxseed oil



to the American flaxseed oil (better refrigerated) I suddenly got faster. I had previously found, using American flaxseed oil, that flaxseed oil produces this effect (faster arithmetic). That's how I learned that the Chinese flaxseed oil was inactive – or less active.

### No More Antioxidants (2012-11-20 04:11)

[1]This fascinating blog post by Josh Mitteldorf points out that antioxidants, once believed to reduce aging by reducing oxidative damage, have turned out to have the opposite effect. By reducing a hormetic effect, they make things worse. I'm a friend of Bruce Ames, one of main proponents of the free radical theory of aging. I've heard him talk about it a dozen times. The turning point – the beginning of the realization that this might be wrong – was [2]this 1994 study, which found that beta-carotene, a potent antioxidant, increased mortality. Bruce did not have a good explanation for the counter-theoretical result. However, Mitteldorf doesn't mention an important fact which doesn't fit his picture. Selenium, a potent antioxidant, also powerfully reduces cancer. Don't stop taking selenium.

I also like [3]this theoretical paper by Mitteldorf about why aging evolved (turning off certain genes reduces aging) and how its evolution – not easily explained by conventional evolutionary ideas – is part of a range of phenomena that the conventional ideas cannot explain. One reason, maybe the main reason, that aging is adaptive is very Jane Jacobsian: it makes the community more flexible. Less likely to repeat old ways of doing things.

Thanks to Ashish Mukarji.

1. <http://joshmitteldorf.scienceblog.com/2012/11/19/anti-oxidants-a-disappointment-or-worse/>
2. <http://www.ncbi.nlm.nih.gov/pubmed/8127329>
3. [http://www.protein.bio.msu.ru/biokhimiya/contents/v77/pdf/bcm\\_0716.pdf](http://www.protein.bio.msu.ru/biokhimiya/contents/v77/pdf/bcm_0716.pdf)

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Sarah Madden (2012-11-20 05:13:35)

Hi Seth, I think there is more to this than just anti-oxidants = bad. That trial with beta carotene is confounded by the addition of synthetic alpha tocopherol. We know from other trials that synthetic fat soluble vitamins are bad news. The effect of vitamin e is not even that consistent: <http://www.ncbi.nlm.nih.gov/pubmed/19267994> I personally take a low dose natural vitamin e supplement that includes mixed tocotrienols (which balance tocopherols) and ultrathione, a highly absorbable version of glutathione, the so-called 'master anti-oxidant', I've had great results with both. Namely glowing skin and good stable mood. I think hormetic stress is important, in fact that is how polyphenols found in vegetables and exercise benefits are now thought to come about, but that doesn't mean the chronic oxidative stress we experience in modern life is not to be avoided and mitigated where possible. Seth: The trial was not confounded. Betacarotene and vitamin e were varied separately. There were four groups, on other words.

Jim Purdy (2012-11-20 08:00:38)

Three take-away lessons that I get from all these changing and contradictory studies – and all the drug recalls – are very simple: 1. All the smug self-proclaimed experts are not as smart as they think they are. 2. We should be very careful about interfering with biological processes that have been selected for over millions of years of Darwinian evolution. 3. We should be especially careful about all the highly profitable new drugs, devices and surgeries. As for me, I'm perfectly happy to let other people

be the guinea pigs taking – and dying from – all the addictive painkillers, antidepressants, proton pump inhibitors, and other magic BigPharma potions.

vimal (2012-11-20 08:52:37)

Does the 1994 study and the vast majority of all vitamin studies show that supplementing with isolated chemically derived vitamins is neutral at best and negative at worst? One wonders if the 1994 study results would have been different had one group eaten carrots and the other not eaten carrots. Seth: If you include animal (usually rat or mouse) experiments, I believe the answer is no, they don't show that. The vast majority of vitamin experiments with isolated chemicals (lab chow with chemical X vs lab chow without chemical X) have produced positive results. That's where the concept of vitamin came from. In these studies the animals were made sure to have a deficiency in the vitamin. Whereas human studies often fail to make sure there is a deficiency.

Nancy Lebovitz (2012-11-20 13:27:34)

If I remember correctly, the idea that antioxidants would slow aging was very abstract. The takeaway might be that biology is sufficiently complex that experiments and knowledge of specific mechanisms are essential.

dearieme (2012-11-20 17:14:11)

O/T: the flu. <http://www.independent.co.uk/life-style/health-and-families/health-news/scientists-urge-ministers-tell-truth-on-overhyped-flu-vaccine-8336184.html>

Sean (2012-11-21 01:14:58)

"The vast majority of vitamin experiments with isolated chemicals (lab chow with chemical X vs lab chow without chemical X) have produced positive results. That's where the concept of vitamin came from. In these studies the animals were made sure to have a deficiency in the vitamin. Whereas human studies often fail to make sure there is a deficiency. " Good point, Seth. The argument I've heard for why the CARET study possibly failed, from the Eades, is that the immune system uses free radicals and that supplying one specific anti-oxidant could actually compromise that process. Hence the need to supply a natural smorgasbord of anti-oxidants and their raw materials to let the body select what it wants to use. But I've heard the same argument used for vitamins, whereas it's clear that extracted or isolated vitamins will always cure their associated deficiency diseases. I'm pretty much agnostic on anti-oxidants at this point.

Jenny (2012-11-21 10:30:02)

Seth - I can't get through to Mittleldorf's theoretical paper. Is that generalised or just from here. Seth: I fixed the link. It should be easier now.

George @ the High Fat hep C Diet (2012-11-21 11:55:24)

There are certain diseases - hepatitis, pancreatitis, and various types of poisoning are good examples - where antioxidants - pretty much generically and indiscriminately - can save your life. Otherwise, beneficial antioxidants fall into groups: 1) antioxidants that are also pro-oxidants, so don't suppress important ROS signalling. Co-enzyme Q10, carnitine, ascorbate. 2) components of antioxidant enzymes; selenium, zinc, copper, manganese, iron and NAC/cysteine/glutathione. 3) plant polyphenols that stimulate the formation of enzymes as in 2) and may not even be antioxidant in vitro except as chelators of free iron. Fat soluble antioxidants are valuable in some contexts - mixed carotenoids or astaxanthin protect against UVA in summer, tocopherols protect against the oxidation of the PUFAs that naturally contain them. Apart from grossly purified or otherwise unnatural forms of some fat-soluble antioxidants - as in CARET - where the vitamins were, to be fair, combined with smoking, which no-one thinks is a good idea - it is hard to discover much harm in the clinical literature. There's not a lot of benefit either, but I imagine that a varied approach tailored to the needs of each patient - which has NEVER been the kind of medicine subject to published analysis, yet is the only responsible way to practice - can produce marked benefit - this was certainly my experience.

George @ the High Fat hep C Diet (2012-11-21 11:56:24)

Sorry, 3) above should read "in vivo" Carry on.

George @ the High Fat hep C Diet (2012-11-21 17:10:14)

Should a healthy person supplement antioxidants? Maybe not. Should an unhealthy person try those antioxidants that are most likely to be of benefit for their symptoms? Why not? If you can relieve pain or reverse degenerative disease with supplements, and you do notice improvement, and you have avoid the added risk of using drugs, maybe you've achieved something. Many effective antioxidants, such as polyphenols, curcumin, astaxanthin, acetyl-carnitine, lipoic acid have anti-inflammatory effects or metabolic effects that might overshadow their ability to quench free radicals. Free radical signalling is significant in the cytosol, between mitochondria and nucleus, and promotes (via FOXO1) elevations in glutathione and antioxidant enzymes - it is self regulating. When this self-regulation breaks down (because minerals or protein is deficient, toxins are involved, or hyperglycaemic conditions are causing maladaptive signalling, i.e. oxidative stress) then supplementary antioxidants are cytoprotective.

pond (2012-11-24 09:31:54)

I once read a book by the professor who called himself the "Father of Antioxidants" and he wrote about the anti- and pro-oxidant effects. He boosted the notion of 5 antioxidants that work in concert: one would produce oxidants that another would gobble onto, and so on in a ring. C, E, selenium I think were 3 of the 5. According to this notion, doing a study of one antioxidant alone would lead to contradictory results, depending on whether the other antioxidants were being consumed in diet in enough quantities. The synergistic notion makes sense in evolutionary biology terms, since traditionally we consumed all vitamins in our diet.

La Revue du Net Paleo #19 | Paléo Lifestyle (2012-11-27 01:59:00)

[...] Une découverte étonnante sur les antioxydants. [...]

George @ the High Fat hep C Diet (2012-11-27 17:50:51)

You could explain the CARET study without mentioning ROS signalling. High vitamin A intakes disordering cell growth signalling in people already deficient in vitamin D; high carotene intakes in oxidative stress conditions forming toxic apocarotenoids, which further disrupt vitamin A signalling. The net effect could also be immunosuppressive. I'm not saying this does in fact explain it, but there are other pathways involved other than the antioxidant effect. "A common explanation of the effect is that when retinoic acid is liganded to RAR-beta (Retinoic Acid Receptor beta), the complex binds AP1 (Activator Protein 1). AP1 is a transcription factor that binds to DNA and in downstream events promote cell proliferation. Therefore, in the presence of retinoic acid, the retinoic acid:RAR-beta complex binds to AP1 and inhibit AP-1 from binding to DNA. In that case, AP1 is no longer expressed, and cell proliferation does not occur. Cigarette smoke increases the asymmetric cleavage of beta-carotene, decreasing the level of retinoic acid significantly. This can lead to a higher level of cell proliferation in smokers, and consequently, a higher probability of lung cancer. Another  $\beta$ -carotene breakdown product suspected of causing cancer is trans-beta-apo-8'-carotenal (common apocarotenal), which has been found in one study to be mutagenic and genotoxic in cell cultures which do not respond to  $\beta$ -carotene itself." <http://www.news-medical.net/health/Beta-Carotene-Side-Effects.aspx>

## **The Physical Spacing Effect: New Way to Learn Chinese Works Shockingly Well (2012-11-22 05:00)**



Two years ago I taped a bunch of Chinese flash cards (Chinese character on one side, English meaning on the other) to my living room wall (shown above). I'll study them in off moments, I thought. I didn't. It was embarrassing when guests pointed to a card and said, "What's that?" But not embarrassing enough.

A few weeks ago, I can't remember why, I decided to test myself: how many do I know? About 20 %. I'll try to learn more, I thought. I was astonished how fast I learned the rest. It took little time and almost no effort. I didn't need "study sessions". I glanced at the array now and then, looked for cards I didn't know yet, and flipped them to find out the answer. After a few days I knew all of them.

I had been using conventional methods (flash cards studied in ordinary ways, Anki, Skritter) and an unconventional method ([2]treadmill study) to learn this material for years. In spite of spending more than a hundred hours on each method, I had never gotten very far. I might get to 500 characters and backslide due to lack of study. Treadmill walking while studying made studying much more pleasant, but I found I would still prefer to watch TV rather than study Chinese. Maybe part of the problem was too many days skipped. After you skip four days, for example, you have a discouragingly large number of cards to review. Plainly these methods work for others. They didn't work for me.

After my success with the two-year-old cards, I put up another array (8 x 13). I already knew about 40 % of them. I learned the rest in a day or so. Then I put up a 10 x 12 array. I tested myself on them one morning. I knew 30 of them. I studied them during the day for maybe 30 minutes in little pieces throughout the day. The next morning I tested myself again (about 12 hours from the last time I had studied them). Now I knew 105 - I had learned 75 in one day, almost effortlessly. That day I studied for a few minutes. The next morning I tested myself again. Now I knew all but one of them.

I did not notice any facilitation of learning when I studied flash cards while walking around. In that case, unlike this one, (a) they were in roughly the same position relative to my body and (b) had no consistent physical location. I noticed the same facilitation of learning during a Chinese lesson in a cafe. I was having trouble remembering three Chinese words (e.g., the Chinese word that means graduate). I wrote each of them on a piece of paper with the English on one side and the Chinese on the other. I put the three pieces of paper at widely-separated places on the table. I studied them briefly, a few seconds each. That was enough. Five days later I still remember them (having used them a few times since then). This happened in a place (a cafe) with which I wasn't familiar, unlike my living room. Maybe the general principle will be it is much easier to learn an association if it is in a new place.

It's very early in my use of this method, but I doubt it's a fluke. It connects with several things we (= psychology

professors) already know. 1. The mnemonic device called [3]the method of loci. You put things you want to learn in different places in a well-remembered landscape (e.g. different places in a building you know well). Usually the method is used to learn lists, such as the digits of pi or the order of cards in a deck. You place different items in the list in different places in the imagined place. Then you "walk" (in your imagination) through the imagined place. The method dates back to ancient Rome. 2. [4]The power of interference. Thousands of experiments have shown that learning X makes it harder to learn similar Y. X and Y might be two lists, for example. The greater the similarity, the bigger the effect. What you learn on Monday makes it harder to learn stuff on Tuesday (proactive interference); what you learn on Tuesday makes it harder to remember what you learned on Monday (retroactive interference). To anyone familiar with these experiments, my discovery has a simple "explanation": spatial interference. 3. Evolutionary plausibility. The study of printed materials (e.g., books) is so recent it is hard to imagine our brain has evolved to make it easy. In contrast, thousands and millions of years ago we had to learn about things in different places. Learning about food and danger in different places was especially important. When language arrived, the necessary learning (at first, attaching names to objects) is quite similar to my learning because the named objects were in different places. The study of vitamins and to some extent my work (especially the power of morning faces) show how hard it can be to figure out what we need for our brains and bodies to work well. How non-intuitive the answers may be.

These results suggest a new mnemonic device: Stand in front of an empty wall and imagine on the wall the associations you want to learn, each association in a different place like flashcards. This is a fast way of putting each association in a different place.

1. <http://blog.sethroberts.net/wp-content/uploads/2012/11/2012-11-22-13.58.27.jpg>
2. <http://blog.sethroberts.net/category/walking-and-learning/>
3. [http://en.wikipedia.org/wiki/Method\\_of\\_loci](http://en.wikipedia.org/wiki/Method_of_loci)
4. [http://en.wikipedia.org/wiki/Interference\\_theory](http://en.wikipedia.org/wiki/Interference_theory)

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Adam (2012-11-22 05:59:55)

Interesting! I know what you mean about falling behind on Anki reviews. I have over 1500 cards due right now in my Intermediate Mandarin deck. It may even be possible to use locations in a similar way within a program like Anki. I was trying to remember that the Tuberoinfundibular pathway is in the Arcuate nucleus & that the Arcuate nucleus is in the Hypothalamus. I had a couple of cards to memorize these & just kept failing over and over again. At last, I figured it out: Step 1. Chunk Hypothalamus, Arcuate nucleus, & Tuberinfundibular pathway together into one piece: HAT. (1st letter of each name) Step 2. Create a spatial schematic. Mine is: Hypothalamus Arcuate nucleus Tuberoinfundibular pathway (Hopefully my spaces are not parsed out! Should be on the 2nd line & on the 3rd) For whatever reason, this makes it incredibly easy for me to remember the components & their relation to one another. I can see it in my head, whereas before I was just \*describing\* it in my head.

Adam (2012-11-22 06:01:28)

Ha... parsed out my spaces AND my description of my spaces. It should be like this: Hypothalamus \_ \_ Arcuate nucleus \_ \_ \_  
\_Tuberoinfundibular pathway

Txomin (2012-11-22 06:21:09)

Learning kanji is tough as fluent speakers (native and otherwise) will tell you. Anyway, the problem with these approaches is a lack of context. Take the plunge and read. A lot. Seth: One reason I am surprised how well this works is the lack of context. Thanks for the advice.

Javeux (2012-11-22 06:26:22)

I used Anki to review Chinese characters for Japanese (about 2100 everyday-use ones), but it would've been much harder without using Heisig's mnemonic system to initially "learn" them. It's all a waste of time if you don't actually get any practice though. Reading isn't such a big deal, but writing requires quite a bit of effort for me. I've been trying to learn shorthand, which is a whole other beast, since writing them out in full looks ridiculously unnatural. Luckily, people generally type nowadays instead.

august (2012-11-22 09:41:42)

hmmmm, outside my office is a wall-sized whiteboard, as in the entire wall is a whiteboard. i wonder if it would be helpful to write on that wall but spaced far apart as a way of studying? i can put it up, then glance at it as i walk by.

Tom (2012-11-22 10:06:16)

Fascinating, and it makes sense.

Robert Simmons (2012-11-22 12:30:15)

I seem to be a bit slow today, but could you spell out exactly what the technique is? You seem to be testing yourself with flashcards, then hanging the ones you don't know on the wall to look at occasionally. Is that right/100 % of it? Seth: That's close. Yes, it is very simple. I just hung a deck of flashcards on the wall. I knew some of them sort of. The technique: Put the flashcards you want to learn on the wall (as in the picture). Study them. That's all. Result: I learned them much much faster and with much less effort than I did with other ways of studying flashcards.

tim perkis (2012-11-22 13:46:52)

This effect of 'memory loci' really is a strong one, and ignoring it is one major flaw of book e-readers. There is a tactile and spatial component to navigating and remembering the contents of a physical book that is almost completely missing in ebook readers. Unfortunately, the current thinking seems to be that the indicator of current position in a book is a distraction, and the trend is to hide it most of the time. I think it actually needs to be made more prominent and ever-present Seth: Yes, that's a good point.

Robert Simmons (2012-11-22 14:52:40)

So I guess where I'm confused is how this differs from what you were doing in the first paragraph. Is it that now you actually study them, whereas before they just hung there and you mostly ignored them? Seth: That's right. What's new is that I put a little bit of effort into learning them.

Brent Durbin (2012-11-22 15:30:39)

I've also been studying Chinese, with varying degrees of motivation, over the past couple years. It is a constant process of relearning things I have forgotten. But after a break, I find that I usually come back strong, relearning what I had forgotten and picking new things faster than in the past. I have noticed that it gets easier and easier to learn new characters - I assumed that it was because I have become more familiar with the radicals, tones, sounds and connections between the characters. So while there may be something to the physical spacing, don't discount the previous hundreds of hours you've spent "preparing" your mind to learn. Seth: You make good points. The sudden jump in learning speed - I never came anywhere close to learning 75 characters in a day - is what impresses me.

jack in davao (2012-11-22 20:20:08)

One other thing you might try with those flash cards on your wall, which I've found generally helpful, is to print the characters in colors according to tone (e.g. all first tone characters are blue, etc). Seems to make remembering the tones much easier, at least for me, when I see the character in my mind I see it in color and subconsciously that seems to make me associate it with

the tone.

Adam (2012-11-22 21:18:54)

Anki has a Mandarin plug-in that automatically converts pinyin into color-coded text. Sometimes the tones it selected were wrong though & I didn't find it that helpful, but maybe I didn't give it enough time. One thing I used temporarily when I was struggling with tones was to visualize the characters in a location associated with the tone. The rising tone characters were in the attic, the declining tone characters in the basement, the 3rd tone characters on a teeter-totter, & the flat tone characters were images in the flat glass table in my dining room. If I see the character for rabbit, I know it is rabbit. I might not remember what tone it is though. Then I remember, the rabbits are all running wild in the basement & I know that rabbit must be 4th tone.

Three Pipe Problem (2012-11-23 11:27:41)

This is great. I think this is relevant to graphical user interfaces (GUI's) in software and web design. As you experiment with different matrix sizes and so forth, you may want to have a look at Fitt's Law, for example, and think about the matrix density as something to play with. The classic PC/Mac desktop is basically a detailed grid of things that one might think would be hard to remember the location of. But people perform well at this, many people even prefer messy desktops since they have little trouble remembering where things are. I once had a coworker who would occasionally just cut and paste most of the shortcuts on his Desktop (including the \*old\* "Old Desktop" folder) into a folder called "Old Desktop", which was then placed in a corner of the new (mostly blank) desktop. This created a series of fossilized "layers" of desktops. He was quite fast at finding even old, obscure things with this. The Windows Phone and new Microsoft Windows 8 user interface (formerly called Metro) conventions seem to rely on this sort of capability, and take it to the next level. Similarly, if you think about the detailed sequence of relatively precise locations many people learn with muscle memory in order to quickly navigate hierarchical menus, it's the same – people are good at mapping positioning to recall of lots of items. What I wonder is have you tested in a way that neutralizes the positioning during recall. In other words, is your learning still great when you can't look at the matrix during recall? Seth: I have done a test where the recall test for two types of study – conventional, with everything in one place, and new, with different things to be learned in different places – and found a huge advantage for the new way. However, it was just one test. I will do more tests where the testing method is the same for the two types of learning.

Ian (2012-11-23 23:41:48)

A wonder if this relates to Night Sky constellations with their different positions and shapes - not that far removed from the Chinese characters you're studying. Maybe this is how we evolved to read in the first place, by pointing to different constellation and naming them.

Neil K (2012-11-25 16:43:57)

This makes perfect sense. Look up "memory cathedral" - it's a memory technique used for centuries, where you imagine things you need to remember being in a giant building. I listen to a lot of podcasts on my iPhone while I'm walking around, and I try to always vary my route. I find that if I ever relisten to those podcasts, I am immediately transported back to where ever I was when I first heard it.

August (2012-11-26 09:45:59)

I've failed to keep up my Anki studying as well. It seems to me it ought to be part of the browser and keep track of everything- emails, feeds, flashcards, etc... As a separate program it ends up being something I remember I am supposed to be doing whenever I am doing something else; if it were integrated almost everything (including TV) could be in it. This would be especially useful for those of us trying to limit light exposure at night- maximize our use of daylight computer hours. Seth: cool idea.

ryan (2012-12-19 08:40:03)

I'm having a hard time wrapping my head around this. It's so simple, and un-intuitive. Placing knowledge and sticking it on a place. So now we have a mandarin wall, a programming wall (with different colors), and maybe a to do list on a fridge. Maybe that's why people put it on the fridge. It's accessible and people frequently goes to the fridge. Now we just need more walls. LOL

## Assorted Links (2012-11-24 05:00)

- [1]Has the impact of Helicobacter pylori therapy on ulcer recurrence in the United States been overstated? "20 % of patients in these studies had ulcer recurrence within 6 months."
- [2]Over-sold flu vaccine. Carl Zimmer in the NY Times, however, [3]says "The vaccines usually provide strong protection against the virus."
- [4]Incredibly fast mental addition.

Thanks to Paul Nash, Grace Liu and Anne Weiss.

1. <http://www.ncbi.nlm.nih.gov/pubmed/9732917>

2. <http://www.independent.co.uk/life-style/health-and-families/health-news/scientists-urge-ministers-tell-truth-on-overhyped-flu-vaccine-8336184.html>

3. <http://www.nytimes.com/2012/10/30/science/scientists-move-closer-to-a-long-lasting-flu-vaccine.html?pagewanted=all&r=0>

4. <http://www.guardian.co.uk/science/alexs-adventures-in-numberland/2012/oct/29/mathematics>

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Adam (2012-11-24 17:26:27)

The H. pylori study might also mean that NSAIDs & Aspirin are safer than we think if the background rate of Ulcers is higher than previously believed. There were a couple of studies with long-term Aspirin use that showed no increase in the risk for GI bleed (WARFASA & ASPIRE, for those interested).

Jim Purdy (2012-11-24 23:09:27)

Ineffective ulcer treatments and ineffective flu vaccines are just minor parts of the unscientific disaster known as modern medicine. Much more harm is caused by the millions of unnecessary prescriptions that doctors write for addictive painkillers and antidepressants and steroids. Instead of spending billions of dollars on new health care programs, here are my suggestions:

1. Let's completely shut down the entire US medical system, with exceptions for obvious (and fixable) problems like broken bones.
2. If anybody feels sick, give them free placebos in the form of Peanut M & Ms. Nuts and chocolate have proven health benefits, unlike most BigPharma junk.
3. Let's retrain all MDs to become public school teachers. Maybe they'll develop some humility when they discover that, unlike adult patients, kids of all ages are more likely to ask "Why?" or say "No" – or just laugh – when an arrogant old fool in a long white coat says something totally stupid.
4. After at least 10 years as teachers, the former MDs could be evaluated. Those that have actually developed humility and skills at listening and explaining could return to medicine. Those who are still arrogant fools could be sent to different jobs, like working with large carnivorous animals in wildlife sanctuaries. Lions and tigers will enjoy the new protein sources.

## Thirty Years of Breast Cancer Screening May Have Done More Harm Than Good (2012-11-25 05:00)

[1]A recent op-ed in the New York Times by H. Gilbert Welch, a co-author of Overdiagnosis, describes a tragedy of ignorance and overconfidence. The current emphasis on regular mammograms began thirty years ago. They will prevent breast cancer, doctors and health experts told hundreds of millions of women. They will allow early detection of cancers that, if not caught early, would become life-threatening. The campaign was very successful. According to [2]the paper cited by Welch, about 70 % of American women report getting such screening.



It is now abundantly clear this was a mistake. If screening worked perfectly – if all of the cancers it detected were dangerous – the rate of late-stage breast cancer should have gone down by the amount that the rate of early-stage breast cancer went up. Over the thirty years of screening, the rate of (detected) early-stage breast cancers among women over 40 doubled, no doubt because of screening. (Over the same period the rate of early-stage breast cancers among women under 40 barely changed.) In spite of all this early detection and treatment, the rate of late-stage breast cancer among women over 40 stayed essentially the same. All that screening (billions of mammograms), all that chemo and surgery and radiation, all that worry and time and misery – and no clear benefit to the women screened and those who paid for the screening, treatment, and so on. Roughly all of the "cancers" detected by screening and then, at great cost, removed, aren't dangerous, it turns out.

Quite apart from the staggering size of the mistake and the long time needed to notice it, screening has been promoted with specious logic.

Proponents have used the most misleading screening statistic there is: survival rates. A recent [3]Komen Foundation campaign typifies the approach: "Early detection saves lives. The five-year survival rate for breast cancer when caught early is 98 percent. When it's not? It decreases to 23 percent." Survival rates always go up with early diagnosis: people who get a diagnosis earlier in life will live longer with their diagnosis, even if it doesn't change their time of death by one iota.

Did those making the 98 % vs. 23 % argument not understand this?

I applaud Welch's research, but his op-ed has gaps. A unbiased assessment of breast cancer screening would include not only the (lack of) benefits but also the (full) costs. Treatment for a harmless "cancer" may cause worse health than no treatment. Maybe chemotherapy and radiation and surgery increase other cancers, for example. What about the effect of all those mammograms on overall cancer rate? Welch fails to consider this.

Welch also fails to make the most basic and important point of all. To reduce breast cancer, [4]it would be a good idea to learn what environmental factors cause it. (For example, maybe [5]poor sleep causes breast cancer.) Then it could be actually prevented. Much more cheaply and effectively. Yet the Komen Foundation and the Canadian Breast Cancer Foundation say "race for the cure" instead of trying to improve prevention.

1. <http://www.nytimes.com/2012/11/22/opinion/cancer-survivor-or-victim-of-overdiagnosis.html>
2. <http://www.nejm.org/doi/full/10.1056/NEJMo1206809#t=articleDiscussion>
3. <http://ww5.komen.org/promise-action.html?ecid=vanityurl:121>
4. [http://blog.sethroberts.net/?attachment\\_id=8276](http://blog.sethroberts.net/?attachment_id=8276)
5. <http://jnci.oxfordjournals.org/content/93/20/1557.long>

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LemmusLemmus (2012-11-25 05:44:53)

Another - albeit nonfinancial - cost of positive screening results is that people worry, and quite a bit. This is the aspect Gerd Gigerenzer emphasizes in his book about the topic.

idyll (2012-11-25 07:34:15)

Trying to get my head around this phrase 'harmless cancer'. What cancer would that be? Seth: Almost all of them, apparently, when it comes to early-stage breast cancers.

Judy B (2012-11-25 09:19:59)

Even with articles like this, the medical industry will not change their guidelines. Mammography (and the attendant procedures, drugs, etc.) simply makes too much money! I would also like researchers to look at that other sacred cow: colonoscopy. I have never seen anything about the numbers needed to treat or the harm that can be done with this procedure...

MikeW (2012-11-25 09:45:27)

Research into cancer prevention is worth pursuing, but so is the development of reliable screening tools. I think few would dispute that when cancer is detected and treated early - before metastasis - lives are saved. That's why Welch's findings are so surprising. What I get out of the op-ed isn't that cancer screening is useless, but that for some reason mammography is a poor screening tool. Maybe breast tumors that eventually advance to late-stage cancer grow so quickly that a biennial mammography is unlikely to catch them in time. Or maybe it's a mistake to focus on gray and white blotches on a mammogram; we should be looking at biochemical blood markers instead. In any case, early detection should still be a major emphasis in cancer research. Seth: The op-ed makes me think the whole thing should be investigated: how did such a big mistake come to happen? Was evidence ignored? Misleading? Or what?

Tom (2012-11-25 10:30:00)

LemmusLemmus wrote: *Another – albeit nonfinancial – cost of positive screening results is that people worry, and quite a bit.* They're not too happy with having their breasts hacked off for no reason, either.

LemmusLemmus (2012-11-25 11:05:09)

Tom: I would think that only happens when it's been confirmed that things are really serious - but I don't know, and maybe that's wrong.

Zach (2012-11-25 12:05:23)

LemmusLemmus: recall the anecdote in the Gigerenzer book of the German doctor who committed suicide upon learning that mammograms only had a 10 % chance of having cancer. He had recommended a mastectomy to anyone who screened positive.

Jim Purdy (2012-11-25 13:03:55)

If you take your well-running car to some auto repair chains for a free diagnosis, you can count on getting a report that says your car needs \$500 worth of repairs. If you feel fine and go to some doctors for a checkup, you can count on getting lots of prescriptions for addictive junk. At least the car shop won't turn you into a crazed drug addict. Skip the doctor, and just get an oil change and a car wash.

LemmusLemmus (2012-11-25 13:46:16)

Zach: No, I don't - apparently it's too long since I've read the book (five years?).

Pensamentos desconexos | Blog Pra falar de coisas (2012-11-25 17:08:24)

[...] 2. Porque testes como mamografia e PSA podem fazer mais mal do que bem. (aqui tem um link). [...]

anon (2012-11-26 06:07:00)

It's far worse than just unnecessary worry and unnecessary mastectomies. Tamoxifen is often prescribed for breast cancer (and for pre-cancerous masses that get picked up on mammograms). The side effects of Tamoxifen include endometrial (uterine) cancer. In other words, current screening and treatment practices are actually, literally causing cancer in previously cancer-free patients.

dearieme (2012-11-26 07:05:48)

Remember Gigerenzer's point that German oncologists recommend breast screening for their patients but not for their wives or themselves.

Murray H. Seltzer, M.D. (2012-11-26 11:25:36)

The above article and some of the comments are about as relevant as those who have never had a sexual experience but feel qualified to write and comment about sex. My qualifications to discuss the subject of screening are that I have been involved in breast cancer screening and surgical operations for over 40 years. Money was not the motivation. Decreasing true misery was the motivation. First you must accept that people do get breast cancer. There may be differing levels of aggressiveness but you cannot always define the level as easily as may be thought. Most of you were not present when we did "radical mastectomies" requiring multiple blood transfusions as the only treatment. Most of you were not there when such patients frequently required post operative psychiatric care. Most of you were not there when radiation was primitive and we did not even have good chemo. So yes, there is waste, false positives, anxiety and increased cost. All of it worth it when 80 % + of the patients can have lumpectomies and save their breasts, require less psychiatric care, and have better qualities of life. Don't throw out the baby with the wash. Refine the indications and frequency required for screening mammography. Perhaps every 2 or 3 years rather than annually. Find ways to reduce cost by having technicians read films rather than radiologists and only have radiologists for more difficult situations. The cynicism and false expertise noted above are offensive to those of us who have been on the front lines, seen the worst and are truly happy for the not-so-perfect improvements that we currently have. Seth: What is the evidence that screening mammograms have done more good (you call them "improvement") than harm? I don't see it. When you say that screening mammograms "save their breasts" you fail to understand the study that Welch describes. It concluded that essentially all of the "cancers" detected by screening mammograms do not endanger breasts.

Evelyn M. (2012-11-26 11:57:31)

Once again, there doesn't seem to be any discussion of the cost of the mammography program. Why is no one ever willing to mention the vast sums of money wasted on so-called "preventive" medicine instead of encouraging people to see a physician only when they are troubled by an actual symptom?

Judy B (2012-11-26 12:28:42)

Amen, Evelyn! Predictable response from Dr. Seltzer. We need to be doing more questioning of guidelines and protocols rather than less!

Tom (2012-11-26 16:59:49)

Seth Roberts wrote: *What is the evidence that screening mammograms have done more good (you call them "improvement") than harm? I don't see it. When you say that screening mammograms "save their breasts" you fail to understand the study that Welch describes. It concluded that essentially all of the "cancers" detected by screening mammograms do not endanger breasts.* Michael Eades wrote an interesting post on his Protein Power blog a year or so ago where he talked about the surprising fact that (in his opinion) virtually no physicians are competent to read scientific papers, even in their fields. In Eades' opinion, what they can understand is "Case Reports" – basically chronological stories of an individual patient's experience. That said, the fact that they don't know how to read a study doesn't mean that they don't think they already know everything in it. :-) Seth: That understates it. Dr. Seltzer failed to understand an op-ed in the New York Times about his own area of expertise.

Jason (2012-11-26 21:17:33)

ACR/SBI: Bleyer and Welch Breast Cancer Screening Article in NEJM Deeply Flawed and Misleading The article by Bleyer and Welch[1] in the New England Journal of Medicine, which suggests that screening mammography finds many cancers that would not advance to kill patients, is based on false assumptions. The thesis depends on their suggestion that the incidence of breast cancer is much higher than would have been expected had screening not been initiated. The authors suggest that the baseline incidence of breast cancer would have increased by 0.5percent each year, when in fact, the data show that it would likely have increased by twice that amount. The incidence of invasive breast cancer has actually increased by 1percent per year for decades.[2] In 1940, it was 60/100,000. By 1980, prior to any screening, it had risen to 100/100,000.

If there had been no screening, and the rate had continued to increase as it had for 40 years, the incidence in 2008 would have been over 130/100,000. In fact, due to prevalence screening, where new women who have never been screened enter the screened population each year, and lead time (cancers found earlier due to screening), the incidence of breast cancer, without any "overdiagnosis" would have been expected to be even higher than 130/100,000. In reality, it was lower even than that, at 127/100,000. Therefore, not only is there no evidence of the authors' claimed "overdiagnosis," but it is likely that treatment of ductal carcinoma in situ (DCIS) over the past decades has reduced the incidence of invasive cancers. This is in addition to the observed 30 percent reduction in deaths each year due largely to screening. While the authors observe that screening is associated with a reduction in advanced stage cancers, they fail to recognize the fact that a reduction in advanced stage disease is not required to have a reduction in deaths from screening. Staging is a crude effort to group cancers for purposes of trying to understand how they respond to therapy. Unfortunately, there are deaths from breast cancer among women with all stages of these malignancies, even the very earliest, DCIS. The thesis by Bleyer and Welch is simply wrong. Misleading articles, based on faulty assumptions and methodology are counterproductive. If such misinformation is used to determine screening guidelines and recommendations, the cost may be lost lives. Seth: Thanks. This can be found at <http://www.itnonline.com/article/acrsbi-bleyer-and-welch-breast-cancer-screening-article-nejmdeeply-flawed-and-misleading> It would be more interesting if (a) it was attributed to someone and (b) it didn't make a big mistake in the very beginning. Bleyer and Welch did not suggest that "the incidence of breast cancer is much higher than would have been expected had screening not been initiated" – that is, that screening increased breast cancer. They concluded that screening did not lower the rate of life-threatening breast cancer. The stuff about the incidence of breast cancer is irrelevant. No one says that screening is supposed to change the rate of breast cancer – it just detects some breast cancers earlier than they would otherwise be caught.

Tana (2012-11-27 08:32:17)

Seth, here is an interesting site to check out- <http://www.breastcancerchoices.org> They have a lot of information that most doctors don't talk about, including the connection between iodine deficiency and breast cancer.

Links & comment « Rhymes With Cars & Girls (2012-11-27 08:40:51)

[...] push for lotsa breast cancer screening may have done more harm than good. Nice going, [...]

Theragingwalrus (2012-12-04 04:06:50)

I'm having a hard time grasping your take on the 98 % vs 23 % issue - could you spend a few words on that? Seth: If a disease is detected earlier it will be survived longer, even if nothing else changes. Even if it is not treated. Breast cancer left untreated would be survived longer if it were detected earlier. So the mere fact of better five-year survival does nothing to support screening campaigns. Reasonable comparisons were available: age-equalized rates of dying of breast cancer for women who are and are not screened, for example. Results of experiments, even better. Yet the proponents of screening chose a grossly misleading comparison. Why?

## **The Emphasis on Education in China (2012-11-28 05:33)**

One of my students grew up and went to high school in Nanjing, population 8 million. Her acceptance to Tsinghua was such a big deal that when her acceptance letter reached the local post office they called to tell her. The post office also alerted journalists. When the letter was delivered to her house, there were about 20 journalists on hand. One of them, from a TV station, asked her to say something to those who failed.

dearieme (2012-11-28 06:33:40)

When I was a lad (and far fewer of us went to university) the results of our Finals would be published in the papers. So if I told you the year, you could look me up in the Telegraph or Times and see whether I got a First, an Upper Second and so on. The contrast between this and the American custom of secrecy in such matters is striking. Things change: a few years ago one undergraduate at Cambridge objected to having his name and College shown on the results lists. He got his way.

joe king (2012-11-28 14:32:42)

"asked her to say something to those who failed." Yes, I want fries with that!

Jim Purdy (2012-11-28 21:26:50)

Joe King, is there anything wrong with working in a restaurant? Isn't that honest work?

garymar (2012-11-29 14:02:27)

Don't students who fail to reach Tsinghua, but still have high scores, get a slot in the next tier of universities? Seth: Yes. In that sense the reporter's question is bizarre. But I suspect the reporter could argue that it is not so bizarre.

James (2012-12-02 02:34:49)

Seth: Have you seen this [1]piece that touches on the problems with living in China? Relevant quote: "The domestic Chinese lower education system does not educate. It is a test centre. The curriculum is designed to teach children how to pass them. In rural China, where we have lived for seven years, it is also an elevation system. Success in exams offers a passport to a better life in the big city. Schools do not produce well-rounded, sociable, self-reliant young people with inquiring minds. They produce winners and losers. Winners go on to college or university to take "business studies." Losers go back to the farm or the local factory their parents were hoping they could escape." Seth: Thanks. Yes, I read that article, but I'd forgotten that part.

1. <http://www.prospectmagazine.co.uk/politics/mark-kitto-youll-never-be-chinese-leaving-china/>

## Assorted Links (2012-11-29 05:00)

- [1]Experiments suggest flu shots reduce heart attacks and death. Huge reduction: 50 %. The new report (a conference talk, not a paper) is a reanalysis of four earlier experiments. I was surprised to learn that the CDC uses heart attack outbreaks to locate flu outbreaks, implying that the new finding is not a fluke – there really is a strong connection. I already knew heart attacks are more common in the winter, which also supports a connection with flu.
- [2]Une histoire des haines d'écrivains by Boquel Anne and Kern Etienne. Published 2009. About literary feuds. One of my students was reading a Chinese translation.
- [3]Correspondences between sounds and tastes.
- [4]Report on fraudulent Dutch research. "The 108-page report says colleagues who worked with Stapel had not been sufficiently critical. This was not deliberate fraud but 'academic carelessness', the report said." I doubt it. Based on my experience with Chandra, I believe Stapel's colleagues had doubts but did nothing from some combination of careerism (doing something would have cost too much, for example a lot of time, and gained them nothing), ignorance (not their field), and decency (they saw no great value in ruining someone). I wonder if the report considered these other possible explanations (careerism, ignorance, decency).

Thanks to Tim Beneke.

1. [http://www.eurekalert.org/pub\\_releases/2012-10/hasf-ivm102212.php](http://www.eurekalert.org/pub_releases/2012-10/hasf-ivm102212.php)
2. <http://www.evene.fr/livres/livre/anne-boquel-et-etienne-kern-une-histoire-des-haines-d-ecrivains-39018.php>
3. <http://link.springer.com/article/10.3758/s13423-012-0321-z>
4. [http://www.dutchnews.nl/news/archives/2012/11/report\\_into\\_fraudulent\\_research.php](http://www.dutchnews.nl/news/archives/2012/11/report_into_fraudulent_research.php)

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dearieme (2012-11-29 07:17:13)

My GP's waiting room (NHS) is festooned with posters urging patients over 65, and those with heart problems, to get a flu jab.

MikeB (2012-11-29 08:26:08)

Scientists urge ministers: tell truth on 'over-hyped' flu vaccine The vaccine given to millions of people each year in Britain is "over-promoted" and "over-hyped" and the protection it offers against the seasonal illness has been exaggerated, scientists claim. Professor Osterholm, an US public health adviser whose report "The Compelling need for game changing influenza vaccines" was published last month, said: "Our report is very comprehensive. It took three years, we reviewed 12,000 peer reviewed papers and interviewed 88 experts from around the world. We took no money from the private sector or governments - we had no conflicts of interest. "The most striking outcome is that we have over-stated the effectiveness of the influenza vaccine. That has had a very dampening effect on the development of new vaccines." <http://www.independent.co.uk/life-style/health-and-families/health-news/scientists-urge-ministers-tell-truth-on-overhyped-flu-vaccine-8336184.html>

dearieme (2012-11-30 04:22:22)

@MikeB: the two pieces of work may be compatible if you interpret the Indy article as saying that flu vaccine does only a mildly useful job at shortening flu episodes and keeping people out of hospital, and interpret the conference talk as saying "but it seems to do a fine job at preventing heart attacks". Still, it's always worth remembering that "All medical research is rubbish" is a better approximation to the truth than almost all medical research.

MikeB (2012-11-30 11:23:02)

@dearieme: I like your quote "All medical research is rubbish" is a better approximation to the truth than almost all medical research What are the chances that this research is true and important? 1 in 10000? Meanwhile, here is something to consider: Both of the following statements can be true at the same time: Healthy people taking statins reduce their heart attack risk by 33 %. Healthy people taking statins have a 99 % chance of receiving no benefit. Reductions in relative risk don't matter as much when overall risk is low. Let's say your risk of having a heart attack over 5 years is 3 per cent. Let's say a statin reduces that risk to 2 per cent. Relative risk has fallen by a third, right? But the real reduction in risk (known as the 'absolute risk reduction') is just 1 per cent (3 per cent minus 2 per cent).

Jo (2012-11-30 13:51:21)

I found the second part of the article about flu shots even more interesting than the reduction in heart attacks. A second study they discussed showed that patients with ICD's or implantable cardiac defibrillators (the small units that shock your heart back into rhythm if it stops or otherwise gets out of rhythm - so this is a separate subset of patients with heart problems) had fewer ICD shocks during flu season if the patients had gotten a flu shot. For someone with an ICD getting shocked is unpleasant (and scary), which is why the researchers picked up on it but what would be the connection with a flu shot??? Very interesting but why this would work is a mystery.

dearieme (2012-11-30 15:51:59)

At least the reduction in number of ICD shocks is, I imagine, "hard data": the ICDs are presumably interrogated regularly, so there's no need to rely on the accuracy of people's reports?

Adam (2012-11-30 18:10:00)

@MikeB Likewise if your risk for having a heart attack goes down, but the chance of that heart attack being fatal goes up, have you really benefited?

### How Helpful Are New Drugs? Not So Clear (2012-11-30 20:13)

[1]Tyler Cowen links to [2]a paper by Frank Lichtenberg, an economist at Columbia University, that tries to estimate the benefits of drug company innovation by estimating how much new drugs prolong life compared to older drugs. The paper compares people equated in a variety of ways except the "vintage" (date of approval) of the drugs they take. Does taking newer drugs increase life-span? is the question Lichtenberg wants to answer. He concludes they do. He says his findings "suggest that two-thirds of the 0.6-year increase in the life expectancy of elderly Americans during 1996-2003 was due to the increase in drug vintage" – that is, to newer drugs.

An obvious problem is that Lichtenberg has not controlled for health-consciousness. This is [3]a standard epidemiological point. People who adopt Conventional Healthy Behavior X (e.g., eat less fat) are more likely to adopt Conventional Healthy Behavior Y (e.g., find a better doctor) than those who don't. For example, a study found that people who drink a proper amount of wine eat more vegetables. Another reason for a correlation between conventionally-healthy practices is mild depression. People who are mildly depressed are less likely to do twenty different helpful things (including "eat healthy" and "find a better doctor") than people who are not mildly depressed. (And mild depression seems to be common.) Perhaps doctors differ. (Lichtenberg concludes there are big differences.) Perhaps better doctors (a) prescribe more recent drugs and (b) do other things that benefit their patients. Lichtenberg does not discuss these possibilities.

A subtle problem with Lichtenberg's conclusion that we benefit from drug company innovation is that drug-company-like thinking – the notion that health problems should be "solved" with drugs – interferes with a better way of thinking: the notion that to solve a health problem, we should find out what aspects of the environment cause it. I suppose this is why we have Schools of Public Health – because this way of thinking, advocated at schools of public health, is so incompatible with what is said and done at medical schools. Public health thinking has a clear and impressive track record – for example, the disappearance of infectious disease as a major source of death. There are plenty of other examples: the drop in lung cancer after it was discovered that smoking causes lung cancer, the drop in birth defects after it was discovered that folate deficiency causes birth defects. Thinking centered on drugs has done nothing so helpful. Spending enormous amounts of money to develop new drugs shifts resources away from more cost-effective research: about environmental causes and prevention. Someone should ask the directors of the Susan K. Komen Foundation: Why "race for the cure"? Wouldn't spending the money on prevention research save more lives?

1. <http://marginalrevolution.com/marginalrevolution/2012/11/bad-pharma-by-ben-goldacre.html>
2. <http://papers.nber.org/papers/w18552#fromrss>
3. [http://geography.ssc.uwo.ca/faculty/baxter/readings/Taubes\\_limits\\_epidemiology\\_Science\\_1995.pdf](http://geography.ssc.uwo.ca/faculty/baxter/readings/Taubes_limits_epidemiology_Science_1995.pdf)

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js (2012-12-01 16:07:06)

This is a little uncharitable it seems to me. Drug vintage isn't correlated with BMI, smoking status or a large number of medical conditions. If what you're saying were true, we wouldn't expect this. Those using newer drugs should be healthier. You need

to have a more sophisticated story to refute Lichtenberg's argument. Seth: I think Lichtenberg – and anyone else who wants to know the value of new drugs – should consider these alternatives. Perhaps there is data that will help assess them. Lack of significant correlation with BMI, etc., isn't much of an argument. Let's take BMI. Maybe current advice about how to reduce BMI isn't very good? Lots of people are health-conscious and weigh more than they would like. Take smoking. Maybe this is heavily determined by culture? Take Medical Condition X. Maybe we don't know how to prevent Medical Condition X? So that even people who do conventionally healthy things (e.g., "eat healthy") still have Medical Condition X at the same rate as those who don't eat healthy. Maybe these indices of health (BMI, etc.) are insensitive? Because if people live longer, shouldn't they be healthier (weigh less, etc.) while they are alive? Quite apart from that, lack of significant correlation with BMI, etc., does nothing to refute the possibility that good doctors help their patients in important ways besides prescribing newer drugs.

dearieme (2012-12-01 18:07:21)

But what is healthy eating? Obviously it must include fish and chips for Friday lunch, bacon and egg at least once a week, the occasional beer, a glass of wine with dinner most evenings, toast and marmalade at breakfast, lots of tea and coffee, and plenty of smoked salmon, sardines, mackerel pate, pork pies, muscat grapes, cherries in brandy, hummus and olives, apples and cheese, duck, lamb, roast vegetables, baked potatoes, watercress sandwiches, parsnip soup, ... and generally Things I Like. Obviously.

Robbo (2012-12-02 14:07:21)

"the disappearance of infectious disease as a major source of death. " Are not drug companies are due a lot of the credit, for example through developing the manufacture of penicillin ? Without drugs, would not infectious diseases such as tuberculosis still be a terrible scourge ? Seth: Drug companies did not invent vaccines. Far from it.

dearieme (2012-12-02 15:23:29)

"developing the manufacture of penicillin ?": the key steps were done at Oxford, not by drug companies.

js (2012-12-02 18:30:28)

It is a bit of a stretch to say that the new drug vintage patients are likely to be healthier on unobservables when they are not healthier on observables. Obviously it is theoretically possible as you point out, but why is it probable? I completely agree with the doctors point, by the way. That is a valid criticism of this research design. Seth: What do you mean by "the doctors point"? I'm afraid I don't understand.

Adam (2012-12-02 19:34:42)

Tuberculosis vaccine was developed by the Pasteur Institute, a non-profit, and Streptomycin was discovered at Rutgers University.

js (2012-12-03 10:17:51)

I meant that physicians who prescribe newer vintages might help their patients in other ways. This is a different from saying that patients who are prescribed newer vintages are different from those who aren't. Seth: Thanks for clarifying that.

## 7.12 December

### More Sitting, More Diabetes: New Meta-Analysis (2012-12-03 05:00)

The first evidence linking exercise and health was a study of London bus workers in the 1950s. The drivers, who sat all day, had more heart attacks than the ticket takers on the same buses, who were on their feet all day. It was a huge advance – evidence, as opposed to speculation. The results were taken countless times to imply that exercise reduces heart attacks but epidemiologists understood there were dozens of differences between the two jobs. For example,



driving is more stressful than ticket taking. Maybe stress causes heart attacks.

The first time I learned about this study, I focussed on two differences. The ticket takers were more exposed to morning sunlight (on the top deck of double-decker buses) and they were on their feet much more. Maybe both of those things – morning sunlight exposure and standing a lot – improve sleep. Maybe better sleep reduces heart attacks. The London data were not consistent with the claims of aerobic exercise advocates because the ticket takers did nothing resembling aerobic exercise.

Later[1] I discovered that walking an hour/day normalized my fasting blood sugar levels – another effect of "exercise" (but not aerobic exercise). I had data from only one person (myself), but it was experimental data. The treatment difference between the two sets of data being compared (no walking versus walking) was much sharper, in contrast to most epidemiology. I am sure the correlation reflects cause and effect: Walking roughly an hour/day normalized my blood sugar. This wasn't obvious. The first thing I tried to lower my fasting blood sugar levels was a low-carb diet, which didn't work. I discovered the effect of long walks by accident.

[2]A recent meta-analysis combined several surveys that measured the correlation of how much you sit with other health measures. The clearest correlation was with diabetes: People who sit more are more likely to get diabetes. Comparing the two extremes (most sitting with most standing), there was a doubling of risk. Because people who stand more walk more, this supports my self-experimental findings.

I found pure standing (no walking), or leisurely (on-off) walking, did not lower fasting blood sugar (which I measured in the morning). After I noticed that walking an hour lowered blood sugar, I tried slacking off: wandering through a store or a mall for an hour. This did not lower fasting blood sugar. I concluded it had to be close-to-nonstop walking. Someday epidemiologists will measure activity more precisely – with Fitbits, for example. I predict the potent part of standing will turn out to be continuous walking. Long before that, you can see for yourself.

1. <http://blog.sethroberts.net/2010/07/18/fasting-blood-sugar-reduced-by-walking/>

2. <http://www.ncbi.nlm.nih.gov/pubmed/22890825>

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jofx (2012-12-03 14:34:30)

I wonder if there's any data on supermarket workers (shop floor vs checkout?). I worked in one for a few years and was incredibly unfit and ended up developing prediabetes, despite walking around (non-constantly) for the best part of 28-hours a week. It was funny how 5-minutes of light jogging practically knocked me out when I first attempted exercise, despite the "workout" I was getting from the job. HIIT helped turn me around, and you can find some studies that show the same kind of results, e.g. doubling the insulin sensitivity of a group of Iranian women in 12-weeks. Seth: I know of a study that found a correlation between jobs that required a lot of standing (such as supermarket checkout clerk) and MORE heart disease. That is, lots of standing in one place appeared to be bad for you. I agree about HIIT, that's what I do.

Celso (2012-12-03 15:36:45)

I've been leaning towards unsubscribing to your blog for a while, your writing has lost quality over the last few months. You have become too biased. Aerobic exercise has extremely positive effects on the body, and the way it functions, but you always depict it in a negative light. Either you hate aerobic exercising and should have a disclaimer whenever you mention the subject, or present data to the world that proves aerobics is not worth people's time (good luck with that). Otherwise you'll discredit everything else you write about, and that would be a shame. Thank you for the useful information on other subjects, I will no longer subscribe to you. Seth: Saying that non-aerobic exercise is good – which is what I say here – is not the same as saying aerobic exercise is bad.

peter (2012-12-03 16:00:38)

i was concerned with post-meal blood sugar and found that a relatively short walk after a meal (i.e., 15- 20 minutes) lowed my blood sugar 2 hours after a meal from 148 to around 100. So i do this twice a day. I also take cinnamon (ceylon not cassia; the latter, i understand, may dangerously thin one's blood) My recent recent blood test was well below 90. "While the two species of cinnamon share certain characteristics such as antimicrobial, and in terms of inhibiting the growth of fungi and yeast, and regulating blood sugar, their contents differ much in terms of the amount of coumarin, which is a naturally occurring substance with strong blood-thinning properties. The coumarin level in Ceylon cinnamon is negligibly small, while that in Cassia cinnamon is an appalling 1200 times higher. The ingestion of large amount of coumarin or consumption of coumarin over a prolonged period of time can cause serious health damages and a negative impact on the liver and kidney. German FDA has warned against consuming the excessive intake of Cassia bark due to its coumarin content. " Seth: Very interesting. Maybe my walking would be more effective if it were done right after meals.

dearieme (2012-12-03 16:12:58)

How about two 15 minute cycling trips per day?

Adam (2012-12-03 16:48:33)

@peter Congratulations & great job at taking responsibility for your health. In China they have a saying "百步走，活九十九" which means "walk 100 steps after a meal & live to 99 years old". Folk wisdom isn't \*always\* useless.

Txomin (2012-12-03 17:49:55)

Ticket takers also interact with an unusually high number of people.

Javeux (2012-12-04 07:36:39)

Celso, I think the data on resistance training and HIIT in particular is evidence that aerobic enthusiasts may be wasting (a relative amount of) their time, at least if using that time efficiently to improve their health is their goal. I think exercise of almost any kind should be encouraged over sedentary lifestyles, but I just wish aerobics wasn't the go-to solution for diabetics and others struggling with health problems, when there are much more effective, time-efficient alternatives that the general public seems oblivious to.

charlie (2012-12-05 07:45:05)

How is vigorous walking for an hour non-stop NOT "aerobic" exercise? Celso is quite right. This blog is way too self absorbed. Goodbye. Seth: Who said it was "vigorous" walking? It is/was ordinary walking. I've done thousands of hours of aerobic exercise. There's a big difference.

Ashish (2012-12-17 18:38:15)

The Ikea JERKER line, discontinued but often available on Craigslist, includes a couple of excellent standing desk models. It's by far the best thing I've done for my home office. Standing desks allow quite a bit of movement-in-place - it's not the same as being, say, a cashier. And, I hope it goes without saying, you want to be barefoot when you stand.

### Assorted Links (2012-12-04 05:00)

- [1]The Data Vigilante
- [2]Unnecessary wisdom tooth extractions
- [3]How American medicine is destroying itself (their title, not mine). "Look at the "breakthroughs" that have been predicted for such scientific sure things as stem-cell technology and medical genetics—but have yet to be realized. . . . Our [= American medicine's] main achievements today consist of devising ways to marginally extend the lives of the very sick."
- [4]New kind of light bulb, matches sunlight much better. I believe building lighting will eventually match sunlight during the day and not match it (removing the blue light that controls circadian clocks, such as the clock that puts you to sleep) after sundown. Improving sleep and health.
- [5]Exposure to pesticides used to purify water correlated with allergies. Water with fewer microbes may be more dangerous than water with more microbes.
- [6]Diabetes: the epidemic. Unlike other major causes of death - heart disease, stroke, and cancer - diabetes is increasing quickly.

Thanks to Dave Lull and Alex Chernavsky.

1. <http://www.theatlantic.com/magazine/archive/2012/12/the-data-vigilante/309172/>
2. <http://news.yahoo.com/blogs/lookout/rogue-dentist-30-crusade-against-wisdom-teeth-removal-105243007.html>
3. <http://www.tnr.com/article/economy/magazine/88631/american-medicine-health-care-costs>
4. <http://www.bbc.co.uk/news/science-environment-20553143>
5. <http://healthland.time.com/2012/12/03/study-links-food-allergies-to-pesticides-in-tap-water/?iid=hl-article-mostpop1>
6. <http://www.guardian.co.uk/society/2011/oct/10/diabetes-the-epidemic>

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dearieme (2012-12-04 05:10:14)

As I understand it, heart disease rose from ca 1920-60 for reasons no-one understands, and has fallen since then for equally inscrutable reasons. (That doesn't stop medical men claiming the credit for the fall, of course.) Some people have discerned the pattern as resembling that of an infectious disease. As for diabetes, some of the rise will just be an artefact of changing the

blood sugar threshold used in the definition of diabetes, and some - at least in Britain - will be an effect of economic incentives: our doctors are now paid a bonus for diagnosing diabetes. There's nothing in the Guardian article to suggest that the diagram that has got the journalist's knickers in a twist shows age-corrected figures, so a third effect will be that diabetes is partly a disease of ageing, and we are an ageing society. Now, I ask myself, why do people lie - for that is effectively what they are doing - when they cite figures uncorrected for these effects. Why do they lie? Seth: I have no doubt that diabetes is increasing adjusted for age. For example, childhood diabetes is rapidly increasing. Because of the connection with obesity - which is obviously increasing, corrected for age - the increase in diabetes is not surprising. I hadn't realized the heart disease pattern suggests an infectious disease but lately I have been seeing more and more evidence that points that way.

Doug (2012-12-04 08:10:16)

God heals, and the doctor takes the fees. Benjamin Franklin

Rashad (2012-12-04 08:49:13)

Regarding lighting, I recently came across this program called f.lux which adjusts the color of your computer monitor based on time of day to more closely resemble natural light cycles. I found the default changes a bit too much, but at moderate settings it seems great. <http://stereopsis.com/flux/>

dearieme (2012-12-04 09:25:44)

"I have no doubt that diabetes is increasing adjusted for age." That statement sounds plausible to me: but then why must it so often be accompanied by lies? Because suppressing mention of the three effects I mentioned is lying: "suppressio veri".

dearieme (2012-12-04 09:26:33)

Why do you wish to draw our attention to unnecessary wisdom about tooth extractions?The Seth: The larger problem of too much medicine is important, I believe.

dearieme (2012-12-04 09:32:43)

By the by, I have long joked that Americans have a life expectancy below that of (say) Britons or Germans because Americans get too much dental treatment. Many a true word ...

Nancy Lebovitz (2012-12-04 12:31:19)

Do you have anything specific about an increase in childhood diabetes? Seth: [1]This article mentions a four-fold rise in Japan.

1. <http://care.diabetesjournals.org/content/27/7/1798.long>

Jo (2012-12-04 13:58:47)

I ignored the advice of several dentists when I was in my 20's who insisted I needed to have my wisdom teeth extracted - mostly because their warnings about future problems were so vague and they couldn't give me any actual numbers as to what my chances were of developing a problem, it always seemed as if they were relying on one or two individual horror stories they had seen among hundreds of patients rather than the actual likelihood of something occurring.

Alex Chernavsky (2012-12-04 14:32:37)

When I was in my late teens, I was told that I would probably need to have all four wisdom teeth removed. I naively agreed to it. When I had the first two removed, I experienced very unpleasant complications. First, i had an allergic reaction to the pain medicine. Then, the bleeding wouldn't stop, and I had to return to the oral surgeon for additional sutures. The anesthetic didn't work well for the second suturing, and I experienced a fair amount of pain during the procedure. I still have the other two wisdom teeth. They have not caused me any problems. And, to their credit, none of my subsequent dentists have made an issue of it over the years.

Nancy Lebovitz (2012-12-04 21:35:16)

Thanks for the link. It looks as though juvenile type 2 is very rare, though definitely increasing. Have you read a book called Diabetes Rising? It claims that diabetes has been increasing for the past century, and there isn't any theory which explains the increase.

Paul N (2012-12-05 15:55:36)

Article from earlier this year from the Chicago Tribune stating that diabetes rates among US teens [1] have doubled in the last decade. The "good" news was that teen obesity rates had stabilised at 20 %(!) (another 15 % overweight). Of course, their dietary advice is to eat "healthier" including, of course, more whole grains and low fat dairy. I am increasingly of the opinion that these American health officials are causing the epidemics they are observing. They also seem to still be of the opinion that obesity is causing diabetes, and therefore people should eat low fat, and whole grains, to avoid obesity. which they have been saying for decades now...

1. [http://articles.chicagotribune.com/2012-05-21/news/sns-rt-us-diabetesbre84k0x7-20120521\\_1\\_full-blown-diabetes-full-blown-type-sugar-levels](http://articles.chicagotribune.com/2012-05-21/news/sns-rt-us-diabetesbre84k0x7-20120521_1_full-blown-diabetes-full-blown-type-sugar-levels)

dearieme (2012-12-06 05:00:37)

"diabetes rates among US teens have doubled in the last decade" I dare say, Paul, but how big would the increase be if you allowed for the redefinition of what constitutes diabetes, and for the changing incentives for diagnosis (including that common incentive, fashion)?

Paul N (2012-12-06 12:07:52)

@ Dearieme, That is a good question, and I'm sure there is some fuzziness about the definition, especially for "pre-diabetes". What can't be argued is the shocking increase in overweight/obese teenagers in recent decades, so I'd wager that, regardless of the definitions, the actual incidence of diabetes has likely matched that rate, if not exceeded it. Given the links to things like sitting and diabetes, I expect modern teen behaviour - lots more time in front of a screen of some sort and less outside doing something - can only make it worse. It seems to be worst amongst black, latino and native american people - who also happen to be the poorer end of town. I suspect a combination of genetic susceptibility, and diet - eating even more cheap carbs, junk food etc - is at work here. We can argue about the definitions, but I don't think there's any debate that there is an increasing problem. After all, that's why the name was changed from "adult onset" diabetes to "type 2 diabetes"...

## **Who is the Richest Person in China? (2012-12-05 06:31)**

If you open the American edition of Forbes, you will find articles about the richest people in America. If you open the Russian edition, you will find articles about the richest people in Russia. If you open the Chinese edition, you will find articles about the richest people in America.

A Russian friend of mine noticed this. He happened to know an sophomore economics major at Tsinghua. It is incredibly difficult to get into Tsinghua and the economics major is the most desirable major of all. To be an economics major at Tsinghua you need a test score that is in something like the top 1 out of 100,000. Staggeringly high. My Russian friend asked the Tsinghua economics major, "Who is the richest person in China?"

The economics major didn't know. He seemed a little angry. "Why should I know? We've never been taught that," he said.

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dearieme (2012-12-05 07:28:45)

"Why should I know? We've never been taught that": sounds like the sort of laddie who fails Oxbridge entrance interviews.

Richard Sprague (2012-12-05 07:39:20)

The authoritative Chinese publication on rich people is HunRun: <http://www.hurun.net/usen/NewsShow.aspx?nid=349>

Tom (2012-12-05 17:52:49)

Off topic, but a story you might like, Seth: The enteric coating commonly used in aspirin may render it useless in up to 40 % of the population, at least in terms of cardiac protectiveness. (The study didn't indicate whether aspirin's ability to relieve pain was also disabled.) <http://www.nytimes.com/2012/12/05/business/coating-on-buffered-aspirin-may-hi de-its-heart-protective-effects.html> The study was funded by Bayer, which sells mostly coated aspirin.

Adam (2012-12-05 17:54:55)

The richest man in China is Li Ka-Shing (李長春) as far as I know. "Richest person of Asian descent in the world" according to Wikipedia.

Tim Beneke (2012-12-06 11:20:35)

Li Ka-Shing is also quite a philanthropist – he funded a very nice building on the Berkeley campus that is named after him.

Adam (2012-12-06 16:36:29)

Can someone explain to me how Li Ka-Shing can be the richest person of Asian descent in the world but NOT be the richest man in China? He lives in Hong Kong, which is in China last time I checked. Are the other richest people in China not of Asian descent? Their names certainly seem Chinese...

## **Bariatric Surgery Linked to Acetaminophen Poisoning (2012-12-06 05:00)**

Acetaminophen is a pain killer found in many over-the-counter drugs, such as Tylenol, NyQuil and Sudafed. It can cause liver failure. [1]A new study at the California Pacific Medical Center in San Francisco reports that people who have had bariatric surgery seem to have a much higher risk of this:

Among 54 patients who had suffered acetaminophen-induced liver failure over a three-year period, 17 percent had had weight-loss surgery. . . . Less than 1 percent of the general population has had the surgery.

The study controlled for the possibility that people who have bariatric surgery are more likely to have liver failure unrelated to acetaminophen:

The researchers looked at 101 cases of acute liver failure seen at California Pacific Medical Center, more than half of which were caused by acetaminophen poisoning. Among the nine patients [of the 101] who had had weight-loss surgery, all of them had liver failure caused by acetaminophen overdose.

The article, by a reporter named Erin Allday, goes on to say:

At this time, there is no reason for bariatric surgery patients to be alarmed, and they should continue using acetaminophen if that's their preferred pain medication or their doctor has prescribed it.

Allday attributes this bizarre advice to unnamed "researchers and weight-loss surgeons." Of course bariatric surgery patients should be alarmed and cut down or stop using acetaminophen.

The next time someone says "correlation does not equal causation" or belittles epidemiology tell them about this case.

Thanks to David Archer.

1. <http://www.sfgate.com/health/article/Bariatric-surgery-and-acetaminophen-risk-4091180.php#ixzz2EDa0Ttm6>

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Jim Purdy (2012-12-06 07:13:38)

The amazing wonders of modern medicine. But never fear. In another thousand years, maybe medicine will start to make a little progress. Maybe. [jimpurdy1943@yahoo.com](mailto:jimpurdy1943@yahoo.com)

Seth Roberts (2012-12-06 14:17:50)

I suspect this is an example of a general rule: ALL medicines and surgeries make ALL other medicines and surgeries more dangerous. If you take Drug A, Drug B becomes more dangerous. The term "drug interaction" obscures the truth that the interactions are always bad.

Adam (2012-12-06 16:43:26)

Seth, that is not completely true. Some drug interactions are actually sought out because they will have additive effects. Taking 2 blood pressure drugs is technically a drug interaction because they both cause lowering of the blood pressure (duplication of therapeutic effect), but in many cases that is the point. In HIV therapy, Ritonavir is used not as an antiviral drug, but because it inhibits the enzyme that breaks down other antiviral drugs, thereby "boosting" them. Seth: "Drug interaction" refers to changes in effectiveness or danger. Taking two blood pressure drugs at once does not reveal "interaction" unless their effects change. Sure, some drugs are specifically designed to make other drugs/surgery work better. Or reduce their side effects. The most common example is analgesics: Make surgery more bearable. They are exceptions to the rule, yes.

Txomin (2012-12-06 19:50:35)

It is dangerous to generalize. We would be far worse off without modern medicine. Seth: Yes, some parts of modern medicine unquestionably help, at least short-term. I have a harder time than you assessing the long-term effects, in particular the effects on innovation. For example, how have antibiotics influenced our understanding of disease?

Nancy Lebovitz (2012-12-07 00:21:02)

Also, people who've had bariatric surgery may be less able to absorb some medicines- a friend had to have her antibiotic dose increased when she had pneumonia.

## Assorted Links (2012-12-08 05:00)

- [1]Trouble with The Long Tail concept (2008 article)

- [2]Computer-assisted diagnosis is better than ordinary diagnosis but doctors don't want to use it. "Most of us don't think we need help at diagnosis, especially with routine cases, which account for the majority of our work," says a doctor. The first malpractice suit (failure to use computer diagnosis) cannot come soon enough.
- [3]Human stool transplants reverse antibiotic damage.

Thanks to Charles Platt and Adam Clemens.

1. [http://www.theregister.co.uk/2008/11/07/long\\_tail\\_debunked/](http://www.theregister.co.uk/2008/11/07/long_tail_debunked/)
2. <http://www.nytimes.com/2012/12/04/health/quest-to-eliminate-diagnostic-lapses.html?pagewanted=all&r=0>
3. <http://www.reuters.com/article/2012/11/30/us-bacteria-stool-treatment-idUSBRE8AT09D20121130>

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Tom Myers (2012-12-08 06:03:16)

Anderson's response to Page's Long Tail study should be found at the top of a Google search for its title: "More Long Tail debate: mobile music no, search yes" But maybe that title is enough. :-)

Liz (2012-12-13 00:16:02)

Antibiotics wreak such havoc with the body's microbiome, it would be good to see stool transplants become a standard treatment/follow-up after a course of antibiotics, even if clostridium difficile is not causing problems. Obviously it would be preferable to use the patients own stool, as mentioned in the closing paragraphs of the article. The big question though - will people be able to get over the yuck factor? I suspect a majority will not....

## Online Teaching Versus What? (2012-12-09 05:00)

Is online teaching (e.g., [1]MOOC) a big deal? In [2]an essay ("Why Online Education Works"), Alex Tabarrok argues for the value of online education (meaning online lectures) compared to traditional lectures. A friend told me yesterday that MOOC was "a frontier of pedagogy". No doubt online lectures will make lecture classes cheaper and more available. Lots of things have gone from scarce/expensive to common/cheap. With things whose effects we understand (e.g., combs), the result is straightforward: more people benefit. With things whose effects we don't understand, the results are less predictable. Did the spread of sugar help us? Hard to say. Did the spread of antibiotics help us? Hard to say. It may have helped sustain simplistic ideas about what causes disease (e.g., "acne is caused by bacteria", "ulcers are caused by bacteria") reducing effective innovation. Do we have a good idea of the effects of lectures (or their lack of effect), or a good theory of college education? I don't think so. Could their spread help sustain simplistic ideas about education? Maybe.

As books spread, the teaching of reading increased. Everyone understood that books were useless if people couldn't read. The introduction of PCs was accompanied by user interface improvements. This helped PCs become influential-not restricted to hobbyists. Will online education be accompanied by similar make-it-more-palatable changes? I have heard nothing about this. Their advocates seem to think the current system is fine and if it could only be available to more people...

Online lectures will make much difference only if the cost and quality of lectures is the weakest link in what strikes me as a process with many links. It would be a coincidence if the link that can be most easily strengthened turned out to be the weakest link. For example, is the cost of lectures the main thing driving up the cost of college? That



would be wonderful if it were true, but I haven't seen evidence that it's true. At Berkeley, for example, there has been enormous growth in the administrator-to-faculty ratio.

Here are two arguments used to argue that online lectures are a big step forward:

It will help people in poor countries, like Zambia. There is a long history of people in rich countries misunderstanding people in poor countries. Several years ago I was in Guatemala. I heard about a school being built by a (rich country) religious group in a poor area. After two years, the American running it wanted to leave. No member of the community took it over. It disappeared. "Maybe they didn't want a school," said the graduate student who told me about it. Maybe few people in Zambia want online lecture classes. (I have no idea.) If so, the benefit will be small.

It will save labor. Each lecture will be viewed many more times. Saving labor is not always good. It is plausible that the growth of online lectures will mean fewer college professors. Colleges and universities are among the few places where people do research and almost the only places where they do unrestricted research. Most of the research is useless; a tiny fraction is enormously useful. At the moment, lectures subsidize research. By giving lectures, professors are allowed to do research. Fewer professors, less unrestricted research, less innovation. "Wasteful" lecturing might be labor we shouldn't save.

One thing I like about online classes is the possibility they will connect people who want to learn the same thing, like ordinary classes do. They can help each other, encourage each other, and so on. I have no doubts about the value of this. (I find language partners – I teach them English, they teach me Chinese – way more pleasant and helpful than tutors.)

At Berkeley, I tried to find good lecturers. With two exceptions (Tim White and Steve Glickman) I failed. Almost all lectures, even those by brilliant researchers, were dreary. ([3]A shining exception by Robin Hanson.) They suffered from a lack of stories and a lack of emotion. (At Tsinghua, things are worse. A friend who majors in bioengineering told me that 80 % of her teachers lecture by reading from the textbook.) The power of professors over students in some ways resembles the power of doctors over patients. Just as there is little pressure on doctors to understand disease (if antibiotics have bad effects, it doesn't harm the doctor who prescribed them), there is little pressure on most professors – at least at the elite research universities that produce online lectures – to understand education. At Berkeley, many professors say they teach their undergraduate students "how to think" or "how to think critically". In fact, they were teaching their students to imitate them. The simplest form of education. This is neither good nor bad – it depends on the student – but it is the opposite of sophisticated.

A few months ago I assigned my Tsinghua students (freshmen) to read 60 pages of [4]The Man Who Would Be Queen by Michael Bailey, a book full of stories and emotion. Any 60 pages, their choice. No test, no written assignment, no grade. One student told me it was the first book in English she'd ever finished. It was so good she couldn't stop reading. My assignment had changed real-life behavior: what my student read in her spare time. Maybe it changed her tolerance of homosexuality and the tolerance of those around her. My assignment (not a textbook or academic paper, not a fixed reading) and evaluation (none) differed from conventional college teaching. Experiences like this make me wonder what fraction of important learning during college happens due to lecture classes. (In my case, the fraction was zero.) If the fraction is low, it suggests that online learning won't make much difference.

1. [http://en.wikipedia.org/wiki/Massive\\_open\\_online\\_course](http://en.wikipedia.org/wiki/Massive_open_online_course)

2. <http://www.cato-unbound.org/2012/11/12/alex-tabarrok/why-online-education-works/>

3. <http://blog.sethroberts.net/2008/03/21/robin-hanson-on-doctors/>

4. <http://faculty.wcas.northwestern.edu/JMichael-Bailey/TMWQBQ.pdf>

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TimG (2012-12-09 07:02:57)

As I read this, I could not help but consider that blog posts - such as this one - are akin to online lectures ("micro-lectures", perhaps?), and that the explosion of blogs and blog readers exemplify the potential value of MOOC. At the same time, there is no doubt that blog quality and readership varies widely, suggesting that MOOC, for MOOC's sake, is a grossly naive concept. Quality of content is paramount. Easy, free/inexpensive access to poor quality lectures cuts both ways: the customer, having little investment in acquiring the lecture, is likewise predisposed to promptly drop that lecture if its quality is in the least substandard. Just as a blog's readership can readily rise and fall with the quality of the posts. This may ultimately improve online learning, as long as lessons are taken from successful online lectures and applied to new attempts. The question for me is whether the "old dogs" (the run-of-the-mill lecturers) have the willingness and/or capacity to change. My guess is that they generally do not. Seth: I like the blog/lecture comparison. When I was in college, I tried to find good books about the subjects I wanted to learn about. A good book about genetics, for example. These were never textbooks. They were often histories of the subject (a series of stories) or memoirs (a series of emotional stories). Nowadays I might try to find a good blog on the subject. Lots of blog posts convey emotion.

Robbo (2012-12-09 07:03:05)

"It would be a coincidence if the link that can be most easily strengthened turned out to be the weakest link." A truth that applies almost everywhere. I am following the internet Harvard Computer Science course and can share some observations. Some parts of the academic process scale up readily, like lectures and design of assignments. Others, like marking assignments, not so much. For me, most of the learning takes place when working on the assignments. The fact that it will be seen and marked helps me to focus on finishing. I expect the future will unbundle research from teaching undergraduates and there will be just a few, expert lecturers. There are other issues which come with eliminating the campus as where the students are - in particular cheating is going to be harder to police. It could be that learning and credentials get unbundled, so you learn online with Harvard, but to get a certificate you go to an office and take a paper and pencil test under controlled conditions - a bit like Gmat or US bar exam. Seth: Thanks. "For me, most of the learning takes place when working on the assignments." I agree. For me, there is little learning without doing. This is what I mean about an incomplete theory of higher education. How important is doing? If it is 100 % or 95 %, yet most courses (outside math, engineering, foreign languages, etc.) provide only a little, then we should be trying to increase doing.

Glen Raphael (2012-12-09 07:22:25)

When I was at Berkeley, John Searle (philosophy department, class was Speech Theory) was an impressive lecturer - he walked the stage like an actor, using a full dynamic vocal range. Different vocal accents, changes in pitch, changes in volume and body language and a full command of the material. Alan Dundes (folklore professor, class was "Forms of Folklore") was just so fascinated by his subject matter that he made the students fascinated too. Also, if you ever have the chance to see economist David Friedman lecture you should do so (I first saw him guest-lecturing at Stanford). He's more in the mold of Robin Hanson - defending unusual positions through interesting stories that make connections that wouldn't have occurred to the audience. Seth: I once had dinner with Alan Dundes. Strangest dinner ever. In an hour, he told fifty jokes. Very enjoyable. Many years earlier, I had attended one of his classroom lectures. He was extremely funny - again, nonstop jokes - but the psychoanalytic theory that he used to explain them seemed worthless. This was the strange case, the only one I can think of, where the delivery was great and the content was poor.

Javeux (2012-12-09 07:37:47)

I haven't tried anything on Coursera, but I like the format of Udacity and Khan Academy. The lectures are much shorter, focused and digestible, and they have great software to make the experience interactive and reinforce what you learn. Typical lectures and lecture notes generally offer a lot less than the course book if you can stand to get through it. The benefit of uni is more in the coursework, exams, guidance from professors and the structure and motivation a course provides. I found it harder to make use of the MIT OpenCourseWare materials than go through a Udacity course.

Tom (2012-12-09 15:14:46)

The price of a university education really started to skyrocket once the law was changed to make it impossible to discharge college debt through bankruptcy.

garymar (2012-12-09 19:46:27)

In scholarly conferences, the value of getting together lies not so much in the presentations, as in the kibitzing that goes on in the hallways in-between, and the lunches and dinners where people get together to talk. The unstructured bits are very valuable, but there has to be a *structure* to hang them on. Seth's students wouldn't have followed his informal recommendation to read a certain book if they weren't already interacting with him within a formal structure. So it looks like you need both. Seth: It wasn't an informal recommendation. It was a homework assignment. I can't imagine an online lecturer saying "read any 60 pages and I won't test you on it".

Tom (2012-12-09 21:58:00)

**Three Dozen Private-College Presidents Earned Over \$1 Million in 2010** In 2010, the latest year for which data is available, the highest paid president, with \$3,047,703 in total compensation, was Bob Kerrey of the New School in New York City. Mr. Kerrey, who left the job in December 2010, received a \$1.2 million "retention bonus" and a payout of more than \$620,000 in deferred compensation on top of his base salary of \$602,593. Among the 493 colleges with budgets greater than \$50 million, the highest paid sitting president was Shirley Ann Jackson of Rensselaer Polytechnic Institute, at \$2,340,441. ... [nytimes.com/2012/12/10/education/three-dozen-private-college-presidents-earned-over-1-million-in-2010.html](http://nytimes.com/2012/12/10/education/three-dozen-private-college-presidents-earned-over-1-million-in-2010.html)

Alexander Boland (2012-12-10 06:38:35)

I always had trouble paying attention in class, which had the fortunate side effect of giving me a lot of practice at teaching myself mathematics from textbooks. That said, I actually recently tried Khan Academy because I wanted to review linear algebra (planning to teach myself group theory). Before that, I thought the idea of online education was hokey BS for reasons similar to things you said above. I was pleasantly surprised—there was an amazing sense of clarity. But I think that it's for a fundamentally different reason than people think: **I was able to pause and rewind.** I could therefore skip through segments that weren't important and play others multiple times. Also, it meant that if I spaced out or had to go to the bathroom, there was no problem. And what makes this such a valuable supplement is that while many lecturers are far from perfect, there is something about watching someone giving a tutorial that's fundamentally different than reading a textbook. As for what scheme will actually work, that's a great question. I think the only straight answer I can give is that the education system as it is now is unsustainable, and when things break, we will hopefully see some serious creative destruction that leads to innovations about how people will be taught. Seth: The Khan Academy makes much more sense to me. One reason is that elementary school teachers may have trouble with or dislike math and science – at least, compared to Khan's teachers. Another reason is that everyone should learn to read, write, do arithmetic, and so on. A third reason is that Khan stuff frees teachers to give special attention to students who are having trouble mastering the material. That's not the case with MOOC's. I do think there's something to be said for adding a personal element to learning. An emotional connection with the teacher. Which might happen much better with a video than a book. But I have never heard the advocates of on-line learning mention this much less say how it will happen.

Jill (2012-12-10 07:07:40)

I think online lecturing needs to be considered as only a single tool of online learning. I learn a lot online (as mentioned above, blogs are an important piece of that), but I have never WATCHED an online lecture. I can probably count on one hand the number of YouTube videos that I've seen - it's just not my thing. On the other hand, my husband does most of his online learning (car repair, art techniques, languages, etc.) by watching videos. Hopefully, as MOOCs increase, the purveyors of learning will keep in mind that different students have different learning styles - and, of course, certain subjects work better in certain formats.

Kajal Sengupta (2012-12-10 17:38:02)

The concept of online learning is recent if I am correct and it is imperative that at the beginning there will be lot of adjustments readjustments to be made. While I agree that we can not equate the learning environments of online and offline education

but if adopted in a proper way backed by field studies this mode can work wonders for those who cannot afford the luxury of online courses.

Jon (2012-12-11 02:17:40)

I went to school (electrical engineering - EE) with a guy that would skip the lectures (would attend for pop quizzes, etc., of course) and would copy his homework from other people. He had straight A's and was the president of the student IEEE. He would take 18 credit hours or more (unheard of for EE). How did he do it? He learned best by studying from the books. No need to attend lectures. Unfortunately, the system caused him to jump through hoops that only slowed him down from being productive and getting to work on a real job. I e-mailed him looking for work after losing my first job as a EE. He wasn't in the business of EE anymore, he followed the money and was a hedge fund worker, not sure what exactly he was doing. My point is, people learn differently and the current one-way college trip is valuable only marginally. It seems because it is subsidized by the government to such a great extent that it has become much more valuable than it would otherwise be. Why is it valuable? Maybe because it acts as a screener for employers that shows the person is willing to stick with it for a long time? I've left EE also for computer programming. Rather than go through another 2-4 years to get a CS degree I'm teaching myself. Books are great, stackoverflow is a great resource, programming themed blogs is great, creating an actual product while teaching myself is great, creating a meet up group in my area is great, connecting with other programmers is great. I think if I were to join a company and learn more closely with programmers would also be invaluable (something I will likely not do since I don't want to move and work regular office hours - 32 hour weeks is too nice). My best resources for learning? 1) Doing the actual programming. 2) Reading programming books. 3) Reading code written by others. 4) Writing about my code that I have written. 5) Asking questions on forums about problems I run into. Seth: Very revealing, thanks.

Jon (2012-12-11 02:22:10)

Oh, last comment. One of the guys in my programming meetup group I started loves doing research (on electronics). It seems he is making little to no money. He open sources his findings. My point? I think there is a lot of research going on out there. People love to tinker and learn. If they are passionate about what they learn then they want to share what they find out with others.

## **Why Do Fermented Foods Improve Health? A New Idea (2012-12-11 05:35)**

I became interested in the health value of fermented foods after I noticed a curious coincidence. Humans have three mysterious food preferences: for (a) sour food, (b) food with umami flavor, and (c) food with complex flavor. I realized that all three preferences made bacteria-laden food more attractive. Bacteria change sugars to acids, increasing sourness. They break down proteins, creating glutamate, which produces umami flavor. And the many chemicals they introduce into a food make its flavor more complex. After I noticed this, I came across many studies that supported the idea that fermented foods are good for health. I also found studies that suggest the bacteria in our digestive system are crucial to health.

This raised the question: What fermented foods to eat? How many? How often? To begin to answer these questions, it would help to know how bacteria in our food help us be healthy. There were two obvious answers:

1. Stimulate the immune system. The bacteria in fermented food are inherently safe: they are specialized to reproduce on/in food, which is so different than inside the human body. But the immune system doesn't know this. If this was one benefit of fermented food, you could study which ones to eat by measuring immune system activation. Unfortunately, that is nearly impossible.
2. Improve digestion. Many people have digestive problems and some of them are helped by fermented foods. Obviously they contain bacteria that digest food. I don't have digestive problems so I can't study this by figuring out which fermented foods help.

Recently, I have begun to think there is a third reason:

3. Place competition. To make us sick, outside bacteria need to stick inside us. To digest our food, the surfaces of our digestive system, such as the inside of our intestines, is much more porous than other surfaces, such as our skin. It is our digestive system, therefore, that is most vulnerable to dangerous microbes. The totally-safe microbes in fermented foods compete for sticky spots with other, more dangerous microbes. If there are plenty of safe bacteria – say, billions in a serving of yogurt – they may do a lot to protect us against the dozen or so similar dangerous bacteria we might get from touching the same surface as a sick person. I think of a wooden floor where the lumber is not quite well-fitted. If you want to protect what's below that floor from black sand (dangerous), an excellent method would be to pour an enormous amount of white sand (safe) on the floor.

If Effect #3 (place competition) is the main reason fermented food protects us from disease, it implies that dead bacteria work as well as live bacteria (in contrast, live bacteria do not digest food, Effect #2). This might explain the potency of alcoholic beverages such as wine, where most of the bacteria are dead. It also suggests that what matters is diversity of where bacteria stick and how much they stick. It might someday be possible to feed people (non-radioactive) bacteria and learn where in the body they end up.

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Nancy Lebovitz (2012-12-11 05:40:39)

Your second point (harmless bacteria stimulate the immune system while being harmless) reminds me of a possibility for why very spicy food gets liked– it's pain without danger.

Todd Fletcher (2012-12-11 10:16:43)

I have a half-baked theory that inadequate digestive flora leads to obesity: it makes foods with lots of white flour and sugar more palatable because they're easily digested by such people. Denser foods like meats with a lot of fat and high protein or raw fruits and vegetables don't digest so easily so they avoid them. Then they get addicted to the blood sugar spikes. No idea if this makes sense or not but there you are. Seth: As Nancy says, lots of people avoid carbs but are still fat. Alex Chernavsky tried a low-carb diet. Initially he lost a lot of weight. After a year or so he started to regain the lost weight. At that point he changed his diet. Short-term weight loss caused by his low-carb diet was not easily sustained for a long time. I don't agree that simply eating white flour and sugar is fattening (or avoiding them is thinning). It's more complicated than that.

Nancy Lebovitz (2012-12-11 14:14:32)

Probably a half-baked theory, or at least you'd need to check on a good sample of fat people. Simple carbs aren't good for me, so I don't eat a lot of them. I like fat and protein more. I'm still fat. Your theory might apply to some proportion of fat people, but biology is complicated.

Bosco Ho (2012-12-11 14:46:14)

Really enjoy reading your stuff here on fermented foods. As for your theory about why bacteria is healthy for us, apropos point number 3, this sounds to me like exactly the same reasoning for the medical technique of fecal transplant [http://www.slate.com/articles/health\\_and\\_science/medical\\_examiner/2011/01/the\\_enema\\_of\\_your\\_enemy\\_is\\_your\\_friend.html](http://www.slate.com/articles/health_and_science/medical_examiner/2011/01/the_enema_of_your_enemy_is_your_friend.html)

Cliff Clayton (2012-12-11 18:13:02)

We can add this to the list of "evolutionary" ways that modern living has short changed human physiology. 1. Industrial foods are unnatural. 2. Artificial light disrupts circadian rhythms. 3. Artificial heat prevents cold adaptation. 4. Modern refrigeration restricts the need for food storage via fermentation. Are there any I missed? Seth: I think you've missed about a hundred. For example: 1. Modern living reduces human contact in the morning. 2. Modern timing of food interferes with sleep.

Nancy Lebovitz (2012-12-11 23:15:47)

Modern news contributes to constant anxiety.

Jim Purdy (2012-12-12 00:17:45)

Human contact in the morning – or any other time – irritates the snot out of me. But I love peace and quiet. I don't have a TV or a radio, and I keep the sound turned off on my computer. You're the psychologist, Seth, but is there really anything wrong with enjoying peace and quiet? If I'm happy, what's wrong with that?

Txomin (2012-12-12 04:17:55)

A while back you mentioned the Nobel Prize in medicine. This could be interesting to you: <http://www.rationaloptimist.com/blog/induced-pluripotent-stem-cells-change-the-ethical-debate.aspx>

Cliff Clayton (2012-12-12 15:34:00)

A possible 4th reason we like fermented foods. (not my idea). New microbes are a source of genetic material for our epigenetic mechanisms to use for genetic adaptations to environmental stresses. IE they are inventory in our junk DNA parts list.

Toxicologia (2012-12-14 12:07:04)

The fermented foods are producing enzymes that aid in the absorption of nutrients and digestive capacity.

dearieme (2012-12-15 04:40:54)

"1. Industrial foods are unnatural." All cooked foods are unnatural.

## **Few Doctors Understand Statistics? (2012-12-12 05:00)**

A few days ago I wrote about a study that suggested that people who'd had bariatric surgery were at much higher risk of liver poisoning from acetaminophen than everyone else. I learned about the study from [1]an article by Erin Allday in the San Francisco Chronicle. The article included this:

At this time, there is no reason for bariatric surgery patients to be alarmed, and they should continue using acetaminophen if that's their preferred pain medication or their doctor has prescribed it.

This was nonsense. The evidence for a correlation between bariatric surgery and risk of acetaminophen poisoning was very strong. Liver poisoning is very serious. Anyone who's had bariatric surgery should reduce their acetaminophen intake.

Who had told Allday this nonsense? The article attributed it to "the researchers" and "weight-loss surgeons". I wrote Allday to ask.

She replied that everyone she'd spoken to for the article had told her that people with bariatric surgery shouldn't be alarmed. She did not understand why I considered the statement ("no need for alarm") puzzling. I replied:

The statement is puzzling because it is absurd. The evidence that acetaminophen is linked to liver damage in people with bariatric surgery is very strong. Perhaps the people you spoke to didn't understand that. The size of the sample ("small") is irrelevant. Statisticians have worked hard to be able to measure the strength of the evidence independent of sample size. In this case, their work reveals that the evidence is very strong.

If the experts you spoke to (a) didn't understand statistics and (b) were being cautious, that would be forgivable. That's not the case here. They (a) don't understand statistics and (b) are being reckless. With other people's health. It's fascinating, and very disturbing, that all the experts you spoke to were like this.

I have no reason to think that the people Allday talked to were more ignorant than typical doctors. I expect researchers to be better at statistics than average doctors. One possible explanation of what Allday was told is that most doctors, given a test of basic statistical concepts, would flunk. Not only do they fail to understand statistics, they don't understand that they don't understand. Another possible explanation is that most doctors have a strong "doctors do everything right" bias, even when it endangers patients. Either way, bad news.

1. <http://www.sfgate.com/health/article/Bariatric-surgery-and-acetaminophen-risk-4091180.php#ixzz2EDa0Ttm6>

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ck (2012-12-12 08:25:01)

"17 percent had had weight-loss surgery. . . . Less than 1 percent of the general population has had the surgery." The rate of general population might be misleading. What if bariatric patients have a much higher probability of taking acetaminophen? What the researchers should have looked at is the rate of liver poisoning of acetaminophen users in general vs. acetaminophen users who had bariatric surgery. Maybe some researchers really do not understand statistics. Seth: Sure, the evidence could be improved. This is always true. The sort of evidence I discuss resembles the first evidence that smoking causes lung cancer.

Tom (2012-12-12 08:40:22)

Seth, please consider rewriting/expanding this blog post into an Op-Ed piece. It belongs in the NY Times.

Dennis (2012-12-12 09:06:15)

I second what Tom said.

ChristianKI (2012-12-12 09:29:34)

If your only information about a study is the information that's contained in a press article about the study, it's a bad idea to start criticizing researchers who are familiar with the study. "Statisticians have worked hard to be able to measure the strength of the evidence independent of sample size. In this case, their work reveals that the evidence is very strong." That claim is wrong. Observational studies produce frequently results that don't replicate even when the P values are under 0.05. See Ioannidis. Maybe acetaminophen is more effective in people who had bariatric surgery and as a result those people are more likely to take acetaminophen than the general population. More importantly, how many who take acetaminophen actually develop liver poisoning? How many bariatric surgery patients who don't take acetaminophen develop liver poisoning? How does that risk compare to the advantages that acetaminophen provides? Instead of contacting the reporter, how about contacting the person behind the study and asking them why he thinks that the reporter wrote "there is no reason for bariatric surgery patients to be alarmed"? Seth: By "strength of evidence" I meant the p value. The p value is very low. Statisticians have indeed worked hard to compute p values independent of sample size. This study unquestionably makes use of acetaminophen more dangerous for those who have had bariatric surgery. Someday the uncertainties will be resolved – until then, a causal explanation of these results (bariatric surgery makes acetaminophen more dangerous) remains plausible. Which is why acetaminophen should be avoided – at least, avoided more than before these results. Thank you for your suggestion

that I contact the researcher. That's a good idea. Of course I can do both: contact the reporter and the researcher.

Jonathan (2012-12-12 11:52:30)

By synchronicity, Prof. Bruce Charlton today put up a blog post about how when he did research in epidemiology, he came to understand that his fellow researchers don't understand and cannot interpret statistics—including not only the researchers running clinical trials, but even the professional statisticians. <http://charltonteaching.blogspot.com/2012/12/the-uk-census-in-rationalistic-s-ecular.html> So why would anyone expect doctors to?

Alex Chernavsky (2012-12-12 15:46:04)

Speaking of incompetent mathematicians, does anyone remember that infamous newspaper column written by Marilyn vos Savant? She outlined a brain-teaser with a very counter-intuitive solution (the puzzle is called the Monty Hall problem). Many people, including some professors of mathematics, sent her nasty letters, claiming that she was wrong. She was not wrong. You can see some of the letters here: <http://marilynvossavant.com/game-show-problem/> Here, for example, is a note from someone named E. Ray Bobo, Ph.D., of Georgetown University:

You are utterly incorrect about the game show question, and I hope this controversy will call some public attention to the serious national crisis in mathematical education. If you can admit your error, you will have contributed constructively towards the solution of a deplorable situation. How many irate mathematicians are needed to get you to change your mind?

Alex Chernavsky (2012-12-12 15:49:27)

An interesting follow-up question is whether any of Marilyn's critics apologized to her later. Apparently, not many did: <http://answers.google.com/answers/threadview/id/510729.html>

Glen Raphael (2012-12-12 20:39:36)

A friend of mine is a doctor who majored in math at Berkeley as an undergrad. He said that in med school and residency, being the one doctor in the room who actually can do and understand mathematics was kind of like having a superpower.

Kim Øyhus (2012-12-13 03:07:25)

Marilyn's answer is wrong, as are all the rest. The true answer here is kind of meta, because the probabilities are very dependent on why the host does what he does, and what he does, such as what he would have done if another door had been chosen. All answers assume that the host behave in a specific way, and when they assume differently, they get different probabilities. The true answer is that there is not enough information to calculate probabilities. The REALLY interesting part is how this answer escape virtually all people, even experts. It seems to be some kind of blind spot in normal humans.

Margaret (2012-12-13 10:16:09)

First, @Kim, you're so right. There's really no clear answer to the Monty Hall problem, at least at the level of real life people on the real life show. I wonder why "smart" people can't see that? Secondly, I don't really have enough information to tell, but I doubt that these experts are as bad at statistics as you're saying. A more likely explanation is that they don't feel that they have the authority to change policy regarding bariatric patients and acetaminophen. It's the whole "trusting authority" problem. Don't trust regular people with information. It might cause a panic!! Just let this new information about bariatric patients slowly percolate up the chain of command to whoever makes policy announcements and in 4 or 5 years, you'll see bariatric surgeons telling their patients to avoid acetaminophen. Problem solved! [sarcasm] Seth: "They don't feel they have the authority to change policy." That's a good way to put it. That's what I was trying to get at with my second possible explanation, they have a strong "doctors do everything right" bias.

Jordan (2012-12-13 10:40:15)

I could not agree with you more. My mom is currently in ICU. She is a type 2 diabetic. Her blood glucose is tested every 6 hours. No matter the level, she gets insulin - the amount depends on what "the sliding scale" tells the nurse to do. Her blood sugars are below 100 about half the time and they STILL give her insulin. I argued over and over with the nurse and MD on staff to



NOT give her insulin if it was 120 or below. I finally had to sign a release. And they still did not like it. Simply, MD's (nurses and therapists) are unable to think. And when they think like you suggest (as they do), it's a bad combination.

Kris (2012-12-13 15:02:09)

Marilyn is wrong. Look at the chart on her page. Game 3 and 6 are never played because the host does not open the door with the auto. She just lost track of her variables. "Door #3" is the door that the host opens, not actually Door #3 and the host opened another door.

Kris (2012-12-13 16:49:11)

Nope, I am wrong. I ran a simulation. With no switching you have .33 chance of picking correctly. does not matter if a door is revealed. You have a .66 chance on picking the incorrect door. In this case the host reveals the other incorrect choice, and a switch puts you on the correct door guaranteed. If you picked the right door (.33) initially, then the switch moves you to the wrong choice.

Matt (2012-12-13 22:44:23)

@Kim The true answer is not "meta" or ambiguous, because the host's actions are described with no ambiguity in the problem statement. There are three doors, and after the contestant makes his choice the host opens a door that does not have the car behind it.

Kim Øyhus (2012-12-14 02:41:31)

Matt, there is a LOT of ambiguity in this problem, as stated by Marilyn vos Savant. She states that the host knows what's behind doors. This means the host can change behaviour depending on that. This dependence can change probabilities a lot. For instance, the host could open another door only when you choose the one hiding the car, to tempt you away. She gives us just one scenario: You choose door 1, host opens door 3, showing a goat. But since we lack information about what the host do depending on where the car is, we cannot calculate probabilities. We do not know how likely other scenarios are. To simplify: Why did the host open that door? Answer: We do not know.

Alex Chernavsky (2012-12-14 06:28:05)

Kim, the mathematicians (and others) who objected to Marilyn's answer didn't do so based on the ambiguity that you described. They seemed to assume the scenario that Marilyn intended (though perhaps didn't express unambiguously). So I think we can still conclude that the objectors were spectacularly wrong.

Kim Øyhus (2012-12-14 06:43:41)

Alex, yes. In other words, they guess what she means, and luckily get that right, and then proceeds to think wrongly, even after being corrected. To me, that behaviour seems very typical, very human, and quite disappointing. To me, the Monty Hall problem was very confusing, and the confusion did not go away when I saw the explanations. When the absence of information was pointed out to me, everything became obvious, even all the other explanations, as just variations on how people fill in that blank, which they do not see, like the blind spot, which it might be a cognitive equivalent of.

nari (2012-12-14 07:38:55)

I agree with Tom too.

Jeremy (2012-12-21 14:38:27)

What was the difference in risk of the outcome for the two groups in the study? Large correlation doesn't suggest anything to me either, because there's no quantification of the size of the association. Seth: I don't understand the question. Which two groups? The essential finding is that people who'd had bariatric surgery seemed have about 20 times higher risk of acetaminophen poisoning than everyone else.

## Why Quantified Self Matters (2012-12-14 05:00)

[1]Why Quantified Self Matters is the title of a talk I gave yesterday at a Quantified Self conference in Beijing. I gave six examples of things I'd discovered via self-tracking and self-experiment (self-centered moi?), such as how to lose weight (the Shangri-La Diet) and be in a better mood. I said that the Quantified Self movement matters because it supports that sort of thing, i.e., personal science, which has several advantages over professional science. The Quantified Self movement supports learning from data, in contrast to trusting experts.

If I'd had more time, I would have said that personal science and professional science have different strengths. Personal science is good at both the beginning of research (when a new idea has not yet been discovered) and the end of research (when a new idea, after having been confirmed, is applied in everyday life). It is a good way to come up with plausible new ideas and a good way to develop them (assess their plausibility when they are still not very plausible, figure out the best dose, the best treatment details). That's the beginning of research. Personal science is also a good way to take accepted ideas and apply them in everyday life (e.g., a medical treatment, an idea about deficiency disease) because it fully allows for human diversity (e.g., a medicine that works for most people doesn't work for you, you have an allergy, whatever). That's the end of research.

Professional science works well, better than personal science, when an idea is in a middle range of plausibility – quite plausible but not yet fully accepted. At that point it fits a professional scientist's budget. Their research must be expensive (Veblen might have coined the term conspicuous research, in addition to "conspicuous consumption" and "conspicuous leisure") and only quite plausible ideas are worth expensive tests. It also fits their other needs, such as avoidance of "crazy" ideas and a steady stream of publishable results (because ideas that are quite plausible are likely to produce usable results when tested). Professional science is also better than personal science for studying all sorts of "useless" topics. They aren't actually useless but the value is too obscure and perhaps the research too expensive for people to study them on their own (e.g., I did research on how rats measure time).

In other words, the Quantified Self movement matters because it gives all of us a new scientific tool. A way to easily see where the scientific tools we already have cannot easily see.

1. <http://blog.sethroberts.net/wp-content/uploads/2012/12/2012-12-13-Why-QS-Matters.pptx>

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Cliff (2012-12-14 16:02:18)

The democratization of research, no?

Nancy Lebovitz (2012-12-15 18:05:31)

The other value of quantified research and other sorts of self-experimentation is for people who are sufficiently non-standard that the usual methods aren't working for them, though perhaps that counts as a variant of the beginning of research. Seth: That's what I mean by quantified self being useful at the "end of research". The end of research is the point at which research has found "usual methods" to solve a health problem. The usual methods work well for most people. To find out if they work for you, you need to measure yourself. If they do not work, you need to measure yourself to find something that does work.

## Radical Thought at Johns Hopkins Medical School (2012-12-15 05:00)

Brent Pottenger, who is a medical student at John Hopkins, writes:

Today, as a required activity for our Hopkins Med endocrinology course, we watched excerpts Supersize Me and Tom Naughton's Fat Head. Our professor then engaged us in a discussion comparing the two films. Our professor told our class that the lipid hypothesis is incorrect, said that the USDA Food Pyramid is the product of corn and wheat subsidies (and lobbies), and definitely stirred up some uneasy responses from my classmates.

I asked Brent what had made them uneasy.

What the professor said contradicted what they believe. Every professor before this has demonized saturated fat, meats, etc., so this was the first time someone questioned that belief.

How did they express their unease?

They expressed unease by getting up and leaving the lecture hall, by whispering in disgust to their neighbors, etc. – you could see it on their faces. Then, some of the more curious classmates who are always inquisitive followed up with genuine questions, wanting to know more about the validity to the statements made in Tom's movie about Ancel Keys, the McGovern Report, the USDA, the science of the lipid hypothesis, etc.

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Chuck (2012-12-15 08:40:59)

That blasphemous heretic of a professor obviously is in need of a frontal lobotomy or at the very least leaching until he recovers his senses. Cheers

Michael (2012-12-15 10:35:05)

Sigh. Another generation of misinformed technicians readying themselves to dispense pabulum and and prescriptions to a unsuspecting public. I'm heartened to learn that there are a few professors out there who are challenging their students to use what they are learning and think.

Kim Øyhus (2012-12-15 14:51:19)

Perhaps most people are evolved to accept dogma, because the alternative was to be rejected by religious society. This could be tested by measuring concentration of dogma acceptance with respect to long term type of society.

Txomin (2012-12-15 16:56:49)

As long as it is not understood, a given notion is never knowledge but belief. This applies to everyone and to everything.

nc289 (2012-12-15 19:01:33)

It's Johns Hopkins, not John Hopkins! Seth: Thanks. I thought it must be either Johns Hopkin or John Hopkins.

dearieme (2012-12-16 14:33:01)

I was in hospital last week and took the opportunity to explain to a young cardiologist about Ancel Keys and his lies. She'd never heard this tale before, and, I suspect, didn't believe a word of it. Worse, I'll bet my bottom dollar that she had no intention of googling around a bit to see what's what. A different young registrar told me that he'd had a look at the photos resulting from my angiogram a couple of years ago. Not only was there no significant narrowing, he said, but there were no deposits at all. Clean as a whistle. Ah, said I wisely, it's my bacon and butter diet! Seth: Good to know. During a year when I ate lots of butter, my deposits decreased. Your experience supports my hope that it was cause and effect – the butter decreased the deposits.

Credulous (2012-12-16 16:55:41)

"It's Johns Hopkins" Is that like Childrens Hospital?

Wil B (2012-12-17 17:56:30)

@ Credulous: Johns Hopkins is a major medical institution in Baltimore, Md.

Janknitz (2012-12-17 18:04:30)

I'm sorry for the patients of the arrogant ones who refused to consider information from a professor who challenged their beliefs. Those a patients who will never be heard or truly cared for by these physicians.

chuck(also) (2012-12-17 18:54:48)

it is an endocrinology class at a top 10 in the world med school. couldn't the teacher just let the science speak for itself? it is what it is, opinion be damned.

## Assorted Links (2012-12-16 05:00)

- [1]"Light" Ph.D. – a less expensive research degree
- [2]Umami Burger expands
- [3]A diuretic reduces autism symptoms. Does water balance influence brain function in people without autism?
- [4]This Amazon reviewer is almost always disappointed and his one-star reviews are fun to read. I suggest that ratings (book ratings, product ratings, etc.) compare the rating to other ratings given by the rater. A 5-star rating is more impressive if a rater's average rating is 2 than if it is 5. I suggest percentiles. For example, rating = 5 (90 %ile) is more impressive than rating = 5 (50 %ile). I'd also like to know the average percentile across raters.
- [5]Lack of variation in heart rate predicts infection in neonates. The writer (Mike Loukides) is too surprised ("astonishing connection"). Many studies have found associations between too-little variation in heart rate and serious health problems.

Thanks to Adam Clemens and Patrick Vlaskovits.

1. <https://forum.quantifiedself.com/thread-light-phd-degree-to-allow-for-respected-publishing?pid=2203#pid2203>

2. [http://aht.seriousseats.com/archives/2012/12/first-look-u-mini-umami-burger-adam-fleischman-los-angeles-ca.html?ref=excerpt\\_readmore](http://aht.seriousseats.com/archives/2012/12/first-look-u-mini-umami-burger-adam-fleischman-los-angeles-ca.html?ref=excerpt_readmore)

3. <http://www.webmd.com/brain/autism/news/20121206/generic-drug-autism-children>

4. [http://www.amazon.com/gp/cdp/member-reviews/A291DLJDR874UR?ie=UTF8&display=public&page=1&sort\\_by=MostRecent](http://www.amazon.com/gp/cdp/member-reviews/A291DLJDR874UR?ie=UTF8&display=public&page=1&sort_by=MostRecent)

ntReview

5. [http://radar.oreilly.com/2012/04/operations-machine-learning-data.html#.UM0KFvcxm\\_I.twitter](http://radar.oreilly.com/2012/04/operations-machine-learning-data.html#.UM0KFvcxm_I.twitter)

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Three Pipe Problem (2012-12-16 05:51:34)

Okay devil's advocate on the reviewing concept: I have personally observed that I am more likely to review products I have a problem with. Let's say this is also true of the serial 1-star reviewer you linked to. Then there are many products that he \*would have\* rated more highly, had he written a review. If he had included these reviews would it change the meaning of any of his existing reviews? I say no. Therefore looking at his "spread" gives no extra information. Seth: The interesting comparison is not Person X (fewer reviews) compared to Person X (more reviews). The interesting comparison is Person Y's five-star review to Person X's five-star review. Surely you agree that five stars means different things from different people. The additional information I suggest is one way to begin to take account of that – to try to adjust for individual differences.

Nancy Lebovitz (2012-12-16 08:58:53)

My filter for amazon reviewers is whether they seem to care about the same things I care about. I'm not interested in how picky they are.

Tom Passin (2012-12-16 09:31:16)

At Amazon, I usually start out looking at the 1-star ratings. Mostly they are worthless, but once in a while you can get a real sense of valid problems. It's mostly a skimming operation. Then I look at the 2-stars. These seem to be rather better and more thoughtful. Then I look at the 4's. I find that too many of the 5-stars are either fanboys or brand new users, and most of them sound pretty credulous. This approach has worked pretty well for me as best I can tell. There are a lot of books I didn't buy because of it, for one thing.

RAD (2012-12-16 11:12:34)

What I find astonishing about Mike Loukides article is how he can start with a fundamental misunderstanding of heart rate variability (HRV) and weave it into an elaborate story that is disconnected from reality. Heart Rate Variability occurs during respiration with heart rate being higher during inhalation and lower during exhalation. Lack of variation occurs when the body is stressed for a variety of reasons. Machine learning over vast amounts of real time data to detect subtle patterns is an over complication of the lessons learned at Sick Kids. Low HRV is a telltale "spike" that indicates the presence of a stressor. You only need a minute or so of heart rate data to calculate the HRV and the value could easily be reported by an inexpensive device like a finger Pulse Oximeter but they don't currently. I think the lesson from the Sick Kids research is that HRV is simple and highly predictive compared to other data being gathered. HRV should be watched as closely as heart rate, blood pressure, blood oxygenation, and body temperature in patients. Perhaps IBM is partially at fault for trying to put a Real Time Big Data spin on results that show HRV is a powerful but essentially low-tech tool. Seth: Good point.

dearieme (2012-12-16 14:26:53)

Shouldn't a "light" PhD be called something else?

R. Jones (2012-12-16 23:25:59)

This is not related to the links, but cessation of masturbation and internet porn (abstaining for 4+ days) gave me greatly increased energy. I speculate that porn and masturbation are major dopamine sinks for the brain and when you stop, your dopamine responses get tied to something else. I am surprised that so few people talk about this. Is it one of those obvious things? It's an awkward topic and many people assume that you are a religious zealot when you start talking about the downfalls of masturbation.

Txomin (2012-12-17 02:27:32)

A PhD is not necessary to get published. I did before getting mine and so have many. Affiliation tends to matter more for those that pervert the peer-review process.

Tom (2012-12-17 09:24:58)

I think RAD has identified why IBM is pushing their big data approach so hard – IBM doesn't have an algorithm that can calculate HRV efficiently. The algorithm does exist, though: [www.ncbi.nlm.nih.gov/pubmed?term=pd2i](http://www.ncbi.nlm.nih.gov/pubmed?term=pd2i) I would disagree, however, with his assertion that HRV is an 'essentially low-tech tool' – the math that can extract the HRV needle from the haystack of autonomic noise is very complex.

Gayle (2012-12-17 19:34:50)

Bookworm has put up a review of a book by an autistic teenager. It is absolutely stunning. Their minds are all there, but they are unable to express themselves through their bodies. After the horrors of repetitive rote teaching of knowledge he had already absorbed, he finally was helped by a teacher who understood. He was finally able to communicate through an alphabet board. <http://pjmedia.com/lifestyle/2012/12/10/everything-you-think-you-know-about-a-utism-is-wrong/> #comment-307587 His book: <http://www.amazon.com/exec/obidos/ASIN/0988324709/pjmedia-20>

shtove (2012-12-23 18:28:17)

Barry Ritholz has a thoughtful post on Amazon reviews: <http://www.ritholtz.com/blog/2012/12/amazon-changes-its-review-policy/> I sample the 5 & 1 star reviews, tend to be swayed by the quality of the reviewer's writing. Postmodern approach, which sometimes fails.

## **Best Books of 2012 (2012-12-17 05:00)**

In order of quality (best first):

1. The Dictator's Handbook: Why Bad Behavior is Almost Always Good Politics (published 2011) by Bruce Bueno de Mesquita and Alastair Smith. The best book about political science I have read. A leader always needs supporters. The essential difference between dictatorships and democracies is how many. Full of data and examples that this view – the whole theory is a bit more complicated – explains. [1]Econtalk interviews.

2. Antifragile: Things that Gain From Disorder by Nassim Taleb (copy sent me by author). Full of original ideas. It may be unprecedented that a serious thinker so anti-establishment has so loud a voice. Much of the book is about a generalization of hormesis, the observation that a small amount of Treatment X can be beneficial even though a large amount of Treatment X is deadly. For example, a small amount of smoking is probably good for you. Taleb goes beyond this to say that in some things, the hormetic benefit (the benefit from small amounts) is much larger than in other similar things. You can fulfill the same function (governance, banking, science) with a system where the entities benefit a lot from small shocks (which Taleb calls "anti-fragile") or a system where the entities benefit not at all from small shocks. Systems where small shocks cause benefits tend to suffer less when exposed to large shocks. In my personal science, I have benefited a lot from day-to-day changes in my life (e.g., it led me to discover that butter improves my brain function and flaxseed oil improves my balance). In large science, day-to-day variation is only harmful. The core idea is that hormesis-like dose-response functions exist outside of the drug/poison/mice/rat/health experiments in which they were discovered.

3. Confessions of a Microfinance Heretic: How Microlending Lost Its Way and Betrayed the Poor by Hugh Sinclair (copy sent me by publisher). By "microfinance" he means microcredit. Sinclair convinced me that the belief that microcredit is a wonderful thing for poor people is one of the big delusions of our time. It is a wonderful thing only for the institutions that give it out (at exorbitant interest rates, usually). Sinclair sums it up like this (pp. 217-8): "Give

a man a fish and he'll eat for a day. Give a woman a microcredit loan to buy a fishing boat, and the CEOs of the MFI [microfinance institute] and the microfinance funds will eat for a lifetime." Sinclair continues: "There is too much at stake [for the CEO's] to allow any genuine scrutiny."

1. [http://www.econtalk.org/archives/\\_featuring/bruce\\_bueno\\_de\\_mesquita/](http://www.econtalk.org/archives/_featuring/bruce_bueno_de_mesquita/)

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David Scrimshaw (2012-12-17 07:25:42)

It seems there's no hyphen in "antifragile" (Just mentioning it to help people searching for the book at their libraries.)

Nancy Lebovitz (2012-12-17 10:36:01)

It seemed to me early on that the administration work of microcredit as originally conceived was very time-consuming and could only be done as a charity. This means that trying to make a profit (or perhaps even a living) at offering microcredit turns it into money-lending.

Griff (2012-12-19 17:14:34)

Seth, I am now very envious of you as you received a copy of Anti-Fragile from Nassim Taleb, who is likely my favorite living author. I missed the opportunity for a signing in D.C.

### Assorted Links (2012-12-18 05:00)

- [1]Japan is shrinking. How will it survive? The Japanese are healthier than people in other rich countries – that is one thing the rest of us can learn from them. A second is visual design. A third is perfectionism, or rather, how to instill perfectionism.
- [2]Quantified Self conference in China. A small error: I didn't say ""Self-tracking and experimentation supports personal science." I said "QS [= the QS movement] supports personal science".
- [3]Is the QS movement a fad? "I see a lot of measuring but not much improvement." A better question is: Do you see any improvement? All big things started small.
- [4]the invention of DNA fingerprinting
- [5]pork fat: the new health food

1. <http://www.nytimes.com/2012/12/16/opinion/sunday/without-babies-can-japan-survive.html?ref=opinion&r=0>

2. <http://www.globaltimes.cn/content/750476.shtml>

3. [http://www.computerworld.com/s/article/9223594/Is\\_the\\_quantified\\_self\\_movement\\_just\\_a\\_fad?taxonomyId=18&pageNumber=1](http://www.computerworld.com/s/article/9223594/Is_the_quantified_self_movement_just_a_fad?taxonomyId=18&pageNumber=1)

4. [http://genome.wellcome.ac.uk/doc\\_wtd020877.html](http://genome.wellcome.ac.uk/doc_wtd020877.html)

5. [http://eatocracy.cnn.com/2012/04/27/beer-whiskey-and-pork-fat-the-new-health-foods/?hpt=hp\\_c2](http://eatocracy.cnn.com/2012/04/27/beer-whiskey-and-pork-fat-the-new-health-foods/?hpt=hp_c2)

Sean (2012-12-18 08:41:56)

I can't imagine how the island nation of Japan which is the size of California but has a population of 130 million could possibly function with say, the population of California. It would be utter mayhem, dogs and cats sleeping together etc. A shrinking population is only a problem for pyramid schemes such as social security.

dearieme (2012-12-18 17:03:19)

Ahoy, Seth. O/T but fascinating. <http://www.ft.com/cms/s/0/0b7af978-493a-11e2-9225-00144feab49a.html#axzz2FS2ccPqR>  
I have speculated along these lines myself in various comment sections - but that was mere conjecture by a medical ignoramus. I wonder how good their evidence is? Seth: Because antibiotics are routinely used to fatten cows and pigs, it is a far-fetched idea.

## **Twenty Dead Schoolchildren in Newtown, Conn. (2012-12-19 05:00)**

Adam Lanza, the Sandy Hook shooter, was taking medication, according to a neighbor. Here's [1]what someone said in 2008: "Every young, male shooter [who] has gone on a killing spree in the United States also has a history of treatment with psychotropic drugs — typically SSRI antidepressants. These shootings have three things in common: 1) The shooters are young males. 2) The shooters exhibit a mind-numbed disconnect with reality. 3) The shooters have a history of taking psychiatric medications."

Lanza was considered by his mom to have Asperger's. No doubt that, and the associated isolation, had something to do with the medication. As I point out every year at Nobel Prize time, the research methods favored by the health-care establishment have done little to reduce major diseases, such as depression. With few exceptions, year after year little progress is made on figuring out the environmental cause of anything, including Asperger's and autism. The result of this lack of progress is that almost every serious health problem, including mental health problems, gets treated with drugs or surgery rather than prevented or treated safely with necessary nutrients (as scurvy is treated with lime juice). The little progress that is made in finding environmental causes is undervalued. The researchers who figured out that smoking causes lung cancer didn't even get a Nobel Prize. The effect of failing year after year to find environmental causes is that people take more and more drugs with little-known or unknown side effects, which are almost always bad. [2]The association of SSRI antidepressants and violence is still unknown to many people, for example. The problem has been made worse by drug companies hiding data. As Ben Goldacre says in *Bad Pharma*, one of the worst cases involved an antidepressant called paroxetine, whose manufacturer (GlaxoSmithKline) withheld data about its tendency to cause suicide. My work has suggested that [3]a lot of depression may be due to lack of exposure to faces in the morning, an idea utterly different than the neurochemical theories of depression favored by psychiatrists. I am sure that seeing faces in the morning is safer than taking psychiatric drugs.

1. <http://psychdrugs.wordpress.com/2008/07/29/antidepressants-violence-and-school-shootings/>

2. <http://www.plosmedicine.org/article/info:doi/10.1371/journal.pmed.0030372>

3. <http://escholarship.org/uc/item/2xc2h866>



Dennis (2012-12-19 06:52:21)

What's worse, if many of these autism or Aspergers cases are a result of overdiagnosis, then many of them shouldn't be treated with antidepressants to begin with.

Alex Chernavsky (2012-12-19 08:06:26)

The single best exposé of the dangers of psychotropic drugs is this book: [1]*Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*, by Robert Whitaker. The author is an award-winning investigative reporter. Unlike many anti-psychiatrists (such as the lunatic Scientologists and their head wing-nut, Tom Cruise), Whitaker is a very sensible guy and has no ideological ax to grind.

1. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452425>

Javeux (2012-12-19 09:15:28)

I told my doctor I was a stressed for years, and managed to get a handle on it with mindfulness, lifestyle changes, and a lot of practice. I said it still felt like there was a lingering susceptibility to stress, despite my new-found above-average coping ability. For example, waking up in a "bad mood" or starting to feel easily antagonised in the afternoon. I figured years of exposing myself to stress probably left some physical damage somewhere that would require more than just "switching off" the habituated stress response. I don't know if there was a communication issue or not, but my doctor offered me SSRIs as a "solution". I said I didn't feel they would address a susceptibility when I felt I had the psychological side under control, and I expressed my concern about the side-effects. It's also worth mentioned that at no point was I depressed. He said he couldn't see any physical cause and that SSRIs weren't addictive like prozac (I was thinking more weight-gain, hair loss, impotence, osteoporosis etc...). It wasn't until a while later when I started messing around with a glucometer that I saw I was getting wild postprandial swings in blood glucose (10.7mmol/L to 5.4 within 25-minutes), and mild hypoglycaemia at night time. I'm not going to claim this explains everything, or that the device is 100 % accurate, but 5-weeks of exercise (2x resistance, 1x HIIT per week) and taking care to balance meals to avoid BG spikes has done wonders for mood and also aches/pains etc already. I can't understand why my doctor would consider SSRIs as a \*first\* option without any evidence other than a subjective impression from a poorly communicated consultation. It's no wonder so many children are ending up on these things, and it really worries me what could've happened if I'd taken up the offer. Would I ever have been able to diagnose the BG problem? Would the hormonal changes that result from SSRIs have masked or worsened it in any way? Sometimes I think the term "evidence-based" is just a empty buzzword when it comes to medicine. Seth: Good story. Medicine is now evidence-based by comparison to what it used to be.

dearieme (2012-12-19 11:28:15)

Isn't there a correlation problem here? Young men sufficiently mad to mass-murder infants are probably sufficiently mad to have been diagnosed and put on drugs. You can't really conclude that the drugs must be to blame for the murder, can you? Seth: Some psychiatric drugs are debilitating, i.e., disabling. It is far from obvious that people sufficiently able to do a school shooting must be on psychiatric drugs. Because of this, the drug-school shooting correlation deserves scrutiny. My belief that psychiatric drugs may cause (= increase) violence is based on experiments. People get placebo or drug. People in the drug group are more violent than people in the placebo group. It is becoming more accepted that some psychiatric drugs cause suicide. There are similarities between killing yourself and killing others.

Paul N (2012-12-19 14:25:37)

There is an article about this on Daily Kos [1]Something has changed, but what? It has a list of these shootings, who did them and what drugs they were on - scary stuff! I suspect big pharma will (anonymously) back calls for tighter gun control to keep the spotlight off themselves.

1. <http://www.dailykos.com/story/2012/12/16/1170660/-Something-Has-Changed-But-What>

John Eels (2012-12-19 14:56:25)

I read the article you mentioned (here's what someone said in 2008). I'm upset. The more I read about psychotropic medications from critical authors, the more I realize how little, if at all, they benefit patients taking them. In some instances there are

short-term benefits, but long-term outcomes (more than five years) are worse for those taking psychotropic substances. This applies to antidepressants, antipsychotics, and tranquilizers. Psychotropic substances make you sicker, not better. Educating people gives them power. You are most invested in your health. Big pharma doesn't care, and is ready to misinform, disguise, and lie to keep profits high. Doctors are misinformed and base their decisions on ostensibly scientific pamphlets provided by pharmaceutical companies. A young doctor once explained monoamine hypothesis to me using a cartoon. In the bottom corner of the cartoon was an antidepressant logo. It's messed up.

Pat (2012-12-19 16:42:00)

I wonder if your imagination will work for morning faces? i.e., 20 minutes of eyes closed and just picturing a face in your mind's eye? I mention this because of the practical difficulty of viewing artificial morning faces.

Matt (2012-12-19 21:51:25)

Watching a morning talk show for twenty minutes seems way way way easier and more practical than imagining faces with your eyes closed for 20 minutes. Seth: Morning talk shows have a low density of the necessary faces: life size looking at the camera. Long ago I used Booknotes (C-Span), now I use bloggingheads.tv.

Jane (2012-12-21 15:20:23)

I got chemical sensitivities very suddenly 25 years ago. I moved into a new empty cabin and discovered that my moods were influenced by a new rug, the new telephone, a ladder which had been covered with wood stain, and so on. Then an environmental doctor suggested I test myself for propane allergy and sure enough, when I turned off the gas, I lost depression and went from 11 hours sleep a night to 9. She suggested I do a trial without wheat and voila! less depression and aches and no more constipation. Later I got rid of mercury, and last of depression was GONE. I wake up happy every day. I knew a woman who was depressed, and had tried all kinds of talk therapy to get over it. I suggested maybe she was allergic to coffee, because she talked about her coffee a lot and people are often allergic to their favorite foods. Two days later, she came by: you were right, it was the coffee! Bottom line, many mental and emotional states from anxiety to schizophrenia are caused by intolerance to chemicals and foods and molds. I have read of a severely autistic kid who became totally normal when they figured out her particular food allergies. Another woman lost 20 pounds and got over her depression when she found out she was allergic to dairy. I have a theory that the Unibomber was allergic to chemicals: he went over the edge when he worked in a chemical factory. Also, I suspect that some are allergic to the antidepressants. Seth: Very interesting. Especially the coffee story.

Cathy (2012-12-21 18:51:53)

Check out the work of David Healy - the psychiatrist who drew the most attention to the link between SSRIs and suicidality (as well as other forms of violence). This YOUTUBE video outlines the manipulations that were used to approve and promote SSRIs. It's also a serious challenge to the thinking behind evidence based medicine - as has been taken up in this blog, as well. Very sobering. <http://www.youtube.com/watch?v=A3YB59EKMkw>

blaohoal (2012-12-22 17:04:41)

Paul: Rampage killings are not a recent or even modern phenomenon. ie: [http://en.wikipedia.org/wiki/List\\_of\\_rampage\\_killers](http://en.wikipedia.org/wiki/List_of_rampage_killers): [\\_Americas http://en.wikipedia.org/wiki/Running\\_amok](http://en.wikipedia.org/wiki/Running_amok)

Jacob (2012-12-27 13:43:55)

I think this version is more correct: 1) The shooters are young males. 2) The shooters exhibit a mind-numbed disconnect with reality. 3) The shooters had easy access to firearms. There is not conclusive evidence of SSRIs causing violence, only a vaguely understood correlation. Like the NRA focusing on video games, turning the discussion from gun control to SSRIs wanders from the realm of statistics and into conjecture territory. Focusing on SSRIs distracts from the larger problems of gun and mental health services (in general). Just my 2¢, respect to Seth and all other commenters. Seth: The evidence about SSRIs and violence collected by David Healy is considerably more than "a vaguely understood correlation." It isn't all correlational, either. Healy did an experiment.

Erin (2012-12-27 14:19:33)

Two things, a friend of mine was on Prozac briefly and she said it made her have extremely violent thoughts/urges. It was all she could do to keep herself from hurting herself or others. GAPSdiet.com I am not affiliated but believe in Dr Campbell-McBride's theories/results very strongly. I have a nephew with aspergers and he does much much better on GAPS (which removes dairy, gluten and all processed foods from the diet and restores beneficial bacteria).

Marlen Casserly (2013-01-05 00:30:57)

aspergers is inherited and currently there is no permanent cure for it.\* Our web blog <http://www.foodsupplementcenter.com/niacin-for-depression/>

## **One Reason for French Longevity: Molded Cheese (2012-12-20 05:00)**

[1]A new article emphasizes the benefits of cheese, especially "molded" cheese, such as Roquefort and Gorgonzola. Fermentation, if that is the right word, is essential:

The advantageous properties of cheese appear dynamically during the ripening process. Cheese which has been ripened for longer has been shown to be more effective in restoration of glucose tolerance, prevention of [2]steatosis [fat deposition inside a cell] and adipose tissue oxidative stress than short-ripened specimens. This data suggests that organic substances responsible for the health benefits of cheese emerge not merely due to mixing the ingredients required for cheese production, but rather as a result of a complex time-dependent enzymatic transformation of the cheese core controlled by probiota, temperature, humidity and possibly other factors.

Only in South Korea and Japan do people have less heart disease than in France, says the article. Readers of this blog will quickly see what South Korea, Japan, and France have in common. All of them eat much more fermented food than most people in rich countries. South Korea: kimchi. Japan: miso and pickles. France: cheese and wine.

Thanks to Peter MacLeod.

1. [http://www.lycotec.com/Imperox\\_files/Could\\_cheese\\_be\\_the\\_missing\\_piece\\_in\\_the\\_French\\_paradox\\_puzzle.pdf](http://www.lycotec.com/Imperox_files/Could_cheese_be_the_missing_piece_in_the_French_paradox_puzzle.pdf)
2. <http://en.wikipedia.org/wiki/Steatosis>

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dearieme (2012-12-20 09:46:36)

Pah, what about Stilton, or Blue Cheshire, or Shropshire Blue? The British wolf 'em down and still die of heart attacks. Though your implicit point, that Americans might usefully eat grown-up cheeses, may be good. [http://en.wikipedia.org/wiki/List\\_of\\_British\\_cheeses](http://en.wikipedia.org/wiki/List_of_British_cheeses)

Chuck (2012-12-20 10:07:22)

Dave Asprey - the Bulletproof Exec - would certainly disagree. He feels that mycotoxins in moldy (aged) cheese are more damaging than any benefit derived from the cheese. When it comes to food and health, does anyone really know? I'm at the point where I only eat what doesn't disagree with me, only when I feel like it and not too much, regardless of what any health expert/layman says. Cheers

Paul N (2012-12-20 10:12:20)

While the Poms (Brits to the non-Aussies out there) do make some really good molded cheeses, that does not mean everyone eats them. When I lived there for six months I noticed that most people preferred milder cheeses. Stilton seemed to be regarded as an "upper class" cheese, and many "ordinary folks" wouldn't eat it for that reason - and that it is normally 2-3x the price. Cheese aside, I didn't see much eating of sauerkraut or the like, and ordinary yogurts don't count for much, in my opinion. They do drink a lot of fermented liquids - i.e. beer - but I don't think that counts for much, either.

John (2012-12-20 11:26:31)

I've noticed that over time, as I refine my diet, I appreciate more and more fermented foods. They have a strong, complex flavor but are usually very simple dishes overall. Chuck, You don't have to treat each person as a guru; why not just look into it? I think the observational evidence and much that Seth has posted here is quite strong.

dearieme (2012-12-20 11:31:57)

Well, Paul, all true Britons eat Stilton.

Chuck (2012-12-20 15:15:47)

John, I don't treat each person as a guru, and I have spent many years "looking into it". That's how I came to the conclusion that nobody really knows. Yes, they have great sounding theories/hypothesis, but very little unbiased hard data to back them up. Since reading the Shangri-La Diet six years ago, I have questioned conventional wisdom. That's why I read Seth, Asprey, Kruse and Peat, as well as Wolff, Sisson, Taubs and Attia. They have lots of ideas and interesting things to try, but it's not a one size fits all world. Fermented foods give me acid reflux. Raw dairy does not. Hot coffee with butter and MCT oil (bulletproof coffee) gives me acid reflux. Cold coffee with raw milk, cream and MCT oil does not. A couple of tablespoons of butter on a homemade coconut bar or a plain rice cake does not. I eat, what most would call, a regular meal (protein, starch & fruit) once a day - dinner. I drink a 16oz glass of water with 3/4 tsp of pink sea salt as soon as I get up. I follow that up with a 16oz coffee drink (1/2 coffee & 1/2 milk, cream & MCT), plus a coconut bar with 1 1/2 tbs of butter. Later I'll have 16oz on milk with cream and coco - maybe more coffee. Maybe a rice cake with butter in the afternoon, and another coconut bar with butter after dinner - maybe not. I also take some supplements - mainly minerals - because I don't believe our food supply is all that nourishing. Does that leaf of kale really have all the nutrients the governments claims it has? Who really knows? Now, would any of those bloggers/authors/doctors, etc., mentioned above call that a "perfect" diet? No. Would I recommend anyone else doing this? No. But after years of suffering from acid reflux, and slowly gaining weight on a "healthy" diet, I'm now weight stable - where I was in my twenties - forty some years ago - and no acid reflux. If you're broken - metabolically - you need to try everything to get un-broken. If you're not, you can just rock-on until you are - maybe you never will be - or try some of the ideas put forth here, and elsewhere, and maybe stay un-broken for a while longer. You never know - who does? Cheers P.S. I know, this way too long of a response.

Evelyn M. (2012-12-20 20:42:32)

Seems to me that the cheeses noted in the article are those created with the help of various kinds of fungi. Mushrooms themselves are more often found in recipes for French and Italian food than in the cuisines of northern Europe, so perhaps total fungal consumption should be considered as well.

Daniel Lemire (2012-12-21 06:39:54)

Isn't beer fermented just like wine? Yet I don't see Germany on your list.

Chuck (2012-12-22 09:53:07)

Daniel - Beer is a high calorie carbohydrate that also contains gluten. Cabbage (sauerkraut/kimchi) and cucumbers (pickles) are low calorie carbs. Cheese is a high calorie fat. So there's more to the story than just fermentation. Cheers

## False Confidence About What Caused the Newtown Massacre (2012-12-20 12:51)

New York magazine commenters are usually smart and well-informed. Which is why this comment, on [1]an article about "the forgotten victim", Nancy Lanza, the shooter's mother, stands out:

They say money cannot buy happiness [Adam's father is apparently rich], but when dealing with someone with a mental illness, it can go a long way toward paying to fix unhappiness – it can pay for good doctors, proper medication [emphasis added], care-givers/guardians, all the tools required to secure a property and keep the "patient" safe, AND giving the mentally ill person his ideal living situation, limiting the snits and tantrums that can lead to real anger, which, in turn can lead to acting out.

No doubt this particular commenter is smart and well-informed. Which makes the fact that he or she is perfectly sure that "proper medication" exists so scary, at least if this person had any control over me or anyone who mattered to me. It reminds me of people who think that if you're fat all you have to do is eat less.

1. <http://nymag.com/daily/intelligencer/2012/12/nancy-landa-rarely-counted-as-sandy-hook-victim.html>

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TMS71 (2012-12-20 13:50:36)

I don't know what 'proper' medication is but if effective medication really existed there would be many fewer problems with schizophrenia. I'm not an expert but from what I understand schizophrenia meds have tons of nasty side effects and all they do is suppress symptoms, they don't exactly restore schizophrenics to a normal state. Schizophrenia is a horrible disease and there is no really effective treatment for it. It doesn't matter if you're rich. Also in the Adam Lanza case it seems his condition deteriorated very quickly, not really giving his mother much time to think about what to do about it. Seth: Well put. It isn't just schizophrenia. No psychiatric drug restores the person who takes it to a normal state, as far as I know. Lithium, given for bipolar disorder, causes massive weight gain, for example.

Zach (2012-12-23 18:38:02)

TMS71, what are your standards for effective medication? No one claims that medication for schizophrenia (or, as far as I am aware, any other mental illness) is intended to be curative. The sole objective is to treat the symptoms, and of course there will be trade-offs, and the effects may be marginal in cases. Seth: I think it's a narrow reading to assert that the proper medication reference asserts that such a thing necessarily exists. However I do believe that for some mental illnesses, including schizophrenia, there are medications for which the balance between symptom alleviation and side-effects lies clearly in favor of the drug for many (perhaps most) individuals. My sister has schizophrenia, and my family spent three years trying to help her without medication. Those years were wasted as best we can tell, whereas with medication she has made steady progress for the past six years. I think it is likely that many patients are worse off with the medications they take than they would be otherwise. Your concerns about antidepressants are likely well-founded. However, I don't think this is necessarily contradictory with them having substantial benefits for many users as well. I've been thinking about this the past couple of days. For many of these drugs, we don't have a clear understanding of how they work. I suspect that in many instances we have barely identified some (potentially) faulty mechanism and are in essence trying to hit the TV on its side, hoping the image clears up. Sometimes this makes matters worse; sometimes it improves them. However, if the effect is consistent on the individual level and the harm is reversible, then there is every reason to try it out. It is important to be aware that some people are suffering, and I appreciate what you do in highlighting this issue, as most people seem to underestimate it substantially. However, sometimes it seems like you think positive outcomes never happen, which troubles me. Seth: With schizophrenia it's hard to imagine a cure (restoration to normal). Presumably it is due to developmental mis-wiring that is not reversible. With depression and

bipolar disorder, however, it is entirely possible that sufferers could be cured in the same sense that giving Vitamin C for scurvy produces a cure. What is hard for outsiders and even insiders to see is how much the current emphasis on drugs makes it harder to do the research that would find the causes of depression and bipolar disorder. There may be short-term gain (people with depression suffer less) but long-term cost (a cure is less likely to be found within the next ten or twenty or thirty years). From this point of view the question of "how good are drugs?" is more complicated than just adding up the costs and benefits for the current group of people taking them.

Peter Fleming (2012-12-31 13:23:09)

ThisWhole over medicating is way out of control. There are fantastically loyal people out there who have very proud very well respected backgrounds. They maybe a bit aggressive. They may be a bit odd. They are given shit medication and get beaten to a pulp by some punk. Then you have made an enemy who has real power. Women are the words culprits for pestering men to see a shrink. All that happens is men learn to hate and avoid women. It is the cause of womens problems not the cure. If you don't like a Mans behavior get him of of your life. Don't have the arrogance to call him ill. It is a dangerous world. If you take away his survival skills and he is hurt women become his true enemy. Just stop trying to play shrink and we might survive this fucking medication induced fiasco we call the world. Do Gooding morons. Bettera punch in the face than a premeditated fire arm blood bath on kids.

### **Shangri-La Diet Tip: How to Drink Flaxseed Oil (2012-12-21 05:00)**

A good way to do the Shangri-La Diet is to drink flaxseed oil between meals. It pushes down your setpoint and also supplies omega-3. Alex Chernavsky, for example, [1]has had success with this. You will probably want to make the flaxseed oil smell-less. Here's how:

I read something on Amazon by one of the people who reviewed your book and it's worked for me. I take a small sip of water and keep it in my mouth and then take the tablespoon [of flaxseed oil] with my nose closed with the water in still in my mouth and swallow. Then I take a another drink of water and then I swish my mouth out with water and after all of it is done I have no residue of flax oil taste. It sounds like a lot to do but it really isn't.

Lately I've been doing the Shangri-La Diet by eating a daily bowl of yogurt, ground flaxseed (50 g), honey and fruit with my nose clipped shut. It tastes great because it is creamy, sour and sweet and has a variety of textures. It has a fair amount of calories (400?) so it's good for weight loss. I have to push myself to drink flaxseed oil but I have no trouble eating this.

1. <http://blog.sethroberts.net/2012/03/13/ten-years-of-weights-including-two-years-on-the-shangri-la-diet/>

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Keimpe Wiersma (2012-12-21 06:52:09)

Why not try the original Budwig Recipe? Flaxseed oil mixed with Cottage cheese (or quark). It's creamy, delicious, and energizing, and it has been my breakfast for several years (even before I heard of the Shangri-La diet). I put some (lightly roasted) sesame seeds and some (pure) sunflower seeds in for a little extra flavour. No honey or fruit (which is perfectly healthy, but because of the sweetness might nullify the 'Shangri-La principle' of tasteless calories).

Brian (2012-12-21 13:33:29)

I nose-clip about five minutes before, rinse my mouth out with water, take a shot of flaxseed from a shotglass (2 tablespoons), and then rinse my mouth thoroughly with water once again before removing the nose-clip. Unless it's a little old, I don't have a problem drinking it straight most days, but I try to break the calorie-flavor association as suggested in the book.

dearieme (2012-12-22 07:33:33)

Of boiled potatoes: is it better to use salted or unsalted butter on them?

Evolutionarily (2012-12-22 10:38:53)

1) What does it say about our aversion to the taste of flax compared to say butter (or sugar)? 2) My method is 1 large glass of COLD low-sodium V8 tomato juice (500mg Potassium), 1-2 tablespoons freshly fine-ground flax seeds, tablespoon coconut oil, and lately throwing in some pure gelatin as an experiment. Stir it up and it goes down well if you drink it in one or two goes as I do and just feels like drinking chilled thick'ish tomato juice.

Eugene (2012-12-22 13:38:30)

I take my flaxseed oil right after my half teaspoon of cinnamon. Easy process and I can't taste the flaxseed oil at all.

Paul Blossom (2012-12-23 07:00:17)

I'm not sure I understand. I thought that it was tasteless calories, or unusual tasting calories that caused the setpoint to change. But you talk about how the yogurt-flax seed mixture tastes good, and how you are on the diet by eating that. What am I missing? Seth: It is calories without smell that lower the set point. I eat the yogurt-flaxseed mixture with my nose shut. There is no smell but it tastes good because it is sour, sweet, creamy, etc.

Keimpe Wiersma (2012-12-23 09:23:42)

Hi Paul: I was suggesting people try this (quark+flax OIL - not seeds) mixture as an alternative way to down their flaxseed oil. If you don't mix it with anything it's tasteless (and kinda smell-less) and has no bad taste (and no after taste either). I myself however am not taking it as part of any diet in particular (I'm already very athletic and well built ;-) but because it's the quickest and easiest way to have a breakfast that will keep you satisfied until lunch. And then there's the supposed anti-cancer effect of the mixture, but that's another story.

Arnold (2012-12-25 12:02:11)

Hi Seth! I wonder what your opinion is on the position of Ray Peat concerning polyunsaturated fatty acids, especially in fish and seed oil. ...declaring EPA and DHA to be safe, the FDA neglected to evaluate their antithyroid, immunosuppressive, lipid peroxidative (Song et al., 2000), light sensitizing, and antimitochondrial effects, their depression of glucose oxidation (Delarue et al., 2003), and their contribution to metastatic cancer (Klieveri, et al., 2000), lipofuscinosis and liver damage, among other problems. From raypeat.com/articles/articles/fishoil.shtml Seth: I'm not interested in the binary category safe/dangerous. What interests me is what intake is optimal. A substance that is harmful at a high dose may be helpful at a lower dose. The references may be helpful but I would look at them differently than Peat.

Arnold (2012-12-27 02:33:53)

What made you change your answer? Your first response seemed more aggressive and angry. Seth: Yes, that's why I changed it.

Aliya (2013-01-09 09:56:32)

I just started this diet 5 days ago and I do flax seed oil, walnut oil, and the light tasting olive oil. I recently read an article about the health benefits of safflower oil, is this an oil I can implement on this diet as well? Thank you! Seth: Safflower oil is high in omega-6, which is pro-inflammatory. I avoid it for that reason.

## Is Jimmy Moore's Ketosis Diet the Shangri-La Diet in Disguise? (2012-12-22 05:00)

I have recently encountered three examples that suggest low-carb diets don't work well long-term:

1. Alex Chernavsky [1] tried a low-carb diet in 2002. Starting at 270 pounds, he lost 70 pounds. A year later, he started to rapidly regain the lost weight. He stopped the diet.
2. A "medical professional" [2] started at about 260 pounds (she's 5'3"). After reading Wheat Belly, she gave up wheat. "After several months of being wheat free I lost 10 lbs. But that's where it stopped." Then she did full low-carb. "From May to July I did what basically was Atkins induction. I lost 20 lbs but then the weight loss stopped."
3. [3] Jimmy Moore lost a lot of weight eating low-carb. Starting in 2004 at 410 pounds, he lost 180 pounds. Then he gained half of it back, ending up near 300 pounds in early 2012.

The theory behind the Shangri-La Diet (SLD) says unfamiliar food will cause weight loss because its smell is not (yet) associated with calories. As the food becomes familiar, its smell becomes associated with calories. Weight loss due to unfamiliarity will disappear. Going low-carb usually involves eating unfamiliar foods. They become familiar. This explains low-carb weight regain. The theory explains partial low-carb success (e.g., Jimmy Moore didn't regain all the lost weight) by assuming that the high-carb foods (e.g., soft drinks) given up produced stronger smell-calorie associations than the low-carb foods (e.g., steak) that replaced them.

Recently Jimmy Moore [4] has been losing weight again. Starting at 306 pounds, over 7 months he has lost 60 pounds. He believes that to lose weight with a low-carb diet, there must be sufficient ketones in your blood – you must be at the optimal level of ketosis. "In order to be fully keto-adapted and to start burning stored body fat for fuel, ketone levels must be between 0.5 to 3.0 millimolar," he wrote. To be fully keto-adapted, he began measuring his ketone level regularly. His first test showed that his ketone level was 0.3. "Holy cow, that could be one of the reasons why I'm not seeing my weight go down!" he wrote. He began adjusting his diet to put his ketone level between 0.5 and 3.0 millimolar, which involved changing protein intake as well as carb intake.

He changed his diet in various ways (mainly protein reduction) and started losing weight. In what I've read, he does not describe his current diet or earlier diet in detail, but does [5] say this:

I will tell you that I've drank liberal amounts of water and 2 Tbs Carlson's liquid fish oil daily along with my regular daily vitamins during this experiment.

Which sounds exactly like the Shangri-La Diet. Alex Chernavsky lost considerable weight and has kept it off [6] doing almost the same thing with flaxseed oil.

My guess is that he is losing weight because of the fish oil. The theory behind SLD makes two predictions: 1. If Jimmy stops the fish oil and continues the ketone level adjustment, he will stop losing weight. 2. If Jimmy stops the ketone level adjustment but continues the fish oil, he will continue losing weight.

I asked Jimmy for comment. Here's what he said:

It's an interesting theory, but not one I want to particularly test out since I'm still doing so well at accomplishing what I am aiming for right now – fat loss, mental acuity and great overall health [all due to the fish oil, I believe – Seth]. Perhaps once this period of testing NK [nutritional ketosis] is over in May, I can add in your suggestion as another testing point.



The theory behind low-carb dieting has never made any correct predictions, as far as I know. It does not explain why the lost weight is often regained. If it turns out Jimmy Moore's weight loss is due to his ketone adjustment, that will be the first correct prediction of the theory.

In contrast, the theory behind SLD led me to five new ways to lose weight (eating bland food, eating slowly-digested food, drinking unflavored sugar water, drinking oil with no smell, eating food nose-clipped). That's roughly the same as five correct predictions, two of them (drinking sugar water, drinking oil with no smell) counter-intuitive.

Jimmy Moore's weight loss may eventually show you can lose weight via SLD even when you don't realize you're doing SLD.

1. <http://blog.sethroberts.net/2012/03/13/ten-years-of-weights-including-two-years-on-the-shangri-la-diet/>
2. <http://www.livinlowcarbdiscussion.com/showthread.php?tid=9606>
3. <http://livinlavidalowcarb.com/>
4. <http://livinlavidalowcarb.com/blog/n1>
5. <http://livinlavidalowcarb.com/blog/jimmy-moores-n1-experiments-nutritional-ketosis-day-1-30/14409>
6. <http://blog.sethroberts.net/2012/03/13/ten-years-of-weights-including-two-years-on-the-shangri-la-diet/>

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John W (2012-12-22 05:35:52)

Have you been following all the recent interest in the "Potato" diet among Paleo enthusiasts? It also seems like the Shangri-la in disguise (bland food version). What is amazing is the number of bizarre ad-hoc theories that are flying around to explain why it works, when both you and Stephen Guyenet would have predicted it easily!

Txomin (2012-12-22 06:37:50)

Overeating is overeating independently of the amount of carbs in a diet. And, by necessity, overeating creates a surplus that the body has to do something about. Portion control, people, portion control. Substitute quantity for quality and your grocery bill won't notice the difference.

Tom (2012-12-22 08:32:54)

John W, I don't see what a potato-only binge has to do with Shangri La. Txomin, just eat less? Brilliant! I can't believe no one's ever thought of it!

KevinF (2012-12-22 09:15:30)

Dude this is seriously lame. Let's just say don't spend your Nobel Prize money til the check clears, know what I mean? Seth: "It is lame" because . . . ?

RAD (2012-12-22 09:26:36)

Seth, It is not clear to me whether you believe your Shangri-La Diet acts by reducing appetite or by changing how the body responds to the same number of calories (or both?). If someone is counting and maintaining a constant intake of overall calories and only changes whether or not they are consuming odourless calories between regular meals, do you predict any difference in weight gain/loss? My apologies if you have answered this before. Seth: I believe it acts by reducing the bodyfat set point. Which reduces appetite until the new lower level is reached. I don't know if set point changes cause metabolic changes so I cannot answer your prediction question.

Chuck (2012-12-22 09:43:41)

Jimmy Moore consumes 85 % of his calories from fat - fish oil, coconut oil, MCT and butter - I think this is more than just the SLD effect. Removing just the fish oil may or may not effect the outcome - it would depend on what he replaced those calories with - if he replaced them at all. Metabolism is very complicated - very interdependent - so much we still don't know. Cheers

Nancy Lebovitz (2012-12-22 11:04:39)

I give Jimmy Moore a lot of credit for having a reasonable theory and testing it.

Kirk (2012-12-22 11:37:41)

Whether JM is practicing SLD depends upon whether some portion of calories are flavorless and are consumed in the midst of a flavor-free window. Perhaps you could ask? As far as I can tell, there are two versions of the potato diet. Those who add flavor (butter, sour cream, salt, herbs, spices) may be losing weight due to (a) avoiding SAD foods and (b) satiety from eating root vegetables. Those who eat potatoes without any flavoring not only get (a) and (b) but also (c) negative alliesthesia and (d) reduced calorie intake due to avoiding tasty oils. I can distinguish the taste of plain potatoes from the taste of white rice from the taste of plain yogurt, and thus I do not consider these foods to be SLD-flavorless unless they are eaten nose-clipped. Paul Jaminet advances another hypotheses for why people rebound from a diet: the diet restricts nutrients the body needs, therefore over time the body's stored reserves are consumed, and thus eventually the body acts: the deficiency must be corrected by eating other foods. See his answer to the question about the potato diet at [www.latestinpaleo.com/blog/2012/12/16/perfect-health-diet-qa-with-paul-jaminet.html](http://www.latestinpaleo.com/blog/2012/12/16/perfect-health-diet-qa-with-paul-jaminet.html).

Chuck (2012-12-22 12:40:46)

Here's a very recent, and informative, podcast interview with Jimmy Moore - <http://www.fatburningman.com/jimmy-moore-nutritional-ketosis/> He's diffidently not using bland, or unusual, foods for his current n=1. Also, when he hit 230 lbs (he's 6'3"), he said he stopped trying to lose weight and added more carbs to his diet. That's when the rebound started. So I think there is more to the low-carb rebound stories than, oh gee, I don't know what happened, I didn't change a thing, meme. Kirk - There's also a third potato diet, the middle-way, so to speak, ala Free The Animal. RN uses a tad of fat per potato and sufficient supplements so he doesn't fall into Jaminet's hole of nutritional deficiency. He's also drinking raw (or lightly pasteurized) milk. Seems to be working for him. Cheers

libfree (2012-12-22 15:49:29)

@seth I agree with you on a lot of things but this is not one of them. I've kept long records of my path towards being a reasonably weighted person and the low carbs - high fat thing is the one that worked and worked for the long term. One day I looked back at my logs and realized that my longer term weight losses involved lower carbs and higher fats. Some things about low carb - high fat. 1. Appetite is reduced. While I have large meals, I only have two of them and my calories remain higher. 2. I have more energy and capacity. I measure this during my workouts. I put in strenuous exercise every day and keep logs of my perceived exertion (you have to be careful, caffeine and other stimulants can throw you off) and I have more energy off the carbs in long distance cardio. 3. The science seems sound from an evolutionary view. Having developed very large brains, we needed large sources of energy to fuel them. Fat is a very good source of this. Seth: "The science seems sound"? The test of a theory is whether it makes correct predictions. I agree, low-carb diets cause weight loss. Whether they cause weight loss for the reason their proponents say is a more difficult question. I am unable to find any correct predictions their theory makes. For example, their theory predicts that you should gain weight if you add sugar water to what you eat. Exactly the opposite happened. The brain needs sugar (glucose) - I fail to see how your evolutionary argument supports low-carb diets over high-carb ones.

Txomin (2012-12-22 16:09:29)

Tom, sarcasm has no effect on weight. The idea of portion control is as old as time (and as effective). It is after all biology 101. Yet, all you have to do is read this thread to realize that it has been dismissed or forgotten even if any and all diet programs end up there nonetheless. I say, start from the top and, instead of making strange choices (that can only produce strange results), gradually substitute quantity for quality, thus learning to eat better while enjoying it more at no additional expense. Seth: Why

do you think portion control works? Has it worked for you, for example?

Tom (2012-12-23 07:25:31)

Nonsense. "Just eat less, you gluttonous fatty," has been a catastrophic failure for the past 40 years. It's not "biology 101"; it's actually sanctimonious nonsense that's endlessly repeated by moralizing people who don't know any better.

Kurt (2012-12-23 12:26:19)

I've been doing a similar NK lifestyle, inspired by the same book that inspired Jimmy (the art and science of low-carb performance.) I've achieved great results with NK so far, primarily in the form of near-complete appetite suppression and weight loss, without any 'side effects' in terms of fatigue, etc. I typically eat one, very high-fat meal in the morning, and usually don't eat much (if anything else) the rest of the day. Part of that however includes adding coconut or MCT oil to my coffee... As I was drinking it the other day, the SLD came to mind. I'd read the book years ago but never really achieved any results (doing the LTOO variant)– but I've always liked the idea. I don't know if it's applicable given the taste/smell of coffee/coconut oil in my own example, but would you consider the coffee/oil part the overlap with SLD? If so, and if I wanted to experiment with it, would you think it sufficient to replace that fat with an equal amount of other more "familiar" fat (like say from butter), and see if my results change? Just curious, I find it all pretty fascinating... Seth: Maybe the calories in the coconut or MCT oil are not becoming associated with the coffee smell. I can't say why that would happen but it's possible. To test this idea, just stop adding the coconut or MCT oil to the coffee and see if the results change. It is the strength of smell-calorie associations that matters. Familiar foods tend to have strong associations, unfamiliar foods weak (or zero) associations. Unclear if you would smell the butter when added to the coffee so hard to predict the effect. Were you doing low-carb before you started the NK diet? How long have you been doing the NK diet? What was your starting weight and how much weight have you lost? I think it is well-established that going from an ordinary diet to a low carb diet causes weight loss, both long-term and short-term. What's less obvious is that NK is better than other low-carb diets.

Is Jimmy Moore's Ketosis Diet the Shangri-La Diet in Disguise? | Online Diets and Weight Loss (2012-12-23 13:20:42)

[...] See the article here: Is Jimmy Moore's Ketosis Diet the Shangri-La Diet in Disguise? [...]

Kurt (2012-12-23 13:55:20)

Yeah, I went from strict vegetarian to low-carb (under 50g) about a year and a half ago because i felt awful & kept gaining weight eating 'healthy' stuff like whole grains/fruit. LC has been amazingly consistent for stabilizing/maintaining my weight, but i never really lost any significant amount. More recently, I started my NK test by cranking up dietary fat and reducing protein. With a few minor 'breaks', I've been in ketosis (measured via blood meter) for about 3 months. I'm down 15 lbs in that time (starting 255), just going slow and steady. I've been drinking the coffee/oil nearly every single day, which seems to have the biggest effect on appetite suppression for me. In my case, NK appears to work significantly better than my general LC diet for weight-loss, but I can't really conclude the mechanism. The NK explanation (higher-fat, moderate-fat, low-carb => keto-adaptation => accessing body fat more readily) seems very different than the potential SLD explanation, but I don't know which (if either) is really going on. Seth: Maybe fats produce weaker smell-calorie associations than carbs or protein so anything that causes you to eat more fat is likely to lower your setpoint (assuming the theory behind SLD is true). Adding calories to a highly-familiar smell (coffee) that is already associated with zero or few calories may not produce strong smell-calorie associations. The system that forms smell-calorie associations stops paying attention to familiar smells. In contrast, with a new smell, pairing that smell with lots of calories should produce a strong smell-calorie association.

Jill (2012-12-26 09:00:09)

How does the smell-calorie association work if you switch from a highly-familiar smell (coffee) that is already associated with a LOT of calories (i.e., lots of cream) to coffee with essentially no calories (no additives)? Seth: The smell-calorie association should become weaker.

My Nutritional Ketosis Success: Is It The Calories Or The Ketones? (2012-12-28 12:13:43)

[...] I'm taking daily, self-experimenting blogger and author Seth Roberts says I'm simply doing his Shangri La Diet in disguise.

But I was already taking fish oil prior to beginning this in May [...]

Derek (2012-12-30 20:50:53)

Wow, this has got to be the worst diet blog I have ever had the misfortune to stumble upon. I want my 10 minutes back! (That I lost reading this smelly garbage). Smells associated with calories?!?! What kind of "scientific method" did you use to cook that one up? In squandering my time reading through your article on Jimmy Moore's NK success, I noted that you make tons of baseless conjectures with no science to back any of them up. Please take down your blog. As a physicist and mathematician it is painful reading such utter tripe, even if only having to do so once. Seth: There is a vast literature on flavor-calorie associations, better described as smell-calorie associations. See the work of Anthony Sclafani, for example.

Donna (2013-01-01 15:47:59)

Derek- I am just a poorly educated nobody, so I didn't realize it was "Garbage" and "Tripe." In my ignorance, I just read Seth's book, tried it...and it worked! I guess it is a good thing I didn't finish my degree. :>) -Donna

### **A Brief History of Antibiotics (2012-12-23 05:00)**

[1]This excellent article by Carl Zimmer gives a brief history of the development of antibiotics. It makes the usual points that the microbes within us improve our health and killing them (with antibiotics) can have bad effects. [2]One study found that children given antibiotics had a higher risk of developing inflammatory bowel disease (IBD) later in life. Giving antibiotics to a child younger than one year was especially dangerous – the risk of IBD increased by a factor of 6.

The article makes the minor mistake of taking seriously what researchers say about number of species:

Each of us is home to several thousand [bacterial] species. . . . [3]My own belly button, I've been reliably informed, contains at least 53 species.

Counting the number of species inside us is like [4]measuring the length of the coast of England. The more closely you look (in the case of coastlines, the shorter the ruler you use), the larger the number you will arrive at. I'd be surprised if the researchers who count bacterial species adjust for this.

What I found most interesting about the article is it says nothing about fermented foods. Apparently the connection is not so obvious.

1. <http://phenomena.nationalgeographic.com/2012/12/18/when-you-swallow-a-grenade/>

2. <http://pediatrics.aappublications.org/content/early/2012/09/19/peds.2011-3886.abstract>

3. <http://phenomena.nationalgeographic.com/2011/06/27/discovering-my-microbiome-you-my-friend-are-a-wonderland/>

4. [http://en.wikipedia.org/wiki/How\\_Long\\_Is\\_the\\_Coast\\_of\\_Britain%3F\\_Statistical\\_Self-Similarity\\_and\\_Fractional\\_Dimension](http://en.wikipedia.org/wiki/How_Long_Is_the_Coast_of_Britain%3F_Statistical_Self-Similarity_and_Fractional_Dimension)

dearieme (2012-12-23 06:45:11)

Ahoy, Seth. If you type The sin of bad science into google and then click on the FT link you can read this article without wrestling with their paywall.

shtove (2012-12-23 17:50:55)

First time I've come across that point about the number of species. Similar to the notion of Mandelbrot fractals.

derp (2012-12-23 22:45:40)

Nice story. Now could you please beat up one or more of these idiots who coerce their doctors into prescribing antibiotics for the common cold?

Kevin (2012-12-24 00:32:39)

Brilliant article on immunotherapy in nytimes today: <http://www.nytimes.com/2012/12/23/magazine/is-the-cure-for-cancer-inside-you.html?src=me&ref=general&pagewanted=all>

LisaW (2012-12-24 16:25:07)

Interesting article. Just a quick correction: IBD is short for Inflammatory Bowel Disease, which is a collective term for the two serious inflammatory bowel conditions - Crohn's disease and Ulcerative Colitis. This is not the same as irritable bowel. Seth: Thanks for the correction.

Greg (2012-12-24 16:53:36)

"Counting the number of species inside us is like measuring the length of the coast of England." There are different definitions for the term "species" throughout biology and the use of this word in reference to bacteria appears to be controversial. Apparently enough scientists think bacterial species don't exist that you can publish a peer-reviewed paper in 2012 called "Bacterial species may exist, metagenomics reveal." Carl Zimmer certainly knows this and has written about it, though I personally find the use of the term to be confusing to those of us who like to dig deeper. I think it is possible that some scientists are using the term without due care, but good microbiology papers will be clear on what they mean by the word if they use it at all. It is sometimes defined with agonizing rigor. Mostly I've seen "species" used to refer to "operational taxonomic units" (OTUs), defined as a specified level of sequence similarity in a particular segment of genetic material (e.g. certain variable regions of 16S ribosomal RNA). The boundaries between OTUs depend on what level of sequence similarity you specify (in other words, the size of the ruler you are using to measure the coast of England). OTU classifications vary from one paper to another and can depend, for example, on which software is used to crunch the sequence data (see e.g. <http://hmpdacc.org/HMQCP> for the Human Microbiome Project). Seth: Good points. Even when the definition of "species" is made clear, there is still the problem of coverage. As you sample more and more exhaustively, the number of species will get larger and larger.

Handoko (2012-12-31 07:45:12)

Its an interesting brief... but in My personal opinion, its suggested to choose a natural antibiotic that can be found surround us. they're still the best we get.

### Assorted Links (2012-12-24 05:00)

- [1]Unusual fermented foods, such as shio koji (fermented salt, sort of)
- [2]David Healy talk about problems with evidence-based medicine. Example of Simpson's paradox in suicide rates.
- [3]The ten worst mistakes of DSM-5. This is miserably argued. The author has two sorts of criticisms: 1. Narrow a diagnosis (e.g., autism): People who need treatment won't get it! 2. Widen a diagnosis (e.g., depression) or

add a new one (many examples): This will cause fads and over-medication! It isn't clear how to balance the two goals (helping people get treatment, avoiding fads and over-medication) nor why the various changes being criticized will produce more bad than good. Allen Frances, the author, was chair of the committee in charge of DSM-4. He could have written: "When we wrote DSM-4, we made several mistakes . . . . The committee behind DSM-5 has not learned from our mistakes. . . ." That would have been more convincing. That the chair of the committee behind DSM-4, in spite of feeling strongly about it, cannot persuasively criticize DSM-5 speaks volumes.

- [4]The Lying Dutchman. "Very few social psychologists make stuff up, but he was working in a discipline where cavalier use of data was common. This is perhaps the main finding of the three Dutch academic committees which investigated his fraud. The committees found many bad practices: researchers who keep rerunning an experiment until they get the right result, who omit inconvenient data, misunderstand statistics, don't share their data, and so on."

1. <http://theconsciouslife.com/unusual-fermented-foods.htm>

2. <http://www.youtube.com/watch?v=A3YB59EKMkw>

3. <http://www.psychologytoday.com/blog/dsm5-in-distress/201212/dsm-5-is-guide-not-bible-ignore-its-ten-worst-changes>

4. <http://www.ft.com/intl/cms/s/2/d1e53488-48cd-11e2-a6b3-00144feab49a.html#axzz2Fsv5ftZh>

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Txomin (2012-12-24 06:17:41)

The Lying Dutchman link is broken Seth: I fixed it.

dearieme (2012-12-24 12:09:44)

Txomin: you could try typing The sin of bad science into google and then click on the FT link: you can then read this article without wrestling with their paywall.

garymar (2012-12-24 15:57:08)

Thanks for the link on shio koji! I see it in the stores all the time but never stopped to ask what it was or how it could be used.

Txomin (2012-12-24 16:35:50)

Thank you.

James (2012-12-25 00:39:45)

<http://www.88-bar.com/2012/12/where-are-all-the-creative-chinese-people-hangi ng-out-in-hacker-spaces-apparently/>

## Christmas Trees at Buddhist Temple (2012-12-25 05:00)



1. <http://blog.sethroberts.net/wp-content/uploads/2012/12/christmas-trees-in-buddhist-temple.png>

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garymar (2012-12-25 17:11:50)

They look like teepees.

## Elements of Personal Science (2012-12-26 05:00)

To do personal science well, what should you learn?

Professional scientists learn how to do science mostly in graduate school, mostly by imitation, although they might take a statistics class. Personal scientists rarely have anyone to imitate, so have more need to understand basic principles. There are five skills/dimensions that matter. Here are a few comments about each one:

1. Motivation. In conventional science, the scientist does it as part of a job and subjects are paid. Neither works here: It isn't a job and you can't pay yourself. My original motivation was wanting to learn how to do experiments (for my job – experimental psychologist). After I discovered how useful it could be, I started doing personal science to solve actual problems, including early awakening and overweight. On these two subjects (sleep and weight control) conventional scientists seemed to have made and be making little progress, with a few exceptions (such as Sclafani, Cabanac, and Ramirez) in the area of weight control. Here my motivation was lack of plausible alternatives. Now I now see personal science like playing the lottery, except it costs almost nothing. Most of the time nothing happens, once in a long while there is a big payoff. An example of the lottery-like payoff is that for ten years I measured my sleep, trying to figure out what was causing my early awakening. One day it suddenly got worse (when I changed my breakfast). That led me to realize many things. Another example is I measured my brain function with an arithmetic test for several years. One day it suddenly improved (due to butter).

2. Measurement. Conventional scientists almost always use already-established measures because they improve communication. In contrast, a personal scientist wants a measure that is especially sensitive to the problem (e.g., insomnia) to be solved or the question to be answered (e.g., did flaxseed oil improve my balance?). Communication is

much less important. Psychologists use [1]Likert scales (rating scales with 5 or 7 possible answers) to measure internal states but they almost always use inexperienced and unmotivated subjects. When I've measured internal states (e.g., mood), I have a lot of motivation and eventually have a lot of experience and find I can make much finer distinctions. Unlike conventional research, I care enormously about the convenience of the measurement. For example, it should be brief.

3. Treatment choice. You don't want to do a lot of experiments that don't find any effect, so you need to choose wisely the treatments you test. Scanning the internet (what has cured insomnia?) and reading scientific papers (what are standard treatments for insomnia?) hasn't worked for me, although it's better to try anything than to try nothing. One thing that's worked is to test large surprising effects I hear about. An example is Tara Grant's discovery that restricting her Vitamin D to the morning improved her sleep. Also successful is measuring the problem for a long time, in search of outliers. When the problem suddenly gets better or worse, I test whatever unusual happened just before that. For example, when I switched from oatmeal breakfast to fruit breakfast, my early awakening suddenly got worse. I started testing various breakfasts. A third successful strategy is to combine the first two strategies with evolutionary thinking, giving bonus points if the treatment I'm thinking of testing provides something present in Stone Age life but absent now. For example, this is one reason I decided to test the effect of standing a lot. Stone Age people must have been on their feet more than most of us.

4. Experimental design. The hard part is knowing how fast the treatment effect rises and falls. If it rises and falls quickly, your experiment should be very different than if it rises and falls slowly. In most cases, what I study rises and falls slowly and the best design is some variation of ABA. Do A for several days, do B for several days, do A for several days. It is much easier to do a condition for too few days than too many so I try to err on the side of too many days. The hardest lesson to learn was to realize how little I know and avoid complex designs with untested assumptions.

5. Data analysis. Statistics books and classes emphasize statistical tests, whereas in practice what matters are simple graphs (e.g., what you measure versus time). I make one or more new graphs every time I collect new data (e.g., I make a plot of my weight versus time every time I weigh myself) but rarely do t tests and the like. I've learned to make several graphs at different time scales (e.g., last week, last month, etc.), not just one graph.

I believe these factors combine in a multiplicative way to determine how much you learn. If any is poor, you will learn little. They provide a way of asking yourself what you've learned after you've done some personal science. For example, where did I get the idea for the treatment? Presumably, with experience, you slowly get better at each of them.

Thanks to Brian Toomey for encouraging me to write this.

1. [http://en.wikipedia.org/wiki/Likert\\_scale](http://en.wikipedia.org/wiki/Likert_scale)

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dearieme (2012-12-26 08:59:22)

Maybe I should try inhaling tiny quantities of stone dust every day? Seth: I agree, not obvious why that is a bad idea.

Nancy Lebovitz (2012-12-26 21:21:25)

Have you explored [1]squatting? I'm reasonably sure that people without chairs do a good bit of it.

1. [http://en.wikipedia.org/wiki/Squatting\\_position](http://en.wikipedia.org/wiki/Squatting_position)



Brian Toomey (2012-12-26 23:12:54)

After speaking with you Seth it occurred to me that you would also want to include data presentation, which would take two forms: 1) presentation to people interested in personal science, similar to this blog, and 2) presentation to the general public like your SLD book. The later would focus on getting people to try an intervention, and would be simple, including direct advice and visualizations or rich media where possible.

Alex Berg (2013-01-05 12:05:35)

And thank you to you Seth for writing it. I find it hard to keep up with the measurements when I don't really seem to learn from them. Seth: Great point.

### Assorted Links (2012-12-27 02:55)

- [1]A Mathematician's Lament about how mathematics is taught (pdf). A little abstract. What about student diversity?
- [2]Ten strange self-experiments. One is different from the rest. "As a teenager, Frederick Hoelzel adopted a strange method of weight-loss. He curbed his appetite by eating non-caloric food substitutes such as corn cobs . . . . His favorite meal was surgical cotton cut up into small pieces, which became part of his daily diet."
- [3]More about the Terrence Deacon case
- [4]Denmark rescinds fat tax
- [5]Interview with Marty Makary about his book Unaccountable. Medical mistakes, he says, are the #3 cause of death in the United States.

Thanks to Casey Manion.

1. <http://www.maa.org/devlin/LockhartsLament.pdf>

2. [http://www.madsciencemuseum.com/msm/gallery/top\\_10\\_strangest\\_self\\_experiments](http://www.madsciencemuseum.com/msm/gallery/top_10_strangest_self_experiments)

3. <http://www.insidehighered.com/news/2012/10/22/berkeley-launches-plagiarism-investigation-light-public-nature-complaints>

4. <http://www.economist.com/news/europe/21566664-danish-government-rescinds-its-unwieldy-fat-tax-fat-chance>

5. <http://www.booktv.org/Watch/14026/After+Words+Marty+Makary+Unaccountable+What+Hospitals+Wont+Tell+You+and+How+Transparency+Can+Revolutionize+Health+Care+hosted+by+Richard+Davis+Sibley+Memorial+Hospital+President.aspx>

x

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Babar (2012-12-27 09:43:37)

Mathematicians lament has been expanded and released as a short book as well- possibly that would answer some of your questions.

Chuck (2012-12-27 10:30:06)

I would be very interested to know what Frederick Hoelzel's diet and exercise routine was between the mid 1930s to the mid 1950 (age 45 to 65), because looking at his picture taken in 1955 at age 65, it's quite apparent that he is lean and muscular (he also appears to be small boned like myself) with very smooth skin - if you don't look at his head/face you would think he was

in his 20s. Cheers

## Department of Self-Presentation: The GiveWell Mistakes Page (2012-12-28 05:00)

The GiveWell website has [1]a page ("Our Shortcomings") that is a list of mistakes. A good idea, sure, what about execution?

It starts badly. Here is the stated reason for the page:

Because we are a startup organization working in areas we have little experience with, it is particularly important that we constantly recognize and learn from our shortcomings. We make this log public so as to be up front with any potential supporters about ways in which we need to improve.

The second sentence alone would have been fine.

The first item is called "overaggressive and inappropriate marketing." I'd call it "dishonest marketing".

I once attended a short talk, before PowerPoint, in which the speaker, Herb Terrace, a Columbia University psychology professor, put a slide in backwards. He struggled to fix it. It was funny and memorable. Maybe I should make similar mistakes on purpose, I thought. I have no idea if the GiveWell mistakes page is a reasonable summary of their mistakes. As Renata Adler [2]pointed out, the New York Times corrects trivial mistakes and leaves major blunders uncorrected ("there are, as a rule, no genuine corrections. These departments are cosmetic"). But the GiveWell mistakes page does three things well. (a) It's a readable summary of what they do and their goals. In contrast, I found [3]their "About" pages unhelpful. (b) It makes them more attractive. As confessions of difficulties and problems and weaknesses usually do. (c) It draws attention to them. It is an original and thought-provoking thing to do. The next time I teach a class, should I include "mistakes I made last time I taught this class"? Maybe.

1. <http://www.givewell.org/about/shortcomings>
2. <http://harpers.org/archive/2000/08/a-court-of-no-appeal/>
3. <http://www.givewell.org/about>

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Paul (2012-12-28 08:07:38)

Bessemer Ventures has a great list of the investments they turned down that ended up being huge successes (like Google, FedEx, Apple, Intel). I don't know any other VC that does anything other than keep quiet about those non-investments. <http://www.bvp.com/portfolio/antiportfolio>

## Assorted Links (2012-12-29 10:57)

- [1]The spread of self-tracking.

- [2]Sitting down and getting up from floor test predicts longevity. Your score depends on how much support you need. "[The correlation with mortality] persisted when results were controlled for age, gender and body mass index, suggesting that the sitting-rising test score is a significant predictor of all-cause mortality; indeed, subjects in the [lowest] score range [score 0-3] had a 5-6 times higher risk of death than those in the reference group [score 8-10]."
- [3]Psychiatric diagnoses, such as depression, widened by psychiatrists who take money from drug companies. One psychiatrist "was skeptical of efforts to reduce the financial ties to industry."It has gotten to be a witch hunt," he said."Most academics have taken money from pharma if they're successful," he explained."

Thanks to Alex Chernavsky and Tim Beneke.

1. <http://www.npr.org/blogs/alltechconsidered/2012/12/26/167970303/who-could-be-watching-you-watching-your-figure-your-boss>
2. <http://www.escardio.org/about/press/press-releases/pr-12/Pages/ability-to-rise-correlated-mortality.aspx?hit=dontmiss>
3. [http://www.washingtonpost.com/business/economy/antidepressants-to-treat-grief-psychiatry-panelists-with-ties-to-drug-industry-say-yes/2012/12/26/ca09cde6-3d60-11e2-ae43-cf491b837f7b\\_print.html](http://www.washingtonpost.com/business/economy/antidepressants-to-treat-grief-psychiatry-panelists-with-ties-to-drug-industry-say-yes/2012/12/26/ca09cde6-3d60-11e2-ae43-cf491b837f7b_print.html)

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Kirk (2012-12-29 12:20:31)

I tried the sitting/rising test. Sitting is more difficult than standing. I use my left hand (non-dominant) for support. It took about ten trials before I was able to sit, using the left hand for support, without the final inches being a controlled fall. I may keep practicing this. I find it annoying that my score is at best 8.

dearieme (2012-12-29 15:09:44)

We own a sofa from which none but the young can arise without a struggle. To my wife's amusement, I do it by rolling into a kneeling position on the floor, and getting up from there. "Elegant!" I say, but she demurs.

aaronblaisdell (2012-12-29 22:44:47)

I remember my first (and so far only) time to down hill ski. It was a few years ago at the Winter Conference on Animal Learning and Behavior held at Winter Park, Colorado. I took lessons, of course, so I could learn appropriate technique. The instructor taught us how to unhinge the skis from our feet whenever we fell down so that we could stand up. Afterward, we would then be able to reattach the skis. This seemed like a lot of needless work to me and I asked why we couldn't just get up again without taking off the skis? "You'll see!" was their response. Well, I fell a lot (not surprising). When I did fall, it was usually by sliding backward onto my butt. From this position, it was quite easy actually to rise up in a squat position. Perhaps it was the fact that I had started doing weighted squats as part of my weekly exercise routine for the two years prior to the ski trip that helped. Perhaps the extra strength and power I had from eating a paleo diet helped, too. I was surprised how easy it was, and how much quicker to immediately get up to resume skiing than to take the skis off, get up, and put them back on, which was quite a pain in the tuckus. To this day, I find it quite easy to lower myself to a sitting position on the floor, and to rise again smoothly and easily. Now, the low and sagging couch at my aunt's house, that's another matter altogether!

## **Never Be Alone in a Hospital (2012-12-30 05:00)**

[1]The Health Care Blog post titled "The Empowered Patient" by [2]Maggie Mahar exists, as far as I can tell, because much hospital care has considerable room for improvement and many mistakes are made – for example, patients are

given the wrong drug. One commenter (MD as Hell) said he has worked in hospitals more than 30 years and has some advice, including

1. Never be alone in a hospital
2. Never go to a hospital unless you have no alternative
3. Do not let fear motivate you to be a consumer of any part of healthcare

In the comments, several doctors expressed their dislike of the whole idea of "patient participation". For example,

Patients manage the process. Really? I'm sure your plumber or mechanic love you and this philosophy so much they hug you when you greet them.

Plumber and mechanic errors are not the #3 cause of death in America, as [3]Marty Makary says about medical errors.

Here is another argument against patient participation:

The huge problem that barely anyone wants to talk about is [the assumption] that patient (and family ) participation are always (or even just mostly) beneficial. This is a completely unfounded assumption. Please read Dr. Brawley's book "How we do harm" to read 2 long and IMHO representative anecdotes of patient/family centeredness resulting in net harm. . . . Lack of patient involvement and medical errors are hardly on top of the list of pressing flaws of the US health care system . . . Profit centeredness resulting in overtreatment of the insured and undertreatment of the underinsured are the main issues.

If medical errors are the #3 cause of death in America, they are one of the most serious flaws of the US health care system. The doctors who dislike patient participation in this comment section do not propose a better way to reduce mistakes, a better way to spend the time and mental energy required by patient participation. Maybe their annoyance is a good thing. Maybe they will be so annoyed they will reduce errors in other ways.

It is bizarre that patient involvement cannot be easily dismissed. I cannot think of another profession (accountants, bus drivers, carpenters, dentists, elementary school teachers, and so on) where anyone says never be alone with them. Sure, hospital patients are highly vulnerable but that vulnerability is no secret. It could have led to a system, similar to flying (airplane passengers are highly vulnerable), with an extremely low rate of fatal error. My own experience supports patient involvement. The biggest motivation for my self-experimentation, at least at first, was my self-experimental discovery that a powerful acne medicine my dermatologist had prescribed (tetracycline, an antibiotic) was no help. My dermatologist had shown no signs of considering this a possibility. When I told him about my experiment (varying the dose of the antibiotic) and the results (no change in acne), he said, "Why did you do that?" Later a surgeon I consulted about a tiny hernia [4]was completely misleading about the evidence for her recommendation that I have surgery for it.

1. <http://thehealthcareblog.com/blog/2012/12/21/the-empowered-patient-strikes-back/>

2. <http://www.healthbeatblog.org/>

3. [http://podcast.c-span.org/podcast/arc\\_btv120812.mp3](http://podcast.c-span.org/podcast/arc_btv120812.mp3)

4. <http://blog.sethroberts.net/2011/11/16/dr-eileen-consorti-and-patient-power/>

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babar (2012-12-30 07:43:44)

ok, then how about Never Let Your House Be Alone with a Plumber

dearieme (2012-12-30 08:36:47)

When you are very ill/tired/worried, your ability to participate fruitfully may be limited. Still, I wish I had participated more over the years whenever I was well enough to do so. In recent years the probable best thing I did was veto the GP's recommendation to take statins, a decision made when I was none of ill/tired/worried. I also now incline to the view that the patient is probably the only actor in the drama who will try to weigh up everything involved - or, at least, everything he (thinks he) understands. The specialists are specialist, the GP can give you only a fraction of his attention - it's up to you to, at the very least, ask some critical questions.

Jeff (2012-12-30 10:01:57)

Taleb brings up the airplane example a lot in his writing. The pilot has as much to lose as you do if the plane goes down so it is in his interest to be vigilant. That is not to say that the doctor is unconcerned for your welfare as a patient but they simply do not have as much to lose as you do if something goes wrong with your treatment. Having "skin in the game" is a great motivator for attention to detail.

ChristianKI (2012-12-30 13:25:06)

As far as advice of what do when you are in hospital I think the post lacks something. Write down what they are doing with you and when they did it. You are in a bad mental state. You shouldn't try to rely on your memory.

Adam (2012-12-31 00:18:40)

@Jeff re: "Skin in the game" Easy solution: Just as the pilot loses his life along with the passenger's if he crashes, mandate that any surgeon who performs the wrong surgery must have the same surgery performed on themselves. Not that amputating the wrong limb is common (AFAIK), but if the surgeon lost his arm too when he accidentally took little boy Tommy's, that'd be quite the dis-incentive!

Paul N (2012-12-31 17:11:15)

If medical errors are the #3 cause of death, then it seems that the statistics on those errors, and the doctors/hospitals who made them, should be made public, continually (i.e. online) Just like it is possible to find out how many cases a lawyer wins/loses, so too with the medical profession. If it is measured \*and\* publicised, it will get managed. The trick being to have an objective way of measuring the errors...

## How to Find a Doctor (2012-12-31 02:45)

David A. Pfister, a Bay Area oncologist, was named "Best of the Bay Oncologist" in 2010 by KRON-TV, according to a Yelp reviewer. He was named one of America's "Top Doctors" by [1]US News, based on a "peer nomination process." The biggest doctor rating site, at least in America, is HealthGrades. A [2]HealthGrades survey of Dr. Pfister's patients (n = 31) asked Would you recommend Dr. Pfister to family and friends? Dr. Pfister's score - halfway between "mostly yes" and "definitely yes" - put him close to the national average.

The "Best of Bay" comment was one of seven Yelp reviews of Dr. Pfister that filtered out (= downgraded) by Yelp's filtering algorithm. The filtered-out reviews were much more positive than the reviews that passed the filtering process. In the five passing reviews, Dr. Pfister received an average rating of 1 out of 5, with comments to match:

He was chronically late, and had poor time-management skills. . . . This was the third and final time that he's made me wait at least an hour past my scheduled appointment time (requiring me to leave before seeing him). [2008]

He was 30+ min late, unfriendly and unapologetic. His bedside manner is horrific and he talked me into having a procedure that ended up being painful and unnecessary. The office is completely disorganized. There are records of deceased patients out in the open in the bathroom. [2011]

When I visit his office, the only thing he wishes to discuss with me are the results of my recent labs. If it were up to him, my appointment would last 2 minutes. . . . All my other doctors have told me for years I should get my care elsewhere. Typical visits consists of 2 hours waiting, 5 minutes with the doctor. [2010]

He is consistently late, as much as two hours, to his first appointments of the day. He arrives completely disheveled, hair sticking up and shirt untucked as if he was up half the night drinking. He also forgets your history and has to be reminded who you are, despite continual and regular appointments. Finally, if you ask questions he becomes very defensive and has even yelled at me for asking questions. [2009]

Which view of Dr. Pfister is more accurate, KRON-TV or Yelp? In March 2012, [3]his license was suspended. He "admitted he has a psychiatric problem and a substance abuse problem." The Yelp reviews that passed the filtering algorithm, with their complaints about lateness, poor grooming, and disorganization, predicted the suspension (assuming that doctors with low yelp scores are more likely to be disciplined). HealthGrades has yet to figure out there is anything unusual about Dr. Pfister. He is not listed on [4]vitals.com.

I came across Dr. Pfister while glancing through yelp ratings of Berkeley doctors. His low rating surprised me. A yelp reviewer linked to the license suspension.

My conclusion: When looking for a doctor, check yelp. Yelp's filtering algorithm, which emphasized the low reviews, really works. In California, you can search [5]state records for licensing board disciplinary actions but such actions are very rare.

Thanks to Bryan Castañeda for a long conversation about detecting bad doctors. In [6]Unaccountable (which should have been on my [7]Best Books of 2012 list), Marty Makary says that hospitals and surgeons are in many ways unaccountable for their mistakes. Yelp is a countervailing force.

1. <http://health.usnews.com/top-doctors/david-pfister-medical-oncologist-84CC002224>

2. <http://www.healthgrades.com/physician/dr-david-pfister-xqx9r/patient-ratings>

3. <http://www2.mbc.ca.gov/LicenseLookupSystem/PhysicianSurgeon/document.aspx?path=DIDOCS20120314DMRAAADE19&did=AAADE120314235054062.DID&licenseType=G&licenseNumber=56495>

4. <http://www.vitals.com/>

5. <http://mbc.ca.gov/>

6. [http://www.huffingtonpost.com/2012/09/27/unaccountable-book-marty-makary-hospitals-doctors-safety\\_n\\_1918529.html](http://www.huffingtonpost.com/2012/09/27/unaccountable-book-marty-makary-hospitals-doctors-safety_n_1918529.html)

7. <http://blog.sethroberts.net/2012/12/17/best-books-of-the-year-2012/>

Tom (2012-12-31 12:35:40)

Off topic, Seth, but thought you'd be interested in this quote from the URL below: "Before Dr. Pringle started the study, a colleague suggested she was wasting her time: to prove that something doesn't age would take far longer than the duration of a research grant, perhaps longer than a researcher's career or even life. But she stood her ground." [www.nytimes.com/2013/01/01/science/studying-seemingly-immortal-lichens-in-a-place-for-the-dead.html](http://www.nytimes.com/2013/01/01/science/studying-seemingly-immortal-lichens-in-a-place-for-the-dead.html)

Matt (2012-12-31 14:18:20)

While this scenario may have proved to be the more accurate portrayal, Yelp is a crooked organization. Yelp's filtering "algorithm" goes something like this: 1. Business begins receiving Yelp reviews of varying rank. 2. Yelp contacts business, asking them to pay money to hide low ranked reviews. 3a. Business pays Yelp: low ranked reviews are hidden. 3b. Business does not pay: Any positive review is filtered within a couple of days. Yelp claims that they filter when they suspect that the business solicits for positive reviews. While that is likely also true, the scenario I laid out, is also true. <http://www.eastbayexpress.com/ebx/yelp-and-the-business-of-extortion-20/Content?oid=1176635>

Vince (2013-01-02 18:10:30)

(Disclosure: I work for Yelp.) Matt, your scenario is simply not true. Yelp's review filter, which works to help consumers in precisely the manner described in Seth's blog here, is applied equally to all business listed on Yelp, advertiser or not. There is no connection between how reviews are displayed on Yelp and advertising. As is described in numerous places on our website, Yelp advertisers pay to advertise (primarily local/search advertising, just like on the major search engines) and do not gain the ability to control the review content on their Yelp listing. Neither does Yelp penalize businesses that decline to advertise. The filter helps consumers trust and benefit from Yelp (as described here), which is why 84 million of them used our service on average last month. Seth: Thanks. Did Yelp reply to the East Bay Express article? I read it when it was published and still remember it. I do not remember any rebuttal.

Matt (2013-01-03 08:46:44)

Sounds like we need an undercover investigation :) because the internet is full of stories like the one I heard from the business that warned me about Yelp reviews. You would think that my legitimate review that I placed on that organization's Yelp page wouldn't be filtered out, seeing that I'm a unique IP address, etc. But the business absolutely predicted that any positive review that was placed would be filtered within a matter of days, and that this all started soon after he declined the ad payment. A quick internet search to back up my personal experience revealed that East Bay article as well as other stories.

Vince (2013-01-03 17:22:28)

Seth: Yes, Yelp did reply to the EBE article and published a number of rebuttals on our corporate blog. You can find them at: <http://officialblog.yelp.com/2009/02/kathleen-richards-east-bay-express.html> <http://officialblog.yelp.com/2009/02/east-bay-express-story-starts-to-unravel.html> Matt: We also published a number of posts on our blog about how our filter works and why some businesses may have come to believe in a grand (but untrue) conspiracy theory. Some good ones are here: <http://officialblog.yelp.com/2010/02/lady-justice-needs-a-lawsuit-filter.html> <http://officialblog.yelp.com/2010/03/additional-thoughts-on-last-weeks-lawsuit-or-how-a-conspiracy-theory-is-born.html> As you can see, there have actually been some undercover investigations by the media and even some lawsuits brought making the same allegations; none of them found anything to substantiate the claims and the suits were dismissed with prejudice. The bottom line is, regardless of how much or how many businesses want to believe in an easily disproved conspiracy theory, it simply isn't true. That's why consumers trust Yelp and use it every day to connect with great local businesses. Which also happens to be our mission.

## **Interview with Doron Weber, Author of Immortal Bird, About What He Learned From a Hospital Tragedy (2012-12-31 20:50)**

[1]Immortal Bird by [2]Doron Weber, a program director at the Sloan Foundation, is about his son, Damon, who had a rare medical condition, and his son's heart transplant operation (cost = \$500,000) at New York Presbyterian/Columbia

University Medical Center. Damon died after the operation. The post-operative care was so bad his father sued. "Three years into the lawsuit, the medical director [of the hospital] claimed Damon's post-op records couldn't be located," [3] said the New York Times.

How can such tragedies be prevented? To find out, I interviewed Doron Weber by email.

SETH Let's say someone lives in a different part of the country – Los Angeles, for instance. What would you tell them about picking doctors to do a difficult expensive operation?

DORON I believe the key step before making any major medical decision is to gather as much information as possible. In my son's case, we talked to everyone we knew at his regular New York hospital (New York Presbyterian) for their recommendation, and then we compared that information with experts at half a dozen other hospitals in New York and across the country who had a good reputation for his operation. I had established contacts at many of these hospitals, usually through physicians or scientists who I knew, either personally or professionally. But sometimes I would just get the name of a leading doctor and call him or her cold. They didn't always respond but often they did, especially if you could make the case sound interesting. And I found that most doctors are very decent people who will try to share their knowledge, albeit succinctly. I got the best results by being polite but determined and I didn't require a long conversation—though some physicians were truly generous with their time—because in the end, you just want to know what they would do or who they would go see if it was their son or daughter.

I also traveled with my son to meet many of these experts at places like Children's Hospital of Philadelphia, Boston Children's, and the Mayo Clinic in Minnesota. During my son's long illness, I found 3-4 key advisers—medical people who I respected and trusted, who would take my calls (one was my cousin, another the friend of a friend), and who were willing to work with me as my son's case developed. These wonderful physicians would not just give intelligent medical advice seasoned by experience but they would send me the latest medical journals and articles for any possible leads. And they would direct me to other experts. Good people tend to know other good people.

If there was one mistake I made, it was to rely too much on data and statistics—they do matter, and they worked to extend and enhance my son's life for several years—and not to listen to my own instincts. The physician whom I consider responsible for my son's death—and against whom I have a still-pending lawsuit—was someone whom I had a bad feeling about from the start. (See *Immortal Bird* for examples.) But she had a great reputation, everyone kept extolling her and her hospital had the best outcome data for my son's operation. Also my son wanted to stay at that hospital. So I suppressed my doubts and reservations and made the correct statistical calculation but a disastrous human one.

SETH What about screening doctors by asking about their legal record? For example, "Have you ever been sued for malpractice?" If so, going down the list of cases and learning about each one. And: "Have you ever been disciplined by a medical board?"

DORON Before my son's wrongful death, despite all my information gathering, it never occurred to me to inquire about a physician's legal record and whether he or she had ever been sued for malpractice. Now I know better. It would be very helpful to know if, and how many times, a physician has been sued before, even if it not definitive, because many doctors and hospital insurers settle out of court with strict confidentiality rules. But at least it gives you a preliminary context. And of course there are also frivolous lawsuits but if the same doctor was charged three times for the same alleged infraction, it is worth heeding. I have been most amazed at how many people, when I tell them about my medical lawsuit, describe how they or a loved one were horribly mistreated by a physician or hospital and came close to filing a lawsuit—but they didn't go through with it because of the stress and the long, uphill battle and the years and expense involved. (Our own lawsuit has been active for six years but is on a contingency basis because we could not have afforded it otherwise.) Almost everyone has a personal hospital horror story—if a conversation ever flags, just bring up this subject—but most people shy away from challenging the hospital and the doctors with their big



reputations and deep pockets. I also found people who did not understand that they had been mistreated because it was too painful to confront and they preferred to accept the hospital's misleading explanation. I think beyond a record of being sued, every physician should have to post a record of all patient histories, which minimally would include diagnosis, length and type of treatment, and outcome for each case. In no other field does the consumer have less information on which to base a decision, and yet in no other field are the stakes so high.

SETH Based on your experience with your son, what are the first things we should change about our health care system?

DORON For me the greatest problem with our health care system is that it is no longer about health care but about the health business. Many hospitals have been taken over by private equity firms while even the non-profits are under pressure to reduce costs at the expense of patient outcomes. So I think we have to find a way to return the patient to the center of the health care system and ensure that everything else revolves around his or her well-being. Efficiency and controlling costs matters but health care is not just another business and should not be run by business managers. I like the Mayo Clinic model where doctors are under salary so can take their time and not worry about insurance and where physicians at the same hospital consult with one another and take a more holistic, multidisciplinary approach. I also think continuity of care is absolutely critical and each patient needs one assigned physician who will take full responsibility and oversight for his/her care and be held accountable, regardless of how many specialists or other doctors the patient sees.

1. <http://www.nytimes.com/2012/02/05/books/review/immortal-bird-doron-webers-lament-for-his-son.html?pagewanted=all>
2. <http://immortalbirdpostscript.wordpress.com/>
3. <http://www.nytimes.com/2012/02/05/books/review/immortal-bird-doron-webers-lament-for-his-son.html?pagewanted=all>

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## 8. 2013

### 8.1 January

#### Success on the Shangri-La Diet (2013-01-02 05:00)

Over at Mark's Daily Apple forum, [1]someone named heatseeker posted this:

I hesitated to post a thread about this because I feel like these forums have been overrun with "fad" diets and hacks lately--and because it's honestly so bizarre-sounding that I feel a little silly admitting it--but my success on the Shangri-La Diet has been such that I felt I should share. I've had serious body fat setpoint issues since, oh, college, I guess--six years--and after watching my setpoint slowly creep up throughout my 20s with absolutely NOTHING making any difference, I'm finally losing weight steadily. I've lost 13lb and it's still coming off like clockwork. Nothing else in my diet or exercise regimes changed, and I've experienced no strength losses (I've continued to make gains, actually).

I use refined coconut oil, 2tbsp/day. I was using unrefined at first but the flavor was too strong.

Has anyone else done the SLD, and had success? I just felt like I should spread the word, because I know there are some other setpoint-challenged people on these forums, and this has been a big breakthrough for me.

"I haven't heard about it," responded zoebird. Then someone posted several links.

1. <http://www.marksdailyapple.com/forum/thread74412.html>

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Nancy Lebovitz (2013-01-02 09:38:46)

"Nothing else in my diet or exercise regimes changed," I thought SLD worked by lowering appetite. Do you think he's eating less without noticing it?

dearieme (2013-01-02 10:10:38)

Nancy, maybe rather than meaning that he ate the same amounts of everything, he meant that he ate things in the same proportions. Seth: That is how I interpreted it.

Nancy Lebovitz (2013-01-02 13:00:37)

It's also possible that whatever effort he made to regulate his eating didn't change.

heatseeker (2013-01-03 10:11:39)

Hi all, it's heatseeker here. Amazing that my post over there somehow wound up here! Anyway, just to clarify, when I said "nothing else in my diet or exercise regimes changed", I meant that I wasn't purposely doing any other diet/weightloss method, and I didn't suddenly increase my exercise. I was trying to make it clear that it was the SLD that was the affecting factor.

Obviously my food intake changed as a result of SLD—that's why it's working, natch—but it wasn't like I started SLD while also doing other things that might have affected my weight. Love the MDA boards to death, but some of the commenters over there have a tendency to pick apart any claims, and I was worried I'd get a lot of "well you went low carb/did more crossfit/stopped eating dairy/started eating vitamin D/etc., and THAT'S why you're losing weight" naysayers. I was just trying to make it really clear that SLD was the only variable in suddenly having success losing weight. Also I'm a chick. Carry on. :) Seth: Thanks for the explanation.

Meegs (2013-01-04 03:59:06)

It works for me as well, but people think I'm crazy. They can't make sense of the idea. But I lost 10 pounds, and even through the holidays I maintained the loss. I stopped it for a while and tried eating low-reward foods, but the cravings came back. I found myself eating bagels and chips again. So I'm back on Shangri-La, and it feels great to be in control of what I eat.

Nathen (2013-01-06 17:54:46)

A friend of mine has been trying to gain weight for many years with no success. Based on your theory, what should she try? Seth: eating foods with (a) lots of calories, (b) that are quickly digested (= high glycemic index) and (c) taste exactly the same each time you eat them (= factory food, chain restaurant food). An example is Coke with sugar.

LeConz (2013-01-13 16:33:53)

Did it ever occur to you (Seth) that a normal carb-diet might for some people be a Anti-Shangri-La diet? I changed my eating pattern recently to a low-carb-diet as I needed to loose some weight. First thing I realized was that I needed about 3 hours less sleep, my digestion worked perfectly AND I lost a non-stop craving for food. The last point is the most important. I learned that I'm coeliac with overweight. This appears to be rather illogical as coeliac disease reduces calorie intake due to malabsorption in the bowels. As I read about the Shangri-La diet I realized that this diet is the exact opposite of my former diet. During the Shangri-La diet the brain realizes there is more nutrients than should be there; The conclusion is that the food eaten has a higher caloric value and less needs to be eaten. The set-point gets lowered, hunger is reduced. During a diet with gluten the bowel doesn't work properly and the brain realizes there is less nutrients there than should be; The conclusion is that the food eaten has a lower caloric value and more needs to be eaten. Because I don't eat gluten anymore my hunger vanished. As I feel really good now I can understand why some people get so fanatic about the paleolithic diet. Quitting gluten when you are coeliac is a true revelation. Nonetheless it might work in the same way as the Shangri-La diet. The Shangri-La diet is more important as it is a general concept that can be user universally for all kinds of diet plans. P.S.: I learned today that pigs are fattened with artificial sweetener. This makes sense as the animal tastes more nutrients than there actually is and can be recognized by the brain. Therefore the animals hunger is increased and it fattens faster. Seth: The Shangri-La Diet is based on two assumptions: 1. Set-point control of weight (old idea). 2. Control of set-point by smell-calorie associations (new idea). What you are describing as the Shangri-La Diet is the old idea. What you describe does not say the new idea is wrong but it cannot be explained by the new idea. The experience you describe suggests that the new idea is incomplete. It suggests, at least to me, that you were hungry because you weren't getting all the nutrients you needed from your food. Your brain was making you hungry so that maybe you would eventually eat the nutrients you needed. That's different from the new idea (assumption #2). It's not so clear your experience is consistent with the old idea either but that's a more complicated discussion.

### Assorted Links (2013-01-03 05:00)

- [1]Nassim Taleb makes a good point about treating high blood pressure. Only when systolic blood pressure is above 180 is there a big increase in risk of death. Giving people lower blood pressure dangerous drugs could easily do more harm than good.
- [2]The Annals of Unsolved Crime, forthcoming book from Edward Jay Epstein
- [3]Should you go to graduate school in literature? by Ron Rosenbaum

- [4]Steve Levitt's 50-year-old sister dies of a rapidly growing brain cancer. His father, a doctor, "was shocked at how impotent — and actually counterproductive — her interactions with the medical system turned out to be." In a hospital, she was prevented from sleeping.

Thanks to Dave Lull.

1. <http://www.facebook.com/photo.php?fbid=10151212006763375&set=a.10150109720973375.279515.13012333374&type=1>
2. <http://www.randomhouse.com/book/214260/the-annals-of-unsolved-crime-by-edward-jay-epstein>
3. [http://www.slate.com/articles/life/the\\_spectator/2012/12/should\\_i\\_go\\_to\\_grad\\_school\\_ron\\_rosenbaum\\_explains\\_single.html](http://www.slate.com/articles/life/the_spectator/2012/12/should_i_go_to_grad_school_ron_rosenbaum_explains_single.html)
4. <http://www.freakonomics.com/2012/10/16/when-a-daughter-dies/>

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dearieme (2013-01-03 05:47:42)

My wife wonders about her BP so if anyone can direct me to a graph like Taleb's, but for women, I'd be grateful.

dearieme (2013-01-03 05:59:46)

The Levitt piece is revealing. "Three hours later, we are still at the hospital. It is difficult to set up home oxygen on the weekend, and the pharmacy apparently has difficulty filling a prescription for a common drug": you can get service like that on the NHS, free. "In this era of molecular biology, the most valuable medication was morphine, a drug that has been available for almost 200 years." Many British doctors believe that American doctors cause - or rather permit - a great deal of unnecessary pain for their patients by underprescribing morphine. Anyway, once it had been determined that the poor woman was riddled with cancers, perhaps palliative care might have been the wise thing to do from the beginning? <http://www.newswithviews.com/Howenstine/james181.htm> <http://www.dailymail.co.uk/health/article-2211442/I-want-enjoy-days-waste-having-chemo-Doctor-Kate-Granger-tells-shes-stopped-treatment-prolong-life.html> Seth: Dr. Levitt might have written this: "In this era of molecular biology, and 100 years of Nobel Prizes in Medicine, the most valuable medication turns out to be morphine, a drug that has been available for almost 200 years."

Alex Chernavsky (2013-01-03 07:53:47)

With regard to graduate school for literature: About ten years ago, there was a wonderful essay written by a disillusioned young woman who (foolishly) went to Yale to get a PhD in literature. Here's how the article starts:

I am sitting in a windowless conference room. The walls are lined with sets of leather-bound books with gold-lettered spines. 'The ode must traverse the problem of solipsism,' a young man is saying. He pauses for a long time. Underneath the table, one leg is twisted around the other. A stretch of gaunt white ankle shows between trouser and sock. 'In order to approach participating in.' He pauses again, his body knotted like a balloon creature made by a children's entertainer. Finally, in one rush: 'The unity which is no longer accessible.' My fellow students utter a long soft gasp, as if at a particularly beautiful firework. 'Brilliant,' says the professor. 'Very finely put. But I didn't quite understand it. Could you repeat it?' I write the sentence down in my notebook, like everyone else in the seminar. *The ode must traverse the problem of solipsism before it can approach participating in the unity which is no longer accessible.* When I have pieced it together, I realise he is talking nonsense. I am struck by the thought that literary criticism - at least as it is practised here - is a hoax.

See, "[1]Letter from Yale", by Helena Echelin.

1. [http://web.archive.org/web/20010728081217/http://www.zmag.org/letter\\_from\\_yale.htm](http://web.archive.org/web/20010728081217/http://www.zmag.org/letter_from_yale.htm)

Kirk (2013-01-03 11:35:36)

Regarding sleep in hospitals . . . Several years ago I had a reaction to the anesthesia used during an operation. They investigated me for days to determine what had happened. That first night they woke me every two hours to take a blood sample. Plus I listened all night to the random beeps from medical machines and the sounds patients made in adjoining rooms due to a severe flu outbreak. The next morning I felt sleepy. Then the day nurse came in, introduced herself, and lectured me on how tired I looked and how I should be getting my sleep. @dearieme, You might find this paper about BP of use: <http://www.math.ucla.edu/scp/publications/mortality.PDF> . Seth: Thanks for the blood pressure reference. I sent it to my mom, who takes blood pressure medicine.

dearieme (2013-01-03 13:38:43)

@Kirk: fascinating - I am in your debt. I was taken not only by the fact that common guidelines for systolic bp are/were too high, but the way that this became clear by applying just three bits of common sense, namely (i) using all-causes death as their measure of merit, (ii) categorising the data by age and sex, and (iii) exploiting percentiles as a 'natural scale' for bp. (I say "common sense" in the reasonably precise sense of "that's what an engineer or physicist would do"). I was also taken by their discussion of the benefits that some bp-lowering drugs afford by mechanisms distinct from the actual lowering of bp. Many statin-sceptics suspect something similar - that the category of patients for whom statins bring a benefit are gaining from effects of their statin distinct from its effect in lowering cholesterol. By the by, apologies for being greedy, but can you by any chance provide a copy of the "commentary on page 159" referred to at the foot of the paper? Anyway, I repeat my thanks.

q (2013-01-03 14:27:13)

other studies than framingham seem to indicate that mortality goes up at lower blood pressure values - you can google this as well as i can. a brief survey of this makes me think though that 140 is not an important number.

Kirk (2013-01-03 16:40:34)

@dearieme I stumbled on that article by a lucky web search. Sometimes authors of articles published in paywall journals have obtained an agreement with the journal to allow the author to place the paper on a personal website (or, ahem, think they have the right but haven't read the fine print). The Lancet is a paywall journal. If you have a local university system which indulges the local taxpayers, you might be able to borrow that issue from them.

Alex Chernavsky (2013-01-03 19:37:28)

Medical school libraries sometimes allow public access to their journals and books. That's true of the University of Rochester. I've been there many times.

Patrik (2013-01-04 23:39:17)

This is tragic story. "Overnight admission to the hospital is recommended for "observation" and rest prior to the trip home. Fifty years of experience have taught me that admission to an academic hospital is not restful. I have stopped counting the patients who want to be discharged to get some rest." I don't want to descend into hyperbole but based on the my recent experiences with hospitals and rest (lack thereof), namely, the birth of my son and my appendectomy - I contend that lack of restful sleep post-intervention has MASSIVE iatrogenic effects and is weakening (killing?) people. As Robb Wolf says: "If someone sleeps well, you can't kill them; if they sleep badly, you can't keep them alive." The night after my appendectomy I, like Kirk (above), was woken up and checked up on ceaselessly, ostensibly for my benefit. Not to mention torture by the hideous and inhumane cacophony of monitoring devices beeping away mercilessly. The next morning, I, literally, begged them to allow me to sleep without interruption for a few hours so I gain enough strength to go home and heal through sleep. Our experience with the birth of my son was not dissimilar - post-birth all through the night, nurses came in to "check" on my wife and son ceaselessly, again, ostensibly, for our benefit. Result, none of us slept and all three of us were exhausted. We opted out of another night in the hospital and went home.

## Rent-Seeking Experts (2013-01-04 05:00)

Two thought-provoking paragraphs [1]from Matt Ridley:

From ancient Egypt to modern North Korea, always and everywhere, economic planning and control have caused stagnation; from ancient Phoenicia to modern Vietnam, economic liberation has caused prosperity. In the 1960s, Sir John Cowperthwaite, the financial secretary of Hong Kong, refused all instruction from his LSE-schooled masters in London to plan, regulate and manage the economy of his poor and refugee-overwhelmed island. Set merchants free to do what merchants can, was his philosophy. Today Hong Kong has higher per capita income than Britain.

In July 1948 Ludwig Erhard, director of West Germany's economic council, abolished food rationing and ended all price controls on his own initiative. General Lucius Clay, military governor of the US zone, called him and said: "My advisers tell me what you have done is a terrible mistake. What do you say to that?" Erhard replied: "Herr General, pay no attention to them! My advisers tell me the same thing." The German economic miracle was born that day; Britain kept rationing for six more years.

This is standard libertarianism. I like the stories but I don't agree with the interpretation. I don't think it is "economic planning and control" that causes stagnation in these examples. I believe it is expertise – more precisely, rent-seeking experts who know too little and extract too much rent. There are libertarian experts, too. They too are capable of doing immense damage (e.g., Alan Greenspan), contradicting Ridley's view that "economic liberation" always causes prosperity. In both of Ridley's examples, the experts give advice that empowers the experts. In the first example, Cowperthwaite is told by "LSE-schooled" economists to "plan, regulate and manage the economy." All that planning, regulation and management require expertise, in particular expertise similar to that of the experts who advised it. Which you cannot buy – you have to rent it. You must pay the experts year after year after year to plan, regulate, and manage. Because the advice must empower the experts, there is a strong bias away from truth. That is the fundamental problem.

Freud is the classic rent-seeking expert. You are sick because of X, Y, and Z – and if you pay me for my time week after week, I will cure you, said Freud. Curiously no treatment that did not involve paying people like Freud would work. Curiously psychoanalytic patients never got better. Therapy lasted forever. You might think this is transparently ridiculous, but professors at esteemed universities such as Berkeley still take Freud seriously. Millions of people pay for psychotherapy. The latest psychotherapeutic fad is cognitive-behavioral therapy – which again requires paying experts to get better, week after week. Berkeley professors take that seriously, too.

Evidence-based medicine advocates are among the newest rent-seeking experts. Like Freud, they focus on process (you must follow a certain process) rather than results. (What they call process in other contexts is called ritual. Rituals always empower experts.) Rather than trying to learn from all the evidence – which might seem like a good idea, and a simple one – evidence-based medicine advocates preach that only a tiny fraction of the evidence (which you need a Cochrane expert to select and analyze) can actually tell us anything. Again, this might seem transparently ridiculous, but many people take it seriously. Evidence-based medicine has an amusing twist which is that its advocates tell the rest of us how stupid we are (for example, "correlation does not equal causation").

The workhorses of the rent-seeking expert ecology – the ones that extract the most rent – are doctors. They are incapable of giving inexpensive advice. However they propose to help you, it always involves expensive treatment. This might seem like a recipe for crummy solutions, but again many people take a doctor's advice seriously (by failing to do their own research). My introduction to the world of rent-seeking solutions was the dermatologist who told me I should take antibiotics for my acne. I was to take the antibiotics week after week – and because I was taking a dangerous drug, I should also see my doctor regularly. During these regular visits, the doctor never figured out that

the antibiotic did nothing to cure my acne. I learned that by self-experimentation.

Like anthropologists who fail to notice their own weird beliefs (a recently-deceased Berkeley professor of anthropology took Freud seriously, for example), the profession that came up with the rent-seeking concept has failed to notice that many of them do exactly that.

One clue that you are dealing with a rent-seeking expert is that they literally ask for something like rent. Religious experts tell you to attend church week after week. Psychotherapists want you to attend therapy week after week. Psychiatrists tell you to take an anti-depressant daily for the rest of your life. My dermatologist told me to take an antibiotic daily (and to renew the prescription I needed to see him). And so on. As these examples suggest, rent-seeking experts thrive in areas of knowledge where our understanding is poor. Which includes economics.

[2]"Rent-seeking experts" in education.

More What I call "standard libertarianism" [3]Tyler Cowen calls "crude libertarianism". Maybe I should have called it "off-the-shelf libertarianism". In addition to what Tyler says, which I agree with, I would say that governments and their "central planners" have sponsored innovation (e.g., the Internet, the greenback, basic scientific discoveries) much better than Ridley seems to give them credit for. Innovation is a huge part of economic development.

1. <http://www.rationaloptimist.com/blog/global-outlook-rosy-europe%27s-outlook-grim.aspx>

2. <http://www.home-education.biz/news/26/60/Nazi-education-law-backed-by-Ofsted/>

3. <http://marginalrevolution.com/marginalrevolution/2013/01/in-which-countries-is-crude-libertarianism-most-and-least-true.html>

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Mark Cancellieri (2013-01-04 06:00:40)

I actually agree with Matt Ridley. There is a distinct correlation between economic freedom and prosperity. Here is just one index of economic freedom. <http://www.heritage.org/index/> With all due respect, it is laughable to associate Alan Greenspan with libertarianism. He headed the Federal Reserve and was incredibly interventionist in the economy. The job of the Fed is to centrally plan the money supply (although that was supposedly not the original intent), and we can see the disastrous consequences of this central planning. There was no "economic liberation." There was instead massive government intervention: artificially low interest rates, political "affordable housing" goals by Fannie Mae and Freddie Mac, the FHA, Sarbanes-Oxley, BASEL capital standards, and on and on. Seth: You don't remember that Greenspan admitted he was wrong? My point is that when an expert has little understanding and requires a lot of rent, any intervention is likely to do more harm than good. The ideology of that expert is irrelevant. The empirical generalization Ridley noticed – which I agree with – he explained by saying economic control is bad. I am saying the same set of observations can be explained by an idea that applies more widely. My explanation implies that the real reason that economic control is bad is that the economists involved are too ignorant and seek too much rent. With more knowledgeable economists seeking less rent, economic control would turn out much better.

Txomin (2013-01-04 06:24:11)

Greenspan describes himself as libertarian something or other... which could mean Austrian liberalism or anything whatsoever. I too agree Greenspan is decidedly in whatsoever territory. And I too agree with Ridley. Ideally, political regulation of economic affairs works. In practice, it amounts to no more than a leech.

rezzrovv (2013-01-04 07:10:58)

When you have so many variables involved in a system as diverse as a semi-free economy, you can't "rent" expertise knowl-



edgeable enough to fulfill the role necessary for central management to work. Wasn't that Hayek's main premise? The more free an economy, the greater likelihood individuals seek their own self-interest filling the vacuums necessary for a viable economy. A central planner can decide how many steak knives need to be manufactured for New York City or entrepreneurs can see the potential profit and provide them doing so with far greater efficiency. I don't disagree with the rent-seeking paradigm you describe but think the economy might not be the best example. Also, I like the concepts of cognitive-behavior therapy. I don't claim anything other than intuition but it would seem to me the idea of changing the structure of thoughts to effect change in behavior does have a finite end of therapy with much greater potential result than talking therapies. Seth: Hmm. One "concept" of cognitive-behavior therapy is to ignore the environmental causes of things. For example, the environmental causes of depression. I wonder if you like that.

Three Pipe Problem (2013-01-04 07:42:01)

1) Greenspan admitted he was wrong long after he abandoned most of his libertarian principles. Compare his recent writing to his chapters in Ayn Rand's Capitalism: The Unknown Ideal and you will see two different philosophies. Of course, Rand claimed she was not a libertarian, and disliked libertarians. I think you are using the term in a very general way that does not correspond very closely with how many libertarians view libertarianism. 2) That being said, most of what libertarians like or dislike about government can be equated to rent-seeking on one level or another. For example, look at the libertarian position on professional licensing. They don't dislike it because it is bad in some vague, unspecified way. They dislike it because it's a power grab by insiders, allowing them to charge higher rates than they would in a free market.

Daniel Lemire (2013-01-04 08:28:28)

I agree with other commenters... Greenspan does not favor economic freedom. Rather he works for the financial system and as an "expert" in the financial system, he made sure that this system and its experts played an increasingly important role in the economy. Not long ago, the financial industry was a relatively minor industry. Under Greenspan, it grew and grew in importance, along with the compensation for financial experts. The USA is not getting freer, it is getting more bogged down in crony capitalism. In effect, I agree with Ridley.

Leslie (2013-01-04 09:14:11)

Psychoanalysis is something I wouldn't bother with, for the same reasons you gave; you don't necessarily get better, therapy can last forever, it's expensive. I did have a very successful experience with cognitive behavioral therapy though. For many years I used to have a real problem with panic attacks, so I found an MD with an interest in non pharmaceutical treatment of mental health problems. I did three half hour sessions of cbt, which virtually eliminated the panic attacks. On the now rare occasion when I get one, it feels much more mild than in the past. You can also find computerized cognitive behavior therapy programs online, which are free. I haven't tried them, so can't comment on effectiveness. Seth: Interesting. I think it would be better to figure out the environmental cause of panic attacks and eliminate that cause, as we eliminate scurvy by giving people adequate Vitamin C. A subject in a morning-faces experiment of mine found that at the same time that the faces raised her mood, they also eliminated the minor panic attacks she frequently had.

Darrin Thompson (2013-01-04 09:15:03)

Like all the other commenters I thought: Greenspan? GREENSPAN???? If you want to find an example of a libertarian rent seeker maybe go for the jugular and accuse Ron Paul of rent seeking. He is, after all, a doctor.

Tuck (2013-01-04 10:13:09)

Great post. Greenspan was a libertarian who took the job of a central planner. I think you can attribute his failure to the latter fact, rather than the former. The central libertarian argument against central planning was that the planner can never know what the sum of all the people, with all their experiments and individual knowledge, know. I think Ridley at you are in perfect agreement, Seth, although approaching it from too different perspectives. You starting at the micro, and he's starting at the macro. You're at different ends of the elephant, in otherwords. ;) The expert can never know as much as all the individuals he interacts with know. Seth: I don't think I am in agreement with Ridley's explanation. I am in agreement with his empirical generalization, namely that central economic planning has a terrible record.

CC (2013-01-04 12:56:52)

Seth, interesting post, but you should be aware that (as far as I can tell) you're using the term "rent seeking" in a way totally different from the way economists use it. It could be confusing to readers. Someone correct me if I'm wrong. It's a very cool concept you've introduced though, so it'd be good to find a catchy name for it. Seth: "Totally different"? What is the difference?

CC (2013-01-04 17:21:36)

Quoting wikipedia: "In economics, rent-seeking is an attempt to obtain economic rent by manipulating the social or political environment in which economic activities occur, rather than by creating new wealth. One example is spending money on political lobbying in order to be given a share of wealth that has already been created. A famous example of rent-seeking is the limiting of access to lucrative occupations, as by medieval guilds or modern state certifications and licensures." and "Rent ... is obtained when a third party deprives one party of access to otherwise accessible transaction opportunities, making nominally "consensual" transactions a rent-collection opportunity for the third party." An example would be convincing the government that everyone should have to buy product X only from me and not anybody else, because I'm the only one who provides it safely. What you're describing is a system where experts convince people that the only acceptable treatment for some problem is to make recurring payments to those experts to provide dubious services. There's not necessarily government restriction of options, but rather there's just a commanding respect for those experts that allows them to dupe us. Like I said, it's a very cool concept you've introduced. Anyway, I really like your blog and I hope you'll keep posting as often as you have been. Btw, I'm a fan of both ELOO for AS, and zinc picolinate for acne. The zinc wasn't a miracle cure for me, but it did help quite a bit with no real effort required on my part. So go pat yourself on the back for improving some random internet stranger's life. :) Seth: Thanks. I didn't know about using zinc picolinate for acne, but it's got to be better than taking an antibiotic. Did Freud manipulate the "social environment" of his day? Hard to say, the term is vague. People chatted enthusiastically about his work – is that the social environment? He certainly manipulated the intellectual environment. So I am talking about rent-seeking in a broader sense, yeah. Maybe the definition of rent-seeking should be expanded to say "social or political or intellectual environment".

CC (2013-01-04 17:44:21)

Interesting, Seth. Yeah, rent seeking typically refers to using the law to restrict people choices so that they have to enrich you somehow. You're saying that there's some notion of "generalized rent seeking" where you manipulate social conventions so that people enrich you. Cool. I should point out, though, that economists are using the word "rent" in a weird technical sense. Requiring licensing to become an interior decorator is an example of rent-seeking, but no one's renting anything (in the everyday sense of the word). You're using the word "rent" in a figurative sense. Doctors convince you to rent them in the sense that you have to drop by once a month so that they can say "yup, keep taking those drugs I prescribed." Maybe this is why you never hear the medical establishment pushing the SLD! You don't need to rent a doctor to execute the diet. Seth: I agree. Many good solutions to everyday health problems are ignored by doctors, quite possibly because you don't need to rent a doctor for them. I wonder if that is part of the reason for the strictures of evidence-based medicine: To make more sure you choose a treatment that requires a doctor (e.g., prescription drug). As you say, economists expanded the notion of "rent" in their use of "rent-seeking", I am expanding it again.

Adam (2013-01-04 19:42:20)

Seth said, "With more knowledgeable economists seeking less rent, economic control would turn out much better." How about no economic control and no rent-seeking? What sorts of economic control do you advocate? Seth: The underlying problems are poverty (poor people seek more rent than rich people) and ignorance (the less experts know, the worse advice they give; the less their audience knows, the more gullible they are). In the case of economics, the ignorance perpetuates the poverty. I don't advocate any particular economic control. I advocate better economics research. For example, as I have blogged, economists pay far too little attention to the causes of innovation. Judging from economics textbooks, they don't even understand or recognize simple things about innovation, such as war is a cause of innovation.

dearieme (2013-01-05 04:46:19)

"they don't even understand or recognize simple things about innovation, such as war is a cause of innovation." That's a special case of the general problem that economists don't study enough Economic History.

MikeB (2013-01-05 13:15:28)

Joseph Schumpeter, prophet of innovation I think Schumpeter is the most penetrating analyst of capitalism who ever lived. He saw things other people didn't see, partly because he lived in 7 different countries. He also served briefly as Austria's finance minister and worked for 3 years as an investment banker, where he made a fortune that he promptly lost in a stock market crash. So he wasn't a typical academic, even though he spent most of his career as a professor, including almost 20 years at Harvard. As for my title, here's the quotation that inspired it: "Without innovations, no entrepreneurs; without entrepreneurial achievement, no capitalist returns and no capitalist propulsion." Schumpeter wrote this sentence during the Great Depression of the 1930s. Many, many smart people of that time believed that technology had reached its limits and capitalism had passed its peak. Schumpeter believed the exact opposite, and of course he was right." <http://innovationzen.com/blog/2007/05/10-/schumpeter-prophet-of-innovation/> Seth: Faint praise. I'm sure many people believed "the exact opposite". What did Schumpeter figure out about what makes innovation more or less likely? Something less obvious than war increases innovation, I hope.

Peter (2013-01-06 20:01:55)

Libertarianism as I understand it is a political philosophy marked by a preference for less, or even no, control of society by the State. Rent-seeking is vastly strengthened by state control. For example, as educated and affluent as I am, I still must do business with the medical rent-seekers if I want medicine or medical tests since the state has a gun pointed at those who might help me outside of the medical profession. The matter of experts and their rent seems somewhat unrelated to the idea of libertarianism. Suppose the experts employed by the Soviet commissars extracted little or no rent, would theirs be a libertarian society? I'd also point out that some economists study innovation. For example, see the blog "Organizations and Markets". I'm not clear on what is meant by "war increases innovation". Wars also increase death and destruction of property. Surely this is a bad thing. Also, suppose that among the many killed in the Iraq and Afghanistan wars is a young and undiscovered innovative genius or that society is impoverished by the wartime destruction of capital and resources to the point that a crucial laboratory is not built. I think a better question is whether the innovation in weapons and war tactics outweigh the unrealized civil society innovation that is lost. Seth: "War increases innovation": see <http://www.ingenious.org.uk/Read/Conflict/Waristhemotherofinvention/> for examples of specific inventions. More broadly, war upsets the power structure among the losers. All sorts of things previously blocked by the top-ranked people are able to move forward. Likewise, when property is destroyed, it creates a demand for replacements, which will be more modern. I'm not saying that the benefits of war outweigh the costs, I am just saying that one effect of war is an increase in innovation. A simple analogy is forest fires, which have beneficial effects.

Rent-Seeking Expert, I Abjure Ye! | Brown Pundits (2013-01-07 17:04:02)

[...] Seth Roberts, a twist on Matt Ridley's post on the European [...]

Phil Goetz (2013-01-08 14:23:50)

Re. cognitive behavioral therapy: Why do you believe it doesn't work? Seth: I don't believe that. Many therapies, including cognitive behavioral therapy, produce modest improvement. The fact that therapies based on much different theories produce the same improvement is one support for my view that CBT is little better than earlier therapies. My problem with CBT is that there is no serious interest in environmental causes. For example, the environmental cause of scurvy is lack of Vitamin C. Once you know that, you can easily and safely cure scurvy. What are the environmental causes of depression? Lack of CBT in everyday life? Surely not. Many facts about depression don't fit that theory, such as the strong correlation between depression and insomnia. The fact that CBT produces modest improvement means little. It is perfectly possible to modestly improve Disease X without having any idea what caused it. Think of duct tape.

Lemmy Caution (2013-01-10 19:08:09)

cognitive behavior therapy is particularly effective for panic attacks: [http://www.paniccure.com/Approaches/CBT/-overcome/overcome\\_panic\\_attacks.htm](http://www.paniccure.com/Approaches/CBT/-overcome/overcome_panic_attacks.htm) A panic attack is really nothing more than bodily sensations of anxiety and a catastrophic misinterpretation of those sensations as dangerous. Your belief that you are in danger results in increased anxiety, which then leads to more sensations and more catastrophic thoughts, creating a vicious cycle between bodily sensations, distorted thoughts, and anxiety, which can rather quickly result in a panic attack. The real problem is actually your mistaken belief

that you are in danger – not the panic itself – since panic is in fact an appropriate emotional reaction when you are convinced that you may be in danger. However, your belief is untrue, and when you understand this on a deeper level, you will master your panic. – My bet is that depression is harder to deal with because much of the time there is no real false belief. Depressives tend to be more realistic than non-depressives. you could probably cure yourself of panic attacks. Seth: What are the environmental causes of panic attacks? I don't know, do you? Perhaps eliminating the environmental causes would be more effective than CBT.

Lemmy Caution (2013-01-15 16:49:52)

If cognitive behavior theory really does "result in 80 % to 85 % of people becoming panic free, usually within eight treatment sessions " why worry about environmental causes that no one can figure out. Plus, panic disorders seem like they would be very likely to be helped by the placebo effect. Anything can break the cycle of catastrophic thoughts if you think it will. My bet is a google search "panic attack and x" where x is almost anything will find someone who believes it will help with the panic attacks. I randomly searched for x = milk and aspirin. <http://www.livestrong.com/article/353540-foods-that-help-panic-attacks/> <http://www.doctorslounge.com/psychiatry/forums/backup/topic-1848.html> This study found the environmental factors to be general ill health, separation from a parent by death or divorce, high interpersonal sensitivity, low social class, and unmarried marital status: <http://www.ncbi.nlm.nih.gov/pubmed/8245920> Seth: Why worry about environmental causes? Because, once found, they are likely to lead to a better solution (cheaper, more powerful, longer lasting). The environmental factors you list (ill health, etc.) are correlated with a large number of problems, there are probably factors more specific to panic attacks.

## **How to Write: Lessons From My Writing Class (2013-01-05 05:00)**

I just finished teaching an undergraduate class called [1]Academic Writing at Tsinghua. One semester, pass/fail, about 10 students. The last assignment was list six things you've learned. Combining the answers, I came up with this:

1. Don't tell readers what they already know. This came up a lot when I discussed how to write a personal statement. "Your university has an excellent program in X" – no, don't say that.
2. To make your writing moving, focus on your own thoughts and emotions. Moving = evoking emotion. Evoking emotion was enormously important, I said.
3. Use simple words and sentences (don't show off). As one student put it, "Received the blames from one class, changed all my GRE words into understandable words."
4. Give examples.
5. Avoid boasting (say "I like X", don't say "I am good at X").
6. Do not write about things that are "too big".
7. Have clear connections between sentences. We spent several classes on the various ways adjacent sentences can be related.
8. Say things that are honest and true. In contrast to what you think your reader wants to hear. A friend asked for advice on her personal statement for a graduate school application. She sent me a revised version. I thought the unrevised more honest version was better.
9. Begin with something interesting.

I asked which of these lessons they already knew. The consensus answer was #1 (don't tell readers what they already know) and #4 (give examples). Their personal statements flagrantly violated #1. One student said they had learned it, yes, but needed to be reminded.

[2]Jon Cousins of [3]Moodscope, in town for a Quantified Self conference, gave [4]a guest lecture. From his talk the students came away with four main things:

1. Copy someone's writing you admire.
2. Imagine your audience. Are they busy? Curious?
3. Write as you speak.
4. Revise after a period of time. Like a month.

Another of Jon's lessons was use punctuation sparingly. An editor told him, "Using an exclamation mark is like laughing at your own joke."

1. <http://www.samebook.net/index.php/group/show/id-53>
2. <http://vimeo.com/16691352>
3. <http://www.moodscope.com/login>
4. [http://blog.sethroberts.net/wp-content/uploads/2013/01/Jon\\_Cousins\\_-Seth\\_Roberts.pdf](http://blog.sethroberts.net/wp-content/uploads/2013/01/Jon_Cousins_-Seth_Roberts.pdf)

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Alex Chernavsky (2013-01-05 06:27:49)

I used to help organize an annual writing contest for high school students. The judges (myself included) had to grade hundreds of essays on a scale of one to ten. I was often stunned by the other judges' grades. Essays that I thought were fabulous would receive mediocre scores, and execrable essays would score highly. So, with regard to application essays, you are at the mercy of some drone (or drones) in the admissions office. *Write as you speak*. I think that's bad advice. In his book, *The Language Instinct*, Steven Pinker [1]quotes from a transcript of Nixon's Watergate tapes:

PRESIDENT: The grand jury thing has its, uh, uh, uh view of this they might, uh. Suppose we have a grand jury proceeding. Would that, would that, what would that do to the Ervin thing? Would it go right ahead any way?  
DEAN: Probably. HALDEMAN: If you do it in executive... PRESIDENT: But then on that score, though, we have...let me Just, uh, run by that, that...you do that on a grand jury, we could then have a much better cause in terms of saying "Look this is a grand jury, in which, uh, the prosecutor..." How about a special prosecutor? We could use Peterson, or use another one. You see he is probably suspect. Would you call...

1. <http://books.google.com/books?id=l7dryHvwDiMC&pg=PA221&lpg=PA221&dq=%22the+grand+jury+thing+has+its+uh%22&source=bl&ots=VXpbIvU98L&sig=26p0vpqKMgoNyWdIcQB18LYMaIM&hl=en&sa=X&ei=hynoUJ-ZMcan0AHlrYGGQAQ&ved=0CDIQ6AEwAA#v=onepage&q=%22the%20grand%20jury%20thing%20has%20its%20uh%22&f=false>

bjk (2013-01-05 12:02:21)

Begin with something interesting . . . I never read the first paragraph, usually most articles begin with the second paragraph. Like starting a speech with a joke, I think the audience is a little sick of this approach. You might want to save the interesting open for later. Seth: As I told my students, one New Yorker (magazine) editor would routinely cross out the first paragraph of stuff given to him to edit. I often do that. I also agree about jokes. Bad idea to begin with a joke. It is as if you have nothing

actually interesting to say.

Tom (2013-01-05 13:33:18)

If you don't open with something interesting you just lost all your readers. Except maybe your mother.

Tom (2013-01-05 13:41:51)

James Altucher has a bunch of good posts on this, but here are two. [www.jamesaltucher.com/2012/12/10-more-rules-of-writing/](http://www.jamesaltucher.com/2012/12/10-more-rules-of-writing/) [jamesaltucher.com/2011/03/33-unusual-tips-to-being-a-better-writer/](http://jamesaltucher.com/2011/03/33-unusual-tips-to-being-a-better-writer/)

Jonathan Shewchuk (2013-01-05 18:44:42)

Like Alex, I don't understand the "write as you speak" advice. Perhaps it would be good advice for the minority of people who become overly formal in their writing. But most people don't speak well at all. I find that experience in writing has changed my speech, because I spend a lot of my writing time thinking about how to say things clearly. For example, I use the passive voice when speaking much less than I used to.

Christopher Burd (2013-01-06 11:48:50)

*Write as you speak. I think that's bad advice.* Writing literally like you speak is bad advice, of course. What works (for me) is trying to write a sort of idealized version of the way I speak, if that makes sense.

Christopher Burd (2013-01-06 11:53:30)

*As I told my students, one New Yorker (magazine) editor would routinely cross out the first paragraph of stuff given to him to edit. I often do that.* Another editor's trick is to replace the introduction with a summarising passage from the conclusion. The idea is that by the end of the piece, the writer finally knows what they are trying to say and are so sick of writing that that they are finally writing succinctly.

Judy (2013-01-14 18:39:22)

Great reminders! Although it may seem like common sense, I always forget these tips. Especially when I'm so eager to just be done with my writing and I don't wait 24 hours to edit. Thanks for the tips! Judy

## **How to Write: What One Student Learned (2013-01-06 05:00)**

Yesterday I gave lessons from my academic writing class based on all student answers. One student, Wang Lingjie, did an especially good job saying what she learned. Here are four things:

Lesson 1: Be genuine. In the last class, Seth showed us a pair of personal statements and its revised form. [I showed a personal statement before and after revision.] Rethought about it, I do feel that the original form would be more like a true person who want to tell his story and show his willingness for a master's degree. [In class, Lingjie had preferred the revised version.] True self expressed more like a vivid individual.

Lesson 2: Keep the sentence simple. Chinese students normally have their technique to produce a fancy article. One of the tips is their substitution list, by which they can switch normal words into long and seemingly educated ones. This kind of decoration seems like showing off. Also, when I went on to write personal statements according to the college's requirements, I understand the importance to be succinct under words limitation.

Lesson 3: Talk to your readers as you speak. I get the inspiration from the guest speaker [Jon Cousins].

Then I took on to read my passages out when I write twitters for my internship. Though the effect of the new promotion tone has not emerged yet, I personally like the latter ones better.

Lesson 4: Raise readers' emotions. Stories help. I realized its importance when we discussed Ashley's 3 outlines. [Students wrote 3 outlines on the same subject.]

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dearieme (2013-01-06 17:59:23)

Ahoy, Seth. here's a scandal I hadn't heard about. <http://www.guardian.co.uk/world/2013/jan/06/france-scandal-weight-loss-drug>

vimspot (2013-01-06 23:16:26)

Is it possible that their writing will have improved from a western perspective, but that they will be penalized for not following the status quo?

### Assorted Links (2013-01-08 05:00)

- [1]Interview with Jane Jacobs about The Nature of Economies. "Canada should seriously study Iceland."
- [2]A month with no electric light. The post is titled "a month with no artificial light" but candles are used.
- [3]Adventures in nutritional therapy. "A record of my successes and failures trying to solve a [4]bunch of health annoyances without resorting to prescription drugs." I've [5]linked here before but there's lots of new stuff.
- Did you know that the inventor of the Heimlich maneuver [6]did AIDS research?
- [7]Falling off the 5:2 diet program (fasting 2 days per week), popularized by the Horizon TV program Eat Fast and Live Longer. It produced only a little weight loss and the other benefits were invisible.
- [8]Great article about the connection between childhood lead exposure and adult crime rate.

Thanks to Hal Pashler.

1. <http://urbanophilia.com/the-nature-of-economies/>
2. <http://jdmoyer.com/2010/03/04/sleep-experiment-a-month-with-no-artificial-light/>
3. <http://www.adnuther.com/>
4. <http://www.adnuther.com/list-of-conditions-fixed-and-unfixed/>
5. <http://blog.sethroberts.net/2011/12/31/ten-interesting-things-i-learned-from-adventures-in-nutritional-therapy/>
6. <http://medfraud.info/Zengerle-Farel.html>
7. <http://www.geekmummy.com/2012/12/falling-off-the-52-diet-wagon/>
8. <http://www.motherjones.com/environment/2013/01/lead-crime-link-gasoline>

dearieme (2013-01-08 05:39:45)

Nutritional therapy, modified. <http://www.telegraph.co.uk/science/science-news/9783724/Tomato-skin-pill-could-cut-risk-of-strokes-heart-attacks-and-cancer.html>

Sam (2013-01-08 10:35:01)

That Mother Jones lead article is fascinating - here's an interesting discussion of some of the methodology and other issues that you may enjoy as well: <http://hisscienceistootight.blogspot.com/2013/01/the-link-between-leaded-gasoline-and.html>

Sean Estey (2013-01-08 12:22:29)

Seth, I read Nature of Economies after being introduced to some of her economic views on this blog, and I was blown away. It's the closest thing to a general theory of economics that I've ever come across. Reading Antifragility by Nassim Taleb, I can detect a strong Jacobs influence in his tendency to look to mother nature for economic guidance. But it's tragic that her influence hasn't made a dent in mainstream thinking. Probably due to the fact that her bottom-up views don't leave much room for economic planners. Seth: I believe that Taleb, who is also anti-planner, is having more of an influence than Jacobs ever had. Maybe the Internet has a democratizing effect.

B.B. (2013-01-11 13:59:34)

Clearly, lead is bad news, and there is experimental evidence it harms health. No disagreement. Let's get the lead out. That is not the same thing as agreeing that lower lead caused lower crime rates. Here is some pushback from Jim Manzi: <http://www.nationalreview.com/corner/337398/lead-and-crime-jim-manzi>

Erikku (2013-01-28 02:45:03)

Dear Seth, regarding your practice of delaying breakfast in order to prevent early awakening, does coffee count as breakfast? I usually drink black unsweetened coffee (and water) when I wake at 4 or 5am, but otherwise delay food until 11 or 12. Thanks! Seth: Food with no calories doesn't count as breakfast. On the other hand, the effect of caffeine is unclear. It probably causes some sort of anticipation - whether helpful or harmful, hard to say.

## **Brain Tracking: Early Experience (2013-01-09 05:00)**

Brain tracking - frequent measurement of how well your brain is working - will become common, I believe, because brain function is important and because the brain is more sensitive to the environment (especially food) than the rest of the body. You will find it easier to decide what to eat if you measure your brain than if you measure other parts of your body. For example, I have used it to decide how much flaxseed and butter to eat. I have used R and the methodological wisdom of cognitive psychologists to make brain tracking tests. Alex Chernavsky, who lives in upstate New York, recently tried the most recent version:

In August, [1]Seth solicited readers to help him test a new brain-tracking program. I said I was interested. I had a number of reasons for volunteering:

- My job involves working a lot with computers, so I thought I had a decent shot at ferreting out any bugs or usability issues.
- I have been [2]tracking my weight daily for over eleven years, so I was confident that I would have enough motivation to do the test on a regular basis.
- I have a long-standing interest in neuroscience, so I was eager to help advance the field, even if in a very small way.



- I'm in my late 40s, and I've noticed a distinct increase in my forgetfulness. There are probably other, less-noticeable decreases in my cognitive function. Thus I have an interest in finding ways to boost the performance of my brain. Hacking brain function is obviously much easier if you can assay it via a quick, reliable proxy (i.e., reaction time).

The program itself was relatively easy to set up. The code is written in a free, open-source scripting language called R, so you have to install R on your Windows computer in order to run the program. Upon downloading the script (which is contained within an R workspace), you have to edit a function to specify the Windows folder that contains the workspace file. After that, you're ready to go.

The three-month pilot study did not involve testing any hypotheses with regard to the effectiveness of interventions (for example, measuring reaction times before and after flaxseed oil). My task was simply to perform the test once or twice a day.

Taking the test involves hitting a number key (2 through 8, inclusive) to match a random target number that is displayed on the screen. The program measures the latency of your response. If you hit the wrong key, the program forces you to repeat the same trial until you press the right key. Reaction-times from these "correction trials" are not used in any subsequent data analysis. A session consists of 32 individual trials and takes about four minutes to complete.

I performed the test daily for three months, although I did miss two days. The test stopped short of being fun, but it was certainly not onerous. The biggest hassle was having to wait for my laptop to boot into Windows. If I had to do the pilot study over again, I would install R on both my home and my work desktop computers, so I could perform the test more easily (perhaps as a way to take a short break from whatever other task I happened to be working on).

The original plan was for me to email the R workspace to Seth once a week or so. However, I suggested to Seth that we could improve efficiency by using a shared DropBox folder. He agreed, and that is the method we adopted. Using this system, Seth had ongoing access to the latest data, and he could also easily make any bug-fixes or other edits that would take effect the next time I ran the script.

I did identify one bug in the script. After each trial, the script briefly displays some feedback in the form of your reaction-time (in milliseconds) for that trial, your cumulative average for that session, and a percentile figure that compares your latest speed with past trials for that same target key. I noticed that the percentile scores didn't seem to make sense for some of the keys. Seth examined his code and agreed that this was indeed a bug. He made some adjustments and the bug was fixed.

I found that over time, as expected, my scores improved substantially. They seemed to plateau after six weeks. However, my accuracy suffered. During the third month of the pilot study, I made a conscious effort to reduce my error rate. I had some success, but I also found myself frustrated by my inability to reduce the errors as much as I would have liked. Making errors, despite my best efforts, was the only vexing part of taking the test.

1. <http://blog.sethroberts.net/2012/08/28/want-to-track-your-brain-function/>
2. <http://blog.sethroberts.net/2012/03/13/ten-years-of-weights-including-two-years-on-the-shangri-la-diet/>

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Peter Andrews (2013-01-09 06:42:25)

Seth and Alex, You might want to consider using free, open source, RStudio server to have a shared R environment. This would allow central tracking by Seth. [http://www.rstudio.com/ide/docs/server/getting \\_started](http://www.rstudio.com/ide/docs/server/getting_started) In any case, RStudio is an improvement over the standard R gui.

Mark (2013-01-09 07:28:53)

I have also been a Guinea pig to test this software and am close to finishing up my third month. However, I still quite enjoy doing the test, have had no difficulty doing it at least twice most days, sometimes more. I've also improved over time, as expected (learning effects), and also plateaued at about 6 weeks. However, I also did some self testing. I'll send more detail to Seth later, which he may or may not decide to post here, but I've been testing the effects of adding a heaping tablespoon of coconut oil to my coffee every morning. I've turned this treatment on and off several times, and without fail each time I see a large improvement with the CO... I've even done some modeling to remove the over time effects and to control for within trial correlation, and the CO effects are still there. I'm known as an extreme skeptic, but I think these results are real.

Jenny (2013-01-09 16:40:57)

Just a comment on Alex's weight loss chart. Has anyone tried using coconut oil after any method that loses weight, ie low carb or walks, and seeing if that holds the weight loss stable? ie was it specific to following the Shangri-la diet, or just any method of weight loss?

Alex Chernavsky (2013-01-09 21:19:30)

Peter, thanks for the tip. Will check it out.

Paul N (2013-01-09 22:26:04)

@ jenny, Coconut oil seems to be one of the single best things you can eat - (in normal eating, not just as the Shangri-La oil) for continued weight management and metabolic health. I have read the books on it by Bruce Fife and also Mary Enig, lots of good information from those two. The more of your calories that come from that instead of other fats (or carbs), the more active and leaner you become (applies to farm animals too). Taken before meals, it suppresses appetite. Taken with meals, it makes other fats easier to digest. It stabilises gut flora. It helps reverse alzheimers. It is good for your skin. and on and on... It seems to be one thing that almost everyone - except the seed oil industry and the USDA - agrees is healthy. 2 tablespoons a day seems to be the consensus for an an effective dose. I take most of mine as chocolate - get 85 % cacao and melt with equal amounts of butter and coconut oil, add some stevia and shredded coconut and cool in silicone ice cube trays. As good as any bought chocolate. To get the shangri-la effect with this you would have to eat it with your nose pinched, and that's just a waste of chocolate!

Nathen (2013-01-10 16:50:45)

How are you accounting for your probable increase in skill over time at the reaction-time task?

William (2013-01-17 09:33:48)

Can you release your code? Perhaps on Github or something? I'd love to see it and implement my own tracking! Seth: A friend and I are making an iPhone app.

## Undisclosed Risks of Common Medical Treatments (2013-01-10 05:00)

Millions of tonsillectomies have been done, mostly to children. Were any of their parents told that tonsils are part of the immune system (taught in high school biology and known since the 1960s)? A Cochrane Review of tonsillectomies (the "highest standard" in evidence-based medicine) fails to mention that tonsils are part of the immune system. A recent study found tonsillectomies associated with a 50 % increase in heart attacks. (I write about tonsillectomies [1]here.)

Are tonsillectomies unusual? Several recent news stories suggest no, they aren't. Failure to tell patients the full risks of medical treatment may be common:

1. Undisclosed risks of hernia surgery. [2]From the Wall Street Journal: "More than 30 % of patients may suffer from long-term chronic pain and restricted movement after surgery to fix a hernia . . . studies show." The article says "many patients don't consider" this risk – meaning they don't know about it. A Berkeley surgeon named Eileen Consorti told me I should have surgery for a hernia I could not detect. I have previously written about her claim that evidence supported her recommendation when no such evidence existed – or, at least, no one including her has ever found it. I said I wanted to see the evidence because there were risks to surgery. She replied that none of her patients had died. I was shocked by the incompleteness of her answer. There are plenty of bad outcomes besides death – as the Wall Street Journal article shows.

2. Undisclosed risks of sleeping pills. A book called [3]The Dark Side of Sleeping Pills by Daniel Kripke, a professor of psychiatry at UC San Diego, goes into great detail about risks of sleeping pills that few doctors tell their patients. For example, one study found that "patients who took sleeping pills died 4.6 times as often during follow-ups averaging 2.5 years [than matched patients who did not take sleeping pills]. Patients who took higher doses (averaging over 132 pills per year) died 5.3 times as often." Insomnia alone was not associated with higher mortality. Tomorrow I will post Dr. Kripke's answer to the question "why did you write this book?" [4]Here is a website about the dangers of Ambien.

3. Undisclosed risks of anticholinergic drugs. [5]From the [6]NY Times: "After [7]following more than 13,000 British men and women 65 or older for two years, researchers found that those taking more than one anticholinergic drug scored lower on tests of cognitive function than those who were not using any such drugs, and that the death rate for the heavy users during the course of the study was 68 percent higher. That finding, reported last July in The Journal of the American Geriatrics Society, stunned the investigators." Anticholinergics are "very very common" said a researcher. They include many over-the-counter drugs, such as "allergy medications, antihistamines and Tylenol PM".

4. Undisclosed risks of statins. [8]A recent NY Times story says "the Food and Drug Administration has officially linked statin use with cognitive problems like forgetfulness and confusion, although some patients have reported such problems for years. Among the drugs affected are huge sellers like Lipitor, Zocor, Crestor and Vytorin." Prior to this official linkage, the reports of forgetfulness and confusion were mere anecdotes that evidence-based medicine proponents ignore and tell the rest of us to ignore.

5. Undisclosed risks of metal-on-metal hip replacements. They leak dangerous amounts of metal (e.g., cobalt) into the rest of the body. "Despite the fact that these risks have been known and well documented for decades, patients have been kept in the dark," says [9]a recent article in the BMJ. By 2007, the danger was so clear that a British regulatory committee said that patients must sign a form saying they've been warned. This didn't happen – a surgeon told the BMJ that "surgeons were unaware of these discussions." Other materials could have been used.

These six treatments (tonsillectomy, hernia surgery, sleeping pills, anticholinergic drugs, statins, and hip replacement) are so common they raise a scary question: What fraction of the risks are patients usually told?

The surgeon or drug company gets paid no matter what happens to you. Malpractice lawsuits are very rare on a per-patient basis – and no one will be sued for performing a tonsillectomy on a child who gets a lot of colds or prescribing sleeping pills to someone who has trouble sleeping. In a Freakonomics podcast, Steve Levitt said that doctors terrify him. And his father is a doctor. Given the undisclosed risks of common treatments, he is right to be terrified.

Thanks to Allan Jackson, Alex Chernavsky and Tim Beneke.

1. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>
2. [http://online.wsj.com/article/SB10001424052970203833004577249344022834000.html?mod=WSJ\\_article\\_MoreIn\\_Life%26Culture](http://online.wsj.com/article/SB10001424052970203833004577249344022834000.html?mod=WSJ_article_MoreIn_Life%26Culture)
3. <http://www.darksideofsleepingpills.com/index.html>
4. <http://ambienoverdose.org/>
5. <http://well.blogs.nytimes.com/2012/02/27/cocktail-of-popular-drugs-may-cloud-brain/>
6. <http://well.blogs.nytimes.com/2012/02/27/cocktail-of-popular-drugs-may-cloud-brain/>
7. <http://www.ncbi.nlm.nih.gov/pubmed/21707557>
8. <http://www.nytimes.com/2012/02/29/health/fda-warns-of-cholesterol-drugs-side-effects.html>
9. <http://www.bmj.com/content/344/bmj.e1410>

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Korben Dallas (2013-01-10 06:43:06)

Well at least SSRI's are a pretty safe treatment for a very common disease, so it isn't all bad.

Alex Chernavsky (2013-01-10 11:28:02)

Undisclosed risks of psychiatric medicines, as described in an interview with investigative reporter Robert Whitaker: "[1]Psychiatric Drugs: An Assault on the Human Condition" (the title is a bit over the top, but the interview is good)

1. <http://www.thestreetspirit.org/August2005/interview.htm>

Nancy Lebovitz (2013-01-10 11:32:30)

The risks associated with bariatric surgery aren't as well known as they should be.

CC (2013-01-10 16:36:37)

Does anyone else think these number sound too crazy to be correct? For instance: "patients who took sleeping pills died 4.6 times as often during follow-ups averaging 2.5 years [than matched patients who did not take sleeping pills]." 4.6 times the mortality? And tonsillectomies increase heart attack risk by 50 %? Does this even sound credible? Seth: You are welcome to examine the studies from which these estimates come.

Adam (2013-01-10 18:21:59)

There was a big (non-randomized) study that showed people who take sleeping pills have the same increase in mortality risk as people who smoke. It was on emedicine if you want to dig for it.

Jenny (2013-01-11 15:36:36)

There are 2 major risks with bariatric surgery that no-one I know who has had it was told about. As mentioned in one of last May's New Scientist - disrupting the neural net around the gut can cause fascinating changes in taste - fish tea for example - which may reverse. And more serious changes in the size of short term memory - downwards - which will not reverse.

dearieme (2013-01-11 16:24:13)

<http://www.forbes.com/sites/larryhusten/2013/01/11/merck-starts-to-suspend-worldwide-availability-of-tredaptive/> #more-4341

Weekend Link Love - Edition 225 | Mark's Daily Apple (2013-01-13 09:00:21)

[...] Roberts discloses some of the often-undisclosed risks of common medical procedures and [...]

aaronblaisdell (2013-01-13 09:36:01)

I'm not surprised that anticholinergic drugs are associated with impaired cognitive function. I've just completed a study in which an acetylcholine antagonist was injected into rats either systemically or directly infused into the dorsal hippocampus. While this treatment did not affect a simple instrumental discrimination (positive patterning), it impaired performance on a more complex instrumental discrimination (negative patterning) known to be dependent on hippocampal function.

Ryan (2013-01-13 09:39:46)

I unfortunately have a fairly large inguinal hernia and surgery of course has been recommended. The surgeon I found to do the procedure (in the next couple months) is a professor of General Surgery and has written various publications regarding the best methods/materials for preventing chronic pain and fixation issues with the surgery. At the surface, this appealed to me before I even spoke to him because he is a doctor who at least recognizes the issues with the surgery. Upon consulting with him, he told me that the method he uses is laparoscopic (he has done primarily laparoscopic hernia repairs at a hernia repair center at university hospitals for nearly 10 years) and that he uses newer, large pore, lightweight meshes in the repair. He said that many of the chronic pain issues are tied to the older method of using a mesh plug and overlay with the open repair, which placed a lot of mesh material over nerves which lead to chronic pain. He then went on to describe that by using a single lighter weight mesh, implanted behind the muscular fascia via laparoscopy, placing the staples used to hold the mesh away from the nearby nerves, that he has not encountered any patients long-term that have dealt with chronic pain issues. His explanation seemed to be on-par with research I had read, and has left me feeling more confident about the procedure I will undergo. What are your thoughts on the matter based on what I have described? Seth: Sounds reasonable to me. I had laparoscopic surgery for a hernia and did not have further problems.

Rebecca (2013-01-17 13:30:18)

Really interesting stuff. I'm on a SSRI (citalopram) after a lot of consideration and a lot of nothing else working well enough. But some of my allergy and asthma drugs that my doctor believes I should take regularly are anticholinergics, and I've always felt quite negatively about taking them every day. The trade off of how I felt on them was rarely worth the benefit to my asthma.

## **Sleeping Pills are Very Dangerous (2013-01-11 05:00)**

Do you know how dangerous prescription sleeping pills are? I didn't, and I do sleep research.

I came across Dr. Daniel Kripke's book [1]Dark Side of Sleeping Pills while finishing [2]yesterday's post on undisclosed risks of medical treatments. I had written an almost-complete draft a year ago. One line in the draft said "undisclosed risks of sleeping pills" with no additional information. I couldn't remember why I'd written that so I googled "dangers of sleeping pills" and found Dr. Kripke's book. I was unaware the evidence was so strong. I asked Dr. Kripke to tell the story of how he came to write it. He replied:

It is almost a life-long story.

As a young psychiatrist, I learned that the American Cancer Society had done a questionnaire survey of a million people which showed mortality related to long and short sleep. [People who sleep less or

more than average have higher death rates.] In 1975, I asked if they would collaborate with me on a more complete analysis of the data on sleep length and insomnia. As a control variable, we included analysis of their one question about sleeping pill use. To my surprise, it looked like sleeping pill use was a strong predictor of early death, while insomnia was not (if you controlled for sleeping pill use by insomniacs).

There were many reasons why these results needed further study, so I asked if I could refine the questions for the new Cancer Prevention Study II (CPSII) which the American Cancer Society commenced in 1982 with 1.1 million participants. Imagine my surprise when I observed that sleeping pill use was associated with a comparable mortality hazard ratio as cigarette smoking! These studies, and about 20 more done all over the world with similar results, had two important limitations: in general, the studies did not identify the sleeping pills used and did not measure whether those taking sleeping pills at the start of the study continued the drugs, or whether those who were not taking sleeping pills (the comparison group) started taking them. So another study was needed.

Meanwhile, sleeping pills were never my main scientific concern. I was mainly interested in bright light treatment of depression and trying to understand how light worked. When I saw that patients needed information about light treatment, I wrote a very short book called "Brighten Your Life", but it wasn't long enough to publish, so I added information about sleeping pills to make it longer. When we found no publisher for the book, I made the information available at two web sites: [3][www.BrightenYourLife.info](http://www.BrightenYourLife.info) and [4][www.DarkSideOfSleepingPills.com](http://www.DarkSideOfSleepingPills.com). I found that the web site about sleeping pills was more popular than the advice about light treatment—indeed, one of the most popular sources about sleeping pills at Google. Therefore, over the years, I have worked to revise and update both web sites to try to help patients. It costs some money to program and maintain the web sites, but people write me to tell me how they have benefited. I see so much misinformation coming from the drug companies that I want people to have an alternative source.

Five or six years ago, my friend Dr. Bob Langer was working at the Geisinger Health Research Center, which had access to electronic health records about sleeping pill use from a large number of people. It took us five years to plan a study, obtain approval from ethics committees, retrieve the complex data from computer files in anonymized form, and analyze the very complex results. When these were published by the medical journal *BMJ Open*, the new information became available at [5]<http://bmjopen.bmj.com/content/2/1/e000850.full>. It is an interesting web site which includes more data in a supplement to the main article and some comments and debate about the article. The interest in the article was world-wide, with stories on the BBC, at Agence France Press, in major newspapers in Japan, India, and China, and even mentions in far-off places like Myanmar and Ruanda. The new data showed that people taking drugs such as zolpidem and temazepam had about 4.6 times the mortality rate of people of the same age and sex who took no sleeping pills. The new data confirm that sleeping pills might cause as much death as cigarettes, and also some cancer, so I feel a big responsibility to make the information available. There may be hundreds of thousands of lives at stake. People need to know that sleeping pills are too risky to use, and I wish I had more help in telling people.

Recently we updated the *Dark Side Of Sleeping Pills* and *Brighten Your Life* and made them available together in [6]a Kindle book, which is easy to purchase at Amazon and read off-line. The books have some new information which we have not yet had a chance to put in the web sites.

Even with, now, more than 20 scientific papers showing that taking sleeping pills is associated with more death and more cancer, many people don't believe it. They imagine there is some other explanation, though nobody has been able to demonstrate an alternative explanation. Of course, statistical association is not quite the same thing as proof of causality, but if it is good enough for the American Cancer Society to advise avoiding cigarettes, it is enough evidence of risk to stay away from sleeping pills, in my

opinion. The problem is that the drug companies have never done a controlled trial study large enough to prove one way or another whether the sleeping pills cause death and cancer, and I think they never will. The cigarette companies have never tried to prove that cigarettes are safe, and they know better than to try. It is the same. Whereas the FDA requires the very large studies for heart and diabetes drugs and so forth, the FDA has dropped the ball with sleeping pills. For more information about that, please see the Kindle book. There is, however, a new alternative to large, expensive, and dangerous controlled trials called a [7]Mendelian randomization study, which uses the new genetic methods to determine causality when a genetic variation causes a risk factor such as sleeping pill usage. Since the genetic data already exist to do the Mendelian randomization studies, it is a matter of doing the difficult statistical analyses. I hope scientific colleagues will join in this task, because I can't do it by myself. It is crucial to determine for sure the risks of sleeping pills. Too many lives are at stake.

Sleeping pills are astonishingly dangerous for something that is treated as more or less safe. In some cases, they are associated with a five-fold increase in death rate after only a few years of use. Cigarette smoking is associated with only [8]a two- or three-fold increase in death rate after long use. And doctors don't prescribe cigarettes. Is there anything else treated as safe that is associated with such a large increase in death rate? I can't think of anything.

1. <http://www.darksideofsleepingpills.com/index.html>
2. <http://blog.sethroberts.net/2013/01/10/undisclosed-risks-of-common-treatments-why-doctors-terrify-me/?preview=true>
3. <http://www.BrightenYourLife.info/>
4. <http://www.DarkSideOfSleepingPills.com/>
5. <http://bmjopen.bmj.com/content/2/1/e000850.full>.
6. [http://www.amazon.com/Dark-Side-Sleeping-Pills-ebook/dp/B00AECALQC/ref=sr\\_1\\_3?ie=UTF8&qid=1357158488&sr=8-3&keywords=daniel+kripke](http://www.amazon.com/Dark-Side-Sleeping-Pills-ebook/dp/B00AECALQC/ref=sr_1_3?ie=UTF8&qid=1357158488&sr=8-3&keywords=daniel+kripke)
7. [http://en.wikipedia.org/wiki/Mendelian\\_randomization](http://en.wikipedia.org/wiki/Mendelian_randomization)
8. <http://www.bmj.com/content/328/7455/1519>

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Alex Chernavsky (2013-01-11 08:54:18)

See also: "[1]Atypical Antipsychotic Drugs and the Risk of Sudden Cardiac Death", *New England Journal of Medicine*, 2009; 360:225-235.

1. [http://anesthesia.ucsd.edu/education/visiting-professor/Documents/Bigatella\\_Anti\\_psync\\_death.pdf](http://anesthesia.ucsd.edu/education/visiting-professor/Documents/Bigatella_Anti_psync_death.pdf)

John S. (2013-01-11 10:05:40)

Thanks for this. I am incapable of sleeping more than six hours per night. It's just the way I am. I used to worry about it, but then I decided to embrace it and use those extra hours in the morning for self improvement. I take on-line courses, sometimes watching the lectures on a treadmill at the gym. My only problem is that my physician thinks I (and everyone else) need 8 hours per night. I am continually being offered sleeping pills. I prefer not to take them, and it's good to know my instincts are basically correct.

Nancy Lebovitz (2013-01-11 10:30:34)

I'm wondering about the big risks of hypnotic drugs study- " Data were adjusted for age, gender, smoking, body mass index, ethnicity, marital status, alcohol use and prior cancer". The data wasn't matched for sleep problems, so it's possible that the drugs aren't more dangerous than insomnia. Seth: I agree. What's also possible, and plausible, is that sleeping pills increase mortality by a large amount. I don't know of any study showing that insomnia is associated with anything close to the same

increase in mortality.

ChristianKI (2013-01-12 10:18:23)

How much years of life are we talking about for a five-fold increase in death rate? Seth: Let's say you're 40 years old and your expected total lifespan is 80 years. Then you have a roughly 1/40 chance of dying each year. If you have a 5/40 chance of dying each year, your expected total lifespan goes down to 48 years – a loss of 32 years of life.

Peter (2013-01-12 12:08:35)

Paul Jaminet's new edition of The Perfect Health Diet discusses the health effects of disrupted circadian rhythms. I wonder if, particularly in the case of cancer deaths, what's showing up in the data as an association between sleeping pills and death is that people with disturbed circadian rhythms are more likely to use sleeping pills. Seth: Yes, that is possible. In [1]this study, however, "sleeping pill use was associated with significantly increased mortality after control for reported sleep durations and insomnia."

1. <http://archpsyc.jamanetwork.com/article.aspx?articleid=206050>

More Dangerous Than Cigarettes | Les Jones (2013-01-12 13:14:43)

[...] Sleeping Pills are Very Dangerous: [...]

Christopher Burd (2013-01-12 18:54:21)

*Let's say you're 40 years old and your expected total lifespan is 80 years. Then you have a roughly 1/40 chance of dying each year. If you have a 5/40 chance of dying each year, your expected total lifespan goes down to 48 years — a loss of 32 years of life.* But this 40-year-old doesn't face a 1/40 chance of dying in Year 1. His risk of death starts out far below 1/40 in his early 40s and end up far above 1/40 in his late 70s. I doubt that quintupling the death rate would really push his life expectancy below 50, although I don't have the patience (or, really, the skill) to work it out mathematically.

babar (2013-01-12 18:56:21)

uh seth, your arithmetic is completely wrong. if you have a life expectancy of 40 years from now, you don't have a constant 2.5 % chance of dying each year. you have a small chance of dying in your 40s, a somewhat larger chance of dying in your 50s, and so on. if i'm 40 and healthy my chance of dying in my 40s is pretty low - i don't know exactly but maybe 3 %? say that goes to 15 %. that means an 85 % chance of making it to 50 - already a 48.5 life expectancy, and that's if everyone kicked at 50, so it's quite quite a bit larger. Seth: Right. It was an approximation to give a rough idea of what the answer would be.

B.B. (2013-01-15 10:28:29)

Is melatonin classified as a sleeping pill? It can be used as a supplement and causes drowsiness. Seth: No. This study was about prescription sleeping pills.

## Hard to Say Whether Medicine Does More Good Than Harm (2013-01-12 05:00)

[1]A draft article by Spyros Makridakis about blood pressure and iatrogenics takes issue with [2]the statement that "The treatment of hypertension has been one of medicine's major successes of the past half-century." Over the last half-century, the article says, the death rate for people with high blood pressure decreased by almost exactly the same amount as the death rate for people without high blood pressure. Apparently "one of medicine's major successes" is a case where the health benefit no more than equaled the health cost – leaving aside what the treatment cost in time and money.

Because very high blood pressure (systolic > 180 mm Hg) is quite dangerous and blood pressure drugs really work, this is a surprising outcome. Makridakis points out that doctors start treating high blood pressure when it rises above systolic = 140 mm Hg, a point when there is little or no increase in death rate. [3]This article tells doctors to immedi-



ately prescribe drugs when systolic blood pressure is above 160. Yet death rate clearly increases only when systolic blood pressure is above 180. Makridakis concludes (as do I) that blood pressure drugs have significant health costs as well as benefits. The drugs are so often prescribed when they do no good and the costs are so high that the overall health costs of blood pressure treatment have managed to be as high as the overall benefits. Even when handed a relatively easy-to-measure problem (high blood pressure) and a relatively simple solution (blood pressure drugs), our health care system managed to achieve no clear gain. If this is "one of medicine's major successes", medicine is in bad shape.

The last paragraph of Makridakis's article makes a surprising statement: "We strongly believe that medicine is extremely useful." It does not explain this belief, which is contradicted by the rest of the article. I was puzzled. I wrote to the author:

I recently read your paper on "High blood pressure and iatrogenics". The main part makes good sense. Then it ends with something quite puzzling: "We strongly believe that medicine is extremely useful." No doubt a few areas of medicine are extremely useful. For large chunks of medicine, it is hard to tell whether they do more good than harm, because so many drugs and other treatments have undisclosed or unnoticed bad effects.

For example, tonsillectomies – for a long time the most common operation – is associated with a 50 % increase in mortality in one study. The notion that cutting off part of the immune system is a good idea makes as much sense as the idea that cutting out part of the brain is a good idea. Another example is sleeping pills. They are associated with a three-fold increase in death rate soon after they begin to be taken. I am not saying that medicine overall does more harm than good. I am saying that a strong belief about the outcome of such an assessment (does medicine overall do more good than harm?) doesn't make sense.

Makridakis replied:

Thank you for your email. The paper you mention is a draft posted for comments. I agree with you that my statement is wrong. It should have read: : "We strongly believe that medicine can be extremely useful". For instance, this could be the case in treating heart attacks, strokes, traumas from car accidents or bullet shots. But in most other cases the harm from treatment can be greater than the benefits. In addition, the harm from preventive medicine can exceed its value. Thank you for pointing out this mistake to me.

Puzzle resolved.

1. <http://www.fooledbyrandomness.com/makridakis.pdf>
2. <http://www.nejm.org/doi/full/10.1056/NEJMsa0903829>
3. <http://www.nejm.org/doi/full/10.1056/NEJMsa0903829>

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Caleb C (2013-01-12 10:27:09)

Reminds me of Kurt Harris, an MDs, view of medical nihilism: "I won't expand much on the influence of medical school hazing and 23 years of reading xrays, CTs, MRIs, et cetera, but this has been a huge influence, especially in making me a medical nihilist.

A medical nihilist posits that in a world where the entire medical system (alternative and complementary not exempted) disappeared in some selective rapture, that the net effect would be positive for the economy, and no worse than neutral for the aggregate level of health and wellness" I'm a healthcare provider as well, and I firmly believe Kurt's assessment of our profession is correct. Of course, I more or less believe it could be extended to most of the top elite fields; education, politics, finance, government, lawyers, medicine; if they were to disappear in a selective rapture the net effect would be positive for the economy, and often times result in a huge aggregate increase in human satisfaction and enjoyment of life. I guess it shouldn't be a surprise that elites will, if allowed, rig the social system so that they capture more wealth than they contribute in utility. At least the old aristocratic elite would risk their lives to protect you from the Viking raiders every now and then, and on average had pretty good tastes in what arts and science they promoted. Comparing state sponsored art these days to the cathedrals, I can't help but think our societies elites are far inferior in quality:)

Robbo (2013-01-12 14:05:18)

Wow ! "Thank you for pointing out this mistake to me." Both of you deserve great credit over this exchange.

Greg (2013-01-12 19:43:31)

Makridakis borrowed a graph from an article by statistician Sidney Port. Here's another one by him about blood pressure and mortality, showing why researchers that may not be experts in statistics can find linear relationships where the true effects are nonlinear. <http://www.math.ucla.edu/scp/publications/EHJ.pdf> This doesn't appear to be a popular reading of the data. Framingham's senior investigator responded and claimed to refute Port's analysis "without resorting to any type of statistical modeling" (or even having a statistician listed as a co-author). Not sure what to think, except that I'd sure like to see more statisticians writing/co-writing medical papers. <http://hyper.ahajournals.org/content/42/4/453.long>

Kim Øyhus, viking raider (2013-01-13 01:40:38)

They assume high blood pressure is a defect. They do not ask why the body raises the blood pressure. If the body is trying to achieve something by raising blood pressure, such as trying to avoid something worse, then pressure lowering medicine will make something worse happen.

dearieme (2013-01-13 02:36:24)

"Thank you for pointing out this mistake to me." I'm with Robbo.

dearieme (2013-01-13 02:52:40)

In Greg's second link: "However, the more relevant outcome is CVD mortality and the CVD events promoted by hypertension unconfounded by non-CVD mortality, which could be associated with low BP." Against which I observe: (i) Relevant to what? Says who? (ii) All cause mortality has the advantages of (a) not being potentially polluted by errors re cause of death, and (b) being useful to anyone who's fairly relaxed about how he dies but less so about when he dies. (iii) It begs the question to assume that CVD events are promoted by hypertension, probably in general and certainly when the debate concerns what constitutes hypertension. (iv) "non-CVD mortality, which could be associated with low BP": I'm trying to decide whether this remark is (a) mere windy assertion, (b) question-begging, (c) evidence of not having grasped the point of the paper they are criticising. These categories are not mutually exclusive. The paper in the first link is altogether on a higher intellectual plane than the one in the second. That doesn't guarantee that it gets closer to the truth, but it stacks the odds in its favour. Seth: I wouldn't say that CVD mortality is "more" relevant, but it is relevant. I think the authors were trying to say this: Let's assume 1. High blood pressure causes CVD mortality. 2. Low blood pressure does NOT cause mortality but is associated with many diseases that do (these diseases cause both death and low blood pressure). If these assumptions are true, by looking at the CVD mortality vs. blood pressure function, you get a better idea of what will happen if you lower blood pressure than if you look at the all-cause mortality vs blood pressure function.

dearieme (2013-01-13 03:21:54)

Again concerning Greg's second link: (i) "Without resorting to any type of statistical modeling" - ha bloody ha: even a primitive bit of statistical analysis is statistical modelling. It reminds me of Monsieur Jourdain's discovery that he has "been speaking

prose all my life, and didn't even know it!" But at least M. Jourdain realised! (ii) A second remark with an anti-intellectual flavour: "the value that the logistic splines analysis of Port et al ...". I've used splines myself (admittedly decades ago) but I have to say that the use of splines doesn't seem to me to be central to the Port et al analysis - they are just a nifty tool. The remark is intended, I suppose, to imply to a readership of medics that Port et al are using some fancy-dan trick to pull the wool over their eyes. The key parts of that analysis are instead (to quote myself) three bits of common sense, namely (a) using all-causes death as their measure of [negative] merit, (b) categorising the data by age and sex, and (c) exploiting percentiles as a 'natural scale' for bp. (I say "common sense" in the reasonably precise sense of "that's what an engineer or physicist would do.") Is it too rude to suggest that engineers and physicists tend to be better with numbers than medics?

Kim Øyhus, physicist (2013-01-14 13:10:27)

A feedback system failing, are what the curves in the article look like. I am thinking about negative feedback, where something tries to homeostase something else, and succeeds, but eventually fail, and blood pressure rises, perhaps as a consequence, or symptom, or direct cause. The curve is flat, with a slight increase, like a feedback system with low amplification and no integration, and the suddenly increases, like from a saturated negative feedback with too big input. It should be possible to map feedback systems like that from their effects.

### **The First John Maddox Prize (2013-01-13 05:00)**

The panel that chose the winners of the first John Maddox Prize – Colin Blakemore, a British psychologist, Tracey Brown (Sense About Science), Phil Campbell (Nature), and Brenda Maddox – deserve a prize for Most Contentious Award. [1]The Maddox Prize is supposed to be awarded to people who have excelled at:

any kind of public activity, including all forms of writing, speaking and public engagement, in any of the following areas:

- Addressing misleading information about scientific or medical issues in any forum.
- Bringing sound evidence to bear in a public or policy debate.
- Helping people to make sense of a complex scientific issue.

The first winners, announced in November, were Simon Wessely, a British psychiatrist, and Fang Shi-min, a Chinese journalist. Criticism of Fang is [2]here. Criticism of Wessely is [3]here (in the comments) and [4]here. One of his papers is [5]here. Wessely is best known for promoting the use of cognitive behavioral therapy (CBT) to treat people with chronic fatigue syndrome (CFS). In particular, "he and his colleagues demonstrated substantial overlap in symptoms between chronic fatigue syndrome and clinical depression. . . . He subsequently developed a treatment approach using cognitive-behavioural therapy techniques, which in many cases brought about substantial improvement."

The puzzle is that this is considered significant. Maybe people with CFS are depressed because they have CFS? Maybe this is why CBT helps them? [6]A statement explaining the reward does not answer this objection. As for Fang, I have no idea if he deserves the prize. I would be surprised if members of the prize committee could judge for themselves the accuracy and value of his work.

1. <http://www.senseaboutscience.org/pages/john-maddox-prize.html>
2. <http://blog.sciencenet.cn/blog-460310-632468.html>
3. <http://www.nature.com/news/john-maddox-prize-1.11750>

4. <http://www.independent.co.uk/news/science/me-bitterest-row-yet-in-a-long-saga-8348389.html>
5. <https://dl.dropbox.com/u/32109159/Wessely.MedicallyUnexplainedSymptoms.pdf>
6. <http://www.nature.com/news/john-maddox-prize-1.11750>

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Alex Chernavsky (2013-01-13 09:56:17)

Fang Shi-min (also known as Fang Shimin and Fang Zhouzi) was described favorably in a *New York Times* piece in 2010: <http://www.nytimes.com/2010/10/07/world/asia/07fraud.html>

Alex Chernavsky (2013-01-13 11:37:37)

CFS sufferers tend to insist that their condition is not psychosomatic. I'm less convinced. Psychological illnesses are well known to be highly influenced by culture. Perhaps there is something about modern Western culture that predisposes people to CFS. For a look at a bizarre psychological condition that's rare in the West but common in the East, see this article about *koro* (the belief that one's penis has either been stolen or is retracting into one's body): <http://www.kuro5hin.org/story/2002/9/16/81843/6555>

dearieme (2013-01-13 18:03:32)

Was this one of the most expensive scientific lies ever told? [http://www.science20.com/news\\_articles/radiation\\_effects\\_did\\_nobel\\_prize\\_winner\\_hermann\\_muller\\_lie-82835](http://www.science20.com/news_articles/radiation_effects_did_nobel_prize_winner_hermann_muller_lie-82835) Seth: Yes. I mentioned it here: <http://blog.sethroberts.net/2011/09/22/assorted-links-127/>

Anna (2013-01-14 13:26:21)

Alex, I suggest you watch the documentary 'Voices from the Shadows'. It can be seen here: <http://mubi.com/films/voices-from-the-shadows> another informative website: <http://mpkb.org/home/alternate/psychosomatic> #historical\_examples\_of\_psychologizing\_problems\_with\_organic\_causes If you're not willing to spend an hour and \$3 learning about the condition, you have no right to claim it is psychosomatic.

dearieme (2013-01-14 17:21:41)

Cheating seems to be spreading from science to poetry. <http://www.guardian.co.uk/books/2013/jan/14/poetry-competition-winner-plagiarist> Seth: Really surprising, since it seems obvious he would be caught.

## What Should Your Cholesterol Be? (2013-01-15 05:00)

According to [1]the Mayo Clinic website, lower levels of cholesterol are better. For total cholesterol, says the Mayo Clinic, below 5.2 mmol/L (= 200 mg/dL) is "desirable". A level from 5.2 to 6.2 mmol/L is "borderline high", and above 6.2 mmol/L (= 240 mg/dL) is "high".

[2]A 2011 study from Norway, based on 500,000 person-years of observation, found drastically different results. For both men and women, the lowest levels of total cholesterol (below 5.0 mmol/L) were associated with the most death. For men, the best level was intermediate – what the Mayo Clinic calls "borderline high". For women, the safest levels were the highest.

If high cholesterol causes heart disease, as we are so often told, the pattern for women makes no sense. For a long time, experts have told us to limit egg consumption because eggs are high in cholesterol. However, a [3]new study shows that egg consumption has no association with heart disease risk.

Via [4]Malcolm Kendrick. I also like [5]his post about whether statins cause muscle pain.

1. <http://www.mayoclinic.com/health/cholesterol-levels/CL00001>
2. <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2753.2011.01767.x/pdf>
3. <http://www.bmj.com/content/346/bmj.e8539>
4. <http://drmalcolmkendrick.org/2012/09/25/silence-was-the-stern-reply/>
5. <http://drmalcolmkendrick.org/2012/12/21/real-life-vs-pharma-company-studies/>

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TimG (2013-01-15 05:53:24)

FYI - broken links to the Norway and egg studies. Seth: Fixed, thanks.

Nancy Lebovitz (2013-01-15 09:07:06)

Suppose the medical establishment did come to believe that low cholesterol was very dangerous. Do you think they'd come with an effective treatment?

Kirk (2013-01-15 12:11:27)

The data from the China Study also shows that mortality increases as total cholesterol drops.

Jonathan Graehl (2013-01-15 13:34:10)

Obligatory "causation is not correlation" counterpoint: old and dying people are made to lower their cholesterol, and if young people lowered it they would be fine or even healthier. (I think it's 70 % likely to be causal)

Txomin (2013-01-15 17:13:17)

Which kind of low cholesterol is associated with a greater mortality? Natural or statins-induced?

BenSix (2013-01-16 09:33:24)

At least some evidence suggests that cholesterol levels [1]decrease with age in older men and women.

1. <http://circ.ahajournals.org/content/96/1/37.full>

Adam (2013-01-16 16:58:56)

The great tinkerer, evolution, developed Cholesterol as an intricate part of the way the human body works over millions of years. To think that medicine can understand the complexities of the situation and improve upon it seems quite arrogant & foolish. This part seems to recognize that humans are not living as intended: "In the Diet, Obesity, and Gene (Diogenes) Project, increased protein consumption together with a modest reduction in glycemic index was beneficial for weight control. Substituting protein for carbohydrate also partly resulted in lower blood pressure, improved lipids levels, and concomitantly reduced cardiovascular risk. Higher vitamin D intake might have beneficial effects on the reduction of visceral adipose tissue and other cardiovascular risk factors. Another possibility is that lifestyle factors associated with egg consumption might have obscured a positive association between egg consumption and risk of coronary heart disease and stroke. However, regular egg consumption tends to be associated with unhealthy lifestyle factors such as smoking and physical inactivity." In other words, eating too much sugar, being inactive, not getting enough vitamin D, & smoking are unnatural & harmful behaviors for humans. I feel 1000 % more confident that addressing these 4 things would be more effective & less dangerous than attacking Cholesterol. Seth: The evidence that high cholesterol causes heart disease is close to zero. Because of this, it is likely that roughly everything mainstream experts say about cholesterol will be wrong. It's like starting an argument "let's assume 1 = 0." With that assumption, you will reach a lot of wrong conclusions.

Tim Banks (2013-01-18 20:15:41)

In the United States heart and arteriosclerosis are the leading cause of premature deaths but in Japan deaths due to cardiovascular diseases are insignificant! We have to wonder why! Japanese eat a lot of fish that contains omega 3 oil, a fat known to reduce plaque in the arteries thereby reversing atherosclerosis. Omega 3 unsaturated fats increase the HDL or high-density lipoproteins and their particle size that are essential for keeping the arteries from blocking. Microbiology and biochemistry are very complex sciences and many phenomena are not at all understood. Many anomalies exist. As mentioned above, omega 3 in fish oil reverses artery plaque yet it contains significant amounts of dietary cholesterol and its molecular is extremely similar! Seth: The French also have a low rate of heart disease – and they eat much less fish than the Japanese. There is one clear similarity between the French diet and the Japanese diet: Both eat a lot of fermented food, far more than other countries.

Peter Andrews (2013-01-30 07:30:23)

... and fermented foods contain Vitamin K2 which reduces vascular calcification...

### Assorted Links (2013-01-16 05:00)

- [1]American Geophysical Union honors Peter Gleick.
- [2]What does using SPSS say about you? (Via [3]Marginal Revolution). I disagree that R users "do not care about aesthetics." R can make much nicer graphs than other packages.
- [4]Does the Daily Mail website get 100 million unique visitors per month? If so, did Michael Jackson sell one billion records?
- [5]IRB difficulties, social science division
- [6]Unsafe injections: "This can't happen in the United States, this is a Third World thing."
- [7]What medication was Lanza on? "It may well turn out that knowing what kinds of guns he used isn't nearly as important as what kind of drugs he used."
- [8]Aaron Swartz in his own words.

Thanks to [9]Patrick Vlaskovits.

1. <http://climateaudit.org/2013/01/05/agu-honors-gleick/>
2. <http://seanjtaylor.com/post/39573264781/the-statistics-software-signal>
3. <http://marginalrevolution.com/marginalrevolution/2013/01/assorted-links-664.html>
4. <http://www.economist.com/news/business/21569066-correction-daily-mail-website/comments#comments>
5. <http://organizationsandmarkets.com/2009/04/09/irbs-gone-wild/>
6. <http://www.usatoday.com/story/news/nation/2012/12/26/infections-needles-mrsa-hospitals/1780335/>
7. <http://mobile.wnd.com/2013/01/the-giant-gaping-hole-in-sandy-hook-reporting/>
8. <http://nymag.com/daily/intelligencer/2013/01/aaron-swartz-reader-in-his-own-words.html>
9. <http://vlaskovits.com/>

dearieme (2013-01-16 14:02:32)

"When it's extremely low cost to perform inference, you are likely to perform a lot of inferences. When your first regression gives a non-result, you run a second one, and a third one, etc. This leads untrained researchers to run into multiple comparisons problems and increases the risk of Type I errors." But it also enormously improves the chances of finding something publishable. Seth: "Untrained researchers" – ha ha! It's better to find something than nothing even if you can't put a p value on the something. In the early days of exploratory data analysis respected statisticians criticized it because they said it would lead to finding patterns where no patterns existed.

Mark (2013-01-17 03:44:41)

Peter Gleick Seth: Thanks, fixed.

Lemmy Caution (2013-01-30 17:54:45)

They make grade school kids fill out human subject consent forms for science fair projects now: [http://www.sciencebuddies.org/science-fair-projects/project\\_src\\_safety\\_human\\_subjects.shtml](http://www.sciencebuddies.org/science-fair-projects/project_src_safety_human_subjects.shtml)

### **"The Most Influential Tree in the World" (2013-01-17 05:00)**

The title comes from Andrew Montford's new book [1]Hiding the Decline (copy given me by author) about Climate-gate. From an introductory section:

When the figures were published the extraordinary lack of data underlying the blade of the Yamal hockey stick caused a minor sensation. In fact the high point at the end of the graph was shown to have been based on only four trees, and only one of these had the hockey stick shape. McIntyre dubbed it 'the most influential tree in the world'.

Most of Hiding the Decline is about the inquiries that followed Climategate. I enjoyed reading about smug powerful people making fools of themselves and the fairy-tale-like consternation created by two unlikely events: 1. A non-scientist ([2]Steve McIntyre) gets involved in the global warming debate. As in a fairy tale, McIntyre is free to speak the truth. In particular, he is free to question. Professional climate scientists cannot speak the truth for fear of career damage. 2. The release of the Climategate emails. As in a fairy tale, a sudden burst of truth about bad behavior previously hidden.

Hiding the Decline is as well-written as a book by a professional writer but this is a book no professional science writer could write due to its investment in an officially-wrong point of view. There are lots of badly-written books from tiny-minority points of view. The appearance of a well-written one, joining Montford's earlier [3]The Hockey Stick Illusion, is no small deal. How much free speech do we have? It depends on the medium. Maybe the sequence from less to more censored is: 1. Conversation. 2. Email and other private writing. 3. Blog post. 4. Poorly-written book. 5. Article in minor magazine. 6. Well-written book. 7. Article in prestigious magazine. 8. Textbook. From one step to the next (e.g., from conversation to email), views become less diverse. This book is disagreement with the official line high up the tree.

One reason we enjoy certain jokes is that they speak a forbidden truth. When you can't usually say it, the truth is funny. The forbidden truth aspect of Hiding the Decline is another reason I enjoyed it so much.

Does the story have a happy ending? Montford thinks not:

As we look back over the ten years of this story, the impression we get is of a wave of dishonesty, a public sector that will spin and lie, and mislead and lie, and distort and lie, and lie again. . . . Despite the emails showing, apparently incontrovertibly, that FOI laws were flouted with the full knowledge of senior figures in university, there have been almost no discernible repercussions for anyone involved. . . . The response to [Climategate] was an extraordinary failure of the institutions and of the people who are paid to protect the public interest – a failure of honesty, a failure of diligence, a failure of integrity.

My view is different. The institutions (University of East Anglia, Penn State, and so on) and officials (e.g., Vice Chancellor of the University of East Anglia) "failed" only in their ostensible purpose. Their actual purpose centers on protecting the people who created or hired them (see *The Dictator's Handbook*). At this they succeeded, but suffered a large loss of credibility. To me, Climategate is the story of how two people – Steve McIntyre and the hacker of the Climategate emails – both with zero official standing, had a huge effect on worldwide public discourse. (A Google search for Climategate returns about 2 million hits.) They exposed dishonesty in powerful and heretofore respected people (science professors) on a matter far more important than expense accounts. They pushed the rest of us a non-trivial distance toward seeing the truth. I didn't know that was possible, and I'm glad it is.

1. <http://www.bishop-hill.net/hiding-the-decline/>
2. <http://climateaudit.org/>
3. <http://blog.sethroberts.net/2010/04/22/the-hockey-stick-illusion/>

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dearieme (2013-01-17 12:56:46)

"e.g., a vice-president of the University of East Anglia": if the reference is to Acton, he's the Vice-Chancellor - which means boss. I suppose the translation into American might be President. Seth: Thanks, I fixed it.

Gortlosk67 (2013-01-23 03:21:59)

"They pushed the rest of us a non-trivial distance toward seeing the truth." They pushed us toward seeing the exaggeration might be a bit nearer the mark. The truth is much harder to see.

... | Glen Davis (2013-01-24 15:11:51)

[...] Seth's Blog » Blog Archive » "The Most Influential Tree in the World" [...]

## No Stagnation in My Kitchen (2013-01-18 05:00)

Stagnation of innovation is often illustrated with kitchens. In 1996, [1]Paul Krugman wrote, "I live in a house with a late-50s-vintage kitchen, never remodeled. The non-self-defrosting refrigerator, and the gas range with its open pilot lights . . . it is still a pretty functional kitchen." (Illustrating, at least, his lack of change.) [2]Tyler Cowen said "if he were to introduce his grandmother to a modern American kitchen, it wouldn't be all that earth-shattering for her." [3]David Brooks mentioned lack of innovation in many things, including "appliances". Last week, [4]the Economist said:

Take kitchens. In 1900 kitchens in even the poshest of households were primitive things. . . . Fast forward to 1970 and middle-class kitchens in America and Europe feature gas and electric hobs [= burners] and ovens, fridges, food processors, microwaves and dishwashers. Move forward another 40 years, though, and things scarcely change.



For a long time I wanted to go to the giant kitchen and housewares trade show in Chicago every summer, until [5]this article convinced it would be the same old stuff with tiny variations.

In contrast, my kitchen has changed greatly in the last ten years. Here's how:

1. Tea-brewing equipment. Soon after I started practicing the Shangri-La Diet (calories without smell), I started drinking lots of tea (smell without calories).
2. Electric tea kettle (heats water for tea better than microwave).
3. Kitchen scale (for tea and flaxseed). I discovered that flaxseed oil and, later, ground flaxseed improved my brain function and gums.
4. Noseclips. For the Shangri-La Diet.
5. Yogurt maker. I believe that fermented foods are essential for health.
6. Kombucha brewing tools (e.g., glass jars).
7. Spice grinder (for flax seed).
8. Soup cooker (for pork belly and miso soup). Eating lots of pork belly improved my sleep.

I would like to make more fermented foods. I hear that in South Korea I can get a machine that makes both natto and yogurt.

My kitchen changed because my ideas about health changed. My ideas about health changed because of my research. I found a new way to lose weight. I had a new explanation of why we like foods with complex, sour, and unami flavors (so that we will eat more fermented food). Self-experimentation convinced me that I was seriously omega-3-deficient, thus the flaxseeds. I discovered that if I eat a lot of animal fat, I sleep better.

I believe kitchen stagnation reflects stagnation in our thinking about health. Every October, I point out that the Nobel Prize in Medicine has again been given to research that is so far useless. "Molecular medicine has come nowhere close to matching the effects of improved sanitation," says the Economist. Could mainstream health researchers be trapped by their desires to show off (no cheap equipment), to be respected (no "crazy ideas"), and to produce a steady stream of publications (no time to test implausible ideas)? Could having goals other than the truth (such as respectability) make it harder to find the truth? People who have written about stagnation in innovation do not seem to have considered these possibilities.

1. <http://www.pkarchive.org/theory/WondersofTechnologyNotSoWonderous.html>

2. <http://tylercowen.com/tag/the-great-stagnation/>

3. [http://www.nytimes.com/2011/10/07/opinion/brooks-where-are-the-jobs.html?\\_r=0](http://www.nytimes.com/2011/10/07/opinion/brooks-where-are-the-jobs.html?_r=0)

4. <http://www.economist.com/news/briefing/21569381-idea-innovation-and-new-technology-have-stopped-driving-growth-getting-increasing>

5. <http://www.nytimes.com/2011/03/10/garden/10housewares.html?pagewanted=all>

Tony (2013-01-18 05:30:32)

What do you mean by soup cooker? Is this different than a blender or slow cooker? If so, I want one! I tried to google "soup cooker" with not much luck. Seth: [1]Here is a picture. Like a slow cooker but more choice of temperature and duration.

1. [http://www.google.com/imgres?imgurl=http://image.made-in-china.com/2f0j00bvCTLWyBZtkL/Computerized-DCrockery-Pot-Soup-Cooker-KZB50-B-.jpg&imgrefurl=http://www.made-in-china.com/showroom/jians-rita/product-detailhqbmlDyoXnkL/China-Computerized-DCrockery-Pot-Soup-Cooker-KZB50-B-.html&h=305&w=300&sz=82&tbnid=kH4WrtiPbvExrM:&tbnh=97&tbnw=95&zoom=1&usg=\\_\\_hXVqm0syNxYtDYqwgEK9VCJtGD4=&docid=Bx5dNFGrlKGeIM&sa=X&ei=GI35UJvGKMS1rQHfsICIBg&ved=0CIgBEPUBMAY&dur=419](http://www.google.com/imgres?imgurl=http://image.made-in-china.com/2f0j00bvCTLWyBZtkL/Computerized-DCrockery-Pot-Soup-Cooker-KZB50-B-.jpg&imgrefurl=http://www.made-in-china.com/showroom/jians-rita/product-detailhqbmlDyoXnkL/China-Computerized-DCrockery-Pot-Soup-Cooker-KZB50-B-.html&h=305&w=300&sz=82&tbnid=kH4WrtiPbvExrM:&tbnh=97&tbnw=95&zoom=1&usg=__hXVqm0syNxYtDYqwgEK9VCJtGD4=&docid=Bx5dNFGrlKGeIM&sa=X&ei=GI35UJvGKMS1rQHfsICIBg&ved=0CIgBEPUBMAY&dur=419)

Rashad (2013-01-18 08:06:00)

Here is a different take on kitchen stagnation, framing it mostly as a wealth distribution issue. [http://www.slate.com/blogs/moneybox/2013/01/10/myth\\_of\\_kitchen\\_stagnation.html](http://www.slate.com/blogs/moneybox/2013/01/10/myth_of_kitchen_stagnation.html)

Tom (2013-01-18 08:17:29)

Seth's point makes more sense. None of his new equipment sounds very expensive. His kitchen changed because what he eats changed, not because he has more money. Professional chefs may buy immersion circulators, blow torches, French tops, pressure cookers, and blast chillers, but they need to be on the bleeding edge to prepare great tasting food extremely quickly. Most people would not, regardless of how much they made. Maybe the Romneys have a blast chiller and an immersion circulator, but I wouldn't bet on it.

dearieme (2013-01-18 10:06:29)

Everyone in Britain has 1 - 3. We also have 5 & 7. About "Kombucha brewing tools (e.g., glass jars)": would our old wine-making equipment do? I too would like to know what a Soup cooker is. Seth: To make kombucha you need glass jars of the right size. Mine hold about a gallon.

Paul N (2013-01-18 12:36:37)

An approximate American equivalent of the soup cooker is the [1]VitaClay Chef It has an unglazed clay crock, can be set at various temperatures, from slow cooking pot roasts, to rice cooking, to yoghurt making. For pot roasts, it cooks faster than crock pots, and then decreases the temperature, too keep it warm but no overcooked. Also has programmable delayed start and a few other good features. I bought one of these for my partner for Xmas. Both she and I are long time crock pot users and we both agree this is better, and produces better tasting food, than any of our crockpots. We have used the yoghurt setting for making kefir, and also for sourdoughing bread. I am normally not a fan of countertop plug in appliances (other than the kettle), but this one has earned its place in my kitchen.

1. <http://vitaclaychef.com/>

Paul N (2013-01-18 12:47:50)

On the topic of kitchen innovation, I think the focus on "equipment" has led to a lack of innovation on "food" and even true "cooking" Here's a great article from Mark Bittman of the NY Times on the topic[1]Your kitchen is tiny - so what> ; "I asked my friend the chef Mario Batali what he thought about all this[people disparaging my small kitchen and basic equipment]. "Only bad cooks blame the equipment," he said. "I can make almost every dish in my restaurants on four crummy electric burners with a regular oven — as can just about anyone else who cares to." I couldn't agree more. The focus on bigger kitchens, with more stuff, has moved the focus from the food itself. It has allowed people to own more gadgets and buy and store more varieties of prepared/processed foods in larger volumes (often resulting in spillage and waste) while the overall quality (and knowledge) of home food preparation has decreased.

1. [http://www.nytimes.com/2008/12/14/weekinreview/14bittman.html?\\_r=0](http://www.nytimes.com/2008/12/14/weekinreview/14bittman.html?_r=0)

Jonathan Shewchuk (2013-01-18 20:16:00)

My favorite new kitchen technology is my sous vide cooker. The custardy eggs you get when you heat them at 148 F for an hour are superb. The way it tenderizes short ribs and chuck roast and anything with cartilage is amazing. And I like that I can leave a roast in it and take it out anywhere between 8 and 48 hours later, still cooked medium, so I don't have to know in

advance when I'll be eating. Seth: Thanks for the suggestion.

Carl Willat (2013-01-19 09:36:44)

I want a bread oven with steam injection.

Paul N (2013-01-19 13:05:24)

@ Carl You can get almost the same result as a steam oven, with this no-knead method and a cast iron pot [1]No Knead Bread. A google search of Mark Bittman and no-knead bread will come up with a few interesting variations on this technique, but the cast iron pot is always the "steam oven" I suppose a bread machine - or even a domestic range - could be made with a steam "system" - but that sounds expensive for home kitchen equipment. And there's nothing to break, leak or become obsolete with the pot.

1. <http://www.nytimes.com/2006/11/08/dining/08mini.html?ref=dining>

dearieme (2013-01-19 18:02:20)

"Seth: To make kombucha you need glass jars of the right size. Mine hold about a gallon." Our wine making jars do too (though of course our gallon is bigger than yours). When the weather warms up enough that we can risk a trip into the attic, we'll have to see whether we can find them.

WR (2013-01-21 20:53:49)

Perhaps you realize, but stagnation ala TC is not about what you actually have, but what you could get. Nothing you list is new, and if anything it's evidence of stagnation. Soup, Yogurt, Kombucha, Tea, etc—not new. Nor are the various apparati you cite new (except perhaps to you), with the one exception being your own nose clipping discovery. The whole point is that once you invest glass jars ("pick the low-hanging fruit"), they prove pretty hard to improve. And gallon glass jars have been around since the 1800's. Maybe your point is that despite stagnation in the latter sense, there is still room for plenty of individual improvement in quality of life? Seth: What I wrote has a non-trivial point. My kitchen changed because my ideas about what to eat improved. That's progress. Other people's kitchens did not change at least partly because – my example makes clear – their ideas about what to eat did not change. In other words, underneath the technological stagnation noticed by TC and others lies scientific stagnation – in particular, stagnation in our understanding of health. I don't think that has been obvious to people who write about stagnation and its causes. Sure, my new ideas led me to choose from existing stuff in new ways. But as the new ideas (e.g., about fermented food) spread, new technologies will come along that do a better job of using those ideas.

Tina D. (2013-01-22 12:24:38)

Yes. I have limited space in my kitchen, so I need to pick and choose what I use, and it revolves around my diet. I like stews and soups and braises, so a slow cooker is essential, but not a panini maker because I don't really like sandwiches. And, as my ideas about food changes - I am slowly becoming a paleo and fermented fan - I'm sure my equipment will change. My friends and I now have 6 gallon plastic buckets to make our sourkraut. I've a fan of only using what I need (although my closet tells me otherwise) but it's really hard to do so when we live in a culture that rewards stuff for the sake of stuff.

### Assorted Links (2013-01-19 05:00)

- [1]Failure of global warming predictions. "T he Met Office is unrepentant. "
- [2]Radiation deficiency? There hasn't been anything new about radiation hormesis in years (not counting Nassim Taleb's Antifragile), but it is so important I will keep mentioning it.
- Unlikely fermented food: [3]natto-coffee gelatin sandwich.
- [4]More about the Weber heart transplant story
- [5]Wide-ranging plagiarism by head of Toronto school board

1. <http://www.dailymail.co.uk/news/article-2261577/Global-warming-stopped-16-years-ago-Met-Office-report-reveals-MoS-got-right-warming--deniers-now.html?ito=feeds-newsxml>
2. [http://www.science20.com/news\\_releases/radiation\\_may\\_be\\_good\\_for\\_you\\_says\\_study](http://www.science20.com/news_releases/radiation_may_be_good_for_you_says_study)
3. <http://en.rocketnews24.com/2013/01/13/cafe-scores-unlikely-hit-with-natto-coffee-gelatin-and-whipped-cream-sandwich/>
4. <http://immortalbirdpostscript.wordpress.com/2013/01/15/helen-haskell-mothers-against-medical-errors-and-damons-story-at-patient-safety-summit-keynoted-by-bill-clinton/>
5. <http://www.thestar.com/news/gta/article/1313575--chris-spence-suspected-plagiarism-found-in-articles-speeches-dissertation>

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Txomin (2013-01-19 05:42:49)

Even if the climatologists had acted with caution, respect, and integrity (which they blatantly haven't), they should still be held accountable for the huge misdirection of resources and funds that has taken and continues to take place. The environmental cost of so-called "bio-fuels" alone is appalling.

Ief (2013-01-19 11:04:24)

Since you are interested in hormesis did you find surprising your brain-test results when you removed your mercury amalgams? If both results like your brain-tests and the ones you link at hormesis articles are true then for low dose stressors we have, some times good some times bad. Some of the bad can probably be interpreted as hormesis because good for something inside you (cancer cells or a microorganism) in a small time scale (months) can be bad for you (and for this thing inside you) in a bigger time scale (several years until it kills you). Also something bad in our culture might have been good in another, we would probably call many shamans (who were respected persons in their tribes) mentally disturbed. The properties of mind that are respected have changed and I am wondering how I should interpret your decreased performance in your arithmetic tests. So some times I end up thinking that whatever will turn out to be true we will be able to talk about hormesis. I do not imply by this that this knowledge is not useful. Seth: Yes, I was surprised. Partly because the brain test results are very hard to improve for a long time. (Now and then they get better for a single test.) Removal of the mercury amalgam fillings caused an apparently permanent improvement. Partly because the improvement was so clear.

dearieme (2013-01-19 13:17:50)

BMI mumbo-jumbo refined. <http://www.dailymail.co.uk/news/article-2264964/Tall-people-overweight-though-t-youre-short-stay-New-Year-diet-little-longer.html>

garymar (2013-01-19 17:12:11)

That Japanese sandwich shop is near a big race track called [1]Suzuka Circuit. Maybe the race fans find that after a day inhaling exhaust fumes, even a natto sandwich tastes good!

1. <http://www.mobilityland.co.jp/english/suzuka/>

dearieme (2013-01-20 15:20:38)

Ahoy, Seth. <http://digressionality.blogspot.co.uk/2013/01/calorie-restriction-monkeys-fed-30-sugar.html> #comment-form

Jenny (2013-01-20 17:07:36)

Can' think where else to put this, but the article before this one won't 'open up'. Seth: It should work now.

dearieme (2013-01-21 04:42:56)

Of the current generation of leading British politicians, this chap may have the highest IQ and most sensitive political antennae. <http://www.telegraph.co.uk/comment/columnists/borisjohnson/9814618/Its-snowing-and-it-really-feels-like-the-start-of-a-mini-ice-age.html>

Jenny (2013-01-21 16:15:45)  
Thanks. Enjoyed reading it.

M&M (2013-02-14 15:58:06)

I had mercury amalgams fillings removed from my teeth about 10 years ago. I personally find it interesting that my migraine headaches have subsided from once a month to now only 4 times a year. For me, the findings are pretty clear.

## **Fecal Transplant Roundup (2013-01-20 05:00)**

[1]A new study has found that fecal transplants work better than antibiotics for clearing up a common and dangerous infection:

Such transplants cured 15 of 16 people who had recurring [= difficult-to-get-rid-of] infections with *Clostridium difficile* bacteria, whereas antibiotics cured only 3 of 13 and 4 of 13 patients in two comparison groups.

*Clostridium difficile* infections often result from antibiotic treatment. It is a big step forward for modern medicine to manage to grasp that the bacteria in our bodies protect us from infection. [2]Here is a blog about the value of fecal transplants; [3]here is another blog.

The comments contain many interesting details:

I spent Thanksgiving of 2012 in ICU and almost died from C-Diff. It was a harrowing experience for both me and my family. It required two months of care, recuperation and doses of vancomycin. My hospital bills are outrageous. [Fecal transplants are much cheaper – Seth] I am praying it doesn't return, having just finished my last dose of vancomycin. I had a dental implant and was on clyndamycin for two weeks and that was the culprit. Dentists should be required to inform patients that C-Diff could be a reaction to that specific antibiotic. I [4]was not warned about this being a possible side effect.

Our mother was hospitalized at a major university hospital and came down with C. diff. The antibiotics they gave her to fight the infection finally destroyed her kidneys and hearing and she decided that life was not worth living in that condition.

We have using this "treatment" for years and years in horses with difficult intestinal issues which didn't respond to other medications. We pass a slurry of fecal material from a healthy horse ( often mixed with electrolytes and baking soda) directly into the stomach of the sick horse. It works in almost all cases.

After my gut microflora was destroyed by 9 months of antibiotics for Lyme disease, I got C. diff this past June. Was flabbergasted that NONE of my doctors, ALL of whom prescribe antibiotics, ( & hopefully read the NYT or the INTERNET) [knew] about fecal transplants! I ditched my Lyme doctor (who said along with my GI & GP): "Take Flagyl" (which didn't work) and then Vancomycin. No thanks. Wasn't going to wait around for the C. diff to corrode my guts or till I was almost dead, so I went right to Dr. Brandt for a transplant and in ONE day the symptoms were gone.

I had recurring c diff for 12 months.Tried a myriad of antibiotics and a colon cleanse.Nothing worked. I was getting sicker and weaker by the day, not to mention very depressed. I was "beyond" desperate.

My husband (an internist) performed a fecal transplant (using my brother's stool—close DNA donor) at home (hanging the saline/stool bag from the ceiling fan!) 3+ years ago. I have been healthy ever since.

[A doctor:] This important study . . . is a big step in the right direction, however the study is quite small. [A doctor who doesn't understand statistics even after it is explained in plain English. The evidence from this "small" study is very strong. In case you didn't understand the numbers, the article says it in words: "the antibiotic groups were faring so poorly compared with the transplant patients that it was considered unethical to continue". – Seth] A larger RCT is needed before this becomes standard of care [implying that his or her lack of understanding of statistics is the norm – Seth]. Since no one is currently in position to reap monopoly profits from this treatment, I predict the study will be a long time coming. [Which, if true, implies that doctors' lack of understanding of statistics will kill a lot of people.–Seth]

The majority of cases of *C. difficile* infection occur in the hospital where they were usually brought on by use of broad-spectrum antibiotics destroying the natural balance of intestinal flora in the gut. A great many people outside the hospital setting walk around healthy colonized by *C. difficile* without becoming infected. Others become colonized while in the hospital, a virtual surety if you stay long enough. Broad-spectrum antibiotics wipe out bacteria that normally out-compete *C. difficile* at different niches within the intestinal ecosystem. [In other words, gross overuse of antibiotics has created a new ecosystem – modern hospitals – where *C. difficile* thrives. – Seth]

After a reaction to an antibiotic caused C Diff which lasted almost a year, was treated with multiple antibiotics of which Vancomycin was the only one that kept it at bay, having had a number of courses without success, meanwhile weight was down 25 lbs and health was deteriorating as in my opinion Vancomycin also presented some problems of its own, teeth browning, lethargy etc. C Diff ruins body and soul. After a lot of research was lucky to have found a doctor who checked out the fecal transplant history/procedure and performed the transplant. The feces donor was my brother having first had blood & feces testing. The transplant was a success, after suffering C Diff for almost a year my quality of life is great - normal.

The [squeamish] tone of this article is enraging. [It begins "The treatment may sound appalling". The headline calls it "This, er, Option". – Seth] I contracted ulcerative colitis when I was fifteen, and the squeamishness of my parents and doctors in my small town prevented me from accessing real care. More concerned with being grossed out than dealing with the problem at hand, I was allowed to go a year without receiving proper care. As a result, I ended up with such extreme internal bleeding that I was sent unconscious to the intensive care unit at Swedish Hospital in Seattle, three hours away from home, where a surgeon removed my entire colon. He chided my parents and local doctors for not seeking help from a specialist sooner; had they done so, I would not have been in such dire condition. I spent the next year of my childhood in the hospital. All this is to say: get over feeling grossed out by the human body and consider any possible treatments that might work. If this one does, great. Ditch the whole "ew" reaction because it stands in the way of saving lives.

I was plagued for decades with room-clearing gas and stomach cramps. Yogurt and probiotics didn't stand a chance against the established bad bugs. Then I went for my first colonoscopy (which gave me a whistle-clean gut.) I was told I could have anything I wanted. First thing, I drank a full quart of organic kefir. I haven't had a problem since. [Very interesting. Before a colonoscopy, you take something special to clean out your gut.–Seth]

Thanks to Alex Blackwood and Karen Goeders.

1. [http://www.nytimes.com/2013/01/17/health/disgusting-maybe-but-treatment-works-study-finds.html?\\_r=0](http://www.nytimes.com/2013/01/17/health/disgusting-maybe-but-treatment-works-study-finds.html?_r=0)
2. <http://thepowerofpoo.blogspot.com/>
3. <http://fecaltransplant.org/>
4. <http://blog.sethroberts.net/2013/01/10/undisclosed-risks-of-common-treatments-why-doctors-terrify-me/>

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derp (2013-01-20 07:21:19)

The doctor you cited indeed is not familiar with statistics. Though he is right that the sample size is small, the effect is large. Furthermore, he seems to have no clue regarding previous studies. Showing the same effect over and over again creates a different statistic - you cannot simply view one study in isolation. This has been repeatedly critized and led to statisticians proposing non-frequentist (read: Bayesian) statistics for medical research (cf. Goodman, Ann. Intern Med. 1999;130(12):1005-1013). Even when using a pooled analysis (Gough et al., Clin Infect Dis. 2011;53(10):994-1002), the treatment effect is so large that instead of arguing, it calls for immediate development of treatment protocols (i.e. donor eligibility, disease screening of the donor, amount & frequency & mode of delivery of the transplant, ...). Seth: Good point.

Jazi Zilber (2013-01-20 13:51:59)

FDA is already blocking innovation here They want to disallow it until fully controlled by them. Likewise, FDA fight AGAINST smokeless cigarettes. Unbelievable! We have a certain killer cigarettes. We have a seemingly safe alternative - synthetic cigarettes. Yet it is "not approved here" and FDA fight against it!

John Eels (2013-01-20 15:44:24)

I can't resist but ask a very practical/utilitarian question. What would you advice a friend to do if he suffered from SIBO (small intestinal bacterial overgrowth)? Seth: I don't know.

Jonathan (2013-01-21 00:40:00)

The horse tale is particularly interesting. It implies that a fecal transplant can be done via the stomach. Perhaps, if a sufferer can't find proper medical transplant, in an emergency they might be able to self-treat by eating feces? Seth: Good point. One person uses ice cubes. Which she swallows.

Adam (2013-01-21 04:30:27)

Of course the FDA is blocking innovation. That is pretty much just what they do. It makes sense when you discover that they are largely funded by the pharmaceutical companies.

dearieme (2013-01-21 04:41:47)

I was about to raise the issue of repugnance, but probably some people wouldn't give a s...

Paul N (2013-01-21 14:51:44)

An alternative - and perhaps less "icky" means to the fecal transplant, is a microbiota transplant by inserting kefir grains into the colon - seems to have the same effect, at least in the case described here; [1]How I corrected ulcerative colitis with kefir grains This and the kefir example in the story above suggest that feces aren't the only way to do this. Part of the problem is likely that many probiotics don't survive the stomach/small intestine, so placing them directly in the colon gets around this.

1. <http://users.sa.chariot.net.au/~dna/IBD/index.htm>

Howard Lundy (2013-01-21 16:06:50)

Good roundup...A fecal transplant (FT) pretty much saved my uncle's life. He had the C. diff colitis infection and was in progressive decline. About 3 days after the FT he started feeling normal again.... get the word out! Visit my advocacy blog for more information at <http://fecaltransplant.info> or [www \[dot\] fecaltransplant \[dot\] info](http://www.fecaltransplant.info)

dearieme (2013-01-21 17:17:11)

Ahoy, Seth: <http://www.guardian.co.uk/lifeandstyle/2013/jan/19/what-doctors-wont-do>

Michael (2013-01-28 13:39:24)

Thank you for referencing my website FecalTransplant.org. A quick note I wanted to make was that I used Fecal Transplant to cure myself of Ulcerative Colitis, which was not caused by Clostridium Difficile bacteria. Most of the studies that are now making headlines in the United States are for its application for c. diff bacteria, however its uses go far beyond just that bacterial infection, but also to diseases like Ulcerative Colitis or Crohn's Disease that are not recognized as being caused by bacterial infection by doctors in the U.S. It is my belief that many disease currently known as autoimmune disorders are actually caused by infection by an unknown pathogen. Seth: That's an interesting idea. Is there evidence for it? I might put it differently. That many diseases are caused by UNDERINFECTION, a new concept to many doctors.

Lemmy Caution (2013-01-30 17:25:18)

Fecal transplants seem like a good idea. I would like to know how dangerous the procedure is though.

Teri (2013-02-07 17:30:44)

A fecal transplant healed me from coliltis in October 2012 after 3 1/2 years of suffering. Read my blog -<http://healed-from-uc.blogspot.com> It WORKS! I am symptom free and drug free!!!

### **Best Introduction to the Shangri-La Diet? (2013-01-21 21:43)**

[1]A long thread at Mark's Daily Apple may be the best introduction to the Shangri-La Diet. It is dramatic (people object, people say the diet is crazy), varied (many voices, many sorts of data), responsive to feedback (questions and objections are answered) and no doubt more convincing than my book (because it isn't by me). The helpful elements include:

1. An introductory success story (from a woman named heatseeker) that I have[2] already blogged about.
2. Someone makes a common Paleo objection – it works because of macronutrient ratios. "You have stumbled on the perfect macro ratios for you!" Heatseeker says this is unlikely because she barely changed her macro ratios. She answers many other questions and objections (e.g., "how do you choke down the coconut oil?").
3. Someone says it didn't work for them ("neither did anything else").
4. Link to [3]a talk by me ("You Had Me at Bacon") that puts the diet in the context of my other work, such as the effect of pork fat on sleep.
5. Link to [4]Alex Chernavsky's results, which are most impressive [5]in context.
6. Emphasis that the flavorless calories can be anything so long as they are flavorless (i.e., have no smell, which can be achieved by eating them nose-clipped). As heatseeker says, she lost weight via flavorless fat, I lost weight via flavorless sugar, so the success cannot be due to the fat. It is more complicated than that.
7. A confident naysayer: "I started eating less and now I'm lean for life. It really is that simple."
8. Link to [6]a scientific paper by me about the underlying theory.



9. Heatseeker says: "I would say that after four years of eating according to TPB [The Primal Blueprint by Mark Sisson], and 2-3 years of really strict adherence, absolutely every promise made by Mark came true-EXCEPT the fat loss." That Diet X works better than a credible alternative (in this case, TPB) is more interesting than the observation that it works better than nothing.
10. A link to me talking about "[7]what food makes my brain work best". More context.
11. "Has been incredibly easy to follow, even while at work," says someone who is not heatseeker.
12. Independent discovery: "38 years ago our gym teacher had one of the overweight girls (we had 2) in gym class doing this! By the time we hit our Christmas break she had lost most of her pudge!! This is a true story. I remember because the girl's parents were not informed and the gym teacher almost got fired for 'experimenting' on the said pupil. What saved her was people finding out that the girl had been caught by the teacher barfing up her lunch in an effort to lose weight (bulimic) so to keep her from going down that path and to gain her trust as a confidant etc she helped her by showing her a method she herself had used to control hunger which was eating a fat source between meals. Fantastic eh??? I had never heard anything quite like this until I read this thread."
13. Bonus side effect: "Last night I slept through the night! Completely! I did not even slightly stir for any reason. . . . I have not slept through the night in YEARS!!!!!!" More reason to think that lack of certain fats impairs sleep.
14. Psychological effect: "What is happening here with the SLD? I feel calm and neutral to food." You may remember [8]research that suggested self-control is like a muscle. One similarity is the more you use it the stronger it gets. Several people have said that as soon as they started SLD, they were able to overcome other addictions, such as smoking and coffee. Maybe this is because years of struggling with food, day after day, had left them with very strong self-control. Before SLD, their self-control was exhausted pushing away urges to eat. As soon as SLD got rid of those urges, their very strong self control made it easy to quit smoking or whatever.
15. Two reluctant yea-sayers: "I coincidentally started trying this as a gesture of support for a desperate friend of mine . . . The whole concept is ludicrous and it's probably just placebo effect . . . I'm kind of embarrassed to admit that this has worked for me. 10 lbs down" (Person 1). "If there weren't so many people saying this works for them, I'd think it was the stupidest thing in the world" (Person 2).

1. <http://www.marksdailyapple.com/forum/thread74412.html>
2. <http://blog.sethroberts.net/2013/01/02/success-on-the-shangri-la-diet/>
3. <http://www.youtube.com/watch?client=mv-google&hl=en&gl=US&v=2oPEeddjEP8&nomobile=1>
4. <http://www.astrocyte-design.com/shangri-la-diet/index.html>
5. <http://blog.sethroberts.net/2012/03/13/ten-years-of-weights-including-two-years-on-the-shangri-la-diet/>
6. <http://media.sethroberts.net/about/whatmakesfoodfattening.pdf>
7. <http://vimeo.com/channels/420283/28918924>
8. [http://www.thepsychologist.org.uk/archive/archive\\_home.cfm/volumeID\\_25-editionID\\_210-ArticleID\\_1997](http://www.thepsychologist.org.uk/archive/archive_home.cfm/volumeID_25-editionID_210-ArticleID_1997)

dearieme (2013-01-22 04:31:28)

I see plenty of advice to the effect that losing weight can reduce the HbA1c of diabetics, even to the point of apparently curing them. Do you have many/any people attributing such a result to the SLD? Seth: No, haven't heard many stories like that.

Morex (2013-01-22 09:40:28)

Hi Seth. Hello from Mexico! I stumbled upon SLD while reading Freakonomics a couple of weeks ago and I have been doing great. It's a life changing thing and a total revolution. But I will write to you about that in a couple of months, after I get more results with my experiments. I am writing here because of coffee. A few hours after I started SLD (almost 2 weeks ago) my cravings were gone, but not the craving for coffee. I love it and I have invested time and effort to become an "expert". I would drink up to 3 liters of coffee in a regular morning. But not today. Just as my craving for food disappeared a week ago, my craving for coffee is gone today. I just had a couple of cups. So here's a crazy and non-scientific theory of mine: Could it be that the cravings for coffee (and other substances) vanish because people doing SLD learn to disassociate taste from food? Or taste from substances? Since taste is no longer in the picture, could it be that coffee loses importance? I don't know. Just some thoughts. Seth: Thanks for your comments about SLD. That's good to hear. Your experience with coffee is fascinating. Here's another possible explanation: Part of your craving for coffee came about because you drank coffee with food. The taste of the coffee became associated with the calories in the food. Take away the food – because you are eating less – and the craving for coffee gets weaker.

Joanna (2013-01-22 14:56:00)

Interesting compilation of info/comments. Any data or thoughts on whether a fat works better/the same/less well than using a sugar as you did when you devised SLD? Seth: Good fats work much better than sugar because of the positive side effects (better skin, sleep, brain, less inflammation). Sugar does not improve skin, etc. I have blogged, with data, many times about the last three (sleep, brain, inflammation). The skin improvement produced by the fat is obvious.

pat (2013-01-23 13:00:02)

I was thinking of giving up snacking, but maybe I should do shangri-la diet for lent.

Joanna (2013-01-24 12:48:54)

Thanks Seth. I was thinking the same thing, that the fats (the right ones) are good for you in other ways. The down side is that a sugar source, before mixed with water, is much more portable than most fats. Which makes the diet easier for travel and work.

q (2013-01-28 13:45:03)

in my life the "calm and neutral to food" effect is more important than the weight loss. (but i'm only mildly overweight.)

q (2013-01-28 14:01:39)

seth, while i have your ear, one question i always had was why the size of the window was supposed to be an hour. how did you arrive at this - why isn't it half an hour or 45 mins or two hours or 15 mins or whatever? Seth: Rat studies suggested the flavor and calories must be ingested no further apart than an hour to become associated. It's meant to give the idea rather than be ironclad. I forget the details of the studies.

## **Personal Science = Insourcing Your Health (2013-01-22 05:00)**

I recently blogged about [1]undisclosed risks of medical treatments. For example, sleeping pills are associated with [2]a big increase in death rate. Patients are rarely (never?) told this. One reason risks are undisclosed is ignorance: Your doctor doesn't know about them. Another likely reason is that you and your doctor have different goals. If a treatment harms you, your doctor is not harmed, in all but a few cases. If you refuse a treatment (such as a surgery), your doctor may make less money. This pushes doctors to overstate benefits and understate costs.

This is the simplest case for personal science: You care more about your health than any expert ever will. The experts have advantages, too (such as more experience with your problem) so it is not obvious that personal science will be better than expert advice – you have to try it and find out. When I started to study my acne, I was stunned how easy it was to improve on what my dermatologist had told me.

[3]A recent article in The Atlantic ("The Insourcing Boom") describes a similar revelation at General Electric. GE executives wondered if they could build a certain water heater (the Geospring) just as profitably in America as in China. They looked at it carefully:

The GeoSpring in particular, Nolan says, has "a lot of copper tubing in the top." Assembly-line workers "have to route the tubes, and they have to braze them—weld them—to seal the joints. How that tubing is designed really affects how hard or easy it is to solder the joints. And how hard or easy it is to do the soldering affects the quality, of course. And the quality of those welds is literally the quality of the hot-water heater." Although the GeoSpring had been conceived, designed, marketed, and managed from Louisville, it was made in China, and, Nolan says, "We really had zero communications into the assembly line there."

To get ready to make the GeoSpring at Appliance Park, in January 2010 GE set up a space on the factory floor of Building 2 to design the new assembly line. No products had been manufactured in Building 2 since 1998. . . .

"We got the water heater into the room, and the first thing [the group] said to us was 'This is just a mess,' " Nolan recalls. . . . "In terms of manufacturability, it was terrible." . . . It was so hard to assemble that no one in the big room wanted to make it. Instead they redesigned it. The team eliminated 1 out of every 5 parts. It cut the cost of the materials by 25 percent. It eliminated the tangle of tubing that couldn't be easily welded. By considering the workers who would have to put the water heater together—in fact, by having those workers right at the table, looking at the design as it was drawn—the team cut the work hours necessary to assemble the water heater from 10 hours in China to two hours in Louisville.

In the end, says Nolan, not one part was the same.

So a funny thing happened to the GeoSpring on the way from the cheap Chinese factory to the expensive Kentucky factory: The material cost went down. The labor required to make it went down. The quality went up. Even the energy efficiency went up. . . . The China-made GeoSpring retailed for \$1,599. The Louisville-made GeoSpring retails for \$1,299.

That's what happened when designers and manufacturers were no longer so far apart. As far as I can tell, the designers at GE had no idea such big improvements were possible, just as I was shocked how easy it was to do better than my dermatologist.

There are dozens of ways to bring the incentives of doctor and patient closer together but that would be like trying to bring the Chinese workers and GE designers closer together. Personal science is much easier. No one besides you needs to change. It corresponds to insourcing: insourcing responsibility for your health.

1. <http://blog.sethroberts.net/2013/01/10/undisclosed-risks-of-common-treatments-why-doctors-terrify-me/>
2. <http://blog.sethroberts.net/2013/01/11/dangerous-sleeping-pills/>
3. [http://www.theatlantic.com/magazine/archive/2012/12/the-insourcing-boom/309166/?single\\_page=true](http://www.theatlantic.com/magazine/archive/2012/12/the-insourcing-boom/309166/?single_page=true)

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dearieme (2013-01-22 07:53:11)

When I've designed instruments I've always gone through everything with my instrument maker so that the design can be practical for him to manufacture: it has always led to improvements. It's amusing to learn that for GE the penny has only recently dropped. The next step should be to sack the dimwitted executives who were in charge before. Seth: Yes, I agree. It should not have been the great revelation it apparently was.

derp (2013-01-22 12:17:26)

> If you refuse a treatment (such as a surgery), your doctor may make less money. This pushes doctors to overstate benefits and understate costs. I'm very much disappointed to hear such talk from a psychologist who should know better. It is a very simple case of extrinsic incentive bias. Doctors don't do it because of the money – at least most of them, with your typical greedy bastard here and there. Why do we doctors overprescribe and overoperate? Most people expect us to, and we have grown to cater to the "do something" mentality. No patient wants to hear simple truths. Health improvement requires actual work on the patients side, such as smoking cessation, getting enough sleep, experiment with your diet etc. Often, the most important thing for your health is not "do something", but "stop doing something". (I hear ya, N. Nassim Taleb...) Most people \*want\* the easy fix, and we can give it to them. Our big-pharma-sponsored professional institutions and conferences play down any reference to possible harm, even censor or ignore it. Most of us choose to ignore it, too, because most of our colleagues ignore it. And given that the majority says there is no harm, there can't be! Completely logical, isn't it? As a medical professional, I highly recommend seeking medical treatment only if your condition is sufficiently severe. Everything else will quite probably harm you. Thank you. Seth: Learn more psychology and you will learn that people are often wrong about their motives. So, for example, a doctor is a bad person to ask what motivates doctors. People's real motives often turn out to be different than what they say, to put it in plain English. The error is always in the direction of making themselves look better – as you do in your comment. Look at studies on extrinsic motivation bias and you will see that the bias is about stated motives, not actual ones. See Atul Gawande's article about this (about why there are enormous cost variations in medical care from one place to the next) for evidence against your view that doctors overprescribe and overoperate because "most people expect [them] to". The differences he found between where health care spending was high and where it was low seemed to be due to differences between the doctors in the two places, not between the patients in the two places. Can you point to any evidence supporting your view (blame the patient)? "Most of us choose to ignore [possible harm], too, because most of our colleagues ignore it." Here I agree, psychology research supports this explanation. I also agree that drug company presentations are a plausible initial cause (that is reinforced by conformity).

derp (2013-01-22 16:39:48)

Seth, thank you for your elaborate response. I have just finished reading Atul Gawandes "The Cost Conundrum". As I can only talk for continental-European health care sytems that are still largely driven by non-profits and local and state agencies, I cannot completely follow the "it's the money" theory; maybe the US is simply not comparable, because of the details of its healthcare "system"[1] or its entrepreneurship culture. Most colleagues I meet seem to be interested in "not working more than 9 hours a day" and "doing less night-shifts". Either we have a severe case of all of us lying to each other (and ourselves) or the "it's the money" theory is deeply insufficient. If I was lying to myself and went 6 years through med school because I'm a greedy bitch, I'd love to find out how I can stop lying to myself. (No sarcasm here, I'd really appreciate to know every self-deception of my brain.) For all the insufficiencies that exist in the system, a blog comment will not suffice, as we both know. I'd like to exclusively focus on the "doctors do it because of the money" thing, because from everything I observed, that is not how 99 % of us operate. I've seen enough greedy folks in the economy department at the university, though. They even admitted to greed. OK. I will stop here because I don't want to sound like that whiney blog commentator who loves to argue with the blog owner just to make a point. Thank you for your time reading and responding to my opinionated emissions. [1] I am deeply sorry for having to put that word in quotation marks, but you might have noticed that the USA is ridiculed for its healthcare system by virtually every other first world country.

## Are Low-Carb Diets Dangerous? (2013-01-23 05:00)

[1]A link from dearieme led me to [2]a recent study that found low-carb high-protein diets – presumably used to lose weight – associated with heart disease. The heart disease increase was substantial – as much as 60 % in those with the most extreme diets. (A critic of the study, Dr. Yoni Freedhoff, called the increase in risk "[3]incredibly small".) Four other studies of the same question have produced results consistent with this association. No study – at least, no study mentioned in the report – has produced results in the opposite direction (low-carb high-protein diets associated with a decrease in heart disease).

I find this interesting for several reasons.

1. I learned about the study from [4]a Guardian article titled "What doctors won't do". A doctor named Tom Smith said, "I would never go on a low-carbohydrate, high-protein diet like [5]Atkins, [6]Dukan or [7]Cambridge." Fine. He didn't say what he would do to lose weight. [8]The psychological costs of obesity are huge. The popularity of low-carb diets probably has a lot – or everything – to do with the failure of researchers to find something better. I have never seen people who criticize low-carb diets appear aware of this. I disagree with a lot of Good Calories Bad Calories but I completely agree with its criticism of researchers.

2. There has never been a good explanation of the success of low-carb high-protein diets (why they cause weight loss), although this has been well-known for more than a century. (A good explanation would be a theory that made predictions that turned out to be true.) Such diets require a big change in what you eat. A big change is likely to have big health consequences in addition to the weight loss, and those side effects could be either good or bad. It now appears bad is more likely. With a good theory of weight control, you should be able to find a much smaller change that produces the same amount of weight loss as a low-carb high-protein diet. Because the change is much smaller, it should have much smaller side effects. Much smaller side effects (unknown whether they are good or bad) are much less likely, if bad, to outweigh the benefits of the weight loss. I have never come across a low-carb advocate who seemed to understand this (that we don't know why they work and it would be a very good idea to find out).

3. The Japanese are remarkably healthy (live very long), slim, and have very little heart disease, yet eat lots of rice. Which makes absurd the notion that all high-carb diets are unhealthy or fattening.

4. [9]The comments on the low-carb study are mostly critical and the criticisms are terrible. For example, Dr. Yoni Freedhoff, who [10]blogs about weight control, says, "The paper's basing all of its 15 years worth of conclusions off of a single, solitary, and clearly inaccurate, baseline food frequency questionnaire". The authors of the study correctly reply that inaccuracy would reduce the associations.

5. Until nutrition scientists do better research, our best source of nutritional guidance may be what we like to eat. Evolution shaped us to like foods that are good for us, at least under ancient conditions. We like carbs and we don't like foods high in protein (lean meat is barely edible) so a low-carb high-protein diet is on its face a bad idea. This is why I find it plausible that the low-carb high-protein association with heart disease reflects cause and effect (low-carb high-protein causes heart disease) and that in particular a high-protein diet causes heart disease. (Too little of the right fats?) We very much like fat. Under ancient conditions, the fat people ate was mostly animal fat and, before that, if you believe in aquatic apes, fish oil. It is quite plausible that lactose tolerance spread so quickly throughout the world because at the time everybody was starved of animal fat – high-fat mammals had been hunted to extinction – and dairy products were a good source of it.

1. <http://www.guardian.co.uk/lifeandstyle/2013/jan/19/what-doctors-wont-do>
2. <http://www.bmj.com/content/344/bmj.e4026>
3. <http://www.bmj.com/content/344/bmj.e4026?tab=responses>
4. <http://www.guardian.co.uk/lifeandstyle/2013/jan/19/what-doctors-wont-do>
5. [http://en.wikipedia.org/wiki/Atkins\\_diet](http://en.wikipedia.org/wiki/Atkins_diet)
6. <http://www.dukandiet.co.uk/>
7. [http://en.wikipedia.org/wiki/The\\_Cambridge\\_Diet](http://en.wikipedia.org/wiki/The_Cambridge_Diet)
8. <http://blog.sethroberts.net/2008/06/28/the-difference-between-being-fat-and-not-fat/>
9. <http://www.bmj.com/content/344/bmj.e4026?tab=responses>
10. <http://www.weightymatters.ca/>

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dearieme (2013-01-23 07:12:07)

Judging by mesolithic middens in Scotland, my ancestors (or a few of them) ate plenty of mussels and hazelnuts.

rif (2013-01-23 07:50:00)

I am confused by this post. The vast majority of low-carb diet suggestions I see are not low-carb high-protein, but instead low-carb, moderate-protein, high-fat. In particular, the Paleo community would never [afaict] suggest just replacing all your carbs with lean protein. Seth: The article discussed low-carb high-protein diets. Their selection, not mine. Yeah, maybe the title of my post is confusing.

Tuck (2013-01-23 08:08:54)

From the study: "The questionnaire used in the study was self administered and recorded information on several lifestyle variables (including detailed smoking and alcoholic drinking habits), anthropometry, and history of diagnoses of major diseases and conditions, including medical diagnosis of hypertension. For the assessment of physical activity, women rated their overall level of activity (that is, activities in the house and occupational and recreational physical activity) on a five point scale with examples attached to levels 1 (low), 3, and 5 (high). Dietary intakes were assessed with a validated food frequency questionnaire..." Self-reported food studies are unreliable enough that they cannot be used to draw conclusions, even from an epidemiological perspective. The margin of error is often very wide, and there's widespread recognition of this fact in the epidemiological literature. "The authors of the study correctly reply that inaccuracy would reduce the associations." How can they know this? If all they have is inaccurate data, they can't state that the better data would swing the results one way or the other. If they have better data, why didn't they use it? "Limitations in the assessment of dietary energy intake by self-report" "...Comparisons of measured energy expenditure with energy intake from either weighed or estimated dietary records against energy expenditure have indicated that obese subjects, female endurance athletes, and adolescents underestimate habitual and actual energy intake. Individual underestimates of 50 % are not uncommon..." <http://www.sciencedirect.com/science/article/pii/S002604959590204X> "The most popular among these diets emphasise reduction of carbohydrate intake, thereby encouraging high protein intake,7 as high fat diets are generally avoided in most Western societies." Atkins is a low-carb, high-fat, moderate-protein diet. Not high-protein. A diet that is too high in protein induces a state called "rabbit starvation", which will kill. Rabbits are high-protein, low-fat. Adding fat to the diet cures the condition. It's possible that lower, but still high levels of protein aren't great for you, but you won't find out via a study of this nature, as the error rate would be too high. "The Japanese are remarkably healthy (live very long), slim, and have very little heart disease, yet eat lots of rice. Which makes absurd the notion that all high-carb diets are unhealthy or fattening." Too much rice and too little of everything else is certainly harmful: it leads to the condition known as "beri-beri" which killed many Japanese sailors before their navy figured out that it was caused by a high-rice diet. Moderate amounts of rice in the diet seems perfectly consistent with good health, as the Japanese demonstrate. "Until nutrition scientists do better research, our best source of nutritional guidance may be what we like to eat." Agreed, within reason. "Hyper-palatable" foods that, for whatever reason, cause us to over-eat them are the

primary cause of the obesity epidemic. Even the Japanese, as they adopt more Western-style foods, are seeing their obesity rates increase. Interesting point about dairy and the gene for lactose tolerance. Lactose tolerance isn't seem necessary for consumption of dairy, however. Most Masaai, for instance, are not lactose "tolerant", as they cannot break down lactose into glucose; yet they do just fine on a high-dairy diet. Great post! :)

Stuart Buck (2013-01-23 08:14:06)

*The authors of the study correctly reply that inaccuracy would reduce the associations.* Random inaccuracy would dilute statistical significance, but there is no reason to think that inaccuracy in food questionnaires is random. Selection bias very likely plays a role – more responsible people who think more about their health are probably more likely to report having eaten certain foods (whatever is thought to be "healthy"), thus inflating any supposed relationship between those foods and better health outcomes. Seth: Your argument is reasonable and makes additional assumptions that may or may not be supported by evidence (I don't know). It is not what the critic said.

Chuck (2013-01-23 08:22:48)

I see the anti-low-carb folks fighting an old battle - low carb - high protein (the old Adkins diet) vs the USDA high carb food pyramid, when the low carb advocates are rapidly moving to a low carb - high fat paradigm (LCHF or HFLC). And, what is the per capita consumption of carbohydrates of the Japanese vs the USA? What about sweeteners? What about total calories? I would bet they're all much lower. And what is the metabolic difference between short grain Japanese rice and American dwarf wheat, HFCS, and sucrose. Saying the Japanese eat lots of rice is misleading because it doesn't say anything about what they don't eat, and what they eat with it. Cheers

Paul N (2013-01-23 10:22:19)

While we can question whether "low carb" diets are dangerous, I think the better question, here, would have been "are high protein diets dangerous" - which the evidence suggests that they are. And even then, some high protein diets -e.g. lots of processed soy - are likely to be more dangerous still. I think, as do many others, it is time to move past the discussion of macronutrient ratios as if they alone were the determinant of healthy diets. A malnourishing diet (i.e. deficient in essential micronutrients) is bad for health, as is a diet full of toxins/antinutrients or foods that are not tolerated (e.g. wheat, soy, MSG, many processed foods) The evidence of successful hunter gather societies around the world shows that different ones had good health with widely varying macronutrient ratios - but they all had adequate nutrition. If we take the Paul Jaminet view of white rice - a toxin free, but micronutrient poor, starch, then eating lots of it is fine, as long as you are still getting adequate nutrition from other foods. Japan today seems to be following many of the other traditional societies, where rice and other traditional foods being replaced by, in the words of Weston Price "the displacing foods of modern commerce" - with predictable results. The continued obsession of the media, and many food/medical researchers with simple calories and macronutrients ignores the greater problem of malnutrition and toxic foods.

libfree (2013-01-23 11:56:59)

I'm not going to repeat the arguments above, I mainly agree with them on the High Protein part. I personally am on the High Fat, low carb, moderate protein diet and am, by all measurements, healthier than I have ever been. More importantly, its not something I have to work at or worry about anymore. I don't think that it should surprise anyone that different people from different parts of the world could have different dietary requirements. 23andMe puts my ancestry into Eastern and Northern Europe. For most of evolution, my ancestors probably didn't have access to plentiful carbohydrate sources for large parts of the year. I agree with the statement that the body wants things that are good for it. Evolution never prepared us for buying sugar by the pound. Those signals could very easily lead you astray in our modern world. On that same note, you might desire carbs a lot because you need some carbs or some carbs re beneficial and they were harder to obtain. Your desire made you take the extra steps needed to get those nutritious carbohydrates that you needed.

Adam (2013-01-23 17:15:19)

Be careful generalizing about who likes what. I love high protein foods like chicken & beef jerky. I did a high fat, low carb diet for a while & had to force myself to eat enough fat – after a while it lost the appeal. It is also probably important to look at the characteristics of the people who are eating a lot of protein. If they are average & immobile, maybe it has one effect. If they

are a professional bodybuilder, maybe it has another. Personally, I eat a lot of protein, but only in the 48 hour window after a heavy weight lifting session. Same for carbohydrates. The rest of the time I am either fasting or eating some fat.

peter (2013-01-23 21:22:57)

the study involved Swedish women. I understand from a Swedish woman i knew, that the Swedish diet lacks vegetables, especially in the winter (or perhaps only in the winter, i can't recall); so all they eat (at least for significant part of year) is protein. if one doesn't eat vegetables then, one will be subject to all sorts of diseases, including heart disease. Paul N alludes to this when he says "A malnourishing diet (i.e. deficient in essential micronutrients) is bad for health, as is a diet" My understanding is that many micronutrients are provided by vegetable. also, Seth, i wonder if you eat a low carb diet, and i wonder what part of Taub's book relating to carbs you find incorrect. Seth: I eat a fairly low-carb diet, yes, to keep my blood sugar low. The part of Taubes's book I disagree with is the part where he explains why low-carb diets cause weight loss. The theory, in other words.

Jonathan (2013-01-23 22:37:48)

Seth, I'm surprised you say "There has never been a good explanation of the success of low-carb high-protein diets." Is there a flaw in the theory that less carbohydrate means less insulin, and lower serum insulin permits lipolysis to occur? (Other than the fact that protein also raises insulin, so low-carb moderate-protein high-fat diets are even more successful.) Seth: "Flaw in the theory"? Yes. It fails to explain dozens of facts. Here's one: Increasing the water content of rats' food makes them fatter. Another flaw is that it has failed to make correct predictions.

Alexander Boland (2013-01-24 12:03:55)

I'm going to have to contest you on (4). I see what you're saying, but the problem with basing something off a single observational study is this: If the study is randomly chosen, then you're right that there's a higher chance of error. On the other hand, because of the randomness of that kind of evidence, it's also easier to find spurious correlations. Of course, I imagine that the doctor you mention could have made the point I made by finding observational data that contradicts the study in question. Seth: Adding noise does not make it easier to find spurious correlations. You can only find a spurious correlation if there is no actual correlation – that is, if what you have is pure noise. Adding noise to noise just gives you more variable noise. Tests for association adjust for amount of variation. I agree when you say that a good critic would have simply pointed to data that contradicts the study in question. None of the critics did, if I remember correctly.

Jim (2013-01-25 15:36:31)

I think there are some long term experiments that show that macronutrient ratios don't affect cancer much. Kitavens ate high carb, Inuits low carb, both were fine. I wonder about the real causes, for example <http://digressionalty.blogspot.com/2013-01/calorie-restriction-monkeys-fed-30-sugar.html>

Greg (2013-01-27 20:08:33)

Seth, I agree with others that the Swedish study is so weak as to be almost uninteresting. Their statistical model adjusts for fat consumption, so it looks like they are only testing the effects of substituting carbs for protein. As demonstrated by the first line of the abstract, these researchers don't understand that a low carbohydrate diet is high in fat (if they don't know what it is, why are they studying it?) If there is a benefit to high fat consumption, we can't tell from this research. There are a number of interesting biases reported in the way people respond to food frequency questionnaires. For example, those with medical conditions will report eating 1.5x as much meat as those without (<http://jn.nutrition.org/content/136/2/459.full>). I didn't see any evidence they adjusted for this sort of thing, despite claiming their questionnaires were "validated." I eat a low carb diet, though I freely admit that I don't have any idea why it works. The commonly cited theories are clearly wrong as you point out, and I wish more people were honestly trying to figure it out. Seth: They believed, like many people, that fat consumption affects weight. So they adjusted for it. I fail to see the problem. As for the bias problem, inaccuracy will reduce associations, not increase them. Sure, someone else with different assumptions would do a different analysis. Until we know for sure their assumptions are wrong – and we are far from that point – their work is worth paying attention to. If they got the wrong answer, the lack of contradictory evidence (studies that got the opposite answer) is striking and not explained by any of their critics.



Greg (2013-01-27 22:11:54)

I think that, by controlling for fat, the paper did not test the hypothesis that replacing carbs with fat has an effect on cardiovascular events. They might have tested the hypothesis that replacing carbs with protein increases cardiovascular events, but I think that result is more easily explained by the fact that unhealthy people systematically overstate their meat consumption. Since the bias is directional, couldn't it create, and not just mask, an association? I haven't done an exhaustive search, but I think the Nurse's Health Study does contradict the finding, and with a larger sample size (<http://ajcn.nutrition.org/content/71/6/1455.long>, see Table 3). Seth: Yes, inaccuracy in the sense of bias can create a false association. I should have been clearer about that. I agree, the meat/poor health bias really does make plausible an alternative explanation that the authors should consider. I am less convinced than you. Is the bias large enough to explain the results? Maybe it is too small. Maybe there are offsetting biases. The study you point to did not specifically study the effect of protein replacing carbs, it studied the effect of carbs replacing everything. I used "low-carb" to mean "low-carb high-protein". Again, I should have been clearer.

Giselle Carslon (2013-02-13 03:16:07)

The way I see it and according to what I've read from <http://products.mercola.com/zinc-supplements/> it is important to take track of a persons nutritional needs especially if you are in a low-carb diet. Since your are reducing those foods that you eat, the nutrition absorption is reduced and in this case we are prone to many deficiencies that may weaken our immune defense.

## Creating More Diversity (2013-01-23 06:30)

Like [1]Tyler Cowen, I found [2]this interview with Harvard professor of genetics George Church bizarre, in the sense of un-self-aware. Here is the most telling part:

SPIEGEL: Wouldn't it be ethically problematic to create a Neanderthal just for the sake of scientific curiosity?

Church: Well, curiosity may be part of it, but it's not the most important driving force. The main goal is to increase diversity. The one thing that is bad for society is low diversity. This is true for culture or evolution, for species and also for whole societies. If you become a monoculture, you are at great risk of perishing.

"The main goal is to increase diversity". Fine. Yet in Church's own classes – if he is like 99.9 % of professors I know – he treats all the students the same (same lectures, same assignments, same tests, same grading scheme), apparently not understanding that such treatment decreases diversity.

When I was a graduate student, I had lunch (along with other graduate students) with Richard Herrnstein, another Harvard professor (of psychology). Herrnstein was on Harvard's admissions committee. The perfect candidate, he said at lunch, would be a flute-playing football player with perfect SAT scores. [3]Jane Jacobs describes an equally dispiriting lunch with a Harvard professor of urban studies.

What is it about Harvard professors? As [4]Ron Unz says, "the elites they have produced have clearly done a very poor job of leading our country."

1. <http://marginalrevolution.com/marginalrevolution/2013/01/surely-harvard-faculty-would-never-say-anything-like-this.html>
2. <http://www.spiegel.de/international/zeitgeist/george-church-explains-how-dna-will-be-construction-material-of-the-future-a-877634.html>

3. <http://www.youtube.com/watch?v=-Si4fhHfGTs>

4. <http://www.theamericanconservative.com/articles/the-myth-of-american-meritocracy/>

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Jennifer R (2013-01-23 12:37:54)

I absolutely agree that treating all students the same, decreases diversity along with real learning. This is something that is discussed in the homeschooling world and a few good schools often.

D (2013-01-23 13:59:54)

I'm still reeling from the Unz piece. In particular, our current "elites", who are not the old elites. Depressing... Seth: Unz complains (and I agree with him) about Harvard admissions. As my post indicates, I also wonder about the quality of teaching at Harvard and other elite schools. People often complain about groupthink (everyone thinking the same) at the top of our government. I've heard the same complaint about the French government: Everyone at the top went to the same school and thinks the same.

D (2013-01-23 14:09:55)

And IIRC, Unz targets Harvard at being one of the worst offenders in using a "holistic" criteria for selecting UNDERqualified whites (in particular, Jewish) who then become our next cohort of elites.

Sarah (2013-01-23 15:35:02)

This reminds me of a quote from Alain de Botton (I'm paraphrasing) There is nothing like climbing to the top that convinces people that the system is working. Seth: Or being born at the top.

CC (2013-01-23 18:42:05)

D- got a link for that or are you just spouting nonsense? I've never heard of Ivy League admissions being \*easier\* on whites, let alone Jews. Seth: That Ivy League admissions are "easier on Jews" is one of Unz's main points. His data revealed this. Maybe he was also surprised, I forget.

CC (2013-01-23 19:33:43)

Seth: I've looked over some of his writings, and his main point seems to be that Ivy Leagues discriminate against Asians, much as they used to discriminate against Jews. He does complain a bit about seemingly lower standards for Jews nowadays, but a lot of people have pointed out that he's conflating Jews with "half-Jews", and the relative numbers of those two groups has changed dramatically in recent decades. Details aside, I'm amazed that in the age of affirmative action and discrimination against Asians, that anyone could claim discrimination in \*favor\* of whites. It doesn't seem mathematically possible! (But maybe I missed something.) Seth: You mean "discrimination AGAINST (non-Jewish) whites"? Or do you mean "discrimination in favor of Jewish whites"? I don't understand your point. Discrimination against Asians obviously favors someone else, why not whites? Or Jews?

CC (2013-01-23 19:36:37)

I should add that I'm not an expert on his claims about Jews; I merely found the comment about overall laxer standards for whites to be odd.

D (2013-01-24 09:24:07)

To be clear, if you actually read Unz' paper (it's about 45 pages if you print), there is heavy, heavy discrimination against Asians and non-Jewish whites at the Ivy level. And there is basically AA for white Jews as well as the standard groups known to benefit from AA. Now we all knew Asians were getting screwed and we all knew whites got screwed, but the surprising parts of his paper are just how bad Asians and non-Jewish whites get hosed, and how much a boost Jewish whites get for being Jewish. This latter claim was certainly the most shocking, as I had always assumed Jewish overrepresentation in all

academic circles awas simply due to cognitive and/or personality differences, but you can't come away from reading Unz' paper and still believe that's the case for the Ivy league schools at present. Seth: I agree with all this. Let me add that Unz also makes a point similar to mine: That elite schools, while claiming to want diverse students, do a poor job of reaching that goal.

Christopher Burd (2013-01-24 14:18:33)

My understanding that the pro-Jewish bias is actually a bias against certain classes of non-Jewish whites. A study a couple of years ago suggested that anything suggesting a conservative orientation (e.g., membership in Young Farmers of America) was the kiss of death for applicants. Obviously, this bias would hit non-Jewish whites far more heavily than Jews. I wonder how applicants with an obvious Orthodox or Hassidic background fare against Evangelical Christians.

D (2013-01-24 14:57:06)

Christopher Burd, I'm not so sure that would be enough to explain the disparity, but I do think plain bigotry explains a lot of this. I'm guessing it's assumed that a non-Jewish white kid from Idaho must (apart from basking in the glow of his Christian white privilege) spit tobacco, wear a cross and carry around a pitchfork when he's not hunting or trying to find black people to harass or lynch. That abstract image is very easy to hate for someone who still (amazingly) maintains some group victim status, and sees that guy as an enemy.

### **Late Comment on Battle Hymn of the Tiger Mother (2013-01-24 20:11)**

Amy Chua wondered if all the pressure to practice (piano, older child, violin, younger child) she put on her two children was worth it. But then there were moments like these:

In a glass-windowed room overlooking the Mediterranean, Sophia played Mendelsohn's Rondo Capriccioso, and got bravos and hugs from all the guests.

Which I found the most chilling sentence in the whole book. Her daughter's recognition ("bravos and hugs") made Chua very happy. But did it make Sophia happy? Chua doesn't answer that question. She doesn't follow the sentence I've quoted with "I could see how pleased she was" or "Years later she would say what a good time she had". Nope, the chapter ends there.

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Jonathan Graehl (2013-01-24 20:59:12)

That's a fruitful sentence to ponder. If Sophia didn't earn at least some subtraction-of-suffering reward from praise well-earned, then it would be a chilling narration from the mother. As a child pianist, albeit under considerably less pressure, I can assure you that once you've submitted to the work necessary to prepare (and especially if you've shirked it a little), having a performance come off well (on however large a stage) is a potent reward, no matter the dislike of practice. What puts me off is just the status-brag "glass-windowed room overlooking the Mediterranean" (so you know, the people in that room must be AMAZING).

Pauline (2013-01-25 02:19:04)

In Alice Miller's *The Drama of The Gifted Child* (previously called *the Prison of Childhood*) where a child's will is disciplined and often broken into obedience, it makes one wonder whose life wish the child is fulfilling, her own or her mother. Indeed chilling stuff.

dearieme (2013-01-25 03:00:24)

With what else would one equip one's window but glass? An old sheet of polythene held in place by drawing pins? Waxed brown paper? Seth: Good question. Maybe the editor was so stunned by what she was reading – the whole book is an enormous surprise – that she forgot to edit.

Tom (2013-01-25 03:05:46)

I go partner dancing a lot, and one thing I've noticed about many Asian women is that they are often sexless. They may be dressed sexily; they may look extremely attractive – but it's all a performance. They are like terrified children putting on a show, like six-year-old Wizards of Oz at the controls of a mannikin that looks thirty and alluring. I think it's a pathology that is passed down through the generations: the young don't get to enjoy their youth, and they age into mothers that are enraged and determined to get back that which has been lost – which is of course impossible. So they try harder and get angrier, demanding ever more from the doppelganger, pushing the pathology down another generation. Something different but analogous happens with enraged, narcissistic Jewish-American mothers and their castrated, humiliated sons. The women often think they are more fabulous than they are, and the men think they are worthless.

Ashish (2013-01-29 18:31:54)

Years later one of her kids will try to commit suicide, but by then we'll all have moved on to new reality entertainment. Tom (above) is right on all counts.

### Assorted Links (2013-01-25 05:00)

- [1]Kamal Patel's quantified self experiment, week 1. Will a lot of quantification improve his health? I wonder if he is measuring too many things.
- [2]Glenn Greenwald on the Aaron Swartz case. Sign a petition [3]to fire Assistant US Attorney Steve Heymann.
- [4]Chernobyl wildlife. "Abundant and surprisingly normal-looking."
- [5]American Gut Project. Via [6]Mark's Daily Apple.
- [7]Widespread failure of Johnson & Johnson hip replacement. I am curious why this problem was not noticed in early tests of the device. Leave aside FDA approval – why was the device approved by Johnson & Johnson? Too-early failure is not an obscure side effect.
- [8]Heather Brooke TED talk about exposing government corruption. The current "information enlightenment," says Brooke, is "about searching for the truth, not because somebody says it's true, "because I say so." No, it's about trying to find the truth based on what you can see and what can be tested. That, in the first Enlightenment, led to questions about the right of kings, the divine right of kings to rule over people, or that women should be subordinate to men, or that the Church was the official word of God."
- [9]Nassim Taleb points to history and the Davos moderator has a curious response: "Who wants the money back?"

Thanks to Bryan Castañeda and Dave Lull.

1. <http://painedatabase.com/quantified-self-week1>

2. <http://www.guardian.co.uk/commentisfree/2013/jan/16/ortiz-heyman-swartz-accountability-abuse>

3. <https://petitions.whitehouse.gov/petition/fire-assistant-us-attorney-steve-heyman/RJKSY2nb>

4. [http://www.slate.com/articles/health\\_and\\_science/nuclear\\_power/2013/01/wildlife\\_in\\_chernobyl\\_debate\\_over\\_mutations\\_and\\_populations\\_of\\_plants\\_and\\_single.html#pagebreak\\_anchor\\_2](http://www.slate.com/articles/health_and_science/nuclear_power/2013/01/wildlife_in_chernobyl_debate_over_mutations_and_populations_of_plants_and_single.html#pagebreak_anchor_2)
5. <http://www.indiegogo.com/americangut>
6. <http://www.marksdailyapple.com/weekend-link-love-226/#more-34808>
7. <http://www.nytimes.com/2013/01/23/business/jj-study-suggested-hip-device-could-fail-in-thousands-more.html?hp&r=0>
8. [http://www.ted.com/talks/heather\\_brooke\\_my\\_battle\\_to\\_expose\\_government\\_corruption.html](http://www.ted.com/talks/heather_brooke_my_battle_to_expose_government_corruption.html)
9. [http://www.youtube.com/watch?feature=player\\_embedded&v=30DJf1eMgbs](http://www.youtube.com/watch?feature=player_embedded&v=30DJf1eMgbs)

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Jim Breed (2013-01-25 12:32:11)

A couple of years ago, my wife and I had the good fortune to spend an hour with a scientist for the Manhattan project who must have been in his early 90's. The day we met him he had been working in his garage workshop making a solar heater because he was cold and didn't want to pay for heat. In the course of our conversation, he pointed out radiation burns on his hands that he had incurred during his career at the Lab and performing radiation measurements following atmospheric tests. He jokingly said, "a little radiation must be good for you because most of the people I've worked with are still alive." If I could be working in my shop at 90, I'd take a dose now and then myself. I realize that this is an anecdote. Its just that you run into a lot of folks who have been exposed to radiation far in excess of what is supposed to be bad for you. Seth: I wonder if the radiation in airport scanners prolongs life. But I also worry that they are not properly maintained.

dearieme (2013-01-25 17:28:19)

"Widespread failure of Johnson & Johnson hip replacement." I'm taken by the recent problems of the Boeing Screamerliner. Many problems in aircraft are, I imagine, systems problems that you can try to find only once you've got a few test planes ready. But batteries that ignite sound like a component problem that you can test for in the lab months, or years, before a plane takes the sky. Very odd.

## **What Happens If I Stop Grading? (2013-01-26 05:00)**

I believe two things about teaching:

1. The best way to learn is to do. From [1]an article by Paul Halmos about teaching math. I began self-experimentation to learn how to do experiments.
2. Everyone's different. [2]My theory of human evolution says we changed in many ways to facilitate trading. (For example, language began as advertising.) The more diverse the expertise within a group, the more members of the group can benefit from trade. Following this logic, mechanisms evolved to increase diversity of expertise among people living in the same place with the same genes. (For example, a mechanism that causes procrastination.) The theory implies that there is something inside every student that pushes them toward expertise – they want to learn – but they are being pushed in many different directions – what they want to learn varies greatly. If you accommodate the latter (diversity in what students want to learn), you can take advantage of the former (an inner drive to learn).

The novelty is #2 – the idea that #2 is relevant to teaching. Human nature: People who are the same want to be different. Formal education: People who are different should be the same. At Berkeley, most professors appeared to have little idea of the diversity of their students. (At least I didn't, until I gave assignments that revealed it.) Almost all

classes treated all students in a class the same: same lectures, same assignments, same tests, same grading scheme. I heard dozens of talks about how to teach. Supporting or encouraging individuality never came up. Now and then I told other professors these ideas – at a party, for example. "Everyone's different, but our classes treat everyone the same," I'd say. No one agreed. It was a new and apparently distasteful idea. Too much work was one response.

I believed my theory of human evolution partly because it explained what I saw with my students (Berkeley psychology majors in undergraduate seminars): The more freedom I gave them, the more they learned. I gave them great freedom with their term project (except I forced them to do it off-campus). That worked fine. One student had an intense fear of public speaking. Her project: give a talk to a high school class. She succeeded. "What did I learn? I learned that if I have to, I can conquer my fears," she wrote. I wrote [3]an article about it. I taught a whole class where the students (all 10 of them) were given great freedom to do something off campus. That worked, too. But the class was too niche and the term project too small. It wasn't obvious if the ideas would work in an ordinary class.

The more freedom I gave my students, the more difficult it became to grade them. At Tsinghua I teach a required class for freshman psychology majors called Frontiers of Psychology. There are 20-30 students. It covers recent research. For the first few years, I had students write comments on the reading. "Write something only you could write," I said. The students struggled to figure out what that meant. I struggled to grade their answers.

Before last semester began, I had an idea: no grading. Maybe other sources of motivation, would be enough.

Last semester, my Frontiers class had two parts:

1. Reading. During this section, they read a variety of things: recent experimental papers (e.g., from Psychological Science), book excerpts (e.g., from [4]The Man Who Would Be Queen) where I said "read any 60 pages you want", and [5]my long self-experimentation paper ("read any third you want"). This taught them how to do research, not just subject-matter content. A typical assignment included a class presentation. For example, each student read a different experimental paper (they chose) and gave a presentation about it. Another assignment involved an in-class debate. I discussed the readings – for example, the controversy around The Man Who Would Be Queen – and gave feedback on presentations but rarely lectured. The main lecture I gave was at the beginning to explain the course. This part of the course resembled a traditional course, except (a) no grades, no tests, (b) many class presentations (public speaking is an important skill), and (c) lots of choice in what they read.

2. Doing. This section had two parts: (a) a short (2 week) experiment where they tested the effect of whatever they wanted (chocolate, piano music, exercise, and naps of different lengths were some choices) on brain function measured by [6]a reaction-time test written in R. They gave presentations about their results (I regret not requiring written reports). (b) a long project (4-5 weeks) where they could study whatever psychological topic they wanted. It might or might not involve data collection. The topics they chose to study included dreams, procrastination, the perception of psychologists, [7]fujoshi, the relative femininity of different sports, the accuracy of first impressions, different ways of teaching English, comparison of Tsinghua students and Peking University students (the top two universities in China, with stereotypically different students), cognition in native versus non-native language, reading screens versus reading books, and positive psychology. They could work in groups or by themselves. They had to get my approval for what they did so that they wouldn't try to do too much or too little. At the end they wrote a report and gave a class presentation. I met with each student or group of students individually to discuss their work, usually for 30-60 minutes. During these discussions they provided evidence (e.g., photographs, recordings) that they had done what they said.

I did give grades (I was required to) but they were minimal. The final grade was entirely based on the final project. I divided each project into parts (e.g., background research, data collection, class presentation) and gave

each part a point value such that the points add up to 96 (= A). If you finish Part X, you get the associated points. (Everyone completed all parts.) If they did really well I gave them slightly more points (e.g., 97). If they failed in some serious way I gave them slightly fewer (e.g., 94). So grading was close to binary: yes or no. You could get a good grade simply by doing what you said you would do.

It was the most pleasant teaching experience of my life. It was also the easiest by far, in contrast to my Berkeley colleagues' claim that my ideas led to "too much work." The hours I had spent every week grading homework in previous versions of the course – the part of the course I liked least – was gone. At the end of the class, I spent many hours discussing the student projects, but I enjoyed these discussions. They didn't feel like work. The students had chosen topics they wanted to study and seemed happy to talk about what they had done. Unlike an oral exam, almost nothing was riding on what they told me and they could be proud of what they were talking about, since it was almost entirely their idea.

The students's work was the highest quality I have ever seen. Two of their final projects might be publishable. (And these are first-semester freshmen.) It's not my field, so I can't be sure, but they have great inherent interest and no obvious flaws. The students seemed to like the class, too. On the final day, which happened to be Christmas, they gave me a Christmas card signed by everyone in the class. One student gave me a card separately. "Thank you," I said. "Why did you give me this?" Among other things, she said I had high standards. Given the absence of grades, that was interesting. Maybe it came from the fact that after every presentation, I would point out something I liked and something I thought could be better. I tried to do that with all of my feedback. Another student told me, after the final class, that what I had said about "the best way to learn is to do" was, in her case, very true. She said she had learned more in my class than in all her other classes put together.

There were about 25 students and 12 assignments = 300 (= 25 x 12) assignments total. There were about 4 instances where a student did not do an assignment. In other words, the students did the assignments 99 % of the time although there was no obvious penalty for not doing an assignment. Had I given grades, I might have gotten 100 % compliance rather than 99 %. To use a costly (in terms of time and student anxiety) grading scheme to get a 1 % improvement in compliance is absurd. Yet that may be what most professors are doing – at least, my experience suggests they could get very high compliance without expensive grading.

I think this class worked well for both my students and me because it contained several elements: 1. A "core curriculum" (recent psychological research) taught in several different ways. 2. Good-quality materials. For example, *The Man Who Would Be Queen* is much better than what psychology students typically read. One student told me she read the whole book even though only a third of it was assigned. 3. Plenty of doing. A class presentation counts as doing. 4. Plenty of student choice. 5. Absence of grading, which has bad side effects.

I think several things caused students to learn a lot: 1. The material was interesting. 2. To some extent – far more than in other classes – they could choose what they wanted to learn, especially during the second half of the class. 3. Peer pressure. They wanted to look good in front of their peers. It would have been embarrassing to not be able to do a presentation when called upon. 4. The instinct of workmanship. Thorstein Veblen wrote a book called [8]The Instinct of Workmanship. People inherently want to do a good job, said Veblen. I agree. 5. Doing is fun.

Would this work with other students? My students were/are very smart, yes. Tsinghua is extremely hard to get into and entrance is mostly based on a standardized test. My students, in other words, did very well under the usual system of teaching. This can be interpreted two ways: (a) They like the usual way of teaching, it fits them (they succeeded because of the usual methods) or (b) like everyone else, they dislike the usual way of teaching but unlike everyone else figured out how to learn on their own. The first interpretation suggests that my students would benefit less than other students from the novelty of my approach. The second interpretation suggests they would benefit more. What is clear is that Tsinghua students are known for studying very hard – yet my class required no studying beyond reading and understanding.

What did I learn? I learned that I can stop grading and things get much better, not worse. I learned that motivations other than grades are plenty powerful.

1. <http://blog.sethroberts.net/wp-content/uploads/2013/01/halmos.pdf>
2. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>
3. [http://media.sethroberts.net/about/2005\\_diversityinlearning.pdf](http://media.sethroberts.net/about/2005_diversityinlearning.pdf)
4. <http://faculty.wcas.northwestern.edu/JMichael-Bailey/TMWVBQ.pdf>
5. <http://escholarship.org/uc/item/2xc2h866>
6. <http://blog.sethroberts.net/2013/01/09/brain-tracking-early-experience/>
7. <http://www.urbandictionary.com/define.php?term=fujoshi>
8. <http://etext.lib.virginia.edu/toc/modeng/public/VebIrks.html>

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Nancy Lebovitz (2013-01-26 05:37:11)

John Holt eventually became a leader of the home schooling movement because he noticed that third and fourth graders were so distracted by grading that they were just inventing arithmetic answers instead of thinking. An Alexander Technique teacher told me that he graded his college courses on attendance because he found that people couldn't let themselves more easily if they were thinking about grades. The Alexander Technique was invented by F.M. Alexander about a century ago because he was an actor who'd lost the ability to speak. After much self-observation in three-way mirrors, he found that he was pulling his head down and back before he started to speak. After more self-experimentation, he found a way to not pull his head down and back, and found that his general functioning improved, including clearing up some breathing problems he'd had since childhood. Seth: I taught a class at Berkeley with a woman who had benefited greatly from Alexander Technique. She told me about his emphasis on self-observation. I haven't heard of grading college courses on attendance. I didn't take attendance. Sometimes students are sick. It seems unfair to reduce their grade because of this. In any case I had no problems with attendance.

Babar (2013-01-26 05:44:38)

Yay! An independent discovery of progressive teaching! Seth: I looked it up: [1]progressive education. Yes, two of the 14 elements describing progressive education ("Emphasis on learning by doing" and "Highly personalized education") are exactly what I was aiming for.

1. [http://en.wikipedia.org/wiki/Progressive\\_education](http://en.wikipedia.org/wiki/Progressive_education)

Three Pipe Problem (2013-01-26 06:24:56)

IMO the resistance to individualization is not coincidental. As Terry Gilliam said, "Usually you spot how societies work by what they glorify: it's usually the thing they're deficient in."

Mark (2013-01-26 06:40:56)

I know from past posts that Seth is not so much a fan of Popper... I am a huge fan of Popper. Popper claimed that we only learn new things via trial and error, and I very much agree with this. Because of this, I think that grades can only hurt true learning (how can one learn from making errors if every error is counted against you?). Our daughter attends a Quaker school where they give no grades and take no standardized tests (all the way through high school), and they seem to teach mostly via trial and error. I love this. Seth: I was under the impression that a lot of learning is imitation. If someone else has learned X (can be anything, e.g., how to drive a car, what is the capital of Texas), you can learn X by imitating that person. If no one has learned X, then you will have to resort to trial and error. I did not know that there are Quaker schools that teach without grades. Can you give a link to more information about this?



Koanic (2013-01-26 11:46:33)

You missed the other, correct possibility. Very intelligent and conscientious people are selected for by Tsinghua admissions system. These people are intellectually curious, and will produce higher quality work when given freedom. The same is not true of other people, who will slack. Seth: That's what I meant with my second possibility. Your comment is very interesting because you propose some connection between very intelligent, conscientious, and intellectually curious. Maybe you have something there. Tsinghua admissions on the face of it does select for people who are very intelligent and conscientious, as you say. Why such people should be unusually "intellectually" curious is not obvious. I've heard it said that high curiosity leads to high intelligence, which makes some sense. Nothing was said about conscientiousness. The saying "genius is an infinite capacity for taking pains" echoes your connection of conscientiousness and intelligence, without mentioning curiosity.

gwern (2013-01-26 16:02:39)

> Very intelligent and conscientious people are selected for by Tsinghua admissions system. These people are intellectually curious, and will produce higher quality work when given freedom. IQ and (Big Five) Conscientiousness are very weakly positively, or actually negatively correlated. Big Five Openness, a pretty much exact math to 'intellectually curious', has only a weak correlation with IQ (IIRC 0.2). Given the extreme selection from the Chinese population to produce the Tsinghua student body, using tests that test pretty much only IQ & Conscientiousness from every description I've heard of them, there's no reason to expect an extreme level of Openness in the student body. So perhaps Roberts is merely seeing what a little freedom looks like when applied to the most elite & capable. I'd question whether they performed as well in that respect as comparable students from Harvard or Oxford, except I think Tsinghua is more selective than either...

Adesomer (2013-01-26 17:04:44)

Hi seth! I just happened upon your blog through an internet search...and I wasn't sure how to contact you about a post you had written, but you had closed the comments on, so I apologize. Let me tell you just a wee bit about myself. I am a mom of 6 who returned to school as a biology major with the inclination to teach secondary education. I was diagnosed celiac a year ago and have had digestive issues most of my life. I have found myself leaning more toward paleo eating and am intrigued by fermented foods to heal the gut. So here is my question...in one of your posts you discuss why you believe these bacterium are good for our guts and why the human race tends toward these flavours...but why does our stomach acid not kill these bacterium? Why is it all not killed prior to hitting the intestines? Feel free to email me directly, should you wish. I am in the beginning stages of food fermentation, beginning with kombucha and on my way to sauerkraut and traditional polish borscht. Thanks in advance!! Alena Seth: Stomach acid kills only what is on the surface. We do not atomize our food in our mouths. It goes into our stomach in lumps. What's inside the lumps is safe from the acid.

Txomin (2013-01-26 17:56:36)

When students are self-motivated, it is possible to do away with many of the "standard" resources available to teachers, including grades, exams, etc, even formal teaching/lecturing can go. When students are not self-motivated, the responsible teacher cannot dismiss any resource out of hand. And, let's be honest, some students are motivated by grades. As a test, give lowish grades to your students at Tsinghua and see how they perform afterwards when they see their efforts ignored and unrewarded in their transcripts.

Jonathan Shewchuk (2013-01-26 19:05:33)

Do you see any element of this I could apply in my 530-student Data Structures class (now in progress at Berkeley)? Seth: Maybe next time I'm in Berkeley we can talk about this over coffee. My short answer is: 1. Give students substantial length of time (such as 4 weeks) for a final project, which can be anything they like involving the course material. Have teaching assistants vet each project for appropriate degree of difficulty. The final project will get an A so long as the student completes each of the promised elements. Each student gives a progress report to the class each week in section. No lectures during this period. Lecture time devoted to the best progress reports. 2. Make the final project involve improving the data structure for someone on campus (student, professor, staff). I don't know if this is feasible. 3. Make the final project involve improving the data structure for someone off campus (e.g., parents, friends of parents). Again, I don't know if this is feasible. The general idea is to introduce freedom (option 1) and realism (options 2 and 3) and reduce worry about grades (option 1).

Around the Web: Mid-Winter Edition | Perfect Health Diet (2013-01-26 20:03:55)  
[...] Seth Roberts believes two things about teaching. [...]

Mark (2013-01-27 06:02:55)

Of course it's true that simple facts (e.g., the Capitol of Texas) can be learned through imitation or memorization. However, I would submit that one cannot learn \_to do \_ anything (e.g., drive a car) except through trial and error (hopefully, fairly minor errors). You can learn that the ignition does X, the accelerator does Y, and brakes do Z through imitation or memorization, but you can't learn not to over-steer or over-break except by doing it and correcting your (hopefully small) errors. Anyway, here's a Quaker school link, note in particular the section on evaluation: <http://www.cfsnc.org/page.cfm?p=421> You might also be interested in the overall philosophy, as it's very close to some of what you've written here: <http://www.cfsnc.org/page.cfm?p=362>  
Seth: Thanks for the links. The part about evaluation says in part: "Student evaluation at CFS is constant and thorough and is not reduced to letter grades." This is not a good description of my approach because I was not "constant and thorough". At the very end, I gave a lot of feedback about term projects. Before that, I gave considerably less feedback. After a class presentation, I would point out one thing I thought was good and one thing where there was room for improvement. I did not give each presentation a thorough critique. That would have taken too long and been overwhelming.

Nancy Lebovitz (2013-01-27 07:59:54)

The teacher believed he had to grade on something— for administrative reasons, I think, and since there were no other Alexander teachers in town and he believed that anyone who showed up would learn, he graded on attendance. He mentioned another Alexander teacher who graded on class notes. I don't know why (I thought the class was very good), but it was down to four students by the end. The reason I brought up the story is that a skilled person concluded that students weren't at their best if they were being graded. Any suggestions for other systems developed from self-observation and experimentation? Offhand, I can think of Bob Cooley's resistance stretching, Gerda Alexander's Eutonics (no relation FM Alexander), and Kenny Werner's Effortless Mastery (cultivating efficiency and intensity for playing music). Tomin, you're arguing that students can be demotivated by lowish grades, which is not the same thing as saying that they will be motivated by a chance at high grades.  
Seth: Thanks for clarifying that. To answer your question ("any suggestions...") lots of weight-loss diets have been developed by self-observation and experimentation. South Beach, for example.

Eric (2013-01-27 11:28:35)

I've been using a variation of this in some of my Computer Science courses at Bowdoin for years. The longer I'm here, the more I'm convinced that the specific material in upper level courses is not particularly important, all that matters is student engagement. When students are engaged they are learning machines and mostly my job is to stay out of their way.  
Seth: I'd like to hear more about what you do.

Bob Levinson (2013-01-27 18:49:48)

Paragraph six of the Halmos article says: "Having stated this extreme position, I'll rescind it immediately. I know that it is extreme, and I don't really mean it—but I wanted to be very emphatic about not going along with the view that learning means going to lectures and reading books. If we had longer lives, and bigger brains, and enough dedicated expert teachers to have a student/teacher ratio of 1/1, I'd stick with the extreme views—but we don't." So Halmos is talking about an ideal. Jonathan Shewchuk's question (above) gets to the heart of issue.  
Seth: Halmos's "extreme position" is no use of books and lectures. He recognizes that is impossible. I don't agree with Halmos's extreme position. I had few lectures but plenty of reading. I gave in-class public feedback on student presentations (all students could hear what I said about Student X's presentation), which vaguely resembles lecturing. The essence of what I'm saying doesn't have much to do with Halmos. It is that a desire to individualize education (= make it different for each student) led me to stop grading. When I did so, things were fine. My students, it turned out, had plenty of motivation from other sources. Grading is so time-consuming and irksome for teachers that this is an interesting outcome.

Koanic (2013-01-28 13:20:53)

"IQ and (Big Five) Conscientiousness are very weakly positively, or actually negatively correlated. Big Five Openness, a pretty much exact match to 'intellectually curious', has only a weak correlation with IQ (IIRC 0.2)." So do horoscopes. Who cares? Self reporting is BS to make work for psych pros. Seth: "So do horoscopes"? Your point is unclear. Are you saying that intellectual curiosity (= openness) as measured by self-report personality tests, doesn't correlate with anything important? If so, that's an interesting and surprising claim, which I haven't heard before. What do you base it on?

Babar (2013-01-29 03:49:03)

Seth, I think more than 2 out of 14 things match between your insight and progressive education. I am pointing this out not to be a stickler but because I sense a kinship of approach - you might learn from them and them from you. Also - I have taught a few classes - unfortunately lecture style - and have to say that it's not strictly correct that one assumes that all students learn the same way. I always tried to explain things many different ways to cover different ways of seeing things and I always was open to questions and thinking things through with students. That being said I agree your approach is better. I didn't have the authority to make those decisions though. Seth: What are the other similarities between what I do and progressive education? I looked again at [1]that list of 14 characteristics of progressive education and failed to find more similarities. Unless you mean an emphasis on projects and "varied learning resources".

1. [http://en.wikipedia.org/wiki/Progressive\\_education](http://en.wikipedia.org/wiki/Progressive_education)

Koanic (2013-01-29 11:47:53)

"Are you saying that intellectual curiosity (= openness) as measured by self-report personality tests, doesn't correlate with anything important?" Yes. And I am saying that all 5 Big 5 self-report dimensions are hopelessly flawed. Taking people's self-descriptions at face value is not an intelligent way to practice psychology, even if it does permit large scale data collection. It is like studying cars by color. There will be some semi-interesting correlations, but nothing actually reliable. The problem is that there are radically different types of people who describe themselves in similar ways, or in ways opposite to or orthogonal to what they actually are compared to the general population. The "publishable results" system has led to an explosion in worthless statistically-significant results. As a result, psychology has moved further and further away from anything resembling an intelligent grasp of human nature. Psychologists can't afford to go under the hoods of cars one at a time. So instead they count car colors from a highway overpass. Useless. Seth: [1]This cites many studies that disagree with what you say about openness (lack of correlation). For example, <http://psycnet.apa.org/?&fa=main.doiLanding&doi=10.1037/0033-2909.120.3.323>. What evidence supports your view ("hopelessly flawed")?

1. [http://en.wikipedia.org/wiki/Openness\\_to\\_experience](http://en.wikipedia.org/wiki/Openness_to_experience)

Koanic (2013-01-29 18:44:35)

I didn't say "lack of correlation". I said "semi-interesting correlations". I think you and I have very different ideas about how useful psychology should be. You're impressed by useless vague correlations of the Big 5. I'm not. What's it good for? If I am blind screening applicants for a job, I will a million times take an IQ test over a Big 5 test. One of the concepts of PUA is "value elicitation." And one of the ironies is that often the values are the opposite of what the person is really like. I have studied the life histories of over 50 applicants to my Neander Hall, in the process of typing them. I can never simply take what they say about themselves or their values at face value. It all must be placed into life context, and compared to what other people like them and different from them said and did. Real psychology will be founded on biological axes, such as testosterone and facial shape. It must account for things like social status, charisma, and actual extro/introversion. Naive interpretation of self-description will never accurately reveal these traits. Even the most benighted psychologist should realize that a guy's self-reported notch count can be quite misleading, and his subjective rating of the women's attractiveness even more so. Self description is nice for publishing papers but doesn't give us any better grasp on human nature. It is only one of three crucial elements - the other two being biology and biography. Seth: I'm sorry you have not seen fit to provide evidence for your view that personality psychology - at least, the part based on self-report - is worthless.

Koanic (2013-01-29 21:45:16)

I presume you mean a study, which is a small subset of the word "evidence". You linked to Wikipedia, which is untrustworthy on this topic, and a paper behind a paywall. Link to the best paper I can access and let's see whether Big 5 and MBTI are good

for anything practical, or are just for academic promotion and horoscope-style self-discovery. And keep in mind, this argument started because someone said something about how openness was more important than high IQ for self-directed coursework. The very idea of naively comparing Chinese vs American students' self descriptions of openness is ridiculous, and even more so for Tsinghua students. Yet if you give those kids an inch they zoom off into independent genius mode. Hmmm.... Seth: I've found some relevant evidence. Is it possible that it might be your turn to do so?

JKB (2013-01-30 08:24:15)

Interesting. You might be interested in this report Teaching Boys and Girls How to Study' (1919) by Peter Jeremiah Zimmers, Superintendent of City Schools, Manitowoc, Wisconsin (scanned online, Google Books) about the very good results the school system had when they shifted away from the teacher-dominated lecture system to the problem method of teaching. Sadly, such innovations never took widespread hold and we became stuck with the lecture style instruction that has long been known to induce "school helplessness" in students. The first reference I've found to the damage school does to creative and innovative thinking was a minor discussion in a book published in 1886. "In spite of the fact that schools exist for the sake of education, there is many a school whose pupils show a peculiar "school helplessness"; that is, they are capable of less initiative in connection with their school tasks than they commonly exhibit in the accomplishment of other tasks."

John (2013-02-02 11:52:22)

From a comment above (and totally irrelevant to the posted article): "Seth: Stomach acid kills only what is on the surface. We do not atomize our food in our mouths. It goes into our stomach in lumps. What's inside the lumps is safe from the acid." However, by the time food is ready to leave the stomach it is far away from being "lumps." It is a chalky, watery mix called chyme, having been totally massaged and mixed with acidic, watery, "mucus-y" secretions. Many/most (?) bacteria survive the acid of the stomach, but not because they are inside the lumps (boluses) of food that came down the esophagus. These "lumps" are totally liquefied before they enter the small intestine, and have been thoroughly exposed to gastric acids.

Koanic (2013-02-08 00:19:49)

"I've found some relevant evidence. Is it possible that it might be your turn to do so?" IIRC, you've admitted that psychology is mostly useless. That's because the science is in its infancy. Here are the green shoots of real, hard psychology that I've described above. It will correlate biomarkers with actual, not just self-reported, psychological traits. sources: <http://www.ncbi.nlm.nih.gov/pubmed/7272664> [http://facelab.org/bc/jones/Teaching/files/Penton-Voak\\_2006.pdf](http://facelab.org/bc/jones/Teaching/files/Penton-Voak_2006.pdf) <http://www.molecularautism.com/content/2/1/15> <http://bps-research-digest.blogspot.com/-2009/09/physiognomy-redux-link-found-between.html> [http://books.google.com/books?id=cywujk9axNwC &pg=PA172 &lpg=PA172 &dq=Kozeny+1962+700+faces+convicted &source=bl &ots=IUOV9AbdAq &sig=ICzEBy4NRKU8HJwx19XED-kqgL8 &hl=en &sa=X &ei=X6IUUYHqG4-K9QTJnoHYBw &ved=OCDAQ6AEwAA #v=onepage &q=Kozeny %201962 %20700 %20faces %20convicted &f=false](http://books.google.com/books?id=cywujk9axNwC&pg=PA172&lpg=PA172&dq=Kozeny+1962+700+faces+convicted&source=bl&ots=IUOV9AbdAq&sig=ICzEBy4NRKU8HJwx19XED-kqgL8&hl=en&sa=X&ei=X6IUUYHqG4-K9QTJnoHYBw&ved=OCDAQ6AEwAA#v=onepage&q=Kozeny%201962%20700%20faces%20convicted&f=false) [http://www.dailymail.co.uk/sciencetech/article-2273857/Neurologist-discovers-dark-patch-inside-brains-killers-rapists.html](http://www.dailymail.co.uk/sciencetech/article-2273857/Neurologist-discovers-dark-patch-inside-brains-killers-rapists.html#ixzz2KHQmQhSi) #ixzz2KHQmQhSi Seth: Thanks for the links. I don't know about the brain damage study. The correlation between facial features and behavior is very weak. Nothing here suggests to me that this work is better (or will ever be better) than the self-report psychology you disparage. Why do we listen to what other people say? Because there is usually some truth to it. Why do you think speech evolved? Because it was useful. Self-report personality psychology is just psychology based on what people say. Many many things in the world are based on what people say and work fine. Sure, roughly all psychology research is useless. Same with all academic research. An engineering graduate student at Berkeley told me that 95 % of the research in her department was useless. Update: this article provides considerable evidence of the practical value of self-report psychology: [http://www.washingtonpost.com/national/on-leadership/why-extroverts-fail-intr-overts-flounder-and-you-probably-succeed/2013/01/28/bc4949b0-695d-11e2-95b3-272d604a10a3\\_singlePage.html?tid=obnetwork#](http://www.washingtonpost.com/national/on-leadership/why-extroverts-fail-intr-overts-flounder-and-you-probably-succeed/2013/01/28/bc4949b0-695d-11e2-95b3-272d604a10a3_singlePage.html?tid=obnetwork#)

Koanic (2013-02-11 21:10:45)

You are correct that the face reading studies are not very good yet. I happen to know that they will get much better, but you can't know that yet. I know why they are not very good - because they haven't found the right things to measure. Human facial inference is still better than academic methods. Introversion / extroversion is by far the least polluted and most accurate of the big 5 self report dimensions. There are certainly accurate self-report dimensions - for example male partner count is accurate.

The page you linked does not specify that the assessment was self-report. The paper has not yet been published. However, I agree with the pro-ambivert result. But this result is not very interesting, by itself, because it does not cover the biological or biographical angles. Seth: May I ask how you know that face reading studies will get much better? I haven't heard that before.

Koanic (2013-02-12 07:21:28)

Because I'm doing it - matching facial patterns to hardwired psychological dimensions, and seeing how the different ways they work out in biographical patterns. <http://www.koanicsoul.com/blog/2012/09/01/paleo-phrenology-and-the-new-face-i-sm/> The most important facial dimensions and corresponding psychological dimensions have not been measured yet in a study. For the most part, psychologists do not even pay attention to the hardwired psychological dimensions I have uncovered. This is because they are mostly not independent axes on self-reporting. Extro/introversion most closely corresponds to the recession of the eyeball from the upper brow bone, aka socket depth.

Koanic (2013-02-12 07:22:31)

should be "eyebrow bone shelf above" not "upper brow bone"

## Movie Directing and Teaching (2013-01-28 05:00)

In [1]my last post I described the result of giving my students more freedom. The more freedom I gave them, the harder it became to grade them. So I stopped grading them – giving them even more freedom. Here is what the director Steven Soderbergh said in [2]a recent interview about giving actors freedom:

INTERVIEWER You've talked at length about giving actors as much freedom as possible. That's resulted in a number of performances that have launched, revived, and revitalized careers. In the case of Jennifer Lopez in Out of Sight, you're responsible for her only good film performance.

SODERBERGH It's not that I never say no; I'm just not trying to control them. I'm looking to amplify and showcase whatever it is about them that I find compelling.

I assume that each of my students wants to learn something (related to the class). I try to make use of that desire rather than push them to learn something else. Whatever my students are good at, I want to make them better at. [3]Here is an old post of mine about how this way of teaching resembles the way good managers manage.

1. <http://blog.sethroberts.net/2013/01/26/my-ideas-about-teaching-put-into-practice/>

2. <http://www.vulture.com/2013/01/steven-soderbergh-in-conversation.html>

3. <http://blog.sethroberts.net/2007/05/12/my-theory-of-human-evolution-business-book-edition/>

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Alex Chernavsky (2013-01-28 06:56:24)

Have you never had students who were unmotivated and didn't perform well on the unstructured projects that you assigned? I'm not proud of it, but I have to say that the threat of bad grades kept me from slacking in many of the classes I took. There were so many potential distractions in my life, all competing for my attention. I'm not sure that I would have done well in high school and college if all my classes were free-form. Seth: I've only tried not grading once. In this particular case, nobody performed poorly. What I conclude is there are other powerful motivators besides grades. One is an innate desire to learn. Another is a desire to look good to your peers (in class presentations). Maybe your teachers never made good use of these two motivations.

Darrin Thompson (2013-01-28 11:51:39)

Thinking out loud: I can't help but wonder how that would work in a more technical class. At the end of the class can you execute proofs or write programs in C or multiply numbers? I suppose there's a case to be made for that fact that the current system of education in STEM subjects seems to favor a tiny minority of white males. I'm working in software engineering. A huge part of our jobs is combining a bunch of people's backgrounds, having a lot of conversations, and finally executing on something, whatever best idea we could come up with. The execution is sometimes a surprisingly small part of the job. Yet that background in technical knowledge has to come from somewhere and you either have it or don't. What you also sometimes have or don't is the ability to use that background effectively with others. That said, I can see the value in a class where you "go make something, like with a computer or whatever." And I wonder how much background students would have needed to "cover" before we all could be confident that they'd succeed at something. Seth: see my next post for an answer to this question.

dearieme (2013-01-28 15:49:55)

As an undergraduate I found most chemistry lectures dull but chem lab satisfying. I found many physics lectures interesting but most physics lab dull. I enjoyed maths lectures and also enjoyed doing computer programming. I don't offhand see any particular pattern there. But I did feel sorry for my friends who were on courses that seemed to involve only learning by listening, reading and writing, and no learning by doing.

### **Giving Computer Science Students Freedom (2013-01-29 05:00)**

After [1]my post about how I stopped grading, Eric Chown, who teaches computer science at Bowdoin, [2]said he did something similar. In upper division courses, he wrote, "All that matters is student engagement. When students are engaged . . . my job is to stay out of their way." I asked him for details. His reply:

Independent Study: I run a lot of them. Many are in areas that I'm not an expert in. This started out of necessity - some of our students wanted to learn things that we simply do not have in our curriculum and if they were exceptional students I knew they'd be able to learn those things on their own. Over the years I've come to see that all any of our students need to succeed in an independent study is a high level of motivation. I make sure they have picked a useful topic and are sufficiently motivated and have a general plan. After that I turn them loose. I meet with them once a week to see where they are. I rarely give them explicit assignments. I'm almost never disappointed by what they learn and accomplish.

Projects: I teach a Projects course. The goal of the course is engagement pure and simple. Students choose a project at the start of the term (approved by me). There are no lectures in the course nor any required reading. Course time is used for 1) weekly short (5-10 minute) student presentations on where they are, what problems they are having, etc., 2) to meet with each other if they are working in groups, 3) to share ideas. Students hand in weekly "work logs" (which I don't grade). As the course goes on, I encourage the students not only to present on their project, but also on the process of the project. Themes always emerge, particularly "what I expected to accomplish versus what I actually accomplished" and "how I learned to motivate myself". At the end of the term they do traditional presentations of their projects and hand in their software and a short paper about it. Student projects have become so central to our curriculum that we now require that all majors take at least one project-centric course to graduate. Probably more than half of our upper level courses have migrated in this direction.

Mobile Computing: Last year I started teaching a course on Mobile Computing. I had zero experience in this area. My goal was to try and stay about a week ahead of the class. . . . I told them that as computer scientists they should be able to do what I was doing - figure stuff out on the fly and learn where to look to find answers. Most of the grade for the course was based on a large project (no tests and a couple of easy warm up assignments). Students absolutely didn't care that I wasn't an expert, they were simply thrilled to have an opportunity to work in an area they were excited about. Many have since told me that it was their favorite course at Bowdoin. My experience as

a computer scientist was all the expertise that they required. I'm teaching it again this term and while I'm more of an expert now I doubt the course will be more successful. If anything, my increased expertise may be a little more threatening to them. Around the college people are amazed that I would try something like this (I suspect some folks are even offended that I would teach outside my training). It has been great and has helped energize me.

**Cognitive Architecture:** I base what I do in this course largely on how my advisor taught at Michigan. I assign readings for each class but never lecture. A lot of the course is about the advantages of "Active Learning" and I try to put it into practice in how I run the course. When we come to class I have the students make a list of questions inspired by the reading. Class is spent discussing those questions. As the semester goes along the choice of readings becomes more and more influenced by the particular interest of the students. I give students a choice between a project and a final. The only constraint on the project is that it should have something to do with the topics of the course and that I'd like them to connect those topics to their major (I get a lot of Neuroscience and Psych majors). Sometimes the biggest problem with the projects is that students simply get too involved. That happened this term with a group that made a robot boat based on Braitenberg's "Vehicles" using Arduino [open-source prototyping]. Neither they nor I knew anything about Arduino ahead of time, but they had an absolute blast with it. Not only did they learn a lot more about Braitenberg's ideas, but they learned about Arduino and even how to solder! By the end of their project I found myself reminding them that they had other classes.

**RoboCup:** I'm head of the Bowdoin RoboCup team. [3]RoboCup is a worldwide competition where robots play soccer against each other. I started teaching robotics to get students interested in Computer Science. My knowledge of robotics going in was basically that one of my best friends in graduate school was a roboticist and I helped him implement some cognitive theories on a mobile robot. I told my students that RoboCup looked like fun and I didn't see why Bowdoin couldn't have a team (I had an NSF grant to start a robotics lab). That was in 2005. By 2007 we had won the world championship, beating teams like Carnegie Mellon. We're still competing almost 10 years later. My best students still know more about robotics than I do. What I know is how to engage them, how to put them on tasks that suit their particular talents and how to see the big picture. I'm a huge believer in the idea of "ownership" so I absolutely give the students ownership of the team. When they make choices that I disagree with I simply make my opinion known. Sometimes I am proven right, often I am proven wrong. We are competing with the top engineering schools in the world as a dinky (1800 students) undergraduate college of liberal arts students. My students on the team (typically from 8-12 at any given time) learn way more doing RoboCup than they do in their classes. Mostly they do this in their free time. Occasionally they can work on it as part of one of my classes or an independent study. They want to learn and they do. I give them opportunity. A steady stream of them are ending up in graduate school at CMU, Georgia Tech, Michigan, etc. [When I was 8 years old, I learned the concept of college major. I asked my mother: "What did you major in?" "Extracurricular activities," she said. She spent more time on the student paper than on her classes. - Seth]

I asked him how his approach differs from what other computer science teachers do.

Here are some differences:

- 1) I don't see my job as trying to transplant my knowledge to my students. I see my job as a facilitator and guide.
- 2) I tell my students ahead of time in some of my courses that I'm not going to tell them everything they need to know. Instead I'm going to try and teach them what to do when they don't have all of the knowledge they need.
- 3) I try to adjust what I do on the fly to the students I have (this is easier at a small school). If I can get the students to come to key material through their own means (normally projects) it will be far more meaningful to them

and they will learn it much better.

4) I'm not afraid of not knowing everything. If I only teach what I know everything about, it really limits what my students can get from me.

5) Fairly open ended projects are a great way for students to learn, and they don't have to be a time sink for me. However, even the most motivated students need "nudges." Part of my job is to figure out (or help them figure out) what nudge any given student needs. Weekly logs, frequent short presentations, etc. seem to work well.

Computer Science lends itself well to projects. However, many or most CS courses are typically taught either through a series of small, well-defined programs, or by standard projects where everyone in the class has the same goal. Most people in the field cling tenaciously to a core of material that they feel absolutely must be taught. Sometimes I think we're headed in a direction where half of the people teaching CS will use the same Power Point slides for their lectures (which helps explain the appeal of things like Coursera). My feeling is that if I can get a student excited about just about anything within the field they will naturally encounter the important stuff in the course of engaging their interests.

1. <http://blog.sethroberts.net/2013/01/26/my-ideas-about-teaching-put-into-practice/>

2. <http://blog.sethroberts.net/2013/01/26/my-ideas-about-teaching-put-into-practice/#comment-1085760>

3. <http://www.robocup.org/>

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Ed (2013-01-29 07:50:32)

Thank you for posting this. This style of teaching sounds like it would do well for an online or online/ in person mix type of class structure, where the teacher would meet with the student one on one online, instead of the typical one to many power point presentation. Do you think that this style of teaching could happen online? Thanks

Eric (2013-01-29 10:14:28)

RE: Ed. Yes, I think it could work online. Of course most of the interest in online learning comes from the idea of scale. I get a bit of scale in what I do in that I can do more independent studies and so forth than most professors, but that pales when compared to the kind of scaling people are excited about for things like Coursera.

TomGinTX (2013-01-29 18:23:48)

Forgive me for stating the obvious, but this is a lot more like the actual day-to-day work that computer scientists do. Traditional courses surely have their place for teaching the basics and getting a student started, but the project-based courses sound like a great idea.

### **Assorted Links (2013-01-30 05:00)**

- [1]Johnson & Johnson executives knew about problems with hip implant but did not tell doctors and patients. Surely an example of a larger problem.
- [2]Evidence that smell involves quantum physics. A theory that almost all smell scientists reject.
- [3]From 210 to 160 pounds via the Shangri-La Diet, and still losing.



- In [4] this history of the NFL's response to brain trauma, doctors, such as Elliott Pellman, acted far more often against player protection than for player protection.
- [5] The Sierra Club has taken lots of money from gas companies. Which makes sense. If you have a lot of money to spend, should you give it to those who agree with you or those who disagree with you? Which recipients will change more per dollar? Peter Gleick failed to understand this. [6] Noam Chomsky is even more confused.
- [7] Overweight associated with lower, not higher mortality. "Relative to normal weight . . . grades 2 and 3 obesity were associated with significantly higher all-cause mortality. . . . Overweight [25 < BMI < 30] was associated with significantly lower all-cause mortality."

1. <http://www.nytimes.com/2013/01/26/business/johnson-johnson-hid-flaw-in-artificial-hip-documents-show.html?pagewanted=2&pagewanted=all>
2. <http://www.bbc.co.uk/news/science-environment-21150046>
3. <http://permanentquivive.wordpress.com/2013/01/26/160-lb-post/>
4. <http://www.theatlantic.com/entertainment/archive/2013/01/the-nfls-response-to-brain-trauma-a-brief-history/272520/>
5. <http://nofrakkingconsensus.com/2013/01/27/the-sierra-clubs-broken-moral-compass/>
6. [http://videosift.com/video/noam-chomsky-how-climate-change-became-a-liberal-hoax?utm\\_source=scribol.com&utm\\_medium=referral&utm\\_campaign=scribol.com](http://videosift.com/video/noam-chomsky-how-climate-change-became-a-liberal-hoax?utm_source=scribol.com&utm_medium=referral&utm_campaign=scribol.com)
7. <http://www.ncbi.nlm.nih.gov/pubmed/23280227?dopt=Abstract>

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Tom (2013-01-30 06:50:59)

Boeing knew about problems with the 787 battery, hid previous failures: <http://www.nytimes.com/2013/01/30/business/boeing-aware-of-battery-ills-before-the-fires.html>

Tom Passin (2013-01-30 06:58:32)

Interesting that in the study of mortality vs weight, the authors report the results for "overweight" and "Grade I Obesity" using rather different wording despite the fact that the numerical results were essentially the same: "overweight was associated with significantly lower all-cause mortality" but "Grade 1 obesity overall was not associated with higher mortality"

Matt (2013-01-30 07:28:19)

Does the weight/mortality study account for people who smoke cigarettes tending to be leaner than non-smokers?

Nancy Lebovitz (2013-01-30 08:18:40)

So far as I know, cigarette smoking only affects weight by 10 or 15 pounds. Would that be enough to have a large effect on the statistics?

Nancy Lebovitz (2013-01-30 08:22:15)

Could the olfactory sensors be sensitive to weight as well as shape?

Korben Dallas (2013-01-30 08:24:13)

@Matt: it was a meta-analysis, maybe some of the original studies they analyzed did adjust for smoking. But it could also be that slightly overweight people try to limit their sugar consumption more than normal weight people, and as such end up healthier, or that they get more nutrition from eating more kcals.. The Sierra club taking money doesn't make much sense to me, you're giving your most vocal opponents money? How does that make sense? If I have a political party, then surely the best way to spend money is to spend it on our own campaigns and not finance the campaigns of others? Seth: "How does that

make sense?" Well, yes, it isn't obvious. It makes sense because they will change. Political parties and gas companies have different goals. Political parties want to win elections, take over government. Gas companies want favorable treatment by government.

Matt (2013-01-30 09:02:29)

@Nancy: Yes, 10-15 pounds, if uncorrected not accounted for, would have a massive effect. An average normal weight person who gains ten pounds will usually be pushed into the overweight category.

dearieme (2013-01-30 14:01:26)

It looks as if the mortality vs weight curve is U-shaped, with a rather flat minimum in the range  $25 < \text{BMI} < 35$ . It would be clearer had they reported results for the scrawny ( $\text{BMI} < 18.5$ ) and separate results for not only the plump (grade 1 obese) but also the fat (grade 2 obese) and the spherical (grade 3). What chance that the scrawny die earlier than the fat? I think we should be told. I wonder whether the data sets are complete enough to allow recalculation using the new, improved definition of BMI proposed recently by some people at Oxford.

dearieme (2013-01-30 14:29:27)

Mind you, can it make any sense to recommend desirable BMIs without reference to age or sex (or, conceivably, race)? (I take it that the point of these correlative studies isn't mere intellectual curiosity - they're intended to yield recommendations, aren't they?)

TomGinTX (2013-01-30 20:10:21)

"If you have a lot of money to spend, should you give it to those who agree with you or those who disagree with you? Which recipients will change more per dollar?" This would explain why the gas companies would offer the money. But I too am puzzled as to why the Sierra Club would accept it. And why all the secrecy? Seth: I am not puzzled. Sierra Club leaders accept it because "it's for a good cause," they tell themselves. They accept it in secret because they think their members will be outraged.

Patrik (2013-01-31 00:54:21)

I hate to break the news to Seth's readers - but ALL of your favorite non-profit causes (environmental or otherwise) take money happily from their ostensible opponents - in fact, some orgs entire *raison d'être* has evolved is to extract money from their frenemies (shakedowns that benefit both parties), while the initial motivating cause is simply window-dressing.

Tom (2013-02-01 01:10:27)

Yes. I always thought this would be an easy way to get rich, if one didn't have much pride.

Hugh (2013-02-01 05:19:57)

Thanks, Seth, for the shout-out!

Paul N (2013-02-01 10:10:13)

A rough Canadian equivalent to the Sierra Club is the Pembina Institute, and environmental think tank, focusing on energy issues. However, they take a different approach, and actively engage with energy companies (and government, and public), and even do corporate consulting" to most of the oil companies in Canada. I say a different approach as not only do they engage with these companies, and receive money from them for doing so, but do not try to hide the fact. How much change they have been able to achieve in their 30yrs of doing so is debatable, but the same question can be asked of the Sierra Club too. At least one of these bodies does not try to hide anything - if you disagree with what Pembina is doing, then you don;t have to donate/associate, but at least they are clear about what they are doing and how they are funded - something many other advocacy groups are not.

Paul N (2013-02-01 11:04:51)

Sorry, link not working above. [1]Pembina Institute

1. <http://www.pembina.org/corporate-services>

M&M (2013-02-14 16:45:17)

Interesting article on the weight/mortality findings. What are your thoughts on this Seth? Seth: I think that as we get older, smell-calorie associations naturally get stronger (they are based on experience, which older people have more of). This raises the setpoint so average weight increases. Being far from the average in either direction generally indicates something is seriously wrong, which would also increase mortality. That's the best I can do.

## Guest Post: What Makes a Good Clinician? (2013-01-31 05:00)

This post is by Adam Clemans.

Marco Arruda, an MD and PhD in the Department of Pediatric Neurology at the Glia Institute (São Paulo, Brazil) is the author of [1]a recent editorial in JAMA Pediatrics about the use of [2]Triptan for headaches in children. There's a lot of controversy because placebos work very well for headache – so much so that they often have to use some tricky methods to actually show a treatment effect with the real drugs.

In [3]a recent article on Medscape, Dr. Arruda is quoted as saying: "Although placebo is the enemy of great clinical trials, it is likely the best friend of good clinicians."

This makes me wonder what he thinks makes a good clinician. If Triptan and a placebo are equally effective, it is curious that anyone would skip the placebo and prescribe the drug, which has listed as side effects:

Anaphylactic shock, angina, angioedema, breast pain, colitis, coronary artery vasospasm, hemiplegia, hypertension, myocardial ischemia, MI, neuropathy, rash, seizure, syncope, tachycardia, ventricular fibrillation, ventricular tachycardia

Why does putting patients in harm's way make one a good clinician?

1. <http://archpedi.jamanetwork.com/article.aspx?articleid=1558558>

2. <http://en.wikipedia.org/wiki/Triptan>

3. <http://www.medscape.com/viewarticle/778396>

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dearieme (2013-01-31 06:06:13)

Has anyone studied the side effects of placebos?

Paul N (2013-01-31 11:47:28)

placebos have definite side effects for drug companies

Paul N (2013-01-31 11:53:42)

To the post itself, I'm not quite sure what Adam is getting at with his last question. "Although placebo is the enemy of great clinical trials, it is likely the best friend of good clinicians." implies a good clinician would make use of some sugar pills (placebos)... "This makes me wonder what he thinks makes a good clinician." It would seem he thinks it is one that uses sugar pills sometimes "Why does putting patients in harm's way make one a good clinician?" His idea is that the clinician

\*didn't\*, by using sugar pills. Am I missing/misreading something here? I wonder what the malpractice status is for a doctor that gives a placebo - for it to work, he must tell the patient it is actually a drug. The lawyers could have a field day with that one...

Elizabeth Molin (2013-01-31 12:40:45)

Apparently placebos often work even when the patient is told, "This is a sugar pill with no active ingredients, but it has helped some people with your condition."

Adam (2013-01-31 16:45:01)

Paul, I was a little unsure of what he meant at 1st too, but if you read the linked article, it is clear he is advocating using Triptans: "... when possible, treat within label by giving preference to approved drugs; and when no evidence is available, or when first-line therapies have failed, select a drug based on plausibility, proved efficacy in studies with adults, and proved safety of the drug in children." The problem is, there is no proof that these drugs are safe in children. It is obvious that Placebos are safer and, apparently, equally effective.

nicholas (2013-01-31 17:07:41)

A placebo is a tricky thing for a clinician and for patients. Personally, I would feel a little disappointed if I made the effort to come to a doctor and they told me to take a sugar pill, even if it was shown to be equally effective, and even if my logical brain believed that. Also, people dramatically underestimate 'no treatment' and in doing so over-estimate the placebo effect. Just doing nothing cures many problems and 'no treatment' is rarely run as a 2nd control. Maybe in children you can get away with prescribing pure placebos, but I'm not surprised that it just doesn't catch on with doctors and their adult patients. So... what if, instead of pure placebos, we had a movement towards 'low dose' medicines. Why not give someone low-dose aspirin at 1/5th or 1/10th of the normal dose? It will have very minimal side effects and would be something that both practitioners and patients can feel like is 'at least something'. It could get some real-world momentum, and would really reduce over treatment and side effects if it did.

Alex (2013-02-01 00:57:36)

"Arruda [...] points out that these studies "force us to remember that 'no evidence of efficacy does not mean the evidence of no efficacy'." sigh... Seth: It's one of the Consolations of Pseudo-Science, that you can say things like that.

Phil Goetz (2013-02-15 16:07:09)

Have the aforementioned side-effects also been compared to the side-effects of placebos?

Adam (2013-02-15 18:39:12)

In Triptan trials, the placebo groups usually have few side effects because they believe (or are told?) that Triptans have few side effects as well. In one trial patients were told they might be receiving an antidepressant but received placebo; side effects included dry mouth, drowsiness, constipation, and sexual problems. In another trial patients were told they might get an anticonvulsant but received placebo; they experienced more drowsiness & sleepiness. These are not at all comparable to heart attack, anaphylaxis, seizures, etc.

Seth Roberts (2013-02-16 02:14:12)

In some cases, "placebo effect" is confused with the effect of time passing. For example, if a patient gets better after getting a placebo, this is called a placebo effect even though it isn't clear that the placebo was responsible. The improvement might have happened if nothing was done.

## 8.2 February

### End-of-Life Medicine: Enormous Lack of Informed Consent (2013-02-01 05:00)

A few weeks ago I blogged about [1]undisclosed risks of medical treatments. Undisclosed risks are common. They might be the norm. The situation would be even worse – in some sense, much worse – if doctors knew of these risks and failed to tell their patients. It was unclear if doctors knew of the undisclosed risks I wrote about.

Recently [2]Tyler Cowen quoted [3]a newspaper story about Israeli doctors giving birth control injections to Ethiopian women immigrants "without their knowledge or consent." Every commenter thought this was repugnant.

[4]The latest RadioLab podcast ("The Bitter End") is about the dramatic difference between how doctors want to be treated when they are near death (they want no CPR, no ventilator, no dialysis, no surgery, no chemotherapy, no feeding tube, no antibiotics, nothing except pain medicine) and how the general public wants to be treated (most people want CPR, ventilator, dialysis, surgery, chemotherapy, feeding tube, antibiotics, and so on).

The RadioLab guys were puzzled by the difference. Upon investigation, they learned that the big differences exist because all those medical procedures (except pain medicine) have much worse outcomes than the public is told. The doctors know about the bad outcomes. It is better to die, the doctors decide. Unless doctors have less tolerance for being in a vegetative state, having ribs broken, and so on than the rest of us, it is clear that most people agree to these procedures because of ignorance. They fail to know what actually happens because the people who know – doctors – fail to tell them.

In other words, a huge number of sick people are being treated without having given informed consent. Doctors are doing many things to the sick people that benefit the doctors without telling the sick people how bad those things are. If end-of-life doctors told the truth, they would have a lot less work.

The RadioLab podcast hints at the moral retardedness implied by this practice in an interview with a medical student, whom I assume was randomly chosen. Why aren't people told the truth? the interviewer asks. "I don't know how to communicate that effectively," says the student. Then he communicates the truth quite effectively. Why don't you say that? says the interviewer. People don't want to hear that, says the student (changing his answer). They don't want to, but they need to, says the interviewer. The student says it would be "presumptuous" to tell them the truth. Presumptuous. What universe is he in? The absurdities and pathetic justifications given by the medical student to rationalize his behavior suggest that the whole medical profession doesn't understand there is a big problem.

The comments on the RadioLab podcast at the website also suggest that doctors fail to grasp there is a big problem. Many commenters are doctors. Some agree with the facts in the program. None expresses even discomfort with the situation. One commenter is Joseph Gallo, the Johns Hopkins medical school professor who runs the study that revealed the enormous difference between what doctors want and what the general public wants. "I second the sentiments about nurses being great," wrote Gallo. "I would add that studies that have asked nurses about their end-of-life preferences have found similar desire to limit care." The two sentences contradict each other. There is nothing "great" about anyone who sees this happening and does nothing.

1. <http://blog.sethroberts.net/2013/01/10/undisclosed-risks-of-common-treatments-why-doctors-terrify-me/>

2. <http://marginalrevolution.com/marginalrevolution/2013/01/this-seems-underreported.html#comments>

3. <http://www.independent.co.uk/news/world/middle-east/israel-gave-birth-control-to-ethiopian-jews-without-their-consent-8468800.html>

4. <http://www.radiolab.org/blogs/radiolab-blog/2013/jan/15/bitter-end/>

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jon (2013-02-01 07:15:45)

It would be nice if there was a free market in medicine, maybe doctors would have a better relationship with their patients then.

derp (2013-02-01 08:13:20)

The best article I've ever read on the topic: <http://www.zocalopublicsquare.org/2011/11/30/how-doctors-die/ideas/nexus/>  
Yes, it's most often the doctors. You don't go to med school because you are a good communicator, you go there for good grades. Even when motivated to learn how to communicate, my personal "end-of-life and bad news communication" course in med school comprised of 60 minutes. I had a lecture on the staging and treatment of super-rare eye cancers, lasting 90 minutes. Talk about priorities. Of course, sometimes family members are dumb as hell. But that's the minority of cases.

Sally (2013-02-01 09:31:23)

How do you know if someone is in fact "end of life"? The fact is, that it is not as clear as many in the general public, and nurses, would like to think. There are people, who are alive and active, albeit with disabilities, who have been declared "end of life" for the last 25 years by various nurses and other health professionals. Would you like to be one of them, would you like to have supports limited? If it comes to their own children, are the doctors quick to withdraw all treatment? Also, many people change their minds entirely, once they are actually in this situation of needing major medical help. Often enough, those who thought they wanted to die suddenly don't. I think this is very dangerous territory with lots of risks for rampant abuse of "the right to live". How many people are being euthanized because the care providers have determined that it is the best thing to do, according to their own knowledge and beliefs. (This is important: Judgements, even when it comes to life, death, medical care, etc., are made within the confines of a few people's knowledge, beliefs, and prejudices. Isn't it nice to play God? Isn't it nice to think of yourself as possessing the knowledge of the universe, being able to decide over life and death? How easy it is to say: "There is nothing one can do!" When, in effect, it would be more honest to state that "there is nothing I (and my colleagues) can do".) Holland, a state that is famous for its pro-euthanasia laws, had a veritable holocaust of sick, old and disabled people (being killed without their consent), because it was so easy to do so and so publicly acceptable. In order to protect the lives of people in the system (medical/care) it is important to err on the side of "life", even if it cuts into the profits of insurance companies. This question of cost, which is the real reason these discussions are being popularized (not because of human suffering), cannot be addressed by limiting our approach to health to the newest drug, surgery, or other traditional intervention. Of course, there is little money to be made by preventing disease and disability (which can never be eliminated, but can be reduced). However, I am not a supporter of always employing the most aggressive care. You are making a good point, that the benefits of treatment always have to be weighed against the risks. I am not in favour of pushing unwarranted risky treatments on patients, which would kill them faster than doing nothing, or which have no proven benefits. (This very common approach is very prevalent in medicine. Chemotherapy may be given, even though it does not improve outcomes and causes suffering. Statins and antidepressants are prescribe like candy, causing much harm,... and the list goes on. How much "end of life" is being caused by medical intervention?) So much for my ramblings. As a health professional my opinions are not as clearly defined and a lot more variable, depending on the individual circumstances. And there is always the nagging in my mind, reminding me, that with all my training and years of experience, I know very little. So I choose to leave the decisions over life and death up to God, and do what I am supposed to be doing: to help. Seth: I disagree. I think life and death decisions should be made by the sick person (and their families) after they have been told the truth about the alternatives available.

Alex (2013-02-01 10:53:13)

What do you mean by "moral retardedness"? Seth: The way they put what's best for them (telling the truth makes their life slightly worse) above what's best for the sick person in their care, who suffers considerably because they do not tell the truth.

Sally (2013-02-01 11:04:13)

Yes, Terry Wahls was once "end of life", so was Jill Bolte Taylor and many more famous and not so famous people.

Christopher Burd (2013-02-01 11:44:08)

"I second the sentiments about nurses being great" He may just be patronizing them and hasn't thought through the implications.

Mehmet (2013-02-01 12:42:09)

I lost my father due to lung cancer two years ago (I do not live in the US). I have two related experiences: 1) My father was at the hospital at the time of his death. When nurse understood that he was dying, she called the doctors and told us to leave the room. When we were leaving the room, I told the doctors not to do anything like CPR. However, when they left the room after my father's death, they told me that they did CPR without giving him any pain. They probably had to do CPR due to some legal responsibilities. However, doing CPR in that case was nonsense: if his heart would start, it would stop in a short time again because his organs were all failing. Not doing CPR should be the default option for dying cancer patients. 2) When my father was diagnosed with late stage lung cancer, he did not want to have chemotherapy. But all of his relatives (including me) insisted him to get chemo. I still regret that. Chemo has less than 1 % chance to cure extensive lung cancer (probably much more less than 1 %). The prolonged life expectancy for a few months is considered as success but that is just prolonged suffering. Chemotherapy is the single treatment that is proven to be ineffective for extensive lung cancer. I would prefer any other treatment than chemo if I am diagnosed with the same disease.

Rachael (2013-02-01 13:31:51)

A very close friend of mine recently died of cancer. He was 45, and not at all ready to die and he chose to do every single possible treatment. The odds for chemo lengthening life after a recurrence, after failing several previous rounds, were slim to none. No one was honest or direct about that with him, and I was alone in saying that. My friend's single greatest fear in life was suffocating, he had a sleep disorder as a child, and severe asthma, and the sensation of breathlessness caused panic for him. No one on his care team explained that a possible side effect of chemo was damage to the alveoli. Once he developed that damage and had to be on round the clock oxygen, no one said it was because of the chemo. It wasn't until he finally was admitted to hospice less than two days before he died that someone explained that it was related to the chemo. He would never have done the last round, or even the second to last round of chemo if someone had explained that. In the end, he suffocated to death, and it was horrifying and painful for his mother and all of us to watch. I don't think anyone had bad intentions, and neither he nor his family wanted to hear those truths. But had someone been brave enough to be truly honest, different decisions would have been made.

Sally (2013-02-01 14:55:19)

Yes Rachael, this is sad, and what you said is right on. This man may have lived just as long or even longer doing nothing, with less pain and suffering. He may even have had a chance for alternative treatments, which may or may not have helped, but at least would not have made him even sicker or would have had less side effects. The statistics for some cancers state as much. I think doctors feel compelled to do "something" (they think it is expected of them), or else, they may want to "cover their butts" by doing what is being prescribed to them (by the professional watchdogs). Seth: I'm not talking about whether doctors "do something." I am talking about who controls whether they do something - in particular, whether patients and their families are told the truth before they decide what to do. Lying to them is taking control away from them. Patients and their families are, in many many cases, not told the truth - by doctors. The treatment alternative is described as better than it actually is. I disagree that doctors are "compelled" to lie. I also disagree that doctors "cover their butts" by lying like this. Quite the opposite: I think they expose themselves to lawsuits based on lack of informed consent.

Sally (2013-02-01 17:44:55)

I agree that patients (and their families, friends, etc.) need to be told the truth. I always try to do this myself. On the other hand, all these doctors often know is what they learned, in university, from their superiors, from their associations, from seminars (usually put on by someone who has something to sell). They may be some of the most brainwashed people out there, and sometime their patients are better informed than they are. It takes time and effort to look deeper into things, and it takes courage to swim against the current. Doctors ARE being punished for not complying with the main-stream. When it comes to lawsuits it usually matters if things were done according to currently accepted rules. If the rule is to prescribe statins for high cholesterol, then a doctor can get in trouble for not prescribing them, when the authorities think this is what should

be done. If the person taking the statins gets diabetes and dementia from taking those statins years later (and all that comes with it), the doctors are usually safe, if they stuck to what is considered current practice. If you deviate from the norm, you may lose your license. I think it is like this in many professions. Millions of people are harmed all the time, because what is taught in schools and universities may be wrong or outdated, or the subject may have been omitted from the lessons altogether (there is only so much time). Later on these doctors get swamped with the usual propaganda and long hours at work, and other pressures, leaving little time to rebel or even question anything. I am not a friend of every doctor, but there are many with the best of intentions, who truly want the best for their patients. Do you always know the truth, Seth? I don't! Doctors are NOT gods. They are NOT powerful and all-knowing. Do you always tell others the truth, Seth, even if it is uncomfortable, even if it is going to crush the other person? I think I am not worthy enough for this blog. I don't seem to get it. I personally see the opposite problem a lot more often, the widespread withholding of treatments and supports for people who are considered doomed (by some professional and other Gods) anyway, why prolong life? They do not all have end-stage lung-cancer, they may have had a large stroke like Jill Bolte-Taylor or they may have been in a coma for 19 years (Polish guy), only to wake up after all this time to resume their lives. Of course, many people would have rather ended their "suffering" than giving them a chance. Seth: "When it comes to lawsuits it usually matters if things were done according to currently accepted rules." Currently accepted rules include allowing people to give informed consent. They cannot give informed consent if they are not told the truth. Please give me one example where a doctor got in trouble for telling the truth. I am not talking about what doctors "prescribe" (meaning offer) – for example, whether they prescribe statins or not. I am talking about whether they tell the truth about what they offer – for example, whether they tell the truth about the consequences of taking statins. You blame "brainwashing" and "the usual propaganda" and "long hours at work" and "other pressures" (such as?) for why doctors fail to "rebel" or "question anything". When a powerful person (the doctor) tells a less powerful person (the sick patient) the truth, it is not "rebelling" or "question[ing] anything." It is common decency. Failing to tell the truth, failing to allow the sick person to make an informed choice of what is done to them, is lack of common decency, to put it mildly. Why you are making excuses for it puzzles me. "Do you always tell others the truth, Seth, even if it is uncomfortable?" When I am asked a question, I try to tell the truth as gently as possible. I figured that out in my twenties. I found it gets easier with practice. Nothing terrible happens. Most people – maybe even everyone – appreciates being gently told the truth. You seem unaware of this.

Sally (2013-02-01 18:10:06)

I should let you know that my own father was revived three times between the ages of 25 and 50. Then he ended up in a coma in a cardiac ICU at age 73. My mother insisted that he gets maximum treatment. She insisted that my father wants to live, at all costs. She got the usual talk from the doctors, stating the complexity of the circumstances, the questionable outcomes of the treatments, and the unlikely recovery of my father. But, accepting the wishes of my mother, and presumably my father, the doctors gave it all they could. The nurses, however, pressured my other to "let go", to accept the "inevitable". To make a long story short, my father recovered. He is continuing his life. He is still needed. Thank God nobody turned off the ventilator and refused to revive him. Seth: I'm puzzled that you are changing the subject. The subject is: Doctors routinely fail to tell sick people the full truth about the treatments they offer.

Sally (2013-02-01 19:04:31)

But that is not all you were writing about. you were writing about all kinds of different things, and your examples were all over the place. So, enough of it, we overlap somewhere in the middle, like the two circles in math class, and then we have the rest of our respective circles (of opinions and beliefs), which do not match. That's fine! I wish you well! May the world become a better place for you and others. I am all for it!

Jerry (2013-02-02 09:58:17)

This post reminds me of the other great nexus where sex, violence, pain, lack of medical ethics, and lack of informed consent all meet: circumcision. I am referring to routine infant circumcision of male newborns, as currently practiced in the US. Do doctors (male and female) circumcise their sons? At what rate compared to the overall population? An even more interesting question: do intact (i.e. uncircumcised) male doctors circumcise their sons? Seth: I don't know of any data suggesting that doctors and everyone else differ greatly on circumcision rate.



Sara Lake (2013-02-02 20:36:07)

Seth, this is a very intriguing discussion. Why do doctors want something different for themselves than what they suggest to their patients? Of course, the patient needs to be offered all options, but it seems somehow unfair that those 'in the know' don't tell the whole truth about what those options involve in terms of quality of life. I think there may be some truth that most hospital doctors have to answer to someone higher up. I have actually heard of a doctor giving the mostly unvarnished truth, and he was a consulting specialist (so, essentially, self-employed). The story is pretty sad, involving a friend of mine whose small child (2 y.o.) had an aggressive genetic cancer which was diagnosed at an advanced stage. The specialist said, when asked what he would do if it was his child, "nothing, just pain relief". That's not what they ended up doing, but they appreciated the honesty (and, later agreed that this would have been a kinder tactic). I think it's a good, honest tactic for doctors to say 'this is what I'd do if it was me/ my child/my husband'. They are the ones that should know, after all.

Terry Elliott (2013-02-03 09:04:23)

I once had a political science professor sum this up. He said that we all need to make an important decision: who's on tap and who's on top? He was of a mind that the individual is always on top and the experts are always on tap. Of course, if you get fed a raft on well or ill-intentioned half-truths about end of life issues it is impossible to make that on top decision. I prefer to be told the truth and the odds so that I can make the decision. We must not abdicate this duty to remain responsible to ourselves even if we might make a mistake.

Slipping Away | stocker cary (2013-02-05 13:45:01)

[...] like this Seth Roberts blog about a RadioLab broadcast called "The Bitter End." It's about the information [...]

Mary (2013-02-05 14:00:03)

A "living will" signed by a patient can be revoked at any time by the patient by law! And unfortunately also (under threat of a law suit) by family members against the patient's will in most acute care places, if the patient is unable. I am a retired health care worker. In my advanced health care/POA for health care I have left specific instructions, including up to three months with treatment except a surgically implanted feeding device, among other things. All hospitals, by federal law, have ethics committees that can be accessed by physicians, nurses, and a group of family members if any of them wishes- if they have any issues in this regard.

### **New Terry Deacon Website (2013-02-03 05:00)**

Terry Deacon is a professor of anthropology at UC Berkeley. I [1]have blogged about the accusation of plagiarism (using Alicia Juarrero's ideas without citing her) against him. In addition to [2]the website accusing him of plagiarism, there is now [3]a website at berkeley.edu (UC Berkeley) meant to restore his reputation. It contains the report of a UC Berkeley committee that concluded there was not enough evidence to be sure Deacon had gotten certain ideas from Juarrerro, whom he had heard talk about them. Except in one instance, they could also not conclude the opposite - that he did not get certain ideas from Juarrero. There wasn't enough evidence to be sure of that, either.

The new website attempts to discredit Michael Lissack, one of Deacon's accusers. Here, in its entirety, is how the website describes Lissack:

Michael Lissack was formerly a managing director of a Wall Street municipal bond department. In 1998, the SEC issued an order finding that "Lissack willfully violated" federal securities laws and "that he undertook such conduct with an intent to deceive." According to the New York Times, later that year, the Manhattan District Attorney's office charged Lissack "with using the Internet to harass executives at his

old firm.” Media reports indicated that Lissack subsequently pled guilty to second-degree harassment. Lissack’s web site identifies him as the founder and executive director of the Institute for the Study of Coherence and Emergence (ISCE), as well as “the ISCE Professor of Meaning in Organizations, and a serial entrepreneur.” His posted CV states that he received a BA from Williams College, an MBA from Yale School of Management, and a Doctorate of Business Administration from Henley Management College.

Okay, maybe that’s relevant. Here’s [4]what’s also true:

[Michael Lissack] is notable as the whistleblower who exposed a yield burning scandal in the 1990s, whereby financial firms made illegal profits from the structuring of U.S. Government investment portfolios associated with municipal bonds. . . . In 1994 Lissack exposed a major yield burning scandal on Wall Street. The issue was eventually settled by a number of firms for over \$200 million, to which Lissack was entitled to at least 15 % per federal whistleblower laws. Lissack used some of these funds for charitable purposes including endowing a professorship in Social Responsibility and Personal Ethics at his alma mater Williams College.

I asked Lissack for comment on the committee report. He said, “By publishing the report the way they did and building a permanent web site they have ensured that anyone who attempts to treat Deacon seriously will read Juarrero and that was in many respects the goal.”

My expertise is too far from Juarrero’s and Deacon’s work for me to judge if the many similarities might be a coincidence, as Deacon claims. [Update: Juarrero has explained the reason for alleging plagiarism to me and I now agree, the similarities are no coincidence. I will post about this again.] I am sure, however, that Juarrero was right to be very upset that her work wasn’t cited.

I know the feeling. When I was a graduate student, at Brown University, I did several experiments with rats on the cross-modal transfer of time discrimination – the first such experiments in animals. They showed that rats had something like a concept of time. After I left graduate school and became a professor, my graduate school advisor, [5]Russell Church, and a new graduate student, [6]Warren Meck, essentially copied one of my experiments and the underlying theoretical idea. Needless to say it was not a case of independent invention. I had told Church about my experiments, which were done in his lab. I [7]published my results before they [8]published theirs. In spite of this, Meck and Church gave me as little credit as possible consistent with citing my work. Their introduction doesn’t mention my work – as if they had thought of their experiments without my help.

Strangely enough, I happened to be in Church’s office, visiting him, when the issue of the journal containing the Meck and Church paper arrived. I took the journal out of its brown paper cover. I looked at the table of contents. I saw their article, which I had not known about. (I wonder why.) I started to read it. I saw that, in the introduction, it didn’t mention my work. “Why did you do that?” I angrily asked Church. To get more credit, he said.

In my experience of academia, powerful people often take credit for what less powerful people have done. [9]The discovery of streptomycin, for which the powerful person received a Nobel Prize and the less powerful person did not, is an example. In the Terry Deacon case, Lissack has helped outsiders decide who deserves credit for what.

[10]Why Alicia Juarrero Got Mad at Terry Deacon.

1. <http://blog.sethroberts.net/2012/09/12/the-terry-deacon-affair/>

2. <http://theterrydeaconaffair.com/>

3. <http://terrydeacon.berkeley.edu/>
4. [http://en.wikipedia.org/wiki/Michael\\_Lissack](http://en.wikipedia.org/wiki/Michael_Lissack)
5. <http://www.brown.edu/Departments/CLPS/people/russell-church>
6. <http://psychandneuro.duke.edu/people?Gurl=/aas/pn&Uil=meck&subpage=profile>
7. <http://psycnet.apa.org/index.cfm?fa=buy.optionToBuy&id=1982-20404-001>
8. <http://psycnet.apa.org/index.cfm?fa=buy.optionToBuy&id=1983-04976-001>
9. [http://www.nytimes.com/2012/06/12/science/notebooks-shed-light-on-an-antibiotic-discovery-and-a-mentors-betrayal.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2012/06/12/science/notebooks-shed-light-on-an-antibiotic-discovery-and-a-mentors-betrayal.html?pagewanted=all&_r=0)
10. <http://blog.sethroberts.net/2013/02/05/alicia-juarerro-on-the-terry-deacon-report/>

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dearieme (2013-02-03 05:11:26)

The most outrageous academic crook that I encountered personally was eventually sacked, under the pretence of ill-health early retirement. It really was hard to get rid of a professor in an ancient British university, but they managed it in the end. I never learned how; perhaps they threatened him with jail.

### Assorted Links (2013-02-04 05:00)

- [1]Quantified Spouse
- [2]Downsides of treadmill workstations. The biggest problem I had with my office treadmill workstation was that it made too much noise. It was also very tiring.
- [3]Anticipation of interaction with a woman reduces men's cognitive performance
- [4]Look back at Is There No Place on Earth For Me?, a profile of a schizophrenic woman by Susan Sheehan
- [5]Why do Finnish students do so well on PISA (an international comparison)? Finnish students do much better than Norwegian students even though the two countries are quite similar.

Thanks to Phil Alexander, Vic Sarjoo, and Navanit Arakeri.

1. [http://www.huffingtonpost.com/2013/01/28/quantified-spouse-movement\\_n\\_2567459.html](http://www.huffingtonpost.com/2013/01/28/quantified-spouse-movement_n_2567459.html)
2. <http://online.wsj.com/article/SB10001424127887324539304578263650060635048.html>
3. [http://download.springer.com/static/pdf/888/art%253A10.1007%252Fs10508-011-9860-z.pdf?auth66=1360872101\\_88ad7dcbe0d500c5e05cd6c322b6ccc9&ext=.pdf](http://download.springer.com/static/pdf/888/art%253A10.1007%252Fs10508-011-9860-z.pdf?auth66=1360872101_88ad7dcbe0d500c5e05cd6c322b6ccc9&ext=.pdf)
4. [http://www.cjr.org/second\\_read/a\\_beautiful\\_mind.php?page=all](http://www.cjr.org/second_read/a_beautiful_mind.php?page=all)
5. <http://www.npr.org/2011/01/28/133301331/the-new-republic-the-u-s-could-learn-from-finland>

## The Clouded Crystal Ball: A Psychic and Her Employees (2013-02-04 19:41)

The New Yorker used to have a mini-department called [1]The Clouded Crystal Ball: examples of bad predictions taken from "newsbreaks" – little bits of text used to fill a column. In [2]an interview, a friend of mine named Margaret Meklín told of a different sort of clouded crystal ball:

My first job in the U.S. was passing out flyers for a fortune teller on Powell and Market in San Francisco. She did not trust her psychic powers enough to guess who was doing a truly good job (it was me!), so she would periodically hide in the tourist crowds to check if we were passing out flyers quickly and efficiently and to a sufficient number of passersby. She gave a higher pay rate to my co-worker, thinking that he was more productive, but she had no idea that he would simply toss a whole stack of flyers into a trash can when she wasn't watching him.

1. [http://www.newyorker.com/archive/1998/10/26/1998\\_10\\_26\\_156\\_TNY\\_LIBRY\\_000016700](http://www.newyorker.com/archive/1998/10/26/1998_10_26_156_TNY_LIBRY_000016700)

2. <http://www.unmannedpress.com/#!/storytellers/ck77>

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Cliff Styles (2013-02-04 21:54:23)

This post is a fragment of poetic perfection, thanks Seth.

Three Pipe Problem (2013-02-04 22:00:24)

I've gone into hundreds of [fortune-teller's parlors], and have been told thousands of things, but nobody ever told me I was a policewoman getting ready to arrest her. – New York City detective

Christopher Burd (2013-02-05 13:52:19)

Is fortune-telling illegal in New York?

shtove (2013-02-05 14:24:15)

It's all about data and how to unhide them. Barry Ritholtz has a post on a new site to track financial pundits: <http://www.ritholtz.com/blog/2013/02/pundit-tracker/>

dearieme (2013-02-06 01:21:30)

Ahoy, Seth. Steve Sailer (the most interesting journalist in the US?) has just blogged a piece on "priming" in social psychology: another case of phoney science?

dearieme (2013-02-06 01:21:37)

Ahoy, Seth. Steve Sailer (the most interesting journalist in the US?) has just blogged a piece on "priming" in social psychology: another case of phoney science?

dearieme (2013-02-06 08:52:44)

Ahoy again, Seth. Cardiobrief has linked to this diet paper. <http://www.bmj.com/content/346/bmj.e8707>

... | Glen Davis (2013-02-12 17:28:14)

[...] Seth's Blog » Blog Archive » The Clouded Crystal Ball: A Psychic and Her Employees [...]

## Why Alicia Juarrero Got Mad at Terry Deacon (2013-02-05 05:00)

In response to allegations that Terry Deacon, a Berkeley professor, plagiarized from Alicia Juarrero, a professor at [1]a community college, UC Berkeley created [2]a website that (among other things) [3]tried to smear Michael Lissack, one of the accusers. Less obvious is that the committee that investigated the allegations ignored their core: The overlap with Juarrero is relentless. It goes on and on. Juarrero explained this to me when I asked her what she thought of [4]the committee report:

I'm disappointed, but not surprised. Not sure what the difference is between "reckless" (which their definition of plagiarism includes) and "negligent" (which they critiqued as a "novel interpretation" of plagiarism). I'll tell you how my cri de coeur spreadsheet came about: as I read Deacon [Incomplete Nature] I got angrier and angrier, so I decided to start the spreadsheet. The index in my own book [Dynamics in Action] is very bad (my fault, my inexperience) and so I was having a hard time finding the parallel material in my own work. I knew I had said something to that effect somewhere in the book but couldn't remember where and couldn't find the entry in my own index. But suddenly, a pattern emerged: All I had to do was read on a few pages or paragraphs further down from the previous "problem," and there would be the next item. This happened over and over again in huge chunks of the work (which I highlighted to point out the big chunks of seriatim similarities) – it's the seriatimness (!) that's so damning and to me, clear evidence this wasn't just someone who vaguely remembered what I had said in a talk and then reconstructed the ideas for himself. The sheer number and sequential nature of the similarities are just too improbable to be a coincidence, or two people working in the same field. He was quite clever about it. He hid it with neologisms, talking about whole-part instead of top-down causality, insisting that self-organization is not enough (and then turning around in advocating it), etc. And, of course, not discussing intentional action, which is the explicit subject of my book.

The spreadsheet for Dynamics in Action and Incomplete Nature is on my website, [5][www.aliciajuarrero.com](http://www.aliciajuarrero.com). It was the seriatim nature of the parallels that really got to me and made me complain to Norton and UC Berkeley – anyone can discuss two or three of the same authors; or two or three of the same themes, or use two or three of the same examples; but that many, in pretty much the same order? The examples UCB picks (Benard cells, whirlpools) are indeed standard ones and if these were the only ones there would be no case. It's the cumulative impact that makes the case, in my opinion. The comments that I really object to in the report are "The idea that it is possible to reconceptualize teleology in terms of dynamical systems theory has been discussed and developed by many theorists" and "The connection between ideas about self-organization and ideas from thermodynamics and information theory has been made by many writers in this area..." The UCB report should have cited sources and dates. Simply to state, "is not in our view original to Juarrero..." and "we see no evidence that Deacon's use... shows any influence of Juarrero's" simply begs the question.

Re the Kant & Self-organization piece: it's true that everyone seems to be mentioning Kant in this connection (as if folks commonly read the Third Critique where Kant discusses this stuff). I suspect Deacon got this reference from his buddy Stu Kauffman (I would bet the rent Deacon didn't read the Third Critique!) – but at least Kauffman included me in his bibliography, if not in the footnotes. But I don't think Deacon could have afforded to include DiA in the bibliography – there's just too much of Dynamics in Action in Incomplete Nature – he just hoped no one would catch the parallels with a community college professor who published 10 years ago. As a philosopher I probably would never have read Incomplete Nature – but then I saw the Wall Street Journal review and the ideas sounded awfully familiar...

I'm happy to put the two works side by side and let readers judge for themselves.

How did Michael Lissack get involved?

First contact I had with him was in 2000, when he phoned my house to ask, "Is the phone ringing off the hook because of the book?" My answer: No, it isn't, who are you? He invited me to give a talk at his ISCE [Institute for the Study of Coherence and Emergence]

institute in Boston that year, and then invited me to be on the ISCE board. He also became a one-man publicity campaign for Dynamics in Action , including a long discussion about it with Kauffman, Deacon and Evan Thompson at Esalen in 2003. They spent hours discussing it. Which reminds me: Evan Thompson published a review in Nature in December 2011 in which he explicitly states that Deacon failed to cite him – and me. And Colin McGinn (whom I've never met), really lit into Deacon in the New York Review of Books in June 2012. None of this was mentioned in the UCB report, which makes it appear that Deacon's just the victim of a witch hunt by Lissack, Rubino and me.

ISCE was the publisher for the Rubino-Juarrero anthology on Emergence that's in question with the Deacon-Cashman article, so I think Michael feels ISCE organization is indirectly compromised by this mess – but it's mostly that he has never seen a fight he's run away from.

1. <http://www.pgcc.edu/>
2. <http://terrydeacon.berkeley.edu/>
3. <http://blog.sethroberts.net/2013/02/03/new-terry-deacon-website/>
4. <http://terrydeacon.berkeley.edu/sites/default/files/shared/docs/deacon.report.pdf>
5. <http://www.aliciajuarrero.com/>

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dearieme (2013-02-05 13:12:48)

That's a bit like Edwards' demonstration of Lewontin's Fallacy - the key bit is not the individual items, it's the correlation structure of the items. Ah, the wonders of Big University - I trust that the lefties who control the joint are really proud of their efforts.

Tom (2013-02-05 20:01:58)

Ooh, a tea partier who thinks everything is about "lefties." How unusual.

asdf (2013-02-06 00:02:34)

"Ooh, a tea partier who thinks everything is about "lefties." How unusual." LOL. U Mad?

dearieme (2013-02-06 01:23:36)

The Boston tea party was perpetrated by tea smugglers who were outraged that a reduction in the duty on tea meant that they would no longer be able to undercut the legit importer and thus would lose their livelihoods. I have no connection with that event which happened some time before I was born. Seth: Interesting. I hadn't heard that explanation before but it makes more sense than what I was taught.

dearieme (2013-02-06 08:50:19)

If I may say so, various chunks of what Americans have been taught about such events make little sense.

Todd Fletcher (2013-02-06 13:14:43)

Large chunks, not just various.

dearieme (2013-02-06 15:09:13)

My first draft said "huge".

Paul (2013-02-06 17:10:26)

The fact that Juarerro uses the phrase "begs the question" correctly—i.e. with complete fidelity to the *\_petitio principii\_* of classical logic—is a good sign that she knows what's going on. It's always windbags like Deacon who screw those things up. (BTW, re "leftie academics": Based on my own acquaintances I'd bet dollars to donuts that Juarerro is more left-wing than Deacon.)

dearieme (2013-02-07 08:35:48)

I'm sure that leftie academics are happy to misbehave towards someone from a lesser institution, whether they be righty or further-lefty. Equal opportunities and all that.

### Assorted Links (2013-02-07 05:00)

- [1]Why do few journalists become politicians?
- [2]Another crowd-funded human microbiome project (in addition to American Gut, which I've mentioned earlier)
- [3]Psychiatrist keeps prescribing Adderall to boy in spite of warnings from the boy's parents that he's addicted
- [4]Life-logging workshop in Rome. "This creation of lifelogs . . . will enable us to better understand ourselves."
- [5]Indian fermented food
- [6]Sleep helps solve difficult problems but not easy ones

Thanks to Dave Lull , Bryan Castañeda, Patrick Vlaskovits and Tucker Max.

1. [http://www.facebook.com/permalink.php?story\\_fbid=10151318978788375&id=13012333374](http://www.facebook.com/permalink.php?story_fbid=10151318978788375&id=13012333374)

2. <http://www.indiegogo.com/projects/276141/x/1768871>

3. [http://www.nytimes.com/2013/02/03/us/concerns-about-adhd-practices-and-amphetamine-addiction.html?\\_r=0&pagewanted=all](http://www.nytimes.com/2013/02/03/us/concerns-about-adhd-practices-and-amphetamine-addiction.html?_r=0&pagewanted=all)

4. <http://lifelogging-workshop.org/>

5. <http://www.healthfooddesivideshi.com/2013/02/fermented-foods-and-condiments-for.html>

6. <http://link.springer.com/article/10.3758/s13421-012-0256-7>

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Alexander Boland (2013-02-07 13:35:47)

Not surprised about the sleep study—my experience has been that I can focus much better on mundane tasks while sleep-deprived because my mind is not as easily understimulated. Back in college, a sleep deprived day meant I listened better to lectures, but had a harder time completing problem sets. I've also hypothesized, similar to the study, that "taking a break" in order to solve a problem will be much less effective if that break is spent on noisy stimuli such as internet surfing.

chi (2013-02-07 17:35:40)

since when are 23 year olds "boys"? Seth: Since women in their 20s started calling themselves "girls". Whenever that was.

Txomin (2013-02-07 22:13:56)

"In the past journalism was an act of courage, revealing truths in the face of powerful establishments and risking jail or even death." No, it wasn't. While some journalist have indeed behaved in such a manner, most by far have never done so, even remotely. Journalism has always and mostly been a form of advertisement whether social, political, or simply commercial. Seth: I think his point is that such cases ("act of courage") were more common.

Txomin (2013-02-08 01:51:03)

If that was his intention, he was not clear. Besides, even if he had been more circumspect in his assertions, there are too many self-promoting myths surrounding journalism (it is, after all, one of the main functions of journalism) to accept such claim at face value. A good example is the alleged versus real role of the press in the Watergate scandal. Seth: Let me give some examples of journalistic courage. Ida Tarbell. Veronica Guerin, the reporter who was killed in Ireland. [1]Here is a list of journalists killed in Russia. [2]Here is more on journalists being killed. Yes, most journalists do not work in war zones or expose corruption, as you say. But since some do, for minimal rewards, journalists are not the first people I would accuse of cowardice.

1. [http://en.wikipedia.org/wiki/List\\_of\\_journalists\\_killed\\_in\\_Russia](http://en.wikipedia.org/wiki/List_of_journalists_killed_in_Russia)

2. <http://www.globalpost.com/dispatches/globalpost-blogs/rights/record-number-journalists-killed-worldwide-2012>

nicole (2013-02-08 17:48:53)

The second link is to the NYtimes article mentioned in number 3. Seth: Fixed, thanks.

Scot (2013-03-01 10:57:31)

This relates to personal science and sleep: a blog I read regularly CoolTools contains a review of safety glasses the reviewer uses with orange lenses to block UV/other blue light during evening activities to reduce sleep. Seems like a cheap, easy, self-initiated and controlled method for personal sleep research. [http://kk.org/cooltools/archives/10178?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed %3A+CoolTools+ %28Cool+Tools %29](http://kk.org/cooltools/archives/10178?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3ACoolTools+%28Cool+Tools%29)

## **Impossible Things That Are True: The Shangri-La Diet and the Behavior of Goldman Sachs (2013-02-08 05:00)**

It simply cannot be that drinking sugar water causes weight loss. Sugar caused the obesity epidemic! It simply cannot be that eating fat will cause weight loss. Eating fat is why we're fat! Everyone knows this. It simply cannot be that whether you smell a food while you eat it makes any difference. Weight loss is all about calories in, calories out. The Shangri-La Diet says all three things are true. I cannot think of an historical precedent. Science has uncovered all sorts of unlikely stuff but nothing so surprising that is also immediately useful.

I thought of the Shangri-La Diet when I read [1]this description by Michael Lewis of what Goldman Sachs has recently done:

Stop and think once more about what has just happened on Wall Street: its most admired firm [Goldman Sachs] conspired to flood the financial system with worthless securities, then set itself up to profit from betting against those very same securities, and in the bargain helped to precipitate a world historic financial crisis that cost millions of people their jobs and convulsed our political system. In other places, or at other times, the firm would be put out of business, and its leaders shamed and jailed and strung from lampposts. (I am not advocating the latter.) Instead Goldman Sachs, like the other too-big-to-fail firms, has been handed tens of billions in government subsidies, on the theory that we cannot live without them. They were then permitted to pay politicians to prevent laws being passed to change their business, and bribe public officials (with the implicit promise of future employment) to neuter the laws that were passed—so that they might continue to behave in more or less the same way that brought ruin on us all.



"The theory that we cannot live without them" was advocated by some of the most prestigious economists in the country.

What Goldman Sachs did – impossible-seeming, but it happened – is a sin of commission. Visible, at least to Michael Lewis, and capable of being pointed out (as Lewis does here) and marveled at.

The Shangri-La Diet seems like a bizarre thing, the diet from outer space, the crazy diet, whatever. It can't be true, but it is. Yet the Shangri-La Diet, strange as it sounds, is actually the only visible sign (at least, visible to many people) of a massive sin of omission: failure to do good research about health. Obesity has been a major health problem for a very long time, more than a hundred years, and an overwhelmingly large problem since about 1980, 30 years ago. Yet conventional thinking about it is so bad – because mainstream research is so impotent – that people still take seriously ideas that date back to the 1950s and before, such as calories in calories out. A weight loss method discovered more than a hundred years old (cutting carbs) is still a big deal. It is as if people were still marvelling at electricity.

The commonality of the two situations (Shangri-La Diet and Goldman Sachs) is that the people who are supposed to understand the world (health scientists in the case of SLD, economists in the case of Goldman Sachs) have in both cases so bungled their jobs that truly terrible things happened. In the case of SLD, the obesity epidemic happened. (Not to mention epidemics of depression, diabetes, auto-immune diseases, and so on. ) A slow-moving unmissable worldwide epidemic that has made hundreds of millions of people feel ashamed every time they look at themselves. In the case of Goldman Sachs, what happened was the 2008 financial crisis and subsequent poor recovery and the fact that the "solution" to the crisis left in place what had caused it.

1. <http://www.newrepublic.com/article/112209/michael-lewis-goldman-sachs>

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Morex (2013-02-08 09:17:29)

Hi Seth. Yes, SLD sounds like a very crazy idea and a stupid thing to do. How on earth will you lose weight drinking frigging oil? This morning I was just thinking on how will I explain my new look to my parents when they see me? Last time I went to visit them (December 2012) I was about 125 kilos. After only a month living in Shangri-la I am 105 kilos... or something like that. They'll be in shock and they'll want to know my new "diet" because all their life have been struggling with weight too. We're a family of big people and terrible nutrition habits! SLD is not for people thinking inside the box. SLD means reading, researching and willing to experiment in oneself. Sadly not everyone is comfortable doing that.

Alex Chernavsky (2013-02-08 13:14:34)

Morex – you lost 20 kilograms in one month? That's almost 1.5 pounds per day. That doesn't sound possible.

dearieme (2013-02-08 14:18:33)

My dear sir, are you suggesting that people who deal with Goldman Sachs should wear nose-clips? Seth: It seems that way, doesn't it?

Morex (2013-02-08 16:45:17)

Alex, I forgot to mention I am a runner and I am training for a marathon. That may be it :)

Txomin (2013-02-08 17:20:36)

If you do strange things, you will obtain strange results.

BenSix (2013-02-09 09:22:11)

*Morex — you lost 20 kilograms in one month? That's almost 1.5 pounds per day. That doesn't sound possible.* Some boxers and MMA fighters have lost 50 pounds extremely quickly but much of this water weight. I'm not sure you could lose 20 kilograms of fat and muscle in so short a time without amputating a leg.

Tim Beneke (2013-02-10 12:35:20)

There is a sense in which one key insight of SLD is deeply implicit in our everyday understanding of hunger, eating and overeating. If you ask people who would weigh more, someone eating a diet of plain brown rice and steamed vegetables, or someone eating a diet that included a lot of cakes, cookies, ice cream, and so on, everyone will say the latter would cause weight gain. But ask them why? Why wouldn't they both eat the same number of calories that would satisfy their hunger and why wouldn't that be exactly the same. Why wouldn't they both eat the same number of calories and stop? Then people will slowly find themselves reasoning in such a way that leads to the conclusion that something about cakes, cookies and ice cream must somehow generate more hunger, must cause them to "pig out" or get "addicted". The most stunning comment anyone ever made to me about weight loss was when I weighed 280 pounds, and after I described my diet and the foods that I pigged out on (high in sugar and fat), Seth said to me: "Interesting that no one ever pigs out on fruits and vegetables." It stopped me cold...

### **Value of Self-Experimentation With Chronic Conditions (2013-02-09 05:00)**

A reader with an autistic son sent me a link to [1]a story in the New York Times Magazine by Susannah Meadows about a boy with arthritis who was cured by dietary changes, including omega-3 and probiotics. Conventional doctors and the boy's father had resisted trying the dietary solution; Meadows is the boy's mother. An expert in the boy's problem, Dr. Lisa Imundo, director of pediatric rheumatology at New York-Presbyterian/Columbia University Medical Center, told Meadows that "she [Imundo] had treated thousands of kids with arthritis . . . and diet changes did not work." It took only six weeks of the dietary change to discover it did work. Eventually the boy's arthritis was completely gone. It may have been caused by antibiotics he'd been given for pneumonia. The antibiotics may have killed his gut flora making his intestines too permeable.

Had Meadows accepted what mainstream doctors told her, her son would have taken medicine for the rest of his life – medicine that wasn't working well. Dr. Imundo wanted to double the dose.

The reader with an autistic son explained how it related to this blog:

It particularly supports the value of self-experimentation in these chronic conditions, especially when there is heterogeneity. The heterogeneity of autism was obvious to me from early on, although I've come to realize it's not obvious to everyone else. Autisms of known genetic causes have different tracks (Fragile X is the best-studied). Broad studies of autism start with a huge disadvantage: they are studying different disorders of similar presentation, and what helps in one case may harm in another. After the steady drip drip of your talking about n=1 experiments, it dawned on me that this applied to our situation. You didn't need to do a massive, double-blind, placebo-controlled study of acne medication any more than I needed to enroll a thousand families in a study of diet and autism. I could start with dinner.

The reader found dietary n=1 experimentation with her son to be very helpful.

Update. After I wrote this, Michelle Franci, a chemist who writes for Slate's Medical Examiner column, [2]complained about the "alternative medicine" in Meadow's piece. Franci fails to mention that dietary changes completely cured the problem, thus avoiding the need for dangerous drugs that weren't working. Franci says that Meadows has

"an irrational fear of chemicals".

1. <http://www.nytimes.com/2013/02/03/magazine/the-boy-with-a-thorn-in-his-joints.html?pagewanted=all>
2. [http://www.slate.com/articles/health\\_and\\_science/medical\\_examiner/2013/02/curing\\_chemophobia\\_don\\_t\\_buy\\_the\\_alternative\\_medicine\\_in\\_the\\_boy\\_with\\_a.html](http://www.slate.com/articles/health_and_science/medical_examiner/2013/02/curing_chemophobia_don_t_buy_the_alternative_medicine_in_the_boy_with_a.html)

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Rachael (2013-02-09 09:19:26)

I thought the follow up article got one thing right, chinese medicine, and indeed herbal medicine is just as much "chemical" in nature as pharma. There are some advantages and disadvantages to "natural" medicines. Disadvantages are lack of standardization, lack of research, etc. Advantages can be that you have access to herbals without going through a medical gatekeeper. But I think the fear of chemicals and the chinese medicine were red herrings anyway. Failure of tight junctions and subsequent auto-immune processes being triggered isn't even "alternative." Every time you turn around there is a new article linking intestinal permeability to auto-immunity in the conventional medical literature. That the doctors treating this disease are un-aware of the current research and the paradigm shift in understanding of auto-immunity is far more interesting to me than the reflexive rejection of "alternative" medicine. One article about intestinal permeability and auto immunity: <http://www.ncbi.nlm.nih.gov/pubmed/19538307>

derp (2013-02-09 09:40:39)

Francl is completely off-topic. I don't see chemophobia in the original article – only a concerned parent who was not willing to put her kid on life-long high-side-effect drugs. If I don't want to live next to a nuclear power plant with my kids, will some physicist accuse me of nucleophobia? Seriously?

gwern (2013-02-09 10:24:47)

> If I don't want to live next to a nuclear power plant with my kids, will some physicist accuse me of nucleophobia? Given that more people died in the Fukushima evacuation than will ever die of the radiation release, and that just Germany's increased coal consumption is killing >100 people a year, I don't think 'nucleophobia' should be mocked as it's a very real thing with fatal effects.

Alex (2013-02-09 12:38:22)

Rachael is right that the "chemophobia" claim is a red herring. Without the artificial time pressure of the six week deadline, the mother could have sensibly tried the diet changes without the herbal medicine for six weeks, then added the herbal medicine if the diet changes alone didn't work.

Lisa (2013-02-10 07:27:03)

Rachael makes the point that there is little research available on the efficacy of herbal medicines, which is wholly incorrect. Also, the difference between herbal and as you say 'pharma' chemicals are many and wide ranging. The 'danger' of herbal medicine is always overplayed as Rachael does here. Yes of course, there are plants that can kill, and/or make you feel very sick, but medicinal herbs are plants that have been used by humans and animals for a long time (longer than any 'well tested' drug) have a totally different risk profile to using 'pharma' chemicals.

Around the Web: Happy Chinese New Year! | Perfect Health Diet (2013-02-10 14:29:42)

[...] Seth Roberts comments on a New York Times magazine story chronicling how a boy with juvenile arthritis was cured by dietary changes that remodeled his gut flora. [...]

Rachael (2013-02-10 14:55:39)

Lisa, I find your comment interesting as I in no way said herbal medicine is dangerous in my comment. I think we can agree that self administering foxglove (digitalis) can be dangerous, and many herbal medicines are extremely safe. The point I was trying to make is that their interactions with our bodies are because of the ways that chemicals interact with our bodies, be they from plants or from factories. I think western medicine neglects and ignores many safer and less side effect producing compounds because they have a bias against plant based substances. I do stand by my claim that relative to pharma compounds herbal medicines are seriously under-researched to the detriment of medicine. Because we have systematically defunded foundational medical research of all kinds and instead have almost exclusively private funded research in the US we close off many probably useful areas of therapy. Who is going to fund large scale research comparing HT2 receptor antagonists to whole ginger extractives? You can't patent ginger, no one would profit from that research. So doctors will continue using HT2 receptor antagonists when it may very well be that the ginger is safer, more effective, and cheaper as well. Or not, we have no way of knowing in the current paradigm until the research is done. At any rate, I suspect you and I are on the same side, sorry if I offended you with my earlier comment.

Lisa (2013-02-11 03:51:04)

Rachael, I appreciate your comment in response. I too think that we probably agree on more points than we disagree, and why we are both reading this blog. However, to counter your ginger argument - there has been quite a bit of published research on ginger! I googled 'H. Pylori and ginger' and came up with this article - top of the list! <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2849670/> Admittedly, it is research on mongolian(?) gerbils but there are plenty more articles. So to agree again, it would be good to see more studies on humans :) Although I would like to see more research using herbal medicine, I think the methods used research pharma compounds are necessarily different. Pharma compounds are by definition 'novel' and therefore it is not only the efficacy that should be studied but the safety (i.e. characterisation of side effects). To study the efficacy of ginger to treat specific conditions could be much cheaper as safety is much less of an issue. (I am aware of ginger's anti-platelet activity which needs to be considered when prescribing it for patients on blood thinning medication). Anyway, it isn't going to happen anytime soon and I am happy to work with what we already have out there in terms of research, combined with the rich herbal medicine tradition, as a guide to my own personal experimentation.

Around the Web: A New Podcast and Bacterial Warfare | Perfect Health Diet (2013-02-25 17:13:22)

[...] Seth Roberts comments on a case in which arthritis was cured by dietary changes that successfully remodeled the gut flora.  
[...]

## What I Learned From My Writing Class (2013-02-10 05:00)

Last semester I taught Academic Writing to Tsinghua undergraduates (psychology majors). Two earlier posts ([1]here and [2]here) summarized what they learned. This post is about what I learned.

When I was an undergraduate, I hated the writing assignments I was given, most of them in English classes. I would have to become nauseous with fear before beginning them. I had nothing to say. When I became a professor and had something to say, everything changed. Writing was easy. This is why - in spite of believing the best way to learn is to do - I gave my students only one actual writing assignment: write a personal statement, which they had to do for graduate school applications. On the last day of class, I asked them: If I had assigned you to write something, what would you have written? Answers varied from diary entries to a literature review about nuclear panic. Then I asked them if they would have preferred a class like that. Half said yes, half said no. If I teach the class again, I would make it an option: do the regular homework assignments, or write and revise something you want to write.

1. <http://blog.sethroberts.net/2013/01/05/how-to-write-lessons-from-my-writing-class/>

2. <http://blog.sethroberts.net/2013/01/06/how-to-write-what-one-student-learned/>

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dearieme (2013-02-10 05:55:36)

Unless my memory deceives me, I have never in my life had to write a Personal Statement. Thank God.

Tony (2013-02-11 05:43:51)

You should write a book on your teaching experiences. They are interesting and insightful.

M&M (2013-02-14 16:09:39)

Agree with Tony. I would be one of the first to buy. We homeschool(ed) our kids. One is now a top-level IB (International Baccalaureate) student and the younger ones are at home. The best lesson I've learned is teaching them, at an early age, to become self-directed.

### **If a Chinese Person Says You Are "A Good Student" What Does It Mean? (2013-02-11 05:00)**

An American writer named James McGregor (in *One Billion Customers*) called China "a nation of bookworms". In China, entry into college is heavily controlled by a nationwide test called the gao kao taken near the end of high school. For hundreds of years, China had the most sophisticated civil service entrance exams in the world. Chinese students study much harder than American students. Amy Chua's *Battle Hymn of the Tiger Mother* (in which a mother puts a huge amount of pressure on her daughters to succeed in conventional ways) was presented by Chua as reflecting Chinese parenting values. It's true that Chinese parents push their children much harder to do well in school than American parents.

All of which might lead unsuspecting Americans to believe that Chinese people value being a good student. Not at all. A Chinese friend explained to me that being called "a good student" is essentially an insult. "You are a good student" is what you say to someone when you can't think of anything nice to say. It means

1. You are not interesting.
2. You have no sense of humor.
3. You have no interests outside of school.

Drone might be the closest English equivalent to the Chinese "good student", except that no one would ever say to someone "you are a drone" and the meaning of the term has recently changed (to mean mini-planes flown remotely).

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dearieme (2013-02-11 07:46:01)

In the UK, "you are a swot" comes close. It implies that to do well in exams you have to devote your time to them rather than being so naturally bright that you can make time to fit lots of other things into your life too. Of course, it rather overlooks the

fact that some children are probably well fitted to being swots, and that some who disparage swots could scarcely do well in an exam however many hours they worked.

JerseyCynic (2013-02-11 17:37:16)

Well "Bless their little hearts"!

Bob Levinson (2013-02-12 19:59:30)

Is your friend a young person? I have a Chinese roommate who is a PhD candidate at Berkeley in microbiology. He says this attitude is a generational change, partly as a backlash to the huge pressure, and partly due to the shift to money-making as a desirable goal. Seth: Yes. My friend is in her twenties. Consistent with what your roommate says.

Myrick (2013-02-16 23:30:05)

years ago among young people in Taiwan describing a girl as "very patriotic" was a popular wink-and-a-nudge euphemism for "pretty unattractive". don't know if this expression is still current, or if there was/is a mainland equivalent, but sounds close to the "good student" thing.

Janet (2013-02-26 10:38:45)

A "tool" is the same thing as a Chinese "good student."

### **A Little-Known Problem With Being a Doctor (2013-02-11 15:16)**

When she was a little girl, a Korean friend of mine, when asked, said she wanted to be a doctor. She got the idea from her mother – it is what her mother wanted. When she was older, she had a friend whose father was a doctor. The friend told her that when her father was sick, he had to pretend that he wasn't sick, and that this made her sad. After my friend heard that, she decided she no longer wanted to be a doctor.

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Theragingwalrus (2013-02-12 13:15:54)

Doctors have to pretend they're not sick? What are you on about? Seth: At least in Seoul, Korea.

### **Assorted Links (2013-02-12 05:00)**

- [1]Interview with Royce White, the basketball player. I agree with him that addictions should be considered mental disorders. I think they are usually self-medication for a mood disorder, such as depression. His view that more than half of Americans have a mental disorder is consistent with my view that you need to see faces in the morning to have your mood control system work properly. Hardly anyone sees enough faces in the morning.
- [2]Racial quotas at Harvard by Ron Unz. "Top officials at Harvard, Yale, and Princeton today strenuously deny the existence of Asian-American quotas, but their predecessors had similarly denied the existence of Jewish quotas in the 1920s, now universally acknowledged to have existed."
- [3]Traditional Filipino fermented foods (scientific paper)

- [4]Omega-6 supplementation (with concurrent decrease in saturated fat) increases heart disease
- [5]How not to globalize Korean food. For one thing, don't assume all foreigners are alike.

Thanks to dearime.

1. [http://www.grantland.com/story/\\_/id/8890734/chuck-klosterman-royce-white](http://www.grantland.com/story/_/id/8890734/chuck-klosterman-royce-white)
2. <http://www.nationalreview.com/articles/339778/racial-quotas-harvard-and-legacy-ibakkei-ron-unz>
3. <http://www.intechopen.com/books/lactic-acid-bacteria-r-d-for-food-health-and-livestock-purposes/lactic-acid-bacteria-in-philippine-traditional-fermented-foods>
4. <http://www.bmj.com/content/346/bmj.e8707>
5. <http://www.seouleats.com/2010/02/how-not-to-globalize-korean-food-article-in-the-korea-herald/>

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dearieme (2013-02-12 06:45:41)

Golly! [http://www.nytimes.com/2013/02/12/science/testing-of-some-deadly-diseases-on-mice-mislead-report-says.html?pagewanted=1&\\_r=1](http://www.nytimes.com/2013/02/12/science/testing-of-some-deadly-diseases-on-mice-mislead-report-says.html?pagewanted=1&_r=1) Seth: Thanks. I have already written a post about it, which will appear in a week or so (backlog).

Darrin Thompson (2013-02-12 08:28:02)

On seeing faces, I get up every morning and my wife and I get our pile of kids off to school. I forget, but, doesn't that count as seeing faces? Isn't that very common? Seth: If you have 30 minutes of face-to-face conversation, that should have an effect.

Rashad (2013-02-12 10:50:28)

Apparently the Unz article is based on some uneven statistical sources which makes the Jewish over-representation a bit of an exaggeration. <http://andrewgelman.com/2013/02/that-claim-that-harvard-admissions-discriminate-in-favor-of-jews-after-checking-the-statistics-maybe-not/>

Rashad (2013-02-12 10:51:21)

Oh, oops, wrong Unz article. That one could be fine.

Nancy Lebovitz (2013-02-13 11:25:26)

Speaking of mice being different from people: [http://www.ted.com/talks/richard\\_weller\\_could\\_the\\_sun\\_be\\_good\\_for\\_your\\_heart.html](http://www.ted.com/talks/richard_weller_could_the_sun_be_good_for_your_heart.html) People who live in places with more sunlight seem to be much less likely to have heart attacks. (Studies mentioned are within Great Britain and Britain vs. Australia.) Subjects were exposed to UVA, which doesn't produce Vitamin D. Nonetheless, they produce more nitric oxide, and their blood pressure went down a little. It turns out that people (mice don't, which made studying the phenomenon more difficult) have stores of precursors of nitric oxide precursors in their skin, and sunlight activates them. A moderate amount of UVA exposure is enough to lower blood pressure enough to affect heart attack rates. (Note number of other factors which might be left out!) The effect is stronger in older people. The NO precursors may come from diet- specifically vegetables. He finishes by saying that as a dermatologist, he tells people to stay out of the sun, but he actually thinks there should be more work on a risk/benefit analysis for sunlight considering that heart attacks are a hundred times more common than skin cancer. Anyway, the reason I found this especially interesting is that it seems to me that depression correlates with grayish-looking skin, and depression is considered an independent risk factor for heart attacks. So there might be something in there about how much blood gets to the skin. (I've also seen people stably lose that greyishness, I think there's an emotional component.)

## Shangri-La Success in Detail (2013-02-13 05:00)

An Indianapolis man named Hugh, who goes by Nufftin on the Shangri-La Diet forums, has been [1]blogging about his weight loss (including graphs) at increments of 10 pounds lost (he writes a post when he's lost 10 pounds, 20 pounds, etc.). So far he's lost more than 50 pounds and is close to his goal weight, which is near his weight in college.

I decided to read all the entries and note what I learned. He started more than a year ago.

November 2011. He's been gaining weight for a long time. He is about 5 feet 6 inches tall and weighs more than 200 pounds, giving him a BMI in the 30s. He does not explain why he decided to try it. He has nice clothes that no longer fit.

April 2012 (10 pounds down). It took a long time to lose the first 10 pounds because he started just before Thanksgiving and Christmas, big eating holidays, and he gave up. He started again January 1 and gave up again. Then he started again in February. Daily weight spikes can be as much as 4 pounds (he weighs 4 pounds more on Tuesday than he did on Monday), but that only happened once (New Year's Party?). After he becomes consistent with the diet (in February), the graph of his daily weights is enormously convincing that the diet works.

May 2012 (20 pounds down). Here's exactly how he does the diet: "a shot glass full of extra-light tasting olive oil in the morning, with no eating for an hour each side; two heaping tablespoons of table sugar dissolved in as much water as it will take to dissolve it in the evening." (You can see why I would write a rather short book about such a diet.) He also does 15 minutes of exercise most days but I won't describe it in detail since it doesn't seem to matter – he stops exercising but keeps losing weight. Some old clothes now fit again. Only two people have commented on his weight loss. Maybe everyone notices but intentional weight loss is so rare it could be he's dying. (Which is what one of my Berkeley colleagues thought about my weight loss. He actually said, "Are you dying?") No one wants to hear that.

July 2012 (30 pounds down). The diet does require some effort. "I lost concentration for a couple of nights and, BOOM. To be fair, it was due to two great dinner parties (feta cheese hamburgers and The Descendants at one, Cuban sandwiches at the other)." These two "losses of concentration" did not have long-term effects. After 5-6 days – how long it took an unusually large amount of food to pass through his body and his salt balance to return to normal? – after those parties, his weight returned to its usual downward line.

September 2012 (40 pounds down). One of his shirts is now too big for him. He gained 6 pounds during a two-week trip. The gained weight comes off quickly (in about a week) but this time there is a noticeable long-term effect: Weight loss resumes at the same rate as before but the function is shifted by two weeks. He stops his 15 minutes of exercise and nothing happens to his rate of weight loss.

January 2013 (50 pounds down). It has taken 15 months to lose 50 pounds. There was one serious plateau, from December 2012 to January 2013, where he did not lose weight. Almost all of his pants are too big. He can take off his shirt at the pool.

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1. <http://permanentquivive.wordpress.com/category/ongoing-series/the-diet/>



Chuck (2013-02-13 10:03:26)

Your "are you dieing" observation is right on. After losing 25lbs on a strict paleo diet, a long time barista at a Starbucks where I had been a regular customer took me aside after not seeing me for a couple of months and ask if I was "ok" (are you sick, do you have cancer, are you dieing). Even my adult children expressed their concern to their mother. I'm small framed and the weight loss was quite noticeable. Funny thing is, my new weight was/is exactly what I weighed in my twenties - at that time I was just the small guy, not the sick guy. Cheers

Hugh (2013-02-14 16:55:26)

Wow. Stunned. Thanks, Seth, both for the diet, and this write-up.

Jay (2013-02-26 14:46:41)

Great info, I have also had good success with this diet. The best part is the lack of hunger. Most diets are an arm wrestling match between the conscious and sub-conscious in regards to cravings for foods which I believe are related to the taste associations. I eat a regular breakfast at 5am. I do the ELOO at 9am. Around 1pm I am rarely hungry, and I have found a large apple or a cup of coffee and a handful of nuts works the rest of the day. Around 4pm I do the ELOO again and usually have dinner around 7pm. Not having to rely on will-power is the best thing about this diet.

## **Who Is Listened To? Science and Science Journalism (2013-02-14 05:00)**

[1]This book review of Spillover by David Quammen is quite unfavorable about [2]Laurie Garrett, the Pulitzer-Prize-winning science journalist. Several years ago, at the UC Berkeley journalism school, I heard her talk. During the question period, I made a comment something like this: "It seems to me there is kind of a conspiracy between the science journalist and the scientist. Both of them want the science to be more important than it really is. The scientist wants publicity. The science journalist wants their story on the front page. The effect is that things get exaggerated, this or that finding is claimed to be more important than it really is." Garrett didn't agree. She did not give a reason. This was interesting, since I thought my point was obviously true.

The book review, by Edward Hooper, author of *The River*, a book about the origin of AIDS, makes a more subtle point. It is about how he has been ignored.

When I wrote *The River*, I did my level best to interview each of the major living protagonists involved in the origins-of-AIDS debate. This amounted to well over 600 interviews, mostly of two hours or more, and about 500 of which were done face-to-face rather than down the phone. Although the authors of the three aforementioned books (Pepin, Timberg and Halperin, Natrass) all devote time and several pages to *The River*, and to claims that I definitely got it wrong, not one of them bothered to contact me at any point - either to challenge my findings, or to ask me questions. However, I have been contacted by someone through my website (a lawyer and social scientist) who asked me several questions, to all of which I responded. Later, this man read the first two of these three pro-bushmeat books and contacted the authors of each by email, to ask them one or two simple questions about their dismissal of the OPV hypothesis [= the AIDS virus came from an oral polio vaccine]. His letters to Pepin, Timberg and Halperin (which he later forwarded to me) were courteous and non-confrontational, and in two instances he sent three separate letters, but apparently not one of the authors could be bothered to reply to any of these approaches.

In other words, there is a kind of moat. Inside the moat, are the respected people - the "real" scientists. Outside the moat are the crazy people, whom it is a good idea to ignore. Even if they have written a book on the topic. Hooper and those who agreed with him were outside the moat.

Hooper quotes Quammen:

"Hooper's book was massive", Quammen writes, "overwhelmingly detailed, seemingly reasonable, exhausting to plod through, but mesmerizing in its claims..."

I look forward to the day that the Shangri-La Diet is called "seemingly reasonable". Quammen and Garrett (whose Coming Plague has yet to come) write about science for a living. I have a theory about their behavior. To acknowledge misaligned incentives (scientists, like journalists, care about other things than truth ) and power relationships (some scientists are in a position to censor other scientists and points of view they dislike) would make their jobs considerably harder. They are afraid of what would happen to them – would they be kicked out, placed on the other side of the moat? – if they took "crazy" views seriously. It is also time-consuming to take "crazy" views seriously ("massive . . . exhausting"). So they ignore them.

1. <http://www.aidsorigins.com/content/view/230/2/>

2. <http://www.lauriegarrett.com/>

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David (2013-02-14 06:29:09)

Reminds me of a thought attributed to Max Planck -- much of the time, new paradigms in science aren't accepted by scientists after much debate and introspection. No, new paradigms become accepted only after one generation dies, and a new, younger generation comes into power.

lef (2013-02-14 09:53:26)

related to davids comment about Max Planck. Many readers of this blog we are probably interested in the topic: extension of lifespan. so this is something to make us feel uncomfortable. Also there is the thought that nature by using death gives various benefits to evolution. Science is not a very natural activity so maybe the choice nature has made for our lifespan is bad for doing science, if Max Planck was right maybe it should have been smaller. Seth: I think the problem is self-correcting in a way different from what Planck said. Science, although unnatural, produces great benefits. Those benefits increase how much free time we have, time that we don't have to work. During their free time, some people do science as a hobby. Science was a hobby for Mendel and Darwin, for example. When science is a hobby, the scientist is perfectly free to seek the truth and nothing but the truth. As our free time increases (and the cost of doing science decreases) more and more people will do science as a hobby. Personal science – science done to help yourself – is a big part of what they will do. As hobby science increases, total science – professional science plus hobby science – will become more accurate.

dearieme (2013-02-14 15:17:42)

Decades ago I saw a mention of the work of someone who had looked at the data about scientists changing their minds in the light of some substantial theoretical advance. He said that the evidence proved Planck wrong. On a different tack: I used to have a colleague, an ambitious but rather dim fellow, whose favourite dismissive phrase was "not mainstream".

shtove (2013-02-14 19:26:29)

Off topic: slopeofhope market trader has adopted a stand-up office platform. Pics & comments: <http://slopeofhope.com/2013/02/finally-finished-with-my-standing-office.html> #comments

Phil Goetz (2013-02-15 15:38:16)

This reminds me of something I found while writing a review of breast cancer prevention methods. Back in the 1980s, an amateur scientist had noticed that some women she (he? don't remember now) knew who wore their bras in their sleep had gotten breast cancer. So she interviewed many women at random and found that women who wore bras at night were something like 20 times as likely to develop breast cancer. Unfortunately, instead of getting a respectable scientist interested, she published a book on her findings. This made the breast cancer/bra connection toxic. Despite indicating a much stronger association with breast cancer than any known behavioral factor, no "respectable scientist" in America or western Europe has ever investigated this. Now two studies have come out on it, one in China and one in Eastern Europe, both indicating a strong connection between wearing a bra at night and breast cancer. This discovery could not have been made in the US or in western Europe, because the claim had been made toxic "crank" material by being promoted by amateurs. Seth: I remember that finding, which I read about in the National Enquirer. I think the researcher failed to control for breast size – women with larger breasts were more likely to wear a bra at night. It's no surprise that if you have larger breasts (i.e., more breast cells) you are more likely to get breast cancer. This may be why it was ignored.

Paul N (2013-02-16 12:14:05)

I think there is more to the bra-breast cancer thing than just breast size. There have been various studies that do show correlation of breast size with cancer, but there are also others that suggest the wearing of bras, especially at night, interferes with the function of lymph nodes by constriction. Impaired lymph function can also lead to a decrease in melatonin, a known risk factor for cancer. I'm sure it would be hard to get funding for a serious bra- breast cancer study! Seth: Yes, that makes sense. And I agree with your basic point that the connection should have been studied, once it was noticed.

### **If You Ever Visit Seoul, You Might Want To Skip Bean Table Restaurant (2013-02-15 05:00)**

A restaurant near Seoul named Bean Table got [1]a surprisingly bad review:

Then came a massive chicken salad dish, given the number of people we had we over ordered. The patrons we brought were split 50/50 on enjoyment for the chicken. We had so much leftovers and were wasting so much food, I asked the waiter to wrap the leftovers. . . . Asking the waiter to wrap this chicken came with a resounding "no", so again to the kitchen to talk to a manager. Actually ended up talking to a chef, a young man who speaks good English, who also declined our request. We had a six year old and a three year old with us and that was the only food they were eating minus the pungent sauce.

Our driver then proceeded to get angry and went to talk to the chef, Sungmo Lee, and surprisingly Mr. Lee and our driver had a conversation that the whole restaurant could hear despite repeated requests by our driver to discuss outside. As that incident occurred being concerned for my family who flew on average 7,000 miles and were picked up for a total driving commute of two hours to come eat at this restaurant I went to calm both parties down. Things progressed from worse to horrible. I identified myself as a food critic, and Mr. Lee proceeded to take that as a threat and stated, "You don't know who I am." . . . My father, a man in his 70s, tried to speak reason to him only to be found that we were asked to leave.

At the end of the day, police were called, we weren't allowed to pay the bill till police arrived even after we stated we wished to leave and skip the remaining courses. Police came and scolded Mr. Lee, telling him that if a customer pays for food then containers should be allowed for the customers to take food home. Keep in mind we are talking about cooked chicken, not fish, or tartar, etc. (Mr. Lee's argument was that there were no take out containers in the restaurant and remained adamant about the no take out policy when we asked the driver to buy some containers). After the police came they asked us to leave while they dealt with Mr. Lee only to find an employee chasing out bus to pay the bill. No discounts, full

price and another time suck of 20-30 minutes and the rest of the meal was safely kept in their fridge due to their “no takeout” policy. . . .

Before all of this nonsense came down my whole Korean family all thought that the restaurant was over rated and there was no single outstanding dish.

Until the Internet, stuff like this was never reported.

1. <http://www.seouleats.com/2013/01/shitty-family-dinner-restaurant-bean-table/>

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### **Web Browsers, Black Swans and Scientific Progress (2013-02-16 05:00)**

A month ago, I changed web browsers from Firefox to Chrome (which recently became [1]the most popular browser). Firefox crashed too often (about once per day). Chrome crashes much less often (once per week?) presumably because it confines trouble caused by a bad tab to that tab. “Separate processes for each tab is EXACTLY what makes Chrome superior” to Firefox, says [2]a user. This localization was part of Chrome’s original design (2008).

After a few weeks, I saw that crash rate was the only difference between the two browsers that mattered. After a crash, it takes a few minutes to recover. With both browsers, the “waiting time” distribution – the distribution of the time between when I try to reach a page (e.g., click on a link) and when I see it – is very long-tailed (very high kurtosis). Almost all pages load quickly (< 2 seconds). A few load slowly (2-10 seconds). A tiny fraction (0.1 %?) cause a crash (minutes). The Firefox and Chrome waiting-time distributions are essentially the same except that the Chrome distribution has a thinner tail. As Nassim Taleb says about situations that produce Black Swans, very rare events (in this case, the very long waiting times caused by crashes) matter more (in this case, contribute more to total annoyance) than all other events combined.

Curious about Chrome/Firefox differences, I read [3]a recent review (“Chrome 24 versus Firefox 18 – head to head”). Both browsers were updated shortly before the review. The comparison began like this:

Which browser got the biggest upgrade? Who’s the fastest? The safest? The easiest to use? We took a look at Chrome 24 and Firefox 18 to try and find out.

Not quite. The review compared the press releases about the upgrades. It said nothing about crash rate.

Was the review superficial because the reviewer wasn’t paid enough? If so, Walt Mossberg, [4]the best-paid tech reviewer in the world, might do a good review. [5]The latest browser review by Mossberg I could find (2011) says this about “speed”:

I found the new Firefox to be snappy. . . . The new browser didn’t noticeably slow down for me, even when many tabs were opened. But, in my comparative speed tests, which involve opening groups of

tabs simultaneously, or opening single, popular sites, like Facebook, Firefox was often beaten by Chrome and Safari, and even, in some cases, by the new version 9 of IE . . . These tests, which I conducted on a Hewlett-Packard desktop PC running Windows 7, generally showed very slight differences among the browsers.

No mention of crash rate, the main determinant of how long things take. Mossberg ignores it – the one difference between Chrome and Firefox that really matters. He's not the only one. As far as I can tell, all tech reviewers have failed to measure browser crash rate. For example, [6]this review of the latest Firefox. "I'm still a big Firefox fan," says the reviewer.

Browser reviews are a small example of a big rule: People with jobs handle long-tailed distributions poorly. In the case of browser reviews, the people with jobs are the reviewers; the long-tailed distribution is the distribution of waiting times/annoyance. Reviewers handle this distribution badly in the sense that they ignore tail differences, which matter enormously.

Another browser-related example of the rule is the failure of the Mozilla Foundation (people with jobs) to solve Firefox's crashing problem. My version of Firefox (18.0.1) crashed daily. Year after year, upgrade after upgrade, people at Mozilla failed to add localization. Their design is "crashy". They fail to fix it. Users notice, change browsers. Firefox may become irrelevant for this one reason. This isn't Clayton Christensen's "innovator's dilemma", where industry-leading companies become complacent and lose their lead. People at Mozilla have had no reason to be complacent.

Examples of the rule are all around us. Some are easy to see:

1. Taleb's (negative) Black Swans. Tail events in long-tailed distributions often have huge consequences (making them Black Swans) because their possibility has been ignored or their probability underestimated. The system is not designed to handle them. All of Taleb's Black Swans involve man-made systems. The financial system, hedge funds, New Orleans's levees, and so on. These systems were built by people with jobs and react poorly to rare events (e.g., Long Term Capital Management). Taleb's anti-fragility is what others have called hormesis. Hormesis protects against bad rare events. It increases your tolerance, the dose (e.g., the amount of poison) needed to kill you. As Taleb and others have said, many complex systems (e.g., cells) have hormesis. All of these systems were fashioned by nature, none by people with jobs. No word means anti-fragile, as Taleb has said, because there exist no products or services with such a property. (Almost all adjectives and nouns [7]were originally created to describe products and services, I believe. They helped people trade.) No one wanted to say buy this, it's anti-fragile. Designers didn't (and still don't) know how to add hormesis. They may even be unaware the possibility exists. Products are designed by people with jobs. Taleb doesn't have a job. Grasping the possibility of anti-fragility – which includes recognizing that tail events are underestimated – does not threaten his job or make it more difficult. If a designer tells her boss about hormesis her boss might ask her to include it.
2. The Boeing 787 (Dreamliner) has had battery problems. The danger inherent in use of a lithium battery has a long-tailed distribution: Almost all uses are safe, a very tiny fraction are dangerous. In spite of enormous amounts of money at stake, Boeing engineers (people with jobs) failed to devise adequate battery testing and management. The FAA (people with jobs) [8]also missed the problem.
3. The designers of the Fukushima nuclear power plant (people with jobs) were perfectly aware of the possibility of a tsunami. They responded badly (did little or nothing) when their assumptions about tsunami likelihood were criticized. The power of the rule is suggested by the fact that this happened in Japan, where most things are well-made.
4. Drug companies (people with jobs) routinely hide or ignore rare side effects, judging by the steady stream

of examples that come to light. An example is the tendency of SSRIs to produce violence, including suicide. The whole drug regulatory system (people with jobs) seems to do a poor job with rare side effects.

Why is the rule true? Because jobs require steady output. Tech reviewers want to write a steady stream of reviews. The Mozilla Foundation wants a steady stream of updates. Companies that build nuclear power plants want to build them at a steady rate. Boeing wants to introduce new planes at a steady rate. Harvard professors (criticized by Taleb) want to publish regularly. At Berkeley, when professors come up for promotion, they are judged by how many papers they've written. Long-tailed distributions interfere with steady output. To seriously deal with them you have to measure the tails. That's hard. Adding hormesis (Nature's protection against tail events) to your product is even harder. Testing a new feature to learn its effect on tail events is hard.

This makes it enormously tempting to ignore tail events. Pretend they don't exist, or that your tests actually deal with them. At Standard & Poor's, which rated all sorts of financial instruments, people in charge grasped that they were doing a bad job modelling long-tailed distributions and [9]introduced new testing software that did a better job. S & P employees rebelled: We'll lose business. Too many products failed the new tests. So S & P bosses watered down the test: "If the transaction failed E3.0, then use E3Low [which assumes less variance]." Which test (E3.0 or E3Low) was more realistic? The employees didn't care. They just wanted more business.

It's easy to rationalize ignoring tail events. Everyone ignores them. Next tsunami, I'll be dead. The real reason they are ignored is that if your audience is other people with jobs (e.g., a regulatory agency, reviewers for a scholarly journal, doctors), it will be easy to get away with ignoring them or making unrealistic assumptions about them. Tail events from long-tailed distributions make a regulator's job much harder. They make a doctor's job much harder. If doctors stopped ignoring the long tails, they would have to tell patients That drug I just prescribed – I don't know how safe it is. The hot potato (unrealistic risk assumptions) is handed from one person to another within a job-to-job system (e.g., drug companies market new drugs to the FDA and to doctors) but eventually the hot potato (or ticking time bomb) must be handed outside the job-to-job system to an ordinary Person X (e.g., a doctor prescribes a drug to a patient). It is just one of many things that Person X buys. He doesn't have the time or expertise to figure out if what he was told about risk (the probability of very bad very rare events) is accurate. Eventually, however, inaccurate assumptions about tail events may be exposed when people without jobs related to the risk (e.g., parents whose son killed himself after taking Prozac, everyone in Japan, airplane passengers who will die in a plane crash) are harmed. Such people, unlike people with related jobs, are perfectly free to complain and willful ignorance may come to light. In other words, doctors cannot easily complain about poor treatment of rare side effects (and don't), but patients and their parents can (and do).

There are positive Black Swans too. In some situations, the distribution of benefit has a very long-tailed distribution. Almost all events in Category X produce little or no benefit, a tiny fraction produce great benefit. One example is scientific observations. Almost all of them have little or no benefit, a very tiny fraction are called discoveries (moderate benefit), and a very very tiny fraction are called great discoveries (great benefit). Another example is meeting people. Almost everyone you meet – little or no benefit. A tiny fraction of people you meet – great benefit. A third example is reading something. In my life, almost everything I've read has had little or no benefit. A very tiny fraction of what I've read has had great benefits.

I came to believe that people with jobs handle long-tailed distributions badly because I noticed that [10]jobs and science are a poor mix. My self-experimentation was science, but it was absurdly successful compared to my professional science (animal learning research). I figured out several reasons for this but in a sense they all came down to one reason: my self-experimentation was a hobby, my professional science was a job. My self-experimentation gave me total freedom, infinite time, and commitment to finding the truth and nothing else. My job, like any job, did not. And, as I said, I saw that scientific progress per observation had a power-law-like distribution: Almost all observations produce almost no progress, a tiny fraction produce great progress.

It is easy enough for scientists to recognize the shape of the distribution of progress per observation but, if you don't actually study the distribution, you're not going to have much of an understanding. Professional scientists ignore it. Thinking about it would not help them get grants and churn out papers. (Grants are given by people with jobs, who also ignore the distribution.) Because they don't think about it, they have no idea how to change the "slope" of the power-law distribution (such distributions are linear on log-log coordinates). In other words, they have no idea how to make rare events more likely. Because it is almost impossible to notice the absence of very rare events (the great discoveries that don't get made), no one notices. I seem to be the only one who points out that year after year, the Nobel Prize in Physiology/Medicine indicates lack of progress on major diseases. When I was a young scientist, I wanted to learn how to make discoveries. I was surprised to find that everything written on the topic – which seemed pretty important – was awful. Now I know why. Everything on the topic was written by a person with a job.

With long-tailed distributions of benefit, there is nothing like hormesis. If any organism has evolved something to improve long-tailed distributions of benefit, I don't know what it is. Our scientific system handles the long-tailed distribution of progress poorly in two ways:

1. The people inside it, such as professional scientists, do a poor job of increasing the rate of progress, i.e., making the tails thicker. I think you can make the tails thicker via subject-matter knowledge (Pasteur's "chance favors the prepared mind"), methodological knowledge (better measurements, better experiments, better data analysis), and novelty. Professional scientists understand the value of the first two factors, but they ignore the third. They like to do the same thing over and over because it is safer. Great for their careers, terrible for the rest of us.

2. When an unlikely observation comes along, the system is not set up to develop it. An example is [11]Galvani's discovery of galvanism, which led to batteries, which led to widespread electricity. This one discovery, from one observation, arguably produced more progress than all scientific observations in the last 100 years. Galvani's job (surgery research) left him unable to go further with his discovery. ("Galvani had certain commitments. His main one was to present at least one research paper every year at the Academy.") His research job left him unable to develop one of the greatest discoveries of all time. In contrast, Darwin (no job) was able to develop the observations that led to his theory of evolution. It took him 18 years to write one book, longer than any job would have allowed. He wouldn't have gotten tenure at Berkeley.

After a discovery has been made, the shape of the benefit distribution changes. It becomes more Gaussian, less long-tailed. As our understanding increases, science becomes engineering, which becomes design, which becomes manufacturing. Engineering and design and making things fit well with having a job. Take my chair. Every time I use it, I get a modest benefit, always about the same size. Every time I use my pencil, I get a modest benefit, always about the same size. No long-tailed distribution.

Modern science works well as a way of developing discoveries, not making them. An older system was better for encouraging discovery. Professors mainly taught. Their output was classes taught. They did a little research on the side. If they found something, fine, they had enough expertise to publish it, but nothing depended on their rate of publication. Mendel was expert enough to write up his discoveries but his job in no way required him to do so. Just as Taleb recommends most of your investments should be low-risk, with a small fraction high-risk, this is a "job portfolio" where most of the job is low benefit with high certainty and a small fraction of the job is high benefit with low certainty. In the debate over climate change (is the case that humans are dangerously warming the planet as strong as we're told?) it is striking that everyone with any power on the mainstream side of the debate (scientists, journalists, professional activists) has a job involving the subject. Everyone on the other side with any power (Stephen McIntyre, Bishop Hill, etc.) does not. People without jobs are much more free to speak the truth as they see it.

We need personal science (using science to help yourself) to better handle long-tailed distributions, but not

just for that reason. Jobs disable people in other ways, too. Personal science matters, I've come to believe, for three reasons.

1. Personal scientists can make discoveries that professional scientists cannot. The Shangri-La Diet is one example. [12]Tara Grant's discovery of the effect of changing the time of day she took Vitamin D is another. For all the reasons I've said.

2. Personal scientists can develop discoveries that professional scientists cannot. Will there be a clinical trial of the Shangri-La Diet (by a professional weight-control researcher) in my lifetime? Who knows. It is so different from what they now believe. (When I applied to the UC Berkeley Animal Care and Use Committee for permission to do animal tests of SLD, I was turned down. It couldn't possibly be true, said the committee.) Long before that, the rest of us [13]can try it for ourselves and tell others what happened.

3. By collecting data, personal scientists can help tailor any discovery, even a well-developed one, to their own situation. For example, they can make sure a drug or a diet works. (That's how my personal science started – testing an acne medicine.) They can test home remedies. By tracking their health with sensitive tests, they can make sure a prescribed drug has no bad side effects. Individualizing treatments takes time, which gets in the way of steady output. You have all the time in the world to gather data that will help you be healthy. Your doctor doesn't. People who have less contact with you than your doctor, such as drug companies, insurance companies, medical school professors and regulatory agencies, are even less interested in your special case.

1. [http://en.wikipedia.org/wiki/Google\\_Chrome](http://en.wikipedia.org/wiki/Google_Chrome)
2. <http://news.slashdot.org/story/12/08/04/200236/why-we-love-firefox-and-why-we-hate-it>
3. <http://www.networkworld.com/news/2013/011113-chrome-firefox-265763.html>
4. [http://en.wikipedia.org/wiki/Walt\\_Mossberg](http://en.wikipedia.org/wiki/Walt_Mossberg)
5. <http://allthingsd.com/20110330/new-lean-firefox-4-re-built-to-play-catch-up/>
6. <http://www.pcmag.com/article2/0,2817,2349494,00.asp>
7. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>
8. <http://www.nytimes.com/2013/02/08/business/us-officials-fault-faa-for-missing-787-battery-risk.html?hpw&wh=98CA918CD979C590A9F52E2925353F61>
9. <http://www.newyorker.com/online/blogs/johncassidy/2013/02/burning-down-the-house-of-s-p.html>
10. <http://media.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>
11. [http://en.wikipedia.org/wiki/Luigi\\_Galvani](http://en.wikipedia.org/wiki/Luigi_Galvani)
12. <http://www.primalgirl.com/2011/11/01/nprimalgirl-sleep-issues-vitamin-d/>
13. <http://www.marksdailyapple.com/forum/thread74412.html>

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Average Joe (2013-02-16 06:18:40)

Speaking about Browser Tests, check this one <http://liferhacker.com/5976082/browser-speed-tests-chrome-24-firefox-18-internet-explorer-10-and-opera-1212> oh btw Opera browser announces transition to WebKit engine [http://www.theregister.co.uk/2013/02/13/webkit\\_sucks\\_on\\_webkit\\_chromium/](http://www.theregister.co.uk/2013/02/13/webkit_sucks_on_webkit_chromium/)

Allen K. (2013-02-16 06:33:37)

Whenever Chrome is slow for me, I get a new tab, do Shift-ESC, and find the process that is running slowly. (Mysteriously, it is usually in control of \_several \_ tabs, so when I End Process it kills all of them. I thought the point of Chrome was to fully



separate these.) Anyway it means I never crash Chrome, and I never wait minutes – if something doesn't load in 5 sec or so, I End its Process and load the pages one by one, pretty instantly.

Elizabeth Molin (2013-02-16 08:49:32)

I beg to differ. There is a word. Anti-fragile = robust.

Roger Sweeny (2013-02-16 10:07:16)

Durable? Strong?

derp (2013-02-16 10:19:23)

First of all, thank you Seth, for that article. "All of these systems were fashioned by nature, none by people with jobs." - quote of the day! As an MD, I rather give people useful advice on what changes to make and what to measure instead of prescribing stuff. Elizabeth, Roger: Please read the introduction to Taleb's Anti-Fragile. Fragile means losing from disorder (entropy). Robust, durable, strong means NOT losing from disorder. Anti-fragile means gaining from disorder. That's the main point.

Reanna (2013-02-16 11:27:42)

Resilient? Hardy? Stable? I think Taleb just wanted to secure his google results by coining a new phrase.

Reanna (2013-02-16 11:29:58)

Whoops, just read the last comment. Okay. Still think resilient is a candidate. Seth: derp is right. Anti-fragile means gains from disorder. Resilient, hardy, stable mean doesn't lose from disorder. I suppose Taleb was slightly wrong in the sense that hormetic means something pretty close to "gains from disorder". Hormetic things (= things that show hormesis) gain from disorder – up to a point. But they are the only anti-fragile things that exist. I read the book before publication. Blame me for not point this out at the time.

Matt (2013-02-16 13:41:59)

One of the most fascinating examples of this to me is incubators and who they choose to fund. What's interesting is that the only reason incubators can exist is because the few black swans that account for their returns. Most companies suck, and a few fall in the "succeed, but don't make us money" category. Only a fraction do well enough to make the incubator money. Here's Paul Graham, who runs one of the most successful incubators in the world, talking about how they specifically DON'T pick an investment strategy that would make them the most money, because they want a steady stream of "pretty good" companies to look good at their job, rather than picking a strategy that would be more successful, but would cause them to look bad. <http://paulgraham.com/swan.html> Seth: That's an excellent example.

Matt Weber (2013-02-16 21:30:40)

I've read your complaints about the professionalization of science many times, but it just occurred to me that they make a prediction: Why don't scientists at liberal arts colleges make all the breakthrough discoveries? They're like the olde-tyme professors you describe – they have the training of professional scientists, but their advancement is determined by teaching success, with discovery viewed as a nice bonus. I can think of a few reasons: (1) They actually are making the breakthroughs (unlikely, but possible) (2) They actually have similar publication incentives as scientists at research universities (possible, especially at higher-tier colleges) (3) Only bad scientists end up at liberal arts colleges (doubtful – faculty hiring is extremely competitive) (4) The teaching load at most liberal arts colleges is incompatible with any time-consuming hobby, including science (possible; 3-4 courses per semester is a lot, and they don't have grad students to do the grunt work) (5) They are trained by professional scientists and have imported that worldview – they see a teaching career as hamstringing, not liberating, their ability to do what they think of as science (my guess for Seth's preferred answer) Seth: One thing to keep in mind: liberal-arts colleges don't cover many subjects. For example, much of my research is about the intersection of nutrition and psychology. Liberal-arts schools don't have nutrition departments.

dearieme (2013-02-17 04:20:05)

I ask from ignorance: do such colleges have the quality and quantity of research lab space, equipment and technical support that one would need? I don't mean that they must equal the ever-growing empires of the top research universities, but there may be some ill-defined minimum that's necessary and which these colleges don't provide. On the other hand: in Britain the funding bodies used to chunter about "critical mass" in research, an evident ploy to shut down any small research groups (or individuals) that might flourish. I say "ploy" because I was once at a meeting where a bigshot bureaucrat was explaining this business and when I asked him about the evidence for his critical mass premise he could produce none. That's "none" as in zero - not even a little bit. I refrained from pointing out that his reasoning was therefore without weight, because the joke would have gone right over his head. Scientists are happy to conspire with such oafs because it's the oafs who direct the funding for the scientists' dreams of glory. Seth: At Reed College, in psychology, it seemed to me that the professors had enough resources to do most research. But psychology might be the lowest-tech laboratory science.

MJB (2013-02-17 06:24:57)

A related issue is 'educated incapacity.' I also often use the phrase to describe the limitations of the expert—or even of just the "well educated." The more expert—or at least the more educated—a person is, the less likely that person is to see a solution when it is not within the framework in which he or she was taught to think. When a possibility comes up that is ruled out by the accepted framework, an expert—or well-educated individual—is often less likely to see it than an amateur without the confining framework. For example, one naturally prefers to consult a trained doctor than an untrained person about matters of health. But if a new cure happens to be developed that is at variance with accepted concepts, the medical profession is often the last to accept it. This problem has always existed in all professions, but it tends to be accentuated under modern conditions. [http://www.hudson.org/index.cfm?fuseaction=publication\\_details&id=2219](http://www.hudson.org/index.cfm?fuseaction=publication_details&id=2219) Seth: I agree, that is another important way that jobs (or job training) are disabling.

CC (2013-02-17 08:02:25)

Outstanding post, Seth. As others have alluded to, Taleb makes a big deal out of the fact that "robust" is not the opposite of "fragile". That would be like saying that "bland" is the opposite of "delicious", where in fact "foul-tasting" is really the opposite of "delicious".

Chris Hynes (2013-02-17 08:39:39)

That's a very interesting hypothesis. If you accept it, a lot of confusing things fall into place. I'll definitely have to do a lot of thinking on the subject. I tl;dr'd it here: <https://plus.google.com/u/1/100434688393505441858/posts/iKiuoMVF2Gz> for my friends that won't read long stuff. Hopefully I captured the gist. Seth: Thanks, you summarized it well.

Nancy Lebovitz (2013-02-17 09:16:43)

A lot of interesting points. News media (especially if on paper) suffer from the job problem on the production side, too. They need to produce a certain amount of "news" per time period, regardless of how much is actually happening. I haven't been able to find a useful review of back-up software. It's easy to find reviews of how easy it is to get the software to make backups (the job), but I haven't seen any reviews of how well the software restores (the black swan). Have you read Root-Bernstein? ( \_Discovering \_, \_Sparks of Genius \_) If I remember correctly, he says that great scientists pay a lot of attention to their tools so they can be sure they're measuring what they think they're measuring, and great discoveries tend to come from trying to solve a practical problem which is somewhat outside their specialty. He probably has more that I don't remember. Seth: News media is a very good example. They are so clearly disabled in other ways by their job, not just by the need for steady output. There are many things they can't say no matter what the truth is. I have read Discovering by Root-Bernstein but not Sparks of Genius. Discovering is one of the books I was thinking of when I said the advice about how to make discoveries was poor. Discoveries has about 10 or 20 pieces of advice that don't fit together well. None of which struck me as useful or explained anything I noticed myself. Sparks of Genius might be better, I'll look for it.

Jonathan Shewchuk (2013-02-17 16:56:27)

Excellent post. Have you written anywhere a complete article summarizing your arguments for how the institutionalization of

science harms its progress? Have you read Bruce Charlton's "The Story of Real Science"? He gives reasons, some similar to yours, some different, for why he thinks science is dying in western civilization. <http://thestoryofscience.blogspot.com/> Seth: A complete article, no. That's a good suggestion. I didn't know about Bruce Charlton's "Story of Real Science", thanks for pointing it out.

Alex (2013-02-17 18:44:11)

Firefox crashing daily? Either your hardware is defective or you're doing something way too extreme (50+ tabs open at the same time, 20+ youtube videos playing at the same time or something like that). As I see, on my home machine I had 19 crashes since Jul 2010, last one was 1 Dec 2012. Previously most of the crashes were caused by buggy plug-ins, but once they were externalized into an independent process they no longer crash the browser. Seth: I doubt it's my hardware since crashes became much rarer when I switched to Chrome. I never have 50 tabs open; I often get to 10. I rarely play more than 1 youtube video at a time. I think there must be a third explanation. Maybe the explanation is that lots of websites have buggy software, but I'm not sure. Maybe you have more memory than me. Maybe it has something to do with being in China. In any case, localization was a feature of Chrome – a difficult feature to add – from the beginning for this very reason: because crashes happen pretty often. How do you explain the increasing popularity of Chrome at the expense of Firefox? Crash rate is the only big difference between them that I've noticed.

Nancy Lebovitz (2013-02-18 01:32:35)

I've only read parts of Sparks of Genius, but it didn't seem wildly different about research. The parts about different mental skills were interesting.

Nancy Lebovitz (2013-02-18 07:38:14)

Seth, any thoughts about how more people could have the free time to do independent work? Seth: I think this is already happening. As people become more productive, they need to work less to produce enough money. Less work, more free time.

Alex (2013-02-18 09:00:51)

Seth, I'd still run a memtest. It does not take much time (overnight) and it can eliminate or confirm the diagnosis. Firefox and Chrome do have a different memory footprint and memory allocation, so it is very possible that one hits a defective memory cell more often than another, causing more crashes. Seth: I did a memory test. No problems were found.

Jirka (2013-02-19 00:58:18)

I agree with the previous posters - this crash rate if either browser is definitely not normal, I would recommend running a stress-test on your hardware (OCCT - [www.ocbase.com](http://www.ocbase.com) - is free, popular, and offers several mixes of CPU/memory tests). Also, Adblock Plus plugin could help a lot, since most buggy code is some kind of intrusive advertising. Seth: I'm curious: how do you know what crash rate is normal? If crash rate is usually very low – as you seem to imply – why did the designers of Chrome include localization from the beginning?

Jirka (2013-02-19 09:29:05)

Taking advantage of multiple processor cores, security, and of course minimizing impact of any crashes - this does not imply that they are expected to be frequent, even rare crashes could be annoying if they take down the whole application. Normal crash rate = what I observe across multiple computers and users. I personally use Chrome all day, every day on two different computers, visit a lot of "suspicious" sites and experience several crashes a year at most. Maybe you just have some atypical browsing habits, maybe there is a problem in some of your plugins (Flash), but frequent crashes could indicate a hardware problem - I had the same problem when I built a new computer; one of my memory sticks was faulty (as diagnosed by Memtest86+), the problem went away when I replaced it.

James (2013-03-04 05:12:22)

Chrome is [1]actually going down in market share by some counts. Firefox 18 and 19 have been noticeably more crashy than 17 IME, but there's also a long-term supported release of 17 if you prefer stability. They did have to be berated to produce

it. Chrome also wants a steady rate of updates, so I'm not sure why you hold that against Firefox. Mozilla did [2]investigate using separate processes to display the browser UI, web content, and plugins, but it was [3]put on hold because it was a giant undertaking and they decided to deliver some smaller gains first instead, including memory usage (How much memory does your Chrome use?) They are [4]starting work on it again now, starting from the mobile version first. Your use of localization conflicts with its standard use in computing, which is adapting an interface to another language, primarily by string translation.

1. <http://arstechnica.com/information-technology/2013/03/chrome-hits-17-month-low-windows-8-still-only-creeping-upward/>
2. <https://wiki.mozilla.org/Electrolysis>
3. <http://lawrencemandel.com/2011/11/15/update-on-multi-process-firefox-electrolysis-development/>
4. <http://www.internetnews.com/blog/skerner/mozilla-set-to-revive-electrolysis-for-firefox-process-threading.html>

### Assorted Links (2013-02-17 05:00)

- "Theirs was a happy life together": [1]The parallel world of biographies for children (Spy magazine article)
- [2]In praise of Spy magazine
- [3]Red light speeds up wound healing
- [4]Nabokov Museum in St. Petersburg vandalized
- [5]No correlation between egg consumption and heart disease. Long ago, doctors and other "experts" told people to not eat eggs because eggs are high in cholesterol and cholesterol causes heart disease. About ten years ago, people started backing away from this nonsense, but the Mayo Clinic website [6]still says this.
- [7]Corporate crime in the drug industry still rampant
- [8]Corporate crime in the drug industry (1984 book)

Thanks to Vic Sarjoo.

1. <http://books.google.com/books?id=PT2PHv62LyUC&pg=PA52&dq=%22parallel+world+lyndon+johnson%22&hl=en&sa=X&ei=HLATUb-cHKfi2gX33IGwBQ&ved=0CDIQ6AEwAA#v=onepage&q=%22parallel%20world%20lyndon%20johnson%22&f=false>
2. <http://splitsider.com/2011/04/digging-into-the-archives-of-spy/>
3. <http://www.ncbi.nlm.nih.gov/pubmed/18177400>
4. <http://www.mhpbooks.com/nabokov-museum-vandalized/>
5. <http://www.bmj.com/content/346/bmj.e8539>
6. <http://www.mayoclinic.com/health/cholesterol/HQ00608>
7. [http://pharmagossip.blogspot.com/2013/02/is-there-cure-for-corporate-crime-in.html?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+blogspot%2FD1JuM+%28PharmaGossip%29](http://pharmagossip.blogspot.com/2013/02/is-there-cure-for-corporate-crime-in.html?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+blogspot%2FD1JuM+%28PharmaGossip%29)
8. [http://www.ivantic.net/0stale\\_knjiige/Zdravlje/Braithwaite-John-Corporate-Crime-in-the-Pharmaceutical-Industry.pdf](http://www.ivantic.net/0stale_knjiige/Zdravlje/Braithwaite-John-Corporate-Crime-in-the-Pharmaceutical-Industry.pdf)

dearieme (2013-02-17 05:22:30)

"... people started backing away from this nonsense": even pretty young dieticians will now advise you to that effect. Although, alas, they preface their advice with the untrue "research has now shown ..." instead of the truthful "the idea was always a load of rubbish, unsupported by any evidence". Hell, even that dreadful liar Ancel Keys said that cholesterol in your food would do you no harm.

dearieme (2013-02-17 05:25:49)

Hah! "... people with higher egg consumption had a 25 % ... lower risk of developing hemorrhagic stroke." Ha bloody ha!

dearieme (2013-02-17 05:28:08)

P.P.S. In a British journal should that have been spelled "haemorrhagic"?

Andrew (2013-02-17 12:25:55)

Ned Kock did a moderating effects analysis of an earlier study that had found a link between egg yolk consumption and carotid plaque. Turns out that what the study really showed was a correlation between being old and liking eggs. <http://healthcorrelator.blogspot.com/2012/12/the-2012-atherosclerosis-egg-study-more.html> Seth: Lotta great stuff at Kock's blog, which I didn't know about. Very easy to read.

derp (2013-02-17 12:52:54)

That egg-heart connection is nonsense and has been pushed by a certain Dr. Spence who takes quite some money for a pro-statin-pushing agenda. Seth: It is nonsense, I agree. Many years ago it seemed like lots of people said that. Simply because eggs were high in cholesterol.

Nancy Lebovitz (2013-02-18 07:36:15)

What was more interesting was that when there turned out to be no evidence that eggs were dangerous, instead of saying that, they said "Well, you can have a few eggs a week". See also, evidence that moderate drinking might be good for people resulting in saying "but that doesn't mean we think anyone should start drinking".

Paul N (2013-02-18 13:19:42)

@ Nancy - Ned Kock did an [1]excellent analysis of that one also. It is amazing how often the advice/conclusions of these studies get "politically corrected" such that it is at odds with the very data they have produced!

1. <http://healthcorrelator.blogspot.ca/2013/01/how-much-alcohol-is-optimal-maybe-less.html>

Joe (2013-02-19 13:17:14)

Found a good one in the Economist this week, about a study showing bacteria in the stomach helps regulate blood pressure: <http://www.economist.com/news/science-and-technology/21571844-gut-bacteria-help-regulate-blood-pressure-sniffing-out-hypertension>

dearieme (2013-02-19 15:56:08)

A friend was mildly concerned about her blood pressure - it was on the high side. Now, perhaps six months later, it's tickety-boo. The only change to her diet that she can think of is that she's started eating half a banana at breakfast every day. Then again, perhaps it's just one of those things. Seth: Evidence that bananas lower blood pressure: <http://news.bbc.co.uk/2/hi/health/264552.stm>

## The Yakult Women of Seoul (2013-02-19 05:00)

Their name in Korean means Yakult women: street peddlers who sell several probiotic drinks, including Yakult. I encountered them in a Seoul suburb ([1]Bundang) on the way to the subway. During one 15-minute walk, I saw three of them. Other street peddlers in Bundang were often men (selling cookware or socks, for example) but the probiotic sellers were always women. I haven't seen street peddlers selling probiotic drinks anywhere else. In Japan, Yakult and other probiotic drinks [2]are sold door-to-door but apparently not on the street.

I asked a Korean friend how she (and Koreans in general) got the idea that probiotic drinks are good for health (which I am sure is true). She said she knew it before she went to school and believed she picked it up from TV ads. Apparently these ads are more successful in Korea than elsewhere. General Foods recently [3]paid \$9 million to settle a legal case based on Yoplait Yo-Plus ads in America that made similar claims. The lawyers who sued General Foods claimed that healthy people don't benefit from Yoplait Yo-Plus.

I can think of several reasons that Yakult women exist in Korea but (apparently) nowhere else. Maybe the fact that Koreans eat a lot of kimchi makes them more likely to believe that a probiotic is healthy. Maybe Koreans care more about health than other people. Maybe Koreans are unusually sophisticated about health. Bundang's density (it is full of tall apartment buildings) is surely one reason, because Yakult women weren't the only street peddlers. American suburbs, where I almost never see street peddlers, are much less dense. Another certain reason is that Bundang is a wealthy suburb. A third certain reason is that Yakult and similar drinks help you digest lactose. Lactose intolerance is much more common in Asia than elsewhere.

It would be interesting to compare the rate of digestive problems in South Korea versus other countries, especially the United States. I think they are likely to be much less common in South Korea.

1. <http://en.wikipedia.org/wiki/Bundang-gu>

2. <http://thestar.com.my/health/story.asp?file=/2007/10/28/health/19073245&sec=health>

3. <http://www.foodproductdesign.com/news/2013/02/general-mills-settles-yoplait-yogurt-lawsuits-in.aspx>

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Mikael (2013-02-19 07:00:12)

Yakult is also extremely popular in Singapore, where I lived for a few years. There were ladies who knocked on apartment doors and sold six-packs (or some other quantity, maybe 8-packs) at slightly reduced prices compared to the shops. My kids (and other kinds) loved Yakult.

vic (2013-02-19 09:13:50)

Gastric cancer rates are generally much higher in East Asia than in the US or Europe Seth: I was under the impression that was because of high salt content. For example, miso is salty.

Robin (2013-02-19 09:38:19)

I can't imagine how Yakult which is just loaded with sugar is a very good way to get probiotics. But yes here in Singapore people give this sugary stuff to their kids and feel good about it. Then again they also pass off watered down chocolate/malt beverage(aka Milo) as a healthy sports drink to rival Gatorade.

Arthur (2013-02-19 10:34:51)

Selling Yakult door to door is quite common in São Paulo, Brazil, not on the street though. Seth: I read that in Brazil Yakult is considered a way to become lactose tolerant.

Morex (2013-02-19 17:33:33)

Yakult is very popular in Mexico. There are peddlers selling it door to door and in the street, specially outside elementary schools. Peddlers even have a subscription business model! Thanks to an ad in the 80's, moms now trust Yakult. I recall the tv ad was an anime that explained how probiotics fought evil bacteria inside the human body. It was funny. Also, Mexico is a country where most of the population suffers from gastritis and colitis thanks to spice and peppers in pretty much any meal. Hell, even candy are hot. It's thought that Yakult helps prevent and heal those diseases. Drinking Yakult is a must for millions. Even more, Yakult has a very good reputation now a days thanks to charismatic and inspiring Carlos Kasuga Osaka, Yakult's CEO for Mexico (Distribuidora Kai). He speaks in conferences and is a YouTube star here. Ergo, a lot of people love Yakult. I like it, but have it maybe once a year.

Erikku (2013-02-20 02:26:38)

Yakult Ingredients: Water, Sugar, Skim Milk Powder, Glucose, Natural and Artificial Flavors, Lactobacillus Casei Shirota (<http://www.yakultusa.com/yakult-nutrition-information.php>) Seth: It's puzzling that they don't add more bacteria, which would make the product more valuable.

## **More Trouble in Mouse Animal-Model Land (2013-02-20 05:00)**

Mice – inbred to reduce genetic variation – are used as laboratory models of humans in hundreds of situations. Researchers assume there are big similarities between humans and one particular genetically-narrow species of mouse. [1]A new study, however, found that the correlation between human genomic changes after various sorts of damage ("trauma", burn, endotoxins in the blood, and so on) and mouse genomic changes was close to zero.

According to [2]a New York Times article about the study, the lack of correlation "helps explain why every one of nearly 150 drugs tested at huge expense in patients with sepsis [severe blood-borne infection] has failed. The drug tests all were based on studies in mice."

This supports what I've said about [3]the conflict between job and science. If your only goal is to find a better treatment for sepsis, after ten straight failures you'd start to question what you are doing. Is there a better way? you'd wonder. After twenty straight failures, you'd give up on mouse research and starting looking for a better way. However, if your goal is to do fundable research with mice – to keep your job – failures to generalize to humans are not a problem, at least in the short run. Failure to generalize actually helps you: It means more mouse research is needed.

If I'm right about this, it explains why researchers in this area have racked up an astonishing record of about 150 failures in a row. ([4]The worst college football team of all time only lost 80 consecutive games.) Terrible for anyone with sepsis, but good for the careers of researchers who study sepsis in mice. "Back to the drawing board," they tell funding agencies. Who are likewise poorly motivated to react to a long string of failures. They know how to fund mouse experiments. Funding other sorts of research would be harder.

In the comments on the Times article, some readers had trouble understanding that 10 failures in a row should have suggested something was wrong. One reader said, "If one had definitive, repeatable, proof that the [mouse model] approach wouldn't work.....well, that's one thing." Not grasping that 150 failures in a row is repeatable in spades..

When this ground-breaking paper was submitted to Science and Nature, the two most prestigious journals, it was rejected. According to one of the authors, the reviewers usually said, "It has to be wrong. I don't know why it is

wrong, but it has to be wrong." 150 consecutive failed drug studies suggest it is right.

As I said [5]four years ago about similar problems,

When an animal model fails, self-experimentation looks better. With self-experimentation you hope to generalize from one human to other humans, rather from one genetically-narrow group of mice to humans.

Thanks to [6]Rajiv Mehta.

1. <http://www.pnas.org/content/early/2013/02/07/1222878110.full.pdf+html>
2. [http://www.nytimes.com/2013/02/12/science/testing-of-some-deadly-diseases-on-mice-mislead-report-says.html?\\_r=0](http://www.nytimes.com/2013/02/12/science/testing-of-some-deadly-diseases-on-mice-mislead-report-says.html?_r=0)
3. <http://blog.sethroberts.net/2013/02/16/web-browsers-black-swans-and-scientific-progress/>
4. <http://espn.go.com/page2/s/list/colfootball/teams/worst.html>
5. <http://blog.sethroberts.net/2009/04/23/trouble-in-mouse-animal-model-land/>
6. <http://mobilehealth.org/speakers-2011/rajiv-mehta-bhageera-tonic.html>

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Tom (2013-02-20 06:46:33)

Yet despite the issues with mouse research, they're phasing out research with animals more like us. <http://www.nytimes.com/2011/12/16/science/chimps-in-medical-research.html> Seth: Rats are more similar to humans than mice. Maybe they will be a better animal model.

Walter Bushell (2013-02-24 05:56:25)

Reminds me of a Mulla Nasrudin (after Idres Shaw. Seems the Mulla was on his hands and knees under a lamp post. When asked why he was, the Mulla said, "I'm looking for my keys." Several people started to help him, and after a while someone asked him where he lost his keys. He said, "Over there in that dark area." "Then why are you looking here!?" "The light is better here, I'd never find them in the dark." Perhaps we could use raccoons, they have similar diets and have hands. Oh, yes and the problem of using genetically identical animals makes statistical analysis easier, but misses the point, some things may be quite toxic to a small fraction of the population and harmless to the vast majority or vice versa. For example, some people are very salt sensitive and get high blood pressure, but the majority has trivial effects from salt. So there is a movement to cut down salt from everybody.

### Assorted Links (2013-02-21 05:00)

- Failing up: After many years of running a company unable to make good products, Bill Gates tells the rest of us [1]how to solve "the world's biggest problems".
- [2]Mini-biography of Aaron Swartz
- [3]Remembrance of Aaron Swartz
- [4]Michael Wolff on David Goldhill's new book Catastrophic Care. "If there is any common strand among the writers trying to deal with this subject . . . it is to almost wholly reject the assumptions, competence, received wisdom, and even good intentions of the experts. They've made this mess."



- [5]A business (hangover remedy) built on self-experimentation

1. <http://online.wsj.com/article/SB10001424127887323539804578261780648285770.html>
2. [http://www.slate.com/articles/technology/technology/2013/02/aaron\\_swartz\\_he\\_wanted\\_to\\_save\\_the\\_world\\_why\\_couldn\\_t\\_he\\_save\\_himself\\_single.html](http://www.slate.com/articles/technology/technology/2013/02/aaron_swartz_he_wanted_to_save_the_world_why_couldn_t_he_save_himself_single.html)
3. [https://github.com/rememberaaronsw/rememberaaronsw/blob/master/memories/\\_posts/2013-01-16-How-I-Knew-Aaron.md](https://github.com/rememberaaronsw/rememberaaronsw/blob/master/memories/_posts/2013-01-16-How-I-Knew-Aaron.md)
4. <http://www.guardian.co.uk/commentisfree/2013/jan/28/us-healthcare-parents-lingering-death>
5. <http://www.buzzfeed.com/gregbeato/a-sin-city-saviors-quest-to-cure-the-common-hango>

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sam (2013-02-21 06:38:11)

"Unable to make good products" is an interesting point of view. How to measure "a good product" if not in market adoption and sales?

Chris K (2013-02-21 06:57:20)

Seth, I really enjoy your blog, as well as SLD. But I have to point out that the cheap shot at Gates is unwarranted, and just plain wrong. There are many like me, a successful entrepreneur and product developer, who feel that Microsoft has developed dozens of great products. We appreciate the non-closed system, unlike Apple. We sometimes need additional capabilities not available in slicker, but dumbed-down, software, particularly so in engineering. Sales numbers may not tell everything, but they can't be ignored. Seth: Here are two examples. Word is okay now. For a long time, it struck me as worse than WordPerfect, which it supplanted. I would never call Word a good product, given that it was a step backward. WordPerfect showed how to do it, they couldn't even be bothered to copy it. Likewise, Windows used to crash a lot. It never seemed like a good product. I agree about the non-closed system. I think the sales numbers can be attributed to near-monopoly status, not great engineering.

max (2013-02-21 08:03:55)

Agree; disappointed to see microsoft-bashing here. Saying that microsoft is "unable to make good products" is at best totally false, and at worst, an oversimplification that doesn't give the company the benefit of the doubt, by failing to consider all the factors that go into determining whether a product is "good" or not. Seth: Yes, not very charitable of me. I persist in believing that Microsoft products – the ones I used heavily, including Word and Windows – could have been much better. I like PowerPoint. No complaints there.

Paul N (2013-02-21 10:00:41)

@ Sam, Those are measures of "sales success", which is quite different from a "good product" Measures of a good product include performance, reliability, and user preference compared to competing products. How do you think Microsoft compares to Linux or Apple on those? Microsoft succeeded because they were the first to come out with a platform that all PC's could use. Once they had the market cornered, it became that much harder for others to break into it, no matter how good their products were. Microsoft was not the best, just the biggest - something quite different.

Joe (2013-02-21 14:12:19)

Gates' objective was never to make a "good product." It was to make a great deal of money, and he definitely has, no?

Nile (2013-02-21 15:50:24)

What I know of Bill Gates I don't like, and I don't like Microsoft. I personally use Linux for almost all of my work. Personal feelings aside however, there is no denying Bill Gates was both a computer genius and a business genius. While Microsoft products may not have been perfect judged against a zero defect policy they were the best in class at the time when all things were considered. What makes more sense for a Fortune 500 company – a Wang word processor or MS Word? Can you do a spreadsheet on HP-UX or Solaris? The ecosystem matters and no matter how much better Multimate or WordStar or ?? were

compared to MS Word (and I don't think they were better ) they did not have an ecosystem and did not adapt to the GUI world.

Lemmy Caution (2013-02-21 16:08:02)

The decline in worldwide infant mortality mentioned in Gates article is a big deal. Microsoft products work perfectly fine.

Tom (2013-02-22 00:48:25)

It's awesome that Gates no longer spends his time ripping off other people's innovations. But Microsoft products are a disgrace. I can't believe anyone is actually criticizing Seth for pointing out the obvious. Microsoft has been putting profits first and customers last for over a decade. They don't upgrade products; they hobble them, forcing trapped customers to update to keep functionality that they've already paid for. This year alone they killed Mesh to force movement to the crippled SkyDrive, plus if you want the same functionality, they recommend paying for both Cubby and LogMeIn Pro. They are shutting down Messenger to force movement to Skype. They are shutting down Hotmail to force the move to Outlook.com; they have not announced it but it is obvious that they will be destroying Live Mail (their free email client) to force payment for Outlook, either in the cloud or locally. But they jumped the shark when in Win 8 they destroyed the desktop interface they stole in 1990 just to try to force their customers onto an interface they hoped would kill iOS. In their hubris, it looks like they have mortally wounded themselves. I understand that Ballmer sees the writing on the wall with the coming decline of WinOS and Office, and that this is his plan to keep revenues high. However, there is nothing in this plan for me, the lowly customer. I love that Win 8, Windows Phone and the Surface tablets are all catastrophic failures. It's a triad of too little, too late tone-deaf mistakes that will leave this company a pale shadow of its former self. I'm looking forward to Microsoft's demise, and resent that in America incompetent CEOs only fail upwards.

dearieme (2013-02-23 03:04:19)

Ahoy, Seth: does this ring true to you? <http://www.independent.co.uk/life-style/food-and-drink/from-vegetarian-to-confirmed-carnivore-8505787.html>

Brian (2013-02-23 23:00:54)

My two cents: Visual Studio seems to beat Eclipse in capabilities, by far. In 2013 it appears to me that Windows crashes less than Ubuntu and in fact all NT derivatives seem very reliable and they seem to have been commonplace for anybody that cared since about 1998. C Sharp and it's ecosystem of objects cannot help but be better than the previous general purpose "best" that was Java and it's own ecosystem of objects because it's kind of hard not to be better when you have something immensely useful/great to start with and then you set out not to innovate radically but just incrementally improve. A local disk installed copy of Excel seems far more polished than anything else.

## **Posit Science: More Questions (2013-02-22 05:00)**

[1]Posit Science is a San Francisco company, started by Michael Merzenich (UCSF) and others, that sells access to brain-training exercises aimed at older adults. Their training program, they say, will make you "remember more", "focus better", and "think faster". A friend recently sent me a[2] 2011 paper ("Improvement in memory with plasticity-based adaptive cognitive training: results of the 3-month follow-up" by Elizabeth Zelinski and others, published in the Journal of the American Geriatrics Society) that describes a study about Posit Science training. The study asked if the improvements due to training are detectable three months after training stops. The training takes long enough (1 hour/day in the study) that you wouldn't want to do it forever. The study appears to have been entirely funded by Posit Science.

I found the paper puzzling in several ways. I sent the corresponding author and the head of Posit Science a list of questions:

1. Isn't it correct that after three months there was no longer reliable improvement due to training according

to the main measure that was chosen by you (the investigators) in advance? If so, shouldn't that have been the main conclusion (e.g., in the abstract and final paragraph)?

2. The training is barely described. The entire description is this: "a brain plasticity-based computer program designed to improve the speed and accuracy of auditory information processing and to engage neuromodulatory systems." To learn more, readers are referred to a paper that is not easily available – in particular, I could not find it on the Posit Science website. Because the training is so briefly described, I was unable to judge how much the outcome tests differ from the training tasks. This made it impossible for me to judge how much the training generalizes to other tasks – which is the whole point. Why wasn't the training better described?

3. What was the "ET [experimental treatment] processing speed exercise"? It sounds like a reaction-time task. People will get faster at any reaction-time task if given extensive practice on that task. How is such improvement relevant to daily life? If it is irrelevant, why is it given considerable attention (one of the paper's four graphs)?

4. According to Table 2, the CSRQ (Cognitive Self-Report Questionnaire) questions showed no significant improvement in trainees' perceptions of their own daily cognitive functioning, although the p value was close to 0.05. Given the large sample size (500), this failure to find significant improvement suggests the self-report improvements were small or zero. Why wasn't this discussed? Is the amount of improvement suggested by Posit Science's marketing consistent with these results?

5. Is it possible that the improvement subjects experienced was due to the acquisition of strategies for dealing with rapidly presented auditory material, and especially for focusing on the literal words (rather than on their meaning, as may be the usual approach taken in daily life)? If so, is it possible that the skills being improved have little value in daily life, explaining the lack of effect on the CSRQ?

6. In the Methods section, you write "In the a priori data analysis plan for the IMPACT Study, it was hypothesized that the tests constituting the secondary outcome measure would be more sensitive than the RBANS given their larger raw score ranges and sensitivity to cognitive aging effects." Do the initial post-training tests (measurements of the training effect soon after training ended) support this hypothesis? Why aren't the initial post-training results described so that readers can see for themselves if this hypothesis is plausible? If you thought the "secondary outcome measure would be more sensitive than the RBANS" why wasn't the secondary outcome measure the primary measure?

7. The primary outcome measure was some of the RBANS (Repeatable Battery for the Assessment of Neuropsychological Status). Did subjects take the whole RBANS or only part of it? If they took the whole RBANS, what were the results with the rest of the RBANS (the subtests not included in the primary outcome measure)?

8. The data analysis refers to a "secondary composite measure". Why that particular composite and not any of the many other possible composite measures? Were other secondary composite measures considered? If so, were p values corrected for this?

9. If Test A resembles training more closely than Test B, Test A should show more effect of training (at any retention interval) than Test B. In this case Test A = the RBANS auditory subtests and Test B = the secondary composite measure. In contrast to this prediction, you found that Test B showed a clearer training effect (in terms of p value) than Test A. Why wasn't this anomaly discussed (beyond what was said in the Methods section)?

10. Were any tests given the subjects not described in this report? If there were other tests, why were their results not described?

11. The secondary composite measure is composed of several memory tests and called "Overall Memory".

The Posit Science website says their training will not only help you “remember more” but also “think faster” and “focus better”. Why weren’t tests of thinking speed (different from the training tasks) and focus included in the assessment?

12. Do the results support the idea that the training causes trainees to “focus better”?

13. The Posit Science homepage suggests that their training increases “intelligence”. Was intelligence measured in this study? If not, why not?

14. Do the results support the idea that the training causes trainees to become more intelligent?

15. The only test of thinking speed included in the assessment appears to be a reaction-time task that was part of the training. Are you saying that getting faster on one reaction-time task after lots of practice with that task shows that your training causes trainees to “think faster”?

Update: Henry Mahncke, the head of Posit Science, said that he would be happy to answer these questions by phone. I replied that I was sure many people were curious about the answers and written answers would be much easier to share.

Further update: Mahncke replied that he would prefer a phone call and that some of the questions seemed to him hard to answer in writing. He said nothing about the sharing problem. I repeated my belief that many people are interested in the answers and that a phone call would be hard to share. I offered to rewrite any questions that seemed hard to answer in writing.

[3]Earlier questions for Posit Science.

1. <http://www.positscience.com/>

2. <http://www.ncbi.nlm.nih.gov/pubmed/21314646>

3. <http://blog.sethroberts.net/2012/11/05/posit-science-does-it-help/>

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Tim Beneke (2013-02-22 12:20:24)

Just a wonderful example of clear critical thinking.

Jazi Zilber (2013-02-24 15:27:43)

Brain training usually does not transfer to other domains / tasks. Some reviews looked into it and found no transfer, and they considered multiple studies. My a priori assumption is that a specific software will not be better than the sum of the studies. Seth: Here is an example of a meta-analysis that found no clinical relevance of working memory training: <http://psycnet.apa.org/journals/dev/49/2/270/>

## Celiac Experts Make Less Than Zero Sense (2013-02-23 05:00)

In the 1960s, Edmund Wilson reviewed Vladimir Nabokov's translation of Eugene Onegin. Wilson barely knew Russian and his review was a travesty. Everything was wrong. Nabokov wondered if it had been written that way [1]to make sense when reflected in a mirror.

I thought of this when I read [2]recent remarks by "celiac experts" in the New York Times. The article, about gluten sensitivity, includes an example of a woman who tried a gluten-free diet:

Kristen Golden Testa could be one of the gluten-sensitive. Although she does not have celiac, she adopted a gluten-free diet last year. She says she has lost weight and her allergies have gone away. "It's just so marked," said Ms. Golden Testa, who is health program director in California for the Children's Partnership, a national nonprofit advocacy group. She did not consult a doctor before making the change, and she also does not know [= is unsure] whether avoiding gluten has helped at all. "This is my speculation," she said. She also gave up sugar at the same time and made an effort to eat more vegetables and nuts.

Fine. The article goes on to quote several "celiac experts" (all medical doctors) who say deeply bizarre things.

"[A gluten-free diet] is not a healthier diet for those who don't need it," Dr. Guandalini [medical director of the University of Chicago's Celiac Disease Center] said. These people "are following a fad, essentially." He added, "And that's my biased opinion."

Where Testa provides a concrete example of health improvement and refrains from making too much of it, Dr. Guandalini does the opposite (provides no examples, makes extreme claims).

Later, the article says this:

Celiac experts urge people to not do what Ms. Golden Testa did — self-diagnose. Should they actually have celiac, tests to diagnose it become unreliable if one is not eating gluten. They also recommend visiting a doctor before starting on a gluten-free diet.

As someone put it in an email to me, "Don't follow the example of the person who improved her health without expensive, invasive, inconclusive testing. If you think gluten may be a problem in your diet, you should keep eating it and pay someone to test your blood for unreliable markers and scope your gut for evidence of damage. It's a much better idea than tracking your symptoms and trying a month without gluten, a month back on, then another month without to see if your health improves."

Are the celiac experts trying to send a message to Edmund Wilson, who died many years ago?

1. <http://www.theparisreview.org/blog/2012/02/29/document-nabokov%E2%80%99s-notes/>

2. <http://well.blogs.nytimes.com/2013/02/04/gluten-free-whether-you-need-it-or-not/>

Koanic (2013-02-23 05:44:49)

One super effective treatment for IBD - fasting and eating less. I have never heard anyone suggest this until recently, in an email. I went from bloody stool to almost perfect (better than nearly everyone's) in 24 hours, with nothing inbetween. This is unprecedented for me. A 24 hour fast is very hard if you are eating a Standard American Diet, for various reasons, but very easy if you are eating paleo. The optimal diet for IBD seems to be yoghurt and lean meat (including shellfish). This is nutritionally complete and the lowest residue possible. Instead, doctors run expensive, invasive tests that only reveal damage progression, and prescribe drugs with often dangerous side effects that merely mask the problem and permit it to become more severe, until the drugs stop working. Then they cut out a piece of bowel.

Tom Passin (2013-02-23 06:28:24)

I'd have to say that Dr. Guandalini's statement that "[A gluten-free diet] is not a healthier diet for those who don't need it," could well be true. In fact, it seems to be a tautology, with no useful content. The real issues are 1) as Seth points to, how can you find out if you have a gluten problem?, and 2) what if you don't have say IBS, try no-gluten and it doesn't seem to make a difference. Are there nevertheless long term health issues for you if you keep eating gluten? Dr G, and his fellows, don't seem to have anything useful to say about 2). Seth: I'm unsure what it means to "need" a diet. If the statement is revised to be clearer - "A gluten-free diet is not a healthier diet for those who don't benefit from it" - it's a tautology.

Alex (2013-02-23 09:33:36)

If I were Dr. Guandalini's patient, I would be concerned. In an article filled with unsupported pronouncements, his took the cake. As Tom Passin points out, the most charitable interpretation of it is as a useless tautology. The subject of gluten-free diets seems to spark a reflexive irrationality in many healthcare providers. Evidence-based medicine is all well and good, but only when the evidence is handed down from on high. Evidence based on what works for you is often greeted with condescending hostility. Doing an ABA trial of a gluten-free diet seems like the lowest of low-hanging fruit to address a chronic condition. Who needs gluten? Yet when Kelly Dorfman, author of Cure Your Child with Food (<http://cureyourchildwithfood.com/book/>) did a Q & A about gluten-free diets at the Washington Post, here again was the "concern." Given the typical lag of years between the onset of symptoms and the diagnosis of celiac disease, this concern seems misplaced. Q. WHO NEEDS A GLUTEN FREE DIET I think there should be an emphasis on the NEED of a Gluten Free Diet. It's fine if that is what the doctor ordered. However, right now, it seems to be the "in" thing to be Gluten Free when it's not necessary. Agree? - February 21, 2013 11:12 AM A. KELLY DORFMAN : There is a little bit of the 'latest thing' going on here with gluten free living. I agree. However, without a tight test for non-celiac gluten sensitivity, waiting for your doctor to point it out could be an exercise in pain and frustration. I have a long list of horror stories I could share (but won't). - February 21, 2013 12:52 PM <http://live.washingtonpost.com/gluten-free-kids-0221.html> #Who-NEEDS-a-GI

Tom (2013-02-23 13:01:52)

Hi, Seth, Off-topic, but I'm pretty sure you'll find the following on niacin therapy for mental illness interesting: [http://www.orthomolecularvitamincentre.com/a\\_hoffer\\_schizophrenia.php](http://www.orthomolecularvitamincentre.com/a_hoffer_schizophrenia.php)

Tom (2013-02-23 13:49:12)

One last link. The comments are interesting, too: <http://high-fat-nutrition.blogspot.com/2013/02/complex-i-hoffer-and-b3.html>

Babar (2013-02-24 07:36:47)

I have thought about cutting out gluten just to see if it is a problem for me (I suspect no, no reason to think it is) but I can't think of a good experiment. If I just stop eating bread I will change other things (fewer cheese sandwiches means less cheese maybe, or substituting spelt for wheat means more spelt, not just less gluten). At the very least less wheat means more of something else! So what experiment can I do that is sensitive enough to capture what is probably a small effect? Seth: So what if you change other things. You will still reduce gluten. If you reduce gluten substantially and notice no changes, that is evidence against the hypothesis that gluten is a problem for you. If you reduce gluten substantially and notice improvements, that is evidence for the hypothesis that gluten is a problem for you. How to increase sensitivity: Reduce gluten a lot. Notice what might have changed. Start measuring those things carefully. Increase gluten. Do they get worse?

Mary (2013-02-24 10:38:06)

I am not a 'celiac' but I was a sufferer of GERD and severe heartburn for many years. I read several articles online about 'leaky gut syndrome.' I eliminated wheat, including my beloved scotch. The results were almost immediate- within weeks I no longer needed omeprazole or Nexium and I have taken no acid inhibitor for four years. Anecdotal? Certainly. Would I go back to the SAD recommendations of x number of whole grain servings? When pigs fly!!! Seth: As far as strength of evidence for causality goes, your "anecdote" is much stronger evidence than many non-anecdotes.

Alex (2013-02-27 20:12:35)

Babar, don't overthink it. You're not trying to wow the Nobel committee, you're just figuring out what works for you. You can do a month off gluten, a month back on, another gluten-free month, and see if there are any changes. Then you can try something else, maybe pursue anything interesting that arose in the first experiment. If cutting out cheese sandwiches makes a difference, try a month without cheese and a month without bread to see which one is having an effect. Get going, and have fun.

KM (2013-02-28 15:24:57)

I stopped gluten and dropped 40 lbs. My skin cleared up. I no longer get acid reflux. My sleep problems improved. Doctor G would have me go back on gluten and have a bunch of tests done to determine if I have a problem with it. Hmm. I think I may disregard his opinion. Seth: Yeah, exactly. His advice makes less than zero sense.

KBS (2013-02-28 15:28:11)

One note of caution-I have been diagnosed with Celiac, but it took almost a year for me to feel better without gluten, in part because of complications due to having Celiac for so many years. Just going gluten free didn't help, at least not at first. So if a month without gluten doesn't make you feel better, you could still have Celiac.

MNP (2013-02-28 17:20:21)

My wife has celiac disease, she was diagnosed about a decade ago. As far as we're concerned, MORE POWER TO THE FAD. It increases her options in buying food in the supermarket and at restaurants, raises awareness, and lowers prices. Since she can't just "quit" eating gluten free, this is very important. Note: I do not have any problem with gluten, and in fact love to eat breads and pastas full of the stuff. We evolved a workable method so she doesn't get sick and I don't have to eat gluten free all the time.

Joe (2013-02-28 20:45:15)

For nearly a year I suffered from excruciating joint and muscle pain, a host of digestive problems, fatigue and weakness. I improved by removing gluten, but then I became intolerant to other foods while at the same time becoming more sensitive to trace amounts of gluten. Gluten free brands such as Bob's Red Mill I became unable to eat because of cross contamination with oats and gluten grains. I am still trying to figure out why food is such a problem (it's been 4.5 years since my onset of symptoms, though I sometimes think acne and fatigue problems starting in my teenage years were somehow related to gluten or other food intolerances) and why no doctors can help me. I don't have celiac disease or a wheat allergy; I've been tested for food allergies but the only things that came back positive were foods I had already been avoiding. I can only guess that I have gluten sensitivity, which has gotten worse as I removed ever smaller amounts of gluten from my diet. If I could remove it completely, perhaps I would be better. This is all my long-winded way of saying there is much science doesn't know about gluten related illnesses and sometimes you can only trust what you feel.

meredith (2013-02-28 20:52:03)

Or you can quit gluten for a couple weeks (with, in my case, immediate and vast improvements in multiple domains) and then have an eating companion prepare a series of meals into one of which is slipped a quantity of vital wheat gluten. Bonus points if he also slips an array of novel powders into the other meals that alter the flavor and consistency of the food in novel-to-you ways (e.g. sorghum, almond meal, flax, nutritional yeast). Extra bonus points for replication and a larger control group of naive diners. NOBEL PRIZE NOW PLEASE But really the celiac test is not totally stupid - I would be much more careful about gluten exposure and cross-contamination if I had any evidence of actual celiac rather than a pretty obvious sensitivity.

And because I self-experimented prior to getting tested, I had to go back on gluten for several weeks for the antibody/scope tests to have any chance of detecting anything, so I really would recommend getting tested and THEN commencing with the rampant and exuberant self-experimentation. Seth: Since you quit gluten and noticed big improvements, why did you bother to get antibody/scope tests? In your case it does sound like the celiac test is "totally stupid". Nor do I understand why you need "evidence of actual celiac" to be very careful about gluten exposure. You have evidence of gluten sensitivity.

meredith (2013-03-01 15:18:30)

I'm careful, but not obsessively so. From my (limited) understanding of celiac, damage to the intestine can result from exposure that doesn't necessarily cause other more overt symptoms, and this damage is related to longer-term complications, so avoiding that requires being really super vigilant about eliminating any potential sources of cross-contamination – e.g. maintaining separate "clean" sets of cookware that have never been used with gluten-containing ingredients, avoiding food from bulk bins, etc. Whereas, as far as I know, as long as I keep my exposure sub-symptomatic there is no reason to think I'm doing permanent damage to myself if I have a sip of beer on occasion or use the communal toaster oven. Could be wrong – since nobody seems to know much yet about the mechanisms of gluten sensitivity – but the convenience is currently worth the risk to me (and would not be with a celiac diagnosis). Seth: Thanks for the explanation, but I'm afraid I don't follow your reasoning. I still don't understand why you would bother to have the tests necessary for an "official" celiac diagnosis. You have already learned that you are sensitive to gluten.

MNP (2013-03-02 00:23:39)

Celiac disease is an autoimmune disorder, and some restrictions or limitations that apply to people with other autoimmune diseases apply to people with celiac's. Even absent that, even gluten seems to make you feel better it might be something else and not sensitivity to gluten. It's still important to test for that if you might have it to both increase knowledge about your symptoms and develop the most effective treatment. Then there's always the chance for a placebo effect. If you're already convinced you're sensitive to gluten and then you reduce gluten you might just feel better because you expect to.

## **Progress in Reducing Acne (2013-02-24 05:00)**

[1]A new study has found that persons with [2]Laron Syndrome (a kind of dwarfism) get almost no acne. Persons with this syndrome, because of a mutation, are insensitive to growth hormone. As a result, they produce much less IGF-1 (insulin-like growth factor) than normal. When given synthetic IGF, they may develop acne; when the dose is reduced, the acne goes away. The authors say: "The findings suggest that an interaction between IGF-1 and androgens is necessary for the development of acne." This is great progress because people with Laron Syndrome are different from everyone else in just one tiny way (albeit a tiny way with many consequences).

The first important step in understanding the cause of acne was [3]finding two ("primitive") groups of people with no acne. This suggested that acne has an environmental cause. There were thousands of differences between the lifestyle of those people and "modern" people, so this was just a start. It was hard to know which differences mattered. The Laron Syndrome finding is consistent with the earlier result (no acne in two groups of "primitive" people) because a "Western diet with [its] high intake of hyperglycemic carbohydrates and insulinotropic dairy over-stimulates IIS" (insulin-like/insulin signaling).

This view predicts that if you replace hyperglycemic foods with foods lower in glycemic index acne should be reduced. [4]This study did that and, indeed, acne decreased (compared to a control group) after ten weeks. The study ended after ten weeks. The patient who reduced his/her glycemic index the most saw the greatest decrease in acne. [5]A second study found the same thing: a low-glycemic-index diet reduced acne. It lasted twelve weeks. With longer follow-up, there might have been even more improvement.

Thanks to Paul Nash.



1. <http://www.ncbi.nlm.nih.gov/pubmed/21054577>
2. [http://en.wikipedia.org/wiki/Laron\\_syndrome](http://en.wikipedia.org/wiki/Laron_syndrome)
3. <http://www.ncbi.nlm.nih.gov/pubmed/12472346?dopt=Abstract>
4. <http://www.medicaljournals.se/acta/content/?doi=10.2340/00015555-1346&html=1>
5. <http://ajcn.nutrition.org/content/86/1/107.full#ref-1>

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Tuck (2013-02-24 06:10:41)

I'll buy that carbs cause acne (there's a book by Loren Cordain called "The Paleo Diet for Acne", you know...), but I find the dairy hypothesis less compelling. The smallpox vaccine was discovered because milkmaids had beautiful skin; they lacked the pockmarks that can result from either smallpox or bad acne. Would they still have had smooth skin if dairy (which, one imagines, they weren't avoiding) caused acne also? Lots of interesting observations from this thread over at PaleoHacks, including one person who breaks out from pasteurized milk, but not from raw milk. "Anyone got rid of acne on paleo diet without going low-carb? <http://paleohacks.com/questions/117824/anyone-got-rid-of-acne-on-paleo-diet-without-going-low-carb>

Alex (2013-02-24 06:58:42)

The high-glycemic link with acne squares with my experience. I eat paleo and have no acne. After a couple of times when I decided to just eat what was served at friend's house at dinner I had acne the next day, in addition to the unhappy digestion. One particular dinner resulted in three pimples, which lasted for a few days. I can usually manage at restaurants, but I've taken to eating a full meal before I go to dinner at my friends' homes.

Theragingwalrus (2013-02-24 07:56:10)

@Tuck Yes Cordain really ties it together in his book on acne. Supposedly the mechanism for carbs is insulin->increased igf-1 by liver->increased anti-apoptotic proteins -> tight junctions not disassembled properly -> large skin cell aggregates -> clogged up pores. The raw milk could explain the lack of acne in milkmaids. A question that still need to be answered afaiak is: is comedone formation purely dependent on these sticky skin cells, or is there immune involvement in this step as well?

Mehmet (2013-02-24 11:53:55)

Considering that people with Laron syndrome also do not get cancer, it would be interesting to look at the correlation between acne and cancer incidence for the whole population. Seth: Excellent idea.

Vic (2013-02-24 15:47:01)

I believe I've seen a number of studies in the past showing an inverse association between acne and cardiovascular disease

Paul N (2013-02-26 08:54:25)

@ Tuck, A bit of googling on dairy and acne finds a few articles written on this very subject, like this one [1]Acne, dairy, and cancer Seems that acne often an indicator for breast and prostate cancers, which are hormone responding glands. As for the milkmaids, we can speculate on that. One guess would be that they often came from families with a long history of dairying, so they might be naturally more tolerant. In any case, dairy foods, and especially the whey portion of dairy, is highly insulinemic, which is why body builders love it so much. Body builders are also prone to acne...

1. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2715202/>

Sean (2013-02-27 10:45:09)

Interesting stuff. A key to all of this is that there are many types of acne. Folks are always looking for one cause. Though most are likely hormonal. Not determined the cause of mine yet, but t's not affected by glycemic index, carbs or milk. It clears up a ton with a lot of sun exposure. 2 months working in San Antonio had it looking better (though still there). Within a week back in London and I had cysts on my neck again. Same thing each time I go to a sunny location. The other big factor for me is digestion. No gallbladder means slower "movements" which I assume means poor removal of toxins. Thanks so much for continuing to focus on acne research. Acne has a huge impact on mental stress and social disorders. Seth: You're welcome. In your case, what's the connection with digestion? You mean that your acne got worse when your gallbladder was removed? Or what? Could you provide details?

Mark (2013-03-01 20:18:40)

I think you are headed in the wrong direction as far as treating acne is concerned. New research has shown that acne patients have low glutathione levels and high interleukin-8 levels. Taking action to correct that can improve not only your acne but your cognition amongst other things. It is not a quick fix—it takes a few weeks to notice results. If you have acne and want to find out if you have low antioxidant function, get a spectracell micronutrient test done. Seth: [1]Here is a study about acne and low glutathione levels. I can't find anything about what happens when the low glutathione levels are raised. Do you know of such a study?

1. <http://www.ncbi.nlm.nih.gov/pubmed/21896138>

## **Bitter Pill: Why Medical Costs Are Killing Us by Steven Brill (2013-02-25 05:00)**

Steven Brill has a great article in Time called [1]Bitter Pill: Why Medical Costs are Killing Us. I found it nauseating and terrifying – and I have health insurance. It is nauseating that helpless sick people are billed huge amounts of money that bear little relation to costs. It is terrifying that our government has failed to protect us from this.

Brill's article is about the details of health care costs in America, especially hospital costs. Markups are huge. One example is a test strip for measuring blood sugar. The patient was charged \$18 for each strip. On Amazon, the strips cost \$0.50 each. The patient had no choice and was not told the wildly-inflated price. Brill gives many examples of similar markups. Hospitals, including nonprofit hospitals, are large prosperous businesses with very well paid CEO's (e.g., \$1 million/year). Yet Americans pay far more for health care than people in any other country and, judged by life expectancy, get worse results than people in about 40 countries. Brill's article begins to explain the discrepancy.

Asked to explain their prices, many hospitals refused. One of them, MD Andersen in Houston, gave a statement that Brill quotes in part:

The issues related to health care finance are complex for patients, health care providers, payers and government entities alike . . . MD Anderson's clinical billing and collection practices are similar to those of other major hospitals and academic medical centers.

Judging from the widespread refusals to explain and answers like this ("everyone does it"), the prices are indefensible.

The term stagnation – America is in the grip of profound stagnation – may be misleading because it makes it sound like things are staying the same. People point to a lack of increase in the median income over the last 30 years as indicating "stagnation". Beneath stagnation is problems stacking up unsolved. (When they are solved, spread of the solutions produces an increase in income.) The problems aren't staying the same: They're getting worse. Health care

costs are a good example. Health care costs have gone up faster than inflation for a long time, with plenty of signs that the American excess (the difference between what Americans pay and what everyone else pays) is completely wasted. (Or worse, given the many bad effects of drugs, surgery, and other high-tech medicine.) The American excess isn't trivial, so median income, adjusted for it, has been going down for a long time, over the same period of time that median income in almost every other country has gone up. Quite a comment on the quality of our government.

As Brill says, the health care debate has been about who will pay? The question are prices too high? has been ignored. [2]Jon Stewart said, "This should be a Silent Spring moment."

1. <http://healthland.time.com/2013/02/20/bitter-pill-why-medical-bills-are-killing-us/>

2. <http://www.thedailyshow.com/watch/thu-february-21-2013/exclusive---steven-brill-extended-interview-pt--2>

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Tuck (2013-02-25 05:57:39)

A huge part of the problem is that hospitals are not subject to the market in the way most other businesses are. During WWII, the Feds set up a regime that made health insurance tax deductible if bought by the employer for the employee. Without going into why that happened, that is the regime health care has been provided under for most people ever since. What that means is that the market for health care bought directly for the end-user is tiny. Hospitals and health insurers don't really cater to it, which is why individual health insurance is difficult to acquire, and hospitals don't provide competitive retail pricing. The fact that this is the case is demonstrated by the competitive retail market for medical procedures that are not covered by health insurance: elective procedures like Lasik or plastic surgery. These procedures have transparent, up-front pricing, use technology to control costs, and have seen prices decline as the procedures become more efficient. If all healthcare behaved this way, we would have a much smaller crisis, if we had one at all. So long as the end-user is discouraged from directly purchasing the product, the market will be dysfunctional. Unfortunately with a single-payer model, things get worse, as one can see in the United Kingdom. At that point, the end-user become a cost, not the customer, which is a large part of the reason why the NHS provides such horrific "care": participating in mass euthanasia. Of course the NY Times' political bias prevents them from making this argument. It's not a new one, it's been made for decades. Our elected officials seems to like the concentration of power under the current system, where, effectively, they're the end-user, not the patient. They get all the attention, and the end-user gets screwed. (This is not to say that using a market makes things perfect. The medical profession, like any other human enterprise, is subject to corruption, but market discipline is a much more effective check on that than is regulation.) Seth: "With a single-payer system, things get worse, as seen in the United Kingdom." People in the United Kingdom live longer than Americans (80.4 vs 78.8 yrs) and pay much less for health care. There are far fewer personal bankruptcies in the UK due to health care costs than in the US. So it is far from clear that things are worse there. Do other data support your idea that a single-payer system would make things worse?

BenSix (2013-02-25 07:02:03)

[1]Of relevance, and possible interest. ...*which is a large part of the reason why the NHS provides such horrific "care": participating in mass euthanasia.* The NHS [2]can be appalling - there is no disputing that. But I would be interested to see the measures by which it is extraordinarily bad.

1. <http://www.medpagetoday.com/Geriatrics/Dementia/37202>

2. <http://www.midstaffspublicinquiry.com/home>

Brian (2013-02-25 07:45:58)

How much of the difference is due to the US' abnormally high infant mortality or other causes?

Alex (2013-02-25 08:48:27)

Tuck, I suspect you didn't read the article. since you refer to "the NY Times' political bias" and the article appeared in Time magazine. You make a good point about the far more efficient and transparent pricing of procedures like plastic surgery that are paid for by patients. However the real money pits of medical care are not optional single procedures but events like cancer or strokes, where the costs are open-ended and outcomes uncertain. I can price a tummy tuck and decide yay or nay, but colon cancer doesn't work that way. It's hard to envision a free-market solution when the buyer has no choice on whether to buy. That's not a free market. "Unfortunately with a single-payer model, things get worse, as one can see in the United Kingdom." Worse based on what? Outcomes, costs? Certainly not by any data I've ever seen. Here, with pictures: <http://www.piiie.com/blogs/realtime/?p=516>. "NHS provides such horrific 'care': participating in mass euthanasia." Any evidence on this? We do have death panels in the US: they are run every day at hospitals' accounting offices. Read the first page of Brill's article so see how MD Anderson's death panels operate.

Steve (2013-02-25 08:52:05)

Do you know this blog, Cassandra Does Tokyo, by an investment banker specializing in Japanese finance? The blogger has an interesting post on the cost of medical procedures in France, and how transparent the pricing is there. Well worth a read: <http://nihoncassandra.blogspot.ca/2011/07/price-isummmerrrr-wrong-part-2.html>

dearieme (2013-02-25 10:07:36)

I decided long ago not to be so insolent as to advise Americans how to improve their medical system (let's pretend that "system" is the right word) save to say "don't copy the NHS". <http://www.independent.co.uk/life-style/health-and-families/features/a-daughters-tribute-to-the-nhs-by-now-i-am-convinced-it-is-the-nearest-we-get-to-a-benevolent-deity-its-free-care-for-american-immigrants-for-absent-parents-for-the-only-father-i-will-ever-have-8507647.html>

Scott P. (2013-02-25 12:04:29)

It is my understanding that fees not recovered are tax deductible so a hospital can charge something outrageous, be unable to collect on a large portion of it and then write it off. I believe there a place for government in health care but Obamacare is a fiasco of the first order.

Daniel Lemire (2013-02-25 13:12:59)

I was told that part of the problem in the US is that many people do not actually pay (or are not insured) so that many hospitals have to take a loss on a fraction of the patients. If so, this makes overcharging a necessity. Disclaimer: I am Canadian.

Tom (2013-02-25 14:57:45)

off-topic, but interesting read: Pennsylvania farmer drops weight rapidly on raw milk + fermented foods diet: <http://www.yourfamilycow.com/fresh-thoughts/i-really-shouldnt-tell-you-this>

dearieme (2013-02-25 15:04:52)

Ahoy, Seth: Spaniards thrive on a Spanish diet. <http://www.forbes.com/sites/larryhusten/2013/02/25/large-trial-shows-cardiovascular-benefits-of-mediterranean-diet/>

SB (2013-02-25 15:58:41)

@Scott A lot (most?) hospitals are not-for-profit, so they don't pay taxes anyway.

libfree (2013-02-25 19:04:37)

@Seth I believe its wrong to make an assumption treating life expectancy as a result of health care. Could getting more and "better" health care reduce life expectancy? Second, personal health practices probably have more to do with life expectancy than our health care system. Also, I would be careful about how much more we spend on health care than other developed nations. For example, doctors pay their way through medical school and then repay their student loans with higher fees in the US. In Europe, their education is paid for and they don't have the resulting student loans. We might be moving expenses into significantly different buckets in different nations Seth: Yes, getting more and supposedly "better" health care could easily

reduce life expectancy. Lots of common treatments have significant (and undisclosed) bad effects. The difference between what Americans and people in other countries pay for health care is so large it couldn't be due to anything as small as the need of American doctors to repay student loans.

Tuck (2013-02-26 10:12:54)

"Do other data support your idea that a single-payer system would make things worse?" For starters, measuring health care outcomes by life expectancy is a bad way to judge: non-health-care-related factors like murder rates and car fatalities play a large role in the difference between countries, and don't reflect health care quality. Second, measuring health-care outcomes across country is fraught with error: "For example, babies who are not viable and who die quickly after birth are more likely to be classified as stillbirths in countries outside the United States, especially in Japan, Sweden, Norway, Ireland, the Netherlands, and France. This is especially likely for babies who die before their birth is legally registered.[9] In the United States, however, nonviable births are often recorded as live births, making the US infant mortality rate appear misleadingly high. In a detailed study of medical records and birth and death certificates in Philadelphia, Gibson and colleagues found that infant mortality had been overstated by 40 percent, merely as a result of these nonviable births that were recorded as live births.[10]" "US health care: A reality check on cross-country comparisons" <http://www.aei.org/outlook/health/global-health/us-health-care-a-reality-check-on-cross-country-comparisons/> I suspect that it's near impossible to do, especially since there's such a large political component to any analysis. Third, if you want to look at actual health-care quality outcomes, rather than potentially-misleading epidemiology, the US system starts looking pretty good compared to single-payer systems: "The United States spends more on cancer care than European countries. However, a study published in the newly released April issue of Health Affairs suggests that investment also generates a greater "value" for US patients, who typically live nearly two years longer than their European counterparts." [http://www.healthaffairs.org/press/2012\\_04\\_10.php](http://www.healthaffairs.org/press/2012_04_10.php) "Cancer survival is known to vary between the regions of the USA covered by the US National Cancer Institute's (NCI) Surveillance, Epidemiology and End Results (SEER) Program,<sup>21</sup> but the range of survival in Europe is much wider. Furthermore, survival from breast cancer during 1985-94 was higher in each of the nine SEER areas than in any of the 22 countries participating in the European study of cancer survival (EUROCARE).<sup>7,22</sup>" "Cancer survival in five continents: a worldwide population-based study (CONCORD)" <http://healthcare.procon.org/sourcefiles/CONCORDCancerSurvivalStudy.pdf> Again, there are many confounders: for instance, cancer screening is much more aggressive in the US than in Europe, which may affect time to survival, but doesn't speak to the poor quality of US healthcare. Fourth, the only other place where I've ever heard of horrible care like this: "There are around 450,000 deaths in Britain each year of people who are in hospital or under NHS care. Around 29 per cent - 130,000 - are of patients who were on the LCP [euphemism for euthanasia]. "Professor Pulicino claimed that far too often elderly patients who could live longer are placed on the LCP and it had now become an 'assisted death pathway rather than a care pathway'" "Top doctor's chilling claim: The NHS kills off 130,000 elderly patients every year" <http://www.dailymail.co.uk/news/article-2161869/Top-doctors-chilling-claim-The-NHS-kills-130-000-elderly-patients-year.html> "Between 400 and 1,200 patients are estimated to have died needlessly at Stafford Hospital in central England between January 2005 and March 2009 in one of the worst scandals to hit the NHS since it was founded in 1948." "NHS ravaged by hospital scandal" <http://uk.reuters.com/article/2013/02/07/uk-britain-hospital-idUKBRE9150RV20130207> "More than 100 hospitals may face tough new inspections in the wake of the report into the Mid Staffordshire scandal. "The Care Quality Commission has concerns about an alarming 20 per cent of hospitals in England and plans to carry out spot checks into their care of patients. "The Sunday Mirror can reveal the healthcare watchdog is drawing up a hit list of hospitals and, in many cases, experts will probe alleged neglect which mirrors the shocking breaches that led to the needless deaths of 1,200 people at Stafford Hospital between 2005 and 2009...." "Bosses are worried about standards at 20 % of hospitals" <http://www.mirror.co.uk/news/uk-news/stafford-hospital-scandal-more-than-100-1648044> ...Is in the US Veterans Administration Hospitals, also a single-payer system. (You know, where \*One Flew Over The Cuckoo's Nest\* took place?) "The waits in California and elsewhere are so bad that thousands of veterans are dying before their claims for physical and mental injuries are approved. In 2011-12, the VA paid \$437 million in posthumous benefits to families of nearly 19,500 veterans, up from just \$8 million three years earlier, the Center for Investigative Reporting says." <http://www.sacbee.com/2013/02/20/5202015/vets-wait-and-wait-for-va-to-fix.htm> | #storylink=cpy Seth: Thanks for the information. That makes clearer what the case against one instance of single-payer (England) is. As for the cross-country comparisons, I agree they can be improved. I look forward to learning what better comparisons show. I especially look forward to cross-national surveys of how people feel about their health, especially older people (when health care effects should be larger). Death is one endpoint; how

you feel while alive is another. For any measure of health (let's call it X), it can always be argued that X depends on lots of other stuff besides health care, just as you can point to flaws in any research. That's not interesting, at least to me. What I find interesting is better comparisons. That provides a test of the idea that the "lots of other stuff" make a big difference.

andrew (2013-02-26 10:47:14)

I've read the differences in life expectancy are mainly due to violent crime and obesity which are two problems the health care system can do little to change. What about the famous Rand study that finds no link between healthcare consumption and health outcomes? [http://www.overcomingbias.com/2007/05/rand\\_health\\_ins.html](http://www.overcomingbias.com/2007/05/rand_health_ins.html) Using Seth terminology this is a gatekeeper problem. The prices and costs that we complain about are a result of that. We cannot change the prices and expect better outcomes. The main issues with Gatekeepers is they inhibit innovation.

Tuck (2013-02-26 10:51:50)

"...and obesity which are two problems the health care system can do little to change." Arguably the obesity epidemic is a result of the health-care system, but that's a whole 'nother discussion. :)

rcm092 (2013-02-26 13:09:58)

What's not discussed is the enormous amounts of money the American Hospital Association and big pharma spend on lobbying congress to keep the game going. In addition, Congress tells us that Medicare is unsustainable and must be cut to make it affordable. Obviously, that's not true. Medicare would be fine if we focused our efforts on reducing the cost of care - like allowing Medicare to negotiate prescription drug prices. The American people are being taken for fools just like when they were flushed down the drain by Wall Street. Seth: Brill mentions the enormous amounts of money spent on lobbying by health care advocates. It's a small part of his piece, however, and I agree with you that it is very important.

Tuck (2013-02-26 16:20:06)

"That makes clearer what the case against one instance of single-payer (England) is." As a more general point of the economic problems with a single-payer provider of any service, look at the US Postal Service. It loses a ton of money and is hugely inefficient in the one area where it has a monopoly: letter delivery. Logically, but for human nature, that should be hugely profitable. It's much more efficient in package delivery, where it has to compete against two brutally-efficient competitors, UPS and FedEx. Of course that's because the consumers can pick and choose. USPS knows that it either has to match UPS and FedEx or exit the business. It can be dreadful in letter delivery, as there's no choice. Seth: US Post Office rates are set by Congress. Perhaps the rates are too low? What about the [1]2006 Postal Accountability Act? Maybe that was a mistake? Consider other examples. The US has a single currency now. Most people think that is better than when there were multiple currencies (and therefore more choice of currency provider). In the US, almost all libraries are government-run. Is the library system doing a bad job? What about the FAA? Airlines have no choice. Is it doing a bad job?

1. [http://en.wikipedia.org/wiki/Postal\\_Regulatory\\_Commission#Changes\\_under\\_the\\_Postal\\_Accountability\\_and\\_Enhancement\\_Act\\_of\\_2006\\_-\\_H.R.\\_6407](http://en.wikipedia.org/wiki/Postal_Regulatory_Commission#Changes_under_the_Postal_Accountability_and_Enhancement_Act_of_2006_-_H.R._6407)

Paul N (2013-02-27 00:12:54)

While we are at the game of comparing health care systems, Hong Kong's government system [1]consumes just 3 % of GDP (another 3 % for private) and the HK citizens are amongst the healthiest in the world. I think one of the real problems with the US system (speaking as a Canadian) is tying it to employment. It means if a business wants to take on an employee, it must also, one way or another, take on their health care. This is a huge deterrent to hiring part time employees, amongst other things. A (well run) government system frees up people, and their employers, from worrying about that, leaving them more time and energy for innovation. The trick is to create any well run government system, of course... Seth: And HK citizens have few personal bankruptcies due to health care costs.

1. <http://www.newworldeconomics.com/archives/2009/092509.html>

nihoncassandra (2013-03-01 03:42:14)

Tuck exemplifies an individual with a fine grasp of political ideology, but little understanding of the different systems of Healthcare and their finance. This ignorance is displayed by a failure to comprehend that the NHS is a single-provider system

(run in parallel with an independent private system). It is NOT a single payer as conceived in other, probably better functioning, though slightly more costly systems on the European continent. The hospitals and practitioners respectively are owned by and work for the NHS. Costs are contained by complete vertical integration (which is effectively evidenced by the spend as % of GDP), but with all its attendant political & bureaucratic failures, that often result in sub-standard care, waiting lists, rationing, and lack of convenience. That said, it is the low-cost global provider and by any measure provides the UK with an excellent value proposition. The parallel private system in part benefits from the NHS existence (many providers have both public and private practices), but is far from efficient or cost-effective. France represents the best model of the true single-payer, and uses its advantage. Contrary to Tuck's derision, Libertarians and conservatives should take note and admire it since it combines the political goals of universal coverage, cost containment, with the best of the market ideas such as competitive independent service providers (less so in hospitals), complete freedom of consumer choice, and freedom of providers to price accordingly, bounded by the pricing discipline and transparency instilled by a single payer. By contrast, even though one pays taxes for use of the NHS, if a patient "goes private", there is no "voucher" or contribution by the NHS to that service, and the patient must foot the entire price untethered by a single-payer. In France, like school vouchers promoted by conservatives and libertarians in the US, one visits a Doctor of choice. The single-payer reimburses a designated amount (like the Canadian usual & customary). If that doctor is the top heart surgeon, he will likely charge a premium, and the patient is free to pay the difference or visit a more economical provider. In practice, most doctors charge the reimbursement rate because most French people cannot afford anything else. And eminent doctors often do pro-bono work where the case is clinically interesting or unusual need. The result is a pricing discipline that prevents absurdities like those cited in Brill's Time article and this is a huge step in the right direction. The same people like Tuck who hyperventilate about such pragmatic hybrid (but ultimately market-based solutions) funnily enough are happy with regulated monopoly provision of public services in other areas like municipal water, electric and gas utilities, Police, etc. precisely because a regulated monopoly in some economic circumstance produces far better outcomes for almost everyone (save the few institutions that are gorging at the trough of the current US "system"). Seth: Very helpful, thanks.

jon (2013-03-02 00:04:08)

Seth, This is the result of highly regulated "monopolies" granted by the state. If you are interested I can dig a lengthy paper on the subject written back in the 90s describing many of the problems. It would be nice to have a truly free market, then we would see the prices going down, not up. Dr Mary J. Ruwart wrote a good book called "Healing Our World: In an Age of Aggression." Which goes over how using the initiation of force (government granted monopolies, like licensing, etc) cause more harm than the good they were initially created to do. I've read "Silent Spring." In the book the author shows how the most egregious polluter of the environment was the government itself (as it continues to be today). It was a great book. The author never advocated the outright banning of DDT. She only asked that it be used responsibly and very little of it be used, if any at all. I think she got it wrong though when she did propose more aggression to solve problems that were caused by the initiation of force to begin with. Peace and love is the path, not more hate and harm. I know that sounds cheesy but I think it is the truth.

Bbcw03 (2013-03-06 22:18:27)

How do you think this problem can be solved? Seth: I don't know. Maybe the book Catastrophic Care has some good ideas.

Jeevan D (2013-03-18 01:29:04)

I am a British citizen & yes there are problems with the NHS (even more so now Cameron is tearing it apart) but let us not be fools, GDP & population is about 5x the difference so it is easy to compare, the UK spends 9.8 % of GDP on healthcare but the US spends 16.8 % (I imagine to provide decent coverage for all would be well beyond 20 %), so the problem isn't the NHS being rubbish, it is underfunded, even if its budget was increased by 10-25 % we would still be spending 25 % less than the US does but our NHS would improve so much. I also want to make it clear, many right wingers say you wouldn't be allowed to pick your own GP, my family picked mine when I was born, and when they retired they picked a new GP, and then a few years ago I picked my own GP

justine cook (2013-03-22 07:21:49)

will you please sign my petition Hi, Time Magazine recently ran an article 'why medical bills are killing us' and included the story of the Recchi's who MD Anderson charged over 83,000 for cancer treatment MD Anderson is supposed to be a non profit

but made a 26 percent profit last year and the head of MD Anderson made more than 2 million dollars last year. I think they should reimburse the Recchi's 26 % of the 83,000 and apologize to them for not giving them assistance or treating them with compassion at the time they most needed it. I do not know the Recchi's but I was absolutely furious when I read this. this type of rip off by the medical community has got to stop. That's why I created a petition to MD Anderson Cancer Treatment Center, Manager, Asm MD Anderson. Will you sign this petition? Click here: [http://signon.org/sign/md-anderson-reimburse?source=c.em.mt & \\_by=857231](http://signon.org/sign/md-anderson-reimburse?source=c.em.mt & _by=857231) Thanks!

## **Consistent- versus Inconsistent-Handed Predicts Better than Right- versus Left-Handed (2013-02-26 05:00)**

At Berkeley, [1]Andrew Gelman and I taught a freshman seminar about left-handedness. Half the students were left-handed. We did two fascinating studies with them that found that left-handers tend to have left-handed friends. I kick myself for not publishing those results, which I bring up in conversation again and again.

After the class ended I got a call from a journalist who was writing an article about ridiculous classes. I told him the left-handedness class had value as a way of introducing methodological issues but all I cared about was that his article be accurate. He decided not to include our class in his examples.

Stephen Christman, who got his Ph.D. from Berkeley (and did quirky interesting stuff even as a graduate student), and two colleagues have now published [2]a paper that is a considerable step forward in the understanding of handedness. They argue that what really matters is not direction of handedness but the consistency of it. The terms left-handed and right-handed hide a confounding. Right-handers almost all have very consistent handedness (they do everything with the right hand). In contrast, left-handers much more often have inconsistent handedness: they do some things with the left hand, some with the right. I am a good example. I write with my right hand, bat and throw left-handed, play tennis left-handed, ping-pong right-handed. In fact, I am right-wristed and left-armed. When something involves wrist movement (writing, ping-pong) I use my right hand. When something involves arm movement (batting, throwing a ball, tennis), I use my left hand. Right-handers are much more similar to each other than left-handers.

Christman and his co-authors point to two things: 1. When you can get enough subjects to unconfound the two variables, it turns out that consistency of handedness is what makes the difference. Consistent left-handers resemble consistent right-handers. 2. Consistency of handedness predicts many things. Inconsistent-handers are less authoritarian than consistent-handers. They show more of a placebo effect. They have better memory for paragraphs. And on and on – about 20 differences. It isn't easy to say what all these differences have in common but maybe inconsistent-handers are more flexible in their beliefs. (Which would explain the friendship findings in our handedness class.)

I think about these differences as another example of how every economy needs diversity and our brains have been shaped to provide it, one idea underlying [3]my theory of human evolution. Presidents of the United States are left-handed much more than the general population. For example, Obama is left-handed. The difference between Presidents and everyone else is overwhelming and must mean something. Yet left-handers die younger. I would say that in any group of people you need a certain fraction, not necessarily large, to be open-minded and realistic. That describes inconsistent-handers (who are usually left-handed). These people make good leaders because they will respond to changing conditions. People who are not open-minded make good followers. Just as important as realism is cooperation, ability to work together toward a common goal.



1. <http://www.stat.columbia.edu/~gelman/>
2. <http://www.readcube.com/articles/10.3389/fpsyg.2013.00009>
3. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

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dearieme (2013-02-26 05:49:15)

My mother told me that I was left-handed as a tiny child and seemed to have swapped to right-handedness by copying the rest of the family. Does that happen or was my mother mistaken? A counterargument is that falling in with people around me is not one of my most conspicuous traits. A supporting argument is that as a soccer player I was noticeably more "two footed" than most of my teammates - so much so that I was usually played on the left. Seth: maybe there is also "inflexible handed" and "flexible handed". You are flexible handed. Your story about changing the hand you write with suggests testing everyone to see how good they are at writing with the less-usual hand (e.g., right handers write with their left hand). That would be good research. Would not depend on self-report (e.g., "which foot do you prefer to kick with?").

CC (2013-02-26 06:09:02)

Left-handers die younger? Then why didn't my life insurance company ask me if I was left-handed? Seriously, I thought this was urban legend that was debunked long ago (people once claimed a 7 year difference in life expectancy, which is crazy). But maybe there's new information I don't know about? Seth: I looked around for new evidence about the longevity difference. I couldn't find any. As far as I could tell, several studies support the idea that left-handers die younger, and a few studies do not, in the sense of no significant difference (either way). Absence of a significant effect is weak evidence.

Greg (2013-02-26 06:40:46)

This is very interesting. I've always had trouble specifying which is my dominant hand. I do things such as writing and brushing my teeth with my left hand, but when I was learning to play golf, left-handed clubs didn't work out. I also use my right hand for tennis and ping pong. Saying that I'm inconsistently handed seems much more accurate.

Tom Passin (2013-02-26 07:30:12)

My handedness is exactly the same as Seth has described. I think of it as being lefty for forehand actions and righty for backhand ones, but the wrist-arm breakdown may be closer to the mark. I'm not that good a leader, though.

Stuart Buck (2013-02-26 15:01:11)

I'm left-handed for eating and writing, but right-handed for all sports.

John Tarantino (2013-02-26 15:26:43)

Very interesting. Like some of the earlier posters I've never known how to properly specify which hand is dominant. I write with my right, play golf, lacrosse and bat with my left, snowboard goofy (typical for lefties), play ping pong right, etc. Never occurred to me that there might be a difference in handedness between arm and wrist as Seth writes. I'm also clearly right eye dominant which may play into things.

Paul Winter (2013-02-26 18:47:51)

I am right-handed except for two handed sports. In cricket I bowl right-handed, & bat left-handed I shoot & play golf left-handed. This is because my left eye is my master eye.

Kudzu Bob (2013-02-27 16:12:16)

As an inconsistent-hander, I have always snickered at those detective stories that include a scene in which a left-handed potential suspect is ruled out because some crime was obviously committed by a right-hander. I wonder how much this particular misconception has affected real police work.

Baduin (2013-02-28 01:15:02)

I would suggest a book by Iain McGilchrist, *The Master and His Emissary*, about the differences between brain hemispheres. His theory seems to agree with your findings. <http://www.iainmcgilchrist.com/>

### Assorted Links (2013-02-27 05:00)

- [1]Bone broths may have too much lead. "Broth made from skin and cartilage taken off the bone once the chicken had been cooked with the bones in situ and chicken-bone broth were both found to have markedly high lead concentrations."
- [2]Upcoming discussion of the work of Renata Adler (in New York City)
- [3]Ben Casnocha on Aaron Swartz
- [4]The silence of doctors about bad medicine. "The silence of other doctors apparently gave company executives the upper hand; in meetings with Dr. Nargol, they said that he seemed to be the only doctor having trouble."
- [5]Dietitians for Professional Integrity. Some dietitians are fed up with their professional organization's links to junk food makers, such as Coca-Cola

1. <http://www.sciencedirect.com/science/article/pii/S0306987713000133>

2. <http://www.92y.org/Tribeca/Event/L%E2%80%99enfance-nue-Screening.aspx>

3. <http://casnocha.com/2013/01/aaron-swartz-he-inspired-me-to-think-in-public.html>

4. <http://www.nytimes.com/2013/02/17/sunday-review/the-hip-replacement-case-shows-why-doctors-often-remain-silent.html>

5. <https://www.facebook.com/DietitiansForProfessionalIntegrity>

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dearieme (2013-02-27 12:30:01)

"A small, blinded, controlled study of lead concentrations in three different types of organic chicken broth ...": well, 'organic' - whatcha expect?

Alex (2013-03-06 09:32:50)

Chris Kresser countered that the amount of lead in the broth with the highest lead content, 9.5 parts per billion, was still below the limit for lead in drinking water, 15 parts per billion. <http://chriskresser.com/bone-broth-and-lead-toxicity-should-you-be-concerned>

### Teaching With or Against Human Diversity (2013-02-28 05:00)

Mark Edmundson, a professor of English at the University of Virginia, defended traditional lectures in [1]a New York Times op-ed titled "The trouble with online education". He described how he teaches. When he teaches, he fails to

1. Pay attention to what students want to learn.

2. Treat different students differently (beyond giving them different grades).

[2]A few weeks ago, I described how doing these two things made teaching much easier. It's like swimming with or against the current. You can take advantage of human diversity (my approach) or you can ignore it (Edmundson's approach), which means fighting against it.

1. <http://www.nytimes.com/2012/07/20/opinion/the-trouble-with-online-education.html>

2. <http://blog.sethroberts.net/2013/01/26/my-ideas-about-teaching-put-into-practice/>

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Scott (2013-02-28 06:13:43)

Seth, How can we translate your thinking about diversity in teaching to how managers guide people to get work done in the work place - e.g., flexible work schedules or working from home. Seth: There is a book called First Break All the Rules that discusses exactly this point. I blogged about it here: <http://blog.sethroberts.net/2007/05/12/my-theory-of-human-evolution-business-book-edition/>. I can't remember what it says. I have never been a manager, but I guess I would meet with each employee and start by saying something like this: "I have no interest in making you like everyone else. All I care about is that you get your work done and help your co-workers get their work done. How do you think you can best accomplish that?" Workers in many jobs are much more interdependent than students so I suppose if someone works from home they would need to be always available for phone calls during working hours except during lunch hour.

## 8.3 March

### Assorted Links (2013-03-01 05:00)

- [1]An Epidemic of Absence (book about allergies and autism)
- [2]Professor of medicine who studies medical error loses a leg due to medical error. "Despite calls to action by patient advocates and the adoption of safety programs, there is no sign that the numbers of errors, injuries and deaths [due to errors] have improved." Nothing about consequences for the person who made the error that caused him to lose a leg.
- [3]Doubts about spending a huge amount of research money on a single project (brain mapping). Which has yet to produce even one useful result.
- [4]Cancer diagnosis innovation by somebody without a job (a 15-year-old)
- [5]Someone named Rob Rhinehart has greatly reduced the time and money he spends on food by drinking something he thinks contains all essential nutrients. [6]Someone pointed out to him that he needs bacteria, which he doesn't have. (No doubt several types of bacteria are best.) He doesn't realize that Vitamin K has several forms. I suspect he's getting too little omega-3. This reminds me of a man who greatly reduced how much he slept by sleeping 15 minutes every 3 hours. It didn't work out well for him (his creativity vanished and

he became bored and unhappy). In Rhinehart's case, I can't predict what will happen so it's fascinating. When something goes wrong, however, I'll be surprised if he can figure out what caused the problem.

Thanks to Amish Mukharji.

1. <http://www.moisesvm.com/>
2. [http://www.nytimes.com/2013/02/20/opinion/losing-my-leg-to-a-medical-error.html?\\_r=0](http://www.nytimes.com/2013/02/20/opinion/losing-my-leg-to-a-medical-error.html?_r=0)
3. <http://www.theatlanticwire.com/technology/2013/02/why-some-scientists-arent-happy-about-obamas-3-billion-brain-research-plan/62258/>
4. <http://www.forbes.com/sites/johnnosta/2013/02/01/cancer-innovation-and-a-boy-named-jack/>
5. <http://robrhinehart.com/?p=298>
6. <http://robrhinehart.com/?p=424>

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Three Pipe Problem (2013-03-01 06:21:07)

Seth, how could you omit Rhineheart's sublime name for this substance – "soylent". Because it \*becomes\* people, I suppose? Best quote in article: "After a week advertisements for fast food looked repulsive. All I crave is Soylent." Fascinatingly, the conclusion he may be testing here is that Soylent is actually healthier than fast food? Sudden dystopian visions...

David C (2013-03-01 08:11:56)

I'm sure Rhineheart's experiment would make Michael Pollan roll his eyes.

Lemmy Caution (2013-03-01 16:38:47)

In the book soylent, stood for soy + lentils.

Adam (2013-03-01 16:44:15)

Actually there are quite a few people who have dramatically reduced the amount of sleep they get & report positive results after a difficult adjustment period; google: "polyphasic sleep". Seth: I can't find any examples where someone maintained it for a year or more. For a few weeks, sure. The Wikipedia article on the subject mentions Buckminster Fuller but I don't trust him.

Adam (2013-03-02 06:58:25)

Steve Pavlina (1st page of Google results) claims he sustained it for about 5 months. There was another quite detailed account of a woman who sustained it for a long time, maybe a year? before her life situation forced her to go back to a siesta style sleep pattern (long sleep at night, nap in the afternoon). Seth: to me, 5 months = unsustainable. You'd think that something that increased your free time by 100 % would do better than that.

ken (2013-03-02 20:07:52)

The Rhineheart link seems less like self-experimentation and more like marketing. He explores the positive effects in detail but glosses over the negative effects with oblique descriptors. Seth: You might have something there. However, I don't know what he's marketing. What is he glossing over? I didn't notice that.

Will (2013-03-15 02:38:30)

This guy slept polyphasicly for over a year: <http://akshatrathi.wordpress.com/2010/05/30/my-tryst-with-polyphasic-sleeping/> I only managed 4 weeks before it caught up with me. I think overall that melatonin is too important to mess around with, regardless of whether reduced sleep schedules are feasible. Rhineheart really doesn't know what he is doing. He hasn't taken into account nutrient interactions affecting bioavailability either. He's bothering with adding things like ginkgo biloba whilst

ignoring choline, creatine, MCTs etc.

## How to Encourage Personal Science? (2013-03-02 05:00)

I wonder how to encourage personal science (= science done to help yourself or a loved one, usually for health reasons). Please respond in the comments or by emailing me.

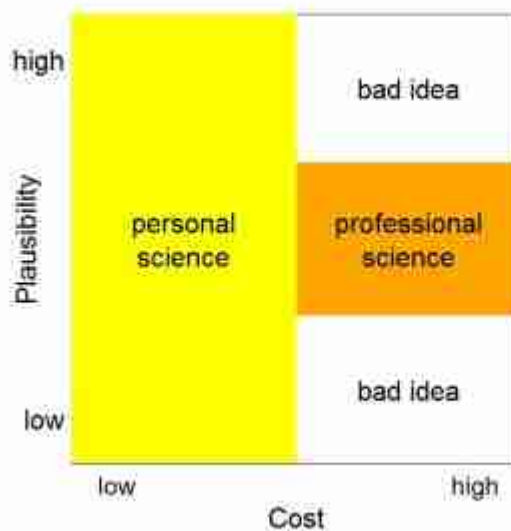
An obvious example of personal science is self-measurement (blood tests, acne, sleep, mood, whatever) done to improve what you're measuring. Science is more than data collection and the data need not come from you. You might study blogs and forums or the scientific literature to get ideas. Self-measurement and data analysis by non-professionals is much easier than ever before. Other people's experience and the scientific literature are much more available than ever before. This makes personal science is far more promising than ever before.

Personal science has great promise for reasons that aren't obvious. It seems to be a balancing act: Personal science has strengths and weakness, professional science has strengths and weaknesses. I can say that personal scientists can do research much faster than professionals and are less burdened with conflicts of interest (personal scientists care only about finding a solution; professionals care about other things, including publication, grants, prizes, respect, and so on). A professional scientist might reply that professional scientists have more training and support. History overwhelming favors professional science – at least until you realize that Galileo, Darwin, Mendel, and Wegener (continental drift) were not professional scientists. (Galileo was a math professor.) There is very little personal science of any importance.

These arguments (balancing act, examination of history) miss something important. In a way, it isn't a balancing act. Professional science and personal science do different things. In some ways history supports personal science. Let me give an example. I believe my most important discovery will turn out to be [1]the effect of morning faces on mood. The basic idea that my findings support is that we have a mood control system that requires seeing faces in the morning to work properly. When the system is working properly, we have a circadian rhythm in mood (happy, eager, serene during the day, unhappy, reluctant, irritable at night). The strangest thing is that if you see faces in the morning (e.g, 7 am) they have no noticeable effect until 6 pm the same day. There is a kind of uncanny valley at work here. If you know little about mood research, this will seem unlikely but possible. If you are an average professional mood researcher, it will seem much worse: can't possibly be true, total nonsense. If you know a lot about depression research, however, you will know that there is considerable supporting research (e.g., in many cases, depression gets better in the evening). It will still seem very unlikely, but not impossible. However, if you're a professional scientist, it doesn't matter what you think. You cannot study it. It is too strange to too many people, including your colleagues. You risk ridicule by studying it. If you're a personal scientist, of course you can study it. You can study anything.

This illustrates a structural problem:

[2]



This graph shows what personal and professional scientists can do. Ideas vary in plausibility from low to high; data gathering (e.g., experiments) varies in cost from low to high. Personal scientists can study ideas of any plausibility, but they have a relatively small budget. Professional scientists can spend much more – in fact, must spend much more. I suppose publishing a cheap experiment would be like wearing cheap clothes. Another limitation of professional scientists is that they can only study ideas of medium plausibility. Ideas of low plausibility (such as my morning faces idea) are "crazy". To take them seriously risks ridicule. Even if you don't care what your colleagues think, there is the additional problem that a test of them is unlikely to pay off. You cannot publish results showing that a low-plausibility idea is wrong. Too obvious. In addition, professional scientists cannot study ideas of high plausibility. Again, the only publishable result would be that your test shows the idea is wrong. That is unlikely to happen. You cannot publish results that show that something that everybody already believes is true.

It is a bad idea for anyone – personal or professional scientist – to spend a lot of resources testing an idea of low or high plausibility. If the idea has low plausibility, the outcome is too likely to be "it's wrong". There are a vast number of low-plausibility ideas. No one can afford to spend a lot of money on one of them. Likewise, it's a bad idea to spend a lot of resources testing an idea of high plausibility because the information value (information/dollar) of the test is likely to be low. If you're going to spend a lot of money, you should do it only when both possible outcomes (true and false) are plausible.

This graph explains why health science has so badly stagnated – every year, the Nobel Prize in Medicine is given for something relatively trivial – and why personal science can make a big difference. Health science has stagnated because it is impossible for professionals to study ideas of low plausibility. Yet every new idea begins with low plausibility. The Shangri-La Diet is an example (Drink sugar water to lose weight? Are you crazy?). We need personal science to find plausible new ideas. We also need personal science at the other extreme (high plausibility) to customize what we know. Everyone has their quirks and differences. No matter how well-established a solution, it needs to be tailored to you in particular – to what you eat, when you work, where you live, and so on. Professional scientists won't do that. My personal science started off with customization. I tested various acne drugs that my dermatologist prescribed. It turned out that one of them didn't work. It worked in general, just not for me. As I did more and more personal science, I started to discover that certain low-plausibility ideas were true. I'd guess that 99.99 % of professional scientists never discover that a low-plausibility idea is true. Whereas I've made several such discoveries.

Professional scientists need personal scientists to come up with new ideas plausible enough to be worth testing. The rest of us need personal scientists for the sake of our health. We need them to find new solutions and customize existing ones.

1. <http://blog.sethroberts.net/morning-faces-therapy-resources/>
2. <http://blog.sethroberts.net/wp-content/uploads/2013/03/2013-02-28-personal-professional-science-in-plausibility-space.jpeg>

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Koanic (2013-03-02 05:29:47)

I'd suggest a combination of the website <http://dontbreakthechain.com/> and a weekly personal experimentation log. A week seems to be an excellent length for a wide variety of personal experimentation. Checkboxes to indicate adherence, notes or rating fields for results in each day. Easily viewable, trackable, and adherable. Let people set the starting day of the week. Plus a listing of experimental results, in an area separate from the calendar.

Alex (2013-03-02 07:09:08)

Good insight. As to your original question, how to encourage personal science, I think the answer lies in graph. Look at the low cost side: begin anywhere. Just pick something and start tracking it. Then pick something you'd like to try. The first trial will likely give you insights and ideas to suggest the next one. Soon you may have a backlog of ideas to try. The interesting results will motivate you to keep going. The road blocks come when you think of personal science as though you were doing professional science. You overthink the situation, as though you were working in the professional science portion of the graph, allocating limited resources, taking risks. Begin anywhere. If you didn't pick the right things to track and test, change what you're doing. Begin again. There are no committees. There is no cost to failure. Seth: I already do plenty of personal science. The question is: what can I do to encourage other people to do it? I don't understand your answer.

Alex (2013-03-02 08:41:33)

No, no, I meant "you" as in the person trying to get started in personal science. You (Seth) already did all of the above. You're the paragon of it, in fact. I think people look at the meaningful results you achieved with self-experimentation and feel like they have to shoot for that right from the start. As you point out, though, this is not a "go big or go home" situation.

Tom (2013-03-02 08:44:30)

Create a reddit where people can chat about what they're tracking? Gamification: A website that gives non-money prizes (badges a la Foursquare) for interesting micro-discoveries and for confirmations by others. They're are a ton of habit-tracking apps. One or more might make personal science easier.

Adam (2013-03-02 17:59:23)

One thing that would encourage more people to self-track would be more reports of the positive effects self-trackers have attained. For example, I've noticed that in many of the QS videos the speaker talks about what they were tracking & how they did it, but don't mention any specific benefit. The recent video by Amelia Greenhall was an exception – the positive benefit she got out of tracking was obvious to me. I would say probably the last 4 videos I watched from QS were interesting, but not useful. If I don't see a clear upside to what they tracked, it doesn't motivate me to track.

Paul N (2013-03-02 22:22:40)

My suggestion is to broaden the definition of "personal science" - it can be many more things that just health related. People can do their own experiments with new ways to make/cook foods, (new combinations, recipes, ferments etc). new ways to grow gardens, new ways to build stuff, tinker with engines etc. Some people learned, by experiment, how to make a microwave smelter. That sounds like an implausible idea, that you certainly couldn't get a research grant to test, but it's cheap and easy enough to try yourself. This could perhaps more accurately be called "amateur science" or "innovations", and these can lead to new discoveries. The difference between just normal "hacking" and "personal science" as I see it, is the application of some amount of scientific method to turn a "hack" into an experiment, or even just making observations of things and noticing what changes. A gardener notices that different combinations of plants do better or worse, and then starts tracking the changes and results. The key elements are the desire to learn by doing, rather than just by reading/watching, and to seek to formulate and test hypotheses. Implicit in this is being willing to be wrong, and question your (and other's) assumptions. That is how I got taught in high school science, though I'm not sure if kids are still being taught like that these days.

Alex Chernavsky (2013-03-03 15:13:52)

There should be some kind of "self-experimentation for dummies" guide written for people who may be intelligent and motivated but who don't have experience in designing experiments or analyzing the resulting data. I think that such a guide would help prevent people from floundering around, getting discouraged, or possibly coming up with spurious results. Seth: I am struck by how often "fear of spurious results" comes up. Whereas I think that if you gather data you are much more likely to improve things than make things worse.

Alex Chernavsky (2013-03-03 15:14:55)

In the comment above, I probably should have written, "personal science" instead of "self-experimentation".

vs (2013-03-04 11:24:07)

Hi Seth, Great post as always. I would imagine a number of your readers found this blog, and in turn personal science, by reading your book *The Shangri-La Diet*. A short book on morning faces and the value of personal science, possibly an ebook culled from your blog, might be a good idea. It would make a compelling story: "Morning Faces: The simple, safe, and revolutionary way to fight depression without prescription drugs and harmful side effects". Blogger James Altucher has written about his experience self publishing free and low cost ebooks and on-demand print books with Amazon. I read his free ebook "How to be the luckiest person alive". It collected a number of his favourite blog posts into a coherent story: <http://www.jamesaltucher.com/2011/05/why-and-how-i-self-published-a-book/>

Anonymous coward (2013-03-05 13:22:17)

Link is dead: <http://blog.sethroberts.net/wp-content/uploads/2013/03/2013-02-28-personal-professional-science-in-plausibility-space.jpeg> "This graph explains why health science has so badly stagnated — every year, the Nobel Prize in Medicine is given for something relatively trivial — and why personal science can make a big difference. Health science has stagnated because it is impossible for professionals to study ideas of low plausibility." I don't know if the Nobel is given for trivial things, but your other points are correct, obvious, and denied by most people. Part of the problem is the eagerness of big business and of those who have funded laboratories to deny entry to startups by increasing government regulation. But even when there are no regulations, biology has bought the meme that amateurs are dangerous and should be crushed. Look at the medical community. Doctors don't want patients to receive their own test results or DNA sequences; they don't want them to be allowed to start their own IVs at home without a nurse; they don't want them to be able to choose their treatment or the medicines they use; they don't want them to take vitamins. It starts by trying to force the patient to pay a doctor every time they take a crap, but it ends with the doctors believing their own propaganda. For instance, Jackson Labs does a background check on anyone trying to buy lab mice, to ensure they're "legitimate" researchers. What exactly is this supposed to prevent? It's not to protect mice. Anybody can go to PetSmart and buy a dozen mice to feed to their pet pythons. All it does is prevent amateurs from doing animal studies, such as seeing how long various genetically-altered Jax mice live. Invitrogen won't even sell you glassware unless you can prove you're "legitimate". Seth: The link works for me now. It failed first time. The explanation of why this could happen is a little complicated, I will skip



it. The Nobel Prize is given for work on problems that are relatively trivial compared to the major sources of death and disability (heart disease, cancer, depression, obesity, diabetes, and so on) – that's what I meant. I agree with what you say. Yes, why in the world does Jackson Labs do a background check? It seems like the main effect of that check is to slow down progress.

### Assorted Links (2013-03-03 05:00)

- [1][2]Japan Korea kimchi dispute
- [3]Dirt restaurant in Tokyo. The dirt is treated to kill bacteria, which I think is a mistake.
- Around 2005, [4]a teenager combined DNA analysis with public data to find his biological father (a good example of personal science – using science to help yourself). Recently some professional scientists [5]showed this wasn't a fluke. The teenager was far ahead of the professionals, in other words. Just as I discovered that my acne was antibiotic-resistant long before professional dermatologists discovered (or at least published) the idea that some acne was antibiotic-resistant.
- [6]Edward Jay Epstein and Vladimir Nabokov. I told this story [7]here.
- [8]If high-school students designed their own school

Thanks to Alex Chernavsky.

1. <http://eng.foodpolis.kr/eng/>
2. <http://www1.american.edu/ted/kimchi.htm>
3. <http://edition.cnn.com/2013/02/10/travel/tokyo-dirt-restaurant/index.html>
4. [http://www.washingtonpost.com/wp-dyn/content/article/2005/11/12/AR2005111200958\\_pf.html](http://www.washingtonpost.com/wp-dyn/content/article/2005/11/12/AR2005111200958_pf.html)
5. <http://www.the-scientist.com/?articles.view/articleNo/34006/title/Anonymity-Under-Threat/>
6. <http://www.edwardjayepstein.com/Nabokov.htm>
7. <http://blog.sethroberts.net/2012/08/11/edward-jay-epstein-reviewed-movies-for-vladimir-nabokov/>
8. [http://www.washingtonpost.com/blogs/answer-sheet/wp/2013/02/20/if-students-designed-their-own-school-it-would-look-like-this/?tid=pm\\_local\\_pop](http://www.washingtonpost.com/blogs/answer-sheet/wp/2013/02/20/if-students-designed-their-own-school-it-would-look-like-this/?tid=pm_local_pop)

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dearieme (2013-03-03 08:15:51)

Ahoy, Seth: this is interesting. <http://extragoodshit.phlap.net/index.php/heart-surgeon-speaks-out-on-what-really-causes-heart-disease/#more-208026> But is it genuine?

Elizabeth Molin (2013-03-03 08:50:11)

Dearieme, I looked into Dr. Lundell. See <http://www.quackwatch.org/11Ind/lundell.html>

dearieme (2013-03-03 14:17:51)

I did smell a rat. It comes from having read so much Global Warming rubbish, I suppose.

garymar (2013-03-03 17:23:16)

I often look for Korean-made kimchi in the supermarkets here in Japan. You read the labels of the regular stuff and its filled with sorbitol, MSG, etc – typical long list of chemical labels. Japan's processed food industry is second to none! Seth: Since

the Japanese live longer than anyone else, even South Koreans, apparently food processing isn't so bad. Yakult is the one processed food I eat regularly, not counting flaxseed oil.

James (2013-03-04 05:15:11)

<http://opinionator.blogs.nytimes.com/2013/02/27/its-the-sugar-folks/> <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0057873> "In other words, according to this study, it's not just obesity that can cause diabetes: sugar can cause it, too, irrespective of obesity. And obesity does not always lead to diabetes. The study demonstrates this with the same level of confidence that linked cigarettes and lung cancer in the 1960s"

### **Butter = Antidepressant? (2013-03-04 05:00)**

On the Shangri-La Diet forums, [1]babyhopes wrote:

At 10 am, I NCd [nose-clipped] a cup of milk, coffee and 2 small spoons of butter (I really like the anti-depressant effects of butter so I am making it part of my breakfast every day)

I noticed something similar the first time I ate a lot of butter (about 60 g). It was at lunch. A few hours later I felt a pleasant warm feeling in my head. The butter was the only unusual thing I had eaten.

When I googled "butter antidepressant" the first result was this blog – [2]I wrote about this three years ago. Well, here is new evidence.

1. <http://boards.sethroberts.net/index.php?topic=8394.msg106906#msg106906>

2. <http://blog.sethroberts.net/2010/05/22/butter-new-antidepressant/>

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q (2013-03-04 06:33:50)

i found the same kind of thing when i started doing sld with butter (i'm not depressed but it improved my mood) but the effect didn't last more than a week for me.

dearieme (2013-03-04 07:42:23)

Good Grief, what sort of breakfast doesn't automatically include butter? With what does he normally separate the toast and the marmalade?

Brian (2013-03-04 08:33:11)

Well, the normal American diet includes only margarine or other butter substitutes. I'd imagine that most Americans no longer know what butter tastes like or why food at certain restaurants tastes so much better than what is prepared at home.

in praise of dearieme (2013-03-04 11:25:39)

dearieme You are everywhere! I've been seeing your comments for years on the blogs I have found most interesting at various stages; CiF, Chris Dillow, CynicusEconomicus, Marginal Revolution (or is it Money Illusion?) and FOFOA (?) When you're ready to give up the toast (gluten) and marmalade (sugar) maybe you should start putting grass-fed butter in your morning coffee <http://www.bulletproofexec.com/how-to-make-your-coffee-bulletproof-and-your-morning-too/>

dearieme (2013-03-04 13:28:45)

Good God almighty! Thank you for that appalling insight, Brian. Maybe General de Gaulle was right.

derp (2013-03-04 15:23:32)

I wonder if lard has the same effect.

john (2013-03-04 15:42:27)

I often notice a delayed positive effect of high amounts of tallow or butter. If I eat a lot, I actually get sort of queasy, but hours later I feel good. During exercise, my face and extremities become warm, and I can handle much more volume (my recovery during high fat eating is improved as well—weightlifting and ballet), from both an increase in motivation and decrease in fatigue.

shtove (2013-03-05 01:56:19)

@in praise of dearieme I've followed some of those blogs too. And they often refer to groupthink. Aagh!

dearieme (2013-03-05 02:03:51)

"you should start putting grass-fed butter in your morning coffee": thank you for the suggestion, but when I want a morning treat I add double cream to my coffee. Seth: I have used both (butter and cream) many times in my morning tea. Cream is better but butter is adequate.

## **A Revolution in Growing Rice (2013-03-05 05:00)**

Surely you have heard of [1]Norman Borlaug, "Father of the Green Revolution". He won a Nobel Peace Prize in 1970 for

the introduction of these high-yielding [wheat] varieties combined with modern agricultural production techniques to Mexico, Pakistan, and India. As a result, Mexico became a net exporter of wheat by 1963. Between 1965 and 1970, wheat yields nearly doubled in Pakistan and India.

He had a Ph.D. in plant pathology and genetics. He learned how to develop better strains in graduate school. He worked as an agricultural researcher in Mexico.

You have probably not heard of Henri de Laulanié, a French Jesuit priest who worked in Madagascar starting in the 1960s. He tried to help local farmers grow more rice. He had only an undergraduate degree in agriculture. In contrast to Borlaug, he tested simple variations that any farmer could afford. He found that [2]four changes in traditional practices had a big effect:

- Instead of planting seedlings 30-60 days old, tiny seedlings less than 15 days old were planted.
- Instead of planting 3-5 or more seedlings in clumps, single seedlings were planted.
- Instead of close, dense planting, with seed [densities] of 50-100 kg/ha, plants were set out carefully and gently in a square pattern, 25 x 25 cm or wider if the soil was very good; the seed [density] was reduced by 80-90 % . . .
- Instead of keeping rice paddies continuously flooded, only a minimum of water was applied daily to keep the soil moist, not always saturated; fields were allowed to dry out several times to the cracking point during the growing period, with much less total use of water.

The effect of these changes was considerably more than Borlaug's doubling of yield:

The farmers around Ranomafana who used [these methods] in 1994-95 averaged over 8 t/ha, more than four times their previous yield, and some farmers reached 12 t/ha and one even got 14 t/ha. The next year and the following year, the average remained over 8 t/ha, and a few farmers even reached 16 t/ha.

The possibility of such enormous improvements had been overlooked by both farmers and researchers. They were achieved without damaging the environment with heavy fertilizer use, unlike Borlaug's methods.

Henri de Laulanié was not a personal scientist but he resembled one. Like a personal scientist, he cared about only one thing (improving yield). Professional scientists have many goals (publication, promotion, respect of colleagues, grants, prizes, and so on) in addition to making the world a better place. Like a personal scientist, de Laulanié did small cheap experiments. Professional scientists rarely do small cheap experiments. (Many of them worship at the altar of large randomized trials.) Like a personal scientist, de Laulanié tested treatments available to everyone (e.g., butter). Professional scientists rarely do this. Like a personal scientist, he tried to find the optimal environment. In the area of health, professional scientists almost never do this, unless they are in a nutrition department or school of public health. Almost all research funding goes to the study of other things, such as molecular mechanisms and drugs.

Personal science matters because [3]personal scientists can do things professional scientists can't or won't do. de Laulanié's work shows what a big difference this can make.

[4]A recent newspaper article. The results are so good [5]they have been questioned by mainstream researchers.

Thanks to Steve Hansen.

1. [http://en.wikipedia.org/wiki/Norman\\_Borlaug](http://en.wikipedia.org/wiki/Norman_Borlaug)
2. [http://sri.ciifad.cornell.edu/aboutsri/CIP\\_UPWARD\\_SRICase.pdf](http://sri.ciifad.cornell.edu/aboutsri/CIP_UPWARD_SRICase.pdf)
3. <http://blog.sethroberts.net/2013/03/02/how-to-encourage-personal-science/>
4. <http://www.guardian.co.uk/global-development/2013/feb/16/india-rice-farmers-revolution>
5. <http://www.guardian.co.uk/world/2013/feb/23/india-rice-revolution-questioned>

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derp (2013-03-05 10:15:31)

Just curious, but how do you stumble across such findings? Seth: A friend sent me a link.

Paul N (2013-03-05 16:58:58)

The SRI article is really quite interesting, and it prompts me to think of another difference between personal and professional science. That is, does the result lead to something that is sellable/patentable? It is a common evaluation criteria for grant funding "will this lead to any patentable results?" So this automatically biases project creation and selection to things that create controllable intellectual property, rather than just things that create useful results. But Laulanié's method could not be patented or controlled, or sold, in any way, so why would any professional scientist pursue it, or any government fund it, if it can't be "sold" to the world? And, potentially, it goes against the interest of corporations that fund agricultural research. Who benefits, other than the farmers themselves, from a method change that increases yield with no new seed varieties and no use of fertilisers or pesticides? Personal science is pretty much about results above all else. Increasingly, professional science uses results as a pathway to "all else". Seth: Very true. Professional scientists, however, are not particularly interested in selling things, although their funders may be. Leaving aside the influence of their funders, professional scientists have a big problem: they get most or all of their status from their job. And two things are true: useless is higher status than useful, making it hard

for them to do useful research; and big (= expensive) is higher status than small (= cheap), making it hard for them to do small research. Laulanié wasn't worried about status. Most people are.

Tom (2013-03-05 22:26:28)

Interesting and somewhat related Ted talk: [http://www.ted.com/talks/allan\\_savory\\_how\\_to\\_green\\_the\\_world\\_s\\_deserts\\_and\\_reverse\\_climate\\_change.html](http://www.ted.com/talks/allan_savory_how_to_green_the_world_s_deserts_and_reverse_climate_change.html)

shtove (2013-03-06 15:46:36)

@derp Another magpie for intelligent articles is Barry Ritholtz at The Big Picture. He's on the finance side, but benevolent scepticism works from every angle. BBC R4 had a good piece today on statins and "treating risk" in the medical industry: <http://www.bbc.co.uk/programmes/b01r0h4r> In the UK we regularly get newspaper headlines: Why O Why Won't the Government Pay For Statins? The radio show makes the point that, to flog product, disease awareness campaigns in the UK are probably as effective as direct marketing of drugs in the US.

Encroaching Govt – Privacy, DHS, Currency. Voice of Eden March 5-6 | Koanic Soul (2013-03-07 05:26:07)

[...] Seth's Blog » Blog Archive » A Revolution in Growing Rice [...]

## Modern Food Reduced Diversity of Oral Bacteria (2013-03-06 05:00)

A new paper in Nature Genetics describes research into the bacteria in ancient teeth plaque. When modern food came along, the bacteria became less diverse. [1]One of the researchers said:

The composition of oral bacteria changed markedly with the introduction of farming, and again around 150 years ago. With the introduction of processed sugar and flour in the Industrial Revolution, we can see a dramatically decreased diversity in our oral bacteria, allowing domination by caries-causing strains.

Whether the decrease in diversity was due to (a) more sugar and flour or (b) less bacteria-laden foods is hard to say.

Again, data suggest we need bacteria to protect us against bacteria. You'd never know this from food safety laws or how freely pediatricians prescribe antibiotics. Again, it is hard to know without more research what caused this or that historical change in health (e.g., more tooth decay when sugar and flour became popular). The obvious answer (e.g., sugar causes tooth decay) might be wrong. If you believe that cavities are caused by too much sugar, the solution is to eat less sugar. What if cavities are caused by not enough bacterial diversity? Then other solutions might work better, such as eating more fermented food.

Thanks to Vic Sarjoo.

1. <http://www.hngn.com/articles/1322/20130217/ancient-teeth-bacteria-record-disease-evolution.htm>

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Ahrand (2013-03-06 06:51:35)

I have found that instead of combating bacteria in your mouth (flossing, brushing, rinsing with anti-bacterials), it is more helpful to gently guide them to behave and force them to diversify. I use Xylitol (a non-fermentable sugar) after meals and before bed,

it is difficult to digest for (certain) bacteria so they cause less problems (the population adapts but seems to be less virulent). Trying to wipe out all bacteria never works as there are always means/places for them to hide and come back (stronger) after the anti-bacterials have flushed. Surprising results after 2 years: whiter teeth, less dental plaque, less sinus infections, ...

Evelyn M. (2013-03-06 07:08:16)

Thank you, Ahrand, for your post. I, too, am convinced that xylitol is an unmitigated blessing. I suffered from terrible oral lichen planus that medical science could do nothing about. A desperate web search convinced me to try xylitol. A half-teaspoon three to four times a day after eating within three months showed that the lichen planus was receding, and after six months it was clearly in remission. My dentist was astounded. My mouth has never been in better shape - even the "geographic tongue" that I had since adolescence is gone - and at basically no cost using a substance that anyone can buy off the web. Read the literature, especially from Finland, where they have done many clinical trials on children. Seth: That's fascinating. Good work!

Paul N (2013-03-08 09:57:26)

Certainly hard to separate the causes (sugar v bacteria) especially since they are related. Eating sugar encourages the growth of sugar loving bacteria, regardless of what other bacteria are eaten. Weston Price concluded that the "displacing foods of modern commerce" - sugar and white flour - were the primary cause. Not only do they make the problem worse, they displace other foods, often fermented ones, so both causes are in operation. Incidentally, in Jared Diamond's "Collapse" he talks about some pacific island where sugar cane naturally grew, and the islanders squeezed the juice, as a source of fresh water. Not surprisingly, their teeth had lots of cavities, and old skulls showed the same. We should also keep in mind that various vitamins, particularly D, K2, C and various minerals (calcium, magnesium, phosphorous) contribute to dental health. A diet deficient in these could still have dental problems even with low sugar and high good bacteria. Indeed, even Weston Price wrote about this, and found that [1]places with naturally high fluorine in the water had lower rates of dental decay. I would posit that neither the absence of sugar nor the presence of beneficial bacteria alone, is sufficient to ensure optimal dental health, though they are unquestionably major factors. Seth: I agree. I found that my gums became much healthier when I started drinking flaxseed oil. It is quite possible that the traditional diets of Weston Price, not just the modern ones, had too little omega-3.

1. [http://books.google.ca/books?id=K0wrAAAAYAAJ&pg=PA377&lpg=PA377&dq=phosphorus+dental+health+texas&source=bl&ots=GBDDrMYtgh&sig=Pm6Ye7zlnR9r\\_k6KvDpCdVgtTpE&hl=en&sa=X&ei=ABc6UZjKKam4yQHZhYFg&ved=0CGEQ6AEwCA#v=onepage&q=phosphorus%20dental%20health%20texas&f=false](http://books.google.ca/books?id=K0wrAAAAYAAJ&pg=PA377&lpg=PA377&dq=phosphorus+dental+health+texas&source=bl&ots=GBDDrMYtgh&sig=Pm6Ye7zlnR9r_k6KvDpCdVgtTpE&hl=en&sa=X&ei=ABc6UZjKKam4yQHZhYFg&ved=0CGEQ6AEwCA#v=onepage&q=phosphorus%20dental%20health%20texas&f=false)

## How Meritocratic is Chinese Higher Education? (2013-03-07 05:00)

A friend of mine taught at Harvard for a few years. Her husband needed a job, so he taught a writing class. He said his students were so bad it appeared to be an experiment: How stupid can you be and succeed at Harvard? They had not been admitted based on SAT scores or grades, that was clear. In [1]a recent article called "The Myth of American Meritocracy", Ron Unz described considerable evidence of exactly what my friend's husband noticed: Harvard admission not based on the usual "meritocratic" measures, such as SAT scores and grades. For example, he found evidence of an Asian quota. If Asians weren't penalized for being Asian, far more would be admitted.

In [2]a follow-up article, Unz wrote:

Near the beginning of my article [about meritocracy] I had noted that although complaints about official corruption of every sort are a leading topic on the Chinese Internet and also in Western media coverage, I had never once heard such a claim about admissions to elite Chinese universities. This led me to conclude that the process was entirely meritocratic, and a couple of individuals with good knowledge of China confirmed this. However, during one of my recent Yale Law events, a student from China stated that he and his friends were firmly convinced that any of China's 350 Central Committee members could easily obtain an admissions slot for his friends or relatives, so my claim was incorrect. This conflicting evidence may be reconciled if the number of such corrupt admissions each year is so tiny—perhaps a few hundred

out of over eight million—that it is completely invisible to the general public. I should note that the New York Times just ran another major story on colleges in China, emphasizing every possible unfair aspect of the system, but nonetheless indicating that admissions were entirely meritocratic and objective.

Here is one reason that there is zero discussion of corruption in admission to elite Chinese universities (such as Tsinghua, where I teach): Rich Chinese universally want their children to go to college outside China, especially America. The more money you have, the easier this is. I'd guess all children of Central Committee members attend college outside China. None of them attend Tsinghua, as far as I know. At least among my students, this is utterly obvious – that education outside China is superior and anyone who can go outside China will. The brake on this is purely cost. One of my students said she didn't want to burden her parents with the cost.

The test that Chinese high school students take to get into college is the gaokao. One of my students got the highest gaokao score in Beijing. An astonishing achievement. He didn't get in to any American university. The Chinese public was shocked. Many newspaper articles were written about it. The rest of my students knew about it. His family is not well-off. This is why he failed where thousands of Chinese students from rich families – who didn't bother to take the gaokao, but surely would have had a lower score – succeeded. Although he went to Tsinghua as a freshman, he too wanted to escape Chinese higher education. First he transferred to the University of Hong Kong. Then he transferred to MIT.

Why is Chinese higher education so bad that everyone who can avoids it? One of my students (a psychology major) said that as the economy quickly improved, the government quickly expanded the college education system. There weren't enough good teachers to fill the slots. That's one reason. Another reason is a certain ethos. I asked a friend of mine, a Tsinghua student not majoring in psychology, "In what fraction of your classes do the professors lecture by reading from the textbook?" 80 %, she said. That's at Tsinghua. Below Tsinghua it's worse. Of course students go to college outside China for reasons that have nothing to do with quality. The most obvious is prestige: It is prestigious to go elsewhere.

Lack of higher education meritocracy in China has a more subtle aspect. It is much easier to get into elite universities, such as Tsinghua, if you live in Beijing or Shanghai than if you live elsewhere, especially poor provinces. Is this unfair? It isn't easy to say because the gaokao is different in different places. I don't know the official reason for this (different textbooks?), but the difference in tests makes it easier to have lower admissions cutoff scores for students from Beijing and Shanghai. A Beijing student at Tsinghua will usually have a lower gaokao score than a student at Tsinghua from a poor province. Of course it is much more expensive to live in Beijing and Shanghai than elsewhere. Moreover, a big chunk of the gaokao is about English proficiency. A student's English proficiency depends heavily on amount and quality of English education, which depends heavily on family income. The richer you are, the better your children's English.

All this makes political sense. Richer people – whose children have better English – have more political power than the less rich. Those who live in Beijing and Shanghai have more political power than people in poor provinces. Allowing their children get into Tsinghua with lower gaokao scores (Beijing and Shanghai residents) or writing the gaokao so that their children have an advantage (English proficiency) is one way to keep them happy.

1. <http://www.theamericanconservative.com/articles/the-myth-of-american-meritocracy/>

2. <http://www.theamericanconservative.com/meritocracy-admitting-my-mistakes/>

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Elizabeth Molin (2013-03-07 09:28:33)

This is only peripherally related, but when I was managing editor of a social-sciences journal, I was continually amazed at the inability of the Ph.D.s whose articles we published to write grammatical English. This was the more striking (to me) because it was a linguistics journal, although it also certainly applies to other fields: [http://www.elizabethmolin.com/?page\\_id=19](http://www.elizabethmolin.com/?page_id=19).

dearieme (2013-03-07 16:03:49)

Surely nobody thinks Harvard is the best university in the Boston area?

Lemmy Caution (2013-03-07 18:21:22)

I would be surprised if harvard students were actually stupid. Maybe that guy was just a bad teacher.

Jonathan Shewchuk (2013-03-07 22:49:40)

Do you know if professors lecture by reading from the textbook in the engineering and math departments too? Seth: No I don't know. I will ask.

Shawn (2013-03-09 12:25:03)

Hmm, funny thing, I wonder why you haven't wrote about the fact that Unz's article points out that gentiles are underrepresented relative to their qualifications?

kelo (2013-03-10 20:10:14)

Hmm, As an Mainland Chinese, born in an poor province(HeNan) and graduating from an Top 10 university, I totally agree with what u say. The reason of all those phenomenons -the drastic competition of gaokao and the desire to go out of China-lies in one thing: No money, no living. As my uncle and father always say:"No matter what u do, you only can survive and get respect because of your money." Haw-haw, funny but depressing.....

## **Great Side Effects of the Shangri-La Diet (2013-03-08 07:32)**

In [1]a recent post on the Shangri-La Diet forums, Morex, who lives in Mexico, describes several great side effects of the Shangri-La Diet:

1. At peace with food. "I am in control of what I eat. If I want I have a piece of chocolate or some peanuts, but food is no longer in command. Food is no longer an obstacle or an excuse. This is FANTASTIC! For 40 years I had a horrible relationship with food. It commanded my every activity in the day. I was always on the look for better flavors and foods that would quench my never fading hunger. This is no longer an issue."
2. No more junk food. "Thanks to SLD, I quit junk food. I no longer crave it and when I have tasted it, it's horrible! Too salty and greasy. Or too sweet. That means no soda, pizza, chips, donuts, candy or anything like that. When I want something sweet in the afternoon, I'd have a teaspoon of honey and that's it."
3. More money. "We eat so little that we are saving extra cash. Who knows, maybe we could soon afford a nice vacation on the beach! (Vacations for Mexicans in Mexico are VERY expensive.)"
4. More time. Much more time. "Since we have been doing SLD, our days are longer! Because of the fact that we eat so very little portions, we are barely cooking. And when we do, it lasts for about 4 days! Before SLD we spent



about an hour a meal. 30 mins. cooking, and 30 mins. eating. Some days it was longer, depending on what we cooked. That means that we spent about 3 or 4 hours a day cooking and eating. Now we prepare meals in about 10 minutes and eat in about 5!!! That's right. For breakfast I have half a bran cookie, some cereal or some fruit. For lunch I just heat up in the microwave something we cooked. For dinner we have a little oatmeal or cereal. And that's it! My days are longer for 3 hours! We have been reading our books (we're book worms here), watching movies we didn't have the time to watch and going out for walks!! FREAKING AWESOME!"

I didn't have the first two problems (loss of control and junk food) but I too distinctly noticed saving money and (especially) time. Just like he says. It's been a long time since I wrote The Shangri-La Diet but I think I failed to mention how much time and money I saved. (If I'm wrong, please correct me.)

What about his weight? He doesn't have a scale but says this: "Before SLD I was size 44. Today [after 2 months of SLD] I am 38, which I haven't been able to wear since I was in the University (19 years old)." He wants to get to size 36. He also posts several pictures, before and after.

Thanks, Morex.

1. <http://boards.sethroberts.net/index.php?topic=8367.msg107026#msg107026>

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Meegs (2013-03-08 15:48:16)

I have had a very similar experience. I even do the teaspoon of honey thing.

### **Tea and News: Rinse First (2013-03-08 17:00)**

While living in China, I discovered that it was a good idea to rinse tea with hot water before brewing it. The rinse removes a certain rough taste – easy to notice in [1]side-by-side comparisons. [2]A Chinese college student made an interesting analogy:

Entertainment news is like drinking tea, first time is like washing tea leafs, no one really cares. Maybe 2nd or 3rd time it will have the sweet taste, but in the end it gets weaker and weaker.

1. <http://blog.sethroberts.net/2012/11/10/the-power-of-the-willat-effect-rinsed-versus-unrinsed-tea/>

2. [http://shanghaiist.com/2009/12/04/the\\_secret\\_is\\_out\\_her.php](http://shanghaiist.com/2009/12/04/the_secret_is_out_her.php)

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RT (2013-03-08 18:24:45)

Yeah, rinse all the lead out! Congrats on the discovery.

in praise of dearieme (2013-03-08 21:26:54)

Is there only taste benefits ? Could it remove Mycotoxins? Are mycotocins something to care about?

Adam (2013-03-09 17:58:47)

I've noticed that expensive tea doesn't need to be washed as much as cheap tea. I inherited a huge amount of cheap tea from HaiNan (not known for quality tea). If I try to drink it straight, it is awful (too strong, bitter, something just off), but if I wash it (pour on hot water, leave on 5 seconds, pour off) it tastes just like expensive tea. Sorry this comment has nothing to do with news.

Kaleberg (2013-03-11 19:44:29)

It depends on the tea. You don't want to do this with an oolong, but it is the only way to get a drinkable cup of pu-er tea. Go to a good tea shop and they'll tell you how to get the best cup when you brew. (We learned a lot at high-end Ten Ren.)

Mo Ibrahim (2013-03-14 19:34:46)

Wow, I've had an intuition to rinse my tea for years, but I've never done it! I'm going to try it tonight and probably from now on...Thanks Seth.

### **Posit Science: Does It Work? (Continued) (2013-03-09 05:00)**

In [1]an earlier post I asked 15 questions about [2]Zelinski et al. (2011) ("Improvement in memory with plasticity-based adaptive cognitive training: results of the 3-month follow-up"), a study done to measure the efficacy of the brain training sold by Posit Science. The study asked if the effects of training were detectable three months after it stopped. Henry Mahncke, the head of Posit Science, recently sent me answers to a few of my questions.

Most of my questions he declined to answer. He didn't answer them, he said, because they contained "innuendo". My questions were ordinary tough (or "critical") questions. Their negative slant was not at all hidden (in contrast to innuendo). For the questions he didn't answer, he substituted less critical questions. I give a few examples below. Unwillingness to answer tough questions about a study raises doubts about it.

His answers raised more doubts. From his answer to Question 7, I learned that although the investigators gave their subjects the whole RBANS, (a) they failed to report the results from the visual subtests and (b) these unreported results did not support their conclusions. Mahncke says this result was not reported "due to lack of publication space." The original paper did not say that some results were omitted due to lack of space. I assume all favorable results were reported. To report all favorable results but omit some unfavorable results is misleading.

To further explain the omission, Mahncke says

We used the auditory measures as the primary outcome measure because we hypothesized that cognitive domains [by "cognitive domains" he means the cognitive gains due to training – Seth] would be restricted to the trained sensory domain, in this case the auditory system. [emphasis added]

He doesn't say he believed the gains would be greater with auditory stimuli, he says he believed they would be restricted to auditory stimuli. The Posit Science website says their training increases "memory", "intelligence", "focus" and "thinking speed". None of these are restricted to the auditory system – far from it. Unless I am misunderstanding something, the head of Posit Science doesn't believe the main claims of the Posit Science website.

Why Mahncke fails to see a difference between methods (Question 13) and results (Question 14), fails to see

a difference between methods (Question 11) and discussion (Question 15), and gives a one-word answer ("yes") to Question 12, I cannot say. In each case, however, he errs on the side of not answering.

My overall conclusion is that this study does not support Posit Science claims. The main measure (RBANS auditory subtests) didn't show significant retention. A closely related set of measures (RBANS visual subtests) didn't show significant retention. A third set of measures ("secondary composite measure") did show retention, but the p value was not corrected for multiple tests. When the p value is corrected for multiple tests, the secondary composite measure may not show significant retention. Because of the large number of subjects (more than 500), repeated failure to find significant retention under presumably near-optimal conditions (e.g., 1 hour/day of training) suggests that the training effect, after three months without training, is small or zero.

I assume that Posit Science sponsored this study because they believed it was unrealistic for subjects to spend 1 hour/day for the rest of their life doing their training. One hour/day was realistic for a while, yes, but not forever. So subjects will stop. Will the gains last? was the question. Apparently the answer is no.

If Mahncke has any response to this, I will post it.

This is another illustration of why personal science (science done for your own benefit, rather than as a job) is important. Professional scientists are under pressure to get certain results. This study is an example. Mahncke was a co-author. Someone employed by Posit Science is under pressure to get results that benefit Posit Science. (I am not saying Mahncke was affected by this pressure.) A personal scientist is not under pressure to get certain results. For example, if I study the effect of tetracycline (an antibiotic) on my acne, I simply want to know if it helps. Both possible answers (yes and no) are equally acceptable. We may need personal scientists to get unbiased answers.

Here are my original questions along with Mahncke's answer or lack of answer.

1. Isn't it correct that after three months there was no longer reliable improvement due to training according to the main measure that was chosen by you (the investigators) in advance? If so, shouldn't that have been the main conclusion (e.g., in the abstract and final paragraph)?

Not answered.

[Seth: Here is Mahncke's substitute question: "Why do you conclude that "Training effects were maintained but waned over the 3-month no-contact period" given that the "previously significant improvements became non-significant at the 3-month follow-up for the primary outcome"?"]

2. The training is barely described. The entire description is this: "a brain plasticity-based computer program designed to improve the speed and accuracy of auditory information processing and to engage neuromodulatory systems." To learn more, readers are referred to a paper that is not easily available – in particular, I could not find it on the Posit Science website. Because the training is so briefly described, I was unable to judge how much the outcome tests differ from the training tasks. This made it impossible for me to judge how much the training generalizes to other tasks – which is the whole point. Why wasn't the training better described?

Not answered.

[Seth: Here is Mahncke's substitute question: "Could you describe the training program in more depth, to help judge the similarity between the training exercises and the cognitive outcome measures?"]

3. What was the "ET [experimental treatment] processing speed exercise"?

The processing speed exercise is a time order judgment task in which two brief auditory frequency modulated sweeps are presented, either of which may sweep up or down in frequency. The subject must identify each sweep in the correct order (i.e., up/up, down/down, up/down, down/up). The inter-stimulus interval is adaptively manipulated to determine a threshold for reliable task performance. Note that this is not a reaction time task. The characteristics of the sweeps are chosen to match the frequency modulated sweeps common in stop consonant sounds (like /ba/ or /da/). Older listeners generally show strong correlations between processing speed, speech reception accuracy, and memory; which led us to the hypothesis that improving core processing speed in this way would contribute to improving memory. This approach is discussed extensively in "Brain plasticity and functional losses in the aged: scientific bases for a novel intervention" available at <http://www.ncbi.nlm.nih.gov/pubmed/17046669>

3. [continue] It sounds like a reaction-time task. People will get faster at any reaction-time task if given extensive practice on that task. How is such improvement relevant to daily life? If it is irrelevant, why is it given considerable attention (one of the paper's four graphs)?

Not answered.

4. According to Table 2, the CSRQ (Cognitive Self-Report Questionnaire) questions showed no significant improvement in trainees' perceptions of their own daily cognitive functioning, although the p value was close to 0.05. Given the large sample size ( 500), this failure to find significant improvement suggests the self-report improvements were small or zero. Why wasn't this discussed? Is the amount of improvement suggested by Posit Science's marketing consistent with these results?

Not answered.

5. Is it possible that the improvement subjects experienced was due to the acquisition of strategies for dealing with rapidly presented auditory material, and especially for focusing on the literal words (rather than on their meaning, as may be the usual approach taken in daily life)? If so, is it possible that the skills being improved have little value in daily life, explaining the lack of effect on the CSRQ?

Not answered.

6. In the Methods section, you write "In the a priori data analysis plan for the IMPACT Study, it was hypothesized that the tests constituting the secondary outcome measure would be more sensitive than the RBANS given their larger raw score ranges and sensitivity to cognitive aging effects." Do the initial post-training tests (measurements of the training effect soon after training ended) support this hypothesis? Why aren't the initial post-training results described so that readers can see for themselves if this hypothesis is plausible? If you thought the "secondary outcome measure would be more sensitive than the RBANS" why wasn't the secondary outcome measure the primary measure?

In a large-scale clinical trial such as IMPACT, it is considered best practice to pick as the primary outcome measure a measure that has been employed in earlier studies. We had used the RBANS in two previous studies (references 8 and 17 in the paper). While we had seen significant results in both studies, it was also clear from those studies that the RBANS had ceiling effects in cognitively intact populations that would limit the statistical sensitivity of the measure. For example, the RBANS list recall measure had 10 words, and a reasonable portion of participants get all 10 correct at baseline, leaving no room for improvement regardless of the efficacy of the intervention. Given that observation, we added measures to the IMPACT study that we hypothesized would be more sensitive. For example, the RAVLT has 15 words, leaving more room for improvement and fewer ceiling effects. [It is unclear that more words = more sensitivity. It depends on the words – Seth] However, since we had not used those measures in previous studies, we decided to define these new measures as secondary outcome measures in the data analysis plan. This issue is discussed in depth in the methods section of the main training effect paper (reference 6), and of

course that's where all of the initial post-training results you mention are described. This improved sensitivity of the secondary outcome measures was quite evident in the post-training data; however for reasons of publication length we did not discuss it in that paper. The comparative data would make an interesting publication, and one that might be helpful to other researchers in this field.

7. The primary outcome measure was some of the RBANS (Repeatable Battery for the Assessment of Neuropsychological Status). Did subjects take the whole RBANS or only part of it? If they took the whole RBANS, what were the results with the rest of the RBANS (the subtests not included in the primary outcome measure)?

Participants took the entire RBANS. We used the auditory measures as the primary outcome measure because we hypothesized that cognitive domains [by "domains" he means "gains" – Seth] would be restricted to the trained sensory domain, in this case the auditory system. Interestingly, there was a significant effect on the overall RBANS measure, however there was no significant effect on a composite of the RBANS visual measures. This interesting result was not included in our papers for reasons of publication length.

[Seth: As I said earlier, a surprising answer.]

8. The data analysis refers to a "secondary composite measure". Why that particular composite and not any of the many other possible composite measures? Were other secondary composite measures considered? If so, were p values corrected for this?

The measures used were the Rey Auditory Verbal Learning Test total score (sum of trials 1–5) and word list delayed recall, Rivermead Behavioral Memory Test immediate and delayed recall, and Wechsler Memory Scale letter-number sequencing and digit span backwards tests. These measures were chosen a priori as more sensitive than their RBANS cognate measures, and a priori we conservatively chose to integrate all 6 into a single composite measure. Individual test scores are all shown in table 2. This issue is discussed in depth in the methods section of the main training effect paper (reference 6). It's straightforward to evaluate what the effects shown on other potential composites would be simply from inspecting the individual test data in table 2. In the methods section of the main training effect paper (reference 6), we discuss our approach to multiple comparisons, where we state "A single primary outcome measure (RBANS Memory/ Attention) was predefined to conserve an overall alpha level of 0.05. No corrections for multiple comparisons were made on the secondary measures." I can see that it would have been helpful to re-iterate that statement in the 2011 paper, and my apologies for the oversight.

[Seth: He doesn't answer my question "were other secondary measures considered?"]

9. If Test A resembles training more closely than Test B, Test A should show more effect of training (at any retention interval) than Test B. In this case Test A = the RBANS auditory subtests and Test B = the secondary composite measure. In contrast to this prediction, you found that Test B showed a clearer training effect (in terms of p value) than Test A. Why wasn't this anomaly discussed (beyond what was said in the Methods section)?

Not answered.

10. Were any tests given the subjects not described in this report? If there were other tests, why were their results not described?

All outcome measures performed in the study are reported in the publication.

[Seth: I have no idea how this answer is consistent with (a) the subjects took the visual subtests of the RBANS and (b) the paper fails to report the results of those tests (see answer to Question 7). The paper does not say that the subjects took the visual subtests of the RBANS.]

11. The secondary composite measure is composed of several memory tests and called "Overall Memory". The Posit Science website says their training will not only help you "remember more" but also "think faster" and "focus better". Why weren't tests of thinking speed (different from the training tasks) and focus included in the assessment?

Not answered.

12. Do the results support the idea that the training causes trainees to "focus better"?

Yes.

[Seth: That's his whole answer.]

13. The Posit Science homepage suggests that their training increases "intelligence". Was intelligence measured in this study?

At the time we designed IMPACT, we were focused on establishing the effect of the training on memory, as the most common complaint of people with general cognitive difficulties. As IMPACT was in progress, Jaeggi et. al published their very interesting paper on the effect of N-back training on measures of intelligence, where they stated that improving working memory was likely to improve measures of intelligence. It would be quite interesting to repeat the IMPACT study with those or other measures of intelligence, given the improvements in working memory documented in IMPACT. The statement on the Posit Science web page relates to the Jaeggi et. al. paper, given that the Posit training program (BrainHQ) includes N-back training.

13 (continued). If not, why not?

Not answered.

[Seth: In Question 12, Mahncke failed to explain his answer about focus ("yes") apparently because I left out "if yes, please explain how". In this question, he dislikes my inclusion of "if not, why not?"]

14. Do the results support the idea that the training causes trainees to become more intelligent?

This question appears to be redundant with 13.

[Seth: Question 13 asked: Was intelligence measured? (A methods question.) This question asked: What about the results? Do they support claims about intelligence? (A results question.)]

15. The only test of thinking speed included in the assessment appears to be a reaction-time task that was part of the training. Are you saying that getting faster on one reaction-time task after lots of practice with that task shows that your training causes trainees to "think faster"?

This question appears to be redundant with 11.

[Seth: Question 11 was a methods question. This is a question about what the results mean – a discussion question. I still have no idea why Posit Science says their training causes trainees to "think faster" or why I should care that their subjects get faster on a laboratory task after lots of practice.]

1. <http://blog.sethroberts.net/2013/02/22/questions-for-posit-science/>
2. <http://www.ncbi.nlm.nih.gov/pubmed/21314646>

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Alex Chernavsky (2013-03-09 08:33:32)

I remember about twenty years ago or so, I read a good deal of Michael Merzenich's research on somatic maps in the cortex. Seemed like he was doing good work at the time. I see that Merzenich is now the co-founder and Chief Scientific Officer of Posit Science. I don't know enough about the claims made by Posit Science to have a strong opinion, but Mahncke's attitude certainly gives me pause. Too bad Posit Science can't answer simple questions about their research. Reminds me of standard practices in the pharmaceutical industry. Seth: I too like Merzenich's work on somatic maps.

### Assorted Links (2013-03-10 05:00)

- [1]Low pay at Weight Watchers. "The \$18 base rate for running meetings has not increased in more than a decade. . . . The restlessness over low pay extends across the weight-loss industry to Weight Watchers' rivals, including Jenny Craig and Nutrisystem."
- At Berkeley I told undergraduates: "Do as many internships as possible. Take as few courses as possible." Salman Khan (of Khan Academy) has a similar view and [2]suggests that college should be built around this idea.
- [3]The Umami Burger empire
- [4]The Positive Deviance Initiative
- [5]Michael Wolff on Edward Jay Epstein's Annals of Unsolved Crimes
- [6]Another teacher who stopped grading. "It has honestly been the best thing I have implemented in my career."

Thanks to Bryan Castañeda.

1. [http://www.nytimes.com/2013/02/26/business/devoted-to-weight-watchers-but-workers-rebel-against-low-wages.html?\\_r=0](http://www.nytimes.com/2013/02/26/business/devoted-to-weight-watchers-but-workers-rebel-against-low-wages.html?_r=0)
2. <http://cacm.acm.org/magazines/2013/1/158766-what-college-could-be-like/fulltext>
3. [http://blogs.laweekly.com/squidink/2013/02/umami\\_burger\\_20\\_million\\_invest.php](http://blogs.laweekly.com/squidink/2013/02/umami_burger_20_million_invest.php)
4. <http://www.positivedeviance.org/index.html>
5. <http://www.usatoday.com/story/money/columnist/2013/03/03/michael-wolff-author-epstein-loves-a-conspiracy/1960717/>
6. <http://iteachicoachiblog.blogspot.com/2011/01/five-reasons-why-you-should-stop.html>

## The Rise of Personal Science: One Example, About Acne (2013-03-11 05:00)

Looking around for evidence connecting glutathione level and acne ([1]it has been proposed that low glutathione causes acne), I found [2]this at acne.org, from a 20-year-old woman:

As a personal choice research and viewing other people's experiences with supplements is safer than taking my doctor's advice. My doctor insisted I go on the pill, insisted I get on antibiotics [a common prescription for acne], insisted nothing was wrong with me and even did a hormonal test...said I was "healthy and normal" and to leave the office because my hormones were normal as well as everything from the liver onwards. I stared at him and told him he was wrong: 1. hormone tests will lie if I'm on the pill and 2. I have acne, never had it before in my life and it came about too fast ... If acne is a symptom then something is wrong. I personally don't trust doctors because they generalize [too much] and from personal experiences [where] I've been laughed at and dismissed and even told "leaky gut doesn't exist". Personal research goes a long way and it's so great to have communities like this where everyone can help each other out.

This is personal science in the sense of trying to learn from other people's data. What's interesting is that she says this. Nobody forced her to. She isn't try to sell something or look good. Her discovery of the power of "research and viewing other people's experiences" – better than trusting a doctor – (a) interests her and (b) she thinks will interest acne.org readers. Her own experience certainly supports what she says.

Long ago, it was discovered that the Earth is round. Before the discovery, nobody said that. After the discovery, people discussed it for a while ("Have you heard? The Earth is round."), maybe a few hundred years. When knowledge of the Earth's roundness became part of everyone's belief system, people stopped discussing it.

In other words, this comment suggests that a new truth is coming into being. Her experience is the same as mine with regard to acne: Can't trust what a doctor says. My dermatologist prescribed two medicines. Studying myself showed that only one of them worked, a possibility my dermatologist seemed to have never considered.

1. <http://www.ncbi.nlm.nih.gov/pubmed/21896138>

2. <http://www.acne.org/messageboard/topic/307056-low-glutathione-may-be-a-cause-of-acne/>

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derp (2013-03-11 07:12:15)

Well, doctors aren't scientists. My medical training made it obvious to me that every scientific thinking is removed from daily medical work. Don't investigate. Don't understand mechanisms. Don't use solutions that work, only because they counteract your intuition or "common medical wisdom" or "state of the art" or your private pet theory. Use the guidelines Big Pharma wrote for us, repeat every therapy even if it has shown to work poorly ("it's the best we have" \*barf\*) and don't listen to the the patient who has a different experience - he's the layman, after all. Doctors obey. They are the modern version of Pythagorean acousmatics. Seth: Doctors obey, yes, but they supposedly obey scientists. Such as medical school professors.



dearieme (2013-03-11 07:13:29)

"Long ago, it was discovered that the Earth is round. ... When knowledge of the Earth's roundness became part of everyone's belief system, people stopped discussing it." Until a 19th century American fabricated the notion that medieval man supposed the earth to be flat.

Nancy Lebovitz (2013-03-11 07:26:33)

Off topic: [http://www.nytimes.com/2013/03/07/science/unreported-side-effects-of-drugs-found-using-internet-data-study-finds.html?hp&\\_r=1](http://www.nytimes.com/2013/03/07/science/unreported-side-effects-of-drugs-found-using-internet-data-study-finds.html?hp&_r=1) &

Chuck (2013-03-11 07:42:16)

It's quite evident that doctors, and scientist, forget that personal science is the foundation of all science and medical treatments. Their attitude is: "If it's not Western, it's not valid. If it's not Modern, it's not valid." Humans have been tinkering around with ways and means to cure or heal themselves since the first time they stubbed their toe. Some things worked, some things didn't. The things that worked were passed down and shared with others. Thinking that an individual is incapable of finding a cure or making some scientific discovery is asinine. Cheers and good health

Nile (2013-03-11 14:43:22)

The contact email given on the home page does not work for me. i hope you don't mind using comments to contact you. "email" follows Dr. Roberts- This may interest readers of your blog. Allan Savory has discovered a counter intuitive way to reverse the increasing desertification of arable land. His method goes against conventional wisdom. This method sequesters carbon, provides increased food and restores grassland all at a very low cost. Having lived in the Horn of Africa I think this is revolutionary. I only hope he can get more traction. I think it is akin to the story about Father Henri de Laulanié and his discoveries about growing rice. They were counter intuitive as well. Here is Mr. Savory's TED talk. [http://www.ted.com/talks/allan\\_savory\\_how\\_to\\_green\\_the\\_world\\_s\\_deserts\\_and\\_reverse\\_climate\\_change.html](http://www.ted.com/talks/allan_savory_how_to_green_the_world_s_deserts_and_reverse_climate_change.html) Best, Nile

Kaleberg (2013-03-11 19:39:03)

I've been lucky. Most of my doctors consider me an excellent test subject, so they often put me on a medication with a specific plan to see if it is working. When I had an infection, I was told to expect improvement in so many days, and otherwise to call in and arrange for a stronger antibiotic. When I started medication for a chronic condition, we did an initial test and arranged for me to return and see if the drug was having the desired effect. There was a plan B, if it had failed. Seth: You have low standards if you are impressed that if a drug doesn't work, your doctor will try a different one.

Christina (2013-03-31 17:24:15)

The side effects of drugs on acne really does concern me. I have to constantly take probiotics because this medication just upsets my stomach. Aside from the topicals we are using, has anyone used LED Light Therapy? I know we can get treatments like this in medical offices but in this article I found, they are talking how there is an FDA approved LED Light Therapy handheld at home device. This info is at the bottom of the article which highlights skin care devices. Please tell me if any of you have tried it because I for one am tired of the medication. <http://www.examiner.com/article/the-year-ahead-skin-care>

Pierre (2013-04-09 18:16:39)

Are doctors educated for acne even?

## Assorted Links (2013-03-12 05:00)

- [1]The new name-dropping. Not bad, New Republic.
- [2]Funny profound Amazon reviews of Sim City 5. "It's astonishing how the same company can take [a] game concept and work on it for 10 years, and have [the result] be so much worse than what came before." Also: "

\$60 for a game you can't play is brilliant." Also: "You have to wait in line for your own single-player game. YOU HAVE TO WAIT TO PLAY BY YOURSELF!! This is absurd."

- [3]Obesity in Mexico (Wikipedia). "There was discussion on putting a 5 percent tax on soft drinks; it was voted against because it was thought to be unfair to the poor when it is more expensive to buy water."
- [4]Intermittent fasting diet partly based on self-experimentation

Thanks to Alex Chernavsky.

1. <http://www.newrepublic.com/article/112578/what-sheryl-sandbergs-acknowledgments-reveals>

2. [http://www.amazon.com/SimCity-Limited-Edition-Pc/product-reviews/B007FTE2VW/ref=cm\\_cr\\_pr\\_btm\\_helpful?ie=UTF8&showViewpoints=0](http://www.amazon.com/SimCity-Limited-Edition-Pc/product-reviews/B007FTE2VW/ref=cm_cr_pr_btm_helpful?ie=UTF8&showViewpoints=0)

3. [http://en.wikipedia.org/wiki/Obesity\\_in\\_Mexico](http://en.wikipedia.org/wiki/Obesity_in_Mexico)

4. [http://www.nytimes.com/2013/03/03/fashion/england-develops-a-voracious-appetite-for-a-new-diet.html?\\_r=0](http://www.nytimes.com/2013/03/03/fashion/england-develops-a-voracious-appetite-for-a-new-diet.html?_r=0)

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## The Pizza Paradox: Home Cooking and Personal Science (2013-03-13 05:00)

Last week I had pizza at the home of my friends Bridget and Carl. It tasted divine. The crust was puffy, chewy and the right amount. The thin-crust bottom was slightly crunchy. The tomato sauce had depth. The toppings (two kinds of mushrooms, Jerusalem artichokes, zucchini, onions, goat cheese) were tasty, creamy and a little crunchy. It was pretty and three-dimensional. It was easily the best pizza I'd ever had, the best home cooking I'd ever had, and much better than the lamb I'd had at Chez Panisse the night before, although the lamb was excellent. The pizza hadn't been hard to make nor were the ingredients expensive. Do other people wonder why this is so good? I asked my friends.

At some level I knew why it was so good – why the sauce was so good, for example (see below). The puzzle – let me call it the Pizza Paradox – was that commercial pizza, even at fancy restaurants (such as Chez Panisse), is so much worse. In restaurants, pizza-makers make dozens of pizzas per day. Business success is on the line. That should push them to do better. Professional cooks study cooking, have vast experience. They use a pizza oven. My friends have never studied cooking, never cooked professionally. They might make pizza once/month. Nothing is on the line. My friends don't have a pizza oven. High-end restaurant pizza should be much better, but the opposite was true.

In my experience, high-end restaurant food usually is much better than home-cooked versions. Why is high-end pizza a big exception – at least, compared to Bridget and Carl's version?

My explanation has two parts. First, the concept of pizza is brilliant. It taps more sources of pleasure than any other food I can think of. Chewiness from crust. Fat from cheese. Umami, sweet, and sour from tomato sauce. Protein from cheese and meat. Complexity of flavor from sauce and toppings. Variety of texture from toppings and crust. Variety of flavor from toppings. Attractive appearance from toppings and bright red tomato sauce. Most foods fail to tap most of these sources. For example, a soft drink isn't chewy, doesn't have protein, doesn't have fat, doesn't have variety of texture or variety of flavor, and isn't attractive.

My friends had one goal: to make the best possible pizza. It couldn't take too long or cost too much but they

weren't trying to save time or cut costs. Over the years, they tweaked the recipe various ways and their pizza got better and better. Experimentation was safe. If a variation made things worse, it didn't matter. It would still taste plenty good. (Due to the brilliance of pizza.) Variation was fun. After making pizza in a new way, they'd eat the pizza themselves (with guests) and find out if the new twist made a difference.

Professional pizza makers don't do this. After a restaurant opens, they make pizza roughly the same way forever. The pizza at Chez Panisse, for example, looks the same now as many years ago. The owner might want to make the best possible pizza but is unlikely to experiment month after month year after year. The actual cooks just want to make satisfactory pizza. Making the best possible pizza is not part of the job. The owner might benefit from better pizza but the cooks would not. They're cranking it out under time pressure (watch Hell's Kitchen). They do what they're told. Owners fear experimentation: It might be worse. It won't be what's expected. Don't mess with success.

This illustrates what I've said many times: job and science don't mix well. To do the best possible science or make the best possible pizza, you need freedom to experiment. People with jobs get stuck. All jobs – including professor at research university, [1]rice grower, and pizza maker – depend on steady output of the same thing again and again. Trying to maximize short-term output interferes with long-term improvement. To do the best possible science or make the best possible pizza, you also need the right motivation: You care about nothing else. People with jobs have many goals. This is why we need personal science: To overcome the (serious) limitations of professional science.

All this should be obvious, but curiously isn't. Long ago, philosophers such as John Stuart Mill claimed that people "maximized utility", apparently not realizing that maximizing output (which happens when people work "hard") slows down or prevents innovation. Later thinkers, such as Frederick Hayek and [2]Milton Friedman, glorified markets. They too failed to grasp, or at least say anywhere, that market demands get in the way of innovation.

The recipe for my friends's pizza had several non-obvious features:

1. Pizza dough from Trader Joe's. At Chez Panisse and other high-end restaurants, this would be taboo. It might produce better results – you still couldn't do it.
2. Pizza stones above and below the pizza. My friends use an ordinary oven. Maybe an ordinary oven with two pizza stones produces better results than a pizza oven.
3. Balsamic vinegar in the tomato sauce. They got the idea from a friend. American cooks, including professional ones, routinely fail to understand how much fermented foods (such as balsamic vinegar) can improve taste. My friends also use more traditional flavorings (marjoram, basil, and garlic) in the tomato sauce.
4. Plenty of goat cheese. They scatter goat cheese slices over the top of the sauce.

There you have the secret of Bridget and Carl's Pizza.

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1. <http://blog.sethroberts.net/2013/03/05/a-revolution-in-growing-rice/>

2. <http://www.marketobservation.com/blogs/index.php/2012/05/17/milton-friedman-on-innovation?blog=10>

Tom (2013-03-13 05:59:35)

Great post. It reminded me of something James Altucher wrote a while ago: "A friend of mine once ran a chain of 100 pizza restaurants. He bought them out of near-bankruptcy and completely turned them around. I asked him what was the key to success of running 100 pizza restaurants. "I'll tell you the one secret," he said. "Make round pizzas". It turns out that too often the pizzerias were making odd-shaped pizzas. Or would be delivered with the wrong ingredients. Or would be delivered too early or too late. He basically said, "don't make basic mistakes" and you will be successful. He didn't set out as his goal to make "the best pizza in the world". Nothing close (almost by definition: his chain was made up all of Dominos pizza stores). He just wanted to do nothing wrong. The stores completely turned around and became super successful. He eventually sold them and made a lot of money."

LisaW (2013-03-13 06:07:35)

What a lovely article! Left me with lots to think about and an appreciation for the fascination of pizza. Thank you :)

August (2013-03-13 06:16:03)

The implications sound much like some of the stuff Celia Green says. The aristocracy and/or those with fortunes end up being the real source of innovation, because they have the time and the insulation from other peoples mores, to do the work. For a variety of reasons, one can innovate in pizza rather well, but I suspect there are a lot of projects for which being a wage-slave still gets in the way. Seth: I will check out Celia Green's work. I have requested her book *The Decline and Fall of Science*. Is this where she writes about similar ideas? It's very true that the aristocracy, etc., "end up being the real source of innovation." Darwin was independently wealthy, Mendel, as a monk, was in a kind of aristocracy.

jay (2013-03-13 06:32:39)

you are leaning too heavily on the idea of taste as a fixed value; many people prefer different toppings, or thickness of crust in their pizza, more traditional preparations from Naples only use raw tomatoes for the tomato sauce, not a prepared cooked "pizza sauce" typically found on north american variations. some folks may prefer the sweeter/saltier sauce than the raw tomato and vice versa. this amounts more to preference than absolute taste. this is akin to making a case for the best way to drink coffee- people have highly preferential ways to drink coffee, no matter how traditional or statistically better one way is presented its about personal preference. the pizza you insist was the best ever may not be an opinion shared by each person who ate that same pie. Seth: There are widely-shared preferences. This is what allows the food industry to create popular products. For example, soup tastes better with certain amount of salt than no salt.

Matt Weber (2013-03-13 08:16:41)

I make pizza at home every so often (less now with the baby), and I've had the same experience - it easily competes, except on convenience, with anything we can buy. But I'm not sure how much it has to do with experimentation. Our first pizzas were already amazingly good; we have tweaked the recipe to optimize it within reason (our constraints are similar to Bridget and Carl's), but I'd say our improvements have been incremental. We did start off with homemade dough and sauce, and local mozzarella, all of which are noticeably better than packaged alternatives - but those, in turn, still make homemade pizza that is better than almost anything we can buy. We do typically put caramelized onions on our pizza, which is an unusual topping, but it's still very good when we don't. Seth: Perhaps your tomato sauce could taste more complex. The usual recipes do a poor job of producing complexity. Likewise, mozzarella does not have a complex flavor.

DDR (2013-03-13 12:34:42)

This guy does some serious pizza experimentation. <http://www.varasanos.com/PizzaRecipe.htm>

Lemmy Caution (2013-03-13 12:46:23)

My kids eat a lot of pizza and they appreciate pizzas from different stores. There is something about the minor differences that they like, even though they pretty much get the same toppings every-time. If you order from the same store all the time they habituate to the taste and don't like it as much. This isn't the same as coffee where people get cross-addicted to an exact brand served in the same way.

Alex (2013-03-13 13:46:20)

Thanks, I needed this perspective. I often feel like I'm doing a lousy job at personal science, because my record-keeping is the pits, I do experiments in fits and starts, etc. If this were my job I'd never get tenure. But in the past couple of years I've made significant progress on big problems, and I've gained important insights. I couldn't run a pizzeria for a day, but I'm turning out great pizzas at home. By the way, Celia Green is, if nothing else, delightfully quotable: [http://en.wikiquote.org/wiki/Celia\\_Green](http://en.wikiquote.org/wiki/Celia_Green) "It is easier to make people appear equally stupid than to make them equally clever, so teaching methods are adopted which make it practically impossible for anyone to learn anything."

dearieme (2013-03-13 14:08:43)

Here is my wife's great advance in pizza-making. We like to eat cheese fondue. There is always some left - a mixture of gruyere and emmenthal, flavoured with riesling, nutmeg and whatnot. We put it in the fridge and use it next time she does a pizza. Yowee!!!!

Paul N (2013-03-13 15:57:49)

"job and science don't mix well." this may be true, but where you have an owner-operator, rather than a wage employee, it is often not true. Farmers are probably the best example. Many great innovations, like the stump jump plough and the combine harvester were invented by individual farmers (though it often needed a company to bring the invention to market). Farmers sometimes experiment with other things - crop and livestock management, and sometimes the "experiments" happen by themselves - unusual seasons/weather/soil conditions, noticing a difference between early and late planted X, or what happened when they didn't plough/spray, or when they overgrazed, etc i'd say the key ingredient is a motivation to invent/innovate/learn. It is not just the independently wealthy who have it, but also those who need to do more/better for their own good. This is not often wage earners. Seth: The revolution in rice farming I wrote about recently happened because a non-rice-farmer got involved. One person. His work revealed that the millions of rice farmers were not doing nearly enough experimentation. Maybe they can do engineering (e.g., stump jump plough). They can't do science (here, agricultural science).

babar (2013-03-13 18:25:19)

'high end' really doesn't exist for pizza - i can't think of many places you can spend \$50 on a pizza meal in the US). the cost of your friends' labor on the pizza alone at their normal pay rate would have been much higher than \$50 i am sure.

babar (2013-03-13 18:27:25)

to be clearer: the reason that you can't get really good pizza is that very few people will pay for it - there's no market for high end pizza. there are some places in brooklyn, franny's for example, and some newish places like motorino, that do things you can't realistically do at home. price point is much higher than most people are prepared for when they think 'pizza'. Seth: Why is the pizza at Chez Panisse so bad, compared to what it could be? They could make much better pizza at almost exactly the same cost. They sell plenty of pizza at their price.

Paul N (2013-03-13 22:47:13)

With the farmers, many used to do their own science(experiments in productivity and land improvement), and a few still do (e.g. Joel Salatin). But almost all of them these days have been brainwashed into leaving it to the "experts", be it universities, USDA, Monsanto etc. there is certainly scope for fresh ideas from outside, like the rice example, but there is also scope from inside. Salatin's example shows that many cattle ranchers are doing it wrong too. The key thing is whether their ideas are picked up and implemented by others, otherwise, like your pizza example, the personal science only gets applied by/to that one person. I will certainly agree it is easier to experiment with things, like pizza or personal health, that you are not dependent on for your living. But some farmers and other owner operators still do their experiments too, we just don't always hear about them. Seth: A book called The Power of Duck describes how a rice farmer vastly improved the yield from a small piece of land. I agree, there are exceptions.

George (2013-03-14 05:46:05)

The best pizza makers in New York produce fantastic pizza that I am 100 % sure is much better than your friends pizza, and it is their job, so I don't think there is really much in what you are saying. I think it has more to do with the fact that a restaurant not geared towards pizza, like Chez Panisse, won't prioritize it, and further and perhaps more importantly, MANY Americans have awful taste in pizza, so few places are incentivized to produce truly great pizza. My brother in law, from San Jose, hates New York style pizza and loves the crappy stuff you get at Mountain Mike's. Making fantastic pizza doesn't require too much innovation - only at the beginning, until you get it right, and nothing essential about a job will make that harder to do. Indeed, it seems like having an indiscriminating consumer base for pizza (most Americans) as well as not specializing in it but merely having it as one item among many, is what's responsible, with number 1 being the main culprit, judging by how bad pizza is in America generally, even at fancy restaurants, with the one exception being New York which happens to have an extremely discerning consumer base for pizza. This example isn't really a good basis for making generalizations about the nature of jobs - yes, jobs can be poorly designed so that they stifle experimentation, but then again, there is nothing essential about a job that does this. Seth: "There is nothing essential about a job that does this." Let me try again to explain it. Foragers can either "explore" (look for new food sources) or "exploit" (revisit known food sources). They can't do both at once. Jobs are essentially exploit, not explore. You hire someone to do something that will make money. I can think of thousands of examples. I can't think of a single case where someone was hired to explore. Sure, some people on some jobs do a small amount of exploration. Google encourages this - but they have to encourage it. Otherwise it would almost never happen.

Evolutionarily (2013-03-14 07:09:22)

Perhaps you have quite refined tastes compared to the "average" individual. I tend to view these circumstances organically in that as these businesses grow ever larger they are forced to satisfice a widening but middle dominated area of the bell curve of tastes, as that is where the numbers are... It is actually an evolving process but rather it devolves to be generic overtime as that becomes the most acceptable pizza on average. Seth: I don't think I have refined tastes, at least with pizza. (Maybe with tea.) I rarely eat pizza, I am not a connoisseur. I think everyone, not just me, wants a tomato sauce with a deep complex flavor. I think everyone wants a variety of textures. And so on.

q (2013-03-14 13:54:06)

Seth: Why is the pizza at Chez Panisse so bad, compared to what it could be? They could make much better pizza at almost exactly the same cost. They sell plenty of pizza at their price. I don't know first hand about Chez Panisse because I haven't eaten there. I live in NYC and it's not convenient. Among people that I know, a lot of them think that Chez Panisse used to be better than it is, and now even though they aren't as good as before they can charge a premium based on their reputation. I don't know if this is true in the case of Chez Panisse but it does happen a lot in the restaurant business (and not just the restaurant business!) I was thinking about your article today and if you think about it a whole lot of food items are like this. For instance I can make a much better cheese sandwich with ingredients from most stores than I can from almost any restaurant. Peanut butter sandwiches too. Why?

Matt (2013-03-14 14:04:35)

This reminds me of the story behind Umami Burger and how he made an amazing hamburger without professional culinary training. <http://www.lamag.com/features/2012/05/01/empire-of-the-bun>

George (2013-03-15 12:30:23)

Regarding the best pizza to be had in New York, the 3 I like best, in descending order of excellence, are Difara in Flatbush, Totono's way out in Coney Island, and Grimaldi's by th Brooklyn Bridge. Now this is just from the places I have tried. Supposedly authentic pizza places are popping up all over Brooklyn and NY that many say are the equal of the above named places, but I haven't eaten at most of them, and the few that I have, like 88 on Atlantic avenue downtown, was very good with great fresh ingredients, but fell short of top honors. One of these days I have to make a pizza tour of NYC - mostly Brooklyn, really - and see if I have to revise my estimates :) But I doubt. Pizza cant get any better than the first two of those places.

Paul (2013-03-15 15:38:51)

Grimaldi's by the Brooklyn Bridge is fantastic. Grimaldi's in Hoboken is utterly mediocre. They use the same kind of coal-fired brick oven, the same ingredients, and reportedly the same preparation techniques, but their pies are soggy, doughy, and not particularly flavorful. I don't know nearly enough about pizza to theorize as to why that is.

Kirk (2013-03-15 16:48:37)

Cooking is the easiest place to learn the rewards of self-experimentation. And in my opinion, guacamole is easier than pizza. Base: either mashed or cubed avocado Vegetables: one or more of: tomato, peppers (green, red, jalapeno . . . ), onion, garlic Herbs and Spices: one or more of: cilantro, cumin, onion powder, garlic powder, cilantro, salt Citrus: lemon juice or lime juice Seth: I suggest adding balsamic vinegar. And irregularly chop the red pepper.

Kirk (2013-03-16 07:26:38)

Regarding guacamole, I experimented with variations about 25 years ago (using different recipes). I finally came to the conclusion that onion and peppers overwhelm the avocado, that the tomato must be peeled and chopped into tiny pieces, that cilantro must be used sparingly, and that the flavors to add are cumin, coriander, onion salt, and garlic powder. I haven't taken the test further to determine if lemon juice or lime juice is best (or balsamic vinegar in your case . . . . I don't like vinegar). It's a small group of ingredients which can be combined quickly to create side-by-side comparisons, with no baking required. The only problem is that after creating your own recipe this way, no restaurant guacamole compares. All the others are a variation on, 'how disappointed am I going to be?' Seth: That's good to know. You don't like vinegar? Apparently you like sour, since you use lemon juice or lime juice. I fail to see the difference between using vinegar and using them. None of your ingredients produces a complex flavor. I think there is room for improvement.

Alex Chernavsky (2013-03-17 10:05:54)

There is a large dose of arbitrariness in such discussions of optimal recipes. With regard to the pizza cooked by Seth's friends, I doubt that I would have liked it much, even back in the day when I ate dairy products. To me, goat cheese always had an unpleasant odor and flavor.

Kirk (2013-03-17 19:57:40)

Sometimes the best approach when cooking is to bring out the essence of the food. For example, I prefer most vegetables to be boiled in salted water until they're halfway between crisp and soft, then drain them and dress with butter. As for guacamole, my recipe enhances the essential flavor of avocado while generating a different flavor. I will experiment with adding fermented food and will send you a link to the results. I'm actually not here to argue about recipes. My understanding is that you're writing a book about how people can benefit by personal experimentation. I suggest that cooking is an easy way to introduce the concept, and that guacamole may be an easier introduction than pizza.

Alex Chernavsky (2013-03-18 05:46:11)

@Kirk, the last two times I made guacamole, I added chunks of fresh grapefruit flesh (minus all the yucky membranes). It was surprisingly good.

Chris (2013-03-18 18:55:09)

How do your friends make use of the second pizza stone? Seth: They put it above the pizza.

Bookmarks for March 19th through March 20th | [dekey.org](http://dekey.org) (2013-03-20 07:03:31)

[...] Seth's Blog » Blog Archive » The Pizza Paradox: Home Cooking and Personal Science – [...]

Will (2013-03-20 07:29:14)

Isn't that the point of tenure? You prove you're smart and capable of strong scientific contributions. and then you draw a paycheck for life and you're free to work on whatever you want to work on. It may be onerous to get tenure, but there has to be some selection mechanism and I'm not prepared to suggest a better one. Seth: I agree, tenure does increase freedom. But

not enough for all purposes.

### **The Climategate Leaker Speaks (2013-03-14 05:00)**

The person who assembled and disseminated the Climategate emails has now [1]explained his or her actions:

The first glimpses I got behind the scenes did little to [increase] my trust in the state of climate science – on the contrary. I found myself in front of a choice that just might have a global impact.

Briefly put, when I had to balance the interests of my own safety, privacy\career of a few scientists, and the well-being of billions of people living in the coming several decades, the first two weren't the decisive concern.

It was me or nobody, now or never. Combination of several rather improbable prerequisites just wouldn't occur again for anyone else in the foreseeable future. The circus was about to arrive in Copenhagen. Later on it could be too late.

Most would agree that climate science has already directed where humanity puts its capability, innovation, mental and material "might". The scale will grow ever grander in the coming decades if things go according to script. We're dealing with \$trillions and potentially drastic influence on practically everyone.

Wealth of the surrounding society tends to draw the major brushstrokes of a newborn's future life. It makes a huge difference whether humanity uses its assets to achieve progress, or whether it strives to stop and reverse it, essentially sacrificing the less fortunate to the climate gods.

We can't pour trillions in this massive hole-digging-and-filling-up endeavor and pretend it's not away from something and someone else.

If the economy of a region, a country, a city, etc. deteriorates, what happens among the poorest? Does that usually improve their prospects? No, they will take the hardest hit. No amount of magical climate thinking can turn this one upside-down.

It's easy for many of us in the western world to accept a tiny green inconvenience and then wallow in that righteous feeling, surrounded by our "clean" technology and energy that is only slightly more expensive if adequately subsidized.

Those millions and billions already struggling with malnutrition, sickness, violence, illiteracy, etc. don't have that luxury. The price of "climate protection" with its cumulative and collateral effects is bound to destroy and debilitate in great numbers, for decades and generations.

Conversely, a "game-changer" could have a beneficial effect encompassing a similar scope.

If I had a chance to accomplish even a fraction of that, I'd have to try. I couldn't morally afford inaction. Even if I risked everything, would never get personal compensation, and could probably never talk about it with anyone.



I took what I deemed the most defensible course of action, and would do it again (although with slight alterations – trying to publish something truthful on RealClimate was clearly too grandiose of a plan ;-).

Even if I have it all wrong and these scientists had some good reason to mislead us (instead of making a strong case with real data) I think disseminating the truth is still the safest bet by far.

From my point of view, the best thing about the Climategate emails is that they were more evidence that mainstream thinking about something can be grossly wrong – that a "crazy" position can be right. My self-experimentation taught me this over and over (e.g., the Shangri-La Diet).

1. <http://tomnelson.blogspot.com/2013/03/mr-foia-speaks-time-to-tie-up-loose.html>

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Alex Chernavsky (2013-03-15 13:03:35)

My "crazy" position is that many standard practices in the mental-health industry are harmful. In part, that view is become slightly less controversial, as we get increasing evidence of the dangers of psychotropic drugs. But I think that many non-pharmacological interventions are harmful, as well. For instance, addiction treatment may very well produce worse outcomes than no treatment.

### **Omega-6 is Bad For You (2013-03-15 05:00)**

For a long time, nutrition experts have told us to replace saturated fats (solid at room temperature) with polyunsaturated fats (liquid at room temperature). One polyunsaturated fat is omega-6. Omega-6 is found in large amounts in corn oil, soybean oil, and most other vegetable oils (flaxseed oil is the big exception). According to *Eat Drink and Be Healthy* (2001) by Walter Willett (and "co-developed with the Harvard School of Public Health"), "replacing saturated fats with unsaturated fats is a safe, proven, and delicious way to cut the rates of heart disease" (p. 71). "Plenty of proof for the benefits of unsaturated fats" says a paragraph heading (p. 71). Willett failed to distinguish between omega-3 and omega-6.

[1]A recent study in the BMJ shows how wrong Willett (and thousands like him) were. This study began with the assumption that omega-3 and omega-6 might have different effects, so it was a good idea to try to measure the effect of omega-6 separately.

They reanalyzed data from a study done in Sydney Australia from 1966 to 1973. The study had two groups: (a) a group of men not told to change their diet and (b) a group of men told to eat more omega-6 by eating more safflower oil (and reducing saturated fat intake, keeping overall fat intake roughly constant). The hope was that the change would reduce heart disease, as everyone said.

As these studies go, it was relatively small, only about 500 subjects. The main results:

Compared with the control group, the intervention group had an increased risk of all cause mortality (17.6 % v 11.8 % [emphasis added]; hazard ratio 1.62 (95 % confidence interval 1.00 to 2.64); P=0.051), cardiovascular mortality (17.2 % v 11.0 %; 1.70 (1.03 to 2.80); P=0.037), and mortality from coronary heart disease (16.3 % v 10.1 %; 1.74 (1.04 to 2.92); P=0.036).

A 50 % increase in death rate! The safflower oil was so damaging that even this small study yielded significant differences.

The authors go on to show that this result (omega-6 is bad for you) is supported by other studies. Walter Willett and countless other experts were quite wrong on the biggest health issue of our time (how to reduce heart disease, the #1 cause of death).

1. <http://www.bmj.com/content/346/bmj.e8707>

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MikeW (2013-03-15 07:38:56)

The BMJ article is interesting, but that old Sydney study has drawbacks that make it almost meaningless today. First of all, 70 % of the participants were smokers. That may have been representative of Australian men in the 60's, but nowadays that level of smoking prevalence is unheard of in the West. Most of these guys had 2 strikes against them already, the omega 6 consumption may have had just a minor effect that pushed them over the edge. Second, trans fats. Nobody was talking trans fats in those unenlightened times, so nobody measured the trans fat of the Miracle margarine that was fed to the intervention group. The BMJ article's response section has a good post from the authors arguing why they don't think trans fat was the problem, but the bottom line is we just don't know how much trans these men were eating. Today almost everyone (including Walter Willett) agrees that trans fats are far worse than saturated fats. Seth: The article I cite considers several other studies. Taken together, they support the main conclusion of the Sydney study.

dearieme (2013-03-15 08:12:14)

The striking lesson is that all that health propaganda was bruited about without there being any worthwhile data to support it. The propagandists were reckless bastards, eh?

Nancy Lebovitz (2013-03-15 08:49:08)

What do you think about the safety of olive oil? Seth: Safe in small amounts, shown by studies supporting the Mediterranean diet. Dangerous in large amounts because it is high in omega-6. I much prefer flaxseed oil to olive oil.

Paul N (2013-03-15 13:35:08)

@ Mike W, I don't think we can rule out this study because some of the participants were smokers. There is no avoiding the fact that the intervention group, following the best medical advice of the day, had a 50 % increase in death rate. A good discussion on this study, and the various doctors responses, is at [1]George Henderson's website. From there, is this quote from Professor Jean Gutierrez of Washington University; "In addition to increasing PUFA intake, participants in the intervention group reported reduced dietary saturated fat, cholesterol, and calorie intake from baseline. A negative energy balance was verified with a slight mean drop in BMI. As expected, circulating total cholesterol and triglycerides were reduced in the intervention group, but mortality outcomes were not improved consequent to these circulating lipid and anthropometric changes, which is unexpected and interesting. The more important question arising from this study may be why a dietary intervention that improved all of these commonly used surrogate end points did not reduce all-cause mortality? " So these people did what we are told to do today - eat less sat fat, lose weight and lower cholesterol, and for doing all that, they died 50 % faster! A modern version of this trial, the LOOK Ahead trial, was stopped last year after 11 years of diet and lifestyle intervention (following the advice of the ADA and the National Cholesterol Education program) failed to show any improvement in cardiovascular outcomes. Again, the intervention group showed "improvement" (lowering) in cholesterol, and a small BMI decrease, but did not show improvements in CV event or death rates. Good discussion of the trial at Hyperlipid. Not only is there a refusal by the medical community to consider that omega-6 might be unhealthy, there is equally a refusal to consider that lower cholesterol (achieved by "diet" or drugs) might not be healthy either.

1. <http://hopefulgeranium.blogspot.ca/2013/02/the-results-show-that-omega-6-linoleic.html>

Valtsu (2013-03-15 14:02:45)

Hi Seth! Regarding heart disease, have you read about Broda Barnes and his work on CVD? Quite interesting IMHO... <http://180degreehealth.com/2009/01/master-broda> <http://valtsus.blogspot.fi/2013/01/thyroid-hormones-and-heart-disease.html> (my article with more references... )

dearieme (2013-03-15 14:53:43)

Ahoy, Seth. <http://www.dailymail.co.uk/health/article-2293948/Could-olive-oil-key-weight-loss-Scientists-discover-SMELL-make-feel-full.html>

dearieme (2013-03-16 07:17:07)

"I much prefer flaxseed oil": but do I want my salads to smell of cricket bats? Seth: on salads I use olive oil.

Paul N (2013-03-16 08:35:51)

We can get a (US) population wide picture of Omega 6 consumption by looking at this paper, which charts trends in food, and n-3 and n-6 fat consumption over the last century. The most amazing change is the spike in soybean oil (mostly comprised of n-6) consumption since the late 60's. there is also an increase in (soy based "shortening" while lard and butter decreased) Why did this increase? "The historical event immediately preceding the largest increase in apparent consumption of soy oil in the United States was the 1961 American Heart Association (AHA) Central Committee Advisory Statement (32) that advised Americans to replace their saturated fat intake with polyunsaturated fats. " And what was the impact on heart disease from 1970 to now? From the American Heart foundation's website, we can see from [1]this graph that the incidence of heart disease, as measured by hospital admissions, has \*doubled\* from in that period. Now correlation is not causation, of course. But if something is anti-correlated - like the decrease in sat fat consumption with the increase in heart disease - chances are it is \*not\* the cause. The dramatic increase in consumption of soy-fed (and anti-biotic treated) chicken probably hasn't helped, either. Seth: Your "this paper" link doesn't work. I cannot find where you get the idea that the incidence of heart disease doubled from 1970 to now.

1. [http://www.heart.org/idc/groups/heart-public/@wcm/@sop/@smd/documents/downloadable/ucm\\_449847.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@sop/@smd/documents/downloadable/ucm_449847.pdf)

dearieme (2013-03-16 12:43:52)

"the idea that the incidence of heart disease doubled from 1970 to now": once you allow for the age of the population, incidence has fallen, has it not? For reasons nobody understands (except for the effect of smoking); similarly, nobody knows why it raced upwards from about the 20s to the 60s (with the same exception). Or so I understand, but I'm no expert. The trouble is, the experts don't seem to be experts either.

Paul N (2013-03-16 21:33:05)

I'll try again. The paper in question is [1]Changes in consumption of omega-3 and omega-6 fatty acids in the United States during the 20th century. Which I found from a 2011 post from [2]Stephan Guyenet on the topic of n-3 and n-6 consumption. It is an excellent summary of dietary changes over this time. As for the idea that incidence had doubled, that is from the [3]graph on page 19 of the charts excerpt from the AHA 20123 statistical update. The number of "discharges" from hospitals for CV diseases went from 3.3m in 1970 to 6.2m in 2000 - an 88 % increase. Discharges means a patient that was admitted, and left, alive or dead, with a CV diagnosis. Whereas the more commonly used "mortality" means dead only. Mortality rates have improved, but that is due to better acute care. I didn't account for population. It was 200m in 1970, and 280m in 1980, so the CV incidence rate per capita increased by 35 % over that time. So, not as dramatic, but certainly in the wrong direction. That paper shows that n-6 has increased and sat fats decreased over the last century, and most dramatically in the 60's-80's. If n-6 was good, and sat fat bad, this should cause a noticeable decrease in CV events, yet they have only increased. So I would say it is "not looking good for the myth"

1. <http://www.ncbi.nlm.nih.gov/pubmed/21367944>

2. <http://wholehealthsource.blogspot.ca/2011/04/us-omega-6-and-omega-3-fat-consumption.html>

3. [http://www.heart.org/idc/groups/heart-public/@wcm/@sop/@smd/documents/downloadable/ucm\\_449847.pdf](http://www.heart.org/idc/groups/heart-public/@wcm/@sop/@smd/documents/downloadable/ucm_449847.pdf)

Clyde Adams III (2013-03-17 00:06:16)

You say one group was told to eat "more sunflower oil," then you say the "safflower oil was so damaging." Which kind of oil was it, sunflower or safflower? Seth: Safflower. Thanks for pointing this out.

Matt (2013-03-17 05:27:58)

Flaxseed oil is 10 % of calories from omega-6, about the same as olive oil. Obviously it may be healthful because of the omega-3 content, but consumption should probably be limited to a few tablespoons a day.

Jess (2013-03-18 15:09:57)

So are we reasonably sure that omega-3 is good for us? Is that a conclusion unlikely to be challenged in the next decade? Otherwise, I think it's back to the drawing board for this field. Seth: I'm sure omega-3 is good for me. The benefits are clear and repeatable.

George Henderson (2013-03-18 23:08:05)

Is omega-3 good for us? Well all these things are contingent. Greenland Eskimo with very high 3 and low 6 have such thin blood they suffer regular nosebleeds and stroke is more common than CVD. I think more to the point is that a balanced 3:6 ratio is better than a badly skewed one, and essential fatty acids are essential. The old "eat more PUFA, less SFA" advice was concocted before the role of omega 3s in diet was even discovered. It was a leap in the dark. "Eat a little more fish, fruit and greens and a lot less carbohydrate if your heart's a bit dicky, and for God's sake stop smoking and while you're at it don't drink so much and reduce your exposure to environmental toxins and dodgy drugs" would have been better advice. The form of PUFA is also important: <http://www.nutritionandmetabolism.com/content/10/1/23> n-3 PUFA added to high-fat diets affect differently adiposity and inflammation when carried by phospholipids or triacylglycerols in mice

### Assorted Links (2013-03-16 05:00)

- [1]Fermentation forum
- [2]Fruit and vegetable consumption today predicts happiness tomorrow
- [3]multiple sclerosis and mercury exposure
- [4]some bacteria protect against acne – a good reason to not take antibiotics for acne
- [5]A fecal transplant eliminated a serious intestinal infection (in mice)
- [6]The Iris Code (a 2004 article about Iris Chang)
- [7]Zeo (sleep tracking) out of business

Thanks to Paul Nash and Adam Clemens.

1. <http://www.wildfermentation.com/forum/index.php>
2. [http://www.eurekalert.org/pub\\_releases/2013-01/uoo-nss012213.php](http://www.eurekalert.org/pub_releases/2013-01/uoo-nss012213.php)
3. <http://iaomt.org/mercury-ms-summary-references/>
4. <http://www.sciencedaily.com/releases/2013/02/130228080135.htm>
5. <http://www.sciencedaily.com/releases/2013/02/130227121908.htm>
6. [http://www.salon.com/2004/11/30/iris\\_chang/](http://www.salon.com/2004/11/30/iris_chang/)
7. <http://mobihealthnews.com/20772/exclusive-sleep-coach-company-zeo-is-shutting-down/>

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gwern (2013-03-16 08:16:22)  
Zeo will certainly be missed.

## DIY Medicine (2013-03-17 05:00)

[1]A medium-length article in The Scientist describes patients with fatal diseases taking their treatment into their own hands. Here's what happened with lithium and ALS:

Humberto Macedo, an ALS patient in Brazil, started a Google Docs spreadsheet to track self-reported ALSFRS-R scores. And Karen Felzer, a research scientist on the US Geological Survey's Earthquake Hazards team whose father had ALS, built a website to host the project. At 3 and 6 months, Felzer, who has a background in statistics (normally devoted to analyzing earthquake aftershocks), examined the data. Both times, she found no evidence that lithium slowed progression. By November 2008, when Felzer posted her second report on the project's website, most patients had stopped taking the drug.

Drug companies don't like the new movement:

Drug companies are understandably wary of any movement that could jeopardize their chances of success, including patient-initiated trials. Drug developers go to great lengths to control the variables in clinical trials, to optimize the dosing and the treatment window in order to reduce side effects while maximizing therapeutic gain, and to monitor patients' health. If patients outside the clinical research system start taking experimental drugs on their own, the likelihood of something going wrong is greatly magnified. And if something does go wrong—something that may not have been caused by the drug at all—entire drug development programs could be shut down prematurely.

The author of the article, Jef Akst, was impressed enough to start [2]a blog about the subject.

1. <http://www.the-scientist.com/?articles.view/articleNo/34433/title/Do-It-Yourself-Medicine/>
2. <http://diymedicine.wordpress.com/>

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Paul N (2013-03-17 13:21:10)

Interesting article. It really illustrates the difference in thinking between a drug company and a terminally ill patient. Drug company (and medical profession in general) worry about what can go wrong - which could damage their reputation/financial status and don't want to go forward unless they can control/eliminate that. Patient - sees the prospect of something that might go right, and is willing to risk poorer health or even earlier death to try it. These are two completely different value sets, and for the drug cos to tell the terminally ill patients not to do it because it \*might\* hurt them highlights this difference. The patient is willing to take a risk the drug companies are not - the drug co's, FDA etc should not have the right to stop them.

derp (2013-03-18 01:58:32)

The drug companies and doctors are interested in the average, while the terminally ill patient decides he's either content with this average (a couple of months of low-symptom living till death) OR the option of trying something totally different and gaining years (maybe, theoretically, even curing himself). If I understood Taleb correctly, this is an example of "the long tail". Right, Seth? Seth: The term "the long tail" was used by Chris Anderson, not Taleb, and refers to something else. The situation you describe might be called misaligned incentives or simply different goals. The patient has different goals than the doctors and drug companies.

## Two Cents about Renata Adler (2013-03-18 05:00)

Renata Adler's two novels, *Speedboat* (1976) and *Pitch Dark* (1988), have just been reissued by New York Review Books. I was pleased to see [1]a recent New York article about her. Here is my two cents:

1. [2]*Gone: The Last Days of The New Yorker* (2000) is one of my favorite books. It can be summed up like this: Genius corrupts. I first came across it in the Berkeley Barnes & Noble. I couldn't stop reading it. When I left the store hours later my scooter had a parking ticket.
2. Her libel lawsuit is described [3]here.
3. She wrote [4]a book about the Bilderberg Group called *Private Capacity*. It was announced then cancelled.
4. During a panel discussion televised on C-Span, she took a phone call. It appeared to be from her daughter.
5. For several years she [5]taught journalism at Boston University. A student said she told great stories.
6. In a book review, she said that Woodward and Bernstein's *Deep Throat* was made up. Apparently she was wrong about that.
7. During a dinner I had with [6]Aaron Swartz last summer, he praised [7]her article attacking Pauline Kael ("*The Perils of Pauline*", 1980).
8. When her article about Kael came out, a friend of mine said, Now she'll be known as the person who attacked Kael. My friend was wrong. She is better known as [8]the person attacked by eight articles in the New York Times when *Gone* was published. One short non-best-selling book, eight negative articles from the most powerful pulpit on earth.
9. *Gone* and some books by Jane Jacobs were the only books I took to China. I also adore *Totto-Chan* but I suppose I have memorized it. I mostly read books by men, so I am puzzled that all my most favorite books are by women. A Chinese friend of mine stayed in my Beijing apartment while I was gone. Her English isn't very good but she praised *Gone*, which she called *Lost*.

1. <http://nymag.com/news/intelligencer/encounter/renata-adler-2013-3/>

2. [http://www.amazon.com/Gone-The-Last-Days-Yorker/dp/0684808161/ref=sr\\_1\\_4?ie=UTF8&qid=1363664171&sr=8-4&keywords=renata+adler](http://www.amazon.com/Gone-The-Last-Days-Yorker/dp/0684808161/ref=sr_1_4?ie=UTF8&qid=1363664171&sr=8-4&keywords=renata+adler)

3. [http://www.leagle.com/xmlResult.aspx?page=2&xmldoc=19862201643FSupp1558\\_11978.xml&docbase=CSLWAR2-1986-2006&SizeDisp=7](http://www.leagle.com/xmlResult.aspx?page=2&xmldoc=19862201643FSupp1558_11978.xml&docbase=CSLWAR2-1986-2006&SizeDisp=7)

4. <http://www.bilderberg.org/pepis00.htm>

5. <http://www.bu.edu/nisprod/coursedesc/data/archives/200709251128/www.bu.edu/bulletins/com/item17.html>
6. [http://www.newyorker.com/reporting/2013/03/11/130311fa\\_fact\\_macfarquhar?currentPage=all](http://www.newyorker.com/reporting/2013/03/11/130311fa_fact_macfarquhar?currentPage=all)
7. <http://www.nybooks.com/articles/archives/1980/aug/14/the-perils-of-pauline/?pagination=false>
8. <http://harpers.org/archive/2000/08/a-court-of-no-appeal/>

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BenSix (2013-03-18 05:26:37)

*She wrote a book about the Bilderberg Group called Private Capacity. It was announced then withdrawn. Allegedly, it was [1]cancelled because "a full length book treatment of the subject is probably not necessary". Yearly assurances that the conference is merely a few old blokes playing gold notwithstanding, I find that very hard to believe.*

1. <http://offonatangent.tumblr.com/post/45518984101/renata-adler-and-the-mysterious-never-published>

Paul (2013-03-18 18:09:08)

I love reading the Amazon reviews of *\_Gone\_*. There are a bunch of 1-star reviews right around the year of its publication. Not a lot of people wrote reviews on Amazon back then; it's pretty obvious what was going on. Adler is a treasure. Seth: I agree, the Amazon reviews are interesting.

Bryan (2013-03-18 18:25:42)

Seth, Is #7 based on personal knowledge? I couldn't find anything in the first link saying Swartz praised Adler's Kael attack. I'll for sure read *\_Gone\_* but Pauline rulez. Seth: Yes, #7 is based on personal knowledge. I had dinner with Aaron.

Elisa (2013-03-19 09:24:12)

Re: "I mostly read books by men, so I am puzzled that all my most favorite books are by women." A theory: It's more difficult for women to be taken seriously as authors (see the gender counts on the VIDA website) so they have to be better to rise to the top. Along the same lines, maybe you should choose a female surgeon? Seth: Plausible theory.

## Assorted Links (2013-03-19 05:00)

- [1]Natto Commuter Pass. Really. A Tokyo restaurant has innovative ways to sell/serve natto.
- [2]How to give an academic talk. I agree with almost all of this but it leaves out two important things: 1. Be as emotional as possible. Convey as much emotion as possible. 2. Tell stories. A good talk is a story.
- [3]Repetition in the history of diets
- [4]Fermentation bubbles back into the mainstream (newspaper article)
- [5]Stinky cheeses in China
- [6]Aaron Swartz lawyers accuse prosecutor Stephen Heymann of misconduct
- [7]Michael Wolff on Renata Adler

Thanks to Rashad Mamood.

1. <http://en.rocketnews24.com/2013/02/27/pork-cutlets-with-fermented-soybeans-all-you-can-eat-natto-part-2/>
2. <http://www.cs.berkeley.edu/~jrs/speaking.html>

3. <http://nymag.com/news/intelligencer/topic/diets-2013-3/>
4. <http://www.chicagotribune.com/features/food/ct-food-0313-fermentation-20130313,0,2844482.story>
5. [http://www.slate.com/articles/life/ft/2011/05/kicking\\_up\\_a\\_stink.html](http://www.slate.com/articles/life/ft/2011/05/kicking_up_a_stink.html)
6. [http://www.huffingtonpost.com/2013/03/13/aaron-swartz-prosecutorial-misconduct\\_n\\_2867529.html](http://www.huffingtonpost.com/2013/03/13/aaron-swartz-prosecutorial-misconduct_n_2867529.html)
7. <http://www.guardian.co.uk/commentisfree/2013/mar/18/return-renata-adler-quixotic-writers>

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dearieme (2013-03-19 05:41:09)

Our dinner last night was a particularly good Bigos - a Polish dish of sauerkraut and meats. We decided that it was distinctly better for having been in the freezer for a couple of weeks. I checked Wikipedia where I found that this is a known phenomenon. My question is: are there other fermented foods that gain from being frozen (or refrigerated) for a while? Seth: My experience is that dishes get better after a day or so in refrigerator when they are soups or casseroles or the like and have lots of spices. Back then I never ate fermented foods so can't comment on that aspect of it. I have always suspected that the dish gets better because the first time you eat it it is a new flavor (home cooking is inexact) and the flavor becomes associated with calories. The second time you eat it - after refrigeration or freezing - the flavor-calorie association makes it taste better. So I predict something you don't say: The Bigos was home-cooked and this was not the first time you ate it.

dearieme (2013-03-19 07:37:20)

<http://en.wikipedia.org/wiki/Bigos> "As with many stews, bigos can be kept in a cool place or refrigerated and then reheated later - it is said that its flavour actually intensifies when reheated. " We've eaten Bigos for decades - my wife had Polish neighbours when she was a child, and a Polish flatmate later. She (my wife) used to make Bigos as a one-off, but recently made plenty and froze the surplus. We were struck by how much richer the previously frozen dish tasted last night. We did NOT think that the improvement was due to the meats tasting better - the whole dish did, and the dominant component is the sauerkraut. So we concluded that it was the sauerkraut that gained by being frozen. Maybe we should try freezing sauerkraut alone?

PeterC (2013-04-14 15:34:35)

Seth On an old post about Natto (<http://blog.sethroberts.net/2009/03/28/natto-shopping/>), you say to a commenter something like, "Nice try, spammer, natto never has corn syrup in it." I wanted to comment there, but comments are closed. A Japanese friend discovered, much to her horror, that all six brands of natto available at Sunrise Mart, a popular Japanese market in New York City, contained corn syrup. She had never looked at the ingredients before, but I recently got her eating along the general lines of Perfect Health Diet. Another Japanese friend mentioned that if you ever see these ingredients on a label, they are different forms of HFCS: C6H12O6 C6H12O6 C6H12O6 C6H12O6 Best Peter Seth: Thank you for correcting me.

Adam (2013-04-15 02:32:13)

Reminds me I didn't eat my natto for the day! The brand I'm eating here in Shanghai, China has plain old sugar, no fructose. None of the natto I've ever eaten has been sweet, so I wonder just how much HFCS is in that natto your friend looked at.

PeterC (2013-04-15 17:40:22)

True, the natto never is sweet, which is why the presence of HFCS is so strange and never suspected. But I did some more research and discovered this page, which claims that the sweetener (either sugar or corn syrup) is for the accompanying flavor packet, which may be discarded. <http://theconsciouslife.com/top-probiotic-foods.htm> So I guess we're good. Seth: THAT makes sense.



## "Most [Scientists] are Trapped" (2013-03-20 05:00)

We need personal science, I say, because professional scientists lack freedom and have goals (e.g., status) other than progress. [1]Art Robinson agrees:

"Most [professional scientists] are trapped," [he said.] Trapped by government money. Filling out grant requests, politicking to be well-liked, serving on grant review boards, going to the meetings to be seen by others, will take half your time. The project itself had better be popular. "You're only going to get the money for something that everyone has heard of and thinks is the coming thing," he said. As for politically sensitive areas such as global warming, "your research had better come up with the results they want." At private research institutions, where half the money may come from private endowments, the research is nonetheless still held hostage. "Professors in these [institutions] who are candid with you will say, Well, we can't really do what we want here because half of our money comes from the government so we can't afford to put it at risk."

He also agrees with me about the importance of hormesis.

In the 1970s, when he worked at the Linus Pauling Institute, Robinson did a mouse experiment that found at certain doses Vitamin C increased cancer. This was contrary to what Pauling had claimed, and he reacted badly. As Robinson tells it,

Pauling responded to the unwelcome news by entering Robinson's office one day and announcing that he had in his breast pocket some damaging personal information. He would overlook it, however, if Robinson were to resign all his positions and turn over his research. When Robinson refused, Pauling locked him out and kept the filing cabinets and computer tapes containing nine years' worth of research. They were never recovered. Pauling also told lab assistants to kill the 400 mice used for the experiments. Pauling's later sworn testimony showed that the story about the damaging information was invented, while experiments by the Mayo Clinic conclusively proved that the theory about cancer and Vitamin C was wrong. . . . When he found himself locked out of his own office, Robinson sued Pauling for breach of contract, slander, and fraud. . . . The case was settled out of court with Pauling paying Robinson \$575,000.

Pauling wrote a book saying that large doses of Vitamin C shortened colds and another book about Vitamin C and cancer. Long ago, I took large doses of Vitamin C when I got a cold. It was hard to tell if it helped. Later I tried zinc, which definitely helped. After I improved my sleep, however, [2]I no longer got unpleasant colds. I stopped taking zinc. For me, Pauling's belief that megadoses of Vitamin C reduce colds was a dead end. (And [3]dangerous. It isn't reassuring that Pauling's wife, who took megadoses of Vitamin C for many years, died of stomach cancer.) Improving sleep isn't hard, and I suspect a much better way to improve immune function than megadoses of Vitamin C.

1. <http://www.independentscientist.com/>

2. <http://escholarship.org/uc/item/2xc2h866/>

3. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1541262/pdf/clinexpimmunol00225-0180.pdf>

Sentinel (2013-03-20 09:50:44)

"Improving sleep isn't hard." - This seems like a gross generalization. If only it were so for everyone! :) Some folks with long-term insomnia like myself bounce from supplement experiment to supplement experiment (D3, l-theanine, melatonin, valerian, magnesium, etc., etc.), try one-leg standing and skipping breakfast, etc., and get no results. Seth: Have you tried getting an hour of sunlight every morning, as early as possible?

Sentinel (2013-03-20 10:39:24)

I have done so whenever it's feasible. Feasible = sunny + before 8 am (when I must leave for work). The advent of Daylight Savings Time has made this much more difficult (for now). BTW, I really value your original essay on self-experimentation and your subsequent discussions on insomnia on this blog, and it has led me to carefully track various n=1 sleep experiments. M negative comment above is purely out of frustration with myself, not with your theories or observations. (BTW, is "black coffee" - void of protein, carbs, or fat - forbidden under the "no breakfast" program? I'll ask again at some future time if I am getting off topic.) Seth: If you are waking up tired a few hours before you usually drink black coffee you should certainly try cutting it out. The caffeine may produce anticipatory waking. Drinking a lot of caffeine will certainly cause sleep problems. Cutting it out is something else to try.

David (2013-03-20 10:51:59)

Agree that figuring out sleep issues is complicated. I tried D3 in the morning, exercise variations, sunshine, and many other ideas. For me, taking supplemental glycine did the trick. Sometimes by making gelatin, other times by simply popping a glycine pill.

dearieme (2013-03-20 13:25:32)

Sentinel, have you tried the artificial daylight lamps? My wife uses one in winter: it cheers her up but if she uses it too late in the day it can cost her sleep. So she uses it early in the day.

dearieme (2013-03-20 13:26:58)

By the way, I hadn't known Pauling was such a shit. Are there any leading scientists who are decent humans? Was the last really Clerk Maxwell?

Joe (2013-03-20 13:47:58)

Magnesium (oxide) didn't work for me as a sleep aid until I stated to take it throughout the day, with a larger dose right before bedtime (about one hour). My eyelids get heavy and out I go. 400mg in the morning, again around noon, and then 800mg at night. Works like a charm.

Sentinel (2013-03-20 14:02:27)

Dearieme, I have not tried an artificial daylight lamp; from what I know they are more for treating SAD, which I do not have. Do you believe, from your experience, that they work for circadian-rhythm-related sleep disorders (as opposed to the Seth-recommended "real sunlight" first thing in the morning)? Joe, regarding the magnesium dosage and timing, that's interesting. Today I took Natural Calm (ionic magnesium citrate) for the first time during daylight hours, just to see what would happen. One thing I've learned from Seth's blog is that details like timing and dosage are essential (witness Seth's discussion re Vitamin D3 timing), but these details are often left out by someone (doctor, blogger, etc.) making a recommendation. That's why I asked (above) if black sugarless coffee is "breakfast" for the purposes of Seth's "no breakfast" approach; that's also why I wonder the extent to which Seth exhausts a leg during his leg stands. :) Seth: I always do the one-leg stands to exhaustion. I found that artificial fluorescent lights with sunlight-similar spectrum improved my sleep.

dearieme (2013-03-20 14:45:36)

"Do you believe, from your experience, that they work for circadian-rhythm-related sleep disorders": I don't know since neither of us has such a problem. But their prices seem to have fallen a long way in recent years so I suppose it wouldn't cost too much to try.

Kudzu Bob (2013-03-20 16:03:01)

"By the way, I hadn't known that Pauling was such a shit." Speaking only for myself, I still don't know any such thing. I can only be certain that these two intelligent and opinionated men did not get along, and that Linus Pauling cannot offer a rebuttal. Seth: "Did not get along"? That understates what happened and the power asymmetry. Pauling fired Robinson for no good reason. And destroyed his data. And, apparently, threatened to destroy him. Robinson did not do anything like that to Pauling.

CC (2013-03-21 09:16:13)

Alright smart guys. I see all this talk of insomnia here, but do any of you have ideas on how to treat HYPERsomnia? I have a friend who needs to sleep 10-11 hrs/day or else she's positively exhausted. Any advice? The doctors are stumped.

Sentinel (2013-03-21 09:50:00)

Hi Seth, thank you so much for your responses. I now see that elsewhere you defined "to exhaustion" as "until it hurt too much to continue." That helps to clarify a bit. Regarding your statement that "artificial fluorescent lights with sunlight-similar spectrum improved my sleep", do you know what # "K" temperature fluorescent bulbs do this well, and how many bulbs/watts would be necessary to have a positive impact on sleep? BTW, I am very jealous that (as cited in your "Effect of One-Legged Standing on Sleep" blog entry) your daily "Rested" ratings only fluctuate in the narrow band between 99 % and 100 % (or when things are bad, between 95 % and 100 %). I think I am usually in the 0 % to 60 % category! :) Seth: I used 4 ordinary length fluorescent lamps. Their color temperature was about 5-6000. My face was about 4 feet away, they were shining upward I was looking forward. I wrote about this in my long self-experimentation paper (where I also discuss standing and sleep).

Joe (2013-03-21 11:44:51)

CC: That's above my pay grade, but hypersomnia is the need to sleep during the day. You didn't mention if your friend sleeps well at night. So this sounds like it might be related to depression rather than a need for more sleep. And possibly fibromyalgia, too.

Joe (2013-03-21 11:47:59)

Sentinel: "Today I took Natural Calm (ionic magnesium citrate) for the first time during daylight hours, just to see what would happen." So...what happened? And don't forget that dosage counts. At least for me, it does.

Sentinel (2013-03-21 14:44:22)

Joe, it made me a bit sleepy at the time I took it ( 3pm); as for the night time effect of daytime Natural Calm, it was inconclusive; if this Comment forum is still open in a few days, I will post something then about the effect daytime use of Natural Calm on nighttime sleep, after I accumulate some data.

CC (2013-03-21 18:39:42)

Joe: You're right... maybe hypersomnia wasn't the right term. Let's just say that she needs a \*lot\* of sleep. I think she sleeps well at night, but she still needs 10-11 hours. I think the doctors have considered depression and fibromyalgia, but I'll check. If you guys have any other ideas, let me know.

Sentinel (2013-03-22 08:45:30)

Joe, After my second day of mid-day Natural Calm magnesium citrate (2:30pm), I actually had a very good (for me) night of sleep. Fell asleep in 5 minutes, slept for six hours straight, which is unusual for me. In compliance with Dr. Roberts, I faced the rising sun for 30 minutes out of an open window from 7:30 to 8 AM. (Had to slink off to workplace.) Hopefully mid-day magnesium plus sun, applied consistently, will yield solid results. Thanks to all for support and advice.

Joe (2013-03-22 13:10:46)

Sentinel: Great. Why not try taking some magnesium right before bedtime, too? Yes, in addition to the magnesium you're taking at noon. Nota bene: There are many kinds of magnesium salt, and they vary widely in the amount of elemental magnesium therein. I recommend that you read "The Magnesium Miracle," by Carolyn Dean, M.D., N.D. for the full skinny.

Magnesium is as important for overall health as Vitamin D, in my opinion. PS to CC: It helps with depression and fibromyalgia, too.

Sentinel (2013-03-23 09:22:36)

I will try it! Many thanks.

Sentinel (2013-04-10 03:09:10)

Update: unfortunately, more Natural Calm (magnesium citrate) in afternoon and before bed, delaying 1st coffee 2.5 hours, and increasing exercise and 1st-in-AM sunlight (plus 6000K light, albeit only 45W) has had no effect on the early awakening. Usually I only have 1/2 to 1-1/2 cups of coffee in a day, and typically I have no trouble falling sleep at first, so I doubt eliminating the remaining coffee will solve the problem. I am developing n=1 fatigue.... :) Seth: You might try: 1. eating more animal fat. 2. one-legged standing. 3. Vitamin D3 in the morning.

Sentinel (2013-04-12 06:05:22)

Thanks again, Seth. I will try to increase animal fat intake; this might be a challenge for me, paleo but pescatarian. One-legged standing did not work for me, though I cannot say I continued doing it after a couple of weeks. I have taken 10k IU of D3 (Solger) almost every day for months but it has not changed my sleep.

### Seoul Restaurant Story (2013-03-21 05:00)

I was in Seoul for a few days. I wanted to go to a really good Korean restaurant. I did a lot of research. Finally I returned to where I started – [1]an article about "the ten best restaurants in Seoul" – and carefully picked one of them: Yong Su San.

I phoned the restaurant, got directions. It was almost dinnertime. To my surprise, it was only a mile away so I decided to walk. I didn't have a map but I could aim for the nearest subway station. I walked toward that subway station for a while, then asked someone for directions. She said another branch of that restaurant was closer to where I was. It was as if after extensive research I had decided that the best meal in New York was at McDonald's.

The restaurant was extremely good. For only \$60 I had a fascinating and delicious meal. At the end they give you a choice of "main food". I chose bibimbap. Bibimbap is all cheap ingredients (rice, vegetables, sometimes egg, hot sauce, sometimes a small amount of meat or fish) and strikes me as the best possible way of combining those ingredients. This is an eternal question – given a small amount of money, what's the best you can do? It's surprising that the best answer comes from a small country (Korea).

1. <http://travel.cnn.com/seoul/eat/10-best-korean-restaurants-seoul-114014>

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dearieme (2013-03-21 05:50:40)

Restaurants be damned. What we had for dinner for two yesterday: it really didn't cost a lot. First course: a timbale of basmati rice, a couple of ounces of smoked salmon discovered when stocktaking the freezer, red onion, and dill, accompanied by a green salad. Second course: aubergine (i.e. "egg plant") stuffed with minced lamb, red pepper ("capsicum"?) and onion, with spices (smoked paprika, cumin, ....). Third course: no room. We dined like kings, don't you think? Seth: I agree. I go to restaurants for social reasons, rarely for the food.

libfree (2013-03-21 10:16:15)

Did you mean to put \$60? That sounds expensive to me.

Morex (2013-03-21 10:33:41)

Here at home Shangri-la rules and we have been saving a lot of money in food. With something like \$20 we buy food for a week, for 2 people. That includes breakfast, lunch and dinner. We buy at a local community market full with local producer. We avoid supermarkets. (Community markets are common in Mexico and they are super cheap) Here are some examples of what we eat: Breakfast: half a cup of chopped fruit, coffee or tea. Sometimes half an egg and a small piece of bread. Lunch: About a couple table spoons of pasta, rice, salad, meat... you name it. We can't eat much because AS is very very strong. Dinner: A couple cookies and some milk. Sometimes half a quesadilla (one corn tortilla folded, with cheese inside). Sometimes I would have only a cup of coffee with cream and sugar. Oh and all the three meals include a lot of plain water. I don't think it can get cheaper than that. Since my girlfriend and me eat so little, we avoid restaurants. That may change when we enter maintenance phase, I guess.

Morex (2013-03-21 10:42:24)

Addendum! We did eat in Church's Fried Chicken the other day and ordered the kids meal for each. It was too much! That's when we decided to pass on restaurants for the time being.

Ashish (2013-03-30 21:03:18)

My recent memory of Seoul is that you could get a very good and quite large Korean meal for around \$5-6. (Which was the same price as a Starbucks sandwich, or an ice cream cone, or coffee and a donut.) \$60 seems sky-high for Korean food in Korea. Seth: It was a fancy restaurant.

### **Furikake (Japanese Condiment): Attention Crazy Spicers! (2013-03-22 05:00)**



From a trip to Japan a friend gave me a mystery jar of some sort of flavoring. It turned out to be wasabi-flavored [1]furikake. Furikake is used to season rice, I learned. It vaguely resembles salt and pepper but is far more complex and powerful. A version I bought has 25 ingredients, including sesame, wheat flour, lactose, salt, MSG, salmon, fish bone powder, and soybean protein. I use it many ways: on roast beef, eggs, and yogurt, for example. It is the easiest way I know to make hamburgers taste good.

The nearest Japanese market (in Berkeley) has 25 different types, I discovered. They cost about \$4 each. I bought

four. I'm going to buy ten more, to use for [2]crazy spicing (randomly varying the smell of food to prevent strong smell-calorie associations from forming).

1. <http://en.wikipedia.org/wiki/Furikake>

2. <http://boards.sethroberts.net/index.php?topic=7063.0>

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B.B. (2013-03-22 06:12:41)

I am surprised that you accept a seasoning that has MSG. Russell Blaylock wrote a book called Excitotoxins that condemned MSG and aspartame, among other chemicals, for harming the brain and leading to disease. I have heard from therapists that many of the kids they treat for ADD get better when MSG and aspartame are removed from their diets. Do you have a view on whether MSG is harmless? Seth: MSG gave a friend of mine nightmares. It isn't harmless. At least in the doses I eat it, it doesn't give me nightmares, however.

Alex Chernavsky (2013-03-22 07:09:29)

Seth, can you describe your current crazy-spicing regimen? I'm looking for ways to improve upon the effectiveness of Shangri-La dieting (in order to produce further weight loss). Seth: I do little with crazy spicing. What about eating more food nose-clipped?

Janet (2013-03-22 11:56:59)

I used Furikake for about 10 years, but I stopped when I found that the sugar-salt combination (and especially if there was MSG) in every single flavor of them made food taste more addictive, and I wanted to eat more, not less. Seth: You mean you wanted to eat less, not more?

Richard Sprague (2013-03-24 10:19:06)

My family and I love furikake, which I discovered while living in Japan in the 80s and 90s. I find it easy to buy in the US, sometimes even at bigger grocery stores. (You can also order it [1]at Amazon.) The brands I buy (including the one linked through Amazon) do not have MSG. It's easy to make your own too: just buy some crisp Japanese seaweed (Nori), crunch it up and mix with some sugar and salt. We often eat rice just with the nori.

1. <http://www.amazon.com/JFC-Nori-Komi-Furikake-Seasoning/dp/B0006G5KEY/>

### Assorted Links (2013-03-23 05:00)

- [1]Tonsillectomies are increasing. This article calls them "unnecessary". In fact, cutting off part of the immune system is likely to be harmful.
- [2]Doubts about Johns Hopkins genetics research (via [3]Robb Wolf)
- [4]The bad record of heart surgery. "Angioplasty can save the lives of heart-attack patients. But for patients with stable coronary disease, who comprise a large share of angioplasty patients? It has not been shown to extend life expectancy by a day . . . and it's done a million times a year in this country [America]." American health care is like a bad dream.
- [5]Why aren't birth control pills available without a prescription? "The current arrangement forces women to go to the doctor at least once a year . . . That demand may suit doctors' paternalist instincts and financial interests, but it doesn't serve patients' needs."

- [6]Cancer: the importance of what surrounds a cell (its "microenvironment").

Thanks to Nandalal and Bryan Castañeda.

1. [http://www.washingtonpost.com/blogs/wonkblog/post/what-tonsillectomies-tell-us-about-the-future-of-health-care/2012/04/25/gIQAt2pHhT\\_blog.html?wprss=rss\\_ezra-klein](http://www.washingtonpost.com/blogs/wonkblog/post/what-tonsillectomies-tell-us-about-the-future-of-health-care/2012/04/25/gIQAt2pHhT_blog.html?wprss=rss_ezra-klein)
2. [http://www.washingtonpost.com/business/economy/doubts-about-johns-hopkins-research-have-gone-unanswered-scientist-says/2013/03/11/52822cba-7c84-11e2-82e8-61a46c2cde3d\\_story.html](http://www.washingtonpost.com/business/economy/doubts-about-johns-hopkins-research-have-gone-unanswered-scientist-says/2013/03/11/52822cba-7c84-11e2-82e8-61a46c2cde3d_story.html)
3. <http://robbwolf.com/2013/03/15/evidence-based-medicine-fraud-double-standards-ignorance/>
4. <http://harvardmagazine.com/2013/03/a-cardiac-conundrum>
5. <http://www.bloomberg.com/news/2012-03-09/take-birth-control-battle-over-the-counter-commentary-by-virginia-postrel.html>
6. <http://www.lbl.gov/LBL-Programs/lifesciences/BissellLab/minapersonal/2008%20awards/East%20Bay%20Express%2012-12-07.pdf>

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Adam (2013-03-23 07:34:08)

Do prescriptions serve patient needs in the first place? The idea is that the doctor & pharmacist know more than you & have to protect you from yourself. It may be true that the experts know more than the patient in many cases, but information is spreading faster & faster these days. Anyone with an internet connection can check out a drug on Wikipedia & search PubMed. Because the relationship is set up this way (doctor tells patient what they need & gives them the permission slip to get it) patients may be more likely to blindly trust that what their doctor ordered is good for them, safe, etc. In fact, the opposite could just as easily be true. If patients could freely choose their own medicine, maybe they would more carefully research the options & potential consequences. Maybe it would reduce lawsuits against doctors (you can't sue a doctor for a drug you yourself decided to purchase & take!) and help lower healthcare costs across the board. Seth: I completely agree, that's an idea worth testing. It's quite plausible. Surely drug companies, pharmacists (whose advice would be more valued), and the general public would like it. Only doctors and perhaps lawyers would be against it.

Roger Sweeny (2013-03-24 09:25:23)

Wow, that article about "Cancer: the importance of what surrounds a cell (its microenvironment)" is more than five years old (magazine dated December 12, 2007). Seth: It's a classic.

## **Earwax Transplant Story (2013-03-24 05:00)**

I think [1]this actually happened:

A man came to the [University of Pittsburgh] clinic with a chronic infection in his left ear. He told doctors that other doctors had tried everything: anti-fungal drops, antibiotics, and many other treatments. The Pittsburgh doctors gave him additional antibiotics. The patient came back to the clinic a week later and said he was cured. The clinic doctors told him they were glad they had helped him. He said: "You didn't. I suffered so much after your drugs I took some earwax from my right ear and put it in my diseased left. In two days I was fine, infection cured." . . . The good ear contained good bacteria that killed off the bad in the bad ear.

I predict that people will eventually realize that the 2005 Nobel Prize for "ulcers are caused by bacteria" was [2]a big mistake.

Thanks to Mark Griffith.

1. [http://hpr1.com/opinion/article/six\\_pounds\\_of\\_stuff/](http://hpr1.com/opinion/article/six_pounds_of_stuff/)

2. <http://blog.sethroberts.net/2009/04/03/nobel-prize-cluelessness-stomach-ulcers/>

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dearieme (2013-03-24 06:34:19)

Have a care, Seth. You'll have us sticking earwax up our bottoms next.

Dan (2013-03-24 08:12:57)

Confused. If you believe his story, and you say you do right up top, then how does it follow that you say bacteria wasn't involved? Seth: I don't say "bacteria wasn't involved". The 2005 Nobel Prize in Medicine was awarded for the "discovery" that ulcers are caused by a certain species of bacteria. The earwax story implies that some bacteria are helpful: they hold down other (bad) bacteria. The broader implication is that when people get stomach ulcers it may be because other bacteria were not holding the bad bacteria in check. If this is true – and I think it is likely – then giving antibiotics for ulcers is a poor idea, even though it may help for a while.

Around the Web: Palm Sunday Edition | Perfect Health Diet (2013-03-24 11:49:10)

[...] Seth Roberts believes in earwax transplants for ear infections. [...]

Dan (2013-03-24 17:46:17)

OK, got it. You may not give this much value, but I work with a guy that promotes juicing and a juice machine and he has a proven way to fix stomach ulcers and it's with cabbage juice. He was involved in a Stanford University study in the 50s with an M.D. that proved it. A way to make it that's more palatable is called the 3 C's and that's cabbage, carrot, celery at 1/3 each. Drink three times a day for a week or two. Not sure how this fits into your bacteria/not bacteria theory, but based on people who have had success, all it takes is freshly made cabbage juice. I could send you links if you care for it, but if you think this is too easy and food and diet isn't the answer to most trouble Americans have, then I won't bother you with it. I like most of your stuff Seth, but I'm also bothered by your lack of credence to people's own experiences that show stuff works. You downplay evidence-based approaches, which is a shame. Seth: My "lack of credence to people's own experiences that show stuff works"? Could you give an example? This post ("earwax transplant") gives credence to an unusual way of treating an ear infection based on one person's experience.

Dan (2013-03-25 14:04:56)

Perhaps I'm mistaken, but I recall you saying in various posts that you were negative to "evidence-based" medicine. Maybe we have different definitions for the term. The main reason I read your blog is because you show stories like this one today and the fermentation ones, and all the others. Perhaps you meant it in a different way. I didn't save your posts so I'll have to wait until you bring it up again. Maybe you didn't say "evidence-based", perhaps it was a different term you used to distinguish scientific studies from people's actual experiences and from current medical practices. Sorry for the confusion on my part. I'm very interested in the experiences of you and others in finding ways to be healthy that work. Today in this new crowd sourcing era, we have an unprecedented opportunity to learn from millions around the world about health giving approaches that were previously unavailable to us. Some things will work and some won't of course, but the alternative is the same top-down health care we already have. Seth: Well put. I have a low opinion of "evidence-based medicine" because in practice the practitioners ignore a lot of evidence. I am against ignoring evidence. I wrote about this [1]here – the example of tonsillectomies where the "evidence-based medicine" reviewers ignored a vast amount of evidence that tonsillectomies are dangerous.



1. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

George @ the High Fat hep C Diet (2013-03-26 17:09:56)

Makes sense to me. My girlfriend has earaches sometimes, I told her about this, she says "Ew." But I believe it. I'd be surprised if it DIDN'T work to be honest. They'll make probiotic eardrops to get around the "Ew." factor

George @ the High Fat hep C Diet (2013-03-26 17:14:56)

"The Reason Why the Ignorant Physicians, the Common People, and the Women in Cities Are More Successful Than The Men of Science in Treating Certain Diseases and the Excuses Physicians Make for This" - title of a work by Rhazes, 865-925

Weekend Link Love - Edition 236 | Mark's Daily Apple (2013-03-31 07:55:54)

[...] Seth Roberts recently explored earwax transplantations. [...]

Janice (2013-03-31 12:22:52)

How is this much different from a fecal transplant for people with c diff?

Weekend Link Love | Interwebtalk.com (2013-03-31 21:52:22)

[...] Seth Roberts recently explored earwax transplantations. [...]

### **Does Unfamiliar Food Cause Weight Loss? (2013-03-25 05:00)**

[1]My theory of weight control predicts that eating unfamiliar food will cause weight loss. As food becomes familiar, we learn to associate its smell with its calories. Stronger smell-calorie associations produce a higher set point than weaker ones. Unfamiliar food has not yet gone through this learning process.

One way to eat unfamiliar food is to travel to another country. When I've done this, I've usually come home a few pounds lighter, supporting the prediction.

Another way is to have someone else choose what you'll eat. This is what [2]Dan Goldstein did. "I emailed my friend Dan Reeves, who has a fitness-expert sister named Melanie Reeves Wicklow, to request a healthy diet I could follow for seven days with no exceptions." He thought of it as a diet where he would make no decisions about what to eat.

Here's what happened on Day One:

Discovered that if you eat oatmeal with an egg in it instead of just oatmeal, you feel full for much longer.

Here's what happened overall:

I lost 15 pounds in about a couple months after the "no-decision" diet. (I lost no weight during the week of the diet).

My explanation: During the week of the diet, he ate the specified amounts, which were more than he would have eaten based on hunger. This kept his weight up. During the following weeks, three things happened: 1. He resumed eating according to hunger. His lower set point caused lack of hunger, which caused less eating, which caused weight loss. 2. Because he ate less, his set point went down. 3. During the no-decision week, he picked up some new habits, causing him to eat less familiar food during the following weeks. He says that the no-decision week "changed his cravings" and caused him to "commit to eating better".

He also says the no-decision week caused him to exercise more but no details are given. I doubt this made a difference. Few people lose 15 pounds in two months from exercise so minor that they don't bother to describe it.

Thanks to Andrew Gelman.

1. <http://media.sethroberts.net/about/whatmakesfoodfattening.pdf>

2. <http://www.decisionsciencenews.com/2011/06/09/a-diet-of-diet-an-exercise-in-exercise/>

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George (2013-03-25 16:45:41)

It's interesting that only people who travel to countries where people are thin lose weight. You went to France, where people are thin, and lost weight. I went to Thailand and lost weight, another thin country. It's quite common for people to lose weight specifically on trips to France, if reports on the web are to be believed. You conclude it's the unfamiliar food, but nobody loses weight when traveling to England or Australia where the food is equally unfamiliar, so that doesn't make sense. It seems far more likely that there are certain things about the eating habits of people in thin countries that have an effect even on visitors, causing them to eat less. It could be smaller portion sizes having a psychological effect - you feel weird eating so much more than the locals. It could be simply seeing so many thin people everywhere and becoming ashamed of your weight, or even aware for the first time that you are overweight (many Americans are shockingly delusional about this). Nor are the people who live in these countries - who are thin - eating unfamiliar food. It seems far more likely that what is keeping French people thin begins to exert an effect on visitors - in other words it makes more sense that there is one common factor that explains both French people being thin and visitors to France lose weight, and that can't be unfamiliar food.

babar (2013-03-26 06:00:33)

a week isn't very long - i know my weight pops up and down a lot probably based on water - so he might have lost as much as a pound that week, who knows.

## **Introduction to Inside Tracker (2013-03-26 05:00)**

[1]Inside Tracker sells blood panels - for example, 20 things measured in your blood (e.g., hemoglobin, magnesium, Vitamin D). It was founded in 2009 in Boston, Mass., by Gil Blander, a biology Ph.D., and two other people. They started offering the service in late 2011. Their main customers are athletes (20 % professional, 30 % amateur) and many Quantified Selfers (20 %). I recently interviewed Dr. Blander:

What have you learned from the data you've collected?

Around 60 % of the population has low Vitamin D.[What's low Vitamin D?] As of today, if you look at the ranges of the diagnostic companies, they are saying that everything below 30 ng/ml is low Vitamin D. We are giving you your optimal zone based on age, gender, athletic activity and ethnicity. We also compare you to your peers.

What else?

More than 50 % have high cholesterol (total and LDL). With folic acid, about 40 % of the population have high folic acid. This is because of supplementation.

High creatine kinase (CK) is another common problem. When you exercise, some of the muscle cells break down and this protein leaks into the blood. An example is a marathon runner. Before the marathon it's below 200 U/L. After the run it can be as high as 10,000 U/L. If you over exercise the level might be above 1000, and you have a much higher chance of getting injured. A bit more than 30 % of our customers have high CK. It has a half life of 5 days. Your steady state CK should be less than 1000. Some supplementation can lower it, such CoQ10 and others.

Another marker we measure is hemoglobin. It measures the amount of iron in your blood cells. If you have low hemoglobin you compromise your athletic ability and decision making. About 30 % of our customers have low hemoglobin. Another marker related to Iron is ferritin (protein that binds to free Iron), If you have low ferritin, take iron supplementation or eat iron rich food, that will increase both ferritin and hemoglobin. If you have normal ferritin and low hemoglobin, there are limited interventions to help you increase your hemoglobin, you may need to go to a high altitude place. Women below 50 tend to have low ferritin. The percentage is 10 % among non-athletes, jumping to 30 % among athletes. We also find it in athletic males. When you exercise, you have microbleeding from your gut. Among male athletes, 10-12 % have low ferritin. The major concern is that they don't know this.

What have you learned about how to increase Vitamin D?

When we started, we looked at the literature, it said you should take 400-800 IU/day. We found that even if you just take 1000 IU/day you will just maintain the level you already have. To increase it you need to consume at least 2000 IU/day. I started by testing myself. I found I had pretty low Vitamin D. At first I tried just food – fatty fish and mushrooms. I ate fish twice/day and a lot of mushrooms for a couple of months. Then I measured it again. It hadn't changed. Then I took 1000 IU/day. I tested my blood again and it still hadn't gone up. Then I went to 4000 IU/day and this brought me to the optimal level. And we saw the same with some of our customers.

Testosterone is a very interesting hormone. It's hard to measure. When you overexercise, it's low, because of the stress. It's strongly influenced by amount of sleep, if you don't sleep well, it will go down. We found if you look at the average consumer, around 10 % have low testosterone, and none of them knew it. It's an expensive test. Insurance companies won't pay for it unless there is a reason.[What's low testosterone?] The adult male: below 348 ng/dl. Women have about 20 times less testosterone. Only a tiny percentage of women, about 1 %, have low testosterone.

TO GET 10 % OFF ON INSIDE TRACKING TESTS, USE THIS CODE: SHANGRILA10

1. <http://www.insidetracker.com/>

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nandalalrasiah (2013-03-26 10:42:53)

To put the prices in perspective, an anabolic steroid panel (without coverage under insurance) from Labcorp (through privatemdlabs) costs \$300 (though you can buy the female hormone panel for \$60 and check the box for 'male' which gives you total testosterone and a limited blood panel.) All sans value-add advice of course.

### Assorted Links (2013-03-27 05:00)

- [1] Seth Godin's criticism of schools
- [2]Emily Nussbaum (New Yorker TV critic) podcast

- [3]Joyce Cohen became oversensitive to sound due to loud ventilation
- [4]Bariatric surgery trades obesity for alcoholism
- [5]Edward Jay Epstein on the death of Boris Berezovsky
- [6]Chinese graduates from top schools play it safe
- [7]ASMR videos. [8]An example.

Thanks to Bryan Castañeda and Joyce Cohen.

1. <http://www.squidoo.com/stop-stealing-dreams>
2. [http://traffic.libsyn.com/longform/Ep.\\_31\\_-\\_Emily\\_Nussbaum.mp3](http://traffic.libsyn.com/longform/Ep._31_-_Emily_Nussbaum.mp3)
3. <http://www.buzzfeed.com/joycecohen/noise-kills-when-everyday-sound-becomes-torture>
4. <http://calorielab.com/news/2006/07/18/bariatric-surgery-trades-obesity-for-alcoholism/>
5. <http://edjayepstein.blogspot.com/2013/03/the-death-of-boris-berezovsky.html>
6. [http://online.wsj.com/article/SB10001424127887324678604578340530200654140.html?mod=wsj\\_valetbottom\\_email](http://online.wsj.com/article/SB10001424127887324678604578340530200654140.html?mod=wsj_valetbottom_email)
7. <http://www.independent.co.uk/life-style/gadgets-and-tech/features/maria-spends-20-minutes-folding-towels-why-millions-are-mesmerised-by-asmr-videos-7956866.html>
8. <http://www.youtube.com/watch?v=CHiKxytbCWk>

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Alex (2013-03-27 10:47:50)

Hyperacusis from exposure to loud noise sounds to me like the ear's version of phantom limb pain: the cochlear fibers die, but the nerves that relayed their signals remain. I wish I could think of an analogue to the mirror therapy that helps sufferers of phantom limb pain.

Ahrand (2013-03-28 04:04:51)

Another good link : <http://news.harvard.edu/gazette/story/2013/03/major-weight-loss-tied-to-microbes/> So obesity is just a case of having too few of the good bacteria and too much of the bad ? Who knew ? Maybe it's even the bad bacteria that are hijacking our reward/craving mechanisms and forcing us to continue these obvious bad habits, how about that ? Maybe you can join your 2 favorite topics (we need more good bacteria + smell/calorie association) here Seth ?

shtove (2013-03-28 18:21:32)

Interesting paper - How the Mid-Victorians Worked, Ate and Died: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2672390/>

q (2013-04-01 14:33:06)

very sad, these stories about hyperacusis. many people have had success with white noise therapy. in many cases it's an anxiety disorder (sound makes you anxious and anxiety makes you more sensitive to sound) and so treating the anxiety is helpful too, or at the very least being aware of the role that anxiety plays in oversensitivity. in most cases there isn't anything actually wrong with people's ear fibers or nerves, they have just been trained into hypersensitivity to the point where normal noises are startling or in some cases threatening. (disclosure: i don't have hyperacusis but have other ear problems including chronic tinnitus. no reason that doctors can see, which isn't that surprising given the delicate anatomy of the ear, and so no prospect of a cure. it's a completely "subjective" ailment but one where focusing on the symptoms - even to measure them - makes it worse.)

## Make Yourself Healthy: Crohn's and the SCD Experiment (2013-03-28 05:00)

In 2010, a Chicago woman named Johanna was diagnosed with Crohn's disease. She was 27 years old. Doctors told her to take drugs. She resisted. Here's what happened, from a 2011 interview:

What do you do for living?

I'm an IT project manager. I'm on disability now because of flare-ups of my Crohn's. I'm just getting a portion of my paycheck until the doctor thinks I'm healthy enough to work. When my flare up was bad, I had horrible joint pain, horrible cramping in the morning and throughout the day (pain was 8-10 on a 10-point scale). Chronic diarrhea, maybe 5-10 times/day. I'd be in meetings and doubled over in pain. My GI said I had one of the most inflamed colons he'd ever seen.

When were you diagnosed with Crohn's?

April 2010. My symptoms started in January 2010. Bad gas, got worse. Diarrhea. In March, pooped my pants at work. Never happened before. Ran home and changed. Went to the ER 5 or 6 times from January to March because I was in so much pain. They thought it was Irritable Bowel Syndrome. One doctor said it was stress. "You need to manage your stress better." I didn't know what doctor to see. Only when I went to the Northwestern University ER did they say you might have a GI problem. Then I got a colonoscopy and was diagnosed with Crohn's.

How was it treated?

With Prednisone, a steroid with horrible side effects. It caused me to have a big swollen moon face, a big belly, facial hair, cold sweats all night, I gained 15 pounds (from 120 to 135). I started taking it in April 2010. I took it until August 2010. I stopped taking it because I still had the same amount of diarrhea. It wasn't working. I told my GI at the time. He gave me bad info about how to stop taking it. I did stop taking it and found a new GI. The new GI put me on Humira, an immunosuppressant, a TNF [tumor necrosis factor] blocker. I started it August 2010. No one told me about diet - "eat whatever you want" [she was told]. It was a shot I would get every 2 weeks. At first I got 4 shots. Within days of the first shots, I felt much better. I was a completely normal person. The Crohn's symptoms were completely gone.

What happened next?

Led a totally normal life, worked at my company with success, everything was good. At the end of July 2011, I started having pain. In early August, I went to a new GI at Rush University Hospital. They have a really good GI and nutrition team. They are among the first studying the SCD [Specific Carbohydrate Diet]. I told him I had stomach pain, etc. He said to double the dose of Humera. That wasn't a bad call. I doubled the dosage of Humera and got much worse. That's when I started developing the joint pain and mouth sores. Cramping, horrible horrible pain. I had diarrhea for about two months.

Now we've reached the place where your blog starts? [She started a blog called [1]The SCD Experiment]

Correct. I couldn't absorb any nutrients. I had to quit work. From 31 August to 3 September I had a 102-3 degree fevers every day. I hoped it would pass. I stayed in bed the whole week. Then I started vomiting. I decided to go the hospital. I had lost 10 pounds in a week or two. I went to the hospital 4 September. In the hospital I lost even more weight. It turned out I had both an infection and antibodies to the Humera.

The first hospital I went to on 4 September was St. Francis Hospital. They were meticulous with my diet, gave me gluten-free lactose-free meals. I was very well taken care of there. All types of specialties to figure out what was going on. I had an infectious disease specialist. The infectious disease specialist was adamant I had an infection.

How did you learn about SCD?

I was in St. Francis hospital trying to figure out what to do about my future. I was looking at all the treatment options. I was researching Remicade. It had been recommended. The next logical step. I went to a ton of forums. Wide range of outcomes. Even if it worked, I would be tied to it. Always a chance of infection. You have to go to a hospital every 8 weeks, at best. I want to start a family. I don't want to be tied to a drug. I didn't want to do it.

My sister sent me a link to the Amazon reviews of Breaking the Vicious Cycle. You should really try this, she said. I thought there's got to be something to this. These people made it work, why couldn't I? What did I have to lose by trying it? I wanted to try a natural solution before blasting my body with something else. My last day at St. Francis I started to do the SCD.

I left St. Francis after 5 days because I had an appointment with the top GI doctor at Rush, Dr. Keshavarvian. He told me my problems were due to a flare-up of the Crohn's. Including the fever. He said nothing about my suppressed immune system and the way it makes you more vulnerable to infection – although to be fair I knew this. To his credit, he said to eat a lot of yogurt.

As soon as I saw him, he admitted me to Rush right away to begin Remicade infusions. Remicade is another immunosuppressant, very similar to Humera.

I asked a lot of questions about Remicade. I asked a lot of questions about diet. They said just do the Remicade, and eat whatever you want. It's a big hospital. Huge overwhelming swarm of lab coats pushing Remicade on me. More than five doctors told me to take Remicade. All of them worked for the GI doctor I'd seen in the morning. They were part of his team. I told the nutritionist I had Crohn's. They sent me a lunch tray with processed turkey meat, a ton of gravy, and a brownie, and tomato bisque soup. Not one thing I could eat or digest. My husband brought me SCD-safe food I could eat. Once I saw that brownie, I decided to refuse Remicade. You're going to tell me what I eat has no effect on my body, I'm going to tell you you're wrong.

They were trying to set up the Remicade infusions. I said I needed one more night to sleep on it. The next morning, the 10th, I said thanks but no thanks. I'm going to try this diet and see what happens. They made me sign a waiver and I went home. At St. Francis they put me back on Prednisone, at lower doses. I've been tapering off.

The first week I was super-scared. Is this diet going to work? I was very weak, couldn't stand up in the shower. I still had major Crohn's symptoms. Every Thursday I got/get blood work. The first Thursday after I started SCD, the blood work results were better [see website for details], but I still felt bad. The second week, amazing. I felt like a new person.

On 23 September I had a follow-up with Dr. K at Rush. I gave him all my blood work and told him what I was doing. He was concerned. He said the diet was hard to stick to and that the legal/illegal list – what you can and can't eat – was different for different people. He said that the diet fails for 3 out of 4 people. When you're on the diet, you can have a flare-up so bad that you need to have your colon removed. These are the risks that you are facing by not taking the Remicade or Imuran. However, he's one of the people spearheading the study of SCD at Rush. He told me we don't have any studies showing that this diet works so I can't in good faith recommend it.

By Week 5 she was much better. By Week 19 she was cured, in the sense of feeling normal and having normal lab results. "I don't even THINK about Crohn's disease," she wrote. "Unless it's to reflect on how so very thankful I am that my sister Angela discovered this diet and talked me into trying it. I owe her my life back." She started her blog at the same time she started SCD.

Doctors told her the diet has a 70 % failure rate. As the lab results and experience reported in her blog show, the diet worked.

1. <http://thescdexperiment.wordpress.com/>

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Tuck (2013-03-28 07:16:25)

Scary. The medical profession has a serious problem.

Tuck (2013-03-28 07:17:56)

And my question to that Doc would be, how often does the diet succeed \*in people who strictly follow the diet?\* I'd guess it's a lot higher than 25 %...

Daniel Lemire (2013-03-28 19:00:35)

Do people ever read the research? Here is what I found when I looked a recent review article: "Numerous studies claim that corticosteroids fail to induce mucosal healing in the treatment of CD, while small uncontrolled studies showed mucosal healing with enteral nutrition. Specifically, the latter studies reported downregulation of mucosal pro-inflammatory cytokine profiles in both the ileum and the colon after enteral nutrition – potentially very interesting observations in respect of achieving a healthy mucosal immunity. Given that the ultimate goal in the treatment of CD is mucosal healing (in addition to symptomatic improvement), this advantage of enteral nutrition over corticosteroid is valuable in therapeutic decision-making. (...) Further well designed large trials are necessary to support the current knowledge on enteral nutrition including long-term benefits of these interventions. Improved evidence to support the role of dietary interventions for inducing and maintaining clinical remission could lead to reduced need for drug therapy with its associated risk for adverse effects." (YAMAMOTO et al., 2009, <http://onlinelibrary.wiley.com/doi/10.1111/j.1365-2036.2009.04035.x/full>) What does that tell you?

AI (2013-03-30 20:51:57)

That's a really interesting story. Thank you for sharing it, and the mention of her blog. I've been reading about the SCD for years now, and it seems that, as much as American doctors criticize it, or claim that scientific research to support it does not exist, there are patients out there who claim it has helped them. I can't escape the sense that something about the American medical educational system, the FDA, big Pharma, and the various state boards of health is broken. They have this permanent, ingrained bias against certain therapeutic approaches. This is highlighted by the fact that, in other countries (e.g. Japan and the UK), enteral nutrition is a front line therapy used by the official, mainstream medical system for Crohns sufferers. (See the book "Beat Crohns!" on Amazon for more on this). So, why does medical science in the UK and Japan endorse a dietary-based, primary therapy for Crohns, while medical science in the US can never quite find support for anything but surgery and drugs? It makes no sense. Seth: I agree, well-put.

LisaW (2013-04-03 13:08:19)

Enteral nutrition is only the frontline treatment for young children with Crohn's in the UK. It is a bizarre situation where the medical establishment have decided that it is effective, but only use it for children as they can't justify dosing them with steroids etc due to the awful side effects, especially on their growth. Adults on the other hand are treated just as they are in the US, with a barrage of drugs and surgeries. It is beyond sense.

Adam (2013-04-04 04:08:36)

<http://www.ncbi.nlm.nih.gov/pubmed/23546607> New study links corticosteroids with risk for Venous thromboembolism (Blood clots).

## **Does Scientific Research Cause Economic Growth? (2013-03-29 05:00)**

Many scientists say that science should be funded because it leads to economic growth. Today's discovery, tomorrow's new product, that sort of thing. It's certainly plausible that more research will produce more growth.

Terence Kelley, a biochemist who was vice-chancellor of the University of Buckingham, [1]points out that some facts do not support this argument:

Two key pieces, one British, one American. The British one is very simple. The British agricultural and industrial revolutions took place in the 18th and 19th centuries in the complete absence of the government funding of science. It simply wasn't government policy. The British government only started to fund science because of the Great War [World War I]. The funding has increased heavily ever since, and there has been absolutely no improvement in our underlying rate of economic growth.

But the really fascinating example is the States, because it's so stunningly abrupt. Until 1940 it was American government policy not to fund science. Then, bang, the American government goes from funding something like \$20 million of basic science to \$3,000 million, over the space of 10 or 15 years. I mean, it's an unbelievable increase, which continues all the way to the present day. And underlying rates of economic growth in the States simply do not change.

I believe the connection between research and economic growth is complicated. Veblen was certainly right, "pure" (= useless) research is high-status, "applied" (= useful) research is low-status. In the long run, this is a good way to allocate effort because although almost all the "pure" research is useless, a tiny fraction is not. And that tiny fraction might never have been done if pure research weren't high-status.

Yet after pure research turns up useful stuff, professional scientists have serious difficulty making something useful from it. Almost all of my discoveries, such as the Shangri-La Diet and the effect of morning faces on mood, relied heavily on pure research. Without the pure research, I couldn't have made them. The "pure" discoveries I used were well-known yet professional scientists were unable to grasp how they could be turned into something useful. I was able to go further than them for three reasons: 1. I was willing to spend a long time (decades) on a one problem. Professional scientists can't wait that long. 2. I was trying to find a useful solution. Professional scientists tend to think useful research is low-status, as I said. 3. Studying myself instead of other people made me much more sensitive to unexpected effects.

1. <http://www.scientificamerican.com/article.cfm?id=the-economics-of-science>



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Daniel Lemire (2013-03-29 06:20:21)

The fact that pure research is high status would not change if government stopped funding pure research. Einstein gave us the theory that made the laser possible and you can't give too much credit to the German State or to the UK for that... the idea of the laser was pursued by various academics and finally built at a private company... This all happened before the US had a science policy per se. So we are back at the core question asked by Kealey, is government funding for science warranted? I have a related (recent) blog post you might enjoy with some hard references that tries to validate Kealey's point from a government policy point of view: Does academic research cause economic growth? <http://lemire.me/blog/archives/2013/02/26/does-academic-research-cause-economic-growth/> One could argue that if science wasn't funded in a socialist manner, then people would have to show more interest in being genuinely useful. One step you have not taken, as a researcher, is to go for "true" public funding via sites such as kickstarter. With the kind of research you do, I bet you would get people to support you financially. True: you could never match what the State can offer... (hard to get 300k \$ a year through kickstarter)... still, it could be very interesting to try... Anyhow, I think that the question Kealey is really asking is what role should the government play in science, if any?

dearieme (2013-03-29 07:21:18)

"In the long run, this is a good way to allocate effort because although almost all the "pure" research is useless, a tiny fraction is not." I've always found this argument - or at least, related arguments - dodgy. If you might stumble across potentially useful truths by doing pure research, you might equally stumble across pure truths by doing applied research. Recall that Thermodynamics was discovered because of research into steam engines, not vice versa. Of course the first really good steam engine, Watt's, presumably benefited from Watt's spell as a research assistant to Black at Glasgow, but thermodynamics did not develop from Black's work but from Watt's. Seth: I think both things are true: It helps to work on real-world problems; and it helps to do "pure" research. We need both. The second point was behind the essay "The unreasonable effectiveness of mathematics". That essay gives many examples.

Kevin (2013-03-30 21:14:48)

I disagree that underlying rates of economic growth in the US have not changed. I'll present a very simple analysis I did a few months ago: Using the data from <http://www.measuringworth.com/usgdp/>, I did two separate fits for 1790-1929 and 1946-2011, skipping the Great Depression/WWII fluctuation. The post-WWII data is smoother (higher  $R^2$ ) and has a higher slope. <http://www.kjplanet.com/gdp-s.png> I certainly do not claim that increased funding of scientific research is solely responsible, nor even that it necessarily contributes (although I think it does), but the premise of unchanging economic growth does not hold.

James A. Donald (2013-04-01 15:07:41)

I would say that government funding ends science by turning it into a state sponsored religion - that science, by and large, died in the early 1940s See the cartoon <http://dresdencodak.com/2011/04/19/dark-science-09/>

Kevin (2013-04-12 13:36:13)

There is a 4th reason: You had the courage to pose solutions people instinctively would think are ridiculous.

## **Make Yourself Healthy: Diverticulitis (2013-03-30 05:00)**

You have [1]diverticulitis when "diverticula in your digestive tract become inflamed or infected. Diverticula are small, bulging pouches." [2]A man in his forties named Tuck had a serious case:

In my twenties I got really sick; lying in bed for 5 days, bleeding from the lower part of my digestive tract:

not pretty. . . Delirious days later and ten pounds lighter and I was recovered, except for one problem: I had diarrhea for the subsequent 14 years. . . . Two years ago [2008] I passed out on the toilet on a ski weekend. The emergency room at Bennington Hospital [Vermont] told me it was a stomach flu.

Four weeks later I got cramps at work. I had to lie on the floor until it passed. Then I drove to my doctor's office, and he told me that I had diverticulitis, and I had to go to the emergency room. I drove myself, and barely made it. I was in agony; I nearly passed out again while they were interviewing me to see if it was "serious". . . . I had a perforated colon. . . . I spent the next four days in the pre-operative ward, so if it got worse they could cut me open immediately. I lost 10 pounds. Then I started bleeding, and I realized these were all the same symptoms that I had had 14 years before. My blood pressure got so low that the automated blood-pressure machine wouldn't work . . .

I mentioned to all three of the doctors I saw that I had had constant diarrhea for the last 14 years, since the first attack, and they shrugged. They told me to eat more fiber, and whole wheat, even though that was what I had been eating for the last 20 years. So I avoided surgery, started eating salad with salad dressing (containing industrial seed oils) and lots of whole wheat. . . . But the more salad and whole wheat I ate, the worse it got. I couldn't understand why. Finally had to have eight inches of my colon removed. The diarrhea continued, so obviously the cause remained.

Then something happened that, before blogging, wasn't possible:

Someone sent me a post that [3]Stephen Guyenet did about how dental problems were pretty much all due to diet, not genetics, as I'd been told. As someone who'd had a ton of cavities, and 8 teeth pulled, and was determined to spare his daughters the same fate, I found this of interest.

I started reading the blog. 6 months later, I decided to stop eating seed oils, which eliminated my carb cravings, hence no wheat. Two days later, [unexpectedly] my diarrhea stopped. A good bit of trial and error, some accidental, ensued. [I learned that both] wheat and seed oils cause distress, but different types. The two combined can cause me to pass out. If I eat wheat by accident, then eating saturated animal fats (like cream) causes things to settle down.

He found that "traditional" oils (palm, coconut, olive) are okay. Industrial oils (corn, canola, cottonseed) are not. Animal fats (butter, lard, beef tallow) are best.

After 16 years my symptoms are now completely under my control. . . . I read the ingredients on everything. I make a big mistake once every 6-9 months. [Other benefits:] I'm much more resistant to sunburn, for instance, and my vision improved a bit.

So his problems were due to (a) wheat and (b) too much omega-6. His doctors had no idea.

The Mayo Clinic recommends a "[4]diverticulitis diet" that is clear liquids and low-fiber foods. [5]According to the Mayo Clinic, "mild cases of diverticulitis can be treated with rest, changes in your diet and antibiotics. But serious cases of diverticulitis may require surgery." The Mayo Clinic, it appears, has no idea what causes diverticulitis.

Tuck added:

It really pisses me off when people dismiss this, because it really makes a difference. I had a colleague who was in the hospital for a colon resection for diverticulitis. When he heard my story, he had the hospital

put him on a gluten-free diet. Four days later, instead of having surgery as scheduled, he checked out: cured. He's symptom-free on a gluten-free diet to this day.

I agree. As someone on [6]the Shangri-La Diet forums put it, "you are handed a GIFT." A story like this is a gift.

1. <http://www.mayoclinic.com/health/diverticulitis/DS00070>
2. <http://yelling-stop.blogspot.com/2010/08/diverticulitis-my-story.html>
3. <http://wholehealthsource.blogspot.com/>
4. <http://www.mayoclinic.com/health/diverticulitis-diet/my00736>
5. <http://www.mayoclinic.com/health/diverticulitis/DS00070>
6. <http://boards.sethroberts.net/>

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Koanic (2013-03-30 06:04:18)

That's good. I found my regimen for living in China. Small meals of plain yoghurt spaced through daylight hours. Limit 2 liters per day. One package of free range organic pork, pressure cooked and otherwise plain, per day. No gorging or fasting. Seth: You seem to be saying your health was better when you did this. What was the health improvement and what was the earlier diet (correlated with worse health)?

derp (2013-03-30 11:23:42)

Wow. I knew that inflammatory bowel disease and a whole mountain of other diseases can be made symptom-free with an exclusion diet, but I didn't suspect gluten to be the bad boy in diverticulitis, too. Is there any common disease that \*isn't\* aided, abetted, induced, entertained or linked to grains? Besides the flu? Is there currently any internet project collecting such first-hand stories, categorizing them and allowing for comments, questions, etc. ...?

Evelyn M. (2013-03-30 20:15:56)

Seeing the reference to "seed oils" in this interesting post reminds me of a conversation I had with a biologist some 20 - 25 years ago whose "animal" was the locust. This was when the scientific community was telling everyone to shun animal fat and eat only polyunsaturated oils. She told me that grasses (including all cereal grains) defend themselves against locusts by increasing the amount of defensive insecticide they produce when attacked. This natural insecticide is found in seed oil. She was worried that encouraging people to ingest large amounts of oil from new sources, untested over the centuries, such as corn, safflower, etc., instead of traditional sources, such as olives, nuts, and animal fats/butter was not wise, since harvesting affects grasses the same way that locusts do.

## **Better Balance and Gums From Flaxseed Oil (2013-03-31 05:00)**

When I took flaxseed oil capsules for reasons connected with the Shangri-La Diet, I noticed, to my surprise, that my balance improved. The next time I saw my dentist, he told me that my gums were much better. A reader of this blog named Chuck Currie has noticed the same things.

I ran across a reference to your book again which led me to your website. And, like I said, from there to Mark Sisson and all the rest.

I had already ran across information about flax oil and cholesterol and heart health. So I started taking two tablespoons a day [of flaxseed oil] - morning and night. I noticed my balance improvement while doing yoga, but thought

it was due to practice. After reading several paleo blogs, I switched to fish oil - one table spoon a day in the morning. Then after reading some other studies regarding possible negative effects of over-consumption of fish oil, I stopped that also.

During this time I really became a strict paleo/primal eater and exerciser. No carbs other than leafy greens and non-starchy vegs. No more chronic cardio. Stopped swimming due to shoulder issues. Started using kettlebells and body weight tabata exercise. Went back and forth on supplementation. My weight dropped to below 120. [He's 5 feet 8 inches tall.]

I was getting totally confused on what was legit and what was BS. Sure I lost weight, but I must have looked sick because people were asking if I was all right. I think they thought I had cancer or AIDS. I felt great though. No more 2 o'clock naps and I slept great. Then I read Kurt Harris's 2.0 blog and that set me straight - and straight back to your blog.

It made me think, OK what works on the individual level, not the hypothesis level. I had also noticed that my balance had deteriorated (I thought it was because I stopped doing yoga) and my gums were bleeding again - I had forgotten that they had stopped bleeding. [After he switched from flaxseed oil to fish oil, his balance slowly got worse.] Sort of back to basics. Sun, lots of it, or D3 - 10,000 units (I am sitting in the sun as I type this on my iPhone). Omega 3 - your posts about flax oil made sense - [sudden release of short-chain omega-3 causes] slow release [of long-chain omega-3] - and is more sustainable than cold water fish and fish oil. Magnesium at night for better sleep and muscle cramps. (when I first went full paleo, I suffered from terrible leg cramps during the night until I found magnesium). And extra butter - beyond cooking with it.

I tested the flax/balance question by continuing to not practice yoga or any other balancing exercises and [measure my balance] just using my ability to wash my feet in the shower without leaning against the wall - which had been my normal habit before my first improvement and then again when it went away. After about a week - perfect balance - both washing and drying my feet. Also, no gum bleeding. So as some would say, "the shit works".

[He added later:] I can definitely say, with a high degree of confidence, that my balance is not as good when taking fish oil as it is when taking flax oil. Fish oil does provide a small improvement over not supplementing any omega-3. But the big improvement comes with flax oil.

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Tom (2013-03-31 05:59:13)

One interesting thing about improved balance - there is a strong correlation between the ability to stand up without bracing oneself with one's hands and mortality: <http://www.dailymail.co.uk/health/article-2247402/Can-floor-using-hands-If-he-ading-early-grave.html>

Pauline (2013-03-31 10:32:45)

The flaxseed oil I have tried makes me feel slightly ill and has an aftertaste and I have read mixed reviews about its use. I see they also use it as a drying agent in paint: <http://en.wikipedia.org/wiki/Flax> Any comments?

Tom (2013-03-31 12:04:30)

Flax oil is linseed oil. Yes, it has been used to thin paints for centuries. Petroleum refining didn't exist in Rembrandt's day.

dearieme (2013-03-31 12:53:31)

Pauline, I simply mix linseed (= flax seed) into my muesli: about a generous half a (British) tablespoon into the jar in which I mix enough muesli for eight breakfasts. That's obviously a small intake compared to spoonfuls of the oil but I assume that it does me good. Whether it does as much good as the three tablespoons of toasted coconut I don't know. :)

Meegs (2013-04-01 08:18:09)

I usually get a lot of tartar buildup in my teeth. Since I began taking the flaxseed oil, I noticed that there is minimal tartar buildup in addition to the weight loss.

Pauline (2013-04-01 08:37:39)

Thanks for tips, do you think our bodies' can extract the oil if we buy the whole linseed, or do we need to grind it to get to the best out of it? I just wonder if like other seeds it just passes through when digested. Seth: I'm pretty sure you need to grind it.

Alex Chernavsky (2013-04-01 11:31:22)

@Meegs - my tartar buildup didn't seem to change much, but my staining decreased. My dental hygienist always used to comment on the staining (which she attributed to my coffee-drinking). After I started taking 3.5 tablespoons of flaxseed oil daily, the staining decreased.

Ed (2013-04-01 13:17:27)

Has anyone tried taking Flaxseed Pills? would that work or do you need to take the oil? Thanks Seth: Flaxseed oil capsules work, but you need to take a lot of them (like 30/day) to get the best effect. I started taking capsules - that's how I discovered the balance improvement - but switched to flaxseed oil (liquid) when I realized how much the best dose was.

David Lloyd-Jones (2013-04-02 13:03:45)

I've been eating ground flax seed two tablespoons every morning for perhaps three months, a tablespoon or so every now and then for a few months before that. Unlike others writing here, I haven't noticed any effects on my teeth and gums, though both have been in fair shape anyway for the last few years, i.e. ever since I started using an electric toothbrush. On the other hand I feel generally good all around, something I attribute in part to the flax seed, in part just to the overall process of looking after my diet with some care and imagination. -dlj Seth: You might get better results if you take more. I've taken 2 tablespoons/day of flaxseed OIL, not flax SEED. Flaxseed oil has a higher density of omega-3 than ground flaxseed. It's also possible that the omega-3 in the ground flaxseed has gone bad, if it is not freshly ground.

Pauline (2013-04-04 08:27:49)

Seth, is there a particular brand you can recommend, apologies if this has been answered before. Also I thought all plant oils were generally bad for one (even Olive oil should be eaten sparingly?) and that saturated fats were better? I have never got my head around all the oil debate, just assume that meat cooked with animal fat seems the logical way our ancestors would have chosen. Seth: I once compared different brands, found no difference between Spectrum, Barlean's, and Whole Foods.

Sam (2013-04-13 19:43:19)

Your going to think this is weird but flax seed oil prevents me from having depression. I used to feel very darkly depressed. My Dad had some flax seed oil in capsules so I tried a few. I noticed my depression lifted. Stopped taking them. Depression. So now I take a couple of tablespoons each night. I make it like the Budwig diet (supposed to cure cancer). The Budwig diet is probably nonsense but I figure it can't hurt and it taste better than pure flax seed oil. In a blender put two tablespoons or so flax seed oil, four tablespoons cottage cheese, and I pour a half a cup of milk to help it blend and go down smoother. Taste a little tangy like buttermilk. Not bad. Works for me. When ever anyone mentions depression or flax seed oil I always think what it did for me. Awful to be depressed. It doesn't make me happy but does lift the worst of my depression.

crosswind (2013-04-15 14:37:12)

I appreciate you writing this. I have gum issues too. For years, i took Barleans flax oils blends because BARLEAN'S is the freshest i know. They press it on the day of ordering for customers/stores. I usually buy Flax Omega Berry Swirl (with plant DHA) for a few years and it always helped me severe PMS moods, cramps, painful cystic breasts etc.. I have not taken in a few months and i have had horrible PMS & cycle since, which required high doses of ibuprofen. Good to konw on the GUMS too. I will keep an eye on them to see if it helps. In the past when I took Barlean's i did not need to take any pain pills for pms. So, after googling many articles, including yours with other reader's comments, it confirms i need to go back on what was working.

## 8.4 April

### Maybe We SHOULD Eat More Fat? (2013-04-02 05:00)

In [1]a review of Salt Sugar Fat by Michael Moss, a new book about the food industry, David Kamp writes:

The term "bliss point" . . . is used in the soft-drink business to denote the optimal level of sugar at which the beverage is most pleasing to the consumer. . . .

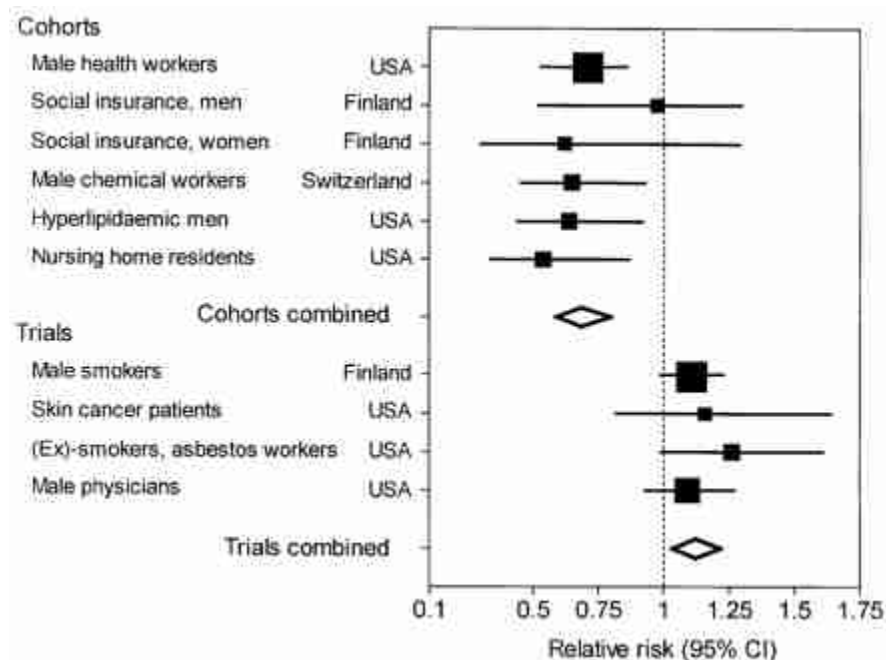
The "Fat" section of "Salt Sugar Fat" is the most disquieting, for, as Moss learns from Adam Drewnowski, an epidemiologist who runs the Center for Obesity Research at the University of Washington, there is no known bliss point for fat — his test subjects, plied with a drinkable concoction of milk, cream and sugar, kept on chugging ever fattier samples without crying uncle. This realization has had huge implications in the food industry. For example, Moss reports, the big companies have come to understand that "cheese could be added to other food products without any worries that people would walk away."

By "fat" Moss means animal fat (the fat in cheese, for example). I haven't seen the book but I'm sure Moss doesn't consider the possibility that "there is no known bliss point for fat" because people should be eating much more animal fat. In other words, it is hard to detect the bliss point when people are suffering from severe fat deprivation.

My view of how much animal fat I should eat changed abruptly when I found that large amounts of pork fat made me sleep better. One day I ate a lot of pork belly (very high fat) to avoid throwing it away. That night I slept much better than usual. I confirmed the effect experimentally. Later, I found that butter (instead of pork fat) made me faster at a mental test. This strengthened my belief that I should eat much more animal fat than countless nutrition experts have said. ([2]Supporting data.)

My sleep and mental test evidence was clear and strong (in the sense of large t value). The evidence that animal fat is bad (based on epidemiology) is neither. That is one reason I trust what I found rather than what I have been told.

Another reason I trust what I found the fact that people like the taste of fat. That evolution has shaped us to like the taste of something we shouldn't eat makes no sense. (Surely I don't have to explain why this doesn't mean that sugar – not available to prehistoric man – is good for us.) In contrast, it is entirely possible that nutrition experts have gotten things backwards. Epidemiology is a fledgling science and epidemiologists often make mistakes. Their conclusions point in the wrong direction. [3]Here is an example, about the effect of beta-carotene on heart disease:



Epidemiology repeatedly found that people who consumed more beta-carotene had less heart disease. When the idea that beta-carotene reduces heart disease was tested in experiments, the results suggested the opposite: beta-carotene increases heart disease.

[4]"Fat will become the new diet food" (via [5]Hyperlipid).

- <http://www.nytimes.com/2013/03/17/books/review/salt-sugar-fat-by-michael-moss.html?pagewanted=all>
- <http://blog.sethroberts.net/wp-content/uploads/2012/09/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf>
- <http://ije.oxfordjournals.org/content/30/1/1.full>
- <http://online.wsj.com/article/SB10001424127887323393304578358681822758600.html?mod=mostpop>
- <http://high-fat-nutrition.blogspot.com/>

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Alex Chernavsky (2013-04-02 09:37:16)

Seth, do you know of any plant fats that might have comparably beneficial effects? I know that the [1]Buttermind experiment suggested that coconut fat didn't compare favorably to butter. But I wonder if there are any other type of plant-derived fats or oils that may be promising. Seth: I can't think of any plant fats that resemble animal fats. They would need to be solid at room temperature – which wouldn't work well for a plant.

- <http://blog.sethroberts.net/2011/01/29/the-buttermind-experiment/>

Mike C (2013-04-02 09:59:36)

Perhaps you could say a bit more on your final point? Any individual study could be wrong, but the idea that I could increase my chances of having a heart attack by eating too many carrots (and thus more beta carotene) sounds ridiculous.

Nancy Lebovitz (2013-04-02 12:31:00)

I think there's a bliss point for fat– people generally don't eat butter or cream alone unless they have a theory saying they should.

Evelyn M. (2013-04-03 05:56:59)

I agree with Ms. Lebovitz. Mr. Moss' test for the "bliss" point for fat was flawed because he added sugar to the mix - and I think he added sugar because he knew that when eating pure fat, even delicious fat such as butter, one reaches a saturation point fairly quickly, and that would undermine the point he was trying to make.

JW (2013-04-03 08:51:09)

Nancy: Agreed. I do drink heavy cream alone, often an entire pint, and have for months. There is certainly a "bliss point." My consistent experience has been that it leaves me both incredibly full and sated, for quite a number of hours. After which point I can hardly imagine eating another thing. What one would expect from 190g of saturated fat, albeit in only two cups. If anything I suspect the fat concoction fed to those individuals is not fatty enough. Not so much because they are fat deprived, but likely because the levels of saturated fat considered "safe" are absurdly low (and therefore who would venture such a thing?) Also, the note about cheese is absurd. Cheese is hardly pure fat or anywhere close to it; even many "high fat" cheeses are mostly protein. Again, fat-is-scary relativism at work. In a world of adequate fat consumption, cheese is a low fat product. In the world of ultra-conservative guidelines, it is notably scary as a fatty food additive.

Bob (2013-04-03 12:44:00)

More accurately the book states that there is no known bliss point for fat up to heavy cream. It mentions that a couple of times but doesn't really emphasize it. bob

Greg (2013-04-03 16:44:29)

I would like to see the bliss point experiment done with pure lamb tallow.

CC (2013-04-04 18:39:59)

"Another reason I trust what I found the fact that people like the taste of fat. That evolution has shaped us to like the taste of something we shouldn't eat makes no sense." As much as I want to believe this, Seth, there are other possibilities: 1. Prehistoric man only had access to small amounts of animal fat. Maybe small amounts are good for you but the amounts we can obtain nowadays are unhealthy. 2. Animal is actually very good for you until age 60 (for instance). Maybe eating a lot of animal fat makes you more likely to have a heart attack at age 60 and beyond; this would have made no difference to prehistoric man. What do you think? I'd love to be wrong about this!

## **Canker Sores Quickly Cured by Walnuts: More Evidence for Importance of Omega-3 (2013-04-03 05:00)**

A reader of this blog named PSB, who lives in New Jersey, told me the following:

I'm 52. I happen to like walnuts and was snacking on them and noticed the pain from canker sores was lessened. I kept eating [walnuts] the next couple days and found the sores healed quickly, painlessly and were gone within a few days. They usually take quite a while to go away. The walnut thing was accidental and just from observation noticing the change in the sores. The sores are still gone and although I haven't been eating lots of walnuts, I usually grab them here and there.

Her daughter "has suffered from canker sores for years . . . [and] gets multiple at a time and they are usually very painful." Her daughter is resistant to eating walnuts. I asked why. "Doesn't listen to her mother, knows it all and I sometimes thinks she prefers to complain. Other than that, no real reason, hahaha," said PSB.

I've blogged before ([1]here and [2]here) about canker sores cured by omega-3. Walnuts are high in omega-3, supporting what I said. [3]The Mayo Clinic lists eight possible causes of canker sores, including "A diet lacking in Vitamin B-12, zinc, folate (folic acid) or iron". Nothing about omega-3.



1. <http://blog.sethroberts.net/2009/06/04/canker-sores-and-omega-3/>
2. <http://blog.sethroberts.net/2009/06/06/yes-canker-sores-prevented-and-cured-by-omega-3/>
3. <http://www.mayoclinic.com/health/canker-sore/DS00354/DSECTION=causes>

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dearieme (2013-04-03 06:13:48)

Walnuts and goat's cheese make a tasty combination.

Vic (2013-04-03 07:53:30)

Walnuts are also high in omega-6. And didn't you blog before that walnuts didn't help your sleep or brain activity, or something? I could be misremembering... Seth: Right. Eating walnuts did not help me. Nor did it help 3 of my students. In each case, the measurements were brain-related. Perhaps brain-related measurements are more sensitive to omega-6 content than canker sores. It's also possible that if you begin an experiment high in omega-3, walnuts have a different effect than if you begin low in omega-3.

Chuck (2013-04-03 08:26:22)

Walnuts are also a good source of folate, iron and zinc - no B-12. Even though they have the highest level of n-3 than any other nut, they have four times higher omega-6. However: "Along with omega-3 fatty acids, walnuts contain ellagic acid. Memorial Sloan-Kettering Cancer Center reports that ellagic acid contains antiviral and antibiotic properties and is now found to have anticancer properties as well." - via Livestrong. So it could be the antiviral and/or the antibiotic properties at work here. Or a combination of all of the above. Cheers

Kevin (2013-04-03 08:53:57)

I suffer from frequent and painful canker sores. I will give walnuts a try; there is very little available for conventional treatments, and "eating more walnuts" certainly won't hurt. Seth: I hope you'll let me know what happens, either way (helps or doesn't help).

Alex (2013-04-03 10:05:42)

Haven't had any canker sores since starting Paleo back in 2011. Used to get them once a month before that. Seth: When you started paleo, did you increase or decrease or leave unchanged your omega-3 intake?

Morex (2013-04-03 15:00:19)

I have been 3 months in SLD and my jaw just hit the floor. Since I was a kid I have always suffered of painful canker sores. I've been having them all my life... But now that I'm reading this, I realized I haven't had any canker sore in my 3 months doing SLD. I have been taking 4 tablespoons of canola oil a day. I was careful to choose a brand with more omega-3 than others. I am very impressed and happy :)

dearieme (2013-04-03 15:18:36)

My wife has a bottle of walnut oil in the kitchen. She uses it for salad dressings and when preparing a chicken for roasting.

chris (2013-04-03 15:43:39)

Suffered for 30 years with canker sores....problem was cow's milk...eliminated from diet haven't had a canker sore in a decade. RAST and skin tests were negative for milk allergy/sensitivity FWIW.

Jake (2013-04-03 17:23:21)

I was a chronic sufferer of canker sores since childhood. Four years ago I gave up wheat and have not had one canker sore since.

Greg (2013-04-03 17:42:48)

Canker sores can be treated medically with amlexanox, an anti-inflammatory, which lends support to the approach of addressing the immune system, via anti-inflammatory diets or omega-3 supplementation. And walnuts apparently contain anti-inflammatory compounds in addition to their omega-3s.

Alex (2013-04-04 05:43:59)

>Seth: When you started paleo, did you increase or decrease or leave unchanged your omega-3 intake? Increased n-3 pretty significantly. Eating about a pound of salmon a week, sardines, some supplementation (LEF Mega EPA/DHA)... about 3-4g/day of n-3 and less than 10g of n-6 according to Chron-o-meter. Seth: Thanks. Supports more omega-3 -> fewer canker sores idea.

LV (2013-04-10 04:00:25)

Like others I found my lifelong canker sores (or mouth ulcers as we call them in the UK) stopped when I stopped eating gluten. That was three years ago and the only ones I've had since have followed accidental gluten ingestion. Prior to this I was eating a broadly Weston Price style diet (including oily fish and cod liver oil) for several years; if there was any improvement on moving to this from a standard 'healthy' western diet it was modest - I wasn't looking for and don't recall noticing any significant change. Are the people who do see improvement from increasing omega-3 actually deficient in omega-3 as such, or do they need more omega-3 to correct an underlying state of inflammation? Are they eating diets generally deficient in omega-3 compared to people who never get canker sores? Seth: I think as a matter of definition if eating more omega-3 cures canker sores then you were deficient in omega-3. That's how deficiency is usually defined. I see your point, however, which is that even if omega-3 cures the canker sores there may be other ways to improve matters.

Paul N (2013-04-10 08:27:32)

LV wrote; "Are the people who do see improvement from increasing omega-3 actually deficient in omega-3 as such, or do they need more omega-3 to correct an underlying state of inflammation? " I'm sure there are many cases where the underlying inflammation is the cause. Wheat/gluten (or soy) causing trouble is a good example - does any amount of omega 3 make wheat "safe" - probably not. SO, if you are eating toxins, omega 3 might mitigate some or even all of the effects, but better to remove the toxins first. Similarly for other deficiencies, like magnesium, or (especially) K2, omega 3 can only do so much. The current fad where fish oil is being sold as a cure all is, in many cases, simply creating "licensing" behaviour, where people continue to eat badly, but think its OK because they are taking fish oil.

Nate (2013-04-10 14:12:03)

How can you tell which brand of canola has more omega-3's? Thanks

## **First Quantified Self Meeting (2008) (2013-04-03 18:13)**

The first Quantified Self meetup was held at Kevin Kelly's house in 2008. Tim Ferriss has posted [1]his notes from that meeting. I was one of the speakers and his notes show how much I repeat myself.

1. <http://www.fourhourworkweek.com/blog/2013/04/03/the-first-ever-quantified-self-notes-plus-lsd-as-cognitive-enhancer/>

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### Assorted Links (2013-04-04 05:00)

- [1]The state of self-tracking by Ernesto Ramirez and Gary Wolf
- [2]Schizophrenia (the negative symptoms) improved by folate and B12 supplementation but only in patients with impaired folate metabolism
- [3]Why more Type 1 diabetes in Finland than neighboring Russia?
- [4]A scientist tries to cure his own cancer
- [5]Resveratrol disappointment
- [6]Where do allergies come from? "Foreign-born children residing in the United States had half the risk of developing allergies than those who were born here."

Thanks to Peter McLeod, John Batzel and Joseph Sinatra.

1. <http://thehealthcareblog.com/blog/2013/03/17/the-state-of-self-tracking>
2. <http://archpsyc.jamanetwork.com/article.aspx?articleid=1660588#RESULTS>
3. <http://www.smithsonianmag.com/science-nature/The-Unintended-and-Deadly-Consequences-of-Living-in-the-Industrialized-World-199164051.html?c=y&story=fullstory>
4. <http://www.nytimes.com/2012/12/23/magazine/is-the-cure-for-cancer-inside-you.html?pagewanted=all>
5. <http://www.newrepublic.com/article/112706>
6. <http://www.cnn.com/2013/03/26/health/what-causes-allergies/index.html>

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Mark Sanders (2013-04-04 10:22:24)

Re resveratrol and wine - one of the interesting theories I've read about wine's benefits (can't remember where I saw it) is that it has to do with the alcohol. Many people think the biggest danger of high blood sugars is in the first 2 hours or so of eating. Meals that might spike blood sugars really high in a person susceptible to carbs/sugars are ameliorated by the alcohol in the wine since alcohol apparently will stop the liver from chugging out sugars into the blood. By the time the alcohol is processed, the danger of high BS is past. Don't know if this is true, but it's an interesting theory to me.

dearieme (2013-04-04 10:52:21)

"Foreign-born children residing in the United States had half the risk of developing allergies than those who were born here." When I was a child (1950s) it was a subject of some amusement in Britain that Americans were forever complaining about their allergies. That may have been when I had the first glimmering of the notion that many American health problems are probably caused by making far too many visits to the dentist. Seth: Maybe antibiotics were/are more freely prescribed to children in America than children in Britain. It is a little shocking how freely they are given out here.

## Practical Use of Our Liking For Complex Flavors (2013-04-05 05:00)

People like complex flavors. I suppose this is why I prefer black tea to green tea. My evolutionary explanation is that this preference caused our ancestors to eat more bacteria-laden food. Bacteria make food taste more complex and bacteria-laden food are healthier than bacteria-free food.

Phil Alexander sent me a story from [1]this book that illustrates this preference:

We entered the saloon. Not a customer was there — a very surprising fact, considering that it was New Year's Eve. The only person in sight was the bartender who paced back and forth in front of the bar like a caged beast.

"Well, whatta you want?" he asked savagely.

"Why, we just want a little New Year's drink," I returned. Winterbill was too surprised to say anything.

"Mix 'em yourself," the bartender replied. "I'm through with the saloon business."

"If you feel that way about it," I said, "why don't you sell out?"

"Well, the first guy who offers me \$300 can have the works."

Somewhat amused and thinking he must be joking, I retorted, "I'll give you \$300 — provided it includes all your stock, the cash register, and other equipment."

"Mister, you've bought yourself a saloon!" he snapped. "I'll not only include all the stock and equipment — I'll throw in a full barrel of whiskey I've got in the basement."

Winterbill now joined in the fun and began to take an inventory.

The owner took off his apron and handed it to me. "Gimme the three hundred bucks."

I gave him the money, still believing it was a joke. He put the money into his pocket, got his hat and coat and departed. To our complete bewilderment, we found ourselves in the saloon business.

A few minutes later, our first customer came in. He evidently had not made our place his first stop. I hurriedly put the apron over my evening clothes and asked for his order.

"Martini," he said in a thick voice.

"Martini," I repeated to Winterbill.

"Stall him!" Winterbill whispered.

"Coming right up," I told the customer. He didn't mind waiting. He was at the stage where he wanted to talk and so proceeded to do.

Meanwhile Winterbill racked his brain, for he had only the vaguest idea how to mix a Martini. He finally settled upon a recipe. He put a dash of everything from the numerous bottles behind the bar into one drink. I stirred it up and handed it to the customer. We watched anxiously while he drank it down.

"That was good!" he exclaimed. "Best Martini I ever tasted. Mix me another."

Again Winterbill started to mix.

"How do you feel?" I inquired, none too sure of the consequences.

"Me?" asked the customer. "Fine. Never felt better in my life."

He didn't show any bad results after the second drink, and we both were relieved. As time went on more customers came in. They ordered whiskey sours, Manhattans, and Martinis. Winterbill had just one formula and that's what he gave them all. Nobody complained.

. . . By the time we closed that night we had taken in more than the whole outfit cost us!

1. [http://books.google.com/books?id=pgjACVyd\\_xMC&pg=PA106#v=onepage&q&f=false](http://books.google.com/books?id=pgjACVyd_xMC&pg=PA106#v=onepage&q&f=false)

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Alex Chernavsky (2013-04-05 10:40:05)

I once made [1]this Ethiopian stew (the recipe lists ten different spices – and I used all ten). It was OK but not great.

1. <http://www.theppk.com/2008/10/ethiopian-spicy-tomato-lentil-stew/>

dearieme (2013-04-05 13:46:19)

That's the spirit in which I approached my first chemistry set: "I'm going to the garden shed, Mum, to mix everything up". The result, as far as I remember, was brown.

CD (2013-04-05 17:27:33)

Hey Seth, It reminds me of this story: [http://www.joe-ks.com/archives\\_jul2004/Chili\\_Cheater.htm](http://www.joe-ks.com/archives_jul2004/Chili_Cheater.htm) A guy won a Texas chili cookoff by combining samples from all the entrants. Seth: Reminiscent of psychology research that found that a face photo constructed by averaging many faces was more attractive than any of the individual faces.

Alex Chernavsky (2013-04-06 20:08:02)

The *New York Times* just ran this interesting article about spices: "[1]The Transformational Power of the Right Spice"

1. <http://www.nytimes.com/2013/04/07/magazine/the-spice-is-right.html??gwh=97DA3B24AB9F1131E78A32EBD6B8E1C8>

## **Speech Pathology Confidential (2013-04-06 05:00)**

Bryan Castañeda told me the following:

I was talking to a good friend of mine who's a speech pathologist. He works for a woman who runs a private practice in Connecticut. Says that a third of his patients require the amount of treatment his boss

recommends, a third require treatment but less than she recommends, and a third require no treatment at all. But his boss is skilled at preying on parents' insecurities (and their clientele has a lot of money), so she makes a killing. He agreed with your advice that people should be more skeptical of the claims of medical professionals and do their own research to evaluate to those claims.

The woman who runs the practice has a Master's in speech pathology, same as Bryan's friend. I asked about the treatments. Bryan's friend replied:

It depends on the diagnosis. If it's a speech disorder, we do articulation therapy. Articulation therapy usually consists of drills, correcting erred sounds by shaping the articulators appropriately and then having the client produce the sound in isolation, at the word, phrase, and sentence levels, and then in reading aloud and in conversation until they've reached 100 % or close to 100 % accuracy.

If it's a language disorder, we do language therapy. Language therapy is a little more complicated. We target specific language areas based on the results of previous testing. It can vary a lot, but some of the more common things I do is read passages and have the client answer questions about it, teach grammar, work on formulating sentences appropriately, teach vocabulary, and word classification activities. A lot of worksheets and games too – materials that my boss writes off at tax time. We bill by the hour, so more hours certainly equals more pay for her," he says. "We are all salaried, so the tighter she crams our schedules the more she gets to keep at the end of the day.

At least the unhelpful treatments are harmless, in contrast to a large fraction of mainstream medicine, where children [1]have their tonsils removed, and so on.

1. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

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MJB (2013-04-07 05:23:22)

So what did cause the long-term doubling of life expectancy in England from 32 in 1680 to 65 in 1942? There is general agreement that medicine was not responsible and that the major factor was better resistance to disease, and that the only thing that could have made this possible was better nutrition. How much has modern medicine contributed to the increase in life expectancy? The answer seems to be about 20 per cent, much less than improved nutrition and improved sanitation. It is easy to adopt a patronizing attitude to those patients who, from 425 BC to 1865, imagined their doctors were doing them good when they were only doing them harm. But we too are credulous. We owe much less to modern medicine than we can imagine Wootton, David (2006-06-22). *Bad Medicine : Doctors Doing Harm Since Hippocrates* (Kindle Locations 4196-4200). Oxford University Press. Kindle Edition. Seth: In addition to better nutrition, there were big improvements in public hygiene, e.g., cleaner water. It became a lot safer to live in a city.

Nancy Lebovitz (2013-04-07 09:35:56)

I'm reasonably sure that intrusive teaching can cause emotional damage, even if there's no surgery or drugs involved.

dearieme (2013-04-07 13:07:43)

MJB's remark implies to me that economic historians have grossly underestimated economic growth rates during the Agricultural and Industrial Revolutions: that doubling of life expectancy, after all, was accompanied by large population growth rates.

## **"Brain Games are Bogus": More Trouble for Posit Science (2013-04-07 19:06)**

[1]A post on the New Yorker website called "Brain Games are Bogus" provides considerable evidence for that conclusion. The evidence is about the use of brain games to raise the IQ of children and young adults, whereas Posit Science's training program – [2]which I raised questions about – is aimed at older people. However, it would be surprising if brain games have no effect until you reach a certain age. More plausible is that they never provide substantial benefits – at least, benefits broad enough and strong enough and long-lasting enough to be worth the training time (one hour/day for many weeks).

I read a Posit Science paper, with older subjects, that seemed to me to show that its training had little lasting benefit. The stated conclusions of the paper were more positive. Too bad the head of Posit Science didn't answer most of my questions.

Thanks to Alex Chernavsky.

1. <http://www.newyorker.com/online/blogs/elements/2013/04/brain-games-are-bogus.html>
2. <http://blog.sethroberts.net/2013/02/22/questions-for-posit-science/>

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Ashish (2013-04-07 22:09:50)

Then there's the meta-question of whether IQ is the limiting reagent in most people's recipe for success in life. Beyond a not-very-high point, I doubt very much that it is.

Nancy Lebovitz (2013-04-08 03:22:18)

I've been doing Posit's exercises for a couple of months, and there seems to be an anti-depressant effect for me. It's hard to be sure that the exercises are the cause because I'm doing more than one thing to oppose depression, but it's enough to be worth the time and money so far. (I'm doing the \$10/month rental.)

Bob Levinson (2013-04-09 18:49:37)

So what can people do to improve their brain power, if not games? Seth: Better food, for one thing. Omega-3, butter, probably other foods as well. Avoid omega-6. It's also possible that better sleep improves brain power.

Alex Chernavsky (2013-04-10 03:49:36)

Seth, what about more exercise? "[1]For a Healthy Brain, Physical Exercise Trumps Mental Workout" Seth: I have found that walking improves my brain test scores for a half-hour or so (I haven't carefully measured how long the effect lasts).

1. <http://www.livescience.com/24180-physical-exercise-boosts-brain-health.html>

## **Cod Liver Oil in Morning Improves Sleep (2013-04-08 05:00)**

Kim Øyhus, a programmer who lives in Norway, writes:

Each midwinter and summer I tend to lose my feeling of when it is day or night, especially if I am in the northern parts of Norway, or if the weather is dark clouds for a long time, which often happens. So sorry, no statistics, just my sense of being unhinged from the diurnal cycle.

Taking 1-2 spoons [= 7-14 ml] of cod liver oil in the morning [7-9 am] got me back to this rhythm in about 3-5 hours. It even works for fixing my diurnal rhythm after partying to sunrise, but only after a days rest.

Is this due to Vitamin D3? (I [1]have collected many examples of Vitamin D3 in the morning improving sleep.) Quite possibly. Cod liver oil contains Vitamin D3. When taking a Vitamin D3 supplement, the minimum dose needed to see the effect, based on the examples I've collected, seems to be about 1000 IU. [2]I didn't notice anything when I took 2000 IU. The effect first appeared at a dose of 4000 IU and was a bit larger at 6000 IU. Kim is taking 600-1100 IU of Vitamin D3, so that is consistent with the Vitamin D3 in the cod liver oil being the source of the effect.

1. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>

2. <http://blog.sethroberts.net/wp-content/uploads/2012/09/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf>

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dearieme (2013-04-08 14:06:54)

After breakfast, every morning in winter - cod liver oil capsules were part of the Standard British Childhood in the 50s. And often your breakfast had been a kipper (after a bowl of porridge).

Hamish Barney (2013-04-08 17:28:12)

There might be co-factors in the cod liver oil that make the smaller dose of vitamin D more effective.

Paul N (2013-04-10 08:19:52)

I'll second the co-factor hypothesis. CLO contains lots of vit A, small amounts of EPA and DHA, and some trace minerals too. all around good stuff - just doesn't taste like it!

Jamie Holland (2013-04-17 19:18:29)

Cod liver oil helps with the vitamin deficiency overall and anytime you heal the body from a vitamin deficiency you're going to help the sleep cycle. I'm a huge believer though in Cod Liver oil, I appreciate how the norwegians are super healthy!

Pauline (2013-04-18 06:34:02)

I supplemented with Oral spray Vit D3 (1000iu) since October last year until now. I increased to Vit D3 (3000 iu) since feb as we have an a bitterly cold and extended winter. I have had no cold, no flu (friends and family were very sick) and I supplement with fermented liver/butter oil one capsule at night. This is the first time I have done this consistently through winter in the UK and my first time of no flu symptoms whatsoever. I may have the odd day of a snuffly nose/or cough but nothing ever develops from it. I am particularly amazed as I do mix a lot with people who are often coughing and sneezing but still no problems for me. I am waiting now to see as Spring arrives how my recent pollen allergy is going to work out. I have started taking home-made Kefir as a possible improvement remedy for seasonal allergies. I wait and see, so far so good.

Pauline (2013-04-18 06:38:01)

I wanted to add my sleep has also improved, I sleep noticeably more deeply but I put that down to magnesium 2 x 250mg a night but it may well be the Vit D3, the K2 and the magnesium.



Brook (2013-04-19 10:11:55)

OK, so I am not really talking cod liver oil... though I have been taking it occasionally because flaxseed scares me just a bit. It doesn't have the same profile of fish oil exactly but people take it for the omega 3. However last night I was studying a bit on enzymes and was listening to a lecture found here <http://www.rawfoods bible.com/index.php?page=misc/Vitalzym> It just started playing. By the end of the discussion he said to avoid flaxseed because of the lignans. Apparently they are a phytoestrogen that acts much like the isoflavones in soy and increase estrogen! I have been trying to find out more about this this morning. For those interested I found three sites so far that have my curiosity (since lignans are especially high in all nuts) see page four here <http://books.google.com/books?id=Uu4nzKx74noC&pg=PA24&lpg=PA24&dq=lignans+and+nuts&source=bl&ots=H7f7PPBAV9&sig=zz4cBeLc9QIE9Us5xt6qXnAd2hl&hl=en&sa=X&ei=9eVwUblHO5CUigKRplC4Aw&ved=0CFIQ6AEwBQ#v=snippet&q=lignans%20and%20nuts&f=true> You can see the percentages of lignans... I am liking pecans more and more Then this site [http://medcomres.com/articles/soy\\_isoflavones.htm](http://medcomres.com/articles/soy_isoflavones.htm) (Beans never did sit well with me.... guess I know one more reason why) Apparently some people can negate some of the bad effects of lignans while on antibiotics because some gut floras help digest it (bad) instead of passing it on. Yet lignans are everywhere in food and is usually found in the most fibrous parts of the plant, but not all fiber has the bad lignan impact. I am finding out that it is because there are many types of lignans and we don't understand them all very well.... certain one however we KNOW increase bad hormone levels of estrogen (like the ones very active in flax... that is why it is sometimes recommended for menopausal symptoms) I imagine that would be very bad for men. Surely there has been more study on this topic... and maybe there really are some good lignan types out there.... for now I am trying to understand this study <http://ethesis.helsinki.fi/julkaisut/laa/kliin/vk/mazur/phytoest.pdf> Until we understand lignans better maybe cod liver oil or algae oil is the way to go. Thanks for your awesome blog Seth. I keep bumping into it during my searches.... its a keeper

Sentinel (2013-04-21 06:55:36)

Seth, For the purpose of battling insomnia, do you have any suggestions on how we can reconcile skipping breakfast, with taking D3 supplements and/or cod liver oil first thing in the morning? Will a pre-breakfast supplement run the risk of setting up anticipatory waking? (Vitamin D3 capsule might be flavorless, thus perhaps no anticipatory waking, but cod liver oil definitely has a taste. Yum.) Is it better to delay the supplements until time of 1st-food (10am or 11am, or whatnot)? Thanks! Seth: There are no calories in vitamin D3. So it produces no anticipatory waking. Cod liver oil early in the morning might be a problem.

## **Why Fujoshi? Experiment by Tsinghua Freshmen (2013-04-09 05:00)**

In January I [1]blogged about teaching a class in a new way. The obvious novelty was that I did no grading, but I was also pleased by the high quality of the student work.

The class, at Tsinghua University, is called Foundations of Psychology. It's required of psychology majors and is taken by freshmen. Last time there were about 25 students. The biggest assignment was a final project where I allowed students to work on their own interests. They could do almost anything they wanted related to psychology and they could work alone or with others. I "graded" their work via a checklist: X points for doing this, Y points for doing that, and so on, with the possible points adding up to an A. The checklist was different for every project. They had about five weeks.

Here is a summary of one project, by Vista Zeng:

In the Frontiers of Psychology class this term, we, a group of three freshmen (Vista Zeng, Joy Wu and Michael Wu) conducted an experiment on [2]Fujoshi. Fujoshi is a subculture that started in Japan and spread in East Asia. It has influenced many of our classmates and friends. When recruiting participants, we found 14 Fujoshis out of about 720 female students in Tsinghua University.

According to Wikipedia, fujoshi is synonymous with yaoi fandom:

Yaoi fandom refers to readers of yaoi (also called Boys' Love, BL), a genre of male-male romance narratives aimed at a female audience, and more specifically those who participate in communal activities organized around yaoi, such as attending conventions, maintaining or posting to fansites, creating fanfiction or fanart, etc. Most fans are teenage girls or young women. . . . In Japan, female fans are called fujoshi.

It's easy to raise questions like "why don't those girls enjoy heterosexual romance narratives?", "why is boys becoming fans of female-female romance narratives and creating another sub-culture (yuri) not so big an issue?", or "why did this phenomena first occur in Eastern society?". Vista Zeng believed that the main reason may be the traditional ethics in Eastern world (China and Japan, to be specific) on women. Traditional Chinese moral principles assume that women are not supposed to appear in these sexual scenes, so the girls turn to male homosexual products to satisfy themselves, and to avoid the condemnation from our society.

Since there are very few researches on this topic, and all of them use research methods like interviewing, Vista decided to conduct an experiment to test her explanation. Joy and Wu joined the project.

The study included 30 Fujoshis and 30 non-Fujoshis in Tsinghua University. [The students recruited about half of their Fujoshi subjects going door to door in the dormitories, the other half by making announcements in classes.] The subjects were asked to read several paragraphs including erotic scene, and the only difference between them was the gender of the two characters. The first story includes two male characters, the second one a man and a woman ("he" and "she"), the third one a man and the reader herself ("he" and "me"). (The idea was inspired by the study about judgments of intentionality by Joshua Knobe, which the class introduced.) What's more, a neutral paragraph was put between two paragraphs. The subjects were asked to estimate her emotional feelings (we mainly focused on embarrassment and the sense of guilt) on a scale before and after reading each paragraph aloud in front of 3 strangers, and the 3 observers would also estimate the subject's extent of embarrassment.

The answer to our assumption was yes. The most important finding was that the Fujoshis felt less guilty than non-Fujoshis when reading the male-homosexual paragraph, but far more guilty when reading the heterosexual one, showing that they agree with the idea that women are not supposed to appear in these sexual scenes. We also found that women are prone to put themselves into the sexual scene in which women are constantly involved, and they are therefore embarrassed and guilt about their own feelings.

We think our study found an example about how the traditional ethics from thousands of years ago still influence the teenagers nowadays in China, and implied a lack of sense of equality and self-esteem of Chinese women – they don't see their natural desire and rights legitimate. However, the Fujoshis are also the ones who dare to show their demands of sexual narratives (generally, we found Fujoshis more open to sexual topics than Non-Fujoshis), which can be seen as a progress in Chinese society. We are glad that we conducted the first experiment on Fujoshi (as far as we know) and got such findings which are worth thinking about.

1. <http://blog.sethroberts.net/2013/01/26/my-ideas-about-teaching-put-into-practice/>
2. [http://en.wikipedia.org/wiki/Yaoi\\_fandom](http://en.wikipedia.org/wiki/Yaoi_fandom)

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Anonymous (2013-04-09 09:40:34)

"why don't boys become fans of female-female romance narratives and create another sub-culture?" Looks like someone didn't think the wikipedia link to yuri was important Seth: You are correct. I have fixed the sentence. The students knew about yuri.

Elizabeth Molin (2013-04-09 09:58:10)

But then why is slash fiction so popular in the US? (And other English-speaking countries; perhaps in other languages as well, but I am only familiar with slash in English.) Given the popularity of e.g. Harlequin Romances, it wouldn't seem that there is a lot of heterosexual sexual guilt among US women.

Ken (2013-04-09 10:22:34)

Can you tell me more about glorious Japan and their bushido code? I am also very interested in the Kantana.

Adam (2013-04-09 15:52:33)

Interesting! I have a Chinese friend who is living in Japan & fluent in Japanese. She has talked about "boy-boy love" before.

### Assorted Links (2013-04-10 05:00)

- [1]Acting classes improve memory of older adults
- [2]Baltimore hairdresser proposes interesting theory about ancient Rome (via [3]John Hawks weblog). The WSJ article fails to mention what a commenter points out, that the hairdresser's husband is a professor of Italian.
- [4]Dried plum reverses bone loss in mice. More than other dried fruit. Impressive study.
- [5]US life expectancy stalled.

Thanks to Greg Pomerantz and Casey Manion.

1. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2769921/>

2. [http://online.wsj.com/article/SB10001424127887324900204578286272195339456.html?mod=WSJ\\_article\\_comments#articleTabs%3Darticle](http://online.wsj.com/article/SB10001424127887324900204578286272195339456.html?mod=WSJ_article_comments#articleTabs%3Darticle)

3. <http://johnhawks.net/weblog/topics/metascience/roman-hairstyle-expert-scholarship-2013.html>

4. <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0060569>

5. <http://asserttrue.blogspot.co.nz/2013/03/us-life-expectancy-stalled.html>

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dearieme (2013-04-10 08:22:39)

OK, what about semi-dried plums i.e. prunes?

bjk (2013-04-10 11:32:46)

Hairdresser story reminded me of Victor Davis Hanson, a farmer in California who wrote a book on Greek history. None of the other historians knew anything about farming, so he had a great advantage writing about just that topic.

Matilde (2013-04-11 02:33:57)

I have noticed in the cited article that the dried plum diet consists on 25 % w/w dried plum. I wonder if this is sustainable for humans without having other side effects.

dearieme (2013-04-11 06:51:24)

"I wonder if this is sustainable for humans without having other side effects." I suspect you're thinking more of bottom effects.

Matilde (2013-04-12 01:13:50)

Exactly. I suppose the authors would not mention this kind of effect in mice. To me, this is one more example of ill-designed mouse experiments.

### **First Make Yourself Healthy Meetup April 24 (Wed) (2013-04-10 20:17)**

Encouraged by the success of the Quantified Self Meetup group, I have started [1]a Meetup group called Make Yourself Healthy. It is about how non-experts – the rest of us – can improve on expert advice about health. The first meeting will be April 24 (Wed.) in the meeting room of the North Branch of the Berkeley Public Library, 6:00 pm to 7:30 pm.

The group is about solving your health problems yourself, before or after mainstream medicine fails to help or provides inferior solutions. Access to health information via the Internet makes this more and more possible; so does new technology, which make it easier to measure health problems.

The first important practitioner of Make Yourself Healthy was Richard Bernstein, a New York engineer with diabetes, who in the 1960s bought a new machine that could measure blood sugar with only a single drop of blood. Bernstein used it to measure his own blood sugar many times per day – in contrast to getting it measured once a month at a lab. What he learned from frequent measurements allowed him to stabilize his blood sugar level, which doctors' advice had never managed to. His health greatly improved. His promotion of what he had done led to the glucometers you can find in any drugstore. Nowadays diabetics take self-measurement for granted.

I have managed to improve my health in many non-standard ways. Acne, sleep, mood, weight, and brain function, especially. On the face of it, you might think: He did a lot of self-experimentation and discovered cool stuff. At first, that's how it looked to me. I wrote a paper called "[2]Self-experimentation as a source of new ideas". But that's misleading. Self-experimentation wasn't new, it was ancient. Yet my discoveries were quite new – quite different from what people already believed. What really led to my successes was: 1. Better information. Before the Internet, I spent thousands of dollars on a UC Berkeley library service called BAKER, which photocopied journal articles that I requested by phone and delivered the copies to my campus mailbox. Xerox machines made this possible. 2. The prison of professional science. There are so many things that professional scientists (such as medical school professors) cannot do. There are so many ideas they cannot test. They have left a lot to be discovered and it turns out that non-scientists (such as me – I was not a sleep researcher, a mood researcher, etc.) can discover at least some of it. In other words, I wasn't successful just because I did self-experimentation, I was successful because I did wise self-experimentation. I chose wisely what to do.

Behind this Meetup group is my belief that anyone who does this – tries to do better than expert advice – probably can teach and learn from other people trying to do the same thing, even if their health issue is different from yours.

If you are coming to this Meetup and have experience (successful or unsuccessful) trying to improve on expert health advice, and are willing to share your experience, please contact me.

1. <http://www.meetup.com/Make-Yourself-Healthy-Meetup-Group/>
2. <http://www.escholarship.org/uc/item/2xc2h866>

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## Journal of Personal Science: Xylitol Cures Lichen Planus and Geographic Tongue (2013-04-12 05:00)

### Xylitol Improves Lichen Planus and Geographic Tongue

by Evelyn M., Westchester County, NY

#### Background

In my forties – I am now 75 – my gums started to bother me. Newly-returned to the United States from Iran, I searched for a good dentist. The first one told me to get a cap on a tooth with a small chip. That was no help. A colleague recommended a specialist in gum problems. The specialist advised "scaling," which didn't help. Then he said I was not cleaning my teeth well enough. He put a substance on my teeth to reveal incomplete cleaning and was flummoxed when he could find no evidence of bad brushing or flossing. I gave up trying to solve my gum problem.

When I was about 50, a "crisis tooth" (a molar on the upper right) forced me to see a dentist. I found a very good dentist, sensible and conservative in approach. After the problem tooth was removed, he turned to the overall condition of my mouth. I told him about the gum treatments I'd had. Then he showed me an x-ray that revealed an abscess under the root of a tooth on the lower right hand side. That tooth didn't hurt, and looked OK, but was leaking pus into the gum, inflaming the entire lower right hand side of my gums. The gum specialist had missed it completely. After that tooth was removed, and the surrounding area healed, my gums were fine for many years.

Two years ago, I developed a condition called [1]*lichen planus*. The entire inside of my mouth was inflamed and swollen – gums, tongue, the inside of my cheeks, all of it. I could not brush my teeth or eat anything except the blandest of foods. I also had a metallic taste in my mouth. It was torture.

After diagnosing the condition ("you have lichen planus"), my dentist sent me to an oral pathologist. The pathologist said there was no cure that he could guarantee and gave me two prescription drugs – one to treat problems caused by fungi, the other to deal with bacteria. Neither helped. I confirmed on the web what the dentist and the oral pathologist had said.

Concluding that medical science couldn't help, I starting searching the web for other suggestions. I found Seth Roberts's blog, which suggested taking flaxseed oil to improve gums. I tried it. My psoriasis improved but the lichen planus remained.

#### Source of Idea

In November 2011, the Drudge Report led me to [2]an announcement that UCLA scientists were working on a mouthwash to prevent cavities. [3]A comment said: "Xylitol is a plant sugar that kills s[treptococcus] mutans, and has been around for years as a toothpaste, mouthwash and gum. This is not new at all. Regular use of xylitol does all this, is cheap, and is NOT patentable. So, UCLA, this is nonsense."

I found a wealth of data on the web about xylitol, mainly research from Finland. The evidence showed that it killed bacteria that cause tooth decay and helped re-mineralize decayed teeth. The reports often mentioned that general oral health had improved in patients using xylitol. I decided to try it.

## **Method**

Most xylitol research has been done using gum that children chew after meals three or four times a day. I do not like to chew gum. I found other studies showing that taking a quarter to a half a teaspoon of the sugar (made from birch bark) four times a day is equally effective. I put the xylitol in my mouth, it melts, I swish it around my mouth until the saliva that it produces is quite extensive (60-90 seconds) and swallow it.

## **Results**

I started taking xylitol more than a year ago. After six weeks, the metallic taste was gone and my inner cheeks were noticeably less inflamed. After three months it was clear that my tongue was improving. Now I am sure that the lichen planus is in remission.

My most recent dentist visit was six months ago [October 2012], after I'd been using xylitol for ten months. My dentist and hygienist were astounded. They had been expecting the lichen planus to look the same as when they had seen it before (one year earlier). By then, however, my mouth had healed substantially.

That wasn't the only improvement. I'd always had what dentists call [4]geographic tongue- deep fissures that make a pattern on the surface of the tongue. It never bothered me. I never noticed it until a dental hygienist pointed it out to me (in horror!). I went from having a tongue full of fissures and "ruffled" around the edges to a tongue that was completely healed and looked better than it had in many years. My dentist could still find some of the lace-like effects that lichen planus produces on the inside of my cheeks. The geographic tongue is now [March 2013] completely gone, as is all the plaque on my teeth, the redness of my gums, and the soreness and inflammation I had experienced from the lichen planus on the inside of my cheeks, my hard and soft palate, and uvula.

## **Discussion**

When I told my dentist I was using xylitol, he knew what it was and was happy to see the improvement, but it had never occurred to him to suggest I use it. It is not a regular dental technique. I continue to use it, keeping jars of xylitol next to the kitchen stove and the computer screen (my two favorite haunts!) so that it is always at hand.

At the turn of the year (2012 to 2013) I emailed friends and family encouraging them to try xylitol. One friend started using xylitol by the end of January and in March told me about her progress. She has already noticed a great improvement in her gums. She said that she hadn't been perfect in dosing herself, sometimes forgetting a day, often only using it three times a day instead of four or five, but since she now had evidence that it actually helps, she was determined to take it more religiously. She bought xylitol gum for her children, putting xylitol mints in their lunch boxes.

## **More Information**

[5]Controversies around xylitol.

[6]Role of Xylitol in Oral Health (video)

[7]Xylitol and dental caries

[8]Sugar alcohols, caries incidence and remineralization of caries lesions: A literature review

[9]Summary of xylitol research

1. [http://en.wikipedia.org/wiki/Lichen\\_planus](http://en.wikipedia.org/wiki/Lichen_planus)
2. <http://losangeles.cbslocal.com/2011/11/19/ucla-microbiologist-develops-smart-bomb-against-cavities-tooth-decay>
3. <http://losangeles.cbslocal.com/2011/11/19/ucla-microbiologist-develops-smart-bomb-against-cavities-tooth-decay/#comment-471991869>
4. [http://en.wikipedia.org/wiki/Geographic\\_tongue](http://en.wikipedia.org/wiki/Geographic_tongue)
5. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2676064/>
6. [http://www.youtube.com/watch?v=\\_YweInjG2as](http://www.youtube.com/watch?v=_YweInjG2as)
7. <http://www.ncbi.nlm.nih.gov/pubmed/12693818>
8. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2836749/>
9. [http://www.angelfire.com/az/sthurston/xylitol\\_natural\\_sweetener.html](http://www.angelfire.com/az/sthurston/xylitol_natural_sweetener.html)

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Deidre (2013-04-12 07:58:46)

I have had geographic tongue all my life for which I was told there was nothing wrong and nothing to be done....really? Occasionally have had very bad bouts of painful lesions on the tongue which have recently been diagnosed as "burning mouth syndrome" for which I was told there is no cure...nothing can be done...really? It has (so far) almost completely abated using xylitol as part of regime by a dentist I found via comments on the PaleoHacks website. <http://www.drellie.com/Ellie-Phillips-My-Recommendations.php> The funny thing is I had just been using Xylitol while waiting to find a couple of her other recommendations. So far, the lesions are gone and the tongue is almost normal. Her regime is part of an overall oral health/cavity free goal. Everything can be purchased at a Walgreens. I may never need to see a dentist again.

Jon (2013-04-12 12:31:08)

I have geographic tongue too. I've been taking Zinc supplements with some success (going out and getting some sun seems to help some too). I wonder if it is a combination of not getting enough sun which caused a deficiency in Zinc which allowed some bacteria to over populate my tongue. I would have to do some research, but it is a hypothesis to start with! I also, haven't been drinking enough water which caused painful fissures on my fingers. I'll have to try the Zylitol too. I had been using it a little bit as I was doing Ellie Phillips regime, but I haven't been consistent with it.

Joe (2013-04-12 14:33:03)

Xylitol is great stuff. So is this book: Kiss Your Dentist Goodbye, by Ellie Phillips, DDS.

David Johnston (2013-04-12 16:56:45)

I suffered from gum disease and cavities from my teen year until a couple of years ago. The progression seemed to get worse when I moved to the USA in 1999. Then I switched dentists and they did (at some considerable cost to myself) an oral DNA analysis, which revealed a number of pathogens, including what they considered the 'bad' one which was an anaerobic bacteria that buries into the gums and does bad things. They gave me a bunch of antibiotics and 3 monthly

cleanings and the progression halted and the gums became less inflamed. Then I became aware of two bits of information, first about omega-3 and gum health from this blog, and secondly about the way anaerobic bacteria in the gut can't metabolize saturated fats (with downstream consequences). So switching my diet to (as far as is possible) saturated fats, with the exception of a shot glass of flax seed oil in the mornings (omega-3) and in the following two years my pockets improves and my gum inflammation went away entirely. The response from my hygienist has been most interesting - her: "I see you've been really on top of your cleaning and flossing". Me: "No, I rarely brush and never floss, I just followed up on some inflammation research and switched to saturated fats and some omega-3s in my diet.". She didn't want to hear any more and has stopped talking about it. I assume the mental dissonance was too great for her. My only regret is that I changed multiple variables at a time, so it's hard to know whether all or a subset of those interventions was the primary cause of the improvement.

Rlen (2013-04-13 02:41:14)

I always try to find some negatives on a good story. On this story I found it here: <http://www.thehealthyhomeeconomist.com/xylitol-not-as-sweet-as-its-cracked-up-to-be/> At least it raises some points about the manufacturing and sources for Xylitol that users should be aware of. Seth: Good idea, thanks.

Pauline (2013-04-15 06:17:04)

i have been reading about Xylitol for a while and even recently saw that a new sweet containing Xylitol was going to be launched in the UK stores to prevent teeth infections. After reading the article above, when we went away this weekend I thought I would try to find some Xylitol gum while I was out shopping. I found Smints which contain xylitol, I kept taking a small mint after a meal or a drink over the weekend. Friday I noticed a small ulcer causing irritation on the inside of my mouth. Without making any connection after popping Smints with xylitol on Saturday and one before bed, on the the drive back home on Sunday I noticed my ulcer had gone! completely. Now that was weird!

Pauline (2013-04-15 06:20:29)

Here is an interesting link from Dr Ellie Phillips page: <http://www.drellie.com/Elle-Phillips-My-Recommendations.php>

john (2013-04-15 22:54:41)

@Rein, thanks for your find. One should be aware of potential pitfalls. eg <http://www.xylitol.org/questions-about-xylitol> Is xylitol toxic to dogs? Many dog owners are aware that chocolate, coffee, and grapes are toxic to dogs, but are aware of the risk from ingesting the common natural sweetener, xylitol? Xylitol is a natural sweetener that is found in a variety of products, including chewing gum, toothpaste, mints, floss, candy, chewable vitamins, and sugar-free baked goods. While xylitol offers many health benefits to humans, it can be deadly to dogs and should not be fed to any pets. Ingesting 100 milligram of xylitol per kilogram of bodyweight may cause a rapid release of the hormone insulin, causing a sudden decrease in blood glucose (potentially life-threatening hypoglycemia, low blood sugar) for dogs. The drop in blood sugar occurs within 15 minutes, while the symptoms of hypoglycemia (vomiting, depression, loss of coordination, seizures, or coma are all possible symptoms) may be seen within 30 minutes after the dog consumes the xylitol-containing product. Exposure to higher doses of xylitol may possibly result in fatal liver failure in some dogs An cautionary note is sounded by this person who points to diet as a factor in out of balance oral cavity flora. [http://www.curetoothdecay.com/Tooth\\_Decay/xylitol\\_tooth\\_decay.htm](http://www.curetoothdecay.com/Tooth_Decay/xylitol_tooth_decay.htm)

## **Xylitol Research (2013-04-13 05:00)**

After learning about [1]the dramatic effects of xylitol on lichen planus, I looked around for a good summary of xylitol research and found [2]this:

Xylitol and other natural sweeteners were tested extensively in Finland as potential replacements for sugar during the early 1970's. A series of over 20 research reports (edited by Professors Arje Scheinin and Kauko Makinen) was published together in Acta Odontologica Scandinavica, Supplement 70, in 1975.



These investigations became known collectively as the “Turku Sugar Studies.”

Sweeteners were tested for their effects on dental and general health. The main trials involved the long-term substitution of either fructose or xylitol for sucrose (ordinary table sugar). This involved a huge cooperative effort between scientists and food producers. Separate fructose and xylitol versions of common food items were provided for the volunteers.

These trials (including blood and urine tests) established the safety of relatively large amounts of xylitol (often 70 grams per day or more) consumed regularly over a period of years. The xylitol group reported that xylitol-sweetened foods were comparable to the familiar sugar flavors.

The control group who consumed normal amounts of sugar continued to experience tooth decay, as would be expected. The fructose group also continued to have tooth decay, although progression appeared to be somewhat slower.

The results of a xylitol diet on oral health were dramatic. New tooth decay was practically eliminated. A therapeutic remineralizing effect was noted where the decay process was reversed. A parallel study achieved similar 90 % reduction in tooth decay simply by adding a small amount of xylitol, delivered in chewing gum after meals) to a normal (regular sugar) diet.

Here are some of the major findings of the Turku Sugar Studies:

- Xylitol can be incorporated into a wide variety of food items to directly replace sugar. More than 100 different products were made with xylitol.
- The taste and overall quality of the xylitol products was comparable, and in some cases superior, to regular sugar items.
- Substantial amounts of xylitol can be consumed regularly with no adverse health effects.
- No potentially damaging bacterial adaptations to xylitol occurred.

Especially early on, there were some instances of gastrointestinal discomfort and even osmotic diarrhea in the xylitol group. After a short period of adaptation (few weeks), these symptoms diminished and became no more frequent than in the other groups. A few individuals were more sensitive than the rest of the group. Even exceptionally high intakes of xylitol of over 200 grams in a day did not necessarily cause any problems. Discomfort was more likely to occur with liquid ingestion on an empty stomach.

It is not necessary to eliminate sugar to dramatically reduce tooth decay. Similar results can be obtained simply by adding a small amount of xylitol to a “normal” diet. Xylitol can provide a natural “antidote” for the damaging dental effects of ordinary sugar. A little more than a teaspoon of xylitol per day can provide amazing protection against tooth decay, when used in chewing gum after meals and snacks.

The last point is especially interesting. Xylitol doesn’t work because you eat less sugar. It works, apparently, because it stops/prevents something that sugar starts, perhaps adhesion of certain bacteria to teeth and gums.

[3]Here (video) is coverage of xylitol research in American mainstream media (in this case, ABC News). The useful information (about a xylitol study) is diluted by unhelpful information about xylitol in fruit and brushing and flossing.

1. <http://blog.sethroberts.net/2013/04/12/journal-of-personal-science-xylitol-improves-lichen-planus-and-mouth-health/?preview=true>

2. <http://www.kiddsdental.com/xylitol-research/turku-sugar-studies.html>
3. <http://www.youtube.com/watch?v=d-5XnpW4gfY>

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Chris (2013-04-13 08:54:05)

Check out the sites of dentist Ellie Phillips– [ultimateoralhealthguide.com](http://ultimateoralhealthguide.com) and [Zellies.com](http://Zellies.com).

Mikael (2013-04-13 10:15:03)

Is this not widely known in the US? In Scandinavia we have been chewing xylitol gum for >30 years already because of these studies. Strange how it hasn't apparently spread. Seth: Yeah, very interesting. How much other really useful health information has failed to spread...

Rob (2013-04-13 13:06:19)

From my understanding xylitol destroys the biofilm of the bacteria - something our bodies immune system has a hard time doing. [http://www.scielo.br/scielo.php?script=sci\\_arttext&pid=S1806-83242013000100004](http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1806-83242013000100004)

Tom (2013-04-13 14:51:32)

Mikael, except on blogs, Americans mostly hear about things that are under patent protection.

RT (2013-04-13 16:19:40)

Seth, I only ever chew Spry gum. Check it out. Seth: I got some Spry gum, too. But it is easier to use xylitol as a sweetener in tea and yogurt.

Bilbo (2013-04-13 18:11:46)

Just wondering if all the Ellie Philipps mentions could be spam on this post and your previous one? It would be easy to do if one had a Google alert for xylitol or something. So far we got her websites, her recommendations and her book under 10 comments? I've been using xylitol for about two months now 4x/day for around 2 tsp total a day. My gum bleeding didn't get any better at the time of this comment. Seth: Phillips has been by far the biggest American promoter of xylitol. You might want to try flaxseed oil for the gum bleeding.

Christopher Burd (2013-04-14 11:22:04)

"Seth: Yeah, very interesting. How much other really useful health information has failed to spread..." There's probably some network analysis to be done here. I imagine ideas from the centre (Harvard, say) quickly propagate everywhere, while ideas from the periphery (Univ. Helsinki) usually remain at the periphery. A few, but only a few, may make it upstream to the centre. I also have a theory that linguistic and political barriers (semi-permeable barriers, that is) may foster innovation by sheltering research and innovation communities from the forces of centralization.

## How Things Begin: LightSail Energy (2013-04-14 05:00)

[1]LightSail Energy is a Berkeley company that makes compressed-air energy storage devices. It was started in 2008 by Danielle Fong and Steve Crane. A year later, they got significant funding. When I think of energy storage, I think of batteries or flywheels or pumping water uphill. Use of a quite different technology intrigued me. Compressed-air energy storage is sometimes disparaged ("[2]a lousy way of storing energy").

Fong went to college (Dalhousie) when she was 12. She studied physics, computer science, math, economics, and

philosophy. When it came time to apply to graduate school, she decided she wanted to work on something important. Energy was important. She had read and admired

### The Limits to Growth

(1972). We are running out of convenient fossil fuels, she thought. We are running out of other things, too, such as arable land and aquifers, but solving these problems would require energy.

She decided to go to Princeton and study plasma physics, hoping to improve fusion technology. It was not what she expected. Her professors were brilliant, working on exciting things, such as compact magnetic confinement devices. In the background, however, “everyone’s jumping through hoops,” she says. Her professors were constantly writing grants. Their grant proposals were hard to understand. They went to “dark and foreboding” federal organizations, where they were misunderstood. Funding was cut “randomly and mercilessly” by forces outside the professors’ control. Among the graduate students, she found “a cadre” of interesting people but most of them, she thought, were overly concerned with finding something that had not been done before that meshed with a professor’s interest, in contrast to doing something important that they themselves found interesting. She also thought the other graduate students were not concerned enough with foundational questions. There were “too many good soldiers.”

Why rely on political whims I can’t control when I can create my own fortune and fund whatever research I want, she thought. If you were a mediocre physicist at any top graduate school, you could go to Wall Street and become a quant or go to Silicon Valley and build stuff. In 2007, she talked to Wall Street quants. “I was studying their derivative and option pricing theories,” says Danielle. “They assumed that price was given by an infinite series of small independent factors.” The independence assumption struck her as unlikely because much of the market relied on the same pricing theory. “This foundational assumption was poorly founded,” she says. It works, the quants said. The market collapsed three months later. Before it did, she decided to leave Princeton (after two years) and go to Silicon Valley.

She moved to the Bay Area and started couch surfing. During her first year there, she worked on several different projects with different cofounders and consulted for a variety of startups. Her “theory” was that she would learn how things work and find the right thing to do. She met Paul Graham and consulted for Y Combinator companies. She realized her “limiting factor” – what she needed the most – was a good co-founder. “Innovation is social,” she says. David McIntosh, a co-founder of Redux Games, “read [her] blog” and put her in touch with Max Crane. Max Crane is Steve Crane’s son. Steve was helping someone else start a video game company in Petaluma that needed a part-time programmer. Danielle was living in San Francisco at the time. Steve offered her the job and offered to drive her to Petaluma. “Every time we would drive up we would talk about different ideas,” said Danielle. “I had 50 different ideas for startups.” The one she kept coming back to, kept thinking about, was making a compressed-air-powered vehicle.

A friend, Nick Pilon, had asked her, “How far can you drive with the [solar] energy you could collect on a garage roof in a day? Is it enough to handle the average American commute?” To answer this, she had to provide a solution to the problem of making a practical, efficient vehicle. Batteries were a serious problem. They are expensive, heavy, and degrade relatively fast. Better energy storage would make a solar-powered vehicle more plausible. Several years earlier, her dad had sent her a link about a car that ran on compressed air. In that case, the CEO had been arrested for fraud. The car didn’t exist. However, MDI International in France had made some progress. (Well before [3]Peugeot.) She suggested this possibility to Steve. It could be very inexpensive and fast to refill. They could make a scooter. Steve got really excited. “I’d love to help you get this funded,” he told Danielle. Eventually he put in \$100,000 and joined Danielle as a co-founder. He left his other jobs to work with her.

The thermodynamics of air compression were discouraging. (So much so that in 2009 Berkeley researchers published [4]a paper arguing that a compressed-air vehicle would not be viable any time soon. “The BEV [battery electric vehicle] outperforms the compressed-air car [CAC] in every category. Uncertainty in technology specifications is considerably higher for CACs than for BEVs, adding a risk premium.”) When air is compressed, it gets hot – and heat may leak away. When air expands, it cools – and cold air provides little pressure. Danielle realized that you could solve both problems

by adding heat capacity to the air. This could be done by adding water (mist) during compression to absorb heat and using the stored heat to warm the air during expansion. If you could continuously supply the expanding air with heat, efficiency would increase from the low 20s to 70-85 %. Such an engine – driven by compressed air – would be cheaper, lighter, and more powerful.

They spoke to Ed Berlin (whom Steve called “the most brilliant inventor I know”). Coincidentally, Ed had been working on a compressed-air hybrid vehicle. They joined forces. Ed introduced them to Keith McCurdy, who advised them about financing. At a party, Keith told Vinod Kholsa, the venture capitalist, about the idea. This led to a meeting with Ford Tamer, one of Kholsa’s partners, who specialized in two-wheeled vehicles. He was more excited about what they could do for the power grid (by storing excess power during times of low demand). They had a whole PowerPoint presentation about vehicles. They scrapped it and made another one.

Steve and Ed built the first prototype. Danielle measured its performance. “Ed had a machine shop in his garage and knew how to use it,” says Danielle.

An especially important early hire (Employee Number 6) was Kevin Walter, who became Vice President of Development (developing the engine that compresses the air). He had previously worked for one of the top racing car teams in the world and had developed many race-car engines.

“We knew how to build engines in theory,” says Danielle, “but he had actually built them.” He knew, for example, where to drill holes so that oil would get to the right places. He also contributed a great deal of (psychic) energy, focus, and perseverance.

Being located in the Bay Area really helped. The Bay Area has many people (in the “low thousands”) who are good at making things. One LightSail employee (Liam McNamara) made a steam-powered automobile from scratch for Burning Man and won Junkyard Wars. Another (Keith Johnson) built electric cupcake cars and an electric pumpkin carriage. The Bay Area has “an atmosphere of possibility,” says Danielle. “The idea that when you have a great idea that is doable, you should do it. No one else is going to do it. Burning Man is a condensation of this. After people come, they feel they really can do something. And once they start, the deadline helps make sure they get it done.”

1. <http://www.lightsailenergy.com/>

2. <http://depletedcranium.com/extremely-bad-report-on-air-powered-cars/>

3. <http://www.dailymail.co.uk/news/article-2266632/Car-runs-air-coming-soon-Peugeot-Citroen-unveil-new-117mpg-hybrid.html>

4. <http://iopscience.iop.org/1748-9326/4/4/044011/>

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Vic (2013-04-14 14:57:13)

I'd be wary of any new energy company funded by khosla - his track record in the area is full of grandiose boasting followed by underperformance and bankruptcy.

Adam (2013-04-14 16:38:27)

People who go on to do great things often have a track record of failures. You can't predict the future by looking at the past.

## **Make Yourself Healthy Meetup: Underlying Ideas (2013-04-15 05:00)**

As I [1]blogged earlier, I've started [2]a Meetup group called Make Yourself Healthy. It is about doing better than expert advice. Doing better than taking prescription drugs for a problem, for example. The first meeting is Wednesday, April 24, 6:00 pm to 7:30 pm, in the meeting room of the North Branch of the Berkeley Public Library (1170 The Alameda).

I've found ways to improve on expert advice. I've found new ways to lose weight, sleep better, and so on. More to the point, many other people have done this. I [3]wrote about some of them for Boing Boing. The specific things they learned about how to be healthy – for example, [4]Dennis Mangan's discovery (or confirmation of someone else's discovery) that megadoses of niacin eliminated Restless Leg Syndrome – are not just important in isolation but also as part of a pattern: showing that such a thing is possible. Their solutions were vastly better than what their doctors recommended. This is counter-intuitive. We don't see this in other areas of life. We don't see amateurs building better cars than professionals, for example. But it's happening.

I believe two things about this:

1. The solutions will generalize. What Person X discovers improves her health turn out to help with other problems. I started drinking flaxseed oil because it improved my balance. It turned out to improve my brain function measured in other ways. And it turned out to improve my gums. I don't have lichen planus or geographic tongue, [5]which xylitol can cure, but I am taking xylitol because I believe (backed up by research) it reduces plaque.
2. The methods will generalize – what you do that finds a solution to Problem X is worth trying with other problems. With me, self-experimentation is an example. When studying my acne, self-experimentation showed how to better than my dermatologist's advice. Later, it helped me improve my health on [6]other dimensions (weight, mood, sleep, etc.).

The Make Yourself Healthy Meetup group can spread the solutions, the methods, and the knowledge that such a thing is possible. It can encourage people to try to improve on expert advice and help them do so.

1. <http://blog.sethroberts.net/2013/04/10/first-make-yourself-healthy-meetup-april-24-wed/>
2. <http://www.meetup.com/Make-Yourself-Healthy-Meetup-Group/>
3. <http://blog.sethroberts.net/make-yourself-healthy/>
4. <http://boingboing.net/2010/05/17/restless-legs-syndro.html>
5. <http://blog.sethroberts.net/2013/04/12/journal-of-personal-science-xylitol-improves-lichen-planus-and-mouth-health/>
6. <http://escholarship.org/uc/item/2xc2h866/>

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## **New University of California: A Good Idea (2013-04-16 05:00)**

A California assemblyman named Scott Wilk has proposed a "New University of California" whose only purpose would be to provide certification tests – tests that show you have learned the material of this or that college class. Here is what [1]his bill says:

(1) The New University of California shall provide no instruction, but shall issue college credit and baccalaureate and associate degrees to any person capable of passing examinations.

(2) The New University of California is authorized to contract with qualified entities for the formulation of peer-reviewed course examinations the passage of which would demonstrate that the student has the knowledge and skill necessary to receive college credit for that course.

This is not online education. You can learn the material however you want – for example, by reading a book.

An unsigned New York Times editorial called the idea "[2]particularly ludicrous" but did not say why. I think it's a good idea. It gives students much more power: They can choose the learning methods and materials and times that fit them best (listening to lectures at work, for example), in contrast to the one-class-fits-all approach at almost all colleges. The cost in time and money will be much less than attending a typical university. The proposal helps employers because passage of these tests reflects a skill useful in many jobs: ability to learn on one's own.

Compared to an ordinary college degree (say, from Berkeley), a degree or certification from the New University of California fails to show that you did well enough in high school to get admitted to Berkeley. This could be remedied by showing your prospective employer a letter of admittance to Berkeley.

1. [http://www.leginfo.ca.gov/pub/13-14/bill/asm/ab\\_1301-1350/ab\\_1306\\_bill\\_20130222\\_introduced.html](http://www.leginfo.ca.gov/pub/13-14/bill/asm/ab_1301-1350/ab_1306_bill_20130222_introduced.html)

2. [http://www.nytimes.com/2013/03/31/opinion/sunday/resurrecting-californias-public-universities.html?\\_r=0](http://www.nytimes.com/2013/03/31/opinion/sunday/resurrecting-californias-public-universities.html?_r=0)

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Alex Chernavsky (2013-04-16 06:26:05)

Thomas Edison State College (in New Jersey) seems to be doing this already: <http://www.nytimes.com/2013/02/25/education/25degree.html?pagewanted=all>

"We don't care how or where the student learned, whether it was from spending three years in a monastery," said George A. Pruitt, the college's president, "as long as that learning is documented by some reliable assessment technique."

Chuck (2013-04-16 06:51:21)

This is a great idea.

DZ (2013-04-16 07:22:48)

This needs to become a reality soon. I live in California and find no way to leverage my independent interests and studies in topics without having to jump through the hoops of accreditation as it stands now. You know all that stuff that people list under hobbies or interests, which shouldn't really be on a resume anyway? This would provide great incentive to get them accredited. So far I've felt helpless doing this without the investment of time and money that a formalized education track entails. As for the NYTimes editorial, it shows they're still living in the past. It's riddled with condescending vocab. It's not logical. Look at this statement: "At the same time, however, the Legislature is awash in bills that seem to assume that online education is the answer to the problem. One particularly ludicrous bill would create a "New University of California" that offered no instruction but would issue credentials to people merely for passing exams." The first sentence doesn't follow the other. This is not about online education, it's about offering no instruction and letting the student determine the best means to seek their instruction. It's a hit-job. I used to live in NYC and attended a college there, and I think it's in line with the usual wariness they show towards California education initiatives. Let them focus on their own backyard. But even the local power structure feels threatened: <http://www.dailycal.org/2013/04/01/bill-proposes-fourth-state-university-system/> At this point I feel there is no

recourse and it's a bit frustrating.

Sentinel (2013-04-16 07:49:59)

Great idea, Seth. Not only does the Times not give strong reasons for calling the "New" schools "ludicrous," but the editorial actually acknowledges that online courses "work well for highly skilled, highly motivated students" – is this not a benefit to California? Also, one might ask a more fundamental question about California's education system: that is, why colleges are used as warehousing for "large numbers of struggling students who lack basic competencies and require remedial education."

dearieme (2013-04-16 07:53:48)

This is like an extension and loosening of the classic Oxbridge system: the Colleges did the teaching and the University set and marked the exams. That system partially broke down with the arrival of science and its expensive labs. I have yet to see a sensible account of how lab teaching and similar "practical" activities will be provided for online-educated students : it should not be beyond the wit of man to cope, especially since the content and educational merit of practical classes have been so heavily diluted Since My Day. Perhaps that point generalises: O/L education may be a poor thing compared to what a university education should be - but compared to what it has widely decayed into, O/L education might be fine.

Paul N (2013-04-16 08:20:19)

The NYT has missed the point. The main idea here is to have an independent, \*objective\* examination to assess what the student has learned, not how they learned it. We already have a real world version of this, in every state and country - the driving test for your drivers licence. This test is administered by the state (though this service may be contracted out) and it doesn't matter how you learn, you have to pass the test. There are similar admissions tests for public (civil) service, bar associations and numerous professional groups. This is merely an extension of the same, well proven concept. As Dearieme alludes, they might want to exclude testing for certain areas that would have a large practical/laboratory component (physics, chemistry, engineering, medicine) though even those disciplines grade their students by examinations. I think we will see more of this, and I thoroughly support the concept.

Jonathan Shewchuk (2013-04-16 10:21:21)

Seems to me that the way to find out whether this idea is good or ludicrous is to do it and see how the market responds to the NUC's college credits. I think that would depend in part on how rigorous the examinations are. If all the NUC did were to provide a substitute for IQ tests that isn't illegal in hiring as IQ tests are, that could attract a lot of businesses. Seth: Yes, I think it might help a lot if the actual scores were provided, not just whether or not they passed a certain threshold. Perhaps along with a percentile derived from other people who had taken the test. Let the test taker decide if that info will be provided.

Robbo (2013-04-16 11:03:30)

Yes. It is basic specialisation / division of labour to unbundle accreditation from teaching. The best teachers and students will benefit enormously, the mediocre will have to find something they are better at.

Mehmet (2013-04-16 12:10:43)

I also think that it is a great idea but I am very much surprised by your last paragraph. I think the whole point of such a university is eliminating the need for an admittance letter to Berkeley. A student who did not work hard in high school should not suffer its consequences as long as he/she acquired the required skills for the job market. If high school knowledge is essential for the job market, it can also be objectively assessed. Seth: Maybe how well you do in high school has predictive power. In other words, maybe people who do better in high school do better at Job X than people who do worse. If that's true, and I were hiring for Job X, I'd want to take high school performance into account.

Brandon (2013-04-16 13:02:31)

Didn't this used to happen more often? My step-father (who is 79 years old) said he went to a junior college (San Mateo?) for two years. Transferred to Cal and attended one year then took the engineering test, passed and went to work for the State of California for the next 40 years without having graduated from Cal.

Nancy Lebovitz (2013-04-17 09:53:13)

I'm reading \_Shadow Scholar\_ which is about cheating and education— the author writes papers for other people. The stakes are so high that a credentialing organization had better administer the test in person with strict ID requirements. Seth: At one point, while I was teaching at Berkeley, I was worried about cheating on a test. I wanted a larger classroom for the test so that the students could sit further apart. The chairman of my department told me: "We're not in that business" (of preventing cheating).

AI (2013-04-18 13:24:47)

Three comments: 1. The bill says that the NUC is authorized to contract with "qualified entities". It's important that these entities be selected objectively and not because, say, they have funded someone's political campaign. 2. There are at least a couple other areas where the government currently provides a certification exam but does not require government training, per se: building contractor exams and real estate broker exams. 3. Part of the value of a UC education has long been that it is selective. Not just anyone gets in. And the NUC could well be as selective as the existing UC, using the same types of criteria as current UCs do. Or, it could use a more or less selective set of criteria. It need not abandon application selectivity altogether. Seth: The UC system is not very selective at the undergraduate level, at least in terms of graduation. Many students transfer in from junior colleges, which are not selective at all. In any case, the notion of needing to pass a threshold in order to take a test that measures what you want to measure doesn't make a lot of sense. If you want to find good plumbers, for example, it doesn't make sense to prevent anyone from taking a test of plumbing skill. Your Point #3 does bring out what a big change a test-centered "university" could cause.

Richard Gay (2013-04-20 08:01:40)

This is indeed the best thing since sliced bread, if implemented properly. It makes more sense to have a strong industry input component – the companies that will do the hiring should be able to design a set of test criteria in order to get exactly the knowledge / skill set they want in an applicant. Passing a certain set of tests would take care of most if not all of the technical component of the interview process; the remainder would be personal compatibility and other soft factors which would be more particular to the hiring company. There is no reason for the process of learning to be limited in any way, by arbitrary selectivity for entry, ability to pay, or any other way. It's time to take the universities out of the credential business. Their costs are too high.

### **The Jenijoy La Belle Tenure Case at Caltech (2013-04-17 05:00)**

Jenijoy La Belle is a Professor of English at Caltech. Her tenure case, which started in the 1970s, is the main topic of [1]this interview. Because of one person – Robert Huttenback – she was at first denied tenure. Amazingly, she managed to get tenure anyway. In the middle of the fight, which promised to become very embarrassing to Caltech, Huttenback became Chancellor of UC Santa Barbara.

Here is a related story from [2]another interview:

One day on a Saturday or Sunday, I was in Baxter [Baxter Hall of Social Sciences and] picking up my mail upstairs. There was nobody else there but Huttenback and a young Turk— a young professor of economics, I guess, who is now of course a famous full professor somewhere, perhaps even retired. They were in the office that Jenijoy was going to have and next to it was the men's toilet. And they were talking about playing a joke. The goal was to make the situation as uncomfortable—more than uncomfortable, offensive—for Jenijoy as possible. And I will not—I remember exactly what they were doing, but it is so crude that I will not tell you.

Here is one of La Belle's comments:



In 1982, someone sent me a clipping from the Santa Barbara News and Review, from a column that sounded more like gossip than news. But it simply began: "Even in UCSB circles familiar with Chancellor Robert Huttenback's perquisites of power, the situation has caused comment. Why do university cars and drivers transport Freda Huttenback, his better half, on personal business? Campus employees, from maintenance to clerical workers, tell us of receiving a Xeroxed map to the Huttenbacks' home and directions to chauffeur her wherever she asks. These trips have reportedly included visits to a Ventura chiropractor. "Huttenback defends the practice by calling his wife a consultant to the university on interior design matters, saying that she occasionally needs a university car and driver for decorating business. Huttenback first denied he or his wife ever used the car for personal errands: 'Whoever told you that must be someone I fired,' was his reply."

Huttenback was eventually convicted of fraud. He defends himself [3]here .

1. [http://oralhistories.library.caltech.edu/175/1/La\\_Belle,\\_J.\\_OH0.pdf](http://oralhistories.library.caltech.edu/175/1/La_Belle,_J._OH0.pdf)
2. [http://oralhistories.library.caltech.edu/200/1/Smith,\\_Annette\\_OH0.pdf](http://oralhistories.library.caltech.edu/200/1/Smith,_Annette_OH0.pdf)
3. [http://oralhistories.library.caltech.edu/156/1/Huttenback\\_OH0.pdf](http://oralhistories.library.caltech.edu/156/1/Huttenback_OH0.pdf)

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Alex Chernavsky (2013-04-17 09:10:55)

See also: "[1]Fallen Dean's Life, Contradictory to Its Grisly End"

1. <http://www.nytimes.com/2012/12/11/nyregion/a-quick-descent-for-cecilia-chang-dean-at-st-johns.html?pagewanted=all>

## **Lose Smell, Lose Weight: Evidence For the Theory Behind the Shangri-La Diet (2013-04-18 05:00)**

A friend of this blog writes:

What prompted me to try SLD: When I first went paleo I dropped 30 pounds with no exercise or food restriction, but my weight has been stable for about a year. In January and February [2013] I went through a bad allergy spell, with my nose congested all the time. I dropped six pounds in that time. When the seasonal allergy went away, the weight came right back. Calories without smell suddenly look like a big factor.

[1]Here is a paper about the theory behind the Shangri-La Diet.

1. <http://media.sethroberts.net/about/whatmakesfoodfattening.pdf>

John (2013-04-18 06:37:06)

Seth, Have you seen this article about smell and weight loss? [http://www.nytimes.com/2009/06/18/fashion/18skin.html?\\_r=0](http://www.nytimes.com/2009/06/18/fashion/18skin.html?_r=0) Also, It would be very interesting to hear an update on your current implementation of the Shangri-la diet. Do you do oil or sugar? Has your weight stayed low? Do you see other health benefits related to the weight loss? -JW Seth: I noseclip a bunch of foods, including cheese and yogurt with honey and ground flaxseed. I'm a lot more muscular than I used to be so weight comparisons are misleading. I didn't see health benefits from weight loss - I wasn't particularly fat to begin with.

dearieme (2013-04-18 13:46:57)

O/T <http://www.telegraph.co.uk/news/uknews/crime/10001149/Scientist-jailed-for-faking-medicine-test-results.html>

Kaleberg (2013-04-19 20:24:32)

My sister is anosmic. She tries to watch her weight. She's had some success, but she has the same challenge as every one else I know limiting what she eats. Lack of smell might help some in some situations, but I know at least one counterexample.

A friend of this blog (2013-04-20 07:06:40)

Kaleberg, it seems to be different if the loss of smell is temporary versus a sense you never had. The weight loss happened over three weeks. Six pounds in three weeks would be pretty good for a weight-loss plan. It was remarkable for an unintentional loss. If I didn't read this blog I probably wouldn't have made the connection. Coincidentally, my young daughter and adult sister are anosmic as well. My sister has generally been slim. It will be interesting to see how my daughter's anosmia affects her weight in adulthood. I am teaching her to practice personal science, so we may be getting some reports from her in a decade or two.

## **Is Red Meat Dangerous? (2013-04-19 05:00)**

[1]A recent paper from the Cleveland Clinic reports more than a dozen studies that add up, say the authors, to the conclusion that red meat and other meats cause heart disease at least partly by increasing trimethylamine-N-oxide (TMAO), which is made from carnitine by intestinal bacteria. Meat, especially red meat, is [2]high in carnitine.

The results were reported all over the world, including [3]the New York Times. There are several reasons to question the conclusion:

1. The association between meat and heart disease is weak. An [4]epidemiological paper from the Harvard Nurses Study found estimated reductions in heart disease on the order of 10-20 % when a "healthy" food was substituted for meat. Conclusions about causality (eating Food X causes Disease Y) based on the Harvard Nurses Study have predicted wrongly over and over when tested in experiments, so even this weak association is questionable. [5]A 2010 meta-analysis found no association between red meat consumption and heart disease. The absence of any correlation is surprising because red meat is widely believed to be unhealthy. People who eat more red meat would presumably do more other "unhealthy" things. (Perhaps the error rate of the underlying epidemiology is high. Errors push associations toward zero.)

2. Within the Cleveland paper, the associations between carnitine and TMAO and heart disease are weak. For example, people with the greatest sign of heart disease ("triple" angiographic evidence of heart disease) had only slightly more carnitine in their blood (about 15 % more) than people with the least sign of heart disease. (Maybe it is peak levels of carnitine rather than average levels that matter.)

3. [6]A 1996 epidemiological study (via [7]Chris Kresser ) that looked at the correlates of various "healthy" habits among people especially interested in health (e.g., they shop at health food stores) found no detectable effect of be-

ing a vegetarian. For example, vegetarians had the same all-cause mortality as non-vegetarians. Other factors were associated with reduced mortality, including eating wholemeal bread daily and eating fruit daily. This study looked at a large number of people (about 11,000) for a long time (17 years), so I consider the lack of difference (vegetarians versus non-vegetarians) strong evidence against the idea that modest amounts of meat are harmful. (And I am going to start eating wholemeal bread in small amounts.)

I don't dismiss the paper. Among people who eat more than modest amounts of meat, there may be something to it. Now and then epidemiology turns up a powerful risk factor – something associated with a risk increase by a factor of 4 or more (people at a high level of the risk factor get the disease at least four times more often than people at a low level of the factor). History shows that such correlations are likely to tell us something about causality. With weaker correlations (such as the correlation between red meat and heart disease), it is much more a guessing game.

To me, the important clue about heart disease is that it is very low in both Japan and France, much lower than in countries with high rates of heart disease. The two countries that have little in common besides the fact that in both people eat a lot more fermented food than in most places. In France, they drink wine, eat stinky cheese and yogurt. In Japan, they eat miso, pickles, and natto. Maybe fermented food protects against heart disease.

1. <http://www.nature.com/nm/journal/vaop/ncurrent/full/nm.3145.html>
2. <http://en.wikipedia.org/wiki/Carnitine>
3. [http://www.nytimes.com/2013/04/08/health/study-points-to-new-culprit-in-heart-disease.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2013/04/08/health/study-points-to-new-culprit-in-heart-disease.html?pagewanted=all&_r=0)
4. <http://www.ncbi.nlm.nih.gov/pubmed/20713902>
5. <http://circ.ahajournals.org/content/121/21/2271.abstract>
6. <http://www.bmj.com/content/313/7060/775?view=long&pmid=8842068>
7. <http://chriskresser.com/red-meat-and-tmao-its-the-gut-not-the-meat>

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zip zop zoop zim zat zed zak (2013-04-19 05:09:42)

" ... the telling fact about heart disease is that it is very low in both Japan and France, much lower than in countries with high rates of heart disease. " ??? Seth: I don't understand your point or question.

Mark (2013-04-19 06:51:54)

From my perspective, the authors of this study immediately lost all credibility based on their interpretation of the results from the recent Med diet trial... It was either a very disingenuous way to support their own conclusions, or they have no idea how to interpret randomized trials. I suspect it was the former. In that trial, BOTH groups were counseled to avoid red meat, so it was in no way a randomized test of the red meat hypothesis like the Cleveland Clinic authors contend.

Paul N (2013-04-19 07:42:00)

The fermented foods eaten in Japan and France also have lots of vitamin K2, which is known to help prevent heart disease. Of course, eating fermented foods also helps with gut flora, b vitamins and a few other benefits. [1]Paul Jaminet has written a good response to that last study on TMAO. The major standout, to me was that once they gave the participants antibiotics, to kill their gut bacteria, and then "rebuilt" their gut flora, the TMAO levels increased \*seven fold\* compared to before. So is the problem carnitine, or disordered gut bacteria? The French and Japanese use less antibiotics and, from the fermented foods, have much better gut bacteria (and both eat far less "factory foods") Small wonder they are much healthier.

1. <http://perfecthealthdiet.com/2013/04/lessons-from-the-latest-red-meat-scare/#comments>

Vic (2013-04-19 10:25:20)

Paul N: from where do you get the idea that the French and Japanese use less antibiotics? You must not know much about those countries. Also, Seth, why change your diet to include wholemeal bread? whatever you've been doing till now appears to be working given you lowered your coronary calcium score fairly dramatically...

Alex Chernavsky (2013-04-19 16:30:19)

Here's an interesting article about an island in Greece where the inhabitants typically have very long lifespans: "[1]The Island Where People Forget to Die"

1. <http://www.nytimes.com/2012/10/28/magazine/the-island-where-people-forget-to-die.html?pagewanted=all>

Kas Thomas (2013-04-19 18:40:22)

Agreed, the association with cardio disease is weak at best. The association with colorectal cancer is much stronger, but even there, you have a lot of confounding variables (potentially) to consider: method and degree of cooking, fat content, etc. I'm not worried about the carnitine nonsense so much as I am about heterocyclic amines, on which the literature is vast. HCAs are scary. Japan is a country of skinny people. France not quite so much, but compared to the U.S., French are lightweights. Low BMI is the route to low CVD. Seth: I explain the thinness of people in Japan and France as partly due to a gourmet strain – good taste in food. They eat little "ditto food". There are few McDonald's in Tokyo, for example. I think this goes along with a taste for fermented food.

Todd (2013-04-20 15:48:16)

I think that Chris Masterjohn wrote the most interesting dissection of this TMAO study here: <http://www.westonaprice.org/blogs/cmaterjohn/2013/04/10/does-carnitine-from-red-meat-contribute-to-heart-disease-through-intestinal-bacterial-metabolism-to-tmao/> Seth: I didn't link to this discussion because I disagreed with its main points. For example, Chris says that fish has much more TMAO than meat. But since TMAO is made from the carnitine in meat, this does not mean that fish causes more TMAO inside the body than meat – which is what matters. Another example is that Chris complains that the mice experiments involved meat dosages that resembled eating 100 steaks per day. He said that was unrealistic. Because of the vast lifespan differences between mice and people, I don't dismiss this experiment. I don't think it is obvious what the "equivalent" number of steaks is.

## **Shangri-La Diet Success, Including Better Sleep (2013-04-20 05:00)**

Greg Pomerantz writes:

Over the Thanksgiving [2012] holiday, I suggested to a relative, Richard, that he try the Shangri-la Diet. At the time I had heard about it but did not know anyone who had tried it. I did not have any particular reason to think it would work, but since Rich had tried a number of other diets (including low carb, which he is still following for the most part) I thought it would be worth a shot.

He started the diet over the Thanksgiving holiday and has kept it up since then with a few breaks. He lost 13 pounds in the first month and another 6 pounds over the next two weeks. Altogether he lost a total of 32 pounds over the 16 weeks following Thanksgiving, an average of 2 pounds per week. During this period, he traveled a fair amount and was not able to maintain the diet every day. However, he reported that one of his favorite things about the Shangri-la Diet is how easy it is to restart after a lapse. He began using extra light olive oil but has switched to walnut oil.

There were two surprising results other than the weight loss (which I think is exceptional in its own right). First, his blood sugar control has improved, even compared to the low carbohydrate diet he was (and still is) consuming. Second, he has been sleeping better at night due to a reduction in his nighttime appetite. I believe the two may be related – one of his medications for type 2 diabetes greatly increases his appetite and causes weight gain. He has been using much less of that medication because of his improved blood sugar on the Shangri-la Diet. Therefore, reduced appetite from the diet plus a reduction in an appetite-increasing medication results in lower nighttime appetite and therefore better sleep.

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Nancy Lebovitz (2013-04-20 11:49:27)

Off topic: [1]Knitting stretches– check the comments, these stretches have made considerable improvements for some of the posters, including some with pain that their doctors weren't able to help. I don't knit and don't have major hand problems, but the stretches made my hands and lower arms feel quite a bit better.

1. <http://knitfreedom.com/being-a-knitter/top-5-stretches-for-knitting-pain-relief>

Jim breed (2013-04-21 19:03:14)

Any info on why he changed from ELOO to walnut? Seth: To get more omega-3, I'd imagine.

manish m (2013-04-23 13:15:35)

What about the coconut oil? How does that compare to walnut?

### Assorted Links (2013-04-21 05:00)

- [1] World Health Organization opposes effective herbal malaria remedy
- [2]Increasing potassium intake reduces blood pressure and risk of stroke (experimental evidence)
- [3]How to clearly distinguish thermometer and proxy temperature records.
- [4]Conversation with Edward Jay Epstein about his new book Annals of Unsolved Crime.
- [5]The flavors of fermentation (WSJ). "Recreating naturally occurring fermented flavors in a lab isn't easy, experts say. "What I marvel the most about is the complexity, especially with something like kimchi," says Paul Ricciardi, an IFF flavorist." I believe we like complex flavors so that we will eat more fermented food.
- [6]Ada by Vladimir Nabokov, annotated
- [7]Patient-powered health (BMJ)

Thanks to Dave Lull and Ashish Mukharji.

1. [http://www.slate.com/articles/health\\_and\\_science/medical\\_examiner/2013/04/wormwood\\_tea\\_to\\_treat\\_malaria\\_the\\_who\\_is\\_opposed\\_to\\_an\\_effective\\_preventive\\_single.html#pagebreak\\_anchor\\_2](http://www.slate.com/articles/health_and_science/medical_examiner/2013/04/wormwood_tea_to_treat_malaria_the_who_is_opposed_to_an_effective_preventive_single.html#pagebreak_anchor_2)

2. <http://www.bmj.com/content/346/bmj.f1378>

3. <http://climateaudit.org/2013/04/07/clearly-distinguished/>

4. <http://www.youtube.com/watch?v=MRPlkMzf7Dw&list=UUNQ20XnWL3zBwhblZYK9L5w>
5. <http://online.wsj.com/article/SB10001424127887324240804578414503289505308.html>
6. <http://www.ada.auckland.ac.nz/>
7. <http://www.bmj.com/content/346/bmj.f2255?etoc=>

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dearieme (2013-04-21 16:13:52)

There's a sort of mock table salt available with potassium replacing the sodium. Is that worth taking? If so, how much per day?

Ashish (2013-04-23 11:27:45)

Does the quantity of good bacteria vary by fermented food type and manufacturer? (Surely it must.) Do you have a list of "Top 20" commonly available fermented foods and brands? I know the information is sprinkled throughout the blog. To ask it another way, are Yakult, natto, and other "exotic" fermented foods really worth it, or can I just eat some pickles and sauerkraut? Seth: No I have no such list. I try to get a range of bacteria. The bigger the range the better.

Ed O'Brien (2013-04-27 12:53:43)

Hi Seth, Have you seen this article? : [http://www.nytimes.com/2013/04/08/health/study-points-to-new-culprit-in-heart-disease.html?smid=fb-share&\\_r=1](http://www.nytimes.com/2013/04/08/health/study-points-to-new-culprit-in-heart-disease.html?smid=fb-share&_r=1) & might work into your idea about the importance of bacteria and how fermented foods are healthy.

## Oral Rehydration Therapy For Diarrhea (2013-04-22 05:00)

Oral rehydration therapy (ORT) is given to people (usually children) suffering from diarrhea, which before ORT was often fatal. It is very simple: The sufferer drinks water with sugar and salt ad libitum (as much as they want). You probably haven't heard of ORT – at least, I hadn't. Everyone has heard of antibiotics. Yet "[1]in 10 years [ORT] saved more lives than penicillin had in 40." Infant diarrhea was once (and may still be) the main cause of death in poor countries.

[2]A history of its discovery supports several things I've said on this blog. One is Thorstein Veblen's point about the disdain among professional scientists for useful research:

ORT might also have been developed long before 1968 but for the attitudes of the dominant medical establishment toward practical experimentation, which the Cholera Research Laboratory and the National Institutes for Health shared. Nalin believes that "the people at the lab ... got kudos for the extent to which [their] work was not practical. As soon as it became practical it was discarded like a soiled towel—it was too common, too hands-on... so the prestige went to people who measured trans-intestinal fluxes or electrical currents".

No one who has attended an elite law school, medical school, or graduate program in education will be surprised by this.

Another is the great resistance among the medical establishment to cheap and effective solutions:

The formidable and persistent ignorance of the Western medical establishment, which continues over twenty-five years after the discovery of ORT, is phenomenal. While its refusal to advocate ORT may be

due in part to the notion that ORT is only necessary for people in the developing world, its actions appear to be driven also by financial considerations. Most hospitals do not train physicians in the use of ORT since they have no financial reason to do so. [I think "since" overstates what is known – Seth] The use of intravenous therapy, which often involves keeping a dehydrated child overnight, assures [greater] insurance reimbursement. Sending children home with ORT would [reduce] profits. Furthermore, recent studies show that diarrhoeal illness among the elderly may incur even greater health care costs that could also be reduced by the use of ORT. At a time of heated discussion about cost-containment in health care, it seems all the more ironic and egregious that a superior, cheap, and proven therapy [fails to replace] a far more expensive one. Estimates based on the cost of hospitalizations and physician visits suggest that ORT could save billions of dollars annually.

As an example of the resistance of American doctors to a better therapy, an ORT researcher, who had used it on Apache reservations in America, told this story:

I had an anthropologist friend who adopted an Apache child from the [Arizona] reservation where we were working. He used to be the anthropologist on the reservation. And then he [left the reservation and] went to Arkansas to teach and the Apache child came down with severe diarrhea and he called me up and he said desperately, "Look, my son's in the hospital and they're giving him all sorts of intravenous fluids. The diarrhea's not stopping, he's losing weight, they're not feeding him. I know that you did this work in Arizona [on the reservation] and it didn't look like that. . . . Would you call this professor of pediatrics and just collegiately talk to him?" So I called up the professor and told him that in our experience with Apache children this is what we found and here's the publication and so on. And he said to me, "Doctor, doctor, our [Arkansas] children are not the same as your [reservation] children". He was treating an Apache child from the same reservation.

Shades of Downton Abbey (where Lady Sybil died because a London doctor was listened to instead of a rural doctor).

1. <http://commonsensemedicine.org/archives/whatever-happened-to-honoring-defenses/>
2. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1036912/>

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Morex (2013-04-22 08:15:22)

ORT in Mexico is very popular and fully endorsed by the government. It's even in our law. Here's the Official Mexican Norm for Children's Health (In Spanish). <http://www.salud.gob.mx/unidades/cdi/nom/031ssa29.html> If you go to a public clinic you can get packets with a powder to prepare serum at home, for free. It's called Suero Vida Oral (Oral Life Serum) and it saves countless lives a year. Over the years, since I have memory, there have been very aggressive health marketing campaigns. Now everyone knows where to get the serum and how to use it. Here's a PDF of a flyer you'd find in public elementary schools and clinics. [http://www.promocion.salud.gob.mx/dgps/d\\_escargas1/programas/1\\_postal\\_vida\\_suero\\_oral\\_dgps.pdf](http://www.promocion.salud.gob.mx/dgps/d_escargas1/programas/1_postal_vida_suero_oral_dgps.pdf) It's a surprise to me that this hasn't been implemented in other countries. Here's

Morex (2013-04-22 08:19:26)

Addendum. Here are a couple of TV commercials. This one is a 30 seconds cartoon with a cherished Mexican character, Cantinflas. This aired in the 80's He explains how to use the serum and how it can save a kid's life. <http://www.youtube.com/watch?v=jY9hVRknI3M> Here is a 2:30 minutes commercial with a little more info. This one is from the 90's. <http://youtu.be/LF8g8oVOQm4?t=7s>

Dena Shunra (2013-04-22 08:23:30)

FWIW, I came across oral rehydration therapy in a BBC World Service broadcast. Noticed it immediately, because the long words were in such stark contrast to the simple meaning: "drink water. With salts/sugar melted in." I'm pretty sure this was more than a decade ago.

Paul (2013-04-22 08:53:57)

Dena, it is not quite that simple. The ratio of salts is important. Water on its own won't work. If there is too much sugar it will make the diarrhea worse. Too much salt is really bad. For instance, sports drinks have too much sugar and won't work. When I had diarrhea recently I just drank Pedialyte. It is interesting to note that they don't seem to make anything targeted at adults although as far as I can see there is nothing child-specific in Pedialyte.

Nancy Lebovitz (2013-04-22 09:04:43)

I've heard of it now and then for twenty years or more, and I've spent my life comfortably in the middle Atlantic of the US. I'm not sure whether either of us has unusually weird information resources.

Nancy Lebovitz (2013-04-22 10:20:33)

[1]A poll about whether people have heard of ORT. 10 yes, 1 no. I'm pretty sure my readers are mostly American and European. My tentative theory is that science fiction readers (me and probably a large majority of my commenters) are likely to pick up odd facts, even before the internet. One commenter mentioned that Gatorade and Pedialyte are well-known remedies.

1. <http://nancylebov.livejournal.com/575641.html?nc=3#comments>

Lauren Rosenthal (2013-04-22 12:37:36)

Seth, would it be possible for you to have a facebook link after each post so that reposting your blog posts would be easy? Lauren

Adam (2013-04-22 15:06:08)

I dispense ORT regularly as a pharmacist, but I often see what you mention too - doctors prescribing IV fluids, IV antiemetics, etc. Although we haven't had a case at my place of work, a local Chinese pharmacist told me she has seen Dystonias (uncontrollable muscle tightening, similar to a seizure) in a child treated with these anti-nausea medications. Sometimes simple is better.

Jim (2013-04-22 19:04:20)

Seth, Your comment about medical and law schools reminded me of a conversation I had with one of my law school professors. He had gone to an Ivy League law school, and then into private practice (big NY law firm) for three years. He said that if he had stayed at the law firm any longer, his resume would have been "tainted," and it would have been difficult for him to get a job as a law professor.

## **Cuban Data Refute Mainstream Health Beliefs (2013-04-23 05:00)**

[1]A new BMJ paper looks at Cuban health before and after the economic crisis of 1991-1995, when the Cuban economy nose-dived. There wasn't enough gasoline for cars. so bike riding greatly increased. In addition, people ate less. What effect did these changes (more exercise, less eating) have on health?

You know what is supposed to happen: Better health. Walter Willett, the Harvard epidemiologist, wrote [2]a commentary about the study that concluded "The current findings add powerful evidence that a reduction in overweight and obesity would have major population-wide [health] benefits." In other words, Willett said that what happened supports conventional beliefs.

But it didn't. In several ways, what happened contradicts conventional beliefs.



1. A popular belief is that exercise causes weight loss. However, the percentage of "physically active individuals" doubled from 1985 to 2010 (from about 30 % to 60 %). In spite of this, the prevalence of obesity considerably increased (from about 13 % to 18 %) at the same time. Apparently exercise is considerably less important than something else. I have never heard a public health advocate say this.

2. A graph showing rates of heart disease, cancer, and stroke (the three main killers) over the period showed no change in rates of cancer and stroke. In spite of big changes in both exercise and obesity. The rate of heart disease stayed constant during the period when obesity went down. It steadily dropped during the period of time when obesity went up. Apparently the factors that control obesity and the factors that control heart disease are quite different (contradicting the usual view that exercise reduces both).

3. There is no simple connection between diabetes and obesity. During the economic crisis, when the prevalence of obesity went down by half (from 15 % to 7 %) and exercise greatly increased, the prevalence of diabetes slightly increased. Only after the crisis did the usual correlation (more obesity, more diabetes) emerge.

4. The only lifestyle factor to have its conventional effect: smoking. When you stop smoking, you gain weight is the usual belief (which I also believe). The data definitely support this connection. A huge reduction in the fraction of people who smoke (from 30 % to 10 %) did not reduce cancer but did coincide with a great increase in obesity.

5. Cubans are doing something right, as shown by the considerable decrease in heart disease and diabetes deaths. Apparently they are also more health-conscious, as shown by much higher rates of exercise and much lower rates of smoking. (Assuming that cigarettes did not become too expensive.) They are getting fatter, too, but apparently that is less damaging than we are told.

Willett and the authors of the study look at subsets of the data and use theories about "time-lag" to draw reassuring conclusions. In fact, large portions of the data are not easily explained by conventional ideas, as I've shown. You can look at the data many ways, but to me the study makes two main points. 1. During a period when everyone was forced to do what doctors recommend (exercise more, eat less), health did not improve. 2. During a period (post-crisis) when obesity got steadily worse, health improved (heart disease rates went down, cancer stayed the same, diabetes mortality went down). Cuba is too poor for the improvement to be due to better high-tech modern medicine. Taken together, these findings suggest we should be more skeptical of what we are told by doctors and health experts such as Willett.

1. <http://www.bmj.com/content/346/bmj.f1515?etoc=>

2. <http://www.bmj.com/content/346/bmj.f1777?etoc=>

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Koanic (2013-04-23 06:37:13)

Nice. There's no animal study that shows a negative health effect from smoking. The global epidemiology on smoking is totally contradictory to the mainstream view. Clearly what the Cubans were eating was more important than how much.

Ed M. (2013-04-23 06:55:33)

Guys, I would take any study coming from Cuba with a grain of salt. Having lived in Miami and knowing many refugees, including a nurse, the situation there is deplorable beyond words... Scabies being spread in hospital, dentists requiring bribes like soap before working on you... It is an experience so far removed from our (dare I say it) privileged existence that might a

well be mars. Potemkin study. -Ed

Alex Chernavsky (2013-04-23 08:37:59)

Koanic wrote, "There's no animal study that shows a negative health effect from smoking." This Wikipedia entry suggests that there *are* such studies: [http://en.wikipedia.org/wiki/Animals\\_and\\_tobacco\\_smoke](http://en.wikipedia.org/wiki/Animals_and_tobacco_smoke)

Matt Weber (2013-04-23 09:34:20)

I wonder if the Cubans were exercising more because they were getting fatter.

arbitrage (2013-04-23 10:08:24)

Seth - I could not parse two data points you laid out. I have not read the original study. You say in #1 that "In spite of this, the prevalence of obesity considerably increased (from about 13 % to 18 %)" and then you say in #3 that "During the economic crisis, when the prevalence of obesity went down by half (from 15 % to 7 %)". Thanks! Seth: Look at the dates associated with the two sets of percentages (13-18 and 15-7). They are quite different.

Tuck (2013-04-23 12:36:44)

Ed M.'s got a good point, but there's a related, and larger one: communist governments are famous for faking statistics to make themselves look better. The CIA learned the hard way that trusting the official statistics coming out of the USSR was not a wise course of action. This one deserves a far larger grain of salt than Willett's work usually requires! "...But Raúl Castro has demanded more accurate information since he stepped in for Fidel Castro, his ailing brother, in July 2006 and officially became president in February last year. "In a speech to parliament in 2006 he attacked shoddy data as "preventing us from knowing what has been done and what remains to be done"." If Cuban statistics stink, you'd think Castro would know... <http://havanajournal.com/business/entry/national-statistics-office-in-cuba-re-leases-more-business-and-economic-data/>

Koanic (2013-04-23 18:23:58)

"This Wikipedia entry suggests that there are such studies:" As far as I can tell from the entry, I've seen all or nearly all of the studies listed. Painting tar on skin is not smoking. The only tumors that developed were in breeds that develop tumors everywhere, and due to tobacco's stimulative effects on blood flow the tumors were somewhat larger in the lungs. Tracheotomizing dogs is obviously not going to improve their life expectancy. There were other handling problems with studies. Basically as long as the smoke didn't reach asphyxiating levels, the animals who smoked always lived longer than the controls. Feel free to refute by providing one pdf that shows a clear negative result for smoking without cheating in some ridiculous way.

Alex Chernavsky (2013-04-23 19:14:49)

Koanic - I'm not sure where this is going. Do you believe that it's a myth that smoking causes health problems in humans? If it's not a myth, then why wouldn't you expect smoking to cause health problems in animals?

Koanic (2013-04-23 19:57:00)

I don't know why you need to know where this is going to provide the pdf requested, if you disagree with what I've written so far.

Alex Chernavsky (2013-04-24 04:35:10)

I don't disagree so much as I think the implied idea (that smoking is harmless) is very... unusual. I thought that the harmfulness of smoking was about as well-supported as any medical hypothesis can be (and consistent with my own personal experience of observing chain-smoking relatives dying from emphysema and cancer). I was asking you to provide more information. I have no PDFs to post.

Koanic (2013-04-24 04:59:41)

"I thought that the harmfulness of smoking was about as well-supported as any medical hypothesis can be" Now you have reason to suspect that it is not, and apparently that's as far as it will go with you, which I'm fine with. Anyone else who wishes to provide a pdf proving causal link is welcome to do so.

Alex Chernavsky (2013-04-24 05:02:07)

"Now you have reason to suspect that it is not'. Actually, I don't – as you haven't given me any reason. Not any *substantial* reason, anyway. I thought there might be something relevant on your homepage, but it all seems to be dedicated to blog posts about picking up women.

Koanic (2013-04-24 08:27:54)

Then apparently you don't understand the difference between correlation and causation.

Adam (2013-04-24 15:20:05)

Interesting read here: <http://smokescreens.org/lungcancer.htm> "Based upon what the media and anti-tobacco organizations say, one would think that if you smoke, you get lung cancer (a 100 % correlation) or at least expect a 50+ % occurrence before someone uses the word 'cause.' Would you believe that the real number is < 10 % (see Appendix A)? Yes, a US white male (USWM) cigarette smoker has an 8 % lifetime chance of dying from lung cancer but the USWM nonsmoker also has a 1 % chance of dying from lung cancer (see Appendix A). In fact, the data used is biased in the way that it was collected and the actual risk for a smoker is probably less." Haven't fact checked the numbers, but if true, it is interesting.

dearieme (2013-04-24 16:22:44)

1) "I thought that the harmfulness of smoking was about as well-supported as any medical hypothesis can be": well, as well-supported as it can be in the inevitable absence of controlled experiment on humans. 2) Eightfold, Adam; wouldn't it depend on how much he smoked? And for how long? The rule I've seen quoted says that the 25-a-day smoker increases his risk of contracting lung cancer 25-fold. (Or perhaps that refers to his risk of dying of lung cancer: my memory isn't clear on that.) How many years he has to smoke to qualify for "the rule of 25" also escapes my memory. But the lack of any allusion to the extent of smoking in your quotation makes me leery of it. And as for its source, I just guffawed at "It first appeared on the Journal of Theoretics".

Koanic (2013-04-24 19:20:38)

"well, as well-supported as it can be in the inevitable absence of controlled experiment on humans." False, it is not established by controlled studies in animals, as I have stated. For example, it could be that there's something generally carcinogenic in the USA, and the bloodflow stimulating effects of tobacco merely grow the tumors faster in the lungs compared to other parts of the body. Or that tobacco alone doesn't cause cancer, but only in combination with some aspect of the American diet. It could be like sunshine and melanoma - if in other places in the world people get lots of sun without getting skin cancer. There is no way it is a very well established medical fact, UNLESS someone can provide a simple animal study proving causation.

dearieme (2013-04-25 02:01:09)

"False, it is not established by controlled studies in animals, as I have stated." Don't be silly, nobody gives a hoot whether smoking would kill animals. The question is whether it kills people, and the only evidence that would be conclusive would be controlled experiments on people. Since those can't be done, people have to settle for the inconclusive but highly suggestive results of epidemiology.

dearieme (2013-04-25 02:03:19)

While we're on the subject of your silliness, Koanic, why the parochialism of your use of "USA" and "American": aren't you taking American Exceptionalism a little far?

Koanic (2013-04-25 09:57:45)

You're wrong. Cancer is a very straightforward disease to induce. If cigarettes don't give cancer to monkeys or mice, they won't to humans either. Seth: How do you explain the strong association between smoking and lung cancer? With high rates of smoking (e.g., 2 packs/day) the association is very strong (compared to other epidemiological associations). With low rates of smoking (e.g., a cigarette/day) it is entirely possible that smoking is beneficial, as [1]this book argues.

1. <http://www.amazon.com/The-Health-Benefits-Tobacco-Smokers/dp/9962636434>

dearieme (2013-04-25 15:10:35)

I suppose that these would have to be American monkeys and US mice?

Alex Chernavsky (2013-04-25 18:29:26)

"If cigarettes don't give cancer to monkeys or mice, they won't to humans either." Apparently, arsenic causes cancer in humans but not in animals. See, for example: <http://www.ncbi.nlm.nih.gov/pubmed/8891790>

Koanic (2013-04-25 19:26:09)

If I recall correctly, the cancer smoking connection looks compelling when you take a naive look at American epidemiology snapshot, but fails to hold when looking at time series or international comparisons, as you partially discovered with Cuba. The "1/d healthy, 2 packs/d unhealthy" hypotheses \*really\* doesn't fit the international data, since other countries tend to smoke much more than the US, yet have far less cancer. The data fits a melanoma type hypothesis much better - American doctors rightly tell Americans to stay out of the sun, but sun doesn't actually cause cancer for more paleo countries or for people eating more paleo diets. Quite the opposite, sun is actually healthy. This would explain why animals who smoke live longer in properly controlled experiments. "Apparently, arsenic causes cancer in humans but not in animals." Key word, apparently. What you should have said is there is a correlation between arsenic exposure in humans and cancer. I have no information about whether this correlation is reliable enough to be considered established without any controlled experiments to back the causal link.

dearieme (2013-04-26 02:16:51)

The cancer-causing properties of smoking were first discovered in pre-war Germany. Apparently those abroad who noticed the results rejected them on the grounds that they probably were just pandering to Hitler's dislike of smoking. So the study that changed everything was a postwar British one by Bradford Hill and Doll. At the very least, then, you have to explain why smoking apparently mows down Krauts and Brits and Yanks. I wouldn't be surprised if smoking affects different races differently, even races as similar as, say, Germans and Italians. Even if one accepted the idiocy that race is just a social construct, one could look at habits - including diet - that varied among, say, the European nations, but one would need to come up with a hypothesis as well supported and biologically plausible as the smoking hypothesis. Still, never say never, eh?

Koanic (2013-04-26 05:07:34)

The origination of the theory in three countries does not mean the theory is correct in three countries. Furthermore, this is a logical fallacy: "but one would need to come up with a hypothesis as well supported and biologically plausible as the smoking hypothesis." I certainly do have my own hypotheses, better informed than those here, but I do not need to advance them. I am content to shred the logical errors of the defenders of the status quo view, which I have done. That nobody has offered evidence to alter my opinions strengthens my estimation of their accuracy. It is precisely this sort of thinking that has permitted the fat theory of obesity to dominate.

Koanic (2013-04-26 05:16:48)

As another example, there is much talk about how a sedentary lifestyle is bad, but my own observation is that a sedentary lifestyle has no impact on my health. At most, modest exercise when healthy is nice but not necessary, and overtraining is quite bad. Instead, I have observed a very strong correlation between being sick and being sedentary, with the causation running the other way. Therefore I conclude the epidemiological emphasis on the health benefits of exercise for the non-obese is mostly garbage. Rather, when one is healthy one will naturally not be sedentary, in the sense of at least walking around, up stairs, etc. The only exception would be extremely long working hours at a desk. If humans are adapted to long periods of inactivity during e.g. winter, then evolutionary biology supports my conclusion.

Theragingwalrus (2013-04-26 05:16:55)

haha love how these comments are completely off-topic you should see koanic on his youtube channel, smoking like it's his day job

Koanic (2013-04-26 05:23:38)

When I say garbage, I mean it is positively harmful. Not that there aren't benefits from exercise, but people who are sedentary are probably unhealthy, and therefore need to be sedentary, aka rest. Telling them to exercise expends or overexpends their limited energy resources, preventing them from taking actions that would actually make them healthier, such as improving diet and environment, getting more sleep, or whatever. Given the many documented positive effects of smoking, it is likely that the correlation between sick people and smoking is similar to the correlation between sick people and being sedentary.

dearieme (2013-04-26 11:25:40)

Well, I'd be obliged if you could demonstrate that light pipe smoking is good for you, Koanic. I do miss it.

Koanic (2013-04-26 20:55:29)

I will not do so, but there's a fellow who will: Nightlight who posts on FORCES, Longevity and other places. Google for your pleasure.

Valentin (2013-05-03 06:35:33)

Difficult to interpret data indeed. But after reading the original article I have to disagree with a few of your points: > 3. There is no simple connection between diabetes and obesity. > During the economic crisis, when the prevalence of obesity > went down by half (from 15 % to 7 %) and exercise greatly > increased, the prevalence of diabetes slightly increased. Only > after the crisis did the usual correlation (more obesity, more > diabetes) emerge. This is true for prevalence - but not for incidence. I.e. people were not cured from diabetes, but fewer got sick. This shows up clearly. > 2. A graph showing rates of heart disease, cancer, > and stroke (the three main killers) over the period > showed no change in rates of cancer and stroke. There is no graph showing the rates of these diseases - the graph shows the mortality attributed to these diseases. Makes a big difference when thinking about whether the "time lag" hypothesis is believable (in that it is for mortality much more than for prevalence). But also making it even more difficult to interpret the data, because changes in treatment for these conditions (e.g. treatment for high blood pressure) could also affect the mortality by a lot.

## **Cheap Good Science (2013-04-24 05:42)**

Last weekend I attended [1]EG, a TED-like conference in Monterey. One of the speakers, a woman named [2]Hong Yi, made representational art from cheap materials – a portrait from coffee-stained napkins, for example. The most stirring talks were by Matt Harding ([3]dancing video) and Jo Montgomery and Chuck Johnson ([4]circus school) but she, more than anyone else, seemed to have done something with big implications. Her art was attractive, profitable, very cheap, and diverse (many materials, many representational styles). If anyone else has ever done this, I don't know about it. She is an architect in Shanghai and her art began because she was in China. At a wholesale supply store, she came across very cheap candles. She realized she could buy enough of them to make a picture with one candle = one pixel. I imagine people will be watching Harding's video a hundred years from now and the underlying point of Montgomery and Johnson's circus school will be valid forever, but both were enormous expensive unique efforts. Hong's work was much easier and cost almost nothing. The benefit/cost ratio was very high and millions of people could do something like what she did.

I realized that my work resembled hers. She had discovered how to make cheap good art – not just once but many times, using a wide range of materials (e.g., different foods) and representational styles. I had figured out how to do cheap good science, answering not just one question (e.g., how to sleep better) but many questions (how to sleep better, how to lose weight, how to be in a better mood, etc.). My science cost almost nothing, so I could do a lot of it (do thousands of experiments) and managed to discover many things. In both Hong Yi's case and mine, the Internet was not needed to do the work but was essential for publicizing it. It didn't fit the usual channels.

For a long time, I called my work self-experimentation. It's true, but misleading, because almost all self-experimentation you've heard of isn't like mine. The book [5]Who Goes First? The Story of Self-Experimentation in Medicine is full of self-experimentation quite different than mine. Most of it is by doctors, designed to show that a new treatment is safe. The scientist tries the treatment himself to protect others. The self-experimentation in Who Goes First? is closer to demonstration than experiment. In contrast, the treatments I've studied (e.g., butter, morning faces, standing a lot) are perfectly safe. My work is about finding new ideas. It is about changing my own beliefs, not trying to convince other people of what I believe.

More recently, I might describe my work by saying it's an example of the Quantified Self (QS) movement. Again, this is true, but also somewhat misleading. My work does involve self-quantification and self-tracking. Like many QSers, I do hope to become healthier as a result. What's misleading is that the tracking is only part of the effort, I don't measure many things, and my tracking isn't high-tech. I'm trying to discover new cause-effect relationships (e.g., new ways to improve sleep). This is not a large part of the QS conversation.

If I describe my work as cheap science, on the other hand, what you automatically think of is pretty accurate. Scientists look for cause-effect relationships (it is central to science); I look for cause-effect relationships. Scientists do many experiments; so do I. Scientists pay great attention to the scientific literature (what has already been done, what is already known); so do I. When something becomes much cheaper (e.g., photography or computing becomes much cheaper), everyone understands that the activity can be done by many more people. That is inherent in my work. I am doing science that many people can do – many more people than can do professional science. The terms self-experimentation and quantified self do not convey this.

Like the term cheap travel, the term cheap science suggests freedom. That too is a big part of what I do. I have vastly more freedom than professional scientists. I can test treatments they can't. I can entertain ideas ("crazy") they can't. I can spend longer on one project than they can. So if I describe what I do as cheap science, the rest of what I say ("I've discovered new ways to sleep better, lose weight, etc.") makes more sense. And maybe the whole activity sounds more accessible, whereas self-experimentation and quantified self seem like the sort of activities that caused the word geek to be invented.

1. <http://www.the-eg.com/>
2. <http://www.redhongyi.com/>
3. <http://www.youtube.com/watch?v=Pwe-pA6TaZk&noredirect=1>
4. <http://www.sancaseattle.org/>
5. [http://books.google.com/books/about/Who\\_Goes\\_First.html?id=V1jwT-P8FjoC](http://books.google.com/books/about/Who_Goes_First.html?id=V1jwT-P8FjoC)

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Nancy Lebovitz (2013-04-24 10:39:21)

You may be leaving out up-front costs– Hong's Yi's learning to draw well and your background in statistics. Seth: I don't think my statistics background has made much difference. But you're right there are "infrastructure" costs. I'm not sure that Hong Yi needed to draw well to produce her work.

Daniel Lemire (2013-04-24 19:31:03)

I propose the following term "ridiculously easy science". Seth: Thanks. That's a good way of putting it.

alexi de sadesky (2013-04-24 20:42:10)

Whether you know it or not, you and Hong Yi are exact opposites. She is most certainly an insider in the art world (or at least wants to be). One look at her architecture models is enough to tell you that. Seth: Have you looked at my animal-learning papers?

shtove (2013-04-25 12:38:16)

Thanks for the link to Hong Yi. Here's her blog: <http://www.ohiseered.com/> So good natured, and I got a good laugh from the uplifting photos and commentary. The use of materials is original. I get the feeling she's at one with the world of marketing. Maybe she's a natural behavioural psychologist. I'll have to think about it.

Pauline (2013-04-26 01:09:07)

I love Hong Yi's work, her ability to imagine amazes me, and inspires - almost like a child who sees patterns in everything and plays with it all. I always notice patterns and shapes in nature and the effects of light and shade. This desire for pattern, design and insight is linked to curiosity and play - isn't that also part of this desire to re-design our selves whether its through sleep, eating, walking, socialising - its the desire to discover new ways of being in the world. Maybe we should call it 'curious science of self creation through feedback'.

David (2013-04-26 02:43:36)

I believe your work and discoveries, just like Hong are very inspirational. You share information and new knowledge to everyone around the globe with the use of the Internet. It sends a message that every individual has the potential to contribute something to society even with no or limited budget. We now have the Internet which we can use to publicize our work without any payment. Seth: "It sends a message that every individual has the potential to contribute something to society even with no or limited budget." I agree, thank you. From my privileged position, I think I tend to miss this point. People want to improve their own health, of course. Economists endlessly discuss self-interest. My work shows a new way of improving one's own health. But people also want to contribute something to society, just as you say - which is not so obvious, at least to economists. My work shows a new way of doing this, too. I am impressed with the work of Adam Grant, which shows that if you can make a job appear more helpful to others, people like doing that job more. Making a job seem more helpful to others is quite different than increasing how much the job helps the person doing it.

Paleophil (2013-05-14 16:20:42)

Once again, cheap science proves superior: Now that the West is forced to seek alternatives to expensive antibiotics whose use has produced supergerms and helped drive up medical costs, it is looking at old-fashioned Russian bacteriophage therapy. Phage therapy is cheaper and "far more robust to heat" (<http://scienceblogs.com/mikethemadbiologist/2006/09/30/phage-therapy>), can adapt to changing bacteria [http://www.bacteriophagetherapy.info/ECF\\_40946-8E2F-4890-9CA6-D390A26E39C1/Pros%20and%20cons%20of%20phage%20therapy.html](http://www.bacteriophagetherapy.info/ECF_40946-8E2F-4890-9CA6-D390A26E39C1/Pros%20and%20cons%20of%20phage%20therapy.html), is more targeted and less likely to cause side effects or resistance, and is equally effective and in some cases more so, but more difficult to mass-manufacture (and thus not favored by corporations). [http://en.wikipedia.org/wiki/Phage\\_therapy](http://en.wikipedia.org/wiki/Phage_therapy), <http://www.npr.org/templates/story/story.php?storyId=89380684>, <http://www.npr.org/2013/04/12/177029253/looking-to-nature-for-antibiotic-inspirations>

## **Make Yourself Healthy Meetup Group: Report of First Meeting (2013-04-25 13:28)**

The first meeting of the Make Yourself Healthy Meetup group happened last night in Berkeley. It went great. About 15 people attended. We heard four fascinating talks - five, if you count mine. About 10 people wanted to talk so there was far more material than time (the meeting lasted about 2 hours).

Here are brief recaps of the talks.

Me. I explained why I started the group. I described how I came to believe that non-experts can discover impor-

tant things about health that health experts, such as doctors, don't know. These non-expert discoveries deserve more attention than they would get on a online forum (e.g., a [1]MedHelp forum about acne). They can help people with other problems and can encourage people with other problems.

Katie Reid. After her youngest child was diagnosed with autism, she tried many things that didn't work. She tried removing gluten from her daughter's diet – a common treatment – and that made things somewhat better. The partial success encouraged her to look further at food. On someone's blog, she came across the idea that MSG (monosodium glutamate) can cause autism symptoms. To her surprise, she learned that MSG is in many things, including toothpaste and juice, without explicit statement on the label. When she removed all MSG from her daughter's diet, her daughter greatly improved and now, three years later, attends class with normal children. All of her autistic symptoms are gone. Katie herself felt much better when she stopped eating any MSG. She lost weight and a low-grade headache disappeared. She has [2]a website and [3]a video about this. [4]Here is a video about this by someone else.

Anonymous. He is 29 years old and has struggled with depression, anxiety and lack of motivation. No long term progress in therapy. Yoga has helped. He found some benefits from meditation, but to get the benefits requires consistency and consistency requires hope, which I don't always have. He started thinking critically about what he eats. Read Eat to Live by Furman and Disease-proof Your Child. Eating whole foods plant-based lowered his blood pressure to 90/60, His weight went from 170 to 155 and is now in low 160s. (It was 160 when he was 19.) He has food addiction and technology addictions, demons that he is battling. Other attendees suggested six things he might try, such as eating more animal fat.

Kylene Miller. She spoke about the value of anti-oxidants. She became a Type 1 diabetic at age 5 and has been sick a lot in her life. She met Dirk Pearson and Sandy Shaw, who told her to eat a lot of anti-oxidants. She started eating large amounts of Vitamins E and C. Then she started trying get her antioxidants from food. She discovered healthy chocolate – cold-pressed so that the anti-oxidants aren't destroyed – made by the Xocai company. It has a huge [5]ORAC (oxygen radical absorbance capacity) score. She had gastric paresis. Four years of throwing up first thing in the morning. She had stopped taking lots of antioxidants. After she started taking them again, her gastric paresis disappeared. She is a distributor for the chocolate. She passed out samples of the chocolate.

Janet. When she was 19 (she is now 22) she suddenly felt very tired most of the time, even though she was sleeping 12 hours per night. She decided what tests she wanted, but her doctor would not order them. After her doctor gave her the blood-test-order form to bring to the testing center, she checked the boxes for the tests she wanted. Three supplements have been especially helpful, including isocort and progesterone (both OTC, over the counter). You can listen to her talk [6]here (thanks to Jane Cho).

I had worried that too few people would have stories to tell, but one attendee lived one block away She had high blood pressure and had lowered it without medicine. I wanted to videotape the talks but during the second one the camera battery died – and, anyway, I was doing it wrong, someone told me. I asked whether the next meeting should be in one month or two months and everyone voted for one month. We need a venue that permits longer meetings.



1. <http://www.medhelp.org/>
2. <http://unblindmymind.org/>
3. [http://www.youtube.com/watch?feature=player\\_embedded&v=J\\_ZfIdDCpdU](http://www.youtube.com/watch?feature=player_embedded&v=J_ZfIdDCpdU)
4. [http://www.youtube.com/watch?v=7jJj9W4uF\\_4](http://www.youtube.com/watch?v=7jJj9W4uF_4)
5. [http://en.wikipedia.org/wiki/Oxygen\\_radical\\_absorbance\\_capacity](http://en.wikipedia.org/wiki/Oxygen_radical_absorbance_capacity)
6. <https://dl.dropboxusercontent.com/u/10760363/meet%20up%20for%20healing.wav>

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Alex Chernavsky (2013-04-25 16:25:00)

Sounds wonderful! If anyone is interested in starting a similar group in or near Rochester, NY, please email me at [alexc@aya.yale.edu](mailto:alexc@aya.yale.edu).

Kirsten (2013-04-25 19:24:04)

Hi Seth- I've been reading your blog for years-was briefly a member of the SLD forums in about 2007-and appreciate the mindset of looking into things yourself rather than leaving it the hands of doctors. As my husband likes to say: No one will care about your money (or health, or time, etc.) as much as you do. Which is maybe why, when I was diagnosed with Hashimotos thyroiditis last fall, I started looking into alternatives. The standard medical prognosis is depressing-Hashis is an auto-immune condition, in which the immune system attacks the thyroid. Standard treatment is to give thyroid medicine to support the diminished organ. You feel better, then the immune system (which is trying to save your life, after all) mounts an even bigger attack. So they increase the dose-and so on until the thyroid gives out and you require thyroid hormone supplements for the rest of your life. I lived through one cycle of that, and it was miserable. Plus, once you have one auto-immune condition, you're likely to develop others. So I started looking-and sure enough, there a group that believes auto-immune conditions start with a damaged gut, and if you heal the gut (and replace good bacteria) you can calm the auto-immune attack. I'm a member of a Facebook page called Hashimotos 411 that has more than 5000 members from all around the world, all following the protocol to some degree. i also help moderate a sub-group, the Elimination/Provocation Diet, which has about 1000 members. (Feel free to look us up!) Different things work for different people, but there are some large commonalities: often natural desiccated thyroid works better for people than synthetic medicine, and often people feel much better when they go on an elimination diet using the auto immune protocol (which removes common auto-immune triggering foods), to start pinpointing their food sensitivities. Certain supplements seem to work for a lot of people, and people seem to have common sensitivities. Anyway, the page is full of people who've been scoffed at by doctors-"There's no such thing as adrenal fatigue" or "Natural thyroid hormone is impossible to dose and will give you heart attacks." Meanwhile, people go on self-experimenting and sharing their findings. In my case, I started on the auto-immune protocol diet in November and by mid-February my blood tests were showing my auto-immune antibodies within normal range-so, for all practical purposes, the condition was in remission. And based on my labs, my doctor recommended that I step down my thyroid medication by 20 %. I'm not out of the woods yet. I've spent the last three months fighting a distressing and completely unexplainable weight gain....until today I traced it (I think) to a probiotic which, it turns out, has dairy and soy. Those of us with damaged guts will often have out-of-proportion reactions to foods or chemicals...but they're signs of what we should avoid. Anyway, thought you'd be interested to know about a large self-experimenting community that's having a lot of success self-treating an otherwise untreatable auto-immune disease. Kirsten

T. Bergenn (2013-04-25 22:03:43)

Dear Kirsten, I am one of the practitioners who has seen the tremendous effect of which you speak: Many autoimmune conditions respond to healing and reconditioning the flora of the gut. I attended the event that Seth hosted last night, and am very inspired by people looking to heal themselves. I had to heal myself as well. I would love to get to know you better, as a colleague. Feel free to connect on LinkedIn (T. Bergenn) and/or Facebook (Ti Bergenn) Best to you with Hashimoto's - we'll keep learning and keep healing! T. Bergenn Longevity Advisor 510-292-9976

alexi de sadesky (2013-04-26 10:04:25)

Seth and Katie Reid, Interesting. Aren't there a lot of free glutamates in things like kelp and fermented foods? What are the implications of that vs. its use as an additive?

### **QS Contest: What Would You Do With a Body Media Armband? (2013-04-25 17:07)**

A la Google Glass, [1]Gary Wolf announces a Quantified Self contest/give-away:

In conjunction with our upcoming [2]QS Europe Conference in Amsterdam on May 11/12, our friends at BodyMedia have agreed to donate a complete personal [3]SenseWear System (retail price \$2,500), a state-of-the-art wearable sensor that allows raw data output. That's going to be our prize. So if you have good questions, we can supply you with a way to collect the data.

The best answer wins the sensor.

1. <http://quantifiedself.com/2013/04/what-would-you-do-with-a-free-bodymedia-sensewear-armband/>
2. <http://quantifiedself.com/conference/Amsterdam-2013/>
3. <http://sensewear.bodymedia.com/>

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### **More Wrinkles = Too Little Vitamin K2? (2013-04-26 05:00)**

[1]This post ("The vitamin deficiency that's written all over your face") by Sarah Pope at Healthy Home Economist is very good. It takes various pieces of data and puts them together to suggest that people who don't get enough Vitamin K2 will get facial wrinkles sooner. The most interesting data is the difference between women in Shanghai, Bangkok and Tokyo – [2]the Tokyo women had the fewest wrinkles. They eat the most natto, of course, and natto is notoriously high in Vitamin K2. Pope should have added that Tokyo women probably also eat a lot more of other fermented foods than Shanghai and Bangkok women – for example, more pickles and miso.

Another example of the same sort of reasoning:

Further research which bolsters the notion that getting plenty of K2 in the diet makes for smoother facial features is found in the research of Korean scientists and was published in the journal Nephrology in 2008. The rate at which the kidneys are able to filter the blood is an important measure of overall kidney function. Researchers found that reduced renal filtration rate was associated with increased facial wrinkling. What does decreased kidney filtration rate predict? You guessed it – Vitamin K2 deficiency, according to American research published the year after the Korean study.

I wonder what other nutritional deficiencies poor kidney function is associated with. These associations are far from convincing but it is a new (to me) and testable idea. And Vitamin K2 is quite safe.

1. <http://www.thehealthyhomeeconomist.com/the-vitamin-deficiency-that-is-written-all-over-your-face/>
2. <http://www.ncbi.nlm.nih.gov/pubmed/17499481>

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August (2013-04-26 06:03:50)

Sounds plausible. My skin seemed to smooth out pretty nicely at a 5mg dose. I started wondering why women, many of whom seem to obsess about skin products, were buying all those products and not K2. I don't think my skin was particularly bad before I started taking it, but the difference to the touch was certainly noticeable.

derp (2013-04-26 11:24:37)

I'm not old enough yet to think about my wrinkles. I've been taking 5mg/day MK4 for the last 6 weeks and my blood pressure went down. As I do not measure it regularly and the K2 supplementation is for entirely different purposes, I cannot be sure to think of it as causative and therefore put it forward as an n=1 hypothesis. K2 is the most underrated of the generally underrated micronutrients.

Darius Bacon (2013-04-26 13:58:22)

I believe K2 cured my (self-diagnosed) psoriasis. I had the problem for 6 months and tried other things first (sunlight helped), and it started coming back after I ran out of K2.

CC (2013-04-26 15:58:39)

Any advice on dosing or if one form of K2 is better than another?

CC (2013-04-26 18:52:55)

Oh whoops, just noticed the 5mg suggestion. Looks like it's sold in 100 mcg doses, which means you have to take 50 pills. Am I missing something?

garymar (2013-04-26 19:14:37)

CC, check out [relentlessimprovement.com](http://relentlessimprovement.com) for larger dose K2.

Pauline (2013-04-27 00:45:25)

August, can you recommend the brand K2 you use and the dose you found effective?

Pauline (2013-04-27 03:44:06)

I see you posted 5mg, I take the Weston Price recommended Fermented Butter/Cod liver Oil, only one cap at night. It recommends 2 a day. I have always had good skin which needs looking after as the climate I now live in is different and the water here is much harder, dosages would vary according to how our bodies absorbed, and upon our deficiency and need of K2?

derp (2013-04-27 05:09:26)

5mg is really high-dose and part of my self-experimentation. Overdosing is quite unlikely, so given that 100mcg capsules cost more per dose than the 5mg ones, I shot for the latter. I've read that Vitamin K2 MK4 has a very short half-life in serum (1-2 hours), so my idea was to have a dose that I only need to take once a day.

Tony (2013-04-27 05:30:52)

[http://www.amazon.com/Carlson-Labs-Vitamin-K-2-Capsules/dp/B003B3P4I6/ref=sr\\_1\\_1?ie=UTF8&qid=1367065797&sr=8-1&keywords=carlson+vitamin+k2](http://www.amazon.com/Carlson-Labs-Vitamin-K-2-Capsules/dp/B003B3P4I6/ref=sr_1_1?ie=UTF8&qid=1367065797&sr=8-1&keywords=carlson+vitamin+k2)

Pauline (2013-04-27 07:14:34)

In terms of dosage when trying something new, I always tend to take the minimum dose to give my body time to adjust. I read somewhere that you often need to find the minimum dose required to fix something - ie less is often more. As these things also build up in your system over time. Personally I usually take child dosages when I experiment because I may be sensitive to some additive that may be part of something I am trying for the first time , so its a quick way to test.

Tom (2013-04-27 10:30:15)

I don't trust that fermented butter oil. Green pastures doesn't say how much K2 is in it. And as far as I can tell, it's just incredibly overpriced ghee.

Pauline (2013-04-27 11:09:35)

I have been re-reading some of the stuff Richard Nikoley wrote on this topic of K2 and fermented cod liver/butter oil with commenters adding their thoughts: <http://freetheanimal.com/2012/01/vitamin-k2-menatetrenone-weston-a-price-activator-xor-whateverits-amazing.html>

Adam (2013-04-27 16:00:42)

Natto / 納豆 has 1100 mcg (1.1 mg) Vitamin K per 100 g AND it is delicious! Seth: It is unclear if different forms of Vitamin K have the same effects.

Adam (2013-04-27 18:08:56)

Updated my blog (link above) with some info about Vitamin K2 & Bone health. I have to admit, I scoured PubMed the other day looking for anything about Vitamin K2 & skin health / wrinkles & didn't come up with anything I thought was interesting. The article linked in the main post doesn't give enough of a citation of sources to track anything down. She also asserts that women living in Japan, Bangkok, & Shanghai are comparable in every way except their consumption of natto, which is absolutely not true.

Pauline (2013-04-30 08:55:33)

In my research I came across the interesting link on Vitamin K2, very interesting: <http://www.womentowomen.com/bonehealth/vitaminkbenefits-heartbones.aspx>

Evolutionarily (2013-05-02 10:33:18)

There is some confusion in the comments here about Vitamin K2 dosage which I would like to clear up... Simplified K2 comes in two forms, MK-4 which is synthesized by animals, and MK-7 which is synthesized by bacteria. MK-4 comes in MILLigram dosages in the 1-15mg/range and MK-7 comes in MICROgram dosages 50-150mcg. I don't have any evidence but I would posit it unwise to try take 5mg of MK-7! As always Stephan clears it up: <http://wholehealthsource.blogspot.com.au/2009/03/are-mk-4-and-mk-7-forms-of-vitamin-k2.html>

Sentinel (2013-05-04 10:02:03)

Seth, you've talked a lot about the importance of Vitamin D3 for improved sleep. I've read that Vitamin K2 has a dramatic effect on how the body uses D3 — but I've only seen discussion of how it increases the D3's ability to help the body properly absorb calcium. Is there reason to believe that K2 might also help D3 in its role as "improved sleep promoter"?

## **Standing Improves IBS Symptoms (2013-04-27 05:00)**

At least in one case. A 23-year-old woman, who lives in Manchester UK and works as a typist, wrote me:

I've recently been trying out a standing desk, partly due to reading the posts you made about them. For the past few weeks, I have been tending to stand instead of sit when at my laptop, normally for more than 3 hours a day. I sit down when I get bored of standing and I walk around lots.

I was looking out for mental clarity effects but I've not seen a clear effect in that direction. What I did find surprising, though, is that my chronic but mild IBS symptoms have abated. I get heartburn/acid reflux regularly, and gut cramping, but since standing more these have all but stopped. I think it's because standing up puts less pressure on my stomach and gut and leaves them more opened up.

I asked how long she'd had the symptoms (heartburn/acid reflux, etc.):

I think the last 3-4 years, but it's hard to say when. I think my IBS probably started happening when I started having problems with anxiety but I wasn't keeping track back then. :) I've suffered from recurring depression for 10 years now, but severe anxiety for me is relatively new. I think it would make sense if it coincided with the anxiety - I've heard of Citalopram (an anti-anxiety medicine) also being prescribed in a low dose for IBS, and some of my friends who have taken Citalopram + who have had IBS have had it go away. I never actually got a diagnosis for IBS, but it seems a fair description. The symptoms are heartburn, gut cramping (sometimes very painful) and my stool being quite variable in solidity.

I asked how long had she been standing more than usual:

4 weeks, when I've been able to. At work I have to sit, often with bad posture, but the last two weeks I have been on holiday. When I stand, I notice an improvement on the same day that I've been standing more. Part of what motivated me to stand with using my computer was when I recently spent a day walking around Manchester (where I live). I noticed that my energy levels were much smoother even though I hadn't eaten very much and that my gut and stomach felt more OK than usual.

I asked what other remedies she'd tried:

About a year after I started regularly getting heartburn, a friend told me about antacids, so I started taking them when I needed them, but they weren't always effective and they don't help with gut cramping. Peppermint tea worked to some extent but would give me strange headaches and made me feel bloated. Peppermint oil capsules were an improvement - no bloating but still giving me headaches. I've also tried various dietary changes. I find that dry carbs (like toast or potato crisps) tend to bring on or make worse heartburn and cramping so I sometimes avoid those. Also when I'm hungry I get heartburn quite badly, so I've tried to eat things that level out my blood sugar over time more (e.g. eating more fat and protein, fewer sugars and carbs). I tried probiotic soy yoghurt (I'm vegan) to see if that would help but it doesn't agree with my stomach. I also have tried probiotic supplement but I'm not sure that I've seen improvement from that either.

She added, "I haven't had IBS symptoms on days that I have been standing yet!" So it is perfectly clear that this is cause and effect – standing reduces IBS symptoms.

dearieme (2013-04-27 10:35:08)

I used to work standing sometimes: I'd simply put a small drawing board on top of a filing cabinet, rather like a lectern, and work away, sitting only to use my desktop computer. Since I had a row of four filing cabinets it meant that I had a huge horizontal surface for paper-shuffling. Nowadays use of a laptop would make everything easier.

Sam (2013-04-29 01:35:56)

When I wear trousers which are too tight I get stomach cramps, too, after sitting a few hours. Funny thing is, apart from the cramps I won't notice they are too tight. So when I buy new trousers sometimes I end up with severe cramps and even circulatory problems up to fainting before I notice the clothing being too tight.

## **News You Can Use: Tonsillectomies Are a Bad Idea (2013-04-29 05:00)**

A reader named Nicole, who lives in Washington D.C., writes:

I have been an avid follower of Seth's blog since Boingboing.net first posted something about or by him. And when I heard that my brother was planning to get my niece's tonsils removed, I remembered [1]the Boingboing article Seth wrote about tonsils and their important, if not completely understood, role as part of our immune system. So I sent that article along. My brother responded quickly with: "Wow, thanks. I won't be getting her tonsils out any time soon."

Nice to hear!

1. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

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Ahrand (2013-04-29 06:42:28)

PS. Seth, also look up the latest research from dr. Scott Napper (Canada) and dr. Hilary Longhurst (UK) why are saying that both nose picking and nail biting is good for your immune system as it introduces small amounts of bacteria.

Char (2013-04-29 20:50:02)

I noticed this article about ADHD maybe being caused by sleep deprivation. This part is interesting: A full half of the original A.D.H.D. group who received tonsillectomies — 11 of 22 children — no longer met the criteria for the condition. In other words, what had appeared to be A.D.H.D. had been resolved by treating a sleeping problem. [http://www.nytimes.com/2013/04/28/opinion/sunday/diagnosing-the-wrong-deficit.html?ref=opinion&\\_r=1&utm\\_source=feedly](http://www.nytimes.com/2013/04/28/opinion/sunday/diagnosing-the-wrong-deficit.html?ref=opinion&_r=1&utm_source=feedly) Any thoughts? Seth: It's an excellent article. A new and persuasive idea that I hadn't heard before. That the author himself had sleep & ADHD-like problems partly explains its excellence, I think.

## **Assorted Links (2013-04-30 05:00)**

- [1]Nigerian fermented foods
- [2]I point out that certain results in the BMJ are impossible

- [3]Big increase in ADHD diagnoses
- [4]Preface and Chapter 1 (Abraham Lincoln) of Edward Jay Epstein's new book, Annals of Unsolved Crime
- [5]How to taste umami (very good)
- [6]No mortality difference between vegetarians and non-vegetarians (2009 study). This is evidence against the new TMAO theory of heart disease (carnitine in meat is converted by bacteria to TMAO, which causes heart disease).

1. <http://www.intechopen.com/books/mycotoxin-and-food-safety-in-developing-countries/nigerian-indigenous-fermented-foods-processes-and-prospects>
2. <http://www.bmj.com/content/346/bmj.f1654?tab=responses>
3. [http://www.nytimes.com/2013/04/01/health/more-diagnoses-of-hyperactivity-causing-concern.html?pagewanted=all&\\_r=1&#commentsContainer](http://www.nytimes.com/2013/04/01/health/more-diagnoses-of-hyperactivity-causing-concern.html?pagewanted=all&_r=1&#commentsContainer)
4. [http://cdn.mhpbooks.com/uploads/2013/04/Lincoln-Excerpt\\_web.pdf](http://cdn.mhpbooks.com/uploads/2013/04/Lincoln-Excerpt_web.pdf)
5. <http://www.umamiinfo.com/2013/02/tasting-umami-c1.php>
6. <http://ajcn.nutrition.org/content/89/5/1613S>

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Alex Chernavsky (2013-04-30 06:45:49)

Here's another interesting article about ADHD. Could the underlying cause be sleep deprivation? "[1]Attention Problems May Be Sleep-Related" Seth: I agree, very interesting. Someone noted this in a comment on the previous post.

1. <http://well.blogs.nytimes.com/2012/04/16/attention-problems-may-be-sleep-related/>

gwern (2013-04-30 08:58:36)

> I point out that certain results in the BMJ are impossible And they reply you are misreading it and it's based on different populations, so it's not violating the conjunction rule. Seth: Thanks, I hadn't seen that. Their explanation of the discrepancy is that the two graphs are based on different populations.

Sonephet du Pertinent (2013-04-30 11:37:16)

Your picking out 1999 ACJN journal is cherry picking a study of very limited value. I am shocked by the very strong selection bias due to the fact that participants are selected for absence of prior disease despite a very high median age (49 for non-vegetarians). There are many other problems, namely a lower-than-national-average intake of meat for meat-eaters, no checking whether labeled "vegetarians" still were vegetarians throughout the study, etc Also, many other studies state exactly the contrary (for instance <http://www.biomedcentral.com/1741-7015/11/63>, based on the same EPIC cohort) so at best I think we'll have to wait for more studies and an honest transversal study on that subject. For the time being, just stating "No mortality difference between vegetarians and non-vegetarians" is purely speculative. Seth: All studies have "selection bias" in the sense that you use it. If "vegetarians" were not actually vegetarians, that would reduce observed differences between "vegetarians" and "non-vegetarians" – the wrong way for your claim that the study should be disregarded. I don't know what a "transversal study" is.

Felix (2013-05-03 14:24:54)

Hi All, first thanks for the nice blog and the free information we get here. The blog by itself is really thought provoking. I have learned a lot from this blog and also i changed my diet .I tried to eat a more fermented food, unfortunately i have developed an intolerance to alcohol. This intolerance is so strong, that i can not drink eat alcohol or eat minimal fermented food like sauerkraut and curd. Does anyone know some other possibilites to get the needed fermented food without the alcohol? The only thing i did find through coincidence was the medicamentation perenterol which has milk bakteria in it and also reduces

my acne a lot. (The skin gets drier)

## 8.5 May

### Acne Club: A New Way to Fight Acne (2013-05-01 05:00)

Recently [1]I posted that my work resembles the work of [2]the artist Hong Yi. Her work shows that profitable beautiful art can be made from the cheapest materials; my work shows that non-trivial useful science can be done by anyone. A reader named David [3]commented:

Your work and discoveries, just like Hong's, are very inspirational. . . . They send a message that every individual has the potential to contribute something to society even with no or limited budget.

This hadn't occurred to me. It should have. I could have made this point in talks, for example. Beyond the obvious point, David was saying that the more your personal science could help others, the more likely you would be to do it. The prospect of helping yourself and others will surely be stronger motivation than the prospect of helping only yourself.

How can one person's personal science help others? This doesn't happen automatically, it has to be arranged. My [4]Journal of Personal Science and the [5]Make Yourself Healthy Meetup group are two ways of facilitating this. What about other ways?

David's comment made me think of another way: Acne Club, that is, a high school club for people with acne. The purpose of the club is to promote personal science about acne. Members of the club try to find the causes of their acne, partly by self-experimentation. They meet to share results and ideas (e.g., treatments to try, how to measure acne) and encourage each other. [6]The discovery of two groups of "primitive" people who have no acne suggests that all acne has environmental causes. If a high school group could identify even one environmental cause, it would be a huge contribution to human well-being – especially the well-being of high-school students. I think this is quite possible.

I had acne as a teenager. If you start such a club, I would be happy to help you however I can. For example, I could give advice about measurement and experimental design and could publicize what you learn.

1. <http://blog.sethroberts.net/2013/04/24/cheap-good-science/>

2. <http://www.redhongyi.com/>

3. <http://blog.sethroberts.net/2013/04/24/cheap-good-science/#comment-1107993>

4. <http://blog.sethroberts.net/category/personal-science/journal-of-personal-science/>

5. <http://blog.sethroberts.net/category/personal-science/make-yourself-healthy/>

6. <http://www.ncbi.nlm.nih.gov/pubmed/12472346>



DZ (2013-05-01 06:09:43)

I always get uneasy whenever I see some grandstanding on this site. No sir, the difference between you and Hong Yi is that she has left something tangible in the physical realm as an artist. You just say that you pioneered this idea that science can be done by anyone, something which my first-grade science kit also claimed. Your work shows interesting causations and correlations, but you didn't teach anything to anybody who wasn't already primed and teachable. To show just how in-house and local baseball your claim is, you need to look at the out of touch examples you provide. Who, in their right mind, would want to have anything associated with an ACNE CLUB??? What a way to seek out even more ostracism for those unlucky kids who suffer from it. Seth: Weight loss produced by the Shangri-La Diet – is that anti-tangible? It would take an unusual person to start an acne club, but unusual people exist.

Tom (2013-05-01 07:07:42)

Also, those who desired to participate while preserving anonymity could do so if there were an Internet component to the club (such as a forum) that allowed people to choose their own handle. Actually, Seth, there may already be an internet forum like that. Maybe you could post there and offer your support. I think having access to your expertise could transform a lot of young lives.

Nancy Lebovitz (2013-05-01 07:19:54)

I think self-experimentation clubs would be a better idea than acne clubs, but the acne club could work as an online forum.

Tom Passin (2013-05-01 08:45:03)

About acne and self-experimentation, when I was a teenager I also had bad acne. At one point I went to a doctor who prescribed a liquid (to be gotten from a pharmacist) that turned out to be mostly alcohol. Presumably it would remove oils from my skin, which was naturally oily, and prevent the pores from clogging. It would help moderately for a while (weeks, usually). The other thing I had heard was not to wash your face with soap (or perhaps not to wash it at all). So I tried that, too. It also would help modestly for a period of time. I ended up alternating between the two methods for several years. I always had acne but after each switch of treatments, it would lessen for a time. I learned from this that the body somehow has a tendency to return to its previous condition. This should be but rarely is taken into account when experiments are run. So I was not surprised to learn that most people regain weight after a weight loss diet, or that antibiotics become less effective. It seems much harder to produce lasting changes.

dearieme (2013-05-01 15:42:24)

Instead of an acne club to fight acne, would an acne rapier not be more suitable?

alexi de sadesky (2013-05-02 05:50:57)

The acne club. Yes. I believe they might find that fist blows to the face result in poppage of pimples.

BQ (2013-05-03 09:19:19)

Maybe it's been too long since you've been a teenager? When I had acne as a teen, I wanted to hide, to be invisible. I didn't want to acknowledge (or have anyone else acknowledge) that I had acne. Even though mine wasn't super bad, every tiny pimple felt like a giant glowing beacon of shame. I can't imagine anyone wanting to start a club about it. And even so, I can't imagine attending a club about it. Or posing for the yearbook photo with the rest of the club? Yeah. Seth: I disagree that all teenagers are the same.

CC (2013-05-03 19:34:04)

"No sir, the difference between you and Hong Yi is that she has left something tangible in the physical realm as an artist. " I don't know about you, but I'd much rather have a cure for obesity and a cure for acne than a piece of art. And I have to say that an online forum would be better than an actual club that meets after school. The acne.org regimen and zinc picolinate supplements might be all you need though.

Serbian boy (2013-05-04 02:34:28)

Dear friends, I am 100 % sure that acne is related to stress. Also it doesnt have to do much with age, even older people in 30-ties or 40-ties could have it. It is a question of your state of mind. Being very relaxed, worried free, and just leting things go is the first thing to so. Just dont be afraid of life and belive that slowly you will get to the point where you would be optimistic, energetic, satisfied, loveble person. Thats all. Try and let us know if it worked for you. Spending money on silly medicenes is not long term solution.

Bex (2013-05-05 10:21:25)

I think its an great idea to start an acne club after school. I am a teenager having acne problem. I would invite some friends of mine and discuss about it. Lets see how it goes... Seth: I'm very curious to hear what happens, good or bad.

Rose (2013-05-13 07:02:34)

On the same line, I wouldn't want to join an obese club. Why not just a forum where all acne sufferers can get support?

### **Acquired Butterphilia (2013-05-04 05:00)**

Because of [1]my finding that butter improved my mental speed, in 2012, Dustin Lee, a programmer in Bozeman, Montana, decided to try eating lots of butter. He thought he'd do it for a month.

He ate a half-stick (2 ounces = 57 grams) every day. Nothing fancy: Kirkland Salted Sweet Cream Butter. At first it was repulsive. He had trouble eating it. He ate it with other foods, such as soup or pancakes. Or he would take lots of tiny slices (without other foods). It felt like more butter than he wanted.

After about two weeks of this, however, he decided this is pretty good. He was enjoying it. He began looking forward to the slices. He made them larger. He prefers the butter hard, straight out of the fridge. He now enjoys eating the fat on meat. He stopped limiting how much animal fat he eats. (His wife still cuts it off meat.) Now he gets lots of fat from lots of sources. Butter is the easiest source.

His children (7 and 9 years old) don't eat butter directly, but he allows them to eat as much as they want. They eat a lot more butter than other children. At other people's houses, he jokes about it. Incidentally, he tried taking Vitamin D3 in the morning (around 7 am) but it made him so sleepy in the evening he stopped.

This impressed me. I'd been eating a half-stick of butter per day for a few years (half as much was less effective), but I always ate it with a little bit of meat, e.g., sliced roast beef (Berkeley) or roast pork (Beijing). That was less than ideal because I kept running out of the meat. I started eating it Dustin's way (straight) and found it's fine. It's like dessert, halfway between ice cream and cheese.

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1. <http://blog.sethroberts.net/wp-content/uploads/2012/09/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf>

Txomin (2013-05-04 06:06:50)

OK. Our friend developed a taste for butter but, did he get the alleged benefits of it?

Chuck (2013-05-04 08:51:25)

Here's a delicious (I think anyway) way to enjoy a little extra butter: Melt together (lowest temp possible): 1 Stick of butter (I use Kerrygold salted) 1 Tablespoon cocoa butter 2 T unsweetened cocoa powder 1 T raw honey 1/4 tsp vanilla I pour it on to a piece of parchment paper placed over a 7 inch square dish which has raised sides. Place in the fridge to harden. Before it becomes completely hard, score with a knife into 2 inch squares. Because of the high fat content, it melts quickly, so keep in fridge. If you don't like salty chocolate, use unsalted butter - I would add a pinch though. I also add a splash of concentrated coffee - it seems to enhance the chocolate flavor. Using more cocoa butter should make it melt slower. I'm going to make a batch with a couple of tablespoons of raw crunchy almond butter. Shredded coconut (Mounds). Coconut & almond butter (Almond Joy). My cocoa butter/powder and vanilla are from bulletproofexec. Enjoy

Wil B (2013-05-04 09:00:22)

Here's another idea. In the past I have melted the butter in the microwave and then added grated parmesan cheese to it. Delicious. Your piece today, Seth, inspires me (with an idea from my spouse), to try something else: in addition to the melted butter and the parm I will add some cream and garlic powder and create what amounts to alfredo sauce. Sounds great. I'll let you know how it turns out. :-)

Kirk (2013-05-04 09:29:11)

Did you ever experiment comparing butter to cream? If so, any difference in mental speed?

Wil B (2013-05-04 09:37:06)

Ok I just whipped up a small amount of my Alfredo sauce idea; and you know what? It is damn good! Better than desert. No pasta necessary or desirable. :-) Next time I'm making a much larger batch.

dustin (2013-05-04 10:01:16)

@txomin: I would say there was a small increase and it seems fairly persistent. I don't know that I \*felt\* my brain working more quickly but there was a bump on my graph. I don't know that I would have continued eating butter just for the brain effects. I just enjoy it now. I think the description of it being between ice cream and cheese is pretty accurate.

Tom (2013-05-04 10:30:07)

Dustin, have you tested a grassfed butter like KerryGold? I wonder if you would see a difference.

dustin (2013-05-04 11:49:27)

@tom: I haven't tried any other type of butter (though I do know that unsalted butter is \*not\* something I enjoy eating directly). I may try returning to experimenting with this again but I found that once I went into "high fat mode" my brain speed scores didn't change much no matter what type of fat I was primarily consuming.

Joe (2013-05-04 12:10:48)

Butter is my cheese. KerryGold is fantastic. But the best butter you'll ever taste is Italian butter from Parma, Italy. You can usually get it at local stores for about \$5 for 8 oz. It's the Parmigiano-Reggiano of butter. [http://www.amazon.com/Delizia-Butter-Parma-8-Oz/dp/B002CXX6EA/ref=cm\\_cr\\_pr\\_product\\_top](http://www.amazon.com/Delizia-Butter-Parma-8-Oz/dp/B002CXX6EA/ref=cm_cr_pr_product_top) Tip: Spread it THICK on virtually any (I eat paleo) pastry and you'll never eat pastry any other way. Buon appetito

Mike C (2013-05-04 13:00:47)

I'm open-minded about all this, but a half stick daily does seem like a significant variance from the norm. Is there any science suggesting hinting at whether or not this might ultimately cause health problems (esp atherosclerosis)?

dearieme (2013-05-04 13:01:15)

By the time I've put herb butter on my steak, and butter on my veggies, and also (gasp!) butter on my toast and oatcakes, I don't feel a need for any more. Except sometimes on biscuits. Or on scones. And in sandwiches. Or just plain bread-and-butter. Or bread-and-butter pudding. And in all sorts of cooking of course. I see no difficulty in enjoying butter as part of the normal course of things. I understand that Americans eat margarine instead. How terribly ill-advised.

dustin (2013-05-04 13:20:52)

@mike: This does give me some pause. If I read LCHF or paleo writers they reference papers that seem fairly convincing that fat (and in particular saturated fat) is unfairly demonized and that most people would be healthier if they substituted a major portion of their carbs with fat instead. I've been reading a lot on this recently and I'm still sticking with LCHF but it does bother me that I'm basing my opinion on what is still a minority view of fat and heart health. FWIW, I've been low carb for over 2 years at this point and my total cholesterol is in the healthy range, my HDL is pretty good (about as good as it has ever been - and higher than some earlier periods in my life) and my total cholesterol to hdl ratio is better than average. The only thing that makes me wonder is that my LDL is a little high (just high of the optimal range), but the more I learn about how that is measured and how reliable a heart health marker it is the less I'm concerned.

Alex Chernavsky (2013-05-04 13:42:10)

Dustin, what brain test did you use, exactly? And can you post the data? I'm interested in doing my own experiments. Thanks.

shtove (2013-05-04 14:58:37)

Try bullet-proof coffee: tablespoon of non-salt butter mixed into the hot brew. I add cocoa and cream. Tasty + replaces the chewable breakfast + covers a chunk of your daily butter requirement. On top of that I have tried fermented cream for lunch over the past six months, but my conclusion is ... pinchable fat.

Meeds (2013-05-04 19:23:12)

I found that eating butter this way worsened my tinnitus. I stopped eating butter straight and the tinnitus got better. But if I eat it with other food, it doesn't cause problems. I am somewhat lactose intolerant (causes things like eczema in me).

Txomin (2013-05-05 02:39:17)

Thank you for the reply, Dustin.

Adam (2013-05-05 16:41:58)

Funny! I've been eating a chunk of butter in my morning coffee & chewing a big chunk of butter before lunch for a couple of weeks now. I never found it disgusting, I only worried that other people would think I had gone insane if they saw me gnawing on straight-up butter. The flavor is great of course & the way it melts in your mouth isn't really like any other food I know of.

Pauline (2013-05-06 08:20:40)

I was inspired by this blog on butter, went to Waitrose today and found this traditional Italian Butter called Gran Bonta in small 125 g packages plus another brand called Gold Top (lightly salted butter purely from Jersey & Guernsey Cream). I looked for the italina parma butter but could not find it. I started eating more butter in everything a few years ago and I think it contributed to completely healing an eczema problem I used to have and urticaria (itchy welts) I used to get int response to eating cheese and coffee/chocolate and other things my body seemed to be intolerant too. Hurray for butter I say!

Pauline (2013-05-07 00:54:09)

Added note: in the UK butter usually comes in 250 g blocks/sticks, so seeing 125 g of italian butter is unusual.

## Assorted Links (2013-05-05 05:00)

- [1] Washington Post covers evidence for the hygiene hypothesis
- [2]Renata Adler answers audience questions (video)
- [3]Mother Jones criticizes probiotics
- [4]Rating prisons on Yelp. Quantified Institutions.

Thanks to Bryan Castañeda.

1. [http://www.washingtonpost.com/national/health-science/hypercleanliness-may-be-making-us-sick/2013/03/25/9e6d4764-84e9-11e2-999e-5f8e0410cb9d\\_story.html](http://www.washingtonpost.com/national/health-science/hypercleanliness-may-be-making-us-sick/2013/03/25/9e6d4764-84e9-11e2-999e-5f8e0410cb9d_story.html)
2. <http://www.youtube.com/watch?v=X94zcVdAlCo>
3. <http://www.motherjones.com/environment/2013/04/should-you-take-probiotics-supplement>
4. [http://www.washingtonpost.com/national/with-few-other-outlets-for-complaints-inmates-review-prisons-on-yelp/2013/04/27/59cc3440-9e24-11e2-a2db-efc5298a95e1\\_story.html](http://www.washingtonpost.com/national/with-few-other-outlets-for-complaints-inmates-review-prisons-on-yelp/2013/04/27/59cc3440-9e24-11e2-a2db-efc5298a95e1_story.html)

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Lemniscate (2013-05-09 02:44:40)

Thought you would be interested in this experiment: <http://robrhinehart.com/> One criticism I would imagine you would share with me is the lack of bacteria in his diet. Otherwise an interesting idea to test nutrientism to its extreme. Seth: Yes, not enough bacteria in his diet. I also wonder if he is getting enough omega-3 and Vitamin K2. I give him credit for two things: improving his diet; and doing the improvement in a sustainable and intellectually engaging, non-dogmatic way. Lots of people improve their diet in non-sustainable and/or dogmatic ways.

## How Much Benefit from the Human Genome Project? (2013-05-06 05:00)

Ten years ago researchers finished the first sequencing of an entire human genome. To mark the anniversary, Eric Green, the director of the National Human Genome Research Institute at the National Institutes of Health, spoke to an unnamed reporter at the New York Times. Here is the final question of the interview:

What about the naysayers who [say], “Where are the cures for diseases that we were promised?”

I became director of this institute three and a half years ago, and I remember when I first started going around and giving talks. Routinely I would hear: “You are seven years into this. Where are the wins? Where are the successes?”

I don’t hear that as much anymore. I think what’s happening, and it has happened in the last three years in particular, is just the sheer aggregate number of the success stories. The drumbeat of these successes is finally winning people over.

We are understanding cancer and rare genetic diseases. There are incredible stories now where we are able to draw blood from a pregnant woman and analyze the DNA of her unborn child.

Increasingly, we have more informed ways of prescribing medicine because we first do a genetic test. We can use microbial DNA to trace disease outbreaks in a matter of hours.

These are just game changers. It's a wide field of accomplishment, and there is a logical story to be told.

There you have it. The head of the Human Genome Project, a very big deal, says in an oblique way that the project has had little practical benefit so far. Note the present tense: "We are understanding cancer". Nothing about decreasing cancer. In a short discussion of benefits, he mentions microbial DNA. In a short discussion of benefits, he says, "We are able to draw blood from a pregnant woman and analyze the DNA of her unborn child." Genetic tests of fetuses are not new. I think he means that the number of rare genetic diseases that can be detected has increased (by how much?). Well, yes, not surprising. It is an increase of something that was already happening and helps only a tiny number of people. Not a "game-changer".

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Zach (2013-05-06 16:17:09)

What is a reasonable time frame to expect successes from a project like this? Seth: I think a fair comparison is with (a) other ways the money might have been spent (e.g., how much would these other projects have accomplished in the same time?) and (b) claims made when the money was being asked for.

dearieme (2013-05-07 06:32:24)

At least the science was, I presume, sound. Compare with the "climate scientists" and renewable energy people, who not only waste the money but do lousy, indeed mendacious, science into the bargain.

Myles (2013-05-07 21:22:34)

Would you bemoan the work of early cartographers for not being able to predict ocean currents? There's certainly a lot of hubris around mapping the genome, but I think that we first need a map before we can begin to make any sense of the territory. Picking nits with the map-makers over how they justify their work certainly isn't helping. Seth: They think disease has a lot to do with genome, I don't. I don't think it makes your point of view more persuasive to call a different point of view "nit-picking".

### **Next Meeting of Make Yourself Healthy Group (2013-05-07 05:00)**

The next meeting of the [1]Make Yourself Healthy Meetup group will be May 23 (Thursday) at the Telegraph Ministry Center (5316 Telegraph, Oakland). Social time will start 6:30 pm, the meeting proper at 7:00 pm. It will last about 2 hours. Admission is \$3, payable at the door, to cover the cost of renting the space. The first speaker will be Robin Barooah, who will tell how he cured his RSI (Repetitive Strain Injury). The doctors he saw were no help.

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Sara Lake (2013-05-12 00:25:28)

Have you written a guide to running a 'Make Yourself Healthy' group? Or even an outline? I'm keen to start one here in NZ, but feel a bit inadequate... :-/ Seth: I am still trying to figure it out. Your interest is very encouraging, eventually I will have something to say about it.

## **The Power of Lassi, an Underappreciated Fermented Food (2013-05-08 05:00)**

[1]Lassi, you probably know, is an Indian drink made from yogurt. It is rarely sold outside Indian restaurants and supermarkets. However, last week at Whole Foods I saw a product called Pavel's Pro Sea Salt Lassi Yogurt Drink, [2]so new it is not yet on the [3]company website. I have no idea why Pro is part of the name. I bought a bottle. I was surprised how good it was.

I tried making it myself. I found I could easily make better lassi than Pavel's by optimizing the amount of salt, adding an optimal amount of sweetener ([4]xylitol – Pavel's lassi was unsweetened), and flavoring it, for instance with vanilla.

Yogurt companies of the world (except maybe Pavel's) seem to have failed to notice that lassi is a very unusual food. It provides pleasure in eight ways: (1) satisfies thirst, (2) creamy, (3) frothy (if you shake the bottle before drinking), (4) salty, (5) sour, (6) sweet, (7) complexity (yogurt alone is slightly complex, vanilla increases complexity) and (8) flavor novelty (if you vary the flavor). To a small extent, (9) it satisfies hunger and, if you're hot, (10) cools you off. It's also (11) very convenient – easier to take a swig of lassi than a spoonful of yogurt – and (12) very healthy. I can't think of another food with twelve strengths. [5]My friends' pizza provided pleasure in ten ways but wasn't convenient or healthy. There are several similar yogurt drinks in other cultures, such as [6]doogh, perhaps because lassi has such a high benefit/cost ratio.

To make lassi, mix 3 parts yogurt with about 1 part water, add sweetener and salt and flavoring to taste, mix. I'm going to try adding cardamon and maybe replace the water with tea, to increase complexity.

1. <http://en.wikipedia.org/wiki/Lassi>
2. <http://www.dairy-delivery.com/pdf/2013-apr/pavels-yogurt-drinks.pdf>
3. <http://pavels.net/>
4. <http://blog.sethroberts.net/2013/04/12/journal-of-personal-science-xylitol-improves-lichen-planus-and-mouth-health/>
5. <http://blog.sethroberts.net/2013/03/13/the-pizza-paradox-home-cooking-and-personal-science/>
6. <http://en.wikipedia.org/wiki/Doogh>

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Alex Chernavsky (2013-05-08 07:34:25)

There's also this cultured coconut drink from So Delicious: <http://sodeliciousdairyfree.com/products/cultured-coconut-milk/plain-cultured-coconut-milk-beverage> I buy it on occasion, although it's a bit bland for my taste. I could probably "doctor

it up”, though, per Seth’s ideas regarding cardamom, etc.

d (2013-05-08 08:39:53)

Unrelated, sorry: Seth, get the Sleep Cycle app. It proved to me last night that pork helps me to have better sleep.

Morex (2013-05-08 10:10:18)

I will definitely try this at home! Thanks, Seth!

Kirk (2013-05-08 10:25:07)

My sweet version: yogurt, frozen mango, pinch of salt, sweetener. Basic version: yogurt, ice water, lemon juice, pinch of salt. I started making lassi using a recipe from one of Madhur Jaffrey’s early cookbooks.

Joe (2013-05-08 10:51:09)

Sounds like kefir. Try kefir made from goat’s milk. It’s got all 12, too. Yummy! Seth: do you make your own kefir? I have found it harder to make than yogurt.

garymar (2013-05-08 18:31:53)

In my experience kefir has exactly the same difficulty as yogurt – almost no difficulty at all. I don’t follow instructions to strain the kefir, just skim some off the top for the next batch. That’s because I let it ferment until a small 1 cm band of clear whey appears on the bottom. I do use my yogurt maker since our house lacks central heating, Temperature setting is 28C. After 12 hours it’s done. Delicious, carbonated, complex. Seth: That’s a good idea, use a yogurt maker to make kefir.

Aldo (2013-05-08 23:25:59)

This looks like ayran. <http://en.wikipedia.org/wiki/Ayran> Although ayran is unsweetened.

Joe (2013-05-09 10:53:24)

To Seth: No way! Too doggone lazy for that. Plus, I have no access to fresh goat’s milk. I get this brand: <http://www.redwoodhill.com/kefir> The plain goat’s milk kefir. I get it at a local health food and nutrition store. It seems to be very highly rated, too. It’s so tasty that I have to watch that I don’t drink too much. I drink about 6 ounces per day. It’s delicious! Seth: Thanks for the recommendation. Yeah, maybe I should be that lazy.

Pauline (2013-05-10 00:44:00)

As I have recently started making my own kefir, I have been on the lookout for anything similar in the supermarkets here. I recently noticed Lassi on the shelves in the UK stores, near the milk/yoghurt section, wondered what it was: <http://www.tesco.com/groceries/Product/Details/?id=271748553> They have more than one brand. Thanks for the info. I am going to buy and try some.

Scot (2013-05-10 17:05:54)

A couple of years ago in Turkey we discovered Ayran. After learning it was yogurt, we ordered it every time we ate out. Usually the wait staff were surprised and amused when we did, but I’m convinced it protected me from stomach complaints due to unusual foods for the duration of our trip. It was also very tasty. I found Ayran to be saltier than the sweet Lassi we order at the Indian restaurant. More similar to the Salt Lassi, although thinner.

## **Teeccino Tasting Notes (2013-05-09 05:00)**

I started drinking lots of tea when I started the Shangri-La Diet. The diet made me crave food with smell, which tea provided. I started chewing gum, too, but that was less enjoyable, maybe because I never became a gum connoisseur.



I recently learned about [1]Teeccino coffee-substitute "tees" (brewed like tea) from Patrick Pineda of [2]Tisano. They resemble [3]Pero but with more flavor and variety. I really liked the first two flavors I tried (Vanilla Nut and French Roast) so I wrote to Teeccino asking for samples of all the flavors. In addition to no caffeine, Teechino drinks are high in [4]inulin, a soluble fiber.

Here are my comments on the samples.

Dandelion Dark Roast. Similar to French Roast (relatively strong coffee taste) but more earthy-tasting. Maybe that's the dandelion.

French Vanilla. Strong vanilla taste. Too much like vanilla for me, I want something more complicated.

Caramel Nut. Halfway between caramel and burnt caramel, which I like. As complex as French Roast.

Mocha. Excellent. Complexity of coffee plus complexity of chocolate.

Chocolate. Like mocha, except darker coffee flavor.

Original. Excellent. Weaker coffee flavor plus fruity complexity.

Almond Amaretto. Wonderful combination of coffee flavor with nutty almond/amaretto flavor.

Java. Rounded coffee flavor.

**Chocolate Mint.** Enough mint but not enough chocolate and coffee.

Southern Pecan. Delicious. Pecan and coffee flavors well-balanced. I wonder: What does Northern Pecan taste like?

Maya Chai. Tastes like chai. I would prefer, in addition, a dark coffee taste.

1. <http://teeccino.com/>
2. <http://tisano.com/>
3. <http://internaturalfoods.com/brands/pero.html>
4. <http://en.wikipedia.org/wiki/Inulin>

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dearieme (2013-05-10 02:24:42)

There's a wonderful soda pop, originating I think in the North of England, called Dandelion and Burdock. You may care to get hold of some and rate it for complexity of flavour.

dearieme (2013-05-10 09:12:01)

Talking of good soda pop, there was a good one we came across in NZ: L & P. I don't drink soda pop usually, but thought I'd try a Kiwi version. Top notch. And, ironically, it's owned by a manufacturer of 'orrible brown sugar water.

Scott Pierce (2013-05-11 05:26:18)

"Southern Pecan. Delicious. Pecan and coffee flavors well-balanced. I wonder: What does Northern Pecan taste like?" Sh\*t. Sorry, a little provincial pride showing through ;)

Rayca (2013-05-15 06:59:58)

I've been drinking Teeccino for 12years. Bought your book. Hope it works. Thx.

## **How Things Begin: Tisano Tea (2013-05-11 05:00)**

[1]Tisano Tea, based in San Francisco, sells chocolate tea. It was started in 2010 by Patrick Pineda, Leonardo Zambrano, and Lucas Azpurua. I was curious about the company because I like two chocolate tea blends very much: Red Cloud Cacao (a black tea/chocolate tea blend from Peet's, no longer available but they will bring it back) and Coco-Mate (from [2]American Tea Room).

Patrick's father was an ambassador from Venezuela. Patrick grew up in California and England and went to college at the University of East Anglia. After studying for a Master's in Film Production from Columbia University (New York), he started working for Al Jazeera in Venezuela making documentaries. He also worked for a local TV station making segments for a children's program. One segment was about cacao. He learned that Venezuelan cacao beans were among the most highly-valued cacao beans in the world. The cacao beans from one valley (Chuao) sold for ten times the usual price.

While making the segment, he met cacao farmers. He discovered a group of cacao farmers whose beans had been organically certified by the United States Department of Agriculture (USDA) due to local NGO sponsorship (the NGO paid for it). The farmers saw it as free training. The organic certification took lots of paperwork to maintain. The farmers had hoped that the certification would allow them to sell their beans at a premium. However, after four years, this hadn't yet happened. At the end of each harvest, they'd had to sell their beans at the conventional (non-organic) price.

This struck Patrick as an opportunity – a niche (organic) within a niche (Venezuelan). In the US, there was a growing demand for organic products. The co-op grew about 16 metric tons of organic cacao beans each year. In 2009, with the financial help of his older brother and friends, he bought 10 metric tons ( \$40,000). A month earlier, he hadn't known that chocolate comes from cacao.

He soon realized there was a problem: How to get it out of the country? If taken straight out, the government would fumigate it and it would lose its organic certification. It would have to be processed in Venezuela. There were several cacao processing plants in Venezuela but to them 10 metric tons was nothing. Patrick finally convinced one of them that organic might be the future. He taught the employees how to process the beans organically while learning it himself. After that it was relatively easy to get the processing plant certified organic.

During processing, 12 % of the weight is "lost" in shells that are normally discarded. Patrick took the shells with him back to America hoping he could do something with them. In Venezuela, he had met an indigenous tribal community that drank tea made from cacao shells as remedy for asthma and to sooth coughs. He looked academic journals for other uses. He eventually found about 120 published papers. The shells had been used as toothpaste and to increase the Vitamin D content of milk by feeding them to cows. The only common uses, it turned out, were as fertilizer (due to the nitrogen content) and animal feed (due to the fiber and Vitamin D content). Neither use was high-price.

What about tea? Patrick sent samples to his partners. They were unenthusiastic. "This tastes like grass. Why would anybody drink tea from a by-product?" However, he was selling chocolate butter and nibs online. With each order,

he included an 8-ounce pouch of cacao shells with instructions how to brew the tea. His customers – at least, some of them – were enthusiastic: How unique, how great, they emailed him. A German woman said she hadn't drunk such tea since World War II ended. During World War II, cacao shells had been added to tea to extend it. His customers wanted to buy more.

He convinced his partners to go to a trade show. In 2010, they went to Expo West, a natural and healthy food product show in Anaheim. Out of all of their products, the tea got the most attention. It won Best in Show for tea. Out of about 500 new products, it was one of four that won Best New Product of Show. People from Twinings Tea and Stash Tea complimented them on their product.

After the trade show, Patrick decided the tea was a good concept and decided to make it a separate brand. Dark chocolate without the guilt. No sugar, no caffeine. He launched Tisano. The name comes from tisane (herbal tea in French) and artesano (artisanal in Spanish).

When I tasted Tisano's chocolate tea, it tasted very familiar. That's because Tisano's cacao shells are the cacao shells in both American Tea Room's CocoMate and Peet's Red Cloud Cacao. There is no doubt that Patrick has created a new niche within the American (and maybe world) tea market: chocolate tea. I don't know how well CocoMate is selling at American Tea Room but I decided to buy it after smelling maybe 40 teas. At Peet's, Red Cloud Cacao sold surprisingly well and they will bring it back seasonally.

1. <http://tisano.com/>

2. <http://www.americantearoom.com/>

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## The Lessons of Tisano Tea (2013-05-12 05:00)

I was curious [1]how Tisano Tea began (yesterday's post) because it was an unusual product (chocolate tea). There wasn't any point I was trying to make. At a party last night, however, I found myself talking to the daughter of a diplomat (Tisano Tea was started by the son of a diplomat). I told her the story of Tisano Tea. And I couldn't help pointing out two generalizations it supports:

1. I've [2]blogged many times about the value of insider/outsiders – people who have the knowledge of insiders but the freedom of outsiders. Patrick Pineda, the founder of Tisano Tea, was not an insider/outsider but he connected two worlds – the United States and Venezuela (in particular poor Venezuelan farmers) – that are rarely connected.

2. When people from rich countries try to help people in poor countries, the usual approach is to bring something from the rich country to the poor country. Nutritional knowledge, medicine, dams, and so on. One Laptop Per Child is an extreme example. Microcredit is [3]a deceptively attractive example. In recent years, the flaws in this approach have become more apparent and there has been a shift toward local solutions to problems (e.g., the best ideas to help Uganda will come from Ugandans and those who have lived there a long time). Tisano Tea illustrates something that people in rich countries have had an even harder time imagining: people in a poor country (Venezuela) knew something that improved life in a rich country (the United States) – namely, that you can make tea from cacao husks. A small thing, but not trivial (maybe chocolate tea supplies important nutrients). An American desire for Venezuelan cacao husks improves life in Venezuela. [4]Ethnic food trucks are a more subtle example. When immigrants from poor countries manage to make a living in a rich country – using knowledge of their own cuisine is a good way to do this –

they often send money home. As far as I know, this possibility has been ignored in development studies.

My research, which shows how a non-expert can do research that teaches something to experts, is related to the second generalization. For example, [5]my research on faces and mood has something to teach experts on depression and bipolar disorder. Although the term "home remedy" is standard, and lots of non-experts have improved their health in ways not approved by doctors, I have never heard a health expert show a realization that this could happen.

1. <http://blog.sethroberts.net/2013/05/11/how-things-begin-tisano-tea/>
2. <http://blog.sethroberts.net/category/scientific-method/insideroutsider/>
3. <http://blog.sethroberts.net/2012/12/17/best-books-of-the-year-2012/>
4. [http://www.nytimes.com/2013/05/12/magazine/the-food-truck-business-stinks.html?ref=magazine&\\_r=0](http://www.nytimes.com/2013/05/12/magazine/the-food-truck-business-stinks.html?ref=magazine&_r=0)
5. <http://escholarship.org/uc/item/2xc2h866/>

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### Assorted Links (2013-05-13 05:00)

- [1]Top diving coach has degree from diploma mill. Should anyone care?
- [2]butter grater from Japan
- "I love bacon. I eat it every day," [3]says 105-year-old woman
- Babies whose parents "clean" their pacifier by sucking on it [4]have much less asthma and eczema than babies whose parents don't do that

Thanks to Casey Manion and Bryan Castañeda.

1. <http://dukecheck.com/?p=13271>
2. <http://technabob.com/blog/2013/05/06/butter-grater/>
3. [http://newsfeed.time.com/2013/05/09/105-year-old-woman-says-bacon-keeps-her-alive/?hpt=hp\\_bn18](http://newsfeed.time.com/2013/05/09/105-year-old-woman-says-bacon-keeps-her-alive/?hpt=hp_bn18)
4. <http://pediatrics.aappublications.org/content/early/2013/04/30/peds.2012-3345>

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Alex Chernavsky (2013-05-13 11:02:08)

The story of the diving coach reminds me of the ridiculous swimming tests that some colleges still require of undergraduates: <http://cornellsun.com/blog/content/2012/11/29/cornell-defends-swim-test-tradition-wall-street-journal-article>

Alrenous (2013-05-13 13:43:52)

Yeah, we should care, but rephrase. "Real diploma-holders can't make top diving coach." This is not the first time I've noticed that a conventional diploma looks like a handicap. Instead of putting the lump of butter on the toast, put it on the knife, and then use the toast's natural roughness to rasp off layers of butter. Especially effective, in comparison, if your butter is cold. If instead it's warm, the amount can be controlled by carefully angling the knife. It scatters crumbs, but doesn't toast tend to do that anyway?

garymar (2013-05-13 16:11:06)

"The bacon-lover rode 'shot-bun' in the Wienermobile through her hometown". Ha!

Robbo (2013-05-15 01:55:09)

The coach is not at fault because he didn't try to deceive. The hiring manager is being pragmatic rather than following the rule of his institution. The rule is wrong, and the harm is that the school is making conditions in its advertising that it does not actually follow - a low level of lack of integrity - and thereby is depriving itself of the potential services of even better coaches who lack a degree and who took the school at its word that a degree was required. I'm not affected, I don't care much, but others should care a little.

Ed O'Brien (2013-05-15 08:50:06)

interesting link on how women's immune systems last longer, which is why they live longer: <http://www.bbc.co.uk/news/health-22528388>

### **Academic Job Advice: Be Able to Say Why You Study What You Study (2013-05-14 05:00)**

Recently I interviewed two job candidates for an assistant professor position at Tsinghua. I asked both of them: "Why did you decide to study this?" (this = their field of research). One had no answer at all. The other had an answer that didn't make sense. I didn't mean it as a tough question. If they had said "because that's what they were doing where I got a postdoc" I would have been perfectly happy. If that were the answer, I might have asked "why does your advisor study it?" - to which "I don't know" would have been perfectly acceptable. Of course, there are better answers.

When I was a graduate student, I read *Adventures of a Mathematician* by Stanislaw Ulam (a very good well-written book). One of the book's comments impressed me: That John Von Neumann was able to distinguish the main lines of growth of the tree of mathematics from the branches. My research was about how rats measure time. The relevance to big questions in the psychology of learning wasn't obvious.

I wondered: Am I studying something important? Or something that will be irrelevant in twenty years? My advisor didn't seem to have thought about this.

When I interviewed for jobs at various universities, no one asked me why do you study this? But it was still a question worth answering. As a grad student I had no choice. But eventually I would have a choice: I could continue to study how rats measure time. Or I could study something else. (Eventually I did change - to studying what controls variation in behavior.)

Here's what I would say now about how to choose a research topic.

What's best is a new method. If you can use a new method to answer questions in your field, do that. The cheaper, easier and more available the method, the better. As a graduate student, I developed [1]a new way to study how rats measure time, which I called the peak procedure. It made it easier to determine if an experimental treatment affected an animal's internal clock.

What's second best is a new experimental effect. Discovering a new way to change something of interest. The bigger, cheaper, newer, and more surprising the effect, the better. Using the peak procedure, my colleagues and I discovered [2]a large and surprising effect (at a certain time during the peak procedure, the variability of bar-press duration - how long a rat holds down the bar when pressing it - became much larger). When I first saw the result, I assumed it was due to a software mistake. It turned out to be a window in what controls the variability of behavior - an easy way of studying that. In that sense it was also a new method.

I don't know if the two job candidates I interviewed were doing either of these two things. Maybe not. My broader point is that if you don't have a good understanding of how to choose a research topic you will have to retreat to

studying something simply because others are studying it. Which is exactly the wrong thing to do if you want to be an innovator and a leader.

1. <http://www08.homepage.villanova.edu/michael.brown/Psych%20175/Roberts1981.pdf>
2. [http://media.sethroberts.net/about/2006\\_variation\\_of\\_bar\\_press\\_duration.pdf](http://media.sethroberts.net/about/2006_variation_of_bar_press_duration.pdf)

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Nancy Lebovitz (2013-05-14 11:18:00)

Off topic: <http://www.fao.org/docrep/018/i3253e/i3253e.pdf> This is a UN report on insects as food for humans– apparently insects have a really excellent nutritional profile, and I've wondered if a paleo diet should include insects.

### **Sous Vide Secrets (2013-05-15 05:00)**

A few weeks ago, based on the good experiences of friends, I bought a [1]sous vide cooker. As promised, food [2]cooked sous vide (sponsored link) (at very low temperatures, such as 135 degrees F., for long periods of time, such as 48 hours) was excellent, clearly better than other cooking methods. For example, I made short ribs. They came out a perfect texture (slightly chewy), very moist and full of flavor. I also made eggs. At the right temperature, they turned a wonderful custard-like texture.

Sous vide isn't new. [3]Professional chefs have been using it for many years. The equipment has been too expensive (such as \$1000). What's new is lower prices. A friend paid about \$350 for a sous vide cooker and vacuum sealer.

My brief experience suggests two conclusions I haven't read anywhere else:

1. Don't pay that much. I bought a [4]Dorkfood DSV controller ( \$100). It turns the electricity to a crockpot on and off to maintain the right temperature. (A new crockpot is about \$20. I already had two.)

The controller is much better than "home sous vide" cookers (about \$400) because it takes up much less space and can be used to control anything, not just crockpots. I can use it to make yogurt, for example. I no longer need a yogurt maker ( \$15, in China). The only problem with the Dorkfood controller is that you can hear it operate. It makes audible clicks. My crockpots and yogurt maker, which do the same thing at fixed temperatures, are silent.

2. You don't need a vacuum sealer. You put the food in a bag, which is submerged in a water bath. Yes, sous vide means "under vacuum" but vacuum sealing may be inferior to using ordinary freezer bags, which cost less, are much easier to get, and unlike vacuum-sealed bags allow opening and re-closing. When I use an ordinary freezer bag I put the top of the bag above the water so as to not worry about leakage. My low-end vacuum sealer (Seal-a-Meal, \$40) works with ordinary freezer bags, not just the special bags you are supposed to buy. I will eventually do a side-by-side

comparison: cook the same food two ways (vacuum-seal and freezer bag).

1. <http://en.wikipedia.org/wiki/Sous-vide>
2. <http://www.cuisinesolutions.com/>
3. [http://www.nytimes.com/2005/08/14/magazine/14CRYOVAC.html?\\_r=0](http://www.nytimes.com/2005/08/14/magazine/14CRYOVAC.html?_r=0)
4. <http://www.dorkfood.com/>

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libfree (2013-05-15 07:12:39)

Seth, I think that the primary purpose of getting all the air out is to keep the item completely submerged. It cooks better when it is completely submerged. Seth: I found that the item can be completely submerged using freezer bags. It is easier to get complete submersion with vacuum-packing, that's true.

B.B. (2013-05-15 09:33:46)

Maybe I am paranoid, but I worry about the chemicals in plastic bags contaminating the meat while it cooks all day. That is not a problem with ceramic or metal cookware.

Tom (2013-05-15 10:39:27)

Thanks for this post. I'd been thinking about the Sous Vide Supreme but couldn't justify the cost or space lost. This looks like a home run. Off topic, Seth, but pretty interesting: Powdered food is way more fattening than non-powdered amounts of the same nutrients: <http://kindkehealthnotes.blogspot.com/2013/04/powdered-food-carbs-appears-to-be-very.html> Seth: The powdered food effect is a lot like one of Israel Ramirez's experiments, for example that baked bread is more fattening than the same dough uncooked.

Rene (2013-05-16 06:46:53)

As B.B says, i dont think you have thought about all chemicals there are in "normal" plasticbags, the sous vide plasticbags, are tested and made for cooking at different temperatures, but a lot of cheap plasticbags/frostbags, are NOT, cause they are not made to heat/cook in them! Think about that aswell, for me it is a big thing there always sous vide plastic bags and a vacuumsealer Seth: I agree, this is an important issue.

Michael (2013-05-16 11:17:36)

I have a Sous Vide Supreme (SVS) and I heartily recommend it. Before that, I, too, used a temperature controller connected to a multi-cooker. As far as I can tell, yogurt made in the sous vide supreme is a bit better than my old method due to the superior temp holding capabilities of the SVS vs a multi-cooker or crock pot. (Crock pot will significantly overshoot and undershoot for up to a 5-10F swing). For most things it might not matter too much, but when you are cooking at the low end, say 131F, a significant portion of time spent under the 131F food safety cutoff could result in less than a 7D reduction in bacteria. I use mine enough that it has dedicated counter space, but I do understand the virtues of something that takes up less space.

Tom (2013-05-16 14:24:38)

Michael, if you look at the Amazon reviews, you will see people who are testing the accuracy of the dorkfood unit controlling an ordinary crockpot with very high-quality lab thermometers and finding that the dorkfood unit keeps the crockpot within .25°F of desired temp.

Steve (2013-05-17 07:45:54)

Seth, great insights! Glad to hear the Dorkfood unit works well. It seems like there's no reason that sous vide ovens couldn't eventually be as cheap as crock pots. Here some more info on the plastic safety issue: <http://nomnompaleo.com/post/12463202060/cooking-sous-vide-plastic-safety>

Jazi Zilber (2013-05-18 05:20:06)

hihi The problem is with meats etc. that have germ risk. these will not be sterilized with this device. If you have read the "how to get Smarter" guy (this with the Russian name, hope you remember), then you will see that this method of cooking eliminates the health issues he claims to be had with high temperature cooking

Dave Tufte (2013-05-28 20:28:15)

I have the older Auber control (which still works great after 4 years). Rice cookers work better than crockpots because they heat from the bottom. Definitely need to add to the tips that, since you're using an offboard temperature controller, you need to make sure that the onboard temperature controls are minimal or non-existent (again, points for the rice cookers). Bags that float can be weighted down with fishing sinkers and alligator clips (the lead will be on the outside of the bag, not the inside). When making stuffed grape leaves, Mediterranean cooks will simmer them with a weight on a plate on top. I've had great luck with putting a stoneware soup bowl on top of my bags, and then having the water level fill the bowl and go just above the top. The stoneware rises fairly quickly to the ambient temperature of the water, and keeps your floaters under control.

## **Journal of Personal Science: One Child's Autism Eliminated by Removal of Glutamate From Her Diet (2013-05-17 05:00)**

by Katherine Reid

I am a mother of five children. I live in Fremont, California. In 2009, my youngest child, who was three, was diagnosed with autism. The diagnosis came from her social and communication impairment and highly repetitive behavior. She did not play with other children. She had no imaginary play. She made no eye contact with anyone. She had no spontaneous language. She did not understand questions. Her language was restricted to repeating what she heard (echolalia). In other words, she didn't use language to communicate. She could stack blocks for hours. She would line up toys and have a meltdown if you moved a toy out of line. Everything had to be according to her rules or she was in chaos. She had highly repetitive routines that would escalate into unrest or panic. For example, she would go to wash her hands, turn the water on, turn the water off, turn the water on, and so on. Each time through the routine she would get more upset that she couldn't stop. These loop-like routines might last hours, typically ending because of exhaustion from crying. She also had episodes of absence (blank stares) that lasted 15-30 seconds.

My husband and I tried a number of popular therapies. We tried [1]Applied Behavioral Analysis (ABA) for 3 months. She got worse; her loop-like routines occurred more frequently. We tried speech therapy for 6 months. It increased her vocabulary, but did not improve her communication in other ways. The third therapy we tried was [2]auditory integration training. We did the full series twice, which took a total of 3 months. There was no improvement. Then she started going to a special-needs school, where each student is given an individualized program. At this point, she was 3.5 years old.

Around the same time that she started the new school, we started changing her diet. I had been looking at nutritional deficiencies associated with autism. As a result, we added green veggie smoothies (for example, kale, cucumber, cilantro, nuts, seeds, fruits, it varied with the season) to her diet, supplemented with a multivitamin, magnesium, B complex, Vitamin D3, Omega 3's (EPA and DHA) and probiotic blends (a mix of pills from different companies, such as New Chapter and MegaFoods). Within three days, she began to look people in the eye and began responding to her name. Before the autism diagnosis, we had taken her for a hearing test, because of her lack of



response to her name.

This encouraged us to think that diet was important. We eliminated gluten and casein (dairy) from her diet. Many parents had seen improvement after they made this change. These changes were often not large enough to make the children no longer autistic, but they did improve. Our daughter's response was similar. Her social and communication skills improved, but she was still about a year behind her peers. She still had long outbursts and meltdowns. We were sure it was the new diet, not the new school, that caused the improvement because several times she had eaten gluten or casein at school by accident (e.g., pizza) and her language and behavior regressed. This happened about ten times. Twenty-four hours after these exposures, she was considerably worse. She wouldn't be able to articulate words and her language comprehension decreased. She also became much more emotional and picky (e.g., had to take a certain route home). The regression lasted about five days.

These improvements encouraged me to read more about diet and autism. I read a few clinical studies – there were hardly any. On blogs, I read about parents' experiences. On one blog – I can't remember which one – I read a comment from a parent that he found that his son benefited from removing gluten and casein, and, importantly, MSG made his son worse. What idiot feeds his child MSG? I thought. I was wrong.

I have a Ph.D. in biochemistry, with an emphasis in protein chemistry, from UC Santa Cruz. I have spent 20 years conducting research and development on proteins for therapeutics and molecular diagnostic applications. Proteins are made of amino acids, the most abundant of which is glutamic acid. When a protein breaks down, glutamic acid is released. I discovered that I had been feeding my daughter plenty of glutamate. I started researching [3]connections between glutamate and autism and convinced myself it was plausible that too much glutamate caused behaviors associated with autism, as well as other brain disorders. Suddenly I understood why removal of gluten and casein might help. Both proteins have a high glutamate content (= a large fraction of their amino acids are glutamic acid). Common types of food processing break down these proteins. For example, fermentation, ultra-pasteurization, adding acid (such as lemon juice), and adding enzymes (e.g., when making cheese) all create free glutamate.

I started looking into food labels. [4]Glutamate can be hidden in many ways, I learned. For example, "natural flavor" may be up to 60 % glutamic acid. Perhaps my daughter had a predisposition to glutamate sensitivity; my research revealed that many of us do. There are glutamate receptors all over the body, including the brain. For example, glutamate receptors in the pancreas regulate insulin secretion. To reduce the amount of glutamate in her food, I tried to remove all processed proteins from her diet. This wasn't simple. Apple juice may have "natural flavors". Toothpaste may have glutamate. Our new diet mainly consisted of organic vegetables, fruits, seeds, nuts, meat, quinoa, and rice. We stayed away from any product with processed soy, corn, or wheat (because of the processed protein). Corn on the cob or edamame was fine because they aren't processed.

This was a huge shift in the family diet and was met with protest. My husband was hesitant because the advice from a team of neurologists had been to try behavioral therapy again. (ABA is one type of behavioral therapy.) They thought a better therapist might help. That was their main advice. They told us they hadn't seen gluten-and-casein-free diets produce improvement.

In May 2010, we made the big dietary changes. After we started the new diet, my daughter never again had a meltdown. She had had one the previous week. About a month later, at the end of the school year, we were contacted by the special-needs school. They said she had improved so much that she should go to a mainstream pre-school. At this point she was almost four. Her language and social skills quickly caught up with her peers. Of my five children, she is the most social and outgoing. Today, at 6 years old, she attends a public school kindergarten. At a September 2012 parent-teacher conference, her kindergarten teacher was shocked to find out that she had been previously diagnosed as autistic.

I decided to make it my mission to educate and raise awareness of the amount of free glutamate in our food and the health ailments associated with it. The name of my mission is Unblind My Mind. More information can be found at [5]unblindmymind.org.

Katie spoke about this at the first [6]Make Yourself Healthy Meetup.

1. <http://www.autismspeaks.org/what-autism/treatment/applied-behavior-analysis-aba>
2. [http://en.wikipedia.org/wiki/Auditory\\_integration\\_training](http://en.wikipedia.org/wiki/Auditory_integration_training)
3. [https://www.google.com/webhp?sourceid=chrome-instant&rlz=1C1GGGE\\_enCN474US480&ion=1&ie=UTF-8#newwindow=1&hl=en&rlz=1C1GGGE\\_enCN474US480&sclient=psy-ab&q=glutamate+autism&oq=glutamate+autism&gs\\_l=hp.3..013j0i22i30.223973.228127.1.228470.18.15.0.0.0.1.1362.9895.5-2j6j3.11.0...0.0...1c.1.12.psy-ab.f8PRoI3Cb7A&pbx=1&bav=on.2,or.r\\_cp.r\\_qf.&bvm=bv.46471029,d.cGE&fp=e263b873deb57f8&ion=1&biw=1092&bih=544](https://www.google.com/webhp?sourceid=chrome-instant&rlz=1C1GGGE_enCN474US480&ion=1&ie=UTF-8#newwindow=1&hl=en&rlz=1C1GGGE_enCN474US480&sclient=psy-ab&q=glutamate+autism&oq=glutamate+autism&gs_l=hp.3..013j0i22i30.223973.228127.1.228470.18.15.0.0.0.1.1362.9895.5-2j6j3.11.0...0.0...1c.1.12.psy-ab.f8PRoI3Cb7A&pbx=1&bav=on.2,or.r_cp.r_qf.&bvm=bv.46471029,d.cGE&fp=e263b873deb57f8&ion=1&biw=1092&bih=544)
4. [http://unblindmymind.org/wpsystem/wp-content/uploads/2013/04/Various\\_Ways\\_Free\\_Glutamate.pdf](http://unblindmymind.org/wpsystem/wp-content/uploads/2013/04/Various_Ways_Free_Glutamate.pdf)
5. <http://unblindmymind.org/>
6. <http://www.meetup.com/Make-Yourself-Healthy-Meetup-Group/>

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Darrin Thompson (2013-05-17 09:24:46)

Interesting. I'll go out on a limb and agree with the evil experts statement: "They told us they hadn't seen gluten-and-casein-free diets produce improvement." IMHO they say that because, in fact, they have probably seen lots of people attempt gluten-and-casein-free diets which produced no improvement. Back in the day when autism intervention diets were hard, you couldn't eat anything packaged or processed. Now there are whole factories making easy processed packaged foods which are GF and sometimes GFCF. And we don't see any improvement in the kids symptoms. So I fully understand where the medical professionals were coming from. "Our new diet mainly consisted of organic vegetables, fruits, seeds, nuts, meat, quinoa, and rice. We stayed away from any product with processed soy, corn, or wheat (because of the processed protein). Corn on the cob or edamame was fine because they aren't processed." That's hard to do. That's more than GFCF. That's old-school GFCF. And it's probably what is needed to really see an improvement. We do something like that, we've seen enormous progress in our children who have autism. However, it's hard to cook \_all\_ the time. Eating out is a crap shoot every time. At school the most well meaning staff will sometimes make a mistake, feed your kid something off list, and you won't know, other than your really effective diet mysteriously quits working for a day or three. This glutamate angle is interesting. We've been pursuing a low lectin approach for awhile but we'll have to queue this up for later. Seth: These results make clear why a GFCF diet could sometimes work, sometimes fail. They sometimes fail because there is so much glutamate in the rest of the diet that even when gluten and casein are eliminated there is still a disabling amount of glutamate left. The real expert failure here is not their statement about GFCF diets, which could easily be accurate, but their failure to learn from this success.

Reanna (2013-05-17 14:41:44)

I've been meaning to comment for a while: The Fertility Awareness Method is another good example of people using personal science to solve problems one step ahead of traditional medicine. Here's a video that gives you some idea of how it can be applied: <https://kindara.zendesk.com/entries/23375112-Video-Kati-s-Experience-With-FAM>

shtove (2013-05-17 17:54:48)

Katie Reid is very impressive, and the clip of her little girl at the end of her video is brilliant - so bright and full of character - vid is here (13:35): [http://www.youtube.com/watch?v=J\\_ZfldDCpdU](http://www.youtube.com/watch?v=J_ZfldDCpdU) But I can imagine other parents who have failed with similar methods getting frustrated with her certainty. "There is a real sense in which dietetics is harder than cosmology." - Martin Rees.

AlexiDSadeski (2013-05-18 14:50:27)

Seth, you have been advocating a lot of fermented foods. Does Katie's research change your mind on that at all? Katie, do you see things like sauerkraut having an affect on your daughter? Have you stopped eating fermented foods and would you recommend that to others? Seth: No, this work doesn't change my mind. The benefits of fermented food are clearly huge. Maybe some people are more sensitive to glutamate than usual – perhaps for enviromental reasons, perhaps for genetic reasons. Sauerkraut is not fermented protein; only fermenting protein produces glutamate.

babar (2013-05-18 18:52:29)

well she's lucky her kid wasn't an extremely picky eater (this means that any change with eating routines causes extreme anxiety) like many kids on or near the spectrum.

Mike H (2013-05-19 18:01:32)

I just stumbled on this site, but the older posts on this subject were closed to comments so I just thought I'd comment here. I'm a Vitamin D and sleep enthusiast, but the theory I follow has nothing to do with the time you take Vitamin D. Instead, it's all about what your level is. (60 - 80 ng/ml being optimal). I didn't see her theory mentioned anywhere so I thought I would direct you to it. <http://drgominak.com/> I also highly recommend her YouTube videos. I think she's onto the real mechanism between Vitamin D and sleep.

Katie Reid (2013-05-21 20:56:38)

In response to Alex about fermented foods: the fermented processes that I find concerning are when we fortify our food with protein (such as in the baking of many wheat breads) and then add high concentrations of bacteria or yeast to speed the fermentation process and "add flavor". The natural fermentation processes that are slow and on foods naturally low in protein are not the issue.

### Assorted Links (2013-05-18 05:00)

- [1]Rating prisons on Yelp. Quantified Institutions.
- [2]Widespread fraud at Indian drug company that makes generic drugs widely sold in the United States. Maybe this article will cause people to stop buying their products. It isn't obvious to me what to do about this problem, although apparently the fine was too small. Jail for the owners?
- [3]Poisoning at Tsinghua University
- [4]Association of Restless Leg Syndrome with glutamate

Thanks to Bryan Castañeda and Andy.

1. [http://www.washingtonpost.com/national/with-few-other-outlets-for-complaints-inmates-review-prisons-on-yelp/2013/04/27/59cc3440-9e24-11e2-a2db-efc5298a95e1\\_story.html](http://www.washingtonpost.com/national/with-few-other-outlets-for-complaints-inmates-review-prisons-on-yelp/2013/04/27/59cc3440-9e24-11e2-a2db-efc5298a95e1_story.html)
2. <http://features.blogs.fortune.cnn.com/2013/05/15/ranbaxy-fraud-lipitor/>
3. <http://www.dailydot.com/society/zhu-ling-sun-wei-petition-case/>
4. <http://www.sciencedaily.com/releases/2013/05/130507134600.htm>

ChristianKI (2013-05-18 06:41:16)

As Ranbaxy is an Indian company jailing its owners is something that the Indian government should do. It's probably not the job of the US government to jail the executive of the companies of foreign countries.

Nancy Lebovitz (2013-05-18 12:54:17)

Good news about the Yelp reviews of prisons- if Kermit Gosnell's abortion clinic had been reviewed, I don't think it could have been that bad for that long.

Nancy Lebovitz (2013-05-18 13:05:27)

As for Roxio and many other problems, cheap reliable quantitative chemical analysis would help a lot. When I say "cheap", I mean cheap enough that a lot of people have their own kits.

dearieme (2013-05-21 07:31:19)

"Jail for the owners?" With fake drugs, it maybe you could pin murder on them, and then there's no need to stop at jailing.

Adam (2013-05-22 04:21:27)

No need to stop at jailing? I was actually thinking that they might be doing some patients a favor by giving them Placebo instead of active drug!

### **"You Can't Change Something Unless You Love It": The Case of Dr. Gilmer and Dr. Gilmer (2013-05-19 05:20)**

"It's a funny thing," Jane Jacobs told an interviewer in an interview I cannot find, "you can't change something unless you love it." (By "change" she meant improve.) She had seen that people who disliked cities gave poor advice about improving them and understood that it wasn't just cities. To improve something, it isn't enough to have a good idea. You also need to (a) pay close attention and (b) overcome obstacles. (a) and (b) aren't easy. You are unlikely to do them without strong motivation, such as love.

Jacobs's point is at the heart of the success of my personal science. My personal science is hugely different from professional science, but different may or may not be better. It has succeeded, I'm sure, because of what Jacobs says. How did I manage to find new ways to sleep better, lose weight, and so on? I had good ideas, yes, but so do many people, including professional scientists. One reason for my success: I observed myself closely. Now and then I noticed outliers (e.g., nights when I slept unusually well, days when I lost my appetite). These gave me ideas to test. In professional science, this rarely happens. For one thing, they can't wait for outliers. They are under pressure to get results soon. Another reason for my success: I persisted. For many years, I measured my weight, sleep, mood, and so on. Unlike a professional scientist, I had no required output. I could spend as much time as necessary.

I keep coming back to this because Jacobs's point is absent from conventional American thinking, such as New York Times op-eds. But it is illustrated again and again. A recent episode of *This American Life*, titled "[1]Dr. Gilmer and Mr. Hyde", is about two doctors named Gilmer: Dr. Benjamin Gilmer and Dr. Vince Gilmer (who are unrelated). VG kills his father and goes to jail. BG replaces him at a rural clinic. His patients tell him what a nice man VG was. This puzzles BG: Why would such a nice man kill his father? The legal system had ignored this question or at least not provided a convincing answer. BG, on the other hand, actually cares. (Spoiler alert.)

He gathers information about the case and visits VG in prison.

With the help of a psychiatrist friend, he comes up with a new idea: VG has [2]Huntington's disease, whose symptoms include aggression (such as murder). In prison, VG has been far too aggressive. His hands shake some of the time; this had been called "malingering" (faking) by a psychologist. When tested, it turns out VG does have Huntington's disease, in the sense that he has the gene for it. When VG was given medication appropriate for Huntington's disease,

he got much better.

BG, who cared about VG, managed to improve his condition. The legal system, which did not care about him, did not. The implication for all health care, including research, is straightforward: Empower those who care.

1. <http://www.thisamericanlife.org/radio-archives/episode/492/dr-gilmer-and-mr-hyde>
2. [http://en.wikipedia.org/wiki/Huntington's\\_disease](http://en.wikipedia.org/wiki/Huntington's_disease)

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Allen K. (2013-05-19 05:39:37)

Of course, where this point is present in American op-ed thinking is in those that call for government-hater politicians to get out of the way of those who would actually attempt good governance. Seth: You might be right: people who dislike government will be bad at it. But the original claim is about the objects of governance.

idyll (2013-05-19 06:32:21)

A corollary: if people do NOT love an institution, it will change, but not for the better.

Tom (2013-05-19 10:41:21)

Without love, you not only can't change something, you can't even truly understand it. Loving a thing gives you the opportunity to know it. This is also true of creative endeavors. Sometimes people who don't like a given creative genre – say, country music – will still set out to write something in the idiom, thinking it is "easy." They invariably do atrocious work. The audience for creative works – and perhaps for things like cities, phones, etc – is itself there in the hopes of loving the thing. So only through love does the creator have even a chance of creating a thing a user would love. Love from creators is crucial yet undervalued. And the result on the audiences' side is delight, which is also usually an afterthought. A good case in point is New York's repurposing of the disused elevated train tracks into a park. For years it was mocked as a foolish idea. Now cities all over the world are falling over themselves to create their own parks in the sky.

Jon (2013-05-19 20:20:54)

As such government should get out of the way of people that love to help others. Remove licensing laws (AKA "grants of monopoly").

Jon (2013-05-19 20:27:10)

Allen K., I agree with you whole heartedly. We need to help those that truly care about good governance by getting rid of the monopoly of government, or rather, statism. This would enable those that truly care about others, through the free market, to help their fellow countrymen. As we saw from Seth's anecdotal story (which holds much truth) the monopolies don't work, it is the individual who has interest in making a difference that does. Unfortunately monopolies only create bureaucratic entities that don't care about their customers.

Duncan (2013-05-20 02:22:41)

By happy chance, I just read this typo on Dave Winer's blog: "So let's solve the problem."  
<http://threads2.scrippling.com/2013/may/usersMailListForDropbox>

## Give and Take by Adam Grant (2013-05-20 09:42)

The publisher sent me a copy of Give and Take by Adam Grant after I sent several emails asking for a review copy. I expected it to be the best book about psychology in many years and it is.

The book's main theme is the non-obvious advantages of being a "giver" (someone who helps others without concern about payback). Grant teaches at Wharton, whose students apparently enter Wharton believing (or are taught there?) that this is a poor strategy. With dozens of studies and stories, Grant argues that the truth is more complicated – that a giver, properly focussed, does better than others. Whether this reflects cause and effect (Grant seems to say it does) I have no idea. Perhaps "givers" are psychologically unusually sophisticated in many ways, not just a relaxed attitude toward payback, and that is why some of them do very well.

I was more impressed with two other things where cause and effect is clearer. One is a story about communication style. It is the best story in a book full of good stories. About ten years ago, Grant was asked to teach senior military officers how to motivate their troops. His first class was a four-hour lecture to Air Force colonels in their forties and fifties. Grant was 24. The feedback forms, filled out by the students after the class, reflected the age – and presumably wisdom – discrepancy. One comment was: "More quality information in audience than on podium."

Grant taught the class again, to another group of Air Force colonels. Instead of talking about his credentials at the start of the class, he began like this:

I know what some of you are thinking right now: What can I possibly learn from a professor who's twelve years old?

Everyone laughed. Grant does not say what he said next – how he answered the question. He went on to give the same lecture he had given before. The difference in feedback was "night and day". Here is one of the comments: "Spoke with personal experience. He was the right age! High energy; clearly successful already."

This is great. A non-obvious, seemingly small change produces a huge outcome difference. Grant clearly understands something enormously important about communication that isn't not found in other psychology books, such as introductory textbooks. It isn't easy to interpret (why exactly did Grant's new opening have its effect?) nor study experimentally – but that's fine. In Give and Take, Grant follows this story with research about what is called "the pratfall effect": Under some circumstances making a blunder (such as spilling a cup of coffee) makes a speaker more likeable. But Grant's opening ("what can I learn...") isn't a blunder. Grant calls it an "expression of vulnerability", a category broad enough to include pratfalls – fair enough.

What can we learn from Grant's story? Above all, that something mysterious and powerful happens or might happen at the beginning of a talk and that ordinary feedback forms are sensitive enough to detect it. What Grant did was highly specific to the situation (young speaker, older military officers) so you can't copy it. To use it you really have to grasp the general rule. Which remains to be determined.

Tomorrow I will blog about another impressive part of the book.

Tim Beneke (2013-05-20 11:34:15)

Perhaps with the generals he established his insight immediately by getting inside what many were already thinking – with humor (emotion). They were then attached to perceiving him as "insightful" and framed his observations that way, had a positive cognitive bias that led to confirmation bias as they heard him talk. In working with other people for the first time, I always try hard to impress them initially.... It's a fascinating story... Seth: I agree, a plausible interpretation and quite different than what Grant says.

Alex Chernavsky (2013-05-20 11:48:06)

A couple of months ago, *The New York Times Magazine* ran a cover story about Grant and his research: [1]<http://www.nytimes.com/2013/03/31/magazine/is-giving-the-secret-to-getting-ahead.html>

1. <http://www.nytimes.com/2013/03/31/magazine/is-giving-the-secret-to-getting-ahead.html?pagewanted=all>

George (2013-05-20 14:19:39)

Wait a minute, what Grant did was extremely obvious and easily replicated in many situations - he was sensitive to the ego of his audience. He understood that old people resent being taught wisdom by young people - a fairly obvious observation that any of us might make - and acknowledged that he was in fact, inferior to his audience in wisdom but had a special message to relate, thus pleasing their ego and allowing them then listen to his message. It is quite common for people to let their ego and sense of self-importance make them close-minded - if you can disarm their ego defenses, they listen to you more. This is basic stuff - in ANY situation being sensitive to the ego of your audience will disarm potential mind-closing resentment and increase receptivity to the message. Seth: You might be right. But it's far from "extremely obvious". Grant explains it quite differently.

vic (2013-05-20 16:35:03)

He penetrated his audience's defenses with a disarming joke - hardly rocket science. I hope there is more to the book than this... Seth: Was his audience "defensive" as you say? Not clear from Grant's description. As for the "disarming" joke, the question is why was it disarming? Lots of jokes at the start of talks have roughly zero effect, as far as I can tell.

Tom (2013-05-20 17:17:34)

The book is awesome. Really looking forward to hearing more of your insights on it, Seth.

George (2013-05-20 17:36:54)

Well, Grant showed *humility* - how this can be seen as anything other than a concession to your audience's sense of self-importance I do not know. I guess I'll have to read the book to find out, but I hope it isn't just another attempt to explain something fairly simple through over-complicated theories in an attempt to be original. In any event, showing humility is always a disarming strategy and can reduce ill-will, resentment, jealousy, and thus reduce attempts to "take you down". Seth: Is it humble to state the obvious, in this case your age? Humility is usually about more subtle characteristics, such as wisdom. Maybe Grant was humble in what he said next (which he doesn't tell us), after the joke about being 12 years old.

ken (2013-05-20 21:06:43)

There is a great book about improv acting called *Impro* by Keith Johnstone. A reliable way to get a laugh as an improv actor is to change the social status you are playing on stage. If I recall the book correctly, it postulated that students respect/fear the teacher who plays high-status; they can appreciate the teaching who always plays low status; but they love the teacher who vacillates back and forth between the two extremes.

asdf (2013-05-21 10:43:12)

I feel like shaking my head at some of these butthurt commenters. Go be killjoys somewhere else.

jason (2013-05-21 11:42:16)

the general rule is to figure out what the other person is thinking and feeling and refer to it in a way that doesn't express judgment. clever salesmen do this all the time and it's a standard tactic in the pick-up artist's repertoire. heck, grant uses the

same move in his interview on the newyorker site to make the interviewer more comfortable: "you've probably encountered many takers". it's rapport building 101. when it's described as a 'tactic' it sounds cheap and exploitative but you can't know what the other person is thinking or feeling if you don't empathize with them. "i know what you're thinking.." is often a reliable signal of genuine sympathy and interest.

Li (2013-05-21 19:20:03)

Seth: Why did you expect the book to be the best one about psychology in many years? Seth: Because I'd heard about his work about improving call-center performance at the University of Michigan: He figured out how to make the callers think their jobs are helping people and this made the callers perform much better. An extremely impressive result. (I blogged about it in the next post.)

### **More about Give and Take by Adam Grant (2013-05-21 05:00)**

Yesterday I commented about Give and Take by Adam Grant, a professor at Wharton who teaches organizational psychology.

When Grant was a graduate student (at the University of Michigan), he was asked to help people at the university's fund-raising call center raise more money. They call alumni, asking for money. The person who ran the center had tried the usual motivational tactics, such as offering bonuses. They hadn't worked.

Grant noticed that most of the money being raised went for scholarships. He tried various ways of making the call center employees aware that the money they raised helped students directly. The most effective way turned out to be a 5-minute meeting with a scholarship recipient. This had a staggering effect:

The average caller doubled in calls per hour and minutes on the phone per week . . . Revenue quintupled: callers averaged \$412 [per week] before meeting the scholarship recipient and more than \$2000 afterward.

A huge effect – and a useful huge effect. And one that is not even hinted at in countless introductory psychology books. Notice that physical conditions of the job and the "physical" payoff (the salary) didn't change. All that changed was employees's mental models of their job.

I conclude that people are far more motivated by a desire to help others than you would ever guess from reading psychology textbooks – and, even more, from reading economics textbooks. Grant says nothing about this, at least in the book, but I'd guess that the employees were considerably happier at their jobs as well. You might think that there has been so much research on job design that there were no big effects left to be discovered. You'd be wrong.



MikeW (2013-05-21 10:08:05)

Well my inner skeptic is saying, is this just another version of the Hawthorne Effect? I.e. their productivity improved simply because they knew someone was trying to improve their productivity. He says he tried things that didn't work, so maybe it's not the same effect. A key distinction would be if the productivity gains persisted long term. At Hawthorne, it always fell back to baseline eventually. Seth: Lots of things didn't improve productivity. It's not the Hawthorne effect.

garymar (2013-05-21 15:18:22)

Doesn't an economics education *decrease* altruistic behaviors?

jason (2013-05-23 09:05:53)

motivation is the result of specific mental states. maybe meeting the scholarship recipients made it easier for the cold-callers to invoke the recipient's desires and 'borrow' their motivation? the increase in motivation/effectiveness may come from something as simple as asking and answering the question "what would i do if i were a scholarship recipient? empathy is a powerful tool. in any case, interesting.

### **More on the Synergy of Walking and Learning (2013-05-22 05:00)**

A few years ago, [1] discovered that walking made studying Chinese more pleasant and studying Chinese made walking more pleasant. It's a big effect. While walking on a treadmill I could easily study Chinese for 40 minutes; while sitting or standing still, 5-10 minutes. The general idea seems to be that walking creates a thirst for novelty, for dry information. An evolutionary explanation is that this effect caused us to better explore our surroundings. Such exploration paid off too rarely and/or with too-long delays to be supported by the usual reward-action mechanism.

Jeremy Howard, the president of Kaggle, [2] discovered the same effect independently while studying Chinese. A few days ago, I heard from Patrick Roach, a medical student in the Midwest, who also discovered the same effect independently – in his case, studying anatomy rather than Chinese. He [3] blogged about the Anki/treadmill combination. I asked him if walking on a treadmill made it easier to study Anki? He replied:

Absolutely. I originally tried this with a 3100 card deck I created while studying anatomy in med school. The format (Image/Name) was perfect for reviewing while walking, as there wasn't too much text to read. I imagine your experience with learning a new language was similar. Anyways, Treadmill + Anki (+Music) along with my Tablet / Wiimote combo was *much* more productive than either task alone. I could easily spend 1-2 hours and not notice the time passing in the same way it dragged on when trying to study endless flashcards sitting in a quiet room. Getting tired or losing focus was less of an issue as well - I noticed I had less distractions/extra attention to spare while walking.

Thanks for getting in touch, Patrick. As [4] Lewis Carroll said, "What I tell you three times is true."

1. <http://blog.sethroberts.net/2010/02/23/boring-boring-pleasant/>
2. <http://blog.sethroberts.net/2012/09/09/independent-discovery-of-walking-catalyzes-learning/>
3. <http://innominatethoughts.com/technology/flashcards-like-a-boss-with-anki/>
4. <http://www.literature.org/authors/carroll-lewis/the-hunting-of-the-snark/chapter-01.html>

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August (2013-05-22 06:39:07)

This is what Google Glass is good for. Unfortunately, they are pushing all the 'social' nonsense.

gwern (2013-05-22 07:44:48)

> The general idea seems to be that walking creates a thirst for novelty, for dry information. An evolutionary explanation is that this effect caused us to better explore our surroundings. Or, besides the far-fetched evolutionary just-so story, walking is serving the same function that music does - it serves as a distraction and interruption when one gets briefly bored, and the more one likes the music, the worse one performs on a memory task, eg. <http://dl.dropbox.com/u/85192141/2012-perham.pdf> > Twenty-five undergrads completed several serial recall tasks. They were presented with strings of eight consonants and had to repeat them back from memory in the correct order. Performance was best in the quiet condition, but the key finding was that participants' performance was worse when they completed the memory task with a song they liked playing over headphones (Infernal's "From Paris to Berlin"), compared with a song they disliked (songs such as "Acid Bath" from the grind core metal band Repulsion). In case you're wondering, participants who liked Repulsion were excluded from the study. Particularly germane, about that same study: > A further intriguing detail from the study is the participants' lack of insight into the degree of distraction associated with each type of music. Asked to judge their own performance, they determined correctly that their memory was more accurate in the quiet condition, but they didn't realise that their performance was poorest whilst listening to the music they liked. So, call us after you've randomized some days or weeks of walking/no-walking and observed an increase in average grade or something. This should be a cheap easy experiment to run, especially if it really is "a big effect"...

Tom (2013-05-22 08:08:46)

*besides the far-fetched evolutionary just-so story* The rotary press is less than two centuries old, making it impossible for our brains to be evolved to do it particularly well. Humans have been walking and needing to recognize and remember locations of food, water, dangers & opportunities for millions of years. So, without the snottiness, how is this idea "far-fetched"?

gwern (2013-05-22 08:35:28)

> So, without the snottiness, how is this idea "far-fetched"? \*Any\* evolutionary story is far-fetched without supporting evidence. Why? Because there are bazillions of possible mechanisms and theories out there: what singles out, from all these possibilities, 'walking has to trigger an entirely new specialized reward system because I vaguely speculate that such a thing might be adaptive'? You might as well say that people love Justin Bieber because his smooth skin reminds them of ripe fruits and this would be adaptive on the African savannah. It is simply privileging the hypothesis. You don't get to just make up random crap and say that any criticism of it is 'snottiness'!

nick (2013-05-22 09:42:34)

I experienced something similar but under different circumstances. I've been watching some educational online courses and while doing that did some physical exercises for the back, shoulders and legs. Normally if I just sat and watched my attention span would be gone in 10 minutes or so and I would get bored quickly. Combined with physical exercise, though, I could do with no issue an hour long session which in my world is a lot. The nice thing is also that after completing the session I felt I could do more and did not feel as tired as I would usually feel. Looks like general physical exercise could be very beneficial to brain activity. Seth: Interesting, I haven't tested other exercises. I noticed that if I am sitting down I would rather watch a movie than study Chinese. Whereas if I am walking I would rather study Chinese.

August (2013-05-22 10:25:45)

We need a hypothesis to test. This is no 'just-so' story. You may be able to term it a 'just try' story. This is the realm of personal science. I realize in the grant writing/granting realm certain stories are there to completely obliterate any testing. The recent hullabaloo surrounding Richwine is a good example, since he inadvertently got squashed by the 'just-so story' known as equality, which stops rather than encourages research.

gwers (2013-05-22 19:59:32)

> We need a hypothesis to test. There is a hypothesis, yes. It is 'walking improves memory performance or concentration'; like most hypotheses framed, it is probably wrong and I've given some examples of why Roberts and other people might have a subjectively mistaken impression, but the hypothesis is certainly not impossible - if saccading can improve memory in right-handed people or chewing gum temporarily boost performance, I don't see why walking couldn't cause an alerting effect too. And you're talking about testing? This is easily testable: this can be tested objectively by Anki's built-in statistics collection or window-tracking (for memory performance and procrastinating, respectively). Roberts has chosen not to do so.

> This is no 'just-so' story. But there is also a just-so story here. It is the just-so story that this hypothesized effect of walking is due to some story about our ancestors walking on the savannah and needed more delayed reward cycles and this explains why the hypothesized effect exists (ah, just so!). This is literally in the first paragraph of the post: "The general idea seems to be that walking creates a thirst for novelty, for dry information. An evolutionary explanation is that this effect caused us to better explore our surroundings. Such exploration paid off too rarely and/or with too-long delays to be supported by the usual reward-action mechanism."

Valerie (2013-05-22 21:09:57)

I am not sure if my example is the exact same phenomenon, but I think most people will be familiar with it: Listening to music on the radio is rather boring. Sweeping the floor is rather boring. Sweeping the floor while listening to music is much more enjoyable (I would not call it fun, but it is not boring). In the same vein, exercising is boring. Exercising while listening to music is ok (again, not quite fun, but much less boring). I wonder if mixing any two rather boring activities makes the mix more fun, or if it needs to be one mental activity with one physical activity. Sweeping the floor while exercising (without music) seems very unappealing to me, though I have never actually tried. Seth: People choose to listen to music in many situations - hard to say that it is usually "boring". I think it is more complicated than what you say. Sitting at a desk doing nothing is very boring - but sitting at a desk studying Chinese isn't much better. Walking on a treadmill doing nothing is very boring - but walking on a treadmill studying Chinese is pleasant.

Donald (2013-05-23 04:05:09)

The article that appeared on my netvibes after reading yours, somewhat relevant: "I tricked myself into loving my workout" - <http://lifehacker.com/how-i-tricked-myself-into-loving-my-workout-509289090> Seth: In the article she says she reads novels during her workout. Similarly, I watch TV I enjoy. What was shocking was to discover that, during treadmill walking, studying Chinese was more pleasant than watching favorite TV. While sitting, the reverse was true.

Pauline (2013-05-24 08:47:27)

I had a similar experience this week. I got bored listening to a video on internet even though the topic was something I am very interested in it. I decided to do some exercises while listening with laptop nearby on the floor. Somehow doing the two together your brain engages more while your body is busy. You are distracted from your own boredom and that focuses attention more.

Brian Person (2013-05-26 09:28:23)

It's not a stretch to say doing a physical activity increases attentiveness and tunnel vision. And that there would be evolutionary advantages to this. The most popular drug on the planet's purpose is to get the effects of physical activity without physical activity. Methamphetamine stimulates the mind to be more attentive to those with attention deficient. Some children have trouble learning if they're just sitting around. It also makes sense for the mind to not assert itself when sitting still to help conserve energy. As a thought experiment, evolutionary psychology can work if you think about it long enough. If your interest in doing the experiments to prove it, by all means. But this isn't a stretch of the imagination. Because you can make it up doesn't mean on it's face fallible, it just means it's not proven. Just ask pre experiment Einstein.

Sam (2013-06-02 17:14:05)

I imagine I'm late to the comment party, but exercise is known to boost BDNF levels. This and or other chemical responses to exercise may be responsible for your enhanced abilities while exercising.

## Next Meeting of Make Yourself Healthy Group is Tomorrow (Thursday) (2013-05-22 09:23)

The next meeting of the [1]Make Yourself Healthy Meetup group is tomorrow (May 23, Thursday) at the Telegraph Ministry Center (5316 Telegraph, Oakland). Social time will start 6:30 pm, the meeting proper at 7:00 pm. It will last about 2 hours. Admission is \$3, payable at the door, to cover the cost of renting the space.

The first speaker will be Robin Barooah, who will tell how he cured his RSI (Repetitive Strain Injury). What his doctors told him to do didn't work.

1. <http://www.meetup.com/Make-Yourself-Healthy-Meetup-Group>

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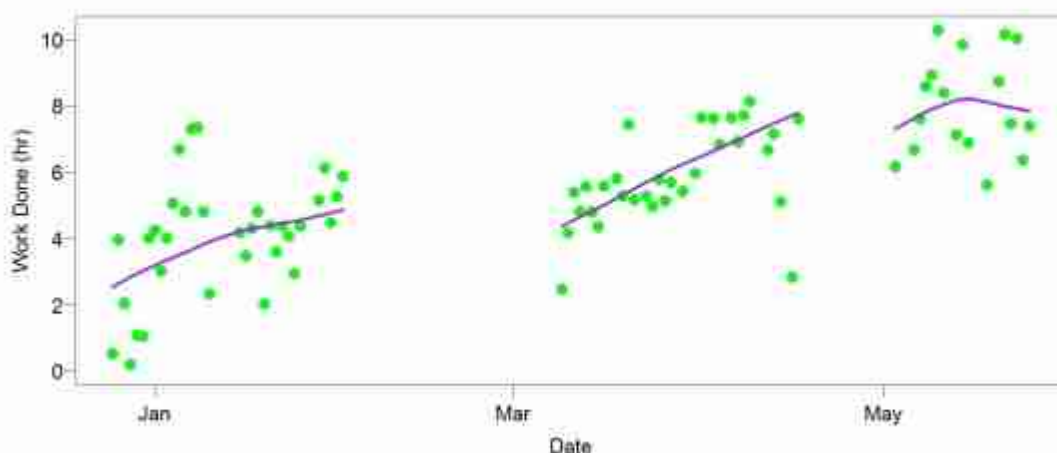
Alex Chernavsky (2013-05-27 06:56:12)

Seth - how did it go? By the way, if anyone in Buffalo / Rochester / Syracuse/ Finger Lakes (Upstate New York) wants to form such a meeting, contact me at [1]alex@aya.yale.edu. Seth: Robin's talk was fascinating. But there were only about 8 attendees, which worries me.

1. <mailto:alex@aya.yale.edu>

## Anti-Procrastination Software Available (2013-05-26 18:16)

[1]



This graph shows how much work I did in early 2013 (one point = one day). It gradually rose from about 2 hours/day to about 8 hours/day. I did not literally get to 8 hours/day because some tasks got counted extra. For example, one minute of Chinese counted as 2 minutes and one minute of book writing counted as 1.5 minutes. The data is in three blocks because sometimes I didn't use the tracking program (e.g., due to travel).

I gathered the data with a program that gave [2]percentile feedback. Percentile feedback compares where you are now (measured in various ways, such as time of day, e.g., 3 pm) to where you were at the same time on previous days and summarizes the comparison with a percentile: 75 means more work done than on 75 % of previous days at the same time; 50 means more work done than on 50 % of previous days at the same time. Displays of such feedback, I noted [3]earlier,

are curiously likable. They usually praised me, in the sense that the percentile score was usually well above 50. . . . They are calm, in the sense that they do not change quickly. . . . Every improvement was noticed and rewarded — and every non-improvement was also gently noted. It was as if the display cared.

Nick Winter [4]used with an earlier version of percentile feedback ([5]video). "The percentile feedback has been a huge success," he wrote. "I'm getting way more done than I ever did, and I'm much better at prioritizing toward my main project."

The new version has several improvements. The biggest change is weights – different tasks may have different weights. Tasks that are more valuable or more difficult get more weight. If you keep failing to do something important, you increase its weight, making it more attractive. For a long time, I have had trouble making myself study Chinese. This has helped a lot.

It has also pushed me away from blogging (less valuable) toward book writing (more valuable). I am writing a book about personal science. The chapter I am writing now is about procrastination.

This program has been a big help with procrastination and has improved my use of time in other ways. To get material for the procrastination chapter, I am making the program (written in R) available, along with a draft of the procrastination chapter. I want to find out what happens when other people use it.

To get the program and use it, you need to install [6]R (which runs under Windows, MacOS, and many UNIX platforms), use Dropbox, and use PayPal. You can do some work away from the computer but it won't work unless you do most of your work at or near the computer.

For better or worse I have learned it is a waste of time to give software to others for free. If you are interested in using it, please send me an email with the following information:

1. Your job.
2. Why you want to try this.
3. How much you will pay (non-refundable after 2 days).
4. How long you will commit to using it.
5. How much you will pay if you don't meet the commitment (= a refundable amount).

I'll pick the highest bidders. If you're one of them, you'll give me the amount in #3 plus the amount in #5 via PayPal. I'll install the program on your computer via Dropbox and show you how to use it (in addition to the written instructions). If you use it for the promised length of time, I'll refund the amount in #5.

1. [http://blog.sethroberts.net/wp-content/uploads/2013/05/work\\_done\\_vs\\_date.jpg](http://blog.sethroberts.net/wp-content/uploads/2013/05/work_done_vs_date.jpg)
2. <http://blog.sethroberts.net/2011/05/01/percentile-feedback-and-productivity/>
3. <http://blog.sethroberts.net/2011/05/01/percentile-feedback-and-productivity/>
4. <http://blog.sethroberts.net/2012/03/28/nick-winters-big-success-with-percentile-feedback/>
5. <http://vimeo.com/36503801>
6. <http://www.r-project.org/>

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Nile (2013-05-26 21:50:29)

I am not familiar with R. Will you be making source code available or is it an executable? I think I can compile R under Linux but if I do, I don't believe an exe file made for Windows would run under Linux. If the software is source code however it should run in either Windows or Linux. Seth: I will provide an R workspace that contains the source code. You run it by loading the workspace and typing instructions. Now that you mention it, I realize it should run under Linux.

Alex Schell (2013-05-27 06:50:43)

How much time do you spend every day using the program? Seth: 12 hours or more.

Alex Schell (2013-05-27 07:26:41)

I meant to ask how much time goes into the actual tracking process, i.e. what's the time cost of using this program? Seth: It takes 10-20 seconds to log a change (starting or stopping something). Go to R, type command, go back to whatever I was doing.

Thomas Johnson (2013-05-27 11:00:37)

Do you feel like this is significantly better than the kind of feedback that RescueTime offers? Seth: I haven't used RescueTime. However, I have tried simply tracking my work, which is the main thing RescueTime does (and provide summaries of the data). I have found this much more helpful.

Jim (2013-05-27 13:54:16)

H Seth, Sorry, I don't see your contact information on the site. Maybe I'm looking in the wrong places?

Jim (2013-05-27 14:31:51)

OK. Found it. Thanks.

tim (2013-05-29 08:49:06)

I am interested - cant find your contact info anywhere on this blog Seth: Look under Ask Me Anything.

Ilya (2013-06-04 16:10:43)

Seth, are you familiar with beeminder.com ? Seth: Just a little. Thanks for mentioning it.

Matthias (2013-06-05 18:00:58)

"For better or worse I have learned it is a waste of time to give software to others for free." What do you mean by that? Seth: It's a waste of my time in the sense that I take time to give Person X the software and, after that, get no feedback.

Ross (2013-06-12 08:37:40)

Professor Roberts, I presume the folks you have chosen are alpha or beta users. When do you think the software will be generally available? - Ross Seth: In a few months, I hope.

## Useful Knowledge: Arithmetic and Chinese (2013-05-27 07:10)

Long ago, a friend told me that when she was in first grade, she had a lot of pennies. She knew how to add but not subtract so after she spent some, she would have to count them again to know how many were left.

I have finally reached the last lesson (Lesson 12) in my beginning Chinese textbook, which I have been using (fitfully) for more than a year. Later lessons build on earlier lessons. When I didn't know a word in a later lesson, I scanned the new-word lists from earlier lessons to find it. I have just discovered there is a word index.

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Elizabeth Molin (2013-05-27 09:55:07)

I did the same thing when I was tutoring a Dutch high school student in English. We were reading a YA book together, and I was making her translate as we went along. When she didn't know a word, I would have to come up with a Dutch equivalent for her. When we got to the end of the book, we discovered the glossary.

gwern (2013-05-27 12:16:45)

> "Irritating! Whenever a man finishes building his house, he discovers what he needed to know to begin. The melancholia of finished things! ..." -Nietzsche, *Beyond Good and Evil* \_

## Assorted Links (2013-05-29 05:00)

- [1]The truth about Yahoo!
- [2]Good experience with probiotics and fermented foods. Had bad case of candida. "I t still seems to me that I am having die off and that I am not allergic to fermented foods, as I had thought for so long. . . . What this means for me and candida and the future, I don't know yet, but I am more hopeful than ever that this is a next big step in my healing."
- [3]Natto ice cream
- [4]Dorkfood Sous Vide Controller coupon code: SHANGRI-LA. 15 % discount. If I was starting now, I'd skip the vacuum sealer and use [5]reusable silicone bags.
- [6]Indigenous fermented foods - long list, with descriptions

Thanks to Grace Liu.

1. <http://www.guardian.co.uk/commentisfree/2013/may/20/yahoo-buy-tumblr-last-ditch-effort>
2. <http://wholenewmom.com/health-concerns/why-i-will-have-fermented-foods-on-my-blog-probiotic-experiment-update/>
3. <http://en.rocketnews24.com/2013/05/29/want-to-enjoy-the-health-benefits-of-natto-without-the-smell-try-this-natto-and-ice-cream-recipe/>
4. <http://www.dorkfood.com/>

5. <http://nomnompaleo.com/post/12463202060/cooking-sous-vide-plastic-safety>
6. <http://naldc.nal.usda.gov/download/23850/PDF>

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Michael Flagg (2013-05-29 14:47:42)

Thanks for the continued posts on the benefits of fermented foods. I've branched out into them thanks to the info I've read here. Speaking of foods, have you been following any of the "Soylent" story? An engineer has reduced food to the chemical inputs and developed a drink that "has everthing the body needs." He and his associates have started a crowdfunding campaign (<http://www.soylent.me/>) that did an initial ask for \$100,000 and as of this writing has raised nearly \$350,000. His blog is at <http://robrhinehart.com/> and he documents the first three months of his experience shifting from regular food to Soylent starting back in February. A lot of interest out there in changing how we eat. Amazing numbers (to me) on his crowdfunding effort. Seth: I hope that something about nutrition is learned from this, but science is very different from engineering. I don't believe for a second that his drink has everything the body needs, much less the optimal amounts. That shows his ignorance of basics. Whether he can figure this out – his ignorance – is the interesting point for me at the moment.

Reanna (2013-05-29 14:52:07)

Seth, I don't know if the probiotics blog post counts as a "good experience" yet. It sounds like something is going on, and the patient has faith. I'd like to see some test results before calling it a good experience. "Die off" always sounds a lot like "I feel like crap but my faith is strong" to my ears.

Walter (2013-05-29 18:59:44)

I am planning to buy the Dorkfood controller because I like sous vide and I think the side benefit is to annoy my wife with the name of the product. Is the coupon only for Dorkfood website or is it also useful for Amazon? Seth: only Dorkfood website.

garymar (2013-05-29 20:58:29)

The list of indigenous fermented foods was great. After reading thru I made an online order for some Japanese "Hama Natto" – fermented the old-fashioned way for 15 months (pretty pricey though). Picture and (Japanese copy) [1]here. Seems to come from the Hamamatsu area (not Hamanadzu – misprint) which is also the area around Lake Hamana.

1. [http://www.ymy.co.jp/shop\\_hamanatto.htm](http://www.ymy.co.jp/shop_hamanatto.htm)

Dan (2013-05-29 22:38:17)

I'm having a hard time taking the Yahoo! article seriously given its author's inability to spell Ms. Mayer's last name correctly. Seth: Is there something in the article you disagree with?

garymar (2013-05-30 19:09:44)

Update on my Hama Natto comment: My Hama Natto arrived this morning. Completely unlike regular natto: whole soybeans, but not slimy, not stinky, dark brown, tastes like miso. Like the package says, much deeper 'body' than miso. Lingers in the mouth. Should be a great condiment on rice.

Paul N (2013-05-31 08:29:49)

The sous vide/plastic stuff is interesting. One comment somewhere suggested what seems to me to be a good way to avoid all the plastic/silicone - use sausage casings! You can buy rolls of sausage casing online from various online suppliers like [stuffers.com](http://stuffers.com) or [malabar spices](http://malabarspices.com), and if you buy the "natural" ones - made from the intestines of pigs, sheep, and cattle, then you can eat it with whatever you cooked in it. They also have artifical casings made of collagen, cellulose and (of course) plastic. To try before you buy, just buy some real sausages (from a real butcher) and try - keep them linked and clip the ends of the string. I have never liked the taste of boiled sausages, but maybe this would work if they were sauteed in butter after cooking, just to brown them a little bit...



Brandon Berg (2013-06-02 01:55:30)

Regarding the natto ice cream, I've also found that natto is much more palatable when eaten in a partially frozen state. This somewhat weakens the taste, but more importantly eliminates the slimy texture which is arguably its most objectionable quality.

## Hospitals and Their Employees: Stuck in the 1800s (2013-05-30 10:01)

[1]An article in the New York Times describes how difficult it has been for hospital administrators to get their employees to wash their hands. Hospital-acquired infections are an enormous problem and cause many deaths, yet "studies [in the last 10 years] have shown that without encouragement, hospital workers wash their hands as little as 30 per cent of the time that they interact with patients." Hospitals are now – just now – trying all sorts of things to increase the hand-washing rate. The [2]germ theory of disease dates from the 1800s. Ignasz Semmelweis did his pioneering work, showing that hand-washing dramatically reduced death rate (from 18 % to 2 %), in 1847.

So hospitals are only now (in the last few years) grasping the implications of facts and a well-established theory from the 1800s. What goes unsaid in the usual discussion of how awful this is – how dare doctors refuse to wash their hands!, a sentiment with which I agree – is how backward both sides of the discussion are. A discussion in which many lives are at stake.

The Times article now has 209 comments, many by doctors and nurses. The doctors, of course, went to medical school and passed a rigorous test about medicine ("board-certified"). Yet they don't know basic things about infection. (One doctor, in the comments, calls hand-washing "[3]this current fad".) They appear to have no idea that it is possible to improve the body's ability to resist infection. I read all the comments. Not one mentioned two easy cheap low-tech ways to reduce hospital infections:

1. Allow patients to sleep well. The body fights off infection during sleep, but hospitals are notoriously bad places to sleep. Patients are woken up by nurses, for example. You might think that everyone knows sleep helps fight infection . . . but apparently not hospital administrators nor the doctors and nurses who commented on the Times article. It was in the interest of these doctors and nurses to suggest alternative solutions because they dislike washing their hands.

2. Feed patients fermented foods (or probiotics). Fermented foods help you fight off infections. I believe this is because the bacteria on fermented food are perfectly safe yet successfully compete with dangerous bacteria. In any case, plenty of studies show that probiotics and fermented foods reduce hospital infections. In [4]one study, "use of probiotics reduced the new cases of C. difficile-associated diarrhea by two thirds (66 per cent), with no serious adverse events attributable to probiotics." Maybe [5]this just-published article (Probiotics: a new frontier for infection control") will bring a few people who work in hospitals into the 21st century.

That hospital administrators and their doctors and nurses – and, in this discussion, their critics – are stuck in the 1800s is clear enough. What is slightly less clear is that our understanding is better now than it was in the 1800s and some of the new knowledge is useful.

Thanks to Bryan Castañeda.

1. [http://www.nytimes.com/2013/05/29/nyregion/hospitals-struggle-to-get-workers-to-wash-their-hands.html?\\_r=0](http://www.nytimes.com/2013/05/29/nyregion/hospitals-struggle-to-get-workers-to-wash-their-hands.html?_r=0)
2. [https://en.wikipedia.org/wiki/Germ\\_theory\\_of\\_disease](https://en.wikipedia.org/wiki/Germ_theory_of_disease)
3. <http://www.nytimes.com/2013/05/29/nyregion/hospitals-struggle-to-get-workers-to-wash-their-hands.html?com>

ments#permid=57

4. <http://news.utoronto.ca/using-probiotics-fight-infection-hospital>

5. [http://www.journalofhospitalinfection.com/article/S0195-6701\(13\)00035-2/abstract](http://www.journalofhospitalinfection.com/article/S0195-6701(13)00035-2/abstract)

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nansen (2013-05-30 18:35:54)

"Patients are woken up by nurses, for example." I was amazed that psych hospitals have fire doors that slam shut all through the night as staff go in and out of the ward...

Koanic (2013-05-30 20:24:10)

Yet another example of the uselessness of the medical establishment. The gastro doctor I went to in the USA refused to prescribe me UDCA. After doubling or tripling my dose of UDCA in China, my limitation of only being able to eat a 1000 calorie diet, and my symptom of having pale colored stool disappeared. This doctor prescribes UDCA to many patients, knows that it has practically no side effects at any dose and can be generally regarded as safe, knows that all his patients who are on it love it, yet when I explained my symptoms and theory, and requested UDCA, he refused to prescribe it. Instead he ordered tests which came back inconclusive, and I languished on, sick for months, with no resolution. This same doctor flushed red when I pointed out the obvious fact that he had not done anything much for [family member] over years of treatment. He became combative and critical towards me. Afterwards attending family members felt I had been rude for mentioning this fact in passing - even though it was a necessary component of the answer to a question he had asked me. Then I went back to Asia, where UDCA is not limited by prescription, and fixed it myself. Doctors are evil idiots, insulated from delivering results, and regulation destroys incentives for good care.

Craig (2013-05-31 08:16:17)

Robert X. Cringely has interesting article related to this What Intel and AMD clean rooms could teach hospitals "Hospitals follow the same mindset and have generally believed they can deal with most problems by cleaning and sterilizing after the fact. The circulating air and every person that enters a patient's room is introducing contamination. Once you understand the full implications of this, you can make hospitals MUCH cleaner and safer." <http://www.cringely.com/2013/05/27/what-intel-and-amd-clean-rooms-could-teach-hospitals>

### **"Because It Costs More": An Example of Medical Reasoning (2013-05-31 05:00)**

Melody McLaren, a friend of mine, lives in London. Her husband has Parkinson's Disease and receives treatment through the National Health Service. His treatment has included "[1]deep brain stimulation" - implantation of an electrical device that stimulates subcortical brain areas. It is a standard treatment for Parkinson's. It cost the National Health Service about £35,000.

She was surprised to discover that in the United States, the same procedure involved implantation of two batteries, one for each side of the brain. The device implanted in England has only one battery. It worked fine. My friend wondered why two batteries were used in the United States. She asked her husband's neurologist, a French woman practicing in London. "Because it costs more," she said. There was no other reason.

At the San Mateo Maker's Faire a few weeks ago, I heard [2]a talk by a doctor named Amy Baxter, who had developed a device for pediatricians that makes shots hurt less. (She had a child and noticed the problem.) She went to considerable trouble to develop a product that could be used by working doctors and presented the product several times to potential buyers. Again and again she was told *It has to be disposable*. Meaning one use per package. Nothing else will fit the supply chain. She did not say why she was told this, but the obvious reason was that disposable

products are more profitable.

[3]Steven Brill's cover story in Time two months ago was about one way American health care takes advantage of sick people with little choice – hospitals, including nonprofits, charge patients for products and services far more than what they cost the hospital. This is another way.

1. [http://www.ninds.nih.gov/disorders/deep\\_brain\\_stimulation/deep\\_brain\\_stimulation.htm](http://www.ninds.nih.gov/disorders/deep_brain_stimulation/deep_brain_stimulation.htm)

2. [http://fora.tv/2013/05/19/Hacking\\_Healthcare\\_How\\_Makers\\_Can\\_Save\\_Medicine](http://fora.tv/2013/05/19/Hacking_Healthcare_How_Makers_Can_Save_Medicine)

3. <http://www.time.com/time/magazine/article/0,9171,2136864,00.html>

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Chuck (2013-05-31 07:25:04)

Disposable, one use, needles are used for sanitation reasons. This became an issue back when AIDS first hit. Auto mechanics also charge customers for products and services far more than what they cost the garage. Cheers Seth: I'm not sure it's that simple why needles are disposable. Lots of things are sterilized...there exist machines whose function it is to sterilize stuff. Needles did not have to be disposable to be sterile. In any case, sterility is far more important for something you stick into the body than Amy Baxter's device, which touched the skin. With auto mechanics, consumers have far more choice.

Tom (2013-05-31 08:02:01)

I was hospitalized briefly recently. One of the devices used to track you is called a pulse oximeter. It's a small noninvasive device that clips on the end of a finger and shoots LED light through the fingertip toward a sensor on the other side (to track pulse, I think.) It was in a disposable adhesive form, which I thought strange because it could easily have been made to last fifty years. Another strange thing was that instead of leaving it on me (it was painless and as light as a bandaid), the nurse at the hospital put a new one on for each reading, requiring several rather than one. I couldn't figure out why. Now I realize that fraud was why.

Chuck (2013-05-31 10:34:08)

Because of disposable needles, you can now get shots at drug stores - and much cheaper than going to the doctor. I don't think they would take the risk of trying to keep a ready supply of syringes and needles sterilized. Besides, everything would have to be glass and stainless steel to withstand the sterilization process - and needles get dull after a few uses. I just took my dog to the local pet store for a by-annual shot - they have vaccination clinics once a week - all the needles were disposable - they couldn't/wouldn't provide this service if they had to sterilize everything in advance. All of the vaccines were pre-loaded in the syringe, in a sealed pack - very convenient for the vet when he has twenty dogs in line and a steady stream coming through the door - and, once again, it was way cheaper than going to the vet. I don't think disposable needles and pre-loaded syringes are what's driving up healthcare costs. And the risks of using non-disposable - soon to be bio hazard - equipment is too high. Cheers Seth: What about recyclable needles? In any case, I urge you to watch Amy Baxter's talk and see if there are good reasons – besides profitability – for requiring her invention to be recyclable. It costs a lot more than a needle.

Joe (2013-05-31 13:16:04)

"I just took my dog to the local pet store for a by-annual shot" Keeping with the spirit of Seth's post, your dog doesn't need by-annual shots. Do YOU need any bi-annual shots? Then why should your dog? It used to be annual shots for dogs, because that's how vets made their money. Yes, at the expense of their canine patients' health, because over-vaccination is a cause of many canine ailments. Now there's a three-year protocol for pets that will eventually lead to even longer intervals. <http://drjeandodds.pethealthresource.tumblr.com/post/34024828409/dodds-canine-vaccination-protocol-2012>

dearieme (2013-05-31 14:12:53)

oximeter: if that's what I think it is, the NHS method involves a clip-on device which is cleaned with an antiseptic swab - before your very eyes - before it grips your fingertip. If only the doctors cleaned their fingers as regularly. Seth: yes, Amy Baxter's device could be cleaned that way. Yet somehow that was unacceptable.

Mike C (2013-06-01 13:50:07)

I'm a little leery of so quickly dismissing these as waste. There may be good engineering reasons (e.g., redundancy) for having two batteries, and that rationale may not have made it to the doctor in question. As for a reusable device somehow involved with injections, as others say, you have to consider the risk that the item will not be properly cleaned. I give blood somewhat regularly, and am frequently surprised at how many errors the nurses/phlebotomists make in their sterile procedures. In the computer field, we often know that rebooting or reinstalling computers is a good way to clear out entropy (viruses and other baddies). There's a lot to be said for "rebooting" anything involved with injections by just using a new one.

Mike C (2013-06-01 13:51:27)

P.S. If you have any thought that Americans (at least) are any good at following safety procedures, five minutes on any freeway should disabuse you of that notion...

TalkingRat (2013-06-01 14:03:18)

Disposable needles reduce the risk of overdose and disease, and reusable needles generally have larger diameters, and get dull, which adds to discomfort. Disposable flu shot needles are now as thin as insulin needles. I don't trust sterilization to get a used syringe clean. It has more in it than medicine, if they pull back on the plunger to be sure they aren't in a vein. Premeasured, there's less chance of the wrong dose, less chance of bottle contamination, and less chance of distraction causing a doctor to accidentally re-use a needle. That happened on a live TV demo of flu shots, the doctor accidentally refilled a used syringe. With disposables, empty means dirty. Plus, once you've broken the seal on a bottle, you have issues with shelf life and temperature control. A major concern of accidental needle sticks is hepatitis, the odds are extremely high. The odds are worse for injection vs. needle stick. I bet the dog vaccine was for kennel cough. Nose drops last a year, but dogs hate them. Shot only lasts 6 months.

Tom (2013-06-01 15:48:19)

Not sure why everyone's perseverating on needles. They weren't mentioned in the post. Disposable needles aren't where the fraud is. Seth: I agree, they are not where the fraud is.

Joe (2013-06-02 08:22:50)

Same thing for "kennel cough" (Bordetella) vaccination: <http://www.dogs4dogs.com/blog/2012/03/21/bordetella-does-your-dog-really-need-the-kennel-cough-vaccine/>

## 8.6 June

### Assorted Links (2013-06-01 15:00)

- [1]Dairy probiotic influences brain activity
- [2]Caspian Sea Yogurt (you can buy it at this website, it will be mailed from Singapore). It ferments at room temperature. [3]Another place to buy the culture.
- [4]Myth in drug advertising. Drugs = junk food of medicine?
- Great minds think alike - at the same time. A few weeks after [5]Mo Ibrahim wrote to New York magazine, proposing to add explanatory links to the Approval Matrix, New York magazine [6]did exactly that without him.

Thanks to Nick Gibb.

1. <http://www.ncbi.nlm.nih.gov/pubmed/23474283>
2. <http://www.caspian-sea-yogurt.com/>
3. <http://www.culturesforhealth.com/matsoni-yogurt-starter.html>
4. [http://digital.library.adelaide.edu.au/dspace/bitstream/2440/14616/1/hdl\\_1484.pdf](http://digital.library.adelaide.edu.au/dspace/bitstream/2440/14616/1/hdl_1484.pdf)
5. <http://www.thewritermoibrahim.com/>
6. <http://nymag.com/arts/all/approvalmatrix/approval-matrix-2013-6-3/>

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### "The \$2.7 Trillion Medical Bill" (2013-06-02 09:00)

The New York Times has started a series called Paying Till It Hurts about high medical costs. [1]The first installment is called "The \$2.7 Trillion Medical Bill" and is about the high cost of common procedures, such as colonoscopies, in the United States compared to other countries. (Which I blogged about [2]quite recently.) The most extreme example is that a certain (unspecified) amount of lipitor costs \$124 in the United States and \$6 in New Zealand. Other treatments that cost much more in the United States include hip replacements and MRI scans.

This series might be a turning point, leading to government regulation of what health care providers can charge, which is how other countries control health care costs. To read the huge number of comments (already > 1000) is to see the suffering caused by these prices. One comment: "An acne medication was over \$550 for a small tube of ointment. The [prescribing] Dr. had no idea it was that expensive."

The high prices are the tip of the iceberg of American health care dysfunction. Less obvious is the poor research that sustains them. Acne is an example. It surely has environmental causes (probably diet). If we knew what those are, you wouldn't have to pay anything to cure acne.

1. <http://www.nytimes.com/2013/06/02/health/colonoscopies-explain-why-us-leads-the-world-in-health-expenditures.html?hp&r=0>
2. <http://blog.sethroberts.net/2013/05/31/because-it-costs-more-an-example-of-medical-reasoning/>

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Alex Chernavsky (2013-06-02 09:34:36)

Speaking of Lipitor (atorvastatin): "[1]Can Statins Cut the Benefits of Exercise?"

1. <http://well.blogs.nytimes.com/2013/05/22/can-statins-curb-the-benefits-of-exercise/>

The Skeptic (2013-06-02 11:21:46)

*This series might be a turning point, leading to government regulation of what health care providers can charge, which is how other countries control health care costs.* I'm curious as to what fuels your optimism. Didn't the PPACA debacle provide us with enough evidence to suggest that government and industry are one and the same? Seth: On the one hand, the level of outrage is very high. On the other, the NY Times is essentially saying "we, as Americans, should be ashamed". This hasn't happened

before. It reminds me of when the civil rights movement began to be effective. It is one thing for medical costs to be high. It is quite another for them to be shamefully high.

dearieme (2013-06-02 11:44:06)

Fair enough, Alex, but I would ask Can Statins Cut the Mustard?

Alex Chernavsky (2013-06-02 13:25:01)

You know what else is shameful? I'm paying about the same amount for health insurance this year as last year, but my coverage is much worse this year. Essentially, my wife and I have only catastrophic coverage. Up to a certain point, we have to pay out-of-pocket for all our medical bills, including prescriptions. To add insult to injury, my health insurance company is calling this plan the "Consumer-Driven Option", as if the insurer is being inundated with impassioned requests to provide much crappier coverage. Consumer-driven, indeed. Do they think we're all stupid?

Tom (2013-06-02 13:33:53)

No, they know we have no choice.

Chuck (2013-06-02 17:10:39)

The problem is too much government meddling and regulation, no free, open market for either healthcare or medical insurance, CYA testing by doctors to protect them from malpractice law suits, the fact that people have forgotten what the definition of "insurance" is when it comes to healthcare (they think it's a medical discount payment plan), i.e.: Can you preexisting damage coverage for auto insurance? How about after death life insurance? And it's not just that we pay too much for prescription medications, other countries pay too little - they need to pay their fair share, as liberals like to say. Seth: It isn't clear to me how government meddling causes colonoscopies to cost much more in the United States than in other countries. There is plenty of government meddling in other countries. Are you saying that the cost of health care is unreasonably LOW in all other countries? Cheers

Tom (2013-06-02 19:19:44)

The amount of pseudo-intellectual Twister-playing that Libertarians do to fit trillion-dollar corporate theft - that's happening *right in front of them* - into their worldview blows my mind.

SB (2013-06-03 04:43:24)

I hope more companies follow the example set by Safeway. This has a chance of putting a serious dent in the increase in healthcare costs.

Nancy Lebovitz (2013-06-03 07:43:13)

Off topic: <http://infoproc.blogspot.com/2013/05/exercise-response.html> There's less scientific evidence about the value of exercise for everyone than you might think- there's at least 10 % of people whose blood markers get worse from exercise, and 20 % (I think) who don't improve. Also, exercise doesn't improve CVD for diabetics.

Adam (2013-06-03 15:34:02)

Nancy, the video won't load for some reason. What blood markers are worsening? Is it transient or prolonged? What kind of exercise?

Nancy Lebovitz (2013-06-04 08:58:46)

Here's the video: [#](http://www.youtube.com/watch?feature=player_embedded&v=E42TQNWhW3w)! I'm planning to take notes on the video so that I've got the details, but meanwhile, you can watch it.

jeff (2013-06-04 23:01:57)

"Seth: It isn't clear to me how government meddling causes colonoscopies to cost much more in the United States than

in other countries. There is plenty of government meddling in other countries. Are you saying that the cost of health care is unreasonably LOW in all other countries?" Hospitals and medical offices are horrifically inefficient and much of this is the direct results of government interference. One example is that a hospital had a do-it-yourself checklist system for managing operations and patient care (basically, developing a system of best practices). This was shot down by the FDA or some other such agency. Multiply this type of nonsense by 100 and then add in the artificially low number of physicians along with the epic risk of litigation (which increases market risk and makes it necessary for everyone with invested capital to earn higher initial fees to compensate for the risk) and you can pretty much sum up a lot of the extraneous costs in our system.

## **Resistance to Fecal Transplants as Treatment for C. diff. Infection (2013-06-03 05:00)**

One of the worst infections you can get in a hospital is C. difficile. It is notoriously unpleasant and hard to get rid of. It has recently been discovered that fecal transplants are highly effective against this infection. Here's [1]what happened next:

The Food & Drug Administration (FDA) [decided] to require an [2]Investigational New Drug (IND) application for stool transplants—formally known as “fecal microbiota transplants (FMT)” —for the treatment of C. difficile colitis. “C. diff,” as it is known, is a severe inflammation of the bowel . . .

Over the last 10 years of my practice, I saw a change in the patients I treated for C. diff. More patients were affected, they were generally more severely ill, and the infection became increasingly difficult to treat. . . . often being refractory to therapy. . . . I also began to see patients floridly septic from C. diff, occasionally needing emergency surgery to remove their colon (colectomy). [I began] to wonder whether we shouldn't be treating severe cases of acute C. diff with stool transplants. I reasoned that it was a better alternative to an emergency colectomy. . . .

There are barriers to doing so, however:

First, there is the “ick” factor. Thus far, resistance to transplants I have recommended has not come from patients or their families, who are desperate for relief. It has come from other health care workers, especially physicians, who seem to find the idea particularly distasteful. [emphasis added. [3]This article supports the idea that doctors are a major source of resistance to this treatment.]

There is cost and time—while the “medicine” is inexpensive and readily available, current recommendations are that the [4]stool donor be tested for a variety of infectious diseases at a cost of \$1500-2000. There might be a week's delay, while the donor is tested for hepatitis and other infections. . . . And now there is the new FDA requirement for an IND, which will be the coup de grace for this treatment. . . . INDs are incredibly burdensome, time-consuming, and expensive for an independent practitioner to obtain. They involve hours of paperwork (my office practice consisted of me and 1-1.5 secretaries; who has time?).

Given the awfulness and danger of this infection, I think it is fair to say that the home-treatment approach (via enema) is very easy. The author of this post, Dr. Judy Stone, complains about home treatment:

Then the sole data will come from some ambitious citizen science group [which is terrible because . . . ? – Seth], and acutely or seriously ill hospitalized patients, too ill to be treated at home, will be deprived of potentially life-saving treatment.

Dr. Stone is serious – deadly serious, you could say. According to [5]this article, "more than 9 % of C. diff-related hospitalizations end in death." Fecal transplants are [6]very effective. Stone predicts that patients will die because "hours of paperwork" are too much trouble, at least for her ("who has time?"). A more persuasive article would have explained why patients who need this treatment cannot be sent to doctors who decide that "hours of paperwork" are doable if that is what it takes to save lives.

Thanks to Paul Nash.

1. <http://blogs.scientificamerican.com/molecules-to-medicine/2013/05/20/the-st-hits-the-fan-fda-inds-and-fecal-microbiota-transplants/>
2. <http://www.fda.gov/drugs/developmentapprovalprocess/howdrugsaredevelopedandapproved/approvalapplications/investigationalnewdrugindapplication/default.htm>
3. <http://www.wired.com/wiredscience/2013/01/fecal-clinical-trial/>
4. <http://haicontroversies.blogspot.com/2013/05/the-kibosh.html>
5. <http://usatoday30.usatoday.com/news/health/story/2012-08-16/deadly-bacteria-hospital-infections/57079514/1>
6. <http://www.medpagetoday.com/MeetingCoverage/DDW/39351>

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dearieme (2013-06-03 06:00:46)

Perhaps one should store one's own poo in a fridge in the garage in case it is needed in future? Seth: If you are going to be staying in a hospital and given antibiotics, that would make a lot of sense.

Chuck (2013-06-03 07:47:27)

Once again, government meddling and regulation, increasing the cost of healthcare. As costs continue to rise, medical vacations to Mexico and Central America will become more reasonable (dental care in Mexico is already more reasonable) and common. Cheers

Lin Wright (2013-06-03 11:15:04)

Not everyone responds to the traditional treatment. Yes, it costs to screen the donor but one 10-day supply of Difficid is \$3800. Vancomycin is not much cheaper, and doctors are leaving patients on it for months and then we relapse as soon as it is stopped. Patients with refractory C Diff who have not responded to the antibiotics are going to die, deaths that could have been prevented. Has anyone talked about the FDA getting pressured by Big Pharma to stop fecal transplants so the drug companies can recoup the monies they have spent on bringing these drugs to market, even though they don't always work?

Adam (2013-06-03 15:03:02)

Who has the time to save lives? Not this Doctor! Wow... just wow...

David Johnston (2013-06-03 15:38:56)

Perhaps hospitals could seek out people with excellent poop with optimal therapeutic properties and pay them for their poop. The paperwork for the doner need only be done once, but many can benefit. As a career choice, I think it would be much less stressful than my current job designing cryptographic circuits. I could sell home-care packages on the side over ebay.

Mister Telawy (2013-06-03 17:52:51)

"A more persuasive article would have explained why patients who need this treatment cannot be sent to doctors who decide that "hours of paperwork" are doable." Because there are very few. Seth: Surely there will be more. You can do the paperwork once for many patients.



Resistance to Fecal Transplants as Treatment for C. diff. Infection – the debate continues (2013-06-05 00:42:12)  
[...] via Seths Blog » Blog Archive » Resistance to Fecal Transplants as Treatment for C. diff. Infection. [...]

Chuck (2013-06-05 05:35:21)

Seth says: "You can do the paperwork once for many patients." I doubt it. This is the government we're talking about. David Johnston says: "Perhaps hospitals could seek out people with excellent poop with optimal therapeutic properties and pay them for their poop." Poop Banks. Give blood and poop at the same time. (Actually not a bad idea...but could you imagine?) Cheers

## **Aquatic Ape Theory Revised (2013-06-04 05:30)**

I became interested in the [1]aquatic ape theory of evolution because it pointed me in a fruitful direction – testing omega-3 fatty acids (e.g., flaxseed oil), which turned out to have easy-to-detect [2]benefits (better brain function, [3]better gums). That is more than I can say for alternatives to that theory, such as the savanna theory. Marc Verhaegen, a Belgian doctor, has [4]recently proposed a new version of the aquatic ape theory. Some of his main points:

- An extensive overview of the literature by Stephen Munro showed that virtually all known archaic Homo [= pre-Homo sapien] sites (including those in 'savanna') were associated with permanent water and edible shellfish.
- Only regular diving can explain archaic Homo's pachy-osteo-sclerosis (POS), the extreme thickness and density of cranial and postcranial bones of most erectus-like fossils. . . . POS is only seen in slow littoral divers, e.g. [5]dugong and manatee, walrus, [6]Kolponomos, [7]pakicetids, Odobenocetops, and Thalassocnus spp. Marine biologists agree POS has a hydrostatic function (ballast).
- The abundant brain-specific nutrients in aquatic foods (e.g. DHA, iodine) facilitated fast brain growth (sapiens' poorer post-aquatic diet required a longer youth to grow the same brain size).
- Man is the opposite of a savanna inhabitant. Humans lack sun-reflecting fur, but have thermo-insulative subcutaneous fat layers, which are never seen in savanna mammals. We have a water- and sodium-wasting cooling system of abundant sweat glands, totally unfit for a dry environment. Our maximal urine concentration is much too low for a savanna-dwelling mammal. We need much more water than other primates, and have to drink more often than savanna inhabitants, yet we cannot drink large quantities at a time.
- Maps of human population densities show that, although we have become fully terrestrial today, we are still a waterside species, and almost half of human dietary calories still come from the water (e.g. rice, aquaculture, fish, shell- and crayfish).

I find the water-drinking point especially persuasive. We need to drink throughout the day, or at least feel bad if we cannot. Almost all workplaces, including cafes, have a source of water. This is inconsistent with savanna living and consistent with waterside living. The term aquatic ape is somewhat misleading. A better name would be aquatic-food ape.

1. <http://ajcn.nutrition.org/content/72/6/1586.full>

2. <http://blog.sethroberts.net/category/nutrition/omega-3/>

3. <http://blog.sethroberts.net/category/nutrition/omega-3/omega-3-and-gum-health/>

4. <http://scienceblogs.com/gregladen/2013/01/30/common-misconceptions-and-unproven-assumptions-about-the-aquatic-ape-theory/>

5. <http://en.wikipedia.org/wiki/Dugong>
6. <http://en.wikipedia.org/wiki/Kolponomos>
7. <http://en.wikipedia.org/wiki/Pakicetid>

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steve (2013-06-04 06:00:11)

I recall reading a comment of Buckminster Fuller's a very long time ago that he believed that man came from the sea. This aquatic ape theory is very interesting. Seth: He came from near the sea, no doubt.

Koanic (2013-06-04 06:29:04)

Amen Seth. Realizing this was the first key to my recovery; doubling the UDCA dose was the second. Not paleo nor primal, not FODMAPS nor GAPS- aquatic and herder for bio that's hacked. "Off the food grid" calls it the "pleistocene diet". <http://eatingoffthefoodgrid.blogspot.com/2010/02/pleistocene-diet-update.html> <http://paleohacks.com/questions/755/the-pleistocene-diet-your-thoughts#axzz2VFvnruqH>

Koanic (2013-06-04 06:52:06)

Couple of immediate applications for the aquatic diet: shrimp test: <http://www.koanicsoul.com/blog/2013/05/18/a-simple-experiment-to-determine-whether-biology-trumps-meditation/> note shrimp cannot be pre-cooked, that removes the seawater. seawater has almost same mineral composition as blood. swap pork fat for sardines

Tuck (2013-06-04 07:44:44)

I don't find this particularly compelling... "Man is the opposite of a savanna inhabitant. Humans lack sun-reflecting fur, but have thermo-insulative subcutaneous fat layers, which are never seen in savanna mammals." We evolved to stand upright to better allow us to survive on the savannah. The hair on the top of our head protects us from the part directly exposed to the sun, the rest of our bodies are obliquely exposed to the sun, and have a high melanin content to protect us from the sun's rays. "We have a water- and sodium-wasting cooling system of abundant sweat glands, totally unfit for a dry environment." This is a bit ridiculous. If we were aquatic, we wouldn't need the excessive number of sweat glands that we have. These are only of use when we're in a savannah-type environment, and allow us to cool when running much better than any other savannah dweller. We do not have a "sodium-wasting" system, we sweat excess sodium, and then conserve it, expelling only that sodium we don't need. This is well-demonstrated. "We need much more water than other primates, and have to drink more often than savanna inhabitants, yet we cannot drink large quantities at a time." In fact, we have a unique adaptation to exertion in hot climates: we can lose up to 10 % of our body weight in water, without any effect on performance. Being able to operate at such a huge water deficit is not an adaptation that one would see in an aquatic animal. Dan Lieberman and Tim Noakes have both published extensively on this topic, Noakes' book "Waterlogged" details all the adaptations we have to surviving in a hot, dry climate. We certainly have some adaptations to an aquatic life, but they are inconsequential next to our adaptations to savannah life. Oh, and for omega-3 fats: the ratio we seem to have evolved to need is that found in the bodies of savannah-dwelling ruminants, our main prey animal. Shell middens do not appear in the archeological record until recently, for millions of years we were eating something else... Seth: "We evolved to stand upright to better allow us to survive on the savannah." If the advantages of standing upright on the savannah were so great, why didn't other savannah animals evolve to stand upright? Well, because it doesn't provide an advantage by itself. Walking upright by itself is a huge disadvantage on the savannah because it means you can't travel as fast as a four-legged creature. You're a sitting duck. Only when humans were able to arm themselves could they live on the savannah. Just as humans can now live everywhere.

Daniel Lemire (2013-06-04 15:44:54)

@Tuck If we were aquatic, we wouldn't need the excessive number of sweat glands that we have. To sweat profusely seriously impairs our ability to survive when water is scarce. It seems logical to think that our ancestors were both exposed to hot temperatures and had, simultaneously, access to abundant water throughout the day. The savannah is fine as long as there is always abundant water. The argument that we can lose a lot of water without harm does not convince me of anything: we

have to be able to lose a lot of water because... we do! It would be really strange if we could sweat a lot, by design, but if we could not afford to lose the water... we would be broken. But we still need to replenish the water rather quickly as anyone working out for a few hours knows. The problem, of course, is that if you live by the sea, what do you drink? You can probably find fresh water... but unlike many aquatic mammals we \*need\* a lot of fresh water. This seems like a major inconvenience. Our kidneys do not seem well suited to life by the sea.

Daniel Lemire (2013-06-04 15:53:39)

I see that the article suggests that we ate coconuts for water.

Arndt (2013-06-04 22:25:09)

My own observation is that I digest fish and seafood much better than meat. When I eat meat I can smell and see it some hours later in my stool, even eggs I can smell but after eating fish, shrimp, oysters, squid, etc there is nothing, no smell, it seems to be completely absorbed. As our human ancestors have probably spend time in the water (probably more in rivers than the open sea) and in the savannah (having been rainforest for most of the time) I don't see a conflict that we have adaptations to both environments.

dearieme (2013-06-05 03:19:49)

Why can't we have evolved on the banks of rivers and lakes surrounded by savannah?

Tuck (2013-06-05 07:09:40)

@Seth: "If the advantages of standing upright on the savannah were so great, why didn't other savannah animals evolve to stand upright?" For the same reason other animals didn't evolve human-sized brains, or opposable thumbs. We're unique. "Well, because it doesn't provide an advantage by itself." No trait exists in a vacuum... But standing upright allowed us to develop the traits that make us the most efficient endurance hunter \*on land\*. There are other primates that swim for food. There are no other primates that can run long distances in hot climates, which allows us to run down large animals and kill them without the need for weapons, thus allowing us to become a dominant predator. @Daniel Lemire: "To sweat profusely seriously impairs our ability to survive when water is scarce." It doesn't. It's a short-term cooling process, allowing us to cool faster than an animal that has to pant when it's running. The body adopts other cooling strategies that minimize water loss when it runs low. "But we still need to replenish the water rather quickly as anyone working out for a few hours knows." We can actually go days and days without water, losing massive amounts of body weight, and be perfectly fine upon re-hydrating. There are plenty of hunting societies in African (or Australian) deserts that do well on minimal water. Try putting an animal that is actually adapted to an aquatic life in those conditions, like a hippo, and you'll see what happens to an aquatic mammal. I think the evidence for the aquatic ape theory is pretty sparse, compared to the alternative explanation. This is an excellent primer on Noakes' work: "Waterlogged – A Dogma-Shattering Book?" <http://www.irunfar.com/2012/07/waterlogged-a-dogma-shattering-book.html> Unlike most such works, Noakes' theories have been put in practice in endurance running events. Endurance runners are more at risk from \*too much water\* than from too little. Which makes perfect sense, as we are adapted to hot, dry conditions. Seth: "For the same reason other animals didn't evolve human-sized brains, or opposable thumbs. We're unique." I'm afraid I don't understand how saying "we're unique" explains anything. I believe that lightning doesn't strike twice in the same place for different reasons, so the many ways that humans differ from all other animals must be connected. For example, bipedality and extensive tool use must be connected, in the sense that they have a common cause or one led to the other. To say "we're unique" gives no idea of what the connection is.

Tom (2013-06-05 11:55:40)

The fact that people get sick when they drink huge amounts of water when they are not thirsty has absolutely nothing to do with how we evolved. There are any number of substances that become lethal when over-consumed. What a bizarre argument. Seth: What is over-consumption is shaped by evolution. An animal that lives close to water has less need to store large amounts of water than an animal that doesn't live close to water.

Daniel Lemire (2013-06-05 14:41:28)

@Tuck Better arguments against the aquatic ape theory: 1. We are lousy swimmers by any standard, and without proper training, we are just plain terrible at it. We are probably more likely to get eaten than to eat when swimming in the wild sea. 2. Our children are sure to drown quickly if left unsupervised near water. As for your hypothesis that we are desert animals... That one athlete claims that we can go days without drinking is... frankly, garbage. I once went an entire day without drinking water and I almost collapsed. This is documented. Maybe one particular runner is able to run for days without drinking. Well, he is an oddity. We are more like Zebras... we need to stay near a water hole.

garymar (2013-06-05 15:30:59)

[1]John Hawks> on why anthropologists find the aquatic ape theory unconvincing. Very general, but last part has good links to more detailed criticisms.

1. [http://johnhawks.net/weblog/topics/pseudoscience/aquatic\\_ape\\_theory.html](http://johnhawks.net/weblog/topics/pseudoscience/aquatic_ape_theory.html)

garymar (2013-06-05 15:31:37)

bad tag, sorry!

Tom (2013-06-05 17:34:59)

Seth, I wasn't calling your argument about water consumption bizarre; your point was completely logical. What was bizarre was Tuck's using Tim Noakes' work on hyponatremia to support his point. Hyponatremia is caused when marathoners drink way too much water, reducing serum electrolytes to dangerous levels. Hyponatremia has *nothing* to do with evolution, any more than the fact that we can overeat to the point of throwing up means we evolved to thrive without food.

Tuck (2013-06-06 11:10:40)

"To say "we're unique" gives no idea of what the connection is." True, but your question: "If the advantages of standing upright on the savannah were so great, why didn't other savannah animals evolve to stand upright?" requires a longer answer, even though "we're unique" is sufficient. I didn't want to get sidetracked. :) Standing upright is an advantage in the savannah if you have several other traits. If you don't, it's not. I'd argue that the other traits are; hands that can use tools (which even chimps have, to some extent); a physique that allows running while standing up (chimps cannot for more than a few feet); sweat glands that allow running while standing up for long distances in hot temps; and a large brain that allows us to track prey over long distances even if the prey is out of sight, which allows us to keep the prey moving until it overheats and becomes helpless. No other animal has that unique set of features, and the combination results in a uniquely lethal predator. @Tom: "What was bizarre was Tuck's using Tim Noakes' work on hyponatremia to support his point." It's not bizarre if you're familiar with Noakes' work. Central to Noakes' argument about hyponatremia is the fact that we're well suited to running in a dry climate. It's hard to square that with the aquatic ape hypothesis.

Tuck (2013-06-06 11:17:54)

@Daniel Lemire: "1. We are lousy swimmers by any standard..." Agreed, but if you're arguing against the aquatic ape theory, it's good to present the alternative first. "That one athlete claims that we can go days without drinking is... frankly, garbage." I suggest you go do a little research, then. Familiarize yourself with the evidence. You're clearly not familiar with it now. Noakes has a ton of citations of the research and evidence in his book, start there. He's not "one athlete" btw, he's one of the leading researchers in human exercise physiology, he's written the medical guidelines used for many international endurance running events, and he's also worked with many of the top athletes and endurance events. Next you can look up some of Daniel Lieberman's work on how man evolved as an endurance-running predator in the savannah's of Africa. He knows a thing or two about human evolution. Once you've done that you can come back and we'll have a discussion.

marc verhaegen (2013-06-07 03:21:42)

Thanks a lot, Seth! The poor anti-littoral "arguments" here show that there's no doubt that archaic Homo during the Pleistocene trekked along the coasts & rivers rather than running over savannas: Tuck thought: "We evolved to stand upright to better allow us to survive on the savannah. The hair on the top of our head protects us..." Yes, that's why all savanna mammals stand & run

on 2 legs, and why the bald & bearded men rest in the shadow while the women are running after kudos... :-D He also thought: "If we were aquatic, we wouldn't need the excessive number of sweat glands that we have." ?? AFAWK, only furseals & humans sweat abundantly thermo-actively on land. Sweat = salt + water = scarce in savannas. Enough said. Please inform a bit first: Humans didn't descend from aquatic apes, of course, although our ancestors were too slow & heavy for regular running over open plains as some anthropologists still believe. Instead, Pleistocene Homo populations simply followed the coasts & rivers in Africa & Eurasia (800,000 years ago, they even reached Flores more than 18 km overseas). - google "econiche Homo" - eBook "Was Man more aquatic in the past?" introd. Phillip Tobias <http://www.benthamscience.com/ebooks/9781608052448/index.htm> - guest post at Greg Laden's blog <http://scienceblogs.com/gregladen/2013/01/30/common-misconceptions-and-unproven-assumptions-about-the-aquatic-ape-theory> - <http://greencomet.org/2013/05/26/aquatic-ape-the-theory-evolves/>

## Walking and Learning: GRE Words (2013-06-05 05:00)

Most of [1]my earlier examples of the benefits of walking while studying involved treadmills and learning a foreign language. A Stanford student named Govind writes:

I found I was able to memorize GRE words very effectively while walking [compared to sitting]. It not only made the process much more enjoyable, but since I walked outside (around Oxford [England]), I also was able to associate words with physical cues. The difference between propitiate and propitious is now inextricably linked to Cowley. (I am now a memory palace convert.)

At Berkeley, I once assigned my intro psych students to do self-experiments. One of them measured how many French words she could study before falling asleep. She tried three body positions: sitting at a desk, lying on her side on her bed, lying on her stomach on her bed. She also tried three audio environments: silence, classical music, heavy metal. Best combination: lying on stomach, heavy metal. Worst combination: sitting at desk, silence. This amused me, but I now see that the real lesson of her experiment is that she didn't try walking. It shows how little-known the walking-helps-memorize idea is, even though the effect is easy to notice, as Govind's story shows.

1. <http://blog.sethroberts.net/category/walking-and-learning/>

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Richie (2013-06-05 09:47:11)

When I was studying for the GRE I would take a vocabulary book with me on my daily hikes. I ended up scoring in the 98th percentile on the verbal section. I'm not sure if memorizing words while hiking increased the quality of my studying. But it was enjoyable enough that it almost definitely increased the quantity of my studying. I would have never been able to sit at home and memorize words for 1-2 hours a day.

Paul (2013-06-06 16:05:09)

I find that at home I can't concentrate enough to listen to a podcast (unless I'm cooking or doing something else that doesn't require the language part of my brain). I'm fine in a car too. It may not be walking so much as having two things going on at the same time. Seth: I see what you mean. Here the improved activity is visual (using Anki) rather than auditory (listening to a podcast). When your eyes are busy (with Anki), it isn't clear what else you can do besides walk. So it isn't clear how to test your explanation. Psychologists usually assume limited capacity - doing X makes it harder to do Y. Of course walking takes no brain power but it's not obvious at all why it should make it easier to do something else (Anki) that does require brain power.

Sentinel (2013-06-18 20:45:46)

Seth: When you write, "Best combination: lying on stomach, heavy metal," did you mean "best for studying" or "best for triggering sleep"? Which combo was best for triggering sleepiness? Seth: Best for studying. In that situation she could study the most words before falling asleep.

### Assorted Links (2013-06-06 05:00)

- [1]Titanium implants cause bad headaches
- [2]Honesty in dermatology
- Edward Jay Epstein:[3] 5 best books on unsolved crimes
- [4]podcast with Greg Pomerantz about his salt-intake self-experimentation
- [5]An English-language website about America (bad) and China (good), purporting to be by "a visiting professor at Fudan University" (in Shanghai) who "has lived in many parts of North America and Europe". The blog entries are undated.

Thanks to Phil Alexander and Casey Manion.

1. <http://www.dailymail.co.uk/tvshowbiz/article-2334101/Dick-Van-Dyke-learns-cause-pounding-headaches-hes-suffered-past-seven-years.html>
2. <http://www.fmylife.com/health/20700784>
3. <http://edjayepstein.blogspot.com/2013/06/the-five-best-books-on-unsolved-crime.html>
4. <http://www.bulletproofexec.com/podcast-44-salt-and-self-experimentation-with-greg-pomerantz/>
5. <http://www.bearcanada.com/>

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dearieme (2013-06-06 06:33:03)

See, I've always said that Americans die early because of their excessive use of dentists.

dearieme (2013-06-06 06:34:26)

What possesses people to write a blog with white lettering on a black background? Insanity?

Lemmy Caution (2013-06-06 11:07:39)

I guess the titanium thing is real. <http://www.ncbi.nlm.nih.gov/pubmed/20384051> 4 % of people are allergic to it.(lot of false positives though) <http://www.melisa.org/metals-disease/metals/titanium> Dentists test people in europe <http://en.wikipedia.org/wiki/MELISA>

### The Rise and Fall of Heart Disease (2013-06-07 05:00)

Heart disease was once the number one killer in rich countries. Maybe it still is. Huge amounts of time and money have gone into trying to reduce it – statins, risk factor measurement (e.g., cholesterol measurement), telling people

to "eat healthy" and exercise more, and so on. Unfortunately for the poor souls who follow the advice (e.g., take statins), the advice givers, such as doctors, never make clear how little they know about what causes heart disease. Maybe they don't realize how little they know.

I encountered an ignorant-without-knowing-it expert after [1]a talk I gave about the effect of butter on brain function. I found that butter improved my brain function (measured by arithmetic speed). I had been eating lots of butter for more than a year. A cardiologist in the audience said I was killing myself. He thought butter caused heart disease. I said that I had experimental data that butter was good for me. Easy to interpret. The notion that butter is bad has come from epidemiological (non-experimental) data, which is hard to interpret. The cardiologist said that the epidemiology has not been misleading. One sign of our correct understanding, he said, is that heart disease has declined. I said there were many possible reasons for the decline.

[2]A 2012 paper called "An epidemic of coronary heart disease" by David Grimes, a British doctor, could hardly make clearer how little we know about the cause of heart disease. Grimes points out that before 1920 heart disease was almost non-existent, that it rose sharply from 1930 to 1970 and since 1970 has declined sharply, at roughly the same rate that it rose. Both the rise and the fall are mysteries, says Grimes, in agreement with what I told the cardiologist. The rise and fall contradict all popular explanations. Heart disease cannot be due to obesity or wealth – both increased substantially at the same time heart disease fell sharply. Nor was the decline due to government intervention:

The decline of CHD deaths in the UK was further described in a UK Government report of 2004, Winning the War on Heart Disease. In this report, the government predictably but undeservedly assumed responsibility for the decline. Clearly, the NHS [National Health Service] in the UK could not have had an international effect [the decline is international].

"There [has been] no obvious effect of statin therapy or other medical intervention," Grimes continues. Yet statins continue to be prescribed in very high amounts and very great expense. The NNT (number of people you need to treat to save one life) is often in the thousands, he noted.

Those who complain about the high cost of health care fatally fail to grasp this enormous ignorance – [3]about many things, not just heart disease – and its consequences. Reducing the cost of health care (reducing the cost of statins, for example) would improve health if cost were the only thing deeply wrong with our health care system. It isn't.

1. <http://quantifiedself.com/2010/09/seth-roberts-on-arithmetic-and/>

2. <http://qjmed.oxfordjournals.org/content/105/6/509.full.pdf+html>

3. <http://blog.sethroberts.net/2013/05/30/hospitals-and-their-employees-stuck-in-the-1800s/>

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Jake (2013-06-07 07:08:18)

Heart disease follows the rise and fall of the incidence of smoking over that time period.

Michael (2013-06-07 07:48:44)

Take a look at this article and scroll down to the chart of lead levels and time its a pretty good match to the CVD curve. hmm.  
<http://www.motherjones.com/environment/2013/01/lead-crime-link-gasoline>

Russell (2013-06-07 07:55:25)

I've been reading with interest a blog by an economist interested in ancestral health and he has been posting studies showing butter has a negative impact on flow-mediated dilation which he uses as a marker of heart health. Interesting contrasting those studies with your findings of improved brain function and heart exams. <http://www.mattmetzgar.com/2013/05/why-is-butter-bad.html> Seth: As far as I know, it hasn't been established that butter IS bad overall. I think my brain function test can be taken as an overall measure of brain health (because it correlates with several other measures) but I don't think the same can be said for flow-mediated dilation – that it is a good measure of overall heart health.

Nancy Lebovitz (2013-06-07 14:04:46)

Off topic: [1]Lecture and notes about how little is known about the health effects of exercise. Seth: very interesting lecture, I will study it carefully.

1. <http://nancylebov.livejournal.com/579003.html>

Alex Chernavsky (2013-06-07 20:52:09)

About four years ago, I went to a lecture by Dr. Caldwell Esselstyn (cardiologist from the Cleveland Clinic). He argued that all oils & fats are bad for your heart. He advocates an extremely low-fat vegan diet. He showed radiograms showing cardiac arteries before and after his diet. The improvements were substantial. I don't know if he's right or not, and my own diet is not low in fat by any means. But I'm raising this issue because his data was not epidemiological in nature. The cardiac arteries were from the same patient, taken at two different points in time. Here's Esselstyn's site: [http://www.heartattackproof.com/resolving\\_cade.htm](http://www.heartattackproof.com/resolving_cade.htm) He also talked about a test called the Brachial Artery Tourniquet Test, which measures the time it takes for an artery to recover following physical compression of it. Esselstyn claimed that this test can be used to show the harmful effects of eating oils and fats. Seth: Esselstyn gives convincing evidence that his diet is better than what his subjects were eating before. Of course, his diet is a huge change from what they were eating before. I have no idea what part or parts of that change made a difference. Did his subjects improve because they ate less of Chemical X? Did they improve because they ate more of Chemical Y? There are hundreds of Xs and Ys involved. In contrast, my butter experiment changed one thing (butter). Sure, butter has several parts, but it is not a massive change. And I am not making claims about components of butter.

Nancy Lebovitz (2013-06-07 21:14:51)

Seth, thanks. I hope you'll comment or post about how the lecture looks to you. It looks plausible to me, but it's also very much in line with how I'd expect the world to work. Seth: The stuff about HIIT is good and what interests me. The stuff about "adverse effects" is all wrong – the analysis is too simple.

Shep (2013-06-07 23:18:54)

Indeed Jake, the curve of CHD and tobacco consumption is almost identical (ramp up to a peak in the 60s/70s, rapid decline since). It's quite bizarre that Grimes doesn't even mention it in his article

Michael B. (2013-06-08 01:29:16)

People in Tibet are known for a diet high in butter. Maybe we could look at their hearts for evidence? Of course we have to consider that over the millennia there have been adaptations for them to this diet.

dearieme (2013-06-08 10:15:49)

"Indeed Jake, the curve of CHD and tobacco consumption is almost identical (ramp up to a peak in the 60s/70s, rapid decline since)." That suggests to me that it ain't tobacco - if it were I'd expect a lag. If the CHD curve declines just as much for countries where smoking hasn't declined much, then that would be pretty conclusive disproof. Worth a look?

Sam (2013-06-11 12:52:47)

One of the sources that David Grimes cites in his paper is a NHS report with interesting international data. The charts on page 10 in particular. It looks like Ukraine and Russia are in a totally different league in terms of CHD deaths, with 3-4x the incidence per 100,000 compared to the UK. <http://www.chss.org.uk/pdf/education/student/NSF2005.pdf> And according to this Wikipedia chart, Russia and Ukraine have among the highest smoking rates in the world (and the highest



of any countries included in that NHS comparison). [http://en.wikipedia.org/wiki/Prevalence\\_of\\_tobacco\\_consumption#Rates](http://en.wikipedia.org/wiki/Prevalence_of_tobacco_consumption#Rates)

Evelyn M. (2013-06-13 20:44:24)

Thank you for posting this interesting essay, Seth. It reminds me of Rene Dubos who studied tuberculosis incidence carefully and pointed out that while society in general and the medical profession in particular credited the development of antibiotics with the decline in TB, the decline had actually begun well before antibiotics were in widespread use. Seth: I didn't know that, but I see that he makes that point in *The White Plague*, which I will look at.

### Watch Nick Winter Work (2013-06-08 05:42)

On [1]this page Nick Winter, a co-developer of [2]Skritter and [3]Quantified Mind, displays how much work he has done each day (in about a week he will take a long vacation).

To increase productivity he is using what I call [4]percentile feedback. He had [5]great success with it when writing the mobile app for Skritter.

1. <http://www.nickwinter.net/codecombat-stats>

2. <http://www.skritter.com/>

3. <http://www.quantified-mind.com/>

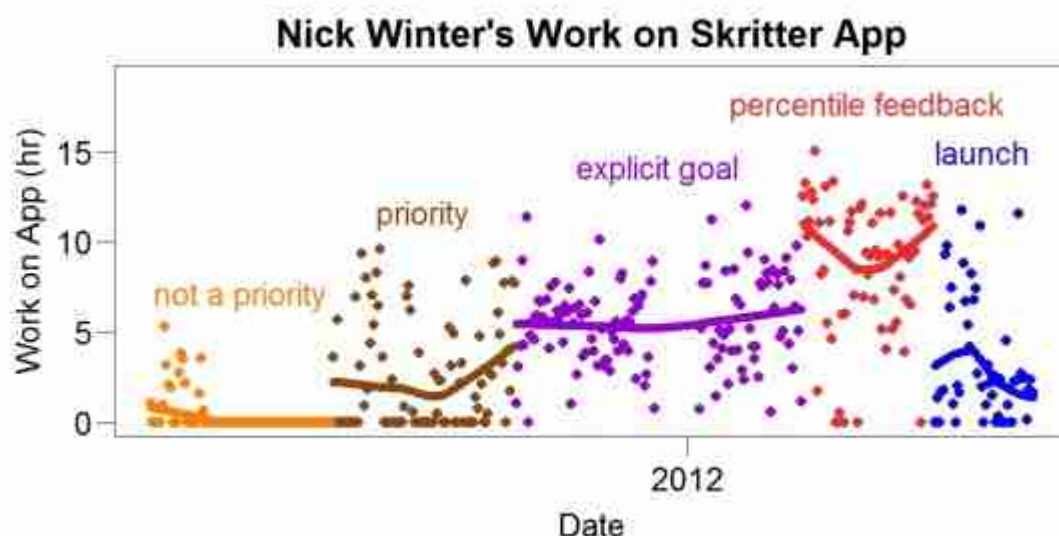
4. <http://blog.sethroberts.net/category/percentile-feedback/>

5. <http://blog.sethroberts.net/2012/03/28/nick-winters-big-success-with-percentile-feedback/>

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### Nick Winter and Percentile Feedback (2013-06-09 08:42)

[1]



How much did [2]percentile feedback help Nick Winter? In 2011, he wanted to finish coding a mobile app for [3]Skritter. This graph shows his daily work on that app. Each point is a different day. The lines are loess fits.

At first, he tried to work on the app but did not make it a priority. Then he made it a priority compared to other things he did. Then he set an explicit goal (a certain number of hours of work each day) and used [4]Beeminder to help reach that goal.

Finally he tried percentile feedback. It helped a lot. His work per day increased about 60 % (to 8.6 hours/day) compared to the previous phase (5.5 hours/day). Using percentile feedback, he finished the app. During the launch, he worked on the app much less.

The data has several interesting features. One is the sudden improvement when percentile feedback started. [5]The same thing happened to me. Another is that it helped him even though he was already making steady progress. A third is that the sudden improvement happened after he had been working on the task a long time (more than six months). Things become easier to do the more we do them but surely this change was complete by the time he started percentile feedback. Apparently it engaged a different source of motivation. Finally, he tried several things before he tried percentile feedback, implying that its value wasn't obvious. It wasn't obvious to me, either. I originally tried it to see what would happen. I didn't have a strong belief it would work.

Above all, this graph shows it's possible to learn from long-term self-measurement and what you learn may not be obvious. People who know little about research sometimes say that randomized double-blind trials are the only convincing way to learn something.

1. <http://blog.sethroberts.net/wp-content/uploads/2013/06/2013-06-09-Nick-Winter-work-on-Skritter-app.jpeg>
2. <http://blog.sethroberts.net/category/percentile-feedback/>
3. <http://www.skritter.com/home>
4. <https://www.beeminder.com/>
5. <http://blog.sethroberts.net/2011/05/01/percentile-feedback-and-productivity/>

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Joan (2013-06-11 15:45:22)

This post led me to find the post about the magic dots, which for me were magic. I have a fairly boring job and lots of annoying things I have to take care of for my family, so it's hard to get going most days. Today I got going right away and stayed on task. I didn't use a stop-watch, just wrote down the time I started, and created the boxes. I started this yesterday afternoon, so this is one and a half days. It seems like getting to fill in little boxes helps me overcome my inner Bartleby.

### Assorted Links (2013-06-10 05:00)

- [1]A curiously short article about "why fermented foods are all the rage"
- [2]Parents help child with disabling rare disease via complete genome sequencing
- [3]Use of vinegar to screen for cervical cancer works as well as more expensive tests
- [4]Charlotte's Webcam and other children's books for the Age of NSA

- [5]From Vanity Fair caption writer to educational reformer. "One of the few useful skills I learned as a journalist," he says, "is not to be intimidated."

Thanks to Navanit Arakeri and Patrick Vlaskovits.

1. <http://www.telegraph.co.uk/foodanddrink/10099066/How-microbes-affect-our-food-and-our-metabolisms.html>
2. <http://phenomena.nationalgeographic.com/2013/03/11/we-gained-hope-the-story-of-lilly-grossmans-genome/>
3. <http://www.forbes.com/sites/matthewherper/2013/06/02/how-vinegar-could-save-73000-women-a-year-from-cancer/>
4. <http://www.guardian.co.uk/media/gallery/2013/jun/09/nsa-kids-books-twitter-pictures?guni=Network%20front:network-front%20main-4%20Pixies:Pixies:Position3:anchor%20image#/?picture=410409135&index=3>
5. [http://www.weeklystandard.com/articles/rise-free-school\\_733952.html](http://www.weeklystandard.com/articles/rise-free-school_733952.html)

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dearieme (2013-06-10 11:03:01)

That's the usual length of Bee Wilson's weekly column.

Lemmy Caution (2013-06-10 11:46:48)

Educational reform is a scam. <http://www.lawyersgunsmoneyblog.com/2012/10/another-education-reform-sic-fraud> The US school system is pretty good. In the US, students with european ancestry do as well or better as in any european country; students with asian ancestry do as well or better as in any asian country; students with hispanic ancestry do as well or better as in any latin american country; and black students do as well or better as in anywhere. The growth in the number of Hispanic students has made it look like the US schools are rapidly deteriorating though. And, "something must be done". Unfortunately, the only way people get improvements is by 1) cheating or 2) keeping students in school longer. So far, cheating has been the preferred solution.

Zach (2013-06-14 07:29:40)

Wouldn't the second story fall count as evidence that the human genome project and the like are having positive effects right now and demonstrate clear potential for further improvements in quality of life? Perhaps some of this Nobel Prize winning basic research isn't so bad after all.... Seth: The beneficial effect of the human genome project has been very small compared to what was promised and what was spent. The example reinforces that - it illustrates a tiny benefit. And this is a success story.

R. Jones (2013-06-22 23:28:06)

I was looking for a rebuttal of this post : <http://www.sciencebasedmedicine.org/kombucha-a-symbiotic-mix-of-yeast-bacteria-and-the-naturalistic-fallacy/> Seth: Thanks. Yeah, I'll write something about it.

## **The Fate of the Tiananmen Students and the Story of Edward Snowden (2013-06-11 09:16)**

[1]This post by Ron Unz made me wonder: What really happened when student protesters were removed from Tiananmen Square 25 years ago? Unz pointed to [2]a strange website with undated blog posts ([3]mentioned earlier), which [4]claimed that the students were not harmed, in contrast to the usual Western view that many were harmed, even killed. I didn't take the website seriously but I had to admit my ignorance.

I asked several Chinese friends about it. One dared reply. She wrote:

My mom once told me that she was near Beijing when the event happened. She said everything is a mess, no one can go into or out from Beijing. The army is everywhere and people are all in an angry mood, no matter the army (try to pass the possible check so use -) or the citizens. She said the students are innocent, they didn't start the whole thing. And indeed the army was hurt first. But students are young and easy to be incited. Once the army began to take serious method, they didn't care whether you are a student or a mob or a citizen, some innocent students hurt in the turmoil and other students try to gather together to fight back. Then everything began to lose control. After this event, all the students who participate in the sit-in were sent to poor countryside far away and never get a chance to get back to big cities in their whole life. (At that time, all the students are getting job position directly from the government, they don't have options to choose.) My mom told me some female students were sent to countryside and raped by the local people, or have to marry to the local farmers even they have high education.

All the student protesters, according to my friend's mother, "were sent to poor countryside" for the rest of their lives. I hadn't read this anywhere, [5]including Wikipedia. The fate of the protesters was far worse than I had been told by Western media.

My friend's mother could be wrong. Even eyewitnesses can be wrong. But what people actually say, the story they tell, matters infinitely more than the truth.

I am optimistic that the story of Edward Snowden will begin to change how we talk about whistleblowing. Recent stories are not encouraging. [6]Mark Whitacre (Archer Daniels Midland) spent 8 years in prison. That he suffered from bipolar disorder might be taken to mean that only crazy people whistleblow. [7]Jeffrey Wigand (tobacco) was played in a movie by Russell Crowe but went from a \$300,000+/year job to a \$30,000/year job. Bradley Manning faces a very long prison sentence. Julian Assange has been living in the Ecuadorian embassy in London for a year, afraid to leave.

Whereas Edward Snowden, whose leaked information is at least as important, has not yet suffered terrible or even humiliating consequences. Maybe he will live the rest of his life in Iceland – as a hero. He won't just have released enormously useful information, he will have set an encouraging example. That might be his biggest effect on the world.

1. <http://www.theamericanconservative.com/american-pravda-liberal-bias/comment-page-1/>
2. <http://www.bearcanada.com/>
3. <http://blog.sethroberts.net/2013/06/06/assorted-links-260/>
4. <http://www.bearcanada.com/china/letstalkabouttam.html>
5. [http://en.wikipedia.org/wiki/Tiananmen\\_Square\\_protests\\_of\\_1989](http://en.wikipedia.org/wiki/Tiananmen_Square_protests_of_1989)
6. [http://en.wikipedia.org/wiki/Mark\\_Whitacre](http://en.wikipedia.org/wiki/Mark_Whitacre)
7. <http://www.nytimes.com/1999/10/15/us/a-tobacco-whistle-blower-s-life-is-transformed.html>

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Tom (2013-06-11 10:44:34)

I hope it works out for him, but I fear it won't. It would've been smarter not to have gone public until he was already physically in Iceland.

dearieme (2013-06-11 13:01:31)

I've seen him accused of being unAmerican. Fair enough: the little bit I saw of him on the telly showed him not to be verbose, sentimental, ignorant or loud. Americans on the telly are rarely like that.

shtove (2013-06-12 02:16:15)

Purpose of the whistle-blown surveillance: <http://www.ritholtz.com/blog/2013/06/big-banks-and-other-corporate-bigwigs-be-nefit-from-illegal-spying/>

Nancy Lebovitz (2013-06-12 10:16:10)

Off-topic: <http://acestoohigh.com/2012/04/23/lincoln-high-school-in-walla-walla-wa-tries-new-approach-to-school-discipline-expulsions-drop-85/> School gets great results by lowering the stress levels of misbehaving students, while still setting boundaries.

### Assorted Links (2013-06-13 06:00)

- [1]Nassim Taleb makes a good point. There is a huge difference between using what you already know (or think you know), which is engineering, and finding out more, which is science. People who know little about science confuse science and engineering, but they do blend into each other, in the sense that science is using what you already know to learn more and engineering is full of uncertainties.
- [2]Association of vegetarian diet and death rate (new study). The vegetarian/non-vegetarian comparison interests me less than the vegetarian/pesco-vegetarian (I call them aquaratarians) comparison, which is less confounded. The pesco-vegetarians lived substantially longer than the vegetarians.
- [3]Levitating Beijingers. What Beijing really looks like.

1. <https://www.facebook.com/photo.php?fbid=10151525994333375&set=a.10150109720973375.279515.13012333374&type=1>
2. <http://archinte.jamanetwork.com/article.aspx?articleid=1691919>
3. <http://english.people.com.cn/90882/8241338.html>

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Jake (2013-06-13 11:51:21)

I think the main reason for the 7th Day Adventists increased lifespan is their frequent use of water fasts.

dearieme (2013-06-13 13:11:14)

Oh I don't know: maybe God just loves them more.

dearieme (2013-06-13 13:13:31)

Now then, Seth, haven't I always sung the praises of fish? Americans would live longer if they cut back their expenditure on dentists and increased it on fish.

Ahrand (2013-06-13 20:11:21)

Now, is it the different amino acid profile of fish or is it the added Omega3 fats and iodine that does it . Because, if its the latter, you can simulate that with supplements...

## Benefits of Brown Noise (2013-06-14 05:00)

Govind M., the Stanford student who wrote me about [1]walking while studying, has written again to say that [2]brown noise (deeper than white noise) makes him "calm and focused". He discovered this while trying to find something to listen to while doing schoolwork:

I tried listening to rain, and that was ok. I know some people try to find places that are really, really quiet and then work there. But that's pretty hard to do. Plus, it seems that the more silent the place, the more distracting individual noises potentially are. So one day I tried brown noise, because it was on the same site as the rain, and I was a fan immediately. I tried white and pink but I found them less calming and a bit too static-y. I use brown noise when I really need to focus. So any "serious" reading, writing, coding, studying, etc. I don't know if there are contexts in which brown noise doesn't help, but it does seem a bit much for responding to emails. . . . [It] makes the outside world melt away.

It also helps him fall asleep. He uses headphones to listen to it. Unfortunately, he said, "everyone that I have told about this thinks I am crazy."

I tried it and quickly became a fan. Brown noise is much more pleasant than white noise. I especially like the Getting Wet preset on [3]this page, which is close to brown noise. It does help me focus. Putting on my noise-cancelling headphones and listening to this is like being instantly transported to a faraway peaceful place. A cabin in the woods. I use it when I am doing something that takes full attention. Unlike podcasts or books, it doesn't interfere with writing. Unlike music, it never becomes boring. (The same piece of music over and over gets boring.) Why isn't something like brown noise piped into waiting rooms, waiting areas, and elevators?

1. <http://blog.sethroberts.net/2013/06/05/walking-and-learning-gre-words/>

2. [http://en.wikipedia.org/wiki/Brownian\\_noise](http://en.wikipedia.org/wiki/Brownian_noise)

3. <http://mynoise.net/NoiseMachines/rainNoiseGenerator.php>

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Matt (2013-06-14 05:16:51)

I'm also a huge fan of brown noise, especially for going to sleep. I also use it for working sometimes. However the combination of f.lux and brown noise make working past 8 PM almost impossible! I go right to sleep.

Alex Chernavsky (2013-06-14 07:53:45)

Speaking of waiting areas, I'm annoyed that virtually every doctor's office and dentist's office now has a TV mounted on the wall. I used to bring reading material with me when I had an appointment, but I can't read with the TV blaring. Very irritating.

Chuck Currie (2013-06-14 07:58:35)

Wow! I'm stuck on grey...the drips in the foreground could be a little lower, or less constant, but the patter of the rain is exactly what it sounds like hitting our patio umbrella...it's hard to suppress the urge to look out the window (it's a grey morning here, so that adds to the ambiance)...and the sound of the distant storm in the background is one of my all time favorite hunker down, under a blanket with a bowl of popcorn and a book sounds. Cheers

KK (2013-06-14 09:25:28)

I wish you would try and quantify the effect from Brown Noise (on attention, focus, ... whatever). Like you did with Omega-3 and butter. Seth: I'm thinking of measuring how long I work with and without it. Maybe it allows me to work longer before I need to take a break. I may also measure its effect on my sleep.

Jim (2013-06-14 09:47:19)

@Alex, My Dr.'s waiting room TV was playing an (I can only assume) pharma sponsored station that would have short "healthy cooking" clips interspersed between a long series of big pharma ads. I waited 45 minutes, and saw some of the ads four times.

Alex Chernavsky (2013-06-14 10:17:03)

Jim: Big Pharma adding insult to injury. Not only do you have to suffer through the distracting jabbering of the TV, but you're also being assaulted by their pseudoscience.

sa (2013-06-14 14:58:37)

I've played around a bit with various sound generators over the past few months. One is the White Noise app from TMSOFT to help focus, mainly by reducing the impact of background noise. One of its nice features is the ability to mix different noise types, eg I often use blue noise and brown noise together, so you get a blend you like. sox is another useful program ( <http://sox.sourceforge.net/> ) which can be used to generate white noise sound files for use in music players. Also, I recently came across the FocusAtWill website which claims to have music that helps with concentration ( see <https://www.focusatwill.com/science/science-primer/> ) . In my experience it seems to be pretty good for background music while working on a computer - I generally use the UpTempo channel.

Tom (2013-06-14 23:17:37)

I use the TM soft app, too, with a 50/50 mix of waves crashing & brown noise. Incredibly centering.

q (2013-06-15 06:54:26)

brown noise does a good job of unfocusing your ears so you can focus on other things.

Kirk (2013-06-16 12:47:23)

I tried several of the generated noises . . .rain, brown, uptempo . . . they just made me nervous. I'm glad they work for others here, but for me, I prefer either quiet or specific musicians. For example, when cutting code, I'll listen to Sonic Youth. When my goal is to relax, I play Marconi Union.

David199 (2013-06-17 07:12:13)

I found this comment on Wiki interesting: " Its spectral density is inversely proportional to  $f^2$ , meaning it has more energy at lower frequencies . . . the sound is a low roar resembling a waterfall or heavy rainfall." I'm a new father and in one of the books on helping babies sleep, the author recommended using noise like a rainfall; however, he recommended using quality speakers with deep base because the base was very relaxing to children (and adults). He said to mimic what a baby in utero hears, turn on your bath water and fill the tub- now stick your head under the water and listen to the difference in base between running water and the deep tumbling sound you hear while submerged. That's what a baby is used to hearing in utero. I wonder if this brown noise is important because of the deeper base sounds than white noise which can be static-y.

Ivan (2013-06-18 16:21:37)

Pink noise works really well for putting me to sleep when mixed with brown. It's not quite as deep and is somewhere in between brown and white noise in terms of frequency.

nicole (2013-06-21 17:52:49)

i mention this post to my husband, and he brings up this episode of south park. <http://www.southparkstudios.com/clips/15-1766/the-brown-noise>

spacediver (2013-06-24 17:09:16)

Been using brown noise for years courtesy of [www.simplynoise.com](http://www.simplynoise.com)

## **Magic Dots User Experience (Person 1) (2013-06-15 05:00)**

[1]One of my recent posts about anti-procrastination software led a reader named Joan to [2]an earlier post about magic dots, which is a low-tech way of getting work done. Every six minutes of work, you make a dot or line in a certain pattern on a piece of paper. I got the idea from [3]the quasi-reinforcement effect of Neuringer and Chung. Studying pigeons, they found that markers of progress act like rewards. What was amazing was that they got pigeons to work twice as hard (= peck twice as fast) without increasing their salary (= food reward). The dots mark progress.

In [4]her comment, Joan said

This post led me to find the post about the magic dots, which for me [have been] magic. I have a fairly boring job and lots of annoying things I have to take care of for my family, so it's hard to get going most days. Today I got going right away and stayed on task. I didn't use a stop-watch, just wrote down the time I started, and created the boxes. I started this yesterday afternoon, so this is one and a half days.

I asked her for details. She replied:

I have an IT job where I am pretty much self-directed, but one week out of four have to be on-call for production support, which takes up most of the time that week, and I also have to assist the on-call person the other 3 weeks when it's an application I own. Since I spend the on-call week pretty much just monitoring 3 mailboxes, it's very hard to focus on the off weeks, and I find myself reading blogs way too much of the time. Also, some of the production support work is interesting -figuring out what happened and how to fix it, but a lot of it is routine and annoying, like some external server was down, so we have to rerun a job.

I have tried various tools to block the most addictive sites, but am not really supposed to install stuff on my work computer. The percentage thing looked interesting, but it looked like it would be minor project to implement. Then I saw the post about magic dots. I'm a "tactile" learner, which means I like to write stuff on paper, so I thought this would be easy to try and started right away. I was already trying to keep a list and give myself checkmark rewards, without much success.

So far this week has been great - I follow this very loosely. I make a list of activities to accomplish between production support calls, including stretching, etc. and anything that is not something to be done immediately. So things that might not be "work", but that I have to get done that day during the day are on the list, and I fill in between support work with this stuff. I count time spent chatting with co-workers, calls to my mother, calls to the bank, even this email.

The first 2 days were pretty hard. I found myself scanning the list for the least annoying or tiresome tasks, but toward the end of the day I was actually pushing myself to stay and finish a couple of issues that would fit in my time remaining, and empty those in-boxes.

I'm not that focused on filling in the dots [= completing a set of 10] as the day goes on, but after every break I start a new one, and note the time I started.



I have no idea why this works, when nothing else seems to have helped.

I asked what else she had tried. She replied:

I had some success with [5]LeechBlock, but had to remove unauthorized apps [LeechBlock is a Firefox addon] from my desktop and [had to stop] using it to stay off the really addictive sites such as [6]ancestry.com. Work already blocks most social media sites. I tried using the IE site blocking, but having to enter a password didn't seem to deter me.

To try to get motivated and get more done I have:

- Affirmations and resolutions. Fail.
- Tried using a "7 habits" style to do list. Fail.
- Putting little mirrors on my desk. No help.
- Improve another habit and hope for carryover. I tried food monitoring, and spent too much time researching diets. I am keeping up with exercise goals though.
- Looked for support or monitoring sites. Did not find one that seemed like a good fit. Internet addiction forums are mostly about porn or gaming addictions, not [7]ancestry.com or paleo diet blogs.
- I followed a popular "personal productivity" blog for a while, but in the end spent too much time reading the forums. Seems like most of these gurus have always been over-achievers.

Based on statistics I have heard, I'm only a little above average in internet use at work, but some days I'm way over.

1. <http://blog.sethroberts.net/2013/06/09/nick-winter-and-percentile-feedback/>
2. <http://blog.sethroberts.net/2012/07/04/magic-dots-quasi-reinforcement-helps-get-things-done/>
3. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1338316/>
4. <http://blog.sethroberts.net/2013/06/09/nick-winter-and-percentile-feedback/#comment-1120876>
5. <https://addons.mozilla.org/en-us/firefox/addon/leechblock/>
6. <http://ancestry.com/>
7. <http://ancestry.com/>

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Alex Chernavsky (2013-06-16 06:36:21)

I'm going to try the magic dots technique. I don't know if it would help with a couple of big issues I have: I am constantly being interrupted (both at home and at work). And I have a LOT of trouble completing (or, really, even *starting*) projects that have no particular deadline.

garymar (2013-06-16 22:13:33)

I just finished a small job on the computer in 40 minutes using the Magic Dots. But first I wrote an Excel script that beeped every 6 minutes to let me know when to make another mark. I'll try again. I don't know yet if the novelty of the thing is what got me thru or not.

pat (2013-06-17 07:35:50)

I have a similar project and will use the magic dots. I have a legal brief to write and it usually helps me when I am billing by the hour (I am a solo practitioner).

David Johnston (2013-06-17 15:35:12)

I'm 2 hours into using magic dots while wiring up a bunch circuits in a chip, which requires lots of concentration and it appears to be working.

## **Occupational Specialization as Far Back as the Bronze Age (2013-06-16 05:00)**

Linear B is an ancient form of Greek, used around 1500 BC (the Bronze Age) in Mycenaean Greece. Stuff written in Linear B gives us one of our oldest views of human life and can reveal things that other ways of looking at the past (e.g., bones, genes, tools, pottery) cannot. At the end of *The Riddle of the Labyrinth* (2013) by Margalit Fox, a book about how Linear B was deciphered, is a section about what the deciphered tablets turned out to say.

One thing they revealed is considerable occupational specialization. According to Fox (pp. 273-5),

[1]Mycenaeans plied a range of trades. Many tablets reveal the names of occupations . . . metalsmiths . . . textile work . . . tanners . . . leatherworkers . . . priests and priestesses . . . soldiers, rowers, and archers . . . swordmakers and bowmakers, chariot makers and chariot-wheel repairmen . . . goldsmiths and perfumers . . . woodcutters, carpenters, shipbuilders and net makers; fire kindlers and bath attendants; heralds, hunters, herdsman, and beekeepers. . . . bronzesmiths.

Occupational specialization is at the center of [2]my theory of human evolution. The decipherment of Linear B showed that it has existed as far back as we can see. Today there is an enormous amount of occupational specialization, but it also flourished when accumulated knowledge was much less.

The more you see the centrality of occupational specialization to human nature, the more you will see how modern schooling malnourishes almost everyone who undergoes it – which is almost everyone. Human nature takes people at one place and time – such as Mycenaean Greece – and pushes them to become adults who do all sorts of different things (woodcutter, herald, beekeeper . . . ). It takes people who start off the same or almost the same – same place, same food, same weather, similar genes – and creates diversity among them. Modern education tries to do the opposite: Take a diverse set of students and make them the same. One example is *No Child Left Behind*. Another is that in almost every college class, all students are given the same material, the same assignments, and graded on the same one-dimensional scale. We don't need everyone to be the same; in fact, we need exactly the opposite. The more diverse we are, the sooner we will find solutions to pressing problems, because they will be attacked in many different ways.

1. [http://en.wikipedia.org/wiki/Mycenaean\\_Greece](http://en.wikipedia.org/wiki/Mycenaean_Greece)

2. <http://www.scribd.com/doc/61801724/How-Economics-Shaped-Human-Nature-by-Seth-Roberts>

dearieme (2013-06-16 06:58:34)

I can recommend the 1958 "The Decipherment of Linear B" by John Chadwick, who had taken part in that decipherment. The hero of his account is Michael Ventris, an architect by trade who had not gone to university. Ventris was the real thing, a genius, and I don't mean "genius" in the grade-inflated US sense. Chadwick had worked with Ventris and so his portrait of him and his working methods is authoritative. Inside my copy of the book I've found a cutting of a review of a biography of Ventris by Andrew Robinson; the cutting is dated April 2002. "The Man Who Deciphered Linear B: The Story of Michael Ventris" (Thames and Hudson). Here's one quotation from the review "it is a testament to the remarkable level of education available in some schools before the Second World War that Ventris left Stowe (a term early ...) with a degree of fluency in Latin and Greek not matched by most of today's graduates in Classics."

Dena Shunra (2013-06-16 11:00:57)

Professional specialization far predates that. See the Sumerian proverbs from the Oxford ETCSL project: you find professionalized makers of clothing (fullers who make felt, weavers) and scribes and temple workers, and even a hierarchy of disgrace: [1]A disgraced scribe becomes an incantation priest. A disgraced singer becomes a flute-player. A disgraced lamentation priest becomes a piper. A disgraced merchant becomes a con-man. A disgraced carpenter becomes a man of the spindle. A disgraced smith becomes a man of the sickle. A disgraced mason becomes a hod-carrier. [2]catalog of texts - proverbs at the end

1. <http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=t.6.1.02&display=Crit&charenc=gcirc&lineid=t6102.p54#t6102.p54>

2. [http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=c.6.1\\*&charenc=j](http://etcsl.orinst.ox.ac.uk/cgi-bin/etcsl.cgi?text=c.6.1*&charenc=j)

babar (2013-06-16 17:59:53)

in modern education, not everyone attends the same schools or takes the same classes. Seth: Well, yes, but surely you've heard the term "meritocracy". Those who believe in it inevitably think highly of one-dimensional measures of achievement, such as IQ scores. Somehow merit is one-dimensional.

Tom (2013-06-16 19:18:59)

Nor has everyone heard of hyperbole, either...apparently.

## **Myopia Increases Innovation (2013-06-17 05:42)**

Big public works projects inevitably cost far more than the original budget. I heard a talk about this a few years ago. The speaker gave many examples, including Boston's Big Dig. His explanation was that these projects would not be approved if voters were told the truth. The German newspaper magazine Der Spiegel has just published [1]an interview with several architects responsible for recent German projects with especially large discrepancies between what people were told at the beginning and the unfolding reality - Berlin's new airport, for example. The article's headline calls them "debacles". One architect gives the same explanation as the speaker I heard: "The pure truth doesn't get you far in this business. The opera house in Sydney would never have been approved if they had known how much it would cost from the start."

I disagree. I see the same massive underestimation of time and effort in projects that I do and that my colleagues and friends do, projects we do for ourselves that require no one's approval. I think something will take an hour. It takes five hours. Plainly the world is more complicated than our mental model of it, sure, but there is more to it than that. Someone did a survey of people in Maryland who had been in a car accident so bad they had had to go to the hospital. Within only a year, a large fraction of them (half?) had forgotten about it. When asked if within the last year they had had an accident so bad they were hospitalized, they said no. Apparently we forget difficulties, even extreme ones, really fast. If you forget difficulties, you will underestimate them.

If I had realized how difficult everything would be, I couldn't have done any of it is one explanation, which I've heard

attributed to Gregory Bateson. From [2]Malcolm Gladwell's excellent review in this week's New Yorker of a biography of Albert Hirschman, the economist, I learned that Hirschman – had he realized that this was human nature – would have had a different evolutionary explanation: We underestimate difficulties because this way of thinking increases innovation. Debacle . . . or opportunity?

Difficulty is the mother of invention.

1. <http://www.spiegel.de/international/germany/de-meuron-von-gerkan-and-ingenhoven-on-german-construction-headaches-a-905472.html>

2. [http://www.newyorker.com/arts/critics/books/2013/06/24/130624crbo\\_books\\_gladwell](http://www.newyorker.com/arts/critics/books/2013/06/24/130624crbo_books_gladwell)

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Franklin Chen (2013-06-17 06:53:34)

Indeed, what would humanity be without the optimism bias? Everything we've done since deviating from other primates has been kind of insanely optimistic. Seth: Maybe there is a compensating bias in the other direction (pessimism bias) because if you are unrealistically optimistic in life-endangering situations, you may die. If I underestimate how long a project will take, nobody dies. If planners underestimate how much an airport will cost, nobody dies.

Janet (2013-06-17 09:46:53)

Do you have a cite for the Maryland car accident study? I study self-report/recall accuracy, and I've never heard of it. I want to add it to my list. Seth: Sorry, I don't. I learned about it from a talk by Elizabeth Loftus, maybe around 1992. I think the talk is online somewhere.

Zubon (2013-06-17 10:15:08)

Without having seen the Maryland study, I note that the standard KABCO injury scale for car crashes has a very broad range for "A," anything from "taken in, checked, and released" to "permanently paralyzed." Police might also code A for cases where someone refused treatment, and comparisons of police and medical reports have shown B injuries that look bad (visible abrasions, any complaint of neck or head trauma) coded as As. Of course people forget things, but if researches simply compared self-reporting to crash reports, they were conflating two types of error. As I said, this is without having seen the study, so it might have taken into account reporting problems.

LemmusLemmus (2013-06-17 13:04:52)

Minor correction: Der Spiegel is a magazine, not a newspaper. On the substantial issue, I found Elizer Yudkowsky's post useful, though too wordy: [http://lesswrong.com/lw/jg/planning\\_fallacy/](http://lesswrong.com/lw/jg/planning_fallacy/)

Alex (2013-06-17 17:03:07)

I think there's a more direct way that evolution favors that optimism bias and amnesia of the negative. Without it there would be hardly any second pregnancies. When I think about it objectively, having children has brought about some of the most grueling hours of my life, with weeks of feeding a newborn round the clock, hours of colicky howling (and that's after pregnancy and childbirth). But those memories feel remote. The highlights feel much more real. Thank you, dopamine! Seth: That used to be my explanation. I can't say I have evidence against it.

SB (2013-06-18 12:48:27)

FYI: <http://www.npr.org/blogs/health/2013/06/18/191279201/3-d-printer-brings-dexterity-to-children-with-no-fingers?uidt=1371584750> #commentBlock An example of innovation coming from outside the establishment. Now, will the establishment embrace it, ignore it or fight to shut it down?

Brock in HK (2013-06-18 18:57:46)

This is the basis for the whole venture capital industry today, and can be seen in many commercial industries at their infancy. Examples: automobiles at the start of the 20th century, dot-coms at the very tail end, plus many in between. Most VC backed companies fail or flounder and only a small few are successful, but when the capital was invested, every company in a VC's portfolio was forecast to have a chance to be a total success. This optimism actually creates much consumer surplus, as in the process of innovation, nobody is sure what exactly will fit the consumer need, so proliferation of ideas and oversupply a) helps identify the best idea and b) helps drive down the price quickly so that more people can benefit from the new invention. Three cheers for myopia! Seth: Your comment reminds me of something I figured out about how to do science: To make progress, it isn't necessary to have a correct explanation of something. Any explanation is helpful, so long as it is testable, because doing the test will be more enlightening than you realize. (Scientists are too pessimistic, engineers too optimistic.) What's important is motivation, not understanding.

Duncan (2013-06-19 14:24:26)

Literal myopia may also be a spur to innovation: Buckminster Fuller's interest in structures is said to have developed early as he concentrated on what he could touch and manipulate, since the world beyond was a bewildering blur, and James Thurber reputedly derived many surreal ideas from his brain's attempts to interpret the fuzzy images his eyes supplied to it.

Kudzu Bob (2013-06-19 22:12:07)

Mario Puzo famously remarked that had he known that The Godfather would be so popular, he would have written it better. Seth: One of the first managing editors of The New Yorker had a saying: "don't get it right, get it written."

## Sunlight and Heart Disease (2013-06-18 22:11)

[1]Vitamin D and Cholesterol: The Importance of the Sun (2009) by David Grimes, a British doctor, contains more than a hundred graphs and tables. Most of the book is about heart disease. Grimes argues that a great deal of heart disease is due to too little Vitamin D, usually due to too little sunlight. I recently blogged about [2]other work by Dr. Grimes – about the rise and fall of heart disease.

Part of the book is about problems with the cholesterol hypothesis (high cholesterol causes heart disease). One study found that in men aged 56-65, there was no relationship between death rate and cholesterol level over the next thirty years, during which almost all of them died (Figure 29.2). There is a positive correlation between death rate and cholesterol level for younger men (aged 31-39). The same pattern is seen with women, except that women 60 years or older show the "wrong" correlation: women in the lowest quartile of cholesterol level have by far the highest death rate (Figure 29.5). A female friend of mine in England, who is almost 60, was recently told by her doctor that her cholesterol is dangerously high.

The book was inspired by Grimes' discovery of a correlation between latitude and heart disease: People who lived further north had more heart disease. This association is clear in the UK, for example (Figure 32.4). Controlling for latitude, he found a correlation between hours of sunshine and heart disease rate (Table 32.3): Towns with more sunshine had less heart disease. No doubt you've heard that dietary fat causes heart disease. In the famous Seven Countries study, there was indeed a strong correlation between percent calories from fat and heart disease death rate (Figure 30.2). You haven't heard that in the same study there was a strong correlation between latitude and dietary

fat intake (Figure 30.8): People in the north ate more fat than people in the south. The fat-heart disease correlation in that study could easily be due to a connection between latitude and heart disease. The correlation between latitude and heart disease, on the other hand, persists when diet is controlled for.

Grimes convinced me that the latitude/sunshine correlation with heart disease reflects something important. It is large, appears in many different contexts, and has resisted explanation via confounds. Maybe sunshine reduces heart disease by increasing Vitamin D, as Grimes argues, or maybe by improving sleep – the more sunshine you get, the deeper (= better) your sleep. Sleep is enormously important in fighting off infection, and a variety of data suggest that heart disease has a microbial aspect. As long-time readers of this blog know, I take Vitamin D3 at a fixed time (8 am) every morning, thereby improving my Vitamin D status and [3]improving my sleep.

Grimes and his book illustrate [4]my insider/outsider rule: To make progress, you need to be close enough to the subject (enough of an insider) to have a good understanding but far enough away (enough of an outsider) to be able to speak the truth. As a doctor, Grimes is close to the study of disease etiology. However, he's a gastroenterologist, not a cardiologist or epidemiologist. This allows him to say whatever he wants about the cause of heart disease. He won't be punished for heretical ideas.

1. <http://www.amazon.com/Vitamin-Cholesterol-The-Importance-Sun/dp/0956213200>
2. <http://blog.sethroberts.net/2013/06/07/the-rise-and-fall-of-heart-disease/>
3. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>
4. <http://www.blog.sethroberts.net/2009/01/24/not-the-same-study-section-how-the-truth-comes-out/>

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Koanic (2013-06-18 23:47:35)

Excellent summary. I find some people have stomach trouble with vit D tablets, and that getting more sunshine works just as well.

Ethan (2013-06-19 05:15:00)

If you haven't come across it before Stephanie Seneff (<http://people.csail.mit.edu/seneff/>) has some interesting theories on vitamin d3 and its relationship w/ cholesterol and sulfur. Seth: No, I hadn't, although I linked to one of Seneff's articles [1]here.

1. <http://blog.sethroberts.net/2012/01/14/assorted-links-154/>

Tom (2013-06-19 13:21:32)

This is further illuminated by the experience of cardiologist William Davis (also author of Wheat Belly), who has found great success reversing arterial calcification with a protocol that includes D3 supplementation until blood levels reach 60-70. This is a link to his greatest circulatory calcification turnaround "success story": <http://www.trackyourplaque.com/forum/topics.aspx?ID=7520> Interestingly, the individual who improved so much is an African American male who upon starting the program had NO measurable Vitamin D in his blood. Yep, ZERO. African Americans are known to be more susceptible to heart disease than whites, and they are also known to produce less D in response to a given level of sunlight. This makes me wonder is another possible confounder of the heart disease epidemic (in addition to latitude) is an increasingly urbanized black and brown population (with concomitant undiagnosed low D3 status) in northern cities. Of course, this issue is risky for a professional scientist to study, as even looking into the matter could end a career. Seth: "increasingly urbanized black and brown population"...the incidence of heart disease is going down, not up. Your possible confounder is changing in the wrong direction.

dearieme (2013-06-19 15:43:08)

"possible confounder of the heart disease epidemic": then why has the epidemic occurred in other countries too?

adamlong (2013-06-20 10:51:53)

Seth: I am a long time reader and huge fan of your blog. Thank you so much for all you bring to the community. I'm particularly interested in understanding these issues related to diet, but at the same time feel the same frustration that-I assume-many others feel because people with credible credentials seem to be taking diametrically opposed positions on issues that are crucial to my day to day decisions regarding my diet. Decisions on questions like, "how often should I eat eggs?" "how much sun should I expose myself too?" A google search on Stephanie Seneff turned up (1) a number of interesting powerpoint presentations and essays but also (2) at least one blog post, from someone who appeared to have relevant background in nutrition, who was extremely critical of her approach and her claims. <http://carbsanity.blogspot.com/2012/03/low-fat-vitd-and-stephanie-seneff.html> Of course, the fact that someone, somewhere has criticized her does not mean she's wrong. But I find myself very frustrated trying to evaluate all of this and would appreciate your take. Seth: I find CarbSane's criticism unconvincing. I do not get alarmed that someone "learned from Gary Taubes". I do not consider it a big deal that Seneff's Ph.d. is in a different area. I don't care whether Seneff's blog has "a feminist angle". I suppose my take is: ignore ad hominem criticism.

Tom (2013-06-21 07:39:18)

Carbsane has said that she herself has no PhD and that her Masters is in Materials Science & Metallurgy. Seth, re: urbanization, I should have added that the 2010 census found that African Americans have subsequently been moving out of urban areas, reversing the earlier concentration: [http://usatoday30.usatoday.com/news/nation/census/2011-05-20-chicago-blacks-exodus\\_n.htm](http://usatoday30.usatoday.com/news/nation/census/2011-05-20-chicago-blacks-exodus_n.htm)

Ian (2013-06-21 22:56:38)

Hi Seth Not sure if you have seen this: Sunshine Could Benefit Health and Prolong Life, Study Suggests <http://www.sciencedaily.com/releases/2013/05/130507195807.htm> The effect appears to be due to increased nitric oxide level and may not be related to vitamin D levels. All the Best

### Assorted Links (2013-06-20 05:00)

- [1]Shio koji, a fermented food I haven't paid enough attention to
- [2]My experience of vegetarianism by Chris Masterjohn. "[After] a couple of weeks of eating red meat, my panic attacks completely stopped." I suspect eating butter would have had the same effect - that the problem was lack of certain fats. [3]A 2012 study found an association between vegetarianism and anxiety disorders (such as panic attacks).
- [4]Higher latitudes, more multiple sclerosis. Multiple sclerosis increases by a factor of 40 from low to high latitudes.
- Richard Nikoley's [5]six years of self-experimentation summed up
- [6]Dangers of statins
- [7]new major in Fermentation Science and Technology at Colorado State University. Smart!

1. <http://articles.latimes.com/2012/aug/25/food/la-fo-koji-20120825>

2. <http://www.cholesterol-and-health.com/Vegetarianism.html>

3. <http://www.ijbnpa.org/content/9/1/67/abstract>

4. [http://www.medscape.com/viewarticle/750047\\_2](http://www.medscape.com/viewarticle/750047_2)

5. <http://freetheanimal.com/2013/06/6-years-of-self-experimenting-my-fully-integrated-approach-to-paleo-primal-eating-real-food-and-vibrant-health.html>
6. [http://people.csail.mit.edu/seneff/statins\\_think\\_twice.html](http://people.csail.mit.edu/seneff/statins_think_twice.html)
7. <http://www.fshn.chhs.colostate.edu/students/undergraduate/fermentation-science/>

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dearieme (2013-06-20 06:23:14)

"the adoption of the vegetarian diet tends to follow the onset of mental disorders": as casual observation suggests.

Michael Flagg (2013-06-20 08:22:55)

Regarding the link to the MS/latitude correlation article, could I get the title? The link sends me to a login page but I don't see a title or author. Thanks. Seth: That's odd. The title is "Latitude is Significantly Associated With the Prevalence of Multiple Sclerosis".

Matt (2013-06-20 08:39:28)

Nikoley's experience with resistant starch seems interesting, I'm going to try that out with green bananas and raw potato starch and see what happens

dearieme (2013-06-20 08:48:41)

There's a well known hypothesis, examined here, that MS was spread into the Faroes by British troops in WWII. (They'd gone there to garrison the island against the German navy, the Danes not having had time to send a garrison.) The argument is that rural people may have little resistance to micro-organisms brought in by the arrival of urban people. When I remember the spelling of the name of the chap who made the hypothesis, I'll post it here. <http://www.ncbi.nlm.nih.gov/pubmed/371519>  
Seth: Very interesting. It is consistent with the latitude finding if the latitude finding is due to better sleep at lower latitudes. Better sleep, more resistance to infection.

dearieme (2013-06-20 08:53:34)

Kinlen: he offered the Faroes example as support when he put forward his hypothesis, aimed first at explaining cancer clusters. [http://en.wikipedia.org/wiki/Leo\\_Kinlen](http://en.wikipedia.org/wiki/Leo_Kinlen)

Paul N (2013-06-20 12:32:14)

Chris M's improvement could also have been (partly) from taurine in the meat. While we can synthesise it, some people are not so good at this. Taurine seems to be important for the brain, though its exact functions are unclear. The b vitamins probably helped too... Seth: Interesting idea, I would like to test it by varying my taurine intake and measuring brain function. I haven't noticed any effect on brain function from changing how much meat I eat (from low to high or high to low...I've never gone to zero). Nor I have noticed any effect of changing my Vitamin B intake. In contrast, changing how much animal fat I eat has had easy-to-notice effects.

Paul N (2013-06-20 20:17:35)

You can buy L-taurine as a supplement. Taurine is also a feature ingredient in Red Bull (don't ask me why, but I'll wager it helps with the energetic feeling) I guess we have a situation where someone with vegan induced nutrient deficiencies will respond well to all sorts of animal foods, but if you are already well nourished with animal nutrient X, more of it won't help. Unless you are one of those who doesn't do well making their own taurine, or converting beta carotene into vitamin A, etc. Seth: Yes, it's very plausible that I already get enough taurine but a vegetarian might not.

Nancy Lebovitz (2013-06-21 05:32:54)

I've heard from a couple of sources that CoQ10 makes statins safer. Do you think there's anything to the idea? Seth: I don't



know anything about this, sorry.

## **Tisano Chocolate Tea and Combining Complex Flavors (2013-06-21 05:00)**

After I interviewed Patrick Pineda about [1]how Tisano Tea began, he gave me several tins of chocolate tea, their main product. Since then, I've had dozens of cups of chocolate tea. It's a good caffeine-free drink, especially with cream.

My main use of chocolate tea, however, has been to improve black tea. Black tea + chocolate tea = great drink, better than any black tea alone or chocolate tea alone. So much better that I have stopped drinking black tea the usual way (without chocolate tea). Even cheap black tea (e.g., Lipton's) plus chocolate tea tastes better than expensive black tea. I think I know why. Black tea (fermented) has a complex flavor, like most fermented foods. Expensive black tea is more complex than cheap black tea, but only a little more. Likewise, chocolate tea has a complex flavor (like chocolate). Combining two sources of substantial complexity produces tea with great complexity – much more than you can get by tweaking one source of complexity (e.g., varying black tea).

Here's a recipe:

1. To 2.0 g of black tea and 0.9 g of chocolate tea add 8 oz of boiling water. Brew 4 minutes.
2. Add cream and sugar to taste.

[2]Peet's tea designers may have reached a similar conclusion. Peet's sells limited-edition teas that are available for only a few months, one at a time. Several months ago the limited-edition tea was Red Cloud Cacao, which combined black tea, chocolate tea, and rooibos. The chocolate tea was from Tisano. I loved it. It sold surprisingly well, I'm told. Their next limited-edition tea, still available, is [3]Anniversary Breakfast Blend. Here's what the tin says:

We seek out small lot teas with unique characters and intriguing flavors . . . Then . . . we set out to make great teas even better . . . We artfully marry the elements of distinctive black teas until we have achieved a well-balanced, extraordinarily aromatic, and flavorful cup.

I told a Peet's customer service person how much I liked the combination of black and chocolate tea. That's funny, she said, the Anniversary Breakfast Blend is made by adding a chocolate mist to black tea. The blended teas are misted with chocolate. The website and the container say nothing about this. My guess is that the tea designers came to the same conclusion as me. Chocolate was so potent they couldn't bear to omit it. But they couldn't simply add chocolate tea to the blend, because that would repeat Red Cloud Cacao, appear formulaic, and spoil the story of "seek[ing] out small lot teas". It would also be obvious: You could look at the tea and see the chocolate. So they used chocolate mist and didn't tell customers. What the tin says is doughnut truth: The whole truth, nothing but the truth, with a hole in the truth.

Complexity is much different than other sources of pleasure in food (salty, sweet, chewy, etc.). [4]My explorations suggest we can detect a lot more complexity that you can get from a single fermented food. But I have yet to encounter a single recipe that combines fermented foods. Most professional recipes produce complexity via many spices, which is labor-intensive (you need to add and adjust all those spices, and worry about their age) and, in my experience, produces no better results than adding one fermented flavoring, such as miso.

[5]Salting tea also seems to improve it.

## [6]Health benefits of cocoa, a new study.

1. <http://blog.sethroberts.net/2013/05/11/how-things-begin-tisano-tea/>
2. <http://www.peets.com/>
3. <http://www.peets.com/anniversary-breakfast-blend-tea-4-oz.html>
4. <http://blog.sethroberts.net/2010/01/08/the-limits-of-expert-trial-and-error/>
5. <http://boards.straightdope.com/sdmb/showthread.php?t=682750>
6. <http://news.psu.edu/story/279134/2013/06/12/research/cocoa-may-help-fight-obesity-related-inflammation>

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Kirk (2013-06-21 10:46:27)

Agreed that most recipes fail to use multiple fermented foods. There are a few exceptions, such as the Reuben sandwich, which uses three fermented foods: corned beef, cheese, and sauerkraut. Also those sandwiches made with a true sour-dough bread, cheese, and a fermented meat. I also suspect it is why cheeseburgers are popular: the cheese along with the ketchup or mustard (both of which typically are made with vinegar.) Then there are the complex salads using cheese, fermented meat, and fermented olives, dressed with a vinaigrette. I use combinations of fermented foods all the time in my cooking. I really appreciate you discovering this technique and writing about it. I've read cookbooks for many years and the only one who came close to this idea was the guy who said most soups can be improved by adding cheese. Seth: Good points. I was making lassi yesterday and thought: what should I add? Vinegar? No, I thought, it's already sour. I failed to appreciate the vinegar (e.g., balsamic vinegar) could add complexity.

Kirk (2013-06-22 10:21:47)

It could be that some foods come together at a certain level and further complexity doesn't help. I described before my doubts that adding a fermented food would improve my guacamole, but I haven't run that tasting session yet. As for lassi, the standard additions are one or more of fruit, salt, spices, sweetener. It would be interesting to try adding a sweet white wine, or cold brewed black tea, or chocolate. (I can't add chocolate due to an allergy, but you could try.) Seth: Adding wine to lassi is a good idea, I'll try it. Guacamole is a good test case. If it doesn't benefit from a more complex flavor, that would puzzle me.

Food of the Gods: "Bulletproof" Cocoa (2013-07-15 04:27:29)

[...] Seth's Blog – Tisano Chocolate Tea and Combining Complex Flavors [...]

## Assorted Links (2013-06-22 05:00)

- [1] natural acne remedies
- [2]A mainstream climate scientist has doubts. "We're facing a puzzle. Recent CO2 emissions have actually risen even more steeply than we feared. As a result, according to most climate models, we should have seen temperatures rise by around 0.25 degrees Celsius (0.45 degrees Fahrenheit) over the past 10 years. That hasn't happened. In fact, the increase over the last 15 years was just 0.06 degrees Celsius (0.11 degrees Fahrenheit) – a value very close to zero. This is a serious scientific problem." What would [3]Bill McKibben say?
- [4]Personal Experiments, a research site where you can sign up for experiments.
- [5]Trouble at GSK Shanghai. The defenses of the accused strike me as plausible.

- [6]Sleep disturbance in a hospital. "Between 10 p.m. and 6 a.m., I did not go more than an hour without some kind of interruption." As ridiculous as cutting off part of the immune system because of too many infections (tonsillectomies) and the view that acne has nothing to do with diet.

Thanks to Dave Lull.

1. <http://knowledgeofhealth.com/natural-acne-remedies/>
2. <http://www.spiegel.de/international/world/interview-hans-von-storch-on-problems-with-climate-change-models-a-906721.html>
3. <http://350.org/>
4. <https://personalexperiments.org/>
5. <http://blogs.nature.com/spoonful/2013/06/gsk-inquiry-reports-signs-of-possible-data-fabrication-in-multiple-sclerosis-paper.html>
6. <http://www.theatlantic.com/health/archive/2013/06/sleep-deprivation-in-hospitals-is-a-real-problem/276960/>

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dearieme (2013-06-22 07:16:35)

When I go to hospital I take an eye-mask and earplugs: not only do they cut out quite a bit of nuisance themselves, but I live in hope that they will inhibit the nurses from waking me for trivial reasons.

RAD (2013-06-22 07:51:25)

Regarding climate change, the following recent research is compelling (to me) and explains the decade long temperature stagnation: <http://uwaterloo.ca/news/news/global-warming-caused-cfcs-not-carbon-dioxide-study-says>

## **Magic Dots: User Experience (Person 2) (2013-06-23 05:52)**

In 2012 I posted about [1]using "magic dots" to get work done. You make a mark on a piece of paper every six minutes you work. The idea derives from [2]the quasi-reinforcement effect of Neuringer and Chung. They found that giving pigeons markers of progress toward food, such as a blackout, doubled how much the pigeons pecked for food – that is, doubled how much they worked.

I found magic dots very helpful. The future will be different from the past was my reaction. (In the future I will get more work done.) So did [3]a reader named Joan. Now [4]a reader named David Johnston tells his experience:

I'm an engineer designing cryptographic digital circuits in microprocessors, which is intellectually challenging but also involves a lot of coding and debugging which requires concentration and attention to detail but is certainly not intellectually challenging. My specialization is random numbers, which even by computer science standards is a very narrow and deep field to specialize in. I don't know of anyone else who does what I do. My work environment is saturated with sources of interruption which very much gets in the way of getting work done. If you think my employer is getting something wrong in creating an effective workplace for engineers, you would be correct. Procrastination is a big issue for me and I've tried various approaches to focus better without great success except for the Japanese music thing described below.

So after reading your article I gave it a try, I set up a timer on my computer (Orzeszek Timer) to beep every six minutes and filled out the dots on each beep.

On my first pass I lasted 2.5 hours before I had a meeting to go to and completed a detailed technical diagram of a circuit I was proposing. The next day I did 5 hours (with a lunch break in between) and was coding up the circuit. I stopped due to a meeting and could have continued. The third day I did not get a chance to focus on code or design, so I managed 0 hours. Then the weekend happened.

This is very much not normal for me. I might do 30 minutes to 1 hour before feeling the need to do something else besides concentrating, like dealing with email or getting a coffee. Getting back to it is not an efficient process since you are typically juggling multiple facts (aka the 'working set') pertinent to the problem and getting back in that frame of mind takes time. This is well a well documented aspect of computer programming, where there is a warm up time before the programmer becomes productive and then the productive period is fragile and easily set back to the start by interruptions.

I intend to keep trying this method and I hope it proves to be effective over longer periods because succeeding at my job is a lot less stressful than not succeeding. Obviously the vanishingly small investment required to try it is a big factor in making it easy to choose to try it.

So my initial reaction is that it works. My sense is that there is something important about mentally breaking up progress into chunks. I certainly do that on long tasks, e.g. a long drive ( I might envision it as passing the 10 %, 20 % etc points as we progress) or recently a game ([5]Ingress - a game you play with a smartphone that requires you get out and walk a lot) where the space between levels doubles. To get to the final level 8 from 7 requires 600,000 points to reach 1.2 million total. Logic would suggest you should just head out and get all the points you can as fast as possible, but that is disheartening because any one day doesn't make a big dent. By setting a goal of 10,000 per day, that gave me a mental and physical framework that was effective. I knew when to keep going (less than 10,000 points achieved) and I knew when to stop (at 10,000 points and probably 2 miles walking). Roughly 60 days later I got to the highest level.

While working on design, the beep in my ear and reaching to draw a dot or line on graph paper was not enough to knock off my concentration, but the continuing for the next six minutes felt like an achievable goal, much like 10,000 points in Ingress felt like an achievable goal each day, whereas choosing to sit and concentrate for five hours is a non starter, much as trying to battle through 600,000 points in Ingress is a non starter.

Possibly unrelated, but maybe not - I have found that I work well listening to Japanese music on headphones (e.g. [6]Happy End or [7]Tokyo Jihen). I haven't a clue what the words are and so it seems to not interrupt my coding state of mind in the same way that English language music does. The cadence (3-6 minutes per song) is not that far off the quasi-reinforcement time of 6 minutes that was suggested on your website. Also it blocks out the blathering of people near me in the office. I presume it being Japanese has nothing to do with its efficacy. It is just a language that hits zero of my language processing neurons. Any language would do if the music was good.

If you find the magic dots don't work for you, I am just as happy to hear about it.

1. <http://blog.sethroberts.net/2012/07/04/magic-dots-quasi-reinforcement-helps-get-things-done/>

2. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1338316/>

3. <http://blog.sethroberts.net/2013/06/15/magic-dots-user-experience/>
4. <http://blog.sethroberts.net/2013/06/15/magic-dots-user-experience/#comment-1122391>
5. <http://www.ingress.com/>
6. <http://www.youtube.com/watch?v=0C5k3zAwPq0>
7. <http://www.youtube.com/artist/tokyo-jihen>

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Koanic (2013-06-23 07:29:21)

Agree with everything noted. Except the limitation is doing it at a desk. Do it with a pen on your upper wrist instead. I track major strategic wins towards the next life level on the right wrist, with a short acronym summarizing the current objective. On the right wrist, I have "SOG" which stands for "sh-t" "OK" "good". I make hashes for each performance level throughout the day. The SOG ratings are relative to yesterday's performance. "Good" means better than yesterday's average. So it drives continuous performance improvement, and is an easily viewable "life dashboard" for the day. Then I download to a journal at the end of the day. It gamifies life, which is cool. Seth: Very interesting. You write with pen on your skin? I would think that would be hard to wash off completely. If not what do you write on?

Koanic (2013-06-23 20:26:09)

Yes, with a pen on my skin. No, the bigger problem is that it smudges and fades. So I refresh it. Also writing on the upper wrist results in less ink loss than writing on the top of the hand, which I was doing previously. With the wrist, it only comes off in the shower.

dearieme (2013-06-24 03:19:15)

Ahoy, Seth: re tonsils. <http://www.nejm.org/doi/full/10.1056/NEJMoa1215881>

RyanE (2013-06-24 13:14:22)

Ball point pen comes off easily with a quick spray of hair spray. Mom's 'final net' is what I used to use when growing up and the at-the-time bass fiddle playing infatuation would write things on my hands... :)

David Corbacho (2013-06-26 11:22:27)

This reminds me to David Seah's tracker <http://davidseah.com/blog/node/the-task-progress-tracker/> Have you use them ? Do you think is a good template to use the magic dots system?

## Scrivener for Windows Review (2013-06-24 05:00)

After hearing several people, including [1]James Fallows ("the single best bargain ever offered in the software world"), praise [2]Scrivener, a software program for writing, I tried it again. I had tried it a year ago, but there were so many bugs I quickly stopped. There were fewer bugs this time, but my experience was not good.

The free-trial copy says you can use it for "30 non-consecutive days". I didn't know what that meant. I was told it means "30 separate days before the trial expires – the trial is measured in "days of use", rather than elapsed time since installation". Someone thought that would be clear? I suggest "30 not-necessarily-consecutive days" plus an explanation of what that means.

When I imported material from Microsoft Word – the most common possible import – links were lost. I filed a bug report. I got an answer: "Unfortunately that's the reality of importing: some information can be lost when you move from one file format to another." Well, yes, but how about fixing the bug? I asked. In reply, I was told that Scrivener

for Windows was the work of one person and that the import software was third-party. "We are constantly striving to find new [import software], and to make improvements on our own, where we can," said the spokesperson for Scrivener.

I used Scrivener for about two weeks. Then, trying to put a quotation block in my text, I found that particular formatting is not available. It has been a long time since I came across writing software that did not include quotation blocks. The final straw. I went back to Microsoft Word.

In a way, it's a miracle I lasted two weeks, given the difference in resources invested in Microsoft Word and Scrivener for Windows.

1. <http://www.theatlantic.com/technology/archive/2013/05/interesting-software-watch-scapple-is-out-of-beta/275497/>

2. <http://www.literatureandlatte.com/scrivener.php>

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Alex Chernavsky (2013-06-24 07:26:09)

What surprises me is the high degree of tolerance that some users exhibit toward crappy software. At my workplace, we use a cloud-based database management system. The software is clunky, poorly designed, slow, and hard to use. The company that makes it is only interested in adding new features, not in fixing problems with the existing features. And yet... many of my co-workers love the program. It makes no sense to me.

Christopher Burd (2013-06-24 09:01:21)

This makes we want to try Scrivener, out of curiosity if nothing else.

Angus (2013-06-24 09:15:50)

I'm a full time freelance writer, and have worked exclusively in Scrivener for Mac for about five years. It doesn't seem buggy at all to me. ESPECIALLY compared to Word for Mac.

Joe Harris (2013-06-24 14:37:32)

Slightly off topic but I highly recommend learning Markdown and a short spell forcing yourself to create documents in it exclusively. Using Markdown you can create documents in any simple text editor and it has the added bonus of discouraging you from using extraneous (and time wasting) formatting.

william counselman (2013-06-25 19:09:31)

Try OpenOffice or LibreOffice free/open source word processors.They have most of the features of MS Word and save files in many formats. Upgrades are always free and you're encouraged to share the program. Versions for Windows, Macintosh and Linux operating system. Works for me. Check it out. Free as in speech and free as in beer.

Bryan (2013-06-26 21:46:11)

I've only used Scrivener (Mac) for one project – a big legal research paper – and I thought it was great. All my work originated in the program, so I didn't have to import anything. Also, I know a number of different writers who swear by the program. Fallows aside, non-techy types seem to love it.

Dario Ciriello (2013-07-04 07:50:46)

I tried it for a couple of days and hated it, but for different reasons. Everyone's process is different, and I tend to the organic and paper notes. Also, I didn't need another learning curve in my life, and Scrivener is both buggy and not entirely intuitive. Last is the import from word issue, which is no problem at all in InDesign or even Wordpress. I'll stick to notebooks and paper.

Kevin McCready (2013-07-04 15:52:15)

You have the word science twice and experiment once in your blog title and you're still with windows??? I switched to linux ages ago and have not looked back for even half a second. It's faster, better, easier and these days has a great community to help with the learning curve. Seth: An R program I need is only available for Windows. I also need to use Windows because my students use it..

Brian (2013-07-07 10:13:39)

Along the lines of Alex Chernavsky's comment, I also noticed, starting in the mid 1980's that many people, rather bizarrely, don't mind buggy software. At the time I thought it was because people who hadn't much computer experience were likely to blame themselves more than the software. In 2013, it seems that explanation is implausible because people have had decades to become familiar with computer use and to better attribute blame. My revised explanation is that buggy software doesn't bother many salaried workers because their salary is in the short-run unaffected by inefficiency. As for Word and Windows, both of which I find quite reliable, I wonder if the fact that parity memory and ECC doesn't seem to be present in the computers most people buy may have something to do with the residual level of dissatisfaction we may be left with. Big programs face more memory error risk. Failures I've encountered in recent years seem less repeatable and so I have revised upward my estimate that they are caused by flipped-bits.

daniel (2013-07-12 23:20:25)

You could try our academic authoring tool Fidus Writer. It's in Beta so still full of bugs. But we certainly try to fix them and value feedback.

Phil Goetz (2013-07-15 12:43:35)

Scrivener is meant for novelists and screenwriters. It's not going to provide a big advantage unless you're making book-sized documents (or trilogies) out of elements that group naturally into scenes and characters. Flipped bits due to ECC are not yet a major cause of bugs. I run large bioinformatics program on a computer without ECC. A typical run requires every bit out of 50,000,000,000 bytes in the files to be correct, and fails about once a month due to a flipped bit. Seth: I agree about Scrivener. I am puzzled that James Fallows, who is not a novelist or screenwriter, likes it so much.

## **Magic Dots: User Experience (Person 3) (2013-06-25 05:00)**

Based on [1]research by Neuringer and Chung, I started marking my work progress by [2]making a mark (such as a dot) every six minutes of work. I did it for difficult tasks, such as writing. Neuringer and Chung found that markers of progress made pigeons peck twice as much. The dots seemed to enable me to work twice as much – e.g., twice as long.

I think a friend came up with the name magic dots. It did seem magic that such a tiny thing – making a dot on a piece of paper – could be so useful. [3]A recent post about procrastination software led a reader named Joan to start

using it. I've already described [4]her experience ("the magic dots have been magic") and [5]someone else's experience here.

Two more people have told me about their experience. I'll describe what one of them said today and what the other one said tomorrow. Alex Chernavsky wrote:

I tried the Magic Dots system yesterday, and I liked it a lot. I ended up with two-and-a-half completed squares. I was more productive than usual. (By the way, have you heard of the [6]Pomodoro technique? It's similar.) I didn't use a stopwatch. I download an iPhone app called [7]Interval Timer, by Delta Works. It's free, but it shows small, unobtrusive ads. I set it to do continuously-repeating six-minute countdowns. The end of each cycle is marked by a short vibration. The iPhone screen stays lit-up the whole time that the application is running, so you can easily check the remaining time. If I remember to glance at the screen, I will make a mark if the application shows a remaining time of less than three minutes. If I forget to check, I make a mark when I hear the vibration. I was home alone most of the day, and I was able to get a lot of work done. I didn't use the technique when I was doing menial chores, like washing dishes. I only used it when I was working at my desk.

Alex also asked several questions:

What happens if you end up getting distracted by a non-productive, time-wasting activity, like checking Facebook? Should you reset the six-minute countdown cycle back to the beginning, or...?

I would just stop the stopwatch, not reset the timer. I would hate to lose the 2 minutes or whatever.

What's the best way to account for unplanned, unintentional changes in focus from one productive activity (e.g., balancing your checkbook) to a different productive activity (e.g., replying to important email messages)?

I don't change anything, as long as I am being productive I keep racking up the dots.

What happens if you need to take a bathroom break or other short break? Should you pause the timer?

No, I count anything necessary, including bathroom breaks and making tea. This is one reason I like the method: getting credit for making tea.

1. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1338316/>
2. <http://blog.sethroberts.net/2012/07/04/magic-dots-quasi-reinforcement-helps-get-things-done/>
3. <http://blog.sethroberts.net/2013/05/26/anti-procrastination-software-available/>
4. <http://blog.sethroberts.net/2013/06/15/magic-dots-user-experience/>
5. <http://blog.sethroberts.net/2013/06/23/magic-dots-more-user-experience/>
6. [http://en.wikipedia.org/wiki/Pomodoro\\_Technique](http://en.wikipedia.org/wiki/Pomodoro_Technique)
7. <https://itunes.apple.com/us/app/interval-timer-for-fitness/id406473568?mt=8>



nicole (2013-06-25 17:26:12)

the six minute increments reminds me of the hell my friends who are lawyers working on billable hours live in. they have to account for their work in 6 or 15 minute increments.

Sarah (2013-06-26 02:41:49)

Hi Seth, Since you don't have a twitter account, I'll leave this here: <http://www.plosone.org/article/info:doi/10.1371/journal.pone.0065263> Study showing scientific impact does not increase in similar proportion to grant size. Regards, Sarah

Jim Breed (2013-06-28 10:15:41)

Thanks to Alex C. for the lead on the interval timer. I just downloaded it.

### **Magic Dots: User Experience (Person 4) (2013-06-26 05:00)**

Previous posts about the magic dots method of getting work done are [1]here. Recently, Patrick Dwyer, a solo-practitioner lawyer in Chicago, started using them. He explained how they help:

When I use the magic dots for brief writing it helps me in a few ways. First, it is much less intimidating to set a goal to write for 15 minutes than for 50 hours. Second, it also does not seem so bad to work for just a few more minutes when I am bored or out of ideas rather than wait for that elusive "flow." Third, it gives me an ability to keep a precise account of my time and what I was doing so that I can show the client a specific task when I send the bill. Fourth, after I have made several boxes at the end of a day, it gives me a sense of accomplishment. All these things help me not to procrastinate. There is also something pleasing about drawing the boxes which seems to be more satisfying than merely writing non-graphic sentences or notes about my time.

I agree with all this, but would add that the method was suggested to me by [2]pigeon research in which none of these factors could have mattered (e.g., pigeons do not bill clients). If the pigeon research and the magic dots method really involve the same mechanism – which seems to be true – then that mechanism is remarkably old. According to [3]this, the common ancestor of birds and humans lived 300 million years ago. Maybe it is hard to notice the mechanism because it is buried so deep in our brains.

Animal learning researchers have always said that by studying animals (such as rats and pigeons) we will learn about humans. This example supports that claim. (As does the Shangri-La Diet.) The pigeon research, which had a very counter-intuitive result, led me to try the magic dots method, which seems like it can't possibly work, but did. Yet when this actually happened it was hard to notice. I talked about the pigeon results, which I thought were astonishing, for many years before I realized they might help me.

1. <http://blog.sethroberts.net/category/procrastination/magic-dots/>

2. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1338316/>

3. <http://answers.yahoo.com/question/index?qid=20110303205452AAQJ3x1>

Nancy Lebovitz (2013-06-26 09:48:04)

Off topic: A face-gazing meditation system which has some overlap with your faces in the morning anti-depression method. It's optimized for feeling calming and nurturing. I don't know whether it would work better than just watching bloggingheads.tv, but it might. Seth: Is a link missing from this comment?

### Assorted Links (2013-06-27 05:00)

- [1]Kombucha beer (which may [2]not taste like beer)
- [3]A growing taste for sour. "I saw bottles of [kombucha] in rural Virginia gas stations . . . kimchi, fermented cabbage, has spread from Korean kitchens to Los Angeles taco trucks."
- [4]Exercise and weight loss. Only the extremes of exercise – very intense exercise (very brief) and very long lasting exercise (walking) – reduce weight or keep weight low. The middling exercise Americans actually choose (aerobics) has little effect. This post, by my friend Phil Price, gets the high-intensity part right but the low-intensity part wrong.
- [5]Weight loss fails to prevent heart attacks. "The study followed 5,200 patients and lasted 11 years." Surely cost tens of millions of dollars. More evidence of mainstream ignorance about heart disease.
- [6]A kickback by any other name . . . "At least 17 of the top 20 Bystolic prescribers in Medicare's prescription drug program in 2010 have been paid by Forest [which makes Bystolic] to deliver promotional talks. In 2012, they together received \$284,700 for speeches and more than \$20,000 in meals."

Thanks to Bryan Castañeda and Hal Pashler.

1. <http://unityvibrationkombucha.com/>

2. <http://beeradvocate.com/beer/profile/27861/77769>

3. [http://www.slate.com/articles/life/food/2013/06/sour\\_food\\_trend\\_why\\_tart\\_foods\\_like\\_pickles\\_greek\\_yogurt\\_and\\_kombucha\\_are.html](http://www.slate.com/articles/life/food/2013/06/sour_food_trend_why_tart_foods_like_pickles_greek_yogurt_and_kombucha_are.html)

4. <http://andrewgelman.com/2013/06/18/there-are-no-fat-sprinters/>

5. <http://www.forbes.com/sites/matthewherper/2013/06/25/weight-loss-fails-to-prevent-heart-attacks-for-diabetics-in-study/>

6. <http://www.npr.org/blogs/health/2013/06/25/195232541/top-medicare-prescribers-rake-in-speaking-fees-from-drugmakers>

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dearieme (2013-06-27 09:19:21)

I thought that the end of the weight loss article, where the writer made a desperate lunge statin-wise, was unconvincing. Hell, maybe the control group combed their hair more often. Still, it showed how difficult it is to do a properly controlled trial - one has to guess which variables should be matched.

### Heart Disease Epidemic and Latitude Effect: Reconciliation (2013-06-28 05:00)

For the last half century, heart disease has been the most common cause of death in rich countries – more common than cancer, for example. I [1]recently discussed the observation of David Grimes, a British gastroenterologist, that

[2]heart disease has followed an infectious-disease epidemic-like pattern: sharp rise, sharp fall. From 1920 to 1970, heart disease in England increased by a factor of maybe 100; from a very low level to 500 deaths per 100,000 people per year. From 1970 to 2010, it has decreased by a factor of 10. This pattern cannot be explained by any popular idea about heart disease. For example, dietary or exercise or activity changes cannot explain it. They haven't changed the right way (way up, way down) at the right time (peaking in 1970). In spite of this ignorance, I have never heard a health expert express doubt about what causes heart disease. This fits with what I learned when I studied myself. What I learned had little correlation with what experts said.

Before the epidemic paper, Grimes wrote [3]a book about heart disease. It stressed the importance of latitude: heart disease is more common at more extreme latitudes. For example, it is more common in Scotland than the south of England. The same correlation can be seen in many data sets and with other diseases, including influenza, variant Creutzfeldt-Jacob disease, [4]multiple sclerosis, [5]Crohn's disease and [6]other digestive diseases. More extreme latitudes get less sun. Grimes took the importance of latitude to suggest the importance of Vitamin D. Better sleep with more sun is another possible explanation.

The amount of sunlight has changed very little over the last hundred years so it cannot explain the epidemic-like rise and fall of heart disease. I asked Grimes how he reconciled the two sets of findings. He replied:

It took twenty years for me to realize the importance of the sun. I always felt that diet was grossly exaggerated and that victim-blaming was politically and medically convenient - disease was due to the sufferers and it was really up to them to correct their delinquent life-styles. I was brought up and work in the north-west of England, close to Manchester. The population has the shortest life-expectancy in England, Scotland and Northern Ireland even worse. It must be a climate effect. And so on to sunlight. So many parallels from a variety of diseases.

When I wrote my book I was aware of the unexplained decline of CHD deaths and I suggested that the UK Clean Air Act of 1953 might have been the turning point, the effect being after 1970. Cleaning of the air did increase sun exposure but the decline of CHD deaths since 1970 has been so great that there must be more to it than clean air and more sun. At that time I was unaware of the rise of CHD deaths after 1924 and so I was unaware of the obvious epidemic. I now realize that CHD must have been due to an environmental factor, probably biological, and unidentified micro-organism. This is the cause, but the sun, through immune-enhancement, controls the distribution, geographical, social and ethnic. The same applies to many cancers, multiple sclerosis, Crohn's disease (my main area of clinical activity), and several others. I think this reconciles the sun and a biological epidemic.

He has written three related ebooks: [7]Vitamin D: Evolution and Action, [8]Vitamin D: What It Can Do For Your Baby, and [9]You Will Not Die of a Heart Attack.

1. <http://blog.sethroberts.net/2013/06/07/the-rise-and-fall-of-heart-disease/>
2. <http://qjmed.oxfordjournals.org/content/105/6/509.full.pdf+html>
3. <http://www.amazon.com/Vitamin-Cholesterol-The-Importance-Sun/dp/0956213200>
4. <http://www.ncbi.nlm.nih.gov/pubmed/21478203>
5. <http://www.ncbi.nlm.nih.gov/pubmed/15480983>
6. <http://www.sciencedaily.com/releases/2011/10/111031115105.htm>
7. [http://www.amazon.com/VITAMIN-D-Evolution-actions-ebook/dp/B00C4BSD20/ref=sr\\_1\\_3?s=digital-text&ie=UTF8&qid=1372175851&sr=1-3](http://www.amazon.com/VITAMIN-D-Evolution-actions-ebook/dp/B00C4BSD20/ref=sr_1_3?s=digital-text&ie=UTF8&qid=1372175851&sr=1-3)
8. [http://www.amazon.com/VITAMIN-What-Medical-Briefs-ebook/dp/B00C4COMP/ref=sr\\_1\\_6?s=digital-text&ie=UTF8&qid=1372175851&sr=1-6](http://www.amazon.com/VITAMIN-What-Medical-Briefs-ebook/dp/B00C4COMP/ref=sr_1_6?s=digital-text&ie=UTF8&qid=1372175851&sr=1-6)

9. [http://www.amazon.com/HEART-ATTACK-Medical-Briefs-ebook/dp/B00C4C0XNG/ref=sr\\_1\\_7?s=digital-text&ie=UTF8&qid=1372175851&sr=1-7](http://www.amazon.com/HEART-ATTACK-Medical-Briefs-ebook/dp/B00C4C0XNG/ref=sr_1_7?s=digital-text&ie=UTF8&qid=1372175851&sr=1-7)

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LemmusLemmus (2013-06-28 07:07:54)

Interesting. If I may go OT, do you have any thoughts on this: [http://well.blogs.nytimes.com/2013/06/27/how-carbs-can-trigger-food-cravings/?\\_r=0](http://well.blogs.nytimes.com/2013/06/27/how-carbs-can-trigger-food-cravings/?_r=0)

Three Pipe Problem (2013-06-28 07:08:27)

What is your basis for saying that sunlight has not changed much. Have you ever heard of those who claim "Global Dimming" has been substantial based on long-running "pan evaporation" experiments? Seth: My basis is what I have read about global weather during the 20th century. Sunlight changes can't possibly explain the results Grimes describes (the rise and fall of heart disease by a factor of 10-100, peaking at 1970). I did not know about that Global Dimming stuff, it sounds interesting.

Three Pipe Problem (2013-06-28 09:04:58)

Glancing at the wiki it looks like it has also reversed recently. Seth: Global Dimming, at 4 % or less, cannot explain changes by a factor of 10.

Sam (2013-06-28 10:39:19)

Did you happen to ask Grimes about the effect of smoking on CHD? It seems odd that he apparently disregards tobacco use entirely, given that it is known to be a significant risk factor for heart disease, and that tobacco consumption has varied significantly over time. I'm not saying that Vitamin D doesn't matter, or anything like that, but just that you'd expect to see some discussion of the impact of tobacco. Here's a link to some historical stats on UK tobacco consumption, which peaked in 1945: <http://www.cancerresearchuk.org/cancer-info/cancerstats/types/lung/smoking/long-cancer-and-smoking-statistics#history> Seth: No, I didn't ask him.

Tom (2013-06-28 10:49:44)

I just read his book "You Will Not Die of A Heart Attack." It's terrific, and I'm sure my GP (and most cardiologists, for that matter) have no idea about the facts laid out in it. It's worth the money for the Deaths from CHD chart alone.

Sam (2013-06-28 10:55:20)

Sorry for the double comment, but this paper from BMC Public Health also shows a much less dramatic drop in CHD mortality than Grimes's paper appears to - in part due to the way the data are presented. For the age groups at the greatest risk of CHD, the decline from 1970 to today is more like 50 %, rather than 95 % (or a factor of 10). <http://www.biomedcentral.com/1471-2458/8/148/figure/F1?highres=y> <http://www.biomedcentral.com/1471-2458/8/148/>

Tom (2013-06-28 11:06:49)

Interesting. I'd love to know what Dr. Grimes has to say about the discrepancy.

dearieme (2013-06-28 11:47:56)

Don't put too much weight on the Clean Air Act. According to the enviro writer Lomberg, if you plot the decline of dirt in the air in the UK (or maybe England and Wales) there is no change of slope when the Act came into force. [I have not checked this claim.] On the other hand, there is no doubt that the air got cleaner and cleaner whatever the actual cause. And anyway, maybe the slope would have changed for the worse but for the Act. For example, maybe economics drove industries to replace coal by oil but it needed the Act to force domestic users off coal.

JM (2013-07-01 12:50:45)

I also found his ebook, "You will not die of a heart attack" interesting reading, although it appears to be just a version of his article that was also linked to here (which you can get for free). He doesn't really solve the mystery of what caused this epidemic but does shed a new light on something everyone seems to think they know they cause of. Also, it isn't as close to an end as he implies - I know of two men in their 50's who suffered recent heart attacks, and in neither case was there a clear case of obvious cause. The doctor's just shrugged their shoulders or said their must have been an unknown family history when questioned - so frustrating!

## **Mental Effects of Butter: "My Video-Gaming is Better" (2013-06-29 05:00)**

Based partly on [1]my research, a friend of mine started eating the same amount of butter I do: 4 tablespoons (about 60 g) per day. He described what happened:

I'm noticeably smarter since I started butter. Immediately.

Faster insights, faster foreign language processing, increased creativity, faster at math-in-my-head. My video-gaming ability is better, which partly is a measure of my reaction time. Since I log my creativity similarly to my workouts I can view the increased production.

Started butter properly 3 days ago. Haven't been sleeping well due to workload and digestive issues...yet still my performance keeps [improving]. I suspect it will be yet markedly better again once I get some proper rest.

I am experiencing creativity effects [similar to those] that resulted when I was mindhacking with various [2]racetams along with sublutamine and centrophenoxine. I have not been taking that brain-stack for a month because it was causing digestive problems. Suddenly with butter all the mind-hacking benefits have returned.

1. <http://vimeo.com/14281896>

2. <http://en.wikipedia.org/wiki/Racetam>

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dustin (2013-06-29 10:50:42)

How do you log creativity / production.

adamdavidlong (2013-06-29 15:48:31)

Seth, I suspect you have covered this before but any thoughts on Dave Asprey's "Bulletproof Coffee" i.e. coffee with grass fed butter + mct oil added. I have been trying it for the last several months. Prior to April of this year, I drank 3 cups of coffee total in the prior 4 decades, but I'm finding I really like this as part of my routine. Seth: I don't know if mct oil has any effect but butter certainly does. I drink black tea every morning...not so different from coffee.

Matteo (2013-07-04 11:31:59)

Do you if any butter is good? I mean, my mother usually buys low cholesterol butter. I still prefer normal butter since as I read from T. Ferriss and others cholesterol is good for Test production. But it would be interesting to know. Seth: I tried several

brands and price points. I never saw a difference. For example, I found no difference between Land o'Lakes and Strauss butter.

Edward (2013-07-19 11:19:00)

I take typing tests and have found that >50g of butter a day improves accuracy from around 97-98 % to 98-100 %, I can type about 87-89 wpm eating anything, but when I consume butter within a few minutes my accuracy and speed jumps miraculously to 90-110 wpm. I did one week of butter and then a one week washout and then replaced butter with 85 % chocolate and the improvements were more substantial than butter, I had never been able to type more than 111 wpm with 100 % accuracy, with about 50g of 85 % chocolate I typed 117 wpm with 100 % accuracy for the first time in my life. 70-75 % chocolate was comparable to butter. The washout period doesn't seem to matter and butter and chocolate combined don't seem to have a compound effect, so in myself chocolate confers what butters seems to and then some.

### **Alternate-Day Fasting Improved My Fasting Blood Sugar (2013-06-30 05:00)**

A few days ago, I gave a talk at a Quantified Self Meetup in San Francisco titled "Why is my blood sugar high?" (PowerPoint [1]here and here). My main point was that alternate-day fasting (eating much less than usual every other day) quickly brought my fasting blood sugar level from the mid-90s to the low 80s, which is where I wanted it. I was unsure how to do this and had tried several things that hadn't worked.

Not in the talk is an explanation of my results in terms of setpoint (blood sugar setpoint, not body fat setpoint). Your body tries to maintain a certain blood sugar level – that's obvious. Not obvious at all is what controls the setpoint. This question is usually ignored – for example, in Wikipedia's [2]blood sugar regulation entry. Maybe Type 2 diabetes occurs because the blood sugar setpoint is too high. If we can find out what environmental events control the setpoint, we will be in a much better position to prevent and reverse Type 2 diabetes (as with obesity).

A few years ago, I discovered that [3]walking an hour per day improved my fasting blood sugar. Does walking lower the setpoint? I didn't ask this question, a curious omission from the author of The Shangri-La Diet. If walking lowered the setpoint, walking every other day might have the same effect as walking every day.

I was pushed toward this line of thought because alternate-day fasting seems to lower the blood-sugar setpoint. After I started alternate-day fasting, it took about three days for my fasting blood sugar to reach a new lower level. After that, it was low every day, not just after fast days. My experience suggests that the blood-sugar setpoint depends on what your blood sugar is. When your blood sugar is high, the setpoint becomes higher; when your blood sugar is low, the setpoint becomes lower. Tim Lundeen had told me something similar to this.

If you tried to lower your fasting blood sugar and succeeded, I hope you will say in the comments how you did this. I tried three things that didn't work: darker bedroom, Vitamin B supplement, and cinnamon. Eating low carb raises fasting blood sugar, [4]according to Paul Jaminet.

1. [http://blog.sethroberts.net/?attachment\\_id=10770](http://blog.sethroberts.net/?attachment_id=10770)

2. [http://en.wikipedia.org/wiki/Blood\\_sugar\\_regulation](http://en.wikipedia.org/wiki/Blood_sugar_regulation)

3. <http://blog.sethroberts.net/2010/07/18/fasting-blood-sugar-reduced-by-walking/>

4. <http://perfecthealthdiet.com/2011/11/safe-starches-symposium-dr-ron-rosedale/>

sa (2013-06-30 05:46:15)

Could you describe what you eat on the eating / fasting days in more detail ? I'm interested in how you use this along side strategies such as your flaxseed consumption and vitamin D supplementation. I've tried alternate day fasting and have had some success with it in the past for weight reduction. There are lots of different fasting plans - from my reading, the essential element seems to be going for 16+ hours without any food, so you don't completely have to abstain from food for a full day. I like a daily 19/5 schedule personally : skip breakfast , have a late lunch, then a normal dinner, which is pretty easy to stick to. In the 19 hours, I consume only water. Seth: Before I started alternate-day fasting, I ate only one normal meal per day – already coming close to your 19/5 schedule. While doing alternate-day fasting (which I am doing now), I eat normally (for me) on the meal days (low carb, vaguely paleo) and on the fast days I eat butter and flaxseed oil and a few other things, about 700-800 calories. I take Vitamin D3 at 8 am every day.

dearieme (2013-06-30 06:39:25)

Is it the fasting that matters, or having successive days with very different diets? What if, say, I ate only fish on the 'fasting' days, and my normal diet, minus fish, on the 'eating' days? Anyone here want to try that out? Seth: There's lots of research about intermittent fasting in animals, such as rats. In this research, the successive days do not have different diets, in the sense that what is eaten on the fast day (the little that is eaten) is the same sort of food that is eaten on the non-fast days.

Mark Cancellieri (2013-06-30 07:28:09)

I believe that intermittent fasting helps by improving insulin sensitivity. Things like fasting improve the sensitivity of insulin receptors in the muscles, allowing the muscles to take in greater amounts of glucose from the blood stream. That's the problem with insulin resistance in obese people. They are consuming tons of sugar (and carbohydrates), but they can't get the sugar into their muscles because the insulin receptors are not sensitive. All that energy available and they can't get it into their muscles to burn it off. As I understand it, high intensity training (i.e. exercising your muscles until "momentary muscular failure") is also very good for improving receptor sensitivity. When we thoroughly deplete glycogen in our muscles, it triggers our body to improve receptor sensitivity so that we will be better able to quickly restore glycogen levels in the future. I tried doing one 24-hour fast per week, but now I do a daily 16-hour fast (a la Leangains). I do all my eating during an 8-hour "feeding window." This is a reasonable compromise for me. I start eating at 12 noon and stop at 8 PM. My next step is to give up diet soda, which I currently drink outside my feeding window (for the caffeine). They have found that artificial sweeteners also reduce insulin sensitivity. This may be sabotaging my results to a degree. Seth: "Intermittent fasting helps by improving insulin sensitivity." Well, maybe. Why should improving insulin sensitivity change the body-sugar setpoint? It isn't clear why. In the realm of body weight, there is a similar issue. Just because exercise burns calories does not imply it lowers the body fat setpoint. Certain sorts of exercise do lower the body fat setpoint, but that had to be figured out.

Antonio (2013-06-30 10:04:52)

Quick question: Seth, how do you measure you blood sugar levels? Thanks Seth: I use Abbott's Freestyle Lite meters with butterfly test strips. They work well. No pain when I prick myself on my arm. Only a tiny amount of blood is needed. The test strips cost about 50 cents each.

Jerry (2013-06-30 10:24:42)

I have been doing a similar self-experiment for about 3 years now. I have accumulated quite a lot of blood sugar data, and my numbers are similar to yours. My situation and A1c numbers are also similar. I've learned a few things in my experiment, which I'd like to share: 1. Blood sugar meters have terrible reproducibility, but some are better than others. Avoid Reli-On meters altogether. I've had pretty good luck with True-Track meters (and the USB port is very handy for downloading data). Whatever meter you are using, buy a full box of strips, and take 10 or so readings from the same prick. You will see significant variation in the readings. It's expensive, but if you do 40 or so successive readings, you'll be able to calculate the statistical variance of the meter. 2. If you get an unusually high or low reading, take another using the same prick. Take a third. The variance will surprise you. If I were injecting insulin, I'd never trust a single reading. 3. I use the inside tip of my left pinky finger. Least innervation and highest vascularization. 4. A reading when you first wake up will tell you more about liver insulin insensitivity than all the readings you take throughout the day. Mine ranges from 75 to 110. If I'm doing something right, it will be in the

80s. More commonly, it will be in the mid 90s. 5. Exercise helps tremendously. I like to rock climb at the local gym, because it's the only activity I truly enjoy. It's very intense, short duration, and probably not very aerobic (I hate aerobics) but it can get your heart rate up for short bursts. Climbing for an hour after work, fasting afterwards, and then going to bed early usually, but not always, will keep me in the 80s the next morning. 6. As per Jack Kruse's recommendations, wearing blue-blockers after sunset seems to help. (They also work tremendously well for eliminating jet lag.) 7. My fasting blood sugar seems to creep up during allergy season (spring and fall). When I'm sneezing and hacking, the sugar is almost always around 100 rather than 85. (I'm very interested to know if a hookworm infestation will lower this.) 8. Stress definitely raises blood sugar. Both long-term annoying stress and sudden, unexpected stressful situations seem to aggravate it. Mine once shot up from 90 to 157 after I was hit with an unexpected bill from a hotel front desk. 9. Read Dr. Bernstein's book. It is loaded with good information. 10. I've found that cutting back somewhat on protein lowers fasting blood sugar. Fat (lard and/or coconut oil) doesn't seem to have much of an effect., unless large amounts are eaten before bed. That seems to increase liver insulin insensitivity. 11. The most fascinating thing I've discovered is that cold thermogenesis (see Dr. Kruse's blog) really lowers blood sugar quickly and effectively. If mine's over 100 in the morning, I jump into a tub of 50 to 60 degree water and soak for 20 minutes. That reliably drops it to the 70s or low 80s. This effect last anywhere from 90 minutes to 5 hours. From what I've been reading, cold does not cause an insulin release, but rather a release of TXIP. 12. I supplement with Mg and D3. Active liopoic acid often seems to have an effect, but it's hard for me to isolate the cause/effect as of yet. I have not tried alternate day fasting, just reduced eating or skipping dinner, and that definitely seems to help. After reading this post, I will try alternate day fasting.

Joe (2013-06-30 12:45:19)

FYI: Alternate day fasting increases LDL particle size independently of dietary fat content in obese humans  
<http://www.nature.com/ejcn/journal/vaop/ncurrent/abs/ejcn201383a.html>

Mike Coleman (2013-06-30 13:12:25)

As an adjunct, you might also check out this study, which points to benefits of glucose control from regular blood donation. The Wikipedia page on blood donation has a couple more references, including the Finnish study pointing to lower incidence of Type 2 diabetes. <http://www.biomedcentral.com/1741-7015/10/53> As for "set points", maybe it doesn't really change the set point. Maybe it just keeps the system from reaching equilibrium most of the time? In any case, that might be a distinction without a difference—if it works, who really cares why. Seth: That's very interesting about blood donation. In your "maybe it doesn't really change the set point", what is "it"? If by "it" you mean alternate-day fasting, I guess you mean that frequent meals (more frequent than alternate-day fasting) may raise fasting blood sugar not because they change the set point but because they keep the system from reaching equilibrium most of the time. Then my question is what you mean by "equilibrium". "who really cares why?" – I think the history of science shows that theories (which answer "why" questions) are often really helpful. Theories may suggest or motivate new experiments, for example.

August (2013-07-01 09:38:29)

I don't think Jaminet is right about this, but the requirements for keeping fasting blood sugar low via a low carb diet is pretty restrictive and thus most people saying they are low carb are probably cheating enough to cause the problem. I did it for a while after going to the doctor and finding out I had a high fasting blood sugar. It seems to be predicated on what you ate or drank the day (or night) before, and it doesn't necessarily make any kind of sense. For instance, when I found out I had the high fasting blood sugar, I had been experimenting with a tablespoon of honey before bed (improves sleep). Well, the honey had to go, but a chocolate bar with 20g of sugar in the afternoon didn't seem to cause any problems. I was carrying around a jar of ghee at the time to help make calorie requirements. Low carb does make you insulin resistant, and in context, this is a good thing because it keeps the glucose reserved for the brain. So, Jaminet and others are probably seeing blood sugar rising during the time it takes for the body to switch this particular insulin resistance off. Peter did a series on palmitic acid a while back, which is how I was informed of this: <http://high-fat-nutrition.blogspot.com/> I got bored with the whole thing. I ran out of blood test strips and eventually decided I want more muscle. I suppose I should get some more, because I'm certainly eating a lot more carbs. The problem is, I can eat to make the testing look good, but I'm not improving my quality of life when I do that. When I eat and gain muscle, the improved quality of life is noticeable. Seth: Higher blood sugar levels are correlated with greater risk of several major diseases, such as stroke. This is why I believe high fasting blood sugar is a bad thing. I agree



that fasting blood sugar is not the perfect way to measure blood sugar; HbA1c is better. When I started alternate day fasting, I didn't notice any decline in quality of life – if anything it improved because I had more free time.

peter (2013-07-02 07:41:05)

walking shortly after a meal (about 15-20 minutes) which prevents a post-meal spike in blood sugar; and cinnamon. my last blood sugar reading was 87; i also eat a fair amount of avocado and minimize starches/sugars Seth: You found that adding cinnamon made a noticeable difference? I haven't heard that before about avocado.

Char (2013-07-02 13:43:06)

I had wondered if you have tried walking for different amounts of time and frequency after you discovered that it lowered your blood glucose to find the lowest amount for the benefit. And are you still walking while doing alternate day fasting? Seth: Yes, I walked varying amounts. I found I needed to walk about an hour to lower my fasting blood sugar the next morning. Thirty minutes wasn't enough. I am still walking while doing alternate day fasting.

A Reader (2013-07-02 20:55:37)

Is the amount of walking one hour in total throughout the day or does it need to be one continuous hour? Seth: Close to continuous. Maybe 2 30-minute bouts will work. But scattered walking didn't help.

Mike Coleman (2013-07-04 13:14:50)

Replying, yes by "it" I meant ADF. In the model I'm contemplating, "equilibrium" is reached by eating ad libitum every day. Now, if one starts eating ADF instead, does this affect set point? Or does it just pull the system away from equilibrium without affecting set point at all? If I have a helium balloon in my living room, it will naturally rise and stay at the ceiling. But if I bat it downwards regularly—say every three seconds—it will spend no time at all on the ceiling. Is that because my batting somehow affected the tendency of helium balloons to stay on the ceiling? No—it just prevents this equilibrium from occurring. One key question is whether the set point sticks upon discontinuing ADF for a while. If it sticks, even for a month or two, that would be interesting. Regarding "why", I just meant that if ADF really affects longevity, as a practical matter, maybe I should be doing it, whether or not set point is the mechanism. Seth: Alternate-day fasting may or may not change the blood sugar level that the body "defends" (= the setpoint). As far as I can tell, it does change the set point. My experience suggests that the defended level changes in a few days, not a month. The helium balloon analogy does not involve a regulated system. Sorry, I don't understand what you mean by "the model I'm contemplating".

First Self-Experiment: Alternate Day Fasting | John Self-Experiments (2013-07-05 15:57:24)

[...] a regular religious practice for thousands of years. Leading health and fitness bloggers have been talking about it for [...]

## 8.7 July

### Does Alternate-Day Fasting Lower HbA1c? (2013-07-02 05:00)

[1] 

This graph shows my HbA1c values in recent years. After a lot of variation, they settled down to 5.8, which was the measurement a month ago. 5.8 isn't terrible – below 6.0 is sometimes called "okay") – but there is room for improvement. In [2]a large 2010 study, average HbA1c was 5.5. The study suggested that a HbA1c of about 5.0 was ideal.

Three weeks ago I started alternate-day fasting (= eating much less than usual every other day) for entirely different reasons. Although people sometimes find alternate-day fasting unpleasant (they get too hungry on the fast days),

I haven't noticed this. I blogged recently that within days of starting, [3]my fasting blood sugar levels greatly improved. Yesterday I got my HbA1c measured again. It was 5.4 – much better. This supports the idea that alternate-day fasting is helping a lot. HbA1c measures glucose in the blood over 8-12 weeks so there could easily be more improvement.

"Whether intermittent fasting can be used as a tool to prevent diabetes in those individuals at high risk or to prevent progression in those recently diagnosed with Type 2 diabetes remains a tantalizing notion," [4]said an author of [5]a recent paper on the subject. My experience suggests that you can easily find out for yourself if intermittent fasting will help. It took only a week to be sure that my fasting blood sugar had improved and only three weeks to have a good idea that my HbA1c has improved. My improvement was almost as fast and clear as what happens when people with a vitamin deficiency are given the vitamin they need.

There are countless ways of doing alternate-day fasting (or, more generally, intermittent fasting). A clinical trial usually tests just one way, which you may not want to copy exactly. My results suggest that blood sugar measurements provide an easy way to tell if your particular version of intermittent fasting is helping.

1. <http://blog.sethroberts.net/wp-content/uploads/2013/07/2013-07-01-HbA1c-versus-date-after-starting-alternate-day-fasting.jpeg>
2. <http://www.nejm.org/doi/full/10.1056/NEJMoa0908359>
3. [http://blog.sethroberts.net/?attachment\\_id=10784](http://blog.sethroberts.net/?attachment_id=10784)
4. <http://www.newsmax.com/Health-Wire/fasting-diabetes-heart-disease-cholesterol/2013/04/29/id/501911>
5. <http://dvd.sagepub.com/content/13/2/68.long>

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John S. (2013-07-02 15:34:00)

If the green dots are your previous level, they show high variability as well as sudden, precipitous drops. Your current results don't support anything. Seth: Time will tell.

Adam (2013-07-03 04:00:43)

I thought that was a bit curious too. In the end of 2006/beginning of 2007 your HbA1c dropped more than 1 point. What was the interval between those 2 readings & what did you do during that time? Seth: The interval was 3.5 months. I can't remember what I did but probably reduced my high-GI carb intake. The early years of these readings are the first years the service was offered. I was surprised by the high values and probably changed what I ate, but it is also possible that the measurement method improved (e.g., the calibration improved).

Jazi Zilber (2013-07-17 20:48:33)

note that this measure gives an average of the last three months of blood sugar. so it lags.....

jclifton (2013-07-20 07:44:03)

Seth, when doing alternate day fasting, how do you continue eating flax seeds/oil and butter if you're fasting every other day? Seth: I eat them on the fasting days. If you look at alternate-day fasting protocols, they usually include 500 calories or so on the fasting days.

## Assorted Links (2013-07-03 05:00)

- [1] Walking after a meal improves blood sugar

- [2]A look at QSers. "Some of the most societally redefining concepts now emerge from edge-thinkers, who are increasingly visible, organized, and effective, in part due to the Web. Even so, whenever I spoke to them or read their blogs, at some point I always wondered, why?"
- [3]Steve McIntyre vindicated. RealClimate [4]says: "That is the most disquieting legacy of Steve McIntyre and ClimateAudit [McIntyre's blog]. The real Yamal deception is their attempt to damage public confidence in science by making speculative and scandalous claims about the actions and motivations of scientists while cloaking them in a pretense of advancing scientific knowledge." A comment on ClimateAudit: "It's quite obvious that in 2009 and again in 2011, you shamelessly plagiarised Briffa 2013."

Thanks to Jazi Zilber and Phil Alexander.

1. <http://well.blogs.nytimes.com/2013/06/24/really-the-claim-taking-a-walk-after-a-meal-aids-digestion/>
2. <http://www.thedailybeast.com/newsweek/2013/06/26/the-body-data-craze.html>
3. <http://climateaudit.org/2013/06/28/cru-abandons-yamal-superstick/#more-18040>
4. <http://www.realclimate.org/index.php/archives/2013/06/yamal-and-polar-urals-a-research-update/>

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dearieme (2013-07-03 06:14:16)

Talking of Global Warming: <http://www.forbes.com/sites/larryhusten/2013/07/02/paper-raises-hundreds-of-questions-about-the-integrity-of-stem-cell-research-group/>

### David Grimes Responds to Comments (2013-07-04 05:00)

In recent posts ([1]here, [2]here, and [3]here), I've described the ideas of David Grimes, a British doctor, about the cause of heart disease. Grimes recently responded to comments on [4]the last post:

First, to develop the latitude theme, that distance from the equator determines risk of heart disease, cancers, multiple sclerosis and others. Four visual pieces of evidence for you.

[5] 

The sunshine map of the UK: We see what would also be the map of multiple sclerosis and CHD in the UK – both diseases most common in the west of Scotland and least common in the south-east of England. Similar pattern of average life expectancy.

Look at cancer incidence in North America for another latitude effect.

[6] 

Then there is breast and colon cancer in Europe:

[7] 

But the [most] important observation of the sun being protective against cardiovascular disease comes from the USA. A latitude effect is present but weak. However a longitude effect is powerful. It works out as an altitude effect – the higher the altitude of residence the lower the risk of death from cardiovascular disease (coronary heart disease + stroke). It is interesting to note the mirror image of the land profile from east to west and the CVD death profile. This can be explained most simply and most plausibly by the higher UV exposure at higher altitudes.

[8] 

[9] 

This is a powerful supplement to the latitude observations in Europe. The [north-south] length of Europe is worth remembering: the north of Scotland is the same latitude as Hudson Bay. In the north of England I live further north than anywhere in China. This means big sun exposure effects.

The size of the disease differences is impressive – e.g., a factor of 2. I think these sunshine correlations are due either to a protective effect of Vitamin D or a protective effect of sleep (more sunshine = better sleep). There's no doubt that sleep quality depends on the amplitude of a circadian rhythm (greater amplitude = better sleep), which in turn depends on the amplitude of the sunlight intensity rhythm, the day-night difference.

1. <http://blog.sethroberts.net/2013/06/07/the-rise-and-fall-of-heart-disease/>
2. <http://blog.sethroberts.net/2013/06/18/sunlight-and-heart-disease/>
3. <http://blog.sethroberts.net/2013/06/28/heart-disease-epidemic-and-latitude-effect-reconciliation/>
4. <http://blog.sethroberts.net/2013/06/28/heart-disease-epidemic-and-latitude-effect-reconciliation/>
5. [http://blog.sethroberts.net/wp-content/uploads/2013/07/Sunshine\\_Average\\_1971-2000\\_1-1.gif](http://blog.sethroberts.net/wp-content/uploads/2013/07/Sunshine_Average_1971-2000_1-1.gif)
6. <http://blog.sethroberts.net/wp-content/uploads/2013/07/PastedGraphic-3.gif>
7. <http://blog.sethroberts.net/wp-content/uploads/2013/07/PastedGraphic-4.gif>
8. <http://blog.sethroberts.net/wp-content/uploads/2013/07/PastedGraphic-5.gif>
9. <http://blog.sethroberts.net/wp-content/uploads/2013/07/PastedGraphic-6.gif>

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dearieme (2013-07-04 06:58:05)

This is excellent stuff, Seth: keep going. Here's my suggestion for someone's research topic: break down the British heart attack rates geographically not according to where people live now, but where they were born (or, even better if practical, where they lived until they were, say, 18). My idea is that if heart attacks depend on some unidentified microorganism you might well pick it up at an early age, long before you are vulnerable to a heart attack. This might be worth doing too for other diseases e.g. M.S. Seth: Thanks! There is a lot of evidence for something happening at a young age, perhaps in the womb, that affects your health much later. The book Mothers, Babies and Health in Later Life by Barker has many examples.

steve (2013-07-04 12:28:15)

Seth, thanks for this post. The altitude correlation is interesting. This is something Ray Peat has written about. He attributes the benefits of altitude to the higher concentration of CO<sub>2</sub> in the air. Here's a link: <http://raypeat.com/articles/aging/altitude-mortality.shtml> Ray writes extensively about the protective benefits of CO<sub>2</sub>. His writings are worth a look, imo. I came across something else interesting regarding the correlation between latitude and MS. It's from Roy Swank, MD. He treated MS with diet and believed that the latitude correlation resulted from those further from the equator consuming a more animal based

diet and thereby more fat. He recommends a low fat diet. [http://www.drmcDougall.com/res\\_swank.html](http://www.drmcDougall.com/res_swank.html) Food for thought. ;-)

Seth: My guess is that radiation hormesis has a lot to do with better health at higher altitudes. There is more radiation at higher altitudes. The radiation activates repair systems.

Nancy Lebovitz (2013-07-04 16:26:46)

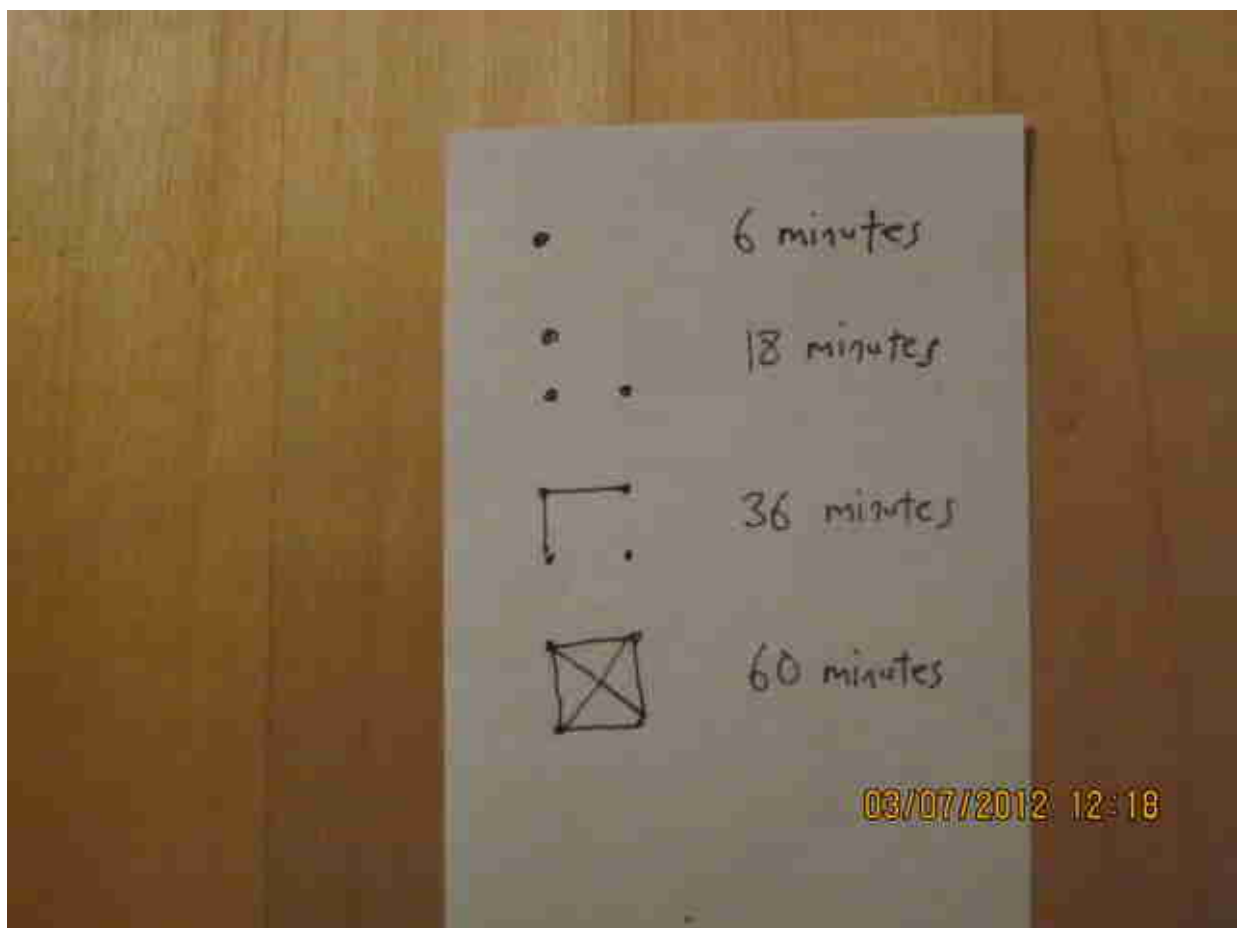
[http://www.ted.com/talks/richard\\_weller\\_could\\_the\\_sun\\_be\\_good\\_for\\_your\\_heart.html](http://www.ted.com/talks/richard_weller_could_the_sun_be_good_for_your_heart.html) Sunlight releases nitric oxide precursors that people have in their skin, which probably helps with blood pressure.

David Grimes (2013-07-06 01:39:51)

Observations are real. Then follows conjecture, attempts to explain the observations based on knowledge that we have. Protection by living at a high altitude in the USA requires explanation. Low partial pressure of oxygen has been suggested but does not make sense. Is the partial pressure of CO<sub>2</sub> really greater at high altitude? My school physics makes this unlikely. Is there a plausible mechanism? Does it make sense? I suggest increased sunlight intensity on the basis o: parallels with latitude; UV light being known the cure tuberculosis; UV light and vitamin D enhancing immune mechanisms. There is the recent observation that sunlight exposure has clinical benefit even when the blood level of vitsmin D does not change, hence the suggestion of a mechanism different from vitamin D. Nitric oxide is suggested but this is a very tentative suggestion and far from conclusive. The bottom line is that the sun is beneficial, but there might be mechanisms of benefit additional to vitamin D

### Why Do Magic Dots Work? (2013-07-05 05:00)

[1]



I've posted [2]several times about the use of what I call "magic dots" to get things done. You make a dot or line every six minutes of work. I use the counting method shown above. [3]The effect was first seen in pigeons. [4]A similar

effect was discovered (by accident) in rats.

It works amazingly well. "The magic dots have been magic," said [5]a user named Joan. It would be nice to know why – maybe the effect can be made even stronger. Joan commented in an email:

I have been thinking about why this has worked for me - I think it's that there is an almost immediate "reward", so I get started right away. Since the reward does not have any associations, there's no inner conflict sabotaging it. For instance, I might feel guilty if I ate a jelly bean every 6 minutes, or I might just eat them anyway. I'm not "deprived" if I don't get to add more dots and lines, and I know I can just get back to work and start writing dots again.

Certainly the dots - or the act of making a dot – act as a reward. But why? If I'm writing something, why do the dots have an effect when I can already see my progress by looking at what I've written? I'm already making marks.

The consistency of the marks – the same mark, again and again – may make a difference. Presumably the brain needs to notice a correlation: Writing (or whatever the difficult task is) produces both marks and progress (= a sense of satisfaction). Other activities produce neither. The more identical the marks, the easier to see the correlation. When I write, there is not one consistent mark of progress.

Maybe other people have independently discovered this, without knowing about the pigeon results. Their methods might shed light on what you need to do to get the effect. I don't know of any independent discoveries. The closest thing I can think of is most computer games provide markers of your progress throughout the game, such as level advancement.

1. [http://blog.sethroberts.net/wp-content/uploads/2012/06/IMG\\_02451.jpg](http://blog.sethroberts.net/wp-content/uploads/2012/06/IMG_02451.jpg)
2. <http://blog.sethroberts.net/category/procrastination/magic-dots/>
3. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1338316/>
4. <http://www.ncbi.nlm.nih.gov/pubmed/528888>
5. <http://blog.sethroberts.net/2013/06/15/magic-dots-user-experience/>

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Shawn (2013-07-05 06:11:35)

Is Magic Dots more for sedentary work? Yes: work where you remain near a pad of paper.

Conrad (2013-07-05 08:13:51)

Hi Seth, sorry if I'm overthinking this, but I just can't figure out your exact "magic dots" methodology from your posts. Here's my best guess- Is this correct? 1. Set a timer that counts upward from zero. 2. As you're working, occasionally glance over to the timer 3. Whenever the timer has passed a new  $n \cdot 6 - 3$  threshold, add "dots" until you reach "n" dots. 4. If you catch yourself NOT working, throw away the paper and reset the timer. Do this example describe it correctly? Example: Last time I glanced at the clock was at 60 minutes, which means there should be 10 marks on my paper (because  $10 \cdot 6 - 3 = 57$ ). Then at the 64 minute mark I glance over at the clock and add the 11th mark (because  $11 \cdot 6 - 3 = 63$ ). The next time I glance at the clock it's at 77 minutes. At this point  $n=13$  (because  $13 \cdot 6 - 3 = 75$ ) so I make TWO additional marks on the paper to get me up to the correct value for n. Seth: Yes, that's right. I changed a few words

Meegs (2013-07-05 11:33:11)

I've tried and it works. Worked for an hour straight on something I was procrastinating on. I'm using an interval timer app and notepad app on my phone and tablet.

Tom (2013-07-06 04:36:03)

I've been trying it; it works. I've just been making a mark when the timer resets.

John Eels (2013-07-06 04:42:16)

I tried it last night. I had a letter to write. It worked well. My approach deviates from Conrad's. I use a six min countdown on my mobile phone. After six min an alarm rings. I make a dot or line then and set the countdown again. Pieces by pieces I approach the square with the cross. In the end, I had four of these figures and a letter to send. Seth: Your letter took four hours?

Alex Chernavsky (2013-07-06 08:10:21)

I use a free interval timer that I configure to automatically cycle through six-minute countdowns. There is nothing to reset, except if you want to stop the cycling. The app issues a short vibration at the end of each cycle. <https://itunes.apple.com/us/app/interval-timer-for-fitness/id406473568?mt=8>

John Eels (2013-07-07 04:51:28)

Yes, it took four hours. The letter was addressed to a close friend. I disappointed her. I apologized and showed what had happened. Seth: That's a good example.

Caleb C (2013-07-07 20:17:36)

Is there an Android App which is a stopwatch that you can program to vibrate/make noise every six minutes? That seems like it would be ideal and I'd really like find one. You get the reinforcement if you're near where you can make the mark, but if you can't make a mark at the moment it keeps going so you still have your running total for when you can make the dots.

Rob (2013-07-15 01:57:38)

@Alex, I prefer the 30/30 app (<http://3030.binaryhammer.com/>) that comes \*without\* the annoying advertisements the interval timer has. @Caleb – I don't own an Android device, but a quick search showed me that the interval timer @Alex was referring to is available to Android users as well.

Bryan (2013-07-21 20:01:24)

You might also look for a "tabata timer" which is a timer app used to time intervals in a workout.

## **Tsinghua Graduation Memento Statement (2013-07-06 05:00)**

The first class of Tsinghua psychology majors in a half-century is graduating in a few days. (The Tsinghua psychology department was closed in the 1950s – Soviet-style university reorganization – and reopened in 2008.) The seniors asked their professors for statements to be included in a memento book. My contribution:

I remember [1]our first day of class (Frontiers of Psychology). It was my first time teaching in China. It was on a Monday, maybe it was your first class at Tsinghua. Some things surprised me. Moving from students in the front row to students in the back, English ability got worse. Each student said their name. When one student said her Chinese name, everyone laughed. I still do not understand this. This had never happened in my American classes. A student had her picture taken with me. This too never happened in America. There were two graduate students in the class. Both of them volunteered to be teaching

assistants. In America, no graduate students attended my undergraduate classes, and you need to pay them a lot of money to be teaching assistants. (At Tsinghua, that was the only time graduate students came to my class.) The graduate student who became my teaching assistant told you, "Don't say *My English is poor*. Say *My English is on the way*." I can tell you now I disagree. It is confusing to say *My English is on the way*. There is nothing wrong with saying *My English is poor*. I say 英语不好 all the time. We were all so new that we weren't sure when class ended! That was the first thing you made me learn: The length of a class period. I enjoyed having dinner with you. You were less afraid of me than my Berkeley students. I especially remember dinner with 王强, who told me the Chinese side of the debate about the Chinese takeover of Tibet. Most people in America, including professors like me, had no idea there is another side. I had had a big gap in my knowledge and hadn't even realized it. The most important thing I learned from you was how to teach better. The homework you did was very good but I was puzzled how to grade it. From talking with you at dinner and listening to you in class, I could tell that all of you were excellent students. It did not seem like a good idea to make it difficult to get the highest grade, but what was the alternative? This was the puzzle that you pushed me to solve. Eventually I changed how I teach quite a bit, as you may know from talking to students from [2]last year's Frontiers of Psychology. Thank you for that, and may you teach your future teachers as well as you taught me.

Because my students were so good, they made me see the deficiencies in usual teaching methods especially clearly. It really did seem idiotic to take perfectly good work and carefully divide it into piles of best, good, and less good (and give each pile a different grade). Surely there were better uses of my time than making such distinctions and better uses of their time and mental energy than trying to do exactly what I wanted.

When I visited Berkeley to be considered for an assistant professor job, one of the interviews was with graduate students. One of them asked, "Which do you like better, teaching or research?" "Research," I said. They laughed. All Berkeley professors prefer research, but you're supposed to say you like them equally. I was unaware of this. I did like research more, and still do, which is why I am surprised that I talk about teaching so much. I told a friend at lunch recently that it was weird how much I talk about my teaching ideas.

1. <http://blog.sethroberts.net/2009/09/22/tsinghua-curiosities-first-day-of-class/>

2. <http://blog.sethroberts.net/2013/01/26/my-ideas-about-teaching-put-into-practice/>

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kxmoore (2013-07-10 20:53:46)

what is the han side of the takeover of tibet? Seth: That a large fraction of Tibetans were essentially enslaved by the monks. See here: <http://blog.sethroberts.net/2009/10/05/china-and-tibet-the-other-side/>

### Assorted Links (2013-07-07 05:00)

- [1]yogurt booze
- [2]does Ritalin make kids dumber?
- [3]Yahoo group on intermittent fasting
- [4]coffee-shop noise increases creativity
- [5]the influence of Jane Jacobs



- [6]Naked and Afraid. A good TV show just starting on the Discovery Channel.

Thanks to Patrick Vlaskovits, Steve Dworman and Alex Chernavsky.

1. [http://www.thrillist.com/drink/nation/yogurt-booze-just-launched-in-the-us-so-naturally-we-made-our-editorial-assistants-try-it?utm\\_content=grubstreet&utm\\_medium=rss&utm\\_source=nymag&utm\\_term=web](http://www.thrillist.com/drink/nation/yogurt-booze-just-launched-in-the-us-so-naturally-we-made-our-editorial-assistants-try-it?utm_content=grubstreet&utm_medium=rss&utm_source=nymag&utm_term=web)
2. <http://www.newrepublic.com/article/113505/did-ritalin-make-kids-quebec-dumber>
3. <http://tech.groups.yahoo.com/group/fasting/>
4. <http://well.blogs.nytimes.com/2013/06/21/how-the-hum-of-a-coffee-shop-can-boost-creativity/>
5. <https://jseliger.wordpress.com/2013/07/03/jane-jacobs-is-everywhere-even-when-you-dont-see-her/>
6. <http://dsc.discovery.com/tv-shows/naked-and-afraid>

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Kudzu Bob (2013-07-07 13:51:27)

Perhaps some [1]ambient coffee-shop noise will stimulate especially creative comments...

1. <http://coffitivity.com/>

## **Journal of Personal Science: Effect of Meditation on Math Speed (2013-07-08 05:00)**

by [1]Peter Lewis

Background

I've been practicing meditation on and off for years. It doesn't interest me in a spiritual sense; I do it because I think it improves my mental function. However, what I've read suggests there isn't a lot of evidence to support that. For example, [2]John Horgan in Scientific American:

Meditation reportedly reduces stress, anxiety and depression, but it has been linked to increased negative emotions, too. Some studies indicate that meditation makes you hyper-sensitive to external stimuli; others reveal the opposite effect. Brain scans do not yield consistent results, either. For every report of heightened neural activity in the frontal cortex and decreased activity in the left parietal lobe, there exists a contrary result.

From a 2007 [3]meta-analysis of 800+ studies:

Most clinical trials on meditation practices are generally characterized by poor methodological quality with significant threats to validity in every major quality domain assessed.

Most of this research asked questions different than mine. The studies used physical measures like blood pressure, studied complex states like depression and stress, or isolated, low-level "executive functions" like [4]working memory. My question was simpler: Is meditation making me smarter? "Smarter" is a pretty complex thing, so I wanted to start with a broad, intuitive measure. There's a free app called Math Workout ([5]Android, [6]iPhone) that I've been using for years. It has a feature called World Challenge that's similar to what Seth [7]developed to test his own brain

function: it gives you fifty arithmetic problems and measures how fast you solve them. Your time is compared to all other users in the world that day. This competitive element has kept me using it regularly, even though I had no need for better math skills.

## Study Design

I only had about a month, so I decided on a 24-day experiment.

**Measurement.** Every day for the whole experiment, I completed at least four trials with Math Workout: three successive ones in the morning, within an hour of waking up, and at least one later in the day. For each trial, I recorded my time, number of errors and the time of day. Math Workout problems range from  $2+2$  to squares and roots. The first ten or so are always quite easy and they get more difficult after that, but this seems to be a fixed progression, unrelated to your performance. Examples of difficult problems are  $3.7 + 7.3$ ,  $93 + 18$ ,  $14 * 7$ , and  $12^2 + \sqrt{9}$ . If you make a mistake, the screen flashes and you have to try again on the same problem until you get it right. As soon as you answer a problem correctly, the next one appears.

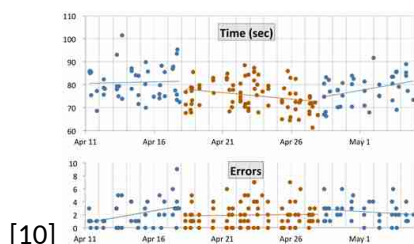
**Treatment.** I used an ABA design. For the first seven days, I just did the math, with no meditation. (I hadn't been meditating at all during the 3-4 weeks before the start of the experiment.) For the next ten days, I meditated for at least ten minutes every morning within an hour of waking, and did the three successive math trials immediately afterward. I did a simple breath-counting meditation, similar to what's described [8]here. The recorded meditations that I gave the other participants were based on Jon Kabat-Zinn's [9]Mindfulness Based Stress Reduction program and also focused on awareness of breathing, though without the counting element. The final seven days were a second baseline period, with no meditation.

Before beginning, I posted about this experiment on Facebook, and I was pleasantly surprised to get eleven other volunteers who were willing to follow the same protocol and share their data with me. I set up online spreadsheets for each participant where they could enter their results. I also emailed them a guided ten-minute meditation in mp3 format. It was a fairly simple breathing meditation, secular and non-denominational.

## Results

Meditation had a small positive effect. During the meditation period, my average time to correctly answer 50 problems was 75 seconds, compared to 81 during the first baseline – a drop of 7 % – and the times also dropped slightly over the ten days (slope of trendline: -0.6 seconds/day). When I stopped meditating, my times trended sharply back up (slope: 1.0 seconds/day) to an average of 78 seconds during the second baseline period. These trends suggest that the effect of meditation increased with time, which is in line with what most meditators would tell you: the longer you do it consistently, the better it works. My error rates were more flat – from 2.1 errors per 50 correct answers in the first baseline period, to 2.2 during the meditation period and 2.5 during the second baseline – and did not display the same internal trends.

(click on the graph for a larger version)



Of the other eleven subjects, six of them stuck with the experiment till the end. Their data was messier, because they were new to the app and there's a big practice effect. Because of this, I was less focused on finding a drop from the first control period to the meditation (which you'd expect anyway from practice) and looking more for an increase in times in the second control period (which you wouldn't expect to see unless the meditation had been helping).

Taking that into account, three of the six subjects seemed to me to display a similar positive effect to mine. Two I'd call inconclusive, and one showed a clear negative effect. ([11]Here is the data for these other subjects.)

#### What I Learned

I found these results encouraging. Like Seth, I take this kind of basic math exercise to be a good proxy for general brain function. Anything that makes me better at it is likely to also improve my performance on other mental tasks. As I mentioned above, I've been using this particular app for years, and my times plateaued long ago, so finding a new factor that produces a noticeable difference is impressive. An obvious concern is that I was trying harder on the days that I meditated. Since it's impossible to "blind" subjects as to whether they've meditated or not, I can't think of a perfect way to correct for this. If meditation does make me faster at math, what are the mechanisms? For example, does it improve my speed at processing arithmetic problems, or my speed of recall at the ones that I knew from memory (e.g. times tables), or my decisiveness once I think I have an answer? It felt like the biggest factor was better focus. I wasn't solving the problems faster so much as cutting down on the fractional seconds of distraction between them.

#### Improvements

It would have helped to have a longer first control period, as Seth and others advised me before I began. I was scheduled to present my results at [12]this conference and at the time it was only a month away, so I decided to make the best of the time I had. Next time I'll have a three- or four-week baseline period, especially if I'm including subjects who haven't meditated before. The single biggest improvement would be to recruit non-meditators to follow the same protocol. Most of the other volunteers, like me, were interested because they were already positively disposed towards meditation as a daily habit. I don't think they liked the idea of baseline periods when they couldn't meditate, and this probably contributed to the dropout rate. (If I'd tried to put any of them in a baseline group that never meditated at all and just did math, I doubt any of that group would have finished.) It might be easier to recruit people who already use this app (or other math games) and get them to meditate than vice versa. That would also reduce the practice effect problem, and the effects of meditation might be stronger in people who are doing it for the first time. More difficult math problems might be a more sensitive measure, since I wouldn't be answering them from memory. Nothing super-complex, just two- or three-digit numbers ( $253 + 178$ ).

I'm planning to repeat this experiment myself at some point, and I'm also interested in aggregating data from others who do something similar, either in sync with me as above, or on your own timeline and protocol. I'd also appreciate suggestions for how to improve the experimental design.

#### Comment by Seth

The easiest way to improve this experiment would be to have longer phases. Usually you should run a phase until your measure stops changing and you have collected plenty of data during a steady state. (What "plenty of data" is depends on the strength of the treatment you are studying. Plenty of data might be 5 points or 20 points.) If it isn't clear how long it will take to reach steady state, deciding in advance the length of a phase is not a good idea.

Another way to improve this experiment would be to do statistical tests that generate p values; this would give a better indication of the strength of the evidence. Because this experiment didn't reach steady states, the best tests are complicated (e.g., comparison of slopes of fitted lines). With steady-state data, these tests are simple (e.g., com-

parison of means).

If you are sophisticated at statistics, you could look for a time-of-day effect (are tests later in the day faster?), a day-of-week effect, and so on. If these effects exist, their removal would make the experiment more sensitive. In my brain-function experiments, I use a small number of problems so that I can adjust for problem difficulty. That isn't possible here.

These comments should not get in the way of noticing that the experiment answered the question Peter wanted to answer. I would follow up these results by studying similar treatments: listening to music for 10 minutes, sitting quietly for 10 minutes, and so on. To learn more about why meditation has an effect. The better you understand that, the better you can use it (make the effect larger, more convenient, and so on).

1. <http://plewis.info/>
2. <http://blogs.scientificamerican.com/cross-check/2011/12/02/why-i-dont-dig-buddhism/>
3. <http://archive.ahrq.gov/downloads/pub/evidence/pdf/meditation/medit.pdf>
4. <http://rd.springer.com/content/pdf/10.3758%2F13415-011-0048-8.pdf>
5. <https://play.google.com/store/apps/details?id=com.akbur.mathsworkout&hl=en>
6. <https://itunes.apple.com/us/app/math-workout/id497620537?mt=8>
7. <http://blog.sethroberts.net/2010/03/27/why-i-use-arithmetic-to-measure-brain-function/>
8. <https://sites.google.com/a/audiodharmacourse.org/mindfulness-meditation/counting-breaths>
9. [http://en.wikipedia.org/wiki/Mindfulness-based\\_stress\\_reduction](http://en.wikipedia.org/wiki/Mindfulness-based_stress_reduction)
10. [http://mechanicalbrain.files.wordpress.com/2013/07/med\\_pl.png](http://mechanicalbrain.files.wordpress.com/2013/07/med_pl.png)
11. [http://mechanicalbrain.files.wordpress.com/2013/07/med\\_other\\_subjects.pdf](http://mechanicalbrain.files.wordpress.com/2013/07/med_other_subjects.pdf)
12. <http://quantifiedself.com/conference/Amsterdam-2013/>

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Erika (2013-07-08 08:35:08)

I am a regular meditator and I have a couple of thoughts that might be helpful. I've had a daily meditation practice for the last 6 years that was initially 15 minutes a day but increased to 2 hours a day (I'm now meditating for 1 hour a day). I practice Zen mediation which is probably quite similar to the breath centered meditation mentioned. - meditation is a skill that is developed. Individuals new to meditation may not see as much benefit if they aren't trying to learn that skill (rather than just thinking during that period of time). Personally, I think this may be part of why some studies on meditation are inconclusive. - meditation takes time. I have personally experienced some dramatic changes because of my meditation practice but only after fairly significant periods of daily, consistent practice. - I would say the real benefits begin to come after 30 minutes of daily practice. For me, there was a clear and noticeable difference about 2 weeks after beginning 30 minutes/day - The biggest improvement came for me when I moved from 30 minutes/day to 1 hour/day. It took about 4 weeks to see that improvement. - 2 hours a day was wonderful. Many of the things that make our lives harder are small day to day anxieties - the 1000 emotional paper cuts of interacting with other people. With this level of practice it is much easier to not take things personally. It's very hard to maintain 2 hours a day. For me, this is what meditation does: - removes some fear of suffering/pain. I find that I procrastinate significantly less because I don't have as much need to avoid those tasks. You might not think that you procrastinate because of suffering/pain but that's what I began to see when I started meditation. - helps with anxiety - helps you see more clearly what you are reacting to. What I would recommend for your experiment: - have another group of experienced meditators and have them increase the daily meditation time (with the minimum being 30 minutes). - have this group run the experiment for at least 2 months - I would have the group try and record their level of procrastination (although it might be hard to measure) Cheers, Erika

gwern (2013-07-08 08:40:06)

Could you post the spreadsheet/data for all 12 subjects? I'd like to analyze it.

Justin Irving (2013-07-10 05:17:03)

Thank you for posting this. Anyone familiar with the emwave2 device? It's a commercial heart rate variability monitor, with desktop software. A biofeedback meditation aid. It would be worthwhile to do a similar experiment, using the HRV monitor as the treatment, instead of 'unguided' meditation. It could tell us something about \*why\* meditation is helpful. I hope I will stay focused this topic long enough to finish a study of my own...

Peter Lewis (2013-07-12 07:40:59)

Erika: Thanks for the detailed reply, it's very helpful and I'll definitely take your recommendations into account for the next time. I'm not sure how long I can realistically get people to meditate a half hour or more every day, but something more rigorous is definitely called for. Gwern (and anyone else): I've now posted the raw data at [www.plewis.info](http://www.plewis.info) (link at the bottom) Justin: haven't heard of the emwave2. I once had a gadget that measured breathing through the oxygen content of your breath, you'd hold your index finger on a sensor ... I think it was called the Stress Eraser or Stress Relaxer? Anyway I found that to be a helpful form of biofeedback for meditation. Heart rate might be a bit more useful but I don't know that either would really tell us "why" it works...

gwern (2013-07-13 19:07:16)

Thanks. Using that Excel data, I've done the analysis and posted it all here: [http://www.gwern.net/Lewis %20meditation](http://www.gwern.net/Lewis%20meditation) Summary:  $p=0.27$  for meditation (but p-values are pretty useless in small studies), and I found practice & Robert's time-of-day effects but not any obvious week-day effects.

What We Are Reading | Quantified SelfQuantified Self (2013-07-14 11:38:21)

[...] Journal of Personal Science: Effect of Meditation on Math Speed by Peter Lewis: Originally presented at our 2013 Quantified Self European Conference, this post details Peter's self-experiment on improving his cognitive abilities through a meditation practice. Peter also has an excellent post on his personal website entitled, What's Driving the Quantified Self Movement? Well worth a read. [...]

## **The History of Human Chromosome Number Reveals Constraints on Professional Scientists (2013-07-09 05:00)**

Why does personal science matter? One reason, as I've said [1]many times, is that personal scientists (who do science to help themselves) are free to speak the truth. Sometimes professional scientists (for whom science is a job) are not.

The history of human chromosome number is a good example. Starting in the 1920s, humans were said to have 48 chromosomes. In fact, the correct number is 46. From the soon-to-be-published book *The Truth in Small Doses* by Clifton Leaf (copy sent me by publisher), which is about cancer research, I learned that in 1955 two Swedish scientists, Tjio and Levan, established the correct number. After their article appeared,

Several researchers wrote [them] to confess that they, too, had spied only forty-six chromosomes but had thrown out the results because they were in conflict with established knowledge.

"In conflict with established knowledge" was euphemism for we were worried what would happen to us.

*The Truth in Small Doses* begins with this story. Leaf's point is that cancer researchers have a similar problem: They too cannot tell the truth, which is that progress against cancer has been poor, in spite of billions of dollars spent on

research.

1. <http://media.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

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dearieme (2013-07-09 05:38:25)

"progress against cancer has been poor": with the exception, I understand, of useful progress on some childhood cancers. Seth: That's right. Because those cancers are rare, it doesn't do much to change the overall record. The other exception is lung cancer. Lung cancer has gone down a lot since it was figured out that it is caused by smoking. Leaf doesn't mention this.

Tim Ossman (2013-07-09 06:31:21)

How long will it before "Professional Scientists" will admit research which makes people TRULY UNCOMFORTABLE, such as that indicating that humans are hybrids of bonobos and PIGS? <http://www.macroevolution.net/human-origins.html> In our lifetimes?

Alex Chernavsky (2013-07-09 07:53:14)

From Richard Feynman's graduation speech given at Cal Tech in 1974 (as quoted on this [1]Wikipedia page):

We have learned a lot from experience about how to handle some of the ways we fool ourselves. One example: Millikan measured the charge on an electron by an experiment with falling oil drops, and got an answer which we now know not to be quite right. It's a little bit off because he had the incorrect value for the viscosity of air. It's interesting to look at the history of measurements of the charge of an electron, after Millikan. If you plot them as a function of time, you find that one is a little bit bigger than Millikan's, and the next one's a little bit bigger than that, and the next one's a little bit bigger than that, until finally they settle down to a number which is higher. Why didn't they discover the new number was higher right away? It's a thing that scientists are ashamed of - this history - because it's apparent that people did things like this: When they got a number that was too high above Millikan's, they thought something must be wrong - and they would look for and find a reason why something might be wrong. When they got a number close to Millikan's value they didn't look so hard. And so they eliminated the numbers that were too far off, and did other things like that

Seth: Yes, another good example.

1. [http://en.wikipedia.org/wiki/Oil\\_drop\\_experiment](http://en.wikipedia.org/wiki/Oil_drop_experiment)

Daniel Lemire (2013-07-09 09:25:33)

I don't think there is necessarily always a conspiracy in favor of the status quo. People just tends to cling to whatever they have learned about first. It is expensive to change your mind. There is no doubt that "we were worried what would happen to us" is sometimes the right explanation, but it is not always the case. The phenomenon you describe happens even when nobody has a strong incentive to preserve the status quo.

Nile (2013-07-09 11:12:00)

To expand on what Daniel Lemire wrote - Thorson Veblen coined the term "trained incapacity" to refer to the inability of people to see solutions to problems when the solution exists outside the training or educational background of the solution seeker. A story, probably apocryphal, was that Veblen bolted a pipe to a table and then dropped a small ball, like a ping-pong ball, into the pipe. On a nearby table Veblen had laid out some tools, as well as normal amenities - water, light snacks, etc. Veblen then invited some engineers to get the ball out of the pipe. The provided hand tools were (deliberately) inappropriate for the task so the engineers failed. Veblen then asked a farmer to get the ball out of the pipe. The farmer promptly took the water pitcher, poured water into the pipe and the ball floated to the top. I have no doubt that some scientists are afraid to speak the

truth for fear of damaging their reputations but I also have no doubt that some scientists (and politicians, educators, citizens, business people, etc.etc.) simply can not see or accept existing reality because of "trained incapacity" All the more reason to do personal science and "crazy" experiments A good, short explanation of the phenomenon by the late, great Herman Kahn can be found here; [http://www.hudson.org/index.cfm?fuseaction=publication\\_details&id=2219](http://www.hudson.org/index.cfm?fuseaction=publication_details&id=2219) Seth: I agree. That's another reason to support personal science: To open up the investigation of X (e.g., cancer) to people who use tools other than the tools of professional scientists. The story sounds too practical for Veblen.

dearieme (2013-07-09 13:02:28)

The Millikan story is a bit clouded, though, by the fact that he fiddled his numbers anyway (or so I understand).

### **Congratulations, Morex! Shangri-La Diet Success (2013-07-10 05:00)**



The photo on the left was taken summer 2011; the photo on the right was taken June 2013. He lost 75 pounds in 5 months. Morex writes:

All my life I had been the fat guy. I was that kid in school that couldn't run or go out and play because I was too heavy. You know how that is.

My teenage years and all my adult life I had been the fat guy. Until today.

I tried every kind of diet to my knowledge. I exercise since I have memory. But I never could lose enough

weight or maintain the little weight loss I could achieve.

Until I read Freakonomics, which led me to research about Seth and SLD, which led me to these forums and to reading the book.

So last January [January 2013], after reading a little about how SLD works, I decided to give it a go.

He gives details [1]here.

1. <http://boards.sethroberts.net/index.php?topic=8367.0>

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David (2013-07-10 20:40:18)

That is incredibly impressive. I am happy for the great success he has had. But I wish we knew why it worked so well for him, but not for others. I've tried SLD three times and did not have any significant success. Seth: If you contact me, I'd be happy to try to answer your question: why it worked for him but not for you.

Morex (2013-07-11 08:51:07)

Thank you for posting about my little SLD adventure. All the credit is yours, really. You, sir, are awesome. But now you made me curious. I know what I did, of course, but is there any particular scientific reason why SLD worked with me?

David (2013-07-11 18:28:21)

Morex - When I've tried SLD I have noticed that food often didn't taste as good as it had before and it did feel like I got full a bit faster, but those effects were fairly small and did not amount to any significant appetite suppression. So after a week or so food cravings start to kick in and willpower (to eat less) runs out. From reading your page on the SLD forums, it seems like you experienced noticeable appetite suppression by Day 4 and the effect only got stronger from there. Is that correct? Seth - I've sent you an email.

Morex (2013-07-12 10:51:08)

Hi David. In my experience, yes, food tastes different under SLD. The things you used to like will no longer be appealing and you will develop new tastes. For example, I now love jalapeños and peanuts. I crave for them and I didn't even think about them before SLD. Also, I rarely use spices anymore. I don't need them. Simple food now is so intense that I may use a little pepper here and there. But that's it. So yeah, food tastes a little different. I think it has to be that you are breaking the addiction to always have very strong flavors on your mouth. And yes, you get full REALLY fast after AS kicks in in all its force. Take a look at my journal and you'll see the portions I have nowadays. My AS was good from the beginning. But it took a little more than a month for it to be this huge. I am not an expert, of course, but I always advise to be VERY patient. In a world where we are used to instant gratification, waiting a few weeks might seem a daunting task. Just have your oil or sugar in the amount appropriate to your body and be patient. I had to read the FAQ a few times and the book twice. And follow SLD like a bullet list. Don't stay too far away from the plan. That was my only secret, really. Hope that helps.

delante (2013-07-15 03:04:15)

Re "why it worked for him but not for you" - if there's anything new here, or if its some aspect that most people miss, I'd be interested to read more about it on the blog . Seth: My theory is this. Your weight is controlled by (say) five factors. SLD changes one of them, pushing you toward a lower weight. It is powerful only to the extent that your eating is based on how hungry you are. SLD will appear to fail - no lost weight - when (a) the other factors are pushing your weight upward strongly



enough and (b) hunger has little control over your eating (= you often or usually eat when you're not hungry), which reduces the downward push of SLD.

### Assorted Links (2013-07-11 05:00)

- [1]self-tracking neuroscientist. I have only learned from tracking when I am adventurous – when I change stuff, such as what I eat. I will be curious to see if the same thing happens here. The initial thought when tracking yourself is "keep things constant" so that the data from different days will be more comparable. This makes sense if you are doing an experiment where different days get different treatments. It does not make sense when you are not doing an experiment. This self-tracker doesn't seem to be doing any experiments, so he should allow his life to be messy if he wants to learn more.
- [2]Interview with Renata Adler
- [3]Alternate-day fasting thread at Mark's Daily Apple
- [4]An essay on the effect of immigrants on "economic freedom" (via [5]Marginal Revolution) does not mention the fact that immigrants bring new ideas and skills. This is an example of the way economists usually ignore innovation, which benefits from new ideas and skills. Innovations usually derive from new combinations of things. To open a new business (an instance of economic freedom) it really helps to have a new good or service. New cuisines (immigrants open restaurants) is just the beginning.

Thanks to Dave Lull.

1. <http://www.technologyreview.com/news/514886/the-quantified-brain-of-a-self-tracking-neuroscientist/>
2. <http://www.guardian.co.uk/books/2013/jul/07/renata-adler-new-york-author-interview>
3. <http://www.marksdailyapple.com/forum/thread81577.html>
4. <http://www.cato.org/blog/immigration-does-not-decrease-economic-freedom>
5. <http://marginalrevolution.com/marginalrevolution/2013/07/assorted-links-847.html>

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Tim Ossman (2013-07-11 15:07:01)

Interesting link for you: <http://www.bbc.com/future/story/20130710-how-our-organs-sniff-out-smells/all>

Steve Johnson (2013-07-11 15:46:56)

<http://www.isegoria.net/2013/07/why-does-the-lack-of-traffic-rules-work-in-en-gland-but-not-in-haiti/> Yep, immigrants bring loads of new ideas and cuisine is just the beginning.

Dave in Seattle (2013-07-11 23:18:41)

Yes, immigrants, especially from the third world bring a great deal with them. Just off the top of my head, think of all the doctors and medical professionals from India and the former USSR who made incredible innovations in medicare and insurance fraud. The next time the feds make a medicare bust just check out the names-usually an odd assortment of Armenians, Ukrainians, Russians, Russian Jews, Nigerians and South Asians, all working harmoniously to screw over their adopted country and Uncle Sugar. The Chechen terrorists in Boston, the Saudi terrorists on 9/11 and the Fort Hood shooting. In Seattle it seems the Romanian immigrants are in forefront of ATM fraud with incredibly high tech card skimmers. The Chinese and Koreans are

ruthless at human trafficking and prostitution. The illegals from Mexico and Central America are usually the ones clogging your local hospitals ER-those are the good ones, the bad ones of course are members of the ruthless drug gangs now recruiting and operating in the USA because of our insane open borders policies. Did I leave anything out? Antibiotic resistant TB, identity theft, the complete fracturing of society because no one trusts each other anymore with high security gated communities for the rich and the ever diminishing middle classes trying to escape the chaos and bad schools . Suburban and urban sprawl, unsustainable water demands in desert monstrosities like Las Vegas and Phoenix, traffic jams, low wages and massive job competition for native born Americans from the lowest rungs of society. These open borders zealots like Obama, Bush jr., McCain and the tenured professors at George Mason University don't have to deal with this anarchy and the crime they've created. They've got cheap nannies, gardeners, maids, etc. and most importantly they get to feel and look compassionate while they get to denigrate the "nativist rednecks" who are left bewildered as their nation crumbles and best of all the taxpayers get stuck with the bill. Plus a fractured and diverse society is much easier to rule and tyrannize. It was Saudi immigrants who gave us the TSA. Remember that the next time you or your grandmother is harassed and molested by a government agent at the airport. Seth: "Did I leave anything out?" Yes, you did. How recently did you use Google? I used it a few seconds ago. How recently did you eat ethnic food? I ate kimchi 10 hours ago. To give just two examples. You left a lot out. When is the last time you were personally affected by one of the bad effects you describe?

Dave in Seattle (2013-07-12 09:53:56)

Look I like some ethnic food. But all I'm asking for is a little hard headed cost benefit analysis. Or better yet, just for our bettors to ask the citizens of this country if we want to be a multiracial, multilingual, religiously diverse nation of well over 300 million people. We were never asked, it was just shoved down our throats and if you disagreed you were labeled a hateful, racssist. See the now unemployed and likely unemployable Jason Richwine or James Watson, John Derbyshire or Pat Buchanan, well you see where I'm going, certain thoughts are well, Crimethink no matter how scientific or factual they are. I'm affected by it everyday, my once friendly, safe neighborhood that was completely homogeneous thirty years ago is filled with Asian and Hispanic gangs, drive by shootings that literally never happened when I was a kid, happen a few times a year. Doors were left unlocked for the most part, kids played all day without any supervision or their parents worrying about them. Now you'd be nuts to let your kids out your sight in this neighborhood. Parts of Eastern Washington state, which is where my family is from (Oakies) used to be filled with quiet, friendly, little farm towns that are now filled with Central American drug gangs fighting vicious little turf wars with each other. And no these Hispanics aren't picking crops in the fields-their parents did that, the kids are in jail, dealing drugs or if they are women usually on welfare. Look I like Mexicans, I like their food and I've done lots of grunt work with them. I respect hard working people and many illegals are decent and hardworking but they bring a whole host of pathologies with them and to ignore these is just stupid. Also flooding the US with tens of millions of low skilled and barely literate workers when the real unemployment is around 20 % is just cruel to our own citizens who we are supposed to be looking out for. It's cruel to the low skilled workers that used to do those jobs, but nobody will hire them now because they aren't as cheap, subservient and most importantly for the employer dispossable as the illegal/legal immigrants. The Google argument is a strawman, when has the US denied entry to genius immigrants? To equate the parents of Brin and Page or of Tesla and Einstein to the millions of low skilled, barely literate people we are taking in nowadays is disingenuous. Like I mentioned before, Medicare fraud is multi-billion dollar industry and highly intelligent immigrants from low trust nations play a huge role in this fraud. No one wants to take an honest look at how much these immigrants cost our nation. I mean how many more Raj Rajaratnam or Armen Kazarians can this country take. Our country is what 16 trillion dollars in debt and yet we continue to take in super smart crooks from all over the world. And yes I know there are plenty of home grown criminals but do we need to scour the world for more? And as Steve Sailer has written about, why are we importing fraudulent asylum seeking Chechens. Or think about all of crime the Somali immigrants cause in once placid Minnesota? I'm sure Somali cuisine has it's fans but is it worth it? You admire Japan and it's culture, so do I. By your thinking Japan should let in millions of migrants from all over the world. Somalis, Nigerians, Salvadorans, Indians and Pakistanis would make Japan more interesting, with a better choice of markets and restaurants, well perhaps. Other things might change too and as Dennis Mangan has said, "What could go wrong?" Seth: I don't have an opinion about large-scale immigration. I am neither for nor against it. My point is/was that your earlier argument that immigration was overall bad was woefully incomplete. I don't agree that a long list of bad effects of immigration - the fact that immigration does have many bad effects - should determine what any reasonable person should think. I agree that the thought police are far worse than the thinkers they try to suppress. I also think that you need

an assimilation process that works and if you don't you are going to have enormous trouble. That being said, I think of the following: Person A: My GPS keeps breaking! Person B: You have GPS? Americans are lucky that so many people want to come here. There's a reason. It's not that they think we're easy marks. Far from it.

Barbarosa (2013-07-12 17:30:11)

Let's get real here. We need to stop pretending that the immigration we like (japanese sushi chefs or Chinese STEM post-docs, e.g.) has a flying fig to do with what the immigration debate is mostly about – amnesty and eventual citizenship for at least 11 million low-skilled, uneducated Mexican citizens, who sure as Hell will not be founding any software companies or twee tea shops. Mexican immigrants have been in this country for well over a hundred years, and for whatever reason they simply do not converge to white middle-class standards on a number of social metrics. Ergo inviting them in en masse will bring down the National average. We have a good thing going. It's not worth risking for cheap Mexican food. It's really not that complicated. The fact that their presence does not obviously deleteriously effect upper-middle class urban yuppies is altogether unsurprising: we don't live in their neighborhoods, their academically below average children don't go to school or camp with ours, and they're not competing for our high paying jobs. Low skilled immigration will only harm American's will low-skilled jobs. And corporate capitalists (i.e. investors of capital) will benefit from their cheaper labor. Well educated, affluent Libertarians like to delude themselves with the conceit that these displaced workers can just go out and get more education or "retool their skill set" or some other such fairy tale. Half of Americans are necessarily below average. It will be hard enough finding a place for them in a economy where the gains are increasingly redounding to the cognitively gifted.

### **Anesthesia Dolorosa Mirror Cure (2013-07-12 05:55)**

[1]Anesthesia Dolorosa is a very rare condition in which part of the skin that is numb feels pain. It is a side effect of surgery for trigeminal neuralgia. "No effective medical therapy has yet been found," says [2]the Wikipedia entry. Whoever wrote that meant that no entirely effective therapy has been found. Some surgical treatments are helpful some of the time.

In [3]a series of blog posts, an art historian named Beth Taylor-Schott wrote about using a mirror to eliminate her husband's Anesthesia Dolorosa, which was on his face. She got the idea from a New Yorker article by Atul Gawande about V.S. Ramachandra's use of mirror therapy to treat phantom limb pain. I [4]mentioned this years ago but it is worth mentioning again as an example of non-medical-professionals finding a solution to a medical problem much better than anything professionals came up with.

Here's a brief description of what happened:

My brother-in-law sent me [5]an article by Atul Gawande from the June 30th [2008] issue of the New Yorker. Using the information from the article, we came up with a non-reversed mirror therapy to try to reduce David's AD-related pain. . . . We started doing the therapy on the 23rd of July, 2008. Within 2-3 days, his pain was down to zero, and as long as we continued to do the mirror therapy 3-4 times a day, it remained that low. This was the lowest it had been since he had had the sympathetic nerve blocks, and it stayed low for much longer periods of time than it had after the blocks.

Once the pain was stabilized at 0, we started to reduce his Neurontin, first by 400 mgs each time, then once we got to 1200 mg, by 200 mg at a time. Typically, we reduced it every 3-4 days. The first or second day after the Neurontin was reduced, the pain would typically start to go up somewhat, although it rarely went above a 5, and that was under extreme circumstances. But if we kept doing the mirror therapy, it would go back down and remain at zero, so that we could reduce the Neurontin again, and so on.

Today is the 27th of August. David's pain has been under control all day. Tonight, for the first time, he did not take any Neurontin when he went to sleep. As of tomorrow morning, it will have been 36 hours since he has had any Neurontin. . . .

[Details of the treatment] David can look either into the mirror in his hand, or into the reflection of that mirror in the mirror on the wall, and in both of them he sees a non-reversed image of himself (unlike a regular mirror image, in which the image is reversed.) The therapy depends upon the brain not realizing that the images it sees are non-reversed images, but assuming that they are regular, reversed mirror images. . . . standing behind the chair, I would reach around and touch/massage the right side of David's face for the length of the session while he watched in the non-reversed mirrors. Yes, you read that correctly. The affected side is the left, but I would massage the right side, the one that still has feeling. Since David's brain thought it was looking into a mirror, it saw me massaging the left side of the face and so actually experienced sensation in that left side when I was actually touching the right side. In this way, it contradicted the brain's theory that since it was not getting any signals from the nerves, something must be terribly wrong, so that it needed to invent pain signals to alert David to its state.

That ordinary people can do so much better than experts on an enormously important problem (if you have AD) is either wonderful or depressing if you believe, as I do, that this will turn out to be common. I have written to Taylor-Schott to ask what has happened since then.

1. [http://en.wikipedia.org/wiki/Anesthesia\\_dolorosa](http://en.wikipedia.org/wiki/Anesthesia_dolorosa)
2. [http://en.wikipedia.org/wiki/Anesthesia\\_dolorosa](http://en.wikipedia.org/wiki/Anesthesia_dolorosa)
3. <http://anadmiracle.blogspot.com/>
4. <http://blog.sethroberts.net/2009/11/17/gatekeeper-syndrome/>
5. [http://www.newyorker.com/reporting/2008/06/30/080630fa\\_fact\\_gawande?currentPage=all](http://www.newyorker.com/reporting/2008/06/30/080630fa_fact_gawande?currentPage=all)

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## **My Heart Watch: Bay Area Health Measurements (2013-07-13 05:00)**

For many years I have used the services of [1]Heart Watch to measure my cholesterol and other health-related things, such as HbA1c. The couple that runs Heart Watch, Sandy and Glen, travels up and down California. I was able to get tested only every three months. Feeling that this was inadequate, just as I did, a man named Karl Corbett recently started a business called [2]My Heart Watch that allows much more frequent tests in the Bay Area, at similar price. My Heart Watch uses the same portable testing devices as Heart Watch.

The Berkeley location is almost across the street from Whole Foods. I signed up online (I was the first person to use their online sign-up service), which was very convenient.

Corbett told me that he greatly improved his cholesterol numbers by changing to [3]a Caldwell-Esselstyn "plant-based diet" that included lots of vegetables, some fruit, no oils, and no animal-based products. (Since the usual oils, such as olive and soybean oil, are plant-based, this is a curious feature. Esselstyn seems to ignore [4]bad effects of cholesterol lowering.) The more often you can test yourself, the more easily you can determine what controls what you're measuring. When you can test yourself often enough to be sure whether a dietary (or other) change has made a difference, you can begin to ignore large clinical trials and their many limitations, which include poor choice of control group, poor statistics, incomplete reporting, biased reporting, publication bias, confoundings, investigator fraud, on and on. They are the fool's-gold standard. If I can determine if [5]alternate-day fasting improves my HbA1c, I can ignore what clinical trials say about it.

Before writing this post I spoke to Corbett about getting discounted testing in return for publicizing My Heart Watch.

1. <http://www.westcoasthealthservices.com/cm/Home.html>
2. <http://myheartwatch.com/>
3. <http://www.heartattackproof.com/>
4. <http://www.ncbi.nlm.nih.gov/pubmed/2144195>
5. <http://blog.sethroberts.net/2013/07/02/does-alternate-day-fasting-lower-hba1c/>

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Sean (2013-07-13 05:52:51)

I'm not sure what convinced me of Dr Esselstyn's diet, whether it was the scientific objectivity, the overall website design, or the 'as seen on CNN' logo at the top of the page, but I'm suddenly convinced that SFAs will clog my arteries.

Laura (2013-07-13 07:47:32)

Regarding the study you linked (bad effects of cholesterol lowering)...it seems that cholesterol was lowered in that study by means of medication. The health outcomes might be very different if the same thing were achieved using an Esselstyn-type diet. Seth: I think it is not so simple. Let's say the medicine in that study has two effects: X and cholesterol-lowering. An Esselstyn-type diet has other effects: Y plus cholesterol-lowering. As far as I know, the medicine in that study does not have the bad effects (e.g., increased risk of suicide) unless your cholesterol is low. Which suggests that it has bad effects because it lowers cholesterol. So it is not obvious how an Esselstyn-type diet will affect suicide and other measures of mental health. Were Esselstyn to understand this and try to find the answer ("what effect does my diet have on mental health?") I would respect him. As far as I know, he doesn't. The bad effects of cholesterol-lowering seen in that study and others he dismisses too easily.

dearieme (2013-07-13 11:00:09)

Perhaps your optimal cholesterol level is whatever level your body adopts when you eat a healthy mixed diet. Who knows?

derp (2013-07-13 14:24:27)

It is an interesting piece of self-experimentation and emphasizes how important it is to measure early, often and regularly. You already noted the futility of bringing down the cholesterol content - this is another aspect of self-experimentation: You need to measure outcomes that really do improve that what you want to improve (health in that case) and not some epidemiologically-linked number.

Javed Alam (2013-07-13 22:36:02)

I have used this home Kit to test for total cholesterol, HDL and Triglycerides. [http://www.cardiochek.com/index.php?option=com\\_content&view=article&id=135&Itemid=255](http://www.cardiochek.com/index.php?option=com_content&view=article&id=135&Itemid=255) It works and results match up with the lab results. I don't use it to test blood glucose levels for that I have a different test kit from Bayers. I also use home A1C test kit from Bayers some times. Seth: At first I was excited by the existence of home A1C testing. Then I saw [1]this review.

1. [http://www.amazon.com/review/R1274T1GB88EI7/ref=cm\\_cr\\_dp\\_title?ie=UTF8&ASIN=B004N110GQ&nodeID=3760901&store=hpc](http://www.amazon.com/review/R1274T1GB88EI7/ref=cm_cr_dp_title?ie=UTF8&ASIN=B004N110GQ&nodeID=3760901&store=hpc)

dearieme (2013-07-14 03:10:15)

On second thoughts: is there any worthwhile evidence that such a thing as an optimal cholesterol level exists? (I exempt from this question the poor souls suffering from Familial Hypercholesterolemia.)

dearieme (2013-07-16 13:53:41)

Perhaps I needn't have exempted the poor souls. <http://drmalcolmkendrick.org/2013/07/16/you-are-a-very-black-swan-indeed/>

### Assorted Links (2013-07-14 05:00)

- [1]Drug companies release hidden data. What are the chances that the no-longer-hidden data increases confidence in efficacy?
- [2]Mood benefits of fermented food
- [3]Finland's success at many things. One is school: "The [4]other popular story is about Finland's school system, which ranks as one of the world's best – with no standardized testing or South Asian-style "cramming" but with lots of customization in the classroom." Lots of customization in the classroom is [5]what I advocate.
- [6]Doctor price-fixing

Thanks to Nicole Larkin and Tim Beneke.

1. <http://www.nytimes.com/2013/06/30/business/breaking-the-seal-on-drug-research.html?ref=todayspaper&pagewanted=all>
2. <http://health.yahoo.net/experts/dayinhealth/are-probiotics-new-prozac#.UeBYUIzScIs.email>
3. [http://www.theatlantic.com/international/archive/2013/07/the-secret-to-finlands-success-with-schools-moms-kids-and-everything/277699/?single\\_page=true](http://www.theatlantic.com/international/archive/2013/07/the-secret-to-finlands-success-with-schools-moms-kids-and-everything/277699/?single_page=true)
4. <http://www.theatlantic.com/national/archive/2011/12/what-americans-keep-ignoring-about-finlands-school-success/250564/>
5. <http://graphics8.nytimes.com/images/blogs/freakonomics/pdf/whatdostudentswant.pdf>
6. [http://www.washingtonmonthly.com/magazine/july\\_august\\_2013/features/special\\_deal045641.php?page=all&print=true](http://www.washingtonmonthly.com/magazine/july_august_2013/features/special_deal045641.php?page=all&print=true)

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Alex Chernavsky (2013-07-14 08:45:08)

Here's another interesting story from the *New York Times*: "[1]Do Clinical Trials Work?"

1. [http://www.nytimes.com/2013/07/14/opinion/sunday/do-clinical-trials-work.html?\\_r=0](http://www.nytimes.com/2013/07/14/opinion/sunday/do-clinical-trials-work.html?_r=0)

Alex Chernavsky (2013-07-14 09:04:49)

Finland also has a very effective way of treating psychosis – far more effective than the standard practice (in most Western countries) of drugging people into oblivion:

**Open Dialogue Therapy in Western Lapland for Psychotic Patients** In the Western World, Western Lapland in Finland has adopted a form of care for its psychotic patients that has produced astonishingly good long-term outcomes. At the end of two and five years, eighty percent of first-episode psychotic patients in Western Lapland are either employed or back at school. Only about one third of the patients are ever exposed to antipsychotic medications, and only 20 % end up taking the drugs on a continual basis.

From: <http://robertwhitaker.org/robertwhitaker.org/Solutions.html>

Mikael (2013-07-14 10:57:30)

That is an experimental therapy in Western Lapland where hardly any people live at all - not something that is used in all of Finland. Don't get me wrong, I love Finland and am half-Finnish, but things are really not as rosy as painted in the articles here. Finland is just the current stop on the "Scandinavians are so happy" meme train. Seth: I am impressed that Finland is testing such a therapy. Nowhere in America, as far as I know, is it being tested.

Staffan (2013-07-14 11:40:05)

Mikael, most measures of economy, health care, education, crime, corruption etc show that Finland is doing very well. And unlike the rest of Scandinavia Finland doesn't have immigrants patrolling certain suburbs and instructing women on how what clothes to wear, it doesn't have riots, it doesn't have Breivik etc.

The Skeptic (2013-07-14 12:11:21)

re: Mood benefits of fermented food *The study was funded by Danone Research. Mayer has served on the company's scientific advisory board. Three of the study authors (Denis Guyonnet, Sophie Legrain-Raspaud and Beatrice Trotin) are employed by Danone Research and were involved in the planning and execution of the study (providing the products) but had no role in the analysis or interpretation of the results.*

dearieme (2013-07-14 13:30:26)

@Alex: "Some patients did do better on the drug, and indeed, doctors and patients insist that some who take Avastin significantly beat the average." So some must have undershot the average i.e. have had their death brought forward by the Avastin?

Adam (2013-07-14 16:33:28)

Yeah, Finland is quite successful... at robbing the unborn who will be forced to pay for all of this sh! & for their entire lives: <http://www.nationaldebtclocks.org/debtclock/finland>

Evelyn M. (2013-07-17 02:22:49)

With respect to the medical price-fixing going on in the U.S., the author recommends more direct government intervention. To me, it seems from the evidence presented that price-fixing started when the federal government established the Medicare program (which, laughingly, was sold to the public as a way of saving money in the long run by making people healthier the same way the NHS was sold in Britain). Perhaps the simplest solution would be to go back to direct payments from patients to doctors, the way the system worked for hundreds of years, with the understanding that care would be provided to those unable to pay by charitable organizations (which would go back to collecting donations from the public at large instead of taking government fees) and physicians themselves, as a moral responsibility buttressed by the increased respect they would thereby earn from the public and their fellow professionals. Using the Web patients could shop around for general physicians or specialists, knowing up-front what the cost for visits or procedures would be - and having feedback to review from past patients. Hospitals, too, would post their charges up-front, so patients could decide where to go based on price versus perceived or actual quality of services. More attention should also be given by the press and other media to the results of Cochrane Collaboration mega-analyses of clinical trials data which show, for example, that annual physical exams by general practitioners or specialists are worthless (or even result in unnecessary and costly treatment). If people had to rely on their own decision-making, they would consider twice before following "doctor's orders" blindly, as most people do nowadays. Most Medicare patients never inquire what the actual cost of a procedure is, they just want to know how much the co-pay amount would be - and since the physician wants the patient to remain on his books, he usually waives that piddling amount in any case. Seth: Your idea has some very good aspects - and a hospital in Oklahoma has started posting charges up front - but it does not address protect against catastrophic loss. If only one person in 1000 is going to need Expensive Procedure X, how shall X be paid for?

Evelyn M. (2013-07-17 17:55:00)

Thank you for the response, Seth. I don't think we need the government to handle the one person in 1,000 needing expensive procedure X - that is what "saving for a rainy day" is for those of us who can pay their own way, the use of high deductible

insurance for unanticipated drastic events for the majority of the population, or the best use of charitable donations for those who can't cope on their own. We will never have a perfect system, and we will never be able to keep everyone alive forever no matter how much money we spend. Seth: That makes sense – that only insurance with a high deductible should exist because otherwise doctors and hospitals will price-fix. However, I would like to know more about health care in Japan, where health is better than here and health care is much cheaper than here. I don't know why. At Berkeley, at a psychology department meeting, there was a certain problem we needed to solve. *Let's see how other departments handle this*, I said. I was told that such a thing was beneath us, We should be leaders.

Evelyn M. (2013-07-18 12:08:54)

As few Westerners know Japanese, and it seems that few Japanese with English-language skills think Americans are interested in their health system, I fear that we may never have an opportunity to learn how the Japanese medical system compares to ours. My own guess would be that differences in health statistics between countries derive from (1) how the numbers are constructed (the different ways infant mortality is defined, for example) (2) the genetic makeup of the population, (3) the relative healthiness of the environment (levels of pathogens, heat and humidity), and (4) the quality of the health care and medical systems. It is sad to hear that things at Berkeley are as bad as you describe. It must be hard to cope in such an anti-intellectual environment. No wonder you run away to China!

### **Anesthesia Dolorosa Mirror Cure Update (2013-07-15 05:00)**

I [1]recently posted about using a mirror to cure anesthesia dolorosa, a painful skin condition similar to phantom limb pain, which is always caused by surgery. Beth Taylor-Schott, the inventor of the technique, told me what's happened since she last blogged about it:

Since then, David is still pretty much pain free and off Neurontin. Just a twinge now and then that he takes care of with Lidocaine, if anything. Have not had to re-do the therapy or anything like that.

I have been contacted by two researchers in the UK, and as I understand it, they're doing research based on the blog, though I have not heard what their results are. Also, someone in Australia wanted to fly us out to do a demonstration and be at a conference, but I couldn't get enough time off work to make it worth it.

I have heard from people who have read the blog and who want to do the therapy and who have questions, which I always answer, but only a very few of them ever come back to tell me that it's worked, and no one has ever come back to say it hasn't, so I'm not sure what to do with that. I don't really see this as my crusade. I put the blog out there, and I figure the people who are meant to find it will find it. We ourselves only discovered this through a weird series of coincidences, after all.

She explained what she meant by "weird series of coincidences":

It was by no means certain that I would read it. I think it had been sitting in my in-box for three or four months when I went back and read it. That is one coincidence. Another is that I came across it because, given that David had just flatlined twice in the hospital, I was in no shape to do anything BUT clean out my inbox, not something I did at all frequently at the time (like MAYBE once a year or every two years). And then too, I read it at a moment when his cardiologist had just told us that probably David needed to not only go off the stimulants he'd been taking to counteract the Neurontin, but also the Neurontin



itself. His pain was being kept under control in the hospital with injections of Toradol, and there was no way they would let me give him that much when he was at home and not being monitored. So what would we have done if the mirror therapy hadn't worked? He would not only have been non-functional, but in constant, excruciating pain. And yet I did not go into the inbox looking for answers, I went into it to distract myself from the fact that I seemingly had no answers. So the whole thing had a very *deus ex machina* quality to it.

And then there's the fact that I happen to be the kind of person who is resilient enough to actually try something like this despite years of frustration with the condition and our treatment at the hands of the experts. What are the chances that I'd be in a situation like this, especially given the rarity of David's condition? (Last I heard, M, the woman in the piece by Gawande, did not pursue the therapy, even after it was suggested to her.)

In a list of things that made the discovery less likely (e.g., rarely cleans out her inbox) she includes something that made the discovery much more likely, namely "what would we have done if the mirror therapy hadn't worked?" She and her husband were incredibly motivated to make it work. More motivated than professional scientists ever are. This is an enormous advantage of personal science over professional science: the much greater motivation of the personal scientist.

1. <http://blog.sethroberts.net/2013/07/12/anesthesia-dolorosa-mirror-cure/>

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### Assorted Links (2013-07-18 05:00)

- [1]A hospital specialized for hernia surgery. Much better outcomes, much lower cost. The combination (better outcomes, favored by patients, and lower cost, favored by insurers) suggests this could spread, if patients plus insurers > doctors plus hospitals.
- [2]Unlocking umami. I use koji salt, works really well. Comes in plastic squeeze container, which says "today's newest seasoning".
- [3]More about the rise and fall of heart disease. This 1980 article considerably predates [4]David Grime's 2012 article on the same subject It is more methodologically sophisticated but reaches the same conclusion: The rise and fall is not explained by any popular theory (e.g., smoking causes heart disease, cholesterol causes heart disease). Because of this failure, using those theories to try to prevent heart disease (e.g., telling people stop smoking) makes little sense. Likewise, I doubt that experts know why [5]dementia is decreasing, although they have theories.
- [6]Hypochondriasis and self-tracking

Thanks to Alex Chernavsky.

1. <https://www.commondreams.org/view/2013/07/17-4>

2. <http://www.chicagotribune.com/features/food/sc-food-0712-glutamates-20130717,0,7242262.story>

3. <http://tobaccodocuments.org/ctr/11325357-5364.html>
4. <http://blog.sethroberts.net/2013/06/07/the-rise-and-fall-of-heart-disease/>
5. <http://www.nytimes.com/2013/07/17/health/study-finds-dip-in-dementia-rates.html>
6. <https://forum.quantifiedself.com/thread-hypochondriasis-and-tracking>

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Matt (2013-07-18 06:00:58)

I believe that hernia hospital was discussed in a chapter in one of Atul Gawande's books. I remember that the doctors at the hospital were hired right after they finished their internship – as soon as they are legally allowed to practice medicine. They aren't surgeons or trained in surgery. I remember being struck by the massive waste involved in doctor's education – these hernia surgeons need not to have ever gone to medical school, but they do what they do far better than general surgeons. And – it would be insulting for a general surgeon, who spent four years in medical school, five years in residency, a few years as a fellow somewhere, to only do one specific surgery. And so the system serves physician's egos and pocketbooks far better than it does patients. Seth: Good points. Especially "such extreme specialization is discouraged by the massive amount of education that doctors receive". I think a similar dynamic operates in science: After all that education, to do simple self-experiments would be insulting. Must do expensive research, whether that's what is needed or not.

dearieme (2013-07-18 06:15:02)

There are a lot of livelihoods that depend on popular theories of cardio-vascular diseases.

Paul N (2013-07-18 06:15:10)

I think this sort of change is inevitable, it is just being resisted by the medical community. Look at the model that made McDonalds successful; -they concentrated on preparing variations of just one thing (i.e. burgers), and -they split up the work into single task jobs that could be done by staff with a relatively low level of training (compared to a traditional chef). It is easy to see how a clinic that specialises in just one thing can follow a similar model, and this already exists with many medical service business (pathology, lab testing etc). And, of course, it already exists for cosmetic surgery - many places do this and nothing else. The problem is/has been the front end - the doctors. You have to see a doctor, that costs probably \$100 for a consultation, to get a test that may cost \$20. As we start to see more of these service businesses deal directly with people - no doctors required- the front end monopoly will start to crack. A specialised surgery clinic is a bit more complicated than a pathology lab, but far less so than a hospital. It is also much less bureaucratic, so we will see more innovation happening too.

shtove (2013-07-18 10:17:25)

Never heard of koji salt - thanks for the link. LA Times has an article (your link is paywalled outside US): <http://articles.latimes.com/2012/aug/25/food/la-fo-koji-20120825>

Thomas W (2013-07-18 11:26:02)

Cataract surgery in India is another example of this trend.

Evelyn M. (2013-07-18 12:11:00)

A wonderful collection of links. Many thanks.

kxmoore (2013-07-18 18:12:37)

heart disease and air quality. <http://forums.webmd.com/3/cholesterol-management-exchange/forum/1270>

Shep (2013-07-18 22:50:02)

Grime didn't even mention smoking in his article and this one clearly states the correlation between reduction of smoking and reduction of heart disease. You seem pretty happy to accept some pretty weak evidence in the face of the There are literally hundreds of articles showing the link between smoking and CHD. Any chance you'll be linking to any of those? Seth:

The article says that changes in smoking do not explain changes in heart disease. There is a correlation, yes, but the details contradict the idea that reduction in smoking caused the reduction in heart disease. Did I miss something? The only evidence I could find that smoking causes heart disease is the risk factor stuff – smokers are more likely to have heart disease than non-smokers. Obviously "smoking is unhealthy" and "heart disease is caused by doing unhealthy things" so this correlation by itself I don't find especially persuasive – people who smoke probably do other unhealthy things. Millions of people suffer from heart disease who don't smoke. For all I know smoking has a small effect. Something else has a large effect. The question raised by the article I cite is: what is that "something else"?

Jerry (2013-07-20 07:46:30)

I have cooked with koji before. You can order dried, inoculated koji rice and use it to ferment your own soy sauce, miso, and to make amasake, a very sweet, delicious desert. Homemade amasake (as opposed to the store-bought stuff) is a bit of an acquired taste. Millet amasake is absolutely delicious. However, I am now convinced that these are not particularly healthy foods. I eliminated all of them from my diet a few years ago and I feel noticeably better. These foods are high in glutamate, and I'd rather err on the side of caution by not eating them. Dr. Baylock wrote extensively about this in "Excitotoxins: The Taste that Kills" a book I recommend. It is hard to refute that free glutamate causes brain damage in lab animals. Yes, it's a naturally-occurring taste, and we have sensors all over our alimentary canals for it (which probably evolved for sensing protein levels in ingested food), but I see no point in adding any to food. Seth: I'm pretty sure we can detect protein in food without glutamate detection. I think we like the taste of glutamate so that we will eat more aged/fermented protein – for example, aged meat. Surely you eat aged meat, which has much more glutamate than fresh meat. But I don't disagree with your decision to stop eating all those fermented soy products. No doubt some people get too much glutamate – for example, people who suffer from MSG.

## **How to Detect Dementia (2013-07-19 05:00)**

Dementia is common. You might think that doctors and neuropsychologists would have a good understanding of how to detect it. Judging from [1]a recent New York Times article, they don't. The article is based on a study that found that people who report memory problems not detected by a standard test turn out to be more likely to end up with dementia (measured by a standard test) than those that don't. This isn't surprising; what's more revealing is how people who report memory problems have been treated in the past: their complaints have been dismissed. For example:

Patients like this have long been called "the worried well," said Creighton Phelps, acting chief of the dementias of aging branch of the National Institute on Aging. "People would complain, and we didn't really think it was very valid to take that into account."

Doctors had no idea whether these complaints were valid but rather than admit this ignorance they . . . confabulated. They claimed, based on nothing, that the complaints were not valid. It reminds me of [2]a surgeon telling me that research supported her claim that I needed surgery (for a hard-to-notice hernia). No such research existed. When I asked her what research? she said she would find it. She was bluffing, in other words. That's just one doctor making up evidence. Here it has been a whole group of doctors.

The problem isn't just confabulation. Apparently doctors in this area fail to understand basic principles of measurement. When Patient Y visits Doctor X and complains of memory problems, Doctor X gives Patient Y a series of memory tests. Only if Patient Y scores below normal range does Doctor X think that Patient Y's complaint is "real". For example:

The man complained of memory problems but seemed perfectly normal. No specialist he visited detected any decline. "He insisted that things were changing, but he aced all of our tests," said Rebecca Amariglio,

a neuropsychologist at Brigham and Women's Hospital in Boston.

Amariglio apparently fails to understand that a series of measurements on one person – which is what the man's complaint was based on, comparing himself now to himself in the past – is going to be vastly more sensitive to change than a comparison of one person to other people. A reasonable response to a complaint of memory loss would be: This is hard to detect with a one visit. Let's give you a sensitive test and have you come back in six months to see if you decline more than normal. Judging from the Times article, doctors still haven't figured this out.

Speaking of memory decline, Posit Science still hasn't sent me [3]the data they promised to send me.

Thanks to Alex Chernavsky.

1. <http://www.nytimes.com/2013/07/18/health/looking-for-early-signs-of-dementia.html?pagewanted=all>
2. <http://blog.sethroberts.net/2011/11/16/dr-eileen-consorti-and-patient-power/>
3. <http://blog.sethroberts.net/2012/11/05/posit-science-does-it-help/>

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dearieme (2013-07-19 06:47:01)

I find myself struggling to remember familiar names. Last week it was "hollyhocks", this week it was - oh bugger, I can't remember. Seth: The more you know the harder it will be to recall one thing correctly – there is more interference from everything else you know. Increasing memory problems with age may or may not be due to memory decline.

Charlie (2013-07-19 10:36:46)

My 94 year old mother has always complained about not being able to remember things, although she remembers lots of things from her childhood. A few years ago she really started complaining and I even noticed she was a little more forgetful. So I took her off her statin meds and started feeding her butter - a pound a week. Her memory is back to where it was when she only thought she couldn't remember. She is also in brighter spirits, more active and engaged. Charlie

Evelyn M. (2013-07-19 11:45:08)

As medical science doesn't know what to do about memory loss, even if physicians acknowledge it is occurring, there is no point in taking that problem to a physician. This should be made common knowledge, just as people should be told that it is useless to visit a physician when you have a cold or the flu. I can no longer keep up with story lines in modern films, but I think that is due to the poor quality of movie production and direction nowadays, not a loss in my own abilities. If I watch a film I haven't seen before dating before the 1970s, I have no trouble whatsoever in following the plot. Also, films in the "good old days" actually let you hear the dialogue - no music hindered the sound of speech, while nowadays dialogue in films is usually overshadowed by loud music and sound effects. I read somewhere that a good test for when a woman is losing her mental capabilities is whether she can still put a complicated meal together. We have proper family dinners every week, and I am able to serve everything on time and cooked correctly, so I'm not too worried about occasional lapses in remembering people's names! First things first.

Alex Chernavsky (2013-07-19 13:45:39)

Evelyn, I think that modern movies and TV shows are far more complicated than they used to be:

During its 44 minutes – a real-time hour, minus 16 minutes for commercials – the episode (of Fox TV show "24") connects the lives of 21 distinct characters, each with a clearly defined "story arc," as the Hollywood jargon has

it: a defined personality with motivations and obstacles and specific relationships with other characters. Nine primary narrative threads wind their way through those 44 minutes, each drawing extensively upon events and information revealed in earlier episodes. Draw a map of all those intersecting plots and personalities, and you get structure that – where formal complexity is concerned – more closely resembles "Middlemarch" than a hit TV drama of years past like "Bonanza." For decades, we've worked under the assumption that mass culture follows a path declining steadily toward lowest-common-denominator standards, presumably because the "masses" want dumb, simple pleasures and big media companies try to give the masses what they want. But as that "24" episode suggests, the exact opposite is happening: the culture is getting more cognitively demanding, not less. To make sense of an episode of "24," you have to integrate far more information than you would have a few decades ago watching a comparable show. Beneath the violence and the ethnic stereotypes, another trend appears: to keep up with entertainment like "24," you have to pay attention, make inferences, track shifting social relationships. This is what I call the Sleeper Curve: the most debased forms of mass diversion – video games and violent television dramas and juvenile sitcoms – turn out to be nutritional after all.

[http://www.nytimes.com/2005/04/24/magazine/24TV.html?\\_r=0](http://www.nytimes.com/2005/04/24/magazine/24TV.html?_r=0)

Evelyn M. (2013-07-19 18:07:47)

Thank you for the comment, Mr. Chernavsky. Happily, "24" was so brilliantly produced and directed (not to mention scripted and acted) that I had absolutely no trouble following it! We are all looking forward to the new season that we've been told will begin in 2014.

Andrew (2013-07-23 06:22:53)

A bit off topic (although a bit related to dementia), but I haven't seen whether you've expressed any views about the fish oil/prostate cancer study. I've been taking omega 3 supplements for some time (both for brain function and cankersores) and a number of people have advised me to stop as a result of the study. I am personally skeptical of the study, but was curious if you have any thoughts. Seth: The study made me glad I take flaxseed oil rather than fish oil. It's epidemiology, usually a bit hard to interpret. I take flaxseed oil because of experimental data I gathered on myself – much better evidence, if I want to know what's good for me.

Kyle Lee (2013-07-23 21:27:20)

1. I think 1 thing with the Fish Oil study is that they looked at 1 factor. Maybe they were pre-disposed to having more health problems which led them to take the fish oil. Also they didn't look at the quality or dosage of the supplements. 2. Seth have you ever experimented with replacing flaxseed oil with fish oil? Seth: Long ago I thought I would try fish oil in place of flaxseed oil but other things have kept getting in the way. The one time I tried fish oil it gave me a headache. I have some in my refrigerator now, however.

## **Butter and Coffee (2013-07-20 05:00)**

In [1]Perfect Coffee at Home, authors Michael Haft and Harrison Suarez, who have started a digital publishing company, say that [2]the Buttermind experiment influenced them to start adding butter to their coffee. In [3]this excerpt, they say that their cholesterol went down 25 points during the period they drank it (their lives changed in many other ways at the same time). At the end they say:

Later, we would learn that Ethiopian warriors had drunk buttered coffee to energize before battle as far back as 600 CE. But that was after we had stopped regularly drinking it. When we transitioned out of the Marine Corps and our days became less frenetic, it just didn't seem as necessary.

The mention of Ethiopian warriors reminds me of how, after discovering that pork fat (from pork belly) improves my sleep, I learned that Mao Tse-Tung praised a certain pork-belly dish (???), calling it "brain food". I don't drink coffee

but I have tried tea with butter. It tasted good, but I didn't like the residue it left on the tea cup. Cream doesn't leave a residue. I haven't noticed that butter gives me energy. The benefits I believe in are better brain function and [4]better sleep. Maybe more calmness.

1. <http://www.perfectcoffeeathome.com/>
2. <http://blog.sethroberts.net/2011/01/29/the-buttermind-experiment/>
3. [http://blog.sethroberts.net/?attachment\\_id=10981](http://blog.sethroberts.net/?attachment_id=10981)
4. <http://blog.sethroberts.net/2009/10/31/effect-of-animal-fat-on-sleep-more/>

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Shawn (2013-07-20 07:11:58)

This is slightly tangential but I ate a couple tablespoons of butter right from the stick and a couple days later developed a couple pimples. I suspect it was from the butter but am not 100 % positive. I have read reports about dairy causing acne. Seth: yes, dairy definitely causes acne in some cases. the effect might go away with more exposure to butter, it's hard to say.

Jim (2013-07-20 09:02:59)

Biohacker Dave Asprey is a proponent of butter (grass fed) with coffee for its purported cognitive benefits. Opinions seem to be split between those having great results, and those who think it is "gross" (e.g., Seth's comment about residue).

Stephen (2013-07-20 09:23:41)

Add me to the list of people you convinced to start drinking buttered coffee. Might be noticing some effects, though I'll report back after a few weeks. As an aside, I really liked your posts on continuous graphical feedback a while back, and I'm thinking about implementing a system like that for myself. So I'd really like to know: - Are you still using your system? - If so, how effective is it now compared to back when you wrote those posts? Seth: I am still using my system, yes. I now use a somewhat better system, an improved version. I couldn't live without it. It is the same effectiveness now as when I wrote those posts. If you are interested in trying it, please contact me and identify yourself as the author of this comment.

David Johnston (2013-07-20 13:18:03)

Why butter and not cream? I drop about 1/3 pint of heavy cream (from allegedly happy cows) in my coffee. It seems to me that cream is just a superset of butter and it pours more easily than butter. Seth: Supposedly butter is made from cream (and only cream), so cream = butter. In practice, it is not so simple. What is sold as "cream" can contain many things and be treated in many ways after the processing point where some cream is turned into butter and some isn't. You make a good point, I should try substituting cream for butter and see what happens.

Charlie (2013-07-20 14:48:14)

First comes milk, then comes cream, then comes butter. Butter is basically the purest form of milk fat - "almost" all the proteins and sugars have been removed, or separated out - when it comes to dairy, it's all about the separation. Butter by volume has twice the amount of fat as cream, and consequently, twice the amount of calories. I prefer the taste of cream in my coffee, so I just eat 2+ tablespoons of butter on a home made coconut bar with my morning coffee. I also eat chocolate butter, which I make, with my afternoon coffee and cream. Cheers

haig (2013-07-20 18:13:15)

Seth, have you seen large differences in effects between animal fat and butter? I drink coffee with coconut oil and am going to experiment with adding either ghee or tallow (yuk I know) for some added fat in the mornings and would like to know which is better or if the differences are negligible. I'm dairy free because of acne and anxiety over raising LDL cholesterol, that is why I'm thinking about incorporating the grass fed tallow. Seth: Yes, I have seen large differences. My arithmetic speed got faster

when I switched from pork fat to butter.

Stephen (2013-07-21 10:28:34)

Seth: That's great to hear. I probably can't use your system (I'm on Linux, and I don't know R), but I just coded up something that does approximately what you described. What were the improvements you added? Seth: A friend and I are making an app that we plan to sell, so I am not anxious to publicize the improvements.

B.B. (2013-07-22 08:01:05)

Is there any advantage for using ghee instead of butter, holding the quality of the cows constant? Seth: I don't know. I should try ghee in place of regular butter.

Charlie (2013-07-23 06:43:22)

Ghee is the last step in the dairy separation chain and is the purest form of milk fat I know of - hard to think of what you could possibly do and what you would be removing once you get to ghee. You can make your own if you have the time and patience. It's also known as drawn butter in the restaurant biz - it's what you get with lobster (should get anyway) - a quality kitchen will have a container of it sitting on the back of the griddle that is used for frying instead of vegetable oil. Cheers

Paul N (2013-07-23 10:46:05)

@ Charlie - you could go one step further in the separation chain, and centrifuge the ghee to separate the short and long chain fats. This is what Weston Price did to create his "high vitamin butter oil", and this is what Green Pastures does (following his procedure) to make their butter oil. However, all of this is a lot of work, and I am quite happy to just eat the butter!

Charlie (2013-07-24 08:41:06)

@ Paul N - You are correct...and I've even taken Green Pastures butter oil - however, because of my already high volume of butter consumption, I'm not sure if it has had any effect. There are some that believe that it helps with tooth/oral health, but so does xylitol, which I also consume, and so does fax seed oil, which I used to consume, and so does reducing your consumption of carbohydrates, especially grains, sugars and fruit, which I did some years ago, so consequently I'm not sure which one, or combination, has actually improved my tooth/oral health...because, it has improved, markedly. I think I should buy stock in Kerrygold... Cheers

haig (2013-07-24 20:37:29)

Thanks Seth. Another question I have, were the gains in mental speed only experienced within a timeframe after eating the butter, or did they carry over throughout the day or week regardless of when you consumed the butter? Did you vary the times that you did your arithmetic tests? Would it be beneficial to eat it before a long day of mental work or is it just important to incorporate it into your diet at any time? Seth: The effects of butter didn't last long - maybe they lasted a day. I took the arithmetic tests at many different times of day. I think it is a good idea, based on my results, to eat butter daily. My experience with flaxseed oil suggests it will have more than one benefit.

## Assorted Links (2013-07-21 05:00)

- [1] Open Source Malaria
- [2] Criticism of Malcolm Gladwell by The Korean, [3] Gladwell's persuasive rebuttal, [4] more from The Korean, [5] more from Gladwell. I thought the work under discussion ("ethnic theory of plane crashes") was the best part of Outliers. Gladwell summarizes it: "That chapter in Outliers is about a series of extraordinary steps taken by Korean Air, in which an institution on the brink of collapse and disgrace turned themselves into one of the best airlines in the world. They did so by bravely confronting the fact that a legacy of their cultural heritage was

frustrating open communication in the cockpit. That is not a slight on Korean culture, or any other high-power distance culture for that matter.”

- More praise for the new TV show [6]Naked and Afraid on the Discovery Channel. It really is riveting.
- [7]Ziploc omelette. Poor man's sous vide.

Thanks to Nicole Harkin.

1. <http://opensource.malaria.org/>
2. <http://askakorean.blogspot.hk/2013/07/culturalism-gladwell-and-airplane.html>
3. <http://widget3.linkwithin.com/redirect?url=http%3A//askakorean.blogspot.com/2013/07/malcolm-gladwells-reponse-to.html&vars=%5B%22http%3A//askakorean.blogspot.hk/2013/07/culturalism-gladwell-and-airplane.html%22%2C%20472031%2C%200%2C%20%22http%3A//askakorean.blogspot.com/2013/07/culturalism-gladwell-and-airplane.html%22%2C%20318580483%2C%202%2C%20319325067%5D&ts=1374354325562>
4. <http://widget3.linkwithin.com/redirect?url=http%3A//askakorean.blogspot.com/2013/07/my-thoughts-on-gladwells-response.html&vars=%5B%22http%3A//askakorean.blogspot.hk/2013/07/culturalism-gladwell-and-airplane.html%22%2C%20472031%2C%200%2C%20%22http%3A//askakorean.blogspot.com/2013/07/culturalism-gladwell-and-airplane.html%22%2C%20318580483%2C%200%2C%20319467629%5D&ts=1374354411358>
5. <http://askakorean.blogspot.com/2013/07/my-thoughts-on-gladwells-response.html?showComment=1374062410180#c2015340896628841675>
6. [http://www.salon.com/2013/07/19/you\\_should\\_be\\_watching\\_naked\\_and\\_afraid/](http://www.salon.com/2013/07/19/you_should_be_watching_naked_and_afraid/)
7. <http://recipes.sparkpeople.com/recipe-detail.asp?recipe=285406>

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dearieme (2013-07-21 05:45:21)

“That is not a slight on Korean culture”: but of course it is, if by “slight” he means drawing attention to a shortcoming. It's saying that for a particular purpose Korean culture is dysfunctional. Naturally all cultures are dysfunctional for some purpose or other; indeed for many purposes or other. That's the human condition.

Alex Chernavsky (2013-07-21 07:41:02)

There is some evidence that spraying with DDT is the best solution to the malaria problem in Africa.

As malaria surges once again in Africa, victories are few. But South Africa is beating the disease with a simple remedy: spraying the inside walls of houses in affected regions once a year. Several insecticides can be used, but South Africa has chosen the most effective one. It lasts twice as long as the alternatives. It repels mosquitoes in addition to killing them, which delays the onset of pesticide-resistance. It costs a quarter as much as the next cheapest insecticide. It is DDT.

<http://www.nytimes.com/2004/04/11/magazine/11DDT.html>

Joe (2013-07-21 13:05:22)

Personally, while the omelet “sous vide” sounds like a good idea, I wouldn't try it. Not for BOILING anything. At warm temperatures, yes. Seth: Good point, not a good idea to boil plastic.

kxmoore (2013-07-21 22:36:38)

“Naked and Afraid” is an awesome show. Miles above the spate of other survivalist shows. Sheer genius, makes me want to learn how to start a fire and make shoes from tree bark and find a woman who can chase down and kill an eel with a club. The



show is about more than surviving in a wilderness though.

dearieme (2013-07-22 07:08:53)

"find a woman who can chase down and kill an eel with a club": dead easy. She takes the eel to a club, gets it to annoy the bouncers, and, bingo, it's a Norwegian Blue.

Tom (2013-07-23 03:50:12)

Corruption and hidden failed animal studies results of Glaxo off-shoring drug research to China: <http://www.nytimes.com/2013/07/23/business/global/drug-research-in-china-falls-under-a-cloud.html>

Alex Chernavsky (2013-07-23 07:08:39)

Tom, the problem may be worse in China, but Big Pharma has a long history of committing fraud no matter where they do business. See, for example: <http://projects.propublica.org/graphics/bigpharma>

Tom (2013-07-23 08:38:58)

Wow...really scary.

### **More Magic Dots (2013-07-23 05:00)**

A New Jersey patent attorney named Jim D writes:

I've been using the magic dots as you described, marking a dot or line every six minutes. I use an online timer with an audible tone every six minutes. A portion of my work requires focus, as I have to review, compare and contrast technical documents. I've historically had limited ability to focus for extended periods of time. I've used an online bar graph countdown timer, but even with the visual feedback of the bar graph counting down, the longest I could go without a short break was 20 minutes. I've also tried online Pomodoro timers, with alternating work and break periods, but again, the longest I could go without a break was 20 minutes.

In contrast, by using the magic dots method, I can easily focus for 60 minutes. I've been working for 60 minutes until the box is completed, and then taking a short break before starting another 60 minute box. After a few more weeks, I will see if I can extend the focus length for a longer period of time. (As an aside, I wonder if completing an entire "box" is psychologically important, and, if so, would a 90 minute "box" shape work better than continuing with consecutive 60 minute boxes?).

I don't think finishing a box matters. Sometimes I do, sometimes I don't, it doesn't seem to make a difference. A friend used a much different counting system; it also worked. After years of using six-minute intervals I have started to use five-minute intervals; they don't interfere too much and shorter intervals are likely to be more powerful. I would like to compare different interval lengths but it is a difficult experiment to do.

Nile (2013-07-23 13:06:32)

I've had a very similar experience. Visual graph type feedback doesn't really do much for me but magic dots work fairly well. I found 6 minutes too short and changed the interval to 10 minutes so I now make magic triangles. I started out trying to work an hour at a time but today I managed 2 hours. I seem to be getting better at extending the time worked but... time will tell

Ronald Pottol (2013-07-23 13:37:31)

For a quick cheap OS X timer, put this in a file called magic\_dots.sh `#!/bin/bash # a script to say magic dot every 6 minuts, for ever. for (( ; ; )) do say "magic dot" sleep 360 done` Then type `chmod 755 magic_dots.sh` in the directory the file is in (or open it's properties and make it executable). Then at a terminal, type (or double click on it, I would think) `./magic_dots.sh &` and your computer will say "magic dot" every 6 minutes. To make it stop, close the terminal window it was run from. Or just leave the & off, and close the terminal window. Worst case, reboot.

Tom Myers (2013-07-30 10:47:32)

Nice. To make it double-clickable on a Mac, however, I believe you should call it magic\_dots.command rather than magic\_dots.sh; double-clicking on that should open up a window which you can close to end the process. You ought to be able to make it stop with `killall magic_dots.command` which could also be in a double-clickable stop\_dots.command file; haven't tried. (On Ubuntu, where the "say" command does not exist, I will now use `espeak -v en "magic dot"` for an equivalent script, which does stop with "killall" - thanks!)

## Are Drug Companies Becoming Less Law-Abiding? (2013-07-24 05:00)

Alex Chernavsky drew my attention to [1]a report of the giant fines assessed drug companies for fraudulent marketing. For example,

Merck agreed to pay a fine of [2] \$950 million related to the illegal promotion of the painkiller Vioxx, which was withdrawn from the market in 2004 after studies found the drug increased the risk of heart attacks. The company pled guilty to having promoted Vioxx as a treatment for rheumatoid arthritis before it had been approved for that use. The settlement also resolved allegations that Merck made false or misleading statements about the drug's heart safety to increase sales.

Fines, of course, are supposed to reduce bad behavior. Here are the fines by year:

- 2009: 2 fines
- 2010: 1 fine
- 2011: 1 fine
- 2012: 5 fines

This pattern does not suggest the fines are working. Drug companies, of course, are very big. I would like to see cross-industry comparisons: which industries pay the most in fines per dollar of revenue?

1. <http://projects.propublica.org/graphics/bigpharma>
2. <http://www.justice.gov/opa/pr/2011/November/11-civ-1524.html>

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Mark (2013-07-24 05:28:59)

Sheesh, this pattern suggests that the fines aren't really being issued... Only 9 fines over 4 years for fraudulent marketing implies to me that their definition of fraudulent is pretty damn weak. "Demonstrated to be safe" is fraudulent in all cases. Seth: I don't know if these are all the fines. I think they are all the giant fines.

Alex Chernavsky (2013-07-24 07:32:30)

In the US, the FDA (Food and Drug Administration) issues a lot of warning letters, typically hundreds every year. [http://en.wikipedia.org/wiki/FDA\\_Warning\\_Letter](http://en.wikipedia.org/wiki/FDA_Warning_Letter)

Wil (2013-07-24 16:57:37)

Seth: These revelations are not new. It is becoming common knowledge that drug development and testing has for years been characterized by conflicts of interest and outright corruption. Marketing practices are particularly egregious. Regulation of the industry is weak to the point of scandal because of long-standing regulatory capture at least as bad as what has occurred in the banking industry. We have essentially the same problem in the broader medical care industry in the USA. The problems are unlikely to be resolved until a way is found to eliminate, or at least temper, the profit motive in these industries.

Wil (2013-07-24 17:19:00)

PS - Readers of your blog concerned about ethics in medicine, pharma and related matters (such as addressed in your post) may be interested in these two blogs by Dr. Howard Brody and Dr. Roy Poses, respectively. <http://brodyhooked.blogspot.com/> Hooked: Ethics, Medicine, and Pharma (Dr. Howard Brody) Updates and Commentary related to HOOKED: ETHICS, THE MEDICAL PROFESSION, AND THE PHARMACEUTICAL INDUSTRY, by Howard Brody, MD, PhD (Rowman and Littlefield, January, 2007) <http://hcrenewal.blogspot.com/> Health Care Renewal (Dr. Roy Poses) Addressing threats to health care's core values, especially those stemming from concentration and abuse of power. Advocating for accountability, integrity, transparency, honesty and ethics in leadership and governance of health care. Regards, Wil

nicole (2013-07-24 18:21:48)

looking at the budget of the FDA for enforcement might also be important. maybe they are not violating the law any more or less than normal, but the FDA has more money for enforcement.

Kyle Lee (2013-07-25 08:36:25)

I've definitely seen this trend going on for a while, it's similar to the banking community. At some point does someone have to go to jail?

## **Researchers Fool Themselves: Water and Cognition (2013-07-25 05:00)**

A [1]recent paper about the effect of water on cognition illustrates a common way that researchers overstate the strength of the evidence, apparently fooling themselves. Psychology researchers at the University of East London and the University of Westminster did an experiment in which subjects didn't drink or eat anything starting at 9 pm and the next morning came to the testing room. All of them were given something to eat, but only half of them were given something to drink. They came in twice. On one week, subjects were given water to drink; on the other week, they weren't given water. Half of the subjects were given water on the first week, half on the second. Then they gave subjects a battery of cognitive tests.

One result makes sense: subjects were faster on a simple reaction time test (press button when you see a light) after being given water, but only if they were thirsty. Apparently thirst slows people down. Maybe it's distracting.

The other result emphasized by the authors doesn't make sense: Water made subjects worse at a task called Intra-Extra Dimensional Set Shift. The task provided two measures (total trials and total errors) but the paper gives results only for total trials. The omission is not explained. (I asked the first author about this by email; she did not explain the omission.) On total trials, subjects given water did worse,  $p = 0.03$ . A surprising result: after persons go without water for quite a while, giving them water makes them worse.

This  $p$  value is not corrected for number of tests done. A table of results shows that 14 different measures were used. There was a main effect of water on two of them. One was the simple reaction time result; the other was the IED Stages Completed (IED = intra/extra dimensional) result. It is likely that the effect of water on simple reaction time was a "true positive" because the effect was influenced by thirst. In contrast, the IED Stages Completed effect wasn't reliably influenced by thirst. Putting the simple reaction time result aside, there are 13  $p$  values for the main effect of water; one is weakly reliable ( $p = 0.03$ ). If you do 20 independent tests, purely by chance one is likely to have  $p < 0.05$  at least once even when there are no true effects. Taken together, there is no good reason to believe that water had main effects aside from the simple reaction time test.

The paper would be a good question for an elementary statistics class ("Question: If 13 tests are independent, and there are no true effects present, how likely will at least one be  $p = 0.03$  or better by chance? Answer:  $1 - (0.97^{13}) = 0.33$ ").

I wrote to the first author (Caroline Edmonds) about this several days ago. My email asked two questions. She replied but failed to answer the question about number of tests. Her answer was written in haste; maybe she will address this question later.

A better analysis would have started by assuming that the 14 measures are unlikely to be independent. It would have done (or used) a factor analysis that condensed the 14 measures into (say) three factors. Then the researchers could ask if water affected each of the three factors. Far fewer tests, far more independent tests, far harder to fool yourself or cherry-pick.

The problem here – many tests, failure to correct for this or do an analysis with far fewer tests – is common but the analysis I suggest is, in experimental psychology papers, very rare. (I've never seen it.) Factor analysis is taught as part of survey psychology (psychology research that uses surveys, such as personality research), not as part of experimental psychology. In the statistics textbooks I've seen, the problem of too many tests and correction for/reduction of number of tests isn't emphasized. Perhaps it is a research methodology example of Gresham's Law: methods that make it easier to find what you want (differences with  $p < 0.05$ ) drive out better methods.

Thanks to Allan Jackson.

1. [http://www.frontiersin.org/Human\\_Neuroscience/10.3389/fnhum.2013.00363/full](http://www.frontiersin.org/Human_Neuroscience/10.3389/fnhum.2013.00363/full)

Alex Chernavsky (2013-07-25 08:24:26)

In my (limited) experience, even people who claim to be experts in statistics often don't know what they're talking about. I remember working on a paper back in graduate school. The lead author was trying to determine whether to use the Kolmogorov-Smirnov test, the Mann-Whitney test, or something else altogether. The people we consulted did not exactly fill us with confidence in their abilities. (Of course, maybe we just asked the wrong people.) Seth: I have never used the Kolmogorov-Smirnov test nor the Mann-Whitney test and expect never to do so.

David Johnston (2013-07-25 09:27:27)

KS is to MW as is sameness of distribution is to sameness of means. KS is very handy in my line of work, MW not so much. Seth: KS is much less sensitive than other tests.

Three Pipe Problem (2013-07-25 09:29:28)

Can you recommend any resources for people who may have a decent math background and know some very basics about statistics and are looking to improve their insight in a time effective manner? Seth: Their insight about what?

Kevin Miller (2013-07-25 09:37:59)

I think a better and, to my mind, more convincing approach, is to require replication. Finding the same effect in two independent samples is pretty powerful. Controls for multiple comparisons are a mixed bag, and some of them can really be too strict. Multiple-experiment papers, which are the norm in most cognitive psychology journals, typically include a replication as part of later experiments, and I find that to be more convincing than statistical controls for multiple comparisons. Of course, neither control for other issues such as non-representative of stimuli or subjects, but such is life in this vale of tears. Seth: The first person not to fool is yourself – preferably without the enormous cost of repeating the experiment. You don't seem to be taking the cost of replication into account. Or maybe you are thinking like a reader rather than as a practitioner. If you have two or three independent tests, the adjustments for multiple comparisons are realistic. You really can set the overall p value to 0.05. Sure, replication is a good idea, too. In multiple experiment papers, nothing is said about experiments that didn't work out – there is no statement like "we are not omitting relevant evidence" – so it is less than obvious what repetition means. Of course, when authors omit relevant evidence they are deceiving others, not themselves. What's interesting about this example is that the researchers appear to have deceived themselves.

Mark (2013-07-25 10:59:12)

Completely agree that replication is key (in experimental studies, that is... Replication is a less reliable tool in non-randomised studies because bias is systematic), and is a much more important consideration than multiple testing. Any "significant" result might be a type 1 error, and a p-value doesn't give any indication how likely that might be. Replication is the only way to rule that out (which is why FDA typically requires at least 2 phase 3 trials).

John Eels (2013-07-25 12:49:37)

@Three Pipe Problem, that's a good question. I'd like to run simple experiments and test for significance. I studied psychology and had courses in statistics. I don't remember much. I'd like to fresh up basic concepts in a playful style: Self experimentation 101 with suggested experiments (week one eat 60g butter daily, week two don't, week three like week one again and so on and test reaction time or whatever concept daily, or connection amount of coffee consumed and self-measured sleep quality, or sleep quality and seeing people in the evening). Stuff gets so much more interesting if it has real life value.

gwern (2013-07-25 21:41:39)

> A better analysis would have started by assuming that the 14 measures are unlikely to be independent. It would have done (or used) a factor analysis that condensed the 14 measures into (say) three factors. Then the researchers could ask if water affected each of the three factors. Far fewer tests, far more independent tests, far harder to fool yourself or cherry-pick. Where would these 3 factors come from? If they're being estimated from the data, without any previous reason to expect particular factorization, and then fed into the tests with the expectation we have reduced our false positive problem, that makes me feel uneasy and wonder how kosher this procedure really is. Incidentally, as far as the Mann-Whitney goes, I've used it twice recently

when I wanted to compare 2 groups but they were blatantly not normally-distributed (in [http://www.gwern.net/Google %20Alerts #it-was-mid-2011](http://www.gwern.net/Google%20Alerts%20it-was-mid-2011) and [http://www.gwern.net/Anchoring #article-effect](http://www.gwern.net/Anchoring%20article-effect)). Normality is common, sure, but so is non-normality; if one never feels the need to use it, perhaps one is simply shoehorning t-tests where they don't belong. Seth: Check out "data transformation" (e.g., log transformation) the next time you encounter non-normal data.

### Assorted Links (2013-07-26 05:00)

- [1]Anatomy of a fraud, self-published book about scientific fraud by Robert Trivers, the anthropologist (pdf).
- [2]Lauren Collins, Republican
- [3]Stinky tofu in Los Angeles. Like blue cheese, except smellier. There are restaurants in Los Angeles that specialize in stinky tofu.
- [4]More about koji. I use koji salt in place of salt...it works well. Greatly reduces the need for other flavorings.
- [5]Letter from Renata Adler to small-town governing board

1. [http://www.roberttrivers.com/Robert\\_Trivers/Books\\_files/Anatomy%20of%20Fraud%20PDF.pdf](http://www.roberttrivers.com/Robert_Trivers/Books_files/Anatomy%20of%20Fraud%20PDF.pdf)
2. <http://www.newyorker.com/online/blogs/newsdesk/2013/07/notes-from-a-royal-baby-skeptic.html>
3. <http://www.kcet.org/living/food/the-nosh/have-you-eaten/4-ways-to-enjoy-stinky-tofu-in-los-angeles.html>
4. <http://www.chicagotribune.com/features/food/sc-food-0712-koji-20130724,0,6019988.story>
5. <http://www.newtownbee.com/news/0001/11/30/losing-sense-transparency/151499>

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dearieme (2013-07-26 14:39:07)

Those who have followed the trail of crookedness in "Climate Science" would not be too surprised at Nature's response, eh?

David Johnston (2013-07-26 15:53:38)

The law requires open meetings to minute the decisions. I.E. motions made, mover, seconder and outcome. Adding anything else adds to legal risk. If I can get through a HOA meeting (I'm president/chair) without any decisions being made, I consider it a victory. Deciding to not decide is not a decision, or at least doesn't appear in the minutes.

### Chinese Food: China vs America (2013-07-27 05:00)

I skype-chatted with [1]Clarissa Wei, a Chinese-American journalist in Los Angeles whose [2]post about stinky tofu in Los Angeles impressed me.

SR What do you think of Chinese restaurants in America compared to Chinese restaurants in China?

CW It depends on where you're talking about. In broad America, the Chinese food is pretty different from that of China. In places like Los Angeles and pockets of New York... it's much more alike

SR I'm thinking of the best ones in Los Angeles.

CW It's definitely cleaner here that's for sure. In Los Angeles, the food quality is pretty similar. The major difference

would be the price and variety. The selections are also pretty similar. The set-up in American Chinese restaurants is obviously different than the ones in China so that influences things a lot

SR I have never been to a Chinese restaurant in America that resembles a high-end Chinese restaurant in Beijing

CW In Los Angeles – there are a couple high-end Canto restaurants. They typically are your seafood + dim sum banquet types. Lunasia is a great example.

SR What do you mean by the set up?

CW Well in China, a lot of the restaurants are literally hole-in-the-walls. There isn't that much of a standard in terms of being neat and sanitary.

SR There is vastly more range in China, both better and worse

CW In the rural countrysides, it's out of people's homes. But in America, everyone has to have at least some degree of sanitation.

SR Chinese restaurants in China are more playful. Like a toilet restaurant, for example.

CW Very true. Yeah they're opening one of those in LA.

SR Or a restaurant where everyone says hello when you enter and goodbye when you leave

CW There's also a Taiwanese "Hooters" in L.A. A lot of the Taiwanese breakfast eateries in L.A. have that "cutesy" vibe.

SR When you were in China were you in any way disappointed by the Chinese restaurants?

CW I was in China in 2011 for 4 months as part of a study abroad program. I was disappointed mostly because I always got sick.

SR What city?

CW Shanghai. But I travelled to Guilin, Dunhuang, Beijing. I got sick from just the regular restaurants on my street. Some were marketed as higher-end. I lost 10 pounds from throwing up. Mind you, I go to Taiwan yearly and that never happens.

SR The first time I went to China I was sick every 2 days, but after that I was fine.

CW I think my toleration for bacteria is pretty low.

SR I get sick no more often in Beijing than in Berkeley. [But in Beijing I eat Korean and Japanese food mostly.]

CW That's surprising. I was at [3]Donghuamen [a night market selling strange food] in Beijing. Did an article on that

place. But I just felt like throwing up because the streets reeked of trash.

SR The cheap restaurants scare me. They use recycled cooking oil.

CW I think that's changing now with the media coverage on the Chinese food scandals. But in places like Los Angeles..the food is pretty up to par in terms of "authenticity".

SR How was the food in the various Chinese cities besides Shanghai?

CW It was alright. I get turned off when a restaurant is dirty to be honest. But that may just be because of my American upbringing. It really influences how I consume the food and how much I eat of it. When I was in Dunhuang, there was a vendor making daoxiaomian but he kept on coughing over and over. And we watched him make the dish and serve it to us. I felt disgusted but we were starving.

SR What did you think of the food expertise of the Chinese people you met in China?

CW I learned a lot about Chinese food in China from my Chinese teacher. That's when I started to gain in interest in the regional differences. The oyster omelette for example in Xiamen is similar to the one in Taiwan, but crispier and thinner

SR It was very hard to buy a kitchen timer in Beijing because I was told no one uses them when they cook.

CW No one uses fancy gadgets or exact measurements there. It's all passed down and family recipes which is the beauty of it.

SR My students at Tsinghua are more connoisseurs of food than my Berkeley students. A lot more.

CW Food is such a central theme of the Chinese culture. There's a fascination with Western food too. In Shanghai, my first article for CNN was "Top Western Restaurants in Shanghai". I brought my Shanghainese friends along to one of the places – a bagel places – and they were fascinated.

SR I went to the best Korean restaurant I've been to outside Korea in Shanghai.

CW Shanghai has a tradition of really embracing foreign cooking traditions. One of the best fine dining restaurants I've been to was in Shanghai, Mr. and Mrs. Bund.

SR Do people in Shanghai understand how good the food is in Japan?

CW I think so. But a lot of Chinese people really don't have the opportunity to travel abroad. They don't have a feel or the exposure to foreign tastes as much as Americans do. In Taiwan, there's a fascination with the Japanese. Obviously because of the occupation of the Japanese but a lot of the high-end Taiwanese restos are Japanese influenced.

SR Controlling for age who did you think are the more adventurous eaters, Americans or Chinese – I mean the ones you know.

CW Chinese hands down.

SR That's interesting, I always worry that my students won't like this or that. [At least, they draw the line at eating insects.]



CW Just because Chinese cuisine has a variety of meats and offal and "bizarre" parts you know. So they're much more open to try .... snails from France than your average American. Because snails are a Chinese dish too. Also in Chinese culture, you're taught to eat anything and everything that's presented to you. It's rude to refuse.

SR A friend of mine said that Chinese (in practice) is a language of verbs, English is a language of nouns. One of the verbs is "eat". Parents tell children: "eat".

CW Yes. Americans have the luxury of being more picky – look at the whole gluten free, vegan movement in these metropolitan places. If you go into a Chinese restaurant in China and say you're vegetarian – they don't really know how to work with you. Some places will just roll their eyes.

SR After you came back from Shanghai to Los Angeles, how did you view American Chinese restaurants differently? The authentic ones.

CW I appreciated it a lot more. The food here is good and it won't give me food poisoning. Sanitation was like the biggest worry in China. An article recently came out that said the ice from the KFC in China had more bacteria than toilet water.

SR I never go to KFC in China. Now I have been vindicated in that decision

CW The egg tarts there are fantastic. Modeled after the original Macau egg tart recipe apparently.

SR There should be a category: best food in worst restaurant. Also worst food in best restaurant.

CW Chinese restaurants have such extensive menus, it's always easy to find a bad item.

SR I was impressed that Chinese restaurants managed to make mashed potatoes slightly interesting. That's baby food! They added raspberry sauce.

CW Again – fascination with Western food.

1. <http://clarissawei.com/>

2. <http://clarissawei.com/2013/07/22/4-ways-to-enjoy-stinky-tofu-in-los-angeles/>

3. [http://en.wikipedia.org/wiki/Donghuamen\\_Night\\_Market](http://en.wikipedia.org/wiki/Donghuamen_Night_Market)

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Alex Chernavsky (2013-07-27 07:43:43)

That's interesting that Chinese restaurants in China have trouble with the concept of vegan food. In the United States, Asian eateries are probably more vegan-friendly than any other category of restaurant. You can usually order any dish with tofu in it instead of meat. (Sometimes you have to be careful that the dish doesn't include fish sauce, though.)

dearieme (2013-07-27 11:02:42)

I had a delicious Chinese meal in San Francisco in 1966. I was rather surprised, though, that I was the only white face in the restaurant.

## Benefits of Alternate Day Fasting (2013-07-28 05:00)

A friend of mine named Dave saw the BBC program [1]Eat, Fast and Live Longer ten months ago. The program promotes intermittent fasting for better health. It sounded good. Already he often went a day without food. Some Brahmins in South India had eaten this way for millennia – which suggested it made some sense. It wasn't a fad. Alternate day fasting was simpler than the "fast 2 days per week" regimen the TV show ended with. He started alternate day fasting immediately.

It was easy to start. The first day was hard. He had painful stomach cramps, but hunger was not a problem. The second day of fasting was slightly difficult, again because of stomach cramps. By the third day of fasting, there was no problem. He tried eating a small meal (400-500 calories) on fasting days but it just made him hungry. It was easier to not eat at all.

Within two weeks, his head felt clearer, he had more energy, and he felt lighter. Lots of people say the same thing in [2]YouTube videos about the diet. He had more mental energy. Before the diet, he easily became overwhelmed. In spite of a highly technical background (he was a math professor at an Ivy League school), something as simple as writing a computer program would exhaust him. When he tried to tackle a technical problem, he would get overwhelmed, exhausted, and would quickly give up. For example, he has written tens of thousands of lines of computer code. Writing in a language he knew very well, he'd be unable to get beyond 10-15 lines. Within three months of starting the diet, he took an online class (an introductory class about R) and was surprised he could do the work. (He had started the class to take his mind off of family issues he had to deal with. He wanted to do something for himself.) After that, he took two more online classes, about cryptography and about functional programming. He finished them and did well. He was elated.

Several other things started improving. He'd had GERD ("acid reflux"). He had poor digestion at night, would wake up with an "acidic stomach" and burning in the back of his throat and mouth. He'd had this all his life (he's now in his fifties). In his twenties, several health experts told him he had digestive problems. When he started alternate day fasting, he didn't change the time of day that he ate. After two or three months, his GERD entirely went away.

Another improvement was athlete's foot. He'd had it since his mid-twenties. He had it all over his feet, not just the toes. He'd done many things to get rid of it. None of them worked, at least permanently. After two months of alternate day fasting, he noticed improvement. Over the following months his athlete's foot continued to improve. However, three weeks ago he started drinking a half-gallon of yogurt per week. Within two weeks of starting that, his athlete's foot got much worse. Eating much more yogurt was the only dietary change he'd made. The connection (yogurt increased athlete's foot) is plausible because athlete's foot is due to one or more fungi, fungi need sulfur to grow, and yogurt contains a lot of cysteine, which contains sulfur. ([3]A natural therapy site gets it exactly wrong: "Continuing to consume yogurt . . . on a daily basis after the immediate problem has been solved may prevent future outbreaks").

His food allergies started going away. Wheat was the worst. After eating wheat, he got brain fog, agitation (difficulty sitting still), and difficulty focusing. He would start having violent imagery; for example, his dreams will get quite violent. A laboratory test showed that he had astronomical levels of an immune response to gluten peptides. Another food allergy of his was dairy. It caused agitation, difficulty concentrating, and depression (in the sense that you feel like you want to kill yourself). Before he figured this out, there were times he consumed a quart of milk in a short period of time. Half an hour later, he got these three symptoms, including scary depression ("there's no way out"). Now he can consume both wheat and dairy without trouble. His wheat allergy isn't entirely gone but it is much better. He hasn't noticed any allergic reaction to dairy, even large amounts.

He'd had blood sugar problems for a long time. He'd had hypoglycemia since his late twenties. After strenuous exercise, he could come close to passing out. He would eat fruit to keep this from happening. He'd be lying on the floor, drag himself to eat a piece of fruit, and instantly feel better. After a meal, he'd feel tired, then eat something sweet and feel a rush of energy. He had a regular need for sweet things, including dessert. Whenever he had dinner, he'd really want dessert. About eight months after he started alternate day fasting, he realized that his craving for something sweet went away. One day it was present, the next day gone. Instead of feeling tired after a big meal, he felt calm.

He thinks that he must have had a candida infection and his gut is healing. This would explain the allergies going away and the GERD improvement. He hadn't expected these changes. He just started it because it fit his eating patterns and was more regular.

"I've experienced hunger for the first time," he says. If he doesn't eat the morning of a day he's supposed to eat, he feels ravenously hungry – a new experience. A crystal-clear sense of hunger, which is pleasant. It's pleasant to know what hunger is. He takes meals more seriously, because that's the day he's eating. He pays more attention to his food.

I found his experience far more convincing than anything else I'd heard about intermittent fasting. It was sustainable, it was easy, the benefits were unexpected, no ideology was involved, all sorts of things got better. It was as if this was the eating pattern our bodies were built for. My friend's experience led me to try alternate day fasting, [4]as I've said. After a few days my fasting blood sugar substantially improved (from the mid-90s to the mid-80s). Within weeks, my HbA1c went from 5.8 to 5.4. I haven't noticed mental changes but my brain test scores have improved for reasons I cannot yet explain (there are several possible explanations).

1. [http://www.dailymotion.com/video/xvdbtt\\_eat-fast-live-longer-hd\\_shortfilms](http://www.dailymotion.com/video/xvdbtt_eat-fast-live-longer-hd_shortfilms)
2. [http://www.youtube.com/results?search\\_query=alternate+day+fasting&aq=alternate+day+fasting&gs\\_l=youtube.3..0110.3382.7630.0.7826.29.21.1.0.0.0.551.3506.2j1j3j5j0j1.12.0...0.0...1ac.1.11.youtube.yzfft10Fcio](http://www.youtube.com/results?search_query=alternate+day+fasting&aq=alternate+day+fasting&gs_l=youtube.3..0110.3382.7630.0.7826.29.21.1.0.0.0.551.3506.2j1j3j5j0j1.12.0...0.0...1ac.1.11.youtube.yzfft10Fcio)
3. <http://voices.yahoo.com/natural-therapy-using-yogurt-treat-fungal-infections-3264848.html?cat=68>
4. <http://blog.sethroberts.net/2013/06/30/alternate-day-fasting-improved-my-blood-sugar/>

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None (2013-07-28 06:57:36)

Funny. The title of the show reminded me of the book about grammar by Lynne Truss: "Eats, Shoots & Leaves". I think that the show is "Eat, Fast and Live Longer" and not "Eat Fast and Live Longer". While reading the first paragraph I was trying to figure out why eating fast could be healthful... Thanks for the link. I've been fasting about one day a week. Feels good. Seth: I thought the title was a joke like that but I checked and you're right, there is a comma.

Elizabeth Molin (2013-07-28 07:05:09)

Possibly related: a dermatologist told me to use any topical medication morning and evening, then skip a day completely, and continue to alternate. This keeps one from becoming inured to the medication, he said, and results in optimal effectiveness. Perhaps we should also work every other day, instead of five days a week and then two days off...

Brandon Berg (2013-07-28 07:41:53)

I had had plantar warts for a couple of years prior to starting IF (eating in a four-hour window each night). They cleared up almost immediately. Seth: Quite surprising, but in agreement with what happened to my friend, especially the disappearance of his athlete's foot. [1]The Wikipedia entry for plantar warts says nothing about intermittent fasting.

1. [http://en.wikipedia.org/wiki/Plantar\\_wart](http://en.wikipedia.org/wiki/Plantar_wart)

Nancy Lebovitz (2013-07-28 08:53:25)

<http://chriskresser.com/the-saturated-fat-heart-disease-myth-colonoscopy-heal th-risks-and-intermittent-fasting> Page down to "Does intermittent fasting harm the adrenals?" - the general point is that people who are highly stressed or who seem to be in worse shape (after the first few days) of IF probably shouldn't do it.

dearieme (2013-07-28 10:07:15)

Thank you, Nancy. I was particularly interested in the suggestion that colonoscopies are a bet against the odds.

Steve Johnson (2013-07-28 10:24:29)

*His food allergies started going away. Wheat was the worst. After eating wheat, he got brain fog, agitation (difficulty sitting still), and difficulty focusing.* Why would he keep eating wheat???? What is wrong with people? Seth: After he figured this out, he ate almost no wheat.

Tom (2013-07-28 11:27:52)

It's highly addictive.

Yojik K. (2013-07-28 11:33:16)

Seth, do you suppose that there is any particular benefit to Alternate-Day-Fasting over other IF regimes like the 18:6? Do you know have any intuition for the dynamics of fasting (the longer you fast, the better results? or, is there any optimal time to for a fast? 24 hours? 18? 16?) Seth: I suppose the longer you can fast without discomfort, the better. I can do alternate day fasting forever, it is pleasant rather than unpleasant. I used to eat one meal per day plus snacks. Plainly alternate day fasting is better.

Ash Simmonds (2013-07-29 01:06:04)

@Elizabeth Molin "Perhaps we should also work every other day, instead of five days a week and then two days off..." Exactly what I did back in 2011. I realised I couldn't handle spending all week at work, and I'd also built up enough leave to take 2-3 months holiday. Instead of doing that, I asked my boss if I could just come in M-W-F, he agreed, and I tell you what everything just makes sense when you do it like that. So yeah, picture this - every day that you go to work, you know you have a day off tomorrow. And when it's Friday - you get two! As for eating, I do what I call Intermittent Feasting. Seth: When your "only work MWF" schedule stopped, what happened?

jclifton (2013-07-29 07:06:51)

Hi Seth, I've followed and have been interested in IF and ADF for a year or so and have had mixed results. Just doing some reading/reviewing of the yahoo link you provided and there are a few posts regarding atrial fibrillation and stiff heart disease. Not sure what to make of them, but in general have heard mostly positive things in relation to the heart and fasting. Have a look: [http://xa.yimg.com/kq/groups/15437070/982523391/name/Ahmet\\_JCF\\_16\\_843-853\\_2010\\_IF+mice+cardiac+probs.pdf](http://xa.yimg.com/kq/groups/15437070/982523391/name/Ahmet_JCF_16_843-853_2010_IF+mice+cardiac+probs.pdf) Also, mentioning the heart: <http://www.scientificamerican.com/article.cfm?id=how-intermittent-fasting-might-help-you-live-longer-healthier-life>

Jeff (2013-07-29 14:25:17)

Seth - What do you eat on your fasting days when you're consuming 700 - 800 calories? Seth: Butter, flaxseed oil, and a few other things.

Jeff (2013-07-29 17:50:15)

Seth - Thanks for the details. I've been eating butter, flaxseed oil and home made kefir from all your posts on the health benefits. Any thoughts on the health pros and cons of eating less of these foods or even skipping them completely some days while doing alternative day fasting? Seth: No, I have no relevant experience. I eat butter and flaxseed oil on fast days, for what it's worth. I want to keep brain function constant so that I can study the effect of other things on brain function.

Nina (2013-07-30 15:10:00)

jclifton - from a cursory reading of the first paper, I wasn't clear what the diet comprised. I think food composition does make a difference to heart function. I'm yet to be convinced of the alternate day fasting as the cause-effect factor in atrial fibrillation and stiff heart disease. I used to experience heart palpitations when I followed a low carb diet and had protein shakes with lots of whey protein and leucine. When I reduced the protein powders, the heart was fine. I'm doing a version of shangri la on one meal a day. I've switched from oil to butter (oil fine at first, but in the second week I started to retch) and no heart problems. Nina

Ashish (2013-07-30 19:00:14)

Interesting. I assume he drank water. Did he consume any liquid calories or probiotics (Yakult?) on his fasting days? I'm tempted to try this - spare no detail. Something is missing in the story. He didn't get to be an Ivy League math professor by being confused, exhausted, overwhelmed and depressed all the time. Were his indigestion and tiredness increasing in severity before he started the diet?

Ashish (2013-07-30 19:13:45)

How does exercise fit in with all this fasting?

limette (2013-07-31 16:11:23)

What did he eat on his non-fasting days? I'm curious, because I'm dealing with a candida infection and this account gives me hope. Seth: A later post will answer this in detail, but the short answer is: nothing unusual. He did not change his diet when he switched to alternate day fasting.

PC (2013-08-04 10:31:18)

My story is quite similar - I feel so much better when fasting, with more mental focus. I am more productive and less depressed. I'm assuming I may have candida overgrowth or something.

## What I'm Reading (2013-07-29 05:00)

- Republic of Outsiders: The Power of Amateurs, Dreamers, and Rebels by Alissa Quart
- Brilliant Blunders: From Darwin to Einstein, Colossal Mistakes by Great Scientists that Changed our Understanding of Life and the Universe by Mario Livio
- Fate of the States: The New Geography of American Prosperity by Meredith Whitney
- Americanah by Chimamanda Ngozi Adichie, might set the record for largest value of letters in author's name (21) minus letters in title (10) = 11
- proofreading part of a new book by Edward Jay Epstein, described as a "Kennedy assassination diary"

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KevinTran (2013-07-30 00:19:13)

Nice post

Kudzu Bob (2013-07-30 00:25:15)

Why do so many contemporary non-fiction writers use colons in their titles? Pressure from publishers? Herd instinct? [1]Even some novelists have begun to do this. The trend bothers me, although for the life of me I cannot say why.

1. <https://www.google.com/search?q=%22a+novel%22+%22amazon%22&ie=utf-8&oe=utf-8&aq=t&rls=org.mozilla:en-US:official&client=firefox-a>

dearieme (2013-07-30 01:37:52)

The trend bothers me: for the life of me I cannot say why. Look, saved a word. How much of punctuation is just habit? I use too many commas, and I don't always edit them out.

### Assorted Links (2013-07-30 05:00)

- [1]The power of the smell of chocolate. I add cacao shells (from [2]Tisano Tea) to the tea when I brew black tea. This adds complexity. 2.5 g of black tea plus 0.9 g of cacao shells.
- [3]Madonna's diet is rather hard. "I am basically dying on this diet. . . . It is so hard to give up all those foods."
- [4]Sous vide basics. "Using extra virgin olive oil results in an off, metallic, blood taste." [5]DIY sous vide, I want to read it to learn how controllers work.
- [6]More about Steve Cooksey and the ADA. The North Carolina branch of the American Dietetics Association attacked Cooksey for making nutrition recommendations on his blog. For free. This post explains why they did such a strange thing. A friend of mine, a nutrition professor at UC Berkeley, gave a Freshman Seminar (unpaid classes with about 10 students) on how to fix a car. Later he got a letter from a dean in the engineering school at Berkeley saying that only engineering professors can teach such a course.

Thanks to Richard Sprague.

1. <http://www.psmag.com/blogs/news-blog/chocolate-the-scent-that-could-save-struggling-bookstores-62847/>
2. <http://tisano.com/>
3. <http://nymag.com/thecut/2013/07/madonnas-diet-is-the-hardest-i-have-ever-tried.html>
4. <http://www.douglasbaldwin.com/sous-vide.html>
5. <http://learn.adafruit.com/sous-vide-powered-by-arduino-the-sous-viduino?view=all>
6. [http://www.forbes.com/sites/michaellellsberg/2012/07/10/american\\_dietetic\\_association\\_2/](http://www.forbes.com/sites/michaellellsberg/2012/07/10/american_dietetic_association_2/)

## Was Sisyphus in Hell . . . or Heaven? (2013-07-31 05:00)



In third grade, I learned that Sisyphus was condemned to an eternity of pushing a rock up a hill, the rock rolls back down, he pushes it up again, and so on. Why the Greeks told this story I had no idea, and still don't.

I am now moving – from an apartment in the basement of a house to an apartment on the top floor of the same house. I've discovered that in small amounts this is enjoyable. I enjoy carrying stuff up a bunch of stairs. I could do it an hour per day forever – like Sisyphus, except with time off.

Here is the downside of the occupational specialization that distinguishes humans from other species. I don't need to haul stuff upstairs one hour per day. People move stuff for a living. Instead I walk uphill on my treadmill, a imitation activity that does nothing for my upper body. I could move heavy stuff around my apartment, but that's boring. The situation reminds me of the way Japanese schoolchildren clean up their school every day. In small amounts, cleaning is fun. Whoever runs Japanese schools has figured this out and used this fact to everyone's benefit. Blogging is another example. In small amounts, writing and being read is fun. The communication this enables helps everyone. When writing becomes a job, a lot is lost – much less diversity of points of view. Those who write for a living are afraid of losing their jobs, reducing even further what can be said.

This blog is all about the fact that science is still another example. In small amounts, doing science is fun, especially when it has practical benefit (e.g., sleep better). Professional scientists have their place, just as professional movers, janitors, and writers have their place. But people who do science purely for their own ends – just as I move stuff upstairs purely for myself – have their place too. I am not as strong as a professional mover but I make up for it in dozens of ways. Personal scientists don't have the resources (e.g., expensive equipment) of professional scientists, but they make up for it in dozens of ways. Without them, the diversity of ideas that are taken seriously (e.g., tested)

goes way down.

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Pat McGee (2013-07-31 11:30:21)

Hi Seth, Who did the sculpture? I like it. Pat

Ashish (2013-07-31 15:16:32)

You might be as strong as a professional mover. IIRC, David Sedaris worked as a mover in NYC. Seth: I wish.

dearieme (2013-07-31 22:07:37)

Ahoy, Seth. <http://cardiobrief.org/2013/07/31/european-heart-guidelines-based-on-disgrace-d-research-may-have-caused-thousands-of-deaths/> Seth: Thanks.

## 8.8 August

### The Feet of People Who Never Wear Shoes (2013-08-01 05:00)

In the 1940s, [1]a podiatrist named Samuel Shulman examined the feet of a few thousand Chinese and Indians who never wore shoes. Their feet were in much better shape than the feet of people who wear shoes regularly.

The resulting complete absence of onychocryptosis [ingrown toenail] should serve to prove that proper nail care plus nonrestrictive footwear are all that is necessary to prevent the condition even in the presence of congenital nail malformations that are considered predisposing factors. . . . One hundred and eighteen of those interviewed were rickshaw coolies. Because these men spend very long hours each day on cobblestone or other hard roads pulling their passengers at a run it was of particular interest to survey them. If anything, their feet were more perfect than the others. All of them, however, gave a history of much pain and swelling of the foot and ankle during the first few days of work as a rickshaw puller. But after a rest of two days or a week's more work on their feet, the pain and swelling passed away and never returned again.

Chinese parks often have cobblestone-like paths that are extremely painful to walk on barefoot (for me) but that others (usually old Chinese people) walk on barefoot for health. I was surprised how clearly the pain went away day by day of exposure. [2]A 2005 study showed that four months of walking on cobblestone mats reduced blood pressure and improved balance compared to a group that walked the same amount normally:

Participants [average age about 80 years old] were randomized to a cobblestone mat walking condition (n=54) or regular walking comparison condition (n=54) and participated in 60-minute group exercise sessions three times per week for 16 consecutive weeks.

Measurements: Primary endpoint measures were balance (functional reach, static standing), physical



performance (chair stands, 50-foot walk, Up and Go), and blood pressure (systolic, diastolic). . . .

Results: At the 16-week posttest, differences between the two exercise groups were found for balance measures ( $P=.01$ ), chair stands ( $P<.001$ ), 50-foot walk ( $P=.01$ ), and blood pressure ( $P=.01$ ).

Some of the cobblestone walkers walked barefoot, some wore socks. A hypertension expert, apparently not understanding statistics, [3] said he wanted a larger study. I agree with him when he says that the speed of the improvement is what's most impressive.

Because our ancient ancestors no doubt went barefoot and walked on irregular surfaces, both sets of results – the foot survey and the cobblestone experiment – support conventional paleo theorizing.

I have a cobblestone mat. I tried to walk on it. It was so painful I couldn't get past the initial difficulty. Maybe I will try again.

1. <http://refs.ahcuah.com/papers/shulman.htm>

2. <http://onlinelibrary.wiley.com/doi/10.1111/j.1532-5415.2005.53407.x/abstract>

3. [http://www.cbsnews.com/2100-204\\_162-708479.html?pageNum=1](http://www.cbsnews.com/2100-204_162-708479.html?pageNum=1)

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Joel W (2013-08-01 06:30:48)

To get yourself accustomed to that pain without full immersion, start by rolling your feet on a lacrosse ball. Lacrosse balls are great for opening up tissue, and they're super cheap. Eventually, you'll get some of the really bad initial knots/fascia broken up and you can start going to the cobblestone.

Tom Passin (2013-08-01 06:38:49)

Trouble is, the abstract doesn't say how \*much\* blood pressure changed, only that the change was statistically significant compared with just walking (the publication is behind a firewall and I didn't want to pay to read the paper itself). We could estimate the minimum effect, though. Let's say that the standard deviation of BP readings is 5 mm, not unlikely based on myself. With 54 participants, the standard error would be about  $5/\sqrt{54}$  or about 0.7 mm. Allowing 3 SD change (2.6 would give  $p = 0.01$ ), that would be about 2 mm. So they probably saw about 2 mm difference in the groups. Not a lot, healthwise. As for the cobblestone mat, I lived for a year in Hawaii and for the last half, I went barefoot a good part of the time. It was painful at first, but eventually I could walk on a coral road carrying a 40-pound load without problems. I could also walk on a hot airport tarmac barefoot in the sun. After I left Hawaii, it took about 2 years for my feet to return to their previous condition. I don't know about blood pressure effects. But I don't think you'll get there with a few minutes a day on the mat. This study had the participants do an hour at a time. That's probably what it takes. Seth: Your calculation of the difference doesn't include the between-group comparison. That would double the minimum effect. I think it is too soon to be sure the blood pressure improvement was "not a lot, healthwise" in the sense of unimportant. The effect might have increased with further exposure. And it seems to point to a way of lowering blood pressure previously unknown or little known that is cheap and safe. Maybe there are other ways to take advantage of the underlying principle. And maybe there are other benefits.

Katie (2013-08-01 07:12:23)

Has anyone ever studied barefoot vs. wearing flip flops? When I'm not working (where I'm a professional and have to wear high heels - ugh), I try to be barefoot or in flip flops (the thinner the sole the better) if I'm out in public as much as possible. All of my older relatives keep saying it's going to ruin my feet, but I've been doing it for about 15 years now and made it through one pregnancy so far and still have no foot pain or problems.

Tam (2013-08-01 16:53:43)

@Katie <http://www.alignedandwell.com/katysays/open-toes-open-hearts/> #sthash.4O03zyvs.dpbs

gwern (2013-08-01 17:51:54)

Thomas: I jailbroke the paper for you at <http://dl.dropboxusercontent.com/u/182368464/2005-li.pdf> Enjoy. Your estimates are on the low end\*, see the table on pg6. Systolic fell by 5.3 mmHg more in the mat walking group, and diastolic fell by 3.19 mmHg more. \* If I had to guess, it might be because you forgot that they should be doing multiple-correction of their p-values, and so the effect size has to be much larger than you assumed in your single-p-value example. In this case, they measured at least 10 end measures and so there's a big adjustment going on.

Katie (2013-08-02 08:47:43)

Thanks, Tam!

Tom Passin (2013-08-02 09:53:13)

"Seth: Your calculation of the difference doesn't include the between-group comparison. That would double the minimum effect. " Actually it would be about  $\sqrt{2}$ . But since I didn't have a good value for the standard deviation, there wasn't any point in getting into more detail. I was just trying to roughly gauge the effect size, based on the info in the abstract. Now that gwern has provided a pointer to the paper, I see that the standard deviation was rather larger than my swag at it (13.5 mm vs 5 mm). Using this higher value and looking for between-group differences, for the 2.6 sigma value (i.e.,  $p = 0.01$ ) you would get about 6.8 mm as the likely difference. From the paper's data, the weighted between-group difference afterwards was 7.06 mm, with a standard error of about 2.4. Pretty close. The change in systolic pressure for the non-cobblestone group was -3.7 mm. So using the cobblestones seems to have lowered the systolic pressure by another 3.4 mm, with about the same standard error as above. If only the abstract had told us enough that we could have assessed the real-world significance without all this estimating! Seth: I agree, the abstract should have made clear the size of the effect.

Tim Beneke (2013-08-02 11:23:52)

FYI: Jiangyin, one of China's richest cities, just down the river a bit from Shanghai, has a sports stadium that seats 30,000 – mostly soccer is played there. There are many amenities, including a large area in the stands where people can walk on cobblestone, or the equivalent, to improve their health. It probably, like acupuncture/acupressure/foot massage, releases endorphins...

Heidi (2013-08-03 00:20:04)

The solution to the cobblestone mat problem is to tell the manufacturer you can't use it, and suggest they make a series of mats leading up to the real thing. They make more money from making it easier to use. This is a common problem with a lot of sports and exercise equipment, the manufacturer always designs it for people who are already fit, and doesn't even try to make things easier for the almost fit but willing.

Seth's Blog » Blog Archive » The Feet of People Who Never Wear Shoes | Apparel stuff (2013-08-03 00:36:28)

[...] Read more... [...]

peter (2013-08-04 12:42:28)

what comes to mind is reflexology, i.e., walking on cobblestone is the same as massaging the bottom of the feet.

A Berg (2013-08-08 06:39:52)

Interesting. I've kind of had a similar experience recently. I've had some difficult to get rid of pain in one of hip joints. Mostly it just hurt slightly to walk. Anat Baniels theory (from her 'Move into life' book) and her methods helped me somewhat. Physiotherapy and chiropractor helped me almost not at all. After 3-4 months with this going a bit up and down, I stopped using sandals/footwear indoor, and just wore socks to see if that would help on the problem. Almost immediately it started to improve. I could better sense my body and try different walking styles and until, I believe, my body rediscovered how to walk

without pain (as I believe Anat Baniel claims it should be able to). Part of the problem I think was tense muscles, and walking barefooted I could better relax my thighs, and recover a natural walk. A few times I have forgotten this, and used sandals, and sometimes I notice some annoyance in the legs again. So I find it quite likely that the bare footedness has helped. But then as I just recall, I guess my experience is just one among many. I believe I have read here last year that running barefooted is better for the knees (as I also discovered after testing it, but I stopped barefoot running because of pain from running on roads).

### Assorted Links (2013-08-02 05:00)

- [1]Obesity associated with hearing loss. The correlation is surprising and, if explained, might shed light on what causes obesity or what causes hearing loss.
- [2]The three biggest lies of Teach For America. From the same blogger: [3]A devastating comment about Secretary of Education Arne Duncan.
- [4]Benefits of breast-feeding. "Breast-fed babies are less likely to have ear infections and diarrhea as infants, and less likely to be obese and have diabetes as adults." More evidence for the importance of microbe-rich food.
- [5]Heart guidelines aren't changed after underlying data shown to be fraudulent.
- Old-fashioned self-experimentation: [6]does a snakebite treatment work? For a long time, self-experimentation to help yourself was undocumented.

Thanks to Alex Chernavsky and dearime.

1. <https://www.ncbi.nlm.nih.gov/m/pubmed/23754553/?i=3&from=/22253364/related>
2. <http://garyrubinstein.teachforus.org/2013/04/30/the-three-biggest-tfa-lies/>
3. <http://garyrubinstein.teachforus.org/2011/03/06/same-kids-same-building-same-lies/>
4. <http://www.npr.org/blogs/health/2013/07/31/207285165/more-moms-are-breastfeeding-but-many-babies-still-miss-out>
5. <http://www.forbes.com/sites/larryhusten/2013/07/31/european-heart-guidelines-based-on-disgraced-research-may-have-caused-thousands-of-deaths/>
6. <http://www.npr.org/blogs/health/2013/07/30/207050435/potential-treatment-for-snakebites-leads-to-a-paralyzing-test>

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Alex Chernavsky (2013-08-02 07:28:15)  
From the article about breast-feeding:

Multiple studies have found hospitals and birth centers often sabotage women's efforts. For instance, one-quarter of hospitals and birth centers give at least half of healthy breast-feeding newborns formula, according to the surgeon general's report, and almost three-quarters give breast-feeding mothers "welcome packs" that include formula.

Todd Fletcher (2013-08-02 09:30:40)

All three of my kids were breastfed and not a single one ever had an ear infection. That's something that's almost unheard of (haha).

MJB (2013-08-02 13:50:12)

A brave Baltimore teacher speaks the truth about schools, students "I have taught in the Baltimore public school system for the past two decades. What we need is better students. We have many excellent teachers. I cannot count the number of students who have physically destroyed property in the schools. "They have trashed brand new computers, destroyed exit signs, set multiple fires, destroyed many, many lockers, stolen teachers' school supplies, written their filth on the tops of classroom desks, defecated in the bathrooms and stairwells, assaulted teachers (beyond constantly telling them to perform certain impossible acts upon themselves) and refused to do any homework or class work. <http://washingtonexaminer.com/a-brave-baltimore-teacher-speaks-the-truth-about-t-schools-students/article/2533752>

Tom (2013-08-02 14:05:17)

Great post about conflicts of interest among the doctors setting cholesterol targets: <http://drmalcolmkendrick.org/2013/08/02/who-shall-guard-the-guardians/>

Tom (2013-08-02 14:06:14)

whoops, sorry about the double post. Seth, interesting post about conflicts of interest among the doctors setting cholesterol targets: <http://drmalcolmkendrick.org/2013/08/02/who-shall-guard-the-guardians/>

aelephant (2013-08-02 16:17:50)

Many Chinese mothers take prescription drugs to STOP lactation so that they can quit breastfeeding. You've heard of the massive formula consumption in China, no doubt. The people around a new mother will also often pressure her to give her baby formula, making her feel that her milk is inadequate in supply or quality. This becomes a self-fulfilling prophecy when the baby is full of formula & loses incentive to feed naturally.

### **Suicidal Gestures at Princeton: A Staggering Increase (2013-08-03 05:00)**

A friend of mine knows a former (retired) head of psychological services at Princeton University. She told him that in the 1970s, there were one or two suicidal gestures per year. Recently, however, there have been one or two per day.

Something is terribly, horribly wrong. Maybe the increase is due to something at Princeton. For example, maybe new dorms are more isolating than the old dorms they replaced. Or maybe the increase has nothing to do with Princeton. For example, maybe the increase is due to antidepressants, much more common now than in the 1970s.

Whatever the cause, it would help all Princeton students, present and future, and probably millions of others, if the problem were made public so that anyone, not just a vanishingly small number of people, could try to solve it. It isn't even clear that anyone is trying to explain/understand/learn from the increase.

Princeton almost surely has records that show the increase. If, as is likely, Princeton administrators never allow the increase to be documented, it will be a tragedy. It is an extraordinary and unprecedented clue about what causes suicidal gestures. Nothing in all mental health epidemiology has found a change by factor of a hundred or more – much less a mysterious huge change.

The increase is an unintended consequence of something else, but what? Because it is so large, there must be something extremely important that most people, or at least Princeton administrators, don't understand about mental health. The answer might involve seeing faces at night. I found that [1]seeing faces in the morning produced an enor-

mous boost in mood and that faces at night had the opposite effect. I cannot say, however, why seeing faces at night would have increased so much from the 1970s to now.

1. <http://escholarship.org/uc/item/2xc2h866/>

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Three Pipe Problem (2013-08-03 05:43:21)

Seth do you know what the Werther effect is? Perhaps that is why Princeton's administration is not so forthcoming. When publicizing suicide predictably leads to more suicides of a similar nature, the ethical question is a complex one. Seth: Yes, I know about the Werther effect. Given the size of the increase and the amount of suffering implied (including people elsewhere), I don't think that whether to do something about it – to do the utmost possible – is a complex or difficult ethical question. The benefits of figuring out what caused the increase would be enormous.

dearieme (2013-08-03 07:22:49)

Is it possible that they are admitting more students who suspect that they are not up to it? Is there any correlation between suicidal gestures and lack of academic success? How do their figures compare with, say, Yale or Oxford? Seth: Good questions I cannot answer. However, I doubt that admissions changes could produce such a big change

Alex Chernavsky (2013-08-03 12:45:26)

I'm not particularly suprised by the dramatic increase in suicidal gestures. Our society seems to be experiencing an epidemic of mental illness in general. It's interesting to note that PTSD didn't seem to exist for soldiers who underwent traumatic experiences during the American Civil War.

A study just published in the *Journal of Anxiety Disorders* looked at the extensive medical records for soldiers in the American Civil War, whose mortality rate was about 50-80 [times] greater than modern soldiers fighting in Iraq and Afghanistan. In other words, there would have been many more having terrifying experiences but despite the higher rates of trauma and mentions of other mental problems, there is virtually no mention of anything like the intrusive thoughts or flashbacks of PTSD. In a commentary, psychologist Richard McNally makes the point that often these symptoms have to be asked about specifically to be detected, but even so, he too admits that the fact that PTSD-like symptoms virtually make no appearance in hundreds of thousands of medical records suggests that PTSD is unlikely to be a 'universal timeless disorder'. Taking an even longer view, a study published in *Stress and Health* looked at historical accounts of traumatic experiences from antiquity to the 16th century. The researchers found that although psychological trauma has been recognised throughout history, with difficult events potentially leading to mental disorder in some, there were no consistent effects that resembled the classic PTSD syndrome. Various symptoms would be mentioned at various times, some now associated with the modern diagnosis, some not, but it was simply not possible to find 'historical accounts of PTSD'.

<http://mindhacks.com/2012/08/11/a-very-modern-trauma/>

Alex Chernavsky (2013-08-03 13:07:20)

So, to follow-up on my comment above: Investigative reporter Robert Whitaker wrote a book about this huge increase in the incidence of psychiatric disease. Whitaker attributes the epidemic to the toxic effects of psychotropic drugs. The evidence he presents is impressive. The book is fascinating (if disturbing) and is worth a read: [1]*Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*. Seth: If I remember correctly, nothing in that book came anywhere close to a hundred-fold increase.

1. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452425>

dearieme (2013-08-03 15:20:30)

"PTSD didn't seem to exist for soldiers who underwent traumatic experiences during the American Civil War." Is PTSD the same thing as the "shell shock" of the First World War?

Ashish (2013-08-03 18:03:15)

The selectivity of elite schools is much greater than it was in the 1970s, the pressure is greater (from the cost, and a tougher job marketplace), and the ethnic and socioeconomic composition of students is much different. So while the data this psychologist relates is shocking, I think the meaningful comparison is to contemporary institutions. Of course, universities have no incentive to make this information public.

nansen (2013-08-03 18:21:58)

"The answer might involve seeing faces at night." What about not seeing faces during the day, due to concentration on gadgets?

BRW (2013-08-03 18:44:42)

I think a number of factors could be at play here. One is certainly diet. I'm sure the food served at Princeton has changed quite a bit since the 70's. Another is probably, sunlight exposure. More competitive = more indoor studying. I also think folks are way up on the pill usage and most likely drinking more alcohol. I doubt one factor is at play here.

Alex Chernavsky (2013-08-04 08:56:33)

Seth, with regard to increases in the rates of mental illness, Whitaker argues that the epidemic has hit young people disproportionately hard. Citing US government statistics, Whitaker shows that among children, the rate of disability due to mental illness increased 35-fold between 1987 and 2007. During that same time, adult disability due to mental illness increased by a bit under 4-fold. 35-fold isn't so far removed from the 100-fold increase you described in your blog post. The rates of juvenile bipolar disorder have increased about 40-fold since 1987. Our old friend Dr. Joseph Biederman (about whom [1]you've blogged) is partly (or perhaps *mostly*) responsible for this iatrogenic tragedy.

1. <http://blog.sethroberts.net/2011/07/22/joseph-biederman-and-parents-they-should-be-left-in-a-room-together/>

Tom (2013-08-04 11:12:27)

The demographic makeup of the student bodies of elite universities has also changed considerably in that timeframe. There may be more "tiger mothers" now.

dearieme (2013-08-05 03:59:05)

Hang on, we've all forgotten the obvious question. What proportion are girls?

Christopher Burd (2013-08-05 14:33:33)

There are more suicidal gestures, but are there more suicides?

Tom (2013-08-05 21:37:58)

Good point. According to Wikipedia at least, females make far more "suicidal gestures" than males. But males actually kill themselves far more often than females. Which raises the question of whether the rise in suicidal gestures might be an upbeat sign. :-)

ChristianKI (2013-08-10 04:40:01)

Maybe the psychological counselling got more trustworthy over time so there's better reporting going on. Looking at the number of real suicides would be a much better way to see whether there a real problem going on. Seth: The number of actual suicides might be less sensitive, since there are far fewer of them.

B.B. (2013-08-12 07:05:40)

I will relate a personal observation. I once taught part-time at Wharton in the mid-1980s. In a class midterm exam, an Asian

female student folded during the exam. I took her outside the class and talked to her. She was clearly suffering extreme test anxiety. I told her I would drop the midterm and base her grade on the final, but only if she went to Penn's counseling center to get treatment for test anxiety. The same thing happened on the final. I asked if she had done as I told her. She related that the counseling center was so overwhelmed with students that it could not give her immediate counseling and only offered medication instead. Truly sad. And that was almost 30 years ago. I am sure the situation has gotten worse. Partly, that student's issue were related to familial and ethnic expectations (she told me that), female anxiety, and competitive pressure. Those factors likely increasingly apply to the entire student population at the Ivies.

sa (2013-08-12 14:42:07)

Maybe its due to an increase in the numbers of people infected by a parasite ? [http://www.theatlantic.com/magazine/archive/2012/03/how-your-cat-is-making-you-crazy/308873/?single\\_page=true](http://www.theatlantic.com/magazine/archive/2012/03/how-your-cat-is-making-you-crazy/308873/?single_page=true) "In a 2011 study of 20 European countries, the national suicide rate among women increased in direct proportion to the prevalence of the latent Toxo infection in each nation's female population. "

### **More About Benefits of Alternate Day Fasting (2013-08-04 05:00)**

Last week [1]I blogged about a friend who derived great benefits from alternate-day fasting. There were several reader questions. I put them to my friend:

Q How does exercise fit in with all this fasting?

A I do lyengar yoga every day, about 2 hours.

Q I assume he drank water. Did he consume any liquid calories or probiotics (Yakult?) on his fasting days?

A Yes, water. I replace electrolytes, but that's for other reasons. (I don't regulate electrolytes well.) There may have been 8 or 10 days in the last 9 months when I had a very small amount of food on a fasting day - a little yogurt or a little rice & sauerkraut, maybe. Q What did he eat on non-fasting days? A Breakfast of stir-fry + egg + some fruit & yoghurt & nuts & flax seeds. Maybe I break that into two meals or maybe not. Dinner of ... veggies/rice/chicken or ... something like that. [He didn't change what he ate when he started alternate-day fasting.] Q Something is missing in the story. He didn't get to be an Ivy League math professor by being confused, exhausted, overwhelmed and depressed all the time. Were his indigestion and tiredness increasing in severity before he started the diet? A I was severely ADHD all my life, and collapsed in the early 2000's. I turned out to suffer from heavy metal poisoning: mercury, lead and a little bit of arsenic. I've been detoxing for a number of years with steady improvement. As to how I managed to become an Ivy League math professor, that's not unusual. There are a lot of us. There is a subtype of ADHD called "with hyperfocus". Hyperfocus is a mild form of the Asperger's "little professor" syndrome, in which a person is completely consumed by one subject, at the expense of anything else.

1. <http://blog.sethroberts.net/2013/07/28/effect-of-alternate-day-fasting-on-a-friend/>

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limette (2013-08-04 12:18:59)

That clinches it for me. Beginning today, I'm starting alternate day fasting. I've had issues with candida since childhood and I want to finally kill it off. Most of the candida diets severely limit food choices and it's been hard to adhere to them.

Thomas Johnson (2013-08-04 12:24:43)

A few questions for you or your friend about the practicality of ADF: \* If you take medications that are supposed to be taken "with food" (which typically means that they are fat-soluble I think) how do you deal with this? \* How do you deal with the social aspect of eating? When your friends invite you to go out for lunch/dinner/drinks with them, do you just order a water? Seth: I'm not taking any medications. When eating with friends, I just eat very little.

Thomas Johnson (2013-08-04 12:28:54)

Also just came across this interesting snippet at <http://www.webmd.com/vitamins-and-supplements/nutrition-vitamins-11/fat-water-nutrient?page=1> Water-soluble nutrients work best when you get them in the proper amounts. When you eat or take more than your body needs, the body adapts by absorbing just what it needs, and then it usually excretes the excess in your urine – but not always. A study in the August 2010 Journal of Nutrition Science and Vitaminology found that urinary excretion of certain vitamins and other nutrients was reduced when study participants fasted.

Adam (2013-08-04 16:07:40)

@Thomas Johnson: Most medications can be taken with or without food, the food slows absorption & can minimize stomach upset. There are only a few that really need to be taken with food. Off the top of my head, I can only think of one & it is an anti-parasite drug that you're probably not taking. What drugs do you take that you think must be taken with food?

John (2013-08-04 18:34:15)

Has it had any effect on body weight?

Ashish (2013-08-04 21:51:34)

Does fasting give him bad breath? That seems to be a common side effect. Aren't bad smells, like the smell of feces, our body's way of telling us that something is wrong - or, in the case of feces, "don't eat this"? (As a practical matter, how does he deal with the fasting-induced halitosis?) Also - I know, so many questions - what is our best understanding of the physiological process by which fasting creates benefits such as loss of bad fat, reduced GERD, etc.? My experience is that missing a meal increases acid reflux, so I hesitate to go all the way. Thanks.

Adam (2013-08-04 23:11:36)

@Ashish: Have a look at [https://en.wikipedia.org/wiki/Stomach\\_acid#Secretion](https://en.wikipedia.org/wiki/Stomach_acid#Secretion). Stomach acid is secreted in response to a meal. No meal = less acid, at least from my reading. Fat loss would be explained by your body dipping into fat stores once all the readily available substrates have been depleted. There are also a lot of hormonal changes that occur in response to fasting.

Thomas Johnson (2013-08-05 13:40:24)

@Adam: I take a zinc supplement daily, which (at least for me) produces significant gastrointestinal upset if not taken with food. See <http://www.livestrong.com/article/30801-effects-taking-zinc-empty-stomach/>

Adam (2013-08-05 18:21:54)

@Thomas Johnson: I see. I think I got a little nausea as well when I tried zinc. You could try splitting the dose up. I found some info that suggests the amount your body absorbs is inversely proportional to the dose you take, so taking smaller doses more frequently would probably benefit you in 2 ways: less stomach upset & a greater percentage absorbed in each dose.

Ken (2013-08-06 14:53:00)

What about drinking coffee on fast days? Encouraged or what that alter the effects of fasting? I would be concerned about low blood sugar making me cranky, but I think black coffee would help compensate. Seth: I drink lots of tea on fast days. Including Choffy, a coffee substitute made with chocolate. I brew it like tea.



Char (2013-08-06 15:02:45)

I found this interesting. I wonder if it's some of the same things going on with alternate day fasting.  
<http://www.dailymail.co.uk/health/article-2385179/I-reversed-diabetes-just-11-days-going-starvation-diet.html>

### **More Evidence Linking Fermentation and Complexity: Wild-Fermented Wine (2013-08-05 05:00)**

I came to believe that we need to eat fermented foods to be healthy partly because this idea solved an evolutionary question: why do we like food that is sour, umami-flavored, and complex? I realized that all three preferences could be explained the same way: All three push us to eat more fermented food. For example, fermented milk (yogurt) is sourer than fresh milk.

Fermentation also increases complexity. An example is miso. I noticed that miso by itself was sufficient flavoring for soup. I had to add quite a few spices to produce the same amount of complexity that miso alone produced – miso was a super-spice.

Wine is a fermented food, of course, but long ago all fermentation was "wild" – it proceeded from whatever fermenting agents were in the air, on people's hands, and so on. Fermentation increased complexity not just because the microbes metabolized the food but because there were many kinds of microbes. Australian winemakers were [1]recently given a lesson in the connection between wild fermentation and complexity:

We were tasting two glasses of pinot noir, blind, and the questions were: is there any difference between them? If so, how are they different?

Glass One was full purple-red in colour and smelled fresh and fruity, delightfully primary, with a bright raspberry aroma that was almost like bubble gum. It was pristinely clean, delicate, light on the palate and charming, but ultimately rather simple.

Glass Two had a darker colour and blacker fruit aromas, more complex and mysterious. Similarly, in the mouth it was fuller-bodied, richer and deeper, with greater textural interest, fleshier and denser, with more tannin. A beautiful wine, too, but much more profound and captivating than Glass One.

Winemaker David Bicknell then announced to the gathering [of winemakers] that the only difference between the wines was that Glass One had been fermented with a pure yeast strain and Glass Two had undergone a wild ferment. That means no yeast had been added: the juice had been fermented by whatever yeast strains happened to be in the air at the time.

"Both wines were picked from the same Upper Yarra Valley vineyard on the same day, and everything in the winemaking was the same except the yeast," announced Bicknell, who is the winemaker at Oakridge. The class was asked to try to pick the wild ferment and say which wine they preferred. The great majority nominated the correct glass, and liked it more. There was nothing wrong with Glass One: it was simply that Glass Two was better - every way you looked at it.

The "class" was a wild-yeast workshop at the recent Australian Wine Industry Technical Conference in Sydney. The "students" consisted mainly of experienced winemakers. . . . The environment, especially the air, contains hundreds of thousands of strains of yeast, most of which occur naturally. The species present depend on what flowers, fruits, trees and grasses are in that locality. Recent New Zealand research has shown that yeasts are territorial, and the species present vary according to the place. . . .

Pairs of Hardys' Eileen Hardy chardonnay and Mount Pleasant Hunter chardonnay, all 2013 vintage, one of each "wild" and the other seeded with cultured yeast, showed more permutations of character. With Mount Pleasant, the wild wine was cloudy in appearance, and quite stinky, but also showed density of flavour and richness, while the regular wine was good but not as interesting. The winemakers seemed to think the stinky one would clean up after a period of lees-stirring.

Of the Hardys wines, the regular ferment looked bright and clear in the glass, and was pristinely clean, intense and lively, with a spring water-like lightness of texture. The wild ferment was cloudy, smelled of cashews, bread, smoky oak, sulfides and spices, but the real difference was in the mouth. Its texture was far more rich and dense, fleshy and rounded, smooth and harmonious.

Eileen Hardy winemaker Tom Newton said he believed the sulfides were related to the wine's greater textural density. Indeed, all winemakers I've quizzed who practise wild fermentation believe it gives their wines greater length of palate and improved texture as well as extra flavour complexity.

Even riesling responds to this "rougier than usual handling". Kerri Thompson's wild-ferment Clare Valley riesling was a graphic illustration. Served beside a conventional Clare riesling, which was a perfectly good wine in its way, her KT Pazzo Riesling 2013 was turbid (not clear) and smelled of apple, pear, yeast and a hint of nuttiness from time spent in old barrels. It was a more expressive, more textural and more layered wine than the conventional one. It's on sale soon at \$29.

And perhaps the most beautiful, exotic, fascinating wine of the day was Cullen's Kevin John Chardonnay 2011. . . . Biodynamically grown and wild fermented, it's a pioneer and benchmark of the genre. It's so complex it's difficult to describe, although honey and oak and what I call "balsamic" (like the smell of balsamic vinegar, without the vinegar or sweetness) aromas are all involved, welded to a razor-sharp, crisply tart, long and linear palate structure.

Will Australia become the new California? Decades ago, California winemakers figured out how to make wines that were the equal of French wines. No doubt French winemaking had stagnated. Australian winemakers have just been taught how to make much better wines for the same price. As far as I know, Californian and French winemakers have yet to learn this lesson.

Wine is a very old food. One remarkable thing about this demonstration is how long it took – how long it took to learn this lesson. Sure, we like hand-made this and artisanal that, but in so many ways we prize uniformity, no more so than in our educational system, to which we entrust the most precious thing we have: our children. Who are treated by that system in a factory-like way, in the sense that all children in a class get the same teaching materials and are given the same tests. I have yet to hear an education theorist say that the best education produces diversity not uniformity. When I let my students' underlying diversity be expressed (for example, in what they chose to learn), teaching became much easier. Win-win. Essentially what the winemakers are figuring out: When you let the natural variation of yeasts be expressed, making great wine becomes much easier.

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dearieme (2013-08-05 07:42:31)

Allow me to recommend a birthday present wine I got from my daughter: Assyrtiko 2012 Wild Ferment from the Gaia estate, Santorini. Yum, yum.

Nina (2013-08-05 10:40:32)

In Europe there's a big natural wine movement. Georgia in the Caucasus has a long tradition of natural wines. <http://www.youtube.com/watch?v=Zh9AcMFTvUM>

Tom Passin (2013-08-05 17:21:54)

I bake bread, mostly sourdough. I use a long fermentation time - usually 12 - 16 hours. It's well known in the baking business that longer fermentation times lead to more flavor. Some of that is just time hydrated (wet) aside from any fermentation, but fermentation also plays a big role. I did an experiment in which I used a pinch of conventional yeast to make one batch of dough, and my regular sourdough culture for another. The recipes were adjusted to have the same overall amounts of flour and water, and the pinch of yeast was selected to give about the same fermentation time as the sourdough batch would take. The result was that both batches fermented, handled, and baked essentially the same as each other. The sourdough bread clearly had better and more complex flavor. I'd done the same kind of thing before, with similar results, but this time I made sure that the recipes and fermentation times were the same so as to get a more controlled comparison. In developing a sourdough culture, it's often said that you get wild yeast from the air. That may be so on occasion, but I have reasons (I won't go into here) for thinking that most of the yeast arrives with the flour you use to create the sourdough culture. Eventually the culture stabilizes with a mixture of yeast and lactic and acetic acid bacteria. It's the mix of all three that gives the fine sourdough quality - the complexity that Seth talks about.

dearieme (2013-08-06 02:47:10)

Ahoy, Seth. News from the Old England Journal of Medicine: <http://www.dailymail.co.uk/health/article-2385179/I-reversed-diabetes-just-11-days-going-starvation-diet.html>

Loweeel (2013-08-06 12:11:11)

Seth, apparently there isn't really any such thing as a true "wild yeast" fermentation. Rather, when they've actually looked into it, regardless of what yeast starts off, they're all out-competed in fairly short order by dominant commercial wine-specific yeast strains. <http://fermentationwineblog.com/2013/08/wild-yeast-fermentation-theres-no-such-thing/> Seth: The article fails to explain why the supposedly wild fermentation wines tasted much better in the Australian taste test.

## **Cream Cheese Improves Brain Function (2013-08-07 05:00)**

Last night I had dinner with a friend in a restaurant. We chatted with a couple sitting next to us. They asked what I did research about. "Food and the brain," I said. "What foods make the brain work best." They asked for an example. "[1]Butter," I said. The woman smiled. "That's great news! Butter is delicious." As they left, the woman said, "I feel like I've learned some really interesting things."

I agree, great news - partly because butter is delicious. Yet it fits what we already know. It's been known since the 1920's that a high-fat ("ketogenic") diet can ameliorate childhood epilepsy. I suppose it's called "ketogenic diet" to avoid the term high-fat - or to sound more "scientific". It's an unfortunate name because why the diet helps is unclear. "Although many hypotheses have been put forward to explain how the ketogenic diet works, it remains a mystery," [2]says Wikipedia.

Another example of dairy fat improving brain function comes from [3] a little girl with a rare genetic disease:

A 3-year-old girl, . . . thanks to a diet of cream cheese, gained the ability to speak despite a disease that [had] left her mute from birth.

Fields Taylor, from Melton Mowbray in Leicestershire, was born with the incurable genetic disease Glut 1 Deficiency that caused a lack of glucose to flow to her brain. Today, Taylor's diet of four containers of the cream cheese per week gives her a voice. . . . "The amount of Philadelphia [cream cheese] she goes through is mad but worth it. It really has been our saving grace. She loves the stuff and piles it on crackers," The Mirror quoted her mother Stevie as saying. "The first time I heard Fields say 'Mum' it was just wonderful." . . . Glut 1 affects just 26 people in the U.K.

Thanks to Tom George.

1. <http://quantifiedself.com/2010/09/seth-roberts-on-arithmetic-and/>
2. [http://en.wikipedia.org/wiki/Ketogenic\\_diet](http://en.wikipedia.org/wiki/Ketogenic_diet)
3. [http://main.aol.com/2013/07/20/fields-taylor-3yearold-mu\\_n\\_3634208.html?ncid=txtlnkusaolp00000058](http://main.aol.com/2013/07/20/fields-taylor-3yearold-mu_n_3634208.html?ncid=txtlnkusaolp00000058)

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Charlie (2013-08-07 09:01:06)

Unfortunately, all commercial produced cream cheese in the US contains one or more of the dreaded "gums" - guar, xanthan or carob bean - none of which I can tolerate. Fortunately, the European versions, do not - creme fraiche, mascarpone, etc., also quark and farmer cheese. Cheers

Jonathan Shewchuk (2013-08-07 23:36:20)

"Ketogenic" implies more than just high fat, doesn't it? The carb intake must also be low enough for the body to go into ketosis. Also, it seems to me that "ketogenic" diets for epilepsy are often more restrictive than ketogenic diets for weight loss or endurance sports, because some epileptics have to severely restrict their protein intake as well to avoid seizures. Seth: Then "high-fat low-carb diet" would have been a good name. The trouble with "ketogenic diet" is that it implies that the diet works because it produces ketosis. That could easily be wrong.

Paul N (2013-08-09 08:25:54)

I'm not sure that "high carb low fat" is accurate either. If the diet is improving brain function in people with impaired brain glucose metabolism, it is almost certainly because of ketones - the brain cannot process fatty acids/triglycerides. But this does not necessarily require it to be low carb, either. Eat coconut oil and/or medium chain triglycerides, and your body produces ketones even when you are still eating plenty of carbs. There is the well known case of [1] Dr Mary Newport, who treated her husband's alzheimers by adding coconut oil to his oatmeal, and saw improvements in days. This would not have been an LCHF diet, nor even "ketogenic" by the normal definition, but it does produce ketones and did improve his brain function. I'll guess, and it's just a guess, that the epileptics have to avoid certain types of proteins that have high glutamate content - as glutamate excites neurons, while ketones produce GABA to inhibit them. It's easy to see there's lots more to be learnt in this area, and also easy to see that since ketones/MCT's/coconut oil are not drugs nor patentable, there isn't much money being devoted to research on them. Given Seth's results with butter, I'm sure butyric acid helps the brain too, though likely in a different way, since it produces improvements that coconut oil doesn't.

1. <http://www.tampabay.com/news/health/spring-hill-couple-inspires-research-into-coconut-oil-for-alzheimers/2124596>

## Alternate Day Fasting: Not For Everyone? (2013-08-08 05:00)

I've been doing [1]alternate day fasting for about two months. I find it very easy. In several ways it's easier than eating every day:

- save time
- save money
- less constrained on eating days
- a little more hungry than usual on fasting days (up to a point hunger is pleasant – when the Shangri-La Diet wiped out all my hunger, I didn't like it)
- sense of accomplishment when I wake up after a fasting day (I did it)
- food tastes better

Maybe my friends are unusually tolerant but I have yet to encounter a serious negative. Yesterday, a fasting day, I happily watched a friend eat dinner. I had two bites out of curiosity. I saw nothing to suggest it made her uncomfortable I wasn't eating.

However, a different friend has told me that alternate day fasting made her sick. She did it for about three months, felt worse and worse, and finally stopped. She believes it works less well for women than for men. I suspect a heavy exercise routine (she ran a lot) made alternate day fasting more difficult. But there is also the best-selling book [2]The FastDiet. It has two authors, a man (Michael Mosely, a doctor) and a woman (Mimi Spencer, a journalist). The book contains a remarkably short and remarkably unenthusiastic description of Spencer's experience with intermittent fasting. Maybe it didn't agree with her, either.

1. <http://blog.sethroberts.net/category/health/intermittent-fasting/>

2. <http://thefastdiet.co.uk/>

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Jim (2013-08-08 06:14:34)

There are many comments on various paleo blogs indicating that intermittent fasting is more difficult and less beneficial for women.

Charlie (2013-08-08 06:16:36)

I have seen several discussions on "paleo" blogs that suggest fasting - intermittent, alternate day, whatever - isn't always good for women, and some suggest it's never good. Cheers

None (2013-08-08 07:05:12)

I fast one or two days a week. I like it so far. I feel better and with more energy the next day. I don't exactly feel great on fast days. I don't think that I could do two consecutive days, much less alternate days. I can't run much on the days I fast. It feels like it would be too much stress on my body. By the way, the 5:2 authors don't always recommend fasting two consecutive days. And don't forget that they define fasting days as days in which men are advised to consume 600 calories and women 500. That's very different from alternate day fasting with no (or few) calories on fasting days.

Rlen (2013-08-08 08:53:02)

I tried 5:2 for a couple of weeks. Initially I did great, but after maybe 6 weeks my stomach started protesting. Violently! I switched back to normal eating and it took me about 2 months before the stomach got back to normal. (I had the impression that too much nightshade plants in my diet caused the upset) I will try 5:2 again as I really like the concept and I do want to know if this was just a one time fluke or not.

Jazi Zilber (2013-08-08 11:49:03)

I believe its individual. For me, fasting has been terrible for awhile. I simply could not stand it. Not psychologically - physically. It would drain my energy and make me sick. then it changed. now i can fast. For a very long time, I was unable to fall asleep without having eaten some time before sleep.

CC (2013-08-08 13:15:45)

When I investigated alternate day fasting several years ago, I discovered that 1) not enough investigation had gone on that explored the differences male vs female physiology made on the effects of fasting, and 2) what findings were available re: female fasting weren't so good. It makes sense; during times of scarcity, it's harder on a female body (and on the developing fetus) to be pregnant. Negative changes in women appeared to be more pronounced and possibly linked to hormonal balance. We do know that, under a certain body weight, fertility can be affected and menses can be delayed or halted. Anecdotal evidence in some of the fasting forums I read also seemed to also point to fasting being unhealthy and not beneficial for some women (though some of those poor women would try repeatedly, experience the same negative results and feel that they were failing). The potential benefits (possibly mainly experienced by males) didn't sound worth the potential risks, to me.

Todd (2013-08-08 14:21:54)

As someone who has worked with a lot of performance athletes, attempting to fast while training for performance can put down a beating on the adrenals. Women are indeed more susceptible to dysfunction in the adrenal/thyroid/ovary axis. Not to say that fasting can't be done for performance athletes, but it usually needs to be a very resilient person with a good understanding of how to fuel during their non-fasting periods. Fasting may also exacerbate adrenal and thyroid issues in people just interested in health and fitness, so, for someone who's already started down some paths of hormonal issues, fasting can dig their hole a bit deeper. Again, not to say that it can't be done or that it's not beneficial, just some folks are way more susceptible to downregulating their thyroid and screwing up their cortisol curve.

Rob (2013-08-09 17:28:41)

Here is Mimi Spencer's experience with the Fast Diet (page 9): "In the months that I wrote the Times feature, I have remained a convert. An evangelist, actually. I'm still "on" the Fast Diet, but I barely notice it. At the outset, I weighed 132 pounds. At five feet, seven inches, my BMI was an OK 21.4. Today, as I write, I weigh 119 pounds, with a BMI of 19.4. That's a weight off. I feel light, lean, and alive. Fasting has become part of my weekly life, something I do automatically without stressing about it. Six months in, I have more energy, more bounce, clearer skin, a great zest for life." Accounting for British understatement, and overlooking the excessive comma usage, I would say that is a strong endorsement. Seth: One paragraph...in a whole book? What about lab results? What about blood sugar? What about examples of feeling "light, lean, and alive"? Did she recommend the diet to anyone else? This isn't my idea of enthusiasm.

Ashish (2013-08-09 23:20:00)

It's 11:17pm. I haven't eaten all day. I suspect that the cooking and eating time saved was replaced by time spent, especially as the day wore on, fantasizing about my next meal, and Googling recipes for breakfast. No euphoria yet. Seth: I think the "conditioned hunger" goes away but the saved time does not.

## The Truth in Small Doses: Interview with Clifton Leaf (Part 1 of 2) (2013-08-09 05:00)

I found a lot to like and agree with in *The Truth in Small Doses: Why We're Losing the War on Cancer – and How to Win It* by Clifton Leaf, published recently. It grew out of a 2004 article in *Fortune* in which Leaf described poor results from cancer research and said that cancer researchers work under a system that "rewards academic achievement and publication over all else" – in particular, over "genuine breakthroughs." I did not agree, however, with his recommendations for improvement, which seemed to reflect the same thinking that got us here. It reminded me of President Obama putting in charge of fixing the economy the people who messed it up. However, Leaf had spent a lot of time on the book, and obviously cared deeply, and had freedom of speech (he doesn't have to worry about offending anyone, as far as I can tell) so I wondered how he would defend his point of view.

Here is Part 1 of an interview in which Leaf answered written questions.

SR Let me begin by saying I think the part of the book that describes the problem – little progress in reducing cancer – is excellent. You do a good job of contrasting the amount of time and money spent with progress actually made and pointing out that the system seems designed to produce papers rather than progress. What I found puzzling is the part about how to do better. That's what I want to ask you about.

In the Acknowledgements, you say Andy Grove said "a few perfect words" that helped shape your thesis. What were those words?

CL "It's like a Greek tragedy. Everybody plays his individual part to perfection, everybody does what's right by his own life, and the total just doesn't work." Andy had come to a meeting at *Fortune*, mostly just to chat. I can't remember what the main topic of conversation was, but when I asked him a question about progress in the war on cancer, he said the above. (I quote this in the 2004 piece I wrote for *Fortune*.)

SR You praise Michael Sporn. His great contribution, you say, is an emphasis on prevention. I have a hard time seeing this as much of a contribution. The notion that "an ounce of prevention is worth a pound of cure" is ancient. What progress has Sporn made in the prevention of anything?

CL Would it be alright, Seth, if before I answer the question, I bring us back to what I said in the book? Because I think the point I was trying to make – successfully or not (and I'm guessing you would conclude "not" here) – is more nuanced than "an ounce of prevention is worth a pound of cure."

Here's what I see as the key passage regarding Dr. Sporn (pgs. 133-135):

For all his contributions to biology, biochemistry, and pharmacology, though, Sporn is still better known for something else. Rather than any one molecular discovery, it is an idea. The notion is so straightforward—so damned obvious, really—that it is easy to forget how revolutionary it was when he first proposed it in the mid-1970s: cancer, Sporn contended, could (and should) be chemically stopped, slowed, or reversed in its earliest preinvasive stages.

That was it. That was the whole radical idea.

Sporn was not the first to propose such an idea. Lee Wattenberg at the University of Minnesota had suggested the strategy in 1966 to little response. But Sporn refined it, pushed it, and branded it: To distinguish such intervention from the standard form of cancer treatment, chemotherapy—a therapy that sadly comes too late for roughly a third of patients to be therapeutic—he coined the term chemopreven-

tion in 1976.

The name stuck.

On first reading, the concept might seem no more than a truism. But to grasp the importance of chemoprevention, one has first to dislodge the mind-set that has long reigned over the field of oncology: that cancer is a disease state. “One has cancer or one doesn’t.” Such a view, indeed, is central to the current practice of cancer medicine: oncologists today discover the event of cancer in a patient and respond—typically, quite urgently. This thinking is shared by patients, the FDA, drug developers, and health insurers (who decide what to pay for). This is the default view of cancer.

And, to Sporn, it is dead wrong. Cancer is not an event or a “state” of any kind. The disease does not suddenly come into being with a discovered lump on the mammogram. It does not begin with the microscopic lesion found on the chest X-ray. Nor when the physician lowers his or her voice and tells the patient, “I’m sorry. The pathology report came back positive. . . . You have cancer.”

Nor does the disease begin, says Sporn, when the medical textbooks say it does: when the first neoplastic cell breaks through the “basement membrane,” the meshwork layers of collagen and other proteins that separate compartments of bodily tissue. In such traditional thinking, it matters little whether a cell, or population of cells, has become immortalized through mutation. Or how irregular or jumbled the group might look under the microscope. Or how otherwise disturbed their genomes are. As long as none of the clones have breached the basement membrane, the pathology is not (yet) considered “cancer.”

For more than a century, this barrier has been the semantic line that separates the fearsome “invader” from the merely “abnormal.” It is the Rubicon of cancer diagnosis. From the standpoint of disease mechanics, the rationale is easy to understand, because just beyond this fibrous gateway are fast-moving channels (the blood and lymphatic vessels) that can conceivably transport a predatory cell, or cells, to any terrain in the body. Busting through the basement is therefore a seeming leap past the point of no return, a signal that a local disturbance is potentially emerging into a disseminating mob.\*

But while invasion may define so-called clinical cancer for legions of first-year medical students, it is by no means the start of the pathology. Cancer is not any one act; it is a process. It begins with the first hints of subversion in the normal differentiation of a cell—with the first disruption of communication between that cell and its immediate environment. There is, perhaps, no precise moment of conception in this regard, no universally accepted beginning—which makes delineating the process that much harder. But most, if not all, types of “cancer” have their own somewhat recognizable stages of evolution along the route to clinically apparent disease.

“Saying it’s not cancer until the cells are through the basement membrane,” says Sporn, “is like saying the barn isn’t on fire until there are bright red flames coming out of the roof. It’s absolute nonsense!”

(Sorry for that long excerpt.) I think that Dr. Sporn’s greatest contribution was to reframe cancer as a continually evolving, dynamic process — carcinogenesis — rather than an event or state of being. And it was one that, conceivably at least, we could interrupt — and interrupt earlier than at the point at which it was clinically manifested. This was distinct from early detection, which, while effective to some extent and in some cancers, was both detecting cancers too late and “catching” many lesions that weren’t likely to develop any further (or didn’t really exist to begin with), adding to the already-great cancer burden.

There was a potential, said Sporn, to intervene in a way that might stop developing cancers in their tracks, and yet would not necessarily have to add to the burden of cancer overtreatment.



As I spend most of Chapter 7 discussing, there are enormous barriers to pulling this off—and I did my best to lay out the challenges. But I do believe that this is the way to go in the end.

SR You praise Kathy Giusti for her effect on multiple myeloma research. I couldn't find the part where that research ("a worthy model for cancer research that can serve as a guidepost for the future . . . that teaches everything there is to teach about the power of collaborative science", p. 260) came up with something useful.

CL Seth, sorry this again may be me not being very clear in my writing. I apologize for that. But the lines you cite actually are intended to set up the Burkitt story in the following chapter. It was Burkitt's effort against the mysterious African lymphoma, that remains, in my view, "a worthy model for cancer research..."

SR You praise Burkitt's epidemiology. How did that epidemiology help find out that Burkitt's lymphoma responds to certain drugs? I couldn't see a connection.

CL Good question. I think Burkitt's very old-fashioned epidemiological investigation identified a widespread, terrible cancer that had been seen many times, but not noticed for what it was. It helped narrow down who was getting this cancer and—at least in a broad, geographical sense—why. But it wasn't epidemiology that helped discover that this lymphoma was responsive to certain drugs—that was trial and error. As with the case of Farber and ALL [acute lymphocytic leukemia], many today would blanch at the primitive experimental protocols that tested these toxic drugs in children. But with an extraordinarily aggressive tumor that was killing these kids in weeks, Burkitt felt he had to try *something*. Again, that's not epidemiology, but it is an understanding of the urgency of this disease that we can, perhaps, learn from.

[End of Part 1 of 2]

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Mark (2013-08-09 07:02:18)

Seth, thanks! This is wonderful. And you've just sold one copy of this book. That said, and I'm not criticizing your reading, but I totally agree with this blurb regarding Sporn. Of course, this is out of the greater context of the book, as well, so maybe I'll be similarly concerned when I read it (I take the view that most of the preventive epidemiology stuff is pretty much bunk).

Rlen (2013-08-09 07:53:45)

Nicolas Taleb has something to say about the medical system as well in his most recent book "Antifragility". In short, he thinks that the current system does not do enough experimentation and tries to much to design a solution. This makes it open to downside (failure) but closes it to upside (unexpected discoveries). Seth: My view is the current system makes science into a job. Jobs demand steady results. There can be no taking chances, no long periods of failure. But good science – in contrast to assembly line science – demands exactly that. That is a blend of what Taleb and Leaf say.

dearieme (2013-08-09 15:53:32)

Somewhere on the web I saw words to the effect of "Cancer is a thousand diseases with a common symptom." I wish people would repeat that rather than the ludicrous "The War on Cancer". "Jobs demand steady results. There can be no taking chances, no long periods of failure." Yes, but why? Who imported this daft mindset into science? After all it's not the mindset that dominates, for example, oil exploration, where periods of failure are accepted as part of the the cost of big successes. Seth: People who aren't scientists asked for it and scientists agreed. Inherent in the notion of job is trade with people with other jobs. People with other jobs (e.g., legislators, parents, journalists, etc.) give scientists money, attention, and so on and want something in return. Such as visible progress. Scientists themselves don't point out how deeply science is screwed up by

emphasis on short-term progress (Stockholm Syndrome?), so it is unsurprising that outsiders don't see it.

## **The Truth in Small Doses: Interview with Clifton Leaf (Part 2 of 2) (2013-08-10 05:00)**

[1]Part 1 of this interview about Leaf's book *The Truth in Small Doses: Why We're Losing the War on Cancer – and How to Win It* was posted yesterday.

SR You say we should “let scientists learn as they go”. For example, reduce the need for grant proposals to require tests of hypotheses. I agree. I think most scientists know very little about how to generate plausible ideas. If they were allowed to try to do this, as you propose, they would learn how to do it. However, I failed to find evidence in your book that a “let scientists learn as they go” strategy works better (leaving aside Burkitt). Did I miss something?

CL Honestly, I don't think we know yet that such a strategy would work. What we have in the way of evidence is a historical control (to some extent, we did try this approach in pediatric cancers in the 1940s through the 1960s) and a comparator arm (the current system) that so far has been shown to be ineffective.

As I tried to show in the book, the process now isn't working. And much of what doesn't work is what we've added in the way of bad management. Start with a lengthy, arduous, grants applications process that squelches innovative ideas, that funds barely 10 percent of a highly trained corps of academic scientists and demoralizes the rest, and that rewards the same applicants (and types of proposals) over and over despite little success or accountability. This isn't the natural state of science. We BUILT that. We created it through bad management and lousy systems.

Same for where we are in drug development. We've set up clinical trials rules that force developers to spend years ramping up expensive human studies to test for statistical significance, even when the vast majority of the time, the question being asked is of little clinical significance. The human cost of this is enormous, as so many have acknowledged.

With regard to basic research, one has only to talk to young researchers (and examine the funding data) to see how badly skewed the grants process has become. As difficult (and sometimes inhospitable) as science has always been, it has never been THIS hard for a young scientist to follow up on questions that he or she thinks are important. In 1980, more than 40 percent of major research grants went to investigators under 40; today it's less than 10 percent. For anyone asking provocative, novel questions (those that the study section doesn't “already know the answer to,” as the saying goes), the odds of funding are even worse.

So, while I can't say for sure that an alternative system would be better, I believe that given the current state of affairs, taking a leap into the unknown might be worth it.

SR I came across nothing about how it was discovered that smoking causes lung cancer. Why not? I would have thought we can learn a lot from how this discovery was made.

CL I wish I had spent more time on smoking. I mention it a few times in the book. In discussing Hoffman (pg. 34, and footnote, pg. 317), I say:

He also found more evidence to support the connection of “chronic irritation” from smoking with the rise in cancers of the mouth and throat. “The relation of smoking to cancer of the buccal [oral] cavity,” he wrote, “is apparently so well established as not to admit of even a question of doubt.” (By 1931, he would draw an unequivocal link between smoking and lung cancer—a connection it would take the surgeon general an additional three decades to accept.)

And I make a few other brief allusions to smoking throughout the book. But you're right, I gave this preventable scourge short shrift. Part of why I didn't spend more time on smoking was that I felt its role in cancer was well known, and by now, well accepted. Another reason (though I won't claim it's an excusable one) is that Robert Weinberg did such a masterful job of talking about this discovery in "Racing to the Beginning of the Road," which I consider to be the single best book on cancer.

I do talk about Weinberg's book in my own, but I should have singled out his chapter on the discovery of this link (titled "Smoke and Mirrors"), which is as much a story of science as it is a story of scientific culture.

SR Overall you say little about epidemiology. You write about Burkitt but the value of his epidemiology is unclear. Epidemiology has found many times that there are big differences in cancer rates between different places (with different lifestyles). This suggests that something about lifestyle has a big effect on cancer rates. This seems to me a very useful clue about how to prevent cancer. Why do you say nothing about this line of research (lifestyle epidemiology)?

CL Seth, again, I agree. I don't spend enough time discussing the role that good epidemiology can play in cancer prevention. In truth, I had an additional chapter on the subject, which began by discussing decades of epidemiological work linking the herbicide 2-4-D with various cancers, particularly with prostate cancer in the wheat-growing states of the American west (Montana, the Dakotas and Minnesota). I ended up cutting the chapter in an effort to make the book a bit shorter (and perhaps faster). But maybe that was a mistake.

For what's it worth, I do believe that epidemiology is an extremely valuable tool for cancer prevention.

[End of Part 2 of 2]

1. <http://blog.sethroberts.net/2013/08/09/the-truth-in-small-doses-interview-with-clifton-leaf-part-1-of-2/>

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sa (2013-08-10 14:28:42)

Regarding the "lengthy, arduous, grants applications process that squelches innovative ideas", another avenue in the future may be crowdfunding. People have been known to fund interesting ideas on Kickstarter.com, such as the Pebble smart watch and Star Citizen, the computer game, to the tune of \$10 million and \$15 million respectively, which are staggering amounts. There is a niche for someone who figures out a way to bring together people who suffer from diseases, or people just interested in donating to a specific area of research, with researchers doing innovative research in those areas. microryza.com is one website which looks like its tackling this as it lets people put their research projects up and gather funds from backers, and update them with results. There's a need for caution in this kind of crowdfunding to prevent scams etc. However its also exciting from the prospect of using the net to gather together people who, say, suffer from a particular condition and have in depth knowledge about it, to fund the scientists working on it directly.

## **Smoking and Cancer (2013-08-11 05:00)**

In his interview with me about The Truth in Small Doses ([1]Part 1, [2]Part 2), Clifton Leaf praised Racing to the Beginning of the Road (1996) by Robert Weinberg. "A masterful job . . . the single best book on cancer," wrote Leaf. In an

email, he continued:

In Chapter 3 of "Racing to the Beginning of the Road," Weinberg goes through much of the early epidemiological work linking tobacco to smoking (John Hill, Percivall Pott, Katsusaburo Yamagiwa, Richard Doll), but then focuses on the story of Ernst Wynder, who just happens to be one of Weinberg's cousins. [As a medical student, Wynder found a strong correlation between smoking and lung cancer.] Building on his own prior epidemiological work, and that of many others, Wynder actually built an experimental "smoking machine" at the Sloan-Kettering Institute in New York in the early 1950s. The machine collected the tar from cigarette smoke (and later, the condensate from the smoke) and Wynder used those to produce skin cancers in mice and rabbits. But the amazing part of the story is what happened later...with Wynder's bosses at Sloan-Kettering and with one of the legendary figures in cancer research, Clarence Cook Little. I don't want to give the story away. (If you have the time, you really would love reading the book.) But it's one of the most damning stories of scientific interference I've read.

Wynder met a lot of opposition. His superiors at Sloan-Kettering required that his papers be okayed by his boss, who disagreed with his conclusions. Clarence Cook Little, according to Weinberg, made the following arguments:

The greater rates of lung cancer in smokers only gave evidence of a correlation, but hardly proved a causal connection. One's credulity had to be strained to accept the ability of a single agent [he means smoking] to cause lung cancer along with so many other diseases including bronchitis, emphysema, coronary artery disease, and a variety of cancers of the mouth, pharynx, esophagus, bladder and kidney. After all, many of these diseases existed long before people started smoking.

A little masterpiece of foolishness . . . and more reason to never ever say correlation does not equal causation. Little was at one point [3]President of the University of Michigan. Later he worked for the tobacco industry. It wasn't just Little. Weinberg says that Wynder's colleagues complained about his "statistical analyses and experimental protocols, which they found to be less than rigorous."

Weinberg says little about epidemiology in the rest of the book – which, to be fair, is about the laboratory study of cancer. At the very end of the book, he writes:

We learned much about how cancer begins; it is no longer a mystery. We will surely learn more . . . but the major answers already rest firmly in our hands. . . . No, we have still not found the cure. But after so long, we know where to look.

The claim that "we know where to look" is not supported by examples. And Weinberg says nothing about prevention.

Weinberg's book reminded me of a new-music concert I attended at the Brooklyn Academy of Music. Hard to listen to (non-melodic, etc.) like lots of new non-popular music. I didn't enjoy it, but surely the composer did – this was fascinating. *How did it happen?* I wondered. Weinberg describes a great deal of research that has so far produced little practical benefit. Weinberg, it seems, has managed to avoid being bothered by this – if he even notices it. How did this happen?

I don't think it's "bad" or wrong or undesirable to do science with no practical benefit, just as I don't complain about "unlistenable" music. Plenty of "useless" science has ultimately proved useful, but the transition from useless to useful can take hundreds of years, which is why there must be "scaffolding," sources of support other than practicality.

This is why scientists use the word *elegant* so much. Their enjoyment of "elegance" is scaffolding. Long before "useless" science, there was "useless" decoration (and nowadays there is "unlistenable" music). Thorstein Veblen showed no sign of understanding that the "waste" he mocked made possible exploration of the unknown, which is necessary for progress. (By supporting artisans, such as the artisans who make decorations, we support their research.) What is undesirable is when someone (like Wynder) manages to do something useful, to foolishly criticize it, as Little and Wynder's colleagues did.

1. <http://blog.sethroberts.net/2013/08/09/the-truth-in-small-doses-interview-with-clifton-leaf-part-1-of-2/>
2. <http://blog.sethroberts.net/2013/08/10/the-truth-in-small-doses-interview-with-clifton-leaf-part-2-of-2/?preview=true>
3. [https://en.wikipedia.org/wiki/C.\\_C.\\_Little](https://en.wikipedia.org/wiki/C._C._Little)

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### Assorted Links (2013-08-12 08:56)

- [1]N=me. Scientists' self-tracking.
- [2]Authentic Japanese recipes in English. For example, [3]Chanchanyaki Style Salmon, including how to substitute stevia for sugar.
- [4]Your magnesium may be too low
- [5]Aaron Swartz's prosecutor complained about an Internet petition

Thanks to Allan Jackson and Casey Manion.

1. <http://www.the-scientist.com/?articles.view/articleNo/36668/title/N-Me/>
2. <https://en.cookpad.com/>
3. <https://en.cookpad.com/recipe/1831863>
4. <http://www.dumblittleman.com/2013/08/50-studies-suggest-that-magnesium.html#more>
5. [http://www.slate.com/blogs/crime/2013/08/01/stephen\\_heyman\\_how\\_an\\_internet\\_petition\\_may\\_have\\_doomed\\_aaron\\_swartz.html](http://www.slate.com/blogs/crime/2013/08/01/stephen_heyman_how_an_internet_petition_may_have_doomed_aaron_swartz.html)

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Leila (2013-08-13 18:27:42)

Recipe for magnesium bicarbonate - <http://www.afibbers.org/Wallerwater.pdf>

vs (2013-08-14 14:54:01)

[http://www.theatlantic.com/magazine/archive/2013/07/can-government-play-money ball/309389/?single \\_page=true](http://www.theatlantic.com/magazine/archive/2013/07/can-government-play-money-ball/309389/?single_page=true) This is a recent Atlantic article on bringing "Moneyball" data analysis to government. It outlines the political resistance to simply determining whether a government health or educational program is effective.

## **"Hunger is a Necessary Nutrient" (Ancestral Health Symposium 2013) (2013-08-16 03:49)**

Nassim Taleb said this or something close to it on the first day of the Ancestral Health Symposium in Atlanta, which was yesterday. Danielle Fong told me something similar last week: We should use all of our metabolic pathways. Of course it is hard to know what metabolic pathways you are using. In contrast, Taleb's point – not original with him, but a new way (at least to me) of summarizing research – is easily applied.

What I know overwhelmingly supports Taleb's point. 1. When I did the Shangri-La Diet the first time, I was stunned how little hunger I felt. This wasn't bad – presumably my set point had been too high, lack of hunger reflected the dropping set point, it was good to know how to lower the set point – but it was dreary, not feeling hunger. It was as if life had gone from color to black and white. Something was missing. 2. Data supporting the health benefits of intermittent fasting, which produces more hunger than the control condition. 3. [1]The experience of my friend who had great benefits from alternate-day fasting. He told me he had never felt hunger before, at least of that magnitude. A great increase in hunger, in other words, happened at exactly the same time as a great improvement in health.

Obviously Taleb is talking about hunger caused by lack of food, rather than hunger caused by learned association (if you eat at noon every day you will become hungry at noon, if you eat every time you enter Store X, you will be come hungry when you enter Store X, the existence of this effect is why they are called appetizers). The Shangri-La Diet reduces your set point but only if your set point controls when/how much you eat is this going to make a difference. So to lose weight you need to do two things: 1. Lower your set point. 2. Lower your weight to your set point. While SLD certainly does #1, it does not do #2. You can make sure your weight is near your set point if you feel strong hunger if you don't eat for a while.

Taleb's comment suggests focussing on the outcome of fasting, rather than on its duration or frequency. Instead of fasting every other day (or whatever), fast until you feel strong hunger. How often you need to do this, how strong the hunger should be, are questions to answer via trial and error.

1. <http://blog.sethroberts.net/2013/07/28/effect-of-alternate-day-fasting-on-a-friend/>

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Charlie (2013-08-16 08:49:34)

"Hunger is a necessary nutrient." "...fast until you feel strong hunger." Life is simple...so many try to make it complicated. Complication is profitable to those who create the complication. KISS (keep it simple stupid) was quite popular for a while...no profit there...so it has been discarded. Thanks Seth... Cheers

Morex (2013-08-16 09:08:59)

I get the point of this post, but at least for me at this time, things are a little different. Under SLD I have no problem feeling no hunger at all. As a matter of fact, it's liberating. I spent too many years being slave to never ending hunger, that SLD is breathing room. I stopped having oil about 2 months ago, but appetite suppression is still very strong. I'm in control of what I eat and much more mindful of the times I HAVE to eat to keep going. This allows me room to focus on other things in life. I have been experimenting with intermittent fasting these past weeks and it's really nice not to be hungry like hell while doing it.

Alex Chernavsky (2013-08-16 12:09:53)

So besides hunger, what of other "metabolic pathways" – thirst, lust, sleepiness, desire for companionship, etc.? Should we use those, as well?

fi (2013-08-16 15:02:04)

Seth, could you explain how a changing set point works when dieting? I am also doing the alternate day diet and have experienced some fasting days with little or no hunger and then some fasting days with extreme hunger. I have also found that weight loss is not linear, rather, at least lately, it comes in sudden several pound drops along with multiple days of no weight loss at all, or rarely mild gains, despite following the same daily alternating fast/eat pattern. I assumed it was water weight, weight of food eaten the previous day etc, but I don't think that can fully explain it. What causes set point to lower and how long does that process take? Thanks. Seth: Your set point will go down when you reduce the strength of smell-calorie associations in what you eat – that is my short and possibly incomprehensible explanation. For a longer explanation, please see The Shangri-La Diet. Your setpoint is always changing, at least according to my theory, sometimes going up, sometimes going down. When the downs outweigh the ups, the overall trend is down. I don't worry about the day to day stuff, I cannot explain it. It is the week by week trends that matter.

Brock in HK (2013-08-17 01:30:19)

Ironically, NNT also said that you can provide confirmatory quotes from authorities supporting both sides of any position, which makes the proposition of quoting him as an authority on something quite "meta". That doesn't mean that his quote is wrong, only that just because he said it doesn't make it true. Fortunately, you provide some data points from which to draw some inferences, rather than just relying on his quote. The joys of NNT! He makes thinking about most things more interesting. Seth: There's a lot of data supporting what he said, he is far from the first person to say it. He just said it the best.

Tom (2013-08-17 13:23:22)

So many Americans today don't know what hunger actually is. The processed food supply is designed to raise the set point and create hunger rather than to satiate. It's like we're all drinking salt water to quench our thirst. From my experience fasting when you are above your set point feels good. Your body is trying to get your weight down to the set point weight. When I break a fast with the lower set point I become extremely satisfied from a healthy meal that might be only 300-400 calories. That's after going most of the day on very little calories. It's like your body forgets what food is.

Adam (2013-08-17 17:36:36)

I've found a hard weightlifting workout in the evening will make me ravenously hungry the next morning. Since I only lift every other day, I tend to eat breakfast every other day as well.

v (2013-08-19 05:17:04)

NNT talks about the importance of variability within a certain range (ala his comment about being exposed to differing temperatures). he left out a key point which is corollary to this: knowing what your range of variability is, is not always obvious, and you can hurt yourself seriously by going over your range. for example, I believe that NNT suffered significant injuries from over-exercising. on the de vany site, there was discussion over my head about 'signal to noise' ratio and how going over a certain range created too much 'noise'. also, de vany himself has exercised over his range as now at around 75 he had to get a knee and hip replacement. I have had problems finding a proper range of carbs. I did not know I was glucose intolerant until recently, as my weight, A1c, and fasting glucose were all within normal levels. it was only when my husband bought a glucose meter and I started testing my post prandial blood sugar for fun that I realized my blood sugar rises to diabetic levels eating a bagel or a bowl of oatmeal or lots of blueberries. testing using 23andme revealed my beta cells do not produce enough insulin early on (phase 1 response). I may already have some damage as I have intermittent tingling on the soles of my feet, gum recession, etc, all of which are associated (not exclusively) with high blood sugar. both my parents have diabetes. at this point I control my blood sugar by eating a stricter form of paleo which involves no fruit (except when temptation overcomes me), and I stop eating at least 5 hours before bed whereas I used to snack a lot before bed time. so range of variability is an important topic that I hope we can address in more detail.

v (2013-08-19 05:30:36)

I forgot to mention that I have been paleo since 2009, but was eating an looser version (basically fruit whenever I wanted). after 3 months of paleo, I had lost 15 % of my body weight, which I have maintained until now. however, after the first year, my A1c went from 5.9 to 5.6. I expected a bigger drop having cut out milk, grains, legumes, and all junk food. I have recently become stricter with my carb intake, and my A1c is 5.3, although my weight is basically the same. so weigh loss does not track directly with improvements in blood sugar levels. I wonder how many others eating paleo may have undiscovered glucose intolerance. my heuristic is if someone in your family has diabetes, buy a cheap meter from Wal-Mart and start testing you 1 and 2 hour post prandial blood sugar levels. at 1 hour, blood sugar must be below 140 at a bare minimum. I believe the national group of American endocrinologists (I forget the official name) says post prandial blood sugar should be below 140 at all times, as being at 140 and above for extended periods leads to organ damage. i think fasting blood sugar needs to be under 100 at a bare minimum.

### **Correlation of Body and Soul (Ancestral Health Symposium 2013) (2013-08-17 05:00)**

Geoffrey Miller, speaking at the Ancestral Health Symposium, said that every mental disorder impairs your sense of humor, so sense of humor is a good marker for overall brain function. It's a fascinating point: what is the evolutionary reason that humor exists? Miller says it helps in mate choice. We select people in many ways (spouse, lover, business partner, friend, student, teacher, etc.). Maybe sense of humor is a general signal of health.

At the first Ancestral Health Symposium, Tucker Max noted that the attendees looked much better – healthier – than usual. It was a good point. Almost no one was fat, for example. And a large fraction of them became interested in paleo because of their own poor health, which paleo helped with. At this year's symposium, I've noticed that the attendees strike me as in unusually good mental health, in the sense that I find everyone easy to talk to. For example, I had an interesting talk with a woman about "unschooling". (I realized from what she said that non-traditional schooling is close to common sense when it is done with kids who are doing badly in school Why repeat what isn't working? My experience suggests it also helps kids who have done well in school. Where it is non-intuitive. If something is working, why change it?) Likewise, all of the questions after talks are polite, none are too long, none are grandstanding.

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none (2013-08-17 07:39:28)

Actually, I don't agree with the premise. One person comes to mind: Woody Allen.

dearieme (2013-08-17 11:44:51)

There's a question I've wondered about since childhood. How does one know that a joke has been made even if one has not seen the joke? By "one" I mean an ordinary, well-adjusted person. Would the same question be valid for a psychopath?

BenSix (2013-08-18 04:14:48)

"Actually, I don't agree with the premise. One person comes to mind: Woody Allen." Humour is a good sign of *intelligence*, perhaps, but not of emotional stability. One could add Peter Sellers, Spike Milligan, Peter Cook, Lenny Bruce, Richard Prior, Rodney Dangerfield, Tony Hancock and Kenneth Williams, and that's just a drop in an ocean of misery.



Kas Thomas (2013-08-21 10:58:15)

Some of the best comedians are seriously disturbed individuals. (I feel certain this has been the subject of many a suitably boring Ph.D. thesis.) Nevertheless, studies have shown that women do seek a "good sense of humor" in mates, so there is both reproductive and survival value, I think, in one's ability to find humor in things. It's a tricky area, though. Finding inappropriate humor in things is not unknown in schizophrenia. Norman Cousins famously tried to tie sense-of-humor to reduced mortality. It would be interesting to know if any recent work has been done in this area. Sounds like a great area for future blogs.

Sylvie- Hollywoodhomestead.com (2013-08-27 11:01:20)

Nice chatting with you at AHS Seth! You might be interested in this post I wrote about unschooling: <http://www.hollywoodhomestead.com/what-is-unschooling/>

### **Unhelpful Answers (Ancestral Health Symposium 2013) (2013-08-18 05:00)**

At the Ancestral Health Symposium, I went to a talk about food and the brain, a great interest of mine. The speaker said that flaxseed oil was ineffective because only a small fraction (5 %) gets converted into DHA – a common claim.

During the question period, I objected.

Seth I found that after I ate some flaxseed oil capsules, my balance improved. Apparently flaxseed oil improved my brain function. This disagrees with what you said.

Speaker Everyone's different.

A man in the audience said what I observed might have been a placebo effect. I said that couldn't be true because the effect was a surprise. He disagreed. (The next day, in the lunch line, he spoke to a friend about getting in a kerfuffle with "an emeritus professor who wasn't used to being disagreed with.") I spoke to the speaker again:

Seth Is it possible that flaxseed oil is converted to DHA at a higher rate than you said?

Speaker Anything's possible.

This reminded me of a public lecture by Danny Kahneman at UC Berkeley. During the question period, a man, who appeared to have some kind of impairment, asked a question that was hard to understand. Kahneman gave a very brief answer, something like "No."

Afterwards, a woman came over to me. Maybe flaxseed oil reduced inflammation, she said. Given that the brain is very high in omega-3, and so is flaxseed oil, this struck me as unlikely. I said I didn't like how my question had been answered. I've been there, she said. Other members of her family were doctors, she said. She would object to what they said and they would respond in a dismissive way.

The speaker is/was a doctor. Her talk consisted of repeating what she had read, apparently. The possibility that something she read was wrong . . . well, anything's possible.

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dearieme (2013-08-18 05:04:33)

"Everyone's different." "Anything's possible." What a convenient philosophy. Mind you, the Second Law of Thermodynamics rules out the second one. Seth: I could have said "If everyone's different, why do you believe what you just told us will help anyone?"

Rachael (2013-08-18 06:16:11)

Both of those answers were dodges to avoid engaging with you. It was very dismissive and unhelpful.

LemmusLemmus (2013-08-18 07:00:36)

"Anything's possible" seems like the perfect answer to questions that start with "Is it possible that . . ." Questions like that should be forbidden.

Alex Chernavsky (2013-08-18 07:39:51)

Any sort of gathering tends to include at least one abrasive, opinionated loud-mouth.

None (2013-08-18 10:20:28)

But both could be right. Let's pretend for a second that the speaker was talking about the results of a carefully done experiment. The outcome of the experiment applies \*on average\*. We rely on groups being comparable (exchangeable, conditionally independent from potential outcomes, etc) when making inferences about treatment effects. However, person i, let's call him Seth, may very well react completely different than person j. Yes, anything is possible but the experiment demonstrated that on average some stuff is more possible than other. An experiment is not answering the question of what is the causal effect for i or j or any of the persons individually. Treatment heterogeneity is an important aspect of experiments. Seth: I wouldn't say "both could be right". She said that flaxseed oil was a poor way to get omega-3 to the brain. I found it worked fine. I believe flaxseed oil is better than fish oil because it produces a steadier flow of long-chain omega-3. The short-chain omega-3 in flaxseed oil is slowly converted to long-chain omega-3. whereas the long-chain omega-3 in fish oil produces a spike in long-chain omega-3. That spike might be why fish oil gave me a headache the one time I tried it.

Alex Chernavsky (2013-08-18 16:29:23)

When I started taking flaxseed oil, it gave me headaches for the first couple of weeks. I was almost going to discontinue taking it. The headaches went away, but I still get indigestion from it once every ten days or so.

Jonathan Shewchuk (2013-08-18 21:13:00)

Seth, I guess you haven't done the experiment to see if DHA would improve your balance equally much as flaxseed oil? It would be interesting to know. If you could do it without getting headaches. Metacomment: I sense that most medical scientists are in denial about how difficult and complex their own fields are. They are deeply invested in there being easily discoverable, clearcut answers, and they greatly underestimate how little they know and how complicated the real answers are. (It's not hard to understand why a career in science might ultimately make a person delude themselves this way.)

Sam (2013-08-18 23:38:40)

I wonder if you might have gotten better reactions if you used questions instead of claims (both for the speaker as for the placebo-man). To ask them how their explanation fits into your results. For the speaker even simple questions like "How have you verified that Flaxseed oil is useless (or is this just a theoretical opinion)?" might work.

v (2013-08-19 05:00:55)

fish oil makes my already heavy periods even heavier. for that reason, I cannot take it. ground flax seed does not have that affect on my periods. is this because the concentration of omega 3s in the ground flaxseed that my body absorbs is much less than that of the fish oil? it is a possibility.

Dr. Dumbfounded (2013-08-19 10:03:03)

I imagine that at least some of the following probably went through the speaker's head after your question: 1. How exactly did you conclude your "balance" was better? Is this something you test in some consistent manner every morning? With as nebulous a term as "balance", an operational definition is a must, particularly when presenting the subject in a scientific forum. 2. How do you know it was the flax seed oil? Is every day of your life completely identical so that the only variable that changed was the consumption of the oil the night before? In a similar vein, since you had no expectation of any effect on your balance (as per your "refutation" of a placebo effect), I think we can safely conclude this wasn't a prospective trial, but a retrospective review of your prior day's activities. Why on earth did you single out the flax seed oil as the cause of your improvement??? This is one of the main reasons retrospective analyses are considered low quality evidence. Your sample size of 1 doesn't help the case much either I'm afraid. Do you understand the purpose of controlled experiments? 3. Balance is a widely distributed function and is dependent on the integrity of multiple bodily systems (musculoskeletal, muscle spindle, peripheral nerves, inner ear/semicircular canals, cardiovascular, vestibulocochlear nerve, vestibular nucleus, visual system, etc.), not all of which exist in the brain. Thus, "improved balance" does in no way equate to "improved brain function" (once again, "brain function" is a bit nebulous a term for an academic venue). In clinical practice, the most common causes of balance disruption are related to hypovolemia, inner ear disorders, and peripheral neuropathy, none of which are "brain functions." 4. Even if your balance did improve, and even if we were to concede (quite charitably!) that it was related to the flax seed oil you consumed the night before, why would we automatically conclude that conversion of flax seed oil to DHA was the responsible mechanism??? 5. Are you high? Did those words really just come out of your mouth?! Who let you in here??? And on and on and on.... Suffice to say that there are many many layers of problems with your statement. And taken apart, the odds that the sentence "my balance was better one morning due to consumption of flax seed oil the night prior thanks to enhanced production of DHA" is true is roughly 86 gazillion to one. Hence the response "anything's possible." I think you owe her a huge thank you. Seth: I carefully measured my balance. I carefully confirmed that flaxseed oil was the cause of the improvement. I found that flaxseed oil improved other measures of brain function. As for whether conversion of the omega-3 in flaxseed to DHA was responsible, can you propose a plausible alternative? When your patients or friends or family say something that disagrees with what you believe, how do you respond?

john (2013-08-19 14:04:57)

And there has been some discussion about the oxidation potential of some fish oils, pre-capsulation, in the factories, whereas flax seed oil can be ground and consumed quickly under the recipients control.

JeffR (2013-08-20 15:23:03)

Dr. Dumbfounded makes many great points and I would hope Seth would think more fully about this.

Erik (2013-08-23 21:26:18)

I used to have horrible earwax problems. My ears would clog up and I couldn't hear. I read on the internet somewhere that omega-3 could help. I took some capsules of fish oil, and it went to work immediately. I could actually hear my ears unclogging. I wasn't testing my balance at the time, but I'm certain that if I was, it would have improved dramatically. Since then, I lost a lot of weight and I don't have the earwax problems anymore. I believe this is in part due to reduced inflammation, and eating more nutrient-dense foods. Anyway, it seems likely that several of the answers you've received might be on to something. It very well could be that the flax seed oil is anti-inflammatory and improved your balance by opening up your ear canals. If that's true, it's also possible that it opened up other tubes in your body, such as the blood vessels in your brain. So it might have led to improved brain function, and it might have led to better balance, but the fact that you had better balance might not be due specifically to better brain function. I do believe that your general question is valid. There are millions of healthy, intelligent human beings on the planet who have never let an oily fish get anywhere near their mouth. So, while oily fish might be a

very concentrated source of omega-3, it's certainly possible or even likely that the body can get sufficient amounts by other means. Personally, I sense that sometimes, your body is better off with a less potent form of a nutrient. Polar Bear liver, for example, is such a potent source of vitamin A that eating it can kill you. The vitamin A found in vegetables, on the other hand, is weaker, less potent. Your body has to convert it to a usable form. So, it probably takes what it actually needs and ditches the rest.

Dallas Hartwig (2013-08-25 08:56:13)

I happened to attend the presentation you are referring to, and heard both your questions and the responses offered. I actually thought that the speaker did an excellent job of responding to your personal experience, given that it seems, at least at first, to disagree with much of what the current published research would suggest about the usefulness of flaxseed as an omega-3 source. The speaker could not discount your personal experience, and was not the one that suggested that your experience may have been placebo-influenced (that was a loudmouthed attendee). The speaker, instead, chose to acknowledge your experience, but was unwilling to pit your personal experience against the majority of the published research in a fight to the death, a decision that I respect and appreciate. As the speaker noted, there can be a large degree of interindividual variability, and your experience does not invalidate the published data, nor vice versa. By phrasing your question in the "is it possible?" format, the speaker had two possible answers: yes or no. If she chose no, she'd be invalidating your perspective and shrugging off n=1 data as well as speaking with an unwarranted scientific hubris, which I suspect we all would be disappointed with as a response. If the speaker said yes, which they did, they were simply acknowledging that your personal experience AND the published data could be correct, as they are not mutually exclusive and may share a common mechanism other than just EPA and DHA concentration at the cell membrane level. I respect the answer supplied, and wonder what possible response would have pleased you more. Seth: When I said "is it possible that . . . " I meant "what about the possibility that . . . " That the speaker would take the question literally did not occur to me. If the speaker had tried to be helpful in her answer, that would have pleased me more. For example, she could have explained the basis for what she'd said. Why she believes it.

JohnG (2013-09-10 08:17:28)

I've noticed this effect in many areas of scientific investigation (nutrition, global warming, etc). Perhaps this phenomenon is caused by a natural human trait to strive to understand and categorize something unexplained. Then, once what was a mystery is first categorized by someone (whether that categorization is correct or not), it is no where near as fun to attempt to duplicate/reaffirm/confirm that categorization than it is to come up with a whole new categorization. So, that first categorization is just left unconfirmed and is just used by others in attempting to find other new categorizations. Just a crazy thought :)

## **Economic Stagnation and Recent College Graduates (2013-08-19 05:00)**

In [1]an excellent article about the college-loan "bubble" – the government has made it easy for students to get loans that a large fraction of them will repay only with great difficulty – Matt Taibbi writes:

We're doing the worst thing people can do: lying to our young. Nobody, not even this president, who was swept to victory in large part by the raw enthusiasm of college kids, has the stones to tell the truth: that a lot of them will end up being pawns in a predatory con game designed to extract the equivalent of home-mortgage commitment from 17-year-olds dreaming of impossible careers as nautical archaeologists or orchestra conductors.

I agree with Taibbi's big point – college students are being very badly treated – but I would summarize it differently. The worst thing older people can do to young people is construct an economy that has no place for them. Humans are the only animal that specializes. We learn a specialized skill and use it throughout our life to make a living. Not allowing someone to do this is not allowing them to be human.

Due to lack of innovation, too few jobs are being created. New jobs in new industries doing new things are jobs for which young people are especially well-suited. The problem with stagnation – stagnation in new goods and services – is (a) problems stack up unsolved and (b) jobs especially suitable for recent entrants to the job market aren't created.

Failing to provide college students decent jobs is Horrible Thing #1. Burdening them with a great deal of debt before they enter a stagnant economy is Horrible Thing #2. I have [2]blogged many times about Horrible Thing #3: Not helping students learn and develop their individual skills.

1. <http://www.rollingstone.com/politics/news/ripping-off-young-america-the-college-loan-scandal-20130815?print=true>

2. <http://blog.sethroberts.net/2011/12/01/bryan-caplan-disses-college/>

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dearieme (2013-08-19 05:20:26)

"We're doing the worst thing people can do: lying to our young." Golly, he can't know much about history if he thinks that's the worst people can do.

Tom (2013-08-19 10:38:04)

The quote is valid read in the context of the article, which is available free.

Christopher Burd (2013-08-19 12:12:18)

Presumably a large portion of these loans will never be repaid, despite the absurd regulation that prevents education debt from being discharged through bankruptcy. An intelligent government would be planning to wind them down in an orderly way, while also correcting the misallocation of resources in (and, possibly, to) the education sector.

Alex Chernavsky (2013-08-19 12:57:44)

This article says that 514 schools have default rates that are higher than their graduation rates: <http://www.takepart.com/article/2013/07/08/student-loan-default-rates-rise-graduation-rates> This article from *The Atlantic* cites government figures to claim that the overall default rate on federal student loans is currently 12.8 %, although a much higher percentage of borrowers are in deferment or forbearance. <http://www.theatlantic.com/business/archive/2013/08/our-student-loan-system-is-broken-and-these-new-statistics-prove-it/278453/>

dearieme (2013-08-19 15:36:45)

"The quote is valid read in the context of the article": do you mean that the article is hysterical and hyperbolic and the quotation is in line with that? It always seems to me a kind of intellectual bad manners to rant and rave about a serious problem that needs calm analysis. Still, I suppose there's a living in it.

Tom (2013-08-19 15:56:21)

I actually agree with Seth that the article is excellent. In any event, Matt Taibbi's career has gone pretty well so far.

Craig (2013-08-19 18:43:16)

I'm not sure how we go about providing college students with jobs. Scott Sumner would emphasize stable NGDP growth, and I agree, but I don't think that is what Seth is talking about. What jobs develop seems to me a pretty emergent property, rather resistant to design from above. There is a lack of feedback in our current system. See Bryan Caplan Launching the Innovation Renaissance [by Alex Tabarrok] (STEM majors haven't increased in 20 years, but Psychology majors have increased tremendously). Still my biggest issue is that I'm not sure how we are supposed to create jobs for graduates. Software and

globalization have eliminated many of the jobs that used to need an intelligent, generally educated person. Seth: You create good jobs for recent college graduates by innovation – creation of new goods and services and new ways of providing old goods and services. The world has plenty of problems to solve. For example, two recent college graduates have started a company that produces biodegradable replacements for styrofoam.

Michael (2013-08-20 05:53:11)

I agree with a lot of the sentiment here but I would say horrible thing no1 is neoliberal capitalism (possibly capitalism in general). When capitalism enshrines profit making as a priority (not job creation or innovation), and innovation isn't really being piqued by capitalism (instead sabotage of human industry, potential is), what happens is less jobs are created, and we see the sort of thing that is happening in the US re tertiary students now. Arguably we don't need new goods and services'. Infinite growth/ the endless pursuit of 'innovation (innovative ways to rationalise to increase rates of profit in times of increasing resource scarcity) aren't necessarily needed. Why can't uncertainty be embraced, not pushed away in discomfort because we focus on endless 'progression' to ever greater ways of profit making and limiting people's potential... Seth: "why can't uncertainty be embraced" – such as uncertainty whether your child will get autism? I don't agree. I agree that new goods and services are not all we need to solve existing problems.

Melissa (2013-08-20 06:44:56)

Matt Tiabbi did a tremendous job exposing the sickening truth about our largest banking institutions during the financial crisis, and I welcome him tackling student debt. The time for calm analysis in this country has come and gone. Considering the fact that what passes for journalism in this country is a mixture of lies, equivocation, and propaganda, I think Tiabbi's unique style is refreshing while being extremely informative. His research is impeccable, and he does an excellent job putting the puzzle pieces together for the masses. Intellectual bad manners? Try being a new graduate with student debt and no prospects, and maybe you will be thankful for the journalist willing to employ some hyperbole and hysteria in exposing how this country treats it's youth. Having a son who graduated in 2009 (magna cum laude from an excellent institution) I can't even begin to tell you how emotionally wrenching it is to realize that no one will give you a chance because you have no experience. The amount of wasted human capital out there is staggering, and the fact that our government does nothing to correct it while profiting off of it is obscene.

Evelyn M. (2013-08-20 21:54:33)

As an old fogey, it seems to me that some chickens have come home to roost. I recall an eminent economist speaking out of turn at the time when vast numbers of women were entering the workforce in this country in the 1970s and 80s. I asked him where all these jobs had come from and what effect this fundamental change in the job market would have. He reminded me of the law of supply and demand, saying that the eager new workers were willing to take much lower salaries than men, so men's salaries had already stagnated. Indeed, he said, the future appeared grim for men who expected that they would be the sole breadwinners for their families, and that eventually women, too, would begin to realize that with the cost of childcare and housecleaning services, the additional wages they were bringing to the family were not really very much. I believe we've all seen that work out as he predicted. And of course the law of supply and demand applies to educational degrees as well. If only five percent of 25 year-olds have college degrees, having such a degree has meaning, if 95 percent hold such a diploma, it is virtually meaningless. Add to that the loss of jobs as the economy changed from manufacturing to service - with many people thrown out of work as factories closed and automation increased - and it seems to me that were we to return to the pre-1970 norm of one breadwinner per family there would be virtually no unemployment. What we have today are more than two people applying for each job available. It would be a wrenching experience to revert to what used to be the norm, but facing reality is better than denying it. And I'm not saying that in every case it would be the mother that would stay at home - we have learned that some women are excellent professionals - and if so then their husbands could manage the household and children, and look for a part-time position. And think, if we could return to a situation in which most children were raised in intact families, with one parent being a mainstay in the home, how much happier our children would be. . . But, such are the musings of an old fogey sitting at her computer. Seth: I agree with you. The change is already happening in an unanticipated way: Many people work from home. And more people are self-employed. Those are jobs halfway between homemaker and company man.

Arndt (2013-09-06 11:03:53)

College students have already spent 10 years in public schools, isn't it enough time to find out your talents? Public school seems like a big failure, college even more. Get a job, get payed for learning skills and finding out your vocation and go to university only if unavoidable for your profession and if you know exactly what you want to get out of you studies. In the end capitalism is not about profits or the economy but about a moral philosophy, that one do not initiate force against a person and his property and that producer and consumer can exchange freely goods and services. Capitalism does not care if you make a profit on your ventures, but most producers do as if you put more resource in your production than you get out you end up broke. Innovation is only beneficial if it reduces cost (consumption of resources), increases the benefit of produces or satisfy new needs. The problem in the west is over consumption, we consume more than we produce and financed it with dept. This dept can't be repayed unless people reduce their lifestyle and produce more and start saving.

## **Women and Body Fat (Ancestral Health Symposium 2013) (2013-08-20 05:00)**

One of the best talks at the 2013 Ancestral Health Symposium was by Will Lassek, a retired doctor. Here's the abstract:

One puzzle is why human males have such a strong preference for women with hourglass figures and low weights that can compromise fertility. The second is why slender young women typically have about one third of their weight in body fat, more than bears starting to hibernate, and why human infants are also very fat. Finally, why do women typically gain another twenty pounds or more during their reproductive years? The answer may lie in the roles that fat plays in providing essential fatty acids needed for the growth of a very large brain and in regulating overall fetal growth.

His answer to the first question was that death during childbirth was a serious danger. Women of lower weight give birth to babies with smaller heads – less likely to cause death. Wider hips means a larger birth canal. Women gain weight after their first birth because their birth canal is wider – the optimal baby size has gone up. A variety of data supported these ideas. Lessek's answer to the first question is quite different than [1]what evolutionary psychologists have said.

1. <http://www.ncbi.nlm.nih.gov/pubmed/16818094>

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dearieme (2013-08-20 05:35:45)

"One puzzle is why human males have such a strong preference for women with hourglass figures and low weights that can compromise fertility." Does he assume that this is a long-standing preference or does he view it as a fashion for the last century or so?

dearieme (2013-08-20 05:37:48)

Actually, reflecting on the slender-to-the-point-of-anorexia models of the present, maybe I should be asking whether the hourglass figure has gone out of fashion in the last few decades.

RAD (2013-08-20 07:26:11)

None of the discussion addresses the question "why human infants are also fat". Was it addressed in the talk? I'd also like to add that the human male preference for an hourglass figure may be independent of the reproductive benefits. The hourglass figure may be a signal of femaleness. As a counter example, human males may have a preference for narrower jaws as a

signal of femaleness and jaw width is probably independent of reproductive health. Seth: The "sign of femaleness" idea is interesting. There is also a preference for neoteny which leads to curious correlations. For example, female models have unusually baby-like faces.

Paleophil (2013-08-20 17:40:39)

"One puzzle is why human males have such a strong preference for women with hourglass figures and low weights that can compromise fertility." It has not always been so and even today is not so everywhere: > Stone Age female (possible fertility) "Venus figurines" are mostly "obese" (for example, see the famous Venus of Willendorf) > female steatopygia was traditionally valued by African Bushmen (fka "Hottentots") and is similar to the aforementioned figurines, though not quite the same > ancient fertility goddess images were usually "fat" > there are/were traditional bride fattening practices and/or male preferences for "thicker" women in traditional societies in Africa, the Caribbean, and among African Americans, Hispanics, and perhaps others > Research suggests that skinniness is overrated, healthwise, and body fat excessively demonized: "Overweight people 'live longer' study claims," <http://www.nursingtimes.net/nursing-practice/clinical-zones/public-health/overweight-people-live-longer-study-claims/5053341.article> > there is a human bias to assume that what is prevalent today has always been so and is perfectly natural, and it is often wrong "Those who have big legs and fat body, like arms too..., they look pretty when they wear grass skirts." - Kitavan woman, Tribal Wives Kitava television show, <http://www.youtube.com/watch?v=OPfeXlwFW Rg> "I don't want no woman with no skinny legs" - Joe Tex

Paleophil (2013-08-21 04:29:20)

The Dr.'s name is spelled Lassek, for those interested in Googling him. He said "If you really want a low waist-hip ratio, you almost have to be skinny." <http://www.pghcitypaper.com/pittsburgh/a-conversation-with-william-lassek/Content?oid=1339427> That may be overemphasizing thinness. Groups in which women's hips are naturally larger could have larger waists and achieve the same ratio and healthy body fat deposition to the hips and buttocks is another factor, not just thinness. I recall reading in the past that male preferences in at least one study were less about a small waist or thinness than waist/hip ratio at any body weight. Women were still seen as attractive even if they had larger waists as long as the preferred ratio was there. Also, there is apparently conflicting evidence even on WHR: <http://psychsciencenotes.blogspot.com/2010/09/brief-rant-about-waist-to-hip-ratio.html> Wouldn't smaller heads also mean smaller brains and be a somewhat offsetting evolutionary disadvantage? Seth: Thanks for the correction. Heads grow. A smaller head in the beginning implies a smaller head only for a period of time. But, yeah, there are certainly trade-offs.

Mariana (2013-08-21 19:49:10)

Have you noticed how the answer is not an answer at all? If indeed there is a good reason for why women are fatter (and isn't there always?) then why do men find it unattractive? My personal guess is that a strong torso usually means a strong body all over, and that having hard abs and all over strength are more common among people who are less fat and more active. When you're healthy and energetic - and fertile - you don't want to stay put in a chair doing nothing all day, getting fatter and weaker. Back in the days when even great beauties were fatter than today's top models those same beauties also wore quite tight corsets that artificially emulate the look of a strong torso: straight back, narrow waist, flat stomach.

Evelyn M. (2013-08-22 06:11:16)

Very thin women, due to anorexia, starvation, or excessive exercise, lose the ability to menstruate and thus become infertile. Our bodies are smarter than we are, therefore men who listen to their bodies gravitate toward women with a reasonable amount of fat deposits in their breasts and hips.

## First Effects of Intermittent Fasting (2013-08-21 05:00)

Jeff Winkler described his first weeks of intermittent fasting:




Annual physical July 2nd [2013], HDL 46, cholesterol 243, LDL 177. Doc pushing for statins. I've been taking 5000 IU D3, some zinc, eating vaguely low carb. Had a kid a couple years ago. Watched Eat Fast, Live Longer. Was blown away.

Decided to try intermittent fasting and use \$500 USB ultrasound device ([1]BodyMetrix) for feedback. Conclusions after three weeks:

- It's not hard. I'm eating within an 8-hour window. Usually try to eat first food at 9 AM, close the window 8 hours after. I'm hardly ever hungry. Now it's like "oh, it's 9, guess I should eat". I'm not eating specially or restricting my intake.
- Losing weight. About 237->231 in 20 days.

For me, the novelty was his BodyMetrix data (mm of subcutaneous fat). Here it is:

[2]  This shows fat loss from the thigh and waist; the chest measurements vary too much to see a trend. The BodyMetrix data and the weight data (237->231) confirm each other. He also used an Omron measurement device that uses impedance to measure body fat. You hold it in your hands. Its data were too noisy to conclude anything. All in all, Winkler's scale did a good job of detecting weight loss, the BodyMetrix device added a bit (confirmed the weight loss was due at least partly to fat loss), and the Omron device added nothing. The BodyMetrix device is advertised with the claim "no embarrassing pinching" but I'm sure pinching (with calipers) to measure skinfold thickness would have been more accurate.

1. <http://intelimetrix.com/FullSite/>

2. <http://blog.sethroberts.net/wp-content/uploads/2013/08/winkler.png>

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Sentinel (2013-08-21 09:41:16)

Seth, what happened to the very interesting links you had posted this AM (re kvas, teetotaling, etc.)? Seth: I posted them too early. They will re-appear tomorrow.

Greg (2013-08-25 05:51:34)

Wow! I'm fascinated by the BodyMetrix device. It looks like it can also do 2D imaging. Have you played around with that? I also wonder if it can do any sort of cardiovascular imaging (e.g. heart or carotid arteries). I'm guessing they are not FDA approved for that and therefore can't talk about it. BodyMetrix says the device can distinguish between superficial and deep visceral fat. Have you looked into that? It would be very nice to see whether different diets favor loss of one vs. the other. Seth: I've never used BodyMetrix device. This data does not make me want to, either

Jeff Winkler (2013-08-27 14:19:00)

Have not tried reading the scans, but you could... example images at <http://www.fitnessassist.com/blog/bodymetrix-ultrasound-body-composition/>. I've been using waist measurement as a proxy for visceral fat. This fellow - <http://bjorngranum.com/intermittent-fasting-end-of-20-day-challenge-with-measurements-and-summary> (a trainer) gets more consistent results than I... see the video @3:57; very little variation. I'm sure there's a practice effect with either calipers or the bodymetrix. Not so simple as stepping on a scale.

### Assorted Links (2013-08-22 05:00)

- [1]The increasing popularity of kvas. "We ferment with ginger and, I believe, longer than other people - for seven to 10 days."

- [2]Giving up wine (and other alcohol) for a month. Before this he drank 2 glasses of wine/day.
- [3]Wellness Mart (in California) makes it easy to get basic medical tests. " In California, you are required to have an order from a doctor for blood tests, but WellnessMart, MD stores all have medical doctors on staff. Our doctors allow their license to be used for basic screening tests because there are some things that really shouldn't be that difficult to find out.

If you don't have a doctor's order and you want to run tests that aren't a part of our standard screening packages, you will be charged a MD Consultation Fee of \$25. Our doctor will help you to put together a panel that will accomplish the goals you are looking to accomplish. If the doctor determines that it is not appropriate for you to run the tests you want to run at WellnessMart, MD there will be no charges."

- [4]Riding a bike while learning Polish. It helps.

Thanks to Casey Manion and Adam Clemens.

1. <http://en.ria.ru/business/20130813/182730958/As-Americans-Quaff-More-Kvas-Sales-of-Russian-Beverage-Bubble-up.html>
2. <http://jdmoyer.com/2013/08/14/40-days-without-booze/>
3. <http://www.wellnessmart.com/>
4. <http://well.blogs.nytimes.com/2013/08/07/how-exercise-can-help-us-learn/>

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shtove (2013-08-22 11:22:20)

The wine article had an interesting reference to gut bacteria and the vagus nerve - Emily Deans covered it last year: <http://evolutionarypsychiatry.blogspot.co.uk/2012/01/more-evidence-for-gut-brain-connection.html>

Kirk (2013-08-23 09:05:23)

J.D. Moyer noticed "a slight resurgence in asthma symptoms" during his experiment (40 Days Without Booze). I wonder if it's due to a reduction in fermented food (alcohol). He could experiment with drinking lassi instead of alcohol to see if he observes the same suppression of asthma symptoms.

dearieme (2013-08-23 16:27:01)

here's a self-experimenter <http://chiefio.wordpress.com/2013/08/20/of-spots-bugs-and-toxins/>

peter (2013-08-24 12:24:12)

re the article on giving up alcohol, the author notes that his asthma worsened; i understand that alcohol dilates blood vessels; i noticed that when i drank as little as a tablespoon of vodka that i seemed to breathe easier. It may be that alcohol dilates lung sacs.

## **Stagnation in Psychiatry (2013-08-23 05:00)**

[1]A recent New York Times article lays it out:

Fully 1 in 5 Americans take at least one psychiatric medication. Yet when it comes to mental health, we are facing a crisis in drug innovation. . . . Even though 25 percent of Americans suffer from a diagnosable mental illness in any year, there are few signs of innovation from the major drug makers.

The author has no understanding of the stagnation, yet is opinionated:

The simple answer [to what is causing the stagnation] is that we don't yet understand the fundamental cause of most psychiatric disorders [what does "fundamental cause" mean? – Seth], in part because the brain is uniquely difficult to study; you can't just biopsy the brain and analyze it. That is why scientists have had great trouble identifying new targets for psychiatric drugs.

The great increase in depression has an environmental cause. Meaning that depressed brains (aside from the effects of depression) are the same as non-depressed brains. Someone who knows that would not talk about biopsying the brain.

You come to a room with a door. If you don't know how a door works, you are going to do a lot of damage getting inside. That is modern psychiatry. I described a new explanation for depression in [2]this article (see Example 2).

Thanks to Alex Chernavsky.

1. [http://www.nytimes.com/2013/08/20/health/a-dry-pipeline-for-psychiatric-drugs.html?\\_r=1&](http://www.nytimes.com/2013/08/20/health/a-dry-pipeline-for-psychiatric-drugs.html?_r=1&)

2. <http://www.escholarship.org/uc/item/2xc2h866>

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dearieme (2013-08-23 05:24:08)

"when it comes to mental health, we are facing a crisis in drug innovation": the first clause there is redundant.

Alex Chernavsky (2013-08-23 06:51:24)

I think the great increase in depression probably has multiple causes, one of which is quite ironic. Antidepressant drugs probably cause depression (or, at least, exacerbate it). See, for example: [1]"Now Antidepressant-Induced Chronic Depression Has a Name: Tardive Dysphoria"

1. <http://www.psychologytoday.com/blog/mad-in-america/201106/now-antidepressant-induced-chronic-depression-has-a-name-tardive-dysphoria>

elduderino (2013-08-23 10:55:50)

We also have a lot of stagnation in other areas of medicine. The advances are minimally incremental and, because of industrial interests, the effects are overstated. Take statins for example. The sad truth is that we had little revolution since vaccination and antibiotics. Seth: I agree. Also the bad effects are understated. And antibiotics are questionable: the bad effects could easily outweigh the good effects.

Steve Greenleaf (2013-08-23 11:02:44)

Seth, Have you read Leah Greenfeld's Mind, Modernity, Madness? I haven't yet, but I've read a bit of it plus her blogs, which provide the main thesis. It seems very similar to the lines along which you are thinking, although she comes at the issue as an anthropologist & political scientist (and perforce, as a historian). A compelling & fascinating topic.

Alex Chernavsky (2013-08-24 07:22:45)

@Steve Greenleaf, the book you referenced certainly looks interesting, but wow! \$34.05 for just the Kindle edition! <http://www.amazon.com/Mind-Modernity-Madness-Culture-Experience/dp/0674072766>

john (2013-08-26 09:59:23)

Hi, Seth, I'd just like to recommend you this reading: <http://www.theverge.com/2013/8/21/4595712/gut-feelings-the-future-of-psychiatry-may-be-inside-your-stomach> Hope you find it useful. Cheers!

## Wild-Fermented Wine and the Ecology of Knowledge (2013-08-24 05:00)

I learned about [1]wild-fermented wine from Shana Reade, who teaches wine sellers about wine. She works for a New York wine distributor called [2]Empire Merchants.

Before the 1950s, almost all wines were made with wild ferments. Only then did cultured (store-bought) yeasts start to be used on a large scale. The new wines surely tasted worse, but it was the era of TV dinners. The first cultured yeasts were especially popular in Australia, where less tradition blocked their adoption.

Nowadays wild-fermented wines are made in many places, including California, France and Germany. They are more expensive than cultured-yeast wines but you can buy one as cheaply as \$15. Wild yeast is free, but the overall process is more costly because it needs more space and time. When you do wild fermentation, you put out vats of wine open to the air. The vat-to-vat variability goes way up and some vats will have to be thrown out. Wild fermentation also varies much more in how long it takes. Wineries rarely harvest all their grapes at once. With cultured yeasts, but not wild yeasts, they can be sure that one batch will finish before the next batch arrives.

Scientists have found that the yeasts in wild-fermented wines have thicker cell walls than the yeasts in cultured-yeast wines. This is an example of the general observation that microbes (and other living things) grown by man have fewer functioning genes and metabolic pathways (such as the metabolic pathways that build cell walls) than the wild type. Wild yeast, of course, has a more stressful and variable environment than cultured yeast. Cultured yeast loses functioning genes over generations because it does not encounter the problem they solve. There is no selection against deleterious mutations. Because wild yeast has more functioning pathways, it produces more metabolic byproducts, making a more complex flavor. This is a tangible version of the idea that [3]we should use all our metabolic pathways. (A better version is use as many metabolic pathways as possible – fermented foods help with that.) So wild fermentation is (a) more diverse in terms of strains of yeast than cultured yeast and (b) individual strains of wild yeast have more functional metabolic pathways than individual strains of cultured yeast. (Cultured wine yeast starter includes several strains of yeast.)

The ecology of knowledge isn't simple. Cultured-yeast wines (in the 1950s) were made possible by earlier wild-fermented wines. With cultured yeasts you can do wine experiments you could never do with wild yeasts, thereby learning how to make better wine in general. Today's wild-yeast wines benefit from that knowledge. They also benefit from a mass market created by cheap (cultured-yeast) wine. An ecosystem that includes both sorts of wine spreads much further and produces much better wine than an ecosystem that includes only one sort of wine.

Personal science is like cultured-yeast wine in the sense that it allows far more experiments. Personal scientists can do experiments that professional scientists would find almost impossible. (For example, the effect of [4]standing 8 hours/day on sleep.) A scientific ecosystem that includes both personal and professional science is going to solve problems far better than an ecosystem with only one of them.

More broadly, the story of wild-fermented wines illustrates how you need complexity and optimality – not just one of them – to solve actual problems (in contrast to artificial ones). Wild yeasts are complex, but not optimal; cultured yeasts are optimal but not complex.

A well-functioning system produces both complexity and optimality. This not-very-difficult idea is almost ab-

sent from modern thought. In nutrition, economics and education, for example, there has been almost no study of how to produce complexity.

Nutrition scientists have had little interest in fermented foods, which increase our inner complexity. Yes, as nutritionists say, we need good amounts of a long list of nutrients and micronutrients (optimality). In addition, however, we need inner complexity to solve actual problems, such as digesting food and fighting off pathogens. You can't make a list of all the metabolic pathways we need to be healthy – it might be in the hundreds of thousands. You'd never learn our need for complexity from any nutrition book, as far as I can tell.

The science of economics revolves around optimality (e.g., most profit). I believe the current stagnation of the American economy is partly due to the poor understanding of economists of how to produce economic complexity. If they don't know, neither will anyone else. Interest groups, rich and poor, have no interest in complexity. (Illustrating The Stupidity of Crowds. The Wisdom of Crowds is about optimality.) All sorts of policies are too narrowly evaluated. Their effect on optimality is assessed (*how will this affect growth of GDP? or how will this affect percent unemployed?*), but not their effect on complexity.

As for education, it is a good idea to push students to be better (push them toward optimality, e.g., be better at math). But a single-minded emphasis on optimality (e.g., No Child Left Behind), with no value placed on complexity, is a disaster.

1. <http://blog.sethroberts.net/2013/08/05/more-evidence-linking-fermentation-and-complexity-wild-fermented-wine/>
2. <http://www.charmer-sunbelt.com/empiremerchants/Pages/Welcome.aspx>
3. <http://blog.sethroberts.net/2013/08/16/hunger-is-a-necessary-nutrient-ancestral-health-symposium-2013/>
4. <http://escholarship.org/uc/item/2xc2h866/>

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dearieme (2013-08-24 05:25:35)

I do hope you tried the Greek one I recommended.

dearieme (2013-08-24 11:52:08)

They need the income, the Greeks.

Kaleberg (2013-08-24 21:15:25)

I read that one theory about the rising alcohol levels in wine is that local wild yeasts have been selected for sulfur resistance by the sulfur based process used to halt fermentation. I wonder how close to the old yeasts these modern wild yeasts are.

Elizabeth Stott (2013-08-25 03:30:33)

Fascinating. Interfering with any dynamic system will cause a back reaction and has the potential for instability. Something neglected by interfering politicians who think things they don't like can be 'fixed' ... I liked your comments on 'optimality and complexity'. It allows us to focus on an argument more effectively. On a tangent - I am curious as to how humans - with our biological dependence on complex systems of micro-organisms - will cope in space. Will the exported microbes develop new strategies for living in space? And will returning astronauts struggle to cope with the terrestrial environment?

## Showers and the Ecology of Knowledge (2013-08-25 05:00)

In [1]a recent post, I said a well-functioning system will produce both optimality and complexity. I meant important systems like our bodies, economies, and formal education. If you look at [2]the nutrition advice provided by the United States Department of Agriculture – the food pyramid, the food plate, the recommended daily allowances, and the associated reports – you will find nothing that increases the complexity of metabolism inside our bodies (in particular, the diversity of metabolic pathways). The advice is all optimality – for example, the best amounts of various micronutrients. The people behind the USDA advice, reflecting the thinking of the best nutrition scientists in the world, utterly fail to grasp the importance of complexity. Half of nutrition research – or more than half, since the topic has been so neglected – should be about how to increase internal complexity. In practice, almost none of it is. It's obvious, I think, that the microbes within us are very important for health. They are mostly in our intestines and must be heavily influenced by what we eat. How did they get there? How can their number be increased? How can their diversity be increased?

The absence is especially striking because the point is so simple. To solve actual problems, you need both optimality and complexity. Showers – what we use to take a shower – provide an example. You want to adjust the water temperature. If you try to do this while taking a shower, it can be hard because of the delay between changing the hot/cold water proportions and feeling the effects. It is better to use the bathtub (lower) tap to set the temperature (measuring it with your wrist) and only after you've optimized the temperature, shift the water to the shower head. The bathtub tap produces simple output (a single stream of water) that is easy to optimize. The shower head produces more complex output that is harder to optimize but does a better job of washing (an actual problem). You need both bathtub tap (for optimization) and shower head (for complexity) to do a good job solving the problem. Likewise, we need both an understanding of necessary nutrients (Vitamin A, etc.), which can be optimized, and an understanding of microbes, which cannot be optimized but can be made more complex, to make good decisions about what food to eat. Ordinary food is the hardware, you might say; and microbes are the software.

1. <http://blog.sethroberts.net/2013/08/24/more-about-wild-fermented-wines/?preview=true>
2. <http://fnic.nal.usda.gov/dietary-guidance/dietary-reference-intakes>

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Jake (2013-08-25 08:16:08)

You call for complexity in nutrition. Art DeVaney and Nassim Taleb call for chaos in nutrition. I think it is the same thing. Who knows what combination of nutrients the body needs? When I go to a salad bar, I try to put in my bowl 11-13 different vegetables. I like the idea of complexity, you should write more about it. Seth: In nutrition, complexity is a matter of enzymes: more enzymes, more complexity. It's like having more books in a library. I'm not sure what chaos is in this situation. I wouldn't say that a larger library is more chaotic than a smaller one.

Antonio (2013-08-25 18:01:43)

Hi Seth, how are you? I have a question related to your previous post on pork belly but I am not sure where to ask. I am interested in the benefits of the animal fat and hence I would like to try your recipe with pork belly and miso soup. Yet, I could not find it while searching over your blog. Thanks. Seth: I just cooked the pork belly and added it to miso soup. That's all.

## Organic Pollutants Associated With Diabetes (2013-08-26 05:00)

Everyone knows that diabetes is associated with obesity, probably because obesity causes diabetes. However, thin people also become diabetic. A clue to why is provided by the correlation between diabetes and what are called "persistent organic pollutants" (POPs). POPs are man-made organic compounds, usually pesticides, such as polychlorinated dibenzo-p-dioxins and polychlorinated dibenzofurans.

[1]A 2006 study using NHANES (National Health and Nutrition Examination Survey 1999–2002) data found very strong associations between levels of these chemicals and diabetes. For example, a risk ratio of 30. These associations persisted even when the data was stratified in all sorts of ways. The scariest result came from people who had BMI < 25. Looking only at such people, those above the 90th percentile for amount of POPs had 16 times the risk of diabetes as those below the 25th percentile. Here is something associated with thin people getting diabetes.

Does the association exist because POPs cause diabetes? You might argue that POP exposure is correlated with poverty (poor people are more exposed), poor people exercise less than rich people, and lack of exercise causes diabetes. However, Agent Orange exposure among soldiers is associated with diabetes. That is unlikely to be due to confounding with poverty or lack of exercise.

Everyone has these chemicals in their body, but almost no one knows how much. I don't know if I'm in the 10th percentile or the 90th percentile. If I'm in the 90th percentile, what can I do about it? A good place for self-measurement and tracking.

1. <http://care.diabetesjournals.org/content/29/7/1638.full.pdf+html>

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dearieme (2013-08-26 05:36:22)

"A 2006 study ...": seven years - so who's tried it out on rats and so on?

Tom (2013-08-26 15:52:52)

Scotchgard stain & fire protection is another key source. If you have furniture or carpeting that was manufactured before 2002 you're exposed to it on a daily basis. [http://en.wikipedia.org/wiki/Perfluorooctanesulfonic\\_acid](http://en.wikipedia.org/wiki/Perfluorooctanesulfonic_acid)

Tom (2013-08-26 18:58:08)

Just remembered that fire retardants in furniture skyrocketed (nationwide) due to a 1975 California regulation. <http://www.sfgate.com/health/article/Flame-retardant-free-furniture-rare-costly-4299274.php>

Ief (2013-08-27 06:47:09)

I will make an old question (just curious what people in this blog think). Why the property man made ads a lot to how much we should suspect a chemical? If unnatural is the answer then what about all the chemicals that occur in the nature but are new to humans (you encounter them whether or not you do any type of "paleo-eating") . To this chemicals there is much more exposure. Bruce ames for example had similar thoughts

## Dutch University Fires Unnamed Researcher (2013-08-27 05:00)

If you [1]google "Ranjit Chandra" (a famous Canadian nutrition researcher), the second result is [2]this page, created by me, which lists many articles about a scandal that Saul Sternberg and I did a lot to uncover. We pointed out that

several details of one of Chandra's papers were impossible. I did not create the page to harm Chandra, but it does: For the rest of his life, anyone curious about him will find out about the scandal. It is a scarlet letter with capital S and capital L.

I suspect this is why Leiden University recently [3]fired a scientist without naming him/her.

Leiden University Medical Centre (LUMC) has fired an employee who has committed fraud in the collection of research data. An internal inquiry showed that the employee deliberately manipulated laboratory research. The employee has confessed and accepted the dismissal. Additionally, the LUMC withdraws two scientific publications by this employee. The fraud was discovered by immediate colleagues at the Rheumatology Department.

A deal was struck. The employee won't contest the firing, the medical center won't name the employee in the press release. The employee didn't want the scandal to follow him/her for the rest of their life.

I disagree with this deal. As a result of the employee's fabrication, a clinical trial was started in which sick people ingested or had injected a powerful drug. The university claims no one was hurt ("It is clear that at no time a dangerous situation has arisen for patients"). I have no idea if anyone was hurt, but the potential for damage was great. Last night a friend told me about a Traditional Chinese Medicine drug that a friend of hers took. It worked for years and then one day stopped working. It came from China. It turned out the Chinese manufacturer had run out of the crucial ingredient and had substituted an animal tranquilizer. Her friend was really damaged by this. Chandra's data might have caused people to take too many vitamins.

The medical center employees who handled this case (presumably very high up in medical center administration) treated the rest of us – who deserve to be warned about the fabricator – not so differently than the fabricator did: as people who don't matter. Who don't deserve protection.

More [4]A comment at Retraction Watch says the anonymity is Dutch tradition: "The names of the people are not published so that these people have a chance of rebuilding their lives in the future. In the Netherlands even people who have committed serious crimes do not have their full name or photo published in the press."

1. <https://www.google.com/search?q=>

2. <http://sethroberts.net/chandra/>

3. <http://retractionwatch.wordpress.com/2013/08/15/leiden-university-fires-employee-for-research-fraud-two-retractions-to-follow/>

4. <http://retractionwatch.wordpress.com/2013/08/15/leiden-university-fires-employee-for-research-fraud-two-retractions-to-follow/#comment-61712>

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dearieme (2013-08-27 05:06:17)

And without the name of the evil-doer, there will be far less publicity for the case and therefore for Leiden University.

Nancy Lebovitz (2013-08-27 05:54:29)

Off topic: <http://www.npr.org/blogs/thesalt/2013/08/22/209844877/reviving-an-heirloom-co rn-that-packs-more-flavor-and-nutrition> Article mentions complex flavors as valuable.



Alex Chernavsky (2013-08-27 07:31:47)

It's hard to keep this kind of stuff secret, especially these days. *Nature* is reporting that the person is name [1]Annemie Schuerwegh:

**Research fraud** A researcher at Leiden University Medical Center in the Netherlands has been fired for committing scientific fraud, the centre announced on 14 August. Annemie Schuerwegh, who worked in the rheumatology department, admitted manipulating data included in a study published in *Proceedings of the National Academy of Sciences* in 2010, says a report from the centre. She went into the laboratory outside office hours and added mouse antibodies to tubes of human blood samples. The centre will withdraw the article and another paper, and has halted a clinical trial based in part on the fraudulent data.

<http://www.nature.com/news/seven-days-16-22-august-2013-1.13575>

1. <https://www.google.com/search?source=ig&rlz=&q=%22Annemie+Schuerwegh%22>

gwern (2013-08-27 16:37:19)

And by insisting on full retribution and perpetually tarring the culprit, one raises the stakes and guarantees the culprit will fight the accusations tooth-and-nail and never clearly admit guilt or lay out what was falsified. It may be satisfying to destroy their ability to 'rebuild their lives in the future', but there are consequences to total warfare and some of those may be unintended. There are reasons lawyer & doctor confidentiality extend to crimes; another good example is how felony murder laws encourage additional murders - if you're already going to jail for life for committing an armed robbery, you might as well kill the clerk so he can't testify later. The Bloody Code was repealed for good reason. So the question is: do you want vengeance, or do you want to make the world a better place?

Ashish (2013-08-27 17:55:30)

@gwern: Naming the perp is not about "vengeance." It is about ensuring that they do not get to repeat the identical misdeed again and again and again. The example of pedophile priests comes to mind. You make a good point about mandatory sentencing laws - I know of no easy answer.

## Autoimmune Disorder Improved With Fermented Food (2013-08-28 05:00)

From [1]a recent story in the Santa Cruz Sentinel:

[Kelly] Dearie turned to fermented foods in a moment of despair.

Her husband Charlie, who suffered from an autoimmune disorder that attacked his platelets, was told by doctors that he needed a spleen removal and a hip replacement. That would mean Charlie, an active 32-year-old man, would never be able to run or mountain bike again. . . .

The family decided to seek an alternative, and consulted Santa Cruz clinical health coach Craig Lane from Health Alkemy. . . . He checked Charlie's temperature, blood pressure and lab results, and listened to Charlie talk about his diet, sleep and exercise. Instead of the surgeries, Lane recommended some dietary changes such as taking out coffee, wheat and sugar, and adding beet kvass, a traditional Russian fermented tonic.

Within three weeks, his platelet numbers were almost normal. Within two years he was running again,

said Dearie. . . . Inspired by her husband's healing, Dearie opened Creative Cultures and sells the beet kvass.

1. [http://www.santacruzsentinel.com/food/ci\\_23900357/microbial-magic-fermentation-is-all-rage-and-good](http://www.santacruzsentinel.com/food/ci_23900357/microbial-magic-fermentation-is-all-rage-and-good)

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Alex Chernavsky (2013-08-28 06:24:29)

OK, but maybe it was the absence of coffee, wheat, and/or sugar. Seth: Yes, that's a fair question, I should have stressed that.

Charlie (2013-08-28 06:58:00)

Ditto Alex...how do we know? I for one, cannot seem to tolerate fermented foods, no matter the type or how much I like them, and I do like them - they give me horrible heart burn. So, I'm sticking with feeding a limited, but robust, gut flora, instead of a weaker diverse, multicultural variety. Cheers

Paul N (2013-08-28 07:41:02)

I think it was likely both. Getting rid of the wheat and sugar certainly removes the major gut irritants and contributors to disordered gut flora, but the fermented stuff helps provide the right flora to restore balance. Add to that that beet kvass has a long standing reputation as a blood cleanser, and I'd say it was both. There are some clinical studies looking at beetroot, and its [1]blood pressure reducing effects. The lactic and other acids from fermentation (and probably a good dose of B vitamins too) almost certainly help.

1. <http://www.ncbi.nlm.nih.gov/pubmed/22414688>

Tuck (2013-08-28 10:58:07)

Wheat is one of the only plants we know of that is a known cause of auto-immune reactions. (Poison Ivy being the other one, but no-one eats that.) Wheat-caused autoimmune diseases are known to affect every tissue in the body. I think it's a pretty safe bet therefore that removing wheat was the trigger for his improvement, and not the beet juice...

Ross (2013-08-31 08:40:06)

Does fermenting wheat via a traditional sourdough process remove the auto-immune issue?

### Assorted Links (2013-08-29 05:00)

- [1]electric field perception by humans
- [2]Umami plate
- [3]Jana Beck confirms that a low-carb diet improves her blood sugar levels
- [4]"Goldman Sachs got the FBI to do its bidding" (Felix Salmon)
- [5]Whey protein reduces after-meal blood sugar rise. Whey protein is in cheese, for example.
- [6]Several unpleasant aspects of surgery prep unhelpful

Thanks to Alex Chernavsky.

1. <http://onlinelibrary.wiley.com/doi/10.1002/bem.20109/abstract;jsessionid=2FB4B665540D49C0752028588254F365.d03t03>
2. <http://www.allvoices.com/contributed-news/15307982-an-francisco-street-food-festival-the-dish-behind-the-digs-part-2>
3. <http://quantifiedself.com/2012/07/jana-beck-on-learning-from-over-100000-blood-glucose-readings/>
4. <http://blogs.reuters.com/felix-salmon/2013/08/02/the-legal-jujitsu-of-goldman-sachs/>
5. [http://www.cpmedical.net/articles/whey-protein-influences-blood-sugar-metabolism?utm\\_content=whey-protein-influences-blood-sugar-metabolism%20&utm\\_source=bn20130827m&utm\\_campaign=bn&utm\\_medium=email&utm\\_term=ctype-M](http://www.cpmedical.net/articles/whey-protein-influences-blood-sugar-metabolism?utm_content=whey-protein-influences-blood-sugar-metabolism%20&utm_source=bn20130827m&utm_campaign=bn&utm_medium=email&utm_term=ctype-M)
6. <http://www.npr.org/blogs/health/2013/08/27/216076742/patients-love-a-kinder-approach-to-surgery-but-surgeons-balk>

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libfree (2013-08-29 09:50:30)

Seth, What are your thoughts on fermented meats? If we eat fermented vegetables and dairy, shouldn't we be letting our meats ferment? Seth: I try to eat fermented meats. For example, prosciutto, aged salami. Cremenelli salami is especially good.

dearieme (2013-08-29 10:15:56)

"doses of whey protein significantly reduced post-prandial blood sugar levels": I hate the dishonesty of that sort of statement. Seth: What is the dishonesty?

Valerie (2013-08-29 20:15:52)

Whey protein in cheese? From my understanding, most of the whey is removed from cheese. Except for a few cheeses (like Ricotta), shouldn't cheese be especially low in whey protein?

dearieme (2013-08-30 08:12:38)

Seth: What is the dishonesty? The use of "significantly" - which the layman will interpret as 'substantially' - when the original result is "statistically significant", a quite different concept. (To be fair, I don't know whether this article is guilty of that crime, but if it isn't it's damn near unique.) Seth: The reduction is large, see <http://www.nutritionj.com/content/11/1/83/figure/F1>. Certainly "significant" in the sense of important. The authors are guilty of not making that clear.

Charlie (2013-08-30 17:05:20)

I don't see how using whey protein to raise your insulin level is beneficial long term. I believe, reducing your carbohydrate load would be much more beneficial; short term and long term. Seth: The whey protein lowered insulin level, see <http://www.nutritionj.com/content/11/1/83/figure/F1>.

Jon (2013-09-03 07:21:26)

Seth, I believe you misread figure F1 with respect to insulin levels. Figure 1B shows insulin levels as a function of time for the different meals, and the whey protein level is higher than all the others for most of the post-prandial period. Figure 1C shows the insulin index of the meals (in light bars.) Again, the whey protein meal shows the highest level. Finally, quoting from the paper itself: The insulin iAUC following human milk, bovine milk and casein was similar to that seen with WWB. In contrast, the whey meal exhibited higher insulin iAUC 0-120 min, than the WWB ( $p < 0.05$ ). Additionally, the whey meal resulted in an elevated insulin response (iAUC 0-120 min) also when compared with data for casein and human milk. Seth: Thanks for the correction. Yes, I said lowered insulin when I meant lowered blood sugar.

Jeff Winkler (2013-09-03 07:34:17)

Great talk from Jana Beck. Here are higher-resolution graphs - <http://janabeck.com/blog/2012/10/12/lessons-learned-from->

100/ Her blog posts about beeminder are also very good. Talk about closing the goals-data-behavior loop!

## Rewarding Criticism Put Nicely Produced Long-Lasting Change (2013-08-30 05:00)

[1]Eliezer Yudkowsky, I'm told, used to be a not-nice critic. The problem was his delivery: "blunt, harsh, not sufficiently tempered by praise for praiseworthy things" (Alicorn Finley). However, this changed about a year ago, when Anna Salamon and Alicorn Finley decided to try to train him to be nicer. Alicorn describes it like this:

Me, Eliezer, Anna, and Michael Blume were all sitting in my and Michael's room (where we lived two houses ago) working on, I think it was, a rationality kata [= way of doing things], and we were producing examples and critiquing each other. Eliezer sometimes critiqued in a motivation-draining way, so we started offering him M &Ms when he put things more nicely. (We also claimed M &Ms when we accomplished small increments of what we were working on.)

Eliezer added:

Some updates on that story. M &M's didn't work when I tried to reward myself with them later, and I suspect several key points:

- 1) The smiles/approval from the (highly respected) friends feeding me the M &Ms probably counted for more than the taste sensation.
- 2) Being overweight, M &Ms on their own would be associated with shame/guilt/horror/wishing I never had to eat again etc.
- 3) Others have also reported food rewards not working. One person says that food rewards worked for them after they ensured that they were hungry and could only eat via food rewards.
- 4) I suspect that the basic reinforcement pattern will only work for me if I reward above-average performance or improvement in performance (positive slope) rather than trying to reward constant performance, because only this makes me feel that the reward is really 'deserved'.

Also:

- Andrew Critch advises that 'step zero' in this process is to make sure that you have good internal agreement on wanting the change before rewarding movements in the direction of the change
- The Center for Applied Rationality (CFAR) has some experience learning to teach this.
- CFAR has excellent workshops but not much published/online material. A good mainstream book is [2]Don't Shoot the Dog by Karen Pryor.

I like this example because the change was long-lasting and important.

1. [http://en.wikipedia.org/wiki/Eliezer\\_Yudkowsky](http://en.wikipedia.org/wiki/Eliezer_Yudkowsky)

2. <http://www.amazon.com/Dont-Shoot-Dog-Teaching-Training/dp/1860542387>

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Alex Chernavsky (2013-08-30 06:48:00)

See also: "[1]What Shamu Taught Me About a Happy Marriage" The author uses animal-training techniques to address her husband's annoying behaviors.

The central lesson I learned from exotic animal trainers is that I should reward behavior I like and ignore behavior I don't. After all, you don't get a sea lion to balance a ball on the end of its nose by nagging. The same goes for the American husband. Back in Maine, I began thanking Scott if he threw one dirty shirt into the hamper. If he threw in two, I'd kiss him. Meanwhile, I would step over any soiled clothes on the floor without one sharp word, though I did sometimes kick them under the bed. But as he basked in my appreciation, the piles became smaller. I was using what trainers call "approximations," rewarding the small steps toward learning a whole new behavior. You can't expect a baboon to learn to flip on command in one session, just as you can't expect an American husband to begin regularly picking up his dirty socks by praising him once for picking up a single sock. With the baboon you first reward a hop, then a bigger hop, then an even bigger hop. With Scott the husband, I began to praise every small act every time: if he drove just a mile an hour slower, tossed one pair of shorts into the hamper, or was on time for anything.

1. [http://www.nytimes.com/2006/06/25/fashion/25love.html?pagewanted=all&\\_r=1&](http://www.nytimes.com/2006/06/25/fashion/25love.html?pagewanted=all&_r=1&)

Dragan (2013-08-30 11:27:37)

Alex, I like that example. Presumably this would be less effective if the person being trained had no affection for the trainer. But even more I wonder how well it would have worked if the trainer (wife) did not love the trainee (husband). Seth, I came across your blog about a month ago and somehow ended up reading through most of it. I believe I learned quite a bit. To me, most interesting topics I've read about here are: the Shangri-La "Diet" (ahead of its time), development of skill in context of human evolution, Jane Jacobs as a thinker on all sorts of things, self-experimentation as part of a new literacy, most of your thoughts on statistics (e.g., against uncritical "Correlation is not causation"). There's more, I'm sure. Thanks for sharing.

### **Criticism of My View of Education: My Answer (2013-08-31 05:00)**

My criticism of college education can be boiled down to this: It is too much one-size-fits-all. It takes too little account of differences between students. Those differences are no accident. They reflect the fact that a good economy needs to produce many different things. [1]Human nature has been shaped to provide exactly that.

Bryan Caplan [2]posted about this, and one reader (Tim of Angle) replied:

Roberts is criticizing colleges for not doing something that they aren't really trying to do. . . . Our educational model is built around hiring teachers who are (supposedly) good at thing X and paying them to train other people to do thing X. Nobody claims that the way the teacher does thing X is the only way to do thing X, nor even the best way to do thing X; what colleges do claim is that the way the teacher does thing X is a successful way to do thing X, and it hopes that the teacher can train students to do thing X competently at least the way the teacher does thing X.

I was discussing undergraduate education at Berkeley. Berkeley professors are hired mainly based on their ability to do research. Undergraduate classes are not about training researchers (= the next generation of professors at research universities, such as Berkeley); that's what graduate school is for.

In most Berkeley undergraduate classes, professors aren't teaching students to "do" anything, at least anything that

most of us would recognize as "doing". (Engineering, art, architecture, foreign language and perhaps statistics classes are exceptions.) In most classes, students are introduced to an important fraction of an academic field. In a social psychology class, for example, they learn about social psychology research. The class is not about how to do social psychology. It is about what has been done and what has been learned. If the class consisted entirely of students who wanted to become psychology professors, that would be fine. In fact, only a small fraction of Berkeley psychology majors (5 %?) go to graduate school in psychology. The students in most Berkeley classes (outside of the more vocational areas, such as engineering) will go on to do many different jobs. Few in any class will become professors.

I think one theory of higher education is close to what Tim of Angle says. The practice, at least at elite universities such as Berkeley, is quite different.

A different theory of higher education revolves around signalling. College performance provides a useful signal to future employers, that's why it exists in present form. At Berkeley, I never heard this motivation (will this provide a good signal to employers?) brought up in discussions about grading or anything else. It's utterly clear, on the other hand, that where you go to college (Harvard versus College of Marin) is indeed a powerful signal to employers and, yes, if you can go to Prestigious College X, you really should. How many "axes of excellence" there should be – how many separate categories or dimensions we should use to rank colleges – is a different discussion.

1. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

2. [http://econlog.econlib.org/archives/2011/12/seth\\_roberts\\_on.html](http://econlog.econlib.org/archives/2011/12/seth_roberts_on.html)

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dearieme (2013-08-31 06:24:44)

"In most Berkeley undergraduate classes, professors aren't teaching students to "do" anything, at least anything that most of us would recognize as "doing"." And yet you ain't learning Chemistry if you are not doing a lab class where you - not you and a partner - do organic syntheses, quantitative analysis, and so forth. Doing is an essential part of learning in many disciplines. Even the mild mathematician must "do" problem after problem until he has internalised theory and practice sufficiently to solve problems skilfully.

Dragan (2013-08-31 16:33:13)


"Engineering, art, architecture, foreign language and perhaps statistics classes are exceptions." Seth, it would be interesting to hear why you called out those particular disciplines as exceptions (to "most classes"). Also, "In a social psychology class, for example, they learn about social psychology research. The class is not about how to do social psychology. It is about what has been done and what has been learned. If the class consisted entirely of students who wanted to become psychology professors, that would be fine." Seth: Yes, it's not black and white. In most classes, you learn knowledge. In a small number of classes, you learn skills. In many engineering classes you build something. In most foreign language classes, you learn to speak and read the language. In (studio) art classes you make art. And so on. It's not black and white because in chemistry and physics classes there are often labs, in geology classes you may go on field trips and learn to identify rocks, an animal learning class may have a lab, and so on. This seems contradictory. If a class consisted "entirely of students who wanted to become psychology professors," then wouldn't we want it to actually be about "how to do social psychology" rather than merely about "what has been done" already? After all, students who want to be psychology professors need to learn how to do psychology. My sense is that students in a typical undergraduate class (and K-12) aren't learning how to "do" the disciplines, but rather how to do some related busywork. I certainly didn't get to "do" much real mathematics before graduate-level courses. Maybe this is not that different from what you're saying. Seth: I agree with you. I wouldn't call the usual curriculum "busywork" but I agree that it is quite different than "real math", "how to do social psychology" and so on. There is a busywork element of most classes in the sense that the content is relatively convenient for the pro-

fessor to teach. Easier to lecture about what social psychologists have learned than to teach a social psychology lab, for example.

## 8.9 September

### The Irrelevance of Grass-Fed Beef (Ancestral Health Symposium 2013) (2013-09-01 05:00)

*Grass-fed beef is better than ordinary (grain-fed) beef because it has a better omega-3/omega-6 ratio.* I've heard this a thousand times. It's true. Grass has more omega-3 than grain, which is high in omega-6. But it is misleading. For practical purposes, grass-fed and grain-fed beef are the same in terms of omega-3 and omega-6.

[1]Peter Ballerstedt made this point in his talk at the recent Ancestral Health Symposium. He showed this slide, based on research by Susan Burkett.[2] 

This shows the amount of omega-3 and omega-6 in one serving of various foods. The amounts in grass- and grain-fed beef are small relative to other foods most people eat. People who have said *eat grass-fed beef*, such as [3]Michael Pollan, should have been saying *eat less chicken*. When I started eating grass-fed instead of grain-fed beef, I noticed no differences, which agrees with this analysis.

1. <http://www.peteballerstedt.com/>

2. <http://blog.sethroberts.net/wp-content/uploads/2013/08/omega3omega6.png>

3. <http://michaelpollan.com/resources/animal-welfare/>

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Nancy Lebovitz (2013-08-28 00:20:21)

Good thing I eat grass-fed beef (at least some of the time) because it tastes better. Seth: I agree, it tastes better.

Beth@WeightMaven (2013-09-01 06:16:23)

I don't know that I would have called grass-fed beef "irrelevant" because the absolute amount of o3 is small. Eating grass-fed beef for o3 or because of the o3/o6 ratio is not useful, as you point out above. But eating grass-fed beef for other reasons can be downright relevant. For example, grass-fed cows aren't typically given the hormones or antibiotics given to feedlot cows. That matters to me! Seth: I am unsure why I should care about the hormones or the antibiotics. I'm not saying you're wrong, just that the evidence behind your view is unclear.

rif (2013-09-01 11:58:23)

I am confused. Surely, a rib-eye steak is a kind of beef?

Joe (2013-09-01 12:05:16)

Why no comparison of grass-fed rib-eye to grain-fed rib-eye? Hmmmmm.

Joe (2013-09-01 12:40:12)

Why no comparison of grass-fed rib-eye to grain-fed rib-eye? Or to strip steak, etc? What's so different about ground beef???

Justin Irving (2013-09-01 13:26:26)

Wow. This is news to me. Thanks for sharing, raises many questions. I was under the impression that grass fed \*and finished\* beef was fairly comparable to wild salmon in O3. I wonder if the data in this chart are for store bought GFB (usually grain finished) or if it was fully grass finished (usually only available through order or local markets). The other advantage of grass fed beef is alleged fat soluble vitamins, which are presumably good. As far as Beth's comment above, my fear is that antibiotics and the estrogen used to fatten cows bioaccumulates and then jacks the human endocrine system and gut bacteria when eaten. I look forward to hearing what the GFB people have to say.

Michael George (2013-09-01 14:28:30)

It looks to me like this is playing with statistics again, and I'm surprised you fell for it, Seth. Is this chart comparing the fat? Or the meat? If I take a ounce of fish fat and an ounce of beef fat – the amount of omega-3's should be comparable, right? The problem, in my mind, is that today people aren't eating the fat with their beef. You can't even buy a cut of beef with the fat still all around it. When I was a kid eating at grandma's and we got a steak or pork chop, there was a ring of fat around it. It was so good! And I'm believing that when our ancestors ate their beef, it had a bunch of fat hanging off it. But today, I don't see people eating the fat with their beef. In fact, I have to buy beef fat separately to add to my meals. Now, I'm under the impression that if I eat the fat with the lean meat, that I'm getting the omega-3's that are necessary. What do you think?

Angelyne (2013-09-01 14:40:19)

I would say that the omega-6/omega-3 content of grass fed beef is irrelevant to the decision to buy grass-fed beef. Ruminants haven't evolved to eat massive quantities of grains, it makes them sick. You end up eating meat from what is essentially a sick cow. But even more important, If you eat a grass fed cow, you are are eating meat produced from animals that exist within their natural context, or as close as you can get with agriculture and husbandry. When properly managed, the animal is outside, in the sunshine, eating what it evolved to eat. The animal/grass coexist and need each other. As apex predators we feed on the cow, which is also part of the circle. When you take a cow to a feeding lot, you break that circle. You feed them something they aren't designed to eat, something that is grown elsewhere at great environmental cost. The manure they produce no longer feeds the soil, but now becomes a pollutant. The water must be piped in from elsewhere, depleting water tables. The cow is now yet another environmental burden in an unsustainable system. That's why I eat grass-fed meat.  
<http://www.pbs.org/wgbh/pages/frontline/shows/meat/interviews/pollan.html>

Bert (2013-09-01 23:12:50)

From where I come from, grass-fed is typically cheaper. O3/6 content notwithstanding, I guess, if I'm to eat what I should, then the stuff that I eat should eat what it's supposed to, too. :)

Antonio (2013-09-02 12:09:45)

"I would say that the omega-6/omega-3 content of grass fed beef is irrelevant to the decision to buy grass-fed beef" I could not agree more. omega6/omega3 ratios is not the only think that matter for our health ...

Tom (2013-09-02 13:06:23)

Thanks for this post, Seth. With all the hype that has grown up around the grassfed beef industry, that chart is nothing short of shocking. Talking about higher Omega 3s lets ranchers benefit from healthfulness perceptions without actually making any health claims. There's no FDA litigation risk if the healthfulness is merely presumed by starry-eyed consumers. I do wish there were an entry on that chart for so-called "Omega 3" eggs. I imagine it would reveal a similar scam.

Kim Øyhus, physicist (2013-09-03 04:54:10)

There are real differences, because when I eat farmed fish, I get rashes or something similar, and after eating wild fish, it disappears. The difference is quite large. Seth: Interesting. I avoid farmed salmon, try to always eat wild salmon.

Kyle (2013-09-05 10:06:24)

It would be nice to compare a grass-fed ribeye to grainfed. Also it would be very interesting to look at the ratio in grain fed dairy verse grass-fed (particularly butter).



David Johnston (2013-09-06 17:26:58)

For me, the grass fed thing was always more about the cow than the O3/O6 ratio.

JohnG (2013-09-10 08:04:25)

The old government nutrition database site would give omega 3 and omega 6 numbers on quite a few items. If I remember correctly, the ribeye numbers were similar between grainfed and grassfed beef with the grassfed ribeye numbers being lower overall for both omega 6 and omega 3. The ratios weren't that much different for any cut of meat I checked. For some cuts, grassfed faired better on the ratio number; and in other cuts it was the other way around. You can look at Loren Cordain's own numbers (<http://thepaleodiet.com/published-research-about-the-paleo-diet/>) and see for yourself that the argument for eating grassfed because it has a better ratio is meaningless. This doesn't negate the possibility, which Angelyne brought up, that there's something else in play when animals are fed outside their normal diet (such as the fact that the ratio of palmitic saturated fatty acid goes up in comparison to stearic acid in grainfed beef and what significance that may hold).

Ed (2013-09-25 12:26:43)

Grass fed vs Grain fed. Grain fed is akin to fattening the cattle up. Literally. The higher fat content of grain fed cattle would be concentrated with omega 6 as opposed to omega 3. Not too mention that cattle have evolved to consume grass, not grain. As far as the increased hormones and its effect on livestock. There have been scientific studies that show a correlation between the hormones and increased negative health effects in humans. A quick Google search will turn up some scientific articles.

sharon (2013-09-25 18:23:01)

Grass fed is kinder to cows.

## **What is College For? (2013-09-03 05:00)**

David Brooks, the New York Times columnist, [1]tries to answer this question:

Are universities [he means undergraduate education] mostly sorting devices to separate smart and hard-working high school students from their less-able fellows so that employers can more easily identify them? Are universities factories for the dissemination of job skills? Are universities mostly boot camps for adulthood, where young people learn how to drink moderately, fornicate meaningfully and hand things in on time? My own stab at an answer would be that universities are places where young people acquire two sorts of knowledge, what the philosopher Michael Oakeshott called technical knowledge and practical knowledge.

My answer: Almost all college students want to figure out what job to choose. The answer will depend on what they do well, what they enjoy, and will have a big effect on the rest of their life. The better the answer, the more successful and happy they will be. For them, that is above all what college is for.

This doesn't even occur to Brooks as a possibility. I suppose professors like this state of affairs (a smart person – Brooks – can't even think of this). If no one mentions it, they are that much further from having to consider it. Trying to help students reach this goal means giving up power. The more a college helps students learn what they enjoy and what they are good at, the less professors can do exactly what they want.

There is nothing terrible about college classes. I don't say that this or that humanities course is "useless". The trouble is lack of balance: too many normal classes, too few "classes" that explicitly help students to learn about the world of work and how they might fit into it. Only a few colleges – often low-prestige "trade schools" – do much to help students learn about possible jobs, what they enjoy, and what they are good at.

Judging by how Berkeley courses are taught – they do little to help students decide what job to do, unless they are seriously considering being a professor – most professors have little or no interest in helping students this way. I suspect, however, they don't know what they might gain from doing so. At Berkeley I taught a class called Psychology and the Real World whose goal was exactly that: help students find their way (a particular problem for psychology majors, few of whom go to graduate school in psychology). They could do almost anything, so long as it was off-campus. It was little work for me and the students learned a lot. I enjoyed seeing them begin to find their way. This is what I think isn't obvious to professors: the more you help students learn what they want to learn, the easier and more satisfying it is for you.

1. <http://www.nytimes.com/2013/04/05/opinion/Brooks-The-Practical-University.html?hp&r=1&>

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Alex Chernavsky (2013-09-03 09:38:55)

And, speaking of education, apparently the US Government is starting to run randomized controlled trials to test the effectiveness of various educational approaches or techniques: "[1]Guesses and Hype Give Way to Data in Study of Education"

1. <http://www.nytimes.com/2013/09/03/science/applying-new-rigor-in-studying-education.html>

Dragan (2013-09-04 16:36:43)

Alex, From the article you linked, opening paragraph: "What works in science and math education? Until recently, there had been few solid answers — just guesses and hunches, marketing hype and extrapolations from small pilot studies." It's true that there have been few solid answers. It's false that this is because education researchers have been only "extrapolating from small pilot studies." Even a cursory google search (or better yet, looking in ERIC) will find large scale experiments dating back 30+ years. Overwhelmingly, findings have been that stuff you think should matter doesn't. For example, both group-based and lecture-based teaching can work... or might not. As the article even mentions, it's not unusual to call What Works Clearinghouse "What Doesn't Work Clearinghouse." My guess? People are different. There aren't going to any "solid" answers of the sort until this fact is recognized. Medicine doesn't work the same for everyone, why should education?

Dragan (2013-09-04 16:52:24)

Seth, I like your general thinking on college education. You may as well extend it to parts of K-12. One of the wisest, smartest people I know finished only 4 years of school. It taught him how to read and write, do arithmetic, read maps, and a bit of history. That was enough. Sure, "modern age requires more than that" but it's not like modern (US) education does a particularly good job teaching more than that. Personally, I can't remember almost anything from grades 7-10 other than a bit of Latin, some basic geometry, and a few books I read and liked. I'm sure there's more I learned, but I'm equally sure it wasn't terribly important. At least in grades 11 and 12 I read mostly enjoyable books and studied Calculus, though I'm sure many of my classmates cared for neither.

Robert (2013-09-06 13:36:38)

Seth, I agree with much of what you said regarding the current nature of education. I'm an undergraduate student and am worrying about the same things you mentioned at the beginning of your posts: what is my desired career path and what do I need to do in order to live my desired future. Most of the classes I've taken for my majors (Human Biology and Cognitive Science) haven't helped me acquire the skills I'll need in the real world and perhaps that's due to teachers not caring about the students' needs and wishes. Since high school, I've kept a folder on my computer titled "Continued Education," which contains much of what I've read on my own in order to provide myself with the education that I really want (i.e. one that improves the skills I want to master). So far, my self-directed education may have been as valuable as the formal education I've received so far-it's a little depressing. Anyway, I'll stop ranting. Thanks for the insight. Robert

Griff (2013-09-06 18:32:48)

I am not sure if I have a well formed thought on this. I think college is for different things for different people. I for instance liked math and knowing how things worked. I would have preferred a math degree, but when I asked the guidance counselor what I could do with that, she said "You could be a math teacher." Given the school I went to, it was a huge de-motivator. When I asked my father, he said "Engineers have to be good at math and they get paid well at the shipyard." As a result, I went to engineering school. It was brutal at first, but when I made it to the more specialized courses, I really enjoyed it. In addition, the courses I chose were heavy on math, e.g. fields and control systems. I liked Psychology as well, but when I suggested switching, my father, who generously paid for my education asked "Are you going to pay for that?" In his own estimation, he didn't think it would give me the best livelihood. I went on to be an engineer, but surprisingly the engineering part of my career was very short. I quickly moved into project management, then management, consulting, and ultimately executive management. There is always a technical edge to what I do and I find I rely on the methodical, analytical, and systems-thinking mindset I learned from engineering, but it is far from true engineering work and I definitely miss the math. (Financials are dull, and I have taken every opportunity to make it interesting through statistics and modeling, but that is still not enough). I think there are at least two groups of people in college. The ones that do it for a love of learning and pursuing an interest, and the ones that are convinced (either on their own or from parental pressure) that it is a necessity. Also, the selection of major can either be by interest or expected financial return. You may be smart enough to be a doctor, lawyer, engineer or software developer, but it doesn't mean you should be one. I think this is why there are so many disappointing doctors, lawyers, engineers and software developers (I believe it is Paul Graham that said there is a logarithmic difference in the productivity or value of software developers, I would assume the same in other knowledge workers). They may be smart, and they may have done very well in college, but that doesn't translate to performance at work or happiness at work. It was interesting at the shipyard. Those with above a 3.0 started as a GS-7 and those with below 3.0 GPA started as a GS-5. Their own statistics showed that GS-5 reached a GS-12 faster on average than the GS-7. The reason wasn't known, but the theories included that GS-5's didn't walk around like prima donna's and got down to working. Not sure if I concur, but it is true that many of the engineer's felt that some things were just beneath them. I don't think a diploma means much more than some level of commitment to a body of knowledge. I wouldn't say commitment to a profession, as only a subset of what is learned is used in the profession. Also, I don't think a college degree should mean much more than a head start in many pursuits. I had worked with many technicians that were at least my equal if not my better. Most of the best had a deep seated interest and many had engineering related hobbies, e.g. ham radio, designing audio amplifiers, etc. My own father had no degree, but is an adept problem solver in addition to being very gifted in working with his hands. He worked his way up from an apprentice pipe-fitter to the highest position possible in the shipyard before retiring. As an apprentice, he was given the opportunity to go to college, but having tried it decided that he preferred working and making overtime to support the family (and pay off his house in seven years). I think the idea that everyone has to go to college is a mistake, and I think companies do themselves a disservice on passing on people that a) don't have a degree or b) don't have a degree in the desired specialty. Of the two best project managers I ever employed, one had no degree and one had a biology degree (we were a technical/engineering organization). One of my favorite interview questions is to ask people what they enjoy doing in their free time. My best employees free-time activity is very similar to their work activity. The sys admins have racks of servers and networking gear in their basements. The developers are tinkering with mobile apps, setting up home music servers, trying out new technologies, etc. Griff Seth: I agree about the free time question. I write this blog in my free time...and it is about the same stuff I do research about.

Hazel Meade (2013-09-17 10:28:34)

When I was in high school I was taught that I should already have decided what I wanted to study by the time I got to college. Obviously college is much more beneficial to kids if they arrive with a major already decided, and a lot of it will end up being wasted time if not. STEM majors in particular depend heavily on the first two years of math and science core courses for the second two years where the real coursework begins. If you aren't already taking the core STEM classes in Freshman year, by sophomore year, you'll have forgotten much of your high school math and it will be nearly impossible to catch up. I can't see much value in spending thousands of dollars a year "finding yourself" by taking random electives. You're supposed to be doing that in high school. Seth: "Finding yourself" is more profitably accomplished by doing internships, which better teach what this or that job would be like. If you are advocating for a gap year, I agree with you.

Hazel Meade (2013-09-17 14:48:49)

I'm not a fan of gap years. I think enriching the high schools with more interesting electives would be the better plan. Let junior and senior year high school students pick more of their own classes and offer a variety of '101' type humanities along with AP math and science. Econ 101, Psych 101, Poly Sci, World History, etc. could all be taught senior year of high school. Seth: I think you overestimate what a high school (more interesting electives) can teach relative to what the rest of the world (gap year) can teach.

Assorted links (2013-09-18 09:18:09)

[...] 5. The Seth Roberts theory of what college should be for, but too often isn't. [...]

Paul (2013-09-18 10:19:14)

Students are very different. I've had students who came in knowing exactly what they wanted to do, others the opposite, older students who needed a degree to get promoted.... What strikes me is how college education is being homogenized - one size fits all and we just have to find the magic bullet seems to be the implicit philosophy now. Seth: I agree. And not just college education.

zbicyclist (2013-09-18 21:52:48)

I don't mean this as a criticism of Seth, who's trying to improve things, but part of this was called in the olden days "working your way through college". That's what's a lot different now. My father in law could work his way through Northwestern (late 1930's). I could work my way through Missouri as a commuter student (late 1960s, tuition \$1250 - that's \$1250 total for four years). Now what you can earn by working 16 hours a week or so doesn't make much of a dent in even a state school's tuition, so perhaps there are fewer students working (or feeling that working while going to college is an important part of their financial/educational process, as opposed to a bit of spending money).

Kelly Smith (2013-09-19 09:07:08)

Great post Seth, I agree that most of the dialogue is missing this critical part of the college purchase. Mentoring, coaching, counseling...whatever you call it, this was definitely something I was looking for from my undergrad education, and like many people, I ended up finding it outside of the "system." It sounds like your psych and the real world course is similar to point #4 in the "University 2.0" concept. I'd love to learn more about your experience with this type of education, and I welcome any feedback on the straw man concept. <http://www.squidoo.com/university-2-0>

Seth Roberts (2013-09-19 14:07:34)

My Psychology and the Real World class is easy to describe: 1. Students found their own internships/volunteer work. I didn't have to do anything or push them. Only students with something in mind took the class - about 12 of them. 2. During class, we discussed what they had learned recently from what they were doing. This required no preparation on my part. So the class was extremely easy to teach, if "teach" is the right word. 3. After the class, some students said it was a great class and they had learned more from it than any other class they had taken. I think I gave all of them A's. They wrote a short paper about what they'd learned.

Karen (2013-09-19 15:00:27)

The ridiculous part of the education system is that we shouldn't have to wait until college to be given the opportunity to find out what we like and are good at. Most of us have no idea how to even begin to answer this question because we have been sitting in a classroom being told what to learn and how to learn it for almost a decade and a half before we are even presented with any kind of choice concerning our education. Forced curriculum does nothing to help kids find their individual talents and interests. This is why I am homeschooling my children. My 11 and 9 year old sons are already well on their way to choosing their future career paths because they are allowed a say in how their education unfolds. Self-directed curriculum is a far better way in which to learn how to set goals and achieve them and when they get to college they will know exactly why they are there and what they need to do to get where they want to go.

## Assorted Links (2013-09-04 05:00)

- [1]fruit and diabetes. Blueberries good, cantaloupe bad.
- [2]R most popular language for "analytics/data mining/data science work" among survey respondents. I wish I could describe the respondents, but I can only say they are people who might call what they do "data mining" or "data science". In addition, the use of R is growing. Most psychology departments teach SPSS or Matlab.
- [3]Thomas Frank criticizes universities, undergraduate education in particular. "An educational publisher wrote to me [asking] to reprint an essay of mine [that is freely available]. . . . The low, low price that students were to pay for this textbook: \$75.95."

1. <http://www.bmj.com/content/347/bmj.f5001?etoc=>

2. <http://www.kdnuggets.com/2013/08/languages-for-analytics-data-mining-data-science.html>

3. [http://thebaffler.com/past/academy\\_fight\\_song](http://thebaffler.com/past/academy_fight_song)

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dearieme (2013-09-04 13:23:25)

Astonishing - an apple a day keeps the doctor away. I hope it applies also to British apples, which are more - how to phrase this delicately - flavoursome than American. Unfortunately the blueberries on sale in Britain are tasteless. If anyone thinks he can frighten me off our home-grown strawberries he is sadly delusional.

dearieme (2013-09-04 13:32:19)

"Thomas Frank criticizes universities" Forgive me for repeating myself but Dissolution of the Monasteries.

Mark (2013-09-04 17:28:21)

More bunk out of Harvard... How many different questions can they ask of this same data set (with no adjustments for multiplicity)?

AI (2013-09-04 20:49:48)

wow. i'm surprised. cantaloupes aren't even that good.

dearieme (2013-09-05 13:53:46)

Ahoy, Seth. <http://www.independent.co.uk/news/science/gut-bacteria-could-be-behind-why-so-me-identical-people-are-fatter-than-others-8800808.html>

Zach H (2013-09-05 19:05:52)

Cantaloupe is cheap. Blueberries are expensive. This is likely significant. Also, dearieme: the apples in American grocery stores may not be tasty, but I assure you a bit of effort uncovers delicious apples, many of varieties unavailable in the UK. Seth: Interesting point about cost. Maybe blueberries are better than cantaloupe because they are more likely to supply a nutrient we are not already getting (because, due to price, we are eating fewer blueberry-like foods than cantaloupe-like foods).

Mark (2013-09-06 03:09:51)

Or maybe people who can afford to eat more blueberries can also afford to take many other steps to protect their health. If you have access to the actual paper, just look at the comparison across fruit quartiles in Table 1. All \*measured\* health behaviours (smoking, drinking, exercise, vitamins) increase monotonically across the quintiles, and it's remarkably consistent across the 3 cohorts. Simply put, the people who ate most fruit, on average, were inherently healthier, and that just cannot be controlled for using a statistical model. The same has been true of the previous BIG RESULTS to come out of this Harvard group using

these very same data. Walter Willet is a hack. Seth: Good point about confounding. However, I don't agree "that just cannot be controlled for" – why not? Why not control for smoking, for example?

Mark (2013-09-06 06:57:56)

Because controlling for all "known" confounders does not necessarily reduce the net confounding bias. That is, bias could very well be increased by controlling for things like this... this is very easy to demonstrate through simulations. "Smoking" (as much as that measures the same thing across people) can be controlled for, but not all of the other health related decisions that go along with it.

David Johnston (2013-09-06 17:07:40)

So the Blueberry-Kefirgurt I eat turns out to be healthy. 1) Ferment 20 %/80 % Kefir/Heavy cream mixture for 3-4 days at room temp until very thick and tangy. Cool in a fridge. 2) Stir in blueberries. 3) Eat. Seth: Good idea.

David Johnston (2013-09-06 17:14:42)

R is a horrible language. The more I use it the more I appreciate Python. But sometimes you need a manova and R's got all the stat functions.

disgruntledphd (2013-09-08 05:02:34)

Seth, while most psychology departments teach SPSS/Matlab/Excel (seriously), the use of R in psychology has been growing for a while. Also, lots of data science questions are merely repacked psychology datasets (certainly those relating to advertising and/or social networks). Anecdotally, I have noticed quite a large movement towards R even in my department, where no-one knew what it was when I started using it three year ago.

Stephen Marsh (Ethesis) (2013-09-08 15:45:58)

BTW. <http://www.telegraph.co.uk/earth/environment/climatechange/10294082/Global-warming-No-actually-were-cooling-claim-scientists.html>

lemmy caution (2013-09-16 10:44:50)

I eat a pound of frozen blueberries a night. A two pound bag costs \$10. I am not even going to pretend that that much blueberries is good for you. It does not seem to be all that bad for me though.

## **Magnesium and Rectum Healing (2013-09-05 05:00)**

After I posted a link to [1]an article about magnesium deficiency ("50 studies suggest that magnesium deficiency is killing us"), a reader who wishes to be anonymous looked into it.

After reading your post about magnesium oil, I read up on it, and thought I'd try it. I didn't notice any difference, but I have a report. In my reading, I came across stories of people who sprayed the oil on wounds.

I have a recurring minor irritation that, when it occurs, usually takes weeks to heal. Passing a large stool can cause small tears in the rectum, so small they don't even bleed but nonetheless can be felt. If another stool, even a regular-sized one, passes before the tears heal, they are painfully re-opened, though not re-opened fully. The pain is not severe but is, frankly, a pain in the \*\*\*. In my case it usually takes weeks for the tears to completely heal.

I was a couple weeks into this cycle when my bottle of magnesium oil arrived. I had read that it promotes healing and some people spray it on wounds. So I sprayed it on my irritated area once a day for three days, and on the third day when I passed a stool there was no pain! Never before had it healed so quickly, and I've had this problem at least once a year for over ten years.

I'm impressed. This resembles a theory making an unlikely prediction that turns out to be true. Other examples of magnesium benefits are [2]here and [3]here. Maybe magnesium will improve my sleep. That should be easy to test.

1. <http://www.dumblittleman.com/2013/08/50-studies-suggest-that-magnesium.html#more>

2. <http://blog.sethroberts.net/2012/04/11/paging-dr-google-magnesium-constipation-and-subarachnoid-hemorrhages/>

3. <http://blog.sethroberts.net/2008/06/23/scott-adams-magnesium-and-knee-pain/>

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anon (2013-09-05 05:45:59)

Has this guy tried anything else? Maybe magnesium isn't the key ingredient, maybe any number of different lotions would work.

dearieme (2013-09-05 05:52:49)

We live in a hard water area so there's presumably lots of Ca (certainly) and Mg (possibly) in the water. Perhaps I should phone the Water Company and enquire.

Vic (2013-09-05 07:32:37)

Seth, isn't your sleep quality already at 99+/100? How will you detect any additional improvement? Seth: When I wake up I rate how rested I feel on a scale from 0 to 100 %. On this scale, the difference between 99 % and 100 % is easy to notice – even though it may not seem like much. I think what I am rating is how much remains of something, where 100 % = none. Maybe it is easier to see why 1 % and 0 % can be easy to distinguish.

Tim Beneke (2013-09-05 10:49:00)

FYI: One common treatment for hemorrhoids is to take a bath in epsom salt water; epsom salts are high in magnesium... I've twice now floated in a sensory deprivation room in 10 inches of water saturated with epsom salts – I wonder how much the calming exuberance I and others feel during and afterwards is tied to the absorption of magnesium...

gwern (2013-09-05 16:02:17)

> Maybe magnesium will improve my sleep. That should be easy to test. I look forward to the analysis. As it happens, I've already started randomized & blinded consumption of 800mg magnesium citrate, and sleep will be one of the endpoints.

magnesium (2013-09-12 18:23:31)

People's experiences with magnesium seem to vary. Some claim it helps them sleep, others say it keeps them up. When I first used magnesium (200mg/d), on day four I slept longer/deeper than I had in years. But the effect wore off and my sleep returned to "baseline". I tried increasing the dose (400mg/d), but it made my sleep worse. At 400mg/d I also developed diarrhea.

## **A Little-Noticed Male/Female Difference: Pressure to Conform (2013-09-06 05:00)**

In *Americanah*, Chimamanda Adichie's new novel, she writes (p. 240):

Ojiugo wore orange lipstick and ripped jeans, spoke bluntly, and smoked in public, provoking vicious gossip and dislike from other girls, not because she did those things but because she dared to without having lived abroad, or having a foreign parent, those qualities that would have made them forgive her lack of conformity.

Here is another example, from [1] a profile of Claire Danes:

She changed schools twice, "fleeing one mean girl only to find another incarnation of that same girl in the next school." She was targeted for her looks, her nerdy curiosity, her refusal to conform.

My impression is that these examples illustrate a large male/female difference: Women will commonly criticize another woman for lack of conformity (unless somehow "earned"); men are much less likely to criticize another man this way. When women do it, it is called being catty. There is no equivalent term when men do it – presumably because no one invents a term for something that doesn't happen.

I have never seen this mentioned in the literature on male/female differences (nor in Sheryl Sandberg's *Lean In*). It isn't easy to explain. Could it be learned? Well, in my experience girls are under more pressure to "act a certain way" than boys (Japan is an example), but I can't explain that, either, nor can I see why that would translate to women putting pressure on other women to conform.

One reason this tendency is hard to explain is its effect on leadership. Putting pressure on other women to conform makes it harder for women to become leaders – leadership is the opposite of conformity. Making it harder for women to be leaders makes it easier for men to be leaders. It is hard to see how this particular effect (there are many others) benefits women.

1. [http://www.newyorker.com/reporting/2013/09/09/130909fa\\_fact\\_lahr?currentPage=all](http://www.newyorker.com/reporting/2013/09/09/130909fa_fact_lahr?currentPage=all)

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Tom (2013-09-06 05:42:00)

I predict that you will be attacked for expressing this idea. :-)

MikeW (2013-09-06 06:02:23)

"I have never seen this mentioned in the literature" As I recall, something like this is mentioned in John Gray's *Men are from Mars, Women are from Venus*. I don't know if Gray ever uses the term "conformity", but he does talk about women needing approval and validation, while we men frankly don't give a damn. By the way, I never bought into Gray's premise. To me it's an insulting stereotype to assume that when a woman talks about a problem, she needs a hug, not a solution. Of course, that may explain why I'm still single... Seth: I haven't read Gray's book. However, needing approval is quite different than disliking non-conformity of other women. The two things – needing approval and disliking non-conformity of other women – do both act in the same direction, to increase conformity.

dearieme (2013-09-06 06:06:53)

Is it an aspect of the fact - if fact it be - that women are less differentiated than men? I know that the standard deviation of IQ among women is smaller than among men. Are there any other quantitative psychological or physiological traits that show that pattern?



Three Pipe Problem (2013-09-06 07:16:28)

dearieme I was reminded of exactly the same thing. Seth, I love the way you pick out new/under-represented ideas and share them. Thanks so much for the time you invest in this blog.

Leslie (2013-09-06 07:43:03)

Perhaps it's more a difference between males and females in how non-conformity is punished and what sort of things are punished. As an example, any queer person will tell you there is pressure to conform from both males and females, but you get threats of violence, actual violence, "corrective rape", and sometimes even murder, from men. The comedian Louis CK has a joke about this difference of physical vs emotional violence between men and women; 'a man will cut off your arm, but a woman will s\*\*\* in your heart'. Of course, you also have "gas lighting" (using lies to make a woman doubt her memory,/perception/sanity), but that's not male on male abuse. I think there is more pressure on women to conform from both men and women. Seth: "More pressure on women to conform from both men and women". That would be a good study. For example, if someone wears an unusual colored shirt, is there a difference in response depending on whether the wearer is male or female?

Leslie (2013-09-06 08:25:37)

Here's a relevant study... <http://blogs.wsj.com/atwork/2013/02/22/conflict-at-the-office-women-and-the-catty-trap/> "The subjects, both male and female, consistently viewed the conflict between the two women in the most negative light." If men are being critical, then they are blunt and honest, if women are critical, then they are catty or b\*tchy. Seth: Well, yes, since there is no male equivalent of "catty" when men criticize other men it follows that different words would be used to describe that criticism. I don't see how that sheds light on whether there is a male/female difference here.

Melissa (2013-09-06 09:04:29)

I think you are missing something here. The people expecting women to comply and exerting that pressure are other women too, in other-words this can be seen as BOTH female oppression AND female leadership.

Ouis (2013-09-06 09:04:50)

I do think that there is some gender bias in the assumption that men don't do this. I am a psychologist and have treated way too many men who were bullied as adolescents because they didn't conform. They were dumped in trashcans, locked in lockers, and beaten up. Gay men are often beaten to death for their differences. That being said, I do wonder with females if there is some evolutionary pressure to conform so as not to attract attention to the female group in general. Someone who stands out as a female may attract dangerous attention to the female "tribe." There may be other competition pressures as well (the female who stands out may attract the alpha ape. Anyhoo, it is all theorizing, but the idea that only females do this too each other is plain wrong. Seth: The idea is that females do it more.

Nancy Lebovitz (2013-09-06 10:18:48)

Men's clothing in Western Civ tends to be much less varied than women's- I don't know if there are other cultures where this isn't the case. Is it pressure to conform or something else?

Tim Beneke (2013-09-06 10:20:04)

Generally, gender researchers in recent decades find that girls and women display more relational violence – malicious gossip, hurtful insults, etc.; while boys and men are more physically violent. "Pressure to conform" probably is tied to this...

Elizabeth Molin (2013-09-06 12:08:15)

dearieme, women are physiologically MORE differentiated than men—we don't pee through the opening we use for sex.

Shawn (2013-09-06 15:41:19)

Could this be a legacy of polygyny type relationships where many women had to share one man? Then they all had to be cooperative (i.e. on the same page) to enhance reproductive fitness?

dearieme (2013-09-07 03:10:01)

"but the idea that only females do this too each other is plain wrong. Seth: The idea is that females do it more." Why do some people find it so hard to grasp any argument about averages? It's as if you said that men are on average taller than women and some chump said 'but my mum's taller than my dad'.

Steve Johnson (2013-09-07 03:36:37)

"Why do some people find it so hard to grasp any argument about averages?" Understanding averages when talking about people leads to crimethink. People are just being responsible and engaging in crimestop.

nile (2013-09-07 11:32:34)

A long, long time ago... a woman who was 8 or 9 months pregnant would have had a difficult time surviving on her own. Not impossible but more difficult. A 9 month pregnant female can't run as fast, climb as fast, jump as high and so on. Chances for survival are enhanced if she is in a community of non-pregnant females and perhaps a few males hanging around because of the sexual availability of the non-pregnant females. If that is the case, then conforming is the most rational strategy - being non-conforming risks ouster. Being non-conforming is an implicit, and sometimes explicit, judgement against the group

Ashish (2013-09-07 14:16:56)

There is a theory that women evolved gossip (and cattiness) as a way to connect with each other during those long days at home while the men were out hunting. As a man, it's easy to interpret gossiping and cattiness as pressure from other women to conform. That's a male-brain interpretation and assumption which may not be true. Perhaps women understand that this cattiness is just cultural, just a way to connect, and do not hear the words (from other women) as literal pressure to conform. I.e. they roll with the verbal punches - they don't take this kind of criticism (from other women) as seriously as a man would. I am neither a woman nor an evolutionary scholar, but I've heard a similar explanations from multiple sources.

Christopher Burd (2013-09-07 22:54:44)

*To me it's an insulting stereotype to assume that when a women talks about a problem, she needs a hug, not a solution.* My personal experience tells me you are wrong: very, very wrong. Instinctually, I agree with you, but I am wrong too.

dearieme (2013-09-08 02:38:45)

"dearieme, women are physiologically MORE differentiated than men—we don't pee through the opening we use for sex." We weren't discussing the plumbing.

Staffan (2013-09-08 04:43:03)

dearieme said, "Are there any other quantitative psychological or physiological traits that show that pattern?" <http://www.sciencedirect.com/science/article/pii/S0092656612001730> <http://staffanspersonalityblog.wordpress.com/?s=men+have+more+varied+personalities>

dearieme (2013-09-08 05:28:54)

Thank you, Staffan.

Elizabeth Molin (2013-09-08 07:41:52)

Sorry, dearieme; I assumed that your use of the word "physiology" covered everything physical, including the plumbing.

KD (2013-09-08 19:20:15)

I'd imagine that it has something to do with sex and mating. The two examples both show women knocking back a rival's reproductive advantages- one for good looks and the other for extra ornamentation. It's pretty obvious that women's looks play a far larger role in finding a mate than mens'. So it makes sense that women would look to hamstring women who have a leg up in that game. It's the same with women who sleep around, they're 'cheating' and the women will be more viscous

than the men policing it. Men don't have a great deal of trouble falling in line behind and supporting somebody they genuinely respect- the captain of the football team type doesn't have a lot of guys gossiping about how he shouldn't show off his bench press. It's a cliché but it's true that the people who 'hate the football team' are the ones dressed in black and smoking behind the library. The other socially dominate types are mostly happy to be along for the ride with their leader. There are occasional power struggles, but when they're over most men are happy to fall into line behind the winner without taking little shots over and over. It's all averages with exceptions, but that largely conforms to my experiences. Looking at real life is a lot more interesting than positing how things ought to be.

ken (2013-09-08 22:11:39)

I wonder if it is part of establishing the pecking order. Perhaps men are quicker to threaten or use violence to establish social dominance, and therefore might use size to determine pecking order nonverbally. If women are slower to threaten or use violence, then superiority must be established using other means.

lemmy caution (2013-09-16 10:36:59)

In bands of hunter gathers, there are strong pressures on men to conform to an egalitarian ethos. Since this is ultimately enforced by violence, a lot of this is weeded out when the state gets a monopoly on violence. Pressures for women to conform are not generally enforced by violence so they are more likely to stick around/ be rediscovered under civilization.

### **Deirdre McCloskey and Me (2013-09-07 05:00)**

In [1]an appreciation of Ronald Coase, I came across [2]an article by Deirdre McCloskey, the economist. It reminded me of our back and forth emails in 2007 about her and Lynn Conway's treatment of [3]Michael Bailey, who had written a book they hated. I reread the emails and found them still interesting, especially McCloskey's claim that she and Conway have/had no special power. Is there a variant of sophistry that refers to self-deception? You can read [4]the whole correspondence, [5]McCloskey's version, which omits my final email, or [6]my version ("McCloskey and Me: A Back-and-Forth", plus plenty of context – my article starts on p. 117 of the 139 pp).

Thank god she and [7]Conway failed to end Bailey's career. The Man Who Would Be Queen ([8]pdf) – about male homosexuals and cross-dressers – remains the best psychology book I have ever read. Last year I assigned my Tsinghua students to read a third of it (any third they wanted). One student said it was so good she read the whole thing.

1. <http://afinetheorem.wordpress.com/2013/09/03/on-coases-two-famous-theorems/>
2. [http://www.deirdremccloskey.com/docs/pdf/Article\\_306.pdf](http://www.deirdremccloskey.com/docs/pdf/Article_306.pdf)
3. [http://en.wikipedia.org/wiki/J.\\_Michael\\_Bailey](http://en.wikipedia.org/wiki/J._Michael_Bailey)
4. [http://blog.sethroberts.net/wp-admin/edit.php?s=%22can+professors+say+the+truth%22&post\\_status=all&post\\_type=post&action=-1&m=0&cat=0&paged=1&mode=list&action2=-1](http://blog.sethroberts.net/wp-admin/edit.php?s=%22can+professors+say+the+truth%22&post_status=all&post_type=post&action=-1&m=0&cat=0&paged=1&mode=list&action2=-1)
5. <http://www.deirdremccloskey.com/gender/bailey.php>
6. <http://srblogfiles.s3.amazonaws.com/wp-content/uploads/2013/09/2008-the-whole-Dreger-treatment.pdf>
7. [http://ai.eecs.umich.edu/people/conway/TS/Dreger/ASB%20paper/PeerCommentaries/Peer\\_Papers\\_Critical\\_of\\_Dreger.html](http://ai.eecs.umich.edu/people/conway/TS/Dreger/ASB%20paper/PeerCommentaries/Peer_Papers_Critical_of_Dreger.html)
8. <http://faculty.wcas.northwestern.edu/JMichael-Bailey/TMWBBQ.pdf>

dearieme (2013-09-07 15:17:12)

Admit it, Seth, you had "cattiness" in mind. Seth: No, the opposite. A puzzle about autogynephilic transsexuals is their hyper-masculine behavior. In various ways (e.g., job choice) they appear more masculine than the average man.

Christopher Burd (2013-09-07 22:45:02)

Disgracefully, the Globe and Mail assigned McCloskey to review Bailey's book. I'm glad he's managed to continue his career, but if I'm not mistaken, he never wrote his planned book on "autogynephiliac" transsexuals - TMWWBQ focusses on the effeminate type, doesn't it? If so, that's a loss, especially with transsexual issues being so much in the news. Seth: TMWWBQ covers autogynephilic (non-homosexual) transsexuals. I presume that is why Conway and McCloskey hated it.

## **Dangerous Noise and "Doctors Hurt You" (2013-09-08 05:00)**

I have a friend with life-altering hyperacusis, a hearing problem where ordinary sounds can cause pain. It started after she worked in a noisy workplace for three years.

"People are always told about things they should do for good health: eat right, exercise, wear sunscreen, don't smoke," said my friend. "But they are almost never warned about loud noise, and if they are, it's only about hearing loss far off in the future." Her healthcare philosophy is doctors hurt you, which she finds so self-evident that she can barely explain why she believes it.

Her husband has hyperacusis, too, even worse than hers. His came from too many rock concerts. He sought medical treatment for a disorder that even Google has barely heard of, and now takes a staggering amount of pain medicine. His philosophy, at least historically, has been doctors help you. She has done her best to keep him away from doctors, but there is no doubt that, through a combination of bad advice and bad treatment, doctors have made his health much worse. (The pain medicines do reduce pain – but much of his pain was caused by doctors.) Judging by his and her experience, doctors hurt you is more accurate.

I am writing this in the loudest Starbucks I have ever been in, in New York City. (I have been in hundreds of Starbucks.) Three employees have told me they cannot control the volume of the music. Even with my Bose noise-cancelling headphones, it is too loud. I must find somewhere else. A friend who used to work at Starbucks disputes their claim that they cannot control the volume. She says the content of the music is set by corporate but the volume is controllable at individual stores. A customer at the loud Starbucks told me he thought the employees made the music so loud to drive customers away.

Exhibit 1 in the argument that doctors hurt you is [1]tonsillectomies, probably the most common operation ever. Your tonsils are part of your immune system – removing them makes as much sense as removing part of your brain. Tonsillectomies remained common long after it was clear that tonsils were part of the immune system. Perhaps doctors didn't understand high school biology? Or they didn't care? Either answer suggests that doctors should be avoided.

1. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

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dearieme (2013-09-08 05:26:26)

The idea that nobody warns you about the health risk of loud noise seems pretty silly to me. Indeed, why would you need warning? If you shrink away from it, what more do you need to know?

PeterC (2013-09-08 06:51:00)

Why not visit some of NYC's wonderful independent cafes, for generally better coffee and less ear-splitting?

Judy B (2013-09-08 08:08:56)

The damage that can be done by over exposure to loud sounds has long been known! That is why the guys guiding planes on the ground at airports wear noise blocking ear phones. Too many were losing their hearing. For years, ENT's have also been warning of the damage to the inner ear from loud music, including the popular ear buds. Unfortunately the warnings have fallen on deaf ears (pun intended).

Alex Chernavsky (2013-09-08 11:05:26)

What's odd to me is that I know a fair number of people who are in their 40s and 50s and who have attended lots of loud rock concerts over the years, and continue to do so. I have not noticed any hearing loss in them. I'm also mystified by stories such as this one: <http://www2.canada.com/ottawacitizen/news/story.html?id=2768201f-b809-4b9a-bdd6-a091929e7149&p=2>

The festival's loudest performance came during KISS – the band apparently hit a high of 136 dB before an NCC official insisted that the sound engineer turn it down.

That performance by KISS is rumored to be one of the loudest, ever. I wonder how the concert-goers (especially the ones right near the stage) escaped serious, permanent damage to their hearing.

Joanna (2013-09-08 11:20:13)

I often wonder how much damage is done every day to the hearing of the (usually immigrant) lawn care workers in my (and many US neighborhoods) who use large very noisy mowers and leaf blowers every day without any noticeable ear protection. If I find the noise level a problem and I am inside my house how much is it affecting them?

AI (2013-09-08 13:02:22)

What percentage of 1960's era pediatric surgeons could even bear the emotional and ethical burden of knowing that they had irreparably damaged the immune systems of thousands of children? (Not to mention the lawsuits.) The belief in the validity of such surgeries must remain intact until those doctors have passed away.

George (2013-09-08 14:41:51)

Which NYC Starbucks Seth? Seth: In Chelsea on 8th Ave, I think. Or maybe 7th Ave? Something like that. A small narrow one.

Tom (2013-09-08 15:06:05)

Al, as the son of a surgeon, I can tell you that surgeons simply don't believe studies associating their livelihood with bad outcomes.

Nancy Lebovitz (2013-09-08 15:07:33)

Hypotheses: the employees at the very loud Starbucks had a boss who insisted on the high volume music or they liked the loud music themselves. If you care that much, it would be interesting to contact higher level management.

Marc Richard (2013-09-08 16:49:03)

I don't know how bouncers and bartenders at clubs don't become deaf in a week. I can barely stand one night out at those places and my ears are ringing for days! Also, concert venues are some of the worst offenders. The kids standing in front of the speakers have no clue what they're doing to their ears.

Ross (2013-09-08 17:55:30)

This is an excursus, but I had Bose noise-canceling headphones for years and then I tried simple firearm surpressing earmuffs. The [1]Peltor Optime 105 Earmuff is vastly better at reducing noise and I can wear them all day while I'm working at my job as a programmer. I switched to them after reading [2]Peopleware which cited some study that found that creative leaps in programming are frequently missed if you listen to music while programming.

1. [http://www.amazon.com/gp/product/B00009LI4K/ref=oh\\_details\\_o00\\_s00\\_i01?ie=UTF8&psc=1](http://www.amazon.com/gp/product/B00009LI4K/ref=oh_details_o00_s00_i01?ie=UTF8&psc=1)

2. [http://www.amazon.com/Peopleware-Productive-Projects-Teams-Edition/dp/0321934113/ref=sr\\_1\\_1?ie=UTF8&qid=1378688033&sr=8-1&keywords=people+ware](http://www.amazon.com/Peopleware-Productive-Projects-Teams-Edition/dp/0321934113/ref=sr_1_1?ie=UTF8&qid=1378688033&sr=8-1&keywords=people+ware)

TomGinTX (2013-09-08 19:11:52)

Ross, thanks for the tip.

Sameer (2013-09-08 19:34:02)

Thank you so much Ross! I have been looking for a suggestion on that note.

Kirk (2013-09-09 21:13:11)

Another thanks to Ross for the tip. I offer two recent and relevant stories. Recently my wife and I flew to California on a Saturday, leaving at 11:50 AM. Apparently most Midwestern vacationers start drinking before a noon flight and continue drinking during the flight. The volume in the plane rose higher and higher as the drunks yelled at each other and four babies cried. I finally tore pieces of paper napkin and stuffed the wads in my ears. The other story happened at my physician's office several weeks ago. I had gone in for a yearly physical. They do the paperwork thing and then have you wait outside the doctor's office. Unfortunately for me, a 60 inch TV screen mounted above the admissions window blared the sound to some reality TV show about building gignormous back yard decks. The sound drove me further and further away, until I was standing in the hall and peeking around the corner as I waited for the nurse come retrieve me. It's not that I dislike loud music. My favorite band for years was Sonic Youth.

Alex Chernavsky (2013-09-10 04:20:11)

Doctors and dentists used to have quiet waiting rooms, where you could sit and read a book. No more. Every waiting room now seems to have a large, loud TV mounted on the wall. I wonder if the majority of patients think that this is a good thing.

Jerry (2013-09-14 09:33:01)

"Exhibit 1 in the argument that doctors hurt you is tonsillectomies, probably the most common operation ever." How about circumcision? I'm talking about routine infant circumcision (currently performed mostly on unconsenting newborn males in the US). Is that not far more common than tonsillectomy? Does it not cause far greater harm? Seth: Yes, it is far more common. "Does it not cause far greater harm?" That's not clear at all. Why do you think this?

Susan (2013-09-16 07:34:45)

I have for a long time been sensitive to loud sound. In the 80's I walked out of a Billy Idol concert because it was killing my ears. I often ask coffee shops and restaurants to reduce the volume, and although they don't like it and friends are sometimes embarrassed I do not feel guilty at all. One friend wore cotton in his ears for many years and I have taken up the practice. He is a musician and so am I, so to reduce stress and keep good pitch, I took up his practice. Be prepared for people asking you if there is something is wrong with your ears. Take care of yourself, don't be afraid to ask for what you want. Think outside the box!

lemmy caution (2013-09-16 10:20:22)

I go to a lot of loud concerts and have tinnitus. Doctors warn people about loud noise all the time. There seems to be a psychological component to people who are disturbed by ear disorders. The more you focus on the problem, the bigger the problem becomes. This habituation therapy seems to work for hyperacusis as well: [http://en.wikipedia.org/wiki/Tinnitus\\_retraining\\_therapy](http://en.wikipedia.org/wiki/Tinnitus_retraining_therapy)

## More About Magic Dots (2013-09-09 05:00)

Govind M., the Stanford grad student [1]who recommended brown noise, has good things to say about magic dots:

I have been using magic dots for about two months now and they work. I have no idea why they work – maybe it's the reinforcement – but they do. I enjoy making them and for me, I have to finish them. I use 9 min/mark for 90 min intervals, which also provides a very easy way to track time. A four box day is enormously productive, though the fourth box typically gets torpedoed by a meeting or something.

One of the advantages of magic dots is that instead of setting down an intimidating 90-minute chunk of time, my mental horizon is shortened to the next 9 minutes. After that, the box takes over. So in situations in which (1) it is difficult to get started and (2) I want to add structure to the day, I use magic dots.

I asked, "When you are using the magic dots, do you work for longer periods of time before taking a break?" Govind said:

Yes. However, it is possible that goal gets shifted from "be focused and attentive and not goofing off on facebook" to "work long enough make 10 marks on a piece of paper." It makes it easier to start and to continue on working.

I too find that magic dots make it easier to start work. I think this happens because the task in front of me (getting work done) seems more doable.

1. <http://blog.sethroberts.net/2013/06/14/benefits-of-brown-noise/>

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Dena Shunra (2013-09-09 10:07:28)

I think the dots and paying attention to making them at fixed intervals distract the uppermost layer of consciousness, the one that otherwise distracts me. I find that some kinds of music achieve this for me, but not reliably. Dots distract that layer of consciousness reliably. When that part's taken care of, it's a lot easier for me to get into a "flow" state - because my own mind is not getting in my way. Another trick that works well for me is counting things - it seems to keep the same mental function too busy to distract me. N=1 of course. Seth: That's an interesting analysis. I'm not sure what you mean by "counting things". What things, for example? When do you count them? How does it help?

Dena Shunra (2013-09-10 07:55:04)

Any counting works for distraction: birds passing by my window; words translated per time unit (15 minutes is good); occurrences of the letter q in my text; typos (times I have to use the backspace). For what it's worth, counting things helps distract that layer of consciousness when I'm trying to go to sleep, as well. Not sheep (I don't have any handy), but reviewing

places I've seen and counting the number of roadbumps in a parking lot, or of branches in a tree work really well. My working explanation of this, which I came to while trying to build a model to describe my work, is that there are "deeper" processing layers (which I need to access professionally, so I can translate units of meaning rather than merely words) that get very distracted by the constant chatter of the top layer (which keeps wanting to talk to me, in words; that massively gets in the way of translating someone else's words). Even deeper layers help get me over conceptual roadblocks (translating metaphors is fun, but tricky); distracting the layers that get between me and \*them\* requires more sensory involvement (going for a walk, for example).

vs (2013-09-10 10:02:03)

I combined magic dots with Govind's recommendation for brown noise. This helps the time pass while working. It also seems to help me work longer hours. Thanks to Seth and Govind for these helpful productivity hacks. On iTunes and I downloaded "Brown Noise Loop" from the album "White Noise Loops for Sleep" by the artist "Sounds for Life". (I find this mp3 more pleasant than the free brown noise mp3s I found online.) Brown Noise Loop is 9:30. I play it on low-volume on repeat. It fades out at the end, so without looking at the time I know about 10 minutes have past. I mark a dot. Then after five dots, or 50 minutes, I take a 10 minute break. I make a pattern like the five side of dice. The hourly breaks came from Cal Newport, and his book "How to Become a Straight-A Student". Breaks between five to fifteen minutes on the hour seem to help extend the period of time people work. Newport wrote this book while completing his PHD at MIT. It's helpful not just for students but also "knowledge workers"- those that read, write, and research in their work.

## **The Blindness of Scientists: The Problem isn't False Positives, It's Undetected Positives (2013-09-10 05:00)**

Suppose you have a car that can only turn right. Someone says, Your car turns right too much. You might wonder why they don't see the bigger problem (can't turn left).

This happens in science today. People complain about how well the car turns right, failing to notice (or at least say) it can't turn left. Just as a car should turn both right and left, scientists should be able to (a) test ideas and (b) generate ideas worth testing. Tests are expensive. To be worth the cost of testing, an idea needs a certain plausibility. In my experience, few scientists have clear ideas about how to generate ideas plausible enough to test. The topic is not covered in any statistics text I have seen – the same books that spend many pages on to how to test ideas.

Apparently not noticing the bigger problem, scientists sometimes complain that this or that finding "fails to replicate". My former colleague Danny Kahneman is [1]an example. He complained that priming effects were not replicating. Implicit in a complaint that Finding X fails to replicate is a complaint about testing. If you complain that X fails to replicate, you are saying that something was wrong with the tests that established X. There is a connection between replication failure and failure to generate ideas worth testing. If you cannot generate new ideas, you are forced to test old ideas. You cannot test an old idea exactly – that would be boring/repetitive. So you give an old idea a slight tweak and test the variation. For example, someone has shown that X is true in North America. You ask if X is true in South America. You hope you haven't tweaked X too much. No idea is true everywhere, except maybe in physics, so as this process continues – it goes on for decades – the tested ideas gradually become less true and the experimental effects get weaker. This is what happened in the priming experiments that Kahneman complained about. At the core of priming – the priming effects studied 30 years ago – is a true phenomenon. After reading "doctor" it becomes easier to decide that "nurse" is a word, for example. This was followed by 30 years of drift away from word recognition. Not knowing how to generate new ideas worth testing, social psychologists have ended up studying weak effects (recent priming effects) that are random walks away from strong effects (old priming effects). The weak effects cannot bear the professional weight (people's careers rest on them) they are asked to carry and sometimes collapse ("failure to replicate"). Sheena Iyengar, a Columbia Business School professor and social psychologist, got a major award ([2]best dissertation) for and wrote [3]a book about a new effect that has turned out to be [4]very close to non-existent. Inability to generate ideas – to understand how to do so – means that what appear to be new ideas (not just variations



of old ideas) are more likely to be mistakes. I have no idea whether Iyengar's original effect was true or not. I am sure, however, that it was weak and made little sense.

Statistics textbooks ignore the problem. They say nothing about how to generate ideas worth testing. I haven't asked statisticians about this, but they might respond in one of two ways: 1. That's someone else's problem. Statistics is about what to do with data after you gather it. That makes as much sense as teaching someone how to land a plane but not how to take off. 2. That's what exploratory data analysis is for. If I said "Exploratory data analysis can only identify effects of factors that the researcher decided to vary or track. Which is expensive. What about other factors?" they'd be baffled, I believe. In my experience, exploratory data analysis = full analysis of your data. (Many people do only a small fraction, such as 10 %, of all reasonable analyses of their data.) Full analysis is better than partial analysis, but calling it a way to find new ideas fails to understand that professional scientists study the same factors over and over.

I suppose many scientists feel the gap acutely. I did. I became interested in self-experimentation most of all because it generated new ideas at a much higher rate (per year) than my professional experiments with rats. I had no idea why, at first, but as it kept happening – my self-experimentation [5] generated one new idea after another. I came to believe that by accident I was doing something "right". I was doing something that fit a general rule of how to generate ideas, even though I didn't know what the general rule was.

T

he sciences I know about (psychology and nutrition) have great trouble coming up with new ideas. The paleo movement is a response to stagnation in the field of nutrition. The Shangri-La Diet shows what a new idea looks like in the area of weight control. The failure of nutritionists to study fermented foods is ongoing. Stagnation in psychology can be seen in the fact that antidepressants remain heavily prescribed, many years after the introduction of Prozac ([6] my work on morning faces and mood suggests a much different approach), lack of change in treatments for bipolar disorder over the last 50 years (again, my morning-faces work suggests another approach), and in the failure of social psychologists to discover any big new effects in the last ten years.

Here is the secret to idea generation: Cheaper tests. To find ideas plausible enough to be worth testing with Test X, you need a way of testing ideas that is cheaper than Test X. The cheaper your test, the larger the region of cause-effect space you can explore. Let's say Test Y is cheaper than Test X. With Test Y, you can explore more of cause-effect space than you can explore with Test X. In the region unexplored by Test X, you can find points (cause-effect relationships) that pass Test Y. They are worth testing with Test X. My self-experimentation generated new ideas worth testing with more expensive tests because it was much cheaper than existing tests. Via self-experimentation, I could test many ideas too implausible or too expensive to be tested conventionally. Even cheaper than a self-experiment was simply monitoring myself – tracking my sleep, for example. Again and again, this generated ideas worth testing via self-experimentation. I did what all scientists should do: use cheaper tests to generate ideas worth testing with more expensive tests.

1. <http://www.nature.com/news/nobel-laureate-challenges-psychologists-to-clean-up-their-act-1.11535>
2. [http://en.wikipedia.org/wiki/Sheena\\_Iyengar#Awards\\_and\\_honors](http://en.wikipedia.org/wiki/Sheena_Iyengar#Awards_and_honors)
3. <http://www.amazon.com/The-Art-Choosing-Sheena-Iyengar/dp/0446504114>
4. <http://blog.sethroberts.net/2010/11/11/more-choice-less-satisfaction/>
5. <http://escholarship.org/uc/item/2xc2h866/>
6. <http://escholarship.org/uc/item/2xc2h866/>

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August (2013-09-10 06:15:40)

Cheaper tests are good, unless the cheaper tests are computer models. We need cheaper real world tests. Didn't you post a long time ago about the error rate of DNA computer models? I learned about the dubious nature of computer modeling via the intersection of politics and climatology. Seth: Computer models aren't tests of theories, they are theories.

Tom (2013-09-10 08:50:13)

A good illustration of your point: <http://well.blogs.nytimes.com/2013/09/10/myths-surround-breakfast-and-weight/>

kxmoore (2013-09-10 09:00:42)

i wonder if this test is replicable. The implications are huge considering the explosion of obesity and it's related health effects. <http://www.ncbi.nlm.nih.gov/pubmed/22863169>

Wil B (2013-09-10 09:13:37)

Experience has shown, I believe, that this is a particularly glaring problem in the context of drug testing and development in the pharmaceutical industry. Much of this is surely brought about by conflicts of interest (and a certain amount of corruption) which are endemic in this exceedingly profit-driven industry. Another issue is the common disregard of true scientific method (Popper anyone?) in the planning and conduct of testing because so much of the "testing" is done with profits in mind. Shouldn't the object (protocol) for whatever is being tested be to disprove a particular hypothesis, rather than allowing biases to creep in so that a certain desired result can be realized and money can be made? A failure to disprove a hypothesis would be much more honest and convincing, wouldn't it? Seth: If "profit" includes career advancement, salary increase, grant renewal, and so on, I think about 100 % of testing is done with profit in mind. Almost always some results are more profitable than the others.

Kim Øyhus, physicist (2013-09-10 23:38:20)

Tests confirming a theory, will give less and less confirmation for more and more work. Tests falsifying a theory, are much more efficient. This means that cheap good scientific results will consist of lots of partially confirmed theories, with lots more falsified theories discarded. Seth: "Tests falsifying a theory are much more efficient." Hmm. You don't have a choice. You can't choose whether your test will support or falsify your theory. That depends on the results. However, I do think that tests of ideas of intermediate plausibility produce more information – more shift in belief – than tests of ideas that are very high or very low in plausibility. But that's just the average shift in belief. More interesting is what the distributions look like.

August (2013-09-11 09:30:24)

I agree, but they are 'testing' against computer models and presenting the results as evidence to the public. I've even heard of it locally, in biochem. My coworker's former boss was doing research into proteins related to cancer. They kept trying to get him to test against computer models. They closed his lab down eventually, and he had to go work as someone else's assistant.

Wil B (2013-09-12 08:31:28)

Seth said (re the scientific approach of attempting to disprove a hypothesis vs. trying to prove the hypothesis): You don't have a choice. You can't choose whether your test will support or falsify your theory. That depends on the results. Perhaps we are discussing different categories and goals of "testing." Staying with the category of drug development and testing for purposes of illustration, let's say a company's hypothesis is that compound X, being developed in a laboratory, is generally effective to treat Y disease in humans and will not have any bad side effects. Employing the usual testing methods, a study group of investigators administers compound X to human subjects with disease Y to see if the compound cures (or ameliorates) the disease. If a significant number of the subjects are cured (or get better) after taking the compound, and do not appear to suffer debilitating side effects, the hypothesis is "proven," the results are positive, and the company will make a lot of money selling it to patients with disease Y. But can we be certain that the testing and record keeping was conducted honestly and without bias in advance; i.e., free of undue influence and a strong desire to reach a certain result? Wouldn't it be better to at least have a

separate, independent arm of the study (if for no other reason than to keep the results-oriented group of investigators honest) examining and tracking the same test subjects and maintaining their own data with the opposite "goal" of falsifying the first group's finding? If the latter group fails in its effort to falsify the first group's results, that's fine because the company (and the FDA) could have much more confidence that the compound will, in fact, be a safe and efficacious product. In this instance the failure to falsify was in reality a positive result! In this context, which method of drug development, testing (and perhaps ultimate approval) would most doctors and end users prefer? Wil B.

### **"The Cause of Ulcers is Bacteria" Makes as Much Sense as "The Cause of Car Accidents is Cars"** (2013-09-11 05:00)

If I were to look at you, and say, in a serious tone of voice, "The cause of car accidents is cars", you'd think I'm nuts. It's not a useful statement. Yet many medical and science experts – including the people who award the Nobel Prize in Physiology or Medicine – believe it is helpful to say "the cause of ulcers is bacteria". The two statements are similar because only a small percentage of cars get in accidents and only a small percentage of people infected with *H. pylori*, the bacterium that supposedly "causes ulcers", get ulcers. A helpful investigation of what causes ulcers would figure out the crucial difference(s) between those infected with *H. pylori* who don't get ulcers (almost all) and those who do (very few).

I recently encountered the "the cause of ulcers is bacteria" twice in one day. Once in [1]a book review by John Timpane:

Barry Marshall, who discovered what causes stomach ulcers, played fast, loose, and messy with his methods and data. He was right, and got the right answer, and now we know.

(Timpane is right about the "fast, loose, and messy" part. Marshall ingested a large number of *H. pylori*. He failed get an ulcer – and claimed the outcome supported his view that *H. pylori* causes ulcers.) And once in The New Yorker, in [2]a long article about the benefits of microbes, especially *H. pylori*, by Michael Specter:

In 1982, to the astonishment of the medical world, two scientists, Barry Marshall and J. Robin Warren, discovered that *H. pylori* is the principal cause of gastritis and peptic ulcers.

Should I expect science journalists to understand causality? Maybe not. But it is interesting that the people who award the Nobel Prize in Medicine and "the medical world" do not understand it.

1. [http://www.philly.com/philly/entertainment/literature/20121021\\_Dirty\\_\\_cheatin\\_\\_lowdown\\_science.html?viewAll=y](http://www.philly.com/philly/entertainment/literature/20121021_Dirty__cheatin__lowdown_science.html?viewAll=y)

2. [http://www.newyorker.com/reporting/2012/10/22/121022fa\\_fact\\_specter](http://www.newyorker.com/reporting/2012/10/22/121022fa_fact_specter)

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Mark (2013-09-11 07:58:56)

I agree, and think that another good analogy would be saying that having no Y chromosome is a cause of pregnancy.

Nancy Lebovitz (2013-09-11 09:49:38)

"Ulcers are caused by bacteria" is still an improvement over "ulcers are caused by stress and/or spicy food". Seth: That's not clear. Maybe 99 % of everyone is infected with *H. pylori* and, of those infected, only those exposed to stress develop ulcers. If so, the old thinking ("ulcers are caused by stress") was better than the new thinking ("ulcers are caused by bacteria").

RAD (2013-09-11 10:02:24)

Seth, I'm grasping to understand your logic. As I understand it, the causality is *H. pylori* Infection -> Chronic Gastritis -> Gastric Ulcers -> Gastric Cancer. Prior to Barry Marshall the presumed causation was Stress -> Gastric Ulcers. Marshall did not get ulcers after his experiment but he immediately had symptoms of chronic gastritis. Are you saying there is no causation between *H. pylori* and chronic gastritis or are you saying that you would like to see more qualifiers when people discuss the association between the PRESENCE of *H. pylori* and chronic gastritis (which I think is low)? Seth: I don't know if ordinary amounts of *H. pylori* cause gastritis (Marshall ingested an unusually large amount), nor do I know what fraction of gastritis cases are associated with *H. pylori*. So I can't answer your question.

Alex Chernavsky (2013-09-11 10:23:37)

Seth, is there an article or a paper that – in your view – accurately describes the etiology of ulcers? I'm asking because I'm not clear about your specific objections to the *H. pylori* hypothesis. Seth: I don't know of one. As far as I can tell, the etiology is almost completely unknown. Most people have *H. pylori* infection. Almost no one gets ulcers. Why do some people with *H. pylori* infection get ulcers? Very little is known about this. My objection to the *H. pylori* hypothesis is that it has confused a lot of people. A lot of people think it is well-understood what causes ulcers. That's not true.

Nancy Lebovitz (2013-09-11 11:18:03)

I think Seth's point is that there hasn't been further investigation into what some people are get serious *h. pylori* infections and others don't.

K Daniel (2013-09-12 00:43:10)

If, as you proclaim, ulcers are NOT caused by bacteria then why does the now standard treatment for ulcers (a two-combination course of antibiotics) "cure" ulcers in the vast majority of cases? What, in your opinion, is causing the ulcers that are "cured" by the antibiotics? If you can't answer that question then I have a new theme: Seth's blog is related to science the same way that creationism is related to evolution. Seth: Ulcers supposedly cured by antibiotics come back very frequently. In your haste to say something derogatory, you seem to not have fully understood my comment. I don't claim to know what distinguishes people infected with *H. pylori* who don't get ulcers (almost everyone) and those infected with *H. pylori* who do get ulcers (a tiny fraction).

dearieme (2013-09-12 03:29:59)

"what distinguishes people infected with *H. pylori* who don't get ulcers (almost everyone) and those infected with *H. pylori* who do get ulcers (a tiny fraction)": that's a very good point, and one that I hadn't appreciated. Why on earth hasn't it been investigated properly?

GB (2013-09-12 04:10:43)

Hi Seth, Apologies for the change of topic, but I don't know how else to contact you. I'm keen to buy Shangri La diet on my kindle, and I know there's a version available for sale. But as soon as I log into my Amazon account, I'm no longer offered the opportunity to buy it. It's like the kindle version no longer exists, only the physical hard cover and paperback versions are available to me. I'm in Australia, and suspect the book is not offered there for some sort of licencing reason. Are you aware of this? Many people Down Under could use your book these days. Thanks for your scientific contribution and great blog.

Mark (2013-09-12 08:18:26)

Do antibiotics actually "cure" the ulcer, or do they just help to meliorate the symptoms? These are two vastly different things. Perhaps *H. pylori* simply exacerbate the symptoms (e.g., by causing irritation or inflammation), so antibiotics appear to "help" the ulcer (but in fact they're doing no such thing). The bottom line, as Seth pointed out, is that if *H. pylori* is the "cause" of

ulcers, then how can the majority of the world's population be infected but very few actually have ulcers? This is all very similar to the whole "high cholesterol causes heart disease" myth.

JM (2013-09-12 12:33:06)

Based on a number of things I have read about H. pylori and ulcers, my personal thoughts are that if almost all of us carry the bacteria then those who do get ulcers it is because the bug has found a weakness in their natural defenses and used it to attack the stomach lining - whether that weakness is caused by stress, diet or something else hasn't been determined. Also found this article very interesting - a small study found a link between the presence of H. pylori and atrial fibrillation of the heart. At the end of the article there is the statement "H. pylori is a very resilient bacterium and has properties that enable it to escape detection by the immune system" <http://www.sciencedaily.com/releases/2005/06/050616062204.htm>

### **Dragon vs. Dragon: Same Name, Different Genus? (2013-09-12 05:00)**

In a discussion of dragonfruit (common in China), a Chinese friend pointed out that Chinese dragons and Western dragons are quite different. I was surprised, I hadn't noticed this. My friend was right:

There are two distinct cultural traditions of dragons: the [1]European dragon, derived from European folk traditions and ultimately related to Greek and Middle Eastern mythologies, and the [2]Chinese dragon, with counterparts in Japan, Korea and other East Asian countries.

[3]says Wikipedia. Why two different imaginary animals would be quite similar isn't obvious.

1. [http://en.wikipedia.org/wiki/European\\_dragon](http://en.wikipedia.org/wiki/European_dragon)
2. [http://en.wikipedia.org/wiki/Chinese\\_dragon](http://en.wikipedia.org/wiki/Chinese_dragon)
3. <http://en.wikipedia.org/wiki/Dragon>

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Richard Sprague (2013-09-12 07:10:18)

This is just an artifact of language, and how somebody a long time ago decided that the proper translation of "Qilin" is "Dragon". They could have easily decided to simply call it a "Qilin". This is similar to how the word "Typhoon" just means "Hurricane in the Pacific". (or more precisely, "tropical cyclone". I bet that whatever similarity there is between the two imaginary animals is a recent development: before East-West contact, they could have been totally different long ago.

Three Pipe Problem (2013-09-12 07:56:38)

Watch "Symbols of an Alien Sky" and you will understand where the dragon myths came from and what they have in common.

Three Pipe Problem (2013-09-12 09:52:14)

P.S. It's not about aliens.

Brandon Berg (2013-09-12 09:57:07)

They're not all that similar. Chinese dragons are essentially flying snakes, whereas western dragons have four legs, large wings,

and torsos. All they have in common are flying, being reptilian and breathing fire. (Actually, do Chinese dragons do that?) Note also that Chinese "lions" are not all that similar to real lions, and in Japanese the real giraffe is named after a very different mythological creature, the kirin.

kxmoore (2013-09-12 10:54:56)

it has been proposed that dragon myths evolved from exposure to dinosaur fossils. would explain cross-cultural similarities.

shtove (2013-09-12 12:04:43)

Lions in medieval heraldry were actually leopards. And the giraffe is camelopardalis. Dragon is from dracus, which means ia. water snake, which gives us Dracula. Mwahahahaa.

dearieme (2013-09-12 12:06:14)

I've seen the claim that the Welsh dragon was introduced to the Romano-Britons by Sarmatian cavalry units of the Roman Army. [http://en.wikipedia.org/wiki/Welsh\\_Dragon](http://en.wikipedia.org/wiki/Welsh_Dragon) The Sarmatians seem to have come from an area that stretched as far east as the Caspian.

Florinescu Eduard (2013-09-12 12:38:01)

How would an animal look if you would found its bones. Do you think our civilizations is the only one digging or finding dinosaur bones. Maybe they project the shadow of their civilization on this reconstructed unidentified animal.

Florinescu Eduard (2013-09-12 12:44:03)

@kxmoore Just now I saw your comment I thought about this but didn't found this speculation in literature, can you give me a reference where you found this mentioned.

David (2013-09-12 12:51:49)

The Chinese dragon is based on the appearance of biggish asteroid impacts, the atmospheric trail in particular.

Tim Beneke (2013-09-12 13:06:25)

I'm told by a Chinese friend that, for the Chinese, the dragon is always serious. This came as a surprise since I always saw dragons as at times, light and sources of amusement...

kxmoore (2013-09-12 19:54:07)

Florinescu see "the first fossil hunters" by Mayer [http://en.wikipedia.org/wiki/Adrienne\\_Mayor](http://en.wikipedia.org/wiki/Adrienne_Mayor) #Fossil\_Legends\_of\_the\_First\_Americans\_282005.29

## **Hobbyist Science vs. Professional Science vs. Personal Science (2013-09-13 05:00)**

In [1]a TED talk, Paula Scher, a graphic designer, told how a hobby of painting maps turned into something like a job.

I was up in my country house, and for some reason, I began painting these very big, very involved, laborious, complicated maps . . . They would take me about six months initially, but then I started getting faster at it. Here's the United States. Every single city of the United States is on here. . . . One of my favorites was this painting I did of Florida after the 2000 election that has the election results rolling around in the water. . . . Somebody . . . saw the paintings and recommended them to a gallery, and I had a first show about two-and-a-half years ago, and I showed these paintings that I'm showing you now. . . . They sold quickly, and became rather popular. . . . The gallery wanted me to have another show in two years,

which meant that I really had to paint these paintings much faster than I had ever done them. . . . I was no longer at play. I was actually in this solemn landscape of fulfilling an expectation for a show, which is not where I started.

A hobby turned into a job. This has happened countless times – I believe [2]all jobs started as hobbies.

One hobby that turned into a job is science. The first scientists were hobbyists – for example, Darwin and Mendel. The success of hobbyist scientists led to the creation of full-time jobs that included doing science – professors of science at universities. When science became a job, something was gained (professionals had more time per day, money, training, institutional support, collegial support, and prestige than hobbyists) and something was lost (professionals had less freedom than hobbyists). Professionals could do many things hobbyists could not, but the reverse was also true: hobbyists could do many things professionals could not. For example, they could work on a question for ten years without publishing anything (Mendel, Darwin) and entertain highly heretical ideas (Darwin). Professionals needed steady output and dared not offend, for fear of losing their job.

[3]My personal science (personal science = using science to help yourself) is another step in this history. I combined the freedom of hobbyists with the knowledge, skills and resources of professionals. I can do whatever self-experiments I want and test whatever ideas I want. Yet I also have professional levels of training, knowledge, skill, and (to some extent) equipment provided by my job as a psychology professor, Berkeley library access, the Internet, free software, and cheap computers. To these two elements – the freedom of hobbyists, the resources of professionals – my personal science added a third element not found in hobbyist or professional science: the motivation of a person with a problem. I wanted better health. My personal science helped me get it. In the beginning, I wanted to sleep better, lose weight, have less acne, and be in a better mood. Later, I discovered new ways [4]to improve my brain function and blood sugar. Just combining the freedom of hobbyists with the resources of professionals, personal science would probably be a big improvement. Adding better motivation suggests that personal science is even more likely to improve our lives by learning what professional scientists haven't learned. The combination of professional science and personal science will be far more powerful (= more useful) than professional science alone.

I've seen this in my own life, over and over, and I predict it will eventually be true for everyone. Learning how to control one's own health – how to sleep well, for example – is non-trivial knowledge.

1. [http://www.ted.com/talks/paula\\_scher\\_gets\\_serious.html](http://www.ted.com/talks/paula_scher_gets_serious.html)

2. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

3. <http://escholarship.org/uc/item/2xc2h866/>

4. <http://blog.sethroberts.net/wp-content/uploads/2012/09/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf>

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Nancy Lebovitz (2013-09-13 06:15:54)

I've been thinking that publication schedules for news and magazines have a similar ill effect to what you describe for science. If you have to keep filling a certain amount of space or time with "information", you're going to be either puffing up small amounts of information or missing important stuff, probably both. Admittedly, since resources are limited, missing important things is inevitable, but having to puff up relatively minor things wastes resources.

Tom (2013-09-13 10:04:45)

Empowering personal scientists would also probably be far faster and efficient than haranguing kids to go into science majors (which might result in more cheap lab techs and teaching assistants in ten or fifteen years, but not necessarily more

breakthrough discoveries.) One thing might help propel personal science is a series of contests, at about 1/100th the scale (or less) of the SpaceX prize. Contests might recognize things like the annual best breakthrough in... - micro power production - fermented food production - bee keeping - backyard mulching - gray water repurposing/usage - low-water landscaping - inexpensive micro-apartment design - inexpensive, supportive senior living design - safer/easier/more effective/higher compliance exercise methodologies to preserve muscle mass in seniors ...etc. The prizes would probably not even need to be financial to be effective. And I can't think of a better coordinating point than The Journal of Personal Science (nor a better coordinator than you, Seth.)

Seth Roberts (2013-09-13 10:05:55)

I agree. And there are many things – some of them true – that professional journalists can't say for fear of losing their jobs.

Bobby Levin (2013-09-13 10:55:20)

Seth: I certainly agree with what you have written, but one thing that concerns me is whether our short term successes could be deceptive. For example, could the ingestion of significant amounts of say butter cause long term health issues that would only be discovered when it is too late. Or could taking a certain nutritional, have short term benefits and longer term consequences.

Seth Roberts (2013-09-13 11:27:08)

The history of pharmaceutical drugs says yes, this is a possibility. Many drugs with short-term benefits have turned out to have long-term costs that weren't made clear. Likewise, the bias of "evidence-based medicine" (which pays great attention to the benefits of treatments, and almost no attention to their costs) also suggests this is a serious problem with professional medical research. When you study yourself, I think there is less bias and better monitoring. You can detect bad effects sooner.

### **Eric Kandel Sheds Light On Who Wins Nobel Prizes (2013-09-14 05:00)**

The most interesting thing about the Nobel Prize in Medicine is its predictable irrelevance to major health problems. Year after year, the prize-winning work has failed to reduce heart disease, cancer, depression, stroke, diabetes, schizophrenia, and so on. Another interesting thing about the Nobel Prize in Medicine is that Eric Kandel, a Columbia Medical School professor, managed to win one. In 1986, a book called *Explorers of the Black Box: The Search for the Cellular Basis of Memory* by Susan Allport told how Kandel tried to take credit for other people's discoveries. Not a pretty picture. Yet in 2000 he won a Nobel Prize for those or very similar discoveries. Did Allport exaggerate? Did her sources deceive her? Did Kandel – contrary to what Allport's book seems to say – deserve a Nobel Prize?

I can't answer these questions. However, a [1]recent article by Kandel ("A New Science of Mind") in the New York Times sheds light on how well he understands medicine and neuroscience. Not well, it turns out. He writes:

We are nowhere near understanding [psychiatric disorders] as well as we understand disorders of the liver or the heart.

Actually, our understanding of liver and heart disorders is close to zero, matching our understanding of psychiatric disorders. If we had some understanding of heart disease, for example, we would know why heart disease is much rarer in Japan than in the United States.

Kandel goes on to say "the prefrontal cortex . . . is the seat of executive function and self-esteem." The self-esteem claim is apparently based on [2]this study. Okay, people with low self-esteem may be more sensitive to feedback than people with high self-esteem. That one region in the brain exhibits such a difference doesn't show it is "the seat of self-esteem" – whatever that means. Perhaps other regions also show such an effect. It would make as much sense



(none) to say the prefrontal cortex is "the seat of feedback". In addition, Kandel apparently fails to realize how often these imaging studies yield false positives. One imaging study is not enough to conclude anything.

Kandel makes a big deal of [3]one particular study:

In a recent study of people with depression, Professor Mayberg gave each person one of two types of treatment: cognitive behavioral therapy, a form of psychotherapy that trains people to view their feelings in more positive terms, or an antidepressant medication. She found that people who started with below-average baseline activity in the right anterior insula responded well to cognitive behavioral therapy, but not to the antidepressant. People with above-average activity responded to the antidepressant, but not to cognitive behavioral therapy. Thus, Professor Mayberg found that she could predict [emphasis added] a depressed person's response to specific treatments from the baseline activity in the right anterior insula.

Mayberg looked at many brain areas (how many is unclear from the abstract). Maybe 30 areas. From those 30 areas, she picked the region that best discriminated responses to the two types of therapy. This means little. If you look at enough brain regions, you will always find one that, purely by chance, discriminates rather well. Mayberg did not show that the particular region she emphasized (the right anterior insula) has any predictive power. She did not do a second study to make sure her results were not pure chance. The abstract emphasizes this ("if verified with prospective testing . . ."). Contrary to Kandel, Mayberg correctly predicted nothing.

Mayberg's study could not be weaker, yet Kandel places great weight on it.

These results show us four very important things about the biology of mental disorders. First, the neural circuits disturbed by psychiatric disorders are likely to be very complex. [The results, which are relatively simple, do not show this.]

Second, we can identify specific, measurable markers of a mental disorder, and those biomarkers can predict the outcome of two different treatments: psychotherapy and medication. [Biomarker means biological correlate. The study was not about biological correlates of depression. It was about predictors of treatment response. Those predictors were measured before treatment, when all subjects were depressed. They were not measured after treatment.]

Third, psychotherapy is a biological treatment, a brain therapy. It produces lasting, detectable physical changes in our brain, much as learning does. [In Mayberg's study, "brain glucose metabolism was measured with positron emission tomography prior to treatment." As I said, it wasn't measured after treatment, so the study could not provide evidence that psychotherapy changed the brain.]

And fourth, the effects of psychotherapy can be studied empirically. [We already knew this. There have been thousands of empirical studies of psychotherapy.]

What a mess.

The article goes on to say impenetrable stuff like this:

This new science of mind is based on the principle that our mind and our brain are inseparable. The brain is a complex biological organ possessing immense computational capability: it constructs our sensory experience, regulates our thoughts and emotions, and controls our actions. . . . Our mind is a set of

operations carried out by our brain. The same principle of unity applies to mental disorders. In years to come [emphasis added] this increased understanding of the physical workings of our brain will provide us with important insight into brain disorders, whether psychiatric or neurological. But if we persevere, it will do even more: it will give us new insights into who we are as human beings.

This is in the grand Nobel Prize in Medicine tradition. The honored work, we are told by the press release, will be terribly useful in the future, although it was done twenty years ago and so far hasn't been useful at all.

I asked Kandel for comment. He did not reply. Whether Kandel's understanding was ever better than this, I don't know.

1. <http://www.nytimes.com/2013/09/08/opinion/sunday/the-new-science-of-mind.html?hpw>
2. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2978246/>
3. <http://archpsyc.jamanetwork.com/article.aspx?articleid=1696349>

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Tim (2013-09-14 06:07:46)

I saw him on Charlie Rose not so long ago spouting bogus left-brain / right-brain nonsense, and other back-of-the-cereal-box neuroscience "facts." Disturbing. I couldn't figure out why he would do that...Maybe he really is that ignorant?

dearieme (2013-09-14 09:41:30)

"to those who, during the preceding year, shall have conferred the greatest benefit on mankind" is a more demanding requirement than "might some day, if the wind is set fair, conceivably contribute to some invention or discovery that perhaps does benefit mankind". Just another case of grade inflation.

Seth Roberts (2013-09-14 10:43:10)

No doubt he is ignorant of psychotherapy research. There's been a lot of it, as I said.

David (2013-09-14 11:04:49)

You say he won an unshared Nobel prize. Not true. He shared the prize with Arvid Carlsson and Paul Greengard. Seth: Thanks for the correction.

slourfet (2013-09-16 06:30:30)

"Actually, our understanding of liver and heart disorders is close to zero, matching our understanding of psychiatric disorders. If we had some understanding of heart disease, for example, we would know why heart disease is much rarer in Japan than in the United States." Close to zero? Really? Do you not think you might be overstating, just a little? What would you say constituted 2 % understanding? Or 5 % understanding? More relevant, "Third, psychotherapy is a biological treatment, a brain therapy. It produces lasting, detectable physical changes in our brain, much as learning does."... As I said, it wasn't measured after treatment, so the study could not provide evidence that psychotherapy changed the brain Writing this sentence has changed my brain. The only interesting claim is "we can identify specific, measurable markers of a mental disorder, and those biomarkers can predict the outcome of two different treatments: psychotherapy and medication" but I agree the evidence doesn't support it.

KevinH (2013-09-20 15:35:11)

Not to promote Kandel, but there is still a large difference in our understanding of the relevant problems. Given a single person we can still say 'you have heart disease, that means you have plaque in location A and it means that if left untreated that you will have an X % chance of undergoing a heart attack, however if we treat it with drug B, you have a Y(>10) % chance of success'. We can't do anything quite like that for psychological diseases. It is all 'do you meet 3 of the 5 criteria', with very poorly understood mechanism, and very low success rates of treatment. Seth: The cause of heart disease is very poorly understood. Kandel may think it is due to cholesterol.

KevinH (2013-09-20 15:52:46)

oops, I apologize but I actually only read before the fold when i posted then read the rest.... however, the argument only gets stronger relying only on your own writing after the fold. No one is arguing about the fact that the heart is the thing that pumps blood through the circulatory system, but as you rightly point out, we have only the weakest claims to understand what 'the prefrontal cortex' or any other region is doing. Also, if your main point of the piece is that the Nobel prize in medicine doesn't strongly effect day-to-day life, you are so wrong you should rethink everything you know. The last three prizes have been handed out for: stem cells, understanding the immune system, and in-vitro fertilization. All fields that are having concrete effects today for real people. 2 years before Kandel, the award was given for nitric oxide; knowledge which is now used routinely in heart surgery and to help keep patients alive after a heart attack. So, when you say "Year after year, the prize-winning work has failed to reduce heart disease" what exactly do you think you mean?

Seth Roberts (2013-09-21 00:57:41)

How did the stem cell research affect everyday life? How did the immune system research affect everyday life?

### **Drawing a Line Where No Line Was Needed: GQ Editor Defends Hugo Boss (2013-09-15 05:00)**

The comedian Russell Brand, [1]at a GQ awards show in London, "joked" – according to Brand, it was a joke – that the sponsor of the event, Hugo Boss, clothed the Nazis. Fine. More interesting to me was something that happened later. [2]According to Brand, the following conversation took place:

GQ editor Dylan Jones What you did was very offensive to Hugo Boss.

Brand What Hugo Boss did was very offensive to the Jews.

Sure, Jones was upset. But nothing in his job description requires him to defend Hugo Boss. Especially in the least nuanced possible way. In contrast to Brand's criticism of Boss, which makes Brand look good, Jones's criticism of Brand, if it has any effect at all (probably not), makes Jones look foolish. He did not make his remark out of carefully-calibrated self-interest.

Jones's comment interests me because now and then something in my head pushes me to do two things I know are unwise:

1. Tell someone else what to do when there is no reason to think they want my advice.
2. Simplify a complicated situation.

Jones did both things. I try to resist – try to say nothing – but am not always successful. Maybe Desire #1 is why professors are fond of teaching what they call "critical thinking" – it allows them to indulge Desire #1. On the face of it, [3]appreciative thinking – especially nuanced appreciation – seems at least as important, but I have never heard a

professor say he teaches that.

1. <http://www.hollywoodreporter.com/news/russell-brand-writes-op-ed-629416?>
2. <http://www.dailymail.co.uk/news/article-2420733/It-wasnt-intended--destroy-Russell-Brand-hits-offensive-Nazi-jibes-GQ-Award-sponsors-Hugo-Boss--admits-ruined-illusion-sophistication.html>
3. <http://blog.sethroberts.net/2008/12/12/whats-appreciative-thinking/>

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Melissa (2013-09-15 09:25:07)

Two things I am constantly tempted to do as well. Have (finally) figured out why the first is ill-advised. And, now that I think about it, the second often blows up in my face as well. But, if possible, would love your perspective on why this is. Seth: If I understand you, you're asking: why is it ill-advised to simplify a complex situation? I'm not sure I understand, but I'll say this: It leaves you badly prepared when things go wrong. Things go wrong more often than you expect. It also leads to overinvestment. You think you understand something, you don't, you lose your investment.

Nancy Lebovitz (2013-09-15 11:20:05)

A while ago, I improved my life by adding what I called the cheerleader function: if anything was important enough for me to be annoyed when it went badly, it was important enough for me to be pleased when it went well.

dearieme (2013-09-15 11:25:47)

Well I think that Shakespeare and Rembrandt and Mozart and Beethoven are jolly good. So there.

Ashish (2013-09-15 13:28:44)

@Nancy: Beautiful! I think I will borrow that.

Seth Roberts (2013-09-15 13:43:09)

"I think that Shakespeare and Rembrandt and Mozart and Beethoven are jolly good." I agree, to some extent literature classes help you enjoy/appreciate literature, art history classes help you enjoy/appreciate art, and certain music classes help you appreciate/enjoy music. Science classes help you understand science, which is surely necessary to appreciate/enjoy it. At Berkeley, at least, I didn't come across professors who said they did this explicitly, although maybe this just means I didn't talk to the professor who taught introductory music. I attended art classes hoping they would help me appreciate art. They didn't – that was quite clear. Nancy, I like that idea. I find that seeing the positive side (seeing the good) is more challenging and less boring than seeing the negative side (seeing the bad).

Kirk (2013-09-15 14:26:04)

One of the things I keep reminding myself, as a parent of young adults in their twenties, is that they don't want my advice unless they specifically ask for it. Drats. I have all kinds of useful advice going to waste. As for GQ's Mr. Jones, my assumption when I first read that Daily Mail article written by Mr. Brand was that the editor was trying to save his own career. The award given to Mr. Brand was "the 'oracle' award at the GQ Men of the Year Awards". Somebody at GQ, possibly Mr. Jones himself, approved that award. And Hugo presumably is a major advertiser . . . look at the photo of the comedian standing in front of a fashion background stamped with GQ and HUGO. I found Mr. Brand's Daily Mail article to be interesting and amusing. Then I watched the video and found the performance obnoxious.

Alex (2013-09-15 15:14:09)

I love your notion of appreciative thinking. I hope you'll mention it more often. You have interesting insights on meta-cognition.

kxmoore (2013-09-15 20:05:48)

i post again russell brand lacerating msm noodles <http://www.youtube.com/watch?v=ADJhErmJuoQ>

kxmoore (2013-09-15 22:58:30)

nice blog on writing about science <http://ksj.mit.edu/tracker/2013/09/my-st-orify-mike-daiseys-responses-my-tra>

Nile (2013-09-16 05:08:00)

#1 made me laugh. I have often said about myself "God put me on earth to tell other people how to live their lives" I too have found this unwise but I am constantly tempted.

Nancy Lebovitz (2013-09-16 07:16:31)

Kirk, you could put your advice online in the hope that it will find its way to people who want it.

Kirk (2013-09-16 19:41:52)

@Nancy, Well, I was kind of continuing a family joke. My mother used to complain she had lots of unused advice left over after my brother and I became adults. My reaction to that impulse (to provide unsolicited advice) is instead to make an effort to ask interesting questions. I think this circles back to one of Seth's original observations, which is that people don't care for unsolicited advice when it is said directly to their face. On the other hand, people love to prospect for gold. We enjoy the thrill of the hunt and the pleasure of an unusual success. Which is why many of us read Seth's blog. He introduces new concepts we might want to experiment with. One final observation. I find that the blog writers who end their posts by soliciting opinions gather interesting comment strings, such as the posts by Kevin Drum and Rod Dreher. Seth: Thanks for the suggestion.

## Teaching Academic Writing: My Plan (Part 1 of 2) (2013-09-16 05:00)

This semester at Tsinghua – which begins this week – I am going to teach Academic Writing in English. The class is in the Psychology Department. It hasn't met yet; I suppose all of my students will be psychology majors. In this post I am describe my plan for teaching it; future posts will describe what actually happened.

Last year I taught a class called Frontiers of Psychology. [1]I discovered that I could teach the class without grading. I never gave grades (nor tests), yet the students did lots of work (the assignment completion rate was about 99.9 %) and apparently learned a lot. Behind my removal of grading was my belief that long ago people learned everything without grading. Maybe I can use those ancient sources of motivation, rather than fear of a bad grade or desire for a good grade. The details of the course centered on three principles: 1. Customization. As much as possible, I tried to allow each student to learn what they wanted to learn. For example, they had a very wide choice of final project. 2. Doing. "The best way to learn is to do" (Paul Halmos) – so students did as much as possible. For example, they did experiments. 3. Telling. Students told the rest of the class about what they had read or done. I gave plenty of feedback but it was always spoken. For example, after each class presentation I pointed out something I liked and something that could have been better.

It was like the discovery of anesthesia. All of sudden, no pain. No difficult grading decisions. No written comments (explaining the grades), which I wondered if the recipient would understand. The class was a pure pleasure to teach. For the students, no longer did they need to worry about getting a bad (or less than perfect) grade.

Can I repeat this with a much different class? At the same time I taught Frontiers of Psychology, I also taught Academic Writing in English for the first time. It was pass/fail, so I didn't grade there, either, but I wasn't happy with how it went. (I didn't want to teach it again . . . but, a month ago, I learned I am teaching it again.) This time I am going to take what I learned from my Frontiers of Psychology experience and try to create a better class.

In the next post I will describe my overall plan. Throughout the semester I will post about how well my plan is working. Supposedly "[2]no battle plan survives contact with the enemy" but my Frontiers of Psychology plan worked fine. I didn't change it at all. Maybe my Academic Writing plan will work, maybe it won't.

[3]Movie directing and teaching.

1. <http://blog.sethroberts.net/2013/01/26/my-ideas-about-teaching-put-into-practice/>
2. <http://lexician.com/lexblog/2010/11/no-battle-plan-survives-contact-with-the-enemy/>
3. <http://blog.sethroberts.net/2013/01/28/movie-directing-and-teaching/>

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Dragan (2013-09-19 21:09:31)

Surely you know that it wasn't Halmos who invented or even coined the learning-by-doing educational approach! Actually, since you're in China, it'd be interesting to see whether this "I hear and I forget. I see and I remember. I do and I understand." or this "Tell me, and I will forget. Show me, and I may remember. Involve me, and I will understand." are actual honest-to-goodness Chinese proverbs in common use.

## Teaching Academic Writing: My Plan (Part 2 of 2) (2013-09-17 05:00)

To review, [1]I am teaching Academic Writing this semester. I want to motivate learning using forces other than grades. Here is my plan.

On the first day of class, I'll say: Don't take this class unless there is some piece of writing you want to do. This class will be all about me helping you write whatever you want. Most of the students will want help writing a personal statement for graduate school applications. I'll tell them there needs to be something else they want to write. Without that the class will be a waste of time.

For the first class – the course meets for 1.5 hours once/week – I'll talk about writing a personal statement.

After that, the general plan will be:

1. I meet with students after class (in the same place) for however long they want, maybe 5-20 minutes. They choose the duration. During these meetings, they show me what they've written. I read it and tell them how they can improve it.
2. During the next class, each student who met with me will give a talk lasting the same length of time as our meeting. For example, if we met for 5 minutes, the talk will last 5 minutes. The talk will be about what I said. After each talk I'll give feedback.

3. In addition, students who meet with me will add my advice to a shared document (e.g., Google Docs).

4. Each week, one student will be assigned to spend a certain length of time (30 minutes) improving the shared document. For example, making it clearer or better organized. The next class they will give a brief talk saying what they did. Again, I will give feedback.

This accomplishes several things: 1. Customization. Each student can write whatever they want. 2. Doing. They actually write "real" material (in contrast to writing assignments). What they choose to write will probably be stuff like a paper for another class but at least it isn't a writing assignment. 3. Telling. They will tell other students what they have learned.

Attractive elements of the plan for me include the fact that I never lecture and never grade. I never need to guess what the students need help with. I learn what they need help with by looking at what they've written. Even though there are no grades or teacher-imposed deadlines, I give lots of feedback – it really is challenging. Attractive elements of the plan for students are that there is flexibility, they can write whatever they want, they never have to take notes (yet there is a written record to refer to), and they are pushed to understand the material in a non-competitive way.

If a student doesn't pay attention in class – the presentations when other students tell what I told them — he risks having me make the same comment on his writing I made earlier on someone else's. Then he would have to tell other students that I made that same comment. The other students wouldn't like that; it wastes their time. So there is pressure to pay attention. If you miss it during class, you can study the shared document.

More English is not my students' native language, although they are quite good at it. I think that they are more likely to understand another student say X (in English) than when I say X (in English) because the student's English will be closer to their English ability. I might use words they don't know. This is a problem in America, too (professor knows a lot more than his or her students) but it is especially clear here. My point is that this is a good feature of having students give class presentations about what I told them, rather than me telling the class directly, which might seem better. If a presenter makes a mistake, I will fix it.

1. <http://blog.sethroberts.net/2013/09/16/teaching-academic-writing-my-plan-part-1-of-2/>

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Mark (2013-09-17 06:29:20)

Seth, This is really awesome. I hope it works out and can't wait to hear how it works out. Seth: Thanks, Mark. I really have no idea what will happen.

Alex Chernavsky (2013-09-17 12:18:39)

Just curious if the administration at Tsinghua University gives you freedom to teach your classes in whatever way you see fit, and how that level of freedom compares to American universities. Seth: so far so good at Tsinghua...At Berkeley, professors complained that I gave students too much freedom.

Dragan (2013-09-19 20:42:22)

That sounds great. I'd enjoy taking your class. Two thoughts I had reading this... 1. This sounds like a difficult course to teach

well. (Much more difficult than a straight-up lecture/assignment class.) 2. "If a student doesn't pay attention in class — the presentations when other students tell what I told them — he risks having me make the same comment on his writing I made earlier on someone else's. Then he would have to tell other students that I made that same comment. The other students wouldn't like that; it wastes their time. So there is pressure to pay attention." Consider it a hunch, but this will happen. Probably more than once. And it's probably not a bad thing, either. If it happens, it probably means that you're dealing with something that's difficult for your students. In that case, it won't be wasting everyone's time! Anyway, I look forward to hearing about how the course plays out.

## Foreign Language Learning Tips (2013-09-18 05:00)

After I said that I was having trouble learning Chinese, my friend [1]Carl Willat made several interesting suggestions:

My ideas are pretty simple, and I don't know if they'll work for you but I'm thinking back on what helped me the most when I was learning Italian. Maybe they will strike you as obvious, or what you're already doing. I'll spell them out here anyway, and please just ignore anything that seems useless. I apologize in advance.

The big one, reading out loud and having someone correct your pronunciation, probably won't work as well when you're dealing with those Chinese characters instead of words in a recognizable alphabet. But the underlying concept, learning the way a child learns, might have other applications. This was Roberta Niccacci's approach and it worked incredibly well for me. She said pronunciation comes before comprehension. I read books out loud to her and my pronunciation got to be very good, though I didn't understand much of what I was reading. After three or four books I could read like an Italian newscaster. "Keep doing this and you will wake up speaking Italian," she said, and that's what it felt like.

I found that in Italian I was developing little islands of solid comprehension in different areas of the language. As I learned more and these areas grew they eventually started to connect with each other. That's when I felt like I was starting to become fluent. Children don't have big vocabularies when they're learning to talk at first, but what they do know they know really solidly. When I was in Italy with Matt he saw a woman call her dog, saying "Vieni qua!" and the dog obeyed. "That little dog knows more Italian than I do," Matt said. It was a joke but the concept was right. The dog only knew a couple of words but knew them really well.

One thing I recommend is having phrases in Chinese that you repeat over and over until you know them so well they sound like English to your brain. These would be phrases that come up in daily life all the time. Probably you're doing this already, right? Because undoubtedly there are things you have to say in Chinese all the time just to get by. It's almost feels like you're learning English synonyms or slang, instead of taking on a whole gigantic language. It helps if you have someone to help you make sure you're pronouncing these phrases perfectly, so you're absolutely confident in them. Same with the Chinese ideograms; get the basic ones really solidly before adding new ones.

Then, talking to yourself. At one point I started talking to myself in Italian, like all the time, both out loud and in my head. I wasn't self-conscious because nobody was listening. I just kept up a constant jabbering. Even if what I was saying to myself wasn't very sophisticated, I was doing a pretty good job of talking like an Italian child who talks to himself. Talking to myself seemed to make me start thinking (and dreaming) in Italian.



As far as memorizing Chinese characters, if I were going to do it I would use the same kind of memory systems I use to memorize a deck of cards or a shopping list of hundreds of items: those mnemonic and associative devices like in the Harry Lorayne books on memory. Lorayne is a memory expert and magician who would do these stunts like remembering everybody's name in a big audience. I think he's got something on memorizing Chinese characters, maybe like what this guy is doing:

<http://www.fluentin3months.com/chinese-vocab/>

When we were learning Italian Matt and I both got this children's book called First Thousand Words in Italian, which had colorful, labeled cartoon drawings of various objects. To this day I see some of those pictures in my mind when I think of certain Italian words. The pictures helped a lot, but we also used those crazy memory tricks from Harry Lorayne. A radiator is "il termosifone" in Italian, which we remembered with the similar-sounding phrase, "they're mostly phony". You know, in San Francisco a lot of apartments have old steam radiators that don't work anymore, so they're mostly phony. I don't know if this method strikes you as too ridiculous, but it sure worked.

Matt and I both ended up with a pretty solid 1000-word Italian vocabulary very early in the game. This was also a lot of fun because when I was talking to Italians even though my knowledge of the language was obviously rudimentary, I nevertheless knew a lot of obscure words I shouldn't have known at that stage. They would be astounded when I came up with the right word for sawdust, spiderweb, rain gutter or puddle. I was talking to Roberta and her Mother one time and I wanted to dig a hole to plant tomatoes and I asked them if they had a shovel, using the word "vanga". They burst out laughing because I had asked for a very particular kind of shovel, more like a flat bladed spade, instead of the more generic "pala". It was just like the way adults laugh when a small child comes up with the right word unexpectedly.

Movies with subtitles. English movies with Chinese subtitles, Chinese movies with English subtitles, or Chinese movies with Chinese subtitles. Especially movies you've seen before so you know the plot and have a vague idea what's being said. Reading and hearing at the same time seems to help your brain get some traction. This works like a refresher course for me in French or Italian, and is especially good for colloquial stuff that's not in the books. I watched some of these movies over and over.

Songs. At one point I worked on my French with French songs from the 1930's. Once again, singing songs meant repeating phrases, and memorizing long passages. You get in the rhythm of the language too. You're keeping it going so you can't really do it in a halting way. In Italian, though, I could never find many songs I liked. I spent one trip to Paris mostly tracking down sheet music to some of those old songs, to solve certain mysteries with the lyrics, and so that I could play them on piano. Having a mission or an errand like that always seems to make travel more enjoyable.

And Bridget swears by the Pimsleur method. She checks the CDs out of the library. She learned a lot of German that way before going to Germany, and was working on Vietnamese briefly so she could talk to our housekeeper a bit. When she was learning Italian the first thing she did was change her language preference to Italian on Facebook. Then every time she went on Facebook which, was quite a lot, she had to do a lot of translating in her mind. She picked it up fast, but she's also really good with languages.

1. <http://www.carlsfinefilms.com/>

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bjk (2013-09-18 08:45:20)

Most of my twitter feed is in french and german, forces me to read short bites of french and german, plus I occasionally click on the articles. Good practice.

Richard Sprague (2013-09-18 10:05:08)

I second the recommendation about songs. A sappy love song usually has easy-to-understand lyrics and phrases that are useful even if you're not in love. (e.g. "if you don't love me, then X" is easy to replace with a different verbs). It helps that the catchiness of a pop beat is a good way to pass time on mundane tasks (e.g. commuting or exercising). Two that I like for Chinese are 周杰伦 (or anything from 周杰伦 and 蔡依林) (google for the lyrics, or ask any of your students to set you up with QQ Music so you can listen as much as you like).

Sentinel (2013-09-18 10:09:07)

Many good ideas in there! Including bjk's. I think that the Heisig method (either the "Remembering the Kanji" book for Japanese or "Remembering the Hanzi" book for Mandarin) does just what he discusses - it might be the ultimate way to systematically employ mnemonic tricks to memorize the meaning of 2000+ characters in a short period of time. Seth: The Heisig method is good, I agree. But in isolation, I have found, it is worthless. For me, at least, it has to be connected with something more social or pleasant - something motivational.

garymar (2013-09-18 14:34:33)

...little islands of solid comprehension... [that] grew [until] they eventually started to connect.

My experience exactly. Of course, with all these isolated areas of comprehension, I would often steer the conversation to a place where I could use them! May have made people think I was a bit OCD at the time. I've used Pimsleur to good effect with Mandarin. Got a solid pronunciation foundation.

Adam (2013-09-18 16:23:09)

Personally, I feel like I need different levels of difficulty depending on my energy level. If I'm highly motivated, I'll try to have a conversation with a Chinese coworker. If I'm less motivated, maybe something passive like watching Chinese TV. If I'm tired, sometimes even passive sources are frustrating because they're too fast & my comprehension is low. At these times, something even more passive, like watching an English TV show with Chinese subtitles & my finger on the pause button works really well. This way I'm not lost as far as what is going on in the show, but I'm still exposed to Chinese & picking up new vocab words.

Robbo (2013-09-19 07:07:09)

I am about 30 months into studying Swedish. At the same time I have been doing some freelance teaching of English, so I have experienced both sides of the desk. I endorse your friend's point about reading aloud. Some of the most productive classroom time I have spent has been students reading aloud and the teacher helping them improve their accent (consonants, vowels, stress, and tone). I try to read something every day in 'study mode', which means use an online dictionary to look up words and expressions I don't understand, and a notebook to write down those I think may be useful. Just the act of writing them down helps them to stick in the mind. I started off using 'easy-read' materials prepared specially for learners, now I use 'good' authors - not excessively literary but writers of clear and expressive Swedish. I also try to write a little Swedish every day (I have a Swedish blog for this). Writing, to me, is a good way to build the active vocabulary and stock of expressions you need to exercise the highest skill, which in my view is to talk fluently, expressively, and correctly in back-and-forth conversation. Where a blog scores over class exercises is that it is my choice what I write and how and when I write it. Of course choosing my own subjects means I am interested and want to do them justice. To do this I have to learn new words and expressions, and by using them they become part of my active vocabulary. I am looking to engage someone to help me by listening to me read aloud and correcting my accent, and reading my blog and correcting my grammatical and word-selection errors.

GB (2013-09-19 07:24:38)

Agree with Carl and garymar. I'm near fluent at comprehending everything a German-speaking waiter would say to me in a bar or restaurant, and yet completely lost at the immigration or tax office. 'Islands of solid comprehension', great concept.

Josh Manley (2013-09-19 07:59:32)

Fantastic post Seth. I enjoy these highly informative, practical posts very much. Thanks for sharing.

Seth Roberts (2013-09-19 13:52:25)

"I enjoy these highly informative, practical posts": Thanks, I try to imitate Tim Ferriss.

Sentinel (2013-09-19 14:45:34)

Seth, I agree that Heisig in isolation may not be effective because it's not inherently interesting. I use [kanji.koohii.com](http://kanji.koohii.com) to study Heisig; it uses online flashcards (you can set up an account for free) which makes Heisig into something more like an interactive video game. (You can share and vote on the memorization tricks everyone has created. I also add the pronunciations to the electronic flash cards, creating deeper "islands of solid comprehension.") Matching what you suggested, I read a lot of manga [only titles I enjoy] and this is my reward for learning all the Heisig kanji.

nicole (2013-09-19 17:48:53)

a friend once told me the easiest way to learn a language is to take a lover. so true. :)

Robbo (2013-09-19 22:04:09)

In the spirit of 'Quantified Self', how does one measure ones own progress in learning a language ? Subjectively I feel I stay still for a while, then something happens that makes me aware that I now am significantly improved from x weeks previously, although in between there was no sensation of daily progress. With a yardstick of some kind, even very imprecise, it would be possible to test different tactics and find out what worked best. Without one, it's a matter of guesswork and subjectivity. Any ideas ?

Adam (2013-09-20 00:09:00)

Anki is one easy way to track your language progress. I have 1539 mature cards in my most recent Mandarin Chinese deck, which means I've probably memorized something like 500 new vocabulary words in the last 7 months. There are some free sites out there that will estimate your vocabulary by having you read an article in the target language & mark the words you don't recognize. For listening & speaking, you'll probably need a partner of some sort, although you might be able to record yourself & compare it to previous recordings.

Jan Rendek (2013-09-21 10:22:22)

I'm a translator/interpreter for Slovak-English living in a non-English speaking country so I'm not speaking English very often. But to be a good interpreter, one has to speak English often. I noticed that I have a warm-up period of app. 10-20 minutes into the job. So next time, I just read an English text for 1/2 hour before a job and voila, the warm-up period was zero :) I'm also reading English texts aloud whenever possible. Did not hurt so far :-)

Ulrike Rettig (2013-10-03 18:26:11)

Great post, with good practical ideas! I especially like the suggestion of reading aloud. I read aloud in French every day. But I'm not at all a beginner, I read aloud as a preparation for speaking (just as Jan Rendek says). One of my best reading experiences was reading a long bed-time story in French to a four-year- old French girl who kept asking questions and making comments. I noticed the next day my French came more easily than usual. I've started a new language, and also found - like Robbo - that I seem to hit a plateau for quite a while, and then suddenly, I make a leap ahead. It must be the way our brain processes language.

## What Goes Unsaid: Self-Serving Health Research (2013-09-19 05:00)

"The realization that the world is often quite different from what is presented in our leading newspapers and magazines is not an easy conclusion for most educated Americans to accept," [1]writes Ron Unz. He's right. He provides several examples of the difference between reality and what we are told. In finance, there are Bernie Madoff and Enron. Huge frauds are supposed to be detected. In geopolitics, there is the Iraq War. Saddam Hussein's Baathists and al-Quada were enemies. Invading Iraq because of 9/11 made as much sense as attacking "China in retaliation for Pearl Harbor" – a point rarely made before the war. In these cases, the national media wasn't factually wrong. No one said Madoff *wasn't* running a Ponzi scheme. The problem is that something important wasn't said. No one said Madoff was running a Ponzi scheme.

This is how the best journalists (e.g., at The New Yorker and the New York Times) get it wrong – so wrong that "best" may be the wrong word. In the case of health, what is omitted from the usual coverage has great consequences. Health journalists fail to point out the self-serving nature of health research, the way it helps researchers at the expense of the rest of us.

The recent Health issue of the New York Times Magazine has an example. [2]An article by Peggy Orenstein about breast cancer, meant to be critical of current practice, goes on and on about how screening has not had the promised payoff. As has been widely noted. What Orenstein fails to understand is that the total emphasis on screening was a terrible mistake to begin with. Before screening was tried, it was hard to know whether it would fail or succeed; it was worth trying, absolutely. But it was always entirely possible that it would fail – as it has. A better research program would have split the funds 50/50 between screening and lifestyle-focused prevention research.

The United States has [3]the highest breast cancer incidence (age-adjusted) rates in the world – about 120 per 100,000 women, in contrast to 20-30 per 100,000 women in poor countries. This implies that lifestyle changes can produce big improvements. Orenstein doesn't say this. She fails to ask why the Komen Foundation has totally emphasized cure ("race for the cure") over prevention due to lifestyle change. In a long piece, here is all she says about lifestyle-focused prevention:

Many [scientists and advocates] brought up the meager funding for work on prevention. In February, for instance, a Congressional panel made up of advocates, scientists and government officials called for increasing the share of resources spent studying environmental links to breast cancer. They defined the term liberally to include behaviors like alcohol consumption, exposure to chemicals, radiation and socioeconomic disparities.

Nothing about how the "meager funding" was and is a huge mistake. Xenia Jardin of Boing Boing called Orenstein's article "[4]a hell of a piece". Fran Visco, the president of the National Breast Cancer Coalition, [5]praised Orenstein's piece and wrote about preventing breast research via a vaccine. Jardin and Visco, like Orenstein, failed to see the elephant in the room.

Almost all breast-cancer research money has gone to medical school professors (most of whom are men). They don't do lifestyle research, which is low-tech. They do high-tech cure research. Breast cancer screening, which is high-tech, agrees with their overall focus. High-tech research wins Nobel Prizes, low-tech research does not. For example, those who discovered that smoking causes lung cancer never got a Nobel Prize. Health journalists, most of whom are women, apparently fail to see and definitely fail to write how they (and all women) are harmed by this allocation of research effort. The allocation helps the careers of the researchers (medical school professors); it hurts anyone who might get breast cancer.

1. <http://www.theamericanconservative.com/articles/our-american-pravda/>
2. [http://www.nytimes.com/2013/04/28/magazine/our-feel-good-war-on-breast-cancer.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2013/04/28/magazine/our-feel-good-war-on-breast-cancer.html?pagewanted=all&_r=0)
3. [http://en.wikipedia.org/wiki/Epidemiology\\_of\\_breast\\_cancer](http://en.wikipedia.org/wiki/Epidemiology_of_breast_cancer)
4. <http://boingboing.net/2013/04/25/our-feel-good-war-on-breast-ca.html>
5. [http://www.huffingtonpost.com/fran-visco/feeling-bad-about-the-feel-good-war-on-breast-cancer\\_b\\_3208408.html](http://www.huffingtonpost.com/fran-visco/feeling-bad-about-the-feel-good-war-on-breast-cancer_b_3208408.html)

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Alex Chernavsky (2013-09-19 07:17:27)

I think one possible reason for the lack of research on preventive measures is that the researchers may figure that the lifestyle changes would turn out to be measures that would be unpalatable to the general public (things like eating less processed food, drinking less alcohol, exercising more, etc.) and hence would not gain widespread acceptance.

Steve Johnson (2013-09-19 09:21:39)

What Alex said but even more so because it's a women's cancer and women react angrily and emotionally to the idea that anything is their fault. Pop culture example from an episode of Sex and the City: Samantha: I don't understand how this happened to me. Dr: It could be genetics, but since there's no breast cancer in your family, it could be a variety of factors, - diet, lifestyle choices. Samantha: - Lifestyle choices? Dr: Some studies have shown women who haven't had children have an increased chance of getting it. Samantha: I see. So I brought this on myself? Dr: No, I'm just giving you the basic... Samantha: I think we're done here. Dr: Maybe I wasn't clear. Samantha: Give me my chart. I'm going to find some woman doctor, some hot woman doctor who understands what this is all about. Yes, it's fiction but it's popular fiction and this is not the only place where you'll hear that same attitude. A cure fits much better into the mental model of the world that women tend towards - if something is wrong it's someone else's job to figure out how to fix it.

Toddy Cat (2013-09-19 10:27:55)

Of course, one of the reasons that "lifestyle modification" has gotten a bad rap over the last fifty years is that so much of the advice was either oversimplified or just flat-out wrong. In fact, one could make the argument that smoking is almost the only thing that the "public Health" community has gotten right in the last fifty years - that's an exaggeration, but not much of one. So naturally, people are a bit skeptical that this time, the authorities finally have it right. And God forbid that that advice might offend someone's ideological prejudices, as seen above.

Nancy Lebovitz (2013-09-19 11:07:09)

It might be pollutants rather than lifestyle. What about \*really\* self-interested medical research? That is, research on a problem the researcher or a loved one of the researcher has?

dearieme (2013-09-19 12:14:08)

"The United States has the highest breast cancer incidence (age-adjusted) rates in the world — about 120 per 100,000 women, in contrast to 20-30 per 100,000 women in poor countries": seek and ye shall find. Screening is bound to put up the number of cases diagnosed, isn't it? It may extend nary a life, but at least it'll find tumours, however small or slow-growing. Also <http://drmalcolmkendrick.org/2013/09/19/deadly-medicines-and-organised-crime-how-big-pharma-has-corrupted-healthcare/> #comments

Jay (2013-09-19 13:28:10)

Hi Seth, I think a big part of the incidence of Breast Cancer might have something to do with the populations of individuals who carry harmful mutations of BRCA1 & 2, in particular, Ashkenazi Jews. From the cancer.gov web site: 1. How much does having a BRCA1 or BRCA2 gene mutation increase a woman's risk of breast and ovarian cancer? A woman's lifetime risk of developing breast and/or ovarian cancer is greatly increased if she inherits a harmful mutation in BRCA1 or BRCA2. Breast cancer: About 12

percent of women in the general population will develop breast cancer sometime during their lives (4). By contrast, according to the most recent estimates, 55 to 65 percent of women who inherit a harmful BRCA1 mutation and around 45 percent of women who inherit a harmful BRCA2 mutation will develop breast cancer by age 70 years (5, 6). 2. Are mutations in BRCA1 and BRCA2 more common in certain racial/ethnic populations than others? Yes. People of Ashkenazi Jewish descent have a higher prevalence of harmful BRCA1 and BRCA2 mutations than people in the general population. Other ethnic and geographic populations around the world, such as the Norwegian, Dutch, and Icelandic peoples, also have higher prevalences of specific harmful BRCA1 and BRCA2 mutations.

Seth Roberts (2013-09-19 13:45:11)

To finish the BRCA argument you need to say how common the two mutations (BRCA1 and BRCA2) are, so we can get some idea of what fraction of breast cancer cases they are involved in.

Seth Roberts (2013-09-19 13:47:14)

I meant "lifestyle" to include all sorts of environmental changes, including pollutants. Maybe lifestyle was the wrong word. Pollutants can be avoided – I try to avoid them in Beijing – just as lifestyle can be changed.

Seth Roberts (2013-09-19 13:50:31)

Public health researchers have also been right about the contribution of low folate to birth defects. I believe that epidemiologists will turn out to be right about the connection between poor sleep and depression – a very important clue to what causes depression. Also about selenium and cancer. However, I agree, there is vast room for improvement.

JM (2013-09-19 13:56:58)

Wow, Steve, way to accuse an entire gender of being angry and emotional when confronted with a devastating diagnoses - I think that probably applies to a lot of people (men and women) who are told they have a possibly fatal illness. And using Sex and the City as an example doesn't really help your argument.

Nancy Lebovitz (2013-09-19 22:43:22)

Jay, there are about 5 million Jews in the US out of a total population of about 300 million– I don't think that's enough to affect the breast cancer stats much. Here's a weird one: cancer rates are *\*positively\** correlated with income. [http://www.who.int/gho/ncd/mortality\\_morbidity/cancer\\_text/en/](http://www.who.int/gho/ncd/mortality_morbidity/cancer_text/en/) More longevity? More diagnosis? Something quite mysterious? Map of states: <http://www.cdc.gov/cancer/breast/statistics/state.htm> Unfortunately, most maps are by country– this strikes me as fairly useless. Seth, what do you do to avoid pollutants in China? Seth: I heavily filter the air in my apartment.

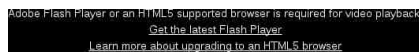
Jay (2013-09-23 15:02:48)

Hi Seth, sorry I left that part out. From: <http://www.jewishgenetics.org/?q=content/ashkenazi-jews-and-brca1-and-brca2> "Various studies have examined the ethnic distribution of BRCA1 and BRCA2 mutations associated with breast and ovarian cancer. Three mutations in these genes (185delAG and 5382insC in BRCA1 and 6174delT in BRCA2) occur at an increased incidence in the Ashkenazi Jewish population, estimated at 2.5 % (or 1 in 40), compared to less than 1 % in the general population." As for the number of Jews, the 5 million number may seem low, but I don't think that number includes the population who may be descendants of Jews (and thus more likely to carry at least part of the genetic profile associated with the cultural group) yet not qualify as technically "Jewish". I count myself as part of this group.

Jeff Winkler (2013-09-24 03:35:19)

Speaking of life-style modification... Sanjiv Shah improved sleep quality by (Boston QS: <http://www.youtube.com/watch?v=VDQ0TPxHn0Q>) by blocking blue light at night. Blue light blocks melatonin production. He reduced sleep latency and increased deep sleep – measured by a Zeo and Fitbit. Shift work in nurses for more than 30 years has a breast cancer risk ratio of 1.36 - <http://www.ncbi.nlm.nih.gov/pubmed/11604480?dopt=Abstract> Profoundly blind women have a 50 % reduction in breast cancer - <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2363754/> It would make sense that income upregulates electronics such as tablets, lowering melatonin production with late-night use.

## Teeth Clenching Can Release Too Much Mercury (2013-09-20 05:00)



IFRAME: [1][http://www.youtube.com/embed/DcSO8gWB0Z0?feature=player\\_detailpage](http://www.youtube.com/embed/DcSO8gWB0Z0?feature=player_detailpage)

Recently the Berkeley City Council heard testimony about a proposed ban on mercury amalgam dental fillings. A young man named D— M—, shown in the video, told the Council that he had grown up in Berkeley and had gotten mercury amalgam fillings from local dentists. They did not tell him the fillings were dangerous. He attended Berkeley High, Harvard, and finally the clinical psychology program at UC Berkeley – which I know is extremely hard to get into, as he says. They accept about 1 in 500 applicants.

In 2007, three years into the program, he started clenching his teeth. He began to have problems resembling mercury poisoning, such as fatigue and poor concentration. He had to leave the psychology program. Hair tests showed large amounts of mercury. He did not eat unusual amounts of fish, so it's likely that his fillings were the source of the mercury. By 2012, he could no longer work and pay rent.

I had no idea that teeth clenching and mercury fillings were so dangerous together. A few years ago, I found, to my surprise, that [2]removal of mercury fillings improved my score on the reaction time test I use to measure brain function. At first, I had thought the improvement had other causes. Only when I tested these causes and found no supporting evidence did I look further and discover the improvement had started exactly when I got my fillings removed. After I discovered this, I looked around for other evidence that mercury fillings were dangerous. To my surprise (again), my evidence seemed more persuasive than anything I found. M—'s story is much scarier than mine and supports my conclusion that mercury fillings are dangerous.

Had M— been using my reaction-time test day after day, he might have discovered deterioration on that test before he noticed other problems. The test might have provided early warning. I hadn't noticed problems with concentration or fatigue, yet when my fillings were removed I got better on my test. Had M— noticed the problem earlier, he might have figured out the cause earlier.

If you don't monitor yourself as I do – and almost no one does – you are trusting your dentist, your doctor, your food providers, and so on, to be well-informed and truthful about the safety of their products. If the problems aren't obvious, there is plenty of reason for them to put their hands over their eyes and say "I don't want to know" about problems with their products. Drug companies have often hidden the dangers of their products and surgeons have hidden the dangers of their procedures. Few people grasp that "evidence-based medicine", with [3]its disregard of bad side effects, is biased in favor of doctors. ([4]Ben "Bad Science" Goldacre is a prominent example of someone who fails to understand this.) If you monitor yourself you are less at the mercy of other people's poor science, lies, and motivations that conflict with finding and telling the truth.

1. [http://www.youtube.com/embed/DcSO8gWB0Z0?feature=player\\_detailpage](http://www.youtube.com/embed/DcSO8gWB0Z0?feature=player_detailpage)

2. <http://blog.sethroberts.net/2011/06/26/damage-due-to-mercury-revealed-by-brain-test/>

3. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

4. <http://www.badsience.net/>

Mark (2013-09-20 07:57:17)

I'm so glad to see you take Goldacre to task on this, I completely agree. I remember when I was reading Bad Science that there was this footnote acknowledging that, in truth, no drugs could ever be determined to be safe for everybody but that one would essentially be wasting their time worrying about that (or something to that effect). I remember being like "What?!?", and quickly jotting a note in the margin. The fact that randomized trials cannot actually "demonstrate" any drug to be safe is missed by most (it's statistically and logically impossible to show that something is no different than placebo, which is essentially what "demonstrated to be safe" means).

Mark (2013-09-20 07:59:37)

I should also say that I think Bad Science is by and large a decent book... Goldacre just doesn't always seem to understand that absence of evidence is not evidence of absence.

Alex Chernavsky (2013-09-20 08:55:07)

Jay S. Cohen wrote an interesting book called, [1]*Overdosed. He makes the point that there is a large amount of variability in how individuals respond to drugs. Pharmaceutical companies don't want to admit that this variability exists – because, at the very least, it complicates dosing issues. Cohen advocates "start low, go slow" when starting a drug regimen. (I think the book is out of print now, but used copies are still available.)*

1. <http://www.amazon.com/Over-Dose-Jay-S-Cohen/dp/158542370X>

Alex Chernavsky (2013-09-20 08:55:58)

Sorry, the book is actually titled, *Over Dose: The Case Against the Drug Companies*.

Seth Roberts (2013-09-20 14:31:04)

Mark, did you mean Bad Pharma (rather than Bad Science)? Bad Pharma is Goldacre's recent book, Bad Science is an older book. I agree, Bad Pharma is a decent book. I hope that someday Goldacre will realize there are big problems with the rest of medicine as well, problems less obvious than high prices.

dearieme (2013-09-20 15:10:13)

For years I've joked that Americans' lifespan is shorter than (for example) most West Europeans' because Americans spend far too much time at the dentists. Correlation and cause?

Sentinel (2013-09-20 15:41:47)

At least according to Joseph Mercola articles sympathetic to "biological dentistry" or "holistic dentistry", removing mercury amalgam fillings has its own set of dangers (release of large amounts of mercury into the body all at once)! In addition to monitoring one's symptoms of mercury poisoning (a la Seth), I wonder if there is a way to also monitor the extent of the increase or decrease of mercury in the body after removing the filling. Scary....

Open2 (2013-09-20 17:07:14)

Supposedly, MTHFR variants can affect a person's ability to detox mercury and other heavy metals.

D.R. (2013-09-21 03:51:08)

Regarding amalgam removal, you may want to look at IAOMT's web site, where they have information describing safe removal procedures: <http://iaomt.org/safe-removal-amalgam-fillings/>

Seth Roberts (2013-09-21 15:57:22)

"Safe amalgam removal". I monitored myself before and after the amalgam removal and saw no change. This shows that the amalgam removal had been done safely.



Dan OBeirne (2013-09-29 11:13:29)

Nice article. We all know Mercury is a dangerous b/c it is a neurotoxic. What you may not know is that it is lipophilic so it stores likes to store itself in fat stores. Since the human brain has a lot of fat the Hg can go there. "Silver dental fillings" contain up to 50 % Hg. Of course this does not affect everyone as we all have different toxic sensitivities. This is also influenced by your total toxic load This is a treatment that dates back to around the time of the US Civil War. Dentist I know, tell me the fear among the ADA seems to be big lawsuits like Tobacco & Asbestos IF the truth came out

Dan OBeirne (2013-09-29 11:14:47)

Here is some scientific research. For example, a peer-review study published in 2005 by the Freiburg University Institute for Environmental Medicine found that "mercury from dental amalgam may lead to nephrotoxicity [kidney poisoning], neurobehavioural changes, autoimmunity [autoimmune disease], oxidative stress, autism, skin and mucosa alterations or non-specific symptoms and complaints,"

Dan OBeirne (2013-09-29 11:20:48)

Proper removal of dental amalgams is VITAL. One of the best is the Huggins Protocol and is based on the pioneering work of Hal Huggins, DDS, MS, a leading figure in the world of biological, or holistic, dentistry. Also find info here: [www.toxicteeth.org](http://www.toxicteeth.org) best from Spain

### **"Sitting is the New Smoking" (2013-09-21 05:00)**

I learned this phrase ("sitting is the new smoking") from Galen Cranz, with whom I taught [1]a class called Office of the Future in 2001. We agreed that sitting was bad. I believed that sitting was bad because I discovered that [2]if I stood a great deal, I slept better. A [3]recent review:

A study published in the journal Diabetologia in November 2012 analyzed the results of 18 studies with a total of nearly 800,000 participants. When comparing people who spent the most time sitting with those who spent the least time, researchers found increases in the risks of diabetes (112 %), cardiovascular events (147 %), death from cardiovascular causes (90 %) and death from all causes (49 %).

I wonder whether any effect of sitting would remain after adjustment for quality of sleep. Maybe those who sat less slept better, as I did. Epidemiologists haven't yet grasped the importance of sleep – part of an overall failure to realize that the immune system matters. Whether or not you sleep well is surely as important as whether or not you smoke. [4]Here is a study that connects poor sleep and heart disease.

At a recent conference, I foolishly sat a lot more than usual. Maybe I sat for 7 hours two days in a row. After the first day I woke up with a minor muscle spasm in my lower back that went away. After the second day, I woke up with a really bad muscle spasm in my lower back and could barely move most of the day. Maybe my sitting muscles are weaker than other people's. Maybe eating more sugar than usual (sugar is inflammatory) and less flaxseed than usual (flaxseed is anti-inflammatory) also contributed to the problem.

1. [http://berkeley.edu/news/media/releases/2000/08/29\\_work.html](http://berkeley.edu/news/media/releases/2000/08/29_work.html)

2. <http://escholarship.org/uc/item/2xc2h866/>

3. <http://articles.latimes.com/2013/may/25/health/la-he-dont-sit-20130525>

4. <http://www.dailymail.co.uk/health/article-2353692/Lack-sleep-increases-risk-heart-disease-SMOKING.html>

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Kristian Dupont (2013-09-21 06:16:52)

A physiotherapist I had once said "the body was made for walking and lying down, not for standing and sitting". It works better in Danish because it rhymes but the phrase still stuck with me, to the point where I am considering trying out treadmills for my desk..

q (2013-09-21 06:24:05)

i think one would have trouble teasing out cause and effect here. (if you have a metabolic issue you'd probably spend less time on your feet because it would be less pleasant.)

vgm (2013-09-21 14:01:47)

Your lower back issue could be a result of shortened hip flexors (as a result of sitting) + not bracing your core/keeping neutral spine, therefore hanging out on your lower back/discs. See mobilitwod for much more.

r (2013-09-21 14:04:52)

Seth, One of my favorite books is Pete Egoscue's "Health through Motion", linking posture and health. Sitting is bad, but even when people move, they're repetitively using the same muscles over and over. They don't get the variety of movement needed to maintain the entire muscular system. The result is some muscles go dormant, while others do extra work they weren't designed to do to pick up the slack. These muscle imbalances shift the skeletal system out of alignment, posture deteriorates, and overall health declines. The book teaches how to analyze posture, and how to re-engage dormant muscles. Egoscue also fits into your theme of outsiders vs experts. He's contended that some things like cartilage loss can be stopped and repaired naturally once the muscular system is rebalanced (<http://bepainfreeforlife.com/2010/01/26/the-body-is-amazing/>). Even things like digestion and sleep improve when posture is improved.

Seth Roberts (2013-09-21 15:01:19)

I find lounging – between sitting and lying down – works fine. Weight is spread out, like lying down, but eyes face forward, like sitting.

Is sitting the new smoking? | peakmemory (2013-09-22 06:17:44)

[...] Seth Roberts makes the case. [...]

lemmy caution (2013-09-23 11:11:52)

Avoiding sitting down is one health tip that I believe works but that I will never follow.

Brandon Berg (2013-09-25 05:31:57)

It's also possible that the casual effect goes the other way. I would expect high blood sugar to wake you up, so maybe the effects of standing on sleep quality are mediated by glucose control.

Ollie (2013-10-06 19:30:02)

Thanks for sharing your thoughts about harmful side effects. Regards

## Assorted Links (2013-09-22 05:00)

- [1]The Teenage Liberation Handbook: How to Quit School and Get a Real Life and Education (1998). Aaron Swartz was greatly influenced by this book.

- [2]High-carb versus low-carb diet difference influences memory. There were a thousand differences between the diet called high-carb and the diet called low-carb, don't take seriously the idea that the crucial difference is the carbohydrate difference. That's just one possibility. The main thing to learn from this study is that your memory is affected by what you eat.
- [3]Climate models predict poorly. "Christy said he believes the models overestimate warming because of the way they handle clouds." I have said for a long time that too much faith has been put in climate models, which have not been shown to predict correctly.
- [4]Experts and guidebook say toxic plant is edible. Someone who trusted the guidebook died.

Thanks to Jeff Winkler and Tom George.

1. [http://en.wikipedia.org/wiki/The\\_Teenage\\_Liberation\\_Handbook](http://en.wikipedia.org/wiki/The_Teenage_Liberation_Handbook)
2. <http://www.ncbi.nlm.nih.gov/m/pubmed/21130529/>
3. <http://www.foxnews.com/science/2013/09/12/climate-models-wildly-overestimated-global-warming-study-finds/>
4. <http://www.newyorker.com/online/blogs/books/2013/09/how-chris-mccandless-died.html>

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Steve Hansen (2013-09-22 07:31:47)

I'm a bit dubious about the "toxic plant killed Chris McCandless" story. This article has a very different take: <http://foragersharvest.com/into-the-wild-and-other-poisonous-plant-fables/>

Anders (2013-09-22 09:10:36)

here's a climate model you may like.... [http://www.coyoteblog.com/coyote\\_blog/2013/09/update-on-my-climate-model-spoiler-its-doing-a-lot-better-than-the-pros.html](http://www.coyoteblog.com/coyote_blog/2013/09/update-on-my-climate-model-spoiler-its-doing-a-lot-better-than-the-pros.html)

Alex Chernavsky (2013-09-22 09:53:25)

Steve, thanks for posting that. Krakauer could be partially right, in the sense that the beta-ODAP in the seeds (if, indeed, it's even present) could have been the final straw that broke McCandless's back. I wonder if anyone involved in this subject has ever attempted to eat a substantial amount of those wild-potato seeds in one sitting.

Tom (2013-09-22 13:55:43)

*the beta-ODAP in the seeds (if, indeed, it's even present)* It's present. <http://www.christophermccandless.info/Ronald-Hamilton/ronald-hamilton-intothe-wild6.html> I wonder if anyone involved in this subject has ever attempted to eat a substantial amount of those wild-potato seeds in one sitting. After reading the Hamilton article, I hope not.

Jim (2013-09-22 15:03:39)

Steve, I don't see a date on the post you cite to, but I think it addresses Krakauer's 1st and 2nd explanations, while the (very recent) article pointed to by Seth is directed to Krakauer's 3rd (and he thinks final) explanation.

Tom (2013-09-22 15:48:34)

Indeed. The certitude of the Forager's Harvest article plays very differently after reading the Hamilton piece.

spacenookie (2013-09-22 17:15:12)

The Forager's Harvest piece does a nice job of showing that McCandless could have/would have just plain starved to death and

that Krakauer has been pushing poisoning theories for the last 20 years that he now admits were wrong. If you look at the following articles, it adds a little more to the controversy. <http://www.alaskadispatch.com/article/20130917/krakauers-wild-theory-mccandle-ss-gives-short-shrift-science> <http://www.alaskadispatch.com/article/20130919/jon-krakauer-responds-what-killed-chris-mccandle-esp-the-comments-of-the-second-article-where-krakauer-and-clausen-go-back-and-forth>.

Adam (2013-09-22 17:18:51)

Alzheimer's is "Type 3 Diabetes" so this is not surprising. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2769828/>

## **Does Intermittent Fasting Improve Repair Processes? (2013-09-23 05:00)**

After I [1]blogged about benefits of alternate-day fasting, a software engineer named Brandon Berg [2]commented:

I had had plantar warts for a couple of years prior to starting IF (eating in a four-hour window each night). They cleared up almost immediately.

I had never heard about this effect of fasting. And the [3]Wikipedia entry on plantar warts said nothing about this. I asked Brandon for details.

When and where did this happen?

I was working full time while also attending college with a 12-hour schedule or so. That may or may not be relevant; I was under a lot of stress, both in terms of the pressure to serve both masters, and the sleep I sacrificed to make it happen. So that may have contributed to my development of the warts. I actually don't remember whether I developed them before or after I went back to school, but I was definitely in school when they went away. I was 23 when they disappeared, and I lived in Seattle at the time. This was back in 2004, so I'm a bit fuzzy on the details.

Did you have any idea what had caused the warts?

Presumably a viral infection, since that's what causes warts, isn't it? I did a lot of walking around barefoot when I lived with my parents before going off to college in 1998; maybe I was infected then, and carried the virus asymptotically until the stress triggered the development of the warts? But again, I don't remember whether they were there when I went back to school.

Had you tried other ways of getting rid of the plantar warts?

I might have tried apple cider vinegar on a select few. I distinctly remember that working for a wart on my thumb, but the ones on my feet were too numerous to treat them all that way. I never saw a doctor about them, since I always figured they'd just go away sooner or later, and they didn't bother me that much.

Why did you do the intermittent fasting?

This was back when the studies about IF extending lifespan in mice first started hitting the media. Or the first time I was aware of them, anyway. Living longer sounded good to me.

Did you expect it to affect your plantar warts?

I had no particular expectation that it would affect the warts.

How did others react to the fact that the IF got rid of the plantar warts?

I lived alone, so I never really told anyone else about them. I've mentioned this to a couple of people in passing, but don't recall any notable reaction, other than "Oh, that's interesting," or something similar.

How fast did they clear up? (= what does "almost immediately" mean?)

I don't remember, exactly. It was definitely within a month. I checked my email archives and see that in 2008 I said that it took less than a week. I remember mentioning this to a friend on ICQ back when it happened, and I \*may\* still have the logs from that on a hard drive in my closet, but I currently have no way to access it since I just moved to Tokyo and only have a notebook with no eSATA port, and I'm not planning on getting a desktop until I find a permanent apartment. Sorry I can't be more precise here. Obviously the probability that it was a coincidence is much lower if they cleared up in a week than if they cleared up in a month.

How do you explain their disappearance?

I'm not sure. It's entirely possible that they'd run their course and it was just their time to go. My pet theory is autophagy: Starved for protein, my body started scavenging for expendable tissue and resorbed the warts. There were two small wart-like growths—one on my thumbprint and one on my nose—that persisted for years afterwards, so it's definitely not a surefire cure.

On a related note—and this also may be purely coincidental—the last two times I've felt a cold coming on, I tried to combat it with a full-day fast, on the theory that this would ramp up my cellular resistance to oxidative stress and reduce the severity of my symptoms. In both cases, I did have a much less severe cold than I usually do, with symptoms reduced to a more or less negligible level by the next day, where I usually get 3-5 days of moderately severe symptoms.

1. <http://blog.sethroberts.net/2013/07/28/effect-of-alternate-day-fasting-on-a-friend/>

2. <http://blog.sethroberts.net/2013/07/28/effect-of-alternate-day-fasting-on-a-friend/#comment-1132097>

3. [http://en.wikipedia.org/wiki/Plantar\\_wart](http://en.wikipedia.org/wiki/Plantar_wart)

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jclifton (2013-09-23 09:23:10)

hi Seth, speaking of fast, any updates on your ADF routine? Still a success? Glycated hemoglobin trending down or has that stabilized at pre-fasting levels? Seth: I'm in China now where it is hard for me to get HbA1c measurements I trust. It is still a success in other ways: easy, losing weight, saving time. The discipline it requires – not much, but some – is somehow pleasant, like physical exercise.

Kirk (2013-09-23 12:05:27)

Paul Jaminet discusses what is happening at length in chapter 40 of the book titled Perfect Health Diet. The key concept is autophagy.

vgm (2013-09-23 13:56:38)

This may have happened to me as well. I had a plantar's wart on my foot for a few years. Around the time I stopped eating breakfast in the morning, it disappeared inexplicably and in definitely less than three weeks.

Jonathan Shewchuk (2013-09-23 18:30:07)

Dr. Michael Eades has a good blog post about how ketosis causes cells to recycle junk proteins at <http://www.proteinpower.com/drmike/ketones-and-ketosis/ketosis-cleans-our-cells/>.

Kirk (2013-09-24 06:25:54)

Robert Chuckrow reports that a cyst he had had for decades disappeared during a long fast. His article on fasting can be found at <http://chuckrowtaichi.com/Fasting.html>.

Jenny (2013-09-25 10:03:08)

I was given a different method for getting rid of warts - plantar and on my hand. Cover the wart with a bit of banana skin - soft side inside. tape in place for a few hours. After about 24 hours, the centre of the wart dies and goes black. Wash/ scrub this off. If necessary repeat. Usually 2 treatments clears them, and only once have I had to do 3 - that was a very deep wart. I have got rid of several, on several different occasions. Somebody said what do you do with the banana? Might as well eat it! I think this must be a chemical reaction affecting the wart. Seth: that's fascinating. I wonder how it was discovered.

JM (2013-09-25 13:56:38)

Have never heard of the banana skin cure for warts - very interesting. Also, if fasting reduces aspects of blood sugar, and warts are caused by a virus, maybe the virus needs sugar (in some form) which plummets in the system when fasting and without enough it dies.

Seth Roberts (2013-09-25 14:32:04)

"maybe the virus needs sugar (in some form) which plummets in the system when fasting and without enough it dies." Blood sugar goes down when fasting to 80 or so. Fasting probably produces dozens of changes. Maybe even hundreds of changes.

### **Chinese versus American Math Education (2013-09-24 05:00)**

When she was in eighth grade, a Chinese friend of mine moved from Shanghai to upstate New York. (Her dad worked for General Electric.) In New York, she discovered she'd already learned eighth-grade math - in fourth grade. Her new school moved her to tenth grade math. It was still material she'd already had, but less absurdly easy.

If 80 % of American parents knew this, would they abide it? Or would they decide that something is terribly wrong? Now, of course, almost no American parent knows this.

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Jim (2013-09-24 08:34:25)

The Chinese students may have a higher aptitude for math that allows for a steeper learning curve than American students could tolerate. In my town, even the American born Chinese students seem to have a relatively high aptitude for math. This is evident even at early grade levels (kindergarten, first grade) where I assume differences in parental emphasis on education would not yet have a great effect.

Jon Orloff (2013-09-24 09:00:04)

Do you suppose that learning a particular language at an early age predisposes one for certain activities? Such as Chinese or Russian for math and German or English for physics?

Wilkins (2013-09-24 09:04:45)

"If 80 % of American parents knew this... " . Then nothing would change at all. Parents already know that American kids lag many other nations in math & science. It's been a loud, consistent theme in the U.S. media for decades. yawn Secondly, "parents" are typically unable to analyze & understand the core deficiencies of the American K-12 school system. They are direct products of that miseducation system, and have been heavily indoctrinated by that very same "system" to accept it as is. The fundamental dysfunctional, and despotic nature of compulsory mass schooling is truly invisible to most Americans. Thirdly, parents have zero practical power/authority to improve that education system. Parental power was lost long ago to legions of government education administrators, bureaucrats, and NEA lemmings. Real power has consolidated at the distant

state and Federal bureaucracies. Imagined parental-power over the vast calcified government school empire is extremely naive.

AI (2013-09-24 09:25:11)

I once heard a math professor at a very large and well known university with a very strong math department say that, by the age of 12, most children have the necessary brain development to understand basic calculus. I've always wondered if that was true, and I'm curious if anyone else has any comments about it. In some countries, all high school students are required to take calculus in order to graduate. So, it seems that by the age of 18 many (most? all?) people have the ability to comprehend math at that level. There's always the sneaking suspicion in US schools that we just aren't teaching math properly/assigning enough homework problems/exercising the students' minds/providing enough body armor/etc.

Alex Chernavsky (2013-09-24 09:26:00)

See also: "[1]Is High Self-Esteem Bad For Math Education?" I like the George Carlin quote at the end of the blog post.

1. <http://scienceblogs.com/evolutionblog/2010/09/08/is-high-self-esteem-bad-for-ma/>

Amanda (2013-09-24 11:46:42)

Malcom Gladwell claims that language differences also play a role: <http://gladwell.com/rice-paddies-and-math-tests/>

Roger Sweeny (2013-09-24 12:32:22)

College professors are some of the least self-aware people I have ever encountered. That math professor is full of sh\*t. My experience teaching high school students is that at the age of 12 many of them don't have the brain development to understand basic algebra, let alone calculus. There is a big intellectual leap between "what do you have to subtract from 12 to get 7?" and "12 - X = 7; what is X?" It is a leap that some people (like "a math professor at a very large and well known university with a very strong math department") make easily, so easily they don't even realize it is a leap. I don't know how many countries require passing calculus to graduate high school. If they are honest in their testing (a very big if), then nowhere near 100 % of their 18 year olds are getting high school diplomas. Math doesn't come easy to lots of people in the USA. Even if we're "teaching math properly/assigning enough homework problems/exercising the students' minds," lots of them won't "get it." Education Realist has an interesting post on, "The myth of 'they weren't ever taught ...'" <http://educationrealist.wordpress.com/2012/07/01/the-myth-of-they-werent-ever-taught/>

GB (2013-09-24 12:32:55)

Malcolm Gladwell outlined some interesting theories on this in Outliers. His ideas sound plausible, but I have no idea if they're valid: [http://chineseculture.about.com/b/2008/12/16/why-are-chinese-better-at-math.h tm](http://chineseculture.about.com/b/2008/12/16/why-are-chinese-better-at-math.htm)

jon (2013-09-24 12:42:50)

Robinson (of the Robinson Curriculum) had his kids teach themselves math from second grade on (among other subjects). They would finish calculus between the ages of 14 and 17. Although I don't necessarily agree with all of Robinson's methods it shows that people are very capable. Government schooling is a waste of time, even private schools. Best just to home educate if possible.

Seth Roberts (2013-09-24 13:10:18)

"Imagined parental-power over the vast calcified government school empire is extremely naive." I didn't say that - that parents have control over the "school empire". I don't know what would happen if parents had a better idea of how bad American education is relative to other countries that also engage in "despotic . . . compulsory mass schooling". (My anecdote at least suggests that compulsory mass schooling is not the only problem.) I am much less sure than you that the answer is obvious. I think recent history supports your claim of powerlessness. Michelle Rhee, Diane Ravitch, Geoffrey Canada - none of them derived power from parents. But I also think most parents don't understand how far America is behind other countries.

Lew (2013-09-24 13:36:58)

My 15-yr old son is doing AP Calculus along with some of his high school friends of the same age. I think he could have handled it a 2-3 years ago. He's on the same curriculum path his 2 older brothers took. And our family isn't even Asian.

S.M. (2013-09-24 14:06:49)

"I don't know how many countries require passing calculus to graduate high school. If they are honest in their testing (a very big if), then nowhere near 100 % of their 18 year olds are getting high school diplomas." "The Chinese students may have a higher aptitude for math that allows for a steeper learning curve than American students could tolerate. In my town, even the American born Chinese students seem to have a relatively high aptitude for math." I have counter-examples for both of these statements. I am an Eastern European - schooled there up to finishing high school. We did high-level calculus in grades 10-12 and most students were pretty good at it. Most of them were white. I don't think you have to be Chinese (or Asian) in order to understand it. Most Eastern European countries have similar math courses in high school and do high level math for grades 5-8. Testing is fair. I don't know much about Western Europe. I went to college in the US. In my first year I was taking differential equations and doing fine while most American peers were seniors. Eastern European friends that moved to the US during high-school often mentioned how their math and science classes were "so easy" because they did that material 4-5 years previously. I don't have direct experience with this but tend to agree. I'm not blaming parent involvement or teacher or anything. I have a distinct feeling that US education was on par with most European schools in terms of difficulty (pre-undergraduate) but schools started to focus on standardized tests and what not and started to "teach to the test". The SAT only has very basic math in it. The GRE also deals with pretty basic math. I got really high scores in both on first try without years of standardized testing experience or preparation. I am in no way a genius; most of my high school classmates probably would have scored similarly. P.S. Something that might contribute to this - Eastern European students tend to "specialize" before high school. Some of them go the math/science route, and take exams to get into those courses, and follow a mainly science curriculum, others do art/music and all that implies, and others do humanities. The students themselves have to discover their aptitudes and needs and apply for the route to match. Most humanities students only take basic math and are never expected to take calculus for their final graduation exam for example. While science route students have to and their work is mostly centered around scientific subjects. Maybe that focus has something to do with it? Seth: Good comment. Including correct use of "steep learning curve", which is rare.

dearieme (2013-09-24 15:48:04)

"I have a distinct feeling that US education was on par with most European schools in terms of difficulty (pre-undergraduate)": no. I can remember the debates in Britain in the late sixties when the Forces of Progress were determined on "comprehensivisation" in the secondary schools. "We want to copy the US" they said. Their opponents howled with anguish: everyone with experience of sending children to American schools seemed to leap into the fray, dismissing American standards as hopelessly undemanding. It was, such people said, the Germans and French from whom we should learn about secondary schooling - it was only at graduate school level that we needed to learn from the US. I've spent most of my career in good universities and everything I and my colleagues have seen - on academic leave, on teaching American visiting students, and so on - says that the Forces of Conservatism were right in the sixties. Indeed, in spite of decades of the dragging down of British standards, American schoolchildren still manage to be more poorly prepared for undergraduate studies, it seems. Nor is the problem remotely confined to STEM subjects: colleagues have reported the problem to be worse in languages, with Americans expecting to work from translations into English rather than reading in the original tongue. The fact that few Americans seem to know much history or geography is also remarked on. The tragedy of all this is that the American exchange undergraduates that I've taught have been clever, unusually keen to learn and very hardworking. By God they've been let down by the schools, and it would seem to have been a problem for generations. Seth: I agree with all this. The mere fact that it has to be said is one sign of how poorly Americans grasp how badly their education system works, compared to many other places. Why education reformers don't pound this - American kids much more poorly educated than other rich countries's kids - into us is a question I can't even begin to answer.

Education Realist (2013-09-24 15:54:28)

"If 80 % of American parents knew this, would they abide it?" Of course. They know it now. How is you think most parents



aren't completely aware of this fact? But of course, by "American parents" you mean suburban, probably white, parents. Asian parents living in this country are well aware. That's why many of them came here, to avoid the hyper-competitive atmosphere back in China and Korea—and it's why most of them pay for hagwons over here. But then, it's only a tiny fraction of "American parents" that delude themselves into thinking that students could be learning more, if only we bothered to teach it to them—or that the brightest kids are suffering by not learning material they could have learned in 4th grade in 8th. Cheating is rampant in China, and while they cover rote material quite well, it's very obvious that they aren't encouraging their kids to think critically. So distrust what you hear that "most" Chinese students are doing, because "most" of them cheat. And those who aren't cheating are desperately memorizing. That's why the Chinese have largely taken over the top 20 % of most elite US universities without having even begun to start taking over the country. And many, but not most, American parents know all that, too. Especially the ones who live next to lots of Chinese, Koreans, and Indians (who cheat, too). Some overstatement in this comment, but nowhere near as much as in your single "most American parents", so we're even. Seth: "They know it now". They do? They know education in other countries is better as measured by standardized tests – and some of them wonder whether the test scores coming out of China (comparing Chinese students to students in other countries) can be trusted. I don't trust them. I don't think most parents know concrete examples like this one. This example cannot be explained by cheating.

S.M. (2013-09-24 16:02:26)

dearieme - you might be right. I was basing my assumption on my professors' stories and impressions. I don't know how it was in the past. The more modern trend of standardizing everything certainly doesn't help. I have a similar experience of American undergraduates - they are quite clever, hardworking and keen on learning. My friends and I used to envy them on their "fun" experience with school. For us it was a very formal environment; American students pre-undergrad get to have more fun. We didn't have a well-stocked chemistry lab, so we did very few experiments and many more paper and pencil problem sets. My American friends did many more experiments. I guess the answer might be somewhere in the middle? I do appreciate Seth's continuous efforts towards finding better ways of learning.

Nancy Lebovitz (2013-09-24 16:49:54)

I'm reminded of an NPR piece I heard a while ago– it claimed that elementary math in American schools is based on a theory that it should be dabbled at repeatedly in the hope that students will eventually pick it up, rather than thoroughly understanding a concept and then moving on.

Adam (2013-09-24 16:54:59)

This probably has something to do with Chinese education being completely focused on their college entry exam, the 高考. Chinese education emphasizes rote memorization above everything else, which I imagine is useful in math. They don't learn how to derive the answers, they just memorize which equation to use for which problem and that's that. While Chinese are able to do well in certain areas based on all of this, it doesn't foster creativity and Chinese children's lives are Hell compared to American children. After school they go to after school school and continue memorizing material for the next test. Very few of them play sports or have time to "just be kids". I remember when I was a kid I would go out in the forest behind my house after school & just play around, build forts & stuff for hours at a time. They say "time in nature" is highly correlated with empathy. Aside from creativity, another thing greatly lacking in Chinese culture is empathy. Don't get me wrong, this seems like a scathing rant about Chinese. I'm married to a Chinese woman & have lived here for 3 years. I do like aspects of China, but the price their kids pay to be "good at math" & to pass a stupid test is not worth it.

as (2013-09-24 18:09:59)

I don't understand what they get for all this. I can use myself as an example though I'm not Chinese. I spent a lot of time on math growing up. All I could really do, however, is solve a given type of math problem fast. And then, over time, I'd probably forget the lesson that I'd learned. I was also part of the math competition team. I didn't really do anything useful or interesting with the math I learned. I didn't use it to solve any real world problems. I don't really use any of the math I learned at my job. In fact, when I look back on it, I wish I'd spent less time on math. I took way too many classes. I wish I'd looked ahead to figure out how much math I'd need later on in life and only done that.

Jim B (2013-09-24 19:04:01)

A co-worker from China told me that the reason they are better than us at math is that they teach their kids to count on their fingers. We have been using the fingermath method to homeschool our kids. <http://www.amazon.com/The-Complete-Book-Fingermath-Scientific/dp/0070376808> The book was meant to be a textbook (in the 70's?), but it never caught on. It is essentially a "finger abacus". Right hand is ones, left is 10's, thumbs are units of 5. You teach the kids how to transition (once you put all four fingers down, you pop them up and put down your thumb – thumb and four fingers down, then you pop them up and put down a finger on your left hand). They are the ultimate math manipulative. My daughter is starting second grade math. All the topics are redundant - carrying? It is obvious with finger math. Borrowing? Obvious. Having the numbers written horizontally instead of vertically? No need to rewrite. Moving on to multiplication–skip counting by 5s? By 10s? No need to drill, just show it to her. If all or most Chinese learn like this, a chunk of our basic math program is redundant. On top of that, the Chinese kids would probably have a better "number sense", and less math anxiety.

Seth Roberts (2013-09-24 19:39:39)

"I don't understand what they get for all this." That's a good question. I was good at math as a kid. Now it's helpful with statistics, which I use all the time. Many psychology professors seem afraid of statistics. This is a huge problem for them because they often let other people analyze their data. It inevitably gets analyzed badly but they are unaware of this. Chinese students who get a perfect score on the math GRE, as many do, find it easier to go to graduate school in America. I think math ability makes engineering more of a possible job. A friend of mine at Berkeley wanted to be a doctor. She changed her mind after her first science class. Maybe better math would have helped.

S.M. (2013-09-25 02:59:17)

I often asked myself what will I do with all that math/science I took as I child. And trust me it was a lot. Often times we would skip sports class and do math. As a child I did find it sometimes useless. From what I can tell so far it's that it does "shape" your brain somehow. People who take the math/science route from my country have some aptitude in it, but for the most part, they end up at the end of it all thinking in a more analytic manner. It was very easy for us to pick up new science subjects in college, or to get good at programming fast, because of the way our brains were "re-wired". Even in our current jobs it's much easier for us to grasp certain scientific subjects or understand things that seem to baffle the humanities folk. We're not doing math exactly, but I am pretty sure we are using those connections that we formed in the past. I don't have any scientific proof of this, it's more of an observation. Wish somebody could do a study at some point to look at how school shapes your mind :)

Kirk (2013-09-25 10:30:42)

I had to take 20 hours of advanced math for my computer science degree, earning high grades in each class. In my work, I used a little bit of set theory but no other math concepts. So from my personal experience, I'm not convinced that America would be a better place if all kids learned more math. The Computer Science department grew out of the Math department. It was obvious they forced all those required math hours just to keep their math department employed. I am more worried about two related issues, both of which I have seen happen to kids I know. (By kids, I mean I knew them when they were friends of my children when young and now they're grown up and in their twenties.) The first: why are so many boys failing in school? The second: why do so many smart girls choose unemployable degrees?

Dragan (2013-09-25 10:48:58)

Seth, I'm curious as to the value of taking algebra by 4th grade? In my own socialist/"Communist" country (not China), 4th grade included Geometry and Algebra content–stuff beyond anything most US students learn till high school. I thought this was great, because I loved mathematics. But other kids, those who didn't love mathematics, didn't think it was so great. They fell behind pretty quickly. Then again, this was a system that did not try to educate all of its students. So it didn't matter if some kids were held back for a while because they couldn't master linear equations by 5th grade. China, I understand, is more similar to this than United States (where we try to educate every child). Given that most students simply do not need this knowledge, what is the value of this type of education? To produce "useful" citizens? If it's product is me, I have to tell you, I'm not particularly "useful"–my pure mathematics degree isn't really gonna help me do anything useful.

Dragan (2013-09-25 11:10:27)

One more thought. It seems that Seth and most of the commentators are aware of some international comparison studies I am not when they draw the conclusion that "most parents don't understand how far America is behind other countries." I guess I don't either! The standard, which I take to be TIMSS, shows U.S. 4th and 8th graders are doing fine, on average. Could be better, yes, but a far cry from what media and politicians tell us. For example, many people I talk to seem shocked to learn that we do better than Germany. In fact... In 8th grade, the 11 education systems with average mathematics scores above the U.S. score were (South) Korea, Singapore, Chinese Taipei (Taiwan), Hong Kong-CHN, Japan, Massachusetts-USA, Minnesota-USA, the Russian Federation, North Carolina-USA, Quebec-CAN, and Indiana-USA. Note that 4 of those 11 were states in the US! The countries which do outscore us are very different than the United States. Education-focused culture, homogeneous, and/or not interested in educating the bottom 20 % of students. Given that United States cooperatively downplays the importance of education, is heterogeneous, and attempts to educate all students, I genuinely don't see how we're so far behind as many here assume.

Education Realist (2013-09-25 11:38:49)

"This example cannot be explained by cheating." No. It could possibly be explained by rote learning. It could also simply be that your friend's daughter was smart. By no means does it mean that the Chinese are that much more advanced than we are. And most parents would know, I hope, not to think one concrete example was evidence of what's going on in a huge country like China.

Seth Roberts (2013-09-25 13:19:33)

"It could also simply be that your friend's daughter was smart. By no means does it mean that the Chinese are that much more advanced than we are." I will find out if my friend was in a special school or class.

Roger Sweeny (2013-09-25 19:09:41)

S.M., I think you may be agreeing with me. I said, "I don't know how many countries require passing calculus to graduate high school. If they are honest in their testing (a very big if), then nowhere near 100 % of their 18 year olds are getting high school diplomas." You said that your fellow students took calculus but they had specialized before they entered high school and the non-science specialists didn't take calculus. I don't doubt that some high school students can handle calculus. Even some 14 year olds can (e.g., the kids you mentioned). However, most American 17 year olds simply cannot. And I feel fairly sure that there is nowhere in the world where close to 100 % can.

Carlos (2013-09-26 00:13:45)

It is not only the Chinese children. I am from Spain and was an exchange student in Iowa where I did the 11th grade. Math was really easy for me because I had already learnt everything they were teaching two years before. But it was not only math, the same happened with Physics and Chemistry where I got the best grades of my class without even trying for the same reason, everything they were teaching I had already learnt before.

### **"Trying to Confuse You": Pluses and Minuses of the Professorial Value System (2013-09-25 05:00)**

A Chinese friend of mine is a chemistry major. In one of her classes, the textbook was so hard to understand she said the authors are "trying to confuse you." They use difficult words, for example. A Berkeley art history major told me much the same thing. In her reading assignments, she said, the writers couldn't write a sentence without a few big words. They were trying to impress readers, she believed.

Yes, professors write badly – in these two cases, the writing seemed actively bad. Thorstein Veblen wrote a whole book about showing off (The Theory of the Leisure Class). One chapter was about professors. They show off, said Veblen, by doing research with no practical application and by writing obscurely. Obscure writing is showing off because, like useless research, it shows you don't have to care what other people think ("it carries a pointed suggestion

of the industrial exemption of the speaker”).

Veblen said little about the costs and benefits of the behavior he described, beyond calling it wasteful. I say the opposite – not wasteful at all. When, long ago, people bought “useless” (“deadweight loss”) gifts or “useless” hood ornaments or decorated buildings with “useless” ornamentation or performed “useless” rituals and ceremonies that require special products (e.g., special clothes), they subsidized skilled artisans. For a long time, that was incredibly important. Research by skilled artisans led to better tools, the creation of metals, and so on. Helping those artisans make a living supported (increased) research in material science. Pushing people toward “useless” research was valuable because it diversified the research being done – there are many ways to be useless, just as you can misspell a word more ways than you can spell it correctly. The most important discoveries, such as electricity, would not have been made if everyone tried to do research with obvious application. Allowing professors to use big words and write badly is a small price to pay for the valuable “useless” research they perform.

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Ad

I use Grammarly for [1]proofreading because . . . well, just because.

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There is an unrecognized problem with this, however. If you get one group of people to do “useless” research by turning things upside down so that useless is seen as better than useful (professors value “pure” research over “applied” research), it becomes very hard for them to do useful research. For a long time, practically all important research was material science research – how to control the material world. When something useful was discovered via “useless” research, the knowledge could be transferred to everyone else, who had normal values (useful is better than useless). Everyone else went on to use the knowledge in profitable ways – to make better knives, for example. This system (the results of “useless” research are used by other people to make a profit) gave us the world we live in, a world of wonderful products. The products on offer are staggering in their diversity, low cost, and general excellence. The hard drive on my laptop, the clothes I wear, for example.

Against this brilliant control of materials we can put our amazing lack of control of our bodies. A large fraction of Americans sleep poorly. Nothing (such as street noise) is making them sleep badly; they just don’t know how to sleep well. Depression is a huge problem, obesity is a huge problem (in America), and so on. It isn’t just ordinary people. Sleep experts don’t know how to improve sleep, weight control experts don’t know how to lose weight, psychiatrists don’t know how to prevent depression, and so on. Closely related to this is our health care system. It is dominated by doctors, who often use a peculiar and self-serving reasoning I call [2]doctor logic. When I was a graduate student, my dermatologist was surprised when I measured my acne to see if the treatments he prescribed actually worked. It was a new idea to him. An influential Stanford psychiatrist named David Burns, whose famous book has sold millions of copies, [3]has not yet figured out it would be a good idea to measure daily the mood of his patients. (Other psychiatrists are even worse.)

Why are we so smart about materials and so stupid about health – which is far more important? I think it is because the whole system evolved to push our economy forward via advances in material science. For hundreds of thousands of years, that is where improvement was possible: better stuff, such as better tools. The same “habits of mind” (as Veblen would say) and research system has managed to produce plenty of “useless” knowledge outside of material science. This knowledge can be translated into useful discoveries, as I have done ([4]new ways to sleep better, lose weight, be in a better mood, and so on), but these discoveries don’t lead to products, at least not in obvious ways. Control of our bodies is quite different than making something physical. My first interesting self-experimental

discovery was that eating breakfast made my sleep worse. That's very useful, but not at all profitable – there is no obvious associated product. For professors, a problem with my discovery is that it's useful. (Another problem is that it's small.) For everyone else, a problem is that it isn't profitable. The system that worked so well for material science breaks down when it comes to health science.

Yet the fact that you are reading this suggests, at least to me, that a big change is coming.

1. <http://www.grammarly.com/>
2. <http://blog.sethroberts.net/category/health-care/doctor-logic/>
3. [http://alumni.stanford.edu/get/page/magazine/article/?article\\_id=64350](http://alumni.stanford.edu/get/page/magazine/article/?article_id=64350)
4. <http://escholarship.org/uc/item/2xc2h866/>

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Glen Raphael (2013-09-25 10:00:39)

The link to "has not yet figured out" is broken.

Seth Roberts (2013-09-25 13:43:56)

I have fixed the broken link ... however it linked to a post that has not yet appeared so the fixed link will be a little puzzling. It now links to evidence for the statement.

Alex Chernavsky (2013-09-25 19:02:23)

See also, "Postmodernism Disrobed", by Richard Dawkins. Here's a sample:

Suppose you are an intellectual impostor with nothing to say, but with strong ambitions to succeed in academic life, collect a coterie of reverent disciples and have students around the world anoint your pages with respectful yellow highlighter. What kind of literary style would you cultivate? Not a lucid one, surely, for clarity would expose your lack of content. The chances are that you would produce something like the following: "We can clearly see that there is no bi-univocal correspondence between linear signifying links or archi-writing, depending on the author, and this multireferential, multi-dimensional machinic catalysis. The symmetry of scale, the transversality, the pathic non-discursive character of their expansion: all these dimensions remove us from the logic of the excluded middle and reinforce us in our dismissal of the ontological binarism we criticised previously."

<http://old.richarddawkins.net/articles/824>

shtove (2013-09-26 13:26:18)

@ Alex. I recall reading a passage in Jacques Lacan - he wrote something like: "I am deliberately making this hard to follow because otherwise it would not be worth writing". Years ago, never been able to track it down with google. Seth: yeah, that's a nice summing up.

shtove (2013-09-26 13:44:22)

ps. the postmodernism generator mentioned in Dawkins doesn't seem to work anymore, but the archive on the website also has a section for generated adolescent poetry: <http://www.elsewhere.org/hbzpoetry/>

## Queen Late (2013-09-26 05:00)

When a Chinese friend of mine was in first grade, she was habitually late for school. Usually about ten minutes. Her mom took her to school on a bike. One day she was 20 minutes late. The door was closed. My friend opened the door. "May I come in?" she asked the teacher. The teacher came to the door. She took my friend to the front of the class. "Here is Queen Late (???)", she said.

Everyone laughed, including my friend. She thought it was a funny thing to say, not mean. The name stuck. Many years later, she was called Queen Late by those who knew her in primary school. Her teacher was not a great wit. Other students at other schools were called the same thing. It was/is a standard joke.

Sometimes I think Chinese have, on average, a better sense of humor than Americans, but who really knows? A more interesting contrast is how lateness is handled. At UC Berkeley, about 20 years ago, I attended a large lecture class (Poli Sci 3, Comparative Politics) taught by Ken Jowitt, a political science professor. Jowitt was considered an excellent lecturer, which was why I was there, but he was also famous for being hard on students who came in late. When I was there, a student came in late. Jowitt interrupted what he was saying to point out the offender and said something derogatory. I don't remember what Jowitt said but I do remember thinking – as someone who also taught large lecture classes where students came in late – that he was making a mountain, an unattractive mountain, out of a molehill. It didn't occur to me to wonder how he could have dealt with the problem in a way that made everyone laugh.

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Kitty (2013-09-26 13:12:16)

I had several professors in college who disrupted the class far more with their offense at latecomers than did the tardy students themselves. One actually stopped talking, walked to the door, yanked in the late students physically, slammed the door and yelled that no one else was to be let in (it was unclear as to who was to enforce this). It made us all very uncomfortable not just for the remainder of the class, but for the rest of the semester. We tell new members to my book club that we start at 7:00, or 7:15 if you are on "Donna time," obviously named for a member who is chronically late. Also not particularly witty, but amusing to us nonetheless.

dearieme (2013-09-26 13:12:23)

"Sometimes I think Chinese have, on average, a better sense of humor than Americans, ...": what's the opposite of 'fishing for compliments'? Seth: Uh, "fishing for insults"?

Alex Chernavsky (2013-09-26 19:23:55)

My ex-roommate from college entered the New York State Police Academy after graduation. He told me that one of the cadets had a habit of falling asleep at inappropriate times. Eventually, the instructors called the whole class for an assembly in the auditorium. Then they made the sleepy student move his bed from his dorm room to the stage. He then had to get into his bed and "sleep" in front of his classmates.

d-day (2013-09-26 23:42:24)

When I was in law school, a professor intensely disliked lateness. During the first week, a student came in just a few seconds after the start of class, she humiliated him by demanding, in front of the whole class, to know the answer to the question. There was, of course, no question, and the poor guy was so embarrassed while she browbeat him that the rest of the students were very uncomfortable on his behalf. Finally she said "the answer is 'yes.' Now go sit down." Which I learned after the fact, since I walked in a minute after that. I tried to slip into my chair unnoticed but she demanded to know the answer to the (nonexistent) question. I said "yes"—thinking, hey, I've got a 50/50 shot!—and sat down. The entire class burst into applause, the teacher blushed purple, and then told me to leave her class and pick up my law degree on the way out because I didn't need her class. I had no idea what was going on, but the class continued laughing so and I stayed put. It was a cool moment—how often do 100 people clap for a display of bravado—and a really, really uncomfortable semester. Unfortunately, I wasn't able to learn the lesson enough to cure my chronic lateness, which continues 12 years later despite some occasionally awful consequences. I've tried setting alarms and timers and keeping records of how long things take, but the answer is always "10 minutes more than you think." I wish you had a not-being-late hack that worked as well as brown noise and magic dots. Seth: I try to get everywhere 10 minutes early. I end up getting there a few minutes early.

dearieme (2013-09-27 02:36:54)

"Seth: Uh, "fishing for insults"?" I was hoping that there was an idiom. Latecomers: I never minded in the least someone who quietly entered by a rear door and sat down without disturbing her classmates. People who entered late by a front door and started to walk across the room between me and the class would find themselves ushered out and advised on the whereabouts of the back door. If they ever tried it a second time I'd usher them out, explain that they were in danger of being reported to a disciplinary officer, and tell them to fuck off. That worked. Seth: That's reasonable. The student Jowitt made an example of had entered quietly through a back door. No one would have noticed if Jowitt hadn't made a fuss. Maybe the idiom you are looking for is "making a mountain out of a molehill". In Jowitt's case, it wasn't even a molehill.

### Assorted Links (2013-09-27 05:00)

- [1]How little is known about tinnitus
- [2]Michael Lewis on Greg Smith's book. Published months ago. "The dystopia often imagined in the world of artificial intelligence—in which computers somehow take on a life of their own and come to rule mankind—has actually happened in the world of finance. The giant Wall Street firms have taken on lives of their own, beyond human control. The people flow into and out of them but have only incidental effect on their direction and behavior."
- [3]The price of admission to the Chinese Academy of Sciences. "Businessmen seeking ministry contracts learned of Zhang's nomination and offered to help. . . . Zhang, using a slush fund provided by the businessmen, cloistered 30 experts from mostly ministry-affiliated universities and research institutes in a hotel for 2 months, during which time they churned out three books on high-speed rail technology that were credited to Zhang."
- Why was Matthew Shepard killed? I have not yet read [4]this book (I will) but it sounds so good I am happy to publicize it before that. [5]It is being ignored. It supports a theme of Ron Unz and this blog, that lots of what we are told is wrong.
- Someone leaving graduate school at École polytechnique fédérale de Lausanne [6]explains why he is leaving only a few months before finishing his Ph.d. His complaints about professional (academic) science resemble mine – for example, the dominant role of will this help my career? in all decisions.

Thanks to Joyce Cohen and Allan Jackson.

1. [http://www.tinnitusresearch.org/en/information/information\\_en.php](http://www.tinnitusresearch.org/en/information/information_en.php)
2. <http://www.newrepublic.com/article/112209/michael-lewis-goldman-sachs>
3. <http://news.sciencemag.org/asiapacific/2013/09/true-cost-becoming-academician-china>
4. [http://www.amazon.com/The-Book-Matt-Matthew-Shepard/dp/1586422146/?\\_encoding=UTF8&camp=1789&creative=9325&linkCode=ur2&tag=vd0b-20](http://www.amazon.com/The-Book-Matt-Matthew-Shepard/dp/1586422146/?_encoding=UTF8&camp=1789&creative=9325&linkCode=ur2&tag=vd0b-20)
5. <http://newsbusters.org/blogs/noel-sheppard/2013/09/24/media-almost-totally-ignore-book-claiming-matthew-shepard-murder-wasn>
6. <http://crypto.junod.info/2013/09/09/an-aspiring-scientists-frustration-with-modern-day-academia-a-resignation/>

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Sentinel (2013-09-27 09:24:10)

Seth, I wonder if you have an opinion on Dr. John Sarno and his theory of Tension Myoneural Syndrome (TMS, the idea that much physical pain, especially back and neck pain, is caused by a mindbody disorder whereby the mind represses unconscious rage by creating a physical distraction through the autimmune system via reducing the flow of blood to certain muscles). The reason I mention it is that he surmises that tinnitus could also be a similar mindbody disorder, controllable (like TMS) through a process of becoming aware of the rage-oriented contents of the unconscious. I had considerable success in eliminating back, neck and wrist pain through application of his methods. Though I did not set out to eliminate my tinnitus through his method, the tinnitus (years long and very annoying) totally went away around the same time. Regards,

JM (2013-09-27 13:50:57)

Regarding tinnitus, my husband recently gave up taking statin drugs, one reason was because they gave him tinnitus - which would start after he took a dose and gradually fade (he was taking a dose every other day before he gave it up completely). It was only one of many side effects that bothered him but one I had never heard of before. And this was on a fairly low dose.

CC (2013-09-27 15:29:01)

Sentinel, I'm not sure if you saw this but the 20/20 report on Dr. Sarno was awesome: <http://www.youtube.com/watch?v=vsR4wydiIBI>

Sentinel (2013-09-27 15:44:12)

CC, thank you. I actually HAVE seen that! Sarno notably did experimentation on himself in the course of developing his theories.

Nancy Lebovitz (2013-09-27 19:25:07)

I manage my tinnitus (right ear) by running my attention down a muscle on the right side of my neck for a few minutes. Unfortunately, it doesn't work if I try to notice the moment when the tinnitus disappears, but there's a reliable correlation between doing the relaxation technique and the tinnitus going away for weeks or months. Being able to manage something that's supposed to be incurable contributes to my cynicism about medicine- this doesn't mean I think all tinnitus has the same cause or the same cure. I don't have a history of exposure to loud sounds, for example. My tinnitus seems to be correlated with worrying about money.

Kitty (2013-09-27 23:48:44)

I can't wait to read the book about Matthew Shepard. If you like reading "everybody got it wrong" books, I highly recommend [i]Columbine[/i] by Dave Cullen. If you haven't, everything you thought you knew about the murders is wrong.

Jim (2013-09-28 11:09:36)

Seth, I think I cured my tinnitus with the low carb, high fat diet that I used to fix type 2 diabetes. My ears used to ring fairly loudly, especially at night and sometimes also had a low frequency throbbing in my right ear. The right ear problem is gone



and I now go for days without hearing any higher frequency ringing. I knew from random blog reading that LCHF works for lots of people on diabetes but I haven't seen anything on tinnitus. It probably took 3-6 months before I realized this helped and it could be that I was still tweaking my diet and something specific did it. For example I got more careful about lowering omega-6 fats which I've read is related to inflammation levels. In any event, it's interesting that a generally irreversible, serious condition is fixed.

Leftblank (2013-10-02 07:59:05)

Seth, Watching this video makes me think flavor scientists have reverse-engineered the SLD to create the Doritos Locos Taco for Taco Bell. <http://www.nytimes.com/2013/10/02/dining/the-nacho-dorito.html> There is a reference to an effort to avoid adding a specific flavor to trigger satiety, and an attempt to prolong the odor so that more hunger is triggered. It almost makes you think these scientists know exactly how to thwart efforts at appetite control.

## **Progress in Psychiatry and Psychotherapy: The Half-Full Glass (2013-09-28 05:00)**

[1]Here is an excellent introduction to cognitive-behavioral therapy (CBT) for depression, centering on a Stanford psychiatrist named David Burns. I was especially interested in this:

[Burns] currently draws from at least 15 schools of therapy, calling his methodology TEAM—for testing, empathy, agenda setting and methods. . . . Testing means requiring that patients complete a short mood survey before and after each therapy session. In Chicago, Burns asks how many of the therapists [in the audience] do this. Only three [out of 100] raise their hands. Then how can they know if their patients are making progress? Burns asks. How would they feel if their own doctors didn't take their blood pressure during each check-up?

Burns says that in the 1970s at Penn [where he learned about CBT], "They didn't measure because there was no expectation that there would be a significant change in a single session or even over a course of months." Forty years later, it's shocking that so little attention is paid to measuring whether therapy makes a difference. . . . "Therapists falsely believe that their impression or gut instinct about what the patient is feeling is accurate," says May [a Stanford-educated Bay Area psychiatrist], when in fact their accuracy is very low.

When I was a graduate student, I started measuring my acne. One day I told my dermatologist what I'd found. "Why did you do that?" he asked. He really didn't know. Many years later, an influential psychiatrist – Burns, whose *Feeling Good* book, a popularization of CBT, has sold millions of copies – tells therapists to give patients a mood survey. That's progress.

But it is also a testament to the backward thinking of doctors and therapists that Burns didn't tell his audience:

- have patients fill out a mood survey every day
- graph the results

Even more advanced:

- use the mood scores to measure the effects of different treatments

Three cheap safe things. It is obvious they would help patients. Apparently Burns doesn't do these things with his own patients, even though his own therapy (TEAM) stresses "testing" and "methods". It's 2013. Not only do psychiatrists

and therapists not do these things, they don't even think of doing them. I seem to be the first to suggest them.

Thanks to Alex Chernavsky.

1. [http://alumni.stanford.edu/get/page/magazine/article/?article\\_id=64350](http://alumni.stanford.edu/get/page/magazine/article/?article_id=64350)

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Alex Chernavsky (2013-09-28 09:44:53)

Here's another interesting article about psychotherapy. Science writer John Horgan discusses the "Dodo Effect":

"Dodo" refers to an episode in Lewis Carroll's fable *Alice's Adventures in Wonderland* in which Alice and other characters wash up onto an island. There they encounter a dodo bird who persuades them to race around the island. The dodo finally announces that the race is over and proclaims, "Everyone has won, and all must have prizes!" Over the last few decades, the psychologist Lester Luborsky of the University of Pennsylvania tested the dodo effect by comparing different psychotherapies, including psychoanalysis, cognitive-behavioral therapy and interpersonal therapy. His research confirmed that all methods are equally helpful to patients. [...] Other prominent researchers—notably Jerome Frank, a psychiatrist at Johns Hopkins—realized that the dodo effect undermined the validity of all psychotherapies. Frank's own research corroborated the dodo effect. In one study, he and colleagues provided depressed patients with three treatments: weekly individual therapy, weekly group therapy and minimal individual therapy, which consisted of just one half-hour session every two weeks. "To our astonishment and chagrin, patients in all three conditions showed the same average relief of symptoms," Frank wrote...

See: "[1]Cybertherapy, placebos and the dodo effect: Why psychotherapies never get better"

1. <http://blogs.scientificamerican.com/cross-check/2010/11/29/cybertherapy-placebos-and-the-dodo-effect-why-psychotherapies-never-get-better/>

Nancy Lebovitz (2013-09-28 09:52:20)

[http://lesswrong.com/lw/iqr/the\\_antiplacebo\\_effect/](http://lesswrong.com/lw/iqr/the_antiplacebo_effect/) #comments Discussion of the importance of tracking so people don't underestimate progress.

Franz (2013-10-04 03:49:09)

Filling out short mood surveys is pretty common when using CBT in the NHS in the UK, and I'm assuming pretty much anywhere that funders want to see effectiveness data (e.g. 42nd Street in Manchester near where I live which is a charity providing free counselling for young people). My experience of private therapists/counsellors is that they tend not to, though. Seth: Are the mood surveys daily? Or just when you come to offices for therapy? My guess is the latter.

### **"Science is the Belief in the Ignorance of Experts" – Richard Feynman (2013-09-29 05:00)**

"Science is the belief in the ignorance of experts," said the physicist Richard Feynman [1] in a 1966 talk to high-school science teachers. I think he meant science is the belief in the fallibility of experts. In the talk, he says science education should be about data – how to gather data to test ideas and get new ideas – not about conclusions ("the earth revolves around the sun"). And it should be about pointing out that experts are often wrong. I agree with all this.

However, I think the underlying idea – what Feynman seems to be saying – is simply wrong. Did Darwin come up with his ideas because he believed experts (the Pope?) were wrong? Of course not. Did Mendel do his pea experiments because he didn't trust experts? Again, of course not. Darwin and Mendel's work showed that the experts

were wrong but that's not why they did it. Nor do scientists today do their work for that reason. Scientists are themselves experts. Do they do science to reveal their own ignorance? No, that's blatantly wrong. If science is the belief in the ignorance of experts, and X is the belief in the ignorance of scientists, what is X? Our entire economy is based on expertise. I buy my car from experts in making cars, buy my bread from bread-making experts, and so on. The success of our economy teaches us we can rely on experts. Why should high-school science teachers say otherwise? If we can rely on experts, and science rests on the assumption that we can't, why do we need scientists? Is Feynman saying experts are wrong 1 % of the time, and that's why we need science?

I think what Feynman actually meant (but didn't say clearly) is science protects us against self-serving experts. If you want to talk about the protection-against-experts function of science, the heart of the matter isn't that experts are ignorant or fallible. It is that experts, including scientists, are self-serving. The less certainty in an area, the more experts in that area slant or distort the truth to benefit themselves. They exaggerate their understanding, for instance. A drug company understates bad side effects. (Calling this "ignorance" is too kind.) This is common, non-obvious, and worth teaching high-school students. Science journalists, who are grown ups and should know better, often [2]completely ignore this. So do other journalists. Science (data collection) is unexpectedly powerful because experts are wrong more often than a naive person would guess. The simplest data collection is to ask for an example.

When [3]Genius by James Gleick (a biography of Feynman) was published, I said it should have been titled Genius Manqué. This puzzled my friends. Feynman was a genius, I said, but lots of geniuses have had a bigger effect on the world. I heard Feynman himself describe how he came to invent Feynman diagrams. One day, when he was a graduate student. his advisor, John Wheeler, phoned him. "Dick," he said, "do you know why all electrons have the same charge? Because they're the same electron." One electron moves forward and backward in time creating all the electrons we observe. Feynman diagrams came from this idea. The Feynman Lectures on Physics were a big improvement over standard physics books – more emotional, more vivid, more thought-provoking – but contain far too little about data, in my opinion. Feynman failed to do what he told high school teachers to do.

1. [http://www.fotuva.org/feynman/what\\_is\\_science.html](http://www.fotuva.org/feynman/what_is_science.html)

2. <http://blog.sethroberts.net/2013/09/19/what-goes-unsaid-self-serving-heath-research/?preview=true>

3. [http://books.google.com/books/about/Genius.html?id=IWQ\\_y90P2uIC](http://books.google.com/books/about/Genius.html?id=IWQ_y90P2uIC)

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We need two different science classes. | Ordinary Times (2013-09-29 07:45:53)

[...] There is another definition of science though. And it is antithetical to the body-of-knowledge definition. Richard Feynman's description of it follows: (Also see Seth Roberts.) [...]

dearieme (2013-09-29 07:47:00)

"science education should be about data – not about conclusions" He did enjoy saying silly things to tease the scientific bourgeoisie. I suppose the proposition that science education should be about data, and conjectures, and hypotheses, and theories, and conclusions, and refutations, and scientific history, and .... was just too humdrum to say.

Bob (2013-09-29 08:15:11)

I think Feynman just fundamentally did not trust experts, authority, teachers, other scientists, etc. He was an extreme case. On his chalkboard at the time of his death he had written "What I cannot create I do not understand" and "Know how to solve every problem that has been solved". He felt the need to derive everything for himself. Heck, he didn't even trust dentists. He thought brushing your teeth was superstition. Seth: Yet he bought meat from meat experts, clothes from clothes experts, electricity from electricity experts, and so on. He flew on planes flown by flying experts. He trusted them with his money and

safety. I suppose if I had said this to him he would have said something like "expertise expands to fill areas of ignorance."

### Assorted Links (2013-09-30 05:00)

- [1]Moldy yogurt claimed unsafe, later [2]turns out to be safe.
- [3]Brain repair during sleep
- [4]Surprising effects of a high-carb diet, a Quantified Self talk by Greg Pomerantz. His low carb diet – that is, his previous diet – was red meat, eggs, butter and green (non-starchy) vegetables. Low-carb paleo with butter. His HbA1c went from 5.6 (low-carb) to 5.5 (high-carb).
- Speaking of "[5]doctors hurt you", [6]a letter to The New Yorker says that a herb common in Traditional Chinese Medicine causes liver cancer. "The traditional [medicinal] use of this family of highly nephrotoxic and carcinogenic herbs represents a significant problem for global public health."
- [7]Financial incentives increase C-sections
- [8]Positive correlation between Alzheimer's and cleanliness. In its use of principal component analysis and transformations (e.g., square root transformation), this paper is more sophisticated than most epidemiology.

Thanks to Alex Chernavsky.

1. <http://www.theguardian.com/business/2013/sep/05/chobani-greek-yoghurt-giant-recall>
2. <http://www.macon.com/2013/09/06/2648889/chobani-says-mold-in-yogurt-does.html>
3. [http://www.huffingtonpost.com/2013/09/04/sleep-myelin-brain-growth-repair\\_n\\_3860316.html?utm\\_hp\\_ref=mostpopular](http://www.huffingtonpost.com/2013/09/04/sleep-myelin-brain-growth-repair_n_3860316.html?utm_hp_ref=mostpopular)
4. <http://vimeo.com/73435170>
5. <http://blog.sethroberts.net/2013/09/08/dangerous-noise/>
6. [http://www.newyorker.com/magazine/letters/2013/09/16/130916mama\\_mail](http://www.newyorker.com/magazine/letters/2013/09/16/130916mama_mail)
7. <http://www.npr.org/blogs/health/2013/08/30/216479305/money-may-be-motivating-doctors-to-do-more-c-sections>
8. <http://emph.oxfordjournals.org/content/early/2013/08/11/emph.eot015.full.pdf+html>

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Alex (2013-09-30 06:25:13)

I read somewhere that the explanation for higher HbA1c is Low Carb -> Lower Blood Glucose -> Longer RBC lifespan -> Higher HbA1c

Jon (2013-09-30 10:13:43)

Here is an article explaining why HbA1c levels may be elevated by a low-carb diet, even if blood glucose levels are not: <http://chriskresser.com/why-hemoglobin-a1c-is-not-a-reliable-marker>

kxmoore (2013-09-30 21:14:26)

Pomerantz's experiment showed little change most health markers between a low and high carb diet. His carbs came

mostly from white rice and he eschewed gluten so I infer he ate little if any powdered carbs. It would be very interesting to see a follow-up experiment replacing the rice with bread to see if results correlated with this study: <http://www.ncbi.nlm.nih.gov/pubmed/22863169>

dearieme (2013-10-01 14:12:12)

"little change most health markers between a low and high carb diet": humph. Eat a mixed diet that includes plenty of fish, and a modicum of wine and beer. That's probably the way to bet.

Greg (2013-10-01 16:05:15)

Hi, thanks for the interest in my talk. I agree a1c is not a terribly reliable marker. I just reported it because the low carb advocates all said it was supposed to go up and it didn't. I wouldn't put much faith in that mouse study. For example, the C57BL/6N mice they used are known to get fat on a high fat diet. This doesn't usually happen to humans who eat high fat diets, so I'm a bit mystified why this mouse is considered a standard animal model for human obesity. I don't really pay much attention to animal studies any more unless the model they are using has been validated to be an accurate in humans (which is virtually never the case). I would not be surprised if bread had a different effect than rice – for one, it is much lower in water content, which likely affects the rate at which you can eat and digest it (the fact that rice is hard to eat fast may be one reason why it seems healthier than other carbs). Although I'm not gluten sensitive as far as I can tell, I don't eat much bread, so I'm not likely to try this experiment with bread. If you do though please let us know what happens.

James (2013-10-05 20:13:14)

<http://blog.ted.com/2013/06/06/tackling-sickness-at-its-source-an-interview-with-ted-book-author-rishi-manchanda/>

## 8.10 October

### "A Debt-Ceiling Breach Would be Very, Very, Very Bad" (2013-10-01 05:00)

At the end of [1]an article by Kevin Roose in New York about the effects of a debt-ceiling breach:

The bottom line: A debt-ceiling breach would be very, very, very bad.

Keep in mind that these are all hypothetical scenarios. Reality could be better, or much worse. The truth is that while we sort of know what a government shutdown would look like (since it's happened in the past), we have no idea what chaos a debt-ceiling breach could bring. If, in a month, we reach the X Date, run out of money, and are stuck in political stalemate, we'll be entering truly uncharted waters. And we'll be dealing our already-fragile economy what could amount to a knockout blow.

This is an example of something common: Someone who has never correctly predicted anything (in this case, Roose) telling the rest of us what will happen with certainty. If Roose is repeating what experts told him, he should have said who, and their track record. Roose is far from the only person making scary predictions without any evidence he can do better than chance. [2]Here is another example by Derek Thompson in The Atlantic.

The same thing happens with climate change, except that it is models, not people, making predictions. Models that have never predicted climate correctly – for example, none predicted the current pause in warming – are assumed to predict climate correctly. We are supposed to be really alarmed by their predictions. This makes no sense, but there it is. Hal Pashler and I [3]wrote about this problem in psychology.

A third example is the 2008 financial crisis. People who failed to predict the crisis were put in charge of fixing it. By failing to predict the crisis, they showed they didn't understand what caused it. It is transparently unwise to have your car fixed by someone who doesn't understand how cars work, but that's what happened. Only Nassim Taleb seems to have emphasized this. We expect scary predictions based on nothing from religious leaders – that's where the word apocalypse comes from. From journalists and the experts they rely on, not so attractive.

I don't know what will happen if there is a debt-ceiling breach. But at least I don't claim to ("very very very bad"). And at least I am aware of a possibility that Roose (and presumably the experts he consulted) don't seem to have thought of. A system is badly designed if a relatively-likely event (debt-ceiling breach) can cause disaster – as Roose claims. The apocalyptic possibilities give those in control of whether that event happens (e.g., Republican leaders in Congress) too much power – the power to scare credulous people. If there is a breach, we will find out what happens. If a poorly-built system falls down, it will be much easier to build a better one. Roose and other doom-sayers fail to see there are plausible arguments on both sides.

1. <http://nymag.com/daily/intelligencer/2013/09/what-happens-if-the-debt-ceiling-is-breached.html>

2. <http://www.theatlantic.com/business/archive/2013/09/you-really-ought-to-be-more-terrified-of-the-debt-ceiling/279993/>

3. <http://escholarship.org/uc/item/5vt0z72k>

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Brock in HK (2013-10-01 07:50:59)

The climate models are written by people, so it's still basically people making the predictions. It just sounds more official to say "the model says". The model says what the people who built the model want it to say. And with many models, it's GIGO.

kasy fiskalne warszawa (2013-10-01 08:41:36)

If a poorly-built system falls down, it will be much easier to build a better one.

B.B. (2013-10-02 09:13:16)

While I agree with some of what you say, not all. (1) We can know from experience and history how to treat diseases or financial crises even if we don't fully understand fundamentals. Science is never-ending. In that sense, there is always more to learn, which means we are all, always, ignorant about everything. (2) I can fail to predict earthquakes, but still can know how to send emergency relief to cities hurt by them. I can fail to predict a bout of the flu, but still know how to treat symptoms. I can fail to predict financial crises, but still can know how to respond to one. (3) History has plenty of examples of default on sovereign debt. Books of case histories have been written. We can see how Greece is doing right now. We can look at recent decades in Argentina. We can look at Russia in 1998. But there has not been a default on sovereign debt by a reserve currency ever that I know of, perhaps with the exception of the collapse of the Roman Empire. It is like playing Russian roulette: better not to test the hypothesis outside of a laboratory. (4) If someone with a bad record of making predictions warns you not to step in a bear trap, it might be wise to listen.

Seth Roberts (2013-10-02 16:37:39)

"I can fail to predict earthquakes, but still can know how to send emergency relief to cities hurt by them. I can fail to predict a bout of the flu, but still know how to treat symptoms. I can fail to predict financial crises, but still can know how to respond to one." You are arguing because you know how to send emergency relief and treat flu symptoms you know how to respond to a financial crisis? I hope not. 1. Earthquakes. We don't know what causes them, don't pretend to. 2. Flu. Do you know how to reduce how often you get the flu in the future? Probably not. Yet that would be a good idea. In

addition to treating symptoms. 3. Financial crisis. Surely it would be a good idea to reduce the chances of later crises. People who failed to predict the 2008 crisis are not good choices for doing this. I was talking about reducing risk, not treating symptoms.

Two Weesk Of Linsk | Rhymes With Cars & Girls (2013-10-08 16:16:07)  
[...] Seth Roberts on failed predictions in finance and climate [...]

JohnG (2013-10-11 15:20:12)  
bingo!

## **How Things Begin: Duke Check (2013-10-02 05:00)**

Ed Rickards, a retired lawyer and journalist, writes [1]Duke Check, a blog about Duke University, which I enjoy reading even though I have no connection with Duke. It emphasizes scandals and bad governance but also [2]praises. He started it in 2009. There have been plenty of scandals since then, including [3]the Anil Potti cancer research fraud.

I recently asked him a few questions.

Why did you start Duke Check?

I started DukeCheck – originally Duke Fact Checker – because of a lack of transparency and accountability on the part of the school's administration. You may want to review [4]this Chronicle profile, especially the comments from the late law professor John (Jack) Johnston, about the need for such a column and my goals. I want to provide stakeholders in Duke – students, parents, faculty, alumni, workers, everyone – with the information so that they can participate and have their thoughts count. I really do not care if they agree with me or not, just so long as they step forward.

After you graduated from Duke, did you have further association with the school (e.g., worked there)?

I graduated from Duke 1963 and Duke Law 1966. No, I never worked for Duke or had any relationship other than alum. I continued to stay in touch, I wrote various letters about my feelings, but the internet is what opened it all up. and made it possible for me to write my blog from either NY (where I used to live) or Coconut Grove (dead of the winter). I have recently closed up NY and live near Princeton NJ . . . on a golf course which is a big switch.

Have you ever been a professional writer?

After brief flirtation with the law, and a job in private equity that was totally boring, I returned to my first love, Journalism, which attracted me while I was in college, and also during the summers when I worked for a local daily newspaper in my hometown. I have worked at the Associated Press, ABC, CBS and NBC, so I have been all around!

[This makes Duke Check a super-hobby – combining the freedom of a hobby with the skills of a professional. This blog, too, is a super-hobby.]

Duke has just opened a campus in China, in [5]Kunshan, which is near Shanghai. The campus is called Duke Kunshan University (DKU). Does the DKU story point to/illustrate any general lesson(s)?

The DKU story will end with an empty campus in Kunshan. Many colleges have hit brick walls with their international adventures and this will be another. 15 years ago, Duke was gung-ho to open in Frankfurt; our president at

the time, Nan Keohane, held an international news conference linked by satellite with reporters asking questions in Durham, NY, and Frankfurt. Six years, \$15 to 20 million later, it died.

Duke should pursue international opportunities; but trying to export bricks and mortar to China will not fly. For one thing, academic freedom is a very strong tradition at Duke, and no Chinese leader will tolerate it. The new campus cannot teach nor allow religious services. We were founded by Quakers and Methodists.

We also see our administration going overboard on finances. At a time when money is tight, unbelievably tight, we're exporting green like mad. The numbers do not add up: number of students, amount we can charge them. This may well be the first thing to implode, academic freedom the 2nd.

1. <http://dukecheck.com/>
2. <http://dukecheck.com/?p=16535>
3. [http://www.cbsnews.com/8301-18560\\_162-57376073/deception-at-duke-fraud-in-cancer-care/](http://www.cbsnews.com/8301-18560_162-57376073/deception-at-duke-fraud-in-cancer-care/)
4. <http://www.dukechronicle.com/articles/2011/10/25/fact-checker-story-universitys-unorthodox-critic>
5. <http://en.wikipedia.org/wiki/Kunshan>

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dearieme (2013-10-03 07:02:00)

Talking of scandals ... [http://cardiobrief.org/2013/10/02/new-questions-raised-about-italian-cardiolo\\_gists-already-under-cloud-of-suspicion/](http://cardiobrief.org/2013/10/02/new-questions-raised-about-italian-cardiolo_gists-already-under-cloud-of-suspicion/)

### **JFK Assassination Diary by Edward Jay Epstein (2013-10-03 01:02)**

Edward Jay Epstein has just published a new book called *The JFK Assassination Diary* based on the diary he kept when he wrote *Inquest*. It is available on [1]Kindle, Nook and as an iTunes ebook. It will soon be available in paperback.

He wrote me about it:

As you know I was the only person to interview the Warren Commission as well as its staff and liaisons with the intelligence services. I did these interviews as an undergraduate at Cornell with no credentials as a journalist, scholar, or author. My interviews also produced a revelation that shook the journalistic establishment, which had been blithely reporting until the publication of my book *Inquest* that the Commission had left no stone unturned in an exhaustive investigation. In fact, as I showed, it was a brief, sporadic, and incomplete investigation. Indeed one in which the senior staff lawyer in charge of the crime scene investigation quit after two days, and the young lawyer who took his place, Arlen Specter, was never able to view the single most crucial piece of evidence – the autopsy photographs. The Commission was never able to obtain them, nor other pieces of evidence, because Robert Kennedy blocked it. For the same reason, the Commission was not provided with any information about a parallel plot to kill Castro in 1963. The Commission could not connect dots to which it was denied access.

I had no problem getting this information. Many of the young lawyers on the staff were furious with the way the investigation had been handled and the time pressure imposed on them. So they gave me FBI reports, payroll records and their memos, without me even asking. This raises a question. As these



lawyers and Commission members were not bound by any secrecy agreement, as amazing as that might seem nowadays, why had not journalists from major news organizations sought the same information from them? After all, in 1963, the Kennedy assassination was the crime of the century. Fifty years later, I still cannot answer this question.

A very good question. Why weren't journalists from major news organizations more . . . enterprising? It is [2]another variation on The Emperor's New Clothes, where a Cornell undergraduate manages to see what many much more experienced and credentialed experts failed to see, or avoided seeing. I would answer Epstein's question like this: The experts were disinterested in gathering evidence that might contradict their world view. That world view included a belief in the competence of exceedingly important government commissions. They didn't want to gather evidence that might make them uncomfortable. I see this every year at Nobel Prize time. No journalist ever questions the claims in the press releases that accompany the prizes.

1. [http://www.amazon.com/ASSASSINATION-ANSWERS-MYSTERY-CENTURY-ebook/dp/B00FHLKDM2/ref=sr\\_1\\_1?ie=UTF8&qid=1380804459&sr=8-1&keywords=jfk+assassination+diary](http://www.amazon.com/ASSASSINATION-ANSWERS-MYSTERY-CENTURY-ebook/dp/B00FHLKDM2/ref=sr_1_1?ie=UTF8&qid=1380804459&sr=8-1&keywords=jfk+assassination+diary)
2. <http://blog.sethroberts.net/2010/04/27/the-emperors-new-clothes-trilogy/>

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dearieme (2013-10-03 03:09:58)

Normally I pay no heed to JFK assassination yarns, but I saw one the other day that raised a wry smile. The proposition was that when JFK was first shot, the car behind jolted and a secret service man aboard accidentally fired a shot which was the one that removed much of Kennedy's head. The wry smile was caused by the thought that many of the claimed inconsistencies in the evidence might be explained not by a huge conspiracy, but by a simple accident. On the who gains principle, LBJ must be the main suspect. On the principle of cuckolded men seeking revenge, the field is too large to contemplate. As for why journalists are not inquisitive, the answer is probably the same as for why dogs lick their balls.

Mark Sanders (2013-10-03 11:06:43)

Related to this is how some investigations refuse to consider eye-witness evidence. My vague memory after all these years is that people heard bullets coming from a different direction than from the window where Oswald was. This testimony was discounted. But here are two other incidents where this happened: 1. The airplane that blew up in the sky over the south shore of Long Island back in (I think) the early 90's. Many eyewitnesses on the beaches said they saw something flying in the sky hit the airplane. This included ex-military people who knew what a missile looked like in the air. All of these testimonies were discarded in the investigation because they obviously didn't know what they were looking at. I remember a ridiculous animation put on TV by the government that tried to explain that the aircraft just broke in half somehow on its own. What was funny was that parts of their explanation apparently conflicted with the laws of gravity and other scientific basics. 2. Again in the 90s I think, an American ship shot down an Iranian civilian airplane, killing many people. The electronic equipment on the ship somehow convinced the commander that it was a military plane and had to be shot down because of where it was and how it was maneuvering. However, sailors on the ship were able to use their own eyes to tell that it was a civilian airplane.

## **The Willat Effect With Gin (2013-10-03 05:00)**

[1]The Willat Effect – named for [2]Carl Willat, whose limoncello comparison tasting made me notice it – may happen when you experience two similar versions of one thing close together. (For example, sip one limoncello and then sip another.) The differences between them become clearer, of course. The Willat Effect is the less obvious hedonic

change: suddenly the differences matter. Suddenly one version is more pleasant, the other less pleasant. The hedonic changes are large enough to change how I spend money (I buy the better version more, the worse version less). I believe this effect turns people into connoisseurs.

I recently noticed the Willat Effect with gin. As part of a project to buy every type of not-too-expensive alcohol in a nearby liquor store, I bought a bottle of Bombay Sapphire London Dry Gin. I neither like nor dislike gin, it was just something they sold I hadn't tried. It was medium-priced (about \$20). I liked it okay.

I returned to the liquor store. This time I bought two brands of London dry gin: Tanqueray (about \$20) and Greenall's Special (about \$15). At home I tasted them side by side. The Tanqueray was much better, I noticed right away. It was softer, more rounded, and had floral overtones absent from the Greenall's. Where was the Bombay Sapphire gin on these dimensions? Did it have floral overtones? I had no idea. Now I was curious. One close comparison shifted my buying habits in two ways: (a) I want to make more of these comparisons. I want to try every brand of gin in the liquor store to see if the cheaper brands tasted worse. (b) Apart from these comparisons, I will never buy inferior gin again.

The Willat Effect happens only if the two things being compared are neither too similar nor too dissimilar. Perhaps differently-priced versions of London dry gin are roughly the right distance apart and are a convenient way to demonstrate the effect. It's easy to get different versions of London dry gin.

The effect interests me because it is (a) practical (a source of enjoyment), (b) a subtle comment on intellectuals (who complain about our "consumerist" society) and economics (I look forward to an economist's explanation of connoisseurship), and (c) it supports [3]my theory of human evolution, which says connoisseurs came to exist because they promote technological innovation. Connoisseurs make it easier for the most skilled craftsmen – the ones most likely to innovate – to make a living.

1. <http://blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/willat-effect/>
2. <http://www.carlsfinefilms.com/>
3. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

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dearieme (2013-10-03 07:08:47)

Also worth trying (in addition to Gordon's, of course) are Adnam's First Rate Gin Original Bombay Dry Gin Oxley Cold Distilled London Dry Gin. I'm sure there are other contenders: you could have some pleasant evenings ahead.

griff (2013-10-03 17:51:37)

I had a similar experience with Vodka. A friend of mine started a distillery in Maryland and my former boss had invested in or sat on the board of another distillery. We decided to sit down and compare. This is interesting, as the whole point of vodka is to not have a taste. Nevertheless, there was a distinct smoothness or "roundness" to one of them. The other was sharp and had an odd burnt wood flavor. Also interesting, but not related. My friend explained that he chose vodka as his first product given a) it isn't really supposed to have a taste, just use good water, good grains, ferment and filter. b) it is the best start up liquor for a distillery as there is no aging process. Therefore, you get a quick return on investment.

Joe Harris (2013-10-08 05:13:53)

I couldn't pass up the opportunity to recommend Hendrick's Scottish gin. This is the king of gins in my view. They use cucumber in it's production and it's best enjoyed with a slice of cucumber in place of the usual slice of lime. Hmm, is it too early for gin? ;)

Paul (2013-10-09 08:46:32)

Boodles! The finest gin of our, or any, era. Beefeater's is pretty good too.

## **The "Disgusting" Foods I Eat (2013-10-04 05:00)**

In [1]a review of Anna Reid's new book, Leningrad: Tragedy of a City Under Siege, I learned that one of the calorie sources that starving Leningraders came to eat was:

'macaroni' made from flax seed for cattle

To which I say: Damn. The implication is that, before the famine, "flax seed for cattle", which is roughly the same as flax seed, was considered unfit for human consumption. Only when starving did Leningraders stoop to eat it. I can buy flax seed in Beijing. But not easily.

The triangle is complete. I have now learned that the main things I care about in my diet, which I go to great lengths to eat every day, are all considered "disgusting" by a large number of people:

1. Flax seed. It is the best source of omega-3 I have found. I eat ground flax seeds every day. Flaxseed oil goes bad too easily.
2. Butter. Perhaps the most reviled food in America, at least by nutritionists. A cardiologist once told me, "You're killing yourself" by eating it.
3. Fermented foods. Many fermented foods are considered disgusting – after all, they are little different than spoiled foods.

1. <http://www.dailymail.co.uk/home/books/article-2032706/BEYOND-HORROR-They-ate-cats-sawdust-wallpaper-paste--babies-Leningrads-agony-Nazis-tried-starve-submission-LENINGRAD-TRAGEDY-OF-A-CITY-UNDER-SIEGE-1941-44-BY-ANNA-REID.html>

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Kevin Miller (2013-10-04 05:15:39)

Flaxseed oil freezes well and thaws quickly. I take small plastic bottles of I think 4 ounces of flaxseed oil, which makes a quick and convenient lunch, particularly when traveling.

dearieme (2013-10-04 06:25:46)

If they don't eat butter, what on earth do they have on their croissants? Or on their peas or boiled potatoes? A mysterious people, the Americans. Seth: Americans use all sorts of butter substitutes, especially margarine. Fancy restaurants serve olive oil in place of butter. In one expensive Berkeley restaurant, I was unable to get butter.

GeoffD (2013-10-04 07:12:10)

I take 360 calories of butter and mct oil for breakfast every morning in my coffee. Delish. I've never been leaner, healthier, more energized or happier in my life. Here's to butter. I'll get my omega 3's in salmon though...

Alex Chernavsky (2013-10-04 07:57:19)

Dearieme - this is what I use in place of butter: <http://www.smartbalance.com/products/buttery-spread/smart-balance-buttery-spread-flax>

Tom (2013-10-04 09:43:00)

Alex, you know that that product is mostly soybean oil, right?

Alex Chernavsky (2013-10-04 10:52:16)

Tom: no, I didn't know that. But it doesn't matter much, because I'm not a heavy user of that margarine.

Antonio (2013-10-04 12:03:30)

"Flax seed. It is the best source of omega-3 I have found" What about chia seeds?

JM (2013-10-04 14:19:48)

Dearieme - No we Americans aren't mysterious - despite being told for decades that cholesterol is bad for us butter is sold in every supermarket (so people do buy and use it!) And most restaurants I frequent put butter on the table these days next to the bread basket and not margarine. The real problem is that most restaurants in the kitchen are using mostly cheap vegetable oils, like soybean oil, as does most processed foods - and I bet if you look around the shelves of supermarkets and restaurant kitchens of Europe and other countries you will see a lot of the same thing. It's a cost issue.

Seth Roberts (2013-10-04 14:20:44)

"what about chia seeds?" Too hard to get. But you might be right - maybe they would be better in some way that would outweigh the increased difficulty of getting them.

Nancy Lebovitz (2013-10-04 18:21:10)

Butter is in a different category- it's a guilty pleasure rather than something like liver that a lot of people are repulsed by.

dearieme (2013-10-05 12:01:00)

Good news, JM. I see that the possibility that butter and its kin are not mass murderers is leaking into the media. <http://blogs.telegraph.co.uk/news/damian-thompson/100239917/is-this-the-real-identity-of-the-heart-disease-serial-killer/>

Jeff (2013-10-05 13:35:10)

Seth - How much ground flax seed do you eat each day? Are you consuming it plain or mixed in something else? Thanks.

Seth Roberts (2013-10-05 14:19:40)

I eat 60 g of ground flaxseed each day. I divide it into two 30 g portions. Eat each portion with yogurt and fermented rice and some flavoring.

dearieme (2013-10-06 13:41:32)

Beef Stroganoff: first my wife fries the mushrooms in butter and then takes them out and puts them aside to keep warm. Then she melts more butter in the frying pan and adds the fat and any gristle she's cut off the meat. When all that has melded together, in goes the beef. When that's ready she adds the warm mushrooms. Then she deglazes the pan with some brandy and finally she adds the cream. She serves on rice, with peas. We feel no need to add butter to our peas for this meal.

Jeff (2013-10-07 14:54:34)

Seth - Why do you divide your dose of flaxseeds? Are you still eating it taste free? Seth: 60 g was a lot to eat at once. Also divided dosing is likely to produce a steadier supply to the brain. No I don't eat it nose-clipped. I get plenty of smell-free calories from the butter I eat.

Ross (2013-10-08 08:11:21)

Professor Roberts, I too have been struggling with trying to figure out how to get flaxseed into my diet. I was buying flaxseed oil, but it is expensive in the long run and I don't know how to test if it is rancid since flaxseed oil doesn't seem to taste so great from any producer. I bought a Piteba oil extractor, but I have failed to make that system work. My wife put in the amount of flaxseed needed to give everyone who eats two pieces of sourdough bread the 60 g and it wasn't very tasty. Can you enumerate the practical ways you ingest flaxseed? What is your yogurt/fermented rice recipe? Do you have any other recipes? Thanks for your blog. - Ross

Seth Roberts (2013-10-08 14:16:32)

yes, flaxseed oil is expensive. And must be kept cold. I grind the flaxseeds with a blender. Takes seconds. I store them at room temperature. I eat them with yogurt (without sugar), sweetener, and flavoring. Flaxseed: 30 g. Yogurt: yogurt I make myself. No sweetener. More sour than store-bought yogurt. About 3 spoonfuls. Sweetener: Xylitol, honey, or something else. Recently I've been using "Japanese yogurt" (a sweetened store-bought yogurt that seems to be different from other yogurt) and fermented rice, which is sold in Chinese food stores. Flavoring: a small amount (1 tablespoon?) of wine, whisky, tequila, etc.

Jeff (2013-10-09 03:49:41)

Seth - Thanks for answering all my questions. How much taste free butter are you currently ingesting?

Texan99 (2013-10-12 09:14:00)

I haven't touched margarine since I moved out of my parent's house decades ago. Never understood why people would eat it when they can get butter. Lots of food can be easily fermented at home, from yogurt to dill pickles. Even leaving the beans to soak in water overnight causes a bit of fermentation to start, and cuts down on flatulence.

joseph (2013-10-14 14:25:48)

" I get plenty of smell-free calories from the butter I eat." In your book which i have you list Extra light Olive Oil, and Sugar Water, as smell free calories which works with the SLD Diet, so butter can be added? then it must be eaten by itself otherwise the attending foods will add smell, what else is smell free? flax seed oil does have some smell, ground seeds maybe not?

Seth Roberts (2013-10-14 15:18:56)

I eat butter wearing nose clips. Nose clips remove smell. Any food is smell-less calories when eaten nose-clipped.

xap (2013-10-15 00:34:20)

I, for one, would love to see a longish post titled something like "What I ate this week." to get a better overall idea of what you eat, when and how. You mention specific topics in the posts, and clarifications in the comments, but it would be great to get a broader overview. As for swimming type nose clips, I have found them somewhat loose (even when wearing two) but came across a post (somewhere in the forums I think) about using spirometry nose clips which have suited me much better since I switched to them.

## TV Shows I Like (2013-10-05 05:00)

Something compels me to tell you the TV shows I really like. In no special order:

1. [1]The Fall. Gillian Anderson is an out-of-town detective called in to solve a string of murders. On Netflix.
2. Mom. Humor with a sad undercurrent (this show) is much better than less-layered humor (The Big Bang Theory, by the same people).
3. Nashville. As good as Thelma and Louise (by the same person), but longer.
4. Downton Abbey . No show portrays kindness better.
5. Survivor. Current season (Blood versus Water), in which returning players playing against their loved ones, might be the best ever.
6. The Mindy Project. The wittiest TV show. (Hello Ladies is good.)
7. Masters of Sex. About Masters and Johnson. Early personal science – sex mystified Masters.
8. Homeland. The first episode makes me think this season will be even better than the first.
9. Peaky Blinders. About a Birmingham crime family post World War I.
10. Mad Men (between seasons).
11. Episodes (between seasons). Matt LeBlanc plays Matt LeBlanc. Very funny.
12. Separated at Birth (between seasons).
13. The Fosters (between seasons). About a foster family.
14. Veep (between seasons). My favorite show – well, either this or Downton Abbey or Nashville.

1. [http://en.wikipedia.org/wiki/The\\_Fall\\_\(TV\\_series\)](http://en.wikipedia.org/wiki/The_Fall_(TV_series))

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Alex Chernavsky (2013-10-05 05:32:30)

I generally don't like television dramas (never liked *The Sopranos* or *Mad Men*, for example). But I've recently started watching *Breaking Bad* (via Netflix), and I'm very impressed with the acting, writing, and directing. It's head and shoulders above your typical TV drama.

dustin (2013-10-05 08:41:37)

@alex chernavsky If you didn't like the sopranos but you do like breaking bad, you might give The Wire a try. Don't be put off by it being a cop show. I'm not generally a fan, but this was in a different category.

kxmoore (2013-10-05 22:11:20)

naked and afraid is the only show i look for Seth: Yeah, I like that too.

vgm (2013-10-06 22:39:23)

I cannot recommend The Thick of It highly enough. Veep is a spinoff of TTOI. Both are created by Ianucci, but I think TTOI is much better. Seth: TTOI was great. I like Veep even more, maybe because Serena (Veep) is even better done than Malcolm (TTOI).

Texan99 (2013-10-12 09:09:38)  
I'm enjoying "Revolution."

### Signaling and Higher Education: Email With Bryan Caplan (2013-10-06 05:00)

I recently emailed back and forth with Bryan Caplan about [1]a signaling view of higher education, which Bryan elaborates in [2]these slides. I wrote to him:

Having looked at your slides, I would say we pretty much agree. I think employers have little control over the content of college education and, as you say, use quality of college because it works better than IQ tests and the like – as you say.

Perhaps we also agree that just as British aristocrats have a lot less power now than they did 200 years ago – the message of Downton Abbey – so are American college professors slowly losing power. MOOCs are one example, blogs are another. Parents and professors are quite happy with the current system, students and employers are not, and they are gaining power. That is my theory, anyway.

I think a signaling explanation does a very good job of explaining why sense of humor matters so much, [3]especially in mate choice. Sense of humor = Nature's IQ test. Sense of humor signals problem solving ability, which really matters but is hard to measure directly. I used to think that we have two basic tasks in life, manipulating things and manipulating other people (long ago nobody was depressed, etc.) and they were really different.

1. [http://econlog.econlib.org/archives/2011/07/diamonds\\_in\\_the.html](http://econlog.econlib.org/archives/2011/07/diamonds_in_the.html)
2. <http://econfaculty.gmu.edu/bcaplan/ihseduc.ppt>
3. <http://www.sciencedirect.com/science/article/pii/S0160289611000523>

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DA (2013-10-06 10:48:28)

One surprising result of this phenomenon is that major businesses seem to invest comparatively little in higher education. It would not be difficult for Microsoft or Apple to start a college dedicated to teaching the skills that their pipeline demands. However, outside of some relatively small gifts to engineering, business and comp sci departments, they seem mostly content with outsourcing under the current model.

Roger Sweeny (2013-10-06 16:42:53)

Microsoft or Apple could start colleges but 1) students can't be sure they won't get fired or want to take a job elsewhere so they will want a curriculum which is fairly general, 2) Anglo-American law prohibits Apple or Microsoft from making an enforceable agreement: we will pay for you to attend and you agree to work for us for 7 years.

Dennis Mangan (2013-10-06 17:20:36)

Employers don't use college instead of IQ tests because that's better, but because using IQ tests is all but illegal. Disparate impact, and all that.

LemmusLemmus (2013-10-07 06:26:48)

"Employers don't use college instead of IQ tests because that's better, but because using IQ tests is all but illegal. Disparate impact, and all that." Sure. The world ends at the borders of the USA.

## Assorted Links (2013-10-07 05:00)

- [1]Psychology and neuroscience research fraud at Washington University.
- [2]Puzzling scientific fraud. Someone made up a paper and put fictitious names on it. Why? On the face of it, the goal was to hurt someone the fraudster didn't like but actually the publicity helps the victim.
- [3]A guide to sour beer. "The brewers I interviewed for this story agreed that in many ways, sour-beer-making is more like winemaking than brewing." I love sour beers.
- [4]The Willat Effect at xkcd
- [5]press release from the Korean Food Foundation about kimchi

Thanks to Aaron Blaisdell and Peter Lewis.

1. <http://retractionwatch.wordpress.com/2013/03/05/wash-u-psych-researcher-cited-in-ori-probe-faces-multiple-retractions/>
2. [http://www.nature.com/news/mystery-over-obesity-fraud-1.13810?WT.ec\\_id=NATURE-20130926](http://www.nature.com/news/mystery-over-obesity-fraud-1.13810?WT.ec_id=NATURE-20130926)
3. <http://www.eastbayexpress.com/oakland/a-guide-to-sour-beer/Content?oid=3718736>
4. <http://xkcd.com/915/>
5. <http://www.prweb.com/releases/2013/9/prweb11178090.htm>

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Andy (2013-10-07 06:54:03)

I had a pint of Erdinger(hefe) that had sat in a poorly maintained keg in a bar in Wan Chai for so long that it had gone pleasantly sour. I had drank proper Belgian lambics before and it was so close, that I actually just finished the beer without complaining and appreciated that a lambic in Hong Kong would have cost me alot more, if I could even find one!

garymar (2013-10-07 14:27:43)

"Furthermore, the clay pot has properties such as biodegradability, rotproofness and vertebration which are all critical elements for storing Kimchi for a prolonged period."

I pride myself on having an ample vocabulary but am stumped by the word "vertebration". The pot has vertebra? Now that I think about it, it could be "ventilation". Rotproofness also was troubling - how could it be rotproof and biodegradable *at the same time*? But I think they mean "anti-fungal" here.

garymar (2013-10-07 14:32:36)

Spoke too soon! Here's what Wikipedia says about Onggi pots:

Vertebration Onggi has one strong advantage over other containers: it is not affected by use or natural phenomena. In fact, onggi can withstand exposure to strong sunshine and rain for a long time.

Well, that clears that up!



Portlander (2013-10-07 20:40:13)

I believe the moral should be choose your Willat Effect wisely.

### **The Emperor's New Clothes and the New York Times Paywall (2013-10-08 05:00)**

A few years ago I blogged about three books I called [1]The Emperor's New Clothes trilogy. Each book described a situation in which, from a certain point of view, powerful people – our supposed leaders – "walked around naked", that is, did things absurd to the naked eye, like the Emperor in the story. As in the story, many people, including experts, said nothing.

After reading about [2]the fate of the *Washington Post*, I thought of the *New York Times* paywall, which can be avoided (i.e., defeated) by using what Chrome calls "incognito mode". (Firefox has a similar mode.) I didn't know this until recently; some of my friends didn't know it. One of them carefully rationed the Times articles she read. I wonder how the long the ignorance will last. The Times is an extremely important institution. In the many long discussions at the *Times* about the paywall, no one mentioned this?

1. <http://blog.sethroberts.net/2010/04/27/the-emperors-new-clothes-trilogy/>

2. [http://www.washingtonpost.com/business/as-jeff-bezos-prepares-to-take-over-a-look-at-forces-that-shaped-the-washington-post-sale/2013/09/27/11c7d01a-2622-11e3-ad0d-b7c8d2a594b9\\_print.html](http://www.washingtonpost.com/business/as-jeff-bezos-prepares-to-take-over-a-look-at-forces-that-shaped-the-washington-post-sale/2013/09/27/11c7d01a-2622-11e3-ad0d-b7c8d2a594b9_print.html)

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Shawn (2013-10-08 05:42:39)

The paywall can also be defeated by doing a search for the article's title.

Alex Chernavsky (2013-10-08 05:45:23)

According to this blog post, the *New York Times* spent something like \$40 million developing their paywall: <http://blogs.law.harvard.edu/phlg/2011/03/28/how-did-the-new-york-times-manage-to-spend-40-million-on-its-pay-wall/>

Mark (2013-10-08 08:25:54)

You can also avoid the NYT paywall by going in through a simple google search... that is, search for the title of the article and click the link.

Three Pipe Problem (2013-10-08 09:58:23)

I find that sometimes to avoid the paywall I have to do a Google search, but rather than clicking on the main NYT article to click someone who has blogged it and follow the link from there.

Alex Chernavsky (2013-10-08 10:00:51)

There is some speculation that the *New York Times* purposely made it easy to circumvent the paywall. That way, people who care about convenience and who have the money will pay the subscription fee. People who are poor and/or tech-savvy can still read the content (and the *Times* still gets ad revenue from those viewers). Now, having said that, it's still a mystery why it should cost a staggering \$40 million to put up the paywall. In a related matter, see this interesting story about the truly outrageous amounts of money that New York City government is spending to create a customized human resources system: "[1]For Bloomberg, Waste Mars Another Digital Project"

Soon after becoming mayor, Michael R. Bloomberg announced a plan to modernize the computer system that handles personnel information for New York City's vast work force. The \$66 million project was to be one of

the signature technological innovations of his tenure. Nine years later, his administration has already spent \$363 million — and the work is far from done. The administration has pressed ahead despite repeated warnings that the project is deeply troubled, according to a review of thousands of pages of city records, as well as dozens of interviews with officials and private contractors. The administration's own internal monitors regularly filed reports detailing chronic mismanagement, cost overruns and rampant waste. "It was a runaway project," said Raj Agarwal, a city official who managed the early stages of the new system before resigning in frustration over what he saw as the administration's incompetence.

1. [http://www.nytimes.com/2011/09/24/nyregion/bloombergs-computer-project-for-personnel-data-leads-to-waste.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2011/09/24/nyregion/bloombergs-computer-project-for-personnel-data-leads-to-waste.html?pagewanted=all&_r=0)

Jim (2013-10-08 10:15:19)

I always thought they made the firewall leaky on purpose.... It is a fine balancing act, clamp down too much and readers go elsewhere (and google can't index articles), give too much away and no one pays. They probably have some idea how many people are reading for free, and if it gets out of hand, will tighten a bit. (There are other well know workarounds, I won't mention them here).

Alex (2013-10-08 12:16:21)

The Washington Post's paywall can be circumvented by going incognito as well. I am sure both institutions are well aware of this, but have wisely opted to allow it. As Alex C. points out, they are still getting ad revenue from page views of people who go to the trouble of going incognito, google searching, or following links from social media (those don't count, either). They maximize revenue when they make it inconvenient, not impossible, to read without subscribing. I saw the downside of the tight paywall with the Wall Street Journal. I had a free account from my time at Dow Jones, which published WSJ. There were writers I enjoyed following. But if I read something interesting that I wanted to share with friends and family, I had to include the text in my email, because they couldn't get to it. It also wouldn't be worth blogging about, because most people couldn't get to it. I didn't see how much that affected my reading priorities until one day I realized that I hadn't checked the Wall Street Journal in months.

Tom (2013-10-08 17:39:24)

I hadn't known about the incognito mode hack; I've just been hitting the 'stop loading' button on the browser before the blocking javascript can load.

Bando (2013-10-09 09:44:59)

Another way to get around is to use different browsers—you get 10 free articles per browser.

## **Does Chicken Extract Improve Brain Function? (2013-10-09 05:00)**

[1]An article in the latest Nutrition Journal says that a "proprietary" extract of chicken meat, called CMI-168, improved brain function. From the abstract:

Normal, healthy subjects were supplemented with either placebo or CMI-168 for 6 weeks. The subjects were given a series of cognitive tests to examine their levels of cognitive functioning at the beginning and end of supplementation, as well as two weeks after termination of supplementation. The combination of these tests, namely Digit Span Backwards, Letter-Number Sequencing, and the Rey Auditory Verbal Learning Test (RAVLT), was used to assess the subjects' attention and working memory. . . . Subjects supplemented with CMI-168 showed significantly ( $p < 0.01$ ) better performance in all cognitive tests after 6 weeks' supplementation compared to [placebo] and [their] superior performance was maintained even 2 weeks after termination of supplementation.

This is the first time I've heard that something in chicken improves brain function. The abstract understates the

4766

strength of the evidence;  $p < 0.001$  (not 0.01) in almost all relevant comparisons.

However, several details make me question the claim.

1. Two of the five authors work for the company that sells the chicken extract.

2. The subject recruitment makes no sense. "A total of 46 healthy male and female subjects aged between 35 and 65 years were recruited either as walk-in or referred from their general practitioners for counseling for life-style related issues." Walk-in? "Life-style related issues"? "Counseling"? I have never heard of such things in this context. Nothing is said about payment or the fraction of people who declined to participate.

3. Vague statistics. I cannot tell if pre-treatment scores were used to make the treatment scores more sensitive. Someone who does better than average before treatment is likely to do better than average after treatment – you want to adjust for that.

4. No apparent learning effect. Subjects in the placebo group did not clearly improve from test to test. There is usually a big learning effect with such tests. Nothing is said about learning effects.

5. Vague supporting evidence. "Anecdotal evidence has long associated EOC [essence of chicken] with improving cognitive performance, especially related to learning and memory, as well as executive function," says the paper. It provides no documentation of this evidence.

6. Uniformly positive results. The paper emphasizes results from nine different tests of brain function. All showed significant improvement at the same  $p$  value ( $p < 0.001$ ). When I used four different tests to measure the brain effects of flaxseed oil, different tests had widely different sensitivities.

I haven't been able to find anything supporting the idea that chicken meat (or extract) improves memory other than what this company says.

I asked a Chinese friend about this; she too had never heard this claim.

[2]The company behind this (Brand's) is more than a hundred years old, and essence of chicken has been their main product. In spite of my doubts, however, I would still like to test the product to see what effect it has on my reaction-time measure of brain function.

Strangely enough, after writing this post weeks ago, I noticed by accident that duck seemed to improve my brain function. I was stunned – as I said, I had never heard such a thing. I'll describe the data later.

1. <http://www.nutritionj.com/content/12/1/121>

2. <http://www.brandsworld.us/en/home/index.php>

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dearieme (2013-10-09 06:02:53)

Duck: now you're talking. My beloved does a lovely smoked duck salad in the summer, and roast duck in the winter. Though I see that we're going to kick off the roasts season with Guinea Fowl - presumably because there's still ample tarragon in the garden. Ah bliss.

Alex Chernavsky (2013-10-09 07:00:36)

Seth, on a related subject, have you heard anything from Eri Gentry? I was hoping that her [1]Buttermind experiment would be the first of many such crowd-sourced studies, but the whole thing has apparently petered out. Seems a shame. It would be nice to have a group of people who could be called upon to test claims such as the one about the chicken extract. Seth: Yeah, I agree. I haven't heard anything from Eri Gentry lately.

1. <http://blog.sethroberts.net/2011/01/29/the-buttermind-experiment/>

Alex (2013-10-09 09:45:02)

Dearieme, your comments often make me hungry. Your beloved needs to start a food blog.

Staffan (2013-10-10 03:50:20)

If they really had something they would use a large sample, let independent researchers do the study, use an ordinary IQ test and follow up after at least six months or even a year to show that the effect could be permanent. Ergo they have zipppo. Seth: IQ tests are not designed for repeated testing. The stronger the effect, the smaller the sample they would need. My research suggests the improvement lasts about a day. I suspect they don't know whether their extract works, even though it does.

dearieme (2013-10-10 06:22:06)

"Your beloved needs to start a food blog." As a birthday present I plan to sign her up for a course on smoking food, held amongst the beauties of the Lake District. Amn't I good to her? On a marginally more serious note, how about duck eggs, Seth?

Seth Roberts (2013-10-10 16:35:39)

I've eaten fermented duck eggs many times. Never noticed improvement on my brain test.

## Assorted Links (2013-10-10 05:00)

- [1] Fruit kimchi recipe
- [2]Eight types of natto at all-you-can-eat natto restaurant in Tokyo. This calls for a trip to Tokyo!
- [3]Yale University gives Nobel Prize to someone who didn't win one. Oops.
- [4]Michael Lewis on the last crisis. "I don't feel, oh, how sad that Lehman went down. I feel, how sad that Goldman Sachs and Morgan Stanley didn't follow."

1. <http://www.starjournalnow.com/news/featuredheadlines/224068211.html>

2. <http://en.rocketnews24.com/2013/02/03/all-you-can-eat-fermented-soybeans-for-8-50-choose-from-eight-types-of-natto/>

3. <http://nofrackingconsensus.com/2013/09/15/rajendra-pachauri-fake-nobel-laureate-part-2/>

4. <http://www.businessweek.com/articles/2013-09-12/michael-lewis-on-the-next-crisis>

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Brandon Berg (2013-10-10 05:57:59)

Eh. Not that big a deal. A typical Japanese grocery store will have on the order of 20-30 natto options, usually around 1-3 yen per gram. From the packaging, this appears to be exactly the same stuff sold in stores. I've heard that modern natto is usually made with a bacterial monoculture and it's less nutritious than wild-fermented natto. I've been meaning to look for a restaurant that has traditional straw-fermented natto, but haven't gotten around to it yet.

## Association of Sleep and Chronic Illness (2013-10-11 05:00)

[1]A recent PatientsLikeMe survey found a strong correlation between chronic illness and poor sleep. Here are the most interesting results:

PatientsLikeMe survey respondents in the U.S. (n=3,284) . . . are almost nine times more likely to [have] insomnia than the general adult population. . . . PatientsLikeMe members with health conditions experience [each] of the four symptoms of insomnia [= trouble falling asleep, trouble staying asleep, early awakening, and waking up not rested] at twice the rate of the general adult population.

This supports my view that bad sleep causes illness. The correlations could have plausibly been the other way (better sleep among survey respondents). People sleep more when sick. Whatever makes sick people sleep more might also make them fall asleep faster and wake up less often.

If I slept poorly, I would move heaven and earth to sleep better. (But would never take sleeping pills.) I sleep well, actually, but I still track my sleep and do various experiments to see if I can improve it. For example, recently I was puzzled why I was sleeping less well in Berkeley than in Beijing. One possibility was that my Beijing bedroom was darker than my Berkeley bedroom, even though my Berkeley bedroom was quite dark (e.g., no light from a street lamp). I made my Berkeley bedroom even darker and found my sleep improved. It really was cause and effect. When I made my Berkeley bedroom lighter, my sleep got worse.

My enormous concern with sleep – nothing matters more for health – seems to put me in a tiny minority. Even sleep researchers don't say bad sleep causes sickness. However, [2]Robb Wolf agrees with me. He has said, "If someone sleeps poorly it is hard to keep them alive. If someone sleeps well, it is hard to kill them" – a good way of putting it. At the recent Ancestral Health Symposium in Atlanta, I asked him where he got this. He said it was based on his experience, meaning his experience working with other people.

My view is heavily based on my experience of my own health. [3]Exactly when I greatly improved my sleep, I greatly improved my health. I stopped getting obvious colds. The people around me continued to get them. I hadn't expected this. In the research literature I found plenty of support for the idea that better sleep causes better health. An example is that poorer health during the winter seems to be due to less light, not the cold. I am sure morning sunlight improves sleep. Vitamin D has been associated with dozens of measures of health (more Vitamin D, better health). This too may reflect the underlying causality better sleep → better health because sunlight increases Vitamin D and improves sleep. That morning Vitamin D improves sleep ([4]Tara Grant's great discovery) be important here. Epidemiologists should always measure sleep the way they always measure smoking. Now they almost never do.

Thanks to Richard Sprague.

More "Even sleep researchers don't say that bad sleep causes illness" – that's wrong. Here's [5]an example:

Yet there's strong evidence that lost sleep is a serious matter. The Sleep in America polls and several large studies have linked sleep deficits with poor work performance, driving accidents, relationship problems, and mood problems like anger and depression. A growing list of health risks has been documented in recent studies, too. Heart disease, diabetes, and obesity have all been linked with chronic sleep loss. "People just don't realize how important sleep is, and what the health consequences are of not getting a good night's sleep on a regular basis," Hunt tells WebMD. "Sleep is just as important for overall health as diet and exercise."

I should have said sleep researchers don't connect good sleep with good immune function, which this quote illustrates.

1. <http://news.patientslikeme.com/press-release/bad-nights-sleep-norm-people-health-conditions-according-patientslikeme-survey>
2. <http://robbwolf.com/>
3. <http://www.escholarship.org/uc/item/2xc2h866>
4. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>
5. <http://www.webmd.com/sleep-disorders/features/toll-of-sleep-loss-in-america>

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David (2013-10-11 07:00:44)

Not that I doubt the importance of sleep, but in this case couldn't the causation easily go the other way: if you're chronically ill, that illness interferes with your ability to sleep?

Char (2013-10-11 08:44:48)

Here Stephan Guyenet discusses sleep and obesity. He mentions Dan's Plan (<http://www.dansplan.com/blog/index.php>) where it's been discussed also. I find this interesting.

Char (2013-10-11 09:05:12)

Whoops! Forgot the link to Stephan Guyenet's blog: <http://wholehealthsource.blogspot.com/2013/10/sleep-and-genetic-obesity-risk.html>

Michael (2013-10-11 12:50:47)

Seth, I think you are correct that bad sleep causes illness. However, that people sleep more when sick, is imo generally true more so for acute than chronic disease. I believe that in chronic disease one may find oneself in a vicious cycle: poor sleep contributes to the chronic condition, the chronic condition in turn (e.g., through pain) contributes to poor sleep. A very tough proposition.

Alex Chernavsky (2013-10-11 17:27:46)

"Even sleep researchers don't say bad sleep causes sickness." About five years ago, I attended a lecture by Cornell psychologist [1]James Maas. He did point out various ill effects of sleep deprivation, although he seemed to focus mainly on people who voluntarily deprive themselves of adequate sleep.

1. [http://cornellalumnimagazine.com/index.php?option=com\\_content&task=view&id=1307&Itemid=9](http://cornellalumnimagazine.com/index.php?option=com_content&task=view&id=1307&Itemid=9)

Stu (2013-10-11 21:08:09)

Most days I wake up feeling more tired than when I went to bed the night before, however I find that if I take up to a tablespoon of raw honey immediately before bed I almost always wake up feeling totally refreshed. I've suffered from low energy, brain fog, fatigue and sore muscles for years and I tried eliminating food groups (dairy, grains, nightshades, etc) but that didn't fix the problems (although wheat has been problematic) but taking the honey did. I usually sleep without any problems that I'm aware of even if I awaken feeling unrefreshed I will still sleep through the night and won't awaken early or whatever, but the crucial thing is I feel rested when I wake up, if I get that right I can even eat bad food and feel good all day. I've tried coconut oil and coconut oil combined with honey but they didn't work. I've also noticed caffeine later in the day and chocolate have a huge impact on this. There are a lot of factors that come in to play so the honey thing doesn't always work, but it can make a big difference. I think the fructose helps replenish liver glycogen which may help me get more deep sleep but I don't know for certain

Seth Roberts (2013-10-12 01:55:52)

That's fascinating. You write: "I've also noticed caffeine later in the day and chocolate have a huge impact on this." Could you elaborate? Huge impact in what way?

Seth Roberts (2013-10-12 02:02:32)

Yes, Maas does say this. This is from a Cornell press release about a book by Maas:

The book also includes two tests to help the reader determine how well they sleep, the costs of sleep loss and research findings that link poor sleep with colds, flu, unhealthy skin, weight gain, diabetes, heart disease and cancer, as well as stress, anxiety and depression.

Stu (2013-10-12 04:56:57)

I've noticed a while ago that for some reason if I drank coke with dinner I always felt terrible the next day and didn't sleep well even though I would avoid sugar most of the time. I thought it was the sugar that gave me hangover like symptoms and unrefreshed sleep, but I had done 'carb back loading' with heaps of sugary foods and junk and slept well after, but if I drank coke I didn't feel refreshed the next day. After a while I realised it might be the caffeine. Also I noticed that the honey wasn't as effective if I had caffeine in the afternoon or evening. Alcohol seems to effect sleep also for me - it helps me sleep but I don't wake up feeling refreshed. It's so hard to get everything right. Recently I tried drinking one cup of tea at 10am and no caffeine after, I found that I felt terrible in the middle of the afternoon but that night I had really vivid dreams, two of the dreams that night were flying dreams which was cool. I think eating chocolate after dinner kind of messes things up also, but a glass of milk without chocolate has similar effects to honey. But it gives me acne... I've even got to the point where I think that flossing before bed and brushing my teeth improves my sleep but that's just ridiculous! The honey and caffeine thing makes sense but the oral hygiene thing is probably a bit far fetched. I do have a lot of light exposure though in the evening so I haven't really dealt with that as a factor. I'm also a little worried that the honey might raise my set point so I don't always do it, plus I think it isn't as effective if you do it everyday for some reason.

Stu (2013-10-12 05:19:10)

Also I forgot to mention: refreshed sleep = low (normal) appetite the next day and fasting is easy, unrefreshed sleep = insatiable (unsatisfied appetite) the next day/can't stop thinking about food!

Vic (2013-10-12 08:47:48)

Seth, how important to your sleep are sleep position (back, stomach, side) and mattress firmness? Seth: I don't pay attention to any of that. Sometimes I wonder what effect it would have if I slept on the floor but I haven't found out.

nansen (2013-10-13 17:25:51)

How exactly do you make your Berkeley bedroom even darker? Have you considered wearing a sleep mask, or do you still want the dawn light to get through?

Jeff Winkler (2013-10-14 13:48:55)

Confirmatory study and a cheap DIY intervention- Michael Mosley (of Eat Fast) participated in a study where they changed sleep from 6.5 to 7.5 hr, and did blood draws for quick feedback. A summary is at <http://www.bbc.co.uk/news/magazine-24444634>. Think the meat is in the video, but it's region-blocked :( - (Seven) volunteers were randomly allocated to two groups. One group was asked to sleep for six-and-a-half hours a night, the other got seven-and-a-half hours. After a week the researchers took blood tests and the volunteers were asked to switch sleep patterns. The group that had been sleeping six-and-a-half hours got an extra hour, the other group slept an hour less. ... the most interesting results came from the blood tests that were run. Dr Simon Archer and his team at Surrey University were particularly interested in looking at the genes that were switched on or off in our volunteers by changes in the amount that we had made them sleep. "We found that overall there were around 500 genes that were affected," Archer explained. "Some which were going up, and some which were going down." What they discovered is that when the volunteers cut back from seven-and-a-half to six-and-a-half hours' sleep a night, genes that are associated with processes like inflammation, immune response and response to stress became more active. The team also

saw increases in the activity of genes associated with diabetes and risk of cancer. The reverse happened when the volunteers added an hour of sleep. ===== Improving sleep quality by blocking blue light @night. Seth, what color were the lights in your Berkley bedroom? Sanjiv Shah - Sleep and Tinted Goggles - Boston QS - <http://vimeo.com/64204620> Reduced sleep latency, more deep sleep (per Zeo). Works for me, and the glasses are \$9. No-brainer.

Seth Roberts (2013-10-14 13:54:08)

I made my Berkeley bedroom darker by lowering the blinds. In Beijing I hang big towels over the windows. Yes, I have considered wearing a sleep mask. It's something I plan to try. I don't worry about dawn light while asleep any more since I wake up before dawn.

Stu (2013-10-14 15:22:10)

I was under the impression that sleep cycles followed a 90 minute ultradian rhythm... If that's the case then 7.5 hours sleep would be ideal as you would awake towards the end of the cycle whereas people sleeping 6.5 hours would be awoken in the middle of the cycle. Perhaps that could be something to consider, maybe 6 hours would be better than 6.5 hours

### **A High School Teacher Learns About Teaching (2013-10-12 05:00)**

While reading a [1]blog post about teaching high school math, this caught my attention:

I tend to stay pretty focused on teaching; rarely do I give A Talk. Today . . . I made an exception.

[teacher] "What is it you think I want?"

[student] "You want me to shut up." . . .

[teacher] "Why?"

[student] "Because it's your job!"

[teacher] "Because I want everyone to pass this class."

The class's sudden silence [made me realize] that my remark had [had] an impact. . . .

I adopt my students' values and goals, rather than insist they adopt mine. [emphasis added. To be sure, this is an overstatement – the truth is teacher/student compromise – but you get the point.] The kids were shocked into silence [because] they realized that my most heartfelt goal was to pass everyone in the class. I learned a key lesson I still use every time I meet a new class [–] make it clear I want to help them achieve their goals, which usually involve surviving the class.

I was unclear what the "key lesson" was so – I have edited the quote to make it clearer – so I asked the teacher blogger, who replied

The key lesson is *explicitly state that I adopt my students' values and goals, rather than insist they adopt mine*. My students's awareness that I want to give them value as they define it is essential to creating the classroom environment I want.



When I began working full time as a public school teacher [after years doing test prep], I had much tougher kids [than in test prep], and my classes were not as comfortable as I was used to. It was the emptiness or worse, hostility, I got from enough of the students that bothered me. I enjoyed teaching. But I felt something missing around the edges that I'd always felt-expected-from my classrooms, and I couldn't even really spell out what was lacking—not gone, just not universal. I didn't know why.

So in that moment [when I told my students that my goal was to help them reach their goals] I realized that one of my greatest teaching strengths was completely under the radar [= not noticed] not only to the toughest of my public school students, but to \*me\*. Many of my toughest public school students, the ones that had tracking bracelets or a long history of suspensions or just three years of repeated failures—hell, not only didn't they realize that I wanted them to achieve their academic goals, they didn't realize they HAD academic goals, since no one had ever told them that just "passing the class" was an allowable goal. I'd never realized how essential that understanding was to the rapport and engagement I had with kids until I experienced teaching without it.

I've only rarely experienced that alienation or hostility since [I learned to be explicit about my priorities]. I still have to be tough and snarl and yell. But now my public school classes give me the same sense of affinity, of understanding, that my test-prep classes did.

All or almost all teachers want their kids to do well. But teachers usually define "doing well" by their own ruler, and set their goals higher than is realistic—and so are often disappointed. I think most people [including high school teachers] don't understand the degree to which high school students feel their choices in school are completely out of their control. They can't choose most classes, they are "helped" by giving them more of the classes they hate (double math periods for strugglers).

This supports my view that teaching is much easier when you try to help students reach their goals than when you try to get them to reach your goals. Few teachers I know have figured this out – at best, they get to different students learn differently and stop. I think it's the beginning of wisdom about teaching. I eventually found, after years of experimentation, that (a) my students's goals overlapped mine well enough to be acceptable to onlookers and (b) their innate desire to reach those goals was strong enough that [2]there was no need to grade them.

1. <http://educationrealist.wordpress.com/2013/07/21/who-i-am-as-a-teacher/>

2. <http://blog.sethroberts.net/2013/01/26/my-ideas-about-teaching-put-into-practice/>

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Texan99 (2013-10-12 08:59:11)

I enjoyed a story arc in "The Wire" in which a teacher got kids interested in math by showing them how an understanding of probability could earn them money at playing craps.

Rollins (2013-10-12 14:58:25)

Seems rather a tale of an egocentric teacher publicly praising himself for his supposed selfless devotion to his students values and goals. Many student, especially Elijah, quite understandably hated high school math... and wanted out of this teacher's classroom. The teacher had exactly zero empathy and support for that clearly stated 'value'. Instead, the teacher proclaimed his own 'teacher-value' to the class – "everyone to pass this class" ... even if they don't ever like or understand algebra... and that somehow this algebra-classroom-experience would most certainly improve their lives ever after. In fact, algebra & geometry are of no practical use to most people in their entire personal lives. Most American K-12 "education" is merely social ritual. The students correctly assessed they were wasting their time in that algebra classroom. But the teacher-bureaucrat could only

see the arbitrary syllabus and daily disciplining of his captive audience... while arrogantly pretending to be empowering the values of his students.

Roger Sweeny (2013-10-13 07:34:14)

Rollins, you are absolutely right that "algebra & geometry are of no practical use to most people in their entire personal lives" and that in that sense the students "were wasting their time in that algebra classroom." However, in terms of getting a credential, you are absolutely wrong. They need to pass algebra to graduate and they need a high school diploma to get considered for many, many jobs—even if the job has nothing to do with algebra. The American legal system allows, even encourages, that. Education Realist's students don't want to be shut out of the "good jobs." ER knows all this. Don't hate the player; hate the game.

Education Realist (2013-10-13 08:01:30)

Thanks, Roger. Rollins, you wound me! I hate reading self-congratulatory teachers. I was doing exactly the opposite of that. I was explaining my priorities in the context of a debate of reform vs. traditional math (I ascribe to neither camp). Seth asked me to elaborate in email, and I stressed several times that I didn't want to sound like a pompous teacher doing some narcissistic backpatting. But the reality is that most math teachers believe, passionately, in their subject. They believe that the solution to the achievement gap is to raise standards, work hard, and love math. Education reformers also believe that the problem is low standards, that all kids could learn math if they had good teachers. I am explaining a priority set that is quite different. Seth asked me to elaborate on one particular piece of that. It's pretty ludicrous to paint me as a teacher who believes in arbitrary curriculum standards, since I regularly post that I do exactly the opposite.

Rollins (2013-10-15 10:46:59)

" It's pretty ludicrous to paint me as a teacher who believes in arbitrary curriculum standards..." ' All curriculum/syllabus standards are arbitrary & subjective everywhere and always. It is impossible for them to be otherwise. Inability to grasp this basic fact leads to huge conceptual errors in "education", "teaching", "student status", "values", "priority sets", "math", "science", "history", etc, etc. There are a million subjects that 'could' be taught in high-school, with a vast array of possible learning methods. Even the 'need' for a teacher is totally arbitrary, as are despotic truancy laws depriving students of basic human liberty. No matter how valuable somebody believes a subject may be— there are only 24 hours in a day, and an arbitrary decision to teach one subject (algebra ?) is also a decision NOT to teach a million other subjects. Most high-school and college curricula and teaching methods have barely changed since medieval times. The denizens of the educational-establishment can not see the big picture and have an extremely narrow view of "education reform" and student values/choices/freedoms.

## **Why We Need Diverse Fermented Foods (2013-10-13 05:00)**

I found [1]this comment from Art Ayers deep in a discussion on his excellent blog [2]Cooling Inflammation:

Probiotic fermenting bacteria only work in the upper part of the gut, not in the colon. The anaerobic bacteria that work in the colon must be slowly acquired by persistent eating of diverse veggies to provide diverse polysaccharides and uncooked veggies to provide the bacteria.

I agree and disagree. It's an excellent point that the bacteria near the stomach are quite different from the bacteria deep in the colon. So you need different sources of each. I don't know what "probiotic fermenting bacteria" are (I was under the impression that all bacteria "ferment"), but, yeah, bacteria that live on lactose (e.g., in yogurt) are going to be quite different than bacteria that live on more complex sugars that are digested more slowly than lactose and thus pass further into the intestine.

To me, this explains why I like vegetables. I have no trouble avoiding fruit, bread, rice, pasta, and so on, but I hate meals without vegetables. Why? This line of thought suggests it is because they supply complex polysaccharides

needed for deep-colon health. As Ayers implies, you wouldn't need a lot. This line of thought suggests how you or nutrition scientists can decide what fermented foods to eat (some for each part of the digestive system).

I disagree about raw vegetables. Like most people, I don't like raw vegetables. I like the crunchiness but the taste is too weak. That most people are like me is suggested by the fact that raw vegetables are almost never eaten without dip or dressing (which add fat and flavor) or something done to make them more palatable (e.g., sugar and liquid from tomatoes). If raw vegetables were important, even necessary, for health, the fact that they are hard to eat would make no evolutionary sense.

I do like pickled/fermented vegetables of all sorts, such as kimchi and sauerkraut. I believe they are a far better source of the bacteria you need than raw vegetables (they have far more of the bacteria that grow on raw vegetables than ordinary raw vegetables).

1. <http://www.blogger.com/comment.g?blogID=196334975274806517&postID=3161635954700370250>

2. <http://coolinginflammation.blogspot.com/>

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xap (2013-10-13 05:26:27)

A fascinating example of bacterial interactions within humans is something I was reading earlier about studies from the early 20th century about tuberculosis and its possible anti-tumor effects. This led to the novel but effective idea of using the BCG vaccine to treat bladder cancer. [http://community.advanceweb.com/blogs/al\\_1/archive/2009/07/13/an-immunotherapy-success-story-bcg-and-bladder-cancer.aspx](http://community.advanceweb.com/blogs/al_1/archive/2009/07/13/an-immunotherapy-success-story-bcg-and-bladder-cancer.aspx)

kxmoore (2013-10-13 08:30:30)

have you tried making kefir Seth? ridiculously easy with much more probiotics than yogurt. also easy to store/put to sleep. Seth: I have made kefir. It was not ridiculously easy, although maybe I was doing something wrong. Do I need kefir grains? I don't know. Do you use kefir grains? If so where did you get them?

kxmoore (2013-10-14 00:13:20)

how i have made kefir for 7 years: 1 put kefir grains and milk and or coconut milk in jar 2 place jar in dark place for 18 -24 hours 3 strain and refrigerate liquid. go back to step 1 you can get grains mailed from numerous sites(ebay) for under \$10 or even free. get live milk grains. if u ever pass thru nyc i'll give you some as a small thanx for your wonderful site. this guy is the kefir master. he ferments veggies with kefir. <http://users.sa.chariot.net.au/dna/kefirpage.html>

### **Omega-3: More Evidence of Brain Benefit (2013-10-14 05:00)**

[1]From the Wall Street Journal:

In a study to be released Tuesday, participants with low levels of omega-3 fatty acids in their blood had slightly smaller brains and scored lower on memory and cognitive tests than people with higher blood levels of omega-3s. The changes [that is, the differences] in the brain were equivalent to about two years of normal brain aging, says the study's lead author.

As this article recommends, I used to eat plenty of fish. But I still noticed a dramatic improvement in my balance and cognitive abilities when I started taking flaxseed oil. The best amount seemed to be 2-3 tablespoons/day. Fish wasn't supplying close to the optimum amount of omega-3. One comment on the article was

The only proper response to this article should be, "Duh."

I disagree. A better response is to ask How much room for improvement is there?

1. [http://online.wsj.com/article/SB10001424052970204653604577249192836516880.html?mod=health\\_newsreel](http://online.wsj.com/article/SB10001424052970204653604577249192836516880.html?mod=health_newsreel)

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Nick (2013-10-14 05:41:07)

You like flax, but it's a source of ALA, not EPA/DHA. <http://examine.com/faq/can-i-eat-flax-seeds-instead-of-fish-or-fish-oil-for-omega-3s.html> Flax is healthy, but I don't think it can offer the same benefits of fish, contrary to what your anecdote suggests.

David199 (2013-10-14 09:59:23)

I'm also curious why he uses flax oil and not fish oil directly.

Ron (2013-10-14 11:57:23)

Seth, Seems to me what would be clarifying/useful is if you were to try and switch out the flaxseed oil for an equal amount of fish-derived omega 3's (ie, EPA/DHA from fish oil). The purpose being that you would then know if it were a general omega 3 dosing effect, or specifically an alpha-linolenic acid effect. Seth: Others have found similar effects using other forms of omega-3.

Brian (2013-10-14 12:44:59)

Seth posited a neurological benefit. Nick, you posted a link about its efficacy in providing a cardiovascular benefit. Further, the abstracts for the later studies at your link, e.g. regarding vegan consumption, dealt with quantities of flaxseed that are approximately no more than 1/8 of what Seth consumes.

JRM (2013-10-14 14:31:25)

What percentage of calories per day are you consuming as omega 6? Omega 3? Seth: Omega-6: Not much. 3 %? That's just a guess. Sometimes I eat nuts. I avoid vegetable oils, nut oils, and so on. Omega-3: 10 %? Again, these are just guesses.

Valerie (2013-10-16 19:30:29)

I tried eating ground flax seeds regularly on two different occasions. Both time, I ended the experiment because I was getting bruises. I mean that tiny bump in anything gave me a bruise. Carrying a heavy box in my hand gave me bruises on both forearms. I even got bruises I could not explain. It seemed dangerous to continue. Did anyone else encounter that problem? Does it mean something? Is there a solution?

Seth Roberts (2013-10-16 19:39:11)

Increased bruising from flaxseeds: I think this is due to an increase in clotting time, a well-known effect of flaxseed oil and perhaps fish oil. Too-long clotting time certainly is dangerous – the danger is of a stroke. I eat ground flaxseed because it has substantial easy to notice benefits (e.g., pink gums instead of reddish gums). If I were in your position, I would start with a tiny dose and increase it. At the first sign of bruising, I would reduce the dose to a dose that doesn't cause bruising. I would also try to find out if my clotting time (without flaxseeds) was unusually long.

### Assorted Links (2013-10-15 05:00)

- [1]blood levels of omega-3 correlated with children's behavior. "Many, if not most UK children, probably aren't getting enough of the long-chain Omega-3 we all need for a healthy brain, heart and immune system."
- [2]"Chemical brain drain". See the comment about Dursban.
- The back pain of a friend of mine, which had lasted 20 years and was getting worse, went away when he followed [3]this doctor's advice.
- [4]Appreciation of Jane Jacobs

Thanks to Alex Chernavsky and Dave Lull.

1. <http://psychcentral.com/news/2013/09/14/omega-3-strongly-linked-to-behavior-learning-in-children/59556.html>
2. <http://www.commondreams.org/view/2013/09/15-5>
3. <http://www.forbes.com/sites/edwardsiedle/2012/11/28/how-americas-best-pain-doctor-took-on-the-medical-establishment-and-won/>
4. <http://www.frontporchrepublic.com/2013/09/what-you-need-to-know-about-jane-jacobs/>

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Sentinel (2013-10-15 06:09:22)

Seth, I was intrigued to learn that there are also people online who claim that methods based on Dr. John Sarno's theories about Tension Myoneural Syndrome (TMS), can be used to combat insomnia.

Ief (2013-10-15 06:40:04)

4 years ago I also got rid of back pain by reading John-Sarno's book, the mind body prescription. When I started reading this blog I was wondering how it is possible Sarno's thoughts for pain hasn't caught Seth Roberts attention (since other meaningful heresies related to medicine had).

Brian Toomey (2013-10-15 09:38:21)

Hi Seth, I'll vouch for Sarno. I've given the book to at least a dozen people who were considering back surgery and/or in serious pain and it worked in all cases. He comes from a psychodynamic perspective (repressed narcissistic rage is a key construct) that might be over theorizing. As I read him, he is essentially working on an ethical way to elicit the placebo effect transparently. I recommend this book to anyone with back pain or anything else that might be psychodynamic (which is lots).

Le (2013-10-15 13:29:11)

After reading Sarnos book I got rid of lower pelvis chronic pain and carpal syndrome that were with me for some years (I went to all the traditional doctors and tried all the usual treatments with zero success). At the time and even now it looked like a miracle as I went from pain to no pain in one week. And I am a very objective and scientific oriented person.

Staffan (2013-10-16 03:52:08)

Not that I don't appreciate omega 3 (it was actually this blog that got me hooked on it) but this sounds a bit dubious. Parents of low intelligence (and low reading skills) are probably less informed about omega 3 so IQ becomes a confounding variable.

### **Coffee Experiments: Suggestions for Improvement (2013-10-16 05:00)**

Seth Brown, a "data scientist" with a Ph.D. in computational genomics, has done several experiments [1] about the best way to make coffee. In one, he compared other people's burr grinders to his blade grinder. There was no clear difference in taste. In another, an Aeropress apparently produced better-tasting coffee than drip extraction. He hasn't found other factors that matter. If I drank coffee, I'd be happy to know these things.

If I were teaching how to do experiments, his work would be a good case study. I'd have my students read it and suggest improvements. The contrast between his data analysis (sophisticated) and experimental design (unsophisticated) is striking, maybe because he has no background in experimentation.

Here's what I would have done differently:

1. Study my reactions, not the reactions of guests. He had house guests rate the coffee he made. Yet he brews coffee for himself much more often than for others – at least, he gives that impression. Since his main customer is himself, it wasn't clear why other people's opinions are more important than his opinion. Maybe he read somewhere that blinding is good and thought it would be easier to achieve if other people did the ratings. He could have rated coffee he made himself blinded. Put stickers on the bottom of identical cups, shuffle the cups. However, since he will usually make coffee unblinded (he will know how he made it), it isn't clear that blinding is good.
2. No "control" experiments. In a "control" experiment, he asked guests which of two identically-made cups of coffee was better. He doesn't say what he learned from this – apparently nothing.
3. Simultaneous presentation. He gave guests two cups of coffee made differently and asked which they preferred. Apparently he gave them one cup at a time. Simultaneous presentation, allowing them to go back and forth, would have allowed much better discrimination. Maybe the two types of grinder differed but his experiment was too noisy to detect this.

In a footnote he wrote:

Ideally, I would have liked to use better control conditions [he appears to realize that there was something wrong with his control experiment – SR], larger sample sizes, more thorough subject randomization [I have no idea what this means; his designs are within-subject. In within-subject experiments, subjects are not randomized – SR], and a more consistent testing environment.

All of these changes would have made his experiments more difficult. Maybe he has internalized the rule harder is better.

The beginning of wisdom about science is roughly the opposite: do the simplest easiest thing that will tell you something. We always know less than we think, so make as few assumptions and as little investment as possible. The easier your experiment, the less you will lose if you make a wrong assumption. The smaller your sample size, the more resources (time, money, subjects, energy) you will have left over for other experiments. Bunsen's experiments would have been easier if he had studied himself. By studying others, he made an untested assumption that they resembled him.

I've done dozens of tea experiments in which I compared tea brewed two different ways. The main things I've learned, besides best brew times and best amounts of tea to use, are: 1. Rinse tea before brewing. It eliminates a kind of dirty taste. 2. Combine [2]chocolate tea and black tea. The combination is better than either alone. 3. A little bit of salt helps.

1. <http://www.drBunsen.org/coffee-experiments/>

2. <http://tisano.com/>

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Tobi (2013-10-16 05:47:09)

It's a pity that he has not tried to rate the response of his subjects, or himself for that matter, for each coffee brewed. For example, in the case of Grinders we are not told by how much one was preferred to the other. Perhaps some people really really like coffee from one grinder over another, while others barely notice the difference.

dearieme (2013-10-16 07:04:11)

"A little bit of salt helps." Also with coffee - hat tip to my father (who also recommended pepper on strawberries - that works too). Anyway: experimentation. I'm disinclined to make much of data-hammering done by someone who didn't have the sense to attend to #s 1, 2 & 3. Seth: You raise a good question: why don't I try pepper in my tea? and if it doesn't help, why not? I found #2 (meaningless control experiment) especially surprising in someone who works with data for a living and has a Ph.D. related to science. Yet I was impressed he computed a Bayes factor for his evidence.

Matthew (2013-10-16 09:05:02)

I never did rigorous experiments with coffee making, but I paid close attention to the factors which I had read made for better quality. Achieving particular effects repeatably is hard, because there are so many factors that interact. I roast my own coffee, use a decent burr grinder, and have brewed using the Aeropress, French press, vacuum brewer, and the old faithful pour-over cone. Even with these investments into quality and repeatability, the results can vary noticeably from brew to brew. What I have been able to determine to my own satisfaction is the primary importance of these factors, in order: \* age of roast. Younger than 2 days is inferior, older than 10 days becomes stale. \* proper water temperature. Over 205 F and you start to get bitter; under 195 and you get sour. \* quality of the beans. The green beans from sweetmarias.com, for instance, are substantially better than those my father purchases from some cheaper website. \* burr grinder. When using freshly roasted coffee of high quality, I found an immense difference between the coffee produced from a cheap grinder (whether whirly-blade or a mill) and an expensive burr grinder.

Robin Barooah (2013-10-16 09:20:31)

The major flaw seems to be in not controlling for other variables that could be dominating the effects of the variables he is measuring. In particular, he mentions nothing about water temperature. If he's using boiling water, he'll produce acidic coffee regardless of grind size and method. Another mistake he seems to be making, at least in the write up, is to treat the factors as independent. A burr grinder is recommended because it produces grinds of a roughly consistent size rather than a wide distribution of sizes. If you use a whirling grinder and a pour over filter then the coffee tends to form into a sludge and the

water remains in contact with the coffee for much longer than if you'd used a burr grinder. This is a large effect and easily measured with stopwatches. The aeropress works by forcing water through the coffee in a fixed time period using mechanical pressure, so the effect of grind consistency is much less than it would be for almost any other method. I think it's a good idea to test the flavor produced by varying different elements of the coffee making process, but the process is a delicate one with many factors. Ignoring that will just produce results that don't generalize. It would be a far better better to start by learning how to make an \*excellent\* cup of coffee, and then testing variables from there, to see which elements are unnecessary.

Kirk (2013-10-16 09:41:16)

I was puzzled by his use of statistical analysis. In a personal experiment like this, I think a simple bar graph works. Which brings up a related issue which I have been thinking about. How do you represent a number of steps of a tasting experiment? For example, with side-by-side tastings of tea, there are multiple variables: the tea, the amount, temperature, washed vs. unwashed. Start by fixing the type of tea, the water temperature, and the amount of tea. Compare washed vs. unwashed and washed wins, which is easy to visualize because it is a binary decision. Next step compares amounts. Suppose the larger amount tastes better, but is that amount optimal? Which requires tastings of amounts both smaller and larger than the first winner, and that step repeats until an optimal amount has been determined for that particular tea. Start the next step which compares water temperature, which also results in multiple tastings. Have you seen a good visualization of this type of experimentation?

Brian Toomey (2013-10-16 09:42:03)

Seth, I was surprised that you didn't mention the scoring. If I am reading it right he took what could have been a rich/sensitive recording (how much do you like this 0-100) and reduced it to a binary (which do you prefer A/B). Any reason why you didn't mention that? Am I missing something? Seth: No you're right. A better measure of preference would have helped. If you are comparing two cups of coffee, I'm not sure you want to ask separately for each cup "how much do you like this 0-100?" I think you want to ask about degrees of preference: slight, somewhat, etc., and assign numbers to them (e.g., slight = 10, somewhat = 20, etc.). I've never seen that done but it's a good idea.

Alex Chernavsky (2013-10-16 10:27:32)

Kirk, I think that conjoint analysis addresses some of the issues you raise with regard to multiple variables that all influence decision-making. [http://en.wikipedia.org/wiki/Conjoint\\_analysis\\_%28marketing%29](http://en.wikipedia.org/wiki/Conjoint_analysis_%28marketing%29)

Tobi (2013-10-16 11:53:50)

@Brian I made a similar remark, but I see my comment must have gotten lost in the system. Seth: Comments must be approved the first time you comment. So the first time you comment what you write will not immediately appear.

Seth Roberts (2013-10-16 14:27:34)

You mention a bunch of different factors that might be studied (= varied). There are dozens more, such as how much salt to add, how much sweetener (and which sweetener), hardness of water, on and on. Although you speak of "steps" there is no obvious order to how you should test each of the factors. No I haven't seen any visualization. It's more basic experimentation than a type of experimentation. Fisher, the statistician, used tea comparison experiments to illustrate basic principles. "A woman says she can tell whether the cream was added before or after the tea..."

Seth Roberts (2013-10-16 14:39:32)

"It would be far better to start by learning how to make an \*excellent\* cup of coffee, and then testing variables from there, to see which elements are unnecessary." that's a very good point. That's definitely what I do if I find something. First get the effect over and over then gradually see what is essential. For example, suppose Food X improves brain test scores. First show that beyond doubt then slowly vary Food X – 1. try different brands, 2. try closely related types of Food X, and so on.



Kirk (2013-10-16 17:08:40)

I've been drinking and comparing teas for many, many years. When I order samples of tea, I set up an NCAA-basketball-bracket for the initial taste-offs. The results usually are obvious between tea A and B, C and D, and so on. Sometimes there's little difference so I carry both teas to the next round. Eventually I end up at the final round where I do the final taste-off. There isn't always a clear winner. At any rate, along the way I've been making notes about the losers, such as 'harsh edge' or 'good but very average'. These help me when I record the results in a spreadsheet. For tea, I use a ranking from 1 to 5 (where 5 is best). I list 60 entries in my spreadsheet now. (I purchased them from the same company over many years). 4 teas sit at the 5 ranking. For recipes I use a 1 to 10 ranking. Anything 5 or below goes in the trashcan. A 6 is edible but will never be cooked again. A 7 could be eaten once a month, an 8 several times a month, a 9 once a week, and 10's are too good. (Think creme brulee). Most people probably don't want to see the step-by-step analysis of a taste-off, especially when a particular case is being refined, as in the example of a particular tea: how much, what temp, how long, etc. Most people want a recipe. They curate their recipe experts by choosing a particular cookbook. However, in this case (the blog posting on how to make coffee) lots of people were interested because many people have run their own coffee experiments and found other variables to be influential. To answer my own question, I speculate that a story-line illustrated with simple bar graphs at each step would help others run similar taste-off experiments. Or, more likely, they'll say, "Hey, you missed THESE critical variables."

Seth Roberts (2013-10-16 19:08:59)

Kirk, after your earlier comment about tea buying and comparing, I bought about 20 samples from Upton. It didn't work - I didn't like any of them. Part of the problem might have been that I couldn't figure out the best way to brew them - the sample wasn't enough tea to test the possibilities and the suggested brewing instructions I disagreed with.

Valerie (2013-10-16 20:05:17)

I agree with your third suggestion: tasting side by side, back and forth, is much more sensitive. However, for the your first and second points, I disagree: 1- Maybe he was not trying to establish which coffee he likes better, but how to make the best coffee. 2- He seems to try to figure out the noise in the rating. An example might help clarify what I mean. I measure my blood pressure every morning. The daily variations can be large (10, 20, even 30 mmHg). That seems to mean my blood pressure varies wildly from one day to the next. But no! If I measure my blood pressure several times the same morning (about 2 minutes apart, keeping conditions stable) I get the same kind of variations. Thus, the daily variations are just noise. Without some control measurements (in my case, several measures the same morning), I would not have reached the right conclusion.

Seth Roberts (2013-10-16 20:53:39)

He wasn't using ratings. He was just asking people which of two coffees they like better. I still fail to see what he learned from having people compare two identical coffees. He might have learned from that comparison that people tend to prefer the first presented to the second presented, but he didn't say anything like that. He said nothing about the possibility of order effects.

JRM (2013-10-17 09:32:23)

I surprised he didn't test cold brew coffee. The bitterness in coffee is from larger alkaloid molecules which diffuse less at lower temperatures. The result is a sweeter coffee.

Seth Roberts (2013-10-17 16:12:28)

"cold brew coffee". thank you for mentioning that. I recently discovered that cold brew tea is a lot better than regular brew, just like you say, much less bitter. I discovered this in Berkeley but I'm now in Beijing, where I forgot it until you mentioned this.

## Assorted Links (2013-10-17 05:00)

- [1]The science of fermented sausage and cheese
- [2]Fermented food in Australia. "There's a yeasty funkiness to fermented foods that I find really interesting,"

- [3]Bad medical journalism pushes down good medical journalism. Decline of TheHeart.org. In contrast, I don't think The New Yorker got worse after it was bought by Conde Nast.
- [4]Whole body vibration. Clearly helps some people in chronic pain (the pain goes away). In other cases, the benefit is less clear.

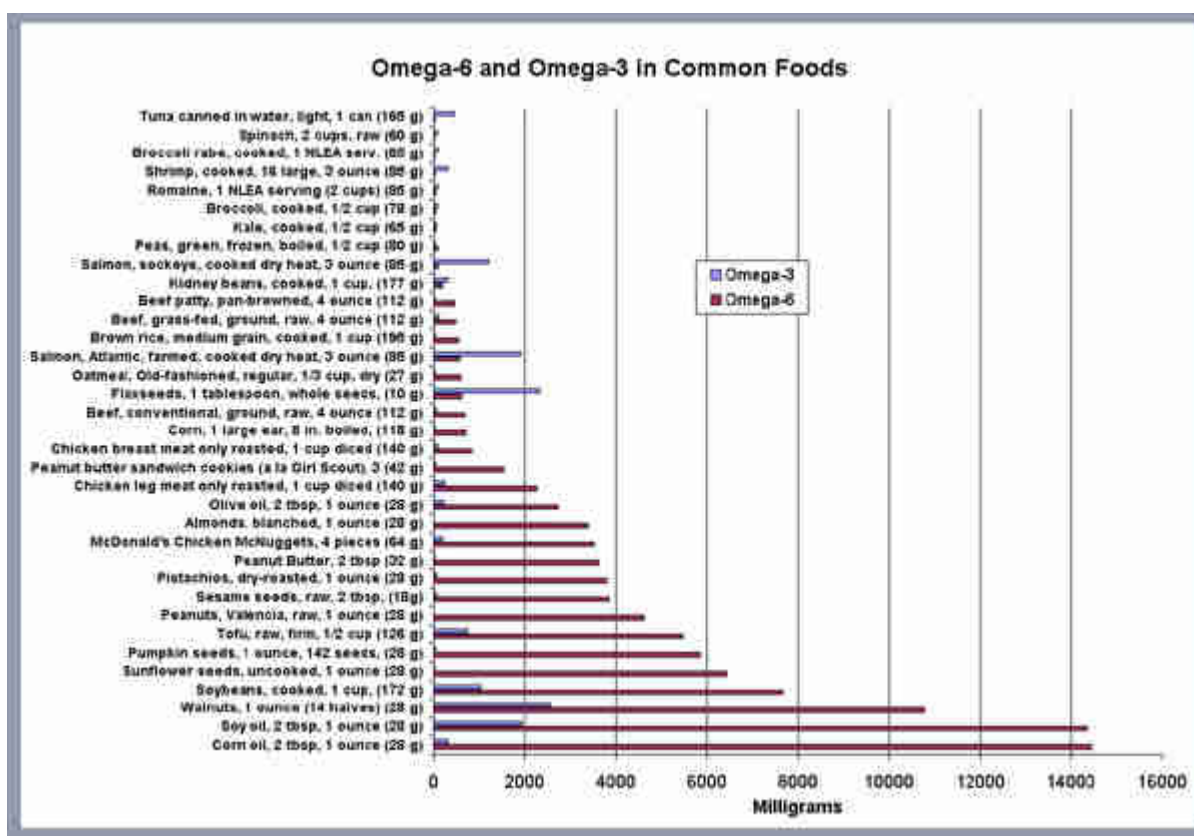
1. <http://www.npr.org/2013/09/27/226837810/food-fermentation-the-science-of-sausage-and-cheese>
2. <http://www.theaustralian.com.au/executive-living/food-drink/pass-the-sauerkraut-please/story-e6frg8jo-1226727119179>
3. <http://www.forbes.com/sites/larryhusten/2013/10/03/a-vision-unfulfilled-reflections-on-the-death-of-theheart-org-1999-2013/>
4. <http://www.ncbi.nlm.nih.gov/pubmed/21165804>

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Tam (2013-10-18 11:47:12)

An anecdote for WBV: my parents have one of these in their physical therapist/personal training studio. One day my little cousin and aunt visited. My cousin was 4 at the time and has very noticeable ADHD. He was running around like a crazy kid does, plopped down on the machine, my mother turned it on, and he immediately calmed down. It was like a light switch had been turned OFF. He was calm and serene with a pleasant smile on his face. The effect only lasted as long as the machine was vibrating. It was quite remarkable. My mother has also used it successfully for a patient with MS that was told by his doctor that he "would never" ride a bike. He rode a bike soon after that. I think it has demonstrated interesting effects on the brain. Personally, I think it feels fabulous and use it for stretching often.

## Omega-3 and Omega-6 in Common Foods and My Consumption (2013-10-18 05:00)



Here is a graph ([2]source) of the omega-3 and omega-6 content of common foods. Although walnuts are relatively high in omega-3, they are much higher in omega-6. This may be why eating them reduced the performance of my lab assistants on a brain test.

When I'm in China, I eat 60 g/day of ground flaxseed. According to this graph, this provides 1.2 g/day omega-3, far more than I would get from any ordinary diet. For example, eating lots of fish would provide much less. I chose this amount based on [3]balance and brain speed results. Flaxseed is hard to get in Beijing. Surely I am the biggest consumer in the China. I am pretty sure I am the only person ever to have optimized my intake. The best amount turned out to be surprisingly high. "We recommend one to two tablespoons [per day]," says [4]a website that sells flaxseed. High consumption of omega-3 should protect me against bad effects of omega-6. For example, when I eat peanuts (high in omega-6), my brain test scores don't change.

[5]Experts say flaxseed is a poor source of omega-3 because it provides short-chain omega-3 whereas the brain needs long-chain omega-3. My results – plenty of brain benefit from flaxseed – suggest this is wrong. The experiments that measured short-chain-to-long-chain conversion did not take account of the effect of experience on enzyme production. If you eat more of a certain food, your body will produce more of the enzymes that digest it. The subjects in the conversion experiments may have had little experience. If your long-chain omega-3 supply is limited by what enzymes can produce, you will get a steadier supply of long-chain omega-3 from enzymatic production than you will from eating the same amount all at once. For this reason dietary short-chain omega-3 could easily be a better source of long-chain omega-3 than dietary long-chain omega-3 itself.

1. [http://3.bp.blogspot.com/\\_9mNHNOMqaqM/SfDcJWRbLjI/AAAAAAAAACRg/cvjLcPdaLpA/s1600-h/Omega6-Omega3GraphFix.jpg](http://3.bp.blogspot.com/_9mNHNOMqaqM/SfDcJWRbLjI/AAAAAAAAACRg/cvjLcPdaLpA/s1600-h/Omega6-Omega3GraphFix.jpg)
2. <http://fanaticcook.blogspot.com/2009/04/omega-6-and-omega-3-in-foods.html>
3. <http://media.sethroberts.net/blog/pdf/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statisti>

cs.pdf

4. <http://www.healthyflax.com/flax-faq/>

5. <http://blog.sethroberts.net/2013/08/18/unhelpful-answers-ancestral-health-symposium-2013/>

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Pat McGee (2013-10-18 07:01:09)

Hi Seth, 1) When I clicked on the link for "balance and brain speed results", I got an errors that seemed to say "Access denied".

2) The HealthyFlax.com web site seems to only promote flax, not sell it. If they do sell it, I couldn't find a link.

Nick (2013-10-18 09:28:39)

The last paragraph on enzymes is interesting. Do you have any references? Seth: It's basic biochemistry. Look at the experiments for which Françoise Jacob won a Nobel Prize: [http://www.nobelprize.org/nobel\\_prizes/medicine/laureates/1965/](http://www.nobelprize.org/nobel_prizes/medicine/laureates/1965/)

Portlander (2013-10-18 10:40:43)

Apologies if you've mentioned this previously, but in what manner do you consume 60g of flax meal a day? Straight, mixed in yogurt, w/ pb & j??? Ok, that last one might be self-defeating :-), but I have 3 kids I have to deal with supplement. I've been giving them mega-EPA fish oil caps for a couple years now. They make a marked difference in my oldest's behavior ( & in my wife's mood back when she was breast feeding), but they are not without concerns. I'm not sure on how much is hype and how much is truth as to the molecular distillation vs. tri-glyceride & EPA vs. DHA forms. There's an enormous difference in cost among the types. So, all in all, I think I'd prefer a good whole food source if we can reasonably work it into our daily diet. OT: Its very hard to beat the convenience of a little magic pill. I can see why pharma is able to do so well for itself. Seth: I eat the ground flaxseed mixed with yogurt. Recently I've gone down to 30 g flaxseeds per day...I'm not sure which is better.

Tuck (2013-10-18 12:50:31)

"High consumption of omega-3 should protect me against bad effects of omega-6. For example, when I eat peanuts (high in omega-6), my brain test scores don't change." From what I've read, it's pretty clear that excess o-6 largely blocks conversion of alpha-linolenic acid (ALA) to long-chain o-3. Consuming more ALA doesn't alter that. But regardless, I wouldn't expect one day of o-6 consumption to have a significant effect on o-3 composition of membranes in the brain (which is why long-chain o-3 is required). If the conversion of ALA to long-chain o-3 is what's driving your increased mental capacity... There is another explanation, however, for your experience. ALA is converted to ketones preferentially over o-6 fatty acids, and ketones are a preferred fuel for the brain. Ketogenic diets, as I'm sure you're aware, are used to treat and cure several brain malfunctions, such as epilepsy. "For example, the oxidation of alpha-linolenic acid is twice that of linoleic acid or oleic acid. Therefore, alpha-linolenic acid and linoleic acid are the most ketogenic fatty acids and enriching a highfat diet with those compounds increases its ketogenic potential. This is the reason that a diet high in flaxseed oil (which contains 60 % of alpha-linolenic acid) is more ketogenic and offers more seizure protection than those using other dietary sources of ketones, at least in animal models (Likhodii et al., 2000)." "Assessing ketosis: Approaches and pitfalls" <http://onlinelibrary.wiley.com/doi/10.1111/j.1528-1167.2008.01826.x/pdf> Increased mental clarity and acuity is one of the benefits many cite from ketogenic diets, so this may be why you benefit from consuming a lot of flax-seed.

Seth Roberts (2013-10-18 16:22:15)

"Increased mental clarity and acuity is one of the benefits many cite from ketogenic diets, so this may be why you benefit from consuming a lot of flax-seed." Based on this explanation, what would you predict?

Seth Roberts (2013-10-18 17:00:47)

For the balance and brain speed results, go here: <http://blog.sethroberts.net/wp-content/uploads/2012/09/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf> something is strange about the embedded link.

JRM (2013-10-19 00:24:33)

Check units. The chart gives more than 2 grams of omega 3 per 10 grams for flaxseed. 60 grams would be maybe 13 grams of omega 3 per day. This says flaxseed oil is 53 % omega 3 <http://nutritiondata.self.com/facts/fats-and-oils/7554/2>

Tuck (2013-10-19 15:56:40)

"Based on this explanation, what would you predict?" I'd expect that any other source of dietary ketones would have similar effects (such as coconut or MCT oil). As would, after an adaptation period, a ketogenic diet. I've done this myself of late, and now associate carb consumption with fuzzy-headedness. I've not done the self-testing that you've done, however. Seth: Thanks. The Buttermind Experiment included a coconut oil condition. People who ate coconut oil did not become faster at arithmetic. I don't know of any evidence that coconut oil improves brain function. That supports the idea that it is the omega-3, not the ketones.

BRW (2013-10-20 07:03:15)

Seth, do you worry at all about toxicity and peroxidative stress?

Tuck (2013-10-20 08:41:56)

"The Buttermind Experiment..." I was thinking that butter might actually be better, if you get high-quality butter. Butter contains butyric acid (named for butter) which is metabolized in beta-hydroxybutyrate, the primary ketone fuel source of the body. Coconut oil contains medium-chain triglycerides, which are also metabolized into ketones. The evidence I've seen for mental improvement is limited to those with Alzheimer's and a specific genetic marker (that predisposes to Alzheimer's): "Study of the ketogenic agent AC-1202 in mild to moderate Alzheimer's disease: a randomized, double-blind, placebo-controlled, multicenter trial." <http://www.ncbi.nlm.nih.gov/pubmed/19664276>

Shane (2013-10-20 11:54:58)

I've read your theory on why flax O3 is not an inferior form of O3 several times, but do not recall reading accounts of self-experimentation pitting flax O3 vs. more putatively bioavailable sources of O3, like any of the various fish oils. Have you done self-experimentation of this kind? If not, why not? Seth: Two reasons. 1. Busy studying less obvious things that seem to change brain function. 2. Problem of mercury in fish oil. The source of omega-3 is a kind of interaction (the omega-3 effect may vary with source), whereas there are still plenty of main effects to study.

Shane (2013-10-20 12:01:14)

To be slightly more explicit, the other day, in a post, you said this: "As this article recommends, I used to eat plenty of fish. But I still noticed a dramatic improvement in my balance and cognitive abilities when I started taking flaxseed oil. The best amount seemed to be 2-3 tablespoons/day. Fish wasn't supplying close to the optimum amount of omega-3." So you point out that, through self-experimentation, you've found that taking a titanic amount of ground flax meal ("the biggest consumer in China.") produces good results. So in your experiments you kept increasing flax O3 dosing until it produced efficacious results. Did you attempt a similar thing with fish oil, only to find there was no effective dosage that could do for you what flax oil did? Seth: No, I haven't tried fish oil extensively. When I first started talking about the benefits of flaxseed oil on mental tasks, others tried fish oil and found similar results. No doubt fish oil works. There is nothing weird about getting omega-3 from plants, all of which contain small amounts of it. Lots of people flourish without eating seafood – see Weston Price. I have never heard that people need to get their omega-3 from fish.

Peter (2013-10-21 07:58:07)

Chia seeds, any opinions?

## My Theory of Human Evolution: Obsessive-Compulsive Disorder (2013-10-18 05:00)

From Entertainment Weekly:

EW: Are you religious?

Jodie Foster: No. I'm an atheist. But I absolutely love religions and the rituals.

Perhaps everyone enjoys rituals. (Even [1]scientists.) It's a curious enjoyment because rituals are arbitrary and without useful result. No other species has rituals. One sign of the pleasure we derive from rituals is obsessive-compulsive disorder (OCD). OCD takes many forms; one is excessive dependence on rituals, such as a need to do certain things, such as counting, tapping, or aligning, so often that it seriously interferes with being productive. The BBC program [2]Am I Normal? did an excellent [3]episode on OCD (no longer available). If you think of OCD (some forms) as addiction to rituals, the capacity of rituals to provide pleasure – or at least reduce anxiety – is clear.

Why do we enjoy rituals? I've already written about [4]Christmas. Rituals and ceremonies, like Christmas and other gift-giving holidays, are a growth medium for fine craftsmanship. They encourage desire for fancy things – Christmas cards, special food, music, art, the special tools used in Japanese tea ceremonies.

(Maybe the word fancy was invented to describe just these things, it fits so well.)

They help support the highly-skilled artists and artisans who are advancing the state of their art. You can read my whole theory of human evolution [5]here.

1. <http://www.blog.sethroberts.net/2007/08/05/something-is-better-than-nothing/>

2. [http://www.bbc.co.uk/radio4/science/am\\_i\\_normal.shtml](http://www.bbc.co.uk/radio4/science/am_i_normal.shtml)

3. <http://www.bbc.co.uk/programmes/b007wflp>

4. <http://www.blog.sethroberts.net/2006/12/24/christmas-an-evolutionary-explanation/>

5. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

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Nancy Lebovitz (2013-10-18 05:54:08)

The difference is that people with OCD don't like their rituals, but people mostly do like religious rituals.

Eric (2013-10-18 06:03:43)

The great evolutionary advantage that humans evolved was intelligence. Understanding the world implies that we will be successful, while being confused implies that we will be in trouble. Rituals simplify a complex world. You don't have to worry about what to do. If you follow the ritual you will be guaranteed success. For information processors in a complicated world this is an oasis of calm.

Allen K. (2013-10-18 07:05:53)

Maybe "superstitious behavior" is too different from your definition of "ritual", but here goes anyway. I've heard of experiments with birds in which they would be rewarded randomly at various rates. If you do it too often or too rarely, they don't change their behavior. But if it's around 1/4 of the time, then they start to guess "something I did got me a reward", and they train themselves to do weird things (which, of course, get them the reward 1/4 of the time), such as stand on one leg. The punchline is that baseball players hit the ball about 1/4 of the time. Seth: B. F. Skinner wrote a paper about "superstition" in pigeons that was later shown to be all wrong (by [1]Staddon and Simmelhag). The 1/4 stuff I've never heard before and animal learning is

my professional field.

1. <http://garfield.library.upenn.edu/classics1981/A1981LF07000001.pdf>

David (2013-10-18 07:15:45)

Humans are not the only animal who perform rituals. My dog will not lie down to sleep without first spinning around 3 times before plopping down into her chosen spot for a snooze. It's a consistent behavior she's exhibited since she was a puppy. It's like she's screwing herself into place to be more snug before nodding off. I once had a cat who had a very set routine for cleaning herself. She ALWAYS cleaned her entire right arm before licking anything else. Always. Seth: Okay, let me restrict the term "ritual" to stuff that is transmitted from one person/animal to another.

Tom Passin (2013-10-18 07:51:27)

Actually, animals do seem to get OCD - <http://www.veterinarypracticenews.com/vet-practice-news-columns/pet-projects/obsessive-compulsive-disorder-in-animals.aspx>

Tom Passin (2013-10-18 08:13:42)

Now I'm enjoying your linked paper on human evolution and trade/specialization. But again, you say that only humans do X - this time, trade - and there is evidence that some animals do trade. E.g., [http://www2.gsu.edu/~wwwexa/news/archive/2009/09\\_0610-tradingbehavior.html](http://www2.gsu.edu/~wwwexa/news/archive/2009/09_0610-tradingbehavior.html) In general, a lot of people who said that "only humans do x" have found that some animals also do the it, even if in simplified and attenuated form. That would suggest that the evolution of X would have been easier because there was a pre-existing starting point for evolution to work on. Seth: The link isn't much support for the idea that animals trade:

Georgia State's Sarah Brosnan, assistant professor of psychology, and research scientist Michael Beran conducted a study to see if chimpanzees spontaneously bartered foods among each other, using tokens which represented those foods. While results indicated that the animals were cognitively able to understand trade, without enforcement from human experimenters, trade disappeared.

Joe (2013-10-18 13:21:24)

"Humans are not the only animal who perform rituals." I agree! See: MATING rituals, for example. Seth: Good point. I should have said humans are the only animals with learned rituals.

Maureen (2013-10-18 15:44:04)

As Joe says - just look at animals when the hormones are pumping! My interest in this evolutionary aspect of rituals is how it plays into that whole can of worms of people getting obese and then trying to fight their way out of it. I've been teaching a series of mindfulness habits and after having a quick browse through your main article, it occurred to me whether I'm just getting people involved in mindfulness or just giving them another ritual to follow? Would you see mindfulness types of training as a case of one unhealthy ritual (scoffing too much food or starving and binging) with a slightly more healthy one of being aware of your hunger and nipping it in the bud. I can see I'm going to have to dig deeper into your work.

Staffan (2013-10-19 04:41:30)

Like Nancy pointed out, OCD is not an addiction. I have subclinical OCD and I'd gladly be rid of it. Lack of anxiety (which is as good as it gets) is not addictive. If I was to give it an evolutionary explanation I'd say those who worried about having bolted their dwelling properly before going to bed had a slightly higher survival rate than others. Seth: "bolted their dwelling"? Locks were invented recently. OCD takes many forms. In one case, a person with OCD did not feel comfortable unless everything in his house was coated with a fine layer of confectioner's sugar.

Seth Roberts (2013-10-19 13:31:39)

"People with OCD don't like their rituals." I agree, that's an important difference.

Andrew (2013-10-20 18:29:02)

For what it's worth, I don't really like special rituals. I generally find them boring. Even brushing my teeth at night is something I have to take extra pains to get myself to do. I may have (undiagnosed) ADHD, which might have something to do with it. I've heard of various psychological benefits to rituals, so it would be nice to enjoy them.

### Assorted Links (2013-10-19 05:00)

- [1]Probiotics reduce frequency of colds, Cochrane review finds
- A dentist says [2]prophylactic removal of wisdom teeth is a bad idea. "Ten million third molars (wisdom teeth) are extracted from approximately 5 million people in the United States each year at an annual cost of over \$3 billion. . . . More than 11000 people suffer permanent paresthesia—numbness of the lip, tongue, and cheek—as a consequence of nerve injury during the surgery. At least two thirds of these extractions, associated costs, and injuries are unnecessary, constituting a silent epidemic of iatrogenic injury."
- [3]Duke University trustees defend endowment secrecy in funny ways. "David Rubenstein '70, the Trustee chair, [says] Duke can keep a student's grades secret — available only to a few administrators — and the principle is the same with Duke's money."
- [4]Self-assembling robots

Thanks to Allan Jackson and Bob Levinson.

1. <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD006895.pub2/abstract>
2. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1963310/>
3. <http://dukecheck.com/?p=16719>
4. <http://web.mit.edu/newsoffice/2013/simple-scheme-for-self-assembling-robots-1004.html>

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dearieme (2013-10-19 07:53:33)

"Duke can keep a student's grades secret — available only to a few administrators": this is a feature of American life that I don't understand. My university results were published in the newspapers. Is it just another example of American talk of free speech and freedom of the press being baloney?

as (2013-10-20 16:58:41)

The removal of wisdom teeth also affects the aesthetics of your face. With my family, there was a noticeable difference for the worse after the wisdom teeth were taken out. The cheeks have this sunken look.

### Harry Shearer Used My Joke (2013-10-20 19:32)

I haven't seen This is Spinal Tap but I am a big fan of Harry Shearer's [1]Le Show, a weekly podcast. For the last few months, one segment has been about the misuse of so: People use it to start sentences that aren't about consequences ("So we were standing there minding our own business. . . ."). I wrote Shearer to say he should change the name from Le Show to Le So. Not long after that, he ended the so segment with "here on Le So".



1. <http://harryshearer.com/le-show/>

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thnidu (2013-10-24 18:33:50)

That's been an opening for jokes for years. "So a blogger, a podcaster, and a linguist walk into a bar..."

## **Our Need for Morning Faces: Does Isolation Cause Delusions? (2013-10-21 05:00)**

In 1995, I discovered that [1]seeing faces in the morning raised my mood the next day. For example, seeing faces Monday morning improved my mood on Tuesday (but not Monday). Study of the effect suggested we have a face-sensitive oscillator that controls mood and sleep. The oscillator needs morning-face exposure to work properly – faces "push" the oscillator as you would push a swing. Long ago, this oscillator synchronized the mood and sleep of people who lived together. The synchronization helped them cooperate. It is much easier to work with a happy person than an unhappy person and, of course, much easier to work with someone awake than someone asleep.

My results suggested you need to see morning faces on the order of 30 minutes to get a big effect. The faces need to be similar to what you'd see in a conversation. Looking at people on the subway doesn't count. Nowadays, as far as I can tell, hardly anyone gets the right input. In extreme cases, this causes depression, poor sleep, bipolar disorder, and anxiety disorders. What else might it cause?

A friend, whom I'll call Ben, recently told me something that sheds light on this. Three years ago he was a graduate student at Columbia. He lived in a basement apartment, with no sunlight. It was between semesters. He had no regular contact with anyone. He was depressed. Then things got worse: He became delusional. He started thinking that every conversation he heard was about him. "Everything I heard or saw was directed at me," he said. There was a boiler in the room next to his apartment. He believed it was a nuclear reactor.

Although Ben was isolated in terms of seeing other people, he had non-visual contact with people online. He told them about his strange thoughts. Some thought he had a problem, some didn't. Some thought he sounded mystical. He felt physical discomfort – a "pulling inside". His heart seemed to be beating differently. He called his parents. They were so alarmed that they contacted someone they knew in New York. Eventually an ambulance arrived at Ben's apartment and took him to a mental hospital. At the hospital, he told them he thought he was dead. After a day or so at the hospital, on a locked ward, he felt much better. However, he wasn't allowed to leave for two weeks because the doctors didn't know what was wrong with him.

After leaving the hospital he took a break from graduate school and went to stay with his parents. He saw a psychiatrist and was prescribed [2]Risperdal (an antipsychotic) and Depakote (for mania).

The pattern is okay during semester (when he sees others on campus), sick between semesters (when he doesn't see others), okay in locked ward (when he sees others). Bipolar disorder sometimes includes delusions during mania, so the association of disordered internal rhythms and delusions is not new. But why should disordered internal rhythms cause delusions – in this case, paranoid ones? One possibility is that it is beneficial to be paranoid in the middle of the night. If someone wakes you up, you will wake up thinking they tried to wake you up, which will make you especially mad. The madder you are, the less likely they will do it again. I argued that the irritability associated with depression is beneficial in the middle of the night for just this reason: It protects sleep. If someone wakes you up you

will get mad at them. This explanation predicts a circadian rhythm in paranoia, increasing in the evening. However, I'm not sure this explains why he thought a boiler in the next room was a nuclear reactor.

1. <http://www.escholarship.org/uc/item/2xc2h866>

2. <http://en.wikipedia.org/wiki/Risperidone>

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gwern (2013-10-21 08:12:52)

> However, I'm not sure this explains why he thought a boiler in the next room was a nuclear reactor. Excluding the obvious like schizophrenia (happens a lot in age brackets like grad students'), maybe sleep deprivation? Associated with hallucinations, and if he was in the basement using a computer, he could be deprived without realizing it.

Sentinel (2013-10-21 09:41:45)

Seth, I understand your theory that seeing faces improves mood the next day, but what is the connection between seeing faces and sleep? (Thanks!)

CC (2013-10-21 09:49:13)

"The faces need to be similar to what you'd see in a conversation. Looking at people on the subway doesn't count." Wait, why not? We're all standing pretty close together on the subway. Seth: What you see needs to be very close to what you see during an ordinary conversation.

Seth Roberts (2013-10-22 04:22:57)

The connection between seeing faces & sleep: Seeing faces in the morning improves sleep, as far as I can tell.

Nancy Lebovitz (2013-10-22 08:29:40)

It seems to me that "Can Isolation Cause Hallucinations?" would be a more accurate title. Seth: Hallucinations is when you see things. But maybe "delusions" is too weak.

Nancy Lebovitz (2013-10-23 13:35:48)

Sorry, I should have proofread before I posted. What I meant was "Can Isolation Cause Delusions?", with the change intended to imply that isolation might cause delusions rather than that it reliably does cause delusions. Seth: I agree, that's a good change.

thnidu (2013-10-24 18:32:09)

CC ( & Seth): I grew up in NYC. On the subway you may be only 6 inches from someone else's face, \*but you're not looking at it\*. We deliberately avoid the appearance of social contact, because being that close normally implies intimacy. And even if we are looking straight at a person's face in the subway, we still normally don't treat the sight / eye-contact as we were conversing with that person. We have our shells up. I would not be a bit surprised if that made a major difference in the psychological effects.

## Mo Ibrahim: How I Became a Teacher (2013-10-22 05:00)

I met [1]Mo Ibrahim, a high school teacher in New York, because of his Behind the Approval Matrix blog, [2]which I admired. [3]I interviewed him about his [4]I Got Uggs! blog. Recently he has become interested in finding out if [5]my ideas about teaching can help him teach better. This is the first in a series of posts by him about that.

I went to college at Chicago State University, a commuter school in Chicago. I started in the late 1980s. I considered a career as a teacher when I was there, but changed my mind after I visited the education department and learned about the student teaching requirement, which seemed like a drag. Later I visited the premed office.

Mostly I studied biology and

graduated with a degree in Independent Studies. By graduation, I had been accepted at University of Illinois School of Medicine, in Chicago.

I started there in 1995. The summer before I enrolled, I had been verbally promised a whopping three scholarships. One was from my State Representative, the other two from a non-profit organization that helps African-Americans get into medical school. I did get the scholarship from the State of Illinois, which covered my tuition. However, I never got the other scholarships, which meant that my living expenses weren't covered. Between the time of the verbal promise and my enrollment, the organization had started a policy of only giving scholarships to students in the second and later years of medical school. Too many African-American students dropped out in the first year; the foundation reasoned it was wasting its money.

At the medical school's financial aid office, I was informed that my only option was to take out a loan. This was something I had sworn I would never do. I'm Muslim; interest-based loans are against Islamic law. Despite being told that it was virtually impossible to be a medical student and work, I got a job during the graveyard shift at a seedy hotel on the North Side. I avoided drinking coffee to stay awake because I didn't want to go to the bathroom and compete with the rats for a stall. Without coffee, I fell asleep. I was only there a week. A tenant who owed the hotel over \$1,000 moved out while I was asleep. I was immediately fired. Three months later, I withdrew from medical school. I couldn't afford it.

My first real job after medical school was in the medical records office at St. Francis Hospital. A co-worker was taking a computer repair class at a community center and suggested that I join him. I didn't take the class, but I purchased a used computer, some computer repair books, and studied for the A+ Certified Computer Repair Technician exam. I passed the exam on the first attempt and got a job making five times what I was making at the hospital. I did computer repair and network engineering for five years. Unfortunately, the work seemed to be drying up. I started at \$100/hour but after five years was making \$9/hour. Toward the end of the five years, my wife and I took a vacation in New York City. In the subway, I noticed an advertisement for the New York City Teaching Fellows (NYCTF) Program. I liked the idea of being a teacher because of the job stability and the idea of giving back to the minority community. NYCTF automatically puts you in an "underprivileged" school. The deadline for applying to the program was quickly approaching and I filled in the online application as soon as I returned to Chicago.

I was invited back to New York for an interview. After I taught a sample lesson and did group and one-on-one interviews, I was accepted into the 2004 NYCTF program. That summer I enrolled in a Master's degree program in Education at the City College of New York. I also got a job teaching at an underprivileged high school near Columbus Circle. Ten years later, I am still trying to determine the best way to teach my students.

1. <http://www.thewritermoibrahim.com/>

2. <http://blog.sethroberts.net/2008/02/18/the-greatness-of-behind-the-approval-matrix/>
3. <http://blog.sethroberts.net/2008/04/04/how-things-begin-i-got-uggs/>
4. <http://www.igotuggs.com/>
5. <http://graphics8.nytimes.com/images/blogs/freakonomics/pdf/whatdostudentswant.pdf>

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nicole (2013-10-22 18:46:19)

the link in the original "behind the approval matrix" now links to some customer matrix website. Seth: thanks, I've fixed it.

Dragan (2013-10-23 12:08:19)

It's always interesting to consider the type of training we give USA teachers—especially those who have the hardest positions (in this case, "underprivileged" schools)—in comparison to the type of training given to teachers in, say, Japan or Finland.

### **Walking Meetings Much Better than Seated Meetings (2013-10-23 05:00)**

In [1]an interview about his new book The JFK Assassination Diary, Edward Jay Epstein was asked how he, a Cornell undergraduate, managed to talk to the people who did the research behind the Warren Commission Report. "It was a different age," he said. "People actually communicated by sitting across a desk from one another and talking." When I heard this, I was amused. I had just discovered that it was much better to meet with students walking than seated. What Epstein considered the good old-fashioned way (seated meetings) was to me the crazy new-fangled way.

As I've blogged, this semester I am teaching [2]a class about academic writing. I am trying to apply my no grading/no lecturing method that [3]worked well last year in a much different class (Frontiers of Psychology). In the writing class, my plan was/is to meet with students one-on-one right after class, in the same room. They choose the meeting length. During the meeting they show me what they've written and I make comments. During the next class they give a brief talk (e.g., 10 minutes) in which they tell the rest of the students what I told them. The course is much easier to teach than usual: no lecture, no grading, no written comments. Yet the students get as much one-on-one feedback as they want. I think spoken (face to face) comments are much better than written ones because they allow the recipient to ask questions.

Right now we covering how to write a personal statement for graduate school applications. The first set of after-class meetings was a week ago. The class has 12 students. Five signed up for meetings, 10-15 minutes each, an hour total. At the end of the hour I was tired. It was hard to concentrate that long. I went home and rested.

The class meets once/week. I thought of my discovery it was [4]much easier to study Chinese while walking than while sitting (more [5]here). While sitting I got exhausted after 10 minutes. While walking (on a treadmill), I could easily study 40 minutes. Jeremy Howard discovered the same thing. He put it like this:

[On a treadmill] I can [study Chinese] for an hour. Normally if I'm just sitting down I can just do it 20 minutes. . . . And at the end of that hour I was ready to do something else. Whereas at the end of 20 minutes, normally I'd be totally ready for a rest.

This gave me the idea of meeting with my students while walking. I've done walking interviews many times – for example, with job candidates and fellowship applicants. I didn't like sitting for long periods of time and I hoped that walking would reduce their anxiety. It seemed to work.

During the next class, I announced the change: Bring a printed copy of your work (while walking I could not read a computer screen). I said they didn't need a printed copy today, just in the future.

After that class, I had four meetings. In three cases, the student did not have a printed copy so I started with the one student who did. I was pleasantly surprised that the other three students had made printed copies of their work by the time of their meeting so I did all four meetings walking.

What a difference! The meetings felt like no work at all. At the end of them, I felt refreshed. Yet their details (who, when, what, how long, etc.) were very close to what had left me tired a week earlier.

Maybe in the future offices and meeting rooms will have side by side treadmills and you project what you want to look at together on the wall. [6]Another advocate of walking meetings is [7]Nilofer Merchant. She says she listens better, mobile phones are less distracting, and the mood is better.

Humans [8]evolved to specialize and trade. Specialized knowledge needed to be passed down, so we must, under the right circumstances, enjoy teaching, just as a healthy diet must taste good.

1. <http://www.youtube.com/watch?v=SN4lvAvVE0c&feature=youtu.be>
2. <http://blog.sethroberts.net/2013/09/16/teaching-academic-writing-my-plan-part-1-of-2/>
3. <http://blog.sethroberts.net/2013/01/26/my-ideas-about-teaching-put-into-practice/>
4. <http://blog.sethroberts.net/2010/02/23/boring-boring-pleasant/>
5. <http://blog.sethroberts.net/category/walking-and-learning/>
6. <http://blogs.hbr.org/2013/01/sitting-is-the-smoking-of-our-generation/>
7. <http://nilofermerchant.com/>
8. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

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Phil (2013-10-23 09:35:19)

Thought you might find this interesting - easy way to try a standing desk: <http://gregschlom.com/post/4555981908/standing-desk> That with a little bit of training for proper standing posture might help a lot of people be more comfortable and productive.

Phil (2013-10-23 09:37:36)

Also - and this is totally unrelated, but I just thought of it - have you ever read *\_Self-Help Without the Hype\_* by Robert Epstein? It's a book that strongly encourages self-experimentation. Seth: Thanks for the recommendation. I haven't seen it.

garymar (2013-10-23 15:27:53)

"People actually communicated by sitting across a desk from one another and talking." I think what he's trying to say here is, "instead of tweeting each other." Emphasis being on face-to-face communication.

dearieme (2013-10-23 18:24:50)

"meet with students one-on-one ...During the meeting they show me what they've written and I make comments." Welcome to Oxford.

Nancy Lebovitz (2013-10-24 05:29:37)

For some reason, I can't see the comments on this post. Clicking on the recent comments links doesn't work either. Any thoughts about how you'd accommodate people for whom walking is difficult or impossible? People with radically different walking speeds? Seth: If someone can't walk, I would meet with them without walking.

Jill (2013-10-24 11:24:14)

"I think spoken (face to face) comments are much better than written ones because they allow the recipient to ask questions." For me personally, I don't think this would be the case. For one, my mental processing seems slower/less robust with oral communication. (Though my hearing tests fine, I sometimes have trouble deciphering words that I hear, vs words that I see.) For another, I like to have a hard copy to refer back to. I think it's worth keeping in mind that you may have some students for whom this is true, and maybe adapt the format to support different learning styles if the need arises. Seth: I suspect my 100 spoken words would be more helpful than my 10 written words. Writing is much harder than speaking, especially handwriting (typing is easier than handwriting). After they talk to me, my students make a written summary of what I tell them – so that is a hard copy.

Cleanthes (2013-10-26 17:42:20)

Hmm, walking about while teaching... How Aristotelian. All that was old is new again.

### Assorted Links (2013-10-24 05:00)

- [1]Michael Wolff on Edward Jay Epstein's new book about the Kennedy assassination and Warren Commission Report
- [2]Order Without Law: How Neighbors Settle Disputes (1991)
- [3]Peking University expels liberal economist (via [4]Marginal Revolution). Plus [5]China's Nobel Prize in science prospects.
- [6]Paleo bakery in Amsterdam. A friend compared this to dehydrated water, but I am less sure that there were no sweets in Paleolithic diets.

1. <http://www.usatoday.com/story/money/columnist/wolff/2013/10/13/epstein-and-the-kennedy-assassination/2960611/>
2. [http://books.google.com/books/about/Order\\_Without\\_Law.html?id=3le1NaQ\\_FtoC](http://books.google.com/books/about/Order_Without_Law.html?id=3le1NaQ_FtoC)
3. <http://www.scmp.com/news/china/article/1334729/peking-university-expels-liberal-economist-xia-yeliang>
4. <http://marginalrevolution.com/marginalrevolution/2013/10/assorted-links-946.html>
5. <http://www.scmp.com/comment/insight-opinion/article/1334631/china-nobel-prize-science-still-big-leap-away>
6. <http://www.paleocompany.nl/home.html>

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Joe (2013-10-24 13:31:15)

There were some sweets, but they were limited to seasonal fruits, perhaps for a few weeks of the year. Perhaps some sugar cane, which was simply sucked on, not processed and added to every food. Paleo-style desserts are at least as tasty as sugar-laden sweets. The sweetness comes from things like stevia, xylitol, honey, dates, fruits, and maple syrup. For example, I

can make you some chocolate avocado brownies that you will never be able to tell from regular old brownies. You would never know they were made from avocados if I didn't tell you beforehand. And they contain ZERO sugar!

lemmy caution (2013-10-24 16:32:09)

Honey is pure sugar. It is hunter gatherers favorite food. Paleo guys should just eat fruit. "Order Without Law" is a good book. Seth: Honey is 20 % water.

Joe (2013-10-25 13:11:02)

Yes, honey is sugar. But then, so are ALL carbohydrates! Used judiciously, say, for infrequent baking, it's no big deal. Since baking, per se, is emphatically not paleo, neither would using fruit be paleo. But Loren Cordain, the Godfather of paleo, says that the 80-20 rule is probably good enough. Eat strictly paleo 80 % of the time, and bend the rules a bit the other 20 % of the time. Which is what I do. Nota bene: From a strictly paleo point of view, eating a little honey once in a great while is probably better for you than eating fruit everyday, because hunter/gatherers couldn't possibly have had fruit available to them all year long. It's a seasonal item.

### **Saturated Fat and Heart Attacks (2013-10-25 05:00)**

After I discovered that [1]butter made me faster at arithmetic, I started eating half a stick (66 g) of butter per day. After a talk about it, a cardiologist in the audience said I was killing myself. I said that the evidence that butter improved my brain function was much clearer than the evidence that butter causes heart disease. The cardiologist couldn't debate this; he seemed to have no idea of the evidence.

Shortly before I discovered the butter/arithmetic connection, I had a heart scan (a tomographic x-ray) from which is computed an Agaston score, a measure of calcification of your blood vessels. The Agaston score is a good predictor of whether you will have a heart attack. The higher your score, the greater the probability. My score put me close to the median for my age. A year later – after eating lots of butter every day during that year – I got a second scan. Most people get about 25 % worse each year. My second scan showed regression (= improvement). It was 40 % better (less) than expected (a 25 % increase). A big increase in butter consumption was the only aspect of my diet that I consciously changed between Scan 1 and Scan 2.

The improvement I observed, however surprising, was consistent with [2]a 2004 study that measured narrowing of the arteries as a function of diet. About 200 women were studied for three years. There were three main findings. 1. The more saturated fat, the less narrowing. Women in the highest quartile of saturated fat intake didn't have, on average, any narrowing. 2. The more polyunsaturated fat, the more narrowing. 3. The more carbohydrate, the more narrowing. Of all the nutrients examined, only saturated fat clearly reduced narrowing. Exactly the opposite of what we've been told.

As [3]this article explains, the original idea that fat causes heart disease came from Ancel Keys, who omitted most of the available data from his data set. When all the data were considered, there was no connection between fat intake and heart disease. There has never been convincing evidence that saturated fat causes heart disease, but somehow this hasn't stopped the vast majority of doctors and nutrition experts from repeating what they've been told.

1. <http://quantifiedself.com/2010/09/seth-roberts-on-arithmetic-and/>

2. <http://ajcn.nutrition.org/content/80/5/1175.full>

3. <http://www.menshealth.com/print/21896>

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Nick (2013-10-25 05:41:32)

Eating butter is still a silly idea because it's bereft of nutrients.

Peter Andrews (2013-10-25 06:02:45)

Very nice half hour Australian TV show about the lack of evidence for cholesterol/saturated fat hypothesis just aired October 24, 2013. <http://www.abc.net.au/catalyst/heartofthematter/>

Richard A. (2013-10-25 06:30:50)

Real butter has all kinds of trace nutrients in it that are missing from margarine.

Tuck (2013-10-25 06:46:22)

"Eating butter is still a silly idea because it's bereft of nutrients." That's wrong. <http://nutritiondata.self.com/facts/custom/2244512/2>

Mark (2013-10-25 08:29:42)

"Eating butter is still a silly idea because it's bereft of nutrients." Well, it's obviously not bereft of nutrients because it's loaded with saturated fat (besides the link Tuck provides).... which is kind of the point. Second, Seth has found that it made him faster at arithmetic. How is that silly?

Alex Chernavsky (2013-10-25 11:28:23)

See also this article from the *Los Angeles Times*: "[1]Time to end the war against saturated fat?"

1. <http://www.latimes.com/science/sciencenow/la-sci-saturated-fat-20131022,0,2193813.story>

Joe (2013-10-25 13:18:49)

It's nice to see the tide finally turning regarding saturated fats. I eat a lot of it, and I've never been healthier. Want a really silly idea? Eating margarine!

emini\_guy (2013-10-25 15:38:10)

See also this: <http://shine.yahoo.com/healthy-living/does-butter-still-deserve-a-bad-rap-controversial-doc-says-no-002203701.html>

David (2013-10-25 19:44:07)

Seth, have you considered doing similar experiments with eggs (and especially with eggs from chickens that eat bugs and grass instead of just corn)? Eggs are criticized for having lots of fat/cholesterol, but certainly humans and their ancestors have been eating eggs whenever they could find them. It's hard to believe that we didn't evolve to take advantage of such a great source of energy and nutrients. Seth: I have never noticed any brain benefit from eating eggs. I haven't specifically done an experiment.

qhfgva (2013-10-25 21:23:55)

I was curious what the vegan response to this article would be and posted a comment here: <https://plus.google.com/u/0/104628657784485387851/posts/DR178fSBY6M> I don't know enough about this paper to know if his response is fair or not. As a butter eater I'd certainly \*like\* to believe that the 2004 paper referenced above is not misleading.

Heidi (2013-10-25 21:34:46)

The study used questionnaires, and apparently the unsaturated fat was vegetable oil used for cooking. In other words, these polyunsaturated fats were mostly nasties, not high quality polyunsaturated oils such as flax oil, etc. I think the study would have been even better if they had asked the participants to use only certain oils, not soy and corn, which they then used to fry up something equally toxic, no doubt. My real question would be, if one cooks with ghee and coconut oil, and only uses high



quality polyunsaturated oil without heating it, would they get better results? I'm betting my own health that ... yes.

Audrey (2013-10-26 12:55:19)

Seth, I wonder if you have ever tested if zinc supplementation has any effects on you. <http://itsthewooo.blogspot.com/2013/10/zinc-omg-cico-is-stupid-and-useless.html>  
<http://www.ncbi.nlm.nih.gov/pubmed/22549093>

Seth Roberts (2013-10-27 00:25:56)

Have I studied zinc? I think I took it a few times and noticed no difference. Not sure.

Nick (2013-10-27 05:51:10)

Can't believe everyone got on the defensive about my comment on butter. It has a bit of vitamin A and perhaps some K2, that's it. Relative to other foods, that's nothing. If you eat, say, ground beef, (saturated fat in it too) you get lots of nutrients that tag along. Does this comment section just latch to whatever Seth preaches like its gospel?

Brock in HK (2013-10-27 07:12:04)

Nick - Can't believe you made a short, ill-informed comment on this blog, which focuses on presenting evidence from the result of (usually self-) experiments. If you had even a few facts to support your initial assertion, you might have started a debate rather than receiving a scolding. Still not quite there with your comment. Can you disprove that Seth benefited from his consumption of butter? That might be a more productive avenue.

Joe (2013-10-27 08:58:55)

"Can't believe everyone got on the defensive about my comment on butter." Really? Even when you make comments like this: "Eating butter is still a silly idea because it's bereft of nutrients" The 20 Health Benefits of Real Butter: [http://bodyecology.com/articles/benefits\\_of\\_real\\_butter.php#.Um013hAnX8k](http://bodyecology.com/articles/benefits_of_real_butter.php#.Um013hAnX8k) 7 Reasons Why Butter is Good For You: <http://authoritynutrition.com/7-reasons-why-butter-is-good-for-you/> Does that really sound "silly" to you? Really?

Nick (2013-10-27 09:46:15)

Butter isn't unhealthy, at least in moderation. I just think there's better options. For butter's saturated fat and CLA, eat fatty red meat. For the K2 and vitamin A, eat beef liver and eggs yolks. For the butyrate, optimize your gut microbiome and eat plant fiber (especially resistant starch). My gripe is that these posts lead people to eat multiple sticks of butter a day, thinking it's healthy. Beyond moderation (e.g. a little added to meals for flavor), it's just a pile of calories without that much added nutrition.

Nick (2013-10-27 09:47:05)

I'm also not knocking Seth's self-experiments. I think they're really cool!

Joe (2013-10-27 13:04:49)

"My gripe is that these posts lead people to eat multiple sticks of butter a day," Why? You yourself said to "eat fatty red meat." Would that automatically lead people to eat several pounds of red meat a day? Ditto for liver, egg yolks, etc. Really? "thinking it's healthy." But it is healthy! When eaten in NORMALLY consumed amounts. "(e.g. a little added to meals for flavor)" Who suggested otherwise? I eat grass-fed butter, red meat, beef liver, and eggs, among other things. Plant fiber is over-rated. IMO (including resistant starch), but I nevertheless eat some each day, mostly in the form of nutritionally dense veggies (e.g. kale). Nothing "silly" about it.

Eric Anderson (2013-10-28 02:20:37)

From this web site: Is Butter Healthy? Butyric Acid Benefits So today I want to start by addressing butyric acid (also known as butyrate). Butter is the richest dietary source of butyric acid (3-4 %), a short-chain fatty acid which is proving to be highly beneficial. Butyric Acid and Metabolic Health A very interesting study demonstrated the benefits of butyric acid in mice. Researchers found that feeding these mice butyric acid could reverse several harmful metabolic affects. The mice

who received butyric acid in their diet were leaner and did not have a tendency to overeat. They also had lower cholesterol, triglyceride and fasting insulin levels—all pointing to better metabolic health and a decreased risk of developing metabolic syndrome. Butyric Acid and Gut Health The gut actually uses butyric acid as an energy source. Butyric acid has been shown to benefit those with gut disorders like ulcerative colitis and Crohn's disease. That's because this short-chain fatty acid helps restore the integrity of the gut lining while also reducing inflammation. Butyric Acid and Cancer Studies have demonstrated that butyric acid has the ability to cause cancer cells to mature into normal cells. This is a unique property, since most anti-cancer substances either kill the cancer cell or cause it to kill itself. Butyric acid, however, appears to preserve the life of the cell by normalizing its function. <http://www.livingthenourishedlife.com/2010/10/is-butter-healthy-part-one-butyric-acid> Is Butter Healthy? In the end, the degree of health-giving properties in any given food is dependent upon an individual's tolerance or dietary needs. In other words, your mileage may vary. But after today's post and as we continue to explore butter's health benefits, I hope that we can end the tirade on this traditional fat and learn to appreciate what butter has to offer.

Brock in HK (2013-10-28 06:50:40)

I'm curious as to a) how many people Nick knows that are eating multiple sticks of butter as a result of posts like this; and b) how many people are negatively impacted in the various health dimensions as a result of eating all those sticks of butter. I posted a request over at [butterovereatersanonymous.org](http://butterovereatersanonymous.org) to see if anyone would volunteer data, but got no joy. Seth: Why the negative bias? Why don't you also ask how many people are positively impacted?

Audrey (2013-10-28 20:09:21)

I think Brock is actually teasing Nick's dogmatism rather than being negative toward butter. In any event, there's no such thing as [butterovereatersanonymous.org](http://butterovereatersanonymous.org).

Brock in HK (2013-10-29 18:22:35)

Big, big ;) to Audrey. I better go park the url for future use! My rhetorical curiosity was grounded in the truth: I think the answer to a) is that very few people are eating tons of butter to the exclusion of other nutrient dense foods such as liver, grass fed beef, vegetables, etc., as a result of posts by Seth or anyone else with similar n>=1 evidence (see Dave Asprey, et. al.). Seth - I think people are actually positively impacted by higher butter consumption than the standard American diet and I (n=1) count myself among them. I think the answer to b) is that of those that would qualify in condition a, an even smaller subset of people are negatively impacted in various health dimensions by the consumption of butter in those much larger quantities. As someone who eats a lot of butter, I was just being Silly.

Brad (2013-11-01 05:42:02)

@Nick, I read similar thoughts about butter all the time. The flaw in many people's thinking is that butter is not nutrient dense compared to other foods because of how they are defining "nutrients", primarily as vitamins and minerals and ignoring the fact that the fatty acids, the actual fat itself, *is* nutrients. It is nutritional and it does have positive impacts to health - therefore by definition is nutrients - regardless of the old, outdated, definition provided by the biased/inept FDA and USDA. Two other logical points... This article and MANY others and related studies support that butter has positive health impact and by association is nutrient dense. Secondly, most people would agree that whole milk, particularly raw/un-pasturized, is a very healthy food. If you don't agree, then just begone as I don't have time to debate with morons. Now, what is butter other than the extraction of most of the lactose and protein from milk? It's basically the concentrated fat and other contents. Is it unhealthy merely because it lacks protein? No! Is unhealthy because it lacks lactose? Quite the opposite. People are just trying to rationalize an irrational fear of eating fat. They think eating fat is bad because it's highly caloric and so make up all this crap to justify not eating much of it. The problem is not the fat or calories, it's that people don't f'ing move enough! (exercise).

jon (2013-11-02 18:19:23)

I fry almost everything in either vegetable oil or butter. My last checkup about 1 month ago suggests that I am in perfect health. Don't believe the hype. <http://wilmington-wedding-dj.com/>

David Johnston (2013-11-04 15:03:30)

Being not afraid of butter is a huge convenience in the kitchen. When I make an omelette, I start with a couple of huge blobs of butter, enough to cover the whole pan bottom to a depth of a couple of mm. Then the omelette slides around easily, cooks evenly, tastes good and has more butter in it. I think there is something to eating fat for breakfast, irrespective of the type of fat. Things you might do if you follow the Seth plan is to drink flax oil, or chow down half a stick of butter. A common thread is that people tend to do this in the morning, because the most practical place and time to do it is in the morning while you are near your fridge. I find that a fat breakfast lasts me until dinner. So you've gone from a fast overnight to a 0 carb breakfast that is highly caloric that you don't break until dinnertime. Without any evidence to back it up, I suggest that continuing a carb fast by eating fat for breakfast is different (in terms of outcome) to eating wheaties for breakfast and having the fat in the evening. I don't have wheaties in the house, so I can't test this hypothesis. Sign's of change? Many of my coworkers brought in to work excess confectionary from Halloween, attempting to offload it on others. I don't remember that in the past. Perhaps the message on sugar is being received more broadly than before.

### **Walking Meeting Update (2013-10-26 05:00)**

In [1]a recent post, I described how much easier it was to meet with students while walking than while sitting. The content of the meetings stayed the same. I met with them after my Academic Writing class to help them with their writing.

I asked my students what they thought of these meetings. They had three complaints:

1. I walked too fast.
2. It wasn't so easy to avoid bicycles and listen to me at the same time.
3. It was cold.

I told them that I found the meetings less tiring. They did not notice this.

I considered walking inside the teaching building but it turned out to be too dark. Instead, we walked outside the building in a nearly-deserted alley (solving Complaint #2). I walked more slowly (colving Complaint #1). I couldn't do anything about Complaint #3.

The students could choose the length of the meetings. Last week all five of them chose 15 minutes. After 1 hour and 15 minutes of walking meetings, I felt entirely refreshed. As if I had done no work at all.

1. <http://blog.sethroberts.net/2013/10/23/walking-meetings-much-better-than-seated-meetings/>

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Dragan (2013-10-26 12:01:29)

Seems interesting that they did not notice a difference in fatigue. Could be the gift of being in one's early 20s perhaps. Also correct me if I'm wrong but they are taking notes, walking and talking. That's challenging. Seth: They don't take notes.

Michael (2013-10-26 12:49:16)

> Seems interesting that they did not notice a difference in fatigue. > Could be the gift of being in one's early 20s perhaps. If I understand the situation correctly, then we're comparing 1 hour and 15 minutes of meetings (Seth) to 15 minutes (student). It seems to me that the shorter duration (i.e. less tiring) could well explain why the students didn't notice much of a difference between walking and sitting meetings.

## Learning English: Walking versus Sitting (2013-10-27 05:00)

A Chinese friend of mine learned about my discovery that it was [1]much easier to study Chinese while walking on a treadmill than sitting. This led her to buy a treadmill. She began to study English (e.g., GRE vocabulary words) while walking on the treadmill. "It worked very well," she told me. She found that if she studied words while walking, she could remember them four days later. If she studied them sitting down, she could remember them only a day later. With Anki, the default settings assume you can only remember what you've studied for a day – the first time you learn a word, you will be tested a day later.

This reminds me of Allen Neuringer's finding of [2]better memory for material learned while moving, but the size of the effect my friend observed is still shocking. If you can remember words four times longer before you need to review them, you can learn four times as fast. The effect that [3]Jeremy Howard and I observed was of similar size. We could only study 10 minutes sitting down but could easily study for 40 minutes or more while walking.

1. <http://blog.sethroberts.net/category/walking-and-learning/>

2. <http://web.reed.edu/psychology/docs/SelfExperimentation.pdf>

3. <http://quantifiedself.com/2012/05/jeremy-howard-on-language-acquisition-performance/>

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q (2013-10-27 07:08:42)

what's even better is stopping and walking and stopping and walking etc. Seth: That's interesting. When you compared straight walking with stopping and walking and stopping and walking, what was the difference between them?

dearieme (2013-10-27 08:21:36)

Learning to read a language is a different problem from learning to speak one. I'd have hoped that all the audio technology available for the last thirty years would have made it easier to learn to speak English than it was for me to learn to speak French. But has it? I wonder sometimes, hearing the pretty bad attempts at speaking English from people at conferences. Anyway, is your Chinese chum concentrating on the written or spoken word? Seth: written word.

Sentinel (2013-10-27 09:37:00)

Seth, I study Japanese vocabulary and kanji while walking (Anki mobile, or my Japanese dictionary flash cards app), but even more so while standing on the subway. Standing and walking both seem to correlate with better retention.

David (2013-10-27 15:13:01)

What a huge effect! If it turns out that big, it will be a wonder that it hadn't been noted before, or taken advantage of by government organizations training employees in foreign languages. It makes me think of two things: one is I remember some teachers claim that adding student motions to teaching really helps the learning. The other is that kids learning (1st) language are most likely walking around at the time, not sitting at a desk. In motion would be the environment more typical to natural language learning. Also, Steve Jobs was famous for having important meetings with people while on a walk.

Adam (2013-10-27 16:49:32)

I haven't tested retention, but I don't do well studying standing in place. Walking is fine, but standing is stressful for some reason. I usually do my daily reviews sitting or reclining on a sofa. I remember reading somewhere that in psychological research they use "doing math while standing in place" as a reliable method of inducing stress.

Seth Roberts on learning while walking | peakmemory (2013-10-29 05:47:12)

[...] Another interesting post by Seth Roberts about the effects of walking on studying: [...]

### Assorted Links (2013-10-28 05:00)

- [1]Probiotic increases Vitamin D in the blood
- [2]It's hard to criticize Jared Diamond. "You're just a nit-picking specialist." Steven Pinker & Jared Diamond: separated at birth.
- [3]Concern about academic freedom at Duke University's new Kunshan campus in China. "I n a preprandial discussion with [Duke President] Brodhead, the professor expressed concern over academic freedom [at Kunshan] — and Brodhead shot back at him that he is a "worrier." . . .  
He told the professor if he ever needed a worrier to serve on a committee, he'd be picked." [4]Kunshan sinkhole.
- [5]Butter is not as bad as we've been told. "The motto has been, if you want to sell crap, make sure it's low-fat crap." [6]Related BMJ article.
- [7]Sleep cleans brain of toxins. Have you heard of the [8]glymphatic system?

Thanks to Claire Hsu.

1. <http://jcem.endojournals.org/content/early/2013/04/19/jc.2012-4262.full.pdf+html>
2. <http://www.livinganthropologically.com/2012/08/04/diamond-romney/>
3. <http://dukecheck.com/?p=16950>
4. <http://dukecheck.com/?p=16926>
5. <http://www.theguardian.com/commentisfree/2013/oct/23/butter-bad-saturated-fat-healthy-eating-industry>
6. <http://www.bmj.com/content/347/bmj.f6340>
7. <http://www.bbc.co.uk/news/health-24567412>
8. [http://en.wikipedia.org/wiki/Glymphatic\\_system](http://en.wikipedia.org/wiki/Glymphatic_system)

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JM (2013-10-29 12:14:40)

The probiotic studied is very interesting, it is a specific strain of *Lactobacillus Reuteri* which is apparently being studied and marketed by a Canadian company. It was recently granted FDA approval to be sold in the US under the product name CardioViva. (I assume it has already been sold in other countries but I don't know under what names.) It was shown in two published trials to reduce not only LDL cholesterol but also CRP. After reading about it I purchased some and decided to do my own experiment to see if it lowers cholesterol. (Mine isn't particularly high but I'm not doing anything else to try and affect it so thought it would be interesting.) My husband is also trying it, he hasn't been able to tolerate statins and should lower his LDL some so we'll see.

Arndt (2013-11-19 22:14:32)

Pass the butter, please: A new integrative medicine paper examines the role of gut bacteria on the maturation of the immune system and claims evidence supporting the use of butyrate as therapy for inflammatory bowel diseases like Crohn's disease. [http://www.science20.com/news\\_articles/butyrate\\_therapy\\_fatty\\_acid\\_produced\\_gut\\_bacteria\\_boosts\\_immune\\_system-124388](http://www.science20.com/news_articles/butyrate_therapy_fatty_acid_produced_gut_bacteria_boosts_immune_system-124388)

### **Doctor's Data Sues Stephen Barrett of Quackwatch (2013-10-29 05:00)**

In 2010, [1]Doctor's Data, an Illinois clinical lab, sued Stephen Barrett, who runs Quackwatch, for making false and misleading statements about them. The lawsuit is still in progress. I am glad they sued. As far as I can tell, Quackwatch does contain false and misleading statements.

I've gotten about fifteen hair tests – whenever I get my hair cut – from Doctor's Data. The test measures about forty elements, such as mercury, tin, and selenium. One test costs about \$60. One reason I test my hair is curiosity – who knows what I might learn? Another is concern about heavy metal exposure due to living in Beijing. In [2]a post updated in 2010, Barrett called hair tests "a cardinal sign of quackery". I have no idea whether there is any truth to Barrett's argument but I am sure he is too confident I am wasting my money. [3]My own data suggest Barrett is wrong about the safety of mercury amalgam fillings. He believes that all safety concerns about those fillings are wrong. I found that when I had some of mine removed, my brain test scores improved starting exactly at the time of removal. We live in a world where all doctors – conventional and alternative – know almost nothing about the cause of almost any major health problem (heart disease, depression, obesity, and so on). Barrett shows no sign of understanding this. He is too sure that people who disagree with him are wrong.

Doctor's Data is far from perfect. Their hair tests have three serious weaknesses:

1. The information they provide customers like me comes without any information that would allow me to judge the error of measurement. I had to send in two samples from the same haircut to get some idea.
2. The measurements they give come with comparisons to a group of supposedly normal people ("reference range") but those people are not described, making it hard or impossible to interpret these comparisons.
3. They do not report calibration results. I would like to make comparisons across tests – e.g., from a test done this month to a test done six months ago. However, I have no idea about the stability of their equipment.

Many clinical labs have these problems.

On the other hand, the information their hair test provides is far from worthless, as far as I can tell. It is hard to learn anything from one test due to the problems I mention (e.g., if a value is high it might be measurement error) but repeated testing is more interesting. If a value suddenly gets worse for several tests, that suggests a problem. Any pattern in your results might tell you something useful.

If Doctor's Data hair tests are worthless, this would be easy to show. Get two samples of hair (at the same time) from each of ten people. Get all 20 samples tested. If there is no correlation between the two samples, the test is probably worthless. No one, including Barrett, has provided such evidence.

You can learn details of the lawsuit, which Tim Bolen is sure Barrett will lose, from [4]Bolen's website. I have enjoyed reading about it – for example, [5]this complaint about Barrett's lawyer's time-consuming method of discovery. Every story needs a villain.

1. [http://bolenreport.com/feature\\_articles/ddvbarrett%20amend.pdf](http://bolenreport.com/feature_articles/ddvbarrett%20amend.pdf)
2. <http://www.quackwatch.com/01QuackeryRelatedTopics/hair.html>
3. <http://blog.sethroberts.net/2011/06/26/damage-due-to-mercury-revealed-by-brain-test/>
4. [http://www.bolenreport.com/feature\\_articles/Doctor's-Data-v-Barrett/Foison%20fluff.htm](http://www.bolenreport.com/feature_articles/Doctor's-Data-v-Barrett/Foison%20fluff.htm)
5. [http://bolenreport.com/feature\\_articles/Doctor%27s-Data-v-Barrett/may%20discovery%20fight.pdf](http://bolenreport.com/feature_articles/Doctor%27s-Data-v-Barrett/may%20discovery%20fight.pdf)

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Michael F (2013-10-29 07:02:41)

Interesting use of the hair samples. At one time, Doctor's Data had a service where you could get your toenails analyzed via neutron activation analysis (NAA). The toenails are typically less contaminated by external contamination (i.e. the selenium as active ingredient in dandruff shampoos, dirt under your fingernails from gardening, etc.) You might inquire to see if they could offer that as an alternative to hair sampling. There is published literature available on NAA of toe nails and other samples that provides (limited in my opinion) guidelines for certain heavy metals and some correlations to disease (i.e. selenium and prostate cancer).

Nate (2013-10-29 07:12:56)

My impression of quack watch is the same. He seems to take the view that anything outside of "standard practice" is quackery. It seems as if his website should be very helpful-but it is not. I am a clinical pathologist. On your #3, the lab should be doing calibration studies on any test they report results on. In my lab, we occasionally get requests for documentation of those studies-which we gladly provide. Just call them and tell them your concerns, and ask for documentation of their controls and proficiency testing over the past several months.

David (2013-10-29 12:33:32)

It would also be interesting to have them test hair that is new and closest to the scalp, vs hair that has been cut off in a trim. You'd think the later would have more contaminants from shampoo, etc. Of course, maybe that is the procedure, I'm only assuming the ends are analyzed based on the comment you made about sending it in at each haircut.

gwern (2013-10-29 15:38:05)

So, what \*have\* you learned from the hair tests? Mercury levels seems like an obvious thing to learn, but I don't recall you ever mentioning it in your mentions of the fillings.

Stephen Barrett, M.D. (2013-10-29 17:28:28)

Two studies have been done in which identical hair samples were sent to multiple laboratories. If you would like copies, e-mail me. Tim Bolen has very little understanding of what is happening in Doctor's Data's suit against me. He often expresses excitement are about things he imagines that happen not to be true.

D.R. (2013-10-30 20:51:35)

Yes, stephen but what you really want is multiple samples sent to the \_same \_ laboratory. That's why the studies you mention are a whitewash. But then, you probably don't care.

Alex (2013-11-01 07:42:08)

I have no dog in Quackwatch v. Doctor's Data fight, but the Bolen site you linked to seems like a heaping helping of crazy. I clicked on a couple of links covering topics I'm familiar with-not a lot of connection with reality. But if you were wondering whether octagenarian magician and skeptic James Randi might be gay, this is the place to confirm it. A lot. Seth: I agree, Bolen's ideas are ridiculous and his treatment of Randi is shameful. But he provides useful links to legal documents.

Katie H (2013-11-12 14:37:16)

You are forgetting the difference between reliability, accuracy, and validity. If two tests from the same person yield the same result, then you have a reliable test. But it may not be accurate (the report may have said "12" both times but the true result is "70") nor valid (it may have said 12 both times, and 12 is correct, but there are 12 ducks and the report said it counted chickens). Seth: Where am I forgetting the difference between reliability accuracy and validity?

### Assorted Links (2013-10-30 05:00)

- [1]Do they read this blog? "Eventbrite, also in San Francisco, offers a treadmill desk (max speed 2 miles per hour) and a kitchen stocked with a Vitamix blender, fresh fruit, almond milk, hummus, Greek yogurt, flaxseed and kombucha."
- [2]The high cost of drugs. Note the disinterest in prevention, which is an extreme version of a cheap cure.
- [3]Ars Technica tries home-brewing apple cider. Impressive.
- [4]Stagnation of economics. "The courses are nearly all maths."
- [5]What caused my bladder cancer?

1. <http://www.sfgate.com/business/networth/article/Tech-social-media-employers-offer-perks-aplenty-4929078.php>
2. <http://www.technologyreview.com/featuredstory/520441/a-tale-of-two-drugs/>
3. <http://arstechnica.com/gadgets/2013/10/homebrewing-cider-part-2-we-lose-control/>
4. <http://www.theguardian.com/commentisfree/2013/oct/28/mainstream-economics-denial-world-changed>
5. <http://www.rcreader.com/news/sandra-steingraber-living-downstream-sau/>

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dearieme (2013-10-30 08:11:42)

Economics is either footnotes to Smith and Ricardo, or it is wrong.

MJB (2013-10-30 11:11:53)

Why I Jumped Off The Ivory Tower What makes me pessimistic about my own university and public universities in the United States in general is that their inability to adapt isn't due simply to bad leadership or an unfavorable economy. It's based on structural features that are self-reinforcing. Poor leadership drawn from huge corporations, an incentive structure that favors narrow specialization, and a hostility to potentially disruptive research, all reinforce each other. Those of us whose interests don't fit into that structure have some difficult decisions to make. <http://zacharyernst.blogspot.com/2013/10/why-i-jumped-out-of-ivory-tower.html>

Ashish (2013-11-01 18:30:56)

Behavioral Economics is still tied to reality. Dan Ariely's class at Coursera is magnificent.



## 8.11 November

### Back Pain Cured by Sarno's Ideas (2013-11-02 05:00)

Two years ago, a professor of decision science wrote me to say that [1]Vitamin D3 in the morning greatly improved his sleep. Recently he wrote again:

Once again you have dramatically improved my life through your blog.

In [2]this Assorted Links post you offered:

The back pain of a friend of mine, which had lasted 20 years and was getting worse, went away when he followed [3]this doctor's advice

I read the link about Dr. Sarno and went to Amazon to check out his book, "Healing Back Pain". 700 reviews with a 4.5 star rating. I spent two hours reading the reviews. Person after person saying, "my back is better" and nobody really described what the book had them do. I bought it two weeks ago.

In a nutshell, Sarno says that this type of back pain is caused by oxygen deprivation of some back muscles/tendons, and that the mind has does this as a defense mechanism so I don't have to confront my subconscious anger.

I don't have to pinpoint the source of my anger. I don't have to come to grips with it and stop being angry. I just have to acknowledge the anger. That's it. I read half the book in one sitting. I thought, this is crazy, but it has 700 4+ stars at Amazon. Maybe it does work.

My wife and I have two cars. One of them is a small Saturn. I hate it. It hurts my back to get in or out of it, and if I drive for more than five minutes I have to squirm to keep the back pain under control. Last week I took the Saturn for two half hour drives with only one wince of pain. Today I took it to the gym (a five minute drive) but it didn't hurt to get in or out.

In the morning, to get out of bed, I have to roll over and swing my legs out toward the floor and then prop myself up into a sitting position. At least, that's how I've done it for the past year. This week, I just sat up in bed with no pain. Every morning.

I am still a bit weak in the lower back, after more than a year of restricted physical activity. But this is amazing.

[4]Interview with Sarno on *Larry King Live* (1999).

1. <http://blog.sethroberts.net/2012/03/09/vitamin-d3-in-morning-7000-iu-improves-sleep-story-21/>

2. <http://blog.sethroberts.net/2013/10/15/assorted-links-283/>

3. <http://www.forbes.com/sites/edwardsiedle/2012/11/28/how-americas-best-pain-doctor-took-on-the-medical-establishment-and-won/>

4. [http://www.tmswiki.org/ppd/Dr.\\_Sarno\\_on\\_Larry\\_King\\_Live](http://www.tmswiki.org/ppd/Dr._Sarno_on_Larry_King_Live)

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Jerry (2013-11-02 13:53:14)

Very interesting! I occasionally get lower back pain. It comes and goes. It is probably exacerbated by my bad (but comfortable) habit of laying on the floor on my stomach when I read, surf the internet, or do programming. You mentioned lack of oxygen. I started taking HBOT treatments a few weeks ago, and have not had any pain since, even though I've been spending more time laying down. (I also noticed that my blood sugar readings tend to be lower after an HBOT treatment.)

Glen Raphael (2013-11-02 21:09:33)

Apparently for Sarno's treatment to work, you have to believe in it - he claims to have a really high success rate among people who do. But the problem with the claim "you have to believe in this for it to work" is that causality could go either way. The reverse story would be: "people for whom this doesn't seem to work are highly unlikely to believe in it."

Sentinel (2013-11-03 08:12:47)

I was treated according to the Sarno method under his successor, Dr. Ira Rashbaum in NYC. (Sarno is retired.) Though I have long had some back pain, the reason I went was unexplainable wrist pain; this excruciating pain (could not use my hand, could not fall asleep) would come every few weeks and last a couple of days. It happened a total of about 20 times. After studying the materials Dr. Rashbaum gave me, the wrist pain never came back. Sarno does not claim to know the full mechanism of this sort of pain, but explained it as the way the mind is structured (several different brain parts trying to work together) at this point in our evolution. Something in the brain decides to initiate this process, he said, in order to prevent deeply repressed anger from bursting into our conscious mind, since such a "bursting" is seen as a danger by some part of the brain; it is done via the autonomic nervous system, which can, he said, slightly but quickly impair oxygen flow to the muscles, nerves, tendons; Sarno says that this slight change can cause intense pain. (He also suggested that fibromyalgia and other ailments could be caused by this same mechanism.) He wrote that there are also medical studies showing evidence of mild oxygen deprivation in the nuclei of muscle cells of patients with back pain. I recommend "The Mindbody Prescription," his later and more fully realized book on this so-called "TMS" theory. Glen, regarding the idea of having to have "belief" in the method, this is indeed a problem for some patients. I sort of got past it by resolving to be as open-minded as one can be, which I think is enough.

Alex Chernavsky (2013-11-03 09:36:35)

I don't know much about Sarno, but I'm puzzled by the disparity between the seeming wackiness of his ideas (on the one hand) and the large number of people who experienced positive results (on the other hand). I wonder if Sarno's methods work for reasons *other* than the ones he postulates.

john (2013-11-03 10:05:44)

Well oxygen deprivation could be considered a general cause to almost any issue, sort of like inflammation. Mark Sisson has mentioned a study about stress perception and blood vessel dilation vs constriction—maybe that is at work here.

dearieme (2013-11-03 17:35:19)

Does using oxygen for a few days cure back pain? If not, why not?

CC (2013-11-03 20:30:52)

Does anyone think Sarno's ideas could be used for someone with hypersomnia?

Sentinel (2013-11-04 05:36:47)

CC, I know it is not the same thing, but Sarno addresses chronic fatigue syndrome in "The Mindbody Prescription" as a possible "equivalent" of this same ("TMS") syndrome, so I think it's possible that he also thought that about hypersomnia. He pointed out that people with hypersomnia have many of the same psychological attributes (excessive guilt and perfectionism, feelings of worthlessness, etc.) as people with the psychogenic back pain that are the main target of his work.

Russ (2013-11-04 08:44:21)

Certain behavioral treatments for chronic pain focus on reinforcing the occurrence of "non-pain behavior" and extinguishing the occurrence of "pain behavior." Some studies, I believe, have also shown that people who go through this procedure not only act as though they experience less pain but also report that they subjectively do experience less pain. A major aspect of Sarno's approach is that one should act as though one is not suffering from chronic pain. That, to me, seems a more likely cause for the improvement than outdated Freudian notions about repressed rage. The clever thing about this approach is that it suggest that simply giving people instructions to act as though they are not in pain may be, in some cases, be an effective treatment for pain.

James (2013-11-04 12:50:08)

I'm pretty sceptical about a lot of things, but reading Sarno's book helped me to eliminate lower back pain/sciatica a few years ago. The only drawback is that since then I've wasted time trying to use his method to get rid of ailments which have turned out \*not\* to have psychological origins.

CC (2013-11-05 10:33:57)

Thanks, Sentinel. I'm not sure if I should advise my hypersomniac friend to go to Sarno's successor's office for an appt or start by reading his book. But it's very encouraging that he addressed CFS.

Sentinel (2013-11-11 08:44:05)

CC, if your friend is interested in seeing the doc, note that he is heavily booked so better to contact him sooner rather than later. I think it's common to just read the book, and perhaps see the doc if condition persists. But this might be more relevant if the patient wants to rule out a physical medical condition that might be causing the pain.

CC (2013-11-14 10:29:07)

Thanks again, Sentinel.

## **Meat as Health Food, Food Preference as Wisdom (2013-11-03 05:00)**

A Chinese friend of mine had a cold. After a few weeks, she was still sick. I suggested she eat meat – it would provide the amino acids needed to make antibodies. She did want to eat meat, she said, but her mom thought that meat was bad for a sick person – an idea from Traditional Chinese Medicine, I guess.

Yesterday I had a desire to eat meat. That was odd; I didn't usually feel that way. I ate all the meat in the refrigerator (slices of cured meat) but it wasn't much. I ate three eggs. That, too, was odd – usually one egg is plenty. In the evening, I distinctly wanted more meat but decided against going out to get some. This morning I woke up with the flu. I could tell by the joint pain. So that's what joint pain is, I thought. I'd read about flu and [1]written about it, but, before this morning, cannot remember having it. How is the flu different from a cold? I once tried to find out. I might not have come down with today's case of the flu were it not for two events: yesterday's decision not to eat meat; and, the day before, running into a friend who had just left the house after being home-bound for four days with the flu. He shook my hand twice.

Humans (including me) are exceedingly gullible; my evolutionary explanation is that this makes us easier to lead. Gullibility – we believe something just because an authority says it – is cement. It keeps members of a group together. Better that 10 people do one thing (e.g., live in one place) than ten things, in many cases. Pointless to waste time on unresolvable and divisive arguments. Doctors, both Western and Eastern, take advantage of our gullibility. [2]As my friend says, "doctors hurt you" because they tell you to do something different from what you want to do (e.g., eat meat). What you want to do is actual wisdom. We've been shaped by evolution to want to do what is good for us and what we want to eat is a giant clue to what we should eat. In nutrition research, this line of thinking, which

is called dietary self-selection research, is nearly moribund, in spite of [3]a great 1939 article about what happened when young children ate what they wanted. The idea that we want to eat what we should eat is what first led me to think [4]we need to eat fermented foods to be healthy. Fermented foods, much more than other foods, satisfy our desire for sour, umami-flavored and complex-flavored foods. For example, it is easy to produce complexity via fermentation; it is hard to produce it in other ways.

As for my flu, I went to the store and got pork and duck. By evening I felt much better.

1. <http://escholarship.org/uc/item/2xc2h866/>
2. <http://blog.sethroberts.net/2013/09/08/dangerous-noise/>
3. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC537465/pdf/canmedaj00208-0035.pdf>
4. <http://blog.sethroberts.net/the-unami-hypothesis-why-i-believe-fermented-foods-are-necessary-for-health/>

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Frankr (2013-11-03 06:13:24)

What if we want to eat sugars & starches, beer & drugs because of the good effects? Clearly all but arguably beer is unhealthy.

Sam (2013-11-03 06:57:48)

Seth, I agree with you based upon yours and my own experiences. But I am confused that If we are hard wired to crave what we 'need' - we should stop craving when that is 'not needed'...??? Then what about constant craving of sweet things that leads to excess sugar consumption.?

Allen K. (2013-11-03 08:53:58)

That 1939 article is indeed great!

Angelyne (2013-11-03 09:12:39)

Where does the craving for carbs enter with this this idea. I often crave chocolate, especially milk chocolate. I do no crave dark chocolate. It's very distinct. If I pick up a milk chocolate bar, I will feel compelled to finish it, especially if I had a glass of wine or two and my inhibitions are lowered. It's very difficult for me to put it aside. (My husband has this rule that chocolate should be shared equally, damn him :) Yet, I'll have no difficulty ignoring a bar of dark chocolate. So I'm clearly craving sugar, not some other component of chocolate. Apart from chocolate, which is the only "bad" thing that I allow myself, for the most part, I'll crave vegetables. I don't remember ever craving meat of any sort. I think if it was up to my natural inclinations (and judging from the past), I'd eat a SAD diet based on grains, vegetables, milk products and some meat, eggs and fish.

Frankr (2013-11-03 10:56:13)

I should say that in general I think it makes a lot of sense to listen to your body when it comes to what your food urges are...

Alrenous (2013-11-03 13:05:05)

Angelyne, First, coffee drinkers crave caffeine. Imagine a child who had a cuppa with every meal. What do you think would happen to the resulting adult if they tried to switch to decaf? Were you raised on starches, like everyone else? Second, discard any biases against introspection. Look at your craving for sugar in detail. I've had cravings for salt, fat, vegetables, meat, and sometimes particular foods, which I can compare it to. Is the sugar craving the same kind of craving? Is the satisfaction the same? Can you tell the difference?

dearieme (2013-11-03 17:33:05)

Of all the vitamins, the best are the "B" vitamins i.e. beer and bacon.

Seth Roberts (2013-11-03 17:33:09)

"what about constant craving of sweet things that leads to excess sugar consumption?" glad you asked...see my next post.

Seth Roberts (2013-11-03 17:38:57)

"What if we want to eat sugars & starches, beer & drugs because of the good effects?" 1. I think a lot of addiction comes from people wanting to feel better when they feel bad. Comfort foods are a small example. If you got rid of depression, I think addiction would become much less of a problem. 2. I think the view that sugar is unhealthy is too simple. See my next post. Lots of people have bad results on a low-carb diet – the notion that starches are unhealthy is also too simple. Paul Jaminet, for example, had bad results on a low-carb diet.

Seth Roberts (2013-11-03 17:44:19)

"It makes a lot of sense to listen to your body when it comes to what your food urges are..." I agree, and I am also saying something else: It isn't obvious what those cravings mean. It isn't obvious why we crave X or Y. And if we try to figure out why, we may learn something useful. Sugar is a good example. Some people crave it. Well, why? I don't think the answer is obvious at all. Until yesterday I had no idea that craving meat more than usual meant I was in danger of getting sick. I had never heard anyone say that. The discussion about meat was at a superficial level: some people (e.g., vegetarians) said meat was bad, others (e.g., paleo) said it was good. These views and the supporting evidence did not help me understand why desire for meat might go up or down.

Brandon Berg (2013-11-04 04:19:18)

Taking into account the fact that many of the foods available today were not available in the distant past, it seems likely that we may crave certain tastes as a proxy for nutrients that have historically been coupled with those tastes. For example, a craving for sugar may actually be due to a need for nutrients found in fruits, such as potassium or vitamin C. Seth: Interesting idea. But, if so, why do sweet things not taste good when we are hungry? (Which is why dessert is separate and comes at the end of the meal.)

Frankr (2013-11-04 05:48:29)

I think a good rule of thumb is, eat paleo foods that you CRAVE (I am including some starches here because I think some types were around). We should not listen to what we CRAVE when it comes to desires for substances that were not around in the paleo era because our body did not have a chance to evolve a craving or distain for them.

Frankr (2013-11-04 05:52:27)

One other thing that the mainstream is not talking about is ancestral foods based off of ancestry. The ideal diet for a typical NE Asian person may be different from the ideal diet for a Sub-Saharan African or N. European.

Wil (2013-11-04 10:54:55)

This appears to be a very complex topic. But it at least seems clear that the addictive nature of certain foods (and/or components thereof) that are damaging can also drive food cravings. For example, carbohydrates in general are addictive as anyone who has tried (and even succeeded) in transitioning to a life style of carb restriction can testify. There has been quite a lot of writing about the topic of the negative effects of certain carbohydrates on humans; such as by Drs. Michael & Mary Dann Eades, Dr. William Davis, Drs. Phinney & Volek, Gary Taubes and, more recently, Dr. David Perlmutter. Dr. Perlmutter, for example, approaches the issue from his perspective as a neurologist (e.g. damaging brain effects from gluten) and Dr. Davis from his perspective as a cardiologist (e.g. the gliadin protein of wheat which can penetrate the blood/brain barrier and lead to autoimmune diseases). All well worth reading and supported by scientific references.

Seth Roberts (2013-11-04 15:12:13)

"There has been quite a lot of writing about the topic of the negative effects of certain carbohydrates on humans; such as by Drs. Michael & Mary Dann Eades, Dr. William Davis, Drs. Phinney & Volek, Gary Taubes and, more recently, Dr. David Perlmutter." Have any of them explained why evolution has shaped us to like the taste of something that is bad for us?

Seth Roberts (2013-11-04 15:13:17)

"We should not listen to what we CRAVE when it comes to desires for substances that were not around in the paleo era because our body did not have a chance to evolve a craving or distain for them." I think we should figure out why we crave them.

Jason (2013-11-04 17:36:57)

Trusting our appetite is important, but our body may also crave proxy foods that don't fulfill the underlying nutritional deficiency. People who chew ice are iron deficient. Chewing the ice does nothing to treat this anemia, but they still have an appetite for ice caused by a lack of iron. An impulse to eat meat when we are on the verge of sickness does not necessarily mean that meat improves flu resistance. It could be a crossed signal, just like iron anemic pagophagia. Seth: "It could be a crossed signal". The connection between desire for meat and sickness makes a lot of sense: Antibodies are made of amino acids, meat is made of amino acids. Unlike ice and iron deficiency. Crunching ice is a modern substitute for crunching bones, bone marrow is iron rich.

Jason (2013-11-04 17:56:21)

When I started taking an iron supplement, my compulsive desire to eat large quantities of Mexican cole slaw (basically fresh raw cabbage in vinegar) and other crunchy things went away. Before the iron pill, I spent a year incorporating raw cabbage into all kinds of meals, and frequenting a specific taqueria that had a salsa bar with free slaw that I would put inside my burrito. Then, just as quickly, I improved my iron intake and the desire for and love of raw cabbage were completely gone. Based on that experience, when I later felt an intense desire to eat an unripe green tomato, I assumed the cause was a nutritional deficiency, but not necessarily one that an unripe tomato would fix. I had never eaten a green tomato, but the desire to eat one was very strong and clear in my mind. I decided to take a fancy multi-vitamin for children that had a small amount of lots of vitamins, minerals, and herbs in it. I also decided to eat some unripe tomatoes, because why not? The desire went away after a week. For many years I ate no candy or really junk food of any kind. This year I started eating candy when I craved it. Sometimes I very much want to eat a pound of Skittles, and other times I have absolutely no desire for candy, and take little pleasure in it if I eat some anyway. I assume, like my cabbage and tomato experiences, that the Skittles are a proxy for some underlying nutritional need, but unless it's a need for pure carbs, I doubt the Skittles treat that need. My personal instinct is that there is something about the fruit flavoring that is appealing. I only crave fruity candy. Even though I use cocoa and eat dark chocolate, I never crave chocolate.

Stu (2013-11-04 18:36:03)

I agree that food cravings are telling us something, it's just not always obvious. In the study Seth referenced they stated that 'meals were often combinations of foods that were strange indeed to us, and would have been a dietitian's nightmare - for example, a breakfast of a pint of orange juice and liver'. Orange juice and liver are seeming unrelated yet they both contain very high amounts of vitamin C, perhaps that child was deficient in vitamin C and instinctually new to eat those foods. When I ate zero starches and sugary foods I developed tennis elbow which wouldn't heal, had poor sleep, was tired and suffered brain fog and fatigue. And all I wanted was to eat starchy foods. I read Paul Jaminet's book and started eating starches and sugary plant foods again and those problems are now a thing of the past. My instinct were probably right all along, I just needed to eat 'real' foods rather than processed ones

Wil (2013-11-06 11:16:49)

Referring to several authors mentioned above Seth said: "Have any of them explained why evolution has shaped us to like the taste of something that is bad for us?" Seth, that's a valid question. My answer is that I don't think any of the referenced authors have addressed this question explicitly. However, my own view is that it's unlikely that evolution is solely or even mainly responsible for our bad eating habits, but rather societal drivers such as, for example, the marketing of packaged food products with messages that bombard all of us daily on TV, the Internet, and in print media. It seems clear that children are

particularly susceptible to this kind of advertising and bad nutrition habits are the result, extending well into adulthood. A number of the referenced authors have also discussed the fact that many such products have one or more components that are addictive. To the extent this may be true, the suspicion is that some packaged (junk?) food companies are not only well aware of it, but have adopted this as a business model in order to grow sales.

Brandon Berg (2013-11-07 01:12:42)

"But, if so, why do sweet things not taste good when we are hungry? (Which is why dessert is separate and comes at the end of the meal.)" I dispute the premise, or at least its universality. Sweet things taste just fine to me when I'm hungry. I think people usually eat dessert last because sweet things blunt the appetite for more substantial foods but not vice-versa. "Don't eat that—it'll spoil your appetite" vs. [??????](#) Seth: Look at the experiments on the question done by Elizabeth Capaldi (although I am afraid they are hard to get ahold of). "But not vice-versa"...okay, what explains the asymmetry? My argument doesn't depend on the assumption you question. It is obvious that we eat dessert after meals, which raises the questions: 1. why after? 2. why are heavily-sweet things, such as pie and pudding, segregated?

## **Does Bedtime Honey Improve Sleep? Nine Reasons to Think So (2013-11-05 05:00)**

[1]Stuart King, an Australian musician in his thirties, recently [2]commented:

Most days I wake up feeling more tired than when I went to bed the night before, however I find that if I take up to a tablespoon [15 ml] of raw honey immediately before bed I almost always wake up feeling totally refreshed. I've suffered from low energy, brain fog, fatigue and sore muscles for years. I tried eliminating food groups (dairy, grains, nightshades, etc) but that didn't fix the problems (although wheat has been problematic) but taking the honey did. I usually sleep without any problems that I'm aware of – even if I awaken feeling unrefreshed I will still sleep through the night and won't awaken early or whatever, but the crucial thing is I feel rested when I wake up, if I get that right I can even eat bad food and feel good all day. I tried coconut oil and coconut oil combined with honey but they didn't work.

I hadn't heard that before. I searched "health benefits of honey" but didn't find it. A [3]Wikipedia entry about the health benefits of honey doesn't mention it. In China, many people think honey is a health food, yet a Chinese friend of mine, who eats honey daily, hadn't heard this. The uses of honey in Traditional Chinese Medicine [4]lie elsewhere. Honey as sleep aid is briefly mentioned (with a question mark: "Key to a restful night's sleep?") in [5]The Honey Prescription (2010).

Many say or assume something quite different. According to [6]Dr. Mercola, to sleep well "avoid before-bed snacks, particularly grains and sugars". [7]A Huffington Post writer says, "You already know which edibles to avoid before bedtime – namely, alcohol, coffee and sugary desserts." Honey is half fructose, which UCSF professor of pediatrics [8]Robert Lustig calls "poison". [9]Lustig says fructose is "one of the most egregious [= worst] components of the western diet, directly contributing to heart disease and diabetes, and associated with cancer and dementia." [10]John Yudkin, a well-known nutrition professor, wrote books about the harm done by sucrose. He considered [11]fructose even worse. Nutrition researchers rarely study time of day effects. For example, nutritional epidemiologists ask what you've eaten but don't ask when.

I found a bit of evidence supporting what Stuart found – namely, two comments [12]here:

Just started honey and vinegar hot drink 2 weeks ago. Am amazed at the increased quality of sleep and relief of night time pain. Thought I was imagining it so did not have my drink one night. Didn't sleep and

was racked with pain again all night. . . [my recipe:] 2 tbsp apple cider vinegar and 1 tbsp honey with 1 cup hot water.

Honey knocks me out and I actually wake up in the morning feeling refreshed and ready for the day—amazing. I've been using the honey for a few months now. The difference has been "night and day!"

In addition, [13]a 2007 study found that honey at bedtime was slightly better than no treatment at reducing the symptoms of coughing children. [14]A 2010 study and [15]a 2012 study found the same thing.

I asked Stuart how he discovered that honey improved his sleep. He replied:

I read [16]something that Tim Ferriss said about having a small snack before bed [Ferriss advises protein and fat, not honey – Seth], I think he mentioned that unrefreshed sleep was due to low blood sugar. At the time I was doing [17]carb back loading (I've since stopped that as carb restriction gave me problems). I would have a snack before bed but it didn't always work. I think the small fructose amount in honey was what helped, starches didn't always help. I did some research and came across your blog and Dave Asprey's blogs on sleep, [18]Dave mentioned raw honey. He encouraged people to take MCT oil with the honey to stay ketogenic, I tried coconut oil with the honey instead but it didn't work. If anything it made my sleep worse with stomach cramps. I think there is an amount where benefits end, I think anywhere between a teaspoon or a tablespoon is about right. . . . The first time I did it I couldn't believe it, I felt so good the next day.

He added later:

I have noticed that if I eat a lot of sugar during the day (soft drinks, desserts and so forth) then I don't feel refreshed [when I wake up] regardless of the honey. Perhaps there's something about honey that helps regulate blood sugar. I think it works better on an empty stomach/lightly fasted. So if you had dinner at 7 pm you might not eat anything after and take the honey at 9 or 10. In the past I've had a late dinner then maybe some dessert or fruit in the following hours, then added the honey just after and I don't think it worked as well. When I first tried it I used commercially available heated honey and it worked great. I've tried 2 tablespoons, but I don't think that worked any better than one and sometimes as little as 1 teaspoon is enough.

In summary, three people reported great improvement in sleep from honey at bedtime. Stuart found several other things: 1. If he ate a lot of sugar during the day, the effect went away. 2. Other carbs didn't work. 3. An empty stomach was important. 4. Effective doses ranged from 1 teaspoon to 1 tablespoon.

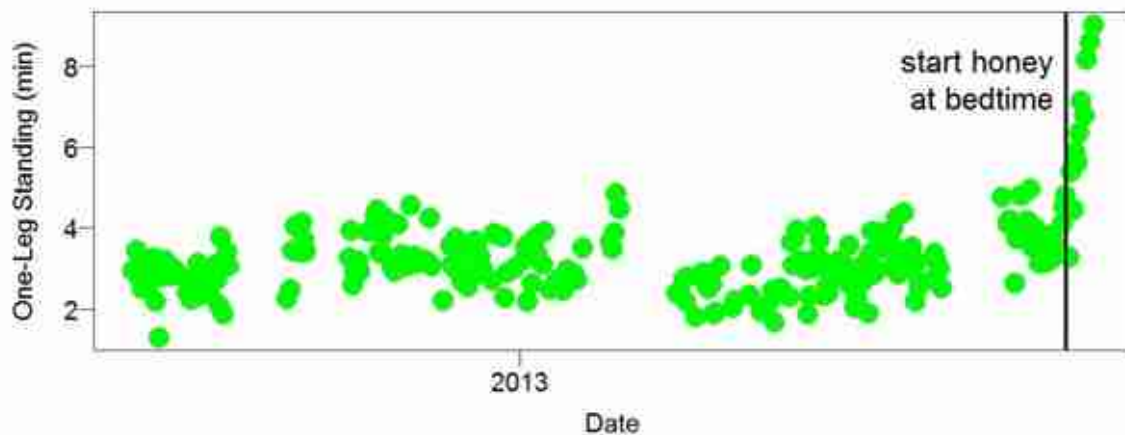
I believe Stuart has discovered something very important. My belief rests on several things:

1. Repetition. I started eating honey (1 tablespoon) at bedtime. My sleep (much better than Stuart's to begin with) clearly improved, even with 1 teaspoon. I felt more rested when I awoke and more rested throughout the day. The improvement happened night after night. One evening I didn't eat the honey on an empty stomach. The improvement didn't happen, just as Stuart would have predicted. I told a friend about it. He took 1 tablespoon at bedtime. His sleep immediately improved by a large amount. He stopped waking up in the middle of the night and stopped needing a nap in the afternoon. Another friend has tried it once (so far). "When I woke up the next morning," she wrote, "I'd realised I'd slept all the way through the night without waking up in the early morning (a nice change) but had a terrible case of the jitters (a not-so-nice change)." A third friend tried it twice. She slept better the first night but not the second. Maybe she failed to eat it on an empty stomach or had too many sweets during the day.



2. Strength increase. As soon as I started the honey, I got stronger – a complete surprise. For years I have done one-legged standing to exhaustion several times per day because [19]it improves my sleep. To reach exhaustion sooner, I stand on one bent leg. Recently I've been doing it four times per day (right leg twice, left leg twice). For a year, I've averaged about 3 minutes to exhaustion. After I started the honey, the length of time until exhaustion quickly increased. Here are the measurements:

[20]



Each point is a different day; each is the average of the two durations for the first right and first left leg standing of the day. The 2013 tick marks the start of 2013. Nothing changed except the honey. The strength increase was also clear in other ways. In Beijing, I live on the sixth floor of a walk up. It became noticeably easier to climb the six flights of stairs.

The strength increase astonished me. The dietary change was tiny, did not happen before exercise, and involved a safe widely-available food (in contrast to the drugs athletes use, such as steroids). I believe better sleep increased muscle growth. I predict that taking the honey at other times, such as in the morning, would not have the same effect. My earlier observations that [21]lots of standing and one-legged standing improve sleep make more plausible causality in the opposite direction: something that improves sleep will increase muscle growth.

When I described my strength increase to Stuart, he replied:

I have noticed that when I do the honey, my weight goes up over the next week or two, perhaps by 400-500 grams [yet] my waist doesn't increase (I measure it with a tape measure) even after a few weeks. I also have been sure that I noticed rapid muscular growth around my chest, shoulders and arms, similar to what I have noticed when going hard at the gym after a few months off. I kind of assumed that maybe I had more stored muscle glycogen from the honey, but had also considered that improved sleep as you said was the reason.

3. Evolutionary explanation. It has been a mystery why evolution shaped us to like sweetness so much. [22]Israel Ramirez (whose research led to the Shangri-La Diet) pointed out that [23]the usual explanation (sugar is a source of energy) makes no sense. If it's because sugars provide energy, why don't potatoes and rice taste just as good? They

don't. Nutritionists lump sugars with other carbohydrates, thereby ignoring the puzzle. No anti-sugar advocate – not Yudkin, Lustig or anyone else – has provided a good explanation of why evolution shaped us to like the taste of a "poison".

There are several related puzzles. Why are meals divided into main course and dessert? In other words, why do we eat the sweet part separate and later? If we like sugars because they provide energy, this makes no sense. If sugars are simply carbs, this makes no sense – we eat plenty of carbs during the main course. The separation of dessert and main course, if it reflects brain mechanisms, must mean that sugars are quite different than other carbs. Somehow we benefit from this division. A few people, in particular Elizabeth Capaldi, an experimental psychologist, have figured out that [24]sweet food tastes worse if we are hungry (enough). This is why dessert comes after the rest of the meal. Yet other carbohydrates do not taste worse. Stuart pointed out something else along these lines, which I had not heard before but which is clearly true: We eat dessert much more after dinner than after lunch.

Stuart's observations explain these mysteries. All four observations (liking for sweetness, separation of main course and dessert, sweet things taste bad when hungry, dessert after dinner but not lunch) make sense if we have evolved mechanisms to push us to eat sweet foods near bedtime. Long ago, these foods would have mainly been fruit. Because sleep is so important for health, there would be powerful selection for anything that improved sleep.

4. Basic physiology. The brain runs on glucose. In my brain tests, sugar drinks, cupcakes, and other sugar-rich foods make an obvious difference 30 minutes to 2 hours later. (I get faster.) And the brain controls sleep, an enormously complicated and time-sensitive process. Too little blood sugar during sleep could easily disrupt sleep.

5. Basic nutrition. Honey is half glucose, half fructose. When you eat it, the glucose enters the blood quickly and would supply glucose to the brain in the first half of the night. In contrast, the fructose turns into glucose and enters the blood slowly (fructose has a low glycemic index). This would supply glucose to the brain in the second half of the night. [25]Many fruits, such as bananas, figs, and grapes, have a similar composition (similar amounts of fructose and glucose). Most fruits have plenty of fructose and glucose. A 50/50 glucose/fructose mixture makes honey near the start of sleep a good source of blood glucose over an extended period without food. Notice that you need both – glucose and fructose – in roughly equal amounts to get a roughly steady supply over six or seven hours.

6. Basic engineering. When you are asleep, there can be no "course correction". You must subsist for the next six or so hours without any behavioral help, such as drinking water when thirsty. So it makes design sense to do something shortly before sleep that will provide a relatively steady supply of glucose throughout the night ("time-release"). That won't be a lot of glucose at once. You need a food that is a mix of sugars.

7. Support for general idea. A few weeks ago a woman told me that when she ate very low-carb her sleep suffered, so she ate more carbs and her sleep got better. This supports the general idea behind what Stuart found – that the brain needs a certain amount of glucose to work well during sleep and it is best if it gets at least some of it from carbohydrate.

8. Explanation of correlation of sugar and bad health. Why is sugar consumption often correlated with poor health? This is easy to explain: sugar at the wrong time is the problem. Too much sugar during the day interferes with the bedtime benefit (and may also interfere with sleep in general). Stuart found exactly this: Eating lots of sugary foods during the day disturbed his sleep and eliminated the honey effect ("if I eat a lot of sugar during the day . . . then I don't feel refreshed [when I wake up] regardless of the honey"). Too much sugar during the day could make it harder to get optimal glucose levels during the night. For example, too much sugar during the day might raise insulin levels, causing too-low blood sugar at night and/or causing a fructose/glucose mixture eaten at bedtime to be digested too quickly. Anything that harms sleep will increase disease. Good health, good sleep and good immune function are closely connected. An example of the evidence is that [26]shift workers get more cancer than non-shift workers.

9. [27]Reichenbach's Common Cause Principle, in my paraphrase, is lightning doesn't strike twice in one place for different reasons. If two rare events might have the same cause, they probably do. In this case, lightning has struck three times in one place. 1. Huge sleep improvement from tiny dietary change. 2. Huge strength improvement from tiny dietary change far from time of exercise. 3. Evolutionary explanation of why sugars taste good, why dessert exists and follows the main course, and so on. Before this, no one has come close to a plausible evolutionary explanation. The absence of an explanation is remarkable because two of the phenomena – sweetness tastes good, sweets are eaten separately after the rest of the meal – are so obvious.

I believe Stuart's discovery is important for two other reasons that might not impress anyone else. One is similarities with my earlier work. First, I've found other "cross-over" interactions with time of day, where something helpful at one time is harmful at another time. [28]Vitamin D in the morning improves sleep, Vitamin D at night harms sleep. Morning faces improve mood, evening faces harm mood. Second, wondering why we like sour, umami and complex flavors was the first thing to suggest to me that [29]we need to eat plenty of fermented food to be healthy. Many facts later, I'm sure this is true. Finally, [30]evolutionary reasoning has helped me find several new experimental effects (morning faces, Shangri-La Diet, flaxseed oil, standing and sleep).

Finally, Stuart's discovery explains something puzzling I'd noticed repeatedly for years. Now and then I slept unusually well. I'd wonder why – how was yesterday different from usual? – and see that the only unusual thing was that I'd had dinner at a friend's house. At the times, I guessed that seeing faces in the evening was somehow improving my sleep. This did not make sense in terms of my morning faces work, but a connection between social contact and sleep was well-established. Now I realize that dinner at a friend's house is one of the few times I eat dessert. A friend told me that when his partner has dinner parties, she serves dessert long after the main course.

[31]This report suggests that different honeys may differ in important ways.

I told a Dutch friend about this. She said it was common in Holland to have milk and honey at bedtime, although she herself didn't do this. I asked why. No clear reason, she said. An excuse to have something sweet? Could this be why the Dutch are so tall? [32]Children grow when asleep. Better sleep, more growth. My strength increase suggests what a big effect this could be.

[33]More posts about honey and sleep.

1. <http://stuartkingmusic.com/>
2. <http://blog.sethroberts.net/2013/10/11/association-of-sleep-and-chronic-illness/#comment-1150683>
3. [http://en.wikipedia.org/wiki/Health\\_effects\\_of\\_honey](http://en.wikipedia.org/wiki/Health_effects_of_honey)
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25. <http://en.wikipedia.org/wiki/Fructose>
26. <http://www.ncbi.nlm.nih.gov/pubmed/16596307>
27. <http://plato.stanford.edu/entries/physics-Rpcc/>
28. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>
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30. <http://escholarship.org/uc/item/2xc2h866/>
31. <https://rirdc.infoservices.com.au/downloads/05-027>
32. <http://sleepdisorders.about.com/od/sleepandgeneralhealth/a/How-Sleep-Problems-Affect-Growth-In-Children.htm>
33. <http://blog.sethroberts.net/category/sleep/honey-sleep/>

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michael (2013-11-05 05:21:06)

I first heard about this from Dave Asprey... his explanation is "During the night, your brain uses a lot of energy. One efficient form of brain energy comes from sugar stored in your liver, called liver glycogen. Your brain taps your liver glycogen before hitting your muscle glycogen (stored sugar in your muscles), so having a little extra sugar before bed can help your brain function better at night. Raw honey is preferentially used to stock liver glycogen, so it is used first for brain function. Raw honey is 22 % better at making liver glycogen than the cooked, conventional stuff you're likely to find at the supermarket. Taken without protein, a small amount of honey will raise blood glucose while you sleep too. I was skeptical of this trick when I first heard about it in The Honey Revolution, but I found it does work well as long as you don't combine it with protein." /michael Seth: I don't follow the logic of this sentence: "Your brain taps your liver glycogen before hitting your muscle glycogen (stored sugar in your muscles), so having a little extra sugar before bed can help your brain function better at night."

dearieme (2013-11-05 06:08:42)

If glucose/fructose is the answer, surely a cup of weak tea with sucrose would do just as well? (It's what my mother did and she slept like a log. Though her evening nip of whisky might have helped too.) We tend to eat our honey at breakfast: perhaps I should try it last thing at night instead.

dearieme (2013-11-05 06:11:22)

"she serves dessert long after the main course": ah yes - dessert before or after cheese? Or cheese instead of dessert? Or savoury dessert instead of sweet dessert? Tricky territory, this.

T. J. Allen (2013-11-05 06:36:06)

I have noticed a great improvement in sleep from consumption of 1 tablespoon of resistant starch (for example, resistant potato starch) before bed. For a while I was using a teaspoon of Diamond XPC before bed and noticed a similar improvement

in sleep quality.

Sam (2013-11-05 07:16:54)

Looking back... for years, We gave our younger son honey and milk at bedtime as a naturopath told us it was good for his recurring cold. He grew up to be 6'2" vs his older brother who is 5'10" and both parents under 5'10". Correlation.. Causation.. I don't know. But this blog post is fascinating..! Thanks Seth.

Three Pipe Problem (2013-11-05 07:18:53)

'No anti-sugar advocate — not Yudkin, Lustig or anyone else — has provided a good explanation of why evolution shaped us to like the taste of a "poison".' I recall someone, cannot remember who, making the argument that certain amino acids are actually quite sweet tasting. I remember this person challenged readers to taste plain unsweetened protein powder with a clean palette, which I remember doing, and thinking it was indeed quite sweet. I don't think this a huge factor as we obviously seem to have a protein-specific hunger. Just thought it was worth a mention. Great post, looking forward to trying this.

August (2013-11-05 07:31:01)

There's also a book called the Honey Revolution: Restoring the Health of Future Generations. I tried this and it worked, but then my fasting blood sugar numbers got high, so I stopped. Since then I may have fixed the blood sugar issue- when I remember to check my numbers are normal now that I workout, so I may be able to do the honey again.

Charlie Currie (2013-11-05 08:17:48)

I tried the honey at night after hearing Dave Asprey mention it a couple of years ago...horrible acid reflux ensued about an hour after falling asleep. Fructose before bed equals heart burn for me...I prefer my Ice cream in the late afternoon...cold, dry rice cereal (like rice chex) as a between dinner and bedtime snack works for me like honey seems to work for others. I've never been a "sweets" person, preferring bread and butter over donuts (however, I don't eat bread anymore either)...weird, huh... Cheers Charlie

Tom Passin (2013-11-05 09:02:49)

Fructose does not primarily metabolize into glucose; much of it goes into glycogen, but the reactions seem to be rather complex. According to the 1st edition of The Perfect Health Diet by the Jaminets, a small amount of fructose seems to help the liver manage blood glucose levels, and some fructose helps restore depleted glycogen levels in the liver and maybe muscles. But only a small amount. The Jaminets recommend 100 calories/day as the most to ingest. Also, fructose promotes fat retention and weight gain. If the effects Seth is talking about are specifically honey-related (as it seems), then it must be something else in the honey, because table sugar and the sugar in most fruits is about 50-50 glucose-fructose. Anyway, most of us take in way too much fructose in the prepared foods we eat. If the effects are stronger with raw honey (unclear from what Seth has posted here), then they may be related to anti-microbial properties of raw honey which would be degraded by the pasteurization of most honey. Also I've read that most commercial honey is blended with a lot of high-fructose corn syrup. So it would seem best to try this with locally produced, preferably raw honey. Here's a report of new research which finds that the liver's metabolism of fructose is much more complex than previously realized - <http://www.sciencedaily.com/releases/2008/12/081209221742.htm>

Paul (2013-11-05 09:19:51)

I get the impression from reading this that the honey doesn't need to be raw. I think I'll start experimenting tonight with "regular" honey and see if it works. If not I'll source some raw and see if that makes a difference. Might also be worth trying with some of the fruits you mentioned to help isolate the mechanism. I quite like grapes, so that might be a good one to try.

Bruce (2013-11-05 09:22:37)

Be sure to avoid ultra-filtered honey (which removes all the pollen, etc) and chinese honey, which often has heavy metals and/or antibiotics in it. Often the two are the same, as pollen is the only way to determine the geographic origin of honey.

Susan (2013-11-05 09:28:51)

Question for you: Did you conduct your self experiment using local honey? I am asking that question since I am a beekeeper. I will be starting the experiment on myself tonight. Thank you.

AI (2013-11-05 10:29:05)

Thanks for the interesting article. This is not directly related to sleep, but there have been a number of articles making their way around the internet about the problematic international trade in honey. These articles state that some honey is contaminated with heavy metals and/or antibiotics which are not allowed in the US. Also, some honey is so heavily filtered that no pollen remains, which is important because without pollen, it's not possible to track its origin. Finally, some "honey" isn't honey at all. Here's an example of such an article: <http://www.foodsafetynews.com/2011/11/tests-show-most-store-honey-isnt-honey/#.UnkpKvkqiNI> Cheers.

Seth Roberts (2013-11-05 12:06:13)

"Did you conduct your self experiment using local honey?" No I used Australian honey. I am in China and don't trust Chinese honey. I also have honey from Canada and from a French company that is "a blend of EC and non-EC honey".

Seth Roberts (2013-11-05 12:09:38)

"If the effects are stronger with raw honey (unclear from what Seth has posted here)..." Raw vs cooked honey made no difference to Stuart. I am using cooked honey. So are my friends that have tried it. Long ago I suspect the effect came from fruit, not honey, although that's just a guess.

Seth Roberts (2013-11-05 12:14:08)

"He grew up to be 6'2" vs his older brother who is 5'10" and both parents under 5'10"." Four inches is close to the difference between the Dutch and their neighbors. [1]<http://www.dailymail.co.uk/health/article-2441250/Average-BMI-Artist-compares-sizes-men-various-countries.html>

1. <http://www.dailymail.co.uk/health/article-2441250/Average-BMI-Artist-compares-sizes-men-various-countries.html>

Heidi 555 (2013-11-05 12:30:45)

There's a book called The Hibernation Diet that is about talking a spoonful of honey before bed. As I recall the diet claimed it would help you to sleep well, lose weight, and build muscle. <http://www.amazon.com/The-Hibernation-Diet-Mike-McInnes/dp/0285637371> I tried it for a month (pre SLD) and it didn't work for me - I gained 3 pounds. I wrote about it on this thread here: <http://boards.sethroberts.net/index.php?topic=6285.msg68506> #msg68506 Seth: gaining muscle and losing weight are not compatible...but I have definitely gained muscle and slept well.

Bee (2013-11-05 14:02:56)

Very interesting post. Not sure if this is related, but as a type one diabetic, I can tell you that it very hard to sleep with low blood sugar. I'm sure mine goes lower in the night than a normal person, as mine can get down to 40-50 at times from taking too much insulin or a hard workout day. A normal person is usually around 70-80 throughout the day, unless it's after a meal. Also, the lower the blood sugar, the more lucid my dreams. Maybe because I'm not sleeping as soundly. I don't know. Just thought that I'd add this.

Stuart King (2013-11-05 16:11:15)

When I first tried the honey I used an organic, but lightly heated variety which worked very well. After switching to raw local honey it didn't work as well. I'm trying different varieties, according to this study conducted by the Australian Government <https://rirdc.infoservices.com.au/downloads/05-027> different varieties of honey have different glycemic indexes ranging from low to high. In the outcomes they say 'The results of this study showed that different honeys could have significantly different effects on blood glucose and insulin levels, due to differences in their sugar content and physical form, and should not all be classified as one type of food for people with diabetes.' This information may be more important than whether

the honey is raw or not. If the honey increases fasting blood sugar or gives you reflux then perhaps try a different variety to see if there's a difference? I'm also curious about whether sucrose would work however honey (unlike table sugar) is a natural food and has antimicrobial, antibacterial and anti fungal properties, can kill pathogens and candida, prevents biofilm formation, (see here <https://rirdc.infoservices.com.au/downloads/09-180>) has prebiotic properties promoting the growth of beneficial microbes in the intestine and also has antioxidants. (<https://rirdc.infoservices.com.au/downloads/09-179> and also <https://rirdc.infoservices.com.au/downloads/05-040>). It appears that honey, much like fruit, has many other benefits to eating it in small quantities (it seems our preference for sweet things after meals takes care of this anyway). I can't see how table sugar would be beneficial compared to honey or fruit but it still may improve sleep.

dearieme (2013-11-05 16:15:22)

Re Susan's point: we routinely eat two sorts of honey, both sparingly (i) Local, and (ii) Manuka honey from New Zealand. Our most recent experiment was honey from Pitcairn Island: we found it in a drawer; presumably it was an old Christmas present.

Adam (2013-11-05 17:08:01)

J. Stanton recently looked at some studies comparing Sucrose (pure sugar) to Honey & Protein: <http://www.gnolls.org/3559/calorie-cage-match-sugar-sucrose-vs-protein-and-honey-there-is-no-such-thing-as-a-calorie-part-vi/> There must be something else in Honey aside from the Sugar. Quoting: J Food Sci. 2007 Apr;72(3):S224-9. The effect of honey compared to sucrose, mixed sugars, and a sugar-free diet on weight gain in young rats. Chepulis LM. "Overall percentage weight gain was significantly lower in honey-fed rats than those fed sucrose or mixed sugars, despite a similar food intake." And... "Weight gains were comparable for rats fed honey and a sugar free diet although food intake was significantly higher in honey-fed rats."

Israel Ramirez (2013-11-05 19:45:32)

Honey is a very complicated substance, containing lots of substances in varying amounts, depending on what kind of plant the bee harvested. <http://www.beesource.com/resources/usda/honey-composition-and-properties/> I wonder whether any beneficial effects might be due to the micro components rather than sugars. When I was a child, my family took great stock in honey as a treatment for the common cold but I had trouble eating it on account of the overly sweet taste.

Dennis Mangan (2013-11-05 21:30:07)

I think evolution shaped us to like a 'poison' like sugar is the same as for cocaine or porn, both of which humans have a taste for - they're all supernormal stimuli. Seth: With porn, it is clear what's going on. Obviously sexual arousal/pleasure via vision was helpful in certain situations. So with sugar what is the corresponding beneficial situation? The answer is not obvious. With cocaine it is not clear what is going on - what the beneficial situation is, for example. Nor what the paleo equivalent was. What paleo event triggered the same neural pathways as cocaine? I have no idea. However, leaving aside cocaine, I think you're right: the implicit assumption of many people is that we just have too much sugar now. This fails to answer the question of why we like sweetness at all (or why dessert is separate). I'm saying it's not the amount so much as the time of day.

dearieme (2013-11-06 03:29:17)

A young friend was recently on his first business trip to the US. He found two of the main courses he was served in restaurants inedibly sweet. He rejected them: I hope he was quick-witted enough to find a diplomatic excuse for his hosts.

Seth Roberts (2013-11-06 04:56:37)

"I wonder whether any beneficial effects [of honey] might be due to the micro components rather than sugars." I doubt it, for two reasons. One is that, if so, our liking for sweetness and the institution of dessert would remain mysteries. This is the lightning doesn't strike twice in one place for different reasons argument. The other reason is that something hugely important (sleep) was massively improved. Something as major as sleep is unlikely to be massively improved by a tiny part of the diet. It would be like building something essential for life that depends heavily on a tiny hard-to-get part. Sure, we require micronutrients (such as vitamins) for many things. But the vitamins we need are not hard to get and deplete very slowly. It is really hard to get scurvy, for example.

Nancy Lebovitz (2013-11-06 05:00:19)

[1]Dessert is not universal. However, the evidence from experience was interesting enough that I tried honey last night. It didn't make any difference, which I guess isn't too surprising. My sleep problem seems to be driven by hot flashes. I wake up (feeling alert), have a hot flash, and it takes me a while to get back to sleep. I believe that the pre-hot flash state includes a gradual increase of body temperature which takes me out of sleep. There may be adrenalin/cortisol involved, too. The whole cycle (which also happen during the day includes feeling tired/distracted before a hot flash (something I wouldn't notice when I'm asleep.) Anyway, I'll keep trying the honey for a while. Who knows? I might get the strength increase. Seth: If you already get a fructose/glucose mixture near bedtime (how near is unclear. one hour? two hours? three hours?) more of it is unlikely to help.

1. <http://nancylebov.dreamwidth.org/1023540.html?thread=3966260#cmt3966260s>

Nancy Lebovitz (2013-11-06 05:05:54)

Not sure if this is relevant to cocaine, but coca leaf (the source of cocaine) is a staple for people living in the high mountains-life is hard and they need the extra energy. I'd love to see whether coca would help people off a cocaine addiction or even be a useful drug like caffeine, but the experiment isn't legal and I guess coca isn't expensive enough to be worth smuggling.

GeoffD (2013-11-06 05:58:28)

Seth, Thank you for the best blog on the internet. Seth: Thanks! That's a lot of blogs.

Three Pipe Problem (2013-11-06 07:47:33)

"The other reason is that something hugely important (sleep) was massively improved. Something as major as sleep is unlikely to be massively improved by a tiny part of the diet." Milligrams of melatonin can massively improve sleep, and it's found in foods.

How to Manufacture the Best Night of Sleep in Your Life | Mark's Daily Apple (2013-11-06 08:47:21)

[...] a tablespoon of honey, preferably raw, right before bed. Seth Roberts has shown through rigorous self-experimentation how it might very well improve sleep, perhaps by keeping [...]

Sue (2013-11-06 11:23:58)

I have hypoglycemia and horrible insomnia. I have tried manuka honey before bed but did not see results; however I can concur with Stuarts discovery that a day of low sugar/low refined carbs will guarantee me a good nights rest as opposed to waking up after only a few hours of sleep and not being able to get back to sleep until sunrise. I find I sleep best with light dinner and sleep even better if Im a little hungry before retiring. I do feel like my insomnia is related to blood sugar problems (possibly caused by weak adrenals). Before discovering the diet connection a snack of cheese and fruit before helped a lot but was not any where near as successful as low sugar/low refined carb diet. Another thing that seem critical for me is potassium supplementation. I use about 1/8 tsp of nu-salt and that ensures me refreshing sleep. Too much and Im groggy the next day. My husband who gave up coffee and was looking for a replacement for mental acuity discovered that a spoonful of honey works just as well without the side effects I am curious as to what brand/type of honey you are taking Seth? I would like to try another source of honey. Andrew-how did you solve your blood sugar problems? Thanks Seth: I have been using [1]a blend of Australian honeys from Leabrook Farms (in Australia).

1. [http://www.springgullyfoods.com.au/leabrook\\_farms](http://www.springgullyfoods.com.au/leabrook_farms)

Meets (2013-11-06 11:57:51)

I tried this last night, and it worked. I had a deep sleep and woke up refreshed, which doesn't happen often. I've been eating a lot of honey, but mainly in the morning and afternoon with coffee or yogurt. Occasionally I would sleep well and not know why. Maybe those were the days I had honey with yogurt before going to bed, which I occasionally would do.

Inquisitive Raven (2013-11-06 11:59:52)

Hi, I'm a type 2 diabetic and I'd like to talk about blood sugar. There is a known phenomenon of [1]elevated fasting blood sugar that seems to be related to the long period of no food that people undergo when they sleep. Basically, as I understand it, when blood sugar drops sufficiently at night, the liver releases glucose into the bloodstream. In non-diabetics, the insulin response keeps it from getting too high, but in diabetics, the result is elevated morning blood sugar. There's an alternate



explanation in the linked article, but whatever the reason, I've found that taking a small amount of carbohydrates before bedtime seems to prevent it. What I haven't done is test whether the form of the carbohydrate matters, nor have I figured out the optimum dosage though I suspect that it's between ten and twenty grams. According to the [2]USDA nutrition database, honey has about six grams of sugar/tsp, so 2-4 tsps is about the right dose. I get the 10-20 gram figure from the fact that the recommended dose for treating a hypoglycemic emergency is 15 grams of glucose and, well, trying to avoid spurious precision.

1. <http://www.phlaunt.com/diabetes/17561156.php>

2. <http://ndb.nal.usda.gov/ndb/foods/show/6170?fg=&man=&lfacet=&format=&count=&max=25&offset=&sort=&qlookup=honey>

Alex Chernavsky (2013-11-06 12:24:44)

Save-the-sugar-for-dessert might be a modern invention:

Were we to attend a 16th century court banquet in France or England, the food would seem strange indeed to anyone accustomed to traditional Western cooking. Dishes might include blancmange—a thick puree of rice and chicken moistened with milk from ground almonds, then sprinkled with **sugar** and fried pork fat. Roast suckling pig might be accompanied by a cameline sauce, a side dish made of sour grape juice thickened with bread crumbs, **ground raisins** and crushed almonds, and spiced with cinnamon and cloves. Other offerings might consist of fava beans cooked in meat stock and sprinkled with chopped mint or quince paste, a sweetmeat of quinces and **sugar or honey**. And to wash it all down, we would probably drink hypocras, a mulled red wine seasoned with ground ginger, cinnamon, cloves and **sugar**. [...] Before 1650, the elite classes throughout the Islamic and Christian worlds from Delhi to London shared pretty much the same diet: thick purees, lots of spices, **sweet** and sour sauces, cooked vegetables, and warmed wines. **Sugar was ubiquitous as a seasoning in savory dishes.**

(Emphasis added.) From: "Birth of the Modern Diet", by Rachel Laudan. *Scientific American*, Aug. 2000. [http://www.rachellaudan.com/wp-content/uploads/2007/08/birth\\_of\\_the\\_modern\\_diet.pdf](http://www.rachellaudan.com/wp-content/uploads/2007/08/birth_of_the_modern_diet.pdf)

Seth Roberts (2013-11-06 15:36:24)

"Save-the-sugar-for-dessert might be a modern invention". There are plenty of modern instances where main courses have small amounts of sugar. Sushi rice has a small amount of sugar. Korean marinades have small amounts of sugar. Cranberry sauce, sweet and sour sauce and pomegranate sauce are modern. And so on. So sugar is certainly used in main courses, but is it new to have dishes that are mainly sweet (dessert) separated from the rest of the meal? The quotation doesn't show something that we would today call a dessert served at the same time as main courses. Elizabeth Capaldi's experiments that show that sweetness is less pleasant when we are hungry don't depend – one hopes – on when they were done.

Seth Roberts (2013-11-06 18:08:16)

"Milligrams of melatonin can massively improve sleep, and it's found in foods." But not in milligram amounts. Much less. Here is the amount of melatonin in various foods that are HIGH in melatonin: <http://www.thehealersjournal.com/2013/04/08/foods-high-in-melatonin/> You would almost never get enough melatonin from food to improve your sleep. Because melatonin is found in food in such small amounts, it is very unlikely that we need melatonin in our food for optimal sleep. However, your comments makes me curious what effect it will have. I have some lying around.

Nancy Lebovitz (2013-11-07 06:04:53)

Second night, I got a definite improvement in sleep– I only woke up once rather than the usual more times than I can remember. I still don't believe in evolutionary arguments, especially if they're supposed to apply to the whole human race. There are foods which are healthy for most people, but debilitating or deadly for some. There are the usual reasons for why childbirth is risky, but some women (for some births?) have a reasonably easy time of it. Why haven't the traits which make childbirth risky been bred out, or at least made much more rare? I believe strongly in experimentation and observation, and I can live with evolutionary theories being used to check on which experiments are worth trying.

Seth Roberts (2013-11-07 06:41:44)

"Why haven't the traits which make childbirth risky been bred out, or at least made much more rare?" at the last Ancestral Health Symposium, a doctor named Will Lassek made exactly that argument: that certain easy-to-notice things evolved because they made childbirth less risky. His talk was titled "Why Women Need Fat: Three Evolutionary Puzzles". His answers to these puzzles were quite different than the usual answers.

Kelly B (2013-11-07 08:56:16)

Another hot-flash sufferer weighing in; I have exactly the same issue that Nancy reported - an increase in body temperature sometime during the night that wakes me up (thinking it's morning, sometimes at 10:30 pm) in order to have a hot flash. I tried the honey last night for the first time - just 1 tsp. I've been eating very low-carb lately, so no sugar throughout the day at all. I had a hard time getting to sleep initially, and I did wake up for a hot flash at 2 am, and at first, I didn't think it was working. However, when I woke up for the day (unfortunately, about an hour earlier than I wanted to - probably a hangover from the time change this past weekend), I felt an incredible sense of well-being. Normally, I wake up with aching hip joints and feeling pretty ugh, but not this morning. My sense is that the sleep was "richer" - I can't describe what was different, but it seemed different in quality from my normal sleep in the way that heavy cream is different from skim milk. I'm very interested in the strength and muscle mass improvements, although I do realize that I just totally blew the opportunity to set up a control. Still not going to stop.

How to Manufacture the Best Night of Sleep in Your Life | Doohickey (2013-11-07 09:54:51)

[...] a tablespoon of honey, preferably raw, right before bed. Seth Roberts has shown through rigorous self-experimentation how it might very well improve sleep, perhaps by keeping [...]

David199 (2013-11-07 21:20:43)

So a few years ago i stumbled on this thread on the Crossfit Forum. Guys/Girls who were normally strict about their diet found that eating ice cream before bed was causing them to lose weight. The thread is 56 pages and spans 7 yrs of comments. I have not read it all but it appears they never considered the brain/liver combination in regards to sleep. They also didn't seem to put together that it needed to be done before bed and just thought it was something in the ice cream alone. Who could blame them? Most of them would have strict diets during the day and then ice cream before bed - in line with Stuarts observations except it was ice cream vs honey. Comments like this from one poster (on page 51) make me think its a similar phenomenon affecting sleep: "When I'm at college, my sleeping pattern is . . . I don't get much sleep. When I eat breyer's there, the next day my WODs [workouts of the day] feel great. However when I go home and get alot of sleep, the ice cream does nothing and I feel better eating real food." And comments like this on page 45, point out that sugar seems to be an important part of the equation: "Oddly, I almost always PR [set a personal record] the next day after eating a bowl or two of ice cream. If I go overboard on pasta or something the night before, I am usually burned out halfway through a respectable length metcon [metabolic conditioning workout] (20 minutes), but with ice cream it doesn't matter what the WOD is, I always feel and perform better." <http://board.crossfit.com/showthread.php?t=20754>

Seth Roberts (2013-11-08 01:22:38)

"So a few years ago i stumbled on this thread on the Crossfit Forum. Guys/Girls who were normally strict about their diet found that eating ice cream before bed was causing them to lose weight. . . Most of them would have strict diets during the day and then ice cream before bed - in line with Stuart's observations except it was ice cream vs honey." That's fascinating. Not just the results - the benefits of the bedtime ice cream - but also the fact that their will power somehow gave out near bedtime. Their willpower went down or the sweets became more attractive or both. I've heard many times about willpower going down in the evening - I can't remember for what. I wonder if it goes down for sweets (less able to avoid them) more than other things, such as cigarettes and liquor. People binge in the evening much more than at other times of day. It is paradoxical that willpower goes down in the evening because in the evening we should do less of stuff...because we need to do nothing in order to fall asleep. In this case less willpower = more tendency to do something. I find that in the evening it is harder to do almost everything.

David (2013-11-08 01:56:18)

Incredible. Something so simple triples your leg endurance. This is the most epic Seth Roberts discovery to date! And to think a honey-sweetened creme brûlée can now be considered a health food to improve strength and endurance, give better sleep thus overall health, boggles the mind.

Louise (2013-11-08 03:34:25)

Regarding the height of dutch people in relation to milk and honey at bedtime. Perhaps it is as simple as better sleep equals better hormone production. Human growth hormone in particular is produced when we sleep. I've had far too much carbohydrate and sugar today to try it tonight but will definitely try tomorrow evening. In general I have noticed that if I eat fairly low carb during the day and then have a small but carbohydrate rich meal for dinner (such as a vegetable and legume curry with half a cup of white rice) I sleep well and wake feeling both relaxed and refreshed the next morning.

Louise (2013-11-08 03:39:00)

I forgot to add - traditionally honey is considered to help the body retain fluid, helping people sleep through the whole night without needing to pee. Whether it's true or not I don't know. Perhaps some people who normally need to get up during the night to pee could report back here if it made any difference.

Guy (2013-11-08 06:29:02)

Well I tried it last night and I have two things to say; first, it seemed to work as I woke up feeling more refreshed and second, technicolor dreams!!

David199 (2013-11-08 07:39:34)

Louise, I'm currently being treated for insomnia- waking up in the middle of the night, usually around 4am. I always need to go to the bathroom. The honey is helping me sleep better but I'm still awake to go to the bathroom even though I drink almost no fluids after 4pm. I have bought the Hibernation Diet book and searched the web for information while I wait for it to arrive. There is very little information other than the following FAQ with the author ([www.hibernationdiet.blogspot.com](http://www.hibernationdiet.blogspot.com)). His short view is that honey nourishes the liver (and you need fructose to open the liver up to store glucose - this could be a reason why we crave sweets), which provides a steady stream of glucose to the brain during the "8-hour fast" while you sleep. When the brain is "happy", you sleep deeply and the rest of the body burns fat as it rebuilds. If the liver does not have sufficient stores of glucose, the brain signals for stress hormones to kick in and take or make glucose from outside the liver to nourish the brain. These stress hormones (like adrenaline and cortisol) compete with rest and shift the body away from a primary fat metabolism. This is the paradox of eating sugar to burn fat (like the Crossfit guys did) This of providing for the brain during sleep (and the crossfit ice cream thread) are making me rethink how we eat and sleep. We've always been taught not to eat at night. Most people eat around 7pm, go to bed at 11pm and wake around 6-7am. This means we are doing a 12-hour fast each night. During the day we eat several times and people complain of fatigue, esp after lunch. Seems odd that we know we get tired after a big meal (think Thanksgiving) and yet we've set up our day to eat heavily when we want to be active and to fast while we are trying to rest.

Kirk (2013-11-08 10:45:02)

David999, I solved my waking-up-to-pee-often problem by adding iodine. I take one fourth of a 3mg tablet once a day in the morning. Seth, I experimented the last three nights with honey-before-bedtime. My recent typical sleep pattern is an initial 3 hours, wake lightly, then 3 sessions of 1.5 hours each. Sometimes I wake up strongly at 4am at which time I'll either change sleep locations, splash cold water on my arms and face, and/or hold standing meditation for 15 minutes, before attempting sleep again.) Night 1: 1 t honey, slept deeply 4 hours, lightly for another 3 hours Night 2: 1 t honey, no change in sleep habits (both my wife and I were cold that night so perhaps we kept waking each other up) Night 3: 1.5 t honey, slept deeply for 5 hours, woke up strongly, stayed awake for half an hour, then slept another 2 hours I plan to increase the dose to 2 teaspoons tonight.

David199 (2013-11-08 11:16:45)

Kirk, any idea why the iodine helps stop the urge to urinate in the middle of the night?

guv (2013-11-08 15:08:23)

on the dessert/ice cream subject, I found a quote attributed to Ray Peat here, <http://www.dannyroddy.com/main/2011/12/2-9/ray-peats-brain-building-a-foundati-on-for-better-understandi.html> that reads, "During the night all of the hormones of stress and inflammation rise, and the ice cream decreases them enough for you to stay asleep, but they still rise" purportedly (from the Danny Roddy site again), Peat likes/uses low fat Haagen Dazs (one without any gums or fillers).

Stuart King (2013-11-08 16:41:07)

Lower will power in the evening might be a result of decision fatigue or ego depletion, which seem to have a direct correlation with blood glucose levels [http://www.nytimes.com/2011/08/21/magazine/do-you-suffer-from-decision-fatigue.html?pagewanted=all&\\_r=0](http://www.nytimes.com/2011/08/21/magazine/do-you-suffer-from-decision-fatigue.html?pagewanted=all&_r=0) <http://www.forbes.com/sites/trustedadvisor/2012/05/22/keep-those-glucose-levels-up/>

Kirk (2013-11-08 17:51:21)

David199, Why does iodine reduce the urge for night-time urination? In my case, I rarely eat manufactured food or at restaurants. This means I am also not ingesting the salt added during manufacturing. Most salt has iodine added to it (see Iodised Salt entry at Wikipedia). But I don't like the taste of iodized salt, therefore, once I stopped eating potato chips and tortilla chips, I probably slowly got deficient in iodine. My hunch is that after a while my body was doing whatever it could to recycle the little iodine it had and not lose it via urination, and whatever process it used to recycle the iodine made the body want to urgently remove the waste. But that's a layman's viewpoint, probably wrong. All I know is that at some point I added iodine based upon supplement recommendations by the Jaminets, then after noticing the good effects, it didn't take long to narrow the cause to the iodine. It's the only supplement I've taken where I have noticed a result.

Seth Roberts (2013-11-08 17:55:28)

That's a good point. These willpower/ego-depletion/blood glucose studies support my views in several ways: that glucose is crucial for brain function, that low glucose leads to bad function, and that glucose levels depend greatly on both food and amount of mental activity. The alternative is that blood glucose regulation is so powerful and precise that blood glucose is not something we need to worry about. Like body temperature.

guv (2013-11-08 17:59:24)

i read another reason for the need to get up & pee during the night, could be due to a deficiency of sodium in your diet.

Brian (2013-11-09 19:24:54)

In the books "The Iodine Crisis" by Lynne Farrow and/or "Iodine: why you need it, why you can't live without it" by David Brownstein it was mentioned that iodine supplementation can reduce the need to get up and pee during the night. I don't recall if it was said why it works. If you buy Brownstein's book do so from his website to make sure you get the current edition. I think I still have a little local raw honey left in my cupboard. I'm going to try this tonight.

Shane (2013-11-09 22:35:37)

Hmm interesting. Who would have thought that honey before sleep would help! If only it didn't need to be done on an empty stomach I'd give it a try. (I find eating before bed has me sleeping a lot better for some reason.) Seth: I'm sure the "on an empty stomach" part is not exactly right - that some foods in some amounts are okay. I am tempted to try thin crackers - eating the honey on thin crackers.

Robnonstop (2013-11-10 08:04:49)

I was told by a chef: The idea of dessert at the end comes from the French. Europeans had sugary meals, and drinks (everything served at once) like other cultures do but when kings got fat, lost their teeth etc. their doctors decided to BAN those who produce the desserts into a separate, smaller kitchen and only allow a little bit of sweet food at the very end of the meal. What royals do is fancy, so everyone adopted this order. Seth: Interesting. Here is another answer: <http://www.quora.com/Desserts/Why-and-when-did-desserts-become-the-last-course-of-a-meal>

Robnonstop (2013-11-10 08:08:34)

On why we get up at night: Apparently adults in rural areas without electricity always get up at night. It's supposed to be that way. You have to go to bed when it gets dark though. When traveling in rural areas in Asia, I noticed people were often awake around midnight, sleeping before and afterwards. This TED talk makes the same claim but without any explanation: <http://youtu.be/-Z-vyLHi2us>

Christina (2013-11-10 10:39:26)

I'm confused by why there's confusion around the evolutionary desire for extremely sweet things. Lots of sugar = lots of glucose = higher spike in blood glucose and ability to do whatever we need to do with renewed energy. Why is it more complicated than that? Seth: Sugar is a low density form of energy. Fat is almost twice as dense. It is unclear that there is an evolutionary desire for "extremely sweet things" separate from a preference for sweetness. The Paleolithic world did not have a lot of extremely sweet things, so perhaps we like extremely sweet things because we like sweet things. High blood sugar is damaging (diabetes), why would we develop a preference for foods that damaged us? If extremely sweet things are so good for us, why do we get sick of them so quickly? (Sweets are generally small.)

Seth Roberts (2013-11-10 14:17:51)

"Apparently adults in rural areas without electricity always get up at night. It's supposed to be that way." I've heard this many times: "It's supposed to be this way." I am less sure. How do the people who say this know what paleolithic sleep was like? Maybe rural people always get up at night because they don't get enough sunlight in the morning, or enough exercise or enough X - there are dozens of possible X's. To be sure that sleep is supposed to be this way we'd need to know all the variables that have a big effect on sleep and then set all of them to their paleolithic values, and see what happens. The people who make the "supposed to be this way" claim don't seem to understand this.

Chuck (2013-11-10 15:35:37)

In Honey's Unknown Benefits By Lindsey Duncan, ND, CN he states..."Improved sleep and relaxation: Honey can promote relaxation and help ease you to sleep at night. The natural sugar found in honey raises our insulin slightly and allows tryptophan, the compound famous for making us sleepy after eating turkey at Thanksgiving, to enter our brains more easily. Taking a spoonful of honey before bed can help you get restful sleep."

Darrin (2013-11-10 15:47:38)

hi all, i am trying to work out how important the Type of Honey is in this instance (for improving sleep)... i have found two local honeys, both are Raw & Organic. Both are 100 % Australian honey (i am in Aus). & am trying to decide which one to buy first (i'll buy the 2nd if 1st choice 'fails'), here's how they differ; Option A: honey is a dark colour & runny (i seem remember reading that the higher fructose honeys can be runnier than the lower fructose honeys). Option B: honey is light colour & a lot thicker than option A (possibly with some minor crystallisation). label also reads that this honey "retains small quantities of propolis and pollen". Both honeys were at the same temperature, same shop/shelf. Although both honeys are raw & organic, i wonder if option B may have the least processing, due to the mention of propolis and pollen. so which do you think i should buy first for this sleep experiment & why... is runnier better, is higher fructose better (although i do not know the actual fructose contents), is inclusion of some propolis and pollen good or bad, etc, Thanks for any feedback/comments/help Seth: I don't know. That is a really hard question.

Seth Roberts (2013-11-10 17:52:52)

"The natural sugar found in honey raises our insulin slightly and allows tryptophan, the compound famous for making us sleepy after eating turkey at Thanksgiving, to enter our brains more easily." Tryptophan has been found to reduce sleep latency - the time it takes to fall asleep after you turn off the lights and try to fall asleep. I don't care much about sleep latency since I usually fall asleep quickly. That being said, it's possible that the honey has caused me to fall asleep more quickly. Last night it seems like I fell asleep in a few seconds.

Darrin (2013-11-10 18:08:33)

Hi Stuart, you said, "When I first tried the honey I used an organic, but lightly heated variety which worked very well. After switching to raw local honey it didn't work as well. I'm trying different varieties..." I am in Australia as well, which particular honey have you found that works best for you so far? & i'll see if i can find it. &/or have you found a difference between say, thick/light colour honey versus runny/dark colour honey...which one worked best for you? thx

Stuart King (2013-11-10 19:20:11)

Hi Darrin, the honey I first used and have found to be effective since is available at Coles in a 1kg glass jar and is called pure harvest organics - organic honey. I emailed them and they said it is an iron bark variety from Queensland. It is heated to 45 degrees Celsius. They have a variety that looks exactly the same in the health food store but it says raw, however on the side of the jar it still says its heated so I don't know what's going on there. It's consistency is more runny and it isn't as dark as the raw variety I use in my tea (which has a much better flavour). The interesting thing is that the raw local variety of honey I was using which wasn't working as well is also iron bark. Maybe the heating process increases the glycemic index of the honeys. It is thicker and darker. My understanding is that the more pollen and particles there are in the honey, the better the quality. This report (<https://rirdc.infoservices.com.au/downloads/05-027>) gives details on the amounts of fructose versus other sugars in different varieties of Australian honey. Iron bark and other pure floral varieties were low GI yet blends were moderate to high GI. Seth posted that he is using a blend, which I haven't tried yet, I'm testing different honeys to see the effects and quantifying the data.

Darrin (2013-11-10 21:44:09)

Thanks Stuart, regarding "...the more pollen and particles there are in the honey, the better the quality", this could be true & could be 'healthier' as well, but whether either of those things is a factor for improving sleep is another matter. Just looking at the info on the pureharvest/coles honey you mention, which can be found here, <http://shop.coles.com.au/online/national/pureharvest-honey-organic> As this honey is not listed on the pureharvest web site, i am guessing this must be a 'supermarket' version. I've noticed something else on some honey labels which may be relevant here, most honeys label the carb content as all or nearly all sugars, usually 80+ grams per 100g. But a few list sugars as a lesser percentage of carbs, ie. with the coles/pureharvest linked above, sugars 73.6g, carbs 82.4g. & another one i just saw in the local coles express, coles brand 500g organic honey, sugars 69.4g, carbs 87.9g. This could be something to track when testing which honeys work for you.

Christina (2013-11-11 00:01:15)

IRT your comment: Seth: Sugar is a low density form of energy. Fat is almost twice as dense. It is unclear that there is an evolutionary desire for "extremely sweet things" separate from a preference for sweetness. The Paleolithic world did not have a lot of extremely sweet things, so perhaps we like extremely sweet things because we like sweet things. High blood sugar is damaging (diabetes), why would we develop a preference for foods that damaged us? If extremely sweet things are so good for us, why do we get sick of them so quickly? (Sweets are generally small.) — Right, but could it be a speed thing? If you're a zebra about to run briefly from its prey, you'd be better off having a Twix bar than a steak. Lots of things - in larger quantities than "needed" - can end up being bad for us, right? Excessive porn, excessive exercise, excessive sugar. The problem here is that our pleasure system is hard to modulate perfectly, not that there can't possibly be an evolutionary reason for liking refined sugars. Also, I don't think excessively sweet things are necessarily "good for us" beyond serving their purpose in the short term. The fact that we get sick of them is = to people (mostly) no longer being interested in sex post-orgasm, right? Really trying to think through where the confusion is coming from, sorry if I'm being ignorant. Seth: My point wasn't that X or Y was the case, it was that there was nothing simple or obvious about the answer to the question of why we like sweet foods.

Stuart King (2013-11-11 01:17:20)

Darrin yes that is the honey I was referring to. I suspect that labelling of sugar content only refers to the glucose, fructose and sucrose contents of honey. There are at least 12 disaccharides in honey in addition to fructose and glucose - sucrose, maltose, isomaltose, nigerose, turanose, maltulose, leucrose, kojibiose, neotrehalase, gentiobiose, laminaribiose and isomaltulose. My guess is this is where the extra carbs are from.

Stuart King (2013-11-11 01:27:24)

Here's an interesting story about someone who went without artificial light for a month and fell into a bimodal sleep pattern  
<http://jdmoyer.com/2010/03/04/sleep-experiment-a-month-with-no-artificial-light/>

Nancy Lebovitz (2013-11-11 05:52:35)

I ran into an example of sugar being good for me. Friday I felt really drained, even though I'd had a reasonable amount of sleep and eaten as much as I wanted of low glycemic and fairly high-fat food. Towards the end of the day I had a piece of Texas sheet cake (white flour, sugar, Crisco, and applesauce). The world snapped into focus, and a friend said it was the first time she'd seen my eyes open all day. It would seem that keeping myself fed properly is more complicated than I thought.

Eric (2013-11-11 07:17:20)

RE: Evolution and sugar. Glucose can provide a temporary substitute for rest in that it can help restore executive functioning for people that are cognitively fatigued. Since hunting can be a high vigilance activity, and therefore one that can fatigue executive functioning this suggests one possibility. [http://www.psych.utah.edu/psych4130/Kaplan\\_and\\_Berman2010.pdf](http://www.psych.utah.edu/psych4130/Kaplan_and_Berman2010.pdf)

David199 (2013-11-11 08:07:33)

Chuck Says: In Honey's Unknown Benefits By Lindsey Duncan, he states..." The natural sugar found in honey raises our insulin slightly and allows tryptophan, the compound famous for making us sleepy after eating turkey at Thanksgiving, to enter our brains more easily." Chuck, supposedly insulin pushes tryptophan into the brain, which becomes serotonin which becomes melatonin and melatonin moderates insulin which is why eating sugar before bed doesn't cause blood sugar swings or fat gain. Melatonin also helps with HGH pulsing which is beneficial. However, I don't understand the idea of "natural sugar." Honey is a mixture of glucose and fructose. Sucrose is a 50/50 mixture of glucose and fructose. The only difference is that while the two monosaccharides are in free form in honey, sucrose holds the fructose and glucose together with a glycosidic bond which is quickly broken during digestion. Does anyone know if "natural sugar" and sucrose are really that different in terms of how the body metabolizes them? (I do realize that honey has several other beneficial compounds. I'm specifically referring to the "natural sugar" argument.) As to why we prefer sweet foods, my guess is that it has to do with proper liver uptake of glucose, since fructose plays a role in activating glucokinase which is involved in glycogen synthesis. Either way, our taste for sweetness must serve some evolutionary purpose in terms of the doses someone would get from fruit and honey ingestion. It's very difficult to overeat on those foods. I think drinking a 24 oz Mountain Dew perverts our inborn taste for sweetness.

Nancy Lebovitz (2013-11-11 08:15:15)

More evidence about the non-universality of dessert: <http://thoughtcatalog.com/michael-koh/2013/11/16-people-on-things-they-couldn-t-believe-about-america-until-they-moved-here/> Not dessert as in sweet foods, but as in the specific course eaten after dinner. It doesn't exist. Guyanese people eat dinner and then that's it. I remember going to my American friend's house and being shocked that people in real life actually ate dessert. Seth: Dessert is rare in China, where I live much of the year. But the Chinese people near me eat lots of sweets, especially at night. I see this any evening I walk down the street.

David199 (2013-11-11 08:27:24)

Eric, my only issue with your link to the research on glucose is that it doesn't explain why we enjoy things that are sweet. Starch is pure glucose and yet it's not sweet. All sweetness in nature, honey and fruit, contain fructose. Potatoes taste great, but are not sweet. Actually, potatoes only taste good with either adding fat or sugar. Seth, in your original post you discuss why we separate sweetness (dessert) from the rest of the meal. But I would question that assumption. Let's say we are having a simple dinner of meat and a sweet potato. Many people would put some sugar on their meat (steak sauce, BBQ sauce, etc) and would add brown sugar to their sweet potato. Can anyone deny that BBQ tastes better with sugary sauce or that sweet potatoes taste better with brown sugar? Sugar is the third ingredient in most ketchups. Most breakfast cereals have added sugar - even the "healthy" ones. (Kellogg's All-Bran lists sugar as the second ingredient) And I dare anyone to eat a bowl of oatmeal without putting something in it to sweeten it. We simply like the taste of sweet and sweet = fructose.

How to Manufacture the Best Night of Sleep in Your Life ‹ Healthy Naturally Club (2013-11-11 12:33:55)

[...] a tablespoon of honey, preferably raw, right before bed. Seth Roberts has shown through rigorous self-experimentation how it might very well improve sleep, perhaps by keeping [...]

Victor (2013-11-11 15:54:22)

This is a very interesting documentary ("Lights Out") on the effect of electric light at night on the natural production of melatonin. <http://www.cbc.ca/player/Shows/ID/2313199682/> After watching it, I bought a pair of the type of glasses recommended (cheaper safety glasses off of amazon) and used them religiously for 1 month. I noticed significant improvement after 3 nights which continued for the full month of use. For the next month I stopped using them and found reduced quality of sleep after 2 weeks. Before watching the documentary I had had very poor broken sleeps from doing the nighttime parenting of our 2yr old and 1 yr old. Now that winter is approaching I am using them again at night and again noticing the sleep improvements. I think that this is well worth watching and trying it out for yourself. I will be trying the honey now as well, and watching for changes in sleep quality, dreaming and strength changes. Thanks all for the insights Seth: Funny coincidence. A few days ago I wrote a post about the use of the glasses you are using. I agree with what you say. The post will appear very soon.

Robnonstop (2013-11-11 18:10:00)

"I've heard this many times: "It's supposed to be this way." I am less sure. How do the people who say this know what paleolithic sleep was like? Maybe rural people always get up at night because they don't get enough sunlight in the morning, or enough exercise or enough X — there are dozens of possible X's." Not sure what you mean by that. The results from rural areas were only relevant because they fit with what scientists observed in unrelated tribal cultures. The logical conclusion is that it's the standard and that artificial light and lifestyles change sleeping behavior. Of course our artificial unbroken sleep might be better but if your argument is that in rural areas people just don't get enough sleep (for some mysterious reason), why would that not also apply to early humans? Waking up at night has many benefits, survival and reproduction being the most obvious. Also worth noting is that there is no point in having 100 % identical behavior and preference among members of a tribe. Someone has to not like berries, in case they are poisoned, someone has to not sleep at a certain time, in case there is an attack etc.

Vincent Colombo (2013-11-12 08:20:26)

I started taking honey before bed two days ago, after reading this article. Both days I noticed that I had increased dream activity, or at least more awareness of my dreams. They also seemed much more vivid, but this may just be the difference between not really remembering/being aware of my dreams and now at least remembering that I did have dreams. Anyway, the first day I tried this I didn't think it helped, and in fact I felt I may have even woken up more and slept less. The second day (last night) I also felt like I had woken up more during the course of the night, and again felt like I had more frequent and more vivid dreams. However, after being up for a short period of time I started to realize how good I felt overall. Perhaps my body simply needs to adjust from my many years of restless sleep to the more restful sleep that I may now be experiencing. The results are interesting enough that I will continue the experiment and see how it goes. This idea and conversation reminds me of something someone told me years ago. They mentioned they drank something they referred to as "silver tea" before bed, which helped them sleep. Silver tea was simply warm milk with a small amount of sugar dissolved in it. I tried it once or twice when younger, and it did actually seem to help me sleep.

Sara L (2013-11-12 12:32:59)

Really interesting, I will try it. Also, I would like to add something a friend recommended me about honey. I don't know how extended it is, but he recommended, to prevent muscle stiffness (I am not sure it's the proper name, in spanish is "agujetas") , to eat one teaspoon of honey before exercising. As I workout very randomly, I usually had muscle stiffness the first days I worked out, but with the honey I never had it again. I guess having the proper amount of sugars available to the muscle during the whole workout keeps it from anaerobic activity.

Melanie C (2013-11-12 23:00:57)

Here's my guess on our inborn love of sweetness – it's about milk. Human breast milk contains a significant amount of sugar in



the form of lactose. Traditionally, children were nursed until at least age three (still the case in current hunter-gatherer tribes.) An inborn taste for sweet is a big survival advantage for kids – they'll nurse more and get lots of calories from all the sugar and fat in milk. Maybe adult enjoyment of the sweet taste is just a leftover from childhood?

Seth Roberts (2013-11-12 23:33:38)

"An inborn taste for sweet is a big survival advantage for kids — they'll nurse more and get lots of calories from all the sugar and fat in milk." good point. this may be why kids like sweets so much more than adults.

Ep 34: Sexbots, money, and honey | Grumpy Old Geeks (2013-11-16 21:25:34)

[...] Does Bedtime Honey Improve Sleep? Nine Reasons to Think So [...]

Does bedtime honey improve sleep? | The Personal Scientist (2013-11-17 20:23:46)

[...] reading this post by Seth Roberts, I've decided to test if half a tablespoon of honey at bedtime improves my [...]

Why a Tablespoon of Honey Before Bedtime will Improve your Sleep | THE MEASURED LIFE (2013-11-19 13:25:01)

[...] Main source: Seth Roberts blog [...]

Tim Lundeen (2013-11-21 13:03:43)

I'm curious whether a mix of glucose/fructose would have the same effect as honey. If so, this would confirm that the micro components of honey are not important. Sucrose causes more inflammation than honey, so wouldn't expect it to be as effective. Also, contaminants in the sucrose/fructose mix could cause it to be less effective, whereas organic honey presumably has much lower levels.

Fructose - The Natural Born Killer. Fact Or Fiction. | Get Real Living (2013-11-24 19:23:42)

[...] Interestingly, there are studies that show a tablespoon of raw honey can aid in better sleep. This is due to honey being half glucose and half fructose; glucose enters the blood quickly, supplying the brain in the first half of the night, with fructose turning into glucose (provided you haven't gorged on sugar throughout your day) slowly, meaning your body has a steady supply of energy the entire night. Read more here. [...]

Dinis Correia (2013-11-25 06:35:32)

I'm from Portugal and milk with honey is one of the common recommendations for a good night's sleep (not been drinking milk for some time now, but my mother did this when I was a kid).

julia (2013-11-27 07:50:53)

Sounds plausible. The only obvious issue is tooth decay. Are you brushing your teeth after eating/drinking the honey? Seth: yes, I brush my teeth after consuming the honey.

Strategy Test 003: Honey Before Bed | The Productive Self (2013-11-27 09:47:10)

[...] for a better night's sleep? Who isn't? I recently came across this article by Seth Roberts. Please read it before [...]

Crystal (2013-11-29 16:28:45)

Fascinating discussion. I just started trialling it last night, and although I did get up mid-sleep (usual pattern) I noticed the zoe this morning was showing solid blocks of light and rem sleep minus the short waking spikes I normally have, with a higher than normal proportion of REM to deep sleep (1.5:1 vs normal 1:1). I should also note that I'm recovering from stress-related problems including insomnia, but am not medicated. I probably should have waited, since yesterday was also the first day of doing a new exercise program (aquarobics) but I was interested in the strength side as well so thought it might be a good combo to try. Having been hobbling around like a really old woman most of yesterday with muscle ache from the session, I was surprised to wake this morning and find virtually no muscle ache left - maybe the drink helped with processing lactic acid? There was also a significant drop on the scales this morning. Admittedly, I would have expected that with the levels of exercise

yesterday but while under the high stress situation I've had over 3 months of sustained and spiked calorie deficits which failed to show any results on the scales. Maybe there's a reason people head for sweet foods under stress? Re: the children growing overnight, there's some interesting research I came across over a year back now, so I can't remember where, that talks about how children's tastebuds are geared towards sweet over savoury, to the point of aversion to some savoury tastes - on a personal level I know I hated some things that I later became almost addicted to, eg avocado & coffee. This dovetails in nicely with the sleep/ growth hypothesis, I would think. Stuart, having experimented on going raw vegan, the 'raw' but heated honey may be because there's a definition of 'raw' that includes anything not heated above 105 degrees F, approximately (the exact figure varies, but the highest I've seen was 108). The idea being that the raw diet retains health properties because it doesn't kill off the enzymes in food through heating, so anything not heated above the point where they start to die off gets considered 'raw'. (We won't go into whether sustained low temperature heating via dehydrator a la 'gourmet raw' recipes also kills them, that's a whole other can of worms). Thanks Seth. You always give me food for thought ;-) Seth: That's a good point about children and growth. Yes, maybe that explains their sweet tooth. To make sure their brains have enough sugar when they are asleep.

Matt Dippl (2013-12-03 16:43:19)

I have the suspicion that this ritual before bed time might have a beneficial effect on gut flora for some people. Honey in a way is a prebiotic food that could feed beneficial bacteria. This could explain the weight and muscle gain because of improved nutrient absorption due to a well functioning gut. The well being in the morning could be due to improved neuro transmitter renewal again through better nutrient absorption. I will see if I can find some data and research on my hypotheses. Great article!

Michael (2013-12-04 10:07:22)

Hello Seth, the famous German Doctor Strunz (best selling author and doctor for preventive medicine) gives the following explanation: It is because of tryptophan! This amino acid competes with 6 or 7 other amino acids for the brain receptors. If you take sugar, the insulin sends the other amino acids to your muscles so that tryptophan gets to your brain. And will likely have still enough amino acids in your blood pool when going to sleep.

Seth Roberts (2013-12-04 11:01:05)

"It is because of tryptophan!" where does Doctor Strunz say this? I'll be surprised if he has any supporting evidence. Tryptophan does make people sleepy, but the honey improves sleep throughout the night, in a big way. I have never heard of tryptophan doing that - for example, improving how rested you feel in the morning. Nor do tryptophan-rich foods improve how rested you feel in the morning, as far as I know.

Annie Kolatkar (2013-12-04 16:31:53)

A human's first food is breastmilk which is incredibly sweet. All infants need sugars to fuel their impressive growth within the first year until they get transitioned to solids. Lactose is in great abundance in breastmilk because it is so easy for the infant gut to break down into two basic sugar molecules which are used for forming other items and energy. The brain is wired to encourage breast feeding. The actions of latching, sucking, swallowing trigger all kinds of brain responses and the reward is more milk in the mother as demands increase. We are hardwired for the taste of sweet. If you remove lactose from an infant's formula, the infant will not thrive. No other sugar comes close to lactose in the first year. There really is no substitute. And breastmilk usually puts a baby to sleep. Feeding is a lot of work and the growth of an infant is mind blowing. Fast forward to sugar when a baby is older. A connection between good feelings and having energy has been present since birth and is now in association with the taste of sweet. It is just a suggestion, but if you wish to look deeper into why we might be wired for sweet, I'd start there. (PS: I'm the mother of two!) And RS is fascinating to me. My 5yo daughter with Down syndrome instinctively eats cold starch. She has never been constipated which is typical of kids with DS. We raised her for 4 years on beef bone broth with lots of lactose and veggies. She is in great shape! Will check back for more info on RS. Thanks!

Annie Kolatkar (2013-12-04 16:35:14)

Sorry, I wrote "info on RS" but it is the honey research I am interested in since my daughter is not a great sleeper. It was the RS that led me here to your site. Too many browser windows open at the bottom of blog and not enough sleep! :-D

## Assorted Links (2013-11-07 05:00)

- [1]Genetics less important than claimed...again and again. The article's html name says "human genetics successes and failures" but the article is almost all about failure.
- [2]Why I left (tenured) academia. "We shouldn't expect [a college president] whose experience is in leading gigantic, dominant corporations to create an environment that rewards original, interdisciplinary, potentially disruptive research. Their previous success (such as it is) is from operating in an inherently conservative environment, running an organization that thrives in the *status quo*." It isn't just the college president. That such people are chosen as college presidents shows how little people at the top understand or value innovation.
- [3]Monitor Me. BBC TV show about high-tech self-monitoring. My self-monitoring is mostly low-tech, except for brain tests done with a laptop. My experience is that I needed to do everything right – good understanding of previous research, good experimental design, good measurement, good data analysis – to make progress. [4]A talk by Larry Smarr, one of the people in the BBC show, supports this. Smarr has colon inflammation. His design, measurement and data analysis are excellent. However, he chose to test treatments (antibiotics, steroids) known to be poor. They didn't solve the problem. It would have been wiser to try to figure what in the environment might be causing the problem. It certainly wasn't not eating enough antibiotics.
- [5]Fecal self-banking

Thanks to Linda Stein.

1. [http://www.slate.com/articles/health\\_and\\_science/human\\_genome/2013/10/human\\_genetics\\_successes\\_and\\_failures\\_ashg\\_stories\\_of\\_disease\\_genes.single.html](http://www.slate.com/articles/health_and_science/human_genome/2013/10/human_genetics_successes_and_failures_ashg_stories_of_disease_genes.single.html)
2. <http://zacharyernst.blogspot.com/2013/10/why-i-jumped-out-of-ivory-tower.html>
3. <http://vimeo.com/72575830>
4. <http://www.tedmed.com/talks/show?id=18018>
5. <http://news.nationalpost.com/2013/11/04/na1105-poopbank/>

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Elizabeth Molin (2013-11-07 08:14:51)

Of tangential interest perhaps: I was recently moved to reread Frank Herbert's *Dune*, where I ran across the following: "Kynes knew that highly organized research is guaranteed to produce nothing new." The copyright of the book is 1965. Interesting that a science fiction writer had an insight back then that still escapes researchers today, nearly 50 years later... (And how scary to realize that that book is nearly 50 years old!)

dearieme (2013-11-07 13:32:51)

Ahoy, Seth. <http://www.independent.co.uk/life-style/health-and-families/health-news/preventing-flu-scientists-find-bacteria-in-japanese-pickled-turnips-which-could-boost-immune-system-8924768.html>

Seth Roberts (2013-11-07 16:00:05)

thanks, I just finished an Assorted Links post that includes a link to this research.

Seth Roberts (2013-11-07 16:22:10)

"Kynes knew that highly organized research is guaranteed to produce nothing new." I wouldn't go that far. I have learned very useful things from highly organized research. For example, 1. A big time use survey found that Americans stayed up an

hour later than people in 12 other countries. Also Americans watched TV an hour later. This suggested to me that TV could substitute for human contact in the control of when we sleep – a crucial step toward discovering the effect of morning faces on mood. 2. A big survey found that people who have insomnia are much more likely to get depressed in the following years than people who don't have insomnia. This too helped me discover the effect of morning faces on mood. I disagree that highly organized research can't find something new; what is more true is that the researchers who do such research are unable to take advantage of the new information. They are too wedded to certain methods, theories and so on, that worked well in the old ecosystem – the one that doesn't contain the new information.

Elizabeth Molin (2013-11-08 07:59:53)

Thanks for the more nuanced take. I was thinking of "highly organized" in the sense of hierarchical, the research being controlled "from on high," I guess.

### **Why Fashion Evolved (2013-11-09 05:00)**

[1]My theory of human evolution says that fashion (changing preferences for well-made goods) evolved so that artists – the innovators of long ago – would not do the same thing over and over. In [2]an excellent interview, music producer T Bone Burnett says something similar:

I don't believe in crowdsourcing [for artists] because you'll end up doing the same thing over and over again. People tend to want artists to do the same thing, and it is incumbent upon artists to do something that the audience doesn't want – yet.

I've had a hard time finding interesting work by economists on the causes of innovation. It isn't just institutional structures ("extractive" versus "inclusive"), as Acemoglu and Robinson say in *Why Nations Fail*. (Better title: *One Reason Nations Fail*.) An exception is Nathan Rosenberg, an emeritus professor at Stanford, for example [3]this paper about aircraft design.

1. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>
2. <http://www.hollywoodreporter.com/earshot/t-bone-burnett-silicon-valley-652114>
3. <http://siepr.stanford.edu/?q=/system/files/shared/pubs/papers/pdf/11-022.pdf>

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Allen K. (2013-11-09 08:08:08)

"That's one thing that's always, like, been a difference between, like, the performing arts, and being a painter, you know. A painter does a painting, and he paints it, and that's it, you know. He has the joy of creating it, it hangs on a wall, and somebody buys it, and maybe somebody buys it again, or maybe nobody buys it and it sits up in a loft somewhere until he dies. But he never, you know, nobody ever, nobody ever said to Van Gogh, 'Paint a *Starry Night* again, man!' You know? He painted it and that was it." - Joni Mitchell

Fred (2013-11-09 08:31:02)

Thanks for the T. Bone link. His comments are golden. With the dominance of YouTube, listening to/watching any musical group is one click away, much to the detriment of sound quality. On one hand I can watch an amazing group of Kinshasa musicians, on the other it might sound like crud. Which is more important, access or quality? It will never be both. This is similar to looking at a Jackson pollock on an iPad.

### Assorted Links (2013-11-10 05:00)

- [1]Better sleep, less likely to catch a cold. Subjects were exposed to a cold virus. Those who'd slept longer during the preceding weeks were less likely to come down with cold symptoms. Likewise, those with higher "sleep efficiency" (fraction of time spent in bed that you're asleep) were much less likely to come down with cold symptoms. [2]When my sleep greatly improved, I stopped getting obvious colds. The implication is that if you get obvious colds, your sleep (and immune function) may have room for improvement.
- [3]Redesigning the save symbol (undated)
- [4]Bacteria in Japanese pickle prevents flu
- [5]Some surgeons are much more dextrous – and their patients do better – than others. The only way you can find out about a surgeon's manual dexterity, it seems from the comments on this article, is to ask a nurse.

Thanks to Sean Curley and Alex Chernavsky.

1. <http://www.ncbi.nlm.nih.gov/pubmed/19139325>
2. <http://escholarship.org/uc/item/2xc2h866/>
3. <http://branch.com/b/redesigning-the-save-symbol-let-s-do-this?ref=feed-popular-stream>
4. <http://www.sciencedaily.com/releases/2013/11/131106073905.htm>
5. [http://well.blogs.nytimes.com/2013/10/31/a-vital-measure-your-surgeons-skill/?\\_r=1&](http://well.blogs.nytimes.com/2013/10/31/a-vital-measure-your-surgeons-skill/?_r=1&)

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dearieme (2013-11-10 08:04:35)

Long ago I worked at a university with a famously good medical school. I asked what sorts of dexterity tests were applied to the candidates for admission. "None." I suppose that the ancient test of tossing 'em a cricket ball and seeing if they could catch it was viewed as infra dig. Seth: This reminds me of when I asked a Berkeley professor of epidemiology about his upcoming introduction to epidemiology class. "Do you cover what causes immune function to get better or worse?" No, he said.

Nancy Lebovitz (2013-11-10 20:38:58)

Catching a cricket ball may or may not be relevant– as far as I can tell, there are many kinds of dexterity. I became a good calligrapher rather easily, but throwing and catching are my strong points.

Greg (2013-11-11 06:01:41)

The Japanese pickle microbe study was conducted by a food company with a probiotics business. Yet somehow the authors declare "no competing financial interests."

Zach H (2013-11-11 07:10:34)

Seth, have you seen this article? <http://www.nytimes.com/2013/11/10/business/the-co-villains-behind-obesitys-rise.html?src=me&ref=general> Have you considered the possibility that the Shangri-La diet works by modifying gut flora? Seth: No. the appetite reduction is very fast, too fast to involve modification of gut flora.

Seth Roberts (2013-11-11 15:04:01)

"The Japanese pickle microbe study was conducted by a food company with a probiotics business. Yet somehow the authors declare "no competing financial interests." good point.

Nancy Lebovitz (2013-11-11 16:56:15)

Typo: I meant to say that throwing and catching are NOT my strong points.

## **How to Write (and Teach): Tell a Story (2013-11-11 05:00)**

[1]A Lifehacker post by Leo Widrich said you should tell a story instead of giving a Powerpoint presentation with bullet points. Widrich did not make his point using stories. He made the written equivalent of a Powerpoint presentation. He wasn't trying to be funny – at least, not that I could tell.

This semester I'm teaching a class on Academic Writing. Yesterday's class marked the switch from personal statements to other sorts of writing. I decided to mark the transition with a lecture. I had just one piece of advice for my students: tell a story. For fun, and to avoid the oddity of Widrich's presentation, I decided to make my point two ways: without and with stories.

The without-stories presentation was obvious. I wrote "Tell a Story" on the board and gave several reasons why it was a good idea.

The with-stories presentation was not obvious. I told several stories:

1. The morning of the class, I was listening to [2]a C-SPAN podcast – an interview of S. Lochlann Jain, a Stanford professor of anthropology who had written a book about cancer. She herself had had cancer. The interviewer asked: When you got the diagnosis, what did you need? It was a good question. But Jain did not answer it. Instead, she pontificated for a few minutes. It was unfortunate. That answer was like the rest of the interview (she pontificated a lot) and I soon turned it off. She could have told a story, I told my students, but she didn't. And she lost me.

2. I came to understand the power of stories while teaching introductory psychology. My classes were large, hundreds of students. I discovered that to get their attention all I needed to do was tell a story. Within seconds, they would start to pay attention. The lecture hall would become quiet. If I stopped telling a story, I would start to lose them. I could see their eyes wander. That's how I came to teach all my classes: tell one story after another. One of my students told me I was "the professor who tells stories".

3. One day I was in the biology building on the Berkeley campus. It contains many small classrooms. From the outside, you can hear what the instructor is saying. I listened to five classes. In none of them was the teacher telling a story. Apparently most Berkeley professors hadn't figured out this basic principle.

4. I attended [3]a high school graduation in Los Angeles. Very expensive private school. There were six speakers, four students, a teacher, and the headmaster. No one told any stories. I was astonished. It's really hard to be a graduation speaker. This simple rule (tell stories) makes it much easier. None of them knew it. I was especially

surprised that the headmaster, who speaks at graduation every year, failed to understand this. Failing to tell stories in this situation is like choosing to crawl when you could walk.

5. A remarkable thing about stories is that anyone can tell one – or not tell one. The weakest person can tell a story, the most powerful person can fail to tell one. When President Obama was elected, it was very uncertain whether he would be a good President. He had so little experience. [4]I used his inauguration speech to guess how good he would be. If he understood politics, he would tell stories; if he didn't, he wouldn't. In fact, he didn't. Five years later, my low expectations [5]have been borne out. Chinese politicians, as far as I can tell, are not clearly better than President Obama. At the beginning of a student talent show at Tsinghua, a Tsinghua administrator gave a short and boring speech. He too failed to tell stories.

I said it made sense that we pay attention to stories much more than to other things. Stories are fundamentally honest. They contain evidence. If you draw a conclusion, fine – your evidence for that conclusion is clear. You are not overstating your case. Without evidence, anyone can say anything. I also said it is to your benefit to tell a story rather than argue or reason or pontificate. You will appear modest and considerate.

I asked my students to compare the two ways (without and with stories) I had made the same point. There were three possible answers: 1. without stories better. 2. equal. 3. with stories better. Their votes:

without stories better: 1 vote

equal: 2 votes

with stories better: 6 votes.

My students said they had not been taught this. Their teachers – in high school and at Tsinghua – did/do not teach this way nor had they made the general point I was making.

Thanks to Dave Lull.

1. <http://lifehacker.com/5965703/the-science-of-storytelling-why-telling-a-story-is-the-most-powerful-way-to-activate-our-brains>
2. [http://podcast.c-span.org/podcast/arc\\_btv110213\\_jain.mp3](http://podcast.c-span.org/podcast/arc_btv110213_jain.mp3)
3. <http://blog.sethroberts.net/2008/05/30/high-school-graduation-confidential-lack-of-stories-speaks-volumes/>
4. <http://blog.sethroberts.net/2009/01/19/how-i-will-judge-the-inauguration-speech/>
5. <http://www.vanityfair.com/politics/2013/11/barack-obama-loner-self-reliant-closed-off>

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pond (2013-11-11 07:01:07)

In the last years of her life, my mother told stories, but I always considered it a mark of her mental decline. For example, I wanted her to get to the point and tell me, "John called and invited us to eat out with them." Instead she told a story: "The phone rang, and when I answered it, John said Hello, and I said, Well we haven't heard from you in a long time, and he said he was sorry, but they had been very busy. Anyway, he said that when they got home today, the dog ... [shortened here for your patience] ... and so they were going to eat out. Wow I said, that was awful. Well, he said, would you folks like to come

with us? It's our treat." Maybe I could say this was a bad story, bad storytelling. But I always thought this was the way her mind worked then, that she could not logically sum up a point, but had to reconstruct every moment, starting at an early time, and proceeding blow by blow chronologically until finally reaching the point - the reason why she was telling us this.

dearieme (2013-11-11 12:44:52)

I once started a seminar with "I want to tell you a story". Many of the research students in the audience stirred uncomfortably. Golly, research students en masse are a woefully conservative, unimaginative lot. To generalise: among the brightest undergraduates, those who do not go on to research tend to be a more impressive mob. Is that your experience? Seth: I don't know. At Berkeley almost none of my students went on to do research. At Tsinghua, almost all the students do. It's also true that my Tsinghua students are more impressive than my Berkeley students but there are a hundred other differences between them.

jtw (2013-11-11 18:39:44)

Seth, could you give an example of how you taught technical material (as in your introductory psychology classes) by telling stories? I get the principle but not the practice.

Alex (2013-11-11 18:46:51)

Wow, that's a helpful insight. In order to make good choices about my mini-me kid's homeschool education, I've been examining what I know and how I learned it, versus the stuff I forgot right after finals. I studied computer science, but almost everything I learned for my major came from the textbooks and projects. The class lectures added so little. I also got a minor in philosophy, for the hell of it. I remember far more of the lectures in philosophy classes, though the subject was intrinsically less interesting to me than computer science. I've been trying to figure out why, and I think you just nailed it. Philosophy class lectures were often built on stories. Computer science lectures tended to be bullet-point presentations of textbook content. I'd figured out on my own that I should emphasize hands-on projects over repetitive drills. But you've added two valuable insights to my teaching: walk instead of sitting, and tell stories. Thanks! Seth: hands-on projects need to be built on something else, I think. I tell my students stories before I assign hands-on projects.

Seth Roberts (2013-11-11 22:06:12)

"Seth, could you give an example of how you taught technical material (as in your introductory psychology classes) by telling stories? I get the principle but not the practice." I teach technical material, I suppose you would say, when I teach statistics. I tell stories about data analyses I have done. The situation, the question, the data, the analysis, the conclusion. In introductory psychology, I might tell the story of how the researcher came to do a certain piece of research, then describe the research. Or a story that illustrates the broad point made by the research.

Portlander (2013-11-11 23:41:45)

My kids attend a Waldorf school. The pedagogy is incredibly story-centric. (I've been calling it narrative-based.) Even basic math is introduced as a narrative where each operator given a name for a character corresponding to what the operator does: gather/add, give-away/subtract, share/divide. I forget what multiply does. I do remember place value is introduced as a narrative of a boy picking up stones on a river bank. The stones are picked up one-by-one, but he can only hold nine stones in his hands. No matter how careful the boy is, whenever he picks up a tenth stone he drops one. So he puts the nine, plus one more, into a pouch. But he only has room for nine pouches on his belt. So when his belt gets full, he takes all the pouches from his belt, plus one more, and puts them into a basket. In turn the baskets get very heavy. So heavy that he can only hold nine of them at a time. So nine baskets, plus one more, all go into a cart. Teachers also light a candle before telling the stories. That really focuses the children's attention. You can hear a pin drop in a classroom of 25 first graders. I've heard from my wife that on days she is picking up my daughter from 1/2 day kindergarten, my 3 y.o. son insists on stopping and listening to the first grade's story if when they walk by the door is left open and the candle is lit. He just stops and quietly listens in from the hallway. Seth, you might want to give the candle thing a try. ;) Seth: That's great! I agree, how can I try the candle idea? Somehow the whole story thing is missing from Teach Like a Champion, a distillation of the best teaching techniques from schools across America. Even though Waldorf schools do it, which I didn't know. I will say, however, that I believe in telling true stories. Maybe that is much harder with young children.



Portlander (2013-11-11 23:47:23)

BTW, which do you remember better: that the arithmetic operators are anthropomorphized, or that place value is introduced through a story about a boy picking up stones? :)

Alex Chernavsky (2013-11-12 05:12:23)

MBA courses typically use a lot of stories (called "cases") . Typically, the cases describe some real-life quandary that was faced by a business organization in the past. The students have to analyze the material in the case and come up with a recommended course of action. Harvard publishes a lot of these cases.

dearieme (2013-11-12 07:05:44)

There's a yarn about a young academic saying to an experienced hand "the students want me to illustrate my lectures with practical examples. What would you do in my shoes?" Answer: "I'd show them some." The original point of the joke was that young academics often lack any store of practical examples. But I'll add to it that I used often to tell stories as my way of presenting practical examples. Of course a dim, earnest student may demand to know whether this story will help him pass his exam: only near retirement is it wise to punch him on the snoot.

RicciM (2013-11-12 11:37:00)

Raconteur stories as learning ? "I hear and I forget. I see and I believe. I do and I understand." – K'ung Fu-tzu

Seth Roberts (2013-11-12 12:38:26)

"I hear and I forget. I see and I believe. I do and I understand." Yeah, how come stories aren't in there? The old saying really misses something. You do not hear a story and forget. Quite the opposite.

dearieme (2013-11-12 13:45:47)

Well, if it's Kung Fu versus Homer, Homer wins.

Portlander (2013-11-12 14:46:30)

**[H]ow can I try the candle idea?** I think the point of the candle is to help with the signal to noise ratio in elementary classrooms. And by noise, I'm not talking about cacophony, ;) rather instructional noise. When the teacher lights the candle she is emphasizing that the next 10-20 minutes are going to be nothing but signal. The sub-text is "pay attention, because this is new and it's going to be on the final." Obviously if she lit a candelabra every morning and let it burn through the day it would not have the same effect. As for trying it out, I think you could light a candle at some point in your lecture. Perhaps 1/2 the time at the beginning, and half the time at 1/2 way point. Then measure if students show more interest, either through follow-up discussion questions or project work or answering test questions correctly on candle topics vs. non-candle topics. If specific points within a lecture is too arbitrary, you could also try it on completely different days. I think, though, for it to work, you can't let on that you're doing it arbitrarily as a way to "trick" the students into paying extra attention. The point of the candle is you are out-of-band communicating to them the impending presence of an atypical SNR. Well, that's my hypothesis anyway. I could be wrong. :) Seth: The notion of signalling stuff so that the body or brain can get ready to receive it is a good one. It is the whole idea behind classical (Pavlovian) conditioning. I completely agree this is a good way to teach young children. Yet it is still unclear to me how this would work in a college class.

Jenny (2013-11-14 10:32:45)

I was interested in your story telling - and then realised that the economics book I was reading - "Bet the Farm" was being told as a story. Brilliant - it enabled me to a) finish it and b) remember a lot of it. If it had been told as dry economics, I doubt if I would have got through it.

Jenny (2013-11-14 10:40:26)

Re K'ung Fu-tzu, if you can 'do', it is even better. The Shetland fiddler, Tom Anderson used to teach kids to play tunes. But he

would play them tunes to dance to for several days - and then teach them the tune (by ear) which they could then easily play because they 'knew' the tune.

Arndt (2013-11-19 09:21:21)

People seem to be less resistant towards examples and arguments if they are presented in a 3rd person perspective rather in a 1st or 2nd person, like if somebody does xy versus if I / you do xy. The words I and you seem to turn on an emotional resistance in people and they don't think about what is said. I think story telling uses the 3rd person perspective.

### **Orange Glasses at Night Improve Sleep (2013-11-12 05:00)**

After I discovered that [1]morning faces improved my mood, I tried to maximize the effect - determine the the best time, distance, size, and so on. One evening I went to a screening (Taxicab Confessions) at the UC Berkeley journalism school. It started about 7:30 pm and lasted about two hours. Over the next few days, I discovered that the morning-faces effect was gone. It took a few weeks to return.

The problem, I realized, was the room lighting. The auditorium, like almost all campus rooms, was lit with fluorescent lamps. Maybe they were off during the film (one hour?) but they were on before and after. Fluorescent light, in contrast to incandescent light, contains lots of blue. The faces effect, I knew, depended on a sunlight-sensitive oscillator, which determined a critical period during which faces made a difference. That oscillator was much more sensitive to blue light than red light. If that oscillator wasn't working properly - e.g., its amplitude was too low - the faces effect disappeared. Normally I never experienced fluorescent light at night. There were no fluorescent lights in my apartment, including the bathroom. Cafes, restaurants, my friends' living rooms, and so on - all incandescent light. Incandescent light has very little blue.

I hadn't realized that ordinary fluorescent exposure could cause trouble, but now I did. After that realization, for many years I avoided fluorescent light at night (= after 8 pm). To get home from San Francisco in the evening, I took a cab to avoid fluorescent light on BART. No fluorescent-lit restaurants for dinner, no late-night supermarkets or drug stores. It was bearable, but not pleasant. Except for the Berkeley campus, where students were getting messed up by evenings in libraries, the city of Berkeley was innocuous, but big cities, such as New York with their late hours and heavy subway use, were terrible, exposing residents to lots of fluorescent light at night. Depression [2]may be more common in urban areas than rural areas.

Eventually I realized I could solve the problem with "blue-blocker" glasses - i.e., orange-tinted glasses - that block blue light. (I use [3]these, \$7.) Now I could live normally, except for looking funny now and then. I wore the orange glasses a few minutes last night in a 7-11. Concerned about blue light from LED screens, I also wear them between 9 pm and 5 am when looking at a computer screen. Although compact fluorescents (replacing ordinary light bulbs) have come along, and incandescent lights may be outlawed, my apartment is still all incandescent. The light from compact fluorescents [4]has a lot of blue. Because I had no doubt that fluorescent light at night was bad because of the blue light, I never bothered to measure the effect of the blue-blocker glasses. This might have been a mistake.

Last June, at an evening meeting in under fluorescent lights, an Oakland woman saw me wearing orange glasses. She'd read about them on [5]my blog. Sixty years old, she'd had poor sleep for decades. "It was a quick and easy thing I could try," she told me. "Not a supplement or med." She already took many of these.

The first evening, she put on the glasses at 8 pm. She'd had a lot of energy when she put them on, but 15 minutes later she fell asleep. She only slept for 30 minutes, but the incident suggested great promise. She got into a routine where she put them on when she got home, usually between 8 and 10 pm. The results:

All summer long, I slept better than I have slept in my entire life with these glasses. I haven't had sleep problems until the last couple of weeks. Most nights I sleep through the night. If I get up, it's to go to the bathroom and I quickly go back to sleep. Completely unknown to me in the last couple of decades.

In other words, they helped a lot. It used to take her about an hour to fall asleep. She would take 3 tryptophan pills (= 2.5 g of tryptophan) at bedtime, and then 3 more every 20 minutes she was awake. She ended up taking 6-9 every night. After she started using the orange glasses, she continued the tryptophan but found almost never took 20 minutes or more to fall asleep.

Is she unusually sensitive to blue light? Does she get more blue light at night than the rest of us? Is it a placebo effect? Her house is full of compact fluorescents (she used to work on energy policy) and she spends a lot of time in front of a big (26-inch) computer monitor and a 46-inch TV. They may make things worse, but none of the three (compact fluorescents, big computer monitor, big TV) was around decades ago, when her sleep was also bad. The effects may go beyond blue-light elimination ("when I put them on my world is relaxed," she said) but the notion that this is a placebo effect is contradicted by the many things she tried that didn't help, not to mention the many experiments showing that blue light affects circadian rhythms.

I'd heard vaguely of sleep improvements. For example, [6]Chris Kresser wrote "I've had many patients swear by these goggles". Chris himself, however, rarely used them unless he was looking at electronic devices (like me). "If I notice that my sleep is starting to get funky, I'll wear them," he wrote, but otherwise not. I knew that I got the faces effect - which was huge - without needing to wear them at night, so I had assumed that ordinary (incandescent) evening light was harmless. However, this story, because the effect is so large, makes me question that assumption. I will try wearing them in the evening even when I am not looking at a computer screen.

[7]Orange glasses improve sleep in a naturalistic experiment compared to other glasses. Subjects put on the glasses three hours before going to sleep.

1. <http://escholarship.org/uc/item/2xc2h866/>
2. <http://link.springer.com/article/10.1007%2Fs00127-004-0698-8>
3. [http://www.amazon.com/Uvex-S0360X-Ultra-spec-SCT-Orange-Anti-Fog/dp/B0030BZ64M/ref=pd\\_sim\\_hi\\_3](http://www.amazon.com/Uvex-S0360X-Ultra-spec-SCT-Orange-Anti-Fog/dp/B0030BZ64M/ref=pd_sim_hi_3)
4. <http://www.popularmechanics.com/technology/gadgets/tests/incandescent-vs-compact-fluorescent-vs-led-ultimate-light-bulb-test#slide-1>
5. <http://blog.sethroberts.net/2011/10/23/bipolar-disorder-good-results-with-blue-blocker-glasses/>
6. <http://chriskresser.com/how-artificial-light-is-wrecking-your-sleep-and-what-to-do-about-it>
7. <http://www.ncbi.nlm.nih.gov/pubmed/20030543>

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GeoffD (2013-11-12 05:56:49)

I've worn them for about 4 months now. They go on every night at 8:30. I'm sound asleep by 10:00. I sleep like a rock straight through. I had a 3 am wake up every night for at least the 3 full years prior to using the goggles. I read every night on an iPad before bed. The benefit to the blue blocking is huge. Seth: That's good to hear. I've been using them at all times recently, instead of just when looking at computer screens.

Frankr (2013-11-12 06:02:16)

This is interesting news. I will try it out. Have you ever tried drinking a cup of milk a few hours before sleeping. I recommend it. I sleep better when I do that.

Xav (2013-11-12 06:56:02)

There's a very popular piece of free software called f.lux ( <http://justgetflux.com> ) which subtly changes your computer display so that it matches the time of day. Lots of programmers have mentioned on various forums I read that it helps with sleep.

dearieme (2013-11-12 06:59:47)

We still use incandescents, having stocked up before the light bulb Nazis' deadlines. In my office (before I retired) I kept the overhead fluorescents off as much as possible and worked with desk lamps. How about LED lights: do they have any ill effects? Seth: I too kept my office lights (fluorescent) off as much as possible.

ChrisB (2013-11-12 07:43:22)

I get this effect from using "flux" on my Mac. This app turns the screen to a red cast at sunset, I go to the strongest setting of tungsten. It takes 15-20 minutes of web browsing in bed and I irresistably fall asleep. Been doing this for over a year. My evolutionary explanation - humans sitting around the campfire at night, safe to go to sleep...

MaxPower (2013-11-12 07:59:59)

Hi Seth, For a couple of years now I've using a computer program called "f.lux" which auto adjusts the color temperature of your computer screen based on time of day and latitude/longitude coordinates. I find it incredibly helpful since I often work on my computer at night.

Brian Toomey (2013-11-12 08:01:34)

Hi Seth, I've been using prescription orange glasses recently. I had bought cheap ones to wear over my prescription lenses. They helped my sleep, but the dual set of lens was annoying so I was very inconsistent with them. I have low blue light light bulbs in my house and have been putting them on at around 5pm and falling asleep around 11pm and sleeping better than ever before. I've only been doing this for 2 weeks, but I am very confident that they are improving my sleep. Seth: I didn't know about low blue light bulbs...how interesting!

Alex (2013-11-12 08:20:49)

Dearieme, regular LED bulbs are also more blue than incandescent bulbs. But you can buy LED bulbs that allow you to adjust the color. At home we are trying Philips Hue LED bulbs, which can be timed to shift colors on a schedule controlled from an iPad. We skew blue in the morning, bright white most of the day, orange at dusk, then red in the evening. The Hue system is spendy, \$200 for three bulbs and a controller. There are also fairly inexpensive (about \$20) LED bulbs that can be manually changed to different colors throughout the day via a little remote control. We started off with one over our kitchen table, and we liked it enough to try out the Hue bulbs. Seth: That's great news. For everyone. I have been very worried that the new LED bulbs will be too blue. I didn't know about adjustable ones.

David (2013-11-12 09:00:50)

There's a free software project out there called f.lux\* that changes the color temperature of your computer screen over the course of the day. It adjusts based on your geographical location and time of day, so it can make the display redder as soon as the sun goes down outside. I've got my laptop set up to switch between 6400K during the daytime and 2300K (dim incandescent range) once the sun goes down. I don't have much data on the effects yet. Although I have noticed that since I've started using f.lux I haven't been on any code-until-3-AM benders. \*<http://justgetflux.com/>

John Kojis (2013-11-12 10:03:12)

I had read about this and got some cheap orange/yellow motorcycle glasses that were bifocals, perfect for evening screens with my older eyes. These worked well, I got sleepy an hour after I put them on, and in a way that I didn't want to fight with to

stay awake. I then decided to spring for a more expensive pair from lowbluelight.com, and they worked even better, perhaps placebo I thought since they cost 5 times as much. I compared the two in looking at a pure blue nightlight I had taken out of the bathroom, and the cheap ones blocked 90 % of the light, made it look brown. When I put on the expensive ones, I had to check to see if the light was on, there was no light at all- I was shocked by the difference. I have no connection to the low blue light people, though they were very helpful on the phone.

Sam (2013-11-12 11:36:05)

For computer monitors there is a program that runs in the background and automatically removes blue at dusk - F.lux - try it.

Seth Roberts (2013-11-12 12:39:47)

"For computer monitors there is a program that runs in the background and automatically removes blue at dusk - F.lux - try it." I did try it. I saw no difference. Whereas orange goggles do seem to make a difference.

Sentinel (2013-11-12 13:34:12)

I use Shades (free download) instead of f.lux. It allows you to make the screen really, really red or amber, etc. (you can choose your tint color from a color palette; the screen ends up darker overall than with f.lux, and 'blue' more or less disappears from your field of vision). Note that if you run f.lux and Shades simultaneously in order to get some uber-effect, the screen starts flickering spasmodically.

Richie (2013-11-12 14:18:38)

When I first started using f.lux several years ago, the program was only able to reduce the color temperature to 2700k, which is equivalent to an incandescent light bulb. At this setting I think it still emitted too much blue light to be effective. However, the recent f.lux update now allows for a color temperature as low as 1200k, which emits less blue light than a match flame. I find this setting to be as effective as wearing orange glasses. Stephan Guyenet had a similar experience with the new f.lux update that he shared in a recent post: [http://www.dansplan.com/blog/2476-f-lux-a-free-computer-program-that-may-impr](http://www.dansplan.com/blog/2476-f-lux-a-free-computer-program-that-may-improve-your-sleep) ove-your-sleep Seth: That's good to know. I used it several years, haven't tried the new version.

vgm (2013-11-12 14:53:40)

My understanding is that blue light inhibits the production of melatonin via the pineal gland. I have been reading to an orange light bulb that I bought on Amazon before going to bed. It seems to be effective, but I do not know if it is real or placebo.

Richard Sprague (2013-11-12 16:18:24)

My quick look at those low-blue light bulbs make me think they must be ordinary orange color bulbs, similar to what you put outside in order to have light without mosquitoes. Come to think of it, maybe that's why those mosquito lights work: insects are attracted to blue lights because it stimulates the same thing it stimulates in our brains.

Justin Irving (2013-11-12 20:55:03)

Seth, I've been using the similar (Uvex S1933X) glasses for about three months. Everything you've written is in line with my experience. I put them on when the sun sets and have them on for the rest of the night (unless I go out that is). Along with honey before bed and magnesium tablets, this has me sleeping like a dog (this is good). I've also switched to wearing Gunnar Optiks brand computer glasses at work, to hopefully cut down on excess blue light from the fluorescent lights and the monitors. I recommend these as well for people who have to work on computers all day.

I've solved everything. | Koanic Soul (2013-11-12 23:15:45)

[...] thus eating more late at night also, fluorescent light exposure: [http://blog.sethroberts.net/2013/11/12/orange-glasses-at-night-impr](http://blog.sethroberts.net/2013/11/12/orange-glasses-at-night-impr-ove-sleep/) ove-sleep/ solution - diet checklist hottnotes <http://www.hottnotes.com/> new [...]

Theragingwalrus (2013-11-13 14:48:11)

Short wavelengths and melatonin production suppression is old news, but is there also a reason to wear orange glasses if you take melatonin tablets? From looking at models of human circadian rhythm on pubmed, there's still a lot of question marks, so science doesn't seem to have found the answer, but maybe a commenter can fill us in here?

Seth Roberts (2013-11-13 17:25:55)

"is there also a reason to wear orange glasses if you take melatonin tablets?" Yes. Because orange glasses probably come closer than melatonin tablets to reproducing the long-ago environment that shaped our sleep/wake system. Long ago humans got very little blue light at night – like what happens when you wear orange glasses. Long-ago humans did not ingest lots of melatonin. With orange glasses, it is much more obvious what the best dose is likely to be (no blue light at all). With melatonin, it isn't easy to figure out the best dose. But there is no need to lean on theory, you can just try them. It might be easier to take melatonin tablets, I don't know.

Seth's Blog » Blog Archive » LEDs: Indoor Lighting of the Future (2013-11-15 05:00:17)

[...] Orange Glasses at Night Improve Sleep [...]

the Revision Division (2013-11-15 07:59:27)

[...] IMPROVE YOUR SLEEP with orange glasses. [...]

Suzanne (2013-11-18 07:09:43)

Seth thanks for the post and all the comments from readers. I've made a variation as I was too impatient to wait for my glasses: <http://suzanneloomscreativity.blogspot.co.uk/2013/11/working-with-insomnia-4.html>

## **More About Sleep and Honey: One Teaspoon (2013-11-13 05:00)**

[1]One of the comments on [2]my honey-improves-sleep post deserves emphasis:

I tried the honey last night for the first time – just 1 tsp. I've been eating very low-carb lately, so no sugar throughout the day at all. . . . When I woke up for the day . . . I felt an incredible sense of well-being. Normally, I wake up with aching hip joints and feeling pretty ugh, but not this morning. My sense is that the sleep was "richer" . . . in the way that heavy cream is different from skim milk.

I asked the commenter for an update. She replied:

I'm still seeing improved sleep. Last night, I think I slept for 8 hours straight, or darn near, which has only been possible with an Advil-PM over the past 6 months or so. One of the notable changes in my sleep is vivid dreams. I recalled them pretty clearly the first night, less so since then; I just know that I've been dreaming. I am using approximately 1 teaspoon of honey, taken on the way to bed. Since starting it, I have taken extra care to avoid sugar and starch during the day, as well. I plan to continue it indefinitely.

I too found that one teaspoon of honey made a clear difference, as did Stuart King, who described the effect. I've been taking one tablespoon to be sure to get the greatest possible benefit; eventually I will test smaller amounts.

I don't know of another case where one teaspoon of an ordinary food produces a big improvement. One teaspoon (5 ml) of orange juice has about 2.5 mg of Vitamin C. The daily requirement of Vitamin C is about 80 mg/day. (Whether you should take much more, [3]as some say, is quite unclear.) If you get less than 10 mg/day for a long time, [4]you'll

get scurvy. According to [5]this table, the common foods highest in Vitamin C, such as orange peel, have about 1 mg/g. One teaspoon of honey is 7 g, so from 7 g of a common food high in Vitamin C you'd get 7 mg of Vitamin C. And keep in mind that scurvy is very rare, but bad sleep is common. Which makes the effect of one teaspoon of honey even more striking.

1. <http://blog.sethroberts.net/2013/11/05/honey-at-bedtime-improves-sleep/#comment-1154226>
2. <http://blog.sethroberts.net/2013/11/05/honey-at-bedtime-improves-sleep/>
3. <http://lpi.oregonstate.edu/infocenter/vitamins/vitaminC/>
4. <http://ods.od.nih.gov/factsheets/VitaminC-QuickFacts/>
5. <http://nutritiondata.self.com/foods-009101000000000000000000-w.html>

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Keimpe (2013-11-13 05:27:28)

One practical question (I don't know if it's been asked before, I haven't read the comments to earlier related posts yet): when do you brush your teeth? Before or after taking the honey? Seth: I brush my teeth in the morning.

Keimpe (2013-11-13 06:47:52)

In the morning!? With a self-quantified reason? Because I figure in the evening would be a better moment: you brush away the stuff you accumulated during the day so the bacteria won't do you harm at night. Seth: I haven't compared evening versus morning tooth-brushing. Maybe I should, you're right. I have noticed that tooth brushing wakes me up, but the effect doesn't last long.

Keimpe (2013-11-13 06:51:52)

Having said that (feel free to merge my multiple comments into one) I have read that sugar (and therefore honey as well) is not the main culprit of caries, because it is actually a preservative (that's why marmalade lasts so long) so it would be illogical to assume that it causes caries. It might even protect your teeth! Mind you, I'm not volunteering to try this at home.

Matt (2013-11-13 07:25:02)

Do you plan on testing comparable amounts of white table sugar? It would be interesting if there was something about the honey that was better for sleep than sugar. But it seems almost inconceivable that's the case. Also, I've always wanted you to test an equal amount of beef tallow in place of butter to see if it has any effect on your arithmetic speed. The fats composition should be mostly the same, except that butter will have significantly more butyrate and 6 and 8 carbon fatty acids. The micronutrient content would be different as well, with butter having a significant amounts of some vitamins like A and D. Seth: Testing sugar is a good idea. Beef tallow is hard to get, not so clear why I should test it. Pork fat was worse than butter.

GB (2013-11-13 07:37:04)

Seth, have you tried the honey with a nose-clamp? I'm wondering whether the taste buds are an important indicator to the brain, or whether just the presence of glucose/fructose is enough without the taste effect. Seth: No, I haven't tried that. Good idea.

Rudy (2013-11-13 07:37:45)

Does it need to be raw honey? Are people getting the sleep effect from every kind of honey?

Keimpe (2013-11-13 07:51:33)

Why should Seth do all the testing? Come on guys (and gals), let's get to it. Matt, you take the sugar, GB, good luck with the nose-clamp. Me, I'll do my first (dark and raw) honey experiment tonight. Results first thing in the morning please, right after a solid tooth brushing session :-)

Chris Sturdy (2013-11-13 08:15:26)

I often eat raw local honey, often mixed with some sunflower seed butter, before bed. If I try to read a novel after this, I often find myself nodding off very quickly. Seth: Maybe I fall asleep faster now that I eat honey before bedtime...but maybe not. It isn't obvious, whereas the improvements in how rested I feel in the morning and strength are obvious. I am trying to figure out if honey affects how fast I fall asleep.

Gaspard (2013-11-13 08:59:32)

A possible explanation is that people on lowish carb sometimes have disrupted sleep related to ketosis, and the carbs remove the underlying stress caused by slight ketosis to enable the body to rest. This is from Dr Eades in 2009: "Sometimes for some people being in mild ketosis interferes with sleep, especially falling asleep. For those people (including myself) I often recommend a little herbal tea WITH sugar or honey before bedtime. The teaspoon of sugar or honey adds about 5 grams of carbs, which isn't a whole lot, but is usually enough to shut down ketone production for long enough to allow sleep." Scroll halfway down this page: <http://www.proteinpower.com/drmike/low-carb-diets/why-is-low-carb-harder-the-second-time-around/>

Charlie Currie (2013-11-13 10:01:18)

Over at Richard Nikoley's blog, Free the Animal, he has a running series on resistant starch, which is primarily about blood glucose control. However, one of the unexpected and pleasant effects (affects? I can never get that right) of consuming resistant starch, primarily in the form of unaltered potato starch, is improved sleep along with vivid, technicolor dreams. There has yet to be any discussion of honey at bed time.

Joe (2013-11-13 13:07:26)

Read this book, Seth: Kiss Your Dentist Goodbye, by Ellie Phillips, DDS. Hunch: You'll never eat honey before going to bed again. Not without brushing, etc., afterwards. And again in the morning. Seth: That's strange, I have read it. Before I realized that honey improves sleep. I guess I'll read it again, I agree that you have a good suggestion.

Seth Roberts (2013-11-13 14:11:12)

Eades: "Sometimes for some people being in mild ketosis interferes with sleep, especially falling asleep. For those people (including myself) I often recommend a little herbal tea WITH sugar or honey before bedtime. The teaspoon of sugar or honey adds about 5 grams of carbs, which isn't a whole lot, but is usually enough to shut down ketone production for long enough to allow sleep." I had no trouble falling asleep, yet I found that a teaspoon of honey made a big difference.

Seth Roberts (2013-11-13 14:15:25)

"Does it need to be raw honey?" No. I haven't tried raw honey.

Joseph Cohen (2013-11-13 14:38:14)

After a few months in ketosis I too found that my sleep length and quality diminished. Last night I ate potato before bed and for the first time since starting a ketogenic diet I slept soundly, had vivid dreams, and recovered libido. Perhaps the potato is having the same effect of the sugar in honey.

CC (2013-11-13 15:30:04)

Am I missing something here, or are we all supposed to brush our teeth before bed AND in the morning? Seth: I don't know. I need to reread Tell Your Dentist Goodbye.

Bruce (2013-11-13 16:32:59)

I've had no trouble falling asleep since I started taking Vitamin D in the morning. I started a tablespoon of honey a week ago, and the effect was instantaneous. My sleep now is almost luxurious, and I am waking up more rested. I take the honey, brush my teeth (and floss), rinse with my healthy-teeth mouth rinse, and then go to bed.



Matt (2013-11-13 17:19:03)

My thinking with testing tallow versus butter is that you could perhaps narrow down the specific cause of the effect. Is it just more saturated fat, or something that is specific to butter? Given that butter is better than pork fat (which has plenty of saturated fat), it seems likely that it is specific to butter. If it's specific to butter, then it seems likely that it's due to the SCFSA in butter (lots of butyrate, and some 6- and 8-carbon fatty acids). And since coconut oil has lots of 8-carbon fatty acids but no butyric acid and doesn't produce the effect, I think that it's likely that the effect you notice is due largely to the butyric acid in butter. Tallow is a good experiment here because if you get similar performance to butter then that would be good evidence that pork fat is worse than beef fat because something in the composition (probably the high polyunsaturated fat) is worse for your brain than the beef fat composition. If tallow is similar to pork fat, then it would be evidence that something in the composition of the dairy fat specifically (likely the butyrate in my opinion, maybe the vitamin A) is what is of particular benefit.

Darrin (2013-11-13 19:52:18)

Hi Bruce, Are you still taking the Vitamin D in the morning (as well as the honey before bed)?

Pj (2013-11-13 23:46:12)

Hi Seth Were you aware that consuming sweets later in the day improves response to light therapy for seasonal affective disorder? This seems like it could be related to consuming honey at night. You can find the paper in Psychiatry research 46: 107-117. The authors are Kurt Kriiuchi, AnnaWirz-Justice, and Peter Graw. Seth: No, I didn't know about this. Fascinating.

Louise (2013-11-14 04:04:17)

Well I've had a teaspoon of honey up to an hour before bed for the last three nights. It has not helped me get to sleep quicker, but I am finding that I wake up earlier. I can only assume this means my sleep has been deeper. I have also had some fairly odd dreams. It is quite rare for me to remember dreams. I also seem to be losing weight and have changed nothing else in my diet or daily routine.

Keimpe (2013-11-14 04:04:51)

Tried a teaspoon of honey last night with no effect. But I must say I had friends over, so I had several beers, and since alcohol always makes me sleep deeper but shorter (and the sleep seems of lesser quality), this was not a good night to test it. But I felt obliged to do it and report back here after my comments yesterday. I'll report back again when there's something to report. Oh, Seth, and if you're planning on re-reading "Kiss your dentist goodbye", you may want to pick up "Cure tooth decay" by Ramiel Nagel as well. Seth: I can't say 1 teaspoon is the best possible dose. The best dose might depend on body weight. If you are uncertain whether there is any effect, you should use a larger dose, such as 1 tablespoon, so that if there is no change it is unlikely that the dose was too small.

Jeff Winkler (2013-11-14 04:34:23)

If anyone has a Zeo, would be interested in deep/REM sleep measurement. I'll check if mine's still working. When I was using the Zeo heavily, was always amazed how inaccurate my subjective impressions of sleep quality/wakeups were.

GeoffD (2013-11-14 05:46:23)

I'm 172 5'11". Dose of 1 teaspoon raw organic. 50 % improvement in sleep quality. I currently also use blue blocking goggles from 8:30 pm on. I also sleep on a grounded sheet. Only one night in, but I'm optimistic. Sleep is the key to health.

GeoffD (2013-11-14 05:49:17)

Note: I mixed it with a teaspoon of coconut oil to blunt the insulin effect. I have done coconut oil alone before bed with no noticeable effect.

Seth Roberts (2013-11-14 07:01:47)

"When I was using the Zeo heavily, was always amazed how inaccurate my subjective impressions of sleep quality/wakeups were." Did you consider the possibility that it was the Zeo that was wrong, not your subjective impressions?

Joe (2013-11-14 09:38:22)

"Am I missing something here, or are we all supposed to brush our teeth before bed AND in the morning?" Only if you want to keep your teeth! And it's not enough to just "brush." You need to use the right kind of brush, use the right kind of mouthwash, maintain the proper PH level, eliminate harmful bacteria, etc. You'll notice the difference IMMEDIATELY. And since dental health is so important for HEART health, maintaining proper dental health can literally save your life.

Paul (2013-11-14 11:10:26)

I don't know if this brushing mouthwash thing is true. My gums seem better when I only brush once a day. I get less bleeding with gums and no soreness. I also eat fermented foods and not much sugar. I think there's something to Seth's bacterial space competition theory. If brushing and mouthwash, etc is so necessary, how do you explain the excellent oral health of pre-agricultural remains? [http://www.npr.org/blogs/health/2013/02/24/172688806/ancient-chompers-were-he](http://www.npr.org/blogs/health/2013/02/24/172688806/ancient-chompers-were-healthier-than-ours?ft=1&f=1001) althier-than-ours?ft=1 &f=1001 Hell, my cat doesn't need to brush his teeth and they're all perfectly white. I feed him a 100 % animal meat/organ diet. I'm also not sure that good dental health CAUSES good heart health. Bleeding gums and heart disease are common side effects of chronic inflammation. Brushing your teeth doesn't fix inflammation, though.

Reply to Darrin (2013-11-14 11:11:28)

Darrin asked me a question (below). Yes, I am taking 4000 IU of Vitamin D every morning, and have been since summer of 2012. (I started at 10000 IU and worked my way down to 4000. If I only take 2000 my sleep suffers.) I have been taking the honey for over a week. >Hi Bruce, >Are you still taking the Vitamin D in the morning (as well as the honey before >bed)?

Joe (2013-11-14 12:07:26)

"I get less bleeding with gums and no soreness." You'll get ZERO bleeding gums, and no soreness whatsoever. And no infections. "how do you explain the excellent oral health of pre-agricultural remains?" They didn't eat what you (probably) eat, especially all the sugar and carbs. "I'm also not sure that good dental health CAUSES good heart health. Bleeding gums and heart disease are common side effects of chronic inflammation. Brushing your teeth doesn't fix inflammation, though." Poor dental health creates bacteria in your blood. If that bacteria reaches your heart, there go your heart valves. E.g., endocarditis. <http://www.mayoclinic.com/health/endocarditis/DS00409> You've basically got it backwards, my friend. Bleeding (infected) gums can cause chronic inflammation. Even stress can, in the form of cortisol. Another good book to read is: The Great Cholesterol Con: The Truth About What Really Causes Heart Disease and How to Avoid It, by Dr. Malcomb Kendrick <http://www.amazon.com/The-Great-Cholesterol-Con-Disease/dp/1844546101>

Stuart King (2013-11-14 14:59:01)

GeoffD, I found that combining the honey with coconut oil didn't seem to work as well. I did it for similar reasons to you. It might be worth considering that you want that quick insulin spike and temporary rise in blood sugar from the honey. Adding a fat possibly changes things a bit. But test it and see what happens, I kind of like the idea of trying to combine other foods for a better effect.

Paul (2013-11-14 16:20:32)

"You'll get ZERO bleeding gums, and no soreness whatsoever. And no infections." Well, like I said, it gets worse the more I brush. My personal experience is different than your expectations. I also don't eat sugar (except this honey experiment and the occasional fruit) or grains. In fact the only thing I've really found that gets rid of my gums bleeding is proper omega 3 to omega 6 ratio. Anyway this is rather tangential to the subject at hand. I've found that I sleep better with honey, but I'm waking up sooner. I don't feel any less refreshed, maybe a bit more refreshed in fact. Just strange to be waking up at 5am.

GeoffD (2013-11-15 07:21:52)

Stuart King, I tried 1.25 tsp raw organic last night without the coconut oil. A good, not great night of sleep. I did go to bed an hour later. I'll try again tonight and for 7 days sans oil.

Allen K. (2013-11-15 10:01:44)

To Keimpe above thinking about sugar as a preservative, in marmalade: there it's acting as a desiccant, sucking the water out of bacteria by osmosis. Same principle as salted meat. It's not going to achieve that in your mouth.

Joe (2013-11-15 11:37:46)

"Well, like I said, it gets worse the more I brush." That's because your gums are INFECTED. Until you deal with that, they'll continue to bleed.

Seth Roberts (2013-11-15 13:17:56)

"I've found that I sleep better with honey, but I'm waking up sooner." I found that a lot of standing had the same effect. I woke up sooner but slept better.

Darrin (2013-11-19 01:27:10)

recalling your penchant for flaxseed Seth & the current talk of Honey, thought this may appeal to you, just saw some honey called OmegaHoney, it's Honey blended with 100 % natural cold pressed flaxseed oil, here's a photo of the front label, [http://www.naturesblend.com.au/components/com\\_virtuemart/shop\\_image/product/945921b210f5f0b247afde8bc3-281c53.jpg](http://www.naturesblend.com.au/components/com_virtuemart/shop_image/product/945921b210f5f0b247afde8bc3-281c53.jpg)

Evan (2013-11-20 08:02:33)

I've been doing this for about a week and a half now, taking 1.5tsp of honey 45-60 minutes before bed. I've noticed two things so far. One, my feeling after my morning workouts improved. This is subjective; I don't have any hard strength or endurance numbers to back up any improvement yet. The second is more objective: after about a week (didn't start happening right away), I have regularly started waking about an hour before I usually do, and when I wake, my body feels like it's ready to get up. The only reason I go back to sleep is because I check the clock and it's 3:30am. Next thing on the list is to shift my bedtime so I early wake at a less obscene hour and watch my performance to see if the early waking is because honey is improving or disrupting my sleep.

Suzie (2013-11-21 02:08:17)

I am interested about the orange glasses. Where can you get one? have anyone tried it? those it work? Computer, TV, fluoro lights are bad for sleep. I will try the honey. I also do EFT in bed ( emotional freedom technique) sometimes it helps. I have an active mind and keeps chatting when I am trying to sleep. Seth: I got my oranges glasses from amazon.com. You might try getting plenty of sunlight, like an hour, in the morning. That might slow down your active mind at night.

## **How to Write a Personal Statement or Statement of Purpose (2013-11-14 05:00)**

At Tsinghua this semester I am teaching academic writing. Almost all the students are seniors and almost all of them are applying to graduate school, so I spent several weeks on how to write a personal statement. Each student wrote a draft. I read each draft and made suggestions in one-on-one meetings. The students wrote down my suggestion, and these summaries were compiled into the following guide.

Tips on writing sentences and paragraphs

Never use many **big words**! Especially don't use two big words in a sentence.

Make the sentence shorter and clearer. e.g. "I've set my career determination to..." is better replaced by "My career determination is..."

Use less space (simple and short sentences) on things people know and more on things they don't know. E.g. you

might want to list the statistical courses taken to emphasize your data skill. However, it's better idea that you write more about some experience when statistical method is successfully used.

Make it clear. Especially don't begin with something complicated and confusing. Stand in the professors' shoes and figure out a better way to get through.

Put the main interest in first paragraph. E.g. I'm interested in cognitive neuroscience, so I need put it at the first paragraph and make it obviously.

Put the topic sentence at the beginning of the paragraph. E.g. I should put the main ideas of every paragraph at the first sentence to make it clear. My first research experiment, I should point out I learned cognitive science by practical experiment.

Saying things more directly for people to get points. Example: I wanted to tell the readers why I had more interests in one specific field in psychology than others, but I did not mention this intention in the first place and only began with saying that some experience interested or not interested me, which might make the readers confused.

Things you should write about

Write things that have personal flavor, things that are unique. E.g. quoting from Einstein to illustrate love for cognitive science is not that unique, since everyone heard about them before.

Write about interesting experiences, rather than normal and boring things. Or write about experience that make you come up with some interesting thoughts.

Figure out what experience is important for your application. E.g. I want to apply to a Ph.D program in educational psychology, then my voluntary teaching experience is equally important as research experience. I should write more about it.

Add a good story or something original. Example: I mentioned my little brother in my PS and wanted to point out that it was him who made me get interested in education, yet it lacks some original experience in this part.

What really happened is more important than what supposed to happen. Better write on past achievement than babble about plans.

Explain the relationship between two events more clearly. E.g. explain the causal relationship: why something happened make you fall for psychology? Give specific reasons.

Usually use chronological order. Example: In the opening paragraph, I firstly said that I had studied psychology for three years blah blah, and then wrote what I once desired to be in high school, which is not in a chronological order.

Show important time. E.g. I did my second research in my first year, it was a early time. So, I need make it obvious.

Show the level of a prize. E.g. I won the Second Prize of the competition and I should show the difficulties of this prize.

Tell about yourself, rather than talk about the university.

Introduce yourself at first. E.g. I start with a sentence by a famous police officer but it has nothing to do with me.

Show your desire for the program. E.g. UCL's program is the one I want to apply for most, so I could say "UCL program is my first choice because of ... "

In short, distinguish yourself from other applications by writing things interesting and convincing in a coherent way.

Things that better not appear

Don't write ~~something professors are familiar with~~, write something they don't know but in a way they can understand.

Don't write ~~something sounds unlikely~~.

Don't say ~~negative things~~. E.g. do not say 'I wasn't interested in psychology at first', for it is obviously negative and should be prevented.

Don't write about ~~anything irrelevant~~. e.g. Don't write about your second major in economics if it's irrelevant to your goal in application. (In this case, writing about economics may convey that you are good at math!)

~~"One of my more unusual"~~ is not interesting. Go for "one of my best"

Tips on writing about researches

Explain why you are interested in your research topic.

If collaborate with someone in a research, refer to them.

When talking about a research, the results and achievements are important.

No use referring to ~~what you didn't do~~ for a research! (E.g. I didn't do the literature research in my first psychology experiment. Although I didn't do the literature research, and I didn't know if others do it, the research is still meaningful and I came up with the idea by myself.)

Tell story in a powerful and persuasive way. E.g., I wrote about the story of my first voluntary teaching in local elementary school in Beijing. To make the story more convincing, I should write about more details, like how often I went there, how many students there were, what subjects I was teaching, the reactions of the students. Etc.

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## LEDs: Indoor Lighting of the Future (2013-11-15 05:00)

In response to [1]my post about wearing orange goggles at night, a reader of this blog writes:

Philips Hue: [www.meethue.com](http://www.meethue.com)

The [2]starter pack includes three bulbs and a controller. One small drawback is that the bulb returns to white when you cut the power. It's annoying to have to repeatedly reset a smart device. The bulbs are well-made, and the light quality is very good across the colors. It will be a great system when they get the price down and refine the controls.

[3]Random LED multicolor bulbs on Amazon

These have varied in quality. One cycled rapidly through the colors (in demo mode) whenever you turned it on, rather than defaulting to white—great fun when your kid likes to flick the lights. One had poor color balance between the red, green, and blue LEDs, so the blended colors came out wrong. Some were great. Having the little remote control nearby was convenient, as long as a kid didn't lose it. These don't put out a lot of lumens, especially in single-LED colors, but that worked fine for us. The bulbs are much lower quality than the Philips Hue, but the low price makes them a good starting point.

1. <http://blog.sethroberts.net/2013/11/12/orange-glasses-at-night-improve-sleep/>

2. <http://www.amazon.com/Philips-431643-Personal-Wireless-Frustration/dp/B00BSN8DN4/>

3. [http://www.amazon.com/s/ref=nb\\_sb\\_ss\\_i\\_2\\_9?url=search-alias%3Daps&field-keywords=led%20multicolor%20bulb&sprefix=led+multi%2Caps%2C253](http://www.amazon.com/s/ref=nb_sb_ss_i_2_9?url=search-alias%3Daps&field-keywords=led%20multicolor%20bulb&sprefix=led+multi%2Caps%2C253)

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Jeff Winkler (2013-11-15 05:20:06)

It's cool that Philips is building these bulbs and paying for studies... though those are pretty fancy/expensive. This podcast with Richard Hansler (PHD, 42 years at GE Lighting) is good - <http://notjustpaleo.com/podcast-30-dr-ri-chard-hansler-lights-influence-cancer-sleep-obesity-depression/> I've ordered Bulbrite orange bulbs - [http://www.amazon.com/gp/product/B000COZ92S/ref=oh\\_details\\_o00\\_s00\\_i01?ie=UTF8&psc=1](http://www.amazon.com/gp/product/B000COZ92S/ref=oh_details_o00_s00_i01?ie=UTF8&psc=1) for our two-year old's room for storytime. 2 bucks each. The reviews say the 100 watt are enough to read by. Hopefully that'll reduce his sleep latency.

dearieme (2013-11-15 07:28:10)

"our two-year old's room for storytime": I remember that. She'd jump up and start trampolining. We eventually had to give up storytime.

Brad (2013-11-15 10:58:45)

There's also a computer program called f.lux, available for most operating systems and even mobile devices, that automatically adjusts the color temperature of your displays with the sunrise/sunset cycle at your location - adding significant red to displays in the evening to reduce this kind of circadian disruption. The latest version works even with those Phillips bulbs.

Reanna (2013-11-16 13:28:34)

Maybe I'm missing something here, but what about an orange lamp shade? Seth: it's not easy to put orange lamp shades on all of the lights in one's house...and you only need the orange light at night.

Alex (2013-11-17 08:46:15)

Brad, thanks for pointing out that I can use f.lux to control Hue lights. I didn't notice that in the May release notes, since I wasn't using Hue at the time. I use f.lux on all my computers, and I love it. Reanna, it wouldn't be enough to have a typical cylindrical lampshade in orange. Light with blue spectrum would still be emitted at the top and bottom. The goal is to avoid night-time exposure to blue spectrum, which is absent from orange light, rather than to increase your exposure to orange

spectrum.

### **Honey, Sleep and Reddit (2013-11-16 05:00)**

Looking at traffic to this blog, I found [1]a discussion on Reddit, in the Paleo subreddit, of [2]my sleep-honey post. "I'm too stupid to know who's wrong," said one person. Someone else, not the original poster, said:

I'm not on a paleo diet by any means, but I've been taking teaspoons of raw honey before I go to bed this past week strictly because I like the taste. What I have found is a noticeable change in my sleeping. I always wake up with more energy.... regardless if I wake up a couple of times in the night or if I get a full night's sleep. I'm generally a poor sleeper in that I wake up several times in the night. After taking the honey this past week, I have found out that I wake up less or even get a full night's sleep. For example, last night I got a teaspoon of honey before bed, and I got an uninterrupted 6 and a half hours of sleep. I woke up so refreshed this morning, I got up and exercised for the first time in so long. I generally exercise in the afternoons because it takes me a bit for me to actually wake up, but I just felt so rested this morning. I noticed these changes lately, but it took this article for me to realize it might be [due to] the honey.

Again, notice that [3]one teaspoon of honey made a noticeable difference. His or her belated realization is like what happened to me. As I said in the original post, now and then I'd sleep really well. It seemed to be correlated with dinner at other people's houses. I'd sleep better than usual after those dinners. It hadn't occurred to me until [4]Stuart King told me about his honey experience that those dinners were almost the only times I ate dessert.

Person 2 commented:

I tried it last night and noticed an immediate difference this morning.

Person 3 commented:

Tried the honey thing. While I usually wake up feeling like there is a mammoth sitting on top of me, today I woke up not totally refreshed, but without the mammoth, definitely a good feeling

1. [http://www.reddit.com/r/Paleo/comments/1qgkoe/honey\\_before\\_bed/](http://www.reddit.com/r/Paleo/comments/1qgkoe/honey_before_bed/)
2. <http://blog.sethroberts.net/2013/11/05/honey-at-bedtime-improves-sleep/>
3. <http://blog.sethroberts.net/2013/11/13/more-about-sleep-and-honey-one-teaspoon/>
4. <http://blog.sethroberts.net/2013/10/11/association-of-sleep-and-chronic-illness/#comment-1150683>

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dearieme (2013-11-16 06:54:06)

Ahoy, Seth. You were talking about gin a while ago; I have here something you must be sure to mention to anyone who you expect to buy you a present for Christmas. Just be sure that they'll understand that they must actually give it to you in time for Advent. <http://www.masterofmalt.com/gin/drinks-by-the-dram/the-ginvent-calendar-gin/>

Paul (2013-11-16 07:35:41)

I tested out skipping the honey last night. Even 1 day without it was enough to make the sleep quality worse. Good stuff here.

ChrisB (2013-11-16 08:40:25)

If you noticed even on morning's after eating dessert for dinner at friend's house, then it implies this isn't restricted to honey. Fortunately for me I have lots of honey around, and it is working for me as well, even if I sleep on a cramped couch I wake up feeling refreshed.

Darin (2013-11-16 09:34:11)

I've been using a tablespoon of honey before bed all week since reading the previous posts. The results have been surprising. I'm sleeping an hour less (6 instead of 7) but feel much, much better in the morning. It's as if the quality of sleep is improved so I need less. I'm convinced.

Matteo (2013-11-16 09:42:36)

I'm two days into honey experiment. I didn't sleep as good as usual the last two nights (I usually sleep quite well), but I think it's unrelated to honey. I've been testing my strength with one set of push-ups to failure. Baseline: 14. Too bad I've established the baseline on just one value, as I was eager to start the experiment. Anyway first day with honey: 16 push-ups. 2nd day: 19. I think it's too impressive to be solely due to the training effect. I'll keep you updated on my progress Seth: Here's how you can do the experiment. 1. Take honey every day. Do one set of pushups to exhaustion every day. You will level off quite soon...maybe at 30 pushups, who knows? 2. after it is clear that you have levelled off, change just one thing: stop taking the honey. don't change anything else. Question: what happens to the pushups? My prediction: the number of pushups you will be able to do will decline.

gwern (2013-11-16 11:24:45)

> I tried it last night and noticed an immediate difference this morning. > Even 1 day without it was enough to make the sleep quality worse. Good stuff > I have lots of honey around, and it is working for me as well > I'm two days into honey experiment. I didn't sleep as good as usual the last two nights (I usually sleep quite well), but I think it's unrelated to honey. It's not often one is gifted with such a clear demonstration of selection bias.

Nancy Lebovitz (2013-11-16 12:12:52)

It seems to work for me- there's a clear difference in the number of times I wake up in the night (once or twice vs. too many to count). I haven't done a careful check by not taking honey to see what happens. I suppose you'd double blind it by putting honey or something else of about the same weight in opaque capsules? I don't necessarily try to go to sleep immediately after taking honey. I note that Seth's desserts with friends were probably a while before he went to sleep.

gwern (2013-11-16 12:57:24)

> I suppose you'd double blind it by putting honey or something else of about the same weight in opaque capsules? Yes. Ideally it'd be a similar density and viscosity too - you wouldn't want to put in an equal weight of lead, because it will move around and feel differently. So maybe molasses? The other non-obvious thing is that while making the capsules, you're probably going to get traces of honey on the capsules, so you need to mix together the control and experimental capsules so they're all equally sticky/honey-y. I had to do this with my vitamin D capsules because the oil got on the outside.

Alex Chernavsky (2013-11-16 13:52:21)

Does the honey only work if you take it on an empty stomach? I usually eat a substantial snack not long before going to bed.

Matteo (2013-11-16 14:23:45)

Gwern, Thank you for showing us how one can brilliantly complicate simple things. If someone wants to test for placebo, he can put the honey in a tea or in hot water. Or not put it. And cover the taste with vinegar for instance, as mentioned in a post on this blog. And if one lives alone one can put stickers on the two cups, and then cover the stickers, and in the morning



unveil which one one did drink. Seth: To make the two drinks (with and without honey) equally sweet you should add artificial sweetener, such as Splenda, to the one without honey. You will need to adjust the amount of Splenda to equate the sweetness. If you also add a complex vinegar to both I think it will become very hard to distinguish them. However, I am sure it is not a placebo effect, because a placebo would not have caused me to suddenly become stronger. And I have tried many things to improve my sleep that failed to do so.

ChrisB (2013-11-16 15:00:34)

Gwern, let me give you more context before you throw up selection bias. I have 10 pounds of honey laying around intended for making mead which is unlikely to happen. So for the first time in a year I started using it for real, the tsp's before bed. And there is a noticable difference on waking in the morning. True its not double-blind placebo, merely unscientific and N=1, but that is seems to work for me is all that really matters.

Nancy Lebovitz (2013-11-16 16:13:24)

Pre-sleep honey doesn't taste nearly as good as I'd expect, and I normally like honey. I'm not sure whether it's a matter of intent or timing or what. Anyone else notice something of the sort? Seth: I don't have any trouble eating the honey but I agree it is much less tasty than usual, when I use it to sweeten stuff. That may be a clue that the effect is larger if the honey is eaten earlier. Or maybe it should be eaten with a little bit of something else (yogurt?). Or maybe it is simply the strong concentration that makes it less tasty.

Seth Roberts (2013-11-16 17:53:46)

"Does the honey only work if you take it on an empty stomach?" This is what Stuart noticed. My experience agrees with his. If I eat other food at the same time – cheese, Yakult – the effect disappears or at least gets much smaller. On the other hand, the Dutch have honey & milk at bedtime and I seriously suggest this may be why they are so tall.

Seth Roberts (2013-11-16 17:56:34)

"I don't necessarily try to go to sleep immediately after taking honey. I note that Seth's desserts with friends were probably a while before he went to sleep." I haven't studied it, but I think you can take the honey a few hours before bedtime and it will still work. However, it might not work if between taking the honey & bedtime you did something that depleted your blood of glucose, such as (a) eat something (which increases insulin) or (b) exercise.

Vladimir Heiskanen (2013-11-17 00:33:30)

Hello from Finland! I've been a reader of your blog for a few years, and I especially have enjoyed your writings on circadian rhythm, and motivation (magic dots, brown/rain noise). I have also tried Shangri-La diet (with sucrose water) but it didn't feel right for me. Gonna possibly try later again. This time I would ask whether you'd like to read an article written by me. In my article, I present some research showing that both red and near-infrared light have direct health benefits on tissues and they could be effectively used for many diseases. Red light and near-infrared could possibly explain daylight's positive health effects even better than vitamin D. My article was published in 180DegreeHealth, and it contains more than 100 scientific references: <http://180degreehealth.com/2013/11/red-light-and-near-infrared-radiation-powerful-healing-tools-youve-never-heard-of/>

dearieme (2013-11-17 06:11:00)

We've recently tried Cretan honey on Cretan cheese. (A persuasive stallholder at a village market gave us a sample and thereby made a sale.) It's delicious, even though neither is anything special on its own. How it would do as a pre-bed snack I don't know. I suppose it's a pricier version of a staple of my hill-walking days: honey and cheese sandwiches. Seth: I found that when I ate the honey with cheese it didn't work.

Kirsten (2013-11-17 13:12:58)

Interested in the comments on the honey method—and seeing patterns with something I've personally been working on. For the last year, I've been taking a natural approach to heal thyroid issues (which can be done while taking thyroid medication—best of both worlds, then.) The approach includes a focus on healing the gut (lots of good animal fats, bone broth, lots of probiotics,

avoidances of grains and other food that irritates the gut) and correcting gut dysbiosis and/or vitamin/mineral deficiencies that come from not absorbing your food well. It's not a permanent diet, but a healing diet that you can gradually ease out of. Various conditions can go hand in hand with a wonky thyroid: most people with Hashimotos or hypothyroid issues will also have compromised adrenals—the theory is, when the thyroid is compromised, the body has a diminished engine and the adrenals start working double time to make up. First, they produce too much cortisol; then they get burned out and produce too little. This can be measured with a 24-hour saliva cortisol test to see what your cortisol is like at various times of the day. Without getting too far into the weeds, there's a theory out there that uses T3 (thyroid hormone) therapy to help support and heal the adrenals. The theory is: The body needs the greatest amount of cortisol when waking up, to start the day. Like every other cell in the body, the adrenals have T3 receptors and need thyroid hormone. In a normal body, the body will start producing cortisol about four hours before waking up, so that the body has the fuel it needs to wake up and start the day. Therefore, if you change your T3 dosing so that you wake up two hours (or so) before your alarm and take your first thyroid medicine dose, then go back to sleep, the body will be better supported in producing the cortisol you need to start your day. This is a simplification—there's a guy named Paul Robinson who has written a whole book on the method. Anyway: I've been doing the CT3M for about 4 weeks, and the difference is remarkable—and very much like what you're describing. People worry about getting back to sleep after the dose; Paul says that not only are you likely to fall asleep, that sleep is likely to be deeper and more restful than the sleep that came before it. This has definitely been my experience. And in the four weeks I have weaned off of glandular adrenal support and now wake up refreshed and well-slept. In fact, it makes me realize that for pretty much as long as I can remember, I've been waking up with a slight feeling of jet lag, a pinch somewhere internally. Way back when my naturopath gave me the 24-hour cortisol test and talked to me about my adrenals, she suggested a small protein snack before bed to support them. Separately, I know people who have tried gelatin dissolved in hot water. On body building boards, there are a lot of comments that the gelatin trick will result in significantly increased fat loss...which I believe you would say is possible true because they are getting better and more restful sleep. Anyway, I always enjoy your blog because your observations tend to intersect with the things I'm working on and trying. I may try the honey trick next, and see if that affects the amount of the a.m. T3 dose I need to feel rested.

peter (2013-11-17 17:28:05)

i've had a similar experience, i.e., better sleep and more energy. Intuitively i sense that the effect will wear off in the same way the beneficial affects of medicine wear off. I'd be interested in where others will notice a wearing off etc.

Seth Roberts (2013-11-18 03:41:04)

"Intuitively i sense that the effect will wear off in the same way the beneficial affects of medicine wear off. " I doubt very much that the effect will wear off. No more than the ability of Vitamin C to prevent scurvy wears off. I believe this effect is why we have been shaped by evolution to want dessert after meals rather than before and eat dessert after dinner more than after lunch.

Simon (2013-11-19 02:52:04)

So it seems that, based on Seth's evolutionary argument for sweet things after dinner, and his experience with dessert at friends' houses, it's not honey in particular that confers these benefits but rather anything that's sweet. Has anybody experimented with this idea? I'm going to test it by eating a date before bedtime instead of the honey, as it seems to provide the same amount of total sugar [1], although the fructose:sucrose ratio of honey is 22 times higher than that of dates. Can anybody think of an objective, quantitative test for assessing how well one has slept? [1] <http://www.wolframalpha.com/input/?i=%28sugar+in+2+teaspoons+honey%29+%2F+%28sugar+in+1+date%29> [2] <http://www.wolframalpha.com/input/?i=%28fructose+in+1g+honey%29+%2F+%28sucrose+in+1g+honey%29+%29+%2F+%28fructose+in+1+date%29+%2F+%28sucrose+in+1+date%29%29> Seth: Yes, it would be nice to have an objective quantitative test for assessing how well one has slept. How many times you wake up is a good measure – the more you wake up, the worse your sleep. That's objective and quantitative. How long it takes to fall asleep is another measure.

David199 (2013-11-19 11:08:44)

". . . it's not honey in particular that confers these benefits but rather anything that's sweet. Has anybody experimented with this idea?" One theory of why it works is that honey 1) provides an insulin spike which pushes tryptophan into the brain which becomes serotonin which becomes melatonin and 2) honey nourishes the liver which provides a steady stream of glucose to

the brain during sleep which allows the brain to keep stress hormones low. Honey has a roughly equal ratio of glucose and fructose which is important since fructose liberates glucokinase which allows the liver to store glucose. Fruits should be similar. Sucrose (table sugar) is 50/50 glucose/fructose but unlike honey, the sucrose and fructose are bound by a glycosidic bond which is broken down in digestion; however, the theory is that this changes the absorption of sucrose making it less healthy (it spikes insulin faster and the fructose is delayed in opening up the liver). HFCS is a more complicated beast. Milk contains lactose which is a disaccharide of glucose and galactose, the latter stimulates glucokinase thereby allowing liver storage of glucose as well. This may lend credence to Seth's question as to why the Dutch's tradition of giving milk and honey before bed contributes to their above average height. There is a crossfit forum where people found eating ice cream before bed resulted in fat loss and better sleep, so there is some anecdotal evidence that sugar and dairy may work. From the theories I have seen, dates should work as would other fruits assuming you are eating the density of calories.

Jenny (2013-11-19 16:22:27)

Since reading about the honey, I've been trying it. The first few nights nothing changed. Then I started sleeping through the night - even on the nights I forgot the honey. I've had years of mid-sleep waking - triggered by a child who woke every 2 hours for 2.5 years. I've tried increasing Vitamin D3 - helped the quality of sleep, meant I went back to sleep (somewhat) quicker. But I would still often wake thoroughly at 3-4 a.m. Now, I often have milk at night, but this didn't do the same thing, and often I woke up thirsty mid sleep. So why didn't that do the same thing as the honey? My feeling is that the honey has somehow 'reset' the sleep pattern. Anyone else noticed this? Also, for about 10 days I became very tired very early, but that seems to have worn off now. Maybe I am catching up a sleep deficit? I'll keep monitoring this.

Seth Roberts (2013-11-19 16:49:26)

"Now, I often have milk at night, but this didn't do the same thing, and often I woke up thirsty mid sleep. So why didn't that do the same thing as the honey?" Milk has the wrong sugar (lactose). A cup of milk has 13 g of lactose, I'm told, which is not so different from the amount of glucose and fructose in the 20 g of honey I've been eating. But lactose is slowly converted into glucose. It would not provide substantial blood glucose for several hours. If milk increased insulin, that would remove glucose from the blood. Anyway, you can ignore comments about mechanism, which are just guesses. What's clear is that (a) the sugar in milk is different from the sugar in honey and (b) milk and honey are very different in several other ways, e.g., milk has lots of fat and some protein. It's also possible that the non-sugar aspects of milk interfere with the benefits of the sugar in milk (if any).

Darrin (2013-11-19 19:08:45)

@Jenny, good feedback/info Jenny, a question...how much honey have you been taking before bed?

Jenny (2013-11-23 15:26:08)

I was taking between a large teaspoon and a desertspoonful. I'm 65Kgs, in case that is relevant. Also, being coeliac, I eat no gluten or sugar, and only a small amount of root vegetables. I am still sleeping all night - and only erratically have the honey! I now take it when it 'feels' right!

## Storing Food Without a Fridge (2013-11-17 05:00)

A Korean artist named [1]Jihyun Ryou has invented [2]modules to keep food fresh without refrigeration. This connects with the themes of this blog in several ways: using science to find cheap safe low-tech solutions, minimal solutions (Ryou's designs use no electricity, I try to find solutions that require no willpower), and increasing (rather than reducing) the microbial content of food. Food stored at room temperature will have more microbes than food stored cold. Ryou says:

I've learned that we hand over the responsibility of taking care of food to the technology, the refrigerator.

We don't observe the food any more and we don't understand how to treat it.

That there could be something wrong with division of labor – handing over tasks to specialists, including specialist machines – is a subtle point. Division of labor works fine for inanimate things, such cloth and furniture and pencils. No economist has realized that animate things (such as our bodies) might be different.

The value of Ryou's designs partly rests on the variability of living things, as does the value of personal science. Well-educated Americans, in my experience, have little idea what they lose when they hand over care of their body to experts, such as doctors and drug companies. As Ryou says, they lose a kind of mental fitness ("we don't observe the food any more," we don't observe ourselves as closely) and are forced to accept solutions in which what the experts want plays a big role. I discovered the power of self-experimentation when I decided to see for myself if the acne medicine my doctor had prescribed was working. I found it wasn't, a possibility the doctor hadn't mentioned.

[3]Early exposure to refrigerated food is associated with Crohn's disease.

Thanks to Steve Hansen.

1. <http://www.savefoodfromthefridge.com/>
2. <http://www.notechmagazine.com/2012/01/saving-food-from-the-fridge.html>
3. <http://www.ncbi.nlm.nih.gov/pubmed/19177167>

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Ross (2013-11-21 11:07:54)

Regarding your striving to find low willpower solutions, have you experimented with minimalist exercise routines such as [1]HIIT/Tabata, or [2]Body by Science ? - Ross Seth: Yes, that's what I do, HIIT.

1. [http://en.wikipedia.org/wiki/High-intensity\\_interval\\_training](http://en.wikipedia.org/wiki/High-intensity_interval_training)
2. [http://www.amazon.com/Body-Science-Research-Program-Results-ebook/dp/B001NLL38S/ref=sr\\_1\\_1?ie=UTF8&qid=1385057158&sr=8-1&keywords=body+by+science](http://www.amazon.com/Body-Science-Research-Program-Results-ebook/dp/B001NLL38S/ref=sr_1_1?ie=UTF8&qid=1385057158&sr=8-1&keywords=body+by+science)

## Assorted Links (2013-11-18 05:00)

- [1]The promise of Bitcoin (the platform). "Bitcoin encapsulates four fundamental technologies . . . "
- [2]Bacteria and our behavior
- [3]Alternate-day fasting by normal-weight subjects. "These findings suggest that ADF is effective for weight loss and cardio-protection in normal weight and overweight adults." The experiment lasted 12 weeks.
- [4]Small interesting psychology experiments. "Whenever I go to a conference, I hate to wear those silly stickers that say "HELLO! MY NAME IS." I just write "SATAN" in the blank space."
- [5]Pomona College dean of students sneers at a more reality-based college. She said: "Discovery, empathy, adaptability is goal of broad-based education, prepares students for life, learning & jobs known & unknown." As the author, John Tierney, says, "What makes some people at liberal-arts colleges so dismissive of, and condescending toward, institutions that actually train people for careers?" I encountered a similar attitude at Berkeley. At a faculty meeting, I praised someone's research. Another professor complained that the research was "applied".

Thanks to Donna Warnock.

1. <http://startupboy.com/2013/11/07/bitcoin-the-internet-of-money/>
2. [http://www.newyorker.com/online/blogs/elements/2013/11/the-e-coli-made-me-do-it.html?utm\\_source=tny&utm\\_medium=email&utm\\_campaign=dailyemail&mbid=nl\\_Daily%20\(58\)](http://www.newyorker.com/online/blogs/elements/2013/11/the-e-coli-made-me-do-it.html?utm_source=tny&utm_medium=email&utm_campaign=dailyemail&mbid=nl_Daily%20(58))
3. <http://www.nutritionj.com/content/12/1/146/abstract>
4. <http://www.quora.com/Psychology/What-is-the-most-bizarre-small-social-experiment-youve-conducted-concluding-with-a-result-which-was-extremely-contradictory-and-opposite-to-what-you-originally-believed-in>
5. <http://www.theatlantic.com/education/archive/2013/11/who-are-you-calling-a-vocational-school-in-defense-of-maine-maritime/281456/>

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Alex Chernavsky (2013-11-18 08:06:37)

Speaking of micro-organisms: "[1]Can common cat parasites cause human schizophrenia?"

1. <http://www.examiner.com/article/can-common-cat-parasites-cause-human-schizophrenia>

dearieme (2013-11-18 09:02:55)

Even more important, Alex, can it happen the other way around?

Nancy Lebovitz (2013-11-18 09:55:22)

Not an experiment, but an observational study- during those long boring high school classes, I kept track of whether students had their hands near their heads, and it seemed to correlate with when the teacher was less interesting.

Seth Roberts (2013-11-18 13:53:54)

"during those long boring high school classes, I kept track of whether students had their hands near their heads, and it seemed to correlate with when the teacher was less interesting." that's very interesting. certainly people have a weak desire to touch their face near their mouth. Maybe it's like a weak sound that we don't usually notice.

Nancy Lebovitz (2013-11-18 16:06:38)

The hands near head included touching face, head on hand, fiddling with hair.... Please view the conclusion as provisional. It's not as though I was double-blinding anything.

### **Self-Experimenters Wanted: Idiopathic Thrombocytopenia Purpura (2013-11-18 23:12)**

A woman named Sara Lake has a condition called Idiopathic Thrombocytopenia Purpura (ITP), an autoimmune condition in which your body makes antibodies to your own platelets. She wrote:

I'm having some success keeping my platelet levels on the "high side of very low" using diet and lifestyle, but there is so little research into this rare disorder that I'm just trying anything my education suggests might help. I would love to connect with other self-experimenters with this condition. I believe that most, if not all, autoimmune conditions can be cured if the triggers are identified (for example, as has been done in the case of celiac disease), but it's a long process. If you know of any other people with this disease please pass on my email address, which is sara.lake (at) gmail.com.

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lipoescultura (2013-11-20 20:07:07)

The ingredients in the said are Citric Acid: 300mg and Magnesium Oxide Complex: 600mg. Medium-density carbohydrates (fruits, starchy vegetables, dairy products): These foods have more carbs per serve than the low-density carbohydrates. Remember that most unhealthy snacks have a healthy alternative.

Angus Stocking (2013-11-21 10:07:26)

I self-experimented successfully with ITP. I had a recurrence, after having a splenectomy that seemed to work for four years or so. When it recurred, I went to a doctor who prescribed prednisone. Instead of immediately starting on the recommended dosage I eased into it—started with much smaller amounts than prescribed, then ramped up slowly until I saw an effect. I was getting daily blood tests at the time, and used the tests to monitor platelet levels. When I got to a normal level, I plateaued the dosage, and then gradually ramped down. I found that the platelet levels stayed normal as I decreased the dose, and when I was off. I have not had a recurrence in about 25 years. I'm sorry, I don't remember amounts, but the ramp up and down periods were about 3 weeks each.

### **Modern Cargo Cult Science: Evidence-Based Medicine, Science Fiction in China (2013-11-19 05:00)**

In [1]a graduation speech, Richard Feynman called certain intellectual endeavors "cargo cult science," meaning they had the trappings of science but not the substance. One thing he criticized was rat psychology. He was wrong about that. Sure, as Feynman complained, lots of rat psychology experiments have led nowhere, just as lots of books aren't good. But you need to publish lots of bad books to support the infrastructure necessary to publish a few good ones. The same is true of rat psychology experiments. A few are very good. The bad make possible the good. Rat psychology experiments, especially those by Israel Ramirez and Anthony Sclafani, led me to a new theory of weight control, which led me to the Shangri-La Diet.

Cargo cult science does exist. The most important modern example is evidence-based medicine. Notice how ritualistic it is and how little progress medicine has made since it became popular. An evidence-based medicine review of tonsillectomies [2]failed to realize they were worse than voodoo. Voodoo, unlike a tonsillectomy, does not damage your immune system. The evidence-based medicine reviewers appeared not to know that tonsils are part of the immune system. Year after year, the Nobel Prize in Medicine or Physiology tells the world, between the lines of the press release, that once again medical researchers have failed to make progress on any major disease, as the prize is always given for work with little or no practical value. In the 1950s, the polio vaccine was progress; so was figuring out that smoking causes lung cancer (which didn't get a Nobel Prize). There have been no comparable advances since then. Researchers at top medical schools remain profoundly unaware of what causes heart disease, most cancers, depression, bipolar disorder, obesity, diabetes and so on.

I came across cargo-cult thinking recently in [3]a talk by Neil Gaiman:

I was in China in 2007, at the first party-approved science fiction and fantasy convention in Chinese history. And at one point I took a top official aside and asked him Why? SF had been disapproved of for a long time. What had changed?

It's simple, he told me. The Chinese were brilliant at making things if other people brought them the plans. But they did not innovate and they did not invent. They did not imagine. So they sent a delegation to the US, to Apple, to Microsoft, to Google, and they asked the people there who were inventing the

future about themselves. And they found that all of them had read science fiction when they were boys or girls.

I know about Chinese engineers at Microsoft and Google in Beijing. They want to leave the country. An American friend, who worked at Microsoft, was surprised by the unanimity of their desire to leave. I wasn't surprised. Why innovate or invent if the government might seize your company? Which is the main point of Why Nations Fail. Allowing science fiction in China doesn't change that.

Thanks to Claire Hsu.

1. [http://neurotheory.columbia.edu/~ken/cargo\\_cult.html](http://neurotheory.columbia.edu/~ken/cargo_cult.html)
2. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>
3. <http://www.theguardian.com/books/2013/oct/15/neil-gaiman-future-libraries-reading-daydreaming>

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Brandon Berg (2013-11-19 05:33:01)

Has the Chinese government seized any companies recently? I didn't realize things were still that bad there.

Warren Roberts (2013-11-19 07:35:11)

Long term follower of your blog. First time commenter. My interpretation of Feynman's criticism rat experiments as cargo cult science is a little different. I remember the story he told about the rat experiments. The one he praised was a scientist who tested every possible variable and documented them all. What he wasn't a fan of was scientists who don't document every possible variable and just publish their positive results. Which means others can't accurately replicate the experiment because they didn't know what wasn't documented. This is just what I got from it.

Seth Roberts (2013-11-19 14:00:59)

Here's what Feynman said about rat experiments in psychology:

When I was at Cornell, I often talked to the people in the psychology department. One of the students told me she wanted to do an experiment that went something like this—it had been found by others that under certain circumstances, X, rats did something, A. She was curious as to whether, if she changed the circumstances to Y, they would still do A. So her proposal was to do the experiment under circumstances Y and see if they still did A. I explained to her that it was necessary first to repeat in her laboratory the experiment of the other person—to do it under condition X to see if she could also get result A, and then change to Y and see if A changed. Then she would know the the real difference was the thing she thought she had under control. She was very delighted with this new idea, and went to her professor. And his reply was, no, you cannot do that, because the experiment has already been done and you would be wasting time. This was in about 1947 or so, and it seems to have been the general policy then to not try to repeat psychological experiments, but only to change the conditions and see what happened.

I take that to be criticism of the whole field of rat experiments in psychology. I have done a lot of rat research and I spent very little time (none) repeating earlier results from other labs. Likewise for the other rat researchers I know about. Of course, some people do that, but very rarely. As Feynman and the Cornell professor said, it is uncommon. I agree with Feynman's general point and would put it like this: go as slowly as possible consistent with progress. Everything is more uncertain than you think. But I have yet to hear another researcher agree with me or say the same thing. So I assume they don't follow this advice.

Nancy Lebovitz (2013-11-19 20:26:35)

[1]South Koreans studying Talmud in the hopes of matching Jewish intellectual achievements

1. <http://issamar.com/strategy/beware-first-china-now-north-korea-the-talmud-is-invading/>

dearieme (2013-11-20 02:54:05)

I believe that some of my colleagues didn't really see the point of my having my students sometimes repeat experiments - both our own and others'. Of course, if their purpose was not to advance science but to get promotion, they were right.

garymar (2013-11-20 17:17:02)

"South Koreans studying Talmud..." Nancy, I follow a few links on this. All South Korean elementary school children are exposed to a book of *stories* taken from the Talmud, it seems. This is hardly an attempt to "match Jewish intellectual achievements." It's no different than reading a book of Bible stories.

Nancy Lebovitz (2013-11-20 22:53:54)

garymar, thanks for checking.

garymar (2013-11-21 03:58:49)

Nancy you're welcome. While googling thru I fell into a world of Hasidic and Torah-Observant websites, and I was quite fearful of causing a shanda!

Brock in HK (2013-11-21 04:37:30)

Similarly, a small "free trade zone" near Shanghai won't change China into a vibrant, freewheeling free market any time soon, if at all. The cargo cult doesn't understand systems thinking. Cargo Cultists implement only one small, visible part of a system hoping the whole end result will spring forth. That never happens.

## **Bedtime Honey Improves Sleep "1000%. Crazy Good Tip" (2013-11-20 13:42)**

On [1]a recent episode of Grumpy Old Geeks, a podcast by [2]Brian Schulmeister and Jason DeFillippo, Jason told what happened when he had [3]honey at bedtime (starts at 1:04:20):

JASON [4]Tim Ferriss posted this . . . I did the experiment. I've been doing it for about six days now. Um, yeah, a thousand percent.

BRIAN Really? It's really helped?

JASON One. Thousand. Percent. I sleep through the night. . . . I can quantifiably tell you that in the morning I am sharper, I get more work done, I am better rested, and I feel a thousand percent better. I'm going with the formula in the article, which is a cup of hot water, mixed with 2 tablespoons of apple cider vinegar and 1 tablespoon of honey. It's tasty, it's really tasty, you wouldn't think vinegar and honey would be great but it almost tastes like an apple cider.

BRIAN That doesn't sound very appetizing to me, but I'll trust you that it wasn't bad.

JASON I found it delicious. And, plus, the hot liquid just before I went to bed, just knocked me out. I fell asleep immediately. . . . I've always had problems waking up five or six times in the middle of the night. I have slept through the night ever since I started this. I wake up in the morning ready to go.



BRIAN Excellent.

JASON This is one of the best sleep tips I've ever found. . . . The last couple nights I didn't really have the time, 'cause I was getting kinda tired and I'm just like, you know what, I popped the lid on the honey and poured it down my throat and that feels like 1 tablespoon or 3, whatever. Same effect. . . . I have a tablespoon of honey right before I go to bed. Man, it has really improved how I sleep. Not even that, it's how I greet the day. I greet the day really just ready to go. I'm a horrible morning person. I hate mornings.

BRIAN [laughs]

JASON If you have problems sleeping, definitely give this a try. Even if you don't have trouble sleeping. I think it will improve how your body solidifies memory and does muscle rebuilding. They [= Seth and Stuart King] talk about strength improvements and it's true. It's ridiculously true. That's when your muscles heal. . . . It's a crazy good tip. So hats off to Tim for passing that one along and I highly recommend it.

BRIAN I don't have sleep issues . . . but I think I'll give this a shot anyways and see if I get any of the other benefits.

JASON Yeah, that's what I'm saying. Even if you don't have sleep problems, it will still help your brain like, hardcode memories. I've found that my memory has really improved. Especially with this project that I'm working on. Before I would wake up and it would take me an hour to get back to where I was . . . [Now] I come back down in the morning and I come back exactly where I was, ready to rock.

BRIAN Awesome. . . . I will definitely try it out.

Lots of research says [5]better sleep = better memory.

1. <http://grumpyoldgeeks.com/ep-34-sexbots-money-and-honey/>
2. <http://grumpyoldgeeks.com/about/>
3. <http://blog.sethroberts.net/2013/11/05/honey-at-bedtime-improves-sleep/>
4. <https://twitter.com/tferriss/status/399549543551090688>
5. [http://en.wikipedia.org/wiki/Sleep\\_and\\_memory](http://en.wikipedia.org/wiki/Sleep_and_memory)

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August (2013-11-20 14:31:36)

I tried it again and ran into a drawback. It produces dreams. I don't dream well, which tends to mean I wake up because the dream is unpleasant. Anyone know of a way to hack dreams? I've got enough disappointment in my life; I don't need these disappointing dreams. Seth: Maybe if you tell someone your dreams or keep a "dream journal" they might become less powerful. I don't know, I haven't tried this, but see research by James Pennebaker about journaling.

Murray (2013-11-20 14:31:51)

Well, I tried taking a tsp of honey for the first time last night right before going to bed, and ... woke up at 3-something AM, then stayed mostly awake until my normal get-up time of 5:15. So, not exactly a success story! To be fair, over the last few years I've had several stretches where I wake up much earlier than I'd like (around 4 am), so last night was only unusual in that I woke up

even earlier than I'm accustomed to. I rarely have problems falling asleep, but early waking is a problem.

Murray (2013-11-20 14:39:08)

@August That's an interesting coincidence. I was awoken last night at 12:55 by an unpleasant dream (in which I was about to be subjected to a severe group beating) which was so vivid and unsettling that it stuck with me even after I'd gone to the bathroom and back to bed. I rarely experience memorable dreams, and the bathroom usually acts as an effective reset button for sleep-related difficulties. Huh.

Katie (2013-11-20 14:57:35)

Two nights ago, I took a TSP of honey before bed and slept very well. Last night, I skipped, and slept like crap. I'm going to start again tonight and see what happens...this is really interesting and something I NEVER would have expected!

Seth Roberts (2013-11-20 16:15:14)

"this is really interesting and something I NEVER would have expected!" Me too. And I had been trying to improve my sleep for many years.

David199 (2013-11-20 16:41:53)

Does anyone have an idea of what the cider vinegar does and how it affects sleep? Thanks

Joel W (2013-11-20 18:10:40)

It occurred to me that the connection between sleep and immune systems might be evidence that old wives tale cure of honey lemon and tea or whiskey. Perhaps it's the improved sleep from the honey.

Jay (2013-11-20 19:17:40)

This idea has exploded... I tried it out. I've done it for about 5 days. Each night I slept about 8 hours. Usually I sleep about 7-7.5 hours. Just 5+ years ago I used to have vivid dreams. Now I don't for some reason. Almost no dream recall in the past few years. Very frustrating, and I think it has affected me mentally. However, past 5 nights I've had semi-vivid dreams with good recall. Although I feel more well-rested when I wake up, I don't think it's as significant as some are reporting here. I only feel slightly more well-rested than usual. Not 1000 %. I'll keep doing this. I'll try the apple cider vinegar too. Seth: "Exploded"? How can you tell?

daz (2013-11-20 20:14:42)

the acv (apple cider vinegar) comment reminded me i actually have a bottle of acv with honey, which has been sitting in my fridge gathering dust (not literally). it was a good find at the time because i was not keen on the neat or diluted acv taste. so i may give the acv & honey followed by the honey a try. this is the stuff i got, <http://www.wescobee.com/products/apple-cider-vinegar-honey/apple-cider-vinegar-honey-500ml> there is a pdf there which may be of interest, of course it's a bit 'marketing-ey'.

Nile (2013-11-20 20:56:27)

August - Google Lucid Dreaming. It is the state of being conscious / aware that you are dreaming. You can then consciously choose to change the dream - change the monster to a friendly pet for example. You can learn to lucid dream by simply asking yourself several times a day while awake "Am I dreaming?" and seriously trying to answer the question by noting color, details in your surroundings, and so on. After a short time, you will ask yourself that question in a dream and you will come to the conclusion you are dreaming! You can then change the dream. One can also use lucid dreaming for problem solving. Mostly the results are absurd, ridiculous, nonsense but every so often you will get a creative solution. Good Luck - hope it works for you

Tobi (2013-11-21 03:14:35)

I tried it out for several days now, and it produces in me a similar effect as when I go to sleep when I have drunk several beers before. I wake up several times during the night, vivid dreams, and feel less rested in the morning rather than more. I think it is

either due to sugar/carbs or due to that a medicine that cures a condition often also has the side-effect of producing the same condition.

Alex (2013-11-21 04:51:37)

Tried taking 1tsp honey for two days right before going to bed. No improvement whatsoever.

Rocky (2013-11-21 10:23:53)

I have been taking 1 tsp just before going to bed for the last 4 nights. - dreams are more vivid and i recall them now - i still wake up 1-3 times during the night; however, i still feel more rested when i get up in the morning - energy level in the morning has improved  
Seth: You might be able to increase the amplitude of your sleep/wake rhythm – be more awake during the day, more asleep at night (and thus avoid waking up during the night) – if you got some (or more) sunlight in the morning. I try to get at least an hour.

Murray (2013-11-21 10:34:26)

Tried a tsp of honey again last night at around 10 pm. Slept soundly and dreamlessly ... and woke up, reasonably bright and alert, at 3:46 am. I'll keep trying for another couple of nights, but it looks like the honey is not working for me as it is for others. The only difference I can tell is that I MAY be more alert and energetic than I would expect to be for two consecutive nights in which I awoke very early. Seth: What's wrong with waking up at 3:46 am if you feel well-rested?

Kirk (2013-11-21 11:12:44)

Honey before bedtime improves my sleep about 50 % of the nights. Unfortunately, it also makes me gain weight. On the nights it does not work, it either has no impact or there has been some external influence (the house temperature was too cold, the temperature was too hot, there was a loud thump somewhere in the house, people or pet noises . . . ) Also, I find no difference between taking 1 teaspoon or 1 tablespoon.

Brian (2013-11-21 13:17:31)

Put me down in the weight gain crowd. I also notice sinus drainage afterwards. My sleep, however, was noticeably better.

Joe (2013-11-21 13:48:16)

On a whim, I tried taking a tablespoon of honey before bed last night. Results? No difference. Different strokes for different folks? Seth: Two things seem to matter. 1. You must take it on an empty stomach. 2. You must not have sweets during the day. Did you violate either of these?

libfree (2013-11-21 14:17:35)

I've been trying this for two weeks now and have been impressed with the results. Noticeably better sleep with myself feeling more well rested. I didn't notice the effect in the first 2 nights and I also didn't get good results last night. I did have a lot more dairy than usual last night and I went to sleep earlier than usual.

Ashish (2013-11-21 21:04:00)

I'm doing the orange glasses, and it's been great so far. But vinegar and honey are both reputed to be quite bad for the teeth, which are even harder to replace than a bad night's sleep. In other words ... let us know after your next visit to the dentist. I want it to work - fingers crossed. (Why doesn't a jar of honey go bad? Because it isn't full of oral bacteria.) Seth: Vinegar is unnecessary – I don't drink it. I brush my teeth after eating the honey.

Stuart King (2013-11-22 04:28:18)

I have also noticed that my dreams have been more vivid and I have better recall. I've even had a dream within a dream (like the movie inception) and moved between dream levels, with the realities being consistent between dream levels. Its a weird thing to remember details of a dream whilst you are already dreaming, yet not realising that your still dreaming. I also seem to be waking much earlier on many days, but I feel pretty good when I do (it doesn't seem unnatural and it varies from day to

day). Is it possible that you don't need the same amount of sleep every day? I tend to doze lightly for a few more hours - I have a feeling that might not be a good thing though. I think the honey leads to better quality sleep - which may mean that less sleeping hours are needed

Troy (2013-11-22 05:23:54)

My wife and I have both tried this over the last week or so, and it's definitely improved things for us. Huge difference in quality of sleep and energy levels on waking. In the N=1 (or 2!) spirit of your blog, I have a theory on the mechanism - that honey eases the transition both into and out of "real" sleep. I say this because we have a 20-month old child who occasionally wakes up in the night. One the two occasions this has happened since we've started taking honey, I've noticed 2 things: 1) that the awakening on hearing him does not have the normal, slightly traumatic feeling of being "yanked out" of sleep, which I'd feel as chest and head tension in the past. The quality of wakefulness is "full", though, but I just feel calm and alert. 2) Having settled him, it's now possible to return to sleep immediately (which was difficult/impossible to do quickly before) It would follow (if this theory were true) that honey does a couple of things: 1) speeds up time-to-sleep from bedtime 2) militates against the damage to sleep from partial or full arousal during the night (external (or internal stress) stimuli, but also apnea, restless partners, etc.) and might also explain why it doesn't work with everyone (i.e. may not improve problems with "baseline" or "best possible" sleep) Great tip, anyway, from our point of view. Seth: Bedtime honey increased my strength; it increased how much exercise increased muscle. That suggests an all-night effect. So does the fact you felt differently in the middle of the night (when awoken).

Arndt (2013-11-22 09:29:05)

I take honey before going to bed for 2 weeks now and I sleep like a rock and I had always difficulties falling asleep. Actually my sleep problems started at age 5 and I was kind of bedphobic as it took me hours to fall asleep and every bit of noise or light would wake me up. I always knew that honey and dates make me sleepy but I had never the sense to do it before going to bed. I eat mostly fruits and meat during the day and it still works.

Murray (2013-11-22 10:20:42)

Day 3: Bed at 10:40 pm, awake at 3:55 am. The moderate sleep deprivation is beginning to catch up with me, though I still seem alert. It's possible that the honey doesn't work for me because I'm violating the rules Seth mentioned above. I fast (or semi-fast, eating only nuts, seeds, and sugar-free gum) most days, then do much of my eating in the evening, including energy-dense foods like high-fat yogurt and the like. So it's unlikely that I have the requisite empty stomach at bedtime.

Joe (2013-11-22 15:57:00)

"Seth: Two things seem to matter. 1. You must take it on an empty stomach. 2. You must not have sweets during the day. Did you violate either of these?" I violated #2. I'll give it another try... as soon as the paleo brownies are gone. :) Seth: Very interesting...that I was able to sort of predict something.

Nancy Lebovitz (2013-11-24 08:18:10)

I'm getting decent results from honey if I don't eat (much?) sugar during the day. However, I also find that my tongue stings a little the day after, as though I've burnt it by eating excessively hot food. Is this happening to anyone else?

Sentinel (2013-11-24 12:22:59)

Murray—can you describe what you mean when you say that you're now sleep deprived? Is your overall energy level lower? Is your energy level good when you wake at 3 or 4am only to see it collapse later in the day? Or is it just a matter of your expectation about the correct time to wake? I do not mean to criticize, I am just curious! Seth—for the purposes of Pre-sleep Honeying, how would you define "empty stomach" - 3 hours without other calories?

daz (2013-11-24 21:19:51)

...how would you define "empty stomach"... Seth mentioned (under one of the other posts) that eating dessert (after dinner) may have improved his sleep, if that is indeed the case, then may be an empty stomach is not so important?

Seth Roberts (2013-11-25 04:46:43)

"may be an empty stomach is not so important?" Yes, that is a reasonable idea. However, I tried eating the honey with a piece of cheese. It didn't work. Why did it work when I had dessert after a meal – perhaps on a not-entirely-empty stomach? I don't know. There are dozens of differences between 1. honey at bedtime and 2. dessert after a meal. I cannot say that dessert after a meal always made me sleep better. Perhaps with dessert after a meal there is more time for the sugar to be digested – hours, for example – before it is needed. Slowing down that digestion with other food is okay or even beneficial. Maybe the first hour of sleep is especially sensitive to blood glucose.

Nancy Lebovitz (2013-11-25 10:02:25)

Last night, I had my honey– then killed a good bit of leftover cheese/sausage omelet, and still saw improvement in my sleep.

Dan Sullivan (2013-11-27 00:00:24)

Just inspired me to go try. I had apple cider vinegar already that I'd bought for something else, and it tasted nasty but worked (muscle cramps). I had tried to cut the flavor with juice but honey **\*\*worked\*\*** to make it taste better. this is what I have: <http://charliehorselegcramps.com/>.

Chloe Hodder (2013-11-27 00:38:52)

A note for those who are not experiencing positive results - I would make sure that you use raw organic ACV that is, as creepy as it sounds, "with the mother" (this is the cloudy ACV). This is vital if you want to be consuming the nutrients and enzymes. Similarly, raw honey contains all the benefits while the processed counterparts strip all nutritional value and use artificial sweeteners and corn syrup in its place. Raw honey is also cloudy and solid at room temp.

Birgit (2013-11-27 01:08:06)

Will def. try this although a tablespoon of honey contains approx. 17g of carbohydrates and I'm a low-carber. As to the vivid dreams, I found out by chance that Vit. B6 is required to have them. So if you're lacking try to increase food containing it or supplement. It's fun! Seth: The honey effect implies there is something seriously wrong with low-carbing – at least the view that carbs are unhealthy.

Birgit (2013-11-27 01:13:51)

NB: I read the other day that most honey in the US (I'm in Europe) is fake, i.e. no pollen but HFCS. Besides the GMO issue... Yuck! So one should make sure to find the proper stuff.

Jenny (2013-11-27 02:50:23)

I take 500mg of rhodiola in the morning. After 7 days or so the quality of my sleep improved dramatically. Love it. I take 500mg in the morning, look for Siberian rhodiola rosea, plus it MUST be 3 % rosavins 1 % salidroside.

Reinhard (2013-11-27 03:21:58)

Dear Seth, Thank you for your intriguing post. What kind/brand of honey did you use? Do you think the quality of the honey matters, i.e. raw vs. heated, organic vs. conventional? Is Manuka honey a good option?

Sandy (2013-11-27 07:59:46)

I'm not surprised. Sugar (as well as salt) lower adrenaline, which are an issue in people with sleep problems. I've had the same effect having a glass of warm milk with sugar + a pinch of salt, or even some OJ.

George (2013-11-27 13:25:03)

More of a question than a comment. Isn't honey you buy in the store homogenized, heat treated? Maybe try fresh honey for better results. I just read this so I'll give it a try. Seth: Pasteurized (= "heat treated") honey works fine for this. I don't know what you mean by "homogenized".

Seth Roberts (2013-11-27 17:32:40)

"What kind/brand of honey did you use? Do you think the quality of the honey matters, i.e. raw vs. heated, organic vs. conventional? Is Manuka honey a good option?" I have used French, German and Australian honeys. They are heated, probably conventional although I am not sure. I don't know if Manuka honey is worth the extra expense. You certainly don't need it for this.

Joel Alain (2013-11-27 18:34:54)

@August I use to have nightmares from age 10 to age 27 EVERY night. Bad, horrible, make-you-feel-like-crap nightmares... Then i found out why: It only happened when i HATE before bed (2 hours or less). So everytime i went to bed with my digestion going, i was 100 % sure to have nightmares. It took me so long to notice that... but anyway, now i did and im really glad. Digestion is a process that use tremendous resources and energy so it somehow affected my brain. Now that i dont eat before bed, no more nightmares. To solve your problem, i would not eat 3-4 hours prior to bed + drink a SMALL cup of water+honey (100 ml or less). Maybe your cup is too big (americans tend to have a "skewed" vision of what small is ;) Joel

Jason DeFillippo (2013-11-27 18:51:47)

Hey Seth. Thanks for the link! Just some follow-up. I use Aunt Sue's Raw honey. I've tried using the raw organic stuff from Trader Joe's and it tastes like crap and didn't have the same effect at all. Aunt Sue's is about twice as expensive but tastes great and works like a charm. We actually recorded a podcast with Tim Ferriss yesterday and as an experiment I stopped taking it the night before the show so we could talk about it and I slept like CRAP! Went back on it last night and slept like a baby and woke up feeling great. Our new ep with Tim comes out on Friday. We spent a good hour and cover some good stuff including this. Cheers! Seth: Thank you, Jason. If I want people to read just one reaction to my original post, I give them yours.

vincent (2013-11-28 05:56:02)

sugar crash at 3am. it's not for everyone!

Anthony (2013-12-05 07:32:11)

This was in no way tasty!!! I'll keep trying though. Had a late dinner so that may have affected. Went to bed at 1:04 took 17 min to fall asleep woke up once in the middle of the night (morning). Had 3h59min of ligh sleep and 2h46min of deep sleep according to my Withings Health PULSE. Woke around 8am

Improve Your Pre-Match Sleep With This Simple, CRAZY Food Hack - Pain Free Football (2013-12-08 12:40:55)

[...] Bedtime Honey Improves Sleep "1000 %. Crazy Good Tip" [...]

### **Orange Glasses and Sleep: Correction (2013-11-22 05:00)**

I [1]recently posted that an Oakland woman found that wearing orange glasses (which block blue light) in the evening greatly improved her sleep, which had been bad for decades. My post underestimated the improvement. Before she started wearing the glasses, it took her 2-4 hours to fall asleep. After she started wearing the glasses, it took 15-30 minutes. She wears the glasses from 8 to 10 pm. After that she goes to bed and tries to fall asleep.

I was very impressed by her story and started wearing orange glasses starting at 8 pm, even under incandescent light. Previously I only used them when looking at a computer screen in the evening. I'm not sure if wearing them more improves my sleep, but if I had to guess I'd say it does.

1. <http://blog.sethroberts.net/2013/11/12/orange-glasses-at-night-improve-sleep/>

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Jeff Davidson (2013-11-22 06:42:33)

I've been wearing orange glasses in the evening for the better part of a year now, putting them on at a time roughly corresponding to Astronomical Twilight\* - which is about 7pm this time of year. The first thing I notice is that I immediately almost immediately start feeling tired and yawning. When I go to bed, around 9pm it will take me only 3-5 minutes to fall asleep. Since I wake for work well before sunrise I also wear them in the morning until the first hints of sunlight. Be careful driving in them though. If you're being pursued by the police their lights are rendered invisible. \* I ignore daylight savings time rules here, meaning that if observing DST Astronomical Twilight occurs at "6pm" but that's an artificial creation.

James D Miller (2013-11-22 13:42:10)

This polyphasic society website says red glasses are better because they block green as well as blue light. <http://www.polyphasicociety.com/polyphasic-sleep/adaptation/night-lighting/>

Jerry (2013-11-24 09:38:39)

I've been using Uvex blue-blockers in the evenings, and put low-blue lights in my house. The blue-blockers really help when looking at a computer monitor. Wearing them definitely helps me fall asleep earlier, and I often find myself crawling into bed around 9:00 pm. Prior to wearing blue-blockers, I could easily stay up till midnight. I am convinced that wearing blue-blockers in the evening lowers my waking blood sugar the next morning, but the relationship is complex and influenced by other factors.

Tobias (2013-11-24 16:00:45)

On the same day as this (Nov 22) the UK Daily Mail had an article about blue light & health. This stuff going mainstream? <http://www.dailymail.co.uk/health/article-2511979/Could-blue-lights-replace-daily-cup-coffee-Scientists-claim-effective-keeping-alert-caffeine.html>

Birgit (2013-11-27 04:07:13)

<http://justgetflux.com/> Love this little app.

Oli M (2013-12-02 07:43:39)

I find orange/amber lenses a lot handier than tools like FLux, which are not available for my non-rooted iPhone & iPad.

Theragingwalrus (2013-12-03 08:37:52)

Could anyone post what orange glasses work for them? I ordered a pair of 3M glasses ('fuel red mirror') but only their reflective coating is orange, looking through them it's more green.

Seth Roberts (2013-12-04 01:21:48)

I use these: [http://www.amazon.com/Uvex-S0360X-Ultra-spec-SCT-Orange-Anti-Fog/dp/B003OBZ64M/ref=pd\\_bxgy\\_hi\\_img\\_y](http://www.amazon.com/Uvex-S0360X-Ultra-spec-SCT-Orange-Anti-Fog/dp/B003OBZ64M/ref=pd_bxgy_hi_img_y)

## Assorted Links (2013-11-23 05:00)

- [1]Against the new statin guidelines. "For people who have less than a 20 percent risk of getting heart disease in the next 10 years, statins not only fail to reduce the risk of death, but also fail even to reduce the risk of serious illness." This is one way of saying that although heart disease has been a top cause of death for more than half a century, doctors still have almost no idea how to prevent it. Vast amounts of money and time have been spent studying heart disease, but, judging by the great emphasis on an almost useless method of prevention (statins), the researchers who spent the money and time didn't do effective research. Cancer could have a hundred different causes. Heart disease, probably not.

- [2]Follow mainstream food advice, increase risk of death. I've covered this [3]earlier but it bears repeating. "There was a 30 % greater risk of cardiovascular death among the people in the study who ate the cholesterol-lowering oil." The cholesterol-lowering oil was safflower oil, high in omega-6. [4]According to the Cleveland Clinic and [5]many others, oils high in omega-6 are "heart-healthy".
- [6]Use of yogurt to prevent infections in hospitals
- [7]Surviving your stupid stupid decision to go to graduate school (a reading list)

Thanks to Phil Alexander and Claire Hsu.

1. [http://www.nytimes.com/2013/11/14/opinion/dont-give-more-patients-statins.html?\\_r=0](http://www.nytimes.com/2013/11/14/opinion/dont-give-more-patients-statins.html?_r=0)
2. <http://diabetesupdate.blogspot.ca/2013/11/study-lower-your-cholesterol-and-raise.html>
3. <http://blog.sethroberts.net/2013/03/15/omega-6-is-bad-for-you/>
4. <http://health.clevelandclinic.org/2012/05/heart-healthy-cooking-oils-101/>
5. <http://www.theglobeandmail.com/life/health-and-fitness/health/conditions/certain-cooking-oils-should-not-be-labelled-heart-healthy-scientists-argue/article15386660/>
6. [http://online.wsj.com/news/articles/SB10001424052702304391204579178350999833402?mod=trending\\_now\\_2](http://online.wsj.com/news/articles/SB10001424052702304391204579178350999833402?mod=trending_now_2)
7. <http://teambox.com/nb/book-club-o6196/746875/surviving-your-stupid-stupid-decision-to-go-to-grad-school>

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JM (2013-11-23 13:39:42)

As someone who has done extensive reading on causes of heart disease over the past two years - motivated by the heart attack of a loved one who had none of the usual risk criteria - I am appalled at how much time and money has been wasted by scientists pursuing the wrong things. However I am becoming more convinced that there are at least several causes for it and it depends on a combination of lifestyle and genetics with the possibility that infection and other environmental stressors also play a part.

Seth Roberts (2013-11-23 17:52:17)

"[heart disease] depends on a combination of lifestyle and genetics with the possibility that infection and other environmental stressors also play a part." The cholesterol hypothesis of heart disease was very popular, much more popular than it deserved to be based on evidence, I believe, because it allowed health scientists and their supporters to do three things they always want to do: 1. Expensive high-tech research (= high status research). 2. Promote expensive solutions (cholesterol lowering drugs). 3. Promote a pill solution (the whole system is geared for pills). The same thing has happened with depression.

Craig Fratrik (2013-11-23 17:55:31)

As someone considering getting a PHD, I'm not sure exactly what I should take away from #4. 1. Just don't do it. 2. Be more personally hesitant to do it if you have other options. 3. Be more hesitant if you're not going to a highly ranked institution. 4. Be more hesitant if your subject matter is not as employable afterward. Thoughts?

Mark (2013-11-23 19:18:48)

Seth, I'd add a 4th point as to why the cholesterol hypothesis was (and still is!) so popular. Simply, they could measure it. Seth: The neurotransmitter theory of depression has been very popular even though neurotransmitters cannot be measured.

Alex Chernavsky (2013-11-23 21:09:11)

The neurotransmitter theory and the cholesterol theory are both easy to explain to patients: "You're depressed because your serotonin levels are too low". "Your cholesterol numbers are too high, so you are in danger of heart disease".



Nancy Lebovitz (2013-11-24 08:05:25)

I also suspect the cholesterol hypothesis was popular because it gave an opportunity to tell people to not eat food they liked. Telling people they must give up something they like is a basic power grab. Seth: The hairshirt theory of science: the more it makes you suffer, the more true it must be.

dearieme (2013-11-24 15:20:52)

The love of power does much more harm than the love of money.

### **Is Diabetes Due to Bad Sleep? (2013-11-24 05:00)**

When I started eating honey at bedtime to improve my sleep, my fasting blood sugar values suddenly improved. Alternate-day fasting had pushed them into the mid-80s; now they were often in the high 70s, values I had never seen before. Without long walks and alternate-day fasting, [1]my fasting blood sugar values would have been more than 100, which is pre-diabetic.

This made me wonder: Does bad sleep cause diabetes? Plenty of evidence, I found, supports this idea. [2]Here is one example:

Just three consecutive nights of inadequate sleep can elevate a person's risk [of diabetes] to a degree roughly equivalent to gaining 20 to 30 pounds, according to a 2007 study at the University of Chicago. . . . This revelation backs up previous research from Yale and the New England Research Institutes, which showed that people who clock six hours or less of sleep a night are twice as likely to develop diabetes in their lifetime as those who snooze seven hours.

[3]Here is another:

In the study, published in the October issue of the Journal SLEEP, short sleepers reported a higher prevalence of coronary heart disease, stroke and diabetes, in addition to obesity and frequent mental distress, compared with optimal sleepers who reported sleeping seven to nine hours on average in a 24-hour period. The same was true for long sleepers, and the associations with coronary heart disease, stroke and diabetes were even more pronounced with more sleep.

Maybe there is something to it.

1. <http://media.sethroberts.net/blog/pdf/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf>
2. <http://www.fitnessmagazine.com/health/conditions/diabetes/lack-of-sleep-can-lead-to-diabetes/>
3. <http://www.sciencedaily.com/releases/2013/10/131001105059.htm>

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Veda (2013-11-24 11:59:41)

An interesting finding, but I'd like to see this cross-checked against populations that we know suffer from periods of very little sleep, like countries with mandatory army service. For instance, is the rate of diabetes in Israel abnormally high? Everyone

does army service there which involves many many consecutive days of very little sleep. Did diabetes rates during the great European wars also rise steeply? And then, what about lawyers, finance types, and execs? Obviously there can be confounding factors that are hard to disentangle, but a good starting point would be simply to see if the real world patterns bear out this finding. I would feel much more comfortable if it did. I suspect the real world does not bear this out. One of the problems with much of this health research is not just that it's unreplicable, but that people never seem to check them against real world facts that are easily observable. The low-carb fantasy gained incredible traction simply from the fact that no one one really cared about looking into the eating patterns of Asians and French and other thin countries. That these are carb heavy countries should have put paid to that theory from day one, yet the theory is still popular in serious circles. Taubes is still doing his thing, incredibly, and against all reason. Of course, the facts about Asia were pointed out, but somehow they were brushed aside or ignored - after all, it's so *far* away. There seems to be an interest in only looking at what happens in America. Stephen Guynet has his influential theory of food addiction based on delicious food as a driver of obesity - a simple glance at thin countries (France, Asia) that eat deliciously should be enough to dismiss that, but the theory still thrives because it *seems* to fit the American situation so well - as junk food increased, we got fatter. It's easy to craft a narrative of food addiction around *that*, even if it involves ignoring global realities, so Guyenet just brushes aside and makes absurd dismissals when the facts about France, etc are pointed out to him. Seth: I don't know of any "real world facts" that show that this idea is wrong. (By bad sleep I don't mean a few years, such as what happens to Israeli soldiers - I mean many years.) Here is more supporting evidence: <http://www.ncbi.nlm.nih.gov/pubmed/20425066> The association between sleep apnea and diabetes after being corrected for obesity, mentioned in another comment, is also more supporting evidence.

Dan (2013-11-24 12:57:34)

Do you think it's the honey, specifically, or the sugars? I was thinking of trying a large handful of grapes instead. After dinner I've been eating dessert the last week, ice cream or pie, and have slept better but I don't like the idea of adding sugary desserts to my daily meals. A bit of honey would be fine but it doesn't have much going for it except the sugar. Grapes may add other benefits nutritionally speaking. Seth: I think it's the sugars. I doubt that the other parts of honey matter.

dearieme (2013-11-24 15:19:13)

An extreme case of bad sleep would be people with sleep apnoea. Does sleep apnoea correlate with diabetes? If so, is there a common explanation in being fat, or is that just another correlate? I understand that sufferers from acromegaly tend to both diabetes and sleep apnoea, so those would be cases of a common explanation (tumour on the pituitary) rather than cause-and-effect.

Seth Roberts (2013-11-25 05:07:33)

"Does sleep apnoea correlate with diabetes? If so, is there a common explanation in being fat, or is that just another correlate?" There is a strong association between them. This report [http://www.idf.org/webdata/docs/DRCP %2081\(1\) %20Shaw %20et %20al.pdf](http://www.idf.org/webdata/docs/DRCP%2081(1)%20Shaw%20et%20al.pdf) says

There has long been a recognized association between type 2 diabetes and OSA, and there is emerging evidence that this relationship is likely to be at least partially independent of adiposity [25,1,2].

In other words, the association remains after adjustment for degree of obesity.

## Dark Picture of Doctors (2013-11-25 05:00)

[1]A New York Times article about error in a risk calculator paints an unflattering picture of doctors:

1. The risk calculator supposedly tells you your risk of a heart attack, to help you decide if you should take statins. It overestimates risk by about 100 %. The doctors in charge of it were told about the error a year ago. They failed to fix the problem.

2. The doctors in charge of the risk calculator are having trouble figuring out how to respond. The possibility of a

simple retraction seems to not have occurred to them. As one commenter said, "That the researchers, once confronted with the evidence it was faulty, struggled with how to handle the issue is quite telling."

3. In the comments, a retired doctor thinks the problem of causation of heart disease is very simple:

Statins . . . are only one component in the prevention and treatment of coronary artery disease. Item number one is to have a normal weight. Item two is never smoke. Item three is exercise. Four is to eat an intelligent diet. Five is to remove stress from your life as much as practical. If everybody did these five things (all of which are free), the incidence of coronary artery disease would plummet and many fewer would need statins.

This reminds me of a doctor who told me she knew why people are fat: They eat too much and exercise too little. She was sure.

4. In the comments, a former medical writer writes:

Several years ago, I wrote up, as internal reports, about two dozen transcripts recorded at meetings with local doctors that a major drug company held all around the country. The meetings concerned its statin. Two ideas presented at these meetings by the marketing team, and agreed with by the physician attendees, were: 1) the muscle pain reported by patients was almost never caused by the statin but was the result of excessive gardening, golfing, etc; 2) many children should be prescribed a statin and told that they would have to take the drug for life.

5. Another doctor, in the comments, says something perfectly reasonable, but even her comment makes doctors look bad:

I am a physician and I took statins for 2 years. Within the first 6 months, I developed five new serious medical problems, resulting in thousands of dollars spent on treatments, diagnostic tests, more prescription medications, and lost work. Neither I nor any of my 6 or 7 different specialists thought to suspect the statin as the source of my problems. I finally figured it out on my own. It took 3 more years for me to get back to my baseline state of health. I had been poisoned. I see this all the time now in my practice of dermatology. Elderly patients are on statins and feel lousy, some of whom are also on Alzheimer's drugs, antidepressants, Neurontin for chronic pain, steroids for fibromyalgia. These poor people have their symptoms written off as "getting older" by their primary physicians, most of whom I imagine are harried but well intentioned, trying to follow guidelines such as these, and so focused on treating the numbers that they fail to see the person sitting in front of them. The new guidelines, with their de-emphasis on cholesterol targets, seem to tacitly acknowledge that cholesterol lowering has little to do with the beneficial actions of statins. The cholesterol hypothesis is dying. If statins "work" by exerting anti-inflammatory benefits, then perhaps we should seek safer alternative ways to accomplish this, without subjecting patients to metabolic derangement.

6. A patient:

My previous doctor saw an ultrasound of my Carotid Artery with a very small buildup and told me I needed to take crestor to make it go away. That was four years ago and I still suffer from some memory loss episodes as a result. The experience was terrible and he's toast because he denied it could happen.

## 7. A bystander:

For the past couple of years my job has involved working with academic physicians at a major medical school. After watching them in action – more concerned with personal reputation, funding and internecine politics than with patients – it's a wonder any of us are limping along. And their Mickey Mouse labs and admin organizations can barely organize the annual staff holiday potluck without confusion and strife. So these botched-up results don't surprise me at all.

I am not leaving out stuff that makes doctors look good. Maybe this is a biased picture, maybe not. What I find curious is the wide range of bad behavior. I cannot explain it. [2]Marty Makary argued that doctors behave badly due to lack of accountability but that doesn't easily explain ignoring a big error when pointed out ( #1), an immature response ( #2), a simplistic view of heart disease ( #3), extraordinary callousness ( #4) and so on. In her last book (Dark Age Ahead), Jane Jacobs wrote about failure of learned professions (such as doctors) to police themselves. Again, however, I don't see why better policing would improve the situation.

Thanks to Alex Chernavsky.

1. <http://www.nytimes.com/2013/11/18/health/risk-calculator-for-cholesterol-appears-flawed.html>
2. <http://online.wsj.com/news/articles/SB10000872396390444709004577652201640230514>

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Alex Chernavsky (2013-11-25 06:09:31)

This post reminds me of an outstanding book I read a couple of years ago. It's called, [1]Mistakes Were Made (But Not by Me): Why We Justify Foolish Beliefs, Bad Decisions, and Hurtful Act, by Caroll Tavris and Elliot Aronson. The book documents the extreme lengths to which people will go in order to avoid admitting that they were wrong. Seth: I agree, several of the examples can be seen as people not wanting to admit they were wrong. For example, a doctor who prescribed statins doesn't want to admit that statins are dangerous. Maybe doctors look especially bad because they make a lot more big mistakes than people in other jobs.

1. <http://www.amazon.com/Mistakes-Were-Made-But-Not-ebook/dp/B003K15I0E/>

jon (2013-11-25 07:52:26)

It would be nice if we had a free market in the medicine market. These results are to be expected. In a free market a possible cure to these mistakes would be: If you go in for surgery you get insurance and get paid an agreed upon amount of money if something bad happens. If a doctor has really poor results the insurance company won't supply or will make the cost of insurance quite high do to the poor results. We will then have price signals that will help us determine which doctors are best and what practices are best. Right now, under government health care (yes, in the USA we have had government health care for a very long time - when the industry is regulated to the point that people cannot choose anymore then it is government healthcare) there are no true or very little price signals. Which is unfortunate. Many people are suffering needlessly and even dying because of it.

Tom Passin (2013-11-25 08:15:56)

I have long suspected that doctors have a strong tendency to have to be right for a combination of two reasons: 1) history - doctors used to be quite dogmatic and arrogant about their practice of medicine, so those attitudes became baked into the system; and 2) High stakes - since peoples' health and lives are at stake, it's hard to be wrong. Very human and understandable, but not adequate as a way to function these days.

MJB (2013-11-25 08:26:32)

John Banja, assistant director of health science ethics at the Center for Ethics and associate professor of rehabilitation medicine: Do perfectionist doctors have trouble managing medical errors? That's part of the idea. A bigger part, however, is that most health professionals (in fact, most professionals of any ilk) work on cultivating a self that exudes authority, control, knowledge, competence and respectability. It's the narcissist in us all—we dread appearing stupid or incompetent. The problem, I think, is that health care is so unpredictable and stressful and contains such high stakes, that many practitioners exaggerate their competence. They come to believe that one ought never appear ignorant, uncertain, hesitant or wrong. So when this professional self-image is challenged, these persons are tempted to withdraw, or become hyper-defensive or just plain arrogant. [http://www.emory.edu/EMORY\\_REPORT/erarchive/2005/February/February7/sandr1.htm](http://www.emory.edu/EMORY_REPORT/erarchive/2005/February/February7/sandr1.htm)

dearieme (2013-11-25 08:31:59)

One thing that's not made clear on any article I've read on this subject is that the whole idea of a "risk calculator" may be bogus anyway. What you'd really like is a list of causes, or of contributors to causes, of heart attacks. What you actually have is a list of positive correlates of heart attacks. That's a plain different animal. For example: is their risk calculator consistent with the unexplained rise in heart attack rates during the five decades before 1960 or so, and the unexplained decline thereafter? Not a chance, I'll bet! In which case, it is not based on causes.

Mark (2013-11-25 08:57:37)

Dearieme, I agree completely with the notion that a "risk calculator" (based on a probability model at the population level) applied to individuals is inherently bogus. Always. Any "risk" calculation (as much as that means anything) must be conditioned on the individual.

Ripken Holt (2013-11-25 09:31:06)

Hey Seth, could you post the code you used to make the programs you use to test your brain function? I'm starting to take flax seeds and want to test my brain to figure out the optimal dose but have no knowledge of writing code. Another thing I would appreciate would be if you could give me a non-computer idea for testing my brain. Thanks so much! Seth: I once posted the code, it was a complete waste of time. I might share the software with you via Dropbox, as I have done for several people, if you could give me a good reason why.

Gina (2013-11-25 09:47:07)

My mother recently had a physical where the doctor scolded her for not taking the Crestor has been prescribing for her every year. She told him that they gave her migraines and that when she researched its efficacy that it didn't seem to provide any benefit whatsoever for women. His response? "Your cholesterol is too high." I asked her what his response was to her complaint of migraines. Nothing. He prescribed it again, and again she is not filling the prescription.

elduderino (2013-11-25 11:19:47)

MD here. I agree with you, roughly. We are, as doctors, neither trained in statistical reasoning nor any kind of critical thinking outside of the diagnose-then-medicate paradigm. With the advent of "guidelines", things got worse instead of better, because the pharmaceutical industry now has only one attack point instead of convincing every single doctor individually, and physicians feel bound by the guidelines because deviating could be interpreted as malpractice. Every morning I go to the hospital, I know that the medical decision making part of my job could be done much "better" (more adherent to guidelines) by a piece of software. This nonsense system is ultimately frustrating. It also defies everyday experience. Whenever someone is about to die, we stop any medication except for fluids and oxygens, and suddenly: blood pressure becomes normal, pulse normal, blood sugar rock stable. What did we do before that, exactly? I wonder. I remember seeing a study where some case was presented and the guidelines said "prescribe this". Something like 95 % said they would prescribe it, less than 70 % were convinced that it is useful and less than 40 % would take it themselves if they had the condition described. That's what I tell my patients: Always ask what your doctor would do if he was in your place, never "what shall I do". You're more likely to get a useful answer. (This idea is a heuristic from Taleb's Anti-fragile). And yes, except for some rather rare cases, to me, statins are the ultimate modern-day quackery. What quackery is is pitifully decided by majority vote, not by independent science, not by statistics, not by experience,

not by observation or even inference. People are so shit-scared by "high cholesterol" that not taking a statin, even only for a couple of weeks, is the same as not taking an antibiotic in a severe infection. "You're gonna die!!!!111!!!11!eleven!11" Erm, what? I furthermore roughly agree with the other commentators above my comment. They all raise good points. Seth: Thanks for your comment. It has seemed to me that doctors are trained in "critical thinking" just enough to criticize alternative medicine but not enough to criticize mainstream medicine.

David (2013-11-25 12:50:46)

How can you have a "risk calculator" when the cause of the disease is officially unknown? It'd be interesting to see an attempt to walk back this "risk calculator"'s basis back through all the dubious correlations to the supposed "data". Seth: You can calculate your risk of dying in a plane crash even though the cause(s) of plane crashes are unknown.

David (2013-11-25 12:53:35)

"The doctors in charge of the risk calculator are having trouble figuring out how to respond." That's because the purpose of the "risk calculator" is to sell more drugs, and to make it more reality-based would sell less. Of course that results in a puzzle. What to do??

dearieme (2013-11-25 15:18:19)

I'll bet the causes of plane crashes are known rather better than the causes of heart attacks. But suppose that there's a positive correlation between plane crashes and the proportion of passengers who are men. In the medical world that would be added to the list of risk factors because it's a positive correlate.

Mark (2013-11-25 16:29:36)

One cannot reasonably calculate their true probability of dying in a plane crash because it depends on nonrandom errors. Again, it's conditional on the precise plane trip, and it's most likely either essentially zero or essentially one.

Alex (2013-11-25 19:47:56)

Elduderino, thank you for an enlightening perspective. I have wondered whether most doctors have ever read anything about cholesterol and stains that wasn't put in their hands by drug companies, through a drug rep or by funding of favorable research.

Audrey (2013-11-25 21:15:10)

Mark said: *One cannot reasonably calculate their true probability of dying in a plane crash because it depends on nonrandom errors. Again, it's conditional on the precise plane trip, and it's most likely either essentially zero or essentially one.* Fly Air India sometime & see if you still think this is true.

Portlander (2013-11-25 22:57:46)

Always remember... (Most) MD's aren't scientists. They aren't even engineers. They are mechanics, and not very good ones.

Audrey (2013-11-25 23:39:52)

Michael Eades has written many times about how most physicians can't comprehend the typical journal article. Case reports yes, journal articles no.

Alex Chernavsky (2013-11-26 05:04:26)

@Audrey: John Ioannidis has [1]written many times about how most journal articles aren't worth comprehending.

1. <http://www.theatlantic.com/magazine/archive/2010/11/lies-damned-lies-and-medical-science/308269/>

Ripken Holt (2013-11-26 11:18:25)

Seth what did you mean by a good reason? I do not think there is any way it could profit you if that is what you meant. I have been reading through your archives after finding your website a week ago (I have read about half of your posts in that time), and want to find the optimal daily dose of flax seeds for me, and since I do not know how to write code I am having trouble

doing it. Any help would be greatly appreciated. Seth: Yes, that's what I mean. I have learned that simply giving strangers code is a waste of time.

How Badly Are Statins Overused? (2013-11-30 18:03:17)

[...] Pointer from Seth Roberts. [...]

Barry Brolley (2013-12-09 10:42:18)

Hi Seth, Dr. Michael Eades (Protein Power) blogged yesterday a moving piece about the frustration he dealt with from the medical system concerning his father: <http://www.proteinpower.com/drmike/statins/statin-madness/#more-5428> scroll down to the comments and look at the one from Gregory Porkrywyka "Statins work and are safe. Period. This has been shown again and again, in men and women"

### Assorted Links (2013-11-26 05:00)

- [1]No correlation between omega-3 levels and cognitive function. I found strong effects of flaxseed oil (high in omega-3) in experiments, so this finding doesn't worry me. Maybe the measures of cognitive function in this study depended on too many things they didn't measure or control.
- [2]Does methanol cause multiple sclerosis? Woodrow Monte makes a good case. "In the 1940s, . . . the National Multiple Sclerosis Society found the incidence of the disease to be virtually equally distributed between the sexes. . . . The real sea change in the incidence of MS in women did not come until after the introduction of a brand new methanol source . . . a can of diet soda sweetened with aspartame has up to four times the amount of methanol as a can of green beans. . . . At the 59th annual meeting of the American Academy of Neurology in Boston on April 26, 2007
- [3]Honey in human evolution. "Upper Paleolithic (8,000 – 40,000 years ago) rock art from all around the world depicts early humans collecting honey. . . .The Hadza hunter-gatherers of Tanzania list honey as their number one preferred food item."
- [4]What one climate scientist really thinks about Michael Mann. "MBH98 [Mann et al.] was not an example of someone using a technique with flaws and then as he [Mann] learned better techniques he moved on... He fought like a dog to discredit and argue with those on the other side that his method was not flawed. And in the end he never admitted that the entire method was a mistake. Saying "I was wrong but when done right it gives close to the same answer" is no excuse. He never even said that . . . They used a brand new statistical technique that they made up and that there was no rationalization in the literature for using it. They got results which were against the traditional scientific communities view on the matters and instead of re-evaluating and checking whether the traditional statistics were [still] valid [in this unusual case] (which they weren't), they went on and produced another one a year later. They then let this HS [hockey stick] be used in every way possible . . . despite knowing the stats behind it weren't rock solid." Smart people still fail to grasp the weakness of the evidence. Elon Musk, the engineer, [5]recently blogged, responding to Tesla fires, that Tesla development must happen as fast as possible because if delayed "it will . . . increase the risk of global climate change."

Thanks to Dave Lull, Stuart King and Joe Nemetz.

1. <http://www.newscientist.com/article/mg21929363.800-fish-oils-dont-boost-brain-power.html#.UoxedsSxWSp>
2. <http://www.whilesciencesleeps.com/files/While%20Science%20Sleeps%20-%20Chapter%209%20%28Prepublication%20copy%29%20Website%203-15-2012.pdf>
3. <http://www.lightofamillionfires.com/2012/07/30/alyssa-crittenden-how-honey-helped-to-make-us-human/>

4. <http://climateaudit.org/2013/11/20/behind-the-sks-curtain/>
5. <http://www.businessinsider.com/elon-musk-blog-post-on-tesla-fires-2013-11>

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Scott Pierce (2013-11-26 08:29:32)

I wonder about the estrogens in flaxseed and what their impact on your cognitive measurements might be vs. the omega-3s. Seth: I agree, I should try another source of omega-3, such as fish oil.

Zach H (2013-11-26 09:29:07)

Is Michael Mann the only one whose model says this? One common problem with critical examples like this is that people latch onto them and insist that to discredit the key example somehow refutes all future work based on the same ideas, even as the results are applied to good effect. I'm not familiar with this situation, but the constant discussion about the hockey stick seems counterproductive when newer, presumably stronger work exists. Seth: I'm not sure what you mean by "this" ("whose model says this"). If you mean "there has been a very sharp warming during the 20th century, much faster than previous warming" the answer is yes, only Mann's model showed this. To call this "one example" is not quite fair. Mann's work was given enormous publicity. At the time of the enormous publicity, many climate scientists must have had considerable doubts about it but said – at least to the public – nothing.

dearieme (2013-11-26 16:54:53)

Mann's model also suppressed the Medieval Warm Period (the period of, for example, the Viking settlement of Greenland) which the global warmongers were ecstatic about - otherwise they would have to explain how you can get rapid warming before industrialisation. It was a wonderfully convenient untruth.

dearieme (2013-11-27 06:07:26)

Zach, here's the account you need of the great Hockey Stick fraud/swindle/accidental error, it could 'ave 'append to anyone and that's God's truth.

### **Darker Bedroom Better Sleep (2013-11-27 05:00)**

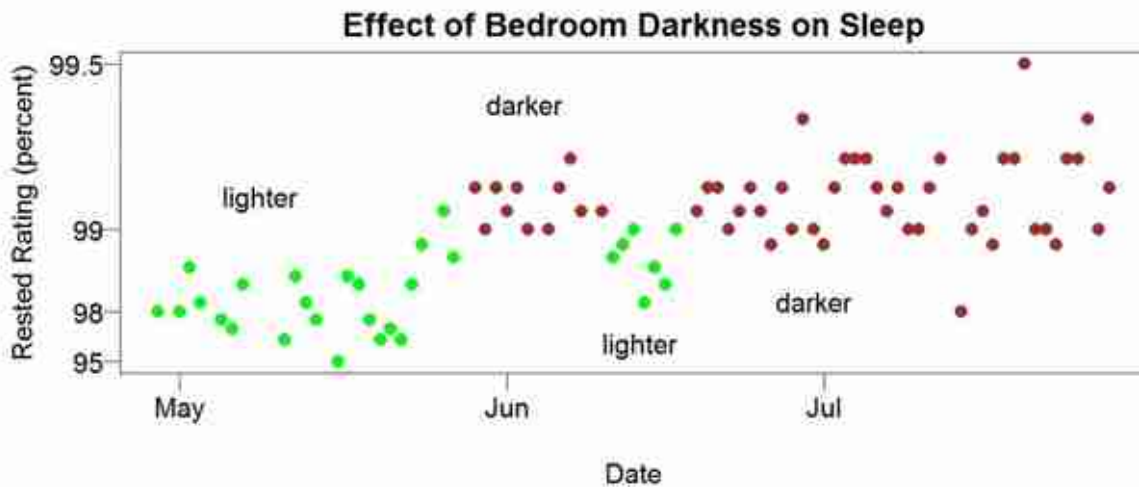
When I moved back to Berkeley from Beijing last spring, I noticed that my sleep was worse in Berkeley, months after arrival. I woke up less rested than in Beijing. There was no obvious explanation. My life was similar in the two places, especially on dimensions that influence sleep. I had expected my health to be better in Berkeley than Beijing because of Beijing pollution.

Wondering why my sleep was different, I realized my Beijing bedroom was probably darker than my Berkeley bedroom. In Beijing I live in an apartment complex and cover most of my bedroom windows to block outside light and for privacy. In Berkeley, I live in a house. My bedroom window looks out over an enclosed backyard. That my Berkeley bedroom might not be dark enough had never occurred to me. It was fairly dark – no street light, no alley light, no light from neighbors.

Did the (likely) difference in darkness contribute to the difference in sleep? I tested this possibility by making my Berkeley bedroom much darker. Later I made it lighter, then darker again (an ABAB design). I measured sleep quality by rating how rested I felt when I woke up on a 0-100 percentage scale where I estimated how rested I felt compared to completely rested (= 100 %). I have used this scale for many years. Here are the results:

[1]





To my surprise, when I made my bedroom darker my sleep improved. It got worse when I returned my bedroom to its original darkness. It improved again when I again made it darker. Until I graphed the data, I hadn't realized that my baseline ratings probably shifted shortly before I made my bedroom darker. (I kept a paper record of my sleep, which made it hard to graph the data. Failure to notice this baseline shift was the last straw....I have gone paperless.) In spite of the baseline problem, the data are convincing that even at low intensities, light intensity mattered.

Depth of sleep (controlled by the amplitude of a circadian rhythm) is surely controlled by the amplitude of the light/dark rhythm. Below a certain threshold of light intensity, however, reducing light at night won't make a difference. These observations implied that the threshold was lower than I'd thought. Support for the idea that the threshold is low – lower than other people realize, too – comes from [2] a study published last summer after my experiment. Researchers reanalyzed old data to see if there was a correlation between lunar phase and sleep quality. Their subjects had slept in a windowless laboratory room. Nevertheless, sleep was worse during a full moon. [3] One researcher was baffled. "What I can't get my head around is, what would that cue be?" he said. In other words, how could the phase of the moon influence sleep? I'm not puzzled. The subjects spent only a few nights in the sleep lab. I believe there was carryover from when subjects slept at home, in rooms open to moonlight. Light from a full moon reduced the amplitude of sleep. This affected sleep later in the lab for the same reason jet lag lasts several days.

Is your bedroom dark enough? The light at night in Person X's bedroom will differ in many ways from the light at night in someone else's bedroom so a one-size-fits-all rule (your bedroom should be darker than . . . ) makes little sense. What does make sense is personal science: measure your sleep and test different levels of darkness.

1. [http://s919.photobucket.com/user/twoutopias/media/2013-11-25effectofbedroomdarknessonsleep\\_zps2ddcf518.jpg.html](http://s919.photobucket.com/user/twoutopias/media/2013-11-25effectofbedroomdarknessonsleep_zps2ddcf518.jpg.html)
2. <http://www.sciencedirect.com/science/article/pii/S0960982213007549>
3. <http://news.nationalgeographic.com/news/2013/07/130725-full-moon-sleep-circalunar-clock/>

dearieme (2013-11-27 05:15:03)  
I just wear an eye mask.

August (2013-11-27 07:22:04)

Yes. This one is much more obvious to me than the blue blockers. When I blacked out my windows, and reduced the overall amount of light I was exposed to, I saw a great improvement in sleep. The blue blockers however, didn't seem to do anything. Some of the Amazon reviews suggest some blue blockers are better than others, so maybe I need a different pair. Without the blue blockers I would get sleepy and go to sleep. With the blue blockers on, it seemed I was not getting sleepy. My sleep quality seemed the same, but I think I might stay up longer if I wear the blue blockers and don't pay attention to the time.

Rxshauna (2013-11-27 08:54:40)

This makes sense. I am so sensitive to any amount of light when I sleep that I have to put sticky notes over lights on the TV, DVR, clocks, etc when I am in hotels. I find them incredibly bright and annoying. I have a niece and nephew who keep a TV on while they sleep and I worry about how this negatively affects their health.

Charlie Currie (2013-11-27 08:56:48)

Seth's sleep improvement guide: 1. Vitamin D early in the morning 2. Blue light blockers at night 3. Honey before bed time 4. Dark bedroom I'm surprised he ever wakes up...ha What I'd like to see/know, is how much improvement each one provides independently of the others; does anyone of them overcome a deficiency of the others; i.e., will darkening your bedroom provide the same quality of sleep as doing all four? This seems, to me, that it would be a very long experiment, involving many confounders - time of year being the largest (does our sleep improve, naturally, as daylight lessens, or the opposite, or not at all?). All good stuff for those who have trouble sleeping - inexpensive and easy to do. But, I think the darkened bedroom is probably the winner over all the others. Of course, our early ancestors, before they moved into caves, slept under very bright night skies, especially when the moon was full.

peter (2013-11-27 15:57:33)

wouldn't a sleep mask be easier than darkening a room? (that's what i've using for years) Seth: I have been told a sleep mask is worse. Someday I will try one.

gwern (2013-11-28 08:19:02)

> Support for the idea that the threshold is low — lower than other people realize, too — comes from a study published last summer after my experiment. Researchers reanalyzed old data to see if there was a correlation between lunar phase and sleep quality. Their subjects had slept in a windowless laboratory room. Nevertheless, sleep was worse during a full moon. One researcher was baffled. I have completely failed to replicate their claim using 1600+ nights of Zeo data from myself & 2 other people: [http://www.gwern.net/Lunar %20sleep](http://www.gwern.net/Lunar%20sleep) There's nothing there. It was a years post hoc analysis on their part, and probably just data dredging.

## Assorted Links (2013-11-28 05:00)

- [1]gut bacteria improve response to cancer chemotherapy
- [2]lifespan depends on season of birth. Does more sunshine during pregnancy produce children who live longer?
- [3]Trouble in the Berkeley anthropology department. One professor said, "It's not true we feud. We don't talk to each other."
- How do people live without [4]laptop keyboard covers?

Thanks to Casey Manion and Richard Sprague.

1. <http://www.theverge.com/2013/11/21/5130280/gut-bacteria-could-alter-efficacy-of-cancer-treatments-says-new-studies>
2. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC30243/>
3. <https://docs.google.com/viewer?url=http://www.christopher-shea.com/wp-content/uploads/2011/09/Can-a-Historian-Lead-Berkeleys-Anthropologists.pdf>
4. [http://www.ebay.com/sch/i.html?\\_odkw=laptop+thinkpad+keyboard+covers&\\_osacat=0&\\_from=R40&\\_trksid=p2045573.m570.11313&\\_nkw=laptop+thinkpad+t530+keyboard+covers&\\_sacat=0](http://www.ebay.com/sch/i.html?_odkw=laptop+thinkpad+keyboard+covers&_osacat=0&_from=R40&_trksid=p2045573.m570.11313&_nkw=laptop+thinkpad+t530+keyboard+covers&_sacat=0)

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dearieme (2013-11-28 09:09:35)

The Berkeley story is good fun. Whether our own (Cambridge's) department of "Arch and Anth" has such antics I don't know. (An Oxford-educated friend once complained to me that "the trouble with Cambridge is that people don't gossip enough. A college or department could be in civil war and the rest of us wouldn't know about it. In Oxford everyone would know in no time.") The last time I was involved with a change in Head of Department, the body with the power of choice (called, can you believe it, a Syndicate) not only canvassed the views of the academic staff but also of the assistant staff, and then the Chairman of the Syndicate held a meeting with the academics to discuss what was to be made of those responses. It proved a good way to proceed, with a widely respected chap appointed Head and only one nose put badly out of joint. It turned out that the views of the academics and of the assistants (secretaries, workshop staff, IT and electronics staff, and so on) were pretty congruent. I must say that the consulting of the assistant staff reminded me of a comment from a German research student whom I supervised decades ago: "You are so democratic here". I corrected him: "We are so democratic here". He had the good grace to chuckle. Naturally the power of the central administration grows by the year: whether the university still feels "democratic" to the old hands, I don't know.

George. (2013-11-28 12:41:39)

Why do you need keyboard covers? Seth: They make cleaning possible. Or at least much easier.

S.M. (2013-11-28 12:45:44)

The laptop keyboard cover is a good one :) After I had my inspiron repaired, I got a cover because no matter how hard I tried I could never keep it cleaned. Now I need a new laptop and I am looking at an asus. What I really like about it is the chiclet keyboard. Much easier to clean around keys. You can probably find good ones for a desktop as well. [http://en.wikipedia.org/wiki/Chiclet\\_keyboard](http://en.wikipedia.org/wiki/Chiclet_keyboard) Would something like this work better? [http://www.ebay.com/itm/10pcs-Apple-Chiclet-Style-Ultra-Slim-wired-USB-Keyboa rd-Black-FCC-CE-Approved-/141085947031?pt=PCA \\_Mice \\_Trackballs &hash=item20d960b497](http://www.ebay.com/itm/10pcs-Apple-Chiclet-Style-Ultra-Slim-wired-USB-Keyboa rd-Black-FCC-CE-Approved-/141085947031?pt=PCA _Mice _Trackballs &hash=item20d960b497) The keyboard cover is great at keeping my keyboard clean, but I still want to get rid of it. Maybe I'm being picky :) Thank you for the links!

Nancy Lebovitz (2013-11-28 12:54:39)

The month of birth effect is larger in Austria than Denmark, so it's not just latitude. Maybe Austria is cloudier?

Seth Roberts (2013-11-28 13:52:04)

I too prefer a chiclet keyboard. I just got a laptop with a chiclet keyboard but I still was a little reluctant to use it until I got a keyboard cover for it. Maybe I have mild OCD.

Crystal (2013-11-29 16:42:25)

Interesting link about the gut bacteria. I saw a show a few months back where they had an 'expert' who specialised in the internal bacterial environment for humans - makes sense, we are an ecosystem. Personally, I wonder whether this might be more likely the reason for the success of the raw food movement, ie that it promotes a better internal bacterial balance, rather than the touted enzyme activity, especially since Tim Ferriss has found fermented foods to be a critical part of diet for weight loss purposes. I'd be fascinated to know the differences in bacterial types and populations between modern man and his predecessors.

## **Why Does Bedtime Honey Improve Sleep? Helpful Data (2013-11-29 05:00)**

I speculated that [1]bedtime honey improves sleep because it consists of an equal mix of glucose and fructose. Glucose is used by the brain during the first half of the night. By the second half, the fructose has been converted to glucose. However, honey has other ingredients, so it is not obvious that fructose and glucose are responsible. I focused on them partly because a need for glucose and fructose during sleep would explain (in evolutionary terms) why we eat dessert after meals, a puzzling separation.

Other carbohydrates also increase blood glucose. Do other carbs also improve sleep? Stuart King (who told me how much bedtime honey improved his sleep) pointed me to a 2010 discussion on a body-building forum. One person wrote:

I save a good portion of my carb intake for my last meal as I've found I sleep better afterwards. The worst nights of sleep I'd have during my prep were during my low carb days. Brutal.

Which supports the idea that blood glucose is running down, with bad consequences, during sleep. Even more telling was what someone else said:

Why does this happen to me? Before I was eating 2 cups of milk and a banana right before bed and would sleep fine. In the past few days I've tried to switch to 1 cup cottage cheese and 2 tbsp natty peanut butter. I've figured out this is why these past few nights I've had much more trouble sleeping and have had to resort to taking more OTC sleep aids. Then I'll still wake up in middle of the night and can't fall back asleep so I end up having a peanut butter and jelly sandwich and a cup of milk and 20 min later fall back asleep and sleep fine through the rest of the night.

Bedtime Snack A (2 cups of milk, banana): Good sleep. Bedtime Snack B (1 cup cottage cheese, 2 T peanut butter): bad sleep. There are hundreds of differences between the two snacks but one is that A, [2]because of the banana, has about 6 g glucose and 6 g fructose (plus 3 g sucrose) and B has [3]neither glucose nor fructose (nor sucrose). Stuart and I and several others have found that one tablespoon of honey (20 g) at bedtime greatly improves sleep. That much honey has about 8 g glucose and 8 g fructose. This is excellent evidence that it is the glucose and fructose in bedtime honey that improve sleep. Further evidence is that a snack with lots of sucrose (jelly) also produces good sleep.

[4]More about bedtime honey and sleep.

1. <http://blog.sethroberts.net/2013/11/05/honey-at-bedtime-improves-sleep/>

2. <http://nutritiondata.self.com/facts/fruits-and-fruit-juices/1846/2>

3. <http://nutritiondata.self.com/facts/dairy-and-egg-products/11/2>
4. <http://blog.sethroberts.net/category/sleep/honey-sleep/>

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Jogo Tyree (2013-11-29 07:03:08)

I am an American living in Thailand. There is a brand of Thai honey that comes with a booklet that lists uses of honey. One item in the list says that honey promotes good sleep. I'd never seen that anywhere else until your series of posts. I saw no noticeable effect when I tried it just before bed, but I had no sleep issues to overcome to begin with. For someone with issues, though, using honey as an aid seems to be backed up by Thai folk wisdom....for whatever that's worth.

Alex (2013-11-29 07:55:37)

I tried the bedtime honey, because I had already noticed that evening carbs would make me sleep better: so far, it totally backfired 3 times out of 3. I suspect it is due to the fact that I am generally trying to avoid sugars, and a lot of carbs: what happens with a spoonful of honey is that my brain goes in hyper-mode like it did not happen to me in ages. I used to suffer from insomnia, it is better now... and honey seem to make it worse. Vitamin D in the morning: good. Blue blocking glasses/f.lux: good. Meditation: good. Honey: 2-3h wide awake, no worries, just my mind speeding all over the place. I will experiment more when I will go back to freelancing, when sleeping 3h later can be compensated waking up later... Seth: Have you tried a smaller amount of honey? You might also want to try getting more sunshine in the early morning and adjusting the time of the Vitamin D - it's hard to know the best time to take it without trial and error. That may help "turn off" your brain at night.

dearieme (2013-11-29 13:45:28)

Not entirely facetiously: have you thought of trying the effect of a lullaby? Seth: On a visit to Stockholm when I was a teenager, I noticed that the Swedish narration in a museum put me to sleep. Later, when I was a graduate student, I tried listening to a foreign language at bedtime. I can't remember the effect. Nowadays I fall asleep very fast.

Tom (2013-11-29 20:54:51)

After having some sleep problems, basically sleeping "normally" yet never feeling rested, and feeling a bit curious, I tried some of the ideas here. f.lux: Using it, not sure of effect. A number of other sources of light, so the orange glasses could be more decisive. Vitamin D: One capsule 5000 IE within 5 minutes of waking up; effect unclear, possibly some improved wakefulness. Honey: One teaspoon before going to bed; when tried, vivid dreams and wake up after about 3 hours fairly rested, though I then normally wait and go back to sleep again for a normal total of 7-8 hours. Interesting. Standing until exhaustion: One-legged knee bends until exhaustion before going to bed, quickly done and seems to help well with falling asleep. Seth: I take my morning Vitamin D at 8 am, which is 3-4 hours after I get up. You might also want to try getting more sunlight in the morning.

shtove (2013-11-30 16:44:50)

Seth's Shangri La oil method had obvious benefits for appetite, so much so that I didn't need to continue past a month. So I'm happy to hear his recommendations for sleep improvement. Sadly the vit D hasn't done it for me. Tried variations over the past year, but nothing that helps with sleep. Happily I've gone a long way in the past couple of months to solving my chronic insomnia. The main thing is magnesium supplementation, especially epsom salt spray - good link here: <http://culinarytidbits.com/how-to-make-magnesium-oil-spray-painless/> Not perfect, but it's a big improvement. This week I took the honey (1 tsp) along with the magnesium supplement - on one night it gave me the best night of non-pharma sleep I've had for thirty years: almost 10 hours, and I awoke rested with an arms-out-wide stretch. Will apply this combination more carefully for the next fortnight and report back. The best explanation of the honey effect I've read is at this commercial link: <http://www.cornectfamilyfarm.com/index.php/articles-tips-links/21-honey-more-than-a-sweetener-naturally>

dearieme (2013-12-01 07:24:41)

My wife and I have both just had an exceptionally good night's sleep. Perhaps the secret was eating dessert (tiramisu) about

an hour before bed. Unfortunately, much though I love it, I couldn't face eating tiramisu every evening.

Jay (2013-12-01 21:55:50)

I have to admit that I am quite often awoken by the urge to urinate. One of my speculative hypotheses as to why honey and other more simple carbohydrates might improve sleep is that carbohydrates make your body hang onto water (carbo...hydrate). The inverse is also true – most bodybuilders who are preparing for contests and those preparing for sports with a 'weigh in' eliminate carbohydrates entirely a few days before the event to empty their body of as much stored water as possible to increase definition. People who go on low carb diets hit a point where they are also urinating frequently as their bodies utilize their glycogen stores before going into ketosis. This initial weight loss is a cause of confusion and frustration for people who think that they are making very quick progress on whatever diet they have chosen, as even diets that are not "low carb" still cause one to consume less of them due to the calorie deficit – people lose water weight as a result. I think I may have even learned that from your Taubes interview! Anyway, not sure of any of this. Just an idea. Some people report getting up several times during the night to urinate when starting out their low carb diets. Maybe you have stumbled upon the reverse? Seth: When I started using the honey, I found myself getting up to pee more often than usual (usual = zero times). The opposite of what your theory predicts. After a few nights it stopped (maybe because I reduced my fluid intake).

dearieme (2013-12-02 03:10:42)

The Old England Journal of Medicine chips in. <http://www.dailymail.co.uk/femail/article-2516510/The-honey-diet-Drop-dress-size-party-season-having-spoonful-honey-bed-following-delicious-recipes.htm> I

tom (2013-12-02 14:55:34)

This lady dr says when she got her patients' vitamin D to 60-80 ng/ml, they had more stage III sleep and started healing problems. She thinks it's something about vitamin D receptors in an area of the brain that help paralyze the body during certain stages of sleep. <http://www.youtube.com/watch?v=xF24xmJQK1k> Seth: Thanks. Her name is Dr. Stasha Gominak. Maybe it was only patients who took the Vitamin D in the morning who improved. Others have reported that taking Vitamin D in the evening made their sleep worse. In other words, her study confounded two things (= changed two things at the same time). 1. Taking more Vitamin D. 2. Doing something that improves sleep. It may have been the second factor, not the Vitamin D, that was crucial. Maybe if her patients had all taken the Vitamin D in the evening, the results would have been much different.

Xav (2013-12-02 16:15:22)

Perhaps another bit of anecdotal evidence for late night carbs in general helping with sleep - I was just reading a blog post about resistant starch with comments from people taking potato starch, especially in the evenings. There were a couple of comments like this one : "On week three of 3 TBS of Potato Starch per evening. Any explanation on the exceptional, uninterrupted deep sleep? No complaints mind you. Have never slept so well. Never." TR <http://freetheanimal.com/2013/06/resistant-starch-now-were-getting-somewhere-and-talking-shit-too.html> #comment-529975 Seth: Thanks, that's very helpful.

## **Mo Ibrahim: My First Semester (2013-11-30 05:00)**

[1]Mo Ibrahim, a friend of mine, teaches high school in New York with hard-to-teach students. He and I want to find out if my ideas about teaching can help him. His blog posts here are the story of that.

I moved to New York in the summer of 2004 to start the Teaching Fellows summer training program at City College of New York. My wife and kids stayed in Chicago until I could find an apartment.

I found an apartment through a Teaching Fellows message board. It was in a nice section of The Bronx, but I only had three months before I had to find another apartment. I spent the first two months taking Master's degree classes at City College and studying for two teacher certification exams – a general exam that all aspiring teachers took and a specialized one for students who majored in special education. There was a lot of pressure to pass the exams, because if you failed you would be expelled from the program.

By the end of the summer, I had passed both exams, gotten a provisional certification to teach, and gotten a job teaching at a high school near Columbus Circle that served underprivileged students. Most of the students were poor and performed far below grade level in reading and math. But I didn't have a place to live anymore, because my lease was up and the landlord refused to renew it. I applied for a number of apartments all over New York City, but all of my applications were denied. Once I called to make an appointment to visit an apartment and the owner asked me to come over immediately, but when he saw me he said the apartment was no longer available. On another occasion, I was told that the apartment was no longer available after I faxed over a copy of my driver's license. I assumed all this was because I was black but an elderly Jewish lady said it was due to my Islamic name. So I moved into a hostel in the East Village. By September, I was teaching full time during the day and taking classes at City College at night. Due to the hostel's two-week limit, I moved to a different hostel in Manhattan every two weeks.

A couple of things struck me when I starting teaching. One was the New York slang. I found myself frequently asking students to translate words and phrases they used. For example, "Yo, it's mad brick in this class!" meant "It's very cold in this class!" I was also struck by their apathy. Most of the students appeared to care little about completing class assignments, turning in homework, and studying for quizzes and exams. I would say, "Why didn't you do your homework?" They would respond, "What's the big deal? It's just homework." Their measure of success was "Did I pass?" Not all of them were like this, but most of them were.

The first subject I was assigned to teach was 11th and 12th grade math – the two grades were mixed in one class. I had diligently reviewed my high school and college math over the summer, so I was confident I knew the subject. I was assigned to co-teach this class with a veteran teacher. By then he'd been teaching at least fourteen years.

I had gone to a professional development workshop for co-teachers. It had taught seven different co-teaching methods. For example, one was "you teach one day, I teach the next day" or "you teach the first half, I teach the second half". Different ways of sharing the teaching. In fact, not only did I not teach a single lesson, but I was relegated to the back of the classroom. My co-teacher was really nice otherwise, but he would not let me teach the class. I don't really know why. When the students were allotted time to work on math problems I would rush to the special education students (students with a learning disability or who were emotionally disturbed, e.g., anger management problems) to give them one-on-one help, but they were usually resistant. They stared at me blankly, or asked off-topic questions like, "Did you see the Yankees game last night?"

Occasionally, students, including non-special education students, would ask me for help. But often in the middle of my explanation the whole-class discussion would resume, and I would have to stop teaching, because my co-teacher asked me not to talk to students while he was teaching. That was my role during my first semester of teaching. I wasn't despondent, though, because I considered it a blessing in disguise. Since my co-teacher kept me from teaching, I didn't have to prepare any lessons. He didn't even allow me to grade any papers, which was a good thing since I was in night school and still living in hostels.

Things changed drastically after the first semester. A veteran English teacher took an emergency leave of absence and I was given her English classes. My math co-teacher asked that all the poor performing special education students be given their own class to be taught by me. A young and friendly English teacher lent me her English curriculum and I developed a modified math curriculum based on the class where I sat in the back. And I was finally able to leave the hostels. I moved into a shared apartment in Brownsville, Brooklyn, the neighborhood where Mike Tyson grew up. It took an hour and twenty minutes on the subway to get to work. During my first commute to work, I overheard someone say: "Did you know Brownsville's the worst neighborhood in New York?" I hadn't known that.

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Roger Sweeny (2013-11-30 14:52:36)

They don't tell you in ed school—in fact, they kind of try to get you to believe otherwise—but some truths about high school teaching are: Your students will not care about your subject as much as you do. Many will not care about it at all. Some will, however, be interested in passing. You will try to get them interested in something more than passing. You will largely fail. Most of what you test on, and that students seem to have learned, will be forgotten before they start the next school year. You can pretend this isn't true, which is dishonest but may spare your sanity. You can just not think about it, which is the default of most teachers. Or you can revel in the small, real triumphs. " \_ \_ \_ \_ \_ wrote three complete sentences which followed each other logically." " \_ \_ \_ \_ \_ now cares enough to get a diploma."

Adam (2013-11-30 16:33:30)

As a public school teacher you are essentially a jailer in a prison for children, so it shouldn't be too surprising that there is some tension between you & the inmate-students.

jason y (2013-12-01 03:02:52)

it sounds like the problem isn't how to devise better teaching methods but how to persuade students to care enough to be taught. you can't teach a kid algebra if he doesn't see how algebra helps him get something he already wants, or if learning algebra prevents him from getting something he wants even more. algebra has to be important enough to capture his attentional resources long-enough to learn it. the entire system of values matters. there's a lot of cynicism surrounding this topic, and i think a good chunk of it springs from the assumption "better at school = intrinsically better" (a shared assumption that probably makes it easier for members of some communities to invest in education!). if academic achievement has more to do with modifiable values than the presence of a super-enzyme in the brain a lot of people's self-worth will be jeopardized (unnecessarily, i might add).

## 8.12 December

### Assorted Links (2013-12-01 05:00)

- [1]Easily-understood explanation of Michael Mann's "hide the decline"
- [2]long funny story based on the Climategate emails
- [3]The Tim Ferriss Experiment (TV show)
- [4]The superhobbyist in Vermeer's studio. A superhobbyist combines professional resources with hobbyist freedom.

Thanks to Carl Willat.

1. <http://wattsupwiththat.com/2009/12/06/american-thinker-understanding-climategates-hidden-decline/>

2. <http://michaelkelly.artofeurope.com/cru.htm>

3. <http://www.fourhourworkweek.com/blog/2013/11/26/premiere-tv-episode-the-tim-ferriss-experiment-online-for-free/>

4. <http://www.vanityfair.com/culture/2013/11/vermeer-secret-tool-mirrors-lenses>



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## Bedtime Honey Doubles a Measure of Strength (2013-12-03 05:00)

A reader of this blog named Nile McAdams, who lives in Minnesota, wrote:

When I read [1]your first blog post about honey I was gobsmacked. Not so much by the improved sleep – the idea of a bedtime snack improving sleep has been around a long time – but by the fact that a tablespoon of honey could double the time you were able to stand on one leg. [One bent leg. After being roughly constant for a year, the time doubled in two weeks. – Seth] Impossible!! Not that I thought you were lying – I didn't – it is just that a lot can go wrong between collecting the data and interpreting the data. So I had to try it for myself.

A little back story. In June I began lifting some 40-pound dumbbells I had laying around. I would hold one in each hand and then, alternating arms, lift them over my head for a total of 10 lifts – 5 for each arm (right arm, left arm, right arm, and so on). For me, the dumbbells were very heavy. I had trouble keeping them stable especially with my left, weaker, arm. Every time I lifted I had a little anxiety that I would lose control and the dumbbell would come crashing down and break stuff. The last straw was that I wasn't really getting better or not getting better fast enough. I lifted almost every day for a month or so but then gradually drifted away. Here is the point of the back story: I had very minor improvement, if any, over the course of that month. I felt a little stronger and I may have been able to do 12 lifts but I was too unsure of how steady I would be on lifts 11 and 12 so I never tried it.

When I decided to try the experiment with honey I thought that these dumbbells would be a good test of strength. I am 70 years old and quite obese – 6' and 300 lbs. I take 2 or 2 ½ tablespoons of honey right before I go to bed – my thinking is that my body mass could be almost double yours or other people taking honey so I should adjust the dose a little bit.

I started lifting on the same day I took the honey or perhaps the day after I took the honey. Here are my dumbbell lifts by day.

10,10,10,10,10,10,12,10,[three day gap]

I went to Chicago for a long weekend so I did not lift that Friday, Saturday or Sunday. I also did not take any honey. I didn't think much of the day I had lifted 12 times, even though it is a 20 % improvement. I felt it was similar to when I was lifting back in June – random variation. Here are my lifts since I came back from Chicago after missing 3 days.

16,14,16,20,14,20,18, 22,16,[1 day gap],22,24

These lifts are outside the bounds of any random variation as far as I'm concerned. In 15 days I doubled my lift with weights I had prior experience with!! This is incredible! The effect is real, at least for me.

A prediction of something that sounds impossible (bedtime honey quickly doubles a measure of strength) is confirmed – how often does that happen? I agree with the underlying idea. Lots of things improve sleep. It isn't astonishing that X or Y improves sleep. The strength improvement, however, astonished me.

When I was standing on one bent leg to improve my sleep, I knew that if I did the exercise every other day instead of every day, my legs would get stronger – much stronger. I didn't want that. I wanted to sleep well every night (that was the reason for the exercise) and I didn't want the exercise to take too long. (To improve sleep, I am pretty sure the exercise must be done to exhaustion.) When he started lifting in June, apparently Nile did not realize that he would get better results – become stronger faster – if he lifted weights every other day instead of every day. The strength increase, it appears, happens whether you want it (Nile) or not (me).

Niles added later:

I am now certain that it is easier for me to go up and down stairs. When I first started lifting these weights, both in June and when I started again in November, I had a lot of "popping" and "cracking" in my shoulder and elbow joints. That has all but disappeared. I have definitely added muscle. My lifts show it and I have gained 3 or 4 pounds.

It took me awhile to feel the effects of the honey both in lifts and in sleep. I didn't notice any differences in lifts until about 11 days and I didn't notice any difference in sleep until 2 weeks or more. About half the nights my sleep is heavier or deeper [than before honey]. I'm not sure of the correct adjective but when it happens it seems clear. On those nights I have deep sleep I don't take a nap the next day. I don't wake up feeling "refreshed" as others have reported but I am not a morning person and it takes me awhile to wake up and get going. I am more productive the day after one of these deep sleeps.

I am on an Ancestral Health Society (AHS) steering committee. After the first symposium, some members of the committee wanted to make recommendations about how to eat. I argued against this, saying it was too early to be sure. No paleo theorist, as far as I know, has said that sweets have value, but at the same time, the honey effect supports the practical value of evolutionary thinking, the rationale for AHS. A big reason I believed the effect of honey on sleep was very important is that it provided an evolutionary explanation of dessert. Another big reason was my sudden strength improvement. Repetition of the sudden improvement suggests that evolutionary thinking pushed me in the right direction.

So bedtime honey doesn't just improve sleep, it also increases muscle growth – a lot. I wonder how to test its effect on memory. [2]Jason DeFillippio of Grumpy Old Geeks said, "My memory has really improved". A reader named Crystal made [3]the astute comment that the impact of a sugar-containing food (honey) on growth would explain why children like sweets so much, something that has never been well explained.

Nile's experience impresses me not just because of the strength increase but also because the effect of the honey increased over a few weeks ("It took me awhile to feel the effects of the honey both in lifts and in sleep"). Maybe the honey caused healing. Some healing processes take years. Maybe bedtime honey speeds them up. The long-term benefits may be more than sleep and strength.

[4]Other posts about bedtime honey and sleep.

1. <http://blog.sethroberts.net/2013/11/05/honey-at-bedtime-improves-sleep/>
2. <http://blog.sethroberts.net/2013/11/20/bedtime-honey-improves-sleep-1000-crazy-good-tip/>
3. <http://blog.sethroberts.net/2013/11/05/honey-at-bedtime-improves-sleep/#comment-1158414>
4. <http://blog.sethroberts.net/category/sleep/honey-sleep/>

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dearieme (2013-12-03 07:22:46)

I've been thinking about what sort of cheerer-uppers might encourage sleep if taken by the glass, so that both sugars and alcohol would help send you to the land of nod. Various digestifs are obvious possibilities; so is Pedro Ximénez sherry, or Bual or Malmsey Madeiras; I wonder how well this lesser-known drink would do. [http://en.wikipedia.org/wiki/Pineau\\_des\\_Charentes](http://en.wikipedia.org/wiki/Pineau_des_Charentes) My motive is that I'd want some variety from honey, and tiramisu is not enough by itself. Madeira keeps very well after the bottle is opened, so that might be the place to start. Mind you, gently chewing a liquorice twist might be quite enough, and a good deal cheaper, and perhaps wiser if you've already had a drink or two during the day. Seth: A few weeks ago I went to an all you can eat Japanese restaurant – and it included all the sake I could drink. I just had one serving but that was enough to clearly disturb my sleep that night. There wasn't anything else unusual about the meal. I like to drink (in small amounts) but since then I have cut way down on drinking in the evening.

dearieme (2013-12-03 07:29:01)

Hold on; I've just googled "liquorice twist". Here's the ingredients list from Tesco (a British supermarket chain). Treacle, Wheat Flour, Sugar, Glucose Syrup, Desiccated Coconut, Vegetable Oil, Glazing Agent (Beeswax), Liquorice Extract, Beef Gelatine, Flavourings, Humectant (Glycerol), Colours (Plain Caramel, Beetroot Red, Curcumin, Capsanthin), Fat Reduced Cocoa Powder. With its treacle, sugar, glucose and beeswax it sounds a bit like synthetic honey. A bit short of fructose, maybe.

B.B. (2013-12-03 10:05:34)

A traditional remedy for insomnia is a teaspoon of honey in a glass of warm milk. The honey part you have already gotten. Maybe milk helps also. Lactose is a type of sugar and may work with honey. Perhaps the calcium in milk calms the nerves and also makes healing / growing at sleep easier. Finally, amino acids in milk may have a calming effect. Anyone test himself using milk as well as honey?

Nancy Lebovitz (2013-12-03 11:21:47)

It wouldn't surprise me if improved sleep improves memory.

Cliff Styles (2013-12-03 12:26:49)

My wife and I have been testing honey at bedtime for a couple of weeks, and we have both had a noticeable improvement in sleep, mostly in the 3am restless wakeup period disappearing. She has more trouble with this than I have, so she found the improvement easy to notice. We take it with a nighttime concoction the includes a nitric oxide releaser and some kefir. That said, the thing that improved my sleep most dramatically was eliminating wheat from my diet several years ago. Before that I had a ferocious sleep apnea and snoring problem (which my wife would attest to). The sleep apnea went completely away and has not returned, and the snoring is down about 90 %. One side effect of the sleep apnea, also gone, was probably long nightmares where I was frequently killed by monsters in my dreams - those, too, are long gone.

dearieme (2013-12-03 14:17:06)

In view of Cliff's comment, may I ask whether we are the first generation of Westerners to have trouble from wheat? If so, why? Seth: Not enough fermented food? Too much refrigerated food? Not enough microbe-rich leftovers?

GB (2013-12-04 05:23:12)

dearieme, perhaps the introduction of dwarf wheat varieties is part of the reason

Cliff Styles (2013-12-04 08:42:19)

Seth: your comment about fermented food may be apt. Here's one small test I have done over the last couple of years, because of an accidental discovery. On vacation, I tend to indulge eating bread or pizza, and that night my snoring will increase and the cough will come back the next morning. Well, a couple of years ago while on vacation we happened to stop at a small farmstead which advertised cheese. The cheese was excellent, and they also made yogurt, an intense and funky yogurt that I loved. I ate quite a bit of it that day, after eating quite a bit of bread at lunch and dinner, and the next morning - no cough,

and my wife said I had been very quiet that night. So, I have tried this experiment perhaps half a dozen times since then, and a little more than half the time taking yogurt at bedtime on a day I have indulged in some wheat product will eliminate the reaction. The older, funkier the yogurt, the better, store-fresh yogurt either works poorly or not at all. Perhaps not conclusive, but suggestive? Seth: Maybe the microbes in the yogurt and cheese made it harder for the wheat molecules to be absorbed into the blood. The microbes and microbe fragments clogged a lot of holes that would not otherwise be clogged. It's a very interesting argument for the importance of fermented foods.

dearieme (2013-12-04 18:11:52)

What is "funky" yoghurt? Seth: short answer, yogurt that smells like socks.

Cliff Styles (2013-12-05 09:09:50)

'Funky' - I was going to say smells like 'cheese cellar by the barn' but 'socks' is better...The taste is different from regular yogurt as the taste of aged cheddar is different from mild cheddar.

dearieme (2013-12-05 12:39:16)

I knew only that the title of the old jazz tune "Funky Butt" means "Farty Arse". Now I know more.

Cap (2013-12-08 12:06:05)

In the weightlifting / bodybuilding community it's heavily emphasized that one of the most important things you can do for full recovery and progress is get enough quality sleep. So perhaps the sleep improvements from the honey were enough to improve the body's response to a training program.

Paul N (2013-12-09 01:35:59)

On the topic of wheat, Joel Salatin had an interesting take on it. His theory is that in pre-mechanized times, when wheat was harvested and tied into sheafs and allowed to stand in the field for several weeks, that the dew each night caused a mild fermentation. Weston Price and observed that the health benefits of whole grain wheat were only gained when the wheat was freshly ground and eaten within days. Modern wheat not only is harvested straight into the combine, but the flours can be years old by the time they are consumed, plenty of time for the omega oils in them to oxidize. I have seen comments by some (American) people that have wheat sensitivities, but to do not have them when travelling in Europe, and they attribute that to different types of wheat being grown there. Finally, on the topic of kefir settling the stomach, I can personally attest to that, it does wonders!

Cathy (2013-12-10 18:39:23)

I have gluten allergy and dairy sensitivity (not lactose intolerant) and when traveling to Italy this past fall I ate all the bread, pasta and cheese I wanted with no ill effects. I do believe there is a difference in the foods in Europe. Could it be the bromated flour here, which is not used in Europe? I am going to try the honey tonight. I stumbled across this blog from Tim Ferris on FB. Glad I did!

Cliff Styles (2013-12-11 13:32:25)

I've travelled in France and Italy a fair amount, and when I do I eat wheat in many forms, since I won't even try to resist all the creativity with wheat in those cuisines. I invariably get my wheat cough back, and the bad sleep, too.

## **Magic Dots: User Satisfaction (2013-12-05 05:00)**

A reader named Niles McAdams, who told me about [1]his strength increase from bedtime honey, also wrote about his experience with [2]magic dots (a way to mark progress):

I have become a HUGE fan of your Magic Dots idea for many reasons. I started using them to increase the time I spent at my standing desk but since then I've used them to keep my writing and programming projects on track.

Here are some of the advantages of Magic Dots:

They can be customized to the individual. Instead of using 10 points and lines to make a box with an X in it, I use six points and lines (10 min. increments) to make a triangle. I would imagine for almost any time increment that a person wished to use, a shape could be found. I used 10 minute increments but one wouldn't have to - imagine, for example, a grade school child studying a spelling test. The parent could ask the child to study for one triangle or ½ hour where each dot or line represents a 5 minute increment. There are many many shape and increment possibilities - enough for any person or task.

They are mostly an intellectual tool not a physical tool. One doesn't need a laptop, tablet, smart phone, Fitbit or any other modern technology to use Magic Dots. One could scratch them out in the dirt with a stick if need be (and in fact, I may do just that when it comes time to weed my garden next spring). Of course you need some way of telling time so a watch is handy but if the sun is shining you don't even need that - a vertical stick in the ground and a few scratches in the ground could record the passage of time well enough. It goes without saying they don't need electricity - pencil, paper and watch or clock and you are in business.

They can be used to show work history. For a while, I would mark my Magic Dots horizontally, side by side, on a piece of paper. Each new day I would start a new line. This allowed me to see at a glance how much standing I had done during the week.

They can be used to show work by category. A few times I have drawn vertical lines on the paper to represent different work categories, e.g., writing versus programming. I combined this with the line per day technique above. At a glance I could see "on Tuesday I had 3 triangles standing, 2 triangles writing, and 1 triangle programming.

1. <http://blog.sethroberts.net/2013/12/03/bedtime-honey-increases-strength/?preview=true>
2. [http://blog.sethroberts.net/wp-admin/edit.php?category\\_name=magic-dots](http://blog.sethroberts.net/wp-admin/edit.php?category_name=magic-dots)

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Kristian Dupont (2013-12-05 07:15:13)

I've added a "magic dot timer" to my pomodoro app. I thought the 25-minute timebox was the highest resolution time management that I could apply, but being allowed to make a little bit of tangible progress every five minutes \*does\* make a difference. It's rather surprising that the constant distraction isn't actually counterproductive. One problem that I find though, as with all gamification, is that I tend to think that if I won't have enough time to finish a complete pattern, I might as well not start at all. This applies to pomodoros in general as well - if I don't have a full 25 minutes before that meeting, I often catch myself wasting the 15 minutes that I do have.

Jim (2013-12-05 08:08:43)

My thoughts are similar to those of Niles. First, I've also gone to a triangle, but with 5-minute increments, so that each triangle is a half hour. (The half hour blocks minimize the starting friction problem mentioned by @Kristian). Second, I've also started keeping a record for tracking purposes. I think the initial benefits mentioned in earlier posts were mostly directed to getting started and keeping momentum. Magic dots are also a great tool for tracking work over time.

Cliff Styles (2013-12-05 09:05:54)

I've been trying this since Seth mentioned it, and it's not helping much. I am very interested in measuring attention, apt and inapt, and so far I find this particular method difficult to sustain. Trying different variations now.

Jim (2013-12-06 16:46:23)

Seth, Do you still have a percentile feedback tracking app on the back burner? Seth: Still working on it. I use an R version every day.

## **Government as Useful Irritant and Rules of Innovation: What Libertarians and Other Economists Miss (2013-12-06 05:00)**

Hayek, Keynes, Milton Friedman and Paul Samuelson disagreed about many things but shared one important belief: Their ignorance about innovation didn't matter. Countless economics textbooks, which say nothing of interest about innovation, agree with them: ignorance about innovation doesn't matter. This belief freed Hayek et al. and textbook writers to make sweeping policy statements. Had they realized that innovation matters, not just productivity – and, especially, that innovation and productivity are sometimes at odds – it would have been far less clear what policies are best.

If you ask how will this affect innovation? about any economic proposal everything changes, especially your certainty that it is right or wrong. I will give just one example. Libertarians – I hope I am describing Tyler Cowen's "smart" libertarians – believe that government interference by and large makes things worse. People function best when given freedom, and so on. A smart libertarian recognizes the value of speed limits, and so on. An example of smart libertarianism, I assume, is [1]Tyler's recent view that a local increase of the minimum wage is "expressive voting at the expense of good economic policy."

Libertarians and other economists neglect the possibility that government serves as a useful irritant. Government regulations are truly an impediment. No doubt about it. No doubt they make life harder for people with some power. The usual argument is they protect the weak from the powerful. Without them, the powerful would exploit the weak. Sure. They would. But that's not all. What goes unsaid and apparently unnoticed is irritating the powerful makes them think. Pain produces thought – about how to avoid the pain. And thought increases innovation.

As a professor at Berkeley, I hated the government-mandated institutional review boards – the human subjects approval committee and the animal research approval committee. They didn't just make research far more difficult due to paperwork requirements, they did horrible things to people based on misunderstandings and mistakes. And there was no appeal. How awful, right? Well, it was certainly painful. That pain is one thing that pushed me toward personal science, where I could be free of them. Pain pushed me to try new things – such as long-term non-trivial self-experimentation. The less I could do professional research (my Ph.D. is in animal learning), the more time I had for personal science. And I brought to my personal science the skill set of a professional scientist (an understanding of experimental design and data analysis, subject-matter knowledge, and so on). Innovation always comes from exploration. The more exploration, the more innovation. Pushing powerful people (such as a Berkeley professor) to explore is a seriously good thing.

Planet Money recently did a series on T-shirts. Planet Money reporters travelled the world – the Planet Money men's T-shirt is made in Bangladesh – and encountered several things not in economics textbooks. One was [2]the story of how clothing factories came to Bangladesh. That you could put a clothing factory in such places and make a profit was a discovery with great consequences, especially for Bangladesh. In the 1970s, American clothing companies felt endangered by imported clothes – from South Korea, for example. They pressed government for trade protection. This led to the passage of the [3]Multi Fibre Arrangement (MFA) which regulated clothing imports. The agreement,

however, said nothing about Bangladesh, which at the time did not make clothes. When South Korea reached its limit under the MFA, a Bangladeshi businessman approached Daewoo, a giant South Korean clothing maker, suggesting that they duplicate their factory in Bangladesh. The head of Daewoo – a powerful man pained by government regulations – was open to their suggestion. Daewoo helped open the first clothing factory in Bangladesh. There are now more than 4000.

When it comes to productivity, there is one set of rules, which economists have worked on since Adam Smith. Innovation has a different set of rules. Most economists seem barely aware that the two sets of rules often clash – what is good for productivity is bad for innovation. Let me sketch a few of the innovation rules. Innovation needs freedom, of course, and the ability to profit from your invention, which I'll call benefit. It is also called self-interest. The importance of benefit/self-interest for innovation is the main point of [4]Why Nations Fail by Acemoglu and Robinson. Innovation is also increased by resources, such as skills, knowledge, space, and equipment. After discussing this with Bryan Caplan, I believe many economists are well aware these three factors (freedom, benefit, resources) affect innovation. All three also increase productivity – for example, more resources, more productivity. Far fewer economists realize that two other things, which act against productivity, are also very helpful for innovation:

1. Pain. Not a lot – not debilitating or all-consuming pain – but enough to make you think hard. Necessity is the mother of invention is the aphorism, which isn't quite right. Pain, not necessity. Government is useful here, as I said. So is war. Many innovations came from wars. A famous example is [5]the greenback, which came from the Civil War.

2. Stability. To innovate, you need free time, which is different from freedom (ask any prisoner). Free time allows painless failure, very helpful for innovation. To have free time, you need a secure job. Government is useful here, too. So is tenure. Pain plus stability = peacetime military spending. The internet came from peacetime military spending. Professors were the first users. Stability also promotes innovation because it makes it easier to detect small improvements. The quieter it is, the better you can detect soft sounds.

[6]My personal science had a good amount of all five factors. 1. Freedom. Studying myself, I could do whatever I wanted. 2. Benefit. At first, I benefited because my discoveries were very practical. If I discovered how to sleep better, I would sleep better. If I discovered how to lose weight, I would lose weight. Later I also benefited because others were interested (I like attention) and my discoveries helped others. 3. Resources. I knew a great deal about the relevant subjects (e.g., circadian rhythms, weight regulation) and how to do research. I could get whatever articles I wanted from the UC Berkeley libraries. And so on. 4. Pain. In addition to the pain caused by Berkeley IRBs, I wanted to sleep better and lose weight. My sleep was not awful nor was I especially fat – it was not intense pain. But it pushed me. I tried to improve my sleep for ten years before I started making progress. 5. Stability. My life was very stable. I rarely took long trips, for example. Failure in my personal science – a treatment that I hoped would improve my sleep didn't work, for example – cost very little. Failure to publish cost nothing.

In contrast, professional scientists, who have plenty of resources, are generally low or at least lower on the other four factors (freedom, benefit, pain, stability). They lack freedom. They are constrained in many ways, which they don't like to talk about. They lack benefit. A few papers that hardly anyone reads – the result of most research – provides little benefit. Almost all research has no practical use. Few scientists study problems that they themselves suffer from. A cancer researcher does not himself have cancer, for example. They lack pain. I cannot think of a single instance where professional research was motivated by the researcher's pain or discomfort. If they don't need a grant for their research and have tenure, they have stability; but if they do need a grant or don't have tenure, they have less stability than I did. Most research grants are only three years long and renewal is rarely easy or assured.

I wrote about the same question – why was my personal science "unreasonably effective"? – [7]here.

What does this say about economics and how to increase innovation? The importance of benefit and resources is already clear. But the remaining three factors – freedom, pain, and stability – are complicated. By and large they are corners of a triangle. The more freedom, the less pain and stability. The more pain, the less freedom and stability. The more stability, the less pain and freedom. You need all three – a point in the middle of the triangle – and where that point should be and how to put it there are exceedingly non-obvious. Once you realize this, your certainty about how to organize society, how run a government, and the best size of government should decrease. A problem with increasing inequality, which I have never seen pointed out (e.g., in a speech about why inequality is bad, [8]Obama didn't mention it), is that it makes the powerful (those at the top) more comfortable. When you make the powerful more comfortable, you reduce innovation.

1. <http://marginalrevolution.com/marginalrevolution/2013/11/assorted-links-983.html>
2. <http://www.npr.org/blogs/money/2013/11/30/247360903/nixon-and-kimchee-how-the-garment-industry-came-to-bangladesh>
3. [http://en.wikipedia.org/wiki/Multi\\_Fibre\\_Arrangement](http://en.wikipedia.org/wiki/Multi_Fibre_Arrangement)
4. <http://whynationsfail.com/>
5. [http://books.google.com/books?id=p3IweU12jH0C&source=gbs\\_navlinks\\_s](http://books.google.com/books?id=p3IweU12jH0C&source=gbs_navlinks_s)
6. <http://escholarship.org/uc/item/2xc2h866/>
7. <http://media.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>
8. [http://www.washingtonpost.com/politics/running-transcript-president-obamas-december-4-remarks-on-the-economy/2013/12/04/7cec31ba-5cff-11e3-be07-006c776266ed\\_story\\_4.html](http://www.washingtonpost.com/politics/running-transcript-president-obamas-december-4-remarks-on-the-economy/2013/12/04/7cec31ba-5cff-11e3-be07-006c776266ed_story_4.html)

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jon (2013-12-06 07:54:51)

In a free market I wonder if people would have been doing the personal science anyways since market forces would push towards that which is normally most efficient and cost effective. So, if you didn't have the government bureaucrats in your way to begin with maybe you would have been doing personal science for a much longer time. It's hard to tell, the broken window fallacy, the seen and the unseen. The detrimental effects of government seem to outweigh any benefits. Just because we would live in a free society doesn't mean that there wouldn't be speed limits still, or something even better that works to keep people safe while driving (who knows, without the government we might be flying instead of driving).

August (2013-12-06 07:56:47)

Are you afraid to say you are just different from other people? The assets wasted by government far outweigh any value the pain it brings might have in forcing people to be innovative. The global resources dumped on the climatology researchers, for instance. Then there is the flip side of the waste. How much science is actually happening any more? When I first read Celia Green I thought she might be a bit crazy, but there's enough crap research coming out for me to realize I could do a better job- and if it weren't largely a political rent-seeking operation now, I would be. Even my fellow students could tell I was different- they mainly wanted to know how I could remember all the stuff, and I finally realized it was mainly because I was more interested in it than they were. But pain comes from poor sleep, acne, etc... Pain would also come from half a dozen other things, and there is no way to qualify how much pain is actually necessary. Suppose I actually got stability, and more resources than I knew what to do with. I'd experiment more, and my experiments would just get bigger. They wouldn't necessarily be based on pain. Indeed, your own ideas about hobbies and gifts would suggest pain isn't crucial to the innovative process, especially not the pain of government.

dearieme (2013-12-06 08:07:39)

To encourage innovation by academics, I recommend that a large proportion of research funds be distributed by drawing lots.



(i) Then instead of devoting time to preparing untruthful grant applications they can devote time to their work, or to productive leisure. (ii) With smaller grants, they will be obliged to be more ingenious in their work. Seth: Yes, I agree. The Canadian system is similar, lots of small grants.

Charlie Currie (2013-12-06 09:18:02)

There was no government pain in 1947 when hydraulic fracturing (fracking) was invented. I would say just the opposite. Now that it is economically beneficial to employ it, and it is wildly successful, there is going to be a whole lot of government pain brought to bare in the form of regulations and restrictions on its use. So the question is, will this new government pain bring about innovation (which will then be regulated and restricted) or less energy.

Charlie Currie (2013-12-06 09:32:30)

I'm not too concerned that increased inequality will lead to the elite and powerful being less innovative. How much innovation actually comes from the elite and powerful anyway? Elite and powerful tech companies seem to release new innovations on a daily basis, however, when you look closely most of these innovations were purchased or licensed from non-elite and far less powerful individuals or companies.

Taconic (2013-12-06 09:40:33)

Nature puts more than enough pain and irritants in human life paths; no need for artificial (government) obstacles to increase that vast natural burden. The natural state of human beings on this planet is abject poverty, suffering and death. The only economic system ever known to raise large masses of population from poverty – is free market capitalism; collectivism in all its various forms (e.g., coercive economic regulation & central planning) has consistently failed to do so in all of history. The post was obviously intended as a mild slam against libertarians and free markets. Note that "innovation" is a central principle of free market economics – it's an absurd assertion to proclaim otherwise.

Seth Roberts (2013-12-06 14:38:39)

"Collectivism in all its various forms (e.g., coercive economic regulation & central planning) has consistently failed to do so in all of history." You don't realize that all governments have collectivist (= coercive) elements? You think that the Internet and greenbacks – not to mention Darwin's theory of evolution – arose because of "free markets"?

Seth Roberts (2013-12-06 14:44:10)

"How much innovation actually comes from the elite and powerful anyway?" Okay, tell me one major innovation that didn't come from the elite and powerful? Darwin: inherited wealth, didn't have to work. Mendel: rich religious order. Pasteur: powerful chemist. Bell Labs: rich, AT & T very powerful.

Seth Roberts (2013-12-06 14:51:43)

"In a free market I wonder if people would have been doing the personal science anyways since market forces would push towards that which is normally most efficient and cost effective." Whereas I think the fact that people can find health specialists (doctors) pushes them away from studying their own health. They would rather leave it to the specialist – do what the specialist says. They fail to understand that the fact that the specialist needs to make money has a big effect on what he advises. They fail to understand how much they are losing. When I started to study my own sleep (to improve it), I had no idea how much better solutions I could find compared to what a doctor would tell me to do (take sleeping pills).

Adam (2013-12-06 18:43:32)

I see a central planning fallacy here. Who knows what the right amount of innovation is? It also boils down to a moral question. People should be free to do what they want so long as it does not harm others or interfere in the others' freedom to do what they want – this is liberty. Government's pain violates liberty. Is violating liberty justified because it might increase innovation? Seth: Long ago, at the very dawn of governments, everyone had a choice: live under a government (coercive but also protective) or not (no coercion, no protection). Apparently the government system was the more popular choice, since that's what we have now. Now there is no longer much of a choice. Governments provide both loss of freedom (coercion) and protection. It

seems to me not to be a "moral" question but an economic one: is the cost (coercion) worth the benefit (protection)? The innovation is a kind of unanticipated bonus, that the original choosers (between government and no government) didn't think about. Curiously governments, by producing pain, caused better governments to be invented. That's where democracy came from – government-induced pain.

MJB (2013-12-07 03:20:24)

Shumpeter and Kondratieff were the economists of innovation. The pain of the economic collapses of the 1870's and 1930's fostered innovation, hence the term 'creative destruction.' The whold focus of modern democratic government is to prevent the pain of another economic depression. Some argue that the black plague of the 1340's and the little ice age fostered the innovations that produced our world.

MJB (2013-12-07 03:50:58)

"Bad Medicine: Doctors Doing Harm Since Hippocrates" by David Wootton discusses historical impediments to innovation in medicine.

TomGinTX (2013-12-07 08:27:04)

Sort of related, a comparison of a couple of views on innovation. <http://www.forbes.com/sites/timothylee/2012/05/27/two-views-of-innovation/>

Assorted links (2013-12-07 11:32:16)

[...] Innovation changes everything, by Seth [...]

TGGP (2013-12-07 16:32:03)

I don't understand the point of your Bangladesh example. It just sounds like government causing a pecuniary shift from South Korea to Bangladesh rather than any innovation. Seth: It was more than a location shift. It was the discovery that you could get good output using a lower-quality location. In Bangladesh the workers were less well-educated than in Korea and there were many other differences. It was somewhat like discovering a new source of energy.

Ray Lopez (2013-12-07 22:01:44)

Professor, please let the scales drop from your eyes! CNTRL + F "patents" yields NO hits on this blog post. NONE! Please quit being blinded by ideology and mention how a reformed patent system can increase innovation. How government-say by offering a prize as GMU's Alex Taberrok has suggested, with the invention then becoming public domain-can increase innovation. Inventions \*can\* be 'engineered'. It is a humanities major's myth that inventions happen in a 'flash of genius' akin to a lightbulb going off. Please turn the corner and take your arguments to the next level-mention PATENTS. It's amazing how economists think that because good Samaritan nerds who invent for free (yes, they not only exist, pretty much all Nobel Prize winners are in this category, and are responsible for much of human progress) are the only people out there. If inventions were better compensated by government, you would have more of them. It's akin to a "public good". Thank you! Seth: Blinded by what ideology? Care to offer some evidence that a reformed patent system will significantly increase innovation? Reforming the patent system might one of my five factors – how much an inventor benefits. Please notice there are four other factors. It is far from clear that lack of benefit is the big problem now.

Ray Lopez (2013-12-08 07:01:31)

Seth says: "Blinded by what ideology? Care to offer some evidence that a reformed patent system will significantly increase innovation?" Yes, here is some historical evidence: <http://www.ladas.com/Patents/USPatentHistory.html> The 1474 Venice patent act predates that city-state getting into manufacturing-coincidence? Not. The 1624 English reform of patent monopolies predated England becoming a manufacturing powerhouse-coincidence? Not. The US Founding Fathers thought patents so important they put it into the US Constitution, and the rest is history-coincidence? Not. US Patent were reformed so as to abolish the need for a working model in 1880, and US industrialization took off after that change-coincidence? Not. U.S. Patent Act of 1952 clarified and simplified existing U.S. patent law and the US economy enjoyed a Golden Age thereafter-coincidence?

Not. US Patent law was restricted by caselaw in the 1960s and 70s to make it harder to get a patent—and US productivity slowed down around the early 1970s—coincidence? Not. US patent law was again relaxed by R. Reagan's administration with the creation of a special court to hear patent cases, and make patents stronger, in 1982; the US economy and stock market boomed—coincidence? Not. You may ignore the evidence, or you may say it is a coincidence, or you may say that the patent laws were concomitant or coincident with the events that followed—that's your choice depending on your ideology. "Reforming the patent system might be one of my five factors — how much an inventor benefits. Please notice there are four other factors. It is far from clear that lack of benefit is the big problem now." - if it's "far from clear", then I may possibly have a point, yes? I'm glad you have an open mind on this issue professor. Thanks for the soapbox. Seth: I don't think the evidence you provide supports your position. It takes decades for a new invention to have a significant effect on the economy – to grow big enough. Yet you describe cases where the economic change followed the patent law change much soon than that. For example, your 1982 example. On the other hand, yes, you may have a point. I mentioned Why Nations Fail which makes roughly the same point as you are making.

Do sharks smile? | 43coms (2013-12-08 17:50:33)

[...] Seth Roberts likes that government could be seen as the irritant necessary for change, lest we get too comfortable with a status quo. [...]

RAD (2013-12-09 07:13:44)

Seth, if you were appointed "Czar of Useful Irritants" do you believe you could increase the rate/degree of innovation in the United States? Seth: No I don't think this theory of mine is ready to be used as the basis for public policy. Better to be used to guide research. For example, compare theory to practice, where innovations come from. To increase innovation in the United States, I would make life easier for small businesses. Some regulations are useful irritants, plenty of others serve to crush small businesses. I agree with that aspect of libertarianism.

Charlie Currie (2013-12-09 08:11:08)

Seth says: "Okay, tell me one major innovation that didn't come from the elite and powerful?" Skateboards three-axis aircraft controller Seth: Skateboards are a major innovation? I disagree. Who invented the three-axis aircraft controller? Speaking of skateboards, I do know that the mountain bike came from the elite and powerful. It was invented by the brother of one of my classmates.

m (2013-12-11 07:22:22)

FYI, the Bangladeshi example has been discussed a fair amount by economists <http://www.amazon.com/The-Elusive-Quest-Growth-Misadventures/dp/0262550423> [http://www3.grips.ac.jp/globalcoe/e/publications/working\\_papers/empirical/GCOE\\_EWP21.pdf](http://www3.grips.ac.jp/globalcoe/e/publications/working_papers/empirical/GCOE_EWP21.pdf)

Productivity Vs. Innovation... | CURATIO Magazine (2013-12-18 03:13:39)

[...] Productivity Vs. Innovation... [...]

## Why Does Bedtime Honey Improve Sleep? More Helpful Data (2013-12-07 05:00)

At [1]Free The Animal, Richard Nikoley blogged about the value of potato starch and other examples of [2]resistant starch (RS) which is slowly-digested starch. As a reader of this blog named Xav [3]points out, three commenters say it has improved their sleep:

1. On week three of 3 TBS of Potato Starch per evening. Any explanation on the exceptional, uninterrupted deep sleep? No complaints mind you. Have never slept so well. Never. [Richard did explain the deep sleep – Seth]

2. After a few days of a few Tbsp RS in the evening, here are my observations . . .

- sleep has been better the last 2 nights without any particular change of lifestyle.
- dreams are vivid, I remember them much more

3. I took 4 tbsp of PS last night. . . I had an incredible sleep (but no vivid dreaming, however). I mean, I did not wake up even once. I was sound asleep from the beginning to the end and it was such the most sweet and tranquil sleep I ever had in a long time!

Emphasis added. Someone else said, "Have been doing this for about a week now. 2T in am and 2 T after dinner. Sleep may be better." No one reported better sleep after resistant starch at other times. Richard said nothing about the time of day to eat it. Several people say it raised their blood sugar.

Readers of this blog know [4]there is abundant evidence that bedtime honey improves sleep. Honey is not a resistant starch, although fructose (honey is half glucose, half fructose) is digested relatively slowly. Potato starch and honey differ in many ways. That both, eaten near bedtime, produce better sleep, suggests that the better sleep is due to something they share. One thing they share is both increase blood glucose throughout the night. Honey does so because it contains a quickly-digested sugar (glucose) and a slowly-digesting one (fructose). Potato starch does so because its carbohydrate is slowly converted to blood glucose.

The potato starch stories support what I've said ([5]here and [6]here) about why bedtime honey improves sleep, namely: You need a certain amount of blood sugar to sleep well. Many people have too little (e.g., due to a low-carb diet). Honey, [7]a banana, or resistant starch near bedtime are three ways to ensure enough. When this becomes well-known, the improvement in well-being will be great.

1. <http://freetheanimal.com/2013/06/resistant-starch-now-were-getting-somewhere-and-talking-shit-too.html#comment-529975>

2. [http://en.wikipedia.org/wiki/Resistant\\_starch](http://en.wikipedia.org/wiki/Resistant_starch)

3. <http://blog.sethroberts.net/2013/11/29/why-does-bedtime-honey-improve-sleep-helpful-data/#comment-1159345>

4. [http://blog.sethroberts.net/wp-admin/edit.php?category\\_name=honey-sleep](http://blog.sethroberts.net/wp-admin/edit.php?category_name=honey-sleep)

5. <http://blog.sethroberts.net/2013/11/05/honey-at-bedtime-improves-sleep/>

6. <http://blog.sethroberts.net/2013/11/29/why-does-bedtime-honey-improve-sleep-helpful-data/>

7. <http://blog.sethroberts.net/2013/11/29/why-does-bedtime-honey-improve-sleep-helpful-data/>

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david s (2013-12-07 07:52:28)

In a previous honey-sleep entry, you quoted someone noting that raw honey had less effect than cooked honey. If cooked honey, PS/RS, or a banana each work to improve sleep, would it make sense why raw honey does not? Does cooking change the relative levels of fructose and glucose, or is it more likely that raw honey does actually work and the observation was skewed by something else?

Douglas Clegg (2013-12-07 08:44:26)

I can attest to resistant starch improving sleep and even a sense of morning calm (as opposed to a kind of morning argument in my mind, which I'd frequently had – and which might've been a result of poor sleep.) I take the starch with kefir, and have become hooked on kefir as a daily staple. I don't know how much the kefir plays into this. I go for unsweetened but sometimes they're out, so I get the sweetened. There are other benefits of the resistant starch (or great sleep) for me, as well, mainly

overall improved mood and outlook whether I take it at night or in the morning. But to be clear: for sleep, I take 1-2 tbsp at night. For morning, 1-2 tbsp mixed with kefir is often breakfast-appetite suppressant. (Not hungry again until the afternoon.) My husband often feels unrested from sleep. He went for a sleep study and they found no sleep apnea. When he took 2 tbsp of the unmodified potato starch with about a cup of kefir before bed he experienced great sleep. Also we both get intense, memorable dreams that seem less "flat" in memory later and retain their vivid quality. All of this may be an effect of deep sleep. To see how long the effects lasted, I stopped the resistant starch three weeks ago. It took 2 weeks for my poor sleep to return. However when I used honey instead – just to see if there was a difference and after reading your blog – I had a few of the worst nights of sleep in awhile. Not sure why, but part of it may be that I'm one of those people who gravitate toward non-sweets over sweets. I like sweet things, and I like honey – but I've always known via taste that there's something about direct sugar and honey and any sweetener separated out from other food (as opposed to mixed or baked within something or occurring naturally within it like milk) that doesn't taste that good to me. However my husband puts honey or sugar in coffee every day and loves hard candy (I've haven't liked it for years). When he got the teaspoon of honey at night, he again had great sleep. Also started on the blue blocker glasses, which have helped me get to sleep. All of this has made me understand that sleep may have been my main stumbling point in life – for decades. Good sleep with remembered, intense dreams has always equalled good mood, productive day and a willingness to participate more and tackle problems. Long note, but wanted to put it all down. And thank you for your insights. I typed this via smartphone so please pardon typos.

Hap (2013-12-07 08:55:52)

A few years ago, Kathleen Des Maisons wrote a book called "Potatoes, Not Prozac." As an aid for recovering addicts — most of whom, she says, are sugar-sensitive — she recommended a baked potato before bed. The release of serotonin was what she focused on. Seth: Interesting, I'll check that out. Eating a baked potato before bed has many effects. I wonder why she chose one of them to emphasize (release of serotonin). Perhaps she believes what professors of psychiatry say about causes of depression, but she shouldn't.

dearieme (2013-12-07 09:01:17)

Presumably not a baked potato with coleslaw? Perhaps just with plenty of butter?

Brock in HK (2013-12-07 09:14:49)

Honey is also more easily incorporated in the diet, as it doesn't require a restructuring of the gut biome to make it effective. Even Richard and others have commented they needed some time for their digestive system to get used to the resistant starch, which they attribute primarily to needing the RS adapted gut flora to flourish and crowd out some of the other flora that were not RS adapted and caused flatulence.

dearieme (2013-12-07 10:21:18)

"RS"? Seth: RS = resistant starch

Charlie Currie (2013-12-07 10:46:22)

I found that consuming 2TBLS of potato starch in the morning improved my sleep (1 wake up - to pee - instead of 2 or 3. I've always been an 8-9 hour sleeper but I found as I got older - I'm 67 - waking up to pee and waking up, but falling right back to sleep increased in frequency)...I really don't think it matters when you consume it. I'm also giving the honey at bedtime a new look...I'm doing it to test the muscle strength component...so far no difference in sleep. I have to be certain not to eat anything for at least two hours before consuming the honey and going to bed. If I don't - as happened last night - the honey causes acid reflux - not a fun thing to wake up to. Knowing that you are also very focused on gut health (consuming fermented foods) you should find this post on FTA regarding resistant starch and improved gut health very interesting: <http://freetheanimal.com/2013/11/resistant-american-comparison.html>

Tatertot (2013-12-07 14:02:35)

Hey, Seth! Richard's buddy here from FTA... I love everything you say except that RS is slowly converted to glucose. It's actually slowly converted to fat-SCFA to be exact. Hardly and, if any at all, gets converted to BG-simple to test with BG monitor! I

don't think anybody ever said that potato starch raised the BG—not in the thousands of comments anyway. There was some concern with tapioca starch, which we initially thought was good RS source, but it definitely caused raised BG...maybe that's what you saw? I like you are looking into timing, it's something we haven't toyed with much. We just consider better sleep a nice side-effect. Keep and eye on FTA for some cool crowd-sourcing projects we have up our sleeve. Cheers!

Xav (2013-12-07 14:56:40)

My main self experiment at the moment is using the VSL3 probiotic for a period of 8 weeks, as animal experiments with this specific probiotic have shown appetite / weight reduction amongst other things. I'm currently contemplating starting using the potato starch at night, instead of honey, as the effects of the starch on both the gut bacteria AND sleep may give a 2 for 1 benefit . If I do, I'll report back with any results.

Jeff Davidson (2013-12-07 15:55:27)

I tried honey a few times (1 tbsp) but I felt I slept more fitfully. I couldn't rightly isolate honey as the cause though so I may try again in the future. Regarding potato starch - it's about 85 % Resistant Starch, meaning this: enzymes in the small intestine can't break down the starch molecules into glucose, so it travels into the large intestine for fermentation via bacterial action. In doing so, the gut bacteria produce short-chain fatty acids (butyrate) as waste product that the cells of the colon use as fuel. In other words, RS is a source of dietary fat. A lot of knowledge about RS is just coming to light, but Tim Steele (aka tatertot) did an excellent series of posts on Animal Pharm about his experiences with RS as a means to cure gut dysbiosis. A few people have noticed improved sleep on such a regimen. I've been taking 4 tbsp/day of potato starch for about 3 weeks now (2 tbsp AM / 2 tbsp PM). Sleep quality has been good, but I still occasionally but less frequently experience early AM waking (1:30-2:30 AM). I find I fall back to sleep easier in general though. There was an adjustment period for me as well - tremendous amounts of gas for five or six days (not smelly though, just windy). It has subsided now. Waiting to see if I notice other effects.

Jeff Davidson (2013-12-07 15:59:21)

Regarding muscle strength improvement I have two thoughts: 1. Increase might come from improved sleep. 2. Increase might come from sufficient rests between workouts. I find I gain strength more consistently though working out 1-2 x per week versus 3-7 x per week. Muscles take a lot of time to repair it seems. Seth: when my sleep improved due to honey, the timing of my workouts (daily) did not change.

BRW (2013-12-07 17:07:04)

@Jeff " Yes, the rest between workouts was my initial impression of what happened to an older fellow in a previous post with bell presses. It is well documented that allowing for more rest makes greater strength gains. I would imagine better sleep would promote strength gains. Working out more infrequently resulted in similar gains for me.

Mark L. (2013-12-07 21:00:29)

I have never had any problems sleeping. I have been taking potato starch after my evening meal since July and have been taking a tablespoon of honey since Seth mentioned it in his blog. I noticed more vivid dreaming from the potato starch and hope that it helps my colon since colon cancer and other colon problems have occurred in my family. I look forward to taking the honey before I go to bed and I love its taste; I haven't noticed anything from taking the honey.

Seth Roberts (2013-12-07 23:11:30)

"In a previous honey-sleep entry, you quoted someone noting that raw honey had less effect than cooked honey" I think someone theorized that. I don't think there was any evidence it was true. I suppose the theory was wrong. Someone who actually compared the two found no difference between raw and cooked honey.

daz (2013-12-08 02:17:19)

"In a previous honey-sleep entry, you quoted someone noting that raw honey had less effect than cooked honey" one possible reason, some people may be 'sensitive' to raw honey, ie. raw honey usually contains small amounts of propolis and pollen, it could be possible that this is problematic for a few people... & therefore cancel out the sleep benefits & possibly even worsen

sleep. this may or may not be an allergy, idk, but i did see mention of a 'honey allergy' which listed some possible symptoms to look for, - Itchy throat, - Tongue swelling up, - Watery eyes, - Hives or constant sneezing.

daz (2013-12-08 02:26:17)

(should have read) ...but i guess if the reaction/"allergy" was only very minor, you would Not notice any of these symptoms...but may be it would disturb sleep (and non-raw honey would not)

pond (2013-12-08 08:19:42)

About that glucose/fructose thing, I have a way to test the hypothesis: table sugar and high-fructose corn syrup are both about 50-50 glucose/fructose. So if honey aids sleep by providing the sugar mix, then so would a tablespoon of table sugar in water, or a few ounces of non-caffeinated soda. I wonder if anyone in the dieting group taking the sugar water before bed has had improved sleep? Seth: I'm not sure the timing of blood glucose would be the same comparing table sugar and honey. Table sugar is not 50/50 glucose/fructose, it is 100 % sucrose. Yes, the sucrose is split into glucose and fructose, but that takes a while. But HFCS should work.

tom (2013-12-08 13:45:58)

I wonder if sleep is dependent on how 'fat adapted' you are, or how long you can comfortably go without a meal (I'm not good at fasting).

Stuart King (2013-12-08 16:16:24)

Tom I think you may be on to something there - I don't know much about 'fat adaption' but I noticed my sleep was excellent recently for over a week (I have been measuring my sleep quality) and interestingly enough, that week I lost weight. I got on the scale every morning, and everyday there was a small reduction in weight which ended up being about 1kg (about 2 pounds). As part of my experimentation (trying different dietary approaches), my weight went back up (everyday) to where it originally was after another week or so and my sleep declined dramatically. I think there is a correlation between the two things which probably suggests I was doing something which was good for me. I did originally discover the honey when I was very low carb and it worked well then. I quit very low carb because of health problems it created. I think I might try alternate day fasting for a couple of weeks to see if that improved the honey effect.

Heisenbug (2013-12-09 18:26:59)

Seth, I'm surprised no one's made the probiotic/prebiotic connection between honey and RS. That might explain it. Honey contains oligosaccharides, which feed bacteria and cause blood glucose to stabilize. Just like RS. <http://www.mdpi.com/1420-3049/17/1/248> <http://www.ncbi.nlm.nih.gov/pubmed/15826039>

Seth Roberts (2013-12-09 19:04:17)

"I'm surprised no one's made the probiotic/prebiotic connection between honey and RS." the effect of bedtime honey is instant - same night. surely improving gut biota will take days weeks or months.

Heisenbug (2013-12-09 19:20:52)

Not necessarily. While increasing bacterial count takes longer supplementation, short-chain fatty acid production by one's existing bacteria (which is what creates the hypoglycemic effect) should happen right upon dosage, whether it's the first time or the hundredth. And from anecdotal accounts, many experience the sleep affects of RS almost immediately. Seth: The brain - which controls sleep - runs on glucose. It does not run on SCFAs. To say that small changes in SCFA concentration affect the brain you have to get really speculative (speculative = beyond what is known). What about the possibility that RS improves sleep because it increases blood glucose during the night? Based on my theory that it is the glucose produced by honey that matters, I predict that if I take the honey 10 hours before bedtime it won't improve my sleep. Does the SCFA theory predict what will happen if I do that?

Heisenbug (2013-12-09 19:53:10)

But it doesn't increase blood glucose. It's an indigestible fiber. It passes through undigested and is fermented in the colon. People on ketogenic diets who supplement with RS stay in ketosis. No rise. Seth: I was under the impression that RS is slowly digested starch, not undigested starch. I agree that some of it is not turned into glucose, but I am not so sure that none of it is. However, I agree with you that it is not settled. It's just that when a starch (resistant or not) greatly improves sleep, and sugars greatly improve sleep, and this would explain why we eat dessert, it is tempting to think that the starch improves sleep because of the sugars it generates. Rather than assume two different mechanisms.

Heisenbug (2013-12-09 20:07:27)

And in fact, people's fasting blood glucose in the morning is lower when supplementing with RS, as a result of the SCFAs. Whether or not the lower FBG is what's resulting in better sleep is not clear. To see if the same thing is happening with honey, I think the test is simple enough. Measure your morning FBG after a day without any honey. Take honey that evening, and measure your FBG the next morning. If it's lower, then you've replicated the RS mechanism. Seth: I don't think it's that simple. You write: "People's fasting blood glucose in the morning is lower when supplementing with RS, as a result of the SCFAs." Why is SCFAs the only possible (or even the best) explanation of why their FBG is lower? What about the possibility that RS increases BG at night and this lowers FBG? People who like RS make a big deal of how it differs from other starch, but if a banana (with no RS) at bedtime also improves sleep and lowers FBG – just like RS – I begin to doubt they understand the effects of RS as well as they think they do.

Heisenbug (2013-12-09 21:29:37)

It is the best explanation because: a) It is undigested, and its only effect is fermentation of bacteria and production of SCFA. b) Butyrate's (the primary SCFA stimulated by RS) effect on blood glucose is well-established. c) Again, blood glucose does not rise with intake of RS. Day or night. Try it yourself. Seth: How do you know that blood glucose during the night does not rise with intake of RS? I cannot measure my blood glucose while asleep or I would try it. Also, to get the sleep improvement provided by RS, at what time of day can the RS be eaten? In the examples I've read, it was eaten in the evening. What about eating it in the morning?

Gina (2013-12-10 00:33:41)

Kiwifruit before bed increased sleep onset, duration and efficiency in this study: <http://www.ncbi.nlm.nih.gov/pubmed/21669584>. Better than honey? Seems like a good self experiment. Seth: It's not so easy to get kiwis. Much easier to get honey and to vary the dose. But yeah, worth trying.

Heisenbug (2013-12-10 08:55:02)

Given that RS's physical properties don't allow it to be digested and affect blood glucose, it stands to reason that time of day doesn't have any effect. I don't know for sure whether the time of dosage influences the sleep effect. Most people seem to be breaking up their intake into two doses, daytime and evening. Though my guess is that there is a correlation, as a nighttime dose would feed your gut/boost SCFAs closer to bed. I don't know if anyone's tested this. Also, figuring out if honey lowers morning FBG would be a relevant finding, as it would bring it that much closer to mirroring the RS mechanism.

The Honey and Resistant Starch experiments: Is There a Link? | Mr. Heisenbug (2013-12-10 11:50:35)

[...] an exchange with Seth Roberts in the comments section of this post, I postulate a possible link between the honey experiment that Seth has been blogging about, and the Resistant [...]

Mark L. (2013-12-10 19:47:20)

I take the potato starch after my evening meal in order to experience vivid dreams (which I assume is a healthy symptom), and to encourage a complete bowel emptying upon rising in the morning, and to minimize flatulence during daytime hours at work. The meaning of a vivid dream for me is: when I briefly awake from a dream, I realize that my dream was of long duration with many "scenes" and that those "scenes" were vivid; however, generally I can't remember the dreams in the morning when I get up.



Nathanael (2013-12-16 12:02:13)

Warning about resistant starch. It's great for a lot of people, but for some people, like me, it's absolutely horrible and leads consistently to digestive upset. I had to learn to avoid it as much as possible. I think it depends on the nature of your personal digestive system. My hormone/neurotransmitter balance runs towards a very, very slow-digesting digestive system to start with. Slowing it down further causes gas, bloating, and cramps. It's important that I eat stuff which digests \*quickly\*, because for me, quickly is a matter of hours. I figured this out in a fairly unpleasant way due to neurotransmitter-balance-altering medications and really bad digestive reactions.

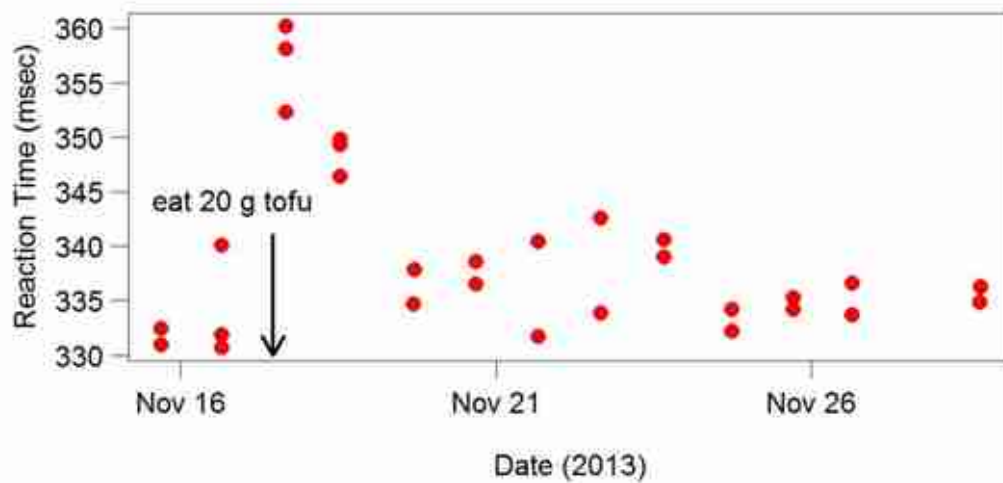
### **Warning, Soybean Eaters: Tofu Made Me Stupid (2013-12-09 05:00)**

I've been testing my brain function daily for the last six years. I use a reaction-time test (see digit, type digit as fast as possible) that takes about five minutes. I have gradually improved the test over the years – this is about version 8. One reason for this testing is that I might observe a sudden change. That could suggest a new factor that affects brain function – whatever was unusual before the change (e.g., a new food). This is how I discovered [1]the effect of butter. My score suddenly improved, I investigated. Another sudden change (improvement) happened soon after I switched from Chinese flaxseed oil to American flaxseed oil. I hadn't realized that something was wrong with the Chinese flaxseed oil. I started brain tracking after I noticed a sudden improvement in balance the morning after I swallowed about five flaxseed oil capsules. Millions of people had taken flaxseed oil capsules, but no one, it seemed, had noticed the balance improvement. Maybe other big changes in brain function go unnoticed, I thought.

A month ago, my score suddenly got worse (= I became slower). There was one unusual thing that day, before the test: I had eaten a piece of bai fu ru, a kind of fermented tofu popular in China. [2]To make it, "cubes of tofu are first fermented, then soaked in brines that contain a number of ingredients: rice wine, vinegar, chili peppers, cinnamon, star anise, and red yeast rice, the last which imparts the deep red hue that you'll see in certain varieties." [3]Here is a discussion of fermented tofu in Los Angeles. It's popular in China. Most people use it as a condiment, but I ate small amounts (one cube) alone.

To find out if the bai fu ru caused the worsening, I did a test. I deliberately ate one 20 g cube at 11 am. I do the brain tests in the afternoon, usually 4-5 pm. What happen to my brain score that day? Here are the results.

[4]



Each point is a different test. I conclude that the tofu slowed me down by about 20 ms and the effect lasted two days. I didn't notice the change in other ways – I didn't feel tired or slow, for example. Presumably that is why this has gone unnoticed.

I think these results reflect cause and effect for several reasons:

1. Clarity. A  $t$  value would be very large.
2. Surprising prediction. A surprising prediction turned out to be true. Sharp drops like this are rare. Perhaps they happen once every 3-6 months.
3. Repetition. A research assistant found similar results, although not as clear. She is Chinese – quite different genetically.
4. Other evidence that tofu is bad for the brain. After I found these results, I remembered [5] an old study. It found an association between midlife tofu consumption and late life cognitive decline among Japanese-American men in Hawaii (more tofu, more decline). [6] A related study of the same men found a correlation between cognitive decline and miso consumption. [7] A later study of Indonesian men and women also found a correlation between tofu consumption and cognitive decline (more tofu, more decline). The same study also found a beneficial weak correlation between tempeh consumption and cognitive decline (more tempeh, less decline). A weak epidemiological association found only once means little – epidemiologists, in my experience, do not adjust for the number of tests done and usually ignore the problem. More recently, [8] an experiment using a mouse model of Alzheimer's disease found that a high-soy diet made brain function worse.

Because of the other evidence, I conclude that all tofu (and other soybean foods, such as soy milk) probably impair brain function, not just this version, which contains slightly more than tofu. The other evidence involves lots of non-fermented tofu. Because of the other evidence and my assistant's results, I believe these results will be true for other people.

I can't explain the effect. Tofu is high in omega-6, but the amount of omega-6 in 20 g of tofu is small. Others think that tofu impair brain function due to its isoflavones.

Most nutrition experts say tofu is good for you. Catherine Newman, in O Magazine, [9]raves about it. "In addition to being wonderfully inexpensive, tofu is high in protein, low in fat, and very low in saturated fat. . . . One daily four-ounce [= 120 g] serving is an excellent addition to a healthy diet." [10]The Mind Health Report (October 2012) says tofu is good for the brain. "For vegetarians, good choices are tofu, beans and eggs."

Better informed experts criticize soy but say fermented soy is good. [11]Joseph Mercola wrote, "For centuries, Asian people have been consuming fermented soy products such as natto, tempeh, and soy sauce, and enjoying the health benefits." The [12]Weston Price Foundation website says a lot about the badness of soy but claims fermented soy is healthy. In an article about why unfermented soy is bad, [13]the Healthy Home Economist says, "Please note that fermented soy in small, condimental amounts as practiced in traditional Asian cultures is fine for those who have healthy thyroid function [as I do – Seth]." My 20 g dose was a small, condimental amount. John Robbins, author of The Food Revolution (2001), dismissed the association of tofu and dementia. [14]He argued:

That's not all we know. We know, for example, that dementia rates are lower in Asian countries (where soy intake is high) than in western countries. We know that the Japanese lifestyle (with its high soy intake) has long been associated with longer life span and better cognition in old age. And we know that Seventh Day Adventists, many of whom consume soyfoods their whole lives, have less dementia in old age than the general population. . . . A number of clinical studies have shown that soy and isoflavones from soy are actually beneficial for cognition. . . . Having studied the literature, soy researchers Mark and Virginia Messina conclude that "there is no reason to believe that eating soyfoods is harmful to brain aging." [Robbins failed to mention that [15]Mark and Virginia Messina own a "nutrition consulting company specializing in soyfoods nutrition" – Seth]

I don't know when the Messinas said this. Maybe there was once "no reason" to think soyfoods bad for the brain, but there is now. The new evidence, epidemiology, and mouse evidence make a good case.

Here are two interesting things. 1. A very popular food is dangerous, maybe harmful. 2. Nutrition experts had claimed the opposite: the food is good for you. Even the better ones (Mercola, Weston Price Foundation) got it wrong, ignoring evidence (the epidemiology). It is a good example of experts overstating their understanding. The Shangri-La Diet is another example (every expert said sugar was fattening, I found it caused me to lose weight).

Even more interesting is the methodological implication. Anyone can do what I did, with any food. It's easy, safe, cheap, and takes little time. The bad effects were large enough, and the method sensitive enough, that the bad effects were well above noise. And this is a non-trivial case. Tofu is popular.

We eat thousands of foods. We have millions of genotypes. We eat our food in millions of environments. Your genotype and environment affect how a food will affect you. So a good understanding of how foods affect us would seem to require thousands times millions times millions of tests. It is absurd to assume that anyone else (government, academia, industry) will do the necessary tests. They can't begin to do the tests. In contrast to people doing a job (for example, people in government responsible for food safety) you have a much simpler problem: Is my food safe for me? You only care about one genotype (yours) and one context (yours) and you eat far fewer than thousands of foods. You can do good tests. You can test exactly what you eat in exactly the context you eat it. Compared to the present, where we extrapolate from epidemiology, animal tests, and the rare human experiment, the reduction in uncertainty and increase in generalizability is immense.

If you want to do experiments like this – test foods one by one – with my software (which requires Windows), please contact me. The tests require a training period of 1-2 months so that the scores during an experiment are roughly constant.

1. <http://quantifiedself.com/2010/09/seth-roberts-on-arithmetic-and/>
2. <http://www.seriousseats.com/2012/09/chichis-chinese-fermented-bean-curd.html>
3. <http://www.kcet.org/living/food/the-nosh/have-you-eaten/4-ways-to-enjoy-stinky-tofu-in-los-angeles.html>
4. [http://s919.photobucket.com/user/twoutopias/media/2013-12-01tofuslowsdownbraintofuplot\\_zpsceffdd58.jpeg.html](http://s919.photobucket.com/user/twoutopias/media/2013-12-01tofuslowsdownbraintofuplot_zpsceffdd58.jpeg.html)
5. <http://www.healthmegamall.com/Articles/BabeskinArticle260.pdf>
6. <http://www.second-opinions.co.uk/soy-online-service/Brain.htm#.UpV0QcRQKm4>
7. <http://www.karger.com/Article/FullText/141484>
8. <http://www.ncbi.nlm.nih.gov/pubmed/23034522>
9. <http://www.oprah.com/health/The-Health-Benefits-of-Tofu-and-Soy-Products>
10. [http://w3.newsmax.com/newsletters/mhr/issues/eat1012/mhr\\_eat1012\\_29.pdf](http://w3.newsmax.com/newsletters/mhr/issues/eat1012/mhr_eat1012_29.pdf)
11. <http://articles.mercola.com/sites/articles/archive/2010/09/18/soy-can-damage-your-health.aspx>
12. <http://www.westonaprice.org/>
13. <http://www.thehealthyhomeeconomist.com/170-scientific-reasons-to-lose-the-soy-in-your-diet/>
14. <http://www.foodrevolution.org/askjohn/52.htm>
15. <http://www.vegnutrition.com/about/index.html>

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dearieme (2013-12-09 05:28:29)

Breakfast experiments: I have found that soy milk disagrees with me; Greek yoghurt doesn't.

MaxPower (2013-12-09 09:25:11)

Hello Seth, As an avid reader of your blog, I'm interested in your cognition tracking software. Please do send me a link. Thank you.

tacker (2013-12-09 13:52:46)

I am interested in the software you use to do this experiment. Let me know the details, and I will try it out. Thanks

John Kojis (2013-12-09 14:34:50)

Hi Seth, Not for the comment section. I'm interested in your software, please let me know how to obtain it. John

Martha Rotter (2013-12-09 14:45:50)

Hi Seth, very interesting! I sent this to my sister, who has been a vegetarian for several years. Her comments: "I would maybe give more credit had there been any reference to GMOs. Because of how heavily this crop is subsidized, I will only purchase items with Organic Tofu/Soy. There are correlations that clearly show how GMO products affect performance, underlining how dangerous they are - including soy/tofu, but addressing many other items as well. Corn, anyone?" So just wondering if you noticed whether the tofu you had was organic or possibly GM? I noticed some of the studies you cite are older so perhaps those were done before there was much modification of soy products? Seth: The label is in Chinese but I doubt that it was organic. Whether it is GM, I have no idea. As you say the studies I cite involve people eating tofu 40 years ago, long before GM became widespread.

James (2013-12-09 15:16:08)

Could it have something to do with the red yeast rice? RYR has statin-like properties; my GP is trying to get me to go on it to lower my LDL. Statins have a long history of negative cognitive effects - perhaps it's not the tofu here? Could you try again using tofu w/o RYR? Seth: I used white fu ru. No red yeast rice. That's red fu ru.

Adam (2013-12-09 16:42:35)

Weston A Price foundation summary of harms of soy: <http://www.westonaprice.org/soy-alert> Chris Kresser discussing soy (repeats a lot of the points from WAP; +F for "Soy."; toward the bottom): <http://chriskresser.com/9-steps-to-perfect-health-1-dont-eat-toxins> Pages of studies showing harm from soy: <http://www.westonaprice.org/soy-alert/studies-showing-adverse-effects-of-soy> Seth: Yeah, I said WAPF says soy is bad ("The Weston Price Foundation website says a lot about the badness of soy"). They also say that fermented soy is good – and I tested fermented soy. WAPF ignored the epidemiology in the sense that the epidemiology didn't show that fermented soy was safe.

epictetus (2013-12-10 00:18:57)

I would like to have a go at these experiments. Can I get a copy of the software?

dearieme (2013-12-10 05:40:45)

Ahoy, Seth: an interesting story. <http://www.theguardian.com/science/2013/dec/09/nobel-winner-boycott-science-journals>  
Seth: Thanks, my mom sent me the link with the comment "this is sort of interesting..."

Adrienne GiryGirl Harvey (2013-12-10 09:39:40)

Interesting, I noticed that when I came back to complex fiction books after NOT eating loads of soy I was able to read them faster, gain more info from them, and not struggle. As a soy-product eating vegan I had a VERY hard time with some cognitive tasks, now omnivorous and avoiding soy, I find these same tasks to be VERY easy. It'd be great to try your software and get some numbers to support this... :)

Austin Lutz (2013-12-10 09:43:15)

Seth, Very interested in the possibilities of your software if you have a link and are willing to share I would like to test and give my feedback/story. I have been very closely watching my health and can feel the difference many times when I eat bread or pasta it slows me down but to what quantitative degree I don't know? Yet. Austin Lutz

Sean (2013-12-10 09:44:53)

More than interested in the software. Please contact me

Darren (2013-12-10 09:45:22)

Definitely interested in trying this. Would the software, as-is, work with supplement experiments as well? Either way, this is awesome. I'd love to give it a try if possible. I could see a community get behind this to create dozens of different heuristics that can test the effect of a single dietary choice on an array of different performance tests. There would be so much to discover, especially once you have a pile of data.

Laura (2013-12-10 09:51:59)

I would love access to the test as well. Thank you!

richard murphy (2013-12-10 09:56:52)

I stopped at 'A research assistant found similar results, although not as clear. She is Chinese — quite different genetically' ridiculous statement Seth: Like "loud" and "soft" and "heavy" and "light" "different genetically" is a relative term. There is always an implied comparison. I meant compared to a random person.

steve (2013-12-10 10:02:18)

I'd like a copy of the software. Thanks!

Diego (2013-12-10 10:04:57)

Hi, I would really like to test this on my self. Please let me know how can I get a hold of the software you mention.

Cy Hossain (2013-12-10 10:09:39)

Hey would love to try out this software of yours thanks!!

Michael (2013-12-10 10:42:54)

Very interesting, but you really cannot draw conclusions based on an individual datapoint. You say the t-value would be very large, but if you mean the results of a statistical t-test, this is wrong, you have no degrees of freedom. Why not repeat the experiment a couple more times? Granted you'd be sacrificing a bit of reaction speed for a few days, and the test would still be imperfect because you have expectations about the results and couldn't be blinded to the treatment, but I would find this much more credible if you repeated it even once more and saw the same spike in reaction speed. Seth: This was a repetition. I had seen the same drop earlier when I had eaten the same tofu in the same amount. A t test would compare the tofu day results with the baseline days before and after. I have no idea why you think there are no degrees of freedom. There are plenty... multiple tests per day and multiple days.

Damian (2013-12-10 10:47:06)

I find it rather remarkable that a number of smart nutrition experts (e.g., Joseph Mercola, The Weston Price Foundation) think that unfermented soy is bad, but fermented soy is good. The idea that fermentation gets rid of the badness—to the point where the good outweighs the bad—is tough to swallow (pun intended), and apparently not well-supported by the evidence. I haven't done the sort of testing Seth did, but I have had blood and intestinal tests confirm that I am soy intolerant—and I feel much better, now that I've given soy, of all varieties, up. I don't remember all of the biochemistry behind this, but the lectins apparently cause problems in the intestines and bloodstream (and brain?), while the indigestible, bacteria-feeding starches, cause digestive problems as well.

Jeff (2013-12-10 12:32:59)

Hi Seth, Great post. I'm also interested in testing and your software. Thanks!

kieran (2013-12-10 13:26:01)

Seth, would love a copy of the software! Very interesting post.

Elizabeth (2013-12-10 13:48:23)

Thinking this is a one person, 'western' adaptation situation .. tell all to the people on Okinawa, one of the Blue Zones and healthiest places on the planet!

Sherif F (2013-12-10 13:54:11)

Question: a good way to double-check the results would be to do this on another day after a couple of weeks of avoiding soy, then, maybe to wait a couple more weeks and then do it again. This would show reproducibility. Would also help show whether the first result was a fluke/coincidence. Seth: A research assistant got a similar result. It is no fluke.

nospoonz (2013-12-10 13:58:50)

I like experimenting with different diets. Would be great to see their cognitive effects. I'd like to try your software if I can. Thanks.

mystic\_eye\_cda (2013-12-10 14:17:50)

Unless you're a truly avid label watcher it's very likely you eat soy every day, it's in bread, condiments, and many meat products. Also studies need to control for how the soy is processed, particularly the use of hexane.

allen (2013-12-10 14:37:51)

Hi Seth, thanks a lot for this article, especially for the way you pay attention to the effect of your environment and intake. Devising, testing, and following through with such a testing method, requires a lot of consequence. I admire that. As I experiment on optimal nutrition myself, and also optimal exercise/training regimes, your software approach to measure influence of substances to the body could help me a lot. Is this the way to contact you? Or did you have something else in

mind? thx and bye allen

cody (2013-12-10 15:41:55)

I'm also interested in the self testing software.

Mark (2013-12-10 15:54:29)

I would like a copy of the software as well.

Dave (2013-12-10 17:22:54)

I'd love to use the software to test myself. What do you need from me?

Seth Roberts (2013-12-10 17:31:17)

I disagree that there is something "Western" about this. Epidemiology involving people in Indonesia found tofu consumption correlated with dementia (more tofu, more dementia). And my research assistant got similar results. She's Chinese.

Scott (2013-12-10 17:36:35)

I'm interested in your software, please let me know how to obtain it. Thanks - Scott

Seth Roberts (2013-12-10 17:37:23)

"I find it rather remarkable that a number of smart nutrition experts (e.g., Joseph Mercola, The Weston Price Foundation) think that unfermented soy is bad, but fermented soy is good. The idea that fermentation gets rid of the badness—to the point where the good outweighs the bad—is tough to swallow (pun intended), and apparently not well-supported by the evidence." I agree, that is remarkable. Unlike a lot of nutritionists, Mercola and WAPF could say whatever they wanted, no one would complain, no funding would be lost, no reputation would be damaged. And yet they applauded fermented soy in the face of evidence – lots of evidence, if you read the WAPF website – that soy is bad or at least dangerous. I cannot explain it. Maybe they are driven more by general principles ("fermentation is good") than evidence. I really don't know.

JGF (2013-12-10 17:42:18)

Hey Seth, my girlfriend is an avid soy lover, I told her this and she didn't take it too well, I did try to sugar coat it as much as possible.....and I didn't call her stupid at all. Anyway her reply that she is following the "Blood Type Diet" and she is Type A, which this book says her blood type gets the most benefit from a mostly vegetarian diet including soy. She is under the impression that other blood types will get little benefit or even negative effects from soy (and a vegetarian diet). Where types A's process it well and benefit from it. Out of curiosity, what was your blood type in relation to this experiment. Also was the blood types recorded in any of the other experiments you looked into? John Seth: I don't know my blood type, sorry. The epidemiology I described involved people of all blood types.

Audrey (2013-12-10 18:05:16)

Or maybe it's simply that Mercola's in the fermented soy business (selling K2 from natto) but not in the unfermented soy business (tofu.) Occam's Razor.

Frank (2013-12-11 02:11:27)

Hi Seth, thanks for sharing your insights. I'm also interested in your software. Look forward to hearing from you how I can get access when you have a moment. Thanks!

Dimitry Venger (2013-12-11 05:33:51)

I would be delighted to test my diet, which I have recently changed considerably (mostly enriched in iron significantly), simply because my SO is anemic and I take most of my meals along with her. So if I could get access to your software, I'd like to see how I score. BTW - do you have any methodology to test the effects of different foods on other bodily functions? (immune system, general alertness, sleep cycle, tendency towards allergic nasal congestion, metabolism and attention span are the

main factors that affect my life)

Ann (2013-12-11 07:18:13)

FYI I have found that soy is my migraine trigger. After eliminating it from my diet I no longer suffer migraines.

dearieme (2013-12-11 07:20:41)

"Seth: I don't know my blood type, sorry." I'm still reeling from this. Different countries are different, eh?

Joseph (2013-12-11 08:49:47)

"She is Chinese — quite different genetically" Are you serious?!? Seth: I already replied to this. You might want to read that.

Jazi Zilber (2013-12-11 11:04:35)

My experience with soy stuff was always bad. I do not measure reaction times. But my stomach is usually quite clear. and i tried it in many forms before, processed soy was almost always significantly bad. I tried soy protein in its various forms. Tofu was bad enough to make me not try it . But not as bad as the meat-like protein things.

Justin (2013-12-11 12:31:31)

Seth: How do you compensate for the psychological sub-conscience effect of your tests? You ate soy repetitively (as you indicate above) HOPING for a slower reaction to prove your inclination. You can say you were trying as hard as you could for the best time/score, but your sub-conscience knows different; almost like a like-detector. I predict that you could repeat this test 1000 times and still have the same slowing effect. Your initial observation, and then your dissecting of your diet was probably the accurate interpretation, but when you repeat it numerous times LOOKING for a negative correlation, you will find it. [Likewise, recent research uncovered on Global Warming data indicates a similar situation where scientist were looking for Global Warming and some went out of their way to misinterpret data at the fringes to find it. Now that average temperatures decreases from those peaks, they call it "Climate Change".] Anyways, the more scientific and truer test would be to consume the soy, and then something that isn't soy to determine if there is a placebo effect on your results. But it would take a third-party to execute that for you and not telling you what you're consuming. Take a heavily flavored soy-mild versus a flavored rice milk. And repeat it numerous times then look for correlations only after it's revealed what you consumed after the fact. Thanks for the links in your post; I think the outside evidence is there which you seemed to have researched after you experienced the initial delayed reaction ( #4 above). Seth: No I didn't hope for the result I obtained. Actually I always hate it when there is a drop. I wonder if I will recover. But you are certainly right that the question is far from settled. I don't agree that later better evidence will be "more scientific" – science needs all sorts of evidence.

Ed (2013-12-11 12:59:39)

I'd like to try your software please. I eat plenty of soy and feel like this would be important to know for the long term effects. Thanks in advance!

Patricia (2013-12-11 13:21:02)

Hi Seth, This sounds really interesting. I would love to do the experiment. I would really appreciate it if you could send me the software. Thank you! -Patricia

progreterian (2013-12-12 02:37:28)

Your findings are absolutely correct. Within the paleo community it's no secret that soy creates brain-fog. Here's the missing element: Soy is estrogenic. Which means it acts as some weird estrogen surrogate in your body and messes with your hormonal balance. Men can feel impacts quicker than women, because of naturally higher testosterone levels. But the long term effects for women are worse. The little testosterone women have gets basically wiped out. It can't counteract the natural estrogen levels AND soy estrogens on top. That's why soy-rich vegetarianism is the most common road to breast cancer. At least become a pescetarian and avoid soy like the plague. Dave Asprey from [www.bulletproofexec.com](http://www.bulletproofexec.com) has been negatively addressing soy and its effects for years. Check out his research. He's a very innovative thinker similar to you.



Seth Roberts (2013-12-12 03:27:40)

"Here's the missing element: Soy is estrogenic." That's an interesting explanation. I have two questions: 1. Why should estrogens cause brain dysfunction? 2. What other foods are as estrogenic as soy?

progrearian (2013-12-12 15:07:56)

I'm not an expert on the topic, just a well-read and heavily researching self-experimenter. 1. The estrogenic effects of soy kick off a chain reaction slowing down the ways the brain is being "fueled", which results in foginess. Phytoestrogens are quite controversial and as far as I know allowed in the US, but if you want to feed it to your baby in Germany for example, you need a prescription. If you mess negatively with the dominant sex hormone of each sex, you do no good. There's no heavy research on it, but as a self-experimenter you can do the following: do your self-reaction test, but instead of eating soy beforehand like you described above, eat some brazil nuts. Those are the most potent natural source of testosterone equivalents. I did that and it sharpened my thinking tremendously. I guarantee you will find similar results. 2. There are many nuts and oil seeds containing phytoestrogens, but in my own diet I have only found flax seed to be as harmful to my brain as soy.

Nico (2013-12-13 03:01:28)

Thank you for this very interesting finding. I'm a string believer in the effects of food on our (immediate) well-being and a health geek. I'm especially fond of your rigorous self-testing. (I'd love a link to the software you use by the way). But I wondered if you could enhance your self-experiment to prevent a placebo-effect. Since you might have read all those articles about tofu being not good for your health, there is a possibility that your unconsciousness might slow you down during the tests, just to make sure you're right. So you would need not to know in advance, if you're eating tofu or not. In addition you might want to make it double blind. So when you're eating it, the person/the cook doesn't know what you're eating either. I thought about cooking up maybe five different dishes, so heavily spiced for example that you can't taste if it's tofu or something else. Then somebody packs them for you in boxes labeled with numbers. Which is which, you can't know. Then you eat one of those every day, and later check if it really was the tofu all by itself. It is certainly a bit overengineering, but might be worthwhile to make sure, we're not fooling ourselves. Thanks again and all the best Nico  
Seth: I had forgotten about one of the epidemiology articles when I did the test. The other one I never knew about. The food I tested here I ate for years. One day my score was surprisingly low and the only unusual thing about that day is that I had eaten the tofu. That's why I did this test. None of this supports the explanation you propose.

Jerry (2013-12-13 13:09:08)

Here are some observations from a long-term N=1 experiment: I used to eat a strict macrobiotic diet consisting of brown rice, vegetables (mostly brassica), beans, seaweed, and relatively high proportions of soy (tofu, tempeh, miso, soy sauce), nut butters, as well as occasional artificial garbage like "Nayanoise" and "Rice Dream". I did this for years. At first, I experienced weight loss. Eventually (about 3 years later), I noticed that I often had mood swings (no doubt caused by blood sugar changes), cravings, and low energy. I had what today I call "brain fog" most of the time, and difficulty concentrating. Most interestingly, I noticed that I had an increasing tendency to be more sensitive and emotional rather than rational. I attribute this to phytoestrogens in the soy. I believe the effect is quite real and measurable, although the change was gradual. I also had a tendency to feel cold all of the time (probably caused by inhibition of thyroid by brassica and autoimmune thyroid disease caused by gluten). After about 12 years of this, I gradually changed my diet to LC/Paleo, by first getting rid of the soy, then the rice and beans, then the seed oils and incorporating fish, meat, eggs, dairy, coconut oil, etc. My energy level is now far higher, my blood sugar is normal and stable, and the brain fog has cleared up. I have a far easier time concentrating. Finally, I went strictly gluten-free. That made a tremendous difference. I now think that in many ways the macrobiotic diet (as practiced in the early- to mid-90s) is about the worst diet one can possibly consume. It is extremely pro-inflammatory, incorporates all the wrong kinds of fats, high in gluten and free glutamate, and prone to cause blood sugar swings (observe any macrobiot and you will see that many of them can't stop eating carbs). I think that the only conditions in which macrobiotics makes any sense at all is if one is in a state of metabolic semi-starvation. Seth: That's very interesting. Given how bad a macrobiotic diet actually is, why did some diet guru decide that such an unhealthy diet was so great?

Sam (2013-12-13 13:59:45)

Hi Seth, I would like to use your software for testing on myself. Can you also send me the software? Thank you! Sam

Randy (2013-12-13 15:22:30)

I'd like to try the software. Thanks.

Weekend Link Love - Edition 274 | Mark's Daily Apple (2013-12-15 08:44:17)

[...] How eating tofu – even the fermented kind – made Seth Roberts stupid. [...]

Susanne (2013-12-15 11:43:09)

Hi, I found this article fascinating and would love to get a copy of the software. Thanks. Susanne

Reijo (2013-12-16 09:53:21)

I would love to try your software on a long term basis as well if you could send me a link. Thank you.

Papa Hotel (2013-12-18 02:41:44)

So you're not going to reveal the software? We're all waiting. Seth: "Reveal" the software? I'm not sure what you mean. If you have a Windows computer and contact me, I may give you the software to use.

Weekend Link Love - Health Tips (2013-12-19 14:48:03)

[...] How eating tofu – even the fermented kind – made Seth Roberts stupid. [...]

Donald. Gillis (2013-12-21 20:30:05)

Would love to try your testing protocol

Alwyn (2013-12-21 21:07:58)

Hi Seth, Please include me for a copy of your software. I typically perform a variety of nutritional tests, mainly around migraines and your software sounds like it can add an interesting angle.

Jerry (2013-12-22 10:09:16)

"Seth: That's very interesting. Given how bad a macrobiotic diet actually is, why did some diet guru decide that such an unhealthy diet was so great?" It was a series of gurus, starting in the 50s. If you look at the macrobiotic diet as basically a traditional Japanese peasant diet, it makes sense and I believe it to be healthy; i.e. it makes sense if you maintain a state of semi-starvation, constant exercise, and no modern junk foods, none of which are at all common among modern American practitioners of macrobiotics. Many have used a macrobiotic diet to treat serious, advanced disease. There is far too much anecdotal to dismiss macrobiotics. Also, the macrobiotic diet is certainly better than the SAD. Modern macrobiotics has made some unfortunate mistakes, however, like treating all grains as equal, treating soy as a kind of health food, ignoring gluten sensitivity, etc. I remember reading a passage somewhere in "Good Calories, Bad Calories" about blood triglycerides becoming visible in a vial of blood, but not visible if in a state of semi-starvation. That fascinated me, and I immediately thought of my experience with macrobiotics and the constant teaching that semi-starvation was something to aspire to. Seth: Interesting, thanks. I wonder how well people sleep on a macrobiotic diet.

Theodora (2013-12-23 00:40:42)

Great post! "every expert said sugar was fattening, I found it caused me to lose weight" Just wondering if you have a post on your experience on this, I'd be very interested, thank you. Seth: Thanks. See my book, The Shangri-La Diet.

Jerry (2013-12-23 00:41:28)

"Seth: Interesting, thanks. I wonder how well people sleep on a macrobiotic diet." I didn't note any significant effect on sleep while following a macrobiotic diet. However, I did begin to sleep better on an LC/Paleo diet, and on Dr. Kruse's Leptin Reset

diet; the latter emphasizes no food after about 6:00 PM. When combined with exercise in the late afternoon (anaerobic; not cardio), sleep becomes deep and restful. The most profound effect on sleep that I've noticed in my N=1 experimentation was achieved by wearing blue-blockers after sunset, especially if using a computer in the evening. Wearing the blue-blockers also seems to have a pronounced effect on waking blood sugar. Wearing blue blockers also seems to elevate my mood (I am, after all, seeing the world through rose-colored glasses).

Weekend Link Love - Health RSS Feed (2013-12-23 23:47:01)

[...] How eating tofu – even the fermented kind – made Seth Roberts stupid. [...]

## **Sleep: Summary of What I've Learned (2013-12-11 05:00)**

I want to summarize what I've learned about how to sleep well. I've found about a dozen changes that helped. Taken together they suggest the importance of four dimensions:

1. Healthy brain. My sleep greatly improved [1]when I ate a lot of pork fat. (As far as I can tell, [2]butter produced the same effect.) I wasn't getting enough animal fat. My sleep also improved when I started eating honey at bedtime. I assume honey raised blood sugar to better levels during sleep, improving brain performance. The great importance of this, I believe, is why we evolved preferences that push us to eat strongly sweet foods, such as fruit, separately and later, i.e., dessert. Bedtime honey also caused my muscles to grow more in response to exercise – a sign of better sleep, since muscles grow during sleep. I have never measured the effect of flaxseed/flaxseed oil on my sleep but [3]the brain benefit was so clear in other ways I'd be surprised if it didn't improve sleep.

2. Strong oscillation. Sleep is controlled by three oscillators. The larger the amplitude of their summed output, the deeper sleep.

One oscillator – the well-known one – is sensitive to the light/dark cycle (especially blue light). It makes us active and awake during the day, inactive and asleep at night. Its amplitude depends on the amplitude of the light/dark cycle, which can be increased by sunlight or [4]daylight fluorescent light in the morning, [5]a darker bedroom, and [6]less blue light in the evening. [7]Vitamin D3 in the morning seems to have the same effect as sunlight, and is much more convenient.

A second oscillator is sensitive to when we eat. To ensure we're active when food is available, it wakes us up about three hours earlier. If you usually eat at noon, for example, it will wake you up at 9 am. I realized the practical importance of this oscillator, which is well known to circadian-rhythm researchers, when I found that [8]not eating breakfast reduced how often I woke up too early.

[9]The third oscillator is controlled by the sight of faces – what you see during a conversation. It also controls mood, making us happy, eager, and serene during the day and unhappy, reluctant, and irritable at night. If things are working properly, most of the bad mood will happen while we are asleep. During a critical period in the morning, faces "push" this oscillator much as you push a swing. It evolved to synchronize the sleep and mood of a community so that everyone is awake, happy and eager to work at the same time. Two people cannot work together if one of them is asleep.

3. "Poison" avoidance. Alcohol and caffeine can make my sleep worse, no surprise there.

4. Muscle growth. Exercise that causes muscle growth deepens sleep, whereas aerobic exercise does not. (Aerobic exercise may make you fall asleep faster, which has never been a problem of mine.) [10]Standing more than 8 hours during the day produced better sleep; less standing (such as 6 hours) did not. This was too hard to be practical.

Later I found that [11]standing on one leg to exhaustion had similar effects. That was practical – I still do it.

The biggest advances, compared to what was already known, are morning faces and bedtime honey (brought to my attention by [12]Stuart King), with Vitamin D ([13]discovered by Tara Grant) honorable mention.

A recent editorial in the [14]New York Times described mainstream thinking:

The brief course of sleep therapy teaches patients to establish a regular wake-up time; get out of bed during waking periods; avoid reading, watching TV or other activities in bed; and eliminate daytime napping, among other tactics. It is distinct from standard sleep advice, like avoiding coffee and strenuous exercise too close to bedtime.

I imagine the health experts of 1950 gave similar advice.

[15]Chris Masterjohn's comments about sleep (thanks to Stuart King for the link) illustrate what a very smart very well-informed person figured out. Like me, he stresses animal fat and the light/dark cycle (morning sunlight and dark bedroom). Unlike me, he thinks a cool room helps. I have varied room temperature and didn't notice a difference. He mentions Vitamin B6 but I eat enough meat that I am unlikely to be deficient. He says carbs help but doesn't narrow it down to honey at bedtime. He doesn't mention morning faces or morning Vitamin D. Neither Chris nor I emphasize magnesium, which [16]some people praise highly.

1. <http://media.sethroberts.net/blog/pdf/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf>
2. <http://quantifiedself.com/2010/09/seth-roberts-on-arithmetic-and/>
3. <http://media.sethroberts.net/blog/pdf/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf>
4. <http://escholarship.org/uc/item/2xc2h866/>
5. <http://blog.sethroberts.net/2013/11/27/correlation-between-moon-phase-and-sleep-quality-supports-importance-of-dark-bedroom/>
6. <http://blog.sethroberts.net/2013/11/12/orange-glasses-at-night-improve-sleep/>
7. <http://media.sethroberts.net/blog/pdf/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf>
8. <http://escholarship.org/uc/item/2xc2h866/>
9. <http://escholarship.org/uc/item/2xc2h866/>
10. <http://escholarship.org/uc/item/2xc2h866/>
11. <http://media.sethroberts.net/blog/pdf/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf>
12. <http://music.anu.edu.au/people/stuart-king>
13. <http://www.primalgirl.com/2011/11/01/nprimalgirl-sleep-issues-vitamin-d/>
14. <http://www.nytimes.com/2013/11/24/opinion/sunday/curing-insomnia-to-treat-depression.html?src=rechp&r=0>
15. <http://blog.cholesterol-and-health.com/2011/03/getting-better-sleep-cool-dark-and-lots.html?m=1>
16. [http://www.huffingtonpost.co.uk/marek-doyle/help-me-sleep-magnesium-secret-to-sleep-problems\\_b\\_3311795.html](http://www.huffingtonpost.co.uk/marek-doyle/help-me-sleep-magnesium-secret-to-sleep-problems_b_3311795.html)

Brian Toomey (2013-12-11 08:39:40)

Great article Seth. Magnesium hasn't helped me noticeably, but a cold room does. I sleep much worse in a hot room. A week of trying bedtime honey seemed to make me sleep slightly deeper, but push my sleep onset forward. Since I have sleep onset insomnia, I don't think I'll keep with it.

Alex Chernavsky (2013-12-11 10:10:46)

Temperature has a significant effect on my sleep. I sleep worse in the summers.

adamlong (2013-12-11 13:04:01)

Seth, I just want to say again how much I appreciate your blog and what you give back to the community. Since reading your blog I have made significant improvements to my sleep and it has really benefited the rest of my life substantially. I can't remember if you've discussed this before but I wonder if you have tried the philips blue light or anything similar. My routine now is that I use orange goggles starting around 8 pm, and then (after taking honey) read in bed with a red light. I find I can't read as long as I used to - I get drowsy very quickly. Then in the morning I use a philips sunrise alarm clock (just started using it recently) to wake up and then a philips golite to expose myself to blue light while drinking my coffee and while shaving. Then I go to the park across the street and do some exercise (indian clubs or sprinting) while facing the sun (one of the benefits of living in Southern California). I have not been rigorous the way you have about teasing out the effects of these different measures, but I can say that overall my sleep is MUCH better than it used to be and I feel that this has improved my mood and my life considerably. Seth: Thanks, that's nice to hear. To answer your question, I put on orange goggles at 8 pm. Haven't tried the blue light.

Li (2013-12-11 15:05:16)

I'm surprised you don't include actual activity - physical or mental - among the oscillators. There's good reason to believe that the former, at least, impacts circadian rhythms.

Jeff Davidson (2013-12-11 15:12:54)

Regarding oscillator number two - Bingo! Some time ago I began experimenting with eating high protein breakfasts within 30 minutes of arising as a way to reduce snacking later in the day. It worked admirably, but since I normally wake at 4AM for work, it didn't take long for me to start having problems with waking at 1:30 - 2AM - quite alert - and not be able to fall back to sleep until, of course, 3:55AM. I was never aware of this affect, but I found the early waking subsided once I started skipping breakfast again. Seth: Definitely supports what I found.

Jeff Davidson (2013-12-11 15:14:38)

@ adamlong, your bedtime routine sounds exactly like mine. It takes me a long time to read books nowadays.

BRW (2013-12-11 15:56:15)

Great summary! I had never heard the 3 hour timing prior to breakfast wake up thing but, it fits with my occasional early rising. Thanks for sharing.

Sentinel (2013-12-11 16:20:03)

@ adamlong - I tried the philips golite too, almost daily for 5 months. i have not noticed any change, but i am thinking that it might pay off over the winter, when the potential for access to sunlight is greatly reduced. the amber glasses seem to have assisted with reducing sleep latency (quickly falling asleep), however.

Jeff (2013-12-11 17:44:35)

Seth - You mentioned in an earlier post that you take your Vitamin D 3 - 4 hours after wakening. Is the reason for this so you can take it with food and still avoid the early awakening effect of eating too close to rising?

Jeff (2013-12-11 17:47:20)

adamlong & Jeff Davidson - Do you recommend any particular red reading light?

Kjartan (2013-12-11 18:04:56)

About the morning faces, for what duration of watching faces have you found to be most effective? In your PDF you mention that you experimented with different amounts of time, but I didn't see any mention or graph showing these results.

Seth Roberts (2013-12-11 20:36:51)

I take my Vitamin D3 at 8:00 am. I don't know if that is best but it seems to work. This has nothing to do with eating it with food - I don't eat it with food. I think Vitamin D3 has the same effect as sunlight - I also try to get plenty of sunlight in the morning. I want those two things - Vitamin D3 and sunlight - to be working together, in synchrony. That will give me the greatest circadian rhythm amplitude and thus the deepest sleep. It's as if two people are pushing a swing; you'd want their efforts to add rather than interfere. There's no substitute for trial and error in finding out what time it is best to take Vitamin D.

Seth Roberts (2013-12-11 20:47:32)

I don't exercise in the evening. I do in the morning, a little bit, you are right I should wonder about it.

Seth Roberts (2013-12-12 03:34:19)

What duration of faces most effective? The longer the better. I usually stop somewhere between 30 and 50 minutes of faces.

AT Natenshon (2013-12-12 12:23:58)

Hi Seth, Any reasons on why no emphasis on Magnesium, I have tried it and found it effective for both muscle cramping and sleep. Seth: In small tests it made no difference. It is hard for magnesium to cross the blood brain barrier, which might have something to do with the negative results. Maybe I should try it again.

Bob Levinson (2013-12-13 17:19:20)

I always thought that coffee in the morning was safe. Calling it "poison" (see number 3 above) led me to [1]this study, which suggests otherwise. Too bad, it will be difficult to quit! Seth: I have two cups of black tea in the morning. No more the rest of the day. Black tea has half the caffeine of coffee. After reading that study I may reduce it to 1 cup of black tea per day.

1. <http://www.ncbi.nlm.nih.gov/pubmed/7796154>

Baeo Maltinsky (2013-12-15 13:29:32)

Eggs seem to cause me horrible insomnia. Back around July 2012, I was trying to improve my diet but I didn't want to give up my vegetarianism, so I started to eat a LOT of eggs. The quantity varied a bit over time but was usually in the range of 10 to 14 per day. Not long after, I started having awful insomnia. I could lie awake all night just unable to fall asleep. There were suddenly just too many thoughts buzzing through my head keeping me up. It was like something was engaging my sympathetic nervous system. I thought it probably had something to do with my dietary changes, but I assumed that it was a result of ketosis disturbing sleep. I tried reintroducing carbs, but when that didn't work I just sort of gave up on dietary modifications (except for when I began supplementing Vitamin D in the morning, but that only helped marginally). I started cycling through OTC sleep aids, but that only sort of worked as I developed tolerance to anticholinergics very quickly and melatonin didn't work at all. By October 2013, I was going crazy. I just couldn't sleep well. It was making me depressed and seriously impairing my academic performance. I was exhausted constantly, but then I noticed something. I slept better when I consumed a lot of caffeine in the morning. I played around with it a bit, and noticed that there was a clear dose dependent relationship between how much caffeine I consumed and how well I slept. Now, there are good reasons not to consume that much caffeine, but it got me looking in the right direction. I had a hunch that the caffeine was depleting my acetylcholine levels, serving a similar function as OTC anticholinergics like diphenhydramine and kava. I wondered what would happen if I sharply reduced my intake of acetylcholine precursors. A lot of people advertise eggs as "choline packed", so I cut back to less than 3 per day. Suddenly, I was sleeping much better. Now, it could be something else in the eggs (I'm not really attached to my choline hypothesis), but either way I feel confident blaming them for my sleep troubles.. My insomnia is just gone now, and it returns whenever I start eating them again. Seth: Great story.

tom (2013-12-15 19:41:58)

I measure my sleep with a fitbit. It just measures motion. Hopefully it corresponds with REM and stage 3 sleep. "What you measure, improves" - Rumsfeld's Rules. But if my sleep is really bad, it logs it under the activity window instead, and I have to edit it to make it a sleep log.

Nathanael (2013-12-16 11:43:53)

For reference, I researched magnesium heavily. Basically, if you have a magnesium deficiency, sleep problems are only one of the many nasty effects – constantly tense muscles are the most common. If you have magnesium deficiency, you need to correct it by taking magnesium. You can't be tested for magnesium deficiency by blood test because it doesn't "hang out" in the blood – you can have a deficiency which can't be found in blood tests very easily. And due to magnesium-depleted soil, it's become much easier to be magnesium-deficient than it was 100 years ago. But if you don't have magnesium deficiency, magnesium will of course do nothing. Seth: I live in Beijing half the year, Berkeley half the year. To my surprise, I seem to be healthier in Beijing, judging by brain test scores. I eat about the same food in both places. The reason may be that in Beijing I drink bottled water with magnesium added, in Berkeley the water I drink does not have magnesium added. I have tried magnesium supplements and they had no effect – but that was in Beijing. Haven't tried them in Berkeley.

daz (2013-12-16 20:06:19)

@Baeo, on the Choline 'thing', i was reading recently that choline (too much?) is not good for people prone to high histamine levels. also choline needs to be in balance with inositol, so may be you are (or your diet is) deficient in inositol. & apparently caffeine can produce an inositol deficiency. just some food for thought...

## **Sleep Apnea, Wheat Allergy, Nasty Cough and Personal Science (2013-12-12 05:00)**

Cliff Styles, a 66-year-old man living in Huntington Beach, commented that his sleep got much better after he stopped eating wheat. I asked him why he gave up wheat. He replied:

I had a morning cough that was very nasty, I didn't smoke, but had read a fair amount about food allergies and that reading suggested an allergic reaction as the cause. I tried several things, over a period of years, including eliminating alcohol for several months of the year (modest help to allergies and depression), reducing sugar consumption (big help to mood swings), with some success. I had been reluctant to eliminate wheat because it seemed benign and I loved all the wheat products, but at one point in reading about food allergies I came across the idea that we develop allergic addictions to foods we eat regularly – and I was probably eating wheat more than three times a day, seven days a week. I made no connection to the sleep apnea and snoring in the allergy research, in fact I took the sleep apnea and snoring for granted, and thought the nightmares were the product of psychological problems.

I decided to experiment with eliminating wheat. Well, it was like I imagine going off of heroin might be like – chills, body aches, flu-like symptoms for four or five days, then all the symptoms cleared up – and the cough went away. My wife was skeptical, so after a few weeks, I went back to eating wheat, the cough promptly came back, she was convinced, I was more certain, went off wheat permanently. I will once in a while indulge, but the quick return of the cough gets me back to the wheat-free diet. The wheat reaction is so pronounced that many friends have noticed my reaction, since I tend to indulge at social occasions.

The sleep benefit happened quite unexpectedly. After quitting wheat, my snoring eased a bit, and the sleep apnea went away, though now I do not remember how quickly, but I think it was pretty fast. Another side benefit is that I lost about 15 pounds of belly fat, and it stayed off for years. My wife notices

that when I indulge in wheat now, my snoring gets worse that night, whereas I won't necessarily notice this myself.

So what was the impetus and chain of causation? A symptom (a nasty cough, you'd think I was a pack a day smoker, especially in the morning), reading about food allergies, self-testing and seeing a result on the cough, and only then getting the benefit to sleep. At no time did I undertake the test of eliminating wheat in order to cure a sleep problem, that was just a very, very fortunate side effect.

How much sleep apnea is due to food allergy? Sleep doctors [1]do not consider this possibility. [2]Here is an example where the food allergy was dairy. [3]Here is another example. [4]Here someone claims "The commonest causes of obstruction sleep apnoea are allergy . . . and being overweight."

1. <http://umm.edu/health/medical/altmed/condition/sleep-apnea>
2. <http://www.apneasupport.org/osa-and-food-allergies-t3852.html>
3. <http://www.mothernova.com/blog/in-the-know/food-allergies-and-sleep-apnea/>
4. [http://www.drmyhill.co.uk/wiki/Sleep\\_Apnoea\\_Syndrome](http://www.drmyhill.co.uk/wiki/Sleep_Apnoea_Syndrome)

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Kyle F (2013-12-12 05:47:49)

My experience with wheat was similar, 4-5 days of flu like symptoms, and then my allergies were gone. Before giving it up I always felt like I had a sinus infection. I did not quantify my sleep but I definitely had a lot easier time studying.

dearieme (2013-12-12 08:16:49)

Do people who give up wheat tend to replace it with other grains: rice, oats, barley, rye ...? Are those grains more benign to the wheat-intolerant? Is it ever enough to reduce wheat intake, or must one expect to need to eliminate it?

GB (2013-12-12 08:33:10)

I also wonder if doctors get the cause and effect order wrong. They always say obesity causes apnea. But many slim people also suffer from apnea. It's possible that having apnea destroys your sleep and thereby encourages muscle loss/weight gain. Or perhaps there's a feedback loop involved. Thanks for your comments Cliff

Charlie Currie (2013-12-12 09:00:28)

All of my allergy symptoms - sinus congestion, cough, watery / itchy eyes, frequent sneezing - all cleared up when I gave up wheat and milk (I still consume butter and heavy cream without any problems - I'm not lactose intolerant, but lactose free whey protein will cause digestive distress - it must be the proteins, not the fat or sugar, in milk that I'm intolerant of). I gave up all grains for a couple of years, now I eat white rice and corn occasionally (tortillas) without any of the allergy symptoms coming back. I eat real ice cream (no additives) occasionally, but I can feel it in my sinuses. If I eat it a couple of days in a row, or drink a couple of glasses of milk, I wake up with sinus congestion. Here's an article in the Daily Beast, which talks about wheat, and wheat germ agglutinin in particular: <http://www.thedailybeast.com/articles/2013/12/10/wheat-threatens-all-humans-new-research-shows.html> Nasty stuff...

Portlander (2013-12-12 09:52:09)

My former manager at work was a textbook wheat allergy case just like this guy, wheat belly, snoring, cough, chronic health niggles, whole nine yards. For \_years\_ that I knew him he had this strange cough that I'd assumed was some sort of tick, like some people crack their fingers. It had gotten so that I'd stoped noticing it even. I would drop hints about low carb and so forth after I'd discovered it, but (hopefully) I was never overbearing or anything. He's a pretty conventional wisdom type of guy



so I wanted to let him know the "new thinking" on Atkins, as I called it. Then, one day he was talking and mentioned that his cough was from acid reflux and he had been on various meds and so forth, but they weren't working so he was going to have to have surgery to fix his esophagus which was being eroded by stomach acid and the irritation from the stomach acid was the source of his cough. When was explaining that a contractor happened to be standing next to me and we were good friends and he had learned the whole low carb & wheat deal from me. The contractor unloaded on the guy. Saying straight-up, and not much nicer than this, that he knows his problems are from diet, and he is absolutely crazy to be choosing surgery instead giving up donuts and beer. He's like a diabetic letting his legs get amputated, or a smoker losing one lung. Besides, it's not like the surgery is going to fix the problem, it's just fixing the most obvious symptom. As an engineer, the manager should understand that. In a sheepish and quite voice the manager said, "yeah, I know but I like that stuff." Well apparently staring down the knife caused him to re-think it all and he gave up wheat completely, cough went away, sleep was better, and he dropped about 20 lbs in 2 months. Again, textbook. I find all of it amazing.

Cliff Styles (2013-12-12 10:26:20)

dearieme: my experience is that all the grains except rice cause the reaction, and the amount can be very small. Sometimes I escape, but I cannot say why. It might be gut bugs that make a difference. portlander: overcoming resistance to a needed test or change often demands hearing it from more than one person, and a crisis. You and your friend were both important. It's just human nature, I think. Perhaps if we all learned to think better, it would not be so true, or if we mastered some of Seth's regular self-testing? Of course, this kind of resistance varies a lot across individuals. I think one of Seth's big points is that experts end up exploiting those weaknesses, and personal science is a way of counteracting that.

dearieme (2013-12-12 14:05:58)

Thanks, Cliff. At the moment I've given up milk, but not yoghurt, cream or cheese. My sinuses are clearer. I'd hate to give up wheat: is there any test that would tell me whether I should be considering it? It would turn our domestic economy upside down!

dearieme (2013-12-12 14:07:37)

It's suddenly fashionable to recommend The Mediterranean Diet. In Italy, at least, that involves plenty of pasta and bread. Is the medical trades' Med Diet an actual Med Diet or a parody of one?

Cliff Styles (2013-12-12 14:36:34)

dearieme: funny you should ask about a test - just last night I was reading the opening chapters of Grain Brain, by David Perlmutter, and he mentions this test: <http://www.drperlmutter.com/learn/resources/563-2/>

dearieme (2013-12-12 14:39:23)

Thank you.

Cliff Styles (2013-12-12 14:54:09)

Seth: the Grain Brain book by neurologist Perlmutter mentions something that might provide a metabolic explanation for your butter and cognition results: 'Most important, cholesterol is looked upon as an essential fuel for the neurons. Neurons themselves are unable to generate significant cholesterol; instead they rely on delivery of cholesterol from the bloodstream via a specific carrier protein. Interestingly, this carrier protein, LDL, has been given the derogatory title "bad cholesterol." In reality, LDL is not a cholesterol molecule at all, good or bad. It's a low-density lipoprotein (hence its acronym), and there is absolutely nothing bad about it. The fundamental role of LDL in the brain, again, is to capture life-giving cholesterol and transport it to the neuron, where it performs critically important functions.' Do you have any knowledge of this? I have never heard of this.

George (2013-12-12 17:17:00)

How is it possible to develop allergies from eating the same foods frequently? Until recently nearly all societies around the world ate the same foods with near complete regularity. There were SOME seasonal changes in fruit and vegetables but for instance bread was eaten year around for one's entire life in Europe and rice was eaten year around in Asia and so was cheese and meat and a host of other foods. Are we expected to believe that people developed allergies to these foods? In some

tropical climates there wasn't even seasonal variations and people at an unvarying diet of sweet potatoes, coconut, fish, and some roots and tubers yet were reported as quite healthy. So what doesn't add up here? Is that just another myth?

Audrey (2013-12-12 17:42:30)

George, the wheat in our diet has changed significantly during our lifetimes. More profitable wheat strains continually push out older versions (with no health testing that I am aware of.) IMHO, this amounts to a massive invisible health experiment.

Portlander (2013-12-12 17:55:12)

I haven't read Perimutter, but FWIW, I'm skeptical of in vitro tests for food allergies. To many positive results, and I don't think they match what really happens the body. No one I know is an IV bread user. Instead, I think if one very thoughtfully pays attention to their mind and body, the food allergies will make themselves known easily enough. Does one have some sort of chronic problem that's been attribute to age or bad luck? Is one's body shape weirdly out of proportion? Are there mornings you just can't get out of bed, or conversely, nights were you just can't sleep? If so, it's likely a food allergy. And if not, don't sweat it. Keep doing whatever you've been doing. :) But if you're suspicious, it should be easy enough to \_completely\_ remove the food from your diet for 7-10 days. Then add it back in with a normal meal of it and see how your system handles it. Classic n=1 testing at its simplest and best. Cheers.

Cliff Styles (2013-12-12 18:10:25)

George: I don't know if 'allergic addiction' is a valid hypothesis or not, but the idea was an essential part of getting myself to test wheat elimination. I, too, was skeptical, and believe me, I did not want to find that wheat was a problem. The change in my life has been dramatic. Armchair science will never be enough for me, ever again. Seth's personal science gets us out of that armchair and into the laboratory we all live in, if we'd just take note.

Kyle F (2013-12-12 20:31:08)

Don't allergenic foods impact serotonin? Could that be a part of it?

George (2013-12-12 20:41:00)

Oh, I certainly think it's possible people are allergic to foods, I just don't understand how it can be the result of eating the same thing over and over again. That's what most people have always done, historically, and continue to do. Things like bread and rice were staples, people had them every day, day in day out, throughout the year. It beggars belief that this could cause allergies. One could be allergic to wheat or develop it at some point but I don't see how regularly eating wheat could be the *cause* of that. I never suffered any particular symptoms and I eliminated wheat and dairy and sugar from my diet several times and never felt any different so I know that for me it makes almost no difference what I eat as long as I eat basically healthy (veggies, fruits, meat, fats, grains) but I don't deny that other people have vastly different experiences. To each his own. These days I eat what tastes good and what I crave, even a little bit of junk food, while trying to keep it balanced and healthy. But that's just me.

dearieme (2013-12-12 21:35:55)

I was in my late fifties when I developed an intolerance for Brazil nuts. I didn't even appreciate the source of my stomach problem until I came across a remark in Jim Watson's book "DNA" about a genetic inability to tolerate a particular protein in the nut. Why my genetics chose to lie doggo for fifty years I've no idea. P.S. The Wikipedia article on Brazil nuts contains no warning of this effect. P.P.S. The index of the Watson book doesn't let you trace his remark. It reminds me of a warning I got as an undergraduate: an American textbook may well have superb diagrams but will always have a lousy index.

Nathanael (2013-12-16 11:52:58)

There are *\*so\** many weird allergies you can get. I have an inhalation allergy to polyester and acrylic dust which has caused no end of trouble, and which took 20 years to figure out. Eliminating those has been extraordinarily difficult and still isn't done. I have a collection of other problems remaining, unfortunately, including one (dry skin) which got significantly worse after I eliminated the allergens.

Nathanael (2013-12-16 11:54:31)

" If so, it's likely a food allergy. " Don't underestimate the possibility of allergy to cosmetics, shampoos, soaps, conditioners, fabrics,... bluntly anything which you come in contact with on a frequent basis could be the allergen.

Nathanael (2013-12-16 11:56:12)

For reference, the pure "eliminate, challenge" scientific test procedure was how I figured out my fiber allergies. Took everything out of the house except cotton, cleaned the house, "detoxed" for a month – providing that it wasn't cotton. Then brought one fiber back in at a time until one of them triggered symptoms.

### **Bedtime Honey: Less Honey May Be Better (2013-12-13 05:00)**

Some people find that bedtime honey does not work, at least initially. [1]One reader wrote:

I tried it out for several days now [1 tablespoon of honey], and it produces in me a similar effect as when I go to sleep when I have drunk several beers before. I wake up several times during the night, vivid dreams, and feel less rested in the morning rather than more.

I suggested a smaller dose – 1 teaspoon, which [2]may be effective. He tried it:

I have taken a teaspoon of honey now for three days and my experience so far is that it is better than a tablespoon of honey. I vaguely remember that I dreamed but do not remember about what. Today I also noticed that reading in the train was easier than before, despite waking up earlier, I felt I understood and retained more of what I was reading. What I find most surprising over these three days is that I don't use my glasses as often as before.

So if a tablespoon causes you to wake up in the middle of the night, try a smaller dose. I haven't yet tried a range of doses.

1. <http://blog.sethroberts.net/2013/11/20/bedtime-honey-improves-sleep-1000-crazy-good-tip/#comment-1156279>

2. <http://blog.sethroberts.net/2013/11/13/more-about-sleep-and-honey-one-teaspoon/>

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Nile (2013-12-13 07:25:09)

I too have cut back on my honey dose at night from about 2+ tablespoons to about 1 tablespoon. Maybe one has to take a small enough dose to not trigger a big insulin surge but big enough to keep the brain in glucose during the night

Sam (2013-12-13 08:08:40)

Seth, Since you have published this, I have tried various quantities and different kinds of honey, each experiment lasting about 4 consecutive days. Although this is very subjective - what works best (for me) is one level teaspoon of raw fermented honey, taken right before going to bed. I do not know the bio chemistry behind honey digestion nor anything about the changes that fermentation may cause. My source for the honey is [http://www.reallyrawhoney.com/category\\_s/44.htm](http://www.reallyrawhoney.com/category_s/44.htm)

Kelly B (2013-12-13 08:48:10)

I'm still taking a teaspoon per night, just before bedtime, and am still finding benefits. I actually stopped late last week for about 3 days, thinking that it had stopped working, because my hot flashes had increased in intensity and were waking me up again one or more times per night. I was going to sleep without it for a week and then resume to see if there was a real difference. After the third night of really awful sleep, I restarted the honey. Between the hot flashes, which ebb and flow, three dogs that don't always sleep through the night themselves, and a cat that occasionally gets very affectionate after dark, sleep is a challenge at our house. What the honey does for me: 1) gets me to sleep very quickly - in the neighborhood of 15 minutes after lights-out. 2) makes the sleep itself deeper - I also know that I dream, but don't usually remember any of the dreams. 3) helps me get back to sleep quickly and easily after any of the interruptions. Overall, a huge benefit from something so very small.

Elizabeth (2013-12-13 09:47:31)

All of you who have had benefits from this: do you eat any other sweets at all during the day / in the evening?

daz (2013-12-13 15:50:11)

'fermented honey' sounds intriguing, i'll have to see if i can find some where i live (outside US)

Stuart King (2013-12-13 20:33:23)

I measured how much honey is in a teaspoon and a tablespoon with a scale and it's more than I thought. A teaspoon was about 10-15 grams and a tablespoon was about 20 - 25 grams. So a tablespoon could provide up to 20 grams of sugars. I've been measuring my sleep and have found that going over 100-110 grams of sugars per day worsens sleep and makes me feel terrible the next day. I've looked at the point in my day when experimenting with sugary foods (fruits, honey, desert, etc) and I can pinpoint the moment I start feeling bad (elevated heart rate, sore muscles and joints and so forth) and it always seems to occur when I go past 100 - 110 grams of sugar. This may seem like a lot of sugar, and it is, but a can of soft drink can contain 40 grams and many juices have a lot as well, so it may be easy to over do it. So the optimal dose of honey might depend on sugar consumption from fruits, honey or deserts/snacks throughout the day. I didn't count starch sources (or veges), so I guess I'm really looking at fructose consumption... On the days where I consume close to zero sugary foods (fructose), my sleep is bad also. My best sleeps happened somewhere around 70 grams of sugar. This suggests to me that there might be an optimal amount of sugary foods and going above or below that may impact sleep (and health). Seth: I measure 1 tablespoon of honey to be about 20 g. Honey is supposedly 20 % water, so there would be 16 g of sugar in 1 tablespoon.

Gina (2013-12-14 01:41:42)

I drink a lot (a couple bottles of cheap wine, more or less) before bed, and I've found that just a teaspoon of honey is helpful. Sleep is better, and I feel better in the morning. I should add that I take an N-acetylcysteine and a vitamin C pill every other drink or so to prevent hangovers. I also take magnesium and evening primrose oil before bed. It works, but I used to wake up shaky (presumably from hypoglycemia), and the honey has alleviated that entirely. I wake up and have a b-complex and more evening primrose oil and feel great.

dearieme (2013-12-14 04:15:43)

"a can of soft drink can contain 40 grams": but since you are not a child or adolescent, why would that matter?

jeff davidson (2013-12-14 04:51:22)

[1]

1. <http://skipthepie.org/sweets/honey/>

stylite (2013-12-14 13:44:47)

Gina, a couple of bottles of wine just for you, or shared among many people? If the former, you are probably an alcoholic, especially if you have been drinking like that for any extended period of time. Consider enrolling yourself in a 12 Step program like Alcoholics Anonymous. Let me know if I can help.

S.M. (2013-12-14 16:30:49)

Thank you for mentioning this. I tried honey a couple of times but I haven't actually seen any improvements. I was looking for improvements in strength, my sleep is ok. It seemed that I was sleeping longer after it, but I am not sure. But I see that I may have been using too much. I will try smaller doses and try the same type of exercise across a week, to see how it goes.

Gina (2013-12-15 01:38:40)

Thank you, stylite. Yes, the wine is for me, but I've found ways of keeping it from negatively affecting my life and health (see my comment re: supplements). AA may work for some people, but my research has lead me to conclude that it is not an effective treatment for alcoholism. I do appreciate your comment. I am especially touched that a perfect stranger would express such concern and even an offer for assistance. Consider my faith in humanity bolstered.

### **Bedtime Honey: Other Benefits Besides Sleep and Strength? (2013-12-14 05:00)**

After I'd been taking bedtime honey for 3-4 weeks, I began to notice changes in addition to better sleep and [1]more strength. One was a sense of increased well-being throughout the day. Not better mood, not more energy, just somehow better. Another was better motivation. It was easier to do everything – pushups, putting stuff away, and so on. My life was not perfectly constant, however, so I could not be sure these changes were due to the honey.

I asked Jason DeFillippo of [2]Grumpy Old Geeks about this. [3]Bedtime honey really helped him. He replied:

I have noticed that during the day I can concentrate for much longer stretches but I was chalking that up to the sleep. I think the motivation you're talking about is definitely starting to manifest itself quite a bit more as well. I'm putting more effort into my business than I have since I started it 2 years ago and haven't really thought about it being a side effect of the honey but it's possible. Amazing things happen when you haven't slept properly for 20 years and can now sleep through the entire night.

After he mentioned concentration, I realized I had noticed the same thing: I could do work that required concentration for longer periods of time. In contrast to Jason, I had slept well for many years before starting the honey – or so I'd thought.

1. <http://blog.sethroberts.net/2013/12/03/bedtime-honey-increases-strength/>

2. <http://grumpyoldgeeks.com/>

3. <http://blog.sethroberts.net/2013/11/20/bedtime-honey-improves-sleep-1000-crazy-good-tip/>

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shane (2013-12-14 05:38:29)

Don't you just think that all these other benefits stem from improved sleep quality? Seth: Yes. But they are not obvious benefits of better sleep and they have not accompanied previous sleep improvements of mine.

Chris Highcock (2013-12-15 13:02:25)

Has anyone pointed out that this was all discussed in The Hibernation Diet by Mike McInnes? <http://www.amazon.co.uk/The-Hibernation-Diet-Mike-McInnes/dp/0285637371> Seth: You're the second person to mention this book.

Jeff (2013-12-16 16:55:09)

Seth - I've noticed a similar feeling from taking honey at night. How would you compare the honey induced increased sense of well being to the mood benefits you get from morning faces? Seth: The mood benefits of morning faces are well described as happy eager and serene. Very obvious. The honey effect is a deep feeling of well-being. Less obvious.

Xav (2013-12-19 02:37:27)

Thanks for the tip about the Hibernation Diet. Looking at Amazon, it seems as if the author has a new book out shortly as well, The Honey Diet (2nd Jan 2014 on the Kindle). The blurb mentions "Just a tablespoon of honey every night before you go to bed" along with a list of benefits, including better sleep. Seth: Yeah, independent discovery.

### Assorted Links (2013-12-15 05:00)

- [1]Interview with sufferer from mercury amalgam fillings. Stephen Barrett, founder of Quackwatch, says mercury amalgam fillings are perfectly safe. For many people, this might be true. It is not always true.
- [2]"She was given a three to five year sentence." One of the greatest wrist-slaps of all time. She deserves at least one year in jail per falsification, which would be several thousand years in jail.
- [3]Ron Unz, the minimum wage and social innovation
- [4]Dairy consumption and heart disease risk. "The majority of observational studies have failed to find an association between the intake of dairy products and increased risk of CVD, coronary heart disease, and stroke, regardless of milk fat levels."
- [5]Tourism and mental illness. "A Canadian woman was denied entry to the United States last month because she had been hospitalized for depression in 2012. Ellen Richardson could not visit, she was told, unless she obtained "medical clearance" from one of three Toronto doctors approved by the Department of Homeland Security." Horrifying.
- [6]Snorting baby shampoo to cure sinusitis. A good example of personal science. His understanding of biofilms led him to try baby shampoo. It is also interesting that he doesn't try to strengthen his immune system to solve the problem or maybe he doesn't know how to. A professional sinusitis researcher would never discover what he did, yet another example of how our healthcare system ignores cheap treatments.

Thanks to Allen Jackson and Phil Alexander.

1. [https://www.youtube.com/watch?v=wE\\_bjZ4kdJI&noredirect=1](https://www.youtube.com/watch?v=wE_bjZ4kdJI&noredirect=1)

2. <http://filmingcops.com/corrupt-government-chemist-tampered-with-40000-cases-locking-countless-innocent-americans-in-prison/>

3. <http://www.unz.com/item/a-12-minimum-wage-transforming-policy-idea-into-political-reality/>

4. <http://www.ncbi.nlm.nih.gov/pubmed/22585901>

5. <http://www.nytimes.com/2013/12/08/opinion/sunday/shameful-profiling-of-the-mentally-ill.html?smid=tw-share&r=1&>

6. <http://www.omaha.com/article/20131204/LIVEWELL01/131209603/1685>

dearieme (2013-12-15 05:51:13)

Yep, a life sentence would be suitable. Pity it can't be "with hard labour" nowadays.

dearieme (2013-12-15 05:52:32)

She may be bonkers by Canadian standards but she could be entirely sane by US standards, surely? :)

dearieme (2013-12-15 06:02:06)

The "dairy fat" abstract is the sort of example I used to use to teach my students how not to write scientific English. Seth: I was amused that the research found no link between dairy fat consumption and INCREASED heart attack risk.

Joseph Moroco (2013-12-15 07:54:56)

Amy's sentence is par for the course here in the Peoples' Republic.

Ross (2013-12-15 08:09:22)

Ugh. That woman definitely deserves to serve all the years that the innocent were sentenced to because of her lies.

Sentinel (2013-12-15 13:11:14)

Seth, it's my understanding from Joseph Mercola, etc., that—for some people—the removal of the amalgam fillings might cause even worse problems than leaving them in, with the severity depending on how effective the patient's body is at eliminating the mercury that is inevitably inhaled or swallowed during amalgam removal. Because my amalgams are breaking down after 25-30 years, I am going to have 10 of them removed in 2014. I was thinking about doing a Quicksilver Scientific "Tri-test" (separate analysis of methyl mercury and inorganic mercury in hair, blood and urine) before and after the first extractions, to see how my body is eliminating the mercury. I recall that you opted for hair and breath tests of your mercury levels. Do you have an opinion as to whether such multi-layered testing as the above-mentioned Quicksilver Scientific's is overkill?

Seth Roberts (2013-12-15 14:00:08)

The breath test was a coincidence...didn't get enough measurements to mean much. Ignore the breath test. I don't learn much from the hair tests, perhaps because they are infrequent. The reaction-time test I do daily showed that there was no bad effects of the removals. I don't know anything about the Quicksilver Scientific test, sorry. If I was really concerned, I would get two (not one) tests before and two (not one) tests after. Otherwise you cannot separate noise from signal.

Alex (2013-12-15 14:16:54)

The link on baby shampoo and sinusitis does not work on mobile devices. You can either click it from a desktop computer or go through the exercise of requesting the full site, then searching for "sinusitis baby shampoo".

Seth Roberts (2013-12-15 16:24:15)

Thanks, Alex, for pointing that out. Too bad because it's a really good story.

Alex (2013-12-15 18:58:49)

The site seemed intent on having mobile users install their site's app to get access. Because it makes so much sense to limit the online reach of their content, and the ad revenue from it, when they can instead lock in users with an unquenchable thirst for news about Omaha, Nebraska.

Resnick (2013-12-16 07:02:27)

The Minimum-Wage is an eternal ideal for the left & Ron Unz - an ideological dogma immune to facts. [http://www.washingtonpost.com/opinions/george-f-will-raise-the-minimum-wage-i-ts-iffy/2013/12/13/f9a8d81a-6363-11e3-a373-0f9f2d1c2b61\\_story.html](http://www.washingtonpost.com/opinions/george-f-will-raise-the-minimum-wage-i-ts-iffy/2013/12/13/f9a8d81a-6363-11e3-a373-0f9f2d1c2b61_story.html) Seth: George Will needs a better grasp of history, such as the Hammurabi Code and the Ten Commandments, both of which promise to protect the weak from the powerful. It is perfectly possible to have a different much lower minimum wage for teenagers. Will apparently doesn't know this, either.

Steve (2013-12-17 09:15:05)

Hi Seth, thanks so much for linking to the baby shampoo story! I had similar issues to the author and was finding nothing working. I tried this method and found it very effective at clearing out a major blockage that I just couldn't shift. It feels so good to be able to breath again! Thanks.

andrew (2013-12-17 16:04:48)

Seth I find the discussion about minimum wage similar to discussions about foreign aid. It is assumed to be obviously positive and the thought that it might have a larger negative affect isn't considered. I would compare it to antibiotic prescriptions for acne from your doctor. It is assumed that it works because that is what we are told but antibiotic use actually made you less well off. Although you could run an experiment on acne and antibiotics it is impossible for us to do that for minimum wage but the following real world example is interesting. The following is from the economist Scott Sumner. Regarding minimum wage,\* here is some data for Western Europe: There are nine countries with a minimum wage (Belgium, Netherlands, Britain, Ireland, France, Spain, Portugal, Greece, Luxembourg). Their unemployment rates range from 5.9 % in Luxembourg to 27.6 % in Greece. The median country is France with 11.1 % unemployment. There are nine countries with no minimum wage (Iceland, Norway, Sweden, Finland, Denmark, Austria, Germany, Italy, Switzerland.) Five of the nine have a lower unemployment rate than Luxembourg, the best of the other group. The median country is Iceland, with a 5.5 % unemployment rate. The biggest country in Europe is Germany. No minimum wage and 5.2 % unemployment. Still want to raise our minimum wage to \$10? Germany used to have really high unemployment. Then they did labor reforms to allow more low wage jobs, combined with subsidies for low wage workers. Now they don't have high unemployment.

Roger Sweeny (2013-12-19 17:00:30)

Will knows that it is theoretically "possible to have a different much lower minimum wage for teenagers." He has observed several attempts to legislate somewhat lower minimum wages for teenagers. Several unsuccessful attempts. Seth: Michigan and Australia are examples of what I am talking about – a lower minimum wage for teenagers than adults. The Australia minimum wage for adults is especially high so I don't understand why Australia is irrelevant. Had Will argued that it doesn't work in Australia, that would have been more persuasive.

Adam's Myth (2013-12-30 07:51:17)

The shampoo treatment was mentioned at the website of a university professor in San Diego, as far back as 2008. I found it then during a desperate search to resolve my own incapacitating sinusitis. In less than a week of shampooing, a six-month headache was gone. It recurred occasionally until I fixed environmental causes. Tried many things, but the two that mattered were to replace the household carpet and to vacuum my mattress every couple of weeks. Couple of years later, my sense of smell returned. When you regain a sense you thought was lost forever, you appreciate even the stinkiest odors! Sinusitis treatment in the U.S. is doubly silly. First, nearly all chronic sinusitis is fungal (says Mayo Clinic in 1999), yet antibiotics are universally prescribed, obviously with no effect on the primary infection. Second, no one ever tackles environmental causes. To Seth's point, though, developing a more discriminating immune system might be an even better solution. But the above worked for me. Final note to Southern California readers: you might notice a link between your sinusitis and seasonal "Santa Ana" winds, which blow dust westward off the deserts every November and December.

## **Soy Can Cause Migraines (2013-12-16 05:00)**

After I posted that [1]tofu made me stupid – made me slower on a reaction-time test – a reader named Ann, who lives in Florida, said she had discovered that her migraine headaches were caused by soy. How she discovered this:

I was 49 years old and in that hot flashes stage of life, had read that soy could help alleviate them and tried a soy capsule not at a meal, immediately noticed sinus pressure and itchiness.



So I started reading all labels and eliminated soy from my diet and my migraines and sinus headaches went away! The hot flashes eventually went away on their own. I was losing whole days every month to the migraines. Every now and then the soy sneaks in at a restaurant but not as bad as before. Whenever anyone says they have migraines I always suggest looking at soy. Regretfully my daughter has the same issue, but she has way fewer headaches after eliminating soy.

I used to blame a lot of my headaches on allergies, never thinking it could be something I was eating. At age 60 now, my cholesterol numbers are excellent and I weigh 122 pounds when so many of my friends are overweight.

I asked how long it had taken to discover this.

I had been having migraines for years, 10-20, but in the mid 90s they got worse (could have coincided with more soy in food). Saw a doctor but he just prescribed imitrex which helped but did not prevent them. He never suggested looking for a food cause. It was dumb luck or divine intervention that I tried that soy capsule in 2001 or 2002. I am often amazed at how much better I feel health wise since then. Since soy is in so much processed food my diet is very basic "real" food. Raw fruits and veggies, plain nuts, fresh meat, real cheese, eggs, yogurt, any desserts I make from scratch with real butter. I'm always excited when I find a cracker that doesn't have soy since that's usually my bread substitute.

Let me repeat part of that: A doctor she saw because of migrains did not suggest trying to find an environmental cause. The same thing happened to [2]a woman I wrote about for Boing Boing. Her doctor just prescribed one drug after another. Her migraines turned out to be caused by cleaning products. Not knowing that migraines often have environmental causes is like not knowing the germ theory of disease.

Few soy eaters realize the dangers of soy, as far as I can tell. I wrote to one of them, [3]Virginia Messina, a nutritionist who has said "there is no reason to believe that eating soyfoods is harmful to brain aging." She has not replied.

A [4]long list of possible migraine triggers (from the UC Berkeley health service) does not list soy, although it does mention soy sauce. It says soy milk should be safe. In a 2006 interview, [5]one headache doctor recommended avoiding all soy. In the comments to [6]this, a woman says:

SOY is the biggest trigger for my migraines. For years I suffered daily from migraines but after watching EVERYTHING I eat and reading all labels and avoiding SOY as best I can I am doing better. The biggest problem is that SOY is in everything!!!! I think one day they will find out how bad it is for us.

Imagine that. Putting something that damages the brain in everything.

1. <http://blog.sethroberts.net/2013/12/09/warning-soybean-eaters-tofu-made-me-stupid/>
2. <http://boingboing.net/2011/07/25/finding-the-source-of-migraines-and-fifty-useless-migraine-drugs.html>
3. <http://www.theveganrd.com/about>
4. <http://uhs.berkeley.edu/home/healthtopics/pdf/triggers.pdf>
5. <http://www.npr.org/templates/story/story.php?storyId=5364970>
6. <http://healthland.time.com/2013/01/24/migraine-triggers-may-not-be-so-potent-after-all/>

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Crystal (2013-12-16 06:38:39)

It may be worth noting that soy was one of the first things to be genetically modified, or so I've been told. That might be why it's being put into so much, if they developed cheap and pest resistant varieties with high yields, the usual aim of any GM program. For that reason I like to avoid all but the organic, non GM versions. Another crop I believe is modified is corn, since, having loved it and eaten it frequently growing up, suddenly in the mid 90s I found it was not digesting properly, if at all, and causing issues because of it. Funnily enough, when I find organic heirloom varieties, I have no such problems and it's like when I enjoyed it as a kid again. Seth: very interesting point.

M J B (2013-12-16 08:19:14)

wheat > leaky gut= soy > leaky vessels??? Especially if GMO soy. I try to avoid all GMO grains and I gave up wheat several years ago and my GERD disappeared permanently in just two weeks! I now buy flour from a company that uses only organic ancient Einkorn wheat. I still eat very little of my home made bread.

Jenny (2013-12-16 17:14:22)

A coeliac (therefore not eating gluten anyway), 2 years ago I developed a serious inner ear infection, and was put onto IV augmentin and ppi. Within 48 hours I was reacting to soy in mayonnaise, with immense stomach bloating. I was going from a flat stomach to looking as if I was 6 months pregnant, in 20 - 40 mins, and it was taking at least 30 hours to go down. It took me long time to realise it was the soy - I kept thinking it was the egg to start with. I still react to soy, but now it's as if it were gluten - causing stomach cramps for days and some bloating. The only variant that does not cause a problem is Japanese fermented soy sauce - it can't be some cheap substitute. I don't eat it very often though - I suspect if I had it regularly I would react more.

## **Rules of Innovation: Two Examples about Snowden and Greenwald (2013-12-17 05:00)**

In [1]a recent post called "Government as useful irritant" I said five factors increase innovation: 1. Freedom. 2. Benefit. 3. Resources. 4. Pain. 5. Stability. The effect of government isn't simple. It might freedom - to the extent the coercion outweighs the protection - and of course corrupt governments make it harder to benefit from your innovation. On the other hand, governments often provide resources, pain and stability. Several of the factors are contradictory - pain and stability, for example - which makes it hard to produce optimal conditions, at least without paying attention to what actually happens.

[2]A article I read soon after that ("Snowden and Greenwald: The Men Who Leaked the Secrets") had two relevant examples. One of my points was that increasing inequality reduces innovation bad because it means the people at the top get more and more comfortable, which reduces their desire to innovate. The more inequality, the more of the population falls into two categories: 1. Too poor to innovate (not enough resources). 2. Too comfortable to innovate (not enough pain).

Greenwald saw the value of pain:

After graduation, he accepted a job in the litigation department of Wachtell, Lipton, Rosen & Katz . . . "I could not thrive or even function in a controlling institution like that. There's a huge dichotomy between people who grow up with alienation, which, for me, was invaluable, and people who grow up so completely privileged that it breeds this complacency and lack of desire to question or challenge or do anything significant.

Snowden had all five factors in large amounts. He had freedom because his bosses paid him little attention and, because of his IT talent, it was easy to get a job. He also had a lot of money. Obviously he had great resources, including

IT talent, knowledge and access. He had pain because he was disgusted by NSA overreach and Obama's failure to improve things. He had stability because he had a steady job. The money helped here, too. Because the revelations are so large, he benefits a lot, even if there is also a very big cost.

1. <http://blog.sethroberts.net/2013/12/06/government-as-useful-irritant-and-rules-of-innovation-what-libertarians-and-other-economists-miss/>
2. <http://www.rollingstone.com/politics/news/snowden-and-greenwald-the-men-who-leaked-the-secrets-20131204?print=true>

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Nancy Lebovitz (2013-12-17 09:24:45)

Unfortunately, a fair chunk of the innovation caused by government restrictions is ways of dealing with the restrictions. Figuring out a clever way for tax accountants to be more efficient would probably be a sensible project in the world as it is, but that cleverness might find better uses in a world with simpler taxes. Idea developed from Howard Ruff, who pointed out the huge cognitive load on a culture from a complex tax code.

Adam (2013-12-17 16:46:23)

I would celebrate a world in which there were no cancer to begin with over a world in which cancer took millions of lives for decades before it was cured, although the 2nd makes a better story.

Portlander (2013-12-17 17:41:12)

Yes. Indeed, this is the problem with the insular and, as often as not, outright nepotistic elite from the Ivy League that's taken over Finance, Govt, and MSM. They are too comfortable with the status quo, and have too much to lose if it is adjusted in the slightest.

chi (2013-12-17 20:16:05)

I dunno, Portlander - it seems like the MSM is going through quite an upheaval right now. Seth: Not because they want to, it has been forced on them.

Brock in HK (2013-12-17 20:42:27)

Struggling to see the way in which Snowden and Greenwald innovated. Can you help? Rebelled against authority, yes, but innovated less so. Seth: Snowden did something highly original and effective. Greenwald at least took a thoughtful position against the status quo.

Nancy Lebovitz (2013-12-17 23:44:58)

Snowden could be said to have innovated getting away (so far) with whistle-blowing, but I'm not sure whether his methods scale. Seth: They scale in the sense that everyone now knows the information he wanted known. There is no need for a million people people (or even one more person) to do what he did.

Brock in HK (2013-12-18 07:26:34)

Pain encouraged the risk taking to do what they did, freedom, cash and stability allowed them the ability to execute. The benefit to Snowden seemed ideological at the time - mainly the personal satisfaction of whistleblowing where he perceived wrongdoing by the government - rather than a thought of the financial gain. However, none of what the pair did is new ground. Confiding in a reporter seems to be a relatively proven way to whistleblow, and reporting the news is not novel for Greenwald. Seeking asylum also already invented - not sure Snowden could patent his method across the whole experience given most of this is in the common domain. I like your framework, but in this case it's more an evaluation of motivation to engage in

potentially risky behavior for those involved rather than innovation. Perhaps we have different understandings of innovation? Seth: Greenwald is nothing like a typical reporter. Except he is paid. Snowden exposed classified documents on a scale that dwarfs anything that came before. But you are right, motivation is a huge part of innovation. So is risk-taking. Of course the term innovation is usually reserved for conventional economic products, such as cars or toothbrushes or services we buy. But the whole point of those products and services is to improve our lives. That is also the point of what Snowden and Greenwald are doing. If you consider the assembly line an innovation – and everyone does – you must realize it merely increased the number of cars. What Snowden and Greenwald are doing/have done is increase the amount of classified info the rest of us know about.

### Assorted Links (2013-12-18 05:00)

- [1]global warming: predicted versus actual
- [2]possible yogurt strains
- [3]Amanda Ripley, author of The Smartest Kids in the World, on the latest PISA results. "Many complicated countries at the top of these rankings. Not just Poland (16 % [4]child poverty ) but Estonia (15 % child poverty), Canada (15 %) and Vietnam!"
- [5]Does resistant starch produce optimal gut biota? Maybe not. "TaterTot has low firmicutes!. . . Slow down on that victory lap, guys."
- [6]Healthy diets and science. A blog that describes many interesting studies. For example, one study found "those who consumed the most saturated fat had a 36 % reduced risk of pancreatic cancer compared to those who consumed the least saturated fat."
- [7]Accuracy of Doctor's Data Vitamin D test. The people who run Doctor's Data have a poor understanding of calibration and related issues, [8]as I've said. This is an improvement – at least there is data. But it is still mediocre. Better would be to include description of the conditions of the calibration measurements, such as when, who, where, and, especially, how long between blood spot deposition and measurement procedure (was this value realistic? when a customer uses the test this value may be a week).

1. <http://climateaudit.org/2013/12/09/does-the-observational-evidence-in-ar5-support-its-the-cmip5-models-tcr-ranges/>
2. <https://www.culturesforhealth.com/choosing-a-yogurt-starter-culture>
3. <http://www.amandaripley.com/blog/the-olympics-of-smarts>
4. <http://www.lisdatacenter.org/>
5. <http://mrheisenbug.wordpress.com/2013/12/06/resistant-starch-case-closed-not-so-fast/#comments>
6. <http://healthydietsandscience.blogspot.co.uk/>
7. <http://click.bsfttransmit1.com/ViewInBrowser.aspx?pubids=9335%7c649%7c90209%7c8961&digest=Gkm%2f11Kf4tTtbuqBX0X1sw&sysid=1>
8. <http://blog.sethroberts.net/2013/10/29/doctors-data-sues-stephen-barrett-of-quackwatch/>

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Paul (2013-12-18 07:57:00)

I said it over on FTA and I'll say it here too. Given our essentially poor understanding of gut biota, I think it's a mistake to focus on the ratio of firmicutes and bacteroidetes as there are both pathogenic and beneficial organisms in each category. What is clear is that bifidio is the group targeted by human breast milk and is the dominant form in a breast fed infant. There are

probably some lessons to be drawn from that. Seth: I agree. I believe it is a mistake to focus on these sort of measurements. I think it is better to focus on things that clearly matter – pain, absence of pain, good sleep, bad sleep, easy-to-observe stuff like that. Do that before assuming you have a correct theory of how gut biota influence health.

Charlie Currie (2013-12-18 09:13:28)

Here's Mr. Heisenbug's latest post on resistant starch (12/15): <http://mrheisenbug.wordpress.com/> "What Resistant starch lacks in breadth, it makes up in precision. Resistant starch is a laser-guided missile aimed at the two most important strains of mucosal bacteria in one of the most crucial clusters of bacteria in the human gut." "And that, ladies and gentlemen, is the reason Resistant Starch, in the form of raw potato starch, is officially the body hack of \*maybe\* the decade."

Wilson (2013-12-18 16:39:14)

Seth, I wouldn't consider it a great loss, but it seems you're not going to be allowed to post on Reddit anymore: <http://dailycaller.com/2013/12/18/reddit-bans-comments-from-global-warming-skeptics/> Isn't it amazing? As far as I know, flat-earthers, creationists and 9/11 truthers are still allowed, but free speech goes only so far. Wonder what they're afraid of? Seth: I agree, amazing.

Portlander (2013-12-18 22:11:31)

Hello Seth, Concerning RS, might I ask you to add my [1]Indiegogo Project to the assorted links – for those readers that might miss it here in the comments. And of course, I'd love to have you contribute. The personal tour of Oregon Wine Country perk is still available. :) Thank you, -Allan Seth: Thanks for your comment, Allan, and I'm happy to have you mention your project here in the comments. However, I'm afraid I don't think the project is well thought out. I think it is really hard – much harder than you seem to say – to figure out whether this or that gut biota will produce good or bad health. Obviously more variety is better but beyond that what? If it were me, I would try to figure out specific connections between resistant starch and stuff we care about (sleep?). That is relatively simple. And free. Sure, resistant starch will change my gut biota. So what? I want a connection to something I care about first. I do not care about my gut biota independently from other outcomes. Perhaps there is something very important here, but see that "no victory lap" post. You don't see me trying to maximize REM sleep or minutes of deep sleep or my Zeo score. I could measure my sleep in expensive high-tech ways, but I don't. I try to maximize things that are easy to measure and that obviously matter, such as how rested I feel in the morning.

1. <http://www.indiegogo.com/projects/resistant-starch-gut-biome-a-family-science-project/x/5693535>

Nancy Lebovitz (2013-12-18 23:15:52)

The ban seems to be on r/science, not reddit in general.

S.M. (2013-12-19 04:46:32)

Hi Seth, Thank you for the links. Have you seen this? <http://annals.org/article.aspx?articleid=1789253> It's all over the news, of course. It makes for a great sensationalist article (Americans wasting 28 billion a year!) What do you think? It seems a bit over-generalization for me. I have started taking some Magnesium supplements and they seem to help a lot. Maybe it's more a question of targeted vitamins or minerals instead of a multi-pill? Would love to hear your opinion on this. Seth: I agree with the research. If anything, multivitamin pills seem to hurt my health – a conclusion I reached before the research came out. I also agree with you, magnesium supplementation seems to be a good idea. Also Vitamin D in the morning. Putting a bunch of stuff together and failing to control the time of day makes for a mess. Not good research.

Wilson (2013-12-19 05:25:42)

I wonder if the link Seth posted would be allowed on r/science(sic).

Jeff (2013-12-20 04:31:14)

Seth - Can you elaborate on how multivitamins hurt your health and how you arrived at that conclusion? Thanks. Seth: They slowed me down on the brain (reaction-time) test I do. But I need to repeat this result to be sure of it.

Portlander (2013-12-20 09:11:41)

Hello Seth, I appreciate your reply, thank you. I'd like to clarify a little bit if I may. I did see the 'no victory lap' post and

I am aware of the limitations of our knowledge of RS & gut biota. I certainly don't believe RS should be the next panacea. However, I do think gut biota is an interesting avenue for further investigation. A lot of people have reported some incredible outcomes from supplementing with RS, and seemingly the only mechanism RS has for improving health is through gut biota. OK then, which bacteria and how much RS? That is the point of the Indiegogo project, to advance those questions ever so slightly. We're presently a healthy, happy family. What's our biota look like now? After 6 weeks of RS, each person taking a slightly different formulation, what's our biota then? How did we respond as far as sleep, happiness, mental focus, etc. So much of the N=1 science on the internet is from people recovering from pathological conditions, I often wonder for healthy people looking for a modicum of prophylaxis, how much of the N=1 experience (and dosage) is applicable. Best Regards, -Allan Seth: "A lot of people have reported some incredible outcomes from supplementing with RS, and seemingly the only mechanism RS has for improving health is through gut biota." You might be right. But I am less sure that better gut biota is "the only mechanism". Another possibility I find plausible is 1. RS improves sleep (not thru gut biota). 2. Better sleep improves health. Judging by what you say, I would start to measure "sleep, happiness, mental focus, etc." for each member of your family. Day after day – something like that. Then I would test one formulation (not several) of RS. What effect does it have on each of the things you are measuring? That study costs nothing. And would be a lot more interesting, at least to me, than the study you propose. To interpret it does not require a untested theory of how gut biota affects health. I believe you (and your family and everyone else) will benefit more from a better understanding of the effect of RS on sleep, happiness, mental focus, etc., than from a better understanding of the effect of RS on gut biota. And you can make hundreds of measurements of sleep, etc., for the price of one measurement of gut biota. Larry Smarr's failure to reduce his Crohn's disease illustrates how high-tech measurement of something different than what you care about can have disappointing results.

### **Bedtime Honey and Sleep: More Evidence It Works (2013-12-19 05:00)**

In [1]a 2010 forum discussion I found this:

SLEEPY HEAD I read that honey helps you sleep. I've tried it the past few night and have slept very well! I have had trouble falling asleep and staying asleep since I was born. I even take Ambien sometimes and still stay awake alllllll night long. I can't believe how well I slept the past 2 nights. Just take one teaspoon of honey before bedtime and sleep like a puppy!

USER 967048 I took honey again last night and slept awesome. I have found that 2 tablespoons work the best.

USER 968407 I took honey again last night and slept like a baby again! This really works!

USER 602568 I've been sipping a cup of milk with a couple teaspoons of honey on nights I can't sleep. It always works. But I thought it was the warm milk. I didn't realize the honey was the key ingredient.

More evidence that as little as one teaspoon produces a big improvement. One teaspoon of a common food can greatly improve something as important as sleep!

1. <http://www.godlikeproductions.com/forum1/message1061255/pg1>

Beth@WeightMaven (2013-12-19 14:09:41)

I've not tried this (yet), but in searching for something related to apple cider vinegar, I saw a comment that honey wasn't vegan. The poster suggested trying maple syrup as an alternative. It'd be interesting to see if that works the same as honey for those who use it to help their sleep. Seth: I agree, maple syrup is worth trying.

Ben C (2013-12-19 15:38:47)

Hi Seth, I just recently found out about your blog and all the self experimenting you do. I am currently trialling raw cold processed honey and have noticed that my sleep isn't as refreshing as store bought pasturized honey? According to David Asprey Raw Honey is 22 % better at making liver glycogen and should improve sleep more but I'm noticing not as sound sleep! Thoughts? From my own experimenting I've noticed that when I take too much honey (over 1 tsbp + ) my sleep isn't as good as taking 1 or 2 teaspoons. Also +1 for cutting sugar during the day to improve the effects of honey for sleep! Seth: I think Dave overstated things. Too much is unknown about the effect to be sure raw honey is better than pasteurized.

Crystal (2013-12-19 16:35:09)

There's an earlier post on honey that has a drink of cider vinegar and honey as the recipe. As for honey not being vegan, you've hit on one of the controversies of that world. There is NO consensus on this. The issue is the question of whether you are abstaining from using all animal products to avoid causing them suffering or to avoid any form of exploitation. The former will include honey since they're not being forced to produce it and don't have any adverse consequences from us taking it. The latter won't. As for using maple syrup as an alternative, frankly I'm surprised that someone against suffering and/or exploitation would suggest it. Forcing a tree to bleed regularly is better than taking something that's produced painlessly by an insect? Disclosure here, I'm not vegan, and I eat both (as well as bleeding myself regularly for the blood bank). But I'm getting my results from milk and honey. Seth: What about causing animals pleasure? What if doing X causes animals pleasure? Why is that neglected from these calculations of the effect of this or that human action on animals?

Crystal (2013-12-19 16:46:55)

PS after re-reading, I want to clarify, it's not quite such a clear cut divide, and there's a lot of debate over whether taking honey is exploitation. Especially since bee farming recently helped with staying the effects of a disease ravaging the wild bee population. If you search the term "beegan" you'll find more about the controversy over honey and veganism.

Adam (2013-12-19 16:58:40)

I mentioned that honey might aid sleep to my wife & she said "duh, everyone knows that!" Apparently it is well-known in the Chinese-speaking world. Seth: Ask your wife what fraction of her Chinese friends actually do it. It is not "well-known" in the sense of commonly done. However, the Chinese certainly see honey as more of a health food than Americans do.

Dragan (2013-12-20 20:38:53)

Not just a well-known Chinese remedy... I don't have time to check whether someone else mentioned this, but when I lived in Croatia (former Yugoslavia, really) a tablespoon of honey mixed with water and apple cider vinegar served at room temperature and sipped slowly before bedtime was not uncommon. My grandparents, now in their late 80s, still use it when they feel restless before bed. When I tried doing this every day for a summer, I was able to fall asleep within 30 minutes, and it usually takes me closer to an hour. I may have felt more rested, can't remember. Unfortunately I'm just too lazy to do this every night. PS A quick search showed there was an earlier post on honey + apple cider. oh well :) Seth: Forgive me, but I fall asleep within a minute. It's no great secret why, see my post about what I've learned about sleep.

tracy a. (2013-12-21 01:19:27)

So one tsp of honey a night is working for me and it made me think: DayQuil in pill form is great, but I always used to swear that the NyQuil pills weren't as good as the liquid. Maybe the reason it made me sleep better and feel better when I woke up had something to do with essentially taking a shot of sugar liquid right before bed. Seth: I think you're right: [1]<http://forum.lowcarber.org/archive/index.php/t-436795.html>

## Front Lines of Personal Science: Why Did I Sleep So Well? (2013-12-20 05:00)

Last night I slept great. I woke up feeling very rested. I can remember only three situations when I woke up feeling more refreshed. (a) On a certain camping trip. (b) When I was on my feet for ten hours. (c) After eating a lot of pork fat. I cannot simulate camping trips, and standing ten hours/day was very hard. The pork-fat effect was repeatable, in the sense that I slept better after eating pork fat, but I never ate that much pork fat again. It was too much.

Why did I sleep so well? I can think of several possible reasons.

1. Random noise. Let's say there are 20 factors that affect my sleep and they just happened to all line up in a good direction.

Another set of possible reasons derive from what was unusual about yesterday. I can think of five things:

2. I had yogurt and blueberries and honey about 6:30 pm. (In addition to 1 tablespoon honey at bedtime.)

3. I forgot to hang a blackout curtain that darkens my bedroom. Usually I hang two. Last night, by mistake, only one.

4. I started eating dark chocolate daily two days ago. Maybe the good stuff in it (the flavones) accumulates in the brain so that the good effects get larger day by day.

5. I watched faces in the morning a half-hour later than usual. Usually I start watching them at 6:00 am. Yesterday I started at 6:30 am. I had forgotten about this difference until I looked at my records.

6. I switched to a new brand of honey (from a German brand to a Canadian one).

#1 is unlikely. #2 vaguely corresponds to the idea that honey helps us sleep because it supplies energy. Maybe honey at 6:30 fills up the liver (with glycogen) and honey at bedtime goes into the blood. But I've eaten plenty of meals at 6:30 without any obvious effect. Maybe they were too low-carb. I don't know if making my room very very dark (two curtains) is better than making my room dark (one curtain) but there is no obvious reason making my bedroom less dark would improve sleep ( #3). I have never heard anyone say chocolate ( #4) improved their sleep. Morning faces did improve sleep but the mood improvement was much more obvious ( #5). I've tried several brands of honey; there was no obvious difference between them, arguing against #6.

As the day wore on I found myself in a good mood but not a great mood, arguing against #5.

I'd say #2 is the most plausible, the rest less plausible, with #1 the least plausible. But I will test all of them.

More (a day later) I did #3 (only one curtain), #4 (chocolate), #5 (later faces), and #6 (new honey) again. I did not sleep exceptionally well. That makes #1 and #2 more plausible.



GeoffD (2013-12-20 06:23:27)

Seth, I can explain the camping effect. You were grounded to the earth. Look into grounding- its the best sleep hack of all. I started with a grounded bracelet and graduated to a grounding sheet for my bed. It plugs into the ground socket of a properly grounded electrical outlet. It dissipates harmful EMF which normalizes nocturnal hormonal patterns. It really is life changing. Earthing.com sells the one that I have. I do believe there are others vendors. Look into it. Seth: Very interesting. We slept on a tarp (inside sleeping bags, wearing clothes); would we still be grounded then? But your idea seems easy to test.

dearieme (2013-12-20 06:51:52)

"You were grounded to the earth": in Britain we'd say "you were earthed to the ground". Wot larks, eh?

Banh Li (2013-12-20 07:59:20)

Paul Jaminet has a bit exploring a possible link between chocolate consumption and positive circadian rhythm function. Weak, but consistent with hypothesis #4. <http://perfecthealthdiet.com/2012/11/chocolate-what-is-the-optimal-dose/>

Peggy (2013-12-20 08:11:52)

I sleep worse with blackout curtains; I need the gradual decreases and increases in light to calibrate my internal clock. (Which might also explain the camping effect.) I try to avoid using overhead lights after dark or early in the morning, and just use lamps.

Christopher Sturdy (2013-12-20 08:33:13)

I still like the honey idea; it's the quality Canadian honey that did the trick! I suppose I could help test the theory. Mmmm...more honey eating for me.

daz (2013-12-20 14:06:42)

Hi Seth, What colors were the German and Canadian honeys? (i just discovered there is actually a honey color scale/grader called the Pfund Scale) Seth: The Canadian honey is lighter-colored and less viscous than the German honey.

Kirk (2013-12-20 14:11:55)

Another alternate explanation: the honey effect is cumulative. At least it seems that way to me. On those nights that sleep is not as rich and deep, I can associate it with some external cause, such as when the bedroom was much colder than usual, or my wife was sleeping poorly. Seth: I've been taking honey at bedtime for at least a month. No reason the effect should suddenly get larger.

daz (2013-12-20 14:20:16)

i have heard that becoming magnesium replete improves sleep. (magnesium deficiency worsens sleep). & the darker the chocolate the higher the magnesium content (ref usda nutrition database).

Stuart King (2013-12-20 14:39:40)

Seth when you tried to repeat the effect on the second day, did you try another new honey that you hadn't had before? I actually think it's the increase in sugary foods that led to better sleep... But I have noticed improved sleep after trying new honey (but not on the second night) which is interesting Seth: No I used the same new honey as the first night. A "first night" effect is strange. I'll look for it next time I change honeys.

Heisenbug (2013-12-20 14:51:05)

#2 seems to lend even more credence to the prebiotic/probiotic hypothesis. Seth: That honey acts as a prebiotic, increasing butyrate production and a bunch of other things? Yes, I agree, it supports that idea. I found one study where probiotics improved sleep: [http://www.insidershealth.com/article/probiotics\\_not\\_just\\_for\\_your\\_gut/3862](http://www.insidershealth.com/article/probiotics_not_just_for_your_gut/3862)

DA (2013-12-20 22:35:58)

Seth, have you seen much discussion of the role that alcohol plays in poor sleep, particularly alcohol's role inhibiting

gluconeogenesis (glucose secretion) in the liver? It could help explain, by its opposite, the role that sugar plays in honey's sleep-enhancing effect. Seth: That's a good point.

tom (2013-12-21 20:44:23)

I've figured out lately that dehydration causes stress and lessens my sleep quality. Like if I have a lot of protein or dry flour products at my last meal and sleep 2 hours later without drinking enough water.

GeoffD (2013-12-23 06:54:16)

Seth, Unless the tarp was rubber you would still be grounded. Plus, since you were likely in the woods and somewhat remote, you would have been away from any EMF. Seth: I think the tarp was plastic. But I agree with you, I should not jump to conclusions about whether or not I was grounded. It does seem worth looking into. Maybe I slept especially well partly because I was away from light in the evening. The harder-than-usual surface (the ground) may have also helped.

Omnivorous wolves, spiders that play tether ball, worms instead of oranges, and yogurt and honey improve sleep (2013-12-23 23:41:55)

[...] Is it the yogurt or honey? The brain seems to like lactate. The brain can also store glycogen and it probably converts it to lactate (whether or not that is a good thing I don't know, but healthy babies have elevated lactate levels besides the ketones, nonetheless it is still not clear whether lactate is an emergency substrate or preferred) However, the main components in different honey are fairly similar, the glucose and fructose part. If two different brands of honey have different effects, then we can more than likely eliminate the sugar component and look at other properties of various kinds of honey. Different kinds of honey have different antimicrobial properties and contaminants. A little hormesis to improve sleep? How does endotoxin impact sleep? (Personally, honey ruins my sleep even tiny amounts and so does sugar (sugar also negatively impacts my typing tests), I seem to sleep best when I eat about 600g of cottage cheese throughout the day, it's probably less then that since I strain the fat out (I'm after the protein anyway, I eat plenty of butter and full fat yogurt), and beef which I like seems to make me sleepless if I eat it too late in the evening or too much of it during the day) [...]

### Assorted Links (2013-12-21 05:00)

- [1]Big time of day effect with aspirin. "Patients who took blood pressure medication at night were about a third as likely to have a heart attack or stroke as morning medication takers."
- [2]Health care cost comparison
- [3]Beware young surgeons
- [4]Benefits of cocoa both behavioral and neurological
- [5]Michael Lissack's thought-provoking library

Thanks to Saul Sternberg, Bob Levinson and Alex Chernavsky.

1. <http://www.sfgate.com/health/article/Aspirin-at-night-better-to-keep-heart-attacks-away-5052907.php>
2. <http://clearhealthcosts.com/>
3. [http://well.blogs.nytimes.com/2013/12/12/are-todays-new-surgeons-unprepared/?\\_r=0](http://well.blogs.nytimes.com/2013/12/12/are-todays-new-surgeons-unprepared/?_r=0)
4. <http://www.neurology.org/content/81/10/904>
5. <http://connect.collectorz.com/users/lissack/books/view>

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Tom Passin (2013-12-21 08:40:00)

You're not reading these snippets carefully enough, Seth. The aspirin at night study didn't find that "Patients who took blood pressure medication at night were about a third as likely to have a heart attack or stroke as morning medication takers". That was some other study. This aspirin study found no effect on blood pressure of when the aspirin was taken. It also didn't find that taking aspirin in the evening vs morning reduced stroke or heart attack rates. It only found that evening aspirin reduced platelet activity the next morning, and it didn't measure even half of the participants at that. And the study wasn't blinded to the participants, either. See <http://www.nhs.uk/news/2013/11November/Pages/Bedtime-aspirin-cuts-morning-heart-attack-risk.aspx>. Seth: I knew that blood pressure medication is not the same as aspirin. I agree, my brief description did not make that clear. I hope you can make an equally long list of what was good about the aspirin study.

Nancy Lebovitz (2013-12-21 09:26:45)

Seth, have you looked into traditional Chinese medicine?– it takes season and time of day seriously. Seth: I hear a lot about the seasonal stuff, much less about the time of day.

Richard Sprague (2013-12-22 13:57:40)

Here is a map-based look at health care costs: <http://www.bestmedicareprice.com/>

Jerry (2013-12-24 17:43:47)

If you wake up feeling "jittery" you should check your blood sugar. I've found that if I wake up like this, it's usually somewhat elevated ( 95 to 110). I've also observed that if I lay around in bed reading for a few hours, it will also rise a little. But getting up between 5:30 and 8:00, and getting the day started seems to keep sugar in the normal range.

## **Front Lines of Personal Science: Progress on Why I Slept So Well (2013-12-22 05:00)**

[1]A few days ago I noted that I had slept unusually well. I wondered why. The previous day had been unusual in five ways (yogurt blueberries and honey 2 hours before bedtime, only one blackout curtain, chocolate, unusual timing of morning faces, new brand of honey). Was one of them responsible? Or was it random variation?

The next day I repeated four of the five unusual things: only one blackout curtain, chocolate, unusual timing of morning faces, new brand of honey. Result: I did not sleep unusually well. This pointed to either yogurt blueberries and honey or random variation as the explanation. Those happened to be the explanations I had considered most plausible (yogurt blueberries and honey) and least plausible (random variation).

Yesterday I repeated all five of the unusual things. Yesterday evening it took longer than usual to fall asleep. Usually I fall asleep within a minute, but this time it took about 4 minutes. As I was lying there, I attributed the long latency to lack of exercise that day. In the morning, for the first time in my whole life, I woke up what a friend called "full of jitters". Very rested, yes, but also too much energy. As if I'd had too much caffeine. Usually I have a cup of black tea first thing in the morning. I started to make one and realized it would make things worse, not better. As I said, this has never happened before.

So it was the yogurt blueberries and honey. The first time I had it I had added the honey just for sweetener and hadn't measured it. The second time I did measure the honey – 14 g, about 2 teaspoons. Probably more than I had used the first time, which may explain the different results (1st time: very rested, 2nd time: very rested and jittery). Both times I ate 125 g blueberries, which has 12 g sugar (half glucose, half fructose). I doubt the yogurt (homemade, no sugar added) matters.

Perhaps the best dose (for me) will turn out to be one teaspoon honey 2 hours before bedtime and one tablespoon of

honey at bedtime. I had tried taking more than one tablespoon of honey at bedtime; it seemed to produce the same effect as one tablespoon.

I want to test with and without blueberries, of course, and different amounts of honey 2 hours before bedtime. If honey alone is powerful, then I will test different forms of sugar. I don't want to be at the mercy of differences between brands of honey, although honey is very convenient.

Let's say it turns out to be the sugar in honey that produces these big improvements in sleep. Then it will turn out that the nutritionists of the world have been even more wrong about sugar than they were about saturated fat. All the data is not yet in, let me repeat. But the data so far unquestionably point in a surprising direction. It is entirely possible that sugar – in the right amounts at the right times of day – will turn out to be the greatest health food of all.

Which would explain what has never been well-explained: why we like it so much.

1. <http://blog.sethroberts.net/2013/12/20/dispatches-from-the-front-lines-of-personal-science-why-did-i-sleep-so-well/>

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Rashad (2013-12-22 12:44:09)

I think your research is pointing in the direction that some ice cream after dinner is ideal. It has lots of cream, so could probably substitute for some of the butter you normally consume, and has a decent amount of sugar, possibly comparable to a tablespoon of honey? Seth: That's an interesting idea. However, the fat in the ice cream might interfere with the digestion of the sugar. Ice cream has a surprisingly low glycemic index. I once had honey and cheese at bedtime, instead of just honey. The results were worse than usual, presumably because the cheese slowed down digestion of the honey. I agree it's worth trying sugar in different contexts.

Gina (2013-12-22 13:14:26)

What Seth is suggesting sounds more like Italian ice or sorbet to me (fruit blended with sugar). I think he found that fat before bed didn't help.

George (2013-12-22 19:22:52)

Hi Seth! I would love to try and replicate your results. I found that what I eat for breakfast and lunch has a strong effect on my sleep with or without honey (if I eat too much carbs before PM I sleep badly, but if too little I get anxious and also sleep badly) Could you please share what you ate for breakfast and lunch on these days? thank you. Seth: No breakfast. Lunch: 60 g butter, 20 g cheese, small amount of pork or duck, 30 g ground flaxseed, 18 g dark chocolate, yogurt, fruit, tea with honey and cream as desired.

John Kojis (2013-12-22 19:46:26)

Do you think it's possible for the quality of sleep to be affected by something even earlier, maybe a few days or more? It might take a longer for some food or environmental factors to work their way through the system. Of course, factors that are closer in time could be assumed to be stronger influences, and would be a logical place to begin, but it seems too simplistic to say it's either what you ate yesterday or random noise. Seth: By "random noise" I meant everything else. As for your hypothesis ("the quality of sleep is affected by something even earlier"), I agree. There is jet lag, which takes several days to recover from. The bad effects of breakfast took me a week or so to recover from.

peter (2013-12-23 10:17:30)

if you eat sweets at the end of the meal it just sits in your stomach on top of the rest of the food and ferments, producing gas. I try to eat food in the order in which it is easily digested. This suggests eating fruit first (which is what they do in Latin America), carbs second, i.e., potatoes etc, vegetables next and then protein last.

### Front Lines of Personal Science: More Progress on Sleep (2013-12-23 05:00)

To recap: [1]Three days ago I slept extremely well, better than usual. I wondered why. What had made the difference? That day (the day before the night I slept so well) had been different from previous days in at least five ways (e.g., chocolate, new brand of honey). I repeated four of them, and did not sleep better than usual. That suggested the remaining difference – I had eaten yogurt, blueberries (125 g) and honey (8 g?) a few hours before bedtime – was responsible. (Every night I had 1 tablespoon – 20 g – honey at bedtime. It wasn't that.) Then I repeated all five elements, including yogurt, blueberries (125 g) and honey (14 g) two hours before bedtime. [2]I woke up wired (jittery). Very rested, but wired, which wasn't pleasant. Too much sugar, perhaps.

The next night I had a banana roughly two hours before bedtime. (In addition, I repeat, to 1 tablespoon honey at bedtime.) [3]A banana has about 6 g glucose, 6 g fructose, and 3 g sucrose, similar to 1 tablespoon honey. I had a strong craving for something sweet at that time, which was new to me – I almost never eat dessert. In the evening I had more brain power than usual. Yet at bedtime I fell asleep quickly, in about a minute.

The next morning I woke up and felt great. Almost perfectly rested, neither tired nor wired. Even though I'd only slept 4.7 hours, a bit low for me. It really was the yogurt, blueberries and honey – almost surely their sugar, which is almost all they have in common with a banana – that had made me sleep so well.

Conclusion: For the best sleep, have sugar after dinner and sugar at bedtime. By sugar I mean a glucose/fructose mixture but for all I know sucrose would work, too.

1. <http://blog.sethroberts.net/2013/12/20/dispatches-from-the-front-lines-of-personal-science-why-did-i-sleep-so-well/>
2. <http://blog.sethroberts.net/2013/12/22/dispatches-from-the-front-lines-of-personal-science-progress-on-why-i-slept-so-well/>
3. <http://nutritiondata.self.com/facts/fruits-and-fruit-juices/1846/2>

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Mehmet (2013-12-23 06:50:53)

I really wonder how you can sleep so little. Is it a result of your sleep improvements? Did better sleep lead to less sleep? Also, I wonder how you wake up. With an alarm clock or spontaneously? BTW, honey improved my sleep. I have also observed that leg fatigue improves my sleep but I do not practice one leg standings. Thank you for this blog. Your experiments inspired me to do my self-experiments. Although I am in the academia, I have rarely investigated my life with scientific curiosity before discovering your site.

Paulo Paiva (2013-12-23 07:14:29)

[Excuse if I made mistakes, english is not my native language – I'm from Brazil] What a coincidence. Today I told my wife how deep I had slept and connect it to the 1 tbspoon of honey and 1 tbspoon of apple cider vinager mixed with half a cup of water before bed (it tastes really good). Then I saw this post and remembered that yesterday I had banana flour pancakes topped with

honey 3 hours before bedtime! I think you are at the right track. And thanks for your blog. I crave for new posts every morning! For years! :) Seth: So interesting! Thank you for reading my blog all these years.

Remi (2013-12-23 07:53:13)

Sleeping less than 5h could be dangerous to your immunity system.

Ripken Holt (2013-12-23 10:55:52)

Would homemade Ice Cream work? My family makes some really delicious homemade ice cream which I had stopped eating because I had gone mostly low carb except for a serving of potatoes with each meal. How about a slice of pound cake? Those are my two favorite deserts of all time.

dearieme (2013-12-23 11:17:29)

But, but, but... surely many people do this anyway? I mean, a milky drink with sugar before bed - weak tea, cocoa, Horlicks, Ovaltine - is pretty standard in Britain, as is dessert - "pud" or fruit - after dinner. Still, I am currently taking a "probiotic" yoghurt drink because I've just finished a course of antibiotic. It's sweeter than I like at breakfast, this "Actimel", so I'll try it before bed instead.

Seth Roberts (2013-12-23 12:39:27)

"But, but, but... surely many people do this anyway? I mean, a milky drink with sugar before bed - weak tea, cocoa, Horlicks, Ovaltine - is pretty standard in Britain, as is dessert - "pud" or fruit - after dinner." Usually I take 20 g of honey (about one tablespoon) before bedtime. I tried 10 g honey - clearly worse results than with 20 g. When I sweeten tea, I use about 4 g honey. "Still, I am currently taking a "probiotic" yoghurt drink because I've just finished a course of antibiotic. It's sweeter than I like at breakfast, this "Actimel", so I'll try it before bed instead." I drink Yakult every day, that's a good idea - have it after dinner rather than in the morning. According to Wikipedia 1 bottle of Actimel has 3.3 g of sugar (sucrose), whereas 1 tablespoon of honey has 16 g of sugar (fructose and glucose).

Seth Roberts (2013-12-23 12:47:38)

"I really wonder how you can sleep so little. Is it a result of your sleep improvements? Did better sleep lead to less sleep? Also, I wonder how you wake up. With an alarm clock or spontaneously?" I usually take a nap in the afternoon, 40-60 minutes. That reduces how much I sleep at night. I wake up spontaneously. I am sure my sleep is unusually deep, partly because I get plenty of sunlight and Vitamin D in the morning, partly because I get plenty of face exposure in the morning. All three of these (sunlight, Vitamin D, faces) I expect to increase the amplitude of a circadian oscillation. Deeper sleep should be more efficient sleep. I hear about other people waking up at night and falling back asleep. That almost never happens to me.

Gina (2013-12-23 13:09:40)

I wonder if the sleep improvements with honey are primarily for people eating a very low carbohydrate diet. My brief low-carb stint was ended because of the complete inability to sleep (elevated cortisol) which was cured with a single carb-heavy meal. Seth: My diet, when I started the bedtime honey, was low-carb - I don't eat rice or pasta or potatoes or bread - but not very low-carb. I ate fruit and honey (to sweeten tea) and sugar (to sweeten yogurt and Yakult) every day. What happened to you supports the general point I am making here: Details of your sugar (and carb) consumption have a big effect on your sleep.

Dan (2013-12-23 13:19:20)

Thank you for sharing your experiment(s) - could you please approximate what was the total amount of sugar you consumed the entire day? Seth: Moderate amount. 10 g in Yakult, 5 cups of tea x 6 g sugar/cup = 30 g, 20 g sweeten yogurt, miscellaneous fruit 10 g = 70 g. Not counting the sugar after dinner (10 g) and at bedtime (16 g).

daz (2013-12-23 14:31:59)

"I hear about other people waking up at night and falling back asleep" ...tho for some of these people, i'm guessing waking up in the night could mean waking up 4 or 5 hours after they went to bed, me included. whereas it sounds like Seth would call this...morning ? :) also, these people may not nap during the day (i don't). Seth: When I wake up after 5 hours feeling rested

and don't fall back asleep later, I don't worry about it. To wake up early and feel tired but be unable to fall back asleep, that was the problem.

Kathy (2013-12-23 17:50:46)

Part of the legendary danger of sugar, to me, is its role in damaging dental health. I can appreciate sugar at the end of the last meal of the day, where the sugar is not unopposed. But it seems honey or dessert closer to bedtime would promote cavities/gum disease. What do you think? I'm very interested in exonerating sugar if it can be done! Seth: I brush my teeth after eating the bedtime honey. The benefits of good sleep are so great that I don't worry about cavities. As for gum disease, that's caused by lack of omega-3. See [1]my post about Tyler Cowen and flaxseed oil, for example.

1. <http://blog.sethroberts.net/2007/07/06/omega-3-and-dental-health-surgery-commuted/>

Ben (2013-12-27 21:47:20)

What time do you usually eat dinner? How long after dinner do you eat the banana? Can't wait to try this out. Thanks Seth!

Seth Roberts (2013-12-28 05:33:41)

I eat dinner around 6 pm. Eat the banana 1-2 hr later.

## **Bedtime Honey Helps an Autistic Boy Sleep (2013-12-24 05:00)**

A reader writes:

My eight-year-old son has autism, on the serious end of the spectrum, with equally serious sleep troubles. A month ago I tried giving honey at bedtime after reading about it on your blog. It has made a tremendous difference.

My son has had trouble sleeping since he was a toddler. Since age four he has seen a pediatric neurologist who is also a sleep disorder specialist. With the doctor's guidance we have tried different over-the-counter and prescription-drug approaches, but none has given him regular sleep, and the side effects from the drugs make increasing dosages risky.

His basic problem is not insomnia (a general inability to sleep) but rather delayed sleep phase disorder. He could sleep fine from the wee hours of the morning to noon. But whenever we managed to advance sleep onset [= get him to fall asleep earlier], he would wake up early. It was hard when we struggled to get him to sleep by midnight and then struggled to wake him at 7:00 a.m. for school. But it was even harder when he would fall asleep at 9:00 p.m., then wake up at 4:30 a.m., often falling back to sleep at 6:30 a.m, just in time for us to wake him at 7:00 a.m.. It's not safe for him to be awake on his own for hours, and he was desperate to go back to sleep until about 9:00 a.m.

Since we started giving him a teaspoon of honey at bedtime he has slept through the night. We still have to give him meds to go to sleep between 9:00 p.m. and 10:00 p.m., but once he's asleep he stays asleep all night until we wake him at 7:00 a.m. The one night, early on, when we forgot to give him honey, he woke up just as he used to.

One factor that may make honey particularly effective for my son is that we've been eating a low-carbohydrate paleo diet for the past two years (because it helps his autism symptoms). Before that he was an extremely picky eater who preferred baked goods, milk, and cheese. With high-glycemic foods all day long a teaspoon of honey at bedtime might not have had much effect.

This is the best my son has slept in his life, and it has been a huge improvement in his and our family's lives. Before the past month, the last time my son had gotten three good nights of sleep in a row was because he'd had a concussion.

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Charlie Currie (2013-12-24 08:21:24)

Excellent. Hopefully she will keep you, and us, posted on how he does over the coming months. I'm curious to see if the protocol becomes adaptive - does he revert back to his previous sleeping pattern over time, and if so, does upping the dose bring back better sleep. I would suggest, if she hasn't already, looking into the resistant starch protocols that are being discussed on the Free The Animal website...lots of reports of improved sleep there too.

mikimoonmouse (2013-12-25 00:52:19)

I used to wake up with a white coated tongue and bad breath, with bedtime honey my tongue is super clean in the morning even without brushing my teeth at bedtime, just flossing.

A reader (2013-12-25 08:36:21)

Charlie Currie, thank you for the recommendation. I'll check it out.

No One (2013-12-29 03:42:54)

Has anyone here tried trehalose? see e.g. <http://forum.bulletproofexec.com/index.php?/topic/4162-trehalose-an-alternative-to-raw-honey-before-bed/> (And the original thread it links to)

## **Frontlines of Personal Science: Confirmation of After Dinner Sweets Effect (2013-12-25 05:00)**

During the last week I have looked into the possibility that my sleep can be further improved - in addition to [1]the bedtime honey improvement - by eating a similar amount of sugar (fructose and glucose) a few hours before bedtime. After [2]I accidentally slept better than usual (or even better than usual), I tried to determine why. Several things had been unusual the day before. Two tests ([3]here and [4]here) pointed to the sugar (honey or banana) a few hours before bedtime.

Last night (Christmas Eve) I tried again. I ate a banana (132 g, peeled) about 3 hours (7 pm) before I fell asleep (10 pm). I fell asleep within a minute and woke up, after an apparently dreamless night, feeling perfectly rested. On my 0-100 percentage scale (100 % = completely rested, no detectable tiredness), which I have been using for about 8 years, it was the first ever 100 %. I had slept about 6 hours, a good amount of time.

To celebrate, I had a cup of black tea. I didn't need it to wake up but I like the taste. I reflected that countless people had drunk tea or coffee to wake up. I had found a better way.

Discovery that an hours-before-bedtime sweet improves sleep (in addition to bedtime honey - that's what's interesting) is significant not just for the obvious practical reason (better sleep) but also because it is the confirmation of a prediction. After I slept unusually well, I thought of [5]six possible reasons. The notion that sugar improves sleep pointed to one of them. The results of every test I've done (three nights) have agreed with that prediction. I believe [6]the only real test of a theory (such as an explanation) is whether it makes correct predictions - especially, whether



it leads to the discovery of new cause-effect relationships. Many things people say haven't passed that test. An example is weight control. That low-carb diets cause weight loss has been known since the 1800s. Many explanations have been proposed; not one has made correct predictions, as far as I know. In contrast, [7]my theory of weight control led me to [8]three new ways to lose weight (sushi, low-glycemic foods, and fructose water).

I doubt it's a placebo effect because the sleep improvement has happened whether I expect it or not. A commenter named Paolo Paiva, after reading my posts about this, realized [9]something similar had happened to him :

Today I told my wife how deep I had slept and connected it to the 1 tablespoon of honey and 1 tablespoon of apple cider vinegar mixed with half a cup of water before bed (it tastes really good). Then I saw [10]this post and remembered that yesterday I had had banana flour pancakes topped with honey 3 hours before bedtime!

Thanks, Paolo. May you continue to sleep well. May the rest of you sleep equally well.

Merry Christmas!

1. <http://blog.sethroberts.net/category/sleep/honey-sleep/>
2. <http://blog.sethroberts.net/2013/12/20/dispatches-from-the-front-lines-of-personal-science-why-did-i-sleep-so-well/>
3. <http://blog.sethroberts.net/2013/12/22/dispatches-from-the-front-lines-of-personal-science-progress-on-why-i-slept-so-well/>
4. <http://blog.sethroberts.net/2013/12/23/front-lines-of-personal-science-more-progress-on-sleep/>
5. <http://blog.sethroberts.net/2013/12/20/dispatches-from-the-front-lines-of-personal-science-why-did-i-sleep-so-well/>
6. <http://escholarship.org/uc/item/5vt0z72k>
7. <http://media.sethroberts.net/about/whatmakesfoodfattening.pdf>
8. <http://escholarship.org/uc/item/2xc2h866/>
9. <http://blog.sethroberts.net/2013/12/23/front-lines-of-personal-science-more-progress-on-sleep/>
10. <http://blog.sethroberts.net/2013/12/23/front-lines-of-personal-science-more-progress-on-sleep/>

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Brian Toomey (2013-12-25 05:53:33)

Merry Christmas to you, too, Seth! I've been sleeping better since adding sweets at night, similar to what you describe. At first I was resistant to the idea of sweets before bed because: 1) I had been not eating after 7 or 8pm as part of an intermittent fasting condensed eating window eating routine 2) I have historically overeaten refined sweets. Recently, though, I've been doing it, having some fruit (or sweets with the Holidays) around bedtime and have been sleeping much better. I would say my rested percent had gone from 90 to 95-98, and I've been getting up about an hour earlier. Definitely much better. When I started reading this before low blue light at night, Vitamin D in the morning, and the above my rested percent was more like 30-40 %. I've also recently (2 months ago) installed blackout curtains and found that my sleep got, to my surprise slightly worse. I have 4 windows in my bedroom, and leaving one of the curtains partially open so some light can get in (there is a lot on my street) seems better than almost no light. Thanks, Seth!

Gina (2013-12-25 10:45:12)

Thanks for your blog, Seth. Merry Christmas! I love the discoveries here, because they are inexpensive and range from easy to pleasurable. Lots of tasty things can be made with just fruit and sugar, why eat plain bananas and straight honey?? Seth: to keep things simple. Simplicity will help me increase my understanding. It is much easier to know what is in a banana or honey than what is in an ordinary dessert.

dearieme (2013-12-25 17:04:45)

From a local orchard we've recently bought candied pears (Comice) and plums (Edwards). They formed two of our thirteen desserts on Christmas Eve, a habit we've adopted from French friends. The table looks magnificent, but iron discipline is required if you are not to make a pig of yourself.

August (2013-12-26 09:13:37)

This reminds me of Kiefer (athlete.io). His focus is mainly for bodybuilders, though I think his first book was for people looking to lose weight. His understanding of hormonal activity throughout the day, and his subsequent recommendations as to when to eat carbs and what type to eat coincides with yours. Now, you are eating a lot fewer carbs and eating them everyday, while Kiefer protocols are to eat a lot after training, and be low carb the rest of the time, but I think you are both tapping into the same daily hormonal cycle.

Xav (2013-12-26 14:58:30)

I was curious to see what research had been done with fruit before bed and sleep, and found this paper : <http://apjcn.nhri.org.tw/server/APJCN/2012/2/169.pdf> ( Effect of kiwifruit consumption on sleep quality in adults with sleep problems ). In the study eating 2 medium kiwi fruits an hour before sleep, helped the subjects sleep better. Seth: Thanks, yes, I knew about that study. You are right I should give it more emphasis. It could have gone the other way (the kiwis made sleep worse) so it supports what I am saying. Two kiwi weigh about 100 g, which would contain about 4 g glucose and 4 g fructose. Not so far from the dosages that I found have worked.

Walter (2013-12-26 21:07:49)

Seth, I always find your blog fascinating and informational. Along those lines I wondered if you have played with resistant starch as a food source for our microbiome? There is a lot of N=1 testing going on the FreeTheAnimal blog and the results are encouraging as a methodology to control blood sugars etc. Walter

Seth Roberts (2013-12-26 22:21:14)

Walter, I will try resistant starch. After I have optimized my sleep without it. I wonder if the benefits claimed for it are due to better sleep. And if it promotes better sleep by being digested slowly during the night.

Xav (2013-12-27 01:59:12)

Seth - you mentioned trying blueberries and now bananas. I wonder if some fruits are more optimal than others ? Here are a couple more studies regarding fruit - juice in this case - and sleep ( in case you haven't come across them already). These are a little different in that in one, time of taking the juice does not seem to be controlled, in the other one serving is taken 1-2 hrs before sleep. 1) Effects of a Tart Cherry Juice Beverage on the Sleep of Older Adults with Insomnia: A Pilot Study <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3133468/> 2) Effect of tart cherry juice (Prunus cerasus) on melatonin levels and enhanced sleep quality. <http://www.ncbi.nlm.nih.gov/pubmed/22038497> Seth: In the second study the two conditions are equated for sugar content.

Gabe (2013-12-27 16:32:59)

You wrote earlier that the total amount of sugar you consume these past few (including post-dinner and pre-bed) is about 95g. Some people write that they experience less of the effect of honey when they eat many non-sugary carbs throughout the day. Do you know what is the total daily number of non- sugary carbs you get these days from food (flax, starchy vegetables, etc)? Seth: Daily "number"? You mean number of servings? I eat 30 g ground flax per day. Maybe 1 serving of non-sweet carbs. Not

much.

daz (2013-12-28 15:17:11)

Hi Seth, in regards to taking honey before bed being effective...in a comment under a prev post you wrote\*... "Two things seem to matter. 1. You must take it on an empty stomach. 2. You must not have sweets during the day" do you still think 'rule' #2 applies? & if so why do you think that may be? \*ref: <http://blog.sethroberts.net/2013/11/20/bedtime-honey-improves-sleep-1000-craz-y-good-tip/> #comment-1156678 Seth: I think #2 applies – you can't eat a lot of sweets, a few sweets make no difference – because it would raise your insulin levels. If your insulin is too high for too long it will remove sugar from your blood at night.

daz (2013-12-29 01:07:40)

ah insulin, thx Seth, i was wondering what the theorised 'mechanism' for #2 might be... the only think i could think of was something to do with liver glycogen, but that made no sense, as i would presume that eating sucrose/glucose/fructose during the day should keep liver glycogen levels high (assuming low/depleted liver glycogen results in poor sleep)

daz (2013-12-29 13:28:10)

...(assuming low/depleted liver glycogen results in poor sleep and 'full'/replete liver glycogen results in 'normal/default' sleep)

nicole (2014-01-02 17:24:47)

i wonder if the reason dessert developed was to give people a bit of sugar before sleep...

## **Lessons of This Blog (1st of 2) (2013-12-26 05:00)**

Kirsten Marcum told me she had "put a number of [my] findings to use in [her] own life." I asked how. She replied:

I've put a few of your specific recommendations to work (SLD, standing on one leg each day, omega-3s, more animal fat/pork fat, butter tea, fermented foods)...but in thinking about this, I realized I've gotten even more use out of general principles I've drawn from your blog over the years:

1. Trust your results. I'm thinking of your own (and other people's) experiments with what caused acne (dairy, etc.) or migraines (soy) and helped restless leg syndrome (b6) or sleep, etc. You and others tried solutions, and the solutions either worked or they didn't, and you/they looked to correct root causes, and those corrections either worked or they didn't. If you still have acne, the acne treatment didn't work—even if it should have, and even if an expert recommended it...and you probably shouldn't just keep doing the treatment just because it's supposed to work. And if you cleared your acne, then the intervention worked—regardless of whether it "should" have. If your brain performance improves in a measurable way after eating butter, trust that result—and be skeptical about the people who tell you butter is damaging your health. If treating a leaky gut improves your thyroid labs, trust that—not the doctor who says your leaky gut diet is too restrictive and is going to damage your health.

2. Many unpleasant circumstances are reversible. It's often possible to find positive interventions that ameliorate, reduce, or remove things that are bothering you—many of which are cheap or free and not hard to implement. It's possible to fix health issues, productivity problems, make learning more fun or effective, etc. It's amazing to me how many people don't think this is true—that you're stuck with extra weight, or acne, or creaky joints, or back pain, or migraines, or the inability to motivate yourself to work—and there's nothing you can do.

3. Most things that are beneficial are also pleasurable, and vice versa. When something is good for us, we usually find it pleasurable (animal fat, salt, sugar at night, umami flavors, learning while moving, faces in the morning). Otherwise, how would we have evolved to do it?

I extend this to say: If something's not pleasurable but supposed to be beneficial, it's either bunk or you're doing it wrong (i.e., in a way that removes the pleasure and possibly the benefit.) So look for the pleasure—because then you're more likely to do it and to see a benefit.

And: If something is pleasurable but not beneficial, your body probably wants something very similar and it's confused—junk food umami vs. fermented foods. In which case, find a pleasurable AND beneficial substitute, and it will be easy to stop doing the thing that is not beneficial.

4. Be skeptical of experts. Most experts have incentives that have nothing to do with the reasons you're consulting them. Understand this, look for their motivations/weaknesses/blind spots, and always check what they're telling you against what your body (or other results) are telling you. Also look for non-experts with interesting ideas.

5. What's good for the brain is good for the body. I would add to this: Many things that we think of as personality or mental/emotional issues actually have a physiological basis—and optimizing your health will likely have a positive effect.

They sound elementary, but they're counter to the way nearly everyone I know thinks.

Over the years, thinking like this has improved my life in multiple ways:

- I 100 % cured my back pain (after 3 rough years) with Esther Gokhale's 8 Steps to a Pain Free back—which cost \$17 and provided more practical and helpful advice than the two doctors, physical therapist, and personal trainer I consulted.
- After a bunch of looking, I found a doctor who, when presented with new ideas, says: "That's interesting. Where did you find out about it, and what have you tried?" More than once, she has looked into the subject, found the new recommendation convincing, and has started to share the information with similar patients—which means I also benefit from what she learns from others.
- I fixed my complexion, have nearly fixed my weight issues, and reversed dozens of nagging health issues (peeling fingernails, bad breath, rosacea flushing, random bad stomachaches, food sensitivities, mood swings, lack of motivation and focus etc.) through a whole-body thyroid/adrenal/gut repair approach that's considered bunk by most mainstream endocrinologists. Parts of this approach happen to incorporate things you've found beneficial—increased amounts of animal fat, fermented foods, focus on optimal sleep, focus on aligning with circadian rhythms. (Interestingly, one of leading proponents of this approach started out focusing on thyroid health and has found even better results by broadening his focus to brain health....very much like your "what's good for the brain is good for the body.")

FWIW, I tend to use topics you've investigated as a check on other people's recommendations—you're not an "expert" in the field of thyroid repair, or gut health, etc., so you have no incentives to adhere or not adhere to a particular line of thinking. So if both you and a thyroid doctor find a particular approach beneficial, that seems very convincing to me.

Those are good lessons. Tomorrow I will explain why I think they all come from one somewhat hidden underlying lesson.

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q (2013-12-26 07:18:51)

ok, on stomach issues. my stomach is more or less fine, but i have a friend who has a lot of "random" stomach issues. i don't think she's going to do the "experimentation" thing much herself but is there anything i should suggest she read or anyone she should see? ie where should she start? i know what i would do, read a ton of stuff and try some things and keep track, but it's not me. Seth: Read what I've written about fermented foods.

Charlie Currie (2013-12-26 08:23:40)

Excellent...I concur with all 5...

Jackye (2013-12-26 16:06:46)

How did you heal your peeling fingernails? I have also greatly benefited from reading Seth's blog; cured my acid reflux/heartburn by eliminating gluten from my diet.

Portlander (2013-12-26 20:54:59)

The one that most resonated with me is #2. I'm always amazed by the number of people that seem to shrug and assume sub-optimal health is part of life. No, it means you're doing something WRONG THAT NEEDS FIXED! Your job is to pay close attention to try and figure it out. When genetic pre-disposition for one ailment after another was newly the rage (which, I guess it still is), the counter joke was "Hey, our genes didn't evolve to kill us." I think too many people think misery is just bad luck and there's nothing one can do about it. It's Shakespearean. Or Biblical. One is born under a crossed star, or a pox is on one's house, and 'dems da' breaks.

Alex (2013-12-27 08:07:59)

For q: one of the surest ways to make your own life worse is to be more invested in solving your friend's problems than she is.

Alex (2013-12-27 21:44:50)

Great observations and impressive results, Kirsten Marcum. If you ever blog about the process, I'd love to read it. I'm most envious of your having found your doctor. When I told my GP I'd lost 30 pounds by eating paleo, she all but rolled her eyes. I'd love to know how many other patients she has who've dropped over 10 % of body weight in months without any exercise or calorie restriction.

Kirsten (2013-12-30 15:18:45)

Hi Jackye- The fingernails were fixed by stomach acid supplements (HCL with pepsin). My doctor told me that low stomach acid is common with autoimmune thyroid issues. So I did a self-test to figure out the dose size I needed, and about four months after I started supplementing, my fingernails stopped peeling. My theory is that without stomach acid, I wasn't breaking down my food well and so I wasn't using all the nutrients I took in. I have to wonder about the positive effects on the parts of my body I can't see. Incidentally, my nails peeled continuously from age 13 to last January (age 39), with only two breaks: once when I took biotin supplements (when I stopped, it came back) and during the year I drank a ton of raw milk. And Alex: Thanks very much! I've been a blog lurker since 2001, but haven't commented much or blogged myself. Maybe that will change as my health improves....one of my major symptoms is a failure to connect intent to action. So I would read blogs and intend to comment, but never do it, or intend to start a blog, but never post. Now that my health is improving, I find I have a shorter list of things I mean to do and longer list of things I'm actually doing. So you never know.

## Lessons of This Blog (2nd of 2) (2013-12-27 05:00)

Yesterday I posted [1]Kristen Marcum's list of general rules she'd learned from this blog. (For example, "be skeptical of experts.") Behind her list, I think there is one idea, slightly hidden from view:

non-experts can discover important things about health

By non-experts I mean people who are not health professionals. People who do not make a living from health research. By discover I mean learn from data for the first time, actually discover – in contrast to learn from an expert. By important I mean stuff that matters to many people. (It's obvious that studying yourself you can help yourself.) I haven't heard anyone else say this, although it isn't far from the Quantified Self movement.

The first example of this rule was the work of Richard Bernstein, an engineer with diabetes. In the 1960s, he pioneered home blood glucose testing, now enormously important. Another example, I hope, is my work. I used self-tracking and self-experimentation to find [2]important new cause-effect relationships in several areas – new ways to sleep better or lose weight, for example. I believe my conclusions will turn out to be true for many people, not just me, because they fit well with research done with other people and animals. I'm a professional scientist, which obviously helped, but not a health researcher.

Why is this rule true? I found it hard to explain even my discoveries. [3]The first time I tried, I didn't do well. I did better [4]the second time.

I came to see that discoveries require several things – more precisely, rate of discovery is a product of several factors. Everyone sees that experts have several advantages over non-experts:

1. more training (graduate school)
2. more resources (equipment, grants, space, assistants, journals, specialized libraries, and so on)
3. more hours per day (all working day)
4. more experience (their entire working life)

What I've never seen pointed out is that non-experts have several advantages over experts:

1. more time overall (with no pressure to publish, a non-expert can easily spend many years on one question)
2. more freedom (no pressure to follow a party line, obey your boss or be popular)
3. more motivation (non-experts want to improve their own health, or a loved one's health; for health researchers it's a job)
4. ability to self-track and self-experiment (this is too humble for experts)

Because of my job, I was only slightly behind health experts in terms of their four advantages, and I was far ahead of them in terms of the four non-expert advantages. This explains why I discovered many things that experts had not managed to discover.

Once I had a reasonable understanding of what had happened, I saw there was no reason I should be the only one. As a professor, I had excellent library access, much better than most, but now, with the Internet, many people have comparable access to research. Supporting my prediction that I am not the only non-expert who can do this, I have found

other non-experts who have made important discoveries. Tara Grant figured out that [5]the time of day she takes Vitamin D made a big difference. Professional researchers have not yet figured this out. Katie Reid found that [6]her autistic daughter completely recovered – autism symptoms completely gone – when all glutamate was removed from her diet. Professional autism researchers haven't managed to cure even one case of autism, as far as I know. Stuart King figured out that [7]a tablespoon of honey at bedtime greatly improved his sleep. No sleep or nutrition researcher has realized this.

In the 1940s, my mother's mother sent my mother newspaper clippings about computers, of which, at the time, there were only a few. This is going to be important, she said. Let me continue the tradition by telling you this is going to be important.

When even a tiny fraction of non-experts become "health knowledge generators" (for lack of a better term) the world will change. Some of the reasons:

1. The IQ advantage. There are far more non-experts than health researchers. A factor of 100,000? Let's say health researchers have [8]an average IQ of 130. If you take 100,000 non-experts (mean IQ = 100, standard deviation = 15) the top IQ among them will be about 165.

2. Trust and generalizability. When a health expert advises you to do Treatment X (e.g., surgery), what should you think? Can you (a) trust him and (b) is what he says true for you? Any reader of this blog knows that health experts routinely overstate benefits and understate costs of the treatment they are promoting. Even if they are telling the whole truth, their advice is based, at best, on several studies. Is what those studies found – studying animals, or at best, other humans – true for you? When you study yourself – for example, carefully measuring the effect of a drug – error due to distortions and differences from the study population go to zero.

3. Good and bad chemicals. We encounter thousands of chemicals, many of recent origin. How we react to them – do they help or hurt? – is determined by our genome (billions of possibilities) and environmental history (countless possibilities). Any sort of expert testing will be woefully incomplete. The danger in assuming that a chemical safe for most people is safe for you is illustrated by a woman who found her almost constant migraines [9]were caused by household cleaning products and Katie Reid's discovery that her daughter was very sensitive to glutamate (found in a large fraction of supermarket foods). That things claimed to be safe may be dangerous is illustrated by the Berkeley graduate student who became [10]poisoned by mercury when he started grinding his teeth and my discovery that [11]fermented tofu made me stupid for a few days. My experience with tofu and [12]butter shows how a non-expert can do better than simply accept what experts say. My brain tracking, which anyone could do, detected previously-unknown or -unclear costs and benefits.

Our economy runs on specialization. We buy cars from car specialists, for example. Long ago, professionals had a monopoly on knowledge. To learn math, you had to pay a math teacher. Then came cheap printing and mass literacy and mathematics books and libraries. The same knowledge became not just free but widely available. Then came the Internet and Wikipedia and Google – even more available. But all this time, the source of the knowledge, its creation, was restricted to professionals. Only professionals (or rich amateurs, like Darwin) could "make" (or "mine") the knowledge. Now that will change.

1. <http://blog.sethroberts.net/2013/12/26/lessons-of-this-blog>

2. <http://escholarship.org/uc/item/2xc2h866/>

3. <http://escholarship.org/uc/item/2xc2h866/>

4. <http://media.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

5. <http://primalgirl.com/2011/11/01/nprimalgirl-sleep-issues-vitamin-d/>
6. <http://blog.sethroberts.net/2013/05/17/journal-of-personal-science-one-childs-autism-eliminated-by-removal-of-glutamate-from-her-diet/>
7. <http://blog.sethroberts.net/2013/10/11/association-of-sleep-and-chronic-illness/#comment-1150683>
8. <http://motls.blogspot.com/2006/03/iq-in-different-fields.html>
9. <http://boingboing.net/2011/07/25/finding-the-source-of-migraines-and-fifty-useless-migraine-drugs.html>
10. <http://blog.sethroberts.net/2013/09/20/teeth-clenching-can-release-mercury/>
11. <http://blog.sethroberts.net/2013/12/09/warning-soybean-eaters-tofu-made-me-stupid/>
12. <http://media.sethroberts.net/blog/pdf/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf>

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Nancy Lebovitz (2013-12-27 09:32:26)

Some experts are researching their own diseases or diseases of loved ones– it might be a good idea to take those experts more seriously. Seth: You'd think so, wouldn't you? But in my experience these experts don't do well. I can think of three examples:

1. Stanford molecular biologist who discovered he had diabetes. He cured it via exercise. Nothing special there, in spite of a lot of high-tech measurements. He noticed the diabetes the same way everyone else does, with blood sugar measurements.
2. Geneticist near Stanford whose daughter has a very rare genetic disease. Last time I checked, he had made no progress in reducing her symptoms.
3. Larry Smarr, who has Crohn's. No progress on reducing the symptoms of Crohn's, last time I checked. Do you know of other examples?

dearieme (2013-12-27 10:34:10)

On being sceptical of experts <http://www.forbes.com/sites/larryhusten/2013/07/31/european-heart-guidelines-based-on-disgraced-research-may-have-caused-thousands-of-deaths/> Seth: good example. what's so telling about it is that it wasn't just one expert, one "rotten apple". Many experts (all European doctors?) followed recommendations based on bad data.

Gina (2013-12-27 11:05:42)

Not only do non-experts not have pressure to toe the party line, they are also free to find solutions to problems that are non-patentable. There is a reason that doctors prescribe Boniva instead of prunes and Ambien instead of honey, even though the prunes and the honey are effective, cheaper and have no harmful side-effects. I recently read *Manufacturing Depression* by Gary Greenburg and highly recommend it. Psychiatrists are uninterested in treatment that does not use drugs. Seth: I agree. I would put it a bit differently. Non-experts are free to find solutions that do not provide income to health care professionals. A naturopath, for example, will rarely advise something they don't sell. Lots of what they sell isn't patentable.

Nancy Lebovitz (2013-12-28 06:01:04)

Terry Wahls– <http://www.terrywahls.com/>– a doctor with serious MS who developed a modified paleo diet which controls her symptoms and which has worked for other people with MS. (It doesn't seem to work for some other people with degenerative diseases, which at least suggests that people in general aren't completely ruled by confirmation bias.) The theory behind the diet is that it's good for mitochondria.

Seth Roberts (2013-12-28 13:11:39)

I see, Terry Wahls is an example of a health care professional who has had good results trying to fix their own health problem. I agree.

Heisenbug (2013-12-28 22:38:56)

I believe another advantage that non experts have is that they are allowed to be generalists. They are able to make connections across different areas and disciplines, which is often how innovation and creativity comes about. They aren't fenced in like



experts. Experts, often for professional reasons, are not allowed to draw from disparate fields to make important connections and findings.

Seth Roberts (2013-12-28 23:22:55)

"Experts, often for professional reasons, are not allowed to draw from disparate fields to make important connections and findings." I haven't noticed that. It's true enough that they might not be curious about other fields. At Berkeley, in my experience, few faculty attended talks outside their field, but nothing prevented or discouraged them from doing so. I attended lots of talks in different fields. Nothing bad happened.

Nancy Lebovitz (2013-12-29 08:33:04)

I'm not suggesting that health professionals who work on their own problems will necessarily find solutions. You spent a long time working on your problems before anything useful turned up. However, I would expect that a health professional working on their own or a loved one's problem is much less likely to publicize a solution which doesn't work or has such severe side effects that it's not worth using. There's still the possibility that a solution which works for the health professional doesn't apply to at least some people with similar problems, of course.

### Assorted Links (2013-12-28 05:00)

- [1]Jared Diamond wrong about Easter Island
- [2]Why are the Kuna Indians (in Panama) so healthy? Answer: [3]low-processed cocoa. See [4]this study for details.
- [5]Asthma associated with depression
- [6]Sufficient conversion of ALA to DHA in rats. " This work indicates that DHA [long-chain omega-3] synthesis from ALA [short-chain omega-3] may be sufficient to supply the brain." Many people have complained that I use flaxseed or flaxseed oil to get better brain function. Don't you know conversion from short-chain omega-3 to long-chain omega-3 is poor? I tell them it works – but somehow I must be wrong. This study shows the issue is more complicated than they realize and it is quite possible that ALA is a good source of DHA. Good news for anyone who can't eat seafood.
- [7]National Sleep Foundation gives terrible advice. "Finish eating at least 2-3 hours before bedtime," they say. Whereas I believe the single best thing you can do for your sleep is eat a source of glucose and fructose, such as honey or fruit, at bedtime.
- [8]Sleep apnea associated with cancer. It is unlikely that cancer causes sleep apnea, but quite plausible that bad sleep – including sleep apnea – increases cancer.

Thanks to Eugenia Loli.

1. <http://www.npr.org/blogs/krulwich/2013/12/09/249728994/what-happened-on-easter-island-a-new-even-scarier-scenario>
2. <http://longevity.about.com/od/lifelongnutrition/a/The-Healthiest-Chocolate.htm>
3. <http://www.medsci.org/press/cocoa.html>
4. <http://www.medsci.org/v04p0053.htm>
5. <http://ije.oxfordjournals.org/content/41/5/1436.short?rss=1&mp%3bssource=mfr>
6. <http://www.jlr.org/content/early/2013/11/09/jlr.M042275.full.pdf>

7. <http://www.sleepfoundation.org/article/sleep-topics/healthy-sleep-tips>
8. [http://well.blogs.nytimes.com/2012/05/20/sleep-apnea-tied-to-increased-cancer-risk/?\\_r=0](http://well.blogs.nytimes.com/2012/05/20/sleep-apnea-tied-to-increased-cancer-risk/?_r=0)

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Jazi Zilber (2013-12-28 05:14:35)

Heavy meal might disturb sleep. Stomach work etc. Insulin reaction too needs to be factored in. I.e. high glycemic meal might lead to lower sugar due to insulin reaction.

Jazi Zilber (2013-12-28 05:16:31)

My experience is like you. For a long time, I could not fall asleep whatsoever without getting full (usually 100 g rice crackers (puffed) with 400 g yogurt.

Sentinel (2013-12-28 06:58:24)

Re the Kuna Indians' drink: if we wanted to try this, is it basically a hot cocoa drink made from dissolving pulverized organic cacao powder in hot water?

dearieme (2013-12-28 07:45:49)

"anyone who can't eat seafood": that's a new one on me. What's the problem?

Gina (2013-12-28 08:44:23)

Dearieme, I assume he's referring to those with allergies, those that live in areas where seafood is unavailable, vegetarians and people worried about mercury.

Hap (2013-12-28 09:12:00)

The cacao powder I got at Andronico's here in Berkeley is this: <http://www.sunfood.com/food/cacao-chocolate-cocoa/cacao-powder-8oz-organic-ra-w.html> Long list of nutrients, and it mentions "flavonols." The possibility of a connection with lower blood pressure is intriguing. I've started adding this to my milk, heavy cream, espresso drink. An interesting enough taste so I've no desire for sweetener.

JV (2013-12-28 10:07:02)

"Anyone who can't eat seafood". Yes, allergies. We have at least one friend who is allergic to shellfish and I don't think it's that unusual

Seth Roberts (2013-12-28 13:17:53)

Hap, In response to the Kuma Indians info, which suggests great health benefits of nearly raw cacao, I have gotten some CocoaVia products, which are supposed to be high in flavonols. You have to process the cacao "gently" to not destroy them. Maybe I will compare the CocoaVia stuff to the Andronico's powder you mention.

emini\_guy (2013-12-28 15:58:12)

Here is what I have been drinking for some time now - seems less expensive than the alternatives mentioned earlier here - [http://www.amazon.com/Healthworks-Certified-Organic-Cacao-Powder/dp/B00EKLPLU4/ref=sr\\_1\\_1?s=grocery&ie=UTF8&qid=1388271400&sr=1-1](http://www.amazon.com/Healthworks-Certified-Organic-Cacao-Powder/dp/B00EKLPLU4/ref=sr_1_1?s=grocery&ie=UTF8&qid=1388271400&sr=1-1)

dearieme (2013-12-28 18:18:02)

In my family problems with sea-food are highly specific - for example, one can't eat crab but is OK with everything else. Another can't eat lobster, at least of the North Atlantic variety, but can eat crab, Australian species, and so on. I've never met anyone who can't eat white fish, salmon, trout, herring, sardines, mackerel and the other common culinary fish, though I don't doubt

that they might exist. Shellfish: yes, I've heard of that problem. But does allergy to shellfish imply allergy to, say, cod, haddock, sole, plaice ....? I ask from pure ignorance, not as a debating point.

dearieme (2013-12-28 18:20:17)

Whitebait: I do hope that everyone can eat whitebait. It would be a rotten trick by God if some poor soul couldn't enjoy them. (I mean Proper Whitebait, not the dismal stuff so-called in NZ - a lovely country, but unsound on whitebait.)

john (2013-12-28 20:29:18)

Mixing cocoa powder and water would make a drink much less fatty than what the Kuna consume. Try adding back cocoa butter? ...or something with baking/dark chocolate? Seth: Good point. However, I already eat a lot of butter.

john (2013-12-28 20:34:45)

Anyway, cocoa/chocolate is nutritious, but it's not as if the Kuna use it to counter all the HFCS and corn oil they consume. Just like most "traditional" cultures, the foods are good quality, and they don't eat most of the crap Americans do.

Alex Chernavsky (2013-12-28 22:04:11)

@Dearieme, here are some reasons why I don't eat seafood: [1]Fish do feel pain, scientists say [2]Further evidence crabs and other crustaceans feel pain (Both links go to the BBC website)

1. <http://news.bbc.co.uk/2/hi/sci/tech/2983045.stm>

2. <http://www.bbc.co.uk/news/science-environment-21044077>

Elizabeth (2013-12-29 09:23:41)

@dearieme, I have a friend who is so allergic to fish of any sort that she can't even eat something cooked in the same oil fish has been cooked in. She develops life-threatening internal hives (possibility of blocked airway, intestines, etc.).

dearieme (2013-12-29 17:21:54)

Dear heavens, Elizabeth: the poor soul. I watched the family member who can't eat lobster discovering the problem. I thought she was going to die; very frightening indeed.

Jazi Zilber (2013-12-31 03:28:01)

This raw cacao powder we know little about. S few people use it! It sounds better. But I would be careful with large amounts. As it is not so throughoutly used and tested

Alex Schell (2013-12-31 23:05:49)

Re: seafood vs. flaxseed, there is a third option for omega-3. It turns out that hens fed a high-flaxseed diet lay eggs with much higher amounts of EPA and DHA. Given the importance of omega-3 for brain development, it makes sense that the yolk should accumulate a disproportionate amount of the converted long-chain omega-3s. (The brand I'm familiar with, "Christopher Eggs" from Kroger/Private Selection, have 660 mg omega-3 per egg.)

## **Missing Data in Clinical Trials: FDA Officials Refuse to Set Limits (2013-12-29 05:00)**

People who believe in "evidence-based medicine" say that double-blind clinical trials are the best form of evidence. Generally this is said by people who know very little about double-blind clinical trials. One reason they are not always the best form of evidence is that data may be missing. Nowadays [1]more data is missing than in the past:

By [missing data] he [Thomas Marciniak] means participants who withdrew their consent to continue participating in the trial or went "missing" from the dataset and were not followed up to see what happened

to them. Marciniak says that this has been getting worse in his 13 years as an FDA drug reviewer and is something that he has repeatedly clashed with his bosses about.

"They [his bosses] appear to believe that they can ignore missing and bad data, not mention them in the labels, and interpret the results just as if there was no missing or bad data," he says, adding: "I have repeatedly asked them how much missing or bad data would lead them to distrust the results and they have consistently refused to answer that question."

In one FDA presentation, he charted an increase in missing data in trials set up to measure cardiovascular outcomes.

"I actually plotted out what the missing data rates were in the various trials from 2001 on," he adds. "It's virtually an exponential curve."

Another sort of missing data involves what is measured. In one study of whether a certain drug (losartan) increased cancer, [2]lung cancer wasn't counted as cancer. In [3]another case, involving Avandia, a diabetes drug, "serious heart problems . . . were not counted in the study's tally of adverse events."

[4]Here is a presentation by Marciniak. At one point, he asks the audience, Why should you believe me rather than the drug company (GSK)? His answer: "Neither my job nor (for me) \$100,000,000's are riding on the results." It's horrible, but true: Our health care system is almost entirely run by people who make more money (or make the same amount of money for less work) if they exaggerate its value – if they ignore missing data and bad side effects, for example. Why the rest of us put up with this in the face of overwhelming evidence of exaggeration (for example, [5]tonsillectomies) is an interesting question.

Thanks to Alex Chernavsky.

1. <http://www.minnpost.com/second-opinion/2013/12/lone-wolf-fda-investigator-says-clinical-trial-system-broken>
2. <http://online.wsj.com/news/articles/SB10001424127887324682204578515172395384146>
3. <http://www.nytimes.com/2010/07/10/health/10diabetes.html?pagewanted=all>
4. <http://www.fda.gov/downloads/AdvisoryCommittees/CommitteesMeetingMaterials/Drugs/EndocrinologicandMetabolicDrugsAdvisoryCommittee/UCM218484.pdf>
5. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

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gwern (2013-12-29 14:25:17)

How much missing data is there for home remedies circulated on blogs like this one? If 100 people decide to try out honey before bedtime, what percent will report back and be included in a post? Does the answer look closer to '0 or 1 %' or '99 or 100 %'?

dearieme (2013-12-29 14:31:05)

I became a great cynic about modern medicine when I read about the statin trials when 15 % (if my imperfect memory serves) of the treated group gave up in the first couple of weeks, and were thereafter just quietly expunged from the stats. Presumably - but we'll never know - they gave up because they already were suffering from adverse side-effects. That meant that all predictions of the proportion of the population who would so suffer were effectively lies. It also meant that the most interesting proportion of the subjects of the experiment were deleted. After all, those who gain by statins - insofar as they exist - are just statistical facts, but people who suffer are actual, identifiable humans, to whom one could apply, if I dare use

the word, science.

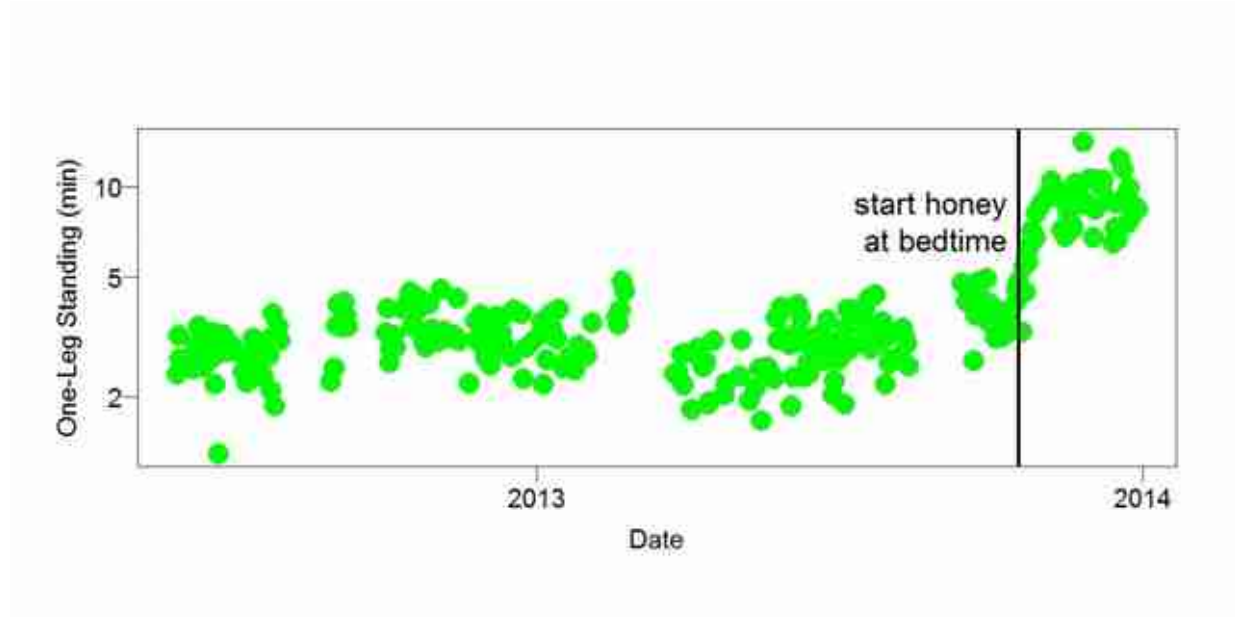
### Sleep and Bedtime Honey: More About Strength Improvement (2013-12-30 05:00)

In [1]my first post about the use of [2]bedtime honey to improve sleep, I included a graph that showed my legs suddenly got much stronger when I started the honey. I measured how long I could stand on one leg (bent). I had been doing this four times per day (left leg twice, right leg twice) for a long time [3]to sleep better.

A reader of this blog named Nile McAdams found [4]bedtime honey caused him to get stronger, too. He measured arm strength.

Soon after my legs got much stronger I reduced my one-leg standing from four/day to two/day to save time. The improvement stopped, but the gains persisted:

[5]



Note the logarithmic y axis. Each point is a different day, an average of the first left leg stand and the first right leg stand of that day.

The graph shows I am much stronger with half as much effort. As I said, the strength improvement has also been easy to notice in everyday activities, including walking, stair climbing (I live on the top floor of a six-floor walkup) and bike riding.

I have been unable to find research that shows a similar effect. Judging by [6]a 2010 textbook, exercise physiologists don't know about it.

1. <http://blog.sethroberts.net/2013/11/05/honey-at-bedtime-improves-sleep/>

2. <http://blog.sethroberts.net/category/sleep/honey-sleep/>

3. <http://media.sethroberts.net/blog/pdf/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statisti>

cs.pdf

4. <http://blog.sethroberts.net/2013/12/03/bedtime-honey-increases-strength/>

5. [http://s919.photobucket.com/user/twoutopias/media/2i013-12-30onelegstandingimprovedbybedtimehoney\\_zps94da9fcb.jpeg.html](http://s919.photobucket.com/user/twoutopias/media/2i013-12-30onelegstandingimprovedbybedtimehoney_zps94da9fcb.jpeg.html)

6. <http://books.google.com/books?id=X0yjZX0Wxw4C&pg=PA871&lpg=PA871&dq=%22exercise+physiology%22+sleep&source=bl&ots=MtAoR5fs-e&sig=0qVaNjvw6scXzY2CoqI8BqSG4zQ&hl=en&sa=X&ei=MWzAUt-PC4j0oATP5YJ4&ved=0CDoQ6AEwADgK#v=onepage&q=sleep&f=false>

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Adam Long (2013-12-30 09:03:28)

Seth, this reminds me of a technique called "carbo backloading". The basic idea is that you can gain muscle by (1) exercising later in the day (e.g. after 3 pm) and (2) eating simple carbohydrates (e.g. honey, but I don't remember anyone discussing honey specifically with regard to the procedure) during the 3 hour window after exercising. Not sure if these are related (and I guess there is considerable debate about whether carbo backloading works) but I wonder if there might be a connection to your findings re: honey and strength gains.

Phil (2013-12-30 15:51:07)

Interestingly, I have a weight lifting book from the mid-1980's that claims to be based on Bulgarian olympic lifter training. They recommend consuming a teaspoon of honey about 10 minutes before each exercise session and a protein source between 30-180 minutes afterward.

Jerry (2013-12-30 19:58:55)

This makes sense: the honey is causing either an insulin spike or a rise in basal insulin. In either case, your insulin is rising. Insulin, aside from being a storage hormone (i.e. causes sugar to be stored as fat) also causes muscle growth. The previous two posts make sense in this light. Bodybuilders often take carbs immediately before and/or after a workout for this reason, before or after depending on their philosophy—turns out that an insulin spike will stop HGH secretion after a workout, so this is a potential problem.

Alex (2013-12-31 20:18:34)

Seth, has your weight gone up since you started taking honey at bedtime? Seth: No, it hasn't.

## **The Year in Personal Science: 2013 (2013-12-31 05:00)**

Here are some especially notable results (most notable first).

### **Other People's**

1. [1]Bedtime honey greatly improved sleep. Stuart King found this after many other things had failed to help him. He got the idea from [2]Dave Asprey, who got it from [3]The Honey Revolution (2009) by Ron Kessenden and Mike McInnes, but Stuart made by far the best case that the effect was important and determined some boundary conditions (e.g., don't eat a lot of sugar during the day). The improvement is so big and easy (honey tastes good) that it's quite possible this is why evolution shaped us to enjoy sweets after dinner – to improve sleep. In the future, I believe, it will be understood that sugars (at the right times in the right amounts) are a necessary nutrient – exactly the opposite of what all nutrition experts, [4]including paleo ones and Weston Price, say. When this stunning reversal will happen I don't know – but no one will have foretold it more than Stuart.

2. [5]Avoidance of glutamate cured autism. "Cure" is not too strong. [6]Katherine Reid, who has a Ph.D. in protein chemistry, realized that many many foods, including ultrapasteurized milk, contain glutamate. When all glutamate was removed from her daughter's diet, her daughter, who had been autistic, became completely normal. The generality of this solution is unclear but to cure even one case of autism is more than anyone else has done.

3. [7]Xylitol eliminated lichen planus. Evelyn M. found that if she swished xylitol around in her mouth several times/day, her lichen planus and overall gum health greatly improved. This effect is well-known in Scandinavia but barely known elsewhere. American dentists don't know it, for example. I didn't know it.

4. [8]Caffeine reduced reaction time. Alex Chernavsky wrote his own version of my brain tracking reaction-time test and found, in a well-designed experiment, that caffeine made him faster, at least for a few hours. What's important here is the method, not the result: Alex's success with a test that costs nothing and takes only a few minutes/day. His success brings closer the day that many people can do these tests. When non-experts realize they can study their own health in good experiments, the world will change.

Mine

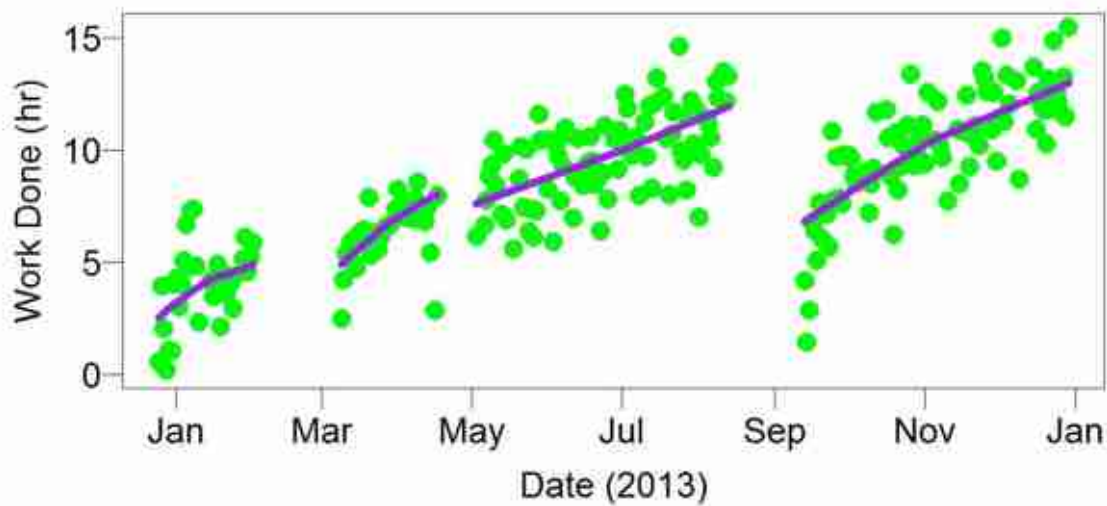
1. [9]Bedtime honey greatly increased my strength. (More [10]here .) This convinced me that bedtime honey was something special, more than another way to improve sleep. (I also improved my sleep by [11]darkening my bedroom – much less important.) Bedtime honey also seemed to [12]improve mood and motivation. I have been trying to improve my sleep my whole adult life – this, I now see, is the secret. My discovery in the 1990s that [13]lots of standing improves my sleep led to the daily one-legged standing that made the strength increase so clear.

2. [14]A banana a few hours before bedtime (in addition to bedtime honey) improved my sleep even more. The Honey Prescription says it's been known for thousands of years that bedtime honey improves sleep, but no one seems to have noticed this, in spite of the importance of sleep. As Robb Wolf has said, "If someone sleeps well, you can't kill them. If they sleep badly, you can't keep them alive."

3. [15]Tofu made me stupid. One 20 g piece of fermented tofu slowed me down for two days on a reaction-time test. Other evidence has suggested that tofu is bad for the brain, but I find this the most persuasive. In addition to what it says about tofu, it suggests the power of brain tracking to reveal important things few people know. (An earlier example involved [16]butter.) Billions of people eat tofu often.

4. [17]Percentile feedback helped me work. The version of percentile feedback I use now (an R program that tracks my work and compares how well I am doing today to the last 100 days) is an improvement, I like to think, over an earlier version. The biggest difference is the addition of weighting: doing a hard task for one hour counts more than doing an easy task for an hour (e.g., a factor of 1.5, so that 60 minutes counts as 90 minutes). I kept track of how much I worked for a whole year, the first time I've managed to do that. Here's what happened.

[18]



I think the lesson is that with the right push, I can slowly improve.

1. <http://blog.sethroberts.net/2013/11/05/honey-at-bedtime-improves-sleep/>
2. <http://www.bulletproofexec.com/the-top-6-ways-to-improve-your-sleep-using-food/>
3. <http://www.livinghoney.biz/the-honey-revolution.html>
4. <http://www.dietdoctor.com/lustig-the-number-one-talk-of-ahs11-now-online>
5. <http://blog.sethroberts.net/2013/05/17/journal-of-personal-science-one-childs-autism-eliminated-by-removal-of-glutamate-from-her-diet/>
6. <http://unblindmymind.org/>
7. <http://blog.sethroberts.net/2013/04/12/journal-of-personal-science-xylitol-improves-lichen-planus-and-mouth-health/>
8. <http://www.astrocyte-design.com/self-experimentation/brain-tracking-caffeine/index.html>
9. <http://blog.sethroberts.net/2013/11/05/honey-at-bedtime-improves-sleep/>
10. <http://blog.sethroberts.net/2013/12/30/sleep-and-bedtime-honey-more-about-strength-improvement/?preview=true>
11. <http://blog.sethroberts.net/2013/11/27/correlation-between-moon-phase-and-sleep-quality-supports-importance-of-dark-bedroom/>
12. <http://blog.sethroberts.net/2013/12/14/bedtime-honey-other-benefits-besides-sleep-and-strength/>
13. <http://escholarship.org/uc/item/2xc2h866/>
14. <http://blog.sethroberts.net/2013/12/25/frontlines-of-personal-science-confirmation/>
15. <http://blog.sethroberts.net/2013/12/09/warning-soybean-eaters-tofu-made-me-stupid/>
16. <http://quantifiedself.com/2010/09/seth-roberts-on-arithmetic-and/>
17. <http://blog.sethroberts.net/category/percentile-feedback/>
18. [http://s919.photobucket.com/user/twoutopias/media/2013-12-30percentilefeedbackandworkdonein2013\\_zps4e0852df.jpeg.html](http://s919.photobucket.com/user/twoutopias/media/2013-12-30percentilefeedbackandworkdonein2013_zps4e0852df.jpeg.html)



Xav (2013-12-31 05:53:01)

Another upvote for xylitol from me. It tastes good in green tea (I use 8 - 12g per cup), and, along with your recommendation of having a couple of tablespoons of flaxseed oil daily (although not at the same time as the tea) , makes a huge improvement in how healthy and pain-free my teeth and gums feel.

Alex Chernavsky (2013-12-31 06:20:13)

Consuming even small amounts of xylitol gives me diarrhea. But I add xylitol to my mouthwash. On another subject: Seth, what happened to your productivity around August or September? Seems like there was a sharp drop, and your recovery took four months or so.

Daniel (2013-12-31 07:36:27)

Hello. I am interested in the honey experiment. I Live in south america and here we ate more late at night I think, like at 21 or 22 hs I understand that in the US you eat earlier. At what time is your lat meal? I ask becaius e I think this can affect what taking honey can produce. Is the script from both available? Do you think <http://www.cambridgebrainsciences.com/> can be a good tool to use as a test? Thanks Seth: I eat dinner around 6 pm. Eat banana around 7-8 pm, have honey close to bedtime (around 10 pm). If you are interested in my brain test software, please email me. I think the cambridge brain sciences stuff takes too long and, based on my experience, the tests are poorly chosen. But I haven't tried it.

Jason H (2013-12-31 07:36:42)

I've been self experimenting with a coconut oil mouth wash in the morning. It's typically 10 to 15 minutes and it has resulted in healthier gums, less sensitivity to cold and a small improvement in whiteness. Also this past year I started playing around with raw apple cider vinegar before bed. I usually have major sinus issues in the winter, which leads to having a humidifier constantly running along with nasal rinses and vaporub. So far the ACV has been a huge success. 0 congestion, 0 nasal rinses, 0 vaporub applications but a couple of humidifier sleep sessions. In addition to using honey at bedtime I've also toyed with blocking out blue light by wearing orange glasses and being made fun of by my wife. I'm not sure if this has been a success. I need to separate it out from the honey and see what happens. I am confident that the belittling will continue.

dearieme (2013-12-31 07:54:31)

Months have rolled by, and still nobody has recited I eat my peas with honey I've done it all my life It makes the peas taste funny But it keeps them on my knife. Happy New Year.

Charlie Currie (2013-12-31 09:27:49)

Oh dearieme that is funny... Seth, I think you're a little harsh on the LC / Paleo people about sugar/honey, or at lease a little overly general. I believe the majority today would say the dose makes the poison. Seth: As Gina says, many paleo people use the term "safe starch". Meaning that sugar is not a safe starch. The "safe starch" view opposes the idea that all starches are bad. Not one person has said that sugar is not the problem, which is exactly what I said in The Shangri-La Diet. All this stuff about how honey improves sleep (no doubt because of its sugar content) is more evidence that sugar is not the problem. Maybe they would say "the dose makes the poison" but that would be further misunderstanding. It's the time of day that makes the poison. I haven't heard anyone in the paleo community say that, with the notable exception of Tara Grant, who figured out that the time of day she took her Vitamin D made an enormous difference.

Gina (2013-12-31 10:32:43)

Charlie Currie: The "Safe Starch" debate (moderated by Jimmy Moore!) comes to mind. Starches are controversial and sugar is the devil. But that was 2012. Maybe attitudes have changed since I quit paying attention. It's weird that "Ancestral Health" changes so much.

Sentinel (2013-12-31 11:57:23)

Happy New Year to Seth and all the self-experimenters out there!

Seth Roberts (2013-12-31 13:58:08)

I was travelling August and September. Long trip from Berkeley to Beijing.

Tom (2013-12-31 14:45:48)

By the way, in scandinavia there are several brands of tooth paste and chewing gum with xylitol. I believe I first saw it marketed by a Finnish company. Not sure whether they take international orders or not, but here's a search at the state pharmacist's in Sweden: <http://www.apoteket.se/privatpersoner/commmon/search.aspx?q=xylitol&t=1> Happy new year!

emini\_guy (2013-12-31 16:18:51)

Chewing gum with with xylitol can be purchased in the US too. Just use Amazon.com - [http://www.amazon.com/Epic-Dental-Xylitol-Sweetened-Cinnamon/dp/B005YXU3ZA/ref=pd\\_sim\\_hpc\\_4](http://www.amazon.com/Epic-Dental-Xylitol-Sweetened-Cinnamon/dp/B005YXU3ZA/ref=pd_sim_hpc_4) There may be other places online to get it, I just happen to patronize Amazon.com.

Bill Lagakos (2013-12-31 17:14:21)

I've miraculously avoided cavities for all of my 34 years, but my dentist still complains; tells me to floss more... perhaps I'll try swishing some xylitol for a single-blind study (I won't tell my dentist about it). Seth: Floss more, why? Because of pockets? My pockets greatly improved exactly when I started drinking flaxseed oil. My plaque did not improve. Plaque: xylitol. Pockets: flaxseed oil or other omega-3 source.

Xav (2014-01-01 04:50:56)

On the topic of sugars and sleep, I've recently started an experiment with taking D-Mannose to see if it has any impact on night time urination. I often get up once in the night for this, so I'm in the process of looking for ways to stop it. I wonder if anyone else has had any experiences with using d-mannose ?

Jeff (2014-01-01 09:20:51)

Seth - Just curious if you've tried honey instead of a banana yet for your other source of sugar 2 - 3 hours before bedtime? If so, have you noticed any difference in your sleep rating? OT, what source of faces are you currently using for morning faces? TIA Seth: No, for the sugar 2-3 hrs before bedtime I've just eaten a banana. For faces nowadays I use about 6 bloggingheads shows with relatively large faces. I put them on a large monitor.

Paul (2014-01-01 13:58:24)

Xylitol, is it safe? [http://www.naturalnews.com/022986\\_xylitol\\_health\\_sugar.html](http://www.naturalnews.com/022986_xylitol_health_sugar.html)

daz (2014-01-01 23:10:33)

"Pockets: flaxseed oil or other omega-3 source" it would not surprise me if there is something 'special' about flaxseed itself that improves gum health, & omega-3 may Or may not be a part of that. i cannot recall seeing/reading any studies or anecdotes that reported improvements in gum health from just taking omega-3 ie. fish oils or fish supplements...?

Ozquoll (2014-01-02 01:29:14)

Sadly the honey at bedtime approach did not work for me at all - I gave it up after three nights of very poor sleep, punctuated by vivid nightmares when I actually was asleep. However, I have had greatly improved sleep ( & blood glucose control) from taking resistant starch as discussed at length on Richard Nikoley's blog. There is at least one American dentist who knows about Xylitol - Ellie Phillips. She's got a book, but the following page on he website gives a pretty good rundown of her thoughts on dental care: <http://www.drellie.com/Ellie-Phillips-My-Recommendations.php> Seth: You might want to try a smaller dose of honey and/or banana. Too much will certainly produce bad sleep.

Jeff (2014-01-02 05:31:26)

Seth - If you're still doing alternate day fasting, it seems like your calories on fasting days much be climbing with all the food that you need to eat for your health (e.g., butter, flax, banana, honey, etc.). I believe you'd said in the past you consume 700 - 800 calories on fasting days. Adding a banana and 1 TBS of honey adds around 160 - 180 calories. How is that impacting your

fasting blood sugar readings and other health measures? Thanks for patiently answering all my questions. Your writing has dramatically improved my health in a number of ways. Seth: The banana and 1 T honey seem to have improved my fasting blood sugar readings but it is a complex question because obviously blood sugar will be elevated for hours after eating honey. So I am not sure. I am sure however that the better sleep has improved my health. It is obvious: feel better, stronger, more energy, more motivation.

Stuart King (2014-01-02 15:15:21)

Ozquoll, try taking the honey on its own without adding another food (resistant starch) simultaneously as I've found that certain foods can hinder the effect of honey. Also try switching to a different honey and have a break from eating between your last meal/desert and taking the honey (maybe 2 hours or more).

Sidney Phillips (2014-01-09 00:09:13)

Here is another experimental study of some merit that can easily be replicated. Researchers have found that drinking mineral water rich in silica can remove aluminum from the body and in some cases, actually reverse symptoms of Alzheimer's disease. The waters richest in silica are the Volvic and Fiji brands: <http://www.ncbi.nlm.nih.gov/pubmed/22976072> Seth: Fascinating.



# 9. 2014

## 9.1 January

### Assorted Links (2014-01-01 05:00)

- [1]Girl brain-dead after tonsillectomy. No doubt her parents were not told (a) your tonsils are part of your immune system, an essential part of your body, and (b) tonsil removal is associated with a 50 % higher death rate. As I said here, an "evidence-based" evaluation of whether tonsillectomies are good or bad failed to mention both of these things, along with a ton of other negative evidence.
- [2]Reverse graffiti. I think of this blog as reverse graffiti.
- [3]Interview with Peter Higgs. "Believes no university would employ him in today's academic system because he would not be considered "productive" enough."
- [4]UC Berkeley Psychology Department fires staff employee (in his 24th year), apparently for union activities. "Francis Katsuura created a Cal Agenda account to track all time that Paul Haller attended bargaining [sessions]. No other department has created such an account."

Thanks to Matt Cassell.

1. [http://sfist.com/2013/12/16/oakland\\_girl\\_brain\\_dead\\_after\\_routi.php](http://sfist.com/2013/12/16/oakland_girl_brain_dead_after_routi.php)
2. <http://www.wordspy.com/words/reversegraffiti.asp>
3. <http://www.theguardian.com/science/2013/dec/06/peter-higgs-boson-academic-system>
4. <http://www.upte.org/rx-tx/ulp/ULP-haller.pdf>

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Charlie Currie (2014-01-01 07:45:14)

Re: Haller So, we have State employees filing a complaint with State employees regarding the unfair behavior of State employees.

Joseph Moroco (2014-01-01 08:07:29)

It was not a routine tonsilectomy, but a Uvulopalatopharyngoplasty. Is there an ambulance being chased. Seth: This article says it was a tonsillectomy: [http://www.huffingtonpost.com/2013/12/21/jahi-mcmath-life-support\\_n\\_4485119.html](http://www.huffingtonpost.com/2013/12/21/jahi-mcmath-life-support_n_4485119.html) Massive bleeding is a common side effect of tonsillectomy. Are you saying that this particular version of a tonsillectomy is much riskier than other versions? If so where does that information come from? My general point about tonsillectomies is that patients are not told the true risk. You disagree?

dearieme (2014-01-01 08:55:48)

re Peter Higgs: whenever the future of the universities is under discussion and I intone "Dissolution of the Monasteries", I admit that I wonder whether the dissolution is already well advanced.

jon (2014-01-01 11:20:21)

My niece just had her tonsils removed. I sent a link from what you (Seth) posted some time ago. But my sister went ahead with the surgery partly because her daughter kept getting infections and started having trouble breathing. Now my sister is thinking of having all her children's tonsils removed after the "successful" removal of her daughter's tonsils. My sister's family have a very poor diet (although it has gotten a little better) in my opinion. Lot's of processed foods and sugary foods. They have stopped eating quite so much processed foods and have stopped eating cereal but the poor health continues. I guess they still haven't removed enough bad foods. My stepfather recently died after he had another heart attack (4th or 5th?) at the age of 65. He was diagnosed with diabetes sometime ago (15 or 20 years ago). But couldn't muster up the will power to sustain a healthy diet. Apparently a nurse told him 2 weeks before he died that if he didn't change his diet he would be dead within 5 years guaranteed. After having multiple heart/artiary surgeries he started have trouble breathing from the last one. He couldn't even get to the mailbox without breathing heavy. He wanted to live longer but couldn't muster the willpower I guess. It is pretty sad. He basically poisoned himself over his whole life and probably cut 20 years off his life if not more. I think these examples from my family definitely make me want to stick to a healthy and clean lifestyle. I find it interesting when people say, "I want to live a good life, I want my sugar!" It seems like a very selfish thing to say as if other people around them don't care about their life. It is not just their life that they are ruining, it is also affecting those around them. After my stepfather got diabetes he was much more moody and harder to get along with, that's 20 years of being around someone with mood swings that could have been avoided.

jo (2014-01-01 15:20:01)

"tonsil removal is associated with a 50 % higher death rate" What does this mean? Seth: That's what a survey found. The researchers compared people who had had tonsillectomies with similar people who hadn't. I link to the study in my article about tonsillectomies.

Nancy Lebovitz (2014-01-01 21:32:28)

Could you post a link to the previous tonsillectomies post? A fast googling didn't turn it up. I wonder if there's a general problem that the risks of all operations are underestimated.

Joseph Moroco (2014-01-02 06:38:32)

That patients are not told the risks is true. I do not disagree that the simple tonsillectomy is overdone, but one heck of a lot of people survive it, as did my dad who died not of complications from the operation as a kid, but simply from being old at 93. Huffington post is not necessarily wrong, but also does not possess papal level infallability. <http://overlawyered.com/2013/12/jahimcm-aths-routine-tonsillectomy/> Seth: Thanks for the source. Yeah, almost everyone survives it, I suppose no one notices that their immune system is not working so well because the tonsillectomy is given to people whose immune function is already bad (e.g., due to poor sleep). I was really surprised when I started sleeping better and stopped getting sick in the usual ways, nobody had ever said that was possible.

Joseph Moroco (2014-01-02 16:34:25)

I have sleep issues and really started reading you more faithfully when you wrote that line about getting enough sleep and you can't be killed, don't and you can't be kept alive. It's been a help. Thanks.

Seth Roberts (2014-01-03 05:33:33)

Joseph: Robb Wolf said that. I asked him who he was quoting and he said it was his own idea.

Sara (2014-01-05 01:39:36)

3 year old killed by dentist who had diagnosed her as needing 6 fillings and 4 root canals: <http://www.cnn.com/2014/01/04/justice/hawaii-girl-dead/index.html>

## Interview with Mike McInnes, Author of The Honey Diet (2014-01-02 05:00)

Mike McInnes is a retired Scottish pharmacist and the author of [1]The Honey Diet, published today. This book interests me because it advocates [2]eating honey at bedtime.

Could you summarize the book?

It's based on two ideas – that modern obesity is driven by two main factors. First, overconsumption of carbohydrates and sugars. Second, poor quality sleep. The medical profession has been saying that the cause of obesity is fat. We've known since the 19th century that it is carbohydrates, not fat. Poor quality sleep drives up stress hormones and appetite hormones.

In the West we have an early evening meal. We go to bed with a depleted liver. There is not enough fuel in the liver to supply the brain overnight. The way to resolve that is to forward-provision the brain, via the liver. The best food for that is honey. Honey is liver-specific. It is metabolized differently from other sugars. Honey restocks the liver prior to sleep. No other food can do this in the same way that honey can do this. Fruits are unlike honey because honey contains an army of nutrients, bioflavonoids, organic acids and others that ensure honey is not metabolized in the same way as refined sugars, which have none of these nutrients. Indeed it is fair to describe honey as the most potent anti-diabetic food known to man.

What's the background, the history, of these ideas?

I'm a pharmacist. Sold my pharmacy. Went into sport nutrition in the late 1990s. I rapidly discovered that athletes have no concept of brain metabolism or liver store during exercise and recovery. The most critical organ of sport is the liver. I looked for a food that would provide sufficient liver supply during exercise and during recovery. When an athlete collapses, it's not enough fuel left in the liver. Same at night, you go to sleep without sufficient fuel in the liver, after an early evening meal – and then you cannot recover physiologically – the brain is forced to activate stress and this in turn upgrades the orexigenic (appetite) hormones.

I knew from my physiological background that fructose was a key sugar to replenish the liver, fructose is liver specific - it only goes to the liver, where it is converted to glucose and stored as liver glycogen. It also brings glucose into the liver – it liberates the glucose enzyme – glucokinase and optimizes the liver (cerebral) energy reserve. Fructose is critical to replenishing the liver. At the time the usual line was the fructose goes only to muscle, and therefore had no role to play in exercise and fueling in sport.

Birmingham University did studies on fructose with success. Now every sports drink in the world contains fructose. They missed the nocturnal physiology. You have to replenish your liver before sleep. If you have a six or seven o'clock meal, you don't have enough in the liver to see the brain through the nocturnal fast. Having discovered that honey was the key fuel to refuel the liver before sleep, I then developed the theory of replenishing the liver before sleep. Honey is the gold standard food for doing that – no other food that I know of can do this as can honey, and without digestive burden.

Have you tested other foods?

You will find thousands of studies on the Mediterranean Diet. I only know of one scientist who has written about the key question of timing. With this diet you have healthy meal that contains fruits and vegetables at 11 pm. The key principle is the timing. That would allow significant liver replenishment of the liver via the fruits and vegetables. That meant the brain had a good liver supply for sleep. The brain could activate the recovery system via the pituitary gland. That meant you were reducing the risk of all the degenerative diseases – diabetes, dementia, obesity and heart disease.

They've now stopped that. They now do as we do in Europe and America, they have an early evening meal. The fastest growing rate of these diseases is in the southern Mediterranean.

I just looked at the nutrient content of other foods.

I wrote a book in 1995 based on utilizing honey at night. We got feedback from all around the world. What the effect of the honey was on nocturnal physiology. It's not difficult to work out what's going on, it's quite simple. The response from readers was that honey at bedtime, in addition to better sleep, produced changes like "fitter/stronger/healthier/improved mental acuity/less nausea and morning sickness" – all of which can be attributed to reduced adrenaline/cortisol and glucagon, to nocturnal energy homeostasis, and improved anabolic profile.

For decades, people have said sleep is a low energy system. That's wrong. Sleep is a high-energy system. Is the brain optimally fueled from the liver in advance of sleep? That's the critical question. The brain has about 30 seconds worth of glucose. About 5 grams in the blood. The blood glucose would last 5 minutes. The only store that matters to the brain is how much reserve fuel is in the liver. Your liver has about 65-75 g of glucose in capacity. It releases 10 g every hour into the circulation – around 6-6 and a half grams to the brain. Do the math, you see the brain is in trouble at any time in the 24 hour cycle if the liver reserve is low – especially in advance of the night fast. The brain cannot use fats for that purpose. The body cannot convert fat to glucose. Never. What it can do is during starvation it can convert fat to ketones and use the ketones for energy. But you have to be starving for that to happen. The brain must be fully provisioned prior to sleep. The gold standard food for that is honey.

What about eating a banana or apple in place of honey?

A tablespoon of honey is equivalent to a small or medium apple. However the apple doesn't have the huge number of nutrients that affect honey's ability to metabolize optimally in the liver and to stabilize blood glucose concentration. Honey has 200 non-nutrients that make a difference. If you took fruit at night, you would get significant liver replenishment but not as much as honey.

Of course a perfectly good case may be made for fruits and indeed vegetables before sleep since they both have an approx. 1:1 ratio of fructose to glucose, as does honey. However there are many additional nutrients in honey that improve insulin signalling, and partition and disposal of the sugars that are not in these foods – hence honey is a potent anti-diabetic food – it improves the action of two of our most widely used anti-diabetic medications – metformin and glibenclamide – I am not aware of any other sugar or sugar containing food that can do that. In the fullness of time we may find other foods/fuels that are as good as, or better than, honey, but the present knowledge is that honey is the Gold Standard. Nothing wrong with some added fiber – but not required at night, and adds digestive burden.

When is the best time to take the honey?

The honey should be taken as close to bedtime as possible.

Why that timing?

You have to do the mathematics of liver capacity and liver release. We've done several local studies on it. One German scientist is interested in this – Christian Benedict at Lubeck University. I wrote an earlier book on this subject that got a huge amount of responses from around the world. People saying how it transformed their sleep patterns. We found there was a significant improvement. It's not a complicated issue.

Why call it a diet?



The only time you burn body fat exclusively is when you are sleeping. During exercise you burn both glucose and fat. You also burn muscle fat. Let's take a 90-minute moderate intensity work out. A BBC study was done. The subject burned 19 g of fat. Overnight when the physiologist measured it he had burned 49 g of fat. What he did not understand during the exercise that although the total fat was 19 g, half of that was body fat, half was muscle fat. His attempt to explain why he burned more fat overnight was nonsense. The reason is very simple. Recovery physiology is highly expensive and exclusively uses body fat as the fuel from the circulation. If you burn 19 g during the workout then the half which is the body fat portion is 9.5 g. Now you can understand the relationship between exercise physiology and nocturnal physiology with respect to body fat used - it was 5 times as much during the night as during the workout. The key to recovery physiology is how much fuel is in liver. The study that reached that conclusion was done in 1950 and was and is ignored by the scientific establishment. It was a study on mitosis in mice. It traced the mitosis (cell division), an index to recovery. The main point was the recovery depends on the level of glycogen in the liver. This study also noted that recovery utilizes fat - again missed by the scientific establishment to this day.

Most of the stuff that I do is already there in the literature, you just need to know where to look. There's only one scientist that I know of who has developed the same idea about sleep. Christian Benedict at Lubeck in northern Germany. The brain's stress system is activated during the night because of the brain's requirement for fuel. He looked at nocturnal physiology. He looked at the stress system overnight. He didn't measure the effect of honey. It's likely that once the book is published, there's an important group at Lubeck called the Selfish Brain Group who are interested in the relation between cerebral energy deprivation and obesity. They are focusing on the concept that obesity is driven by chronic cerebral glucose deprivation. Basically the same as my theory. Some differences.

The foods we eat overload the circulation with energy. It means that if the glucose in that system went into the brain the brain would fry to death. The cerebral glucose pump, which is called the iPump, is suppressed. This is my theory. Consequently the glucose that you are consuming when you eat a high carb meal does not transfer into the brain. That means the brain is now deprived of energy so you are forced to go back and eat more and you repeat the cycle.

The time we burn body fat is when we are sleeping. For that to happen you have to activate the recovery system. For that to happen the brain has to have reserve fuel in the liver. If the brain does not have enough fuel in the liver it cannot activate recovery, it has to activate stress. The highest consumption of energy during the night is REM sleep and that's when you learn. There's another fundamental question that we need to address. The scientific and health professions will tell you if you are diabetic, you increase your risk of dementia dramatically. They've got that completely the wrong way around because suppressing the cerebral glucose pump is incipient dementia. It means that your brain is already deprived of energy - it's already starving. The first thing that happens is we overload the systemic system with glucose. The second is that we overproduce insulin. Both hyperglycemia and hyperinsulin suppress the cerebellar glucose pump (iPump). That is incipient dementia. Then the excess glucose in the circulation is converted to fat via insulin. Now you're becoming obese. Eventually your ability to keep your glucose stable by storing it as fat breaks down - you become insulin resistant - and then you become diabetic. The first system of energy impairment is in the brain. Then in the body - the sequence is first incipient dementia and chronic cerebral glucose deprivation (hunger) - then the excess circulating energy is converted to fat - then this protective mechanism breaks down - you become insulin resistant - that is diabetic.

I'm a retired pharmacist. I don't have access to university science and study facilities. I just use the existing literature - however this is changing and a number of academics are now interested. There's nothing that I've said that is not based on the literature.

If people take honey at bedtime they will lose weight?

This has been confirmed over and over again. Anecdotally, of course. Talking to athletes. Hundreds of peo-

ple. After the first book, we got feedback from all around the world. Small to massive weight loss. Many people lost several stone. The new book has more science and is based on new science as well that is emerging almost daily. They're realizing that Alzheimer's and diabetes are basically the same disease. They still think that diabetes causes Alzheimer's, whereas it's the other way around. Chronic cerebellar glucose deprivation – that is incipient dementia causes obesity and diabetes. Any high energy system which is overloaded will short circuit. That's what sugars are doing to the brain. The mechanism is very simple, sugars and insulin short-circuit the brain by suppressing the cerebral glucose pump – the iPump. If your blood sugar is too high it reduces the blood sugar/energy in the brain. That means if you have a high carb meal, less glucose enters the brain. Within 15 minutes, you're hungry again. This is why carbohydrates make you hungry sooner. The explanation is stunningly simple.

You see people on TV who are gigantic. That's the reason. These people are suffering from chronic cerebral hunger. The more they eat, the worse it gets.

I lost weight when I drank sugar water. Can you explain that?

I saw that. The fructose would replenish the liver. If the liver is replenished, the brain thinks that's fine. There's research by a guy named Maricio Russeck in Mexico. He discovered glucose receptors in the liver. He advocated the notion, which was correct, that the liver is critical in appetite control. That's now being confirmed by recent science.

How is *The Honey Diet* different from the earlier book?

That book was based on restocking the liver before sleep. There's much more science in this book. The scientific world has moved on in two ways. It's now looking at honey in a serious way. Also, the question of low carbohydrate versus low fat diets is now becoming a major issue.

How would you sum this up?

The critical measure for the brain in all feeding and appetite regulation is based not on what's in the blood but what's in the liver. Russeck was spot on, 5 decades ahead of his time. These are absolutely critical questions. Let's focus on dementia. There's 35 million demented people in the world. That doubles every 20 years. One hundred years from now, one billion people are demented. The human brain is now shrinking, it's not growing. That's because one percent of those demented people is genetically driven. What is causing the other 99 % of dementia, which has happened in the last 40-50 years? The answer is sugar. Refined carbohydrates. Processed foods. Honey is metabolized differently than refined sugars.

If I drink fructose and glucose in water at bedtime, it would have a different effect?

Yes, because they don't contain the nutrients that are in honey that enable it to be metabolized differently. In America, high-fructose corn syrup (HFCS) drives obesity. It overloads the liver with fructose and it's then converted to fat.

HFCS at bedtime would have quite a different effect than honey?

Yes, for sure.

1. <https://www.hodder.co.uk/books/detail.page?isbn=9781444775907>

2. <http://blog.sethroberts.net/category/sleep/honey-sleep/>

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Xav (2014-01-02 05:59:28)

Thanks for this interview - very interesting. I recently bought Mikes original book "The Hibernation Diet", mainly for information on his experience with honey, and will be getting his new book as well, as I find it fascinating that such a simple and easy to implement dietary change can have such a positive impact. What is the optimum amount of honey that Mike currently recommends, and at what times of the day ? Secondly, I'm curious as to what the most important nutrients in honey are, which can make its action different from a mixture of fructose/glucose (plus smaller amounts of other sugars).

RAD (2014-01-02 07:55:17)

McInnes said "Your liver has about 65-75 g of glucose in capacity. It releases 10 g every hour into the circulation...". Does anyone have a definitive source for these two values/assumptions? I've seen liver glucose capacity stated as around 100g and also 200g.

Gina (2014-01-02 09:48:38)

Honey has mystery nutrients that make it metabolize differently from fruit or sugar? What are these nutrients and what is this difference? Sugar water replenishes the liver (good) but sugars short-circuit the brain and give you Alzheimer's? What?

Allan Folz (2014-01-02 10:39:17)

Gina wrote about what I was thinking. I realize he's not a researcher, but a little disappointing of an interview. He asserts honey is different from a glucose-fructose water solution, but it doesn't seem like he's even tried. It reads like a snake-oil sales pitch. That said, I have been trying it on my 10 y.o. son. He's always had a hard time with relaxation, falling asleep, and staying asleep. Last night was the third night in a row of about 1 TSP of honey before bed and ss I'm measuring it out he comments, "my ticket to 7:00." So that he doesn't disrupt everyone else in the house we have a rule he's not allowed to get out of bed and start playing until 7:00. Sometimes I'll hear him get up, go check the clock in the kitchen then go back to bed 3-4 times starting as early as 5:30 or 6:00. It's pretty boring for him to lay in bed for an hour not being able to do anything fun, so it didn't take long to figure out that the honey keeps him asleep until closer to 7:00 when he's allowed to get out of bed. :)

Evelyn M. (2014-01-02 11:37:41)

Many thanks for publishing this interesting interview and for all your work on sleep in general.

jeff davidson (2014-01-02 12:19:16)

<http://blog.cholesterol-and-health.com/2010/10/high-fructose-corn-syrup-is-sweet.html>

C.M. Mayo (2014-01-02 12:56:30)

Thanks for this facinating and inspiring post. As a budding apitherapist, may I suggest that raw, that is, unpasteurized honey would be best. Pasteurization destroys many of the enzymes in honey. Best is raw local honey which one can usually find at the local health food store or farmers market. For my money most of what sells in large supermarkets, mixes of whatever cheap honey comes from China (and who knows what pesticides are in there) boiled beyond boiled, is not much better, if at all, from corn syrup. (Google and ye shall find plenty of toe-curling stories about mass merchandized supermarket honey.) There is more information about the nature and benefits of raw vs pasteurized honey on the various apiculture and apitherapy websites around the world. For those who want to learn more I warmly recommend the Charles Mraz apitherapy course offered annually by the American Apitherapy Association. And by the way I got a jar of honey from the co established by Charles Mraz himself in Vermont at Draeger's in Menlo Park just last week. Pretty good stuff!

Stuart King (2014-01-02 15:05:09)

I haven't read Mike's books unfortunately but I have been taking honey before bed on and off for a couple of years and I have done so everyday over the past few months with great success. I have found that heated honey works just as well as raw, if not better. I have confirmed this as I have been measuring my sleep over the past months and have had some of the best sleep in

my life using heated honey. I exclusively used raw for a long time but have been more successful with heated. This suggests to me that it's the fructose/glucose ratio that's more important rather than the other properties of honey. I also think honey is probably easily and rapidly digested - maybe quicker than fruit I don't know. Perhaps heated honey is easier on the digestion but again I don't know. I believe raw honey is a great product and probably superior in many ways for a lot of reasons, but not for sleep. Telling people they need to source raw honey to improve sleep is wrong - heated and even blended honeys work very, very well.

George (2014-01-02 15:06:55)

Anyone who at this late date can still say that carbohydrates is the cause of obesity (yep, it's why the Japanese are obese, and the French, with all their baguettes and croissants) does not deserve to be taken seriously and can comfortably be considered a quack. I like how he doesn't even express his opinion cautiously on this contentious and discredited theory but says strongly that we've "known since the 19th century". Not someone with good intellectual habits. It gets worse - the Japanese are infamous for being one of the most overworked and chronically stressed and under-sleeping - if not *the* most overworked and under-sleeping - nation out there, yet are perhaps the thinnest developed country. Yep obesity is caused by carbs and poor sleep and stress - now I know why the Japanese are obese! At what point do we stop taking seriously anyone who tries to explain obesity by only looking at America? It's don't even like they look at the whole West (France would immediately discredit the carb theory) for chrissake! It's just America. This habit of simply ignoring what's going on in the rest of the world and coming up with these absurd explanations for obesity in America that could have easily been disproven had anyone actually cared to take a single moment to look beyond America is so intellectually disreputable and yet so widespread and endemic to Americans writing on obesity and nutrition that the entire field seems intellectually frivolous and corrupted, at least as it is practiced in the US. It's not just this writer or that - it's intellectual standards across the board. Also the medical profession says the cause of obesity is excess calories not fat. No macronutrient is the cause of obesity and "we've known that" for quite some time now.

Stuart King (2014-01-02 15:38:02)

George, maybe an excess of any nutrient or too many calories is the problem. I think the current war on carbs and sugar/fructose will turn out to be almost as absurd as the war on saturated fat and people like Lustig or Taubes have hugely overestimated how much we need to cut down on sugars. The healthy amount of sugary foods people should eat is probably lower overall, but the ideal range (where there is no toxicity and where the most benefits are found - ie sleep) is certainly higher than what Lustig or Taubes propose. I do believe their research is important but this idea that a whole macronutrient needs to be removed is strange - even in the absence of carbs your body begins to convert protein into glucose, doesn't this tell us something! Seth: The idea that a whole macronutrient that tastes really good - that stands out for tasting really good - should be removed is even stranger.

Ben C (2014-01-02 17:16:14)

I have found similar results to Stuart King regarding Heated Honey v. Raw Honey. For me personally, Raw Honey causes strong brain fog - maybe a reaction to pollen? Heated honey works well for me - much superior to raw honey.

Kirk (2014-01-02 17:23:15)

MrHeisenbug argued that it was the fermentable fibers in honey which leads to better sleep, rather than the sugars. How would experiments be designed to isolate the source of improved sleep? Seth: Eat sugar without the fermentable fibers. Someone has done this and reported excellent sleep. If it is the fermentable fibers, we are left with the mystery of why we like sweets so much and why we eat dessert separately. If it is the sugar, not the fermentable fibers, we have an answer to those mysteries. But I am not certain which explanation (sugar or fermentable fiber) is right and look forward to more evidence.

Kwan (2014-01-02 18:41:31)

According to <http://www.prebiotin.com/fermentable-fiber/> that stuff is also in bananas (hmmmm) yams, onions, garlic, chicory root and Jerusalem artichokes. If you can figure out how much is in honey and then eat a different food with a comparable amount of fermentable fiber at bedtime I think that would be a good experiment. You may have to take into account the bioavailability of it in each food, but that's for someone else to figure out because I'm not that kind of scientist. I've tried honey

on several different occasions now and sometimes on back to back nights but it has ALWAYS kept me awake for 2-3 hours every time I've tried it. It's supposed to be local Great Lakes honey, but maybe I need to try a different type or possibly try it heated. Seth: You should try a smaller amount.

George (2014-01-02 19:03:48)

@Stuart, of course, the best course seems to eat a balanced diet - no excess in any one nutrient, but no deprivation either, like all traditional diets do. Rates of degenerative disease and cancer were extremely low in societies that followed this common sense prescription. I was reading an interesting article on the diet of mid-Victorians that illustrated this well. But the problem with American writing on nutrition is not that their conclusions are wrong but that the intellectual standards are so low. It's astounding that the carb theory of obesity can still be taken serious. Simply astounding. It's as if Japan and France simply did not exist (and a host of other countries). I just don't understand how an entire field can be permeated by such shoddy intellectual standards. The *very first* order of business for anyone trying to understand American obesity is to compare the American diet to those of countries with extremely low rates of overweight. Oh, I don't know, Japan comes to mind. American nutrition writers love nothing more than to compare American eating habits to some imagined Paleolithic diets that we perforce can know little of - but compare it to entire contemporary countries where can get precise, accurate, and comprehensive diet information? Nah, why bother doing that? We might actually get some insight into the problem. Worse, it might disprove our pet theory! It's absurd. It boggles the mind It drives one to despair. I'm not even talking about strict scientific rigor, which can be hard to achieve especially in this field, I'm talking about the most basic rules of good thinking - look for counterfactuals, see if your theory explains all cases, etc, etc. Nutrition writing in America might as well be sold under the novels section in bookstores the entire field functions as some kind of repository for myths, wish fulfillment, and projections for the Western psyche. And that's too bad, because it's so important,

Adam (2014-01-02 20:09:10)

George, it seems like you're doing the same thing you're criticizing. The Japanese have an average daily caloric intake of about 2,800, while people in the US have an average daily intake of about 3,800. Could 1000 calories per day have any bearing on rates of Obesity? Even just looking at Carbohydrates, the Japanese consume about 58 % of calories from Carbs, while people in the US consume about 49 %. It isn't exactly like people in the US are on a low Carb diet! It might also be fruitful to look at where those Carbs are coming from. The Japanese tend to eat more healthful sources of Carbs, like white rice, while people in the US tend to eat French fries, potato chips, cookies, etc.

George (2014-01-02 20:37:17)

Adam. Of course its the calories! That's my point. It's not carbs, its calories. So the Japanese and the Americans both eat high carb (with the Japanese a higher percentage)s. One country is thin and one is fat. Isn't the conclusion that carbs isn't the culprit? Isn't that what logic would dictate? We have one way in which Japan and America are similar and one way in which they are different - and we conclude the way they are similar is responsible for the difference in obesity rates?!?!?! (not you, but the low-carbers) Seth: Yes, that is a good example of mass delusion. It makes no sense, but there it is.

Audrey (2014-01-02 21:07:08)

It's not the calories. Calories are nonsensical in the context of a human diet. J. Stanton is doing a great series explaining why. It's already seven parts long, but here's the first one to start you off: <http://www.gnolls.org/3374/there-is-no-such-thing-as-a-calorie-to-your-body/>

Stuart King (2014-01-02 21:42:15)

I'm not too worried about the weight loss thing anymore - some say its the carbs, others the fats or food toxins, calories, gut bacteria, metabolism/body temperature, thyroid, incorrect eating schedules, omega 6 oils, fructose, wheat, lack of exercise, nutrient deficiencies, etc... What I do know to be true however, at least for me, is that improving my sleep by eating moderate amounts of sugary foods, some starches and honey before bed has made more of a difference to my health and how I feel than any diet plan, theory or strategy yet and this leads me to believe that sleeping well is more important than worrying about specifics regarding macronutrients or calories.

tom (2014-01-02 22:02:27)

Paul Jaminet recommends 15 - 25 g of fructose per day, 3 to 8 g per meal (no more than 10 g per meal). A little bit has some benefit in glycemic control he says. I guess in sugar grams it's double the amount.

Seth Roberts (2014-01-03 05:48:33)

"the best course seems to eat a balanced diet" No, I think the essence of this discussion of the effect of bedtime honey on sleep is that the "balanced diet" concept is misleading and incomplete. I cannot say why bedtime honey improves sleep nor induce the general rule. I am sure, however, that the timing of nutrients makes an enormous difference. For example, sugar at Time A: bad. Sugar at Time B: good, even great. The idea that time of day matters enormously is absent from the concept of "balanced diet", not to mention from every nutritional book and article I have read. I think it is fair to say balanced diet = flat earth.

George (2014-01-03 06:06:36)

Seth, that factors like meal time are also important and it's not just about a balanced diet can certainly be true but I don't think it undermines the basic point about eating all macronutrients and not demonizing any one of them, which I think you agree with. Of course we might be able to discover all sorts of tweaks - like honey at bedtime - but the basic point is that the movement in America to demonize a particular food group is silly.

Eric (2014-01-03 07:31:57)

It strikes me that "time of day" effects are going to be the biggest thing to come out of this blog because the potential implications for so many things are so large. Bedtime honey, morning Vitamin D, really only scratch the surface. Seth: Don't forget morning faces.

Robbo (2014-01-03 09:04:56)

George: What we have "known since the 19th century" is that, amongst people who are well overweight, a low-carb diet is very often a straightforward way to lose weight. Google "William Banting" and check the date. Of course this does not necessarily mean it was the carbs that made them gain the excess in the first place, or even the low-carb that made them lose it, rather than low gluten, or low fructose but in the absence of good scientific data, in Damon Runyon's words, that is the way to bet. @Seth I'm not sure there is a paradox between our being attracted to sweet things like honey and the possibility that eating a chronic excess (seems to) harm us. In a state of nature we never had the opportunity to eat excessive amounts of honey, so one should not expect us to have an evolved defence against the consequences of doing so. Could not sugar be a parallel with alcohol ? a little being good for us, while a lot is harmful, especially as a habit ?

gwern (2014-01-03 09:18:25)

What an interview... I like how he spends hundreds of words in response to the 'have you tested any other foods' question to finally say, 'no'. And some of this crap! > You have to do the mathematics of liver capacity and liver release. We've done several local studies on it. One German scientist is interested in this - Christian Benedict at Lubeck University. I wrote an earlier book on this subject that got a huge amount of responses from around the world. Hail King Publication & Selection bias! Who can see thy ways, who is meet to contend with thee? Of a truth I know that it is so: how can man be just with biases? If he be pleased to contend with them, he cannot answer them one of a thousand. They are mighty in strength: who hath hardened himself against them, and prospered?

Jim (2014-01-03 10:12:32)

George, I saw a paper I think somewhere on [www.high-fat-nutrition.blogspot.com](http://www.high-fat-nutrition.blogspot.com) showing that high levels of omega 6 fats can lead to storage of excess carbs as fat. If this was true, then no carbs, no fat storage OR no omega 6 no fat storage. So now the Japanese and Kitavans can be thin on high carbs, American's eating high levels of omega-6 fats can be fat on high carbs and cutting carbs in America leads to weight loss. My own experience was that cutting carbs was like throwing a switch, I lost 30lbs in 3 months and kept off for 3 years now. I eat a lot, 2500-3000kcal/day when I've tracked it. I don't know if that omega 6 paper is true but I think there is something more complicated going on than too many calories.

Usul (2014-01-03 11:10:05)

Which kind of honey should we eat? anything from the supermarket of specifically raw honey? I heard that processed honey no longer has any nutrients, just sugar and water.

Seth Roberts (2014-01-03 13:19:20)

"I don't think it undermines the basic point about eating all macronutrients and not demonizing any one of them, which I think you agree with. Of course we might be able to discover all sorts of tweaks – like honey at bedtime – but the basic point is that the movement in America to demonize a particular food group is silly." I would say it is wrong but I wouldn't use the word "silly", as if it were obviously wrong. I never agreed with the demonization of sugar, but that was because I didn't think the data supported it. It seemed to be driven as you say by the same forces that drive people to demonize other things and embrace other too-simple solutions. So "demonize" seems fair but "silly" does not. I wouldn't call bedtime honey a "tweak" – it is the whole thing, as far as I can tell. The whole reason we like sugar so much. Not a small change. People who demonized sugar ignored the problems of why we like sweet foods so much and why we separate them and eat them later (dessert). I wouldn't say that is silly, it was rather a case of ignoring inconvenient evidence. Evidence-based medicine (as practiced) does this to extremes – ignores almost all of the evidence. Unwise and reckless, yes, silly no. I think if something is common (as ignoring inconvenient evidence appears to be) I wouldn't call it silly.

Seth Roberts (2014-01-03 13:31:42)

"I'm not sure there is a paradox between our being attracted to sweet things like honey and the possibility that eating a chronic excess (seems to) harm us. In a state of nature we never had the opportunity to eat excessive amounts of honey, so one should not expect us to have an evolved defence against the consequences of doing so." To the extent I understand the anti-sugar position, I agree with what you say: That is exactly what anti-sugar advocates said to themselves. Here is what I say in response: Ignoring a problem – actually two problems – does not make them disappear. Problem 1: Everyone, or almost everyone, likes sweet things. A lot. Massive evidence showing this. Problem 2: Dessert is common, if not universal. I have yet to encounter a culture where sweet foods are eaten at the same time as non-sweet foods. This separation is exceedingly strange; it does not happen for any other way we categorize foods. For example, salty foods are not eaten separately. People who said sugar was bad for us ignored these two problems, in the sense that there was a massive amount of evidence obviously relevant to the effect of sugar (is it good or bad for us) that they could not explain. No amount of common-sense thinking makes the evidence go away.

Audrey (2014-01-03 13:49:54)

The "dessert last" phenomenon is indeed fascinating. I've never seen it discussed before. Presumably, in most of our history we would have turned in for the night shortly after dessert. But today, we have what we call dessert long before we go to sleep...yet the supermarkets are jammed at 11pm with people buying ice cream and cookies for their late-night snacks. As if it were some kind of compulsion.

Jim (2014-01-03 14:10:34)

Seth, In the interview there are two interesting ideas. The first is that low sugar at night releases cortisol, which then drives gluconeogenesis to raise blood sugar. I know that cortisol does this but I'm not sure that low blood sugar necessarily raise cortisol. Wikipedia says that low blood sugar raises glucagon, which in turn drives gluconeogenesis. So if cortisol is always raised as well this is interesting as being stressed while sleeping seems like a bad thing, but I don't know if this is true. Anybody? I have read and have some experience with what's called the reverse cortisol cycle. Ie people with a lot of stress go to bed with high cortisol levels, have a hard time falling asleep, then wake up groggy with low cortisol. The opposite is supposed to be healthy. Go to sleep quickly with low cortisol levels and wake up alert with a slightly elevated cortisol level. When I changed my diet and some other work related issues, I noticed at some point a big change from the reverse cortisol pattern to the "more normal" pattern and slept better. The second idea is that high blood glucose causes processes in the brain to limit or even over limit glucose to the brain which then causes cell death. I've read that high blood glucose causes the mitochondria in the brain to "fail" over time and cause cell death, sort of the opposite idea. The recent book "Grain Brain" makes this point as do others. I don't know if it's true, I'm not a biochemist, but there are many people that think that chronic high blood sugar causes mitochondria damage which in turn starts a cascade of health issues. In any event this second idea seems novel (googling a bit

doesn't turn up anything that I could find, anybody else find something?) and if true remarkable. Any thoughts on this? thanks

daz (2014-01-03 14:42:12)

"So now the Japanese and Kitavans can be thin on high carbs, American's eating high levels of omega-6 fats can be fat on high carbs..." this would seem to gel with the data on omega-6 consumption ( & production) in the US in recent history. lard, tallow, shortening, butter, etc either stable or trending down. & soy, canola, corn, margarine oil, etc trending up do a google image search for something like 'vegetable oil consumption' for some graphics

daz (2014-01-03 14:43:23)

"So now the Japanese and Kitavans can be thin on high carbs, American's eating high levels of omega-6 fats can be fat on high carbs..." this would seem to gel with the data on omega-6 consumption ( & production) in the US in recent history. lard, tallow, shortening, butter, etc either stable or trending down. & soy, canola, corn oil, margarine, etc trending up do a google image search for something like 'vegetable oil consumption' for some graphics

daz (2014-01-03 18:17:37)

"It's not the calories. Calories are nonsensical in the context of a human diet" yes & no. it is about energy. if you absorb more energy into the blood stream then you burn over a period of time, then weight will increase, that can be both fat & lean body mass. the problem with counting calories is that it does not reflect the actual energy that is passed in to the blood stream, which is an individual thing. way too many variables to try & work out how much real energy you will get from a particular 'calorie of any food' at one time...some things that will influence this are, gut flora, thyroid & anabolic hormones/metabolism, food type,...etc, etc Seth: I believe that it is about hunger, not energy or calories. Hunger determines how much you will eat.

daz (2014-01-03 23:56:38)

"I believe that it is about hunger"... I agree. my "it is about" comment was more to do with pointing out that calorie counting is as a very inaccurate science, if you could actually count the calories that are absorbed in to the blood (which would be highly individual), that would mean something (as a metric), but of course that is impossible. on the hunger topic, yes hunger will definitely be a big factor in the qty ( & type?) of food you stuff in your face

daz (2014-01-04 00:23:28)

by way of a bit of an example on the 'calorie counting' subject, here is an interesting study that attempted to compare the predicted calories of Almonds 'on the label (so to speak)' (predicted by the Atwater system [http://en.wikipedia.org/wiki/Atwater\\_system](http://en.wikipedia.org/wiki/Atwater_system)) and the 'actual/real' calories (averaged across 18 subjects). <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3396444/> "Design: Eighteen healthy adults consumed a controlled diet or an almond-containing diet for 18 d. Three treatments were administered to subjects in a crossover design, and diets contained 1 of 3 almond doses: 0, 42, or 84 g/d. During the final 9 d of the treatment period, volunteers collected all urine and feces, and samples of diets, feces, and urine were analyzed for macronutrient and energy contents. The metabolizable energy content of the almonds was determined. Results: The energy content of almonds in the human diet was found to be  $4.6 \pm 0.8$  kcal/g, which is equivalent to 129 kcal/28-g serving. This is significantly less than the energy density of 6.0–6.1 kcal/g as determined by the Atwater factors, which is equivalent to an energy content of 168–170 kcal/serving. The Atwater factors, when applied to almonds, resulted in a 32 % overestimation of their measured energy content." Seth: very interesting, I've always wondered about that – the size of the undercount.

George (2014-01-04 07:02:01)

@Daz - one of the things that allowed me to finally lose weight and keep it off for years is disregarding all the experts advice about how many calories I "should" be eating. I realized every time I hewed to the "correct" number of calorie I ended up being ravenous and crashed shortly after - sound familiar? It's pretty much every American's experience with trying to lose weight. Initial success following popular calorie recommendations followed by extreme hunger leading to crashing, leading to bizarre beliefs that it can't be about willpower but *must* be about type of food consumed. Eventually I traveled overseas, forgot about calories, observed what the skinny locals were doing and practiced portion control like them. And I listened to my hunger and never let myself get too hungry, like the locals. And the pounds melted off and stayed off. It seems clear



to me now that paradoxically it's the too restrictive calorie recommendations in America that are actually responsible for the inability of Americans to successfully lose weight. Losing weight isn't a science, it's an art, and the American approach, with its attempt to put everything into a mathematical formula and be precise, which doesn't pay attention to feelings of hunger, and which for some reason gets the calories very wrong, is disastrous and what's fueling our obesity epidemic. It's not that the scientific approach is wrong, it's just that we don't know enough yet about diet and nutrition to craft a reliable scientific approach, so in at this point our best bet is not to do 'pretend' science but to do what skinny countries do; exercise portion control, listen to your hunger but don't pig out, and follow traditional guidelines about how much it's 'normal' to eat.

Jonti (2014-01-04 12:11:33)

Thanks for this. Very useful. I plan to start taking it immediately. Can you please say how much honey? How many table spoons? And is there a difference between cooked and raw honey - which is better? Thanks once again. Seth: try 1 teaspoon to 1 tablespoon of honey. I use cooked honey, haven't tried raw. Some people find differences, sometimes cooked is better, sometimes raw is better. Search the comments for details.

Evelyn M. (2014-01-04 13:00:10)

Thank you, George! The more people concentrate on being "scientific" about their eating habits, the more complicated they make their lives and the less they listen to their own bodies - which, let's face it, are far smarter in knowing what is best for each individual than the medical/scientific research establishment. I would not be surprised if - when all is said and done - we learn that the best diet is the traditional diet from the area of the world from which our ancestors came. In other words, the traditional Chinese diet is best for people of Chinese extraction, the traditional Italian diet is best for people whose families came from that part of the world, etc. Such an approach toward diet takes into account both genetics and the natural environmental experiment in which people have evolved over thousands of years. Seth: I think experts are biased to tell us stuff that is wrong because if they tell us to do what we are already doing, they seem less valuable.

dearieme (2014-01-04 13:24:50)

Eating sweet and sour food together: marmalade at breakfast is a delicious sweet-and-sour food. It's unusual to eat it at any other time of day, though.

Nick (2014-01-04 19:33:50)

This comment section has taken a detour from honey to calories, macronutrients, and bodyweight regulation. Well since that happened I'll chime in and try to unite the two. Honey is fantastic for our gut microbes. Evidence is mounting that the microbiota orchestrates many facets of human health. For example, see this 2012 review of honey and the microbiome: <http://www.mdpi.com/1420-3049/17/1/248> Key quote: "oligosaccharides present in honey might contribute to the antidiabetic and other health-related beneficial effects of honey." It's so silly that people debate macronutrients, totally sidestepping the gut microbiome like we're sterile creatures.

Jay Augustyn (2014-01-05 06:33:40)

I've been paleo/primal(sic) since September 2010. My main reason for trying paleo/primal was constant joint pain mostly in my knees and morning brain fog. These issues cleared up within weeks of starting the new diet. However from April 2011 I started a semi-constant 3am wakeup, with sweating and heart palpitations. This has got steadily worse and recently it's got so much worse that I have been waking up with a severe headache and very bad morning brain fog. Typically I eat my last meal no later than 7pm and then eat again only the following day at around noon. I've never been big on eating in the morning or before 10am. Some days I have only one meal but most days two, rarely three. I've never been overweight, weight now at 49 what I did at 20, and have no other current issues barring the sleep issue. As I am completely averse to ever stepping foot into a doctors office I started to trawl through the internet for answers. It's taken me weeks to get to this blog and the honey solution after wading through site after site talking about diabetes. Given I have no issues during the day and never really feel as though I have to eat even if only doing one feed a day, I ignored much of the discussion on diabetes. In any case I have an almost zero sugar diet with very low carbs - typically no more than 50g a day. Having read through this interview I decided to give the honey solution a try as the nighttime liver glycogen issue resonated with me. So for the last two nights I have taken a

tablespoon of honey just before bedtime and have woken up at 6am with no sleep interruption, no headache and very little brain fog. I'll be convinced this has legs if I can go for a month with no more 3am wakeups and morning foginess. Great blog Seth! Seth: Thanks, that's very meaningful praise – that this blog provides better (not just different) advice than other blogs. I think the failure of paleo gurus to advise a diet that produces great sleep is their single biggest failing. Obviously such a diet is paleo, that is, eaten by our ancestors, because I'm sure our ancestors slept well. Please write again after a month, whatever the results. I hope you will buy McInnes's book, at least to thank him for the improvement.

Brian (2014-01-05 09:36:29)

Does it need to be raw honey or will normal honey work? How about combined with potato starch and kefir?

mikimoonmouse (2014-01-05 10:58:42)

In Germany exists a 'Betthupferl' which means literally 'bedjumper' it's a small sugary food taken just before jumping into the bed and to sleep well. Ray Peat says that bed time sugar reduces adrenaline and this improves sleep. He thinks that darkness is very stressful and antimetabolic and that is why we sleep. He says that total darkness would make good sleep less possible. Red & infrared light could improve sleep. <http://oneradionetwork.com/health/dr-ray-peat-ph-d-answering-a-plethora-of-questions-regarding-health-diet-and-nutrition-january-1-2014/> Seth: I disagree about darkness. I found that when I made my bedroom darker I slept better. Now my bedroom is extremely dark and I sleep great. I haven't tested red or infrared light.

as (2014-01-06 04:21:08)

Seth: *I disagree about darkness. I found that when I made my bedroom darker I slept better. Now my bedroom is extremely dark and I sleep great.* So the break of dawn or the sunrise doesn't wake you up in the morning? Do you wake up in a dark room?

Seth Roberts (2014-01-06 06:41:04)

right, I wake up in a very dark room.

TomGinTX (2014-01-07 19:56:35)

"I lost weight when I drank sugar water. Can you explain that? I saw that. The fructose would replenish the liver. " @Seth, it would have been interesting if you would have followed up with: I (and others) also lost weight by drinking extra light olive oil. How does your theory account for that? Seth: I don't like to ask questions I know the answer to. I know the answer to that one: It doesn't.

William Blair (2014-01-08 12:01:17)

The Honey at nighttime advice worked for me the first night. I have continued it for the last 5 nights. Even when I didn't get optimal amount of sleep - it still worked. When I say it worked, I mean I wake up refreshed, no grogginess, no headaches later after coffee - raring to go. I can't remember the last time I've felt this good waking up and throughout the day. I still feel like napping around 3-4 PM everyday, but I can muscle through no problem now. In short, three words: I feel great!

david s (2014-01-09 11:42:35)

"We go to bed with a depleted liver. There is not enough fuel in the liver to supply the brain overnight. The way to resolve that is to forward-provision the brain, via the liver" "Your liver has about 65-75 g of glucose in capacity. It releases 10 g every hour into the circulation – around 6-6 and a half grams to the brain. Do the math, you see the brain is in trouble at any time is the 24 hour cycle if the liver reserve is low – especially in advance of the night fast." Assuming this is all true, it seems that the liver would be fully depleted upon waking. Would McInnes suggest honey in the morning, as well? If not I would think the brain would be "in trouble". Seth: One possibility is that brain function during the day is less important than brain function at night so that brain function during the day can get by with less blood sugar. Or maybe we should eat honey in the morning. A friend of mine who is a lawyer said that when he did the Atkins Diet he lost cases he would have won. It really did reduce how well his brain worked.

John Smith (2014-01-09 16:32:31)

Stuart King said, (January 2nd, 9:42 pm) it isn't as much to do with the diet as it is to do with the good sleep! Well summarized

Stuart! Diets are varied and contradictory, but sleep is universal! And, Seth, balancing the diet is done simply by using the honey at night instead of in the morning which is our traditional (American?) way. Even those souls who conscientiously use real honey from their own back yards, tend to see it as a breakfast food, especially in wintertime. By switching it to a nighttime food, the balancing act is dramatically induced. We use honey to start us, to stimulate us, to extend our activity levels, but decline to use it to balance us up with the rest and recuperation stage. And to Eric, If you want to improve on your Vitamin D production, put a thin (watery) lotion of honey on your skin 'before' you go out in the sun. It feeds the cells that make the D, and even prevents burning to a great extent. Depending on one's age, learning to use this new-found energy from these insights, is critical. Honey and all nostrums than give increased energy tend to prompt us to get out there and make up for lost time. BIG MISTAKE! Do use some of that energy investing time in restful activity, or down time. Restoring the body is a long time project. Think of the honey as fuel in you motorcar. Just doing double the miles is great, but what about the long term servicing, repairing and repainting? Real honey enjoys about 1 % of the sweeteners market. It won't take much of this kind of talk to double the demand, and still the potential is enormous (98 % untapped). Honey production is a dying industry. Don't get caught shot of real honey. Many thanks to Mike McInnes for his brave venture into these truths. To you also, Seth, for hosting intelligent discussion. As a long term commercial honey producer I figure my industry may just survive. Mankind himself may even survive! Hooray! Seth: I hope honey producers will realize that they themselves can gather data – studying themselves – on the value of honey for sleep. And they can publish it themselves on a website. There are a hundred questions to answer. For example, what is the best dose? What is the best time?

John Smith (2014-01-09 18:18:37)

Would you believe there are more like 7 billion questions to answer? Why? Because to get it 100 % right it must be on an individual basis. We all need to do our own experimenting and believe in the results we find for ourselves. Leaving it to experts will always trend towards mass medication, mass profiteering and computerized averaging which will be good if the masses do it, but will produce poor results for many individuals. Seth: We are on the same page.

William Blair (2014-01-10 12:56:22)

David s Says: January 9th, 2014 at 11:42 am [ Assuming this is all true, it seems that the liver would be fully depleted upon waking. Would McInnes suggest honey in the morning, as well? If not I would think the brain would be "in trouble". ] I thought the same thing and have been taking a shot of honey every 8 hours or so since I started doing this. I missed an 8 hour window just the other day and I didn't notice any difference though. I'm still doing it every 8 hours as a snack, if anything else. Seth: There may be subtle improvement due to eating honey during the day. The improvement in sleep is not subtle.

## Science Critics Are Human: Cautionary Tale (2014-01-03 05:00)

One reason personal science is a good idea is it is simple and immediate (in the sense of near). You study one person, you do experiments (easier to interpret than surveys), you can easily repeat the experiment (so you are not confused by secular trends – big changes over time – and implausible statistical assumptions), you are aware of unusual events during the experiment (so you are less confused by anomalous results and outliers), you are close to the data collection (so you understand the limits and error rates of the measurements). These elements make good interpretation of your data much easier. Professional science generally lacks some of these elements. For example, the person who writes the paper may not have collected the data. This makes it harder to understand what the data mean.

I hear criticism of (professional) science more now than ten years ago. Lack of replicability, for example. What I rarely hear – actually, never – is how often science critics make big blunders. As far as I can tell, as often as those they criticize. This is not to say they are wrong – who knows. Just overstated.

An example is [1]a critique of salt and blood pressure studies I read recently. Many people say salt raises blood pressure. The critique, by Michael Alderman, a professor of epidemiology at Albert Einstein College of Medicine, said, not so fast. The title is: "Salt, blood pressure and health: a cautionary tale." It's a good review, with lots of interesting data, but the reviewer, at the same time he is criticizing others, makes a major blunder.

He describes a study in which people were placed on a low-salt diet. Their blood pressure was measured twice, before the diet (Time 1) and after they had been on the diet for quite a while (Time 2). Comparison of the two readings showed a wide range of changes. Some people's blood pressure went up, some people's blood pressure stayed the same, and some people's blood pressure went down. Alderman called this result "enormous variation between individuals on the effect of salt on pressure". Oh no! He assumes that if your blood pressure is different at Time 2 than Time 1, it was because of the change in dietary salt. There are dozens of possible reasons a person's blood pressure might differ at the two times (leaving aside measurement error, another possibility). Dozens of things that affect blood pressure were not kept constant.

Had there been a second group that did not change their diet and was also measured at Time 1 and Time 2 – and had the subjects given the low-salt diet showed a larger spread of Time 2/Time 1 difference scores than the no-change group, then you could reasonably conclude that there was variation in the response to the low-salt diet. To conclude "enormous variation" you'd want to see an enormous increase in difference-score variability. But there was no second group.

This is not some small detail. Alderman actually believes there is great variation in response to salt reduction. It is the main point of his article. *Spy* magazine had a great column called Review of Reviewers. Such as book and movie reviewers. Unfortunately there is no such thing in science.

1. <http://ije.oxfordjournals.org/content/31/2/311.full#ref-7>

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George (2014-01-03 09:15:57)

Right, so he commits a very basic and fundamental purely logical error that anyone with a good training in philosophy or science or who has taken the trouble to consciously develop good intellectual habits would easily avoid. What strikes me is 1) How relatively basic the error is yet serves as the basis for his entire position. 2) How utterly characteristic this kind of thing is across the nutrition field even with researchers and writers on nutrition. The entire field needs to be massively cleaned up and high intellectual standards imposed. Will this happen? The problem here seems to be that nutrition and diet have some kind of connection with our need for myth and the search for human meaning in a way that a more abstract science like physics simply doesn't have. The result is that nutrition and diet frequently stimulate the emotions and the myth-making faculty in ways that physics does not. This emotion doesn't just distort thinking but seems

B D McCullough (2014-01-03 12:32:42)

Reason #1,113,412 to remember to ask: "Where's the control group?"

Nancy Lebovitz (2014-01-03 13:54:23)

Off-topic: I just ran across this, and it seems like the kind of thing you and/or your readers might want to look into. I drink very little, so I'm won't be helping with the research. "A large social group that I am involved in, which has been known to drink heavily, has started taking N-acetyl-cysteine (500-1000mg) and Source Naturals Hangover Formula (which is primarily a C & B complex), and the effect it has on hangovers is not in any way subtle."

Gina (2014-01-03 15:43:21)

Nancy Lebovitz, I drink a lot, and have used this combination for years. It works! It is a bit of a pain, because you need to pop an NAC, C and B1 with almost every drink, but it's worth it. I bring my pill bottles to the bar and hand them out to friends. Another thing that I think all drinkers should have on hand is Evening Primrose Oil. It prevents liver damage and tolerance.

kxmoore (2014-01-04 19:50:22)

Gina i just started brewing beer. I wonder how adding the anti hangover formula directly to the brew would work. Gonna experiment with my next brew. The question is whether the formula will compromise the flavor of the beer and if the beer affects the formula unfavorably.

John Smith (2014-01-11 13:48:57)

Seth, here is my take on 'science.' It is a new word brought about by the need to quit using the word 'truth.' The priests of our religions just about murdered the word truth, to the point where it was no longer viable. So the 'scientific method' was designed to differentiate between 'truths' as the establishments (religions?) issued them, and workable facts that were in keeping with current understanding. But what we really did at that point was establish a new religion. We created a body of thought more up to date, yes, and far more practical, workable and predictable. It followed that it also made more and better results, which are expressed as money. Yet we only changed what we believed to be true. Never did the scientific method guarantee that the conclusions drawn from the data would be correct or long lasting. New science contradicts old science every day. The science of today will be obsolete tomorrow, so to speak, at least in many instances. Once we as individuals 'believe' something to be true, it becomes truth to us. Unfortunately we are usually loathe to back away from that position, and when the masses believe untruths, the 'church' becomes the haunt of dogma. Individualized science is the only good solution. If I believe it, it is true for me. I can learn better tomorrow, maybe, but for today it is true. Others may find my truth nothing more than lies. Bully for them..... as I see their truth as lies all too often. But it is only truth if the individual believes it really and truly..... like deep down, man. And if I am not prepared to act on that belief, probably I don't really believe it. Unfortunately the 'science' of today has morphed into a religion, duly presided over by High Priests who maintain yesterday's truth for the protection of the power and influence of established methods and organizations. The www is doing to 'science' and the power bases it has spawned what Christianity did to the Roman Empire and the printing press did to the Catholic Church (which the Roman Empire morphed into). Individualism has taken a back seat to collectivism in the last hundred years, but the www has ushered in a whole new epoch. Seth: I agree. The habits of mind, the built-in tendencies, that led to religion didn't change just because science was invented. I think of personal science as similar to literacy, and mass literacy rested on the printing press.

## **ADHD Experts Have a Bad Case of Gatekeeper Syndrome (2014-01-04 05:00)**

[1]Gatekeeper syndrome afflicts many many healthcare professionals. People with gatekeeper syndrome dismiss or ignore any solution that does not involve them (or someone like them) being a gatekeeper and charging "toll", i.e., making money. When I was a teenager, I had acne. None of the dermatologists I saw showed any interest in what caused it or even seemed to understand it was possible to learn the cause. All of them prescribed drugs (antibiotics) so powerful I had to see them again and again to get the prescription refilled. That's garden-variety gatekeeper syndrome.

[2]A recent New York Times article about Attention Deficit Hyperactivity Disorder (ADHD) illustrates gatekeeper syndrome among professionals from whom you might expect better. The article describes ADHD experts at various universities wringing their hands: Did we overemphasize drugs at the expense of "skills training"?

Some authors of the [1999] study — widely considered the most influential study ever on A.D.H.D. — worry that the results oversold the benefits of drugs, discouraging important home- and school-focused therapy and ultimately distorting the debate over the most effective (and cost-effective) treatments.

What about finding the cause(s) of ADHD? And getting rid of it/them? Maybe that would be a good idea? None of the experts quoted in the article even seems aware this is possible.

When an ordinary psychotherapist or doctor has gatekeeper syndrome, I think they're just a foot soldier. The experts in the Times article are not foot soldiers. They're generals. They are professors at world-famous universities, such as UC Berkeley and McGill, with enormous influence. (One is a former colleague of mine, Stephen Hinshaw.) They don't need to see patients and dispense treatments to make a living. They have assured income (tenure) and prestige. They enjoy freedom of thought.

Too bad they don't use their freedom and prestige to better help the children they study and the tens of millions of children who will be diagnosed with ADHD until someone (not them, apparently) figures out what causes it. Instead, they study who should get the revenue stream that each new diagnosis provides.

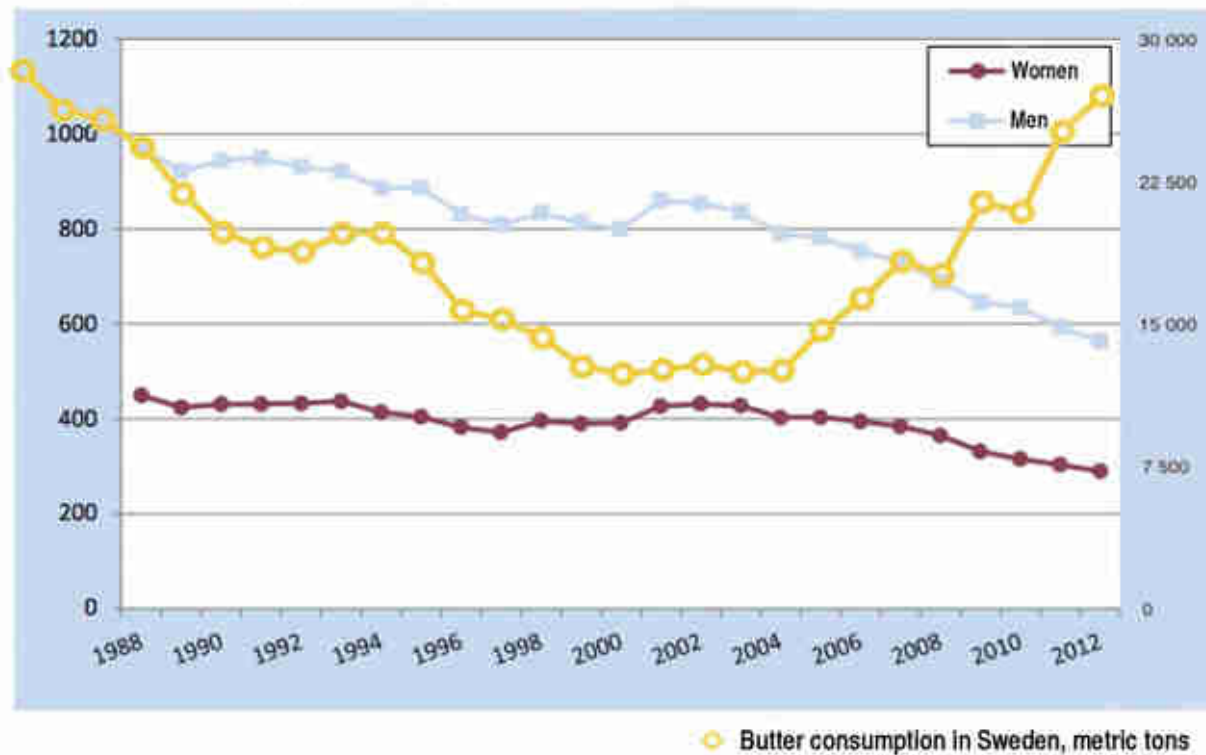
Thanks to Alex Chernavsky.

1. <http://blog.sethroberts.net/category/gatekeeper-syndrome/>

2. <http://www.nytimes.com/2013/12/30/health/adhd-experts-re-evaluate-studys-zeal-for-drugs.html>

## Butter and Heart Attacks in Sweden (2014-01-05 05:00)

Chart 5. Age-standardized incidence rates of acute myocardial infarction, per 100,000 population, 20 years old and older, gender and age, 1988-2012.



This graph from [1]Andreas Eenfeldt (via [2]Mark's Daily Apple) shows heart attacks (left axis) and butter consumption (right axis) in Sweden over the last quarter-century. Heart attacks have been going down, at least in men. What interests me is that when butter consumption suddenly increased, starting in 2006, heart attacks went down more quickly.

If you fit a straight line to the heart attack rates for 1988-2005, you will see that the remaining rates (2006-2012) are below the extrapolation of the line, both for men and women. The Swedes made other dietary changes when they started eating more butter (the butter replaced other foods, for example). Nevertheless, these data make it more plausible that if butter has any effect on heart attacks, it reduces them, the opposite of what we've been told.

I eat a half stick (60 g) of butter daily. [3]It improves my brain speed. After I gave [4]a talk about this, a cardiologist in the audience said I was killing myself. I said I thought my experimental data was more persuasive than epidemiology, with its many questionable assumptions. The new data suggests I was right – butter does not increase heart attacks. It also supports my belief that by learning what makes my brain work best, I will improve my health in other ways (such as reduce heart attack risk).

No doubt a low-carb high-fat diet is better than what many people eat, but I believe the never-eat-sugar part of such a diet is a mistake. [5]There are plenty of reasons to think sugars eaten at the right time of day improve sleep. Whatever you think about nutrition, don't get too comfortable.

1. <http://www.dietdoctor.com/about>

2. <http://www.marksdailyapple.com/weekend-link-love-274/>

3. <http://media.sethroberts.net/blog/pdf/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf>

4. <http://quantifiedself.com/2010/09/seth-roberts-on-arithmetic-and/>

5. <http://blog.sethroberts.net/category/sleep/honey-sleep/>

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gwern (2014-01-05 06:46:57)

> If you fit a straight line to the heart attack rates for 1988-2005, you will see that the remaining rates (2006-2012) are below the extrapolation of the line, both for men and women. Really? It just looks like the usual meandering time-series to me. Data and source code for this claim?

hertm (2014-01-05 07:04:37)

"Really? It just looks like the usual meandering time-series to me. Data and source code for this claim?" Don't you have a worthless anime essay to write?

dearieme (2014-01-05 07:28:53)

I'll say it again: nobody knows why heart attack rates have been trending down in so many countries for so many decades. But it's so marked that it can't be to do with the decline of smoking, with the adoption of low-fat diets, or with medical changes. The infection conjecture sounds plausible, but until the relevant micro-organisms are identified, it remains conjecture. My personal variant is that heart attacks are indeed caused by infections, and that the decline is caused by "over use" of antibiotics by the medical trades. When I'm proved right, I shall happily share my Nobel with those who provided the evidence to back me up. Seth: Epidemics usually decline, in my understanding, because it becomes harder and harder to surprise a host. The virus or whatever spreads faster than the epidemic of acute illness. You may recall my theory that shaking hands is an early warning system. However, this is such a slow epidemic it is hard to know if the usual ideas apply.

Eric (2014-01-05 07:57:26)

The most likely thing butter is replacing is margarine. It seems like the data could be accounted for by a decline in margarine consumption alone.

Jim (2014-01-05 11:00:02)

there are people who have questions about this graph but it is dramatic [http://www.drdaavidgrimes.com/2013/07/an-epidemic-of-coronary-heart-disease.ht ml](http://www.drdaavidgrimes.com/2013/07/an-epidemic-of-coronary-heart-disease.html) Dearmieme, if you haven't read his book, check it out Seth, I'm now with you on the sugar. It can't make sense that something everybody likes is bad for you, but there does seem to be some context that makes it work. Time of day or amount or some co-factor. Ditto on saturated fat, meat has it because that's what mammals are made out of, including us. So maybe there is a situation where it's bad but it can't be universally bad, that wouldn't make any sense

Ripken Holt (2014-01-05 11:18:10)

Seth, I've been following your blog and you have pretty much convinced me that sugar is important to your body's health. However, I am curious as to what DOES cause the astronomical heart disease rates in America if it is not sugar. What do you think the likely cause(s) are? Seth: I don't know what causes heart disease nor can I explain the recent decrease, which as dearieme says is substantial. I explain the fact that heart disease is very low in France and Japan by their high consumption of fermented foods (France and Japan) and omega-3 (Japan). I think Mr. Heisenbug may be on to something when he asks why smoking is a very bad risk factor for heart disease.

Gina (2014-01-05 13:12:03)

I agree with Eric. I'm only convinced that soybean oil, corn oil, cottonseed oil, etc. are bad, not that butter is good. This makes sense with the Esselstyn/Ornish/Barnard stuff (i.e. studies that reverse heart disease and diabetes with ultra-low fat diets). I'm guessing that avoidance of these fats would prevent heart disease no matter what the rest of one's diet. Seth: My Agatston score – a measure of circulatory system calcification and an excellent predictor of heart attacks – went down during a year in which I greatly increased my butter intake compared to all previous years of my life. I did not eat less soybean oil, etc., during that year. I just ate more butter – much more fat overall.

dearieme (2014-01-05 14:52:10)

"astronomical heart disease rates in America": nah, the epidemic is practically over. From Jim's link "At the peak of the epidemic in 1970 there were 520 deaths per 100,000 per year in England and Wales, 700 in the USA, and ... Thereafter there was an abrupt and apparently spontaneous decline, by 83 % during the next 20 years to 1990. This is an important observation as during this time there was no widespread effective medical intervention. The decline continues. At present the death rate is about 20 per 100,000 per year and the decline appears to continue. We appear to have experienced a natural epidemic and it is now almost over. The cause of it has not been obvious, but when we realise that CHD has been an epidemic we can start to think objectively about what might have caused it."

dearieme (2014-01-05 14:57:43)

Which takes us to the Swedish study: if heart attack rates are declining anyway, the correlation with butter consumption is probably meaningless. There could be a similar trend for the consumption of, say, Australian Shiraz or New Zealand Sauvignon Blanc or Single Malt whiskies. Mere observational studies are feeble things, especially when there's no demonstration that it's among the people who eat the butter that the decline is concentrated.

Gina (2014-01-06 08:47:59)

"My Agatston score — a measure of circulatory system calcification and an excellent predictor of heart attacks — went down during a year in which I greatly increased my butter intake compared to all previous years of my life. I did not eat less soybean oil, etc., during that year. I just ate more butter — much more fat overall." I wonder if that can be attributed to the K2? That would explain why some people insist that only grass-fed butter is healthy (higher K2 content). Surely the butter displaced something in your diet? Seth: It immediately displaced pork fat – I stopped trying to eat pork fat every day in order to sleep better, which I'd been doing for about a year. When I started eating more pork fat was when my overall fat consumption went way up. I think at that time everything else went down.

Crystal (2014-01-06 11:01:48)

Why are there 3 extra data points at the left of the graph? Does that data cover a different time period or are the points not



aligned properly? I thought butter was demonized because it was a saturated fat, not that it, alone, was correlated to heart attacks. Publish the same graph against total sat fat consumption and you'll have a stronger case to dissociate the two. Ps there's interesting work that charts the total lack of correlation between sat fat consumption and heart attacks in coconut producing ( & eating) countries, so now there's a bit of work investigating possible heart benefits from specific medium chain saturated fats, like coconut oil, in the diet.

gwern (2014-01-06 13:55:30)

hertm: aww, is someone butthurt over my criticisms here? > Seth: My Agatston score — a measure of circulatory system calcification and an excellent predictor of heart attacks — went down during a year in which I greatly increased my butter intake compared to all previous years of my life. Interesting, but where's the control Seth's scores? This comment seems to assume that if your Agatston score is different at Time 2 than Time 1, it was because of the change in dietary butter. There are dozens of possible reasons a person's Agatston score might differ at the two times (leaving aside measurement error, another possibility). Dozens of things that affect Agatston score were not kept constant. This would seem to be committing a very basic and fundamental purely logical error that anyone with a good training in philosophy or science or who has taken the trouble to consciously develop good intellectual habits would easily avoid.

Joe (2014-01-06 14:25:17)

If you have a Kindle, you can read about the various reasons heart attack rates are plummeting, and for only \$1.46! You Will Not Die From A Heart Attack, by Dr. David S. Grimes: <http://www.amazon.com/WILL-HEART-ATTACK-Medical-Briefs-ebook/dp/B00C4C0XNG>

## **Bedtime Honey and Sleep: Different Kinds and Amounts of Honey (2014-01-06 05:00)**

A reader named Sam, an engineer in Irving, Texas, writes:

I am a long time reader of your blog. Based upon your writings, I have taken Vitamin D in the morning and Magnesium Glycinate powder at night for over a year. Both have helped. So I do not have any sleep issues that needed to be addressed. I took the honey only to see if it would make any further difference. I was a bit wary to begin with as I do not usually consume honey. I have had a mild allergy to eating honey until at least several years ago. Even a teaspoon of honey would within an hour give me abdominal cramps that would last for an hour or more.

I started a Primal/Paleo/PHD way of eating 3 years ago. No processed foods, no wheat, only fermented dairy (kefir/cheese/cultured butter/ghee), occasional alcohol and occasional desserts (generally fresh fruit or some ice cream) and regular use of home fermented food like sauerkraut, beet kvass and lemonade.

So the honey experiment was also to test whether the changed diet had fixed the allergy.

I tried regular store bought honey (Kroger) first. I took a tablespoon approximately 10 minutes before going to bed. It could be a bit more than a tablespoon as I would dip a regular tablespoon in the jar and eat it as soon as the stringing ended. The first day there was anxiety in expectation of an allergic reaction. No cramps but there was some mild abdominal pain, I would just call it discomfort. I thought this could be psychological. So I tried it for 3 more days. Still the same discomfort within the hour. But I would fall asleep at some point and wake up feeling the same as I used to earlier.

I almost quit after this – when my wife reminded me that we had some Manuka honey in the pantry

that we got as a gift and that could be worth trying. So I did. This is a honey produced in New Zealand and has some number on it – that claims to have medicinal properties. This honey was thicker, so easier to measure. About one tablespoon each night, same time as before. Same discomfort – no change in overall sleep quality or post waking up energy. I tried this for 4 days.

It may seem that the obvious course of action would be to quit the experiment at this stage. However, around this time, I read a comment on one of the blogs I follow, describing the process of refining honey for bottling. Apparently it is heated and filtered as a minimum and maybe more processing in most cases. I know a friend who cured his allergy to homogenized milk (skin redness after consumption) by shifting to raw milk which he pasteurizes himself at a low temperature. So I looked for raw unprocessed honey and stumbled upon [1]a source – which curiously had regular raw honey and fermented raw honey. I ordered a jar of each.

Initially I tried the raw honey, in the morning, in white tea just to test for the abdominal discomfort. Surprisingly, there was none. So I decided to take it at night and continue to see if there are any benefits. One tablespoon as before. I usually fall asleep within a few minutes of turning off the lights. This time, I noticed that I would toss around a bit longer before getting to sleep. However, I did notice that I would wake up more energetic. As I said it is subjective – hard to describe. But I would get ready faster and finish up a few chores that I would be lazy about on other days.

After a week I reduced the dosage to one teaspoon. The only observable change was that the tossing in bed now ceased and I would fall asleep quickly. So I stayed with this dose as a smaller dose is difficult to measure accurately.

After a total of 10 days on regular raw honey, I decided to try the fermented raw honey – only because I had ordered it and had it with me. I stayed with the one teaspoon dose just before bed and immediately noticed one remarkable change besides the increased energy in the morning. Normally, I wake up once at night, around 2AM, to go to the bathroom. The very first night, I slept through till the morning. Subsequently, I have noticed that occasionally I wake up at 5AM but most nights I just sleep through.

It has definitely increased my sense of well being and post wake up energy.

His main conclusions are:

1. Raw honey works better than ordinary (cooked) honey. Manuka honey is no better than ordinary honey. Fermented raw honey is even better than ordinary raw honey.
2. One teaspoon is better than 1 tablespoon – fell asleep faster.
3. The benefits include less waking up at night, more energy in the morning, an increased sense of well being, and better motivation (e.g., to do chores).

I fall asleep quickly whether or not I take honey at bedtime. But it is curious that fermented honey works better than non-fermented. Fermented honey has less sugar; maybe that's the reason for the difference.

1. [http://www.reallyrawhoney.com/category\\_s/44.htm](http://www.reallyrawhoney.com/category_s/44.htm)

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Drini (2014-01-06 06:44:28)

Thank you very much for this blogpost. I think I also noticed that I have more difficulties falling asleep when I eat honey before sleep (1 Tbsp). I noticed for instance that honey raises my body temperature, I think that this is not the effect you want before going to sleep (Isn't sleep associated with lower body temperature?). Maybe having honey 30 minutes or 1 hour before going to sleep might also help getting to sleep faster. This was never a problem prior to using honey. I think I should also try different doses and check their effects. Seth: I agree. You should certainly try smaller amounts of honey. You might also try other sources of sugar, such as a banana.

B.B. (2014-01-06 09:55:51)

This blog used to discuss the benefits of intermittent fasting. Now I am reading about the benefits of eating honey right before going to bed. How do people eat honey before bed and do IF at the same time?

kxmoore (2014-01-06 10:13:29)

what is fermented honey? i googled it and "mead" kept appearing.

dearieme (2014-01-06 13:29:05)

The claim for Manuka honey is some sort of anti-bacterial property. It's delicious stuff, in my view, but if it doesn't work for Sam, then for Sam it doesn't work.

Joe (2014-01-06 14:14:32)

B.B.: If fasting intermittently, I don't think a teaspoon of honey would have much effect, one way or the other. That is, the fasting wouldn't have to be zero calories, only reduced calories.

vs (2014-01-06 18:10:42)

Dr. Michael Eades has recommended honey or sugar at bedtime to help with sleep. He suggests ketosis can hinder sleep. A small amount of honey or sugar (one teaspoon) at bedtime temporarily knocks people out of ketosis. This allows them to fall asleep easier. Dr. Eades wrote this in a 2009 blog post: <http://www.proteinpower.com/drmike/bogus-studies/more-thoughts-on-why-low-carb-the-second-time-around/> He suggests ketosis may hinder sleep: "And once we get going again on a low-carb diet, we usually get into a little ketosis, which makes falling asleep a little more difficult yet." After discussing the benefits of low-dose sublingual melatonin tabs as a sleep aid, he recommends herbal tea with one teaspoon of sugar or honey at bedtime: "The other thing you can do is to have a cup of herbal tea right before bedtime. And sweeten the tea with either sugar or honey. That's right. Real sugar. A teaspoon of sugar is about 5 grams of carb, which won't do a lot to hinder your weight loss, but it will be enough to shut down ketone production long enough to get you to sleep." A search of Dr. Eades' blog reveals that he has mentioned this a few times in response to reader comments about poor sleep on low-carb diets. I do not believe Dr. Eades has written on why ketosis may hinder sleep. A Google site search of his blog did not turn anything up. If anyone has insight on this link between ketosis, sleep, and sugar, please let us know.

daz (2014-01-06 19:09:07)

@Sam, Hi Sam, i been trying to find an image of the label for the 'Really Raw Honey' fermented raw honey showing the nutrition facts, with no luck. could you tell me what the carbs and sugar numbers read on your label pls. i found the non-fermented info, which was Total Carbs: 17g, Sugars: 17g (for a 21g server size).

Sam (2014-01-06 19:42:41)

@kxmoore - here is the source I used for Fermented honey [http://www.reallyrawhoney.com/category\\_/s/44.htm](http://www.reallyrawhoney.com/category_/s/44.htm) @daz - the nutrition facts about FRH are the same as the NFRH - In fact the jars have the same labels - Only "fermented" is written on the lid. It however tastes much different.

daz (2014-01-06 20:10:48)

"In fact the jars have the same labels – Only "fermented" is written on the lid" ...that would explain it...why all the labels looked the same, but the look of the contents varied (using google images) thx for the reply

Paleophil (2014-01-06 20:57:43)

I've been using Really Raw fermented honey for years. It's the only honey or sugar that I notice any benefits from (with the possible exception of the much maligned agave nectar, which I recently started experimenting with, but it's too soon to tell), and I have tried many. The main things I notice from it are reduced skin flaking on scalp, eyebrows and forehead, reduced muscle tension and a mild feeling of well being. I don't get this from their unfermented honey. However, if I consume too much, I get some dental gunk in the morning, though not as much from other honeys. I asked the Really Raw people if they had heard of any unusual benefits like this from their fermented honey and they confirmed that other customers had reported benefits. It's also by far my favorite tasting honey, though not everyone shares that opinion.

Gina (2014-01-06 21:52:40)

vs: Ketogenic diets raise cortisol, which hinders sleep. From what I have read, this is more pronounced in women (and female rats). Side note: I would beware of advice from the Drs. Eades. They are married to low-carb dogma and advise more and more restrictive diets (to the point of an all egg diet) to people for whom low-carb is obviously not working.

daz (2014-01-06 22:13:43)

keep us updated on your Agave nectar experiment Paleophil, pls, are you trying it before bed. i wrote Agave nectar/syrup off without a second look after reading it was very high in fructose...tho i never did investigate any deeper,...brands, production, sugar breakdown,...etc

dearieme (2014-01-07 10:22:54)

Two sorts of honey that might be worth somebody's trying, in hopes of non-sugar benefits: honeydew honey and comb honey.

Joe (2014-01-07 11:16:03)

Gina: "Side note: I would beware of advice from the Drs. Eades. They are married to low-carb dogma and advise more and more restrictive diets (to the point of an all egg diet) to people for whom low-carb is obviously not working." Being wed to the low-carb way of eating is a "good thing," in my opinion, because it works. And he's never, to the best of my knowledge, ever advised anyone to eat an all-egg diet. He has, however, discussed an experiment that Jimmy Moore was contemplating, namely eating nothing but eggs for a week to see how that would affect his cholesterol levels. Dr Eades said it would likely raise his LDL a bit, but his trig and HDL levels would increase substantially (very good things). And that's it. There's nothing really restrictive about the diet Dr Eades recommends either. It's basically nothing more than eating fewer carbs and more healthy fats and proteins, and avoiding sugar and grains, all of which have positive effects on our health. Of course, if you're from the school that thinks it's actually healthy to eat lots of sugar, starch, seed and vegetable oils, trans-fats, refined and processed foods, and "healthy whole grains," I can see why you might think otherwise. Personally, I'm sticking with Dr. Eades, Dr. Jaminet, Mark Sisson, The Weston-Price Foundation, Dr. Sinatra, Dr. Ravnskov, Robb Wolf, Dr. Lundell, Dr. Grimes, Dr. Kendrick, Dr. Bowdon, Dr. Masterjohn, Dr. Westman, Dr. Davis, Dr. Perlmutter, Dr. Hastings, and countless other doctors, researchers, etc., who recommend the low-carb/paleo way of eating. Works for me! Seth: How do you reconcile low-carb advice with data that show honey at bedtime improved sleep? Eating honey is the opposite of avoiding carbs.

Bedtime Honey and Sleep | Mallacoota Honey and Warré Beehives (2014-01-07 11:45:07)

[...] Bedtime Honey and Sleep: Different Kinds and Amounts of Honey ... read Full Article [...]

Joe (2014-01-07 12:27:06)

Seth, eating honey is not the same thing as avoiding carbs altogether. It's called LOW carb eating, not NO carb. I generally eat between 100 and 150 gs of carbs per day. 1 tablespoon of honey contains 17 gs of carbs. No big deal, really. I used to eat a lower number of carbs when I wanted to lose some weight, but now that I've lost what I wanted to lose, the 100-150 gs per

day maintains my desired weight easily. I don't dispute that eating honey at bedtime improves sleep. But it didn't improve mine, after a short n=1 experiment. Which I intend to fiddle around with again soon, incorporating the changes we discussed. Yes, I'm almost out of bananas! Seth: Thanks for explaining that – but it seems to me there really is a contradiction between advocating that people eat less carbs and discovery of an effect that requires eating more carbs. What if the bad effects of carbs were due to 1. eating them in factory food and fast food (food that is especially fattening because it has exactly the same smell every time) 2. eating them at the wrong time of day (the right time of day is after 6 pm)? I am not saying that low-carb diets aren't helpful. Obviously they help many people. I am saying that the theory why they help (used by many of the experts you listed) seems to be quite wrong. And this wrong theory has gotten in the way of improving those diets. You know more about the work of the experts you listed than I do, so maybe I am missing something.

Joe (2014-01-07 13:45:35)

Seth, first, I'm in no position to advocate anything. I can, however, attest to what works for me. And has for a long time. Everything is a trade-off to me. Do I want to eat a few more carbs (than I normally do) if I can sleep a little better at night? Which is going to have the more positive effect on my health? Will I be able to measure it? Feel it? Etc. I can't answer that yet, regarding eating honey right before bedtime. But eating 17 grams of honey probably won't jeopardize the positive effects of my otherwise low-carb/paleo diet, and if it allows me to sleep a bit better, that's a win-win for me, right? And if it doesn't, no harm, no foul. It didn't matter much when I ate carbs, or what they smelled like, etc., but I didn't really do a lot of experimenting with that. I found a way that worked for me, and then I stuck with it. I don't understand why you feel the theory of why low-carb works is wrong. The more carbs one eats, the more carbs one wants to eat. That's the way it works for me, anyway. I can eat a certain number of carbs without getting into trouble. More carbs than that? I blow up like a Macy's parade float. It also provides me with better health profiles and numbers. Yeah, my total cholesterol is a little high, but my triglycerides are negligible, my HDL level is very high, the size of my particles is huge, my BP is better than normal, my inflammation is low, my BS is better than normal, etc. I don't really buy into the diet-cholesterol theory of heart disease anyway. But, like Pascal's wager, it can't hurt to "keep the faith." I'll probably be a better man. And if they are right, I'll still be okay. :) Nota bene: No one who has read: <http://www.amazon.com/The-Great-Cholesterol-Con-Disease/dp/1844546101> ...could possibly believe the cholesterol theory afterwards! Also, I think what you're missing about those experts is that they aren't as rigid as you probably think they are. There's wiggle-room. There's also acknowledgement that what works for me might not work for you, and vice versa.

vs (2014-01-07 16:06:38)

Thanks to Joe for sharing his experience. I agree most low-carb diets are not rigid and there is wiggle-room. If one follows a low-carb diet from start to finish, they are more "controlled carb" rather than "low-carb". Low-carb diets advocate carb-restriction to lose weight and improve health. Then they offer strategies to help a person \*increase\* their carb intake to find the amount they can eat to maintain their weight and health. Take the Eades' book "Protein Power", or Dr. Atkins' book "The New Diet Revolution". Both recommend starting the diet with very low carb intake: Atkins 20 g per day, the Eades 30 or 55g per day. This should promote weight loss and help normalize blood chemistry, blood pressure, etc. But then both books advocate slowly adding carbs back into the diet: 5 or 10 g of additional carbs per day, over weeks or months, following a system set out in the books. The goal of these two plans is not to eat very low carb forever, but instead to find the person's unique carb tolerance- how many carbs they can eat and still maintain their weight and health. Dr. Atkins called this amount the "Critical Carbohydrate Level for Maintenance". This carb level varies, but as Mark Sisson wrote in his book the "Primal Blueprint", it can be as high as 100-150 g per day. This is especially true if the carbs are high quality fruits and vegetables, rather than heavily processed foods. For those following a low-carb diet like the Eades or Atkins plans, a teaspoon or tablespoon of honey at night is a reasonable increase in carb intake.

Seth Roberts (2014-01-07 18:47:19)

Why do I think the theory behind (most) low-carb diets is wrong? Because they say carbs cause obesity. Whereas I lost lots of weight drinking sugar water. They have never explained this, they ignore it.

Joe (2014-01-08 08:49:34)

But Seth, how many grams of CARBS per day were you eating? Yes, including the sugar in the water. Seth: I increased my carb

consumption, which caused me to lose weight. This contradicts the idea that carb reduction causes weight loss (which implies that carb increase should cause weight gain) no matter how many grams of carbs I was eating. When I was losing weight I wasn't eating very many carbs besides the sugar water because I had very little appetite.

Gina (2014-01-08 15:36:25)

I think the theory behind low-carb diets is wrong because of huge populations of lean people who eat starchy diets.

B.B. (2014-01-08 16:03:06)

Maybe bananas work for some people because they are rich in potassium, which can be absent in the modern diet. Also, what about protein and fat at bedtime. I have a favorite snack of ricotta cheese with honey. The honey may help, but the protein from ricotta cheese may stabilize blood sugar and provide nutrients for muscle repair. Does fat like flaxseed oil help in the evening? I am wondering about people's experiences.

Joe (2014-01-08 16:12:08)

Gina, I'd say this: If a high starch diet allows you to remain thin and fit and healthy, by all means, go for it. I'm not really a proselytizer. But too much starch causes me to gain weight. Not a little starch now and then, but a steady diet of it. The vast majority of people I know who eat starchy diets are fat and out of shape, especially as they age. The vast majority of people I know who restrict their carbs are fit and healthy. I'm not a scientist, so I can't explain exactly why that is so. Perhaps the scientists can't either. I just know what my eyes and ears tell me. And eating a low-carb/paleo diet is very EZ for me to do. And I really like the results. I usually don't spend a lot of time "fixin' what ain't broke." I can't explain it any better than that. Seth: I wonder if your low-carb diet hurts your sleep, meaning that a higher-carb diet would give you better sleep. With a good understanding of why low-carb diets produce weight loss, it might be possible to increase how much carbs you eat (to get better sleep) without causing weight gain. Without a theory, it is pure trial and error. A good theory about weight control should be able to greatly reduce the trial and error. When you say "too much starch causes me to gain weight" you may be drawing the wrong conclusion from your experience. Maybe one form of "too much starch" causes weight gain but another form would not.

Joe (2014-01-08 16:30:55)

B.B.: "Maybe bananas work for some people because they are rich in potassium" Define "work."

Jenny (2014-01-08 16:46:24)

I've been trying about 1 tsp of honey at Bedtime since Seth first mentioned it. For the first time in 32 years, I now sleep all night. I never had difficulty falling asleep, just staying asleep past 3 -4 am. I am definitely getting through the chores faster, and more of them (ie more energy). I am also losing the post-Christmas weight at a pretty regular 0.2Kg a night. This rather fits with Seth's sugar water. BTW, I've eaten paleo for the last 8 years since I found I was coeliac, using a relatively low-carb version.

Paleophil (2014-01-08 18:41:42)

@daz, I too had written agave nectar off and had even suggested to my sister to stop using it, thanks in part to negative views on fructose from folks like Dr. Lustig. I have tried taking the agave syrup before bedtime a couple times and didn't notice anything particularly different, though I was already sleeping through the night. I did notice that the first time I tried it in a long time that I was surprised by a nice wave of muscle relaxation after taking it that I sometimes get after consuming RF honey. It's baffling to me, because fructose is supposed to raise lactic acid, not lower it. Does anyone know of a possible cause for this? Perhaps it was coincidence, though I do seem to get a bit of it most times I try it. I doubt I'll add agave nectar to my regular diet, but the early testing has been interesting. In contrast, brown rice glucose syrup, which I also tested a small amount of after glucose syrup was recommended by a fairly well respected Paleo blogger as the safest carb for carb sensitive people like me (even supposedly safer than "safe starches"), had rapid and rather bad negative effects. It also tasted pretty bad to me. vs wrote: "This is especially true if the carbs are high quality fruits and vegetables" Don't forget honey, which is the topic of the article, after all. :)

daz (2014-01-08 20:33:01)

i dropped in to a health shop the other day & looked at the agave offerings, talk about spoilt for choice, a few of the options were agave blue, light, dark, clear, amber, i'm guessing the sugar breakdown & mineral content etc would vary quite a bit between types & brands, & i would assume the 'effects' would/could vary quite a bit as well

Gina (2014-01-08 21:10:32)

"The vast majority of people I know who eat starchy diets are fat and out of shape, especially as they age. The vast majority of people I know who restrict their carbs are fit and healthy." - Joe You must not live in Japan, France, Italy, Greece or Costa Rica. I take it that the people you know who eat starchy diets are also not Seventh-Day Adventists. All these groups eat starchy diets and are healthy and lead long lives. None eat low-carb diets.

Joe (2014-01-09 10:56:17)

Gina, I think if you'll google a bit, you'll find that all of those countries are currently experiencing the same problem we are - an epidemic of obesity and diabetes. But let me add this. I wouldn't care if they weren't. I know what works for me, and what doesn't work for me. And selfishly, that's the only diet I really care about. My own. And starches give me a problem. I don't totally avoid them, but I tread lightly. Nota bene: For someone who warns others of heeding dogmatic advice, you seem pretty dogmatic yourself. Seth: I agree, obesity and diabetes are going up in those countries. That doesn't change the fact that they are a lot slimmer than Americans while eating a high-carb diet. Which they have been doing for a very long time, like a hundred years or more. The high-carb diet is unquestionably not the reason for the increases in diabetes and obesity. It is something about Western foods that is. Or perhaps something else about Westernization (less activity?). All of those countries are eating far more Western foods in recent years. You seem to be ignoring this - it isn't carbs that are bad, it is something else.

Joe (2014-01-09 11:21:23)

Seth: "I wonder if your low-carb diet hurts your sleep, meaning that a higher-carb diet would give you better sleep." Before I started eating low-carb/paleo, I ate like your typical Italian (which I am), and unfortunately resembled Luciano Pavarotti, not Frank Sinatra. And I slept poorly. By poorly, I mean maybe 2-3 hours on a good night. On bad nights, no sleep whatsoever. "With a good understanding of why low-carb diets produce weight loss, it might be possible to increase how much carbs you eat (to get better sleep) without causing weight gain." I sleep pretty well, all things considered, for my age. 7-8 hours on a good night. 5-6 hours on others. Plus a daily nap of 45 minutes. Most mornings I wake up refreshed, others mornings, not so much. I don't even know where perfection lives, so I'm not going to spend a lot of time looking for it. I'm not going to sacrifice my current way of eating, my health profiles, etc., just to sleep another hour per night. I understand the health benefits that come from getting a good amount of sleep, but I also understand what happens to my health when I eat too many carbs, get fat, etc. "A good theory about weight control should be able to greatly reduce the trial and error. When you say "too much starch causes me to gain weight" you may be drawing the wrong conclusion from your experience. Maybe one form of "too much starch" causes weight gain but another form would not." Seth, here's my theory: Find something that works for me, and then stick to it. I like n=1 experiments as much as the next guy, but I also understand the wisdom of not trying to fix things that aren't broken. I got here by experimenting, by the way. And in my experiments, I discovered that eating copious amounts of pasta, Italian bread, pizza, etc. was going to kill me. So I tried all the popular ways of losing weight and getting fit. None worked very long (especially vegetarianism), or very long. Until I tried eating low-carb. Then the weight came tumbling off. Then I learned about the paleo diet, and changed my low-carb base accordingly. Then came even greater weight loss, plus amazing improvements in all my health profiles. What's not to like? Seth: I agree there is a lot to like about that story. As for what's not to like, I suspect your sleep could be better. Maybe your gut biota could be better - check out the correlation of fiber intake and heart disease if you think this is unimportant. I also wonder when you started eating low-carb. Alex Chernavsky lost lots of weight when he started low carb but around two years later he started gaining it back.

vs (2014-01-09 11:28:00)

Thanks to Gina, Joe and Seth for sharing their thoughts and experiences, and for this very interesting discussion. For what it is worth, I believe Gina and Joe are both right. Gina points to countries, and Seventh-Day Adventists, who eat starchy diets and are healthy. One possible reason: they do eat a starchy diet, but don't generally exceed 600 calories a day from starches. Here

is Paul Jaminet and Shou-Ching Jaminet in "Perfect Health Diet": "Although the precise magnitude of the various quantities is uncertain, it appears that the body's natural daily glucose consumption is about 480 calories for brain and nerves, 200 calories for glycoproteins such as hyaluronan and mucin, 100 calories for muscle glycogen and immune, intestinal, and kidney cell use, offset by about 200 calories of glucose produced in the course of fat burning. For sedentary healthy people, then, the natural carb intake is about 600 carb calories per day." These facts inform their diet recommendations. The Jaminets suggest eating: "About 600 carbohydrate calories per day from about 1 pound of "safe starches" such as sweet potatoes, yams, taro, white rice, sago, tapioca, and potatoes and 1 pound of fruits, berries, and sugary vegetables such as beets and carrots." Generally, 600 carb calories works out to 150 g of carbs per day. This is what Joe mentioned above, and what Mark Sisson emphasized in "Primal Blueprint". It appears it is ok to eat certain carbs- and indeed might be beneficial to do so. The key is knowing how much: too many and one is likely to gain weight. Many low carb and diet paleo books are really just about helping people find the right amount of carbs.

Joe (2014-01-09 11:38:14)

Seth: "I increased my carb consumption, which caused me to lose weight. This contradicts the idea that carb reduction causes weight loss (which implies that carb increase should cause weight gain) no matter how many grams of carbs I was eating. When I was losing weight I wasn't eating very many carbs besides the sugar water because I had very little appetite." Life is full of contradictions, my friend. Some people who eat lots of carbs do well, some don't. Some people who eat lots of meat do well, some don't. I can't explain it. I can't explain why you lost weight by consuming sugar water, and you probably can't explain it either. The good folks at NuSi: <http://nusi.org/about-us/board-of-directors/#.Us7qGLQnXng> ...are busy trying to explain it. Using the scientific method, for a change. Maybe they'll be able to explain it, maybe not. But in the meantime, I have results that appear to work well for me, even if I can't explain them in scientific terms.

Joe (2014-01-09 11:47:38)

vs: "For what it is worth, I believe Gina and Joe are both right." Heh. That wouldn't surprise me one little bit!

Joe (2014-01-09 15:40:50)

Seth: "I agree there is a lot to like about that story. As for what's not to like, I suspect your sleep could be better. Maybe your gut biota could be better — check out the correlation of fiber intake and heart disease if you think this is unimportant. I also wonder when you started eating low-carb. Alex Chernavsky lost lots of weight when he started low carb but around two years later he started gaining it back." My gut biota is in very good shape. I drink some kefir almost every day, and I eat a lot of high-fiber veggies and fruits. I also eat a tablespoon of soluble fiber each day (in the form of Konsul). You could set your watch by my "movements." Fiber is important, but not at the expense of everything else. I've eaten this way for roughly 10 years, Seth. I used to weigh 300 pounds. I weigh about 190 today, and it hasn't varied by more than 10 pounds either way, since I first got to 190. 190 puts me at a 24.4 BMI. I've had friends with Alex's experience. Without exception, once they started writing down what they were actually eating, they quickly realized it was no longer low-carb. I usually ask them to consider starting all over again, like in Atkins' Phase 1, and cut carbs way back to 20 grams or less for a few weeks. It has always worked. I'm not saying it always works. For everyone. I'm saying it has always worked for me, and for the people I know. Also, though a lot of experts will tell you not to look at the scale everyday, I do. At the same time every day (first thing in the morning). And what that scale says will dictate how many carbs I eat that day. I nip things in the bud. Again, it works for me. Seth: That's good to know, especially about the fiber sources. I am more interested in measuring my gut biota than you seem to be; I want to find out whether there is room for improvement. When you say "it works for me" you seem to be ignoring my point about your sleep. I am not so sure it works for you, in the sense that there is no room for improvement.

Joe (2014-01-09 16:47:07)

Seth: "I agree, obesity and diabetes are going up in those countries. That doesn't change the fact that they are a lot slimmer than Americans while eating a high-carb diet. Which they have been doing for a very long time, like a hundred years or more. The high-carb diet is unquestionably not the reason for the increases in diabetes and obesity. It is something about Western foods that is. Or perhaps something else about Westernization (less activity?). All of those countries are eating far more Western foods in recent years. You seem to be ignoring this — it isn't carbs that are bad, it is something else." I'm not really



ignoring anything, Seth. There are many contradictions in the literature. Frankly, I haven't seen that many slim Japanese, for example. And when one controls for things like smoking, there probably isn't that much difference overall. For every Kitivan there is a Masai. And no one really knows why there are obesity epidemics in those places (my guess is increased SUGAR consumption), as well as in our own backyard. People are busy looking for solutions, but I seem to have found mine. And it doesn't include sugar. Seth: You're ignoring that there are plenty of examples of people being quite healthy and slim on a high-carb diet. Although the Japanese are not incredibly slim today, they were exceedingly slim as recently as 20 years ago. On a high-carb diet. I have no idea what "contradictions" you are referring to, the slenderness of Japanese was obvious to anyone who visited Japan. As was the fact that they ate lots of rice. Moreover, they stayed thin without weighing themselves daily and adjusting their diet according to what the scale said. Perhaps they were controlling their weight in a better way than you are. I agree, Japan today is different.

Leila (2014-01-09 18:54:04)

FWIW, I went low carb in 2010 & quickly lost about 45 lbs. I stalled at that point, never did lose any more weight although I am well over my target (yes, it's quite reasonable). I stayed on the diet diligently (using my carb counter) for several more months but no luck. I understand this is fairly common in the low carb community. I continue to control carbs & most of the weight has stayed off, which is nice. But shortly after I stalled (spring 2011) I started experiencing some worrying effects that cannot be explained by anything other than diet as that was the only thing that I had changed. I developed what appeared to be keratosis pilaris on my back, arms & legs that is mostly resolved now that I've added back some carbs. My hair also started falling out and it still is. In my experience, a low or controlled carb diet might be one way for some people to lose weight. But it isn't effective for everyone and can have drawbacks. I agree that there is likely some other mechanism at work. Returning to the topic of honey, I've been taking a tsp or so nightly of an unpasteurized locally-produced product. Sometimes it improves my sleep and sometimes not so I'm going to experiment with the dose, maybe added yogurt, maybe try fermented, etc. I do find that the almost daily headaches I usually have upon waking are not entirely gone but are much less painful since I started the honey. I'm not particularly patient & often try several things at once, so that might not be what did it, but I'm thankful. I also enjoyed the 2013 year in review post. I started chewing xylitol gum the other day & find almost no plaque on my teeth any more. Nice! I'm giving it more time to see if it helps my mouth & tongue. The dermatologists all have differing diagnoses, of course. I may try spraying some on my head just in case one of them is right & it really is lichen! I've become a big fan of personal experimentation since I started reading this blog. Thanks Seth!

Joe (2014-01-09 20:25:40)

Seth: "You're ignoring that there are plenty of examples of people being quite healthy and slim on a high-carb diet. Although the Japanese are not incredibly slim today, they were exceedingly slim as recently as 20 years ago. On a high-carb diet. I have no idea what "contradictions" you are referring to, the slenderness of Japanese was obvious to anyone who visited Japan. As was the fact that they ate lots of rice. Moreover, they stayed thin without weighing themselves daily and adjusting their diet according to what the scale said. Perhaps they were controlling their weight in a better way than you are. I agree, Japan today is different." Seth, I really wish you'd stop telling me what I'm ignoring. I have admitted, several times now, that there are people who do fine on a high carb diet. BUT I'M NOT ONE OF THEM. That is, I don't care how the Japanese control their weight. I care about MY WEIGHT, not the Japanese's. I was stationed in Japan in the 60s. I saw many fat Japanese. They ate mostly fish, veggies and fruit (not so different from what I eat. Plus a little rice and tofu. What I noticed most was the very small size of their portions, which appeared to be a cultural thing. Kitivans stay thin and healthy eating a lot of carbs. The Masai stay thin and healthy eating essentially no carbs, just meat and milk. Contradictions, no? You also seem to think that weighing myself daily is some kind of hassle. It's not. I also take my BP almost daily. When I exercise, which I do almost daily, I also time myself, count reps, measure distances, etc. Again, they are not hassles to me. They are just a part of my daily routine. No spreadsheet or statistical program necessary! Why can't my personal success, doing it my way, be just as relevant as any other person's way? It's almost as if you've lost faith in your own axiom, i.e., the importance and significance of PERSONAL EXPERIMENTATION, at least when it comes to me. I just don't get it. Seth: I think it's a good idea to look at what works for other people, in addition to self-experimentation. My self-experimentation would have gotten nowhere if I didn't pay great attention to what worked for other people. Nowhere did I say your personal success is irrelevant. Nor do I think that. I'm not ignoring your success, I'm wondering about how ideal it is. And what caused it. Surely those are topics for discussion? Especially because you are doing

something very popular (low-carb). I keep bringing up what you're ignoring because you keep ignoring it ("I don't care how the Japanese control their weight") at the same time you say you aren't ignoring it ("I'm really not ignoring anything")...forgive me. For all I know you have a good reason for ignoring how the Japanese control their weight but doing so goes against everything I've learned.

Joe (2014-01-10 10:21:41)

Seth, you're still not understanding me. And that's probably my fault. But I'm game-bred, so I'll keep trying. Yes, "I don't care how the Japanese control their weight." But that doesn't mean that I've ignored them. Just like I haven't ignored all the other populations. The Kitivans, Massai, Inuit, etc. Heck, I've been studying them at length for many years, trying to figure it out. The one thing I have actually learned from all this is: there are many ways to skin a cat! And nobody can really explain why any of them work to keep the pounds off, live healthy lives, etc! And that includes you, Seth! What I keep saying here is that I have found a way to lose weight, keep it off, and enjoy a healthy and fit life. It's the only way that worked for me. I tried most of the others and they didn't work for ME. They obviously have worked for others. But I don't really care what works for others, I only care about what has, and is, working for me. Yes, it's a good idea to look at what works for others, if only to figure out why/how something worked. But again, that doesn't appear to be what we are doing here. It seems like you're saying that because the Japanese can eat lots of carbs and stay healthy, I can too. Well, for the gazillionth time, I CAN'T. I've tried doing that. I know what happens to ME. No, I don't know why that happens to me, and neither do you know why it doesn't happen to the Japanese. So you're asking me to explain something that you can't even explain yourself. Is that really fair? Look, my way (low-carb/paleo) has also worked for countless others who have really given it a try. The internet is littered with similar success stories. Sure, there are failures, too. I have no idea why some fail and some don't. I do know why certain people I know have failed, and then got back on track. I've seen many fat Japanese too (and so have you), and can't explain why they didn't get the secret memo that apparently tells the Japanese how to stay fit and healthy. Neither can you. So Seth, I'm not ignoring anything. "My self-experimentation would have gotten nowhere [too] if I didn't pay great attention to what worked for other people." I.e., I found a way that worked for me while watching what worked for others. Just like you, Seth! It just wasn't the same way. And now that I have, why should I look for yet another way? This way has already made me into a fit and healthy human being. I'm willing to work at the edges, say, by trying a teaspoon of honey at bedtime. I've tried that once already, and it didn't work. I'll try it again (while avoiding bananas, as we discussed), and make it a longer trial. Whether it works or not, that little bit of honey at bedtime won't cause me to substantially jeopardize my usual way of eating. But I'm not going to just cannonball into the deep end of the carb pool. That just ain't gonna happen. Nosirree Bob. 🤔🤔🤔🤔🤔 Translation: Experience is the mother of wisdom. :)

## Interview with Mr. Heisenbug (2014-01-07 05:00)

Although the blog [1]Mr. Heisenbug ("Respect the microbiota") is quite new, I have learned a lot from it, especially about the importance of fiber. I interviewed the blogger:

SETH Tell me about yourself, such as your background relevant to your blog.

HEISENBUG My name is Shant Mesrobian. My professional/academic background has no relation to the content of the blog. My background is in tech/politics/publishing. The blog is just a side hobby and is produced from independent research. (I'm a "non-expert" as you might call it.)

SETH When did you start your blog? What led you to start it? Have you blogged before?

HEISENBUG I started the blog about a month ago. I have not blogged before. I started it because the topic interests and excites me a lot. I anticipated a surge in microbiome experimentation and "hacking" and felt I could help direct that conversation in a productive direction. In digging through the research, there seemed to be a lot of dots that needed connecting.

SETH What do you mean, "dots that needed connecting"?

HEISENBUG Certain clusters of bacteria, and certain mechanisms (butyrate production, endotoxemia) kept surfacing in the studies I came across. For instance in the smoking post, it was sort of staring at you in the face that smoking clearly reduces levels of bacterial groups that are implicated in health and disease. Yet the study didn't seem to find that interesting, so there was a gap that needed to be filled. But the pattern could only be detected by someone who reads a bunch of disparate studies. Same with the obesity/transplant study – many people are trying to help themselves because they vaguely know that potato starch can elevate butyrate (perhaps not even that much) – so here is a study showing directly that a different microbiota can achieve that, and it is particularly by elevating levels of bacteria that I had previously implicated as being prime starch degraders + butyrate producers. It's been a series of eerie coincidences that has kept me posting material.

In general, I think there is a bit of an information gap about how to alter gut biota – there isn't a real understanding of what "fiber" is.

SETH What do people fail to understand about fiber?

HEISENBUG First, that fiber is an overly broad and useless term. The only definition you can assign to the term is "a food that, when consumed, is not digested and is transported directly to the large intestine." But what happens to the fiber when it gets there is completely dependent on what type of fiber it is. The type of fiber most people are familiar with is the mechanical kind that is just a bulking agent. Insoluble. No fermentation or microbial impact. Comes out the other end. The fibers we're interested in are the bioactive type that are not only fermentable by gut bacteria, but preferentially fermented by good, commensal bacteria. But this isn't what people think of when they hear "fiber."

The other thing that's not understood is that fiber can make a significant impact on the microbiome. People are just very primed by the germ theory aspect of bacteria – that they're "bugs" you have to "catch." So while people have begun to accept the idea that there are good bacteria that you want, the understanding is still very stuck in the "you have to eat the bacteria to get good bacteria." I'm a big fan of fermented foods (making & eating), but I don't believe it's the primary way to tend to one's microbiome.

SETH How have your ideas/beliefs about fiber changed over the years?

HEISENBUG I currently consume a paleo/ancestral type of diet. Before then, I regarded fiber as most people do: a necessary, functional component of food that you need in order to "stay regular". I sought it out mostly from whole grain foods. I did not realize there were different types of fiber, or that they had anything to do with gut flora.

Then, when I went paleo, I adopted the general paleo attitude toward fiber: fiber comes from grains and grains are bad, that fiber is an unnecessary bandage that covers up for a bad diet, and that good digestive health can be had by simply eating nutritionally dense, non-toxic foods that people are evolved to eat. Fermented/probiotic food being a helpful addition.

Then I came to my current position once I learned more about the microbiome. What I've realized is that while paleo/ancestral eating goes a long way toward correcting the modern standard American diet, it still retains one common feature with it (at least in the way most people seem to practice it), which is that it focuses primarily on feeding the upper GI, while starving the lower GI (ie, your large intestinal microbiota).

And the ironic twist is that by dropping wheat, paleo may in fact have LESS fermentable fiber than the standard American diet. That's because, while it contains mostly insoluble fiber, wheat does contain a small amount of

fermentable fiber, which means that wheat constitutes the primary source of fermentable prebiotic fiber for the average American. So drop wheat, and you probably just lost your predominant source of fermentable fiber for your gut flora.

SETH The most interesting idea I've seen on your blog is that [2]smoking is associated with heart disease (and other diseases) because it reduces microbial diversity. Because of this idea, I've become a lot more interested in fiber. Is this your idea? As you say, because smoking is such a big risk factor, it is a good place to start to understand heart disease (and other diseases). What are other explanations of why smoking is such a big risk factor?

HEISENBUG I've never seen anyone else make the connection between smoking -> microbial diversity -> heart disease. Smoking's high ( #1) correlation has always intrigued me, especially since there have never been solid explanations for it. Separately, I've been reading about endotoxemia-induced inflammation and its effect on chronic metabolic disease. So when I came upon this study, it was sort of a smoking gun.

As I said, the explanations for smoking being a big risk factor, if you really read them, aren't saying anything. They are generalities. "Smoking contributes to heart disease because it contributes to atherosclerosis." Well of course. Atherosclerosis IS heart disease. The question is how? Smoking raises LDL cholesterol. Ok, but how?

The inflammatory cascade that results from loss of microbial diversity, a bloom in "bad" bacteria, and a decrease in "good" bacteria, is an explanation for all of those.

SETH Could the importance of fiber explain [3]that famous failed beta-carotene trial? There had been plenty of correlations between beta-carotene and better health. Yet in an experiment, people taking beta-carotene if anything did worse than the control group. Maybe beta-carotene consumption was a marker for fiber (e.g., people who ate more beta-carotene ate more carrots).

HEISENBUG If the epidemiology that inspired the trial was based on high carrot consumption, then I think that's definitely a possibility – carrots are fairly high in pectin, a type of fiber with decent prebiotic activity. But since the trial subjects did even worse than placebo, I find another explanation convincing – that unusually high doses of beta-carotene, which is a precursor to vitamin A, blocks actual Vitamin A.

SETH Has your better understanding of fiber improved your own health?

HEISENBUG My health is already pretty good, and I think I'm probably too young for metabolic and chronic disease symptoms to make themselves evident, so I "unfortunately" can't report on those types of markers. So for me this is all preventative at the moment. And I have yet to experiment with some more potent, high-dose prebiotic sources. I plan to soon. But I have noticed a significant improvement in sleep and a next-day feeling of well-being, relaxation, and clarity after a day when my fiber intake is higher and I consume yogurt cultured with lactobacillus and bifidobacteria, and I suspect it has something specifically to do with the bifidobacteria. That's just a hypothesis now and something I'm currently exploring on the blog. Figuring out the ideal sourcing, combination, and amount of fiber is really still a work in progress as far as I'm concerned. There's no real handbook, and people are just starting to figure all of this out. Lots of people experimenting with resistant starch (in the form of potato starch) are reporting dramatic stabilization in blood sugar and weight, digestive improvements, and greatly improved sleep. I'm hoping that a lot of personal experimentation and self reporting, combined with gut sequencing services like American Gut and uBiome, will get us closer to figuring it out.

1. <http://mrheisenbug.wordpress.com/>

2. <http://mrheisenbug.wordpress.com/2013/12/26/is-this-why-smoking-is-the-number-one-predictor-of-heart-dise>

ase/

3. <http://www.nejm.org/doi/full/10.1056/NEJM199404143301501>

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Charlie Currie (2014-01-07 10:03:16)

Thank you. I've been following Mr. Heisenbug's very interesting blog and wonder who this was.

Kelly B (2014-01-07 11:49:27)

Absolutely fascinating - I've added another blog to keep an eye on. Thanks!

JM (2014-01-07 13:05:34)

Great interview Seth. I had found his blog (probably from a link here?) and only begun to read through it but it looks fascinating. Improving gut health is looking more like a new year's resolution for me.

Kirk (2014-01-07 14:46:18)

This is a great interview, Seth, thanks. @MrHeisenbug, thank you. I hope you have time to answer several questions. 1) You say that honey is rich in scFOS. How does one determine which foods contain decent prebiotic capabilities? 2) I find that a rounded teaspoon of honey, taken just before bedtime, significantly improves my sleep. Does that contain enough scFOS to alter the microbiome? 3) What is the transit time, from ingestion to when scFOS starts to be fermented? I know that my sleep is improved by the 3-hour mark, because that's when I historically have woken up from my initial sleep. On the honey protocol I sleep deeply until the 5-hour mark. So whatever it is in honey which makes me sleep better, it is being used by the body/mind within 3 hours. 4) Others suggest it is the sugars in the honey which cause the improved sleep. Or perhaps some of the other 200+ factors in honey. Can you suggest designs for experiments which would tease out the true causes of improved sleep? For example, ingesting a certain type of sugar, or ingesting an isolated fermentable fiber. 5) How long do prebiotics stay in the gut? Are they consumed within a 24-hour cycle or do they stay around longer? So could somebody eat a food with scFOS one day and it would not only improve sleep that night but the next night as well? In conclusion, many thanks for bringing your knowledge and enthusiasm to this fascinating subject.

Grace/Dr.BG (2014-01-07 16:52:50)

Hi Seth and Heisenbug (love your name!) The famed NEJM beta carotene was a failure in not just that trial but ALL synthetic Lurotin beta-carotene trials like HATS, Physicians health, and CARET. It is factory made from benzene petroleum derivatives by the chemical company BASF AG. These are not bio-identical to mammalian receptors. The fact that synthetic non-bioidentical hormones like PROVERA in the Women's Health Initiative where record numbers of women died of strokes, cancer and heart risks are inherently dangerous cannot be overstated, I think. Natural, food-based carotenoids are not only safe but extremely efficacious. <http://www.ncbi.nlm.nih.gov/pubmed/24141200> <http://www.jonbarron.org/article/phs-ii-vitamins-e-c-beta-carotene-and-cancer-0#UySmNIW1r0> Great post and interview! Seth: Thanks. That's a good point. Which I never heard Bruce Ames make.

Stuart King (2014-01-07 18:20:09)

Mr Heisenbug have you considered that the differences in bacterial groups in smokers are due to other causes rather than cigarettes? Smokers may not be as health conscious and may be less likely to eat vegetables for example. Perhaps the positive changes in microbial composition after smoking cessation may be due to other lifestyle changes (improved diet). Quite often smoking cessation is accompanied by an overall effort to improve health in other ways also. I would be interested in seeing the microbial composition of someone who ate more like Michael Pollan but smoked regularly.

Heisenbug (2014-01-08 08:12:51)

Kirk, Foods high in fermentable prebiotic fiber are pretty easy to find provided you know what to look for. Fructooligosaccharides/inulin/resistant starch/mucilage/pectin is a good list and should direct you to plenty of foods. Honey contains many

oligosaccharides that have all been shown to have prebiotic activity. The FOS in honey (kestose, nystose, inulobiose) are among those. The oligosaccharides are formed from honey's simple sugars by the activity of enzymes provided by bees. The amount of fermentable fiber in a teaspoon of honey would be well below 1 gram. If honey has outsized prebiotic activity, it is likely due its unique combination of oligosaccharides. Trying to isolate/duplicate this somehow in an experiment would be quite difficult outside of a lab setting. But I still think it would be worthwhile to test for a prebiotic effect, and a pure formulation of FOS would probably be the closest substrate (something like: <http://www.amazon.com/NOW-Foods-Nutra-Flora-Ounce/dp/B0002JIXLM/>). I guess coincidentally, the 3 hour mark is probably a good general marker for when you'd expect fermentation to begin. That's when the small intestine would be mostly emptied, and this is also confirmed by breath tests which test for malabsorption and small intestine bacterial overgrowth. The cutoff for these tests is 2.5 to 3 hours - anything detected before then is considered premature fermentation. After 3 hours is considered to be normal colonic fermentation. Among fibers, oligosaccharides/FOS are known to ferment very rapidly and preferentially.

Heisenbug (2014-01-08 08:17:26)

Stuart, The smoking study did not just pick random people off the street who had already quit smoking. It was a controlled cessation study. Your second point is a good one. I too wonder if certain dietary or other factors are protective from smoking's microbial impact. After all, tobacco smoking is ancient and has existed for a long time. But the very high levels of the diseases it is strongly associated with are not.

nicole (2014-01-08 18:03:46)

Great post/interview. A few things. I know that people who have heart problems are required to take antibiotics before having dental work...I assume that there are some studies out there showing the connection between these two problems. Might make for some good reading/future posts on Heisenbug. This might also help confirm your theory about heart disease, bacteria, and smoking. Also to Kirk, because I have a toddler at home, I have learned more than I wanted to know about sleep cycles. The three hour mark is the end of a typical sleep cycle. I am wondering if something at 3 hours is waking you up because that is when you are most wake-able...Conversely, I am wondering if the honey somehow extends the sleep cycle to 5 hours making everyone more rested.

Adam (2014-01-08 20:06:23)

Mr. Heisenbug, I searched here & over at your blog & didn't see anything about Lactulose. There's a neat review over on SuppVersity you might find interesting: <http://suppversity.blogspot.com/2014/01/supplement-review-lactulose-isomerized.html>

daz (2014-01-09 03:55:18)

from that suppversity post, "There is "natural" lactulose in milk: Due to the fact that lactulose can be produced by the heat-induced isomerization of lactose (see inset in figure to the left for a reaction curve for milk that's heated at 130°C), all varieties of heat treated milk, even the low-temperature pasteurized variety will contain a certain, albeit low amount of lactulose (see figure to the left)" warm milk before bed anyone...

Heisenbug (2014-01-09 07:34:58)

Adam, Lactulose is definitely shown to be potentially prebiotic/bifidogenic. In fact, it's what they use in those breath tests I mentioned in the comment above. My only issue with it is that it's not really something found in food. It's commercially produced from lactose as a food ingredient and for medical purposes. As the article says, you can find lactulose in milk, but only because of the pasteurization process. As such, I don't see a reason to go out of one's way to obtain lactulose (it isn't very practically obtained) when there are other good options that have more of a basis in human dietary patterns. Daz: I was just thinking that myself.

Kirk (2014-01-09 11:29:31)

I was talking with a friend about using honey. He said that several years ago he asked his Avurpedic physician how to improve his sleep. The physician said to drink warm milk with honey just before bedtime. Seth: very interesting!

Gabriella Kadar (2014-01-09 16:23:14)

Heisenbug, I wondered why UHT milk in Tetrapacks tastes different, sweeter, than regular milk. Also it is a bit of a quandary: some moderately lactose intolerant people report that they can consume SOME UHT milk without catastrophe. I suppose eventually the laxative action of the lactulose will get them if the lactose doesn't again depending on volume ingested.

daz (2014-01-14 21:41:10)

hi Mr. H, i was just looking at an old list i quickly put together quite a while back, in the doc i listed fibres that i did not want to go looking for ie. may be best for me to avoid. & fibres that probably worth getting ie. may be good for me. i should clarify that at the time i probably put things on the 'avoid list' if i read some 'bad press' about it...eg. low fodmap diets? anyway at the time, my list went like this, 'avoid/bad': Insoluble (roughage), FOS, fructan, Inulin, 'good': RS (resistant starch), Pectin, GOS?, the list is likely way over-simplified, if it makes any sense at all...? anyway just wondered if you may have some sort of list of your own, possibly ordering 'good' to 'bad' dietary fibre. &/or comment on my list. i seem to recall at the time that pectin look interesting, & i was already on the RS 'bandwagon'. not sure why i thought GOS may be a good one.

Heisenbug (2014-01-15 10:42:03)

Daz, The only reason to actively avoid any specific type of fiber, as far as I know, is if you have a specific intolerance for it and it gives you gastrointestinal problems. Even insoluble fiber isn't necessarily "bad." But it can come in a package, like wheat, that may give you separate issues. The only reason you'd put FOS or Inulin in the "avoid" bucket is because they are both fructans and belong to the "FODMAP" group – types of carbohydrates that some people do not absorb properly and thus experience gastrointestinal issues. The "FODMAP Diet" is specifically designed for those people. In this case, I think GOS would probably have to be on that list too. The question in my mind about this is that, since that kind of intolerance may be caused by small intestine bacterial overgrowth (ie, fermentation happening where it shouldn't), then presumably any type of fermentable fiber would be an issue, not just FODMAPs. Also, I'm curious as to whether FODMAP intolerant people have a problem with FOS, since it's shorter chain and known to cause less issues than something like inulin. For now, only your personal experimentation can answer these questions.

daz (2014-01-15 21:25:55)

thx for taking the time reply H, i do not have any 'fodmap' issues (afaik), so that makes my life easier...

Charles (2014-01-18 14:17:09)

One of the best, if not THE best source of resistant starch (RS) is potato starch. It's almost pure RS, with no additional carb effects. Bob's Red Mill Potato Starch is the one most people are now using to get more fermentable fiber. Most natural food sections have it, or you can get it on Amazon. Note: it's NOT simply potato flour. It's potato STARCH. Potato flour is just dried and powdered potatoes. It contains almost zero RS. A few hundred people have been experimenting with it, to almost universal positive effect. Check out the Free the Animal blog to get some more info. There are dozens of posts and hundreds of comments. Unnecessary disclaimer: I don't work for Bob's Red Mill :=)

## **Mars Corp. Won't Tell Me the Flavonoid Content of Dove Dark Chocolate (2014-01-08 05:00)**

Via a website, I asked about the flavonoid content of Dove dark chocolate. In China, a package of Dove dark chocolate has a picture of a heart – meaning the food is "heart-healthy". [1]The heart benefits are believed to come from flavonoids. Mars has been exploring this idea in various ways, such as [2]this special process and [3]these special chocolates.

An email from Mars said I should call a hotline. The woman who answered did not know what flavonoids are. "Do you want to know the cocoa content?" she asked more than once. No, the flavonoid content, I said. She looked. "We don't have that information," she said. Haha!

I said the flavonoids in chocolate are believed to be responsible for the health benefits of chocolate. (That's true, but I might have said [4]flavanols – a type of flavonoid – instead of the much broader term flavonoid.) "We don't make health claims for our chocolates," the Mars representative said. (As if a picture of a heart on a package is not a health claim. No doubt there is an important difference between US and Chinese law.) [5]I can see why she would say that. Our brilliant government, protecting us from crazy ideas such as chocolate and yogurt are healthy, but not from the [6]exaggerations of doctors and drug companies. Which is more dangerous, (a) eating chocolate or yogurt or (b) being cut open?

1. <http://www.bmj.com/content/343/bmj.d4488>
2. [http://www.cocoapro.com/about\\_cocoapro.html](http://www.cocoapro.com/about_cocoapro.html)
3. <http://www.cocoaavia.com/>
4. <http://en.wikipedia.org/wiki/Flavanols>
5. <http://abcnews.go.com/Business/dannon-settles-lawsuit/story?id=9950269>
6. <http://globaleconomicanalysis.blogspot.com/2013/12/cancer-free-i-beat-prostate-cancer-mish.html>

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Nick (2014-01-08 06:39:09)

Oo. That's even more annoying than when Dove labels it as "dark chocolate" without specifying the percent cocoa.

Matt (2014-01-08 06:52:42)

Hi Seth, Love the blog. Just wanted to let you know that the link at the bottom (<http://blog.sethroberts.net/2013/12/30/man-beats-prostate-cancer/?preview=true>) is broken. Regards, Matt. Seth: I fixed it, thanks.

dearieme (2014-01-08 09:00:42)

Being cut open by someone who's eating chocolate.

Mark (2014-01-08 12:21:25)

"hey, you got chocolate in my gall bladder"... sorry, you have to harken back to the old Reeses' peanut butter cup commercials...

anon (2014-01-08 14:05:28)

Seth, Not relevant to the post, sorry: I'm a teacher, and I'm looking for any websites/books/resources regarding experiments that teachers have done independently in their classrooms to improve test scores, student satisfaction, etc. I'm looking for a sort of "quantified classroom" approach I guess. I like to consider myself science-minded, but when I thought about implementing experiments in my classroom, I wasn't sure where to start. If you have any thoughts or could make any suggestions through a post, comment, or e-mail, I'd appreciate it.

TomGinTX (2014-01-09 21:40:04)

Be worried if someone is eating Junior Mints while observing your surgery.

Christian Kleineidam (2014-01-10 06:24:19)

@Anon Teacher: What do you teach? One of the thing were quantified self works well if it's about something you are interested in. You might just ask your students. One the one hand we could do boring stuff in class. We could also do cool experiments. If any of you has a good proposal for an experiment we will do it. Then have a genuine discussion with your students about their ideas and see whether you can lead them to something that makes a good experiment.



anon (2014-01-11 07:58:26)

I teach English as a Second Language (ESL) to adults. One idea that crossed my mind is having students vote on enjoyment/engagement following an activity using their smartphones--there are sites that allow you to tally/analyze data from such votes. I do interest inventories with my students, as you suggested, and they are great. Good suggestion. We don't run experiments per se, as it's not a science class, but I'm rather free to direct content toward student interest so this idea is still useful. Thanks for your thoughts.

## **Reaction Time as a Measure of Health (2014-01-09 05:00)**

Six years ago I started using a reaction-time (RT) test (a test where you press a key in response to something as fast as possible) to track my brain function. I took the test daily. It must use only a small part of the brain but I assumed that something that made me faster would probably improve overall brain function. Behind this belief, which I call better RT, better brain, were countless studies of brain anatomy and physiology, which had shown that neurons and glial cells all over the brain share many features. Cells in different parts of the brain are much more alike than different. More support for this assumption was that [1]certain doses of flaxseed oil improved both RT and other measures of brain function, such as balance.

I also assumed that changes that improved RT would probably improve overall health – what I call the better RT, better body assumption. It was less plausible than the better RT, better brain assumption because the cells in different organs of the body differ so much. They have many similarities but also many differences. I believed it for two reasons. (a) Flaxseed oil not only improved several measures of brain function, it improved my gums, no doubt because it reduced inflammation. It had been far from obvious that improving gums was so easy or that flaxseed oil (in the right dosage) would do so. The assumption better RT, better body had made a surprising prediction, you could say, that turned out to be true. (b) The brain gets much the same blood as the rest of the body. (Not exactly the same, because of the blood-brain barrier.) In the same way, all plug-in electrical appliances use the same house current. Just as all appliances have been designed to work well with that current, all our organs should have been shaped by evolution to work well with same mix of nutrients. You can't feed your brain differently than your heart.

When I discovered that [2]butter improved RT, the better RT, better body assumption made a second even more surprising prediction: Eating more butter improved my health. This contradicted the claims of all mainstream health experts, who say saturated fats cause heart disease. I stuck with my assumption – I still eat a lot of butter. The data I've seen since then has supported my conclusion. For example, [3]my Agatston score got better, not worse, after a year of eating lots of butter. The Agatston score is currently [4]the best predictor of heart disease.

I recently found more support for the better RT, better body assumption. Several studies have found that RT is a good predictor of health (better RT, better health). Even more impressive, it is a better predictor than many of the predictors we already know of. The RT test used in these studies is close to the test I now use, which I developed independently. The RT test in these studies involves showing a digit (0-4), after which the subject presses one of five keys (labelled 0-4) as fast as possible. My current RT test is very similar but uses 7 digits instead of 5.

[5]A 2005 study looked at the oft-reported correlation between higher IQ and lower mortality. The IQs and RTs of about 900 persons were measured in 1988. Deaths until 2002 were noted. RT was associated with lower mortality, even after taking out associations with smoking, education and social class. RT and IQ are correlated (better RT, higher IQ). When the RT-death association was removed, IQ no longer predicted death. So RT does a good job of capturing whatever it is about IQ that predicts mortality.

[6]A 2009 study compared RT to more conventional health predictors ("risk factors"). About 7,000 subjects were followed from 1984 to 2005. RT in 1984 was a good predictor of all-cause mortality compared to classic risk factors.

Smoking was by far the best predictor, followed by RT. RT was a better predictor than physical activity, blood pressure, a questionnaire measuring "psychological distress", resting heart rate, waist/hip ratio, alcohol intake, and body mass index.

[7]A third study, based on the same subjects as the 2009 study, found that amount of decline (slowing) in RT (from one test to a second test seven years later) predicted death. People with more decline were more likely to die.

All this supports studying how your RT is controlled by your environment, especially what you eat. You have to choose wisely what to study. The point is not to be as fast as possible regardless of everything else. Lots of drugs (stimulants, such as caffeine) decrease RT for short periods of time. I doubt they improve health. (If they harm sleep, they probably worsen health.) What makes sense is to look for two things: 1. Poisons. Things that slow you down. [8]I discovered that tofu did so. I gave several reasons for thinking that tofu affects many people this way, not just me. Billions of people eat tofu, unaware of this possibility. 2. Deficiencies. Study things that are missing from your life now but were likely to be present when we evolved. It is quite plausible that our ancient ancestors ate more omega-3 (in fish, but also in flaxseed) and more animal fat (from big animals, but also in butter) than we do now. My data suggest omega-3 and animal fat are nutrients necessary for health whose importance mainstream nutrition researchers have not fully appreciated.

My RT data have shown me there's a lot I didn't/don't know about how my food affects me. Maybe everyone can say that. Unlike almost anyone else, however, I can reduce my ignorance myself. [9]I don't need to rely on experts.

1. <http://media.sethroberts.net/blog/pdf/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf>
2. <http://quantifiedself.com/2010/09/seth-roberts-on-arithmetic-and/>
3. <http://blog.sethroberts.net/2010/08/28/new-heart-scan-results-good-news/>
4. <http://www.everydayhealth.com/heart-health-pictures/the-single-best-predictor-of-a-heart-attack.aspx#/slide-1>
5. <http://www.ncbi.nlm.nih.gov/pubmed/15660853>
6. <http://emilkirkegaard.dk/en/wp-content/uploads/7.-Reaction-time-and-established-risk-factors-for-total-and-cardiovascular-disease-mortality.pdf>
7. <http://www.ncbi.nlm.nih.gov/pubmed/17846257>
8. <http://blog.sethroberts.net/2013/12/09/warning-soybean-eaters-tofu-made-me-stupid/>
9. <http://blog.sethroberts.net/2013/12/27/lessons-of-this-blog-2nd-of-2/>

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Dirk (2014-01-09 05:11:24)

Hi Seth, which tool do you use to measure RT?

sam (2014-01-09 05:36:18)

I've been thinking about trying RT tests for a Long time now. As far as I remember you show calculations and have to enter the last digit of the result? Or do you have a plain reaction test now? Seth: The test I use is what psychologists call a "choice reaction time" task. See a digit, type that digit.

Mehmet (2014-01-09 06:41:44)

I did not know there was such a strong correlation between overall health and reaction time. That was very interesting. Measuring brain function is certainly easier than measuring your liver function :) Regarding the RT test, I have a similar question with sam. Have you changed the test from a simple arithmetic test to a digit retyping test? Previously, I coded another version

of your simple arithmetic test. I started experimenting with it but I saw that trying to be fast reduced the accuracy of my results. I accepted a maximum 4 errors in 30 questions for the experiment to be valid. However, there is a significant difference in trying to make zero errors and allowing a margin of four errors. In a digit retyping test, I think it maybe possible to be more accurate and reduce the margin of error. In the end, if you spend enough time, it seems to me that simple arithmetic test boils down to a digit retyping test.

Jeff Winkler (2014-01-09 08:36:22)

That's really interesting. Remember in Eat, Fast where they did the balancing and ruler drop tests? Backs up your thesis (though Mosley did not re-test those measures after the intervention) What I find fascinating about your RT tests is that they're sensitive cheap and quick, with lots of longitudinal data. So you use them like a tremor detector. Signal detection. That turns up things like soybeans. Seth: I remember those two tests only vaguely. I will watch it again. I agree, my RT tests are sensitive cheap and quick. And easy. Room for improvement: Less sensitive during learning period, comparisons across people a bit unclear (timing may depend on your computer), not especially accessible, speed/accuracy tradeoff a possible problem.

Ripken Holt (2014-01-09 09:00:38)

Is there a application online that could be used to test one's reaction time? I would like to test mine but do not have any knowledge of coding? Seth: I am distributing the reaction time test I use. If you are interested in using it, please contact me. It is not online, it runs under R.

as (2014-01-09 09:12:08)

This is off topic, but for flaxseeds, isn't phytic acid an issue? Or do you assume that if you have you have good results with regards to reaction time and dental health, the flaxseeds can't be harming you too much?

Nancy Lebovitz (2014-01-09 10:02:55)

Any thoughts about psychological(?) factors like ADD or hypervigilance?

Alex (2014-01-09 11:09:09)

Mehmet brings up a good question: Seth, in your testing, what do you do with wrong answers? Ignore, track separately, allow some number of them, just never make mistakes?

Alex (2014-01-09 11:18:09)

Nancy Lebovitz, the distractability and hyperfocus of ADHD are two sides of the same coin: impaired ability to \*direct\* attention. ADHD is badly named. It's not really attention deficit; it's attention-control deficit. It would not surprise me if attention control rose and fell with general brain function. I wish I had a dime for every friend who's told me, "My kid doesn't have ADHD; s/he can focus on a video game for hours on end."

Nancy Lebovitz (2014-01-09 13:00:14)

Hypervigilance isn't the same thing as hyperfocus. Hypervigilance is constant awareness of possible threats, and it's associated with PTSD and/or anxiety. <http://en.wikipedia.org/wiki/Hypervigilance>

Seth Roberts (2014-01-09 15:23:02)

to measure RT I use an R program I wrote myself.

Adam (2014-01-09 18:51:30)

Koanic Soul turned me on to this online arithmetic game: <http://arithmetic.zetamac.com/game?key=d10589f4> You can File > Save Page As to save it to your HD if you like

Mike Garcia (2014-01-10 09:31:31)

I would like for you to send me the test if you would? Thanks, Mike

GTR (2014-01-10 11:15:53)

Apparently in 19th century people had lower reaction times than today. More sleep perhaps? <http://phys.org/news/2013-05-victorian-era-people-intelligent-modern-day-counters.html>

Ian (2014-01-11 02:45:21)

An online reaction test can be found here. <http://www.humanbenchmark.com/>

Steve R (2014-01-24 20:01:04)

I'd think testing RT and tracking results would be a great app for a smartphone, but all I see are games, nothing that really keeps track of the times and could be used for research. Have you heard of anything for iPhone or Android?

Steve R (2014-01-24 20:10:34)

Just discovered this after leaving the above comment, there's some interesting stuff here, both some possible apps and some discussion about whether these devices are really usable for testing RT <http://cogsci.stackexchange.com/questions/506/are-there-any-cognitive-test-or-test-suites-available-on-the-ipad>

### **Man Beats Prostate Cancer Without Surgery (2014-01-10 05:00)**

[1]This story by investment blogger Mish Shedlock about a prostate cancer diagnosis illustrates the bias of doctors toward dangerous expensive treatments:

The biopsy showed I had cancer. My "Gleason Score" was 6. The surgeon who performed the biopsy *strongly recommended* surgery. He gave me a cost of \$20,000.

Bad recommendation. Shedlock got rid of his cancer, as measured by PSA (Prostate Specific Antigen) tests, without surgery or any other expensive or dangerous treatment.

The surgeon said something else also highly misleading. He told Shedlock he was "10 % cancerous". When Shedlock repeated this to his oncologist,

The oncologist replied "That's not correct. Of the 12 samples, only one had cancer and one was questionable. The cancerous sample was 10 % cancerous." Now that is a hell of a lot different than being 10 % overall cancerous.

His oncologist seemed unfamiliar with data:

I informed the oncologist that I was going to have a PSA test every month. He commented something along the lines of "Why do you want to do that? Every six months is sufficient. The tests are not that reliable." . . . [I thought:] The more unreliable a test is, the more tests one should take to weed out erroneous outlier results.

This reminds me of the dermatologist I had in graduate school. After I tested the two medicines he had prescribed for my acne, and found that one of them didn't work, and told him this, he said, "Why did you do that?" Haha.

The oncologist predicted that the cocktail that cured Shedlock "would not do [him] any good".

I am sorry Shedlock does not name the doctors involved, as [2]I did in a similar situation. I too avoided recommended surgery and my surgeon made highly misleading statements. Shedlock wrote about bad health care more generally [3]here.

Thanks to Steve Hansen.

1. <http://globaleconomicanalysis.blogspot.com/2013/12/cancer-free-i-beat-prostate-cancer-mish.html>
2. <http://blog.sethroberts.net/2011/11/16/dr-eileen-consorti-and-patient-power/>
3. <http://globaleconomicanalysis.blogspot.com/2013/10/unnecessary-surgeries-you-bet-doctors.html>

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Bill (2014-01-10 06:16:57)

Great story. I think he neglected one possibility, though: he had "cancer," as currently defined, but it went away on its own and would have even if he had never known about it in the first place. It seems clear this happens, maybe a lot. Until the biology and natural history of cancer are understood a lot better this raises questions about the wisdom of screening for "cancer." Another possibility is that he still has "cancer," which may or may not ever hurt him, but the latest biopsy samples didn't happen to see it. My sense is that especially as men get older if you only look hard enough (more biopsy samples) almost all of us may have "cancer." Autopsy studies support this idea. If you look less hard, fewer of us do. Same may be true of other cancers, including breast and thyroid. What a mess.

Xav (2014-01-10 07:23:40)

Reminds me of that Upton Sinclair quote : "It is difficult to get a man to understand something, when his salary depends upon his not understanding it!" I was Googling some of the supplements the author mentions in the linked post to see what benefits they have in general, and actually came across another interesting site where people with a different prostate disorder report their personal experimentation with various nutritional approaches. <http://www.prostatitis.org/itworksforme.html>

Jack (2014-01-10 11:25:40)

Most people do not realize what an evil scam is perpetuated by Doctors and how men are actually checked for prostate cancer. Samples of a mans prostate are taken. Then live Cancer cells are put on the man's healthy tissue samples. If the Cancer cells grow in the Petri dish or start to eat the man's healthy sample, the evil Doctors tell the man he has Cancer! Then they proceed to kill the healthy man with deadly radiation, poisonous and/or radioactive drugs or surgery. Since Doctors admit that they do not know how to cure Cancer, why in the world would people trust them at all? There is a Natural cure for everything! You wouldn't go to a person to fix the transmission on your car if the person admitted they couldn't fix it! The lab technicians put Cancer cells on your cells and then say you have prostate Cancer! That's outrageous! If a man's prostate hurts, it's probably from ejaculating too often. Avoid sex and masturbation for a few days. In addition, two saw palmetto capsules taken with two thistle capsules once a day if you are hurting plus sitting down when urinating until you're back to normal will be extremely helpful in most cases.

Jeff Winkler (2014-01-10 11:34:23)

understatement: "misaligned incentives that reimburse more for treating rather than monitoring"

## Joseph Biederman is Still at Harvard (2014-01-11 05:00)

Joseph Biederman is a professor of psychiatry at Harvard Medical School. It makes a certain sense. According to [1]Wikipedia, in 2007 he was

the second highest producer of high-impact papers in psychiatry overall throughout the world with 235 papers cited a total of 7048 times over the past 10 years as determined by the Institute for Scientific Information.

And he has won several awards:

Biederman was the recipient of the 1998 NAMI Exemplary Psychiatrist award. He was also selected by the Massachusetts Psychiatric Society Awards committee as the recipient of the 2007 Outstanding Psychiatrist Award for Research. In 2007, Biederman received the Excellence in Research Award from the New England Council of Child and Adolescent Psychiatry. He was also awarded the Mentorship Award from the Department of Psychiatry at the Massachusetts General Hospital.

But there's also [2]this:

Biederman had pioneered the diagnosis of bipolar disorder in children and adolescents, a disorder previously thought to affect only adults. One of the world's most influential child psychiatrists, Biederman's work led to a 40-fold increase in pediatric bipolar disorder diagnoses and an accompanying expansion in the use of antipsychotic drugs – developed to treat schizophrenia and not originally approved for use in children – to treat the condition. However, Biederman and his colleagues Spencer and Wilens failed to accurately disclose the large consultancy fees they were receiving from pharmaceutical companies that make antipsychotics whilst conducting this research.

For which Biederman received a slap on the wrist from Harvard.

And there's [3]this:

Dr. Biederman pushed [Johnson & Johnson] to finance a research center at Massachusetts General Hospital, in Boston, with a goal to “move forward the commercial goals of J. & J” [said Biederman in an email]

In other words, he felt no shame in admitting that he considered the commercial goals of Johnson & Johnson more important than the health of children with severe problems. One of the few people who can really help these children – by doing good research – he preferred to help Johnson & Johnson.

1. [http://en.wikipedia.org/wiki/Joseph\\_Biederman](http://en.wikipedia.org/wiki/Joseph_Biederman)

2. [http://blogs.nature.com/news/2011/07/harvard\\_scientists\\_disciplined.html](http://blogs.nature.com/news/2011/07/harvard_scientists_disciplined.html)

3. <http://www.nytimes.com/2008/11/25/health/25psych.html?ref=josephbiederman&gwh=C3A62AB351690D33D898CAE714EA391E&gwt=pay>

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Alex Chernavsky (2014-01-11 06:39:49)

Biederman and his cohorts brought great harm on countless children and adolescents. Children who are diagnosed with pediatric bipolar disorder usually receive powerful psychiatric drugs that allegedly treat their "illness". In reality, the drugs cause brain damage that actually worsens the long-term outcome for those children. Robert Whitaker lays out the evidence in his outstanding book, *Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America* (the Amazon link is [1]here.) Anyone who takes psychiatric drugs (antidepressants, antipsychotics, anxiolytics, Ritalin, etc.) – or has a loved one who takes such drugs – should read the book. Seth: I hope someone writes a book about Biederman and his enablers.

1. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing-ebook/dp/B0036S4EGE/>

dearieme (2014-01-11 08:50:58)

Alas, being a famous university implies no absence of crooks, conmen, spivs, and chaps who sail close to the wind. Seth: No one word (such as "crook") does justice here. Because of Biederman's great influence, the good he might have done (but doesn't do), the targeting of young children, the bad health of these children to begin with, the involvement of drug ingestion . . . the noxiousness of it is monumental.

Alex (2014-01-11 15:32:10)

Seth, I couldn't agree with you more.

Ruth (2014-01-11 22:22:03)

We open our newspapers and see some monster who murdered a child and have a hard time understanding it. But the Biedermans out there are the real monsters. They have destroyed many hundreds and thousands of lives by setting a chain of events in kids' lives that lead to homelessness, institutionalization, suicide, or just a miserable, unhealthy life. I always wonder how people like this live with themselves.

Adam (2014-01-12 00:31:18)

But is he rich?

Kyle (2014-01-12 09:27:01)

He's relatively rich. According to this article he got paid " \$1.6 million in speaking and consulting fees" from drug companies. Do you guys have any good ideas in terms of leading a campaign against this guy?

Crystal (2014-01-12 19:17:13)

This came out of left field! From the headline, it seems like you expect his sacking, but there's no reference to anything recent that might justify it, or even what prompted you to write it. I went hunting through archives, and it was 2011 when you last had a post in him, so this one, failing to include any reference to the background of your previous posts, and with no actual update material in it, just makes you look as though you have some kind of vendetta going. Consider you previously made mention of comments by his lawyer, did you really expect that an institution like Harvard would risk drawing attention by turfing him out without very good cause? You're treading a very slippery slope here. Imagine the consequences if anyone's job could be put at risk by someone in the public domain calling for their head, and more so, over things that are long since past and which, presumably, they've given no indication is still their mode of practice? I fail to see any actual point for this article, I'm afraid, and it comes across as particularly emotionally driven. Not what I've come to expect of you, Seth. Seth: For money and/or career, Biederman has used – and is still using – his enormously powerful position to cause many thousands of sick helpless children to be given drugs that almost certainly damage them. He deserves this post and much more.

## Eggs and Insomnia (2014-01-12 05:00)

It isn't well known that eggs (large amounts) can cause insomnia nor that caffeine – in special cases – can reduce insomnia. But a reader named Baeo Maltinsky recently made [1]those discoveries:

Back around July 2012, I was trying to improve my diet but I didn't want to give up my vegetarianism, so I started to eat a LOT of eggs, usually in the range of 10 to 14 per day. Not long after, I started having awful insomnia. I could lie awake all night just unable to fall asleep. There were suddenly just too many thoughts buzzing through my head keeping me up. I assumed that it was a result of ketosis disturbing sleep. I tried reintroducing carbs, but when that didn't work I gave up on dietary modifications. I started cycling through OTC sleep aids, but I developed tolerance to anticholinergics very quickly.

By October 2013, I was going crazy. I couldn't sleep well. It was making me depressed and seriously impairing my academic performance. I was exhausted constantly, but then I noticed something. I slept better when I consumed a lot of caffeine in the morning. I noticed there was a clear dose dependent relationship between how much caffeine I consumed and how well I slept. I had a hunch that the caffeine was depleting my acetylcholine levels, serving a similar function as OTC anticholinergics like diphenhydramine and kava.

I wondered what would happen if I sharply reduced my intake of acetylcholine precursors. A lot of people advertise eggs as "choline packed", so I cut back to less than 3 per day. Suddenly, I was sleeping much better. Now, it could be something else in the eggs (I'm not really attached to my choline hypothesis), but either way I feel confident blaming them for my sleep troubles. My insomnia returns whenever I start eating them again.

I asked him why he hadn't realized earlier that eating so many eggs was the problem. He replied:

I just didn't think there was anything special about the eggs. I googled around for it and the only things I could find were about ketosis induced insomnia, so it didn't occur to me that eggs specifically were likely to be problematic. I tried consuming enough carbs to knock myself out of ketosis, but when that didn't improve the situation, I just assumed that something else was going on aside from diet. Eggs seemed like the perfect food. Cheap, nutrient rich, paleo, easy to prepare, and compatible with my (then) vegetarianism. It would have been hard for me to find a suitable replacement, so while the idea of testing it probably occurred to me, performing the test itself wouldn't be trivial and the results wouldn't be actionable.

As it got worse, I tried treating it more aggressively with OTC sleep aids, and that worked well enough that I stopped worrying about it. I wasn't sleeping great, but it was enough to get by. Eventually they stopped working, but not long after that I made the caffeine connection and decided to try removing eggs. It was easier to do at that point because I had given up on paleo and vegetarianism and could just substitute chicken and sprouted lentils, and I had a (probably incorrect) neurochemical explanation to support it. Moreover, it had become VERY difficult to eat the eggs. My body just didn't want to consume them and I had to slowly force them down. Something seemed to know it was bad for me, but I wasn't listening to the signs. My behavior was not at all rational, and believe me after I discovered eggs were the problem I was kicking myself for not trying it sooner.

I asked him what he learned from this, apart from how to sleep better. He replied:



1. Costly experiments sometimes need to be performed.
2. Sometimes your values are bad for your health.
3. Don't give up just because there's no evidence to support a hypothesis.
4. Simple things can easily go unnoticed.

Those are good lessons.

1. <http://blog.sethroberts.net/2013/12/11/sleep-summary-of-what-ive-learned/#comment-1163569>

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dearieme (2014-01-12 05:54:35)  
He should have been eating quail eggs.

Mehmet (2014-01-12 07:57:59)  
Another lesson maybe: "too much of a good thing is bad" or "dose makes the poison".

Sentinel (2014-01-12 09:08:43)  
Fascinating re caffeine and eggs. Baeo - what time of day were you eating the eggs, and in what form did you consume eggs and caffeine?

Kyle (2014-01-12 09:22:18)  
I agree with Mehmet. I kind of question the idea about ketosis, because eggs have a lot of protein. What do people think about caffeine being beneficial because they help boost certain hormones?

David (2014-01-12 09:24:04)  
I'm a vegetarian and really like eggs, but can't imagine eating a dozen a day even for a single day. I guess my overall caloric intake must just be much less than his. +1 for what Mehmet says. Also "Meden agan" ("Nothing too much"/"Moderation in all things").

Brandon Berg (2014-01-12 11:25:19)  
Eggs only have about 60 calories each. In terms of calorie count, a dozen is a light meal.

Brandon Berg (2014-01-12 11:26:06)  
Got the math wrong. It would be an average-sized meal, not a light one.

Kevin (2014-01-12 11:54:23)  
The caffeine may have worked due to circadian rhythm amplitude, similar to sunlight or vitamin D in the morning.

gwern (2014-01-12 14:49:25)  
> It isn't well known that eggs (large amounts) can cause insomnia nor that caffeine — in special cases — can reduce insomnia. But a reader named Baeo Maltinsky recently made those discoveries: I see we're using an interesting definition of 'known'. I will point out that this would be very easy to do a blind self-experiment on: simply buy a few hundred grams of a choline like choline bitartrate or choline citrate (like \$10), cap it & some flour for placebo (< \$5), and do my usual concealed-containers trick. I can confidently predict that no one will do this, however, not even the OP who claims to be so confident...

Joe (2014-01-12 16:01:22)

I think there must be more to this story. Why would someone try to improve his diet by suddenly consuming 10-14 eggs daily? Where is it written that eating over a dozen eggs a day is a kind of improvement? Improvement in what way? To what end? He tried reintroducing carbs? Why would a vegetarian ever need to RE-introduce carbs? Don't vegetarians, almost by definition, eat a lot of carbs? Caffeine eventually helped him get to sleep? Really? In my opinion, there's too many moving parts, and also some major inconsistencies, here to hazard even a guess as to why he couldn't sleep, then suddenly why he could (what else was going on in his life at these times?), etc.

Jimmy (2014-01-12 16:08:31)

Interesting timing. I've recently come into a weird situation that requires me to eat a dozen egg yolks most days. My sleep has also been really out of whack in about the same time period, but there's enough other possible causes that I'm not sold on the egg thing yet. I actually have choline and gel caps on hand, so I might try that test eventually. However, first I'm going to try the more convenient (but less conclusive) test of piracetam to see if counteracting the extra choline improves my sleep. (I know piracetam helps me burn through choline because I've experienced and corrected for the other end of the spectrum before)

Don (2014-01-12 16:56:08)

I think it is in fact the choline (or phosphatidylcholine) in the eggs. I realized a couple years ago that eating eggs daily for breakfast caused me to experience a marked increase in shoulder and neck tension. I must be fairly sensitive to this effect, since I only ate 2 or occasionally 3 eggs per day. The light went on for me when I remembered that acetylcholinesterase inhibitor drugs can have shoulder tension as a side effect (sleep disruption as well.) These drugs raise acetylcholine levels, as I believe dietary phosphatidylcholine can do as well. Too much lecithin (presumably soy source) has the same effect on me.

Alex (2014-01-13 07:41:03)

This was a helpful clue, perfectly timed. One night last week I woke up at 3:00 and my preteen daughter woke up at 4:00. It's unusual for her to wake up, less so for me. After your post I realized that the previous night I'd made omelets for dinner instead of our usual meat and veggies fare. She asked for seconds, thus eating four eggs at bedtime. She'd had two eggs for breakfast, also. We'll have to try it again.

Baeo Maltinsky (2014-01-14 04:58:02)

Sentinel: The time varied between the late afternoon and late in the evening. Almost always scrambled. Caffeine came in the morning in the form of tea. Gwern: I have serious doubts about the choline hypothesis. For all I know it could have something to do with an amino-acid deficiency caused by having eggs as my primary protein source. Either way I imagine that I probably have some greater sensitivity to whatever-it-is-that-caused it than the general population. Joe: Gary Taubes and Robert Lustig presented very compelling cases I suppose. Given how bad my diet was before, switching to eggs as a dietary staple was actually a massive improvement. You are correct in assuming that low-carb vegetarianism is insane. I agree completely (at least I do now). Caffeine and other stimulants actually do have calming effects in some people (those afflicted with ADHD being the obvious example). Your other criticisms are valid. Humans are complicated and this was by no means a controlled experiment. All I can say is that the eggs definitely caused me sleeping issues, so I tend to avoid them these days. Really, I'm still not sure what's going on. I made some bizarre and probably incorrect connections coming to what may be an incorrect hypothesis. I can say this: eggs cause insomnia for me. I don't know why. Choline toxicity? Amino acid imbalances? Some specific allergy to eggs (which would explain the positive effects of anticholinergics I suppose)? I'll freely admit that I don't know. I haven't performed the tests and frankly at this point I'm not that interested in finding out if it means testing it myself. Also, while it's interesting to see other people reporting similar things, I'm a bit concerned that the choline hypothesis is getting too much attention. A quick reasonability check (looking at the choline content of eggs and comparing it to the TUL) suggests that choline toxicity is unlikely. Insomnia isn't even a common symptom of choline toxicity when it DOES happen. Maybe the form it's in in eggs causes the issue, but that's yet to be established.

Carlos (2014-01-14 05:12:03)

For me the issue are raw eggs. If I made some mayo for dinner I won't sleep well, but I can have 4-6 fried eggs for dinner

without issue. Anyone else has experienced this? P.S: I should point out that I have dinner quite late for US standards, around 22:00 (which is quite common here in Spain)

JRM (2014-01-14 10:01:43)

"Almost always scrambled." Some people, like myself, react to egg whites. I go for hard boiled eggs, eat the yolk and throw away the whites. I had read about egg whites causing a reaction in some people and then noticed the effect in myself. Most of the nutrition is in the yolk, too. Yolk: <http://nutritiondata.self.com/facts/dairy-and-egg-products/113/2> Egg White: <http://nutritiondata.self.com/facts/dairy-and-egg-products/112/2>

Joe (2014-01-14 10:38:33)

Baes: "Gary Taubes and Robert Lustig presented very compelling cases I suppose. Given how bad my diet was before, switching to eggs as a dietary staple was actually a massive improvement. You are correct in assuming that low-carb vegetarianism is insane. I agree completely (at least I do now). Caffeine and other stimulants actually do have calming effects in some people (those afflicted with ADHD being the obvious example). Your other criticisms are valid. Humans are complicated and this was by no means a controlled experiment. All I can say is that the eggs definitely caused me sleeping issues, so I tend to avoid them these days." Thanks for the feedback, Baes. Yes, Taubes and Lustig present very compelling cases (in my opinion), but what about those cases caused you to suddenly start eating 14 eggs per day? I didn't find anything like that in any of the Taubes books or Lustig videos. I agree with you that choline toxicity is unlikely. But too much protein might be the culprit, especially if you were consuming other forms of protein (meat, milk, cheese, etc.) at the same time. A lot of my gym-rat friends used to talk about how consuming too much protein caused many of them to sleep poorly. I think you will agree that we all have different sensitivities to caffeine, and while I think ADHD is grossly over-diagnosed, I don't think caffeine is actually helping you sleep. How about another experiment: Try having a couple of cups of coffee in the evening, before you go to bed, and see how that works out for you. If it's the caffeine that is actually helping you sleep, you should sleep at least as well, right? My prediction: You won't. Again, thanks for the feedback. Carlos: Try commercial mayo - it's pasteurized. That is, the eggs are essentially cooked. See if it makes any difference. Personally, I don't think there's enough egg in mayo (typically 6-8 % by weight) to have the effect you're describing.

Baeo Maltinsky (2014-01-14 12:29:27)

Vegetarian protein sources that aren't heavy in carbohydrates are few and far between. Eggs seemed like the best option at the time. My protein intake wasn't exceptionally high. It was normally between 80 and 120 grams per day, which is about average for someone my size (I'm about 6'1"). I never claimed that caffeine in the evening helped me sleep. Caffeine in the morning though seemed to. I'm not going to say that it definitely did something, but it seemed to. Maybe if I kept closer records I'd see that it was nothing after all. Hard to say.

Joe (2014-01-14 14:51:31)

Baeo: "Eggs seemed like the best option at the time" Why? Don't you like meat, poultry, or fish? Why just eggs? Protein requirements are all over the board, depending on whom you ask, your age, your activity level, etc. But unless you're trying to build (or prevent the loss of) muscle mass due to age, inactivity, injury, that seems a bit much to me. In fact, the CDC says that the adult male needs 56 grams of protein per day. The AMA says .36 grams per pound of BW (thus, a 190 pound person would need only 68.4 grams of protein per day). And Mark Sisson has this to say: . How do those recommendations apply to your personal situation? "I never claimed that caffeine in the evening helped me sleep." Didn't say that you did. I asked you to try drinking your coffee in the evening, instead of in the morning, to see what happens. If it helps you to sleep then, too, you just may be one of those rare individuals who get better sleep with caffeine. But if it doesn't help you, and actually makes your sleep worse, then it's highly unlikely, I think, that caffeine in the morning makes you sleep better either. You might want to find this out about yourself for future reference.

Joe (2014-01-14 14:53:18)

Oops! Forget the link to Sisson. Here it is: <http://www.marksdailyapple.com/how-much-protein-should-you-be-eating/#axzz2qPRzVqIJ>

Baeo Maltinsky (2014-01-14 17:09:32)

Joe: I was, at the time, a vegetarian. I've since given that up. With regards to protein intake, while the requirement for someone my size may have been only 70 grams, in practice most people consume well more than their requirement without ill effects. 100 grams of protein just doesn't seem like enough to cause issues, especially given that consuming the same amount from different sources doesn't cause me problems. I'm considering trying evening caffeine in the near future. However, if this blog has taught us anything it's that time-of-day is such an important indicator. Morning caffeine could improve sleep while hurting it at night, like with Vitamin D.

Joe (2014-01-14 17:36:15)

Baeo: One thing too much protein can do for you is to make you fat. Excess protein is stored as fat. I call that an ill effect. Yes, time-of-day can be important. But there are confounding factors. For example, some research shows that taking vitamin D first thing in the morning, on an empty stomach, is a waste of money. It'll go right down the urinal. The Cleveland Clinic says to take vitamin D in the evening, with what is usually the biggest meal of the day (increases vitamin D absorption). That's why it's important to EXPERIMENT on yourself. Anyway, I hope you figure it out one day. Good luck!

daz (2014-01-14 20:57:00)

histamine is another potential explanation... excessive egg consumption may raise histamine levels (in some people) over time. (looking around the web) foods raising histamine seems to be a bit like filling a bucket with water. histamine levels may be rising without any symptoms...until one day they overflow 'the bucket'. then you need to try & empty 'the bucket' by avoiding high histamine foods & foods that raise histamine. purportedly eggs (or specifically egg whites) "are potent histamine liberators", Source wiki, [http://en.wikipedia.org/wiki/Egg\\_allergy#Egg\\_white\\_intolerance](http://en.wikipedia.org/wiki/Egg_allergy#Egg_white_intolerance)

daz (2014-01-14 21:10:22)

cont. i forgot to finish my thought process... purportedly, one symptom of high histamine is insomnia. which may be why antihistamines are sometimes used as a treatment for insomnia (usually the first generation H1 antihistamines (the 'sedating antihistamines'))

Jazi Zilber (2014-01-16 06:16:56)

I fell asleep multiple times fast after drinking coffee. I felt it has a connection.

## Assorted Links (2014-01-13 05:00)

- [1]Stephen J. Gould, evolutionary theorist: appearing to be smart
- "[2]A revolution is when you change your thinking." I agree. Via [3]Danielle Fong.
- [4]Brain glycogen. Not all glycogen is in the liver.
- [5]Ethiopians (in Ethiopia) don't eat dessert. Evidence that traditional diets may not be optimal.
- [6]Katherine Reid on how dietary changes eliminated her daughter's autism (talk)
- [7]The Floyd Leg. A shockingly simple great idea.
- [8]Eric Lander, a professor at MIT and Harvard, says we should spend a lot of money on genomics without providing examples where it has been helpful. "The rate of progress is just stunning," says Lander, again without examples. Perhaps he borrowed this style of argument from the Nobel Prize press office. I am sorry to see James Fallows, the interviewer, be so credulous. Dear Dr. Lander: Why is it that doctors have no clue what causes heart disease or diabetes or depression or a dozen other major diseases – but think they do? Is more money for genomics going to help with that?

Thanks to [9]Edward Edmonds and Bert Sutherland.

1. <http://infoproc.blogspot.com/2011/06/high-v-low-m.html>
2. <http://www.theguardian.com/world/2013/dec/13/uruguay-president-jose-mujica>
3. <https://twitter.com/DanielleFong>
4. <http://www.ncbi.nlm.nih.gov/pubmed/15086511>
5. [http://books.google.com/books?id=4E1l1QKYeXkC&printsec=frontcover&source=gbs\\_ge\\_summary\\_r&cad=0#v=onepage&q=dessert&f=false](http://books.google.com/books?id=4E1l1QKYeXkC&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q=dessert&f=false)
6. <http://www.youtube.com/watch?v=iL4SD5f2toQ&noredirect=1>
7. <http://www.thefloydleg.com/>
8. <http://www.theatlantic.com/magazine/archive/2014/01/when-will-genomics-cure-cancer/355739/>
9. <http://edwardjedmonds.com/>

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Cathy (2014-01-13 08:58:07)

Wow, just wow at the Katherine Reid video. I got chills and tears in my eyes watching the last video of Brooke talking about kindergarten. This subject is worth a deeper look.

John Eels (2014-01-13 11:08:38)

All great ideas evoke the question: "Why hasn't anyone thought about this before?" The Floy Leg is compelling. I like it very much.

Joe (2014-01-14 12:32:16)

Re: Katherine Reid's video, I like it! We are not only what we eat, but are also what we eat eats. WHOLE FOOD = REAL FOOD.

### **Does Smoking Increase Heart Disease? If So, Why? (2014-01-14 05:00)**

[1]Mr. Heisenbug says that smoking is the best predictor of heart disease. (Not quite. A high Agatston score is a better predictor. [2]For example.) It is the best lifestyle predictor. People who smoke, according to [3]this, have a six-fold increased risk of heart disease compared to non-smokers.

Why would this be? Heisenbug points to a study that found that when smokers quit, the microbial diversity of their gut increased. He speculates that (a) smoking decreases microbial diversity, which is quite plausible and (b) decreased microbial diversity increases heart disease – which has some plausibility.

I commented:

It would be interesting to find other factors that have a big effect on microbial diversity and whether they are also associated with heart disease. The idea that smoking causes heart disease via its microbial effects predicts, or at least suggests, that a change that reduces microbial diversity a lot will increase heart disease.

Heisenbug replied:

The only lifestyle factor that we can safely say leads to a lack of microbial diversity is a diet that is low in fermentable fiber. And fiber intake is consistently linked (negatively) with heart disease. I've never seen data linking lower overall diversity to a decrease in risk for any disease. And lots showing the opposite.

I replied:

The stuff about diversity (fiber intake increases diversity and is associated with less heart disease, many associations of more diversity with less risk of Disease X, no associations in the opposite direction) is substantial support for your idea, in my opinion.

His theory, in other words, made a prediction that turned out to be correct. A large fraction of what we're told about health hasn't led to any correct predictions. Here is an idea about how to prevent heart disease, a major killer, that there is actually reason to believe. And Heisenbug can say whatever he wants, in contrast to a heart disease expert quoted, say, in the *New York Times*, who is under pressure to say certain things. So we can take what he says at face value.

Heisenbug replied:

I agree. Especially because there's never been a good explanation WHY fiber has that effect on [he means "association with" – Seth] heart disease.

Suddenly I am a lot more interested in microbial diversity and the association of fiber and heart disease. Smoking has countless health effects – it increases many cancers, for example. Obviously it increases lung and throat cancer. This means there are many ways it could cause heart disease. Fiber is quite different than smoking and as far as I know has no effect on lung and throat cancer. If it could be established that fiber causes a reduction in heart disease (not just is associated with a reduction), that would be considerable evidence (but far from proof, of course) that microbial diversity influences heart disease.

1. <http://mrheisenbug.wordpress.com/2013/12/26/is-this-why-smoking-is-the-number-one-predictor-of-heart-disease/>
2. <http://content.onlinejacc.org/article.aspx?articleid=1136854>
3. <http://well.blogs.nytimes.com/2010/02/10/low-i-q-predicts-heart-disease/>

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Andy (2014-01-14 06:03:10)

I think this is nonsense. Quitting smoking is associated with an increase in phylum firmicutes bacteria (often associated with, obesity heart disease and T2D). Smoking is associated with an increase in bacteroides recently famous because they promote leanness. Trying to dig up a study where smoking was associated with increased bacterial diversity in UC patients especially in butyrate producing groups and nicotine patches reduced occurrence of flare ups. I'd say it's a fair bet the increased heart rate and blood pressure inflict most of the damage.

Nancy Lebovitz (2014-01-14 09:11:28)

I'm not going to say it's the strongest factor, but sunlight seems to do a lot to prevent heart attacks by a path which doesn't involve vitamin D. Exposure to sunlight causes human skin to release a precursor for nitric oxide.

dearieme (2014-01-14 09:29:16)

"Coronary Calcium Independently Predicts Incident Premature Coronary Heart Disease Over Measured Cardiovascular Risk Factors": now there's a fine sample of lousy English.

Charlie Currie (2014-01-14 09:36:07)

Andy says: "Smoking is associated with an increase in bacteroides recently famous because they promote leanness. " So what's going on with all the obese smokers? Also: "I'd say it's a fair bet the increased heart rate and blood pressure inflict most of the damage." From this - "<http://www.ncbi.nlm.nih.gov/pubmed/9162447>" you get this - "It is a paradox that while smoking acutely increases blood pressure, a slightly lower blood pressure level has been found among smokers than nonsmokers in larger epidemiological studies." Exercise also acutely increases heart rate and blood pressure and regular exercisers are known to have lower heart rates and blood pressure than non-exercisers, yet exercise is recommended as a defense against heart disease. Go figure.

Nancy Lebovitz (2014-01-14 11:28:36)

Just for another angle- Wim Hof (who does a lot with enduring cold) believes that intermittent exposure to cold (like cold showers) increases the flexibility of blood vessels. It could make sense that exercise + rest is good for the circulatory system because it increases its range in a way that constant high blood pressure doesn't.

Heisenbug (2014-01-14 12:25:56)

Thanks, Seth, for leading me to that initial insight. I put it in my back pocket, and forgot it was there. I do think there must be protective factors when it comes to smoking. And not just for heart disease. But there just isn't much fiber/cancer research out there, probably because it isn't intuitive the way it is with heart disease. Colorectal cancer being the only exception, for obvious reasons. No one cares about the microbial link, so the disease has to have a clear & intuitive dietary connection to merit fiber research. But there is some data to at least raise suspicion: <http://www.ncbi.nlm.nih.gov/pubmed/1851150> "Of the seven case-control studies, which evaluated the relationship between the fiber-rich diet and breast cancer, six demonstrated an inverse association. For cancers of the esophagus, mouth, pharynx, stomach, rectum, endometrium, and ovary, there are only a limited number of studies, most showing a protective effect from eating a diet high in fiber-containing foods." But we can always start from the other end - the microbiome/cancer link. A decent amount there: <http://www.nature.com/nrc/journal/v13/n1-1/abs/nrc3610.html> And since we know fermentable fiber is a (if not THE) major modulator of the microbiome, I think there's enough for a similar inquiry.

Heisenbug (2014-01-14 12:31:45)

Andy, The research you are referring to is outdated. In fact, if you read the blog posts where I talk about this, you will see that the research indicates the opposite of what you say, and figures prominently in the case that's being made. I'd be interested to see whatever UC study you are referring to. IBD and microbiota is pretty complicated, but most of what I've seen involves a reduction in the butyrate-producing Clostridia (ie, Firmicutes), which is a big part of the microbial pattern I've documented.

Antonio (2014-01-14 13:03:03)

Interesting but it seems to be one of those guesses that makes very sense outside the country. In Europe it seems that a lot of people smoke but the incidence of heart disease is lower than USA. This seems to be specially true in France.

Heisenbug (2014-01-14 13:16:20)

Andy, I forgot to address the last part of your comment. "I'd say it's a fair bet the increased heart rate and blood pressure inflict most of the damage." You don't mention how, or what mechanism, but I'll assume you are referring to nicotine inducing those affects. Pipe-smoking exposes smokers to far less nicotine, yet has not been found to be any safer: <http://www.ncbi.nlm.nih.gov/pubmed/20952559> Nicotine patches do not contribute to arrhythmia or ischemia: <http://www.ncbi.nlm.nih.gov/pubmed/9784902>

JM (2014-01-14 13:33:49)

So if smoking is the best lifestyle predictor, what could we learn if we looked at the people who smoke for years and never get heart disease - what is it about them that protects the heart? The first example that I can think of is a family friend who recently died, in his 90s and active but also still smoking. And he is not the only one I have known. A more thorough analysis of these smokers, including things like their gut health, might actually yield some good answers. But since all most experts want to focus on is cholesterol!

William Blair (2014-01-15 13:02:07)

Forgive my ignorance - is it the smoking that causes this particular problem mentioned (not including the obvious hazards - you're inhaling smoke!) or is it the nicotine that causes the microbial diversity?

William Blair (2014-01-15 13:02:51)

that causes the reduction in microbial diversity\*

Heisenbug (2014-01-15 14:09:25)

William, It's a good question. Unfortunately, the study did not look into that, so we do not know. But as I mention in the original post, tobacco smoke has been shown to directly introduce pathogenic bacteria & their endotoxins into smokers. So that would suggest it is not, in fact, the nicotine.

William Blair (2014-01-16 12:07:43)

If I could, I would have a study conducted with smokers of all "flavors" - cloves, pot, tobacco (those seem to be the most popular / quasi-legal ones) and see what happens. My guess is that smoke is the culprit. I think having all varieties of "common" smoke in the study would lead to a more definitive conclusion. Thanks, Heisenbug.

## **"Bedtime Honey is a Godsend" (2014-01-14 20:19)**

A reader writes:

The [1]bedtime honey treatment has been a godsend for me. I had been sleepless for several months when you first wrote about the honey, waking up many times every night and staying awake for long periods. I immediately began trying the honey, and the first night, though I still woke up a few times, I had dreams for the first time in ages. After a couple more nights I was sleeping all night. I usually wake up once a night for one reason or another, but wonderfully, get back to sleep which was impossible for so long before the honey. Sleep deprivation is so miserable, I cannot thank you enough!

In case you haven't tried it. What did I blog about before? I can't remember.

1. <http://blog.sethroberts.net/category/sleep/honey-sleep/>

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Rif (2014-01-15 03:51:46)

So am I the only one honey \*doesn't\* work for? I've been trying it for about a month now [I think since one of the very early mentions]. I \*want\* it to work, because I sure do need to sleep better and honey is delicious, but so far I seem to be sleeping



neither better or longer. Right now it's the third night in a row when I've tried honey before bed but I've woken up after about 3 hours of sleep, still tired but having a hard time getting back to sleep. I've experimented with quantities between 1 Tbs and 1 Tsp. Seth: You might want to try taking it earlier in the evening, such as 2 hrs before bedtime.

Sentinel (2014-01-15 05:53:05)

Rif, don't worry, honey does not make much difference for me either! It seems that people suffer insomnia for a variety of reasons: toxin exposure, anxiety, depression, poor sleep hygiene, a room that is too warm/cold/bright/noisy, etc. It would be surprising (to me, anyway) if a given supplement or food could improve sleep for ALL of these types of insomnia. Seth does not even currently suffer from insomnia (jealous!), but instead (sorry if I am misstating this, Seth!) has sleep that tends to vary only between 99 % restorative and 100 % restorative; so we are all dealing with different sleep issues, different starting points. What I learned from Seth is not "honey will fix your sleep," but "theorize and experiment until you find what fixes your sleep." Seth: After 20 years of trial and error, I managed to sleep well...but honey easily improved on that. That is the lesson I draw. I feel better the whole day because I have slept better. I have the wrong scale to show how much better I feel the whole day.

Three Pipe Problem (2014-01-15 06:48:46)

My presumption has been that honey works better for those who are more carb/fructose depleted

Bob (2014-01-15 07:35:51)

Hasn't worked for me or my wife, either. Not that we were sleeping poorly before trying it, but all the reports here made it worth checking out. No effect for me, worse for my wife (hours of wakefulness in the middle of the night after a few hours of sleep, what someone jokingly said Seth would call "morning" since he sleeps far less than most of us).

Bruce McCullough (2014-01-15 07:42:06)

Tablespoon of honey before bed works wonders for me; did nothing for my wife. But she sleeps like a log anyway - probably there is no improvement to be had in her case. Rif, try taking vitamin D in the morning as an aid to sleep. Search this blog for posts on the phenomenon. I doubt that honey would have worked for me if I hadn't already been taking D.

Joe (2014-01-15 11:11:20)

Hasn't worked for me either. At least not yet. I wonder of the placebo effect might be in play here? Perhaps some of us are just more suggestible than others?

peter (2014-01-15 12:22:49)

it helped my sleep some; but the clear difference for me was more stamina and more energy. I seem to get more out of my workouts. My experience seems consistent with the view that honey restores a depleted liver.

William Blair (2014-01-15 12:51:41)

I must say it's been phenomenal for me for a couple weeks now. I am happily amazed at the difference it made for me, daily. Even with inadequate amounts of sleep I can wake up on a dime without any grogginess - such an event happened just last night. The wife turned the nightstand light on at 3AM. I woke up immediately, alert and ready to go. I wish it worked for everyone like this and I'm sad to see that it isn't (judging by some of the comments). I've even been eating badly the last couple of days (in moderation) - still no problems! I'm rambling now, but I honestly can't remember ever feeling this good. Years and years, literally. All I can say is: I'm glad I found this blog and that article!!

William Blair (2014-01-15 12:58:47)

[Joe Says: January 15th, 2014 at 11:11 am Hasn't worked for me either. At least not yet. I wonder of the placebo effect might be in play here? Perhaps some of us are just more suggestible than others? ] From what little I know, the placebo effect is certainly a squirrely thing, so it would impossible to effectively refute your suggestion. I can only speak for myself and say I had no expectations either way. However! I can say this as a personal observation (in the same vein as personal science, I suppose). I have eaten honey with breakfast periodically and let me tell you - I sure didn't feel any better afterwards or the next day.

Joe (2014-01-15 13:50:33)

William: "From what little I know, the placebo effect is certainly a squirrely thing, so it would impossible to effectively refute your suggestion. I can only speak for myself and say I had no expectations either way." William, if you had no expectations, why did you try it? I didn't try it because I didn't think it would work. I tried it because I thought it just might work. It had worked for others, maybe it would work for me. I agree that there are things about the whole placebo/nocebo theory that are not easily explained. The way I look at it is this: I don't care if it can or can't be explained scientifically. But if someone can take a pill that is supposed to make, say, his headache go away, and it's only a placebo, but his headache goes away, I don't think it would matter much to the person taking the pill. I have no doubt the honey is working for you. I also have no doubt that it's not working for me. The mystery continues...

John Smith (2014-01-16 00:38:40)

There are so many variables in our lives, it is presumptuous to expect honey to be a cure all for everyone in the matter of one week, or even one month. Perhaps many of you readers and commenters know more of each other's details, but I can only guess at: How old is this person? How Sick? With what other symptoms? What is the lifestyle, including the diet, mindset and disposition? What was the origin of the honey? (And pertinent to my case:) How close to your bedhead is there excessive electromagnetic fields? What priority does this person give to getting good sleep? Good health follows on from good lifestyle, which includes myriad factors to be considered. And each of us has the challenge of working on our own leading edge causes of illnesses of all types. Not being able to sleep well is certainly in the loop, both as a cause of disease and as a result of disease. But at the end of the day, by eliminating each 'cause' as it comes to our notice, we can energize our body and be delightfully healthy. Disease cannot exist in a fully energized body. Failing energy will promote diseases of every persuasion. Modern sweeteners are an abomination. They are a factor in most everyone's energy problems. Getting off them is a big challenge, as is finding foodstuffs that are high quality. Modern medicines are also a major factor, as we easily get hooked on them and lose our awareness of just what real health feels like. Trying to wean ourselves off 'treatments' of all types is a big challenge. But for those of us with reasonable lifestyles and average health, a well fed belly and a well stocked liver is the key to good sleep. Honey is the gold standard food to achieve this liver 'charging' with glycogen. Honey that has been diluted with any other commercial and cheap sweeteners probably will not work, but the percentages of real honey to the substitute is to be considered. Determining the difference is not easy, this is why the remark, "Buy your honey from someone you trust" becomes so pertinent. Unfortunately not everyone has immediate access to someone they trust to get their honey from, but giving this detail some priority will pay big dividends. In my case, I was pre-diabetic, but probably with Type III as I have been a health fanatic for most of my life, thanks to my father before me. But as age took its toll I had spells of not sleeping at all on occasion, and once for three nights in succession. Not good. I thought I was dying. Without consulting any professionals, I read McInnes's book, seriously policed my 'other' sweeteners intakes, shunned alcohol and caffeine, and commenced to reduce my work hours. My health completely turned around, although I did go through several months of 'withdrawal' which was not encouraging. Even now, I have occasion not to sleep at all for one night, and nerves are usually indicated, but overall I sleep quite well, and have energy above and beyond many other men my age. I need to work on my brevity now, don't you think? Cheers

daz (2014-01-16 14:38:15)

just talking on the sleep benefits of honey here, not any other benefits... one possible explanation why honey does not improve sleep (or certain sleep issues) for some people, could be because they need more than the liver glycogen 'hack' mentioned previously (here & under other posts)... take an example of two people, both of whom wake up in the middle of the night, lets say at 3am ( & they would prefer not to), Lets say that Person A already has full liver glycogen before taking the honey dose before bed. & Lets say that Person B has low liver glycogen before taking the honey dose before bed. & lets assume that the honey dose replenishes the liver glycogen of person B to that required for a good nights sleep (as far as liver glycogen requirements are concerned). So from a liver glycogen perspective for a good nights sleep both persons are covered. But both persons still wake at 3am...so the presumptions would be that the wakings are not related to liver glycogen in these cases. & the reasons/causes for the wakings lies elsewhere. I am not saying that the appropriate liver glycogen levels are not required, but in these cases something else is also 'broken' (or multiple 'things are broken') that need to be resolved as well (on top of any potential liver glycogen shortfalls).

Nathen (2014-01-16 19:25:29)

I've been taking varying amounts of honey just before bed for several weeks now and after what seemed like great results the first night, have noticed no effect since on number of instances of sleep onset, maintenance, or morning insomnia, nor on energy level upon waking or during the day. This does not seem to depend on how much carbohydrate or sugar I've had during the day. I'd like to have a more precise dependent variable than my subjective experience—something like reaction time measurements, but I use a Mac so can't use yours. (Anyone have a Mac solution?) I suspect that even with a better measurement I'd be ferreting out a small effect, if any. Disappointing because I love honey and really need better sleep. Maybe a post updating your theory to explain negative results? Seth: Maybe you don't get enough circadian-rhythm-establishing events, such as morning sunshine and morning Vitamin D3. No doubt they matter too.

Drini (2014-01-25 07:38:10)

After several trials, I can say as well that honey did not improve my sleep. On the contrary, it actually worsened it, because it made me self-conscious about my sleep, which used to be ok. I wanted honey to work especially for improving my energy levels during the day. Alas, it did not work on that either. Other forms of sweets before sleep don't work either, I've tried bananas several times before sleep without any noticeable improvement. I have still to try having honey 2-3h before sleep. Or trying to up my dose (2T). 1t up to now has been better than 1T. 1T impairs sleep onset. Seth: What works best for me is having something sweet at three different times: 1.3-4 hr before bedtime. 2. 1-2 hr before bedtime. 3. At bedtime. Each time, roughly 40-60 kcal.

Pine Cone (2014-02-13 09:30:07)

I tried 2 tsp of honey before bed two nights in a row. The first night I definitely 'felt' like I had deeper sleep, but it almost seemed like I was 'dreaming' that I was sleeping deeper. I've read many comments about increased dream activity, so maybe that make sense. I generally wake several times per night, this did not change with the honey either of the two nights. However, I've suspected for some time that I need a new mattress :) I use Sleep Cycle to track my sleep and per the app, my sleep DID improve... by 12 %. That's enough for me to keep at it. THE REASON FOR MY COMMENT TODAY, is that I've encountered another possible side effect, and I'm curious if it's been noted yet? The first morning after the honey, my resting heart rate was 49 bpm (usually in the 60 bpm range, sometimes higher), AND my blood pressure was WAY down (110/75). I've been wrestling with high blood pressure for months, in fact the previous day it was 160/89... typical. The second morning, my heart rate was in the 'normal' range for me (60 bpm) but my blood pressure was close to the same, 110/77. Possible caveat that I will test against, is that I also added red light exposure before bed in hopes of winding down... BUT I did expose myself to red light the night before... and the morning of the 160/89 reading. Any similar experiences with blood pressure??

## **Who Tests the Genetic Testers? And the Experts? (2014-01-15 05:00)**

In the New York Times, a writer named Kira Piekoff, a graduate student in Bioethics, tells how [1]she sent her blood to three different companies, including 23andMe, for genetic analysis and got back results that differed greatly. As usual, none of the companies told her anything about the error of measurement in their reports, judging from what she wrote. So she's naive and they're naive (or dishonest). Fine.

I'm unsurprised that a graduate student in bioethics has no understanding of measurement error. What's fascinating is that the experts she consulted didn't either, judging by what they said.

A medical ethicist named Arthur L. Caplan weighed in. He said:

The 'risk is in the eye of the beholder' standard is not going to work. We need to get some kind of agreement on what is high risk, medium risk and low risk. [Irrelevant – Seth] If you want to spend money wisely

to protect your health and you have a few hundred dollars, buy a scale, stand on it, and act accordingly.

As if blood sugar and blood pressure measurements aren't useful. [2]A good scale costs \$15.

A director of clinical genetics named Wendy Chung said:

Even if they are accurately looking at 5 percent of the attributable risk, they've ignored the vast majority of the other risk factors — the dark matter for genetics — because we as a scientific community haven't yet identified those risk factors.

She changed the subject.

J. Craig Venter, the famous gene sequencer, does not understand the issue:

Your results are not the least bit surprising. Anything short of sequencing is going to be short on accuracy — and even then, there's almost no comprehensive data sets to compare to.

The notion that "anything short of [complete] sequencing" cannot be helpful is absurd, if I understand what "short on accuracy" means. He reminds me of doctors who don't understand that a t test corrects for sample size. They believe any study with less than 100 subjects cannot be trusted.

I told a friend recently that I have become very afraid of doctors. For exactly the reason illustrated in these quotes, from well-known experts who are presumably much more competent than any doctor I am likely to see. The experts were unable to comment usefully on something as basic as measurement error. Failing to understand basics makes them easy marks – for drug companies, for example – just as the writer of the article was an easy mark for the experts, who managed to be quoted in the *Times*, making them appear competent. Surely almost any doctor will be worse.

1. <http://www.nytimes.com/2013/12/31/science/i-had-my-dna-picture-taken-with-varying-results.html>

2. <http://www.ikea.com/us/en/catalog/products/30190013/>

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dearieme (2014-01-15 07:29:12)

Dear God, I hate it when people chunter on about "risk factors" as if they were causes. Or even just features that make you more vulnerable to other causes.

Nancy Lebovitz (2014-01-15 09:40:12)

It seems to me that measurement error is only the start of the limits of DNA testing. There's no simple way to measure the limits of knowledge about the prevalence of diseases or the limits of current theories.

C.M. Mayo (2014-01-15 10:36:16)

Comments sections are just so perfect for tossing out frisbees of vocabulary. If one uses a highfalutin word, one surely must know what one is talking about. The Emperor has no clothes in all too many professions, not just medicine. But especially

medicine. (But don't get me started about investment banking.) Who tests the testers is a vital question. Re the tragedy of what happened in the state of Massachusetts with deliberately fudged lab tests that sent untold numbers of people to jail. Anyone who doesn't know about that, google and ye shall find. Seth: Yes, I linked to a story about the Massachusetts forensics tester who made up lab results. I wonder if better technical competence by the people who read her reports would have caught her fabrications much earlier.

libfree (2014-01-15 11:00:19)

23andme did give you those numbers but they also gave you the links to the research it was generated from and which gene it related to.

Nancy Lebovitz (2014-01-15 12:04:40)

Off-topic: I'd like it very much if you'd offer a longer list of recent comments- it's a way of letting discussions continue longer.

dearieme (2014-01-15 15:03:39)

Experts: 800,000 corpses is a lot. <http://www.forbes.com/sites/larryhusten/2014/01/15/medicine-or-mass-murder-guideline-based-on-discredited-research-may-have-caused-800000-deaths-in-europe-over-the-last-5-years/>

Sentinel (2014-01-15 16:34:34)

Ms. Peikoff (who I believe is the daughter of Leonard Peikoff, who was Ayn Rand's choice for heir to her estate -- interesting if not relevant) ran into the same problem I did with the Quicksilver Scientific Co. "mercury speciation" test -- New York does not allow these test kits to be mailed from New York to labs that are not certified according to some specific NYS standard. I am surprised she admitted that "my in-laws mailed it from their home in New Jersey." It seems New York is hostile to the concept of "health-test buyer beware," though in this context there may be something to that....

gwern (2014-01-16 13:11:01)

> They believe any study with less than 100 subjects cannot be trusted. I'd agree with them. See: publication bias, underpowering, winner's curse, base-rates, self-selection, internal vs external validity, assumption of normality and the central limit theorem. To name just a few reasons why small n studies, even if they have nice <0.05 p-values, are predictably untrustworthy.

Christian Kleineidam (2014-01-17 05:43:57)

A study can only be trusted if the participants are independent from each other. If you test Alice with SNP-detection chip X 100 times those 100 times aren't independent measurements. SNP-detection chip X might have a systematic bias. As far of the subject of what makes a good scale, I think these days a good scale should measure body fat. If you do spend money on an expensive scale like the Withings scale you also get pulse measurements in addition to weight and body fat data. Having the air CO2 and temperature data can also be useful. \_\_\_\_ Claiming that Wendy Chung changed the subject shows misunderstanding of how to read a newsarticle. Chung probably spend >10 minutes at the telephone or in person with the journalist of the article and during that time she said that sentence or something that the journalist considers to be equivalent to that sentence. Given that the sentence is true, it doesn't suggest that Wendy Chung said anything wrong. I also don't see any indication that the journalist who wrote the article is naive. She did what a good journalist is supposed to do. She investigated whether the 3 companies are going to report similar results. She might have already expected the result of the measurements but I commend a journalist who actually goes out and tests and then tells the readers about the experiment. She doesn't just tell readers about what the FDA has to say but she actually goes out and experiments and reports the results to the readers. Seth: She is naive because she failed to address the question of measurement error. The subject of the article. It isn't clear she even understands what it is. I agree that it is a good article, just for the reason you said. Sometimes naive people do good work.

## Donald Knuth and Dessert: A Heretic (2014-01-16 05:00)

I claim we eat dessert after dinner – separating high-sugar foods from other foods – so that we are more likely to get sugar near bedtime. We need sugar near bedtime to sleep well, I suspect. Donald Knuth, the computer scientist, [1]seems to disagree:

Donald Knuth came on time [to dinner at a Stanford dorm] and started his dinner with dessert. Only after he finished the cake he proceeded to the salad. He explained that order of courses by not being consistent.

Perhaps he's been reading Taleb, who stresses the value of randomness. I would have been more impressed had he eaten the cake at the same time as the rest of the meal.

1. <http://www.quora.com/Stanford-University/What-is-it-like-to-have-dinner-with-Donald-Knuth>

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Nancy Lebovitz (2014-01-16 05:03:49)

Non-obvious problems with randomized control trials <http://www.edge.org/response-detail/25497>

Mark (2014-01-16 06:56:26)

Ornish apparently doesn't know how to interpret an RCT (either that, or he's intentionally trying to mislead, which isn't out of the question since the WHI results didn't confirm his pet hypothesis). Seth: I think Ornish missed the real problem with RCTs. If you have to run a giant study to find an effect, it must be a weak effect. If you understand how something works, you will be able to find large effects. RCTs, as presently done, try to use large numbers to substitute for understanding – to cover up lack of understanding. It doesn't work.

Robbo (2014-01-16 09:26:21)

My understanding is that the old-fashioned way of serving a formal meal was service a la francaise, which was everything was served at once, starters, main courses and desserts. Diners ate their food in whatever order they liked. In the 1800's fashion changed to service a la russe, which is the service by courses we have now, which imposes a starter, main course, desert pattern

dearieme (2014-01-16 09:34:27)

There is still contention as to whether one should have cheese before or after dessert.

peter (2014-01-16 10:15:02)

i try to eat food in the order that it first digested. first fruit, second vegetables, third starches and last protein. if you eat fruit/dessert at the end of the meal it just sits on top of meat etc.. and ferments, causing gas and perhaps discomfort.

Mark (2014-01-16 14:35:24)

Actually, besides seeming to believe that a "significant" result indicates a "real finding" and that a "non-significant" result indicates no difference, I think Ornish's biggest misunderstanding is that RCTs are able to identify the biological efficacy of a treatment (i.e., how a treatment would work if used 100 % correctly). Most RCTs, including virtually every drug trial in which the patient has the option to adhere or not, cannot get directly at efficacy (no matter what their authors contend), they can only assess effectiveness... and, actually, they can only assess effectiveness of being randomized to receive one treatment

or the other. Thus, the WHI didn't provide any evidence that dietary changes didn't protect against heart disease or cancer, only that being randomized to a group that was instructed to make those changes didn't result in any appreciable differences. HUGE difference! Seth: Ornish is right that a system – ours – with heavy reliance on RCTs isn't working very well. But his ideas about what would work better are pure speculation. He is unaware of a better-working system.

Michael (2014-01-16 15:04:26)

I had a friend who'd always order and eat dessert before the rest of the meal. Sadly he died. He was the most fun person to eat out with as it often caused much confusion. Seth: This reminds me of my advice about how to give a talk: Make a blunder. Something that makes people laugh. Long ago you could put a slide in backwards. Now it is less clear how to do this.

Christian Kleineidam (2014-01-16 17:49:04)

I don't think that Taleb argues for randomness in a case like this. Taleb said much about the value of following traditions.

### **More on Government as Useful Irritant: Why Are Economists Stupid About Innovation? (2014-01-17 05:00)**

Martin Feldman, a Harvard professor of economics and former advisor to President Reagan, is [1]against a hike in the minimum wage. One of his arguments:

When low-skill labor becomes more expensive, employers have a greater incentive to mechanize or out-source their work.

He – like most economists – ignores the point that an increase in the minimum wage, by forcing employers to reexamine familiar practices, will increase innovation. (I have seen non-economists make this point.)

How you can hope to understand economics without understanding innovation is beyond me. I realize that economics is a job – that academic economists try to write papers that make incremental improvements in understanding and innovation is not always important. Yet the whole profession seems stuck in a world where it is okay to ignore innovation and okay to try to increase productivity yet not acknowledge that [2]productivity and innovation are often at odds. (For example, almost all foreign aid programs ignore innovation.) I have never heard or read an economist make this simple and obvious point. The situation reminds me of a friend of mine. When she was in first grade, she had a lot of pennies. Now and then she would spend some. She knew how to add but not subtract, so after she spent some she had to count them all again. At least she got the right answer eventually. Economists, not understanding the effect of Policy X on innovation, really cannot predict the effects of any policy that affects innovation.

It isn't just economists. Epidemiologists seem stuck in a world where it is okay to ignore the immune system. They act as if the immune system does not exist, except perhaps when someone asks them why smoking is so bad and they reply "maybe it reduces immune function". Statistics professors seem stuck in a world where it is okay to ignore the question of how to generate an idea worth testing, except to grant that making graphs is helpful.

Psychology professors, at least the ones who do experiments, are also stuck that world. With few exceptions, they have no idea how to generate ideas plausible enough to be worth testing. You can read a thousand psychology textbooks and ten thousand psychology papers and end up knowing no more about how to do that than when you started. It is a methodological question, yes, but maybe you have to be a psychology professor to grasp how disabling it is to not have a good way to generate ideas (ideas plausible enough to be worth the cost of testing). It is like having a car – psychology professors know a lot about how to do experiments to test ideas – but no fuel.

Something is making a lot of very smart very capable people ignore the obvious. I have a theory of why these vast

areas of ignorance – easily noticed, yet rarely acknowledged – exist. It is because science is slow and difficult and [3]in several ways incompatible with careerism. Science is innovation, careerism is productivity. You, a professional scientist, are trying to climb up a wall of rock (= discover stuff) but you have to lift your career at the same time. Really really hard. If you can pretend to climb, that's much easier. (My solution was to ignore my career, which [4]suffered great damage.) Distant observers, including granting agencies, university administrators, [5]journalists and the general public, have a hard time telling the difference between real climbing and pretend climbing.

1. <http://www.higherwages.org/opinion/a-hype-free-way-to-help-low-wage-workers/>

2. <http://blog.sethroberts.net/2013/12/06/government-as-useful-irritant-and-rules-of-innovation-what-libertarians-and-other-economists-miss/>

3. <http://media.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

4. [http://blog.sethroberts.net/?attachment\\_id=12883](http://blog.sethroberts.net/?attachment_id=12883)

5. <http://www.theatlantic.com/magazine/archive/2014/01/when-will-genomics-cure-cancer/355739/>

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Brandon Berg (2014-01-17 05:21:23)

The problem is that innovation to solve an artificial problem (such as unskilled labor being too expensive because of government fiat) is often wasteful. If the government passed a regulation requiring all manufacturing workers to work with their dominant arms tied behind their backs, you'd see a lot of innovation in the field of one-armed manufacturing processes, and this would substantially mitigate the harm caused by the new regulation. But the new equilibrium would almost certainly have lower total productivity. You can make an argument from complacency, i.e. that employers don't bother innovating when the status quo is good enough, and the supply shock caused by a higher minimum wage would wake them from their complacency and spur them to innovate in ways that would result in a more productive equilibrium. Maybe that's true, and maybe it's not, but it's not at all obvious, especially since many low-wage industries are highly competitive and unlikely to encourage complacency. And this argument for a higher minimum wage becomes an argument for any kind of negative supply shock. Seth: Of course innovation is "wasteful". We need such waste. It is inevitable. It is the price you pay for innovation. Thorstein Veblen made exactly the same mistake over and over and over. Complaining about wasteful decorations, for example. He failed to see the value of "useless" decoration and could do nothing but make fun of it. It was a serious limitation of his understanding. I agree that innovation is never obvious – it is never obvious that Change X will produce innovation.

August (2014-01-17 07:46:37)

There are economists talking about innovation, but they are talking about intellectual property and how your useful irritant is strangling innovation. When economists talk about minimum wage laws they usually talk about the poor people who are being screwed in the name of helping poor people. The irritant frames the debate, so to speak.

jon (2014-01-17 08:41:00)

The previous comments say it well. Like all government programs, the stated goal is one thing but the outcome is another thing which creates more "need" for more regulation rather than just remove the old regulation that caused the problem in the first place. It is more about controlling other people than anything else, power hunger.

Portlander (2014-01-17 10:11:04)

I'm completely convinced economists, in particular, are so stupid because they are so obviously lying. It is a one party system (Keynesian) used to give a cover story so that bankers and govt can rip-off the productivity of the middle class. To sell a pack of lies takes some effort and is inevitably going to have some contradictions to deal with. Trying to paper over those contradictions with yet more lies is going to make one sound stupid. If your job was to defend pre-Copernican astronomy, you'd sound



stupid too. Also, it's interesting you mention innovation because the 20th century had massive innovation which should have made the middle class incredibly, almost unimaginably wealthier. There's no denying in a lot of ways it has, however, in quite a few others and relative to those in the banking and govt classes, it's been a disaster. The reason is, the system has been set up to skim a large part of the wealth generated by innovation to the banking and govt classes. They control the money supply and get first dibs on it. This is all well-known, but there's a series of institutional lies used to justify it. Nowadays almost anyone that questions it is lampooned and dismissed, without even honest debate of the merits. It's treated like questioning the lipid theory of heart disease some 20 years ago. Anyone attempting that case would be labelled a kook and completely ignored by those that owned the megaphone and set the agenda. The internet has broken their monopoly on the megaphone, but they are still maintaining their grip on the real financial power. They've set up the system to have too much divide and conquer for dissenting voices.

jon (2014-01-17 10:31:31)

Coyote blog does a good job explaining why looking at the bare numbers of unemployment after a minimum wage hike doesn't make sense. Basically, he talks about how businesses plan ahead and cut jobs/hours months before the actual implementation of the minimum wage (since they are announced well in advance). Also, that only 3 % of workers work at minimum wage, so, if the minimum wage lowers employment by 10 % of those 3 % of workers, that is not that much. [http://www.coyoteblog.com/coyote\\_blog/2014/01/this-just-in-demand-curves-slope-down.html](http://www.coyoteblog.com/coyote_blog/2014/01/this-just-in-demand-curves-slope-down.html)

Daniel (2014-01-17 10:34:51)

I would like to see more differentiation between useful and useless or wasteful irritants. Let's frame this problem as an optimization problem, i.e. always looking for the highest mountain in a given map. It's very easy to find a local optimum: just always move upwards. But you get stuck at local optima very easily. Now you can throw an "irritant" at the system, i.e. move randomly downwards sometimes. This might lead you to discover a higher optimal point at another place on the map. In optimization theory people spend a lot of time tweeking these sorts of problems: how often should I move downhill, what should my step size be, and so on. (They will use different methods from this simple search, also, of course.) If you move downwards to little, it does nothing to find a new optimum. If you move downwards to fast or to often, you might not even find an optimum. It all depends on the structure landscape. If we assume for there to be just one optimum, all we need is productivity methods, i.e. moving upwards the hill. So, the relevant questions are: - Do we assume that there are not enough irritants already? - If it is, is the probability to small or is the step size to little? The minimum wage or any other of your given strategies might well be the wrong perscription. You might increase the frequency of irritants, when you "should" be adding magnitude, or you might add irritants to an overirritated system. These conditions should be elaborated quite a bit. Sounds interesting, though. Seth: I agree. It would be helpful to look at examples of each (government stifling innovation, government causing innovation) to see if there was a way of distinguishing the two. However one way that governments create innovation is that they disgust/mistreat people so much that they leave - move to America, for example. No one will ever argue that governments should mistreat people, yet in the past that really has increased innovation.

dearieme (2014-01-18 04:45:20)

A profession that busies itself in writing footnotes to Smith, Ricardo and Keynes may simply not understand what innovation is.

Paul (2014-01-18 09:33:31)

Yeah, remember how, when we had a high minimum wage like in the 60s, it created mass unemployment? Me neither. Just like with capital gains tax, there's a record of policy implementation here that the libertarian types in this comment section steadfastly ignore. Seth: I am puzzled that Australia, with a high minimum wage and exceptions for teenagers, is ignored.

MJB (2014-01-18 11:36:37)

Do successful anti-smoking campaigns reduce the population's level of intelligence? Other researchers point out the positive impact of smoking on the major advances and artistic creativity that have taken place in Europe and the U.S. over the last few centuries. A large number of writers and artists have been known as a passionate smokers, and geniuses like Niels Bohr and Albert Einstein have praised tobacco positive effect on their thinking. The English psychology professor Bruce Charlton asks

on his blog ; "Are we sacrificing genius and great inventions with anti-smoking campaigns in favor of longevity?" His answer: Maybe ... <http://www.sott.net/article/269265-Brain-Researchers-Smoking-increases-intelligence>

jon (2014-01-22 10:47:33)

I think saying government interventions are good because it causes innovations is a similar argument to the proverbial "broken window" fallacy. Yes, breaking the window will make the shop owner buy a new one (and maybe one that is shatter proof) but it will also cause the shop owner from putting the money towards something that could be even more innovative and useful that more people would rather enjoy. If it wasn't for all the government "irritants" maybe we would be putting that money to more interesting projects and maybe we would be flying places instead of driving or maybe we would be living on Mars by now. Seth: I'm not saying ALL government intervention is good. I'm saying the effect of government intervention is more complicated than what libertarians have said and more complicated than what other economists have said – because all of them (libertarian and non-libertarian) ignore the effects on innovation. In general, economists ignore innovation. They advocate this or that policy without grasping even a little what the effects on innovation will be.

### Assorted Links (2014-01-18 05:00)

- [1]Dangers of Splenda. Never use it in baked goods.
- [2]Overdiagnosis of attention deficit disorder. "So many medical professionals benefit from overprescribing that it is difficult to find a neutral source of information. . . .  
The F.D.A. has cited every major A.D.H.D. drug, including the stimulants Adderall, Concerta, Focalin and Vyvanse, for false and misleading advertising since 2000, some of them multiple times."
- [3]David Suzuki, prominent environmentalist, former genetics professor, founder of the David Suzuki Foundation, once voted the greatest living Canadian, [4]is asked a question about climate change that turns out to be surprisingly hard.
- [5]Confucius Peace Prize. Awarded to Putin because Russia [6]makes China look good?
- [7]Top 10 retractions of 2013. There is a website for retractions ([8]Retraction Watch) but no website for discoveries that could have been made but weren't, except maybe this blog. I'm not joking. I am far more alarmed by lack of progress than retractions.

Thanks to Dave Lull.

1. <http://www.greenmedinfo.com/blog/sucraloses-splenda-harms-vastly-underestimated-baking-releases-dioxin>
2. <http://www.nytimes.com/2013/12/19/opinion/an-epidemic-of-attention-deficit-disorder.html>
3. [http://en.wikipedia.org/wiki/David\\_Suzuki](http://en.wikipedia.org/wiki/David_Suzuki)
4. <http://www.youtube.com/watch?v=Z4SaIFsyxgA>
5. [http://en.wikipedia.org/wiki/Confucius\\_Peace\\_Prize](http://en.wikipedia.org/wiki/Confucius_Peace_Prize)
6. [http://www.americanthinker.com/2013/12/russias\\_great\\_stagnation.html](http://www.americanthinker.com/2013/12/russias_great_stagnation.html)
7. <http://www.the-scientist.com/?articles.view/articleNo/38743/title/Top-10-Retractions-of-2013/>
8. <http://retractionwatch.com/>

jtw (2014-01-18 08:47:38)

Seth, I am unfamiliar with David Suzuki or with the details of climate science. So I watched the clip naively. I thought he didn't have any trouble answering the question: there is warming. He referenced the IPCC report. One of the first figures in the 2007 report is this one: <http://www.ipcc.ch/graphics/syr/fig1-1.jpg>. This shows a warming trend. How else should he have answered?

as (2014-01-18 08:58:39)

Top Ten Retractions: I found it hard to understand exactly what was retracted. An Indian guy faked data for his PhD. Indian people cheat a lot.

Joe (2014-01-18 10:10:10)

David Suzuki...the greatest living Canadian? Harump. EVERYONE knows that's Gordie Howe! To jtw: Check out this web site: <http://www.climatedepot.com/> No warming for almost 17 years. Which is why the warmists are busy looking for explanations.

JV (2014-01-18 10:11:59)

Scary facts about Splenda but can't say I'm all that surprised. And interesting the effects on gut flora is so bad. Have avoided all of these artificial sweeteners as much as possible, kind of assuming we weren't getting the whole story from manufacturers. But it's scary how many people consume them believing they are safe.

shtove (2014-01-18 13:02:50)

Hoax article in the retraction list: <http://retractionwatch.com/2013/09/23/a-serbian-sokal-authors-spoof-pub-with-ron-jeremy-and-michael-jackson-references/>

jtw (2014-01-18 18:01:00)

Joe: the graph at the link you supply that purports to show no warming comes from the not-very-credible-seeming Lord Monckton Foundation with no attribution or explanation.

dearieme (2014-01-18 18:14:44)

Suzuki's answer was woefully ignorant. If he really doesn't know the names of the main sources of the temperature records he should be thoroughly ashamed of himself. It was also disingenuous; it of course does not refute the proposition that a warming trend has been replaced by a flat trend to say that the last few years include the ten warmest, since that's what you would expect from a flat trend, or even from the start of a cyclical decline. It's hard to believe that anyone with a background in science could make that mistake honestly.

MJB (2014-01-18 20:07:37)

Here is Jo Nova's take on Suzuki (with 568 comments!): David Suzuki's performance on Q & A last night was extraordinary. I was knock-me-over amazed that he has not heard of UAH, GISS, HADcrut and RSS, and knew nothing of the pause in global surface temperatures that even the UK Met Office and IPCC lead author climate scientists like Hans von Storch are discussing. How afraid is Suzuki about man-made global warming? So afraid, it doesn't occur to him to check the data, incredibly he doesn't even know what the data is. Tony Jones had to rephrase the questions to explain them to Suzuki, who doesn't even understand them. How much is his reputation as a scientist worth when he doesn't even bother to check the evidence for a cause he stakes his reputation on? Three times in Q & A he admitted he didn't know — he didn't know there was a pause in warming for the last 15 years, he didn't know how global temperatures are measured, and he didn't know that cyclones were not increasing over the Great Barrier Reef. He wants politicians jailed for "denying the science". "You bet!" he exclaims, but then admits he hasn't thought that through either. <http://joannenova.com.au/2013/09/david-suzuki-bombs-on-qa-knows-nothing-about-the-climate/>

dearieme (2014-01-19 04:54:47)

Here's another interesting one, Seth <http://www.theguardian.com/books/2014/jan/19/lewis-wolpert-sorry-using-others-work> What do you make of his excuse "When downloading material from the internet as part of my research, and coming back to

it after a gap of maybe weeks or sometimes months, I simply did not recall that I had not written these passages myself.”? It strikes me that his own writing must lack character if he can confuse it with bits and bobs cribbed from the literature. I used to think that the old-fart scientists who were automatically suspicious of fellow scientists who sought popularity and large circulations were being dog-in-the-manger. Now I'm less sure. Seth: I ignore Wolpert's excuse. Maybe he paid someone to write it. Who knows. My experience is that when scientists write for a large audience they are as good or as bad as when they write for fellow scientists. For large audiences, Hans Eysenck and Richard Herrnstein wrote badly. For fellow scientists, they also wrote badly. On the other side, Leon Kamin and Ben Williams wrote well for both audiences. So I see nothing wrong with writing for a large audience. Good scientists do it well, bad scientists don't. There may be something to the idea that a certain deep dishonesty is behind some popular science writing by scientists – a willingness to say things are simpler than you know they are.

dearieme (2014-01-19 07:37:26)

Ahoy, Seth. Your sort of thing? [http://www.theguardian.com/science/2014/jan/19/mathematics-of-happiness-debunked-nick-brown?CMP=tw\\_t\\_gu](http://www.theguardian.com/science/2014/jan/19/mathematics-of-happiness-debunked-nick-brown?CMP=tw_t_gu) (H/T Bishop Hill) Seth: I am sort of on Fredrickson's side. She didn't understand the math. In psychology theories rarely matter. The math was theory. It is not wildly different from pointing out a spelling or grammar mistake if you realize how little theories matter.

Joe (2014-01-19 10:03:25)

jtwt: "the graph at the link you supply that purports to show no warming comes from the not-very-credible-seeming Lord Monckton Foundation with no attribution or explanation." Why does the Lord Monckton Foundation seem "not-very-credible"? As someone who claims to be unfamiliar with climate details, are you really in the best position to make that judgement? Additionally, Monckton is using data from RSS, the same data that's often used by the IPCC. That is, it's not his data. It's available to just about anyone who's interested. Moreover, the IPCC itself ACKNOWLEDGES there has been no warming for 17 years: "IPCC Head Rajendra Pachauri Acknowledges 17 Year Stall In Global Warming" <http://canadianawareness.org/2013/02/ipcc-head-rajendra-pachauri-acknowledges-17-year-stall-in-global-warming/> Suzuki should have known about this, no? If you spend some time on that web site, you'll learn far more about climate science than you will ever learn by reading, say, the NYT. And if you want to ask specific questions, feel free to join in the conversations on this web site: Watt's Up With That <http://wattsupwiththat.com/>

donny (2014-01-19 10:50:53)

Will splenda affect the palatability of the food that rodents eat? Studies where sweetener is added to the diet are problematic. If it affects either the quantity of food eaten, or the meal pattern (continuous nibbling vs. discreet meals, light cycle eating vs night cycle eating) then gut bacteria could be affected through the sweetness—and you'd expect to be able to find all sorts of poor results with sweetened foods—no matter what the sweetener. This would apply to cancer as well, when given with food—increased chow intake or a disordered meal pattern can worsen cancer. There are all kinds of bitter substances that seem to have beneficial effects, as well... Stephan Guyenet once suggested to me in his comment section that the bitterness might be affecting consumption, and as often be what leads to a good result, rather than some more complicated explanation.

Jonathan Graehl (2014-01-22 16:24:55)

<http://thephysicspolice.blogspot.com/2013/12/baking-with-splenda.html> "The results clearly show that overall, the same (or fewer!) dl-PCBs were produced with the addition of sucralose, whereas a different organochlorine molecule (1,3-DCP) did cause higher dl-PCBs. This demonstrates that knowing a molecule is an organochlorine does not imply it will necessarily result in elevated dl-PCBs as a byproduct of cooking."

## **Journal of Personal Science: Baby Shampoo Cured My Sinusitis (2014-01-19 05:00)**

by Bill Mitchell

Chronic right-side sinusitis came as a shock in November 2008, at age 42. For weeks both sides (left and right) were blocked. I lost my sense of smell even after my left sinus cleared. An incapacitating headache lasted months. My right sinus was often totally blocked. I had previously been in very good health. I had never been to a hospital, never taken medication, no drugs, slender, athletic, normal blood sugar and pressure, no dental fillings, etc. Some hay fever, but no other allergies.

The breakthrough was finding out about baby shampoo. In less than a week of shampooing my nose, a six-month headache was gone. It recurred occasionally until I fixed environmental causes. I tried many things, but the two that mattered were replacing the household carpet and vacuuming my mattress every couple of weeks. A couple of years later, my sense of smell returned. When you regain a sense you thought was lost forever, you appreciate even the stinkiest odors!

I found out about the use of baby shampoo to treat sinusitis from the website of a UCSD professor of medicine named Terence Davidson, who died recently. [Use of baby shampoo to treat sinusitis seems to have been recently [1]rediscovered by an Omaha journalist named Michah Mertes.] The website no longer exists, but is [2]archived in the Wayback Machine. The Wayback Machine shows that Dr. Davidson added mention of shampoo in summer of 2008, but by the summer of 2009 had removed it. Why remove mention of the only treatment that seemed to matter?

Sinusitis treatment in the U.S. is doubly silly. First, nearly all chronic sinusitis is fungal (said the Mayo Clinic in 1999), yet antibiotics are universally prescribed, with no effect on the primary infection. Second, no one ever looks for environmental causes.

#### **Things that didn't help:**

- Consulted five doctors: family GP, two urgent care, one internist, one ENT [ear nose throat]. None explored environmental causes.
- X-ray ordered by internist. Found a blob in the right sinus; ordered antibiotics, which had no effect.
- Scoped by ENT doctor. He viewed only the left sinus, because the right (the one with the problem) was too narrow to get the instrument in. Pronouncing the left side normal, he prescribed steroids, which had no effect.
- Medications prescribed in various combinations by all five docs, to no avail: antibiotics, Claritin, Sudafed, steroid inhalers, Nasonex, pain relievers.
- In my home, I sprayed bleach solution onto a small patch of mold found under my bedroom carpet.
- Replaced a leaky shower stall and mushy floorboards that had caused the mold.
- Hired an environmental consultant to look for mold in HVAC system. Found none.
- Had all acoustic ceilings removed, as they had been raining fine dust.

#### **Things that helped slightly:**

- Sinus rinse with saline alone. Has worked well for daily "maintenance," but when trying fix the headache and closed sinus, was like chipping at an iceberg with an icepick.
- Sinus rinse laced with topical antibiotic (obtained under prescription, at my request, from a doctor friend who saw no harm in it – purchased pre-mixed in saline solution, from a compounding pharmacy). Not obviously better than rinse alone.

- Sinus rinse laced with topical antibiotics, administered with my head upside-down, and left to steep in the sinuses for 20 minutes. My idea here was to use the antibiotics in part to prevent the side effect of an ear infection, since some water might go into the ears when re-inverting. No ear infection, but not much sinus relief either.

### Things that obviously worked:

- Reading about and treating biofilms with surfactants. This was a breakthrough.
  - Shampoo-laced sinus rinse was the first real success.
  - Repeated shampoo rinse, at intervals of 30 to 60 minutes. My idea was to let the surfactant break things up, then wash again while everything was wet and loose. This was much more effective than just once a day.
  - Simplest setup: I use a Neilmed squeeze bottle and salt packets (avail in supermarkets), mixed with tap water. I use tap because I trust that our city water is clean and chlorinated. I do not use warm tap water, because water heaters are supposedly bacteria farms. I use almost a teaspoon of Johnson's baby shampoo in 16 oz. of water. Using this much is painful – stings the nasal passage. Recently I learned that someone else gets the same relief, and no pain, using only a few drops of shampoo.
- Became more aware of a "sinus closing down" feeling. After a few months of relief, I could more keenly sense when my sinus would begin closing/inflaming/whatever, usually in response to dust exposure at home. This feeling could be used as a signal to decide what to fix next. Examples:
  - When sinuses closed, e.g. while kicking up dust cleaning the garage, I tried putting on a HEPA-filtered painter's mask (bought at Ace Hardware), to verify that sinuses promptly opened back up again. They did.
  - Purchased a highly-rated (per Consumer Reports) bagged vacuum cleaner. I suspect that cheap bagless vacuums (anything you buy at Target) silt up immediately, then simply blow dust around the house. So my sinus tells me.
  - Replaced the carpet, and vacuumed up the thick layer of dust beneath the carpet. Have not had a serious sinusitis recurrence since doing this.
  - Began vacuuming my mattress every two weeks. Probably should replace it: even now, I can feel my right sinus start to close after a few weeks if I don't vacuum it.
  - My sofa is a dust trap. I can feel it. Vacuuming doesn't help – it's on the replace-soon list, but I can afford to wait because things are under control now.

### Possibly interesting endnotes:

- At age 45, I got my first cavity. Dentist said this was unheard of: you either get cavities before age 25, or never. Cavity immunity is hereditary; neither my father nor his father ever had any; my siblings have none, except for a few my brother got after radiation treatment for cancer. My own unusual cavity occurred in the right maxillary first molar – a tooth whose root reaches up into my troubled right sinus. I mentioned to the dentist that it seemed interesting that this cavity, which he considered so unusual, should occur in the same location, at almost the same time, as the only other medical problem I've ever had. He said there was no connection, and, sounding a little bored, changed the subject.
- My right nasolacrimal duct is now wider than before – air escapes from beneath my right eyelid when I sneeze. Seems benign. Amuse your friends, loads of laughs.

- Warning on ear aches: nasal irrigation with too much pressure, or laying down on your side too soon after nasal irrigation, can let water drain into the middle ear, causing ear aches. I read the warnings and was careful, but still had this problem a few times. It was a small price to pay.
- I tell other sinus sufferers how well this worked for me, but it's hard to get anyone to try. Either they are grossed out by the process (understandable), or they have read the scare stories about fatal amoebic infections after sinus rinsing with bad tap water. These cases are extremely rare, and I believe all occurred when using untreated water in hot, humid climates. But the phrase "brain-eating amoeba" sure resonates – no one wants to try it.

### Possible origins of my sinusitis:

- 3-week visit to the Philippines a year earlier (no obvious infection).
- 1-week camping trip in the Sierras 6 months earlier (no obvious infection).
- Exposure to smoke from the [3]Freeway Complex Fire, the 4th largest fire in Orange County history, which partially burned a landfill, i.e. potential random toxicity. The sinusitis and headaches began within days after the fire; however, I was 10 miles downwind – pretty far.
- 1-month stay in someone else's house in December 2008, where the central heater was later found to be leaking a trace amount of carbon monoxide. This was concurrent with the worst of the sinusitis, but it did not get better when I went back to my own home. My family stayed in the same house, with no ill effect.
- In recent years, eating crappy batter-fried restaurant food increasingly causes strange nose/throat effects, such as wheezing and temporary sinus blockage. Fried chicken at Knott's Berry Farm is the worst – instant shortness of breath. I can think of no reason this should happen, but there it is.

### More

Remember how baby shampoo disappeared from the UCSD prof's website? Something similar happened at NeilMed's website, and the reason may be a nasty side effect. [4]This post says some people lost their sense of smell after using Neilmed's surfactant additive. Neilmed makes my favorite sinus rinse product, which uses a squeeze bottle instead of gravity feed. A few years ago they briefly began selling a surfactant additive, but then pulled it off the market, and now have only [5]an undated post saying the re-release is 2 to 3 years away. Maybe risk of side effects is why the UCSD guy removed it.

1. <http://www.omaha.com/article/20131204/LIVEWELL01/131209603/1685>
2. <https://web.archive.org/web/20090309103134/http://drdavidson.ucsd.edu/Portals/0/nasal.htm#Johnson>
3. [http://en.wikipedia.org/wiki/Freeway\\_Complex\\_Fire](http://en.wikipedia.org/wiki/Freeway_Complex_Fire)
4. <http://www.texassinuscenter.com/blog/11-07-11/neilmeds-sinusurf-additive-causes-loss-sense-smell>
5. <http://www.neilmed.com/ask/index.php?article&qid=1608>

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Cathy (2014-01-19 06:50:57)

Very interesting! First off, using baby shampoo sounds plausible, but once a hairdresser told me that any shampoo that has anti-tear properties is very harsh. Could other "basic" shampoos be as effective? I admit that it is extremely difficult to find a 'normal' plain shampoo. I have recently taken up drinking plain, warm water. It makes sense that water heaters are "bacteria

farms” as they tend to stay warm for a good part of the time. I enjoy warm water because I think it tastes differently from just tap cold or refrigerated water. I can change that I'm not picky. Interesting observations about battered fast food. Whenever my husband eats fast food battered or otherwise, he gets a fair amount of mucousy congestion (coughing, throat clearing) almost immediately! He knows there is a correlation, too. He has also suffered from mild asthma his whole life. I wonder if the asthma symptoms have other causes than what he thinks like cats etc? Since he likes the crispy chicken sandwiches but doesn't always eat them, I peg the oil used to prepare French fries and other deep fried stuff even if it isn't breaded. I don't trust these places not to use the same oil for cooking multiple items.

Alex J (2014-01-19 07:13:06)

Fascinating, thanks for sharing. Now we just need someone to pioneer the first snout transplant.

peter (2014-01-19 11:32:43)

you can buy Hypoallergenic Mattress Protector , and do the same for your pillows, so you don't have to vacuum the mattress.

Evelyn M. (2014-01-19 14:19:31)

Some years back I suffered from eczema on my eyelids that persisted and persisted. I knew if I saw a dermatologist I would be given a steroid and did not want something that serious near my eyes - so stayed far away from the medical profession, except the medical literature. One source - a Mayo Clinic document - suggested using baby shampoo full strength on the eyelids twice a day. It worked amazingly well - after about 18 months of disfiguring and painful eyelids the baby shampoo cleared it up in less than a week. Hasn't returned since (knocking on wood).

Laurel (2014-01-19 15:07:15)

Interesting article. I think the literature does use J & J Baby Shampoo. Recently, the company is replacing the old formula with one that doesn't have formaldehyde (supposed to hit the stores in the near future). Any recommendations for other baby shampoos for the sinus rinse that are equally effective without formaldehyde? Also, given that biofilms are the problem in sinusitis, and the surfactants in the detergents are the solution to breaking down the solution, what are the active ingredients that we should be looking for when selecting a proper baby shampoo for this rinse?

Kathy (2014-01-19 15:22:24)

It's no surprise that your dentist would not confirm your correlation - I would not be surprised if they are taught in dental school to deny, deny, deny! The differing metals in the typical amalgam filling constitute a battery, with saliva as electrolyte. So you might be able to get a lasting solution with the right dental work - I recommend Dr. Hal Huggins'-trained dentists (he has a website and contact number). My dental revision is making a huge difference for me!

Portlander (2014-01-19 18:41:23)

Which came first, cavity or sinusitis?

Bill (2014-01-19 20:33:48)

Sinusitis, by about 3 years, unless a cavity had gone undetected in prior dental visits.

Jason H (2014-01-20 09:37:45)

My wife and I usually have major sinus issues from Nov to March each year. This involves sinus rinses multiple times per week, Vaporub at night + a humidifier and taking the occasional decongestant. This fall I ran into a blog (can't remember where) that recommended drinking a Tbsp of unpasteurized apple cider vinegar before bed. We only do this every other day or so and we dilute it with half a glass of water (I can't image drinking it straight). The results have been shockingly awesome. I haven't done a single rinse, the humidifier is still stashed away in a corner somewhere and I haven't purchased any decons. We've experimented with skipping a 3-4 days and we both start to get a little clogged up. Seth: That's interesting, especially since Japanese and Koreans drink vinegar drinks - for example, pomegranate vinegar. I like them and drink them too. There is about 1 tablespoon of vinegar in each drink.



Bill Counselman (2014-01-20 12:01:00)

I have suffered sinus congestion for 30 years, trying everything from inhalers- effective for 12 hours-then no nose breathing whatsoever- and addictive; Pseudoephedrine- ineffective- and raised BP; steroids- ineffective; nasal antihistamine spray and pills- ineffective; months long series of allergy injections- so far no result; double dose of amoxicelien for the tooth-no change. A recent continuing sinus infection was surely caused by a right maxillary first molar infection which had an, apparently unsuccessful, root canal in 2011. I had it removed a week ago (leaving a hole the "size of a nickel" into my sinus cavity which had to be stitched up) but my right nostril is still partially blocked. I have been using a neti pot which helps for a while. I am considering breathing steaming water with a few drops of tea tree oil because of its antibiotic, and hopefully anti-fungal properties after seeing a 'Dr. Oz' program touting oregano oil for the same reasons. I would hesitate to sinus rinse with any commercial shampoo because of the many GRAS chemicals which I DO NOT RECOGNIZE AS SAFE and do not use. Remember that chemicals are easily absorbed through the skin and mucus membranes. My weak Delta Dental plan does not cover tooth implants, very little toward the cost of the Periodontists' tooth extraction fee, and of course nothing toward 'silver amalgam' (Wikipedia: "It commonly consists of mercury (50 %), silver ( 22-32 % ), tin ( 14 %)" tooth filling removal. Seth: I have Delta Dental and it covered about half the cost of my "silver amalgam" removal. Contact Sandor Hites, my dentist in Berkeley, to find out how this is done. About your sinus congestion: Have you considered the possibility that it is due to an allergy?

Portlander (2014-01-20 12:13:43)

Thanks Bill, that's what I thought but Kathy's comment seemed to imply (at least to me) she thought it went the other way. Re-reading your story I didn't see it clearly mentioned so I thought I would ask. MD's & antibiotics are like the old saying about hammers – when one's only tool is a hammer, every problem looks like a nail. Great story, and thanks for sharing. I've filed this away in my long-term memory. :)

Seth Roberts (2014-01-20 15:41:45)

"MD's & antibiotics are like the old saying about hammers — when one's only tool is a hammer, every problem looks like a nail." How true.

Bill (2014-01-20 22:26:55)

"Remember that chemicals are easily absorbed through the skin and mucus membranes." This is a good point. I use J & J baby shampoo, because it was (briefly) recommended by the UCSD researcher. Obviously it was designed to be non-irritating – "no more tears" – but as another commenter mentioned, until recently it contained quaternium-15, which breaks down over time into formaldehyde. J & J claimed in a Time interview that one apple contains more formaldehyde than 14 bottles of shampoo... <http://ideas.time.com/2012/08/22/the-real-lesson-of-formaldehyde-in-baby-shampoo/> ...yet they changed the formula this month to eliminate quaternium. <http://www.theverge.com/2014/1/18/5322990/johnson-johnson-drops-formaldehyde-from-baby-shampoo> To reduce the unknowns, if anyone can suggest a simpler product, the simplest possible surfactant that does not irritate mucous membranes, that would be helpful.

Can self treatment be useful? | Fratrik's Blog (2014-01-21 14:36:53)

[...] it is clear that conventional medicine did nothing for Bill Mitchell and his solution [...]

tom (2014-01-21 17:34:56)

You should check out <http://drellie.com> . She says cavities are caused by the wrong bacteria in your mouth making acid or acidic foods, and suggests using 3 different common mouthwashes, the original crest, and xylitol to reduce it, and it seems to work for me. I even have a xylitol nasal spray, but I haven't tried it. I had gotten a lot of cavities lately and I'm in my upper 40s. I also have this weird inflamed feeling in the base of my nostrils when I'm hungry. And I have some stomach gastritis, but my dr said 'everybody has that'. But I think my better mouth state helps everything else.

Sean Murphy (2014-01-22 13:36:44)

When I was younger and even into my 30;s I had sinus trouble and ear infections frequently. In the last decade or so I take

N-Acetyl-Cysteine (NAC) 500mg morning and noon and xylitol (4 grams or so morning and evening). You can buy xylitol in bulk (e.g. 1-2kg bag) and get enough for 4-6 months. Theories, NAC thins mucous keeps flowing, xylitol breaks down bio-film and has a specific anti-bacterial effect (confused with sugar but not digestible by them). Two more things to consider stirring into the mix.

Sam (2014-02-07 16:30:24)

I haven't heard of the Baby shampoo treatment. I had really bad sinus trouble and heard from Jerry Pournelle that a SinuPulse would help. I bought one and used it with salt water for a couple of years almost every day. It helped but what worked best and finally stopped my sinus was using sea salt, a pinch of baking soda, a couple drops of Lugal's solution and a 1/2 teaspoon of H<sub>2</sub>O<sub>2</sub> in the sinupulse for wash. Now I still use it but infrequently as my sinus problems are not near as bad. The sinupulse is expensive but worth it if you have sinus as bad as I had. There's two different kinds. One has a round tank. My round one stopped working in about a year. The other has a square tank and I still have it. It's lasted longer. Of course the square tank cost more. I think the square one is called a SinuPulse Elite. I have no financial interest in SinuPulse. Just have used their products. I also would not use the dial valve that lowers the flow. I believe that it puts more pressure on the pump. If the flow is too much don't press so hard against the nostril and let a little of the flow escape.

Sam (2014-02-07 16:30:56)

Forgot I added xylitol to the wash also.

Sam (2014-02-07 16:48:04)

One last thing. Twenty Mule Team Borax I bet would work better than baby shampoo. Borax is anti-fungal. Borax is also used to treat logs in log cabins but as borate but I believe it's the element boron that causes the effect.

Alain (2014-02-08 08:14:14)

Humming cures chronic sinusitis by increasing nasal gaseous Nitric Oxide (NO) -a natural antifungal- and it is actually free. Relevant studies: Strong humming for one hour daily to terminate chronic rhinosinusitis in four days: a case report and hypothesis for action by stimulation of endogenous nasal nitric oxide production. <http://www.ncbi.nlm.nih.gov/pubmed/16406689> Humming-induced release of nasal nitric oxide for assessment of sinus obstruction in allergic rhinitis: pilot study. <http://www.ncbi.nlm.nih.gov/pubmed/15305890> Humming greatly increases nasal nitric oxide. <http://www.ncbi.nlm.nih.gov/pubmed/12119224>

Carol (2014-02-08 15:35:52)

I had terrible sinus problems in high school - sinusitis, polyps. Eventually, my sense of smell was gone. Multiple visits to my ENT got me nowhere. Finally, in my late 20s, I started rinsing with a very strong saline solution (using an enema bag). Worked like a charm! My sense of smell, which had been mostly non-existent for 10 years, returned and has been with me now for over 20 years. No maintenance rinsing has been needed. The nice things about using the enema bag were that 1) the force was very easily controlled by my grip on the tube, and 2) those bags hold much more water than any neti pot or squeeze bottle.

daz (2014-02-09 18:31:22)

using an "enema bag"...now there's a good idea i'll have to go in search of a cheap 'bag' device myself now. i have used a netti type bottle and a smallish squeezable bottle in the past, & was looking for a better option without forking out loads of \$ \$ on some fancy powered machine

## **Who Will Make the Future Better than the Past? Professors or the Rest of Us? (2014-01-20 05:00)**

Stephen Hsu, who has [1]an excellent blog, recently became Vice President for Research and Graduate Studies at Michigan State University. Before that, he was a professor of physics. At a dinner for faculty promoted to full professor, [2]he said:

When an attorney prepares a case it is for her client. When a Google engineer develops a new algorithm, it is for Google – for money. Fewer than one in a thousand individuals in our society has the privilege, the freedom, to pursue *their own* ideas and creations. The vast majority of such people are at research universities. A smaller number are at think tanks or national labs, but most are professors like yourselves. It is you who will make the future better than the past; who will bring new wonders into existence.

In this blog, in thousands of posts, I have argued a much different view: everyone can make the future better than the past in the way Stephen is talking about, by adding to our understanding. In particular, anyone – not just professional researchers, such as professors at research universities – can increase our understanding of how to be healthy. This has already started to happen. Some examples:

1. Stuart King (a musician) commented [3]how much bedtime honey helped him sleep better. Learning about [4]this effect is a big step forward in knowing how to be healthy – good sleep is at the center of good health. No professional researcher has come close to Stuart's insight.
2. Katherine Reid (trained as a protein chemist but not a professor) discovered that if she removed all glutamate from her daughter's diet, [5]her daughter's autism disappeared. This is more progress than any professional researcher has made. None of them has made even one case of autism disappear.
3. Many people told me about how various treatments they learned about from this blog have helped them – for example Vitamin D3 in the morning and bedtime honey. I recently posted [6]a comment about bedtime honey, for instance. These treatments are so new and surprising that these experiences are meaningful. They help others decide if these treatments should be taken seriously. (For anyone who dismisses these reports as "anecdotes", I have one question: What have you discovered?)
4. I have used a brain tracking test to find out new things about how my environment affects my brain, including the [7]benefits of butter and the [8]bad effect of tofu. At least a billion people – everyone in China, for starters – eat tofu regularly. You might think that such a popular food would have been extensively tested for safety but, shockingly, other research supports my conclusion that tofu is bad. Anyone can do the sort of tests I did. Let me repeat my offer to give my brain tracking R software (which only works under Windows) to others who want to use it. There is an associated [9]Google Community to join.
5. Although I am a professor, [10]my self-experimental discoveries about sleep, mood and weight were outside the area of my graduate school training (animal learning). For example, I am not a sleep expert. I made my discoveries without expensive equipment or university resources beyond the library – that is, I made them with resources to which almost anyone has access.

I am sure these examples are the beginning of something important. They are easy to explain. Who is better equipped to discover important stuff about health, professional researchers (e.g, professors) or non-professionals (the rest of us)? Although professional researchers have big advantages over the rest of us – this is the usual view – non-professionals have big advantages over professionals that few people seem aware of. Sometimes the non-professional advantages outweigh the professional advantages and the non-professionals get there first. For example, a professional autism researcher could have done what Reid did (measure the effect of removing all glutamate on autism), but Reid did it first.

The advantages of non-professionals over professionals, a topic I have discussed [11]many times, include:

1. Ability to self-track and self-experiment. This is too humble for many professionals. In *The Theory of the Leisure Class*, Thorstein Veblen emphasized that professors like to show off via their work. This is a disaster for science, where small (low status) and fast is much more effective than big (high status) and slow – a lesson that few

health scientists have learned.

2. Freedom. Non-professionals can study anything, consider any crazy idea, test any treatment. Professionals must be respectable. Institutional rules and committees also constrain them.

3. Time. Non-professionals can study any problem for as long as they want. Professionals must publish regularly.

4. Motivation. Because they study their own problems, non-professionals are highly motivated to find the truth. For example, no one cares more about the safety of your food than you do. Professionals usually study problems whose solution gives them no practical benefit. While non-professionals care only about their own health, professionals care a great deal about their career, which makes it [12]quite a bit harder to do the best thing for other people's health.

5. IQ (which Stephen often blogs about). If you randomly select one professor who studies health, and compare him/her to a thousand randomly-selected non-professionals, the top IQs among the non-professionals will be much higher than the professor's IQ.

I [13]keep writing about this – hardly saying anything new – because it is so important, so non-intuitive (in almost every other area of knowledge, such as physics, only professionals make lasting contributions) and no one else says it.

1. <http://infoproc.blogspot.com/>
2. <http://infoproc.blogspot.com/2013/12/one-in-thousand.html>
3. <http://blog.sethroberts.net/2013/10/11/association-of-sleep-and-chronic-illness/#comment-1150683>
4. <http://blog.sethroberts.net/category/sleep/honey-sleep/>
5. <http://blog.sethroberts.net/2013/05/17/journal-of-personal-science-one-childs-autism-eliminated-by-removal-of-glutamate-from-her-diet/>
6. <http://blog.sethroberts.net/2014/01/14/bedtime-honey-is-a-godsend/>
7. <http://quantifiedself.com/2010/09/seth-roberts-on-arithmetic-and/>
8. <http://blog.sethroberts.net/2013/12/09/warning-soybean-eaters-tofu-made-me-stupid/>
9. <https://plus.google.com/u/0/communities/114619130176100669530>
10. <http://escholarship.org/uc/item/2xc2h866/>
11. <http://media.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>
12. <http://blog.sethroberts.net/2014/01/11/joseph-biederman-is-still-at-harvard/>
13. <http://blog.sethroberts.net/2013/12/27/lessons-of-this-blog-2nd-of-2/>

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gwern (2014-01-20 08:40:32)

> (For anyone who dismisses these reports as “anecdotes”, I have one question: What have you discovered?) So, you can only criticize some music if you're a musician? You can only criticize research if you've published research? You can only criticize a movie if you've directed a movie? A classic excuse, but it doesn't wash: you don't need to be a farmer to know what bull shit smells like.

Sidney Phillips (2014-01-20 09:00:20)

Seth: I'd just like to point out what you had mentioned earlier on the dangers of mercury fillings. I'm studying for my USMLE Step 1 medical board exam and I noticed my memory wasn't nearly as sharp as it used to be. At the same time my doctor diagnosed me with hypothyroidism; he said it was Hashimoto's without even running labs. I paid for my own labs and my tests came back negative for anti-thyroglobulin antibodies, which should be present with Hashimoto's. Around this time, I read your earlier post how your memory improved after removing your mercury fillings. Also in that same post one of your readers had cited some pubmed studies linking mercury fillings to thyroid problems. I decided to have my fillings removed by a dentist knowledgeable in doing so since you have to remove them carefully. It's been only 5 days since I had them removed but I already feel sharper, as if the brain fog has lifted. I'm detoxing now with chlorella, cumin, and water high in silicon (Fiji). So, I was able to better my health thanks to one of your blog posts. My own doctor didn't have the time or inclination to think deeply about my problems, and had the arrogance to diagnose Hashimoto's without even running labs. I will certainly not go back to him. The problem is finding a doctor who is open to alternative remedies and is current with the latest research. As I told my parents, I can't imagine most doctors after a long day's work wanting to come home and sit in front of pubmed for 2-3 hours. Seth: A doctor would not need to sit in front of pubmed for 2-3 hours to realize it might be a good idea to order labs. And doctors are supposed to continue their education, which should definitely include looking at recent research.

MJB (2014-01-20 12:15:33)

Mathematics of happiness debunked by Nick Brown The astonishing story of Nick Brown, the British man who began a part-time psychology course in his 50s – and ended up taking on America's academic establishment Who was he to doubt the work of a leading professional which had been accepted by the psychological elite? "The answer," says Brown when I meet him in a north London cafe, "is because that's how it always happens. Look at whistleblower culture. If you want to be a whistleblower you have to be prepared to lose your job. I'm able to do what I'm doing here because I'm nobody. I don't have to keep any academics happy. I don't have to think about the possible consequences of my actions for people I might admire personally who may have based their work on this and they end up looking silly. There are 160,000 psychologists in America and they've got mortgages. I've got the necessary degree of total independence." "Not many psychologists are very good at math," says Brown. "Not many psychologists are even good at the math and statistics you have to do as a psychologist. Typically you'll have a couple of people in the department who understand it. Most psychologists are not capable of organizing a quantitative study." <http://www.theguardian.com/science/2014/jan/19/mathematics-of-happiness-debunked-nick-brown>

Cliff Styles (2014-01-20 12:32:59)

It seems to me that apart from the value of self-testing to discover new health things, you are actually promoting a kind of heuristic for living that can apply to any arena, a heuristic that is as valuable as learning valid rules of inference. Part of what self-testing does is help us question our own convictions in a way that can produce evidence of an apt answer one way or another. Simply committing to self-testing, to mastering it, and then learning from doing it alters the way we think, not just our behavior in a particular domain. 'Learning from really doing it' is as much an education and testing of our own feelings as it is some objective test of the non-subjective world.

emini\_guy (2014-01-20 14:59:16)

I agree with gwern that experts and non-experts should be treated in the same way and subjected to the same level of scrutiny. I have benefited quite a bit from gwern's research into melatonin and I have found melatonin helpful for improving my sleep. I have yet to find Seth's ideas equally useful, but I do appreciate them as stimulating and I did give them a fair try and continue experimenting with them. It is not particularly hard, though, to find people who make their careers or build online reputations by attacking the ideas of others without giving them due consideration. The Internet made it quite easy for such people to flourish. Some of them may have hidden agendas, which you will not find out unless you do some extra digging.

gwern (2014-01-20 15:09:51)

Sidney Phillips: > It's been only 5 days since I had them removed but I already feel sharper, as if the brain fog has lifted. Mercury poisoning onset can take a long time (Minamata disease took 5 years from initial release to first diagnosis), the symptoms can persist for decades, and many are irreversible. Nootropics users taking worthless substances often report 'feeling sharper' and

a lifting of 'brain fog' in the first week of consumption... MJB: you should really read Gelman's comments on that research: <http://andrewgelman.com/2014/01/19/british-amateur-debunked-mathematics-happiness/> Many stories are oversold, and that's no exception.

CC (2014-01-20 15:21:01)

Seth, I get your larger point, but I think the stuff you wrote about weight loss and AS has to be the most revolutionary. The rest of the medical establishment has made basically zero progress on obesity, and you discovered something significant and actually cured a bunch of people. Not surprisingly, academics refuse to take it seriously. So here you have a major health crisis, ONE person put a dent in the problem, and none of the authorities want to acknowledge it. [Btw, any hints for what what to do if the AS effect from ELOO fades over time?] Seth: I wish I could say I "put a dent in the problem" but I am afraid hundreds of thousands of people doing the Shangri-La Diet is not many compared to hundreds of millions of obese people. Maybe someday. I think the obesity epidemic is partly driven by a depression epidemic – that is the more serious problem. If you are depressed you eat certain foods to feel better and they are more fattening than other foods. I do have a new idea about what causes depression (lack of morning faces) but I have yet to write a book about it. If the AS effect from ELOO fades – and even if it doesn't – I suggest you switch to nose-clipping other sources of fat, such as flaxseed oil and butter.

Seth Roberts (2014-01-20 15:39:53)

"It seems to me that apart from the value of self-testing to discover new health things, you are actually promoting a kind of heuristic for living that can apply to any arena, a heuristic that is as valuable as learning valid rules of inference." I have tried to do experiments in other areas but only in the area of health have I found my experiments paid off. For example, I used to measure the mileage of my scooter. These measurements were never very helpful, although I did them for years. On the other hand my self-testing has helped me in other ways, as you say. 1. It has made me very skeptical of experts (because what they said was contradicted by what I directly observed) and I agree that such skepticism is at least a good starting point for understanding many things. For example, journalists gain nothing by being so credulous about what scientists claim. I recently gave the example of James Fallows and Eric Lander. 2. I believe that if professional scientists did the self-testing I advocate they would learn better how to do their jobs, and that would help the rest of us. 3. Another general lesson from self-tracking and self-experimentation is not to be dismissive. To realize you can learn from small things and imperfect things. This isn't taught – if anything, the opposite is taught. Lots of smart people are dismissive.

Cliff Styles (2014-01-20 18:49:20)

I got enormous and unexpected benefits from trying the experiment of eliminating wheat from my diet, and apart from the health benefits, it made me aware of some of my own biases, and that they are correctible, at least somewhat, if I am willing to self-test. I emphatically did not WANT wheat to be a problem, and it was only a nasty symptom that motivated me to try the experiment of eliminating it. I was somewhat dismayed by my discovery, though relieved, too. If I had been more attuned to self-testing earlier, for instance if I had learned self-testing as I learned about logical fallacy or other useful thinking methods, I might have approached many things in life with a view to self-experimentation and testing. That might have included testing things where I felt something that made the prospect of testing unpleasant. Your point about people being dismissive is something that I did to myself in many arenas. I think - suspect, really - that an attitude that included testing might have led me down some interesting paths. The question is how to test that, I suppose? Seth: No, I don't think there is any need to test whether self-testing (doing it, learning about it) is beneficial. It obviously is. I think of literacy. It is obviously beneficial, we don't need to wonder whether it is. Literacy and self-testing both give a wider relatively-unfiltered view of the world. Literacy shows the outside world, self-testing the inside world.

Sara (2014-01-21 01:36:09)

Great post. I do think that credulity serves journalists in that questioning scientists would force them to do much more work, and expose them to having their own authoritativeness questioned.

DA (2014-01-21 01:54:56)

@Sidney Phillips Sidney- I urge great caution with your detoxification procedure. Mercury is a neurotoxin and must

not be moved around without appropriate understanding and care. Your use of chlorella, in particular, can make things much worse. Please visit these two email lists: <http://groups.yahoo.com/neo/groups/adult-metal-chelation/info> <http://groups.yahoo.com/neo/groups/frequent-dose-chelation/info> and look at this book: <http://noamalgam.com/> Good luck.

Brock in HK (2014-01-21 05:31:57)

Hsu's comments should be accepted as the same platitudes that are offered to every graduating high school or college class regardless of its quality. "You are the future!!!!" The obvious clue is he told them they would advance science out of pure motives rather than for profit or gain. While a good launching point for this blog, it's mostly innocent as a speech of its type. It certainly would be less inspiring to tell them they are insignificant cogs in a wheel and will probably not perform their chosen profession correctly, which is your assertion will happen. That said, you are probably correct about most of the promotees addressed.

Nancy Lebovitz (2014-01-21 11:51:40)

Maybe it's time for a list of self-experimentation friendly doctors. There's already a list of fat-friendly health professionals: <http://fatfriendlydocs.com/> - it exists because many health professionals tell fat people to lose weight instead of paying attention to actual symptoms. Actually, what I'd like is a list of health professionals who listen and think, but that's a little harder to define and publicize. Seth: That's a good idea. If someone sends me as little as one name I will post it. I would like to find a doctor near Berkeley who will approve lab tests that I will pay for.

Nancy Lebovitz (2014-01-21 18:47:12)

Posting a doctor's name is good, but having a page that's easy to search for is better.

Nancy Lebovitz (2014-01-21 18:47:40)

Correction: having a page that's easy to search for and add to is better. Seth: Yes, I agree.

John Smith (2014-01-21 22:07:17)

Seth, you ask the eternal question: which one..... egg or chicken? Which is the most important, the flintlock or the flint? In truth, it is neither, but both. Which gender is the most important, the male or the female? The answer is the same: it takes the pair of them to make it tick. Individuals can come up with innovative ideas, revolutionary ideas even and great solutions to problems, and they are the active entity. The establishments act as the stone, the flint, and the unmovable. It is the spark that they two emit that fires the cannon. Individuals whether professional or one of the people can come up with this new perception, but until enough of 'we the people' embrace it, it will not influence the establishments. The establishments are self-preserving and unmovable, whereas individuals are self-sacrificing and irresistible. Establishments will not embrace any innovation that threatens their status or the equilibrium of the 'economy' or the interest of the masses collectively. They are far more likely to sacrifice individuals as collateral damage just to maintain the status quo. The evolution of the round earth concept is my favorite example of how new perceptions take forever to be incorporated into the establishments. The unfortunate part of it all is when professionals come up with good ideas that work for individuals but would topple the society were those ideas to be implemented, they are faced with choosing between their own wellbeing and the advancement of the new idea. A cancer cure (for example) would be a disaster right now for our economy. The older an establishment is, the bigger it is and the more powerful, the more is at stake should it be made redundant by newer and more workable ideas. These new ideas can come from both professionals and common people. Ironically, the professional has more to lose should he postulate something that is against the interest of his power base, so the wise ones often look to see which side of their bread the butter is on. We the people have nothing to lose, so we speak our own truth regardless of how it may suit the establishments. As an example, I may postulate that the earth is still growing, as it reduces the light from the sun to matter in the form of minerals, which would be quite in keeping with Einstein's theory. A professional is far less likely to postulate such a foreign idea, yet Jules Verne, (a playwright) could suggest space travel, regardless of how long it took Tsiolkovsky and his like to bring it into the realm of serious human endeavor. Jesus taught the people in parables. Lewis Carol hid his 12 place decimal system in a children's book. Any new idea that is perceived to be a threat to the establishments will only fly when enough laymen endorse it. It could be suggested that until establishments yield we the people cannot progress (as a class). As individuals, however,

we may progress and influence other individuals. Individuals are at liberty to change. Sufficient numbers of 'us' can change establishments. Establishments are loathe to change except in favor of themselves and their influence and control over the masses. By what measuring unit, standard or specification will we be able to know if the world improves? Isn't this present moment the most perfect one?

## **Carbohydrate Near Bedtime Improves Sleep, Say Two Books (2014-01-21 05:00)**

Janet Rosenbaum, a professor of epidemiology at SUNY Downstate Medical Center, Brooklyn, writes:

Has anyone mentioned the connection between the honey/banana before bedtime and the advice to have an ounce of simple carbohydrate without protein before bedtime? There have been at least two books on this idea: Potatoes, not Prozac by Kathleen DesMaisons and The Serotonin Power Diet by Judith Wurtman. The first book suggests a small baked potato and bans alcohol and sugar during the day. The second book allows an ounce of any carbs such as pretzels. The proposed mechanism is that eating protein during the day, and carbs before bed without protein increases serotonin production over night, and my own experience is that it improves sleep and creates more vivid dreams.

I cannot easily get the Serotonin book here in Beijing but I found [1]this related to the Potatoes book:

Now that you are having three meals a day at regular intervals, let's add Mr. Spud to your routine. Have a potato (with its skin) every night three hours after dinner. It will help your body raise your serotonin level and make you feel more confident, competent, creative and optimistic. You can eat your potato baked, mashed, roasted, cut into oven fries or grated into hash browns. Just be sure you eat the skin. And you can top it with anything you like except foods that contain a protein. (Protein eaten along with the potato at bedtime will interfere with your serotonin-making process.) Good toppings are butter, salsa, mustard, spices, or olive oil. Toppings you should NOT use are cheese, sour cream, bacon bits, or cream of chicken soup.

I found when I ate honey with cheese the sleep-improvement effect of the honey was much reduced, in agreement with what is said here about avoiding cheese.

[2]Here's what happened when one person tried this. I am quoting only the parts about sleep:

[Day 1] I had the infamous potato at the recommended time. That potato really kept me up. I barely slept. What was this about her saying that a potato helps you get a good night's sleep? But I'm willing to give it some time. I never get a good night's sleep so it will be nice to see what that's like again.

[Day 2] This night, I could not sleep at ALL. I was up till around 4 am. How can a little potato keep a person up so much?

[Day 3] I finally had that promised sleep that the author was talking about. WOW. I haven't ever felt quite like this before.

[Day 4] A blissful night's sleep.



[Day 9] Those potatoes really work on making one's sleep much better.

[Day 23] I am not eating potatoes at night most of the time, which is part of the **PNP** [Potatoes Not Prozac] diet, but not something that you start from the beginning. [Nothing about sleep.]

Maybe she stopped the bedtime potato because she wanted to lose weight faster.

A potato near bedtime will surely increase blood glucose during sleep, supporting the idea that a better supply of blood glucose is what improves sleep. Presumably it's important to do this without (a) triggering too much insulin production or (b) increasing brain activity so much you wake up. Whether glycogen, in the liver or elsewhere, has anything to do with this I have no idea. Glycogen is one source of new glucose as the brain burns thru blood glucose but another is not yet digested carbohydrate in what you've recently eaten (e.g., potato).

1. <http://www.radiantrecovery.com/4r.htm>

2. <http://www.fatassdiet.com/potatoesnotprozac.html>

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Charlie Currie (2014-01-21 08:05:48)

A spoonful of honey seems, to me anyway, a much easier solution than eating a potato (with the skin) every night. Seth: True. But both fruit and potatoes have fiber, honey doesn't. Mr. Heisenbug has convinced me that fiber is very important.

Scott Pierce (2014-01-21 08:20:28)

I have suffered from cluster headaches, which wake me up regularly around 4 AM near every morning. Since starting a tablespoon of honey, I have only woken up once with a headache and was easily able to go back to sleep. I have slept all the way through to my alarm and actually don't want to get up. I haven't done that in maybe a decade. This last Saturday, I actually slept until 8:30. This is all definitely new territory for me. I have tried so many things from melatonin to holy basil extract and nothing has come close to the honey. It took several days before I noticed a difference and I almost gave up. Thankfully, I didn't. One protocol I followed for a short period was taking glycine, which is recommended by some for sleep problems. I wonder if it might be a similar mechanism in place for both?

gwern (2014-01-21 09:07:13)

So, it's great that two books speculate about this, but did either include any actual experimental evidence? As in, systematically recorded interventions and data collection with objective metrics collected by eg an actigraph?

dearieme (2014-01-21 09:13:26)

Avoiding cheese must be much easier in the USA.

Nancy Lebovitz (2014-01-21 10:49:18)

Any theories about why a potato before bedtime could make sleep a lot worse and then a lot better?

Charlie Currie (2014-01-21 14:32:08)

And, why not a sweet potato...there's over 5 times the amount of sugar...so you should be able to eat 1/5 of a sweet potato and get the same effect.

tom (2014-01-21 17:22:28)

Video on Dan's Plan about sleep. He stresses 1/2 hr of sunlight in the day. <http://www.dansplan.com/blog/2553-how-light-exposure-affects-health-an-interview-of-dan-by-dr-joseph-mercola>

daz (2014-01-21 18:57:34)

anyone read the 'Potatoes, not Prozac' book... looking at the excerpts above, it seems that eating the potato skin (as well as 'flesh') is important (critical?) for it to 'work', does it mention why in the book?

daz (2014-01-21 19:15:04)

i found some related text which hooks in to this topic on a site here, <http://goaskalice.columbia.edu/serotonin-and-foods> (caveat, i know nothing of the credentials of this site or author). some of the text, "Carbohydrate-rich meals often increase serotonin levels. However, manipulating serotonin levels through food may be very difficult to achieve because serotonin's properties may have varying effects in different people. Some people may experience a temporary lift in mood after a carbohydrate-rich meal, while others may become relaxed or sleepy. Certain foods that increase serotonin levels aren't the healthiest choices either. Believe it or not, candy and sweets, which are simple carbohydrates, have the greatest impact, but the effect will only last 1 to 2 hours. Complex carbohydrates (rice, potato, pasta) may increase serotonin levels, but not to the same extent because the protein content of these foods might actually inhibit serotonin production. Here's a brief explanation of the mechanism behind the effect of food on serotonin levels: after consumption of a carbohydrate-rich meal, the hormone insulin is secreted. Insulin lowers the blood levels of most amino acids (the building blocks of protein), except for tryptophan (a precursor to serotonin). Amino acids compete for transportation across the blood-brain barrier, and when there is a larger proportion of tryptophan, it enters the brain at a higher rate, thus boosting serotonin production. To make matters more interesting, tryptophan is present in many protein-rich foods, which have been found to prevent serotonin production. So, you can see how intricate and complex this system is. In terms of the effects of actual foods on serotonin, here are some suggestions from nutritionists: If you're having trouble falling asleep, try a small snack of carbohydrate-rich food. Warm milk may work for the psychological comfort, but also because milk contains a moderate amount of carbohydrate in the form of lactose (milk sugar)" "The carbohydrate/tryptophan/serotonin pathway is simply a hypothesis at this point. Since each of us is unique, in order to get a "desired effect" from food, you would need to experiment eating different foods and observing how your body reacts to each of them. You'll also need to take into consideration your other lifestyle choices — how much sleep you get, whether or not you exercise regularly, the medications you take, your stress levels, etc. — when figuring out what affects your moods in what manners"

John Smith (2014-01-21 20:28:09)

Certainly the protein foods are big consumers of energy in the digestion process, so a handful of nuts or soybeans prior to sleep seems risky to me. Carbs like potato, rice, oats etc., that digest quickly and easily, yield a higher percentage of net energy. The fiber provides the slow release effect, making the energy from the gut longer running. The honey, of course, requires almost no converting, i.e. energy input prior to utilization by the cells. All foodstuffs need a 'net energy' score, as some take almost as much energy to utilize as they yield, and this is strongly influenced by how efficient the metabolism of the individual is. So a young person will get a better 'yield' owing to a strong digestive system, whereas an old person can at time get a negative result, i.e. it took more energy to process than what it delivered.

Justin Irving (2014-01-22 11:34:37)

This makes me wonder about the mechanism behind "carb backloading", the protocol of the physics guy/bodybuilder Kiefer. If Seth or others are familiar with this protocol (go nuts on carbs a few nights a week), maybe all the hand waving about mTOR is a side show, and what is really happening is that a late carb meal is causing better sleep, and better sleep the muscle gains ? Anyway, my point is that other healthy-oriented bloggers have found a connection between carb timing and health. Background: <http://robbwolf.com/2012/11/27/kiefer-carb-backloading-episode-160/> Seth: Good point.

daz (2014-01-22 15:30:33)

"[Day 3] I finally had that promised sleep..." i wonder why in this anecdote, it took till the 3rd night for this person to see

an improvement in sleep (a vast improvement by the sounds of it). in fact on nights 1 & 2 the person reported worse sleep. ...anyone have any ideas/theories (why it took till 3rd night to work)...? ... & any possible explanations/reasons why nights 1 & 2 would be worse...? thx Seth: I agree, that's a good question. One possibility is that there is large random variation in his sleep and on the first two nights it would have been unusually bad had he not taken the honey.

Adam (2014-01-24 11:10:28)

The Serotonin aspect reminds me of SSRIs like Sertraline (Zoloft). They have listed as common side effects BOTH somnolence (excessive sleepiness) AND insomnia. People starting SSRIs commonly feel stimulated or even anxious, presumably due to the greater Serotonin activity going on. If it is too bad, sometimes the doctor will have them reduce the dose. Often it just improves after a while on its own. Perhaps the lady had deficient Serotonin activity for a long time & the sudden increase due to the potato led to her reaction. Makes me wonder if reducing the dose to half a potato during the acclimation period would have helped.

### Assorted Links (2014-01-22 05:00)

- A very common knee surgery ( \$14 billion per year spent on it in America) [1]turns out to be no better than sham surgery in many cases. Plainly this supports critics of medicine who say there is overtreatment. To be fair there is good news: 1. At least this particular operation wasn't [2]contraindicated by high school biology. 2. The study was done and published. 3. And publicized widely enough to influence practice.
- [3]Heart guidelines based on fake research probably killed tens of thousands of people. Making useless knee surgery look good.
- [4]"The time you're taking to help this girl, you could be ..." A great talk by Jessica Alexander about ten years working for NGOs. Her book is Chasing Chaos: My Decade In and Out of Humanitarian Aid.
- [5]On EconTalk, Judith Curry, the climatologist, makes the excellent point that it is weird to call someone who believes climate questions are more complex than portrayed a "denier". In every other use of the term, a denier is someone who avoids recognizing complexity, i.e., the opposite. On the other side of the ledger, Curry makes an elementary physics mistake when she says that as an ice cube floating in your drink melts, the water level of your drink rises. (It stays the same.)

Thanks to Allan Jackson.

1. <http://www.nejm.org/doi/full/10.1056/NEJMoa1305189>

2. <http://boingboing.net/2012/01/10/tonsillectomy-confidential-do.html>

3. <http://www.forbes.com/sites/larryhusten/2013/07/31/european-heart-guidelines-based-on-disgraced-research-may-have-caused-thousands-of-deaths/>

4. <http://www.booktv.org/Watch/15088/Chasing+Chaos+My+Decade+In+and+Out+of+Humanitarian+Aid.aspx>

5. [http://www.econtalk.org/archives/2013/12/judith\\_curry\\_on.html](http://www.econtalk.org/archives/2013/12/judith_curry_on.html)

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dearieme (2014-01-22 05:54:00)

What can you make of a world where a leading climatologist isn't familiar with Archimedes' Principle? She should have mastered that at thirteen or fourteen. Seth: I think it means you don't even have to understand Archimedes' Principle to realize the vacuity of the arguments for anthropogenic global warming.

GB (2014-01-22 06:17:58)

I haven't listened to Curry's talk, but surely there's a difference between melting sea ice (which is analogous to the melting ice cube in a glass) and melt from continents (Antarctica, Greenland) and glaciers, which would add to sea level. Seth: Curry said that when the ice in your drink melts, the level of the water rises. Sure, when a glacier sitting on land melts, the water level rises.

Tom Passin (2014-01-22 07:55:33)

Well actually, the water level in the glass will fall, because ice has a lower density than water. When the ice melts, its density will increase and its volume will get smaller. Judith Curry seems to have other reasoning problems when taking about climate change: <http://tamino.wordpress.com/2014/01/21/one-of-the-problems-with-judith-curry/>

Roger Sweeny (2014-01-22 08:45:34)

Tom, no, the water level will not fall. Yes, as the ice melts, its density will increase and its volume will be smaller, but some of the ice was NOT IN THE WATER. It was floating above the water. That part of the ice now goes into the water and exactly counteracts the effect of increasing density. That's because how high something floats depend on its density. The less dense it is, compared to water, the higher it floats. (The buoyant force on something is equal to the weight of the fluid it displaces. So a bit of pure ice in pure water has to weigh exactly the same as the fluid it displaces. Then, when it melts, it will take up exactly the same amount of space as the water it previously displaced, and there will be no change in water level. Glaciers in the sea are more complicated. Salt water is more dense than pure water but glaciers also contain rocks and dust.)

Greg (2014-01-22 09:02:19)

Her quote from the EconTalk transcript. "Again, the bigger wildcard is how much the glaciers are going to melt. So, once you melt the great glaciers, it's like adding more ice cubes into your glass of water, once they melt it causes the level of water in your glass to rise." This is different than just melting ice in a glass causing the water to rise. Seth: It is? She said "once they melt..." meaning "when they melt, but not before that . . .".

Stephen (2014-01-22 14:14:32)

I've had that knee surgery, and it was very successful! Which makes me wonder what actually is happening there. For example, was my return to normal function actually the result of my post-operative care and exercise regime? Or perhaps the surgery isn't very accurate and helps some to roughly the same extent it harms others? Apropos the glaciers: my country (New Zealand) has several glaciers on land, which is also the case for a large chunk of Antarctica. Sea level will rise when they melt – that ice wasn't floating on the sea before and the meltwater will add to the sea's volume. They are consistently melting now too. Curry may be wrong about the mechanism but she is right that melting glaciers will cause or are causing sea level rise.

Tom Passin (2014-01-22 19:50:45)

I stand corrected, Roger Sweeny is right. The decreased volume of the melted ice exactly offsets the volume of ice that had been above water before melting. I worked it out for a simple example to cross-check the thinking. And, as he says, the case of real glaciers consisting of frozen non-salty water and having embedded materials makes the details more complex (not to mention density changes with temperature changes), but clearly won't change the result in any important way. At any rate, the glacier melt from non-floating ice is what would affect the sea level, not the floating ice.

Alex Chernavsky (2014-01-22 21:37:33)

With regard to NGOs and helping poor people in third-world countries: <http://www.npr.org/blogs/money/2013/08/2-3/214210692/the-charity-that-just-gives-money-to-poor-people> A charity called "Give Directly" has had remarkable success with just giving money away, no strings attached. It's a wonderful concept.

Shep (2014-01-22 22:03:15)

Again, the bigger wildcard is how much the glaciers are going to melt. So, once you melt the great glaciers, it's like adding more ice cubes into your glass of water. Once they [the great glaciers on land] melt it causes the level of water in your glass to rise." Change the comma in the transcript to a full stop and the meaning changes.

Matt (2014-01-23 02:04:35)

I think her point is that glaciers, on land, melt \*into\* the water, so more water is there overall. Seth: That's so obvious no sane person would say it. I don't think that's what she meant, especially since she mentioned ice cubes in a glass.

MJB (2014-01-24 04:57:07)

Judith Curry doesn't think that "as an ice cube floating in your drink melts, the water level of your drink rises" just like President Obama doesn't think there are 57 states even though he said so. Here is her recent testimony before the Senate: [http://www.epw.senate.gov/public/index.cfm?FuseAction=Hearings.Testimony &Hearing \\_ID=e07101a7-0715-7690-b6e9-c39e56a3b468 &Witness \\_ID=b46b2226-01bf-4156-a675-ae9093e5e140](http://www.epw.senate.gov/public/index.cfm?FuseAction=Hearings.Testimony&Hearing_ID=e07101a7-0715-7690-b6e9-c39e56a3b468&Witness_ID=b46b2226-01bf-4156-a675-ae9093e5e140)

### **Berkeley Undergraduates and Professors: Then and Now (2014-01-23 05:00)**

Stephen Hsu mentioned the documentary At Berkeley. In response, someone who had graduated from Berkeley long ago and recently returned [1]commented:

One thing hasn't changed much though, most professors still hate, and with studied contempt, having anything to do with undergraduates.

My mom was an undergraduate at Berkeley. I asked her what she thought of this comment. She didn't agree, but she didn't exactly disagree:

I got absolutely no sense of "studied contempt" or dislike from profs. Some were dull, one went on my forever hate list because he humiliated a student in public, some were difficult, one was very conservative but provoked me into doing good work. More or less enjoyed my economics courses, including one on "labor" taught by Clark Kerr. Maybe the sociology professors were like that. I'd declared it as my major, but didn't like a single sociology prof I had, and barely escaped thru to graduation with them.

[2]As I've said, [3]Ken Jowitt, a political science professor at Berkeley, humiliated students who came in late. At one point he was Dean of Undergraduate Studies.

When I got a job at Berkeley, I remembered my mom's comment that she'd had only three good professors (Kerr, Robert Nisbet, and David Mandelbaum, an anthropology professor). I wondered if I would be her idea of a good professor. It turned out that quite a few professors treated undergraduates badly, as Hsu's commenter says. One professor told me that when a student came to him with a grading complaint, he made the student put the complaint in writing – just like [4]in post-Soviet Russia, where paperwork obstacles were placed in front of those who wanted to start a political party. Another professor, I was told, did not look at students who came to see him during office hours. He sat with his back towards them. A third professor, when I asked when the assigned reading would be available (I was auditing his class), wouldn't say. "Sometime," he said.

With few exceptions, the profs I knew avoided students, as Hsu's commenter says. One of them, when a student asked to see him, told the student, "I'll be around." It was easy to see why they avoided students (students bored them, wanted stuff, were full of complaints, "wasted" their time, and had nothing to do with what they really cared about, their research) but it said a lot about the situation, such as how much the professors learned from the students – not much, apparently.

Yet I learned an enormous amount from my undergraduate students, especially two of them. One student, in response to an open-ended term project assignment, chose to give a talk to a high school class about depression. Yet she had stage fright! It was extremely difficult for her to give that talk. But she did. Based on more conventional assignments, she had seemed a mediocre student. After I read her paper about what she'd done, I saw how much I had underestimated her. And it wasn't just her. I suddenly saw how much the whole system – which judges undergraduates by how much they resemble professors – grossly underestimates almost all of them. What a tragedy. This is the fundamental thing to realize about undergraduate education, that students are judged by how closely they resemble professors. Excellence in other ways is ignored. It is an incredibly wasteful system. It is like "evidence-based medicine" reviews that ignore 1000 papers on a topic to focus on 4 papers that meet their restrictive criteria. And then claim to have summarized the subject.

She wasn't even the most extreme case. I taught introductory psychology for a few years. One of my lectures was on weight control. I showed a graph of how I had lost weight when I had started eating less processed food – oranges instead of orange juice, for example. At the same time as the weight loss, I had started to sleep less (40 minutes less per day). One of my students came to my office hour. He said he knew another way to lose weight and need less sleep: eat food high in water content. He showed me a thick book that promoted this. The book looked bad – no data, just words. But he said it had helped him.

So I tried it. At first I ate four pieces of fruit per day. Nothing happened.

I ran into the student. Hey, I'm eating four piece of fruit every day, nothing's happened, I said. He said, "I eat six pieces of fruit a day."

So I went from four to six. I was already eating so much fruit that to eat two more pieces meant I had to change my breakfast. I changed it from oatmeal to two pieces of fruit. Exactly then my sleep started getting worse. I had been waking up early about half the time; I started waking up early all the time. Eventually I discovered that any breakfast caused early awakening. Oatmeal was simply better than fruit.

This experience was the turning point in my whole scientific life. It made me begin to realize that personal science – or self-experimentation, as I called it then – was a powerful tool.

My views about both teaching and research, in other words, were greatly shaped by contact with undergraduate students. The influence wasn't passive – I did a lot more than simply listen to them – or simple. I did my part: gave unusual assignments, gave students much more freedom, tried student suggestions. In both cases, I ended up with a point of view very different than my colleagues and very different from the point of view I started with. I think professors can learn a lot from undergraduates because some of them are so different than professors. They are challenging and inspiring in ways graduate students are not.

1. <http://infoproc.blogspot.com/2013/11/at-berkeley.html#comment-1126111277>
2. <http://blog.sethroberts.net/2013/09/26/queen-late/>
3. [http://en.wikipedia.org/wiki/Ken\\_Jowitt](http://en.wikipedia.org/wiki/Ken_Jowitt)
4. <http://www.theguardian.com/books/2012/feb/26/vladimir-putin-masha-gessen-review>

dearieme (2014-01-23 15:46:20)

I much enjoyed supervising final year undergraduates on research projects - principally experimental, sometimes computational. They are cleverer and more interesting than you would think if all you did was lecture them. Especially if you lectured past them rather than at them. On the other hand I remember with horror the twerps who taught me freshman physics. Could I face spending another three years in their company? I could not. Seth: I liked my undergraduate professors, at Caltech, College of Marin, and Reed, except for the College of Marin French teacher who wouldn't let us, his students, speak French because we mispronounced it.

bjk (2014-01-23 21:07:06)

One professor said that professors avoided undergrads to avoid the adulation of students. This was at U of Chicago, that may be something unique to Chicago. It made a certain sense to me, though; that is a responsibility most professors don't want (and some do, of course).

Portlander (2014-01-23 23:44:56)

Seth, you're a Reddie? Nice. I'm not one myself, but there's a few of them that end up never leaving town. Generally, I've found them to be sharp, interesting people and a lot of fun to be around. I'm guess I'm not overly surprised you'd have gone there, nor overly surprised you didn't finish there - or did you? Seth: I finished there. When I was there, Reed had its own version of mistreating undergrads - assigning grades but not telling students what they are. School policy.

dearieme (2014-01-24 03:58:57)

"assigning grades but not telling students what they are": rather different from my experience. Not only were my, and everyone else's, grades published on notice boards, our Finals results appeared in the better sort of newspapers.

Portlander (2014-01-24 09:02:16)

"assigning grades but not telling students" Haha. Funny that's what you bring up. A friend liked to joke... sleeping with students was frowned upon and would result in a letter of reprimand; telling students their grades meant immediate termination.

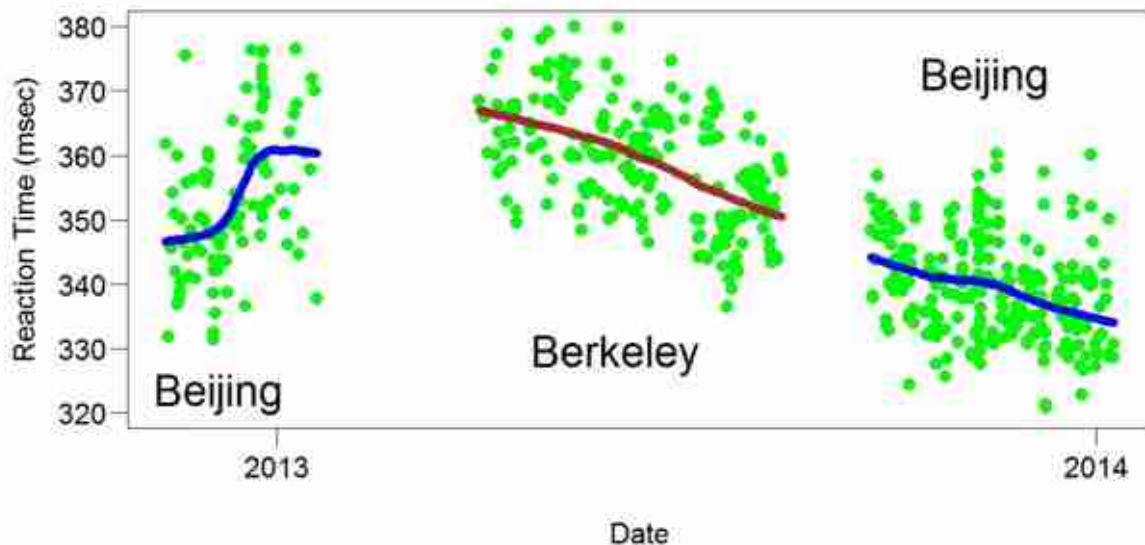
Alex (2014-01-27 19:39:07)

"French teacher who wouldn't let us, his students, speak French because we mispronounced it"? Wow, that is a special kind of crazy. How does no one put a stop to it?

Dragan (2014-01-30 16:28:15)

Having studied at Berkeley and now working there as an instructor, the quality of teaching and uh "civility" of the professor seems quite variable. However, I will say that in 7 years I've been involved with the university, I never had the impression it's as bad as some of those stories make it seem. Nor have I noticed a significant difference in this matter between Berkeley and the few elite, research-heavy, private universities I'm familiar with (both east and west coast). Perhaps it has something to do with a particular department(s)? Seth: My direct experience is in the psychology department. However, antipathy toward teaching undergraduates seemed to me to be universal. In 25 years as a Berkeley professor, I don't think I ever heard another professor - including me - say something positive about teaching undergraduates. I heard lots of negative comments. In contrast, people often liked teaching graduate courses.

## Beijing versus Berkeley: Which is Healthier? (2014-01-24 05:00)



This graph shows my brain test reaction times over roughly one year. Each point is a different test; I usually do two tests per day back to back. I assume faster = better. In February 2013 I returned to Berkeley from Beijing. In August 2013 I went back to Beijing. When I returned to Berkeley, my scores got worse (slower). I was shocked. Surely Berkeley is healthier than Beijing. At first I thought it was jet lag, but the scores stayed worse long after that made sense. Then I thought it might be some difference in diet, even though I eat similar food in the two places. I tried to make my Berkeley diet closer to my Beijing diet. This might have helped. I noticed accidentally that chocolate improved my score and started eating chocolate frequently. This artificially reduced the difference since in Beijing I had not been eating chocolate. In Berkeley I started doing two things I hadn't done in Beijing: alternate-day fasting and whole-body vibration. I don't know if they made a difference. When I returned to Beijing in September, my scores got better, even though I was not eating chocolate. Eventually I improved my sleep in Beijing but that seemed to make little difference. The comparison is far from perfect – many things varied – but by and large my scores got worse when I went from Beijing to Berkeley and improved when I went from Berkeley to Beijing.

What might have caused this? There are a hundred possibilities but one stands out. In both places, I brew and drink several cups of tea every day. In Beijing, everyone, including me, drinks water from big plastic bottles that are delivered to your house. You can choose pure water or "mineral" water, which has added magnesium and potassium. In Berkeley I use tap water (Brita filtered). I don't think potassium affects brain function – for example, eating bananas makes no difference – but there is [2] plenty of evidence that magnesium improves brain function. In Beijing I had tested a magnesium supplement and found no effect, consistent with the idea that I was already getting enough. Magnesium is also believed to improve sleep. In Beijing I seemed to sleep better than in Berkeley. Again, this is consistent with a difference in magnesium levels (more in Beijing). If ordinary magnesium-enriched water improves brain function, it would be significant because it is so easy, in contrast to [3] other ways of increasing magnesium levels.

1. [http://s919.photobucket.com/user/twoutopias/media/2i014-01-10berkeleyvsbeijingreactiontime\\_zps221e5bf7.jpg.html](http://s919.photobucket.com/user/twoutopias/media/2i014-01-10berkeleyvsbeijingreactiontime_zps221e5bf7.jpg.html)
2. <http://www.nature.com/news/testing-magnesium-s-brain-boosting-effects-1.11665>
3. [http://www.lef.org/magazine/mag2012/feb2012\\_Novel-Magnesium-Compound-Reverses-Neurodegeneration\\_01.htm](http://www.lef.org/magazine/mag2012/feb2012_Novel-Magnesium-Compound-Reverses-Neurodegeneration_01.htm)



Xav (2014-01-24 05:50:09)

What's whole-body vibration ? I don't think I've seen you mention it before.

Brock in HK (2014-01-24 06:50:55)

Maybe because Beijing is otherwise so unhealthy you take extra precautions there whereas in Berkeley, where you would perceive your day-to-day environment as relatively benign, you aren't as careful about other potentially negative environmental exposures to toxins? Your water choice could be one of those 0.5 % things that add up over a number of different items to become statistically significant. I know when I go back to the US, I relax on the bad stuff that I would otherwise not eat in Hong Kong, where I pay more attention. Part of it is some home cooked meals from my childhood contain ingredients I don't eat now, for example. Part of it is that in the US, Taco Bell is right there and calls my name, but in all of Asia there is no such temptation.

August (2014-01-24 07:08:18)

Does Berkeley have flouride in their water? The Brita filters don't get rid of flouride.

Tom Passin (2014-01-24 07:56:39)

To me the data look like one smooth curve that has not got much to do with location. The reaction times rose during the first Beijing trip, picked up in Berkeley at about the same level, then began a long steady decline that continued through your entire Berkeley residence and through the next Beijing one. I don't see a discontinuity when you went back to Beijing. With that much scatter in the data, you shouldn't pay much attention to details like wiggles and shelves in the smoothed data, even if you use LOWESS smoothing. Or use a much wider smoothing window. To me, the simplest explanation would be that when you got back to Berkeley, you started doing something that has a small but long term beneficial effect. The improvements are still playing out. Judging by the data, the rate of improvement appears to be declining - perhaps the effect has nearly run its course. Now what is causing the change, if anything? Seth: The Berkeley Beijing discontinuity is somewhat hidden by the fitted lines which average over large periods of time. Look at the points closely and you will see it.

Charlie Currie (2014-01-24 08:01:29)

Maybe it's stress. Whether you think about it or not, maybe Beijing is less stressful than Berkeley. I find that sitting on the beach is very relaxing, much more so than any other "natural" environment (i.e. parks, mountains, desert), and usually take a little nap. The ocean has high levels of magnesium and as waves break on the shore their magnesium filled mist is carried on shore by the sea breeze where it is easily inhaled. Maybe the magnesium in the water reduces your stress level, improving your scores.

Mark (2014-01-24 08:15:18)

I agree with Tom Passin, your results (with the exception of the weirdness present in the Beijing "run-in" period) would seem to be consistent with a continuous improvement from Berkeley period through second Beijing period. Also, wondering if you use the same computer in both locations? Seth: I use the same computer in both locations. Had I used a different loess parameter, the sharp change from Berkeley to Beijing would have been clearer.

Scott Pierce (2014-01-24 08:32:05)

My first thought was perhaps the impact of being in new surroundings (e.g. Beijing) would cause an excitability that would positively impact reaction times whereas Berkeley, even after a stint away, is old-hat. Returning to Beijing a second time would be less impactful as the "newness" would not be present the second time around. Seth: I'd spent a lot of time in Beijing before this data.

Joe (2014-01-24 14:07:02)

"Maybe the magnesium in the water reduces your stress level, improving your scores." Which should be easy enough to test.

Richard Sprague (2014-01-24 15:31:10)

Looks like classic training effect to me: your reaction times are getting faster because you take the test so often. What, exactly, is the test? Did you make some kind of adjustment back in late 2012? I don't have self data like yours about reaction times, but

my Zeo data (several years, across both countries) shows no difference at all. Eg. if REM is a proxy for stimulation or something, I see no patterns. FWIW, anecdotally I feel more "alive" when I'm in Beijing: Lots of new, interesting stimuli everywhere, regular interaction with unusual people from different backgrounds. In the US I'm just another guy. It'd be interesting if that anecdotal sense was quantifiable. Seth: The practice effect stopped long before this data was collected. The test is a choice reaction time test. It was constant over the period shown.

anon (2014-01-24 22:05:04)

seth, i've played dozens of video games in my life, many of them nothing but elaborate "choice reaction time tests", and skill plateaus followed by gradual improvement are common all along the skill spectrum. you cannot say with any confidence that practice effects have stopped. Seth: Going from Beijing to Berkeley I slowed down. That cannot be due to a practice effect.

John Smith (2014-01-25 16:06:55)

Seth, I have yet to discover just where you stand on the subject of astrology, or better yet, the cycles of life (which are never out of sync with the solar system!). But you must be aware that cycles accompany most parts of our lives. I have no doubt that a competent 'astrologer' would reveal that some important cycles were involved in your personal ups and downs. If you dig deeper into your own awareness of self, you may discover that many things in your life were in a state of flux, change, reorganization, etc. about the time your dots were dancing. Sleepless nights in my life can be triggered by many events, of course, but no one causative suspect can ever be relied on to promote such. It takes several of them to produce the effect, and that generally occurs when there are negative aspects in the solar clock to the position of Uranus in my birth chart. Your reaction time will be affected seriously at times when Mercury is in a challenging position to your birth positions. In my experience, the 'mood' of the solar system is the only causative factor that reliably is indicated in any situation. Do the planets compel us? Not necessarily, but we certainly respond to their transits and we cannot escape their influence, only adapt to it. Try getting your daylight off sync to the real one. Try getting summer in California to be winter, just for your own purposes. It will not work. Even being on the moon is no escape, it is only a variation.

anon (2014-01-25 18:08:03)

my comment was not about the increase in RT from beijing to berkeley. i said, specifically, that practice effects cannot be excluded as a partial explanation for the observed improvements because it is not easy to tell when practice effects have stopped. even simple skills develop in fits and starts.

Steve (2014-01-26 14:38:41)

Seth - what was responsible for the very abrupt slowdown in Beijing before you left for Berkley? It looks quite unnatural compared to the other changes and discontinuities? Seth: Good question. I don't know.

BRW (2014-01-31 12:31:54)

So, are you planning on taking a magnesium supplement for a period in Berkley and testing after that? Seth: Yes, I will test the magnesium explanation.

BRW (2014-02-01 16:43:32)

Terrific, can't wait to hear the results!

Ben (2014-02-02 19:58:55)

Does this test rely on the site of your computer network? In the vane of a practice effect: some suggest lots of plateaus in skill before improvement as new neural networks are built. Not likely the reason though IMO.

## Assorted Links (2014-01-25 05:00)

- [1]Hermann Goering and Jane Jacobs (also [2]this)

- [3]Dietary fiber may prevent asthma – very important finding because the two seem unrelated
- [4]cheap convenient lab tests. Unfortunately you still need a doctor to order them.
- [5]intermittent fasting on the Diane Rehm Show
- [6]pollutants and brain damage

Thanks to Gerry Mandel, Casey Manion and Jeff Winkler.

1. <http://andrewgelman.com/2014/01/09/hermann-goering-jane-jacobs-together-last/>
2. <http://andrewgelman.com/2014/01/09/san-fernando-valley-cityscapes-example-benefits-fractal-devastation/>
3. <http://m.voanews.com/a/1824538.html>
4. <http://gutcourse.tumblr.com/post/72878138606/theranos-lab-tests-in-walgreens-cheap-from-one-drop>
5. <http://thedianerehmshow.org/shows/2014-01-09/latest-research-intermittent-fasting-0>
6. <http://yubanet.com/enviro/Generation-Toxic-Scientists-are-finding-that-our-kids-brains-are-at-risk-from-a-barrage-of-common-chemicals.php#.UtGt7J7a6m6>

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dearieme (2014-01-25 11:28:06)

"Unfortunately you [US residents] still need a doctor to order them"?

Mike (2014-01-25 13:24:38)

Hi Seth! Love your stuff. I follow this basketball coach/trainer's blog, and thought of you: "Why did I prevent the player from using ice? Everyone knows that RICE (rest, ice, compression, elevation) is the accepted treatment for an injury like an ankle sprain. Whereas it is accepted, is it the best treatment? When a player twisted his ankle earlier in the season, and went to the doctor, the doctor told him to rest 3-5 days and ice the ankle. Who am I to suggest that a medical doctor was incorrect? Of course, he missed almost two weeks of practice time and games doing his own form of rehab (he went home, so I never saw him), whereas this player could have returned to the same game and played the next day without any rest or ice (just compression and elevation)." <http://developyourballiq.com/return-to-play-after-an-ankle-sprain/>

John Smith (2014-01-25 16:16:36)

A sportsperson brave enough to rub a little Manuka Honey on the throbbing spot as immediately as possible after the incident will be amazed at how the honey talks to the cells in such sweet tones that the trauma is extinguished as though water had been put on a fire. The ice trick was mainly to prevent bruising, as that was a visible sign. However, for healing to commence (and infection and bruising to be prevented) blood flow needs to be adequate with plenty of nutrient in it as well. The Honey ensures both. The extent of the injury is crucial, of course, but the effect of the honey is welcomed by the tissue regardless.

anon (2014-01-25 18:10:37)

what does everyone think of metamucil as a source of fibre?

dearieme (2014-01-28 02:04:56)

A case for a balanced diet from the Old England Journal of Medicine. [http://www.dailymail.co.uk/health/article-2546975/One-twin-gave-sugar-gave-fa t-Their-experiment-change-YOUR-life.html](http://www.dailymail.co.uk/health/article-2546975/One-twin-gave-sugar-gave-fa-t-Their-experiment-change-YOUR-life.html)

## **Journal of Personal Science: Nasal Congestion Due to Fabric Allergies (2014-01-27 05:00)**

by Nathanael Nerode

I have an inhalation allergy to polyester and acrylic dust that caused no end of trouble, especially nasal congestion. It took 20 years to figure out.

I live in Ithaca, NY. My nasal congestion started after a multi-month trip to China in 6th grade, in 1988. The air in Beijing was truly awful, and literally everyone had nasal congestion while there. But my congestion didn't go away when I came back.

To figure out why it hadn't gone away, a doctor (allergist) back in roughly 8th grade did prick tests. The "dust" test was said to use actual dust collected from houses. In retrospect, it presumably included polyester dust. It was the only prick test, other than the control histamine injection, to show an allergic response. The idiot doctor proceeded to claim that I had a dust mite allergy even though the "dust mite" prick test was negative. I told him no, I didn't, and he should learn to read his test results. I asked what was in household dust other than skin, hair and mites. He somehow did not manage to come up with "fabric". If I'd been bright enough to think of that then, I might have been able to figure this out much sooner.

In some ways my nasal congestion was quite bad. I got secondary sinus infections repeatedly, due to the airways never, ever clearing out. I carried Kleenex with me everywhere, and bought it by the case. I had to mop my nose a few times every hour. When I caught a cold, the frequency would increase to every couple of minutes.

The congestion lasted continuously through multiple living quarters at college and back in Ithaca – of course, at all those locations I had brought a full set of clothes, and had a typical polyester bed, and most had carpeting. It mysteriously cleared up once – during a trip to North Carolina. Only in retrospect did I realize that on the trip I was sleeping on a futon in a house with no carpeting, with nothing but cotton clothes.

The allergies were definitely triggered more indoors than outdoors and were worse in fall than spring. I quickly eliminated the possibility of detergents by repeated changes of detergent with no result. I was then stuck with no further ideas for 20 years.

After 20 years, I moved into a new house while bringing very little with me (only a couple of sets of clothes). Suddenly my allergies went away. I realized the cause was something in the old house but not the new house.

I could keep stuff at the old house, and I moved in really slowly, so I was able to do challenge-response experiments, with a multi-week test time for each.

I had had work done on the new house. I first eliminated wood dust, tile dust, drywall dust, and grout dust as possibilities, because they were all over the place while I was there. Then I moved in huge piles of books. Still no allergies.

Then I moved in my clothes. (Still no bed, latex futon.) My allergies came back instantly. I moved the clothes back out, sorted them by fabric, and waited four weeks for my symptoms to clear.

Then I moved the clothes back in one fabric at a time, with a two-week testing period to see whether symptoms developed for each. Luckily I was not allergic to the first thing I tried, which was cotton.

After finding the polyester allergy and moving the polyester out, I waited four weeks for symptoms to clear up before moving the next set in. Eventually I found the acrylic allergy too.

I also had to stop testing for a month or so at least three times when I caught colds, as determined by additional symptoms or by family and friends developing the same symptoms.

This took a long time – about a year – and is not a straightforward option for most people. I haven't tested every fabric yet. I stopped after I got through all the common ones.

After I was "detoxed", I started having a noticeable mild contact allergy to polyester and acrylic, which confirmed the conclusions. I think this wasn't noticeable before due to constant exposure creating suppression of the response.

So I solved the problem from a combination of luck (moving into the new house showed that it wasn't generic "dust") and pure grinding testing, much like most science.

I'm not sure many people would have the opportunity to test the way I did. I modeled what I did on the hardcore "challenge" protocol used for food allergies where you start with a very limited diet and "challenge" it with one thing at a time. How many people can do that with fabrics? You need a place to store the rest of your clothes. You may need to buy all-cotton socks or underwear or shirts or pants if you didn't own any (luckily I did) – and you need to have no carpet and remove your BED from the house (which I had done anyway coincidentally).

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Josh Manley (2014-01-27 08:45:41)

Thanks for the great article Nathanael. The key insight was that you took the absence of symptoms seriously and decided to investigate it further. Too often we fail to recognize that a sudden change in symptoms is both relevant and an interesting question to explore further.

Jack (2014-01-27 10:41:18)

Fascinating.

JRM (2014-01-28 13:15:51)

Wow. Just wow. I have read anecdotes about people who follow a paleo diet see their allergy response decreased. Presumably, removing inflammatory foods from the diet causes the body's inflammation response to go down and the body reacts less to the allergen. I wonder if the author of this tried removing certain foods from his diet (dairy, grains, etc.) after figuring out the polyester and acrylic allergy to see if the body reacted less severely.

Bill (2014-02-02 16:02:12)

This is impressive, thanks for posting.

I Link, Therefore I Am - #3 - Paleo Diet Basics (2014-02-20 06:22:26)

[...] Finding the Cause of Chronic Nasal Congestion [...]

## Which Ideas of this Blog are the Most Useful? (2014-01-28 05:00)

"Your writing has dramatically improved my health in a number of ways," a reader said. I asked for details. He replied:

I've tried most of your health interventions. The first was SLD. Overall, I lost about 90 lbs. Roughly half of this was from a more traditional diet of eating whole foods esp. vegetables and exercise. I had plateaued until I discovered SLD and lost the rest. I added flax oil, butter and homemade kefir to my taste free meal over time. The butter helped me lose more weight. At the same calories, the saturated fat was somehow more filling. Initially the butter made me happier but that wore off after a few months. My HDLs and triglyceride levels are better than when I was training for a marathon and not eating this stuff. The flax oil has improved my gum health. I can't really see a direct result from the kefir. I'm more eating it on faith. I skinned my knees quite badly a while ago. My wife commented on how quickly I healed. So maybe the kefir and other items are helping me heal faster.

I tried morning faces twice over about a week without success. My job exposes me to a lot of evening fluorescent lights. I picked periods when I wouldn't be exposed, but even if it worked, I couldn't have maintained it over a long period.

Insomnia has been a long-time problem for me. One legged standing didn't have a noticeable impact. Shifting my vitamin D3 to the morning seemed to help a bit. Bedtime honey has led to a big improvement. It's uneven, but more often than not I'm sleeping much better. Even when I don't sleep as well, I don't feel as tired as I did without using honey. My mood has also improved. I'm calmer and happier. The honey seems to reinforce my circadian rhythm. I have more energy in the morning and am tired in the evening. I'm currently tracking what else I'm consuming and when to see if I can figure out how to get the benefits on the honey more consistently. My wife and friend have tried honey at bedtime and both report improvements.

My view is that of the cause-effect relations I have emphasized, the most useful will be (a) the [1]effect of morning faces on mood (hard to use at first), (b) the [2]effects of sweets on sleep (easy), and (c) the [3]effects of foods on brain functionb. Bedtime honey is just the first of the sweets effects and [4]flaxseed oil and butter are just the first of the brain effects. Full understanding and use of the morning faces discovery lies many years in the future. Of the various methods I've developed, I think the most useful will be the [5]use of reaction time measurements to improve brain function (and, probably, overall health). At the level of what might be called "meta-methods" (the usual name is big ideas), I think the most useful will be that [6]people who aren't health experts can discover important things about health.

1. <http://escholarship.org/uc/item/2xc2h866/>

2. <http://blog.sethroberts.net/category/sleep/honey-sleep/>

3. <https://plus.google.com/u/0/communities/114619130176100669530>

4. <http://media.sethroberts.net/blog/pdf/2012-09-24-The-Growth-of-Personal-Science-Implications-For-Statistics.pdf>

5. <https://plus.google.com/u/0/communities/114619130176100669530>

6. <http://blog.sethroberts.net/2013/12/27/lessons-of-this-blog-2nd-of-2/>

AI (2014-01-28 08:37:14)

What is the long term effect on the pancreas of eating that teaspoon of honey each night? Seth: I don't know. But better sleep -> better immune function -> less of many diseases, including cancer.

Sara (2014-01-28 10:29:46)

Al, you know that tens of millions of Americans eat cookies or ice cream before bed each night, right? Visit your local market around 10 pm any night and see what's being scanned at the registers. Seth: No, I did not know that. That's a very interesting idea, that there is a shift in what is bought toward sweet stuff in the evening. Where I live in Beijing there is a massive shift in what is sold in the evening: fruit is much more available after 6 pm than before because a bunch of fruit vendors open for business.

Kelly B (2014-01-28 11:06:25)

I'd vote for honey (still going strong!) and just the general promotion of self-experimentation science; that we can and should set up n=1 controlled trials of our ideas and look hard at the results, rather than waiting for the rest of the world to come up with the "Way to be Healthy (TM)".

Xav (2014-01-28 14:07:22)

Two results I have had from two ideas on this blog : 1) Flaxseed oil, which has mostly fixed my problems with bleeding and painful gums. 2) Probiotics. Unexpectedly, a long standing, nagging pain in my right hip has almost gone since I started taking a daily probiotic supplement to improve my gut microflora. Taking the probiotic, and adding more prebiotics like leeks to my diet, are the only major changes I can think of that happened at the same time. It may just be coincidence - however a Google search for people with conditions like Crohns and IBS and with hip pain brings up quite a few results, so who knows there may be a connection.

Jake (2014-01-28 14:55:35)

The greatest benefit I have received from this blog is the idea of being a personal scientist. Try new things and evaluate the results. I try to inspire my friends to do the same thing. Seth: Thanks!

nansen (2014-01-28 20:12:33)

Item [b] (bedtime honey) helped me with item [a] (morning faces). Since I have been on hemo-dialysis, it's been very difficult to get out of bed around 5:30 am PST in order to get a strong effect from the faces. With the honey, I have plenty oomph even on only 5-6 hours sleep. (After the treatment, I can take a nap to catch up.) Thank you!

John Smith (2014-01-28 23:33:01)

I really like the idea of do it ourselves science, especially if you can pull a bunch of like minded people together, Seth. Not that there is a great dearth of good science, but mostly the good stuff is too controversial so it gets swept under the carpet if favor of something more 'politically correct.' Even on a full tummy, sugars can find space, hence we can always roll up for pudding regardless of having gagged previously on turkey. Just as water will find room in a jar full of marbles, sugars can squeeze into a glass full of water without changing the volume. Seth, what do the Chinese think of honey? Is real honey vs analog honey an issue there? I hear they are keen importers of Australian honey yet are regarded statistically as the world's greatest exporter of 'honey.' Seth: The Chinese think honey is a health food. Many vendors sell only honey. However, I don't hear about it being associated only with bedtime. I can buy Australian honey at stores that sell foreign products but not most stores. Most Chinese food stores sell only honey from China.

Jack (2014-01-29 09:22:52)

I have tried taking honey before bedtime(I tried 1,2,3 and 6 teaspoons on different occassions) and in every case I could not get to sleep for hours! It kept me awake for hours and acted like a strong stimulant! I felt terrible and mean in the morning every time; not well rested. So like most things, Honey before bedtime may help some people sleep better but may not work for everyone. In Chinese Medicine, honey (and/or sugar, liquorice or anything that tastes sweet) is used to cure ailments of the

stomach and small intestine. It is a YIN energy tonic, taken for energy. It is also good for the lungs and large intestine but bad for the kidneys, bones, teeth, sex organs and hair on the head. Sweets are also used to water down the effects of stronger herbs and medications. Two tablespoons of sugar in 12 ounces of water will usually cure nausea or stomach aches quickly. Also Seth, I've been wanting to tell you how foolish it is that modern medicine uses sugar pills as placebos for medical studies, because sugar itself is a medicine and cures many ailments it cannot be considered a placebo. And as you have proven, it can also be used as an appetite suppression. And Seth, it's amazing but oil and butter fall into the same Chinese medicinal category as honey and sugar... so strengthening the stomach and small intestine may be yet another benefit of the Shangri-La diet! And as to Honey, the great mathematician Pythagoras is known to have eaten only bread and honey all of his life, and he lived to be well over 100 years old.

JM (2014-01-30 10:42:16)

Sorry Jack, but if you check wikipedia you will find that very little is known of Pythagoras actual life (we are talking Greece circa 500 BC) and even how and when he died is in question so I wouldn't put much stock in that bread and honey story.

funder (2014-01-30 13:06:05)

Nobody's mentioned Vitamin D in the mornings yet? Totally changed my life.

Anne (2014-01-30 13:21:06)

I am so very grateful for this blog. I have learned D vitamin in the morning, for me it is a life saver. I live in the nordic countries and have problem in the winter. I also find it helps me sleep better. Sunglasses in the evening when looking on TV or computer, makes it much easier to go to sleep. Earlier I had to stop at 8pm to be able to sleep in normal time. Omega tree helps my gums and I do not need to go to the dentist so often. I used to have severe gum problems with a lot of inflammation and bleeding, as I lost my own teeth in a car-crash back in the 70. As I think gluten is not that good for me anymore, so I make crackers out of flaxseed to have for breakfast instead. I also use a lot of butter today and I feel it is good. I am raised in the fat phobic generation, I did not eat any butter or fat for more than 30 years. When I work a lot from home I do faces in the morning, but when I work I meet a lot of people early in the morning I of course tried the bedtime honey since a couple of weeks, I cannot for sure say if it is very good or only good. Some nights I wake up at 02.00 am on honey, I mix with a green banana before bedtime. On the banana I do not wake up at 2 am. But I am more alert the day after on honey before bedtime. Perhaps those that get insomnia on honey react different. Like some people like my self cannot drink coffee later than 3 pm and other can drink coffee just before bedtime.

Draga (2014-01-30 16:17:41)

For me, I'd say the "most useful" was just seeing another academic say some of the things I've been thinking about (but seemed crazy). For example, "appreciative" vs "critical" thinking. Stuff like that. On self-experimentation front, eating food with no taste (noseclip) is so effective it's like cheating.

Bill (2014-02-09 08:50:36)

Sleep and allergies have been your most useful subjects for me. A subject you haven't covered, but which might be popular, is female hair loss. It seems possibly more treatable than male pattern baldness - there are hints of nutritional or hormonal causes (lysine, iron, thyroid, estrogen, etc.) - but it does not seem to have the full attention of the normal medical community. I wonder if you have any self-experimenting readers out there who have succeeded with this.

## **The Turning Point in My Self-Experimentation (2014-01-29 05:00)**

Several people have said that bedtime honey made them wake up too early. [1]For example:

No effect for me, worse for my wife (hours of wakefulness in the middle of the night after a few hours of sleep)



The commenter said this meant it wasn't working.

My view is different. To me, this experience suggests that there is something safe, cheap and practical (honey) that has a powerful and non-intuitive effect on sleep. Finding something like that is extremely hard. (Drug companies have spent billions of dollars trying to do this, with far worse results.) It isn't easy or obvious or trivial to learn how to use that powerful force to produce improvement rather than harm ("hours of wakefulness in the middle of the night"), but I am sure it is possible.

My first important use of self-experimentation was in graduate school. I discovered that one of the medicines my dermatologist had prescribed for my acne wasn't working. The notion that a prescribed medicine didn't work is useful, but not shocking. This success was enough to launch me into self-experimentation to improve my sleep – specifically, to reduce early awakening. This turned out to be very hard.

After ten years of trial and error (all error), [2]I discovered something that made my early awakening reliably worse. I was thrilled. After ten years, something finally made a difference, albeit in the wrong direction. It was a turning point. I did many experiments and finally figured out that any breakfast made my sleep worse. This was far more progress than finding out that a prescribed medicine didn't work. It was progress because (a) nutrition experts usually said that breakfast was "the most important meal of the day". My discovery flatly contradicted that. I became a lot more skeptical of experts, a view that has served me well. (b) Eliminating breakfast greatly reduced early awakening, and (c) the discovery showed that self-experimentation could do better than expert advice in surprising ways. My interesting self-experimentation began with the discovery of something that made my sleep worse.

I too have found that although I am sleeping much better, bedtime honey and other evening sugars have also made me wake up too early more often. I too need to learn how to better use this new knowledge.

1. <http://blog.sethroberts.net/2014/01/14/bedtime-honey-is-a-godsend/#comment-1168304>

2. <http://escholarship.org/uc/item/2xc2h866/>

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Jon (2014-01-29 11:10:34)

Hi Seth, Today I came across a recommendation for honey before bed from another source, Dave Asprey (bulletproofexec..best known for recommending coffee+butter+mct(coconut) oil in the morning) He wrote: I also recommend that, on zero starch days, you consume up to 1 tablespoon of raw honey before bed along with MCT oil. Raw honey forms liver glycogen preferentially compared to other forms of sugar, and liver glycogen fuels the brain better than muscle glycogen. Some people don't need to do this, but if your sleep quality improves, it's an easy biohack that doesn't take you out of ketosis thanks to the wonderful powers of MCT oil. No comment on whether or not it works..just thought you may be interested in another person linking honey and sleep. Seth: Thanks. I got the idea from Stuart King, who got the idea from Dave Asprey. Who got the idea from a book by Mike McInnes.

Michael (2014-01-29 13:21:06)

This is interesting for me because I have the opposite problem. I'm a very deep sleeper and it take a lot to wake me up. If I didn't set an alarm I'd oversleep every morning, and even after I wake up I'm still groggy for some time. I used to never eat breakfast, but I started after reading that it caused you to wake up too early. I found that it does help me wake up earlier, but I would still naturally oversleep without an alarm. And actually, writing this now, it occurs to me there's probably room for improvement. I always get up, shower, get dressed, and then eat breakfast, when I should probably eat breakfast immediately after getting up. This would move my breakfast a half hour or so earlier each morning, and hopefully

I'd see a corresponding shift in when I'd naturally wake up. I'm not sure why this never occurred to me before, but I'll give it a try. Back on point though, for someone like me, something that causes you to wake up earlier may be a feature and not a bug.

John Smith (2014-01-29 16:53:38)

Few who comment on honey/sleep divulge their age, health status, etc. I am a committed user of honey, but I also know that the older one is, the longer they have been pre-diabetic (or worse) the longer it will take for them to realize the full benefit of these principles. It has to do with the health of the endocrine glands. When they are old, sick and worn out (at any age) one needs to allow for their inability to perform as perfectly as the text book says they should. Also, I always take notice of the age of the author of any book or advice page. Young people assume youth is forever. If only it were so! And we have been conditioned (by the drug pushers) to expect immediate results. Like right now, Man. Overnight! Hey if it didn't work the first time it is no good! Yet we all know we have tried myriad other 'approved' methods that didn't work either. Seth is right on top of the ball having had the light come on in his head, that the experts are looking after their own garden. We as individuals will either tend our own or suffer the consequences.

JP (2014-01-29 17:49:14)

Seth - In the comment section of an earlier post you mentioned you are now eating sugar three times before bed. What are you eating each of these times?

Seth Roberts (2014-01-29 18:18:30)

yes, I eat sugar 3 times after dinner and before bed: Time 1 (soon after dinner): longan (approx 140 g) plus Yakult (1 bottle, 60 kcal) Time 2 (a few hours before bedtime): banana (approx 120 g) Time 3 (near bedtime): honey (20 g)

Ben C (2014-01-29 21:05:13)

How long after waking is your first meal on average?

Sidney Phillips (2014-01-29 22:04:07)

What do you think of Trehalose? It's a disaccharide composed of 2 glucose molecules. The enzyme required to digest it apparently resides in the small intestine, so theoretically it should last longer while providing a steady stream of energy through the night, unlike honey which gets digested quickly. Honey helps me get to sleep quickly, but it has not solved my early waking problem. I am going to try Trehalose on my next order from Swanson's. It's not cheap, but not prohibitively expensive either:<https://www.swansonvitamins.com/swanson-ultra-pure-trehalose-1-lb-454-grams-pwdr> Seth: I haven't heard of Trehalose. Very interesting.

Seth Roberts (2014-01-30 01:39:27)

I wait at least 3 hours after waking up to eat anything solid, such as butter.

C (2014-01-30 19:27:43)

I always sleep better with bedtime ice cream. The more the better. I wonder what mothers milk would do

Charles (2014-01-30 20:28:32)

To be honest, waking up after a couple of hours would be what I expect would happen. The sugar would cause low blood glucose, and eventually your body would kick out some adrenaline to get your blood sugar back up. And then you would be wired and not able to get back to sleep. That won't happen with everyone, some people have more stable blood sugar, but I would imagine that's exactly what happened with that guy's wife.

Charles (2014-02-01 14:13:55)

@Sidney Phillips: That waking up problem is specifically what a number of people have reported as being helped or eliminated by potato starch (as a concentrated form of resistant starch) supplementation. I've had that problem for decades and it was almost completely eliminated a couple of weeks after starting potato starch, and has stayed that way for months. The same

for my girlfriend and other friends. Seth and I have disagreements about the mechanism, but it's been reported by too many people to be an illusion or confirmation bias.

daz (2014-02-01 17:18:04)

Hi @Sidney Phillips, keep us posted on your Trehalose experiment. i too still have trouble with nighttime/early awakenings. & have been experiment with various sugar/carb strategies myself, with various timings & doses. @Charles, potato starch is definitely 'good stuff' imo. tho for me personally it had no effect on my sleep (good or bad). i started 'supping' with it back in April (2013). i am still taking it tho & will continue to do so. i currently take 1.5 to 2 tablespoons per day. ( i did go as high as 4 tbls p/d for a while in the beginning).

Charles (2014-02-02 11:53:09)

@daz, Sorry to hear it hasn't helped. For those people who have had little sleep benefit, the protocol that will sometimes help is to take a couple of tablespoons in water an hour after dinner, then no more food after that. If you've been doing that, and it hasn't helped, then I guess your unique biome and/or other affected systems aren't where the issue is. That's a bummer. It's really helped me and a lot of others I know. But everyone is different.

daz (2014-02-02 15:37:01)

Thanks Charles, "...the protocol that will sometimes help is to take a couple of tablespoons in water an hour after dinner, then no more food after that" This is actually new info to me, would you have a link that would take me to more on this pls Charles. (is it from comments on the f-t-a web site, i have not checked that site in months & i am sure there are hundreds of comments now, under multiple posts...). it's been a while since i did the PS post dinner & then my max would have likely been 1.5 tbls, but more likely 1 tbls. (i currently take my PS during the day)

Amelia (2014-02-04 15:56:55)

I just wanted to chime in that when I was pregnant (my son is now 11 months old and nursing) I started waking up in the wee hours of the morning every a few nights, quite alert, and felt unable to sleep unless I had a snack. This also happened another time a few weeks ago. Trying a spoonful of honey before bedtime sounds like a sensible thing to try; I didn't have this problem pre-motherhood, but perhaps I need to compensate for the higher 24/7 glucose demands of pregnancy and nursing, which should be especially interesting to try in future pregnancies.

Science is a method, not an institution (2014-02-05 20:25:09)

[...] corruption and inaccuracy of studies produced by modern academia. Mr. Roberts frequently advocates self-experimentation and using the scientific method to get reproducible results and to understand them [...]

### Assorted Links (2014-01-30 05:00)

- [1]Benefits of yacon syrup
- [2]MIT & Aaron Swartz
- [3]A job search in the English Department at UC Riverside
- [4]Watch out for iron overload. You may be eating too much iron.
- [5]Scoliosis successfully treated without surgery. "Surgery was recommended as the only option to help her recover."

1. <http://mrheisenbug.wordpress.com/2014/01/04/proof-of-the-prebiotic-effect-dr-ozs-fat-busting-yacon-syrup/>
2. <http://www.bostonmagazine.com/news/article/2014/01/02/bob-swartz-losing-aaron/print/>

3. <http://www.insidehighered.com/news/2014/01/02/email-job-candidates-renews-debate-about-conference-interviewing>
4. <http://humanhackerhouse.com/watch-out-for-iron-overload/>
5. <http://www.dailymail.co.uk/health/article-2532647/Teenager-severely-curved-spine-pain-free-shunning-drastic-surgery-favour-exercises.html>

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dearieme (2014-01-30 05:49:57)

The misbehaviour of a Search Committee is God's way of shouting "Don't be an academic". Unusually sound advice from the old boy, I'd say.

JM (2014-01-30 09:06:22)

I'd find the scoliosis treatment article more credible if they showed before and after x-rays. Less pain and easier breathing are great but what is the actual long-term prognosis, especially if the curvature is severe. My daughter had the rods put in her back about 10 years ago and has done extremely well since - very active and no pain. She only has some limits in flexibility such as yoga or dance moves. If there had been another option at the time I would have pursued it but we were told her curvature was one that would continue to increase as she aged (most scoliosis doesn't progress after the child hits puberty, she was one of the unlucky ones that did).

Allan Folz (2014-01-30 12:02:41)

That reminds me... Seth, did you see the club foot piece on Morning Edition this week? It's the classic story-line of motivated parents empowered by information sharing made possible by the internet up-ending the highly-invasive (and highly lucrative) surgical status quo, er, standard of care with a 50 year-old non-invasive technique developed by a country doc in fly-over country. [1]How Parents and the Internet Transformed Clubfoot Treatment Seth: Thanks. Yes, I did see it and put it in an upcoming Assorted Links.

1. <http://www.npr.org/blogs/health/2014/01/27/265254533/how-parents-and-the-internet-transformed-clubfoot-treatment>

shtove (2014-01-31 13:32:35)

Anyone seen this - music & Alzheimer's (6:30) - 7m hits? [#t=43](http://www.youtube.com/watch?v=NKDXuCE7LeQ) Seth-style casual miracle.

## **Depression, Pain and Addiction: The Connection (2014-01-31 05:00)**

Because of cold weather in America, [1]Longform (the website) linked to [2]a 1995 article about the death by freezing of Teresa McGovern, daughter of George McGovern. She was drunk and fell down. Her alcoholism was intractable. She went for treatment dozens of times. I have a theory about what causes alcoholism and other addictions and why they resist treatment.

Let me start with the fairly obvious part. People go to their addiction (alcohol, gambling, smoking, whatever) to escape pain. The addictive activity provides a hit of pleasure that eliminates the pain for a while. It is difficult to endure pain and after a while, if you can escape, it is impossible - your "willpower" runs out. An addict keeps feeling pain, keeps doing the addictive activity to get rid of the pain. Pain triggers the addiction. Addictive activities, such as drinking, often produce cravings, which are an additional source of pain. This makes the problem worse - makes the total pain even harder to endure - but it is not the whole problem. The addiction started when there were no cravings. This is why abstinence alone - which does get rid of the cravings - is not a good solution. It does not get rid

of the sources of pain that were/are the ultimate cause of the problem.

The McGovern article illustrates the pain-reduction aspect of addiction:

I can numb the pain, says a voice. "It doesn't sound like an evil voice. It sounds like a friend, telling you the truth." Teresa's younger brother, Steven McGovern, is describing the voice of alcohol, as it whispers to you when you are feeling tense or dissatisfied or empty: Here's your old pal, I can get you through this. "I have experience with this," he explains. Like Teresa, Steven has struggled for years with addiction.

At the end of [3]Double Down, a great memoir by Frederick and Steven Barthelme, about loss of a large inheritance due to gambling addiction, the authors say something similar, that their addiction derived from depression. I haven't talked with addiction specialists but I doubt any of these ideas would surprise them.

The less obvious part of this comes from my discovery that [4]seeing faces in the morning caused a large oscillation in mood: happy during the day, unhappy at night (while asleep). The effect of being happy during the day was that small amounts of badness (e.g., bad news) made me less happy but did not push me all the way to feeling bad (= painful). I had a buffer. If I feel very happy and then something bad makes me feel less happy – only slightly happy – this has no effect on my behavior. I don't go out of my way to increase my happiness. Only when the border between happy and unhappy is crossed, and I start to feel bad (pain), not merely less happy, do I feel any desire to reduce the pain.

Life is full of pain-causing stuff. Everyone should have a buffer of happiness provided by morning faces but almost no one does. For almost everyone, as far as I can tell, most of the time they are in a neutral state, neither happy nor unhappy. When something bad happens, lowering their mood, they don't go from very happy to slightly happy, they go from neutral to unhappy (= painful). And when in pain they seek ways to escape it. This makes all sorts of pleasure-causing activities, including drinking alcohol and eating "comfort food" (= food with a strong flavor-calorie association – the stronger the flavor-calorie association, the more pleasant a food tastes), more attractive.

Long ago, people had this buffer of happiness during the day which made it possible for them to forage together in spite of problems, such as hunger and thirst and yesterday's disappointments. In the evening, the buffer disappeared as your mood went down. The problems indicated by pain became more urgent and were dealt with. If you were thirsty, for example, you would drink something. Modern life has reduced or eliminated many sources of pain but it has also (a) eliminated the buffer, our natural protection, and (b) provided many short-term sources of pleasure (such as drinking) harmful in large doses. Because we live in a world that is inevitably painful now and then – no treatment can change that – the combination of (a) and (b) causes addiction. Treatments for addiction, at best, push people away from one short-term source of pleasure. They never restore the buffer, the natural protection.

When The Shangri-La Diet was published, many SLD dieters said it had become easier for them to stop smoking. My explanation is that because their hunger (one source of pain/discomfort) went down, they had more willpower left over to deal with another source of pain/discomfort, craving a cigarette. As my sleep has improved in recent months, due to bedtime honey and related changes, [5]I have found it easier to do everything. My explanation is essentially the same. No longer having to use willpower to overcome tiredness – I am less tired – leaves more of it to do everything else.

1. <http://longform.org/>

2. [http://www.washingtonpost.com/lifestyle/style/teresa-mcgovern-a-death-in-the-cold/2012/10/21/42ad26ca-1bde-11e2-ba31-3083ca97c314\\_story.html](http://www.washingtonpost.com/lifestyle/style/teresa-mcgovern-a-death-in-the-cold/2012/10/21/42ad26ca-1bde-11e2-ba31-3083ca97c314_story.html)

3. [http://www.frederickbarthelme.com/?page\\_id=65](http://www.frederickbarthelme.com/?page_id=65)

4. <http://escholarship.org/uc/item/2xc2h866/>

5. <http://blog.sethroberts.net/2013/12/14/bedtime-honey-other-benefits-besides-sleep-and-strength/>

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dearieme (2014-01-31 09:26:37)

The Theory of Conservation of Willpower. And why not? But I used to propound a Theory of Conservation of Fretting: if you solved some social problem that people were whining about, the same people would just start whining about another. In other words, the problem isn't the problem, the problem is the people.

Gina (2014-01-31 09:41:29)

Addiction treatment is another area where the experts haven't made any progress whatsoever, yet they don't seem interested in innovation.

Therapsid (2014-01-31 09:50:27)

This is interesting. Since reading on this blog about the morning faces phenomenon, I've been turning to it as alternative to heavy drinking. However, if morning faces exacerbates night unhappiness, and if heavy drinkers drink disproportionately at night, it might only help reduce drinking insofar as people go to sleep very early.

Alain (2014-01-31 10:09:29)

It can all be related to a better equipped, less disturbed/stressed out, better functioning decision power "muscle", if I may. I've seen this before. Trivial and abnormally frequent decision making does typically wear out any kind of willpower we have left to make more important decisions throughout the day. Should we have to exert that willpower on overcoming other people's frowns, sad faces and bad temper, we will (I assume) end up with impaired decision making capabilities at the end of the day. A quote from an NPR article on how Obama deals with decision making processes: "He had very self-consciously sought to eliminate all trivial decision-making from his life, such as what he wears to work," Lewis tells NPR's Renee Montagne about his interviews with the president for his piece in the October issue of Vanity Fair. "So, he says, 'I got rid of all the clothes I have except for gray suits and blue suits, so I don't even have to think about what I put on.'" Why? The president "started talking about research that showed the mere act of making a decision, however trivial it was, degraded your ability to make a subsequent decision," Lewis says. "A lot of ... the trivial decisions in life — what he wears, what he eats — [are] essentially made for him." <http://www.npr.org/2012/09/11/160898373/inside-obamas-decisions-from-libya-to-lunch>

Alex Chernavsky (2014-01-31 10:23:56)

Addiction-treatment is probably the most backward, pseudo-scientific sub-specialty within psychiatry. As writer Maia Szalavitz once put it, "In any other area of medicine, if a physician told you the only cure for your condition was to join a support group that involves 'turning your will and your life' over to God (AA's third step), you'd seek a second opinion."

George (2014-01-31 10:43:06)

I don't think its pain so much as it is boredom. Most people don't really experience pain but boredom is the great scourge of life for many people especially in modern times. People turn to the bottle out of boredom.

Jack (2014-01-31 12:04:59)

In China, the age old cure for alcoholism is putting one to three teaspoons of dried tiger feces in an alcoholics favorite drink. This makes the patient's favorite drink taste absolutely terrible... so terrible that the brief negative flavor association of the feces with that of their favorite drink is never forgotten. Usually the alcoholic only needs to take this "medicine" only once or twice, and they will never, ever touch the stuff (any alcoholic drink) ever again. No expensive "therapy" sessions are ever needed. (Of course, the alcoholic patient is not usually told what the medicine actually is.) Tiger feces is very expensive in China for this reason. Probably regular dried house cat feces powder would work as well, but without the

mystique of being from a Tiger. The Chinese have been involved in self experimentation and natural cure research for thousands of years. The West would do well to learn from the Chinese. I would trust natural Chinese cures and/or treatments that have been proven to work for thousands of years over modern poisonous medicines and treatments developed only in the past few to hundred years anytime. I think any sane person would. I believe most of modern medicine is harmful and should only be tried as a last resort; when natural cures and those discovered from self experimentation have not born fruit.

Nancy Lebovitz (2014-01-31 13:33:58)

I like the idea of a happiness buffer, though I believe faces in the morning aren't the only way to fill it. See [1]Heal Thyself, also published as *The End of My Addiction*, by a surgeon who found that Baclofen (a prescription muscle relaxant) stopped his cravings for alcohol and incidentally cured his addiction to spending money. A number of commenters at amaxon have found that Baclofen stops their addiction. A detailed description of raising a happiness set point: [http://lesswrong.com/lw/20l/ureshiku\\_narital/](http://lesswrong.com/lw/20l/ureshiku_narital/)

1. [http://www.amazon.com/Heal-Thyself-Destroyed-Alcohol-Personal/product-reviews/0374532206/ref=cm\\_cr\\_pr\\_btm\\_link\\_2?ie=UTF8&pageNumber=2&showViewpoints=0&sortBy=byRankDescending](http://www.amazon.com/Heal-Thyself-Destroyed-Alcohol-Personal/product-reviews/0374532206/ref=cm_cr_pr_btm_link_2?ie=UTF8&pageNumber=2&showViewpoints=0&sortBy=byRankDescending)

Joe (2014-01-31 14:03:59)

Alex: Addiction-treatment is probably the most backward, pseudo-scientific sub-specialty within psychiatry. As writer Maia Szalavitz once put it, "In any other area of medicine, if a physician told you the only cure for your condition was to join a support group that involves 'turning your will and your life' over to God (AA's third step), you'd seek a second opinion." Joe: If I ever experienced the horrible PAIN that Seth attributes addiction to, I'd try just about anything to rid myself of it. That is, if I heard of a program that had the best success at dealing with addiction (i.e., AA, <http://www.burningtree.com/effectiveness-12-step-programs/>), and all the PAIN associated with it, I'd try praying to Bugs Bunny if that was part of the program. Hell, I'd turn my life over to Kanye West, if doing so would just rid me of that awful PAIN. When a person has hit rock bottom (Step 1), I don't think that would be that hard to do. By then, the person would probably have already sought second, third, fourth, fifth, etc. opinions anyway. Ditto for other disorders that produced great PAIN. Successfully turning off the horrible PAIN by turning your life over to God (pick the diety or program of your choice) would be an example of negative reinforcement, wouldn't it? Maybe some kind of "spiritual change" is exactly what's needed by some folks? What's the downside? Probably leading a better life?

Alex Chernavsky (2014-01-31 15:08:25)

Joe: AA has a host of problems associated with it. See: <http://www.orange-papers.org/>

Seth Roberts (2014-01-31 15:15:21)

"if morning faces exacerbates night unhappiness, and if heavy drinkers drink disproportionately at night, it might only help reduce drinking insofar as people go to sleep very early." Morning faces make me tired much earlier, like 2 hours earlier. It is a huge effect.

Seth Roberts (2014-01-31 15:19:25)

Re AA. My research suggests that AA meetings (a) should be held only in the morning (b) quite early, like 7 am. Maybe the seating arrangements should be changed, too, so that people are closer together. Or the meeting should be preceded by 30 minutes of simple socializing.

Gina (2014-01-31 15:27:54)

"If I ever experienced the horrible PAIN that Seth attributes addiction to, I'd try just about anything to rid myself of it." Saying that 12 step treatment is the best we can do is a pretty grim view. You see how well it worked for Teresa McGovern. When someone has been to rehab 10 times, right now all the experts can recommend is an 11th trip to rehab. The rehab industry has absolutely no motivation to find better treatments. They would lose all the repeat business.

Joe (2014-01-31 15:43:16)

Alex: For every orange paper there is a green one. :) <http://www.green-papers.org/> This is just a guess, but I wouldn't be

surprised if AA's success rate was as good as psychotherapy's alone. Done together, they appear to be the best thing we currently have to offer. Gina: "Saying that 12 step treatment is the best we can do is a pretty grim view." I didn't say that, of course. I'll refer back to my posts on various diets and say again that there are many ways to skin a cat. And lots of cats have lost their skins to AA. We should be thankful for that, while we look for even better ways to help people in distress and pain. Seth: That sounds like an idea worth testing! The trick, as I see it, would be to get them up that early. :)

Sara Lake (2014-01-31 15:47:53)

Seth, have you heard of the 'rat park' experiments? I think you must have. Addicted rats were put into a happy rat environment (about 200x the size of a regular rat cage with both space and privacy tunnels), and allowed to do things rats like to do (have sex, socialise, eat, sleep, play with toys). Most detoxed themselves, even when their substance of abuse was freely available. Seth: No, I haven't heard of them. Thanks.

Gina (2014-01-31 15:53:04)

"Re AA. My research suggests that AA meetings (a) should be held only in the morning (b) quite early, like 7 am. Maybe the seating arrangements should be changed, too, so that people are closer together. Or the meeting should be preceded by 30 minutes of simple socializing." My grandfather spontaneously quit drinking after years of having to be frequently hospitalized to "dry out" and severe liver cirrhosis. He had a job where the older guys would show up an hour or so early to work and sit at benches outside, drink coffee, chew tobacco and socialize. Now I'm wondering if his habit of going to work early came first. It's interesting.

Karen (2014-01-31 16:13:47)

Sara Lake or anyone: Do you have a link or citation for the paper describing the "rat park" experiment?

Alex Chernavsky (2014-01-31 16:31:55)

Journalist Anne Fletcher wrote an excellent book about addiction. It's called, [1]*Sober for Good: New Solutions for Drinking Problems – Advice from Those Who Have Succeeded*. She interviewed hundreds of people who had been sober for at least five years. Turns out (not surprisingly) that people quit using a variety of different approaches. And some people had not actually quit but rather moderated their drinking (which is a big "no no" in 12-step circles).

1. <http://www.amazon.com/Sober-Good-Solutions-Drinking-Succeeded/dp/0618219072/>

Joe (2014-01-31 17:22:27)

A story about addiction: I quit smoking 41 years ago. I was a 4-pack (Lucky Strikes) a day smoker. Before I turned off the alarm clock in the morning, I would light a cigarette. I HAD to have a cigarette. Yeah, it was that bad. I only needed a few matches to get through an entire day - and 4 packs of Lucky Strikes. I tried to quit dozens of times. I would try cutting back, try filters, even menthols (yuck!). I might make it two weeks, then back to puffing like a locomotive. Nothing worked. I LIKED smoking. I NEEDED to smoke. Then a lucky thing happened to me while confined to a hospital bed with double pneumonia. My second bout of pneumonia in just 6 months. I almost died. Some do-gooder doctor wheeled in a movie projector and showed me a film about what smoking can do to you (okay, I already knew it could kill me, but that apparently wasn't enough). The film was of an autopsy of a person who died from lung cancer. And the mere sight of the cancerous lung, and the horrible damage the smoking had done (imagine the sight of someone peeling hot asphalt off a roadway), and I was done with smoking. Forever. Haven't had a cigarette since. Not one. Do I still get urges to smoke? Yes. Especially when having a drink. But I will never smoke another cigarette. Period. Haven't had pneumonia since, and rarely even get a cold. The dumbest thing I've done in my life was to start smoking. The smartest thing I've ever done was to stop. Thank God for do-gooder doctors!

as (2014-01-31 18:30:37)

Teresa never married. She had two children with a man she lived with for four years. The article said that she was sober during those years and that she broke up with her boyfriend when she started drinking again. Maybe lack of a good stable family life leads to addiction? Sara Lake's "rat park" comment was interesting.



Alex Blackwood (2014-01-31 19:56:21)

I believe the Rat Park experiment Sara Lake is talking about is discussed here: [http://sub.garrytan.com/its-not-the-morphine-its-the-size-of-the-cage-rat-par k-experiment-upturns-conventional-wisdom-about-addiction](http://sub.garrytan.com/its-not-the-morphine-its-the-size-of-the-cage-rat-par-k-experiment-upturns-conventional-wisdom-about-addiction)

anon (2014-01-31 20:17:35)

Have you heard the Radio Lab (the NPR radio program) that discusses a woman taking a medication (for parkinson's tremors, if i recall) that makes her a gambling addict, and then her symptoms go away when she stops the medication? Seth: No I haven't heard it.

Sara (2014-01-31 21:53:51)

Apparently hypnosis works quite well for smoking.

John Smith (2014-01-31 23:23:32)

According to the gospel of John (me!) addiction has two components, one physical the other spiritual, mental or psychological (you choose one from those three or add the correct one). No one can administer any help, pill, advice, or whatever, that will work for any individual until that individual is ready to accept the challenge and make changes. Depending on the addiction, it will take more than just a little effort. AA did well as long as it was alcohol and cigarettes it targeted. When Overeaters Anonymous came along (same problem, addiction to food) the 'cold turkey' the 'never another mouthful of food' type of logic, simply wasn't enough. The overeaters had to learn a better way, as quitting eating proved to be fatal. They found that following the 12 steps was all it took, just that they had to dig deeper into the psyche to work out why they were so unhappy, fix that, then curing the addiction was easy going. In the 12 steps programs, reference to god is somewhat ambiguous as it speaks to "god as you understand him or perceive him (something to that effect)." Which is erroneous, of course, as it assumes god is a male, humanoid, personalized etc., but worst of all 'perceivable.' It denies the fact that we are god unto ourselves. Replace god with yielding to the other side of your head as in 'right brain' would work for me. The opposite is true also, yielding to the 'left brain.' Addiction cannot be cured without the assistance of both hemispheres. Males in particular are loathe to go into right brain stuff, females equally, do not care to live by logic (as a generalization). But it is all in our head, both the problem and the solution. If you read the Book, Feed Your Brain First, by Dr. Fessenden (Co-Author with McInnes in The Honey Revolution) you will discover the energy used by the brain is not always full speed ahead. As the health deteriorates or the day wears on, energy level get low, the voltage to the brain falls and the survival lobes get the first pick with the cerebrum (higher brain) taking what is left over. Chronic Depression always includes the condition of chronic partial brain starvation. So to cure any addiction especially those leading to depression, get the body energized (using natural foods and herbal medicines) so the brain is fully powered. Then one can think straight about using the decision making process intelligently. However, until that individual is ready to make the big change, nothing will work on a permanent basis. Making the big change will always work, even if the body lags behind. Fixing the body only will only partially work..... With the problem reoccurring further down the track. Another good book (which I haven't read) is called "The Pleasure Trap." I think there are several of a similar title, so can't speak for them all.

Alex Blackwood (2014-02-01 06:57:14)

Accounts of people wrecking their lives with gambling and compulsive sexual behavior while taking dopamine agonists go back years. Here's one: <http://www.houstonpress.com/2005-09-15/news/overstimulated/>.

James M. (2014-02-01 08:01:24)

Socializing more, talking fully about issues to someone, exercising at least three times a week, regular long sleep, going Primal/Paleo, has helped with my depression.

Tam (2014-02-01 13:28:25)

Matt Stone talks about similar ideas in a few differnt articles. One, about Rat Park, and another about 1811 Eastlake, in Seattle. 1811 is a very successful so -called "wet house" for the homeless that allows its residents to have alcohol. The success is measured in taxpayer money saved and also by how much drinking has declined. It seems to point to the idea that seeing a

human, or even a rat, as who they are, and allowing them to be seen and take care of their most basic needs which includes socialization and acceptance, can make all the difference in addiction healing.

Charles (2014-02-01 14:24:33)

RE: Morning faces...one of my favorite jobs over the years was being a breakfast cook. I got to see a lot of morning faces. And looking back, it seems to me that the regulars, who would come in every morning (a common breakfast joint phenomena) were basically pretty happy. Hardly any regular "grumps." And I still love going out for breakfast, it's my favorite meal to go out for. And I don't think it's just the coffee that makes people feel good, based on Seth's hypothesis. As to addiction, there is a major neurochemical component to it, and it can be turned on and off with various amino acids (for a lot of people, not everyone). That can be related to the happiness buffer, too, of course. If your neurochemistry is screwed up, by environment or genetics, and you're always fighting that, it doesn't take much to push you over the edge. Fix that, and it's a lot easier to deal with other habitual behavior. And yes, I worked with a chemical dependency program to do just that, and it helped a lot of folks.

Alex (2014-02-01 16:15:43)

Dearieme, the "The Theory of Conservation of Willpower" is in fact laid out, with neurochemical basis, in Willpower: Re-discovering the Greatest Human Strength, by Roy F. Baumeister and John Tierney. Baumeister makes the case that what we call willpower is glucose availability in the brain. Tierney also wrote a piece about Baumeister's work in the NY Times: <http://www.nytimes.com/2011/08/21/magazine/do-you-suffer-from-decision-fatigue.html?pagewanted=all>. I don't have a country to run, but I have found it useful, as Obama mentioned doing in the Michael Lewis piece, to reduce the number of trivial decisions I make throughout the day.

Sara Lake (2014-02-01 20:48:58)

The original rat park paper is this one: <http://www.ncbi.nlm.nih.gov/pubmed/98787?dopt=Abstract> and here is an interesting article by the lead researcher <http://www.parl.gc.ca/Content/SEN/Committee/371/ille/presentation/alexander-e.htm> Here is a list of some of his other publications. It's not hidden research, just didn't get a lot of attention. I think it's easier for governments to focus on 'the drug' rather than 'the addictive society'. [http://www.ncbi.nlm.nih.gov/pubmed?term=Alexander%20BK%5BAuthor%5D&cauthor=true&cauthor\\_uid=98787](http://www.ncbi.nlm.nih.gov/pubmed?term=Alexander%20BK%5BAuthor%5D&cauthor=true&cauthor_uid=98787)

Sara Lake (2014-02-01 20:52:54)

Also, if you look at the 'related citations' in pubmed, you'll see that it's not exactly an untested hypothesis (that the drug is not the root cause of the addiction).

Seth Roberts (2014-02-02 02:41:28)

"I think it's easier for governments to focus on 'the drug' rather than 'the addictive society'." I agree. Easier for governments and professors who need to publish regularly. Just as it is easier to focus on "which is the best treatment for Disease X?" rather than "What causes Disease X?"

Alex Chernavsky (2014-02-11 20:28:50)

Just saw this interesting article about Alcoholics Anonymous: "[1]After 75 Years of Alcoholics Anonymous, It's Time to Admit We Have a Problem", by Maia Szalavitz

1. <http://www.psmag.com/navigation/books-and-culture/75-years-alcoholics-anonymous-time-admit-problem-74268/>

## 9.2 February

### Announcing PaleoCon (2014-02-01 02:18)

I am one of the presenters – that is, interviewees – at [1]PaleoCon, which began a few days ago. The presenters were interviewed by John Durant. Among the presenters are Paul Jaminet and Chris Kresser.

1. <https://gv166.infusionsoft.com/go/pcreg/twoutopias/>

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Kristi Vice (2014-02-07 10:53:02)

I really liked your presentation and listened to it twice. I just wrote down six of your "weird" tricks for better mood, sleep and brain, but I seem to be short one trick. Thanks for your unusual thinking and sharing.

### Charles Dickens, Demons, and Personal Science (2014-02-01 05:00)

In [1]a review of biographies of Charles Dickens I found this:

In 1849 he showed a short account of his early years to his close friend John Forster, revealing a story he never told his own family: the shame-inducing months he spent, while his father was in a debtor's prison, as a 12-year-old "laboring hind" in a factory that bottled shoe-blackening.

Suddenly I understood why he wrote *Oliver Twist* and why it is so good. Budding writers are told write what you know. They should be told write what you feel bad about.

The work of [2]James Pennebaker has shown the benefits of even small amounts of self-disclosure. No doubt this is why all sorts of psychotherapy, supposedly based on enormously different theories, help roughly the same amount: All involve self-disclosure. I see this effect as something built into us by evolution to increase self-disclosure. Talking about bad experiences helps your listeners avoid what happened to you. To motivate such disclosures, evolution has built into us something that causes us to feel better after we talk this way.

Scientists are not told study what you know and they are especially not told study what you feel bad about. Scientists are mostly men, of course, and that sort of thing makes men uncomfortable. [3]My personal science, however, suggests the correctness of this idea.

1. [http://www.nytimes.com/2011/11/06/books/review/charles-dickens-biographies-review.html?\\_r=1&nl=books&emc=booksupdateema4&pagewanted=all](http://www.nytimes.com/2011/11/06/books/review/charles-dickens-biographies-review.html?_r=1&nl=books&emc=booksupdateema4&pagewanted=all)

2. [http://en.wikipedia.org/wiki/James\\_W.\\_Pennebaker](http://en.wikipedia.org/wiki/James_W._Pennebaker)

3. <http://escholarship.org/uc/item/2xc2h866/>

gwern (2014-02-01 09:09:50)

> Budding writers are told write what you know. They should be told write what you feel bad about. Charles Dickens was made famous and financially successful by his humorous light fiction \_Sketches by Boz\_ and \_The Pickwick Papers\_.

Peggy (2014-02-01 10:59:49)

Self-disclosure works better when there is someone on the other end listening. i think this effect partly explains some of the successes seen by alternative medicine practitioners: they take much more time to listen than is the norm in conventional medicine these days. Also, those who listen may learn surprising and unexpected things that may prove useful in treating others. I gather that your doctor didn't learn anything about treating acne from you, but he could have and should have.

John Smith (2014-02-01 12:31:17)

The Amway mantra is: Just tell your own story! I am often criticized (not prosecuted) for practicing medicine without a license, as I occasionally 'give out advice.' This is illegal in most Western Cultures, but isn't usually prosecuted unless money changes hands. But to avoid the criticism, my intention is to simply tell my own story, and or give my personal opinions. Telling my own story is possibly more healing for me than it is for my listeners. However, even the listeners may remember that story in years to come and benefit from some little part of it. AND its all so legal to tell your own story and no one knows it better than the individual who lived it! Nonetheless, when I meet someone whose only conversation is crying about their misfortunes I consider them addicted and tend to avoid that person. Good post, Seth. If we want to get some good science, we have to become scientist ourselves, aye? (and you don't need a piece of parchment to be a good scientist!)

LemmusLemmus (2014-02-02 05:04:47)

Why would a trait be selected for on the basis of its helping others? Kin selection? Group selection? Tit for tat?

Seth Roberts (2014-02-02 14:02:07)

"Why would a trait be selected for on the basis of its helping others?" When you help others in many cases you help yourself. For example, when you live with 10 other people you have 10 other brains working to solve your common problems, of which there are no doubt many. By helping those 10 other people, you are helping solve your problems.

## **Adult Acne, Water and Milk Thistle (2014-02-02 05:00)**

A reader writes:

I suffered from moderate acne as a teen, which continued well into my adult years. In my early forties, I sought help from a dermatologist, hoping that progress had been made since my teenage experience which included tetracycline and sunlamp therapy to induce drying and peeling. I was disappointed to have this doctor recommend basically the same treatment twenty five years later. I declined.

Fortunately, a friend recommended drinking lots of water, and I began doing so, attempting to drink eight glasses a day. This was in December. The acne actually got worse . . . but I received a Brita water filter pitcher for Christmas and began drinking filtered water. Within a week my skin was totally clear, and remained so with minimal exception thereafter, even when my water consumption waned over the years. I was delighted and grateful to have found such a simple and healthy solution, and annoyed that no doctor had even suggested it.

But about 15 years later – about a year ago – I began to experience significant breakouts again, this time confined largely to my nose. I assumed that I needed to simply up my water intake again. This time

it didn't help. Maybe the filter was overdue for a change, I thought (we'd long since upgraded to a reverse osmosis filter), so I had it changed but still no improvement in my skin.

I began cutting out various foods, eggs, coconut oil, whey protein, things I was eating lots of, thinking maybe I'd developed a sensitivity. Nothing worked, although I did see immediate improvement when visiting family in the states, which made me wonder if it was the change in the water. So back home I tried to drink bottled water or club soda exclusively and it seemed to help maybe slightly.

I continued to search for a more complete solution. While perusing several online blogs devoted to acne treatment, I read a comment from a self-described longtime sufferer who claimed to have recently discovered a cure for his acne – milk thistle and NAC [n-acetyl-cysteine]. I got some milk thistle, took a few capsules a day for maybe three days, and voila, clear skin again. I never had reason to add NAC since the milk thistle worked so well.

I have reduced water consumption to normal levels (meaning I try to drink several glasses daily but don't bother to track), take a few milk thistle capsules a week (don't track that either), and only start to get breakouts if I happen to miss taking any for about a month, which I did just recently over the holidays. I still don't know what causes the acne, and I don't know why the milk thistle "cures" it, but it works wonderfully for me.

[1]Here is more evidence for the effectiveness of milk thistle for acne.

1. <http://www.acneeinsteinstein.com/studies-reveal-almost-irrefutable-evidence-for-the-root-cause-of-acne/>

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Kevin (2014-02-02 10:05:02)

The milk thistle helps the liver, which removes toxins from the body. When the liver is overloaded, toxins will also be removed via the skin.

John Smith (2014-02-02 11:44:27)

and..... our cells, bodies and brains have memory. Once an avenue is established for the excretion of waste products the liver and kidneys cannot process, it continues to use that outlet. Should one outlet be eliminated, as in the removal of the tonsils, then a new outlet would be established. I Found in my own life, that water fasting made a life changing difference. Many toxins in the body are the residues of past pains whether real or imagined, especially the hurts we collect as children. The water fasting cleared much of this for me and released the liver and kidneys to do their normal functioning once again.

Bill (2014-02-02 15:47:23)

I had awful adult acne, hideous cystic lumps that left scars. My college pictures are hard to look at. This continued into late twenties. It was a food allergy, but took forever to figure out: black tea. Especially Oolong. My face would begin to itch within minutes of drinking, and the breakout came the following day. But it took years to notice the connection, I'm embarrassed to say. The allergy – if that's what it is – is highly specific. Green tea is no problem. Coffee is no problem. The only offender is black tea, especially Oolong. Even now, in my late forties, I break out if I drink two cups of black tea. The effect can be mitigated by drinking a ton of water.

daz (2014-02-02 15:52:28)

"But about 15 years later — about a year ago — I began to experience significant breakouts again, this time confined largely to my nose" makes me wonder if your water supplier made a change...something that your water filter could not block/clean. Adding Chloramine comes to mind (<http://en.wikipedia.org/wiki/Chloramine>). I read somewhere this has become more common in recent years...'chlorine on steroids' perhaps. As far as i know only Vitamin C type filters remove/negate this stuff (or adding Vit C to drinking water & bath water). You should be able to find out what's in your water by checking info on the suppliers web site. It still doesn't change anything i guess...but would be interesting to know. (pls post up if you find they do use chloramine)

Florinescu Eduard (2014-02-03 03:49:08)

Milk Thistle is good for psoriasis too so it must hit a common cause. By the way I discovered that soluble barley drink (tries to imitate Coffee) in the evening improves sleep, especially when you had a active day.

CC (2014-02-03 17:34:11)

Good to know about milk thistle. In case anyone cares, I've had great success with taking 100 mg zinc picolinate daily. I recently started applying apple cider vinegar (1 part ACV to 2 parts water) to my face 1-2 times daily. It seems to have worked really well, though this could be a coincidence. I'll keep observing for a few more weeks before concluding anything. I think I got both these suggestions from the SLD forums.

Sam (2014-02-04 04:46:45)

The Vitamin C trick to remove chlorine works. It only takes a pinch per five gallon bucket. I used to do this for my plants. If you have a white bucket try it. Add a pinch then stir. Look in the bottom and you will see a small grain in the middle. That's the chlorine. The info comes, if I remember correctly, from the San Fransisco water department.

Trev (2014-02-07 00:32:16)

I recently started taking D3 4000iu a day, just because there's no sunshine here in England. A pleasant side effect was that 4 persistent spots on my forehead have disappeared. Medication wouldn't shift them but now they've gone. A quick search pulled up the same experience for other people.

### **More Muscle Strength, Less Cancer (2014-02-03 05:00)**

[1]A 2009 study followed about 9000 men for 10-20 years. It found that strength (how much you can bench and leg press) measured at the start of the study was associated with likelihood of dying of cancer during the study. Men in the upper two-thirds of the study population in strength had 40 % less cancer mortality. This might be the most surprising result:

Further adjustment for BMI, percent body fat, waist circumference, or cardiorespiratory fitness had little effect on the association. The associations of BMI, percent body fat, or waist circumference with cancer mortality did not persist after further adjusting for muscular strength.

In other words, muscle strength was a better predictor than several similar measures (BMI, etc.) and these other measures stopped predicting when corrected for muscle strength. Muscle strength is closely connected to something important.

Men who are stronger by and large exercise more, no doubt. Yet muscle strength is determined by resistance training, not aerobic exercise – and it is aerobic exercise (and to some extent walking) that have been promoted by countless

experts since the 1960s and the invention of the concept aerobic. Jogging reduces how much time you have for resistance training.

These findings interest me because I do a lot of resistance training – stand on one leg to exhaustion several times per day – purely to sleep better. By improving something easy to measure (sleep), these data suggest I have also been improving something hard to measure (chance of dying from cancer). Not surprising, but reassuring.

My data also suggest two different possible reasons for the strength-cancer association. One is that men who exercise more sleep better as a result; better sleep, better immune function, less cancer. Another possibility is that strength is a marker for good sleep. Among men who do equal amounts of exercise, [2]those who sleep better will be stronger.

From [3]The Breviary.

1. <http://cebp.aacrjournals.org/content/18/5/1468.long>
2. <http://blog.sethroberts.net/2013/12/30/sleep-and-bedtime-honey-more-about-strength-improvement/>
3. <http://digressionality.blogspot.com/2013/12/muscular-strength-and-adiposity-as.html>

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Charlie Currie (2014-02-03 09:09:00)

My father-in-law would be the exception...he had very strong legs and arms. He was an athlete in his younger days and worked labor intensive jobs prior to becoming a realtor. In his thirties he grew a large belly...solid, not flabby. Aerobic exercise was not on his to-do list. In his fifties he had high blood pressure, by sixty he had heart disease, T2 diabetes, required knee replacement (both) and was diagnosed with bi-polar syndrome. In his sixties he had quadruple by-pass surgery, in his seventies he developed throat cancer. He died at age 86 from complications from aspirating a piece of chicken. If not for excellent medical, and home care, he would have died much younger, either from his heart disease or cancer. I think the fact that he was never feeble was also a benefit and contributed to his multiple recoveries. Maintaining leg and arm/shoulder strength is excellent advise, but it may not prevent you from contracting life threatening diseases.

Max (2014-02-03 09:12:41)

Another likely contributing explanation for the strength-cancer association: resistance training improves (reduces) HbA1c. Elevated HbA1c has been shown to be an independent predictor for cancer. Dr Richard Bernstein connected all these dots years ago, which is why his program includes serious strength training for T1 and T2 diabetics. (love the blog, thank you)

Jake (2014-02-03 09:21:25)

Two reasons why muscles help prevent cancer: Active muscles produce myokines. Myokines reduces inflammation which reduces your chance of getting cancer. Muscles act as a glucose sink to reduce glucose and insulin peaks. These peaks are a major driver of cancer.

Adam (2014-02-03 12:19:21)

"It found that strength (how much you can bench and leg press) measured at the start of the study was associated with likelihood of dying of cancer during the study." This should read "was \_inversely \_ associated". When I first read it, I thought you were saying the stronger you are the more likely you are to get cancer.

aretae (2014-02-03 13:57:13)

I think there's a reasonable chance that Muscle Mass is a generic health marker. Mark Rippetoe, who is the most interesting person in health that I haven't yet started reading (linked often from Instapundit), has been saying things like this for a while: Muscle Mass is your basic measure of health. Beats almost anything else, at least for some groups (men?). You're now the second person who's said: No, really, muscle mass matters a lot. Beats the pants off fat. More muscle & more fat: Healthier. Less fat + less muscle = less health.. Fascinating.

Bo (2014-02-03 14:09:01)

"These findings interest me because I do a lot of resistance training — stand on one leg to exhaustion several times per day — purely to sleep better." I'm sorry, but standing on one leg isn't really resistance training (at least not even for the average not-so-healthy individual). If you can stand on one leg for more than a few seconds (and after a few goes once you master balancing) it's not really strength training. It's strength-endurance at best, though I wouldn't count on even that.

John Smith (2014-02-03 14:37:32)

I would think that the strength of the will and the psyche, the level of determination, these are what form the basis of good muscle and good health. Many folk give up far too early.....'I can't' they wail. Just watch them on the fat shows. Admittedly that strength of will needs to be developed just as one develops muscle and not just on the day of the TV shoot, so heavy people should not be expected to perform like a flyweight overnight. Those who believe they can, are usually right. Those who believe they can't are always right.

Justin Irving (2014-02-03 15:50:18)

A few years ago Art De Vany linked to a study (on his old subscription blog) showing that lean mass was the best/a top predictor of cancer survival. I guess that's not shocking. Thanks for this post though, motivation for dead lifts!

Charles (2014-02-03 15:57:38)

Well, strength requires muscle. Muscle building requires growth hormone, and I believe GH is released in sleep. So there could be a connection.

aretae (2014-02-03 23:38:11)

Other point re: muscle mass/Strength. It seems to be substantially to hugely genetic. As with most things, putting 50 % of variance as a lower bound for the genetic share seems reasonable. This makes me less convinced by your sleep hypothesis. Example, my teenager has much larger/more muscular legs than I do, despite my having been semi-seriously lifting for 1/3 of the last 15 years, and his being mostly a couch-potato.

Paul N (2014-02-04 11:46:13)

Having more lean muscle mass also helps you live longer. This excerpt and graph from the book "[1]bending the aging curve gives a good illustration. Further within that book (which I have not read, only seen excerpts), it talks about the decline of fast twitch muscle mass with age, while the amount of slow twitch remains roughly constant until the last decades. All this might have something to do with the fact that to retain your fast twitch fibres, you need to be doing lifts, sprints and power exercises. At the other end of the scale, marathon runners die younger, so I know which group I'd rather be in

1. <http://www.humankinetics.com/excerpts/excerpts/what-do-we-mean-by-bending-the-aging-curve-from-bending-the-aging-curve-by-joseph-signorile>

## **Philip Seymour Hoffman's and Cory Montieth's Death From Heroin: Why? (2014-02-04 05:00)**

Philip Seymour Hoffman, the great actor, was found dead a few days ago with a needle in his arm. Last year, Cory Montieth, the actor, died in similar circumstances. Why did they die? It was hardly the first time they'd taken heroin.



Starting in the 1970s, [1]Shepard Siegel, a psychology professor at McMaster University, did [2]a series of rat experiments that showed that drug tolerance and craving involved a large amount of Pavlovian conditioning. Repeated exposure (e.g., injection) of Drug X in Situation Y (e.g., your bedroom at 11 p.m.) will cause learning of an association between X and Y. This association has two effects. First, when exposed to Y, you will crave X. Second, when you take Drug X in Situation Y, the effect of the drug is diminished. You become "tolerant" to it.

You have probably experienced both effects – they occur with caffeine, chocolate and alcohol, for example – but are unaware of Siegel's explanation: Situation-drug associations. After you learn the association, Siegel said, the situation generates a response in your body that opposes (reduces) the drug effect. If the drug makes you less sensitive to pain, the conditioned response is more pain sensitivity. If the drug makes you awake, the conditioned response makes you sleepy. It's easy to realize that drug craving involves associative learning: You notice that you crave coffee or whatever in familiar situations but not unfamiliar ones. You crave Drug X at college but not at home. It's much harder to grasp that the tolerance involves associative learning.

Drug users, such as Hoffman and Montieth, as they become "tolerant", take larger and larger doses, not realizing that their "tolerance" depends on a learned association. The situation becomes more and more dangerous because if you take the drug without eliciting the conditioned compensatory response, you may die. Without the conditioned response, a drug amount you survived yesterday may kill you today.

Siegel explored the possibility that this actually happened – that drug addicts died of "drug overdose" because they took the drug under unusual circumstances that didn't evoke the compensatory response. He found plenty of support for this idea. One sort of support was [3]interviews with "overdose" survivors. They often described unfamiliar circumstances at the time of the injection – e.g., there's usually music, but this time there wasn't. Another sort of support was [4]a rat experiment with heroin. After developing tolerance to heroin, rats injected with a really large dose in a strange situation were much more likely to die than rats injected with the same dose in the same situation where they became tolerant.

I am pretty sure Hoffman and Montieth didn't know about this research. There is a connection with the Shangri-La Diet. In both cases, Pavlovian learning has a big effect on something we care a lot about (life/death in the drug case, body weight in the diet case) and this connection is highly non-obvious.

1. <http://www.science.mcmaster.ca/pnb/people/60-faculty-web-pages/202-dr-shepard-siegel.html>

2. <http://psycnet.apa.org/psycinfo/1992-98225-006>

3. <http://link.springer.com/article/10.3758%2F03333867>

4. [https://docs.google.com/viewer?url=http%3A%2F%2Fwww.psychology.nottingham.ac.uk%2Fstaff%2Fmxh%2FC83CLI%2FSiegal%2520et%2520al%2520\(1983\).pdf](https://docs.google.com/viewer?url=http%3A%2F%2Fwww.psychology.nottingham.ac.uk%2Fstaff%2Fmxh%2FC83CLI%2FSiegal%2520et%2520al%2520(1983).pdf)

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Xav (2014-02-04 05:35:34)

I was thinking about your ideas from the Shangri La Diet earlier today. I was wondering if the fact that so many hygiene related products have food related scents added in affects appetite in the general population as we are constantly exposed to smells associated with food. Just this morning I counted orange (in shower gel), various fruit smells (in handwash), lemon (in washing up liquid), and cocoa and vanilla (in perfumes of people I passed in the street).

CC (2014-02-04 06:26:14)

This might be a dumb question, but does this mean we should mix up the "situations" in which we take ELOO? Don't do it in the same room at the same time each day? Seth: No, because learned CS-US associations when the US is a food (rather than a drug, such as caffeine) seem to involve purely CS's that are smells. There is association with the smell of the food but not the place where you ate it. It is when the US is a drug that you get associative learning where the CS is a situation, such as a place and/or time of day.

Alex Blackwood (2014-02-04 11:54:12)

Another factor: when you are taking a street drug the purity and strength are not predictable. There is speculation about whether PSH's overdose was linked to heroin mixed with fentanyl--no worthwhile sources to cite, since it's all speculation at this point. But the variability in how much drug you are actually getting and what adulterants are enhancing the effect may be adding a variable schedule of rewards, a powerful reinforcer, to the addiction situation.

Gina (2014-02-04 13:26:08)

They both recently went to rehab. Overdoses following rehab (e.g. Amy Winehouse) are common. Rehabs are not interested in teaching people how to be safe when they relapse, even though they know how likely people are to relapse, so there's no way they would be told about Siegel's research or any other information that could be useful in saving their lives.

Joe (2014-02-04 14:54:27)

I'm with Alex. I think it was a "hot shot." Something added to the heroin, or maybe a far more pure (stronger) heroin. He had (apparently) injected the heroin in a familiar setting, so any conditioned response should have been present. Sad story. He was a hell of an actor. Seth: If he was exposed to the familiar situation many times without exposure to the drug, the familiar situation-drug association may have gone away -- been "extinguished" to use the technical term.

Al (2014-02-04 20:03:08)

You wrote: "After developing tolerance to heroin, rats injected with a really large dose in a strange situation were much more likely to die than rats injected with the same dose in the same situation where they became tolerant." But, what about comparing rats injected with the same dose in a strange situation to rats injected with the same dose in the same situation? How does that comparison work out? Seth: by "injected with the same dose" I meant injected with the same really large dose.

Adam (2014-02-04 22:21:53)

Al, I think "same dose" in that paragraph is referring to the same \_large \_ dose, not the dose they were previously treated with.

eric (2014-02-05 02:05:32)

Real cause of death is the fact that they were obliged to purchase their drug of choice on the black market, which practically by definition includes unknown dosage and ingredients. If addicts were (not criminalized and) permitted to purchase heroin by prescription at pharmacies, there would be close to zero deaths from overdose. Almost all heroin deaths in the USA are directly attributable to the US government, which makes its sale and possession a crime. Ergo like anything illegal that is in demand, a black market springs up with questionable quality in its goods.

Seth Roberts (2014-02-05 04:59:29)

"If addicts were (not criminalized and) permitted to purchase heroin by prescription at pharmacies, there would be close to zero deaths from overdose." What about the work I describe, which suggests this is wrong?

kayvee (2014-02-05 08:16:09)

Hi Seth I found your blog through your presentation at PaleoCon Your ideas were fascinating and I find your writing the same I have an odd question: What do you think of Ayahuasca tea and Iboga. They are used as a means to heal past traumas that is believed to be the cause of addictions?

kayvee (2014-02-05 08:17:06)

To add: <http://www.ibogaine-therapy.net/index0a14.html?PAGE=40>

AI (2014-02-05 08:57:40)

I read it wrong. Thank you for the clarification.

Joe (2014-02-05 10:01:46)

Seth: "If he was exposed to the familiar situation many times without exposure to the drug, the familiar situation-drug association may have gone away — been "extinguished" to use the technical term." Seth, from all reports, he's been exposed to the situation AND to the drugs, for quite some time. I don't think anything was ever truly extinguished. Nor do I think he was ever "dry" for 22 years. Until more information develops that could change my mind, I'm sticking with Occam's Razor: He died of a "hot shot." Nota bene: I raised and trained field-trial retrievers for many years. I used the principles of classical AND operant conditioning in training. But certain dogs just didn't respond in the anticipated way. E.g., the same principle that would work so well on dog A wouldn't work at all on dog B. Behaviorism is a great guideline for training dogs (or as learning theory per se), but it's riddled with exceptions. Hoffman could be an example of such.

Joe (2014-02-05 10:30:55)

New developments regarding Hoffman: "I was Philip Seymour Hoffman's gay lover and saw him freebasing cocaine the night before he died", says writer who found his body" <http://www.dailymail.co.uk/news/article-2552207/I-Philip-Seymour-Hoffmans-gay-lover-I-saw-freebasing-cocaine-night-died-says-Manhattan-writer-star-body.html> I don't think anyone is ever going to untangle this man's psychological turmoil.

Nancy Lebovitz (2014-02-05 13:36:48)

How stressful do rats find strange situations? They're just put into a strange situation, and this might be different from a human who's gone somewhere they want to go.

Seth Roberts (2014-02-05 14:44:15)

"How stressful do rats find strange situations? They're just put into a strange situation, and this might be different from a human who's gone somewhere they want to go." The rat experiments equated novelty of the injection situation between the two groups. Both groups were injected with a very large dose in a situation with which they were equally familiar. In other words, the injection situation was equally "strange" for the two groups.

Alex Chernavsky (2014-02-05 17:30:18)

Psychologist Stanton Peele [1] argues that heroin overdoses, as such, are rare. He claims that overdoses are usually caused by mixing heroin with other drugs. It's an interesting article.

1. <http://lifeprocessprogram.com/lp-blog/library/the-persistent-dangerous-myth-of-heroin-overdose/>

Alex Blackwood (2014-02-05 21:24:16)

Seth, what changes to the treatment of drug addiction do you think would be warranted by these findings?

eric (2014-02-06 01:35:07)

Seth Roberts Says: "If addicts were (not criminalized and) permitted to purchase heroin by prescription at pharmacies, there would be close to zero deaths from overdose." What about the work I describe, which suggests this is wrong? Notice I said "close to zero".

Suzanne (2014-02-06 15:25:08)

I understood he nearly died before and the shock of THAT experience pushed him into rehab.

Seth Roberts (2014-02-06 16:55:38)

Seth, what changes to the treatment of drug addiction do you think would be warranted by these findings? 1. Further study of the issue, so it can be better said what circumstances are likely to trigger "failure of tolerance". 2. Publicize the findings.

Alex Blackwood (2014-02-07 21:00:35)

My conjecture was that the variable schedule of rewards from street drugs of unpredictable purity and strength could be a significant factor in addiction. Well, these figures on the rising death toll from overdose of prescription opioids don't exactly support that. [http://www.washingtonpost.com/national/health-science/philip-seymour-hoffman-heroin-death-points-to-broader-opioid-drug-epidemic/2014/02/07/42dbbc5a-8e61-11e3-b46a-5a3d0d2130da\\_story.html](http://www.washingtonpost.com/national/health-science/philip-seymour-hoffman-heroin-death-points-to-broader-opioid-drug-epidemic/2014/02/07/42dbbc5a-8e61-11e3-b46a-5a3d0d2130da_story.html)

Weekend Link Love - Edition 282 | Mark's Daily Apple (2014-02-09 08:42:26)

[...] Roberts gives a very interesting explanation of why the same dose of the same drug can be deadly or benign in the same person, depending on a [...]

Weekend Link Love | Cesar's HealthCesar's Health (2014-02-09 09:02:37)

[...] Roberts gives a very interesting explanation of why the same dose of the same drug can be deadly or benign in the same person, depending on a [...]

D. M. Mitchell (2014-02-09 09:59:23)

That was quite interesting and seems to be a valid explanation for some heroin "overdose" deaths. However, years ago I read about a re-study of heroin overdose deaths in Baltimore. The researchers found that in two-thirds of those deaths both heroin and alcohol was involved. Two downers at the same time can quickly lead to death.

Weekend Link Love | Kate's Healthy Living (2014-02-09 10:00:38)

[...] Roberts gives a very interesting explanation of why the same dose of the same drug can be deadly or benign in the same person, depending on a [...]

Mark Cancellieri (2014-02-09 10:22:17)

This is very interesting. It also seems to be consistent with the "opponent process theory." <http://gettingstronger.org/2010/05/opponent-process-theory/> Seth: True. Unfortunately, opponent process theory was a dead end. It led to no predictions, no interesting experiments. Whereas Siegel's theory of drug tolerance led to many experiments, including with quite different phenomena.

Weekend Link Love | Handy Health And Fitness Secrets (2014-02-09 23:00:50)

[...] Roberts gives a very interesting explanation of why the same dose of the same drug can be deadly or benign in the same person, depending on a [...]

Philip Seymour Hoffman's and Cory Montith's Death From Heroin: Why? | theraineyview (2014-02-10 19:56:44)

[...] Philip Seymour Hoffman's and Cory Montith's Death From Heroin: Why?. [...]

Alex Schell (2014-02-12 10:25:38)

Another case report: <http://www.harmreductionjournal.com/content/2/1/11>

Weekend Link Love (2014-02-16 06:35:23)

[...] Roberts gives a very interesting explanation of why the same dose of the same drug can be deadly or benign in the same person, depending on a [...]

### **Better Sleep, Less Cancer (2014-02-05 05:00)**

A few years ago, [1]two studies found that people with sleep apnea have a much higher rate of cancer than people without it, even controlling for several cancer-related variables. In one study, the increase in risk was five-fold. These studies raised several questions: 1. Were the associations due to chance? 2. If real, did the associations reflect cause and effect? Surely people with sleep apnea are different in several ways from people without it. 3. If the associations did reflect cause and effect, which of the many effects of sleep apnea was/were responsible?

[2]A new study found that rats woken up frequently got more cancer. This is a correct prediction from the idea that bad sleep increases cancer, increasing the plausibility of that idea.

[The study] used mice, housed in small groups. During the day—when mice normally sleep—a quiet, motorized brush moved through half of the cages every two minutes, forcing those mice to wake up and then go back to sleep. The rest of the mice were not disturbed. After seven days in this setting, both groups of mice were injected with cells from one of two tumor types (TC-1 or 3LLC). All mice developed palpable tumors within 9 to 12 days. Four weeks after inoculation the researchers evaluated the tumors. Tumors from mice with fragmented sleep were twice as large, for both tumor types, as those from mice that had slept normally. A follow-up experiment found that when tumor cells were implanted in the thigh muscle, which should help contain growth, the tumors were much more aggressive and invaded surrounding tissues in mice with disrupted sleep.

[3]Great Sleep! Reduced Cancer! is a whole book (98 pp) about the connection between sleep and cancer.

Epidemiologists haven't yet figured out that they should always measure sleep quality, just as they always measure cigarette smoking and body weight, but at least [4]interest is growing. Both short and long sleep [5]are associated with a higher risk of heart disease.

1. <http://well.blogs.nytimes.com/2012/05/20/sleep-apnea-tied-to-increased-cancer-risk/>

2. <http://www.medicaldaily.com/poor-quality-sleep-ups-cancer-growth-risk-fragmented-sleep-weakens-immunity-and-helps-tumors-grow>

3. [http://books.google.com/books?id=VrsQMK4o3vEC&printsec=frontcover&source=gbs\\_atb#v=onepage&q&f=false](http://books.google.com/books?id=VrsQMK4o3vEC&printsec=frontcover&source=gbs_atb#v=onepage&q&f=false)

4. <http://ije.oxfordjournals.org/content/40/6/1431.full>

5. <http://eurheartj.oxfordjournals.org/content/32/12/1484.short>

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dearieme (2014-02-05 12:14:28)

Ahoy, Seth. [http://pipeline.corante.com/archives/2014/02/05/the\\_evidence\\_piles\\_up\\_antioxidant\\_supplements\\_are\\_bad\\_for\\_you.php](http://pipeline.corante.com/archives/2014/02/05/the_evidence_piles_up_antioxidant_supplements_are_bad_for_you.php)

tom (2014-02-05 20:21:16)

Exercise helps fat metabolism (and sleep?). Summation at the bottom. <http://www.gnolls.org/3637/what-is-metabolic-flexibility-and-why-is-it-important-j-stantons-ahs-2013-presentation-including-slides/>

Ozquoll (2014-02-06 01:25:19)

Mothers looking after babies are definitely short on sleep! I seem to recall reading that the most long-lived groups of women are celibate nuns...

John Smith (2014-02-10 21:19:02)

Ozquoll, at least mothers are young enough to pull out of it, all other things being equal. When bad sleep befalls the aging and the elderly, it is quite a different matter. Shift workers should take advantage of their youth to make a fortune, yes, but they should progress onwards towards more sapient friendly employment. I wish our researchers would always fully describe the ages of those who participate in their experiments. What may kill an old person may go unnoticed by a young college student.

### **Evidence that Antioxidants Increase Cancer (2014-02-06 05:00)**

Many researchers were shocked when a large 1984 experiment found that a beta-carotene supplement increased lung cancer. Because beta-carotene is a potent antioxidant, and epidemiology had linked eating vegetables with less cancer, it was supposed to decrease lung cancer. My Berkeley neighbor Bruce Ames was the foremost proponent of the idea that antioxidants will decrease cancer.

Now [1]more evidence supports the idea that antioxidants may increase cancer.

A request for comment elicited this:

"It's disappointing but not surprising that people's beliefs are not modified by scientific evidence," said Dr Paul Marantz, an epidemiologist at Albert Einstein College of Medicine in New York. "People so want to believe there is a magic bullet out there."

One commenter on the article rightly says:

"It's disappointing but not surprising that people's beliefs are not modified by scientific evidence," . . . Rather a snide comment considering the fact that it was science that spent years telling everyone that antioxidants and supplements were beneficial.

1. <http://news.yahoo.com/antioxidants-including-vitamin-e-promote-lung-cancer-study-190119863--finance.html>

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Edward (2014-02-06 09:11:38)

Snide, maybe, but it does not get around the larger effect: that people want to rely and believe what "experts" say. It is easy to blame an "expert" or use them as scapegoats when things turn out to be wrong than it is to take responsibility for it. That is exactly what personal science/self-experimentation avoids. It puts the responsibility back with the individual. Hindsight is always 20/20.

Dirk (2014-02-06 10:19:20)

Does this mean we have to stop eating carrots?

Sara (2014-02-06 10:55:31)

It wasn't "science" that was running the huge marketing campaigns for these particular additives.

AI (2014-02-06 11:03:18)

The study seems to have found that the antioxidants are too much of a good thing. From the article: "What seems to happen is that antioxidants indeed decrease DNA damage, as expected. But the damage becomes so insignificant as to be undetectable by the cell. The cell therefore does not deploy its cancer-defense system ..."

August (2014-02-06 13:06:24)

I think the best argument for being careful with antioxidant intake came from sports medicine. I want to work out and get the benefits of working out and I could see how antioxidants might impede the process. But the first thing I thought of when I clicked on this link was, were they using real vitamin E or that fake stuff? And soy free vitamin E products are hard to find, so there's another confounding factor. So, this sort of study makes me think nobody can patent antioxidants and cancer seems to be quite lucrative for the medical industry, regardless of whether or not the patient eventually dies, so I need to be careful believing these results.

William Mullan (2014-02-06 13:55:06)

It's important to note that this does not apply to food: "The scientists stressed that the results do not pertain to foods such as fruits and vegetables that are naturally high in antioxidants." One could hardly eat enough of some of these high antioxidant foods (although I can demolish the cacao and Okinowan Purple Yams) for them to be harmful. As with much consumption, there seems to be a U-shaped curve. Further, there are plenty of other benefits attributed to antioxidants that go beyond whatever previous cancer prevention benefits were assigned to them.

Nancy Lebovitz (2014-02-06 15:17:11)

This is hindsight, but I wonder if there were ways to tell that antioxidants didn't have a good enough theory behind them. There was no detail or quantification. How much of which antioxidants? Perhaps more importantly, there was no feedback—no hint of how you could tell whether you were taking too much of something.

Allan Folz (2014-02-06 16:46:58)

If you've been keeping up with Mr. Heisenbug and the other gut biota bloggers, this would not be surprising. The cancer-fighting effect from vegetables is likely not from feeding anti-oxidants to ourselves; rather, it's from feeding soluble fiber to our gut bacteria. They found a correlation and jumped to a causation. Well, in their defense, I'm sure it sounded good at the time. Seth: good point. yes, there is a long history of jumping to conclusions in nutrition.

daz (2014-02-06 19:50:28)

Agree with William, "It's important to note that this does not apply to food" "As with much consumption, there seems to be a U-shaped curve" When looking at/thinking about taking a new supplement, I always think, how much food would I need to eat to get that particular dose of vitamin/mineral etc... & is that feasible or would that have been feasible in the past... Take astaxanthin as an example, plenty of hype around this one in recent years, especially over at mercola.com (who sells it), with info like "550 times stronger than vitamin E, and 6,000 times stronger than vitamin C" as per the ORAC values

(purportedly). the mercola product contains 4mg of astaxanthin per capsule, dose one per day. & on his web site he talks about doses up to 12mg per day for certain ailments. even 4mg is a lot of Haematococcus pluvialis (MicroAlgae) even if you happen to have access to some...and even more shrimp & krill. [http://en.wikipedia.org/wiki/Astaxanthin#Natural\\_sources](http://en.wikipedia.org/wiki/Astaxanthin#Natural_sources)

daz (2014-02-06 23:44:33)

... & you need to eat the complete shrimp/krill, shells & heads to get the astaxanthin (but that would have been how our ancestors would have eaten them i assume, no wimpy peeled & beheaded shrimp)

John Smith (2014-02-10 21:28:16)

Superfood supplementation, right on up to vitamins, minerals and hi-tech isolates are not exempt from the rule of 'iatrogenics' in that they all help us compensate for the imbalances caused by lifestyle without forcing us to correct the lifestyle. After all today's medicines are the result of centuries of herbal medicine. Today's pill poppers are little different from the pill poppers of yesteryear and of the next century. I continue to use my favourites, just the same. Will fix up the lifestyle just before the cancer gets me!

Charles Williams (2014-02-13 08:22:21)

It is unfortunate that the term "antioxidant" is not routinely preceded by the qualifiers "endogenous" or "exogenous". While exogenous antioxidants are frequently sources of oxidative stress themselves (and the attendant increased rate of mutation), endogenous antioxidant enzymes are responsible for the evolution of aerobic life itself, and without them, no aerobic life-form can exist. It is becoming progressively more apparent to members of the medical community, as it has been to members of the biochemistry community for years, that activation of the Nrf2 master transcription protein, which controls the activity of the activity of the genes for endogenous antioxidant enzymes, may well be a giant step toward the prevention, and perhaps the treatment, of degenerative diseases. See Biogen's recently FDA-approved Nrf2 activator, Tecfidera, for the treatment of multiple sclerosis. Ironically, the most potent Nrf2 activator yet tested is a combination of extracts from phytonutrients, which the FDA classifies as a "supplement", putting it in the same category as the "worthless" compounds in recent government and medical publications.

### Assorted Links (2014-02-07 05:00)

- [1]Probiotics for colicky babies
- [2]Edward Jay Epstein on diamonds (video). "I bought a diamond for \$1500. A day later I tried to sell it. People were offering me one-fourth or one-fifth the price."
- [3]Internet spreads much better treatment for clubfoot
- Marion Nestle, an NYU professor and frequently-quoted food expert, [4]says it is a "myth" that "what you eat is more important than how much you eat." The concept of a body-weight set point was first proposed in about 1950.

Thanks to Carl Willat.

1. <http://www.npr.org/blogs/health/2014/01/20/263487578/can-probiotics-help-soothe-colicky-babies>

2. <https://www.youtube.com/watch?v=7Yo6EVP-Trw&noredirect=1>

3. <http://www.npr.org/blogs/health/2014/01/27/265254533/how-parents-and-the-internet-transformed-clubfoot-treatment>

4. <http://www.primephysiquenutrition.com/30-experts-reveal-the-biggest-nutrition-myths-of-2014/>



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Alex (2014-02-07 08:59:50)

The marketing success of diamond engagement rings is an ever-present reminder that you can fool too many of the people too much of the time. I wonder if the custom will diminish as gay marriages increase, since those couples don't fit the ready script that the man must spend two months' salary on a ring for the woman as the first step to marriage.

Gina (2014-02-07 10:45:57)

I think the Twinkie diet proved that it really is how much one eats that matters when it comes to weight.

peter (2014-02-08 17:19:19)

Gary Taubes, author of "Why we get fat" would disagree; his research establishes that carbs are the culprit. Seth: I agree with Taubes that food matters. The point of the link was that Marian Nestle was about 60 years behind the times.

Daniel (2014-02-11 07:03:34)

Have you seen this? <https://experiment.com/projects/will-vitamin-d-improve-the-health-of-patients-with-heart-failure> One of my favorite sites/services. Seth: Very interesting site, didn't know about it. Unfortunately these researchers fail to understand the importance of the time of day that the Vitamin D is taken.

### **"Night and Day": Steve Hansen on Teaching (2014-02-08 05:00)**

At a recent dinner, Steve Hansen, a friend of mine, said the difference between his current teaching and earlier teaching is "night and day," partly due to this blog. I asked him to elaborate.

ROBERTS What is your teaching situation?

HANSEN I've been teaching at Peking University [in Beijing] in the Guanghua MBA program for the last two years. I teach courses in innovation (big company Clayton Christensen sort of stuff), entrepreneurship, and social responsibility/social enterprise. The classes usually consist of 30-50 students from all over the world.

My teaching at Peking U. is a part-time job. Full-time I run a social enterprise here in Beijing ([1]Phonemica). Before this I was a professional market researcher working at a large company and I worked as a consultant for years. Although I had a little teaching experience early in my career (e.g. taught undergraduates when I was a grad student), I certainly did not have any special teacher training or background. I was hired at Peking U. on the basis of my professional experience. Thus when I started teaching I was to a large extent repeating to my students the experience I had had as an MBA student myself, years ago.

ROBERTS How did you teach this course at first?

HANSEN My teaching changed quite a bit in the first year. The first semester I did lecture and discussion. I didn't like it. I felt it was a lot of work to prepare, and while it helped me personally a lot, by getting me to summarize my learnings from years of reading and work experience, I didn't feel it gave the students a lot. Even though the course got mildly positive reviews, I felt the students weren't engaged in a way that made me excited about going to teach.

The second semester I started making changes. First, I took to heart some advice I got to follow more of a

case study approach. The experience I gave the students in the beginning of that semester was fairly standard "case study" method made famous by Harvard. [2]Here's a mini-documentary of how Harvard expects case study method to work. The professor asks pointed questions from the case and expects the students to have answers and defend them.

ROBERTS What caused you to change how you teach it?

HANSEN I like the case study method in theory. I like it a lot. I think by mimicking real life situations and summarizing the many facts that synthesize a business manager's knowledge and must be put to use in making business decisions, the case study method has the potential to help students learn in a way that is useful: giving them the skills to make real-world decisions, and doing it faster than they could get the same experience by going out and working. As far as activities that can be done in an academic environment go, the case study is pretty darned close to "learning by doing".

However, I found my classroom reality was different from the ideal portrayed in [3]that Harvard Youtube video, in which a professor says, "I have been amazed... at the consistent level of high preparation".

In my reality, students often didn't come prepared. Sometimes they would say, "Sorry, I didn't have time to read the case" – despite significant portions of the grade being dependent on in-class participation. And even if they were prepared, to some extent, often it wouldn't be to the extent that I had hoped, where they were able to argue the intricacies of a position and defend it. Instead they might give a cursory answer, with a weak defense, and much of the class would be spent with me pushing them to elaborate their answers through Socratic questioning, lecturing, and so on.

So I was still doing a lot of the talking, and really leading the class. It was better than my first semester, but it wasn't meeting my standards of what a real learning environment should be: student-led because they're motivated to learn.

It was about at that time that I must have read some of the articles and ideas you published about "learn by doing". Those rang true to me. Learning by doing is something I've always believed in and tried to practice, and I realized that my students still weren't doing it.

So later during that semester I started experimenting. My first experiment, I'm sorry to say, was a complete failure. My approach for a few classes was to have students simply teach the class. I would assign the next class's case study to a group. They would read the case and come up with main points. I would meet with them and review what they were going to do. Then they went in and tried to teach their fellow students.

In retrospect it seems obvious that this was wrong. As business school students the "doing" that I wanted them to do shouldn't have been to "do teaching" but to "do business" as simulated in the case. When the students were teaching the case they were (again naturally, in retrospect) worse than I was. They would lecture rather than ask. They would miss key issues. And of course they had the same problem I'd noticed myself: other students weren't prepared enough, even though the lecturing group was extremely prepared.

After enough experimentation to realize this wasn't working, I cut it off and went back to my semi-successful case study method.

But the failure had given me an idea. I saw that students who were forced to present were MUCH more engaged than those who sat and listened. Why not, I thought, just make everyone present? It would kill several birds with one stone. First, I'd noticed that students' presentation skills needed a lot of work. They had trouble being concise and answering the critical questions. Having to present would give them practice on this critical skill. Second,

they'd be engaged and motivated – at least for the part where they were presenting. Third, by divide-and-conquer of the case itself, we'd get far deeper into the details and (sometimes) quantitative analysis of the cases.

And so that's what I started doing this year. It has worked even better than I imagined. Not only are students engaged for their part of the lecture and discussion; the preparation seems to spill over into the whole case, so most students really know what's going on. The presentations get better and better as the semester progresses. In contrast to the past, now I'm having to shut down vigorous discussions in the interest of time, rather than ask pointed questions to stimulate interest. And best of all, this environment satisfies my own desire of creating a place where students want to learn. I work less, and the students learn more. That's the part that seems "night and day" to me.

For anyone who's curious, there are some details I've worked on to make the approach better, at least for my particular situation. Here's the nitty gritty:

I divide the class into random groups of 4-5 students. That group is together for the semester, and for each class they're tasked with presenting on one part of the case. I assign that presentation the week before, and it's often a question that forces them to take a position. Often, too, I assign the same question to two different groups. This has the effect of creating a sort of debate between the groups, because they almost never come up with the same answer to a question.

I require VERY short presentations. Usually 2 minutes. Sometimes 3 or 4 if the topic is very complex. I allow any member of the group to present. Although I encourage them all to take the opportunity to practice presenting, I don't force the issue.

All the students in the group get the same grade, but with the following "peer evaluation" element that I adapted from someone else (i read about it online but have now lost track of where). Peer evaluation means that your fellow students give you a grade at the end of the semester. If your fellow students all give you 100 %, then you get 100 % of the group grade. That's the usual case. On the other hand, if all your fellow students give you 50 %, that probably means you didn't do much and you get only 50 % of the group grade – a guaranteed failure for that portion of the class. In even more detail, what I do is take the average of the peer scores, but not including the lowest score. This virtually eliminates the possibility that one enemy classmate can sabotage a groupmate's grade.

Overall I've found that the peer evaluation mostly eliminates the freeloader problem that general plagues groupwork. In cases where someone tries to freeload, they simply get a bad grade, so the other groupmates aren't really bothered about it.

At least as importantly, this entire system, once explained, makes my grading job much easier.

I also like the "group is responsible for the presentation" approach because it allows some flexibility. There's always going to be a week during a semester that a student simply gets swamped with other things and doesn't have time to prepare. Under the group presentation regime, the busy students can beg groupmates to cover for them, and then return the favor another week. Would it be better if everyone were always prepared for every class? Well, maybe, but that doesn't really seem realistic.

ROBERTS What did you read that influenced you? HANSEN I read [4]all your posts about education and teaching. It's hard to say any one post made me change the way I teach. It's more that your posts about teaching, like your posts about diet etc., often help me consider what my goals are and how I can do low-risk experiments to find better ways to reach those goals. As for specifics... I remember reading [5]this, for example, that helped me remember to think about my students' goals rather than my own for them (not that I think I should have no influence on their goals – more that I should keep in mind they are autonomous agents about whom I know little and should learn more). I still grade, but I've experimented with "grading less" I guess you could call it, partly inspired by [6]discussion like

this. I was probably most influenced/inspired by [7]the Halmos paper (also [8]here) you [9]mentioned. I was a math major as an undergraduate, so I liked the subject matter. I was always interested in the kind of simple statement of problems and choices that he describes in that paper, not just in math, but in business and elsewhere. I really enjoy simple problem statements that force one to go through complicated analyses and yet still reduce everything back to a simple statement of resolution. Business at its most interesting can be quite like that. You have to make decisions: fund this project or don't. Build this product or build that one. What do you do? Even more than enjoying the problems, though, I completely agree that the hard part is making students ask questions. It's not actually solving the problems that's hard; it's figuring out what the problems are in the first place. After reading his paper, I started doing some searching and found others who were experimenting with teaching techniques. It would take me a while to re-find those people, but I definitely gleaned ideas from others. These helped shape my own experimentation.

1. <http://phonemica.net/>
2. <https://www.youtube.com/watch?v=wudRjl1TQoI>
3. <https://www.youtube.com/watch?v=wudRjl1TQoI&noredirect=1#t=6>
4. <http://blog.sethroberts.net/category/education/>
5. <http://blog.sethroberts.net/2013/10/12/a-high-school-teacher-learns-something-important-about-teaching/>
6. <http://blog.sethroberts.net/2013/09/16/teaching-academic-writing-my-plan-part-1-of-2/>
7. <http://srblogfiles.s3.amazonaws.com/wp-content/uploads/2013/01/halmos.pdf>
8. <http://www.jstor.org/discover/10.2307/2319737?uid=2134&uid=2&uid=70&uid=4&sid=21103450585213>
9. <http://blog.sethroberts.net/2013/01/26/my-ideas-about-teaching-put-into-practice/>

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John Smith (2014-02-10 21:41:55)

How can they teach until they learn how to learn? (possibly from Steiner) Kahlil Gibran also has a wonderful treatise on teaching in his little book, "The Prophet." Good discussion, guys. Thanks.

### Assorted Links (2014-02-09 05:00)

- [1]Sugar for insomnia
- [2]Japanese pickle prevents flu in mice
- [3]Interview with Edward Jay Epstein
- [4]contact lenses that measure blood sugar
- [5]Duke University blunders badly in China. No one wants to attend its new campus in Kushan. A friend of mine called the campus a "real-estate scam".

Thanks to Phil Alexander, Joseph B. and John Batzel

1. <http://butterbeliever.com/how-to-fall-back-asleep/>
2. [http://www.eurekalert.org/pub\\_releases/2013-11/w-jsp110413.php](http://www.eurekalert.org/pub_releases/2013-11/w-jsp110413.php)
3. <http://www.powerlineblog.com/archives/2014/01/diamonds-epsteins-short-course.php>
4. [http://www.iphoneincanada.ca/news/google-smart-contact-lens-project/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+iphoneincanada+%28iPhone+in+Canada+-+Canada%27s+%231+iPhone+Resource%29](http://www.iphoneincanada.ca/news/google-smart-contact-lens-project/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+iphoneincanada+%28iPhone+in+Canada+-+Canada%27s+%231+iPhone+Resource%29)
5. <http://dukecheck.com/?p=18277>

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dearieme (2014-02-09 08:34:53)

"the hair-brained idea": somebody isn't eating enough butter.

jacobber (2014-02-09 09:04:42)

carbs and sugars at night definitely keep me calm at night and it's easy to fall back asleep when i wake up. However: I'm still trying to figure out a way to stop having to wake up and pee at night. That's the next step.

Nancy Lebovitz (2014-02-09 09:27:02)

That's the same Epstein interview you linked to on the 7th. Still, fascinating stuff, and now I'm wondering how the diamond cartel has managed to maintain focus instead of just trying to slide along on past dominance.

peter (2014-02-09 10:14:04)

Lactobacillus brevis also is found in pickled turnips. I've used it for weeks and noticed a difference. It seems to clear my lungs (i probably have a low level infection that once cleared by i took intravenous antibiotics). I buy the Japanese style fermented turnips. I'll try the Japanese pickles, since they probably taste better.

Joe (2014-02-09 13:41:49)

In the sugar for insomnia article: "I've even skipped the spoon and just stuck a wet finger into my little sleepy dust container and licked it off, and that works, too. Puts you back to sleep in no time!" That just makes me think there's something else going on here. Not exactly placebo, but having to do with degree of suggestibility. A few granules of sugar and salt puts him back to sleep in no time? I ain't buying it. :)

Eczema & Probiotics: Personal Update, Reader Reports, and the Respiratory Connection | Mr. Heisenbug (2014-02-09 21:31:27)

[...] a post on Seth Roberts's blog, I came across a news report showing that a bacteria from Japanese [...]

dearieme (2014-02-10 14:42:11)

Ahoy, Seth. <http://www.forbes.com/sites/larryhusten/2014/02/10/leading-european-cardiologist-accused-of-plagiarism/>  
Seth: Thanks, good article.

Josh (2014-02-11 11:23:01)

The "Sugar for insomnia" article was interesting. But I thought I'd forget about it before I ever got to use it because I rarely have the type of insomnia this trick addresses (e.g. can't fall back asleep in middle of night, after waking). Lo and behold, last night I had this type of insomnia (due to over-training, something I consciously avoid, but couldn't avoid yesterday). I awoke at 330am and couldn't fall back asleep. At 530am I decided to give the salt + sugar trick a try, and I was back out like a light. Too bad I had to get up an hour later:(

## **Adult Acne Due to Allergy (2014-02-10 05:00)**

Someone [1]commented:

I had awful adult acne, hideous cystic lumps that left scars. My college pictures are hard to look at. This continued into late twenties. It was [due to] a food allergy [that] took forever to figure out: black tea.

Especially Oolong. [Oolong and black tea are usually distinguished. Black tea is "fully-fermented", oolong "semi-fermented". – Seth] My face would begin to itch within minutes of drinking, and the breakout came the following day. But it took years to notice the connection. . . . Green tea is no problem. Coffee is no problem.

In response to my questions, he verified the connection:

On Tuesday night, I drank two cups of strong black tea. Itching began within a hour, and mouth sores hit 18 hours later. Now at 48 hours, very slight acne breakout, but not bad at all.

Part of figuring out the problem was realizing that face itching was a bad sign. The black tea -> itching connection was relatively easy to notice. Another difficulty was the wrong ideas he'd been taught:

To figure out the tea, I first had to unlearn things that turned out to be wrong. Unlearning seems to be much slower than learning.

First, when I was in high school, acne was widely considered to be partly a hygiene problem. So I spent vast useless effort washing several times a day, while possibly missing signals that the cause was something else. Later, in college, I tried washing my face only with water, and then not at all. This turned out to have no effect on acne. That was the first clue of wrong learning.

Second, in high school I drank a lot of grapefruit juice. The citric acid was extremely painful on the mouth sores. I somehow concluded, maybe just emotionally biased by the sharp pain, that grapefruit juice was causing the sores. In college I didn't drink grapefruit juice, but there was no effect on mouth sores.

Third, a received wisdom was that acne is hormonal, and there was not much you could do but try to manage it. So I didn't even try to look for an environmental cause, until I was still suffering from acne well into my twenties.

These three wrong conclusions probably cost me years.

Not to mention the astonishing claim of dermatologists that [2]acne is not caused by diet. This [3]list of what to do about acne from the American Academy of Dermatology says nothing about food. It is plausible that in this situation – in 2014, after hundreds of years of experience treating the problem and thousands of medical journal articles about it – the overall effect of doctors is to make things worse.

1. <http://blog.sethroberts.net/2014/02/02/adult-acne-water-and-milk-thistle/#comment-1171633>
2. [http://www.skincarephysicians.com/acnenet/acne\\_and\\_diet.html](http://www.skincarephysicians.com/acnenet/acne_and_diet.html)
3. <http://www.aad.org/dermatology-a-to-z/diseases-and-treatments/a---d/acne/tips>

Alex Blackwood (2014-02-10 08:28:49)

It's infuriating that for a variety of conditions doctors say, "diet does not affect xxx." They can correctly say, "We do not have evidence that diet makes a difference in xxx," but instead go for the broader, false, "We have evidence that diet does not make a difference in xxx." Personal science has been a lifesaver for me in navigating the gap between those two statements. Seth: There is plenty of evidence that diet causes acne. E.g., dairy. Dermatologists ignore it. Then they claim the opposite. That they are not ridiculed for doing this is interesting.

Frankr (2014-02-10 09:39:07)

Dermatology should be viewed as an industry, like any other. They don't want to loose customers. It's kind of like how the tobacco industry for a long, long time, refused to admit the connection between smoking and cancer.

MikeW (2014-02-10 10:10:58)

A while back I read a paper where they analyzed the sebaceous gland output of 10 adults, and found that each individual's sebum had a distinct, markedly different, fatty acid/wax ester profile. Maybe that's one reason bloodhounds can tell us apart, but it also explains why acne sufferers blame a wide variety of trigger foods for their blocked pores (for me, it's definitely cheese and trans fat, but I don't have any problem with chocolate or tea). I feel some sympathy for dermatologists, who can hardly be expected to determine an individual's unique food sensitivities in a 15-minute office visit. But they could do a better job of pushing patients to pay attention to their diets and do their own experimentation.

Ward (2014-02-10 18:22:47)

Sounds like a possible histamine reaction to me. Teas cause exactly this reaction in folks who are are histamine intolerant.

John Smith (2014-02-10 21:49:05)

The Antropops taught me that acne is the body disposing of bad blood associated with unsuitable or unwanted DNA in the maturing person. Hence, if it persists into full adulthood, it would indicate a person not fully coming to grips with the traumas of youth. And lets face it, all of us thought we were badly done by, aye?

Sara Lake (2014-02-13 18:11:57)

I had terrible adult acne and spent years looking either spotty or patchy because my skin turned a nastly mottled colour. Even when not really 'breaking out' my skin was bumpy all over my face. I found the cure accidentally when I started taking niacin (B3) for my cholesterol. The acne went away in less than two weeks. I've heard of the same thing happening to someone else but with B5. I now only need to take niacin about once a month (100mg) to keep the acne gone. It takes about 6 months for it to recur if I stop completely.

## **Journal of Personal Science: L. Planturum-Rich Fermented Foods and Supplement Prevented/Cured My Eczema (2014-02-12 05:00)**

by [1]Shant Mesrobian

At some point during the last decade, while living in Washington D. C., I began to suffer from hand eczema. Painful red itchy inflamed dry skin covered most of my hands. It was usually triggered by cold dry weather in the fall and winter. It also flared up after a lot of cleaning — when my hands were exposed to a lot of water and soap, which dried them out. I was in my twenties when it began.

Eczema, also called *atopic dermatitis*, is believed to be a too-extreme allergic reaction. It is common. About 10 % of American adults suffer from it, according to two recent surveys ([2]here and [3]here). In my case, a certain level of dryness is required. I believe the dryness, which may reduce a protective coating, allows something in the environment, like dust or pollen, to trigger an allergic inflammatory response.

The first thing I did to solve the problem was see a dermatologist, who prescribed a steroid-based cream. The cream did reduce the inflammation. It was just something to apply when the inflammation appeared. It didn't stop it from happening. As I learned more about eczema, I decided this was an absurd solution. Steroids have nothing to do with the cause of eczema. At best they treated the symptoms, and had bad side effects (is anything creepier than "skin thinning"?).

Then a funny thing happened. A few years ago, my eczema disappeared. I didn't notice it had stopped until this fall (2013), when it came back. I had forgotten about it. As soon as the weather turned cold and dry, it hit hard.

Why had it disappeared and returned? My environment had not changed in any big way. Nor, when I first thought about it, could I think of any dietary changes in the past year or two. Then I realized I had made a dietary change – and recently. In September (2013), I had stopped eating a few fermented foods that I had steadily eaten for the past few years — sauerkraut, kimchi, and kombucha. I had drank kombucha only a few times a month but had eaten sauerkraut or kimchi almost daily (3-4 forkfuls/day, \$0.50/day). I had started eating them in 2011, hoping they would improve my health. The last time I had had eczema was the winter before I began regularly eating them.

Had the fermented food prevented eczema? This was not far-fetched. The ideas that (a) bacteria in food can influence your immune system and that (b) bacterial exposure can "calm down" an over-reactive immune system are both well-accepted. Review articles are [4]here, [5]here and [6]here. There is lots of supporting evidence. An early example is the evidence behind the hygiene hypothesis – children in "dirty" places had fewer allergies than children in cleaner places. [7]This article says "approximately 70 % of the entire immune system" is in the gastrointestinal system.

Fermented vegetables like sauerkraut and kimchi are dominated by the bacterial species *Lactobacillus plantarum*. If sauerkraut and kimchi had prevented eczema, it was probably due to *L. plantarum*.

After multiple flares over a few months, I tested this idea. I found a probiotic supplement (Jarrow Formulas Ideal Bowel Support) solely composed of *L. plantarum*. Then I waited for my eczema to flare up again. When it did (early January 2014), I began taking the supplement (one pill daily, \$0.50/day). Within three days, the eczema had completely disappeared. In the past, three days after it started the eczema got worse. It usually lasted about two weeks from start to disappearance. I had never seen it disappear like this. Usually at this point (3 days after it started) hand washing would be painful and make it worse. Now I could hand wash with abandon. Even more amazing: I could walk around outside during a cold spell without gloves, and did not have any exacerbation or return of symptoms. Being able to do these things three days into a flare up had never happened before.

I kept taking the supplement (one pill/day). In the past, before the fermented foods, I had at least some inflammation on my hands through the entire fall and winter, with extreme periods and less extreme periods. Now (February 2014) I have zero inflammation. In the past, dryness on my hands immediately led to inflammation. In normal people, dry hands are dry hands. I never have just dry hands. Dryness is a trigger. I'm not used to seeing a dry hand without inflammation on it. For the past few weeks, I've had mildly dry hands without inflammation. I've become a normal person with dry hands.

Several studies – which I didn't know about when I saw that the probiotic supplement helped – support the idea that *L. plantarum* can reduce eczema. Two studies ([8]here and [9]here) found that *L. plantarum* inhibited house-dust-mite-induced eczema in mice. [10]Another study found that *L. plantarum* inhibited allergic reaction and histamine-induced scratching (itching is a hallmark symptom of eczema) in mice. It concluded that *L. plantarum* "may improve allergic diseases, such as . . . atopic dermatitis". In [11]another mouse study, *L. plantarum* was successfully used to reduce dust mite allergy. The most impressive evidence was from [12]a 2012 study done with children in South Korea. All of them had eczema. Those given *L. plantarum* improved much more over 14 weeks than those given a placebo.



In contrast to my success, many studies have found no effect of probiotic supplements on eczema. [13]One review concluded “Initial meta-analyses suggest no benefit of probiotics [supplements] in the treatment of eczema or asthma.” Maybe they tested the wrong bacteria or used a too-small dose. I haven’t noticed any effect of yogurt (which contains different bacteria) on my eczema.

After [14]I posted about this in my blog, several people tried something similar and reported what happened. Overall [15]I would summarize their results as modest improvement. The most positive result was this: “After 5 days of radish kimchi the eczema in that person [a family member] is very clearly receding and, in a few spots, is completely gone. From prior experience, it would not have done this on its own.” The least positive result was no change, which a few people noticed.

My interpretation is that kimchi and sauerkraut – that’s what everyone tried – have far less *L. plantarum* than the probiotic supplement I took. [16]This article considered sauerkraut “probiotic” when the concentration of *L. plantarum* was “higher than  $10^6$  colony-forming units (CFU) per gram of product”. [17]This sauerkraut maker says their sauerkraut has  $8 \times 10^6$  CFU per gram. A serving of sauerkraut might be 60 g, so the total number of *L. plantarum* in one serving will be roughly  $5 \times 10^8$ . In contrast, the probiotic supplement I took supposedly contained  $10^{10}$  CFU – a factor of one hundred more. A daily dose of  $5 \times 10^8$  CFU might eliminate eczema if you eat it for months, as I did, but might produce much more modest results after just a week.

1. <http://mrheisenbug.wordpress.com/>
2. <http://www.ncbi.nlm.nih.gov/pubmed/17498413>
3. <http://www.medscape.com/viewarticle/559989>
4. <http://jn.nutrition.org/content/130/2/403.long>
5. [http://link.springer.com/chapter/10.1007%2F978-0-387-74087-4\\_17](http://link.springer.com/chapter/10.1007%2F978-0-387-74087-4_17)
6. <http://www.mdpi.com/2072-6643/5/6/1869>
7. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2515351/>
8. <http://www.ncbi.nlm.nih.gov/pubmed/21338447>
9. <http://www.ncbi.nlm.nih.gov/pubmed/22726349>
10. <http://www.ncbi.nlm.nih.gov/pubmed/22210038>
11. <http://www.ncbi.nlm.nih.gov/pubmed/19120072>
12. <http://www.ncbi.nlm.nih.gov/pubmed/24094544>
13. <http://www.uptodate.com/contents/prebiotics-and-probiotics-for-treatment-of-allergic-disease>
14. <http://mrheisenbug.wordpress.com/2014/01/27/l-plantarum-cured-my-eczema/>
15. <http://mrheisenbug.wordpress.com/2014/02/04/kimchi-sauerkraut-experimenters-a-distinct-pattern-emerges/>
16. <http://onlinelibrary.wiley.com/doi/10.1111/j.1750-3841.2010.02030.x/abstract>
17. <http://shop.goldminenaturalfoods.com/GOLD-MINE-ORGANIC-RAW-SAUERKRAUT-16-OZ/productinfo/1901-1916/>

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Meegs (2014-02-12 11:21:24)

I suffered from hand eczema for years during cold weather, and it has gotten a lot better since I started a whole foods diet that includes a lot of fermented foods. I’m not sure what specifically helped, but I drink a lot of kombucha and kefir.

Todd Fletcher (2014-02-12 15:53:20)

My eczema and other skin problems of 15 years disappeared completely from regular kefir and yoghurt, which I did because of this blog. Seth: Great to hear!

Evelyn M. (2014-02-13 10:21:51)

Many thanks for this post. I am ordering the product specified and will let you know if it has any effect on the psoriasis and/or lichen planus (different practitioners give different diagnoses) that has been plaguing the skin on my legs for years.

rudy (2014-02-16 06:08:57)

i had the same problem, at least the same symptoms in winter, also increased by handwashing. in my case the solution, suggested by my doctor, was much simpler: just to wash my hands with cold water instead of hot water. i haven't had a recurrence this winter. i assume hot water washes off more skin oils.

Leila (2014-02-16 20:04:25)

I've now seen two dermatologists for scalp issues & resultant bald patches, and have received two diagnoses, lichen planopilaris & pseudopelade. Both diagnoses were made by looking at my head, rather than performing a biopsy. When I questioned the 2nd one about it, he said a biopsy wouldn't show anything, that it's an "old-fashioned" investigative method. They both gave me steroid prescriptions and freely admitted that it won't likely help. The 2nd one referred me to a 3rd who specializes in hair transplants. I find the whole thing vastly irritating. Doctors who write a quick prescription and send me on my way, doctors who treat symptoms instead of looking for underlying causes, doctors who do less research than I do. One of these docs is the assistant head of dermatology at the local university, so I had high hopes. When I got to his office I thought I had the wrong address, as the signs & brochures on offer were all about lipo, dermabrasion, skin tightening procedures and looking youthful. It's no wonder there's so much interest in personal experimentation - the medical profession is failing it's responsibility. Oh well, they don't call it a practice for nothing! I've also ordered the Jarrow I. Plantarum product. I doubt this is an allergy but I don't see how it can hurt to try it.

## **The Idealist: Jeffrey Sachs and the Quest to End Poverty by Nina Munk (2014-02-14 05:00)**

After I finished *The Idealist: Jeffrey Sachs and the Quest to End Poverty* by Nina Munk, I thought of something a graduate student in English had told me: A little Derrida goes a long way and a lot of Derrida goes a little way. It was literally true. A few sentences by Derrida, you could think about for days, maybe productively. A whole book by him was baffling and irritating. A lot of Jeffrey Sachs goes a little way, I thought.

When it came out (2005), I thought *The End of Poverty* by Sachs was the ravings of a lunatic. Munk's book shows I was right but I had to admit that George Soros giving Sachs \$100 million or whatever to put his ideas into practice (to "test" them) was considerably more interesting than the activities of the other billionaires Munk had written about before Sachs. Soros had an advisory board whose reaction to Sachs's ideas was the same as mine but Soros overruled them. Soros was right. A tiny bit was learned from spending all that money, which is better than learning nothing. Certainly I learned more than if the money had been used to buy a private jet.

As an assistant professor doing animal learning experiments, I saw over and over that it was incredibly hard to learn anything. Anything. No doubt all science professors who are honest learn this. But then I saw something that is less easy to see: If doing the "right" thing pays off worse than we expect - Sachs's flamboyant failure in Africa is an example - then doing the "wrong" thing should pay off better. If spending an enormous amount of money we learn less than expected, then when we spend very little money we should learn more than expected. This is the upside of ignorance. The less you know, the easier it is to learn more. And we know much less than famous professors, such as Sachs, say we know.

My personal science is the polar opposite of what Sachs did. He tried to help others (poor Africans), I try to help myself. He tries to help people he knows almost nothing about, I try to help myself – and I know a lot about myself. He tried to do something big (end poverty). I try to do something small (e.g., sleep better). What he did cost millions of dollars. What I do costs nothing. I can test a new idea about how to sleep better in days. Sachs took years to test his ideas. For me, failure costs almost nothing. Sachs's failure cost him years of his life. You have to be an extraordinary person with great talent to do what Sachs did. Whereas anyone can do personal science.

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Alex Chernavsky (2014-02-14 07:19:58)

I think I've previously posted a comment on this subject, but I'm excited about a new charity called "Give Directly". This organization has the radical idea that you can alleviate poverty by giving away money, with no strings attached. Here's a recent [1]article from *Forbes* magazine:

**Give Directly's Breakthrough 'Free Money' Model Grows As Evidence Mounts** Give Directly has an extremely simple model – find poor people and give them money. That's it. It's a radical idea which sometimes rubs people up the wrong way – a popular refrain is, won't people just drink the money? But the program, which gives extremely poor people in Kenya and Uganda \$1000 split over two payments and transferred by mobile phone, is gaining ground thanks to the data it's gathered backing up its claims. [...] The system works by removing the usual arbiter, an NGO, and putting money straight into the hand of poor people to spend on whatever they want. Faye hopes the approach will make donors think about more about giving to non-profits – will they do more good with the money then the poor could do themselves?

1. <http://www.forbes.com/sites/hollieslade/2014/02/10/give-directlys-breakthrough-free-money-model-grows-as-evidence-mounts/>

MJB (2014-02-14 12:40:19)

"I saw over and over that it was incredibly hard to learn anything. Anything. No doubt all science professors who are honest learn this." I remember a Richard Feynman video where he said the same thing.

Seth Roberts (2014-02-14 20:51:07)

"I remember a Richard Feynman video where he said the same thing." That's interesting! I do not remember Feynman ever talking about this. Can you remember the video?

aretae (2014-02-15 08:03:05)

"I saw over and over that it was incredibly hard to learn anything. Anything. No doubt all science professors who are honest learn this." This also was the line I was going to comment on...but I see it's also been noted by MJB. "We're wrong a lot" is at this point the center of my epistemology. You say it very well here.

Valerie (2014-02-15 14:04:14)

I think I saw the same video with Feynman. He was commenting on nutrition science, how the so-called knowledge on nutrition was not solid, the scientists behind it had not done the hard work that is needed to truly figure things out. In a related vein, I sometimes see professors who publish several articles per year, or a few hundreds over their careers. I have a very hard time imagining that they have a significant contribution to make to science (the criteria to have an article published, I was told in graduate school) several times per year, or a few hundred times during their careers. As a professor yourself, what do you think happens? Do you believe those publications are honestly meaningful? Did all the authors really contribute?

Cliff Styles (2014-02-15 15:20:46)

That last paragraph is the pithiest summary of your thinking, and nails why I keep coming back to your blog. It may be the most important paragraph I will read this year, I am passing it around to everyone I can think of with my evaluation attached. It's a Seth Roberts coda, at the end but not an ending. Seth: Thanks, Cliff, that's nice to hear. Yes, this blog is a long exploration of that point of view. If I had to do it all over again, I would have named it Personal Science.

Seth Roberts (2014-02-15 17:32:35)

"As a professor yourself, what do you think happens? Do you believe those publications are honestly meaningful? Did all the authors really contribute?" I believe that the distribution of progress per article follows a power law: A very large fraction of articles contribute very little (make little or no progress), a very tiny fraction of articles make great progress. I also believe the same distribution holds for individuals: If someone has written a hundred papers, and you measure how much progress each paper made, the distribution of those measurements will follow a power law. The problem is with the SLOPE of that power law distribution (relatively flat slope = high average progress per paper, steep slope = low average progress per paper). I think there are aspects of the system, especially the pressure to publish, that make the slope steeper (= reduce average progress per paper).

John Smith (2014-02-18 15:42:26)

My Take: We learn almost automatically that which is stored in our DNA. In other words, what our parents knew, we can pick up on without effort. So we unfold as we grow into adults just as a blow-up Santa Clause does on Christmas Morning. But beyond that, we have to work at it, as in learning what other DNA strings know, and there is far too much of that for us to ever take it all in. So we specialize and avoid all information not relevant to our specialty. Once all that has been rummaged through, we are in very creative territory, and only when we are aware of the question will we pick up on the answer. This may take much pain and suffering to attain. This is why two people hearing the same lecture pick up on different points. Unless we are ready to take on new ideas, they will just float on over our heads. Usually the answers to the 'exotic' questions will be obvious in ancient texts but having been committed to maxims and clichés are usually ignored. There is nothing new under the sun, only new ways to express the same form. In effect we can learn as much as we are willing to.

## Assorted Links (2014-02-15 05:00)

- [1]Acne fixed with raw honey. "I ditched the antibiotics and started using raw honey on my current breakouts and under the skin pimples."
- "Fussy critiques of science experiments" are used to discredit good science – an example being [2]Tyrone Hayes's work showing that atrazine is dangerous. One "fussy critique" complained about a misspelled word. Was this a secret signal that the author of the critique had a gun pointed at his head?
- once again, [3]a drug company (Boehringer Ingelheim) hides important information
- [4]German city emphasizes sleep
- [5]powerful heart doctor accused of plagiarism

Thanks to John Batzel, dearieme and Adam Clemans.

1. <http://imgur.com/a/rpVBw>

2. [http://www.newyorker.com/reporting/2014/02/10/140210fa\\_fact\\_aviv?currentPage=all](http://www.newyorker.com/reporting/2014/02/10/140210fa_fact_aviv?currentPage=all)

3. [http://www.nytimes.com/2014/02/06/business/study-of-blood-clot-drug-pradaxa-unnered-its-maker-documents-suggest.html?\\_r=0](http://www.nytimes.com/2014/02/06/business/study-of-blood-clot-drug-pradaxa-unnered-its-maker-documents-suggest.html?_r=0)

4. <http://www.theatlantic.com/health/archive/2014/02/the-town-thats-building-life-around-sleep/283553/>
5. <http://www.forbes.com/sites/larryhusten/2014/02/10/leading-european-cardiologist-accused-of-plagiarism/>

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Adam Long (2014-02-15 09:13:46)

Seth, first link was very interesting. Ok, I admit that the pics of cute girl didn't hurt, but also discussion of benefits of honey (e.g. for wound dressing) are very interesting to me. I had a question about the exact definition of "raw honey" Since reading about it here, I have been taking a tsp of honey about 5 to 6 nights per week and have noticed significant reduction in sleep latency – as in, I used to be able to read in bed, now when I try to read, I get through a few sentences and then conk out. I have purchased a few bottles/jars of "raw honey" from Sprouts, a local grocery store here in LA. In some cases, this "raw honey" comes in a jar and is solid at room temperature. Other containers, also labeled "raw" contain honey that is liquid at room temperature and also a little bit darker than the honey that comes in a jar. As far as anybody knows, is there any significant difference between the "solid at room temperature" and "liquid at room temperature" honey. For what it's worth I haven't noticed a difference myself but would be curious to hear from others on this.

Gina (2014-02-15 09:14:03)

Seth, Anytime I read about sleep, there's always the lark/owl distinction. Your sleep discoveries seem to suggest that with all the oscillators working correctly and in sync that there is no real distinction (i.e. all humans in a given area would have the same circadian rhythm). I just started morning faces and it has been terrible to drag myself up early. If being a "night owl" truly is inherent then it would be better to do it later. I'd love to know your thoughts. Seth: I completely agree with your interpretation of my research – that "with all the oscillators working correctly" there would be no night owls. Lack of the right (best) environment increases variability, including person to person variation. You could say the wrong environment reveals underlying genetic variability. It is hard to know the best time to watch morning faces, you should just try different times. And the more sunlight (and Vitamin D) you get in the morning, the earlier you will wake up.

Sidney Phillips (2014-02-15 18:15:12)

Reading about Tyrone Hayes' battle with Syngenta just confirmed what I already knew: companies like Syngenta and Monsanto are pure evil. Seth: They never considered the possibility their activities might be exposed.

Bill (2014-02-19 09:41:51)

The acne photo series shows her becoming noticeably leaner as her skin became clearer. Is it possible she simultaneously stopped consuming something else, such as dairy or other carbohydrate?

## **Elegant Variation, Fashion and Employee Free Time: What Do They Have in Common? (2014-02-16 05:00)**

I am learning Chinese by studying a Chinese version of The Three Little Pigs. The story contains a phrase that irritated me: "Three's home" (in Chinese). Although I did know the Chinese for "home", the rest of the story used the term "Three's brick house" (in Chinese). Why couldn't they stick with one name for it? I thought.

I knew the answer: In language, we like to use different words for the same thing. [1]A famous archeological decipherment puzzle was solved when someone realized the stone cutter had used different words for the same thing. A little repetition is okay but extreme repetition is not. Thus the term elegant variation. Using different words for the same thing is not just confusing, it makes the language harder to learn (because it is larger), with no obvious improvement in breadth or speed of communication.

Why do we do this? Why do we dislike certain sorts of repetition, even though language is built on repetition? I

think the answer is that this is built into us to help the language to expand and grow. The variation seems useless but it isn't because (a) there is a new word and (b) the new word can shift in meaning. The old word can continue to mean what it meant.

Fashion has a similar function. Our shifting preferences in art and decoration force artists to keep inventing. They cannot merely do the same thing over and over and over. Fashion obviously increases innovation.

In her brilliant book [2]*The Good Jobs Strategy*, Zeynep Ton, an MIT business professor, says that retailers should "operate with slack" – meaning hire more employees than necessary. The effect is to give employees some free time. Why should this be? Because when you give employees free time you give them to think. Giving them time to think gives them time to think of improvements.

Language (elegant variation) and material science (fashion) might be more central to human life than well-run stores (slack) but in each case there are real problems to solve – and they are solved, in part, by adding seemingly-useless elements to the system. The new elements help the system improve.

1. <http://www.pbs.org/wgbh/nova/ancient/cracking-maya-code.html>

2. <http://zeynepton.com/book/>

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Three Pipe Problem (2014-02-16 06:42:22)

When I was in college, the professor who helped to improve my writing the most would make us read our papers out loud to him. I was reading a paper about Plato to him, and he stopped me because he could not follow my train of thought. It turned out that my unconscious training to avoid using the same phrase repeatedly had made the paper incomprehensible. I remember telling him I had wanted to avoid using the same terms, and he said, "It helps."

George (2014-02-16 06:44:58)

Its interesting you should be writing this in China. Some cultures don't seem to prize elegant variation but prefer to fix their fashion in architecture and literature to a single mold, which they repeat for centuries.

Audrey (2014-02-16 08:39:03)

Since language variation demonstrates mental agility and creativity, we might be unconsciously motivated to do it to show off, to help attract the opposite sex. Why do we have so many songs, or even one song? Maybe for the same reason we have oral sex: it's appreciated. Seth: When I hear that this or that feature of human behavior evolved for the sake of showing off to the opposite sex – and I hear it often – I think, sarcastically, thank goodness things are so simple. There is certainly a lot of sexual signalling and as far as I know it is always very asymmetric: one sex does it much more than the other (e.g., dance). I am unaware of any sexual asymmetry in language variation. Both men and women do it, roughly the same amount.

Nancy Lebovitz (2014-02-16 11:06:30)

[1]Slack: Getting Beyond Burnout, Busywork, and the Myth of Total Efficiency gets into various aspects of why you need slack in organizations- time to think, learn, recover from delays, etc.

1. <http://www.amazon.com/Slack-Getting-Burnout-Busywork-Efficiency/dp/0767907698>

Chris West (2014-02-17 01:30:25)

I read The Odyssey for my A Levels in school and I remember the formulaic descriptions of things like the sunrise. I found this increasingly frustrating and it detracted from my enjoyment of the book. Why was it so annoying? I guess it felt lazy and it was just really boring to re read the same phrases and descriptions over and over. I couldn't mentally 'buy in' to the description of a beautiful sunrise after I'd read the same description 10 times. Outside of my day job I run a small record label. Writing is not one of my strong points and creating press releases is a hard task. I have to come up with many different way of referring to the same thing - "the album, released today", "the band's full length debut was recorded at...", "the band had this to say about their self-titled release..." etc. I figure the people I'm sending these to must read many of them every day so I need to keep it as interesting as possible. As always, context is important. I would assume in a research paper its acceptable to use the same, and probably very particular, terms for things. Is this the case?

garymar (2014-02-20 03:08:17)

The Odyssey and Iliad come out of *oral* traditions of storytelling. When you've got 11,000 lines to recite, repetition gives your hearers a chance to assimilate and gives you a break at the same time. This highly non-repetitive [1]Onion piece cracked me up, because the writers used as many different synonyms as they could think of for "a # #hole".

1. <http://www.theonion.com/articles/911-truther-vows-not-to-rest-until-everyone-knows,35319/>

## Cheating at Caltech (2014-02-17 05:00)

Caltech has a serious problem with undergraduates cheating on academic work, which Caltech administrators appear to be ignoring. A few years ago, one alumnus considered the problem so bad that he urged other alumni to stop donating. I attended Tech (that's what we called it) for a year and a half in the 1970s. I didn't think cheating was a problem then. Now it is.

[1]A recent article in the Times Higher Education Supplement by Phil Baty praised Caltech's "honor system", which includes trusting students not to cheat on exams. A Caltech professor of biology named Markus Meister told Baty that "cheats simply cannot prosper in an environment that includes such small-group teaching and close collaboration with colleagues because they would rapidly be exposed." That strikes me as naive. How convenient for Meister that there is no need to test his theory - it must be true ("cheats simply cannot prosper").

A few years ago, a Caltech alumnus named Peter Seidel, after receiving a donation request, told his fellow alumni not to donate until the system was cleaned up. Here's some of what he said:

I found out today that Dean of Students Jean-Paul Revel said the following to my dad on the phone while I was at Caltech (Not realizing that my dad is a former Caltech student and BOC [Board of Control] rep) "Peter has a real problem with cheating. The fact is that people cheat. Peter needs to get over it."

I think it's safe to say that the Caltech 'Honor Code' is obsolete. [= is no longer working - Seth]

There is a small and growing population of students at Caltech [who] are systematically cheating,

and the Caltech administration is aware of it but refuses to do anything about it. I suspect the problem began when Caltech started advertising its 'Honor Code' to prospective high school students in the 90's, which lead to self-selection of students who were willing to bend the rules.

In my personal experience, I caught students cheating red-handed while I was a student, and though I took my findings to the BOC, nothing ever came of it.

I also went to one of my professors (along with several of my classmates) and we explained that we were very concerned that there was a significant amount of cheating going on in his class. While he was very empathetic and gave us a significant amount of his time, ultimately he essentially said that his hands were tied because the school does not allow him to give proctored exams.

The Caltech exam system is set up in such a way that it is extremely easy to take extra time on an exam, open a book on a closed book exam, or search for the answers on the internet. Most exams are taken by students alone in their dorm room, with no one watching, at the time of their choosing, with the student timing themselves and with both the coursebook and an internet connection in the room, with only the student's integrity preventing them from using resources they are not allowed to use. For that matter, many quizzes and exams are turned in to unlocked boxes in empty hallways where it would be simple to take another student's answered exam to copy or check answers against, and then return it when turning in one's own exam. <

In my job in the financial industry I interview a number of Caltech seniors every year for potential jobs. And unfortunately, I have to try to answer the question 'Is this person a cheater?' as part of my interview process. I have seen examples of resumes where students flat out lied about their GPA.

But probably the most blatant example . . . is a student [he means graduate – Seth] that I recently interviewed [who] claimed, as his two 'hobbies', to be a member of the Caltech fencing team his freshman and sophomore years, and a member of the Caltech chess club all four years at Caltech. As it happened, when I was handed his resume, the coworker sitting to the left of me was a former Caltech grad student that coached the fencing team during those years, and the coworker sitting to the right of me was a former Caltech undergrad who was an avid member of the chess club as both an undergrad and an alum. Both of them also happened to be part of the group scheduled to interview this student, and received copies of his resume. I asked them what their opinion was of the candidate.

Neither of them had ever heard of him.

We decided to go ahead and give the candidate an interview, and give him a chance to explain, in case we were somehow misunderstanding the resume. The first person to interview him was the former fencing coach. The interview began normally, and then after a while they had the following exchange (I'm paraphrasing somewhat):

Former fencing coach: I see you have two years on the Caltech fencing team.

Candidate: That's right.

Former fencing coach: Well, I was the coach at that time... and I don't remember you.

Candidate: Well, it wasn't actually my freshman and sophomore years; it was just my freshman year.



Former fencing coach: I was the coach both years.

Candidate: Well, I wasn't really on the official team, I just took the PE class that taught fencing.

Former fencing coach: I taught that class.

Candidate: Well, I didn't really take the whole class. I signed up for it, but I only went to the first week, and then I dropped it.

After the first interview, we decided we wouldn't be making him an offer, but I decided to go in and talk to the candidate anyway. [In] the meantime, the coworker who was a Caltech chess club member asked another chess club friend of his if he knew the guy, and he didn't. I told the candidate that we wouldn't be offering him a job, but I wanted to talk to him about his resume. I told him I had heard about the previous interview, and that there were also a couple members of the Caltech chess club who did not know who he was. He responded 'Well, it wasn't a formal team, and not everyone went every time.' I asked him what night of the week the club met, and he told me (confidently) 'Saturday nights.' (I knew that it was actually Friday nights.)

When people cheat and get away with it, they are more likely to cheat in the future, Seidel believes – a very plausible idea. Given the disinterest of professors and administrators in the problem, the Caltech mascot should be a monkey with its hands over its eyes.

1. <http://www.timeshighereducation.co.uk/features/caltech-secrets-of-the-worlds-number-one-university/2011008.fullarticle>

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dearieme (2014-02-17 07:00:20)

Everything should be examined the old-fashioned way unless there is something intrinsic to the material that requires, say, "continuous assessment" examining. So the candidates enter a room just before nine a.m., or 1 p.m., and have three hours to answer a paper that they've never seen before. They are equipped only with calculators of a specified type - no phones, laptops, books or whatever. Repeat five, six, seven or more times across the course of a week or two. The papers should be set and marked by academics who are not the people who taught the course. The Caltech system described here is absurd. Why on earth would anyone think it a good idea? Seth: It makes life easier for professors. Much easier.

Sara (2014-02-17 08:41:33)

It minimizes staff workload while maximizing the number of summa cum laude graduates?

mit (2014-02-17 10:14:17)

interesting...I also don't believe the honor code system works. But even without honor code systems, there is cheating occurring! For example, most Greek houses keep records of previous exams and finals and then new pledges use them. I went to a college where my affiliated housing unit also had this. I have heard stories of people back in the 70's using their frat's finals and I have heard stories of people in the 2000's using their frat's finals. Apparently the professors didn't think it necessary to change the exams over the past ten years, or they cycle them in a very predictable fashion. Which just made me think of mark twain about never letting school interfere with my education. I think the greater lesson is that for many people, going to university is almost like a finishing program and cheaters do prosper (Steven A. Cohen for example). From what I saw, many

go to college in order to fit into an upper class... and professions that used to not require a degree now do for reasons I don't understand. David Brooks has spoken about this, nothing new. For what it's worth, and though I saw both women and men cheat, women were more likely to get caught, confess, and take the penalty for cheating than men were. Caltech is a much higher proportion of men, which makes me wonder if its environ is anything like the Tour de France? Everyone's doing it and you're not competitive if you don't cheat.

Steve Johnson (2014-02-17 15:09:39)

Seems likely that there is an element that's not being mentioned in this story: <http://educationrealist.wordpress.com/2013/10/08/asian-immigrants-and-what-no-one-mentions-aloud/> "The stereotype, delicately put: first and second generation Chinese, Korean, and Indian Americans, as well as nationals from these countries, often fail to embody the sterling academic credentials they include with their applications, and do not live up to the expectations these universities have for top tier students. Less delicately put: They cheat. And when they don't cheat, they game tests in a way utterly incomprehensible to the Western mind, leading to test scores with absolutely zero link to underlying ability. Or both. Or maybe it's all cheating, and we just don't know it. Either way, the resumes are functional fraud. "

as (2014-02-17 15:13:20)

What was the ethnicity of the students? Were they Indian or Chinese?

as (2014-02-17 19:33:55)

Steve Johnson beat me to it.

Boisfeuras (2014-02-17 22:38:27)

Steve Johnson and "as" beat me to quoting Education Realist. A quick look at Caltech's student demographics shows it as 39+ % "asian/pacific islander/native Hawaiian". So there's a 4-in-10 chance that the cheaters are Asian.

GB (2014-02-18 03:13:12)

To paraphrase Charlie Munger, if you're a shopkeeper it's immoral if you don't make it difficult for your employees to steal from you. We know people are more likely to cheat when they feel the chances of getting caught are lower. The university is encouraging bad (but rational?) decision making by students. Better off not testing them than playing this game.

Joe (2014-02-18 14:20:34)

The question that should be asked here is, What would Sheldon Cooper do?

John Smith (2014-02-18 16:29:19)

How can they learn how to teach until they learn how to learn? (Steiner?)

Bill Mitchell (2014-02-19 13:09:25)

For some reason this didn't post before, so here it is again... I graduated from Caltech in the 1980s. Cheating was rare then, as far as I know. At risk of sounding quaint, most students attended for knowledge, not prestige or financial gain. Cheating just wouldn't be interesting to people I knew there. I was aware of one small cheating network: students who knew each other from a particular private high school openly shared answers on homework and take-home tests. That private high school is in a developing country notorious for corruption. It is not any of the countries mentioned in previous comments above, and I won't say which, lest it spawn unproductive nationalist finger-pointing. Not to say the other commenters' are wrong. It's just that generalizations about cheaters' ethnic origin are not actionable. Maybe a more useful observation is that the cheaters I saw at Caltech had, compared to the rest of us, bigger incentives to cheat (financial and prestige compared to home-country alternatives), and lower barriers (knew each other well, and trusted in each another's cultural assumption that anything goes). In the ensuing 30 years, the U.S. in general has become more like those students. Incentives are greater, because college is more expensive, income disparities are greater, and so your lifetime return on investment from attending a top-tier school is now much higher than that from a second-tier school. Barriers are lower, because the Internet eases cheating, and because

for a decade, high-profile corruption and fraud in the US has often gone unpunished or lightly punished (finance, banking, corporate governance), reinforcing a message that anything goes. Until those things are corrected, clearly a school must police itself to preserve its reputation. Sad but obvious. It would sure help if employers would hire more intelligently. When we fetishize a Caltech diploma, and rank it over skills, initiative and enthusiasm, we sustain the huge incentive for students to get that degree by hook or crook.

Seth Roberts (2014-02-19 14:35:29)

Your comment didn't post earlier because the first time you make a comment it is moderated – held for approval – and I hadn't yet approved it. I suppose the more people who know that Caltech still has an honor system – that is, makes cheating considerably easier than other schools – the better.

Bill Mitchell (2014-02-19 15:29:49)

The honor system appeared to work when I was there. Decades later, Caltech remains one of the hardest things I've ever done. As the school's president put it to incoming students at our orientation, "we will challenge not just your mental limits, but your physical limits," meaning sleep deprivation. The intensity was incredible. Exhausting, but rewired me to think better. But it does depend upon the student culture. If cheating takes root, an honor system can't work. I would hate to see them lose a well-earned reputation by not putting a lid on cheating, if it is a growing problem.

Bill Mitchell (2014-02-19 15:53:12)

Actually I just realized the honor system was likely working in the 1980s, deducible from two facts: most courses there were still being graded on a C curve, and individual student scores in applied math and electrical engineering tests often averaged below 70 %, with wide variance. If cheating were rampant at that time, this seemingly could not have occurred. The bell-curve grading would have driven competition among cheaters, which would either have driven scores up, or driven variance down, or both. That doesn't seem to have happened. I have no idea if any of that is still true today.

Seth Roberts (2014-02-19 22:57:11)

The president said there would be sleep deprivation? Counter-productive. Sleep is when long-term memories are formed. Many studies have shown that sleep deprivation reduces long-term learning. I imagine that anyone at Caltech paying attention, including faculty, realizes there is now lots of cheating. If they (the faculty) keep the honor system in the face of that, they deserve to lose their reputation. It is honest students who suffer. They get lower grades and are tainted by the cheaters. It's interesting that honest students don't band together and demand proctored tests.

as (2014-02-20 13:23:30)

I also wonder if the liar at the interview was a woman?

Bill Mitchell (2014-02-20 18:17:43)

Agreed, the celebration of sleep deprivation seems obviously counterproductive. I'm curious now to inquire with someone currently involved at the university about prevalence of cheating. Will let you know if I learn anything.

Bill Mitchell (2014-02-21 11:38:44)

Some confirmation of a very recent rise in cheating, but also assertions that core courses are already responding with in-class exams: <http://www.quora.com/California-Institute-of-Technology/Why-are-some-core-clas-ses-at-Caltech-administering-in-class-exams> One of the commenters there recalled something I'd forgotten: traditionally, Caltech's honor code exams are unlimited-time and open-book. This allows exams to ask harder and more interesting questions, which in turn helps solve a challenge in teaching there: huge variance in student aptitude. Most Techers scored between 790 and 800 and the SAT math section, but the narrow spread of scores does not imply a narrow spread of aptitude. Instead, it means the SAT was simply too easy for the top tier of students there. The right tail on that aptitude distribution is very long. Traditional in-class, closed-book tests might result in a similar spread to the SAT: half the class scores 100 %, and is bored out of their minds, while the other half has a more normal spread. Harder questions, open books and no time limits permit a wider variance of outcomes, and

more closely resemble real-world problem solving, in which there is typically no time limit. As long as students are honest. A second challenge to testing in class is that students can no longer spend 15 hours on a test. Potential problem, because not every student at this level can think both deeply and fast. In-class exams would dramatically reduce grade outcomes for honest students that think deeply but deliberately – a profile that may exactly describe students destined to make great contributions later. So I don't have a solution, but begin to appreciate the scope of the challenge.

Dragan (2014-02-21 15:15:36)

Cheating is a great indicator that something is wrong with the educational system in question. But, hey, it could be worse. Some teachers I work with suggest they'd be happy if their students attempted to cheat. At least that would show they cared, and they might even learn a thing or two.

Seth Roberts (2014-02-21 15:23:57)

Those are good points. I agree, a good reason for take-home exams is to pose interesting thought-provoking questions. Here's another point: Should grades be based (partly) on how smart students are? Or would an ideal grading system be solely a measure of whether they have mastered the material put in front of them by the teacher? If the latter, it is not so obvious that you want to pose problems that separate geniuses from everyone else. If you want to measure learning, not intelligence, you are pushed toward simpler questions. In my own teaching I avoid tests (and grading) altogether. My goal is learning. I find that other sources of motivation can replace grading. I have no interest in ranking my students according to their intelligence. I wonder why other teachers want to do this – or are they mindlessly copying how they were taught?

Cliff Styles (2014-02-21 19:33:56)

'I find that other sources of motivation can replace grading. I have no interest in ranking my students according to their intelligence' That's the honorable way, it seems to me. Installing a grading and status widget into a student's head is crippling for life, and once it's in there, it's very hard to remedy. I speak from personal experience.

Bill Mitchell (2014-02-23 11:05:29)

Any links to non-grade motivational methods you use in class? That sounds interesting.

Seth Roberts (2014-02-24 02:45:24)

non-grade motivational methods: <http://blog.sethroberts.net/2013/01/26/my-ideas-about-teaching-put-into-practice/>

## **Interview with Zeynep Ton, Author of The Good Jobs Strategy (2014-02-18 05:00)**

[1]The Good Jobs Strategy by Zeynep Ton, published in January, argues that retailers should change low-level jobs in four ways:

1. Offer fewer choices – fewer versions of each product.
2. Standardize common tasks and empower employees to handle unusual situations.
3. Cross-train employees so that each employee can do several jobs.
4. Operate with slack, that is, hire more employees than seemingly necessary.

The brilliance of this book is that it addresses a major problem (bad jobs), includes substantial evidence and persuasive argument, is practical, and is exceedingly non-obvious (judging by how many retailers already follow her recommendations). Ton is an MIT business school professor whose area of expertise is operations.

I interviewed her by email.

ROBERTS How did you get into studying this? My impression is that the details of how employees are treated is not what operations professors usually study.

TON Early in my career I studied pervasive operational problems at retail stores that hurt supply chain and financial performance. My doctoral thesis was on misplaced products and the resulting phantom stockouts. I found that even retailers that were great at managing the backend of their supply chain, by getting the right products to the right stores at the right time, were pretty bad at managing the last ten yards of their supply chain. Once the products made it to the store, they would stay in the backroom or in the wrong place and often not meet the customer that wanted to buy them.

Problems like misplaced products were common, frequent, and had a huge impact on customer service, sales, and profits. When I studied what drove these problems I found that stores that had more workload for employees, lower training, and more employee turnover had worse performance.

Things really clicked for me several years ago when I was presenting my research to a group of retail managers and executives. I showed them my findings from analyzing a lot of data from Borders that showed that if stores increased the amount of people they would make more money. This finding just didn't make sense—why would managers staff their stores with too few people even though having more would increase profits? When I asked people in the audience to raise their hands if I would find a similar result if I analyzed data from their chain, almost all raised their hands.

What I saw was that a lot of retailers were operating in what I call a vicious cycle. Low investment in employees caused operational problems, which reduced customer service, sales, and profits. When stores had low sales and profits, they had low labor budgets, which further reduced their investment in employees.

Everybody suffers from this vicious cycle. Employees have bad jobs, customer get bad service, and investors are worse off because there is a lot of money left at the table. I thought there have to be some companies that operate much better. That's how I started looking at firms that follow the good jobs strategy.

ROBERTS How have your ideas on this subject changed over the years?

TON There was a period when I wasn't sure if excellence was possible in low-cost retail. All the examples around me were of retailers that offered bad jobs and had poor operational performance. When I went to Spain to study Mercadona I realized that I finally had found the "Toyota Production System" of retailing. What really excited me was studying QuikTrip after Mercadona. Here were two completely different companies—the largest supermarket chain in Spain and a convenience store chain with gas stations based in Tulsa, Oklahoma. Yet they were both beating their competitors by offering much better jobs than their competitors. At the same time they were both offering low prices and great service to their customers.

When I looked into what allowed them to deliver value to their employees, customers, and investors at the same time, I saw that they were both excellent operators. They were both making a set of operational choices that reduced costs, increased employee productivity, and allowed employees to have a big role in driving profits. When I looked at Costco and Trader Joe's, I saw they were making the same choices. In my book I highlight the four choices I observed [shared by these four companies].

ROBERTS When you present these ideas to retailers, what is their reaction? Of course there is a range of reactions, but which reactions surprised you the most? Which reactions did you learn the most from?

TON The reaction that I learned most from is the following. When Marshall Fisher, a Wharton professor and a thought leader in operations management, presented his finding that retailers could make more money by increasing staffing levels, a CEO said, "I spend my days saying no to a long line of people suggesting ways to spend money, including adding more staff. I don't need a couple of Ivy League professors with their fancy statistical analysis giving them more ammunition!"

This really shows how retailers view their labor — as a cost to be minimized.

ROBERTS What do you think about how Amazon treats employees? Do you have any suggestions for them? [The book is published by Amazon.]

TON I have not studied Amazon.

ROBERTS Your book lacked a chapter called "What Happens When..." about what happens when companies try to implement the changes you suggest – I mean, make changes based on your research. Can you say anything about that?

TON Of the four model retailers that follow the good jobs strategy, only one went through a dramatic change. Mercadona started as a company that operated just like most companies operate right now, but had to change in order to compete against much larger companies. I hope that my book will encourage more companies to adopt a good jobs strategy. If I can observe some of these changes, I will be in a better position to offer suggestions for implementation.

ROBERTS It seems to me the underlying theme of your book is "Look, your employees have brains. The more you take advantage of those brains, the better off everyone – you, them, owners, customers – will be." Is that a fair summary?

TON One could say that the book is about designing the work that employees do to leverage committed, motivated, and capable employees. It's also about making smart operational choices that benefit employees, customers, and investors at the same time.

ROBERTS Do you have a theory – is there a theory – that ties your four suggestions ("operational choices") together? Is there an underlying principle from which all four of them can be deduced?"

TON The four choices I observed are choices that operationally excellent companies have been making for decades and they could be traced to lean manufacturing. Overall, the good jobs strategy—the combination of the four choices and investment in people—is a blueprint for operational excellence.

ROBERTS Why has it been hard to learn to make the choices you describe?

TON Unfortunately, the dominant view in business is that paying employees as little as possible and treating them as a cost to be minimized is the best and perhaps only way to run a profitable business, especially in industries with low profit margins.

As I show in my book, that's not the only way and that's not even the best way.

But companies can make bad choices just like people can make bad choices. We know exercising is great for our health but regular exercise requires commitment, discipline, hard work and a long-term view. The good jobs strategy is good for companies' health but that too requires commitment, discipline, hard work, and long-term view.

Excellence is always harder to achieve than mediocrity. And right now we have too many companies stuck in mediocrity.

ROBERTS You say "the dominant view in business is that paying employees as little as possible and treating them as a cost to be minimized is the best and perhaps only way to run a profitable business, especially in industries with low profit margins." That is a common-sense view that Adam Smith might have expounded. Why has such a wrong view persisted so long? On the face of it, I would think that how to treat employees would be one of the central questions that business professors (and CEOs) try to answer and nobody would be satisfied with repeating ideas of several hundred years ago. It's one thing for a third grade teacher to tell students "the earth is flat" – yes, it looks vaguely flat. But for sophisticated university professors and captains of industry to say "the earth is flat" for hundreds of years when there is a vast amount of money to be made from realizing it isn't flat, that is puzzling.

TON But it's not just ignorance. Perhaps I should have worded it differently. Following the good jobs strategy is not easy. You have to get many things right. It requires excellence.

POSTSCRIPT This is what Ton said in the book – that the good jobs strategy is difficult. I wasn't persuaded. CEOs of major retailers have done many things that are not easy. Why has this difficult thing been out of reach?

I suspect an examination of why the 4 retailers Ton study broke from the pack and treated their employees differently would not find that the people in charge were more capable of excellence than the leaders of other companies. Maybe their personalities were different, maybe their cultures (internal company culture or external society culture) were different, I have no idea.

I am unsurprised that business profs had failed to figure out what Ton figured out (although her conclusions are supported by the work of other professors). Other disciplines have enormous blind spots – epidemiologists never study the immune system, for example. The more things you can take for granted, such as the idea that labor is a cost to be minimized, the easier it is to publish papers. In academia what is rewarded and selected for is not solving real problems, it is publishing papers in prestigious journals, which is quite different.

1. <http://zeynepton.com/>

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Alex Chernavsky (2014-02-18 05:58:58)

And speaking of things that are not easy and that companies routinely do not do: Why do so few companies try to make their products easy to use? And I'm not talking just about high-tech devices. Last night, I assembled a [1]cat tree that I had ordered through Groupon. The instructions were not very clear. They looked like they were composed *by* an engineer *for* other engineers (and, the print and drawings were quite small, making it difficult to read, even with my reading glasses on). With only a minimal amount of effort, the instructions could have been made much more user-friendly. I imagine that the manufacturer does all sorts of difficult things, from implementing employee health plans to buying & maintaining industrial-grade woodworking equipment. Why can't they expend more effort to make their product easier to assemble?

1. <http://www.groupon.com/deals/gg-1-deluxe-cat-trees>

Kirk (2014-02-18 11:33:45)

@Alex, I remember reading, many years ago, an answer to your question. Don't remember the source. As I recall, at the last minute somebody remembers that the product needs an instruction page. This task is assigned to the least-competent, most unproductive worker in the area (engineering or from the production floor) because everybody else is busy doing real work.

Which explains the brilliance of Apple, Amazon, and insert-your-favorite-example. Somebody at the top cares about everything.

Nancy Lebovitz (2014-02-18 12:15:40)

Employees don't just have brains– a high proportion of people want to do good work.

Jim Keller (2014-02-18 12:56:22)

If you take these two ideas together, people care more about status than success and people care more about the short term than the long term you get lot's of seemingly counterproductive strategies. One interesting thing happened at Apple retail. The new person in charge cut labor costs at retail stores. Revenue per employee went down. So they realized quickly that low cost didn't mean more profit. <http://online.wsj.com/news/articles/SB100008723963904443751045775932715051216> 02 So this might be a small experiment based on the the ideas in the book.

Bob Ramsey (2014-02-18 17:45:27)

This is great, but there's nothing in this about honey and sleep and recovery. Isn't that what this blog is about?

Seth Roberts (2014-02-18 18:31:25)

"This is great, but there's nothing in this about honey and sleep and recovery. Isn't that what this blog is about?" The connection between Ton's work and this blog is that both Ton and I believe that people who are usually ignored or treated as passive recipients have a lot to contribute. Ton believes low-level retail employees are a powerful force that can be used for the good of everyone (customers, bosses, etc.) In health care, I believe that the rest of us – people outside the health care system, non-experts, people usually considered by those inside the system to be passive recipients – are a powerful force for better health. For example, the idea that bedtime honey can improve sleep came to me from someone outside the health care system. I am outside the health care system. In my teaching, same thing: I believe that students have untapped capabilities that will help them learn and help you teach them and make teaching much easier.

James M. (2014-02-18 18:53:58)

To add two cents, I thought this blog was about more than honey and sleep, and looking at self-testing and experimentation. That being said, in an effort to address some sleeping issues, I tried the honey approach for a couple of nights using raw honey. That woke me up in the early morning hours with heart burn/indigestion. To resolve that, I took a table spoon of 10 % Greek yogurt and went back to bed. Thought this may be worth adding to your database. Keep up the blog variety. Seth: Thanks. If bedtime honey causes you to wake up too early, I suggest you reduce the dose. Try cutting it in half.

Duncan (2014-02-22 14:27:08)

For what it's worth, I think Kirk is remembering something from Zen and the Art of Motorcycle Maintenance: "I'm from the factory too," I say, "and I know how instructions like this are put together. You go out on the assembly line with a tape recorder and the foreman sends you to talk to the guy he needs the least, the biggest goof-off he's got, and whatever he tells you—that's the instructions." Something I'd forgotten from the book was Pirsig's decision to stop grading his English students. It turned into career suicide for him, though, as I recall. You weren't thinking of ZMM when you tried different approaches to teaching, Seth? Seth: I've never read that book. It sounds interesting.

## **DIY Medical Devices: No Science, Please (2014-02-19 05:00)**

[1]An article about DIY medical devices – devices created outside of big companies – does illustrate the predatory nature of our health care system:

It can still be difficult for inventors to break into the medical-device market. Amy Baxter, a pediatrician



specializing in pain management, found this out firsthand. When her four-year-old son developed a fear of needles, Baxter set up shop in her basement and created [2]Buzzy, a vibrating ice pack shaped like a bee that numbs the sting of injections. . . She says, “I decided to use my solution as a mother to be a better — more globally impactful — doctor.” Baxter held randomized controlled trials comparing the device to ethyl chloride spray and published the results. But when she launched the product in 2009, she found it nearly impossible to get her product into hospitals.

“It’s the nature of the system marketing to hospitals to pad prices and make items disposable to ensure repeat sales,” she says. Medical sales reps paid on commission will only take the time to push a new product if it is very expensive, with a high profit margin, or if it’s a cheap item that has to be reordered often, she says. “A reusable, low-cost product doesn’t work.”

On the other end, she says, hospitals’ complex budgetary processes often disconnect the physicians who order products — and pass the price on to patients and insurance companies — from their true cost. “Decisions to buy aren’t as straightforward as looking at a catalog,” she says. “There is no easy way to comparison shop, and less incentive in the medical environment.”

The result of all this inefficiency [which curiously works only in one direction – to make things worse for consumers and better for health care professionals], Baxter says, is not only [3]notoriously inflated hospital prices — like \$36.78 for a \$0.50 Tylenol with codeine pill and \$154 for a \$19.99 neck brace — but also a high barrier to entry for devices like Buzzy, which is currently available only online, with no marketing beyond word of mouth.

A predatory relationship is one where one side is much more powerful than the other side and uses that power to take from the other side.

The article says nothing about science – better understanding of the connection between environment and health. Science is so poorly understood by so many people that even a doctor, such as Baxter, fails to understand that it exists:

The more people become involved in medical making, says Baxter, the less the human body will seem like a mysterious black box whose problems and solutions are only within the realm of experts. [Not true. Making is not science. There is still a great need for science – Seth] “The truth is,” she says, “the place where the body interfaces with the rest of the world is just engineering.”

No, it isn’t just engineering. There is a vast amount we don’t know about the world’s effect on the body. Even a small improvement in understanding how environment (including food) controls health (e.g., how to sleep better) can easily be worth billions of dollars per year, more than all DIY medical devices put together. And knowledge (and the associated benefits) spreads at no cost at all, in contrast to medical devices.

Engineers assume people will get sick. Scientists do not.

Thanks to Alex Chernavsky.

1. <https://medium.com/the-magazine/4472ea75fdd6>

2. <http://buzzy4shots.com/>

3. <http://www.nytimes.com/2013/12/03/health/as-hospital-costs-soar-single-stitch-tops-500.html>

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dearieme (2014-02-19 05:14:45)

"I decided to use my solution as a mother to be a better — more globally impactful — doctor." More globally bloody impactful? Jail her for assault and battery on the English language.

garymar (2014-02-19 06:06:28)

"This is where DIY is exquisitely powerful: you make it for yourself, your friends and loved ones. You have a vested interest in making it work."

This sounds very similar to the philosophy of this blog.

Trev (2014-02-19 07:42:44)

The UK is heading the same way. And even worse than that is the fact that the grown ups letting it happen. Looks like Huxley was more right than Orwell.

Sidney Phillips (2014-02-19 10:21:32)

I am in medical school right now. My training in nutrition at my school consisted of one powerpoint lecture on vitamins. That's how it is in most schools. Doctors do not understand proper nutrition, beyond telling patients to "eat a balanced diet". I have gained so much benefit from going gluten free, removing mercury fillings, and getting 23andme genetic analysis done (learned I have methylation cycle defects). It is amazing how in the last 2 months I have done more to help my health on my own than doctors have ever done for me. I hope to be a different kind of doctor, one who actually spends more than 10 minutes with a patient and can explain proper nutrition and lifestyle choices. Sadly, with the way healthcare is heading I don't see myself being part of healthcare teams with nurses running the show (insert sarcastic "thanks Obama!"). I think I will probably have my own concierge practice in a wealthy area like Beverly Hills or Manhattan.

## **Good Sleep Prevents Cancer (2014-02-20 05:00)**

I have long said that good health begins with good sleep. I came to this conclusion when I improved my sleep a great deal and [1]at exactly the same time stopped getting obvious colds. I concluded that better sleep made my immune system work better. At the 2012 Ancestral Health Symposium, in Los Angeles, Rob Wolf said something similar about the centrality of sleep: "If a person sleeps well, you can't kill them. If they sleep badly, you can't keep them alive."

Mainstream health researchers, on the other hand, haven't figured this out. James Watson, the co-discoverer of the structure of DNA, in [2]a recent paper about how to fight cancer, wrote this:

Long known has been PERIOD 2 (PER2) involvement as a clock protein at the heart of the circadian rhythms of higher animal cells. Later, quite unexpectedly [emphasis added], PER2 was found to function as a tumour suppressor, with the absence of both its copies causing the rate of radiation-induced cancers to rise.

When PER2 is absent, circadian rhythms disappear and sleep becomes very fragmented, spread out over the whole day. When you sleep better (which usually means more deeply), your immune system works better and does a better job of suppressing tumors. There is plenty of other supporting evidence. For example, in 2012 [3]two studies found sleep apnea associated with higher cancer rates. The PER2 evidence is especially good at establishing cause

and effect.

1. <http://escholarship.org/uc/item/2xc2h866/>
2. <http://rsob.royalsocietypublishing.org/content/3/1/120144.full>
3. <http://well.blogs.nytimes.com/2012/05/20/sleep-apnea-tied-to-increased-cancer-risk/>

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CC (2014-02-20 07:52:53)

Great! But improving sleep isn't easy. So what do you suggest for someone who needs 10-11 hours of sleep each day? I know I've asked this before, but I'm curious if anyone has new ideas.

Joe (2014-02-20 10:55:08)

CC: Why do you think you need 10-11 hours of sleep per day?

Sidney Phillips (2014-02-20 11:52:02)

I was having a lot of problem staying asleep. Never had sleep problems before, but I am studying for my USMLE Step 1 exam (medical boards) and this has caused a lot of stress leading to my present sleep problems. I've tried honey before sleep, morning faces, not eating breakfast, red glasses at night, standing on one leg to exhaustion. Nothing worked. I always waked up 4 hours after I went to sleep. The post about "sleepy dust" glucose+salt to get back to sleep got me thinking. What if I took glucose + salt before I went to sleep would that make a difference? However, instead of using pure glucose I decided to use ribose (more heart healthy) and trehalose (2 glucose molecules held together which digest slowly) instead. I tried the following mixture, and lo and behold I slept 8 hours without waking up early! My SleepCycle (what an awesome app) scores went up from 55 % to 75 % with night movements reduced from 1000+ to around a 100. I tried substituting pure glucose for the ribose and rrehalose a few nights later and did not get the same results. The cheapest source for ribose I found is Swanson's and for trehalose it is brooklynpremium.com's NeuroCoat brand. 5 g Ribose 10 g Trehalose 1 teaspoon Himalayan salt 1 teaspoon lemon juice (for vitamin c)

dearieme (2014-02-20 13:01:27)

Has it got to be Himalayan salt?

Look (2014-02-20 14:20:00)

If you need 10-11 hours of sleep does that mean you are not sleeping well?

Sidney Phillips (2014-02-20 14:30:36)

No, I'd imagine any salt would do the trick. I just like Himalayan salt's taste and it doesn't have the additives that normal table salt has.

Seth Roberts (2014-02-20 15:55:15)

very interesting. What happens without the salt and lemon juice?

daz (2014-02-20 16:02:57)

...time for me to google Ribose and Trehalose

Sidney Phillips (2014-02-20 16:10:11)

Didn't work without the salt. Lemon juice probably doesn't make much of a difference; haven't tried it without it. I'll try without it and see what happens.

Alex Chernavsky (2014-02-20 17:14:12)

Sidney, what dose do you take of the dry mixture? And do you take the lemon juice separately, or do you mix it in?

Sidney Phillips (2014-02-20 18:36:38)

I take one dose of the above mixture right before sleeping. I mix the lemon juice with it, using 8 oz of water.

libfree (2014-02-20 19:03:39)

While I have little doubt that sleeping well is a good indicator for immune health, I still have questions about how much it affects it or why it affects it. I've struggled with sleep apnea since I was very young. About 12 years ago, I decided to begin working out vigorously on a regular schedule. Before that, I would say that I got an average number of colds and flu's a year. Since that time, I only miss a day of work every 3 or 4 years even though I had untreated sleep apnea still. Even more recently, I've managed to beat my apnea after starting the paleo diet so now I'm probably invincible.

daz (2014-02-20 19:40:00)

the Trehalose is pretty cheap to get, the Ribose is a bit more pricey. might get some Trehalose & give that a try either in its own or with sugar/glucose/fructose

bjk (2014-02-21 05:07:31)

Is 4 hours of sleep, some of it very deep, better than 8 hours of shallow sleep? I can wake up and not feel rested at all even after getting a long night's sleep. Jared Diamond said in his most recent book that the New Guineans he was familiar with would get up and talk throughout the night, so getting 8-9 hours of straight sleep might not be entirely natural. Seth: I agree, depth of sleep is really important. I haven't seen Diamond's latest book but now I am curious what conclusion he drew from his sleep observations.

Adam (2014-02-21 11:43:02)

From what I recall, a biphasic sleep schedule is the most natural. One blogger, JD Moyer did a self-experiment where he went without electricity at night & he ended up sleeping about 4 hours, then waking up in the middle of the night for a couple of hours before falling back asleep. Afternoon siestas are pretty common in a natural sleep cycle too.

Seth Roberts (2014-02-21 15:15:11)

to determine what sleep is "natural" you have to set every variable that affects sleep to its natural level. Surely Moyer does not know every variable that affects sleep. For example, I suspect he doesn't know about the effects of evening sweets. Which is a really big effect.

Look (2014-02-21 16:07:41)

See this excellent stifle for the history of sleep. Indeed it appears as if we slept twice a first sleep of 4 hours followed by a 1 hour rest and then a 2nd sleep. Sleep We Have Lost: Pre-industrial Slumber in the British Isles The American Historical Review (2001) 106 (2): 343-386

Adam (2014-02-22 09:28:23)

I found this as well, interesting read: <http://slumberwise.com/science/your-ancestors-didnt-sleep-like-you/>

Charles (2014-02-22 12:19:46)

<http://www.ncbi.nlm.nih.gov/pubmed/23399661> Time-restricted feeding of rapidly digested starches causes stronger entrainment of the liver clock in PER2::LUCIFERASE knock-in mice.

Lazer (2014-02-24 18:37:58)

Try a thin comforter on the floor. You have to be extremely concious of where your hips sit when you sleep this way, so your posture stays correct. I used to have wicked insomnia before starting this. Now time to sleep is less than five minutes and can

rise immediately upon waking, no matter what I have eaten, or if there's caffeine in my system.

Seth Roberts (2014-02-24 19:15:03)

"Try a thin comforter on the floor. You have to be extremely conscious of where your hips sit when you sleep this way, so your posture stays correct. I used to have wicked insomnia before starting this." What sort of insomnia did you have? trouble falling asleep, trouble staying asleep, waking up too early (not feeling rested when you wake up)?

daz (2014-02-26 18:01:08)

"Try a thin comforter on the floor. You have to be extremely conscious of where your hips sit when you sleep this way, so your posture stays correct" The posture 'thing' is interesting, I take it the comforter on the floor 'forces' you to sleep on your back?... ..the 'best' sleep position suggestions/recommendations seem to vary, different people suggest different positions and for various different reasons/theories. Some of the reasons are based on ailments, ie. GERD, heart, lungs,

John Smith (2014-02-26 20:43:42)

Seeing as recovery hormones are released when our muscles work, I figure the tossing and turning is an emergency measure to quieten down the endocrine glands. For just a few seconds after rolling over (in a sleepless fit) one really feels some good endorphins flowing. With this in mind, I sometimes do some exercises in the wee hours if I can't sleep. The success rate varies depending on many other factors.

Adam (2014-02-26 21:58:54)

Re: Posture You have to read this: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1119282/>

## Fermented Foods/Probiotics Clear Lungs? (2014-02-21 05:00)

On this blog, [1]Peter commented:

Lactobacillus brevis also is found in pickled turnips. I've used it for weeks and noticed a difference. It seems to clear my lungs [emphasis added] (I probably have a low level infection that once cleared by taking intravenous antibiotics). I buy the Japanese style fermented turnips.

At Mr. Heisenbug, [2]libfree commented:

I've taking the probiotic for just this week (twice a day plus some kimchi when I can + I started eating Kimchi at the beginning of last week) and I've seen some dramatic improvements. My feet have always had dry, itchy skin which has just disappeared. I have a chronic bunionette, a bunion on the outside edge of the foot, that has softened dramatically. My Rosacea hasn't changed at all. Sinuses seem better but I'm still holding off on whether this intervention is helping. **The most dramatic change has been in my lower respiratory area. My lungs are nearly free of mucus. I don't remember a time that they were this clear.** [emphasis added]

Lungs: canary in the coal mine of modern life?

1. <http://blog.sethroberts.net/2014/02/09/assorted-links-308/#comment-1172596>

2. <http://mrheisenbug.wordpress.com/2014/02/09/eczema-probiotics-personal-update-reader-reports-and-the-respiratory-connection/>

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Sam (2014-02-22 20:54:19)

Water kefir has many of the bacteria known to help immune function. I hate kraut. I hate sour foods. This might be an easier way to get what you need. "...L. brevis is one of the major Lactobacillus species found in tibicos grains (aka water kefir grains)..." [http://en.wikipedia.org/wiki/Lactobacillus\\_brevis](http://en.wikipedia.org/wiki/Lactobacillus_brevis)

Sam (2014-02-22 21:04:51)

Forgot to add. I wonder if resistant starch in combination would help also. Particularly potato starch. Might help feed healthier microbes. <http://www.edsgym.com/resistant-starch.html> Here's a couple of links to the guy who experimented with resistant starches. <http://freetheanimal.com/2013/05/resistant-starch-4-letter-word-nope-goal-create-mashed-potatoes-a-diabetic-can-eat-every-day.html> <http://freetheanimal.com/2013/04/resistant-assimilation-resistance.html>

libfree (2014-02-23 16:15:24)

Sam, I don't particularly like kimchi or kraut and I find Kombucha too expensive to drink on a regular basis. I take the Jarrow v299 supplement twice a day. I did it originally hoping it would do something about my Rosacea. Then I noticed the dry skin on my feet cleared up, I stopped coughing up phlegm all the time and my gums stopped bleeding. I tried the flax seed oil and fish oil for the gums for a few months and it seemed to help a little but they stubbornly remained sore and bleeding. I've had this problem since I was a child and the dentist told me it was because I wasn't brushing enough. They were still telling me that last year. I have a follow up, because it didn't do anything to clear the chronic congestion in my nasal passages. I read about someone that swabbed their nose with kimchi juice and cleared up chronic sinusitis. I got to thinking that if I was ingesting Kimchi rather than swallowing a supplement, that the bacteria would be working into my sinuses and into my lungs as I breathed. As an experiment, I started swabbing my nose with the Jarrow v299 once a day. The change has been dramatic. I'm 4 days in and have had 4 mornings where I could breathe through my nose when I woke up. At most, I have one morning here or there where that happens. I've also seen steady improvements in congestion in my nose. Still too short to know for sure but I'm thinking I'm on to something.

Sam (2014-02-23 21:10:00)

"...swabbing my nose with the Jarrow v299 once a day..." That's extremely interesting. I used to have chronic sinus. Jerry Pournelle advised using a sinupulse to wash out the sinuses. I bought one and used it for a year frequently and after a while I rarely needed it. I still use it every now and then but it's made a tremendous difference. A netti pot would also work but I believe the pulsing helps. Over time I've changed my washing liquid. Now I use a prepackaged salt baking soda mixture, then I add one teaspoon xylitol, 1/2 teaspoon of H<sub>2</sub>O<sub>2</sub>, and three drops of 2 % Lugol's solution. One thing about the Water kefir is it's cheap. A little sugar, water and maybe molasses. Lot cheaper than any supplement.

John Smith (2014-02-23 23:04:28)

A drizzle of that Manuka honey into the nose with the head laid back over the edge of the bed is all I use to heal the sinuses. To avoid the risk of complication, I only do one nostril at a time. Some burning and 'fright' accompanied my first attempt, but was apparently mostly mental, but with asthmatics, it might be dangerous. They stay clean for many months thereafter, although I do seem to have some weakness there (my father had many complications of the sinuses, so guess I inherited some of that memory).'

## **The Great Prostate Hoax by Richard Ablin (2014-02-22 05:00)**

[1]A recent study in the BMJ concluded that the massive breast cancer "prevention" program – having women get annual mammograms – had done more harm than good. Women were randomly assigned to get mammograms plus

self-exam or self-exam alone. The death rate from breast cancer was the same in the two groups. However, women in the mammogram group were told they had cancer and received very painful and expensive treatment far more often than women in the other group. This being modern medicine, the true situation is even *worse* than what you read in any article about the (very negative) study. One critic has said that the randomization was not done properly. If true, this means that medical researchers, even when told exactly what to do, don't do it, in ways that make a multi-million dollar study useless. In spite of billions of dollars and billions of hours spent on mammograms and billions of pink ribbons, we still know practically nothing about the environmental causes of breast cancer. (I suspect bad sleep is a major cause. [2]Shift work is associated with breast cancer.)

A new book (to be published in March), titled *The Great Prostate Hoax: How the PSA Test was Hijacked by Big Medicine and Caused a Public Health Disaster* says that prostate cancer screening is no better. The book is by Richard Ablin, who discovered the prostate-specific protein used in the screening test. The trouble with the PSA test is simple. First, the reading is often high for reasons that have nothing to do with cancer. Second, prostate cancer is common (cancer increases as the fourth power of age) and usually benign.

In [3]an interview, Ablin made some good points:

The US Food and Drug Administration failed in its duty to the public: its advisers warned that routine PSA screening would cause a public health disaster, but it was approved under pressure from advocacy groups and drug companies. . . . The unfortunate reality is that no current data show that men who undergo PSA screening live longer than men who decide against it.

A few years ago Ablin wrote [4]an op-ed about this.

1. <http://www.bmj.com/content/348/bmj.g1403>
2. <http://www.medicalnewstoday.com/articles/262864.php>
3. <http://www.newscientist.com/article/mg22129564.400-prostate-cancer-test-has-been-misused-for-money.html>
4. <http://www.nytimes.com/2010/03/10/opinion/10Ablin.html>

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dearieme (2014-02-22 14:20:40)

In the late 70s-early 80s my wife worked on a breast-screening research project. About the time she left, her boss, the P.I., was coming to the conclusion that annual population mammography was a bad idea. Years later, in Gerd Gigerenzer's excellent book on Risk, I was impressed by his remark that in Germany asymptomatic mammography was not used by doctors for themselves or their wives, but it was used for their patients.

Bruce McCullough (2014-02-22 15:25:49)

Wouldn't be the first time a multi-million dollar study was ruined by lack of statistical knowledge. The Women's Health Initiative writing group (which had a lengthy roster of people with initials following their names) responded to criticism with this sentence (among others): "The CIs, interpretable individually at a single point in time as having a 95 % probability of including the true hazard ratio..." JAMA, December 11, 2002—Vol 288, No. 22 p2823 where CI is, of course, "confidence interval". As anyone who has taken a first course in statistics knows, the interval includes the population parameter or it doesn't. The "probability of including the true" parameter is either 0 or 1. That someone wrote this mistake into a draft is understandable; we all make mistakes. That no one in the entire writing group picked up this freshman mistake is horrific. The above article contains a link for the members of the writing group, but this link went inactive a long time ago (I wonder why!). Seth: I've

taken a first course in statistics. I find no fault with their description. I don't see why you say the probability of including the true parameter is either 0 or 1. You don't know what they meant? Or how a 95 % confidence interval differs from a 50 % confidence interval? I seem to be missing something.

Allan Folz (2014-02-22 22:28:41)

Mish, a financial blogger, has a very interesting (incredible, IMO, due to the borderline malpractice) [1]first-hand account of his experience with prostate cancer. Of course, an elevated PSA test is what precipitated the whole chain of events. Here's my favorite quote concerning the PSA tests because it shows how unscientific MD's really are in their thinking and understanding: *I informed the oncologist that I was going to have a PSA test every month. He commented something along the lines of "Why do you want to do that? Every six months is sufficient. The tests are not that reliable." That is not an exact quote, but is best as I can remember. My thought - which I did not express - was "What kind of mathematical silliness is that? The more unreliable a test is, the more tests one should take to weed out erroneous outlier results."* It's a long piece but stays interesting and informative all the way to the end. Seth: I agree, I blogged about it.

1. <http://globaleconomicanalysis.blogspot.com/2013/12/cancer-free-i-beat-prostate-cancer-mish.html>

Allan Folz (2014-02-23 13:56:37)

Oops. My bad, sorry I missed it.

Denise Burchard (2014-03-08 12:02:56)

Actually, it's Richard ABLIN, not Albin. Seth: thanks, I fixed it.

## The Conditioned-Tolerance Explanation of "Overdose" Death (2014-02-23 05:00)

[1]I recently blogged about [2]Shepard Siegel's idea that heroin "overdose" deaths – such as Philip Seymour Hoffman's – are often due to a failure of conditioned tolerance. In the 1970s and 80s, Siegel proposed that taking a drug in Situation X causes learning of a situation-drug association. Due to this association, Situation X alone (no drug) will cause an internal response opposite to the drug effect. For example, coffee wakes us up. If you repeatedly drink coffee in Situation X, exposure to Situation X without coffee will make you sleepy. As the learned response opposing the drug effect grows, larger amounts of the drug can be tolerated and the user needs larger amounts of the drug to get the same overall (apparent) effect – the same high, for example. Trying to get the same high, users take larger and larger amounts. But if you take a really large amount of the drug and don't simultaneously evoke the opposing response, you may die. What is called "overdose" death may be due to a failure to evoke the conditioned response in the opposite direction.

[3]Siegel's Science paper about this – a demonstration with rats – appeared in 1982. Since then, plenty of evidence suggests the idea is important.

First, "overdose" death has become more common. [4]A Washington Post article prompted by Hoffman's death says that death due to "overdosing" on drugs – usually opiate drugs – has [5]doubled in the last ten years and is now "the leading cause of accidental death in the United States, accounting for more deaths than traffic fatalities or gun homicides and suicides."

Second, new data has supported Siegel's explanation. Alex Schull linked to [6]a 2005 case report that says: "K.J. did not return home with the heroin purchased as he did on other occasions but went to the public toilet in the pedestrian underpass at the Népilget Metro station where he injected the same quantity (0.5 gram) that he had taken the previous day in the accustomed place, at home with his wife." The report cites other supporting evidence.

Third, new data has contradicted other explanations. The Post article includes an interview with an addiction expert named Keith Humphreys, a Stanford professor of psychiatry. Humphreys said, "Toxicology results after a fatal over-



dose usually indicate that the victim has consumed either their normal dosage level or a dose slightly lower than their normal level.” He also said, “Toxicology studies of overdosed people very rarely find that impurities played an important role.”

Yet Humphreys appears unaware of Siegel’s idea, even as he provides supporting evidence:

Typically overdose occurs because they’ve had a loss of tolerance. This loss of tolerance often arises because they haven’t used for a while. Maybe they had a voluntary period of abstinence. Maybe they were in jail, and their body can no longer handle the same dose.

The other leading cause of loss of tolerance is consumption of other substances. This is particularly true of alcohol, which seems to lower the body’s ability to tolerate opiates (so do benzodiazepines). Most of what we call “opiate overdoses” are really polydrug overdoses: alcohol and heroin, alcohol and oxycontin, benzodiazepine, alcohol and Vicodin, combinations like that. [This is consistent with Siegel’s explanation. The second drug makes the situation less familiar, reducing the conditioned opposing process. – Seth]

Siegel’s idea was [7]recently mentioned in the *New York Times*:

A change in where a person uses his or her drug of choice can increase the likelihood of an overdose, studies suggest. “If you habitually use in your car, for example, the body prepares itself to receive the drug when it’s in that environment,” Dr. Rieckmann said. “It’s called conditioned tolerance. When people using are in an unfamiliar places, the body is less physically prepared.”

This was the first mainstream mention I’d ever seen. I told Siegel about it and he said it was the first mainstream mention he’d seen, too. He added, however, that he had come across the idea in a crime novel:

A Scottish constable, Hamish Macbeth, appears in a series of books by M. C. Beaton. In one 1999 book in the series, “Death of an Addict,” Macbeth has a conversation with a Dr. Sinclair, a pathologist on the scene of an apparent heroin overdose: “Dr. Sinclair leaned his cadaverous body against his car and settled down to give a lecture. ‘The reason for tolerance to heroin is partially conditioned by the environment where the drug was normally administered. If the drug is administered in a new setting, much of the conditioned tolerance will disappear and the addict will be more likely to overdose’” (Beaton, M. C. *Death of an addict*. New York: Warner Books, 1999, p. 23). M. C. Beaton is the pen name of Marion Chesney, and I wrote to her asking how she knew this. She couldn’t recall, but thought that it likely was due to a conversation she had with a Scottish police officer.

There are several similarities between Siegel’s idea and the Shangri-La Diet, which I will point out later.

1. <http://blog.sethroberts.net/2014/02/04/philip-seymour-hoffmans-death-from-heroin-why/>
2. <http://www.science.mcmaster.ca/pnb/people/60-faculty-web-pages/202-dr-shepard-siegel.html>
3. [http://www.psychology.nottingham.ac.uk/staff/mxh/C83CLI/Siegel%20et%20al%20\(1983\).pdf](http://www.psychology.nottingham.ac.uk/staff/mxh/C83CLI/Siegel%20et%20al%20(1983).pdf)
4. <http://www.washingtonpost.com/blogs/wonkblog/wp/2014/02/07/100-americans-die-of-drug-overdoses-each-day-how-do-we-stop-that/>
5. [http://www.cdc.gov/media/releases/2013/p0220\\_drug\\_overdose\\_deaths.html](http://www.cdc.gov/media/releases/2013/p0220_drug_overdose_deaths.html)
6. <http://www.harmreductionjournal.com/content/2/1/11>
7. <http://www.nytimes.com/2014/02/11/health/prescription-painkillers-seen-as-a-gateway-to-heroin.html>

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Rashad (2014-02-23 07:33:58)

Just FYI, I'd definitely heard this idea and assumed it was more widely known before you mentioned it. Probably from my mother who is a retired public health doctor who has done a lot of work on addiction.

Nancy Lebovitz (2014-02-23 09:29:36)

Does this imply that people who want to get the most for their money from drugs should keep taking them in different circumstances? Seth: Yes. I think if you really want to keep the cost down you should wear headphones and listen to different music each time. Maybe clip your nose shut to reduce smells to focus more attention on sound.

LemmusLemmus (2014-02-23 10:03:57)

I, too, had read about the idea, I believe in a 2004 ARP paper on smoking. But I had never considered it in connection to a data point that one often sees cited in connection with addiction. The data point is that, apparently, there were many U.S. soldiers who got addicted to Heroin in Vietnam, but many of whom quit when they came home. This is quite often cited in support of the idea that addiction/drug consumption is a choice (rather than something that is beyond the addict's control). I think I may also have seen it linked to the sociological idea of framing (different situations trigger different behaviours). Be that as it may, it suggests that the best moment to quit is when you know you'll be in unfamiliar situations a lot. It may also help explain why I drink so much more coffee in the office than at home. Seth: Siegel has emphasized that Vietnam heroin data. I'd say the best moment to quit is when you change where you live - when starting grad school, for example. Or moving to a new apartment. Or even to a new office in the same building. You make a good point, I have never heard "move to a new apartment, change your workplace" as part of how to get rid of an addiction.

Christopher Sturdy (2014-02-23 11:15:22)

I mentioned your earlier post and talked about this in my learning class, although I used a different study of Siegel's (morphine tolerance) to make the point.

Sara (2014-02-23 11:26:29)

Someone should develop a blood pressure cuff that automatically injects naltrexone when it can no longer detect a heartbeat. Of course, there's then the issue of moral risk. But if Hoffman had had one he'd still be here.

Sara (2014-02-23 12:08:46)

Hmm... That wouldn't work, because if there's no pulse, the naltrexone isn't getting to the brain. Maybe it could detect shallow breathing, then sound an alarm, then if no response, an injection?

seth (2014-02-23 21:33:46)

Just an FYI: Keith regularly blogs at <http://www.samefacts.com>

JP (2014-02-24 16:41:09)

Seth - I wonder if your 2007 blog post on visual and auditory cues possibly raising the body's set point could function in a similar manner. "I'm not surprised that auditory and visual signals for food cause hunger. There are lots of conditioned cravings like that. Tim goes on to wonder if these learned signals for food raise the body-fat setpoint, as the theory behind the Shangri-La Diet says that food-associated flavors do. If you walk by your favorite bakery every day, will you weigh more than if you don't?" <http://blog.sethroberts.net/2007/08/21/do-all-signals-for-food-raise-the-set-point/>

Seth Roberts (2014-02-24 17:48:43)

I really don't know if sounds and sights associated with food raise the setpoint. However, I am sure they cause hunger and I am sure hunger increases the probability of eating. For that reason, it is better to avoid them, if possible, if you want to lose

weight.

'A change in where a person uses his or her drug of choice can increase the likelihood of an overdose...' (2014-02-27 03:55:47) [...] This was the first mainstream mention I'd ever seen. I told Siegel about it and he said it was the first mainstream mention he'd seen, too. He added, however, that he had come across the idea in a crime novel: [...]

bebo (2014-02-28 07:08:16)

This phenomenon was discussed in lectures in every psychology course I took in college in the 90's. Friends I had at low-end state schools at the time also learned the same thing in their intro-level psych courses. Very old news, and widely known. They always discussed the case of the girl found ODeD in Grand Central Station who took half of her regular dose that she usually injected at home. Sounds suspiciously like the "case study" cited from 2006.

### **Fermented Food Can Cure Eczema: More Evidence (2014-02-24 05:00)**

After reading Shant Mesrobian's story of [1]how he eliminated his eczema with fermented foods and a probiotic supplement, Todd Fletcher left [2]a comment:

My eczema and other skin problems of 15 years disappeared completely from regular kefir and yogurt, which I did because of this blog.

I asked for details.

*Who are you?*

I live in Mesa Arizona, 49 years old, software developer.

*When did it start?*

I had lots of allergy problems as a child; had to have soy milk as a baby, had allergy shots for 5 years until I was 22 or so, I was allergic to trees and grass. The allergies pretty much went away after I came to Arizona and now have had no problems at all with it for many years.

I am pretty sure my eczema started in Maryland before I moved to AZ, that would put it before 1992. It started on the outside of my right shin. I can't recall and never had any notion of any change that brought it on. It continued up until I started the kefir, though it would go dormant from time to time, often after which it would reappear elsewhere. It progressed from my shin to the back of my right knee, my right inner thigh, then my back, then my hands. It was always most prominent on my right side; I am right-handed.

*Before fermented foods, what did you do to get rid of it?*

I tried vitamin E both orally and topically very early. It did seem to soothe it but I hated the smell and mess. Otherwise I used cortisone when it was really bad, but tried to minimize that. Mostly I just put up with it.

*What were the fermented foods?*

I liked Nancy's Peach best for kefir; it was the most sour, and the other flavors of that brand had berry seeds that I didn't like. Otherwise I got Lifeway Pomegranate [kefir], second most sour. Yogurt was mostly Strauss Farms or

Brown Cow, though occasionally I'll get Fage if the others aren't there. I would have probably 3 containers of kefir and one or two of yogurt a week. For the yogurt I would get unflavored and add some bananas or maybe a little honey.

*After you started eating kefir and yogurt, how long until you noticed improvement?*

Less than a week. I went on and off many times, both intentionally and inadvertently, and the pattern was repeated every time. Now I can go off of either one without it returning; I don't think I have seen any eczema in more than a year even though I might go a week or two without it. I have slowed down in the kefir because most of them have sugars and stuff, I mostly go for the plain yogurt these days.

*Did you expect the improvement?*

Not at all. I was trying to recover from a bad stomach bug that left me with digestive distress. I only tried the kefir because I read it had more cultures than yogurt. It solved the digestive problems but I only noticed the effect on eczema when I stopped it and the eczema returned. I hadn't noticed it had stopped since it sometimes went dormant for a few weeks at a time.

*What were the other skin problems?*

I had splitting of my fingertips, really painful and right on the tip making it hard to use. I assumed this was just the eczema presenting itself here, but it might have been something else. I also had generally dry itchy skin no matter how much lotion I used, which is not a problem now.

1. <http://blog.sethroberts.net/2014/02/12/journal-of-personal-science-1-planturum-rich-fermented-foods-and-supplement-prevented-cured-my-eczema/>
2. <http://blog.sethroberts.net/2014/02/12/journal-of-personal-science-1-planturum-rich-fermented-foods-and-supplement-prevented-cured-my-eczema/#comment-1173017>

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Adam (2014-02-24 11:38:53)

I had 2 small patches of eczema on my left & right wrists while I was living in China. When I got back to the US I started eating Greek yogurt mixed into 2 tablespoons of Potato starch four times a day. The eczema has gone away completely. Seth: Good to know. I hope this blog will be an eczema-free zone.

Joe (2014-02-24 13:43:51)

Adam: How did you arrive at 4 times per day? Did, say, 2-3 tablespoons once per day not work?

Adam (2014-02-24 17:15:06)

I started with 1 tablespoon four times a day. For the first week or so I was getting a lot of gas. Not painful or smelly, just a lot of it. After the first week it subsided, along with the vivid dreams I was getting at night. I doubled up to see if the dreams, the gas, or both would come back. I honestly have no idea what the "correct" dose of potato starch is... I am just playing with it & experimenting at this point. It isn't as if I titrated the dose to the eczema - I actually didn't even notice the eczema disappearing, as it wasn't that bad to begin with. One day I just examined my wrists & found it was completely gone.

cathy (2014-02-25 07:33:22)

@Adam, was your greek yogurt plain or flavored? I like Greek Gods or Brown cow as well as Fage, the last being the one I can eat plain easiest. I like the Greek gods w/honey the best.

Adam (2014-02-25 10:22:12)

I like it plain. Usually I got ZOI brand, but I have Greek Gods in the fridge right now. I have had it with honey & Macadamia nuts mixed in, which was delicious, but I usually only eat honey before bed.

Justin (2014-02-27 00:17:13)

I had eczema as a teen and into my early adult years. It came on with a vengeance around age 28. By age 33, it was so bad that I often wished for death. We are talking bloody sheets from my skin splitting open in up to 20 locations during the night; eyes swelling shut from eczema on the lids. It looked as though someone had stabbed me all over. Just terrible and without relief, minute after minute after minute. Then I read on Mangans that fish oil cured a lot of simple health problems and that some Dutch researcher had done a lot of work on fish oil and inflammation. I had already been taking 2g/day of fish oil. I immediately went to 14g per day buying from bulk natural oils (about 2,000 capsules). Within two weeks my eczema was reduced by >90 %. As soon as I lowered the dose to 6g, the eczema would return. I now use about 10g per day to keep it in check. The Dr's say I should be wary of heavy metals, but I see no other choice (though I am going to try adding yogurt as per the original post). I should mention that during my horrific period of outbreak, I was prescribed and religiously used Elidel for my eyelids and very strong steroids for my hands, arms, back, legs, etc. The efficacy of the steroids compared to fish oil at 14g/day was poor. The side effects of the steroids are very real as well. The skin on my hands is now very thin and I blister easily; this is not a major life problem, but it is worth noting. As for experts, when I told the Dr. that I was taking 14g of fish oil per day, he replied, "you mean 14mg..." I admire much of the medical community, but so much of it is just out of whack. I am sure Dr.s are over regulated and face a litany of challenges, but the end result is substandard care. I should mention that I consulted more than eight dermatologists over a period of six years. Not one mentioned fish oil as a potential solution. They are all one thing: diagnose then drugs. Now I only get flare ups from vasodilators likes niacin and yohimbine (great stuff when matched to dmaa and caffeine; otherwise perfectly terrible).

## **Fermented Foods, Eczema, and the Room for Improvement in Medicine (2014-02-25 05:00)**

When I was a graduate student, I had acne. Via self-experiment, I discovered that the antibiotic my dermatologist had prescribed didn't work. He appeared unaware of this possibility, although antibiotics were (and are) very commonly prescribed for acne. "Why did you do that?" he said when I told him my results. As I've said before, I was stunned that in a few months I could figure out something important that he, the expert, didn't know. He had years of training, practice, and so on. I had no experience at all. Eventually I gathered [1]additional and more impressive examples – cases where I, an outsider with no medical training, managed to make a big contribution with tiny resources. The underlying message seemed to be that professional medicine rested on weak foundations, in the sense that big conclusions could be overturned with little effort.

Two recent posts ([2]here and [3]here) on this blog argue that eczema, which afflicts about 10 % of Americans, can be cured and prevented with fermented foods. This observation makes perfect sense because of two pre-existing ideas: 1. Eczema is due to an overactive immune system. 2. Fermented foods "cool down" that system (a variant of the hygiene hypothesis). Professors of dermatology failed to put them together, but people outside medicine were able to.

After I learned that eczema could be cured easily and safely, statements by medical professionals about eczema became horrifying. A dermatologist [4]recently wrote about eczema on Reddit:

Eczema is a chronic condition, which includes hand eczema. It's a condition of dry and sensitive skin. Topical steroids are a useful adjunct in getting your skin clear, and - in certain cases - keeping your skin clear. I tell my patients that the most important thing in management of eczema is the skin care regimen. This means avoidance of irritating factors and restoration of the skin barrier.

The [5]National Eczema Association:

The exact causes of eczema are unknown. You might have inherited a tendency for eczema.. . . Many doctors think eczema causes are linked to allergic disease, such as hay fever or asthma. Doctors call this the atopic triad. Many children with eczema (up to 80 %) will develop hay fever and/or asthma.

The [6]Mayo Clinic website: "The cause of atopic dermatitis is unknown, but it may result from a combination of inherited tendencies for sensitive skin and malfunction in the body's immune system." The various remedies listed have nothing to do with the immune system.

What else don't they know? Doctors have great power over our well-being. Imagine learning that the driver of the car you are in is nearly blind.

1. <http://escholarship.org/uc/item/2xc2h866/>
2. <http://blog.sethroberts.net/2014/02/12/journal-of-personal-science-l-planturum-rich-fermented-foods-and-supplement-prevented-cured-my-eczema/>
3. <http://blog.sethroberts.net/?p=13068>
4. [http://www.reddit.com/r/eczema/comments/1ya4nw/new\\_sufferer\\_advice\\_please/](http://www.reddit.com/r/eczema/comments/1ya4nw/new_sufferer_advice_please/)
5. <http://nationaleczema.org/eczema/causes-and-triggers-of-eczema/>
6. <http://www.mayoclinic.org/diseases-conditions/eczema/basics/definition/con-20032073>

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BoSelecta (2014-02-25 10:44:02)

<http://suppversity.blogspot.com/2014/02/fish-oil-or-gla-to-treat-acne-vulgaris.html> (Fish Oil or GLA to Treat Acne Vulgaris? Controlled Human Trial Confirms) Seth: very interesting, thanks

Valerie (2014-02-25 14:50:01)

If I had to guess, I would say that your dermatologist didn't change his practice after you told him what happened to you. Based on my experience, I think he just dismissed it. For a long time, I had problems finding just a non-stupid doctor. Now that I have a competent doctor, I find that I would need a competent AND interested doctor. Many times, I bring observations to my doctor, observations that seem important or at least relevant to me, and he just doesn't care. For example, I have idiopathic polydipsia (excessive thirst of unknown origin [no, I don't have diabetes]). At some point, I noticed that if I fast for a few days, I completely stop being thirsty. The change in thirst is very obvious. This is great, right? It should bring insight into the problem, right? Doctor doesn't care. As another example, I observed that my hypertension is much worse in winter than in summer. Maybe that could help us find the cause of the hypertension, or a treatment, right? Doctor doesn't care. That instance baffles me even more since the doctor is a hypertension specialist. I have learned to keep my expectations very low with doctors.

An Appreciative Reader (2014-02-25 15:43:33)

Dear Seth Roberts: I appreciate your blog so much. After many years of dealing with doctors of all kinds I have concluded (don't laugh, readers) that my best strategy is, TAKE RESPONSIBILITY FOR YOURSELF AND TRUST YOUR INTUITION. I stay

far away from them, for I do indeed feel good, I am healthy and every single time I have gone near one, they want to give me flu shots and run me through a zillion checkups. It has not escaped my notice they inevitably write down everything with a pen that is emblazoned with the name of a pharmaceutical company. I recently found out my sometime doctor's hospital insists that its clinic's doctors fulfill quotas, eg so many chest x-rays per month. It is obvious to me now that the whole industry that almost all doctors are part and parcel of is set up to make money, not necessarily heal anybody. (Just look at the food the hospitals serve their patients...) Apart from good habits and a healthy diet, scrappy attitude, etc., I believe a good strategy is to learn to listen to one's body, to know- to really know, a gut sense- when one has to go to the doctor. Obviously, sometimes one does need a doctor. But otherwise, steer far clear. Re Healthy diet, after a surgery and round of treatments that left me more than a decade of complaining to my various doctors on every visit, not a one recommended yoghurt. This is a total head-slapper. I am sure the Greeks and Romans knew about this! Long story short, with a daily dose of yoghurt and Keffir I am just fine for the past 10 years and the last five years, with the addition of raw honey and vinegar, even better. And the floaters in my eyes cleared up, too. But one doesn't need a prescription for that.

James M. (2014-02-25 17:59:06)

By following a paleo/primal diet (reduction/removal of refined carbohydrates and sugar), + reducing/addressing stress, I reduced and cleared up chronic skin problems, lost about 30 lbs, corrected some age related issues, that my family doctor could not resolve. He usually comes across as an astute doctor, but for one of my issues that cleared up, his solution was "luckily I have a medication for that", and prescribed me a medication that required regular blood monitoring and follow-up visits to have the prescription renewed (don't like needles and don't like wasting time). No longer take the medication by accidentally not taking it for a while and realizing I did not need it, and the health issue has been resolved. When I went back to him and asked why he had not suggested a diet and exercise based approach to correct the problem, he said patients generally don't listen, and just want a pill, over changing their life-style/diet. I would have appreciated the opportunity to have heard that advice and made the choice. I saw a natural path and she provided more health support than the doctor. Not wanting to knock doctors, because they do have lot of knowledge and training to help those in need, but there does seem to be something lacking in the medical system, if amateurs can find solutions that the experts with all their training and experience cannot find.

Seth Roberts (2014-02-25 18:07:26)

Not wanting to knock doctors, because they do have lot of knowledge and training to help those in need, but there does seem to be something lacking in the medical system, if amateurs can find solutions that the experts with all their training and experience cannot find.

yes, exactly

joseph (2014-02-25 21:39:38)

To An Appreciative Reader Says: you wrote at the end of your comment "floaters in my eyes cleared up" im curious about that can you tell more? which of the things you did helped at least in your estimation? thanks

Bill (2014-02-25 22:46:52)

To solve chronic problems, run your own experiments. A close relative has fought autoimmunity his whole life. Eczema as a toddler, allergies in childhood, supposedly idiopathic brain tumor as a teenager (excised), visual migraines since his 20s (unrelated to tumor), rosacea and rheumatism since his 30s, and, for the past 4 years, a yet-unnamed energy-sapping ailment that forces him to lay down and rest every hour or two throughout the day. He's essentially housebound in his mid-40s, lucid, intellectually normal, not depressed, not lazy, not anxious, just physically unable to get through a day. For 4 years, he has seen dozens of doctors, specialists in every field you can imagine, taken every test, been prescribed a witch's brew of medications. None of it has ever made any difference. Yet no doctor, over a period of years, has ever suggested, even as a last resort, that he examine environment or diet. His energy collapse began concurrently with a 2-year spate of mysterious, nearly constant belching, even on an empty stomach. Yet no one has ever examined his GI tract, nor treated for GI problems, nor suggested dietary changes, let alone something as novel as fermented foods. Unfortunately, my close relative considers doctors to be

absolutely authoritative, so he runs no experiments of his own. He just keeps going back to a dry well, visiting more doctors, who run more random blood tests, find nothing, and prescribe the standard we-dunno-what's-wrong-with-you drugs, such as steroids. To solve chronic problems, run your own experiments.

AI (2014-02-25 23:50:10)

Good article, but why should it come as any surprise that dermatologists etc. would make such statements? They have to maintain an air of mystery around health because permanently healing people would put them out of business. Seth: But if they appear too ignorant people will stop asking them for advice.

An Appreciative Reader (2014-02-26 01:37:29)

Joseph wrote: "To An Appreciative Reader Says: you wrote at the end of your comment "floaters in my eyes cleared up" im curious about that can you tell more? which of the things you did helped at least in your estimation? thanks" Hi Joseph and all, I am not sure what exactly I did or did not do that made the floaters diminish. They started getting bad about 2 years before I began to study apitherapy and from that time, for the past few years, I have been taking a teaspoon raw honey once or more per day, and a homemade salad dressing for a dose of vinegar also daily, and slowly, the floaters improved. Other things that might (or might not) have helped diminish the floaters: on one occasion I tried meliponna eyedrops. These are made from honey of the stingless bee (indigenous to the Americas and Australia). Ha, the drops did sting!! But they are reputed to help eye trouble, in particular cataracts (which I do not have) so I thought I'd try it for the floaters. I did only that one application and it was (now that I look back on it) about the time I began to notice a marked improvement with the floaters. So maybe that one dose did it, or at least helped. Maybe. One other thing I tried was reading books by Meir Schneider, an Israeli healer who runs the School for Self-Healing in San Francisco, and trying some of the exercises he suggests, in particular "palming" and focusing on the floaters- yes, just looking at the floaters, directly. Maybe that was what did it. I don't think it would have been taking yoghurt and/or other probiotics because I had been taking yoghurt daily for some years before the floaters began to appear. But possibly the yoghurt combined with the honey and/or vinegar and/or meliponna drops or something else had some effect. Originally, I suspected that the floaters might have started in response to my staring at a laptop screen for so many hours a day. But my habits have not changed in that regard. So in sum, I tried a bunch of things and whether it was one or two or all or none- and my own sense is that it was probably the raw honey in my diet plus the Meir Schneider exercises- floaters are no longer the annoyance they once were. Hope this helps. PS I had been informed by two doctors that I would have to just live with the floaters. Yet another reason why my confidence in doctors has so badly eroded in recent years. I am not anti-doctor, by the way- I do appreciate their lengthy education and experience and on more than one occasion a doctor has saved my life. But in general (there are exceptions, of course), my experience has been that doctors presume to know far more than they actually do and their attitudes toward me as patient, and eagerness to prescribe tests and prescription medicines- which may be in part cultural and in part in response to increasingly perverse incentives- I find downright consternating. Mr Roberts, I find your blog both fascinating and empowering and I thank you again.

Adam (2014-02-26 11:30:57)

"When I went back to him and asked why he had not suggested a diet and exercise based approach to correct the problem, he said patients generally don't listen, and just want a pill, over changing their life-style/diet." This is one of my biggest gripes with "in addition to a healthy diet and exercise" or "when diet and exercise fail"... many doctors do not check the first box - they don't make sure that the 1st, most effective treatment has been tried; in some cases they don't even suggest it! If patients do try it, they are basically guaranteed success - diet and exercise DON'T fail for most common conditions.

Bill (2014-02-26 17:37:02)

» Unfortunately, my close relative considers doctors to be absolutely authoritative, so he runs no experiments of his own. « Correction. He has recently experimented with kombucha, probiotic yogurt, and saliva transplants from healthy people. I feel silly for leaving this out, because he just told me about it a month ago.

John Smith (2014-02-26 20:30:28)

Water Fasting was the first protocol that gave me a real boost in good eyesight. The water in our iris relies on osmotic transfer



to be refreshed, cleared and regulated as there is no duct circulation apparently. So the water in our eyes can be no cleaner than the water in our body generally. Hence, if our kidneys are compromised (almost all adults with Western Lifestyle!) our eyes cannot improve. Anything that improves the kidney function helps the whole body, eyes and all. I like protocols that alter lifestyle over potions and palliative procedures, but the older I get, the more I tend to reach for soft medicines, foods, vitamins, minerals etc. I do find that taking myself away from TV, Fluorescent lights and computer monitors early rather than later makes a big difference to my eyesight. Of late, I have been putting tiny drops of Manuka honey in my eyes. This feels like it is burning, but in fact no evidence of damage is found. Instead, one wakes up the next morning with clear eyes and good vision range. The honey is a great osmotic water mover. I see a doctor every time I am required to by some law, some contract or some urgent social need. I try to make friends with them in case I need them one day for some real emergency. It is hard to make friends with someone you see only ever 15 years! I gather from doctors I do know well, that after a few years of dealing with the general public a contempt for them arises as they are for the most part hopeless and useless at looking after even the simplest of problems. I blame health insurance for part of this, as having now paid for these services, one tends to want to collect something in return. Free medicine for the elderly is a cause too, as they are often lonesome and go to their doctor for social purposes more than good medical help. Doctors are often really excited when they are able to actually help someone in true need. The rest of the time, well I think it must be like farming pigs.

Justin (2014-02-27 00:24:23)

Please feel free to consult my message in the previous post about eczema. I used fish oil to largely rid myself of a very severe case. Anyone with severe eczema should consult the post. When eczema is bad, it is a serious condition that also exposes you to a huge number of pathogens through the open sores.

Lynne Logan (2014-02-27 16:12:52)

A friend of mine referred me to your blog because I suffer from psoriasis, which is, of course, very similar to eczema. I've written several posts on my blog about my trials/tribulations with this obnoxious skin disorder and the issues I've had with my dermatologist, i.e. - <http://tenaciousbitch.com/2013/12/13/post-123-make-no-mistake-i-am-also-a-head-bitch-and-im-not-going-to-apologize-for-it/> - which most people found rather amusing. Anyway, I want to thank you for posting this information about fermented foods because I got tired of asking my doctor if there were any foods or homeopathic remedies that would make my psoriasis better only to be told there weren't. Knowing that I was able to cure my own hypoglycemia by altering my diet, I, like you started experimenting with various Vitamins and supplements as well. Unfortunately, fish oil didn't really help me much. Why? Because psoriasis is a bastard, and that would just be way too easy...!). However, last fall I began taking borage oil pills as part of the Fat Flush Diet, and I noticed a major reduction in the severity of my breakouts. Now, I take 500 mg twice/day in the gel cap form, which cost me \$3.94 for 50 pills from Walmart.com - much better than the \$598 I was spending per month on Taclonex, the topical steroid ointment, which is the subject of the post I mentioned above. Borage oil is made from a wild flower found all over the world, and its healing property have been utilized as far back as the time of the Roman Empire. Maybe, you've already written about the benefits of the oh, so, awesome borage oil. I don't know. I've haven't had time to peruse any of your other posts as yet. From what I understand borage oil helps the body to suppress inflammation in one's skin and such, which I read about on this site: <http://www.shikai.com/publications/borageSkin.htm> That said, since it doesn't completely rid my skin of the dreaded psoriasis, I'll definitely give fermented foods a try! Again, thanks for sharing. Have a great day! LL/otherwise known as TENACIOUS BITCH

anon (2014-02-27 16:59:29)

Seth & readers, You talk a lot about acne, any experience with enlarged, clogged pores on the nose? I don't get many pimples, but I have the pores as described. I looked online and people repeatedly said (paraphrasing): "pores size can't be changed, use chemical treatments or pore strips that tear the material out of pores." Has anyone done any diet change that had an effect?

Bill (2014-02-27 18:27:28)

Here's an experiment you could try for pores. Consider what chemists say: "like dissolves like." Oil dissolves oil-based things. The gunk in our pores is oil-based. So wash your face with a harmless, non-irritating oil. This will mix with, and soften, the oil-soluble gunk in your pores. Then clear the excess oil away by washing your face with a non-irritating facial cleanser. Over time, this should leave you with spotlessly clean pores. Using this reasoning, for years, I have shaved every morning using olive

oil as pre-shave balm, with regular shaving cream on top. The olive oil dissolves any oil-soluble gunk on my face, and then the shaving cream clears it all away. Pores have never been clearer, and it has not given me acne, despite many years of adult acne in the past.

Jan (2014-03-01 11:38:55)

Seth, just to let you know that MDs in Slovakia, Europe are very similar to those in the US. I too have something reddish on my skin, and all they were able to do after several trials (and errors) was to prescribe the usual suspects. I declined that cosmetic solution. My "eczema" gets worse with the approaching winter. I wonder if I eat less fermented food as winter gets closer ... will have to test it. Jan Seth: "cosmetic solution" is a good description.

Mark (2014-03-02 22:54:55)

At least part of the problem is, most of them don't seem inclined (or...incentivized?) to LOOK for any solutions other than what is presented in pill form. Seth Roberts Says: February 25th, 2014 at 6:07 pm Not wanting to knock doctors, because they do have lot of knowledge and training to help those in need, but there does seem to be something lacking in the medical system, if amateurs can find solutions that the experts with all their training and experience cannot find. yes, exactly

Mark (2014-03-02 23:00:20)

Also, interesting timing (not sure if this has been referenced yet on this blog or not): <http://mrheisenbug.wordpress.com/2014/01/27/l-plantarum-cured-my-eczema/> Seth: That is one of the two cases that prompted this post.

## Assorted Links (2014-02-26 05:00)

- [1]"We never asked: Based on what?" A father wishes he had been less trusting of his son's doctors.
- [2]Does Paxil increase breast cancer? In Marin County, California, where I grew up, there is more breast cancer than expected. Could this be due to Paxil?
- [3]Answer to criticisms of mammography study that found no benefit.
- [4]gut bugs and brain function
- [5]fake Nobel Laureates

1. <http://web.archive.org/web/20080213122107/http://www.charliefoundation.org/noframes/whoweare/essay.php>
2. <http://www.latimes.com/science/sciencenow/la-sci-sn-antidepressant-paxil-breast-cancer-20140218,0,3273056.story>
3. <http://www.latimes.com/science/sciencenow/la-sci-sn-mammograms-breast-cancer-acr-gilbert-welch-20140219,0,294785.story#axzz2tq7lKt7i>
4. <http://www.bbc.com/future/story/20140221-can-gut-bugs-make-you-smarter>
5. <http://fakenobellaureates.com/>

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Alex Chernavsky (2014-02-26 08:33:11)

The fake-Nobel website reminded me of this simple but amusing Google search: "[1]MBA from Princeton" Princeton University doesn't have a business school and has never awarded an MBA degree.

1. <http://www.google.com/webhp?nord=1#nord=1&q=%22mba+from+princeton%22>

Adam Long (2014-02-26 09:04:21)

the BBC story on guts biome and brain function is interesting but is also somewhat – to me anyway – exasperating in that way that mainstream media reports frequently are: "here's this exciting possibility that researchers are working on, but you are just going to have to wait for big pharma to turn this into a product" that you can buy. In the meantime, the article cautions us to be VERY skeptical of these "probiotic supplements" – "take it with a pinch of salt" that these actually work. Because heaven forbid that they list the bacteria that seem to work so that people could, gasp, actually spend \$23 on a bottle of supplements and, I don't know, TRY it for themselves. Seth, I don't mean to be snarky – thanks for posting the link, it's just frustrating that, for a variety of reasons, I see lots of these articles in the main stream press that are interesting but only cover 90 % of the practical information and then stop short.

dearieme (2014-02-26 12:00:14)

"fake Nobel Laureates": everyone who claims to have a Nobel Prize in Economics. Seth: Sometimes appreciation of economics reminds me of appreciation of art.

CC (2014-02-26 20:06:38)

Adam: I thought the same thing. Some of that article sounded like it was boiler-plate "leave it to the scientists" stuff that I'm so used to reading.

AI (2014-02-27 10:25:28)

Some articles on the topic of gut bacteria populations (e.g. the "gut bugs and brain function" article on bbc.com, linked to above) say that a diverse diet fosters a diverse gut bacteria population. Other articles (e.g. Art Ayers's CooingInflammation blog) say that a simple, non-diverse diet fosters a diverse gut bacteria population. I wonder who is right.

MJB (2014-02-28 11:05:46)

Another cancer diagnosis not to worry about We have repeatedly discussed the problem of over-diagnosis and the consequences: treatment of cancers that would not harm the person in which they are found — some breast and prostate cancers definitely fall into this category. A new study just published in JAMA Otolaryngology now extends this finding to thyroid cancer. They examined the data on thyroid cancer incidence, type, tumor size and mortality, and found that the incidence (new cases) of thyroid cancer nearly tripled (from 4.9 to 14.3 cases per 100,000 persons) between those dates. While that certainly sounds like a frightening statistic, the authors also found that most of this increase was due to an increase in papillary thyroid cancer — a type that is not deadly. Further, many of the tumors were too small to ever become life-threatening. In addition, they found that the mortality rate from thyroid cancer had not increased between 1975 and 2009, which also suggests that the increased incidence was not due to deadly forms of disease. In their discussion, the authors note that the apparent epidemic of thyroid cancer in the United States does not "seem to be an epidemic of disease." Instead, their data indicate that the problem is over-diagnosis. <http://acsh.org/2014/02/another-cancer-diagnosis-worry/>

Suzanne (2014-03-01 13:18:57)

Seth Thanks for the mammogram article. I've always refused the test, despite attempted coercion from many quarters. This strengthens my resolve. I've also come across people who get benign cysts and go through cycles of alarm and distress each time they are tested and she gets the all clear.

## Brain Test Phenomenology: Bad Beijing Restaurant? (2014-02-28 05:00)

[1] 

This graph shows recent results from the test I used to track my brain function. The test is a choice reaction task done on my laptop: see a digit (e.g., "2"), press the corresponding key as fast as possible. The x axis shows the time

of the test. The ticks ("Sat", etc.) mark the beginning of the associated days. The y axis shows the average percentile of the reaction times. Higher percentile = faster. (Let me explain what "percentile" means: Each reaction time is compared to earlier reaction times with the same stimulus, and its percentile is computed. For example, a percentile of 60 means that 60 % of previous responses were slower.) An average of 60 is quite good and 40 is quite bad. I usually do two tests per day, one right after the other, in the late afternoon (e.g., 4:30 pm).

On Friday and Saturday, my scores were close to normal. On Sunday afternoon, however, my scores were much worse than usual; the average score was about 15. A score that low might happen once per year. The next day (Monday) I tested more often than usual – both morning and afternoon – and my scores gradually returned to normal. On Tuesday I also tested both morning and afternoon. My scores were ordinary the whole time. This showed that the improvement Monday morning was not normal.

What happened Sunday? I am pretty sure the problem is my lunch at a middle-cost noodle restaurant whose English name is [2]Flying Noodle. It is close to the Tsinghua campus but I'd only been there once before (and eaten almost nothing that time). On Sunday I had a small pickled vegetable dish and an ordinary-sized plate of fried eggs and tomatoes. I suspect the problem is the oil used to cook the egg and tomato. It might have been soybean, corn, sunflower or peanut oil, all high in omega-6. (There are also complaints about reuse of cooking oil.) As I entered the restaurant, I worried about the oil, but also thought *who really knows?* By the time of my brain test, I had forgotten my concern.

A friend was with me. She ate different dishes. She found that her scores on a iPhone game she often plays, which requires fast reactions, were suddenly and mysteriously worse after the lunch. Then, in about a day, they recovered.

This interests me in several ways:

1. New phenomenology. In this example and [3]my earlier tofu results (a piece of fermented tofu reduced my brain score for two days), I noticed something never noticed before: Sharp changes (bad) in brain function. Fortunately I quickly recovered. Nobody knew this happened. It's like looking through a microscope or telescope for the first time, but with much more relevance to everyday concerns.

2. Comparison with [4]*Super Size Me*, a 2004 documentary by Morgan Spurlock, which argued that McDonald's food was unhealthy. Spurlock ate only McDonald's food for 30 days. Realism: Spurlock ate far more McDonald's food than anyone would normally eat; I ate one meal. Information value: Spurlock's test was so unrealistic and his diet so plainly unhealthy that I doubt the results – Spurlock's health got worse, he gained weight – have any implications for the rest of us. In contrast, I find my results horrifying. Bias: Spurlock was obviously biased against McDonald's before he started. I thought favorably of the Flying Noodle – that's why I went there. Cost: My data cost essentially nothing, Spurlock's movie [5]cost \$65,000, not to mention the damage to Spurlock's health. Recovery time: Spurlock took 14 months to lose the weight he gained. I recovered in a day. Repeatability: My test is easy to repeat, Spurlock's very difficult.

3. Public health disaster? China has a very high rate of diabetes, for unknown reasons. Chinese teenagers and college students have much worse (inflamed) skin than I see in other countries. Old people in China look much worse than old people in Japan. Could heavy use of high-omega-6 cooking oil be a big reason?

4. Where were authorities? We expect our government – in combination with academia – to protect us against dangerous chemicals in our environment. If I'm right about the cause of my low score, that didn't happen here. Cooking oil is the opposite of a rare food. If ordinary amounts of a common cooking oil did cause these results, it suggests something is seriously wrong with the regulatory system. A big argument for personal science – and brain tracking in particular – is that you monitor exactly the environment to which you are exposed in exactly the genetic context you care about (yours).

1. <http://blog.sethroberts.net/wp-content/uploads/2014/02/2014-02-25-bad-restaurant-maybe.jpeg>
2. [http://www.tripadvisor.com/Restaurant\\_Review-g294212-d5482531-Reviews-Flying\\_Noodle-Beijing.html](http://www.tripadvisor.com/Restaurant_Review-g294212-d5482531-Reviews-Flying_Noodle-Beijing.html)
3. <http://blog.sethroberts.net/2013/12/09/warning-soybean-eaters-tofu-made-me-stupid/>
4. [http://en.wikipedia.org/wiki/Super\\_Size\\_Me](http://en.wikipedia.org/wiki/Super_Size_Me)
5. <http://www.filmeducation.org/pdf/film/SuperSizeMe.pdf>

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dearieme (2014-02-28 07:50:38)

Ahoy, Seth - more from The Old England Journal of Medicine. <http://www.dailymail.co.uk/health/article-2570081/Why-fatter-These-graphs-exp-lain-sugar-fruit-juice-XXX-blame.html>

Sidney Phillips (2014-02-28 09:35:13)

Interesting. That's why these days I really dislike eating out. No matter the cost of the restaurant you know the restaurant will be using the cheapest ingredients possible, especially when it comes to oils. It is just not economically feasible for restaurants to not re-use oils. Maybe the good ones re-use the oil just a few times, who knows though. Re-using oil after frying is not healthy at all. I had similar results as yours recently. I've been on a strict gluten and dairy free diet with great results. Recently my parents visited me and brought some take out from an Indian restaurant. Even though I avoided eating anything with gluten and dairy, the next day I felt off. I use the Quantified Mind website to track my reaction times and they were noticeably slower. I attributed the bad results to the cheap oil (soybean, corn, canola?) the restaurant must have used. Never again.

Paul N (2014-02-28 09:41:45)

I wonder if there might also be something at play with MSG? I know several people who feel sick after eating foods -often asian restaurant foods - containing MSG. Maybe that restaurant uses it? In any case, would probably be a simple one to test, by spiking a home prepared meal with some MSG and see what your scores do. Makes me wonder about doing the same with aspartame (NutraSweet), which is neuroactive in some way (stimulant, I think). Great data, and as you say in comparison to super size me, far easier to test and under more real world conditions, which makes the result more relevant. All that SSM showed was that an obviously unhealthy diet makes you unhealthy - we already have plenty of public health/obesity statistics to show that! Seth: Good idea about testing MSG and aspartame.

Allan Folz (2014-02-28 10:38:01)

5. Pay **very** close attention to your diet for 2-3 days prior to taking any high-stakes tests. Eg. AP's, SAT, GRE, etc. Seth: Yes, I agree. It's not just high-stakes tests. It's anything requiring a quick response. Since I have managed to become much faster at my brain test I am also much better at catching things when they fall. Surely much better at bike riding (reacting quickly) and sports that involve quick reaction, such as baseball.

Nancy Lebovitz (2014-02-28 11:24:35)

Seth, do your brain test scores correlate with anything you can feel or notice directly? Seth: If I am tired I'll be slower. that is uninteresting so if I am tired I won't do the test. Cases like this - low scores - are not noticeable, at least by me, without the test.

dearieme (2014-02-28 11:39:57)

"5. Pay very close attention to your diet for 2-3 days prior to taking any high-stakes tests. Eg. AP's, SAT, GRE, etc." Follow Bertie Wooster's advice: eat fish.

dearieme (2014-02-28 13:30:52)

Seth, have you ever tried using your tests to compare yourself pre- and post- dental treatment? <http://www.forbes.com/sites/larryhusten/2014/02/27/tooth-extraction-prior-to-cardiac-surgery-may-not-be-a-good-idea/> I have long argued that a likely reason for American lifespans being a little shorter than those in many other developed countries is excessive dental treatment, but that link is probably the first I've seen to carry a hint of the effect.

john Smith (2014-02-28 14:11:00)

Being considered pre-diabetic, and well aware of how well I sleep at night, I have come to avoid the 'Asian' style of cuisine available in my city here in Australia. The last four or five times I had meals of that type left me quite sleepless that same night. I suspected the MSG, but did not test at home. MSG covers a host of names and similar products added to food according to the Wikipedia, but avoiding them all is a task if one eats either processed food or restaurant food. At home I avoid all bottled oils. According to one report olive oil is the most written up complaint about substitution and dilution, and if it is that bad with olive oil, why trust all the rest? And speaking of dilution and substitution, that same report listed (along with the oil) milk, fruit juice and honey as the top four!

Bill (2014-02-28 15:23:43)

I wonder whether stale oil triggers systemic inflammation. I get wheezy (sort of like asthma) after eating deep-fried food at certain restaurants.

dearieme (2014-02-28 16:21:27)

John Smith: we've lately taken to buying Portuguese olive oil, now available in the many Portuguese shops in East Anglia. It is our hope that it might be less prone to adulteration than Spanish or Italian, if only because the shopkeepers may have more idea of which suppliers to trust than a supermarket buyer has. And even if we're wrong, there is the compensation that, so far, it has tasted better.

dearieme (2014-02-28 16:22:57)

Oh yeah, and the only fruit juice I drink nowadays is from the cherries we grow ourselves. Morello cherries, of course, so that the juice isn't packed with sugar.

dearieme (2014-02-28 16:27:42)

If you scroll down here you'll see the comparison of the nutritional content of sweet cherries and morellos (sour cherries). [http://en.wikipedia.org/wiki/Cherry#Nutritional\\_value](http://en.wikipedia.org/wiki/Cherry#Nutritional_value)

Justin Irving (2014-02-28 20:10:53)

I remember being struck by how much healthier Mongolians (in independent 'outer' Mongolia) looked next to Northern Chinese when I visited Mongolia in 2007. I wonder if you'd be willing to share the R script you're using these days for the reaction time test? I'd like to start doing this and would like to work off your script if possible.

Seth Roberts (2014-03-01 03:11:59)

To use the R programs join the Brain Tracking group and follow the directions.

Alex Chernavsky (2014-03-01 06:46:56)

The Brain Tracking group is here: [1]<https://plus.google.com/communities/114619130176100669530>

1. <https://plus.google.com/communities/114619130176100669530>

as (2014-03-01 19:27:15)

Seth Roberts: China has a very high rate of diabetes, for unknown reasons. Chinese teenagers and college students have much worse (inflamed) skin than I see in other countries. Indians are even worse. Sidney Phillips: Recently my parents visited me and

*brought some take out from an Indian restaurant. Even though I avoided eating anything with gluten and dairy, the next day I felt off.* Indian restaurants are terrible about reused oil. It's not just soybean oil, it's soybean oil which has been reused several times. Sometimes, the restaurant will reek of that reused oil stench. Seth: I guess the good news is that the effect went away in a day. The notion that Chinese restaurants (in China) regularly use bad cooking oil is very old news but no one has had any idea how long the effects last. Maybe you get bad skin if your exposure is too frequent.

Seth Roberts (2014-03-01 23:14:07)

"Seth, have you ever tried using your tests to compare yourself pre- and post- dental treatment?" yes, I found that after removal of mercury amalgam fillings my brain test scores substantially improved. I was puzzled by improvement for a long time – none of my various explanations predicted correctly – until I noticed that the improvement started exactly at the time of the removal. Those particular fillings were broken. After removal of other fillings, my score did not change.

dearieme (2014-03-02 03:37:25)

Thank you for that answer. It makes me suspect that we've had this conversation before and I've forgotten it. Any remedies for bad memory? (Mine has always been patchy at best.) Seth: Yes, I wrote a post about it several years ago. The post said little more than what I said in my reply so it seemed pointless to link to it.

Daniel (2014-03-07 14:45:40)

Are you still working on an iPhone app for these tests? Seth: yes

## 9.3 March

### How to Brew Black Tea (2014-03-02 05:00)

After I discovered the Shangri-La Diet (2000), I started drinking lots of tea. Tea has smell without calories, which complemented the calories without smell of the diet. Mostly I drink black tea – more complexity than green or oolong tea. Until recently, I made it the usual (Western) way. 1. Add hot water to tea. 2. Wait 3-4 minutes. 3. Add cream and sweetener. 4. Drink. 5. Throw away tea.

Now I do this: 1. Rinse tea with hot water, discard rinse water. 2. Add hot water. 3. Wait short time (e.g., 30 seconds). 4. Taste the results in a certain way. 5. Drink. 6. Reinfuse tea for longer time (e.g., 45 seconds). And so on. From 2.5 g of tea leaves I make 3 cups of tea (200 ml each), with infusion times of 35, 55 and 90 seconds. I drink the first two cups straight (no additions), then add sweetener (xylitol), salt and cream to the third cup. It's like three different sorts of tea. The first cup is a little sweet, the second cup is slightly bitter with more complexity, the third cup has bitterness, complexity, fat (cream) and sweetness. I use [1]a Polder timer that, at the end of the interval, resets to the length of the interval. For example, if you time 30 seconds, it ends up reset to 30 seconds. This makes it easy to remember the length of the last infusion.

What interests me is Step #4: "Taste the results in a certain way." After brewing the tea, I pour a little of it into a small glass. I have four of them. I pour the tea from #1 to #2 to #3 to #4. This greatly cools it, making it much easier to assess the taste. If you drink the tea before cooling, the heat is distracting. As soon as I started doing this, it was easy to see that short infusion times (e.g., 30 seconds) gave better results than long infusion times (e.g., 3 minutes) and that the tea could be used several times. I could easily distinguish between a brewing time of 30 seconds and 40 seconds.

Without Step #4, you (or at least me) are in very bad shape. Soon after brewing, the tea is too hot to taste clearly. The heat is distracting. Within a few sips, however, taste adaptation is so strong you cannot taste it clearly either. This is

why I drank tea for 13 years without understanding what is going on.

With the particular black tea I am drinking now, the first 30 seconds or so of infusion releases a slightly-sweet tasting chemical. If I cold-brew tea, this is what it will taste like. After that comes more complexity but also more bitterness. All in all, I like more bitterness (not too much) and complexity, so I reduced the amount of tea from 2.5 g to 2.0 g and increased the first infusion time to 60 seconds. That produced better results.

For many years, in other words, (a) I brewed it wrong then added cream and sweetener to fix my mistake and (b) due to poor feedback I had no idea what I was doing. Does that remind you of anything?

1. <http://www.polder.com/shop/measuring-temperature/timers/3-in-1-timer-clock-amp-stopwatch-1>

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peter spero (@guaif1) (2014-03-02 08:22:33)

years ago i read that it is unhealthy to steep tea for longer than 4 minutes because of the increase in oxalates, which can produce kidney stones. i couldn't find anything directly on point, but there a ncbi article, here <http://www.ncbi.nlm.nih.gov/pubmed/23532418>, Effect of different brewing times on soluble oxalate content of loose-packed black teas and tea bags. in addition, one article claims that "the majority of flavonoids (the health benefits of tea) are infused from the tealeaves to the brewed tea after about 4 minutes of brewing." it also mentions the potential of kidney stone from oxalates. <http://toxicfoodie.org/tag/black-tea/> i suppose if i looked longer i'd find more, but i can't spare the time right now. i rinse my green tea once to reduce the acidity (rinsing it reduces the number of P-H drops i add to the tea) , but try to brew it for no more than 4 minutes.

AI (2014-03-02 08:33:28)

yeah. my career.

TVG (2014-03-02 08:53:22)

I'd be careful drinking a lot of tea. Tea contains heavy metals that can accumulate to high amounts given how easy it is to drink large quantities of tea. See here and keep in mind the clearance time of heavy metals can be a month+: <http://www.hindawi.com/journals/jt/2013/370460/>

Sidney Phillips (2014-03-02 13:44:17)

I'd be careful drinking any variety of tea. Tea has been proven to be anti-androgenic. I looked into this after realizing I wasn't losing any weight despite drinking 3-4 cups of Japanese matcha. See <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3739374/> Also, any tea from China, organic or not, has been proven to have high levels of aluminum. Don't have the time for the cite, but it's out there. If you are going to drink green tea, make sure its from Japan. Adding some tamarind to the tea will reduce the fluoride. However, with the radiation accident ove there I'm not sure I'd even drink Japanese green tea now. I switched over from drinking green tea to yerba mate. As far as I can tell, mate doesn't have the high levels of aluminum, fluoride, and lead that green tea has. Perhaps its because mate is cultivated in south america. Here is a good white paper on yerba mate: <http://amambay.de/wp-content/uploads/2011/11/Heck-Mejia-Yerba-Mate-Tea.pdf>

Ripken Holt (2014-03-02 15:34:54)

Do you drink coffee as well Seth? What are your thoughts on the bulletproof coffee recipe Dave Asprey has? Seth: No, I don't drink coffee. I support adding butter to coffee, of course.



Adam (2014-03-02 21:12:21)

Everyone always goes on about heavy metals in tea. I drank all kinds of tea for three and a half years, all day long almost every day. I was tested because one of my coworkers kept warning me and I started to get paranoid. Everything came back clean. Seth: thanks!

Allan Folz (2014-03-02 22:25:03)

A friend got kidney stones from drinking too much green tea. Though, he drank quite a lot. I think a pint or a quart a day, and no other water. Not sure how long they took to develop. He was a young guy, in his early-40's at the time, to have kidney stones.

john (2014-03-03 16:17:52)

If I was a Chinese anthropologist at a Chinese university, I would find American food habits worthy of several PhD candidatures, including new export products potential . 1. A want to take a beverage and if it did not hit a conditioned bliss point, add sugar until bliss point hit. If slightly astringent, add a mammalian calf food until it tastes like mammalian calf food. 2. If taking tea , don't examine the thousand years of knowledge and the billion plus people that it has succoured, find what can generate a concern and cause FDA approval and quality control import permits to be established and then create a patentable genetically modified plant so that leaves have not one atom of heavy metals .

gwern (2014-03-03 18:16:04)

> Until recently, I made it the usual (Western) way. 1. Add hot water to tea. 2. Wait 3-4 minutes. 3. Add cream and sweetener. 4. Drink. 5. Throw away tea. What tea expert did you learn this from? Was this endorsed by any tea textbook you read? > Now I do this: 1. Rinse tea with hot water, discard rinse water. 2. Add hot water. 3. Wait short time (e.g., 30 seconds). 4. Taste the results in a certain way. 5. Drink. 6. Reinfuse tea for longer time (e.g., 45 seconds). And so on. This sounds similar to the Chinese gongfu style beloved of tea connoisseurs & experts ([https://en.wikipedia.org/wiki/Gongfu\\_tea\\_ceremony](https://en.wikipedia.org/wiki/Gongfu_tea_ceremony) #Brewing), dating back who knows how many centuries (but not as far back as the \_Classic of Tea \_, according to this paraphrase <http://www.teanamu.com/2010/10/lu-yu-classic-of-tea-chapter-5/> ). > For many years, in other words, (a) I brewed it wrong then added cream and sweetener to fix my mistake and (b) due to poor feedback I had no idea what I was doing. Does that remind you of anything? I dunno, this seems like a pretty clear cut case of laymen Doing It Wrong compared to the experts (when all your blog posts are trying to argue the opposite). Seth: I am unaware of any expert advocating Step #4. That is the important step.

Adam (2014-03-03 22:23:08)

FWIW the black tea I drank earlier today said "Steep for at least 4 minutes" in the instructions. I promptly ignored the instructions.

Bill (2014-03-06 09:01:59)

Wonder if the acne I get from black tea is just from bad brewing. I would leave the bag in for a long time, like an hour. These comments suggest that would result in high oxalate, which the interwebs suggests can cause acne and mouth sores.

### Assorted Links (2014-03-03 05:00)

- [1]more about cheating at Caltech
- [2]omega-3 supplementation reduces acne. Impressive results. Will dermatologists stop saying food doesn't cause acne?
- [3]Is it possible that vaccines are not perfect?. [4]More about vaccines.
- [5]Excerpt of The Question of Separatism by Jane Jacobs. [6]Interesting critique.

- [7]Why did non-polio paralysis increase from 2,000 cases to 60,000 cases? See Minute 6 of this video.

1. <http://www.quora.com/California-Institute-of-Technology/Why-are-some-core-classes-at-Caltech-administering-in-class-exams>
2. <http://www.ncbi.nlm.nih.gov/pubmed/24553997>
3. [http://www.huffingtonpost.ca/lawrence-solomon/vaccine-skeptics\\_b\\_4548510.html](http://www.huffingtonpost.ca/lawrence-solomon/vaccine-skeptics_b_4548510.html)
4. <http://www.vaccinationcouncil.org/2013/11/12/vaccines-a-peek-beneath-the-hood-by-roman-bystrianyuk-and-suzanne-humphries-md/>
5. [http://english.republiquelibre.org/Excerpt\\_of\\_The\\_Question\\_of\\_Separatism:\\_Quebec\\_and\\_the\\_Struggle\\_over\\_Sovereignty\\_by\\_Jane\\_Jacobs](http://english.republiquelibre.org/Excerpt_of_The_Question_of_Separatism:_Quebec_and_the_Struggle_over_Sovereignty_by_Jane_Jacobs)
6. <http://rfmcdpei.livejournal.com/3606075.html>
7. <https://www.youtube.com/watch?v=YE4IIGTzWdY&noredirect=1>

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Jason (2014-03-03 06:07:30)

I'm puzzled by the anti-vaccine links here. In the first, your link text is "Is it possible that vaccines are not perfect?" which is not the topic of the article. Rather, the article criticizes the press for being too hard on anti-vaccine views. This is itself a pretty laughable assertion, but there's a more important deception embedded in both the link text and the article. No one actually claims that vaccines are perfect. Not immunologists, not doctors, not vaccine makers, not the CDC, not anyone. The second article, blandly linked with the benign sounding "More about vaccines," is deeply dishonest, engaging in a classic bit of misdirection by talking about death rates outside the context of the greater morbidity of vaccine-preventable diseases. It has lots of pretty graphs, but the argument doesn't pass the smell test, particularly if you're familiar with the authors and the axes they're grinding. I get the sense that you're sympathetic to the anti-vaccination argument. A comment box isn't an adequate forum to discuss the many problems with those arguments. But as a regular reader I ask this of you: Apply the same standard of skepticism to articles like these as you do to everything else. Learn something about the history of the argument before posting such obviously biased material. Thanks for listening. Seth: By and large anti-vaccine arguments are poor and I am unsympathetic. What is true, however, in spades, is that experts with power over our health – in charge of vaccination programs, for example – are much less competent than they say they are or we are told by journalists. If you've read much of this blog – and there is no reason you should have – you will know that I think the basic idea behind vaccines is correct. In practice, however, there are many difficulties that the public is never told. You may be unaware of them. For example, do you know why the Secretary of Health resigned in 1955?

babar (2014-03-03 07:22:45)

nothing going on at caltech that oral exams couldn't fix.

Alex (2014-03-03 08:07:46)

I am with Jason on this one. I was disappointed to see in this blog links that amount to nothing more than the usual dead horses getting another beating.

Jason (2014-03-03 11:07:36)

I assumed it was swine flu and GBS, but I was off by about 20 years. (Embarrassing for an MPH holder.) Still, I'd offer two counterpoints. The first is that the Cutter Incident isn't an example of the failure of vaccine theory or the safety and efficacy of vaccines categorically. It's an example of industrial failure. The second is that to say that "the public was never told" is a little silly. It was a major scandal that led to many law suits and contributed to the resignation of a cabinet secretary. I think perhaps you paint "experts" with too broad a brush. In public health prevention at least, experts typically go to great lengths to clarify the limits of the evidence base and the climate of uncertainty under which many of their decisions have to be made. In many ways, this is exactly why anti-vaccine proponents have so little trouble getting coverage in the media and capturing the public's attention. Unlike the cautious experts, they present their views with an almost fundamentalist zeal. Seth: That an MPH holder

didn't know about this case illustrates my broad point that what we are told is biased in a pro-vaccine direction. Surely you knew the pro-vaccine side of the history. Yes, "never" is a little too strong.

Joe (2014-03-03 14:32:02)

Until more scientists rediscover and start practicing the scientific method, and other time proven scientific techniques (e.g. Koch's Postulates), and understand the difference between the presence of antibodies to a virus and the presence of the virus itself, new vaccines and vaccinations will remain suspect (as they should). The HPV "vaccine" is but one example. First, HPV doesn't cause cervical cancer, so there is no possible way a "vaccination" (Gardasil) against cervical cancer can work. Having HPV antibodies is not the same thing as having an active HPV infection. (They tried to pin this on herpes simplex virus first!) Cervical cancer occurs in older women, and is rarely fatal. HPV warts (papillomas = warts) usually clear within days of infection, thanks to our immune systems. 50 % of the American adult population has been infected with HPV. Yet less than 1 % ever develop cancer in their lifetime. Over 1/3 of women with cervical cancer have never been infected with HPV. Plus, the cancer is never subject to antiviral immunity, because no viral proteins are ever expressed in cervical cancer. Vaccinations can save lives. They can also take them, along with causing unbelievable suffering and harm. In my opinion, letting your teenaged daughter, for example, be "vaccinated" for a virus that doesn't cause anything but genital warts, and certainly not cervical cancer, is borderline criminal. Yep, that's my opinion, and I'm sticking to it. Seth: This reminds me of a UC Berkeley faculty member, in the biology department, who was one of the founders of molecular biology. He knew more about viruses than almost anyone. He did not allow his children to be vaccinated.

Seth Roberts (2014-03-03 14:56:28)

"I think perhaps you paint "experts" with too broad a brush. In public health prevention at least, experts typically go to great lengths to clarify the limits of the evidence base and the climate of uncertainty under which many of their decisions have to be made. In many ways, this is exactly why anti-vaccine proponents have so little trouble getting coverage in the media and capturing the public's attention. Unlike the cautious experts, they present their views with an almost fundamentalist zeal." I'm not sure who these "cautious experts" are, could you give examples? What you say does not describe the public health experts I hear. For example, I have never heard Robert Lustig "go to great lengths to clarify the limits of [his] evidence base." Quite the opposite: He presents his views with "almost fundamentalist zeal". Nor have I heard caution from the public health experts who claim that obesity is due to not enough exercise. If you mean epidemiologists like Walter Willett, I have never heard him point out how consistently wrong his predictions have been (eight out of eight?) when tested in clinical trials.

Joe (2014-03-03 16:58:26)

Seth: "This reminds me of a UC Berkeley faculty member" That would probably be Peter Duesberg, and I agree with you, he knows more about viruses (and probably cancer, too) than almost anyone. Unfortunately, he's in the minority. The establishment has been successful in shutting his ideas down, to the detriment of millions of lives. I wouldn't be surprised to see him win the Nobel Prize one day, but it'll probably have to be posthumously. Seth: No, it wasn't Duesberg. The person I'm thinking of is a little older than Duesberg. I forget his name.

Joe (2014-03-04 00:17:47)

Harry Rubin? Seth: yeah, probably.

Mark (2014-03-04 04:58:07)

Seth, I completely agree regarding "public health experts" (as someone with a PhD in a public health field, myself). In particular, Walter Willett is a complete hack, his nutritional epi group at Harvard spews out bs result after bs result, each of which manages to garner huge media attention. Utter garbage.

Jason (2014-03-04 12:29:22)

Sorry, I can't let Joe's comment go unaddressed. The evidence is extremely strong: virtually all cervical cancer (90 % +) results from certain strains of HPV. HPV is also linked to several oral, anal, and penile cancers. Again, this kind of propaganda relies on misdirection. Case in point: Joe's note that cervical cancer occurs mainly in older women, and that this is a reason not to vaccinate young women against high-risk strains of HPV. The progression from HPV to cervical cancer is a long one, typically

occurring over 10-20 years, and sometimes longer. Of all HPV infections, only a tiny number can result in cancer. Of the women infected with those strains, only a tiny number will develop pre-cancerous cells. Of those women, only a tiny number will go on to develop cervical cancer. The older women who have cervical cancer today overwhelmingly have it because they were infected with certain strains of HPV when they were young women. Joe's free to believe what he wants. But it doesn't make it true.

Jason (2014-03-04 12:55:53)

To get to your broader point, it seems like a stretch to suggest that the lack of broad public awareness of a vaccine-related industrial failure from nearly 60 years ago is strong evidence of pro-vaccine bias. But you're right that the information most people receive is pro-vaccination. But isn't it possible that this is because from a scientific and medical perspective, the anti-vaccine perspective is inherently weak? How else to explain that most anti-vaccine arguments rely on a combination of misdirection and outright falsehoods? Anti-vaccination views are as old as vaccination, and the political and economic arguments are very big. The scientific arguments are very small, because in most instances, the benefits greatly outweigh the risks. Seth: I didn't say it was "strong evidence". Just evidence. What I am doing, in a broad way, is saying: "Here is information that opened my mind. I didn't know about it. Maybe you would like to know about it also." In other words, I like to learn about complexities, facts that show things are not so simple. I assume readers of this blog are the same as me. You are simply saying, without any new facts, that things are so simple ("in most cases, the benefits [of vaccines] greatly outweigh the risks"). I fail to see the contribution. What about my question: Who are some of these "cautious experts" you seem to believe are common? Here I am asking for new facts – facts that might show my simple view of public health experts (they usually overstate their case) is wrong.

Joe (2014-03-04 18:03:23)

Jason, thanks for your reply, but I don't appreciate the "propaganda" nor the "misdirection" comments. Your "facts" are wrong. Viruses don't cause cancer. Period. And there's ZERO scientific evidence that they do. <http://vactruth.com/2011/10/26/hpv-vaccine-cancer-repackaged-as-an-std/> <http://www.rense.com/general78/hpv.htm> Now, if you still think that you're preventing your teenaged daughter from getting cervical cancer, by "vaccinating" her against a virus that couldn't possibly cause any kind of cancer, go right ahead. But no teenager of mine will ever be sacrificed on the altar of pseudoscience. Seth: "Viruses don't cause cancer"? Check out Peyton Rous.

Joe (2014-03-04 20:42:49)

Sorry, Seth, for not being more precise. Rous is a retrovirus (RNA), and a freak laboratory mutation. And speaking of Duesberg, Rubin, and Temin...here's what they have to say about Rous: [http://books.google.com/books?id=pRWVZJKOONsC&pg=PA117&lpg=PA117&dq=duesberg+peyton+rous+virus&source=bl&ots=OntyVgM3LP&sig=c5mmUOaME7mhA10\\_E-WSZnCFbM8&hl=en&sa=X&ei=JJoWU6PcEYSqkAeW6oHACw&ved=0CD4Q6AEwAg#v=onepage&q=duesberg%20peyton%20rous%20virus&f=false](http://books.google.com/books?id=pRWVZJKOONsC&pg=PA117&lpg=PA117&dq=duesberg+peyton+rous+virus&source=bl&ots=OntyVgM3LP&sig=c5mmUOaME7mhA10_E-WSZnCFbM8&hl=en&sa=X&ei=JJoWU6PcEYSqkAeW6oHACw&ved=0CD4Q6AEwAg#v=onepage&q=duesberg%20peyton%20rous%20virus&f=false) For anyone who wishes to know more about viruses, retroviruses, cancer, and especially all the politics in science, I couldn't recommend this book more highly. Seth: I think you're too sure that viruses don't cause cancer. There is a very strong association between HPV and cervical cancer. The conventional explanation (it reflects causality) might be right. I don't think anyone has proven it is wrong.

Adam (2014-03-04 22:46:53)

There was a lot of press recently about the HPV vaccine guarding against cancer. For example: <http://www.webmd.com/cancer/cervical-cancer/news/20140304/study-adds-to-evidence-that-hpv-vaccine-helps-guard-against-cervical-cancer> Except they did not show less cancer in women, they showed a reduction in "abnormalities". They then go on to say "the vaccine has a significant impact on the health of women", but has it? Depending on the abnormalities prevented, there might have been no symptoms, no negative impact to health, and no treatment needed. I'm also curious if anyone knows if these abnormalities sometimes spontaneously resolve. What percentage of them will progress to cervical cancer? These are important things to know in order to judge the real impact on the health of women. Seth: I agree. There is a big difference between what is claimed (less cancer) and what was measured (less abnormalities).

Seth Roberts (2014-03-05 03:06:42)

"The evidence is extremely strong: virtually all cervical cancer (90 % +) results from certain strains of HPV." I'd say the association is extremely strong. Evidence of causation: not so strong. Until this particular theory ("virtually all cervical cancer (90 % +) results from certain strains of HPV") is used to reduce cervical cancer – and such evidence is a long way off – I would not say the evidence is strong.

Joe (2014-03-05 09:51:34)

Seth: "I'd say the association is extremely strong. Evidence of causation: not so strong. Until this particular theory ("virtually all cervical cancer (90 % +) results from certain strains of HPV") is used to reduce cervical cancer — and such evidence is a long way off — I would not say the evidence is strong." The reason the association is so strong is because of the now explosion in testing for ANTIBODIES to HPV. HPV is essentially a ubiquitous virus, i.e., most of us have antibodies to it. Just like EBV, HSV, etc. So the "association" is going to be strong. But as we should all know, antibodies don't cause diseases. They are merely a sign that our immune system is doing, or has done, it's job. Koch's Postulates were designed to test for causality, not association. Which is why the "virus hunters" (by ignoring Koch's Postulates) get away today with blaming so many diseases on relatively harmless viruses. All the better to sell more vaccines and drugs! Seth: "I think you're too sure that viruses don't cause cancer." I try never to be too sure of anything, Seth. I try my best to go where the facts, the science, and common sense, take me. And that's where it's taken me. Seth: "Until this particular theory ("virtually all cervical cancer (90 % +) results from certain strains of HPV") is used to reduce cervical cancer — and such evidence is a long way off — I would not say the evidence is strong." That's precisely my point. I would never endanger the health of a teenager (all vaccinations have consequences), for example, until it's proven that there is a reduction of cervical cancer in those who are "vaccinated" for HPV. (And even then, I'd want to know by how much). Of course, that's why the "virus hunters" love "slow" viruses so much (tip: there are no slow viruses). [http://www.whale.to/vaccine/slow\\_viruses.html](http://www.whale.to/vaccine/slow_viruses.html) They'll probably be long gone by the time the evidence is in. How convenient. Note: Statin drugs, for example, reduce cholesterol. But do they actually prolong life? Most studies say no. Statins come with serious, even fatal, side effects. Whatever happened to: "First, do no harm"? Seth: You seem to misunderstand what an association is. It is a correlation. Start with two groups of women: one has cervical cancer, the other doesn't. HPV 70 times more common in the first group than the second. Curiously Peter Duesberg had difficulty understanding this, too.

Joe (2014-03-05 15:45:06)

Seth: Could you please point out the precise comment I made that caused you to believe that I don't understand that association means correlation? And also, please, point out what Duesberg has ever said that caused you to believe that he doesn't understand it either. And in what group is HPV 70 times more common than in another group? What are you trying to say here? Note: Firemen are almost 100 % correlated/associated with building fires. Did the firemen cause the fires? Of course not. Which is why correlation alone doesn't PROVE anything. In fact, it can be downright misleading. And why Koch's Postulates is the gold standard for causation.

Seth Roberts (2014-03-05 15:54:33)

Here is the comment that suggested you don't understand what association means:

The reason the association is so strong is because of the now explosion in testing for ANTIBODIES to HPV. HPV is essentially a ubiquitous virus, i.e., most of us have antibodies to it. Just like EBV, HSV, etc. So the "association" is going to be strong.

I forget Duesberg's exact comment. It was something like "Everyone who eats tomato soup is going to die. Does that mean eating tomato soup causes death?" He seemed to think that "everyone who eats tomato soup is going to die" = association between tomato soup and death. There is no association between eating tomato soup and death. People who eat tomato soup are no more or less likely to die than people who don't eat tomato soup. HPV infection was 70 times more common in the cervical cancer group than in the other group. I'm illustrating what an association is.

Joe (2014-03-05 17:27:59)

Seth, HOW does that graf suggest that I don't get it? And if Duesberg ever said that, I'm sure he intended it to be an illustration that associations/correlations mean very little when it comes to PROVING the CAUSE of any disease, just as my firemen/fires example was trying to do. At best, a strong association/correlation is an invitation to perform more experiments, research, testing, etc. By the age of 50, 80 % of women have been infected with HPV. So who comprised the "other group"? Moreover, for the sake of discussion, let's say that HPV infection was 70 times more common in the cervical cancer group than in "the other" group. What were all the other things in common (association/correlation) that the first group shared, compared to the second group? Things such as recreational drug use, promiscuity, alcoholism, smoking, impaired immune systems, obesity, family history, diet, other prescription drugs, age, etc. Why jump to the conclusion that it must be the HPV? Seth: You seem to believe that more sensitive testing for HPV – revealing that HPV is more common than previous tests showed – will increase the association between HPV and other things, such as cervical cancer. It won't.

Joe (2014-03-06 09:53:17)

1. HPV (an STD) infection rates have probably always remained pretty steady, even when we weren't routinely testing for it. 2. There was no HPV association with cervical cancer, because we weren't then looking for one. 3. Now we know that by the age of 50, 80 %(!) of women will have been infected with HPV, and that all but a very tiny fraction of them will ever get cervical cancer, the SAME tiny fraction of women who have historically gotten cervical cancer (older women). 4. To then jump to the conclusion that it must be those all-powerful HPV antibodies that are causing a tiny fraction of those women to get cervical cancer, and to begin "vaccinating" everything that moves, is the very definition of ANTI-science. 5. Your belief in the mythical powers of viruses borders on the religious. Seth: Where do you get 80 %? The studies I've seen say 20 %-50 %. For example, <http://www.ncbi.nlm.nih.gov/pubmed/18809145>.

Joe (2014-03-06 10:36:59)

Oops! Make that: ...and that BUT a very tiny fraction of them will ever get cervical cancer

Joe (2014-03-06 12:40:41)

Seth, the CDC, WebMD, etc. "The Centers for Disease Control has postulated that at least 80 % of sexually active women will have evidence of an HPV infection by age 50 (CDC, 2004)." <http://blogs.webmd.com/womens-health/2011/03/hpv-a-perpetual-problem-or-brief-infection.html> <http://www.cdc.gov/vaccines/pubs/pinkbook/hpv.html> And YOUR argument would be stronger if the vast majority of women ( 80 %) were NOT infected by HPV by the age of 50. And I would bet that the number is even higher. Maybe as high as 95 %. So think about that. Only 5 % (or 20 %, pick your poison) of women with HPV infection ever get cervical cancer, and only a tiny fraction of them die from it. And we want to "vaccinate" everything that walks? Please. Actually, the extremely high rate of HPV infection (almost universal), along with the tiny fraction of women ever getting cervical cancer, should tell you that HPV couldn't possibly be the cause of cervical cancer. And why it doesn't is a mystery to me. Seth: Thanks. I think I see the reason for the discrepancy. You have confused sexually active women with all women.

Joe (2014-03-06 13:32:55)

Seth, what percentage of women (say, over the age of 14) do you think have never been sexually active? Seth: You should ask those who used the term "sexually active" that question. I don't know what they meant by it. And you might want to read the links you cite in support of your claim of 80 % HPV infection rate. This link – which you sent me – shows a HPV infection rate of about 25 %. <http://blogs.webmd.com/womens-health/2011/03/hpv-a-perpetual-problem-or-brief-infection.html>

Joe (2014-03-06 14:51:30)

Seth, what part of 'The Centers for Disease Control has postulated that at least 80 % of sexually active women will have evidence of an HPV infection by age 50 (CDC, 2004).' are you failing to understand? It's right after "How many of us have HPV?" You can also google it yourself. Also, I don't need to ask anyone about "sexually active." Common sense and seven decades of actual experience with women leads me to believe that they're essentially all sexually active at some point, if not their entire lives. I've yet to meet one who wasn't. Note: I think you're just trying to pull my chain again, so absent a sensible comment on your part, I'm done with this topic. Seth: I fail to understand what they mean by "sexually active". You equate "sex-

ually active women" with all women. I don't. I'm sure if they meant all women, they wouldn't have qualified the word "women".

Joe (2014-03-06 18:08:21)

Presumably, it's because HPV is sexually transmitted. "HPV is the most common sexually transmitted infection (STI)... HPV is so common that nearly all sexually active men and women get it at some point in their lives." <http://www.cdc.gov/STD/HPV/STDFact-HPV.htm> PS: We must know different women. :)

### **Who is the Smartest Person Who Believes Climate Change Fear-Mongering? (2014-03-04 05:00)**

A few days ago I read about [1]Apple CEO Tim Cook's response to a shareholder complaint about sustainability programs:

At a shareholders meeting on Friday, CEO Tim Cook angrily defended Apple's environmentally-friendly practices against a request from the conservative National Center for Public Policy Research (NCPPr) to drop those practices if they ever became unprofitable.

I support the practices Cook defended. But the incident was summarized by a headline writer like this: "Tim Cook tells off climate change deniers." I am a climate change denier in the sense that I don't believe that there is persuasive evidence that humans are dangerously warming the planet.

The headline – not what actually happened – reminded me of something surprising and puzzling I noticed soon after I became an assistant professor at Berkeley. I attended several colloquium talks – hour-long talks about research, usually by a visitor, a professor from somewhere else – every week. Now and then the speaker would omit essential information. Such as what the y axis was. Or what the points were. The missing information made it impossible to understand what the speaker was saying.

I didn't expect graduate students to interrupt to ask for the missing info but surely, I thought, one of the five or eight professors in the room would. *We all need to know this*, I thought. Yet none of them spoke up. I cannot think of a single example of a professor speaking up when this happened (except me). Even now I am unsure why this happened (and no doubt still happens). Maybe it reflects insecurity.

I mention climate change on this blog because it is interesting that so many intelligent supposedly independent-thinking people actually believe, or claim to believe, that humans are dangerously warming the planet. The evidence for the supposedly undeniable claim ("97 % of scientists agree!") is indistinguishable from zero. Of course journalists, such as Elizabeth Kolbert of The New Yorker and Bill McKibben (a former journalist), are often English majors and intimidated by scientists. I don't expect them to question what scientists say, although questioning authority is half their job. Of course actual climate scientists do not dissent, for fear of career damage. It is when smart people who are not journalists or climate scientists take this stuff seriously that I am impressed. Just as I was impressed by Berkeley professors who did nothing when they didn't understand what they were being told.

It seems to me that the smarter you are the more easily you can see that climate change fear-mongering is nonsense. There must be some other important human quality (conformity? religiosity? diffidence? status-seeking? fear of failure?) that interferes with intelligence in non-trivial ways. To try to figure out what the quality is, I ask: *who is the smartest person you know who believes global warming fear-mongering?* Does that person do other extreme or unusual things? These might shed light on what the intelligence-opposing personality trait is.

People talk about intelligence quite often ("you're so smart!" "she's very bright"). Many people, including me, think

it matters. There are tests for it. But this other trait, which can negate intelligence and therefore is just as important...not so much. In my experience, not at all. My fellow Berkeley professors were very smart. But they were also something else, much less apparent.

1. <http://arstechnica.com/apple/2014/03/at-apple-shareholders-meeting-tim-cook-tells-off-climate-change-deniers/>

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Christine (2014-03-04 05:26:52)

As a reasonably intelligent but not very well educated person, here's what I figure. Earth's climate changes, it has to, because change = stability over the long term. The "climates" of all the planets in our solar system are changing. Our sun's activity is changing - or at least not doing what our scientists expect it to do as this recent solar max has been very meek indeed. But most humans don't think in the long term or see the big picture. Maybe it is just plain too scary for most to believe that our climate is something that is out of our control. Maybe people are somehow comforted in believing that humans are causing climate change, because that implies we can fix it too? It might also be a game of bait and switch. Focus our attention on the evils of carbon and it takes our attention away from all the other nasty crap poisoning our air and water.

MJB (2014-03-04 06:17:11)

People of very high intelligence are especially susceptible to large abstract theories about society. Those of a literary inclination fall for romantic and imaginative theories like those identified by Stephen Pinker: illusions about the Noble Savage, the Blank Slate, and the Ghost in the Machine. Mathematical and scientific types are prone to see politics in terms of engineering; to see human populations as quantities of concrete to be shoveled around. As P.J. O'Rourke said after visiting Poland in the 1970s: "Commies love concrete." In my 2000 article I proposed the following counterfactual thought experiment: Suppose that in, say, 1920 the U.S. franchise had been limited to citizens holding a Ph.D. What would the consequences have been? Is there any doubt that we should have had a Soviet America in very short order, and that we should right now be digging ourselves out of the same pit the poor Russians find themselves in? Political stupidity is in fact a special kind of stupidity, not well correlated with other kinds. Think of the barmy political programs that issued forth, with such confidence, from Jean-Paul Sartre, Bertrand Russell, Norman Mailer and other members of the mid-20th-century preposterentsia, as exposed in withering detail in Paul Johnson's book *Intellectuals*. At the very highest levels of intelligence, the correlation between IQ and sensible political opinions may actually be inverse: the more brilliant you are, the dumber your politics. Albert Einstein thought well of Stalin; Hitlerism got its first mass following in the highly-selective German universities. <http://www.vdare.com/articles/john-derbyshire-s-modest-proposal-on-politics-and-intelligence>

hofrum (2014-03-04 06:20:48)

"But they were also something else, much less apparent." I think that some of the many cognitive biases (listed at [https://en.wikipedia.org/wiki/List\\_of\\_cognitive\\_biases](https://en.wikipedia.org/wiki/List_of_cognitive_biases)) are in action here, as for example the bandwagon-effect or the in-group favoritism.

Robbo (2014-03-04 07:25:25)

"It is when smart people who are not journalists or climate scientists take this stuff seriously that I am impressed. Just as I was impressed by Berkeley professors who did nothing when they didn't understand what they were being told." Is there a "not" missing somewhere in there? I think there may be different types of 'smart', one practical, another theoretical. People who don't much come into contact with harsh reality can spin whatever theory their fancy takes, and probably believe it too. The more practical tend to ration out their credulity by the spoonful rather than the bucket.



Tim (2014-03-04 07:36:13)

You need a home button. Seth: what's a home button?

Al (2014-03-04 08:30:39)

Something similar happens in company meetings. People working for, say, a software startup, tend to be quite competent, energetic and smart. But when the CEO tells them during a group meeting that a sock puppet selling pet food is gonna be bigger than IBM and Microsoft combined, no one stands up and calls BS. I'm sure 97 % of startups fail eventually. And everyone knows it. Don't be a hater, bro'. Just smile and high-five the CEO. Seth: During the company meetings, when the CEO says something delusional, I think there are three differences from what I observed at research talks: 1. At the research talks to speak up is just to tell the speaker that they left out something essential, presumably by mistake. The speaker is very likely to be grateful. They want to be understood. No one wants to be told they are delusional. 2. At the research talks, the professors in the audience who say nothing are at least equal status with the speaker. 3. At the research talks, everyone in the audience wants to understand. If Professor X asks a clarifying question, everyone in the audience will be grateful. At a company meeting, I suspect reactions to a delusion-challenging question would be more complicated.

Sidney Phillips (2014-03-04 11:06:08)

I believe the more intelligent you are, the greater you are susceptible to the pressures of group think. Just from my own experience I'm a graduate of a selective liberal arts college (Williams) and I can guarantee if you went against the grain and questioned global warming you'd have been classified as a kook by professors and classmates. There is intense pressure to accept the commonly held "smart" beliefs. I've also believe based on what's happened to me personally, it certainly does not pay to rock the boat. To be classified as an eccentric in fields such as law, medicine, banking, academia is a sure fire career killer. Thus, the pressure to go along with the group think. Whereas a lesser educated person can afford to be a maverick and go against the grain since they usually have much less to lose.

Kelly B (2014-03-04 11:26:02)

Maybe restating something above, but academics, in particular (and probably Tim Cook too), are former nerds. I think they've been battered throughout life by the desire to be part of the cool kids, and once they find a group to hang with, are less likely to do anything to prompt shunning. As a former nerd myself, I can say that I'm a "climate change denier", but the group I hang with doesn't seem to pay much attention to that particular issue, so I guess I can afford to be.

jon (2014-03-04 11:55:23)

A great TedX talk on the subject, "Willful Blindness." <http://www.youtube.com/watch?v=Kn5JRgz3W0o>

Kirk (2014-03-04 11:57:37)

Challenging a speaker in a room full of educated people feels like a confrontation. Most people can tolerate only a limited number of concurrent fights. Most people probably already feel like they're fighting on two fronts, work and politics, and some people have relationship/family fights also. Also, people don't like to feel stupid. Sometimes questions ARE stupid, although sometimes questions are smart. Often the person who wants to ask a question has no idea if the question is stupid or smart.

RAD (2014-03-04 12:02:16)

I think that Catastrophic Climate Change Belief/Skepticism has more to do with political world views than it does with intelligence. If you want to delve into the intelligence/motivations of smart Catastrophic Climate Change Believers then Paul Krugman is probably a fine example: <http://www.nybooks.com/articles/archives/2013/nov/07/climate-change-gambling-civilization/> Am I the only one that finds it surreal that a Berkeley Psychology Professor is challenging the intelligence of people who believe in climate change? Seth, your curiosity about the missing y-axis units is not the only way you stand out :-)

Joe (2014-03-04 12:07:32)

Seth: "But this other trait, which can negate intelligence and therefore is just as important...not so much. In my experience, not at all. My fellow Berkeley professors were very smart. But they were also something else, much less apparent." "I know

that most men, including those at ease with problems of the greatest complexity, can seldom accept even the simplest and most obvious truth if it be such as would oblige them to admit the falsity of conclusions which they delighted in explaining to colleagues, which they have proudly taught to others, and which they have woven, thread by thread, into the fabric of their lives." Tolstoy Moreover, it's just about impossible to even discuss the climate these days. The vernacular has now been so corrupted by the alarmists (and not by accident) that we might as well be speaking in tongues. And while I'm no climate scientist, I refuse to believe that we even have the ability to measure GLOBAL temperature changes, to within a few tenths of a degree(!), in the first place (computer models, or no computer models). I've seen no evidence of it. No, not even with satellites, much less with ground-based temperature stations. Tree rings? You gotta be kidding me. My hunch is that this is all about politics and nothing about science. And always has been. It's just another government grab for even more power over our lives, to be able to "redistribute the wealth," to enact "social justice," to extract more taxes from us, etc. The best thing we can do to these people is to mock them. To ridicule them. To make fun of them. To puncture their balloons. And, of course, to laugh heartily at them. They deserve it! PS: I hope everyone is following the legal goings-on between Michael Mann (the actual driver of the clown car that is global warming hysteria) and Mark Styne. Mann is now suing Styne because Styne made fun of him! Everyone SHOULD make fun of him...because he's a freakin' buffoon! [http://www.realclearpolitics.com/articles/2014/02/12/mann\\_vs\\_steyn\\_the\\_trial\\_of\\_the\\_century\\_\\_121528.html](http://www.realclearpolitics.com/articles/2014/02/12/mann_vs_steyn_the_trial_of_the_century__121528.html)

Elizabeth (2014-03-04 12:47:30)

Maybe the Berkeley professors already had or wanted a relationship with the guest speaker that caused them not to want the distinction of being remembered by that guest speaker for having publicly embarrassed him.

Seth Roberts (2014-03-04 13:14:33)

Albert Einstein thought well of Stalin? Whew. I knew he thought well of Freud and Veblen. (Freud a fabulist and Veblen a great economist.) Maybe the liking of Stalin is a comment on the information available at the time.

Brandon (2014-03-04 14:49:48)

I see this a lot in what I call "Intellectual Atheism". Smart people talking about the non existence of God or a higher being. I believe there is a God but if I didn't, I would spend exactly zero time discussing it. I certainly would not attend a meeting or put up a billboard explaining why I do not think God exists (any more than I would spend any time talking about American Idol or some other show that I have no interest in watching).

aretae (2014-03-04 14:50:15)

Tribe – My very short, nearly self-contradictory theory of human nature is that individuals almost never have opinions. Groups have opinions. People belong to groups. And people assert opinions in order to indicate belonging into the groups. Disputing an opinion held by a group is read by almost everyone (both in and out of the group) as being substantially to primarily about attacking the group. Only very strange people who are permanent outsiders actually address opinions as being about a topic, and then only because they're somewhat socially inept, and never figured out how to belong to a group anyhow. Belongingness appears nearly orthogonal to intelligence. I can think of very smart insiders, and very dumb outsiders .

dearieme (2014-03-04 14:54:57)

The category "intelligent but obtuse" is worth investigation no doubt, but isn't much of what we see just people preferring to stay with the flock? Seth: Yeah, I would agree that science is both supported and pushed against by human nature. It's human nature to be curious, which improves science. And it's human nature to "stay with the flock" which works against science. That's an argument for personal science, which is done in isolation. So no effect of what other people think.

Cahokia (2014-03-04 15:19:50)

I'm not convinced that such an overwhelming majority intelligent people, at least in the U.S., fully buy into anthropogenic global warming. 40 % of Americans in 2013 agreed that climate change was a major threat according to Pew Research. Undoubtedly the 60 % who disagreed or had no strong opinion included many intelligent people.

john (2014-03-04 15:36:47)

what are the consolidated x axis criteria being used to define intelligent people?

Todd Fletcher (2014-03-04 16:24:57)

As a proponent of bitcoin and one who talks a lot about it I have observed often that most people will never hold an opinion not shared by most, doesn't matter what you tell them, they won't do it. Conversely, they will readily claim a falsehood to be true if it's held by the group. Nobody ever wants to be the odd man out except those who can't be anything else

bjk (2014-03-04 17:24:01)

How many things do we seem to understand without genuine understanding? It's got to be immense. Here's an example of economists not understanding basic econ concepts. [http://marginalrevolution.com/marginalrevolution/2005/09/opportunity\\_cos.html](http://marginalrevolution.com/marginalrevolution/2005/09/opportunity_cos.html)

Mark Snders (2014-03-04 17:37:58)

I see quite a bit of smugness in these comments, and while everyone is curious about group think, I notice everyone here seems to come from the same flock. There are two issues here. One is, does global warming (or climate change) exist? The other is, if this does exist, is man causing or exacerbating the situation? I'm not a scientist, but I think it's pretty obvious things are changing. And while I have a hard time not falling asleep examining the arguments one way or the other, I want to note that man can cause climate change at least on a minor local way. One example is that tearing out trees and plants and replacing them with concrete and pavement will make an area hotter in the summer - Atlanta comes to mind. And if man can do it in a metropolitan area, I don't see it as a stretch that he can affect larger areas too.

Glen Raphael (2014-03-04 19:03:15)

I think the quality you're looking for is just religiosity. Environmentalism is a secular religion complete with the notion of a mythical past utopia (when man didn't yet exist or "walked lightly upon the earth"), a fall from grace, and a predicted apocalyptic future caused by our collective sins against Nature. Some people just find that stuff intuitively appealing. Knowing that "the end of the world is nigh" due to scary "truths" you are privy to that others aren't. The exact same characteristic that motivates street-corner preachers (and their followers) motivates climate catastrophists.

TomGinTX (2014-03-04 19:10:54)

Tim, click on "Seth's Blog" at the top of the page. It is like a Home button.

TomGinTX (2014-03-04 19:17:36)

Glen says: "The exact same characteristic that motivates street-corner preachers (and their followers) motivates climate catastrophists." I dunno, Glen. AFAIK nobody ever got a government grant to do street-corner preaching.

Glen Raphael (2014-03-04 19:41:29)

Various people start out motivated by apocalyptic environmentalism - the idea that whatever people do is somehow "damaging the planet". They get this meme from their parents, friends, teachers or the media they consume, just as they would get any other religion. Some of those people go into science and then DO their science in a way that helps further their preexisting religious beliefs about imminent environmental catastrophe. The belief comes first, THEN the grants. I don't think it goes the other way around. It's true that you can make a lot of money promoting alarmism - a lot MORE than you can make fighting it - but I think most people promoting alarmism do so because they honestly believe we are DOOOOOMED if we don't change our sinful ways and start "listening to the planet". Which affects what they choose to study and what results they tend to find credible. The money is just an extra bonus on top of the core opportunity to help promote views they find compelling and important.

John Smith (2014-03-04 20:13:07)

The Herd instinct, yes. But every herd has some form of common belief (system) which is the religion of that herd. Todd Said: "Nobody ever wants to be the odd man out except those who can't be anything else." That's me, perhaps. I share little with

most groups, but something with most groups. I grew up in a unique family group and was left free to decide for myself on most things. So by my analysis I am the only person I consider smart enough to decide anything critical to my belief system, but also fully aware that many are smarter than me especially with regards to their own affairs. I contend that mankind is responding to global warming, just as the dinosaurs did, not causing it. Does the algal bloom cause the summer heat? Do the krill warm the oceans? This is why the smartest man I know says he learns more from the kids in his 'handicapped' home than from the university trained. Those kids have a quality one might call, Total Honesty, or at least they are not handicapped by societal moors. Joe said: "My hunch is that this is all about politics and nothing about science. And always has been. It's just another government grab for even more power over our lives, to be able to "redistribute the wealth," to enact "social justice," to extract more taxes from us, etc." Every regime needs an enemy, every household needs a boogey man. The church has the devil, medicine has the germs, and now governments have climate change. Like god herself, it is great to be an expert on something that can never be finalized. Seth, you must be the smartest person any of us know who is a doubter, as I didn't notice anyone nominating any other! Cheers

GB (2014-03-05 00:55:34)

I don't know if he quite fits the definition of your question, but Nassim Taleb is probably the smartest person I know of that supports minimising carbon emissions. I don't think it's because he thinks there's compelling proof of man-made warming, it's just that he approaches the unknown differently to you. If I could be so bold as to try and read both your minds, you seem to be seeking proof of man-made warming as a prerequisite to large scale action (apologies if I've misunderstood your thoughts). He supports action in the absence of compelling proof that man isn't causing warming. It's his consistent approach to preference natural over non-natural, with the onus of proof required by the non-natural - same with GMOs etc. In this case, the natural is not releasing masses of carbon dioxide into the environment as a grand experiment. His arguments have logic, but also cost (action on emissions). But he's not a high IQ conformist, if that's what you were specifically after. Seth: I like Nassim but his logic doesn't make sense. Pollution is a proven serious problem - living in Beijing, I know - why not work on that? There are plenty of known problems. Work on them. That's hard enough.

dearieme (2014-03-05 04:21:57)

Bruce Charlton, whose blog I used to frequent, has a category he calls clever-sillies.

jason y (2014-03-05 05:07:56)

aretae nails it. i don't have an opinion on anthropogenic climate change. i have opinions on the credibility of climatologists and the judgment of believers and skeptics. holding an opinion on the science would be foolish because i am unqualified to scrutinize the evidence. it is self-defeating and pointless to deny in the presence of believers and believe in the presence of skeptics when all anyone really cares about is whether you're an ally or an enemy. unless you can contradict and challenge others with style, aplomb, and grace, you're better off just agreeing.

David Watson (2014-03-05 06:23:28)

I would agree with Jason y and add that if you simply change the title in the link below, the article aptly describes why college professors and doctors don't argue nearly as much as they should. The whole system is setup to reject these people outright regardless of what Thomas Szasz thought. <http://www.madinamerica.com/2012/02/why-anti-authoritarians-are-diagnosed-as-mentally-ill/>

JM (2014-03-05 06:38:57)

Doesn't starting with the title "Who is the Smartest Person Who Believes Climate Change Fear-Mongering" get this off to a start begging the question? And is the "I've met smart people who went along with bad science" part supposed to be an evidence-based criticism of man-made climate change? I'm confused about the lack of science in this blog post. Seth: I wasn't trying to convince anyone that the "humans are dangerously warming the planet" idea is wrong. I take that for granted. The post is about human nature, not climate change.

Eric (2014-03-05 07:08:03)

It is very dangerous to paint large groups of people with a single brush because it is easy to find bad apples in any large group and then to use those bad apples as the basis of your comparison. E.g. there are lots of examples of psychologists behaving badly, falsifying research, etc. but it would be foolish to conclude that the whole field is a hoax or should be ignored. I happen to know a bunch of people that work on climate science, and in general they do it because they passionately believe in what they are doing. Several of them also happen to be brilliant. I also know some people working in climate science that don't have a clue how to construct and test a proper model. Same goes for other fields that I have worked in - Psychology, Computer Science, Neuroscience. Sturgeon's Law says that 90 % of everything is crap. The trick is to find the 10 % that isn't. Ultimately it comes down to this: the field has been making general predictions for several decades now. Are those predictions coming to pass or not? The evidence is that the world is a fair bit warmer and that there is more volatility in the weather. So those predictions seems fairly solid at this point. That has to be tempered against the fact that this could be mere coincidence. It also needs to be tempered against the fact that predicting complex systems is incredibly difficult at best. However, if it was coincidence then it just as easily could have gone the other way. The question is when there is enough evidence to be sure. Personally I think Global Warming is the wrong fight. There are loads of reasons to pursue renewable energy that are hard to argue about. Not relying on foreign governments for our energy for starters. The plummeting costs involved (e.g. solar) as it scales up. As Seth points out there is pollution. Fighting pollution covers lots of the same ground as fighting global warming, but there are not too many people who are "pro pollution." Ironically I think the argument that has always been used against the pro global warming side - economics - will ultimately be the one that wins for them, just not for the reasons that they think. Seth: The current long-lasting "pause" in global warming was not predicted by any model. How do the people you know in climate science deal with this fact?

Bob (2014-03-05 07:40:21)

Seth asked: "who is the smartest person you know who believes global warming fear-mongering? Does that person do other extreme or unusual things?" OK. Rather than people I "know of" like Tim Cook of Apple, I will answer this with someone I know personally, whose intelligence I have been able to gauge over many years. My "smartest person...who believes in global warming fear-mongering" is an Ivy League educated engineer. "Does that person do other extreme or unusual things?" He is extremely religious and active in his church and in church politics at a national level. I would describe him as a leftwing extremist in politics generally. He is a guy who, when he has a strong opinion about something, is unpleasant toward those who disagree with him. He is intolerant toward opposing viewpoints on topics he's passionate about. In his field of work, with which I have been involved at times, he is extremely good. Seth: That's really interesting. I don't know anyone who is extremely religious. At the heart of cooperation is shared beliefs - a shared belief that what you are doing together is a good idea. If your shared beliefs (your religion) are too strong, too all encompassing, you'll believe too many things that are wrong and will fail to be persuaded by evidence. But if your shared beliefs are too weak or too few you will be impossible to work with.

Casey (2014-03-05 13:20:24)

There isn't "Global Warming" because the glaciers are melting to keep the temperature stable. When all the glaciers melt, then there will be "Global Warming". Also, the amount of CO<sub>2</sub> is at a all time high - due to many things - one of them being the big rain forests are not-so-big anymore... I would recommend watching "Chasing Ice" with the realization that all the energy it takes to melt ice keeps the temperature constant. For example: if you have a cup of ice water - the water is 32F until all the ice melts - once all the ice melts then the water will heat up to room temperature. Note that the water is 'cold' until all the ice is gone...

Roger Sweeny (2014-03-05 16:20:53)

Joe, To determine if average temperature is increasing, decreasing, or staying pretty much the same, you don't have to have perfect measurements. You just have to have measurements that are taken the same way, and combined the same way, over time. You can be pretty precise, even if you're not accurate. E.g., if your thermometer reads two degrees too high, you can still use it to determine if the temperature is going up, down, or staying the same.

Roger Sweeny (2014-03-05 16:37:39)

Seth, The most recent explanation I have seen for the "pause" in global warming is that there is indeed more thermal energy but it is going into the oceans. So it doesn't show up as a rise in air temperature. However, at some point it will and air temperatures may rise quickly. You're right that none of the models predicted the "pause." Various people are now trying to change various models to incorporate it.

Roger Sweeny (2014-03-05 16:58:25)

Watts Up With That reprinted part of the Nature article that says essentially, "the ocean ate the heat."  
<http://wattsupwiththat.com/2014/01/16/the-journal-nature-embraces-the-pause-and-ocean-cycles-as-the-cause-trenberth-still-betting-his-heat-will-show-up/>  
<http://wattsupwiththat.com/2014/02/28/the-top-ten-reasons-global-temperature-hasnt-warmed-for-the-last-15-years/>

Eric (2014-03-06 12:12:31)

Re the pause: <http://www.economist.com/news/science-and-technology/21598610-slowdown-rising-temperatures-over-past-15-years-goes-being> The explanation is a combination of a) the ocean, b) changes in the solar cycle, c) aerosols. As for a smart guy that believes in global warming, Neil deGrasse Tyson is a pretty good candidate. Not that it seems to matter. As others on this thread have indicated, both sides are so dug in that very few opinions are going to change anytime soon. What would it take to change your mind Seth? I'm genuinely curious as I really admire many of the things that you have done on your blog. Are there any possible set of experiments, measurements, models, etc. that would change your mind?

JM (2014-03-07 08:04:51)

"Seth: I wasn't trying to convince anyone that the "humans are dangerously warming the planet" idea is wrong. I take that for granted. The post is about human nature, not climate change." Sure, but how can you even start to evaluate your human nature hypothesis when you "take for granted" the metric by which you evaluate the hypothesis? Is there any good way to move past a couple of anecdotes and some supposition here and actually improve the way that we learn, model, communicate, and do science? Or are we doomed to have everything be dominated by badly handled data teased to tell the wrong stories? Seth: In my experience, the evaluation of any idea involves taking stuff for granted. And I've learned to start as small as possible, e.g., with "a couple of anecdotes".

Joe (2014-03-09 13:43:17)

"One example is that tearing out trees and plants and replacing them with concrete and pavement will make an area hotter in the summer - Atlanta comes to mind. And if man can do it in a metropolitan area, I don't see it as a stretch that he can affect larger areas too." Exactly. But that doesn't affect our climate. It affects the temperature in a very, very small area. "E.g., if your thermometer reads two degrees too high, you can still use it to determine if the temperature is going up, down, or staying the same." But how do they know if the thermometer reads "too high"? Or "too low," for that matter? Compared to what? There is no gold standard, so all temperature station results are highly suspect. But, again, this has very little, to nothing, to do with climate. It has to do with the temperature of a very, very small patch of ground. Ground that is affected in many ways by changing nearby development, weather (weather is not the same as climate), etc.

Nathen (2014-03-09 14:32:37)

Sounds a bit like Cialdini's bystander effect, but it also reminds me of ideological immunity, intelligence correlated with closed-mindedness to new information. I have no idea if it's a real thing, but it seems plausible. All of the smartest people I know believe in climate change. They tend to be well educated, skeptics, liberal, feminist, and artists. And probably eccentric to those outside our cultural bubble, which is difficult for me to analyze objectively. A couple of them write publicly-maybe you can discern some commonality like what you have in mind: <http://thequodlibetarian.blogspot.com> <http://basecase.org/env/>

Joe (2014-03-09 14:49:55)

Is the U.S. Surface Temperature Record Reliable? [http://wattsupwiththat.files.wordpress.com/2009/05/surfacestationsreport\\_spring09.pdf](http://wattsupwiththat.files.wordpress.com/2009/05/surfacestationsreport_spring09.pdf) In other words, no. Imagine what it must be like in other countries.

Dragan (2014-03-10 12:51:27)

Among the smarter people I know, all but one believe in climate change. He tells me that most people he knows do not believe in climate change. Might be something there.

Joe (2014-03-10 15:44:20)

Dragen, it all depends on how the question is asked. Virtually no one disputes that the climate is changing. It has always changed; it will always change. But most of us believe that man can't, and hasn't, had much (if any) effect on it. And that there's nothing that can be done about it anyway, except to ADAPT to the changes as they happen. This has essentially been the case since the beginning of time. The CAGW (catastrophic man-caused global warming) crowd (Al Gore, James Hanson, Michael Mann, and all the other Chicken Littles), enjoy running around and screaming that "The sky is falling!" and hope that they can use this scare tactic to raise our taxes, make money off of carbon futures, or fund phony "green" energy projects for their cronies, etc. It's an ANTI-science scam. Please don't buy into it.

Kjartan (2014-03-15 13:10:21)

What? How can you people be serious? You honestly do not believe that humans influence climate? Such amazing arrogance

Seth Roberts (2014-03-15 15:33:20)

Arrogant? It is arrogant to be unsure? I am unsure if the influence of humans on climate is dangerous. I do not know what size it is – although you are right in the sense that I suspect it is small compared to other influences.

M. Goff (2014-03-21 22:56:34)

You might find the take Cliff Mass has on climate change fear mongering interesting. [1]<http://cliffmass.blogspot.com/2014/03/moses-versus-joseph-biblical-lesson-in.html> He's at the University of Washington and works on weather, not climate. He has stated in the past that he believes global warming is happening (but the obvious effects won't happen for quite some time, as they are currently swamped by short term variability). That said, he on several occasions posted criticism of the the way climate change issues are presented by both scientists and the media. In particular he has argued against the extreme and/or overly precise claims of possible futures (especially in light of poor predictions so far), the hype of current weather as climate change driven, and general fear mongering (not all of which are addressed in this most recent post on the subject).

1. <http://cliffmass.blogspot.com/2014/03/moses-versus-joseph-biblical-lesson-in.html>

Hamsta (2014-03-31 17:47:55)

I do notice that the folks buying into climate change tend to be on the higher side of the mean IQ. I myself don't buy the androgenic thing, although pollution is real and controllable with will and money. There is another take I have. I have been reading Joseph Tainter on "The Collapse of Complex Societies". It was written in 1988 but is selling better now than when released. Anyway, Tainter was looking for a more cohesive framework for understanding why complex cultures and societies have collapsed through the ages ( and there have been a lot of them). The big idea is that societies and civilizations start out simply. The entire purpose of a civilization is to Hoover out materials and energy from the environment and distribute the goodies to members of the society. As challenges present themselves (weather changes, running out of game or resources, threat from other societies, disease) the society must rise to a new level of complexity to deal with the threat and survive. As years pass and challenges are met, complexity increases to an unsustainable point. The society becomes less able to deal with threats or change because of vastly diminished returns on increased use of energy, materials and information flow (administration and vested interests). So, after all that, I believe many of the intellegensia in western culture intuit (but don't articulate) that our own civilization may be way down the path where sustainability of resource and energy use is questionable. This, in spite of stunning technological progress (high complexity). So.....maybe the collective consciousness is saying "let's slow down a bit". How to do this? Well use less energy and resources for one thing. Yeah, maybe WE have enough for now and don't need so much growth for now. And - the emerging nations should stop demanding their share of the pie too. So let's keep them where they are by halting use of the good stuff like oil. Let them have, maybe, solar or wind. So, I believe, we may be seeing the climate change movement as class warfare fought on a different front. The "science" is almost irrelevant. The beliefs will follow the unconscious imperative that western culture needs to buy time while figuring out a way to "complexify" even further. The third world is going to get screwed.

Seth Roberts (2014-04-01 00:08:41)

I would put it like this: Lots of societies get stuck doing the same thing over and over. They fail to innovate. They overuse this or that resource and, when it runs out, they die. For all I know, a misguided belief in AGW may cause valuable innovation. Perhaps that's why we humans are so credulous – so we will innovate and explore more. Fake crises help us survive real crises.

### **The Polio Vaccine Disaster: Precursor of the Obamacare Website Fiasco (2014-03-05 05:00)**

When friends complain about evil government (e.g., NSA surveillance), I tell them "never underestimate the stupidity of government employees" – by which I mean their stupidity outweighs their self-interest. The Obamacare website fiasco is a good illustration. Everyone has heard "power corrupts" but closer to the truth is power makes you stupid.

The Obama website fiasco had many precursors. One was in the 1950s – in the details of [1]the introduction of the polio vaccine.

Rather than staging a long series of careful field trials with appropriate scientific evaluation, Salk darted ahead on his own in the remainder of 1953 and 1954. The trials were successful. The foundation released the results to the press, and such were the nation's expectations that from that point there was no turning back. In August 1954 the foundation ordered five drug companies to begin producing mass lots of vaccine, on the basis of a formula for inactivating the virus with formaldehyde, according to a procedure Salk himself had devised. . . . James Shannon remembered very well what happened next. At this point he had become the associate director of the NIH. "I was working over the weekend and I got a telephone call from Los Angeles, and this is eight or nine o'clock on Friday night. It was the Health officer of the City of Los Angeles and he said they just had two reports of polio in some children who had been vaccinated nine days earlier. He wanted to know what should be done about it?"

One of the companies that contracted to make the vaccine, the Cutter Laboratories in Berkeley, California, had released several lots of vaccine that had been improperly inactivated. Live polio virus was being injected into children. The gratitude of the public turned to horror, as the cutter vaccine gave polio to almost 80 recipients; these children in turn went on to spread the disease to another 120 playmates and relatives; three quarters of the victims were paralysed and 11 died. . . . NIH's Laboratory of Biologics Control, which had certified the Salk vaccine, had received advance warning of problems. . . .

In 1954 the rush was on. [Eddy's] lab had gotten samples of the inactivated polio vaccine to certify on a "due-yesterday" basis. "This was a product that had never been made before and they were going to use it right away," she recalled. She and her staff worked around the clock. "We had eighteen monkeys. We inoculated these eighteen monkeys with each vaccine that came in. And we started getting paralyzed monkeys." She reported to her superiors that the lots were Cutter's, and sent pictures of the paralyzed monkeys along as well. "They were going to be injecting this thing into children. . . .They went ahead and released the vaccine anyway, a lot of it. The monkeys they just disregarded."

Shannon called the Surgeon General Saturday morning. Additional cases of paralysis continued to occur. "It seemed obvious that we had a crisis on our hands, the magnitude of which was unknown." Late Saturday afternoon a working group of senior virus specialists, whose advice the polio foundation had started to ignore a year earlier, began meeting in Shannon's office. Note that Shannon had completely taken charge of the crisis. "Sebrell was not the man to manage this," DeWitt Stetten recalled. 'James Shannon was a man of quite different character."



Shannon had brought in the Surgeon General, who called polio chief Basil O'Connor in New York. On Monday evening O'Connor and his advisers came down to Bethesda. Shannon wanted to withdraw the vaccine, "It was a very stormy meeting," he said. "O'Connor and the polio group in general disallowed any possibility of induced infections [as a result of the vaccine]. ... So Basil O'Connor stormed out with dire warning of what he was going to do to the NIH and the Public Health Service. Further vaccination was stopped. I had many sleepless nights."

The basic problem had really not been the carelessness of the Cutter company, which rightly or wrongly was exonerated in a later report. It was the difficulty in jumping from Salk's lab experiments with killing (formalinizing) the virus to large-scale industrial production.

. . . Ruth Kirschstein, the director today of an important NIH institute, added, "The Cutter incident resulted in everybody up the line who had anything to do with it—very few people know this story—being dismissed because of it." All went out: the director of the microbiology institute lost his post, as did the equivalent of the assistant secretary for health. Oveta Culp Hobby, the secretary of Health, Education and Welfare (or Oveta "Culpable" Hobby, as she was known), stepped down. Dr. Sebrell, the director of the NIH, resigned.

Whereas I think the "basic problem" was overestimating the competence of powerful people, especially powerful experts.

1. <http://www.whale.to/v/eddy.html>

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dearieme (2014-03-05 07:42:07)

An era when people who perpetrated cock-ups got the sack? "In olden times".

MikeW (2014-03-05 08:10:43)

The Obamacare website / polio analogy is interesting, but you seem to be perpetuating the myth that the website's problem was scalability. Unlike Salk's efforts, the website was sloppy work from the start, riddled with broken links, misspellings, and a confusing user interface. In this case, incompetence pervaded the whole project, from the bureaucracy all the way down to individual programmers.

gwern (2014-03-05 08:42:05)

> In 1954 the rush was on. [Eddy's] lab had gotten samples of the inactivated polio vaccine to certify on a "due-yesterday" basis. "This was a product that had never been made before and they were going to use it right away," she recalled...The gratitude of the public turned to horror, as the cutter vaccine gave polio to almost 80 recipients; these children in turn went on to spread the disease to another 120 playmates and relatives; three quarters of the victims were paralysed and 11 died. To put this 'due-yesterday' haste in perspective: at the time, polio was killing 9 children & paralyzing 58 children a day in the USA, and killing or paralyzing 1300 children a day worldwide.

OzMan (2014-03-06 13:49:25)

Thanks for sharing this little-known but important piece of vaccine history. It is also important to note that since the Cutter event, there have not been any vaccine reactions due to manufacturing issues - to my knowledge, please correct me if wrong. (I do not refer to known reactions such as the 1 in million risk of getting paralysis from oral polio vaccine, or the 2 in 100,000 who will get a bowel blockage after rotavirus, and the few other rare known serious vaccine reactions. But any time there are

some serious events that happen AFTER a vaccine is given, the natural tendency for governments is to suspend vaccine use. Eventually, the investigation finds the deaths or other events unconnected to vaccine - and meanwhile children are needlessly put at risk of infectious disease. (Or a vaccine scare like pertussis in the UK in the 1970s or MMR-autism impact lead to massive disease outbreaks). How do we address these cognitive biases - and focus on fixing system failures instead of blaming individuals? \*\*\* Like others, not sure I agree this is same issue as the ObamaCare fiasco; perhaps of more substance is the what is human and financial cost of not having universal health care - even after Obamacare; and what was cost of delays in getting cover? And what is the accountability of our political representatives, who now seem to just represent moneyed interests...

Charles (2014-03-21 12:28:50)

The ones designing and implementing the web site were not federal workers. It was a consulting company who had previously demonstrated incompetence at this kind of project, and should probably have never been given the project. Problems were compounded by unrealistic deadlines for all the features requested, and last-minute changes, never tested. My understanding is that federal procurement rules made it difficult or impossible to choose another contractor. That's not the fault of federal employees other than whoever drafted the laws specifying those rules.

Seth Roberts (2014-03-21 13:22:58)

yeah, those are fair points.

### **"We Need Only One Santa": My Answer to Grand Health Promises (2014-03-06 05:00)**

"We need only one Santa" is a line from [1]a video by Icelandic's Best Party, which won enough support that its leader, Jon Gnarr, became mayor.

"We need only one Santa" would have been a good response to any big health promise in the last 20 years. Not one has come true, just as there is no Santa Claus. "Beating cancer now is a realistic ambition because, at long last, we largely know its true genetic and chemical characteristics," [2]wrote James D. Watson, co-discoverer of the structure of DNA, in 2009. We need only one Santa, Dr. Watson.

At the NIH, "one of our biggest projects is the BRAIN initiative . . . We are bringing together the best and the brightest people from a variety of disciplines to figure out, over the next 10 years, exactly how the brain works," [3]said Francis Collins, head of the NIH, a few days ago. We need only one Santa, Dr. Collins.

1. <http://www.youtube.com/watch?v=xxBW4mPzv6E>

2. <http://www.nytimes.com/2009/08/06/opinion/06watson.html?pagewanted=all>

3. <http://www.aarp.org/health/brain-health/info-2014/francis-collins-brain-initiative-qa.html>

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dearieme (2014-03-06 09:54:41)

You'll be accused of the War on Santa, Seth.

Maarten (2014-03-06 12:42:50)

Don't you think the above efforts should be made, or are you just opposed to the hyperbole? I'd rather have scientist run ahead of themselves out of ambition, then pessimistic scientists who don't even try.

Seth Roberts (2014-03-06 13:10:57)

I am opposed to the hyperbole. If liars get all the available grant money...

dearieme (2014-03-06 16:51:06)

"I'd rather have scientist run ahead of themselves out of ambition, then pessimistic scientists who don't even try." What a wonderful example of the false dichotomy.

Cahokia (2014-03-07 11:42:37)

"I'd rather have scientist run ahead of themselves out of ambition, then pessimistic scientists who don't even try." I agree. I know Seth Roberts isn't opposed to cutting edge medical research per se, just to inflated claims and academic group-think. However, posts like this easily read as arguments against biotech, genetics research, stem cell research, etc. There's only so much fermented foods and honey before bedtime can do to extend healthy human lifespan.

Cuhtzaka Indlis (2014-03-07 19:17:52)

Gnarr squeaked into office on a 34 % combined protest vote /comedy /off-the-wall campaign and has made some progress on his promises, but Reykjavik's major -and very real- problems are still there. Overstatements are expected in campaigns. Watson helped discover DNA structure while pursuing anti-cancer strategies. Your quote is from his campaign (note the word 'campaign') to free up more cancer research money and again change the FDA's perpetually outdated drug-testing policies. Overstatement is expected in campaigns. Collins shepherded the Human Genome Project, the DNA mapping project that allowed Watson to dream so large. Now he is describing a vastly larger, longer, and more complex project; but he's describing a reasonable expectation for a decade-long project. Seth: You are unaware of the overpromising of oncogene researchers? Collins is "describing a reasonable expectation"? You know this how?

Cuhtzaka Indlis (2014-03-07 21:00:18)

Seth: ". . . overpromising of oncogene researchers . . . You know this how?" Proof of performance. Collins never promised to cure cancer, he promised -and delivered- on mapping the human genome. This latest is not much different than a contractor's promise to build a high-rise bigger than one successfully built before. In this case, a high-rise that makes extensive use of building techniques pioneered in the previous project. You put Collins' description in with two examples of issue advocacy; issues where real performance has always lagged far behind the verbiage. Both Gnarr's and Watson's hopes/promises have followed the traditional success (and failure) rates for political change and cancer therapy. Neither has 'bumped' or radically altered the trajectory of their subjects. Gnarr and Watson promise changes of \*things\*: governance and cures. Collins' promise is discovery. Can I or anyone guarantee the project's on-time on-cost performance 10 years out? No, but nobody can absolutely predict anything -perhaps not even the sunrise- ten years out. But 'reasonable expectation' is a reasonable description of the brain mapping project. Seth: You believe Collins's promise ("to figure out [in 10 years] exactly how the brain works") is not much different than "a contractor's promise to build a high-rise bigger than one successfully built before"? Surely not. If Collins truly thinks that mapping a network = finding out exactly how something works, he has lost his marbles and should be removed from his job. If Collins knows better but thinks his listeners will believe anything, that is unfortunate and really is a lot like a parent telling a three-year-old about Santa Claus.

Joe (2014-03-08 12:52:32)

Chromosomal Chaos and Cancer [http://mcb.berkeley.edu/labs/duesberg/pdfs/2007,\\_Duesberg0507,\\_SciAm.pdf](http://mcb.berkeley.edu/labs/duesberg/pdfs/2007,_Duesberg0507,_SciAm.pdf) Here's my hunch (if we're lucky). The 21st century will find us making more progress against disease, especially one like cancer (including ways to totally prevent them), even cures, by exploring clean new paths, instead of mindlessly following the same old, pothole-riddled ones.

## Sleep and Depression: More Links (2014-03-07 05:00)

In 1995, hoping to improve my sleep, I decided to watch TV early in the morning, [1]for reasons explained here. One Monday morning I watched tapes of Jay Leno and David Letterman that I'd made. Nothing happened. On Tuesday, however, I woke up and felt great: cheerful, eager and yet somehow calm. I had never felt so good so early in the morning. Monday had been a normal day, I had slept a normal length of time. The good feeling was puzzling. Then I remembered the TV I had watched. It had seemed so innocuous. The notion that 20 minutes of ordinary TV Monday morning could make me feel better Tuesday but not Monday seemed preposterous. Absurd. Couldn't possibly be true.

Except for one thing. I had done something to improve my sleep. Plenty of research connected sleep and depression. That research made it more plausible that something done to improve sleep would improve mood. [2]I went on to confirm the morning faces/mood linkage in many ways. The research connecting sleep and depression had been the first signs of a hidden mechanism (we need to see morning faces for our mood regulatory system to work properly) I consider very important.

[3]Two new studies further connect sleep and depression. One of them found that people who sleep normal amounts of time are less influenced by genes associated with depression than those who sleep longer or shorter lengths of time. The other found that teenagers who sleep less than usual are at greater risk of depression.

The theories that psychiatrists have used to justify anti-depressants (e.g., "chemical imbalance") do not explain the many connections between sleep and depression. Depression is associated with lots of bad things, unsurprisingly, but the association with bad sleep is especially strong. It is not easily explained away. You might think that if you are depressed you are more tired than usual and therefore sleep more/better than usual. The opposite is true. All this might have generated, among psychiatric researchers, a search for a better theory – an explanation of depression that can explain the sleep/depression connections – but it hasn't.

1. <http://escholarship.org/uc/item/2xc2h866/>

2. <http://escholarship.org/uc/item/2xc2h866/>

3. <http://www.sciencedaily.com/releases/2014/01/140131230851.htm>

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George (2014-03-07 05:32:05)

Why does it matter that we have a theory to explain depression? We need a cure for depression. If sleep works, great (although I doubt its important). I've actually heard that sleep deprivation is helpful for depression, but whatever. I am resistant to any theory that posits the human organism to be incredibly delicate and only capable of thriving in a narrow set of conditions. I think that's clearly wrong. If you tell me we're obese or unhealthy because oops, vegetable oils! I'm gonna laugh. We're not that delicate. If depression is caused by imbalances in sleep, when we evolved in an environment rife with nighttime hunters and menaces and raids, I'm gonna say, no, its unlikely we're such delicate creatures that not getting our 8 hours is gonna hurt us so much. Seth: My theory says we have a circadian oscillator that controls both mood and sleep. That oscillator needs certain input to function correctly. Just like we need Vitamin C for other things to work correctly. My theory suggests new treatments for depression.

Gina (2014-03-07 07:17:00)

Seth: In your quest for the perfect night's sleep, have you tried nonalcoholic beer? It raises GABA. I've been drinking one an hour before bed and it seems to help. I recently quit drinking (again), and morning faces, avoidance of blue light at night and fruit and NA beer before bed have resolved the sleep issues that have been my undoing in this endeavor before much more quickly. Link to study: [http://www.plosone.org/article/info %3Adoi %2F10.1371 %2Fjournal.pone.0037290](http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0037290) George: It's hard to know where to look for a cure for an ailment if one does not know the cause of it. I've also read that one night of sleep deprivation can help depression, but that is very different from chronic sleep deprivation.

Audrey (2014-03-07 09:07:15)

Seth, are you still getting good results with the orange glasses before bed? Mine arrived yesterday, and I think they helped me fall asleep faster, but it'll be a while longer before I've had time to do a/b testing & be more confident about that.

Adam (2014-03-07 10:39:21)

Here's an article suggesting that the sleep deprivation effect may be due to enhancement of Serotonin and/or Norepinephrine (Noradrenaline): <http://www.ncbi.nlm.nih.gov/pubmed/15694238>

Seth Roberts (2014-03-07 11:43:22)

I haven't measured the effect of orange glasses but I wear them anyway.

George (2014-03-07 16:44:28)

Gina, not true at all. Many of the most important breakthroughs in medicine occurred not through directed research but completely by chance or as a byproduct of searching for something else entirely. Antibiotics, probably the biggest saver of lives ever, was a complete chance discovery. In fact, since the switch to large scale directed research, breakthroughs have become far fewer. Theories in fact come after you observe something works. In this case, oh I noticed sleep cures depression now let me invent a theory for that. The theory never would have existed without the prior observation, and plays no important role. There is a whole tradition of empirical medicine that doesn't rely on theory but relies on tinkering and serendipity. Directed research has some successes but overall a worse track record. This is surprising but true. We overvalue theory. Seth - maybe your theory is right, but it seems unlikely that we didn't evolve to handle regular disruptions in sleep and to go without sleep periodically. In any event if sleep does in fact cure depression then your theory may or may not be right who knows.

Seth Roberts (2014-03-07 20:19:27)

"In this case, oh I noticed sleep cures depression now let me invent a theory for that." That doesn't describe what happened to me. I noticed that morning faces improved my mood. I wasn't depressed. In fact, morning faces did NOT especially improve my sleep.

nansen (2014-03-07 20:22:22)

Even the mainstream media has gotten the word about the fallacy of "chemical imbalances". Here is David Brooks in 2011 in the Times: "Many of us have been taught that depression arises, in part, from chemical imbalances in the brain. Apparently, there is no evidence to support that. " Seth: good to know.

Sara (2014-03-07 22:49:19)

The convenient thing to drug companies about the "chemical imbalance" meme is that it suggests that one will need to purchase chemicals to restore balance.

Seth Roberts (2014-03-08 06:29:17)

"Antibiotics, probably the biggest saver of lives ever, was a complete chance discovery." Not true. The discovery that antibiotics were useful against disease owed a great deal to the germ theory of disease. This supports what Gina said.

George (2014-03-08 13:49:26)

Seth, noticing that some substances make you better or worse does not require any germ theory. Man has been doing that since the dawn of time. Had Fleming had all sorts of theories about what a bacteria is and how one might go about killing it he would not have had as much success in a hundred years as one chance event. "...Antibiotics transformed medicine. The discovery of antibiotics began by accident. On the morning of September 3rd, 1928, Professor Alexander Fleming was having a clear up of his cluttered laboratory. Fleming was sorting through a number of glass plates which had previously been coated with staphylococcus bacteria as part of research Fleming was doing. One of the plates had mould on it. The mould was in the shape of a ring and the area around the ring seemed to be free of the bacteria staphylococcus. The mould was penicillium notatum. Fleming had a life long interest in ways of killing off bacteria and he concluded that the bacteria on the plate around the ring had been killed off by some substance that had come from the mould." <http://www.historylearningsite.co.uk/antibiotics.htm>

Zach H (2014-03-08 14:25:02)

George - You need the germ theory of disease in order to recognize that staphylococcus has anything to do with getting sick. Otherwise no one would have been interested in learning how to kill bacteria. There's a big difference between directed research in general and the sort of studies in particular that you are complaining about. Tinkering doesn't exist without some over-arching principle leading up to it (correct or not).

Seth Roberts (2014-03-08 18:09:57)

George, there's a lot of truth to the saying "chance favors the prepared mind". Chance favors the prepared mind (often full of theories) in two ways: 1. the "prepared" person is more likely to do the thing that leads to the chance observation. As Zach says, the germ theory of disease is the reason Fleming was studying bacteria in vitro. 2. the "prepared" person is more likely to see how the chance observation can be used. In Paris, I suddenly lost my appetite. A chance observation. This had nothing to do with any preparation or theory. But what happened after that did: based on my theory of weight control, I came up with an explanation of my loss of appetite. Then I tested my explanation. The results led to the Shangri-La Diet. Surely lots of people have had a sudden loss of appetite for reasons similar to mine. But, because of my "preparation" (my theory of weight control), I seem to be the only person to have learned from it.

Nathen (2014-03-09 14:03:05)

I had a biopsychology textbook in the mid-2000s that stated that intermittent total sleep deprivation—I think the best "dose" was staying awake all night once every three or four days—completely alleviated symptoms of depression. I never read the source articles but I wondered since then if we would find out that depression, or some subset of depressed states, was a sleep disorder.

### **Defenders of the Indefensible: Jim Dean, University of North Carolina (2014-03-08 05:00)**

Starting in 2011, [1]Carolyn Willingham, a tutor at the University of North Carolina, complained to the press about fake classes for athletes. In place of an education, she said, athletes, some of whom could barely read, were encouraged to take fake classes, such as classes that never met.

Jim Dean, executive vice chancellor and provost, responded to her charges like this:

Dean asked Willingham to provide raw test data supporting her analysis. She declined, explaining that she'd obtained the confidential information by promising the university's Institutional Review Board not to share it with anyone. She told Dean he could obtain the data directly from the athletic department, which gathered it in the first place. He declined to do as she suggested. "If she had the proof," Dean says, "why wouldn't she share the proof?"

Later Dean handled Willingham's charges like this:

Dean said of Willingham: "She's said our students can't read, our athletes can't read, and that's a lie."

In fact, Willingham had said

18 out of the 183 special admit athletes whose records she assessed read at roughly a third-grade level. An additional 110 of the athletes, she said, read at between fourth- and eighth-grade levels. She never said that most, let alone all, of the 800 athletes at UNC are illiterate, and she said nothing at all about the other 18,000 undergraduates.

When challenged, Dean conceded he'd misspoken.

Even the reporter, apparently, finds Dean's defense repugnant. An important detail is that Willingham, who is wealthy, did not need the job. She was free to say whatever she wanted.

1. <http://www.businessweek.com/articles/2014-02-27/in-fake-classes-scandal-unc-fails-its-athletes-whistle-blower#p1>

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dearieme (2014-03-08 08:27:44)

It's always lovely to see someone with financial independence actually use it to do something for the rest of society, rather than just bleating about fashionable causes. Seth: I agree. How much charity money is wasted because the people giving the money know essentially nothing about the people they are supposedly helping?

Audrey (2014-03-08 08:32:49)

"An important detail is that Willingham, who is wealthy, did not need the job. She was free to say whatever she wanted." This is a key point, yet it is rarely made. I'm not sure why. For the last several years, the myth that poor people have the same freedoms as the rich has been pushed hard, despite its obvious falsity. Kerry Kennedy could afford to hire attorneys to fight DUI charges, so she did and she won. Yet almost no members of the public can finance a legal defense. Their actual innocence is irrelevant. So prosecutors can file unwinnable cases left and right, knowing that only the 1 % can afford to contest them. In Kennedy's case, the prosecutor was handed a well-publicized loss. <http://www.nydailynews.com/new-york/kerry-kennedy-buying-good-lawyers-helped-beat-drugged-driving-rap-article-1.1708774>

Audrey (2014-03-08 08:40:04)

What's further interesting about the above article is that in its original form, it was built around misquoting Kennedy, and is essentially prima facie evidence of libel. So, possibly after being contacted by Kennedy's lawyers, they inserted the italicized sections, which correctly describe what Kennedy said, putting the lie to the rest of the article. That makes one wonder about every "shocking" article in the paper that ISN'T about someone wealthy enough to put muscle behind a libel complaint.

Sidney Phillips (2014-03-08 10:05:33)

True, wealth does buy you "justice" in this country. Like when Alice Walton killed an innocent bystander most likely while DUI, and wasn't even charged by the local police. <http://bud-meyers.blogspot.com/2012/04/alice-walton-in-wonderland.html>

jason y (2014-03-10 06:35:34)

Sidney, the blog post you linked to doesn't claim Alice Walton was DUI when she drove over a bystander. As for the main post, it is common knowledge that a large fraction of athletes can't read and do not belong in the classrooms of colleges

and universities. It's an open secret. It's only inappropriate to notice if you suggest it's a bad thing. It's also an open secret that athletes are offered "made up classes" like underwater basketweaving, and it's been one since the 60s at least. [http://www.urbandictionary.com/define.php?term=underwater %20basket %20weaving](http://www.urbandictionary.com/define.php?term=underwater%20basket%20weaving)

## The Coming Reunification of Korea (2014-03-09 05:00)

A few years ago, a Korean friend of mine spent a college year abroad in Tanzania. In South Korea, access to information about North Korea on the Internet was blocked. In Tanzania, it wasn't. Impressed by what she learned, she cut-and-pasted some of it into an email to her sister.

After she sent the email, she remembered that in South Korea it was illegal to cut-and-paste from a website. She called her mom to tell her sister not to read the email. The message was successfully conveyed and her sister deleted the email without reading it.

In the last year, however, the South Korean government has changed its policy and is now trying to educate citizens about life in North Korea. Information is no longer blocked. Now and then people escape. They are put on show and tell about North Korean life many times. The intention is to prepare for [1]the coming reunification. [2]Special committees have been formed to discuss how to solve the anticipated problems.

We are used to hearing about the advantages of dividing one country into two, but my friend had no trouble explaining why the South Korean government wanted reunification. One reason was that the war with North Korea was very expensive. Another was that families had been divided. A third was that since North Korea has nuclear weapons, reunification will mean that South Korea has them. (My friend had not read [3]a certain newspaper article the day she said that.) [4]This article suggests that the real reason cannot be said out loud. It is that reunification will allow South Korea to take advantage of the land and people freed by the collapse of North Korea.

"What have you learned from the reunification of Germany?" I asked.

"There will be chaos for a long time," she said.

1. [http://en.wikipedia.org/wiki/Korean\\_reunification](http://en.wikipedia.org/wiki/Korean_reunification)

2. <http://www.voanews.com/content/south-korea-forming-committee-to-prepare-for-reunification-with-north-korea/1858571.html>

3. [http://news.xinhuanet.com/english/world/2014-03/03/c\\_133156820.htm](http://news.xinhuanet.com/english/world/2014-03/03/c_133156820.htm)

4. <http://www.bbc.com/news/world-asia-25911981>

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Brandon Berg (2014-03-09 05:54:44)

*After she sent the email, she remembered that in South Korea it was illegal to cut-and-paste from a website. Are you sure about that? I'm having trouble confirming this.* Seth: Yes, I'm sure that's what she said.



Brandon Berg (2014-03-09 06:25:56)

For that matter, why would the South Korean government want to censor information about North Korea? It could only make the South Korean government look good by comparison.

gwern (2014-03-09 08:58:21)

Brandon: the SK censorship is aimed at NK propaganda. This is not as stupid as it sounds for two reasons: 1. NK was actually wealthier and better off than SK early on, immediately after the Korean War, where they were being subsidized by China/Russia and were busy industrializing (NK has all the mineral resources and great stuff you want for industrialization which would make unification so valuable ([http://www.nkeconwatch.com/nk-uploads/global\\_economics\\_paper\\_no\\_188\\_final.pdf](http://www.nkeconwatch.com/nk-uploads/global_economics_paper_no_188_final.pdf)), while SK has the agriculture; as well, Communist regimes have always been pretty OK at industrialization; see "The Myth of Asia's Miracle" <http://web.archive.org/web/20090302203414/http://web.mit.edu/krugman/www/myth.html>). Unsurprisingly, the military dictatorship did not necessarily want NK materials around. 2. Some South Koreans are crazily, bizarrely, delusional about NK. You have no idea how many sympathizers there already are, and how many spies NK has had working for it willingly over the years. To us, NK seems about as appealing as working for Sauron, but to many South Koreans, it's apparently a fine idea. To give you an idea of what I mean, one of their congressmen was convicted a month ago or so after the intelligence agencies recorded him discussing how to best overthrow the SK government and welcome in NK, where to store their gun caches which bases and power stations were best to sabotage, etc. Can you imagine an American representative being put on trial for planning landing locations for Spetsnaz? It wouldn't've been plausible in the heart of the Cold War, much less now.

BRW (2014-03-09 10:26:44)

Gwern, You mean like Alger Hiss? [http://en.wikipedia.org/wiki/Alger\\_Hiss](http://en.wikipedia.org/wiki/Alger_Hiss)

AI (2014-03-09 10:42:29)

Are we talking about NK taking over SK – because I'm finding it hard to imagine NK leadership rolling over and letting SK leadership have any new influence or power. At all. Why would the NK leadership allow any change that would lessen their own power? Also, there's the American troops in the DMZ – Washington would certainly have something to say about such a reunification. And what about Beijing? It's all so complicated. How will all of these participants come to terms?

dearieme (2014-03-09 14:38:35)

If SK has a declining birth rate, then an obvious way to add people is to take over NK. That is one view of what West Germany did.

## **Human Papilloma Virus and Cervical Cancer (2014-03-10 05:00)**

After I say that Nobel Prize in Medicine is usually given for research of little or no proven value, one counterexample I've heard is the 2008 prize for the discovery that cervical cancer is caused by the human papilloma virus (HPV). This should allow us to reduce cervical cancer via vaccination.

There are several things wrong with this example:

1. The predicted improvement has not been observed. The average age at which a woman is diagnosed with cervical cancer is 48 years old. To assess the effect of HPV vaccination – usually given to young girls – on cervical cancer [1]you need to wait thirty years. Thirty years haven't passed. The history of medicine is full of examples where treatments that supposedly worked – such as tonsillectomies, given to millions – when tested turned out to not work. The history of medicine is also full of examples where supposedly wonderful treatments (e.g., frontal lobotomies) turned out to have side effects so bad the treatment was stopped.

2. Cervical cancer is not a big source of death. In the United States, it kills perhaps five thousand women per year. Heart disease kills hundreds of thousands of people per year; so do all forms of cancer taken together. And pap

smears, which cost little, actually work. "Cervical cancer is 100 % curable if detected early," [2] says one website.

3. Because pap smears work well, it isn't clear there is room for improvement. To find out you'd want to compare two groups: (a) pap smears plus HPV vaccination and (b) pap smears alone.

4. It isn't clear the vaccine will work, even if HPV infection does cause cancer. There are at least 100 varieties of HPV; the vaccine protects against two. Does vaccination against two varieties increase infection by other varieties (because different viruses compete for the same niche)? Hard to rule this out. Again, there are many examples in medicine where actually helping people turned out to be far harder than experts had predicted, even when the initial idea wasn't nonsense. An example is the oncogene theory of cancer, which also has a Nobel Prize associated with it.

In summary, not a counterexample.

1. [http://mobile.oralcancersupport.org/dental/pdf/guidelines\\_for\\_vaccination\\_2008.pdf](http://mobile.oralcancersupport.org/dental/pdf/guidelines_for_vaccination_2008.pdf)

2. <http://www.uihealthcare.org/health-topics-pap-tests-and-cervical-cancer/>

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RAD (2014-03-10 06:10:23)

Seth, some counter points: - You seem to be conflating the discovery that HPV causes cervical cancer with the efficacy of the HPV vaccine. I'm assuming these are separate things. - Cervical cancer may not be a big source of death but, like breast cancer, it seems to kill relatively young people. If you were to define some notion of "Cost to Society" then 5000 mid-age women might be significant. - Pap smears may be low price but that may not be the same as low cost. Pap smears are costly in terms of patient time and discomfort (both physical and psychological). If HPV vaccinations eventually reduce the frequency of required pap smears then this can benefit women without bending the price/cost curve. Seth, I'm not disagreeing with your assessment, I don't know enough about the topic, but I'd re-focus the target of your skepticism before accepting it as fact.

Jason (2014-03-10 06:41:03)

What a narrow and — dare I say it — misleading critique. Let's take a look: 0. I'm not sure you're the ultimate arbiter of what has or will have "proven value," but the 2008 prize, shared between the HPV-related discovery and the discovery of HIV seems by several measures to be yielding practical benefit, of which vaccination is only one. Also, the prize identifies what the committees views as important discoveries within the basic science of physiology and medicine. As with much basic science, the value often doesn't emerge for a long time, or emerges from discoveries stemming from the original one. 1. This is true, although not exactly relevant to evaluating the Nobel prize. This is one application, and it will take time to discover if the vaccine affects cancer rates (among other things) over time. However, the data is already showing strong affects in a) infection with cancer causing strains of HPV, and b) cervical abnormalities. Perhaps you're right that some other cause will emerge to mean that cancer rates down the road persist despite these signposts that they won't, but if you have a compelling theory as to why, you haven't presented it here. 2. As is the case with most disease, mortality is not the only important measure. The vaccine and other advances stemming from this discovery has the potential to reduce a lot of morbidity, both physical, and psychological (see below). But I'd also add that in the third world, cervical cancer is a leading cause of death among low-income women. The wealthy U.S. is not a typical example. 3. Pap smears work pretty well in part because they have a medium-high false-positive rate, and false negatives matter relatively little because of the slow moving nature of the disease. Assuming of course that women get regular, expensive testing. For women who don't, the usefulness of a single pap goes way down. But there's good news on this front thanks to — yes, that's right — the discovery that certain strains of HPV cause cervical cancer. New testing that detects the actual strains of infection increases the accuracy of detection, and should decrease the needed frequency of screening. So in addition to reduced morbidity from actual cancer, women should experience less physical discomfort from screening and from unnecessary interventions. It will also reduce psychological morbidity by reducing the

number of false positives. These advances should also reduce the cost of screening while increasing the convenience, which means more women in poor countries should be able to get screened, saving more lives and preventing more suffering. 4. The vaccine doesn't protect against non-cancer causing strains. It protects against the most common cancer-causing strains. You're right that there isn't long-term data yet, but I'm not sure I understand your point. We shouldn't promote vaccination because it's not 100 % effective? No vaccine is 100 % effective. We shouldn't promote a vaccine shown to reduce infection rates of cancer-causing strains and reduce cervical abnormalities because... why exactly? So in summary, the discovery that HPV strains lead to cervical cancer has no predictable practical benefit except for: leading to improvements in screening that will reduce mortality, reduce morbidity, and save money; leading to a vaccine that reduces infection rates, reduces morbidity, and will likely — in 30 years or so — show reductions in cervical cancer mortality; and also vastly increasing scientific understanding of the mechanisms of a type of mutagenesis. I don't know if you're a Monty Python fan, but the example of the Romans and the aqueduct springs to mind.

Jason (2014-03-10 06:44:24)

Oh, who could resist: <https://www.youtube.com/watch?v=ExWfh6sGyso>

as (2014-03-10 12:23:18)

It's important to know whether venereal warts causes cervical cancer whether the vaccine works or not because it illustrates the danger of promiscuity. Getting a Pap smear done is a terrible thing. You have to go to a doctor's office, get naked, put on a paper gown, lie down on a bench and put your feet up in stirrups. Then the nurse sticks a long metal thing in your vagina in order to scrape your cervix. It would be a good idea to tell girls that cervical cancer is caused by a venereal disease and that they don't have to get a pap smear done every year if they're sure they haven't been infected with the HPV virus. The recommended Pap smear intervals have changed. They used to say get it done every year, but then it was changed to every three years if your previous ones hadn't shown any irregularities. It was probably performed too frequently for many women. If a doctor or nurse finds out that you don't get regular check-ups at the gyno, they jump on you (out of concern I understand) to get a Pap smear done. They never tell you about the connection to venereal disease. I used to go to a dermatologist regularly and they would always ask me about my last Pap smears. I also know women (like my mother and her friends) who NEVER go to the gynecologist and same thing, they get yelled at on the rare occasion they do go to a regular doctor for something.

as (2014-03-10 12:43:13)

HPV also causes oral cancer and anal cancer. People don't usually get Pap smears in their throat or buttohole. Seth: Let me ask you the same question. How do you know that HPV causes oral and anal cancer? All that's been observed is a correlation, as far as I can tell. What about the possibility that early stages of the cancer make HPV infection more likely?

as (2014-03-10 12:58:56)

Chastity is the issue at hand here, correct? If a woman gets cervical cancer, it means that (1) she was bad (2) the man was bad or (3) they were both bad. What if they lied about their chastity or faithfulness? [1]"Roving Mates Called Factor In Cancer"

1. <http://www.nytimes.com/1996/08/07/us/roving-mates-called-factor-in-cancer.html>

Seth Roberts (2014-03-10 13:04:58)

Jason, do I say "we shouldn't promote a vaccine because it's not 100 % effective?" No, I say that treatments should be tested before they are applied to large numbers of people. Since when is that controversial? Such tests will make clearer the relative size of costs and benefits. Surely you know that the assumption you make here – you assume that costs are small relative to benefits, since all you talk about are benefits – has been wrong dozens of times in medical history. Dozens of popular treatments (at least) were stopped or drastically scaled back after it became clear their costs outweighed their benefits. Mammograms are the latest example where it has become clear that the cost/benefit ratio is substantially worse than expected. Also, why are you sure that HPV infection (infection with certain strains) causes cervical cancer? What about the possibility that early stages in cancer progression make HPV infection with those strains more likely? Lack of certainty that HPV infection causes cervical cancer is another good reason to test the effect of vaccination.

Joe (2014-03-10 13:22:56)

as Says: "HPV also causes oral cancer and anal cancer" That is one powerful little virus! It shouldn't be long now before "global warming" will be blamed on HPV, too, merging two of the biggest scientific hoaxes of all time. Jason: "the 2008 prize, shared between the HPV-related discovery and the discovery of HIV seems by several measures to be yielding practical benefit, of which vaccination is only one." What that particular prize actually identifies is the moment in time when many previous laws of science were turned on their heads. When correlation would now essentially mean the same thing as causation. When the scientific method would mostly be discarded. When historically proven and effective scientific techniques would now simply be ignored, like Koch's Postulates. When viruses and retroviruses would now be deemed capable of doing things they absolutely are not capable of doing. When the "virus hunters" and BigPharma won the battle for control of the scientific paradigm. A sad day indeed.

as (2014-03-10 13:58:29)

Seth: *Let me ask you the same question. How do you know that HPV causes oral and anal cancer? All that's been observed is a correlation, as far as I can tell. What about the possibility that early stages of the cancer make HPV infection more likely?* "The first was posited by a doctor in Florence in 1842. He noticed that prostitutes and married women died of cervical cancer, but nuns almost never did. Though he might have discerned that it was sexually transmitted, he was thrown off by another fact: Nuns often died of breast cancer. His conclusion was that nuns' corsets were dangerously tight." [1]Link Oral and anal cancer: you get the cancer where you perform the sex act, right? Seth: More associations. I don't see how that answers my question.

1. <http://www.nytimes.com/2006/08/30/health/30iht-snvaccine.2638963.html?pagewanted=all>

as (2014-03-10 15:03:54)

Cervical cancer is also on the list of AIDS defining illnesses.

Joe (2014-03-10 15:18:19)

as Says: "Cervical cancer is also on the list of AIDS defining illnesses." But only with a positive test for HIV antibodies. Cervical cancer with no HIV = cervical cancer. Cervical cancer with HIV = AIDS. Does that make any sense to you?

as (2014-03-10 15:36:24)

Joe Says: *March 10th, 2014 at 3:18 pm Cervical cancer with no HIV = cervical cancer. Cervical cancer with HIV = AIDS. Does that make any sense to you?* If you have HIV but not HPV, would you get cervical cancer? (I realize such a person is unlikely to exist). If you don't have HPV, would you ever get cervical cancer? If a person with HIV develops Kaposi's sarcoma or cervical cancer, what does that mean? Could they have developed Kaposi's sarcoma without being infected with herpesvirus 8?

Joe (2014-03-10 16:02:10)

as Says: "If you have HIV but not HPV, would you get cervical cancer? (I realize such a person is unlikely to exist)." No, because neither virus can cause cancer. "If you don't have HPV, would you ever get cervical cancer?" You could, yes, but it would have nothing to do with HPV. "If a person with HIV develops Kaposi's sarcoma or cervical cancer, what does that mean? Could they have developed Kaposi's sarcoma without being infected with herpesvirus 8?" A person with KA almost certainly got it because of long-term "popper" abuse (amyl nitrate), plus a weakened immune system (probably caused by additional recreational drug abuse). <http://www.duesberg.com/media/jlpoppers-3.html> And no one really knows how women get cervical cancer, no matter what he or she might tell you. It's a disease of older women, yet only a very tiny fraction of them actually die from it. If a woman has routine Pap smears, it's almost impossible to die from it.

as (2014-03-10 21:10:57)

Seth: *More associations. I don't see how that answers my question.* Nuns don't get cervical cancer, but they do get another female cancer and that is breast cancer. It's not that they live some super healthful lifestyle where they don't get cancer at all like hunter gatherers. Prostitutes get cervical cancer. The more a man cheats, the more likely it is that his wife will get cervical cancer. The cervix is in the female genital area. This makes it seem like cervical cancer is caused by a venereal disease. When people have sex in the mouth or in the butt, they get the cancer in that area instead. I don't understand why you don't find the HPV - cervical cancer link plausible. Seth: I do find it plausible. But I also find another explanation worth considering.

Jason (2014-03-10 22:12:07)

Contra Seth's argument, there's very little controversy about the HPV-cancer link. (Nice summary here: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1769629/>) I'm not enough of an expert to find holes in the molecular genetics research (and neither is Seth), but my rudimentary understanding is that the evidence goes well beyond mere association. Not to mention the emerging medical literature that demonstrates reduced cervical abnormalities in the vaccinated population, which pokes a pretty big hole in Seth's alternative theory about cancer leading to infections rather than the other way round. Speaking of that alternative theory, let's look at it in the context of the evidence. Seth is suggesting that cervical cancer develops in some undetectable form of the disease (which I'm not sure is even possible in how we define cancer), remains latent for years and years showing no physical symptoms except HPV infections, until finally it becomes detectable — and just by coincidence — tends to do so in women with higher viral load from HPV infection. Is that possible? I suppose. Is it plausible? Not very. Is it more plausible than the current prevailing theory? Certainly not. Seth: In general, cancer develops very slowly. One theory is that four different mutations are required for a cell to become cancerous. The first three mutations have no obvious effect. This is not terribly controversial, since most cancer increases as the fourth power of age. I haven't been able to find how cervical cancer changes with age.

Robin (2014-03-11 02:32:31)

Nobody seems to have mentioned that the HPV vaccination has led to a small number of otherwise healthy young women/girls having severe reactions and either dying or ending up in a pretty bad state. As a father of two young girls, I'm super-focused on knowing a hell of a lot more about so-called vaccinations before they go anywhere near my kids. Scaremongering? Well, it seems that measles is pretty low in the mortality stakes amongst those who get it and are not either immune-compromised and/or malnourished. Why then are most national "health services" so relentless in their characterisation of measles as a terrible disease, seemingly up there with tetanus and cholera, that needs endless resources and attention to stamp it out?

Jason (2014-03-11 07:33:54)

Robin: Nobody has mentioned it because the publicized cases don't hold up to scrutiny. That doesn't mean the vaccine is 100 % of course. Nothing is. As for your point about measles, you're falling victim to a classic misdirection technique: focusing on mortality to the exclusion of all other harm from disease.

Joe (2014-03-11 08:55:17)

as Says "Nuns don't get cervical cancer, but they do get another female cancer and that is breast cancer. It's not that they live some super healthful lifestyle where they don't get cancer at all like hunter gatherers." Nuns lead healthy lives. They don't smoke. They don't abuse drugs. They generally eat healthy foods, and not too much of it. They get lots of sleep. They don't have promiscuous sex. And they're generally happy, stable people (except for Sister Mary Catherine, my 2nd grade teacher, who whacked me with a ruler almost every single day). That's why nuns practically never get cervical cancer. Unfortunately, they also have a much higher incidence of breast cancer than married women, because early pregnancy is protective against cancer. And hunter-gatherers did get cancer, although it was very rare. "Prostitutes get cervical cancer." Because they are promiscuous, abuse recreational drugs, eat poorly, get little sleep, take antibiotics prophylactically, have severely compromised immune systems, etc. "When people have sex in the mouth or in the butt, they get the cancer in that area instead." The vast majority of people (perhaps as high as 99.99 %) who have sex in the mouth or the butt never get cancer in those areas. "I don't understand why you don't find the HPV - cervical cancer link plausible." Unless you believe that correlation is the same thing as causation, there's no reason to believe it. There is no scientific proof that HPV causes cervical cancer. There is only correlation.

Joe (2014-03-11 09:09:21)

Jason: "Contra Seth's argument, there's very little controversy about the HPV-cancer link" That's a little like claiming there's a "97 % consensus" on global warming. :) <http://wattsupwiththat.com/2013/11/20/the-97-consensus-myth-busted-by-a-real-survey/> There is all kinds of controversy about the cause of cervical cancer, HPV, etc., but you have to be willing to look for them. Note: It's just a hunch, but I think you'd probably say the same thing about, say, statin drugs, too, right? :(

Joe (2014-03-11 09:15:22)

Robin: "Nobody seems to have mentioned that the HPV vaccination has led to a small number of otherwise healthy young women/girls having severe reactions and either dying or ending up in a pretty bad state. As a father of two young girls, I'm super-focused on knowing a hell of a lot more about so-called vaccinations before they go anywhere near my kids." Good for you! Educate your girls, do your best to raise them to avoid recreational drugs, unhealthy lifestyles, etc., urge them to get regular Pap smears, and they'll have a greater chance of being struck down by lightening than by cervical cancer.

as (2014-03-11 11:24:18)

Joe Says: *urge them to get regular Pap smears* I would never urge any girl to do that. A hand in the vagina is a terrible thing.

Robin (2014-03-11 11:40:14)

Jason wrote: "Robin: Nobody has mentioned it because the publicized cases don't hold up to scrutiny. That doesn't mean the vaccine is 100 % of course. Nothing is. As for your point about measles, you're falling victim to a classic misdirection technique: focusing on mortality to the exclusion of all other harm from disease." The publicised cases DO hold up to scrutiny. Not all of us here are in the US and outside the US, for example in Denmark and New Zealand, there are cases of healthy young women reacting severely to Gardasil. To be clear: it is uncommon, but measles mortality is minuscule also. Now, measles and other harm. What, exactly, are you talking about? Gambling, alcohol and tobacco are fully legal, contribute to GDP, raise significant amounts of tax, and result in massive, widespread harm to society that studies show is acute and enduring (alcoholics are a disaster for their immediate and extended families, and the relationships of the same people with others). A life in perspective is about appropriate responses to risks. What risk are you referring to that measles causes that is so devastating, that is worth the concern, cost, adverse reactions, and risk of vaccine use where there is no long-term knowledge about it? As for "misdirection technique"s, I think you are referring to the Straw Man fallacy, and if so I utterly reject this. The measles issues is directly relevant to this discussion. However, YOU are referring generally to general health benefits of measles vaccinations. What are you talking about?

Robin (2014-03-11 11:42:26)

as wrote" "Joe Says: *urge them to get regular Pap smears* I would never urge any girl to do that. A hand in the vagina is a terrible thing." I can't honestly work out whether you are serious (scary; what is a pap smear compared with terminal cancer? I have a prostate DRE every year. Not my idea of fun, but better than being unlucky and ignorant) or just joking!

Robin (2014-03-11 11:43:11)

minuscule → miniscule

Joe (2014-03-11 11:47:16)

as Says: "I would never urge any girl to do that." That's supposed to be a joke, right? Or do you just prefer that they die?

as (2014-03-11 12:35:40)

I'm serious. It's important to tell girls that cervical cancer, oral cancer, and anal cancer are the outcome of venereal diseases. Ectopic pregnancies too. I would never recommend a hand in the vagina every year or every three years or whatever the new standard will be.

Joe (2014-03-11 13:06:38)

as Says: "I'm serious. It's important to tell girls that cervical cancer, oral cancer, and anal cancer are the outcome of venereal diseases." Even when there is no scientific proof that they are? And not even bother to tell them what can happen to them if they end up destroying their immune systems, by abusing recreational drugs, alcohol, smoking, taking antibiotics prophylactically, not getting enough sleep, good nutrition, etc? Just tell them to "get this little vaccination, honey, and you can have all the sex you want, with as many men as you want, in as many ways as you want"? You do realize that even the HPV = cervical cancer supporters recommend that women get routine Pap smears, right? That's right. Gardasil or no Gardasil, they recommend routine Pap smears. Why do you suppose that is? "I would never recommend a hand in the vagina every year"

But getting a useless vaccination every few years, for perhaps the rest of their lives, a vaccination that may have already killed over 100 girls and harmed 20,000 others, that's okay, eh? Wellalrightyhen!

Seth Roberts (2014-03-11 13:07:05)

"The publicized cases don't hold up to scrutiny." You mean, unless you can prove that New Product X has caused harm, the public should not learn about cases where it may have caused harm? Yet the benefits of New Product X should be widely publicized, even though the benefits too are not proven? And they call this "evidence-based medicine". A better name would be "good-news medicine".

Jason (2014-03-11 21:38:22)

Robin: What I mean by misdirection in this case is this: focusing on measles mortality as the sole measure by which we evaluate whether or not the measles vaccine is 'worth it' is a strategy to draw people's attention away from the entirety of the measles disease burden on the infected, their families, and society. Robin and Seth: When I say the cases don't hold up to scrutiny, I mean the evidence linking these reports doesn't rise above the level of coincidence. Not even to the level of association that Seth insists is inadequate to connect a pathogen to disease. (Talk about a double standard...) As to Seth's other point, no, of course I wouldn't agree with such a broad statement about proof, and I don't think many people would. Anecdotes in and of themselves represent a pretty low level of evidence, but they are evidence. But an anecdotal case of a young woman who died within 72 hours of receiving a vaccine is not in and of itself evidence of harm from the vaccine and more than an anecdotal case of a young woman dying within 72 hours of having a bagel is proof of harm from the bagel. Back to Joe... it really depends on how you define controversy, doesn't it? Do I consider a few people whose arguments rely on willfully ignoring or misrepresenting evidence to be adequate to call something controversial? No, I guess I don't. At least as you've represented them, your arguments refuting the HPV-cancer link a) ignore much of the evidence base, perhaps intentionally; b) rely on theories that were flawed even when produced 100 years ago, long before the science behind much of the current evidence was even developed; and c) don't actually offer much of an argument beyond that you just don't believe the existing evidence. To me, that's not a controversy. Or at least, it's not a scientific controversy. But people try to call the science in the question to back up political arguments that they know aren't defensible purely on political grounds. On the statins question, you might be surprised. Purely in terms of evidence, there doesn't seem to be much controversy that for primary prevention, statins aren't very useful, and certainly aren't justified based on the number needed to treat to prevent a cardiac event. There's controversy about whether or not to change current clinical recommendations, but again, that's not really a scientific controversy. It's a political one. (Side note for anyone reading who found this because of statins: the evidence in favor of statins is much stronger among persons who have already had a heart attack.) I don't object to a healthy skepticism about science. That science often turns out to be wrong is a feature, not a bug. What I do object to is the attempt to delegitimize scientific findings merely because they are inconvenient or unpalatable to a political or cultural viewpoint.

Jason (2014-03-11 21:46:02)

Also, Seth, I'm not able to find a name of your four mutations theory, so I can't read much about it. But even if that were the case, it doesn't increase the plausibility of your alternative theory in the context of the observed data. If anything, it makes the virus-cancer link seem more plausible, since it would provide an additional explanation of how an infection today could set off a chain of cellular change that results in cancer many years later. Seth: Surely you know that cancer increases as the fourth power of age. Look into how that is explained.

Retired now (2014-03-11 23:18:00)

I think what irritates me about the whole vaccination debate is that medicine says it is now evidence based, but what it considers to be evidence depends on the political correctness of the belief. As a now grandparent I would like to see the RCTs which prove efficacy and safety of any vaccine given. But that data is not actually available. Just asking for it raises the hackles of any medical person who can't provide it. They say "trust me" and frankly I no longer do. Association is not causation and while medicine demands proper RCTs for any alternative medical treatment they are more than prepared to accept association when it comes to vaccines. What made me really cautious about the HPV vaccination outcomes is that the doctors in sexual health clinics were claiming reduction in cancer within two years of the vaccine's introduction and various groups of docs have

made that claim at least annually since then. Anecdotal evidence isn't acceptable in the place of RCTs. I want to know that the RCTs have been done over a decade or more for both cancer outcomes and in relation to safety. Noone has been able to give them to me. And I want to compare the numbers who report severe side effects with those who report cervical cancers. Only then can I make an informed choice.

Robin (2014-03-12 00:24:33)

Jason wrote: "Robin: What I mean by misdirection in this case is this: focusing on measles mortality as the sole measure by which we evaluate whether or not the measles vaccine is 'worth it' is a strategy to draw people's attention away from the entirety of the measles disease burden on the infected, their families, and society." Sorry, but public health authorities have set the agenda here with their focus on brain inflammation and death as "possible outcomes" when they are justifying their resource spend on vaccinating against measles. They cite absolute numbers of people infected, and numbers of people taken to hospital. They do not mention the percentage of those infected who are fully vaccinated (a varying yet significant percentage, and in my book a false sense of "security" is of particular concern) and that of those who visit hospital, as it would be very, very rare for these people to not be checked and sent on their way straight away. I should concede that we are probably coming at this from different angles. Although chicken pox can be vaccinated against (at a cost, with scaremongering, and failure rate) we chose not to do this and instead our kids have all had chicken pox. Was it a hassle? Yes. Was it unpleasant and inconvenient? Yes. However, we have some confidence that their resulting immunity is robust, and the negative factors are really not that bad. Chicken pox is referred to as a horrendous, scarring, terrible disease in media by those who are selling or promoting the vaccine. I find this unacceptable, but you might feel this is quite OK to mislead and scare people. Concerning anecdotal evidence, of course it is difficult to establish causality. However, when a healthy 12 year-old girl feels immediately unwell immediately after a Gardasil injection, and goes downhill from there and dies, this indicates to me that as a parent I want to know significantly more about this. Nurses complain about Gardasil that most often the girl faints, breaks out in hives, etc. immediately following. This isn't some random thing I read on the internet. I actually have had these conversations. Recently. I recognise your right to be concerned about the veracity of my claims, though. My general position is that I really don't think we know enough about the immune system, nor do we have enough data to make high-quality guesses. Add this to obviously unhealthy amounts of power held by pharma companies and their consultants, the economics of big health, etc., and the overall picture isn't a good one. I think Seth's post above does a better job of summarising the situation - apologies for the long-winded response.

Robin (2014-03-12 00:35:04)

Briefly, on measles, in NZ, people born before 1969 are considered to be completely immune to measles. Why? Because the measles vaccine was introduced somewhere around then. That is, the first one, that was supposed to provide life-long immunity. Except it didn't. So another one was introduced. A booster. Whooping cough is also an issue. Again in NZ, the situation was that mothers passed antibodies to their infants through breast milk, but this only occurred if the mother had had WC. A problem has arisen whereby mothers who were vaccinated against WC didn't pass the antibodies to their infants, putting their infants at significant risk. The Ministry of Health in NZ has recently realised this and started a programme of pregnant mother vaccination in an effort to address this introduced problem. Many actors in this context take the approach that by the time adverse issue are detected and the impact determined, that they will be long gone, unavailable to take responsibility, or at the most, legally beyond reach.

Seth Roberts (2014-03-12 01:06:28)

But an anecdotal case of a young woman who died within 72 hours of receiving a vaccine is not in and of itself evidence of harm from the vaccine any more than an anecdotal case of a young woman dying within 72 hours of having a bagel is proof of harm from the bagel.

You fear vaccines and bagels equally? Everyone I know fears vaccines more. If someone dies within 72 hours of a vaccination any sane person would increase how much they fear vaccines unless there is a more plausible cause of death. Any person with a good understanding of the logic of science would increase how much they fear vaccines unless it was proved that the cause



of death was something else. I suspect that in the anecdotes you refer to there was not a more plausible cause of death, much less a proven alternative cause.

Jason (2014-03-12 06:36:33)

Anyone with a good understanding of the logic of science? Really? Anyone with a good understanding of the logic of science would have a lot of questions before feeling confident connecting two events related only by proximity in time. Further, people with a good understanding of the logic of science don't demand lower standards of proof for the things they believe versus the things they don't believe. Seth: Science is about degrees of belief, not proof or "standards of proof". Nothing is ever proved or disproved. Evidence pushes belief in Idea X (such as "vaccines cause harm") up or down. If someone died within 72 hours of getting vaccinated that should increase belief in "vaccines cause harm" unless you are sure the person died for another reason. Where does your understanding of science come from? You have been poorly taught.

Joe (2014-03-12 10:58:59)

Jason: "Back to Joe... it really depends on how you define controversy, doesn't it?" Absolutely. Definitions matter. The best example of that is found in the "climate change" field. The climate alarmists began to use the term after it became apparent that the globe hadn't warmed for over 17 years. Another "inconvenient truth"? "Do I consider a few people whose arguments rely on willfully ignoring or misrepresenting evidence to be adequate to call something controversial? No, I guess I don't." Jason, I think you need to expand your list of reading material. It's not a few people, it's from experts around the world. And if I thought they were misrepresenting the evidence, I wouldn't put any credence into their claims or their research. "At least as you've represented them, your arguments refuting the HPV-cancer link a) ignore much of the evidence base, perhaps intentionally;" What evidence base? You have only a correlation upon which to hang your hat. A correlation shared by the vast majority of the population (HPV infection). Of which only a tiny fraction ever get cervical cancer and die. And which can essentially be totally avoided by getting regular Pap smears. And you somehow think it makes sense to "vaccinate" virtually everyone on the planet, with a "vaccination" that's never been proven to protect against anything, and which may have already killed over 100 girls and harmed 20,000 others. I think that's criminally stupid. "b) rely on theories that were flawed even when produced 100 years ago, long before the science behind much of the current evidence was even developed;" What theory would that be, exactly? And what "science" is there behind the current evidence? That somehow correlation now means causation? When did that become science? "and c) don't actually offer much of an argument beyond that you just don't believe the existing evidence." Oh, I believe the existing evidence. Unfortunately, the "evidence" consists of correlation, not causation. And anyone who's ever taken even Bio 101 knows that correlation isn't the same as causation. Your side wants to convict firemen for starting all those fires simply because firemen can be found at the scenes of most fires. My side demands more than that before we blame the firemen. Like real scientific (forensic) evidence. "To me, that's not a controversy. Or at least, it's not a scientific controversy. But people try to call the science in the question to back up political arguments that they know aren't defensible purely on political grounds. As far as I'm concerned (I can't speak for others here), this particular controversy isn't about political arguments. It isn't even about the subject of vaccinations in general. It's about the scientific method. It's about the wisdom of exposing millions of young women (and others) to the potential hazards (including death) of a vaccine that's never been scientifically proven to prevent any disease, including the disease the vaccine is purported to protect them against. A disease that has historically affected only older women, and which takes the lives of only a tiny fraction of them, and even that tiny fraction can be protected by getting regular Pap smears. What ever happened to: "First, do no harm"? "On the statins question, you might be surprised." Nothing surprises me anymore about the subject of statins. "Purely in terms of evidence, there doesn't seem to be much controversy that for primary prevention, statins aren't very useful, and certainly aren't justified based on the number needed to treat to prevent a cardiac event. " Yet one cannot visit a doctor anymore without being strongly urged to take a statin pill. Why? And just recently, the protocol has even been expanded to increase the target base by at least 40 %. Why? "There's controversy about whether or not to change current clinical recommendations, but again, that's not really a scientific controversy. Here's the scientific controversy: Statins were sold to the public as an easy and safe way to lower one's cholesterol, right? Everyone knew that high cholesterol was a risk factor (i.e., correlation) for heart attacks, right? But wait, numerous studies have now shown us that just as many people with "low" cholesterol levels have heart attacks as those with "high" levels. And that there is essentially ZERO difference in overall mortality. Especially if one understands the difference between relative risk and absolute risk. So they better come up with an explanation for that,

right, and quickly? So now they try to claim that for those with previous heart attacks, there is a barely measurable benefit. While they still try to push statins on all the rest of us! Why? Heck, once a person has reached the age of 65, those with higher cholesterol levels live longer than those with lower levels. That is, cholesterol appears to have a PROTECTIVE effect. So why in the heck would anyone want to artificially lower one's cholesterol? I just don't get it, and would you, if you could find a way to be honest with yourself. There may be something about statins that protect a small fraction of us against heart attacks, but it isn't by lowering our cholesterol. That's a scientific fact. It may have a slight anti-inflammatory effect, and more and more scientists are now attributing CHD to inflammation, so statins have been pushed on the public (as a whole) for exactly no good scientific reason. All thanks to an incorrect CORRELATION. Entire books have now been written about all the serious side effects of taking statin drugs (including death). Books such as "The Statin Damage Crisis," by Duane Graveline, M.D., "The Heart Revolution," by Killmer McNally, M.D., "The Great Cholesterol Myth," by Stephen Sinatra, M.D., and Jonny Bowden, Ph.D., "The Great Cholesterol Con," by Malcolm Kendrick, M.D., "The Cholesterol Conspiracy," David R. Hastings Lloyd, "You Will Not Die From A Heart Attack," by David S. Grimes, M.D., "Ignore The Awkward," by Uffe Ravnskov, M.D., Ph.D., "The Cholesterol Delusion," by Ernest N. Curtis, "Low Cholesterol Leads To Early Death," by David Evans and Tom Naughton, "The Truth About Statins," by Barbara H. Roberts, M.D., and many more. I guarantee to you, Jason, if you read all those books, they will have to put a gun to your head to get you to swallow a statin pill. [...] "I don't object to a healthy skepticism about science. I have no skepticism about science. I have a lot of skepticism about the people who claim to practice it. And far too many of them are dangerous to our lives. That's a scientific fact. "That science often turns out to be wrong is a feature, not a bug. What I do object to is the attempt to delegitimize scientific findings merely because they are inconvenient or unpalatable to a political or cultural viewpoint. I see no one here who fits that description. I do see a lot of people who QUESTION those so-called scientific findings, which is what scientists are supposed to do, right? In fact, it's part of their job description! And I object to the people who try to ridicule or belittle them for doing their jobs. For caring about their children. For questioning the "experts." For doing their own due diligence. And I think they should be roundly praised and congratulated.

Joe (2014-03-12 11:05:23)

Jason: "Further, people with a good understanding of the logic of science don't demand lower standards of proof for the things they believe versus the things they don't believe." Yet you're apparently totally satisfied with having correlation essentially mean the same thing as causation, forgoing the scientific method altogether. Sigh.

Joe (2014-03-12 11:17:18)

Jason: "Anyone with a good understanding of the logic of science would have a lot of questions before feeling confident connecting two events related only by proximity in time." But they are not only related by proximity of time. Getting a shot, and then being hit by a car, might fit your description. But getting a vaccination, and then almost immediately (or soon after) suffer symptoms (e.g., seizures, strokes, dizziness, fatigue, weakness, headaches, stomach pains, vomiting, muscle pain and weakness, joint pain, chest pains, hair loss, appetite loss, personality changes, insomnia, hand/leg tremors, arm/leg weakness, shortness of breath, heart problems, paralysis, itching, rashes, swelling, aching muscles, pelvic pain, nerve pain, menstrual cycle changes, fainting, swollen lymph nodes, night sweats, nausea, temporary vision/hearing loss, death, etc.) that could LOGICALLY be connected to having foreign proteins and chemicals injected into your body, would not. No, it's not proof. Any more than any other correlation can be considered proof, but it sure jumps out as something that demands more investigation before going too much further. "First, do no harm."

Joe (2014-03-12 12:17:20)

The next "Big Thing": PCSK9 inhibitors <http://www.ncbi.nlm.nih.gov/pubmed/23652470> They surely must already know by now that statins don't work by lowering cholesterol (and don't prolong life), yet here they are again, looking for yet another way to make money...er...lower cholesterol levels. It couldn't be that most of the statin patents are running out...could it? God help us all.

## Nick Szabo is Satoshi Nakamoto, the Inventor of Bitcoin (2014-03-11 05:00)

There were many funny things about [1]Leah Goodman's claim in Newsweek that a California engineer invented bitcoin. One was her observation that he put two spaces after a period – just like the inventor of bitcoin. Another was her observation that his relatives said he was "brilliant", without giving any examples. His brilliance had remained perfectly hidden – until now. A third was her conclusion that he was obsessed with secrecy and distrusted government – just like the inventor of bitcoin (according to her). Felix Salmon [2]was quite wrong when he said there are some very strange coincidences and the pieces of her argument "fit elegantly together". Actually, her argument is worthless from top to bottom. Salmon was right, however, when he said that the engineer's English shows he couldn't possibly have invented bitcoin. As Salmon says, Goodman ignored this itty-bitty problem.

Who is the inventor of bitcoin? I'm sure it's [3]Nick Szabo, a former law professor at George Washington University. This idea first surfaced a few months ago in [4]an anonymous blog post based on textual analysis. Szabo used certain phrases in the original bitcoin description far more than a bunch of other possible candidates. That is real evidence. The hypothesis that Szabo is the inventor passes several other tests as well:

1. Right time zone. The original bitcoin postings appeared to come from the Eastern (United States) time zone. Szabo lives near Washington, D. C.
2. Prior to bitcoin, he had similar ideas. As far as I can tell, his previous ideas were the closest of anyone's.
3. Yet the original bitcoin proposal didn't reference his work. The usual reason for not mentioning a predecessor's work is that you want more credit. Yet the creator of bitcoin didn't want credit. Failure to mention Szabo's work is so strange it may have been Szabo's way of telling insiders he's the inventor. In other words, this fact makes sense if Szabo is the inventor. It remains unexplained if anyone else is.
4. Szabo failed to get excited when bitcoin emerged. It was based on his work (more or less). Like everyone, [5]including me, Szabo had been [6]told countless times that his ideas were worthless, crazy, stupid and so on. ("Money just doesn't work like that, I was told fervently and often.") Because of that treatment, I greatly enjoy pointing out confirmation of my ideas. It's such a fundamental pleasure there's a word for it: glee. If he wasn't the inventor of bitcoin, Szabo should have gleefully followed its progress, pointing out over and over how this showed his original ideas were right. He didn't do this. Again, this makes sense if he was the inventor – he didn't want to draw attention to how close bitcoin is to his published ideas. It remains unexplained if anyone else is.
5. The clincher, for me, is that he wrote [7]an article about the emergence of money that is compatible with [8]my theory of human evolution. His article says money emerged from collectibles. Collectibles are an important part of my theory. I say they emerged because they helped skilled artisans, who were innovators, make a living. For most people, collectibles are trivial, whereas I've written often about [9]the Willat Effect, which I believe is the psychological rule that created them. It isn't easy to be consistent with my theory. I've read dozens of theories about human evolution. Whenever they explain the same things as mine (e.g., evolution of language), they have been inconsistent with my theory. Two examples are Jared Diamond's ideas and Daniel Dennett's ideas. Szabo's essay is the only the second example I have seen of ideas that fit mine. [10]The aquatic ape theory, which is about what happened before the events of my theory, also fits; Szabo's ideas are about what happened after the events of my theory. Szabo's ideas about the emergence of money are very non-obvious (especially because you have to realize the centrality of collectibles) and are compatible with a theory he cannot have heard of. I doubt anyone agrees with me that compatibility with my theory is a great plus but it is obvious that if you understand how money began, you are in a much better position to invent a new form of money than if you don't. The difficulty of mining bitcoins corresponds to the difficulty of making collectibles. You could randomly pick anyone, including cryptographic experts, and the probability would be extremely low they have a good theory of how money began. Yet Szabo does.

I ignore the coincidence of initials: NS and SN (or NS).

Szabo's achievement is good news for me because we have a similarity. He was a law professor. They are not supposed to invent new and useful things. No law professor before Szabo invented anything remotely as new and potentially important as bitcoin. I am a psychology professor. They are not supposed to make useful discoveries about health. I have made discoveries/inventions about health that are certainly new and might some day be important, such as the Shangri-La Diet and [11]the underlying theory, [12]the effect of morning faces on mood and [13]daily brain testing.

1. <http://mag.newsweek.com/2014/03/14/bitcoin-satoshi-nakamoto.html><http://mag.newsweek.com/2014/03/14/bitcoin-satoshi-nakamoto.html>
2. <http://blogs.reuters.com/felix-salmon/2014/03/07/the-satoshi-paradox/>
3. [http://en.wikipedia.org/wiki/Nick\\_Szabo](http://en.wikipedia.org/wiki/Nick_Szabo)
4. <https://likeinamirror.wordpress.com/2013/12/01/satoshi-nakamoto-is-probably-nick-szabo/>
5. <http://srblogfiles.s3.amazonaws.com/wp-content/uploads/2014/03/2012-The-reception-of-my-self-experimentation.pdf>
6. <http://unenumerated.blogspot.com/2011/05/bitcoin-what-took-ye-so-long.html>
7. <http://szabo.best.vwh.net/shell.html>
8. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>
9. <http://blog.sethroberts.net/category/human-evolution/my-theory-of-human-evolution-directory/willat-effect/>
10. [http://en.wikipedia.org/wiki/Aquatic\\_ape\\_hypothesis](http://en.wikipedia.org/wiki/Aquatic_ape_hypothesis)
11. <http://media.sethroberts.net/about/whatmakesfoodfattening.pdf>
12. <http://escholarship.org/uc/item/2xc2h866/>
13. <https://plus.google.com/u/0/communities/114619130176100669530>

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furcio (2014-03-11 07:07:44)

You are right. He is on my list on the top. I think the same.

Seth Roberts thinks it was Nick Szabo | Megalomania:me (2014-03-11 07:43:02)

[...] Seth Roberts thinks that Nick Szabo created bitcoin and he gives a few good reasons to back up his claim. [...]

gwern (2014-03-11 08:46:15)

> This idea first surfaced a few months ago in an anonymous blog post based on textual analysis. Szabo used certain phrases in the original bitcoin description far more than a bunch of other possible candidates. That is real evidence. No, it's bullplop. I criticized it at the time: [http://www.reddit.com/r/Bitcoin/comments/1ruluz/satoshi\\_nakamoto\\_is\\_probably\\_nick\\_szabo/cdr2vgu](http://www.reddit.com/r/Bitcoin/comments/1ruluz/satoshi_nakamoto_is_probably_nick_szabo/cdr2vgu) My criticism has been trapped in moderation since 1 December 2013. Oddly enough, the author has had time to approve 4 or 5 other comments, but \*not\* mine. I wonder why? > The original bitcoin postings appeared to come from the Eastern (United States) time zone. You should check the timezone metadata on the SVN repo & original whitepaper, and look at the location of the IPs in Finney's debug dump of the first Bitcoin transactions... > Szabo lives near Washington, D. C. Really? The address I have for Szabo is in Minnesota. Just because he's affiliated with GWU doesn't mean he lives in DC. > Yet the original bitcoin proposal didn't reference his work. This also 'proves' Wei Dai wrote Bitcoin, among others. > If he wasn't the inventor of bitcoin, Szabo should have gleefully followed its progress, pointing out over and over how this showed his original ideas were right. He didn't do this. Most of the Cryptography mailing list thought it was a questionable idea at best, and Szabo has many projects, just look at his homepage. > Szabo's achievement is good news for me because we have a similarity. He was a law professor. He was a cryptopunk decades before he went into law school. > 5. The clincher, for me, is that he wrote an article about the emergence of money that is compatible with my theory of human evolution. Once one has a theory, anything fits it. You are listing confirmatory evidence for Szabo,

but where's your \*disconfirmatory\* evidence? For example, the \_Sunday Times \_ just posted an article on Satoshi where Wei Dai pans the Szabo theory for the simple reason that no one has seen Szabo write C++ code, much less code dealing with cryptography & IRC & P2P networking. Coding is not a skill you pick up overnight! So, where is the evidence - any evidence - that Szabo knows C++? This is important. This is really really important, given that literally the only thing we know \*for certain\* about Satoshi is that he knows how to write C++ & English. If one's favored candidate can't be shown to be an experienced C++ coder, that's a fatal problem for one's theory. Seth: Szabo asked for help coding his ideas. No one disputes that.

milam\_command (2014-03-11 09:05:26)

Lively discussion of this post over on Reddit: [http://www.reddit.com/r/Bitcoin/comments/205396/seth\\_roberts\\_on\\_nick\\_szabo\\_being\\_satoshi\\_nakamoto/](http://www.reddit.com/r/Bitcoin/comments/205396/seth_roberts_on_nick_szabo_being_satoshi_nakamoto/)

alphageek (2014-03-11 11:55:30)

Szabo is the author of the paper. Finney is the author of the code.

dearieme (2014-03-11 12:10:32)

I am Spartacus. :)

jason y (2014-03-11 15:20:05)

gwern, if Szabo could write C++ code, what do you think the probability is that you wouldnt have found any evidence of it? i know you're just making up a number, but i trust your judgment.

gwern (2014-03-11 16:11:43)

> Seth: Szabo asked for help coding his ideas. No one disputes that. That evidence has already been explained and screened off: he still needs that help. Interesting as Bitcoin is, if you've read Szabo's papers (and not third-hand summaries), Bitcoin can still only be shoe-horned in as a very limited and partial implementation. Incidentally, does that reply mean you concede all of my other points? > Finney is the author of the code. Alphageek, have you compared the bitcoin-0.1.0 code to some of Finney's code like the RPOW server? > gwern, if Szabo could write C++ code, what do you think the probability is that you wouldnt have found any evidence of it? I don't know. I have not finished looking into the matter to my own satisfaction. My point here is that ability to write C++ is the single most important piece of evidence in favor of being Satoshi, and yet, almost every Satoshi speculator ignores it or dismisses it in a sentence. I'm reminded of [http://lesswrong.com/lw/35d/inherited\\_improbabilities\\_transferring\\_the\\_burden/](http://lesswrong.com/lw/35d/inherited_improbabilities_transferring_the_burden/) and [http://www.gwern.net/Death %20Note %20Anonymity](http://www.gwern.net/Death%20Note%20Anonymity)

anand srivastava (2014-03-12 04:24:45)

What do you think about the utility of gold and other collectibles in the modern times where you can trade with currency. Why do very rich people buy rare works of arts for huge amounts?

Brock in HK (2014-03-12 07:51:19)

I am Spartacus

Todd Fletcher (2014-03-12 10:02:03)

Agree 100 %. I read Szabo's website before reading Nakamoto's white paper and the frame of mind is the same, and it's a singular one; nobody else I have encountered had the same angle on it

Adam (2014-03-12 13:12:40)

About the initials: Szabo is a hungarian name and in hungary you always start with the last name, thus it's Szabo Nick (SN)

Gimme Dat Coin-Rough Draft | Liftoff (2014-03-13 00:37:38)

[...] <http://blog.sethroberts.net/2014/03/11/nick-szabo-is-satoshi-nakamoto-the-inventor-of-bitcoin/> [...]

## Assorted Links (2014-03-12 05:00)

- [1]progress on narcolepsy. It is an auto-immune disease. A vaccine against the H1N1 (swine flu) virus apparently [2]caused narcolepsy in France.
- [3]Was Angleton right? New book by Edward J Epstein.
- [4]Vivaldi's business plan. "It doesn't depend on pity; it doesn't begin with scarcity. It starts with people's talents and promise, not their neediness and suffering. It doesn't assume that the people with money have the answers and the solutions while the people without money have the problems and the tragedy." [5]Another excellent post by the same author (Samuel Wells).
- [6]Is the problem gluten or something sprayed on wheat? ([7]Here is a unconvincing rebuttal.)

Thanks to Patrick Vlaskovits.

1. [http://www.huffingtonpost.com/dr-michael-j-breus/narcolepsy\\_b\\_4682890.html?utm\\_hp\\_ref=healthy-living&ir=Healthy+Living](http://www.huffingtonpost.com/dr-michael-j-breus/narcolepsy_b_4682890.html?utm_hp_ref=healthy-living&ir=Healthy+Living)
2. <http://www.ncbi.nlm.nih.gov/pubmed/23884811>
3. <http://www.powerlineblog.com/archives/2014/02/ed-epstein-was-angleton-right.php>
4. <http://www.christiancentury.org/article/2014-02/vivaldi-s-business-plan>
5. <http://www.christiancentury.org/article/2013-07/what-s-really-killing-church>
6. <http://www.examiner.com/article/is-it-the-gluten-or-is-it-the-glyphosate>
7. <http://www.examiner.com/article/bogus-paper-on-roundup-saturates-the-internet>

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dearieme (2014-03-12 06:45:19)

The most important Soviet defector to British Intelligence (sorry, I can't remember his name) said that he chose the UK rather than the USA because he knew that US Intelligence was thoroughly penetrated.

## "Dawn of Genomic Medicine" (2014-03-13 05:00)

According to the headline of [1]a Yahoo News article, "the dawning of the age of genomic medicine" is upon us. There has been little impact of genomics but "that is finally changing," says Julie Steenhuysen, the author of the article.

I was curious how this would be argued. Here's how:

Sambrookes had been very athletic as a young teen, but as she matured, she noticed a heaviness in her legs. By age 20, running left her tired. At 40, she needed a pacemaker, just like her mother did at that age.

"I started thinking there is something to this," said Sambrookes, now 56, who lives in Michigan City, Indiana.

After some dead ends, she found McNally, who cast a wide net, testing for more than two dozen genes that could account for Sambrookes' heart and muscle problems.

The culprit turned out to be a mutation in a gene called Lamin that causes Limb-girdle muscular dystrophy. The disease can cause weakness and wasting of the muscles between the shoulders and knees. The mutation can also cause electrical disturbances of the heart.

McNally recommended Sambrookes replace her pacemaker with an implantable cardiac defibrillator that could protect against sudden cardiac death.

That proved to be the right call. Last August, Sambrookes' heart stopped three times. Each time, the defibrillator shocked her back to life.

"She literally tried to die three times," McNally recalls of her patient. "It still takes my breath away."

Because someone recommended a pacemaker be replaced with a defibrillator, genomic medicine is a good idea. The benefits of genomic medicine must remain elusive if you have to use such a poor example to support it.

1. [http://news.yahoo.com/dawning-age-genomic-medicine-finally-213006405--finance.html;\\_ylt=AwrBEiJE6hhTvjAAKkDQtDMD](http://news.yahoo.com/dawning-age-genomic-medicine-finally-213006405--finance.html;_ylt=AwrBEiJE6hhTvjAAKkDQtDMD)

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August (2014-03-13 06:02:18)

The forums on 23 &me led me to realize that I had a poor ability to process sulfur. It seems like 'genomic medicine' is all about making a pill or medical process, but the benefits seem to come from sharing experiences. 23 &me tries to discover things by survey, but like most surveys, there are often questions that I can't answer correctly because they've got multiple choice answers that don't quite apply.

Jack (2014-03-13 10:07:05)

What the lady had in common with her mother was that she probably grew up eating the same kinds of foods as her mother, and that they were both going to Medical Doctors who were on commission. Neither one probably tried changing their diet or pursuing natural cures. Chances are it had nothing wjatsoever to do with genetics. Genetics is nothing more than modern day voodoo, and a new scam to milk money out of unsuspecting gullible moroins who will put their health into the hands of modern witch doctors who only know how to prescribe poisons, un-needed tests, dangerous surgeries and dangerous radiation and other procedures.

JV (2014-03-13 11:04:46)

This just shows that the advances are being pushed by those of us interested enough to look for genetic answers. She states she found someone to test and help her "after some dead ends" - she actively pursued answers! For those of us willing to look hard there are emerging answers in our genetics at places like 23 and Me. I have been dismissed by doctors saying it isn't proven science yet but there is lots of information there if you are willing to dig - and a lot backed by research studies that have not become mainstream yet

Allan Folz (2014-03-13 12:16:23)

I'm confused about the defib vs. pacemaker distinction. They say the new defib saved her life on three occasions, but they leave hanging in the air whether the pacemaker had been doing the same thing in a prophylactic manner all along. It's like

saying a parachute saved your life three times, but your old way of making sure the aircraft had enough reserve fuel to reach its destination in event of a stiff headwind didn't accomplish anything. I can appreciate there might be additional advantages to the defib, but saying it saved your life vs. a pacemaker isn't necessarily one of them. I hate reporters. Are they really that logically challenged, or do they think the rest of us are idiots?

Retired now (2014-03-13 14:25:44)

To me the whole point of knowing one's genome is how to avoid turning potentially problematic genes on in the first place and if one has inadvertently turned them on how to turn them off. A drug or gadget isn't going to fix anything.

Seth Roberts (2014-03-13 14:57:42)

"I hate reporters. Are they really that logically challenged, or do they think the rest of us are idiots?" I think they have a job that, like almost all jobs, requires steady output. The fewer questions you ask the faster you can finish the piece. So long as the result is not obviously idiotic, they are okay. There is a tradition in science/health reporting of giving authorities a free pass - allowing them to say anything, no matter how self-serving, without criticism. I do wonder if their critical faculties erode from disuse. If years of not being critical cause them to lose the ability to be critical.

Seth Roberts (2014-03-13 14:59:39)

"The forums on 23 & me led me to realize that I had a poor ability to process sulfur." What happened next? Did you stop eating sulfur-containing foods? If so did anything change?

dearieme (2014-03-13 18:20:32)

When I had my first cardiac arrest I fell on top of my bike and the mechanical shock restarted my heart. Pushing a bike around with you everywhere in life would be inconvenient I admit. And you are not likely to gain advantage from it in bed, for example. But sarcasm aside, I agree with Seth. You don't half weaken a case by citing feeble evidence.

JV (2014-03-13 20:20:24)

Pacemakers and defibrillators are not the same thing - a pacemaker alone will not restart a heart that has stopped completely - they only adjust the pace of a heart's rhythm. Although I believe they now have combined units that can perform both functions but if you don't have one of these types you don't get both benefits

Allan Folz (2014-03-13 21:00:22)

I understand they are not the same thing. What I don't understand, and what I'm asking is would her heart have likely stopped if it was connected to a pace maker. It's suspiciously convenient (well, to my cynical mind anyway) that within weeks/months(?) of her switching from a pace maker to a defib, the defib starts firing away, saving her life three times. OK, it could happen, and that's great if so, but it's just kind of hanging there in the story. I think that's called begging the question. No? Of course, I'm not a paid journalist. I could be wrong.

dearieme (2014-03-14 03:08:56)

I want to know what happened to Ma and Grandma. By implication they carried the gene. Did they suffer atrial fibrillation/cardiac arrests? Because if they did the recommendation to get an implanted defib would have been sensible without the genetic fol-de-rol.

JV (2014-03-14 07:40:17)

Good question about the relatives dearime, I agree the article seems incomplete. Also being saved by falling on your bike after cardiac arrest sounds like a one in a million type thing, you're a very lucky guy! Allan they probably replaced the pacemaker with a defib that could also pace her heart - I have a friend whose defib (after firing several times) was upgraded to one that could also pace - as his heart gets weaker it keeps him in a more regular rhythm to spare the damaged heart muscle as much as possible.



August (2014-03-14 14:33:32)

Initially I dropped anything I could associate with sulfur. I can handle some now, but I had overloaded my system. I started taking molybdenum, which is need for the enzyme. I notice beneficial effects immediately. I think anyone suffering I.B.S symptoms ought to consider sulfur may at least be a contributor to the problem. Seth: Thanks, that's good to know. You mean these two events - (a) stopped sulfur and (b) started molybdenum - happened at the same time? What is "the enzyme"?

dearieme (2014-03-15 12:44:44)

The Old England Journal of Medicine comes up trumps again! You should supplement your bike (for outdoor use) by having a bright wee daughter, for indoor use. <http://www.dailymail.co.uk/news/article-2581537/Schoolgirl-Izzy-McCarron-9-saves-fathers-life-kicking-chest-heart-stopped.html>

### Assorted Links (2014-03-14 05:00)

- [1]Magnesium associated with reduced arterial calcification
- [2]Sarno method for treating muscle pain compared to other methods. "My surgeon who had been an NBA team physician assured me I had a 90 % plus chance of returning to my life as it had been. However, eight weeks after the surgery I was WORSE."
- [3]Are old people in Great Britain living shorter lives because of prescribed drugs?
- [4]Some cancers detected by mammograms apparently disappear without treatment.

Thanks to Steve Hansen.

1. [http://www.cpmedical.net/articles/magnesium-intake-associated-with-decreased-arterial-calcification?utm\\_content=magnesium-intake-associated-with-decreased-arterial-calcification&utm\\_source=bn20140225m&utm\\_campaign=bn&utm\\_medium=email&utm\\_term=ctype-M](http://www.cpmedical.net/articles/magnesium-intake-associated-with-decreased-arterial-calcification?utm_content=magnesium-intake-associated-with-decreased-arterial-calcification&utm_source=bn20140225m&utm_campaign=bn&utm_medium=email&utm_term=ctype-M)
2. [http://www.tmswiki.org/ppd/My\\_Victory\\_Over\\_Pain,\\_by\\_Baseball65](http://www.tmswiki.org/ppd/My_Victory_Over_Pain,_by_Baseball65)
3. <http://drmalcolmkendrick.org/2014/02/22/a-ghost-in-the-machine/>
4. <http://archinte.jamanetwork.com/article.aspx?articleid=773446>

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Mark (2014-03-14 06:35:47)

Seth, That magnesium study has precisely the same problems as the Willett studies that we had been discussing. Look at Table 1. Across the board, almost every indicator of health (except physical activity, but more on this below) increased monotonically across the magnesium quartiles. The folks in the highest quartile were inherently healthier than those in the lower quartiles. This inherent (i.e., unmeasured) difference cannot be adjusted for in statistical models. Incomplete adjustment for "potential confounders" (or even "known confounders") can just as easily increase the net confounding bias as reduce it. Regarding the physical activity measure, I'm skeptical. They measured it in hours per day, and the averages ranged between 4.5 and 4.9 (hours per day!!) across the quartiles. I'd wouldn't put much weight on that one! I wouldn't use this study as a reason to start taking magnesium!

dearieme (2014-03-14 12:44:23)

Ahoy, Seth [http://pipeline.corante.com/archives/2014/03/14/going\\_after\\_poor\\_published\\_research.php](http://pipeline.corante.com/archives/2014/03/14/going_after_poor_published_research.php)

Seth Roberts (2014-03-14 14:04:44)

The real problem isn't the research that is done (which is easy to ignore), it is the research that isn't done. E.g., the narrowness of research at medical schools. Ioannidis has never shown any sign of understanding that.

dearieme (2014-03-14 14:46:58)

Ahoy Seth, Ben Goldacre seems to be admitting that his study of statin side effects is on a par with much "Climate Science" i.e. it's twaddle based on lousy data. <http://www.theguardian.com/science/blog/2014/mar/14/statins-side-effects-study-placebo-ben-goldacre> Why on earth would he choose to compromise his reputation with such rubbish? There's nowt so queer as folk.

Seth Roberts (2014-03-14 18:53:27)

Ben Goldacre's misunderstanding, as revealed in that article, is epic. First, he doesn't explain how he knows statins do cause muscle pains. I'm sure they do – but how does Goldacre, the evidence snob, know? Second, his explanation for why his study got the wrong answer makes no sense. "Incomplete data"? All studies have incomplete data.

James (2014-03-17 08:42:40)

Antibiotics cause weight gain - but why? Could childhood antibiotic use promote obesity in later life? [http://www.nytimes.com/2014/03/09/opinion/sunday/the-fat-drug.html?\\_r=0](http://www.nytimes.com/2014/03/09/opinion/sunday/the-fat-drug.html?_r=0)

## **The Wisdom of Google: "Dessert", "Honey" and "Fruit" Closer to "Dinner" than "Breakfast" or "Lunch"** (2014-03-16 05:00)

I have [1]blogged many times that bedtime honey improves sleep. I learned this from [2]Stuart King, an Australian musician. He also pointed out we eat dessert with dinner more than with other meals. Which others who have described the honey effect [3]have not said. The dessert observation suggests that other sweets, not just honey, improve sleep. After I repeated the dessert observation, a friend said I of all people should know it isn't universal. The Chinese don't eat dessert, she said. Yes, I said, but where I lived in Beijing there seemed to be lots of sweets eaten in the evening, and lots of street vendors selling fruit in the evening.

The honey-sleep connection helped me improve my sleep in other ways. I found my sleep got better if in addition to bedtime honey I ate fruit (e.g., banana) an hour or so before bedtime. My sleep got even better if I ate something sweet, such as Yakult, an hour or so before that. Both observations implied that honey improved sleep because of the sugar. Nowadays I usually eat three sets of sweets: soon after dinner, mid-evening, and bedtime. I sleep very well every single night, better than ever before. These findings make sense if glycogen (stored glucose) is very important for sleep. My way of eating (three sets of sweets slightly spread out) may produce more glycogen at bedtime than similar ways of eating (e.g., eating the same sweets spread throughout the day).

Recently I realized that Stuart's observation about dinner and dessert made a prediction: the word dessert should be better associated with the word dinner than the words breakfast and lunch. (A lot of talking/writing consists of describing reality.) I used Google to test this prediction. I counted the hits returned when I searched "dessert dinner", "dessert breakfast", and "dessert lunch". The prediction turned out to be true: "dessert dinner" had a lot more hits than the other two combinations, even though breakfast, lunch and dinner are almost equally common.

I checked about forty other food words: Were they more associated with one meal than others? I found several interesting things.

1. It wasn't just dessert. Honey and fruit were associated with dinner more than breakfast or lunch. The size

of the association was very similar in the three cases. For almost all other food words I tested there was little or no association.

[4] 

Here are examples of little or no association.

[5] 

2. There were some surprising associations, shown here.

[6] 

No surprise that tea is associated with breakfast but why is potato associated with lunch? French fries? Why is nuts associated with dinner? Do nuts contain something that improves sleep?

For each food I computed a "dinner effect" meaning the  $\log(\text{dinner count})$  minus the average of  $\log(\text{breakfast count})$  and  $\log(\text{lunch count})$ . Here is a kind of histogram of those values.

[7] 

The outlier status of nuts, fruit, honey and dessert is clear.

These findings support (a) the original idea (because the original idea led to them), (b) the importance of the original idea (because the association is so clear) and (c) use of Google to learn what people do. Word associations are influenced by many things, no doubt; these results suggest actual behavior is a strong influence. Use of Google to study behavior is free, public, fast, and convenient.

I was surprised the results were so clear. I suspect the explanation is that sweets taste better closer to bedtime. Dessert, honey and fruit differ in many ways; the similarity of size of association suggests that the association is due to what they share (sugar).

I hereby give you permission to eat dessert with dinner.

1. <http://blog.sethroberts.net/category/sleep/honey-sleep/>
2. <http://stuartkingmusic.wordpress.com/>
3. <http://blog.sethroberts.net/2014/01/02/interview-with-mike-mcinnis-author-of-the-honey-diet/>
4. <http://blog.sethroberts.net/wp-content/uploads/2014/03/2014-03-15-google-food-basic-effect.jpeg>
5. <http://blog.sethroberts.net/wp-content/uploads/2014/03/2014-03-15-google-food-no-effect.jpeg>
6. <http://blog.sethroberts.net/wp-content/uploads/2014/03/2014-03-15-google-food-surprises.jpeg>
7. <http://blog.sethroberts.net/wp-content/uploads/2014/03/2014-03-15-google-food-histogram.jpeg>

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Jeremy (2014-03-16 08:11:03)

Breakfast seems to me the most commonly eaten sweet meal. Often breakfast is nothing but some pastry, cake, or dessert, in many countries (jam is a breakfast food, cereal, pain au chocolate, etc). Dinner is always real food perhaps followed by a desert,

but never just a desert like breakfast often is.

gwern (2014-03-16 08:55:53)

So, in your Anglosphere-customized-search-results, dessert is associated with dinner. ...did anyone actually doubt that? What happens when you look at Google results in, say, Urdu?

Sara (2014-03-16 10:26:53)

Very interesting post.

Adam (2014-03-16 13:57:56)

I got 5.6 million hits for "dessert" and "breakfast" in Chinese; 14.7 million hits for "dessert" and "dinner" in Chinese.

Adam (2014-03-16 13:59:29)

Tons of hits for honey and breakfast though! It seems drinking honey water for breakfast is very popular in the Chinese speaking world. Even my wife does it.

Jeremy (2014-03-16 15:24:58)

The problem is the word "dessert". The definition of that is something that comes after a meal, usually dinner. Do a search for "sweet" and I am sure it will come up more associated with breakfast than dinner. As I said above, breakfast is often primarily sweet while dinner is always non-sweet + perhaps some sweet at the end. Sweet in the morning seems far more prevalent than the other way around. Also, afternoon snacks are often sweet as well. It would seem, then, that traditionally, while dessert would often follow lunch or dinner, those meals were always largely non-sweet, and sweet was far more associated with early morning and afternoon eating and that sweet was only a minor part of evening eating.

Seth Roberts (2014-03-16 16:31:42)

The results for dessert are very close to the results for fruit and honey. All three should be explained the same way. Where is the word dessert defined as you say ("something that comes after a meal, usually dinner")? I cannot find a definition of dessert that includes "usually dinner" or something like that. That is not the meaning I learned.

Seth Roberts (2014-03-16 16:32:16)

yes, drinking honey with breakfast is very popular in China. I wonder if that has something to do with high rates of diabetes in China. Maybe the problem is not how much sweets they eat but when they eat them.

daz (2014-03-16 17:47:27)

another confounding factor, for some people dinner could be lunch... From wiki, "Dinner usually refers to the most significant meal of the day, which can be the noon or the evening meal. However, the term "dinner" can have many different meanings depending on the culture; it may mean a meal of any size eaten at any time of day.[1][2] Historically, it referred to the first meal of the day, eaten around noon, and is still occasionally used for a noontime meal if it is a large or main meal. However, the meaning as the evening meal, generally the largest of the day, is becoming standard in the English-speaking world." <http://en.wikipedia.org/wiki/Dinner>

dearieme (2014-03-16 17:47:28)

My childhood breakfast was porridge followed by either a kipper or bacon and eggs. The Dutch like ham and cheese at breakfast, in my experience. So that's the civilised world covered: maybe the rest eat jam.

daz (2014-03-16 17:59:04)

when i was growing up in the UK in the 70's, from memory, my mum called me in for dinner for the early evening meal, whereas my mates mum called him in for Tea (he had has 'dinner' at lunch time). & then there's the term supper as well, <http://en.wikipedia.org/wiki/Supper>

daz (2014-03-16 18:05:03)

since i've linked the wiki's for dinner & supper, i may as well add the Tea wiki link as well, that's Tea as meal (not as a drink), [http://en.wikipedia.org/wiki/Tea\\_\(meal\)](http://en.wikipedia.org/wiki/Tea_(meal))

mikimoonmouse (2014-03-16 19:39:58)

Seth, you are clearly no cafe drinker !

mikimoonmouse (2014-03-16 19:49:26)

In France there is a saying that breakfast in Germany is the beginning of a laborious day, while in France it is the end of a wonderful night. Maybe breakfast is a belated dessert.

dearieme (2014-03-17 15:40:24)

Ahoy, Seth. The OEJM speaks: <http://www.dailymail.co.uk/health/article-2582867/Saturated-fat-DOESNT-cause-heart-disease-all.html>

gwern (2014-03-17 16:13:05)

> I cannot find a definition of dessert that includes "usually dinner" or something like that. That is not the meaning I learned. I suggest getting a better dictionary. From the OED, first definition of 'dessert': > dessert > > (di'zɜ:t) > > Also 7-8 desert, 8 des-, disart, 9 desert. > > [a. F. dessert (Estienne 1539) 'removal of the dishes, dessert', f. desservir to remove what has been served, to clear (the table), f. des-, L. dis- + servir to serve.] > > 1. a.1.a A course of fruit, sweetmeats, etc. served after a dinner or supper; 'the last course at an entertainment' (J.). > > 1600 W. Vaughan Direct. Health (1633) ii. ix. 54 Such eating, which the French call desert, is unnaturall. 1666 Pepys Diary 12 July, The dessert coming, with roses upon it, the Duchesse bid him try. 1708 W. King Cookery 261 'Tis the dessert that graces all the feast. 1739 R. Bull tr. Dedekindus' Grobianus 96 If the Guests may pocket the Desart. 1834 Lytton Pompeii iv. iii, The dessert or last course was already on the table. 1846 J. Baxter Libr. Pract. Agric. (ed. 4) II. 69 The Medlar when in a state of incipient decay is employed for the dessert. 1875 Jowett Plato (ed. 2) III. 696 Pleasant kinds of dessert, with which we amuse ourselves after dinner. Seth: The quotations do not support the definition. They are consistent with "after a meal".

Kirk (2014-03-17 16:57:14)

I agree that the term 'dessert' is associated with dinner/supper. An alternative analysis would look at the number of 'defined' breakfasts on the published menus of 'diners' such as Dennys. (Note: this is an American analysis.) Glancing at the menu at dennys.com, I see 26 defined items in the Breakfast section (not including the last one, Breakfast Sides). Some are sweet, some are not. The sales figures probably aren't available, so one has to count simply by availability. Without looking at actual ingredients (using the names), I count seven as being primarily sweet (such as the French Toast Slam). But even those customers who order a non-sweet selection could spread jam on their bread and put sugar in their coffee.

## Heart Emergencies by Appointment at Mt. Sinai Hospital (2014-03-18 05:00)

[1]A recent *Bloomberg News* article looked into why Mt. Sinai Hospital in New York did a very large number of heart procedures, making its cardiologists very well-paid. One reason, the journalists discovered, is that patients had been told to lie:

On a pair of representative Sundays in 2012, 10 patients told ER workers they'd been instructed to arrive there before their cath-lab appointments, according to internal hospital correspondence. Two of them said they'd been coached to say they were having acute symptoms of heart disease, according to the exchanges.

Even more remarkable, the journalists found, was that many patients had cardiology appointments before they showed up at the emergency room:

Certain patients who showed up at Mount Sinai Hospital's emergency room on Sunday mornings stood out [because] they already had appointments. Each was scheduled for a procedure at Mount Sinai's catheterization lab, where cardiologists thread wires and tubes into blood vessels to detect disease and insert cardiac stents. The New York hospital's cath lab has regularly scheduled such emergencies-by-appointment, according to three doctors and another medical professional, all of whom said they had direct knowledge of the practice.

Larry Husten, a medical columnist at Forbes, [2]argues that this is an example of a widespread problem.

1. [http://www.bloomberg.com/news/2014-03-06/mount-sinai-cath-lab-takes-nyc-heart-emergencies-by-appointment.html#disqus\\_thread](http://www.bloomberg.com/news/2014-03-06/mount-sinai-cath-lab-takes-nyc-heart-emergencies-by-appointment.html#disqus_thread)
2. <http://www.forbes.com/sites/larryhusten/2014/03/06/what-ails-mt-sinai-hospital-ails-the-entire-us-healthcare-system/>

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dearieme (2014-03-18 07:46:22)

I originally read "The New York hospital's cath lab" as 'cash lab'.

Joe (2014-03-18 09:11:29)

That's just the tip of the iceberg. Stents now comprise 85 % of coronary interventions. Drug-coated stents cause even more blood clots than the non-coated ones, but, of course, bring in even more money for the hospital. For the past 15 years or so (after all this expensive intervention), heart attack rates have remained relatively constant. First, do no harm? Nah. First, let's make some money.

Karen (2014-03-18 10:11:53)

I don't see why this isn't enough to send people to prison.

Joe (2014-03-18 10:55:21)

Best-selling author Kevin Trudeau jailed for TEN YEARS as judge calls him an 'uncontrollable huckster' for selling fake weight loss tips <http://www.dailymail.co.uk/news/article-2582977/TV-pitchman-Kevin-Trudeau-get-s-10-year-sentence.html> Question: What's the difference between what Trudeau does and what a lot of BigMedicine and BigPharma do today? Stents (and other procedures, like tonsillectomies, Caesarian deliveries, etc.) that aren't needed (or that actually cause harm), drugs that aren't needed (or that actually cause harm), etc. I'm not aware of anyone losing his life because of Trudeau's false claims. The same can't be said of BigPharma and BigMedicine. They all defraud and con the public, but only Trudeau goes to prison? :( PS: Yes, I

know the real reason is that Trudeau violated several court orders, but you know what I'm talking about.

JM (2014-03-18 11:45:11)

Joe has a very good point - we have had Trudeau's case plastered across the Chicago newspapers recently. Part of the problem is that Big Medicine and BigPharma has everyone convinced, from most of the doctors on down through nurses and to the average citizen that things like stents and drugs save lives. And most people, if told that they need one of these things, are too frightened to say no or even ask questions about alternatives because they are convinced they are going to die without them.

Joe (2014-03-18 13:13:14)

I think I'll throw in BigGov, too, for things like "The Food Pyramid," "The Food Plate," "You can keep your insurance company. Period.", mass "swine flu" vaccinations, "global warming" hysteria, etc. Trudeau should have an awful lot of company in the dock, no?

Robin (2014-03-19 00:42:30)

Wow another example of how the "health" system in the US is well and truly f\*! %ed.

### **Truth to Power: Eric Lander's Reddit AMA (2014-03-19 05:00)**

A year ago, Eric Lander, who identified himself as "President and Founding Director of the Broad Institute of Harvard and MIT [and] one of the principal leaders of the Human Genome Project, directing the largest center in the international project" did a Reddit AMA (Ask Me Anything). One of the questions did not go as expected:

Question As an advisor to the President, what is being done or do you think will be done to increase the attractiveness of students finishing PhD programs in science?

Lander We need to shorten the time for getting a PhD and for a first faculty job. Young people should get out into the scientific world early, when they have lots of fresh ideas. We should encourage grants to young scientists and should encourage them to take big risks. When you're taking big risks, science is amazingly fun.

The response to this answer was very negative.

With all due respect, this is a ludicrous statement. . . The true problem is the way in which you fund science. You fund projects and proposals. In order to get these projects funded, the preliminary data has to be essentially the whole project being done. Then you fund at a 6 % percent line. It leads to cronyism in the peer review process and a general sense of despair in scientists. How about you radically change the funding system for PIs?

I too am disappointed with Dr. Lander's response to possibly THE most important question here regarding training basic scientists.

Do you truly believe this? . . . There is no reason to encourage more students to go into science if there is not enough government funding to support their careers.

Alas, this is not important. It just pleased me that someone questioned Dr. Lander's absurd claims, which he makes often. "We should encourage young scientists to take big risks". Yes, I agree, does he really believe this? Do he really believe that someone coming up for tenure should take big risks?

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Joe (2014-03-19 09:17:17)

"Question As an advisor to the President, what is being done or do you think will be done to increase the attractiveness of students finishing PhD programs in science?" Wear more makeup? Wear designer clothes? Yep, that ought to help. Sorry, I couldn't resist. :)

dearieme (2014-03-19 12:12:28)

I find it hard to see why spirited youngsters would want to be ground in the sausage machine that eventually spits out tenured jacks-in-office. Hell, you could be into your forties before you were able to tackle a project that you had chosen yourself for its intrinsic interest. It's a far cry from the best science lab there's ever been, with Ernest Rutherford's bright young men at the Cavendish. I'm very proud of persuading my daughter not, Not, NOT to do a PhD. Seth: A very smart Berkeley grad student in biology told me she had decided to leave academia after seeing up close what professors had to do – how hard they worked. She had entered grad school thinking she wanted to be a professor.

dearieme (2014-03-19 13:58:49)

Aye, Seth, when I left academia to work in industry my new colleagues could scarcely believe how much work I got through.

### **Cheap Accurate Home HbA1c Test (2014-03-20 05:00)**

Walmart sells [1]a kit for home measurement of HbA1c (brand name ReliOn) that costs \$9 and provides results by email. It's sold only at Walmart. I have been paying \$30 for the same measurement at a test center (about 30 minutes away). If you use insurance, copay might be \$15. Without insurance, a doctor's office test might cost \$90. The reviews suggest the test has roughly the same variability and average as a lab test. A few people had trouble getting enough blood on the dots but at \$9 there is plenty of room for repeat testing.

My blood sugar improved when I started to walk an hour per day and when I started intermittent fasting (eating about half as much as usual every other day). I noticed the effects with blood sugar tests but frequent HbA1c tests (say, once/week) would have been much better.

Diabetes has become an enormous problem in China, where 10 % of adults have Type 2 diabetes, roughly the same as in America. Americans often think obesity causes diabetes but this doesn't explain why smoking – which makes people thinner – [2]is associated with diabetes. People get diabetes who don't smoke and aren't fat. Whether anyone who walks an hour/day gets diabetes is less clear.

Thanks to Shant Mesrobian.

1. <http://www.relion.com/diabetes/a1c-test>

2. <http://www.ncbi.nlm.nih.gov/pubmed/11063954>



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Joe (2014-03-20 12:38:01)

Seth, this may be another example of how associations/correlations can lead us astray. What if smoking per se has nothing to do with getting diabetes? What if obesity per se has nothing to do with getting diabetes? After all, most smokers and most obese people do not have diabetes, right? "As a young surgeon, Peter Attia felt contempt for a patient with diabetes. She was overweight, he thought, and thus responsible for the fact that she needed a foot amputation. But years later, Attia received an unpleasant medical surprise that led him to wonder: is our understanding of diabetes right? Could the precursors to diabetes cause obesity, and not the other way around? A look at how assumptions may be leading us to wage the wrong medical war." [http://www.ted.com/talks/peter\\_attia\\_what\\_if\\_we\\_re\\_wrong\\_about\\_diabetes](http://www.ted.com/talks/peter_attia_what_if_we_re_wrong_about_diabetes) What do many smokers and many obese people have in common besides diabetes? What do the smokers and obese people without diabetes have in common? Etc.

Adam (2014-03-20 16:39:39)

Smokers and obese people have lower IQs: <http://jaymans.wordpress.com/2013/04/30/obesity-and-iq/>  
<http://www.reuters.com/article/2010/02/23/us-smokers-smarter-idUSTRE61M3UQ20100223>

Parser (2014-03-20 22:38:40)

Seth, perhaps clarify this sentence: "People get diabetes who don't smoke and aren't fat. " I couldn't parse it. Seth: Some diabetics (a) aren't fat and (b) don't smoke.

Jazi Zilber (2014-03-27 19:57:56)

There is a completely done at home within five minutes test <http://www.amazon.com/A1CNOW-SELF-CHECK-BAYER-HEALTHCARE-DIABETES/dp/B004N11OGQ>

Seth Roberts (2014-03-27 23:26:19)

if you buy 10 tests it costs \$15/test. Very interesting.

### Assorted Links (2014-03-21 05:00)

- [1]Why I am anti-Komen. "Do you think individuals who donated to Susan G. Komen foundation knew their money would be used to sue other charities who want to raise money like Prom was doing? . . . Once national news shone a spotlight on Komen's bullshit move, they backed off."
- [2]Cardboard standing desk
- [3]Alex Chernavsky finds no effect of soy on brain speed
- [4]Probiotic helps children. Notice that the study was done in Mexico City.

Thanks to Melody McLaren.

1. <http://getupswinging.com/2014/03/05/why-i-am-anti-komen/>

2. <http://www.fastcoexist.com/3027364/this-cheap-strong-cardboard-standing-desk-will-let-you-ditch-your-deadly-office-sitting>

3. <http://www.astrocyte-design.com/self-experimentation/brain-tracking-soy/index.html>

4. <http://well.blogs.nytimes.com/2014/03/17/probiotic-eases-ills-in-children/>

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Shelley (2014-03-21 11:35:15)

How are your sinuses? I was helped so much by your Baby Shampoo post. I am anti Komen for many reasons. Komen thinks Mastectomy, radiation, and chemo: Moderate and normal. Not eating meat: Radical and ridiculous. Komen uses 85 % of the \$ \$ they take in to make MORE money, not on "the cure" at all and they focus on drugs and "moderation" instead of what we all already KNOW will help prevent cancer—a low fat, plant-based diet!!!!!!!!! The pink ribbon on the KFC bucket of chicken was the last straw for me.

GB (2014-03-21 14:57:03)

Do we really KNOW that Shelley, or do we just think we know it because of some grand epidemiological studies and confusion over the healthy user effect? I'm certainly unconvinced. I mean, we KNEW 40 years ago that lowering saturated fat and increasing carbs would make us all healthy and free of heart disease and diabetes. Many of us still know it. And now we're all fat. From past presentations, Seth was (is?) eating half a stick of butter a day. I suspect reduction of processed foods and all the inflammatory crap in them is much more important than minimising animal protein.

GB (2014-03-21 15:02:37)

But totally agree with you on KFC, that stuff may well cause cancer

Alex (2014-03-21 19:38:03)

The rant missed other problems with Komen. For an organization that goes after other charities, and not just cancer groups, who use "for a/the cure," it doesn't care that much about a cure. It spends just 21 % of its budget on research. When my friend was diagnosed with inflammatory breast cancer seven years ago Komen didn't even have any information about it on their website. IBC affects younger women, has a high mortality rate, does not show up on mammogram, and is frequently misdiagnosed as an infection. It really needs the awareness push. Komen also decided in 2112 to stop giving money to Planned Parenthood, which for many women is the only place they can afford to get a mammogram. The backlash convinced Komen to reverse course, but it was an eye opener for many people who had supported the group until then.

Shelley (2014-03-21 20:32:08)

GB- Have you read the China Study? The research project culminated in a 20-year partnership of Cornell University, Oxford University, and the Chinese Academy of Preventive Medicine, a survey of diseases and lifestyle factors in rural China and Taiwan. More commonly known as the China Study, "this project eventually produced more than 8000 statistically significant associations between various dietary factors and disease." The findings? "People who ate the most animal-based foods got the most chronic disease ... People who ate the most plant-based foods were the healthiest and tended to avoid chronic disease. These results could not be ignored," said Dr. Campbell.

Tim S. (2014-03-22 02:02:16)

Interesting on the soya... Want to test myself, had been avoiding soya – Seth, can you email me the R code you use for your reaction time testing? Thanks! Tim Seth: I'm no longer distributing it for free. Sorry.

Joe (2014-03-22 08:38:26)

Shelley, have you read these <http://chriskresser.com/rest-in-peace-china-study> "Denise got hold of the raw study data and took it apart with a fine-toothed comb. And what she found is that the claims Campbell made in his China Study book are not supported by the data. She also found important data points Campbell never bothered to mention in the book because they didn't support his vegan agenda" Denise Minger dismantles The China Study: <http://rawfoodsos.com/2010/07/07/the-china-study-fact-or-fallac/>

GB (2014-03-22 12:38:01)

Cover to cover Shelley. When I mentioned 'grand epidemiological studies', that's the chief one I had in mind. I'm all for people doing whatever makes them feel healthiest, so best of luck to you. I've got some great friends who went vegan and feel the

best the ever have (hence why I read the book 5 years ago and did quite a lot of amateur research and self-experimentation afterward). But you shouldn't say 'what we all already know will help prevent cancer' based on that work, it cannot and hasn't proven anything scientifically. And the follow up trials haven't been enough to bring me around as yet. Again, the evidence for removing processed rubbish and large amounts of sugar seem much, much more clear cut. But good luck to you if you've found what works!

Teresa (2014-03-22 19:03:50)

Planned Parenthood does not perform mammograms. Never has. That was a made-up media sob story. Check your facts. That said, Komen's caving to political and media pressure in that widely publicized incident seems to have ticked off both supporters and critics of Planned Parenthood and prompted many to take a closer look at Komen.

James (2014-03-23 04:03:26)

An ethics committee stops an MS patient receiving HSCT (stem-cel transplant) treatment mid-course, and won't allow another to be treated, who then goes to Russia at great cost to receive the therapy: [http://clubtrotppo.com.au/2014/03/15/edicts-from-on-high-ii-ethics-committee-e dition/](http://clubtrotppo.com.au/2014/03/15/edicts-from-on-high-ii-ethics-committee-e-dition/)

James (2014-03-23 04:05:01)

As with CCSVI, the MS organisations aren't supportive of new treatments: <http://www.msaustralia.org.au/news/ms-australia-statement-autologous-hematopoietic-stem-cell-transplant-hsct-treatment> Blog of the second patient: <http://www.movingmountains2013.com/>

Shelley (2014-03-23 07:45:19)

Joe- Denise Minger? I believe she was apx 23 when she wrote her first rebuttal to the China Study, she is not a doctor, nurse or scientist and on one of her blogs she is self described as a tutor, free lance writer and website designer - are those adequate qualifications to provide a rebuttal to decades of unbiased peer reviewed research? I certainly don't think she is qualified. Whoever is backing Denise Minger, is she the best they can do? Can't they find a real doctor with decades of research to provide a serious rebuttal? My question to Denise Minger is, if you are as smart as you say you are and you're "community" gives you credit for, why can't you understand the plant based doctors you talk of are promoting a whole food plant based diet rather than a vegan diet? She is supposed to be brilliant, yet she seemingly cannot grasp the whole food plant based diet concept she is supposedly intelligent enough to debunk. If she was legitimate why not just be honest and straight forward about her information without playing games and trying to deceive? Is Denise Minger really the best the low carbers can come up with in their battle against the plant based doctors? They couldn't find a Dr. McDougall, Dr. Esselstyn or Dr. T. Colin Campbell type with professional stature and decades of research and field work to make their case? These days with the internet, Facebook and Twitter everyone with a camera is an expert on any topic regardless of their qualifications, even Denise Minger. Heeeeeeeere's Denise: <http://www.youtube.com/watch?v=heWprUncqlw> This is an absolutely perfect example of why Dr Mc Dougall refuses to call himself a vegan. In her talk, Ms. Minger never mentions that Dr. M has said many times that there are lots of UNhealthy vegans. The point isn't veganism but healthful eating. Which all the plant based gurus espouse. I can't off hand remember all her arguments but I do remember the one about Seventh day adventist vegans and vegetarians having a higher rate of all cause mortality than seventh day adventists who eat fish. However, if you look at the numbers she gave, the difference appears to be small and they are comparing ovo lacto vegetarians to those who eat fish. Which to me is another reason not to eat milk and eggs. The PrimitiveNutrition videos and HealthyLongevity pretty much counter all her arguments on this video. Minger is a perfect example of a lowcarber nutritionist: she is not a doctor, she is not a nutritionist, she has not enough competence respect to a real nutritionist or doctor, she tricks the articles, she tricks the people, she tricks with all the news that she finds only to adapt the truth to her thought. She's so inarticulate and silly that she may actually be doing vegans a favor. With so many negative things to fight in the world, why spend her energy fighting vegans whose philosophy is harmlessness? It really baffles me. She must feel guilty and this is her way of dealing with it.

Joe (2014-03-23 13:13:32)

Shelley: "are those adequate qualifications to provide a rebuttal to decades of unbiased peer reviewed research?" You're

pulling my leg, right? "She's so inarticulate and silly" That's pretty much the way I feel about McDougall. Plus, he's a pretty nasty guy, too. We're not going to change each other's minds, Shelley. Why not give this topic a rest?

Shelley (2014-03-23 15:53:02)

Oh go on Joe have you ever met Dr Mc Dougall in person? NO I am sure you have not. How can you say he's a nasty guy? For a 70-something you should know better than to say someone is nasty whom you have never even met. I am not pulling your leg about Denise! I listened again to part of a crappy speech of Denise Mingers. There is lots of evidence during it that she is reciting something someone else wrote with all the stumbling she does throughout it. Further this is what she used to have up on her webpage, before she had the sense to take it down: ..... Denise Minger wrote: About Me ... I started college when I was 16, switching majors about ten times but ultimately deciding on English. I currently live in Portland, Oregon and work as a freelance health writer, teacher, and web designer. .... Joe-you are 70 so you surely must know what freelance writers do-right ? They write what they are paid to, when they are paid to, for whoever pays them! In her case I think the stupid jokes, failed irony, and stupid quips are all her, but the cherry picked out of context, and twisted data from studies she cites and the minority conclusions she presents as mainstream research is fed to her. I am sure she is quite well paid for her services and I don't see her as really caring about health - hers or that of others, just like all the other low carb, high animal products, fad diet pushers. It is obvious that the only thing she brings is lame jokes and failed irony, while someone else is feeding her info and paying her bills. I give up on you Joe but perhaps someone with a modicum of common sense can learn from what I posted about Denise. Joe I feel bad for you are 70 and you have been duped.

Shelley (2014-03-23 15:56:30)

Joe-at 59 seconds you can see Loren Cordain & his book "The Paleo Diet" <http://www.youtube.com/watch?v=2zVxA6yipv4> Where do you get the idea that eating lots of meat and fat lowers cholesterol? When someone is losing weight, their cholesterol lowers. However, at some point the cholesterol has to go up because you are eating lots of meat and fat. On the Atkins diet, the LDL is high. Jimmy Moore who has a website called Livin La Vida Lo Carb has GAINED weight on his paleo low carb diet and now is on a diet that is even higher in fat and is ketogenic. In a talk in Australia which is on you tube somewhere on the net he says his cholesterol is over 340 and his LDL is around 240. He isn't worried. Some people think there is no connection between cholesterol and heart health-!!!! I am wondering how Jimmy got fat on his paleo diet which is supposed to be the best for losing weight (according to the primal diet people). He evidently thinks it is because he wasn't eating enough fat! Esselstyn's book on preventing and reversing heart disease is worth reading - it will make you confident you have the tools and info to talk to doctors & others who spout nonsense. I know the plant based diet helps with not only heart disease but every other chronic condition as well. That is the beauty of the Mc Dougall program. One diet, one approach to combating ALL chronic conditions. Some people hate it to hear that one diet can be the answer for the vast majority of issues but it's completely correct. Getting on board is a win-win proposition. Do not pass up the opportunity to read Esselstyn's book. Great info is in there. Plant Positive has made a series of excellent videos. He provides a lot of citations and points out how Paleo is a FAD diet. this first video is a good one. It's concise and worthwhile Paleo is the latest re-packaging of low carb. <http://www.youtube.com/watch?v=egqf7k5Lzhk&list=PLCC2CA9893F2503B5&index=1> The Mc Dougall way of eating is very simple. My advice to anyone is this: just follow it for 4 weeks and see if you like how you feel. Get your weight before starting, a lipid profile and glucose. And then have another test at the end. It does not matter what other people saw or did not see. It is a sample of one in the end ! Why would you rely on what others report, when you can have the answer in 4 weeks for yourself?

Joe (2014-03-23 17:09:17)

"Where do you get the idea that eating lots of meat and fat lowers cholesterol? When someone is losing weight, their cholesterol lowers. However, at some point the cholesterol has to go up because you are eating lots of meat and fat. On the Atkins diet, the LDL is high? One last time, I couldn't care less about my LDL level! Because it has nothing to do with my health (unless it gets too low). But here's a few things (for those of you who still believe in the lipid hypothesis) that WILL get better, your HDL will go way up, your triglycerides will virtually disappear, and your LDL particle size will be large and fluffy, all of which are supposedly VERY "good things." "Some people think there is no connection between cholesterol and heart health-!!!!" Count me among them! Read these books: Malcomb Kendrick, "The Great Cholesterol Con," David R. Hastings, "Cholesterol Conspiracy," Uffe Ravnskov, "Ignore the Awkward, How the Cholesterol Myths are Kept Alive," David S. Grimes, "You Will Not

Die From a Heart Attack," Kilmer McCully, "The Heart Revolution," Stephen Sinatra and Jonny Bowden, "The Great Cholesterol Myth," Ernest Curtis, "The Cholesterol Delusion," David Evans, "Low Cholesterol Leads to an Early Death, Evidence From 101 Scientific Papers," etc. Those will hold you for a while (actually, I know you will never read any of them, because Dr. McDougall said you shouldn't, but maybe others will). "How can you say he's a nasty guy?" Because I know people who know him very well, plus the fact that I've heard him on the radio. And you act very much like him.

Shelley (2014-03-23 19:53:10)

Adios Joe- your poor long suffering wife has had a tough life with you -I will bet \$ \$ on it. hahah

Joe (2014-03-23 21:13:55)

She hasn't had it nearly as hard as your poor ol' husband, who must feel like he's married to Tammy Faye Bakker herself, EH? The horror. The horror.

GB (2014-03-24 00:53:19)

Shelley, if you want to question the lack of credentials of Minger, this probably isn't the blog to be doing it at. One of Seth's great interests is the advantages that an amateur outsider can have over inside professionals - time and time again they make the breakthroughs in science. Question Minger's processes and conclusions if you wish, but to question her lack of authority is a lazy and ill-thought approach.

### Assorted Links (2014-03-22 05:00)

- American Physical Society [1]expresses uncertainty about AGW (anthropogenic global warming).
- [2]Kyoko Miyake, talented documentary maker. I really liked Brakeless.
- [3]Interview with Renata Adler. "The following thirty-two pages, in place of my essay-my most "controversial" essay, in some ways, closely argued-were from a cookbook."
- [4]The modern diet, in graphs. Note the huge increase in soybean oil. Sugar isn't the only foodstuff to have increased a lot over the last 50 years.
- [5]Blame doctors for the heroin epidemic. "Until recently, the system was rigged to encourage doctors and dentists to give out opioids with reckless abandon."

Thanks to Casey Manion.

1. <http://www.breitbart.com/Breitbart-London/2014/03/20/American-Physical-Society-Sees-The-Light-Will-It-Be-The-First-Major-Scientific-Institution-To-Reject-The-Global-Warming-Consensus>
2. <http://www.kyokomiyake.com/>
3. [http://www.believmag.com/exclusives/?read=interview\\_adler](http://www.believmag.com/exclusives/?read=interview_adler)
4. <http://www.businessinsider.com/whats-wrong-with-the-modern-diet-charts-2014-2>
5. <http://www.newrepublic.com/article/116922/what-makes-heroin-crisis-different-doctor-prescribed-pills>

Shelley (2014-03-22 06:12:26)

The Modern Diet in Graphs piece was interesting. But wow- "heart healthy" butter? eggs are "nutritious"? On what planet? Do you know that eggs have a caloric density of 1000? That is one thousand calories per pound-! Not what you want to eat if you are trying to lose or maintain weight. Someone I know has been looking at the published research on tests done, including published animal research, before the 1970's, on the use of eggs. He was able to find several studies, and they showed eggs caused more heart disease faster than any other animal foods, in the animals studied. Different amounts of eggs were used, and there is no small amount of eggs that do not harm the body. Any one recommending that even 1 egg a week, is healthy, is just plain ignoring the research, and just does not want to understand the truth. THE ONLY REASON 1 egg a week, or 1 egg a day, is considered safe is because it will take a few decades to do major harm to most people consuming that amount. A slower amount of heart disease build up is considered safe by the people making the nations health regulations. Everyone needs to understand this. This is one more reason why heart disease is still the number one killer.

Seth Roberts (2014-03-22 07:08:21)

this study disagrees with you about the dangers of eggs: <http://www.ncbi.nlm.nih.gov/pubmed/11023006> "When dietary confounders were considered, no association was seen between egg consumption at levels up to 1 + egg per day and the risk of coronary heart disease in non-diabetic men and women." so does this study <http://www.ncbi.nlm.nih.gov/pubmed/10217054> "These findings suggest that consumption of up to 1 egg per day is unlikely to have substantial overall impact on the risk of CHD or stroke among healthy men and women."

Shelley (2014-03-22 07:42:11)

OK Thanks- I will inform my friend and look over the links you posted. I used to eat eggs each day. Loved them. Now the thought of eating an egg makes me want to puke. fish eggs cheese all contain dioxins - which increase your risk of many cancers. <http://nutritionfacts.org/video/dioxins-in-the-food-supply/> Chicken and eggs are the top sources of arachidonic acid in the diet, an omega 6 fatty acid involved in our body's inflammatory response. <http://www.youtube.com/watch?v=-0ap3dVC-LM> <http://nutritionfacts.org/video/eggs-vs-cigarettes-in-atherosclerosis/> Eggs are nasty chicken's "periods". Nobody needs the cholesterol in them, as we produce what we need. There are far superior and less expensive sources of protein than nasty slimey eggs!

Joe (2014-03-22 09:09:33)

Shelley, yes, grass-fed butter is heart-healthy, even if you still cling to the blood lipid theory of heart disease. <http://authoritynutrition.com/why-are-eggs-good-for-you/> And eggs are one on the most nutritious foods you can possibly eat. <http://authoritynutrition.com/why-are-eggs-good-for-you/> On the other hand, lipophobia is one of the more deadly disorders out there. Viva la graisse!

Joe (2014-03-22 09:20:30)

Oops! The correct link for grass-fed butter is: <http://authoritynutrition.com/grass-fed-butter-superfood-for-the-heart/>

Gina (2014-03-22 09:42:06)

Joe: Blog posts are not impressive. I can link you to a thousand that say the opposite of Authority Nutrition (lofty!) if you like. In the US, egg producers are not allowed to advertise eggs as healthy or even safe. Seth posted studies that found that eggs are not detrimental to heart health, but other studies link them to atherosclerosis (<http://www.ncbi.nlm.nih.gov/pubmed/22882905>), cancer progression (<http://www.ncbi.nlm.nih.gov/pubmed/20042525>) and diabetes (<http://www.ncbi.nlm.nih.gov/pubmed/22390963>). It's way too easy to get a bad case of confirmation bias with this stuff. If you want to cite blogs as sources, you can do it with anything (<http://theflatearthsociety.org/forum/>).

Shelley (2014-03-22 09:54:13)

Oh Joe-what I have learned about dairy is that it increases the production of a hormone in the body called IGF-1 (insulinlike growth factor 1). IGF -1 is strongly linked to the development of cancer of the breast prostate, lung and colon. T Colin Campbell tells us (The China Study) that "under unhealthy conditions IFG-1 becomes more active, increasing the birth and growth of new

cells while at the same time inhibiting the removal of old cells - this favours the development of cancer” Also high levels of calcium as found in dairy products lower vitamin D and Vitamin D protects against cancer. Dairy also causes constipation. Our bodies are just not designed to process the milk of another species! It amazes me that humans not only consume milk meant for cows, but infant cows at that. Can you think of any species that consumes the milk meant for infants of another species? The medical community of course dismisses this idea because there’s no money to be made in telling people to eat healthy. Then you have the government and their ridiculous food pyramid telling people to consume lots of dairy. Never mind that the dairy industry heavily influences the government to make those recommendations. So my best advice is to stay away from any dairy, raw or otherwise, it ultimately leads to health problems. Based on study after study the most important change you can make in you diet is to eliminate all dairy products RIGHT NOW. The number of autoimmune and degenerative diseases linked to dairy and cheese consumption is long and very, very scary. An excellent book on the subject, based on peer-reviewed scientific evidence is Joseph Keon’s ‘Whitewash: The Disturbing Truth About Cow’s Milk and Your Health’ It’s available at Amazon : <http://www.amazon.com/Whitewash-Disturbing-Truth-Health-ebook/dp/B004FPZ3D0> You can also watch Keon give a lecture at the Vegetarian Society of Hawaii on the same subject at: [http://www.youtube.com/watch?v=cp9MwjW5 ...](http://www.youtube.com/watch?v=cp9MwjW5...) at a \_player In the “The China Study”, which is considered the most comprehensive study of nutrition ever conducted, one of the biggest points in the book is how casein promotes cancer. Casein makes up 87 % percent of cow milk protein. Casein is the predominant phosphoprotein found in fresh milk and dairy products. here is a quote from the book: ..... The Cancer Casein Connection In fact, the connection between casein and cancer was so profound that the scientists could literally turn cancer growth on and off in the laboratory animals, like a light switch, simply by altering the level of casein protein in their diets. Interestingly, they also found that feeding the animals the same levels of plant based protein (gluten and soy) did not at all promote cancer growth. .... there are about 27.3 grams of casein in 1 liter of whole cow’s milk. Approximate! Casein Amounts: 6.5 g casein in 1 cup whole milk - I think skim milk has even more. 5.7 g casein in 1 oz. cheddar cheese 11.3 g casein in 1 cup plain fat-free yogurt You can do no better than following Dr McDougall’s advice. Go to his home page, click on the link for the free program. <http://drmcDougall.com/> Your health will be immensely improved, I know mine was. I have now been McDougalling for a little over 3 years and will stay with this way of eating forever. My lipids are now excellent, I have no skin issues or sinus issues anymore, my energy is great, I weigh what I weighed in high school. I sleep beautifully and have a clear mind. All because I eat no animal products whatsoever! You get used to eating foods with out greasy butter and your taste buds come alive. I never miss butter anymore!

Nancy Lebovitz (2014-03-22 09:56:28)

I’m pretty sure the doctors/heroin article is substantially wrong, or at least severe pain is very undermedicated. The only way I can conceive of that article being plausible is that maybe it’s easy to get smallish amounts of opioids, and some people find out they’re all too fond of them, but it’s very hard to get enough opioids to treat serious intractable pain. Seth: The article proposes just what you say: It’s easy to get small amounts of opioids, and some people become addicted.

Kevin (2014-03-22 10:07:34)

Many other studies confirming egg safety, including the links in the original article. 1982: <http://www.ncbi.nlm.nih.gov/pubmed/7124663> "It is concluded that within the range of egg intake of this population differences in egg consumption were unrelated to blood cholesterol level or to coronary heart disease incidence." 2009: <http://www.ncbi.nlm.nih.gov/pubmed/19000074> "For the majority of U.S. adults age 25+, consuming one egg a day accounts for <1 % of CHD risk." And, of course, the 99 year old lipid researcher Fred Kummerow: [http://www.nytimes.com/2013/12/17/health/a-lifelong-fight-against-trans-fat.html? \\_r=1 & ...](http://www.nytimes.com/2013/12/17/health/a-lifelong-fight-against-trans-fat.html?_r=1&...) "Cholesterol has nothing to do with heart disease, except if it’s oxidized ... He has never used margarine, and instead scrambles eggs in butter every morning. He calls eggs one of nature’s most perfect foods"

Kirk (2014-03-22 10:09:33)

Talking about pain, the recently published book "A Nation in Pain" (by Judy Foreman) is well worth a read. Apparently there are many legitimate alternatives to meds.

Seth Roberts (2014-03-22 12:45:58)

I just picked the first two studies I found relating egg consumption and heart disease. I didn't have a preconception about it. The first study you cite, about heart disease, found a very small difference:

Plaque area in patients consuming <2 eggs per week (n = 388) was  $125 \pm 129$  mm<sup>2</sup>, versus  $132 \pm 142$  mm<sup>2</sup> in those consuming 3 or more eggs per week.

between groups where egg consumption was about twice as much in the high consumption group. That implies eggs matter little, if at all. The second study about diabetes is more impressive. People who eat lots of eggs are surely different in other ways from people who eat very few – maybe you have heard of the healthy person bias – but at least the association is large.

Seth Roberts (2014-03-22 12:53:46)

Butter tastes good – in many situations, it tastes delicious. So do other animal fats. The notion that they could be bad for us in any amount is hard to reconcile with evolution. If they are bad for us in any amount, why don't they taste bad – so that we won't eat them? Maybe you know that a genetic change that made it hard to digest milk (lactose intolerance) disappeared in some populations. This change – the disappearance – made it much easier for adults in those groups to eat cheese and other dairy. Presumably the genetic change happened because milk and dairy products helped people survive. I tend to agree that ordinary milk is bad – I never drink it. But I eat yogurt and cheese – I think the benefits of fermentation outweigh the problems. I am sure we need to eat fermented foods to be healthy. McDougall hasn't figured that out, as far as I can tell.

Gina (2014-03-22 13:34:02)

"Butter tastes good — in many situations, it tastes delicious. So do other animal fats. The notion that they could be bad for us in any amount is hard to reconcile with evolution. If they are bad for us in any amount, why don't they taste bad — so that we won't eat them?" It seems likely that we only evolved to dislike things that are acutely bad for us (i.e. poisonous), not things that kill us slowly and only past our reproductive primes. Liking animal fat was no problem for people who lived to the ripe old age of 25 and just needed calories. I don't think it's so advisable to apply that to ourselves. "Maybe you know that a genetic change that made it hard to digest milk (lactose intolerance) disappeared in some populations. Making it easier for adults to eat cheese and other dairy. Presumably this was because milk and dairy products helped people survive." Mere survival is not what most people are looking for. When starvation is a threat, any food is health food.

dearieme (2014-03-22 13:58:35)

Different peoples have different diets, but one can be pretty confident that every human in history has experienced being an egg, and has experienced consuming milk. So I'd tend to put the burden of proof on people who wish to argue that eggs, or butter, yoghurt or cheese, are killers.

Joe (2014-03-22 14:01:22)

Gina: "Blog posts are not impressive." Look closely, Gina, those posts provide you with direct links and references to scientific studies, etc. Of course, you're free to ignore them, too. Shelley: You keep referencing the China Study. That study has been debunked so many times now that it's a farce. You're free to ignore the debunkings, of course, but I just can't do that. Here's yet another look at it: <http://www.proteinpower.com/drmike/cancer/the-china-study-vs-the-china-study/> I eat grass-fed butter, a daily dose of grass-fed kefir, and some hard cheeses. No plain milk to speak of. And I'm so regular that the U.S. Naval Observatory sets its clocks by my bowel movements. "My lipids are now excellent" So are mine (how can that be?!), even though I think they have ZERO to do with CVD. Ditto BP, BS, BMI, etc. I'm basically a relatively low-carb-paleo eater, and have been for many years. It helped me lose 100 pounds, and to keep it off. I've never felt better in my life. I'm sorry that you fear fats so much, but I'd fight to the death to preserve your right to do so! :) PS: Gina and Shelley, have you ever had your homocysteine (tHcy) levels checked?

Joe (2014-03-22 14:16:44)

I can hardly believe it. I'm citing Dr. Oz! <http://www.doctoroz.com/videos/5-surprising-ways-live-longer-under-minute> "Dr. Oz's 5 Surprising Ways to Live Longer in Under a Minute 1. Eat Eggs Eggs are a powerful source of protein and cost just pennies.



Many people have been led to believe that eating eggs increases blood cholesterol, but that's simply not true. Eggs contain choline, a B vitamin shown to reduce inflammation in the brain, which may lessen the chance of developing Alzheimer's disease. Eating two eggs comprises 26 % of your daily protein intake, yet contains less than 10 % of your recommended calories for the day. Thus eggs can help you shed pounds. These protein powerhouses protect your bones and fight frailty. Antioxidants and other nutrients in egg yolks help prevent macular degeneration, the leading cause of blindness; they also protect the retina from UV sun damage.

Gina (2014-03-22 14:25:27)

"Gina and Shelley, have you ever had your homocysteine (tHcy) levels checked?" Lower than an omnivore's. I take my B12.

Shelley (2014-03-22 14:46:42)

Joe-My homocysteine is fine. Joe please-hahah Dr Oz? You can not be serious! I swear Dr. Oz is deaf. No matter how many times he hears that fish is unhealthy, he continues to recommend it. A few months ago, Dr. Fuhrman was on his show (again) and explained to Dr. Oz (again) that fish is NOT a good food because of the fat content, saturated fat content, and contamination. Dr. Oz acted as though he had a lightbulb moment and said, incredulously, "But I've been recommending fish to my viewers for YEARS." Dr. Fuhrman then reiterated what he'd just said. And Dr. Barnard was on the show within the last six months, saying the same thing. Yet Dr. Oz continues to recommend fish. It's mind-boggling. Dr Oz is forever flip-flopping. He's in it for the entertainment! He's ridiculous! a older quote, apparently valid, from Dr. Oz: "'We have the science to suggest that if you can make three changes — give up all meat, all dairy, and refined foods including free oils — you can avoid dying from cancer and heart disease. It's being brought to life in a new documentary called Forks Over Knives. I saw it, I loved it, and I need all of you to see it too. This could be the Hail Mary of medicine"- Dr. Mehmet Oz Seems to conflict with his recent comment on his show where he said : "What causes us to die from heart disease and stroke and Alzheimers is inflammation in the body and that's not caused by fats that we've been eating for two and a half million years." I like Dr Oz as a personality. But the problem with following Dr. Oz' advice on diets is that he supports them ALL ! So far I've seen him support, paleo, gluten free, Weight Watchers, low carb (to a certain extent), lacto ovo vegetarian, etc. Jack of all trades, expert at none? he flips-flops all the time. he does present some interesting stuff at times though. I think I stopped watching him regularly years ago- after he said eating yogurt is good for you. Joe-don't you realize that both Dr Oz and Oprah's jobs are to deliver an audience to booksellers and movie producers? If that means jumping on the bandwagon of a different protocol at the drop of a hat, so be it. These shows are mostly about ENTERTAINMENT not health information. It's like getting marriage counseling from Jerry Springer. Do not listen to Dr Oz. Seth - butter does not taste delicious once your taste buds get dialed back. If you get off fat & give your taste buds a chance to clear off the grease you will not be able to tolerate butter. Your both will love the natural taste of real whole foods but you have to give it 30-90 days.

Joe (2014-03-22 15:11:03)

Gina: "Lower than an omnivore's. I take my B12." Not THIS omnivore, and without taking a B12 supplement! Shelley: "Joe-My homocysteine is fine." No supplements? "Joe please-hahah Dr Oz? You can not be serious!" Yeah, I feel pretty much the same way about Dr. Oz, which is why I said I couldn't believe that I was citing him. But even blind dogs can stumble across a bone from time to time. "Dr. Fuhrman was on his show (again) and explained to Dr. Oz (again) that fish is NOT a good food because of the fat content, saturated fat content, and contamination." Fish is a great food! Particularly for its fat content, including sat fat, although some fish can be high in mercury and probably shouldn't be eaten more than a few times per week. I eat wild-caught salmon 2-3 times per week and sardines most days. So I don't worry about mercury at all. I.e., the benefits far outweigh any risks. <http://blog.cholesterol-and-health.com/2010/01/saturated-fat-is-not-associated-with.html> "A recent meta-analysis in the American Journal of Clinical Nutrition pooled together data from 21 unique studies that included almost 350,000 people, about 11,000 of whom developed cardiovascular disease (CVD), tracked for an average of 14 years, and concluded that there is no relationship between the intake of saturated fat and the incidence of heart disease or stroke." So my question is, why do you have such an irrational fear of fat?

Shelley (2014-03-22 16:04:25)

Joe last Aug my homocyst was a 5 or a 6. Yes I take supplements-including B12. read posts on here about homocysteine:

<http://drmcDougall.com/forums/viewtopic.php?t=8627> and this talks about b12 <http://www.veganhealth.org/articles/vitaminb12> I do not think I have an irrational fear of fat. I think you are ignoring the research and the news! You have a ridiculous point of view on fat. And FISH! Holy Christ! The oceans are now contaminated. I live in San Diego and 6 months after the Fukushima disaster they were catching radioactive tuna off the coast of San Diego-! Pollution in our environment is increasing every day so the grass fed animals of today are more polluted than those from 100 years ago. Current seafood is now total garbage. <http://www.nuc.berkeley.edu/forum/218/radioactive-bluefin-tuna-caught-coast-san-diego>.2012-05-28 Mercury in fish and particularly in tuna and other large predators has been known for a while. Here is what the EPA has to say about it after issuing a warning in 2004. <http://www.epa.gov/hg/exposure.htm> #3 [ this is an excerpt from Mc Dougall's newsletter of June 2009 ] Fish is not health food. The truth is fish is an animal muscle made up primarily of proteins and fats, with no carbohydrates or dietary fibers—fish muscles are nutritionally just like the muscles of cows and chickens. They are all loaded with cholesterol and chemical contaminants, and deficient in vitamin C. Fish-fat easily accumulates in the human buttocks, thighs, and abdomen, leading to obesity and type-2 diabetes. All that excess animal protein will cause bone loss (osteoporosis), and the pharmacological activity of the fats (omega-3) will suppress the immune system (cancer and infection) and cause bleeding. Fostering the myth that fish is a miracle food is a slogan many of us grew up with, “better living through chemistry.” In the case of fish, the miracle chemical is omega-3 fatty acids, which have been advertised to prevent and treat diseases ranging from Alzheimer’s disease to strokes. The most thorough review ever conducted (48 randomized controlled studies of 36,913 subjects) of fish and omega 3 fats on health was published in the April 2009 issue of the British Medical Journal and the authors reported, “Long chain and shorter chain omega 3 fats do not have a clear effect on total mortality, combined cardiovascular events, or cancer.”<sup>4</sup> Other research explains the origin of the felonious belief that fish is health food: people who choose fish are the same people who choose an overall healthier diet, consciously avoiding coronary-artery-damaging saturated fats—eating the fish does not prevent heart attacks, it is the not eating beef, chicken, and cheese that saves lives.<sup>5</sup> The erroneous belief that these magnificent swimming animals will improve the health of people is at the root of the decimation of our oceans. People are eating more food from the sea every year and the result is industrial fishing has depleted the world’s fish stocks by 90 % since the 1950s.<sup>6</sup> I love the ocean and am saddened by this loss. Fortunately, I am not demented (from lack of fish consumption) and neither are you. We can stop this runaway destruction of planet Earth and return health to its entire species—but we must act quickly. One major step is to reintroduce the natural human diet of starches to people. If you want to know more about this one big simple solution then read the first chapter of my new book, *The Starch Solution* ( to be published in about a year). 1) Devore EE, Grodstein F, van Rooij FJ, Hofman A, Rosner B, Stampfer MJ, Witteman JC, Breteler MM. Dietary intake of fish and omega-3 fatty acids in relation to long-term dementia risk. *Am J Clin Nutr.* 2009 Jul;90(1):170-6. 2) Kröger E, Verreault R, Carmichael PH, Lindsay J, Julien P, Dewailly E, Ayotte P, Laurin D. Omega-3 fatty acids and risk of dementia: the Canadian Study of Health and Aging. *Am J Clin Nutr.* 2009 Jul;90(1):184-92. 3) Friedland RP, Petersen RB, Rubenstein R. Bovine Spongiform Encephalopathy and Aquaculture. *J Alzheimers Dis.* 2009 Mar 6. [Epub ahead of print] 4) Hooper L, Thompson RL, Harrison RA, Summerbell CD, Ness AR, Moore HJ, Worthington HV, Durrington PN, Higgins JP, Capps NE, Riemersma RA, Ebrahim SB, Davey Smith G. Risks and benefits of omega 3 fats for mortality, cardiovascular disease, and cancer: systematic review. *BMJ.* 2006 Apr 1;332(7544):752-60. 5) Cundiff DK, Lanou AJ, Nigg CR. Relation of omega-3 Fatty Acid intake to other dietary factors known to reduce coronary heart disease risk. *Am J Cardiol.* 2007 May 1;99(9):1230-3. 6) Myers RA, Worm B. Rapid worldwide depletion of predatory fish communities. *Nature.* 2003 May 15;423(6937):280-3.

Shelley (2014-03-22 16:07:25)

p.s-Joe-Dr. Greger over on Nutritionfacts.org has been doing a series of videos tracing the sources of industrial pesticides, chemicals like mercury, flame retardants, organophosphates, etc. in our food supply (and in breast milk!). In every study FISH comes out as the major source of chemical pollutants in our bodies. Sometimes by a factor of 10 or more over other animal products and 100 or more over vegetable products. The more carnivorous (i.e. higher up in the food chain) the fish - like salmon or mackerel - the higher the contamination. Do yourself a favor and lose the fish. You can get your omega-3 fatty acids from ground flaxseed, hemp and chia seeds, or walnuts.

Joe (2014-03-22 17:08:20)

”Do yourself a favor and lose the fish.” No thanks, Shelley. I’m keeping the fish, the beef, the pork, the lamb, the poultry, etc. The Okinawans are one of the healthiest and longest-lived groups of people on the planet, and they eat fish almost daily. So

do many other populations. And there are countless other studies attributing health and longevity to regularly eating fish, including the Mediterranean Diet. Yes, fish can become contaminated, but so can vegetables and fruits, even the organic varieties. So do your best to minimize it, and enjoy your meal. After a nice glass of wine, of course! Oh, yeah. And don't sweat the small stuff! Stress kills! :)

Josh (2014-03-22 17:25:22)

Interesting debate between Joe/Seth and Gina/Shelley (and the underlying subtext of pro meat/fat vs anti meat/fat). And this debate makes me really wonder about how far nutritional science can take us toward agreeing on what exactly is good for our health, and what is bad for our health. Both sides linked studies that supported their beliefs. So if I can show 'x' is good for our health based on several scientific studies, and you can show 'x' is bad for our health based on several scientific studies, where does the science get us? I'll answer this question - absolutely nowhere. People who believe animal fat is good for their health will search out studies that support this view (confirmation bias). And people who think animal fat is one step below cyanide will search out studies that support their view (confirmation bias).

Joe (2014-03-22 17:51:28)

Josh, not all science is equal. And the data changes over time, as more becomes known. Yes, confirmation bias can be a problem, but only if you let it. It's YOUR life at stake, so just don't let it. Remember that correlation does not equal causation. Use your common sense. And whatever you do decide to do, don't let it stress you out. Enjoy your meals. Try to enjoy them along with friends or family. Unless you have a problem with alcohol, have a nice glass of red wine with your dinner. Get some exercise most days, even if it's just a 30-45 minute walk. Keep your weight down (people with BMIs between 25 and 30 live the longest). That is, enjoy your life! You only get one.

Alex Chernavsky (2014-03-22 18:30:13)

My diet is strictly vegan. I haven't eaten any animal products in about ten years, but my reasons are not based on any putative health effects. I believe that it's wrong to inflict unnecessary harm on sentient creatures. And I don't see how eating them is *necessary* (pleasure, convenience, amusement, habit, or tradition don't really count as necessities). Animal-rights philosopher and attorney [1]Gary Francione makes this argument in his writing.

1. <http://www.abolitionistapproach.com/veganism-and-nonviolence/#.Uy43pv17t8E>

Joe (2014-03-22 19:04:59)

Alex, you're entitled to your beliefs. And I do respect them. I just hope that you will respect the beliefs of those who do not agree with you. You say it's wrong to inflict unnecessary harm on sentient creatures. But have you ever walked behind a farm combine in the field? I have. You should try it once. It's pretty gory. Farm combines kill millions (perhaps billions) of animals each year in the harvesting of crops. Farming also eliminates the habitats of millions (perhaps billions) more (in the preparation of farm fields), resulting in even more animal dislocations and death. I would never think to accuse vegetarians or vegans of "inflicting unnecessary harm on all those sentient creatures" in the fields. Sometimes your side sounds harshly judgmental, don't you think? Frankly, I don't see much difference. Do you?

Alex Chernavsky (2014-03-22 19:21:38)

Joe, I'm quite familiar with your argument. It's debunked here: <http://animalplace.org/1newweb/number.html> Briefly, even if it's true that lots of animals are killed as a result of growing plants, it's *still* better to eat plants than animals, because raising meat is a very inefficient process (e.g., you have to feed a lot of plant matter to a cow to produce a small amount of beef). I do see a big difference. Otherwise, I wouldn't eat the way I eat.

Seth Roberts (2014-03-22 19:46:55)

I ate as you recommend for a long time. No butter, almost no animal fat. During that time I found animal fat repulsive, as you say. Then by accident I discovered that pork fat greatly improved my sleep. Later I discovered that butter improved my brain function as measured by a reaction time test. The anti-animal-fat advocates have no such simple clear evidence on their side, as far as I can know.

Joe (2014-03-22 19:55:15)

Alex: "Briefly, even if it's true that lots of animals are killed as a result of growing plants, Of course it's true! I've seen the carnage with my own eyes. Have you ever even been on a farm? And it only takes a quick google search to see that your debunking has been debunked many times. "it's still better to eat plants than animals, because raising meat is a very inefficient process (e.g., you have to feed a lot of plant matter to a cow to produce a small amount of beef)." So, I'm supposed to stop eating the tastiest, most nutrient dense foods on the planet, because it's more "efficient" to eat plants? Wow. Wouldn't it be even more "efficient" to just stop eating altogether? I kind of think that's where you're heading, Alex, with all due respect. Right down Paul Erhlich Lane. Really, Alex, it's become a religious experience for you, I can see that now. And I do respect it. Up to the point of your side condemning or insulting those of us who don't share those religious beliefs. And then I lose all respect for it. I already have a religion, my friend, it's been around for over two millenia now, and it meets all my needs. If yours meets all your needs, then good on ya. But lighten up on the proselytizing, okay?

Alex Chernavsky (2014-03-22 20:16:34)

Joe, Gaverick Matheny has done the calculations. You can read about it [1]here (Matheny, G (2003). "Least Harm: A Defense of Vegetarianism from Steven Davis's Omnivorous Proposal". *Journal of Agricultural and Environmental Ethics* 16 (5): 505–511.) I do agree with what you wrote further above ("...enjoy your life! You only get one"). But in my view, the word "your" is extended to include non-human animals. Incidentally, for whatever it's worth, I have no religion: I'm an atheist. I strive to base my opinions on reason, not on some sort of mystical principles (I only mention this fact because you raised the issue of religion.)

1. [https://ethik.univie.ac.at/fileadmin/user\\_upload/inst\\_ethik\\_wiss\\_dialog/Matheny\\_\\_G.\\_2003\\_Defense\\_of\\_Veg\\_\\_i\\_n\\_J.\\_Agric\\_Ethics.pdf](https://ethik.univie.ac.at/fileadmin/user_upload/inst_ethik_wiss_dialog/Matheny__G._2003_Defense_of_Veg__i_n_J._Agric_Ethics.pdf)

Joe (2014-03-22 21:15:45)

Alex, I've done my own calculations. Based on what I've seen with my own eyes. And the biggest difference I can see about the way you eat and the way I eat, is that there really is no difference in the amount of carnage. Sentient animals die in the process. By the millions. That's a fact. But the animals I'm responsible for at least get eaten in the end. Not so, yours, although some do get eaten by predators and scavengers. Your view, that animals have the same rights as humans, is essentially a religion (in my opinion). A form of animism, if you will. I believe they have only the rights we grant them. Period. Which of course are open for discussion. I firmly believe, though, that they deserve to be killed (and raised) in the most humane way possible or feasible (so they can enjoy life, too!). And if I were an animal, I'd rather be quickly dispatched by a bolt gun than mutilated by a combine or tractor, and left to die in a field slowly. And painfully. Nota bene: Allan Savory has written about a way to feed all of the world's hungry, and then some, by raising cattle and eliminating desertification at the same time (which would also affect the climate in a positive way). Roughly, it entails letting the cows basically raise themselves. The only human involvement would be to keep them moving, so that the grasslands (after being consumed) get a chance to revive and then thrive. Much like the bison once did in America. Millions of starving African kids, for example (as this was to be an African project) would then have access to all the protein they could handle, the deserts would come back to life, and there would also be a positive effect on the climate. My religion, unlike yours, Alex, puts the lives and sufferings of those African children, and others, ahead of those of animals. Yes, it's a "mystical principle," but it's also based on sound reasoning. PS: I look forward to the day when scientists are able to prove that plants are sentient beings, too. <http://www.greenfudge.org/2009/12/01/plants-display-sentience-and-social-behavior/> That will certainly muck up the party, EH? :)

Gina (2014-03-22 21:30:48)

"But lighten up on the proselytizing, okay?" Oh, the irony! Alex didn't suggest that you or anyone else stop eating meat; he merely provided an explanation for his choice. He neither condemned nor insulted anyone. You, however, are a font of unsolicited advice.

Joe (2014-03-22 22:15:17)

Gina, I'm not trying to convert anyone to anything. I also don't suggest or imply that the way that others choose to eat is somehow unethical, as Alex is doing. At least in my opinion, that's what he's doing. And that's insulting. I also didn't know that

I had to ask anyone's permission to give advice or express my opinion here. Here's more unsolicited advice: If you don't enjoy reading my comments, DON'T READ THEM! But the whining is unbecoming. And unnecessary.

Brock in HK (2014-03-22 22:23:23)

Looks like everyone here is convinced, as I am, that AGW is not proven as fact, and that human causes of climate change should be doubted, judging by the lack of comments on that issue. Whereas whether eggs or meat are good or bad for you - that stirred up 32 diatribe-ilicious comments in a blog where comments are usually short and pithy. The corner has been turned on AGW, but diet dogma can't be left behind.

BRW (2014-03-23 05:45:59)

I worked on a livestock farm in the past and I presently work on an organic vegetable farm. Even though we are small-scale and minimal till- we harvest practically everything by hand, and never use a combine- STILL, I (unintentionally) kill more animals and critters every year growing vegetables than I ever did on the livestock operation. You can't grow plants without animals and you can't grow animals without plants. It is a cycle, believe it or not. Furthermore, most of the animals you hold so dear would not be around today without the farmers who grow them. Vegans certainly aren't doing much to preserve heritage breed pigs. Everything is alive. And you have to consume living things to be nourished. Oh, and eggs are quite good for ye. It sounds like you might just be afraid of the color yellow (butter, yolks, tallow). It is one of the louder ones, isn't it?

Shelley (2014-03-23 07:52:11)

It is correct that there is no study or research that definitively shows that eating a small amount of animal products or oils is significantly more damaging to long term health than eating none. No one can successfully argue on that point. I do tend to agree that eating a small amount of either over the course of a lifetime is probably a reasonably safe thing to do and still be able to live healthy & to a ripe old age. We have proof of that in several cultures. By the way Joe- the Okinawans do not eat fish EVERY single day. They eat a lot of sweet potatoes and veggies and occasional fish. The people on the Mc Dougall way of eating know oil & animal foods carry some risk. Where the line occurs as to when it becomes an unacceptable risk is going to be different for everyone. Just as the number of cigarettes smoked over a certain time period will affect each of us differently so will the amount of animal products and added oils. Do you think it is "OK" to injure your endothelial cells "in moderation"? I don't I am over age 50 and want to protect my health. The forums on drmcDougall.com exist to explain and promote Dr. McDougall's viewpoint which is to eliminate those items from your diet as much as possible. Good people choose to eat meat, dairy and added oils everyday. Dr. McDougall would be the first to acknowledge this. But his position, and the idea he wishes to convey, is to try to eliminate these risks as much as humanly possible. If you go to a McDougall event you will be served food that matches those ideals. He will not endorse consuming small amounts of animal products or oil. His goal, expounded on through his website, is the BEST diet, not an "ok" diet. It's the maximum healing diet, not a diet designed to be just adequate. Many of us appreciate that and make our dietary choices on that basis. Others feel they have little risk in consuming small amounts of these items and make that their dietary lifestyle. Both might be fine but the forum and the rest of the mc dougall website are there to reinforce the idea that these items are not necessary to good health and do carry risks. We will all ultimately make the decisions we feel are the best for ourselves. Those decisions will be different for each of us. We all know there will NEVER be a large research study to demonstrate the validity of the plant diet to minimize risk factors to disease. just who would fund the research at the universities? The farmers ?

Joe (2014-03-23 09:19:46)

Shelley, regarding the Okinawans. I was basically sharing my own experience with actual Okinawans. I was stationed there for a short time. I knew many Okinawans. And the Okinawans I came in touch with ate fish virtually every day. And frequently pork. And, yes, veggies. They're reputed to be one of the healthiest populations, so I was trying to show the contradiction between your claim that fish is supposedly bad for us, with the real-world experience of actual Okinawans. Actually, I think the main reasons they live so long are basically their genetics, their culture, their relaxed lifestyle, and their low levels of stress. Not necessarily their diet. Mañana may be a Spanish word, but I think they borrowed it from the Okinawans. If you have good experience following Dr. McDougall's diet (I'm very familiar with what it entails, and I just don't agree with it, I also don't do well on carbs), then, by all means, hold a steady course. That's precisely what I'm doing. I've found something that works

for me, so I'm sticking to it, too. My health profiles are all excellent. I've never felt so good. So why would I change course? Why would you change course? The short answer is, we wouldn't. "Do you think it is 'OK' to injure your endothelial cells "in moderation"? I don't I am over age 50 and want to protect my health." I agree with you on that point. But eating large amounts of sugar can injure them, too. Which is another reason why I avoid bread, pasta, too many other carbs, etc. I'm in my 8th decade (I still can't believe I've made it this far) and also want to keep on keeping on. Regarding a better scientific study: It's being done. By NuSi. <http://nusi.org/> They aren't trying to "validate" a plant diet. They're just going where the science takes them. Let's hope they finally get it right, or whether there even is a "right" answer.

Shelley (2014-03-23 09:39:27)

Joe- if you made it to age 80 and your health is fine you could be one of those rare genetically gifted individuals who can eat anything and suffer no ill effects. I had an uncle who smoked, drank, ate meat+ cheese + crap and never exercised. He made it to age 88 but I think his last 4 years he was just "existing" & not really enjoying his life. Another uncle made it to age 96. Ate terrible, drank a little, did not smoke and played golf and walked until about age 90. His last 5 years he was miserable. I really don't care to live past age 85. Mostly I want to feel good and be able to do for myself all the time I am on earth. Eating meat displaces nutrients. Cutting out animal-products makes more room in your diet for fruits and vegetables—a goal that most people fail to meet. Meat contains NO fiber, NO phytochemicals, and very little antioxidants. Phytochemicals are angiogenesis inhibitors slowing or stopping the process of a cell becoming cancerous. Antioxidants clean away free radicals. And you don't have to worry about IGF-1 when you eat plants. We all need to eat more fruits and vegetables, as many as we can. Excess protein fuels cancer. Excess protein is hard on the kidneys. Excess protein leaches calcium out of your bones (which is why US has high levels of osteoporosis). Excess protein causes inflammation. All facts - Google if you don't believe me. But despite all this, even if animal foods were the healthiest diet for humans, eating them is simply not sustainable for much longer. On a per calorie basis, they require over ten times as much land, water and energy as a plant-based diet. If everyone ate the way we do in the USA, we'd need two planet Earths to feed us all and we only have ONE. ONE DAY eating meat will be regarded as something as disgusting as smoking is now. One day! You are not built to eat meat. You have no teeth to kill, no claws, not anything to kill other animals with. Nature has not made you a natural killer-meat eater, Your organs aren't built to consume meat and your body hasn't been made to hunt. The fact that you have the technology to kill doesn't justify the fact of murder or consumption of other living beings.

Joe (2014-03-23 11:43:08)

Shelley: "Joe- if you made it to age 80 and your health is fine you could be one of those rare genetically gifted individuals who can eat anything and suffer no ill effects." I'm not 80. I'm in my 70s (i.e., 8th decade). And while it may be my genes, I highly doubt it, considering that I lost my father to a heart attack (when he was 63) and my mother to a heart attack (caused by a stroke) when she was 56. "But despite all this, even if animal foods were the healthiest diet for humans, eating them is simply not sustainable for much longer." Why not? Watch this video: [http://www.ted.com/talks/allan\\_savory\\_how\\_to\\_green\\_the\\_world\\_s\\_deserts\\_and\\_reverse\\_climate\\_change](http://www.ted.com/talks/allan_savory_how_to_green_the_world_s_deserts_and_reverse_climate_change) You sound like you come from the Paul Erlich school, too. And that's just one example of why we almost certainly have more land than we'll ever need, if we'd only use it intelligently. Add in the fact that the rate of global population growth is dramatically (and has been) slowing down, and there is no "population bomb." That's a myth. <http://overpopulationisamyth.com/content/episode-5-7-billion-people-will-ever-yone-please-relax> "You are not built to eat meat." Of course we are! We're omnivores. In fact, our early ancestors had virtually no tooth decay. It wasn't until the advent of the agricultural age that our health (and teeth) began to suffer. "You have no teeth to kill, no claws, not anything to kill other animals with" What we do have is a very large brain, and that's what made us the apex predator that we still are. We make/use tools. We work as a team. That's how we evolved. "The fact that you have the technology to kill doesn't justify the fact of murder or consumption of other living beings." Oh, geez. Here we go again. Insulting my beliefs. What is it about you plant-eaters that compels you (almost all of you!) to constantly proselytize and insult those who disagree with you? I have a hunch why that is. It's because you're not eating enough animal fat! :(

Shelley (2014-03-23 15:45:21)

Joe i am not going to debate endlessly with you about why meat eating and dairy farming are bad for the environment. And why you are not built to eat meat. The evidence is out there for anyone with half a brain. Joe you are not an obligate

carnivore. Do you salivate when you see a cow or a chicken? Like a cat does? Of course not. The paleo diet is discussed over and over on mc dougall forums. It is nonsense. Don't be brain washed. it is not good for anything. it's an excuse so meat eaters can continue eating meat. What we can't find is any experimental support for a "paleo" or "ancestral diet" approach, or deliberate increase in cholesterol, saturated fat, or animal food, doing anything like: Reducing incidence of angina Reducing atherosclerotic lesions Reducing incidence of heart attacks Reducing diabetes Reducing obesity Reducing cancer If these diets are the natural and proper diet for humans, where's the science showing a correlation between increasing cholesterol, saturated fat, or animal consumption and reduced risk or incidence of any of these? As Dr. McDougall puts it in his Starch Solution video, all civilized populations have relied on grains and starches. Agriculture allowed us to achieve the ability to do other things besides forage for food. The Paleos do not have to forage either. They go down to the store and grab a prepackaged, hormone-injected, frozen carcass. In no way is it the same. Going plant-based is a big shift for the body to undertake, ridding itself of the toxins and hormones in animal products, and if someone isn't fully adherent, that process is going to stall or take much longer, and the benefits may not fully materialize. It took most of us years of bad eating to develop health problems, so it's unreasonable to think that it won't take time for our bodies to adjust. The difference is that the Mc Dougall way of eating isn't based solely on how past populations ate or glorifying those primitive peoples. This WOE isn't opposed to progress. Even so, the starches and grains we consume are very similar to what past civilizations consumed. Paleos are in denial that what they're consuming in any way resembles what early man ate, either in quality or quantity. The fresh fruits and vegetables aspect is good, but the meat consumption is much heavier and processed. Early man probably ate more like rural Asians - mainly plant-based with some occasional animal product. If they were healthier (debatable), it was because they ate only whole foods and their animal consumption was still relatively low...especially compared with the SAD diet and how most Paleos interpret the amount of meat they should consume. If Paleo leaders urged their followers to eat mainly fruits, vegetables and an occasional small serving of meat, there'd be no problem, but I don't think that's what's being advised, is it? Diet choices should always be about long term health. The human body can live on an amazingly bad diet for short time periods and even find them enjoyable. It's what happens long term that have driven people to certain cultural preferences. For most of recorded history it's been a starch based diet with the inclusion of small amounts of meat. We have culturally reversed these choices of late and are paying the price. I was listening to a past Coast to Coast interview. George Noory asked why was his doctor saying just the opposite of what Dr. McDougall says in "The Starch Solution". Dr. McDougall explained that his son 4 years ago graduated from Medical School and as when he went to school there weren't any classes in nutrition. George then said you aren't telling anyone not to eat meat? Dr. McDougall said of course not.. but if someone came to me who was smoking and was worried about lung disease, I wouldn't tell him to cut back to two cigarettes a day. Eating animal-derived foods causes our most common diseases for many well-established reasons, including the indisputable facts that they contain no dietary fiber, are filthy with disease-causing microbes (including mad cow prions, and E. coli and salmonella bacteria), and contain the highest levels of poisonous environmental chemicals found in the food chain. Remember, disease-causing red meats, poultry, fish, and eggs are not needed in our diets. In March 2012, the Harvard School of Public Health published results of a study on red meat that followed 120,000 people over more than 20 years. In one sentence, the study found that eating any amount of red meat increases the risk of premature death, and the risk of mortality rises proportionately as you increase your consumption. Substituting other healthy protein sources (nuts, fish, poultry, and legumes) was associated with a somewhat lower risk of mortality. Even a small amount of red meat, with low amounts of saturated fat, was associated with a significantly increased risk of mortality. This raises the question of "why"? Frankly, nobody has a definitive answer. One suspected dangerous ingredient is heme iron (the iron found in red meat), which causes oxidative damage throughout the body. Other suspects are preservatives used in processed meats, which convert to carcinogens inside the body. Here are a couple mechanisms whereby meat causes disease. [http://www.youtube.com/watch?v=p\\_uy4kfQDkA](http://www.youtube.com/watch?v=p_uy4kfQDkA)

Joe (2014-03-23 17:36:17)

"Joe i am not going to debate endlessly with you" And yet, here you are, debating endlessly with me. Can't stop yourself? Maybe if you ate some animal fat, you could, eh? "Do you salivate when you see a cow or a chicken?" Do you salivate when you see a carrot? How inane can you possibly be? "Going plant-based is a big shift for the body to undertake" I can see why that would be. It's because your body is crying out for some good ol' animal fat and protein, the same stuff that humans ate for hundreds of thousands of years! The same stuff we EVOLVED on. "I was listening to a past Coast to Coast interview." So, you believe in aliens and alien abductions, too, eh? That doesn't really surprise me. And yet you make

fun of Minger. "Even a small amount of red meat, with low amounts of saturated fat, was associated with a significantly increased risk of mortality." Not so! <http://chriskresser.com/does-red-meat-increase-your-risk-of-death> But before you read that, make sure you understand the difference between correlation and causation. Ask your granddaughter to explain it to you. I'll finish this off by saying your slavish devotion to your guru and cult leader is unbecoming. In fact, had you lived in San Francisco, back in the 70s, I'm sure you would have been a member of the People's Temple. And you would have probably inhaled the Kool-Aid all the way down to Jonestown and beyond. I feel sorry for you, Shelley, even though you're almost as nasty as McDougall, your cult leader. But then that's to be expected. It's all part of the brainwashing process, right? Sigh.

Shelley (2014-03-23 19:50:59)

Joe- you are not a gentleman. Shame on you. I feel sorry for your poor wife. That's all I have to say to you. Now good night!

Joe (2014-03-23 21:04:54)

"Joe- you are not a gentleman." I am, but only to ladies. "That's all I have to say to you." I'm betting there's more to come.

GB (2014-03-24 01:31:25)

Not sure why I'm stepping into this argument, it's going nowhere. But Shelley, your comment "And why you are not built to eat meat. The evidence is out there for anyone with half a brain" deserves some reply, because it's a half-brained comment itself. We've been using tools to directly hunt for at least 2.5m years, and for scavenge work before that. We've also been outsourcing part of the digestion process through fire for a long, long time (see Richard Wrangham's work). That's why we didn't need to evolve omnivorous teeth and stomachs to become omnivores, and we did do some evolving anyway (stomachs shrunk, for example). We're a different kind of omnivore than the rest, and we got there in a completely unique way. What does seem almost certain is if we didn't go through that meat-eating evolution, our brains wouldn't have encephalized and you wouldn't be able to have this argument with Joe. Our brains would likely be about 65 % smaller. Of course, that doesn't guarantee meat eating is the right approach going forward, but if we didn't eat meat the past 2.5m years, we wouldn't be human. That's important to some of us.

## **Why Do Sweet Foods Taste Good? The Importance of a Simple Observation (2014-03-23 05:00)**

Stuart King writes:

I was very hungry today at dinner and the thought of sweet food wasn't appealing at all, but after filling up on some rice, chicken and coconut cream curry I immediately had ice cream and chocolate slice [= what Americans call a brownie], which had had no appeal 15 minutes or so before!

An everyday observation that anyone can make. Studies have shown what Stuart noticed: When you are hungry sweet foods are unappealing. This is why dessert is eaten after the rest of the meal.

The main way that psychologists explain an experimental effect – choose between explanations – is by finding out what makes the effect larger or smaller. For example, discovery of what makes learning more or less (what increases or decreases the effect of one learning trial) is the main way psychologists have chosen among different theories of learning. Different theories predict different interactions.

Why do we like sweet foods? The usual answers are that sweet foods are a "good source of energy" and they provide "quick energy". But these explanations do nothing to explain what Stuart noticed. If sugar is a good (= better than average) source of energy, we should eat it before other foods (average sources of energy) when we are hungry (hunger signals lack of energy). The opposite is true. You may not want to call it a "contradiction" but there is no doubt the conventional view does not explain what Stuart noticed. Of course many nutrition experts, such as Weston



Price, are/were entirely sure sugar is unhealthy.

As a tool for choosing among theories, Stuart's observation is especially good because (a) it is very large (sweets go from unappealing to appealing) and (b) paradoxical (eating calories should make all calorie sources less appealing).

If you have been reading this blog, you know I explain Stuart's observation by assuming that we need sugar in the evening to sleep well. Sugar (sucrose, fructose, glucose) eaten in the evening increases blood glucose, which increases glycogen. During sleep, glycogen becomes glucose, which the brain needs to work properly. Evolution shaped us to like sweet foods after a meal so that we will eat them closer to when we sleep. (The value of replenishing glycogen close to bedtime also explains why [1]we eat sweet foods after dinner more than after breakfast or lunch.)

I can't think of another case where what experts say is so out of line with what's easily observed. For example, I'm sure cholesterol doesn't cause heart disease, but there is no everyday observation that supports my belief.

I can't think of another case where what experts say is so out of line with what's easily observed. For example, I'm sure cholesterol doesn't cause heart disease, but there is no everyday observation that supports my belief.

If sugar is helpful for sleep, why is it [2]associated with diabetes? My guess is that sugar is almost always consumed in foods that taste exactly the same each time – what in The Shangri-La Diet I called ditto foods. For example, soft drinks. Ditto foods with sugar, because they have a strong precise CS (smell) and a strong fast US (calorie signal), produce an especially strong smell-calorie association. Such an association raises the body fat set point, thus causing obesity. Obesity causes diabetes. It's also possible that eating sugar during the day – at the wrong time – hurts sleep. Maybe sugar during the day raises insulin and thus reduces the conversion of sugar to glycogen. Less glycogen causes bad sleep, bad sleep causes diabetes. My blood sugar levels clearly improved when I started eating sweets in the evening – opposite to what the sugar-diabetes link would predict.

1. <http://blog.sethroberts.net/2014/03/16/the-wisdom-of-google-dessert-honey-and-fruit-closer-to-dinner-than-breakfast-or-lunch/>

2. <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0057873>

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Shelley (2014-03-23 05:54:00)

I never ate sweets at night but USED to crave chocolate. Not anymore. I have been liberated from my addiction to chocolate. How? I stopped eating it and 60 days later I lost the craving. The good news is that if you cut out all the added fats, sugars, and salt from your food your taste buds WILL adjust. It takes time. 2 or 3 weeks is NOT enough for most folks. You need 30-90 days. After that you'll actually learn to taste subtle flavors that were overpowered with grease, salt & sugar before. Give yourself some time and your taste buds will adjust. You'll be amazed at how good "real food" really does taste and how satisfying it can be! I did not believe it would happen for me but it did.

Gina (2014-03-23 07:51:16)

Our taste for very sweet would be based, I assume, on dried fruits and honey. Like most people, I only like something that sweet when I am not hungry. However, I only want fruit (more sweet than starch and less sweet than honey) when I am hot and thirsty. I wonder if people who like sweet breakfasts are those who don't have sweets at night and if they started having dessert after dinner they would stop wanting a sweet breakfast.

George (2014-03-23 09:04:23)

This is a good example of using selective evidence. While what he says here is real, there are also lots of times when you crave sweets on an empty stomach. I went through a period where I dieted hard and then binged, and my binges would often start with sweet food and I would often crave sweets. I start the day with a sweet food, and want nothing else in the morning. The ubiquity of sweet food for breakfast as the main meal around the world, which is unheard of for lunch or dinner, also suggests otherwise. (breakfast is not always or necessarily sweet - some people eat bacon and eggs - but it's the ONLY meal where it is common for the main meal to be entirely sweet. Waffles with maple syrup is considered normal for breakfast but if that was your lunch or, worse, your dinner, you'd be looked at as very eccentric) Basically, what he and you are doing is just fitting the facts to your theory.

gwern (2014-03-23 09:37:08)

Agree with George here. Both as a kid and now I loved sweets for breakfast - waffles, pancakes, oatmeal with honey or maple syrup, and of course, regular cereal (loaded with sugar, check the ingredients list sometime). In direct contradiction to this theory. And what do people eat for snacks? When they come home and want something to eat as fast as possible, what do they eat? If it's not fruit (my own standard after-school snack), it tends to be starchy carbohydrates. (Hold a saltine cracker in your mouth for less than a minute and you can start tasting the sugar as it's broken down.) Plus, does the mechanical theory make any sense here? How does eating an ounce or two of sweets before bedtime make a hill of beans' difference to metabolism 8 hours later? Is one's body so dysfunctional it cannot do some basic regulation of blood sugar while asleep? And it's not like one is exercising vigorously while asleep. > I can't think of another case where what experts say is so out of line with what's easily observed. I look forward to hard data, perhaps even randomized data - I realize it will be a great sacrifice to decide whether to have a late-night snack based on a coin flip and then to analyze the data, but posterity will thank you!

Joe (2014-03-23 12:02:27)

Seth: "Obesity causes diabetes." Not in my opinion. In fact you may have it pretty much backwards. There is a correlation, and that's it. And we know what that means, right? Virtually nothing. "Most overweight people never develop type 2 diabetes, and many people with type 2 diabetes are at a normal weight or only moderately overweight." Until you can explain to everyone (and back it up with data to support your claim) why the vast majority of obese people DON'T develop T2D, saying that obesity causes cancer is not too different from saying that cholesterol causes heart disease. We both know how that worked out, right? <http://www.diabetes.org/diabetes-basics/myths/> I think Dr. Attia is on to something: What if we're wrong about diabetes? [http://www.ted.com/talks/peter\\_attia\\_what\\_if\\_we\\_re\\_wrong\\_about\\_diabetes](http://www.ted.com/talks/peter_attia_what_if_we_re_wrong_about_diabetes)

James M. (2014-03-23 13:02:11)

Here is an article/interview with Lewis Cantley, PhD in biophysical chemistry, with commentary on the actions of glucose/fructose/artificial sweeteners, the action on the body/brain, including a thought about why fructose turns readily to fat (found through Mark's Daily Apple). <http://www.biomedcentral.com/1741-7007/12/8> Seth: Thanks, I saw that. When did biologists become climate scientists? (who feel no need to make correct predictions)

Alex (2014-03-23 13:09:47)

Seth, some interesting thoughts in the last few sentences of the post. Hmm... gwern, blood-sugar management seems to be open to great variability between individuals. I've noticed a big difference in my sleep patterns based on blood sugar once I started experimenting. I used to find it impossible to stay awake at 5:00 p.m. I assumed it was some wacky circadian glitch. Once I went paleo (low-carb) that stopped. Just stopped. The honey at bedtime trick (and no other sweets/starches during the day) made a huge difference for my kid. But other people have no trouble staying awake at 5:00 p.m. even if they eat a spaghetti sandwich for lunch, and most other kids sleep through the night just fine regardless of what they ate all day.

babar (2014-03-23 15:01:09)

"sweets" didn't really exist until recently. there was fruit, when it was in season. very little fruit kept long out of season. apples and pears. honey i'd think was very scarce - when did people learn to keep bees? so i doubt that evolution has much to say about this.

Seth Roberts (2014-03-23 17:23:48)

"i doubt that evolution has much to say about this." okay, how do you explain these generalizations: 1. we like the taste of sugar. 2. we don't like it when we are hungry, only when we are not hungry? 3. (bonus question) we like it more in the evening than earlier in the day? I don't think it's a stretch to suggest that evolution shaped when we eat fruit.

Retired now (2014-03-23 17:28:08)

I have noticed that I really want something sweet after dinner at night, but by the time two hours has past I no longer want it (mostly). Not sure how this would fit your theory. And after years of on again, off again, occasions of no sugars and no chocolates I can tell Shelley that one can have totally lost all cravings and then for no apparent reason the cravings return without apparent trigger and without being self indulgent. So don't be too self righteous about it all. If your cravings stay away then be thankful.

George (2014-03-23 18:05:30)

"we don't like it [sugar] when we are hungry, only when we are not hungry" I just don't understand how anyone can say this. Am I missing something? I LOVE sugar when I am hungry. It's fascinating to me that the field of nutrition seems to produce a long line of highly intelligent people who make bold claims that are contradicted by readily available and extremely obvious information - Ancel Keys, Taubes, Guyenet, Seth, etc. I am convinced the field of nutrition functions as a channel for displaced religious sentiments. Something about nutrition seems to recruit mental habits that usually play a role in religion.

Seth Roberts (2014-03-23 19:16:32)

"how can anyone say this?" Elizabeth Capaldi said it based on research she did - data she collected. Perhaps you missed the part where I said studies showed this.

GB (2014-03-24 02:12:34)

Seth, perhaps this is beyond the scope of this post, but do you have any theories about how we sated this hunger for sugars at night in the deep past? I can't see anyone raiding a beehive and then saving the contents until after dinner. Gathering and saving fruit until after dark, perhaps? Does anyone know if any contemporary hunter gatherer tribes save sweet carbs until near bed time? It would be a nice addition to the theory if we could identify such behaviours. Likewise, not being able to identify such behaviours would be an interesting thing, why would evolution offer such low-hanging fruit and yet we're unable to find HGs taking advantage of it?

Anand Srivastava (2014-03-24 03:05:20)

I try to do a thought experiment when I read something like this. My principle is that whatever is supposed to be healthful should not be contradictory to the environment we had during the palaeolithic times. As we are probably much more adapted to that environment than we are to the modern times. My reasoning for this principle is that our environment has changed too fast for us to be able to adapt to the changes. This does not mean that we have not changed, and there is ample that we have changed, but the changes are not universal, and they do not negate the adaptations to the Palaeolithic times. This in a nutshell is the Palaeolithic Principle. Testing Sugar in the night theory with the Palaeolithic Principle, below. In the palaeolithic people, would get sugar from fruits or honey. They would gather them and eat them during their cook-out in the evening, or eat them while they were on hunt or gathering. This means that they were eating sugary stuff either before sleeping or during exercises. They might have also been eating them for breakfast as left-overs. The least sugar would be eaten during the breakfast, as it would be a premium item, and unless you got a lot by luck, nothing would be left over. I think the logic seems very plausible. And maybe beneficial. A little in the breakfast may not hurt. In any case, without some amount of hard work everyday (or at least alternate days), you are not going to be healthy, whatever you do.

Seth Roberts (2014-03-24 06:35:57)

I think people gathered fruit and saved the fruit to eat until late in the evening. They were hungry when they gathered the fruit; it wouldn't have tasted good at the time.

Seth Roberts (2014-03-24 06:42:04)

Surely hunger was very common long ago. If hunger gets rid of or at least reduces our sweet tooth, that is a stunning fact. Having a sweet tooth makes sense – because sugar supplies energy – so not having one...how strange!

George (2014-03-24 06:43:10)

Research has shown that we like sugar ONLY when we are not hungry? Wow, I shudder for the state of scientific research. ONLY when we are hungry, not even just it's more common when we are not hungry? Okay, I'm outta here. This place is a joke. Pure nonsense, and an unwillingness to back off from nonsensical claims. Seth: The research showed people liked sweets much less when they were hungry. I was trying to convey it was a big effect. I see I misled you.

JV (2014-03-24 07:22:47)

Just a personal observation - I will eat sugar when I am hungry but I realize I don't find it satisfying. If I'm not careful I will look for more sweet foods (the idea of pay attention and don't eat mindlessly) and end up feeling slightly sick but if I eat something not sweet the hunger is more satisfied. I think that is a lot of the problem with our modern society, we often don't pay attention to what our bodies are telling us and sweet foods are way too easily available everywhere we turn.

Kirk (2014-03-24 10:27:53)

I agree that honey just before bedtime improves my sleep. I'd like to know why. But jumping from that personal observation to the theory that people eat sweets after supper so as to improve their sleep ignores other lines of thought. 1) Many people eat their last meal hours before they go to sleep. The honey effect, for me, depends upon honey ingestion within 1 hour of bedtime, not a dessert immediately after supper. 2) People eat sugar throughout the day, when they need to stay awake. One line of proof includes inspecting the menus of breakfast chains such as Dennys, IHOP, and Perkins. Another line of proof: stand in a fast food chain during lunch, the kind where people buy a cup and fill their drink at will from the dispenser. What percentage of customers select a sugared soft drink? From my limited personal experience, I remember it as being a large percentage. 3) Using soft drinks as a measurable product of how Americans consume lots of sugar, using a search engine to look for its consumption before bedtime yields few results. Searches such as: "bedtime coke", "bedtime cola", "bedtime soda". 4) Then again, Americans do love their ice cream. The search phrase, "ice cream before bedtime" yields a wild mixture of positive and negative search hits. Apparently, if you eat ice cream before bedtime, either you lose weight and sleep better, or you gain weight and have nightmares. If I remember correctly, the speculation that desserts improve sleep originated due to a dinner party where dessert was served, thus, it was concluded, it was the dessert that improved sleep. However, there are at least two alternate theories. The first, which is the one I prefer, is that a dinner party is a minor stress event which typically ends well. It is stressful because people might not like your jokes and stories, or you may be stuck talking with a bore. Also, you have to be 'on stage' for a long period of time. It's similar to going on a vacation and exploring a bunch of new places. The second explanation is that a dinner party simulates paleo life; a day of hunting/gathering, followed by sitting around the fire talking with companions and hearing and telling stories. What is similar in modern life? Many people, after a day of work, watch TV, where they see friendly faces and hear stories. A dinner party is a more intense expression because one not only consumes but tells stories.

dearieme (2014-03-24 11:40:41)

Why do people fuss so much about paleo life? The population has grown so much since that it's easy to believe that we've evolved a long way from then.

Seth Roberts (2014-03-24 12:56:42)

"I agree that honey just before bedtime improves my sleep. I'd like to know why." I think the idea that "honey before bedtime improves sleep" is far from proven (although the idea that "sweets in the evening improve my own sleep" is proven beyond doubt). It is also unclear to me how much weight (a lot? none? moderate amount?) to put on what people tell me about their sleep. For example, you tell me that honey before bedtime has improved your sleep. How much weight should I put on that? By looking into associated phenomena, such as the notion that when we are hungry, we don't want sweets, I learn more about both issues (1. is it generally true that bedtime honey improves sleep? 2. Should I trust what people tell me about their sleep?)

If the answer to both #1 and #2 is yes, then the idea that we don't like sweets when we're hungry makes sense. If the answer to both #1 and #2 is no, the idea that we don't like sweets when we're hungry is not explained. I agree with you, this post is no help in understanding why bedtime honey improves sleep.

Joe (2014-03-24 13:36:19)

dearieme: "Why do people fuss so much about paleo life? The population has grown so much since that it's easy to believe that we've evolved a long way from then." I'm not sure that I understand your question. But the people who "fuss so much" about paleo are usually the people who think eating a 100 % plant-based diet is the ONLY way to eat. Which is preposterous, of course. Man evolved while eating animals, animal fat, fish, insects, snakes, etc., and certainly veggies and fruits (when in season) for millions of years. That's why we are omnivores, not carnivores or herbivores. And we've thrived. On the other hand, it's only been about 10,000 years (since the beginning of agriculture) that we've eaten things like grains, especially wheat, year-round fruit, etc. Which is basically a blink of the eye, in terms of evolution. Many of us think our health has suffered for it. Others don't agree. Thus the "fuss." Also, it seems to be a sort of religious experience for one side, saying and implying that those of us who choose to eat animals and animal fat, like we have for millions of years, are now "unethical." You can probably imagine how some of us would respond to that. Hint: Not very well.

Edward Edmonds (2014-03-25 09:02:17)

I think an interesting question to ask would be: Do people who eat deserts after dinner eat big breakfasts, smaller breakfasts, or no breakfast? And do people who eat big breakfasts tend to eat desert after dinner? When I am hungry but not stressed I crave meat and/or fat. When I'm hungry and stressed I tend to still crave meat and/or fat but less of it and only two things as "desert" satisfy my "sweet" craving: yogurt or dairy (e.g. milk) or something sweet. Another question I'd be interested in knowing the answer to is do people who eat more full fat yogurt crave less sugar?

David (2014-03-25 10:06:39)

Just a few thoughts: 1. i think we crave sweets after meals because we didn't get sugar during the meal, not because we naturally prefer it after a meal. In other words, if you have steak and potatoes, you may crave dessert. If you have a Moroccan meal with meat, rice, figs and honey, you may not crave sweets after a meal. (This would be easy to test). 2. No one craves just sugar. They want dessert, which is fat, starch and sugar together, so i see sugar as part of a balanced diet. 3. Almost all starches and meats are more palatable when eaten with sugar. Breakfast cereals are loaded with added sugar, meats like barbaque are covered in sugary sauces. I mean is there anyone when hungry who likes plain oatmeal??? No, we love it with brown sugar and fruit or honey. 4. There is a lot of discussions of what Paleo ancestors ate. First, I've been following the Paleo diet for over 10 yrs and it changes every few years. It was high protein and veggies, then they added more saturated fats, then they added more tubers like sweet potatoes. For a diet that hasn't changed in a million years, it changes about every 2 yrs with a new recommendation of how we misunderstood something. 5. Which brings me to #5, Paleo people say we would not have had access to sugar but traditional peoples have collected honey throughout history. Honey can be stored indefinitely, so i kind of roll my eyes when a Paleo advocate says that we should only eat honey if you've gone through the trouble to climb a rope ladder, beat off bees, recover the honey and sprint away from the bees. Those same people never say you can only eat meat if you have run for miles, tracked an animal, killed it, skinned it, and carried it back to your tribe. My point is just that i think we have to be careful creating narratives for why we should or should not do something. 6. Finally, we don't live a Paleo life. We struggle under a 10 hour cognitively demanding job with more chronic stress which has been shown to damage the brain, given sugars role in providing energy for the brain (mostly through the liver), it makes sense that we might crave (and therefore need) more sugar than we had during Paleo times.

Strauss Vasconcelos (2014-03-26 01:21:42)

Seth Roberts, I believe your theory how about sugar improves is correct, but I do not quite agree with the explanation for diabetes. To me, a simpler explanation would be that our livers need a certain amount of micronutrients to digest properly high amounts of sugar, including magnesium, complex B, coenzyme q10 and choline (choline is needed in liver to properly export triglycerides produced by excessive ingestion of alcohol and sugar, see this post made by Chris Masterjohnson: <http://blog.cholesterol-and-health.com/2010/12/meeting-choline-requirement-eggs-organs.html>). So the brain prefers to

ingest sugar after a meal because half of it is glucose, who can provide immediate energy for brain, and the another half, fructose, is metabolized exclusively in liver, providing a stable source of glucose for a brain whose body cannot store high amounts of glucose. My proposal to fix your theory is that sugar (and honey) helps improve not only sleep, but our health and brain function as well. But if we ingest insufficient ammount of those mentioned micronutrients and high amounts of sugar, we'll develop metabolyc syndrome and inexorably DM II. Of course, like traveling to Rome, there are many ways to develop DM II, not just this one.

David (2014-03-26 05:56:39)

Strauss, i agree with your points, and its a reason why i think there is confusion on the issue. Fructose is incorrectly seen as bad, but its really the refined sugars and their lack of nutrients that cause problems. Honey and fruit have a ton of nutrients that accompany the sugars and help them metabolize. Second, the glucose and fructose are free and not bound together like in sucrose. Third, i agree that the primarily benefit of sugar is supporting the brain. With only 2 % of body mass and yet consuming 20 % of the calories, keeping the brain healthy with a steady supply of fuel seems paramount.

George (2014-03-29 15:40:02)

"Seth: The research showed people liked sweets much less when they were hungry. I was trying to convey it was a big effect. I see I misled you." Fair enough, Seth. I still think you're ignoring lots of readily available evidence. You've ignored the point about breakfast, which as the name implies is breaking a long fast, being the most commonly eaten sweet meal. That alone poses a serious challenge to your theory. That the ONE meal eaten after a long fast every day in all cultures around the world tends to be sweet, or is often sweet, and that this isn't the case with lunch or dinner, massively does not support your theory. There there is the well known fact that heavy dieters almost always binge on sweet foods - they don't binge on steak and bacon and eggs, but donuts and ice cream and chocolate. Again, massive un-evidence. Sorry, it's a nice theory but it just doesn't add up. Do the right thing and move on. Truth is more important than our pet theories. Seth: You might want to read the research I mentioned, by Elizabeth Capaldi.

Nancy Lebovitz (2014-03-30 02:30:04)

David, I'm quoting this because I like it: "4. There is a lot of discussions of what Paleo ancestors ate. First, I've been following the Paleo diet for over 10 yrs and it changes every few years. It was high protein and veggies, then they added more saturated fats, then they added more tubers like sweet potatoes. For a diet that hasn't changed in a million years, it changes about every 2 yrs with a new recommendation of how we misunderstood something." As for the rest, honey is easy to store, but I don't have a feeling for when people invented a way (ceramics?) to store it. Could they have used animal bladders? If so, I don't think there'd be a fossil record. It's true that people don't want straight sugar for dessert. Hard candy is for snacks, not dessert. Still, dessert varies a lot in it' fat/starch/protein/sugar ratio. Your basic cake is sugar/refined flour/a little egg and dairy. Cheese cake is mostly cheese and sugar. Let to themselves (no theory about nutrition), people don't use whole grains in dessert so far as I know. I believe we need more investigation of dessert.

Patti (2014-04-02 08:55:46)

I have been experiementing with a ketogenic diet. Recently my blood sugars upon rising have increased to well over 100. Within a couple of hours upon rising my blood sugars drop to 90. That was not the case before I started the diet,

Patti (2014-04-02 09:05:44)

continuing... as my blood sugars were normally around 90 upon rising. I have been reading about the Somogyi Effect and Dawn Phenomenon for diabetics as a possible clue to why my bs have shifted. I am beginning to think the SE and DE are not mutually exculusive to active diabetics. From this post, and the one about honey before bed, I am wondering if being in a state of nutritional ketosis might just only be beneficial during the day. This thought comes about because last night I just went crazy with eating sugar before bed, and I awoke in very good spirits after having a wonderful dream. For the last several months this has not been the case. I usually had very uncomfortable dreams. I think for me my hours of rest have increased to 8 hours due to the time change. During the winter I usually will awake at 3am and stay awake for a couple of hours. Today I am going to experiment with eating a ketosis diet through out the day and tonight I am going to have honey.

Seth Roberts (2014-04-02 11:17:20)

"I am beginning to think the SE and DE are not mutually exclusive to active diabetics." I agree. I found this in Wikipedia: "Clinical studies indicate that a high fasting glucose in the morning is more likely because the insulin given on the previous evening fails to last long enough." I had/have a high fasting glucose in the morning but don't take insulin (and am not diabetic). So the explanation of the high glucose in the morning, at least in my case, cannot be my insulin didn't last long enough.

Patti (2014-04-03 20:34:09)

I tried the honey last night, and it did not work. I actually awoke at 12am in a panic. This also happens when I have fruit. I am thinking the fructose in both is the culprit.

Seth Roberts (2014-04-04 13:40:31)

If bedtime honey causes you to wake up too early, try a smaller dose.

Danny (2014-04-04 16:01:47)

Humans are born loving sweet, fatty and salty foods. Scientists think it is evolutionary because we didn't get much of this stuff when we first evolved so people who ate this whenever they found it lived longer and passed on liking this in their genes to their offspring. The human brain takes a lot of energy to keep it going, as well as our body, and snacking on a few plants just won't do. Humans who ate sweet things (fruits, etc.) and fats (meats, nuts) got more nutrition and lived longer.

Seth Roberts (2014-04-04 19:21:15)

This does not explain why we eat sweet foods separately (dessert) and after the main food.

## **Treat Everyone As Smart, Capable and Motivated? (2014-03-25 05:00)**

A Vancouver drug center has started an unusual program: [1]alcoholics bottle homemade beer.

The Drug Users Resource Centre, the Downtown Eastside non-profit famous for housing Canada's first crack pipe vending machine, is also behind what may well be North America's first program teaching severe alcoholics how to brew their own beer and wine.

Now the alcoholics just do bottling but the people behind the program intend to expand it to include other parts of the beer-making process, such as fermentation.

What's interesting is that they are not treating severe alcoholics as passive or disabled – as recipients of treatment. At least not entirely.

This program reminds me of several things. Geel, a town in Belgium, [2]treats people with mental illness as valued caregivers. [3]Zeynep Ton says low-level retail employees should be treated as people who can learn many jobs, give good advice to both customers and management, make good use of free time, and so on. [4]I treat my students as people who want to learn – who do not need to be scared into learning by threat of a bad grade – and are capable of inventing their own assignments.

Is there a general lesson to be drawn from these examples? (All are complicated, in spite of brief descriptions.) Could it be a good idea – as a default – to treat those you deal with as smart, capable and motivated? It is no great leap to treat alcoholics as motivated to make beer but it is a slight leap to treat them as capable of making beer. Is the next step is to treat them as smart?

What if doctors, before they saw a patient, told them: Please search the Internet for possible remedies. Bring a list of the ones you want to consider to our meeting. Is that crazy? The slightly subtle point is this may make the doctor happier.

1. <http://news.nationalpost.com/2014/02/19/vancouver-drug-centre-teaching-alcoholics-to-brew-their-own-beer-so-theyll-stop-drinking-mouthwash/>
2. <http://faculty.samford.edu/~jlgoldst/apa98talk.pdf>
3. <http://zeynepton.com/>
4. <http://blog.sethroberts.net/2013/01/26/my-ideas-about-teaching-put-into-practice/>

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Brandon Berg (2014-03-25 05:59:09)

My impression is that doctors are not generally happy with patients doing this. I may be wrong about that, but I feel as though I've heard a lot of doctors complaining about patients who self-diagnose before coming in, but have no recollection of any doctor ever speaking positively of the practice.

Alex Chernavsky (2014-03-25 06:29:34)

I do have a little bit of sympathy for doctors. One of my responsibilities at work is to troubleshoot computers. My non-techie colleagues (that is to say, almost all of them) sometimes have totally ridiculous theories about what's wrong with their PCs and how to fix the problem. Seth: In contrast to the completely non-ridiculous theories of psychiatrists. If you were paid by the visit you might be happy if a client wanted to test a ridiculous theory. It would mean two visits rather than one.

Peggy (2014-03-25 07:46:01)

I'd say the general lesson is that accepting someone as they are can provide them with a foundation from which they can go on to change and to become whole. Perhaps a lack of belonging actually propels people toward self-destruction.

Edward Edmonds (2014-03-25 08:44:24)

I work in a histology laboratory where we have a yearly flux of new students doing clinical rotations as a part of their academic programs. Different senior histologists have different methods of teaching. Most of them train in an authoritarian manner essentially writing off any new ideas new students almost always have using the excuse that because they have no clinical experience they can't possibly have any real world ideas that are of use. Or my favorite excuse is when I hear a student that has a good idea the senior histologist will say "we don't do things that way at this facility"... I remember when I was a student, I had good ideas, and I remember questioning whether or not I got into the right field of work whenever I heard



that kind of discouragement. I never forgot that feeling. When I train students I always expect that they will do things a little differently or that they will have new ideas, so instead of treating them like they have something to learn from me, my first question is always show me what you have learned or show me how you'd like to do this procedure, in other words they went through the same training I did maybe at a different facility but there are a lot of different ways to approach things we do in the lab, so I let them develop their own "style". Then after they do it in their own way I show them how I do it my way and I explain step-by-step why I'm doing it this way just as I have them explain why they choose to do a procedure in they way they choose. The entire thing is an enjoyable experience we are learning, and laughing, and undoing the dogma learned from the academic setting. In the end it makes more confident and competent histologists, they know why they do the things they do instead of just memorizing steps... all of my students end up being excellent troubleshooters and problem solvers.

andrew (2014-03-25 09:28:20)

That is the basis of libertarian philosophy.

Gina (2014-03-25 09:31:04)

The problem with bringing a list of possible remedies to a doctor appointment is that the doctor will only be familiar with the pharmaceutical options. I've done this with my grandmother and my cat. All I got was a glassy stare from the human doctor and complete sarcasm from the vet. Both were dismissive without even listening. The vet wouldn't even take the paper (published in a peer-reviewed journal) that I printed off.

C.M. Mayo (2014-03-25 09:41:06)

My teaching philosophy exactly. And over the years I have found that everyone, yes everyone, is capable of writing more and wilder and more vivid fiction- or whatever kind of writing they fancy. Love your blog. It is always such a surprise.

nicole (2014-03-25 10:59:26)

article in this month's harper's about just this topic: <http://harpers.org/archive/2014/04/diagnose-this/> i can get it for you Seth if you don't have access.

Alex Blackwood (2014-03-25 11:29:56)

Same experience here, Alex Chernavsky. Having been on the other side makes me more patient with doctors when they get that look of, Oh, no, another PhD from Google University.

Joe (2014-03-25 12:29:22)

Alex Blackwood: I have zero patience with doctors who don't know how to listen to their patients. And I've been known to walk out the door when they don't. I've also had doctors thank me for providing them information they didn't know anything about. First, the internet is what you make of it. It's just a tool. You can get bad information from the internet, and you can get good information there. And doctors don't always have access to the good information, or the time to find it. I'd even go so far as to say that doctors FREQUENTLY have bad information. An example of that (I can give you dozens of them), in my opinion, regards statin drugs. Doctors essentially get their information regarding statin drugs from the drug companies. What incentives do you think come into play there? The vast majority of doctors don't even know that statins have ZERO efficacy on patients without a previous history of heart attacks, yet they prescribe them anyway. For virtually everyone! Why do you think they do that? This information is available to anyone with a computer. Frankly, I think anyone who takes the time, has the interest, etc. to do their own due diligence should be applauded, not ridiculed. If for no other reason than to be better informed.

Seth Roberts (2014-03-25 12:30:26)

" the general lesson is that accepting someone as they are can provide them with a foundation from which they can go on to change and to become whole." I agree, that's part of it. I'd also say that treating alcoholism, retail sales, etc., are difficult tasks and that, because of that difficulty, two brains (e.g., boss and employee) are better than one (e.g., boss).

Seth Roberts (2014-03-25 12:56:34)

"That is the basis of libertarian philosophy." yes, the basic assumption of libertarian philosophy is that government consists of people who are not smart, not capable and not motivated telling people who are smart, capable and motivated what to do.

AI (2014-03-25 13:16:24)

If doctors were always correct in their diagnoses and always offered the most effective known treatments, and if doctors were available 24/7 to offer their service to each patient, then, yes, this would be a crazy idea. But, in the current environment, it may still be a crazy idea because: 1. What kind of a defense in a medical malpractice lawsuit is: "Well, my patient thought it was a good idea ..." ? 2. The internet, (even with PubMed, WebMd, NIH), is not good enough, user-friendly enough, deep enough. Doctors should also tell patients to research their condition in a decent medical library at a hospital or university. A lot of the knowledge in those libraries is not yet easily and cheaply available online (e.g. I don't know a way to access a selection of the vast number of books and journal articles housed in UCLA's Louise M. Darling Biomedical Library online as cheaply as I can on site. It sure seems like a lot of stuff there is not available in PubMed or on Amazon, etc.)

dearieme (2014-03-25 13:25:13)

There's an absurd new habit sneaking into the NHS. You walk in to talk to your GP and he says "we only have ten minutes so restrict yourself to one problem". Observe that this requires the patient to guess whether his symptoms add up to one problem or more. Bonkers, eh?

Joe (2014-03-25 13:41:22)

AI: "1. What kind of a defense in a medical malpractice lawsuit is: 'Well, my patient thought it was a good idea ...? That's why it shouldn't end with that. How about: "Due to my patient's request, I checked his information out more thoroughly, and other experts in the field thought it was a good idea. So I gave it a try, and lo and behold, my patient was very happy with the results." "2. The internet, (even with PubMed, WebMd, NIH), is not good enough, user-friendly enough, deep enough." It's easy to find great information outside of those sites (which are often part of the very problem we're discussing, not the solution). The internet is a very, very large (and deep) resource. It can lead you to great books, papers, journals, articles, etc. on many subjects, written by other experts or knowledgeable people. Especially if you're looking for more information about a specific subject. One doesn't have to graduate from medical school to learn the truth about statin drugs. In fact, medical schools may be the worst places to learn about them. Medical libraries are just tools, too. You can find good information there, and you can find very, very bad information there. Kind of like the internet.

GeoffD (2014-03-26 05:00:58)

As a Dentist, I would love it if people took some level of ownership over their problems. My least favorite patient response is an apathetic "Do whatever you think is best." The info is all out there now. Most people don't want to be bothered.

Dragan (2014-03-28 18:42:31)

I always thought that the Pygmalion effect is worth thinking about. This isn't quite the Pygmalion effect, I think, but the idea - treating everything as smart, capable, and motivated - strikes me as similar.

## **"Why Fuss About Paleo Life?" (2014-03-26 05:00)**

[1]dearime asks:

Why do people fuss so much about paleo life? The population has grown so much since that it's easy to believe that we've evolved a long way from then.

Jared Diamond wrote a paper about rapid evolution on an isolated island. When modern (factory) food was introduced to the island (in the 1940s?), there was a very high rate of diabetes, presumably due to the new food. Since

then, the rate of diabetes on the island has gone way down, although they still eat modern food. Diamond took this to be due to evolution (people with diabetes-resistant genes had more offspring), supporting dearime's point of view.

After the first Ancestral Health Symposium, Melissa McEwen commented how unhealthy many of the top people looked. On the other hand, Tucker Max commented how healthy the attendees looked in general. I agree with both observations. A paradox.

When I was an assistant professor, and wanted to sleep better, I believed wondering about paleo life was unhelpful because (a) we knew so little about it and (b) it must have differed in thousands of ways from modern life. Should I spend an hour trying to find out about paleo life and/or what paleo gurus recommend for bad sleep? Or should I spend an hour trying to find out how ordinary people have improved their sleep? My answer was the latter. I ignored paleo life.

Looking into how ordinary people improved their sleep did help. I eventually reached a non-trivial conclusion: Eating breakfast made my sleep worse. No paleo guru had said that – I had been right to ignore them. Yet it made evolutionary sense. Cavemen did not eat breakfast, I was pretty sure. (No refrigerators.) After that I paid more attention to what evolutionary thinking would suggest. This led to [2]several discoveries: the effect of faces in the morning on mood, the effect of standing on sleep, and the Shangri-La Diet. It is incredibly hard to discover big new experimental effects (such as the effect of morning faces), especially in fields you know little about (my specialty in psychology was animal learning, not mood, sleep or weight control). I was impressed.

[3]The effect of bedtime honey (more generally sweets in the evening) on sleep emphasizes the paradox or puzzle or whatever you call it. I found out about the honey effect by paying attention to what works. No paleo involved. Stuart King told me it improved his sleep. Here are three reasons to look at ordinary experience and avoid paleo theorists: 1. It turned out to help. 2. It's a huge effect and very easy. 3. Paleo theorists have said the opposite: avoid carbs, avoid sugar. If you followed their advice, you would do the opposite of what helped Stuart and me. On the other hand, I increased my belief in the effect because it made evolutionary sense: 1. It makes sense of why we like sweets. 2. It makes sense of why our liking for sweets goes down when we are hungry (surely due to an evolved mechanism). 3. It makes sense of why we eat sweets more in the evening (presumably due to an evolved mechanism that makes sweets taste better in the evening).

The short answer to dearime's question is that, in my experience, it is incredibly hard to learn anything about health. There are so many possibilities and evolutionary thinking helps choose among them – decide which to take the trouble to test.

1. <http://blog.sethroberts.net/2014/03/23/why-do-sweet-foods-taste-good-the-importance-of-a-simple-observation/#comment-1179169>
2. <http://escholarship.org/uc/item/2xc2h866/>
3. <http://blog.sethroberts.net/category/sleep/honey-sleep/>

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Jake (2014-03-26 09:14:25)

When you are young, anything you do health-wise seems to work. When you are over 60, you have no room for error. That is when you must mimic your evolutionary past. I am 71 and my wife and I have followed a strict paleo low-carb lifestyle for the past 5 years which resulted in great improvement in our health. In the last two years I have mimicked paleolithic meal frequency including hunting failures and seasonal famines. This has resulted in even more dramatic improvement in our health.

Joe (2014-03-26 09:18:32)

Seth: "The rate of diabetes has gone way down." 'According to the CDC, the rate of diabetes has roughly DOUBLED in just the last 30 years.' <http://www.cdc.gov/diabetes/statistics/prev/national/figage.htm> And it was rising in previous years. And it's projected to DOUBLE again in the next 30 years. So if there are such things as "diabetes resistant genes," it appears that diabetics are reproducing far faster than non-diabetics. Seth: "I believed wondering about paleo life was unhelpful because (a) we knew so little about it and (b) it must have differed in thousands of ways from modern life." We know quite a bit about it. We can also assume many other things about it. Such as HOW it must have differed in the "ways of modern life." For example, that our ancient ancestors certainly didn't eat fast food. For a long time, they didn't even eat cooked food. They didn't eat processed or refined foods. They didn't eat sugar. They didn't eat grains. They probably didn't eat three meals a day. They probably were forced to fast from time to time. They ate what was available to them, e.g., meat, fish, insects, snakes, seeds, veggies and fruits, when they could find them. They spent most of their waking hours hunting and gathering. They were outside a lot. They got lots of sleep. Etc. Which is pretty much what "paleo" life today is all about. Eat only REAL foods. Don't eat sugar. Don't eat grains. Don't think you need to eat three meals a day. Exercise. Get a good amount of sleep. And that's about it. Our ancestors managed to live pretty healthy, relatively disease-free lives living that way (or we wouldn't be here today), and we can today, too. Are there other ways to "skin the cat"? Yes. But why "fuss" about a way of living that served us so well for hundreds of thousands of years? Seth: "3. Paleo theorists have said the opposite: avoid carbs, avoid sugar. If you followed their advice, you would do the opposite of what helped Stuart and me." Maybe the purists would say that. But the vast majority of them would say that a 80/20 rule is good enough. That is, feel free to tinker around the edges. If you can tolerate a little sugar, and not gain weight, go right ahead. If you can eat a lot of simple carbs and not gain weight, go right ahead. But some of us can't do that without gaining weight. Seth: "If you followed their advice, you would do the opposite of what helped Stuart and me." Have you ever eaten a strict paleo diet? Unless I misunderstood you, you previously said that you ate pretty much the way Alex C. eats. Which is apparently a strict vegan diet. But you decided to "tinker around the edges" yourself, and try a little animal fat. Which helped you think better and faster. So the question is, if you had been eating a paleo diet, would you have been thinking better and faster all along? :) Seth: "The short answer to dearime's question is that, in my experience, it is incredibly hard to learn anything about health. There are so many possibilities and evolutionary thinking helps choose among them — decide which to take the trouble to test." At least we can agree that there are many possibilities, and that taking the trouble to test them is extremely beneficial. That's precisely how I found paleo and lost 100 pounds. But I think we can learn more by looking back in time (what we already know worked pretty well), than trying to forecast where evolution will take us (what we hope will work for us)...because that may not be a place we really want to go.

Maarten (2014-03-26 10:22:25)

Evolutionary thinking is reverse engineering. It's creating a narrative for an observation that can't be explained by logic, filling the gap with theories that can't possibly be proven. It's what humans do when the world becomes too complex or unpredictable to understand. Finding a narrative is important, so in that way I'm attracted to paleo thinking. However, it should never get in the way of (self-)experimenting and observations. As you point out, when your observations conflict with a theory, just abandon it and find a new one. And one day, I hope to be okay with not understanding, or lacking a clear narrative for most observations in my life, and just live it.

dearieme (2014-03-26 11:40:19)

"We can also assume many other things about it." Why would I base my diet on someone else's guesses? "But why "fuss" about a way of living that served us so well for hundreds of thousands of years?" "us"? We are not them; we have evolved. Our numbers have shot up so far since the beginning of the neolithic that we are bound to have many differences from them. Still, if you want to mimic what you fondly imagine is the diet that kept 'em going to the ripe old age of 35, I admire your pluck.

Joe (2014-03-26 12:22:41)

dearieme: Why would I base my diet on someone else's guesses? What then do you base YOUR diet on? "We are not them; we have evolved." Do you think we have "evolved" to eat fast food, processed and refined foods, sugar, grains, etc. in just 10,000 years? If so, why all the obesity, diabetes, heart disease, cancer, etc? That sounds like we may be DEvolving. "Still, if you want to mimic what you fondly imagine is the diet that kept 'em going to the ripe old age of 35,

I admire your pluck." I do have a lot of pluck! I attribute it to eating like Grok. But to your question, should I assume then that you think eating lots of fast food, sugar, processed and refined foods, industrial oils, grains, getting little or no exercise and sleep, etc. is helping us to lead longer lives? By what mechanism? Paleo man didn't get to enjoy our present lifespans, but the reasons for that are pretty obvious, aren't they. They didn't have life-saving medicines, like antibiotics. They didn't have doctors. Many of them probably starved to death. They also died from rampant infectious disease. They spent much of their time fighting each other over limited resources (warfare). Hunting and gathering in paleo times was a very dangerous business. Injuries (and deadly infections) were commonplace. It's surprising they lived as long as they did. How long do you think we'd live today without medicines? Without life-saving procedures? Without doctors? Answer: Not long.

Joe (2014-03-26 12:43:00)

Dearieme, as you can see from this graph, as recently as the early 20th century, lifespans were still only 39 years (average of males and females) or so. <http://www.beyondveg.com/nicholson-w/angel-1984/angel-1984-1a.shtml> What else happened in the late 19th and early 20th century? Could it be the development of Modern Medicine? [http://en.wikipedia.org/wiki/History\\_of\\_medicine](http://en.wikipedia.org/wiki/History_of_medicine) Hmmm.

Seth Roberts (2014-03-26 13:45:28)

When I wrote "the rate of diabetes has gone way down" I meant the rate on this particular island – the island that Diamond was writing about.

dearieme (2014-03-26 14:15:45)

"What else happened in the late 19th and early 20th century? Could it be the development of Modern Medicine?" Probably it was overwhelmingly caused by greater wealth bringing clean water, sanitation, and plentiful foods, plus the wonderful fluke of the discovery of antibiotics.

Joe (2014-03-26 14:32:35)

Sorry, Seth. I was focused on your suggestion that just in a few years, people had actually EVOLVED to eat modern foods. I'm not a geneticist, but I'm unaware of any evolutionary theory that would account for anything like that, so quickly. I think the more reasonable explanation is that the vast majority of diabetes goes undiagnosed (if this is in fact the island of Papua New Guinea). "CONCLUSIONS: The vast majority of persons with type 2 diabetes in PNG are undiagnosed and are not receiving treatment: based on the lower of two country prevalence estimates, less than 3 % of the diabetic persons in the country are seen at health facilities. Services are limited, with only a handful of health professionals specially trained in diabetes. Expansion of services and awareness and prevention programs are urgently needed." I don't know when "modern foods" were introduced, or even what "modern foods" really means. And I hope they didn't use obesity as a proxy for diabetes, because the vast majority of obese people do not have diabetes.

James M. (2014-03-26 14:36:01)

Looks like a great debate. Personally learning from Paleo/Primal (and even other sources like Weston Price for traditional foods, Raw foodists, vegetarians) and trying to keep it 80/20 has allowed me to: drop 30 lbs; maintain my weight; cleared up my skin, allowed me to get off an expensive medication; reversed health issues; gave me more energy; a clear mind; and so on. There are a lot of Paleo/Primal promoters who are saying to try different things and tweak the diet/lifestyle as one goes, and not be an extremist about it. Paleo/Primal also lead me to this website which put out there alternative approaches and the benefits of self-experimentation. By experimenting with Paleo/Primal I benefited. It's quite possible some other approaches may have given me the same results, but then again if it works, don't break it. Still learning as I go. I did note that Seth was talking about diabetes rates on the island and not the population as a whole. If people can be healthy on a diet high in sugar and carbohydrates, good for them. I've found its doesn't work for me. Keep up the interesting writing. I don't necessarily agree with everything, but it does open the door to re-thinking on issues, and maybe a change in opinion.

Joe (2014-03-26 14:36:12)

Dearieme: "Probably it was overwhelmingly caused by greater wealth bringing clean water, sanitation, and plentiful foods, plus

the wonderful fluke of the discovery of antibiotics.” That too. So it’s wasn’t really fair to compare lifespans between paleolithic and neolithic eras, right?

Gina (2014-03-26 14:41:11)

”I do have a lot of pluck! I attribute it to eating like Grok.” You eat nothing like Grok. Grok wouldn’t even recognize the meat and vegetables that you eat. Eat some cattails and bugs and wash it down with some untreated water and you might be getting closer to Grok’s ballpark. Avoiding processed foods is a great idea, but it doesn’t mean anyone is really eating ”paleo”. <https://www.youtube.com/watch?v=BMOjVYgYaG8>

dearieme (2014-03-26 14:46:46)

”Do you think we have ”evolved” to eat fast food, processed and refined foods, sugar, grains, etc. in just 10,000 years?” I think it most unlikely that we haven’t evolved to eat grains in the last 10000 years. We know for sure that we evolved to drink milk in adult life in a much shorter period than that. As for ”fast food, processed and refined foods, sugar”: since I don’t eat an Americanised diet I’m personally probably not much affected. Perhaps I have evolved to thrive on fish-and-chips, a wonderful fast food unavailable to my ancestors before the 19th century, and a perfectly reasonable part of a mixed diet. I particularly enjoy it with mushy peas with a squeeze of lemon on them. Allow me to recommend it to you. Or perhaps it’s more likely that some fast foods, such as f- &-c, are nutritionally beneficial without any need for massive recent evolution. If what you are asking is why Americans like their food and drink so sweet, I have no polite answer to offer, unless it be that it could be a response to the government’s War on Fat in the diet. ”If so, why all the obesity, diabetes, heart disease, cancer, etc?” Rather than being so excitable, take them calmly in turn. Heart disease rates have collapsed: the mysterious rise from the 1920s to the 1960s has been followed by a mysterious fall since. There’s no explanatory theory yet available that’s backed by good evidence. The scale and timing of the changes rule out age distributions, the rise and fall of smoking, and changes in diet as explanations, and (I’m tempted to say ”of course”) medical intervention. Cancer is the subject of much hysteria. Last time I looked (about ten years ago) it was quite clear that talk of cancer epidemics in developed countries was rubbish. Once you’d corrected for the rise and fall of smoking, and the ageing of the populations, there was no increase in rates. Nil. Nowt. There was nothing to explain. Diabetes: there I have less knowledge. In the UK it is very hard to know whether there has been much or any intrinsic growth in Type II because (i) the population is ageing, but that never seems to be allowed for in consciousness-raising articles in the papers (ii) the racial composition of the population is changing: this may be a big deal because South Asians are particularly prone to the disease (iii) the threshold for diagnosis of Type II has been reduced, and (iii) the government pays GPs for each diagnosis diabetes. So higher rates of diabetes are of course reported. Whether that has happened on a like-for-like basis is unknown to me. But if there has been no change like-for-like, there is again nothing to explain. As for obesity, who knows? Perhaps it’s caused by an infection that stops the feeling of satiety working properly? Most aspects of human biology seem to be complex and little understood. Consequently quasi-religious doctrines on food strike me as inevitably short of evidence. I see two rational responses. (i) Eat a mixed diet, in moderation; certainly avoid slurping large beakers of brown sugar-water; probably include far more fish than is, for example, the American norm. (ii) See whether you can learn by self-experimentation, such as that advocated by our blogger, but don’t assume that the lessons that apply to you necessarily apply to everyone else.

Joe (2014-03-26 15:02:10)

James M: ”There are a lot of Paleo/Primal promoters who are saying to try different things and tweak the diet/lifestyle as one goes, and not be an extremist about it.” Exactly, James. As Seth says, this blog is about personal science, self-experimentation, and the scientific method. It also shouldn’t be about what works on an island somewhere; it should be about what works for YOU. I personally believe that most of what ails us is related to what we consume (and what our parents consumed while we were in the womb). Yes, I’m sure that our individual genes come into play, too, but the field of epigenetics shows us that we can also influence our DNA by what we eat. <http://advances.nutrition.org/content/1/1/8.full>

Joe (2014-03-26 15:27:19)

Dearieme: ”Heart disease rates have collapsed: the mysterious rise from the 1920s to the 1960s has been followed by a mysterious fall since.” You’re absolutely right! It peaked in the 70s and has been plummeting ever since. And well before anyone ever heard of statin drugs. For more about this phenomenon, read this book: ”You Will Not Die of A Heart Attack,”

by Dr. David S. Grimes. Smoking appears to be the main suspect, but there is no clear answer. "Allow me to recommend it to you." I have no problem at all with fish and chips that are made without industrial oils and wheat flour. Know of any? :) "I think it most unlikely that we haven't evolved to eat grains in the last 10000 years." I disagree. Read Dr. Davis's great book, "Wheat Belly," for all the details. Also, the wheat being grown today is not the wheat your grandmother ate. "Cancer is the subject of much hysteria." Unfortunately, that's true, too. We have no idea what causes cancer (in general). And now we're blaming relatively harmless viruses for it. :( "As for obesity, who knows? Perhaps it's caused by an infection that stops the feeling of satiety working properly?" I think the vast majority of obesity is caused by what we eat, and how we live. Ditto diabetes. "I see two rational responses. (i) Eat a mixed diet, in moderation; certainly avoid slurping large beakers of brown sugar-water; probably include far more fish than is, for example, the American norm. (ii) See whether you can learn by self-experimentation, such as that advocated by our blogger, but don't assume that the lessons that apply to you necessarily apply to everyone else." I have no problem with any of that, Dearieme, accept perhaps with the word "moderation." That's what seems to trip a lot of folks up. And especially if it works for you, and your health markers are okay. Good luck!

Joe (2014-03-26 15:45:05)

Gina: "You eat nothing like Grok. Grok wouldn't even recognize the meat and vegetables that you eat." How do you know what I eat? Was that you peeking in the kitchen window the other night? You were wearing a pointed cap and carrying a broom, right? I eat as close to what Grok ate as I can, only better. I eat grass-fed meats (including organ meats and bone marrow), wild game, like venison, elk, rabbit, wild-caught fish, organic veggies and fruits, even some so-called exotic foods, like snails, oysters, etc. "Eat some cattails and bugs and wash it down with some untreated water and you might be getting closer to Grok's ballpark." I've eaten cattails, and a lot of other stuff you wouldn't touch with a ten-foot pole. Like snakes, maggots, grubs, bugs, lizzards, etc. In the service, I was taught to eat just about anything, if anything was all I had to eat. Including untreated water, which is pretty easy to do if you know how. Grok knew how. And so do I. "Avoiding processed foods is a great idea, but it doesn't mean anyone is really eating 'paleo.'" It means they're on their way, and that's a "good thing"!

Joe (2014-03-26 16:35:57)

Dearieme, one reason (I'm sure there are more) for the plunge in heart attacks since 1970 could be this: "When there is increasing traffic volume on a highway, it may make sense to make the highway into a larger freeway to allow a higher traffic volume. In short, the same happens to the coronary arteries: When blood flow is increased, the inner layer of vessel cells (endothelial cells) sense this necessity and start the process of enlarging from capillaries into genuine collateral vessels. In response to endurance exercise training (such as running, bicycling, swimming, and hiking), blood flow is increased, which leads to a conversion from capillaries into collaterals. This is a very elegant treatment everybody can accomplish. It reduces the chances of the occurrence of angina pectoris, myocardial infarctions, and death. Beyond the interventional, surgical, and medical treatments against coronary artery disease, this collateral training is a natural and valuable therapy that many patients can apply by themselves, for themselves, if only they are aware of it. " <http://circ.ahajournals.org/content/116/11/e340.full> In short, exercise can create new collateral arteries, which is akin to giving yourself your own by-pass operation! I don't know exactly when the fitness craze started (the 70s, it seems), but perhaps that has had more of an effect than we thought?

dearieme (2014-03-27 05:25:56)

But lots of countries exist where it is or was normal for people to take far more exercise than Americans do or did. The rates peaked for them around 1970 too.

Joe (2014-03-27 07:59:56)

Which countries?

David (2014-03-27 10:17:39)

The issue with the 80/20 rule was initially put forth as a way of making Paleo easier to follow, now its a way to say, "we might be wrong so experiment." Paleo is an entire lifestyle change and therefore virtually impossible to know what is really causing improvements in some people's health. The problem i have with Paleo is that's its a narrative, a belief system about what to eat. If Grok only got honey infrequently because he would have to scavage it from bees, then you should not eat honey at

night - even if we discover it helps. I don't find that logic compelling, and one thing i have noticed about the Paleo diet over the last decade is that it keeps evolving. First it was protein and veggies with low fat, then they added saturated fat, then tubers, i recently saw a paper on legumes being Paleo. At this rate, Paleo will involve eating bread in the next year. Pioners like Mark Sisson have said they would change certain things in their books. Robb Wolf has been making big changes in his understanding of Paleo. We do not fully understand Paleo. I find using evolutionary history as a valuable framework, but i'm more into finding an optimal diet and lifestyle, and i believe some answers might be outside the current Paleo understanding. That's why i like Seth's blog, he's into experimenting, not following an idea.

Joe (2014-03-27 11:01:39)

David: "The problem i have with Paleo is that's its a narrative, a belief system about what to eat. If Grok only got honey infrequently because he would have to scavage it from bees, then you should not eat honey at night - even if we discover it helps." That's simply not true, David. If it helps you to take a little honey at night (say, to sleep better), go ahead and have a bit of honey. I get a good amount of sleep, but I tried it anyway, and it didn't help me at all. On the other hand, there are many reasons that some people sleep poorly, right? Maybe there are other ways to "skin the cat"? Magnesium, potassium and Vitamin D deficiencies can easily wreak havoc with your sleep. Why not check that out, too? Or carefully review your daily routines. Anything there that might be affecting your sleep? But a little bit of nightly honey is not even close to being a deal breaker, as far as paleo goes. It might, however, cause you to gain weight and/or affect various health markers. "We do not fully understand Paleo." Agreed! But that doesn't mean it's not a great place to start, does it? That is, eat what YOU think paleo is. For example, eat real foods, eat no processed or refined foods, no industrial oils, no sugar and no wheat. See what that does for you. More importantly, see what it does to your health markers. Then decide if you want to add or subtract any foods. See what THAT does for you. See what THAT does to your health markers. Etc. For some strange reason, you've come to think of paleo as a rigid system. It's not! Compared to diets like vegetarianism and veganism, which eliminate entire food groups(!), paleo is about as permissive and logical as a lifestyle can get. It's all about experimenting. Also, paleo isn't just about what you eat, it's about how to live a healthier life; it includes getting more exercise, and getting it outdoors (whenever possible). Getting good sleep. Etc. "I find using evolutionary history as a valuable framework" Indeed it is!

David (2014-03-27 11:37:10)

Joe, i appreciate your view of Paleo, but i followed the Paleo diet for several years and for most Paleo advocates, it's a belief system, a lens that you need to review everything through. Did Grok do it? If not, then you probably should not either. I later abandoned Paleo after several years because 1) was slowly gaining weight 2) stopped making progress in the gym 3) sleep got worse and 4) had low energy and it was affecting my work, 5) eating so much meat gave my clinically high serum ferritin levels. I was very healthy before Paleo and got less and less healthy during Paleo, so i dropped it after about 7 yrs although i bought into it for far too long and believe it really affected my health. Most damaging in my opinion was the low carb recommendations and the lack of cardio vascular workouts. I really like many of the Paleo principals, but I don't consider eating real food, lowering your stress, exercising and getting more sleep to be anything more than common sense. The issue of grains and dairy are still debatable in my mind (my wife is 100 % gluten free by choice). I agree that Paleo has helped many people, but many of those seem to have had health problems before finding Paleo. The point of Seth's post was "why worry about Paleo". I agree with him and you that its a valuable framework, but i'm much more willing to ignore the Paleo advice if my personal experience differs. In the past, it was: "No, high carbs are bad. You just need to get through the carb flu and get fat adapted." After almost ten years of playing that game, i finally gave up.

dearieme (2014-03-27 12:27:02)

"Which countries?" Read the fourth para. <http://www.drdaavidgrimes.com/2013/07/an-epidemic-of-coronary-heart-disease.html>

Joe (2014-03-27 13:11:34)

David: " I was very healthy before Paleo" Then why did you try paleo??? "Most damaging in my opinion was the low carb recommendations and the lack of cardio vascular workouts." David, I can see by those comments that you don't know much if anything about paleo. First, paleo doesn't have to be "low-carb." You can essentially eat all the veggies you want! You can eat



fruits, too! Especially if you don't have a weight problem. I average between 100-150 grams of carbs per day. That's an awful lot of carbs, David. And sometimes even more. And in no way is cardio exercise discouraged! Just the opposite, in fact. What IS discouraged, is something called "chronic cardio." That's basically the marathon and half-marathon type runners. Repeat after me: Chronic cardio is bad. Cardio is good. I run 5k about 5 times per week. Sometimes I just briskly walk it. I never go further than 5k. And I always do it outside. And I don't stress out if I happen to miss a couple days. Note: Just about anyone can do 5K. "I really like many of the Paleo principals, but I don't consider eating real food, lowering your stress, exercising and getting more sleep to be anything more than common sense." Semantics, David. Call it what you want, but paleo is all about common sense. Eating REAL food. Not eating processed or refined food. Lowering your stress. Exercising. And sleeping. Note: saying you work 10 hours a day and can't find the time to run or walk for 30-35 minutes each day is known as bull ca. "The point of Seth's post was "why worry about Paleo"." The only ones here who appear to "worry about Paleo" are the folks who aren't doing paleo, or don't appear to understand what paleo actually is. And isn't "eating so much meat gave my clinically high serum ferritin levels." Have you been checked for hereditary chromatosis or liver disease? Do you have RA? Some solutions : eat less red meat and donate blood from time to time (which is a good idea anyway). Stop being so rigid, David! "After almost ten years of playing that game, i finally gave up." That's too bad. I wonder if you were ever really on paleo? But it's definitely your prerogative! Good luck!

Joe (2014-03-27 13:23:46)

Dearieme: It was just a guess anyway. But the fitness craze wasn't isolated to the U.S. Do you really think that the UK took "far more exercise" than we Yanks? Really? But isn't it interesting to know that you can effectively give yourself a coronary bypass operation (increasing the flow of blood to your heart) with the right kind of exercise? I do!

dearieme (2014-03-27 13:36:58)

The only time I lived in the US was for three months in 1966. I was struck that the young men took no exercise - no cricket, no rugby, no soccer, no walking or cycling to work. People in Britain took far more exercise. I lived in a YMCA with a good gym. Only four people ever used it: two young Britons in the US for their university long vacations, and two young Italians ditto.

Joe (2014-03-27 14:12:55)

Well, I'm not surprised you saw no cricket, Dearieme. :) But no baseball, no softball, no field hockey, no hockey, no soccer, no football, no flag football, no rugby, no bicycling, no jogging, no lacrosse? Wow. Even in the 60s, those were pretty popular activities. Not like they are today, but still very popular. What city or cities? I've spent some time in your country (mostly in London), and the most exercise I saw Brits getting was by staggering from pub to pub. Not that there's anything wrong with that! :) PS: One of your countrymen, Dr. Malcomb Kendrick, thinks heart disease is caused by dysfunction in the HPA axis. You can read about it in his book, Then Great Cholesterol Con, The Truth About What Causes Heart Disease and How You Can Avoid it." I tend to agree with him.

David (2014-03-27 14:20:01)

"Then why did you try paleo???" Because i was trying to be like Grok. Joe, these days Paleo has a lot of variability, you could argue an all meat Inuit diet is Paleo as is a super high carb Kitavan diet, but i started Paleo back when it was more low carb, when everyone talked about the carb flu and getting passed it, about being fat adapted, when you had to watch fruit intake because too much would be too much sugar, etc. It was mostly veggies for carbs and i don't consider veggies carbs. No way broccoli gets me through the day the way potatoes do. I followed the likes of Cordain, Sisson, Art Devany, and others and it was lower carb. I felt it was more strict back when i was following it and i admit that i kept trying to go low carb to get fat adapted and break through the carb flu. I'm aware of the chronic cardio vs moving slowly distinction in Paleo, but i've been doing a little more "chronic cardio" and i feel better. I'm sure someone will say i'm damaging my heart and should be walking and not jogging, but i feel better and i'm not over doing it. I'm not training to be a marathon racer. (I do agree with the Paleo idea on that being harmful). As for blood iron levels, i don't have a genetic disease but i do give blood frequently now. I ate so much red meat on Paleo (I bought it from a local farmer where his cows were 100 % grassfed) that i began to detest it. Today i had leftover potatoes, lima beans, and pot roast for lunch, when i was doing Paleo the potatoes and beans would have not been allowed. I find i feel much better with higher starch and sugar content like potatoes, beans, corn and grains. I also had horrible sugar cravings during Paleo that never went away and i

would binge on chocolate sometimes. Now i just eat honey or drink fruit juice if i can. Are they Paleo? Well they weren't a few years ago, maybe now they are. My point is it goes back to Seth's post where he said: "Eating breakfast made my sleep worse. No paleo guru had said that — I had been right to ignore them." I got some good ideas out of Paleo, but at some point, like Seth mentioned, i needed to ignore the paleo gurus and try some things that were not part of the Paleo doctrine.

Joe (2014-03-27 14:56:14)

"Because i was trying to be like Grok." I'll take that to mean: just for the hell of it. But if you can't live without eating lots of potatoes, beans, corn and other grains, fruit juice, etc., then paleo isn't for you. And if you are doing "chronic cardio," yes, you ARE damaging your heart, but jogging vs walking has nothing to do with it. It's the amount of time and miles you put in. The actual science behind this is all over the internet, so you don't need to listen to paleo gurus. So I'm not really sure that you know what chronic cardio is, either. I have a bit of chocolate, myself. But only really dark chocolate (88 %). It's actually good for the heart. The way I usually satisfy my own sweet tooth, the part that remains, is to eat various paleo treats made with sweeteners like stevia and xylitol. But infrequently. Mostly just on holidays. So, now that we've seen that paleo isn't for you, and because I really have no idea how you are currently eating, all I can do is wish you good luck! So...good luck!

David199 (2014-03-27 16:08:54)

I'm going to try and get back to the original question, about why we obsess over Paleo life. The short answer, is that many people believe we are best adapted to Paleo life and the further we move away from it, the further we move away from optimal health. Second, because its impossible to test every single aspect of health, it helps to have a framework. Did Paleo man have access to high fructose corn syrup in handy little aluminum cans? No, then maybe we shouldn't either. No need to wait until a bunch of studies come out, we can use the Paleo framework right now to make the decision. My specific issue is that we need to be careful and not over-rely on a single framework because its based on our best guess of what happened a million years ago. That doesn't mean its worthless, it just means that its one of several potential possibilities. So Joe, let me ask this question: If someone followed a Paleo diet (which i'm going to assume still prohibits grains) and then that person as an experiment ate grains for a 6 months and felt better and had better biomarkers, would you: 1. Recommend that they keep eating grains because it appears to be good for them even though Paleo man didn't have them. 2. Recommend they don't eat grains because Paleo man did not have access to them and therefore there may be other harmful things going on that are not represented in the way they feel or their test results (i.e. silent evidence). I would say #1 and i'm guessing you would say #2. And don't get me wrong, i fully understand position #2 and believe silent evidence is very important to consider. Joe, you and i began to disagree over a few points, but i want you to know that i still use the Paleo framework quite a lot. It's not something i completely dismiss, but i'm willing to consider that things outside the Paleo framework, even opposite to it, may be more healthy.

dearieme (2014-03-27 17:12:13)

London, Joe, is scarcely in Britain at all. No, back in '66 it was striking to this foreigner how little exercise Americans seemed to take. I know that much of your climate is unsuitable for the sort of country walks, and the more testing hill-walking, that are so popular here year round. I understand that gardening for nine months of the year would be pretty brutal in much of the US. But heavens, your population even plays golf largely sitting on its bums. And, in that one three month spell (and many short visits since) everyone has emphasised to me that nobody walked anywhere. They even drive to the gym!! I don't know about you but for most of my career I cycled to work. You can in our climate (though it's kinder in the dry east of the country).

Joe (2014-03-27 17:28:29)

David, those are valid questions. I don't eat grains not because of paleo, but because grains are bad for me. Grains, especially wheat (rice isn't so bad, which is why I eat a little sushi from time to time), provide almost no nutrition (which is why it always needs to be "fortified." I concentrate on eating NUTRIENT-DENSE foods. I want as much nutrition as I can get out of a food. Eating grains is much like eating sugar (as far as I'm concerned) - it's just empty calories. And they'll just help to make you fat. There is no way that eating grains can improve your health profiles (BS marketing by the grain companies aside), simply because it brings nothing good to the nutritional party. It does, however, bring some bad things, and if you're interested in learning about them, you can't beat Dr. Wm. Davis's book, "Wheat Belly." In short, today's wheat is nothing like the wheat your

grandmother ate. I would never recommend that anyone eat grains, especially wheat. On the other hand, if that was all I had to eat (which has happened at times to various populations in our history), of course I'd eat it. I'd eat just about anything if my very survival was at stake. But we have choices today, perhaps too many choices, and I think we should be thankful for them, and exploit them to the fullest. You say that you still use the paleo framework a lot. I think by eating lots of potatoes, beans, corn and other grains, and things like fruit juice, and bingeing on chocolate, etc., you've left the paleo "framework" in your rear view mirror. It's much like a vegan regularly eating meat and still claiming to be a vegan. Tweaking a "framework" on the edges is one thing, but that's not what you're doing (IMO). Look, just by eating real foods, avoiding processed and refined foods, and sugar, you may somewhat improve your health markers. You sound like that may be good enough for you. It's just not good enough for me. But whatever you do, don't stress over it. Grab the bit and run! And good luck! PS: If you do find anything outside the paleo framework that's more healthy, please let me know! I've been looking for many years and I can't find anything even close.

Joe (2014-03-27 17:49:11)

Dearieme, I may not know your country as well as you do, but I do know that London is in Britain. And I have no idea why you'd use the word "scarcely" there. Perhaps you're just trying to pull my leg? :) You won't tell me what U.S. city you visited, but I need to tell you that you have a very narrow perspective of my country. It's a VERY big place. You're painting us with a very narrow brush. Yes, we have places where the people rarely walk. But we also have places where we seldom do anything else. I always drove to work or took the train. Mostly because I didn't exactly want to walk or ride a bicycle the 30-40 miles to the office and back. Like I said, we're a VERY big country. But that didn't stop me from jogging 5-6 miles when I got home, etc. You've probably heard of the blind men and the elephant story? [http://en.wikipedia.org/wiki/Blind\\_men\\_and\\_an\\_elephant](http://en.wikipedia.org/wiki/Blind_men_and_an_elephant) Well, the next time you come over here, you really do need to grab more parts of the "elephant." :)

Nancy Lebovitz (2014-03-30 02:35:20)

Joe, I have a friend who gets sick (he describes it as his digestion shutting down) if he doesn't eat a lot of wheat, and it's the same for at least one of his relatives. While I think there are tendencies in what foods are good and bad for people, I think the only advice I'd give to everyone is "give some attention to how your food affects you". Fish seems to be very good for me, but it's deadly for some people.

### Assorted Links (2014-03-27 05:00)

- [1]difficulties of personalized risk assessment
- [2]Drugs cause falls in old people. When drugs were stopped, falls went down – in one case, by two-thirds.
- University of Western Australia, in response to a complaint, [3]allows researcher to "investigate" himself.
- [4]Food and mental illness
- "[5]I have stage 3 melanoma. . . . I have the ability to speed read . . . I found one very promising study."
- [6]Translator strikes back
- [7]Masha Gessen, one of my favorite writers, on Pussy Riot

Thanks to Alex Chernavsky.

1. <http://www.healthscareonline.com/http://www.healthscareonline.com/blog/the-limited-potential-of-personalized-medicine/>

2. [http://jppr.shpa.org.au/lib/pdf/gt/2008\\_06\\_Zeimer\\_GT.pdf](http://jppr.shpa.org.au/lib/pdf/gt/2008_06_Zeimer_GT.pdf)

3. <http://climateaudit.org/2014/03/24/lewandowsky-ghost-wrote-conclusions-of-uwa-ethics-investigation-into-hoax/#more-19039>
4. [http://www.washingtonpost.com/national/health-science/can-what-you-eat-affect-your-mental-health-new-research-links-diet-and-the-mind/2014/03/24/c6b40876-abc0-11e3-af5f-4c56b834c4bf\\_story.html](http://www.washingtonpost.com/national/health-science/can-what-you-eat-affect-your-mental-health-new-research-links-diet-and-the-mind/2014/03/24/c6b40876-abc0-11e3-af5f-4c56b834c4bf_story.html)
5. <https://m.facebook.com/humansofnewyork/photos/pb.102099916530784.-2207520000.1395864582./631498613590909/>
6. <http://jnthnwrgh.t.blogspot.co.uk/2013/10/why-translators-should-give-dr-alaa-al.html>
7. <http://www.booktv.org/Watch/15485/Words+Will+Break+Cement+The+Passion+of+Pussy+Riot.aspx>

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Nancy Lebovitz (2014-03-27 07:01:52)

Possible relationship between early abuse and obesity: <http://www.sciencedaily.com/releases/2014/03/140320134722.htm>

Gina (2014-03-27 07:56:26)

Thanks so much for linking the the Gessen interview, Seth. I can't wait to read the book.

Joe (2014-03-27 08:17:31)

A study on the effect of medications on falls in the elderly, and not one word about statin drugs? Amazing. Simply amazing.

Andrew (2014-03-27 11:21:38)

Great article on why the mouse as control animal has proved disastrous for medical research: <http://slate.me/rA6eqo> Seth: I agree, great article. thanks.

Al (2014-03-27 14:16:02)

Thank you for the link to the page by the guy who is a speed reader with cancer. It's interesting that this particular guy did \_not\_ say "I'm a speed reader, therefore I went on the internet and tried to find a bunch of web pages to speed read." Instead, he said: "I have the ability to speed read very technical material, so I went to the library at Duke and read over 800 papers on melanoma ... " It's really interesting that he found a promising new (to him and his doctors) idea for his own therapy. It's also extremely interesting that there are comments on that page where people talk about their own success stories fighting cancer, despite their doctor's gloomy prognosis. In addition, there is this: "...in Latvia, Melanoma is treated by virotherapy drug name Rigvir. Basically you ingest a virus that is deadly to melanoma but harmless to humans." There are articles about Rigvir and Oncolytic Viruses on Wikipedia. Also, here are some resources described (but not necessarily available online) by the UCLA library catalog. <http://catalog.library.ucla.edu/vwebv/search?searchArg=oncolytic+virus&searchCode=GKEY^&searchType=1>

Charles (2014-03-27 15:14:12)

Only those that survive cancer have the ability to tell you about it. What's hard to determine is exactly what helped, if at all. That indeterminable thing is the only thing that would help another patient

Nancy Lebovitz (2014-03-30 02:36:51)

Andrew, thanks for the link to the mouse article(s). I'm working my way through them, and this is a very serious situation.

## **Larger Lesson of "We Were Wrong about Saturated Fat" (2014-03-28 05:00)**

My sister sent me a link to [1]an article ("Butter is Back") by Mark Bittman, the *New York Times* food columnist, about a recent review that found saturated fat didn't cause heart disease. I told my sister I had clicked on the link but had forgotten to read the article.

My sister was incredulous. *How could you not want to say "I told you so"?* she wondered. (In [2]a 2010 talk I questioned the danger of butter.)

Here is the relevant passage, according to my sister:

A meta-analysis published in the journal *Annals of Internal Medicine* found that there's just no evidence to support the notion that saturated fat increases the risk of heart disease. (In fact, there's some evidence that a lack of saturated fat may be damaging.) The researchers looked at 72 different studies.

I told you so. But this part interests me more:

No study is perfect and few are definitive. But the real villains in our diet — sugar and ultra-processed foods — are becoming increasingly apparent.

Uh-huh. The experts were staggeringly wrong about saturated fat...but they couldn't possibly be wrong about "sugar and ultra-processed foods". That makes no sense, but that's what Bittman wrote ("increasingly apparent"). To me, what is increasingly apparent is that nutrition experts shouldn't be trusted.

I don't know what "ultra-processed foods" are but I am beginning to believe the experts are utterly wrong about sugar, too. As far as I can tell, sugar in the evening improves sleep – by a lot, if you get the details right – and nothing is more important than good sleep. If you have read *The Shangri-La Diet*, you already know that sugar alone cannot have caused the obesity epidemic. It is more complicated than that.

1. <http://www.nytimes.com/2014/03/26/opinion/bittman-butter-is-back.html>
2. <http://quantifiedself.com/2010/09/seth-roberts-on-arithmetic-and/>

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David (2014-03-28 06:02:21)

Great post. I am always amazed at how confident people are in answers that turn out to be wrong. I find it depressing that journalists continue to make these errors, instead of saying "Finding out that we were wrong about saturated fat makes me question whether we are right about other supposed 'angles and demons' in our food supply."

nicole (2014-03-28 06:27:00)

"To me, what is increasingly apparent is that nutrition experts shouldn't be trusted." Made me spit out my coffee laughing...so true.

RAD (2014-03-28 07:20:07)

Seth, I'm with you that nutrition experts shouldn't be trusted on macronutrient research (fats, carbs, proteins) but I'm much more inclined to trust micronutrient research (e.g. Vitamin D, Zinc, etc.).

Nancy Lebovitz (2014-03-28 07:20:39)

Workplace wellness programs are designed to get people to follow theories of what causes health– there's no feedback from the person about whether the program is making them healthier. <http://www.newsworks.org/index.php/thepulse/item/64755-whats-next-for-workplace-wellness-lifevest-health-wellnow> <https://www.lifevestthehealth.com/> How sure are you that obesity is a disease? That losing weight will make fat people healthier?

Gina (2014-03-28 07:23:09)

Maybe it's too soon for a victory lap?: "The meta-analysis of dietary fatty acids and risk of coronary heart disease by Chowdhury et al. (1) contains multiple errors and omissions, and the conclusions are seriously misleading, particularly the lack of association with N-6 polyunsaturated fat. For example, two of the six studies included in the analysis of N-6 polyunsaturated fat were wrong. The relative risks for Nurses' Health Study (NHS) (2) and Kuopio Ischemic Heart Disease Study (KIHD) (3) were retrieved incorrectly and said to be above 1.0. However, in the 20-year follow-up of the NHS the relative risk for highest vs lowest quintile was 0.77 (95 percent CI: 0.62, 0.95); p<sub>trend</sub> = 0.01 (the authors seem to have used the RR for N-3 alpha-linolenic acid from a paper on sudden cardiac death), and in the KIHD the relative risk was 0.39; 95 % confidence interval [CI], 0.21-0.71) (the origin of the number used in the meta-analysis is unclear). Also, relevant data from other studies were not included (4 and 5). Further, the authors did not mention a pooled analysis (6) of the primary data from prospective studies, in which a significant inverse association between intake of polyunsaturated fat (the large majority being the N-6 linoleic acid) and risk of CHD was found. Also, in this analysis, substitution of polyunsaturated fat for saturated fat was associated with lower risk of CHD. Chowdhury et al. also failed to point out that most of the monounsaturated fat consumed in their studies was from red meat and dairy sources, and the findings do not necessarily apply to consumption in the form of nuts, olive oil, and other plant sources. Thus, the conclusions of Chowdhury et al. regarding the type of fat being unimportant are seriously misleading and should be disregarded." <https://www.hsph.harvard.edu/nutritionsource/2014/03/19/dietary-fat-and-heart-disease-study-is-seriously-misleading/> I love coconut milk dishes, but I probably won't be having them every night just yet. I do agree that nutrition experts shouldn't be trusted, but that includes the authors of the meta-analysis.

JV (2014-03-28 08:03:58)

This just supports the work of Fred Kummerow the 99 year old researcher at the University of Illinois. (I know his work has been mentioned here) His method of dissecting arteries removed in heart bypass operations showed that it was not saturated fat he found but trans fats that caused atherosclerosis - and he has been saying it for 30 years! I find his research more compelling than some of these nutrition studies.

dearieme (2014-03-28 08:52:18)

I want to be appointed Sugarfinder General.

jimk (2014-03-28 09:16:17)

I'd be careful about confidence in "micro nutrients" as well, here's just a few examples, there's lots more. <http://gettingstronger.org/2012/11/why-i-dont-take-vitamin-d-supplements/> <http://joshmitteldorf.scienceblog.com/2014/03/25/life-extension-supplements-a-reality-check/> Some of this is about unknown or unexpected confounders, some are about cause and effect like does low Vitamin D cause poor health or does poor health cause low vitamin D.

Todd Fletcher (2014-03-28 09:33:41)

A lot of the knowledge about diet we need was embedded in traditional cuisines. Reviving those and the husbandry practices around them seems to me a safe way to make improvements in our health.

Joe (2014-03-28 09:49:25)

Seth, this may sound a bit like blasphemy on your site, but I must admit that I find your fascination with sugar to be very puzzling. It has zero nutrients (just empty calories), zero fiber, it can lead to obesity, it damages the endothelium (the lining of the arteries), it can be addictive, yadda yadda yadda. You know the rest. If a dose of sugar before bedtime causes you to sleep better, why not EXPERIMENT with ways to essentially "have your cake and eat it" too? By getting your nightly carb injection from a real food source that at least provides you with some nutrition and fiber too, like a banana, some almond butter, a small bowl of oatmeal and warm milk, magnesium and potassium supplements during the day, etc? Also, isn't it just possible that your current diet may be causing you to have difficulty sleeping? I'm definitely with you on questioning the experts, self-experiments, the scientific method, etc., but sometimes they're right, right? They can't be wrong all the time. I think they're right about sugar. But even if they aren't, it would be healthier for you to get your sugar from some real foods, with real nutrients and real fiber. And isn't that why you want better sleep? To be healthier?

Joe (2014-03-28 10:03:44)

Gina, Willet's attempt at "rebuttal" is not surprising. There will be others to come. How can they not try to rebut that study (of course, there have been other studies, which arrive at precisely the same conclusion?: <http://ajcn.nutrition.org/content/91/3/5-35.full.pdf> People like Willet, and schools like Harvard, are so heavily invested in the lipid theory of CVD that they really have no choice but to go down swinging, much like climate alarmists. To admit that they've been wrong all along would essentially mean that their careers are over, their reputations damaged beyond repair.

Matt (2014-03-28 10:03:50)

Seth's fascination with sugar is probably exactly because it has zero nutrients, zero fiber, can be damaging in certain circumstances, etc. That the observed results are so at odds with conventional wisdom are particularly interesting to me, and I'd guess to Seth as well.

Joe (2014-03-28 10:24:16)

Matt: "That the observed results are so at odds with conventional wisdom are particularly interesting to me, and I'd guess to Seth as well." But there is no conventional wisdom to be at odds with. Quite the contrary. Many, maybe most, experts would conclude that a little sugar (or other forms of carbohydrate) at bedtime, in and of itself, is relatively harmless, and may even improve sleep. And even I would have to agree. On the other hand, why not totally eliminate the potential for damage (which isn't unsubstantial), by eating some real food, some real fiber, and get some real nutrients, and also improve his sleep? If improving Seth's health is his main objective (by getting better sleep), I fail to understand why he doesn't think more nutrients, fiber, etc. wouldn't be better at accomplishing that. And I'm pretty sure that he'll be along shortly to explain that to me. :)

Mark (2014-03-28 10:59:41)

I've said it before and I'll say it again... Walter Willett is a hack. All of his Harvard nutritional epi group's studies have clear, obvious flaws. So, as Joe said, his rebuttal is not at all surprising.

John (2014-03-28 11:09:20)

@Joe the whole point of eating food is to get energy and refined sugar is great for that. All the nutrients you get from food are pretty damn useless without some "empty calories" ( yea I think saying empty calories is really stupid). I expect the "experts" to reverse course on their opinions of sugar. The "experts" opinion of fiber I think is pretty damn laughable also. I have very little fiber in my diet and yet somehow manage to have 3 quick bowel movements a day.

Seth Roberts (2014-03-28 15:10:53)

I found in an experiment that Vitamin D in the morning improved my sleep. Others found the same thing. Experimental evidence does not have the problems of the evidence discussed on Getting Stronger. <http://blog.sethroberts.net/category/sleep/vitamin-d3-and-sleep/>

Joe (2014-03-28 15:27:34)

John, I really don't know what to say. I'm almost speechless. That said, I think just about everything you just said is "really stupid." And trying to debate someone who says really stupid things is...really stupid. So...

kxmoore (2014-03-28 17:38:01)

" But the real villains in our diet — sugar and ultra-processed foods — are becoming increasingly apparent." (Bittman) One little interesting study that echos this sentiment found that the form a food took had vastly different impact. See Kindke's post "Powdered food ( carbs? ) appears to be very evil" <http://kindkehealthnotes.blogspot.com/2013/04/powdered-food-carbs-appears-to-be-very.html> Seth: Reminds me of several of Israel Ramirez's results. For example, that adding water to chow made it more fattening.

Stu (2014-03-28 17:49:05)

If sugar is so bad for your health and causes obesity then why is Robert Lustig (the guy leading the anti sugar movement) overweight? He also has a red face (malar flush), bags under his eyes, a swollen face and a thinning outer third of his eyebrows (and thinning eyebrows in general) which are all symptoms of hypothyroidism. A zero carbohydrate diet is know to contribute to thyroid problems and hypothyroidism. Don't believe me? Then just do a google image search. I once had someone tell me that they were avoiding eating carrots and onions because of the sugar content which is ridiculous. Maybe refined sugar isn't ideal due to a lack of nutrients, but I don't think people should be avoiding fruit and vegetables because of sugar. The days where I have felt the best and slept well are often the days I eat the most fruit and sugary/starchy vegetables.

Nancy Lebovitz (2014-03-29 06:56:59)

Joe, why do you think such small amounts of sugar are dangerous to most people?

Adam (2014-03-29 08:26:00)

I was traveling for work this past week and left my honey at home. Normally I dip a spoon in it and twirl it around a bit, then eat whatever is left on it about 20 to 30 minutes before sleep. While I still slept well, I did wake up during the night and experienced not one but two nightmares. I can't remember the last time I had a nightmare before this.

Joe (2014-03-29 08:31:12)

Stu: I don't really think that Lustig is overweight. He's got a little bit of padding, yes, but for someone his age, that's pretty normal. A BMI of 27-28 is the sweet spot (relative to longevity) for men his age. On the other hand, Lustig has said many times that's he's NOT a fan of low-carb (you can look it up). So those "extra" pounds you see may be due to eating too many carbs, too many calories, etc. And I agree with you. I don't think people should be avoiding fruit and vegetables. Quite the contrary. Refined sugar, yes. But fruits and veggies come with nutrients, fiber, etc. That is, they're real foods. Nancy: On the assumption that we're talking refined sugar, here's what I think: One of the discoverers of insulin, Fred Banting, discovered that among sugar plantation owners who ate the refined version, diabetes was rampant. But among the native cane workers, who only got to chew the raw cane, there was no diabetes. Yes, it's only a simple observational study, but I think there is a strong message there. I just don't think that humans are able to deal with refined sugar. But do I think small amounts of sugar are dangerous to most people? That would depend on what you mean by dangerous, and by small amounts. Do I think that a single teaspoon of sugar at bedtime is dangerous? No, not really. Not for most people. But do I think eating processed and refined foods all day, foods that are usually heavily laden with sugar, are dangerous? Absolutely. In fact, I think it's deadly. That's why I stick to real foods, foods that don't require an addictive drug (which means, by definition, that it's very hard to keep it to "small amounts") be added to it to induce me to eat it. I also think that too much sugar (of any variety) can seriously damage the endothelium, the lining of the arteries. Over time, that can lead to heart disease, diabetes, renal dysfunction, Lupus, etc. And the more damage, the more cholesterol that's needed to repair it. So you can see why I think that artificially lowering one's cholesterol level with statin drugs is counter productive. And dangerous. It's just doesn't seem logical to me, in this age of obesity, diabetes, etc., why we would want to add something like refined sugar to our diets, knowing how addictive it is, without at least getting some actual nutrients and fiber in return. Our food stuffs today are already short of nutrients (thanks to modern farming techniques), then we often cook the remaining vitamins and minerals right out of them, so the part we actually consume often lacks any nutrients at all. So, to someone like me, it's just another lost opportunity to improve one's health. That's probably more than you wanted to hear, but sometimes I just can't help myself.

Seth Roberts (2014-03-29 12:37:05)

I think fruit and Yakult (which is sweetened with glucose) are good substitutes for honey. I wouldn't take honey on a trip - too messy.

babar (2014-03-29 15:43:32)

i think you can get honey in little packets like they have jelly in at ihop. just don't forget them in your coat pocket when you put it in the wash.



daz (2014-03-29 16:14:29)

Seth Says "I found in an experiment that Vitamin D in the morning improved my sleep"... Hi Seth, on the Vit D subject, have you made any changes since you started your D3 supp routine... ie. do you vary your dose at all, possibly depending on how you feel, or the season (sun exposure), etc also, do you ever bother getting your Vit D blood levels tested (if so, what are/were your numbers & do/did you adjust your D3 supp based on the result). cheers Seth: No I haven't made any big changes. I will get my Vit D blood level measured soon.

Nancy Lebovitz (2014-03-30 02:44:48)

Joe, based on what you've said, it sounds like you're overly worried about sugar. I agree that it's a bad idea to use it as a staple, but that doesn't mean there's a reason to avoid the teaspoon or even tablespoon of honey before bedtime. There's at least one confounding factor in Banting's research- amount of exercise. Also, do you have information about lifespans for workers vs. plantation owners?

fi (2014-03-30 13:39:53)

Where's the high5-icon? I totally agree with you, Seth. Sure too much sugar, probably like too much of anything is bad, but I find it really hard to believe that nature would evolve such an enduring love of the taste of sugar if it really was that "toxic". It just doesn't make any sense to me. Plus, if I recall correctly, our brains (and pretty much our bodies) run on sugar. And I agree that nutritionists are not to be trusted. They have been wrong about a lot, like 180 wrong, so how are we ever supposed to trust anything they say? I have seen dietitians and nutritionists on tv say they make their recommendations based on the evidence, but honestly, at some point you have to wonder if they are really understanding what they are reading. It's like the whole field has no b.s. detectors at all.

Joe (2014-03-30 13:42:05)

Nancy, yes, I am worried (concerned would be a better word) about sugar, but I don't think I'm overly concerned about it. "Given its many links to obesity, diabetes, heart disease, etc.) And I think I said that one daily teaspoon is probably no big deal - for most people. But like with any addictive drug, self-limiting the daily dosage can be problematical. I don't think Banting's research looked at exercise. But, yes, it certainly could be a confounding factor. I don't think it looked at lifespans (although T2D can usually be expected to knock off 10 years, on average), or other aspects of the diets, or even things like vitamin D levels, for example. It was just one factor, but a pretty startling one, in my opinion. You might be interested in reading the book "Sugar Blues", by William Duffy, just to name one.

Joe (2014-03-31 10:20:22)

fi, actually, our brains and body do very well on relatively small amounts of glucose. <http://www.marksdailyapple.com/the-definitive-guide-to-sugar/> #axzz1zRCTnHV4 The excess goes to your liver. See: non-alcoholic fatty liver disease. <http://authoritynutrition.com/sugar-liver-diabetes/>

Jack (2014-03-31 10:37:28)

Seth, Thanks for posting this. Any way you look at it, you, seth Roberts, are a genius and way ahead of your time!

Patti (2014-04-02 11:08:07)

Tom Naughton gives a speech regarding experts and the wisdom of crowds. If you are interested here is the link <https://www.youtube.com/watch?v=KzPnnDDC ljo>. Title Diet, health, and the wisdom of crowds.

## Teaching Histology: Lessons for Other Teaching? (2014-03-29 05:00)

Edward Edmonds is an [1]histologist at the Albany Stratton VA Medical Center, Albany, New York. He has been an histologist since 2002. Previously he worked at the Landstuhl Regional Medical Center, Landstuhl, Germany, the Ehrling Bergquist Hospital Offutt AFB, Nebraska, and the Armed Forces Institute of Pathology (now Joint Pathology Center),

Washington D.C.

Recently he left [2]an interesting comment on this blog:

When I train students I always expect that they will do things a little differently or that they will have new ideas, so . . . my first question is always show me what you have learned or show me how you'd like to do this procedure. In other words they went through the same training I did maybe at a different facility but there are a lot of different ways to approach things we do in the lab, so I let them develop their own "style". Then after they do it in their own way I show them how I do it my way and I explain step-by-step why I'm doing it this way . . . The entire thing is an enjoyable experience. We are learning, and laughing, and undoing the dogma learned from the academic setting. . . . All of my students end up being excellent troubleshooters and problem solvers.

I asked how he came to this way of teaching. He replied:

Through experience. People like to feel good about themselves, no matter their status. If that person feels they have some sort of insight or knowledge that other people don't have – when that person is queried about their knowledge or has an opportunity to discuss it, they light up, becoming a teacher themselves (regardless of the quality of the information). There is a level of confidence there.

What if someone came along and challenged the quality of that information? Let's say the person challenging the information was an arrogant prick who did have better information but nonetheless put the ignorant person in their place? The quality of the information might be good, but nothing was actually learned that was relevant to the subject. Instead what was learned was how that prick made the other person feel and the prick feeling unchallenged felt empowered. If there were witnesses to the exchange the information learned was not bidirectional it was *omnidirectional*, everybody in the setting learned more about each others' behavior but nothing relevant was retained because the environment was authoritarian. That is an extreme example but it happens in degrees and often it is subtle.

Now that person who was challenged might go home and for spite try to find things to improve the quality of their information. But the learning is motivated not by genuine interest but by spite which has a tendency to cloud judgment (as we can witness in heated academic debates). Are they learning (understanding) in that state of mind? Probably not.

That is partly where my teaching style comes from. It comes from recognizing the "state" in which learning occurs and that someone that learns well who is "smart, motivated, and capable" is so, not because they have some inherent grasp on a subject, but because they have confidence in their ability to learn. In other words they are smart because they recognized as being "smart, motivated, and capable of learning". I want to learn from the students just as much as they want to learn. That really is key.

He also explained the difference between histologists and pathologists:

The histologists/cytologists are the people who develop the microscope slides you often see in studies with different "stains" we have a background in chemistry, biology, and anatomy, we do grossing (dissecting specimens), and autopsy, immunohistochemistry, electron microscopy, etc. A pathologist is some one who makes the diagnosis on the specimens we prepare. We work very closely together and in some facilities our disciplines overlap. However, they are actual doctors. There are also pathology assistants, they

typically just gross and do autopsy. So whenever you have surgery or a biopsy it comes to histology to be processed, we do that and then the pathologist makes a diagnosis and puts their signature on it.

1. <http://en.wikipedia.org/wiki/Histology>

2. <http://blog.sethroberts.net/2014/03/25/treat-everyone-as-smart-capable-and-motivated/#comment-1179357>

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Nancy Lebovitz (2014-03-29 06:58:58)

Off-topic: <http://www.psmag.com/navigation/books-and-culture/killing-pigs-weed-maps-most-ly-unread-world-academic-papers-76733/>

Alex Chernavsky (2014-03-29 08:40:09)

Following-up on Nancy's off-topic post, I'm reminded of the fact that some significant percentage of songs on Spotify have never been played – ever. There's a cool web app called [1]Forgotify that will randomly choose an unplayed song and play it for you. I actually haven't used that app, but there's another, similar one called the [2]Spotify Random Song Generator that plays a totally random song (whether it's been played in the past or not). I've used it a number of times, and it's quite interesting the music it selects.

1. <http://gizmodo.com/you-can-stream-those-4-million-spotify-songs-that-have-1512468463>

2. <http://www.karnhuset.net/demos/spotify/randomSong/>

AI (2014-03-29 09:54:53)

Thanks for this post. I like the description he gives of the state of mind one is in after being "put in one's place" by someone arrogant. It's not conducive to an open minded exploration of the facts. It's not a learning state of mind. At that point, you're just trying to save face in the group. Certainly, I have experienced this state of mind too many times. Not fun. But, it is the real world. There are always arrogant pricks out there. So, it is a great skill to be able to deal constructively with those types of people. But it's difficult. Some of these arrogant people are really skillful at evoking fear and anger. And it's a winning strategy for them because once you become fearful, you are no longer thinking as clearly, reasonably, honestly as you are when you're calm. I sometimes think it is their main rhetorical technique: make the other person fearful, angry, resentful, predominantly emotional, and then make them look really stupid in front of the group.

dearieme (2014-03-29 12:58:36)

O/T lesson from life: today I happened across an article in an old Telegraph. On a brief visit to Washington D.C. a journalist decided to go and look at the White House. This proved surprisingly difficult because everyone from whom she asked directions assured her that it was beyond walking distance. When she got there she had, she said, covered a distance that most British people would consider a short stroll.

Nancy Lebovitz (2014-03-30 02:55:09)

More off-topic– This place has a good commenting community, but with only the three most recent comments listed in recent comments, it's hard to know which threads are still active. The best simple system I've seen for keeping track of comments is at <http://nielsenhayden.com/makinglight/> Making Light– give access to the last 1000/2000/4000 comments, and if you click on a comment in one of those lists, it changes color. The best complicated system is at [1]Alas, a Blog.

1. <http://amptoons.com/blog/>

Nancy Lebovitz (2014-03-30 02:55:53)

Corrected link for Making Light: <http://nielsenhayden.com/makinglight/>

## More Cereal Fiber, Much Less Heart Disease (2014-03-30 05:00)

In Vitamin D and Cholesterol: The Importance of the Sun (2009) by David Grimes, an excellent book, I came across [1]a 1977 study of healthy middle-aged men. The researchers measured their diet and watched them from 1966 to 1976. The question: What diets were associated with better health? There turned out to be associations with cholesterol (lower better) and systolic blood pressure (lower better), but these were less interesting than two strong dietary associations. One was between energy intake and heart disease. Men in the lowest third of energy intake had 23 cases of heart disease; men in the highest third had 7 cases. That's probably due to exercise: the more you exercise the more you eat. We already know exercise is good.

The other association was with cereal fiber. Men in the lowest third of consumption (2-7 g/day) had 25 cases of heart disease; men in the highest third (8-34 g/day) had 5 cases. (A Wasa cracker has about 2 g cereal fiber.) You might dismiss this as healthy-person bias: healthy people do many healthy things, such as eat fiber. However, there was no association of heart disease and fiber from fruit and nuts. They're healthy too. "The advantage of a diet high in cereal fibre cannot be explained [by us]," said the authors.

Later studies have found the same thing. For example, [2]a 2006 review reached a similar conclusion: "There is an increasing body of evidence, including that from prospective population studies and epidemiological observational studies, suggesting a strong inverse relationship between increased consumption of wholegrain foods and reduced risk of CVD." [3]A study of health-conscious people – to reduce healthy-person bias – found a similar association: "Persons who habitually ate wholemeal bread had a lower mortality from cerebrovascular disease." [4]A 2002 review and [5]a 2013 review provide even more evidence for the association.

[6]Shant Mesrobian has emphasized the importance of fiber for health. Whereas paleo gurus usually say grains are bad. [7]Here, for example, are "10 reasons to avoid grains".

1. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1632514/>
2. <http://www.ncbi.nlm.nih.gov/pubmed/16441941>
3. <http://www.ncbi.nlm.nih.gov/pubmed/6291372>
4. <http://www.nature.com/ejcn/journal/v56/n1/full/1601283a.html>
5. <http://www.bmj.com/content/347/bmj.f6879>
6. [mrheisenbug.wordpress.com](http://mrheisenbug.wordpress.com)
7. <http://www.eat-real-food-paleodietitian.com/Paleo-diet-reasons-to-avoid-grains.html>

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dearieme (2014-03-30 05:58:33)

There are still parts of Scotland where people eat lots of oats (porridge, oat cakes), eat lots of fish, and take plenty of exercise. I've never seen any suggestion that they are exempt from the high rate of heart deaths in Scotland. But maybe they are. (Decades ago my wife attended a seminar on heart attack rates in Glasgow. The figures differed strikingly from one apparently identical neighbourhood to another, where a "neighbourhood" was tiny - just a few streets. The investigator had no explanation to offer.) Seth: The study I describe was done in London. Grimes would emphasize the lack of sunlight in Scotland as a cause of heart deaths.

kxmoore (2014-03-30 07:28:19)

Perhaps it is not the consumption of whole grains giving the positive effect but the fact that the whole grain eaters tend to eschew highly processed flours.

kxmoore (2014-03-30 07:43:26)

re: heart attack rates in Glasgow. Heart disease has been associated with air pollution. Pollution rates can vary strikingly in a city. Strangely an environmental group has just released an air pollution study naming a street in Glasgow as the most polluted in Scotland. Scotland's most polluted streets identified in Friends of the Earth league table <http://www.dailyrecord.co.uk/news/scottish-news/scotlands-most-polluted-streets-identified-3063791>

Adam (2014-03-30 07:45:36)

Some flavors of paleo are open to including gluten-free grains. For example, the Perfect Health Diet advocates eating up to a pound a day of white rice. Robb Wolf talks regularly about eating corn tortillas. There's a good list of gluten-free grains here: <http://www.listproducer.com/2011/08/30/list-of-10-gluten-free-grains-for-everyone/> Perhaps people could have it both ways, gluten-free AND whole grain?

libfree (2014-03-30 07:54:50)

I agree that lots of paleo people ignore the importance of plant fibre. A couple of things that I think might be important. You might be able to get that fibre from other sources but these just weren't measured properly. My friend from Lao eats far more whole food than I do and I've wondered if my western take of throwing out parts of our food might reduce our fibre intake. He doesn't throw the apple core away, he eats it. When he eats chicken wings and ribs, he cleans the bones more than anyone I've ever seen. I saw a study that found animal fibre being close to scFos in terms of helping pass probiotics.

RAD (2014-03-30 08:18:38)

Interesting. I don't see how it fits with the observation that the traditional Greenland Inuit diet was associated with low CVD rates. I think this goes back to macro vs. micro nutrients. To convince me of a macronutrient claim it has to be compatible with both the Inuit low-carb diet and the Okinawa low-fat diet.

kxmoore (2014-03-30 09:55:18)

A common denominator of whole grain, Inuit and Okinawa diets is sparsity of high-processed flours.

Joe (2014-03-30 13:20:09)

IMO: Too small of a study to garner much information. Too much information was missing or excluded, etc. And it's about the only study I've ever read that posits there's no benefit to eating whole grains and unrefined starches over their refined counterparts. (Someone should alert the authorities!) It's hard to tell how they even controlled for that. I also wonder what they mean by "clinical coronary heart disease"? And using death notices for cause of death is notoriously unreliable. "Heart disease" is usually the go-to, absent an obvious gun-shot wound, blunt force trauma, etc. It also turns on its head, the current conventional wisdom, which is that low triglycerides, high HDL, and large LDL particles are protective. Grains (and too many carbs) cause triglycerides to go up, HDL to drop, and LDL particle size to become small and dense (all the better to attack your endothelium). Ditto for sugar. And, of course, they didn't even have a "no grains" arm. That would have been interesting, I think. It's also interesting to note, however, that saturated fat is NOT implicated. Huzzah! And that it's better to be short than tall. I can't do much about the latter, but I'm sticking to my game plan: Eat saturated fat, veggies, fruit, and don't eat grains or sugar.

RAD (2014-03-30 16:06:19)

@kxmoore, I agree that Inuit and Okinawa diet both lack high-processed flours but the study Seth links to shows that neither sugar intake nor refined flour intake was correlated to CVD incidence. The only dietary factor that seemed to count was fibre from brown/whole-grain bread and breakfast cereal. I find that weird, really weird. @Joe, I thought the study showed that whole-grains was basically all that counted.

kxmoore (2014-03-30 21:15:37)

@RAD I should have read more carefully. Yeah, the first study Seth mentioned showed no refined carb cvd correlation. Perhaps the cereal fiber afford a "second meal effect" that mitigates a harmful effect of refined carbs?

daz (2014-03-30 22:21:59)

some of the Scottish 'cuisine' should be enough to give anyone a heart attack...? deep fried mars bar anyone...  
[http://en.wikipedia.org/wiki/Deep-fried\\_Mars\\_bar](http://en.wikipedia.org/wiki/Deep-fried_Mars_bar)

Joe (2014-03-31 07:01:38)

RAD: I may be wrong, but I think that's what this means: "Straight tabulations of coronary cases against white bread eaten showed no trend. Thus our data do not support the hypothesis that the incidence of CHD is related directly to intake of refined carbo- hydrates" I agree with you, it's weird.

kxmoore (2014-03-31 07:35:57)

You want to see weird? This complicated experiment suggests we should be eating spaghetti for breakfast.  
<http://ajcn.nutrition.org/content/69/4/647.full>

RAD (2014-03-31 08:37:21)

@Joe, I think the accepted wisdom goes something like "replace refined carbs with whole grains" and the statement you quoted says something like "it doesn't matter whether or not you eat refined carbs" but the paper addresses the whole grain part elsewhere. Eating whole grains reduces CVD even if you prefer your grains soaked in high fructose corn syrup (poetic license with causation/correlation). That's the bizarro part for me.

Joe (2014-03-31 09:04:45)

RAD, I couldn't find it, but I'll take your word for it. And, yeah, ain't nothing like a little "high fructose corn syrup" for breakfast! New advertisement: Eat Kellogg's Cocoa Krispies, now with HEART-HEALTHY high fructose corn syrup!

Joe (2014-03-31 09:08:50)

kxmoore, did you notice the study was funded by a CEREAL group? I guess that helps to explain the lack of an eggs and bangers arm.

Jack (2014-03-31 10:34:35)

In all fairness, I would have liked to see an article named "10 reasons to avoid meat" right along side of the article "10 reasons to avoid grains". No doubt more people who do not get enough grains and fiber are having medical problems because they are constipated, which impairs the circulation of their blood and energy, which may lead to cerebrovascular disease and other problems. Who knows? Not me.

Joe (2014-03-31 11:08:36)

Jack, constipation is a complicated matter. But the amount of fiber you eat may, or may not, be a contributing factor. "Stopping or reducing dietary fiber intake reduces constipation and its associated symptoms" <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3435786/> Things like lack of exercise, taking certain medications, not drinking enough water, not eating enough fat, etc., all can contribute to it. Eskimos eat almost zero fiber and they have little to no constipation. People who are forced to eat liquid diets for weeks and longer can still have regular bowel movements. Etc. I always try to "have my cake and eat it," whenever I can, and I eat a good amount of veggies and fruits (along with animals and fish), mostly for the nutrients, but also for the fiber. And it all goes through me like you-know-what goes through a goose.

### Questions for Jeffrey Sachs (2014-03-31 05:00)

On [1]Econtalk, Russ Roberts recently [2]interviewed Jeffrey Sachs, author of *The End of Poverty* and head of the Millennium Village Project (MVP). I enjoyed it but thought Roberts was too easy on Sachs. Here's what I wished he had asked:

Your book, *The End of Poverty* – did you get anything wrong?

What mistakes have you made with MVP?

You say Nina Munk [[3]author of *The Idealist*] chose a non-representative village. [Sachs said that Munk spent her time in the only village in "a war zone."] Did you tell her that? If not, why not?

Munk was on your side when she began reporting, but changed her mind. Why is that?

Why was the project set up in such a way that evaluation is difficult? Why not pick ten villages and randomly select five for treatment?

You say the MVP project is successful because people are copying it – but those people are government officials. Is it plausible they are copying it because they see it as a good way to make money for themselves or improve their career? You must know many worthless medical treatments have been widely copied. Is this your best evidence of success?

No doubt your employees have often told you what you wanted to hear rather than the truth. What's an example? What have you done to get honest assessments of how things are going?

What did you learn from Nina Munk's book?

[4]Roberts says he didn't ask Sachs certain questions because there wasn't enough time.

1. <http://econtalk.org/>
2. [http://www.econtalk.org/archives/2014/03/jeffrey\\_sachs\\_o.html](http://www.econtalk.org/archives/2014/03/jeffrey_sachs_o.html)
3. <http://blog.sethroberts.net/2014/02/14/the-idealist-jeffrey-sachs-and-the-quest-to-end-poverty-by-nina-munk/>
4. [http://www.econtalk.org/archives/2014/03/postmortem\\_on\\_s.html](http://www.econtalk.org/archives/2014/03/postmortem_on_s.html)

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dearieme (2014-03-31 06:18:31)

Is Sachs one of the people who pillaged Russia just as it was re-convening after the USSR, or am I mistaking him for someone else?

Dominic Frisby (2014-03-31 07:44:45)

Seth, I am trying to contact you. Would you be able to drop me a line - frizzers at gmail dot com Thanks Dominic

Seth Roberts (2014-03-31 12:29:54)

Sachs describes his work in Russia: <http://jeffsachs.org/2012/03/what-i-did-in-russia/> The Harvard economist accused of wrong-doing related to Russia: <http://www.thecrimson.com/article/2006/2/10/tawdry-shleifer-affair-stokes-faculty-anger/>

dearieme (2014-03-31 13:45:16)

Perhaps you meant "A Harvard economist accused of wrong-doing related to Russia"? I mean, Summers is a Harvard economist too. Seth: Right. "A" not "the".

Jeremy Cherfas (2014-04-03 07:13:16)

Did you hear the interview of Nina Munk by Owen Barder? I thought it was particularly interesting as they both tried very hard to give Sachs the benefit of the doubt, and yet ...

Seth Roberts (2014-04-04 13:49:23)

No I didn't know about that interview, thanks.

## 9.4 April

### The Trouble with Critics of Science, Such as John Ioannidis (2014-04-01 05:00)

I haven't been interested in the work of John Ioannidis because it seems unrelated to discovery. Ioannidis says too many papers are "wrong". I don't know how the fraction of "wrong" papers is related to the rate of discovery. For example, what percentage of "wrong" papers produces the most discovery? Ioannidis doesn't seem to think about this. Yet that is the goal of science – better understanding. Not "right" papers.

Almost all important health discoveries are discoveries of new cause-effect relationships. If you do X, Y happens. My view of the problem with modern health science is nothing like what Ioannidis and other critics (such as the "couldn't replicate Finding X" critics) say. It is lack of progress on major health questions (e.g., what causes depression?), emphasized every year by awarding of the Nobel Prize in Medicine to research of little or no practical value. Almost every year, the Nobel Prize press office says the honored research will be useful in the future. The lack of progress shows no sign of ending.

The best that can be said about recent critics of science, such as Ioannidis and Danny Kahneman, my former colleague, is they see there's a problem. The worst that can be said about them is they fail to understand the cause of the problem. This is why their proposed solutions could easily make the problem worse.

Whenever you do an experiment – psychology and the health sciences are almost all experimental – you "use up" the effect you are studying (X causes Y). You can do an experiment to learn if X causes Y only so many times. After that, you know the answer and a new experiment is pointless. Professional scientists are only able to test ideas (cause-effect statements) that are fairly plausible. With such ideas, a publishable outcome is likely enough to be worth the cost of testing. They are unable to test implausible ideas, because such experiments are not likely enough to produce a publishable outcome. With limited resources, they must generate a certain number of published papers per year, at least if they want a career.

To have a viable system, you need to generate new plausible ideas at at least the same rate you are using them up. Otherwise you will run out. You must design your experiments so that they accomplish this. Not necessarily every experiment, but your experiments in aggregate. It isn't easy to find new plausible ideas. If you think I'll just get on with my career, generating papers as fast as possible and leave it to someone else to come up with new ideas worth testing, then your field will run downhill as plausible ideas are used up and not replaced. This is what has happened in several fields, including mine (animal learning). In psychology much greater concern about both fraud and lack of replicability have started at about the same time. I believe both (more fraud, more lack of replicability) stem from the increasing difficulty of honest (or more honest) research.

A friend who is a psychology professor agreed with me that psychologists – at least him – didn't know how to generate new ideas worth testing. "Do you?" he asked. I said I did:



1. They [= psychologists] should modify their data collection. In my experience, new ideas almost always come from carefully collected data. They don't come from introspection, talking to friends, reading the newspaper, watching TV, going to talks, etc.
2. Finding new ideas worth testing means finding new ideas that are plausible enough to be worth the cost of testing. To find new ideas with sufficient plausibility to test you need to test implausible ideas. A small fraction will pass the test, gaining plausibility. They will become sufficiently plausible to be worth testing.
3. To test implausible ideas in a career-consistent manner, you need to be able to test them very cheaply. Few if any psychologists have thought about this. They don't realize how important it is.

When you have very cheap tests, you can test far more ideas than you can if you only have expensive tests. You need a "test set": very cheap tests, cheap tests, almost-cheap tests, and so on. Ideas that pass a very cheap test become worth testing with a cheap test, those that pass a cheap test become worth testing with an almost cheap test, and so on. With current methods (all tests are expensive), perhaps social psychology professors who want to publish have a set of 50 ideas that are plausible enough to be worth the cost of testing. Those ideas get tested over and over, using them up. Were cheap tests available, perhaps the same professors could choose from a set of 1000 ideas those they want to test. Of those 1000 ideas, 950 were too implausible to test with expensive tests. Among those 950, I believe, would be some ideas that when tested seemed to be true.

I came to these beliefs trying to understand why [1]my self-experimentation did a good job of finding new ideas worth testing. [2]I concluded that the secret was this: I was able to test implausible ideas very cheaply – thousands of times more cheaply than professional scientists. Self-tracking – keeping track of my sleep, for example, and looking for outliers – was a very cheap way of getting new ideas about what controls sleep. Self-experimentation was a slightly more expensive (but still very cheap) way to test ideas that self-tracking came up with.

Many people have complained about a lack of replicability problem in psychology, including my friend and co-author [3]Hal Pashler. An obvious solution is to raise the bar for publication: require better (= stronger) evidence. Sure, this will improve the quality of testing, but how will it affect the rate of production of plausible new ideas? My cost-of-test proposal suggests it will reduce that rate of production. I am saying that cheap tests are all important. Raising the publication bar will make the only test you have more expensive. What if the replication problem is a response to lack of plausible new ideas? Then this solution to the problem would make the problem worse.

1. <http://www.escholarship.org/uc/item/2xc2h866>

2. <http://media.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>

3. <http://www.nature.com/news/replication-studies-bad-copy-1.10634>

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Nancy Lebovitz (2014-04-01 08:12:53)

Good points about the importance of science being on a path to doing something useful, though pure science can pay off in the long run. Who'd have thought that observing the movements of the moon and planets would pay off centuries later in

communications and observation satellites? Back to medicine.... I think you're pointing at serious problem, but if the field didn't have so much fraud and incompetence, there's be more good information (and less bad pseudo-information) to base hypotheses on.

Adam (2014-04-01 08:23:17)

Aside from discovery, medical science also must support the pledge all doctors take to "first, do no harm". This is the main danger with wrong studies. We assume that the results are right because the P-value is small and then we go out and treat millions of patients based on it. Years later we find out we were killing thousands of people.

dearieme (2014-04-01 10:30:06)

We did an accidental experiment this week. We made lots of apple sauce for the roast pork on Sunday, but that left me with no apple to chop up for breakfast the next day. So I took some of the surplus sauce and stirred it up with half a banana and a couple of tablespoons of Greek yoghurt to mimic my usual meal. I felt so full all morning that I could scarcely eat lunch at my usual time. I reckon the secret was that when the apple sauce was made it had been reinforced with some of the pork fat. I suppose it's ancient knowledge that a bit of fat at breakfast saves you from the desire for a mid-morning munch, but I was struck by how firm the lesson was here. It seemed to be clearer than I've ever had it from nuts at breakfast, for instance.

Joe (2014-04-01 12:18:39)

"I felt so full all morning that I could scarcely eat lunch at my usual time." Ah, the wonders of good ol' animal fat.

Seth Roberts (2014-04-01 13:47:11)

"Years later we find out we were killing thousands of people." One big reason medical treatments do harm is that the theory behind them is wrong. For example, cholesterol theory, chemical-imbalance theory.

Seth Roberts (2014-04-01 13:53:42)

"Back to medicine.... I think you're pointing at serious problem, but if the field didn't have so much fraud and incompetence, there's be more good information (and less bad pseudo-information) to base hypotheses on." That's what a friend of mine says. I think he's wrong. I think the problem lies elsewhere - failure to discover big new effects.

Joe (2014-04-01 14:38:46)

Game...Set...Match? "Vegetarians were twice as likely to have atopy (allergies), a 50 percent increase in cancer and a 50 percent increase in heart attacks." <http://www.plosone.org/article/fetchObject.action?uri=info:doi/10.1371/journal.pone.0088278&representation=PDF> I watched FOX News this morning, and they were heralding a new study where it was discovered that 1 out of 3 American children, between the ages of 9-11, had "high" cholesterol levels, and that "something must be done about this!" [No mention of Hippocrates' warning to: "First, do no harm."] What do you suppose that certain "something" will inevitably be? It doesn't take Nate Silver to forecast the probable answer: more statins! Maybe mix them right into the kids' boxes of CoCo Puffs and fruit juice? Or the next "big thing," PCSK9 inhibitors (currently in Phase III clinical trials), which lower cholesterol levels even MORE than statins. All that, while study after study shows that people with "high" cholesterol levels live longer than those with "low" levels! <http://www.ravnskov.nu/the%20benefits%20of%20high%20C.htm> How do we stop this runaway train before it takes most of us right over the cliff with it? I have no idea. :(

AI (2014-04-01 16:59:54)

I'm not a vegetarian, but I took a look at that study from plosone.org, and I found the following statement near the end: "Potential limitations of our results are due to the fact that the survey was based on cross-sectional data. Therefore, no statements can be made whether the poorer health in vegetarians in our study is caused by their dietary habit or if they consume this form of diet due to their poorer health status. We cannot state whether a causal relationship exists, but describe ascertained associations. Moreover, we cannot give any information regarding the long-term consequences of consuming a special diet nor concerning mortality rates."

Joe (2014-04-01 17:50:56)

Al, that same claim can be made for just about any cross-sectional study, unless they control for those factors. And that's almost impossible to do. And the opposing disclaimer could be that vegetarians are usually MORE health conscious (have healthier habits) than your average bear. Here's another study that comes to roughly the same conclusion: <http://jnci.oxfordjournals.org/content/early/2010/04/06/jnci.djq072.abstract> So the next time you hear someone say how healthy a vegetarian lifestyle is, think back to these studies. A vegetarian diet will usually lower your LDL and TC, but it will also substantially raise your triglycerides and lower your HDL level (the so-called "good" cholesterol). The latter two are supposedly risk factors for heart disease. So you're damned if you do, and damned if you don't. Which is why the diet-heart theory of heart disease is absurd, in my opinion. And is making some of us do really stupid things, like take statin drugs.

dearieme (2014-04-02 02:21:28)

I suppose it will soon be the case that the effects of statins will start showing up as a reversal of the heretofore ever-increasing life expectancy. It seems to me unlikely that such powerful drugs, with such pronounced adverse side effects, won't promote earlier death. Of course, cause of death is unlikely to be reported as "statination".

Alexis Gallagher (2014-04-02 11:12:25)

Seth, my apologies if you are already aware of this connection, but you should know that the way that you talk about idea-generation in science is \*extremely\* similar to the way people in the "lean startup" movement talk about starting businesses. The core idea of lean startup is that instead of investing the time and money to start a business based on a hunch of whether there is demand for its product, you should progress through a sequence of progressively more expensive stages of data gathering to validate your idea. So first do the cheapest possible thing that you can do to test an idea, such as basic analysis and discussions. Then do the next most expensive thing you can do to test it further (such as customer surveys, or trial ad campaigns). Proceed along this path, ramping up your investment gradually, in a way shaped by evidence you are discovering. People in the lean world like to talk about "de-risking" the process, by proceeding in this incremental and empirical way. This is just like the progression you describe, from cheap idea generation, to cheap tests via self-experimentation, to more expensive research trials. I mention not only because it's interesting, but because the lean startup movement is large and quite influential in certain circles. It might help you to spread your ideas in some quarters, if you pointed out this parallel. I think this is one of the main books used to describe this approach: <http://theleanstartup.com>

I like Ioannidis (2014-04-02 20:35:15)

I think Ioannidis serves the important role of deconstructing the temple. I don't think he is trying to say that too many papers are wrong, rather he is saying that we underestimate how many are wrong, and this leads to counterproductive practice. He is not trying to point out the solution, he is only pointing out the errors. There's nothing wrong with that. Ioannidis is the garbageman of medical science.

Seth Roberts (2014-04-02 21:54:35)

He's pointing out the wrong errors, thus distracting attention from the important errors. Far more damaging than "wrong" published papers – which can be ignored – are papers that are not published but should have been.

### Assorted Links (2014-04-02 05:00)

- Oncology researchers [1] make too much of very little.
- [2] deadly delays in newborn blood testing. Do hospital employees = government employees?
- [3] University of Western Australia refuses request for data because requester "made inflammatory statements on [his] weblog . . . including attacks on the character and professionalism of University staff."

- [4]Benefits of fermented food. "Once all the grains in her diet were fermented, she began to feel normal — for the first time in years."

1. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2724853/>

2. <http://www.jsonline.com/watchdog/watchdogreports/Deadly-Delays-Watchdog-Report-Delays-at-hospitals-across-the-country-undermine-newborn-screening-programs-putting-babies-at-risk-of-disability-and-death-228832111.html>

3. <http://climateaudit.org/2014/03/28/uwa-vice-chancellor-refuses-lewandowsky-data/>

4. <http://www.ediblebrooklyn.com/departments/dyi-diary/going-grain/>

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Hap (2014-04-02 07:58:18)

On the subject of bread, popularly demonized in Dr. Perlmutter's book "Grain Brain," as leading – along with glutinous and simple carbohydrates – to decaying brain health, dementia, and Alzheimer's: Does a bread with a "starter culture" in it count as fermented? I'm thinking of the wonderful breads from Acme Bread here in Berkeley. I am hooked on Cranberry-Walnut.

Seth Roberts (2014-04-02 11:20:41)

does (fermented) bread count as fermented food? Maybe. I suppose there are a lot more bacterial fragments in bread than in non-fermented food and maybe these bacterial fragments help protect you against dangerous bacteria. I don't know.

Evelyn M. (2014-04-04 07:20:38)

Talking about bread. I tried the fashionable "no-knead" bread recipe last year and had good results (that's just flour, salt, water, and a very small amount of yeast with a very long rising period). When Cooks Illustrated offered a new take on that recipe specifically to increase the taste of fermentation, calling their loaf "almost no-knead bread." That recipe adds beer and vinegar and produces a delicious loaf. As everyone liked the result of my experimentation, I bravely ordered sourdough starter and gave that a go, but didn't have much luck until I cut the amount down to about 2 tablespoons (considering it part of the liquid in the recipe) and kept the 1/4 teaspoon of yeast that was in the original recipe. (Remaining sourdough starter can be frozen with great success.) That process created a very flavorful loaf. Reading your blog post about the importance of feeding the good intestinal bacteria, I replaced two tablespoons of the King Arthur European-style bread flour that I have been using with high gluten corn flour as recommended and let the dough rise for a full 24 hours. Everyone loves it.

fitness (2014-04-29 14:45:56)

Wow that was odd. I juust wrote an very long comment but after I clicked submit my comment didn't appear. Grrrr... well I'm not wrting all that over again. Anyways, just wanted to say excellent blog! Checkk out my blog :: [1]fitness

1. [http://iznek.cocolog-nifty.com/tennis/2006/04/post\\_febb.html](http://iznek.cocolog-nifty.com/tennis/2006/04/post_febb.html)

## **Journal of Personal Science: Molybdenum and Avoiding Sulfur Helped My IBS (2014-04-03 05:00)**

by August Hurtel

I live in Shreveport, Louisiana and work in the interlibrary loans department at Shreve Memorial library. I am 39 years old.

I believe, due to experiences I will expand upon below, that excess sulfur compounds, especially sulfites, may contribute to and even cause irritable bowel syndrome (IBS). If you have IBS, you can try to verify this in a few ways.

1) Try molybdenum. I take Carlson Lab's Moly-B 500 mcg tablets (one tablet/day).

2) Avoid [1]foods and supplements high in sulfur.

3) If you have already purchased the services of 23 &me or want to, you can look at this thread in the forums – [2]“Reactions to food containing sulfites, sulfur dioxide, bisulfite, metabisulfite. SUOX gene” – and see if you have the same polymorphisms, though if you just do the first two, you'll be able to guess.

The woman who started that thread at 23 &me goes by the name Red Ringlets. She asked if anyone with four polymorphisms involved in sulfur processing experience reactions to sulfur compounds commonly added to foods as preservatives and/or for antibacterial purposes. I have three of these polymorphisms. I knew I was allergic to certain medicines, but I had not thought about the effect of sulfur coming from my food and supplements largely because I associated reactions to sulfur with hives and headaches.

Several years ago [3]once the appetite suppression the Shangri-La diet kicked in, I adopted what most would consider a paleo template for my diet. This means I generally avoid grains, legumes, and dairy with caveats (like rice, now that I work out, and butter because it is animal fat and therefore good according to evolutionary thinking). Additionally a substantial amount of the meat that I buy comes from conventional sources.

Despite not being technically paleo, I enjoyed coffee, chocolate, and red wine, which are all high in sulfur. Sulfur is also added to various coconut products, shrimp, fish, dried fruit – many products a person trying to eat paleo might eat. I ate them. And I would have gastrointestinal distress that I could not explain despite getting leaner.

In the summer of 2013 after a few social functions that served grilled hamburgers, grilled shrimp, and other summer party foods a paleo dieter might think would be okay, I went to the emergency room. I had a serious pain where my appendix should be. Sometimes the pain would get worse after eating, and I would often get diarrhea. I thought I had appendicitis, but the doctors found nothing wrong. They took regular X-rays and did blood tests, and came back and said they found nothing. I got really angry about that, so they ordered a CT scan. The CT scan also showed nothing. They told me I had IBS because they had gone through a list of other things it might be and eliminated all of them.

When I went to the emergency room, I also inadvertently took with me a large amount of sulfur. I had a couple of 90 % Lindt bars with me. My chocolate intake had risen during that time, too. I had stuff to do, places to go – and an excuse to treat chocolate like a food group.

I was aware, from reading on the internet, of FODMAPs, which are osmotic carbohydrates that draw water into the gut, causing gas, bloating, cramping and diarrhea. They seemed a likely culprit because these were the symptoms I experienced. Following a [4]low FODMAP diet seemed to help, but not perfectly so.

There is some overlap between the two lists of foods to avoid (high sulfur and high FODMAP), so avoiding FODMAPs might have helped because it made me avoid sulfur. It also made it possible for me to have days where I didn't eat any FODMAP foods but I would eat something like shrimp and then I'd have symptoms despite not eating any FODMAPs. So, looking back on it, I think of attending a wedding, eating nothing but shrimp, and drinking a little bit of red wine, and then having IBS problems and not understanding why because it doesn't fit in well with the FODMAP story. I think FODMAPs are problematic in a gut that has already been compromised, but FODMAPs are not evolutionarily novel, and thus are unlikely to be the original cause of the problem.

Since it was summer and I just gotten through that ER experience, I stopped eating a lot of fruits, chocolate, wine, etc. One of the things that figures largely for me as a source of sulfur during this time though is shrimp. I kept thinking it was a safe food to eat, and didn't realize until later it was a source of sulfur. Additionally, I was

taking several supplements that contained sulfur: gelatin, biotin, glutathione, NAC, ALA, MSM. I had gotten into the habit of trying different supplements since 2010 because of a neuralgia that neither doctors nor dentists could explain. Though I was not taking all of them at once, I did supplement enough to assume I kept my sulfur level high throughout this time period.

I noticed the thread Red Ringlets posted at 23 &me in August of 2013. In October I asked whether or not sulfur could cause a dehydrating effect. I asked this because I've noticed wine can take more water out of me than other drinks containing alcohol do. I didn't get an answer to that question, but I began to explore some of the links people had put into the thread. I read through this site: [5][www.learningtarget.com](http://www.learningtarget.com). I found the following page particularly helpful because it mentioned that molybdenum is a vital part of the [6]sulfite oxidase enzyme: [7]Vitamins and Supplements for Sulfite Problems.

I still had not made a connection between sulfur and irritable bowel syndrome, but I decided to supplement with fucoidan, which is a sulfated polysaccharide found in some seaweeds. I thought it would help my gut, but it caused diarrhea. It was as if I had decided to supplement with cholera. The effect was large and obvious enough for me to realize it was probably the supplement I had just taken. Once I accepted that, I put together what I had learned from the 23 &me thread.

Now, in retrospect, I think fucoidan may have caused diarrhea for completely different reasons. I learned in my 23 &me health report that I am norovirus resistant, and I have subsequently read that this has something to do with my ability (or inability) to make fucose. I can't remember where I read this, but it made me think fucoidan could have destabilized my gut flora for reasons unrelated to its sulfur content.

Whatever the reason for the extreme reaction to fucoidan, I decided the beneficial reaction to molybdenum meant that I had a genetically limited capacity to deal with all the extra sulfur in my food and supplements. I threw out my high sulfur supplements and tried to stick to low sulfur foods. Within about two weeks I started having normal bowel movements. This was better than what I was achieving before the entire fucoidan fiasco. I had migrated to a diet of rice and fish which helped me approximate normalcy, but any time I tried to have any variety in my diet, I would run into problems. By avoiding sulfur, I was able to eat a larger variety of foods without incident.

Eventually I found if I was very careful, I could eat small amounts of high sulfur foods, but this is hit or miss because I can't reliably gauge what the potential dose is, nor is it always clear whether a food has sulfur in it. I still supplement with molybdenum but I think the long term strategy here is both molybdenum and at least avoiding high sulfite foods because my genetics suggest it is doubtful I am going to be able to process as many sulfites as other people do regardless of how much molybdenum I have.

As I mentioned before, I think once the gut is compromised, many things become irritants. Removing excess sulfur has increased my health a lot, but I suspect I need to improve gut flora, and possibly heal some tissue damage. The doctors may not be able to see it, but I still have residual pain in the region where my appendix is.

1. <http://www.livingnetwork.co.za/chelationnetwork/food/high-sulfur-sulphur-food-list/>
2. <https://www.23andme.com/you/community/thread/22714/>
3. <http://boards.sethroberts.net/index.php?topic=6389.msg69839#msg69839>
4. <http://stanfordhospital.org/digestivehealth/nutrition/DH-Low-FODMAP-Diet-Handout.pdf>
5. <http://www.learningtarget.com/nosulfites/>
6. [http://en.wikipedia.org/wiki/Sulfite\\_oxidase](http://en.wikipedia.org/wiki/Sulfite_oxidase)
7. <http://www.learningtarget.com/nosulfites/vitamins.htm>

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August (2014-04-03 07:51:57)

"I read through this site: sulfite oxidase enzyme:" Originally was "I found the page below particularly helpful because it mentioned Molybdenum is a vital part of the sulfite oxidase enzyme" And it looks like this other link completely disappeared: <http://www.learningtarget.com/nosulfites/>>[www.learningtarget.com](http://www.learningtarget.com)

JM (2014-04-03 12:03:50)

August, great example of using careful observation and personal science to diagnose and treat yourself - and I think it's pretty obvious that traditional medicine would never have figured this out. And thanks for sharing, maybe this will help someone else who is having similar problems.

August (2014-04-03 13:50:43)

Thanks JM. It looks like I need to correct my correction. The link is: <http://www.learningtarget.com/nosulfites/>

dr j (2014-04-03 14:52:40)

Dear August, Thank you for taking the time to write about your inspiring detective work! Its is extremely valuable to be able to mull over your process in approach; i am starting on a Lynch Syndrome path. best john

Steve (2014-04-03 18:22:13)

August: I just checked my 23 &me data. My results are the exactly the same as Red Ringlets and yours: SUOX rs10876864 AA, rs705703 CC, i5000977 AA, i5000976 AA . That would finally explain why I get such intense headaches when I drink red wine.

Seth Roberts (2014-04-04 13:48:39)

Sorry. It appeared correctly in the visual editor.

JRM (2014-04-06 09:27:20)

I started supplementing with molybdenum after I did a hair minerals analysis test which showed very low levels of molybdenum. I felt better. 23andme said that I was a slow metabolizer of caffeine. Molybdenum is used in caffeine detoxification via xanthine oxidase. Supplementation helped reduce caffeine withdrawal symptoms the next day. The farmer who I buy almost all of my beef from commented that my hair test was similar to his soil minerals test. A different local farmer commented that her soil minerals test showed a deficiency in molybdenum. When I go to the farmer's market, I find that asking farmers if they do soil mineral tests and supplementation is a good indicator of whether their food will taste good. The best farmers test beyond ph, Ca, Mg, N, P, K to a plethora of micronutrients Mo, Se, Fe, Cu, Zn, B, Mn, Cr, Co, etc. Soil mineral deficiencies become mineral deficiencies in the plants and animals grown on that soil. People can't go to nutritiondata.com, plug in their daily diet, and assume that their diet contains all the necessary minerals because the website says it should. One of William Albrecht's themes was that the soil quality in the South is compromised due to heat and precipitation leaching out the minerals from the soil. Maybe it is coincidence that the author is from the South. I don't know. Other minerals which were low on the test like lithium (5 mg/day) and magnesium (via MgCl foot baths), I also noticed a benefit from supplementing. But I haven't noticed a benefit from supplementing selenium.

JRM (2014-04-06 09:33:04)

My markers are SUOX 56398711 i5000976 AA SUOX 56397916 i5000977 AA SUOX 56391486 rs705703 CC intergenic 56401085 rs10876864 AG I haven't noticed a reaction to sulfites or sulfur containing foods.

Louis (2014-04-15 10:41:58)

Hello, August, Thanks for writing this article. I imagine you might be helping many people; perhaps you've helped me at least. If nothing else, it's another hypothesis for me to test. I believe I could have this issue with sulfites, so I've begun a low sulfur diet. I too have IBS that got slightly better on a low FODMAP diet, but by no means took care of it completely. I'm wondering a couple things: 1. You say that you had normal BM's after two weeks. Did that two week period include supplementing with

molybdenum or was that on the low sulfite diet alone? 2. I have a number of symptoms that I think are related to the IBS such as insomnia and difficulty concentrating. Did you too have symptoms related to your IBS? If so, did they go away or show improvement in two weeks too? Thanks!

Anne (2014-04-18 00:08:56)

Hi August Thank you for taking the time to write down this post. It was really interesting, and I will try this out over the coming weeks. I will start today and take away MSM and instead put in some molyben. The last entry from Louis was really interesting and I am very intressted in your comments on that, because that is a big thing even for me. 2. I have a number of symptoms that I think are related to the IBS such as insomnia and difficulty concentrating. Did you too have symptoms related to your IBS? If so, did they go away or show improvement in two weeks too? Kindly Anne

August (2014-04-30 13:43:11)

Louis, The two week period included both molybdenum and the low sulfite diet. I can say I had problems sleeping at various times, but I had not associated it with I.B.S. because of stress in my life. I did not track my sleep during the two weeks and I can't remember if it improved specifically during those two weeks. I have my windows covered and I try to avoid blue light at night, but I notice sleep changes depending on the season, stress, and I assume the more pain I am in, the more likely I will stay awake too, so I.B.S. must have had some effect. I can say I am sleeping reasonably well now. I wake up before my alarm, possibly in anticipation of the loud birds who inhabit my neighborhood.

#### Assorted Links (2014-04-04 05:00)

- [1]Website designed to measure drug side effects
- [2]"Natural" wine. "Ambient yeast alone are capable of taking his fermentations to completion."
- [3]Sophisticated study of macronutrient composition in mice

Thanks to Tucker Max and Barnaby Kerbel.

1. <https://www.rxisk.org/Default.aspx>

2. <http://italltastesthesametome.com/post/53515264703/an-afternoon-on-etna-with-frank-cornelissen>

3. <http://www.abc.net.au/radionational/programs/healthreport/high-protein2c-low-carbohydrate-diet/5309616#transcript>

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MJB (2014-04-04 07:15:04)

Researchers Debunk Bubonic Plague of Black Death In Europe, Classify it As a Pneumonic Plague Instead Growing up, children have been taught that the Black Death, which spread throughout London in the mid-1300s and killed roughly 60 percent of the population, was caused by fleas off the backs of rats traveling on boats from Asia. However, researchers believe the disease, previously thought to be bubonic and spread through fleabites from human to human, was actually an airborne virus given its fast-spreading nature, according to the Washington Post. Such a pattern of transmission would make the black death a pneumonic plague, not a bubonic one. [http://www.latinpost.com/articles/9864/2\\_0140401/researchers-debunk-bubonic-plague-of-black-death-in-europe-classify-it-as-a-pneumonic-plague-instead.htm](http://www.latinpost.com/articles/9864/2_0140401/researchers-debunk-bubonic-plague-of-black-death-in-europe-classify-it-as-a-pneumonic-plague-instead.htm)



Andrew (2014-04-04 07:50:30)

Re: side effects, it wasn't surprising to find out that the Fort Hood shooter was on antidepressants.

Nancy Lebovitz (2014-04-04 10:45:31)

I was hoping the side effects website was evaluating typing speed and errors and such so that people could find out side effects from drugs they were taking.

GB (2014-04-04 11:13:53)

Re the University of Sydney study on macronutrient contents in mice. See the comments below the article from Rory Robertson, he's the sort of economist I wish they all were - useful. Also note the protein used - casein. Not exactly a balance of amino acids.

## **Bedtime Honey and Motivation (2014-04-05 05:00)**

A friend writes:

[1]The honey has been the biggest improvement in my life in several years. It's not just the energy, I think I'm more motivated to do things.

I started the honey with 1 tablespoon, but like others who commented, I had some trouble getting to sleep, so I reduced the dose to about 2 teaspoons. I take the honey about 15 minutes before bedtime, and I have not missed a dose since starting.

The first morning after the honey I felt much more alert and rested. I had no trouble getting out of bed even on 5 hours sleep at around 6:30 – 7:00 AM PDT.

The motivation that has come since starting the honey doesn't feel primarily psychological. It doesn't wax and wane or change in response to events. It feels raw (no pun intended), more like a drive.

The motivation improvement (that might be due to honey) seemed to begin a few weeks after I started it. The main aspect of the motivation is that I feel impelled to do things. This feeling lasts all day. It's not a manic feeling, because I still have priorities, and I can bail out of a task if I'm not making progress.

I noticed a similar change. After I started the bedtime honey, it became easier to do everything. Not a big change, but noticeable. When it started is hard to say.

1. <http://blog.sethroberts.net/category/sleep/honey-sleep/>

Andrew (2014-04-05 08:37:25)

Maybe a dumb question, but do you brush your teeth after the honey? Or before?

Nathen (2014-04-05 10:42:33)

I've started to collect reaction-time data. Is your bar for an unusual score a certain number of standard deviations out? Have you determined how important the time of day of the test and consistency of timing is? I've been testing every hour for a week and so far it is not at all clear.

Seth Roberts (2014-04-05 12:32:43)

To determine an unusual score I look at the data. I don't do any calculations. The time of day seems to have a small effect. I don't know what you mean by "consistency of timing" but if you mean the time between tests that appears to matter little. For example, if I stop for 3 days after doing the test daily it will not change the score by much.

Seth Roberts (2014-04-05 12:33:03)

I brush my teeth after the honey.

Retired now (2014-04-05 17:07:05)

I have to get rid of my residual candida infection first - honey exacerbates it. In the meantime I find that a starchy dessert or rice or potato starch helps with the sleep without setting off the thrush.

ML (2014-04-06 06:03:20)

FWIW, I've experimented with other sources of sugar besides honey and bananas and found a similar effect. I've been following Seth's schedule of taking a dose right before bed, an hour or so before and about two hours before bed. I've slept better when I've taken the equivalent of two TBS of honey 2 hours before bed and one TBS the next two times. I also find my sleep is improved if I've had some sugar around mid-afternoon.

shtove (2014-04-09 16:40:48)

The one invariable effect I find from 1 Tbsp of honey before bed: no matter how little sleep, I get up in the morning without intolerable fatigue. Recently I varied other beneficial sleep factors - reduced the carbs, no relora - and achieved the grand total of 12 hours sleep over 3 days. Previously that would have had a dreadful effect on me, but I was waking fairly easily and able to perform well on each day. Amazing - although I did have to catch up on sleep late in the week. I have now restored my previous routine, but this honey effect seems constant over the past few months. Eradication of that fatigue is helpful with anxiety over sleep onset.

Antonis (2014-04-14 16:00:20)

I would like to share my experience about honey. I brush my teeth using honey and it kills harmful bacteria in mouth because I know it is antibacterial effect. When I burn my skin, I apply honey after cold applying. It recovers the skin speedily, but you should cover of it. Same for scars and cuts. And now it is interesting to hear honey helps for losing weight and good sleep. I think it is a miracle food for people. Why I started to use honey: I read some verses from the Qur'an and it triggered me to search honey. Related verses says: "And your Lord inspired to the bee, "Take for yourself among the mountains, houses, and among the trees and [in] that which they construct. Then eat from all the fruits and follow the ways of your Lord laid down [for you]." There emerges from their bellies a drink, varying in colors, in which there is healing for people. Indeed in that is a sign for a people who give thought." Nahl 68-69 verses

## **What is Teaching? (2014-04-06 05:00)**

[1]Russ Roberts says:

Great teaching is more than passing on information. For that you can read a book or watch a video. A great teacher provokes and takes you on a journey of understanding. That requires grappling with the material and making it your own. Usually that means applying your knowledge to a problem you haven't see before. At least that's often the case in economics. I think Doug Lemov said it in his EconTalk episode – you haven't taught it until they've learned it and learning is more than just hearing the facts or the answer to a problem.

This was the view I heard at UC Berkeley among faculty – when they weren't complaining about teaching.

I disagree with this. The best teachers bring out what is inside their students. They provide the right environment so what is inside each student is expressed. How to do this will be different for each student, so you have to learn about them – not just generally, you have to learn about each one. (Or at least you have to grasp their diversity and allow for it.)

Learning is natural. Every student, in my experience, wants to learn something. What makes the situation much more difficult, is the false assumption that every student wants to learn the same thing or can be cajoled into learning the same thing. One of my Berkeley students said that in high school he had had a "great teacher" of philosophy, much like the teachers that Roberts praises. He had made philosophy so interesting that my student had originally majored in it. That had been a mistake, said my student.

I believe [2]human nature has been shaped in many ways to make our economy work. Human economies center on trading. You make X, I make Y, we trade. If everyone made X, that would be bad economics. So we have been shaped to want to go in different occupational directions – you want to be an Xer, I want to be a Yer. This is deep inside us and impossible to change. When healthy students have trouble learning, I think the underlying problem is their teacher wants them to be an Xer (like the teacher) – but they want to be something else. A great teacher finds that something else.

Even the term *great teacher* is misleading, because it seems to imply that being a great teacher (= every student learns a lot) is difficult. I have found it's easy, just as swimming with the current is easy. It requires a certain psychological ingenuity to fit this way of teaching into a system that doesn't understand it. But after I figured out how to do it, it was so much easier than teaching the traditional way. I used to try to make all my students learn the same thing. That was really tiring – like swimming against the current. After class I'd be exhausted. Now I feel fine after class.

1. [http://www.econtalk.org/archives/2014/04/postmortem\\_on\\_c.html#more](http://www.econtalk.org/archives/2014/04/postmortem_on_c.html#more)

2. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>

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Zach H (2014-04-06 06:13:57)

How would you adapt your teaching style to something like math, where the thing the student might want to learn requires a great deal of knowledge they might not be interested? It seems unavoidable that a certain core of mathematical subjects

is necessary while the students do not want that knowledge for its own sake. A big difference is that you have the luxury of teaching a subject where the particular knowledge and experience acquired in your course does not have to satisfy as many prerequisites. Additionally, the material in such subjects is artificial with respect to human experience. Adapting it to a format where it aligns with what people want to learn requires many acts of ingenuity.

Scottt (2014-04-06 08:13:56)

Along the same lines as what Zach says... My wife and I are very involved in the elementary teaching sphere. There are fundamental things that people simply need to know, whether they are particularly interested in knowing them or not. It's the price of admission to civilized society. How to add, subtract, write, etc. To use an extreme example from the opposite end of the teaching continuum from where you practice, when a kindergarten child shows up in school not even knowing his own name (happens every year - parent issue), then he needs to learn it or he can't function. Doesn't matter whether he wants to. I think your philosophy finds a home at the (perhaps) high school and university level, but probably not earlier than that. In the early grades, the genius of teaching is being able to get kids to engage in and be excited about learning what must be learned. Until they have been exposed to the broad range of all that has been learned before, they can't know what may interest them.

Roger Sweeny (2014-04-06 08:14:36)

Every state now has "learning standards" that say, "Students will learn X, Y, and Z." Teachers are legally supposed to have no choice: they must get students to know X, Y, and Z. So legally, a "good teacher" HAS TO "make all my students learn the same thing." State learning standards don't care whether "every student wants to learn the same thing." Students don't have a choice. So one of the tasks of a "good teacher" is to try to get all students "cajoled into learning the same thing." (Of course, one of the results of this is that students don't learn a whole lot of what they are supposed to, though almost all do a certain amount of "learn, get a grade, and forget." But "Students will learn X, Y, and Z" is the official policy of all states, and all of them pretend that's what is actually happening.)

Andrew (2014-04-06 09:24:49)

Great post. So much of civilization is the attempt to force people to adapt to the constraints of mass production, rather than the reverse.

AI (2014-04-06 12:54:58)

If one person is an X-er, another a Y-er and still a third is a Z-er, there is probably a collection of knowledge and/or a set of skills they all need in order to conduct economic transactions with each other. For example, a natural born visual artist may not be as quickly able to learn to read as a natural born journalist, but learning to read benefits both the economy and the visual artist if the visual artist. It's more efficient if the visual artist can, say, understand a written agreement to sell her artwork to the journalist, and so on. If the visual artist has to pay someone else to read and interpret that written agreement, then some efficiency is lost and the visual artist is less well off. But in a society where the visual artist is forced to learn to read by a rigorous school system she benefits by being more efficient, and having a lower cost of doing business than if she were illiterate. On the other hand, maybe this idea is just wrong. Maybe it's a waste of time to teach a visual artist to read. She could, instead of wasting time understanding written agreements to sell artwork, be actually creating artwork, which would benefit her more than the savings she experiences from reading her contracts herself. How is an educational system supposed to know which skills to teach all people and which skills to teach only to certain specialists? What if the educational system gets the mix wrong? And, what if you are, by nature, a visual artist, but not good enough to be economically viable? What should the educational system do for you in that case?

Terri Fites (2014-04-07 05:09:00)

Good post. Thank you for sharing it. We homeschool, and I see lots of what you said in both my kids and the kids I teach chemistry to in our homeschool group--and myself as I teach them! Take care.

aretae (2014-04-08 21:55:08)

Seth, As someone outside of the schools, who has been teaching for 20 years (dozens of unrelated topics, hundreds of

audiences), and considers himself a philosopher of education... What you've said here is very important, and I would refactor it substantially...to make both your and Russ Roberts' statements basically true. 1. Motivation is the core of learning. When someone wants (badly) to learn something, one can't keep them from learning it with a team of horses...teacher or no. When someone actively doesn't want to learn a topic, the greatest teachers in the world cannot teach them. Normal education is the business of trying to make a recalcitrant student learn something they don't care about. Your model, as far I've been able to piece together over the course of the last couple years on your blog, centers around letting students learn about things they do care about. As such...you maybe shouldn't take the title "teacher". You are perhaps instead an education sherpa...you help a student to take their own journey. I think the gap is huge between what you're talking about and what "teaching" is understood to be. My line: teaching and helping the student learn are effectively unrelated topics. I'm into the 2nd, not so much into the 1st.

aretae (2014-04-08 22:06:39)

Zach, I'm in the fields of math and computer education. You asked Seth: How do you adapt your method to a topic like math. My shortest answer is: I don't. I can teach K-8 mathematics ( $1+1=2$  through fractions/decimals/percent) to a group of interested previously math-free homeschool students Aged 10-14, in one hour a week for a semester...and I have. Once I know that that's the parameter against which I'm working (K-8 math for an interested student takes 20 total contact hours)...why would you? Almost everyone at one point or another decides that knowing some math is better than not knowing any. Home-/un-schoolers find it pretty easy to teach then. It's only fitting that approach into traditional big-box schooling that is hard.

Dragan (2014-04-10 19:16:06)

Seth, I don't think the comparison is fair. Roberts is obviously talking about teaching of some particular subject, in the way the word is usually used. You are using teaching in the sense of bringing out a person's potential... I think? Why is one of these superior to the other? I met a wonderful teacher of First Aid, CPR and AED. I mean, he was truly excellent. He didn't bring out any of my latent potential or anything of the sort, though. But I see nothing wrong with that.

Seth Roberts (2014-04-10 20:02:45)

Not a fair comparison? You mean: we are talking about different things? I doubt it. I think Roberts is talking about most formal education. For example, economics classes at a university, high school classes. So am I. Roberts describes the usual view of teaching: take what is in the teacher's head and put it in the student's head. I am not saying that's wrong. I am saying there is another goal that deserves more attention than it gets: helping each student achieve his/her goals. In the discussions of how to teach I've heard – for example, I attended lots of workshops at UC Berkeley on how to be a better teacher – this never came up.

Dragan (2014-04-11 14:33:33)

Yes, my take was that you are talking about different things. I think I misunderstood. I was thrown off by your comment that being a great teacher is not difficult. I suppose I agree, if we're talking about those of us who teach a relatively small number of eager undergraduates whose goals are not altogether different from ours. Coincidentally most educational research at the very least pays lip service to constructivism, the idea that students construct their own knowledge. A typical advice for teachers, then, would be to meet students where they are and work from there. Unfortunately, details are seldom given.

### Assorted Links (2014-04-08 05:00)

- [1]Kimchi in crisis. "Interest is waning among younger people. Yet despite struggles at home, kimchi is becoming more popular around the globe."
- [2]Timing of light and sleep – association with body weight. Thin people wake up earlier than fat people. The reason may be that thin people sleep less than fat people. The paper references two studies that increased morning light and asked if weight changed. One found no effect, the other a significant reduction in body fat.
- [3]I don't have chronic fatigue syndrome, I have Lyme disease

- Go to the bottom of [4]this entry (Ignored Expert) and click on Real Life for real-life examples of ignored experts.
- [5]Success using probiotic to cure eczema

Thanks to Casey Manion, Phil Alexander, Viorel Tulica, Melody McLaren, Christian Pekeler, Donna Warnock and Tom Passin.

1. [http://english.chosun.com/site/data/html\\_dir/2014/03/26/2014032601897.html](http://english.chosun.com/site/data/html_dir/2014/03/26/2014032601897.html)
2. <http://www.plosone.org/article/info%3Adoi/10.1371/journal.pone.0092251>
3. <http://www.nczonline.net/blog/2014/04/02/i-have-lyme-disease/>
4. <http://tvtropes.org/pmwiki/pmwiki.php/Main/IgnoredExpert>
5. <http://mrheisenbug.wordpress.com/2014/03/31/eczema-l-plantarum-success-stories/>

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daz (2014-04-08 22:00:30)

hi Seth, just reading an old post of yours from back in 2011 here, <http://blog.sethroberts.net/2011/07/30/science-in-action-why-did-i-sleep-so-well-2/> just wondered (when you have time) what your current dosings & timings are for, butter, flax oil & coconut butter...? after dabbling with honey for a bit, i'm now interested to try other things before bed to see how my sleep is affected. thx

B.B. (2014-04-10 07:33:47)

I have issues with the Ignored Expert site, real life examples. There are three models of The Prophet. The first is Cassandra, the accurate forecaster who gets repeatedly ignored by stupid and greedy Suits, who often work for oil companies. Cassandra likes to feel superior when the forecasted disaster finally happens; often the Suits get killed. Al Gore likes to think of himself as Cassandra. The second model is the Boy Who Cried Wolf. The boy dishonestly makes opportunistic forecasts for his own agenda. The result is no one believes him when the wolf actually arrives. The third model is Chicken Little. There are those who are always in an hysterical model, forecasting catastrophes which never arrive. Which category do global warming advocates belong in? Instead of Ignored Expert, I see the Stopped Clock fallacy. A flawed clock is always wrong, but can still be useful because it may give the approximate time. A Stopped Clock is almost always wrong, but it is right exactly two times per day. Unfortunately, someone looking at the Stopped Clock cannot know if that is one of the right times. A Stopped Clock is utterly useless even though it is sometime right. There are always Cassandras forecasting, for example, a stock market crash or an earthquake. Like a stopped clock, they are almost always wrong. Sometimes, the disaster will happen. Then they will congratulate themselves on being geniuses, and everyone will ask why were they ignored. They were ignored because they are almost always wrong. Did Elizabeth Warren, a lawyer, really make a forecast in the 1980s that the stock market would crash in 2008? She could have become very wealthy investing on that basis. I wonder if she forecasted the crash in 1987, in 1990, in 1998, and in 2000-2002 along the way. Did she also forecast the stock market booms of the 1990s, the mid-2000s, and 2009 to 2012? Did she also forecast that the "affordable housing" initiatives she has long advocated helped create the subprime mortgage bust? I want to be an Ignored Expert also. I forecast that the stock market will suffer a major crash sometime in the next 30 years. I can't tell you when, where, how, or why. When the market crash comes, I expect to be called a Genius. I forecast a recession will start sometime in the next 15 years. Finally, I forecast a really hot Summer sometime in the next 10 years. Yes, I am being sarcastic. There is a world of difference from an engineer discovering a potentially dangerous flaw in the Shuttle using valid testing procedures, and someone making a forecast. For every Ignored Genius you can find who wasn't listened to, I can find an Expert who made a prediction that turned out ridiculous, like a prediction that man could never fly faster than sound. How are we supposed to separate experts who make foolish predictions from those who are Cassandras?

Seth Roberts (2014-04-10 10:14:24)

"For every Ignored Genius you can find who wasn't listened to, I can find an Expert who made a prediction that turned out ridiculous." I'd go much further. For every Ignored Genius you can find a thousand Experts who made a prediction that turned out to be ridiculous. Global warming experts who predict disaster are the Boy Who Cried Wolf (the prophecy involves self-interest) except that they don't know there isn't a wolf. The models on which they base their prediction are likely to be wrong but they don't understand this.

celebrity (2014-04-29 15:20:58)

Simply desire too say your article is as astounding. The clearness in your post is simply cool and i could assume you're an expert on this subject. We'll with your permission let me to grab your RSS feed to keep updated with forthcoming post. Thanks a million and please carry on the enjoyable work. Look at my site [1]celebrity

1. <http://rdlnk.co/LANK4>

### Assorted Links (2014-04-09 05:00)

- [1]how to self-experiment with resistant starch. See comments.
- A list of [2]health benefits of honey says nothing about sleep
- [3]Someone says "I told you so" about the demise of Better Place, the Israeli car-battery-swap company. Better Place raised an insane amount of money, something like \$1 billion.
- [4]Behind the New York Times series on health care costs. "The social media team analyzed the remarks and discovered that there were deep frustrations about the cost of inhalers and medications for asthma, the most common chronic condition affecting people of all ages." There should be deep frustration that anyone still has asthma. The notion that figuring out what causes asthma is possible – and will cost about a million times less than continuing to buy inhalers and medicine – has not occurred to enough people.

Thanks to Tuck.

1. <http://www.marksdailyapple.com/how-to-conduct-a-self-experiment-resistant-starch/#axzz2yJ46acXz>

2. <http://www.mnn.com/health/fitness-well-being/stories/10-health-benefits-of-honey>

3. <http://thinkprogress.org/climate/2013/05/28/2065311/battery-swapping-bust-electric-car-company-better-place-shuts-down/>

4. <http://www.nytimes.com/times-insider/2014/04/08/it-took-a-digital-village-how-a-times-series-was-built/>

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Fred Silva (2014-04-09 11:16:59)

Unfortunately the New York Times article is paywalled :( Seth: Sorry, I didn't realize the paywall varies from country to country. I was in Korea when I read it.

Seth Roberts (2014-04-09 17:41:32)

you can see most NY Times articles, including this one, by opening them in what Chrome calls "incognito window". Firefox has something similar.

Nancy Lebovitz (2014-04-09 18:15:09)

What advantage does resistant starch have over potatoes?

Alex (2014-04-09 20:55:14)

No, that article is only for premium subscribers. It's paywalled even in incognito mode.

Seth Roberts (2014-04-09 23:38:03)

that's odd, because I read it using incognito mode. More: The NY Times paywall varies from place to place. Using incognito mode, I can read it in Korea but not in America (and Australia).

Adam (2014-04-10 08:04:20)

Nancy, potatoes that are cooked and cooled will contain a small amount of resistant starch, but not much. If you are shooting for a certain intake target, it is much easier to take pure resistant starch in the form of potato starch than to get it from whole foods.

JM (2014-04-10 08:09:23)

Nancy, it has to do with cooking the potatoes. When you cook potatoes to a certain temperature (I think it's about 140 F) the starch granules burst and become regular starch which your body digests as such. Cooked and cooled potatoes, green bananas and other food that contain undigestible resistant starch which then feed the gut bugs in your lower digestive tract. Lots of info at Mark's Daily Apple which ran the self-experiment post (which I thought had a nice outline of how to do your own self-experimentation). Also there is a lot of info at Free the Animal blog.

Jerry (2014-04-10 18:26:16)

The evidence indicates that asthma is an infectious disease caused by Chlamydia pneumoniae. I successfully treated mine using the Hahn Protocol. Check out <http://www.asthmastory.com/steps/> for info on how to do it. I use my inhaler very seldom now.

harold (2014-04-12 17:16:24)

At the end of the Honey health benefit article there is a link to •10 uses for honey outside the kitchen. " #9: Fight insomnia: If you don't have much trouble falling asleep, but tend to wake up in the middle of the night, it could be totally natural (for centuries many people had a two-sleep schedule) or it could be due to stress hormones, adrenaline and cortisol, being out of tune. A bit of salted honey (you need both sweet and salty) can help reset these hormones and get you back to sleep. You only need a small amount (this shouldn't be a snack!), so use a teaspoon or egg spoon to keep yourself from overindulging."

### **Hobby versus Job: Casa Pepe Guest House, Seoul (2014-04-10 05:00)**

Yesterday I was in Seoul, at [1]Casa Pepe Guest House. Sensationally good at a very low price. It really is a guest house – attached to a house – with a separate entrance. There are four rooms, with shared kitchen and bathroom. The owner is an renowned chef. The first evening he brought salad and wine from his (Japanese) restaurant. The first morning, he invited me to come with him to buy fish at the Seoul fish market. Every morning, he made breakfast – something different each time.

I found it through hotels.com. On their map, it was off by itself. I thought that meant bad location, but the opposite was true. It is the sort of good location you cannot normally get. It is near the Blue House (Korea's White House) and many foreign embassies and is very safe. Dozens of interesting restaurants and cafes are nearby. (Even more than the rest of Seoul.) The neighborhood is the Beverly Hills of Korea, with better (and cheaper) restaurants and less pretentious architecture. Casa Pepe started about a year ago, with a remodelling. Everything is new and clean. The floor is heated. The building is up a steep path and has a nice view of streets, hills and houses. Free laundry. All for less than \$50/day.



During my stay I briefly overlapped with a *Tsinghua student* (how could that possibly happen?) but otherwise I was the only person.

Why is it so nice? The owner said, "It's my hobby." I think that explains it.

[2]I've said that doing a job and doing science are fundamentally incompatible. Any job requires steady and repeated output. You do the same thing over and over. The goal of science is discovery – and a discovery is inherently unpredictable and unrepeatable. (Art is a job with science-like elements – and [3]artists were the first scientists.) Casa Pepe Guest House illustrates another side of the job/science conflict: A job is inherently conformist. You give people, especially customers and your boss, what they expect. Science is inherently nonconformist. The more a discovery challenges "what everyone knows", the better. Hobbies make this point because they can vary more than jobs. If you make tables as a hobby, for example, your tables can vary more than if you make tables for a living. Casa Pepe is way outside (better) what one expects from a rented room.

Another way Casa Pepe is unusual is that it is very hard to find, even if you study [4]the directions. I found it by knocking on a neighbor's door. The neighbor called Casa Pepe. Someone from Casa Pepe came to meet the neighbor and me on the street – it was too hard to tell the neighbor where it was. Here are better directions. From Incheon Airport, take airport bus 6112 to the Hangsun University stop. Go to Exit 6 of the nearby subway station ([5]Hangsun University Station on Line 4). Walk up the street (Seongbuk-ro) indicated by Exit 6 – toward the hills. After walking about 13 minutes, where the road veers right, you will see a sign that says Seongbuk-ro 19-gil (gil = side street), which points almost exactly to a steep concrete path on the left perpendicular to the street. It is the width of a driveway. Go up about 40 meters. Casa Pepe is on the right – a white house with a red door, with a sign that says "casa pepe". Don't be misled by the fact that the listed address is not on Seongbuk-ro 19-gil.

1. <http://casapepepark.com/>
2. <http://media.sethroberts.net/articles/2010%20The%20unreasonable%20effectiveness%20of%20my%20self-experimentation.pdf>
3. <http://media.sethroberts.net/articles/2011-04-08%20How%20Economics%20Shaped%20Human%20Nature.pdf>
4. <http://casapepepark.com/sub01/sub02.php>
5. [http://en.wikipedia.org/wiki/Hansung\\_University\\_Station](http://en.wikipedia.org/wiki/Hansung_University_Station)

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Alex Chernavsky (2014-04-10 08:20:20)

I work for a non-profit organization, and we depend a lot on volunteer labor. In working with IT volunteers, I find that the best, most-capable volunteers are those for whom computers are both a hobby and a job. The volunteers who are IT professionals ONLY, and who don't "mess around with" computers much at home, tend to be much less knowledgeable and less adept at problem-solving.

Dragan (2014-04-10 18:43:26)

Lovely story. I had both awful and pleasant experiences in Seoul. Not a place I intend to return to, but if I did I'd be certain to visit this guest house. Interesting how an earnest story like this can sell something so well.

Nancy Lebovitz (2014-04-11 09:14:28)

Off-topic: person finds considerable health gains from drinking more water. <http://andrewducker.livejournal.com/3074-958.html?thread=28953230#t28953230>

kxmoore (2014-04-13 08:26:41)

I just got into the beer-making hobby. I go to a monthly beer swap at a brewshop in Brooklyn. The best beers I have ever tasted were made by the hobby brewers at these events.

Seth Roberts (2014-04-13 11:31:50)

Beer making is a very interesting example. I suppose there is a set of products where we tend to think that small scale production = better: beer, cheese, wine, sausage (?), book-binding (?), others. The word artisanal is used. In other cases, we think bigger = better: flat-screen TV, car, and so on.

## **Burnt Sugar Grapefruit: Give Thanks for South Korea (2014-04-13 05:00)**

A Marginal Revolution commenter [1]wrote:

South Korea being prosperous has had no benefit to me, yet I have borne the cost.

I say: Wait ten years. No country combines innovation and quality like South Korea. Samsung illustrates quality but the innovation is less clear. Here are examples.

1. Food preparation. In Seoul, a friend took me to an American-style buffet. Nothing could be worse, I thought. But I was blown away by original treatments of familiar things. One was an octopus salad. It was truly chewy and crunchy, in contrast to most restaurant salads. Whoever designed it understood underlying principles – they weren't just mindlessly copying. The fruit on offer included burnt sugar grapefruit – small pieces of grapefruit with a little bit of added sugar, then torched. The burnt sugar adds complexity. A simple small cheap attractive practical dish – not grilled grapefruit with too much brown sugar.

2. Cafes. Seoul is bursting with little cafes that are pleasant places to spend a few hours. They are well-decorated (many individually-decorated), serve interesting food and drink, and make Starbucks look cold, hard and stodgy. You can easily spend \$6 on dinner and \$6 on a drink afterwards but the \$6 drink seems worth it. One Korean explained the profusion of beautiful useful cafes on competition ("Koreans are very competitive"). Another Korean said it was the TV series Sex in the City ("The characters spent a lot of time in cafes"). There are two Korean cafes near where I live in Beijing.

3. Bakery. [2]Korean bakeries have what Americans expect in a bakery, such as bread and croissants, but also have many more products, both baked goods and other food, than American bakeries. There are many Korean bakeries in Beijing.

4. Airport. Incheon Airport was voted the best airport in the world for 7 years; in the most recent two years, it was voted second best. I'm not sure this reflects innovation that future airport architects will want to study; new airports have a huge advantage for which I cannot adjust. But Incheon has free wifi that works; Beijing International Airport has free wifi that doesn't work.

5. Door lock. Nice houses and apartments in Seoul have a kind of digital door lock I haven't seen anywhere else. Via Google I found [3]this – which, lo and behold, comes from South Korea. These locks are better in several ways than other electronic door locks. For example, the keys are lit. My guess is that new houses and apartments in America don't have these locks because Americans don't even know they exist. Apparently a South Korean company (Milre) figured out that substantial improvement was possible. There isn't even an English Wikipedia entry for Milre, yet it will have more effect on your life than, oh, 99.999 % of the current entries.

6. Pop music. Gangnam style, obviously; K-Pop, slightly less obviously, if you don't live in Asia. Gangnam style = K-Pop plus humor.

Keep in mind South Korea is small (population 50 million; the population of Japan is 130 million). A country that is a lot more prosperous now than 30 years ago is a good place to innovate because all the crummy old stuff is being replaced – that is clear. It is also a big plus for innovation if its citizens are well-educated. If you understand that, and how bad the United States is at innovation (housing, health care, cars, education . . . ), you will see that helping South Korea become prosperous was a great investment. Inadvertently great, but great nonetheless.

In *Start-up Nation: The Story of Israel's Economic Miracle*, the authors (Dan Senor and Saul Singer) argued that Israel is unusually innovative because no one defers to their superiors, everyone challenges everyone else ("The Israeli said, "What does "excuse me" mean?"). In *The Ethnic Theory of Air Crashes*, a chapter in *Outliers*, Malcolm Gladwell repeated the theory that Korean Air had a lot of crashes because co-pilots were too deferential. Which is only to say we have a lot to learn about innovation and South Korea.

1. <http://marginalrevolution.com/marginalrevolution/2014/04/jurgen-osterhammel-on-the-crimean-war.html>

2. <http://discoveringkorea.com/100218/seouls-best-bakeries/>

3. <http://www.ebay.com/itm/New-Security-Keyless-Entry-Electronic-Digital-Door-lock-Milre-MI-3710-Aurora-/271027354688>

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kxmoore (2014-04-13 08:21:23)

There are several Korean bakeries here in NYC. They are in Koreatown and have French names and are often crowded. The baked items look good but everything tastes like wonderbread to me. Awful. There is also a huge Korean-owned buffet restaurant. The food is superior to American buffets except for the desserts.

Andrew (2014-04-13 10:39:17)

Tons of Korean cafés and restaurants in Los Angeles, too. The cafés help family members immigrate to the US by creating jobs that can be given to cousins, etc.

Seth Roberts (2014-04-13 11:22:56)

Two of the Korean bakeries near me in Beijing are Tous Les Jours and Paris Baguette.

No One (2014-04-13 13:16:42)

I have friends who work at the Israeli branch of Samsung (which is Korean). They have interesting culture clash stories. One of the things that happens often is that Korean teams come to Israel to learn the "Israeli Creativity" style, and come back confused how that thing could ever work anywhere.

dearieme (2014-04-13 16:03:43)

"South Korea being prosperous has had no benefit to me, yet I have borne the cost." In what sense has the complaint borne the cost, I wonder, and in what senses has he had no advantage from it?

dearieme (2014-04-13 16:14:05)

Ah, forgive me for answering my own question, but the commenter seems to be thinking of the cost to the American taxpayer of the Korean war and the American military deployment there ever since. Plus the cost to the casualties and, presumably, their families. It's a fair point, and so I withdraw my cantankerous remark.

jeff (2014-04-13 21:20:08)

Seth, On any topic that compares peoples, you risk ruining your career if you actually are interested in digging for truth (not that I claim to know the form of the latter), so you might considering staying away. When you compare Starbucks to Korean cafes, I am sure your observations are spot-on. But the superiority of the Korean cafes only partially stems from Korean character, the gulf is made wider because the United States is a socially atomized place of extreme diversity. By now, only dolts deny that diversity equals reduced social cohesion, so you are comparing a unified people against an atomized people and declare the unified people do things better. No duh; this is a worthless comparison and you should be ashamed for advancing it, given the general tone of your blog. You can't compare S. Korea to the USA or any European country because all but Korea are increasingly factioned. But if you compare Korean cafes to French cafes of the 1920s and adjust for technology, I am sure that you will find the former to be nicer but the latter to be more inspiring, and more importantly, a place more likely to result in copulation, which if you are like me, really can't be beat for life enjoyment. So which would be better Korean or French cafes? For me, it would be the latter, because once a certain level of comfort is attained, then the physical pursuits are where life begins. Moreover, when you say the USA is bad at innovation, you are being myopic beyond all imagination. The USA along with many Western nations is in the midst of an inventive and enormous scientific experiment, replete with controls, to see if various peoples from around the world are interchangeable and what will be the consequences of pushing diverse populations nearer to Malthusian limits. Since we already know the answers to these questions on a small scale, one scientific test is, will our massive educational interventions make all peoples equal and interchangeable to arrive at the expected resultant had no population replacement, and/or augmentation programs been initiated? Change your vantage and you will see that the wealthy people of the USA gave up on advancing some forms of innovation and turned to social engineering for the hobbyist science that you advocate. You may not see social engineering as experimental, but it is, and it is of the highest and most profound importance as once it begins, it never ends. As regards overall Korean innovation, I am sure it is great, but it will be within the same limits as other high-IQ agrarians. The reason that Korean Air pilots suffered many crashes most likely resulted because, despite their fiery personalities, they are a people genetically disposed to obedience and compliance to a slightly higher level than a mixed pastoralist/agrarian people. To be a good pilot, you need both adherence to rules and a cowboy confidence. After the crash in San Francisco a year or so ago, an American trainer shared his experiences training East Asian pilots. He marveled at their mastery of the air operations manual, declaring it far better than his, but he said they were generally deficit when it came time to improvise. Compare this to Feynman who opined that it was important not to study too much, the works of others, as it might impede your ability to innovate.

Dragan (2014-04-13 22:28:29)

My favorite memory of my summer in Korea (Seoul mostly) is the food. For the young, the party scene is fantastic, as well. Lots of places to go to, lots of young people dancing, and a very safe environment. Interesting stuff, too: breakdancing shows and video game competitions as serious as high school basketball games in the US. A guy I met in Seoul told me that in his hometown of Manila, everyone brings guns and knives to dance clubs. So he flies out to Seoul whenever he feels like enjoying himself at a reasonable price without fearing for his safety. Outside of wonderful food and nightlife, the rest of my impressions weren't as favorable as yours, Seth. (Well, I did think that Incheon was wonderful.) I've met welcoming and helpful Koreans while there, but I did not feel welcome in the country overall. I do not think I'd like to visit it again. For comparison, I'd be happy to travel through Japan again, or China, at least the parts I previously visited. A few years ago, one of the traveling websites (maybe Lonely Planet) had a poll for "Least favorite city" and Seoul was 3rd on the list. I thought this a bit ridiculous, as I've been to far worse cities, but had to admit there's logic to the madness.

Brock in HK (2014-04-14 07:08:53)

The commenter clearly favors tyranny of all being harmed against their will vs free people fighting for liberty. He undervalues the benefits of freedom, which is why his calculus is wrong. Think of the cost to the world of South Korea in a Kim dynasty-led Stone Age.

George (2014-04-14 16:57:03)

Nearly all Asian countries are infinitely superior than America at the "art of living well" - food, nightlife, cafes blow American versions out of the water. The funny thing is Asians are scene as "boring" in America, but in their own countries they have

magnificent tradition of unbridled hedonism and excitement seeking that makes our pathetic Puritan attitude to fun seem utterly lame. Which it is. We're pathetic when it comes to food and nightlife and fun in general. Asians drink more than us (waaay more), party harder and better, and eat waaaay better. Arguably these things are what really matter in life (In my view they are!). It's because Asia, like Europe, has a "culture" - a set of traditions created over centuries through a process of tinkering to maximize human enjoyment. America does not have traditions (i.e a culture), we have "science" - a habit of starting from scratch and finding that we simply can't invent a good lifestyle using "science". We can't even figure out how to stay thin using this start from scratch "science" - once we got rid of thinness-promoting traditions, all our science couldn't replace it. Outside of things like food and nightlife, I think its fairly obvious that America is infinitely more creative and innovative. But living is simply better there, the little things in life that make it fun and exciting. Now compared to Europe its a bit more complicated.

Adam (2014-04-14 21:17:31)

Having lived in China for 3+ years and having Asian friends in Korea and Japan as well, I have to say you are dead wrong about Asians knowing how to party. My friends back in the States are much better at it than anyone I ever saw in China. Japanese and Koreans drink a lot, but it is a sort of hierarchical thing forced on them by the work environment. You get drunk because the boss is getting drunk. It isn't fun, it is a mandatory work event.

George (2014-04-14 22:55:21)

Sure, Adam, clubs closing in LA at 2, capital of entertainment for chirssake - yeah, we Americans really know how to party. Not to mention you have to drive so you can't really drink. It's barely better in NYC with closing times of 4. China kind of sucks though, that's true. Maybe there was a whole scene I didn't tap into. But then there's the endless prostitution, the late night clubs, the heavy drinking, the great food - give me a break. Asians do debauchery and dissipation on a scale that would make our Puritan ancestors roll over in their graves. Europe's better at it too, much better. Berlin has parties that last till Monday. No, we're about work in America, and buying stuff. We're dull, but comfortable, and we own lots of stuff. Clearly we have our priorities right.

Dragan (2014-04-16 17:56:29)

"Asians do debauchery and dissipation on a scale that would make our Puritan ancestors roll over in their graves. Europe's better at it too, much better. Berlin has parties that last till Monday. No, we're about work in America, and buying stuff. We're dull, but comfortable, and we own lots of stuff. Clearly we have our priorities right." I completely agree. "We can't even figure out how to stay thin using this start from scratch "science" - once we got rid of thinness-promoting traditions, all our science couldn't replace it." I really liked this line. In fact I think I'll steal it, the highest form of flattery. :)

## **Pregnancy Gingivitis: Failure to Look for the Cause (2014-04-14 05:00)**

A few days ago, I learned from a Crest ad that a large fraction of pregnant women, such as half, suffer from gingivitis (inflamed gums). It's called [1]pregnancy gingivitis. The ad recommended better dental hygiene, such as brushing your teeth more.

Thirty years from now will people think *how could they* [meaning us] *havebeen that stupid?* Faced with pregnancy gingivitis, they brushed their teeth more? Pregnancy gingivitis is supposedly due to "hormones" that increase during pregnancy. In other words, a health expert actually thinks - or claims to think - that pregnancy gingivitis has a different explanation than other gingivitis. Yet he doesn't know what causes other gingivitis. For example, [2]here is what Mayo Clinic experts say causes gingivitis. This makes no sense. But it is worse than most nonsense, since fetal health is at stake.

Several years ago, I greatly increased my flaxseed intake because I discovered it improved my balance. [3]My gums suddenly went from red (inflamed) to pink (not inflamed), no doubt because flaxseed has lots of omega-3, which is

anti-inflammatory. Gingivitis is – usually? always? – caused by too little omega-3.

My theory: pregnancy gingivitis happens because pregnant women need more omega-3 than usual. A growing brain needs lots of omega-3. If this theory turns out to be true, the gums of pregnant women should be monitored to make sure they are getting enough omega-3. Nowadays pregnant women are given omega-3 to take but there is no test to make sure it is enough. That pregnancy gingivitis is common suggests it often isn't enough. Actually, everyone's gums should be checked to make sure they are getting enough omega-3.

1. <http://www.oralb.com/topics/gingivitis-during-pregnancy.aspx>

2. <http://www.mayoclinic.org/diseases-conditions/gingivitis/basics/causes/con-20021422>

3. <http://blog.sethroberts.net/category/nutrition/omega-3/omega-3-and-gum-health/>

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Mark Sanders (2014-04-14 11:16:40)

I like to read your blog for the articles on self-experimentation. However, simply because something works for you is not scientific proof that your cure, or your explanation for your own cure, is true for everyone else. There is a list of things that go out of whack in a pregnant woman's body, most of which resolves once the baby is delivered. This is not to say your idea is wrong, maybe it is. But just because it worked for you doesn't mean it will work for a pregnant woman or that the Mayo Clinic should change it's explanation of gingivitis, an explanation that makes sense to me.

Seth Roberts (2014-04-14 12:44:40)

Many (10?) other people told me that their gingivitis went away when they took 1-2 tablespoons of flaxseed daily. Nobody told that this amount of flaxseed failed to reduce gingivitis. My confidence about this is not based only on the fact that something worked for me. It is also based on the fact that it worked for many other people and the research showing that omega-3 is anti-inflammatory. Of course, my idea about pregnancy gingivitis is just a theory, a theory that can be tested. But at least it is a theory that explains ordinary gingivitis and pregnancy gingivitis in the same way.

Adam (2014-04-14 14:18:06)

That is funny. It seems like they just figured women's hormones are something that changes during pregnancy and arbitrarily said that that is what causes pregnancy gingivitis. Which hormones specifically and in what way do they cause inflammation of the gingiva?

Tom Metz (2014-04-14 14:38:56)

Self experimentation and anecdotes are, in my opinion, some of the best sources of information we have as long as what we resolve to experiment and what we try isn't dangerous and used in place of what we know also works. Suggesting that pregnant women should take flax oil or eat more flax (it's just a food) is not dangerous. Self experimentation is not even in the same league as a clinical trial yea I know. But lets look at the prospect of a clinical trial to see if pregnant women with bad gingivitis need more omega 3... who on earth would fund that study? Nature's Bounty? Bob's Red Mill? Colgate? Colgate would lose money if there was a connection. "Hey ladies you don't need colgate... you need flaxseed!" Omega 3 isn't prescription and therefore would provide no benefit to the companies with adequate money to actually fund studies. It will simply never happen. Mr.Heisenbug (don't know his actual name) said on his blog that he cured his hand eczema with a specific type of probiotic. Because of this countless others with eczema have tried this probiotic with great success in curing their eczema. No clinical trials exist that establish the connection between eczema and this probiotic. The standard treatment here in the U.S. for eczema is to go to your doctor, then get a referral to a dermatologist, then get a prescription for a steroidal hand creme that's going to have a plethora of side effects, cost your insurance an obscene amount of money and probably smell terrible. The sad thing is... the creme will always be the medical systems treatment of choice because

there is much money to be made on it. As for the topic... I would think a pregnant would need more omega 3 because it is essential for brain development and well the woman is essentially developing someone else's brain for them. According to this article... <http://www.sciencedaily.com/releases/2012/06/120609152436.htm> omega 3 in breast milk is important for infant development. It would make sense that, if there is a connection between gingivitis and omega 3, the gingivitis would be worse for a pregnant woman. Most American adult women are already deficient in omega 3 because of the high amount of omega 6 oils used in processed foods. A pregnant woman would have to defer their amounts of omega 3 to the developing baby thereby depleting their own stores. An interesting (and safe) test would be to examine food diaries of pregnant women and see if at any point they crave foods high in omega 3 (fish flax etc...) Love your blog Seth and, as an educator, look forward to all of your posts.

Gina (2014-04-14 15:11:14)

You can count me among those whose gums improved with flax. I don't do oil, but 1-2 tbsp of ground flaxseeds a day. How do you know it's the omega-3 and not the lignans or something else in flax?

Seth Roberts (2014-04-14 16:26:03)

how do I know it's the omega-3 and not the lignans or something else? because the flaxseed oil I used didn't have lignans. and plenty of research shows that omega-3 is anti-inflammatory.

Amol (2014-04-14 19:03:26)

It is incredibly interesting to me that dosage is an incredibly important factor for generally accepted medical drugs but no one ever applies it to food. After reading your blog, I started experimenting with honey immediately after waking up and before going to bed to absolutely amazing results in sleep at night and appetite control during the day. When I tell people that I eat 60 grams of honey a day, they almost always ask as to why so much without realizing that 60grams is only 3 tablespoons. My guess would be that Omega-3/ Fish oil or Flax seeds probably fall into this category where people make random statements about dosage without any meaningful evidence, self-experimental or otherwise, to back it up.

Leslie (2014-04-14 20:09:22)

Hi Seth, I stumbled on this interesting bit of info on cannabinoid like anti-inflammatory in flax (<http://www.ncbi.nlm.nih.gov/pubmed/22706678>), so perhaps that also contributes to the positive effects seen with flax?

Allan Folz (2014-04-14 20:28:59)

I have what I think is an interesting self-experiment wrt O3 & pregnancy. My wife had some pretty bad post-partum depression following the birth of our first. It lasted more or less until he weaned, a little over two years. With our second, for the whole pregnancy there was some underlying tension whether she would experience it again. Quite fortunately and thankfully it did not. About the only difference I noted at the time was the first was a boy and born with some moderate complications during delivery while the second was a girl, no issues. I chalked it up to the complications (depression is well-known among heart-attack survivors and IVF recipients, which IVF is, IMO, by-definition a complication). For the third pregnancy I had "discovered" Paleo eating and so we were on a low-moderate carb diet. We were also supplementing vitamin D and a little fish oil. She was averaging 5K IU of D a day, but only about one, 1g capsule once or twice a week of the fish oil. All in all, not much fish oil as I was generally skeptical at the time of how much was really necessary for people otherwise eating traditionally healthy, home-cooked meals. Late in the third trimester she started experiencing a certain amount of moodiness. In and of itself, it would not be atypical for any woman in her third tri, but with my wife's history it us more sensitive and take notice. Paying close attention (and long before discovering your blogging about self-experimentation) I eventually correlated the moodiness to those times we'd skip taking fish oil. If she didn't take any mid-week, by Saturday it was very noticeable that her mood was down and she would be on the short-tempered side. Once I noticed the connection, and without telling her what I was doing ie. single-blind, I'd deliberately skip her mid-week one week note her weekend temper and mood. The next week I'd be sure she took a cap mid-week. Next week back to skipping. Then a week of double-dosing, 2 caps twice in the week. It had the best results yet. At first I was amazed. It was neat: so mechanical, like flipping a switch. But then it occurred to

me that if two capsules in a week vs. one was enough to change her mood then she was obviously deficient as every mg was being put to use with no spare capacity "in the tank." I wondered if her body was scavenging it from her own brain, kind of a sobering thought. After that she went to supplementing daily and had no mood issues through the rest of the pregnancy or while breast feeding. I can't remember if she had the typical "baby blues" at the three day mark. I am convinced O3 is a vital part of nutrition for mothers both pre-natal and while nursing. I share this story about every time the subject comes up. I also have an interesting story about my son and fish oil, but for another time. :)

Jim (2014-04-14 20:32:15)

In reply to Mark: I have always had poor gums. When I saw, years ago, Seth using flax oil to help with gums - and other bloggers saying that it helped (Marginal Revolution) I tried it. My gums were much improved. The last time I went to my dentist his comment was "Who has been taking care of my teeth?" My gums were much improved. I told him that he was taking care of my teeth - every 4 or 5 years. For me flax oil is really good. It really ups my HDL cholesterol levels also (from the 30's to the 50-60's).

sam (2014-04-15 05:56:04)

the esteemed chris kresser is not that keen on flaxseed oil. he prefers fish oil. <http://chriskresser.com/why-fish-stomps-flax-as-a-source-of-omega-3>

Tom Metz (2014-04-15 11:11:09)

To Allan, Wow that appears to be quite a connection between the Omega 3 and depression during or after pregnancy. Through such an idea we can ask the question- is Omega 3 deficiency during pregnancy the primary cause of postpartum depression? A pretty significant reality if true seeing that postpartum depression is very common. Now if there was only a way to connect the postpartum depression to gingivitis. That would be pretty wild.

Allan Folz (2014-04-15 12:14:30)

Tom, I really think it is. I also think it extends well beyond pregnancy. I wonder how many pre-adolescent boys struggling with ADHD and teenage boys struggling with depression, and so many of them on one big pharma prescription or another, really are suffering from an O3 deficiency.

Seth Roberts (2014-04-15 13:28:52)

yet flaxseed oil works. and does not have mercury contamination problems.

Allan Folz (2014-04-15 18:49:31)

I don't have an opinion on flax vs. fish. At the time I didn't even know there was an efficacy debate. We were taking a fish-based supplement because it was most readily available. Heck, even among fish oils there's a huge debate between molecularly distilled esters and the natural triglycerides. I don't know which is necessarily better, except that the distilled esters did work for us. So, I call it omega-3 at let folks decide which they want to take. Now that I'm thinking about it, yes, I should do a self-experiment - put the family on flax for a month and see if anyone can notice a difference. Unfortunately, I don't have any pregnant or nursing mothers for a real test.

Bill Johnson (2014-04-18 05:56:28)

My wife's been Oil pulling for several years now and during pregnancy she does it even more than usual. She finds it very effective in avoiding this mouth problem. How about giving it a try for all mothers there.

Cord (2014-04-18 07:10:14)

The state of medical knowledge about pregnancy is shameful. We basically haven't progressed much beyond "hysteria" when it comes to diagnosing and treating woman-specific medical problems. I'm working on my second pregnancy. Gingivitis is not a malady I have encountered so far, but I do take cod liver oil and eat a ton of eggs (pastured, from my own flock). The one that gets me is the chronic constipation. Every pregnancy guide will tell you that constipation is common in pregnancy, and there



are lots of cute theories about how this is adaptive because it helps you extract the most possible nutrients from your food. Not a whisper about what happens to me: total cessation of gut motility from the day before the positive test until 18 months after the birth of the baby. People who say "just eat more fiber" (like my OB) make me livid. Whatever is causing this, it's NOT adaptive to be dependent on Milk of Magnesia for two years with each kid. I actually got a blockage with my first pregnancy, and the thought of doing that again terrifies me. I was determined to find an answer this time around, but my OB was no help, and even the internet is extremely squeamish about recommending \*anything\* for pregnant ladies other than an extra pillow and a sedate walk. I tried a chewable probiotic, with no results. Then tried the Jarro-dophilus (whose thick shelled capsules are supposed to make it past the stomach intact), and later added potato starch with it ala Free the Animal, and things are not entirely back to normal, but lo and behold, I am off the milk of magnesia!! All this says to me that the problem may be hormone related, but if it were just "hormones", a probiotic wouldn't fix it- it's got to have something to do with gut health, and probably gut flora. Pregnant or not, intractable constipation is not normal and not healthy. So why doesn't my OB know about this? Why do all mainstream sources of pregnancy info shrug this problem off as "just hormones" and recommend totally ineffective solutions?

Seth Roberts (2014-04-18 07:36:28)

I agree. Calling it "hormones" makes no sense. You might try steel-cut oatmeal, that's a good source of fiber.

Terri (2014-04-20 13:53:12)

As a medical doctor taking time to read on nutrition, GI health, food intolerances, and pregnancy for myself and my own issues, I have learned way more than I ever did before. But at least I have the tools to make sense of what I am reading so I won't complain much. I don't have gingivitis, but I have definitely realized that many of us females head into pregnancy deficient in omega 3, iodine, vitamin d, vitamin k2, magnesium, and micronutrients. Sadly, my own OB didn't even take time to make sure I was on a decent prenatal vitamin. On flax vs seafood vs supplement, I think each person has to find their own way. I have the commenter Cord's issue, and flax, despite trying it, made the GI motility much worse. Seafood is feel good food for me.

### **Mo Ibrahim: My Third Year of Teaching (2014-04-15 05:00)**

By the start of my third year of teaching, in 2007, half of my New York City Teaching Fellows cohort had quit teaching. Some for health reasons, some due to differences with their school's administration, and some due to the difficulty of teaching during the day and going to graduate school at night. Teaching poor students, writing fifteen-page papers on pedagogy and compiling lesson plans proved to be too much.

The day before classes began that year, the principal told me that our students needed to earn an economics credit to fulfill graduation requirements. He asked if I wanted to teach the class. I hadn't taken economics since freshman year of college, but I reluctantly agreed. The principal said he had an economics curriculum in his office and he would return shortly with the material. He didn't return and never gave me the material. . However, I was able to develop a curriculum on the fly. I had read Gladwell's *The Tipping Point* and watched Gopnik's *Lighting Up New York* documentary. I got the idea to make a curriculum based on Gopnik's four theories of New York City crime reduction: Broken Window, Abortion, Child Boom and Korean Immigration. To supplement my curriculum I read *Freakonomics* and Park's *The Korean American Dream*. I didn't have to teach math anymore, because I was teaching economics, but I was still teaching English. My class focused on reading poetry and short stories and writing short essays.

By that time I had earned my Master's degree from the City College of New York, and had learned two principles that proved helpful. During an evening class, an African-American female professor, who insisted we call her Doctor, advised us to use the don't ask, apologize principle to get around policies with school administrators. For example, instead of asking if I could take my English class to read poetry in Central Park, I should take them knowing that I could simply apologize if I were reprimanded by an administrator. She also told us about a research study done by Lisa Delpit, an education researcher, who advised teachers not use please with inner-city male students. According

to her study, when students in that demographic hear the word please they feel they have a choice. For example, a teacher should say, "Go back to your seat," instead of "Go back to your seat, please." In my experience, she was right. The command without please worked better.

I can't recall using any other teaching techniques that I was exposed to during graduate school. There should have been more instruction on how to motivate students to study and how to get parents to make their children do their homework. Talking to my students, I learned that, when they get home, most of my female students took naps and most of my male students played video games. Very few of them did any homework, read or studied.

I didn't give any homework or quizzes in my English class, which had about 20 students, because most of my students didn't do any schoolwork at home. I had my English students do all of their writing assignments during class time. I didn't give any homework in the economics classes as well, which had about 30 students, but I had felt compelled to give quizzes to assess how well the students understood my lessons. I knew that the majority of my students weren't going to study at home, but I hoped that I had explained the material well enough that they would be able to do well on quizzes. I initially did a quiz review the day before the quiz, but that didn't seem to help the dismal passing rates. I tried doing the quiz review immediately before the quiz, but that didn't help. I eventually moved to telling my students exactly what was going to be on the quiz, but surprisingly even that didn't help. When students don't understand a lesson or do well academically, teachers are supposed to take responsibility, but that's very difficult to do when most of the students are very apathetic.

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dearieme (2014-04-15 06:39:09)

State education is a failed experiment.

Gina (2014-04-15 11:48:32)

I have a friend who just quit teaching due to student apathy. It's sad, because at one time she was so excited about teaching. She said she was out of ideas for how to make her students care. She was teaching at a small rural school where half the students ended up dropping out.

Banh Li (2014-04-15 13:15:37)

dearieme: Data from some countries (e.g. Finland and Poland) do not support your claim.

AI (2014-04-15 17:58:53)

A lot of people in low income areas have higher priorities than studying economics. Many of these young people live in a dangerous, overcrowded environment. And their parents and peer groups can't or simply don't place a high emphasis on academic learning. Given that reality, what kind of results can we reasonably expect teachers, schools or even government to deliver? (Even in solidly middle class schools, many students are apathetic when confronted with academic economics.) The older I get, the more difficulty I have in believing that we can just slap an "education system" on top of a free, loosely regulated, highly individualistic collection of people (i.e. America) and expect high quality results. For most of us, learning a complex academic subject requires patience, focus, time, and work. In our system, a lot of that is solely under personal control. Sure, a government program in a free society can help with some of these things. But we don't live in a totalitarian, Soviet-style system where we can force kids to spend ten hours a day reading a physics textbook and working out homework problems. We live in a free society. The school police are not allowed to come to my house and force me to read about the law of cosines. I have no doubt that we Americans - across the board - could excel at quantum mechanics, organic chemistry, and writing just-in-time compilers if we wanted to spend ten hours a day doing those things. But that's not what we're in to.

Brock in HK (2014-04-15 18:47:29)

I think the dismal passing rate is a sign that the material was too sophisticated for the students level of ability, rather than their lack of desire to study. Strong evidence is that the review immediately prior to the quiz did not have an impact on their scores relative to other times of quiz prep. There is a body of research, especially as relates to Khan Academy, that indicates where people are learning most efficiently, and that is not the point where they are getting many to most of the answers wrong. Totally separate is how that came to be that the material was too sophisticated for this specific group of students.

WW (2014-04-15 21:00:01)

Dearieme, why is this an example of failed state education? it seems to be apathetic students being the cause. why would non state education fix that?

dearieme (2014-04-16 04:17:10)

"Data from some countries (e.g. Finland and Poland) do not support your claim." Then it's not a failed experiment in those countries. They'll do very well to keep it that way. "why would non state education fix that?" Because doing away with a monopoly run on rigid doctrinal lines has every chance of leading to the sort of experimentation that will lead to improvements. In other words, much the usual reason for trying to abolish monopolies.

Dragan (2014-04-16 18:35:29)

Thanks for the review, Mo. I have a question. "I can't recall using any other teaching techniques that I was exposed to during graduate school." Since you're not using any techniques from your graduate school training – yet you are teaching – how/where did you pick up your teaching "know how"? Is it modeled on what you observed your own teachers do, or...?

Terri (2014-04-20 14:11:58)

Thinking aloud: WHY are students apathetic? Why? How do we draw those kids in? How do we get them to learn the basics needed to just be motivated, dedicated citizens? Is there anything you see which helps? Smaller classes? More structured class? Less structured class? Presenting it as it will appear to them in real life? Anything? Loved the mention of the act now, ask forgiveness later. Not really great thought, but seems very applied and sometimes necessarily so. And I had not heard of the "please" one, but I will store that away for sure. Good post.

## **Korean Bakery Opens in Berkeley (2014-04-15 05:00)**

After I wrote [1]my recent post about Korean innovation, I noticed an example in downtown Berkeley. A few months ago, the Korean bakery Paris Baguette opened a branch in a good location (next to a BART station) that has seen two businesses – two different cafe chains – fail in the last 5 or 6 years. It seemed to be doing well. There were more customers than I'd ever seen with the previous business (Tully's Coffee). [2]Paris Baguette has about 20 American branches.

Jane Jacobs once called Berkeley a "pretentious suburb" but it is where Peet's – the original of Starbucks – began and where Chez Panisse is. It had a farmer's market and an emphasis on organic food long before the rest of America. ([3]A new survey suggests the health benefit of organic food is small or zero.) If you could call a location an "early adopter" Berkeley would qualify, but that would be understating it. Via the Free Speech Movement and the whole notion of student protest, little Berkeley shaped an entire decade (the Sixties). But it seems to have been a long time, like half a century, since anything important started here. The Bay Area, however, remains enormously innovative (Google, Twitter, Intel, and so on).

1. <http://blog.sethroberts.net/2014/04/13/burnt-sugar-grapefruit-give-thanks-for-south-korea/>
2. <http://www.parisbaguetteusa.com/>
3. <http://www.cancerresearchuk.org/about-us/cancer-news/case-study/organic-food-doesn%E2%80%99t-lower-overall-cancer-risk>

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Cathy (2014-04-15 06:25:59)

Not surprised Tully's coffee failed, that is awful tasting coffee! I'm sure there are other better places to get a good cup of coffee in Berkeley. Also, it is possible that the Korean bakery will have decent coffee. I find it strange that it is a French bakery. I have been seeing a few articles recently where the French connection is made to cuisine in Vietnam, especially Hanoi which makes sense since it was a colony of France. Let us know what you think of the place, it sounds intriguing!

dearieme (2014-04-15 06:40:23)

I remember strolling about the Berkeley campus in the summer of '66. It smelt funny.

George (2014-04-15 07:39:30)

It's funny you list twitter and google as paradigm examples of innovation - they're my go-to examples of what I consider the utterly trivial nature of what people call "innovation" these days. Korean bakeries aren't nearly as good as Vietnamese sandwich shops (Banh Mi). I'm sure you know about them, everyone does - some are lame, but the good ones are awesome! What I like about the Korean (and other Asian) coffee shops is that they somehow provide a really tranquil and soothing atmosphere. I'm not even sure what it is, but they've figured that out. Maybe it's the clientele - Starbucks in America are filled with yuppie strivers focusing away with incredible intensity on their computer screens - grim faces, serious looks, they just ooze tension, effort, and striving. No one smiles. No one looks up. The original European idea of the coffee house as a relaxed social space where you go to share an idle hour (or three) chatting with friends, or read some light book, has been perverted in typical American fashion into workaholic spaces where grim people gather to energize themselves with shots of strong coffee while they conquer the world. It's quite hideous. The lack of relaxation and ease is palpable. Asia, I believe, has managed to preserve the European concept of the coffee shop much better.

Andrew (2014-04-15 07:43:23)

I can't believe I bothered to read all of George's comment. :-/

Sam (2014-04-15 11:22:59)

What I like about the Korean (and other Asian) coffee shops is that they somehow provide a really tranquil and soothing atmosphere.

I've noticed this as well. I think part of it is the interior decor. The Korean shops tend to be warmly and brightly lit inside. Starbucks tends to be dark with moody lighting inside. Also the focus in Korean shops seems to be on the snacks, deserts, cakes, etc. rather than on coffee. With Starbucks and other American coffee shops, the focus is mostly on coffee. People going to eat pastries and snacks will be in a lighter mood than people going for coffee.

kxmoore (2014-04-15 19:40:24)

If you have ever had a baguette in Paris or for that matter one from a real French bakery anywhere in the world "Paris Baguette" will disappoint.

Seth Roberts (2014-04-15 21:47:26)

What's interesting about Paris Baguette is the innovation. Not the quality of the baguettes. The innovation is not disappointing.

dearieme (2014-04-16 04:13:48)

"yuppie strivers focusing away with incredible intensity on their computer screens – grim faces, serious looks, they just ooze tension, effort, and striving. No one smiles. No one looks up." And yet much of what they do is doubtless worthless piffle. It's a funny old world.

George (2014-04-16 06:57:39)

Oh, it's undoubtedly worth piffle dearieme. The things they waste their youth on and take so seriously are indescribably trivial. But in a world that glorifies "work", to be busy is to be cool. Every civilization before us glorified the life of leisure and idleness and contemplation. Perhaps you worked so you could achieve leisure, but work itself wasn't cool. I pity these kids.

Andrew (2014-04-16 07:04:28)

Yawn. Congrats on knowing exactly what your millions of imagined whippersnappers are up to. Could you sneer a bit more efficiently, please?

kxmoore (2014-04-16 10:12:43)

"What's interesting about Paris Baguette is the innovation" I didn't see innovation at Paris Baguette. Just a bad imitation of a French cafe. But then again, McDonald's is a bad imitation of a burger joint.

Sam (2014-04-16 11:05:23)

I didn't see innovation at Paris Baguette. Just a bad imitation of a French cafe. But then again, McDonald's is a bad imitation of a burger joint.

I suppose the innovation would be the different tastes and the different items they have. If the tastes don't appeal to you, then I suppose it would just seem like a bad imitation rather than innovation. Personally, I like both real baguettes and Western baked goods, as well as the kinds at Paris Baguette and other Korean bakeries. The latter tastes different and good to me. One thing I like in particular is how the deserts are much less sweet and less richer than French deserts. Though the ordinary breads tend to be sweeter than ordinary French breads. Incidentally, McDonald's is much closer to a traditional burger joint than the newer burger joints popping up these days. McDonald's started as an old school burger joint, and its burgers are still closer to the traditional burgers than the newer, monstrous gourmet burgers that are popping up these days.

Seth Roberts (2014-04-16 14:35:42)

"Just a bad imitation of a French cafe." You underestimate what was necessary to win the Cafe Wars in Seoul.

### **Assorted Links (2014-04-16 05:00)**

- [1]How not to govern a university
- [2]Smelly fish popular in Korea. "Extremely chewy texture."
- [3]Popular pain killer associated with doubled risk of atrial fibrillation
- [4]Hunter-gatherer microbiome
- [5]interview of me in Chinese

Thanks to Tyler Cowen.

1. [http://www.weeklystandard.com/blogs/ayaan-hirsi-ali-speaks\\_786719.html](http://www.weeklystandard.com/blogs/ayaan-hirsi-ali-speaks_786719.html)
2. <http://news.yahoo.com/south-koreans-crave-asias-smelliest-fish-055629592.html>
3. <http://bmjopen.bmj.com/content/4/4/e004059.full>
4. <http://www.wired.com/2014/04/hadza-hunter-gatherer-gut-microbiome/>
5. [http://paper.people.com.cn/smsb/html/2014-04/08/content\\_1412180.htm](http://paper.people.com.cn/smsb/html/2014-04/08/content_1412180.htm)

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dearieme (2014-04-16 05:52:39)

In case anyone is interested, here's the NHS's webpage on NSAIDs. <http://www.nhs.uk/conditions/Anti-inflammatories-non-steroidal/Pages/Introduction.aspx>

dearieme (2014-04-16 05:57:07)

When I was a fresher our University Principal held a Nobel Prize in Physics. Nowadays almost every university boss I read about seems to be a creep, a twerp, or a crook, of little or no academic distinction. It's been less than two generations, for heaven's sake.

Joe (2014-04-16 09:34:19)

Dearieme, universities were also once bastions of free speech and non-conformity (e.g., compare Berkeley circa 1966 with Berkeley circa 2014). Not anymore. Orwellian newspeak, doublethink, thoughtcrime and PC propaganda rule the roost today. Even historically Catholic universities have been infected with this horrible virus. And it's not by accident. That "long march through the institutions" is proceeding exactly as planned.

Dragan (2014-04-16 18:53:01)

Fairly grim stuff about Brandeis. Probably the biggest disappointment of my professional life was realizing that Universities are not very much like what I imagined them to be.

Gina (2014-04-16 19:16:29)

Interesting story about the Hadza gut biome. From what I can tell, we know almost nothing, since, on paper, their gut biomes seem awful despite their good health.

Terri (2014-04-20 14:19:39)

What interested me was perhaps their overall health despite quite a bit of honey and tubers. Their diet didn't seem all that diverse as stated in the articles I have read. I kind of mull that over in my mind as I think about how it is recommended to us to eat a diverse diet. Is diversity overrated? But then without diversity how do they/we acquire select nutrients.

Terri (2014-04-20 14:20:38)

My comment was regarding the Hadza article.

best (2014-05-10 07:14:05)

{ i'am finally find good url shortener this is best link shrinker with lot of awesome features. give it a try.

## High-Frequency Trading and Health Care (2014-04-17 05:00)

High-frequency trading is a misnomer. It's actually short-latency trading, a name that makes clearer why it is so unsavory. As Michael Lewis explains in *Flash Boys*, short-latency traders use a buy order on one exchange to quickly buy that stock on other exchanges before the original buy order reaches the other exchanges. Lewis writes:

The deep problem with the system was a kind of moral inertia. So long as it served the narrow self-interests of everyone inside it, no one on the inside would ever seek to change it, no matter how sinister or corrupt it became – though even to use words like "corrupt" and "sinister" made serious people uncomfortable.

I thought of health care. Our health care system – centered on treating symptoms with drugs you take for the rest of your life – serves the narrow self-interests of those inside it, such as doctors and medical school professors. That is surely one reason its predatory aspect is rarely mentioned.

But I also noticed how poorly Lewis, an excellent writer, describes the problem. "Moral inertia"? No, the problem is not that Person X or Person Y is slow to get outraged. "Corrupt"? No, no one is being paid off to look the other way or vote a certain way or introduce a certain bill. "Sinister"? It's unclear what that means. Is Lewis just using a fancy synonym for "bad"?

Elsewhere Lewis uses the word *predatory*, which seems accurate. Short-latency traders preyed on those who sold stock, taking advantage of their ignorance. Of course, no one is forced to buy or sell stock and the loss on one trade is small. But everyone gets sick.

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Andrew (2014-04-17 06:07:01)

I think Lewis was almost forced to use inaccurate language. To call these pricks what they are would, over the length of a book, become wearily coarse and shrill.

MC (2014-04-17 06:51:27)

It's difficult for outsiders to follow, but Lewis' book is essentially a fiction. What's really happening is that one rich group of guys is furious at another rich group of guys that are eating their gourmet lunch. How does that affect you and me and grandma? Not at all.

AI (2014-04-17 07:42:57)

Almost everyone with a little money saved is more or less forced to participate in the market, through vehicles like the California Public Employee Retirement fund, their 401K or their IRA. These vehicles are pretty much designed by law to be invested

exclusively in stocks and bonds. A few people with truly self-directed IRAs do have a chance to invest retirement money in other vehicles (e.g. real estate, small private businesses, etc). But these are neither widespread nor easily available to employees at most organizations. And, with interest rates so low and food, fuel, and education prices rising at faster than "inflation" these days, it's very hard to justify parking your cash in a money market account over the long term. Don't forget that Wall Street sometimes tries to force you to put more of your cash into their market. (Remember George W. Bush's attempt to privatize social security?)

Glen Raphael (2014-04-17 07:58:48)

Maybe Lewis does a poor job describing the problem because he doesn't understand it and it's not clear what's wrong with it. HFT involves a great many strategies - not just that one - and it's not at all clear there's anything "predatory" about that one. There is no universal human right to have orders filled across every market simultaneously at the same price. If you don't want to be "preyed on", there's a simple solution: don't place orders that large. Trades that are so large they can't be fulfilled on one market are big enough to move the market. When the market moves, entities that trade across many exchanges need to either quickly adjust the prices they offer or lose a lot of money. This "predation" makes markets more efficient price-finders as it enhances a small preexisting diseconomy of scale. Yes, HFT can make it slightly more expensive to make truly massive moves in the stock market than it might otherwise be. But that's only a \*bad\* thing if you think there's some moral reason why huge trades over many markets should be exactly as cheap to carry out as tiny trades on one market.

Seth Roberts (2014-04-17 09:27:34)

"It's not clear what's wrong with it"? It's clear what's wrong with it to the persons who want to buy or sell - they pay more. You mean it's not clear what's wrong with it to you? That's what you seem to be saying but maybe I am misunderstanding. A larger reason that HFT is bad is that it makes the stock market less attractive. HFT contributes nothing to the economy and to the extent it makes the stock market less attractive it is destructive.

Joe (2014-04-17 14:09:11)

Al: "Don't forget that Wall Street sometimes tries to force you to put more of your cash into their market. (Remember George W. Bush's attempt to privatize social security?)" I'm no fan of Dubyah, but his plan was VOLUNTARY. No force at all. And for the sake of my grandchildren, etc., I wish he had succeeded. Wall Street can't force anyone to do anything, but the government can, and does. Given the FREEDOM of putting my money under the care of the government, or investing it in the market (thus being able to leave those assets to my children, etc.), I'm going with the market. Every. Single. Time.

Andrew (2014-04-17 14:47:01)

Unfortunately they tried to sell social security privatization at the exact moment it became clear that Wall Street was behind the trillion dollar mortgage fraud that cost so many their homes. Oopsie.

Joe (2014-04-17 15:18:20)

Andrew, Wall Street wasn't behind it, but they weren't blameless either. They allowed the government to shove them around, by threatening them with more regulation, disallowing mergers, expansion, etc., if they didn't loosen credit standards. You've heard of the Community Reinvestment Act, right? That's when it started, and it only got worse over time, with Freddie and Fannie gobbling up anything the banks could throw at them. The heavy hand of government caused the meltdown, and that's a fact. Note: There's another meltdown yet to come, which the US taxpayer will also have to bailout: Student loans. About a trillion dollars worth. Just about anything the government touches turns to c & \$p. And just wait until you see what it does to health care!

Andrew (2014-04-17 22:19:40)

Very simple world you got there, Joe. Looks a bit cramped.

stocksandstartups (2014-04-17 23:40:54)

Seth said: " It's not clear what's wrong with it'? It's clear what's wrong with it to the persons who want to buy or sell — they



pay more. " "They pay more" - Maybe, maybe not, this is far from clear, especially for the proverbial "little guy" (e.g. anyone who doesn't trade multi-million dollar blocks of stock). And even if people are paying more, it's tiny. HFT traders are looking for pennies per share on a trade. If a penny or two per share is going to have any effect on your retirement, then you're also worrying about what color to paint your Gulfstream Jet because you are super-rich. For the rest of us, this makes no difference. Still mad about a penny difference? Remember, until 2001 stocks traded by the sixteenths, so you couldn't even change your buy/sell price by 1 cent, you had to do it by 1/16th of a dollar (6.25 cents)! Not to mention all this investment in bringing technology to the stock market is why you can sit at home and get real-time price quotes in your pajamas, and why you can get \$8 stock trades. Just because someone else is getting rich doesn't mean you're getting ripped off.

Joe (2014-04-18 06:44:02)

Simple, Andrew? Blaming everything on Wall Street is simple. But how could you leave out the part the government played? Surely you weren't unaware of it, right? Did you follow the Cliven Bundy situation in Nevada? If so, you got to see the heavy hand of government in action. Should a desert tortoise be able to effectively put a rancher out of business? A rancher who has been peacefully ranching those lands since 1874? Was it really necessary to have armed federal agents, along with K-9s and armored vehicles, remove Bundy's herd? Couldn't the government have simply filed a lien on his ranch? Yes, legally, Bundy was in the wrong. But the government breaks the law every single day. They also simply ignore many laws they don't like. Only the government can get away with c & \$p like that. I think that's wrong. YMMV.

dearieme (2014-04-18 07:01:22)

"legally, Bundy was in the wrong": jeeze, that was a lot of words to camouflage a simple point. The answer to your complaints about The Government is, of course, to have them sell off most federal land. Alas, they would handle it so that Harvard advice would result in most of it ending up in the hands of oligarchs. Just as Harvard advice managed to bring that about in Russia. Comparing the USA to Russia: can that be valid? Probably not; Russia is run with greater intellectual rigour.

Seth Roberts (2014-04-18 07:39:34)

Another thing that's wrong with HFT to people who buy and sell is that the prices they see on their computer screen at the moment they do a trade are not the prices they end up paying.

Joe (2014-04-18 07:46:56)

Dearieme, I wasn't trying to camouflage anything. That should have been obvious, no? And no "point" is simple around here, apparently. Selling off federal land is, of course, one solution, especially when considering our 17+ trillion debt (and growing by the day). But it won't happen. It makes too much sense. The real question is: How did they end up owning all that land to begin with, and why do they still own it? Our Constitution actually prohibits it. But our Congress enjoys ignoring the Constitution. And so they refuse to divest it. Ah, the wonders of government. Also, how much "intellectual rigor" must the Russians have if they were stupid enough to take advice from Harvard "economists"? How do they think WE ran up our 17+ trillion debt? Russia is essentially a banana republic that happens to have a lot of oil. Let's see how that works out for them in the long run.

stocksandstartups (2014-04-18 11:24:49)

Seth said: "Another thing that's wrong with HFT to people who buy and sell is that the prices they see on their computer screen at the moment they do a trade are not the prices they end up paying." This is exactly how it is for any individual (you or me, e.g. non-professionals) who buys or sells stock. If I'm placing an order to buy a stock, just because the screen says the "ask" (what someone is trying to sell their shares at) is at \$50.27, doesn't mean I'll be able to buy at that price, and this makes complete sense. By the time my computer screen loads the price information, and I enter my sell order and click "Submit", the market may have moved. The \$50.27 ask may have already been filled (someone else bought it), and the next cheapest ask is now \$50.35. So now I have to up my bid. This is far from 'bad' (or 'good' for that matter), it's just how markets work. And this just as often can work in your favor with the price dropping as you enter you bid, and thus you get a cheaper price than you were expecting. Thus if HFT traders were guaranteed the price they saw on their screen they would have a significant advantage over non-professionals/individuals. So I'm confused by the point you're making here. The only explanation I can think of is you've never bought or sold stock, or if you have, you were hands-off about it and didn't pay attention to the price movements

as you were placing your order. Seth: HFT caused prices to move away from sellers and buyers. For example, if you are buying, the price goes up. This is different than random fluctuation.

dearieme (2014-04-18 12:44:15)

"How did they end up owning all that land to begin with": well, in Nevada they stole it from Mexico, fair and square.

dearieme (2014-04-18 12:46:20)

The Russian government improved its intellectual rigour by expelling Harvard economists, and having a drunken president retire. You may be able to think of equivalents that the US federal government would benefit from.

Joe (2014-04-18 14:16:59)

I prefer to think of it as stealing it back from the Europeans, dearieme. Stealing land is something you Brits are familiar with, no? I think we should do with Harvard economists what the Mormons do. Send them out into the world on missions, for not just two years, but for the rest of their lives. Let them help other countries run up mountains of debt, devalue their currencies, and generally screw up their economies, like they did to ours. They won't go voluntarily, or pay their own way, like Mormon missionaries do. But a guy can dream, can't he?

Noah Motion (2014-04-19 08:11:07)

*High-frequency trading is a misnomer. It's actually short-latency trading, a name that makes clearer why it is so unsavory.* The fact that the trades are short-latency means that they can be, and are, if I'm not mistaken, made with high frequency. And it's unclear to me how 'short-latency' is any more or less unsavory than 'high-frequency.' Seth: The term short-latency makes clearer the problem (from the point of view of ordinary traders): use of very short latency to front-run. Frequency has nothing to do with it. The trades could be high frequency without the extremely short latency. It is the extremely short latency that matters.

how to do a liquid diet (2014-04-27 23:04:22)

However, in most of the time, these two age groups largely depend on vitamins supplements. For example, there is evidence that patients with Crohn's disease, which causes inflammation in the gastrointestinal tract, can benefit from a high-calorie liquid diet. Dependent upon what the options are, you can combine fruits and vegetables. my blog post: [1]how to do a liquid diet

1. [http://kelleyxomyvqwruw.beeplog.com/658289\\_3974659.htm](http://kelleyxomyvqwruw.beeplog.com/658289_3974659.htm)

liquid diet weight loss recipes (2014-04-28 04:44:49)

These days there's a great number of speak about liquid protein diets. Thus, responsible use of the substance must be observed. The liver produces proteins that help maintain the volume of the blood and the clotting factor. Also visit my site: [1]liquid diet weight loss recipes

1. <http://darrelgzcd.wordpress.com/2014/04/21/while-many-of-the-other-shake-liquid-diet-plans-come-in-vanilla-chocolate-or-strawberry-the-hollywood-diet-is-a-fruit-shake/>

myaree led lighting (2014-05-01 16:16:23)

Today, I went to the beachfront with my kids. I found a sea shell and gave it to my 4 year old daughter and said "You can hear the ocean if you put this to your ear." She placed the shell to her ear and screamed. There was a hermit crab inside and it pinched her ear. She never wants to go back! LoL I know this is entirely off topic but I had to tell someone!

Lindsey (2014-05-03 00:35:13)

The travel - A maker is normally lightweight and portable so it can easily be taken along on your travels, so there is no need to get fussing over big espresso machines. Coffee lovers usually buy grounded coffee beans within the market. For most single-serving coffee machines you can use warm water only or domestic hot water and mild dishsoap to completely clean the exterior.

## Universities: Expectation versus Reality (2014-04-18 05:00)

A recent Ph.D. from Berkeley named Dragan [1]commented here:

Probably the biggest disappointment of my professional life was realizing that Universities are not very much like what I imagined them to be.

I asked him to elaborate. He replied:

My peers dreamed of being in the sports or movies, of being lawyers, of being rich. Those dreams didn't seem so great to me. Instead I fantasized about being a scholar and later in life climbed up the educational ladder towards a PhD at a leading research university. The closer I came to becoming a professor – my professional goal in life – the more disappointed I became.

I am somewhat embarrassed to remember this, but I used to say things like: "Universities are places where people can devote themselves to a life of study, investigation, and imagination. In exchange for a home like this, we provide society with ideas. And, of course, we teach." I guess I thought that there should be a home for people who are capable and devoted to intellectual pursuits, a rather naive notion it seems.

I wanted a place where I would be judged primarily by my intellectual and creative ability. Instead I have been made keenly aware of the importance of networking, of doing favors for the right people, of who to cite, whose criticism to acknowledge and whose to ignore. I used to despise such things, now they're second nature. The irony, that I now know far more about popularity than I did back in high school. One of the first things I learned is that it is imperative to do research that brings money and/or prestige. In other words: popular research. I didn't know such a thing existed.

What if I don't want to do popular research? The most common advice I received during my graduate studies: "Wait till you're tenured to do that," always said with good intentions.

Only one person told me: "Do what you believe in. Tenure and accolades will come in time." I liked this advice more. But the professor who gave it was fully tenured before I was born. Perhaps things were different in his time? I suspect they were. Last year, two retired professors, each from a major research university, assured me that they would never get tenure in this day and age. They took years with their research and published few yet original papers. "You have to wait until tenure nowadays," they said.

This is not what I thought I'd find. Nor did I expect to find that efficiency and money-making are priorities here. I love what I do, or at least what I want to do. If I could afford to, I'd do it for free. I mean that as an academic, money seems relatively unimportant. Yet universities seem to be run by people who aren't academics and whose primary interest is making money, rather than fostering research. It occurs to me that these two aims may be in conflict.

Don't get me wrong: I am not saying that academia is altogether bad. I can honestly say it beats unemployment and the handful of low-wage jobs I had as a teenager. And there are days when all the things I just wrote about seem less important and I focus on my research or my teaching. But other times I think, silly me. If only I was smart enough to get rich in the first place, I could have done anything I wanted to – like pursue research that actually interests me.

As a professor (with tenure) at Berkeley, I was fascinated by how mediocre I was. By the usual metrics, I was in the bottom quarter of the distribution. Yet I had made discoveries that I knew were important – for example, [2]a surprising way to lose weight, a *really* surprising way to improve mood. Although these discoveries impressed me, they [3]did not impress my colleagues.

1. <http://blog.sethroberts.net/2014/04/16/assorted-links-321/#comment-1184012>

2. <http://escholarship.org/uc/item/2xc2h866/>

3. <http://srblogfiles.s3.amazonaws.com/wp-content/uploads/2014/01/2012-The-reception-of-my-self-experimentation.pdf>

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dearieme (2014-04-18 06:52:41)

Allow a nit-pick; if you were bottom quartile then by definition you were not mediocre. Unless you were being described by a sports commentator, for whom "mediocre" = "average" = "ordinary" = pretty poor.

Joe (2014-04-18 07:12:40)

Glenn Reynolds, a law professor, has written a good book about the coming "purge" in academia. Up to 50 % of our universities will not survive it. Since most people do not belong in college (my opinion), and moreover, can't afford it these days (also my opinion), other ways to "get educated" and/or develop meaningful skills will be found. Yes, "creative destruction" is coming to academia, and soon. The Higher Education Bubble <http://www.amazon.com/Higher-Education-Bubble-Encounter-Broadside/dp/1594036659> I also think tenure is part of the problem, not the solution. It basically protects bad teachers (and some really bad teachers) and gives them a place to hide. And, as usual, government involvement has only made the situation worse. Yep, that's my opinion, and I'm sticking to it.

dearieme (2014-04-18 07:25:35)

"Glenn Reynolds ... has written a good book about the coming "purge" in academia": a book? It doesn't need a book. For years I've just said "Dissolution of the Monasteries", which seems to me to sum up the position reasonably well.

dearieme (2014-04-18 07:27:11)

P.S. I'm hoping my pension will survive: even the monster Henry VIII pensioned off nearly all the monks, rather than leaving them to starve.

Joe (2014-04-18 08:06:42)

"For years I've just said 'Dissolution of the Monasteries,' which seems to me to sum up the position reasonably well." Maybe you should have written a book?

Alex (2014-04-18 08:22:00)

What are the usual metrics for a professor? Do they emphasize teaching or research? Seth: At Berkeley, research. Number of papers in good journals and top journals, such as Science and Nature, is very important.

Andrew (2014-04-18 12:07:21)

Has anyone ever applied "moneyball"-type statistical analysis to tenure-likelihood and grant-getting success? Ie, what are the "sleeper" journals, buzzwords, co-authors, etc.? It seems like much of the data that would be needed is publicly available. Whatever the results, the ensuing publicity from publishing that research would itself make someone's career. :-)

Alex (2014-04-18 12:47:22)

Did that align with your own goals for yourself? Seth: No. I wanted salary increases.

jason y (2014-04-18 16:54:21)

Joe, you illustrate the problem. If someone writes a book he's an authority. If someone condenses the essence of a book's argument into a couple sentences he's just another guy with an opinion. The demand for impressive windiness is one of the reasons academics remain powerful. I keep reading that college is becoming a bad investment for the bottom x percent, but the culture is such that I think many people would take a long-term income penalty in order to prove they aren't uneducated. We have a long way to go before this "bubble" pops, or before this system fundamentally changes, esp. with the coming increase in ZMP workers.

Alex (2014-04-18 17:48:09)

It's not that college is becoming a bad investment for the bottom x percent; it's that some majors are not good investments, and are becoming financially suicidal as the price tag rises. A degree in engineering or computer science is an excellent investment. But a degree in English, history or anthropology? Fine if you have a trust fund, but if you're going to college and expecting to support yourself after, you'd be better off using that time and money to start a business. At least that debt can be discharged through bankruptcy.

Joe (2014-04-18 18:15:04)

Jason, college is becoming a bad investment for much of the top x percent, too. The quarter of a million dollars (and up) it takes to get a decent degree (at a decent school) these days could be invested (say, by someone's parents), and over time that should more than offset any "long-term income penalty." [The "investor" should have somewhere between 2.5 and 3.0 million dollars after, say, 35 years, with even a modest rate of return.] And possibly even allow the "student" to do something he or she actually wants to do, like create a business, write a killer program, learn a rare skill, invent something, etc. And the culture will change once parents and students realize that, for the vast majority, paying \$250,000+ for an education is a bad investment. And the coming increase in ZMP workers only makes the need for change more urgent. Academia got greedy. And in the immortal words of Rev. Jeremiah Wright, "the chickens are coming home to roost." Maybe not this year, or next, but soon...says just another guy with an opinion.

jason y (2014-04-18 18:34:31)

Pardon me, I was thinking in terms of the distribution of IQ, or something very much like IQ. Your distinction is the right one. That said, baristas would rather live a life of debt peonage than admit they can't hack it in university. Like I said, there's nothing worse these days than being anything less than smart, and as long as you need a college diploma to be above suspicion young people will remain only too willing to commit financial suicide.

jason y (2014-04-18 18:45:11)

Joe, I don't disagree with you. We only disagree on how much I think people are willing to spend or give up to have a piece of paper that proves they aren't ignorant. Intellectual insecurity is rampant. I am utterly bemused by its ubiquity. Until everyone stops worrying how smart other people think they are, especially members of the credentialed class, universities will continue to jack up the price of token diplomas and kids will continue consigning themselves to the poorhouse to protect their egos.

dearieme (2014-04-19 02:14:58)

The cheap answer would be to run standard IQ tests for all eighteen year-olds and give them a lapel badge to wear with their score on it. Bingo: no need for silly credentials.

dearieme (2014-04-19 02:15:54)

In fact, not even the exact score: probably displaying the decile would do the trick.

CC (2014-04-19 06:29:27)

Seth, that last link was interesting to me. I liked this: <> You point out that you never advocated eating bad-tasting food. But even if you had, is expecting people to stick to this any crazier than expecting people to permanently cut calories every day for the rest of their lives?? The normal diet advice figuratively pits people against their own brains and tells them to keep up the fight for (say) 60 years. Oh yeah, and the success rate is near 0 %. I often tell people who think that we've already "cured" obesity (just have a little self-discipline, stop shoveling food down your throat) that I've invented a cure for heroin addiction: Stop using heroin! Yet any doctor who proposed this would (correctly) be laughed at.

CC (2014-04-19 06:30:04)

Sorry, that last comment was supposed to have this excerpt inside the angle bracket: The committee went on to criticize my weight-control ideas: "Eating bad-tasting food may lead to sustained weight loss, but only in those who have the self-discipline to adhere to such a regimen." My conclusions were not likely to generalize, in other words, because hardly anyone will have enough self-discipline.

Seth Roberts (2014-04-19 14:14:32)

Drinking sugar water was not "eating bad tasting food". To claim I discovered that "eating bad tasting food" causes weight loss was highly inaccurate.

CC (2014-04-20 04:43:52)

"Drinking sugar water was not "eating bad tasting food". To claim I discovered that "eating bad tasting food" causes weight loss was highly inaccurate." Right, I was agreeing with you.

Terri (2014-04-20 14:28:09)

This is true in medical academics as well. Very, very, very frustrating. Angering. Sad. Detrimental.

Jack (2014-04-21 11:41:06)

Seth, Dr. Seth Roberts, you are a Genius, an individual, an adventurer and a trailblazer. Your unique insights and personal investigations have helped so many people, most of them who are not even known to you. Please continue to be YOU! And "don't let the turkeys bring you down"! Thanks for sharing your great work and personality with us all.

Dragan (2014-04-22 18:00:26)

A bit overwrought, but complaining feels good sometimes. Coincidentally, the 2012 article Seth linked in his commentary ("did not impress my colleagues") is very useful in defending oneself from accusations of "introspection." Can't praise it enough for that.

Serwis GSM (2014-04-28 06:22:15)

Komis GSM w Piotrkowie Trybunalskim. W polskim artykule proponujemy zasobny selekcja telefonów komórkowych w atrakcyjnych należnościach. Podajemy baterie, ładowarki, kable, wytrzymałe tudzież ozdobne pokrowce plus obudowy, ruchome pamięci, prekursorską biżuterię aż do telefonów komórkowych.

Seth Roberts | The Story's Story (2014-04-29 12:30:12)

[...] Seth Roberts died (H/T Tyler Cowen), though unlike Cowen I didn't know him. But in 2013 he did link to The Story's Story and I consider that a small but significant achievement. He too was interested in cities and how cities function; he knew so much but was open to talking to strangers: his contact page still says, "Ask Me Anything/Contact Me," which is often a sign of an active, open mind. Of his recent posts this is my favorite. [...]

## Lyme Disease and Bad Medicine (2014-04-19 05:44)

I got *Cure Unknown: Inside the Lyme Epidemic* (2008) by Pamela Weintraub from the library and found something surprising: an angry foreword. Weintraub is a science journalist; the foreword is by Hillary Johnson, another science journalist and apparently a friend of Weintraub's.

In her anger, Johnson says several things I say on this blog.

The more Weintraub investigated, the more virtually everyone with a shred of authority was losing their credibility. . . . The so-called "objective" scientists were sending an entire disease down the river and over the cliff [meaning they ignored it] for reasons that seemed frequently to have more to do with mere opinion and crass external forces — cash, prestige, careerism — than with scientific erudition.

She rejected the science writer's inbred habit of relying on the government official with the highest pay grade or the scientist with a job at Harvard as the final word on a topic. . . . I think of her, with enormous respect, as a "recovered" science journalist.

As one who also suffers from the disease I chronicled with kindred passion in *Osler's Web*, I sometimes wonder if the only investigative writers who will possess the necessary temerity to remove the white gloves and tackle those putative experts to the ground will be those . . . whose personal experience demands they follow the rocky trail that leads to the truth.

The last point is the most important, I think. You can curse the careerism of Harvard medical school professors and the servility of science writers but that does nothing, or not much, and what you are upset about (careerism and servility) is unsurprising. Less obvious, at least to me, is that there is a way to overcome the careerism and servility. It *still* surprises me that I was able to figure out [1]interesting stuff about sleep, obesity, depression and so on that the experts in these fields hadn't figured out — and that sometimes contradicted what they said. (For example, I found sugar *isn't* fattening.) As Johnson says, one reason I was able to learn so much was that I wanted to sleep better, lose weight, be in a better mood, and so on. Unlike the experts in those fields, for whom research was a job.

1. <http://escholarship.org/uc/item/2xc2h866/>

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Alex (2014-04-19 07:19:28)

Foreword Seth: Thanks, I fixed it.

dearieme (2014-04-19 12:08:11)

"I wanted to sleep better, lose weight, be in a better mood, and so on. Unlike the experts in those fields, for whom research was a job." Approval of what is approved of is as false as a well kept vow.

Garcinia Cambogia Extract (2014-04-29 14:23:35)

Hi there friends, its impressive post regarding educationand fully explained, keep it up all the time. Here is my weblog;

[1]Garcinia Cambogia Extract

1. <http://momtv.com/blog/show/blogid/136796/id/187496>

## Teaching Children: Adjustment to Individual Differences (2014-04-20 09:29)

After [1]I blogged about my belief that a good teacher tries to bring out what is inside their students (not just transfer brain contents), a reader named Terri Fites [2]commented:

We homeschool, and I see lots of what you said in my kids.

I asked her to elaborate. She replied:

Here is where I learned the most starting on day one of kindergarten with my first child five years ago; it is my job to identify strengths, weaknesses, and to help the learner achieve the goal using what they can. For example, I was embarrassed and appalled that my first child didn't read or show any interest in reading to herself until about second grade (7 years old). However, I continued to provide the necessary environment—reading wonderful books aloud, having her read a sentence from our selections, occasionally forcing her to read from her own readers. She had a great verbal understanding and would listen to anything I read aloud to her. Eventually, slowly, she transitioned and has NO issues with reading now. Her strength is verbal understanding and listening comprehension. Her weakness is focus on her own activities and sitting still.

My second child came along and was strong in different ways that I had to discover and appreciate. Her verbal skills, although perfectly normal, are not her strength, but music rises out of her at every moment. Clearly we have to do more than music. Using this strength, I make sure to provide plenty of musical CDs in Spanish for Spanish (which she struggles with—we have had tutors come for years with the intent the girls become fluent). We memorize and recite poetry routinely as part of our lessons, and she "sets" hers to song/music. When we do math facts (addition, subtraction, multiplication flash cards), she does best if she hears them in a sing-song voice. Her strengths are effort, music, rhythm, and art. Her weaknesses are verbal reasoning and remembering verbal types of things (not so prominent in math and geography skills so her spatial and math skills overcome this problem remembering things).

I would say, particularly in elementary school, that although the reading, writing, and arithmetic skills needed should not be optional—the timing of learning them and the method of learning them ought to be fluid to a degree. Everybody should learn to read but we're losing kids because they're not developmentally ready until second or third grade for some of these verbal/reading things. By then the bulk of the spelling and phonics rules have been expected to have been learned and the child is probably destined to be a poor speller, decoder, and poor at reading aloud. (This would be my husband. Obviously he was able to overcome this, but his spelling and read aloud are not pleasant. He says he remembers the year when words and reading just started coming together for him. Unfortunately, that was fifth grade. Did he need to learn to read and spell then in fifth grade!? I'd argue NO! But, in this case, recognition of a child/type of child is important. He is very, very logical, and the way that spelling/phonics is taught now/then is NOT so logical. A rule is given here. It is broken here. It is ignored here. No explanation is given. A kid learns long A as a \_e here or -ay there, but not all the other combinations that make the long



A sound- and certainly not all together in a lesson sequence!!!: ea, ae, ei, eigh, ai, etc. The logical child gives up. There are programs out there like Orton Gillingham, for example, designed to teach the "rules" of English in such a logical manner. Or I design my own curriculum. But this is not an option for most school teachers. Autonomy is being denied.) And now, multiplication is being moved forward in school grades, too. And analytical, thinking math is being moved forward. I think we'll lose students! Good students! "I'm no good at math." Geesh. Because you can't do story problems in second grade? Because you're still mastering the facts and you're being pushed into application too early?

1. <http://blog.sethroberts.net/2014/04/06/what-is-teaching/>

2. <http://blog.sethroberts.net/2014/04/06/what-is-teaching/#comment-1181991>

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dauids (2014-04-20 11:10:41)

Couldn't agree more. I've long held a belief that we should do away with fixed time lengths for grades (as in, Third Grade is a nine month length of time). This doesn't make any sense, and we don't need a very advanced appreciation of different learning styles to understand this. Some kids learn math relatively faster than others, some develop reading comprehension faster, etc. We should split up reading, writing, math into separate classes. When a student displays mastery of a certain level of, say, math, that student moves on to the next level of math. It shouldn't matter whether that mastery is achieved at the same time as other students, or whether it takes one month or 18 months. Moving between levels should be fluid. Any given math class may contain older students who are learning math at a relatively slower pace, and younger students who are learning math at a relatively quicker pace. Additional benefit: outlier students learning any particular subjects at extremely slow rates can much more easily be identified and assisted, then would be the case when a block of students move from grade level to grade level every year, all together, in all subjects, at the same time. A system like this should theoretically work fairly well until high school, when students begin selecting their own courses and specializing with languages, arts, AP courses, etc.

Seth Roberts (2014-04-20 11:37:38)

I skipped fourth grade but it shouldn't have taken such a massive dislocation to make the work challenging for me. Likewise, I remember one student was held back a grade. That was awful. I still remember what a good artist he was. Much better to start with the idea that everybody has their own strengths and their own speed.

Terri (2014-04-20 14:43:14)

Reply of dauids sounds great! Why can't it be done this way? Seth's reply reminds me of how I don't allow my kids to use the word "smart." Makes me cringe. They can say...John knows his chemistry or Janie plays piano like a champ or Sally uses the biggest words I have ever heard. But not "smart." That artistic student described could draw anything and Seth could obviously spell well, read well, and get all his math work right--each child "smart" in their own right. Sadly, both probably felt so alienated by the handling of their strengths by the academic institution.

Allan Folz (2014-04-20 19:53:24)

*first child didn't read or show any interest in reading to herself until about second grade (7 years old) FWIW, that's the Finnish model. Waldorf too. Students of both systems seem to do OK for themselves. The standard American education model seems to have the idea that brains are empty buckets into which we pour knowledge at some pre-ordained and invariable, X. Ergo, if we want smarter people we must begin pouring knowledge sooner. Of course, the truth is smarter people are able to learn and remember at rates far greater than X, multiples in the case of geniuses. And dumber people retain at rates far below X. And then there is the difference in capacities. Finally, on top of those, as Terri's story illustrates, different people learn and remember things differently depending on how the material is presented and conveyed. It's all so messy when your goal is to use early 20th century mass production techniques to optimize throughput.*

Elizabeth (2014-04-21 06:28:12)

dauids: what you're describing is pretty much the Montessori method used by the elementary school my daughter attended in the Netherlands. Each child works independently, either individually or in small groups of two or three, on modules of math, reading, etc., which are identified by colors and flora/fauna rather than any visible hierarchy (1, 2, or A, B, etc.). The teacher checks your progress when you've finished the green fish module in math, for instance, and tells you to go on to the pink tulips. Each child progresses at their own pace, with as much help from the teacher as they need. First through third grade are all in the same room, working through the same modules. Of course this is very demanding of the teachers!

Dragan (2014-04-22 18:23:29)

I liked this story. One of my sisters could read before first grade, the other struggled for some time. They are both of them very smart, and very different, individuals. Not too long ago it occurred to me that the educational system in this country is a disaster. I went from being generally against home schooling in most circumstances to supportive of it in most circumstances. It's not the teachers, the vast majority want to be good teachers, but even great teachers in our system are only allowed to be good. Nor do I think that the upcoming for-profit reforms will improve things for most kids. So when I heard my nephew will be home schooled, I thought, great.

### Assorted Links (2014-04-21 05:00)

- [1]High priced drugs
- [2]Indiegogo QS-related scam. "Founded by CEO [3]Isabel Hoffman, whose big thing before this was anti-aging medicines, and [4]CTO Stephen Watson, a York University math professor." Hoffman was the University of Toronto's Alumni of the Year in 1995. Also [5]this and [6]this.
- [7]omega-3 helps children with ADHD
- [8]Seoul traditional restaurants. The best guide to Seoul restaurants I have ever seen.

Thanks to Tyler Cowen.

1. <http://knowledge.wharton.upenn.edu/article/sovaldi-whos-blame-1000-day-cure/>

2. <http://pando.com/2014/04/04/revealed-healbe-isnt-indiegogos-first-giant-medical-scam/>

3. <http://tellspec.com/team/>

4. <http://www.math.yorku.ca/Who/Faculty/Watson/menu.html>

5. <http://pando.com/2014/04/18/indiegogo-moves-on-from-healbe-pr-disaster-by-locking-a-woman-out-of-her-account-when-she-asked-for-a-refund/>

6. <http://histalkmobile.com/airo-health-cancels-and-refunds-all-orders-for-its-recently-unveiled-calorie-counting-activity-tracker/>

7. [http://www.jaacap.com/article/S0890-8567\(11\)00484-9/abstract](http://www.jaacap.com/article/S0890-8567(11)00484-9/abstract)

8. <http://www.cntraveler.com/features/2014/04/the-heart-of-old-seoul-korea>

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Joe (2014-04-21 08:10:13)

Sovaldi! Sounds like the name of an Italian-made violin, right? It's a very fitting name. Because, once again, the public is being played like a fiddle. An \$84,000 "treatment" for a "virus" that no one can even prove exists. And brought to us by the usual

suspects. This will probably invite scorn again, but, yes, IMO, HCV is another one of those phony viruses (HIV, HPV, FIV, etc.), brought to us by those intrepid "virus hunters" at the CDC. Sigh.

Gina (2014-04-21 09:20:20)

At least Solvadi actually cures something. When was the last time that happened? I was beginning to think that drug companies only focused on erectile dysfunction and depression. The ADHD link should be labeled "omega-3 helps children with ADHD... just not very much."

Al (2014-04-21 09:34:29)

Re the patent system for medicines, there is some discussion about alternative systems, for example, here: <http://www.cepr.net/index.php/Publications/Reports/financing-drug-research-what-are-the-issues>

Joe (2014-04-21 10:26:22)

The "cure" claimed by Sovaldi is: that 90 percent of the participants had undetectable levels of the virus after 12 weeks taking Sovaldi plus the older pill-and-injection cocktail. Not one word about extending even one life by even one day. Approximately 15,000 Americans are said to die each year from "HCV-related diseases." Watch that number remain at 15,000 for decades to come. Want an easy way to avoid dying from "HCV-related diseases"? Never take an HCV test.

Andrew (2014-04-21 14:45:06)

Joe, you are an absolute moron. The reason they are charging that much is because it actually cures the disease: <http://hopefulgeranium.blogspot.co.nz/2014/03/on-participating-in-phase-iii-trial-of.html>

Joe (2014-04-21 15:40:15)

Thanks for keeping it classy, Andy! I've come to expect no less from you. This story is about something called "viral load." Do you know what PCR is? That's how they measure viral load. It's the same process they use in HIV patients. But it does NOT measure the VIRUS itself: "The latest diagnostic disease indicator, 'viral load,' is an indirect measure divorced from any actual symptoms at all, which means that the efficacy of a drug is judged according to the observed change in a number deemed to be a 'surrogate marker,' and whether you're actually better, worse, or felt fine to begin with has got nothing to do with it. It's based on the 'Polymerase Chain Reaction' method of amplifying formerly undetectable amounts of molecular genetic material—in this case, fragments of RNA that are said to be from HIV—by copying them in enormous numbers. Forbes magazine called it biotechnology's version of the Xerox machine But errors are amplified too, by the same amount. The PCR process will indiscriminately copy dud HIVs that have been neutralized by antibodies, defectives that never formed properly in the first place, scraps of free-floating RNA, all of which end up being counted. And incredibly, these counts are presented as if they represented active viruses detected in the patient and not creations of the PCR process itself. The Australian mathematician Mark Craddock has shown the mathematical basis of the model to be fatally flawed and based on wrong assumptions about what the number of RNA fragments says about the number of free viruses." <http://www.duesberg.com/viewpoints/aids-heresy-hogan.html> Ditto for HCV. In other words, he ain't cured. It was interesting, however, to note that the author had apparently been cleaning up his life, his diet, taking supplements, etc., and was doing very well...way before he contemplated becoming a guinea pig for Big Pharma. It would also be interesting to know more about how he originally came to test positive for HCV antibodies. And about the lifestyle he lived. Was he an alcoholic? Abuse recreational drugs, etc? PS: The reason they are charging that much is simple: Because they can. Ever since the advent of HIV, they've known that they can always count on the ignorance of people like you. PPS: "HCV has some immunosuppressive effects that protect the liver, together with the virus, from the host immune response to some extent. You don't necessarily want to lift that protection without good reason." That statement may go down in history as perhaps the dumbest words ever spoken. Now HCV can even PROTECT the liver! Sounds like something you would say...Andy.

Dragan (2014-04-22 18:26:08)

Someone forwarded this article to me and I thought of this blog. Give your ideas some legs: The positive effect of walking on creative thinking doi: 10.1037/a0036577

George Henderson (2014-04-24 19:14:12)

Hi Joe and Andy, HCV infectivity depends on its presence in serum, because it rides on the VLDL → LDL-R cycle. This is why carbohydrate restriction is a worthwhile method to control HCV. And why PCRs are accurate predictors of clearance. My PCR count predictably dropped and rose according to the carbs in my diet. I don't doubt that Sofosbuvir + GS-5816, or any similar combo, will clear the virus and save lives IRL, which is not to say that other methods won't also save lives. I doubt that interferon-based therapies could ever have had the same effect. During treatment my ALT and AST went to normal and have stayed there. And my fibroscan score shows significant reversal of scarring. Pharma gets precious few things right, but this is one of them. Don't risk adding Sovaldi to some toxic old brew, wait for the all-new combos.

## **The Link Between Lead and Crime (2014-04-22 05:00)**

In the 1960s, a Caltech geochemist named Clair Patterson made the case that there had been worldwide contamination of living things by lead, due to the lead in gasoline. There were great increases in the amount of lead in fish and human skeletons, for example. More than anyone else he was responsible for [1]the elimination of lead in gasoline. (By coincidence, this was just shown on [2]the new Cosmos TV series.) A professor of pediatrics at the University of Pittsburgh named [3]Herbert Needleman did some of the most important toxicology, linking lead exposure (presumably from paint) and IQ in children. Children with more lead in their teeth had lower IQ scores. The importance of this finding is shown by the fact he was accused of scientific misconduct.

When lead was eliminated from gasoline, blood levels of lead went down – and so did crime. The idea that childhood lead exposure causes crime many years later explains so many otherwise-hard-to-explain facts, especially worldwide declines in crime rates, that I conclude it's true: lead exposure does cause criminality. Kevin Drum wrote [4]a long article about this in Mother Jones a year ago and followed up his original article [5]in many ways. [6]A BBC radio show yesterday covered the topic.

This interests me for two reasons. One is simple. It shows the value of [7]monitoring your own brain function by using something like the brain test I have often blogged about – e.g., to notice that [8]butter made me smarter or [9]mercury in my teeth fillings made me stupider. There's still lots of lead in the world – in old windowpanes, for example. And you are exposed to thousands of other modern chemicals (e.g., in cleaning products) whose effects on your brain are essentially unknown.

The other reason is complicated. It involves the context of this discovery. Mostly, the health research establishment has been unable to get anything right. Heart disease has been the #1 killer for decades; doctors still claim (and vast number of people, including New York Times health writers, believe them) that it is caused by cholesterol. Depression and bipolar disorder might be the single greatest cause of suffering nowadays – and psychiatrists are still claiming it is caused by "chemical imbalance" in the brain. (For my view of what causes depression, see [10]this.) Beyond figuring out that lung cancer is caused by smoking, there has been almost no progress understanding what causes cancer. The "oncogene theory" of cancer turned out to be a dead end. There have been little bits of progress here and there but on the big issues, there has been nonsense decade after decade – and lack of realization that it is nonsense.

In contrast, taking lead out of gasoline was a big step forward in public health and pointing out the link to crime a big step forward in understanding crime. Rare examples of progress. What can I learn from that? I have stressed [11]the importance of insider/outside – people close enough to understand but far enough away to have freedom. The lead/crime case supports that. Clair Patterson was a geochemist, not a toxicologist. Rick Nevin, the first person to argue that lead causes crime, was an economist, not a criminologist. Both of them had a good methodological understanding and used this to shed light on a different area than their original training. (Obviously I have used my background in experimental psychology, especially my methodological knowledge – how to experiment, how to measure brain function – to shed light on many health questions.) The lead/crime link also supports my view that the

notion that "correlation does not equal causation" does more harm than good. The immediate response of many many people to the lead/crime evidence was exactly that – putting them on what turned out to be the wrong side. Whatever truth correlation does not equal causation might have is outweighed by the damage it does when it is used to ignore evidence. How smart do you have to be to realize "correlation does not equal causation" is stupid? To me don't ignore evidence is the most important principle of science. But many university professors don't agree with me.

I'm also impressed – in a good way – by Drum's article. At least it exists. Anyone can read it and then look further, for example at [12]original scientific articles. I wouldn't say it was easy to write but it did not require expensive travel, extensive interviews, or months of research. It did require original thinking. In contrast, the New York Times and The New Yorker, which do allow expensive time-consuming journalism, haven't published anything nearly as good in decades. The New York Times's idea of high-quality journalism seems to be [13]a series about the high cost of health care while The New Yorker weighs in on [14]the harm done by Dr. Mehmet Oz.

Thanks to James Keller.

1. [http://www.unc.edu/courses/2006fall/envr/230/001/Needleman\\_2000.pdf](http://www.unc.edu/courses/2006fall/envr/230/001/Needleman_2000.pdf)
2. [http://en.wikipedia.org/wiki/Cosmos:\\_A\\_Space Odyssey](http://en.wikipedia.org/wiki/Cosmos:_A_Space Odyssey)
3. [http://en.wikipedia.org/wiki/Herbert\\_Needleman](http://en.wikipedia.org/wiki/Herbert_Needleman)
4. <http://www.motherjones.com/environment/2013/01/lead-crime-link-gasoline>
5. <http://www.motherjones.com/kevin-drum/2013/01/lead-and-crime-linkfest>
6. <http://www.bbc.com/news/magazine-27067615>
7. <https://plus.google.com/u/0/communities/114619130176100669530>
8. <http://quantifiedself.com/2010/09/seth-roberts-on-arithmetic-and/>
9. <http://blog.sethroberts.net/2011/06/26/damage-due-to-mercury-revealed-by-brain-test/>
10. <http://blog.sethroberts.net/morning-faces-therapy-resources/>
11. <http://blog.sethroberts.net/category/scientific-method/insideroutsider/>
12. <http://pic.plover.com/Nevin/Nevin2007.pdf>
13. <http://query.nytimes.com/search/sitesearch/#/%22paying+till+it+hurts%22>
14. [http://www.newyorker.com/reporting/2013/02/04/130204fa\\_fact\\_specter?currentPage=all](http://www.newyorker.com/reporting/2013/02/04/130204fa_fact_specter?currentPage=all)

Xav (2014-04-22 05:40:12)

Seth, what shows and Youtube channels do you (and other blog readers) currently use for providing a dose of "morning faces" ?

Seth Roberts (2014-04-22 06:08:27)

I use bloggingheads.tv.

dearieme (2014-04-22 06:18:10)

I think you're wrong about causation and correlation. The simple belief that correlation must imply causation does, I guess, far more damage than ..... well, than what? For many problems it's perfectly reasonable to demand that an observed correlation be backed up by controlled experiments - whether on a population sample or on an individual. The problem arises where you can't perform experiments - nobody is going to impose lead or cigarette smoke on a sample of people. There you can turn to Bradford Hill's criteria - which seem to me superior to an uncritical supposition that correlation must imply causation. [http://en.wikipedia.org/wiki/Bradford\\_Hill\\_criteria](http://en.wikipedia.org/wiki/Bradford_Hill_criteria)

Seth Roberts (2014-04-22 07:28:10)

In my experience few people assume that correlations must imply causation. Whereas many people use "correlation does not equal causation" to ignore evidence.

sam tanyonevski (2014-04-22 08:01:32)

the complete state should read: "Correlation does not imply causation, but it does demand explanation."

gwern (2014-04-22 08:21:33)

> The problem arises where you can't perform experiments - nobody is going to impose lead or cigarette smoke on a sample of people. Dearieme, yes yes, everyone knows you can't experiment on people - \*that\* way. There's still ways you can try to experimentally confirm it: for example, instead of focusing on \*adding\* lead, focus on \*removing\* it; you can go find an area with lots of lead in its building, pay for random buildings to be renovated and de-leaded, and monitor outcomes of their inhabitants. This will require a lot more money and data than if you could add big doses of lead (since generally there's not that much lead you can remove so the effect will be small), but it's doable if there's will. Unfortunately, there isn't. Most people don't appreciate the value of this sort of research. (How much would an experimental confirmation or debunking of the effect of lead on crime be worth over the next century? Billions, at a minimum. Is anyone running these sorts of experiments? Nope.)

Joe (2014-04-22 09:08:31)

People who think the "correlation does not equal causation" principle does more harm than good, would certainly DEMAND that they NOT be tried for a capital crime (i.e., punishable by death) in a court of law, based solely on correlation. Or I would hope not. And real lives are also at stake here. There would be a demand for EVIDENCE, wouldn't there? Just because there is a far stronger correlation between men and murder than women and murder, a good criminal investigator would never automatically discount the idea that a woman may have committed a particular murder, and not a man. He or she would still look for EVIDENCE, right? Just imagine how many men would unjustly lose their lives if it were otherwise. It's the basis for the Hippocratic rule of: First, do no harm. The reason so many scientists and researchers like to use correlations rather than actual scientific evidence is this: \$ \$ \$ And it's easy to find a correlation. But actual EVIDENCE? Not so much.

Jack (2014-04-22 09:59:36)

In grammar school I was taught that the ancient Romans used lead pipes in their cities for plumbing, which poisoned them. Later I discovered that most if not all major cities in the United States use lead pipes throughout the cities to distribute water to homes. The city water, of course, is also filled with poison: arsenic. chlorine. chlorates and flouride (flouride is rat poison). Many of the weights that bodybuilders and weightlifters use are filled with lead, with no lead warning label whatsoever on them. Either city planners never went to school, refuse to learn from history, or don't care; or there is a gigantic conspiracy to keep people sick to keep them physically and mentally weak and submissive and trapped in the modern health care system,

which is actually a Death Cult. It is amazing that any of us are still alive, considering all of the poisons that exist in our air, water, food and "medicines". Good article!

Adam Long (2014-04-22 11:31:08)

Seth, I hope this is not a hijack but I had a few questions about the practicalities of morning faces. Apologies if you have covered these questions elsewhere, but I've read through your (extremely helpful!) summary page and couldn't find answers. 1) When you say morning, have you or others found that earlier is better? I get up around 7 am but as a practical matter, it would be easiest to do this while at my desk, around 9:30 or 10. Of course I will endeavor to self-experiment and find out, but would be curious to know if you have any thoughts on this question. 2) Do you find that you need to be staring directly at the faces for this to work? I ask because as a practical matter it would be easiest if I could have this running on my computer screen while I'm doing other things.

Seth Roberts (2014-04-22 13:17:38)

Is earlier better? There is an ideal time, where moving the faces earlier or later produces weaker results. The only way I know to figure out the ideal time is trial and error. Do you have to be staring directly at the faces for this to work? Yes. My guess is that the sensitive period is roughly 2 hours long. During this period you need at least 30 minutes (ideally 50 minutes or more) to get a big useful effect. So you need look directly at the faces for at least 30 minutes during the sensitive period. While looking at the faces you can listen to whatever you want – music, podcast, book, etc.

Xav (2014-04-22 15:56:26)

Thanks for the pointer to bloggingheads. Did you ever do any experiments with looking at still images of peoples faces versus videos to see if there was any impact ?

dr j (2014-04-22 16:45:23)

The only problem with removing lead is that lead has been replaced with other additives that mimic the behavior of lead in controlled gasoline combustion. As a chemist friend of mine said, okay remove lead, remove that as one source of stupidity and replace with partial pyrolysed benzene and other aromatic ring structures in early morning start-ups and by exhaust catalysts that are sub optimal.

bjk (2014-04-22 18:21:29)

30 minutes sounds like a long time to stare at faces. How about getting a dog? Your unconscious can't tell the difference between human and dog faces, right? The assumption is already that it can't tell the difference between virtual and real faces.

Seth Roberts (2014-04-22 19:09:48)

I can't imagine staring a dog straight in the face for 30 minutes. 30 minutes isn't a long time for a conversation.

Seth Roberts (2014-04-22 19:11:11)

I've never tried still images. If I didn't have a computer monitor, I'd use a mirror.

Seth Roberts (2014-04-22 19:12:22)

ethanol is a good substitute for the lead in gasolines.

Alex Chernavsky (2014-04-23 04:14:03)

There's also the interesting theory that legalized abortion lowers the crime rate: [http://en.wikipedia.org/wiki/Legalized\\_abortion\\_and\\_crime\\_effect](http://en.wikipedia.org/wiki/Legalized_abortion_and_crime_effect)

Andrew (2014-04-23 07:30:38)

Watching a talk show like bloggingheads for 30 minutes doesn't seem hard.

dearieme (2014-04-23 14:04:12)

But, gwern, it's so easy for your sort of experiment to miss the point. For example, people gathered the statistics for one of the big Australian lead-mining towns. (Broken Hill, I imagine.) People there were as healthy as you like - no sign of lead cutting a swathe through them. But, it seems likely, that if lead in gasoline was the problem then you need to study not the rather large particles ("dust") emitted by ore mining, but the tiny particles emitted from internal combustion engines. dr j: "As a chemist friend of mine said, okay remove lead, remove that as one source of stupidity and replace with partial pyrolysed benzene and other aromatic ring structures in early morning start-ups and by exhaust catalysts that are sub optimal." That may be why there was then a war against aromatic compounds in gasoline. Benzene, once used to wash grease off your hands in the chem lab, was discovered to be far more dangerous than had been understood.

dearieme (2014-04-23 14:09:22)

"The idea that childhood lead exposure causes crime many years later explains so many otherwise-hard-to-explain facts, especially worldwide declines in crime rates, that I conclude it's true: lead exposure does cause criminality." But that might extend to having exposure to lead being used to explain every otherwise inexplicable rise or fall over time. Does decline in lead explain rises in divorce rates, bastardy, and so on? Does the lead argument satisfy Bradford Hill's criteria?

Seth Roberts (2014-04-23 15:00:29)

Nevin goes over how his argument satisfies Hill's criteria here: [http://www.ricknevin.com/uploads/Nevin\\_-\\_2009\\_Env\\_Res\\_Author\\_Manuscript.pdf](http://www.ricknevin.com/uploads/Nevin_-_2009_Env_Res_Author_Manuscript.pdf) Few things rose a lot and then fell a lot over the period of time we are talking about. For example, divorce rates only rose.

B.B. (2014-04-25 09:51:47)

For pure health reasons, there is plenty of cause to "get the lead out." We need to do more and faster. But that is different from pinning the blame for violence on lead. Here is an article which takes a skeptical look at the lead-violence link. The issue is not so obvious. The article gives academic references. <http://www.samefacts.com/2014/04/crime-incarceration/lead-and-crime-a-hole-in-the-theory/> Here is another idea. Modern chemicals reduce testosterone in males, and that reduces aggression. And another theory. It is well known that heat, particularly humid heat, put a burden on the body, which must keep the brain cool. If it is too hot, people become "hot heads." An overheated brain will far more easily commit acts of violence. It is why violence is higher in summer. The widespread adoption of air conditioning and new dress standards which allow cooler clothing may have reduced violence. Could not greater incarceration contribute to lower social violence (outside of prisons, that is)? New York has had an exceptionally large drop in violent crime. Is it not PC to say that aggressive policing made a difference?

York (2014-04-25 10:47:04)

Lactobacillus plantarum CCFM8661 alleviates lead toxicity in mice. <http://www.ncbi.nlm.nih.gov/pubmed/22684513> Protective Effects of Lactobacillus plantarum CCFM8610 against Acute Cadmium Toxicity in Mice <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3591948> Dead L.plantarum -as in heat-killed- works as well as alive cultures.

York (2014-04-25 10:48:32)

It may boil down to lack of probiotics.

## **Value of Salt Reduction Supported by Four Studies (2014-04-23 05:41)**

For a long time, researchers have found links between high sodium intake and higher blood pressure, and between higher blood pressure and increased risk of stroke. At the same time, critics, [1]including Gary Taubes, have argued that the data do not support the idea that most people should reduce their salt intake.

New evidence suggests the critics were wrong. Four different studies support the idea that high amounts of salt



intake are generally bad.

[2]One study recently appeared in BMJ Open. "The UK initiated a nationwide salt reduction programme in 2003/2004. The programme has been successful and resulted in a 15 % reduction in population salt intake by 2011," write the authors. That might not seem like much but the reduction was in the salt in processed foods, which for most people is most of their salt intake. The more processed food you ate – and the more extreme your salt intake – the greater the reduction.

The main finding of the study was that over the same period, there was a large and steady decrease in both blood pressure and strokes in the UK. Mortality from stroke and ischemic heart disease (IHD) went down by 40 %!

There were small changes in other environmental variables over the same period: people ate slightly more fruit and vegetables, weighed slightly more, smoked somewhat less, and so on. Maybe these other changes were what led one critic to dismiss the results in [3]a *New York Times* article:

Dr. Niels Graudal, a senior consultant in the department of internal medicine at Copenhagen University Hospital, said that connecting the two events "is meaningless."

"This paper describes two independent incidents," he added. "That these incidents should be in any way connected is absolutely unlikely."

Consistent with the low quality of science journalism in the *New York Times*, it seems the reporter, Nicholas Balakar, did not ask Dr. Graudel any hard questions – for example, for an alternative explanation of the decline.

The BMJ study did a poor job of determining the *a priori* likelihood of such a big decline. It could have looked at year by year changes in stroke and IHD mortality before 2003, for example. Was stroke and IHD mortality rising or falling? It could have looked at changes in stroke and IHD mortality in similar countries without a salt reduction program over the same period. Such comparisons would have helped a lot. But the BMJ study did report the results of other nationwide salt reduction programs.

Japan, in the late 1960s, carried out a government-led campaign to reduce salt intake. Over the following decade, salt intake was reduced, particularly in northern areas from 18 to 14 g/day. Paralleling this reduction in salt intake, there were falls in BP and an 80 % reduction in stroke mortality in spite of large increases in fat intake, cigarette smoking, alcohol consumption and obesity which occurred during that period. Finland, in the late 1970s, initiated a systematic approach to reducing salt intake through mass media-campaigns, co-operation with the food industry and implementing salt labelling legislation. This led to a significant reduction in the average salt intake of the Finnish population from  $\approx 14$  g/day in 1972 to less than 9 g/day in 2002. The reduction in salt intake was accompanied by a fall of over 10 mm Hg in systolic and diastolic BP and a decrease of 75–80 % in stroke and IHD mortality.

Again, reductions in salt intake happened just before huge decreases in stroke and IHD mortality. It is the triple repetition of an unlikely event (big reductions in mortality) and the experimental aspect (something was specifically changed) that convince me. The critics are not going to come up with a plausible alternative explanation of all three cases (UK, Japan, Finland) any time soon.

[4]A paper co-authored by the same Dr. Graudal who dismissed the new findings found that high sodium intake

was associated with increased mortality. It also found that low sodium intake was associated with increased mortality. This is why a reduction in the salt in processed food makes so much sense: 1. It's easy. You don't have to do anything. 2. It reduces salt intake the most in people who eat the most salt – exactly where it is likely to be the most beneficial.

Just to be clear, this data also says that if you don't eat a lot of salt, there is no good reason to reduce your salt intake (unless you have high blood pressure).

1. <http://www.nytimes.com/2012/06/03/opinion/sunday/we-only-think-we-know-the-truth-about-salt.html?pagewanted=all>
2. <http://bmjopen.bmj.com/content/4/4/e004549.full>
3. <http://www.nytimes.com/2014/04/22/health/study-linking-illness-and-salt-leaves-researchers-doubtful.html>
4. <http://ajh.oxfordjournals.org/content/early/2014/03/26/ajh.hpu028.1.full>

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Charlie Currie (2014-04-23 07:26:26)

The big confounder here is processed food... As Gary Taubes says, "MOST" people do not need to reduce their salt intake. And, I would add, "MOST" people need to reduce their processed food intake.

Adam (2014-04-23 08:38:00)

Here the same Dr. Graudal says CDC salt guidelines are TOO LOW: <http://www.webmd.com/food-recipes/news/20140402/cdc-salt-guidelines-too-low-for-good-health-study-suggests>

CC (2014-04-23 09:10:41)

The Japanese decreased their salt intake from 18 \*grams\* to 14 grams/day? That's a huge amount of salt! In the linked article from Adam (in the comments), Graudal says that the safest intake is between 2,645 and 4,945 mg. Maybe the opponents don't really disagree after all?

Seth Roberts (2014-04-23 10:30:44)

yes, Japanese food is very salty.

Charlie Currie (2014-04-23 11:03:21)

I think in most cases, not all for all people, very salty food is self limiting. The problem with the salt content of highly processed foods, or at least one of the many, is that it is right in the "salty enough" zone, so it is not self limiting, which is certainly not the goal of food manufacturers. And, it's pervasive, just like soy, wheat, sugar, corn (starch & HFCS) and other un-spellable / un-pronounceable ingredients.

bea (2014-04-23 11:20:28)

I'm a 54 year old woman 5'6". On the sad diet I weighed 175 lbs and BP was creeping up to slightly above normal. Fast forward 4 years Paleo style diet 135 lbs and BP low. Sometimes 80 over 60. I now make sure I get enough salt daily. I put some salt in my water and liberally salt my food. That upped my BP to 115 over 75. I also don't drink water excessively as I can tell it depletes my sodium. When you switch to a real food diet you need to seek out salt.

Gina (2014-04-23 11:23:52)

Could iodine be playing a role in this? I don't know if the salt in processed food is regular, iodized salt or what's in salty Japanese food. I know that some people who go on low-sodium diets get into trouble with iodine deficiency, just like people who use

non-iodized sea salt. But, like most things, too much iodine is trouble.

Seth Roberts (2014-04-23 11:27:30)

"The problem with the salt content of highly processed foods, or at least one of the many, is that it is right in the "salty enough" zone." The amount of saltiness you think is "just right" depends on your salt intake. When your salt intake is higher, you want more salt in your food. Presumably this was a long-ago adaptation to salt scarcity. When salt was abundant, you wanted more of it – just like the theory behind the Shangri-La Diet. (When calories are abundant, you want more.) This means that the salt in processed foods has two effects: it increases the salt in your blood; and it increases how much salt you want in the next food you eat. This is another reason that simply reducing the salt in high-salt foods is worth trying – because it has two effects.

Bill (2014-04-23 12:10:18)

Dr. David Brownstein has been advising his patients to \*supplement\* unrefined salt for years and has found no increase in BP and substantial health improvements. He has written a book about salt and health based on his clinical experience. Unrefined (real) salt may be very different in its biological effects than refined salt. And the observational epidemiology cited here is not, to me, convincing. Beyond the obvious confounder of salt correlating with processed food, there are doubtless many others. Very easy to draw the conclusion you expect or want when establishing real causality would require far more rigorous methods. If you believe this kind of epidemiology then why not listen to the Harvard School of Public Health and avoid animal fats? Also, the effect sizes cited here strain credibility. How could a 10 point drop in BP explain an 80 % decrease in stroke and heart disease mortality? Other things are going on, and I don't think anyone really knows what they are.

Joe (2014-04-23 12:37:58)

"Other things are going on, and I don't think anyone really knows what they are." I agree. Too many moving parts. "Dr. David Brownstein has been advising his patients to \*supplement\* unrefined salt for years" Yes, and Light Grey Celtic sea salt in particular. Far more minerals. Plus, it tastes great! I can't stand the taste of refined salt anymore.

Joe (2014-04-23 13:34:10)

14 grams of salt was normal in those places!? I got a lot of benefit from deliberately increasing my sodium intake to 4 grams and that tastes like a lot to me. I can't imagine how people were managing to get down so much more in Finland and Japan.

Seth Roberts (2014-04-23 15:05:00)

"How could a 10 point drop in BP explain an 80 % decrease in stroke and heart disease mortality? Other things are going on, and I don't think anyone really knows what they are." The big decrease is plausible because it is only extremes of salt intake that are dangerous – that is, it isn't linear – and the decrease was greater among people who ate a lot of salt. "Other things are going on." If you have an alternative explanation of the UK, Finland and Japan results, what is it? A vague claim of "other things" is no help.

George (2014-04-23 16:21:01)

"Other things are going on." If you have an alternative explanation of the UK, Finland and Japan results, what is it? A vague claim of "other things" is no help." Stupendous intellectual error. I can perceive an error in your logic without having to come up with an explanation of my own. As a piece of logic this is terrible (really shockingly so), as a piece of psychology this is one of the best things I've seen in a long time. It's very hard for the human mind to simply admit ignorance and suspend judgement. People would rather believe a bad theory that has little supporting evidence than simply say "I don't know". The human incapacity to simply say "I don't know" when there is insufficient evidence is probably responsible for most of the silliness that passes as nutritional advice these days and does grave harm to our prospects for ever figuring out true causes. If you simply can't suspend judgement until good evidence shows up and feel irresistibly compelled to adopt the first vaguely plausible theory, you are unlikely to persevere in getting at the true cause.

dr j (2014-04-23 17:46:55)

Ah George, loosen up! Seth provides us with "brain morning faces" and I'd be a tad lost without his and others' reactions and anecdotes. I've spent 20 years at morning teas with academics and my old dept head would say something like this to goad somebody to go spend the week after hours reading up on the literature to create more outrageous discourse at morning tea the following week- might even lead to a paper or two for the dept. :-)

Jack (2014-04-24 10:10:33)

The sinister movement to demonize salt and destroy the health of the world's population has been in full swing for a while now. By getting people to believe that salt is bad, and to limit salt, the agenda for population control thrives. Wars have been fought just to obtain salt. Gandhi led the native people of India in a walk to the sea to make their own salt from saltwater, to protest the British governments monopoly on salt. The body needs salt to retain life giving fluids in the body, and to transport life giving fluids through the body for nourishment and to flush wastes out of the body. For thousands of years, Chinese Doctors have known that salt is absolutely essential to health. In Chinese Medicine, salt is known to strengthen bones, strengthen teeth, strengthen kidneys, strengthen sex organs & performance, strengthen ears and hearing, strengthen brain fluid and strengthen and increase the hair on the head. It is also used to cure problems and diseases associated with the same things it strengthens. Yes, the Chinese know that too much salt or too much salty taste in the diet is not good for the heart and may increase blood pressure. But to demonize salt, to encourage people to cut back too much on salt will make people weak and lead to illness, increased doctor and dentist visits, and early death. Every person's body is different, and people's health conditions change all of the time. Salt is necessary for life. How much salt is needed depends on common sense and the needs of the individual. Personally, I would not take any government study seriously or any World Health Organization study seriously, because their agendas are the same. They are Death cults designed to trick people into submission and to cull the human population.

Gina (2014-04-24 14:18:19)

Is it just me, or is it getting weirder here?

George (2014-04-24 18:30:48)

I know, dr J, but seriously! There's limits to bad thinking and this kind of thing permeates nutrition and diet advice in this country. It has to stop. I have no idea why the quality of thinking in the field of nutrition seems particularly bad as practiced by highly intelligent people, but it is. There's a mystery here.

Bill (2014-04-25 06:27:38)

"The big decrease is plausible because it is only extremes of salt intake that are dangerous — that is, it isn't linear — and the decrease was greater among people who ate a lot of salt." Seth, are you saying that four out of five strokes and heart attacks take place in people who eat "extreme" amounts of salt? Maybe that's true, and maybe it could make credible that an average 10 % BP decline could cut CVD mortality by 80 %, but I'd be very surprised. "If you have an alternative explanation of the UK, Finland and Japan results, what is it? A vague claim of "other things" is no help." I don't think anyone knows. As you've pointed out, the underlying causes of CVD aren't even known. And hasn't CVD dramatically decreased in recent decades in general? Dr. Nortin Hadler has pointed out that CVD now poses a pretty low risk of shortening our lifespans, just as the hysteria about avoiding sat fat, salt, etc. and taking stains is peaking. If we don't know why life-shortening from CVD is declining, just picking one thing that correlates with that decline doesn't seem convincing to me. For now at least, I'll keep bringing my own salt to restaurants (since it's on the table less and less) and supplementing my 1 teaspoon of Celtic salt per Dr. Brownstein.

libfree (2014-04-25 12:29:44)

Aren't we just discussing levels here? I don't see that "The value of salt reduction supported by 4 studies" doesn't really help me determine if my salt levels are good or bad. Since going on Paleo, I have to fight to get my salt levels up to 5g a day which is where I feel the best (based on various markers). I do live in the american south and I sweat heavily and exercise heavily daily. I am a little shocked by how much salt is listed on processed foods. I've been paying attention the last few days when I go through the grocery store and it's pretty shocking. I just looked up the old meal I would eat at Taco Bell in the bad old days it comes in at a shocking 3.4G. I still don't see how I could have come close to the 14g number that Japanese had even on my old

diet. I checked my old diet log and found the number to be closer to 10g.

Justin (2014-04-25 12:54:08)

What about other minerals? E.g. potassium and magnesium (among others)? Having an aggressively high sodium intake without counter-balancing other minerals could cause for some issues as the body reels to re-balance. Laser-beam focus on just sodium, which seems to be the "salt" du jour seems to ignore a considerably more complex system.

Sara Lake (2014-04-25 19:54:27)

I'm (still) researching autoimmunity in a bid to cure my ITP. I've just come across a link between high salt and increased expression of IL17 (a high, or under-regulated level of which is linked with autoimmune disorders). [http://www.the-rheumatologist.org/details/article/4797501/Salt\\_as\\_a\\_Promoter\\_of\\_Th17\\_Cells\\_and\\_Autoimmune\\_Disease.html](http://www.the-rheumatologist.org/details/article/4797501/Salt_as_a_Promoter_of_Th17_Cells_and_Autoimmune_Disease.html)

sam tanyonovski (2014-04-26 01:30:55)

okinawans have been living till 100, illness free, for centuries in spite of a plethora of salt. of course, once they started with western food longevity decreased and illnesses increased.

George (2014-04-26 14:36:23)

The problem with what you're saying that in the world of nutrition Japan doesn't actually exist. If Japan *existed*, then Taubes theories would have been laughed to scorn. If Japan *existed*, then Stephen Guenets theories of high palatability leading to obesity would have been considered a joke. If Japan *existed*, then the theory that processed food leads to obesity would have been discarded long ago as a poor joke. No, sam tanyonovski, Japan simply *does not exist*. So stop inventing countries that don't exist to illustrate your nutritional theories. Only one country actually exists when it comes to nutrition; the United States.

Tom Metz (2014-04-27 10:51:24)

I don't know if the two go hand in hand but since losing over 100lbs years ago my taste for salt went through the roof. I don't know if it's some kind of psychological addiction but I love salt. In the past I would probably get, not even kidding, 20+ grams a day. I never actually measured it to be that much but when I did make an effort to measure I remember weighing out 10 grams and looking at it saying "whoa this is nothing..." then I proceeded to eat the 10 grams and a lot more without weighting it throughout the day. It doesn't increase my blood pressure (maybe by 10pts max to an already low blood pressure)... at least not according to the cuff I bought. What does happen, however, is that I retain an ungodly amount of water. Always. I can retain, and I am not kidding, 15lbs of water if I have an extreme salt intake for a couple of days in a row. That's finally the point when I HAVE to cut back because I will literally feel heavier when I walk around. My shoes get tighter and I just look really really fat. People have even made comments that I've put on weight. They don't believe me when I tell them it's water weight. For that reason I HAVE to watch my salt intake... which I hate because I really really really love the salt which is funny because I never cared about it when I was super overweight. I really do think salt sensitivity is very very individual. I can't tell you how many times I've read that the body adjusts homeostasis and fluid balance to match CONSISTENT levels of salt intake. Not in my case. For years it's been- eat a little salt consistently, hold a little water. Eat a lot of salt consistently for a couple of months, hold a lot of water for a couple of months.

Justin (2014-04-28 06:26:59)

@Tom, I, too, take in a lot of salt. I've not measured it to date, but I salt like a fiend. Usually sea salt but I'm not afraid of typical table salt. I also take in a decent bit of magnesium daily. Like you, I can tack on some serious water weight under the right circumstances. The most consistent water-weight add is related to carb/glycogen replenishment-something I've blogged about here: <http://justinowings.com/understanding-bodyweight-and-glycogen-de/> One thing I've noticed that I'm curious about in your experience is that while my salt intake is high, I think my potassium intake can be low at times \_relative to other salts\_, which can lead to cramps/issues that seem to be dealt with by adding some "NoSalt" to water or literally licking it off my hand (doesn't taste the best as far as salt goes but seems to work). I've also noticed that alcohol consumption can lead to some serious water retention - not unlike what you describe with people noticing weight gain. I can clearly see the impact of water retention on my "softness" when I see a material change in the scale. For example, yesterday I started the day at 164.

Ate a high protein diet that was low in fat and low in carb (call it 200g protein, 30g fat, 70g carbs but probably 40 of that was dietary fiber). ALSO had 6 oz of tequila – 68 g of alcohol. Weight this morning = 169. By tomorrow morning my weight will probably be around 163 if I had to guess. Crazy, right? Maybe not to you. I hate water weight fluctuations though — they're just annoying. I prefer looking more lean to puffy and the worst I've had it on water retention was at the tail end of a week at the beach where my legs literally got swollen from the water weight. Given my body comp at the time was only about 10-12 % BF, that kinda water retention made for serious swing in my appearance – particularly on my legs. TL;DR – water weight is a major force to be reckoned with! And it seems pretty poorly understood. Btw, I have very low BP (and a low resting HR), too.

Tom Metz (2014-04-28 10:17:56)

Thanks for your reply Justin, I'll get to potassium but first I want to talk about alcohol consumption and water retention. It's really interesting that you mention alcohol because I, unfortunately, have a lot of personal experience with this. I use to drink a lot during my college days. Thankfully, though it was hard to completely stop... once I did finally stop I haven't been tempted to go back. This was many years ago. The first time I ever got pretty drunk I woke up the next morning feeling light as a feather and feeling the best I had in months. Alcohol is a natural diuretic as it inhibits anti-diuretic hormone. It's well known in bodybuilding circles that drinking some hard liquor before a show can help drop water weight and increase muscle definition. Aside from that I never noticed alcohol to CAUSE water retention. Of course I was really obese at the time so it may have happened. I would imagine it's possible, probably from an overcompensation effect from it greatly inhibiting anti-diuretic hormone while the body is metabolizing the alcohol. As for the potassium... I started using lite salt mixed with nu-salt to combat the high sodium. I'm probably using %75 potassium and %25 sodium while measuring everything out carefully. Excess potassium can be dangerous. It takes a lot though. I don't think the potassium does anything special to help eliminate excess salt. The decrease in sodium intake as a result of the potassium replacement probably helps reduce water retention a lot more than taking in potassium does. Interestingly I find that the potassium does make me quite thirsty but I don't hold the water. I'll drink like crazy then urinate a lot over the next couple of hours. One thing that I swear works... eating a lot of cranberries. There doesn't seem to be a lot of research on this but a lot of people swear that cranberries help with water weight. My experience has been that when I make a cranberry smoothie (with real cranberries I don't use the juice) I get a dull, almost uncomfortable, mild sensation in my midsection followed by increased urination for a couple of hours. Of course if you really really want to eliminate water weight... eliminate carbs for a couple of days, like you mentioned, lower salt, sweat a lot, be in a calorie deficit etc... the body loses a lot of what it uses to hold on to the water this way.

Sam (2014-05-06 13:21:14)

Japan carried out a government-led campaign to reduce salt intake ??

thhq (2014-05-09 04:02:34)

The super saltiness of Japanese diet is probably due to liberal use of soy sauce. Finland I don't know but salt licorice pastilles (salmiakki) are popular. They're so salty that they burn my tongue.

## **Journal of Personal Science: Omega-3, Nursing a Baby and Postpartum Depression (Part 1 of 2)** (2014-04-25 05:00)

by Allan Folz

My wife had moderately severe postpartum depression (PPD) after the birth of our first child, a boy, in 2004. The depression lifted at the same time the nursing stopped, when he was about two years old. The pregnancy itself was without major or even minor problems so the depression was a big surprise. It was frustrating because nothing we did to alleviate it actually helped.

With our second child, born in 2007, for the whole pregnancy we were worried she would experience it again. Thankfully she did not. There were a couple of differences between the two pregnancies. Our first baby was a boy and born with a complication during delivery. The placenta did not release. This caused to be transferred to a

hospital, as it was a home birth. At the hospital she was given two units of whole blood. Our second baby was a girl, also born at home, and this time with no issues.

Her third pregnancy was in 2010 and this is where the story begins.

A couple months before she became pregnant, I had discovered paleo dieting following a link to [1]Richard Nikoley's blog. I read about his experience and followed links to other sites in the paleosphere. The diet, the rationale behind it, and the numerous reports of other people having their health remarkably improved by it really resonated with me, so we adopted a lower-carb, paleo-style diet.

We didn't have health problems that we were trying to correct for ourselves or a particular need to lose weight, outside of a few pounds for my wife relative to how much she weighed prior to her first pregnancy some six years before. However, I've always had an interest in health, medicine, and how the body functions. I even considered becoming an M.D. back in my undergrad days and minored in biology alongside my major in electrical engineering. I have a strong skepticism towards experts and what is the conventional wisdom in mainstream media sources. I think that's why I almost immediately found Seth's blog so intriguing, he questions the conventional wisdom and pushes people to take personal responsibility over their health and well-being. So, we were on a low to moderate carb diet, but weren't fanatical about it. I remember that after my wife's first visit with her midwives they were concerned by the ketones in her urine and strongly suggested she start eating more complex carbs. She followed their advice to be conservative. We were also supplementing Vitamin D and a little fish oil (a Mega-EPA omega-3 supplement). She was averaging 5K IU of Vitamin D a day, but only about one, 1 gram capsule once or twice a week of the fish oil. All in all, not much fish oil as I wasn't sure how much was really necessary for people otherwise eating traditionally healthy, home-cooked meals, and I'm very skeptical of the diet supplement industry.

Late in the third trimester she started experiencing some moodiness. By itself, it probably would not have seemed atypical for a woman in her third trimester, but with my wife's history we were far more sensitive to it and quick to take notice. Paying close attention (and long before discovering Seth's blogging on self-experimentation), I eventually realized the moodiness happened when we'd skipped taking fish oils mid-week. If she didn't take any mid-week, by Saturday it was very noticeable that her mood was on the short-tempered side. Once I noticed the connection, and without telling her what I was doing (i.e. single-blind), I'd deliberately skip the mid-week dose one week and note her weekend temper and mood. The following week I'd be sure she took a capsule mid-week. Next week back to skipping. Then, just to be sure, I had her double-dose one week. The double-dose had her in the best mood of all.

At first I was amazed. It was so neat, so mechanical – like flipping a switch. But it occurred to me that if two capsules in a week vs. one was enough to noticeably change her mood then she was obviously deficient as every mg was being put to use with no spare capacity in her system. I wondered if her body was scavenging omega-3 from her own brain for the developing fetus. That was a sobering thought. After that she went to supplementing daily and had no mood issues throughout the rest of the pregnancy or while breast feeding. She did have some of the typical “baby blues” that set in at the three day mark, but they did not last long. Also, she had good days and bad days, like anyone would. I'd say the omega-3 returned her to her normal bearing, irrespective of the demands of pregnancy and nursing.

There is zero doubt in my mind that omega 3 helped both my wife deal with a severe and yet all too stereotypical mental health problem. I'm a pretty sharp, pretty well-read guy who's always had an interest in biology and medicine. After the experience with our son's weaning, I wondered if nursing could cause or complicate PPD.

Seven years ago, when my wife was pregnant for the second time, I had searched the web for material related to those two (nursing and PPD) and came up empty-handed. I know I've never read something dealing with those two in mainstream outlets because it's the type of thing I would mentally file away for future reference if the

situation ever came up. It seemed like I was the only one willing to consider there might be a connection between them. Diet suggestions for nursing mothers are full of the usual bromides about getting enough complex carbs, fiber, and protein. Search engine auto-completes on “postpartum depression” don’t offer “omega-3” or “diet” anywhere in the top 10. You have to type the first two letters of each before they pop-up as auto-complete options. Today, the first hit for “postpartum depression diet” (I use Bing) is <http://www.postpartum-living.com/depression-diet.html>, which makes absolutely no mention of fats or lipids. It mentions vitamins, of course, but, incredibly, nothing specific.

During the two years my wife had PPD after her first pregnancy, no one suggested omega-3. At the time, I attributed her PPD to the delivery complications and the blood transfusion. I knew that depression is well-known among heart-attack survivors and IVF recipients, and, in my opinion, IVF is a pretty severe complication. Among the health professionals she saw about her PPD, the only thing the MD did was give her a prescription for Prozac or something similar, which she didn’t use because, well, of course – she was nursing. Had she quit nursing to take the prescription we would have attributed the improvement to the drug when it actually came from ceasing nursing. The naturopathic practitioners – she saw two different ones – gave her B-12 shots, SAM-e, melatonin, and a bunch of useless diet advice that one could read at all the usual places. The B-12 was good for a 24-48 hour energy boost. Other than that, none of them made the slightest difference.

*Part 2, about using omega-3 to treat ADHD, will appear tomorrow. Allan Folz is a software developer in Portland, Oregon. He recently co-founded [2]Edison Gauss Publishing, a software house that makes academically rigorous educational apps for children in grades K-8. Their apps are suitable both classroom and home use, and have proven to be particularly popular among homeschoolers that appreciate a traditional approach to practicing math.*

1. <http://freetheanimal.com/>
2. <http://www.EdisonGauss.com/>

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nicole (2014-04-25 07:44:26)

Did you see this? <http://www.theatlantic.com/health/archive/2014/04/postpartum-depression-can-happen-to-any-parent/360918/> I wonder what would account for Dad’s getting PPD...

Allan Folz (2014-04-25 14:48:02)

Wow, crickets. :) Let me guess tl;dr? Sorry. As for the Atlantic article (and I thought I mine was long), not impressed. Didn’t make a clear enough distinction between “blues” and depression. Beyond that, sure, Dads are sleep-deprived too and experience negative effects. No surprise there. However, it didn’t offer any prescriptive advice beyond the usual “communicate, get rest, eat well, brush your teeth well and floss.” Ok, maybe not that last one, but I didn’t read the whole thing so maybe it’s in there after all. :)

Andrew (2014-04-25 15:30:53)

Hi, Allan, it’s a good article. Maybe people are waiting for part two before commenting? Anyway, I enjoyed this, and I’m very much looking forward to reading the second part.

Allan Folz (2014-04-25 15:52:32)

Thanks Andrew. I was a little worried I missed the mark with it.



Thomas Johnson (2014-04-25 16:36:57)

Did the midwife note anything about prenatal vitamins? Nearly all prenatal vitamins include omega-3, and all of the doctors my wife and I have talked to suggest continuing to take prenats during nursing. Here's the nutritional information for one of the most popular prenats (one-a-day): <http://labeling.bayercare.com/omr/online/oad-womens-prenatal.pdf> Note that it includes 223mg of omega-3. It seems like traditional medical advice could have saved some self-experimentation here.

Seth Roberts (2014-04-25 17:12:30)

I'm guessing that 223 mg of omega-3 is not nearly enough.

Allan Folz (2014-04-25 17:27:34)

Thanks for your question Thomas. It is a good one. With our first she took the Rainbow Light pre-natal all through the pregnancy and the whole time she was breastfeeding. It was a hard multivitamin so certainly had no O3. 10 years ago I'm not sure any of them did. Also, "Does your prenatal vitamin have O3?" was certainly a question no one asked us. Nor is it all that far from "Are you taking an O3 vitamin?" which definitely no one asked, much less recommended. With our third, she took the same pre-natal multivitamin. After three children, I know the routine. They ask, we tell them yes, Rainbow Light, they smile, nod, and say OK, good. But I'll respectfully dispute O3 is traditional, or even contemporary, medical advice. DHA is "a thing" now, but is it ever linked to mental health of the mother? Please show me where. I only see it marketed as important for the baby's development, akin to Folic Acid and Vitamin D. If the baby is healthy, who is going to know to take O3 for mom's benefit? Finally, the One-a-Day of 200mg of DHA and 23mg/day of EPA is very questionably adequate. From the Bloch/Qawasmi paper that Seth linked to on Monday we know EPA has greater efficacy than DHA. It's why O3 was discredited for ADHD treatment early on – all the early studies used DHA and the effects were mixed at best. For my wife, 400/200mg of EPA/DHA respectively, ie. 1 capsule a week, was not enough to keep her mood level, and twice that amount was the bare minimum. OaD is 1500/wk. If the woman is lucky enough to have the DHA work for her, she might be fine, but if not I think she'll have a very hard time knowing how to fix it if she is relying on conventional advice (switch to EPA and 2-5X the dosage) . My fear is doubling up on her OaD, a reasonable thing to attempt, is unlikely to help. So she'll give up on O3 for the wrong reasons.

Allan Folz (2014-04-25 17:32:53)

Seth, you beat me to it. For the record, the [1]Bloch-Qawasmi paper.

1. [http://www.jaacap.com/article/S0890-8567\(11\)00484-9/abstract](http://www.jaacap.com/article/S0890-8567(11)00484-9/abstract)

Thomas Johnson (2014-04-25 17:53:12)

Regarding links to mental health of the mother, I don't have a link to the original study, but a quick search found this article on WebMD: <http://www.webmd.com/baby/news/20110412/omega-3s-may-cut-risk-of-postpartum-depression> The study mentions 300mg of DHA 5 day/week in the experimental group. There's also this <http://www.medscape.com/viewarticle/775013> and this more recent article: <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0067617>

Seth Roberts (2014-04-25 18:41:51)

"she'll have a very hard time knowing how to fix it if she is relying on conventional advice (switch to EPA and 2-5X the dosage)" this isn't clear. what is the conventional advice? apparently YOUR advice is switch to EPA and 2-5X the dosage.

Allan Folz (2014-04-25 20:03:00)

Sorry. What I meant to say... She'll have a very hard time knowing how to fix her depression if she is relying on conventional advice, which either completely ignores O3, or at best recommends 1000-1500mg of DHA a week, which is too low an amount to make a difference. Instead, I believe women should be ready to take 400-800mg of EPA *a day*, which works out to 2800-5600mg/week.

Max (2014-04-26 07:24:04)

Excellent article, thank you Allan. I encouraged my wife to take 2 capsules, daily, of the Nordic Naturals pro-omega/ultra-omega product, which has 650mg EPA / 450mg DHA. Through two pregnancies (2011 and 2013) and breastfeeding, we had excellent

results - calm, alert babies and and no PPD. It's impossible to know how much to credit the O3 but your report reinforces my belief that it helps.

milly (2014-04-27 06:03:48)

Thanks for the post, very interesting. I suffered from terrible insomnia (and PPD/moodiness) since my son's birth, and once I weaned him at 2.5 years a few months ago, my sleep (and thus, mood) drastically improved. I took fish oil while pregnant (in addition to my prescription, iron-heavy prenats which I continued taking until weaning) but less vigilantly while breastfeeding. Conventional advice warns mothers of potential depression post-weaning, and bracing myself for that, was shocked to find the complete opposite.

Stephanie Pires (2014-04-28 00:39:01)

I had a very severe PPD with my first son, who has very mild autism. I feel that I am lucky to be alive. I noticed that the less I nursed, the less depressed I was. When I finally quit at 11 months, I was back to normal within a month. It was like a miracle. I too had complications and thought that I might die during his delivery. I always assumed the PDD was actually a form of PTSD. I didn't know anything about omega 3's 30 years ago, but I have to say, it was the single most awful event of my entire life. I can understand now who something like that would have helped. At the time, no one took me seriously, except my mother. She called me every day twice a day and finally, when my son was 3 months old, I went and spent a month with them. I was somewhat better after that. I think my strange labor and delivery were related to oxytocin.

Orthomol world vitamin (2014-04-30 09:17:44)

Orthomol Vitamins for teenagers i join, all above told the truth.

mcx realtime data provider (2014-05-01 10:47:14)

Thank you for the auspicious writeup. It in fact was a amusement account it. Look advanced to more added agreeable from you! However, how can we communicate?

## **Journal of Personal Science: Omega-3 and ADHD (Part 2 of 2) (2014-04-26 05:00)**

by Allan Folz

My story of omega 3 and self-experimentation did not end with my wife and her pregnancy. As I mentioned, I discovered the paleo diet, Vitamin D, and fish oil all about the same time. Mostly for reasons of general good health we began supplementing with vitamin D and fish oil (Mega-EPA Omega-3 supplement). I ordered some of each from the same place online and we began supplementing both at the same time, around January-February of 2010.

At the time my son was in kindergarten and having problems socializing at school. He had them at home too, but we'd all adjusted to them at home. He exhibited a lot of what would be called typical spectrum issues, though I was certain he didn't have anything approaching Asperger's. Things that interested him, such as building with Legos playing outside with or without friends, he did quite well. It struck me that he was a high-energy boy who didn't appreciate receiving directions, desk work, or anything requiring moderation and self-reflection. I like to joke that Tom Sawyer is hardly a modern archetype.

Nonetheless, he was having problems. The Vitamin D Council web site had a number of very persuasive anecdotes from parents about autistic children cured by Vitamin D. Our son wasn't autistic, but autism involves several behaviors, and he had a few of them. He didn't make good eye contact when talking or being talked to. He wouldn't follow directions if he didn't feel an intrinsic motivation to follow them. He could not fall asleep and would often lay in bed restless for an hour or more at night. The Vitamin D Council recommended 2000 IU per 50 lb/day, so that's what we all took. We also took one fish oil capsule a week. At the time I thought of omega-3 only being for heart health. This made me a little skeptical about how much was really required. We seemed a healthy family, so I figured

our needs were modest. One capsule a week seemed well beyond the norm so we should be good.

Almost immediately after beginning the supplements my son's behavior improved. I was pleasantly surprised and attributed it to the Vitamin D based on what I'd read on the Vitamin D Council web site. It wasn't a cure by any means, but it was a very noticeable improvement. He would still have bad days, and I was a little bummed that after the initial improvement the Vitamin D didn't seem to be helping any further. However, I figured such is real-life outside of attention-grabbing headlines.

Two years later, January and February of 2012, second grade for him, and about a year and a half after the self-experiment with my wife during her third pregnancy, my son's behavior dramatically worsened. We were all still taking D, but at that point it was obviously not showing any benefit for my son. He was in a worse place than when he was in kindergarten. I resigned myself to Vitamin D not being his problem, and at his teacher's demand signed him up for outside testing.

I didn't notice at the time, but we had run out of the "fish oil" over Christmas break. The second week of January we visited family in the Midwest. When we returned, school was a nightmare for him and us. My wife and I attributed it to too much TV, bad diet, and not enough sleep while we were visiting family. However, even two and three weeks after our return his problems were worsening. Around the beginning of February, I finally got around to ordering another bottle of the omega-3. I thought of it as mostly being for my wife, who was doing fine, so I didn't feel any immediacy. When it finally arrived, we all started taking it again. Immediately his behavior improved. It was such a night and day difference the connection was impossible to miss. It was like kindergarten when he first started taking Vitamin D, only far more so. For the first time in two weeks he wasn't angry and crying at the end of the day. That's when it occurred to me that in kindergarten he started taking fish oil at the same time as Vitamin D. For the last two years I had been attributing to Vitamin D what was due to the omega-3 supplement. I felt like an idiot.

After that, I did some research on omega-3, fish oil, and ADHD. When I knew what to look for, I found that there were, in fact, a few studies about using omega-3 for ADHD treatment. It seemed that EPA was effective while DHA was not, or at best, less effective than EPA. When I took a closer look at our "fish oil," I remember thinking to myself, "Oh wow, this stuff is Mega-EPA. How lucky is that." I had chosen it almost at random. It had the best per-dose price and was listed as a top seller.

In retrospect, were it not for the pain and difficulty experienced by my son, it would be funny how the answer was under my nose the whole time. I was slow to appreciate it because of my own prejudice and not treating the problem as something to scientifically test. I thought of omega-3 as being for heart health. I'd never seen it mentioned in relation to emotional health or brain development, outside of the usual bromides about eating walnuts and so forth. Plus the recommendations are always couched in generalities without specific dosage guidelines. Even after I discovered it made a difference for my pregnant wife, it didn't occur to me to test it seriously on my son. Their symptoms and nutritional needs seemed unrelated.

A few weeks later we saw the professional who had tested our son to go over the results. A few weeks had passed between the evaluation and when we met to discuss the results; it was during that time that I made the omega-3 discovery. I told the professional that our son was getting really good results from the omega-3 supplement. I said that after noticing his results I'd done some online searching and there were a few scientific studies supporting the use of omega-3 supplements for ADHD. The professional said he was aware of the studies, but the efficacy wasn't as certain or as strong compared to the prescription drugs so most people choose the prescriptions. (He sent me the same Bloch & Qawasmi paper Seth linked to in his April 21 Assorted Links.) I wondered if most people were even made aware of the possibility of omega-3 deficiency – he certainly didn't bring it up with us. I would not have found the research papers without first knowing what to look for. I knew what to look for only because of the discovery I made with my son.

The omega-3 supplement, while a huge improvement, was not an immediate cure. We started giving him two capsules daily which consisted of 800 mg EPA and 400 mg DHA. That seemed to me a lot of omega-3, relative to what one could consume through normal dietary intake.

I was not overly comfortable with that level of dose long-term despite it clearly working. So every couple months or so I'd have him skip a day or whole weekend. Without fail, his mood noticeably worsened. By the early evening he would be overwhelmed and frustrated to the point of tears by little things that weren't going his way, things that were really just the usual complications of life in a household with two parents and two siblings.

A poignant instance of the effects of missing a dose happened in the Fall of the following school year, still 2012. My wife's mother came for a visit. The break from routine caused my wife to forget to give our son his omega-3 supplement for three or four days in a row. He might have had them on Sunday, but not on any of the weekdays. By Thursday I had gotten a note and phone call from his teacher about his behavior at school. We had to go and meet with her the following week. At the meeting I shared that we had forgotten to give him the omega-3 capsules due to his grandmother visiting. I saw this as proof it was working. The teacher didn't know we had forgotten, and yet his behavior had noticeably regressed. She did not share my awe, and tried to imply that he should be on a prescription. I said that kids can forget prescriptions just as easily and the side effects from a missed prescription are going to be far worse than three days off an omega-3 supplement.

Last month we again ran out of the omega-3 supplement. Except for the accidental occurrence when my wife's mother was visiting, this is the first time he's been off it for more than a few consecutive days in the two years and two months since I first discovered it helped him. I'm quite pleased that he seems to be doing OK. There's been virtually no difference in his behavior since stopping. However, it's not a true cold-turkey quit. We have some of the Green Pastures FCLO infused coconut oil, so he's been taking that instead. The manufacturer is vague about its omega-3 content, but my rough estimate is that he's taking, a third to a half of his previous dose with the Mega-EPA capsules. Then again, it's in the triglyceride form which is supposed to be 50-70 % better absorbed on a per-gram basis. Perhaps it's a wash.

I've thought about having him try flax oil. There is considerable debate about the efficacy of flax oil and the body's ability to synthesize EPA and DHA from ALA, the omega-3 in flax oil. It might be a little late to test efficacy now. The best time to test was one and two years ago when the Mega-EPA supplement was clearly working and had an "efficacy" half-life of 24 hours. The thought never occurred to me until recently when reading Seth's blog.

I can't end without sharing some of my frustrations with the state of health science. There is no doubt in my mind that omega-3 helped both my son and my wife deal with some severe and yet common mental health problems. I'm a pretty sharp, pretty well-read guy that's always had an interest in biology and medicine. Outside of a few esoteric corners of the web where you have to know what you're looking for in order to find it, omega-3 is something you take for heart health.

I think the comparison with statins is apt. When "heart-healthy whole-grains" don't fix one's blood makers, and why would they, it's very quickly on to prescription drugs (statins). When "use your words" doesn't fix a young boy's interactions with classmates and teachers, and why would it, it's on to prescription drugs. Boys especially are put on incredibly strong pharmaceuticals with well-established risk factors that include stunted growth and suicide. Pharmaceuticals should be tried last, but they are clearly being tried first by frustrated parents and suspect practitioners. It's a national shame and a personal outrage.

*Part 1, about using omega-3 to treat postpartum depression, appeared yesterday. Allan Folz is a software developer in Portland, Oregon. He recently co-founded [1]Edison Gauss Publishing, a software house that makes academically rigorous educational apps for children in grades K-8. Their apps are suitable both classroom and home use, and have proven to be particularly popular among homeschoolers that appreciate a traditional approach to*

practicing math.

1. <http://www.EdisonGauss.com/>

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Alex (2014-04-26 06:53:06)

Thanks for sharing your story, Allan. I'll be doing some trials.

babar (2014-04-26 07:32:22)

thanks for sharing your story. your boy sounds a lot like mine with respect to where he sits with respect to "spectrum" behaviors. (my kid is 6.) we haven't tried anything with omega-3 (and knowing him, he would refuse a new "vitamin".) i'm glad you have found this link but in my brain the problem in many cases is with the school environment and not the kid. your kid is probably intrinsically fine and if he grows up with his self intact he will do quite well in life.

Max (2014-04-26 07:32:43)

Thank you again. This is going to help a lot of people. My wife's 8 year old boy is in a similar situation and I will encourage them to try EPA at these doses. One question: it's hard to imagine a young boy being able to swallow the big capsules or liking the taste of the liquid. How do you manage delivery?

C.M. Mayo (2014-04-26 07:47:54)

An especially interesting read. Thank you for your generosity in sharing this story. My own sense is that oily fish must have been a more important part of the human diet, so our bodies need that oil and with the modern diets we have, we usually don't get it unless in a pill. Ditto fermented vegetables. I share the frustration at how quick-on-the-trigger so many doctors are to prescribe pharmaceuticals, many of them on the market with very dubious data behind them, and when there are alternatives without dangerous side effects.

Alex Chernavsky (2014-04-26 08:53:27)

Interesting story. You were very wise to avoid psychotropic drugs. If you are interested, you should check out a book called, [1]*Anatomy of an Epidemic: Magic Bullets, Psychiatric Drugs, and the Astonishing Rise of Mental Illness in America*, by Robert Whitaker. A portion of the book deals with the harmful effects of drugging children. See [2]here for an interesting Ritalin-related excerpt from that book.

1. <http://www.amazon.com/Anatomy-Epidemic-Bullets-Psychiatric-Astonishing/dp/0307452425>

2. [http://books.google.com/books?id=XhPp\\_o6bB3EC&pg=PA225&lpg=PA225&dq=%22robert+whitaker%22+ritalin&source=bl&ots=JvGz2mAkdf&sig=D0PNMMyn7FKbVhvsEOUqMaeyF3o&hl=en&sa=X&ei=eMtbU7b1E\\_DLsQSCxIKoBg&ved=0CIEBE0gBMak#v=onepage&q=%22robert%20whitaker%22%20ritalin&f=false](http://books.google.com/books?id=XhPp_o6bB3EC&pg=PA225&lpg=PA225&dq=%22robert+whitaker%22+ritalin&source=bl&ots=JvGz2mAkdf&sig=D0PNMMyn7FKbVhvsEOUqMaeyF3o&hl=en&sa=X&ei=eMtbU7b1E_DLsQSCxIKoBg&ved=0CIEBE0gBMak#v=onepage&q=%22robert%20whitaker%22%20ritalin&f=false)

Adam (2014-04-26 08:56:38)

To offer something of a counterpoint, for those of us without ADHD or Depression, there is an argument that supplementing with Fish oil may be harmful: <http://chriskresser.com/when-it-comes-to-fish-oil-more-is-not-better>  
<http://www.westonaprice.org/know-your-fats/precious-yet-perilous>

Andrew (2014-04-26 09:46:43)

Max, Carlsons "Very Finest Fish Oil" with lemon flavor in the pint bottles, while expensive, is surprisingly good tasting. I recently read someone on the net recommending just drinking small gulps of the Carlsons directly from the bottle. I haven't done that yet, but it definitely seems more convenient than pouring it out every time I want to take a dose.

Mehmet (2014-04-26 10:58:54)

In a bbc documentary, i have seen a child's school problems are resolved by omega 3:  
[http://www.bbc.co.uk/science/humanbody/mind/articles/intelligenceandmemory/omega\\_three.shtml](http://www.bbc.co.uk/science/humanbody/mind/articles/intelligenceandmemory/omega_three.shtml)

dearieme (2014-04-26 12:36:51)

We are regular eaters of mackerel pate, sardines on toast, and smoked salmon. We also enjoy the occasional kipper. I trust that these will satisfy our needs for fish oil. As for other fish, I had a nice piece of whiting yesterday. Yum, yum.

Allan Folz (2014-04-26 12:46:35)

Thanks everyone. I really appreciate it. I prefer to be the private type, but I feel helping people by getting the word out about O3 is important. @babar - I feel very much the same way about schools' treatment of boys today. However, he was not functioning well at home either. To a certain extent I'm sure school wore him down and that spilled over into home life, but life wasn't grand prior to kindergarten either. Regardless, O3 makes a huge, noticeable difference. @babar & max - Concerning delivery, they are large pills that the kids chew up. Our oldest son has always been adventurous towards foods and eating, and the others started young enough they didn't know a difference. When our youngest was a baby I would pierce it with a fork and let him suck it out while I held the capsule. Seemed gross to me but he loved it. The capsules pop loudly and squirt in your mouth when you bite into them. I call them firecrackers and they like that, complaining even when they occasionally don't get a good pop for whatever reason. Finally, though we take fermented cod liver oil straight and quickly chase it with food, I've read of people mixing it with just enough peanut butter, yogurt, or ice cream to carry it across the tongue and down the gullet. I think the same should work for any liquid oil. @Alex & Mehmet - Thanks, I'll check them out. One thing I've learned is that many parents who have gone the prescription drug route really don't like hearing about alternatives. @Adam - While I haven't seen those specific links, I do share concern about over-doing the O3. It's partly why I was under-dosing for so long, and repeatedly testing my son's response to taking him off it every couple or few months. My preference is for as small a dose as he can tolerate, though I see Seth has discovered what seems to be large, bordering on incredible, doses make a commiserate improvements. It's also possible unrefined flax seeds are metabolized differently whereby overdosing it not a concern. @Andrew - I guess whatever works for somebody, but if one is aiming for a specific physiological effect, I think the dose needs to be more carefully measured than a "swig." :)

Deb (2014-04-27 09:38:20)

Great article. I'm going to try it with my 12 yr old son. And that Adam dude who posted fish oil harmful articles obviously does not have a child with ADHD. If he did he would understand that you will try ANYTHING to help your child.

Robert (2014-04-27 11:15:46)

You may want to look into some of the new EPA-only supplements - Nordic Naturals EPA Elite, RenewLife EPA 1000 and OmegaVia EPA 500. The one by OmegaVia is the smallest (kid-friendly) pill.

Charles (2014-04-27 11:31:54)

I was taking Wellbutrin for "adult" ADD. It had pretty much saved my life when I finally realized that I had ADD when I was 40, and had been experiencing it for most of my life. After a number of year, though, I wanted to get off the drug, and read a Purdue study that indicated 50 % of boys with ADD had Omega-3 deficiencies. So I started taking fish oil caps, and was able to stop the Wellbutrin. It's true that it's probably not great to take unlimited amounts of fish oils. But given the alternatives, I would recommend erring on the side of getting enough, then start cutting back until you find the correct amount. And adding fatty fish to the diet, as well as getting the gut microbiota in good shape with pre- and probiotics. 90 % of the neurotransmitters produced in the body are produced by intestinal bacteria. If your gut is screwed up, your brain will be, too.

<http://tinyurl.com/bbwwebcams25441> (2014-04-27 20:58:38)

Thanks for finally writing about > Seth's Blog

krol (2014-04-28 00:56:47)

Its that you go through my head! You appear to be aware of a great deal of close to this particular, just like you published the hem ebook within it or something. I have faith that you only need to can do by w. g. to drive a car the message residence somewhat, however other than that, that is amazing web site. A superb understand. I'll certainly be back.

Vitamin shopppe orthomol (2014-04-29 02:54:48)

orthomol Vitamin c serum at me a similar situation, let's discuss.

recuperar ex, bajar de peso, eyaculacion precoz, insomnio, perder pelo, acne, ligar (2014-04-29 06:25:26)

aqui hay de todo trucos consejos recuperar a tu ex bajar d peso eyaculacion precoz ,de todo para ayudar al internauta nuestro lema es ayudar al progimo primero pq solo asi ellos ganan y nosotros satisfechos quedamos, si qieres averiguarlo pasat x nuestra web en este link y averigualo x ti mismo.gracias

Dave (2014-05-01 14:01:14)

Awesome article Allan. I (and my family, co-workers, etc.) also notice (!!!) when I stop taking my fish oil. I've been through several cycles of self-experimentation on this, and I can say w/o a shadow of a doubt that it makes for a large positive difference in my mood, outlook, level of anxiety, speed of thought, etc. I'm 50 y/o now and often wonder what life would have been like if I would have discovered Omega-3 supplementation sooner. My first-born son is the "spitting image" of me at that (teen)age, both good and bad, and this article FINALLY put it all together for me regarding my son's behavioral challenges. So, while I'm still able to have a strong influence over his choices, I'm going to insist that he start supplementing as well. With all of the information out there (now) on ADHD and the "spectrum", I recognize some of those symptoms in myself and son, so there seems to be some of that correlation with us as well. Finally, I've found Krill Oil to be particularly effective for me. I do think the "phospholipid carrier" (vs. triglyceride) marketing of Krill Oil suppliers is more than hype in my case. BTW - Is there a strong Northern European component to you or your wife's lineage? If so, I would not be surprised. I gather others have noticed a correlation of omega-3 / behavior / mood for people w/ that ancestry as well.

## **Seth (2014-04-27 19:15)**

Hello, this is Seth's sister, Amy, with the sad news that Seth died on Saturday, April 26, 2014. He collapsed while hiking near his home in Berkeley, CA. He had asked that any memorial gifts be made to [1]Amnesty International. Thank you to all for following and sharing Seth's work.

1. <http://www.amnestyusa.org/>

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Gretchen (2014-04-27 19:34:14)

Seth was an extraordinary person and will be missed. Thanks for letting us know.

James Babcock (2014-04-27 19:39:11)

My condolences. I'm stunned; I've been reading his blog for awhile and never suspected his health was failing. I know this is a rough time, but I'd like to ask: if you don't already know for certain, please preserve any evidence, digital and physical, that might indicate why he died. If it was the result of one of his self-experiments, then I think he would want us to know.

Gerry Mandel (2014-04-27 19:40:24)

I am deeply saddened to lose my dear friend of 35 years. Brilliant, curious, kind, supportive – Seth was a treasured friend who I looked forward to sharing ideas and experiences with for many years. I will miss him a lot. My condolences to Seth's family.

Katie (2014-04-27 19:47:30)

I'm so sorry for your loss. He will be missed.

Graham English (2014-04-27 19:47:35)

So sad. RIP Seth.

Alex (2014-04-27 20:01:59)

Amy, I'm devastated to hear this news. Seth has been an incredible inspiration for improving my family's lives. Please accept my condolences.

Dimitri (2014-04-27 20:17:52)

How sad. Seth was an amazing person. So honest and inspirational. My sincere condolences.

Terry Stewart (2014-04-27 20:32:02)

I am so sorry to hear this. I followed his work closely both here and in my academic career (Roberts and Pashler, 2000 should be required reading for all scientists). His passion for the science and understanding the world around us shone through in everything I read of his. I'll miss him.

JRM (2014-04-27 20:47:14)

I am deeply sadden to learn of his death. Amy, I would like to know if he died of a brain hemorrhage (or other sort of hemorrhage) and what his level of omega 3 intake was. Please fill us in on the medical details. In October, I emailed him this: "I left a comment because you underestimated your omega 3 consumption by a factor of 10. The denominator is 10 g for flaxseeds, not 100 g. <http://blog.sethroberts.net/2013/10/18/omega-3-and-omega-6-in-common-foods-and-my-consumption/> #comment-1152121 " [That is, his omega 3 intake was about 13 grams/day] And he responded with the next day with "thank you for your comment (and the additional info in your email), I took your comment VERY seriously. I have already gone down from 60 g/day to 30 g/day. But it is not so obvious what to do because if I remember correctly I found that 60 g/day produced better results than 30 g/day. I'm not sure about that however. Maybe I am misremembering. Maybe I will stay at 30 g/day for a while and then see if there is any difference when I go to 15 g/day. Seth"

Gerry Mandel (2014-04-27 20:51:00)

I am deeply saddened to lose my dear friend of 35 years. Brilliant, curious, kind, supportive — Seth was a treasured friend who I looked forward to sharing ideas and experiences with for many years. I will miss him a lot. My condolences to Seth's family.

Nick (2014-04-27 20:52:42)

Wow. Unbelievably tragic. I've always been intrigued by Seth and his ideas. I admired him. I wish you and your family the best in this difficult time.

Adam Long (2014-04-27 20:54:54)

As others have already written, and I stunned and devastated by this news. I am so sorry for your loss. My condolences to you and your family. I never got the chance to meet Seth in person, but I learned so much from his writing. What an inspiring person. I am at a loss for words. RIP Seth.

Richard Starr (2014-04-27 20:59:12)

Count me among the many terribly saddened readers of this blog. Condolences to Seth's family.



Melissa (2014-04-27 21:06:23)

Seth's creativity, courage, kindness, and integrity have inspired and helped me more than I can say. We've lost a very fine man.

Shar (2014-04-27 21:12:39)

On April 21 Seth was interviewed extensively by Super Human Radio's Carl Lanore. Condolences to all who cared for and loved Seth.

Lauren (2014-04-27 21:23:20)

This is tragic and shocking news. I've been a reader for years and learned so much from Seth and this site. There was still so much more to learn from him. Please accept my condolences.

Sean Estey (2014-04-27 21:37:14)

I'm absolutely shocked that this happened to Seth. I've never met him, just interacted via a few comments on his blog and an email conversation, but I feel like I just lost someone I know. Seth had such a curious, bright mind and was never afraid to challenge the status quo. A great loss...

Lars Thurfjell (2014-04-27 21:37:25)

My condolences. I met Seth at the 2011 Ancestral health symposium. Very interesting and cool person.

Dragan (2014-04-27 21:46:57)

A very thoughtful and unique person, I'll miss his insights. Dragan

Nancy Lebovitz (2014-04-27 21:49:30)

I'm very sorry to hear of Seth's death- he found and pursued a non-standard and useful way of making people's lives better. I admire his gusto and optimism about how much could be discovered.

Aaron Blaisdell (2014-04-27 21:55:33)

I am shocked. I am in shock. I can't bring myself to believe Seth is gone, and feel like this is some elaborate hoax. Seth has been a dear friend for a long time. My collaboration with him, and my conversations with him, have made a profound impact on my life. His warm companionship, unique intellect, insatiable curiosity, and infinite creativity will be missed. A bit of Seth will live on in me for the rest of my life.

Bryan (2014-04-27 22:02:55)

I'm shocked and saddened. RIP, Seth.

emini\_guy (2014-04-27 22:04:23)

I am stunned and saddened too. I found his ideas refreshing and stimulating. I will be missing him and this blog that he kept posting to so often. Condolences to his family and friends. RIP Seth.

Andrea (2014-04-27 22:05:19)

EVERYTHING that Nancy said, which was perfect. Seth was curious, persistent, and an asset to the human community. I met him once at the Ancestral Health Symposium and he was just as I'd imagined: quiet, shy, curious, and studious. A complete person, at one with his path, it seemed. May his work live on.

Patrick Vlaskovits (2014-04-27 22:08:14)

RIP SETH.

Stu (2014-04-27 22:25:40)

I'm very sad to hear of this. Seth and I never met in person but we communicated over email regularly and became friends.

RIP Seth I will miss our friendship.

Robin Barooah (2014-04-27 22:31:23)

I'm shocked and saddened. I considered Seth to be a personal friend, and will miss him.

JC (2014-04-27 22:43:14)

This is terrible news. Prof. Roberts taught me much about science and health. This is truly a deep loss for the world. My condolences to his family.

R.I.P. Seth Roberts | Uncouth Reflections (2014-04-27 22:48:21)

[...] saddened to learn that scientist, professor, self-experimentation advocate, and best-selling author Seth Roberts has died. I was an avid reader of Seth's blog for years and even met him in person a couple times. [...]

Martha Rotter (2014-04-27 22:51:25)

Thanks for letting us all know, Amy. I'm so sorry for your loss. I am absolutely devastated. Seth made such a huge difference in my life and the lives of so many others, he was an incredibly visionary and forward-thinking researcher. I will truly miss reading his insights & research. So sad to have lost such a brilliant mind. RIP.

Ellis Reppo (2014-04-27 22:54:23)

I learned a lot from Seth by reading this blog. He has helped me in numerous ways. My condolences go out to his family and to those that knew him personally or through this blog.

RIP Seth Roberts | Ben Casnocha (2014-04-27 22:58:36)

[...] came today that Seth Roberts, the UC Berkeley professor of psychology, collapsed during a hike near his [...]

Brian (2014-04-27 23:02:35)

Thank you, Seth, for always listening to us and for helping us. Our thoughts and prayers are with your family and loved ones.

Alexander in Sweden (2014-04-27 23:13:03)

R.I.P. Seth, you will be missed by a lot of people.

Allan Folz (2014-04-27 23:27:38)

Wow. Just wow. So sorry for your and your family's loss. I hope you can find some solace that his legacy, heterodox questioning and self-awareness through self-experimentation, touched many tens of thousands of people and made their lives better for it. RIP Seth.

Angel Mac (2014-04-27 23:29:57)

Thank You Amy and So Sorry for your loss. Seth was a Real Human BEing at it's best. Question: Would it Help for readers to "Continue to Donate" To Help KEEP this Blog ONLINE for All to Read ? If not Please POST and let us know what would help Keep this Blog HERE Thanks May Seth continue to send messages to many on this plane.

falconcy (2014-04-27 23:30:32)

Sad to hear that Seth has moved to Shangri-La in the Sky. We met online and knew each other virtually - it was a pleasure to have known him and my thoughts are with his family at this sad time. I'll be drinking a shot of EVCO in his memory tonight.

Jusin (2014-04-27 23:37:19)

Seconding James' comment. I really want to know why he died, if there was a link to one of his self-experiments.

David (2014-04-27 23:38:33)

What terrible news. The world has so few independent thinkers. My condolences to everyone.

Allan Folz (2014-04-27 23:58:17)

It's hard to think about right now, but I agree: if his passing was related to his heavy omega 3 intake, I think he'd want his friends, acquaintances, and readers to know. I am so sorry for all our loss.

Robin (2014-04-28 00:10:27)

This is very sad to hear. A part of me always hoped he'd find a way to hack himself to immortality! Rest in peace Seth.

Anand Srivastava (2014-04-28 00:13:25)

I have been following this blog for a long time. The news is a shock. I thought it was some kind of a joke. He was always self experimenting to figure out how to fix whatever he didn't like about himself. I guess whatever this problem was sneaked up on him. It would be useful for all his followers to know what went wrong. I think he would like it as well. He was a true researcher. We need more people like him. RIP Seth.

Hilly Billy (2014-04-28 00:16:14)

About time.

Kasim (2014-04-28 00:32:16)

He was always self experimenting to figure out how to fix whatever he didn't like about himself. I guess whatever this problem was sneaked up on him. It would be useful for all his followers to know what went wrong. I think he would like it as well.

Jon (2014-04-28 00:55:20)

How sad to hear this news. Best wishes to all those that were close to Seth and his family during this difficult time.

Hamish barney (2014-04-28 01:32:48)

My sincerest condolences to you and the rest of your family. Seth's writing was very important and influenced me deeply. He was an original and deeply original thinker and even though I never met him I will miss him deeply.

Resurgent (2014-04-28 02:04:30)

This is devastating news..! I have had several email exchanges with him - What a fine man..! A terrible loss!! Rest in peace, dear friend...!!

John N (2014-04-28 02:06:13)

Very sad news. I didn't know Seth and I wasn't a poster here, but I'm a longtime reader and a big admirer, his blog has been educational and inspirational. He was a force for good. I hate death.

Daf (2014-04-28 02:11:19)

Such terrible news. Seth's blog has been a "must-read" for me for several years and it's sad to think there will be no more. Please accept my sincere condolences.

Sara Lake (2014-04-28 02:24:16)

Amy, I am so very sad to hear about your loss. Seth was such a bright light, a unique voice for personal science and also just a lovely person. I emailed him 'out of the blue' one day, never expecting a reply, with a request that I never thought he'd be interested in (to publicise my health issue on his blog, so that anyone with info could contact me). Not only did I get an answer almost immediately, but he was enthusiastic about my idea, did it that day, and asked me to keep him updated on my progress. And when I did, he always replied with encouragement and ideas. People just aren't like that, especially busy, quite famous professors. Sad day. :(

Jay August (2014-04-28 02:52:11)

This is really sad news. RIP Seth.

Jo tB (2014-04-28 03:10:58)

So very, very sorry to learn of Seth's death. I only recently discovered his blog and enjoyed reading and learning from it. My condolences to the entire family at the loss of Seth at much too early an age. I wish you all every strength in the coming months in coping with your grief. My heart goes out to you all.

Kasim (2014-04-28 03:15:25)

So sad. RIP Seth.

Daniel (2014-04-28 03:15:51)

So sad. He will be missed greatly - what an original thinker, a true inspiration!

Glen Raphael (2014-04-28 03:18:12)

Ouch. I was not expecting that and am very sad to hear it - thank you for letting us know! (Seth and I had corresponded over the years due some overlapping interests, but hadn't met in person.) How old was Seth? Wikipedia doesn't list his birth date but seems like it ought to.

Laura B. (2014-04-28 03:18:43)

Hi Amy, When is Seth's funeral and viewing? Where will they be located? I would like to go. Thank you. -Laura

Seth Roberts has passed away (2014-04-28 03:50:24)

[...] sad news is here, from his sister, he collapsed while hiking. This is a shock, as I had email with Seth less than [...]

BenSix (2014-04-28 04:06:43)

I was sorry to hear this. My sympathies to those who loved him.

Dan Maldonado (2014-04-28 04:13:19)

Seth was brilliant, and kind. Rest in peace, friend.

Alex Chernavsky (2014-04-28 04:15:12)

Amy, my deepest sympathies to you and your family. I never met Seth in person, but we corresponded for several years, and I spoke with him over Skype a few times. Recently, we started the "Brain Tracking" group for people who were interested in self-experimentation. Seth was a unique individual, and I'm greatly saddened by his death. The loss is profound. I'm co-moderator of the Google+ Group for people who are interested in tracking their reaction time. Although Seth was the main driving force behind the project, I do think that we should continue his work. If anyone is interested in joining the group, you can do so here (you have to have a Google+ account before you can request membership in the group): <https://plus.google.com/communities/114619130176100669530> @Glen: A *New York Times* article listed his age as 52 in September, 2005.

Michael Bishop (2014-04-28 04:17:40)

Amy, I'm deeply sorry for your loss. Seth, Thank you for pursuing truth and sharing the journey.

GB (2014-04-28 04:22:35)

Seth was unique as both an innovator and educator, and generous in how he shared his knowledge and findings in ways that improved the lives of people he'd never meet or who could never thank him. What a tragic loss. RIP Seth and my condolences to his family and friends.

Paleophil (2014-04-28 04:23:14)

Sorry for your loss, Amy. I will miss Seth's interesting take on things.

Morex (2014-04-28 04:28:50)

Amy, please know that you have a couple of SLD successful people in Mexico that are thinking of you, your family and in deep and infinite gratitude for Seth's work and kindness. He changed my life, made think, laugh and realize there is a vast world of knowledge to discover right in front of me. This is a huge loss for humanity. Thank you, thank you, thank you Seth. You left this world a better place and changed the life of thousands.

Steve (2014-04-28 04:48:43)

My life has improved greatly from rigorous application of his insights. I now share them with others as food for thought. His work will forever impact the future. Of all the things he suggested and that I tried – morning faces, nighttime honey/dessert, increased butter consumption, Vitamin D in the morning, introducing fermented foods into my diet, flaxseed for better gum health – I have benefited from, and experimented with. Sometimes it was less the case that the suggestion solved a problem and more the case that it opened my mind to the possibilities of tinkering with and understanding my body more. I've also valued the insights on teaching posted to this blog. /salute

Mark L. (2014-04-28 04:49:14)

RIP Seth! Seth made quite an impact around the world. And I am thankful for his influence on me.

Morex (2014-04-28 04:54:03)

Amy: I just posted about the sad news on the SLD forums. Sorry to bother you with this, but please let me know if you need help running the forums or maintaining them. I own a small web hosting service and I could host the forums for you. Even if they are not so active, a lot of people benefit from those forums. I don't want all that knowledge to disappear. Thank you.

Chase Saunders (2014-04-28 04:59:44)

Seth was a great man. Rest in peace.

Noah Slater (2014-04-28 05:03:48)

I discovered Seth's Shangri-La diet through Aaron Swartz, and unlike so many other things, it made me feel as if I had some control over my weight. His approach to self-experimentation inspired me to start thinking about my life in a similar way. And in fact, I have been working on a percentile feedback tool (with the help of Nick Winter) that helps me make better use of my time. This was directly copied from one of his experiments. Seth has had a profound effect on my life, and I am shocked and saddened to learn of his passing. Thank you for everything, Seth.

Christian Kleineidam (2014-04-28 05:10:02)

Rest in peace. Seth did work that mattered.

Peter Breton (2014-04-28 05:20:24)

I'm shocked and saddened to hear this. Deepest sympathies to you and to his family. Seth affected a lot of lives through his work and his many lively interests. I never met him in person, but I felt that I knew him through this blog. Truly a great loss for all of us.

Mathew Ferguson (2014-04-28 05:22:23)

Seth's work improved my sleep (and life) immensely and I'll forever be grateful for his particular brand of personal science. He was an original thinker and not willing to accept something just because someone said it was so. We've lost a great mind but the people he inspired will continue to self-experiment and step-by-step improve the world.

Dirk (2014-04-28 05:25:41)  
Sad news, rest in peace Seth...

Grant (2014-04-28 05:40:35)  
That's so sad. His was one of the few websites I visited every day for fear that I might miss a fascinating post if I didn't. Rest in Peace, dear Seth

Nassim N. Taleb (2014-04-28 05:44:21)  
Sad, very sad news. I feel deep sorrow. A man of integrity, of intellectual thirst, a friend.

My "Total Fat Loss Solution" Talk - Perfect Health Diet | Perfect Health Diet (2014-04-28 06:06:28)  
[...] Roberts died on Saturday, while hiking near his home in Berkeley. Aaron Blaisdell and others have written eloquently of this [...]

WW (2014-04-28 06:11:35)  
Seth, rest in peace my friend. We'll miss you. Amy, our condolences. Seth made a difference in our lives by making us think and question.

Mark Levison (2014-04-28 06:12:04)  
Amy thanks for giving us the sad news. May his memory be a blessing. Please share our heartfelt condolences with your family. Seth - thanks for inspiring us, challenging us and making us think.

Brian Beaven (2014-04-28 06:12:29)  
I'm very sorry for your loss. I have been following Seth's blog for a couple of years. I enjoyed his thoughts and experiments.

dearieme (2014-04-28 06:28:28)  
Condolences to all his family. I knew Seth only from his blog and some e-mailing but I'll badly miss our online "conversations". He has added to the sum of human knowledge, and done so with spirit and pluck. RIP.

Christopher Sturdy (2014-04-28 06:33:09)  
My deepest condolences to you and your family, Amy. Seth made a lasting impact with his initial research discoveries about timing and animals. This work has been, and will continue to be, textbook material that generations of professors will teach and generations of students will learn. He continued to make an impact in his more recent work with self-experimentation, as can be seen by the number of posts before this one. His critical thinking and spirit of inquisitiveness and discovery will be missed by all.

Geoffrey (2014-04-28 06:36:15)  
Never commented before, but have read this blog for many years. My sincere condolences, he will be missed.

AI (2014-04-28 06:41:41)  
Very sad to hear this news today. I have always appreciated Seth and his willingness to express views which ran counter to conventional wisdom and political correctness if he thought they were backed up by sound evidence and reasoning. Most of all I appreciated his ideas about the meaning and importance of personal science.

vimal (2014-04-28 06:50:09)  
Amy, I'm so sorry for your family's loss. Seth was a truly innovative thinker and helped many improve their health and well-being.

RIP Seth Roberts | Rhymes With Cars & Girls (2014-04-28 06:56:11)  
[...] Another one of my favorite bloggers. [...]

Scott Pierce (2014-04-28 06:56:16)

Wow. Seth touched a lot of people including me. He was never afraid to say what he believed was right. He'll certainly be missed.

Wil and Judy B (2014-04-28 07:00:58)

Very sorry to hear this, we will miss his writing and his unique way of thinking!

Natan (2014-04-28 07:01:54)

Amy, this is terrible news. Condolences.

Bryan (2014-04-28 07:06:37)

Terrible news. Loved his blog, ideas and his quantified truth-seeking experiments. Not much more to say, but THANK YOU Seth for everything you shared with us.

MJB (2014-04-28 07:07:57)

A great loss. Seth was an original thinker with great integrity.

Max (2014-04-28 07:13:12)

Really stunned and sad to see this news. :( Deepest sympathies to Seth's family and friends. His passing is such a loss, for all of the reasons mentioned above. I hope we can celebrate and continue his spirit of profound inquiry. It feels especially startling given the care Seth obviously gave to his own health (though perhaps this extra attention grew out of a condition we, or he, didn't know about.) Someone mentioned his dosage of ground flaxseed. By my calculations, it would take 22 (large, Nordic Naturals pro-omega) fish oil capsules to match the 13g of flax-derived Omega 3s he took daily. That's a lot. Unrelated to Seth's experiment, I took around the same amount of 4 tbs ground flaxseed for a few weeks but developed spontaneous bleeding in my eye and stopped. (until seeing these calculations today, I had no idea 4 tbs had that much omega 3) Checking this blog had become a treasured nightly ritual for me. Seth's wisdom will be greatly missed.

SM (2014-04-28 07:14:33)

I am so sorry for this loss. Seth was quite unique in his empirical approach to medical problems and blog posts (which I've followed for years now) will greatly be missed. I believe it is unfortunate that his untimely passing might now cast doubt on the efficacy of particular regimens he followed. To those who might think this, remember that there could be other causal factors we did not know regarding his health that could have encouraged him to become active in this field. Amy, again I'm so sorry for your loss. If you ever do decide to release more information about causes that lead to his passing, please let us know. I believe it's an extremely personal topic, but also feel that such information is something that Seth believed could help to advance both the medical field and humanity, in general. Warm Regards, SM

Cliff Styles (2014-04-28 07:16:07)

What utterly wretched news. Seth was an inspiration, he had a lot of work left to do, and now we will all miss both the man and his work. From my contact with him, only through email and this blog, he made me aware that being a good man and a true scientist were one. My condolences to all of those who will miss him.

Kim Kirkpatrick (2014-04-28 07:18:10)

This is a great loss. I include Seth's work in so many of the things that I teach and that I write. Although he and I were never close personally, his work clearly had an impact on my thinking in a major way. He will truly be missed. My sympathies go out to all whose lives he touched.

space (2014-04-28 07:22:06)

I cannot believe Seth is gone... I'm so sorry for your loss. I've been reading him for a long time. What a great scientist he was. Very inspiring human. Whenever you find the strength, if you think he would have liked that, please share the medical reasons why he left us.

Gerry Mandel (2014-04-28 08:09:28)

I am deeply saddened to lose my dear friend of 35 years, Seth Roberts. Brilliant, curious, kind, supportive — Seth was a treasured friend who I looked forward to sharing ideas and experiences with for many years. I will miss him a lot. My condolences to Seth's family.

Charles (2014-04-28 08:12:00)

Sad ;=( A great loss to personal science, and one less good person in the world.

Jazi Zilber (2014-04-28 08:13:57)

What a loss!! RIP Seth. We will miss you. And Amy, any way I can contact you?

Martyn (2014-04-28 08:14:23)

My condolences, as a longtime reader, too. A great and premature loss.

Kelly Valenzuela (2014-04-28 08:17:43)

Please accept my sincere condolences! Seth was a very interesting and kind person, and his presence will be greatly missed. =(

LisaBL (2014-04-28 08:21:26)

OH!! I'm completely shocked! Seth was one of the my favorite QS speakers and we were always really happy when we could get him to make the trek to QSSV. He inspired and challenged so many assumptions. My condolences to your family!

Tim Steele (2014-04-28 08:23:12)

Seth - Thanks for everything! My condolences... Tim

Sarah Madden (2014-04-28 08:30:21)

Just truly shocking news. What a great loss to the world. His memory will live on in the hearts of all the people he has touched with his knowledge and will to make the world a better place. Rest in Peace.

Gina (2014-04-28 08:38:41)

I think for the rest of my life I will continue to wonder what Seth would think about things. I can't believe he's gone.

CeeKay (2014-04-28 09:26:45)

That is terrible news. RIP.

Tucker Max (2014-04-28 09:28:23)

Amy, I am so sorry to hear about this. I am deeply saddened and I can't imagine how it must feel for you. I wrote a tribute to Seth, he had a huge impact on my life: <http://tuckermx.me/rip-seth-roberts/>

Tom Metz (2014-04-28 09:38:09)

Seth changed my life in many ways and I know he's changed the lives of others with his book. The fact that he was so enthusiastic about sharing his thoughts and his experiments was a reality I took great satisfaction from. I feel like all of his blog posts and work are way ahead of their time. Fifty years from now science and public understanding will catch up and those of us here now will point back to this blog. "I think for the rest of my life I will continue to wonder what Seth would think about things." Me too Gina



Mehmet (2014-04-28 09:41:19)

I am deeply sorry and it is hard for me to believe that Seth has gone. He very much influenced me with his scientific thinking and he opened a new door to me through this blog. I will miss his posts and I think the world has lost an important critical thinker.

Ryan Holiday (2014-04-28 09:41:38)

A terrible loss. Someone suggested that we post our tribute here for his family, along with what I believe is Seth's final column. He changed my life in many many ways, and I thank him for that. <http://betabeat.com/2014/04/personal-science-pioneer-seth-roberts-passes-away/> / <http://betabeat.com/2014/04/seth-roberts-final-column-butter-makes-me-smarter/>

nborlaug (2014-04-28 09:42:34)

I agree with a previous poster that to truly honor Seth's work we should ask for a detailed understanding of how and why he died as soon as it's appropriate. I think it's safe to say that is what he would have wanted. Many of us have followed his prescriptions, and is it possible that some of his ideas led to short term benefits but long term consequences? Or did he suffer from some condition, and his experimentation led him to live longer than he otherwise would have? Perhaps we'll never know. But it's worth asking questions when the time is right. If you're interested in joining me in making sure we get answers, email me at [nborlaug@outlook.com](mailto:nborlaug@outlook.com)

Allen Neuringer (2014-04-28 09:43:46)

My condolences to Amy and to all those who valued Seth's friendship, inspiration, creativity, and research – as did I.

Tara Grant (2014-04-28 09:44:00)

Seth I started that journal of personal science you asked me to do. I'm so sorry I didn't write you back last week. I figured out a way to map my mood that you would be very proud of. Thank you for being my mentor. You have changed my life and the way I think and I will be forever grateful.

Craig Fratrik (2014-04-28 09:51:14)

I am so sorry for your loss. Seth fundamentally changed how I view the world. He will be greatly missed.

Gary Wolf (2014-04-28 10:01:06)

Dear Amy, Please accept my condolences as well. I'm shocked and so sad to hear this news. Seth spoke at the very first meeting of the Quantified Self, in 2008, and his supportive advice shaped the community in many ways. If there is to be a public memorial will you let us know? There is a good QS community in the Bay Area; if there are any practical things that are useful, let me know and I'll assist. Gary Wolf

Kelly Barratt (2014-04-28 10:02:36)

I am so very sorry to hear this; Seth's blog has been one of my go-to reads every morning and I've learned to think about a lot of things very differently because of his research and writing. Please know how very much we all appreciated him.

Jacquie (2014-04-28 10:03:55)

Amy, my heartfelt condolences to you and your family. I am so terribly saddened by this unexpected news. Thank you for taking on the unwelcome task of informing us of his passing. I will greatly miss Seth's unique perspective on the many diverse topics that were of interest to him and his readers. He, and the commenters on his posts, challenged my thinking, in the best possible ways, on my notions of health, personal responsibility, fairness, convention and conviction. Most of my days included a visit to Seth's Blog and I am a better educated person for the time I spent considering his ideas, reasoning and criticisms. Seth's sudden absence in my daily routine will be felt for a very long time. His inspiration and the example he set will be with me always.

Mark Frauenfelder (2014-04-28 10:18:22)

Seth was a great inspiration, and an exceedingly generous person. What a shame that his life was cut short when he had so much more to offer. I'm going to miss him very much.

Mo Ibrahim (2014-04-28 10:37:42)

Wow, this is absolutely unbelievable! My condolences to Seth's family.

jseiger (2014-04-28 10:41:24)

Amy, you might be the wrong person to do this, but you or someone Seth would have trusted should try to take some of his blog posts and papers and turn them into a book. Seth was a thinker, and for such people a book is the ultimate testament to their lives.

Omega 3 Fatty Acids for my Brain | Juraj Karpis (2014-04-28 10:47:12)

[...] Seth Roberts was a great teacher who changed my life. [...]

John Eels (2014-04-28 10:51:19)

I'm sad to hear the news. I didn't know Seth personally. I visited the blog often. Seth's ideas have had a great effect on my life. Especially the morning faces.

Joe (2014-04-28 10:52:47)

Like so many others here, I'm shocked. Amy, I'm so sorry for your loss. You have my deepest condolences. Godspeed.

Ashish Mukharji (2014-04-28 11:04:45)

How very sad. Seth made a big difference to my life, as he did for so many others. Amy, I'm so sorry for your loss.

Aaron Blaisdell (2014-04-28 11:05:11)

Seth has a paper in press and should appear in print in a week or two in a special issue of the International Journal of Comparative Psychology on Behavioral Variability that my colleague Dave Stahlman and I are editing. Please check here: [http://escholarship.org/uc/uclapsych\\_ijcp](http://escholarship.org/uc/uclapsych_ijcp) where it will be published. I will forward the link again once the issue has been published.

Andrew (2014-04-28 11:09:32)

A brilliant man who improved so many lives.

as (2014-04-28 11:19:41)

I am sorry for your loss. I know he helped many people with his life's work. What happened?!

Richard Nikoley (2014-04-28 11:29:40)

Seth Roberts. A man I often had a question for and was always honored and surprised that he had questions for me. A truly insatiably curious man, the very definition of a man in my eyes. When I did my AHS11 presentation, he was the first person to the microphone for the Q &A. Every now and then, I'd get an email asking if and when I was going to blog about some thing or the other that I had said (and forgotten) I would blog about. He probably had 3x5 cards or something to keep track. :) What a tragedy. What a loss.

Shant (2014-04-28 11:36:07)

I am devastated by this news. Seth and his work had a profound impact on me, and I owe him quite a bit. It was great getting to know him and work with him, however briefly. I put down my own personal thoughts about Seth here: <http://mrheisenbug.wordpress.com/2014/04/28/seth-roberts/> Rest in peace, Seth. You will be dearly, dearly missed.

Claudia (2014-04-28 11:37:09)

Like all the others posting here, I was stunned to read of Seth's passing. What a vibrant, questioning, questing voice that has now gone silent. I too checked in daily to read the latest posting – a habit that will be very difficult to give up. Thanks to all his friends and family for nurturing that inquisitive, productive mind. RIP, Seth Roberts.

Andrew (2014-04-28 11:40:08)  
It's always about you, isn't it, Richard?

C.M. Mayo (2014-04-28 11:52:25)

My deepest condolences to you and your family. I am one of the many who did not know Seth personally but avidly followed his blog and occasionally entered the fray of the comments section. There are a zillion blogs out there, but Seth's so enriched my life that, from the time I discovered it, I made it a daily ritual to check in- and was almost always astonished by whatever he had posted, and astonished at his continuing generosity. Seth's creativity, courage, generosity, and quest for excellence were truly an inspiration to me-and so many others. His passing is a great loss.

Richard Nikoley (2014-04-28 12:16:05)

Andrew, We value people because they value us. You can look at it any way you like. I lost. You lost. I'm simply telling people how I lost.

Nassim N. Taleb (2014-04-28 12:25:18)

Sad, very sad news. I feel deep sorrow. A man of integrity, of intellectual thirst, a friend.

Sheila (2014-04-28 12:29:52)

Dear Amy, I cannot imagine what your family is going through right now. I am one of the many people (all of us strangers) who tried to help Seth. I called 911, and was on the phone with them until the medics and fire came. I am available to you and your family with a very open heart and with great sadness for your loss. Please contact me if you would like to. I am so very sorry. I have been thinking about your family, hoping to let you know that I am available if I can help with anything around closure, but not knowing how to contact anyone, since Saturday. In humanity, Sheila

Eliezer Yudkowsky (2014-04-28 12:37:11)

I am shocked and horrified. Seth Roberts was responsible for 20 pounds of personal weight-loss for me via Shangri-La, and when I reported that the diet mysteriously stopped working after that, he personally Skyped and emailed with me on suggestions trying to get it working again. His personal spirit of investigation was an inspiration to all of us and is probably to some extent responsible for my trying to compose my own ketogenic Soylent now. I'm sad.

Jack Harris (2014-04-28 12:38:46)

Just stunned at this terrible news. Though I knew him only from this blog, it was obvious Seth was a brilliant and courageous guy with a unique perspective to share. My sincere condolences to his family and loved ones.

Rachael (2014-04-28 12:45:14)

Amy and family, I am so sorry for your loss. I had many an interesting conversation with Seth, and have enjoyed his blog very much. I will be thinking of your family and wishing you peace.

Leroy (2014-04-28 12:46:40)

I came to Seth's blog every day. He greatly enriched my life with his many unique approaches to life's problems. I will miss him greatly.

Paul Langford (2014-04-28 12:49:24)

A real loss. Condolences to all the family.

Ross (2014-04-28 13:07:12)

This is so sad. I will miss his writings very much. Every day that I fired up my RSS reader, I would check for his posts first and many in my family have seen an email from me with a link to his postings. He was a seeker of truth. I wish the best to his family

and close friends.

Seth Roberts: The Best Way To Learn Is To Do | Quantified SelfQuantified Self (2014-04-28 13:17:21)

[...] self-experimenter and personal scientist, died last Saturday. Seth's sister Amy, made the announcement yesterday on his blog. The news was unexpected and very sad. A few things Seth taught [...]

Martin (2014-04-28 13:21:39)

This is really tragic. I am a long time reader and his blog was a never ending source of inspiration. Thanks Seth

Oliver Mayor (2014-04-28 13:23:59)

My condolences to the family. Seth's ideas, curiosity, and compassion helped and inspired me and so many others. I'd hoped to meet him in Beijing some day. This is quite a loss to the world, that Seth left us so soon.

Well this sucks: RIP Seth Roberts | Free The Animal (2014-04-28 13:38:20)

[...] I dropped this comment on the post by his sister, on his blog. [...]

David Smith (2014-04-28 13:48:46)

Very tragic. I've been think about this all day. I didn't know him personally but his blog was probably the most inspirational one that I follow. He'll be missed.

Seth Roberts | Hunter Gatherer (2014-04-28 13:54:17)

[...] was deeply saddened to learn that Seth Roberts suddenly passed away. Many people knew Seth better or longer than I did, but I'd like to share a few [...]

Richard Nikoley (2014-04-28 13:55:26)

Seth let down a lot of people by going and dying. Express how much he let you down, here and anywhere.  
<http://freetheanimal.com/2014/04/sucks-seth-roberts.html>

John Durant (2014-04-28 14:12:45)

Seth inspired me and so many people to improve their lives – in ways large and small. I loved to walk and talk with him. I wrote a short remembrance of Seth: <http://huntergatherer.com/seth-roberts/>

B.B. (2014-04-28 14:18:58)

To Amy and all other family members, I am so sorry to hear of Seth's passing. What a bold and imaginative thinker he was. I always looked forward to his postings. He cared very deeply about finding the truth about things, about what are the causes of illnesses, and truly about evidence-based treatments. I learned so much from his references and observations and speculations. Who can fill such shoes? We need more people like Seth.

Nile (2014-04-28 14:20:43)

Amy, Please accept my very deepest condolences. I spoke with your brother a few times and carried on several email "conversations" with him - the last just a few days ago. I thought he was a brilliant man ahead of his time. I hope you and the rest of your family and Seth's close friends can find some solace in the fact he discovered so much, helped so many people in his far too short life. You are in my prayers.

Duncan (2014-04-28 14:26:59)

My condolences to you and the rest of the family, Amy. I checked the blog every day or two because Seth's posts were always stimulating.

Sue Breedlove (2014-04-28 14:30:11)

Amy, I'm so very sorry to hear the sad news. Seth was a dear friend to me and my sons. Let me know if I can help in any way. Take care.

Tom (2014-04-28 14:30:52)

Seth transformed the world with his brilliance, curiosity and generosity. What a profound loss.

Nile (2014-04-28 14:32:42)

Richard- Using Seth's death to promote your web site is beyond the pale. Andrew was right but far too kind.

Ash Simmonds (2014-04-28 15:02:38)

Well, that sucks. :(

Seth Roberts has died | Economic Sophisms (2014-04-28 15:11:37)

[...] He died on Saturday. [...]

Michele (2014-04-28 15:35:41)

RIP. I am so sorry to hear of this. I feel it as a personal loss as well. I only recently learned of this site. I have done a lot of my own personal health experiments but have gotten mostly open hostility from the world over trying to share that info. I had hoped to talk with him but could not readily find an email and then got busy with life. I feel like another door has closed and nothing will ever come of what I have learned other than my own improved health.

Donald (2014-04-28 15:51:18)

I'm so sorry, what a loss, he made a big impact on my life and no doubt many others.

Jay (2014-04-28 16:38:32)

Such sad, sad news. I didn't know Seth, but I read his blog all the time. There were many things I learned from his writing and self-experiments that improved my health. My sincere condolences to his family.

BRW (2014-04-28 16:56:33)

I wish Seth's loved ones the best. He provided such a valuable platform for new ideas to be explored and information to be shared. His thirst for understanding was contagious, I always looked forward to his posts. I hope he was at peace in the end. Condolences, BRW

Steve Hansen (2014-04-28 17:06:03)

I followed Seth's blog for years and, like so many others, benefited from his approach to science and knowledge. Not just from his personal experiments, but from the ideas he was open to. His blog led me to Nikoley's and to Dr Sarno (Healing Back Pain) and a complete cure of 20 years of back pain. Free. No drugs no surgery – just thinking. Truly life changing. We became friends here in Beijing, where I teach at the university just down the road from his Tsinghua. Amy, if there is anything that needs to be done in Beijing I am happy to do it (steve.hansen@gmail.com). My condolences. Steve

Marian Lizzi (2014-04-28 17:11:42)

Amy, my sincere condolences. I was lucky enough to work with Seth on The Shangri-La Diet. As an editor and a friend, I will miss him deeply. Seth was one of a kind, and a great inspiration.

Peter Eckersley (2014-04-28 18:00:36)

This is terrible news. Will information about Seth's funeral be posted here?

Israel Ramirez (2014-04-28 18:16:44)

I have never met Seth in person but corresponded with him, spoke with him a couple of times on the phone, and read several of his academic research papers. I encountered a smart, gracious gentleman, who was willing to entertain novel ideas. I am very grateful for having encountered him and deeply regret hearing about his passing away.

Dickbutts (2014-04-28 18:27:33)

I'm just going to put this out there, maybe there's a correlation between eating a stick of butter every day and dying while exerting. Just another novel idea I'm sure he would have appreciated studying.

Kudzu Bob (2014-04-28 18:40:30)

His intellect and good humor cannot be replaced. Rest in peace, Seth.

Jim Keller (2014-04-28 19:38:29)

Seth, You were a great thinker and blogger. I read your blog everyday, for insight, outrage and sometimes a laugh. Thank for helping us all look past conventional wisdom, question all the bad answers out there and actually supply some good ones of your own. You helped me certainly and I know many others. Thanks for the quick responses to emails. I found myself thinking "Seth would like this" when I found a gem on the internet. I'll still think that. I'm really sad about your passing. All the best to your family and friends. Goodbye, Jim

Jim (2014-04-28 20:47:25)

Seth, Thanks for your help. You will be missed.

DBH (2014-04-28 20:52:14)

Seth improved the quality of my life. I am grateful for his blog and saddened by his passing.

Robin Benson (2014-04-28 20:56:59)

Can't believe he's gone. Somebody wrote above that Seth "cared very deeply about finding the truth about things". This was my experience also. Thanks Seth, and farewell.

Anon (2014-04-28 21:40:09)

Heart issues eh? Just looking at this blog I can easily tell you why. Fish oil consumption and Salt limitations. Really? You're just begging to die of heart issues.

TSINGHUA\_hyx (2014-04-28 21:46:38)

R.I.P an excellent teacher for me

Viorel (2014-04-28 21:49:14)

So sad to hear about this! RIP, Seth, you will be missed.

Melody McLaren (2014-04-28 22:09:48)

Amy - Like man others, I am stunned and shocked by this news. I've known Seth since we met back in 1978 - when he first joined the UC Berkeley Psychology Department as a young assistant professor and I was a second-year grad student. I think Seth introduced me to you during that early period. We had a long, fascinating friendship that lasted right up to last Thursday, when we were trading emails about the OPTIMA breast cancer trial I'd just joined. I will always remember him for his refreshing, honest outlook on scientific research and his love of experimentation - including wild and wacky projects with food and exercise - as long as I live. He will be deeply missed by me and no doubt man others.

Drini (2014-04-29 00:41:13)

My condolences to the family. I discovered Seth's blog and writings early this year. I loved his theories and his experimental

approach. It's sad that such a brilliant scientist and self-experimenter is gone. This kind of tragic loss really forces you to put things into perspective. We still have a lot to learn and we need to approach the quest for the ultimate health truth-if such thing exists-with humility, positivity and patience. For, even the best of us aren't infallible. Seth, thank you for your work and experiments, for making it available to others and for improving the lives of many. You will be missed. May you rest in peace.

Jason (2014-04-29 03:58:29)

I never met Seth, but his work changed my life for the better. His spirit lives on in each of us who is healthier, happier, and more curious because of him.

Alice Lee (2014-04-29 04:20:28)

Hi Amy, I'm an student from Tsinghua University and Positive Psychology Center at UPenn. Seth has always been my favorite professor, since the very first lesson. I'm flying to San Francisco today. Would it be possible for you to let me see his last place? I appreciate your help. Please contact me at [lixingyu1993@hotmail.com](mailto:lixingyu1993@hotmail.com), if at all possible. Thank you.

Peter Andrews (2014-04-29 05:19:34)

My ongoing life is diminished because I will never again get to click with anticipation because 'Seth has a new post!'. Although I am not religious, i hope against hope that Seth is somewhere now happily observing his new situation, already trying to figure everything out. Miss you already, Seth.

Bill Stuart (2014-04-29 06:53:42)

I am so sorry Seth is gone. His keen intellect, courage and imagination are all too rare. He was a great influence on how I live and see the world. My heartfelt condolences to his mother and family.

Ashley (2014-04-29 06:57:58)

I was beyond shock when I heard the news last night. I took 3 of Seth's classes back at Tsinghua University, and he was the one who introduced me to R and agreed to write a recommendation letter for me 3 days before the deadline, when I had no one else to turn to. He was a great scholar, teacher, as well as a friend. RIP Seth.

Terri Fites (2014-04-29 07:51:00)

Thank you for letting us know. I am sorry for your loss. We will miss his blog and how he reached out to us. Thank you to Seth.

Åse Innes-Ker (2014-04-29 08:50:25)

I am so sorry to hear this.

Brian Toomey (2014-04-29 09:32:12)

What a terrible, horrible loss! I had just emailed with Seth on Friday night putting the finishing pieces on a piece I was writing on how self experimentation had improved me in sleep. Not only had Seth's ideas been the original impetus for my sleep improvement, but he had also mentored me in the design and data analysis in R of my self experimentation, and also been a fabulous correspondent and entertaining writer. I'll miss Seth in all these ways: - As a generator of novel ideas - As perhaps the most rigorous thinker in QS around design & data analysis - As an entertaining blogger - As a friendly, approachable correspondent What a gigantic loss. Thanks, Seth, for all you did.

Matt (2014-04-29 10:39:49)

Shocked and saddened. Seth's writings had a huge impact on me. RIP

Nassim (2014-04-29 11:04:47)

Seth was a great man, an independent and fearless thinker, a person of integrity. But above all he was a loyal friend. A huge, huge loss.

robin (2014-04-29 11:38:14)

Shocked and will miss his insight and Outlook on life

A Note about Seth Roberts | Patrick Vlaskovits (2014-04-29 11:52:18)

[...] Seth Roberts has unexpectedly passed away. Others who knew him more intimately than I did, have already penned, quite eloquently, why he will be missed. See John, Tucker, Ryan, and Richard. [...]

mark johnston (2014-04-29 13:08:35)

RIP Seth

Igor Carron (2014-04-29 13:20:33)

Amy, I am sorry for your loss. Seth was a truly gifted person and we collectively won't be the same without him. Tonight, we will have a heavier heart, I know I will. Godspeed Seth.

Ashish Mukharji (2014-04-29 16:37:30)

How very sad. Seth made a big difference to my life, as he did for so many others. Amy, I'm so sorry for your loss.

Evolutionarily (2014-04-29 18:24:23)

Tragic news, Seth improved my life with his thoughts and will be sorely missed.

Tim Beneke (2014-04-29 18:54:21)

Hi All, I am so stunned and saddened by Seth Roberts' death. We'd been friends since 1997 and had many fascinating conversations. He helped me in so many ways. Specifically, his Pavlovian analysis of weight control and his crucial insight that consuming calories with little or no flavor would reduce hunger, enabled me to lose, on average, about 20 % of my weight and keep it off over the past 15 years. Shortly after I first met him I described my problems with over-eating and pigging out on sweets and fats. He stunned me when he said, "Interesting that no one ever pigs out on fruits and vegetables." Interesting indeed! And his insistence that if I stopped being a night person and went to bed earlier, and tried to get morning sunlight, my baseline mood would improve, turned out to be true, and did far more than anything else to help me come out of depression. I learned so much from Seth – about how to think and how to listen. He was the most intellectually fearless and tenacious person that I've known. He used his brilliance to attack very core problems that caused a great deal of human suffering – obesity, sleep problems, depression – and came up with concrete solutions that truly helped people. His blog was also a site through which many interesting ideas were funneled. He delighted in being able to help people. He was scientific in the best sense – science is simply a method of being rigorously and flexibly sensible and intelligent and open; it was a joy to watch Seth become intellectually excited and pounce upon an idea, a finding, a realization. He became possessed and fascinated at such times. He was unafraid to ask questions or appear dumb. He had such a freshness of mind that at times he appeared to start all over from scratch in approaching a problem and re-think it. I once told him of research about how to improve one's memory; he said that he did not want a better memory. His ability to forget and see things freshly was part of his creativity. I knew him mostly in Berkeley, but more recently in China where we both taught at Tsinghua. In November of last year, I had dinner with Seth and three of his Tsinghua students – it was apparent how much they liked and admired him, and how much he appreciated them. One student said to me, "His students love him." He frequently spoke and blogged about the brilliance and decency of his students at Tsinghua. Ten days before his death we had dinner in Berkeley. He said he wanted to write 8 hours a day until September when he returned to China; he was excited about starting a column on personal science for the New York Observer. The world is worse off without him in so many ways. He had a sweetness that was both personal and intellectual. He had so much more to give to the world, so much more to teach us – it is so sad that we will be deprived of Seth. He was a truly original thinker; such people are rare. A certain original sweetness and a certain original brilliance has left us. My condolences go out to everyone who knew him. Timothy Beneke

K O (2014-04-29 19:29:25)

I always appreciated that he listened to students and lay people with the same respect and attention that he accorded to other researchers. Truly a loss.



Katherine S. (2014-04-29 22:20:02)

I am so sorry to hear of Seth's passing. I learned a great deal from him. So many of us will carry a small piece of him with us, and to us, he lives on in this way. Please everyone, be respectful.

Jonathan Shewchuk (2014-04-29 22:27:22)

After a long time following his blog, I met Seth once, last fall at Nefeli Cafe on UC Berkeley's Northside. We discussed ideas for personalizing courses at Berkeley so that students would learn better. Seth was one of those very rare men who genuinely personified the cliché "thinking outside of the box" instead of mouthing the words. It was brilliant of him to look past his field's staid view of the scientific method to the little-explored question of how to generate hypotheses worth testing. His arguments for why self-experimentation can accomplish some things that large controlled intervention studies cannot accomplish are dead-on. And I have to admire his powers of observation, both in spotting interventions that seem utterly unlikely (in weight loss, depression, mental performance, etc.), and in finding ways to motivate the students in his courses to give unique performances. I'm as stunned as anyone that he died so young. Is there anyone else who thinks like he did?

Aya (2014-04-29 23:24:26)

Thank you Seth, I have many many things to thank you for... Rest in peace.

Mark (2014-04-29 23:50:10)

Wow. Haunting words from his last post: "It was nice to know all that but I did wonder: Was I killing myself? Very sad. My condolences.

dedicated server seedbox (2014-04-30 00:58:18)

I feel this is one of the so much important information for me. And i'm satisfied reading your article. But wanna commentary on some normal issues, The web site style is ideal, the articles is truly excellent : D. Just right task, cheers

sam tanyonovski (2014-04-30 01:17:24)

Seth was an iconoclast of the highest order. Brave, imaginative, and brilliant. I will miss him sorely.

Troy (2014-04-30 04:50:22)

RIP Seth - you were a unique person with a great message that you lived. You've changed a lot of lives and I just wanted to thank you. Condolences to Amy & Family

Justin (2014-04-30 06:20:46)

My condolences to Seth's family. As is evident by responses here and across the Internet, Seth impacted many people's lives in profound ways. While not the only way, Seth did an interview once with a blogger about Uggs. That interview got me thinking about creating a blog about minimalist footwear – FiveFingers, specifically – as I was looking for other blogging outlets outside my of my (considerably less focused!) personal site. The result was BirthdayShoes.com, which has reached a few million eyeballs over the last five years and changed my life in many, many ways. Oh how the ripples grow! Seth once asked me why I blogged and while the reasons are many, his death makes one extremely poignant: your life scales to touching the lives of others in ways you can barely realize. Thank you, Seth, for changing my life in so many ways.

Alice Lee (2014-04-30 06:22:33)

My deepest condolences to your family. Seth was my teacher in Tsinghua University. His ideas were always brilliant and inspiring. He's my favorite professor since the very first lesson. I will miss him.

Julia (2014-04-30 08:52:08)

I'm really sorry to hear this. He was a great guy—even though I never met or corresponded with him, it was thanks to his blog that I was able to stop taking prescription sleep medication. (Vitamin D in the morning makes a huge difference.) His blog also

introduced me to the wonderful paintings of Red Hong. I know he's helped a lot of people, and he seemed totally resistant to dogmatic thinking. What an awesome guy.

Cord (2014-04-30 13:47:25)

My condolences to Seth's family. I can't claim to have known him personally, but I have loved this blog for being so consistently fascinating, literate, and civil: a rare thing in the wilds of the internet. I'll miss it. May his memory be eternal.

Arrigo Benedetti (2014-04-30 14:17:00)

Rest in peace, my friend.

as (2014-04-30 19:41:16)

How I wish I had met him. Is there an obituary? What happened to him? How did he die?

Digby (2014-04-30 19:53:46)

So sad to learn of Seth's passing. I have followed him for several years, enjoyed his experiments and encouragement.

Huan (2014-04-30 22:57:02)

My condolences to Seth's family. I know him in 2010 when he gave a talk at Tsinghua about his self-experiments of changing diets. I was an undergraduate there and very intrigued by his thesis. After that I came to talk to him about my acnes and I thought maybe I could try to identify the reasons for it by adopting his methods. Then we started a spreadsheet to track my diet, sleeping time and other potential factors. I remember it was not easy to get omega 3 oil in Beijing and sometimes he got some for me. I guess there were so many other factors than diet playing role in this experiment and I moved to Shenzhen later in 2010, so we never went deep into the data and analysis. I was a journalism major in undergrad but used quant models to do my thesis. He was surprised at first but then he wrote long emails listing why journalists should learn statistics. Working with him definitely changed my way of thinking and his intellectual curiosity is always an inspiration. I just wish I could have spent more time chatting with him and know him better. RIP Seth.

Primal Retreat (2014-05-01 02:26:30)

RIP Seth - your wisdom will be missed.

Mike Bowerman (2014-05-01 07:53:48)

Shocked and saddened to learn of Seth's passing. Condolences to his family and friends. Seth's unique intellect found insights which improved many lives and will doubtless help still more people as others learn of his work. That he won't be continuing this work is a loss to all. On a personal level, Seth generously spoke and corresponded with me on several occasions which I greatly appreciated. I had always thought I would have another chance to get his thoughts on his work, or have a chance to meet in person. I hope his blog will continue as a legacy and tribute.

nicole (2014-05-01 11:04:28)

This is so sad.

Steve Johnson (2014-05-01 17:55:25)

Amy, Although I never knew Seth he touched my life through his discoveries - every morning I wake up more refreshed due to what he learned and shared. I'm very sorry for your loss.

Stirner (2014-05-01 19:41:05)

How tragic. What more is there to say? Seth was a rare independent thinker and I have every confidence that many of his hypotheses will be decisively confirmed in the long run. In the meanwhile, his legacy lives on in all those he inspired. RIP.

statcruxdumvolviturorbis (2014-05-01 20:58:36)

how old? sounds like cvd. if he didn't have familial hypercholesterolemia then what? why, in god's name, did he die from a heart attack? but, no worries, you'll see him again. if you have any doubts read this: [http://en.wikipedia.org/wiki/Being\\_and\\_Time](http://en.wikipedia.org/wiki/Being_and_Time)

Stephen Yeh (2014-05-01 21:54:55)

I'm stunned. Seth was a bright light. I sat in on his Psych 1 class when I was 17 and followed his career since then, including interviewing him for a paper. He was one of my heroes and role models.

April (2014-05-02 01:43:45)

So astonishing! Seth is a great teacher, I still remember my first course in Tsinghua, he taught us "Current topics in Psychology". He is really really great! RIP. Miss u forever.><

Saul Sternberg (2014-05-02 11:55:41)

Seth and I became interested in each other's research about thirty-five years ago, when he was a graduate student at Brown. In the years since then we were collaborators and friends. (Each of us has attested to how much we learned from the other.) I followed his work in detail, and as you'll see from my comments elsewhere (<http://www.psych.upenn.edu/~saul/about-seth.roberts.pdf>) his scientific accomplishments, I admired them greatly. Except for occasional visits, our interchanges were long-distance ones, phone or email. We discussed many topics – from how to make thicker yogurt to the fairest procedure in considering a tenured professor for dismissal. And of course, various aspects of science. My interactions with Seth contributed greatly to the enjoyment of my scientific life. I am deeply grateful for all that he gave me. Hearing about his untimely death, another friend said: "What a tragedy. I am so sorry to hear that. I know he was a dear friend of yours and a kind of intellectual child. And such a brilliant and brave intellect. This must leave a hole in your world." Indeed, it does.

Clay Kik (2014-05-02 13:42:58)

Seth featured me once. We exchanged e-mails and a few calls. He helped me cope with my bipolar which I am forever grateful. I will be missing him. I checked this blog first thing every morning. I'm so sad we lost a true original. My thoughts and prayers are with you Amy.

Amy Rogers (2014-05-02 18:51:14)

One of Seth's oldest friends today sent an email to Seth's address inquiring about a comment she posted but it hadn't appeared on the blog. I then realized that there were many more comments awaiting approval. Now they are. We are truly touched by your comments and I know Seth would have loved reading them, too. (I hope he is.) As soon we have more information about Seth, we will share it. I can be reached at [twoutopias.amy@gmail.com](mailto:twoutopias.amy@gmail.com). Please note that while I will read your emails, I will not be able to reply to all. Thank you. -Amy

Alex Chernavsky (2014-05-03 03:28:51)

I'm starting to gather remembrances at <http://www.seth-roberts-memorial.com/>. I just started the site last night, so it's a work in progress.

Remembrances on Other Sites | Seth Roberts Memorial (2014-05-03 04:56:06)

[...] Seth's blog — post by Seth's sister Amy (the comments section contains many remembrances): [...]

Jonathan (2014-05-03 06:57:18)

Dear Amy, I am so sorry to hear about Seth's passing. I send healing wishes to you and family. You probably remember me from Tam, where I first met Seth - the brightest kid in a group of very bright classmates. He and I connected from time to time over the years, although not enough and not recently. I was always intrigued by his research and I will follow up via the links on this blog. At this sad time, the outpouring of sympathy and support from so many people who benefited from knowing Seth and his work is a wonderful tribute.

Martin (2014-05-03 07:23:37)

I am another long-time reader of the blog who has never commented before. Seth was a very special person. I am sure there are thousands like me who never met him but who will greatly miss him.

Kurt Miller (2014-05-03 08:09:25)

This is incredibly sad news. I've been a reader of Seth's blog (and book) for many years. I didn't know him personally, beyond brief interactions online. His curiosity, intellect and unconventional ideas have been very inspirational. All the best to those around him. He will be remembered.

ayeppo (2014-05-03 09:45:48)

RIP Seth. Thank you for the inspiration and courage to live your life without the shackles of science, a true explorer. You will be missed.

Agatha (2014-05-03 14:13:16)

Very sad to hear this news. Seth's self experiments were an inspiration. He will be missed. Blessings to his family and friends at this time.

Matej (from Slovenia) (2014-05-03 15:08:18)

I am stunned. My condolences to Seth's family and friends. I was following his blog for many years and I admired him for the unconventional ideas, self-experimentation and original research and blog posts. I was inspired by him. I feel so sorry. Even though I didn't know him personally I will miss him. RiP Seth.

Nassim N. Taleb (2014-05-03 17:18:40)

(I apologize for the duplication but my posts were not showing up).

Anne (2014-05-04 02:04:11)

My deepest condolences to you and your family. Seth was the light to me since many year. I have learned so much from him and all the followers comments. As some earlier wrote, when emailing a question Seth responded very quickly I hope you will find a way to keep the site up, as there is so much wonderful work and articles here posted by Seth We will miss him very much. RIP SETH

Ashu@Kathmandu (2014-05-04 05:00:57)

I followed Seth's blog religiously for the past several years. It was among the first things I read everyday. I learnt a lot from his thoughts on general science and personal science, on how to learn, and even on how to sleep soundly on airplanes! He was someone who never let anything get in the way of his pursuit of the verifiable truth. He was indeed a searchlight of a man, who illuminated many things with simple experiments backed by profound questions! May he rest in peace. I will greatly miss him.

Peggy (2014-05-04 05:37:32)

I'm going to miss Seth; I've been reading his blog daily for several months. He convinced me to try skipping breakfast (something I had never tried before), looking at faces in the morning instead of being surly and avoiding eye contact, and eating honey or other carbs before bed to improve sleep. His recent posts on Omega-3's were also very interesting to me. My condolences to all his family, friends, and followers.

shtove (2014-05-04 05:44:00)

So sad. My condolences.

Weekend Link Love - Edition 294 | Mark's Daily Apple (2014-05-04 07:37:45)

[...] Seth Roberts has died, and with him goes an interesting, brilliant man, a fearless self-experimenter and a platform for new

and useful ideas. Others have shared their remembrances of Seth here. Honor him by always being curious about everything, even the things you know to be true. [...]

Seth Roberts | Megalomania:me (2014-05-04 13:45:45)

[...] Roberts died on Saturday. This is very sad news for me. Dr. Roberts was a huge inspiration and I'll miss [...]

Patti (2014-05-04 15:01:08)

I loved his uniqueness.

Jenny (2014-05-05 02:23:44)

I am terribly sorry to hear about Seth. I have read his blog for years and will miss him and his ideas enormously. My condolences to all of you who knew him personally - he is someone I had always hoped to meet.

Jan (2014-05-05 06:51:37)

My deepest condolences. I too am shocked. Whenever I was tired by all the dogma around me, I opened his blog, read some of his entries and suddenly everything was more bearable. Jan from Slovakia/Austria

Anna (2014-05-05 10:24:55)

I was stunned when I opened the blog a few days ago and saw the news. I didn't know or correspond with Seth but I read his original paper that eventually became the SLD book and followed his blog whenever possible. He was brilliant and so good at puncturing inflated claims made by the medical establishment. I always wanted to tell him that most of the things he did for himself did not work for me at all but he taught me how to find the things that do. The world needs a lot more people like Seth. My deepest condolences to the family and friends. And please let us know what happened.

JohnG (2014-05-05 11:08:45)

Seth's dedication to science regardless the outcome meant so much to me. We corresponded a few times and even spoke over the phone once. He was so amazingly pleasant and caring. I'm terribly saddened for the loss. He was a hero in my eyes. JohnG

john (2014-05-05 12:29:25)

Thank you, Seth, for the invaluable things I learned from you by reading this blog! I miss you... RIP

Gianna B. (2014-05-05 15:58:50)

I've followed Seth's blog for years and always admired his critical thinking, curiosity and lack of complacency to blindly accept conventional wisdom. It's so hard to believe he is gone. I guess part of me wishes that he really hasn't died, that this was another QS "experiment" of Seth's ... to see how many web hits could be generated quoting from a single 50-word post ("Hello, this is Seth's sister, Amy, with the sad news...") without any other corroborating sources such as published obituaries, mortuary listings, a Berkley press release, a hospital reference or news articles from even a small or local newspaper, an alumni newsletter, other public family statements ... anything. But I'll keep watching and keep google-ing, hoping it's just a bad dream.

Everette Twining (2014-05-06 00:29:52)

I have, admittedly, only a vague sense of awareness when someone mentioned to me that he had died. Regardless, I'm sorry to hear of his passing - every death leaves an emotional tear in the fabric of friends. No mention of a couple of things: how old was he when he died, and what was the cause of death?

Sam (2014-05-06 00:36:03)

These are really bad news! I hope this is not some side effect from the self-experimentation - I remember some study stating that too high Omega-3-dosage could lead to epileptic seizures (but never found that study again). Most important: My condolence to you, Amy, and the rest of Seths family and friends! Seth will be missed!!

Rachael (2014-05-06 21:05:55)

Amy and family, I just stopped by to say that I am thinking of you, I know how sad it is to lose a brother. I hope you are having some comfort in the number of lives your brother has touched, and that you feel joy in the number of people he has changed and influenced. I continue to miss Seth, and hold you all in my thoughts. I wish you peace.

Rachael (2014-05-06 21:06:24)

Influenced, I meant.

Kim Øyhus, physicist (2014-05-07 01:16:29)

Seth was a real genius, making real original discoveries, unlike those fake geniuses having misleading high scores on such as IQ and grades.

Weekend Link Love | Acne Scars (2014-05-07 03:33:53)

[...] Seth Roberts has died, and with him goes an interesting, brilliant man, a fearless self-experimenter and a platform for new and useful ideas. Others have shared their remembrances of Seth here. Honor him by always being curious about everything, even the things you know to be true. [...]

Ernie (2014-05-07 10:38:56)

Dr. Seth Roberts. A man of action, looking for sound evidence to help millions of people improve their health. His spirit will live on in all those who are curious, willing to self-experiment, and question what the truth is. He will be deeply missed. Amen.

Artoo (2014-05-07 13:59:36)

RIP

Pauline (2014-05-08 02:53:41)

Sad. Words. Fail. Gone too soon.

Goodbye Seth Roberts, But Not 'Personal Science' | 1 Gear Bike DIY (2014-05-08 15:57:06)

[...] Roberts has died. His sister posted on his website that he had collapsed and died while hiking in Berkeley. This was sad and shocking to me, as [...]

Ben Rubin (2014-05-08 17:56:40)

Seth was a friend, mentor, and inspiration. He made a difference - and we won't forget him.

Alexis Gallagher (2014-05-09 12:25:19)

This is truly heart-breaking news. Such a loss. Two things always amazed me about Seth. First, that he was such an original thinker - really, truly, genuinely original, in a deep and intelligent way. Second, that he managed to remain so optimistic and so cheerful! He did this despite facing the incomprehension and neglect which comes from being so original. I am sure he could have made his life much easier, professionally, by doing work that was more conventional. But he did not. In this way, he has been a model to me both intellectually and emotionally, a model I do not expect to live up to. I was working on a project that I was very keen to share with him (an app inspired by his blog posts on Magic Dots), and it's hard to believe now I will never have the chance to show him. I am sure his passing is a great loss not only for us but for the many people who do not know him at all, but certainly would have benefited from his curiosity and his courage.

Weekend Link Love | About Arthritis Pain (2014-05-11 01:34:30)

[...] Seth Roberts has died, and with him goes an interesting, brilliant man, a fearless self-experimenter and a platform for new and useful ideas. Others have shared their remembrances of Seth here. Honor him by always being curious about everything, even the things you know to be true. [...]

Iris Lamb (2014-05-12 17:53:02)

I am shocked and saddened. My heartfelt condolences to Seth's family, and to the world at large, which has lost an innovative, creative, courageous man. He will be missed.

Galen Cranz (2014-07-07 09:44:40)

Seth! I just learned tonight why you failed to show up on the 26th of April as we had planned. I didn't want to bug you so I didn't call or email to ask what happened. Now I know. I finally sent an email tonight asking if you were alright-'cause it wasn't like you to disappear. I am in shock to know that my worse fears are true. Seth came to see me after the publication of *The Chair* in 1998. No other colleague sought me out on the basis of ideas. Turns out we were both Reedies, and I proposed that we teach a course together, "The office of the future" (which we thought of as neolithic). We did, twice, once with others from the business school, "The Post-Dilbert Office." We were both interested in nutrition and food and ate together in NYC and the Bay area intermittently. We had dinner at the new restaurant that replaced O Chame on April 24. He offered to help me with some computer issues on the afternoon of the 26th. Seth, my friend, this is your friend Galen, saying farewell--and re-opening to the depth of appreciation I have for you. You'd love the book I'm reading now. Dang, I wish we could talk about it after you read it. Love, Galen

## 9.5 May

### Cause of Death (2014-05-10 07:00)

Hello, this is Seth's mother Justine. I'd like to offer what little information I have to try to answer some of the questions that were posted about Seth's death. We're told that we'll get a full coroner's report in about 6 months. In the meantime we were given only "Cause A: Occlusive coronary artery disease" and "Other significant conditions: cardiomegaly."

Most of you won't be surprised to learn that Seth had not visited his doctor in Berkeley in many years, and, responding to a recent question, said that he hadn't been to a doctor during his stay in Beijing either. We are left with 3 sets of paper records. The earliest, dated 2009, reports a Coronary Calcium (Agatston score) screening which he discussed [1]here last October. He obtained a second screening 1-1/2 year later. The first report showed his coronary artery occlusion to be about average for a man his age, with an accompanying risk of heart attack, but no cardiomegaly. The second report, following his conclusion that butter was beneficial for him, and his heavy ingestion of it, showed an improvement in his score: "Most people get about 25 % worse each year. My second scan showed regression (= improvement). It was 40 % better (less) than expected (a 25 % increase)." The report showed the calcification to be unevenly distributed, with most found in his left main coronary artery, and none in all but one of the other arteries. Again, no heart enlargement was reported.

The second medical report set, done in December 2011, was from Beijing and covered an exam that may have been required by his employer, Tsinghua University. This included a physical exam, an x-ray and EKG. All reports were negative, i.e., no abnormal findings and no cardiomegaly.

The third set of reports, from a laboratory in St. Charles, Ill., used data collected in Berkeley. They list toxic and essential elements in his hair. The latest report, dated July 18, 2013, showed one element rated "high." This was mercury, "found to correlate with a 9 % increase in AMI [acute myocardial infarction]" according to the report. His level was assumed to indicate exposure gained from eating fish. Presumably Beijing's toxic smog contributed directly both to the mercury level of the fish that he ate there, and to the level in his hair.

The only information about his blood pressure was in the Beijing report where it was recorded at 117/87. I could find no information about cholesterol levels, though it has not been a familial problem. Of the remaining Framing-

ham Study risk factors: Seth did not smoke or have diabetes. He was not overweight and was physically active. Seth's father died of a heart attack at 72.

Of course, I can't end this posting without sending my deepest thanks for all of the kind notes posted here. They were hurtful to read because of the reminding. They were healing to read because of the solace gained from learning about his friends and that he was able to help many people.

-Justine

1. <http://blog.sethroberts.net/2013/10/25/saturated-fat-and-heart-attacks/>

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Aaron Blaisdell (2014-05-10 07:15:51)

Hi Justine, I am truly sorry for your loss. It is still hitting me very hard as well. Thank you for taking the time to provide us with the details of what you know regarding Seth's death. You and Amy are in the collective hearts of everyone who's life Seth touched in a meaningful way. We all miss him very much.

Alex Blackwood (2014-05-10 08:40:29)

Justine, my condolences to you on the loss of your son. You and Amy have been incredibly kind to share information about what happened to Seth. Thank you.

Melissa (2014-05-10 09:05:01)

I cringed every time I saw someone ask for this information in sympathy for your family at this time of such loss. You've made an incredibly gracious gesture at a time when no one had any right to expect such a thing from your family. It is very much in keeping with how I imagine Seth would have wanted it handled and it's clear that he gained a great deal of what made him so special to so many people from you and your family. Thank you so much.

Alex Blackwood (2014-05-10 09:55:43)

For those of us who want to continue the conversation from Seth's blog, I have started Seth Roberts Community on Google Plus. It's a place to share and discuss interesting items you might have found on Seth's blog. Feel free to join. <http://plus.google.com/communities/101301560863575453174>

Adam Long (2014-05-10 10:11:22)

Thank you so much for posting this information. I am so sorry for your loss, and my thoughts and prayers are with you and your family during this terribly difficult time. In trying to explain to friends who were unfamiliar with Seth what the loss meant to me, I realized that the best way to express my thoughts is to say that Seth was one of my heroes. "Hero" is a word I don't use much anymore, but it certainly applies to him. Thank you.

Seth Roberts is Dead | Mark's Daily Apple Health and Fitness Forum page (2014-05-10 10:21:13)

[...] [...]

Martin (2014-05-10 10:43:50)

A hero indeed! Condolences again to Seth's family and thank you to them for caring about the rest of us who did not know him as well but who also miss him very much.



emini\_guy (2014-05-10 10:56:06)

Thank you for this information and condolences to Seth's family and friends once again. He will be missed.

Natan (2014-05-10 12:00:32)

Thank you, Justine.

Philip Kilner (2014-05-10 15:01:38)

Hello Justine, I'm very sorry for your loss, and very grateful that you have been able to give us this update. I'd just like to say that Seth's writings helped me lose five stone in weight with the Shangri-La Diet, and - more importantly - helped me to take ownership of my own health issues, and to think about them in a new way. I will miss reading his work, but he has made a lasting change for the better to my life, and that will stay with me as long as I live. Not many of us can make that sort of difference to the lives of strangers. Thinking of you and your family at this difficult time, Philip

Patti (2014-05-10 16:02:27)

Justine - thank you for your post about Seth.

Pauline (2014-05-11 01:57:11)

Thank you for sharing this at such a time of loss...brave, generous and compassionate, I can see where Seth learnt these qualities.

Robin Benson (2014-05-11 02:46:03)

Thank you Justine. Apples do not fall far from the tree.

Danielle (2014-05-11 16:00:05)

Dear Justine, I am so sorry for your loss. Seth was loved by so many. You have my deepest Sympathies. Danielle

Suzanne (2014-05-11 17:06:02)

Justine, Thank you for going to so much trouble at this difficult time for the family. I'm so sad for the loss of Seth. He was a remarkable man in many ways. His forthright views and willingness to investigate scientifically AND listen to other people's opinions was great. I benefitted much from the posts, the news snippets he posted links to, as well as his great stories. I learnt about aspects of life in China too. We have lost a great champion of academic ethics in Seth and I deeply regret that few will take up the fight that he bravely waged against corruption and distortion in universities. I'll continue to experiment with methods for better sleep, weight loss and health, but will miss these daily 'chats' with Seth (as that's what his blog felt like to me.) Happy Mother's Day - you did a great job!

Sara Lake (2014-05-11 17:30:36)

Justine, thank you so very much for your touching openness in sharing with us. I know Seth would have wanted that, he never held back, even when what he had to say was controversial or contradictory.

Steve Greenleaf (2014-05-12 04:35:34)

My condolences to Seth's family and friends, as well as fellow readers. We will all miss his voice among us.

Remembrances | Seth Roberts Memorial (2014-05-12 04:53:32)

[...] by Seth's sister Amy Rogers (see also the follow-up post by Seth's mother [...])

Bob (2014-05-12 06:12:11)

My condolences. Modern medicine will likely point to blockages as the cause, but even that conventional wisdom may be inherently flawed. <http://www.westonaprice.org/cardiovascular-disease/what-causes-heart-attacks>

space (2014-05-12 08:36:23)

I'm deeply sorry for your loss. Thank you so much for keeping us updated. We will all try to understand what happened.

JohnG (2014-05-12 08:44:40)

Thank you Justine. It was thoughtful to release that information.

nicole (2014-05-12 11:05:12)

Justine, Thank you for this post. I really appreciated it. I also remembered Seth posting about getting medical labs done near his house: <http://blog.sethroberts.net/2014/03/20/cheap-accurate-home-hba1c-test/> Maybe you can find more data from those tests. Thinking of you and your family and this great loss.

Morex (2014-05-12 15:05:18)

Justine, Thank you very much for posting this and keep us informed. Seth was a hero for me in many ways. He saved my life through his work and kind words. Rest assured that like many people here, we won't let his memory fade away. All my love and thoughts to you and your family.

Kirsten (2014-05-12 16:48:53)

Justine and Amy (and family)– I am so deeply sorry for your loss and appreciate your posts here. I've read Seth's blog regularly since 2006 and was for a short time a participant in the SLD forums. And I will always be glad that an exchange with Seth just a few months ago led to an e-mail where I explained what I had learned from his work and how I had put the principles from his blog into action. Since learning of his death, I have felt a real sense of loss. I miss his point of view–I looked forward to seeing where his inquiry took him and the way his thoughts developed. I can only imagine what it's like for those who knew him in real life. He was one of a kind. Deepest condolences– Kirsten

Laura B. (2014-05-13 22:39:28)

Dear Justine and Amy, Thank you for taking the time to write about Seth. –Laura

Althea T. Kippes (2014-05-14 14:10:54)

Dear Justine and Amy, I am so sorry to hear of Seth's passing, and please accept my deepest sympathies for your loss. I met Seth when I was living in Berkeley and in law school. He was such an intelligent, creative, and caring person, as well as quirky and fun. Doing things with Seth was always an interesting adventure. I can't believe that he is gone... Seth's spirit will continue to live on in all of the people that he touched in his life and in all of our memories. –Althea

JiPé (2014-05-16 20:37:17)

I've been reading Seth blog for about a year, but recently stopped for a couple of months. I read his posts from a RSS reader and just begun reading from where I left of. I could not have expected something so tragic could happen. I can feel your pain and the pain of all the readers who have found in Seth the hope of a solution for their health problems. I'm very sorry for your lost and I wish to thank you deeply for informing us about the cause of his death. Something you would not have to do, but probably did knowing your son would have liked it so. Thank you. I send you all my love. Maybe someday, this blog would become a book. I think it should, so we could remember him more deeply, like we had a part of him in our home, and our hearth.

Jeff Baird (2014-05-16 23:30:59)

Hello, A note for Seth's family – I'm so sorry for your loss. I work for the BBC World Service in London. We interviewed Seth for a radio program we did a few years back on the new breed of self-trackers. If you would like a copy of an mp3 of the interview please drop me an email (jeff dot baird at gmail) and I'll try to dig out a copy of it from our archives. best regards, Jeff

Dave in Berkely (2014-05-18 13:16:56)

Justine - I am a friend of Seth's here in Berkeley. I have already been in touch with Amy, and want to communicate my condolences to you also. His passing came as quite a shock to me. I can't imagine how it might have been for you. Since you

have brought up the issue of the hair test (actually, there were multiple), and since I am the one who was involved with Seth on this issue, perhaps it is now appropriate for me to say something about it. Seth had a mouthful of amalgam fillings. Worse, he also had gold in his mouth; and when differing metals are in combination like this in the same mouth, the less noble one will just dissolve into the saliva. Dental text-books are quite clear that these combinations should be avoided, but dentists routinely ignore it. While I had talked to Seth for a long time about the issue, it was only when I got him access to a Jerome mercury vapor meter that he took it seriously. The level of mercury vapor in his oral cavity was astronomical. If I remember correctly, it was measured at nearly 60mcg/m<sup>3</sup>, some 200x EPA limits for long-term exposure. (That's off the top of my head. If relevant, I can check those numbers.) As a result, he had his amalgam fillings removed. Subsequently, Seth began to do hair tests, which were uniformly and over a period of years, high in mercury. I tried to tell him that the problem was not gone. That the half-life of mercury in the brain is some 25 years, and so he needed to consider the question of detoxification. Particularly as some of his symptoms, including the insomnia, were certainly consistent with mercury toxicity. And, his need for so many omega-3 oils seemed to indicate a high rate of oxidation of these oils in the body. He listened, but never really did anything about it. Since the main targets of mercury toxicity are the electrical tissues (brain & heart) and the detoxification organs (liver, kidney & skin), I can't help but think that this must have been a factor in his untimely death. I am sorry to have lost a good friend. I encourage others to consider this aspect of health quite seriously. To explore it further, you can contact DAMS at [amalgam.org](http://amalgam.org). They keep a list of amalgam-free dentists and sympathetic MD's. (Though beware of their detoxification advice.) You might also join the [adult-metal-chelation@yahoogroups.com](mailto:adult-metal-chelation@yahoogroups.com) and [frequent-dose-chelation@yahoogroups.com](mailto:frequent-dose-chelation@yahoogroups.com) lists, and have a look at the books "Amalgam Illness: Diagnosis and Treatment" and "Hair Test Interpretation: Finding Hidden Toxicities" by Andrew Cutler ([noamalgam.com](http://noamalgam.com)). These latter resources provide a slow, low dose, physiologically appropriate detoxification protocol. (It's not just the detests who are failing to read their textbooks. When it comes to chelation, the MD's don't do follow their own advice on the proper dosing of pharmaceuticals.)

Sheila Buff (2014-05-21 08:42:09)

Dear Justine and Amy, I was deeply saddened to learn of Seth's untimely death. I worked with Seth on the writing of The Shangri-La Diet. We had a lot of fun and learned a lot from each other. Seeing the book succeed and help so many people was very gratifying for us both. Seth's legacy will live on through the people he has helped and through his inspiring teaching.

Digby (2014-05-25 15:12:51)

My condolences on the death of your son. We all have lost a wonderful, open, sharing, and brilliant man. I've sampled Seth's blog and papers for fifteen years, and was always struck by his comity and generous spirit. The best always die way too young.

Steven Jonas (2014-05-28 11:56:29)

Like Melissa, I cringed while reading comments demanding to know the cause of Seth's death. Still, as someone who has adopted several dietary changes based on his work (and tested their efficacy), I have to admit to wanting to know those details because they seem important. But I know that I have no right to that information, and can imagine that as a family member, it must be hard to publish it. I really appreciate that you did so, when you didn't have to.

Noumenon (2014-05-29 00:10:30)

Hey, thanks so much for posting. While we on the Internet don't have any right to know this stuff, we sure are curious and interested. This is a much better capstone to the blog than just trailing away.

Anna Purna (2014-06-01 04:44:18)

Quote from post above: "The only information about his blood pressure was in the Beijing report where it was recorded at 117/87. " That indicates a rather narrow pulse pressure. [http://en.wikipedia.org/wiki/Pulse\\_pressure](http://en.wikipedia.org/wiki/Pulse_pressure) 117 systolic minus 87 diastolic = 30 pulse pressure 30/117=25.65 % Quote from Wikipedia:"A pulse pressure is considered abnormally low if it is less than 25 % of the systolic value. The most common cause of a low (narrow) pulse pressure is a drop in left ventricular stroke volume. In trauma a low or narrow pulse pressure suggests significant blood loss (insufficient preload leading to reduced cardiac output). If the pulse pressure is extremely low, i.e. 25 mmHg or less, the cause may be low stroke volume, as in Congestive Heart Failure and/or shock. A narrow pulse pressure is also caused by aortic valve stenosis and cardiac tamponade.

Food Safety Talk 61: I Needed a Semenko | barfblog (2014-06-01 19:56:03)

[...] experimenter Seth Roberts, including the predictable reaction from hacker news. More on his cause of death has been provided on his blog, posted after FST [...]

Core Economics | In memoriam Seth Roberts (1953 – 2014) (2014-06-03 13:35:22)

[...] with (and miscalculations about) Omega-3 fatty acids might have caused his collapse; a subsequent message by his mother on his blog and responses to it suggests several other explanations (amalgam fillings, heavily polluted fish [...])

My ideal setup | The Maverick Mathologist (2014-06-08 18:25:18)

[...] a idéia do que de um design para o experimento. Eu não sou um self-experimenter a Seth Roberts (RIP), mas apenas alguém que “perde as estribeiras diante de uma idéia” (parafraseando [...])

## How Little We Know: Big Gaps in Psychology and Economics (2014-05-22 12:18)

Seth's final paper "How Little We Know: Big Gaps in Psychology and Economics" is published in a [1]special issue of the [2]International Journal of Comparative Psychology (Vol 27, Issue 2, 2014). This issue is about behavioral variability and is dedicated to Seth. Abstract of the paper follows:

A rule about variability is reducing expectation of reward increases variation of the form of rewarded actions. This rule helps animals learn what to do at a food source, something that is rarely studied. Almost all instrumental learning experiments start later in the learning-how-to-forage process. They start after the animal has learned where to find food and how to find it. Because of the exclusions (no study of learning where, no study of learning how), we know almost nothing about these two sorts of learning. The study of human learning by psychologists has a similar gap. Motivation to contact new material (curiosity) is not studied. Walking may increase curiosity, some evidence suggests. In economics, likewise, research is almost all about how people use economically valuable knowledge. The creation and spread of knowledge are rarely studied.

The family is grateful to Aaron Blaisdell Ph.D. who completed final edits to Seth's final manuscript for publication.

1. [http://blog.sethroberts.net/wp-content/uploads/2014/05/IJCP\\_May\\_Issue\\_TOC\\_-eblast.pdf](http://blog.sethroberts.net/wp-content/uploads/2014/05/IJCP_May_Issue_TOC_-eblast.pdf)

2. [http://escholarship.org/uc/uclapsych\\_ijcp](http://escholarship.org/uc/uclapsych_ijcp)

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emini\_guy (2014-05-22 14:00:40)

Thanks for this information. Just downloaded the paper. Looks interesting.

Lauren (2014-05-22 16:47:28)

Thank you, Amy.

shuwei (2014-05-23 15:48:38)

Thank you!

Terri Fites (2014-06-01 19:13:12)  
Thank you!

Laura B. (2014-06-01 22:17:17)  
Thank you!

Andreas Ortmann (2014-06-03 14:21:17)  
I just finished a little tribute to Seth; here u are ... <http://economics.com.au/?p=9975>

Core Economics | In memoriam Seth Roberts (1953 – 2014) (2014-06-03 19:59:42)  
[...] final paper was just published in a special issue (dedicated to him) of The International Journal of Comparative Psychology (Vol 27, I.... The article is titled "How Little We Know: Big Gaps in Psychology and Economics" and it [...]

Chris (2014-06-08 06:10:56)  
RIP Seth. Of all the blogs I read, you were the first I went to on a daily basis, and you were there nearly every day with the most interest thoughts of your own, or a collection of link to the thoughts of others you thought most interesting, and... I was always most interested to read them. It is fortunate you were in a position as professor and blogger to inspire our next generation. Thank you.

## 9.6 June

### Seth Roberts Memorial Talks (2014-06-13 21:54)

[1]Ancestral Health Society will have a series of public talks honoring Seth's life and work will be held at UC Berkeley on August 10th, 9am - 1pm. Registration will be open to the public on June 20th. Please register at [2]<http://www.ancestralhealth.org/post/seth-roberts-n1-loved-all>.

1. <http://www.ancestralhealth.org/>
2. <http://www.ancestralhealth.org/post/seth-roberts-n1-loved-all>

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Joe (2014-06-15 12:43:50)  
Does anyone know why there has been no obituary for Seth in The Daily Californian, the UC Berkeley newspaper?

peter (2014-06-27 12:18:28)  
readers of this blog should find a way to continue Seth's work by contributing interesting articles and self-reporting. the problem is finding someone to sort thru all the submissions. any thoughts?

Joe (2014-06-29 12:18:40)  
Peter, I'd like to see it, too, but I have no idea how that could actually be done.

peter (2014-06-29 13:05:24)  
seth's family controls the web site; so we'd have to start with them (after an appropriate period of time); then perhaps a like-minded colleague at Berkeley. Alternatively current readers, although it's not clear if anyone is qualified to sift thru the

articles. Also, there would have to be one person in charge (if everyone is in charge, then no one is charge).

Alex Chernavsky (2014-06-29 18:52:20)

Alex Blackwood started a [1]Google+ Community for people who are interested in continuing Seth's work.

1. <https://plus.google.com/u/0/communities/101301560863575453174>

Amy Rogers (2014-07-01 15:34:10)

Hi all, I appreciate all the interest in continuing Seth's work. I want to help where I can. I do need to make a decision what to do with this site and the sethroberts.net forum. I am open to all suggestions what you want to see happen to them. Please send your suggestions to [twoutopias.amy@gmail.com](mailto:twoutopias.amy@gmail.com). If you wish to debate an idea with others, please take it to the [1]Seth Roberts Community on Google+ or, for non-Google users, start a topic in the [2]forum under "Self-Experimentation > General." I'll be listening. @joe An obituary was placed only in one major newspaper, [3]*San Francisco Chronicle*. Amy

1. <https://plus.google.com/u/0/communities/101301560863575453174>

2. <http://boards.sethroberts.net/>

3. <http://www.legacy.com/obituaries/sfgate/obituary.aspx?n=seth-roberts&pid=170957308>

Geraldine (2014-07-10 11:02:34)

I am stunned to read of Seth's passing, just found out about it this morning when someone left a comment on my book review of the Shangri La Diet. My sincere condolences to all of Seth's family and friends. He was a unique individual and a very caring, giving person, from what I knew. We corresponded by email for a few months when I read, used and wrote about the Shangri La diet, several years ago. This makes me so sad...may he RIP.

## 9.7 July

### Assorted Links (2014-07-31 05:00)

These final assorted links were found in draft mode. - Amy

- [1]Postdoc leaves academia (fMRI emotion research). "I actually ran into that process in three different labs, two of which were at TopUniversityA with PIs who I highly revered and respected. It's just how it goes in those fields...remove all of the negative results, don't actually report the ridiculous number of fishing expeditions you went on (especially in fMRI research), make it sound like you mostly knew what you were going to find in the first place, make it a nice clean story. When my colleagues (from a well-known, well-respected emotion research lab) were trying to talk me into removing all of the negative results and altering what my original hypothesis was, literally saying "everyone does it..." that was it for me. I had a sinking feeling that everyone did do it that way and that I couldn't trust the majority of work I had to depend on/reference myself. The level of denial in psychology and human neuroimaging research that this process just clogs the system with useless BS is something I just can't stomach." Devastating criticism – especially finding the same thing in three different labs. I believe nothing involving fMRI and psychology. My friend Hal Pashler [2]wrote about this. At UC Berkeley, the fMRI machine used by psychology researchers malfunctioned for years. Nobody noticed. Only when someone from UC Davis got different results at Berkeley was the problem detected.
- [3]interview with me about the Shangri-La Diet. The questions do a good job of making the mechanism clear.
- [4]Little or no benefit of antidepressants when children are asked

Thanks to Nile McAdams and Alex Chernavsky.

1. <http://anothersb.blogspot.com/2014/04/dear-academia-i-loved-you-but-im.html>
2. [http://www.pashler.com/Articles/Vul\\_etal\\_2008inpress.pdf](http://www.pashler.com/Articles/Vul_etal_2008inpress.pdf)
3. [http://www.superhumanradio.com/components/com\\_podcast/media/mp3s/SHR\\_Show\\_1394.mp3](http://www.superhumanradio.com/components/com_podcast/media/mp3s/SHR_Show_1394.mp3)
4. <http://www.minnpost.com/second-opinion/2014/04/when-children-are-asked-antidepressants-are-no-more-effective-placebo-study-f>

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gwern (2014-08-01 07:35:33)

BTW, I finished my randomized experiment investigating Seth Roberts's claim that using a walking treadmill helped his spaced repetition scores. I found that it did not help, but it hurt: [#treadmill-effect-on-spaced-repetition-performance-randomized-experiment](http://www.gwern.net/Treadmill) > Little or no benefit of antidepressants when children are asked Fulltext: <https://pdf.yt/d/ip9cxFsWLNiTpymo> / <https://www.dropbox.com/s/d0k4gz0sj6a28yg/2014-spielmans.pdf> I was under the impression that the depressed are poor at noticing improvements even other people notice in them, so I'm not sure whether this shows anything.

Laura (2014-08-02 07:52:30)

Thank you so much for posting these. The interview is great. I really miss Seth's blogging.

JP (2014-08-16 04:05:58)

Thank you SO much for keeping Seth's blog up and running. His year's of posting are a treasure trove of insight and research that I refer to often. If it's not too much trouble, could you give us some notice if you ever decide to take it down?

## 9.8 August

### Videos of Seth Roberts Memorial Talks (2014-08-20 07:10)

Video recordings of [1]Ancestral Health Society's public talks on August 10, 2014 honoring Seth's life and work are posted at [2]<http://bit.ly/1v33kbM>.

Many thanks to Tess McEnulty for putting together these videos, adding captions, and making them accessible. - Amy



IFRAME: [3][http://www.youtube.com/embed/videoseries?list=PLvz1IcZRktDGUa\\_RTLuuA9XlFvUwceyGf](http://www.youtube.com/embed/videoseries?list=PLvz1IcZRktDGUa_RTLuuA9XlFvUwceyGf)

1. <http://www.ancestralhealth.org/>
2. <http://bit.ly/1v33kbM>
3. [file://www.youtube.com/embed/videoseries?list=PLvz1IcZRktDGUa\\_RTLuuA9XlFvUwceyGf](file://www.youtube.com/embed/videoseries?list=PLvz1IcZRktDGUa_RTLuuA9XlFvUwceyGf)

Dan Maldonado (2014-08-20 20:06:44)

Thank you for posting this.

Robin (2014-08-25 01:20:07)

Thanks for this. We miss him.

GB (2014-09-16 11:26:44)

Thanks Tess and Seth's family for posting these. I still check the blog occasionally but it's not a daily ritual any more, I didn't know Seth but I miss him. Thanks to everyone who contributed to the talks, and of course thanks Seth for your body of work.



*gads*

BlogBook v0.5,  
L<sup>A</sup>T<sub>E</sub>X 2<sub>ε</sub> & GNU/Linux.  
<http://www.blogbooker.com>

Edited: October 15, 2014

